

INTEGRATED FINDINGS & DESIGN DRIVERS

BETTER MARKET STREET

EXISTING CONDITIONS & BEST PRACTICES



Prepared by: Perkins+Will Consultant Team

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Better Market Street - Existing Conditions & Best Practices

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Prepared for:

San Francisco Department of Public Works

San Francisco Planning Department

San Francisco Municipal Transportation Agency

San Francisco County Transportation Authority

San Francisco Office of Economic and Workforce Development

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** Note: A version of the Integrated Findings & Design Drivers document is also available with a Key Findings Matrix included. This matrix provides capsule summaries of findings as applied to the issues and geographic areas of Market Street, as well as reference to specific pages in the Existing Conditions & Best Practices documents.*

For access to this longer version of the Integrated Findings, please visit <http://www.bettermarketstreetsf.org/> and search for "Integrated Findings & Design Drivers, including Key Findings Matrix," or contact Kris Opbroek, Project Manager, Department of Public Works, 415.558.4045.

A. Overview

The goal of the Better Market Street Project is to revitalize Market Street from Octavia Boulevard to The Embarcadero and to re-establish the street as the premier cultural, civic, and economic center of San Francisco and the Bay Area. To serve this goal, five cooperating agencies of the City and County of San Francisco have initiated the first phase of planning and design, beginning a public discussion of the potentials on Market Street, compiling and analyzing the most up-to-date information and issues, and researching innovative ideas that have benefitted other great streets.

This document provides a stand-alone abstract of the Better Market Street Project's progress and achievements thus far and relates directly to the Existing Conditions & Best Practices analysis. It focuses on the key issues raised by the current design and operational characteristics of the corridor today, and provides a sampling of potential design strategies that might serve not only to address those issues but to realize a remarkable new urban experience spotlighting the best of San Francisco. The Existing Conditions & Best Practices analysis itself represents advancement in the understanding of Market Street, based on significant new survey and analysis data and the compilation of existing conditions information.

The Integrated Findings & Design Drivers, as such, encapsulates the Better Market Street team's perspective on what has been learned, interweaves the perspectives of mobility and urban design, and focuses on what that foundation of integrated thinking suggests about the redesign of Market Street. A set of reference documents,

known as the Better Market Street Existing Conditions & Best Practices analysis, is available to readers who want to learn more about the findings and design directions outlined here. The Existing Conditions & Best Practices analysis will provide a continuing resource of information, drawn from a variety of design and transportation sources, enriched by new investigation and organized to focus on this study area and its key challenges and opportunities. It looks at the Market Street corridor in detail, considers Market Street in the context of the City and surrounding districts, and steps back to consider international best practices. The last section of this Integrated Findings document provides a full list of the key findings of that work in an easy-reference chart linked to specific sections of the Existing Conditions and Best Practices documents.

Integrated Findings & Design Drivers as a Tool for Design:

Process: The process of developing this document was iterative, similar to the process of research-based design and engineering, and committed to the delivery of valuable tools for the next stage of the design process. The effort began with the creation of just such a tool: the Matrix of Key Findings. That instrument was then used to engage all design team members in cross-discipline thinking about those key findings, leading to the identification and naming of six areas of interdependent findings and design ideas. The Matrix of Key Findings is reproduced in full at the end of this document for reference.

Findings: Key findings are summarized in Section B: Integrated Findings & Design Ideas with a perspective on design and operations that marries transportation data, street characteristics, functionality, and urban form and experience. They may be accessed in summary under the discussion of Integrated Findings, or reviewed in more detail in the Matrix of Key Findings. Six Drivers of Design help to organize this discussion.

Design Ideas: Once considered and presented as interwoven observations and studies of mobility and design, the compelling issues of space, modes of travel, civic identity, safety, and pedestrian experience require coordinated action. Consequently, for each of the Six Design Drivers ideas are discussed for potential design or operational changes on Market Street, focusing on what appear to be the most promising of best practices from elsewhere in the City, region, or globe, and what might be unique solutions for Market Street. The next phases of project work will take inspiration from this early menu of actions and go on to create full, multifaceted alternatives for comprehensive evaluation, public review, and discussion.

Actions to improve Market Street may include a variety of design or operational changes. For this work, "design changes" indicates a focus on the physical elements of the street along the full corridor, from building face to building face and along connecting links. This design process will work to resolve competing demands for space among modes, improve mobility, and significantly improve the experience of Market Street for all

users. “Operations” improvements will work in direct partnership with design toward solving mobility problems; the focus here is on integrated systems of movement by all modes as tested and programmed to match rider needs with routes, stops, frequency, service, intermodal transfer, and linked access parameters.

Tools: A variety of tools are provided with this document in order to facilitate access to detailed reference material and to demonstrate the importance and value of integrating the findings and solutions of transportation and urban design perspectives. Provided here are:

- Focus on Six Drivers – summary of findings and design direction/ideas:

- > **Improve Mobility**
- > **Enhance Public Realm Experience**
- > **Reduce Conflict & Friction**
- > **Enhance Access**
- > **Spotlight Unique Identity**
- > **Integrate Actions: Form, Streets & Function**

- **Lexicon of Locations and Terms** – an orientation to the Market Street corridor, highlighting key locations and terms used to describe and analyze the street and its needs for improvement.

- **Key Findings Matrix** – organized to parallel the content of the Existing Conditions & Best Practices analysis, the Matrix includes a succinct summary of each key finding, a specific reference to pages of the Existing Conditions and/or Best Practices research, a discussion of design and operational considerations suggested by that key finding, a checklist of geographic locations where this finding or action needs to be focused, and a series of notes referring to next steps in order to test ideas going forward.

Design Drivers

Improve Mobility

The commitment of the City and County of San Francisco to offer effective and extensive sustainable transportation options is nowhere more apparent than on Market Street. Bringing all the modes together is what provides the rich potentials of a great urban street, although each mode -- whether transit, pedestrians, bicycles, taxis, paratransit or private vehicles, and the interface between them -- is presently challenged in some way. Concerted efforts in place-making, street design, and operations can set a better balance among modes and enhance the experience and the efficiency of their use. Within that balance, uses that serve the most people, enable safe and healthy access choices and activate the public realm will be favored. It should be remembered that every journey begins as a pedestrian trip and may engage multiple modes before it ends again as a pedestrian trip.



Enhance Public Realm Experience

Multiple issues affect the public realm experience today from solar access to activity levels, links to land uses, and ground floor vacancies, as well as characteristics and potentials for plazas and places at various scales. Strategies that improve the pedestrian experience while easing movement along and to the street will be paramount as design proceeds. It is the responsibility of this project to create engaging places to walk, more inviting places to sit, places to play and settings for performance. Among design strategies will be those that program activity along sidewalks and in plazas, study and apply new boarding protocols for transit, and improve real and perceived security.



Reduce Conflict & Friction

Conflict and friction along Market Street put modes of travel and users in competition, cause traveller delays, raise safety problems, and affect the broader urban character of the street and the perceptions of its users. (The City and BMS team have collected extensive data on collisions and areas of friction.) Opportunities to address these issues abound; though they will require some critical decisions as to design and operations, and can offer many benefits to the new Market Street. Design ideas from cycle tracks to repositioned boarding islands to added signals to new boarding protocols will be tested and will inform those decisions.



Enhance Access

Market Street faces challenges in broader issues of access: getting to transit, moving to destinations on and off Market Street, and implications for parallel streets and the larger study area. An integrated system of access will better move people, use universal design to invite persons with disabilities to enjoy the street and full modal access and link modes of travel. A key focus will be the application of universal design principles to improve access to busses and streetcars by persons with disabilities. To achieve this goal, obstacles to access have been identified, and design strategies for intersections, approaching streets, and shared public places are evolving.



Spotlight Unique Identity

Market Street carries a corridor-wide identity as the City's main street—an historic focal point of the City's growth and change. At the same time, distinct segments of the street bring both their own rich heritage and their emerging personalities reflecting disparate districts distinguished by a variety of commerce, arts, food, government and more. Design and operations solutions will be employed that strengthen Market Street's underlying identity, while celebrating episodic civic events and unique districts.



Integrate Actions: Form, Streets and Function

This sixth driver interweaves the findings and design ideas of the previous drivers to emphasize the need for integrated action. As such this driver introduces a meta-theme to the Better Market Street work, and begins to describe a path from findings to action. Here the interrelationships among findings related to urban form, street character and functionality are highlighted. With a broad definition of the street from the uses in bordering buildings across all modes and activities of the street to the facing set of buildings and storefront uses emphasizes the need for coordinated action to achieve the greatest benefit. As such, this driver sets the scene for creation of an urban design framework to guide design decisions and trade-offs ahead.



