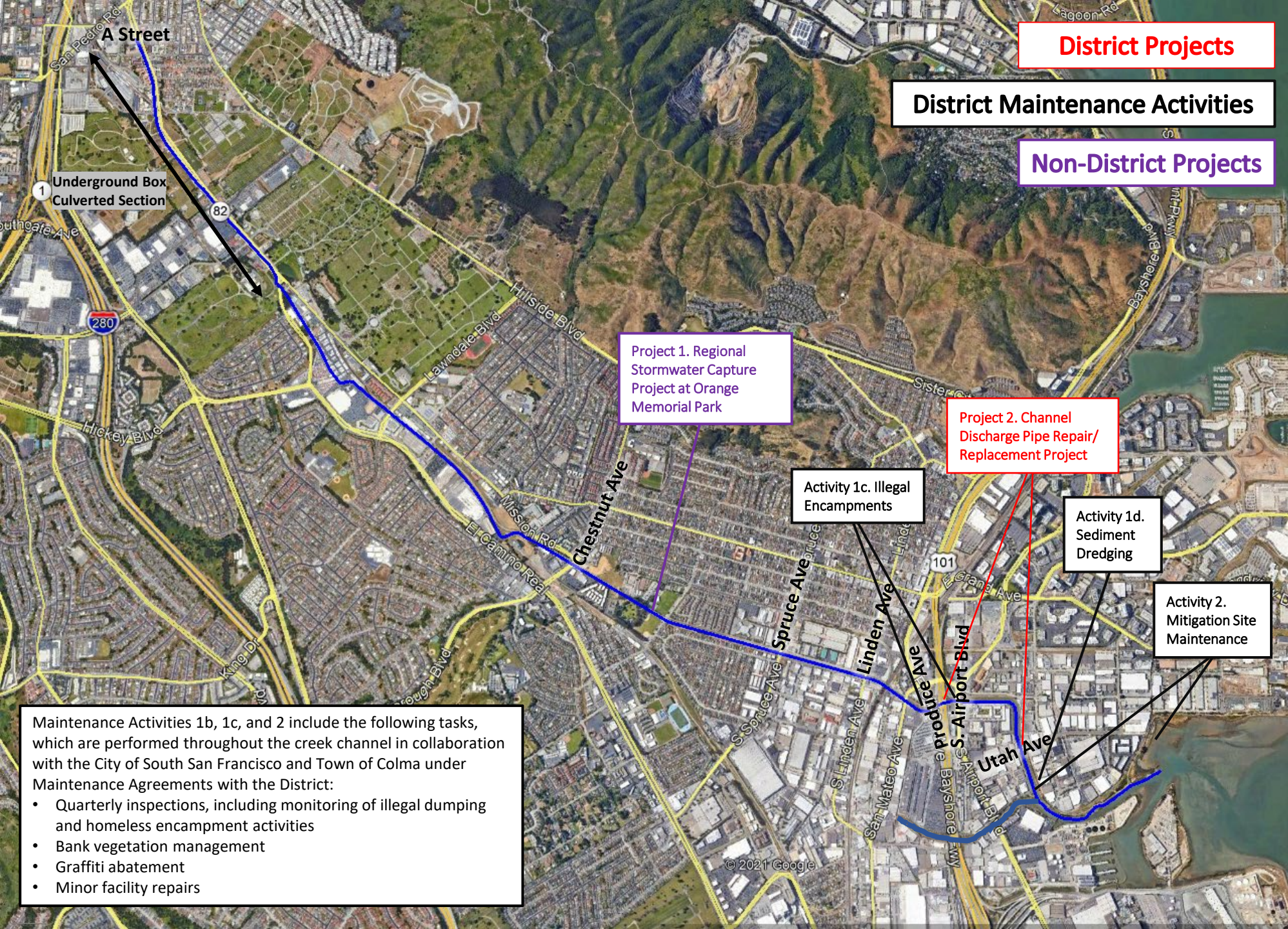


June 13, 2023

Colma Creek Citizens Advisory Committee Meeting

AGENDA

- I. Roll Call**
- II. Public Comment**
- III. Action to set the Agenda and approve the Consent Agenda**
 - a. Approve minutes of the December 13, 2022 and March 14, 2023 meetings**
- IV. Update on Colma Creek Flood Zone Projects and Maintenance Activities, including the draft Fiscal Year 2023-24 Budget**
- V. City of South San Francisco Presentation on their Lindenville Specific Plan**
- VI. Adjournment**



District Projects

District Maintenance Activities

Non-District Projects

Project 1. Regional Stormwater Capture Project at Orange Memorial Park

Project 2. Channel Discharge Pipe Repair/ Replacement Project

Activity 1c. Illegal Encampments

Activity 1d. Sediment Dredging

Activity 2. Mitigation Site Maintenance

Maintenance Activities 1b, 1c, and 2 include the following tasks, which are performed throughout the creek channel in collaboration with the City of South San Francisco and Town of Colma under Maintenance Agreements with the District:

- Quarterly inspections, including monitoring of illegal dumping and homeless encampment activities
- Bank vegetation management
- Graffiti abatement
- Minor facility repairs

Agenda Item 4

Update on Colma Creek Flood Zone Projects and Maintenance Activities

Appendix A
Map of Colma Creek Flood Zone Projects and Maintenance Activities



April 15 Student Volunteer Event at Maintenance Site 3

OneShoreline
Building Solutions for a Changing Climate

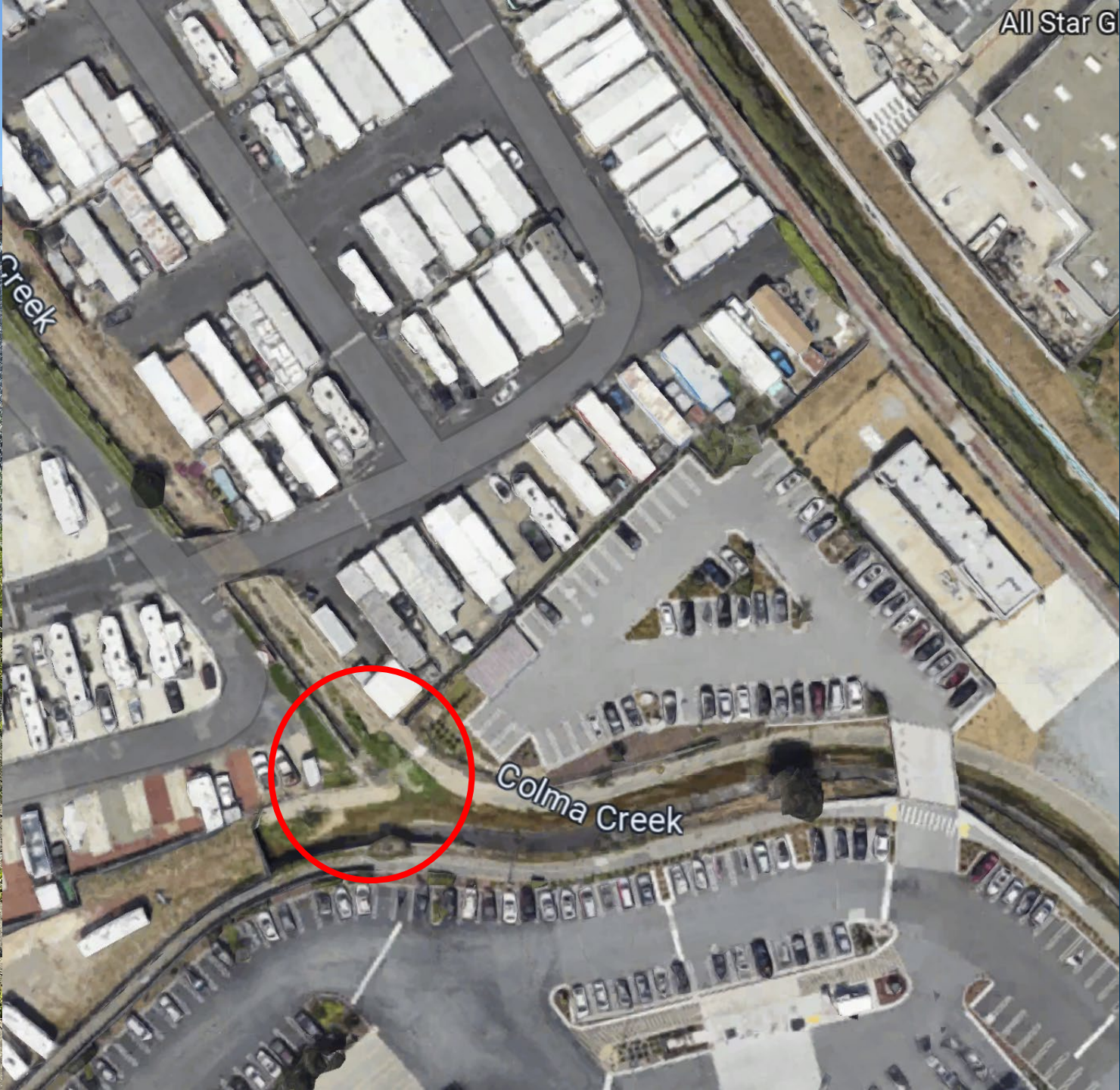


April 22, 2023, Earth Day Creek Clean Up Event with SSF



		Total of Prior 5 Years (FY16-17 through 20-21)*	2022-23 (Budget)	2022-23 (Actual YTD)	2023-24 (Draft Budget)
Revenue					
	Taxes (Secured Property)		\$ 4,167,095	\$ 6,021,481	\$ 5,075,653
	Rent and Interest Income		\$ 25,131	\$ 299,346	\$ 196,550
	Inter-governmental Revenue		\$ 95,307	\$ 13,538	\$ 97,375
	Total Revenue	\$ 23,909,201	\$ 4,287,533	\$ 6,334,366	\$ 5,369,578
General Administration of Flood Zone					
			\$ 165,860	\$ 148,129	\$ 150,450
Project Expenditures					
<i>Project Number</i>	<i>Project Name</i>				
1	Planning & Coordination with City of SSF General Plan				
	Preliminary Study	\$ 88,448	\$ 50,000	\$ -	\$ 50,000
2	Channel Discharge Pipe Repair/ Replacement Project				
	Design & Permitting	\$ 75,527	\$ -	\$ 8,863	\$ 15,000
	Construction	\$ -	\$ 828,761	\$ 307,287	\$ 546,874
	Project Administration	\$ 91,567	\$ 207,190	\$ 32,132	\$ 213,540
	Total Project Expenditures/Estimates	\$ 1,053,881	\$ 1,085,951	\$ 348,281	\$ 825,414
Maintenance Activities Expenditures					
<i>Activity Number</i>	<i>Activity Name</i>				
1	Colma Creek Operations & Maintenance				
	Maintenance Tools and Equipment		\$ 2,000	\$ -	\$ -
	Maintenance and Minor Repairs	\$ 1,128,865	\$ 430,000	\$ 24,623	\$ 800,000
	Project Administration	\$ 224,222	\$ 107,500	\$ 116,363	\$ 200,000
2	Mitigation Site Maintenance				
	Annual Maintenance Activities	\$ 454,017	\$ 90,000	\$ 4,922	\$ 25,000
3	Maintenance Agreements				
	With City of South San Francisco	\$ 20,720	\$ 45,000	\$ -	\$ 45,000
	With Town of Colma	\$ 53,256	\$ 35,000	\$ -	\$ 35,000
	Total Maintenance Activities Expenditures/Estimates	\$ 1,881,080	\$ 709,500	\$ 145,908	\$ 1,105,000
	Total Expenditures/Estimates	\$ 2,934,961	\$ 3,503,860	\$ 494,189	\$ 1,930,414
Estimated Fund Balance at End of Fiscal Year			\$ 32,766,399	\$ 34,446,952	\$ 37,886,116

*Expenditures before FY20-21 do not include staff time



Agenda Item 5

City of South San Francisco Presentation
on their Lindenville Specific Plan



Colma Creek CAC

June 13, 2023

The Purpose of Today's Meeting is...



Provide a brief overview of the Lindenville Specific Plan process



Review draft policy direction for business retention, retail, arts and makers and housing



Discuss and receive feedback on the draft policy direction

What is a Specific Plan?

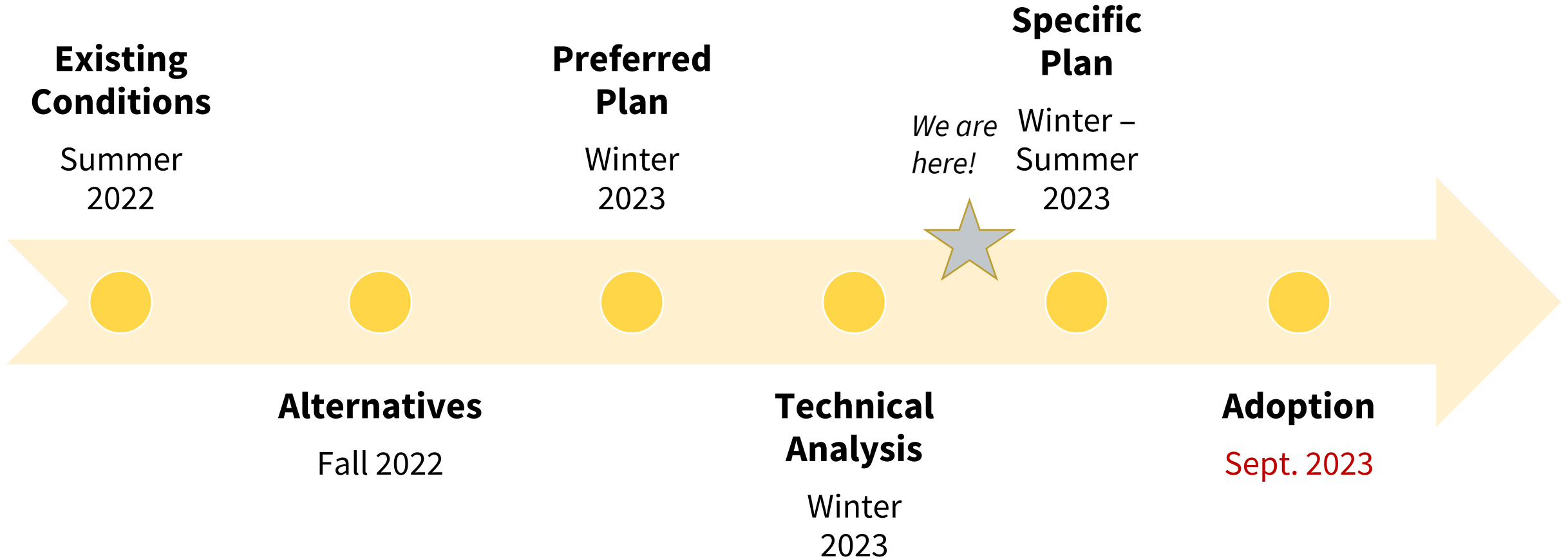
What it is?

- A comprehensive planning and zoning tool for a small area
- Refines the vision and guiding principles
- Defines policy and development standards
- Strong focus on implementation

What's Required?

- Distribution, location, and extent of the uses of land, including open space
- Proposed distribution, location, and extent and intensity of major components of transportation and infrastructure
- Development standards
- A program of implementation measures
- A statement of the relationship of the specific plan to the general plan

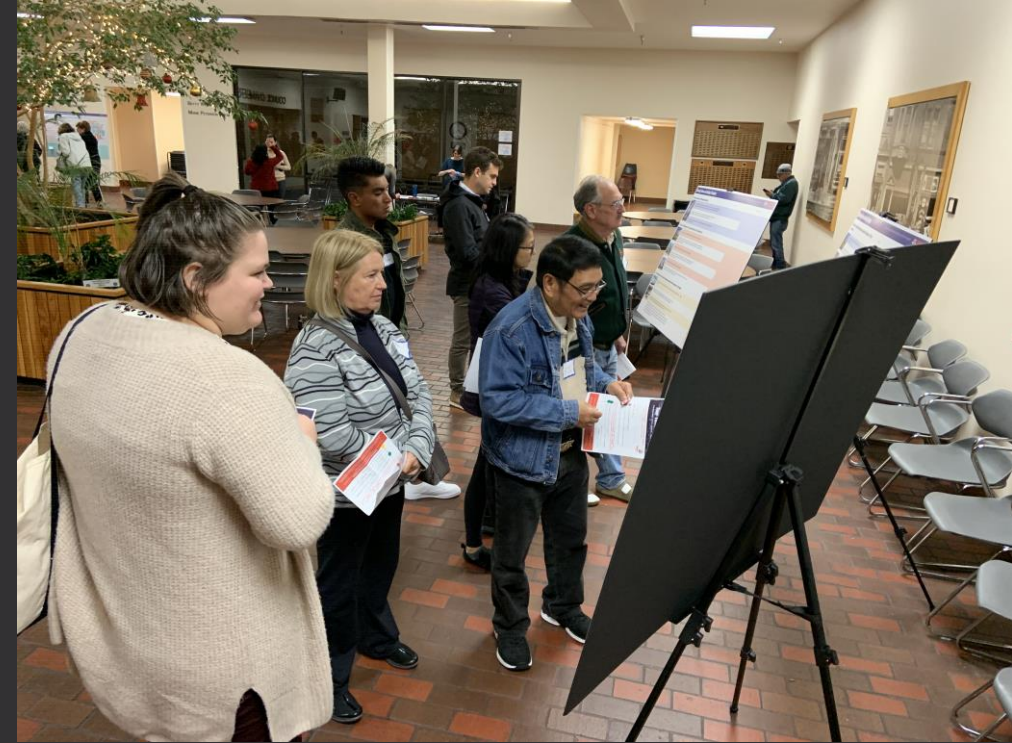
When will the Specific Plan be Done?



