UDOT Utility Management and Innovative Contracting Strategy

Philip J. Meis, M.S., P.E.
Utility Mapping Services, Inc.

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Overview

• CI/ASCE 38 Data Acquisition and Conflict Analysis
• Utility Coordination and Design Mitigation
• Master Agreements
  – Merge independent efforts
• Innovative Contracting
  – Instructions to Proposers
  – Supplemental Agreements
  – Benefits & Pitfalls
• Case Study
Unlike Other DOTs, UDOT Has Major $kin in the Game

Municipalities, Service Districts and Water Companies

100% Reimbursable under Utah Law. Relocation work typically completed as part of Contract.

Private Utility Companies

50% Reimbursable under Utah Law.
Strategy Item #1 – Obtain Good Data

Radical New Approach in 2003: SR201 - Bangerter to Jordan River ($53M Design Build)

UDOT Sponsors QL B and A Acquisition

Before Data Mapped Per CI/ASCE 38-02  After Data Mapped Per CI/ASCE 38-02
Strategy Item #1 – Obtain Good Data

• Include Inventory of Overhead Facilities
• Identify Small Irrigation and Water Companies
• Test Holes at Apparent Areas Where 3D Coordinates Useful
Strategy Item #2 - Early Planning, Analytics and Coordination

- Project Utility and Railroad Coordinator Position
- Project Overview Meetings with Municipal Public Works, Service Districts, and Utility Companies
- Individual Meetings
- Conflict Analysis (UCM Completion)
Project Overview Meetings

Municipalities, Service Districts and Water Companies

- Relocation work typically completed as part of Contract.
- First experience with Design Build.
- Develop trust, learn together.
- Allow time to budget for Betterments.

Private Utility Companies

- Previous bad experience with Design Build projects.
- Listen to concerns and address issues in RFP.
- Reestablish trust, desire to improve process.
- Communicate requirements to Design Build proposers.
Strategy Item #3 – Empower Contractor

In Request for Proposal:

• Complete and Accurately Qualified Utility Information (Per CI/ASCE 38)

• UCM

• Master Agreements between DOT and Utilities

• Promote Avoiding Relocations during Design (via Utility Work Bid Line Item)

• Promote Utility Work by Design Builder (via Supplemental Agreements)
SUPPLEMENTAL AGREEMENT

PROJECT NO. MP-15 (H782)/245; UTAH COUNTY I-15; UTAH COUNTY CORRIDOR EXPANSION PROJECT

CHANGE NO. 76963 - PIN NO. 7637

THIS SUPPLEMENTAL AGREEMENT, made and entered into this ______ day of ______, 2011, by and between the UTAH DEPARTMENT OF TRANSPORTATION (UDOT) and GUESTAR GAS COMPANY ("Company"), a registered corporation in the State of Utah.

The parties hereto entered into a IHP Pipeline Relocation Master Utility Agreement dated November 5, 2009 UDOT Finance No. 108361. All the terms of said IHP Pipeline Relocation Master Utility Agreement remain in full force and effect unless otherwise specified herein.

The parties hereto agree as follows:

1. Design-Build will perform the following described work in accordance with the terms and conditions of the IHP Pipeline Relocation Master Utility Agreement.

   Location of work:
   Design-Build Design Package: A-QHFP-2 – Location is 1180 South 4850 West in American Fork City, I-15 CORE station 4236+80 to 4237+80.

   Description of work to be performed, including proposed location by design package:
   Company package designation: PRJ009650 – 1180 South 4850 West

   Work includes:
   • Retiring portions of a 6-inch steel Intermediate High Pressure natural gas pipeline,
   • Retiring portions of a 4-inch polyethylene Intermediate High Pressure natural gas pipeline,
   • Placing a 10-inch steel casing pipe,
   • Placing 6-inch polyethylene Intermediate High Pressure natural gas pipeline.

Page 5 of 12
Master Agreements

Purpose

• State and Federal reimbursement terms and conditions up front.
• Formalize commitments between DOT and Third Parties.
• Allocate responsibility for design and construction.

Suggestions:

• Use standard agreement language on all projects. The site specifics may change, but relocation laws and approach stay the same.
• Provide existing utility facility information, requirements and consequences, but don’t try to anticipate impacts or pre-engineer solutions. It ties the hands of your Design Builder and assumes risk.

Supplemental Agreements

• Details of Identified Relocations or Adjustments
• Cost Estimate
• Betterments
• Plans
Utility Requirements including:

- General Terms and Conditions
- DOT and Federal Standards and References
- Performance Requirements
- Design and Construction Criteria
- Submittals
- Warrantees

Prime responsible to specify mutually agreeable proposed utility work compatible with project design, master agreements, and other utilities.

