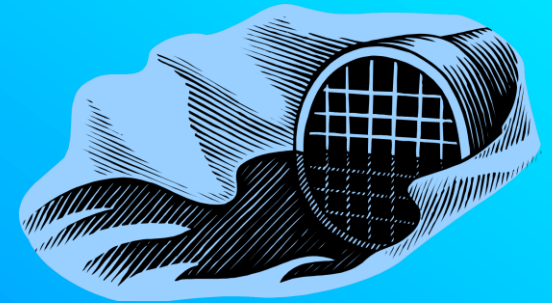
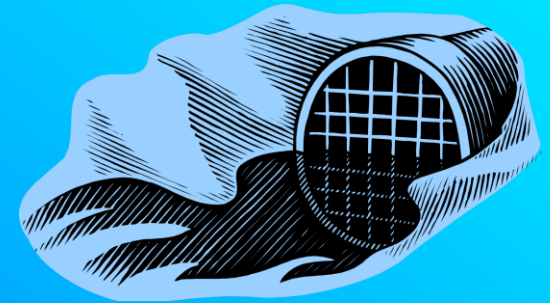

New Culvert/Sewer Regulations

Mark Van Port Fleet
Engineer of Design
Michigan Department of Transportation



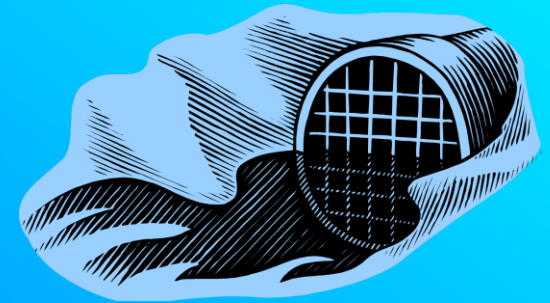
Case for Change

- New Federal Regulations
 - Alternate materials will be specified
 - Satisfactory Quality and equally acceptable
 - Price estimated to be approximately the same
 - Can substitute, but if increased cost no increase in federal aid
- Competition



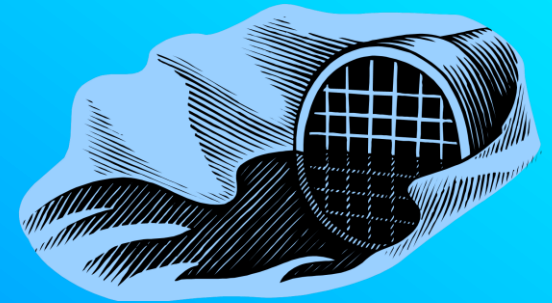
Determination of Compliance

- Michigan FHWA letter to MDOT
 - States Policy complies with regulations
- Local Agencies determined insufficient
 - Must develop a transition plan
 - Can use systematic implementation
 - Metered to gain experience
 - Consider roadway importance
 - Learn Construction Techniques



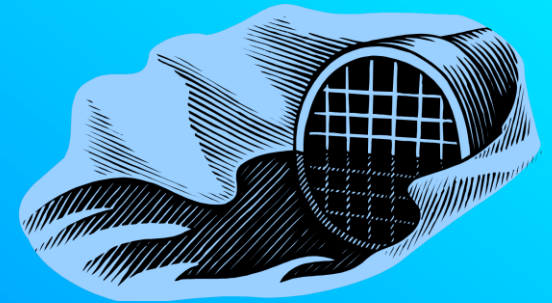
MDOT/CRAM/MML Work Group

- To establish policy for Local Pipe Usage
- Review Current Use
- Propose New Applications
- Establish Design Parameters
- Follow Published Standards



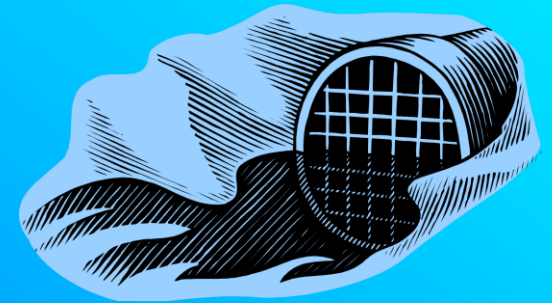
Members

- Wayne Schoonover
- Bob Peterson
- Wayne Harrell
- Rich Townsend
- Bill Meinz
- Chris Youngs
- Bruce Kadzban
- Mark Van Port Fleet
- Robert Rochon
- Bob Clegg



Procedure

- Used MDOT Policy as Guide
- Considered Uniqueness of Local System
- Considered Experience of Local Use
- Established Design Life Criteria



Design Life Criteria

- Storm Sewers 70 Years
- Cross Culverts 50 Years
- Underdrains & Foundation Drs 35 Years
- Driveway Culverts 25 Years
- Bank Drains 25 Years
- Downspouts 25 Years



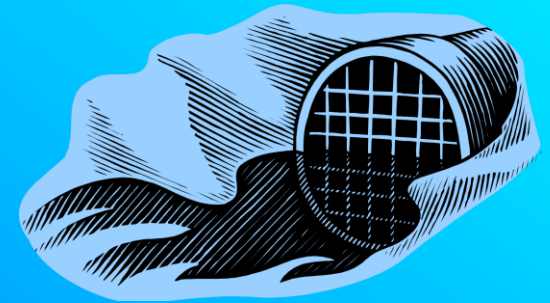
Service Life of Materials

- Metal Pipe
 - Galvanized 16 Gage 30 Years
 - Polymeric Coated 20 Years Added
 - Aluminized Type 2 1 gage less
- Aluminum
 - 14 Gage 50 Years
 - 12 Gage 20 Years



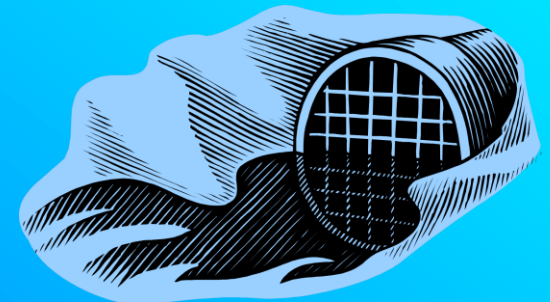
Other Topics

- Trench Width and Backfill Criteria
- Flammability
- Design Calculations
- Designer and Contractor Training
- Inspection parameters
 - Video
 - Mandrel Testing
- Industry Sensitive Issue



What's Next

- Implementation
- Pipe Specifications
 - MDOT Acceptable
 - Expanded Use
 - Cost Savings



QUESTIONS?