Tentative Meeting Schedule

- Planning Commission (7/6)
- Youth Commission (7/10)
- Racial and Social Equity Commission (7/17)
- Parks and Recreation Commission (7/18)
- Cultural Arts Commission (7/19)
- City Council (7/26)

In person and virtual community meetings to be scheduled



Stormwater Modeling

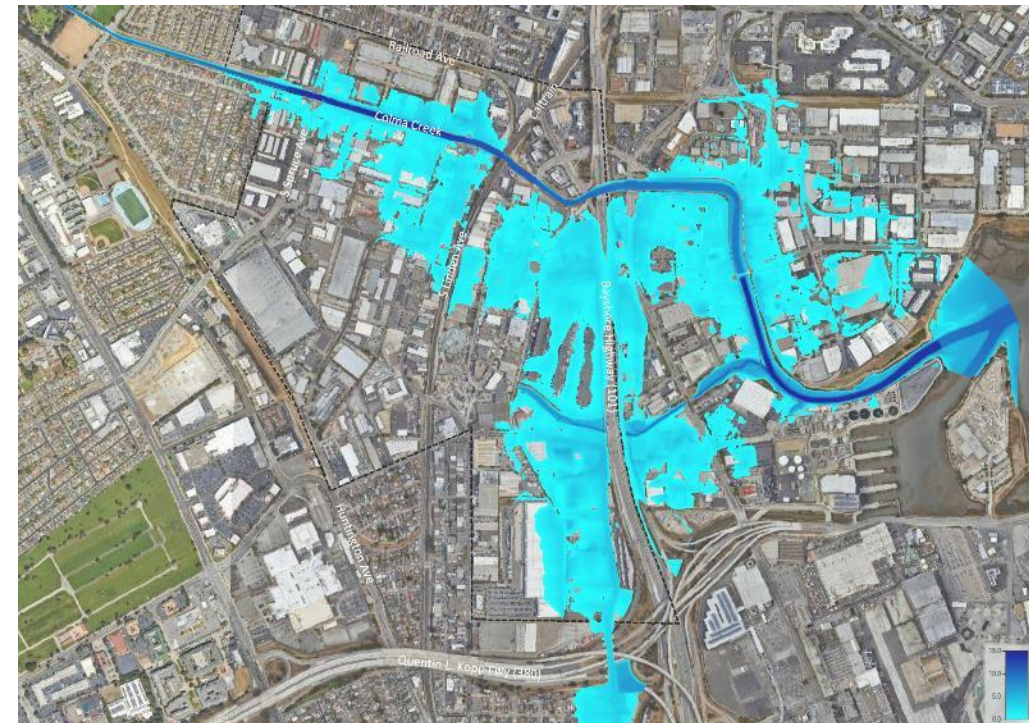
Lindenville Specific Plan

Colma Creek H&H Modeling

- Evaluated 100-year storm events, including future climate change and sea level rise
- Characteristics of existing climate flooding :
 - Originates from Navigable Slough
 - Flood depths <2' north of Navigable Slough; deepest flooding at Terminal Ct
 - Flood depths <4' south of Navigable Slough; deepest flooding along Shaw Rd
- Under the future climate change scenario, additional flooding observed upstream of Caltrain



Existing 100-year Storm (6.8' NAVD88 MHHW Tide)

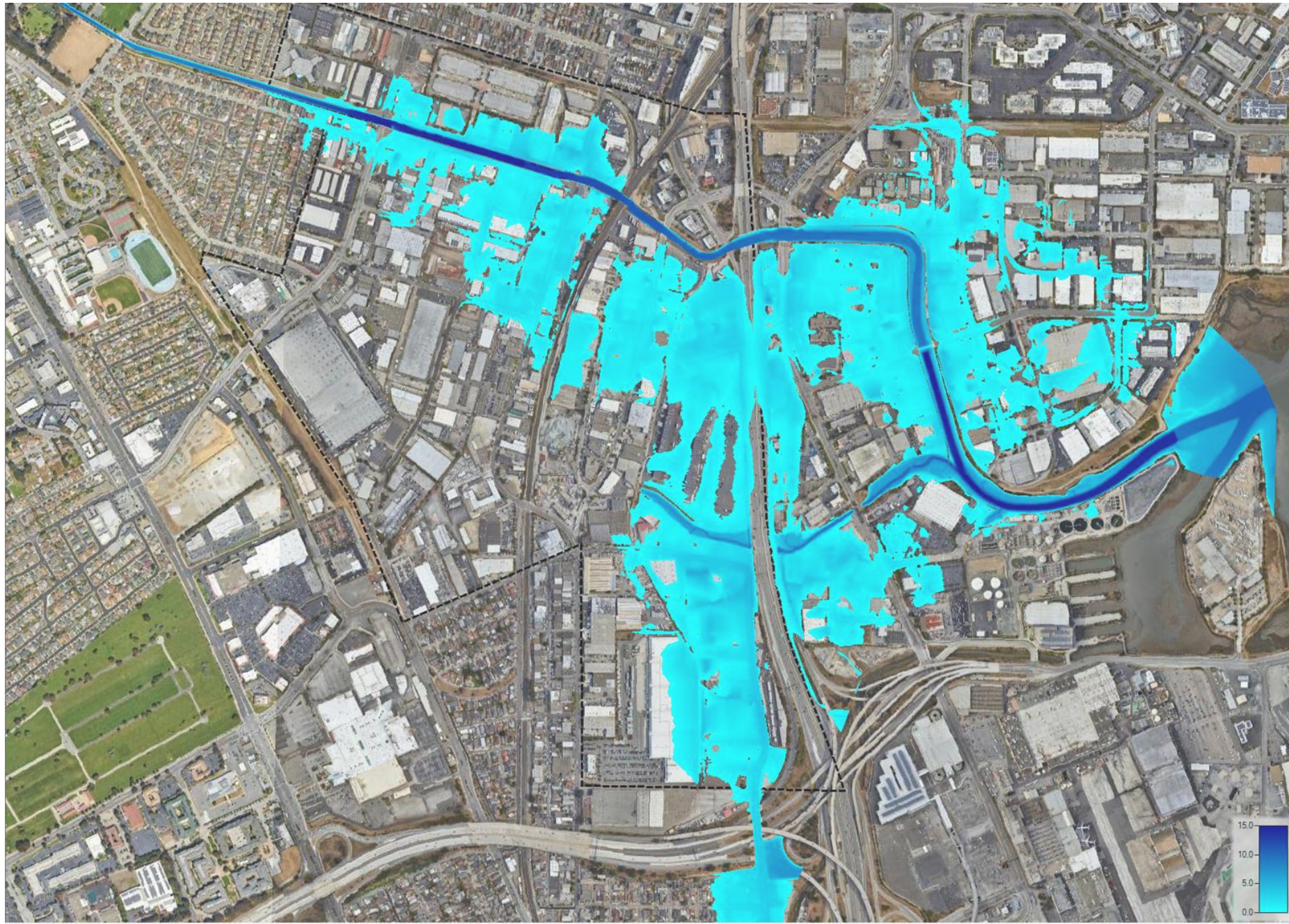


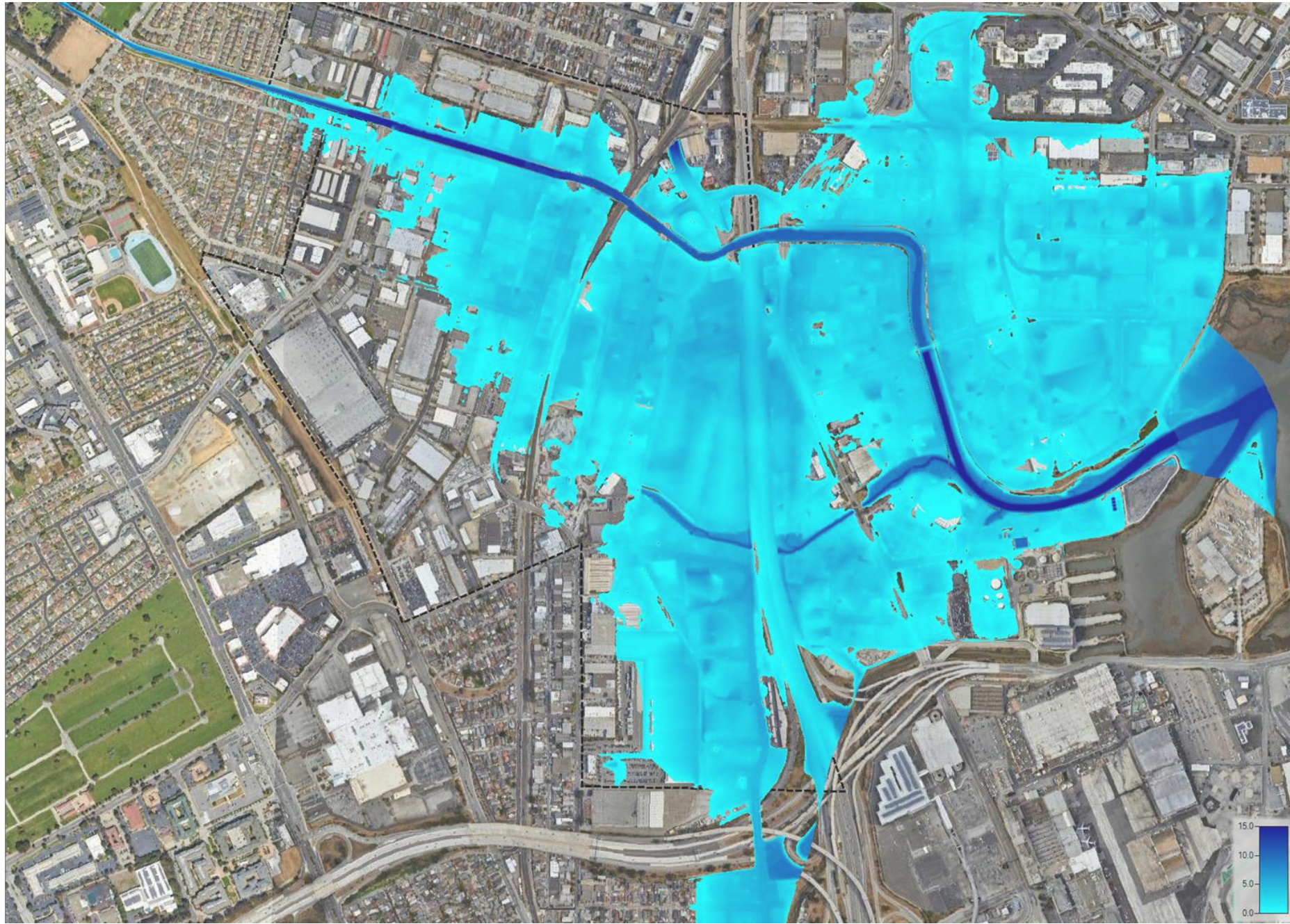
Future 100-year Storm + 3ft SLR (9.8' NAVD88 Tide)