Figure A. Lexicon of Market Street terms

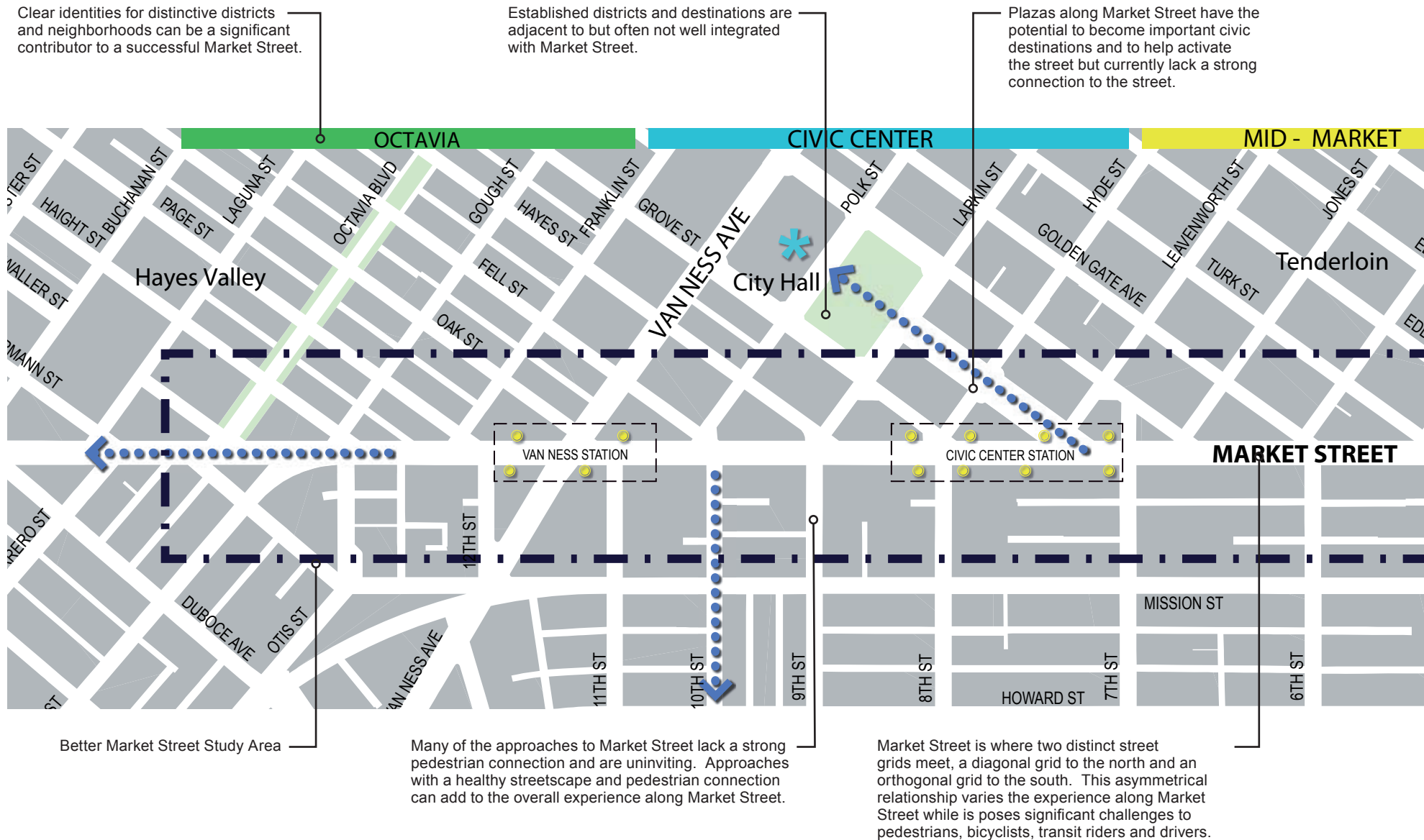
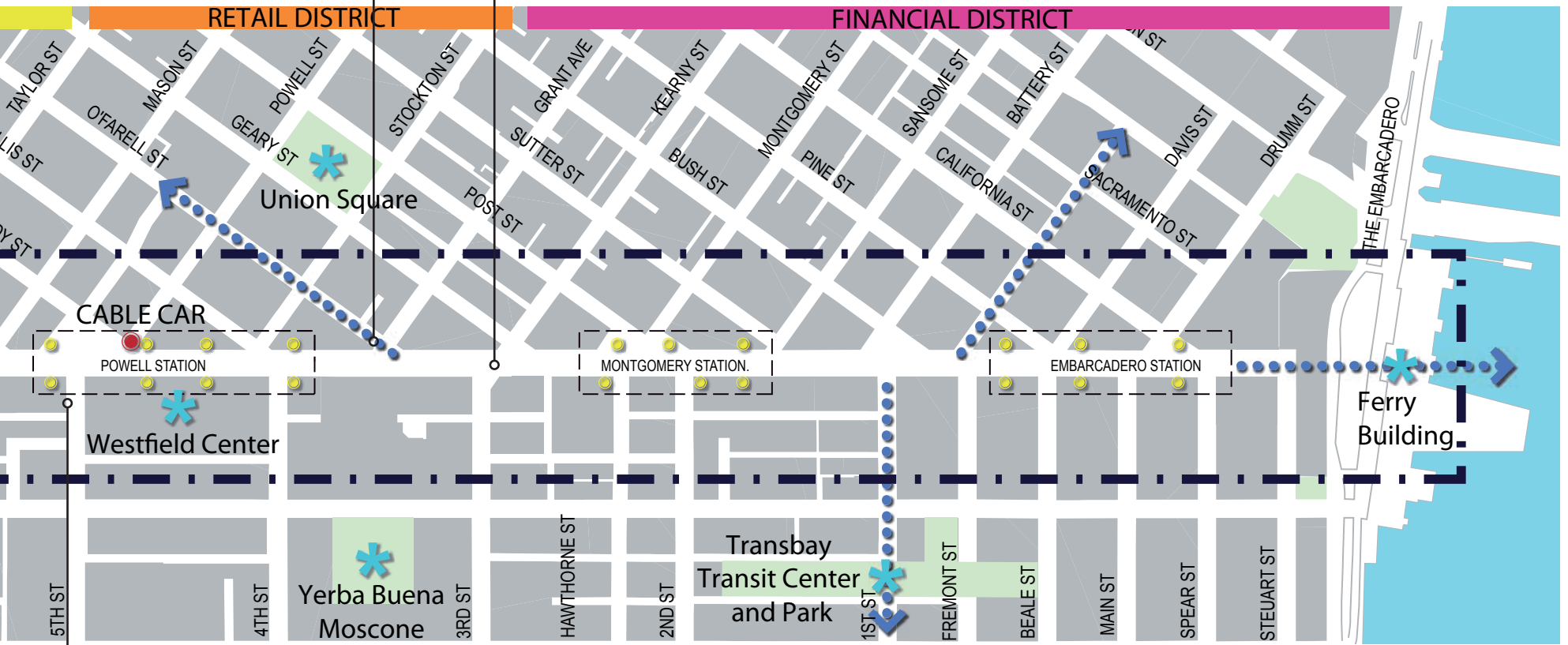






Fig. A - This map introduces the extent of the Better Market Street study area, the key characteristics, destinations and challenges presented along the street, and the language or lexicon of terms that will be used to present both problems and solutions. In no way does this one map present the totality of conditions along Market Street.

Market Street offers a range of views to city landmarks, historic buildings, and significant topography.

Unconventional intersections make navigation for all modes difficult and unpredictable. Desire lines for pedestrians are compromised and a source of conflict and friction between modes.



Transit portals are areas of high activity and access, but also create barriers along the sidewalk. This results in what are considered pinch points which limit movement for buses, bicycles and other vehicles.

-  Important Views
-  Major Destinations
-  Cable Car Turnaround
-  Transit Stations and Entry Portals

B. Integrated Findings & Design Ideas

The central focus of this document is on Integrated Findings and Design Ideas. It is here that the reader can get a sense of the most important findings from the analysis of Existing Conditions, reviewed through the lens of an integrated urban design and transportation perspective. That perspective supports the organization of findings and design direction under six categories, presented here as Design Drivers:

- > **Improve Mobility**
- > **Enhance Public Realm Experience**
- > **Reduce Conflict & Friction**
- > **Enhance Access**
- > **Spotlight Unique Identity**
- > **Integrate Actions: Form, Streets & Function**

Guide to the Integrated Findings and Design Drivers

The six Design Drivers discussed and illustrated here include: an overview of the topic in relation to broad objectives; a narrative description of primary findings of the existing conditions analysis; and bulleted list of design ideas that may be applied to address issues raised and enhance positive characteristics.

In presentation of both findings and design ideas, selections were made among many findings and directions in order to give the reader a broad sense of what will drive the next phase of work, wherein alternative concepts for Market Street design and operations improvements will be developed and tested using an integrated team approach.

A menu of potential changes to the Market Street corridor is included at the end of each of the six topics. These are drawn from Best Practices research, consideration of unique Market Street characteristics, and the interplay of issues and objectives across transportation and urban design perspectives. Some of these design and operations changes will need to be analyzed using detailed transportation models, or through application of urban design considerations.

Improve Mobility

Market Street defines the upper limits of mobility options for San Francisco, handling nearly one-third of Muni's all-day weekday transit lines, and accommodating pedestrians, bicycles, taxis, paratransit, delivery vehicles, and private cars at the same time – more than 250,000 people use Market Street on an average weekday. This mobility, inviting multiple modes, large numbers of users, increased pedestrian activity, and intermodal options, demonstrates the City's commitment to offer sustainable alternative options for travel in the City and the region.

Much thought and effort has been directed at improving mobility in recent years, perhaps most notably with the testing of bicycle lane and intersection crossing treatments for pedestrians and cyclists. At the same time, all modes remain challenged along Market Street, including pedestrian movement, which when improved will bring a renewed urbanity to the street. That desired urbanity might be defined by extended pedestrian day use, comfort, and activity for multiple ages and diverse groups; visibility for destination uses; welcoming places and programs for staying to enjoy the City's great street; realizing an exciting new mobility for pedestrians (a mode that most of those arriving on Market Street utilize

in their trips) implemented while improving transit mobility. The recent completion of the Public Space Public Life survey on Market Street confirms these findings from a pedestrian view of mobility. The current testing of pilot projects for pedestrian, bicycle and private vehicle movements will provide additional insight.

Mobility targets for Market Street can be defined by numbers, and they can also be defined by experience – the experience of the street and the city that accompanies each modal choice. Understanding this interrelationship is key to the current Better Market Street endeavor. Overall mobility will be improved for all travel modes.



This photo shows a congested boarding island illustrating the difficulties in boarding and alighting for transit users, and most especially for persons with disabilities.



Recent efforts to allocate space and improve safety for bicycles are illustrated here with painted bike lanes and a "bike box" which serves as a waiting area for bikes.

Findings

Transit Dominates and Serves: Both the design of the street network and the land use patterns serve to funnel transit to Market Street, including several of Muni's busiest lines. During the busiest hour of the day at the busiest points, more than 80 buses and streetcars pass in each direction. Almost one quarter of all public transit boardings in San Francisco occur on or under Market Street. On an average weekday, there are approximately 38,000 boardings of Muni buses and streetcars between Steuart and Van Ness, and another 55,000 boardings on Muni Metro below, together accounting for about one-eighth of all Muni boardings (BART accounts for about 120,000 daily boardings below Market Street). Current street configuration and volumes result in transit vehicles moving slowly, generally 5 to 6 miles per hour, with vehicles in motion only about 50% of the time. (See also "Reduce Conflict and Friction" section of this document.)

