



Memorandum

Date: April 16, 2018
To: Transportation Authority Board
From: Jeff Hobson – Deputy Director for Planning
Subject: 05/08/18 Board Meeting: Adoption of the Vision Zero Ramp Intersection Study Phase 1 [NTIP Planning] Final Report

<p>RECOMMENDATION <input type="checkbox"/> Information <input checked="" type="checkbox"/> Action</p> <p>Adopt the Vision Zero Ramp Intersection Study Phase 1 Final Report</p> <p>SUMMARY</p> <p>The first phase of the Vision Zero Ramp Intersection Study addresses safety issues at five intersections in and around the South of Market (SoMa) Youth and Family Special Use District (SUD). The study, recommended by Commissioner Kim, was funded in part with \$100,000 in Prop K sales tax funds from the Neighborhood Transportation Improvement Program (NTIP). The project team recommended low-cost, near-term improvements such as sidewalk extensions (bulb-outs), signal upgrades, opening of new crosswalks, and new wayfinding signage. The project team presented the draft concept plans to advocacy groups, neighborhood groups, and other stakeholders near the study locations to solicit their feedback. The Transportation Authority worked with the San Francisco Municipal Transportation Agency (SFMTA) to develop cost estimates and identify funding and implementation next steps.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Fund Allocation <input type="checkbox"/> Fund Programming <input type="checkbox"/> Policy/Legislation <input checked="" type="checkbox"/> Plan/Study <input type="checkbox"/> Capital Project Oversight/Delivery <input type="checkbox"/> Budget/Finance <input type="checkbox"/> Contract/Agreement <input type="checkbox"/> Procurement <input type="checkbox"/> Other: _____
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DISCUSSION

Background.

The Transportation Authority’s NTIP is intended to strengthen project pipelines and advance the delivery of community-supported neighborhood-scale projects, especially in Communities of Concern and other underserved neighborhoods and areas with at-risk populations (e.g. seniors, children, and/or people with disabilities).

Phase 1 of the Vision Zero Ramp Intersection Study seeks to improve safety for all modes of transportation at freeway ramp intersections in and around the SoMa Youth and Family Special Use District (SUD), an area characterized by high concentrations of senior centers, single-room occupancy hostels, and schools. The purpose of the Study is to develop proposed near-term safety improvements at five freeway ramp intersections within the SUD, with the goal of reducing collisions and associated traffic fatalities.

Phase 1 Study Methodology.

The project team worked closely with the SFMTA to select study intersections, evaluate collision patterns at each, and propose improvements to address identified issues.

To select five study intersections, the project team identified the ramp intersections in and around the SoMa Youth and Family SUD with the highest numbers of injuries and fatalities from 2008 to 2014. The project team then screened the intersections to determine if they were already being studied, analyzed, or improved as part of other projects. Based on these two criteria, the selected five ramp intersections are:

- I-80 westbound off-ramp at 5th/Harrison Streets;
- I-80 eastbound on-ramp at 5th/Bryant Streets;
- US-101 southbound on-ramp at 10th/Bryant Streets;
- US-101 northbound off-ramp at 9th/Bryant Streets; and
- I-80 westbound off-ramp at 8th Street.

At each intersection, the study team analyzed collisions that occurred from 2011 to 2015 to identify the most common causes and conflict points. Issues identified included; traffic signal visibility, pedestrian and bicycle visibility and infrastructure, vehicle weaving, high-speed turning movements, and closed pedestrian crossings at some intersections. The project team developed a toolbox of proven short-term design treatments that could be applied to address observed collision types at the study intersections.

Design Recommendations.

The study team developed the design recommendations to address the collision patterns observed at each intersection. Recommendation include (see Attachment 1 for details):

- Sidewalk extensions (bulb-outs) to reduce turning speeds and shorten pedestrian crossings;
- Street lighting to improve visibility;
- Signal upgrades to improve visibility, add exclusive turn phases where needed, and add leading pedestrian intervals;
- Opening new crosswalks where they are currently missing;
- New wayfinding signage to reduce confusion and weaving; and
- Consideration of lane striping changes, including a potential off-ramp lane reduction at 8th and Harrison Streets and/or elimination of a tow-away double left turn lane at 10th and Bryant Streets.

Stakeholder Outreach.

The project team presented initial improvement plans to advocacy groups, neighborhood groups, and other stakeholders near the study intersections to solicit their feedback. The team worked with the District 6 Commissioner's office to identify key stakeholders in the area and the Commissioner convened many of the stakeholders at a Vision Zero District 6 Community Meeting. Through presentations at the District 6 meeting, at the Vision Zero Task Force, and to individual stakeholder groups, the team heard input from a variety of community groups including those, such as United Playaz, the West Bay Pilipino Center, the Central City SRO Collaborative, that represent traditionally underserved communities. The stakeholders expressed strong interest in improving freeway ramp safety, particularly for pedestrians and bicyclists. Community groups generally supported the proposed

improvements and provided additional enhancement ideas, such as additional bulb-outs and landscaping. The project team revised the project cost estimates to allow the SFMTA to incorporate these or other enhancement ideas in the design phase.

In addition, many stakeholders provided more general suggestions for improving the pedestrian and bicyclist experience throughout SoMa that fell outside the scope of this study, such as improving pedestrian conditions, transit stop amenities, and traffic congestion issues. While some of these issues could be addressed with physical improvements outside the five intersections studied, others would require additional resources be dedicated to education and/or enforcement activities. We will continue to coordinate with SFMTA Vision Zero program staff working on these approaches, including through the second phase of the Vision Zero Ramp Intersection Study, currently underway.

Next Steps: Funding and Implementation.

The planning-level cost estimate for further planning, design, and construction of the improvements at all five intersections is approximately \$4.4 million. The SFMTA will lead design and construction of the proposed improvements. The next steps will include completing design of the recommended improvements, seeking approval from Caltrans (encroachment permits), and completing the SFMTA's legislative process. These upgrades could be implemented in approximately three to five years, pending the SFMTA Capital Improvement Program and Caltrans approvals.

