MANAGING UTILITY INTERFACES

New Orleans
Streetcar Expansion Project
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New Orleans Streetcar Expansion Program

• Overview
  – Phase I - Loyola Corridor: Canal Street to Union Passenger Terminal (UPT)
    • 1.6 Miles
    • February 17, 2010 – Received $45M – Tiger Grant Funding ($4.3M Local Funding)
    • Construction began August 2011
    • Revenue Date – November 2012
    • All ADA accessible
New Orleans Streetcar Expansion Program

• **Overview** (continued)
  
  – Phase II - French Quarter Loop: Canal Street to Press Street (with an amendment to Poland Ave.)
  
  • 1.4 Miles
  • $75M – Revenue Tax Bond
  • Current Final Design
  • Construction scheduled for Fall of 2012
New Orleans Streetcar Expansion Program

• **Overview** (continued)
  
  – **Phase III – Convention Center Loop:**
    
    • 1.2 Miles
    
    • **Future Funding** will be applied for under the Federal Transit Administration “Small Starts Program” later this year.
• Managing Utilities on the Loyola Corridor:

  – We approached our project recognizing two factors:

  • We recognize the City of New Orleans is an older city which is very significant in terms of underground utilities, location and identification of those utilities.

  • In 2005, the City of New Orleans was impacted by Hurricane Katrina causing major flooding resulting in the destruction of numerous records located at the City of New Orleans, the utility companies, Entergy and cable companies, as well as the Regional Transit Authority. A challenge we had to overcome.
• CREATE A BALANCE

– Think: Where do we draw the line and how much do we invest on preliminary subsurface procedures before spending too much money.

– The Unknowns: No matter what the preliminary site analysis is, it does not determine what actually happens once you start digging.

– Ask the questions: For example: In past jobs, how have you mitigated unknown utilities and worked around them, with them and how have you approached stakeholders on those jobs?
• OUR TEAM

  – Contractor: Archer Western
  – Project Management Team: Parsons Brinckerhoff
  – Project Managers: The Regional Transit Authority Internal Staff
• **LESSONS LEARNED**

  – Absolutely paramount that a strong working relationship between the Project Management Team needs to be supported by:
    - An external group
    - Internal staff members and
    - An evaluation process to determine the selection of an experienced contractor.

  – Engage in round table discussions upon selection of construction company and processes utilized during excavation due to uncertain location of utilities.
Traffic Cable 6” to 8” below grade.
Conduit melted by asphalt placement.
Four communication line conduits, 2 feet below grade.
Traffic signal conduit located directly below pavement.
Traffic signal conduit located directly below pavement.
Unmarked waterline 2 feet below grade, struck during excavation.
More traffic signal conduit along with manhole encountered during excavation
(1 foot below grade)
Exposed Power cables, deemed dead by local power company, found to be live in a near miss incident.
Exposed Power cables, deemed dead by local power company, found to be live in a near miss incident.
Unknown brick foundation located during excavation.
Live mislocated gas line (8 feet from utility locator marking) uncovered under unidentified communication lines, running on top of existing canal directly under pavement.
Second slide of: Live mislocated gas line (8 feet from utility locator marking) uncovered under unidentified communication lines, running on top of existing canal directly under pavement.
Notched wooden beams exposed during excavation.
Exposed direct bury wire not in conduit.
Shallow conduits and direct bury wires.
Shallow conduits requiring relocation.
Relocation required due to shallow installation of power cable resulting in delay.
Unique cable installation provides challenges for mitigation.
Abandoned unidentified sewer line.
Unknown brick structure found in track guideway.
Direct bury cable 1 foot below ground surface.
Differing site condition  thin concrete pavement placed on dirt covering brick.
Brick structure in subgrade.
This gas line is dead, no wait I think its this one.
Delay caused by indecisive gas company.
Unmarked electrical duct bank (on bottom), two unmarked, unknown duct banks (on top). New duct bank threaded between the existing duct banks.
Unknown Concrete slab in subgrade, demo required causing delay.
Conduit vs. backhoe…. Backhoe wins!!! Unmarked, unlocated directly below pavement.
Fiber lines encountered 2 feet below grade.
Cypress Stump encountered while excavating for 30 inch waterline installation. Week delay to excavate.