



Monterey Bay Air Resources District
 24580 Silver Cloud Court, Monterey, CA 93940

MEETING DATE:	August 21, 2019	REGULAR AGENDA
TO:	The Board of Directors	
FROM:	Richard A. Stedman, Air Pollution Control Officer	
SUBJECT:	Receive the FY20 AB2766 Applicant Summary and Staff Recommendations	

RECOMMENDATION

Receive the FY20 AB2766 Applicant Summary and Staff Recommendations. Staff is providing this report for the convenience of the Board as information only in preparation for Board approval at the September Board Meeting. No further action is required.

EXECUTIVE SUMMARY

On March 20, 2019 your Board authorized the FY20 AB2766 Motor Vehicle Emission Reduction Grant Program. The anticipated total FY20 AB2766 Budget after disencumbering unused funds from previous grant years is **\$2,029,600**. Your Board also approved the Staff recommendations of the Criteria and Procedures for this year’s AB2766 grant program. Highlights include:

- ***FY20 AB2766 Clean Vehicle Program:***
 - The EV Voucher Incentive Replacement Program for public fleet replacement projects to potential applicants in the tri-county area.
 - FY20 Monterey Bay Electric Vehicle Incentive Program (MBeVIP) was created and co-hosted by MBCP and MBARD. Combined funding up to \$1.1M available for incentives.
 - MBeVIP applicants are currently able to apply directly on-line from the District EV incentive webpage.
- ***FY20 AB2766 Clean Air Management Program:***
 - Direct emission reduction projects can continue to receive a maximum award of \$400,000 for 75% fixed cost projects such as:
 - Roundabout design and construction
 - Adaptive Traffic Signal Control
 - Other direct emission reduction projects eligible for funding are:
 - Fleet Vehicle Replacement
 - New transit

- **FY20 Application Outreach:**

- Phone calls were made and email blasts were sent out for the benefit of prospective applicants to discuss FY20 AB2766 Grant Criteria and Procedures, the EV Incentive Replacement Program and the Direct Emission Reduction Project application instructions.
- Announcements for the opening of the applications were posted on the District website and also via e-mail distribution lists.
- The application packet was made readily available by download from the District website.

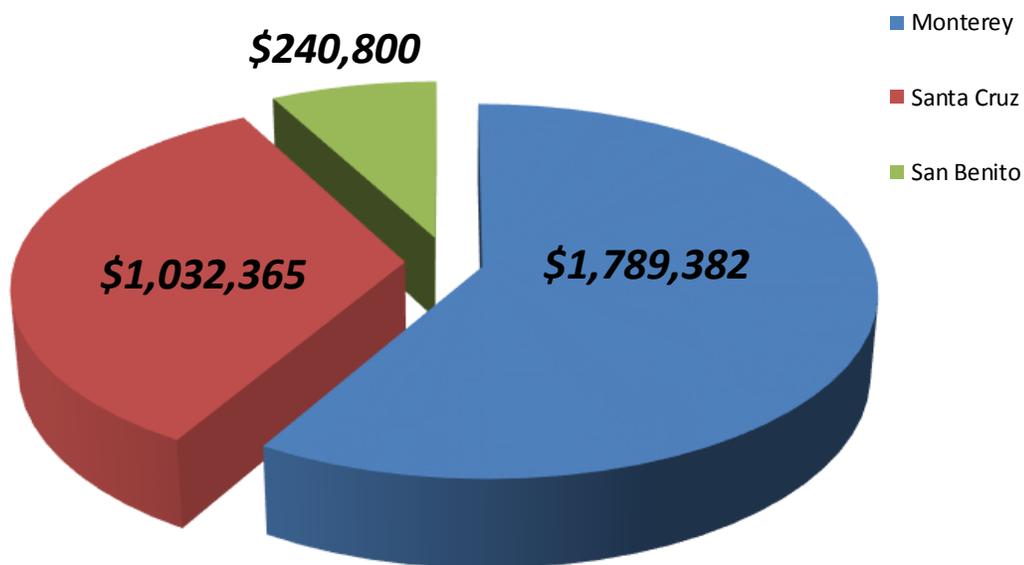
- **FY20 Applications:**

- The District received and reviewed ten applications under the Clean Air Management Program and found all projects eligible for funding.
- The ten direct emission reduction projects submitted were then ranked according to the calculated cost effectiveness (C/E) and annual tons of pollution reduced.
- One project was submitted under the EV Voucher Replacement Program.