The SFMTA plans to incorporate recommendations at all five of the study intersections into larger corridor improvement projects or as part of its traffic signal upgrades program. The SFMTA is including the improvements proposed at the intersections of 5th and Harrison streets and at 5th and Bryant streets in its 5th Street Improvement Project, with construction of near-term elements slated to begin in 2018 and longer-term treatments to follow in 2019. The SFMTA included the recommendations at the other three ramp intersections in its draft Capital Improvement Program update for fiscal years 2019 to 2023. The Capital Improvement Program will be finalized upon approval by the SFMTA Board, expected in July 2018.

The project team identified multiple potential funding sources to design and implement of the recommended improvements. Potential funding sources include Prop K sales tax, Prop A General Obligation Bond, Prop B general fund set-aside, and Interagency Plan Implementation Committee impact fees. In addition, the projects would likely be competitive for several other discretionary state and regional grant programs that local sources could leverage including state Active Transportation Program or Highway Safety Improvement Program funds.

FINANCIAL IMPACT

None. The recommended action would not have an impact on the adopted Fiscal Year 2017/18 budget.

CAC POSITION

The CAC will consider this item at its April 25, 2018 meeting.

SUPPLEMENTAL MATERIALS

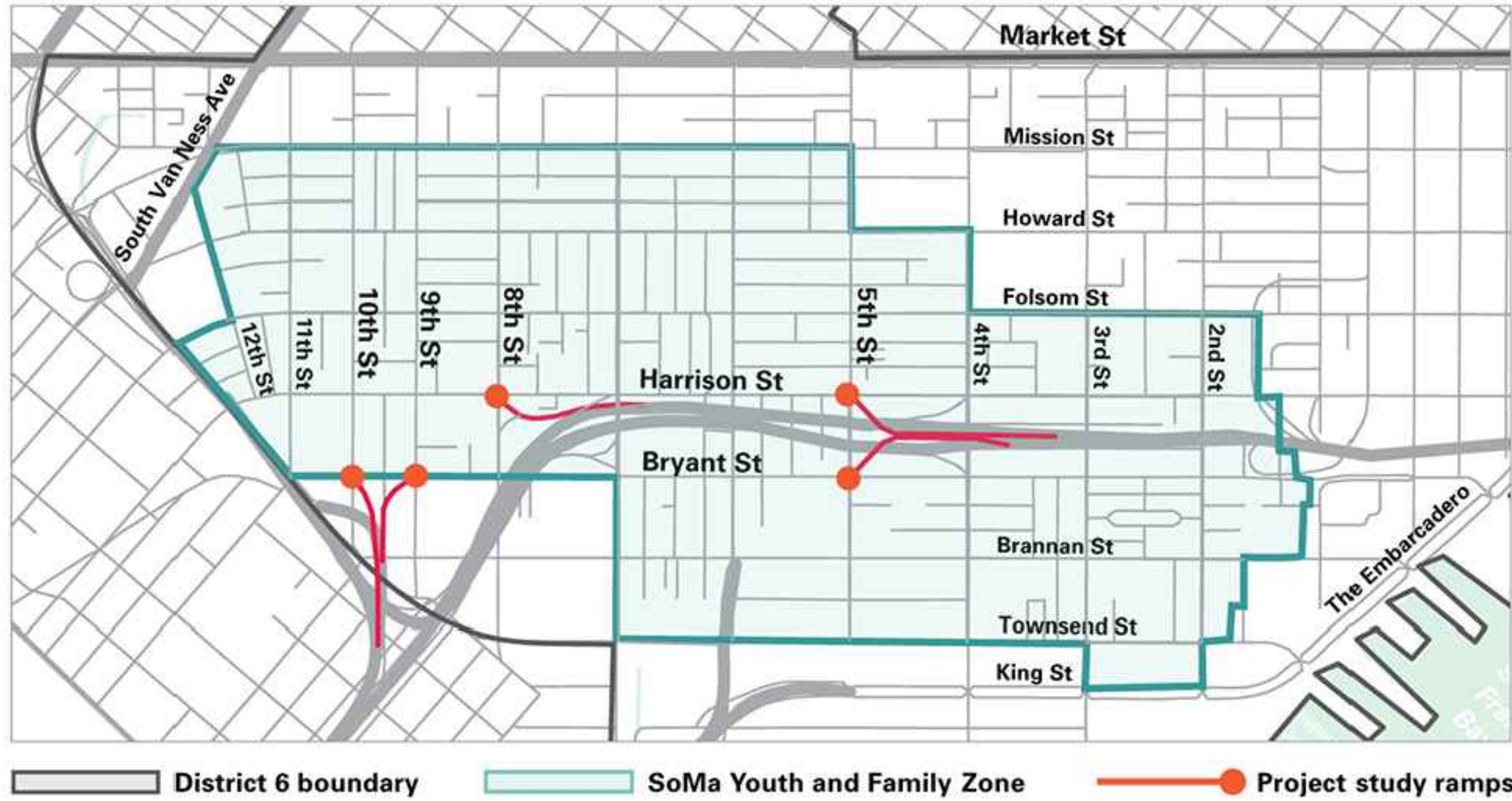
Attachment 1- Recommended Improvement Concept Plans

