TxDOT Utility Partnering Conference

Track 1

December 3, 2019

Large Diameter Utility Tunneling

Nancy Nuttbrock, P.E.

Outline

- Common Tunneling Methods
- Common Tunnel Support Methods
- Common Tunnel Support Details
- Questions

Tunnels are Different

- Entirely within the ground.
- Very simple structure.
- Highly complex construction scenario.
- Work from inside/out
- Lots of third party impacts.
- Serial construction schedule
- Construction means and methods/safety
- “Differing Site Conditions”

Who Participates

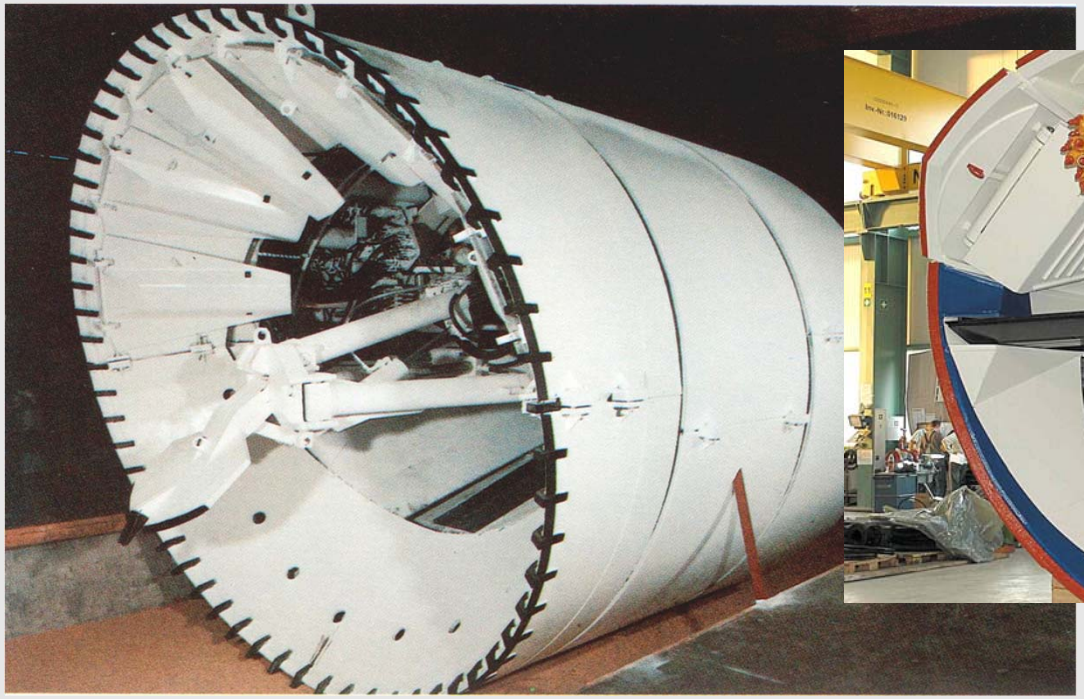
- The Geotechnical Engineer
- The Tunnel Engineer
- The Designer
- The Contractor
- The Owner
- Third Parties – Most Common for TxDOT

Tunneling Methods Commonly Used in Texas

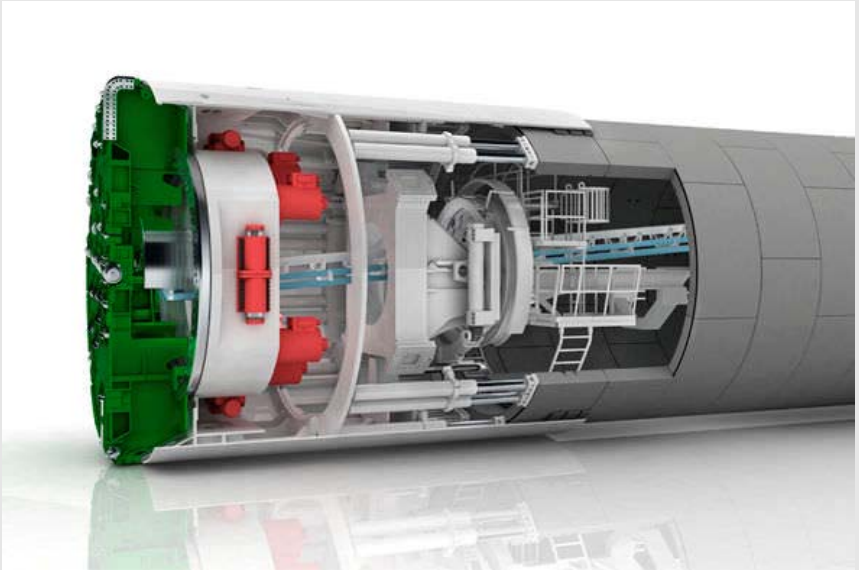
- Hand Mining
- Shield Tunneling
- TBM (Main Beam/Shield/EPB/Slurry)
- Roadheader
- Microtunneling
- Auger Bore
- HDD

