

# Upper Market Safety Project: **OVERVIEW**

## Project Goals

Increase safety and comfort of Upper Market Street for everyone, including people on foot, on bike, in a vehicle, and riding public transit.

Specifically, the project includes the following objectives and strategies:

- » Reducing the potential for conflicts
- » Designing the corridor to be more intuitive and consistent
- » Addressing primary collision patterns
- » Implementing safety changes as quickly as possible (i.e., phasing improvements)
- » Moving towards longer-term solutions that incorporate community preferences and priorities

## Project Components

The Upper Market Safety Project is organized into three distinct groupings of potential changes/improvements:

- 1. Streets & Sidewalks** - physical changes such as roadway striping and sidewalk/streetscape improvements
- 2. Circulation** - modifications to traffic flow and signals
- 3. Curbspace Management** - prioritizing the use of the curb for parking, loading, emerging mobility services, and other uses



The Upper Market Safety Project developed an initial draft curbspace management plan in 2016 to address double-parking and overall inefficiencies of how curb access is allocated along the corridor. While not the focus of tonight's meeting or the current project phase, a separate effort to revisit and adopt/implement this plan is expected to take place in late 2018 or 2019.

## Key Project Drivers

### Community Vision, Recommendations, and Development Guidelines

This project reflects the values of the surrounding community. Numerous plans and studies have identified Upper Market as feeling unsafe and uncomfortable, which is supported by the many phone calls and emails we receive about the corridor.

### Vision Zero San Francisco

The City and County of San Francisco adopted Vision Zero as a policy in 2014, committing an effort to **prioritize street safety and eliminate traffic deaths in San Francisco by 2024**. Upper Market Street is on the Vision Zero "High-Injury Network" which represents the small number of streets that account for the overwhelming majority of collisions and injuries in San Francisco.

The "High Injury Network" was updated in 2017 to include hospital data in addition to police data. This effort showed that approx. **28% of severe injury collisions are not reported to the police.**



Design concept for the 16th/Noe/Market Street intersection from the Upper Market Community Vision and Recommendations report from 2007



Revised (2017) High-Injury Network including 2013-2015 collision data from police records as well as trauma data from SF General Hospital

### PURPOSE OF TONIGHT



**A reminder to please complete and return your survey forms prior to leaving!**

- » **Help the Project Team identify and prioritize streetscape enhancement opportunities** to accompany construction of approved 'street & sidewalk' changes in 2019/2020.
- » **Review and comment on SFMTA's proposed circulation changes** that are aimed at simplifying Upper Market's intersections to promote safer and more efficient operations. A final proposal will be presented for approval later this spring.

Know someone who couldn't make it to the open house? An online version of tonight's survey will be available on the project website ([sfmta.com/uppermarket](http://sfmta.com/uppermarket)) from March 1 through March 12, 2018.

# Upper Market Safety Project: **OVERVIEW**

## Phase One Planning, Outreach, and Near-Term Implementation

The SFMTA held multiple public engagement events to develop draft proposals for the Streets & Sidewalks, Circulation, and Curbspace Management components of the project. SFMTA crews also implemented a suite of near-term safety improvements including:

- » Crosswalk Upgrades
- » Painted Safety Zones
- » No Right Turn On Red Restrictions
- » Signal Timing Adjustments
- » Spot Re-Paving
- » Vehicle/Bike Lane Striping Upgrades



**SFMTA** Municipal Transportation Agency | **Upper Market Street Safety Project**  
Project Proposal - Market Street at Noe/16th Streets

**MARKET AT NOE/16TH**

**PROPOSED CHANGES**

<p><b>Improved Roadway Striping and Markings</b></p> <ol style="list-style-type: none"> <li>1. Add green paint to existing bike lane</li> <li>2. Reduce door zone hazard for bike lane (restricts parking)</li> <li>3. Existing painted safety zone, to remain</li> </ol>	<p><b>Sidewalk and Concrete Improvements</b></p> <ol style="list-style-type: none"> <li>4. Concrete curb extension</li> <li>5. Boarding island thumbnail island</li> <li>6. Reconstructed curb extension and curb ramp (fixes improperly constructed curb extension)</li> </ol>
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Example graphic from the Streets and Sidewalks proposal approved by the SFMTA Board in May 2017. Full printed copies are available this evening and are included/integrated with the streetscape conceptual design graphics developed by Public Works.

