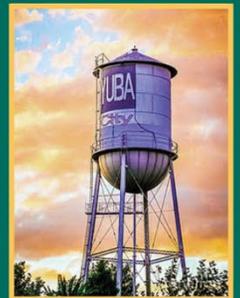
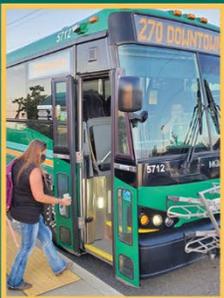


# Next Generation Zero-Emission Bus Operations, Maintenance, and Administration Facility





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- Attachment B - Detailed Project Budget and Funding Documentation
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- Attachment D - Commitment to Sustainability
- Attachment E - Project Readiness Assessment
- Attachment F - Benefit-Cost Analysis Technical Memorandum

# 1 PROJECT DESCRIPTION

The **Next Generation Zero-Emission Bus Operations, Maintenance, and Administration Facility Project** (project) would replace Yuba-Sutter Transit Authority's (YSTA) transit facility, support a zero-emission bus (ZEB) fleet and enable public transit service expansion. The project would be constructed on a 19.72-acre long-neglected former brownfield site, located in a historically disadvantaged community and area of persistent poverty, in need of redevelopment. The site also has sufficient space for solar power generation to meet the transit facility and ZEB bus fleet energy needs and for other potential co-developments, such as a mobility hub that could support multiple transportation modes, such as shared vehicles, vehicle charging, and bike or scooter sharing. YSTA is the sole public transit service provider for all of Yuba and Sutter counties in California, with frequent connections to downtown Sacramento (the region's largest employment hub) 40 miles south. YSTA oversees six local routes, two commuter routes to Sacramento, three rural routes, and a local demand response (Dial-A-Ride) service.



YSTA's mission is to provide safe and cost-effective public transportation services that increase mobility, connectivity, and improve the quality of life for Yuba County and Sutter County residents. However, YSTA's mission is in jeopardy because its existing transit facility will be severely affected by a California Department of Transportation (Caltrans) State Route (SR) 70 widening and improvement project that will critically impact on-site circulation and functionality, requiring YSTA to move its facility to a new location. In addition, California's recent adoption of the Innovative Clean Transit (ICT) regulations by the California Air Resources Board (CARB) (State ZEB Mandate), which require 100 percent of all bus purchases starting in 2029 to be zero-emission buses (ZEBs), will require construction of a new transit facility that also can support ZEBs. YSTA's existing facility is at maximum capacity, obsolete and unable to support a full fleet conversion to ZEBs.

**Consequently, YSTA is seeking \$15 million in RAISE Grant Program funding for facility design, engineering, and construction to help replace its existing facility and assist in the early transition to ZEBs, to provide next-generation transportation choices to the region's residents.** As a small transit agency that is being evicted from its transit facility, YSTA needs federal support to undertake this essential project.

This project aligns with all RAISE Grant Program selection criteria and has broad community support. More specifically, the project aligns with the program's overarching goals to invest in infrastructure projects with significant local and regional impact—particularly projects that improve access to reliable, safe, and affordable transportation for historically disadvantaged communities and areas of persistent poverty, improve infrastructure conditions, apply transformative technology, address climate change and racial equity, and promote mobility and connectivity that facilitates economic competitiveness.

## 1.a Project History

In 2019, YSTA was informed that its facility would be partially or completely demolished by the end of 2025, to make way for the Caltrans SR 70 project. YSTA has considered several options, including ceasing operations altogether, which would not only be counter to its mission, but also would be environmentally and socially unacceptable. The only two feasible options for YSTA are either: (1) to lease space and continue operating its 51-diesel/gasoline bus fleet (i.e., the No-Build Alternative); or (2) transition to a zero-emission facility and bus fleet (i.e., the Build Alternative; hereafter referenced as the project) (see Table 1).

**Table 1. Comparison of the No-Build (Lease) Alternative and the Project**

Transit Facility Element	No-Build Alternative (Lease and No Zero-Emission Buses [ZEBs], Solar Photovoltaic [PV] or Expansion Capacity)	Project (Facility Construction, ZEB Fleet, Solar PV and Expansion Capacity)
<b>Facilities</b>		
Facility Location	Long-term leased space (including possible separation of administration/operations and vehicle maintenance/storage)	Single location for consolidated agency functions
Building	Costs to upgrade leased warehouse/garage for fleet maintenance and storage	Build to suit transit authority needs
Fueling Infrastructure	Off-site diesel/gasoline	Battery electric bus (BEB) fleet charging plus battery back-up (and temporary diesel/gasoline tanks)
Solar PV	Not applicable	Solar energy generation panels
<b>Equipment</b>		
Bus Fleet (diesel/gasoline)	Maintain 51 diesel/gasoline buses (refurbish/rehabilitate fleet per maintenance schedule as new diesel/gasoline bus purchases would not be allowed under the State ZEB Mandate starting in 2029).	All diesel/gasoline buses would be phased out for BEBs ahead of the State's goal of a 100 percent ZEB fleet by 2040.
BEB Fleet	Not applicable	BEBs would replace 51 decommissioned diesel/gasoline buses
Bus Replacement/ Rehabilitation	Costs associated with maintaining and major overhauls to diesel/gasoline buses	Cost for replacing diesel/gasoline buses with BEBs. Reduction in diesel/gasoline bus replacement/rehabilitation costs.
<b>Service and Operations</b>		
Deadhead (non-passenger) miles	Increased vehicle miles traveled (VMT) from leased site and off-site fueling	Decreased VMT due to central location that reduces deadhead mileage
Service and Ridership Level	Maintain service at current operating levels	Room for future expansion as population growth and demand requires
State ZEB Mandate	Would not meet State ZEB Mandate requirements; would be subject to possible fines for non-compliance	Would meet State ZEB Mandate requirements

Under the No-Build Alternative, YSTA would need to make major site improvements to an existing facility (e.g., modify/construct a warehouse or garage), to accommodate maintenance and storage requirements. Therefore, YSTA would need to sign a long-term (i.e., 20-year) lease to secure a suitable site and justify these capital investments. Office space for YSTA administration and operations would need to be leased separately/off-site, which would result in reduced operational efficiencies. Under the No-Build Alternative, YSTA would be unable to invest in a ZEB fleet and related infrastructure, provide additional environmental and climate benefits with solar photovoltaic (PV), and expand its service as needed in the future. In addition, it would be unable to comply with the State ZEB mandate. Therefore, it would be prudent for YSTA to use its limited funds instead to construct a build-to-suit facility to provide efficient and environmentally sustainable operations for decades to come.

Implementation of the project would result in increased environmental, climate, local and regional benefits and allow future growth and service expansion, as well as compliance with the State ZEB Mandate requirements. In preparation for a move to a new location, YSTA received a Caltrans Adaptation Planning grant in 2019, to complete a facility site evaluation and selection process.

After completing the [Resilient Next Generation Transit Facility Plan](#) (Facility Plan) (February 2021), YSTA quickly moved forward on the preferred site (Site 3 in the Facility Plan - 6035 Avondale Avenue, Linda), by completing a Phase 1 environmental assessment and property appraisal. The 19.72- acre property was

purchased in July 2021. The Federal Transit Authority (FTA) issued a Categorical Exclusion for the protective acquisition of the project site on May 28, 2021. For this reason, additional NEPA issues are not anticipated.

## 1.b Transportation Challenges to be Addressed by the Project

### 1.b.i Displacement from the Current Transit Facility



The Caltrans SR 70 Binney Junction Roadway Rehabilitation and Complete Streets project is fully funded and is projected to start construction at YSTA's existing transit facility site in 2025. The purpose of the Caltrans SR 70 project, which includes modifications to the Binney Junction railroad overcrossing (see Attachment A), is to rehabilitate the existing roadway to improve safety, traffic operations, inadequate shoulders and vertical clearances, facilitating goods movement, sight distance, and bicycle/pedestrian facilities; to comply with the Americans with Disabilities Act (ADA); and to increase multimodal mobility and operations. This State project would displace or significantly affect on-site circulation, bus parking, and the functional use of YSTA's existing facility. Any amount of loss to the 3.2-acre transit facility will have a significant impact on transit operations. Therefore, this is expected to require YSTA to close its transit facility and to relocate to another site by 2026. **YSTA has no choice but to relocate.**

### 1.b.ii State Innovative Clean Transit Mandate



CARB requires that starting in 2026, a minimum of 25 percent of all YSTA bus purchases be ZEBs, and that by 2029, 100 percent of the bus fleet purchases be ZEBs. YSTA's existing facility is a 60-year-old former Seven-Up Bottling Company plant that was remodeled into a transit facility in 1996 and expanded and modified in 2011 to its current and ultimate capacity. A 2018 study conducted by YSTA determined that its existing transit facility could only house 12 ZEBs and was wholly inadequate for the required 100 percent conversion to a ZEB fleet.

Under the No-Build Alternative, YSTA would enter into a long-term lease agreement at a new location for its future transit facility and would invest only in the minimum capital improvements necessary to support its existing diesel/gasoline bus fleet. Without ownership of the underlying property, it would be financially imprudent for YSTA to make the necessary investment in battery electric bus (BEB) fleet charging infrastructure and solar PV to support ZEBs. BEB equipment is costly and requires a large footprint, particularly the switchgear and charging cabinets, which would need to be close to the bus storage location. Fleet conversion to BEBs also requires a substantial investment in the local power grid, to supply adequate power to the site. The power supplier, Pacific Gas and Electric Company (PG&E) is unwilling to make those investments without assurance of a 10-year commitment to the existing facility. Therefore, installation of the necessary BEB infrastructure is expected to be a difficult and costly short-term investment in any site leased by YSTA.

Under the State ZEB Mandate, YSTA would be unable to purchase new or replacement diesel/gasoline buses and without a new facility, YSTA would be unable to transition to a full ZEB fleet. Instead, it would be forced to operate and maintain its current fleet indefinitely with an alternative leased property, with significant impacts on operations and maintenance (O&M) costs, service levels, and the environment. Furthermore, without the ability to transition to ZEBs, YSTA's future operations would be out of compliance with the State's ZEB mandate, and therefore potentially subject YSTA to fines for non-compliance.

### 1.b.iii Operating Capacity Constraints



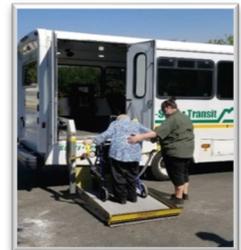
YSTA estimates a 3 percent annual growth rate in future ridership, based on past trends and projected population growth in the region. This calculates to an additional 358,087 (1,290,038 total) public transit users by 2030. Between 2030 and 2040, ridership is projected to increase by 443,665, for a total of 1,733,703 transit users per year. Under the No-Build Alternative, YSTA would be unable to expand its future bus fleet and transit service, which would adversely affect local and regional growth.

Between 2010 and 2018, the proportion of the local labor force leaving the Yuba and Sutter bi-county area for employment elsewhere increased from 28.5 to 33 percent. Most of those commuters traveled to Sacramento, Placer, and Butte counties. In March 2021, Yuba City was named among the 20 hottest housing markets in the country, according to a report by Realtor.com. For homebuyers who are facing a tough real estate market with low inventory and high prices in Sacramento and other large urban areas, lower housing costs in Yuba and Sutter counties have made them magnets. This has resulted in significant residential growth and increased long-distance commuting. Before the COVID-19 pandemic, YSTA's Sacramento commuter route ridership had been growing steadily since the beginning of 2018.

