

Sponsored By:

AYRES











What types of projects should communities focus on for the BIL funding for FFY22? FY23?



FFY22 Project Types





Requirements

- No impacts:
 - Real estate
 - Utility
 - Railroad
- Little-to-no impacts:
 - Environmental
- Design costs not allowed

What Types of Projects?

- Simple roadway projects:
 - Mill & fill
 - Pulverize & pave
- "Shelf" projects already designed
 - Bridge or roadway
 - Attention can turn to documentation











FFY23 Project Types





Requirements/Recommendations

- Minimum impacts:
 - Utility
 - Environmental
- No impacts:
 - Railroad
 - Real estate
- Design costs allowed

What Types of Projects?

- Straightforward
- Roadway or bridge













How does a community go about selecting an engineering firm?

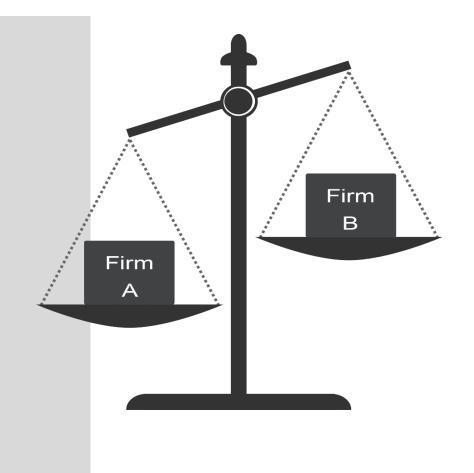


Design Consultant Selection



Contract Types

- 2-party design contract
 - 100% local funds for design (no federal funds)
 - Recommend Qualification Based Selection (QBS)
 - Recommend that firm be on WisDOT Roster
 - Solicitation method flexible
- 3-party design contract
 - 80% federal funding for design
 - Required Qualification Based Selection (QBS)
 - Required that firm be on WisDOT Roster













Design Consultant Selection



Solicitation Methods (typical)

- Small Purchase (less than \$200,000 design services)
 - Establish selection criteria & committee
 - Contact minimum 3 firms
 - Review qualifications of each firm
 - Rank firms and send selection form to WisDOT
- Request for Proposals (\$200,000+ design services)
 - Solicit Notice of Interest more formal process
 - Review qualifications of each firm
 - Rank firms and send selection form to WisDOT













Design Consultant Selection



- Sample Selection Criteria
 - Experience
 - Firm, project manager, staff
 - Similar projects
 - Proximity to project
 - OAvailability/capacity
 - Past performance
 - Timeliness, quality of work
 - References
 - Project Approach

	Resources Available To Do Job	Unsat	Margn	Norml	Above	Excel	Outst
	Outlook in general, interest in work.						
2.	Project Manager/Engineer General impression, self expression, knowledge and experience, self confidence, persuasiveness.	Unsat 0	Margn 2	Norml 4	Above 6	Excel 8	Outst10
3.	Public Involvement Proposal or plan, sensitivity.	Unsat O	Margn 2	Norml 4	Above6	Excel 8	Outst 10
	•al Issues	Unsat	Margn	Norml	Above	Excel	Outst

Excerpt from WisDOT FDM 8-5-55











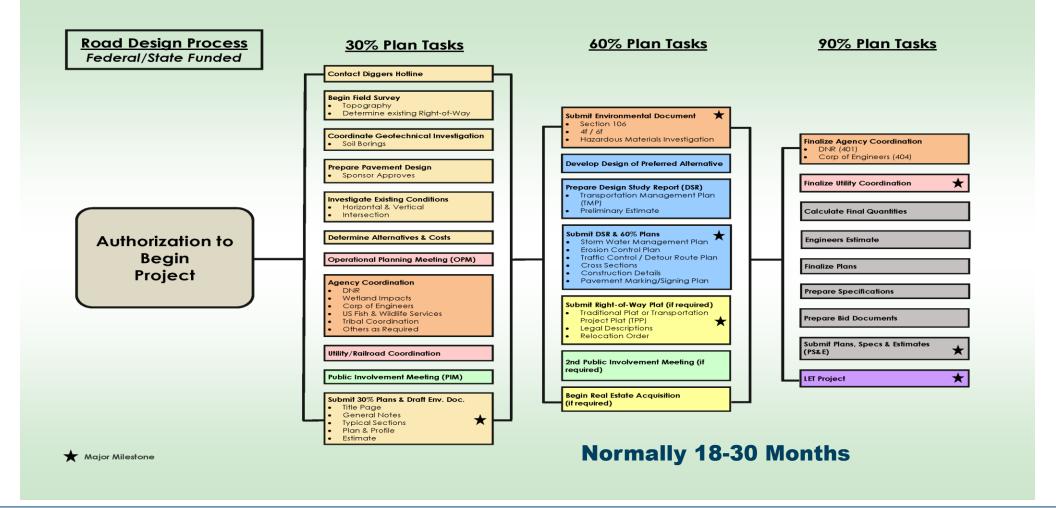


What is the overall federal process and timeline?



