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Public Works Commission

ACTION CALENDAR
January 26, 2021

To: Honorable Mayor and Members of the City Council

From: Public Works Commission

Submitted by: Matthew Freiberg, Chair, Public Works Commission

Subject: Public Works Commission Recommendation for the Five-Year Paving Plan

RECOMMENDATION

Adopt a resolution that recommends approval of the first three years of the Five-Year Paving Plan, for FY2021 to FY2025, as proposed by Staff, with special advisories regarding prioritization of permeable paving on select streets.

SUMMARY

This Report to council is comprised of two sections:

1. A recommendation on the City's Proposed 5-Year Paving Plan
2. An update from the Public Works Commission (PWC) on the approach to address the on-going paving condition deficit through the creation and implementation of a Long-Term Paving Master Plan.

(1) The City of Berkeley's Street Rehabilitation and Repair Policy (Street Policy) requires that a 5-year paving plan be reviewed each year and adopted formally by the City Council, with advice from the PWC. The Rehabilitation Plan (commonly called the Paving Plan) for FY 2021 to FY2025 has been reviewed by the PWC and it is recommending adoption of the first three years of the plan. It is worth noting that streets that are prioritized as part of the Vision Zero high injury streets, Pedestrian Plan, and Bicycle Plan only include the paving of these streets, they do not include any of the associated roadway improvements that are recommended as part of this plan. It is recommended that City Council secure additional funding to ensure that these improvements are funded and incorporated into the redesign of these roads.

(2) Berkeley's streets are in an "at-risk" condition, far from the City's target of having our streets in "good" condition, and they continue to decline year on year. In January 2020, City Council directed the Public Works Department and the PWC to develop a long-term Paving Master Plan. Due to the suspension of commissions and the continued suspension of subcommittee activities, limited progress has been made developing this plan. Currently Staff and the PWC are collaborating on an update of the Paving Policy

that will provide guidance for the future of paving in the City and the development of the Paving Master Plan.

FISCAL IMPACTS OF RECOMMENDATION

This Paving Plan is based on the Adopted Biennial Budget for Fiscal Years 2021 & 2022, and on the following estimated available funding levels from all sources, including State Transportation (Gas) Tax, Measure B, Measure BB, Measure F, and the General Fund.

Five-Year Paving Program Funding Sources by Year, in $					
Fund Description	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**
State Transportation Tax	495,303	495,303	495,303	495,303	495,303
State Transportation Tax –SB1	1,230,000	1,310,000	2,000,000	2,000,000	2,000,000
Measure B - Local Streets & Roads	660,000	330,000	0	0	0
Measure BB – Local Streets & Roads	1,380,000	1,654,000	2,700,000	2,700,000	2,700,000
Measure F Vehicle -Registration Fee	155,000	155,000	155,000	155,000	155,000
Capital Improvement Fund	1,925,000	1,925,000	1,925,000	1,925,000	1,925,000
TOTAL	**5,845,303**	**5,869,303**	**7,272,303**	**7,272,303**	**7,272,303**

In addition to the City's program funding, additional grant and bond funding has been made available for paving in FY 2023, summarized below.

Other Funding for Paving by Year, in $					
Funding Source	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**
Grants (South Side Complete Streets – Bancroft, Telegraph, and Dana)*	0	0	1,200,000	0	0
TOTAL	**0**	**0**	**1,200,000**	**0**	**0**

*The grant funded projects are not included in the five-year paving plan

CURRENT SITUATION AND ITS EFFECTS

The City's streets continue to be evaluated as "at risk," and do not meet the City's target to be in "good" condition. The latest pavement condition analysis conducted by PEI, identifies the city-wide average Pavement Condition Index (PCI) to be 57, ranging across council districts from 52.8% to 61.9%. The average PCI is down from 58 in 2019. The lack of resources available to the Paving Program are resulting in a continual decline in the condition of the City's streets.

District	Area (sqft)	Mileage	Percent of Total	PCI in 2020
District 1	7,652,427	38.6	19.6%	55.3
District 2	6,164,641	32.7	15.8%	52.8
District 3	5,132,474	24.3	13.1%	58.8
District 4	3,411,318	16.1	8.7%	53.7
District 5	6,209,611	37.1	15.9%	61.9
District 6	4,750,199	35.3	12.2%	56.5
District 7	1,672,660	7.8	4.3%	55.9
District 8	4,053,495	23.0	10.4%	58.1

This report addresses the following topics:

- Review of the new 5-year paving plan for fiscal years 2021 – 2025.
- An update on the progress towards updating the City's Paving Policy and for a master plan to improve the condition of Berkeley's streets.

Review of 5-year Paving Plan

Staff prepared a list of paving projects for the new 5-year planning period (FY2021 – 2025). This was prepared using, StreetSaver program analysis, knowledge of what has been accomplished in recent years, and available funding. The proposed plan is summarized as follows.

	FY2021	FY2022	FY2023	FY2024	FY2025	Total	% of Total
Square Footage of Paving							
Arterials, sqft	0	0	7,200	0	54,910	62,110	2.3%
Collectors, sqft	61,700	128,340	177,040	194,515	37,500	599,095	22.0%
Residential, sqft	351,450	464,628	395,067	549,901	304,620	2,065,666	75.8%
Total Area	413,150	592,968	579,307	744,416	397,030	2,726,871	100.0%
Miles							
Arterials, miles	0.00	0.00	0.04	0.00	0.21	0.31	2.1%
Collectors, miles	0.10	0.68	0.95	0.94	0.21	2.88	19.2%
Residential, miles	2.08	2.65	2.05	3.41	1.60	11.79	78.7%
Total miles	**2.18**	**3.33**	**3.04**	**4.35**	**2.04**	**14.98**	**100.0%**
Total Bikeways	*0.76*	*1.31*	*1.34*	*2.21*	*1.38*	*7.01*	*53%*
Bicycle, Pedestrian, and Vision Zero High Injury Streets	*0.58*	*1.32*	*2.29*	*2.22*	*1.38*	*7.79*	*52%*
Cost							
Arterials, $millions	$0	$0	$0.102	$0.000	$0.683	$0.785	2.6%