## Project Time Line

### Neighborhood Planning

- **Market-Octavia Area Plan** establishes planning and funding framework for project
- **Upper Market Community Vision and Recommendations** provides initial transportation and streetscape concepts
- **Castro CBD Beautification & Safety Plan**

Late 2000's

### Initial Project Planning / Outreach

- **Stakeholder Advisory Group** consisting of Castro CBD, Castro Merchants, Duboce Triangle/ Eureka Valley Neighborhood Associations, Market-Octavia CAC
- **2015 Open House & Curbspace Management Workshop**
- **DTNA community survey**
- **Phase One Near-Term Improvements**

2013-2015

### Streets & Sidewalks Approval

- **Ongoing public engagement** including stakeholder meetings, open houses and project survey
- **Draft Circulation Study/Proposal & Curbspace Management Plan**
- **May 2017 SFMTA Board Approval** of "Streets and Sidewalks" proposal

2016/2017

### **CURRENT PHASE**

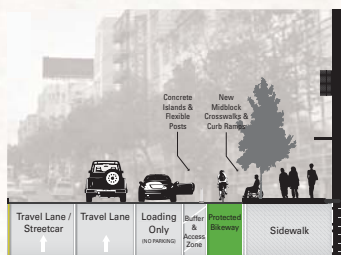
- **Detailed Design Phase** for Streets & Sidewalks plan
- **Circulation Proposal** to be finalized for SFMTA Board consideration in spring 2018
- **Phase Two Near-Term Implementation**

2018

### Construction

- **Streets & Sidewalks, Circulation proposals** combined for construction
- **Curbspace Management Planning, Outreach & Implementation (TBD)**

2019/2020



## Phase Two Near-Term Implementation (UNDER CONSTRUCTION)

"Phase Two" improvements started in January with a much-anticipated signal timing change at the 16th/Noe/Market intersection, and will continue through early April with construction of the following elements:

- » **Painted Safety Zones, Vehicle Lane Consolidation** at the Laguna and Guerrero Streets intersections
- » **A Curbside, Protected Bikeway** with 'loading only' on Market Street between Octavia and Buchanan Streets
- » **Side Street Metered Parking** to replace those converted by the protected bikeway on Market Street

Additional bike lane greening and 'spot' improvements west of Duboce Avenue/Buchanan Street are also planned for implementation later in 2018. Elements of the circulation proposal, if approved, may also be implemented later this year.

## Public Engagement Tracker



Including tonight, the Upper Market Safety Project has invited and received public input through:

- » **5 major public events & half a dozen public hearings**
- » **25 in-person meetings** with neighborhood groups & leaders
- » **Updated project website and email contact list**
- » **Numerous 311's** (visit sf311.org for more info)

# Upper Market Safety Project: **APPROACH TO SAFETY**

## The Problem

Previous analysis of Upper Market collisions (from 2007-2012) reveals that:

- » *Virtually all (98%) of bicycle and pedestrian collisions result in an injury (compared with one-third of vehicle-only collisions).*
- » *Half of injury-causing pedestrian collisions and one-quarter of bicycle collisions involve turning vehicles at intersections\*.*
- » *Citywide, vehicle left-turns disproportionately contribute to traffic injuries – the movement preceding collisions in 28% of injuries.*

This analysis speaks directly to the challenges of Upper Market Street's intersections, whose large size and skewed geometry create confusion and opportunities for high-speed turns.