Existing Climate 100-year Storm



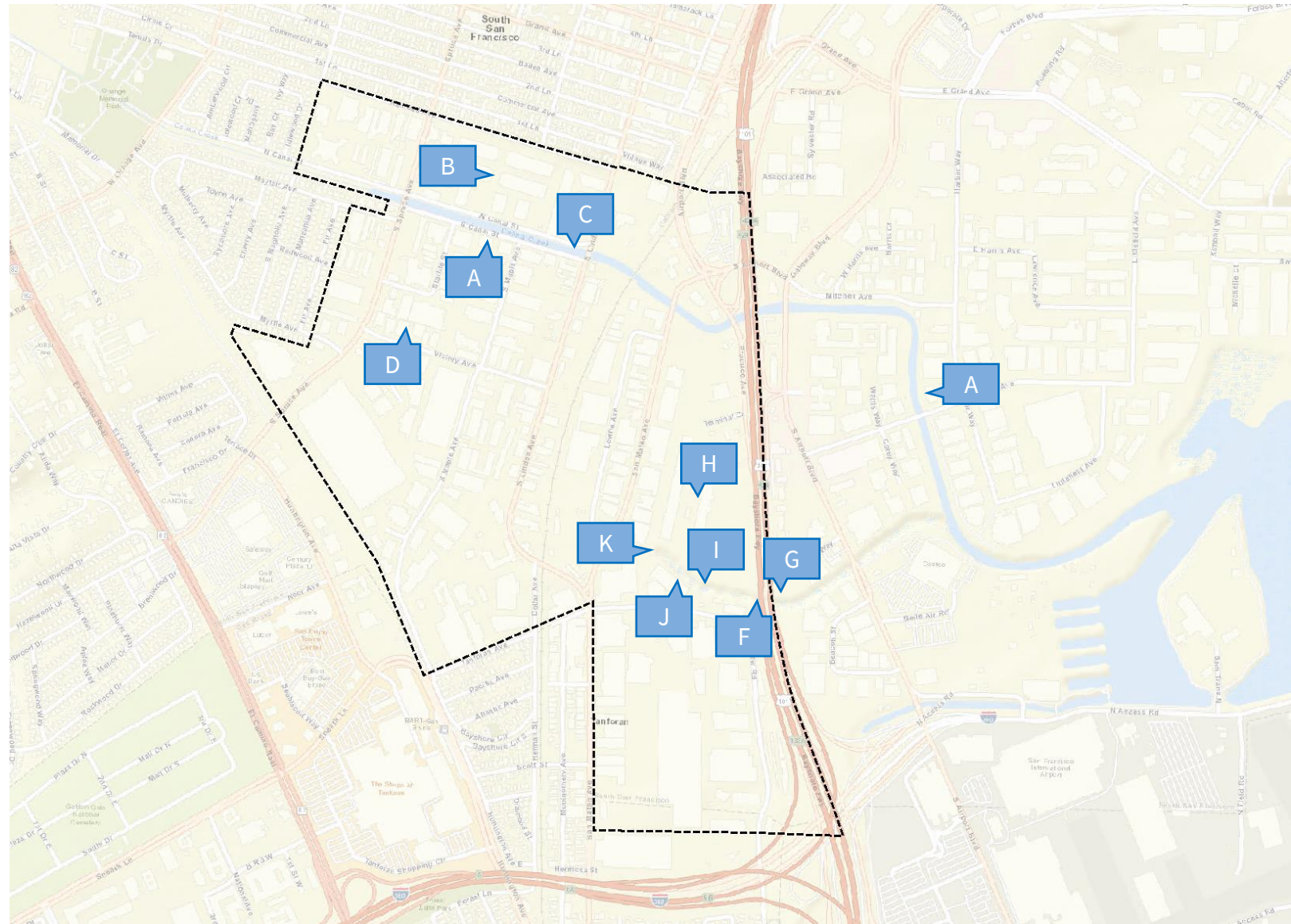






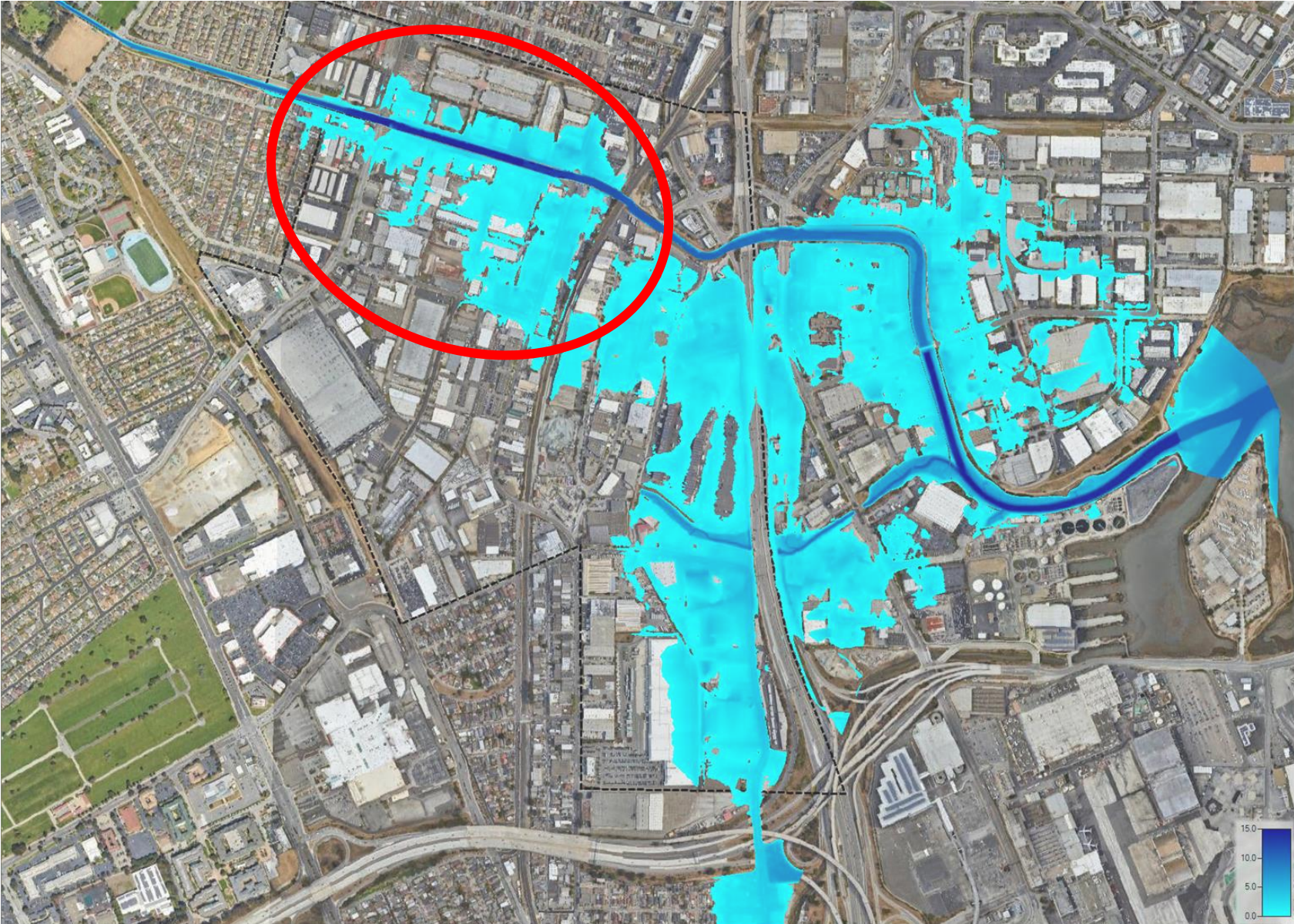
Modeling Analysis

- Investigating causes of flooding and potential flood protection options
- **Colma Creek**
 - A. Widen Channel
 - B. Provide Detention Capacity (Floodable Multi-use Parks)
 - C. Raise Floodwall(s)
 - D. Reduce Inflow (upstream GI)
- **Navigable Slough**
 - F. Increase Capacity at 101
 - G. Install Tide Gates
 - H. Raise Development Sites
 - I. Provide Detention Capacity
 - J. Raise Floodwall(s)
 - K. Reduce Inflow (upstream GI)



Colma Creek Flooding

- Future Climate 100-year Storm + 3' SLR



Modeling Analysis

- Investigating causes of flooding and potential flood protection options

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- **Navigable Slough**

- F. Increase Capacity at 101

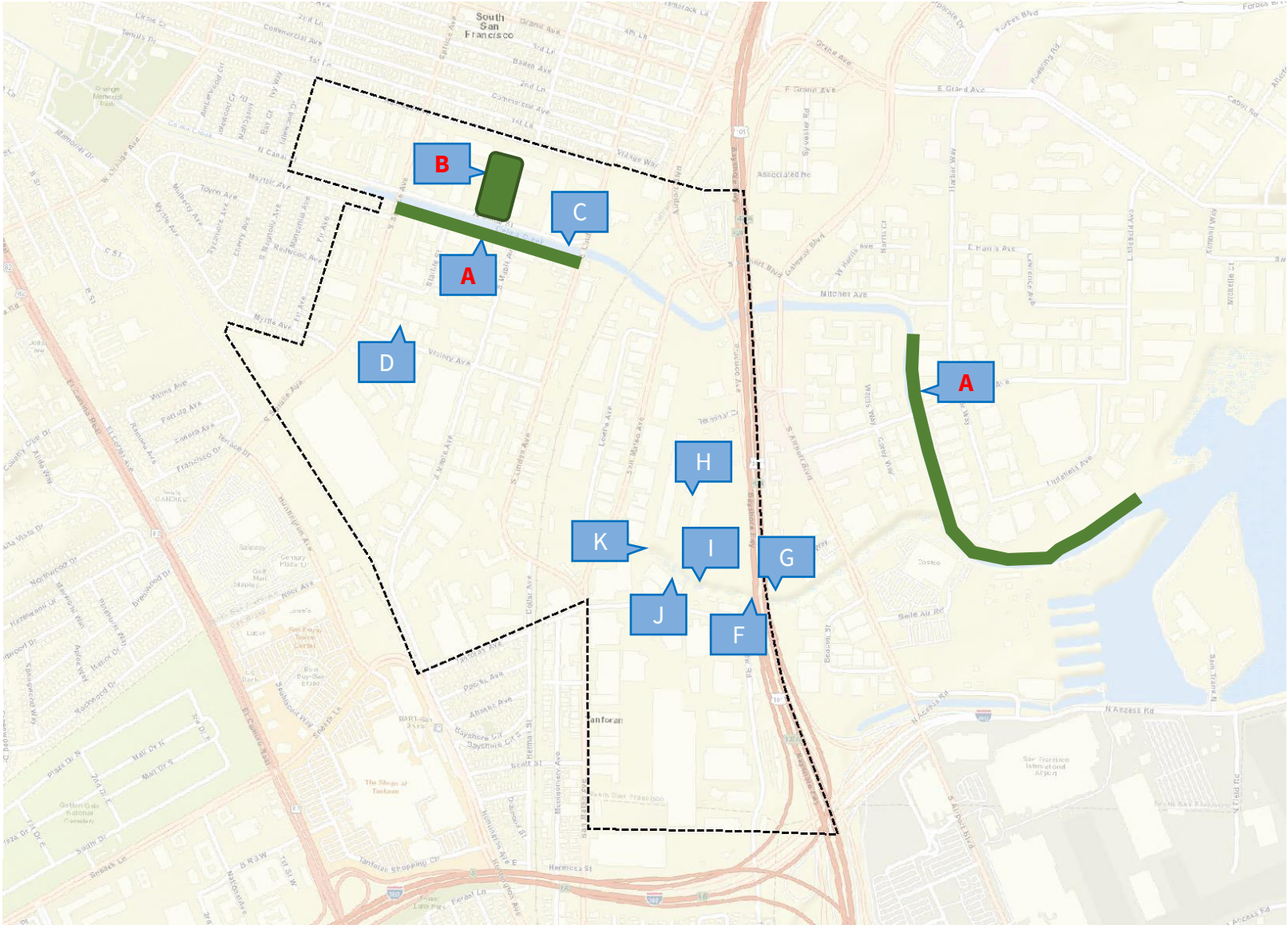
- G. Install Tide Gates

- H. Raise Development Sites

- I. Provide Detention Capacity

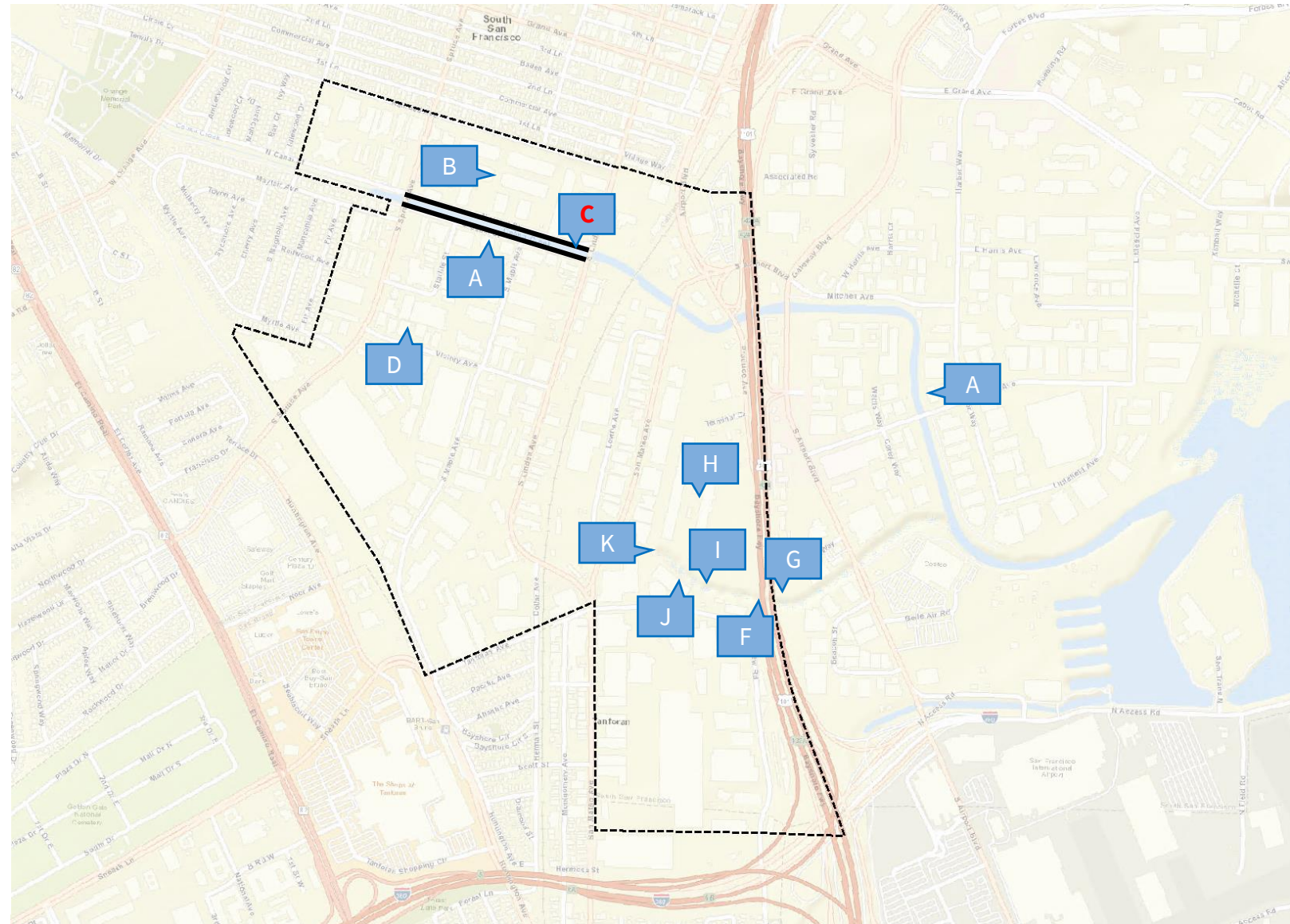
- J. Raise Floodwall(s)

- K. Reduce Inflow (upstream GI)

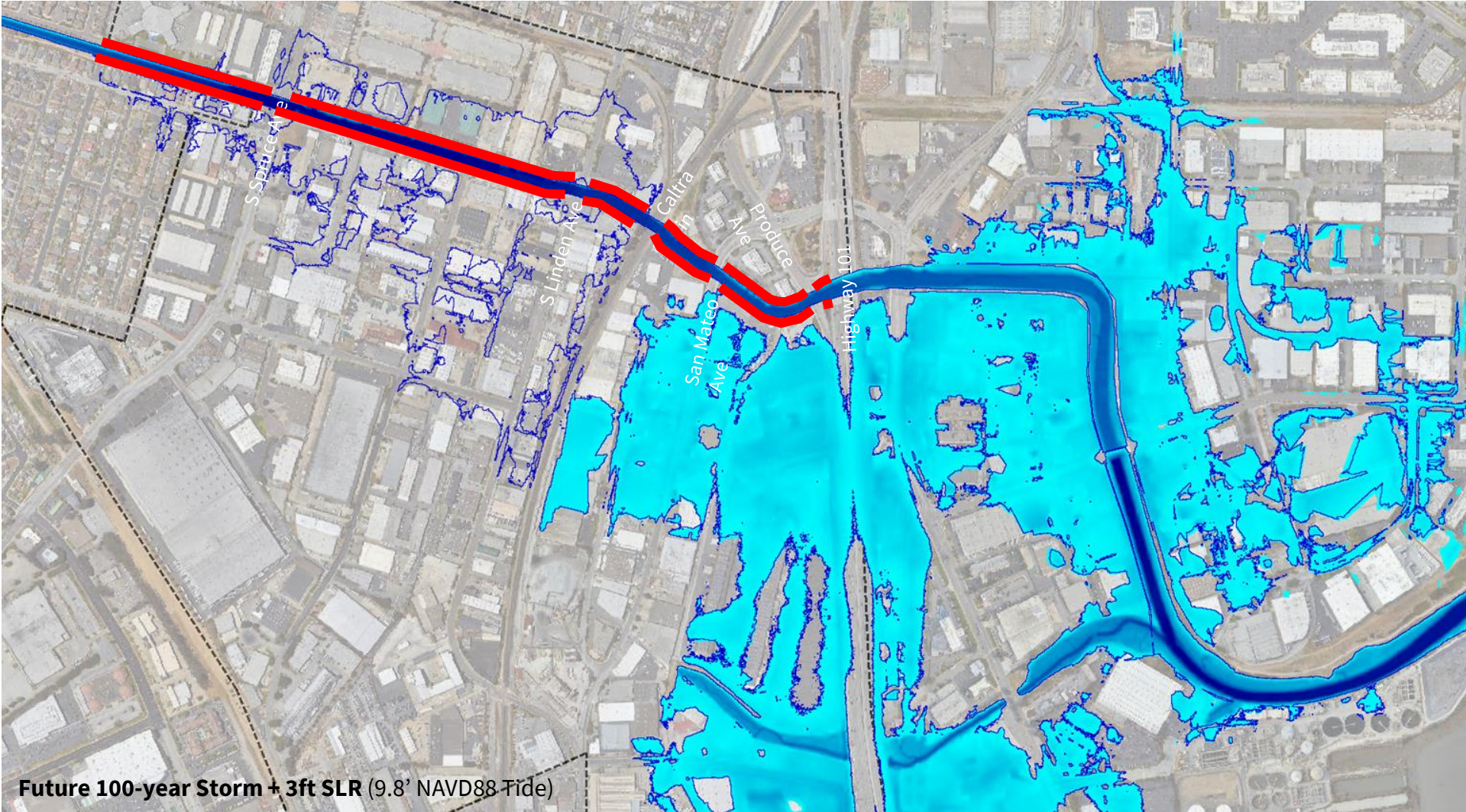


Modeling Analysis

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Colma Creek – Raised Floodwalls



Modeling Analysis

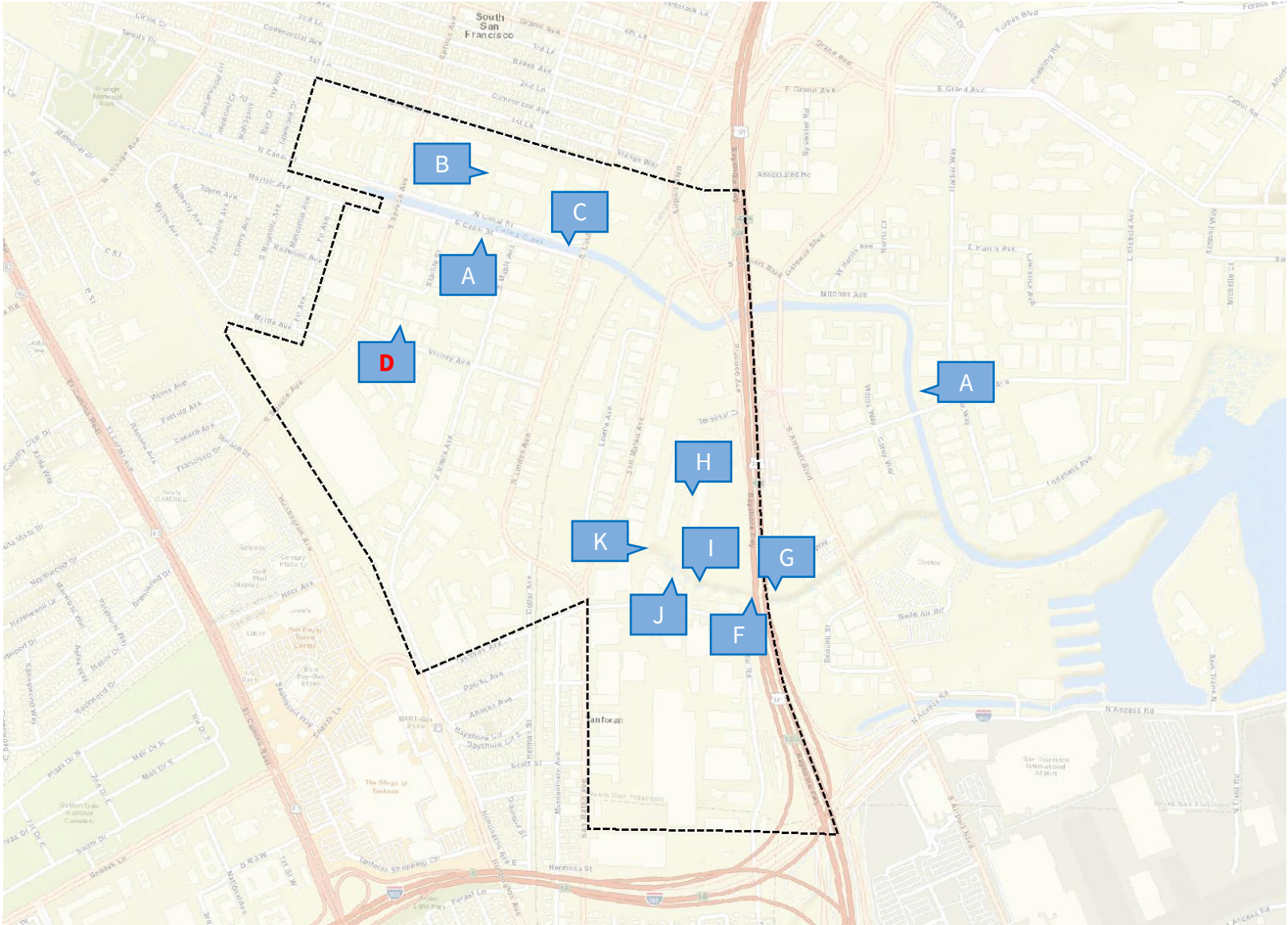
- Investigating causes of flooding and potential flood protection options