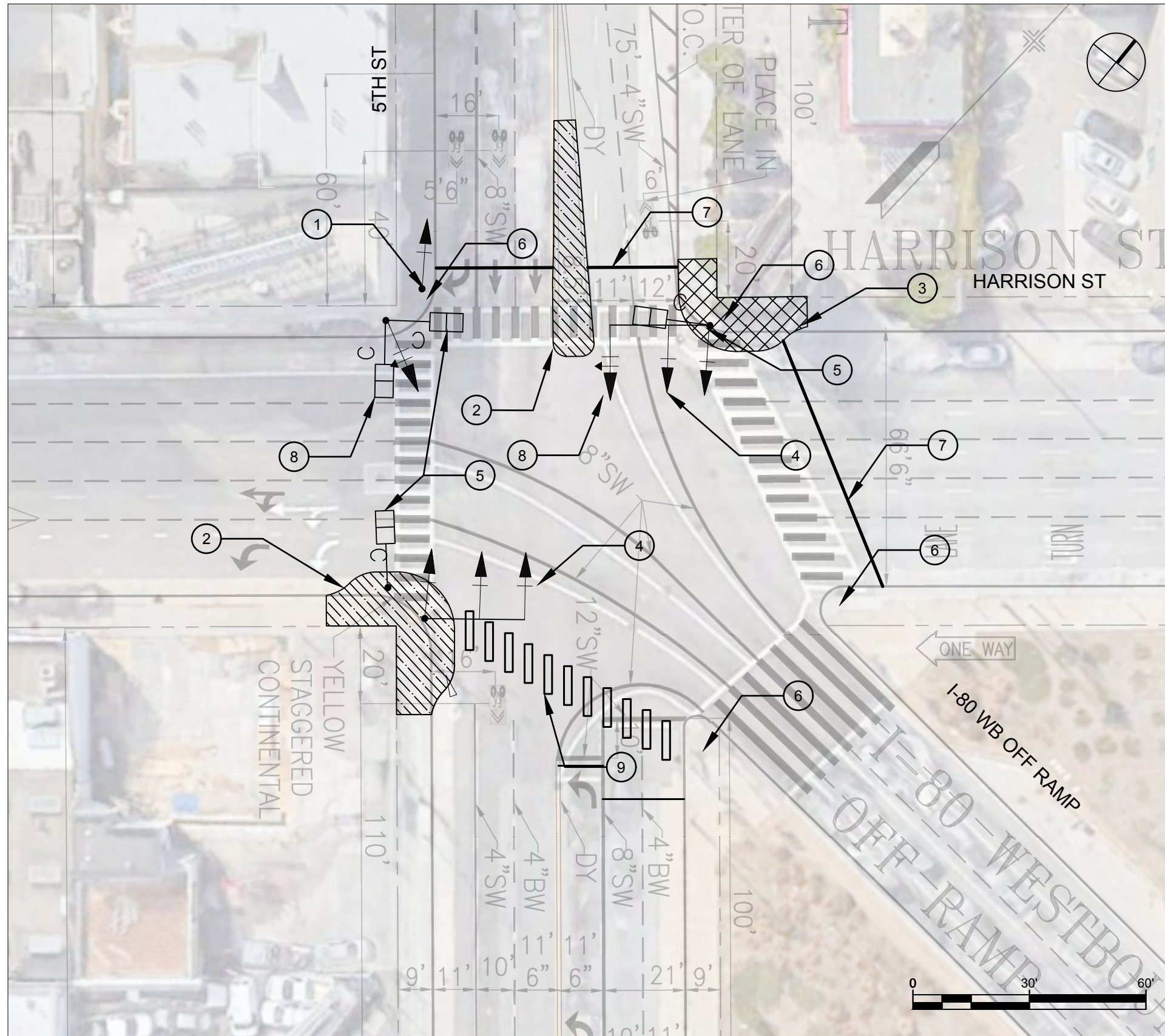
Enclosure – Vision Zero Ramp Intersection Study Phase 1 Final Report

