



Memorandum

Date: June 21, 2017
To: Transportation Authority Board
From: Eric Cordoba – Deputy Director for Capital Projects
Subject: 07/11/17 Board Meeting: Vision Zero Ramp Intersection Study Phase 1 Update

<p>RECOMMENDATION <input checked="" type="checkbox"/> Information <input type="checkbox"/> Action</p> <p>None. This is an information item.</p> <p>SUMMARY</p> <p>The first phase of the Vision Zero Ramp Intersection Study addresses safety issues at five intersections within the South of Market (SoMa) Youth and Family Special Use District (SUD). The study recommended by Commissioner Kim includes \$100,000 in Prop K sales tax funds from the Neighborhood Transportation Improvement Program (NTIP). The project team is gathering input on draft design concepts for low-cost, near-term improvements such as sidewalk extensions (bulb-outs), signal upgrades, opening of new crosswalks, and new wayfinding signage. The team is also working with the San Francisco Municipal Transportation Agency (SFMTA) to refine cost estimates and develop funding and implementation plans for these improvements. A second phase of the study to address additional SoMa ramp intersections is also just starting.</p>	<p><input type="checkbox"/> Fund Allocation</p> <p><input type="checkbox"/> Fund Programming</p> <p><input type="checkbox"/> Policy/Legislation</p> <p><input checked="" type="checkbox"/> Plan/Study</p> <p><input type="checkbox"/> Capital Project Oversight/Delivery</p> <p><input type="checkbox"/> Budget/Finance</p> <p><input type="checkbox"/> Contract/Agreement</p> <p><input type="checkbox"/> Procurement</p> <p><input type="checkbox"/> Other:</p> <hr/>
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DISCUSSION

Background.

The first phase of the Vision Zero Ramp Intersection Study recommended by Commissioner Kim includes \$100,000 in Prop K sales tax funds from the Transportation Authority’s Neighborhood Transportation Improvement Program (NTIP). The 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).

Improving safety is a top priority in San Francisco. 11 city agencies have passed “Vision Zero” resolutions committing to elimination of traffic injuries and fatalities by 2024. Phase 1 of the Vision Zero Ramp Intersection Study seeks to improve safety for all modes of transportation at freeway ramp intersections within the SoMa Youth and Family 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 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 within 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 a lack of pedestrian crosswalks at some intersections. Using a toolbox of proven design treatments, the team then developed proposed improvements at each intersection to address observed collision types.

Proposed Improvements.

The proposed improvement concepts, shown for each intersection in Attachment 1, include:

- Sidewalk extensions (bulb-outs) to reduce turning speeds and shorten pedestrian crossings;
- 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.

The planning-level cost estimate for further planning, design, and construction of the improvements at all five intersections is approximately \$3.6 million. These upgrades could be implemented in approximately three to five years, but note that these costs and timelines are preliminary and subject to Caltrans review and consultation.

Stakeholder Outreach.

The project team is now seeking input from stakeholders including transportation advocates, community groups, and others on the proposed improvements and implementation timeline. The team worked with the District 6 Commissioner's office to identify key stakeholders in the area and is currently meeting with all interested groups. To date, the design proposals have received positive feedback and support.

Next Steps and Phase 2.

The project team will continue conducting community outreach to seek input on the Phase 1 design concepts through July 2017 and will refine proposed concept plans based on the feedback received. The study team is also working with SFMTA to develop refined cost estimates, funding plans, and implementation schedules, as well as reaching out to Caltrans to refine the improvement plans and determine next steps for their review. Most of the proposed improvements would require Caltrans approval, and significant additional review and analysis would be needed to proceed with any off-ramp striping changes. The final report is expected to be complete by Fall 2017.

We have also begun Phase 2 of the Study, funded by a Caltrans Planning Grant and Prop K, that will analyze safety issues at an additional ten SoMa ramp intersections and recommend short-term and, where needed, longer-term improvements. Similar to Phase 1, the intersections will be selected based on the highest-injury locations that are not yet being addressed by other planning efforts. The Study will propose improvements based on safety analysis, community outreach, and additional technical analysis. The project team is currently drafting a Phase 2 Study evaluation framework and a community engagement plan and is expected to conduct initial stakeholder outreach later this year.

FINANCIAL IMPACT

None. This is an information item.

