

PIMA COUNTY TRANSPORTATION ADVISORY COMMITTEE  
FY19-20 Pavement Program Roadway Prioritization

May 28, 2019  
Arterial/Collectors and Local Roads



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**PIMA COUNTY**

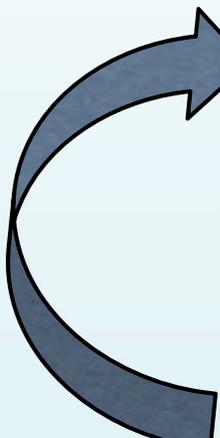


On April 23, the TAC recommended that the proposed FY 20 \$15M department allocation for pavement repair/preservation be prioritized as following:

- Distribute funding equally by Board of Supervisor District
- Distribute 50% of funding to local roads and 50% to arterial/collectors
- Generate a road list of the above allocations using StreetSaver algorithms maximizing value
- Prioritize local road funding to repair worst first and
- Allow Department of Transportation staff to adjust and generate final roads list selection through:
  - Minimizing mobilization cost by strategic grouping
  - Minimizing fragmentation of work with subdivisions or along arterial/collector roadway segments
  - Selecting additional roadway segments to allocate budget remnants



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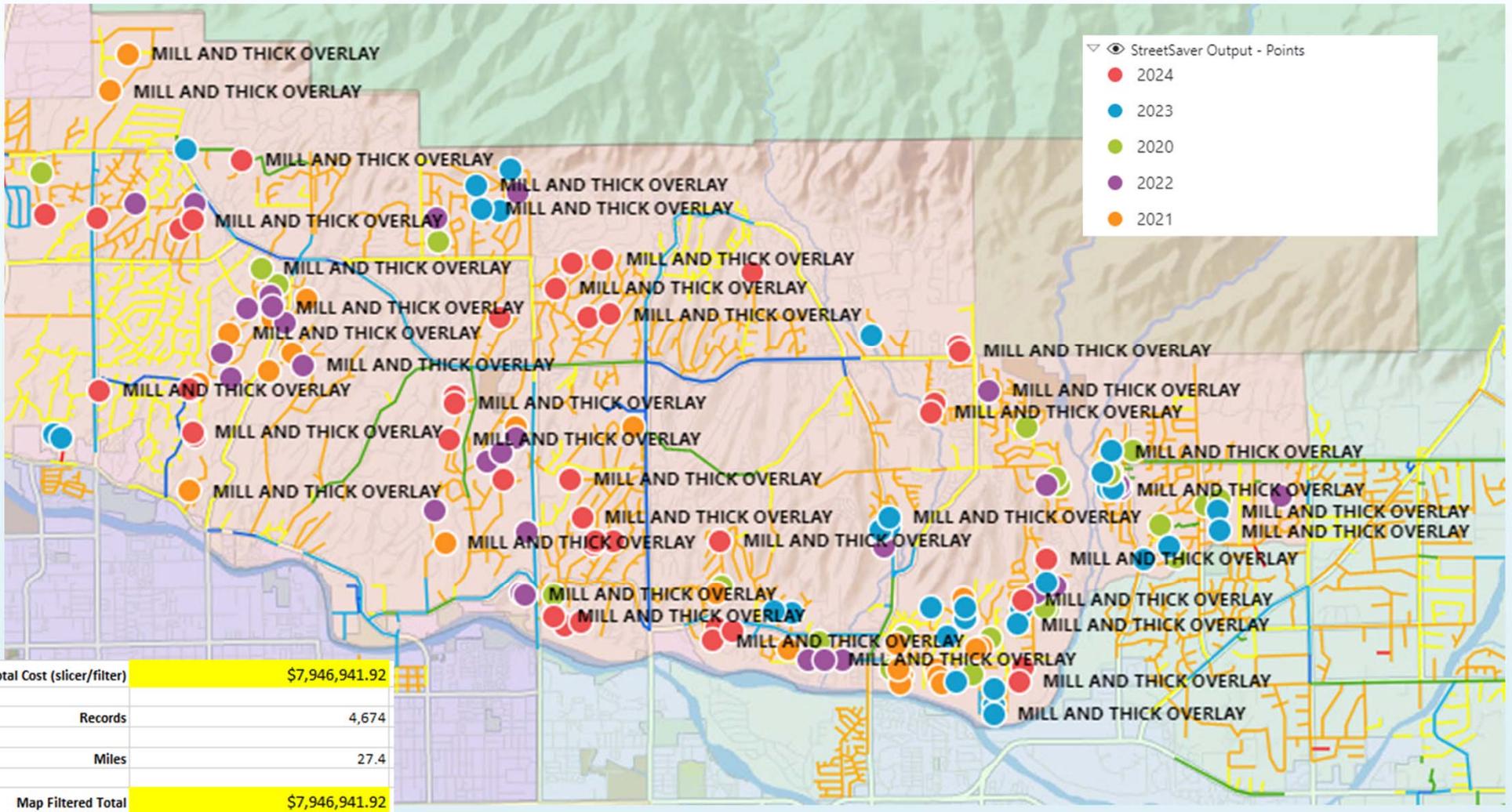


