

# Highway Design and Construction Management Considerations to Make Your Project Attractive

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WTBA

- The Wisconsin Transportation Builders Association is a non-profit trade association
- Approximately 100 Highway Contractors
- 50 Consulting Engineers
- 100 additional Associate Members

Steve Baas - Executive Director

Matt Grove


- WTBA Director of Engineering 20 yrs
  - 13 years prior managing Highway and municipal projects and staff
  - Professional Engineer - WI
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# Key Program Increases

- **State Highway Program**


- \$587 Million increase over previous budget
  - Rehab: +\$25M, Majors: +\$26M, SE Megas: +\$156M, Int. Bridge: +\$400, D/B: -\$20M
- Recent \$1 billion federal grant for I-535 Blatnik Bridge replacement
  - WI & MN each allocated \$400 M = Fully funded \$1.8 billion project estimate

- **Local Programs**

- \$4 Million increase existing formula/discretionary projects
  - \$100 Million: 1-time LRIP Supplemental grants
  - \$150 Million: Agricultural Road Improvement Program (new program)
  - \$50 Million: Southern Bridge project in Brown County
  - \$12.5 Million: Assessment of local bridge/culvert conditions
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Impact of  
LRIP-S  
ARIP

- **Additional \$ 150 M Local Let Projects**
    - ARIP - 3 Years to award (2026)
    - ARIP - 5 Years to reimburse (2028)
  - **Discussing Single Point for Advertising**
    - Including Consultant Opportunities
    - WCHA
    - Towns Association
    - League of Municipalities
  - **Electronic Bidding ?**
  - **Consistent Specifications and Contract Administration**
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# Estimating and Bidding

- Estimating
  - 1) *...to calculate approximate amount or value of something*
  - 2) *... to form an opinion about or evaluate*
  - 3) *... How is Contractor Going to Bid (not found in any dictionary)*
- Bid
  - 1) *...To offer or propose (an amount) (Contractually Binding)*

# Estimating and Bidding

- Bid Price Determined by Contractor  
(can't be "Materially Unbalanced")
  - Know Costs + Unknown Costs
  - HCCS / Other Software ?
  - Internal Process / Programs
  - Calculation of Actual Costs + Risk
  - **Experience**  
**(Risk / Reward)**



# Estimating and Bidding

## How Attractive Have You Made The Project to Industry ?

- Your Design / Contract Affects Price !
- Appropriate Risk Allocation and bidability !
  - 10 % Contingency for changes (they will happen)
  - Local Leaders need to be educated on this
- Are You Promoting Competition (Primes and Subs) ?
  - Accurate (Bidable) Plans and Quantities
  - Constructable Schedule



# Scheduling Provisions and Restrictions

## What Can Be Done to Get Best Pricing ?

- More Flexibility - Allowing for Early and Late Work season work and contractor chosen start times
- Relax noise and working hour restrictions
- Limit # of Stages and restrictions
  - Each stage creates prime and sub mobilization concerns
- Unreasonable schedules have large impact on cost



# Scheduling and Liquidated Damages

- Develop contract time and completion dates based on reasonable production rates
  - ( Do not base completion dates on local events or other unrelated fixed dates )
- If including liquidated Damages, make them as low as possible (big risk that is often uncontrollable )
- “Substantially Complete” - Stop contract time when roadway is serviceable, not entirely complete (landscaping, striping, electrical are in high demand late in season)

## Road Closed to Traffic

- Close the Road to Traffic Whenever Possible (Huge savings and safety consideration)
- Pedestrian and access accommodations - Discourage Pedestrians and bicycles from entering work zone - do not have unreasonable accommodation plan requirements



# Staging Areas and Haul Roads

- Staging Areas
  - Provide options if available
- Maximize Haul Roads and Project Access  
( Must be able to get materials to project)
- Allow for Portable Plants and Recycling  
Town Boards should be aware of need for  
approved sites and not delay process



## Specs and Bid Items

- Use specs that contractors are familiar with
  - If using WisDOT specs, remove QMP and ride spec requirements – define reasonable penalties for non-conforming materials
- Provide appropriate Pay Items and units (Ton, cy, sy etc)
- Use “Lump Sum” only when there is no chance of change. Each when potential for change is limited (should never be paid as a fraction of “Each”)

# Utilities

- Utilities relocations need to be well thought
- Largest potential for project delay
- Do not put utility conflict risk on contractors
  - Delays should be considered compensable
- Avoid utility work during project
- Make the status of utility relocations know at the time of bid (your project will be more attractive if contractors know the utilities are not in conflict)

## Pre-Bid

- Where is your project advertised ?
- Pre-bid consultation - consult experts such as industry associations if you have questions
- Electronic Bidding is extremely valuable in most situations
- Pre-bid Questions - who is the contact and responses should be prompt

## Contract Administration

- Staff with experienced and reasonable oversight personnel that are active and engaged
- Emphasize Communication
  - Preconstruction Meeting
  - Chain of Command - who is the decision maker
  - Weekly Meetings with agreed upon minutes
  - Construction Oversight Software ? Appia ?
  - Keep local leaders informed regarding progress

## Contract Administration Cont...

- Subgrade evaluation - proof roll process and decision maker for corrective action
- Change order process - notification and timely decisions (use of experts ?)
- Address time extensions as delays happen
- Provide consistent Payments and agree on quantities
- Discuss potential winter shutdown conditions in advance
- 1 punch list and close out projects quickly



## Closing Thoughts

- Well thought out designs and contract documents that limit contractor risk = \$ savings
- Make sure specialty products are available
- Strong pre-project and during project communication is essential
- Ethical and fair approach to contract administration - eliminate individuals that have behavioral issues (solve problems – don't create Problems)
- Do not under design to save \$
- Methods Based Specs do not have warranties (unless there is an obvious latent defect)
- Fairly managed projects will give your agency a good reputation and will help deliver projects at lower costs in the future

QUESTIONS ?

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