

As of 9/8/23

**Prop L Sales Tax Program
Project Information Form (PIF) Template**



Project Name and Sponsor		
Project Name:	Next Generation Fare Gates	
Implementing Agency:		
Prop L Expenditure Plan Information		
Prop L Program:	07- BART Transit Maintenance, Rehabilitation, and Replacement	
Prop L Sub-Program (if applicable):		
Other Prop L Programs (if applicable):		
Project Information		
Brief Project Description for MyStreetSF (80 words max):	The Next Generation Fare Gates (NGFGs) Project will upgrade fare gates at all eight stations in San Francisco. This effort is a part of a larger \$90 million capital project to replace all 715 fare gates throughout the BART system. The existing fare gates have reached the end of their useful life and have consistently been identified by BART riders and community stakeholders as a priority for replacement. The new gates will increase reliability, access, and improve ridership experience.	
Project Location and Limits:	The NGFGs will be installed at all eight stations in San Francisco: Embarcadero, Montgomery St., Powell St., Civic Center/UN Plaza, 16th St. Mission, 24th St. Mission, Glen Park, and Balboa Park.	
Supervisory District(s):	District 09, District 03, District 05, District 06	
Is the project located on the 2022 Vision Zero High Injury Network ?	No	Is the project located in an Equity Priority Community (EPC)? Yes
Which EPC(s) is the project located in?	The project is located in EPCs with high levels of households with minority or low-income status, seniors, people who have limited English proficiency, single parent families, zero-vehicle households, and people with disabilities. Please see Attachment A, pg. 8, for a map of the Project's Location and Equity Priority Communities.	
Detailed Scope (may attach Word document): Please describe in detail the project scope, any planned community engagement, benefits, considerations for climate adaptation and resilience (if relevant), and coordination with other projects in the area (e.g. ...)	Please see Attachment A, pgs. 1-6.	
Attachments: Please attach maps, drawings, photos of current conditions, etc. to support understanding of the	Please see Attachment A, pgs. 1-6.	
Type of Environmental Clearance Required:	Categorically Exempt	
Coordinating Agencies: Please list partner agencies and identify a staff contact at each agency.	The Project will be coordinated with other projects taking place at the stations, or near the stations, in San Francisco. BART participates in and hosts quarterly and monthly meetings with various City and County of San Francisco stakeholders where construction projects are discussed. These meetings include the BART, San Francisco Public Works, and SFMTA Quarterly Coordination Meeting, and the BARTCCSFMarket Street Monthly Meeting. The Project will also coordinate with BART led projects, including the Traction Power Substation Replacement Project, Market Street Entrance Canopy Project, Escalator Replacement Project, and the Embarcadero Platform Elevator Project. Additionally, the Project will also coordinate with MTC on the Clipper 2 integration.	

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Project Delivery Milestones	Status	Work	Start Date		End Date	
Phase	% Complete	In-house - Contracted - Both	Quarter	Fiscal Year (starts July 1)	Quarter	Fiscal Year (starts July 1)
Planning/Conceptual Engineering	100%	In-house	Q3-Jan-Feb-Mar	2018/19	Q2-Oct-Nov-Dec	2021/22
Environmental Studies (PA&ED)	N/A					
Right of Way	N/A					
Design Engineering (PS&E)	N/A					
Advertise Construction			Q2-Oct-Nov-Dec	2022/23		
Start Construction (e.g. Award Contract)	0%	In-house and Contracted	Q2-Oct-Nov-Dec	2023/24		
Operations (i.e. paratransit)	N/A					
Open for Use	N/A				Q2-Oct-Nov-Dec	2026/27
Project Completion (means last eligible expenditure)	0%	Contracted			Q2-Oct-Nov-Dec	2030/31
Notes						
Project Completion time includes warranty periods.						

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Project Name:	Next Generation Fare Gates									
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Project Cost Estimate		Funding Source		
Phase	Cost	Prop L	Other	Source of Cost Estimate
Planning/Conceptual Engineering	\$ -	\$ -		
Environmental Studies (PA&ED)	\$ 2,948,553	\$ -	\$ 2,948,553	
Right of Way	\$ -	\$ -		
Design Engineering (PS&E)	\$ -	\$ -		
Construction	\$ 87,051,447	\$ 12,525,000	\$ 74,526,447	
Operations (i.e. paratransit)	\$ -	\$ -		
Total Project Cost	\$ 90,000,000	\$ 12,525,000	\$ 77,475,000	
Percent of Total		14%	86%	