CAC POSITION

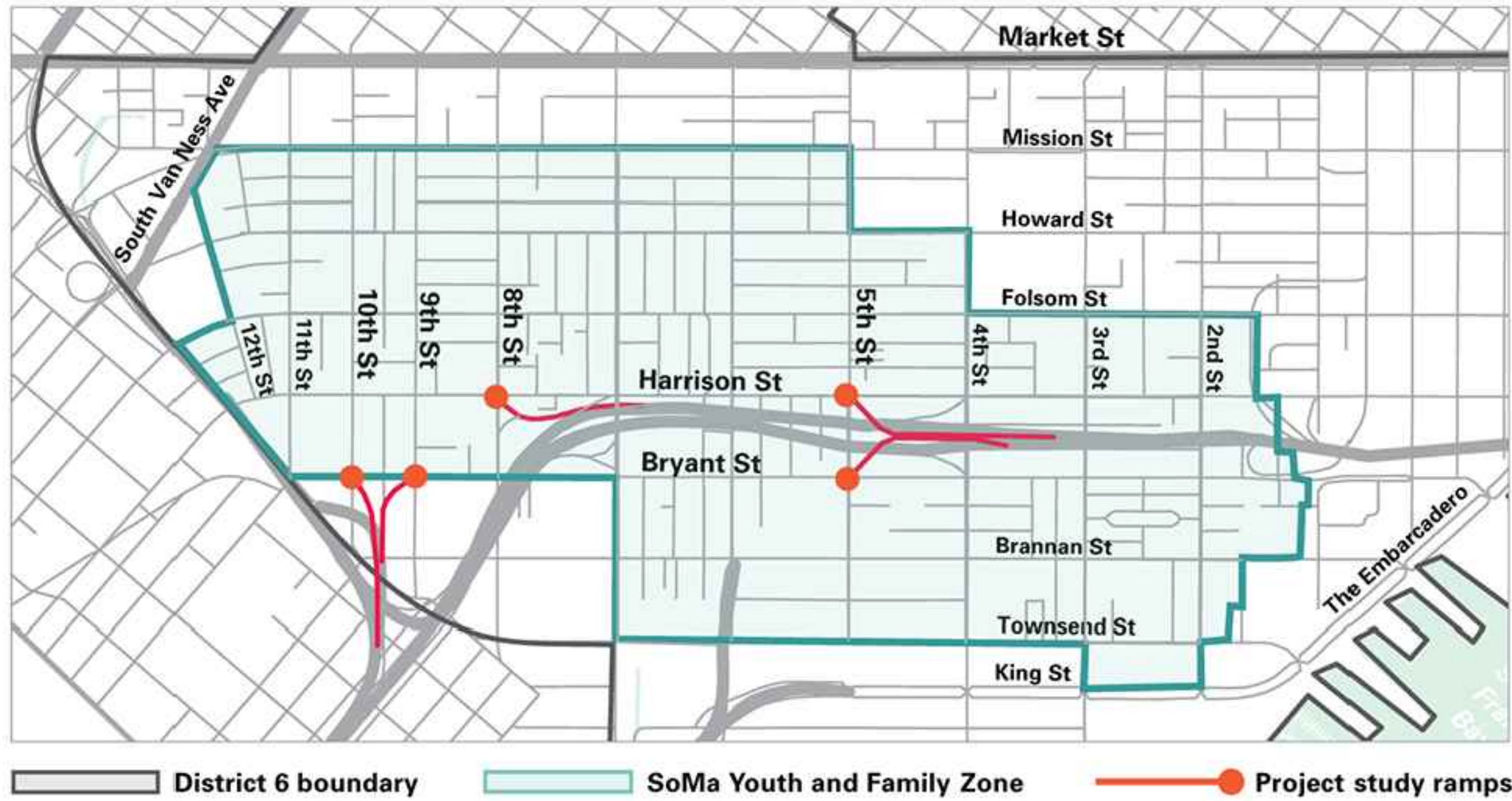
None. This is an information item.