*\*40% of all Upper Market bicycle collisions occur midblock (due to vehicle 'dooring' and bike lane violations), which supports greater physical protection and visual separation of the Upper Market bike lanes.*

## Addressing the Problem

The Upper Market **Streets & Sidewalks** and **Circulation** proposals are meant to build upon each other in order to achieve the following:

- » **Shorten crossing distances** to limit pedestrian exposure to traffic
- » **Slow vehicle turning** through tighter corners and visual queues
- » **Simplify intersections** to reduce the potential for conflicts and stress
- » **Separate different modes** through signal phasing and timing

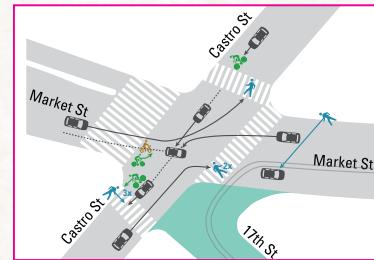
## Challenges

- » Market Street already includes bulb-outs at intersections, so reducing crossing distances across Market St is not feasible.
- » Not all intersections reveal consistent patterns of collisions.
- » Potential restrictions at one location (e.g., restricting turns off of Market Street) may result in issues at another location.

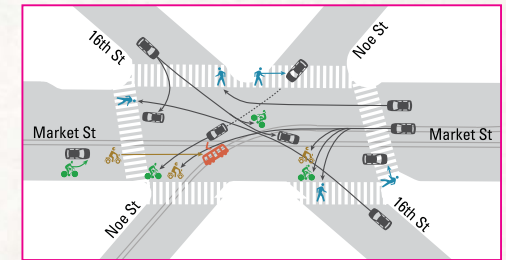
## Collisions

The following diagrams depict injury-causing and fatal collisions at Market Street intersections between 2012-2016 (most recent records) for which a police report was filed. Collision analysis helped guide the Streets & Sidewalks and Circulation proposals.

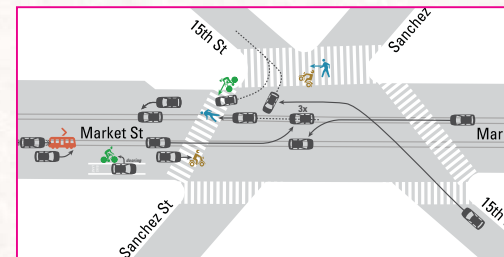
**Castro / 17th St**



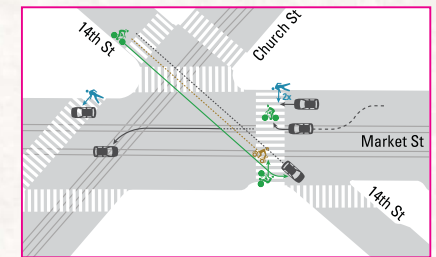
**Noe / 16th St**



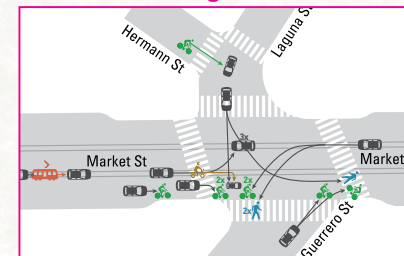
**Sanchez / 15th St**



**Church / 14th St**



**Guerrero / Laguna / Hermann**



*Analysis of the Duboce/Buchanan and Octavia/Central Freeway intersections is not included since no circulation changes are currently proposed.*