YSTA projects that by 2040, it may operate a fleet of 85 ZEBs (BEBs or fuel cell [FC] vehicles), including revenue (67 buses) and non-revenue vehicles. This represents a 28-vehicle (16-bus) increase to its current fleet. In so doing, YSTA will need to hire more employees (e.g., bus operators, maintenance, and administrative staff) to maintain and manage the vehicles and obtain a bigger facility to house the additional buses and ZEB fueling infrastructure. YSTA will need additional space for the anticipated growth, which would be infeasible under No-Build Alternative conditions. According to YSTA's Facility Plan, the new fleet will require an estimated 142 employees and 42,736 square feet of building space which constitutes a 43 percent increase of employees and 58 percent increase of building square feet.

### 1.b.iv Rural Transit Provider Challenges

YSTA plays a critical role in addressing the unique transportation challenges faced by rural and small urban communities. Access to transportation contributes to the economic development, health, and quality of life of these communities. Reliable transportation particularly is needed by rural residents to access healthcare services, consumer services, employment and educational opportunities, and social services. It also is important for accessing recreation and other activities of daily life. YSTA has three rural routes serving the cities of Live Oak (population 9,367) and Wheatland (population 3,610), as well as the Yuba County foothills that provides lifeline transit service to these outlying communities. Passengers on these routes can connect at multiple transfer stations to YSTA's other service routes.



Unfortunately, transit agencies serving rural communities frequently lack adequate resources to maintain and improve their infrastructure. YSTA receives approximately \$2.6 million annually from Federal Transit Authority (FTA) Section 5307 (small urban) and \$350,000 annually from FTA Section 5311 (rural) funding (totaling almost \$3 million annually), but about \$2.5 million of this is committed to operating use. YSTA also receives about \$300,000 annually in FTA Section 5339 (State of Good Repair) funds for capital improvement purposes. Although State funds are available for some of the incremental difference (e.g., State Low-Carbon Transit Operations Program) in the cost of zero-emission vehicles and chargers, currently no funding exists for development of the necessary transit facility to support ZEB fleet conversion. Other State and local funds (State Transit Assistance and Local Transportation Fund) would

need to be used to match federal funds but would be insufficient on their own to entirely fund construction of a new transit facility.

### 1.c Project Solutions to Address the Transportation Challenges

It would be more financially and socially prudent for YSTA to invest funds in design and construction of a new transit facility that could support anticipated future service growth and the transition to ZEBs in advance of the State’s ZEB mandate. In addition, early adoption of the State’s ZEB mandate would advance local and regional climate resiliency, environmental sustainability, and improved social equity efforts.

YSTA’s transportation services are integral to the region’s economy, which is challenged by rising costs of living that impede employers’ abilities to attract the quality and quantity of labor it needs. Job opportunities are concentrated primarily in Yuba City, Marysville, and 40 miles south in Sacramento. YSTA’s rural service and commuter routes provide reliable, low-cost transit options that efficiently move workers to and from rural and bedroom communities to job generators. YSTA transit services are critical to the region’s economy by making long commutes viable for employees and reducing demand for the limited parking available in the central business and commercial districts, where jobs are located. The project will enable YSTA to become safer, more environmentally sustainable, and to remain an important link between the region’s more affordable housing in the Yuba-Sutter region and sustainable wage jobs.

### 1.d Statement of Work

The replacement facility is necessary to ensure continued operation and expansion of YSTA’s regionally significant services and enable a transition to an all-ZEB bus fleet (see Figure 3 Conceptual Design). The project includes the following (see final design criteria in Section 2 of the [Facility Plan](#) for more information):

- Administration and Operations Facility
- BEB Charging Infrastructure
- Covered Bus Fleet/Agency Vehicle Parking
- Landscaping and Climate Resiliency Features
- Maintenance Facility
- Wash and Temporary Fuel Facilities
- Employee and Visitor Parking
- Solar Power Generation

**Administration and Operations Facility and Employee and Visitor Parking.** The administration and operations building would accommodate staff offices and cubicles; file and general storage rooms; a drivers’ room and lobby; a dispatch suite; training/conference rooms; coin counting and lost and found rooms; copy/work and supply rooms; a kitchen and break room; an IT/server room; a small recreation area; quiet and medical rooms; a custodial supply room; a main lobby with a public counter to take photos for new fare cards, apply for paratransit service, and general interaction with administrative staff; public and staff restrooms and an employee shower room and lockers; and employee and visitor parking with electric vehicle (EV) charging stations.

**Maintenance Facility.** The maintenance building would house general maintenance, inspection, tire, brake, parts distribution, and other daily vehicle maintenance functions. The maintenance facility would include lift bays, a parts and battery storeroom, tire bay/storage, a lube and compressor room, mechanical and electrical rooms, a floor scrubber and forklift parking area, portable equipment storage and toolbox storage, a common work area, electronics shop, waste fluid collection, mechanic workstations, a maintenance managers office, a break room, an employee restroom, and a shower room and lockers. Maintenance personnel would work on multiple shifts, performing varied tasks six days per week. The facility design would provide flexibility to allow all maintenance activities to be performed on all shifts for improved efficiencies.

**Covered Bus Fleet/Agency Vehicle Parking.** After moving through the wash facility, buses would be parked and the BEBs would be connected to an overhead charger for charging overnight in the agency vehicle/bus fleet parking area. This parking area would have shade canopies/structures for better and more efficient vehicle maintenance and employee protection (during pre- and post-trip inspections and vehicle cooling), particularly during extreme weather conditions (e.g., extreme summer heat), and for mounting the facility's solar array.



Figure 1. Next Generation Transit Facility Conceptual Design

**Solar Power Generation.** The new transit facility would include development of a renewable energy DC microgrid to meet YSTA's current and future energy needs for BEBs and agency vehicles, maintenance and operations facilities, and employee and public charging stations.

The initial solar array to power YSTA's bus and agency vehicle fleet and facility would be located on the bus canopies. If YSTA's future energy needs exceed the initial solar array's capacity, the site's surplus land on the north end of the property could be converted to a solar farm with a ground-mounted solar array that could generate an additional 1.5 megawatts. Harnessing clean energy would lower operating costs and increase resiliency during extreme weather events, while also hardening the local electrical grid. YSTA anticipates over \$100,000 in annual electricity savings and potentially savings up to \$600,000 annually by not having the expense of purchasing fossil fuels.

**BEB Charging Infrastructure.** To provide power for the BEBs, charging infrastructure is proposed as part of the transit center design. The infrastructure would enable the new buses to recharge overnight and be put back into service the following day. YSTA has secured \$8.5 million in AHSC funding to purchase the BEB charging and associated solar PV infrastructure.

**Temporary Fuel and Wash Facility.** The wash facility would be used for exterior bus cleaning. Transit vehicles would enter the site and be staged for fuel (at a temporary fuel facility for remaining diesel and gasoline vehicles) and wash activities. Vehicles would transition from wash to interior cleaning, inspection, and other maintenance areas, before being moved to bus parking.

**Landscaping and Resiliency Features.** Climate-appropriate and drought-resistant landscaping (indigenous and compatible with the surrounding area) would be provided to shade employee/visitor parking areas and along boundaries with adjoining properties, as appropriate, and for any street improvements in the right-of-way as recommended by the local jurisdiction.

Although YSTA has yet to complete final design of the new facility, some of the specific project features already have been determined and would include elevated charging cabinets and overhead charge dispensers that would protect critical infrastructure during a flooding event. In addition, YSTA would

complete a drainage analysis for a range of storm events, to ensure adequate site drainage. Emergency backup batteries/power generators will add resiliency, and microgrid management software with switch controllers would be installed to maintain continuous power for essential services. Furthermore, YSTA would maintain a defensible space as a buffer around the site facilities, to help slow or stop the spread of wildfire, either from direct flame contact or radiant heat.

### 1.e Yuba-Sutter Transit Authority Operations

YSTA was formed in 1975 by the two counties and the cities of Marysville and Yuba City as a joint-powers agency for the provision of affordable public transit services. Since its inception, YSTA has carried out this charge by contracting with private transportation companies for operation of all services. YSTA is directed by an eight-member Board of Directors, composed of two elected representatives who are appointed by each of the four member jurisdictions.

In fiscal year (FY) 2019, the year before the COVID-19 pandemic, the fleet operated a combined 92,571 vehicle service hours and provided almost 1 million one-way passenger trips with six local fixed routes; Dial-A-Ride service; intercity express commuter and midday service to downtown Sacramento; and three rural routes.

**Local Fixed Route.** In a typical year (FY 2019), approximately 56 percent of the operation would be provided as urban fixed route service. The local fixed route system provides service on six routes in Yuba City, Marysville, Linda, and Olivehurst.

**Dial-A-Ride.** The local Dial-A-Ride service typically accounts for 26 percent of the operation. Except for weekday evening service when it was open to all passengers, Dial-A-Ride service is available only to seniors age 65 and over and persons with disabilities and serves as YSTA's complimentary ADA paratransit service.

**Sacramento Commuter Route:** Before the pandemic, approximately 15 percent of the operation provided service between Marysville/Yuba City in downtown Sacramento, primarily as peak-hour weekday commuter service. The Sacramento commuter service provides 10 morning and 10 afternoon peak-hour schedules, with another three midday schedules. The midday schedules are used by many daily or occasional commuters, but they are also popular with those traveling to and from Sacramento for medical, educational, and other non-work purposes.

**Rural Routes:** Rural routes represented approximately 3 percent of the operation, with 6,970 boardings in FY 2019.

**Additional Transportation Services:** In addition to its transit routes, YSTA has been providing other essential transportation amenities, including shuttles during community events and emergency evacuation response. YSTA also was the first transit agency in the Sacramento region to equip all buses with bike racks.

### 1.f Other YSTA Transportation Infrastructure Investments

In 2017, YSTA was awarded a Caltrans Sustainable Planning Grant to develop a [Corridor Enhancement Plan](#) (Corridor Plan) (September 2018) for the key transfer center in Yuba City. A transit center would be crucial to the operational and ridership potential of the entire local route system. The Corridor Plan provides analysis and conceptual site designs, focused on supporting capital improvements to the route's five key transit centers, with emphasis on Route 1 bus facilities. It also evaluated YSTA's existing transit facility for capacity to introduce ZEBs. The information in the Corridor Plan would be used as the basis for future study tasks that would be developed to evaluate potential corridor enhancements.