Funding Plan - All Phases - All Sources						Cash Flow for Prop L Only (i.e. Fiscal Year of Reimbursement)				
Fund Source	Prop L Program	Phase	Fund Source Status	Fiscal Year of Allocation (Programming Year)	Total Funding	2023/24	2024/25	2025/26	2026/27	2027/28
SFCTA Prop L	07- BART Transit Maintenance, Rehabilitation, and Replacement	Construction	Planned	2023/24	\$ 12,525,000	\$ 6,263,000	\$ 6,262,000		\$ -	\$ -
FTA Formula Funds		Construction	Allocated		\$ 10,272,000	\$ -	\$ -	\$ -	\$ -	\$ -
Federal Earmark		Construction	Allocated		\$ 2,000,000	\$ -	\$ -	\$ -	\$ -	\$ -
BART Measure RR		Construction	Allocated		\$ 5,665,000	\$ -	\$ -	\$ -	\$ -	\$ -
BART Capital Allocations		Construction	Allocated		\$ 11,724,000	\$ -	\$ -	\$ -	\$ -	\$ -
ACTC Measure BB		Construction	Programmed		\$ 19,573,000	\$ -	\$ -	\$ -	\$ -	\$ -
AHSC		Construction	Programmed		\$ 5,201,000	\$ -	\$ -	\$ -	\$ -	\$ -
CCTA Measure J		Construction	Programmed		\$ 3,500,000	\$ -	\$ -	\$ -	\$ -	\$ -
FY24 CA State Budget Earmark		Construction	Programmed		\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ -
SFPUC Easement Sales Proceeds		Construction	Planned		\$ 306,000	\$ -	\$ -	\$ -	\$ -	\$ -
South Hayward JPA Dissolution Settlement Proceeds		Construction	Planned		\$ 750,000	\$ -	\$ -	\$ -	\$ -	\$ -
STIP Funds (CCTA)		Construction	Programmed		\$ 9,500,000	\$ -	\$ -	\$ -	\$ -	\$ -
UTA Funding		Construction	Programmed		\$ 5,035,000	\$ -	\$ -	\$ -	\$ -	\$ -
FTA Formula Funds		Environmental Studies (PA&ED)	Allocated		\$ 2,949,000	\$ -	\$ -	\$ -	\$ -	\$ -
					\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total By Fiscal Year					\$ 90,000,000	\$ 6,263,000	\$ 6,262,000	\$ -	\$ -	\$ -

Notes
Expected Prop L request amount is \$12,524,476

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Prop L Supplemental Information Please fill out each question listed below (rows 2-8) for all projects.	
Project Name	<i>Next Generation Fare Gates</i>
Relative Level of Need or Urgency (time sensitive)	The Project is time sensitive. The Project needs to proceed in the proposed timeframe to enable coordination for the installation of new gates in San Francisco.
Prior Community Engagement/Level and Diversity of Community Support (may attach Word document):	Please see Attachment A, pgs. 6-7.
Benefits to Disadvantaged Populations and Equity Priority Communities	Please see Attachment A, pg. 8.
Compatability with Land Use, Design Standards, and Planned Growth	Yes
<u>San Francisco Transportation Plan Alignment (SFTP)</u>	Environmental Sustainability
	See Attachment A.

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The next section includes criteria that are specific to each Expenditure Plan program. The questions that are required to be filled out for each program will auto-populate once the Prop L program is selected on the Scope & Schedule tab.

07- BART Transit Maintenance, Rehabilitation, and Replacement

Safety	The current gates have reached their end of their useful life and break down often. The NGFGs will be designed to provide safe access to the system for everyone, with increased attention to address the needs of people with mobility limitations, using improved detection technology to ensure they properly open and close and premature closing is reduced. Accessible NGFGs will meet American with Disabilities Act requirements. The Project will also help to improve infrastructure condition as the work directly assists to maintain the condition of BART's assets in a state of good repair. BART has chosen a vendor, STraffic, with extensive experience with fare gate design and installation. The vendor has experience with TR4 reader systems, modular design and readily available industrial components. The vendor has also worked extensively with ADA community to obtain input to modify gates installed across the world. Working with STraffic, BART will be able to enhance functionality of new gates, ensuring they are safe for all patrons, and to maintain and upgrade parts in the gates over the next 20-25 years to ensure they are reliable.
Need (Asset Useful Life)	The current fare gates have reached the end of their useful life. The NGFGs project will replace current gates at all stations in San Francisco.
Improves Efficiency of Transit Operations	Modern technology on the NGFGs will shorten the transfer time between the Muni and BART system. The NGFGs will also have upgraded features including shatter proof barriers and heavy-duty panels for better protection for internal components. These features will result in higher reliability and will minimize the frequency of maintenance.