September, 2017

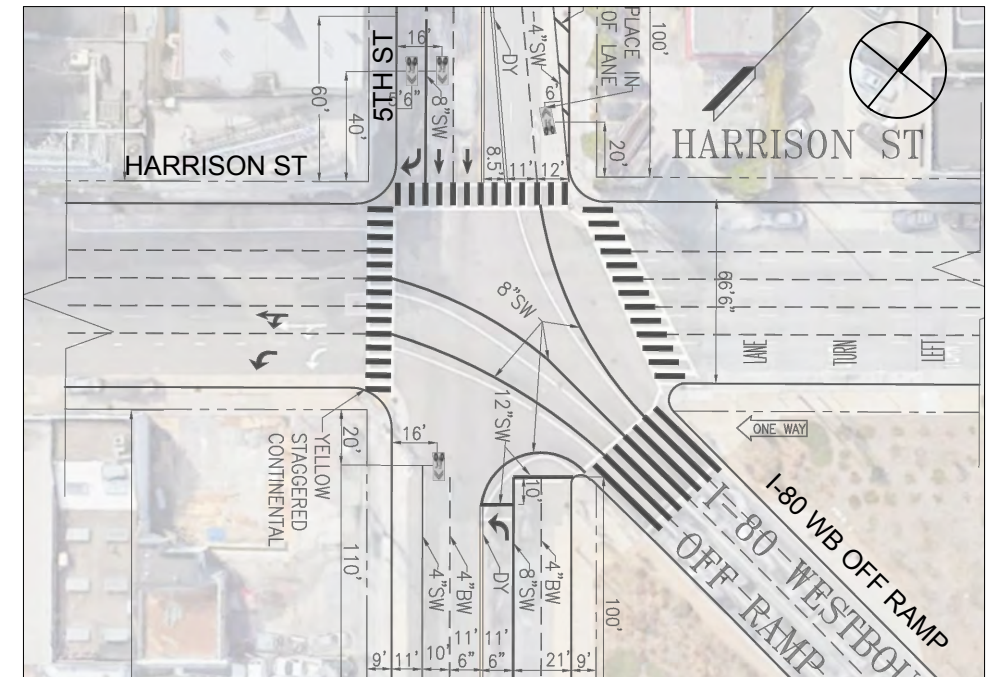
VISION ZERO SF

RAMP INTERSECTION IMPROVEMENT CONCEPTS





HARRISON STREET / 5TH STREET