Transit Riders: Transit riders are provided convenient locations to access frequent transit, but while waiting for transit are largely denied any experience of lively plazas, programmed street activity or even comfortable, welcoming landscape and places to sit. Demand data show users utilizing surface transit heavily with some clear peaks and valleys through the day.

Transit Demand: Demand for transit on Market Street is expected to increase significantly due to the new Transbay Transit Center, the Transit Effectiveness Project and the planned Geary and Van Ness BRT lines. Muni expects to increase frequency of service on key routes as part of the Transit Effectiveness Project.

Pedestrians: Heavy north-south motorized traffic and peak pedestrian flows limit pedestrian mobility along Market Street and diminish the pedestrian experience. Wide, one-way streets such as 9th and 10th tend to encourage higher vehicle speeds on their approaches to Market Street. The north side of Market Street is interrupted by many angled intersections, requiring out-of-direction travel and multiple street crossings. The south side has long blocks. Overall, Market Street provides poor pedestrian accessibility and connectivity.

Cyclists: Market Street is one of the most heavily travelled bicycle corridors in San Francisco. It is principally a commuter route (75% of cyclists commute) where cyclists travel primarily along—rather than across—Market Street. There are disproportionately fewer women, children, and seniors riding bicycles than average in lively urban downtowns in other countries. This may be an indicator that safety—real and perceived—is a concern among a number of demographic groups.

Transit Boarding Islands: Transit boarding islands challenge mobility because they are narrow and because they are not long enough to accommodate three or more vehicles. Islands are located on the near side of intersections, which is generally less efficient for transit operations than the far side. The location of the islands conflicts with pedestrian crossings and often causes pinch points for cyclists and buses in the curbside lane. Some islands cannot accommodate disabled users because they are too narrow for deployment of wheelchair lifts or ramps or because there are no high platforms for boarding of F Line streetcars.

Lanes: Transit operations benefit from the capacity of four lanes and the ability to change lanes when necessary.

Private Vehicles: Only 14% of people on Market Street are in cars. Market Street has no driveways east of Van Ness Avenue, and no access to parking garages. 80-85% of cars on Market Street are crossing Market Street, and those traveling along Market have an average trip length of only 2 blocks. Private vehicle traffic approaching 10th and 6th Streets from the west are required to turn right off of Market Street, which has proven to decrease transit times and increase safety perceptions for pedestrians and bicycles.

Design Ideas

Improve movement—pedestrian, bicycle, transit, taxi, paratransit, and private vehicle modes:

- Recognize the many competing functions of Market Street when determining modal balance.
- Look to the future role of Market Street as a great urban street with increased transit and bicycle use, and a transformed experience for pedestrians not only going to work, but seeking destinations on the street and as part of a network of park, plaza and street activities.
- Apply measures to make transit and bicycle travel on Market Street faster, more efficient, more reliable, easier, safer, and guided by clarity of way-finding
- Meet universal design principals to enhance accessibility for all users of all ages and abilities

Improve opportunities for modal transfer and make pedestrian/cyclist improvements:

- Market Street should be the hub of integration across modes. It is here that cyclists and pedestrians should easily access MUNI, BART and the Transbay Transit Center.
- Provide clear wayfinding for all users of Market Street.
- Provide sufficient secure parking for cyclists.

- Provide real-time information on underground arrivals at street level so that transit users can make fully informed decisions and take advantage of overlapping service.
- Locate planned bike share hubs near major transit stops.

Link transit decisions to street corridor character and priorities:

- Correlate boarding and alighting locations to street/plaza improvements.
- Improve disabled access to transit. Achieve effective orientation with improved way-finding.
- Provide safe, pleasant waiting conditions.
- Provide immediate linkages to surrounding destinations and districts.

Enhance Transit Mobility: Consider and test measures, such as:

- Extend transit-only lanes – east from 5th inbound, east of 8th outbound – and enforce.
- Consider optimization of stop locations, potentially using “skip-stop” service patterns—but recognize that best practice evidence cautions against long stop spacing for local-stop services in a downtown environment.
- Time-restrict, prohibit, or reduce private vehicles; recognize that this may require forced right turns (already in place on portions of Market Street) which conflict with pedestrian and bicycle movements, and may increase traffic demands on parallel facilities.

- Set time restrictions or seek alternative locations for deliveries.

Address Private Vehicles: Address implications of car use and car restrictions.

- Recognize that car volumes on Market Street are low, but have disproportionately high effects on other modes.
- Enhance way-finding to vehicular parking off of Market Street.
- Study vehicle restrictions – both for traffic along Market Street and for traffic turning onto Market Street from north-south cross streets – to determine what diversion may occur and what benefits to other modes might be derived.
- Consider demand management tools such as congestion pricing and shuttle management to reduce effects of vehicle restrictions on Market Street
- Increase efficiency of north-south traffic crossing of Market Street to improve north-south transit service
- Provide accessible areas for vehicles to drop off or pick up disabled persons close to their destination or origin.

Figure B. Average number of people on Market Street by mode, weekday PM peak period



Figure C. Number of people along Market Street by mode, weekday PM peak period

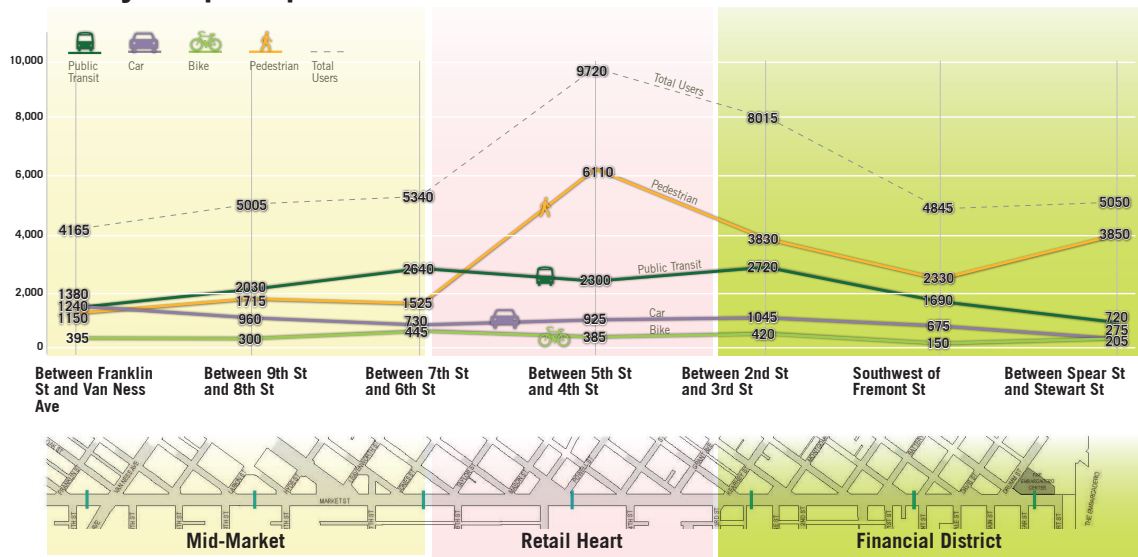


Fig. C - This multifaceted diagram provides a variety of information about volumes, location and types of trips along Market Street. It also helps to characterize three of the key districts along the street in terms of their profile of trip-making. Pedestrian volumes shown in gold on the charts illustrate that typical trips on Market Street begin or end as a pedestrian.

Figure D. Existing bicycle conditions

CORRIDOR CONDITIONS

Signal Timing Not Optimal for Cycling Speeds

Dedicated Bicycle Facilities

"Leapfrogging" With Buses and Vehicles

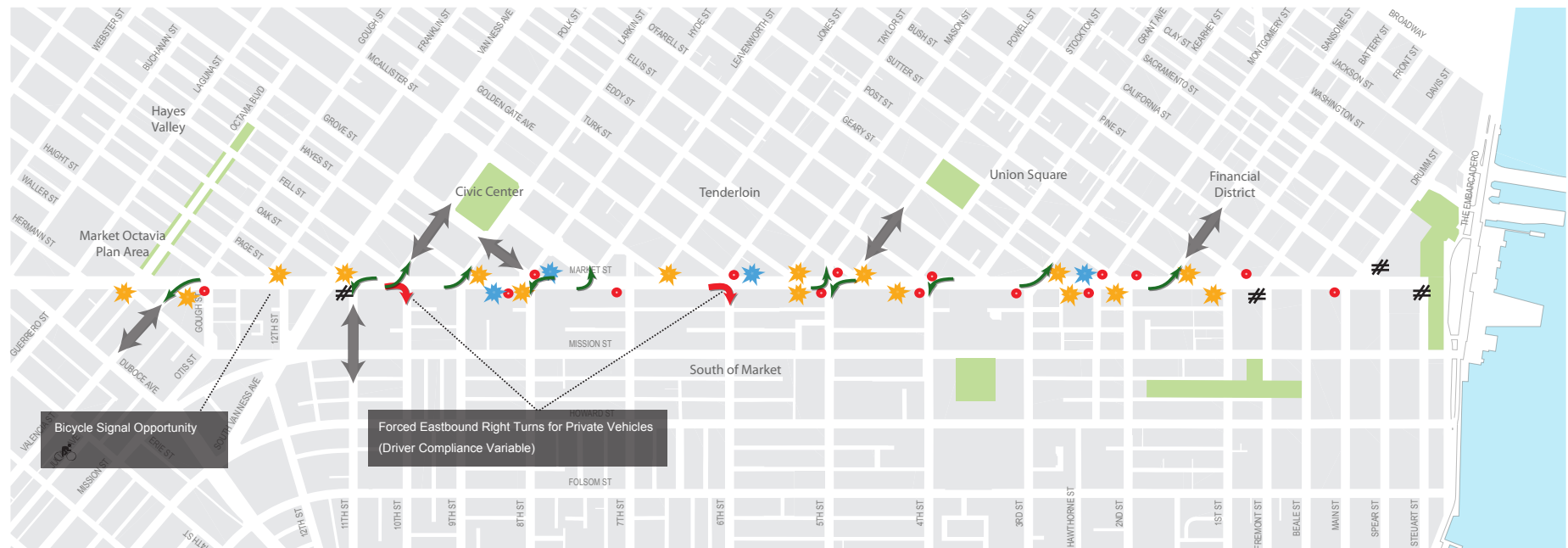
Vehicle Congestion on Cross-Streets and Market Street

Market Street at Guerrero Street

Market Street at 8th Street

Market Street at 5th Street

Market Street at Stuart Street



Source: San Francisco GIS Data - <http://gispub02.sfgov.org/website/sfshare/index2.asp>

- Pinch Points
- ★ Conflicts with Right Turning Vehicles
- ★ Conflicts with Dwelling Buses
- ↔ Challenging Connection Point
- ↘ Desirable Left-Turn For Bikes from Market Street
- # Muni Track Conflicts (Track Spurs/Constrained Space for Bicycles)

Fig. D - Bicycle conditions along Market Street show that pinch points between transit boarding islands and the curb occur at many intersections along with an inconsistent path of travel that makes cycling difficult along the length of the street. The four bars at the top indicate the varied street configurations for bikes down the length of Market Street.