Federal Process/Timeline









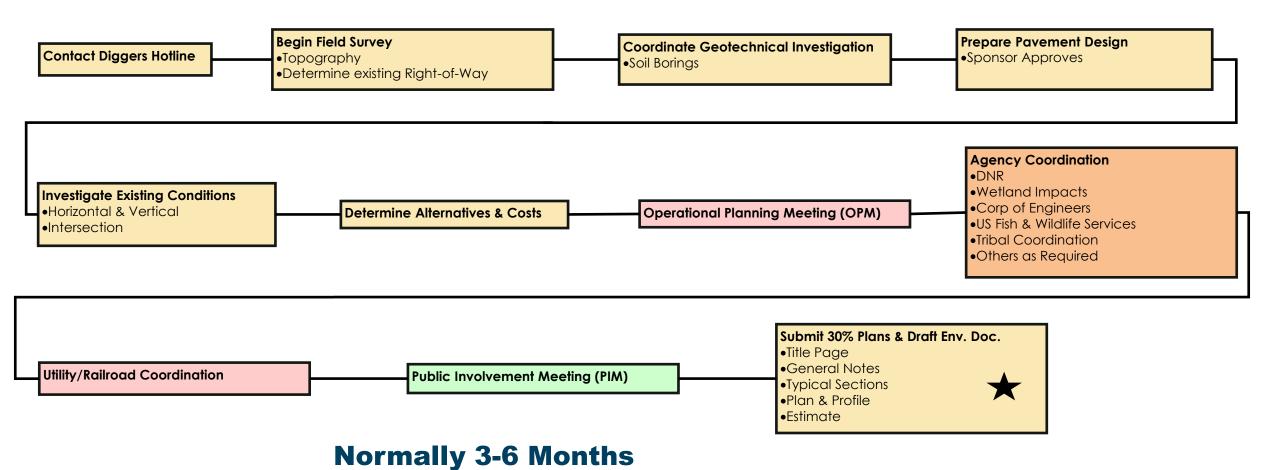






30% Plans Specifications & Estimate









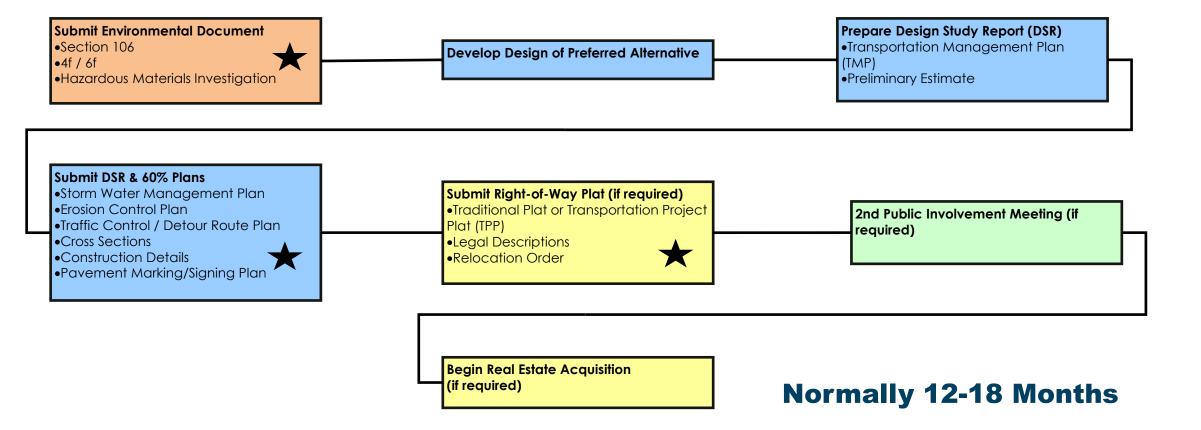






60% Plans Specifications & Estimate









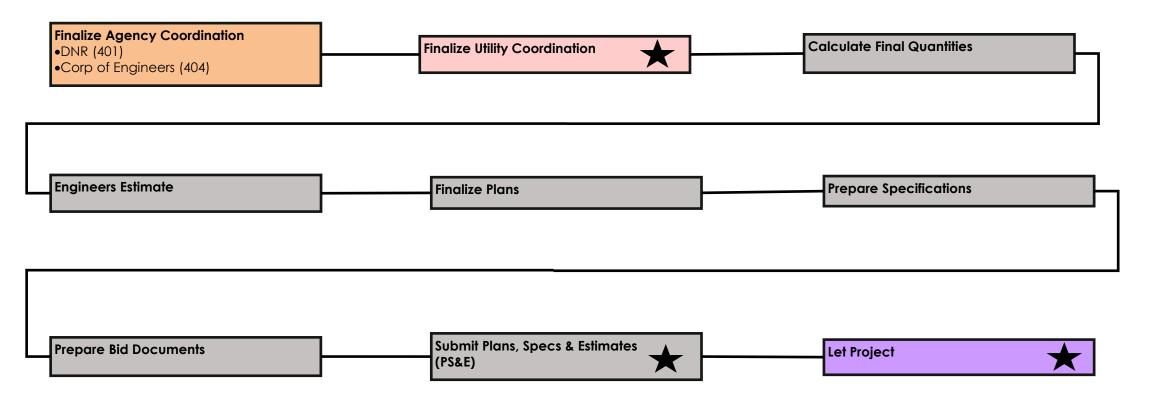






90% Plans Specifications & Estimate





Normally 3-6 Months





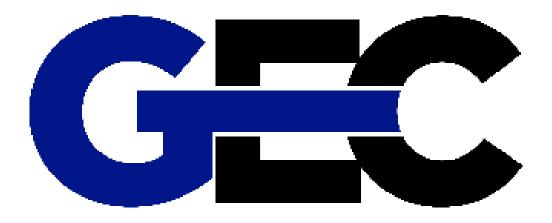








What is involved in the plan development aspect of the project?



Project Plan Set



- The plans will have to meet WisDOT standards and specifications
 - 2 Levels of "Standards"
 - Design Standards = How the project has to be constructed
 - Plan Set Standards = How the data files (CAD models) and project documents are formatted and organized for the DOT
 - WisDOT standards and specifications are available in the <u>Facilities Development Manual</u> on the WisDOT website











Project Plan Set



- Engineer needs to know the existing conditions of the project area
 - For FFY2022 projects grades and widths should remain the same, minimal to no environmental impact
 - If there are utilities (underground or above) where/how does it impact pavement?
 - Where are manholes that will need to be paved around? Are power lines close to the roadway?
 - What is the volume and type of traffic that use the road?
 - What are the existing soil conditions?
 - Are there any other unique circumstances with your road?













What is involved in developing project "specifications?



Project Specifications



- WisDOT Standard Specifications
 - What work is included with each bid item
 - Material requirements
 - How to Measure
 - How to Pay
- Special Provisions
 - Modifications to standard bid items
 - Unique items that come up occasionally
 - Standardized format and numbering system for Contractors to follow

https://wisconsindot.gov/pages/doing-bus/eng-consultants/cnslt-rsrces/rdwy/stndspec.aspx











Project Specifications



- Additional Bid Package Documents (<u>Facilities Development Manual Chapter 19</u>)