Collectors, $millions	$0.269	$1.519	$1.987	$2.685	$0.634	$7.095	23.6%
Residential, $millions	$5.189	$3.654	$3.934	$4.005	$4.509	$22.212	73.8%
Discretionary, $millions	*Staff intends to use all of the Discretionary Fund to comply with the City Council referral to use 50% of funding on Bicycle, Pedestrian, and Vision Zero High Injury Streets.*						
Curb Ramps	$0.150	$0.348	$0.240	$0.474	$0.126	$1.344	5%
Total cost, $millions	**$5.845**	**$5.869**	**$7.275**	**$7.275**	**$7.275**	**$30.092**	**100%**
Total Bikeways	*$1.267*	*$2.922*	*$3.340*	*$4.373*	*$4.509*	*$16.412*	*55%*
Bicycle, Pedestrian, and Vision Zero High Injury Streets	*$1.181*	*$2.922*	*$4.291*	*$4.373*	*$4.510*	*$17.277*	*57%*

The above summary does not include $1.2 million in grant funding in FY2023.

The PWC paving subcommittee discussed the plan with Public Works Department staff and we have the following comments.

1. Many of the City's streets with the lowest PCI are on residential streets. The proposed plan by staff shifts more focus of the paving plan to residential streets. While this prioritization of residential streets falls outside of the City's Paving Policy for allocation of paving funds by street type, this plan helps address the roads that are in the greatest need and will do the most to improve the citywide average PCI. The PWC agrees with this approach in the near term but recommends shifting focus back to the primary transportation network streets (arterials, collectors, bus routes, and the low stress bike network).

   The following table provides a breakdown of the cost allocated to different street types in the current five-year paving plan compared to the Paving Policy:

	Cost Breakdown Per Paving Policy[1]	**Cost Breakdown Per 5-Year Paving Plan (FY2021-2025)**
Arterial streets	10%	2.6%
Collector streets	50%	23.6%
Residential streets	25%	73.8%
Discretionary	15%	0%

2. The plan reviewed against the council referral to Develop a Bicycle Lane and Pedestrian Street Improvements Policy, which recommends that at least 50 percent of the repaving budget be allocated to Vision Zero pedestrian high injury streets and

[1] This allocation is specific to Measure B Sales Tax and Gas Tax revenues, but as a matter of practice has been applied to all sources of revenues in recent years.

bikeways between 2022 to 2025. The 5-year paving plan was reviewed against the council referral figures in addition to the May 2017 Bike Plan, the March 2020 Vision Zero Action Plan, and the October 2020 Draft Pedestrian Plan.

Between 2022 - 2025, approximately 58 percent of the paving dollars ($16.1 million) and 56 percent of the paved miles (7.2 miles) are allocated to the bikeway and vision zero high injury streets, so the requirement in the council referral is met. However, there are no funds allocated towards the "Prioritized High-Injury Streets" identified in the Draft Pedestrian Plan. The high priority bikeways (Tier 1 & 2 in the bike plan) make up slightly more than half of the bikeway miles & slightly less than half of the bikeway dollars allocated in the paving plan. The lower priority (Tier 3) bikeways account for the balance. Inclusion of some of the high priority projects in the pedestrian plan and shifting some of the Tier 3 bikeway projects to Tier 1 bikeway projects should be considered to better meet the intent of the council referral.

It is worth noting that the five year paving plan does not include any of the additional roadway improvements that are intended to improve bike and pedestrian safety that are recommended in the Bicycle Plan, Pedestrian Plan, and Vision Zero. It is recommended that City Council secure additional funding to ensure that these improvements are funded and incorporated into the redesign of these roads.

3. The PWC has reviewed the plan for contiguous streets and that the work is bundled for cost effective implementation. While there are multiple short sections of paving in the current five-year plan, staff has made every effort to bundle projects to the maximum extent practicable, with consideration of other extenuating factors such as subsurface utility maintenance and funding limitations. This is balanced with having the paving work be spread equitably across all Council Districts of the City. Over the 5-year Paving Plan, financial resources and miles of roads surfaced are allocated fairly equally across all council districts. This allocation is very much in line with the historic interpretation of equity that has been practiced by the City.

District	Mileage	Percent of Total	PCI in 2020	FY 2021 – 25 Investment ($)	FY 2021 – 25 Miles Surfaced	Projected PCI in 2025
District 1	38.6	19.6%	55.3	$4,046,266 (13%)	1.69 (11%)	47
District 2	32.7	15.8%	52.8	$4,590,248 (15%)	1.73 (12%)	46
District 3	24.3	13.1%	58.8	$4,620,579 (15%)	2.38 (16%)	52
District 4	16.1	8.7%	53.7	$4,073,349 (14%)	1.36 (9%)	50
District 5	37.1	15.9%	61.9	$3,911,654 (13%)	1.68 (11%)	55
District 6	35.3	12.2%	56.5	$2,382,033 (8%)	2.06 (14%)	49
District 7	7.8	4.3%	55.9	$3,576,655 (12%)	2.39 (16%)	58
District 8	23.0	10.4%	58.1	$2,891,269 (10%)	1.7 (11%)	53

The Public Works Commission is currently evaluating an update to the definition of equity. The leading definition would move the Public Works Department towards a

results oriented performance evaluation, where investment of resources are allocated in a way that seeks to provide equivalent PCI outcomes across all planning areas, rather than focusing purely on the monetary inputs.

