

2018 Street Maintenance Plan

City Of Helotes Public Works
Department

Activity	Impact.amt	Unit
Edge Repair (Chip Seal Edge)	5%	
Edge Repair (Cut and Remove Pavement)	5%	
High Density Mineral Bond	30%	
JT/Crack Seal (Poly Mod ASP Emulsion)	5%	
Mill and Overlay Type B 4 inch	100	Absolute
Mill and Overlay Type B 6 inch	100	Absolute
Mill and Overlay Type B 8 inch	100	Absolute
Mill and Overlay Type D 1.5 inch	100	Absolute
Mill and Overlay Type D 2 inch	100	Absolute
One Course Surface Treatment	75%	
Onyx Surface Treatment	30%	
Overlay 1.5 inch Type D	85	Absolute
Overlay 2 inch Type D	85	Absolute
Overlay 4 inch Type B	85	Absolute
Overlay 6 inch Type B	85	Absolute
Overlay 8 inch Type B	85	Absolute
Pothole Repair	5%	
Single Course Bituminous Slurry Seal	35%	
Two Course Surface Treatment	85%	

Pavement Condition Index

- **Pavement Condition Index (PCI)**- a numerical index between 0 and 100 which is used to indicate the general condition of a street or pavement segment.
- **Activity**- Road maintenance option programmed into Cartegraph.
- **Impact Amount**- The amount of impact on the each Activity has on the PCI.
- **Unit**- There are three different units of impact that affect the PCI.
 - 1. Percentage: Percentage of increase on current PCI of the Asset.
 - 2. Absolute: Exact PCI point score for the Asset.
 - 3. Relative: PCI score increase to the existing Asset Score.

Activity	Impact.amt	unit
Edge Repair (Chip Seal Edge)	5%	
Edge Repair (Cut and Remove Pavement)	5%	
High Density Mineral Bond	5%	
JT/Crack Seal (Poly Mod ASP Emulsion)	1%	
Mill and Overlay Type B 4 inch	100	Absolute
Mill and Overlay Type B 6 inch	100	Absolute
Mill and Overlay Type B 8 inch	100	Absolute
Mill and Overlay Type D 1.5 inch	100	Absolute
Mill and Overlay Type D 2 inch	100	Absolute
One Course Surface Treatment	50%	
Onyx Surface Treatment	10%	
Overlay 1.5 inch Type D	90	Absolute
Overlay 2 inch Type D	90	Absolute
Overlay 4 inch Type B	90	Absolute
Overlay 6 inch Type B	90	Absolute
Overlay 8 inch Type B	90	Absolute
Pothole Repair	5%	
Single Course Bituminous Slurry Seal	15%	
Two Course Surface Treatment	60%	

Condition Category Ride Quality

- **Ride Quality-** Score from Zero to One Hundred on smoothness of ride for the street.
- **Activity-** Road maintenance option programmed into Cartegraph.
- **Impact Amount-** The amount of impact on the each Activity has on the PCI.
- **Unit-** There are three different units of impact that affect the PCI.
 - 1. Percentage: Percentage of increase on current PCI of the Asset.
 - 2. Absolute: Exact PCI point score for the Asset.
 - 3. Relative: PCI score increase to existing Asset Score.

Overall Condition Index (OCI)

Asset Estimated OCI Calculations:

- The estimated OCI for an asset is calculated by taking into account the asset's age, predicted performance, and inspections and tasks performed on the asset. Using this data, the estimated OCI for the asset is determined.



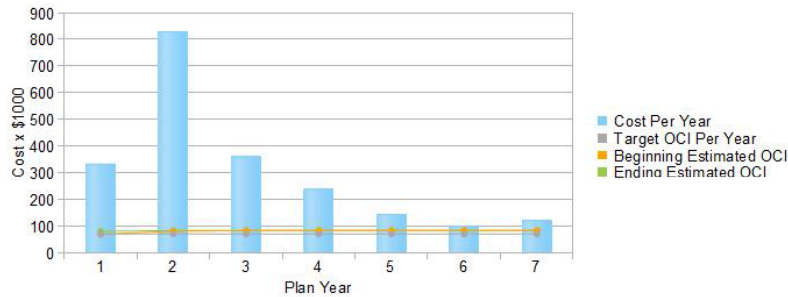
New Technologies for Street Maintenance - Axys

What is Axys?

- Axys- A mastic surface treatment that combines the durability you want from a pavement maintenance application with the environmental sensitivity.
- Axys- is a mixture of asphalt emulsion, fine aggregate, polymers and catalysts.
- Axys- has been engineered to develop early strength with shortened, predictable dry times between 15-45 minutes.
- Axys- is engineered to stand up to wheel pushing from vehicles turning at low rates of speed which make is perfect for parking areas and suburban streets.