Hand Mining

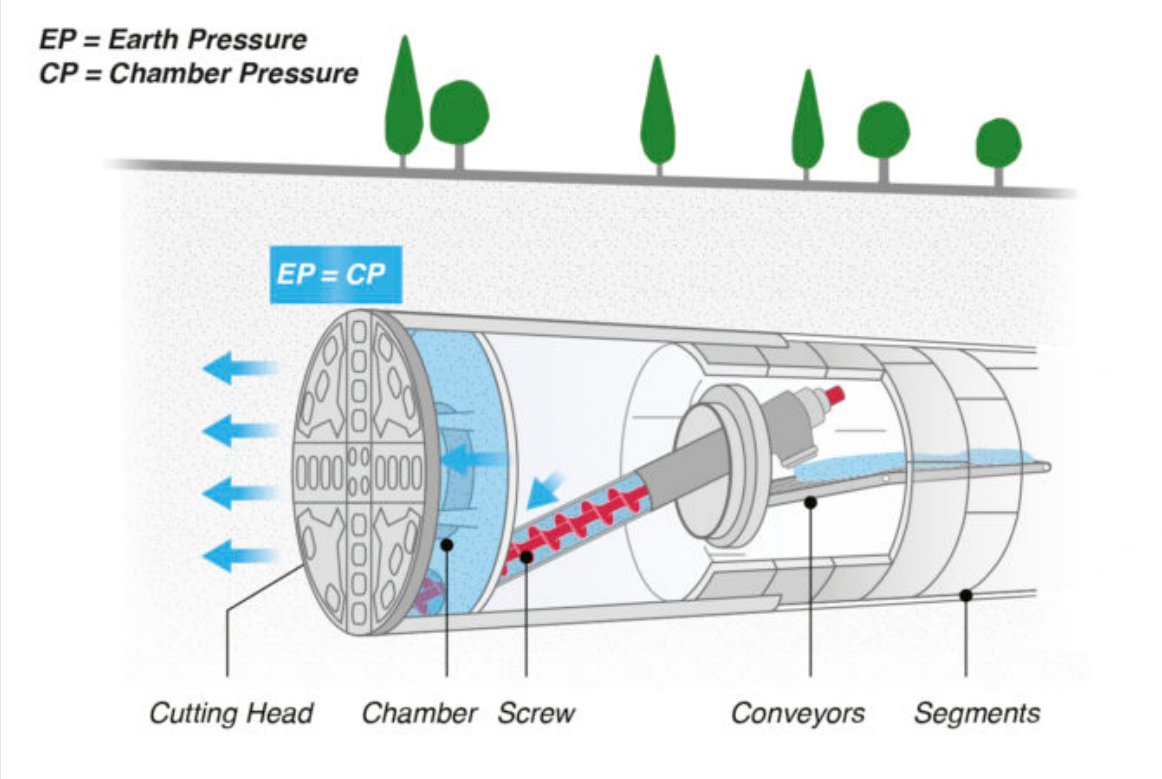
Shield Tunneling



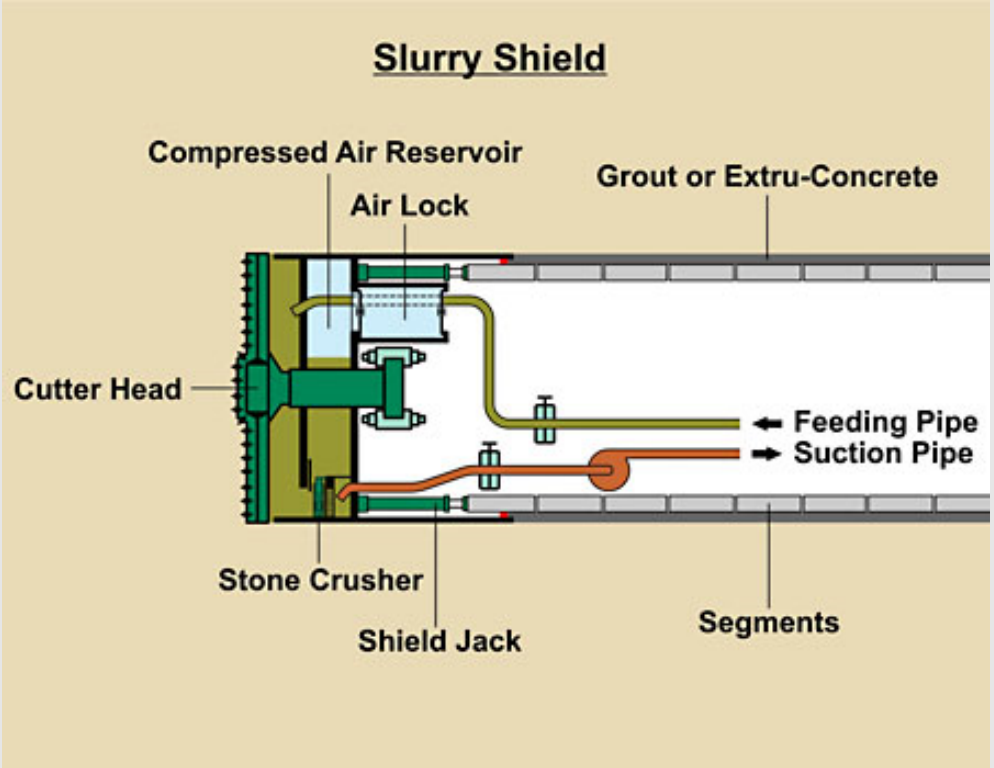
TBM – Single Shield



TBM – Earth Pressure Balance

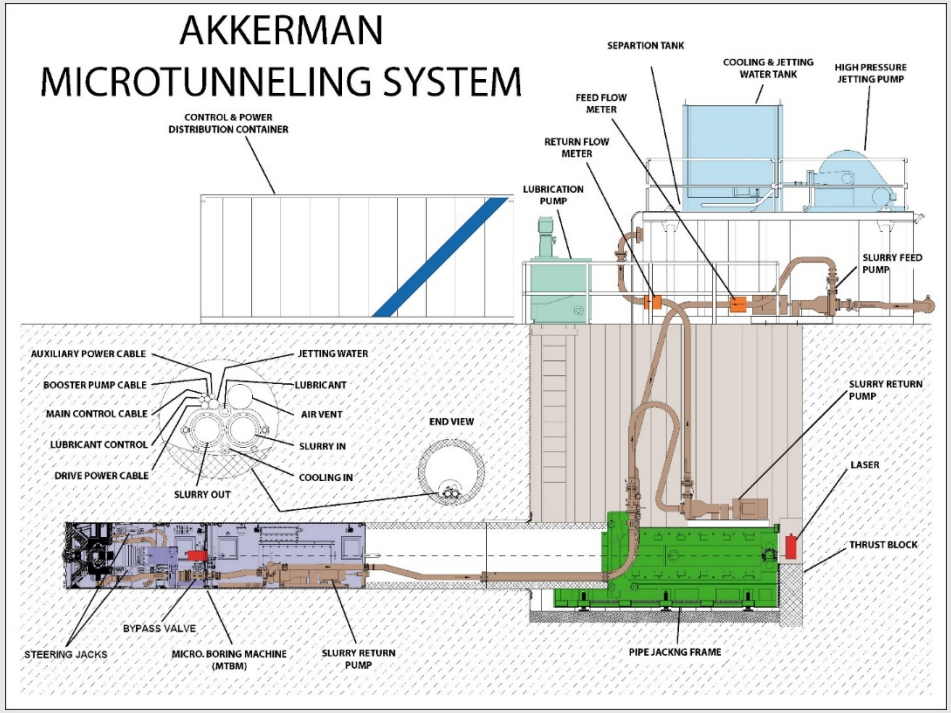


TBM – Slurry


Slurry Shield
Compressed Air Reservoir
Air Lock
Grout or Extru-Concrete
Cutter Head
Feeding Pipe
Suction Pipe
Stone Crusher
Shield Jack
Segments

Roadheader

Microtunneling



Auger Bore

Horizontal Direction Drilling

① Directional Drill machine
② Rotating and pressing pipes
③ Pilot drill begins ground penetration
④ Technician with locator receiver box
⑤ Pilot head drilling and pressing for direction
⑥ Enlargement and pull-back with Reamer
⑦ Swivel attached to Reamer and Pipe
⑧ Utility Pipe being Pulled Back

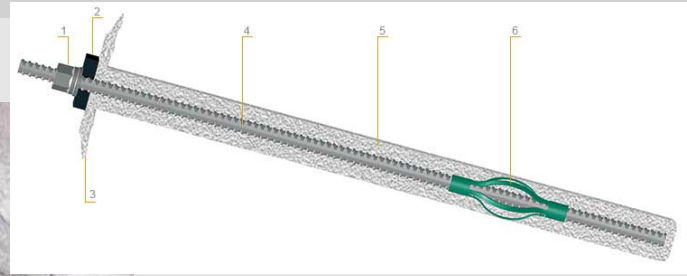
So What Works Where?

Tunneling Method	Hard Rock	Soft Ground	Groundwater	Curved Alignment	Small Diameter < 48 In	Cost
Hand Mining	✓	✓		✓		$
Digger Shield	✓	✓		✓		$$
Open Face TBM	✓	✓ (Shielded)		✓		$$
Pressurized Face TBM (EPB/Slurry)		✓	✓	✓		$$$
Roadheadder	✓			✓		$$
Microtunneling	✓	✓	✓	Rare	✓	$$$
Auger Bore		✓			✓	$
HDD		✓	✓	✓	✓	$$

Tunneling Support Methods Common in Texas

- Rock bolts
- Shotcrete
- Ribs and lagging
- Steel liner plate
- Steel casing
- Jacked FRP
- Pre-cast segments

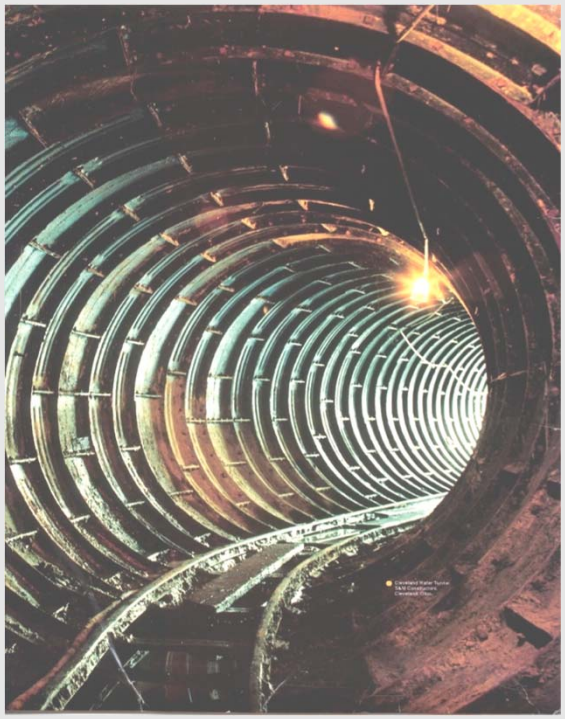
Rock Bolts



Shotcrete

Ribs and Lagging

Steel Liner Plate



Steel Casing

Jacked FRP

Pre-Cast Segments

So What Works Where?

Tunnel Support	Hard Rock	Soft Ground	Groundwater (pressurized face)	Curved Alignment	Small Diameter < 48 In
Rockbolts	✓			✓	
Shotcrete	✓			✓	
Ribs and Lagging	✓	✓		✓	
Steel Liner Plate	✓	✓	✓ (Gasketed)	✓	
Steel Casing	✓	✓	✓		✓
Jacked FRP		✓	✓	Rare (MTBM)	✓
Pre-Cast Segments		✓	✓	✓	

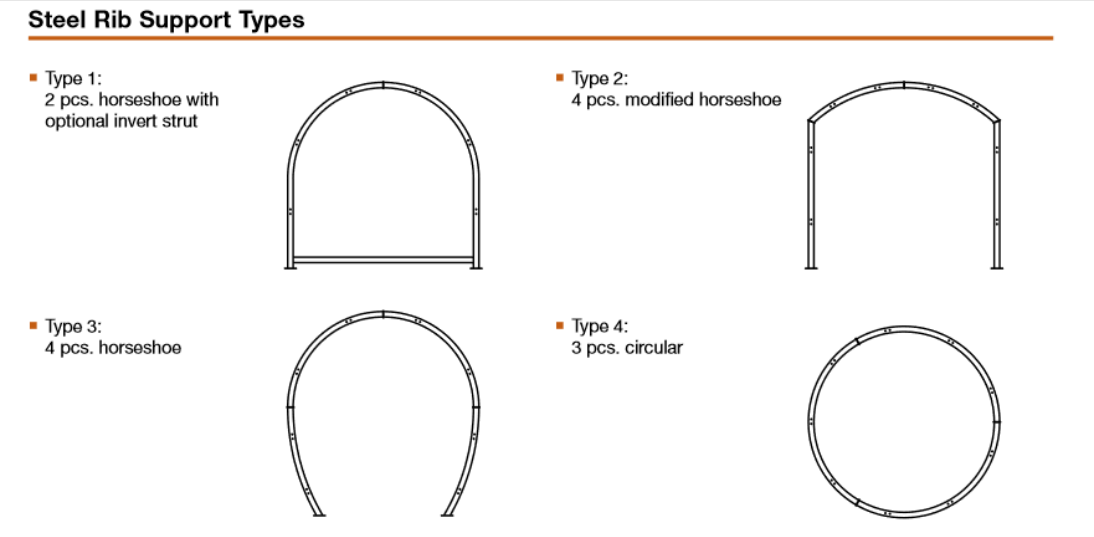
What are most common in Texas for Utility Tunnels?

