

**US 34, IL 41 and IL 167 ■ Hydraulic Reports
Avon and Watanga, Illinois**

Civil Engineering – Hydraulics Subcontractor

Millennia Professional Services was retained by Graef USA, in concert with the Illinois Department of Transportation, to provide hydraulic modeling, design guidance, permitting and hydraulic reports for multiple creek crossings, channel modifications, and stream bank stabilization on this various-various contract.

The planned improvements include structural culvert replacements at IL 41 and IL 167, and analysis of culverts at US 34 and an adjacent railroad. The structures were in severe disrepair, with some structure conditions ratings at 3 (rated from 9-0).

Clients:

Graef USA
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Illinois Department of Transportation
District 4
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Peoria, IL 61602
Phone: 309.671-2489



Engineering Services Provided:

- Field Observation Visits
- Project Narrative
- Waterway Information Tables
- Hydraulic Report Data Sheets
- Hydrology using StreamStats
- Hydraulics Analyses using HEC-RAS
- Modeling for Natural, Existing, and Proposed Conditions
- Freeboard Analysis and Design Recommendations
- Hydraulic Survey Data Exhibits
- Hydraulic Report
- Bureau of Bridges and Structures Permitting