Source: City of San Francisco GIS data

Enhance Public Realm Experience

Central to the success of the Better Market Street program is the enhancement of the public realm. This will entail the improvement of existing spaces and realization of a network of links and spaces that benefit from:

- environmental conditions such as sun access,
- high volumes of pedestrian use,
- civic and cultural programs,
- the serendipity of a lively urban street—San Francisco’s defining artery, and
- supportive ground floor designs and uses.

In studying existing conditions, the analysis sought to identify strengths and weaknesses of the current system in reaching this goal.

Findings

Sidewalks offer Opportunity for Change: The existing generous width of sidewalks could support additional uses, modes, and recreational, civic and social activity, along with a long menu of temporary uses characteristic of a vital city street. The exceptions are the Octavia zone, where widths are the minimum dimension to comfortably allow pedestrians to pass, and the Retail District, where pedestrian use levels are particularly high and many on-sidewalk activities already exist. Other types of change are still possible in these areas, including expanded programming for civic or social activity, more places to stop, sit and enjoy city life and easier connections along and across Market Street.

Plazas Lacking in Character and Number:

Larger plazas punctuate Market Street at regular intervals but are not strong destination points and do not activate Market Street. Medium and small gathering spaces are insufficient in number and need also to be improved and activated, as demonstrated by recent surveys documenting the very limited ways these plazas are used.

Public spaces along Market Street do not invite people to stay and enjoy the street, or offer any opportunity for cultural, arts, or recreational activity. There are few opportunities to sit down along the street or in adjacent open spaces. There are few invitations to engage in commercial, physical, or play activities. The areas that are the most active transit nodes fail to capitalize on the influx of pedestrians or to invite them to engage in activities other than simply waiting for transit.

Pedestrian Activity: The existing conditions analysis benefits from an on-the-street Public Space Public Life survey with a focus on pedestrian activity. Findings show dramatically large variation from block to block, little pedestrian activity after 6 p.m., perceived security problems (especially between 6th and 12th streets), and little mixed-use residential neighbors to provide passive surveillance and activity. Market Street crosses through diverse neighborhoods, yet the range of activities along the street is similar across the corridor.

Solar Access: The north side gets more sun over a longer period of time and features angled streets and larger public spaces. The south side benefits from afternoon sun and features smaller public spaces and alleys. Few businesses in the sunny areas have yet taken advantage of this environment and the wide sidewalks that could serve a variety of pedestrian uses.

Green Landscape: Market Street does not live up to its potential as a strong landscape link in the City with a positive, flourishing green landscape image as intended with the last generation tree plantings. This is due largely to a high degree of shade and poor soil conditions and a lack of engaging and attractive landscape that would reinforce and invite active, comfortable, diverse use and users. This is a significant interruption in the larger plan for a city green network.

Land Uses: Most of the land uses along Market Street offer little in terms of activating the street, particularly at nighttime. Ground floor façades vary in quality, affecting the overall character and pedestrian environment. This results in long stretches of inactive sidewalks and security challenges, and represents a failure to capitalize on one of the most important points of lively interaction between city life and pedestrian activity.

Design Ideas

While not practical to assume that all the design ideas listed here can be accomplished it must be mentioned that certain trade-offs inevitably will need to be made to move the project forward. It is difficult at this point to understand the extent how those trade-offs are made without design options that allow us to value each design idea, which is why moving forward with a clearly defined set of goals is critical to process.

Realize a Pedestrian Environment of Life and Activity:

- Zones for furnishings, pedestrians, signage and transit access areas.
- Street furnishings/seats to reinforce a new sense of invitation.
- Shorter and more direct crossings to remove visual and actual obstacles, such as circuitous routes and unfavorable signal timing.
- Sidewalk extensions where added space would shorten crossings and still accommodate other modes.
- Continuous sidewalks across lesser-used side streets.
- Pedestrian desire lines that are free from obstructions and are visually clear with signage that supports movement to key locations along the corridor. Such a desire line is the most direct route between A and B from a pedestrian's perspective.

- Programmed spaces, linking the life of San Francisco to the life of Market Street, and inviting families, older persons, and children, along with workers and visitors, back to Market Street.
- Integrated plazas benefiting from the surrounding uses and living/working population.
- Built edges and retail frontage to frame the desired pedestrian paths and spaces.

Improve Security, Real and Perceived:

- Activate street with the pedestrian programs, mixed land uses, and improved (transparent) storefronts that constitute an “invitation to spend time.”
- Improve lighting.

Scale Sidewalks to Activity; Create a Sense of Urbanity:

- Consider existing and projected future levels of pedestrian activity.
- Encourage uses, designs, and programs of activity that encourage people to extend their use of Market Street—to stay and enjoy, observe, meet, and gather.
- Scale sidewalks to activity type and level; create an inviting and comfortable pedestrian experience.

Consider Competing Space Needs:

- Reduce potential conflict between bicycle facilities, loading, delivery, and drop-offs.
- Configure all spaces in the context of the broad goals of the project and the six drivers of design outlined here.

Figure E. Publicly accessible open space and connections



UN Plaza



Hallidie Plaza



Crown Zellerbach

Fig. E - A successful pedestrian environment is measured, in part, by the number and quality of connections to the larger open space network, and such networks have been identified in the San Francisco Open Space Vision 2100 as well as in Market/Octavia, Powell Street and Transit Center plans.



Lack of furnishings allows for only transient activity.



Signage elements obstruct views and connectivity.



Seating encourages social activity.



Absence of building uses removes frontage zone and lack of furnishings make sidewalk inactive.

Sidewalks offer the greatest opportunity for change and are able to support additional activities that can help lure people to Market Street and encourage them to stay. Significant increase in pedestrian use can be supported by current sidewalks, even potentially inviting compatible uses to share the space.

Reduce Conflict & Friction

Market Street endures many points of conflict and friction that create roadblocks to efficiency and clarity, set one mode of travel competing against another, and result in real and perceived safety problems. Both conflict and friction affect the pedestrian/street life experience, discouraging the use of Market Street. Conflict, primarily involving collisions involving various combinations of transit vehicles, private vehicles, bicycles and pedestrians, is well documented, and will require action to improve safety. More subtle areas of friction affecting bicycle and pedestrian choices and the character of public spaces also call for concerted effort.

Design and operations strategies with the potential to resolve these problems while bringing an appealing urbanity to the street include:

- relieving pinch points by relocating conflicting functions,
- striking a different balance in the street section devoted to each mode of travel,
- reducing the negative effects of automobile traffic, and
- reducing delays for transit.

Findings

Collisions: The highest-risk intersections for collisions involving Muni vehicles are at 3rd and 4th streets. Cyclists are disproportionately involved in collisions, especially between Octavia and Gough. Over one half of all collisions involve either pedestrians or cyclists, and most collisions are with private vehicles.

Obstacles: Obstacles, in their presence and location, are a major source of conflict and friction. These include BART vents, BART/Muni portals, transit loading islands, Muni tracks, loading bays, landscape elements, and utility poles.

Travel Time/Speed: Traffic signal timing along Market Street is not optimally suited for any mode. For buses and bicycles, in particular, this can result in “leapfrogging,” or a rolling series of conflicts, which causes delays to both modes. Signal timing also affects all modes traveling on north-south cross streets; optimizing for through movements on Market Street may have consequences to modes crossing Market Street that should be considered.

Delay: While most transit delay, in terms of time spent stopped, can be attributed to loading and unloading and signal delay, vehicles are a notable contributor to delay, particularly where there are high volumes of pedestrians in crosswalks preventing eastbound vehicles from turning right. This auto congestion often backs into the main travel lanes, causing delays to transit. In these cases, eastbound transit vehicles in the curb lane often merge into the center lane to avoid the congestion, sometimes preventing other transit vehicles from accessing stops. Cyclists also delay pedestrians by encroaching into crosswalks at signals, reducing the effective width of the crosswalk. In turn, traffic congestion, “leapfrogging” between bicycles and transit, and boarding island “pinch points” causes delay to cyclists. As noted above, leapfrogging also delays transit. The traffic signal timing also results in delays for pedestrians and cyclists.

Pedestrians: Because nearly every trip on Market Street begins or ends as a pedestrian – whether involving the large number of transit riders, bicyclists or drivers – pedestrian exposure is great and makes them frequently a party of collisions with other modes in conflict situations. Even more frequently, they are affected by issues of friction, where multiple movements need to occur in very limited space, where street crossings cannot be navigated in the allowed time. Pedestrian areas such as sidewalks and pedestrian desire lines along sidewalks and through street crossings are frequently interrupted, blocked or limited by illegally parked vehicles, transit portals, or other obstacles.