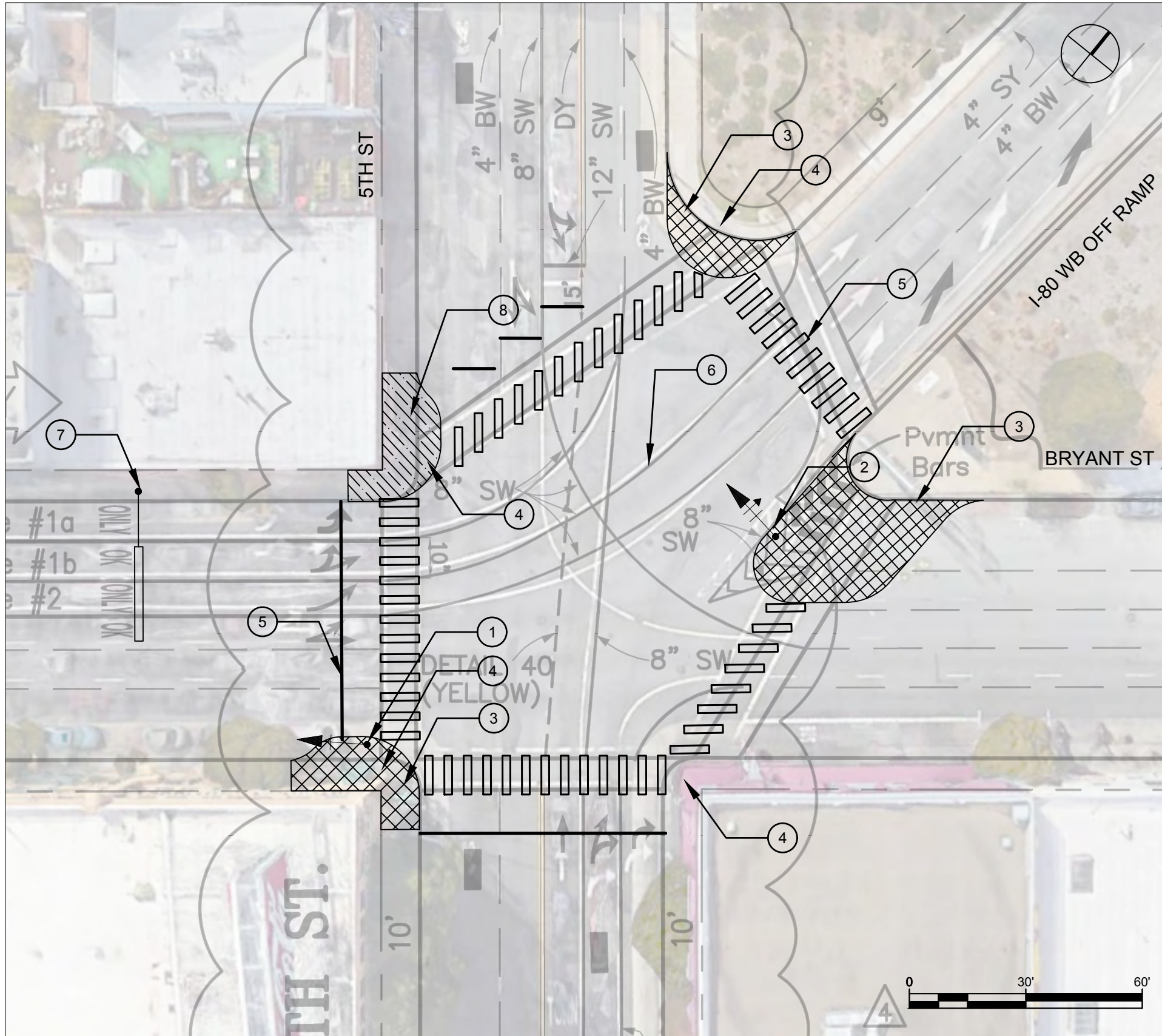


EXISTING CONDITIONS

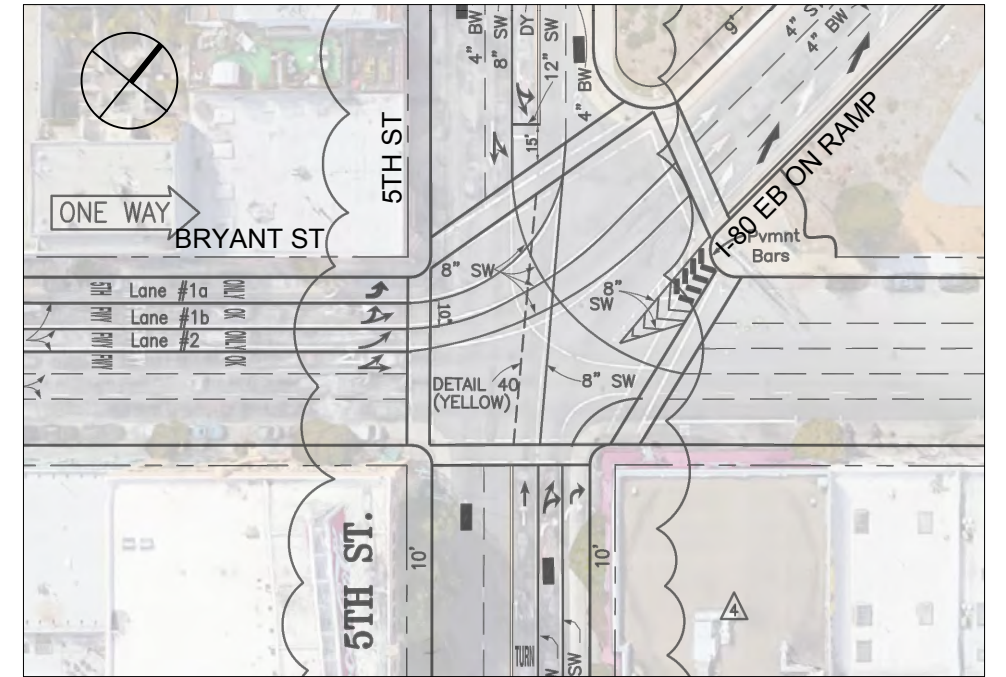
IMPROVEMENT CONCEPTS:

- ① INSTALL NEARSIDE TRAFFIC SIGNAL
- ② CONSIDER TEMPORARY INSTALLATION OF BULB AND MEDIAN UNTIL 5TH STREET STREETScape PROJECT PLANNING IS FINALIZED
- ③ INSTALL PEDESTRIAN BULB
- ④ INSTALL TRAFFIC SIGNAL MAST ARM POLE
- ⑤ PROVIDE LEADING PEDESTRIAN INTERVAL PHASING
- ⑥ UPGRADE 8" TRAFFIC SIGNAL HEADS TO 12"
- ⑦ INSTALL STOP BAR SET BACK FROM CROSSWALK
- ⑧ CONSIDER PROVIDING LAGGING OR PROTECTED LEFT TURN VEHICULAR PHASE
- ⑨ INSTALL PEDESTRIAN CROSSING WITH EXCLUSIVE SIGNAL PHASE
- ⑩ CONSIDER IMPROVED STREET LIGHTING AT THE INTERSECTION
- ⑪ CONSIDER POTENTIAL FUTURE BIKE NETWORK IMPROVEMENTS ON 5TH STREET DURING NEXT STAGE OF DESIGN

*ALL PHYSICAL IMPROVEMENTS WILL REQUIRE CALTRANS APPROVAL



BRYANT STREET / 5TH STREET

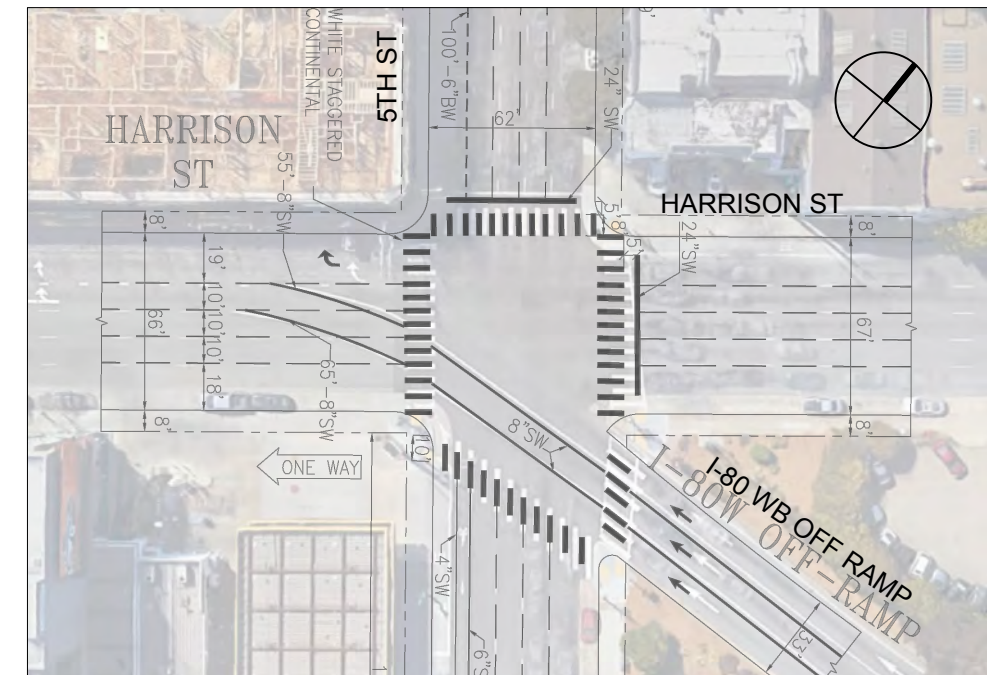
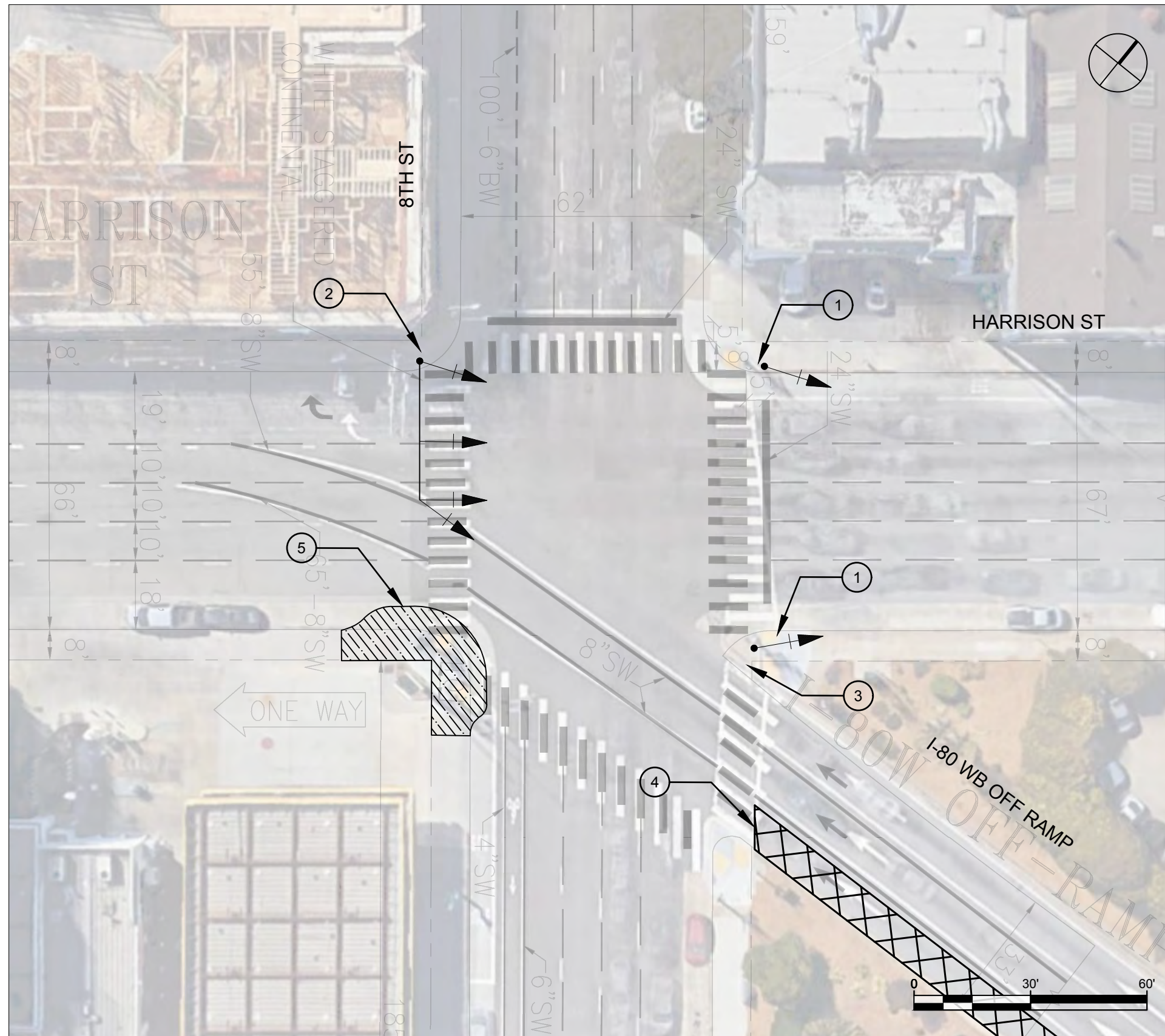


