



June 10, 2020

# Green Infrastructure Grant Program

Board of Supervisors – Budget and Finance Committee

Sarah Bloom San Francisco Public Utilities Commission



# What is Green Infrastructure?

**Green Infrastructure** is a set of engineered, sustainable stormwater management tools that slow down, clean, and route stormwater to keep it from overwhelming the City's sewer system.





# SFPUC's City-wide Green Infrastructure Strategy

SFPUC long-term vision to manage **1 billion gallons** per year of stormwater **using green infrastructure** by 2050



Sunset Blvd, SF



Alvarado Elementary, SF



RL Stevenson Elementary, SF



401 Grove St, SF



Holloway Avenue, SF



# Green Infrastructure Grant Program

- Launched in February 2019
- Encourages San Francisco property owners to design, build, and maintain performance-based green infrastructure projects
- Maximum grant amount of \$765,000 per impervious acre managed, up to \$2M per project
- Property owner is responsible for 20-years of maintenance

**RL Stevenson Elementary**

*Before*



**RL Stevenson Elementary**

*After*







# Technical Assistance Program

- 24 Site visits with technical team
- 14 Opportunities Analyses given to potential grantees
- 10 Pre-application meetings

## GREEN INFRASTRUCTURE GRANT PROGRAM NORTHRIDGE COOP

IMPERVIOUS AREA	AREA
11,300 sf	Back half of adjacent building roofs
4,500 sf	Concrete channel
15,800 sf (0.36 acres)	

### RAIN BARRELS

Rain barrels store roof runoff for use in irrigation to offset use of potable water. When the rain barrel is full, excess water overflows to the existing sewer connection.



### BIORETENTION RAIN GARDENS

Bioretention rain gardens are vegetated depressions that store stormwater runoff. A bioretention area could be located on Bertha Lane to manage stormwater runoff from the concrete channel.



### A Community Garden

The Northridge Cooperative Community Garden has several opportunities for green infrastructure. Considering site soils are not conducive to infiltration, it is recommended the site utilize green infrastructure facilities that provide temporary runoff storage, like rain barrels. Downspouts from the surrounding roof areas are located on the outside of the homes, which provides the opportunity to redirect the roof runoff to rain barrels that could be used to irrigate the community garden. Because the roofs are pitched, the downspouts on the back of the homes only drain half of the roof areas. Overall, these areas do not add up to the 0.5 acres of impervious area required to receive a Green Infrastructure Grant. However, additional roofs could also be connected to rain barrels in other areas of the Co-op. Additionally, it may be possible to manage stormwater runoff from the concrete channel on the east side of the community garden with a bioretention planter on Bertha Lane.



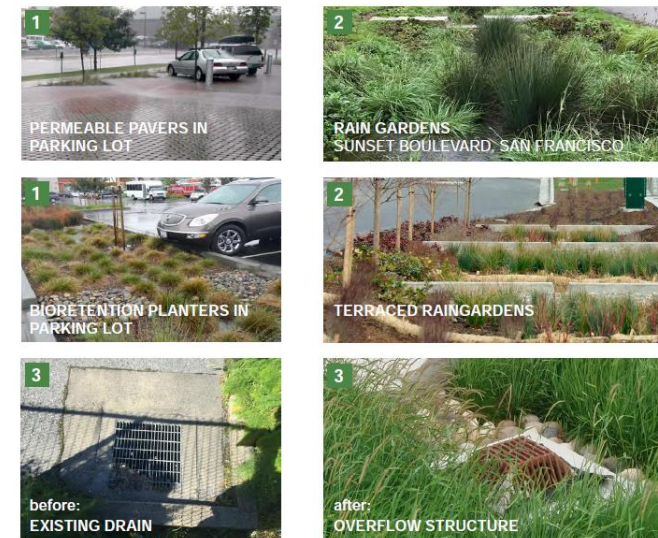
- Catch Basins
- Manholes
- Laterals
- Culverts
- Pipes
- 5ft Contours
- Drainage Management Area
- Flow Direction
- Rain Garden
- Rainwater Harvesting Cistern