Turns and Cross Traffic: The combination of left- and right-turn challenges, heavy vehicular cross traffic, and the “wobble” that crossing vehicles must make to navigate skewed intersections presents serious friction and particular problems for bicycles and pedestrians.

Bicycles: Bicycle travel is a fast-growing mode on Market Street, and as bicycling continues to increase, so do the challenges cyclists face. Despite representing only 5% of the people on the street at peak periods, cyclists are involved in 30% of all collisions. Cyclists compete for space with Muni and private cars, and the majority of problems are caused by “leapfrogging” buses and inadequate space provision at intersections.

Space: Space allocated among modes of transport does not always equate with intensity of use. Most often this is a matter of allocating the horizontal section of the roadway, i.e., width

allowed for transit, bicycles, and vehicles, as well as sidewalk width for pedestrians. The greatest conflict typically occurs at intersections that often become pinch points where modes need to share space, but conflicts are also present in between intersections, such as between buses and cyclists.

Design Ideas

Increase focus on pedestrians: Though conflicts increase on Market Street where pedestrian volumes are high, international Great Street lessons suggest that high-use areas can become the safest settings, where all users anticipate and compensate for those volumes.

- Consider the street as a public social space, minimizing conflicts and inviting diverse users and a wide variety of activity.
- Recalibrate signal timing: priorities, e.g., leading pedestrian intervals and separate phases.
- Install intersection and mid-block crossing treatments to guide and protect pedestrians.
- Restrict vehicle turns, easing conflicts with pedestrians and cyclists.
- Minimize crossing distance; channelize or shorten actual walking paths.
- Calm traffic.

Reduce delays for transit: Consider multiple options to reduce delays of transit boarding and alighting, and evaluate through modeling. Consider such changes as:

Figure F. Distribution of space - above grade

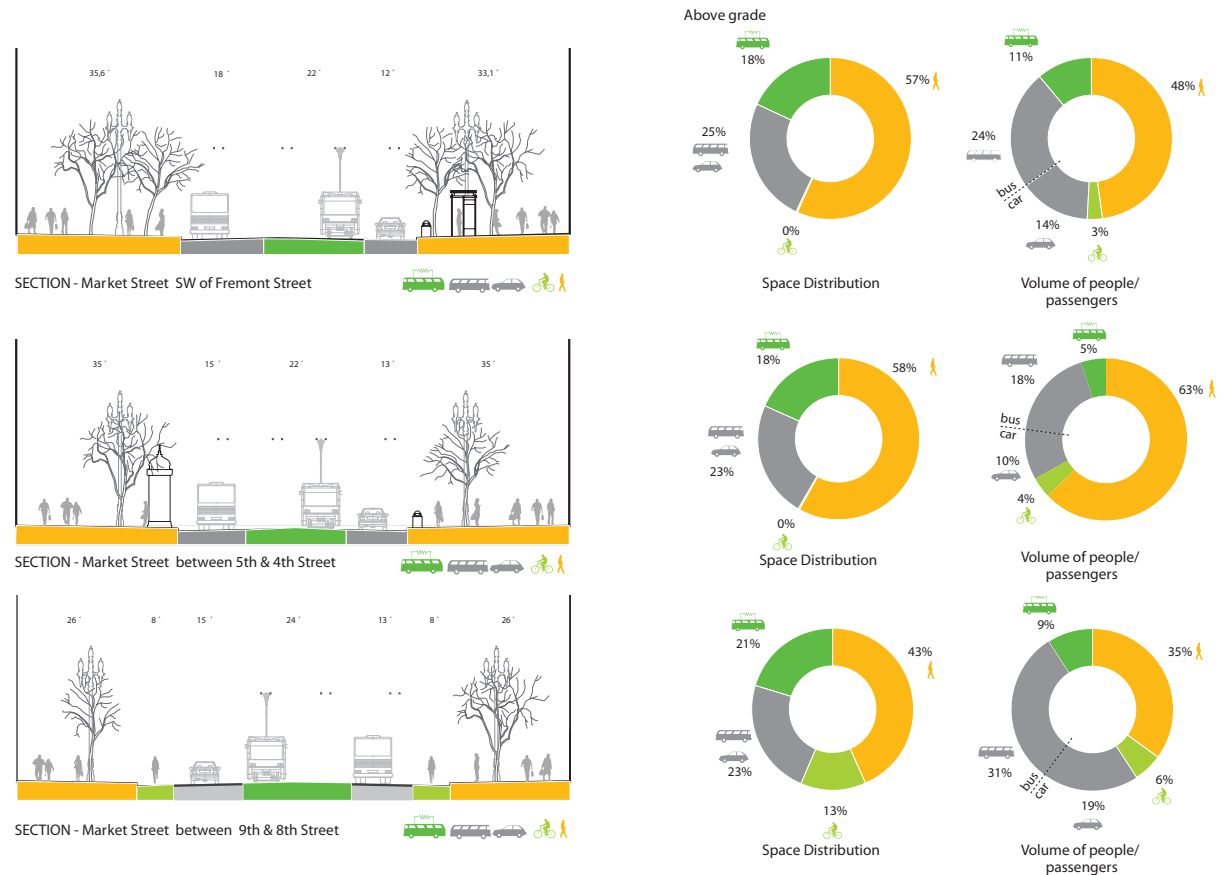


Fig. F - This illustration shows the comparison of street sections in three locations of Market Street with respect to the space allocated to pedestrian, bike, transit, or vehicle uses. The circular graphics use the information of the street sections to compare the space distribution to the volume of passengers using each mode of travel. Reducing conflict and friction will involve adjustments in these allocations of the street/sidewalk section.

Figure G. Vehicle traffic volumes: PM peak hour



- Traffic Analysis Study Area
- Greater than 2000 vehicles per hour
- 800 - 2000 vehicles per hour
- 500 - 800 vehicles per hour
- Less than 500 vehicles per hour
- Arrows indicate one-way street

Fig. G - Turns and cross traffic have been noted in the findings as a significant conflict with pedestrian and bicycle travel, especially in relation to streets that cross Market Street and serve heavy volumes, much greater than volumes on Market Street itself. This map indicates those heavy use streets and indicates comparative volumes.

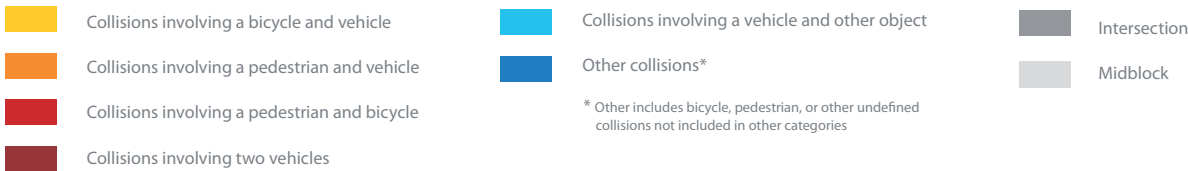
- Repositioned islands (i.e. from end of block to mid-block) to reduce frequent pinch points at intersections.
- Longer and wider boarding islands to improve service, safety and accessibility.
- All-door boarding to reduce time stopped.

- Level boarding to better serve all users.
- Ticket machines to reduce boarding time at bus stops and boarding islands.
- Priority signals to favor particular modes at particular times.

Address bicycle conflicts with separations and priorities:

- Consider cycle tracks, including the study of benefits along with the challenges of competing needs in the right-of-way, such as paratransit, loading, and pedestrian access.

Figure H. All Market Street collisions, 2005 - 2009



* Other includes bicycle, pedestrian, or other undefined collisions not included in other categories

Fig. H - This graph indicates the location, types and volume of collisions experienced on Market Street. The first three types at the top of each bar relate to pedestrians and bicycles and can be seen to constitute over half of the collisions recorded on the street.

- Implement signal synchronization and timing optimization; try to ease flow and reduce bunching or platoons of cyclists.
- Delineate users of lanes and provide sufficient space where lanes are shared.
- Implement waiting areas for cyclists wanting to cross Market or turn left from Market.
- Install way-finding elements for cyclists: delineations in street, on curbs and on signs; education; bicycle signal heads; textured pavement; bicycle boxes at intersections.

Enhance Access

The effort to maintain and enhance access to and along Market Street is central to the Better Market Street program, which begins to redefine the concept of access as a driver of design. The objectives for Market Street access include not only access to and among modes of transportation, but also access to district destinations, a safe and attractive network of pedestrian routes, and an emphasis on visual orientation. A fully integrated system of access will be successful in moving people, linking modes, and bringing residents, workers and visitors to the heart of San Francisco while showing off the City's destinations and personality.

As such, this broad definition of access embraces all of the traditional transit-related issues—points of demand, physical access to stops and between services and modes, and access to parking, loading, and paratransit. At the same time, it considers places and activities that warrant a greater presence on Market Street, including access to cultural destinations and entertainment, as well as everyday amenities and opportunities to meet and interact in city spaces. The existing conditions analysis identified both physical and programmatic problems and opportunities for improvement.

Findings

Approaches: The quality of approaches from side streets dramatically affects the access experience to Market Street and the ability to link Market Street to surrounding destinations and districts. The most challenged approaches are west of 5th Street.

East of 5th Street uninviting approaches also are experienced on the south side of Market Street, especially in the Financial District. The Retail District benefits from inviting approaches that work in both directions from 5th to 2nd Street.

Transit Demand: Demand for and access to surface transit is relatively constant along Market Street east of Van Ness. Multiple stops with more than 2,000 combined daily boardings and alightings demonstrate relatively high demand along the corridor, with busy stops at subway stations and transfer points, especially in the Financial District where the greatest number of routes converge. Demand related to Chinatown bus transfers will be relocated below grade with the Central Subway project.