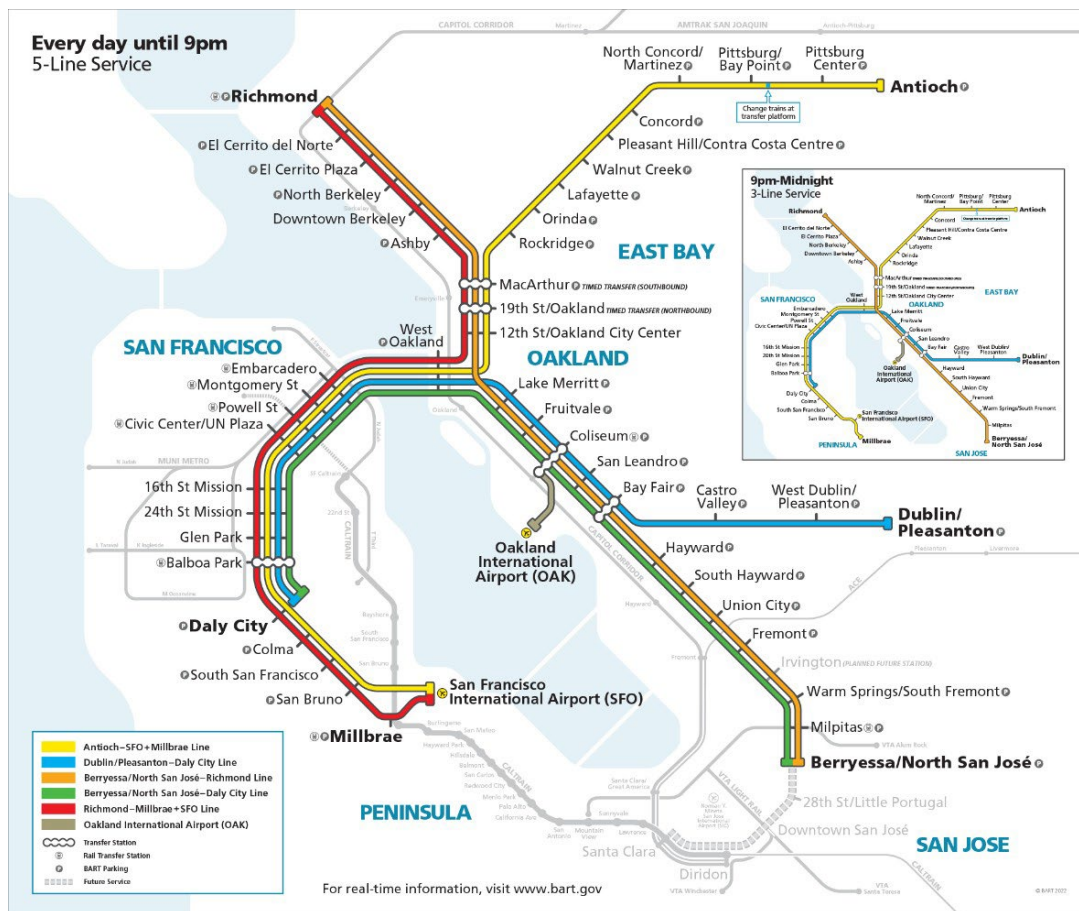
Next Generation Fare Gates Attachment A



Detailed Scope

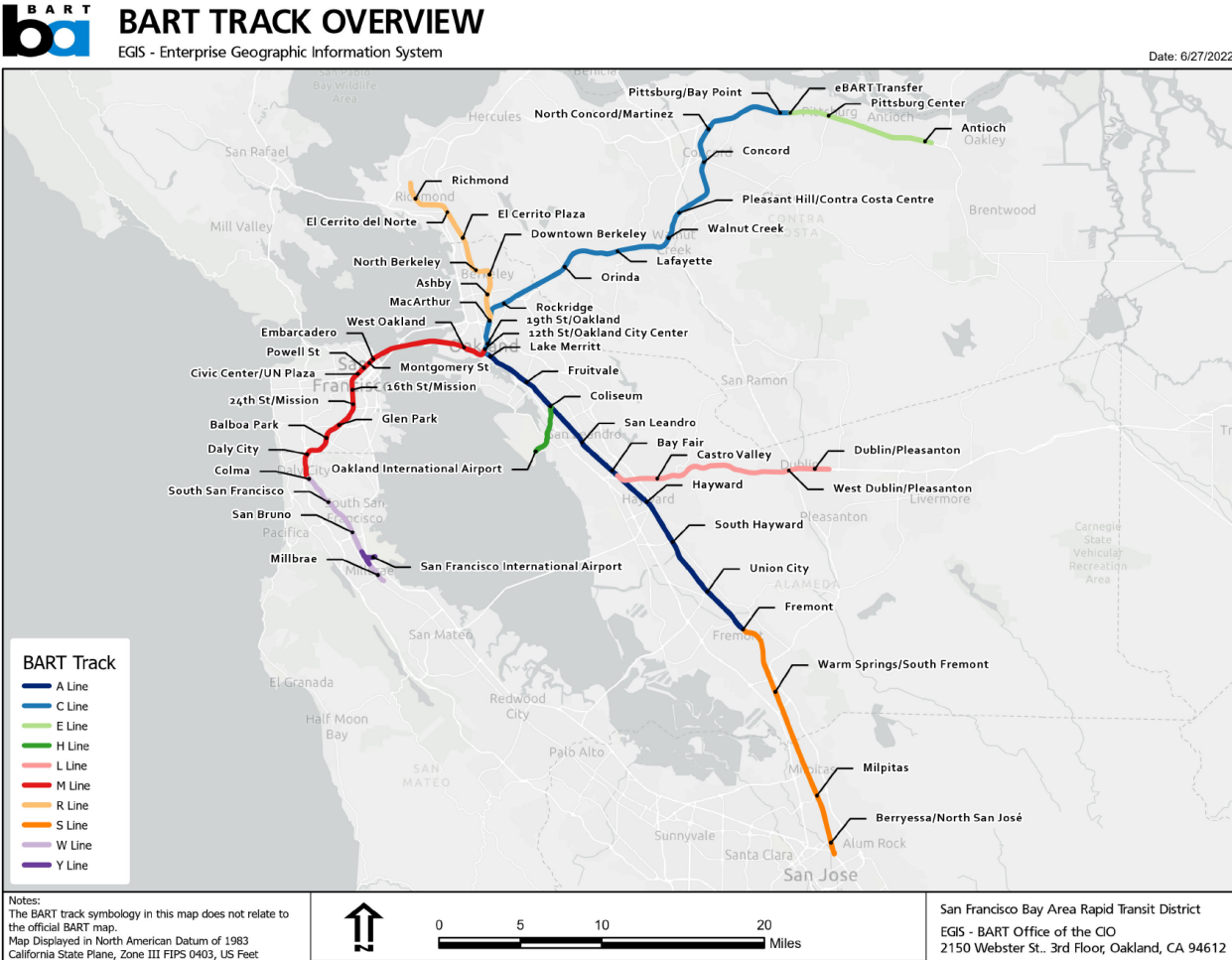
The San Francisco Bay Area Rapid Transit District (BART) requests to program \$12,500,000 of Proposition L (Prop L) funds through the 5-Year Prioritization Process (SYPP) for the Next Generation Fare Gates (NGFGs) Project. The NGFGs Project is a BART District system-wide \$90 million capital project to replace all 715 fare gates. BART is a heavy-rail public transit system that connects the San Francisco Peninsula with communities in the East Bay and South Bay. BART service currently extends as far as Millbrae, Richmond, Antioch, Dublin/Pleasanton, and Berryessa/North San José, see figure 1. BART operates in five counties (San Francisco, San Mateo, Alameda, Contra Costa, and Santa Clara) with 131 miles of track and 50 stations. BART's ridership exceeded 420,000 trips per day before the COVID-19 pandemic. During the pandemic, BART experienced unprecedented ridership pattern changes. The average daily trip count for fiscal year 2022 to 2023 was 149,433. BART anticipates ridership to increase in the next few years as the Bay Area recovers from pandemic related impact. The NGFGs Project will ensure BART continues to provide reliable transportation for Bay Area residents and visitors to reach work locations, shopping centers, tourist attractions, entertainment venues, universities, and other destinations.

