Chinatown
Safe Routes to School Project

July 12, 2016
ITE Western District Annual Meeting
Albuquerque, New Mexico
Overview of the City of San Francisco
Overview of the Area

North Beach
Chinatown
Nob Hill
Financial District
Union Square

Gordon Lau Elementary School
Washington Street

Looking west on Washington Street

Looking north from main door of school campus toward annex
Clay Street

Looking east on Clay Street

Looking south on Joice Street
Gordon Lau Elementary School Campus and Annex

- Crosswalks too far away from main campus door for most pedestrians
- Closest crosswalk is about 200 feet away.
People Choose the Fastest Route

Parents & kids crossing Clay St at Joice St

Parents and kids crossing Washington St between the annex and main campus with the help of crossing guards.
Original Proposed Plan

Original Bulb-out Plan:
- Washington Street bulb-out was in middle of Trenton-Stone block (top drawing)
- Clay Street bulb-out was west of Joice Street (bottom drawing)
Final design moved bulb-out towards Trenton Street to preserve parking in front of the annex doors for pick-up and drop-off
Final Clay Street Bulb-out Design

Final design move the bulb-out to the east side of the intersection next to the driveway. To separate the curb ramp and the driveway, a barrier and curb were installed between them.
Clay/Joice Before and After Installation

Above:
Before photo. Note the west leg of the intersection is less challenging to build due to the driveway.

Top Right and Right:
After photos. Driveway and curb ramp next to each other led to a unique design.
Final Clay Street Bulb-out Design

To the left:
- Blue line was the general slope profile of Clay St.
- Dashed blue line was the original slope.
- Red line is the new slope profile. (Lines are exaggerated)
Powell and Washington Streets

- Intersection with many forms of transportation from cars to pedestrians to cable cars.
- Unconventional traffic controls due to cable cars
- Cable cars cannot stop at the intersection
Cable cars must stop farther upstream from the intersection to pick up speed coming down the hill on eastbound Washington Street to get up the hill on Powell Street.

If they don’t pick up speed, they must be pushed up the hill by a “pusher” truck.
Traffic Signal Placement Issues

- Original design for Powell St before signal turn on. Note the left signals are stacked.
- Final design and current configuration has the left signals side-by-side.
- Why? Because…
Traffic Signal Visibility

Cable car grip-people usually stand up while controlling cable cars.

Note in pictures:
- The grip-person is several feet back from the front.
- The roof and front top windshield is quite low.
Due to the cable car design, one of the two traffic signals on Powell Street were lowered.

However, even after the signal placement modifications, the cable car gripperson still have to squat down to see the cable car signal.
Central Subway Project Coordination

- $1.6 billion subway project construction started before we could begin.
- Construction closed Washington Street to all vehicle and pedestrian traffic.
- Building bulb-out would have a major conflict with trucks entering and exiting subway project area.
- Funding was expiring so it will be constructed as part of a separate project.
“Building Canyon” Effect for Solar Devices

- Shadows on both streets during most hours of the day meant that batteries on solar powered flashing beacons may not fully recharge.
- Manufacturer agreed.
- Cost of beacons decreased, but overall costs increased due to new conduit and pullboxes required.
Final Design: Hard-wired Beacons

Flashing beacons on Washington Street are now hard wired to the new Powell-Washington signal.

Flashing beacons on Clay Street are now hard wired to the existing Clay-Stockton signal.
Construction Contractor Issues

- Good economy results in fewer bidders for city projects.
- Only two contractors bidded on project.
- Awarded to lower bidder.
- Notice-to-Proceed date was 11/13/2013.
- Substantial completion on 3/31/2015.
Lessons Learned

- When dealing with groups/schools/etc, be aware of staff changes.
- Good communications and support are always a plus. (especially when things change)
- Be careful of mid-block crosswalks on hills. It looks simple but can get complex.
- When using solar powered devices, check shadows during the day.
- Cable cars are unique.
- Having a good economy is not always a good thing for construction projects (though this current economic cycle is unusually extreme).
- Large construction projects will have higher priority than smaller projects.
Questions?

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