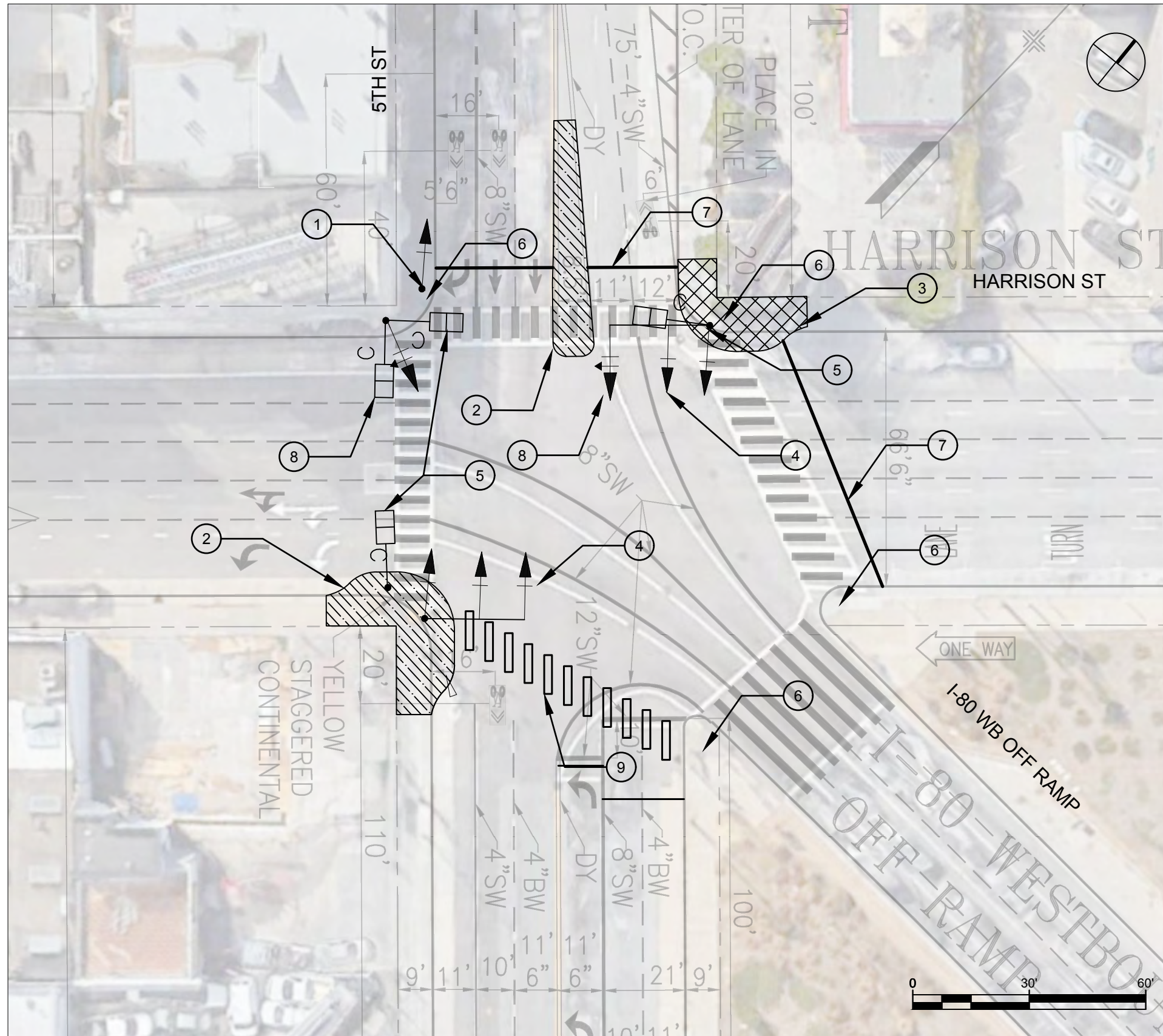
SUPPLEMENTAL MATERIALS

Attachment 1 – Vision Zero Ramp Intersection Study Phase 1 Concept Plans