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Modeled Inflow Locations

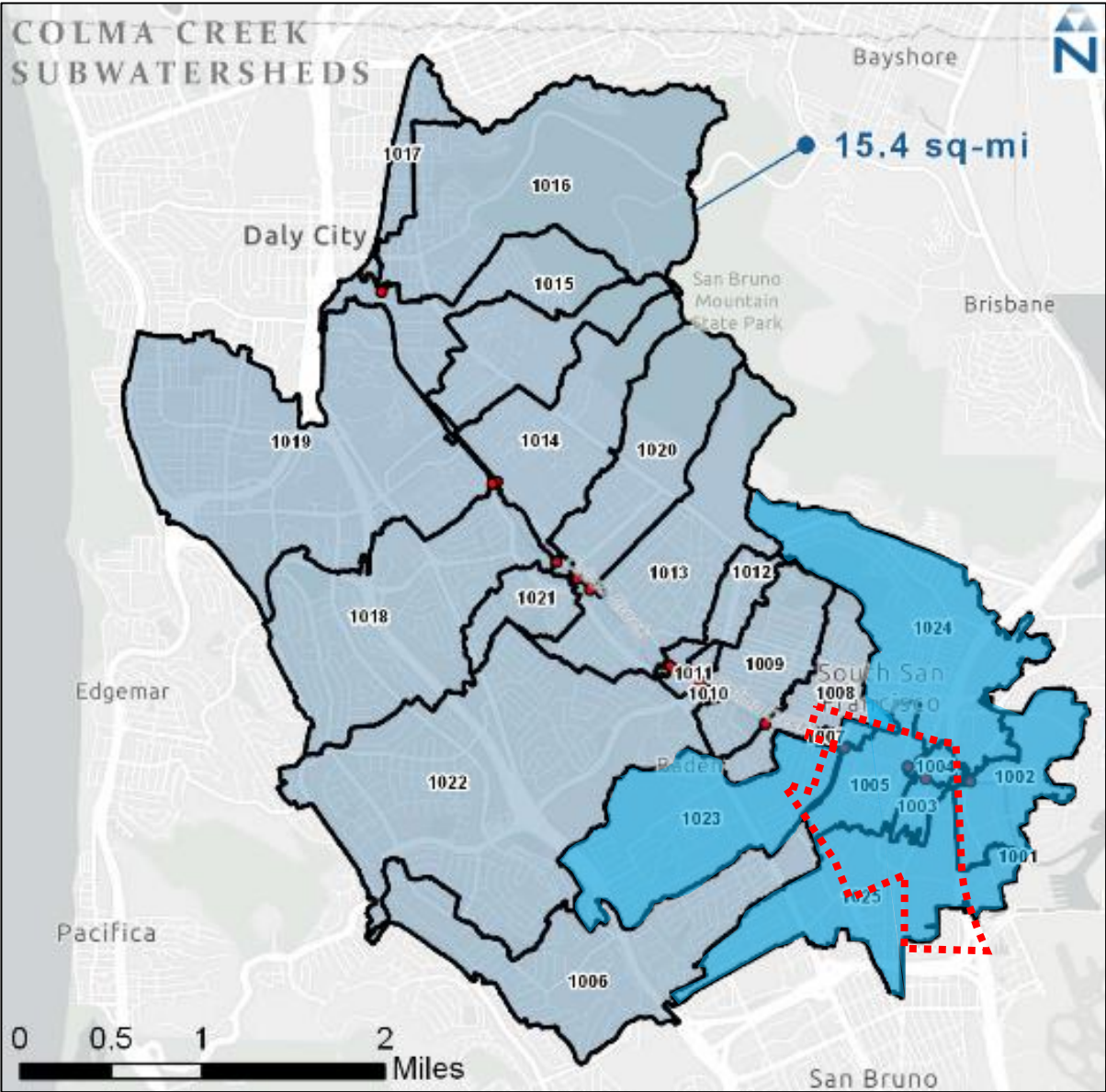
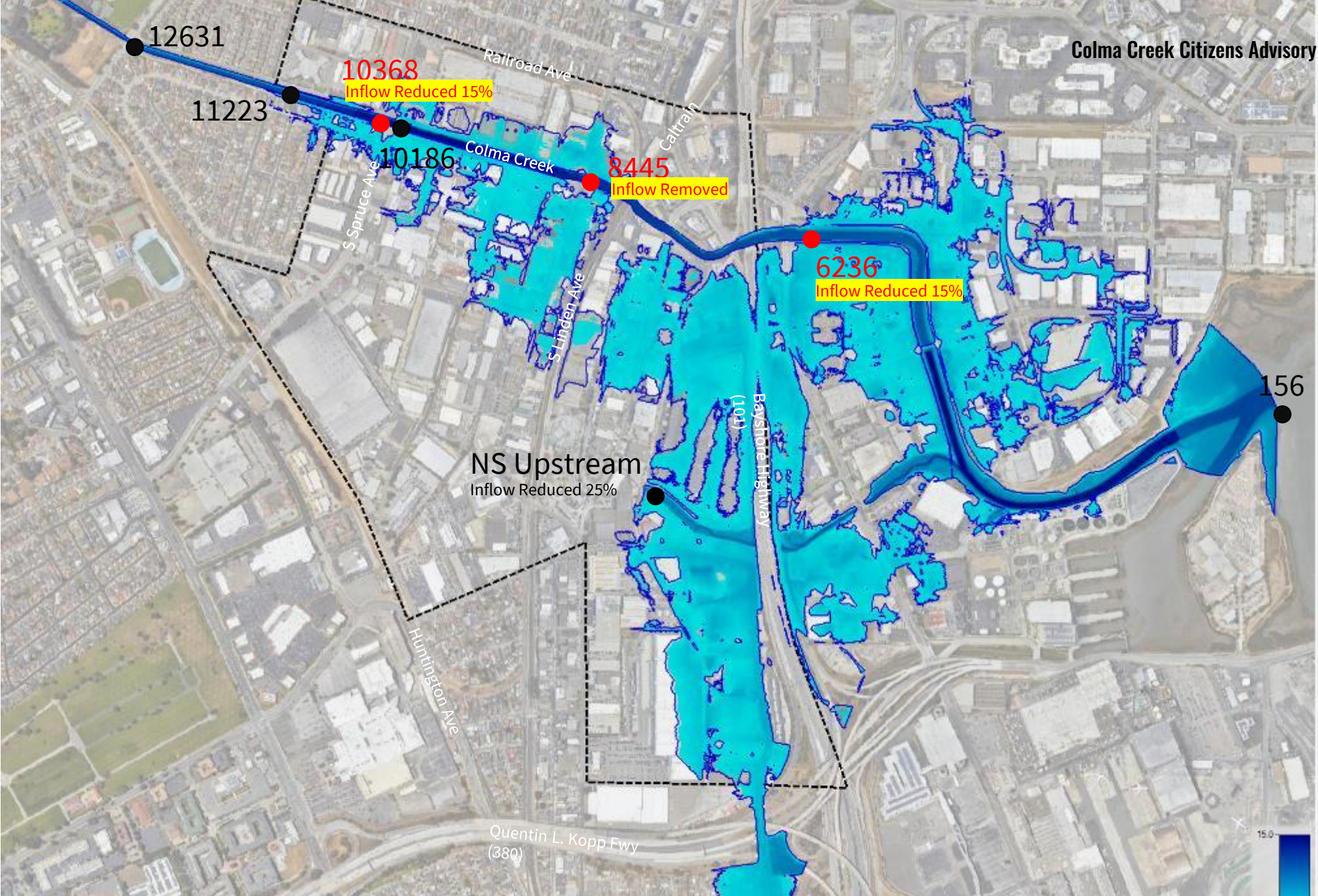


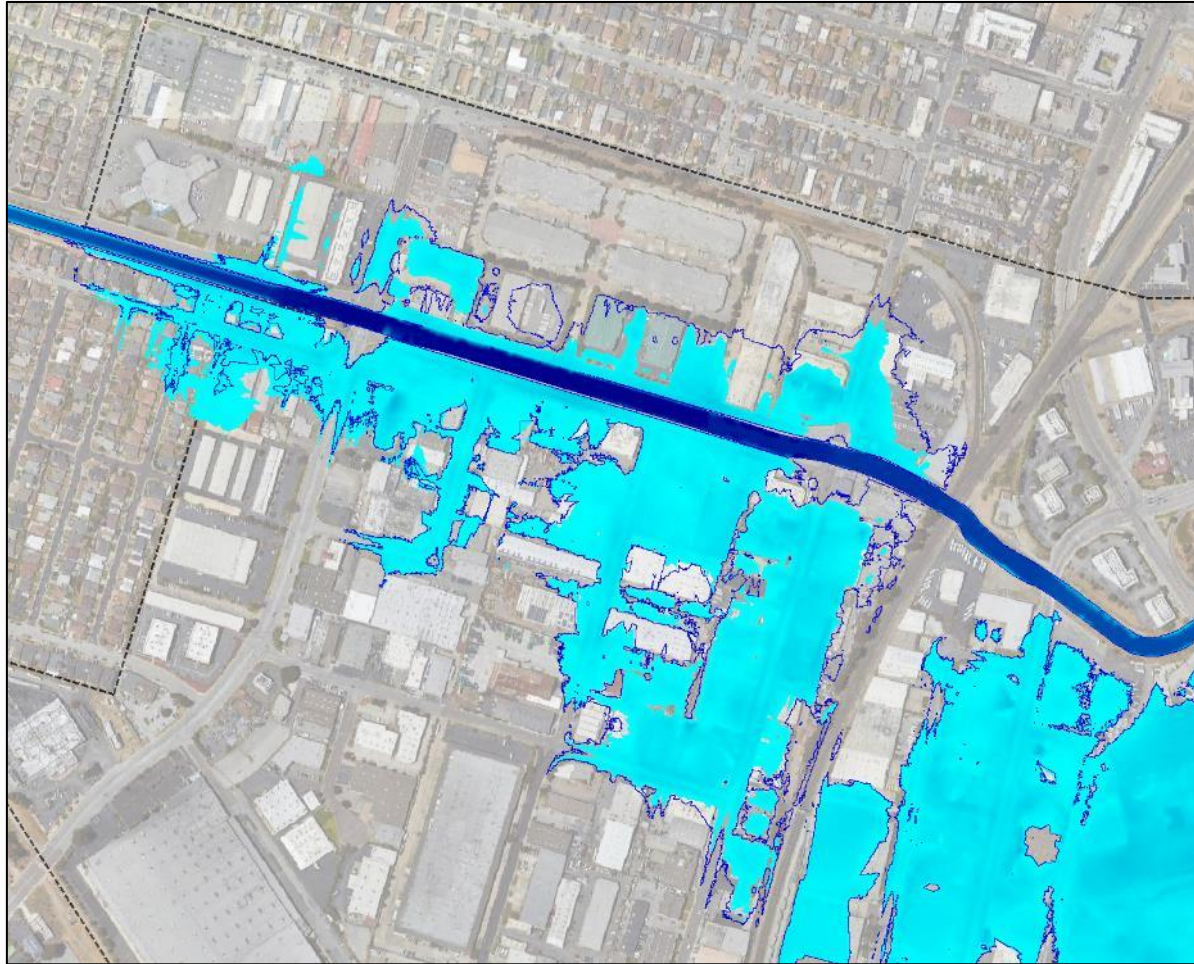
Table 3-6. Relation of hydrograph inputs locations to subwatershed boundaries and major junctions.

HEC-RAS Cross-Section	Junction description	Subwatersheds
29961	Start of Colma Creek flood channel at A St in Colma, CA	1016, 1017
20402	Downstream confluence of Old Colma Creek	1014, 1015, 1019, 1018
19191	Stormwater pipe entering beneath BART Station	1020, 1021
16043	Stormwater pipe	1011, 1012, 1013
14180	Confluence of 12 Mile Creek	1010, 1022
12631	Stormwater pipe below Orange Avenue Bridge	1009
11223	Stormwater pipe	1008
10368	Stormwater pipe entering above Spruce Avenue Bridge	1007, 1023
10186	Stormwater pipe entering below Spruce Avenue Bridge	1006
8445	Stormwater pipe entering below Linden Avenue Bridge	1005
6236	Double pipes entering below South Airport Boulevard Bridge	1003, 1004, 1024
NS Upstream	Navigable Slough culvert below Spruce Avenue	1001, 1002, 1025
156	Confluence of Colma Creek and San Francisco Bay	Tidal condition



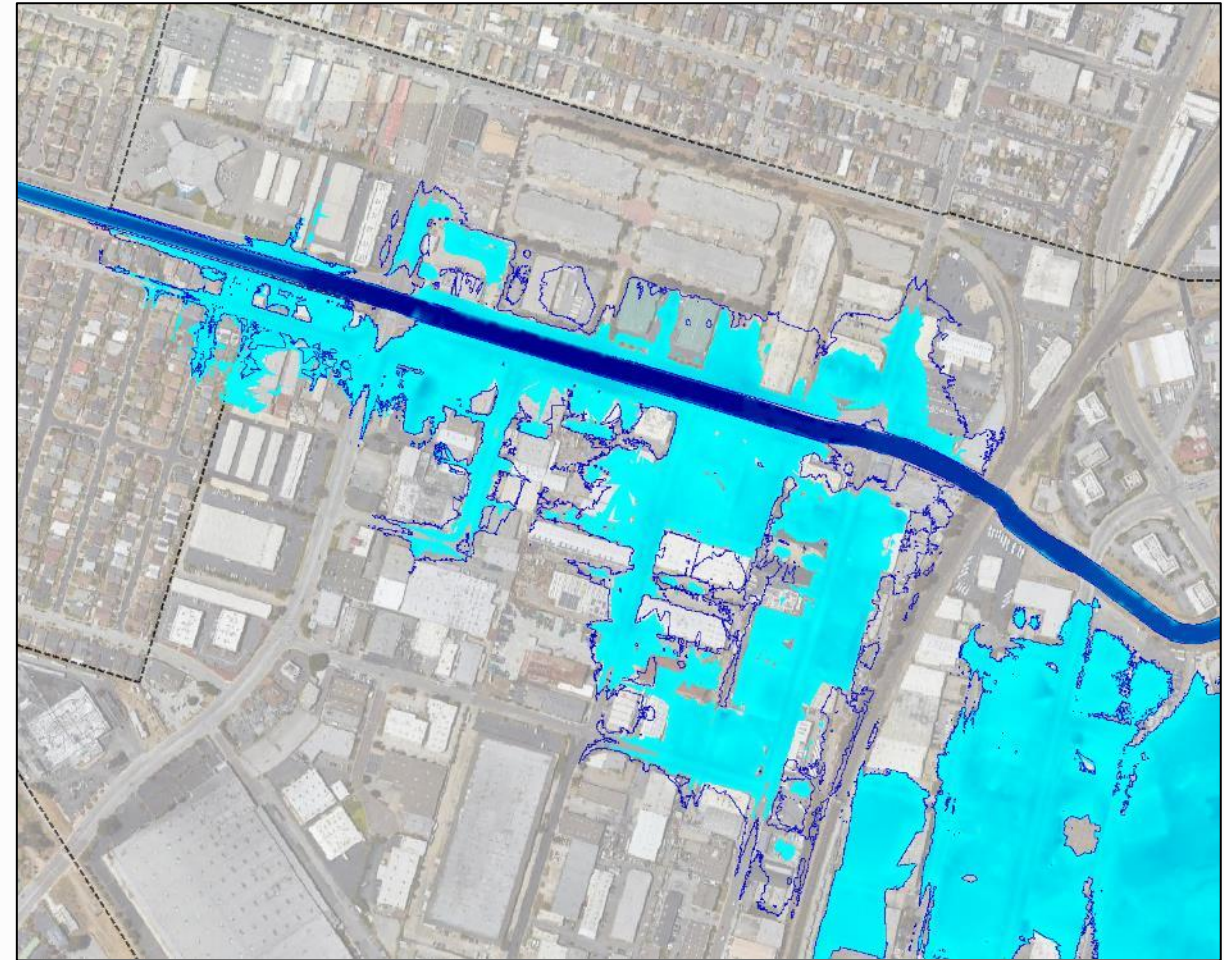
Future 100-year Storm + 3ft SLR (9.8' NAVD88 Tide)