## 2 PROJECT LOCATION

Yuba and Sutter counties are in the central Sacramento Valley, California, approximately 40 miles north of Sacramento (see Figure 2). Yuba County includes the incorporated cities of Marysville and Wheatland, as well as numerous unincorporated communities, including Linda, Olivehurst, Loma Rica, and Beale Air Force Base. Sutter County includes the incorporated cities of Yuba City and Live Oak and numerous small, rural communities. The project site is at 6035 Avondale Avenue (see Figure 3) at North Beale Road in Linda, in Yuba County, which is on the east side of the Feather River that bisects the two counties. The project site is in the Yuba City Metropolitan Statistical Area (MSA). The MSA had approximately 167,000 residents in the 2010 Census. Therefore, the project would be a

### RURAL PROJECT.



Figure 2. Project Location



Figure 4. Project Site

The project site is centrally located within the Yuba-Sutter bi-county service area. The site is a flat, vacant parcel encompassing 19.72 acres, zoned Neighborhood Mixed Use. It is bordered by commercial uses, vacant land, and a single-family residential neighborhood. Rehabilitating the abandoned and long neglected former industrial infill site for the project’s environmentally sustainable and technically advanced transit facility

will enhance safety and economic opportunities for both the Historically Disadvantaged Community (HDC) and Area of Persistent Poverty (APP) in which it will be located (Census Tract 06115040302) and the numerous surrounding HDCs and APPs that YSTA serves in Yuba and Sutter counties (see Figure 4). There are 14 census tracts in Yuba County; 11 are HDCs and six are APPs. Sutter County has 21 census tracts; 19 are HDCs and six are APPs. In addition, the census tract where the project site is located is a federally designated Opportunity Zone. There are six other Opportunity Zones in

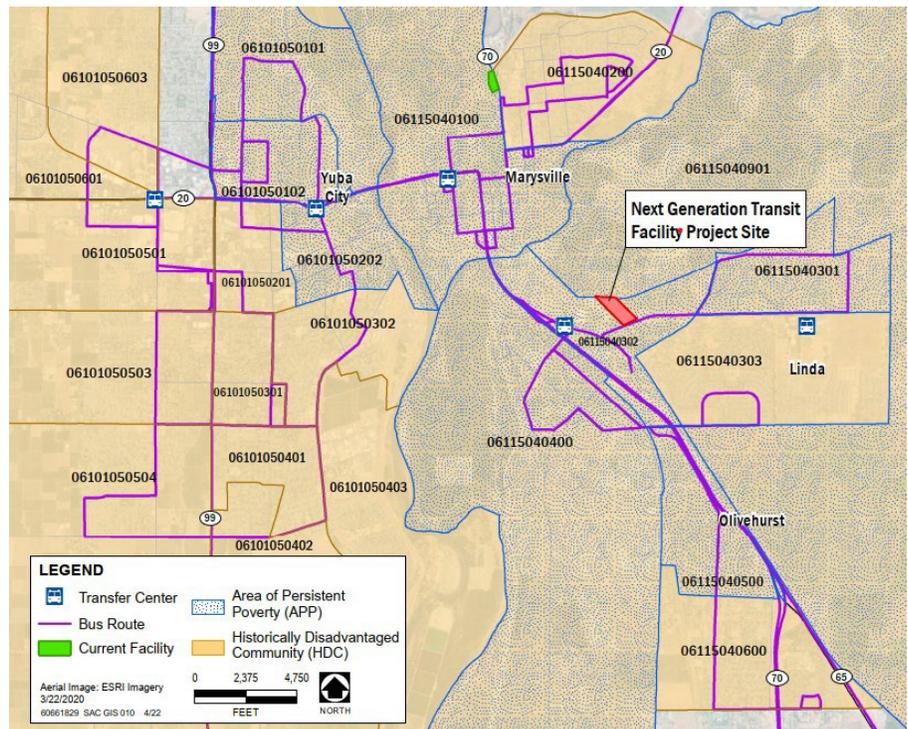


Figure 3. Historically Disadvantaged Communities and Areas of Persistent Poverty

the YSTA bi-county service area (see Section 4.e) North Beale Road is the connecting roadway to Linda-area residences, public use facilities, and businesses, and is the gateway to Beale Air Force Base.

The project would redevelop a currently unused and blighted community open space area into an aesthetically pleasing and technologically advanced transit facility that would add to the community's current safety and revitalization effort (see Section 4.a).

### 3 GRANT FUNDS, SOURCES, AND USES OF THE PROJECT FUNDS

#### 3.a Project Scope

YSTA proposes to complete environmental review and final design and construct a new transit facility. YSTA's Facility Plan determined its future space needs and assessed potential relocation sites. The Facility Plan also included a planning-level project scope (see Table 2) and cost estimate to implement concept design alternatives for the project site (see Figure 1). RAISE grant funding would be used for the initial phase of project development.

**Table 2. Project Scope**

Phase	Category	Scope
Completed	Land Acquisition	6035 Avondale Avenue, Linda, California (purchased July 2021)
Initial Project	Environmental Assessment	NEPA Categorical Exclusion is anticipated
	Final Design	Plans, Specifications, and Estimates (PS&E)
	Construction: Sitework (excluding paving)	Grading, drainage, utilities (water, electric, sewer, gas), landscaping/irrigation, fencing, stormwater management and offsite improvements (curbs/gutters, sidewalks)
	Construction: Paving	Paving for bus parking and circulation (concrete) and employee/visitor parking (asphalt)
	Construction: Buildings	Administration and operations building, bus maintenance building, fuel and wash buildings and canopies
	Construction: Equipment	Shop equipment, office furnishings, Information Technology (IT) communications
	Battery-Electric Bus (BEB) Charging Infrastructure	Alternating Current (AC) conduit, charging cabinets/dispensers, switchgear for charging, and battery back-up
	Diesel/Gasoline Fueling Infrastructure	Temporary above-ground, diesel/gasoline fueling infrastructure
	Solar Panels (BEB fueling)	Solar panels on bus canopies and structures
Build-Out	Additional BEB Charging Infrastructure	AC and DC conduits plus inputs/outputs, charging cabinets/dispensers and switchgears for charging, and emergency generator, as needed
Build-Out	Additional Solar Panels	Ground mount solar panels installed on excess land, as needed

#### 3.b Project Costs and Funds

Project cost is estimated to total \$45.2 million, and YSTA is requesting \$15 million in RAISE funds for the project. This estimate includes everything needed to construct and move into the facility and operate BEBs. As additional BEBs are purchased, additional chargers will be installed. The project cost estimate was based on YSTA's Space Needs Program (June 2020), concept design alternatives for the Project site (Site 3 in the Facility Plan – 6035 Avondale Ave., Linda), and unit costs using RSMeans Cost Data – Building Construction Costs.

YSTA has been fiscally responsible during the pandemic and has managed to set aside a significant portion of their annual state and federal apportionments and pandemic relief funds for the facility. In addition to the \$15 million RAISE grant funding request (33 percent), project funding will consist of \$1.3 million (3 percent) in other federal funds and \$28.9 million (64 percent) in non-federal (local and state) funds,

including a recently awarded \$8.5 million from the Affordable Housing and Sustainable Communities (AHSC) grant and a pending \$11.325 million grant from the State Transit and Intercity Rail Capital (TIRCP) program (see Table 3). A detailed project budget with a breakdown of how YSTA anticipates funding sources will be allocated for each major project activity is provided in Attachment B. Also included in the attachment is the project funding source documentation, including a YSTA funding commitment letter; a copy of the Sacramento Area Council of Governments (SACOG) 2021–2024 Metropolitan Transportation and Improvement Program (MTIP) project page; and the AHSC grant award letter. The MTIP would be amended on Notice of Award to complete the funding package. The project estimate is based on 2021-unit costs, and thus three percent annual inflation for construction and consultants was applied for project implementation beginning in FY 2022–2023.

**Table 3. Project Funding Sources**

Source of Funding		Amount
<b>Non-Federal</b>	State Transit Assistance, State of Good Repair Funds	\$2,875,337
	Strategic Growth Council Affordable Housing and Sustainable Communities Grant Program	\$8,500,000
	Sale of Existing Transit Facility	\$3,500,000
	Low Carbon Transit Operations Program	\$1,710,153
	Transit and Intercity Rail Capital Program	\$12,325,000
<b>State Total (64%)</b>		<b>\$28,910,490</b>
<b>Federal</b>	FTA 5311 (Rural)	\$364,492
	FTA 5311 (Rural) Coronavirus Response and Relief Supplemental Appropriations Act	\$963,628
	RAISE Program	\$15,000,000
<b>Federal Total (36%)</b>		<b>\$16,328,120</b>
<b>Project Total (100%)</b>		<b>\$45,238,610</b>

### 3.c Other Federal Sources of Funds

**FTA Section 5311, Rural Transit and Intercity Bus** program provides supplemental funding for public transit services in non-urbanized areas that have populations less than 50,000 residents. YSTA has set aside the entire FY 2020 apportionment of \$364,492 for the project.

**FTA Section 5311 (Rural), Coronavirus Response and Relief Supplemental Appropriations Act** apportions \$14 billion in funding, which is being allocated to support the transit industry during the COVID-19 public health emergency. YSTA has set aside its entire apportionment of \$963,628 for the project.

### 3.d Non-Federal Sources of Funds

**Strategic Growth Council Affordable Housing and Sustainable Communities (AHSC) Grant.** YSTA partnered with the local housing authority to apply for a grant that included a funding request for the new transit facility. The AHSC grant funding was awarded as part of the Richland Village Residential Affordable Apartment (176-unit) Complex project. The housing project was awarded \$30 million of which \$8.5 million was allocated to components of the new transit facility, including public EV charging equipment; solar PV system mounted on bus parking canopy structures for powering BEBs BEB charging infrastructure; a portion of the transit facility building construction; sidewalks, curbs, gutters and streetlights; crosswalk, street trees, bioswales, and landscaping; bike parking and seating/benches; signage; ITS technology; and an on-street bus stop shelter adjacent to the facility.

**State Transit Assistance (STA)** funds are generated by the sales tax on diesel fuel. YSTA has received an annual average of \$1,350,000 in the past 4 years and has \$1,906,535 in funds available through FY 2022, in existing available allocations designated for the project. In addition, YSTA receives STA State of Good Repair funds, of which \$968,802 is available for the project.

**Low Carbon Transit Operations Program (LCTOP)** funds are part of the California Climate Investments that were created by the passage of Senate Bill 862, which established this noncompetitive formulaic program with 5 percent of annual carbon auction proceeds being allocated to the program. YSTA has committed existing available allocation of \$812,681 through FY 2022 toward the project, as well as the next 2 years of funding (FY 2023–2024). YSTA anticipates that the program will contribute \$1,730,217 toward the facility.

**Sale of the Existing Transit Facility.** The estimated \$3.5 million value of the existing facility is based on a similar facility that is currently for sale for \$150 per square foot that also contains a mix of office space and vehicle maintenance bays. At \$150 per square foot the current 27,061 facility is worth just over \$4 million. However, due to location not being as optimal as the comparative property, the estimate was lowered to \$3.5 million. The estimate is the minimum expected as compensation for taking of the site. The final negotiated settlement between Caltrans and YSTA could result in higher compensation for YSTA's existing facility. YSTA would commit its entire transit facility sale proceeds toward construction of the proposed replacement facility.

**Transit and Intercity Rail Capital Program (TIRCP).** YSTA recently applied for \$12,325,000 in TIRCP grant funding for transit facility construction. An additional \$1,675,000 was requested to help pay for YSTA's first three intercity over the road coach commuter BEBS. Award announcements are expected in June 2022.

### 3.e Other Potential Funding Sources

YSTA is diligently seeking other funding sources if the TIRCP application is unsuccessful. YSTA will be applying in May for funding under the 2022 FTA Section 5339(b) Buses and Bus Facilities Grant Program. Also, SACOG, the regional Metropolitan Planning Organization, has a biennial call for projects, anticipated in fall 2022, and YSTA will be applying for funding under this regional program. In addition, approximately \$3 million of annual local transportation funds are available for YSTA to fund transit capital needs. If necessary, a Transportation Infrastructure Finance and Innovation Act (TIFIA) loan has been considered to fund the remainder of the non-federal match for the project. The YSTA Finance Program Manager has been in contact with U.S. Department of Transportation staff to discuss the requirements to secure a loan.

**Private Investment.** The [PG&E EV Fleet Program](#) helps install charging infrastructure to save money, eliminate tailpipe emissions, and power large fleets. The program provides incentives and rebates for EV infrastructure (depending on facility location and vehicle types), construction, and mainline power delivery upgrades. Under this program, PG&E covers the cost to bring the anticipated power needed to the site from the nearest substation. The program also can provide substantial construction and logistical support, including site design and permitting. YSTA will apply to participate in the program when it is further along in the Transit Facility design process. **RAISE funding would allow YSTA to expedite this facility project to participate in the program before it expires at the end of 2024.**

### 3.f BEB Fleet Sources of Funds

In California there are a number of programs designed to help transit agencies purchase ZEBs. Transit agencies are allocated annual LCTOP funds and the State Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) pays a portion of the cost of ZEB directly to the manufacturer lowering the initial cost of ZEBs. Additionally, the local air district has funding for bus procurement and is currently assisting school districts in updating their fleets. California Volkswagen Environmental Mitigation Trust funds are also available on a competitive basis. Funding from Federal sources such as the 5339 Low or No Emission Vehicle Program or Bus and Bus Facilities Program will also be requested to offset the high cost of ZEB adoption.