This was the principal problem to resolve

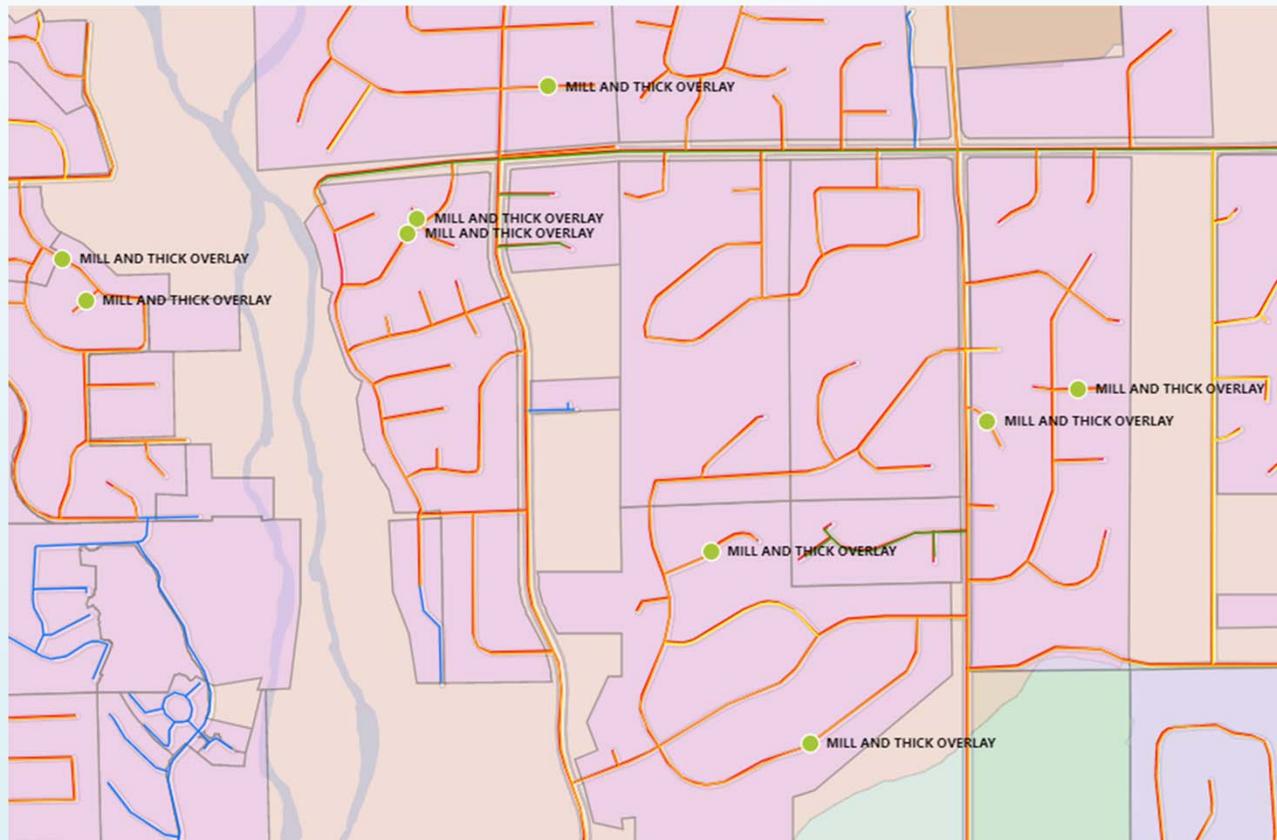
- Selected Filters:
  - District
  - Year
  - Treatment
  - Scenario name