EXISTING CONDITIONS

IMPROVEMENT CONCEPTS::

- ① INSTALL NEARSIDE TRAFFIC SIGNAL
- ② INSTALL FARSIDE TRAFFIC SIGNAL. CONSIDER PROVISION OF PROTECTED PHASING.
- ③ INSTALL PEDESTRIAN BULB
- ④ UPGRADE 8" TRAFFIC SIGNAL HEADS TO 12"
- ⑤ INSTALL HIGH-VISIBILITY STAGGERED CROSSWALK MARKINGS AND STOP BARS
- ⑥ REFRESH PAVEMENT MARKINGS AND LANE DELINEATOR LINES
- ⑦ INSTALL CANTILEVERED OVERHEAD SIGN TO DESIGNATE LANE ASSIGNMENTS
- ⑧ CONSIDER TEMPORARY INSTALLATION OF BULB UNTIL 5TH STREET STREETScape PROJECT PLANNING IS FINALIZED
- ⑨ CONSIDER POTENTIAL FUTURE BIKE NETWORK IMPROVEMENTS ON 5TH STREET DURING NEXT STAGE OF DESIGN

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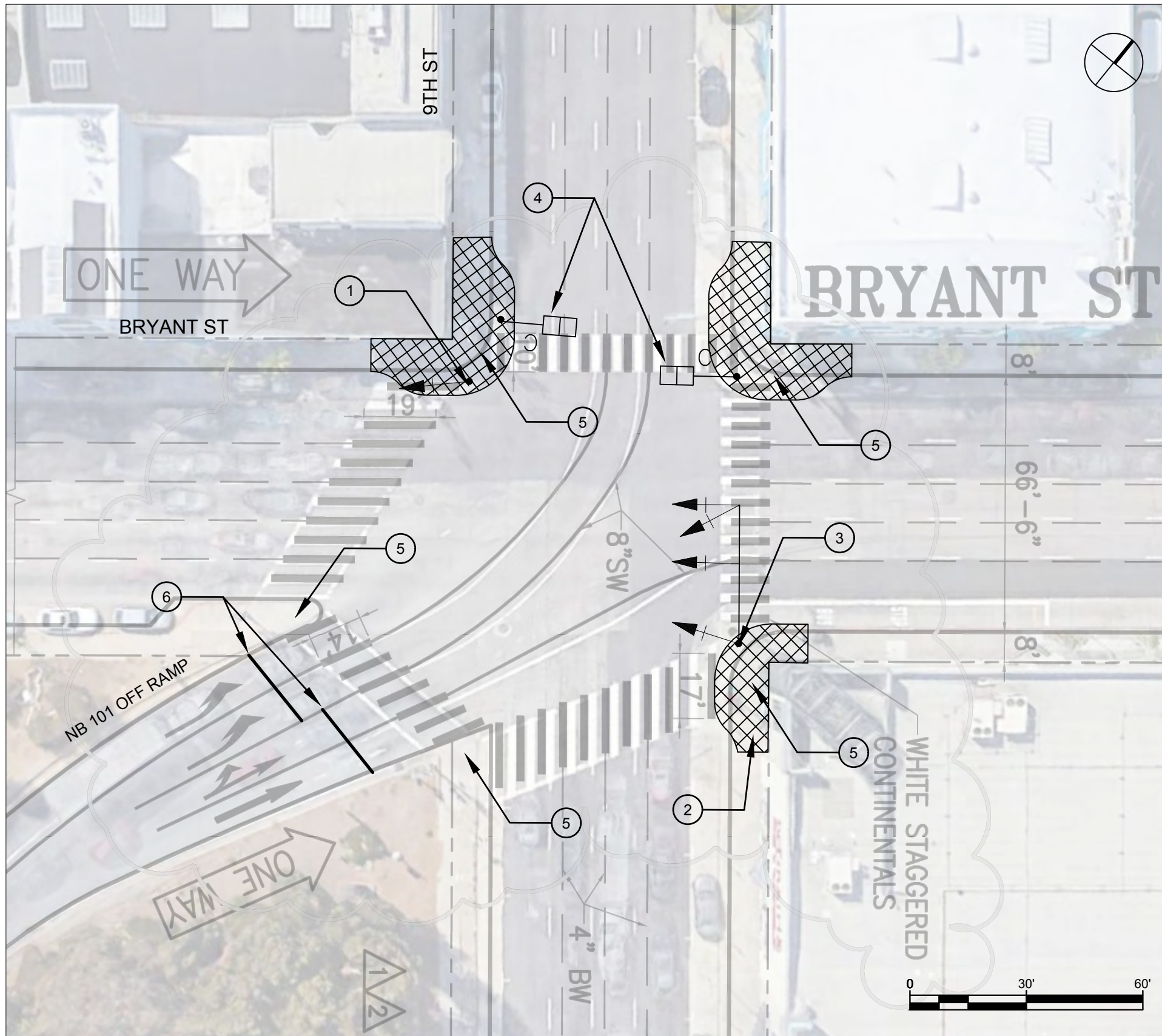
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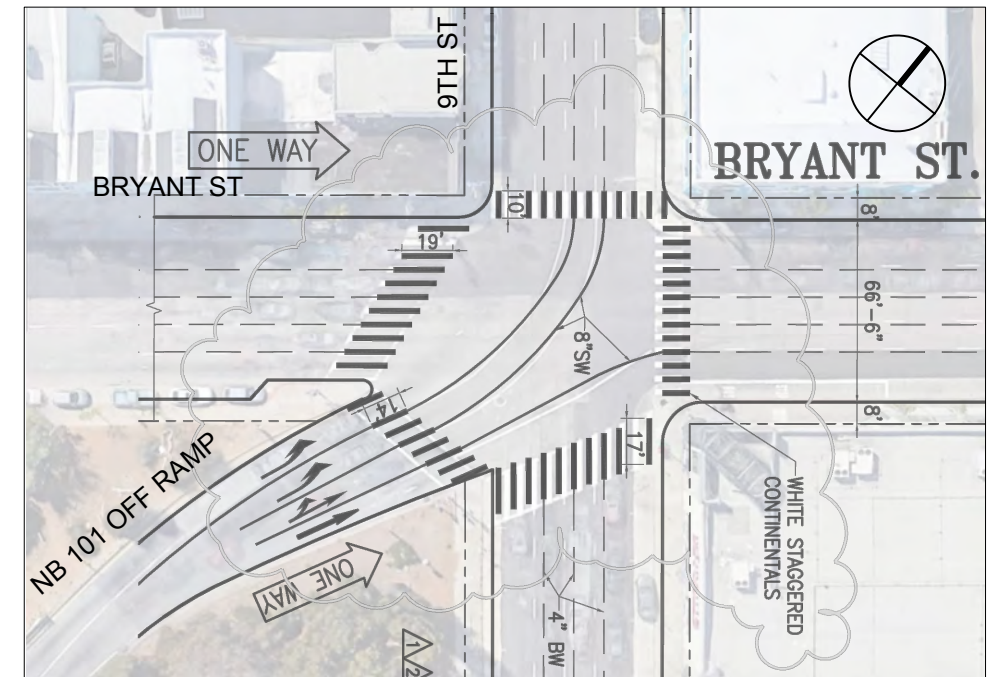
- ① INSTALL NEARSIDE TRAFFIC SIGNAL
- ② INSTALL TRAFFIC SIGNAL MAST ARM POLE
- ③ UPGRADE 8" TRAFFIC SIGNAL HEADS TO 12"
- ④ CONSIDER OFF-RAMP STRIPING CHANGE PENDING ON ADDITIONAL TRAFFIC ANALYSIS AND CALTRANS REVIEW
- ⑤ CONSIDER POTENTIAL INSTALLATION OF A PEDESTRIAN BULB PENDING OFF-RAMP STRIPING CHANGE