The total dollar amount of grant requests from all the applications was **\$3,062,547**. The breakdown by county is shown below in Figure 1:

Figure 1.

FY20 Total Funding Request by County

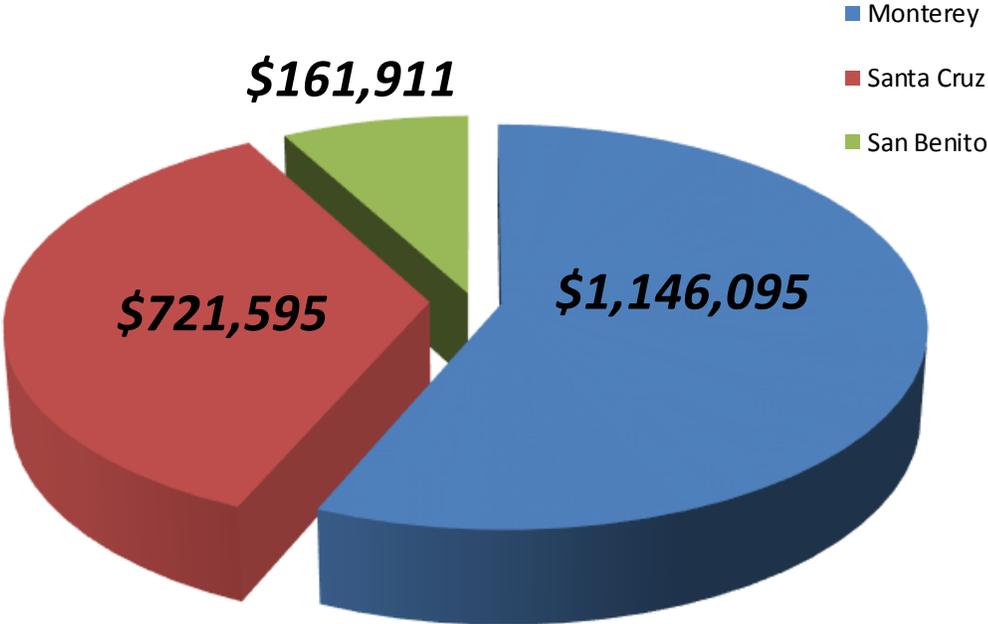


Total Funding Request \$3,062,547

The FY20 AB2766 anticipated total grant funds of \$2,029,600 allocated by County is illustrated below in Figure 2:

Figure 2.

FY20 AB2766 Anticipated Funding by County



Total FY20 Budget: \$2,029,600 (excludes EV Incentive Program)

Population numbers taken from US Census 2018 estimates
<https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

The FY20 eligible project ranking is shown below in Figure 3:

Figure 3

FY 20 Ranking List: Direct Emission Reduction Projects

App No.	County	Applicant Name	Project Description	Grant Request, \$	C/E, \$/ton	Annual tons reduced
20-04	Monterey	City of Monterey	Adaptive Signal Control	\$ 400,000	\$8,231	7.70
20-01	Monterey	MST	New Transit, Electric Bus	\$ 400,000	\$63,967	0.50
20-05	Monterey	City of King	Roundabout Enhancement	\$ 400,000	\$82,309	0.34
20-02	Monterey	City of Salinas	E-Fleet Replacement	\$ 400,000	\$123,259	0.26
20-03	Monterey	City of Gonzales	E-Fleet Replacement	\$ 189,382	\$16,900,133	0.001
20-07	San Benito	San Benito County High School District	G2G Vehicle Replacement	\$ 65,450	\$611,489	0.01
20-06	San Benito	San Benito County High School District	Electric Shuttle Replacement	\$ 175,300	\$3,217,275	0.004
20-10	Santa Cruz	City of Capitola	Adaptive Signal Control, 41st Corridor	\$ 400,000	\$21,859	2.93
20-09	Santa Cruz	Santa Cruz County	Adaptive Signal Control, Soquel	\$ 400,000	\$25,828	1.77
20-08	Santa Cruz	City of Santa Cruz	E-Vanpool Replacement	\$ 202,365	\$1,473,435	0.01

The **attached** FY20 Grant Project Summary describes all of the eligible projects along with the **staff recommendations** for funding the ranked direct emission reduction projects and the EV Voucher Replacement Program.