Figure 1, BART System Service Map 2023



BART recognizes that existing fare gates, system-wide, have reached the end of their useful life and have consistently been identified by BART riders and community stakeholders as a priority for replacement, especially as BART continues efforts to modernize stations. New state-of-the-art NGFGs will reduce maintenance needs, cutting both costs and system downtime, and improving service to transit riders. This Project includes fare gates at the San Francisco stations along BART’s M Line. The Project work will take place at eight stations: Embarcadero, Montgomery St., Powell St., Civic Center/UN Plaza, 16th St. Mission, 24th St. Mission, Glen Park, Balboa Park. These stations rank high in station activity (entries + exits), see figure 2 for information on BART track lines and table 1 for ridership activity details.

Figure 2, BART Track Lines Overview



Average Weekday Station Activity (activity = entries + exists)		
Station	June 2019	June 2023
Embarcadero	93,100	30,900
Montgomery Street	89,300	25,700
Powell Street	55,400	22,900
Civic Center / UN Plaza	49,200	17,200
16 th St. Mission	26,500	10,900
24 th St. Mission	24,600	10,300
Glen Park	15,000	6,100
Balboa Park	20,200	7,100

Table 1, Average Weekday Station Activity

The Project's scope of work includes modernization of all 152 fare gates, based on number of aisles, at the eight listed stations. The current fare gates have reached their end of useful life, as they are more than twenty years old, outdated, break down often, and require continued maintenance. In addition, spare parts for current fare gates are no longer in production. Current fare gates require recurrent maintenance to remain reliable and operational. BART's Maintenance and Engineering Department ensures fare gates are in optimum condition with its preventive maintenance practices. Currently, the fare gates undergo preventive maintenance every ten weeks. Corrective maintenance is also conducted when fare gates are underperforming. In order to minimize corrective maintenance, BART has been dedicating \$120,000 annually to preventive maintenance tasks. However, BART regularly deploys technicians to address corrective maintenance tasks and ensure fare gates perform at their optimum capacity due to issues with the outdated fare gates. BART receives an average of 2,000 annual requests/tickets to address fare gate performance challenges systemwide. In San Francisco, annual corrective maintenance is most often required at Powell Street, described as M30 below, see table 2.

San Francisco Stations Annual Corrective Maintenance				
	2019	2020	2021	2022
M16: Embarcadero	10	8	8	3
M20: Montgomery	9	6	1	0
M30: Powell	13	1	8	13
M40: Civic Center	4	0	4	5
M50: 16th St.	3	0	0	0
M60: 24th St.	2	1	2	0
M70: Glen Park	1	0	1	0
M80: Balboa Park	1	1	0	0