- Selected Filters:
  - District = 1
  - Year = 2020-2024
  - Treatment = Mill and Thick Overlay

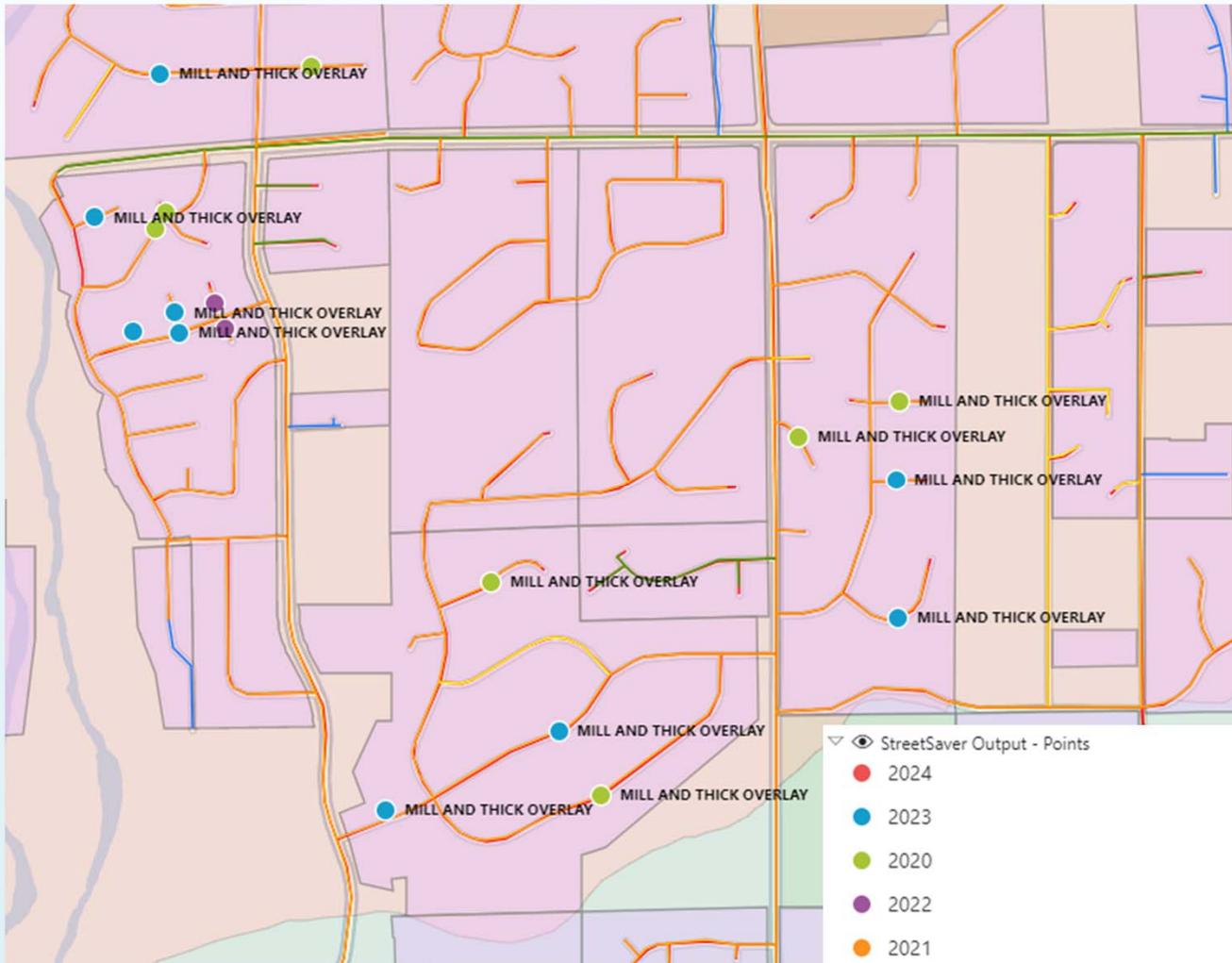


- Selected Filters:
  - District = 1
  - Year = 2020
  - Treatment = Mill and Thick Overlay
- Added Subdivision layer to minimize fragmentation within subdivisions