Scenario Results: Cost and OCI Per Plan Year

Scenario Name: OCI Target - Best Value



Plan Year	Cost	Beginning Est. OCI	Ending Est. OCI	Target OCI
1	\$332,353.14	68.90	80.49	70
2	\$828,920.42	80.49	82.96	70
3	\$359,897.24	82.96	83.05	70
4	\$237,117.36	83.05	83.01	70
5	\$142,823.41	83.01	83.13	70
6	\$97,400.65	83.13	82.91	70
7	\$121,078.33	82.91	83.07	70
	\$2,119,590.55	68.90	83.07	70

Activity Cost per Plan Year

Scenario Results:

- The results from Scenario Builder are estimates based on projected cost and quantities.
- The year one cost estimate in Scenario Builder is **\$ 335,353.14.**
- We combined activities from years 1-3 in this plan with the goal of completing entire streets.
- Scenario Builder recommends activities by street segments which are block to block.
- Our Year one Cost estimate for Fiscal year 2017-2018 is **\$ 735,027.**

2018 Street Maintenance Recommended activities

Seq #	Subdivision	Cost	Activity	Street
1	Misc.	\$ 28,112	Two Course Surface Treatment/Axys	Old Scenic Loop
2		\$ 8,271	One Course Surface Treatment/Axys	Mountain View
3		\$ 6,400	One Course Surface Treatment/Axys	Saltillo Flat
4		\$ 6,634	One Course Surface Treatment/Axys	Alta Loma
5	Helotes Park Estates	\$ 6,438	One Course Surface Treatment/Axys	Lazy F Trl
6		\$ 41,000	One Course Surface Treatment/Axys	Flying W Trl
7		\$ 6,642	One Course Surface Treatment/Axys	Diamond K Trl
8		\$ 18,920	One Course Surface Treatment/Axys	Rocking M Trl
9		\$ 3,723	One Course Surface Treatment/Axys	Bar D Trl

2018 Street Maintenance Recommended activities

Seq #	Subdivision	Cost	Activity	Street
10		\$ 14,220	One Course Surface Treatment/Axys	Cross XD Trl
11		\$ 2,700	One Course Surface Treatment/Axys	Laurel Leaf
12		\$ 4,930	One Course Surface Treatment/Axys	Circle B Trl
13		\$ 3,273	One Course Surface Treatment/Axys	Circle E Trl
14		\$ 31,200	Axys Surface Treatment	Rafter S Trl
15		\$ 12,100	Axys Surface Treatment	Marnoch
16		\$ 1,967	One Course surface Treatment/Axys	Circle C Trl
17		\$ 8,613	One Course Surface Treatment/Axys	Rafter O Trl
18	Beverly Hills	\$ 2,234	One Course Surface Treatment	Sunset Ranch

2018 Street Maintenance Recommended activities

Seq #	Subdivision	Cost	Activity	Street
19		\$ 5,500	One Course Surface Treatment	Baxtershire
20		\$ 135,000	Axys	Neighborhood
21	Evans Valley	\$ 7,200	One Course Surface Treatment	Circle N Dr E
22		\$ 21,600	One Course Surface Treatment	Circle S Dr
23		\$ 8,190	One Course Surface Treatment	Circle N Dr W
24	Hunters Ridge	\$ 39,640	Axys Surface Treatment	Neighborhood
25	Commercial	\$ 6,460	Axys Surface Treatment	Signal Hill
26		\$ 19,300	Mill and Overlay Type D 4 inch	Rainbow Ridge
27		\$ 50,260	Axys Surface Treatment	Leslie Rd
28	Helotes Ranch Acres	\$ 233,500	One Course Surface Treatment/Axys	Neighborhood

2018 Street Maintenance Activities; Cost Per Neighborhood

Helotes Park Estates: \$155,726
One Course: 471,473 Sq. Ft
Axys: 180,965 Sq. Ft

Beverly Hills: \$142,734
One Course: 30,936 Sq. Ft
Axys: 586,956 Sq. Ft



2018 Street Maintenance Activities; Cost Per Neighborhood

Evans Valley : \$ 36,990
One Course: 147,960 Sq. Ft

Hunter Ridge : \$39,640
Axys: 172,384 Sq. Ft



2018 Street Maintenance Activities; Cost Per Neighborhood

Commercial : \$ 76,020

Axys: 246,607 Sq. Ft

Mill/Overlay: 10,158 Sq. Ft

Helotes Ranch Acres: \$ 233,500

One Course: 486,458 Sq. Ft

Axys : 486,458 Sq. Ft





2018 Street Maintenance Activities; Cost Per Neighborhood

Miscellaneous Streets: \$ 49,417

- Old Scenic Loop: 38,509 Sq. Ft
Two Course and Axys
- Mountain View: 17,231 Sq. Ft
One Course and Axys
- Saltillo Flat: 13,333 Sq. Ft One
Course and Axys
- Alta Loma: 13,820 Sq. Ft One
Course and Axys.

2018 Street Maintenance Plan
Total Recommended
Expenditures:

\$ 735,027