4. The PWC agrees that 15% of available funding should be reserved for discretionary and/or demonstration projects. The PWC is in the process of developing a recommendation for how to manage this reserve as well as criteria to help prioritize projects to be funded with the discretionary reserve. Over the next five years, Staff intends to use the entirety of this funding source to comply with the October 29, 2019 City Council Referral that requires 50 percent of funding to be allocated towards priority bicycle paths and high injury vision zero streets. As a result, there are not any permeable paving projects included in the five-year plan. The PWC encourages City Council and Staff to consider incorporating pervious roadway surfaces as part of the Southside Complete Streets Project.

5. The PWC would also like to make note that the current plan does not include the paving of Derby and Ward Streets between Shattuck Avenue and Telegraph Avenues. The Public Works Commission only became aware of this council resolution from September 2019 on November 2020. This note in our report is highlight that these streets will be brought up for consideration in next year's five-year plan for years three, four, or five of that plan.

Master Plan to Improve the Condition of Berkeley's Streets

The current citywide average PCI is 57 on a scale of 100, and is firmly in the "at risk," category. Streets in this category tend to degrade at a more accelerated rate than those in a "good" or "fair" condition. Under the proposed paving plan, the PCI is estimated to dip to 52 by 2023. This is far from the City's target of having our streets in "good" condition (PCI of 70 -79), and it is clear that action is needed to reverse this trend before our roads fall into "failing" condition where massive reconstructs will be needed for roads city-wide. Below is a summary of the current conditions of Berkeley's streets by road type that has been prepared by staff and PEI.

Section/Area	PCI in 2020	PCI in 2019	Total Center Lane Miles
Overall system	57	58	214.2
Arterial streets	63	66	21.9
Collector streets	60	64	37.1
Residential streets	55	55	155.3
Bus routes	62	66	39.2
Bike lanes	61	62	63.6

In January 2020, Council provided direction for the Public Works Department and the PWC to develop a long-term Paving Master Plan to develop a road map and understand the funding and resources needed to improve Berkeley's streets to a "good" condition.

Due to the suspension of the City Commissions during COVID, little progress has been made today. However, with the PWC re-authorized to commence meetings, we are re-engaging in this process, addressing the following items starting with items 1 and 2.

1. Update the Street Policy – The policy was last updated in 2009. The policy should be reviewed and updated to incorporate current thinking about using life cycle cost analysis, Vision Zero, equity, sustainable multi-benefit technologies, and other factors. With these considerations in mind, the updated policy should include new performance metrics that capture the diversity objective the City holds for our road network.

2. Equity – Historically, it has been the practice of the City to evaluate equity in roadway investment in terms of equivalent allocation of financial resources and miles of roadway surfaced among the Council Districts. However, this does not result in equal outcomes across the City.
   The Public Works Commission is currently evaluating an update to the definition of equity. The leading definition would move the Public Works Department towards a results oriented performance evaluation, where investment of resources are allocated in a way that seeks to provide equivalent PCI outcomes across all planning areas, rather than focusing purely on the monetary inputs.

3. A long-term paving capital plan – The Master Plan should include a 40-year paving plan to help the City identify the most efficient path to move the current PCI from “at risk” to “good.” This approach spans two cycles of a typical asphalt road’s expected useful life, and allows for decisions on street paving to be optimized for the greatest bang for our buck over the full life of our assets, rather than the current short-term approach.

4. Financing Strategy -- Lack of funding for street paving plays a major role in the overall condition of the City’s streets. As part of the Master Plan, the work should include a long-term funding gap analysis, a financial plan to address the funding gap, a cost-of-service rate study to develop recommended rates needed to sustainably finance the Paving Program, and an impact fee analysis to allow the City to recoup the cost of accelerated wear on our roads imposed by heavy vehicles. We also recommend the master plan include an evaluation of grant funding opportunities.

5. Public Engagement -- Public feedback is critical to the successful development and implementation of any City Plan. The Master Plan should provide guidance for public engagement strategies that will allow the collection and synthesis of public feedback regarding the future of the City streets.

The recommendation to approve the 5-year paving plan and to forward it to Council was discussed by the Public Works Commission at its November 12, 2020 meeting. Motion to approve made by Krpata and seconded by Hitchen. Ayes: Freiberg, Humbert, Schueler, Erbe, Constantine; Noes: Nesbitt; Abstain: none; Absent: Brennan,

ENVIRONMENTAL SUSTAINABILITY

Permeable pavers provide a way of reducing the volume of storm water entering the City storm drain system; improving the quality of urban runoff from the roadway that is conveyed to local creeks and the Bay; and reducing greenhouse gas emissions by installing a durable product that requires less maintenance than traditional asphalt concrete.

Full Depth Reclamation (FDR), a cost-effective alternative to traditional street reconstruction methods, is planned for use in several of the streets selected for rehabilitation. It recycles much of the existing pavement on site, and incorporates it into the pavement subgrade, thereby reducing truck trips to and from construction sites. In addition, the Paving Plan includes repair of the City's deteriorating storm drain infrastructure that minimizes degradation of water quality in local creeks and the Bay. These repairs are consistent with the City of Berkeley's 2011 Watershed Management Plan. Furthermore, the Paving Plan also proposes approximately 5.8 miles of improvements to bicycle routes, and improvements to sidewalk and curb ramps adopted from the Bicycle and Pedestrian Plans. These steps result in lower emissions of greenhouse gases into the environment, which is consistent with the goals of the 2009 Berkeley Climate Action Plan.

RATIONALE FOR RECOMMENDATION
It is the policy of the City of Berkeley that there shall be a Five-year Street Rehabilitation Plan for the entire City to be adopted by the City Council. Further, the proposed plan provides for much needed street infrastructure improvements that are consistent with the City's Street Policy.

ALTERNATIVE ACTIONS CONSIDERED
None.