Raise Floodwalls (1-ft)



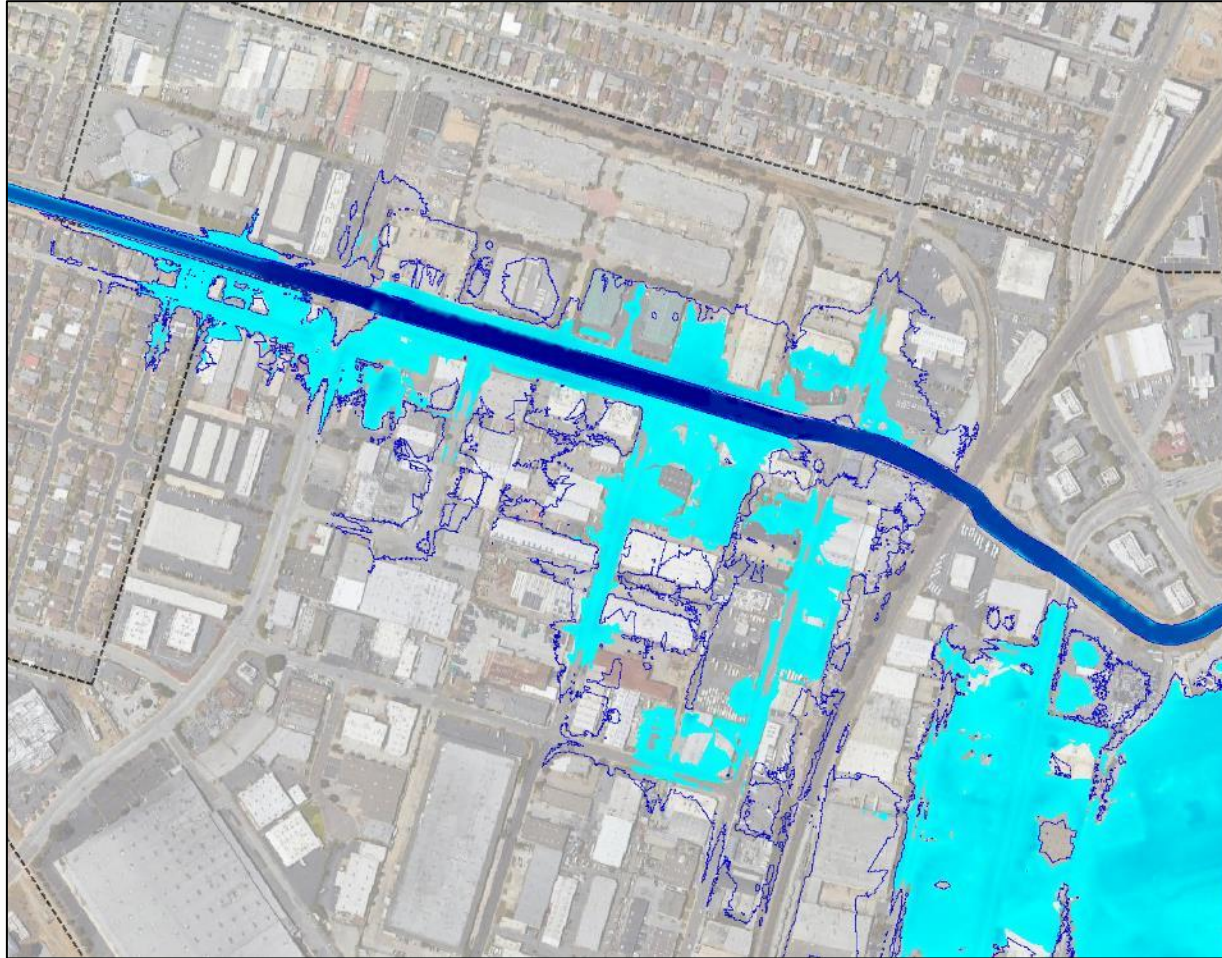
- Most improvements had minor flood benefit, other raising floodwalls.
- Even a 1' increase in height can make a difference in flood extents.

Raise Floodwalls (1-ft) + Widen Creek (south side only)



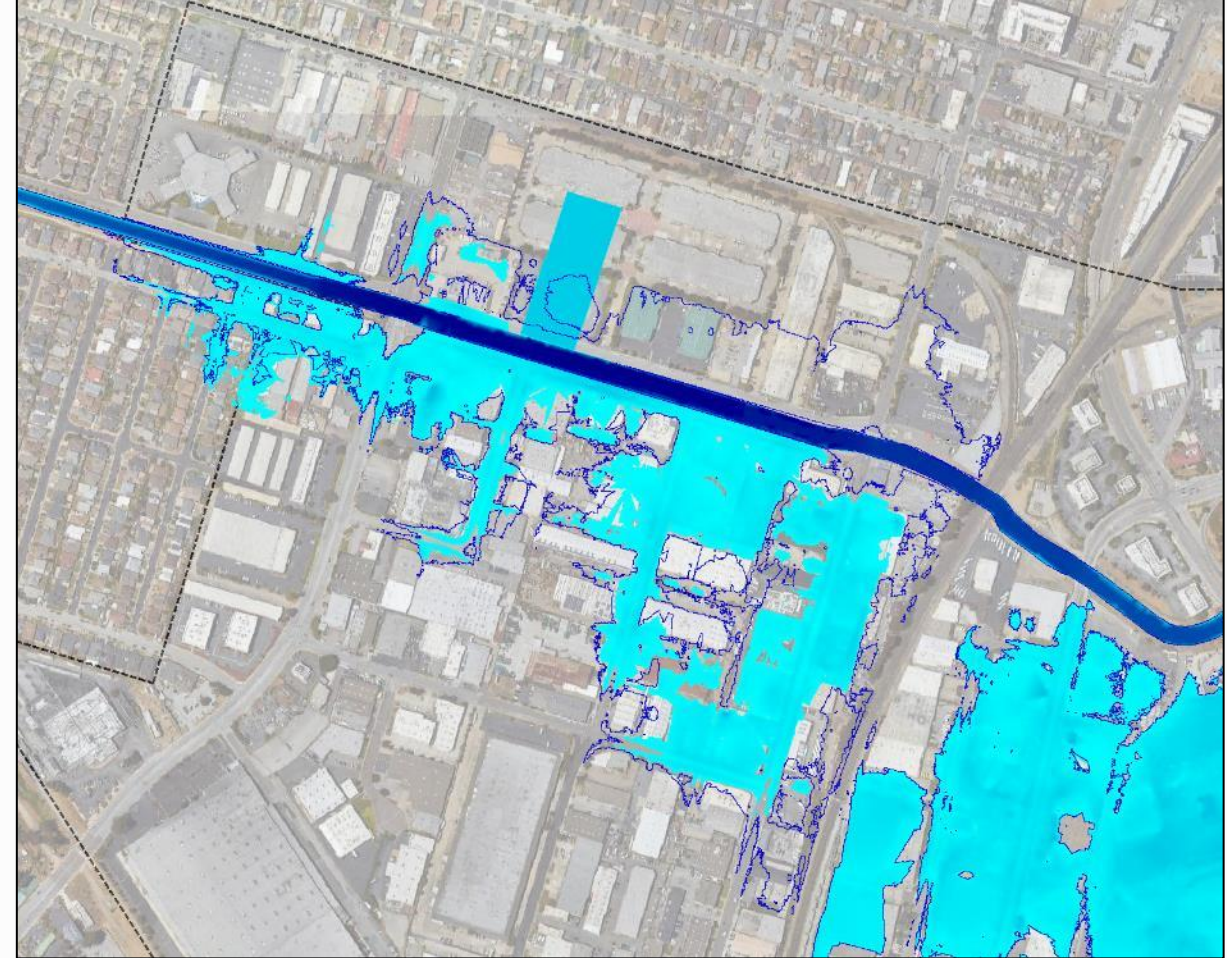
- Combining raised floodwalls (1') and channel widening (i.e., both scenarios that increase capacity) results in additional flood benefit.

Raise Floodwalls + Widen Creek + Reduced Inflow



- Reducing upstream flow into the channel, along with the capacity upgrades, produces more noticeable benefit.

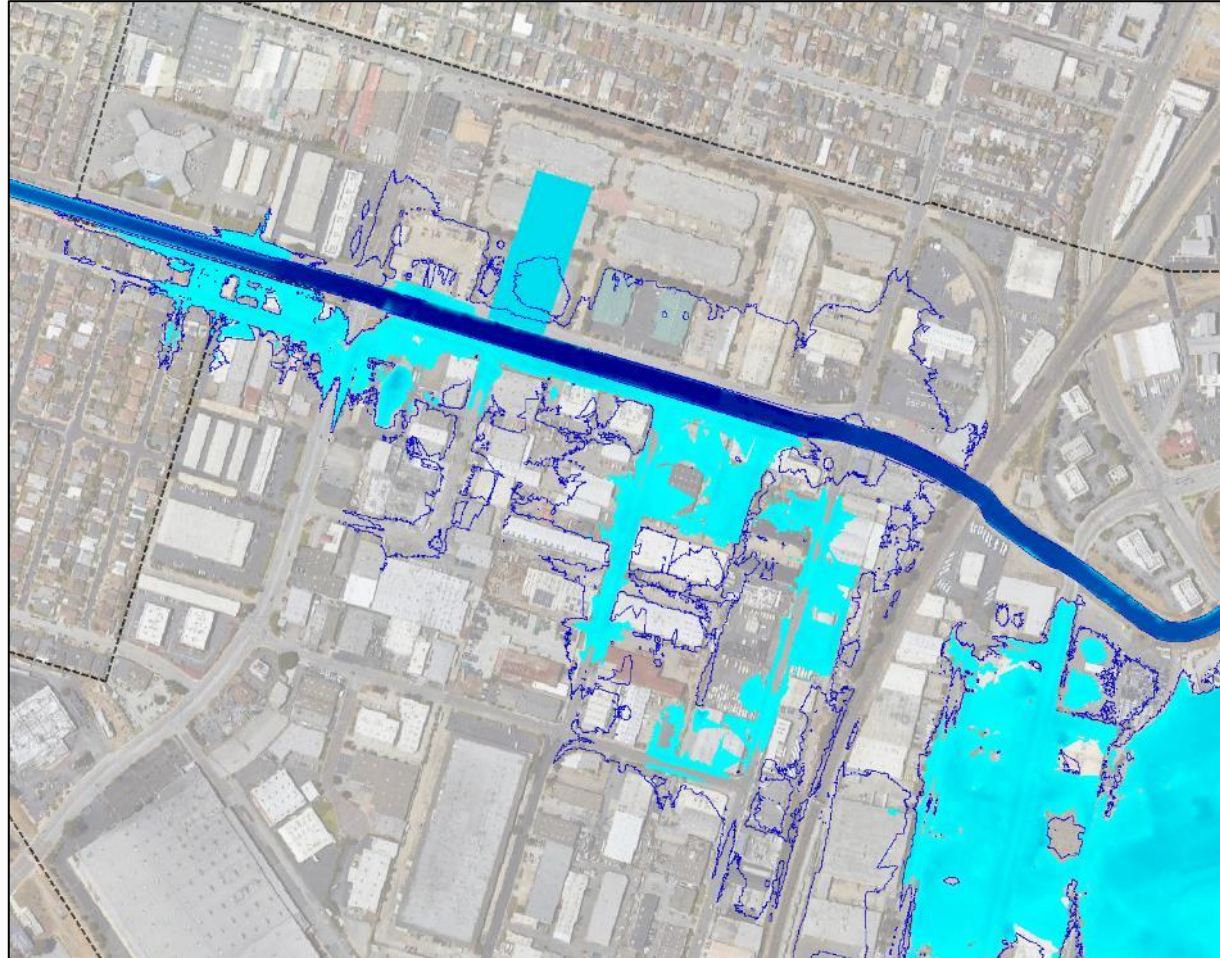
Raise Floodwalls + Widen Creek + Floodable Park (north side)



- A detention facility can more meaningfully manage excess flow with the capacity increases.

Flood Control Combinations

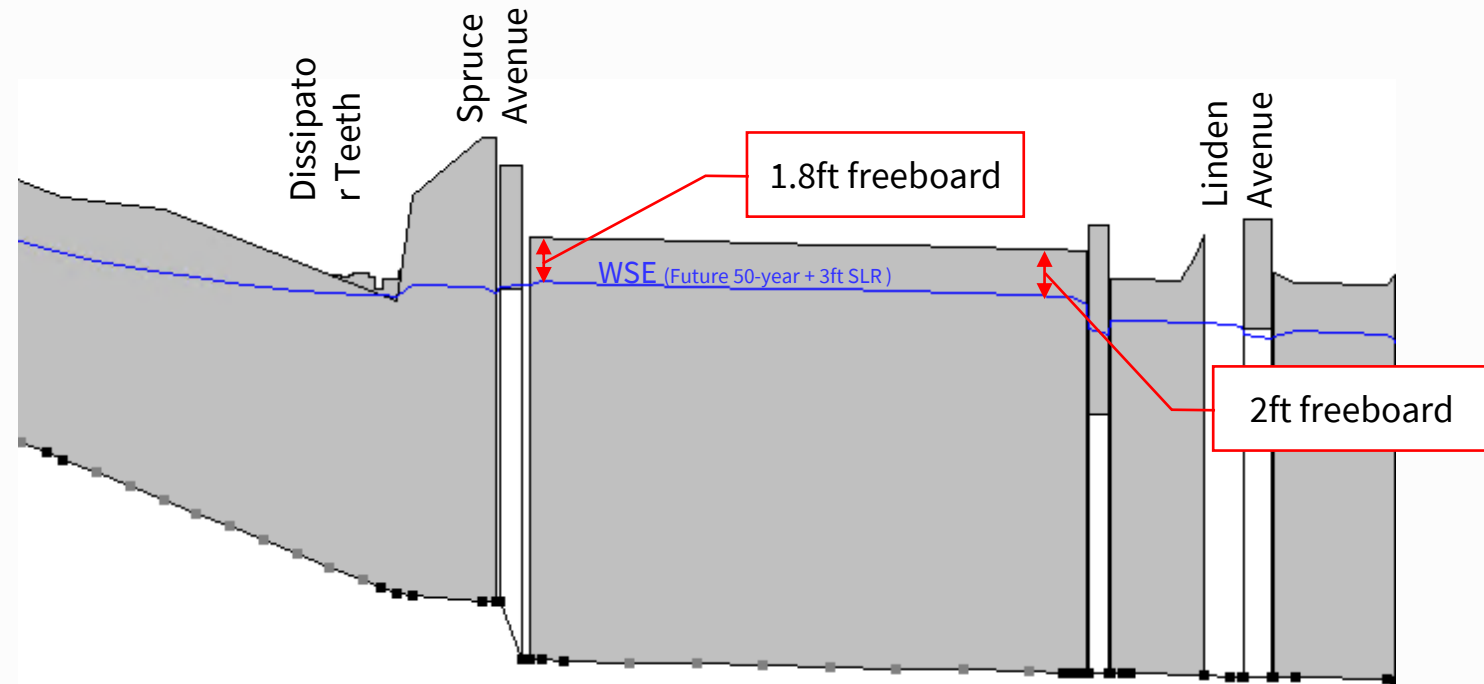
Raise Floodwalls + Widen Creek + Reduced Inflow + Floodable Park



Combining all scenarios together results in the most significant reduction in flooding along both sides of the creek.

Flood Control Combinations

Combination of channel capacity improvements (raising floodwalls 1' and widening the creek to the south) result in the creek meeting intended level of service (i.e., convey 50-year storm with 2' freeboard) under the future climate + SLR conditions.