- Ground Conditions Typically Shale, Stiff Clay, and Soft Limestone without Groundwater
- Tunnel Excavation
  - Hand Mining
  - Open Face TBM
  - Auger Bore (<600 ft Typically)
- Tunnel Support
  - Ribs and Lagging
  - Steel Liner Plate
  - Steel Casing (<600 ft with Auger Bore Typically)

Ribs and Lagging - Details

Ribs and Lagging - Details

- Typically 3-6 foot spacing
- Cold formed rolled steel sets
- Tie-rods between sets



Ribs and Lagging - Details

PROS

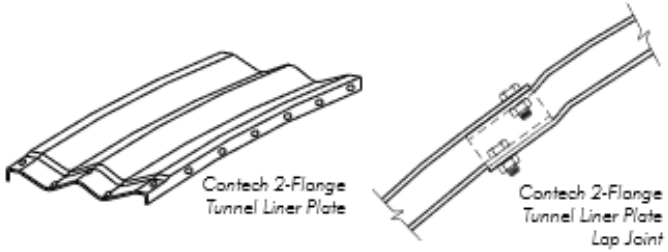
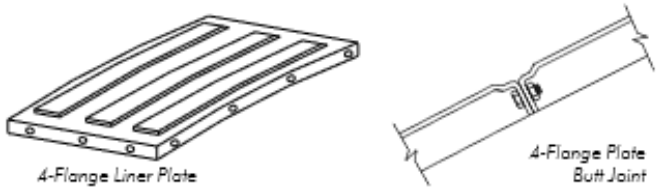
- Cost and Time Efficient Support
- Various Types of Lagging (Timber, Steel, Shotcrete, Liner Plate)
- Can be installed in a shield or against competent ground
- Various Geometries
- Can be jacked off of

CONS

- Exposes Ground to Air
- Requires filter fabric where erodible soils are present

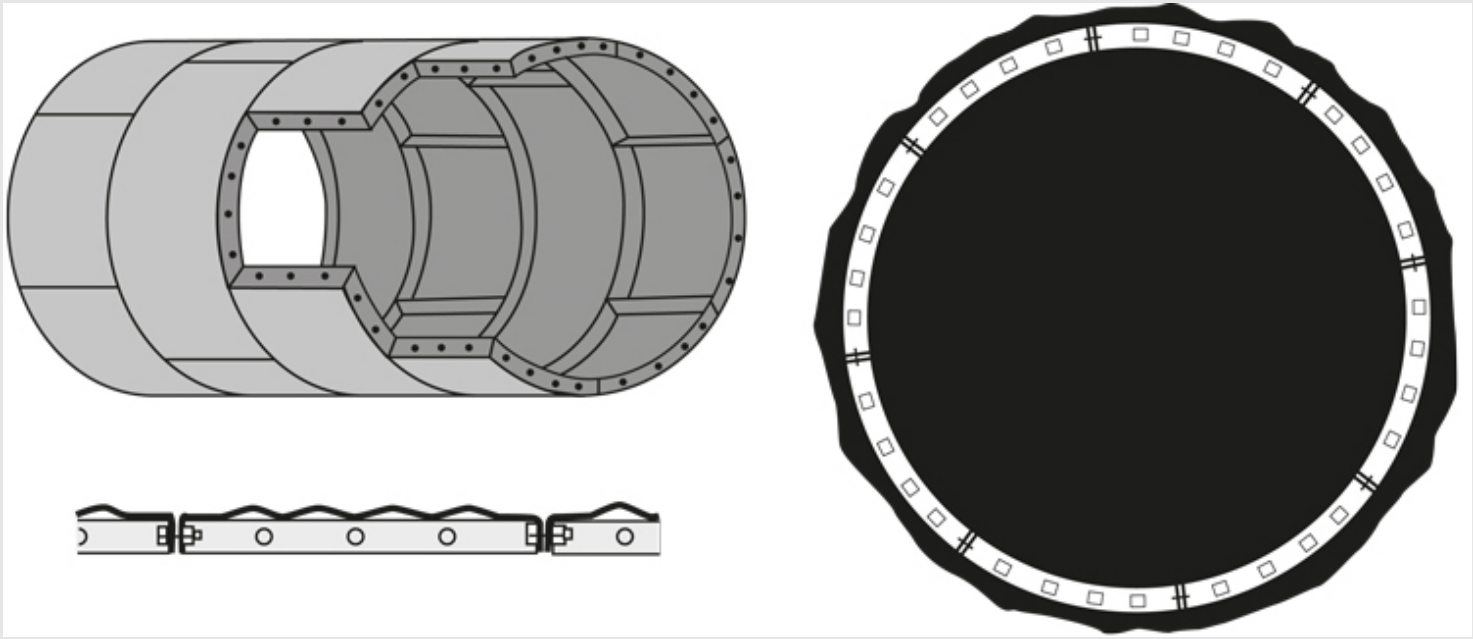
Steel Liner Plate - Details

Steel Liner Plate

2-Flange Tunnel Liner Plate from Contech provides corrugations extending through the lapped longitudinal joint. When assembled, this liner functions as a corrugated pipe with continuous circumferential corrugations. The result is more effective corrugation performance for the highest stiffness and strength in the industry. It has the strength to handle the loads encountered during construction, providing a safer working environment.	 *Deep, full length corrugations and lapped joints for more effective stiffness and ring compression.*
4-Flange Liner Plate feature shallow, partial corrugations that do not extend fully to the joint. When assembled, ring stiffness is limited by both the joint strength and lack of a continuous corrugation. The result is less stiffness and a hinge action joint.	 *Shallow corrugations and hinged joint.*

Steel Liner Plate

Steel Liner Plate



Steel Liner Plate- Details

PROS

- Can be installed in a shield or against competent ground
- Various Geometries
- 4 Flange can be jacked off of without additional structural support
- Galvanized or bituminous coating for corrosion protection
- Steel Ribs can be used for additional ground support

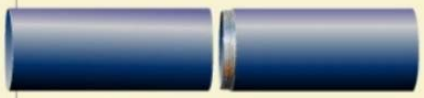
CONS

- Typically more Expensive than Ribs and Timber Lagging
- Requires time to bolt in place
- 2 Flange requires additional structural support to jack off of

Steel Casing - Details

Steel Casing - Details

24" Permalok Casing Pipe	vs.	24" Permalok Welded Steel Casing Pipe
A 24" Permalok connection is made in 6 minutes or less, allowing a crew to install up to 10 pieces of casing 20 feet long in one 8 hour shift.		The best field welders take 90 minutes to fit and butt weld one joint of 24" x .500" inch casing. At that rate the same crew can install only 3-4 pieces of casing 20 feet long in an 8 hour shift.
End Result: **200** linear feet per day	vs.	*End Result:* **60** to **80** linear feet per day



vs.

60" Permalok Casing Pipe	vs.	60" Permalok Welded Steel Casing Pipe
A 60" Permalok connection is made in 6 minutes or less, allowing a crew to install up to 10 pieces of casing 20 feet long in one 8 hour shift.		The best field welders take 180 minutes to fit and butt weld one joint of 60" x .750" inch casing. At that rate the same crew can install only 2-3 pieces of casing 20 feet long in an 8 hour shift.
End Result: **200** linear feet per day	vs.	*End Result:* **40** to **60** linear feet per day

Steel Casing Details

PROS

- Cheap and readily available
- Various thicknesses
- Can be welded or permalok
- Cannot leak at joints

CONS

- Difficult to handle
- Require larger shafts
- Difficult to drive long distances (> 600 ft) and in swelling ground
- Straight drives

QUESTIONS?

Networking Break

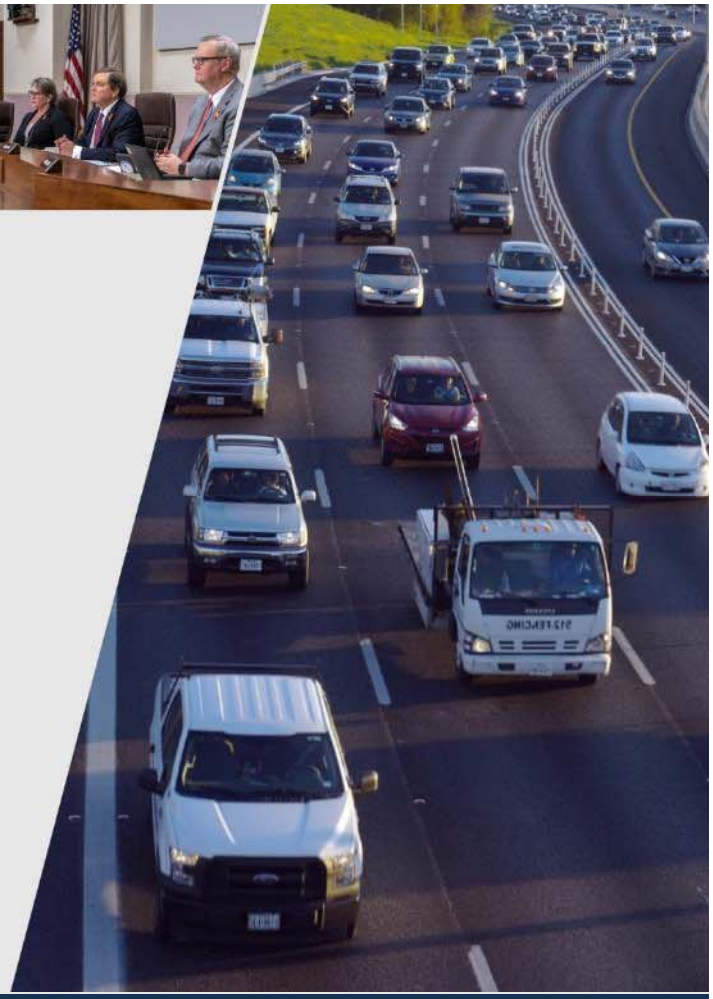
Next session starts at 2:30pm

A-M-Azing Utility Protections

Max Layne, PE
Utility Engineer
HDR

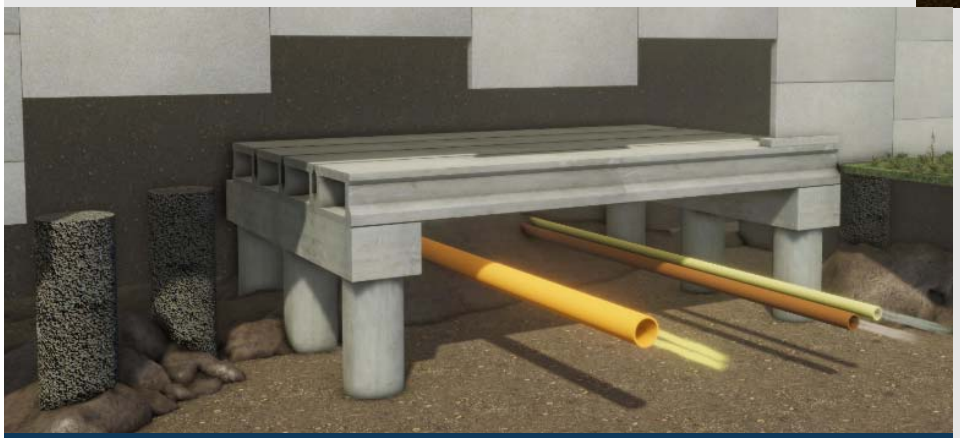
O 512-498-4719 M 512-927-7461

Max.Layne@HDRinc.com



December 3, 2019

STRUCTURALLY SUPPORTED UTILITY PROTECTIONS



Structural Engineering
Water Pipeline Engineering
Geotechnical
and Drainage Elements
of Highway Design

