

## Report on December 14, 2022 Meeting with Youngdahl Engineering

Report Prepared By: Lynn Kissel (CECSD Director) and Joy Reggiardo (CECSD General Manager)  
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Cameron Estates Community Services Director, **Lynn Kissel**, and General Manager, **Joy Reggiardo**, had a productive and informative meeting with **John Youngdahl**, Principal Engineer and President, at the offices of Youngdahl Consulting Group in El Dorado Hills. The CECSD had requested the meeting to learn how the company might assist with the planned 2023 “Windshield Survey” of District roads.

Lynn provided John with a packet of background materials for the discussion. That packet included an outline of the proposed Windshield Survey, a draft survey form, summaries of the CECSD Roadway Database, and selected portions of recent director reports on road maintenance. As it is the basis for much of the packet and discussion, a hardcopy of the *Thin Maintenance Surfaces Handbook* (2007) was also available for reference.

John spoke about an assessment and felt it would highlight areas that needed repair. He felt that his company could **best help with training the Directors** on the definitions of the defects on our draft survey form. It was suggested that **three road segments could be the focus of the training**. John made a constructive suggestion that a TMS Handbook page reference be cited for each defect on the survey form. (Lynn suggests that LL-W, FlyC3, SH2 would be good training candidates.)

We collected enough information to make a reasonable estimate for John’s services. He provided us with an hourly rate for principals of his company, noting that rates were lower for less senior employees. For the Windshield Survey, he felt he would be good choice for the training, and **he would charge for his on-site time at 88% of his base rate** assuming that no other preparation or follow-up work was requested. We will need to give John a week or two of advanced notice.

With the training, the TMS Manual and the survey form, John felt that the District could reasonably complete the survey ourselves. Lynn and John thought **January or February would be a good time for training**.

We had an extended discussion about cost effective road maintenance in foothill communities like the CECSD. John reviewed the basics of road construction and maintenance. He related experiences with roads with his own Home Owners Association.

It was made clear to us that John felt that **sealing against water** should be our biggest maintenance concern. Water degrades the sub layers and does the most damage to our roads. Traffic volume and weight can be a concern, but CECSD traffic is considered light by industry standards.

The **first thing** John said he would do to maintain the roads, is to **seal all the cracks**. This prevents water from going under the top layer of pavement into the sub layers. The **second thing** he would do would be repair spots and **seal coat (chip seal) our roads**. By doing this, it will keep the drainage layer in tack, and shed the water to ditches. We need to preserve the substructure and aggregate base.

John told us of developments relying entirely on chip seals for creating and maintaining roads. He mentioned a particular local paving company that exclusively and successfully used double-chip-seals

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with Petromat™ to construct new roads. It was an effective method to shed water and keep water from getting underneath the road. It was used in areas with little traffic. It was effective and low cost.

John spoke about some of the issues he's had in the South Shingle community where he lives. One area had recurring issues and was re-paved every two years or so. The root cause of the problem was drainage and water was getting under the road surface. For this situation, after they installed new drains, the road stayed in good shape and the problems did not return.

**Lynn asked if repairing isolated distresses and doing ongoing maintenance with repeated "seals" was a reasonable goal for District roads. John agreed with this goal.**

One unexpected item involved "Reserve Studies" that John repeatedly cited. When asked, we learned of an important requirement for HOAs that the District does not have. HOAs have "reserve" requirements, and "reserve study" requirements, a consequence of the Davis-Stirling Act. The reserve study is an analysis of future costs and a requirement to reserve budget to meet those future needs. While not a requirement for the District, it does point to the concern that delayed maintenance can lead to ballooning future expenses that break the budget. Lynn loosely associated this concern with our ongoing maintenance cost studies and our plans to forecast future costs and future budget needs.

We talked about the complaints from residents on our recent seals. **John felt that requiring a two sweeps of the chips made sense**, immediately after application and after one week. He also thought complaints might be reduced by informing the residents about chip seals in advance.

John didn't agree that keeping the loose stones for an extended period was very important -- better to remove the loose stones. In fact he cited situations where excessive loose stones were detrimental. **He didn't feel that immediate follow-up treatments (like fog seals or cape seals) were very important.**

Lynn asked about getting 3rd party inspections of major work. His comment was that it was "not generally done."

Lastly, John spoke about the life of a paved road. It is generally about 20 years. It can be maintained for much longer using recurring and inexpensive treatments like chip seals. With proper sealing of cracks, the road will last longer.