



## OSKALOOSA'S MUNICIPAL STREET PAVING PROGRAM

Project Report #8

Oskaloosa, Iowa

July, 1991

When he was named City Engineer of Oskaloosa in 1981, Larry J. Stevens accepted responsibility for modernizing a structurally aged, inadequate and obsolete street system. The high cost of seal coating old bituminous surfaces at four-year intervals not only did little to provide suitable traffic service but consumed limited road funds badly needed for more permanent construction. Further complicating potential solutions was the negative attitude by property owners to using assessments for financing new paving.

However, after expanding on preliminary data developed by his predecessor, Stevens was able to identify 600 blocks of streets that would furnish an essential transportation network for this city of 11,000 population. With support from municipal officials and community leaders, a 10-year program was adopted that would pave 100 blocks, financed with 25% property assessments and 75% general obligation bonds. Maintenance costs would be controlled by limiting seal coats to 100 blocks annually.

Since completing their 1991 16-block Portland cement concrete (PCC) paving contract, a total of 95 blocks have been built and another 22 blocks are proposed over the next three years. By following Stevens' long-range paving and resurfacing plan, costs are controlled and the people of Oskaloosa take pride in their expanding network of modern, durable and attractive streets.



Following the February 15, 1991 letting, which attracted five bidders, a contract for \$341,106.70 was awarded to Iowa Paving Contractors, Inc., Ankeny, Iowa, and specified completion on or before October 1. The work involved five separate locations throughout Oskaloosa. All sections required a conventional 6 in. integral curb on pavements either 25 ft., 28 ft. or 31 ft. wide from back-to-back of curb. PCC bids were \$14.50/SY for 8,126.3 SY of 6 in. pavement and \$15.25/SY for 7,436.8 SY of 7 in. pavement. Differences in design, width and thickness were selected in recognition of traffic service demands.

Based on his years of experience, Mr. Stevens specified that after the old surface was removed, the top 6 in. of embankment had to be disked and recompacted, followed by placement of a 6 in. soil-aggregate base consisting of salvaged seal coats, reclaimed aggregate base material and soil to a width one 1 ft. wider on each side than the proposed pavement.

In a cut section near the south end of Santa Clara Street, side hill seepage was controlled by replacing over 500 ft. of 15 in. RCP longitudinal storm sewer with ADS (N-12) corrugated perforated polyethylene smooth lining pipe and backfilled with excess pea gravel sweepings reclaimed from seal coat treatments. This change not only solved the drainage problem, but provided a savings of nearly \$2.00 per lineal foot of storm sewer construction. Iowa Paving Contractors used Iowa Department of Transportation (IDOT) Class A concrete mix A-4 with

Class 2 coarse aggregate and fly ash provided by Ideal Ready Mix Co., Inc., to obtain the minimum 28-day compressive strength of 4,000 PSI. Air content averaged 6% with 2 in. slump.

Longitudinal L-1 sawed joints were located at 1/3 points for 25 ft. slabs and 1/4 points on 28 ft. and 31 ft. slabs. Transverse contraction joints were spaced at a maximum of 15 ft.

Chart B smoothness was required only on the 11th Street segment (2080.5 ft.). With the exception of a short section near the middle of the job where separate pours were needed because of property access requirements, profilograph reductions showed an index of 12.4 in. per mile.

Additional information may be obtained by contacting the Iowa Concrete Paving Association at (515) 278-0606.