Navigable Slough Flooding

- Existing Climate 100-year Storm



Modeling Analysis

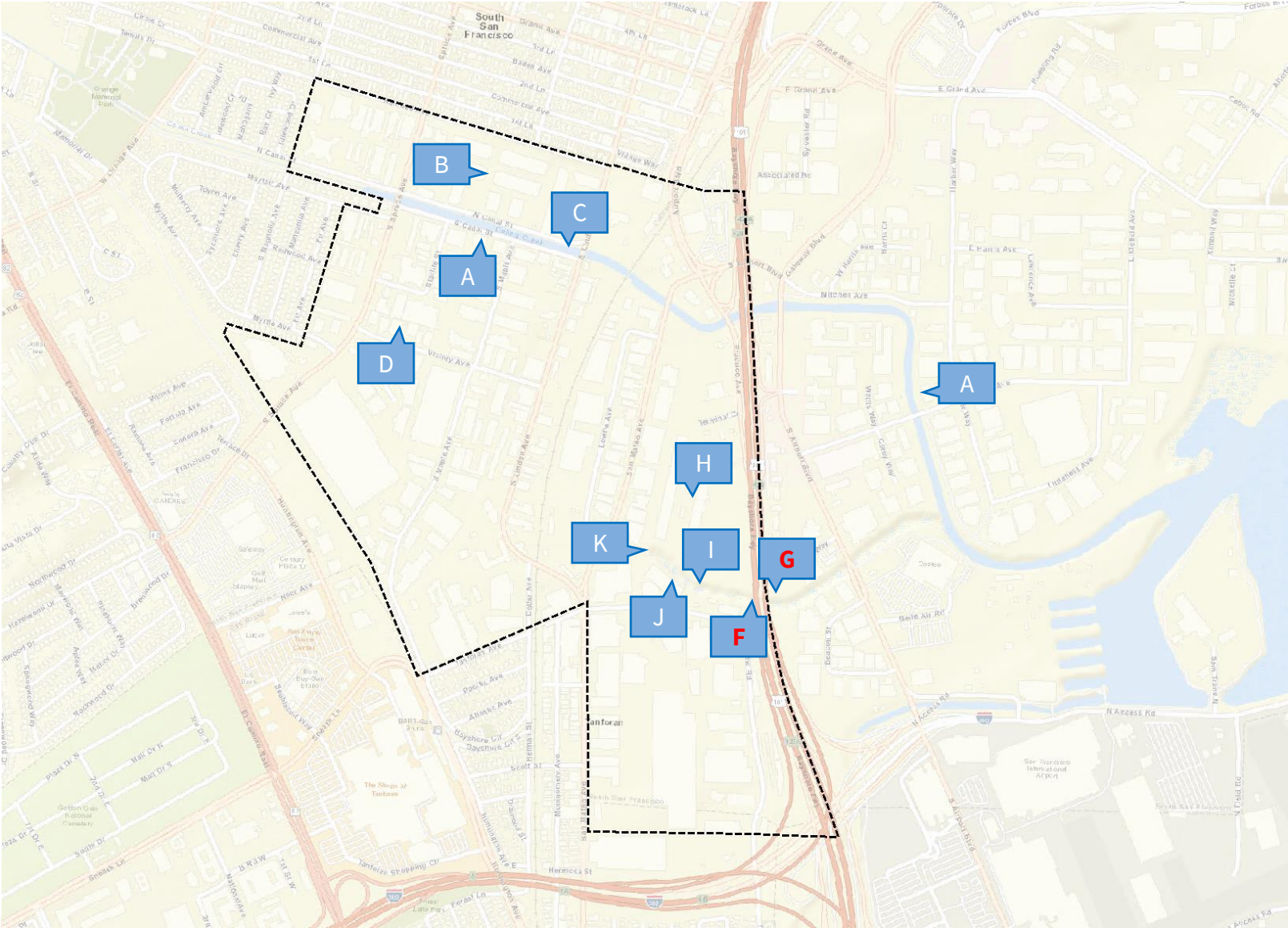
- Investigating causes of flooding and potential flood protection options

- **Colma Creek**

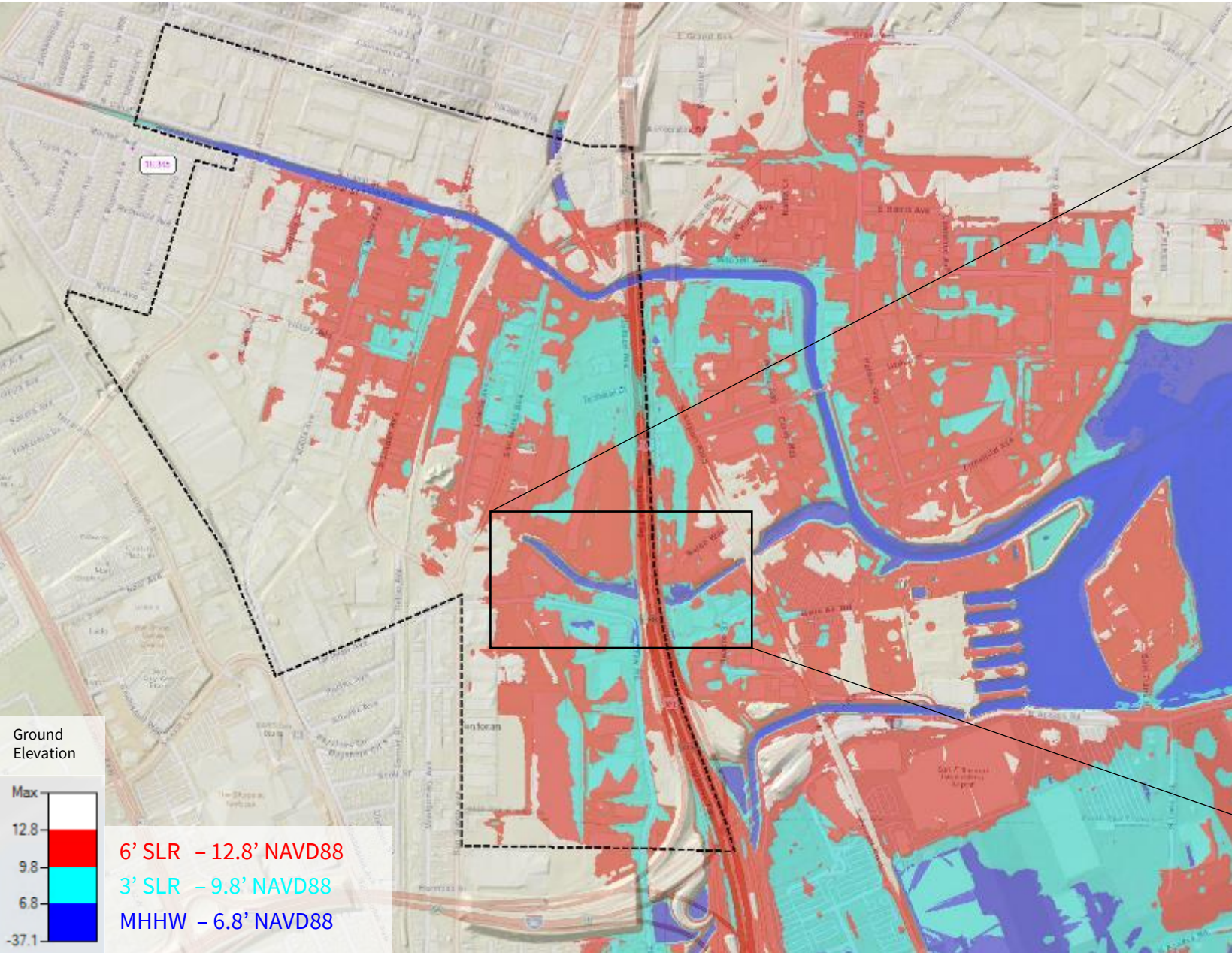
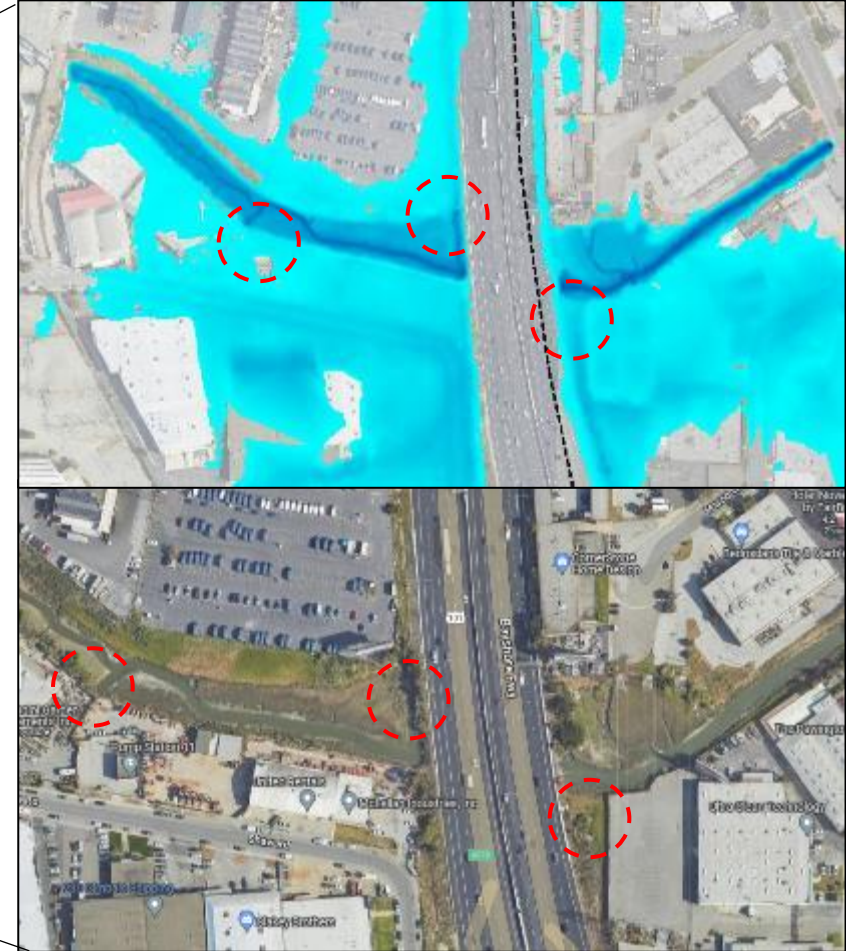
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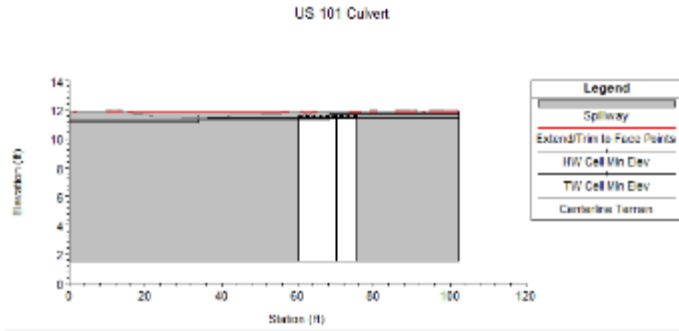


Initial Spill Locations

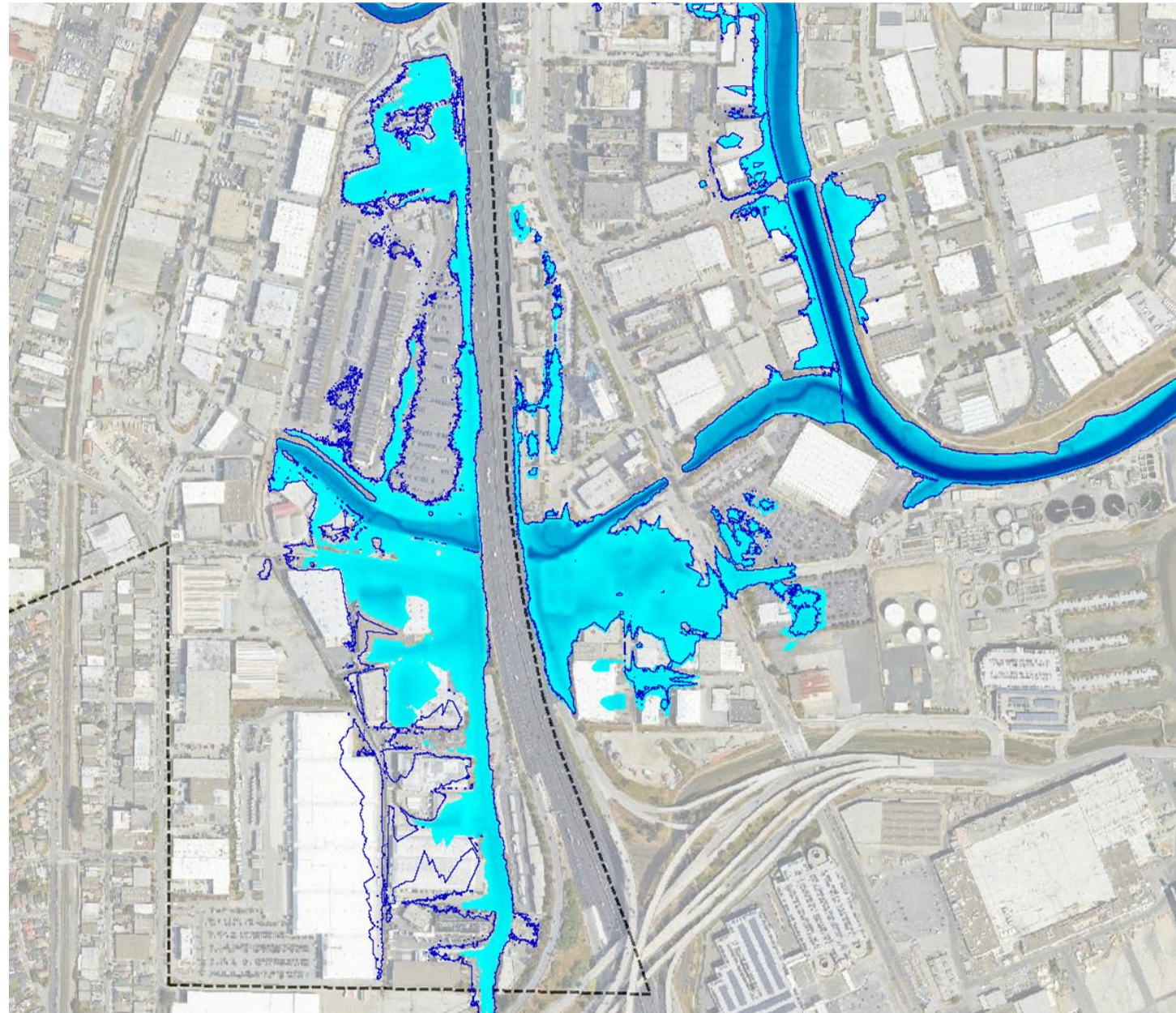
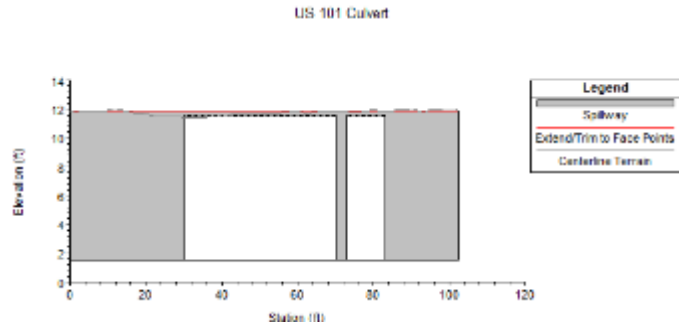


- Increased capacity under 101

Existing:
10' x 10' & 5' x 10'



Modeled:
40' x 10' & 10' x 10' with flap gates



Existing 100-year Storm (6.8' NAVD88 MHHW Tide)