Table 2, San Francisco Annual Corrective Maintenance

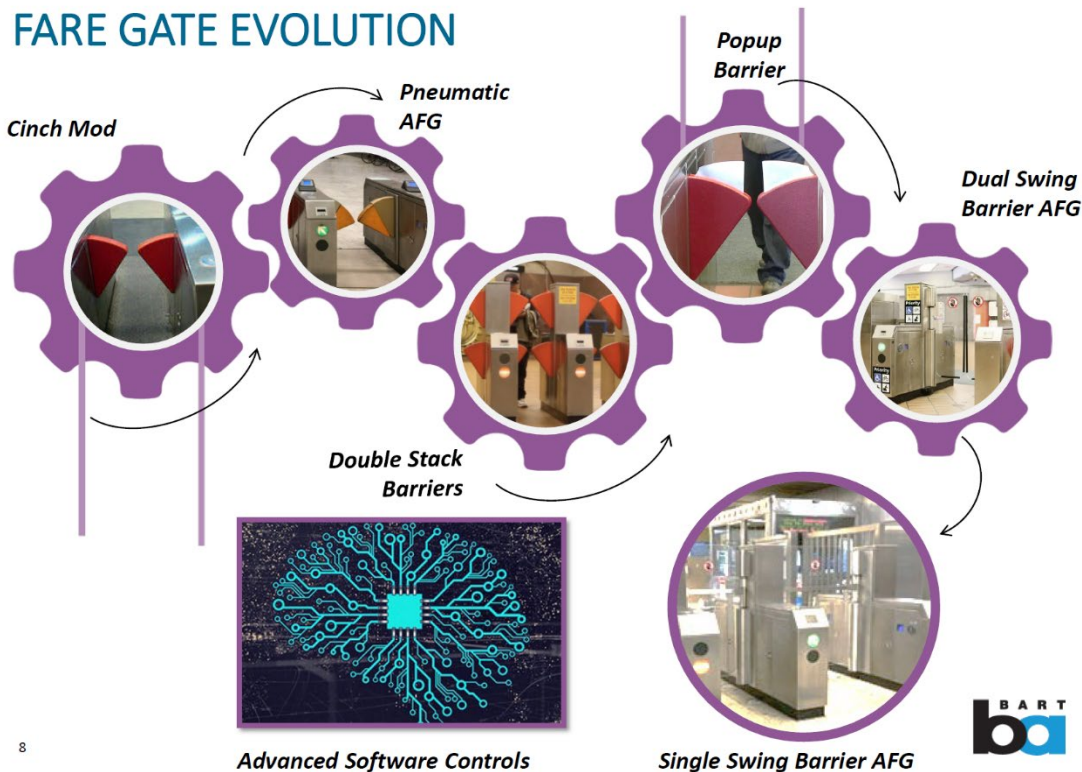
In recent years, BART has been making investments to identify and develop the best way to improve current fare gates. A variety of designs were considered and rated based on reliability, maintainability, throughput capacity, effectiveness, accessibility, and ability to easily integrate with Clipper®, the region's all-in-one transit fare payment card. In 2019, the BART Board of Directors voted unanimously to adopt a swing gate style design as the standard for new gates. The new design will offer BART more control over the replacement schedule, reducing engineering and deployment time. In total, design innovations are estimated to reduce the cost of the final design and installation from \$150 to \$90 million. See figure 3 for a representation of two test designs deployed at the Richmond station.

Figure 3, Double Stack Barrier and Dual Swing Barrier



BART's Fare Collection Engineering Department has developed innovative enhancements, retrofitted existing retractable fare gates to swing style fare gates, and implemented prototypes at various locations throughout the transit system, including the Richmond, Coliseum, Concord, Bay Fair, Montgomery Street, Balboa Park, Embarcadero, and El Cerrito Plaza stations. For each installation, BART made improvements based on information gathered from the previous installation. These prototyped fare gates provided BART vital data for the Fare Collection Engineering Department to develop specific requirements and criteria for the final NGFGs. The design of multiple prototypes is shown in the Fare Gate Evolution, figure 4.

Figure 4, Fare Gate Evolution



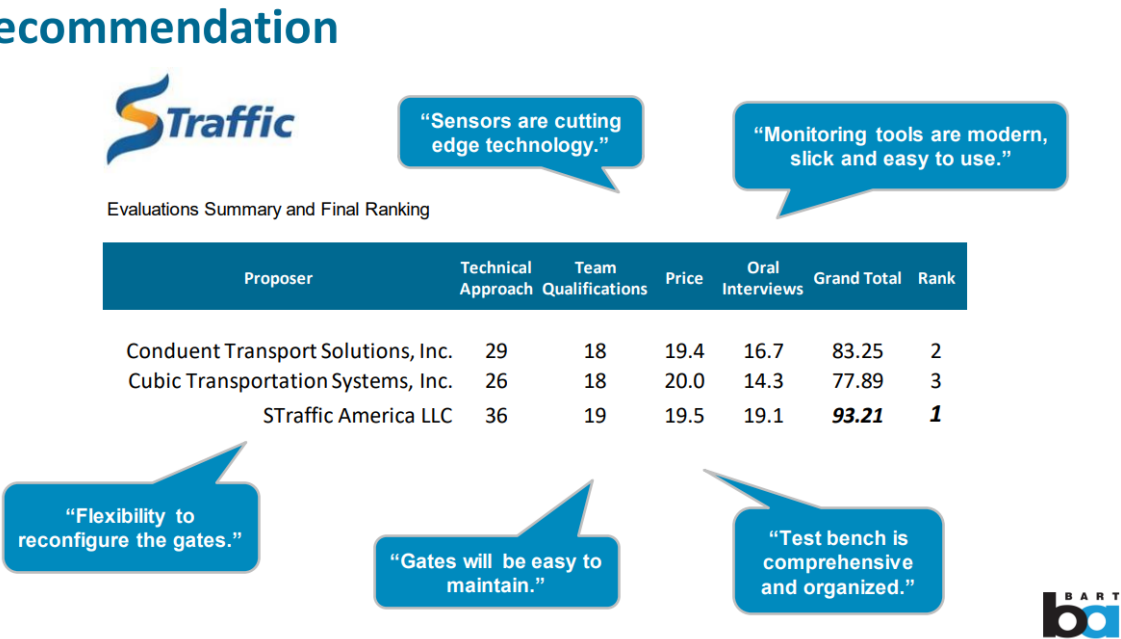
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With extensive knowledge of possible solutions, BART looked forward to launch and implement new technology systemwide. In September of 2020, BART released a Request for Expressions of Interest (RFEI) for companies to assist to develop an innovative design for the new gates. The RFEI was an opportunity for interested stakeholders to share information, provide input, and discuss with BART potential alternatives, feasibility, and challenges. The RFEI provided details on BART’s design ideas and implementation approach. Information gathered through the RFEI process provided BART information to assess alternative options and opportunities for improvements. With this knowledge, BART issued a Request for Proposals (RFP) in May of 2022 and December of 2022.