FY20 AB2766
Grant Project Summary

Presented to:
MBARD Board of Directors
August 21, 2019

Prepared By:
Alan Romero, Air Quality Planner III

Executive Summary:

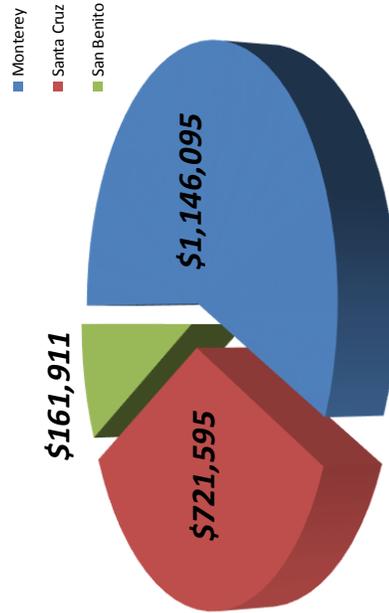
AB2766 FY20 will represent twenty-nine years of awarding vehicle emission reduction grants via the District’s AB 2766 Grant Program. To date, the District has awarded over \$34 million in funding to projects designed to yield vehicle emission reduction benefits within San Benito, Santa Cruz, and Monterey Counties. The anticipated FY20 AB2766 grant budget is **\$2,029,600**, which includes the disencumbering of unused funds from previous grant years.

As approved by your Board in June 2019, the FY20 budget allocation included funds for the Electric Vehicle Incentive Program (EVIP) for the general public. The EVIP has run consecutively for three years. Starting with FY17, the District has incentivized the purchase of 734 electric vehicles within Santa Cruz, Monterey and San Benito counties. The FY20 EVIP application cycle opened on August 1, 2019. Each year the incentive amounts have been reduced in order to increase the number of EVIP participants.

In the FY20 grant cycle, the District received and reviewed 11 applications and found all projects eligible for funding. One of these projects was submitted under the Public Agency EV Incentive **Replacement** Program. The EV voucher request totaled **\$30,000**.

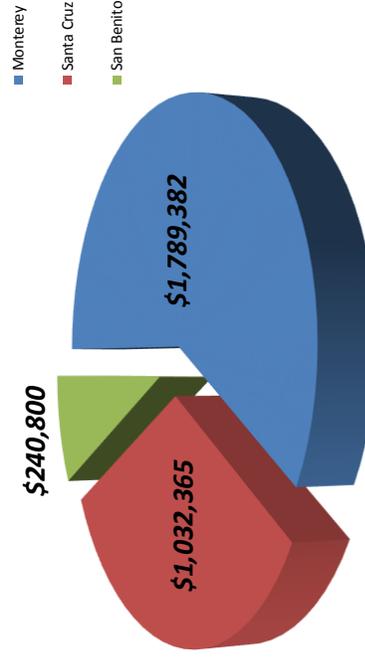
The ten direct emission reduction projects submitted were ranked according to the calculated cost effectiveness (C/E) expressed as cost per either annual tons or pounds of pollution reduced. The total requested amount of FY20 AB2766 grant funds from all of these eligible projects is **\$3,062,547**.

FY20 AB2766 Anticipated Funding by County



Anticipated Total Budget **\$2,029,600**

FY20 Total Funding Request by County



Total Funding Request **\$3,062,547**

FY20 AB2766 Eligible Applicant List

App. No	County	Applicant	Project Type	Funding Request
20-01	Monterey	MST	New Transit, Electric Bus	\$ 400,000
20-02	Monterey	City of Salinas	E-Fleet Replacement	\$ 400,000
20-03	Monterey	City of Gonzales	E-Fleet Replacement	\$ 189,382
20-04	Monterey	City of Monterey	Adaptive Signal Control	\$ 400,000
20-05	Monterey	City of King	Roundabout Enhancement	\$ 400,000
				\$ 1,789,382
20-06	San Benito	San Benito County High School District	Electric Shuttle Replacement	\$ 175,300
20-07	San Benito	San Benito County High School District	G2G Vehicle Replacement	\$ 65,500
				\$ 240,800
20-08	Santa Cruz	City of Santa Cruz	E-Vanpool Replacement	\$ 202,365
20-09	Santa Cruz	Santa Cruz County	Adaptive Signal Control, Soquel	\$ 400,000
20-10	Santa Cruz	City of Capitola	Adaptive Signal Control, 41st Corridor	\$ 400,000
				\$ 1,032,365
Grand Total				\$ 3,062,547

EV Incentive Replacement Program	Additional Vehicles to Replace
19-24 Santa Cruz County of Santa Cruz	2 \$ 30,000

