



City of Grand Island

Tuesday, December 02, 2003

Study Session/Special Mtg

Item -5

Life Cycle Cost Comparison of Asphalt Versus Concrete on Locust Between Stolley Park Road & Fonner Park Road

The original concept for improving Locust Street between Stolley Park Road and Fonner Park Road provided for moving the sidewalks back away from the curbs, installing pedestrian lighting, upgrading the roadway lighting, and adding landscaping elements. Since a number of the driveways were going to be shifted, moved, combined or eliminated, we felt it was a good time to overlay the road with asphalt.

The curb needed to be replaced to provide for drainage and to increase the life of an asphalt overlay. Discussions with the engineers and contractors resulted in a decision to replace the out side lanes of the roadway, build an integral curb and gutter section, and overlay all 5 lanes with asphalt.

Staff has never felt that the asphalt overlay was the best long-term solution. Both the contractor and the Business Improvement District have indicated that they believe the cities long-term investment would be best served by using concrete. The switch from asphalt to concrete would cost almost \$250,000.

Concrete is less expensive then asphalt over the life of the pavement, but has a higher up front cost. In addition, the annual maintenance costs for concrete are less than they are for asphalt. Asphalt would need to be replaced every 8 years at a cost of \$80,000 (using today's dollars). The life cycle cost for concrete will be less then asphalt as long as the concrete lasts longer then 24 years. Concrete has an expected life of 25 to 40 plus years.

The city would incur up front costs of almost \$250,000 to reduce future costs. If the council supports the change, city staff will review the 400 Capital Improvements Budget to see if there is money from other projects that could be used to change the project from an asphalt overlay to full depth concrete and come back for council approval at the December 9, 2003 Regular City Council Meeting.

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