## 4 PRIMARY SELECTION CRITERIA

### 4.a Safety

The Next Generation Transit Facility Project will foster a safe transportation system for the movement of goods and people. This project will enhance safety outcomes in YSTA's bi-county and cross-regional service area by implementing both facility design improvements and bus operation efficiencies to reduce the number, rate, and consequences of bus accidents, fatalities, and injuries. Routine transit operations generates a substantial volume of employee pedestrian traffic. Many of these trips would require maintenance personnel to walk the length of the bus parking area, to pick up a vehicle or return to a workstation after parking a vehicle. Pedestrian walkways and vehicular flow at the new facility will be designed to minimize walking distances and minimize employee/vehicle conflict points, thus reducing personnel exposure to vehicular traffic. New ZEBs will also have pedestrian detection safety features to minimize the risk of an accident with pedestrians while on route or at the facility. The facility will also be a healthy and safe place to work with features allowing natural light, utilization of health-conscious building materials, and state of the art ventilation systems to maintain air quality even during forest fire events that create unhealthy air quality levels in the Northern Sacramento Valley each summer.

The Next Generation Transit Facility will also have a positive impact on the surrounding HDC through the operation of ZEBs to provide local and regional transportation options. The new facility will make possible the replacement of the ten diesel buses that currently operate in the North Beale corridor each hour with ZEBs which will have a significant positive air quality impact in the community of Linda and the surrounding region. This improvement coupled with the facility that will use green building practices and solar power generation to minimize or offset its carbon footprint will be a great asset to the health and safety of the community.

#### 4.a.i Internal Safety Benefits (Quantified)

The existing transit facility was a former bottling plant that was converted for transit use. Due to its layout, YSTA's current operations are prone to minor on-site accidents. Under the No-Build Alternative, YSTA would need to adapt an existing building for its operations. Therefore, YSTA would be similarly situated with remodeling and operating in a facility that was not originally intended for transit operations. Any future operations under the No-Build Alternative would therefore be less efficient and safe than a build-to-suit facility, designed specifically for transit operations that would provide safer fleet circulation.

The design of the new transit facility would need to allow safe and efficient movement of personnel, equipment, and vehicles and minimum unobstructed clearance to allow for safe turning movements and maneuvering of buses. Through well-planned and proper design, the project is anticipated to reduce most minor accidents at the bus maintenance, storage, and fueling site.

#### 4.a.ii Public Safety Benefits from Reduced Deadheading (Quantified)

Reduced deadheading would have public safety, state of good repair, and environmental sustainability benefits. Deadhead miles for YSTA are the number of miles from the point of unloading the last passenger (empty/out-of-service bus) to the transit facility, and from the transit facility to the point where the first passenger is picked up either later in the day or the next operating day. Because the No-Build Alternative would not have on-site fueling, this also would include the distance to and from a fuel station. Fewer deadhead miles would result in fewer bus accidents, fatalities, and injuries.



To compare the No-Build Alternative to the project, the Benefit-Cost Analysis (BCA) for this grant application used site 14, the only non-vacant site analyzed in the Facility Plan site evaluation and selection

process, for the hypothetical No-Build Alternative. The No-Build site would be at 1321 Harter Parkway in Yuba City. A group of under-utilized warehouses exist on the site that YSTA presumes could work as an interim transit facility.

**Fixed-Route Savings.** YSTA operates 22 fixed-route buses. Based on 300 operating days, under the No-Build Alternative, daily deadhead miles for fueling off-site (3.5 miles each way) would result in 46,200 deadhead miles per year and approximately 3,367 deadhead miles per year would occur due to site location (site 14 vs. the project site [site 3 in the Facility Plan]). These deadhead miles would not occur under the project because bus fueling would be on site and the project would be near the centroid of YSTA’s bi-county service area and directly on three of the six bus routes.

**Commuter Route Savings.** Due to the lack of bus parking facilities in Sacramento, labor costs, and unattended bus security issues, currently all 10 commuter buses return to refuel (eight empty buses and two reverse commute) to the transit facility after each morning trip, and then return (seven empty buses) to Sacramento in the afternoon (85.4 miles per bus round-trip) to pick up return passengers. Based on 250 operating days, this results in 133,224 deadhead miles each year. This would continue under the No-Build Alternative. An additional 23,660 deadhead miles also would be added for off-site fueling of the buses every year. In addition, these buses would have approximately 1,990 additional deadhead miles per year due to site location (site 14 vs. site 3).

“The Grid” represents the single most defining aspect of Sacramento Central City’s transportation system. The [Sacramento Grid 3.0](#) (August 2016) plan for this area responds to travel demand by focusing on investments in pedestrian, bicycle, and transit facilities. Under Grid 3.0, the preferred network would add a secure transit bus layover and recharging facility for ZEBs. In 2020, more than \$27 million in TIRCP grant funding was awarded to two key transit projects in the Sacramento region and three new studies, including a study to determine a suitable location for the layover facility to accommodate regional, local, and zero-emission charging infrastructure.

Under the project, layover of YSTA’s BEBs in downtown Sacramento for charging purposes would occur between commute periods. BEB infrastructure would allow six YSTA morning commuter buses to remain in Sacramento instead of making the round-trip to drop off, refuel at the transit facility, and pick up passengers in the afternoon. Along with on-site fueling and fewer miles from the project site to downtown Sacramento, implementation of the project would reduce deadhead miles by 160,000 miles per year.

**Dial-A Ride Savings.** Under the No-Build Alternative, the 14 Dial-A-Ride buses would travel 33,600 miles for refueling off-site and an additional 2,500 deadhead miles due to site location (site 14). Implementation of the project would result in over 700,000 fewer deadhead miles over 20 years.

**The project would reduce vehicle miles traveled (VMT) by 4.9 million bus miles over 20 years. This VMT reduction will conservatively prevent 7 crash injuries. A new build-to-suit transit facility and reduced deadheading would generate \$405,000 in savings from reduced fatalities, injuries, and property damage (see Section 7).**

#### 4.a.iii Public Safety Benefits from Mode Shift



Public transportation is one of the safest ways to travel. Credible research indicates that many planning practices that improve public transportation and encourage its use also tend to increase traffic safety. It has less than a tenth of the per-mile traffic casualty (injury or death) rate. Public transit-oriented communities typically have about one-fifth the per capita traffic casualty rate as automobile-oriented communities. In addition, crash rates tend to decline as transit use increases in a community. Public transportation safety strategies include improved access, newer and updated vehicles, speed (grade separation and faster loading), and more service (e.g.,

routes, frequency).<sup>1</sup> The improved facility capacity would allow YSTA to increase transit service levels to meet long-term transit demands.

Furthermore, diesel/gasoline buses often are described as noisy, and diesel exhaust can have a strong, unpleasant odor. In addition, diesel engines produce a considerable amount of heat. These factors may dissuade potential riders, especially those who may be sensitive to these factors, and may negatively influence the public opinion of bus service. The new facility, along with newer cleaner buses, expanded service area, increased frequency, and other transit service enhancements (see Section 4.c) would help encourage local residents to transfer from private automobile trips to safer transit trips, reducing the potential for automobile crash injuries, fatalities, and property damage through mode shift. Public benefits are expected to result from YSTA service improvements, in both its coverage and ridership, which otherwise could not be achieved without the increased facility capacity and technological improvements supported by the project.

#### **4.a.iv Transit Facility Site Safety and Security Improvements**

The new transit facility is expected to improve safety for users of the transit system and the HDC and APP where it would be located, as well as those surrounding it. The project would redevelop a currently unused and blighted community open space that has a long history of trash accumulation and loitering, a public nuisance for the community that has been plagued with grass fires since its last commercial use ended in 1994 (see Attachment C, Letters of Support – letter from neighboring resident, Peggy Shockley).

The project site is at the corner of Avondale Avenue and North Beale Road in Linda. North Beale Road is the connecting roadway to Linda-area residences, public use facilities, the main Yuba College campus, and businesses, as well as the gateway to Beale Air Force Base. Identified by Caltrans as one of the top 5 percent unsafe roads in California in both its 2007 and 2008 “California Highway Safety Improvement Program 5 Percent Report,” the purpose of Yuba County’s North Beale Complete Streets Revitalization Project (revitalization project) is to improve safety and mobility choices for multimodal users, stimulate new investment in surrounding properties, encourage neighborhood revitalization, and provide overall visioning for the future of North Beale corridor.



For most residents in the disadvantaged and low-income communities in Linda, North Beale Road provides the only continuous access between neighborhoods. Because many people cannot afford to drive, they use the corridor to walk and bike and access public transit. School children and college students walk and ride daily to and from Linda Elementary School and Yuba College. The area’s high proportion of people with disabilities also adds to the number of pedestrians and transit users along the roadway. The revitalization project is intended to help transform this unsafe and incomplete street corridor into a safe, multimodal, visually appealing gateway to major employers and a variety of small businesses and residential neighborhoods.

Phase 1 of the revitalization project, completed in 2019, is between two of Yuba County’s busiest intersections—Lindhurst Avenue and Hammonton—Smartsville Road—which includes project site frontage. The revitalization project includes curbs, gutters, sidewalks, ADA-compliant ramps, streetlighting, bike lanes and enhanced transit stop infrastructure along the corridor, which has many of the higher use bus stops in the system. These improvements would also enable access to the new transit facility and improve transportation options provided to the surrounding area. Three of the six fixed bus routes serve North

<sup>1</sup> [The Hidden Traffic Safety Solution: Public Transportation](#). American Public Transportation Association. September 2016.

Beale Road. Phase 2 of the revitalization project has started, extending improvements to Yuba College and enhancing bicycle and pedestrian access along the corridor.

In addition to providing funds to help pay for construction of YSTA's new transit facility and public EV charging infrastructure, the project's recently awarded AHSC grant will provide funds for the installation of a crosswalk (protected by a new traffic signal) across North Beale Road (AADT 19,000) and new bus stop amenities (e.g., transit shelter) on both sides of North Beale Road at the intersection of Avondale Avenue immediately adjacent to the project, as well as sidewalks, street trees, landscaping, bioswales, and streetlights to improve community safety. The project's redevelopment of the former brownfield site into a modern, sustainable, and technologically advanced transit facility may also stimulate new investment in surrounding properties, which would further support local community revitalization efforts.

#### 4.a.v Other Safety Benefits

Each fuel would have different safety risks. ZEBs have the potential to be safer than conventional combustion engine vehicles because they would have less flammable gasoline/diesel onboard. Fossil fuel toxicity also could pose a hazard with fuel leaks or spills, contaminating soil and groundwater. The transition away from diesel buses to ZEBs correspondingly would eliminate the diesel fuel-related safety risks that otherwise would persist under the No-Build Alternative conditions.

#### 4.b Environmental Sustainability

YSTA's new environmentally sustainable and resilient transit facility would include on-site power generation and storage for the BEBs and would supply electricity to meet the facility's energy needs. It also would include features to enhance the resiliency of the facility, when addressing extreme weather events such as flood, fire, and excessive heat. This green facility would be designed for energy efficiency, water conservation, and stormwater protection by incorporating modern building design and best practices. Construction of the new facility on a former brownfield site and early adoption of the State ZEB mandate would advance local and regional climate resiliency, environmental sustainability, and social equity efforts.



#### 4.b.i Early Adoption of State ZEB Mandate

The burning of fossil fuels is a primary contributor to climate change through emission of GHGs. Diesel/gasoline bus use contributes to this negative environmental impact. Although a fully loaded bus provides per-passenger GHG emission reduction compared to personal vehicles, electric propulsion would have the potential to further reduce GHG emissions as well as address other air pollution issues.

