



# FY20 BUDGET MEMO # 12

DATE: April 9, 2019

TO: The Honorable Mayor and Members of the City Council

FROM: David Summers, Director of Public Works

THROUGH: Robert Stalzer, City Manager *RA Stalzer*

SUBJECT: Annual Street Paving Program FY20 – FY24

Page G-13 of the proposed FY20 budget document lists the funding requests for FY20-FY24 for Street Paving and Concrete Maintenance. Staff recommends the adjustments as proposed for budget items G-89, Street Repaving and G-87, Concrete Curb & Gutter Maintenance.

Transportation Project	FY2019 Adopted	FY2020 Proposed	FY2021 Proposed	FY2022 Proposed	FY2023 Proposed	FY2024 Proposed	FY20 to 24 Total
Concrete Curb & Gutter Main.	1,400,000	1,850,000	2,200,000	1,350,000	1,000,000	1,000,000	7,400,000
Street Paving	1,997,000	1,109,515	3,300,000	1,000,000	3,300,000	1,000,000	9,709,515

Currently the average repaving is every 10 years for arterial and primary roads and 20 years for residential roads. Five years ago the paving average was every 12 years for arterial and primary roads and 23 years for residential roads.

(for Reference)

The concrete maintenance work (curb & gutter, driveway aprons, handicap ramps) for a street needs to be done before it is repaved. It is essential that this work be scheduled correctly, to ensure that the process be as efficient and cost effective as possible and to provide the highest quality product possible. Ample time needs to be allotted to get the concrete work completed before the paving can start, without causing the paving contractor to stay idle to an extent where he leaves the City to attend another paving job. In addition, this work needs to be coordinated to minimize disruption to businesses and households, and be completed before the cold weather sets in.

There are several reasons for this CIP budget adjustment, as listed below:

1. Many of the streets on the upcoming FY20 paving list need significant concrete repair work, therefore the concrete contractor needs sufficient lead time to get the street ready for paving. The more concrete work required, the less time available for paving before the paving season ends.
2. Concrete and Paving contractors are very busy during these times due to the upsurge in construction work, specifically the I-66 project, as well as others. When they come to the City to start work, they are not willing to stay idle.
3. Paving contractors if not kept constantly busy will leave the City and go to another site, in order to keep their paving equipment in use, as they only get paid for asphalt quantities installed.

4. Once a paving contractor leaves the City for another job, it may take several weeks for them to return to the City. This causes delays in completing our annual paving list, causing street paving and the allocated monies for the current FY to be carried over to the next FY.
5. Paving and Concrete is seasonal work, and extending the season into late Fall when temperatures start to drop increases the risk of subpar quality work due to the sensitivity of the materials being used in temperatures below 40 degrees Fahrenheit.

Because of the reasons above, it is crucial that the City gets significant lead time in the concrete replacement work for the upcoming FY. This is why the paving amount has been reduced for FY20 and increased for FY21. Once we enter FY21, we should have a good amount of streets that have had their concrete repairs completed, and are ready for paving. Looking to the future until FY24, you will see this pattern continue so that the concrete repairs have sufficient lead time for completion, and allowing the paving operations to proceed uninterrupted, which will help keep the paving contractor in the City.

There are many factors which contribute to the amount of funds we request every year for paving:

1. Length of paving cycle. – We are finding that the standard cycle for repaving, 10 years for arterial and primary roads, and 20 years for residential roads, is a very general estimate. Certain highly active roads will not last this long without repaving, and some low traffic residential roads may last longer.
2. Price of Asphalt – The price of asphalt is somewhat dependent on the price of oil. Also, prices may go up when there is a very strong demand.
3. Aging underground utilities (Washington Gas and Fairfax Water). - There are many locations in the City where this infrastructure is in need of replacement. These utilities are actively replacing infrastructure throughout the City. Leaking utilities as well as the open cuts in the street to repair them contribute to the accelerated decay of the asphalt overlay and also compromise the structural integrity of the roadway.
4. Development work (Scout, Northfax, etc.) - Most of these developments require utility taps into the mains that are located in the street. This work necessitates open cuts and patch repairs in the pavement. These patches create additional seams in the pavement and will reduce the life of the overlay. In addition, these construction projects use many heavy construction vehicles which access the site using City roads which contribute to the pavement deterioration.
5. Traffic counts and traffic loads. - Very high ADT or very heavy trucks on City streets, such as Fairfax Boulevard and Pickett Road, will reduce the paving lifecycle. We have noticed that certain heavily used streets seem to need repaving every 8 years rather than every 10 years.
6. Aging streets. - Many of the streets in the City were constructed in the 1950's or earlier. Many of the older roads in the City have compromised subbase (the gravel bed beneath the asphalt) that has deteriorated over time due to age, water damage, traffic loads, etc. This causes the asphalt to flex more and deteriorate quicker, and will accelerate the repaving cycle. Some of these streets will need a rehabilitation, rather than just a repaving. Rehabilitation work is significantly more expensive as the work is much more invasive than just a milling of the top 2 inches of pavement. Rehab work will typically require removing a depth of 12 inches from the street to get down to the subbase to make repairs.
7. Harsh winters. - Plowing and de-icing operations may accelerate the deterioration of the asphalt pavement.
8. New pavement mixes. - Staff is finding that some of the new environmental requirements for asphalt mixes, such as using recycled asphalt, may be contributing to a shorter life of the material.
9. Ancillary items. – Other items required in the street paving operation such as striping, traffic loops, manhole adjustments rings, 3<sup>rd</sup> party inspections, milling, etc. Some of these items can

increase in cost substantially. For example, a harsh winter will require more re-striping work causing the cost of thermoplastic material to rise significantly.

These reasons and others are why Public Works inspects every street every year to refine the yearly paving list to make sure we are paving the right streets and at the right time. Public Works, with the help of our Transportation Division continues to pursue funding for Primary Paving and Roadway Rehabilitation work whenever available, as shown on pages G-74 and G-83 of FY20 CIP. The City has been taking advantage of these State and Federal funding programs for almost 10 years since they began, for an estimated total amount of approximately \$10 million dollars that has been used for our roadway infrastructure upkeep.