

THOMAS C. PETERS

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July 12, 1988

Board of Directors
S.W.A.R.M.
7400 Willowbrook Road
Willits, CA 95490

Gentlemen:

At your request I have inspected the roads maintained by your Association located in Willowbrook Hills and Sherwood Forest Hills subdivisions. I was asked to estimate the cost to place a 4-inch thick rock surface, 12 feet wide on all roads and estimate the average annual maintenance for your budgeting purposes.

The subdivision roads vary in width from 12 feet to 18 feet and the profile grade ranges from 2% to 20% or steeper. Obviously, the steeper roads are more expensive to improve and maintain. In developing my cost estimates for improvement and maintenance, I allocated proportionately higher costs for those areas with steep grades and those presently in poor condition.

In developing these estimates, I worked closely with Douglas Manning, a General Engineering Contractor who has performed road work for your Association on these roads in years past. I also reviewed the Association's expenditures for road maintenance and materials for the past three years. Using these sources and other estimates I have done for another subdivision, I have calculated an estimated cost per lineal foot to re-rock and improve the roads (4 inch rock, 12 feet wide), and an estimated annual cost per mile to maintain (re-grade) all the roads. These estimated costs are shown on the attached sheet.

Other items which you may want to consider in your budget would be:

1. Annual bridge inspection of Sherwood Creek Bridge.
2. Special Projects
 - A. Replacing twin bridges crossing
 - B. Road widening
 - C. Culvert additions and replacement

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3. Development of Overall Road System Map to assist in project planning.

I can provide you with estimates for these items upon your request.
Thank you for the opportunity to be of service to you.

Sincerely,



Thomas C. Peters
Civil Engineer

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Enclosure

BUDGET ESTIMATES

INITIAL RE-ROCK COST

First Gate	\$31,680 per mile (\$6.00 plf)
Second Gate	\$23,760 per mile (\$4.50 plf)
Third Gate	\$31,680 per mile (\$6.00 plf)

ANNUAL REGRADING COST

First Gate	\$400 per mile
Second Gate	\$300 per mile
Third Gate	\$500 per mile

ANNUAL ADDITION OF ROCK*

Flat and Moderate Grade	- 100 cy per mile @ \$10/cy
Severe Grade	- 200 cy per mile @ \$10/cy

*Annual addition of rock will replace rock lost to traffic and regrading.