Early adoption of ZEBs would expedite YSTA's reduction in fuel consumption, pollution, and GHG emissions sooner, benefiting local and regional air quality. At the July 15, 2021 YSTA Board meeting, the Board approved a Resolution that would accelerate the conversion to a 100 percent ZEB fleet by no later than 2035 (see Attachment D, Commitment to Sustainability), five years in advance of the State's goal of 2040. However, based on YSTA's adopted fleet replacement schedule, and assuming the availability of future funding, YSTA could potentially transition to a 100 percent ZEB fleet as early as 7 years (2033) in advance of the goal, if the facility and charging infrastructure is constructed to support the BEB fleet. To be conservative, the BCA used the minimum State ZEB bus purchase requirements for the analysis, which results in complete conversion of its 51 diesel/gasoline buses by 2040. Furthermore, YSTA projects that by 2040, it may operate a fleet of 67 buses (an additional 16 buses for anticipated population growth). **This foundational, transformational transit facility project is the critical pre-condition for YSTA's full transition to a 100 percent ZEB fleet.**

### **REDUCTION IN DIESEL BUS DEADHEAD MILES EMISSIONS (QUANTIFIED)**

As described in Section 4.a.ii, project implementation would result in fewer deadhead miles annually compared to the No-Build Alternative. Under the project, the new facility location would be central in the Yuba–Sutter bi-county service area, with easy access to SR 70 for efficient transit service operations that would reduce emissions. In addition, a significant amount of emissions would be avoided, particularly for the commuter buses, with the elimination of VMT by diesel/gasoline buses when BEBs are used to provide service. The project is expected to contribute to reducing CO<sub>2</sub> emissions by over 19,000 tons over the 20 year analysis period.

### **USE OF RENEWABLE ENERGY (QUANTIFIED)**

One of the factors that led to selection of the 19.72-acre project site was the potential for generation and storage of renewable energy (solar farm) for other transit facility power needs, in addition to the solar arrays that would power the BEBs. An analysis of the site showed that 2.15 megawatts of solar could be produced on site using roof space, bus parking canopies, and the remaining undeveloped land. A system this size in a favorable solar zone such as Northern California is projected to produce 3.46 million kilowatt-hours (kWh). The average kWh/mile for BEBs has been found to average [2.2 kWh/mile](#). Based on these calculations, renewable energy produced on site could provide power for 1.57 million vehicle service miles. This example shows how investment in renewable energy would result in significantly lower GHG emissions and provide costs savings.

**The project will allow the conversion to a BEB fleet, which, combined with the reduced deadhead mileage, will prevent the consumption of 6.6 million gallons of gasoline equivalent and almost 20,000 tons of CO<sub>2</sub> emissions over the 20-year period of analysis. The installation of solar panels will prevent over 2,000 tons of CO<sub>2</sub> from being emitted by electricity production for the facility itself. Reduced diesel /gasoline resulting from project implementation and use of solar energy would generate \$1.2 million in benefits from reduced emissions (see Section 7).**

### **REDUCTION IN DIESEL BUS IDLING**

Under the No-Build Alternative, YSTA’s entire diesel/ gasoline fueled bus fleet would continue to be stored without shade during the extreme heat of Northern California summers. This storage approach would result in extended engine idling (approximately 30 minutes) to cool down the interior of a bus (while sitting in the sun), or to warm up a bus in the winter, before it would be comfortable for the driver to leave the yard. During the summer months, this especially would be true for the commuter buses scheduled to leave the yard from 2:30 p.m. to 4 p.m. This idling would require additional staff time, consume significant quantities of fuel, create unnecessary emissions, and create wear and tear on the buses. The project’s solar-mounted bus parking canopies would reduce the need for idling by the legacy diesel/gasoline buses before their eventual replacement. The new BEBs would have the capability of being heated or cooled at set times while plugged into renewable power, which would allow them to be ready to be put into service quickly, reducing emissions, and saving staff time and labor costs.

### **4.b.ii Environmental Justice Communities**

The majority of YSTA’s service area includes both HDCs and APPs, as well as California Environmental Protection Agency (CalEPA) identified disadvantaged communities (DACs), that have a large population of minorities (mostly Hispanic and Asian-Punjabi) and low-income residents.

California was one of the first states to adopt and codify environmental justice (EJ) in statute. In addition to requiring fairer treatment and outcomes for communities and individuals disproportionately impacted by pollution and other negative environmental factors, EJ proponents also worked to ensure that EJ

communities and individuals have greater involvement in decision making processes. The aim is to lift the unfair burden of pollution from those most vulnerable to its effects. CalEPA's CalEnviroScreen is the state's environmental health screening tool that has been specifically developed to identify and characterize those communities that are disproportionately burdened by multiple sources of pollution within the state.

CalEnviroScreen scores and ranks every census tract in the state based on its potential exposures to pollutants, adverse environmental conditions, and socioeconomic factors (e.g., poverty, unemployment, linguistic isolation, housing burden, etc.). All data used in the tool is obtained from state and national sources. The scores are weighted, ranked, and mapped so that different communities can be compared on a percentile basis. An area with a higher score represents a community with a greater burden and disadvantaged population at risk to environmental harm.

CalEnviroScreen helps target climate investments in disadvantaged communities in support of Senate Bill (SB) 535 (De Leon, 2012) and Assembly Bill (AB) 1550 (Gomez, 2016). Those bills directed that at least 25 percent of the state's Cap and Trade Program funds are used for projects located within and that benefit disadvantaged communities. An additional 10 percent of the funds are provided to support projects in low-income households or communities. CalEPA identifies the top scoring communities as DACs for purposes of implementing SB 535 and AB 1550 (<https://calepa.ca.gov/envjustice/ghginvest>).

YSTA serves eight DAC census tracts in its bi-county service area, in the area where most of its ridership originates, including the DAC census tract that the project site is located (see [CalEPA's proposed DACs October 2021 map](#)), many of which have a high proportion of ethnic minorities and a high pollution burden, including Diesel Particulate Matter (PM). Many of these communities suffer from high rates of asthma, low birth weight, and cardiovascular disease. Diesel emissions often are expelled within a few feet of passengers alighting or waiting at bus stops, which can make the air unpleasant and dangerous to breathe for these passengers and others in the area. With the transition to electric propulsion buses under the project, all transit users, including transit-dependent and disadvantaged and low-income communities, will breathe cleaner air, enjoy quieter rides, and benefit from the reduced risk of respiratory and other illnesses.

### **INCREASE IN EMERGENCY RESPONSE AND CLIMATE RESILIENCY**

Climate change is expected to increase the annual average temperatures in the Sacramento region by 2.7 to 10.8 degrees Fahrenheit between the months of July and September. In addition to higher summer temperatures, prolonged heatwaves are expected to be more frequent and intense. Heatwaves are predicted to have both higher daytime and nighttime temperatures, along with fewer cooling degree days, which are crucial during these periods of intense heat. Low-income residents may have limited access to air conditioning or may be hesitant to operate air conditioning and cooling units because of potentially high electricity costs during peak hours. Cooling centers will allow people some rest and time for their body temperatures to cool down, preventing heat-related illnesses. Extreme weather events due to climate change put strain on the power grid, resulting in rolling blackouts. The project's direct current microgrid with battery energy storage and generator backup would allow continued transit operations during loss of power from the grid. This would enable YSTA to provide transportation to cooling centers, use BEBs as mobile cooling centers, or use the transit facility as a cooling center during extreme heat events. BEBs also could be used as a mobile source of power for critical facilities, including nursing homes, medical clinics, or other essential services during emergencies, in lieu using gasoline or diesel-fueled generators.

The project site has a low wildfire risk and is well-situated for emergency response support with the nearby police station, fire station, and Rideout Regional Medical Center. The site could be a good option for use as an emergency evacuation shelter for the surrounding population centers.

### 4.b.iii Climate Change and Environmental Justice Planning

The Facility Plan site evaluation and selection process determined the amount of space needed for current and future operations, identified 10 potential transit facility sites, analyzed and ranked the potential sites, studied the resiliency of potential sites, and provided design criteria for the future facility, complete with a funding plan. Potential sites were evaluated based on their planning and operations potential, including appropriate land use, impact on the efficiency of operations, access to power, traffic impacts, environmental impact, resiliency, operating costs, and environmental justice.

The site evaluation criteria were broadly classified into four different categories: Planning/Operations, Development Costs, Facilities, and Fueling Infrastructure. The Planning/Operations category is important when considering reducing deadhead miles, assessing access to power, indicating potential environmental impacts, providing a likely indication of resiliency, and approximating future costs. Each potential site was rated in the site evaluation matrix by Planning/Operations criteria. More detail on the specific site evaluation criteria is provided in the Project Readiness Assessment (Attachment E). The criteria most relevant to climate change and environmental justice considerations include:

- Wildfire risk/resilience
- Flood risk and Levee Protection
- Emergency response to extreme events/natural disasters (including use an evacuation center).
- Stormwater management and drainage

### 4.b.iv Specific Project Elements that Address Climate Change Impacts

Although YSTA has yet to complete final design of the new facility, some of the specific project elements already determined would include elevated charging cabinets and overhead charge dispensers that would protect critical infrastructure during a flood event. In addition, YSTA would complete a drainage analysis for a range of storm events, to ensure adequate site drainage. Emergency backup power generators would also be provided to the BEB fleet, and microgrid switch controllers would be installed for switching between power sources. Furthermore, YSTA would ensure a defensible space as a buffer around the site facilities, to help slow or stop the spread of wildfire, either from direct flame contact or radiant heat.



Most importantly in developing a strategy to address flood risk would be to have a working site-specific disaster response plan for YSTA employees and other individuals at the site, as well as for resilient infrastructure and the bus fleet. YSTA, working through the Yuba and Sutter County Offices of Emergency Services, would provide clear guidance to individuals about how to prepare for floods or fires and how to respond in the case of an event – either when early warnings are available or when disaster is imminent, such as during a flash flood or levee failure, as well as identifying alternative routes to critical routes. This guidance would provide protocols for monitoring official sources for information about upcoming floods or wildfires, on evacuation, and on communication during disasters. In addition, this plan would include drills for employees and clearly written instructions placed in different locations around the facility.

YSTA also would develop a viable plan for evacuating the BEBs and other agency vehicles, including driving the vehicles to a safer location. This would involve training and drills, so staff members would be able to carry out the plan effectively. This adaptation option would have a relatively low cost, but the potential benefits would be significant as such a plan could prevent injuries and fatalities, and significant damage to the agency's fleet.

#### 4.b.v Energy Efficiencies

This green facility would be designed for energy efficiency (i.e., application of commonly accepted methods to reduce energy losses and more energy efficient technology), water conservation, and stormwater protection, by incorporating modern building design/best practices. In addition, YSTA would assess energy efficient features that could address extreme weather events, such as excessive heat. For example, the project would set heating, ventilation, and air conditioning (HVAC) design criteria with additional capacity as heatwaves become more intense and frequent in California’s Central Valley—for office areas, 72 degrees (50 percent relative humidity) with more stringent requirements for areas housing computer equipment and other temperature-sensitive equipment. Spot cooling in maintenance areas would provide for a velocity of 200 feet per minute across workers. The transit facility HVAC and other cooling equipment would be planned to meet the same design standards under specific future climate scenarios with warmer than normal (current) conditions and would allow enough space so that as cooling equipment reaches the end of its useful life, a higher capacity piece could be installed.

#### 4.b.vi Local and Regional Climate Adaptation Plans

The 2015 SACOG Region Transportation Climate Adaptation Plan (CAP) outlines key strategies and actions for the Sacramento region to take to ensure that its transportation assets are adaptable to potential climate-related events. Identified adaptation strategies include changing design standards on maximum temperatures, implementing asset management systems and increased monitoring and maintenance schedules, providing shade, using alternative fuels, conducting risk assessments, identifying alternative routes to evacuation routes (during flooding or wildfire), increasing drainage capacity, weatherproofing equipment, using heat resistant materials, and protecting electrical equipment. As described above, the new facility would implement numerous environmentally sustainable and climate adaptation strategies, specifically identified in the SACOG Region Transportation CAP.

