

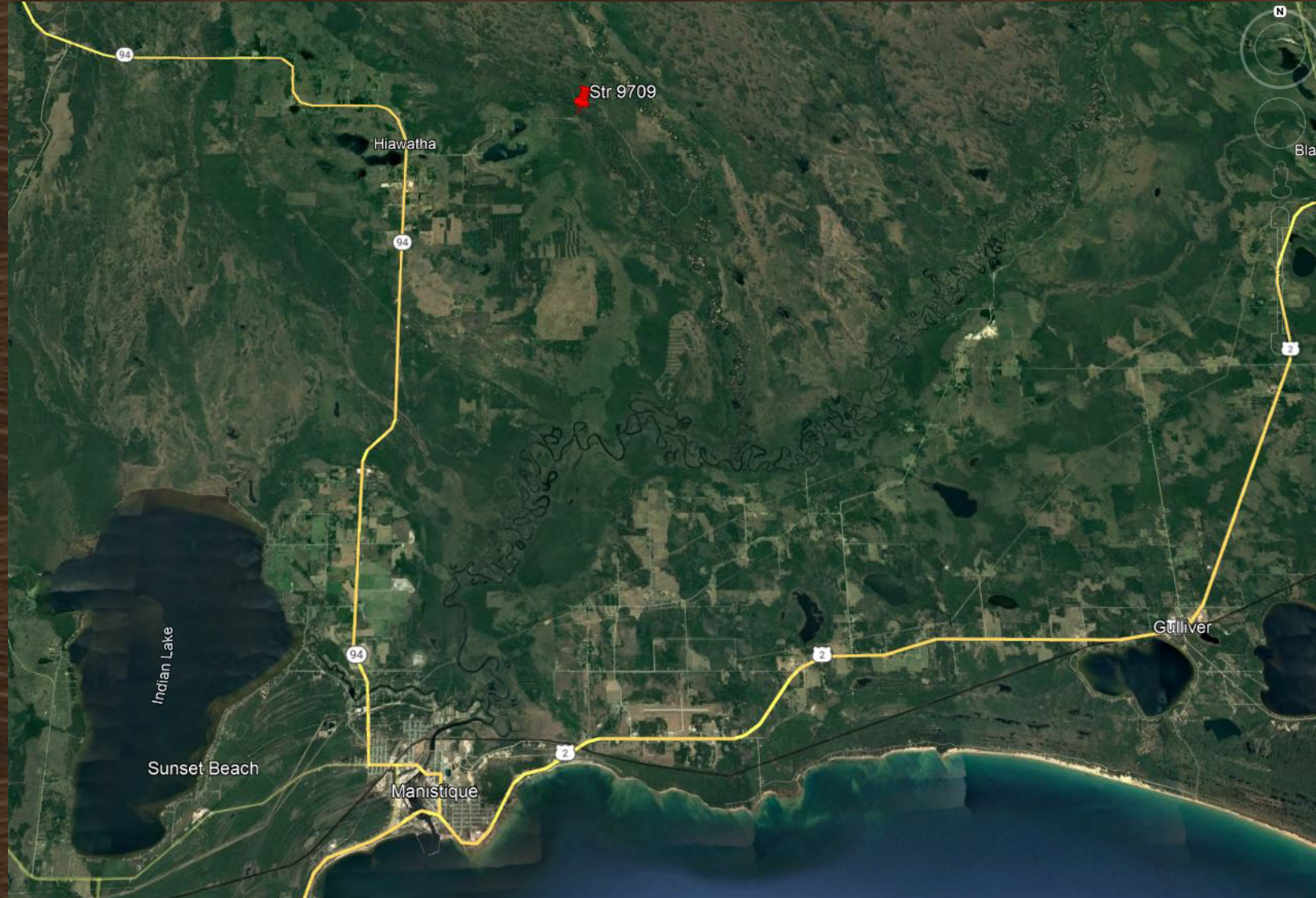
TIMBER?!?