*ALL PHYSICAL IMPROVEMENTS WILL REQUIRE CALTRANS APPROVAL

HARRISON STREET / 8TH STREET



BRYANT STREET / 9TH STREET

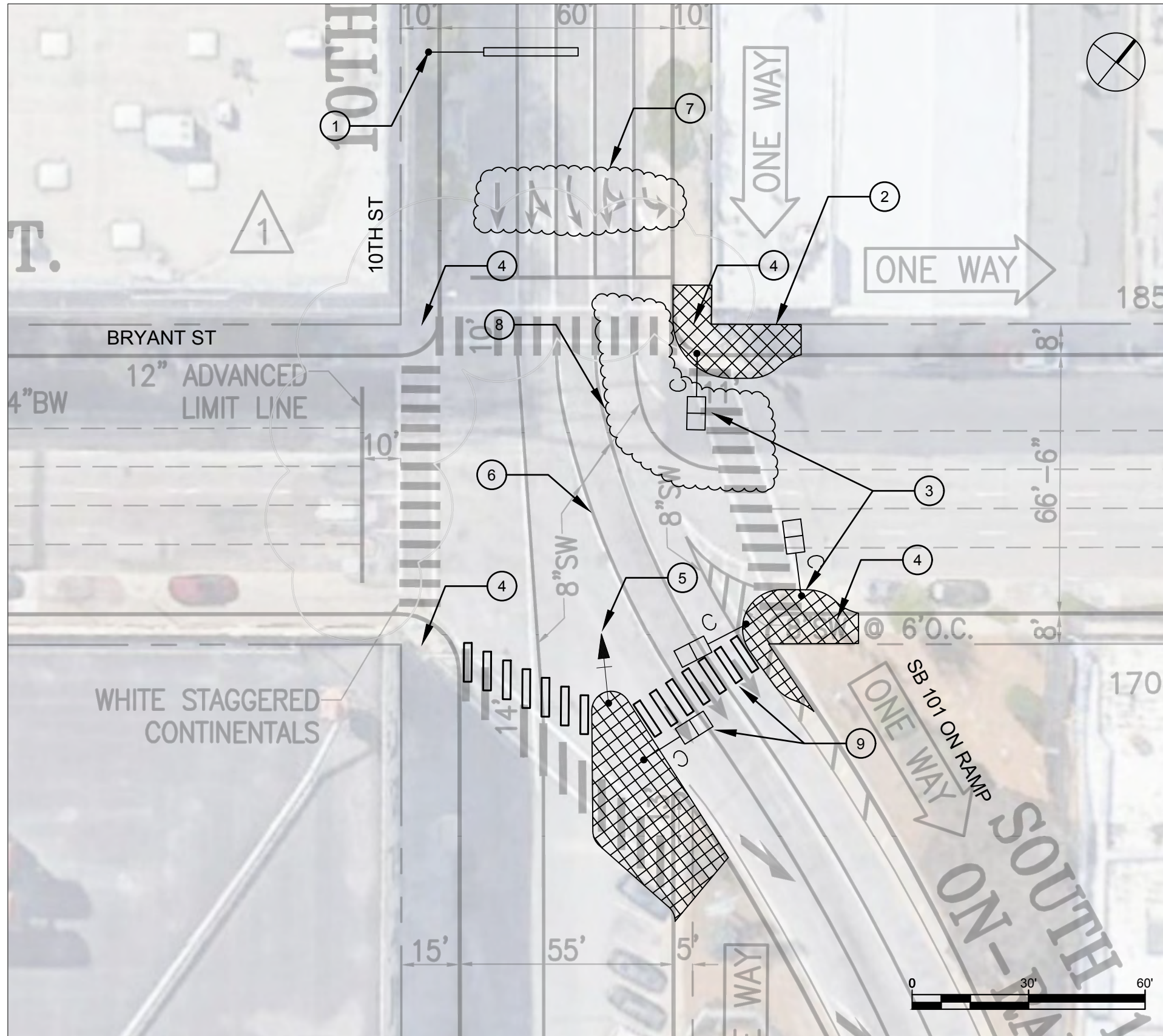


EXISTING CONDITIONS

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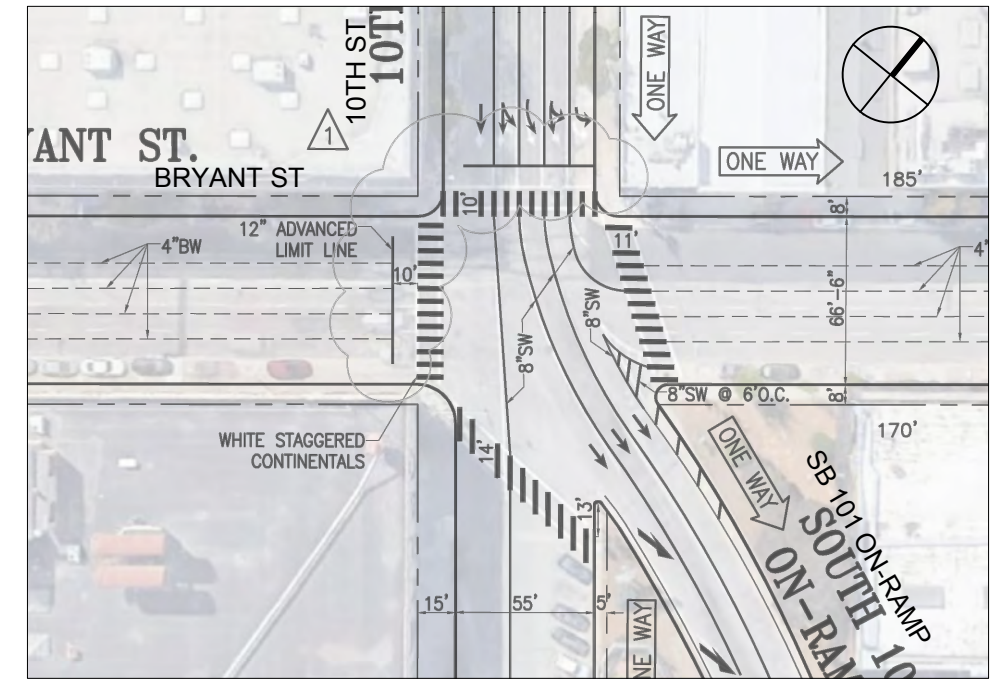
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- ② INSTALL PEDESTRIAN BULB
- ③ INSTALL TRAFFIC SIGNAL MAST ARM POLE
- ④ PROVIDE LEADING PEDESTRIAN INTERVAL PHASING
- ⑤ UPGRADE 8" TRAFFIC SIGNAL HEADS TO 12"
- ⑥ INSTALL STOP BAR

*ALL PHYSICAL IMPROVEMENTS WILL REQUIRE CALTRANS APPROVAL



BRYANT STREET / 10TH STREET

**All physical improvements will require Caltrans approval*



EXISTING CONDITIONS

IMPROVEMENT CONCEPTS::

- ① INSTALL CANTILEVERED OVERHEAD SIGN TO DESIGNATE LANE ASSIGNMENTS
- ② INSTALL PEDESTRIAN BULB
- ③ PROVIDE LEADING PEDESTRIAN INTERVAL PHASE
- ④ UPGRADE 8" TRAFFIC SIGNAL HEADS TO 12"
- ⑤ INSTALL FARSIDE TRAFFIC SIGNAL
- ⑥ REFRESH PAVEMENT MARKINGS AND LANE DELINEATOR LINES
- ⑦ CONSIDER ALTERNATIVE LANE ARRANGEMENTS (E.G., TOW-AWAY LANE CLOSURE, TWO-STAGE BIKE BOX)
- ⑧ CONSIDER RESTRIPING CHANNELIZING LINES
- ⑨ INSTALL HIGH-VISIBILITY STAGGERED CROSSWALK MARKINGS AND NEW PEDESTRIAN SIGNALS

*ALL PHYSICAL IMPROVEMENTS WILL REQUIRE CALTRANS APPROVAL

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www.sfcta.org/NTIP-vision-zero-ramp-intersection-study