#### 4.c Quality of Life (Quantified)

The project will provide urban and rural residents, workers, and visitors with an improved transportation option. The quality of life in YSTA’s bi-county and the greater Sacramento region for residents improves with high-quality public transportation and other mobility benefits that YSTA would provide.

YSTA provides local fixed-route transit services; intercity workforce commuter and midday services to downtown Sacramento; rural route deviation services; and local paratransit and senior citizen transit services. In addition, YSTA strives to enhance community cultural and recreational connectivity and safety,



providing off-site parking shuttle services during special events. For example, the Punjabi-American community in Sutter County is one of the largest Punjabi populations outside India. For more than 10 years, with nearly 100,000 in

attendance each year, YSTA has provided an off-site parking shuttle service to the Yuba City Sikh Festival and Parade, as well as provided services for other events such as the Fourth of July fireworks and the annual Martin Luther King, Jr. March. YSTA also was the first transit agency in the greater Sacramento area to be 100 percent bike accessible, with all buses equipped with two- or three-position bike racks.

YSTA’s fixed route and commuter buses are equipped with GPS tracking, providing passenger information on the DoubleMap (<https://www.yubasuttertransit.com/bus-tracker>) app and website, allowing real-time arrival information for all services from any connected device, free on-board Wi-Fi, and an online trip

planner. YSTA also is one of a nine-member consortium of operators for design and implementation of the regional Connect Transit Card electronic fare card system, making regional connections seamless, including access to Sacramento International Airport and the Sacramento Valley Amtrak Station.

YSTA also is a key provider of emergency transportation services for both Yuba and Sutter counties. YSTA has supported a number of emergency evacuation events, including the Oroville Dam Spillway crises in 2017, high-water threat events, flood (levee failure) events, and wildfire events.

The project would build on YSTA's strong foundation of reliable and convenient transit services, diverse mobility options, and other transportation tools, to increase superior accessibility. The new transit facility would support cleaner, zero-emission buses that would provide healthier and safer access to living wage jobs, health care, education, recreation, retail, and other essential goods and services. **The reduction in bus deadhead VMT would reduce congestion for area motorists and noise pollution for surrounding residents valued at \$0.4 million over the 20-year analysis period.**

The project also would allow expansion of operational and administrative capacity to improve services within YSTA's existing service area and ultimately would help fill any identified gaps in transit service that develop due to housing growth in the southern portions of Yuba and Sutter counties to be closer to the Sacramento employment center. This would provide citizens with more mobility opportunities to move within and between communities that are not currently connected by public transit.

#### **4.c.i Decreasing Transportation Costs to Jobs**

Bus storage/charging capacity is a significant factor in YSTA's ability to grow its fleet. The project would allow YSTA to increase operational capacity to meet the projected need for increased service, estimated to be 67 buses by 2040. The increased capacity would enable YSTA to provide even more affordable, convenient, and reliable trips to employment centers and job opportunities, acting as a conduit between rural and small urban communities and regional jobs. For example, using conservative local factors in the Fuel Savings Calculator available online at [www.publictransportation.org](http://www.publictransportation.org), a typical daily YSTA commuter to downtown Sacramento would save about \$3,800 a year. This example assumes weekday ridership on YSTA's Sacramento service using a monthly pass versus operating a mid-size car on a 42-mile one-way trip between Marysville/Yuba City and downtown Sacramento. This calculation also assumes an average fuel price of \$3.75 per gallon (which has increased to over \$5.00 per gallon in recent months), vehicle efficiency of 25 miles per gallon, and parking costs of \$150 per month. In addition, YSTA would enhance the quality of life for commuters, by providing the ability for them to use their time on the bus for reading, working via the Wi-Fi service, or resting rather than focusing on the road.

#### **4.c.ii Public Outreach and Project Design**

Outreach to the disadvantaged and low-income communities and the public has been a priority throughout the project's planning process. The Caltrans planning grant funded the recently completed Facility Plan site evaluation and selection process, which included an extensive and comprehensive public outreach process—press releases, distribution of an [informational video](#), website postings, agency newsletter feature, local newspaper article, virtual public presentations, and meetings with local elected and appointed officials. Public input was invited at meetings, through passenger newsletters and via e-mail through a link on the project's webpage. In addition, during the engineering and design phase of the project, it would be subject to public review and comment through regular updates at public meetings of both YSTA and Yuba County.

YSTA's continuing outreach efforts would focus on the disadvantaged and low-income communities in and around Linda, where the project would be located, where people would stand to benefit from jobs and increased access to transit options to be provided by the new transit facility, ZEBs, and enhanced

transit service. An open house session also would be held in the community near the project site, to capture the community’s vision for how the new facility can best contribute to the ongoing revitalization of the North Beale Road corridor, as well as on the concepts of a multipurpose transit facility, on-site mobility hub, and other community needs.

An outreach plan would be developed to provide a structure allowing scheduling, documentation, and evaluation of each step of the public involvement process and engagement efforts. The purpose of the outreach plan would be to offer a systematic and strategic approach for reaching diverse groups of people and interests in the geographic areas, including those in underserved, overburdened or disadvantaged communities.

The project would redevelop a currently unused and blighted community open space. The development of an aesthetically pleasing and technologically advanced transit facility with increased “eyes on the street” would add to the community’s safety and revitalization effort. A multipurpose transit facility (e.g., emergency shelter, cooling center, mobility hub) also would benefit the communities that encompass and surround the new facility site.

#### **4.c.iii Transit Agency Policies Designed to Ensure Racial Equity**

YSTA operates in a racially diverse region, with a large population of Punjabi and Spanish-speaking residents. In fact, significant public outreach directly to Punjabi residents has included translating materials and providing them in both print and electronic form to Sikh Temples. In addition, all essential materials, such as service information or forms, are translated into Spanish and made readily available on YSTA’s website. As shown in Figure 4, YSTA’s service is focused on HDC and APP, where ethnic minority populations often are found, to offer enhanced service for transit-dependent residents. Under YSTA’s Disadvantaged Business Enterprise program, the transit authority does not discriminate on the basis of race, color, sex, or national origin.

#### **4.c.iv Community and Regional Connectivity Benefits**

The new transit facility would improve connectivity for citizens to jobs, health care, and other critical destinations. Yuba and Sutter counties have changed from a historically agricultural-based economy to a much more mixed economy, which now includes the Air Force base, a college, hospitals and clinics, commercial developments, and entertainment facilities. The top three employers with more than 1,000 employees are Beale Air Force Base, east of the Yuba City/Marysville area, and the Marysville School District and Rideout Regional Medical Center, both in Marysville. A wide variety of employers with 100–500 employees have operations throughout the service area.

In addition, the project site would have ample space for public fueling infrastructure, and its proximity to hubs such as Marysville and Yuba College could make it a viable option for a publicly accessible alternative fueling facility for vehicle charging. Also, because of its close proximity to Linda’s Central Business District, it would have the potential to serve as a mobility hub.

### **4.d Mobility and Connectivity**

YSTA provides public bus service to retailers, services, medical facilities, schools, jobs, and recreation and entertainment amenities throughout Yuba and Sutter counties, as well as to jobs, medical, educational, and other non-work purposes in downtown Sacramento and the Sacramento Intermodal Transportation Facility (Sacramento Valley Amtrak Station), which serves as an intermodal hub for Amtrak passenger rail and bus service, Capital Corridor train service, Sacramento Regional Transit (SacRT) bus and light rail service, regional bike trail and pedestrian connections, and connections to future California High-Speed Rail (CHSR) stations. From Sacramento, YSTA bus passengers currently have convenient access to SacRT and the

Sacramento Valley Station, with passenger rail connections to jobs and other amenities in Sacramento, the San Francisco Bay Area, and destinations in-between (Figure 5).

In addition to added capacity to expand service, the project will provide YSTA a greater ability and operational flexibility to modify its future operations to better meet its users' transportation needs. Towards this end, YSTA recently released a [Request for Proposal](#) for development of a Comprehensive Operational Analysis/Short-Range Transit Plan (COA/SRTP). The objectives of YSTA's COA/SRTP are to evaluate current service model efficiencies and determine if underserved, disadvantaged or low-income community needs are being met, enhance service to these communities including transit dependent and disabled populations, and provide greater opportunities for engagement in transit planning to identify transit needs. In addition, the plan would include recommendations for restructuring the transportation network for greater system coverage, frequency, operational efficiency and enhanced regional connectivity, including integration with other regional transportation systems and modes. The plan also would provide a framework to support transit services for already constructed and planned developments and commercial districts. Furthermore, the plan would provide guidance on fulfilling regional, state, and federal goals by enhancing YSTA's services to promote increased local and regional travel options and reduce single-occupant vehicle use and GHG emissions.

The project will give YSTA the operational flexibility to adapt and/or expand its service to take advantages of future opportunity for integration with other regional transit system developments. YSTA will coordinate schedule and timetable planning between agencies to reduce transfer wait times and improve the seamlessness of the travel experience between transit systems as envisioned by [the California Integrated Travel Project](#) (Cal-ITP) statewide effort to facilitate easy and accessible travel planning and payment for all transit users. More specifically, the project would increase YSTA's operational flexibility and ability to implement Cal-ITP and other state or regional proposed initiatives for information and payment system improvements. For example, YSTA is cooperating with the Capital Corridor Joint Powers Authority, SacRT, SACOG and other regional transit service providers on a proposed TIRCP grant application that would include a regionwide Cal-ITP supported contactless payment system on buses providing feeder service to Capital Corridor trains in downtown Sacramento. If funded, this project would result in the installation of contactless readers on YSTA's entire commuter and local fixed route bus fleet. Given the operational flexibility to develop its future transit service, YSTA will be able to better coordinate and partner with other transit system and transportation modes. It will also give YSTA more opportunity to play a larger role and make a greater contribution in the planning for service changes and capital investments necessary to improve such coordination and operations between transit systems and transportation modes. The various facilities and systems that YSTA will be considering for future service connections and integration.

#### 4.d.i Benefits to Freight Movement

The project would be consistent with the California Sustainable Freight Action Plan (CSFAP) and the goals of the 2020 California Freight Mobility Plan (CFMP). YSTA provides commuter service to and from downtown Sacramento via the SR 99 and SR 70 corridors as well as I-5 (40 miles each way), several times a day. YSTA's commuter service reduces traffic congestion by replacing automobile trips in these corridors.



Figure 5. Amtrak Train—Capitol Corridor

One of the primary guiding principles of the CSFAP encourages “local and regional efforts to improve trade facilities and corridors to achieve regional environmental, public health, transportation, and economic objectives consistent with statewide policy goals.” Likewise, goals of the CFMP call for “innovative approaches to optimize integrated network efficiency, improve travel time reliability, and achieve sustainable congestion reduction.” Project implementation would support these goals by replacing diesel/gasoline commuter buses with clean-energy electric buses, which would reduce GHG emissions, improve air quality, and enhance service to downtown Sacramento jobs and transit stops within steps of the Sacramento Valley Station with connections to other regional public transit systems.

In 2018, YSTA received a \$10,000 mini-grant award by SACOG to encourage first-time commuters to try the service because after commuters try the service, they usually do not resume driving. The services provide commuters with a convenient and low-cost alternative to congestion, allowing them to reach their destinations quickly and more relaxed. YSTA will engage in a similar marketing campaign to advertise the new transit facility and clean-energy buses and amenities (including Wi-Fi service) and will promote enhanced commuter service. The commuter service schedule will be adjusted when feasible at YSTA’s Sacramento transit stops that are within walking distance of the Sacramento Valley Station for transit/train passengers to improve connections for those arriving from the San Francisco Bay Area and other places of origin.