The final NGFGs, selected via the RFP, will be the vendor’s design meeting BART’s required technical specifications with minimal customization. The gates will be swing style, and the main actuation of the gates will change from pneumatic to electric. The electric style requires lower maintenance frequency and therefore are more cost effective. The new NGFGs will have improved sensors to optimally open and close the gate able to detect patrons, wheelchairs, children, luggage and bikes accurately. The installation/construction phase of the NGFGs will include: Systems Integration and Engineering, including back-office system integration, interfaces, and Clipper integration; Startup and Launch, including O&M training documentation, engineering training, installation training, and test rollout; Program Management, including mobilization, demobilization, general conditions, and field office.

From January to March of 2023, BART reviewed proposals, interviewed responsive vendors, and chose STraffic to implement the project. The vendor selection was conducted by an evaluation panel comprised of nine BART staff from various departments. The vendors were evaluated on four categories: technical approach, qualifications of the firm and proposer’s team, price, and oral interview. See figure 5 below for the final scores.

Figure 5, Vendor Evaluation Summary



The contract with STraffic is for procurement of faregates to replace the existing faregates systemwide. STraffic and/or another vendor may also be contracted for installation. This would be a separate future contract or work order.

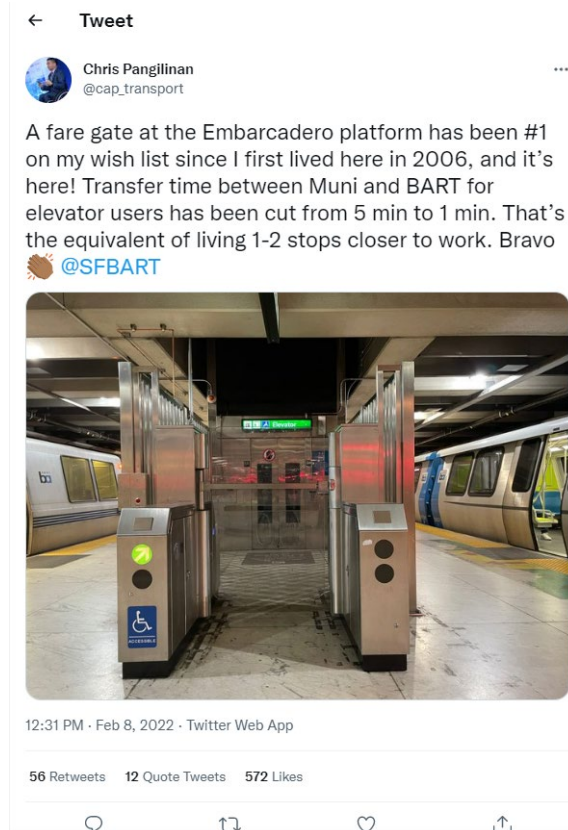
Prior Community Engagement/Level and Diversity of Community Support

BART has engaged with community members and obtained input and support for prototype fare gates through various forums:

- In July of 2020, the NGFGs Project team conducted a presentation for BART's Accessibility Task Force (BATF) to provide an overview, and obtain feedback, regarding an accessible fare gate prototype deployed at BART's Richmond Station. The BATF advises the BART Board of Directors and staff on disability-related issues and advocates on behalf of people with disabilities and seniors to make the BART system accessible to and useable by people regardless of disability or age. BATF members provided very positive feedback regarding the new accessible fare gate. Mr. Roland Wong, an BATF member, stated that his "experience was positive and [he] had no problems entering and exiting the swing gates." He also stated that the "faregates did not make loud noises and were quiet."
- In March of 2022, the NGFGs Project team presented an update to the BART Board of Directors. The BART Board is comprised of nine elected officials representing the BART Districts: Contra Costa County, Alameda County, and City and County of San Francisco. Each of the nine BART Board members represents a constituency with wide-ranging needs, as each county is composed of different populations, and access and use of transit varies significantly by city within each county. Therefore,

BART Board Directors' input is representative of different segments of the San Francisco Bay Area community needs.

- In February of 2022, Chris Pangilinan, Vice President of Paratransit at the Metropolitan Transportation Authority, New York, twitted the following about one of the NGFGs installed at the Embarcadero Station "A fare gate at the Embarcadero platform has been #1 on my wish list since I first lived here in 2006, and it's here! Transfer time between Muni and BART for elevator users has been cut from 5 min to 1 min."