Mother Nature's Material for Bridges

Existing Crossing

- ◇ Timber Structure
 - ◇ 12" Spike Lam Deck Panels
 - ◇ Timber Piles
- ◇ Built 1966
- ◇ Poor Condition
 - ◇ Several broken deck boards
 - ◇ Deck panels pulling apart
 - ◇ Broken spreader beams
 - ◇ Decaying piles
 - ◇ Large deflection with truck traffic
- ◇ 75-Foot Bridge (3 Spans)
- ◇ County Primary Road
- ◇ Low Traffic Volume
- ◇ High Commercial %









So Many Choices

- ◆ Lots to consider
 - ◆ Cost
 - ◆ Longevity
 - ◆ Maintenance
 - ◆ Time to Construct
 - ◆ Aesthetics
 - ◆ Materials

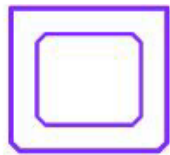


Alternatives Considered

- ◇ Steel I-Beam
- ◇ Pre-Stressed Concrete I-Beam
- ◇ Concrete Box Beam
- ◇ Many More!



Concrete Beam
Channel



Concrete Beam
Box



Concrete Beam
Box Girder



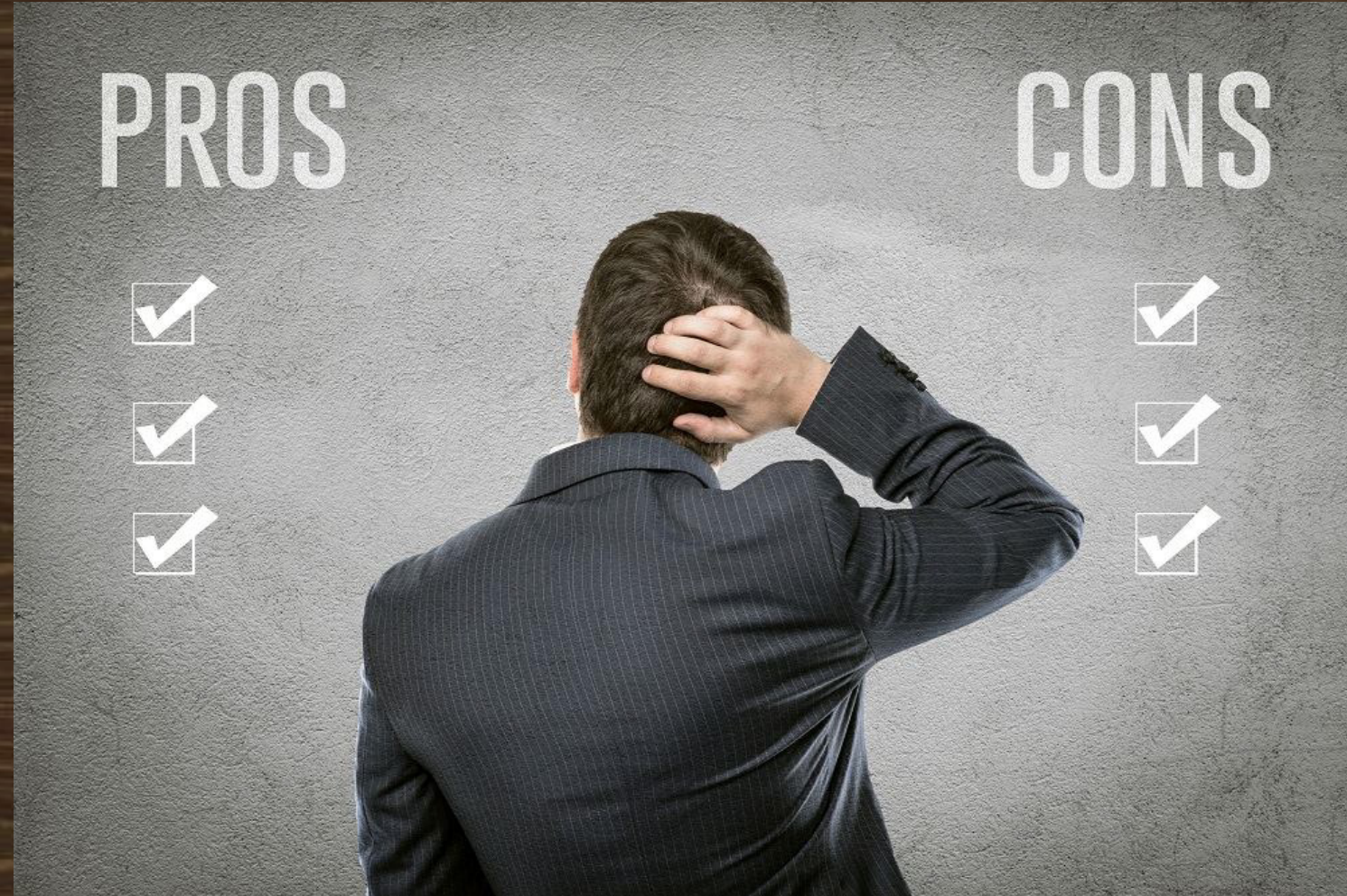
Timber Pros & Cons

Pros

- ◆ Completely Prefabricated
- ◆ Cheaper
- ◆ Faster Construction
- ◆ Lighter Weight Pieces
- ◆ Thin Profile
 - ◆ Hydraulic must
 - ◆ Less approach work
- ◆ Less Concrete

Cons

- ◆ Shorter Service Life
- ◆ Span Length Limited