December 3, 2019

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What was at Stake

the critical path

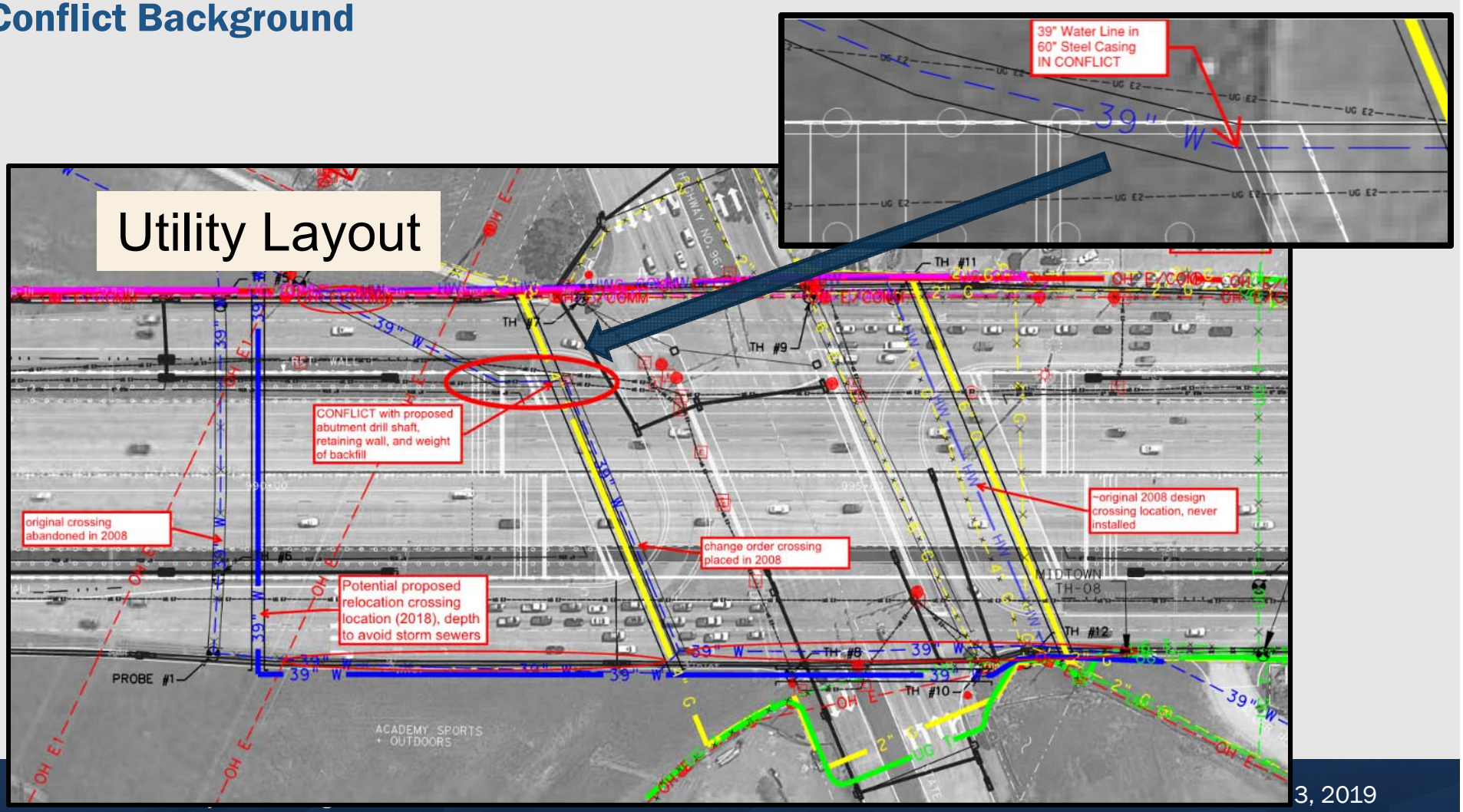
- Conflict: **39” WATER LINE** in **60” STEEL CASING**
- Discovered **IN CONFLICT WITH THE** highway project bridge expansion schedule’s **CRITICAL PATH**
- WL relocation would take 18 months for completion

  = $3.4M in costs to project

RESOLVED for $180k with protect in place structure

- $150k construction + $30k design
- 180k / 4.3M = **4%** or **1/25th** the cost of full relocation

Conflict Background



- Bridge column **DRILLED SHAFT**
- **WEIGHT** of bridge embankment **BACKFILL** (30 ft of fill)
- Storm sewer **CULVERTS**
- **Lateral SOIL PRESSURES**
- Multiple stakeholder party interests
- WL relocation- est. 18 months for completion
  - Could only be shut off relocated in low water demand winter period
    - Estimated $6k per day in delay claim costs
    - Est. 12 mo. of direct delay costs 12 mo. x 6k/day = 1.9M in delay costs
    - $1.5M WL relocation cost
  - $1.5M + $2.8M = $3.4M utility conflict

Coordination

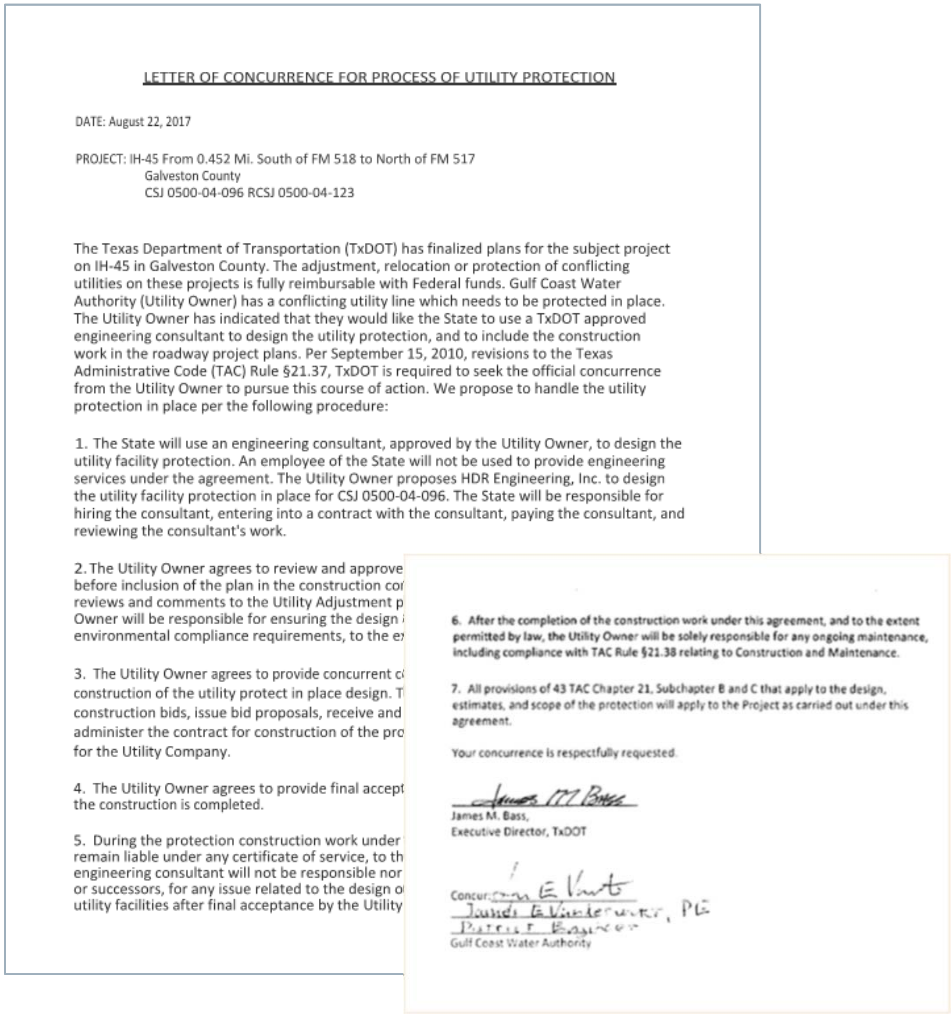
Letter of concurrence

Coordinated concurrence of the protect-in-place design between:

- Water line owner & engineers
- State DOT
- HDR Engineers

  (structural, pipeline, geotechnical)
- City representatives
- Construction groups

- All agreed for TxDOT consultant (HDR) to design a protect-in- place



LETTER OF CONCURRENCE FOR PROCESS OF UTILITY PROTECTION

DATE: August 22, 2017

PROJECT: IH-45 From 0.452 Mi. South of FM 518 to North of FM 517
Galveston County
CSJ 0500-04-096 RCSJ 0500-04-123

The Texas Department of Transportation (TxDOT) has finalized plans for the subject project on IH-45 in Galveston County. The adjustment, relocation or protection of conflicting utilities on these projects is fully reimbursable with Federal funds. Gulf Coast Water Authority (Utility Owner) has a conflicting utility line which needs to be protected in place. The Utility Owner has indicated that they would like the State to use a TxDOT approved engineering consultant to design the utility protection, and to include the construction work in the roadway project plans. Per September 15, 2010, revisions to the Texas Administrative Code (TAC) Rule §21.37, TxDOT is required to seek the official concurrence from the Utility Owner to pursue this course of action. We propose to handle the utility protection in place per the following procedure:

1. The State will use an engineering consultant, approved by the Utility Owner, to design the utility facility protection. An employee of the State will not be used to provide engineering services under the agreement. The Utility Owner proposes HDR Engineering, Inc. to design the utility facility protection in place for CSJ 0500-04-096. The State will be responsible for hiring the consultant, entering into a contract with the consultant, paying the consultant, and reviewing the consultant's work.