FY 20 Ranking List: Direct Emission Reduction Projects

App No.	County	Applicant Name	Project Description	Grant Request, \$	C/E, \$/ton	Annual tons reduced
20-04	Monterey	City of Monterey	Adaptive Signal Control	\$ 400,000	\$8,231	7.70
20-01	Monterey	MST	New Transit, Electric Bus	\$ 400,000	\$63,967	0.50
20-05	Monterey	City of King	Roundabout Enhancement	\$ 400,000	\$82,309	0.34
20-02	Monterey	City of Salinas	E-Fleet Replacement	\$ 400,000	\$123,259	0.26
20-03	Monterey	City of Gonzales	E-Fleet Replacement	\$ 189,382	\$16,900,133	0.001
20-07	San Benito	San Benito County High School District	G2G Vehicle Replacement	\$ 65,450	\$611,489	0.01
20-06	San Benito	San Benito County High School District	Electric Shuttle Replacement	\$ 175,300	\$3,217,275	0.004
20-10	Santa Cruz	City of Capitola	Adaptive Signal Control, 41st Corridor	\$ 400,000	\$21,859	2.93
20-09	Santa Cruz	Santa Cruz County	Adaptive Signal Control, Soquel	\$ 400,000	\$25,828	1.77
20-08	Santa Cruz	City of Santa Cruz	E-Vanpool Replacement	\$ 202,365	\$1,473,435	0.01

Staff Recommendations:

AB2766 FY20: Staff Recommendations for Grant Projects

App No.	County	Applicant Name	Project Description	Grant Award	C/E, \$/ton	Annual tons reduced
20-04	Monterey	City of Monterey	Adaptive Signal Control	\$382,032	\$8,231.00	7.70 *96% funding
20-01	Monterey	MST	New Transit, Electric Bus	\$382,032	\$63,967	0.50 *96% funding
20-02	Monterey	City of Salinas	E-Fleet Replacement	\$382,032	\$123,259	0.26 *96% funding
20-06	San Benito	San Benito County High School District	Electric Shuttle Replacement	\$161,910	\$3,217,275	0.004
20-10	Santa Cruz	City of Capitola	Adaptive Signal Control, 41st Corridor	\$360,798	\$21,859.00	2.93 *90% funding
20-09	Santa Cruz	Santa Cruz County	Adaptive Signal Control, Soquel	\$360,798	\$25,828.00	1.77 *90% funding

NOTE: * Indicates a percentage between the County allocated amount and the individual project funding request

EV Voucher Incentive Replacement Program

20-21	Santa Cruz	County of Santa Cruz		\$0		
				Sub Total	\$2,029,600	
				Sub Total	\$0	
				Grand Total	\$2,029,600	
				FY19 Budget	\$2,029,600	
				Remaining Funds	\$0	

FY20 Direct Emission Reduction Project Description and Analysis:

Monterey County:

20-01: Monterey Salinas Transit – New Transit Electric Bus
C/E: \$63,967 Annual tons reduced: 0.5/Annual lbs. reduced: 1001 *Recommended Partial Funding: \$382,032

In this current proposal for AB 2766 funds, MST is seeking to procure an additional electric bus. MST receives an annual allocation of State Low Carbon Transit Operations Program (LCTOP) funds, and the FY120 LCTOP allocation will be used toward the purchase of a new electric bus. However, because the price of electric transit buses is so much more than a typical diesel bus, MST's allocation alone will not cover the entire cost of the bus. In recent years MST has expanded its fleet with cleaner technologies and now has one battery electric trolley, two battery electric buses, and four hybrid diesel-electric buses in its fleet. MST is requesting a grant from the AB 2766 program to help pay for the electric bus. MST is requesting **\$400,000** for this project.

20-01 Staff Assessment:

The total cost of this project is **\$1,010,000**. MST will employ its own match funding in the amount of **\$424,559** to assist in funding the project. The remaining necessary funds will come from a California Air Resources Board (CARB) HVIP voucher in the amount of **\$120,000** and LCTOP funds in the amount of **\$65,441**. MST will continue data collection and analysis to be reported back to MBARD to confirm emission reductions. MST is still awaiting the delivery of three other electric buses. The cost effectiveness (C/E) for this project is above the \$20K threshold but will also yield acceptable emission reduction. Based on the allocated funding amount and ranking for Monterey County projects, staff recommends partial funding of this project as indicated.