The project would incentivize ridership to further reduce single-occupancy vehicle use and traffic congestion, particularly during peak commute periods. The transition to ZEBs would translate to newer, cleaner, and more reliable buses, which would incentivize workers to transfer from private automobiles to safer and more affordable transportation. The comfort, cleanliness, and amenities that YSTA would provide, such as free Wi-Fi service, bike racks, and real-time bus location and arrival information, would encourage frequent use of the service. Furthermore, the additional capacity resulting from project implementation and other transit improvements over time would enable YSTA to increase and optimize the frequency, reliability, and consistency of its transit service throughout the region. Furthermore, YSTA is a partner in development of the [SR 70–SR 99 Comprehensive Multimodal Corridor Plan](#) that would address numerous operational issues as well as regional and interregional goods movement deficiencies. Project implementation would help to shift travelers from automobiles to public transit to help reduce traffic congestion and improve freight movement of goods in the region.

#### **4.e Economic Competitiveness**

As described above, a larger, modern, technologically advanced transit facility would allow YSTA to improve system operations and safety; increase transit frequency, reliability and timely access to employment centers, job opportunities, and other community amenities; enhance transit service; and further incentivize ridership (lowering transit user transportation costs) by supporting newer clean energy buses, resulting in improved local and regional movement of people and goods.

The BCA calculation for the economic competitiveness criterion is focused primarily on reduction in transportation costs associated with the movement of workers and improved long-term efficiencies. By providing a technologically superior transit facility with room to expand services, the project would allow improved access to education and job opportunities in Yuba and Sutter counties and Sacramento, the region’s largest job hub, and beyond. The larger capacity also would allow possible service beyond the current service area boundaries, to include education and job opportunities in nearby Placer, Yolo, and Butte counties. Beyond these quantifiable transportation benefits, the project would contribute to the functioning and growth of the economy, improve the movement of goods and people, and promote the expansion of private economic development in California, by:

- increasing transportation options and system connectivity, particularly for the numerous underserved, overburdened, or disadvantaged communities in Yuba and Sutter counties;

- leveraging seven federally designated Opportunity Zones within the bi-county area (see Figure 6) with transit access;
- supporting planned employment centers and housing development areas along major transit corridors;
- decreasing the cost to access jobs for small urban and rural communities;
- helping to reduce the demand for limited parking in downtown Sacramento;
- helping reduce single-occupancy vehicle use and traffic congestion, particularly during peak commute periods;
- improving long-term efficiency and reliability, and reducing costs in the movement of workers and goods; and

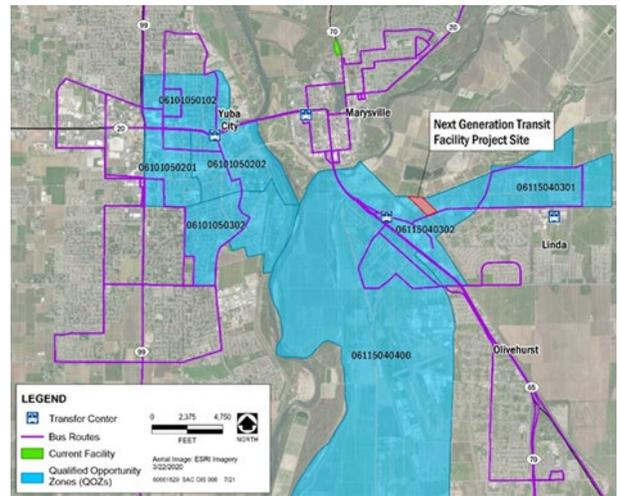


Figure 6. Opportunity Zones Served by YSTA

- offering significant regional and national improvements in economic strength by increasing the economic productivity of land, capital, or labor, and improving the economic strength of regions and cities.

All equipment needed for the project would be produced in the United States. Thus, the project would meet all requirements of the Buy America regulations.

#### 4.e.i Local Housing and Employment Development

Local housing policies are aligned with State goals to promote high-density residential and/or transit-friendly development. Numerous major areas for future large scale commercial and residential development and growth are located within the region. These areas are potential locations of future increased transit demand that could be served by modified or expanded YSTA transit service over the next 20 years. Approved or proposed development areas near the location of the proposed transit facility and along YSTA's commuter service routes (SR 70 and 99) are listed as follows:

***Marysville/Linda.*** SACOG projects Marysville to add 660 jobs by 2040. One major growth driver is the Adventist Rideout expansion of its health care campus near downtown. Adventist is interested in seeing more urban housing development for its staff in Marysville.

***Plumas Lake Specific Plan Area.*** The Plumas Lake Specific Plan area encompasses approximately 5,000 acres of non-prime farmland in the south part of Yuba County (see linked plan). A key feature of the site is SR 70 that provides the easterly boundary for most of the Plan area. The north-south regional access provided by the highway establishes this area as suitable for part of the growth that is expected to occur in Yuba County in the next 20 years. Residential development as envisioned in the Plumas Lake Specific Plan would allow a diversity of housing choices in price range and residential type and density

***Sutter Pointe Specific Plan Area.*** The Sutter Pointe Plan Area encompasses approximately 7,528 acres in South Sutter County (see linked map for planned development). SR 99/SR 70 divides the southern part of the site and serves as the western boundary of the northern portion of the project site. The plan proposes a diverse mix of land uses, including employment centers, many different housing types, retail shopping villages, recreation amenities, schools, community services, supporting on-and off-site infrastructure, roadway improvements, open space and various public uses.

Additionally, SACOG awarded the City of Wheatland, the second-largest city by population in Yuba County, located along SR 65, a grant to study the feasibility of an employment zone (EZ) associated with the

[Johnson Rancho and Hopyard Farms](#) area that was annexed to the eastern portion of the city in 2014. The [Wheatland Employment Zone Feasibility](#) study was completed in 2021. The total annexation area is about 4,500 acres and is planned for about 14,500 dwelling units. The market analysis for the EZ identified opportunities for development of 13,100 jobs. Although the Wheatland EZ is not in construction yet, prospects for more rapid development have increased with an effort by Beale Air Force Base to establish an off-base university-affiliated research center as means of expanding its current federal lab operations. This development could result in the office/research and development portion of the employment zone beginning construction within the next several years. The landowners of the Johnson Rancho have expressed interest in beginning development more quickly, to help meet housing demands from other employment growth at the base.

The additional capacity resulting from project implementation would enable YSTA to expand transit service along SR 70, SR 99, and SR 65, and to Butte County to the north, or to Placer County on the SR 65/Wheatland corridor, further enhancing regional connectivity and access between jobs, homes, and essential services in the Sacramento region and supporting regional economic strength and growth.

#### **4.e.ii Economic Competitiveness (Quantified)**

As described in Section 4.a.ii, project implementation would result in fewer deadhead miles annually compared to the No-Build Alternative. In addition to reducing the costs associated with accidents, injuries, fatalities and emissions, a reduction in deadhead miles reduces annual operating costs. Under the project, YSTA would also not have to lease a separate facility for office space and warehouse space, and the electricity cost would be near zero because the transit facility would be powered by on-site solar energy.

In addition, YSTA plays a critical role in addressing the unique transportation challenges faced by rural and small urban communities. Access to transportation contributes to the economic development, health, and quality of life of these communities.

**The project would generate \$16,969,000 in economic competitiveness benefits (see Section 7).**

#### **4.f State of Good Repair**

According to the [FTA Grant Management Requirements \(FTA C 5010.1D\)](#), the useful life of facilities and buildings is 40 years. YSTA must vacate its existing facility, a 60-year-old former bottling plant, in 2025 because of the Caltrans SR 70 project. Implementation of the project would allow YSTA to maintain its vital public transit service while also providing YSTA with a new, modern, state-of-the-art, build-to-suit facility. The new facility would improve the transit system's quality, operational efficiency, resiliency, and overall state of good repair in contrast to the continued operation of the current diesel/gasoline fleet beyond its useful life; if the facility to support the BEBs cannot be constructed in a timely manner, public transit service would be negatively impacted, including for those in underserved, overburdened, or disadvantaged communities.

##### **4.f.i Next Generation Transit Facility (Quantified)**

Although the building footprint would be expanded under the project, O&M costs would be minimized by modern, efficient building systems and designs. The new facility design would meet all applicable State and local energy standards, policies, and guidelines, and would use modern green building practices to improve energy efficiency and reduce utility costs. It also would increase future facility resiliency, allowing continued operation during extreme weather events (see Section 4.b). The state of repair, energy efficiency, and utility costs of a leased facility are unknown under the No-Build Alternative, but likely would be comparable on a unit per square foot basis to YSTA's existing transit facility O&M costs.

#### 4.f.ii ZEB Lower Comparative Lifetime Costs (Quantified)

Electricity is a reliable and readily available fuel source, and a number of original equipment manufacturers have entered the market and produced BEB models that currently are operating efficiently toward the end of their useful lives. Although the upfront cost is higher, electric buses have lower comparative lifetime costs than diesel/gasoline buses, and the costs continue to drop because manufactures' warranties have become longer on key components, such as drivetrains and batteries. Moreover, as electric bus manufacturing scales up, and as battery costs—the most expensive part of an electric bus—decline over time, electric bus prices will fall as well. Government estimates of ZEB price will decline sharply as advances in battery manufacturing and increased demand drive down costs.

#### 4.f.iii Reduced Bus Wear and Tear and Labor Costs (Quantified)

Buses at the existing transit facility are uncovered and would continue to be stored without shade under the No-Build Alternative. Extended engine idling to cool down or warm up a bus creates significant wear and tear on the buses and reduces their overall useful life. It also consumes significant quantities of fuel, creates unnecessary emissions, and increases labor costs. The covered bus parking under the project would eliminate the need for idling, particularly for the remaining diesel/gasoline buses before replacement, in the summer months.

**State of Good Repair would result in a savings of \$2,471,000 for the facility only and \$8,642,000 including the facility and bus fleet (see Section 7).**

#### 4.f.iv Maintaining Rural Infrastructure

The project would be the foundation for future transit and transportation operations in this rural/ small urban region. Therefore, the project would contribute to local, regional, and inter-regional state of good repair and economic growth in the YSTA bi-county service area and overall Sacramento region. The project would allow YSTA to expand its operations and maintenance functions, accommodating future transportation demands in its service area, and would generate new regional connections. The facility would be the key to transit operations and maintenance of all public transportation assets over the next 50 years.

## 5 SECONDARY SELECTION CRITERIA

### 5.a Partnership and Collaboration

YSTA has been operating in partnership with the local member jurisdictions (Yuba and Sutter counties and the cities of Marysville and Yuba City) since 1975. Since its inception, YSTA has been directed by an eight-member Board of Directors, composed of two elected representatives appointed by each of the four member entities. In the past, YSTA has partnered with Yuba County and Caltrans to help expand and develop regional Park & Ride lots.

This project, construction of a critical local and regional asset, would be supported by an actively engaged and diverse partnership of public, private, and non-profit entities. These individuals and entities, such as Congressman John Garamendi, SACOG, two air districts, and numerous other entities, include local and regional transportation authorities, agencies, and community groups (see Attachment C, Letters of Support).

As described in Section 4.c.ii., outreach to the disadvantaged and low-income communities and the public has been a priority throughout the project's planning process. YSTA's continuing outreach efforts would focus on the disadvantaged and low-income communities in and around Linda, where the project would be located, where people would stand to benefit from jobs and increased access to transit options to be provided by the new transit facility, ZEBs, and enhanced transit service.

In addition, the main campus for Yuba College is 1.7 miles from the project site on North Beale Road. YSTA has a longstanding collaborative relationship with the College including the development of a major transit center on the campus. This collaborative relationship has proved fruitful during development of this grant application as YSTA has been in talks with the College regarding their interest in expanding its existing Automotive Technology program to include heavy-duty ZEBs. The program has made many changes in the last few years, one of them being a technician level course in hybrid vehicles systems and safety as a requirement for a certificate or degree in Automotive Technology, and the College has expressed support for working with YSTA to expand the program. As part of the project, YSTA would continue to foster its collaborative relationship with the College, by exploring additional means to help support the course and meet student training needs.