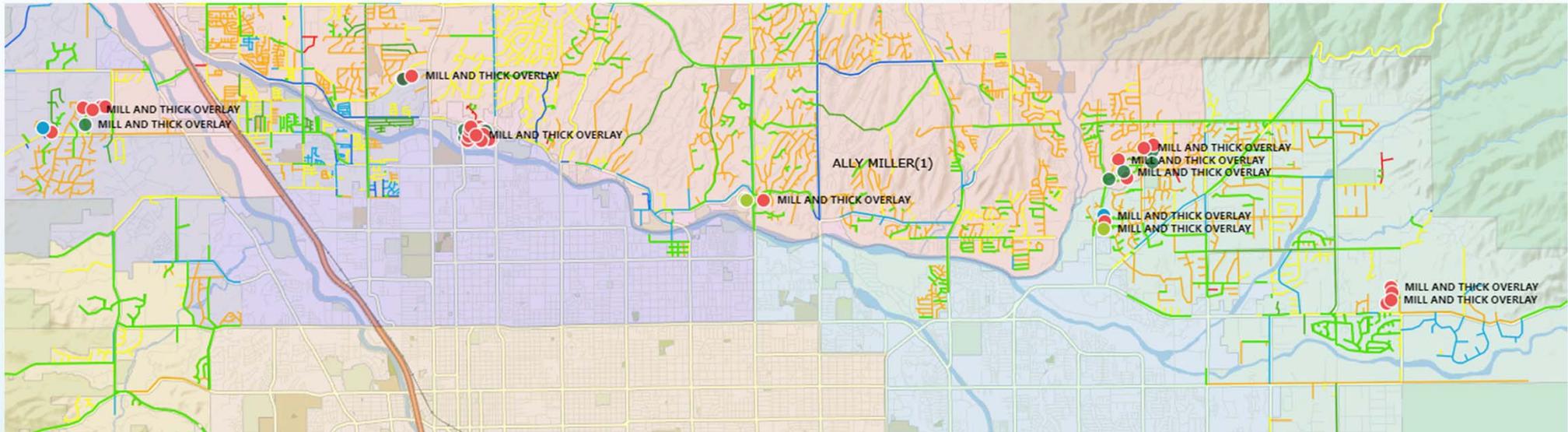
- Selected Filters:
  - District = 1
  - Year = 2020-2024
  - Treatment = Mill and Thick Overlay



- Added years
- Lassoed points in an area
- Added roads that were within subdivision, but not part of Scenario (didn't have points)
- Subset:
  - Adjacent to scenario road
  - Within subdivision
  - PASER/PCI same
  - Roads each year
- Performed same steps for each BOS District
- Reviewed District Total
- Packaged areas together
  - Package 1:
    - BOS D1, D3, D4
  - Package 2:
    - BOS D2, D4, D5