Pedestrian Desire Lines: Along Market Street sidewalks, pedestrian desire lines (the preferred path to a destination based upon factors such as ease, visual orientation, security and safety) are achievable and obstructions generally kept out of the pedestrian movement zone. However, crossings of Market Street face challenges, including fast moving traffic, signal timing keyed to motorized traffic, small and exposed traffic islands, and illegally parked cars. 26% of North/South crossings (8 out of 30), are interrupted, requiring waiting on traffic islands and forcing indirect paths of travel. Along the northern side of Market Street, more than one third of the intersections significantly interrupt the pedestrian path, leaving pedestrians stranded, thereby discouraging repeated use. In addition, some desired movements are not served at all, such as mid-block crossings from long south-side blocks.

Destinations: Many centers of activity and destinations are just off Market Street, and yet have little relationship to the street. Coordinated programming, wayfinding, or real time information sources with theaters, convention events, educational institutions, regional transportation centers, and retail destinations that could bring new life to Market Street are seriously lacking. Though these destinations bring people downtown, people are not encouraged to stop and spend time on Market Street. Upcoming projects offer opportunity to activate Market Street with new residents, businesses and public places. Similarly, the benefits to these surrounding destinations of having an identity on Market Street is also lost.

Grids, Geometries & Intersections: The difference in the street grids north and south of Market Street has profound effects on the movement and experience of Market Street users. Challenges include a limited number of easy crossings due to intensive traffic and multiple skewed crossings.

The asymmetrical grid also brings an unexpected result, namely that what looks like an easier walk for pedestrians on the north side, with short blocks, is in fact so constrained by these problem intersections and crossing traffic that pedestrians favor walking on the south side. Walking the corridor on the north side from Octavia to The Embarcadero can take 15 minutes longer than on the south. As problematic as these crossings are now, it should be noted that the angled grid provides easy orientation and great potential for signature/identity spaces to guide pedestrian access.

Loading: Loading bays along Market Street are heavily used for many different purposes, among them deliveries, passenger drop-off, tour and shuttle buses, paratransit, and taxis. Relatively few parcels fronting Market Street can be accessed via rear alleys or from side streets, however, and rear loading docks are rare. Loading bays create problems for cyclists at several points and at times detract from the overall attractiveness of the street as a social space.

Taxis: There are few spaces reserved for taxis on Market Street, with only one drop-off zone and one passenger loading zone designated. Taxi stands are located off Market Street. For travel, taxis are allowed in transit-only lanes.

Parking: There is currently no direct access to parking from Market Street. Available parking near Market Street is extensive and sufficient; access is primarily limited at the present time by lack of visibility of and orientation to the multiple smaller garages that make up 80% of the available parking. Double-parking along Market Street (including partial sidewalk parking) is prevalent.

Design Ideas

Improve Intersections to invite and improve pedestrian access:

- Implement crosswalk treatments and corner geometries to guide and reduce crossing distances.
- Consider and test effects of removal of islands, converting islands to extensions, and raising crossing treatments.

- Landscape to frame rather than obstruct.
- Calm cross-traffic.

Improve Approaches:

- Recognize that different design solutions are needed on the north side versus the south side of Market Street.
- Envision opportunity on north side to provide a varied experience of crossings, public spaces, and landscape strategies; seek place-making opportunities where uses and physical configuration warrant such as along Grant Street; and test mobility impacts.
- Reinforce a more continuous experience along south side.
- Improve approaches and tie to character of north or south side:
 - Designate streets west of 5th for intensive improvement, and provide guidance. (Suggested network includes Octavia, Hayes, Grove, Van Ness, Leavenworth, McCoppin and 7th streets.)
 - In Financial District, focus on Spear and First Streets to improve approach.
 - In retail and convention area, focus on 3rd, 4th and 5th streets

Enhance Access to Destinations and Districts:

- Utilize place-making, view corridors, and environmental graphics as stepping stones to improve access to key destinations and connect back to transit.

- Test designs that reinforce the identity or multiple identities of Market Street.

Stitch Across and Along Market Street:

- Consider mid-block crossings.
- Repair continuity of pedestrian paths/desire lines by healing extensive interruptions on north side.

Enhance Way-finding:

- Reinforce desire lines with physical and visual changes.
- Reveal extent of parking available off of Market Street.
- Focus on paths to and from destinations.

Address Loading:

- Consider more effective use of existing bays, including better enforcement of use laws.
- Position relocated or new loading bays to avoid or minimize conflict with travel modes
- Seek alternatives west of 8th, including “delivery stations” on side streets.
- Test flex-time delineated loading to avoid friction during busiest times of day.
- Consider more bays for loading to match particular needs and locations.
- Consider flex lanes that serve various loading/mobility/lingering functions throughout the course of the day, week and year.

Figure I. Districts and centers

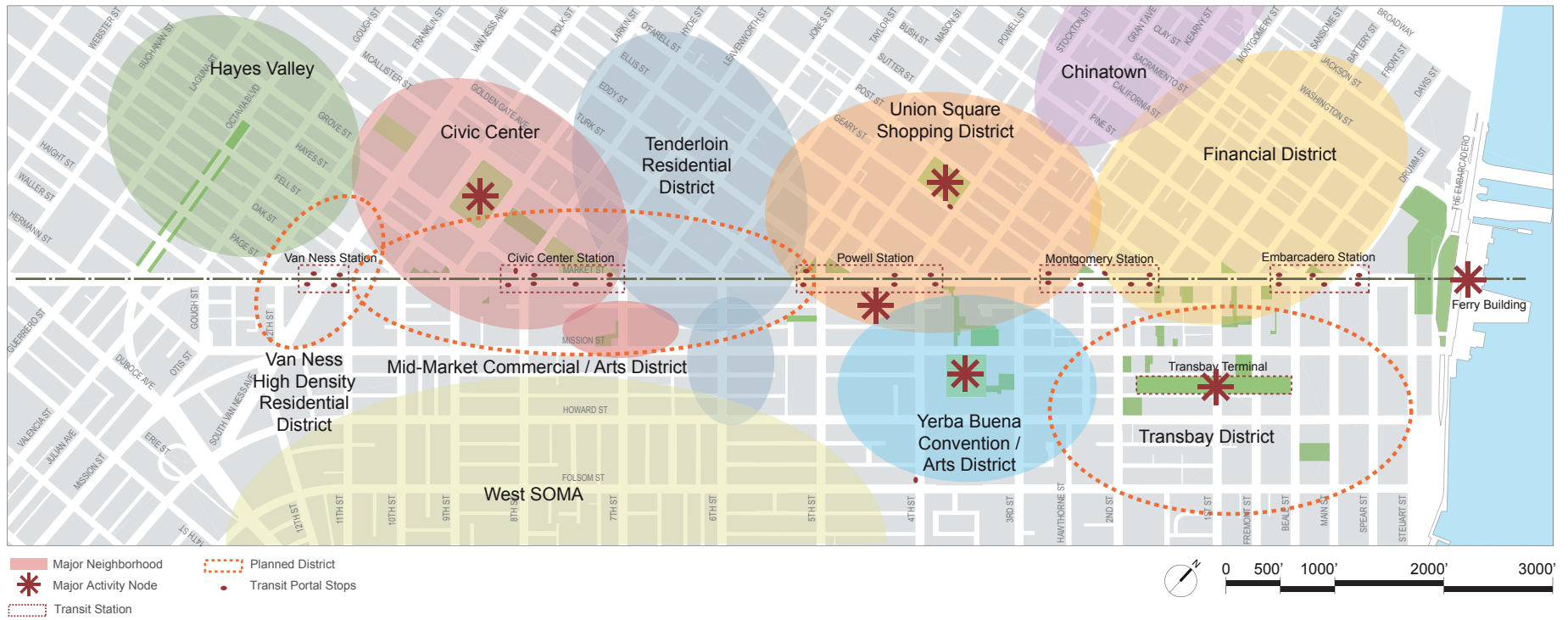
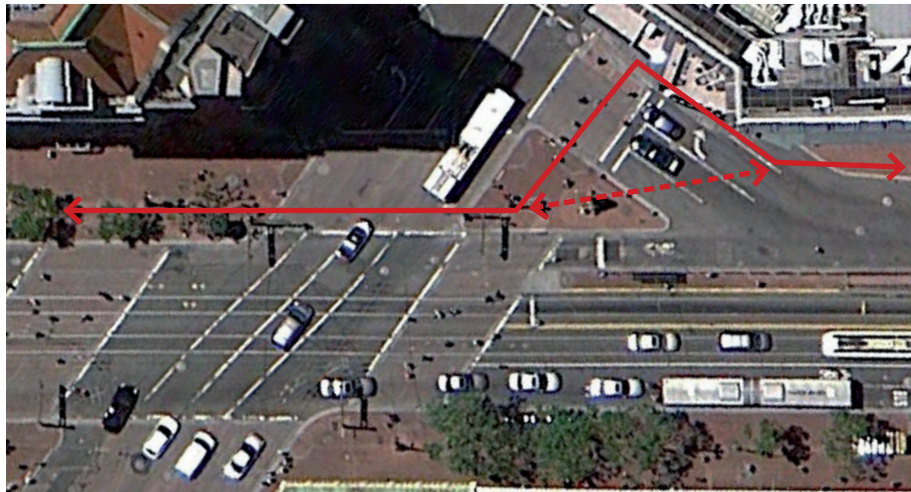


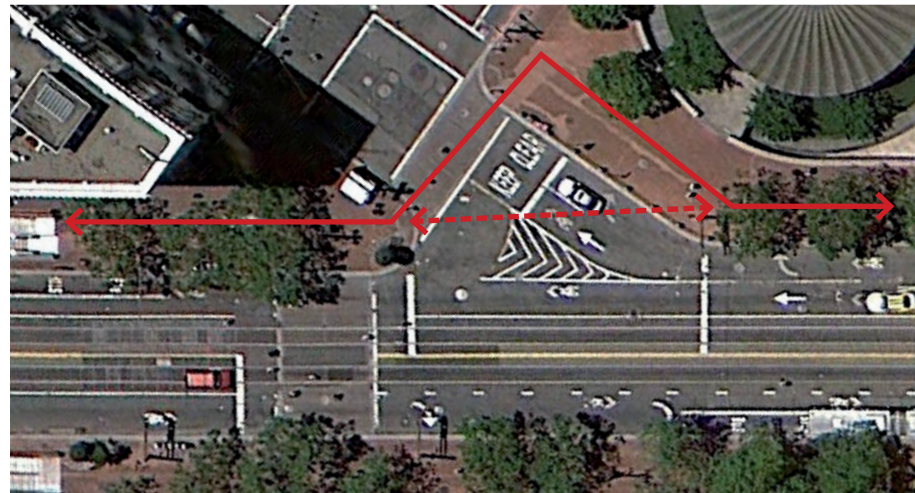
Fig. I - There are currently many successful destinations along Market Street that bring people downtown but all lack a strong physical and visual connection to or presence on Market Street.