The new transit facility also would allow YSTA to explore new partnership opportunities, including with PG&E through its EV Fleet Program; local and regional employers and governments to expand and enhance transportation options for area residents; and the City of Sacramento, Capital Corridor Joint Powers of Authority, San Joaquin Regional Rail Commission, and other agencies on operational efficiency and enhanced regional connectivity, including integration with other regional transportation systems and modes.

### **5.b Innovative Technologies, Financing, and Delivery**

The new state-of-the-art transit facility would use on-site power generation and storage managed through a software-controlled direct current microgrid to efficiently charge BEBs. The project's microgrid would avoid the inefficiencies and energy losses associated with converting from alternating current power and would reduce the peak energy required and consequently reduce demand charges for high energy use periods. The new facility would contain an electronics shop, allowing staff to service the BEBs, and would have battery storage rooms and repair bays, equipped with safety and diagnostic equipment to repair the BEBs. These shop and repair bays would enhance facility resiliency, allowing continued operation during extreme weather events and enabling the buses to return to operations quickly, avoiding potential delays for repairs from outside sources. Furthermore, the new facility would have the information technology infrastructure in place to operate next generation transit buses, when fully automated buses become available. Electric vanpool, car share, and bike/scooter programs also would be future options to use the site's space and energy-generation potential.

In addition to the funding identified in Section 3, innovative financing opportunities are being sought from multiple federal, State, and local funding sources, taking advantage of the California Climate Investments Greenhouse Gas Reduction Funds and other sources to fund specific aspects of the project. In addition, as discussed in more detail in Appendix E, Project Readiness Assessment, YSTA intends to use the Construction Manager/General Contractor (CM/GC) approach to save time on project delivery and most efficiently use its available funding.

## **6 PROJECT READINESS: ENVIRONMENTAL RISK**

Appendix E, Project Readiness Assessment, provides a more detailed discussion of the project's readiness and environment risk potential based on both: (1) YSTA's technical capabilities and financial feasibility; and (2) the project's specific circumstances and requirements. Appendix E identifies the key project development tasks that YSTA has completed to date and YSTA's future project development approach, key implementation steps as well as potential risks and mitigation strategies. The assessment demonstrates that YSTA is currently on track to complete all remaining necessary environmental reviews, design, engineering, contractor procurement and project delivery activities in full accordance with the schedule and RAISE grant funding requirements.

## 6.a Technical and Financial Feasibility

YSTA is in good financial standing and has demonstrable experience delivering major, grant-funded projects on time and within budget, with the capacity to successfully deliver this Project in full compliance with applicable federal requirements. YSTA manages a budget made up of a mix of federal, State, and local awards, fares, and other locally generated revenues, YSTA's audited financial statements for FY 2020, included federal funding of \$3.4 million in federal Sections 5307 and 5311 for operating assistance and nearly \$4.5 million in federal Sections 5307, 5311, and 5339 in capital assistance. As demonstrated in recent FTA triennial reviews, YSTA complies with all FTA progress reporting requirements regarding projects in awards through the submission of accurate and timely milestone progress reports, federal financial reports, and award close outs.

YSTA's past performance demonstrates its management and technical capability to complete the project successfully. The agency has successfully completed and been a significant partner in several complex construction projects over the years. In 1996, YSTA completed the site identification, purchase, and approval of its current facility property with the assistance of federal support for its \$2 million acquisition and conversion of a former Seven-Up Bottling Company plant. In 2011, YSTA completed a \$3.2 million remodel and expansion of that facility to its current and maximum capacity. YSTA's current Executive Director oversaw both projects. Other major projects have included the design, development, and later expansion of three Park and Ride facilities, in coordination with partner agencies Caltrans and Yuba County.

YSTA has committed local and State matching funds from verifiable, stable, and reliable sources, sufficient to meet or exceed the local match requirements thereby ensuring that the project would be adequately capitalized. If federal, State, or local funding is less than anticipated, because of the forced transit facility relocation, YSTA would leverage additional local funds, seek other funding sources, possibly including a TIFIA loan, or scale back its project to meet the new constraints (see Section 3.e).

## 6.b Final Design and Environmental Risk

YSTA staff is developing a Request for Qualifications (RFQ) to hire a firm to assist with project development and delivery. YSTA is planning to pursue project development and delivery using a Construction Manager/General Contractor (CM/GC) approach. YSTA has already identified two firms that have the expertise, technical capacity, staff, and equipment resources necessary to successfully deliver the project using a CM/GC process. YSTA has begun preliminary discussion with both firms to verify their qualifications, availability and interest in the project. Use of the CM/GC project delivery method will expedite the project through the environmental and design phases.

Hiring and engaging a contractor early in the process will nearly eliminate the time needed for additional procurements and purchase delays. It will also better ensure that the Next Generation Transit Facility is designed in accordance with the design specifications and requirements as the contractor will have greater transparency and participation in the design and engineering decisions. By contributing early to the project's development, the contractor can advise on opportunities to improve the final design's constructability which will result in more cost-effective outcomes and minimize the occurrence and magnitude of change-orders and cost overruns during its subsequent construction.

FTA issued a Categorical Exclusion for the protective acquisition of the project site on May 28, 2021. YSTA has also contracted with a local environmental consultant to survey the property for federally or state-protected plants and animals. This survey was conducted to help minimize the chance of any delays due during the National Environmental Policy Act (NEPA) process that will be conducted once the project has been scoped sufficiently to begin the environmental process. The completed assessment found no indication and low likelihood of any federally and state-protected plants and animals would hinder

development of the project site. As a result, a **second Categorical Exclusion is anticipated to be adequate for transit facility construction**. Irrespective, YSTA will use consultant expertise and assistance to conduct a thorough environmental analysis. YSTA has established relationships and resources to engage design and construction professionals with specific experience and expertise with site-related soils and other hazards, if any previously undiscovered geographic, geologic or other conditions warrant such an action.

YSTA staff has also consulted and confirmed with the Yuba County Planning Department that the facility qualifies as an allowable use within the current Neighborhood Mixed Use zoning for the site.

As a result of its completed due diligence efforts, initial environmental assessments and inter-agency consultations, YSTA anticipates with a high-level of confidence that the project’s necessary NEPA/California Environmental Quality Act (CEQA) approval requirements can be met under a Categorical Exclusion/Mitigated Negative Declaration finding. Contingent on being awarded grant funding, YSTA anticipates that the final design and the environmental assessment for the new transit facility would be completed in 2023, with construction starting in early 2024.

### 6.c Project Readiness, Schedule, and Risk Mitigation

Extensive planning and site acquisition work has been completed to date. YSTA’s Next Generation Transit Facility Plan was completed in 2021. That planning effort determined the facility needs, design guidelines, comprehensive facility concept designs as well as selection of a preferred site.

YSTA subsequently purchased the preferred site in July 2021 with protective acquisition authorization from the FTA. As a result, those efforts have laid the necessary groundwork for YSTA to design and construct the project in a well-organized and timely manner. As a result, once sufficient funding has been secured, YSTA can proceed to obtain all remaining approvals, complete the final design and engineering of the facility and execute the project delivery within the time and budgetary constraints.

The project is included in [SACOG’s 2021-2024 Metropolitan Transportation Improvement Program](#) (Project ID YST10533) through Administrative Modification #21-13. The changes to the MTIP have been incorporated in California’s 2021 Federal Statewide Transportation Improvement Program.

Figure 7 provides the summary schedule for the project’s Initial Phase (see Section 3.a, Project Scope). This schedule has been designed to ensure that all necessary activities will be completed well ahead of the statutory deadline for RAISE funds obligation and start of construction, so that

**Figure 7. Project Schedule**

Item	2022				2023				2024				2025			
	Q1	Q2	Q3	Q4												
Environmental Assessment																
Final Design																
CM/GC Selection																
Transit Facility Construction																
BEB Changing Infrastructure																
Operation Start																

CM/GC = Construction Manager/General Contractor  
 BEB = battery electric bus

any unexpected delays will not put the Federal funding at risk. In the unlikely event that circumstances threaten to impact the project’s schedule, YSTA will immediately address schedule-related issues. However, the extensive planning work that has been done to date on all components of this project which will allow YSTA to begin project implementation without delay once a RAISE funding award is obtained.

**ASSESSMENT OF PROJECT RISKS AND MITIGATION STRATEGIES**

YSTA’s risk assessment for the project has identified key future risks that have a potential to adversely affect project implementation and completion. The identified risks and YSTA’s planned approaches for managing and reducing each specific risk factor are discussed in the Project Readiness Assessment (see Appendix E).

**7 BENEFIT COST ANALYSIS**

A comprehensive BCA has been completed in support of the RAISE application, in accordance with the U.S. Department of Transportation’s 2022 *Benefit-Cost Analysis Guidance for Discretionary Grant Programs*. The BCA developed a project-specific Excel spreadsheet model to estimate the monetary benefits and costs of the project’s effects on future transit service, YSTA operations, and the environmental benefits of its transition to ZEBs and the major costs that otherwise would result if YSTA is unable to comply with future State ARB ICT regulations. The BCA model is included with this grant application. The BCA Technical Memorandum is provided as Attachment F.

The BCA evaluation compares the costs and benefits of the proposed project to the future No Build Alternative. The BCA also includes the net bus fleet costs (and residual value benefits) that would be necessary to achieve all of the estimated future benefits. Table 4 summarizes the long-term outcomes of the project.

Together, the project facility and BEB bus fleet will result in future benefits of \$37.7 million (based on a 7 percent discount rate) over a 20-year period of operations. Compared to a similarly discounted estimated total cost of \$31.8 million, the project’s benefit-cost ratio (BCR) is 1.2, which demonstrates a positive return on this investment. The project has net benefits of \$5.9 million.

**Table 4. Benefit-Cost Analysis Summary**

Values stated in \$2020 Millions	RAISE BCA
<b>Costs</b>	
Capital Costs	\$31.8
<b>Net Total Costs</b>	<b>\$31.8</b>
<b>Benefits</b>	
Safety Benefits	\$0.5
Economic Competitiveness	\$17.0
Mobility and Community Connectivity	\$0.0
Quality of Life	\$0.4
State of Good Repair	\$8.6
Environmental	\$11.2
<b>Total Benefits</b>	<b>\$37.7</b>
<b>BC Ratio</b>	<b>1.2</b>
<b>Net Present Value</b>	<b>\$5.9</b>

**Table 5. Benefit Detail (\$2020 \$M)**

Item	Present Value (7%)
Lease and Facility Upgrade Costs Avoided	\$4.9
Utility Costs Avoided	\$0.7
Net Bus Fleet Capital and Maintenance Cost Savings	\$3.6
Emission Savings (Buses and Facility)	\$1.2
Deadhead Labor and Fuel Cost Savings	\$5.8
Congestion and Noise Cost Reduction	\$0.4
Bus Stop and Crosswalk Amenity Benefits	\$0.1
Social Cost for Non-Compliance	\$10.1
Off-Site Fueling Cost Avoided	\$3.4
Commuter Bus Deadhead Avoided	\$2.1
Residual Value (incl BEB+ Batteries)	\$5.1
<b>Total Benefits</b>	<b>\$37.7</b>

Table 5 provides additional detail on the major categories of future project benefits estimated by the BCA. The lease and facility upgrade cost avoided are estimated to total \$4.9 million over the life of the project. The project will also reduce YSTA’s utility and fuel costs by \$12.0 million and its maintenance costs by \$9.8 million. The project will also result in major emission reduction (\$1.2 million) and safety benefits (\$0.5 million). The 2045 residual value of the project represents another \$5.1 million in benefits.