CITY MANAGER
Staff recommends the City Council approve the first three years of the paving plan, per the Commission's recommendation. In addition, to respond to the recent recommendations of the City Audit, staff updated the street repair program website: https://www.cityofberkeley.info/Public_Works/Sidewalks-Streets-Utility/Street_Repair_Program.aspx to identify the level of funding necessary to move our street conditions from at-risk to good, and to identify funding sources to achieve and maintain our streets in good condition.

CONTACT PERSON
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Attachments:

1. Resolution
2. Five-Year Street Rehabilitation Plan for FY 2021 to FY 2025
3. Map of proposed roadway surfacing projects

RESOLUTION NO. ##,###-N.S.

APPROVAL OF THE FIRST THREE YEARS OF THE FIVE-YEAR PAVING PLAN FOR FY 2021 TO FY2025

WHEREAS, the Street Rehabilitation Policy, Resolution No. 55,384-N.S. approved on May 22, 1990, requires there be a Five-Year Street Paving Plan for the entire City to be adopted by the City Council, and

WHEREAS, the City Council requests advice from the Public Works Commission on the Five-Year Paving Plan; and

WHEREAS, on November 12, 2020, the Public Works Commission voted to approve the first three years of the Five-Year Paving Plan, submitting the FY 2021 to FY2025 Five-year Paving Plan to City Council, attached as Exhibit A;

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the first three years of the FY 2021 to FY2025 Five-Year Paving Plan attached as Exhibit A hereof, is hereby adopted.

Exhibit A: Five-Year Paving Plan for FY2021 to FY2025

EXHIBIT A
5-YEAR STREET REHABILITATION PLAN FOR FY 2021 TO FY 2025

Revised: 10/30/2020

Fiscal Year	Street ID	Section ID	Street Name	From	To	Class	Treatment (from StreetSaver)	Updated Total Cost	District	P	Mileage	Current PCI	Last M&R Date	Last Paved
2021	319006	45	ADA ST	SACRAMENTO ST	ORDWAY ST	R	Reconstruct	$ 780,000	1, 5	N	0.26	25	10/1/1992	MILL AND OVERLAY W/FABRIC
2021	932042	30	BANCROFT WAY	6TH ST	8TH ST	R	Heavy Mtce	$ 70,800	2	3A	0.13	55	11/1/1986	MILL AND OVERLAY W/FABARIC
2021	932042	35	BANCROFT WAY	8TH ST	SAN PABLO AVE	R	Heavy Mtce	$ 86,000	2	3A	0.19	59	NA	
2021	829104	60	CHANNING WAY	MARTIN LUTHER KING	MILVIA ST	R	Reconstruct	$ 462,920	4	2A to 2B*	0.13	15	5/1/1995	THIN AC OVERLAY(1.5 INCHES)
2021	729104	63	CHANNING WAY	MILVIA ST	SHATTUCK AVE	R	Heavy Rehab	$ 267,640	4	2A to 2B*	0.13	34	9/1/1991	MILL AND OVERLAY W/FABRIC
2021	319129	38	CURTIS ST	HOPKINS ST	CEDAR ST	R	Reconstruct	$ 202,267	1	N	0.07	11	12/1/1992	MILL AND OVERLAY W/FABRIC
2021	322129	40	CURTIS ST	CEDAR ST	VIRGINIA ST	R	Reconstruct	$ 360,800	1	N	0.13	16	10/1/1992	MILL AND OVERLAY W/FABRIC
2021	729152	64	DURANT AVE	SHATTUCK AVE	FULTON ST	C	Heavy Rehab	$ 268,880	4	N	0.10	32	8/12/1997	MILL AND OVERLAY W/FABRIC
2021	739186	60	EMERSON ST	ADELINE ST	SHATTUCK AVE	R	Light Rehab	$ 192,320	3	N	0.15	59	4/1/2001	RECONSTRUCT STRUCTURE (AC)
2021	839191	60	ESSEX ST	ADELINE ST	TREMONT ST	R	Heavy Mtce	$ 88,160	3	N	0.06	68	4/1/2001	RECONSTRUCT STRUCTURE (AC)
2021	739191	62	ESSEX ST	TREMONT ST	SHATTUCK AVE	R	Light Rehab	$ 141,920	3	N	0.11	64	4/1/2001	RECONSTRUCT STRUCTURE (AC)
2021	418290	30	HOLLY ST	ROSE ST	CEDAR ST	R	Reconstruct	$ 596,960	1	N	0.17	7	10/1/1992	MILL AND OVERLAY W/FABRIC
2021	115550	25	SPRUCE ST	ARCH ST	EUNICE ST	R	Heavy Rehab	$ 379,834	5, 6	3C*	0.19	47	11/1/1990	MILL AND THIN OVERLAY
2021	920528	50	2ND ST	UNIVERSITY AVE	ADDISON ST	R	Heavy Rehab	$ 560,000	2	N	0.09	32	8/27/1997	MILL AND OVERLAY W/FABRIC
2021	320686	10	SPINNAKER WAY	BREAKWATER DR	MARINA BLVD	R	Reconstruct	$ 1,000,000	1	N	0.28	22	8/1/1991	OVERLAY
2021			CONTINGENCY					$ 386,802						
			TOTAL FUNDING					$ 5,845,303			2.18			
								22%	bike/ped					
								23%	bike/ped not incl contingency					

FISCAL YEAR 2021 TOTALS

Total Estimated Cost and Miles $5,845,303 2.18 miles

	Mileage	Estimated Cost	% Cost	% Mileage
Arterials	0.00	$0	0%	0%
Collectors	0.10	$268,880	5%	5%
Residentials	2.08	$5,189,621	95%	95%
Bikeways	0.76	$1,267,194	23%	35%
Curb Ramps		$150,000	3%	
Total		$1,417,194	26%	

District	Cost	Miles
1	$2,550,027	0.78
2	$716,800	0.40
3	$422,400	0.33
4	$999,440	0.36
5	$579,917	0.22
6	$189,917	0.09
7	$0	0.00
8	$0	0.00
	$5,458,501	2.18