## Glen Park Greenway - Green Infrastructure Grant Planning - Option 2

In this option, all stormwater management facilities would be located on the school side of the SFPUC Right of Way. The flat portion of the school's parking lot would be improved by means of permeable pavers and/or bioretention planters (1), thereby also helping beautify the parking area. Additionally, raingardens and/or terraced raingardens (2) would be installed between the parking lot and the SFPUC Right of Way, thereby enhancing both the school site and the greenway. All together, these stormwater facilities would manage primarily runoff from the school's parking lot (A). The existing drain would be re-used as an overflow structure (3). None of the project's components would run through the SFPUC Right of Way.

PROs: parking lot beautification; no coordination on SFPUC ROW needed

CONs: some coordination needed with Archdiocese for elements located in parking lot



### Legend

- Drainage Management Area
- Potential Stormwater Facility Footprint\*
- SFPUC Right of Way for Sewer Access
- Pedestrian Path through Greenway (no re-alignment needed)
- Existing Sewer Pipes\*\*
- Surface Flow Direction

\* Location of flat portion of parking lot, ideal for permeable pavement, is approximate.  
\*\* Pipe alignment is approximate. Underground utility survey needed to establish exact alignment.

DMA	Acres	Surface Type
A	0.6	Parking Lot of Saint John's School's plot
Total	0.6	

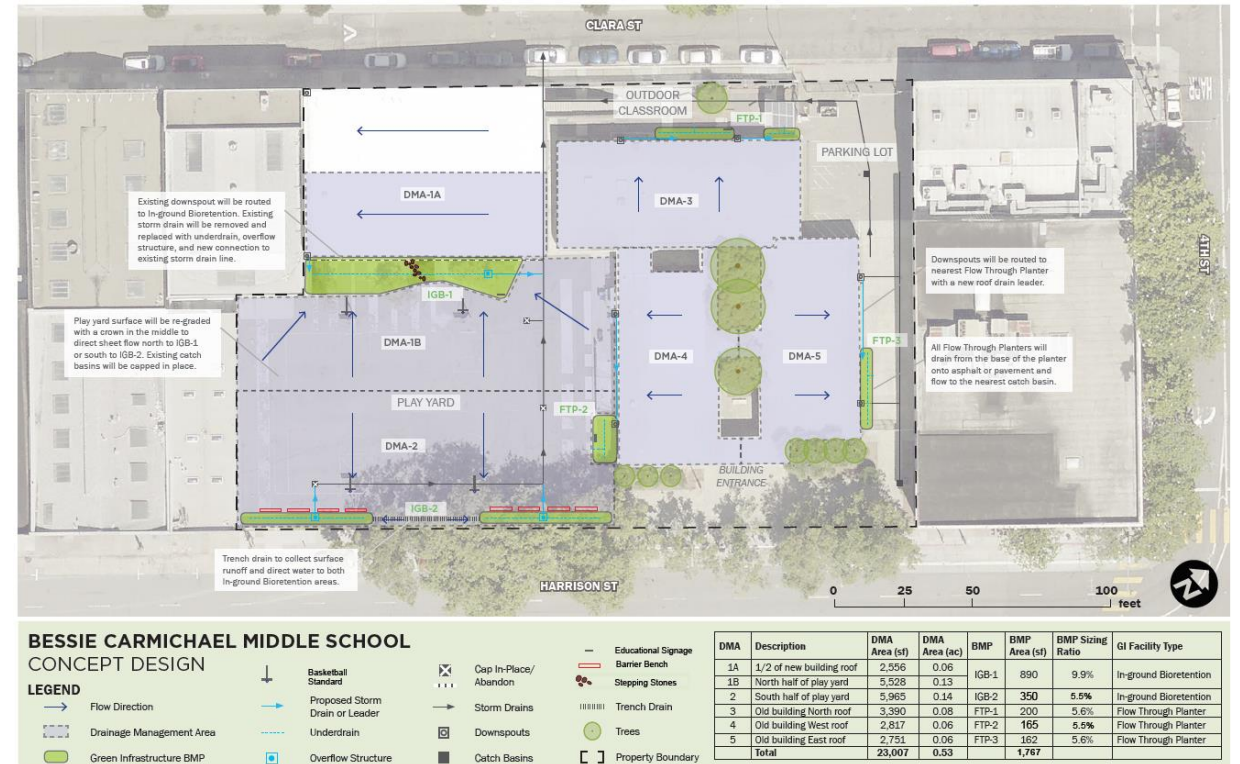




# Awarded Projects

## Bessie Carmichael Middle School - \$428,057

- Estimated 33,000 gallons of stormwater removed each year
- Project Status: In Construction





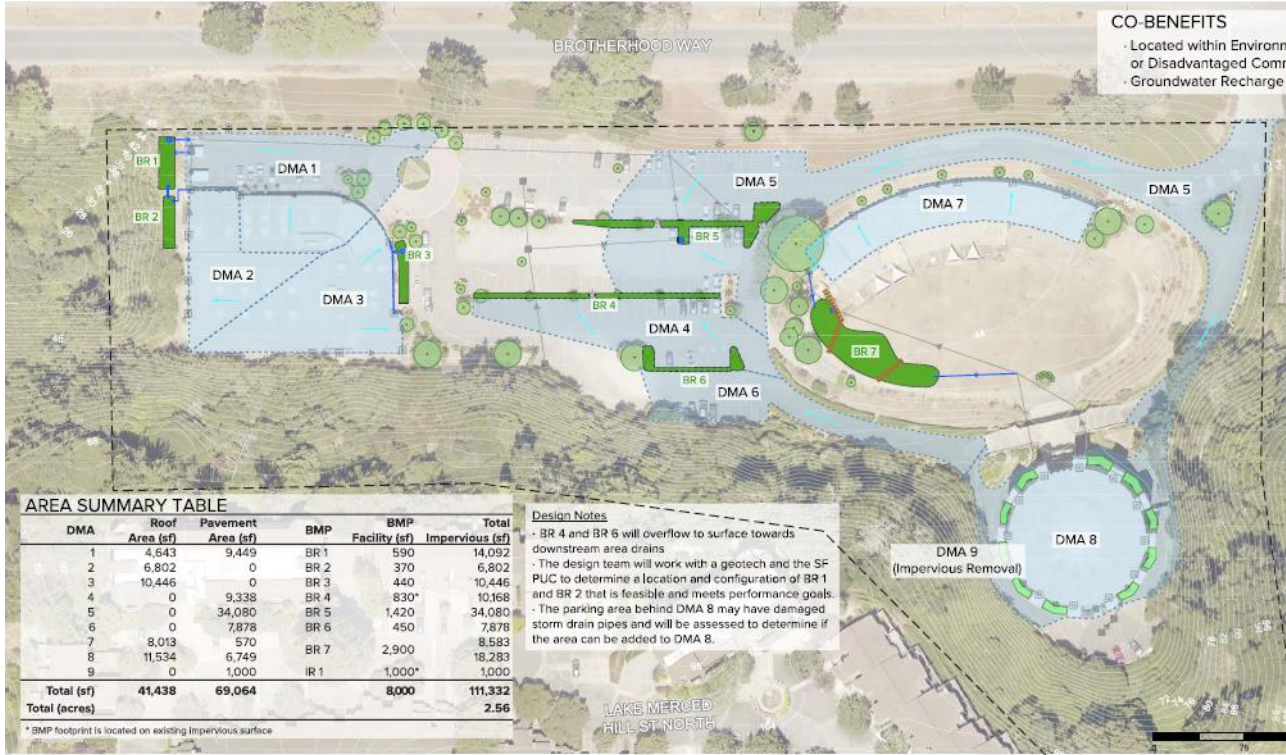




# Awarded Projects

## Holy Trinity Greek Orthodox Church - \$1,577,161

- Estimated 1.3M gallons of stormwater removed each year
- Project Status: Initiation Phase