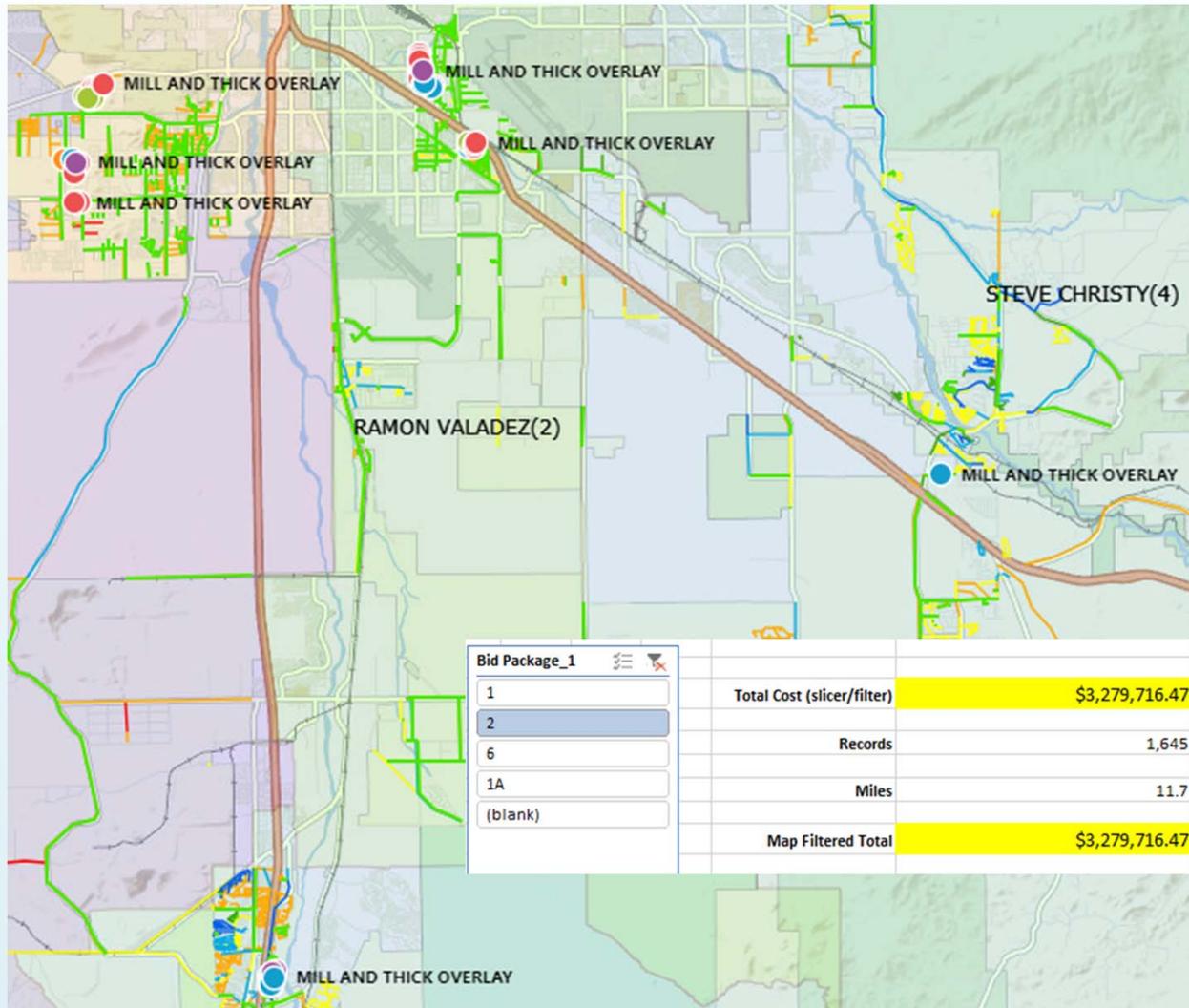
# Local Road Package 1



Bid Package_1			Added Cost	Total Cost
1	Total Cost (slicer/filter)	\$2,134,730.18	\$1,606,571.50	\$3,741,301.68
2	Records	1,540		
6	Miles	7.6		
1A	Map Filtered Total	\$2,134,730.18	\$1,606,571.50	\$3,741,301.68
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# Local Road Package 2