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A
5-YEAR STREET REHABILITATION PLAN FOR FY 2021 TO FY 2025

Revised: 10/30/2020

Fiscal Year	Street ID	Section ID	Street Name	From	To	Class	Treatment (from StreetSaver)	Updated Total Cost	District	P	Mileage	Current PCI	Last M&R Date	Last Paved
2022	931073	50	BROWNING ST	ADDISON ST	DWIGHT WAY	R	Heavy Rehab	$ 953,600	2	N	0.50	35	10/1/1995	MILL AND OVERLAY W/FABRIC
2022	213119	10	COLUSA AVE	NORTH CITY LIMIT	SOLANO AVE	C	Heavy Rehab	$ 1,518,904	5	2B	0.68	44	11/1/1986	MILL AND OVERLAY W/FABRIC
2022*	728180	50	ELLSWORTH ST	BANCROFT WAY	DWIGHT WAY	R	Reconstruct	$ 319,661	7	N	0.25	22	11/1/1992	MILL AND OVERLAY W/FABRIC
2022*	736180	60	ELLSWORTH ST	DWIGHT WAY	WARD ST	R	Light Mtce	$ 113,356	7	N	0.38	92	5/11/2011	RECONSTRUCT SURFACE (AC)
2022*	736180	65	ELLSWORTH ST	WARD ST	STUART ST	R	Light Mtce	$ 22,671	3	N	0.05	92	5/11/2011	RECONSTRUCT SURFACE (AC)
2022*			ELLSWORTH ST	STUART ST	ASHBY AVE	R	Light Mtce	$ 113,356	3	N	0.24	92	5/11/2011	RECONSTRUCT SURFACE (AC)
2022	736227	60	FULTON ST	DWIGHT WAY	BLAKE ST	R	Heavy Mtce	$ 82,628	3	3E*	0.06	60	6/1/1993	MEDIUM AC OVERLAY (2 INCHES)
2022	736227	61	FULTON ST	BLAKE ST	PARKER ST	R	Heavy Mtce	$ 27,840	3	3E*	0.07	69	6/1/1993	MEDIUM AC OVERLAY (2 INCHES)
2022	736227	63	FULTON ST	PARKER ST	STUART ST	R	Heavy Mtce	$ 382,092	3	3E*	0.25	58	2/1/1992	THIN AC OVERLAY(1.5 INCHES)
2022	920275	40	HEINZ AVE	7TH ST	SAN PABLO AVE	R	Reconstruct	$ 910,408	2	3E	0.26	22	11/1/1992	MILL AND OVERLAY W/FABRIC
2022*			STUART ST	FULTON ST	ELLSWORTH ST	R	Heavy Rehab	$ 196,000	3	N	0.12	39	11/13/1998	RECONSTRUCT STRUCTURE (AC)
2022*	736561	70	STUART ST	ELLSWORTH	HILLEGASS AVE	R	Heavy Rehab	$ 319,661	7	N	0.35	39	11/13/1998	RECONSTRUCT STRUCTURE (AC)
2022*	636561	78	STUART ST	HILLEGASS AVE	BENVENUE AVE	R	Heavy Rehab	$ 79,915	8	N	0.07	33	11/13/1998	RECONSTRUCT STRUCTURE (AC)
2022*			STUART ST	BENVENUE AVE	COLLEGE AVE	R	Heavy Rehab	$ 132,400	8	N	0.07	33	11/13/1998	RECONSTRUCT STRUCTURE (AC)
2022			CONTINGENCY					$ 696,811						
			TOTAL FUNDING					$ 5,869,303			3.32			
								50%	bike/ped					
								56%	bike/ped not incl contingencyy					
								73%	bike/ped not incl contingency or ebmud share					

* in Fiscal Year column denotes coordination and/or cost sharing with EBMUD project

FISCAL YEAR 2022 TOTALS

Total Estimated Cost and Miles $5,869,303 3.32 miles

	Mileage	Estimated Cost	% Cost	% Mileage
Arterials	0.00	$0	0%	0%
Collectors	0.68	$1,518,904	29%	20%
Residentials	2.65	$3,653,588	71%	80%
Bikeways	1.31	$2,921,872	56%	39%
Curb Ramps		$348,000	7%	
Total		$3,269,872	63%	

District	Cost	Miles
1	$0	0.00
2	$1,864,008	0.76
3	$824,587	0.78
4	$0	0.00
5	$1,518,904	0.68
6	$0	0.00
7	$752,678	0.97
8	$212,315	0.14
	$5,172,492	3.32