Modeling Analysis

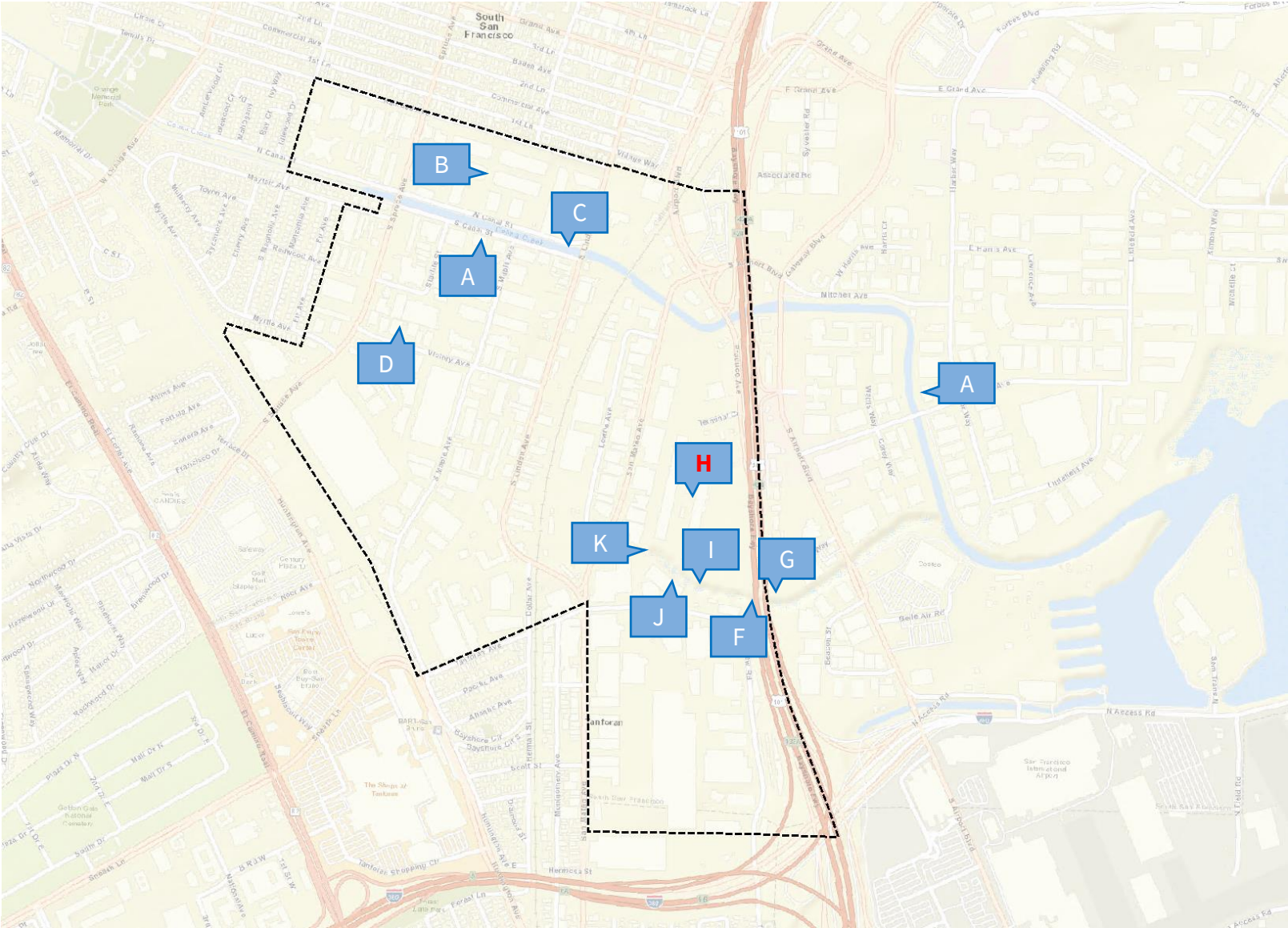
- Investigating causes of flooding and potential flood protection options

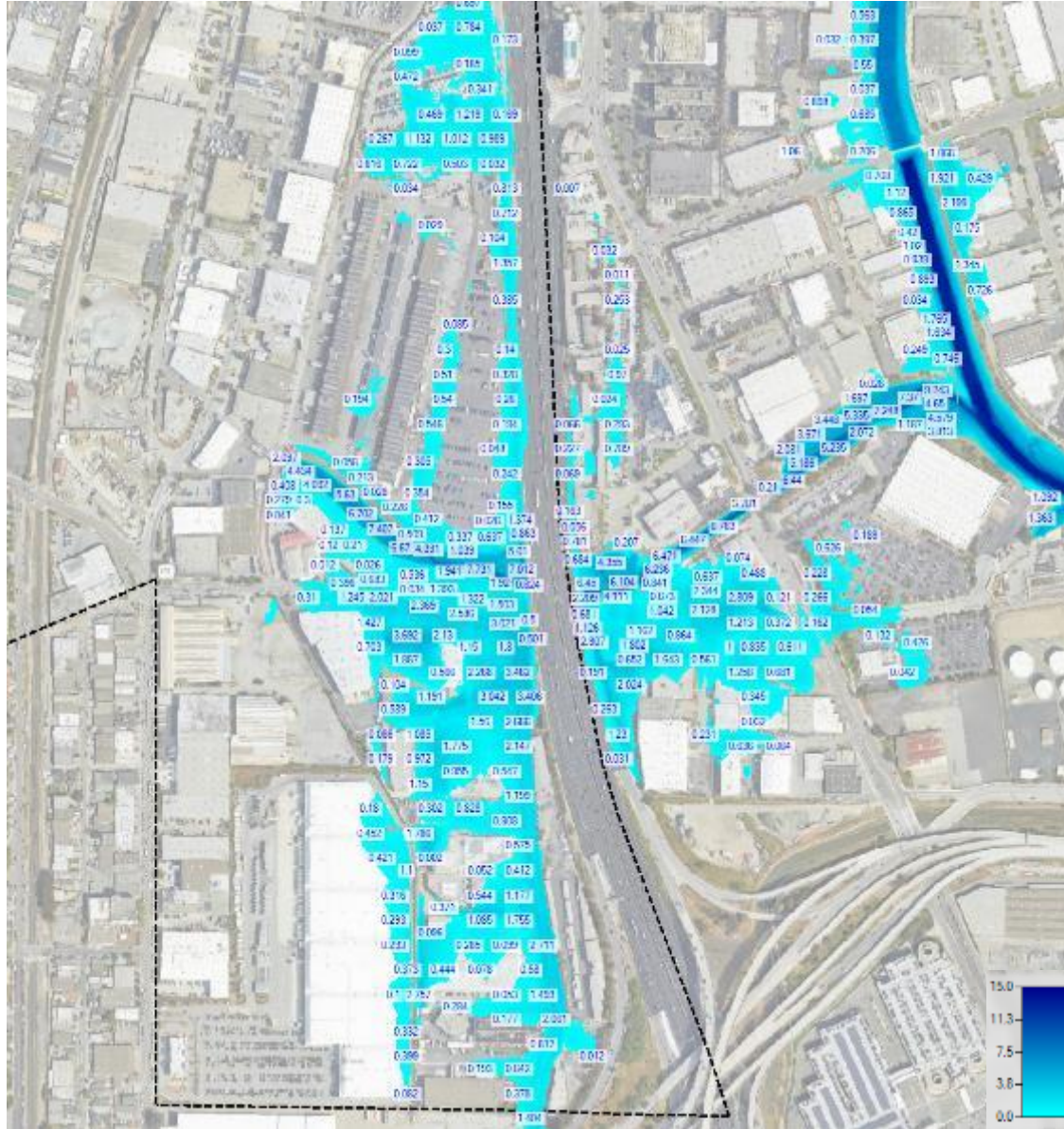
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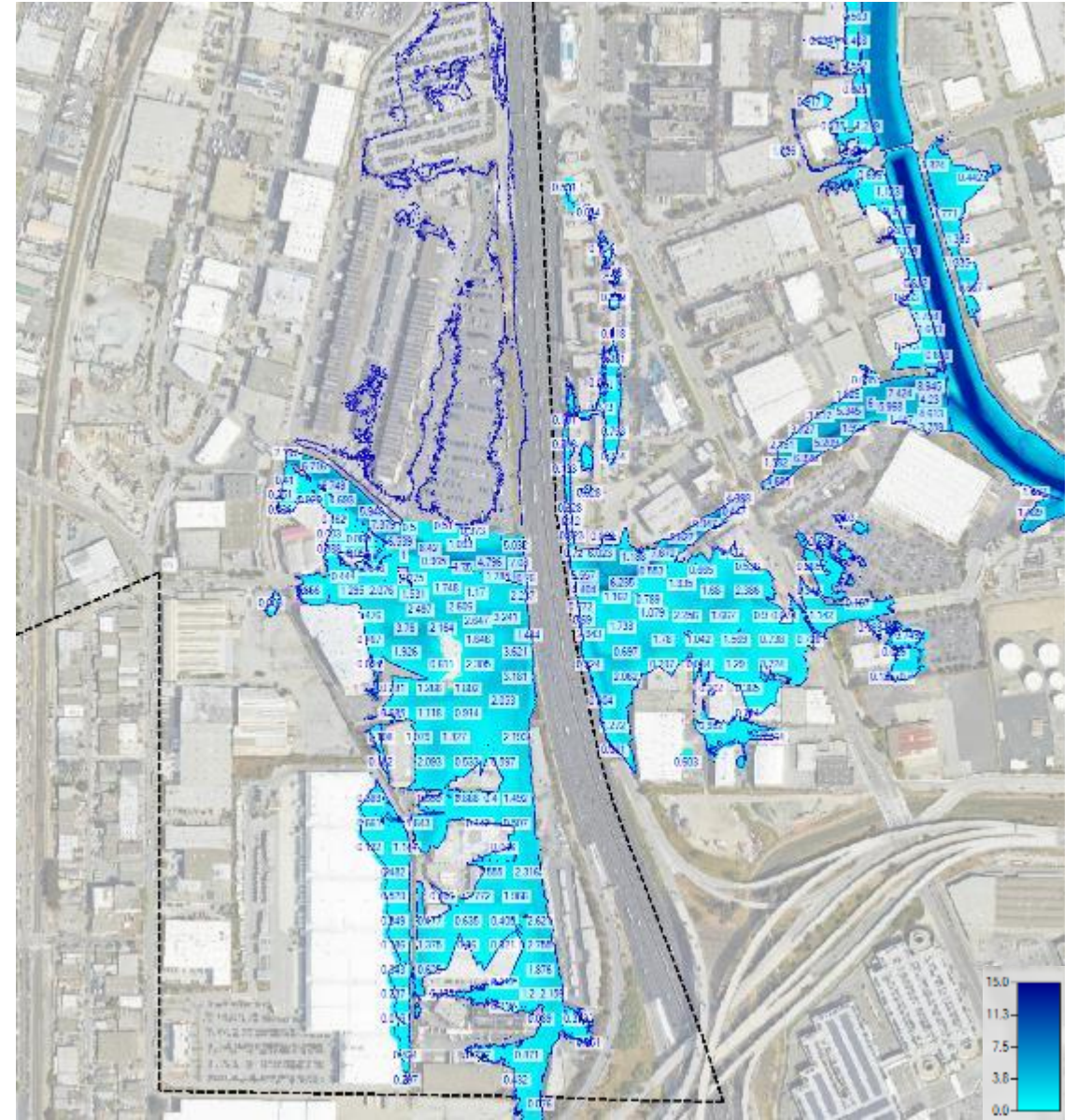
- **Navigable Slough**

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Flood Depths: Existing Conditions
Existing 100-year Storm (6.8' NAVD88 MHHW Tide)



Flood Depths: Future Development Sites Raised
Existing 100-year Storm (6.8' NAVD88 MHHW Tide)

Modeling Analysis

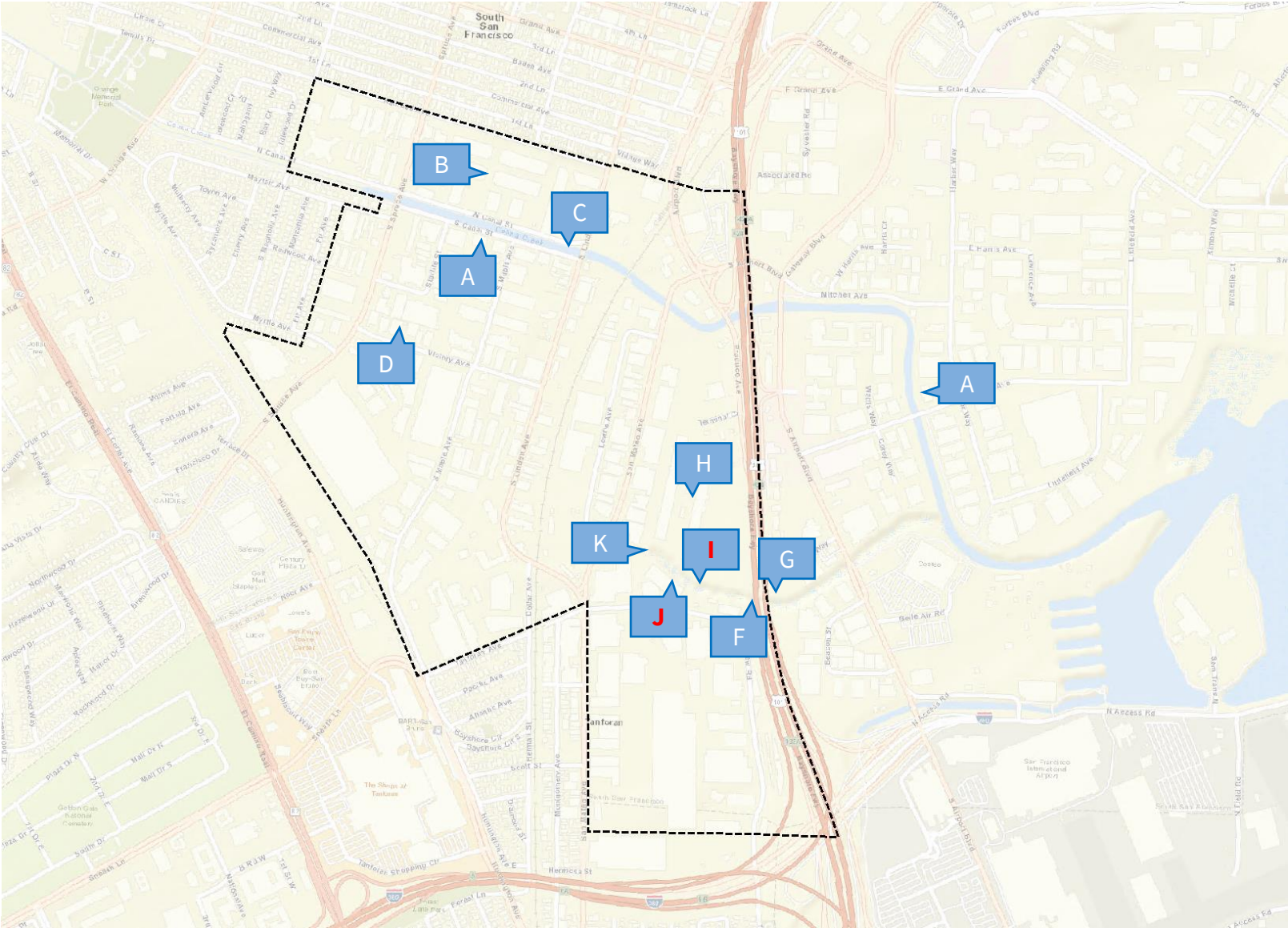
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Navigable Slough Flooding Detention Volumes

Flood volume (i.e., theoretical detention needed) on either side of Slough.

10-yr

North: 0.2 MG
South: 0.1 MG

25-yr

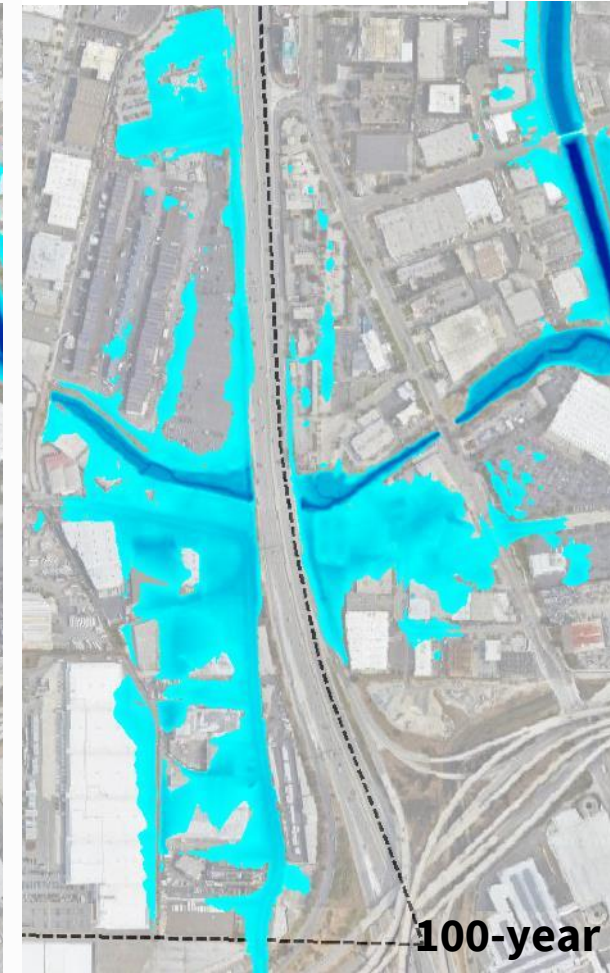
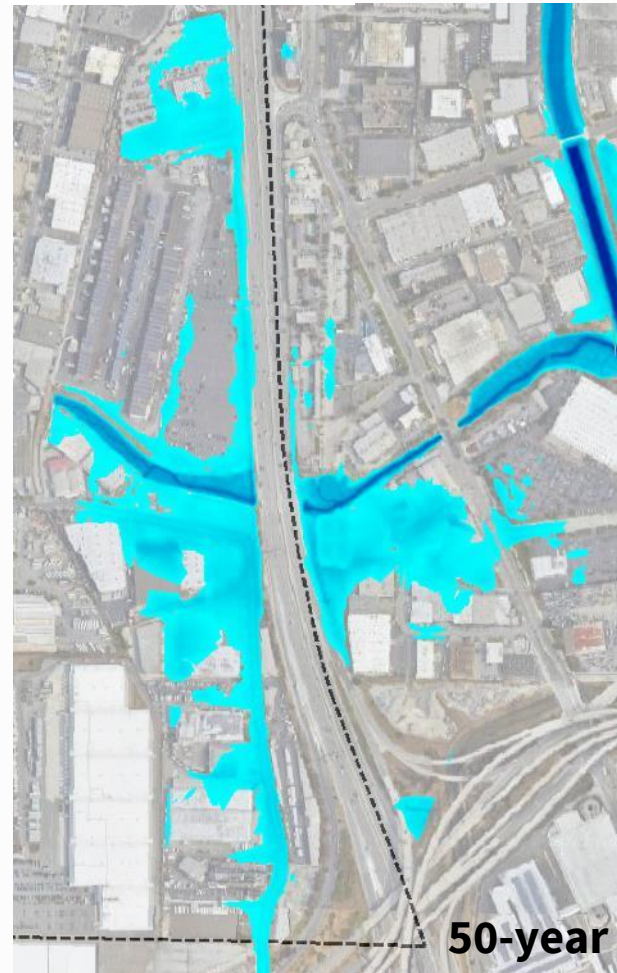
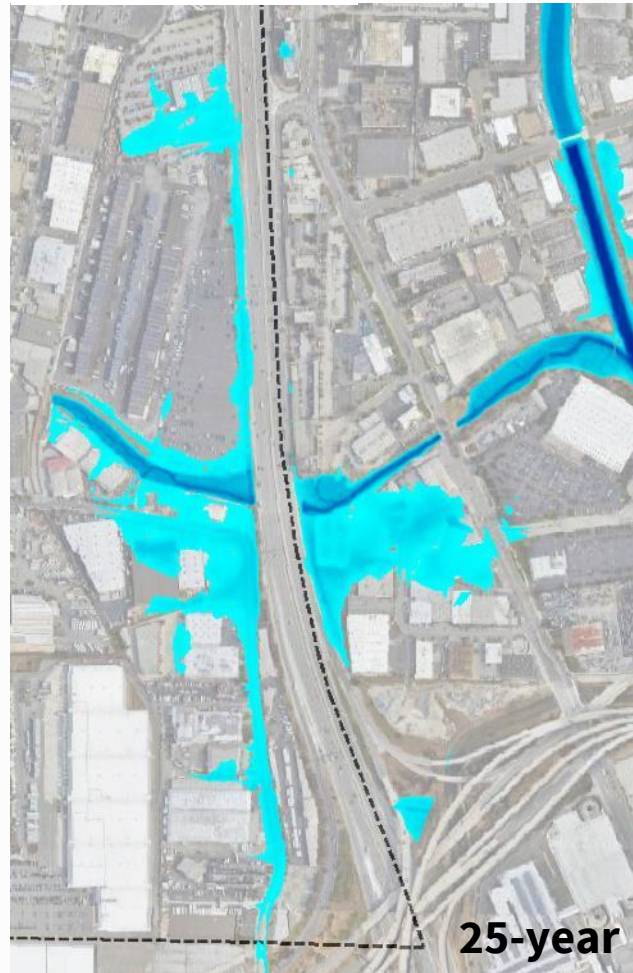
North: 0.7 MG
South: 2.1 MG