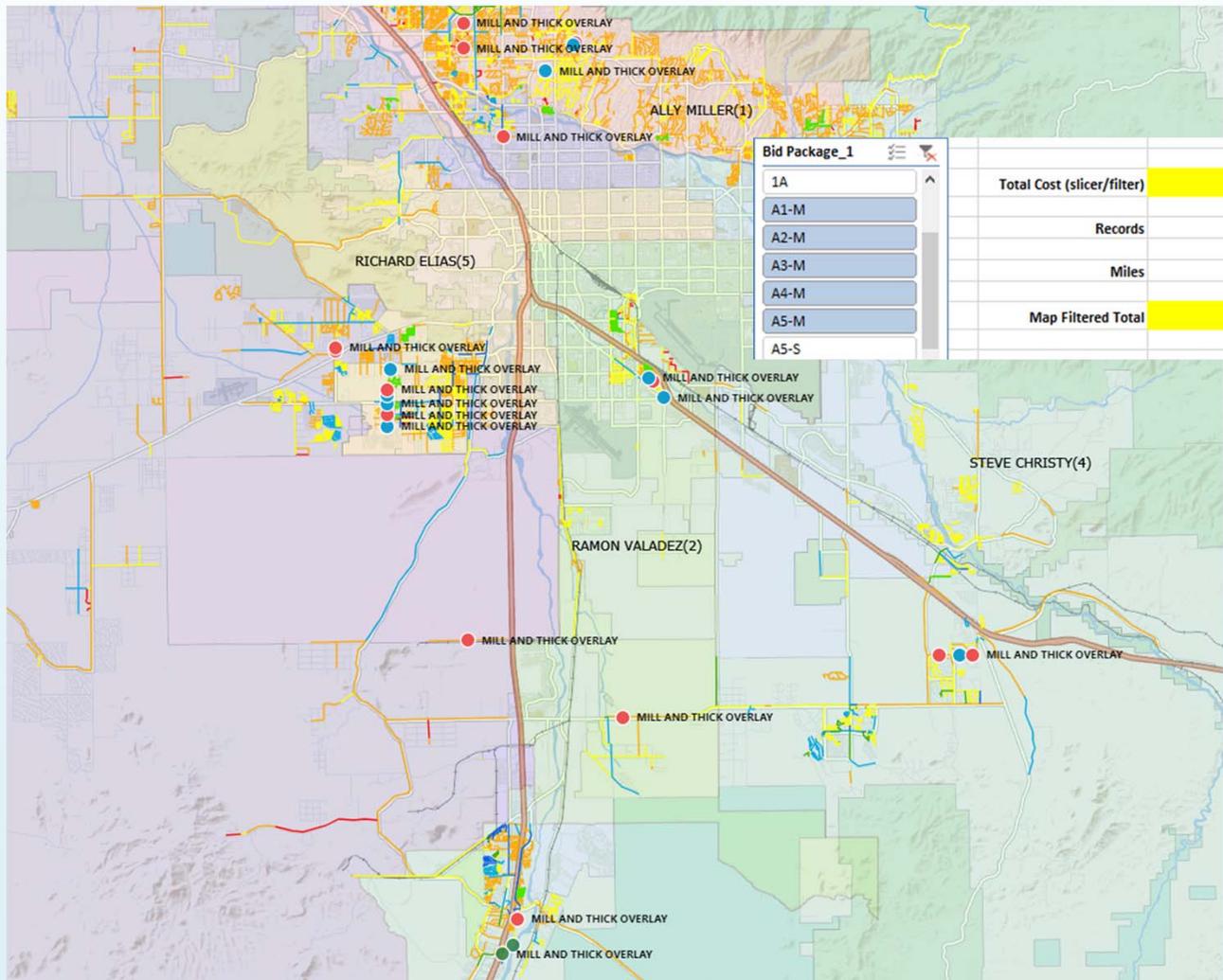


Bid Package_1
1
2
6
1A
(blank)

		Added Cost	Total Cost
Total Cost (slicer/filter)	\$3,279,716.47	\$724,923.50	\$4,004,639.97
Records	1,645		
Miles	11.7		
Map Filtered Total	\$3,279,716.47	\$724,923.50	\$4,004,639.97