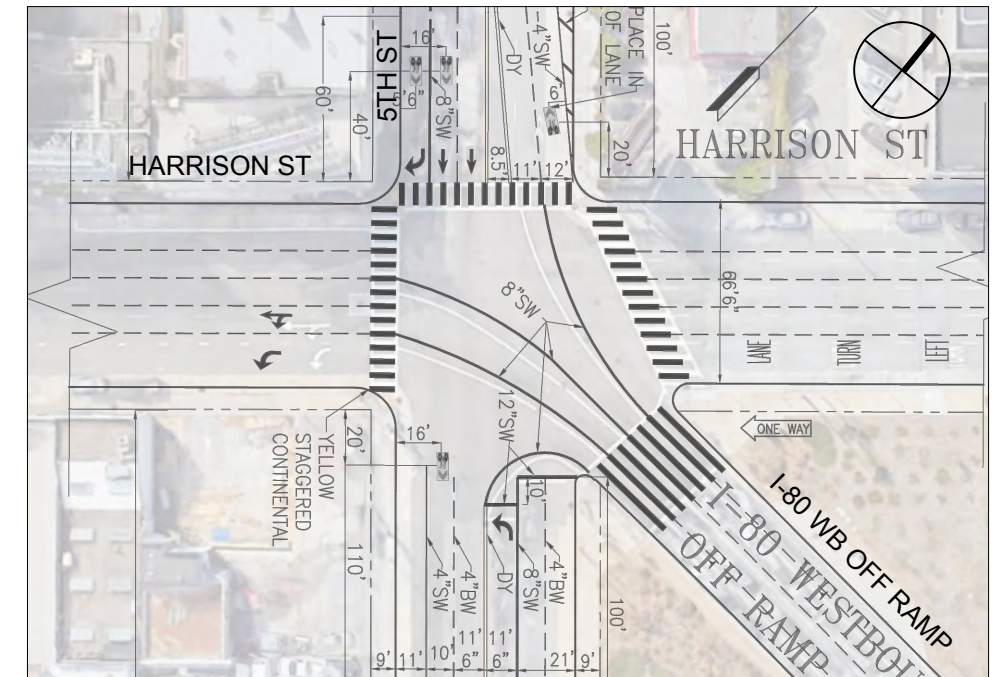
VISION ZERO SF

RAMP INTERSECTION IMPROVEMENT CONCEPTS





HARRISON STREET / 5TH STREET

