The Best Laid MOT Plans Often Go Awry
A Roundtable Discussion
Prior to 2013 most MOT plans were developed by the contractor as part of bidding. Why? Let’s explore some of the pros and cons to Contractor Design (CD) MOT.

**Pros**

- CD MOT allows the contractor to design the MOT that should be the most efficient design for them to utilize thereby saving time and money.
- ODOT MOT plan review one time (contractor proposal for MOT) instead of potentially two (consultant MOT plans and then the Contractor’s proposal for MOT changes)
- Eliminates potential of designing an MOT plan to include in the project plans that may not get used.
Cons

• CD MOT requires each bidding contractor design MOT plan. Since only one contractor gets awarded the project the remaining designs that were prepared for bidding purposes are not used.

• ODOT tends to be very particular with regard to MOT since it is a safety and congestion issue. The designer has the time to put the MOT in place that best serves the project and the traveling public. Traveling public impacts and/or user costs often are not factored into Contractor designs which are typically driven by ‘least expensive’ costs.

• There is a lot of work that goes into developing a sound MOT plan that often goes beyond the guidelines of the OMUTCD, TEM and CMS. It is difficult to quantify issues based on Engineering Judgment and relay that in the design-build scope. There is an extensive list of nuances to help the ODOT/Consultant decide how traffic should be maintained.
MOT Plans Why Do We Do Them??

Cons

• It is challenging when the CD MOT is not working as well as it could or there are perceived safety issues from the public yet the design complies with ODOT’s standards and specifications.

• Mixing Design-Build components with Design-Bid-Build components in a contract results in coordination and liability issues amongst ODOT, designers, and contractors. It is prudent to keep a contract either all Design Build or all Design Bid Build.

• Due to the low-bid environment, Contractors may not put forth the effort to provide a design acceptable to ODOT requiring the District to review the MOT plan several times.

• Contractors only have a fixed amount of time between advertisement and bid. Oftentimes, this is not enough time to properly design and price a complete MOT scheme.
What is commonly missed in design?

Factors not considered in design that should be.

• Size/depth of excavations
• Overhead clearances (bridge/utility)
• Restrictions on excavations relative to existing features
• Cure times
What happens during construction that causes a change in MOT phasing?

Things that happen in the field that cause a change in the phasing

• Material lead time
• Utility relocations
• Utility physically not able to move prior to starting the work due to RW or other constraints
• Changes to adjacent project phasing
Other factors that can’t be considered during design?

- Timing of bidding. Not all “one” construction season projects are started in the spring.
- Contractor’s means and methods.
- Utilities- relocation delays and/or unexpected utility locations.
- Weather- we may look for ways to accelerate the project to catch up which may result in alternate MOT or pulling portions of work that were in later phase of construction up.
- Material delays is another that may result in some MOT changes indirectly.
- Unexpected results- even with the best planning sometimes traffic doesn’t end up working like we hope and we make changes to improve flow/safety.
• Think holistically about the project, not just what is on paper.
• Consider the equipment size and placement.
• Look to balance workzone needs, with safety, schedule, budget.
• Request feedback during/after construction to learn what worked and what didn’t. Attend progress meetings.

Recap...what can engineers and designers do to create a better, more applicable set of MOT plans?
THANK YOU
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