

## **PROJECT STATUS MEMO (UPDATED DUE TO EXPANDED TID2 ELIGIBILITY)**

### **KRONENWETTER DRIVE NORTH (PHASE B) ROAD PROJECT**

To: Village of Kronenwetter

From: Robert J. Roth, PE

Re: Kronenwetter Drive North Project B

Date: August 29, 2024

**BACKGROUND.** The Village of Kronenwetter had previously commissioned the design of Kronenwetter Drive North (Upper aka Phase B) From TID2 to Kowalski Road. This is a 1.7 mile segment of construction.

This memo is a brief summary memo on the project. The project estimate is attached.

**CURRENT STATUS.** Our focus has been on the portion of the project within TID2, however, this Kronenwetter Drive North has advanced in reasonable stride to beyond the 50% stage.

**SCOPE.** The following key design elements are included in the Kronenwetter Drive North project:

1. Address significant joint movement in the entire portion of the roadway.
2. Address lack of sub-base adequacy for level of traffic received, additional truck traffic.
3. Maintain roadway width and functionality, with allowance for heavier traffic.
4. Rebuild portions near Jakes Lake Road to raise profile due to standing water issues in that area.
5. Rebuild portions of the roadway to increase base support and structure, while improving base drainage. This will reduce the freeze-thaw effect in this area.
6. Address roadway design elements (culverts, shoulders).
7. No ROW acquisition is necessary.

**DESIGN ASPECTS.** There is between 2.5" and 3.5" of asphalt on average in this segment of road. The base includes from 8" to 9" of crushed aggregate. This was likely built as a WisDOT access road to properties upon the build-out of I39. That is, the level of service was not necessarily for a

high level of truck traffic. The use of the road has changed over the years, but also, the performance of the road is now evident in other aspects.

The pavement condition has lateral/transverse cracking with mild rutting and longitudinal cracking throughout. The segment south of Jakes Lake Road is in worse condition. The lack of base drainage is likely contributing to the washboard effect, especially during weather transition periods, and it is susceptible to freeze-thaw effects. However, the pavement movement appears to be limited to only the areas near the cracks, indicating that drainage may be worsening as the pavement ages and the cracks open-up. This would normally indicate that the minimum improvement would be a mill and overlay. However, we note that there is generally inadequate base and pavement for a higher level of service for trucks (minimum 12" CABC with 4" asphalt). This occurs for all portions of Kronenwetter Drive North except for a limited area near Kowalski. We are also concerned that with elevated water levels, there is a lack of drainage and these spots will be revealed only during construction. Therefore, we need to plan for an adequate budget that allows for field testing, proofrolling and onsite decisions with the roadway.

We have estimated 30% of the road segment will need to be rebuilt based on the borings and driving the road on numerous occasions. This can be lowered with additional emphasis on construction testing/inspection to evaluate conditions in real-time. The re-built section is summarized as follows:

- Mill/pulverize existing asphalt, stockpile
- Excavate to desired base level, stockpile
- Install geofabric with drainage layer ASTM No 67 clear stone
- Install 12" of 3" compacted breaker run base
- Install 6" of 1.25" compacted crushed aggregate
- Place new 4" HMA with shoulders

The remaining segments will have a mill and overlay with the addition of 4" of CABC for additional structure, summarized as follows:

- Mill/pulverize existing asphalt with 4" new material
- Keep original base below mill line
- Resultant 14-15" aggregate material including regrind/millings
- Regrade and shape, compact
- Place new 4" HMA with shoulders

Our 90% and final plans will confirm all base and roadway segments. Where the road is to be reconstructed, it is possible that we may be able to re-use aggregate taken from the project if it meets design specifications. We will likely account for this in the customization of the project bidding.



**BUDGET & PRELIMINARY COST.** Project costs for the Kronenwetter Drive North (Upper) portion, at this stage of the project, are included. These estimates are subject to change as we finalize the documents. The overall cost of the project is \$1,460,000.

**NEXT STEPS.** We will release the public involvement plan as the next step, followed by the 90% bid documents stage (plans, estimate, report), set up a public involvement meeting, initiate permitting and pursue finalization of the construction bid package.

Please contact me with any questions or if additional information is needed.

Sincerely,

**ROTH PROFESSIONAL SOLUTIONS**



Robert J. Roth, PE  
Project Engineer

