Ivins City Staff Report
City Council Meeting 4/7/2022

Agenda Item: Approval of expenditure for 2022 streets pavement maintenance

Submitted by: Thomas J. Jorgensen, P.E., Assistant City Engineer

Recommended City Council Action:
Approve expenditure of $243,244.58 for 2022 streets pavement maintenance plus an additional $10,000 for contingency for a total of $253,244.58.

BACKGROUND:

Staff has identified the following amounts of pavement surfaces that need maintenance this year.

Streets: 1,344,498 square feet
Trails: 24,359 square feet

This year Staff is recommending using three different types of materials for our pavement maintenance program: Slurry Seal, Cape Seal (combination chip seal and slurry seal), and Premium Seal Coat.

These products are effective treatments for protecting asphalt streets from deterioration from sun and water while providing a renewed skid resistant wearing surface. A premium seal coat treatment provides an extended life of approximately 5-10 years but should only be applied to roadways that are in good to excellent condition. The slurry seal treatment provides an extended life of approximately 5-7 years. Slurry seal treatments are more suitable for roadways in average condition and that don't meet the condition requirements of the premium seal coat treatment. A cape seal treatment provides an extended life of approximately 5-8 years and is typically applied on streets that have the most needs.

Staff has inspected the streets and trails to receive treatment this year and has determined which treatments are most suitable for each section; Premium Seal Coat (approx. 640,910 sqft) and Slurry Seal (approx. 650,229 sqft) and Cape Seal (appox. 77,718 sqft). A map has been attached showing which streets and trails are to receive which treatment.

FINDINGS AND ANALYSIS:

Formal Bids were received from several companies for the slurry seal and an informal bid was received for the premium seal coat. A summary of these bids is provided below:

Bid Schedule - Slurry Seal

Bid	Company	Total Bid	Notes
1	American Pavement Preservation	$113,139.85	Apparent Low Bidder
2	Asphalt Preservation	$117,691.45	
4	M&M Asphalt Services	$120,292.37	

Bid Schedule – Premium Seal Coat

Bid	Company	Total Bid	Notes
1	Holbrook Asphalt	$130,104.73	

The apparent low bidder for the slurry seal was American Pavement Preservation. Staff recommends awarding the project to American Pavement Preservation. Staff requests that the Council approve this expenditure.

Staff did not seek bids from other premium seal coat contractors due to a previously prepared in-house study that concluded that the material provided by other manufacturers needed to be 25% discounted compared to the product provided by Holbrook Asphalt. Staff is recommending that Council award the project to Holbrook asphalt and requests that the Council approve this expenditure.

It should be noted that staff did not receive any bids on the chip seal portion of the cape seal product. Staff has reached out to several contractors that have bid in the past and is hopeful that we'll receive a minimum of one to two quotes. This expense will be brought before council as soon as it is received.

It should also be noted that several of these roadways that are receiving treatment will need to be restriped and that the majority of Center Street will be restriped this year. An estimate for restriping will be requested and will also be included as a recommended expense later.

SUPPORT MATERIALS:
Project Map – 2022
Technical Memorandum – Comparison of HA5 to ONYX