20-02: City of Salinas- Medium Duty E-Fleet Replacement

C/E: \$123,259/\$61.63 Annual Tons Reduced: 0.26/Annual lbs. reduced: 519 *Recommended Partial Funding: \$382,032

The City of Salinas proposes to replace three existing city vehicles that are normally used for City related activities such as field inspections, special events, traffic management, trainings, etc. City staff currently uses a 1986 Ford Econoline, 1996 Ford Econoline and a 1986 International S1600 flatbed truck to perform these duties. The City of Salinas proposes to replace these vehicles with three 2019 Phoenix Motors medium-duty EVs totaling **\$445,072** after HVIP and Disadvantaged Communities incentives. The Phoenix Motor medium-duty vehicles are 100% electric. The city would need three level 2 chargers at cost of

\$10,656 after HVIP incentives plus installation. The City of Salinas is requesting **\$400,000** to implement this electric vehicle fleet replacement project.

20-02 Staff Assessment:

The City of Salinas would be replacing the three vehicles described above. They would be replaced with the 2019 Phoenix Motors E450 chassis utilizing the E-200 Phoenix fully electric drive system. Unit 730 would be replaced with the flatbed truck version of this chassis. This truck is primarily used for special event set up and tear down but will also have the ability to perform various tasks where a flatbed is needed. Units 51 and 41 would be replaced with the electric cargo truck version and would be used by Traffic and Transportation to perform surveys and assessments. The project proposal also includes the installation of two Level II chargers at the corner of W. Alisal and Lincoln Ave in the City of Salinas Lot 17 and one level two charger at the 426 Work Street Public Works yard. These locations would be subject to change if there are any unforeseen conflicts with the installation. At the immediate onset and over the project life of 15 years, the total annual vehicle emissions would be zero, which is significant with respect to air quality within the District. Staff recommends partial funding as indicated for this project.

20-03: City of Gonzales- E Vehicle Replacement

C/E: \$16,900,133/\$8,450 Annual Tons Reduced: 0.001/Annual lbs. reduced: 2 Not Recommended

The City of Gonzales is proposing to replace the existing gasoline powered animal control vehicle with an all-electric vehicle. The City Climate Action Plan supports the use of more electric vehicles in the City’s fleet. HVIP funding in the amount of **\$80,000** will be used as matching funds to offset the cost of the electric vehicle. A stand-alone dedicated level 2 charge station would also be installed. The City is requesting **\$189,942** to implement this project.

20-03 Staff Assessment:

The animal control vehicle used by the City of Gonzales drives only 2500 miles annually. Hence, the calculated C/E for this project is exceedingly low (i.e. cost per ton of pollutant reduced is extremely high). As well, the corresponding annual emission reduction is infinitesimally small, which renders this project as one with minimal emission reduction benefit. Based on available funding for Monterey County, staff does not recommend funding this project.

20-04: City of Monterey- Adaptive Traffic Signal Control Project – Foam Street/Munras Avenue

C/E: \$8,231 Annual Tons Reduced: 7.70

***Recommended Partial Funding: \$382,032**

The City of Monterey experiences significant arterial roadway congestion along the corridors of Foam and Munras Avenues (including Fremont Avenue, which creates inefficient traffic flow resulting in considerable emissions of pollutants and particulate matter. A reliable and effective traffic control system ensures that traffic volumes are distributed throughout the City of Monterey traffic network. Having made the improvements at Lighthouse and Del Monte Avenues, The City of Monterey is requesting additional funding to purchase and install an Adaptive Traffic Signal Control (ATSC) system on the Foam Corridor at seven (7) intersections and Munras-Fremont corridor at seven (7) for a total of 14 intersections. This includes the purchase of new controller cabinets, controllers and vehicle detection necessary to the system.

The City of Monterey staff extensively researched the different adaptive systems and based on a study of 12 different systems conducted by Kimley Horn and Associates, the City chose to deploy the SCOOT (Split Cycle Offset Optimization Technique) system initially on the Lighthouse Corridor. SCOOT has since been deployed on Del Monte Avenue and will be implemented on North Fremont Street. The Foam Street corridor consists of seven (7) signalized intersections (shown in Figure 1) on Foam Street from its Lighthouse Avenue to David Avenue, totaling 0.78 miles. The Munras Avenue-Fremont Street corridor consists of seven (7) signalized intersections from Soledad to Abrego and from Camino El Estero to Webster Curve totaling 1.41 miles. Due to the high cost of the system, the City is requesting funding in the amount of **\$400,000** supplemented with Measure X and local funding to expand the SCOOT traffic adaptive system along these corridors. Total project cost is projected at **\$776,829**.