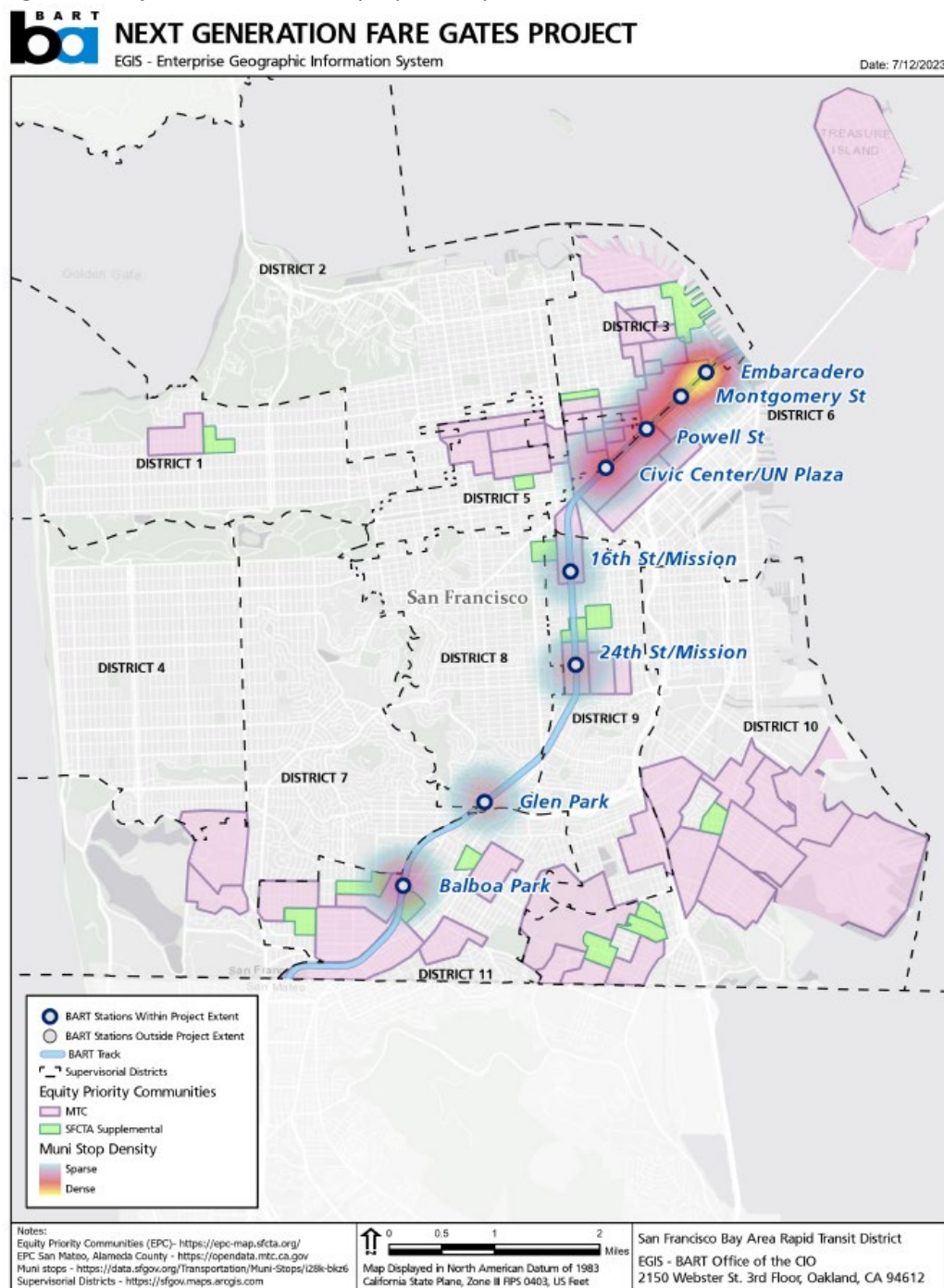
- In April of 2023, the NGFGs Project team provided an update to the BART Board on the vendor selection. A copy of the presentation is included in the programming packet, see item named "April 2023 Presentation to BART Board."
- In June of 2023, the NGFGs Project team provided an update to the BART Accessible Task Force. A copy of the DRAFT minutes are included in the programming packet, please do not distribute. See item named "BATF 06-22-2023 Draft Minutes."

Benefits to Disadvantaged Populations and Equity Priority Communities

The Project will take place at all stations in San Francisco. These stations serve diverse populations, including historically underserved communities and Equity Priority Communities. The Project's will take place at various locations with significant densities of historically underserved communities, including ethnic and racial minorities, people who are of low income, people with disabilities, elderly, people whose household does not own a vehicle, single parent families, and people who are rent-burdened. The Project Location Map included below provides a

visual representation of combined MTC and San Francisco County Transportation Authority EPC measures, see figure 6.

Figure 6, Project Location and Equity Priority Communities



San Francisco Transportation Plan Alignment (SFTP)

