IMPLEMENTING UTILITIES IN CONSTRUCTION CONTRACTS
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But we’ve always done it this way.
Causation

- Funding Constraints
- Utility Delays
Currently

New utility specification

Coordination, documentation & monitoring

SUBSECTION 8.14
UTILITY COORDINATION, DOCUMENTATION, & MONITORING RESPONSIBILITIES

A. - GENERAL

In accordance with the provisions of Section 8.06 Execution and Progress, utility coordination is a critical aspect of this Contract. This section defines the responsibility of the Contractor and the utility companies, their obligations in coordination with the Engineer, with assistance from the Contractor, to coordinate with the Work progresses. The Engineer, with assistance from the Contractor, shall coordinate with the utility companies. To support this effort, the utility companies that are impacted by the Contractor’s operations, to provide routine and accurate schedule updates, provide notification of delays, and documentation of the steps taken to resolve any conflicts for the temporary or permanent relocation of the impacted utilities. The Contractor shall provide copies to the Engineer

- Providing advanced notice, for all utility-related meetings initiated by the Contractor.
- Providing meeting minutes for all utility-related meetings that the Contractor attends.
- Providing all test pit records.
- Request for Early Utility work requirements of this section (see below).
- Notification letters for any proposed changes to utility start dates and/or scheduling.
- Written notification to the Engineer of all apparent utility delays within seven (7) Calendar Days after a recognized delay to actual work in the field – either caused by a Utility or the Contractor.
- Any communication initiated by the Contractor, associated with additional Right-of-Way needs in support of utility coordination.
- Submission of completed Utility Completion Forms.

B. - PROJECT UTILITY COORDINATION (PUC) FORM

The utility schedule and sequence information provided in the Project Utility Coordination Form (if applicable) is the best available information at the time of the bid and has been considered in setting the contract duration. The Contractor shall use all of this information in developing the bid price and the Baseline Schedule Submission, inclusive of the individual utility durations sequencing requirements, and any work that has been noted as potentially concurrent utility installations.

C. INITIATION OF UTILITY WORK

The Engineer will issue all initial notice-to-proceed dates to each Utility company based on either

WITH THE CONSTRUCTION INDUSTRY INPUT

Required utility relocations that need to occur prior to the baseline construction conference in the form of a Notice to Proceed, and the approval of the Utility. Prior to officially requesting approval for the move with MassDOT and all utility companies, the Contractor shall provide copies to the affected Utilities.

According to MassDOT Standard Specifications or Sequencing that varies from the baseline, the Contractor must submit this as an adjustment to the plan. The baseline schedule includes the approval of the Proposal Schedule and a proposal with any changes to this plan without MassDOT approval. The submitted schedule must be reviewed and approved by MassDOT.

Utility owner is not advancing any Pipeline; the baseline schedule will be provided to the Utility owner in the event that the Contractor Contract will continue to be issued.
Why?

**BECAUSE DELAYS:**

- Are **often** caused by poor communication
- Cause embarrassment
- Are usually VERY public
- Cause frustration
- Cause confusion
- Hurt all Parties --- $
Delays caused by others = Frustration - Lost in Translation
Current Goal

Utility Coordination & Construction Planning

MassDOT  Contractor  Utility Co.
Designer
Key Initiatives

- District Utility Constructability Engineer
- Incentive Based Utility Legislation
- New Engineering Directives
- Duration Based Force Account Agreement
Key Initiatives

- Integrated 8.02 – Construction Scheduling Spec
- Integrated Contract Time (CTD) from Designers
- District Utility Reimbursement Engineers
- Automated Work-flow, forms and letters
- 8.14 – New Utility Coordination Spec

2010 to today
Initial Results

1. Better Planning
   • More realistic contractor durations (seasonal)
   • ‘Constructability’ before construction bids
   • Fewer Utility related mistakes in bid documents

2. More Utility Company involvement – and Earlier

3. Less dominant/less lengthy, third-party caused delays

4. Awards

5. Helping with overall results for on-time performance

6. A better equipped ‘next generation’
OVERALL MASSDOT HWY ON-TIME COMPLETIONS

- **2005**: 35% (Late Completion), 65% (On-Time Completion)
- **2006**: 26% (Late Completion), 74% (On-Time Completion)
- **2007**: 16% (Late Completion), 84% (On-Time Completion)
- **2008**: 13% (Late Completion), 87% (On-Time Completion)
- **2009**: 43% (Late Completion), 57% (On-Time Completion)
- **2010**: 68% (On-Time Completion), 32% (Late Completion)
- **2011**: 78% (On-Time Completion), 22% (Late Completion)
- **2012**: 68% (On-Time Completion), 32% (Late Completion)
- **2013**: 65% (On-Time Completion), 35% (Late Completion)
- **2014**: 67% (On-Time Completion), 33% (Late Completion)