20-04 Staff Assessment:

The Foam Street corridor is located in the Cannery Row area, north of the Presidio and Downtown Monterey. The corridor is largely a commercial and tourist destination area comprised of the Monterey Bay Aquarium, Cannery Row, restaurants, retail outlets, and various hotels. Foam Street has an ADT of 13,500 for a two-lane one-way road, this is approximately one-third of the traffic on Lighthouse Ave the other major arterial in the Cannery Row area. The Foam corridor is designed to work in conjunction with traffic flows on Lighthouse Avenue and Del Monte Avenue. However, the Cannery Row area has unpredictable peaks due to tourist traffic and can have anywhere from 2 to 4 million tourists per year.

The Munras-Fremont corridor provides the entrance into Downtown Monterey from Highway 1. The Munras Avenue section runs from Soledad to the intersection of Fremont and Abrego. Fremont Street runs from Camino El Estero to the intersection of Munras and Webster where Fremont Street and Munras Avenue merge. The intersection of Fremont and Aguajito is not included in the Munras project corridor as it is a Caltrans owned intersection. This corridor provides access to Downtown Monterey, Del Monte Center (Regional Shopping Center) and Monterey Peninsula College. The ADT on Munras Avenue is 26,700 and the ADT on Fremont Street is 31,900. Comparatively, Fremont carries

nearly 60% of the ADT on Highway 1 (55,000 vehicles per day) and Munras carries nearly 50%. The calculated C/E due to the sheer volume of traffic along both the Foam Street and Munras Avenue corridors is significantly high (i.e., the cost per ton of pollutant reduced is extremely low). Correspondingly the amount of annual pollutants reduced is also significantly high at 7.7 tons annually. If funded the City of Monterey will have 5 major corridors under the same adaptive control system, which would further optimize traffic flow in the City and therefore significantly reduce vehicle emissions. Staff recommends partial funding as indicated of this project.

20-05: King City– Roundabout Enhancement Project

C/E: \$82,309 Annual Tons Reduced: 0.34 *Not Recommended*

The Transportation Agency of Monterey County (TAMC) contracted with Kittleson & Associates to conduct a Regional Roundabout Study. The firm used Caltrans' Intersection Control Evaluation guidelines for a holistic approach to compare constructing modern roundabouts vs. stop or signalized intersections at 25 locations around Monterey County, which included the Broadway Street / San Antonio Drive / US101 Northbound ramp terminals in King City. A Roundabout was determined to be the preferred control for the intersection. The results of the study and direction to proceed with the project were unanimously approved by the King City Council. King City is committed in continuing the planning and design process to ultimately construct its first Roundabout. The City was fortunate to receive a FY17 AB 2766 grant to prepare a Project Study Report – Project Development Support (PSR/PDS) Project Initiation Document (PID) per Cal Trans Project Development Procedures Manual. The document provides a key opportunity for Caltrans, TAMC and King City to achieve consensus on the purpose, need, scope, and schedule of the project. During the development of the PID, an alternative was developed that reduced both the size of the proposed roundabout and improvements within State right of way. This resulted in the PID being no longer required for the project to move forward and allow for the next step in the project to be preparation of Plans, Specifications and Estimate (PS&E) and Environmental Documents (ED). This also allows for project cost saving and a reduction in project schedule.

The proposed project of preparation of PS&E and ED documents will be implemented in the fall of 2019 and will position the City to program the project with Caltrans and TAMC and to fund construction using a combination of local traffic impact fees, TAMC funds, and additional grant funding. King City is requesting **\$400,000** to implement and complete the PS&E for this roundabout project. Total cost is projected at **\$589,200**.

20-05 Staff Assessment:

The calculated C/E and the annual emission reduction do not compare well to other similar direct emission projects. For example, the City of Salinas FY20 AB2766 project 20-02 yields an annual emission reduction of nearly the same amount with the implementation of just three EVs to their fleet. Moreover, the emissions of the Salinas project would be zero immediately at the onset of the project and would continue to

be zero throughout the entire project life, which the roundabout project would not produce. The factors influencing the calculation results for this project are primarily due to the low average daily traffic at the project location and the high funding request amount. Further, the FY17 grant 17-03 will need to be amended as it is the intention of King City to use those funds for the design PS&E process along with the funding request in this FY20 application. Other key factors surrounding this project include the total project duration based on typical milestone assumptions of roughly 3 to 4 years before the start of construction. Also project build approval will be contingent on environmental sensitivity and clearance, community support, right of way acquisition, the complexity of deviations from mandatory and advisory design standards as well as the project itself. In considering the relationship between roundabout benefits and design/construction costs, the roundabout alternative is not expected to provide a positive return on the investment until 14 years of operations have been reached, or 20 years from the PSR-PDS start date. Based on available funding for Monterey County, staff does not recommend funding this project.