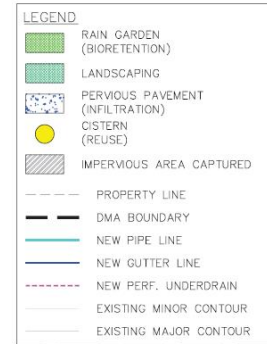




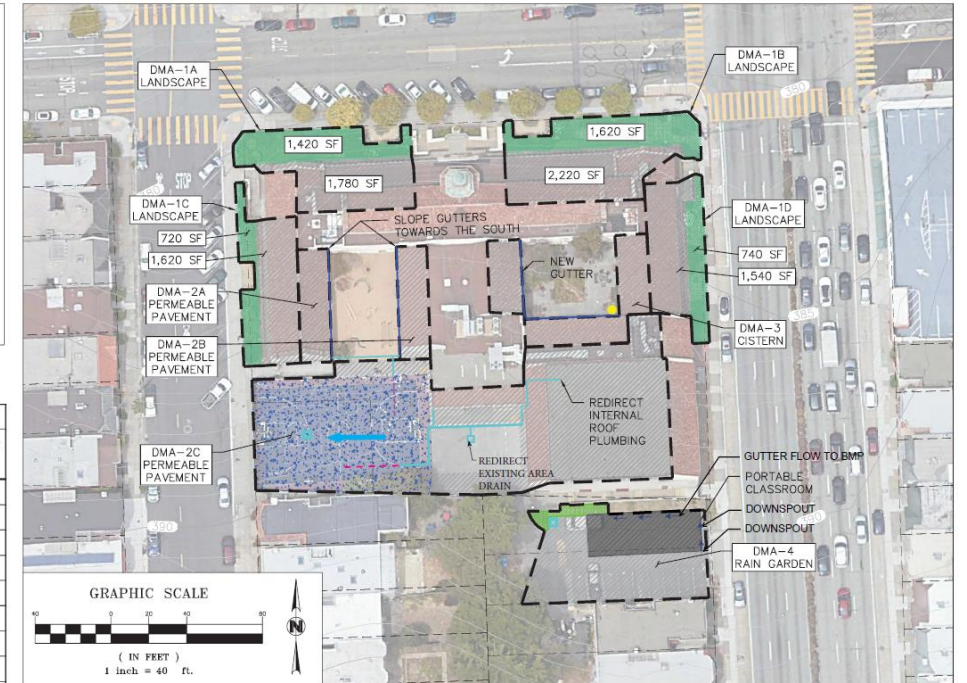
# Awarded Projects

## Lycee Francais de San Francisco School - \$480,958

- Estimated 323,000 gallons of stormwater removed each year
- Project Status: Initiation Phase



DMA SUMMARY TABLE			
DMA	IMPERVIOUS CAPTURED (SF)	BMP AREA (SF)	MAX GRANT AMOUNT
1A	1,420	1,420	\$24,938
1B	1,620	1,620	\$28,450
1C	720	720	\$12,645
1D	740	740	\$12,996
2A	980	--	\$17,211
2B	960	--	\$16,860
2C	14,640	5,640	\$257,107
3	2,180	750 GAL	\$38,461
4	4,150	245	\$72,882
<b>TOTAL</b>	<b>27,410</b>	<b>--</b>	<b>\$481,550</b>