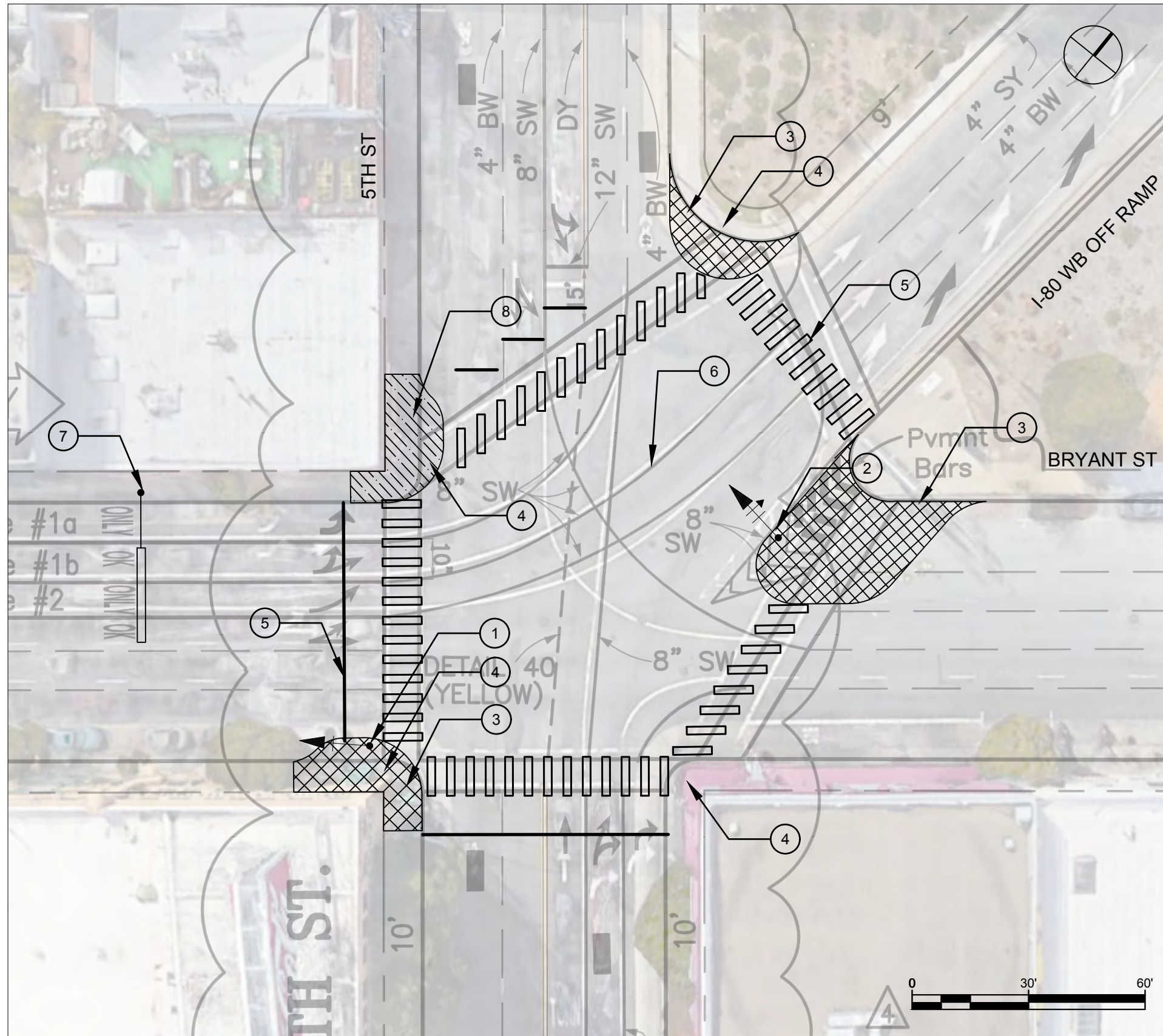


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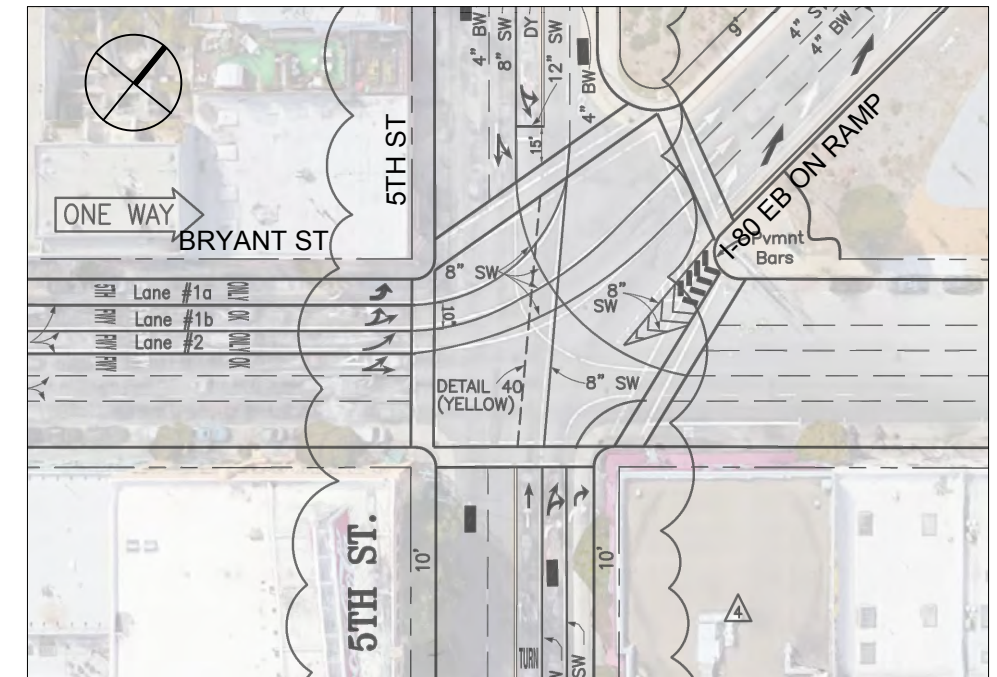
IMPROVEMENT CONCEPTS:

- 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

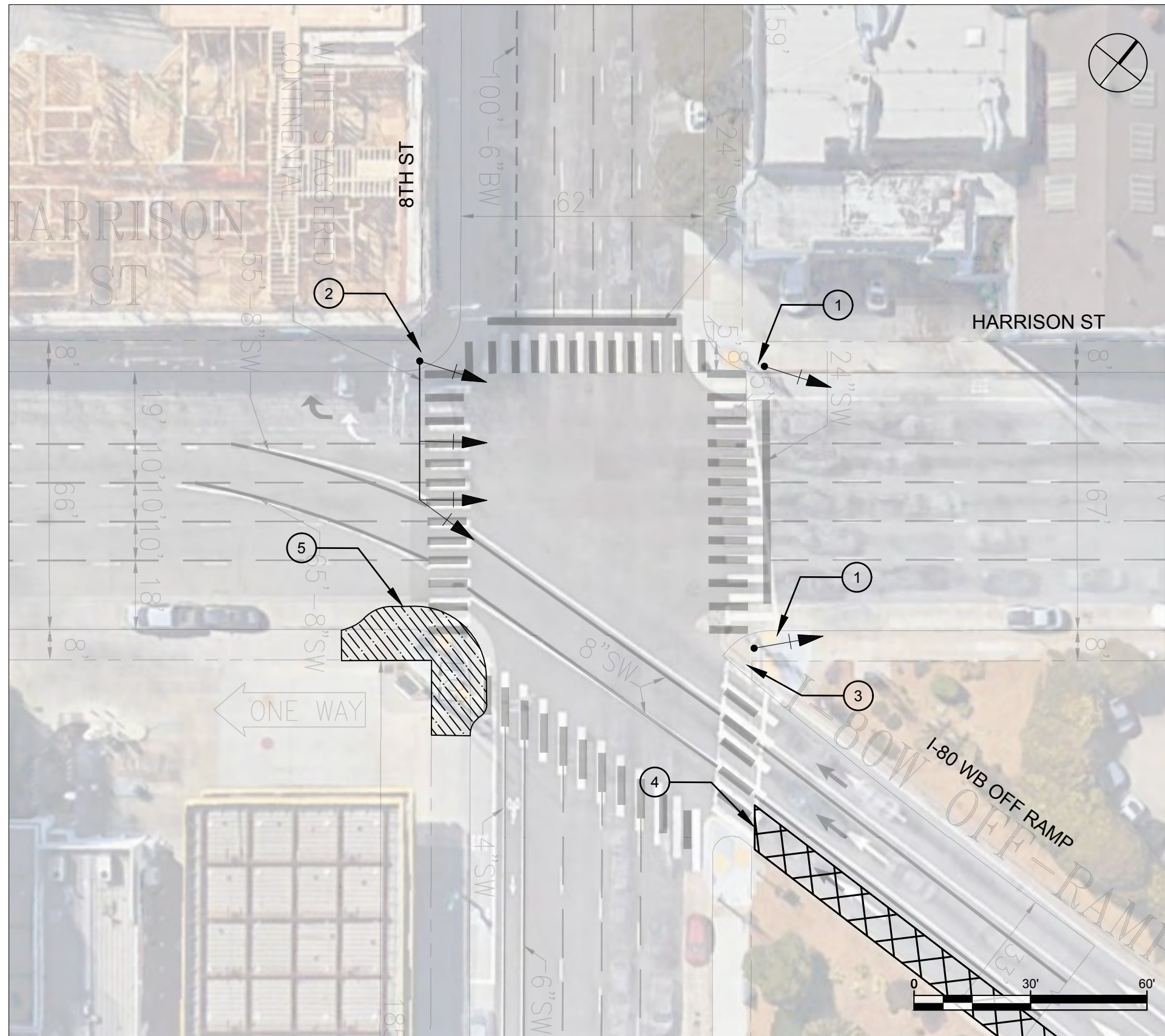


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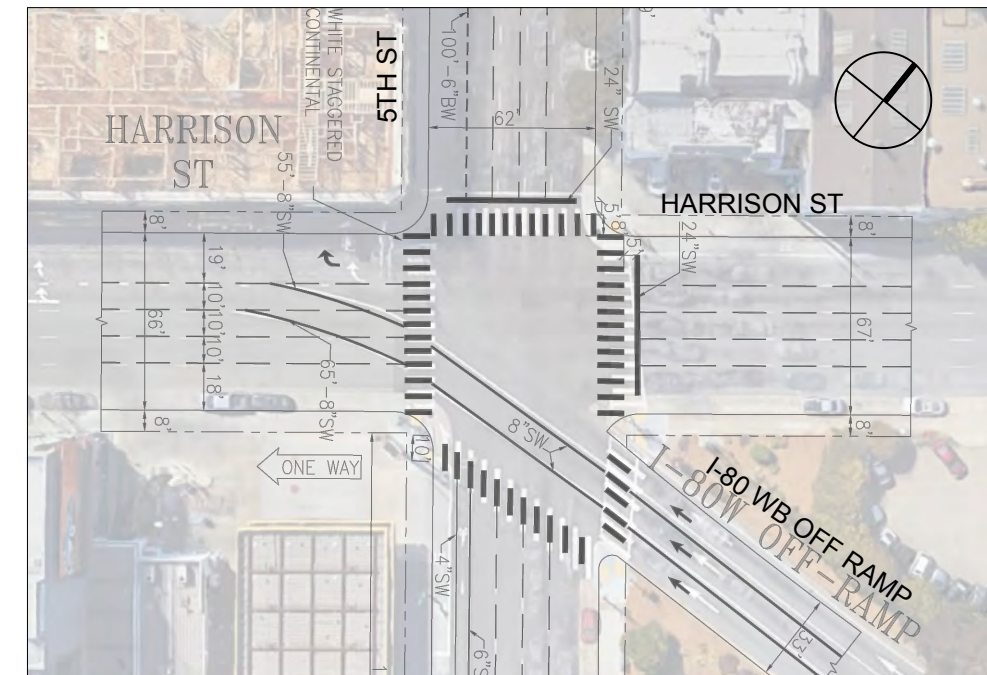
IMPROVEMENT CONCEPTS::

- ① INSTALL NEARSIDE TRAFFIC SIGNAL
- ② INSTALL FAR SIDE 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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HARRISON STREET / 8TH STREET