San Benito County:

20-06: San Benito High School District- Electric Shuttle/Van Replacement Project

C/E: \$3,217,275/\$1,609 Annual Tons Reduced: 0.004/Annual lbs. reduced: 8 *Recommended Funding: \$161,910

The objective of this project is to replace one older mid-size gasoline powered sport utility vehicle (SUV) used daily to meet various student needs. The replacement vehicle would mainly service the special needs student population during the day and the athletic programs in the evenings and weekends. The replacement vehicle will be an all-electric shuttle bus, which will be traveling to Santa Cruz, San Benito, Monterey and Santa Clara counties on a regular basis. SBHSD is requesting **\$175,300** for this project, which includes the cost of EV charging infrastructure.

20-06 Staff Assessment:

San Benito High School District (SBHSD) is in the process of converting their diesel school bus and white vehicle fleets to all electric. Total project cost is **\$354,800** and SBHSD will be applying for CA HVIP funding to fill the funding gap. The C/E calculated for this project is quite high and yields relatively low annual emission reduction. However, as cited above for the City of Salinas project 20-02, the vehicle emissions would be zero immediately at the onset of the project and would continue to be zero throughout the entire project life. Based on the allocation for San Benito County, staff recommends partial funding of this project.

20-07: San Benito High School District- Gas to Gas Vehicle Replacement Project
C/E: \$611,489/\$306 Annual Tons Reduced: 0.01/Annual lbs. reduced: 26 **Not Recommended**

The objective of this project is to replace two (2) older high mileage gasoline powered trucks that serve as maintenance vehicles for SBHSD. The vehicles travel in around the school district on a daily basis. The replacement vehicles will be two cleaner burning gasoline trucks. SBHSD is requesting **\$65,450** for this project.

20-07 Staff Assessment:

The C/E calculated for this project is well above the CMAQ threshold and yields relatively low annual emission reduction. Even though the C/E is lower than project 20-06, the gasoline powered replacement vehicles will continue to emit pollutants throughout the life of the project. This project would yield zero emissions immediately and throughout the life of the project if the replacement vehicles were all electric as indicated in SBHSD project 20-06 above. Based on the allocation for San Benito County and the staff recommendation of funding project 20-06, staff does not recommend funding this project.

Santa Cruz County:

20-08: City of Santa Cruz – Electric Shuttle/ Van Replacement Project
C/E: \$1,473,435/\$737 Annual Tons Reduced: 0.01/Annual lbs. reduced: 22 **Not Recommended**

The City has successfully implemented a CNG vanpool for its refuse truck drivers since 2002, with funding for that vehicle purchase provided by the Monterey Bay Air Resources District (MBARD). The original CNG van has since become difficult and costly to maintain and was rendered unusable in May 2019. This is unfortunate as there is increased interest in participating in the refuse driver vanpool. Moreover, through a May 2019 survey, the City has learned that there are 63 other employees interested in participating in a van or carpool. With the success of the refuse driver vanpool and leveraging the planned electric vehicle charging infrastructure expansion to be installed by the City by the end of the year, the project would provide a prime opportunity to scale up this beneficial amenity to employees while simultaneously reducing vehicle emissions. The project would implement a three all-electric vehicle vanpool, initially expanding the refuse truck vanpool participation from 8 to 15 people and two new vanpools that would accommodate an additional 16 vanpool participants. The City of Santa Cruz is requesting funding of **\$202,365** for this project

20-08 Staff Assessment:

The total project cost is **\$567,365**. The City will apply for PG&E funding of **\$100,000** for the EV charging infrastructure. They will provide secured match funding of **\$25,000** and will also apply for CARB HVIP funding for the remaining balance of the project cost. Lightning Systems will be the electric drive-train conversion integrator for the three 2019 Ford Transit chassis. The project involves the replacement of just one vehicle with a low annual vehicle miles traveled (VMT). This results in a very high C/E and a corresponding low annual emission reduction, which is typical of vehicle replacement projects like this, (i.e. low VMT and high project cost both of which are key variables in the calculation equations). Based on the limited funding allocation and the large delta in project C/E with the other Santa Cruz County projects which rank significantly higher, staff does not recommend funding this project.