LFSF - ORTEGA CAMPUS

CONCEPTUAL SITE PLAN  
SAN FRANCISCO, CALIFORNIA

FEBRUARY 25, 2020  
EXHIBIT 1

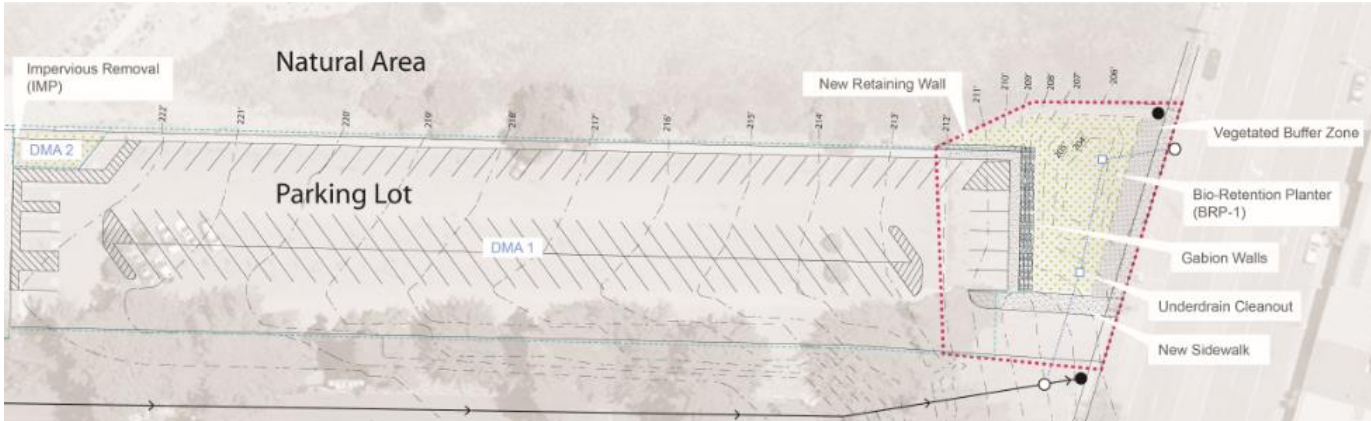
Co-Benefits:  
Groundwater Recharge  
Education/Curriculum



# Awarded Projects

## Crocker Amazon Park\* - \$884,291

- Estimated 512,000 gallons of stormwater removed each year
- Project Status: Pending Commission Award



**LEGEND**

- Drainage Management Area (DMA)
- Regrading Zone
- Overflow Structure
- Underdrain / Proposed Pipe Connection
- Contour Lines
- (E) Manhole
- (E) Catch Basin
- Existing Drain Pipe
- Bioretention Planter

**AREA SUMMARY TABLE**

DMA	BMP ID	IMPERVIOUS AREA MANAGED / REMOVED (sf)	GI BMPs (sf)		ANNUAL RUNOFF REMOVED
			BRP	TOTAL (sf)	
DMA 1	BRP-1	45,289	3,016	48,305	85%
DMA 2	IMP	673		673	100%
<b>TOTAL (sf)</b>		<b>45,962</b>	<b>3,016</b>	<b>48,978</b>	
<b>TOTAL (ac)</b>		<b>1.06</b>	<b>0.07</b>	<b>1.12</b>	

PP = Permeable Pavement; BRP = Bio Retention Planter; IMP = Impervious



**CO-BENEFITS**  
Environmental Justice Area  
Public Access Opportunities

*\*Funds reserved ending Commission award*



# GI Grant Program Performance and Budget

## Program Performance to Date:

3.3 MG of stormwater removed each year  
6.9 Acres of impervious surface managed

## Total Program Budget: \$12M

Administration Budget	\$583,000
Funds Reserved* to Date	\$4,978,585
Program Contingency**	\$497,859
<b>Remaining Project Balance to Date</b>	<b>\$5,940,557</b>

\*reserved funds = awarded or reservation letter

\*\*program contingency = 10% of reserved funds of active projects



RL Stevenson Elementary, SF



# Lessons Learned from Pilot Year

- Property owners are excited about the program!
- Technical assistance during project visioning is critical for most grantees.
- Grant administration and set up is taking much longer than expected.
- Delegated authority to the SFPUC Commission requires that each grant obtain two (2) commission approvals.
- Grantees have limited resources and projects are stalled without the first payment.