New Bridge

- ◆ Same Style
- ◆ Timber Superstructure (18" Spike Lam Deck Panels)
- ◆ More Spreader Beams
- ◆ Steel Piling, CIP (14" Diameter)
 - ◆ No Bedrock/Sandy Soils
- ◆ 90 Feet Long (3 Spans)
- ◆ 28 Foot Clear Width vs 20 Foot on the Old Bridge
- ◆ Total Cost = \$1.31 Million





























































Why Did We Choose Timber

◆ Cost Effective

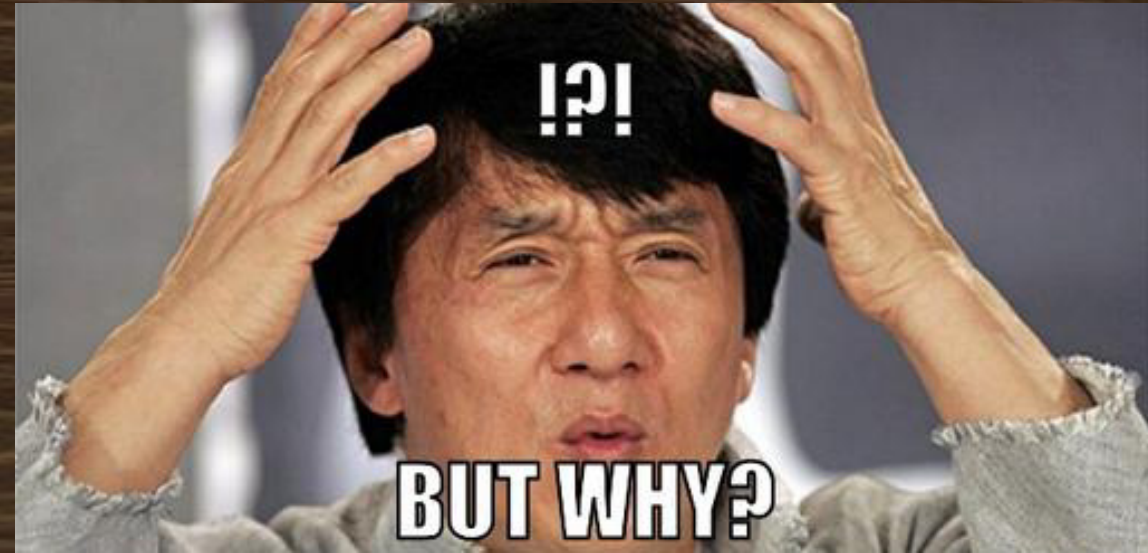
- ◆ Limited Funds (programmed originally as rehab)
- ◆ Steel I-Beam or Concrete I-Beam estimated to be 30 – 40% higher

◆ Faster Construction

- ◆ No wait time for concrete curing
- ◆ Prefabricated, set and fasten together

◆ Less Concrete

- ◆ Remote work site, nearest plant over 60 miles away



Questions?

Contact Info

Ian Stampfly, PE – Project Engineer

County Highway Engineer – Schoolcraft CRC

engineer@schoolcraftroads.org, 906-341-5634

Gust Junttila, PE – Design Engineer

Project Manager – UP Engineers & Architects

gjunttila@upea.com, 906-779-0937

Jake Silkey – Sales Engineer

Wheeler Bridge

jsilkey@wheeler1892.com, 262-229-4068