FINANCIAL IMPACT:
GL Code: Street Funds: 10-60-515: $253,244.58

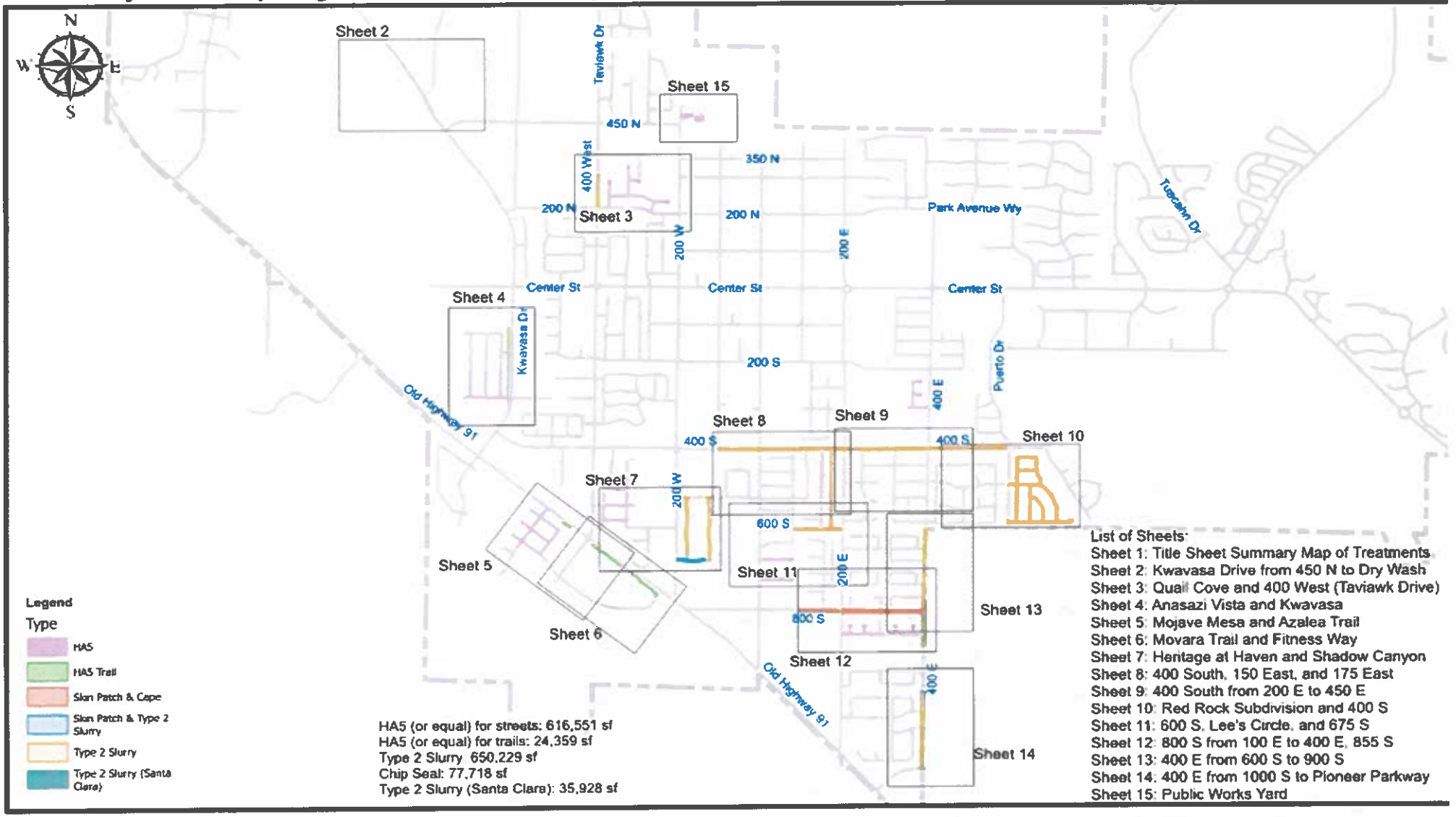
Respectfully Submitted:

Thomas J. Jorgensen, P.E., Assistant Public Works Director

Content Review:

Dale Coulam, City Manager

Ivins City 2022 Spring Pavement Management



0 500 1,000 2,000 3,000 4,000 Feet

Title Sheet: Summary Map of Treatments

Print Date: 3/8/2022

Sheet 1

TECHNICAL MEMORANDUM

IVINS CITY

Date: April 3, 2019
To: Mayor and City Council
From: Charles Gillette, P.E., Ivins City Public Works Dir/ City Engineer
Re: Comparison of HA5 to ONYX, Evaluation of Equality of Two Proprietary Premium Sealcoats

Ivins City recently requested bids for sealcoat products that the city has identified as "proprietary premium sealcoats". The City requested a bid from Holbrook Asphalt for a product called "HA5" or also known as high density mineral bond and a bid from Straight Stripe for a product called "ONYX". One year ago, a similar bid procurement was conducted and HA5 was priced lower than the ONYX product and the City proceeded with the application of HA5. This year, the ONYX pricing proposal is 7 percent lower than the HA5 pricing.