 - Plan Letter
 - Environmental Commitments
 - Contract Time for Completion
 - Governors Approval Form
 - Right-of-Way Certification
 - Utility Status Report
 - Certificate of Coordination of Railroad Work with Highway Construction
 - Contractor Data Packet (optional)
 - Estimate coming next!













Please explain the process of developing an "estimate".



Estimate Creation





Estimates Typically Include Costs for These Services:

- Design = \$
- State Review for Design = \$ Coordinate with WisDOT Region
- Construction = \$
- Construction Engineering = \$ Coordinate with WisDOT Region
- State Review for Construction = \$ Coordinate with WisDOT Region

Note:

- FFY22 Design Costs will **not** be included in the application
- FFY23 Design Costs will be allowed in the application











Estimate Steps





- Define project limits
- Define scope of work
- Identify project risk
- 4 Identify major quantities

- Understand unit costs
- **6** Obtain unit costs
- Apply a contingency











Estimate Steps



- Define project limits
 - Roadway: # of miles _____
 - Bridge: Length of roadway approaches _____
- 2 Define scope of work
 - Identify project needs



- Identify project risk
 - More risk = more design effort = more cost
 - Considerations:
 - Real estate
 - Environmental concerns
 - Construction timeframe
 - Location, location
- Identify major quantities











Estimate Steps



- Understand unit costs
 - Labor from state-certified contractors
 - Materials from state-certified pits
 - Review statewide costs/ trends, market conditions

- Apply a contingency
 - Use 20% contingency
 - Do not lowball estimate
 - No opportunity to apply for Change Management

- **Obtain unit costs**
 - Bid Express:

Bid Express - Secure electronic construction bidding for government agencies and their vendors

• WisDOT:

Wisconsin Department of Transportation Local project tools (wisconsindot.gov)













Please summarize and provide an example of federal certifications required in a PS&E.