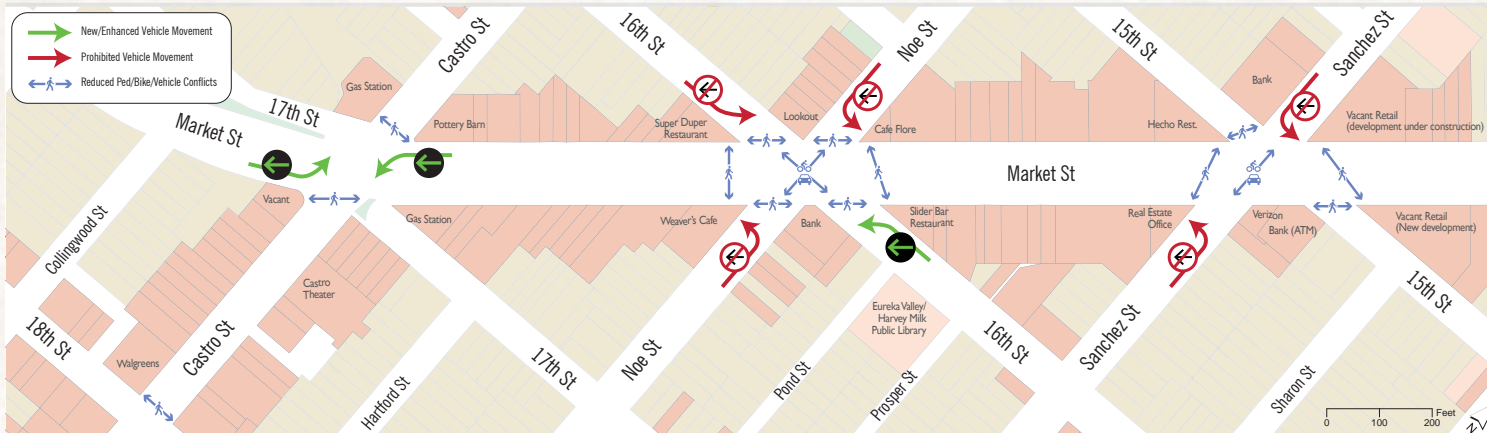
**Signs of Progress:** Along the Upper Market corridor (excluding Octavia Blvd), **the number of collisions dropped by over 25%** from a total of **161** in the 5-year period between mid 2007-2012 to **118** between 2012-2016.

# Upper Market Safety Project: **CIRCULATION PROPOSAL**

## Approach to Proposal

The circulation proposal focuses on better controlling left turn movements at several of Upper Market's large, multi-legged intersections through two key strategies:

- » **Enhancing high volume left turns:** Where higher volumes of left turns are present (e.g., 16th St to WB Market St), the SFMTA proposes protecting the left turn movement.
- » **Restricting low volume left turns:** When left turns off of side streets are lower, the SFMTA proposes restricting these left turns to simplify intersection movements while minimizing the number of vehicles that would be diverted onto other streets.



### 17th/Castro/Market

#### Proposed changes:

- » Add new **protected left turns** for people driving on Market Street turning onto Castro Street (both directions)

#### Benefits:

- » **Reduces conflict points** in Castro Street crosswalks at Market Street
- » **Improves pedestrian safety** at 18th/Castro intersection
- » **Reduces the volume of cut-through traffic** on 18th and Castro streets
- » Reduces the volume of people making left turns from Market onto 16th and Noe streets
- » **Addresses a general pattern of left-turn collisions** at the intersection

### 16th/Noe/Market

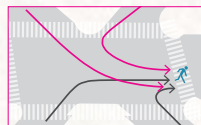
#### Proposed changes:

- » Prohibit left turns from Noe and eastbound 16th streets
- » Add a new **protected left turn** for people driving westbound on 16th Street, turning to westbound Market or southbound Noe streets

#### Benefits:

- » **Reduces conflict points** between people driving and walking in crosswalks at 16th/Noe/Market
- » **Simplifies traffic flow** and reduce vehicle-vehicle and vehicle-bike conflict points for people driving and biking on 16th and Noe streets

*Example: At 16th/Noe/Market, the proposal would reduce stress and improve comfort in the eastern crosswalk by eliminating all potential vehicle conflicts from the north*



### 15th/Sanchez/Market

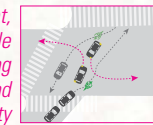
#### Proposed changes:

- » **Prohibit left turns** from Sanchez Street

#### Benefits:

- » **Reduces conflict points** between people driving and walking in 15th and Market Street crosswalks, and between people driving and biking on Sanchez Street
- » **Simplifies traffic flow** for people driving on Sanchez Street
- » **Reduces queuing** of eastbound Market Street vehicles in the intersection

*Example: At 15th/Sanchez/Market, the proposal would reduce vehicle weaving caused by left-turns, making the Sanchez bike route safer and improving overall vehicle capacity*



### Laguna/Guerrero/Market

#### Proposed changes:

- » Add new **protected left turns** for people driving on Market Street turning onto Laguna and Guerrero streets

#### Benefits:

- » **Reduces conflict points** between turning drivers and people walking, bicycling, and driving along Market St
- » Reduces potential for conflict at the crossing of Laguna at Hermann adjacent to new LGBT senior center and housing
- » **Directly addresses a left-turn collision pattern** at the intersection

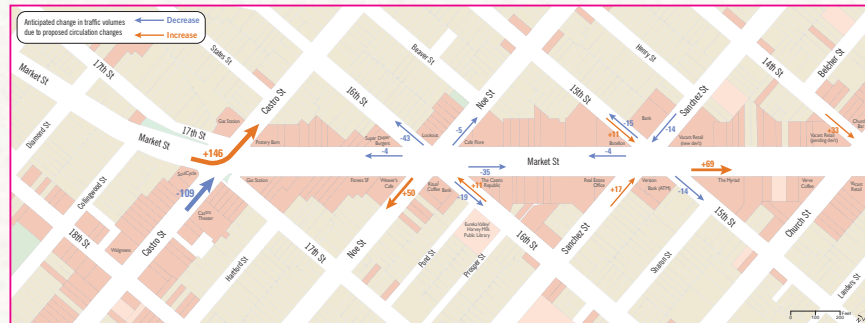
# Upper Market Safety Project: CIRCULATION ANALYSIS

## Trip Diversion

Approximately 135 vehicles in the AM Peak Hour (175 in the PM Peak) would be affected by left turn restrictions at Noe, 16th and Sanchez streets and would need to find alternative routes to reach their destinations. To put this number into perspective, this volume represents 7% of the total peak hour traffic coming from these side streets (i.e., excluding Market Street traffic and other intersections). Some traffic currently using local streets would also be redirected onto arterials by the proposed new protected left-turns at Castro Street and from westbound 16th Street onto Market Street.

The maps below show estimated changes to travel patterns and volumes in the Upper Market area as a result of the circulation proposal:

### AM Peak Hour



### PM Peak Hour



Drivers turning left from 16th Street onto westbound Market Street would benefit from a dedicated left-turn phase, reducing intersection conflicts with eastbound drivers and improving overall traffic flow.

## Vehicle Delay

Copies of the [Circulation Study report](#), which includes a detailed analysis of estimated traffic impacts, are available this evening for reference and discussion. In general, the circulation proposal is not expected to significantly impact travel times for most trips within the study area, with a few exceptions. Additional delay of 15-30 seconds during the congested peak periods is projected primarily for the westbound Market Street approach to Castro Street (due to additional signal phasing), while existing delays at the westbound 16th Street approach to Market Street would be reduced by approx. 20 seconds during the same time periods. Market Street at Laguna/Guerrero may also experience added delay in the peak hours, depending on direction, with introduction of protected left turns.

## Alternatives Considered but Dropped / Deferred

Alternatives considered but ultimately dropped or deferred by project staff during development of the Circulation Study (or in response to suggestions from the public) include:

- » **One-Way Side Streets:** staff deemed one-way conversions too disruptive to neighborhood circulation, especially given that similar benefits are provided with the current proposal
- » **Street Closures:** despite weekly closures of Noe Street (during the Castro Farmer's Market), staff deemed overall support too low and impacts too high to include a permanent street closure with the current proposal
- » **Pedestrian/Bicycle "Scrambles":** scrambles or 'all-walk' phases require too much time for pedestrians to clear the intersection, resulting in unacceptable delays. Similarly, a bike-only phase for the Duboce pathway/Buchanan Street intersection was considered but ultimately deferred due to impacts to westbound Duboce Street and eastbound Market Street.
- » **Roundabouts:** would require too much space and investment, impact MUNI travel times and accessibility, and reduce pedestrian comfort

Additional information is available tonight and online by reviewing the 2016 SFMTA Frequently Asked Questions (FAQ) document.