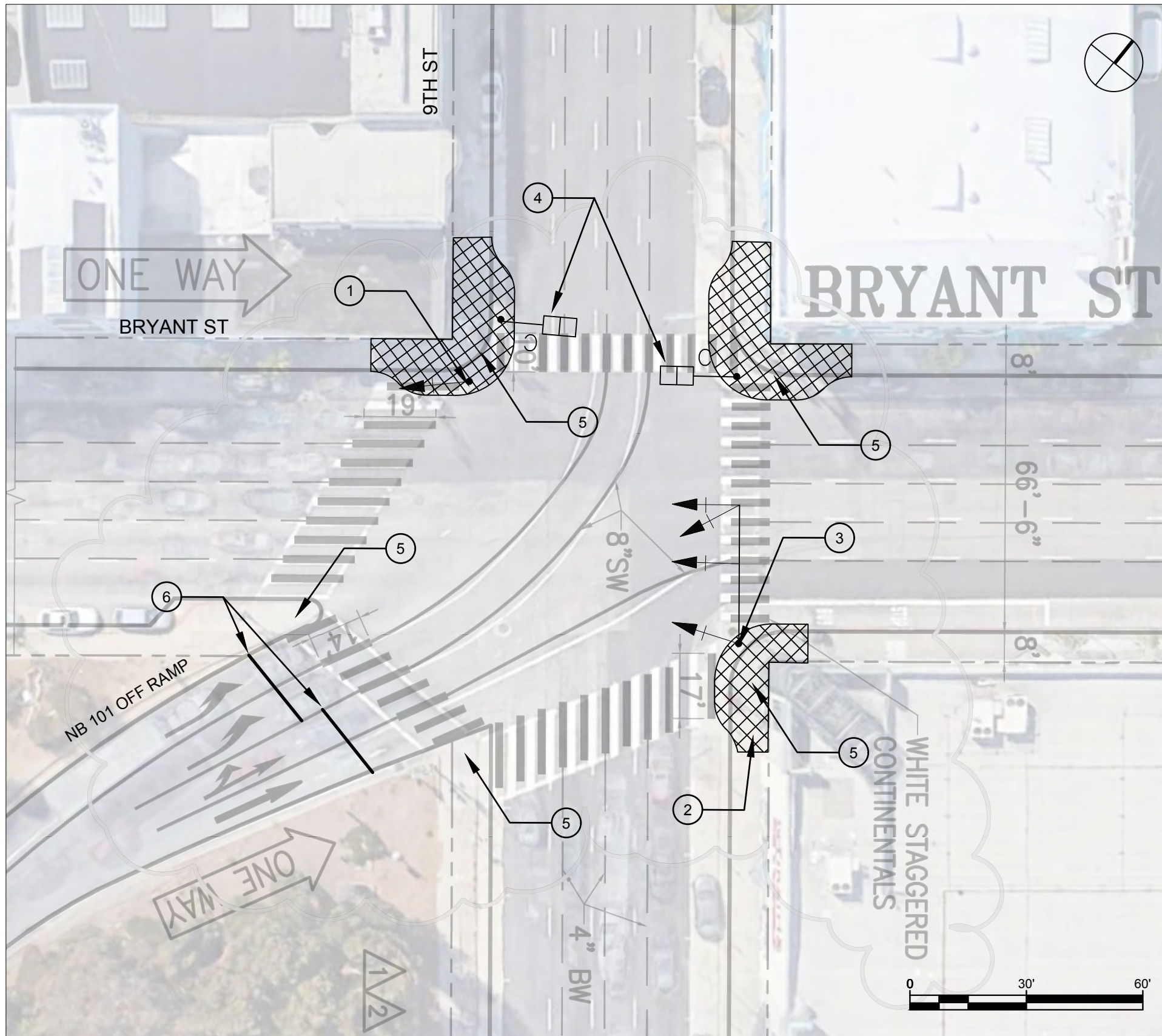


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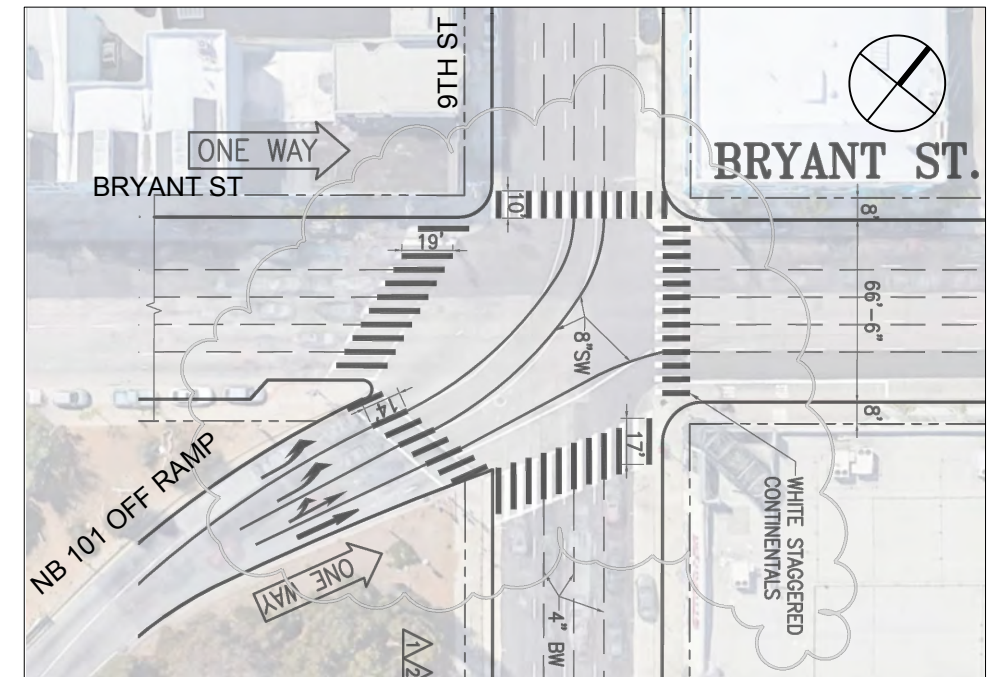
IMPROVEMENT CONCEPTS:

- 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



BRYANT STREET / 9TH STREET

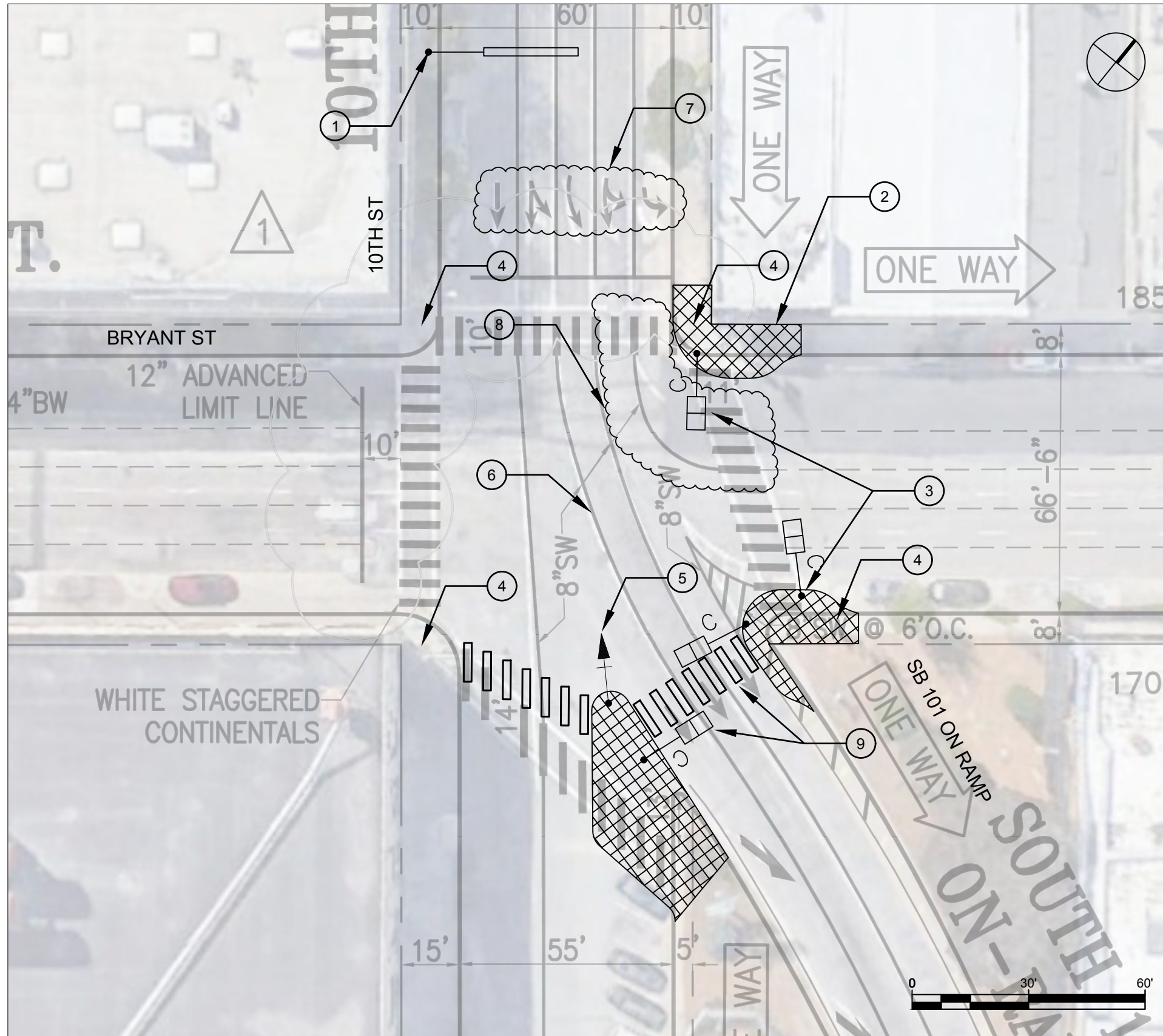


EXISTING CONDITIONS

IMPROVEMENT CONCEPTS:

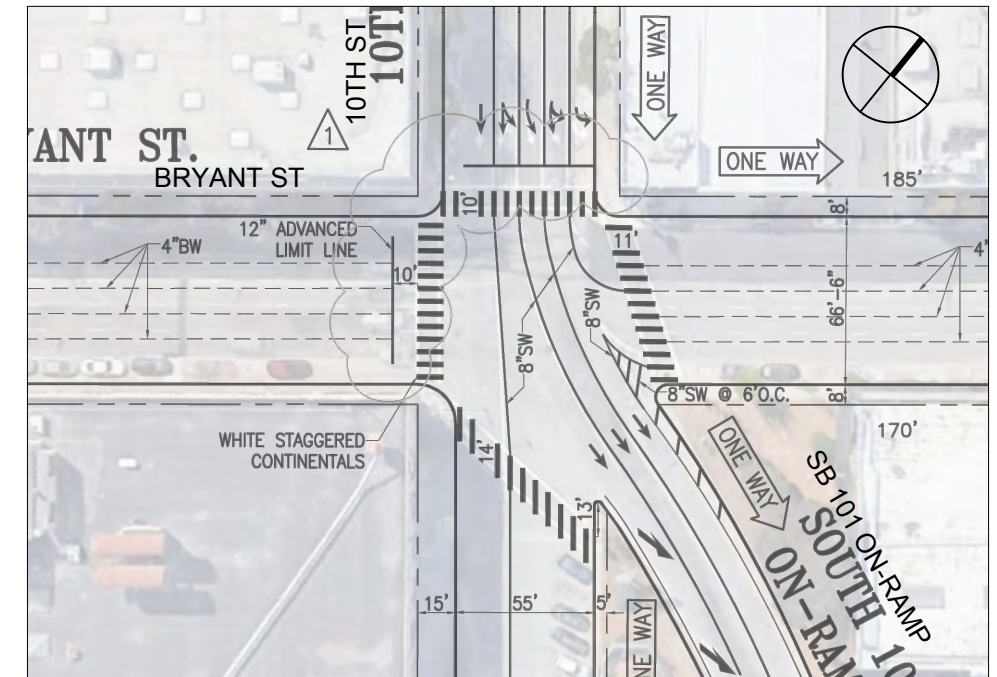
- ① INSTALL NEARSIDE TRAFFIC SIGNAL
- ② INSTALL PEDESTRIAN BULB
- ③ INSTALL TRAFFIC SIGNAL MAST ARM POLE
- ④ PROVIDE LEADING PEDESTRIAN INTERVAL PHASING
- ⑤ UPGRADE 8" TRAFFIC SIGNAL HEADS TO 12"
- ⑥ INSTALL STOP BAR

*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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