2. The Utility Owner agrees to review and approve
before inclusion of the plan in the construction co
reviews and comments to the Utility Adjustment p
Owner will be responsible for ensuring the design
environmental compliance requirements, to the e

3. The Utility Owner agrees to provide concurrent c
construction of the utility protect in place design. T
construction bids, issue bid proposals, receive and
administer the contract for construction of the pro
for the Utility Company.

4. The Utility Owner agrees to provide final accept
the construction is completed.

5. During the protection construction work under
remain liable under any certificate of service, to th
engineering consultant will not be responsible nor
or successors, for any issue related to the design o
utility facilities after final acceptance by the Utility

6. After the completion of the construction work under this agreement, and to the extent permitted by law, the Utility Owner will be solely responsible for any ongoing maintenance, including compliance with TAC Rule §21.38 relating to Construction and Maintenance.

7. All provisions of 43 TAC Chapter 21, Subchapter B and C that apply to the design, estimates, and scope of the protection will apply to the Project as carried out under this agreement.

Your concurrence is respectfully requested.

James M. Bass,
Executive Director, TxDOT

Concur:
Gulf Coast Water Authority

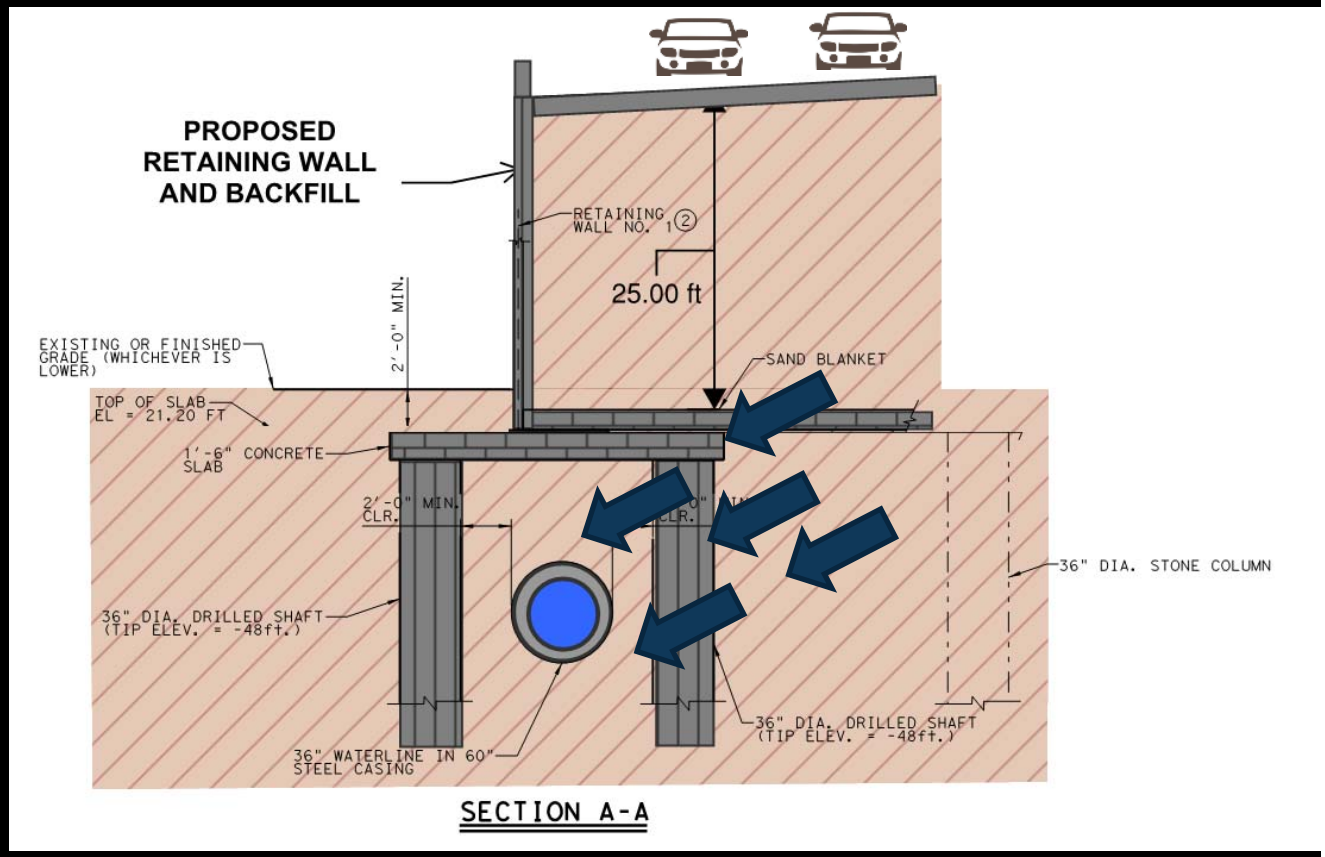
Protect in place Design concept

'A BRIDGE UNDER A BRIDGE'

- Protect in place desig
  - Supported by 17 dr
  - Slab designed to h protect water line
- Also redesigned:
  - Bridge column des
  - Drainage designs w
  - Retaining wall vertical slip joints added

- **Conflict:** Lateral soil pressures from new backfill could disturb pipe and burst over time
  - Shifting clay soils

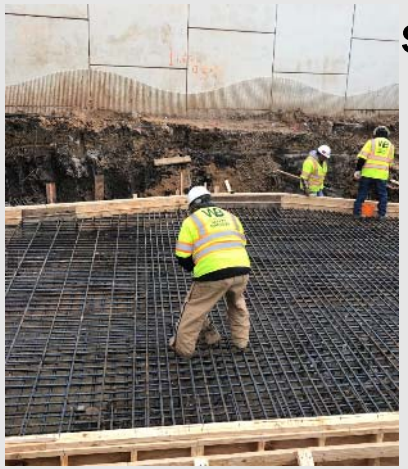
- **Resolution:** designed additional drilled shafts and opted for large diameter 36” drilled shafts to limit lateral earth movement