SFTP Goal	CCP Alignment
Equity	<ul style="list-style-type: none"> • The existing BART system covers large portions of the Bay Area and bisects several communities, including those with designated minority and low-income populations. No impacts from the installation or operation of NGFGs are anticipated; therefore, no disproportionately high and adverse effects are anticipated for any surrounding communities, including any Title VI/EJ communities. • BART, as a recipient of federal funds, is required by the FTA to comply with Title VI of the Civil Rights Act of 1964 and its amendments (Act). Title VI of the Civil Rights Act of 1964 requires that no person in the United States, on the grounds of race, color, or national origin be excluded from, be denied the benefits of, or be subjected to discrimination, under any program or activity receiving federal financial assistance. Presidential Executive Order 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” addresses environmental justice (EJ) in minority and low-income populations. Presidential Executive Order 13166 “Improving Access to Services for Persons with Limited English Proficiency” addresses services to those individuals with Limited English Proficiency (LEP). FTA Circular 4702.1B, dated October 1, 2012, titled Title VI Requirements and Guidelines for Federal Transit Administration Recipients (Title VI Circular) and FTA Circular 4703.1, dated August 15, 2012, titled Environmental Justice Policy Guidance for Federal Transit Administration Recipients (EJ Circular), require that federal funding recipients such as BART review its transportation decisions to ensure equity in the transportation decision making process and to ensure that decisions are not made on the basis of race, color, national origin, or socioeconomic status. BART’s Office of Civil Rights monitors BART’s compliance to these mandates, including monitoring the NGFGs Project. • Lastly, for the NGFGs Project BART has chosen a vendor for the Project with a diverse team, including Disadvantaged Business Enterprises (DBE). The team includes 1) e² Engineering, a DBE certified training firm specializing in Intelligent Transportation Systems; 2) VST Engineering, a DBE certified firm with 30 years of experience delivering capital projects from conceptual design through implementation; and 3) Pride Resource Partners, an LGBT-owned and operated DBE specializing in contract compliance, scheduling, and supervisory oversight.
Environmental Sustainability	<ul style="list-style-type: none"> • As part of its mission, BART is committed to integrating climate adaptation and resiliency practices into daily operations and future transit investments. BART’s Sustainability Policy (adopted in 2017) frames overarching resilience actions and initiatives, which are further detailed in BART’s 10-year Sustainability Action Plan. • The NGFGs have no physical features that will lead to environmental impacts. The NGFGs are Categorical Exempt.

Accountability & Engagement	<ul style="list-style-type: none"> • BART has been conducting extensive outreach and engagement to diverse stakeholders as discussed in the section named “Prior Community Engagement.” • Prior to submitting their proposal, STraffic conducted extensive outreach to local Bay Area community groups. As a result, STraffic has committed to provide 2000 hours of new technical internship to Bay Area community-based organization. Hands-on STEM (science, technology, engineering and mathematics) internships provide students with the opportunity to apply theoretical knowledge gained in the classroom to real-world projects. This hands-on experience allows them to develop practical skills and a deeper understanding of how technical concepts are applied. It also gives them the opportunity to work with cutting-edge technologies, tools, and equipment, which can be valuable in their future careers. • The Project aligns with MTC’s Equity Platform, the Regional Active Transportation Plan, and the Blue-Ribbon Transit Transformation Action Plan, as the Project’s work will: <ul style="list-style-type: none"> ○ Modernize fare gates to preserve and improve access for all customers, including people with disabilities, seniors, cyclists, families with strollers, and travelers with luggage. ○ Support and expand ridership as modernized fare gates may attract more riders, as customers may feel more comfortable with accessing the transit system for their transportation needs. ○ Support transit ridership for customers of diverse backgrounds. There are several housing developments near the San Francisco stations, and many of them are occupied by people who are of low income, people with disabilities, and seniors. BART serves as the primary mode of transportation for many of these community members given the location of the stations. BART service is also convenient to transfer to other modes of transportation as is Muni service, see Project Location and Equity Priority Communities Map, which includes Muni stop density near the stations.
Economic Vitality	<ul style="list-style-type: none"> • Ranked by population, the Bay Area is the fourth largest metropolitan area in the United States. The nine-county region is home to more than 7.8 million people and 3.9 million jobs. The Bay Area’s economy continues to grow, despite setback from the COVID-19 pandemic, driven in part by the technology sector that is vital to growing the nation’s overall economy. By 2050, the region expects over ten million residents and five million jobs to be located here.¹ As one of the Bay Area’s largest transit network, BART currently operates and maintains 50 stations and 131 miles of revenue track, serving over 149,000 passengers every weekday in the counties of Alameda, Contra Costa, San Francisco, San Mateo, and Santa Clara. The NGFGs Project will support expected economic growth and vitality in

¹ Plan Bay Area 2050, Plan Bay Area 2050 Final Plan

	<p>the Bay Area. The Project will help to improve access and experience for community members to travel to employment locations throughout San Francisco and the greater Bay Area. The Project is also located in areas with projected greater densities, Priority Development Areas, and Transit-Rich Areas.</p>
Safety and Livability	<ul style="list-style-type: none"> • The current gates have reached their end of their useful life and break down often. The NGFGs will be designed to provide safe access to the system for everyone, with increased attention to address the needs of people with mobility limitations, using improved detection technology to ensure they properly open and close and premature closing is reduced. Accessible NGFGs will meet American with Disabilities Act requirements. The Project will also help to improve infrastructure condition as the work directly assists to maintain the condition of BART's assets in a state of good repair. • BART has chosen a vendor, STraffic, with extensive experience with fare gate design and installation. The vendor has experience with TR4 reader systems, modular design and readily available industrial components. The vendor has also worked extensively with ADA community. STraffic will be incorporating lessons learned to ensure the final fare gate design is equipped with top and side mounted readers, sensor technology for safe access of persons and service animals, and aisle lighting, messaging, and color-coding options. Working with STraffic, BART will be able to enhance functionality of new gates, ensuring they are safe for all patrons, and to maintain and upgrade parts in the gates over the next 20-25 years to ensure they are reliable.