Figure J. Desire line interruptions



Geary and Kearny Streets intersection

Desire line interruptions and “island hopping” by side streets
 in **36%** (7 of 19) of side street intersections at northern side



Sansome Street intersection

Desire line interruptions
 in **11%** (2 of 19) of side street intersections at northern side

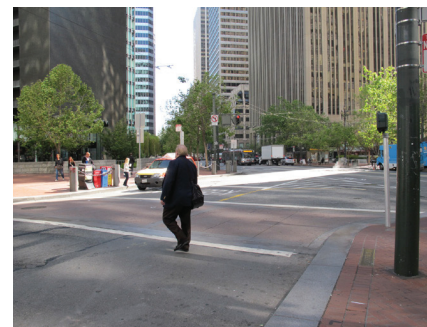


Fig. J - Along the northern side of Market Street pedestrian desire lines are interrupted by illogical paths of travel, numerous signals that often strand pedestrians on traffic islands, primarily on the north side.

Spotlight Unique Identity

Market Street continues to serve a city-wide civic purpose, but could do much more to reflect and celebrate San Francisco. Research highlights powerful stories and places at the heart of the City's growth and evolution. Parades, marches, and celebrations bring local, national, and international crowds. Yet major destinations and economic generators within a block or two of Market Street are invisible from the City's "great street."

There is little on Market Street to reflect the City as it is today and the ways in which it is growing and changing. Many opportunities to spotlight destinations and districts on surrounding blocks have been identified through this work. These destinations offer a window into San Francisco's signature prominence in the arts and design, in sustainable citywide initiatives, and in openness to technology advances (announced every year at Moscone). Also immediately linked could be the world of farm-to-table food at the Ferry Building, and the diverse and numerous neighbors here and throughout the City who see Market Street as their great street.

Design and operations strategies must be conceived to strike the right balance between establishing a corridor-wide identity and defining distinctive zones along Market Street that relate to surrounding destinations.

Findings

Lacking Legibility, Identity, and International Draw: People arrive on Market Street expecting

a premier experience on par with the great streets of great international cities, but find themselves disappointed, confused or lost. Tourists seldom put Market Street on their itineraries, using it primarily for central access or Ferry Building visits. For residents of the city and region, the civic identity of Market Street revolves around the calendar of parades, festivals, and events, and the link to the Civic Center through UN Plaza. National and international examples offer a much more diverse menu of signature public realm experiences and events that could be accommodated on Market Street.

Five Unique Zones Characterize Market Street:

Octavia, Civic Center, Mid-Market, Retail District, and Financial District. Analysis of the street, its physical characteristics, the nature of facing buildings and uses, the level, type and daily profile of activities and the key destinations along and near Market Street reveals a much richer palette of civic and neighborhood identity features on or near the street than is manifested or perceived along Market Street today. These five character zones also correspond to zones of pedestrian use and activity.

Views: Market Street offers many views to surrounding districts and landmarks, including long views for City orientation, as recorded and catalogued for this study. Key views include regional destinations Twin Peaks, City Hall, and the Ferry Building. However, near-in views, especially along angled approaching streets north of Market, also offer excellent orientation possibilities. Along Market the raw material for visual interest is often in place but not framed or featured.

Design Ideas

Bring Civic Events to Market Street:

- Anticipate and enable civic/citywide uses in the new design.
- Work with City team to program traditional and unique events for each annual cycle—and test transportation and place-making implications.
- Cooperate in the re-branding of Market Street as it returns to its role as the City's Great Street.

Highlight the Unique Features of Each Zone along Market Street:

- Architectural character and the stories it tells of the past and future.
- Building pattern or grain, emphasizing the different patterns of use and history of growth suggested by this varied urban rhythm.
- Pedestrian activity, which varies dramatically block to block, yet may offer opportunity for change.
- Diversity of land uses, especially those uses that might attract new populations of Market Street users or enliven the street with compatible activity at ground level.
- Destinations of high interest and activity.

Harvest Economic Benefits of a Great Street:

- Expand local and regional use.
- Increase pedestrian use, comfort, and safety.
- Implement incentives to locate on Market Street.

Figure K. Key views

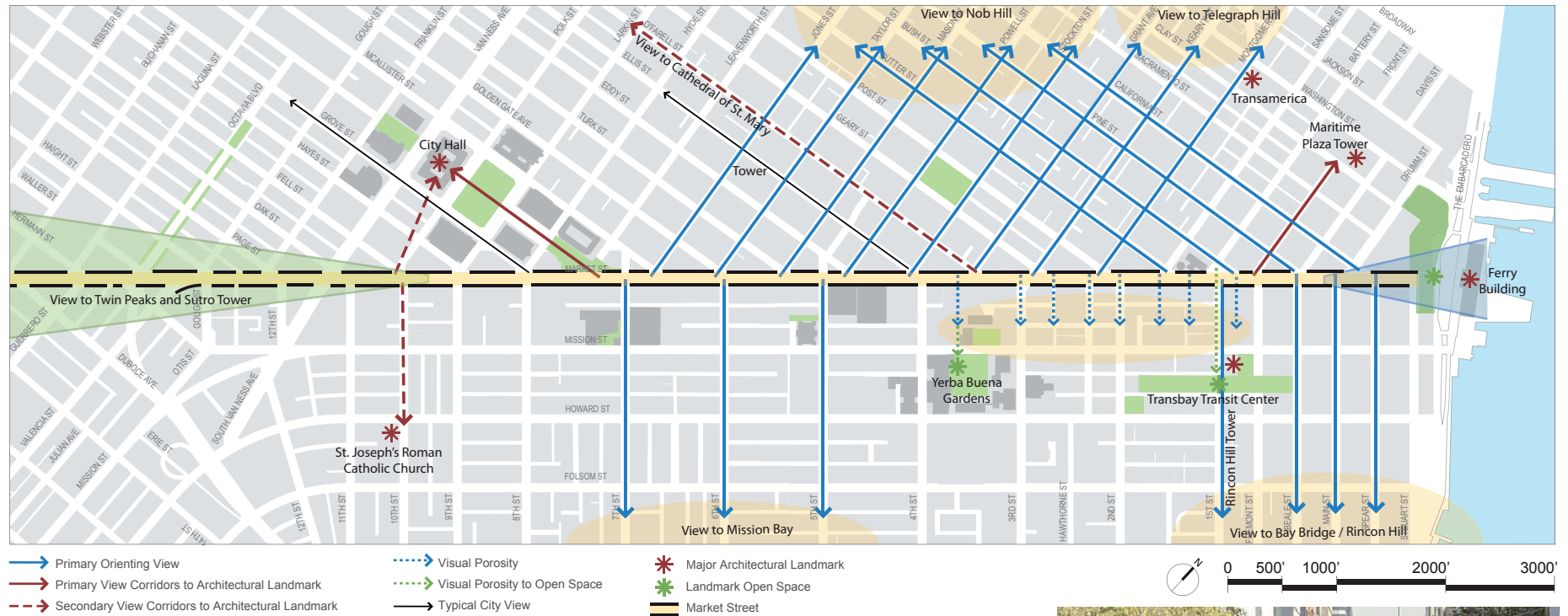


Fig. K - Views from Market Street to other civic locations, historic neighborhoods and iconic landmarks, if featured and framed well, can give pedestrians a sense of place and orientation within the context of the city. These are particularly evident and more available on the north side of market where such orientation can be very important to counteract the confusion of angled streets approaching Market Street. The views illustrated here are the inventory of views completed and recorded as part of the Existing Conditions analysis for Better Market Street.

Test Design Implications and Impacts and Find the Balance for Identity:

- Define elements for a continuity of expression.
- Identify opportunities to bring diverse identities to the street.



Market Street is the civic heart of the city and hosts many of the parades, protest and marches that occur in San Francisco.

Integrate Actions: Form, Streets & Function

This sixth driver interweaves the findings and design ideas of the previous drivers to emphasize the need and potential for synergistic action. As such this driver introduces a meta-theme to the Better Market Street work, and begins to describe a path from findings to action.

The emphasis is on the need for integrated action. Previous discussions of mobility, experience, conflict, access, and unique identity are brought together with the broad observations of an urban design analysis to lay the groundwork for challenging decisions and promising opportunities ahead. The discussion which follows spotlights interrelated findings of urban form, street character and functionality.

As a result this Design Driver for Integrated Action can lay the groundwork for the preparation of an Urban Design Framework which will be a next step in the Better Market Street process. Design studies will consider and test alternative approaches in order to achieve these objectives.

From Findings to Action

In-depth review of existing conditions and best practices brings the focus, over and over again, to the distinct differences along the street. These are differences where urban form, street character, and functionality and functional capacity work together to create memorable and distinct zones of like characteristics, inter-related problems, and the potential for coordinated solutions. Enabling the varied and lively personalities of Market Street to become more visible in form and program in no

way diminishes the overriding potential of Market Street to be the City's great signature street. Rather, it invests that signature with the intriguing possibilities of diversity that characterize San Francisco today and tomorrow.

Urban Form: There are a myriad of ways in which urban form can be observed, recorded and analyzed. In this case, an extensive on-the-street survey and an in-depth record of urban form were completed to inform and urban design framework and the future testing of design solutions. This work highlights the critical need to integrate considerations of architectural character, history, identity, land use, destinations, block structure, streetwalls, open space, intensity of use (passing through and lingering), and views with the essential elements of transportation service.