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A
5-YEAR STREET REHABILITATION PLAN FOR FY 2021 TO FY 2025

Revised: 10/30/2020

Fiscal Year	Street ID	Section ID	Street Name	From	To	Class	Treatment (from StreetSaver)	Updated Total Cost	District	P	Mileage	Current PCI	Last M&R Date	Last Paved
2023	729042	65	BANCROFT WAY	SHATTUCK AVE	FULTON ST	C	Heavy Rehab	$ 341,126	4	4*	0.09	41	8/7/1997	MILL AND OVERLAY W/FABRIC
2023	729042	60	BANCROFT WAY	MILVIA WAY	SHATTUCK AVE	C	Heavy Rehab	$ 418,348	4	4*	0.13	34	12/1/1989	MILL AND OVERLAY W/FABRIC
2023	728042	76	BANCROFT WAY	TELEGRAPH AVE	BOWDITCH ST	C	Heavy Mtce	$ 133,325	7	4*	0.13	63	12/1/1990	MILL AND OVERLAY W/FABRIC
2023	628042	78	BANCROFT WAY	BOWDITCH ST	COLLEGE AVE	C	Heavy Mtce	$ 161,036	7	3C*	0.13	56	12/1/1990	MILL AND OVERLAY W/FABRIC
2023	627042	80	BANCROFT WAY	COLLEGE AVE	PIEDMONT AVE	C	Heavy Rehab	$ 254,076	7	3C*	0.13	28	12/1/1990	MILL AND OVERLAY W/FABRIC
2023	728140	50	DANA ST	BANCROFT WAY	DWIGHT WAY	R	Heavy Rehab	$ 458,900	7	2A to 2B*	0.25	45	12/1/1989	MILL AND OVERLAY W/FABRIC
2023	736140	60	DANA ST	DWIGHT WAY	BLAKE ST	R	Light Rehab	$ 91,440	7	3E	0.06	44	12/1/1989	MILL AND OVERLAY W/FABRIC
2023	736140	65	DANA ST	BLAKE ST	WARD ST	R	Light Rehab	$ 466,580	7	3E*	0.25	65	7/30/2008	RECONSTRUCT STRUCTURE (AC)
2023*	627155	85	DWIGHT WAY	HILLSIDE AVE	DEAD END ABOVE	R	Reconstruct	$ 387,040	8	N	0.11	22	9/1/1993	RECONSTRUCT SURFACE (AC)
2023*	627155	83	DWIGHT WAY	PIEDMONT AVE	HILLSIDE AVE	R	Reconstruct	$ 501,840	7, 8	N	0.14	12	9/1/1993	MILL AND OVERLAY W/FABRIC
2023*	637217	80	FOREST AVE	COLLEGE AVE	CLAREMONT BLVD	R	Heavy Rehab	$ 618,000	8	N	0.36	45	8/1/1996	RECONSTRUCT STRUCTURE (AC)
2023	835431	65	OTIS ST	RUSSELL ST	ASHBY AVE	R	Heavy Rehab	$ 224,000	3	N	0.13	49	4/1/2001	RECONSTRUCT STRUCTURE (AC)
2023	728584	50	TELEGRAPH AVE	BANCROFT WAY	DWIGHT WAY	C	Heavy Rehab	$ 473,060	7	3C*	0.25	39	7/1/1988	MILL AND OVERLAY W/FABRIC
2023	319293	47	HOPKINS ST	GILMAN ST	SACRAMENTO ST	R	Heavy Rehab	$ 233,942	5	3A, C	0.10	32	9/13/2002	MILL AND OVERLAY W/FABRIC
2023	213293	50	HOPKINS ST	HOPKINS CT	MONTEREY AVE	C	Light Rehab	$ 87,193	5	3A, C	0.05	59	9/13/2002	MILL AND OVERLAY W/FABRIC
2023	213293	52	HOPKINS ST	MONTEREY AVE	MC GEE AVE	C	Heavy Rehab	$ 119,167	5	2A, C	0.05	47	12/1/1989	RECONSTRUCT STRUCTURE (AC)
2023	319293	45	HOPKINS ST	NORTHSIDE AVE	PERALTA AVE	R	Light Mtce	$ 239,587	1	N	0.10	78	9/13/2002	MILL AND OVERLAY W/FABRIC
2023	319293	46	HOPKINS ST	PERALTA AVE	GILMAN ST	R	Heavy Mtce	$ 493,031	1, 5	N	0.27	58	9/13/2002	MILL AND OVERLAY W/FABRIC
2023	319293	49	HOPKINS ST	SACRAMENTO ST	HOPKINS CT	A	Heavy Rehab	$ 101,755	5	3A, C	0.04	38	9/13/2002	MILL AND OVERLAY W/FABRIC
2023	319293	40	HOPKINS ST	SAN PABLO AVE	STANNAGE AVE	R	Light Mtce	$ 37,188	1	N	0.09	74	9/13/2002	MILL AND OVERLAY W/FABRIC
2023	319293	42	HOPKINS ST	STANNAGE AVE	NORTHSIDE AVE	R	Heavy Mtce	$ 181,658	1	N	0.17	69	9/13/2002	MILL AND OVERLAY W/FABRIC
2023			CONTINGENCY					$ 1,253,011						
			TOTAL FUNDING					$ 7,275,303			3.04			
								46%	bike/ped					
								55%	bike/ped not incl contingency					

* in Fiscal Year column denotes coordination and/or cost sharing with EBMUD project

FISCAL YEAR 2023 TOTALS

Total Estimated Cost and Miles $7,275,303 3.04 miles

	Mileage	Estimated Cost	% Cost	% Mileage
Arterials	0.04	$101,755	2%	1%
Collectors	0.95	$1,987,331	33%	31%
Residentials	2.05	$3,933,206	65%	67%
Bikeways	1.34	$3,339,948	55%	44%
Curb Ramps		$240,000	4%	
Total		$3,579,948	59%	

District	Cost	Miles
1	$704,948	0.51
2	$0	0.00
3	$224,000	0.13
4	$759,474	0.23
5	$788,573	0.37
6	$0	0.00
7	$2,289,337	1.27
8	$1,255,960	0.54
	$6,022,292	3.04

