MARSH LAKE ROAD

Status update: June 25, 2019

Activities since May 23rd update:

- As a reminder, the options authorized by City Council for further evaluation are summarized as follows.
    - Option 1: County option – two-lane divided with median + trail on north side
    - Option 2: City option – City Standard (9-ton) with curb and gutter + trail on north side.
    - Option 3: City option – 7-ton road, no curb and gutter, matching existing width and alignment.

- **OPTION 2**

    - After obtaining input from Josh Mulvihill (resident representing Marsh Lake Road), staff from the planning, engineering, public works departments and Fire chief, a width has been selected for Option No. 2 that meets state aid standards:

        - 32-feet wide from face of curb to face of curb which would include two 11-feet wide drive lanes + two-feet curb reaction (distance from drive lane to curb) on each side and a six-foot bike lane on one side (within the roadway). A trail adjacent to the roadway will continue to be included in the analysis for Option 2 as was authorized by the City Council. SRF is preparing an illustrative typical section demonstrating this width.

- **OPTION 3**

    - On May 29th, a meeting was held with Erik Johnson, a geotechnical engineer with Braun Intertec to discuss the pavement section design for Option No. 3 for purposes of preparing budget level cost estimates. Feedback and discussion with Erik included the following:

        - Maintaining the current alignment could help minimize the need for soil corrections.
        - Using select granular borrow (sand) reduces the roadways susceptibility to freezing due to the presence of heavy clay soils in the area.
        - In areas with frost boils (such as the east end by the Schmieg farm and in front of Hunt Club road), two feet of sand may be necessary due to subgrade soils, but one foot of sand will be adequate in other areas.
        - The amount of sand, gravel and bituminous pavement can be adjusted to find a cost-effective solution as long as the minimum gravel equivalency is met.

        - The existing gravel road base can be recycled and reused for construction of a 7-ton road to save costs.
        - In order to drain the sand section draintile (finger drains) should be included at low points of the road.
        - Using a separator fabric between the clay and sand layer helps keep the clay from pumping into the sand layer which reduces the effectiveness of the sand as a drainage layer. Fabric may be recommended in certain areas based on subgrade conditions (organic soils that may be permissible to remain in place to reduce costs).
        - If the City opts to not use sand, the gravel base section should be increased.
        - Generally, Braun recommends sand be included in both Options 2 and 3.
        - Once a design is selected, additional soil borings should be obtained to verify existing conditions and specific recommendations updated for the project.

    - Following the meeting on May 29th, Erik noted that a 7-ton road is more appropriate for residential streets with less than 1,000 daily trips. Marsh Lake road traffic projections are greater than 1,000 trips per day.

- **LIFE CYCLE COST ANALYSIS**

    - On June 17, staff met to outline the parameters that will be evaluated as part of the life cycle analysis for each of the options. The City currently spends approximately $25,000 per year maintaining Marsh Lake Road. Preliminary parameters for maintenance costs that would be the City's responsibility for each option include:
        - **Option 1**: County is responsible to pay for crack sealing and seal coating, mill & overlay, plowing, striping and sweeping. City is responsible to pay for ditch mowing, stormwater and storm sewer maintenance, median landscaping, and trail maintenance.
        - **Option 2:** City is responsible to pay for crack sealing and seal coating, mill & overlay, plowing, sweeping, striping, ditch mowing, stormwater and storm sewer maintenance, and trail maintenance.
        - **Option 3:** City is responsible to pay for crack sealing and seal coating, mill & overlay, plowing, sweeping, striping, and ditch mowing.

- **Next Steps**: Staff will prepare costs estimates for Options 2 and 3, develop life cycle costs, and prepare the decision design matrix for discussion and decision by the City Council. The upcoming meetings are anticipated to present our findings to the public.
    - Monday, July 15th – Neighborhood Meeting
    - Monday, July 22nd – City Council Workshop (discussion) followed by regular City Council meeting (anticipated decision)