design

SLAB PLAN & PROFILE AND DETAILS

- 1.5 FT thick concrete slab
  - #6 & #9 rebar
- 17 drilled shafts



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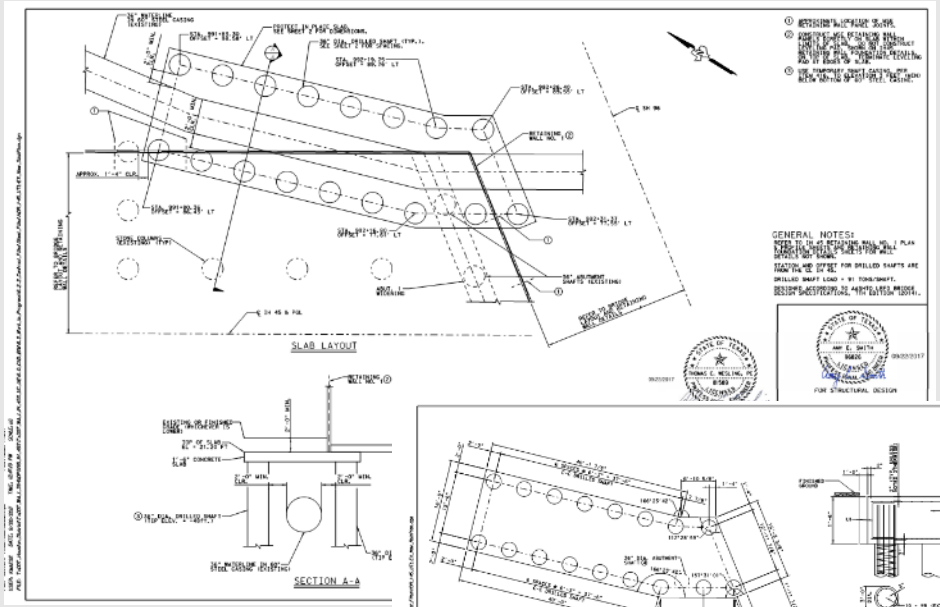
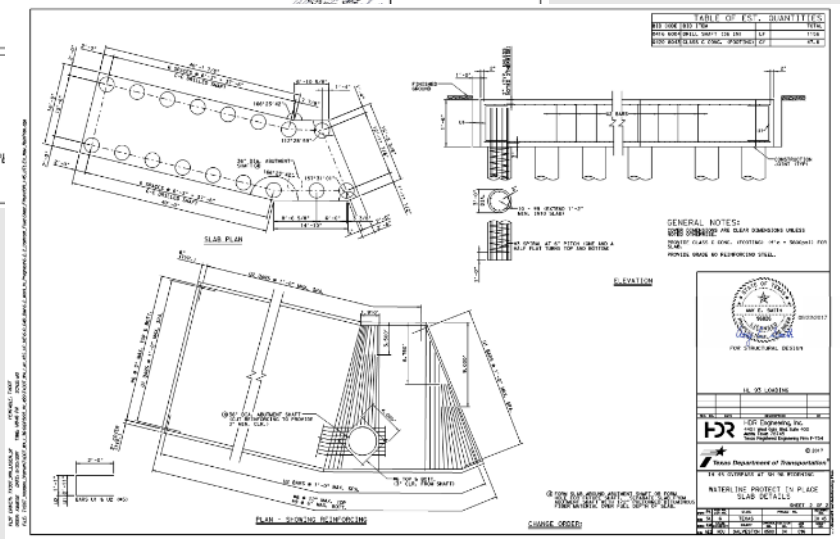
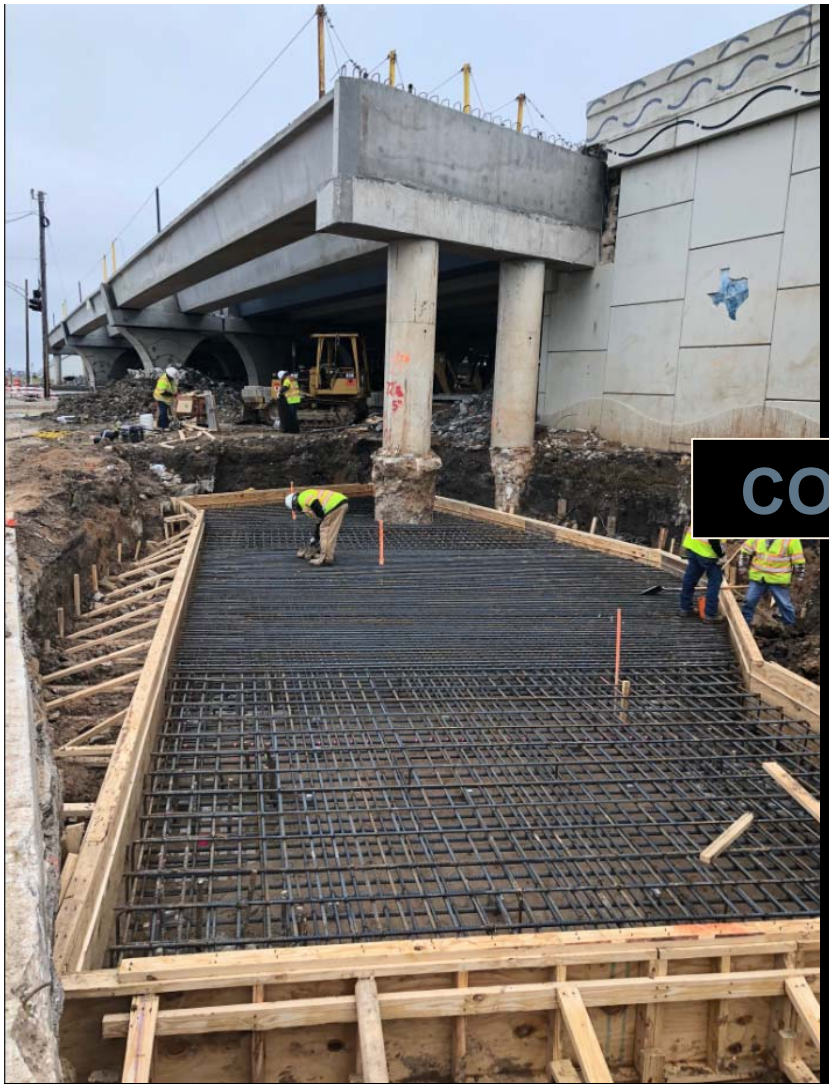
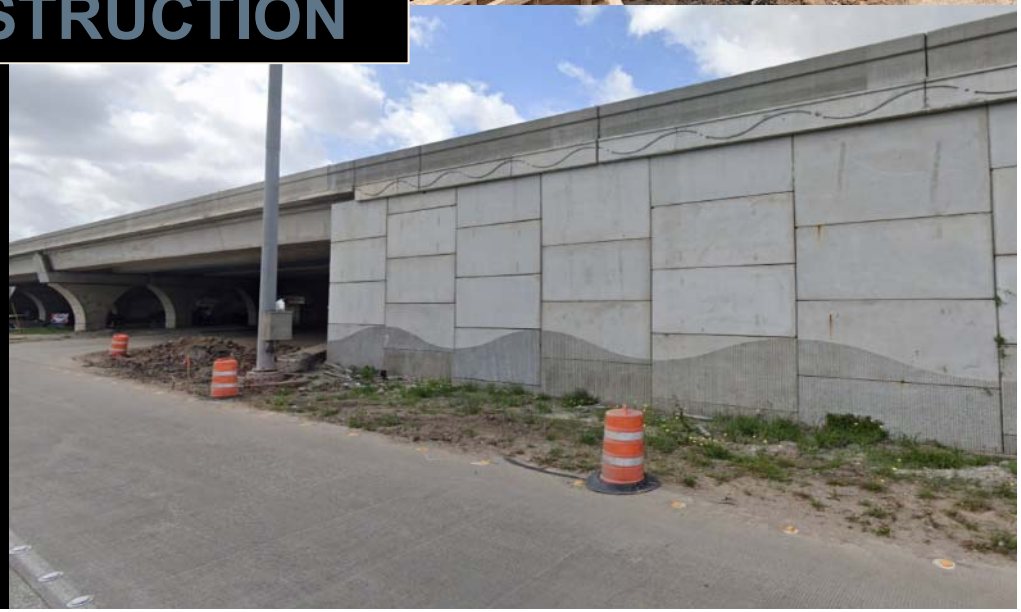






CONSTRUCTION



Summary

Selected Option: Protect in-place design and construction completed in **4 months** for **~$180k**

>

Other Option: WL relocation completion in **18 months** with **~$4.3M in costs**

- Slab/supports constructed 1 year before previous estimated relocation date
- Project continued immediately on bridge work
- No added safety risk or extended delay issues to traveling public
- DOT client and Utility Owner were extremely satisfied with the outcome

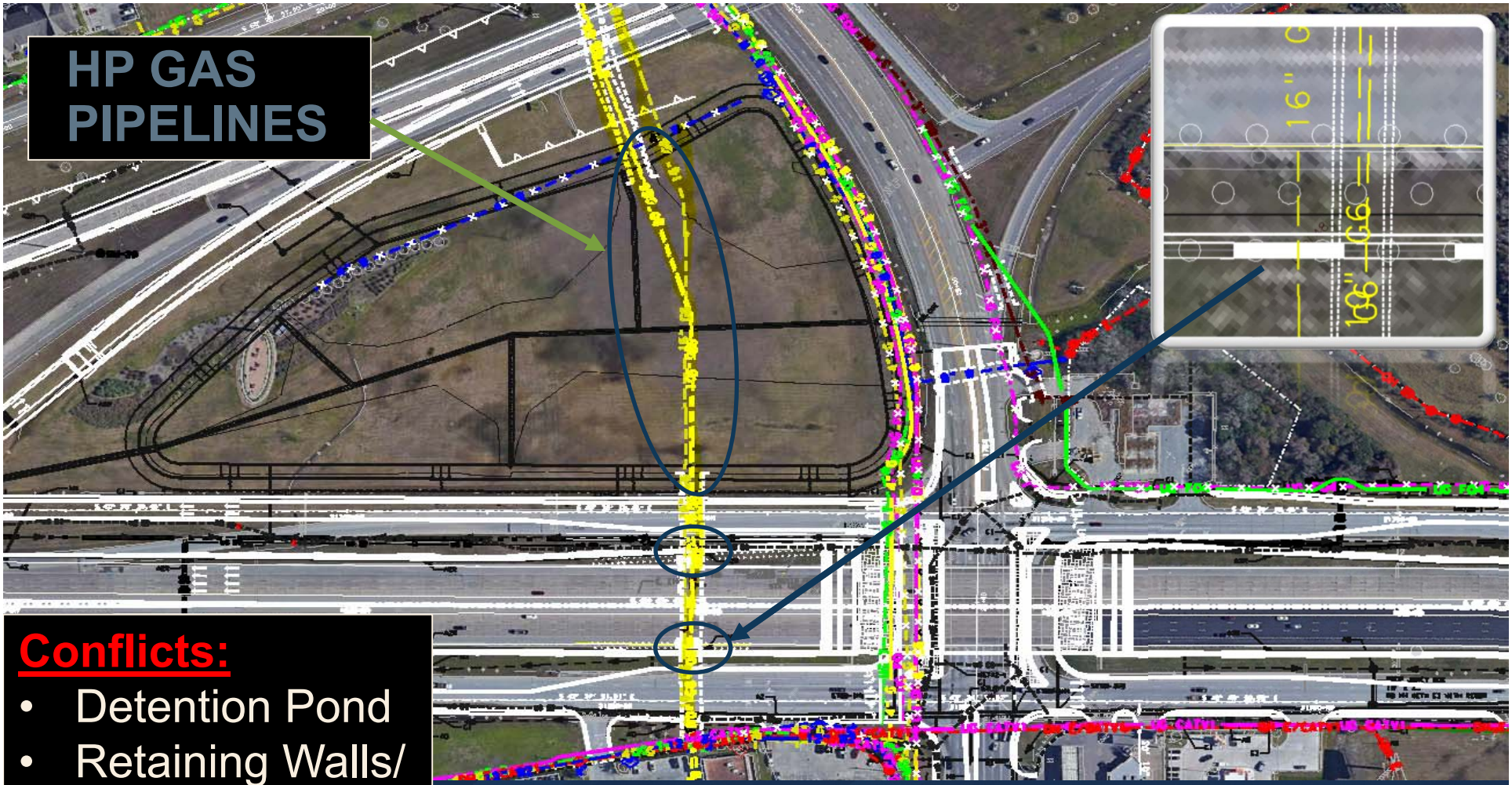
Repeatable Solution

Similar Design Concept Over High Pressure O_2, N_2 Pipelines on IH-45

Protect in place structural design + retaining wall re-design + pond re-design in **3 months** for **~$400k**