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A
5-YEAR STREET REHABILITATION PLAN FOR FY 2021 TO FY 2025

Revised: 10/30/2020

Fiscal Year	Street ID	Section ID	Street Name	From	To	Class	Treatment (from StreetSaver)	Updated Total Cost	District	P	Mileage	Current PCI	Last M&R Date	Last Paved
2024	830104	57	CHANNING WAY	ROOSEVELT AVE	MARTIN LUTHER KING	R	Reconstruct	$ 695,500	4	3E	0.19	1	9/1/1991	MILL AND OVERLAY W/FABRIC
2024	830104	50	CHANNING WAY	SACRAMENTO ST	ROOSEVELT AVE	R	Heavy Rehab	$ 696,780	4	3E	0.31	22	9/1/1991	MILL AND OVERLAY W/FABRIC
2024	111127	10	CRESTON RD	GRIZZLY PEAK BLVD	SUNSET LANE	R	Heavy Mtce	$ 93,378	6	N	0.36	63	6/1/1995	RECONSTRUCT STRUCTURE (AC)
2024	115127	20	CRESTON RD	SUNSET LANE	GRIZZLY PEAK BLVD	R	Heavy Mtce	$ 116,258	6	N	0.36	64	11/1/1988	RECONSTRUCT SURFACE (AC)
2024	322142	48	DELAWARE ST	ACTON ST	SACRAMENTO ST	C	Heavy Mtce	$ 108,175	1	4*	0.13	61	10/1/1992	MILL AND OVERLAY W/FABRIC
2024	636146	78	DERBY ST	HILLEGASS AVE	COLLEGE AVE	R	Reconstruct	$ 577,560	8	3E*	0.14	25	8/8/1997	MILL AND OVERLAY W/FABRIC
2024	729152	60	DURANT AVE	MILVIA ST	SHATTUCK AVE	C	Reconstruct	$ 693,355	4	N	0.13	11	11/1/1992	MILL AND OVERLAY W/FABRIC
2024	111249	17	GRIZZLY PEAK BLVD	KEELER AVE	MARIN AVE	C	Reconstruct	$ 859,622	6	3C*	0.27	19	10/1/1992	MILL AND OVERLAY W/FABRIC
2024	739285	70	HILLEGASS AVE	ASHBY AVE	CITY LIMIT (WOOLSEY	R	Light Mtce	$ 98,900	8	3E	0.16	76	7/28/2003	RECONSTRUCT STRUCTURE (AC)
2024	736285	60	HILLEGASS AVE	DWIGHT WAY	ASHBY AVE	R	Light Mtce	$ 312,000	8	3E	0.61	78	5/31/2000	RECONSTRUCT STRUCTURE (AC)
2024	213293	53	HOPKINS ST	MC GEE AVE	CARLOTTA AVE	C	Heavy Rehab	$ 149,680	5	2A, C	0.06	45	12/1/1989	RECONSTRUCT STRUCTURE (AC)
2024	213293	55	HOPKINS ST	CARLOTTA AVE	JOSEPHINE ST	C	Heavy Rehab	$ 874,580	5	2A, C	0.35	50	12/1/1989	MILL AND OVERLAY
2024	115344	80	LATHAM LANE	MILLER AVE	GRIZZLY PEAK	R	Heavy Mtce	$ 38,500	6	N	0.10	59	6/1/1994	RECONSTRUCT STRUCTURE (AC)
2024	834371	65	MC GEE AVE	DERBY ST	RUSSELL ST	R	Light Rehab	$ 551,992	3	N	0.25	59	12/10/1998	RECONSTRUCT STRUCTURE (AC)
2024	834371	60	MC GEE AVE	DWIGHT WAY	DERBY ST	R	Light Rehab	$ 374,400	3	N	0.26	51	7/1/1988	THIN OVERLAY w/FABRIC
2024	115380	70	MILLER AVE	HILLDALE AVE	SHASTA RD	R	Light Rehab	$ 449,880	6	N	0.66	53	6/1/1994	RECONSTRUCT STRUCTURE (AC)
2024			CONTINGENCY					$ 584,743						
			TOTAL FUNDING					$ 7,275,303			4.35			
								60%	bike/ped					
								65%	bike/ped not incl contingency					

FISCAL YEAR 2024 TOTALS

Total Estimated Cost and Miles $7,275,303 4.35 miles

	Mileage	Estimated Cost	% Cost	% Mileage
Arterials	0.00	$0	0%	0%
Collectors	0.94	$2,685,412	40%	22%
Residentials	3.41	$4,005,148	60%	78%
Bikeways	2.21	$4,372,797	65%	51%
Curb Ramps		$474,000	7%	
Total		$4,846,797	72%	

District	Cost	Miles
1	$108,175	0.13
2	$0	0.00
3	$926,392	0.51
4	$2,085,635	0.63
5	$1,024,260	0.41
6	$1,557,638	1.76
7	$0	0.00
8	$988,460	0.91
	$6,690,560	4.35

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A
5-YEAR STREET REHABILITATION PLAN FOR FY 2021 TO FY 2025

Revised: 10/30/2020

Fiscal Year	Street ID	Section ID	Street Name	From	To	Class	Treatment (from StreetSaver)	Updated Total Cost	District	P	Mileage	Current PCI	Last M&R Date	Last Paved
2025	729014	63	ALLSTON WAY	MILVIA ST	SHATTUCK AVE	R	Heavy Rehab	$ 228,800	4	N	0.14	37	11/1/1990	MILL AND THIN OVERLAY
2025	931129	50	CURTIS ST	UNIVERSITY AVE	DWIGHT WAY	R	Reconstruct	$ 2,009,440	2	N	0.57	9	8/18/1997	MILL AND THICK OVERLAY
2025	834146	50	DERBY ST	SACRAMENTO ST	MARTIN LUTHER KING	R	Reconstruct	$ 1,688,560	3	3E	0.48	18	10/1/1992	MILL AND OVERLAY W/FABRIC
2025	736146	70	DERBY ST	FULTON ST	TELEGRAPH AVE	R	Reconstruct	$ 1,069,280	3, 7	3E	0.31	13	10/1/1992	MILL AND OVERLAY W/FABRIC
2025	319241	40	GILMAN ST	SAN PABLO AVE	SANTA FE AVE	A	Heavy Rehab	$ 683,116	1	4*	0.27	48	10/2007	MILL AND OVERLAY
2025	111249	15	GRIZZLY PEAK BLVD	EUCLID AVE	KEELER AVE	C	Reconstruct	$ 634,478	6	3E	0.21	13	11/1/1990	MILL AND THICK OVERLAY
2025	639671	78	WOOLSEY ST	HILLEGASS AVE	COLLEGE AVE	R	Reconstruct	$ 434,534	8	3A	0.11	13	NA	
			CONTINGENCY					$ 527,095						
			TOTAL FUNDING					$ 7,275,303			2.08			
								62%	bike/ped					
								67%	bike/ped not incl contingency					