# Arterial/Collector Package (Mill/Overlay)



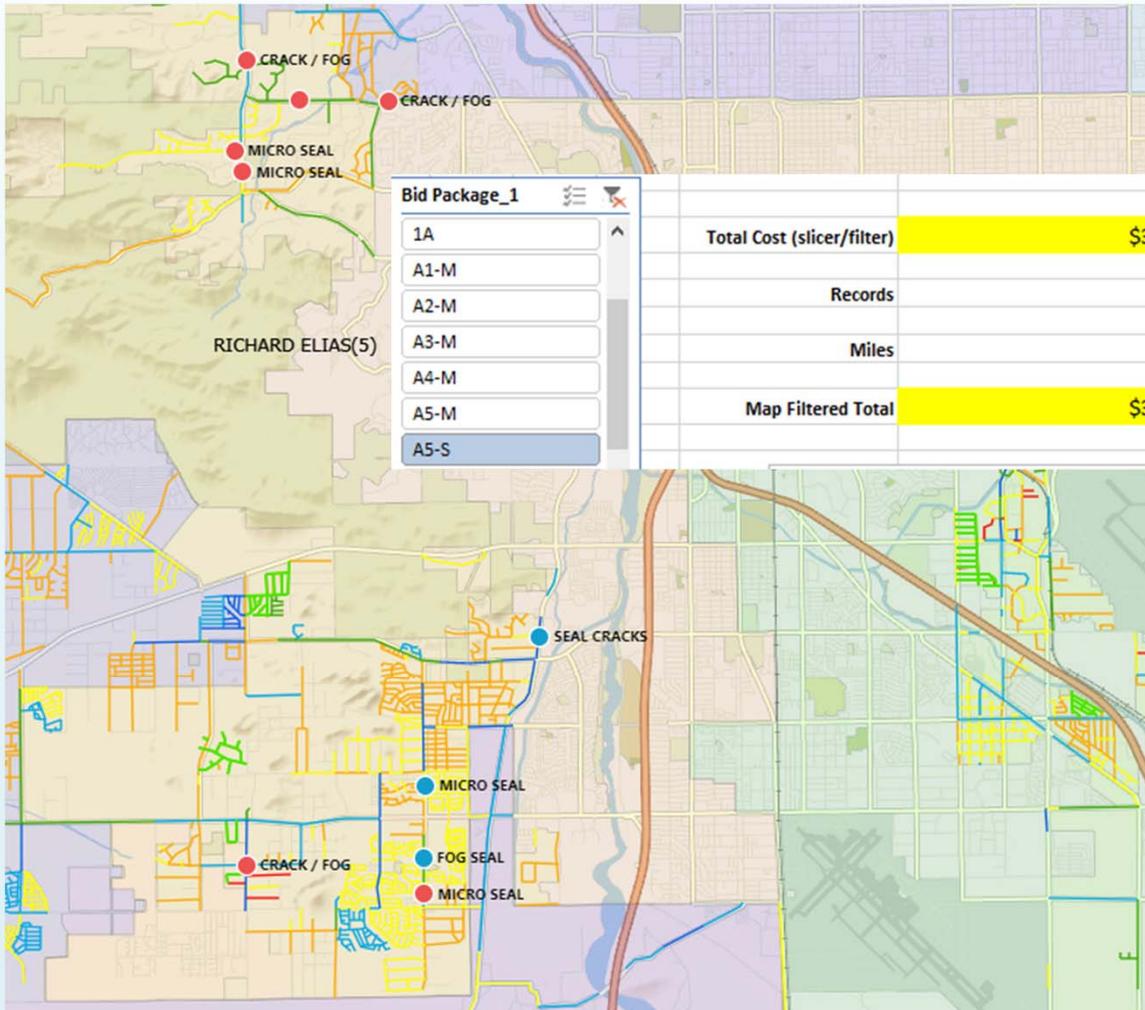
Bid Package_1	
1A	
A1-M	
A2-M	
A3-M	
A4-M	
A5-M	
A5-S	

		Added Cost	Total Cost
Total Cost (slicer/filter)	\$5,093,380.21	\$1,523,598.87	\$6,616,979.08
Records	787		
Miles	14.8		
Map Filtered Total	\$5,093,380.21	\$1,523,598.87	\$6,616,979.08

- Followed similar format for Arterials/Collectors
  - Lots of roads to choose from
  - Reviewed/compared against recent adjacent work
  - Added segments for continuity
  - Compared/Contrasted with Regional Priority roads