20-09: County of Santa Cruz – Adaptive Traffic Signal Control Project – Soquel Ave/Soquel San Jose Road/41st Ave
C/E: \$25,828 Annual Tons Reduced: 1.77 *Recommended Partial Funding: \$360,798

The County of Santa Cruz experiences significant traffic congestion along Soquel Drive and Soquel San Jose Road – Porter Street in the town of Soquel as well as the at the top of 41st Avenue. The corridors consist of four traffic signals along Soquel Drive and Soquel San Jose Road – Porter Street, and share a common traffic signal at the Soquel Drive / Porter Street intersection. A recently completed traffic study reported deficient LOS E traffic operations at the Soquel Drive / Porter Street intersection during the weekday AM and PM peak hours, and documented oversaturated traffic flow conditions for extended periods of time (i.e., 7:00 - 9:00 AM and 2:30 – 7:00 PM). The County of Santa Cruz is requesting grant funding to implement the InSync™ adaptive traffic signal control system along the project corridor. The County of Santa Cruz is requesting funding of **\$400,000** for the project.

20-09 Staff Assessment:

The project as submitted includes the integration of the 41st Avenue Adaptive Traffic Signal Control system awarded to the City of Capitola in the FY19 AB2766 grant cycle (Grant 19-13). As such, the County of Santa Cruz is proposing to install the same adaptive control system as the one selected by the City of Capitola. As the Soquel Avenue corridor is connected at the north end of 41st Avenue, integrating the same system into the two corridors will result in optimal congestion management and significant motor vehicle emission reduction along the 41st and Soquel Avenue corridors. The C/E and corresponding annual emission reduction yield significant cost benefit. The estimated cost to implement the InSync™ System is **\$600,000** and the County of Santa Cruz will provide match funding of **\$200,000** as well as the shortfall from the requested amount of **\$400,000** to complete the project. Based on the project’s high ranking and the allocation of funding for Santa Cruz county, staff recommends partial funding of this project as indicated.

20-10: City of Capitola – Adaptive Traffic Signal Control Project – 41st Ave. Corridor Enhancement

C/E: \$21,859 Annual Tons Reduced: 2.93

***Recommended Partial Funding \$360,798**

The City of Capitola is requesting funding to implement a regional adaptive system along the 41st Avenue corridor and the total project area spans into Santa Cruz County, Caltrans, and Capitola jurisdictions. In addition to significantly reducing motor vehicle emissions, this proposed implementation would decrease average travel time along the corridor by approximately 442,562 vehicle-hours and decrease fuel consumption by approximately 199,700 gallons of fuel in the first year after installation. The proposed 41st Avenue project corridor in Capitola jurisdiction will include seven (7) signal controlled intersections from 41st Avenue /Soquel Avenue on the north end to 41st Avenue / Jade Street on the south end. The requested grant amendment funding will be used to cover the remaining equipment, construction and installation costs to install the 41st Avenue adaptive system in both the City and Caltrans right-of-way. The City is requesting a grant amount of **\$400,000** to complete this project.

20-10 Staff Assessment:

This proposed project was initially selected under the 2016 AB2766 Clean Air Management Program (Agreement No. 16-02) to install an adaptive traffic control system at four (4) intersections in the City of Capitola from 41st Avenue / Clares Street on the north end to 41st Avenue / Jade Street on the south end. Adaptive signal coordination for the Caltrans ramps was scoped in the initial 2016 AB2766 grant application, but Caltrans did not want to install an adaptive system at the time due to operational changes with their Highway 1 ramp metering system. The original grant amount that was awarded in 2016 was **\$369,600**. However, due to the complexity in attempting to integrate the Caltrans owned intersections, the project was not able start before the contract expiration date. Caltrans has now given the City approval to go ahead with the installation of the InSync™ System on their three intersections at the 41st Avenue/Hwy 1 overpass. From recent developments, the 41st Avenue adaptive signal system project has garnered significant support and coordination from the local community and regional agencies. The annual motor vehicle emission reduction is significant at 2.93 tons as well as the decrease in idling and delay time through the entire corridor.

The estimated cost to implement the project for the seven intersections is **\$903,758**. The FY19-13 grant to the City of Capitola of **\$400,000** will cover the cost and installation of the three Caltrans owned intersections. The City will provide match funding in the amount of **\$142,960** to cover any remaining costs. The expansion project ranks the highest for total annual emission reduction of all the eligible Santa Cruz County projects submitted. Based on the funding allocation to Santa Cruz County and the eligible project rankings, staff recommends partial funding this project as indicated.