FISCAL YEAR 2025 TOTALS

Total Estimated Cost and Miles $7,275,303 2.08 miles

	Mileage	Estimated Cost	% Cost	% Mileage
Arterials	0.27	$683,116	10%	13%
Collectors	0.21	$634,478	9%	10%
Residentials	1.60	$5,430,614	80%	77%
Bikeways	1.38	$4,509,968	67%	66%
Curb Ramps		$126,000	2%	
Total		$4,635,968	69%	

District	Cost	Miles
1	$683,116	0.27
2	$2,009,440	0.57
3	$2,223,200	0.63
4	$228,800	0.14
5	$0	0.00
6	$634,478	0.21
7	$534,640	0.15
8	$434,534	0.11
	$6,748,208	2.08

FISCAL YEAR 2021-2025 TOTALS

Total Estimated Cost and Miles $33,540,515 14.98 miles

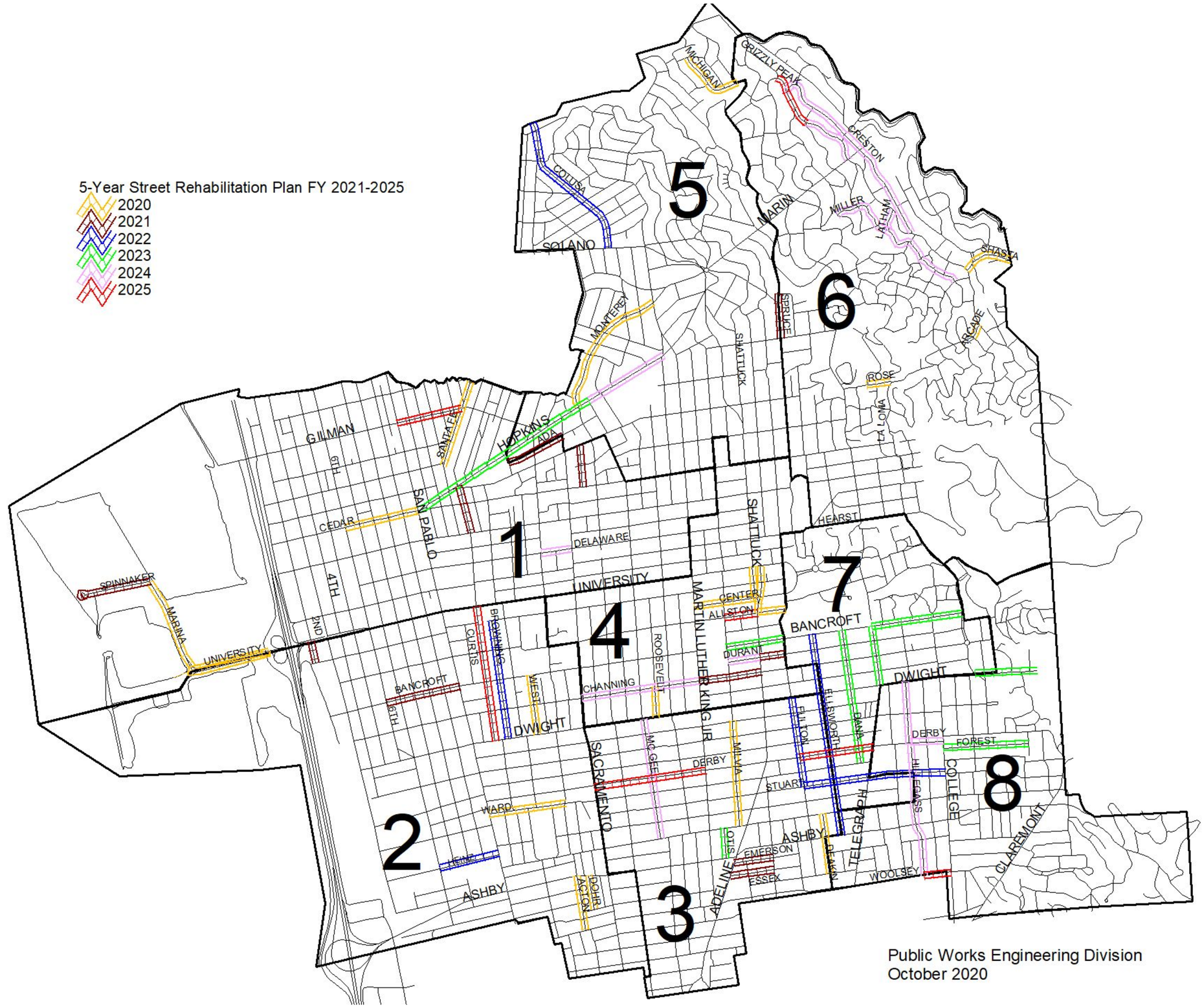
	Mileage	Estimated Cost	% Cost	% Mileage
Arterials	0.31	$784,871	3%	2%
Collectors	2.88	$7,095,005	24%	19%
Residentials	11.79	$22,212,176	74%	79%
Bikeways	7.01	$16,411,779	55%	47%
Curb Ramps		$1,338,000	4%	
Total		$17,749,779	59%	

District	Cost	Miles
1	$4,046,266	1.69
2	$4,590,248	1.73
3	$4,620,579	2.38
4	$4,073,349	1.36
5	$3,911,654	1.68
6	$2,382,033	2.06
7	$3,576,655	2.39
8	$2,891,269	1.70
	$30,092,053	14.98

Total Funding $33,540,515

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

*Proposed bike facilities from 2017 Bike Plan.



Public Works Engineering Division
October 2020