Average:
- Late Completion: **22.5%**
- On-Time Completion: **64.8%**

**Related Results (Contributing)**
Review of Past ‘Needs:’

Legislation

New Policies

‘Buy-In’

Funds

Project Controls

Consistency
**How are we ‘making it stick’**

**A) Automated Process - Online**
- Task Based Work Flows
- Procedures
- Forms & letters
- Schedules
- Specifications

**B) Training & Support**

**C) ‘One Buildable’ Solution**

**Not an ‘open checkbook’**
# Early Utility Coordination & Incentives

## Concurrent / Exclusive Utility Work

Contractor note: In planning and executing the work, the Access Restraints listed in the Special Provisions, takes precedence over the checklist in these 4 columns.

<table>
<thead>
<tr>
<th>Estimated Duration (Work Days) by Utilities (Lead time not included)</th>
<th>Concurrent / Exclusive Utility Work</th>
<th>Access Restraint &amp; Limitations of</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exclusive</strong></td>
<td><strong>Concurrent Utilities</strong></td>
<td><strong>Contractor Off Site</strong></td>
</tr>
<tr>
<td>Utility working with no other Utility in vicinity</td>
<td>Utility working with other Utility(s) on site</td>
<td>No Contractor physical construction operations on-site (while Utility is working)</td>
</tr>
<tr>
<td><strong>Contractor Concurrent</strong></td>
<td></td>
<td>Contractor and Utility are working on-site - but NOT in the same vicinity</td>
</tr>
</tbody>
</table>
### How are we ‘making it stick’

#### DESCRIPTION - Utility Relocation Phases, Tasks and Activities

<table>
<thead>
<tr>
<th>Description</th>
<th>Concurrent/Exclusive Utility Work</th>
<th>Contractor Off Site</th>
<th>Contractor Concurrent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabling work by the Contractor</td>
<td>Estimated Duration (Work Days) by Utilities (Lead time not included)</td>
<td>Exclusive</td>
<td>Concurrent Utilities</td>
</tr>
<tr>
<td>Verizon</td>
<td>Coordinates with contractor to remove existing duct and relocate cables as detailed in the MassDOT construction plans</td>
<td>5</td>
<td>X</td>
</tr>
<tr>
<td>Charter Communications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rec locate equipment from existing vault to Verizon manhole</td>
<td>1</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Inst new vault on sidewalk</td>
<td>1</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Expose conduit outside of Verizon manholes</td>
<td>1</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Tie new conduit into existing ducts and trench to vault</td>
<td>1</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Place new cable (vault to manhole)</td>
<td>1</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Rec locate equipment to new vault and activate</td>
<td>2</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lightower</td>
<td>Re locate and adjust Handhole locations as required for Stage 1 TTCP</td>
<td>2</td>
<td>X</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enabling work by the Contractor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility Operations - Underground</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>PUC Form Notes</strong></td>
<td></td>
<td></td>
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<tr>
<td>---</td>
<td>-------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Unless otherwise specified in the MassDOT Construction Contract, or unless specifically noted within this PUC form, the Utility durations shown herein are to be planned (within the CTD and by the Contractor) as unimpeded access to the Utility company to perform Utility relocations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>&quot;Concurrent Utilities&quot; operations if noted herein, are to signify those Utility Company operations that can be worked concurrently - MassDOT and the Contractor are to prepare NTPs to Utilities accordingly.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Access Restraints- See MassDOT Contract for Contractual Access Restraints (refer to Subsections 8.02 and 8.03).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Utility non-work periods - For planning purposes, the durations above contain some non work days (contingency) for New England conditions (precipitation, high temperatures, low temperatures, snow, ice). Gas line work however, typically has a global restriction and can NOT be installed from 15-November to 15-March. Municipally Owned Electric and Gas Utilities are also restricted from proceeding from 15-November to 15-March. The Contractor shall (and the CTD plan) reflect this calendar restriction within the schedule (unless otherwise note).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Access - Unless otherwise noted in the Contract, the Contractor must provide safe and unimpeded access (for trucks, lifts, cranes, etc) to the Utilities, to allow for the proposed relocation(s) - including but not limited to snow removal, clearing and grubbing, guard rail removal, barrier removal, tree removal, and grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>For all MassDOT construction contracts issued after January 2014, the new Utility Coordination/documentation specification is required. This is Section 8.14 in Design-Bid-Build Contracts (see Design-Build index reference for applicable section #).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Training