# Arterial/Collector Package (Sealcoats)



**Bid Package\_1**

- 1A
- A1-M
- A2-M
- A3-M
- A4-M
- A5-M
- A5-S

		Added Cost	Total Cost
<b>Total Cost (slicer/filter)</b>	\$370,431.06	\$0.00	\$370,431.06
Records	313		
Miles	7.2		
<b>Map Filtered Total</b>	\$370,431.06	\$0.00	\$370,431.06



### FY 2019-2020 Transportation Department Road Repair Program

Allocation by Cost					
District	Local <sup>1</sup>	Arterials & Collectors <sup>1</sup>	Regional Priority <sup>2</sup>	HURF Bonds <sup>3</sup>	Grand Total
1	\$1,453,251	\$1,196,637	\$1,628,613	\$1,484,030	\$5,762,531
2	\$1,531,648	\$1,494,103	\$941,189	\$299,181	\$4,266,121
3	\$1,513,407	\$1,650,097	\$528,827	\$1,956,280	\$5,648,611
4	\$1,600,271	\$1,468,570	\$754,267	\$1,246,732	\$5,069,840
5	\$1,566,909	\$1,178,003	\$1,154,312	\$649,351	\$4,548,574
<b>Total<sup>4</sup></b>	<b>\$7,665,486</b>	<b>\$6,987,410</b>	<b>\$5,007,207</b>	<b>\$5,635,574</b>	<b>\$25,295,677</b>
Allocation by Miles					
1	5.3	3.7	17.4	4.9	31.3
2	5.5	4.1	8.0	0.4	18.0
3	5.5	4.6	6.5	9.1	25.7
4	5.8	4.2	6.0	4.1	20.1
5	5.7	10.2	4.0	2.7	22.6
<b>Total<sup>4</sup></b>	<b>27.8</b>	<b>26.8</b>	<b>41.9</b>	<b>21.2</b>	<b>117.7</b>

<sup>1</sup> \$15 million department operational allocation

<sup>2</sup> \$5 million tentative general fund allocation. Any overages in this category will be covered by a transfer from the department operational allocation category.

<sup>3</sup> \$6 million remainder road list of 2018 \$16 million HURF Bond reallocation, the total initial amount of which was equitably distributed by district

<sup>4</sup> Final amounts to be adjusted/redistributed based on actual procurement costs



# Visualization App

### Pavement Repair and Preservation

**Street**  
All

**Bid Package**  
All L-3 L-1 L-2 A-6 A-5 A-4  
A-3 A-2 A-1 Bond-3 Bond-2  
Bond-1

**BOS District**  
All 1 2 3 4 5

**Road Class**  
All Local Major Collector Minor Arterial  
Minor Collector Other  
Other Principal Arterial

**Treatment**  
All CRACK / FOG FOG SEAL  
MICRO SEAL MILL AND THICK OVERLAY  
SEAL CRACKS

**Sub Division**  
All

**Project Treatments**

- MILL AND THICK OVERLAY
- FOG SEAL
- SEAL CRACKS

**Miles**  
Selected: 75.5  
Total: 75.5

**Dollars**  
Selected: \$20.3M  
Total: \$20.3M

Map showing project locations in Tucson, Arizona. Key locations include Casas Adobes, Flowing Wells, Catalina Foothills, and the University of Arizona. The map displays various road segments with color-coded overlays representing different project treatments.

**Dollars by District**

District	Treatment	Amount
D1	MILL AND THICK OVERLAY	\$4.1M
D2	MILL AND THICK OVERLAY	\$3.3M
D3	MILL AND THICK OVERLAY	\$5.1M
D4	MILL AND THICK OVERLAY	\$4.3M
D5	MILL AND THICK OVERLAY	\$3M

Legend:  
● MILL AND THICK OVERLAY  
● CRACK / FOG  
● FOG SEAL  
● MICRO SEAL  
● SEAL CRACKS

**Dollars** | **Miles**

<https://pimamaps.maps.arcgis.com/apps/opdashbaord/index.html#/04a9431566dc4173824bc0feda6fd51b>

This page revised on June 14, 2019 to ensure weblink worked correctly.

# Discussion

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