State/Federal Approvals



- Environmental Document Categorical Exclusion Checklist (CEC)
 - Identifies Project Purpose & Need
 - Document alternatives and impacts to determine preferred alternative
 - CEC process developed by WisDOT to meet National Environmental Protection Act (NEPA) compliance
 - Public Involvement also required
- Typical Items Requiring Review
 - Wetlands/Waterways
 - Endangered Species
 - Hazardous Materials

- Archaeological site
- Historical properties
- Section 4(f)/6(f) Properties
- If impacts determined commitments to avoid, minimize, or mitigate may be required
- Commitments may impact/limit alternatives, construction methods & schedule











State/Federal Approvals



- Design Study Report (DSR)- Overall Project Design Summary
 - Identifies Existing Conditions
 - Documents Design Decisions/Direction
 - Any Exceptions to DOT Standards Identified
 - Signed/Stamped by Professional Engineer
- Concurrence on Final Design Elements
 - Before Finalizing Plat
 - Before Acquiring Right-of-Way (ROW)
 - Before Finalizing Utility Relocations











State/Federal Approvals



- Utility Coordination (Not bound by TRANS 220 Process)
 - Locate and contact all utilities along project
 - Identify conflicts
 - Arrange for relocations and have work completed prior to construction
 - Compensability complications if outside existing Right-of-Way (ROW)
- Right-of-Way
 - Locals pay for land and services 100%
 - Must be acquired prior to Plans Specifications & Estimate (PSE)
 - Can significantly affect timeline
- Railroads
 - Coordination required if within 1000' of project
 - Overpass structures or crossings require heavy coordination and will significantly affect timeline
- Projects Should Not Have these Complications for FFY22 Dollars
- Projects Should Avoid for FFY23; FY24 26 OK but increases complexity













Please explain the letting process and the roles of different stakeholders.



Letting Process



- Comparison to Local Letting
 - WisDOT has major role
 - o Time period from PS&E submittal to bid letting:
 - 3 to 5 months (state letting)
 - Quarterly PS&E; monthly lettings (<u>link FDM 19-1</u>)
 - 3 to 5 weeks (local letting)
- Additional PS&E Review Steps
 - WisDOT plan checkers
 - Design consultant revisions, if necessary
 - Verify utility status cleared
 - Verify right-of-way cleared
 - Federal authorization
- Ad Period (5 weeks)
 - WisDOT advertises project
 - Possible addendum prepared by design consultant













Letting Process



- Bid Letting (2nd Tuesday)
 - WisDOT "opens" and reads electronic bids
 - Bid tabulation prepared
 - O Low Bid exceeding 5% of estimate:
 - Consultant prepares Bid Justification
 - Town approves accepting "low" bid
- Contract Award and Execution (6 weeks)
 - WisDOT awards project to lowest bidder
 - WisDOT executes 2-party contract with contractor
- WisDOT Hires Construction Engineering Firm
 - Pre-construction conference scheduled
 - Contractor Notice-to-proceed issued















The let has been awarded and construction is about to begin. What happens during construction?



Post Let/Award Process



General Process

- WisDOT selects construction engineer and negotiates contract
- Engineer coordinates with contractor, WisDOT and Town to set preconstruction meeting
- Town may wish to hold public information meeting
- Contractor will hold project start meeting

Contractor Role

- Construct project according to plans and specifications
- Request contract modifications, if warranted
- Hold weekly project update meetings











Post Let/Award Process



- Town Role
 - Attend project meetings and provide guidance regarding issues and changes

- Construction Engineer Role
 - Assure contractor following plans and specifications
 - Eyes and ears for the Town
 - Coordinate with WisDOT
 - Make sure Quality Control tests are completed
 - Document all work and materials











Post Let/Award Process



- WisDOT Role
 - Provide overall direction on issues that arise
 - Approve pay applications
 - Review and approve final quantities and payment
 - Organize final documents for project audit (if Fed requests)





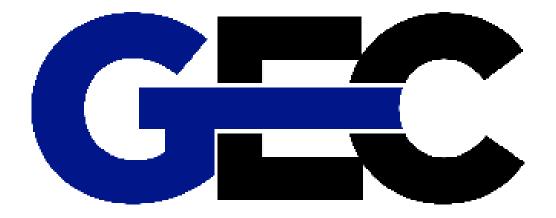








Construction has concluded. What happens during the closeout process?



Closeout Process



- Closeout Process will not occur for 1-2 years from end of construction
- STP is NOT a Reimbursement Program.
- DOT will bill the project sponsor at the end of the project.
 - After the project is complete DOT will review all project costs.
 - Any costs not eligible for federal funding or any budget overruns will be billed to the project sponsor along with required 20% of eligible costs.
- May be billed during project for costs not eligible for federal funding.
- 20% match will be billed after project completion.