# Upper Market Circulation Proposal: **WHAT WE'VE HEARD**

## **Duboce Triangle Neighborhood Association (DTNA) Correspondence & Survey**

*"We would like to see SFMTA undertake a comprehensive traffic study of the Upper Market corridor that considers more permanent solutions to the pedestrian and bicycle safety issues that currently exist. This study should include consideration of street closures, road diets, and other measures that may significantly improve the safety of the corridor."*

- Letter from DTNA, WalkSF, and SFBC signed April 2015

A 2016 DTNA-sponsored survey regarding potential circulation changes to the Upper Market corridor collected 335 responses, revealing overall preferences for more intersection guidance and protected turn phases and majority opposition (73%) to the idea of restricting left turns off of Market Street.

Extensive additional correspondence and questions from DTNA also led to a formal SFMTA response letter and Frequently Asked Questions (FAQ) - both of which are available for download from [sfmta.com/uppermarket](http://sfmta.com/uppermarket).

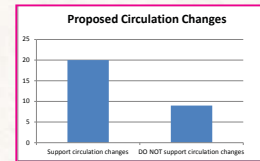
## **15th Street Traffic Diversion**

**Concern:** 15th Street is a quiet local residential street and will be become overwhelmed with more traffic with the proposal to restrict left-turns.

**Response:** SFMTA anticipates only modest increases in traffic for eastbound 15th Street (+11 vehicles in the AM peak hour, +26 in the PM peak) due to availability of alternative routes (and slightly reduced traffic for westbound trips). Given that **15th Street currently handles approx. 4,200 vehicles per day**, the overall daily volume of eastbound traffic would increase by approx. 8% and should not result in substantially different conditions than today.

If travel demand on 15th Street or other streets does increase more than expected, **traffic calming opportunities** are a potential option as is reversing any problematic left-turn restrictions (since this requires only sign removal).

## **2016 SFMTA Project Survey**

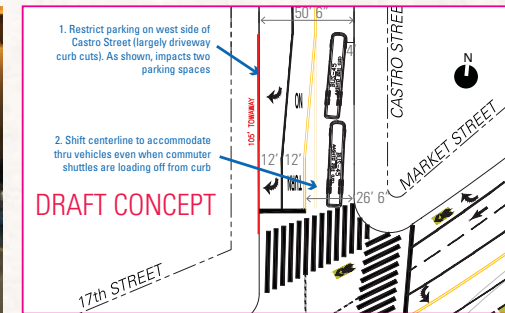


The 2016 SFMTA project open house included a survey regarding the circulation proposal. While a majority was supportive, the number of responses was deemed too low to provide a definitive snapshot of stakeholder preferences.

## **New Protected Left-Turn to Northbound Castro Street & Commuter Shuttles**

**Concern:** Adding northbound traffic could overwhelm the roadway with blocked traffic when commuter shuttles are stopped several feet off the curb.

**Potential Solution:** Re-stripe Castro Street to widen the northbound travel lane adjacent to the shuttle zone



## **Traffic Data**

**Concerns:** Data used for the circulation study is outdated; lack of data in Duboce Triangle Neighborhood to assess impacts.

**Response:** Traffic data used for the circulation study was collected in 2016, which is sufficiently current to support the analysis. **Recent recounts of the specific turns proposed for restriction also found no substantial differences from the 2016 counts**, while new data for the Duboce Triangle was collected in February 2018 to provide a (revised) baseline for assessing potential impacts of the proposal.