50-yr

North: 1.4 MG
South: 6.7 MG

100-yr

North: 1.9 MG
South: 12.6 MG



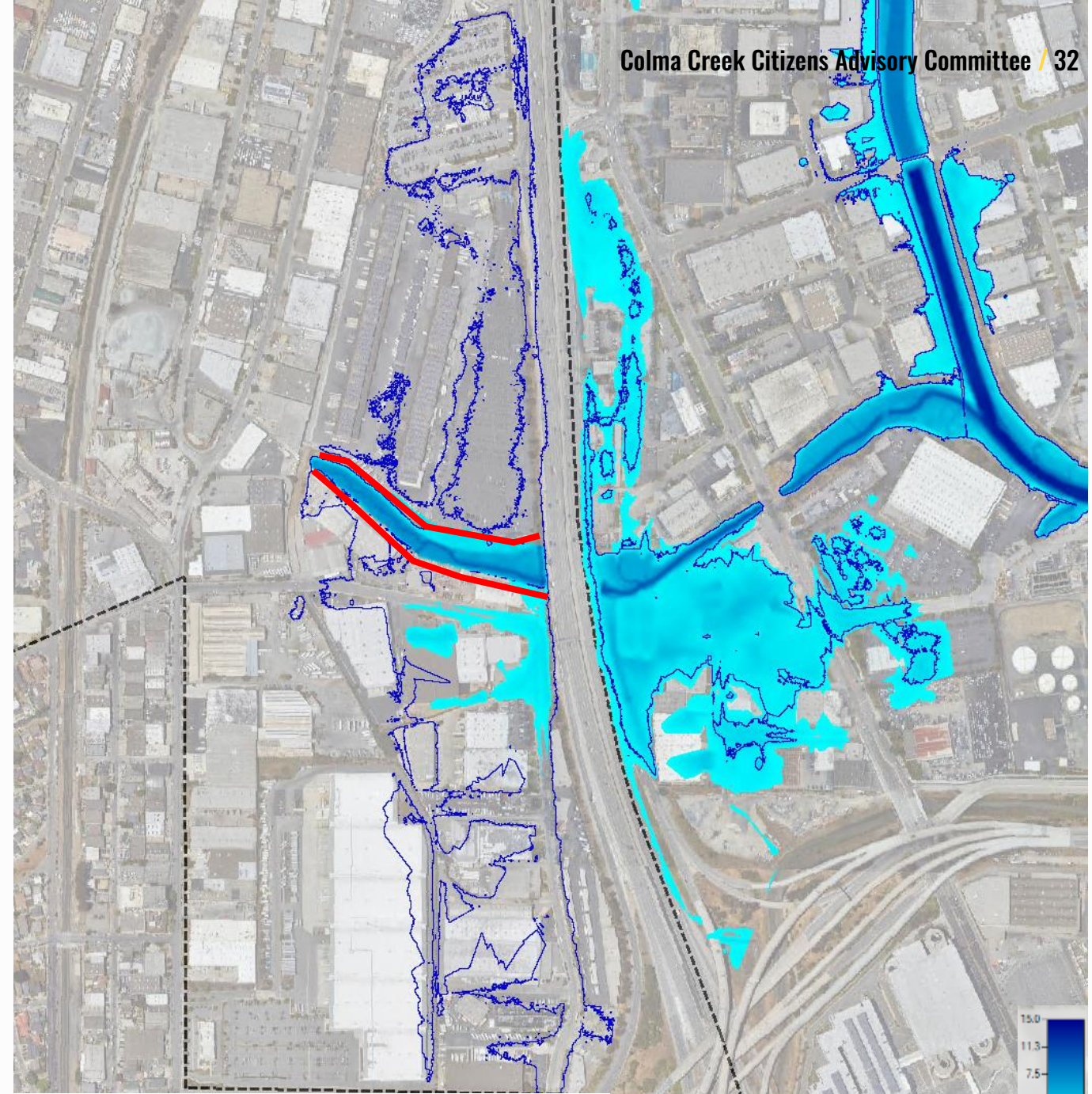
Navigable Slough Flooding

Raise Floodwalls

Floodwalls raised west of Highway 101 reduce flooding in Lindenville - but increase flooding extents downstream.

Upstream of Hwy 101:

- Existing bank elevations 9 - 12 ft
- 100-year WSE 11.5 - 12 ft
- Required floodwall height 2-4 ft (including freeboard)



Navigable Slough Flooding

Detention & Floodwall Options

Option A Detention Facilities

- More impactful in north.
- Impact limited on larger storms (>25-yr) in south)



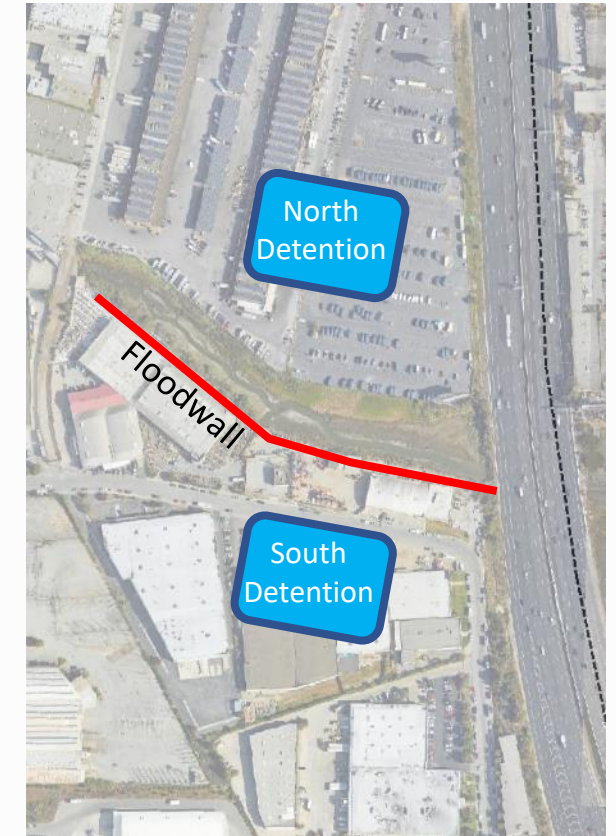
Option B Floodwalls

- Can address flooding within Lindenville.
- Exacerbates flooding conditions downstream.



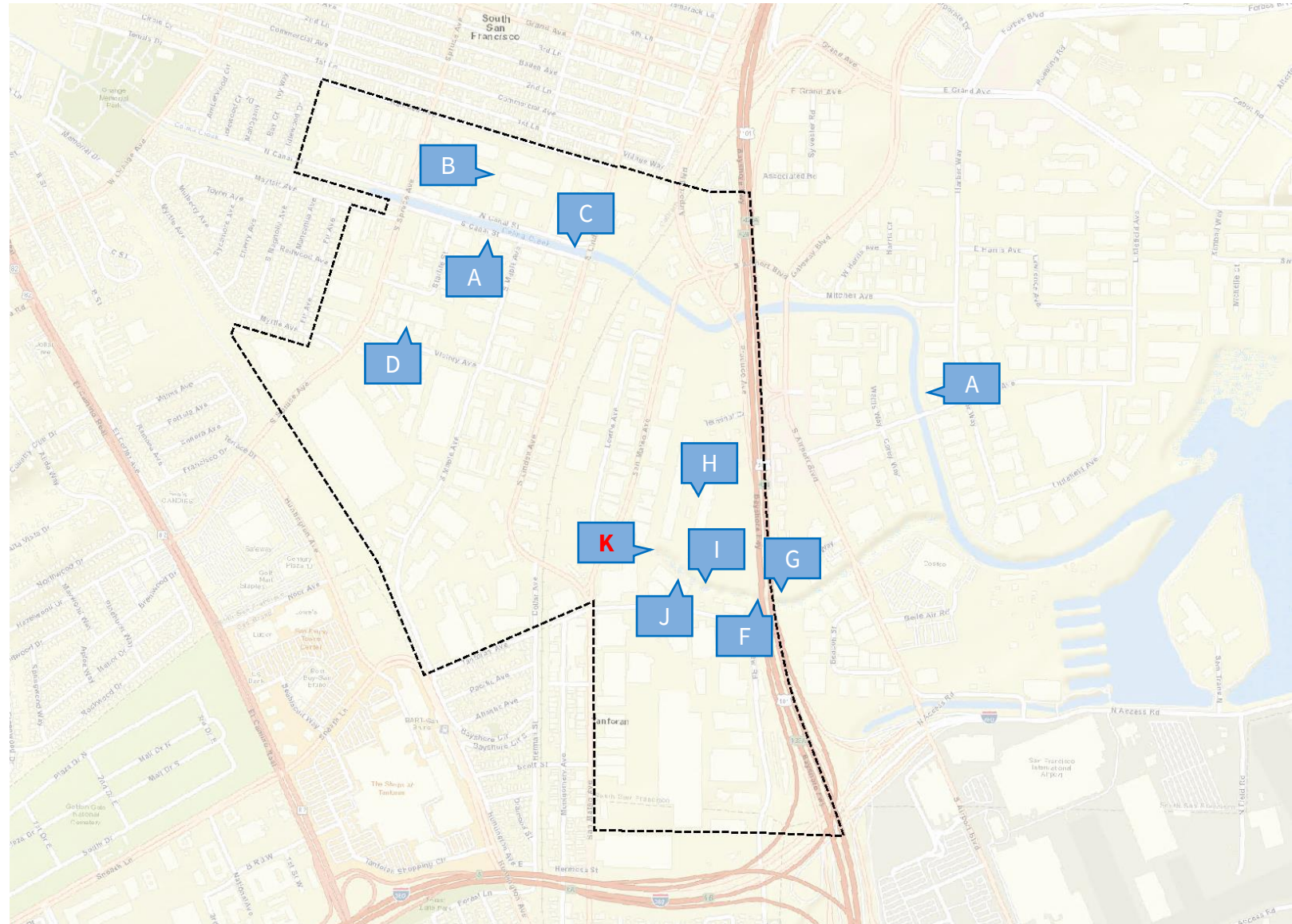
Option C Detention + Southern Floodwall

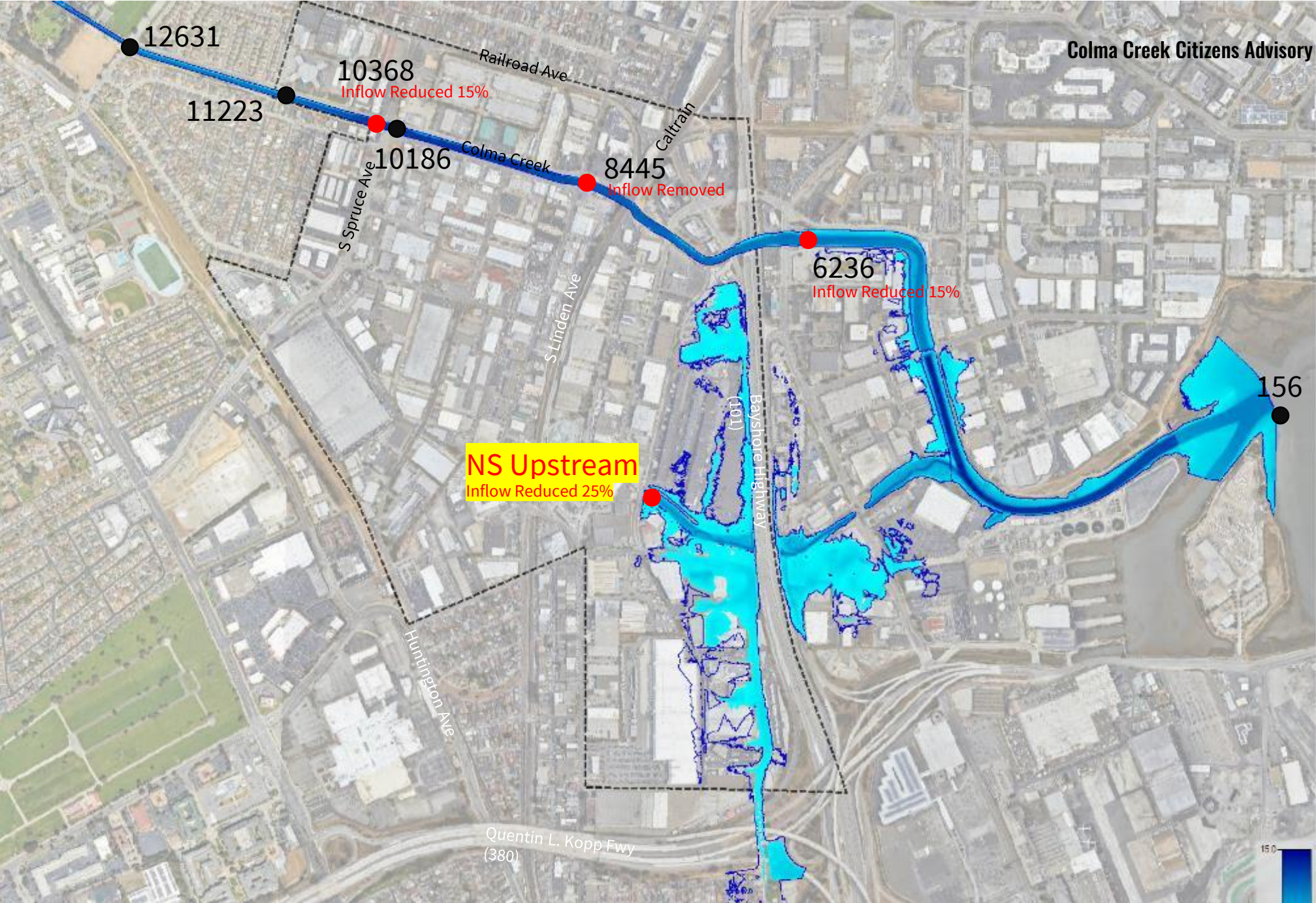
- May be preferred solution to mitigate flooding in Lindenville with no downstream impacts.



Modeling Analysis

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Existing 100-year Storm (6.8' NAVD88 MHHW Tide)

Discussion

- What are your reactions to the strategies?
- Do you have ideas for additional strategies to explore?





Next scheduled Committee Meeting

Tuesday, September 12, 2023

3:00 p.m.