# Lessons Learned from Pilot Year

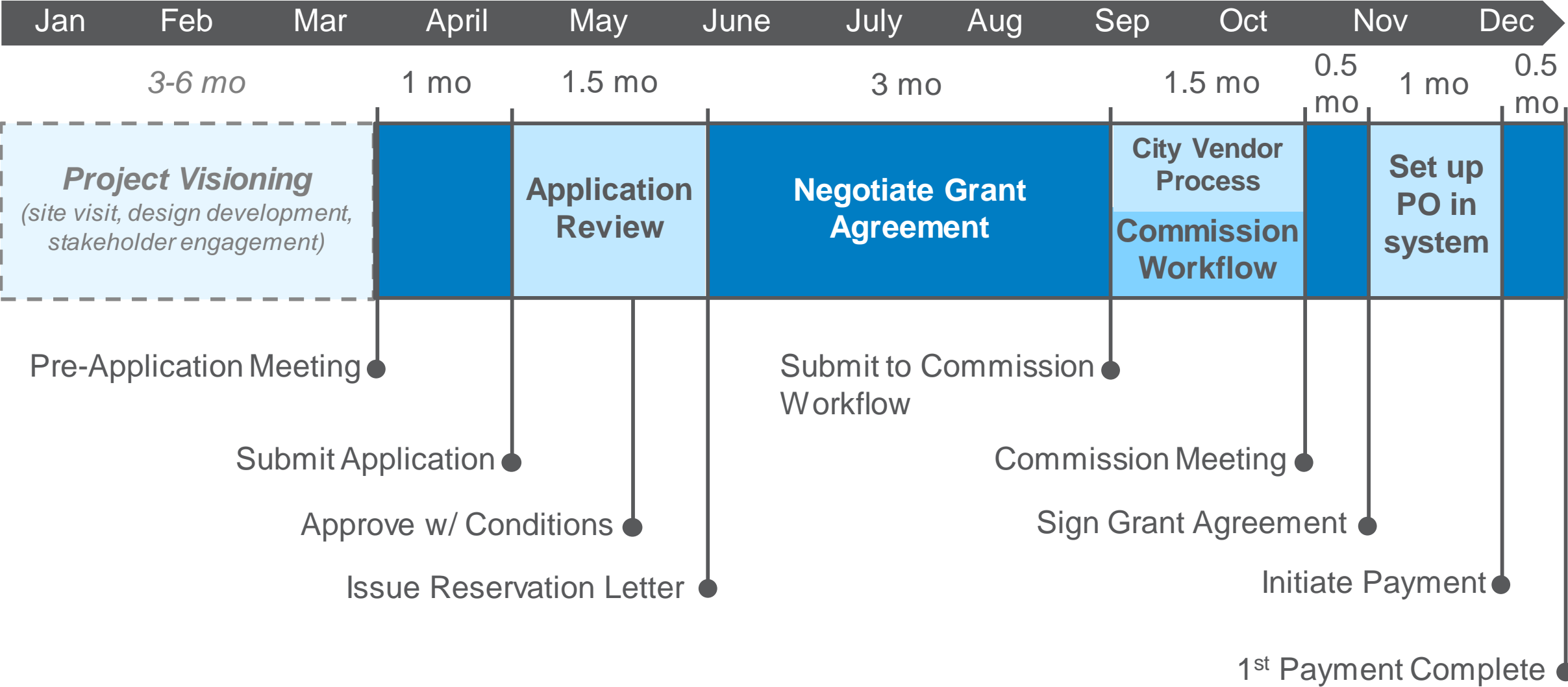
Administrative challenges are having a significant impact on school projects:

- SFUSD had to front the full design costs for projects to remain on schedule
  - Lafayette Elementary School (10 months to 1<sup>st</sup> payment)
  - Bessie Carmichael Middle School (7 months to 1<sup>st</sup> payment)
- Construction of St. Thomas More School delayed to Summer 2021 (9 months to 1<sup>st</sup> payment)