The purpose of this memorandum is to present an analysis of the comparison of the two products to determine if HA5 merits the 7 percent pricing premium over ONYX. The analysis is based on visiting prior applications of both products by myself and Tom Jorgensen, Assistant Public Works Director.

Both companies were requested to provide locations and references for the product for prior applications of the product that were approximately five years old. Both companies have offered 5 year warranty guarantees that seem to be equal.

Ivins City Existing Applications
The City has two year old applications (installed in 2017) of both products. ONYX was installed as a free installation on 100 North from 100 West to 200 West. The City procured HA5 that was installed on 593,000 square feet of area at Indigo Trails, Pioneer Parkway, Desert Rose Subdivision, Red Cliffs Estates Subdivision, 400 West (from 400 S to Old Hwy 91), 200 East (from 400 S to 600 S), and Center Street (from 200 E to Snow Cyn Dr).

Comparing the two installations, it appears that both products are providing adequate coverage and seal of the streets listed above.

Parking Lot Comparisons
Both companies provided locations of installations that were on parking lots. However, please note that none of the proposed work, this year includes parking lots. ONYX applications that were four years old were evaluated at parking lots of Elks Lodge and Red Cliffs Mall.



ONYX Application (4 years old)
Elks Lodge Parking Lot
Installed in June 2015



ONYX Application (3.5 years old)
Red Cliffs Mall
Installed October 2015

The Elks Lodge ONYX was in very good shape and the sealcoat residue showed very little sign of wear despite the underlying parking lot showing a lot of distress. There was some micro cracking in the ONYX, but it was unclear whether it was significant. However, the traffic volumes at this parking lot are likely very light.

The Red Cliffs ONYX was not in as good of shape of as the Elks Lodge. More wear was in evidence. However, most of the wear was only revealing aggregate although there were some spots, maybe 5% of the lot where the coating was nearly completely worn off.

One parking lot application of HA5 was observed that was 7.5 years old than the ONYX application



HA5 Installation (7.5 years old)
Dixie Center
Installed October 2011

The Dixie Center HA5 appeared to be in excellent shape, better than the ONYX at Red Cliffs and perhaps comparable to the Elks Lodge despite being an older installation.

Residential Street Comparisons

For residential streets, ONYX provided one example of a 5-year old installation at Ashdown Forest HOA in Cedar City in Fiddlers Canyon.





ONYX Application
Ashdown Forest HOA (Cedar City)
Installed in August 2014 (4.5 years old)

This application appeared to at the end of its life cycle with approximately 50 to 80 percent coverage still adhering to the underlying asphalt.

ONYX did not have an example of residential street application in Washington County.

HA5 has been installed consistently at the Sun River Subdivision in St George for 15 years. We observed the installations that were aged at 5, 6, 7 and 15 years. The 5, 6 and 7 year old installations are shown below.

HA5 Installations



5 years old (Whitestone Dr)



6 years old (Ironwood Dr)



7 years old (Garnet Ridge Dr)

A 15-year-old installation of HA5 (picture not included) in Sun River was also observed. This application did appear to be ready for resealing. We observed about 50 to 60 percent coverage of the pavements, which did seem impressive for the age of the seal.

Conclusions

The 5-, 6-, and 7-year-old applications of HA5 do appear to have significant performance improvements over the 4.5-year-old application of ONYX in Cedar City. It is difficult to know if the cold weather and periodic plowing causes the decreased performance of the ONYX. It is arguable also that the hot temperatures in St George could provide an equally harsh or harsher environment than Cedar City. There is not enough data and observations to determine if this is the case.

The HA5 at the Dixie Center does appear to be superior to the Red Cliffs Mall ONYX installation where both products are exposed to a similar traffic pattern and a similar hot climate comparable to Ivins climate.

In conclusion, our observations have convinced us that the two products should not be treated as equal and that a premium is justified for the HA5 product. If a product can provide at least one additional year of service, that would justify a 15 to 20 percent premium. Based on these observations, we are convinced that the HA5 would outperform the ONYX by at least one year and perhaps more. Therefore, we recommend selecting the HA5 despite the 7 percent premium over the ONYX product. We would not consider recommending ONYX unless the discount was at least 25 percent.