Prime responsible for all coordination, surveying and traffic control required by utilities.

Also included in RFP:

- Fully executed Master Agreements
- Complete Utility Contact and Responsibility Log with information from Master Agreements
- Municipal, Service District and Utility Company Reference Documents, Specifications and Standard Drawings
- CI/ASCE QL B data, targeted QL A and Overhead Inventory with observed clearances

Questions for utility and railroad companies submitted as RFI to DOT. Posed questions and provided answers to all proposers in the Addendums, unless identified as proprietary.
Instructions to Proposers
Incentive/Disincentives

Utility Relocation Cost

- Provide a means in Proposal Price to consider cost of utility relocations
- Provide incentive/disincentive to the Proposer to minimize cost of utility relocations
- Allocate anticipated utility relocation costs between the Contract Proposal Price and a Utility Relocation Line Item
- Share cost savings or overrun between Utility Relocation amount and actual cost of utility relocations with Prime

Performance Evaluation

- Encourage, reward consistent and superior performance over the term of contract
- Criteria rating – low score nullifies award for that period

Criteria

- Accommodate utility company schedules
- Coordinate utility work to minimize impact to public
- Cooperate with utility companies
- Minimize utility delays
Coordination During Design and Construction Supplemental Agreements

- DOT Designates Utility Coordinator to be Principal Contact for all utility related Project Activities.
- Prime designates Utility Engineer to design utility work performed by Prime and integrate utility company performed designs into project plans.
- Weekly Coordination Meetings throughout duration of project.
- Supplemental Agreements negotiated by Prime and reviewed and executed by DOT.

Supplemental Agreements Include:
- All terms of Master Agreement by reference, unless otherwise specified.
- Location of work
- Description of work to be performed, including proposed location and plan sheets attached.
- Anticipated duration of work.
- Estimated Detailed Cost of Work
- Utility and DOT shares of cost
- Betterments
- Authorization to Proceed
Benefits

• Utilities included in project development and realize cost reduction (work is value engineered by designer, prime contractor).
• Decreases project risk (e.g., damage, health and safety, schedule, public and commerce disruption, project budget)
• Transfers control and responsibility to prime, reduces utility related delay claims resulting from third party failures to perform
• Project schedule optimized
• Utility work is optimized
• Contractor has tighter bid - utility unknowns are largely eliminated, less contingency required
• Contractor can work deals with utilities – e.g., offer betterment opportunities, joint construction work, etc. (state statutes prohibit DOT’s to cutting deals or even managing utility work.)
Benefits

Handles Inherent Project Dynamics

• Delays utility work until project funded and authorized

• Work Scope, Project Limit, Priority Changes
  – Avoid premature relocates

• Manages Aggressive Timelines
SR-201 Utility Relocation Savings
$1 Million anticipated telephone duct relocate
$1.4 Million in additional utility relocations
$2.4 Million total

Project spent $200,000 on S.U.E. and required contractor to bid utilities as part of proposal.
Contractor awarded the project designed around majority of utilities and bid $630,000 for utility relocation.
Contract called out 60/40, contractor/DOT saving split on design savings.
Upon completion utility relocation costs totaled $480,000

Total cost savings of around $2 million
Standardize Process

- Digital As-Built Data Standards
- Standard Use of CI/ASCE 38-02 for Subsurface Utility Engineering
- Standard Use of Conflict Matrices
- Master Agreement Standards
- Proposal and Bid Document Standards
- Pre-qualifications for SUE / Coordination
Lessons Learned

• Establish good relationships and trust with third parties. Make utility representatives part of your team and invest them in the project’s success. They are residents and highway users, too.

• Clearly communicate to Prime they are expected to join and maintain those relationships. Recognize and reward good cooperation throughout the design and construction of the project.

• Work hard up front. Provide complete and accurate information about utility requirements and facilities in the RFP. Leaving discovery for the individual proposers results in an undue burden on utility representatives, introduces inconsistency into the proposals, and reduces time utilities have to anticipate work, potentially creating delays and not preventing them.

• Facilitate completion of betterments before or during construction - it’s good for the roads and good for the companies.

• Be fair, encourage the spirit of partnering between all parties.

Patty Jones – UDOT
Benefits

• More Sophisticated Approach, Enables More Sophisticated Solutions

• Reduces Risk

• Reduces Cost

• Holds Public Welfare Paramount

“Engineers, in the fulfillment of their professional duties, shall hold paramount the safety, health, and welfare of the public.” – National Society of Professional Engineers Code of Ethics
Enjoy Your Stay in Salt Lake City!

Philip J. Meis, P.E., SUE Principal Engineer
Utility Mapping Services, Inc.
p. 406.933.5300
c. 801.209.2032
pjmeis@umsi.us
www.umsi.us