# Application to 1st Payment Timeline

Example Year

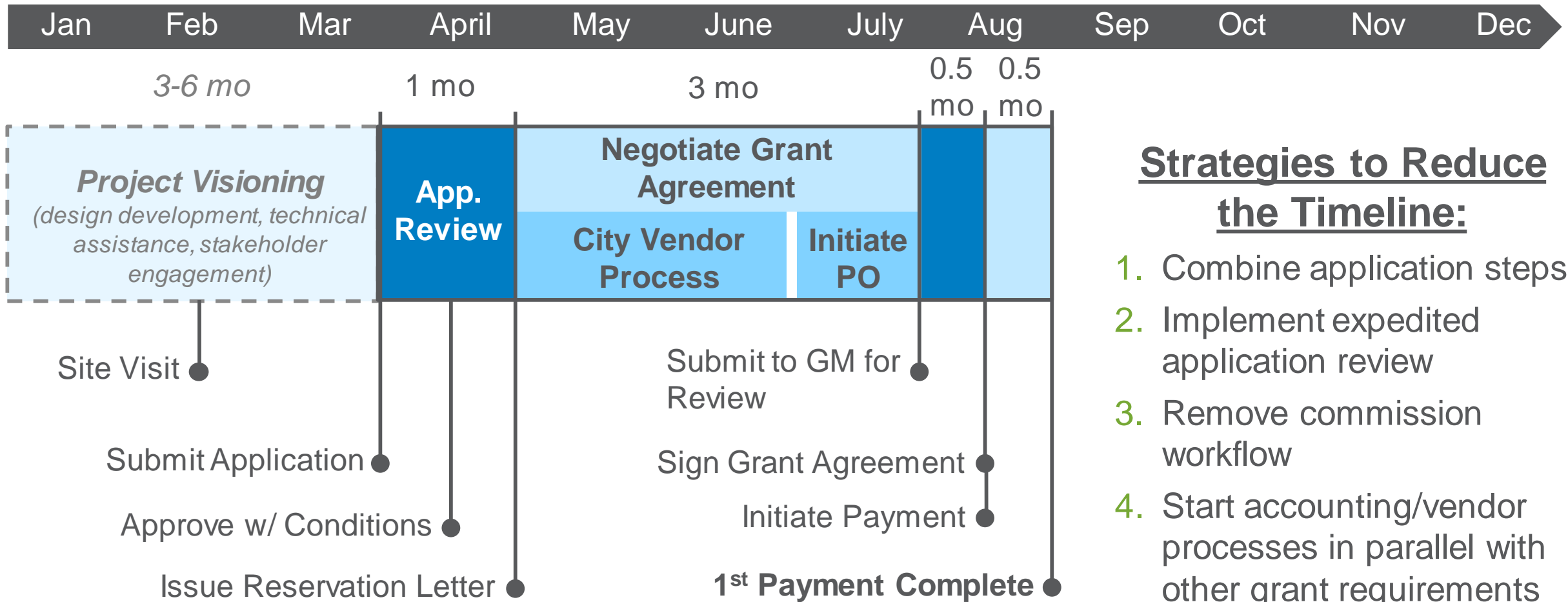


**Total = 9 months**



# Improved Application to 1st Payment Timeline

Example Year



## Strategies to Reduce the Timeline:

1. Combine application steps
2. Implement expedited application review
3. Remove commission workflow
4. Start accounting/vendor processes in parallel with other grant requirements

**Target Timeline = 5 months**



# Removal of SFPUC Commission Workflow

## Grant Program Oversight Mechanisms:

- Continue to have SFPUC Commission approve program budget every 2 years
- Continue to have SFPUC Commission approve program rules
- Begin quarterly updates to SFPUC Commission
- Continue quarterly updates to the Board of Supervisors
- Continue request for fixed periods of delegation of authority (2-years at a time)



**THANK YOU!**

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