* Scope & Work Hour and Schedule Development - Table of Contents

Controls Guidelines

* Construction Contract Time Determination (CTD): Guidelines for Designers/Planners
  * Attachment A: Important Work Restrictions
  * Attachments B & C: Normal Work Shifts and Examples of Special Provision 8.00
  * Attachment D: Example 8.06 'Limitations of Operations' Near Active Railroad
  * Attachment E: Incentive/Disincentive Draft Guidance
    * Example of Incentives Worksheet
  * Attachment F: Example Simple Conceptual CTD (Contract Time Determination) for 25% Design Stage
  * Attachment G: Example Contract Time Determination (CTD) with Narrative 75% Design Phase
  * Attachment H: MassDOT CTD Checklist
* Production Based Construction Cost Estimate
* Construction Schedule Toolkit

Presentations
How are we ‘making it stick’

A) QUICK DEMO – ONLINE TOOLS

http://www.massdot.state.ma.us/highway/Departments/UtilitySection/FormsDocuments.aspx
Utility Reimbursement

Construction Phase – UTILITY SCHEDULE ALTERATION

FOR CHANGE or DELAY of PREVIOUSLY APPROVED UTILITY PROGRESSION

Roles

- CONTRACTOR
- UTILITY
- MassDOT State Utility Engineer
- MassDOT DUCE
- MassDOT Controls Scheduler
- MassDOT Dist. Construction

Support for:
- Contractors
- Utility
- And MassDOT R.E. Staff

See Proposal Schedule workflow (previous chart) and/or Specification 8.02 and 8.10 for Delay, Settlement, and/or Recovery Schedules.
TODAY
QUESTIONS & DISCUSSION

SUBSECTION 8.14
UTILITY COORDINATION, DOCUMENTATION, & MONITORING RESPONSIBILITIES

A. - GENERAL

In accordance with the provisions of Section 8.00 Prosecution and Progress, utility coordination is a critical aspect of this Contract. This section defines the responsibility of the Contractor with regard to the initial utility relocation plan and changes that occur as the prosecution proceeds. The Engineer, with assistance from the Contractor, shall coordinate with the utility companies that are impacted by the Contractor’s operations. To support this, the Contractor shall provide routine and accurate schedule updates, provide notification of delays, and contractor position updates, and documentation of the steps taken to resolve any conflicts for the temporary and/or permanent relocation of the impacted utilities. The Contractor shall provide copies to the Engineer.

- Providing advanced notice for all utility-related meetings attended by the Contractor.
- Providing meeting minutes for all utility-related meetings attended by the Contractor.
- Providing all test pit records.
- Requesting utility work requirements with this section (see below).
- Notification letters for any proposed changes to utility start dates or sequencing.
- Written notification to the Engineer of all significant utility delays within seven (7) calendar days after a recognized delay to actual work in the field—either caused by a utility or the Contractor.
- Any communication, initiated by the Contractor, associated with additional Right-of-Way needs in support of utility work.
- Submission of completed Utility Completion Forms.

B. - PROJECT UTILITY COORDINATION [PUC] FORM

The utility schedule and sequence information, provided in the Project Utility Coordination Form (if applicable), is the best available information at the time of the bid and has been considered in setting the contract duration. The Contractor shall use all of this information in developing the bid price and the Baseline Schedule Submission, inclusive of the individual utility duration sequencing requirements, and any work that has been noted as potentially concurrent utility installations.

C. INITIATION OF UTILITY WORK

The Engineer will issue all initial notice-to-proceed dates to each Utility company based on either the

Prior to the Baseline

Required utility relocation that need to occur prior to the early utility relocation, the pre-construction conference in the raw of a utility activity needs to be issued a notice-to-proceed of this intent to request early utility relocation. Prior to finally requesting approval for all utilities with MassDOT, and all utility companies to the Contract. If this request is accepted to notice-to-proceed to the affected Utilities,
BACK UP SLIDES FOR Q&A