Street Character: Intimately linked to the considerations of urban form are the specific elements of street design which hold tremendous potential to improve the experience of Market Street. The full realization of this potential requires an expansive definition of the "street" running from the life and activity of storefront uses at the edges, across the full extent of sidewalk, transit, bicycle, paratransit, traffic and wayfinding elements to the other facing storefront or building entry or plaza that defines the other side of the street. Physical characteristics of the street itself—its accommodation of modes, per both operational strategies and physical lane widths; the experience of users seeking to move efficiently and reach destinations; types of conflict or friction; viability of pedestrian links; and level of programming

of the public realm—differ along Market Street, creating varied character recognized by users and passersby alike. As a result the trade-offs among users and modes that will be essential for action may well vary by district as well.

Taking the broad urban design perspective, it must also be emphasized that many of the problems and many of the opportunities along Market Street revolve around the relationship or lack of relationship between and among uses. Recent surveys identified a lack of positive symbiotic relationships connecting storefront or building uses with sidewalk or plaza programming or daily enjoyment. The City's goals include welcoming a broader diversity of uses, a major increase in pedestrian activity, crowds, special events, gatherings and the full panoply of urban life.

Functionality and Functional Capacity: Demand for transit, with more than 200,000 daily boardings (including Muni and BART), represents a significant challenge to match services to needs along Market Street and already the manner in which service is provided varies significantly based upon geography and geometrics. A forecast of important changes in uses along the street, adding jobs, residents and destinations, will continue to differentiate that service. Improvements to functional capacity are being sought in each area where the street section varies and/or the number of transit routes changes, and requirements of each travel mode will necessitate adjusting the allocation of space and street configuration.

Ideas for an Urban Framework

Recognize Variety in Street Types:

- Accept the variation in street characteristics present along Market Street itself:
 - Some street elements/operations should be consistent along the corridor to emphasize continuity.
 - Some street elements/operations should be different along the corridor to emphasize Market Street's varied character.

Recognize, Test and Resolve Competition for Space among Modes:

- Consider flex lanes to accommodate activity peaks and valleys.
- Consider hybrid of street sections, loading platforms and lane widths along corridor.
- Recognize “pinch points” created by BART portals.

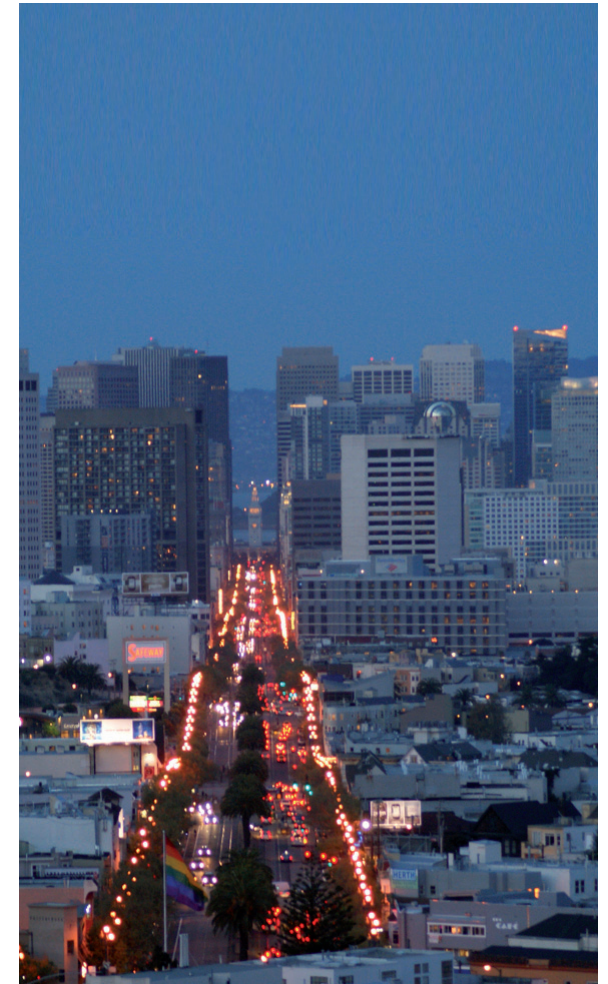
Feature Variety in Urban Form:

- Capitalize on unique urban form and asymmetry of block patterns which work together to frame the space of Market Street while providing distinctive, orienting, memorable districts and destinations along the street.
- Enhance the distinctive character of both the north side and south side respectively, yet as an integrated whole.
- Consider distinguishing character on north side of Market Street, with its shorter blocks and angled intersections:

- Implement discontinuous and varied experiences.
 - Highlight views to signature spaces and buildings to convey sense of history and orientation.
 - Utilize the sunny side of the street for public spaces and functional plazas and related building uses.
 - Implement place-making techniques, both permanent and temporary in conjunction with plans for spaces and plazas.
 - Simplify configuration to ease crossings while calming traffic
- Consider distinguishing character of the south side, with its long blocks and perpendicular intersections:
 - Design to the continuous experience and direct passage along Market Street.
 - Integrate with the greater density of development on the south side.
 - Seize opportunities to enjoy the specific points of sun access.
 - Optimize under-utilized space for a variety of more engaging uses, either permanent or temporary.
 - Integrate transportation nodes with public plazas and overall street life.

Encourage Positive Relationships Among Uses:

- Designs and policies, in concert with demonstration projects (as tried in other cities), can encourage a greater mix of uses in spaces, sidewalks, and surrounding buildings. When successful, this mix of uses and users is no longer considered “friction” but rather one of the pleasures of urban life.



Aerial views of Market Street provide a powerful message of the role of the street in the city and the changing character of the streetwall or building facade scale from one end to the other of the Better Market Street study area.

Figure L. Urban figure ground



Fig. L - This “figure ground” diagram illustrates the pattern of building footprints on the blocks lining Market Street. Clearly apparent are the differences in block size north and south of Market Street and the scale of buildings that exist on those blocks. Uninterrupted facades, especially along the south side result in uncomfortable long walks for pedestrians and few places to cross the street.

Figure M. Grids

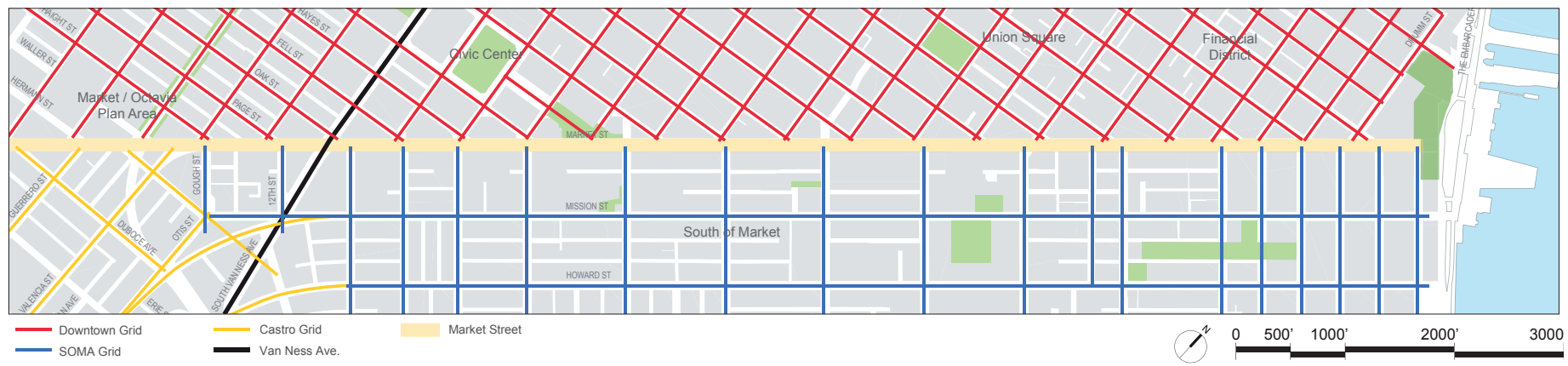


Fig. M - The different grids of the city that intersect at Market Street are apparent here, with only one street continuous across Market Street, from South Van Ness to Van Ness. These grids distinguish the north and south sides of the street.

C. Matrix of Key Findings

The Existing Conditions & Best Practices document provides an exhaustive record of Market Street design characteristics and operations. Based upon new survey work, site observations, review of past and current studies prepared by the City of San Francisco, and consultation with City staff, the full document reports on the analysis of those elements of Market Street which constitute a “Great Street”—providing a “catalogue” for urban form, character, and operations on all levels and for all modes. In the spirit of this Integrated Findings & Design Drivers document, that extensive documentation has been synthesized into an easy reference Matrix.

The Matrix of Key Findings is organized to parallel the content of the Existing Conditions & Best Practices analysis. It includes a succinct summary of each key finding, a specific reference to pages of the Existing Conditions and/or Best Practices research, a discussion of design and operational considerations suggested by that key finding, a checklist of geographic locations where this finding or action needs to be focused, and a series of notes referring to next steps in order to test ideas going forward.

As such, the Matrix or Key Findings provides an easy reference for future Market Street design tasks and may well be used in a variety of ways, including:

A broad overview of Market Street today, its characteristics, its challenges and some varied perspectives on actions needed

An easy reference for specific information by mode, by geographic area, or by operational or design element

A resource for consideration of trade-offs in the process of design, allowing quick reference to early findings, and/or

A checklist of additional data or analysis needed for design resolution.

Note: A version of the Integrated Findings & Design Drivers document is also available with a Key Findings Matrix included. This matrix provides capsule summaries of findings as applied to the issues and geographic areas of Market Street, as well as reference to specific pages in the Existing Conditions & Best Practices documents.

For access to this longer version of the Integrated Findings, please visit <http://www.bettermarketstreetsf.org/> and search for “Integrated Findings & Design Drivers, including Key Findings Matrix,” or contact Kris Opbroek, Project Manager, Department of Public Works, 415.558.4045.