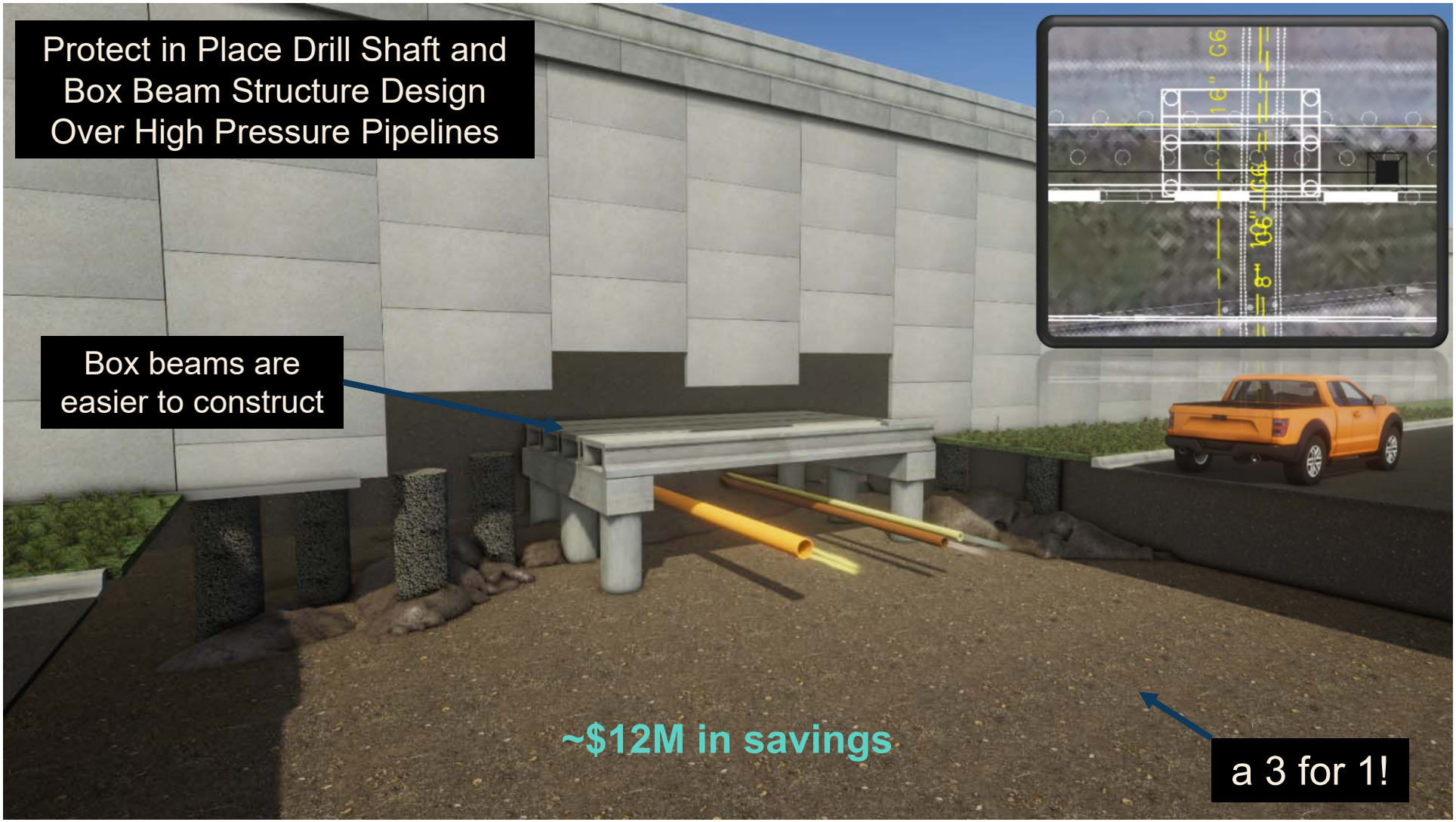
>

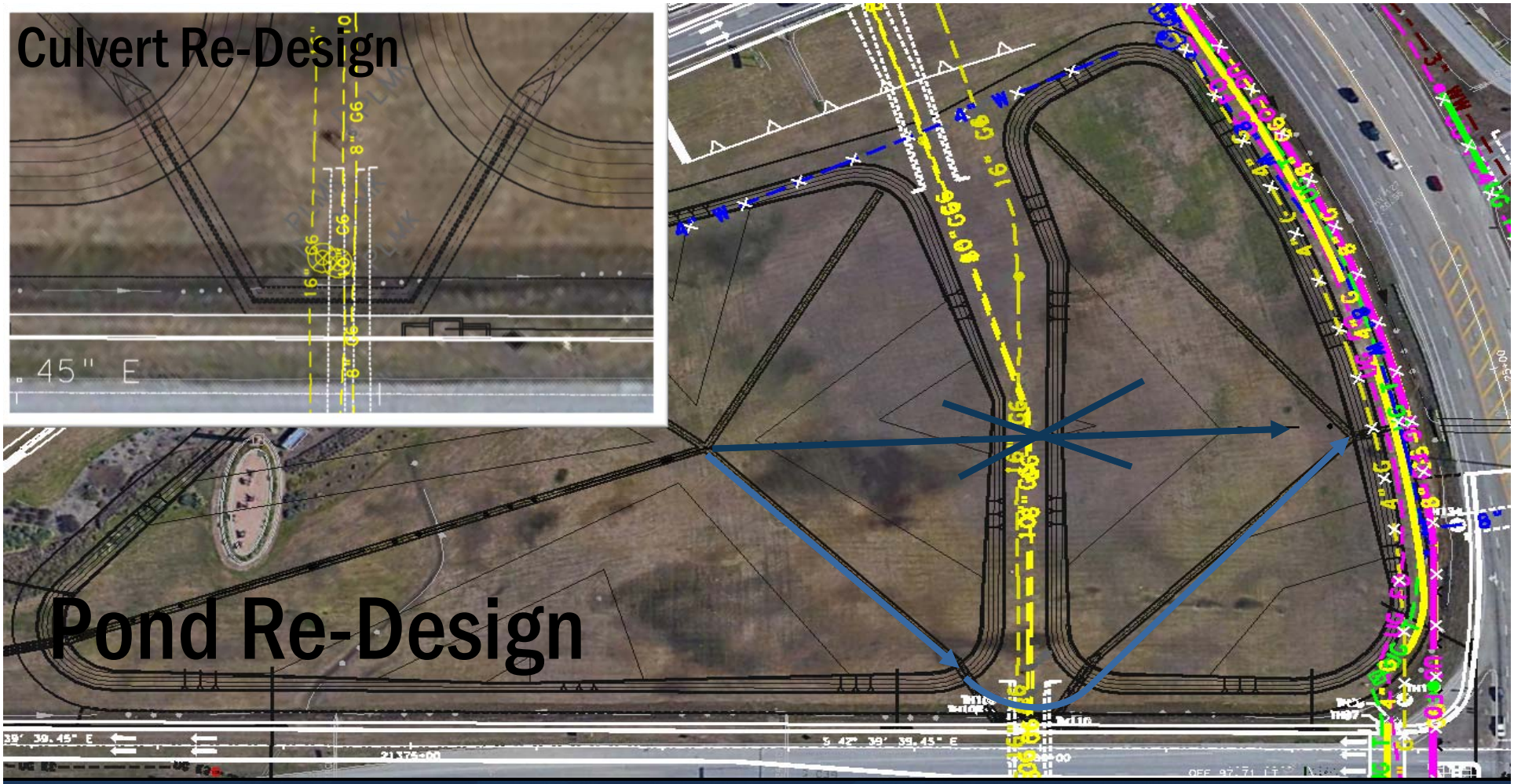
~$6M in direct relocation costs
~2 years of project relocation schedule delays
~$3M in easement acquisitions for re-route
~$12M total potential costs



Conflicts:

- Detention Pond
- Retaining Walls/ Stone Columns


Protect in Place Drill Shaft and Box Beam Structure Design Over High Pressure Pipelines
Box beams are easier to construct
~$12M in savings
a 3 for 1!


Culvert Re-Design
Pond Re-Design

SH 146
Bridge Re-Design

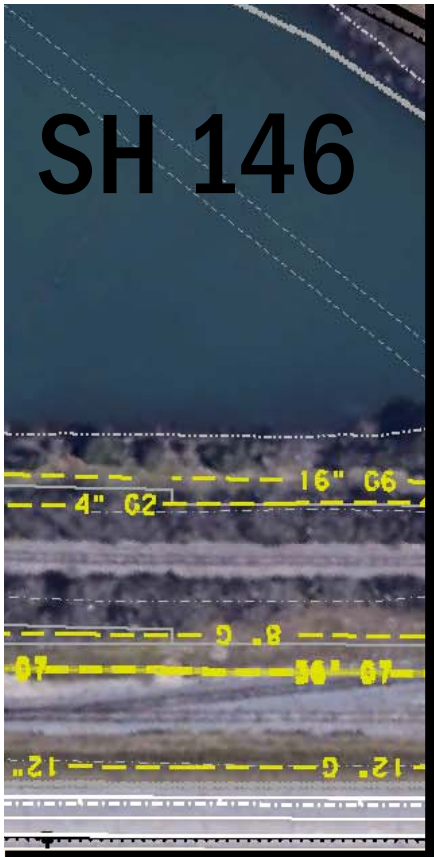
Gas facility relocation completion in

4-5 years with **~$12M in costs**

<

Re-design bridge in

4 months for **~$275k**



Conflicts:

- Bridge overlap over Maintenance Facility
- Bridge bent foundation with pipes

Initial Design with Conflicts

Redesign- No Conflicts

Initial Design with Conflicts

Initial Design with Conflicts

Redesign- No Conflicts

UTILITIES! Our lives really do depend on them

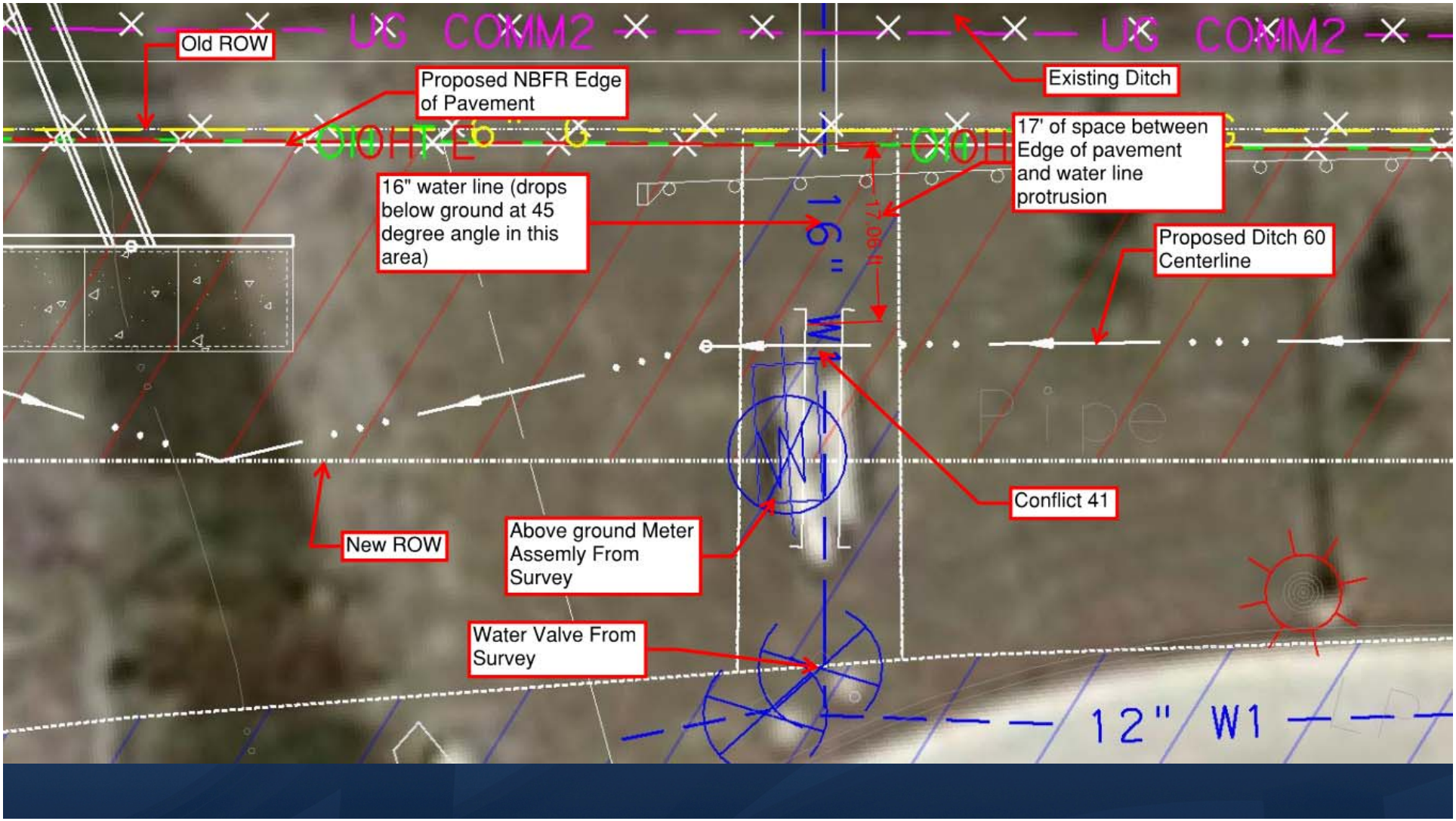
It's not *always* about money and time savings

Utilities serve PEOPLE (and hospitals)

IH 69 Expansion

Rosenberg, Tx

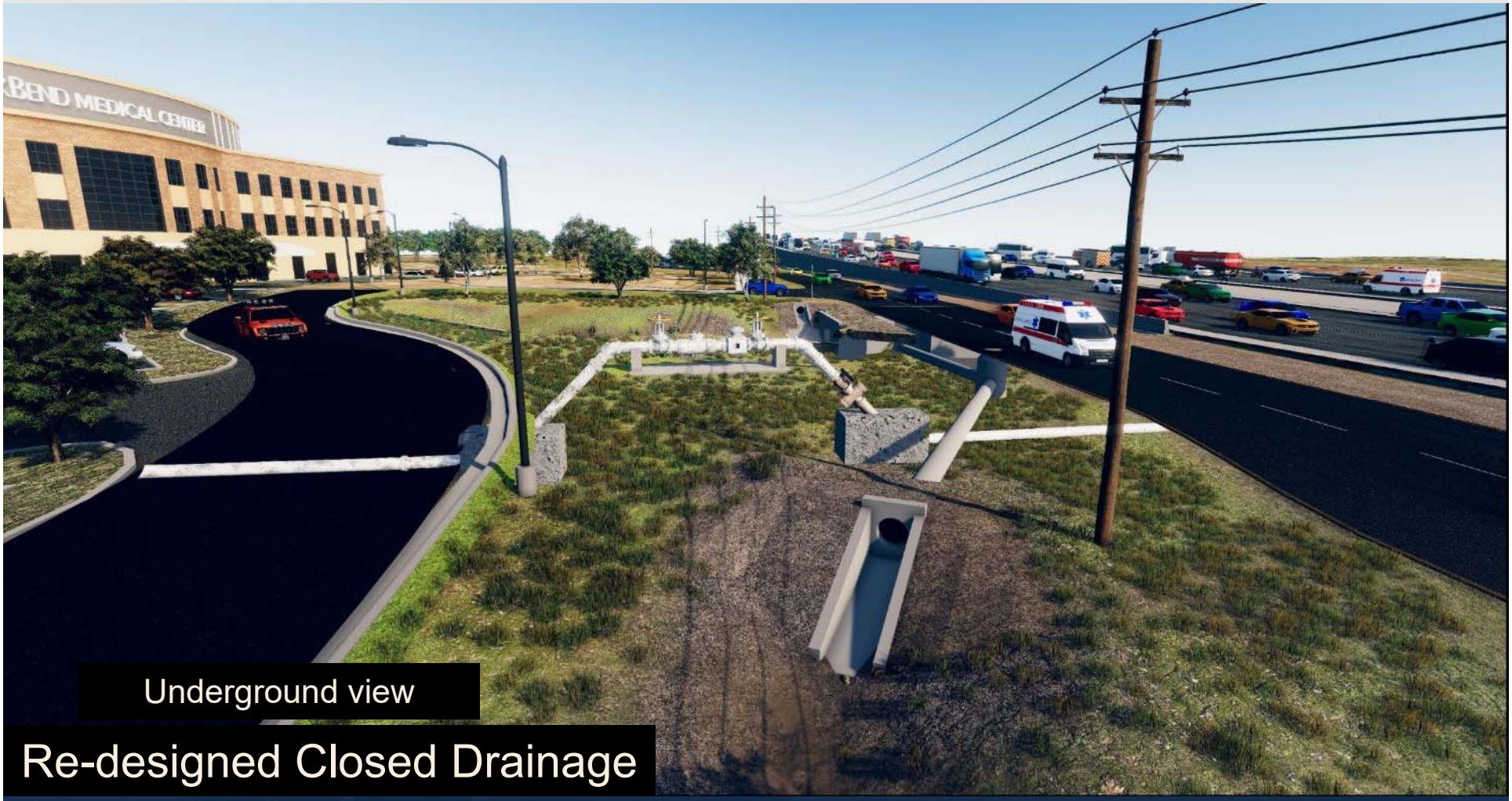
- Hospital's ROW was being Acquired
- Utility service connections were in conflict
- But could NOT be shut off for ANY period of time
  - Major Water Meter Facility Avoidance
  - Electric Meter Facility Relocation


Old ROW
Proposed NBFR Edge of Pavement
Existing Ditch
17' of space between Edge of pavement and water line protrusion
16" water line (drops below ground at 45 degree angle in this area)
Proposed Ditch 60 Centerline
Conflict 41
New ROW
Above ground Meter Assemly From Survey
Water Valve From Survey
UG COMM2
UG COMM2
16" W1
12" W1

Existing conditions

Conflict with Proposed Open Drainage

Re-designed Closed Drainage



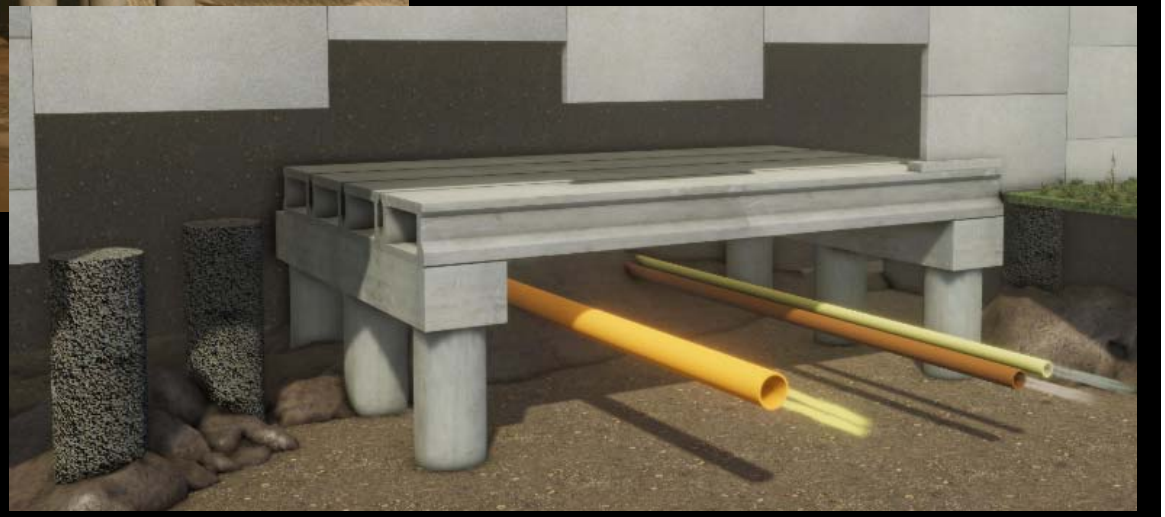
Underground view

Re-designed Closed Drainage

Construction Picture

Electric Meter Protection

Questions?



Networking Break

Next session starts at 3:30pm

Basics of the Telecommunications Network:
The Life of a TXDOT Relocation Project

JEFFREY BROOCKS
AT&T – Director Construction & Engineering

TXDOT UTILITY PARTNERING CONFERENCE
Austin, Texas
December 3, 2019

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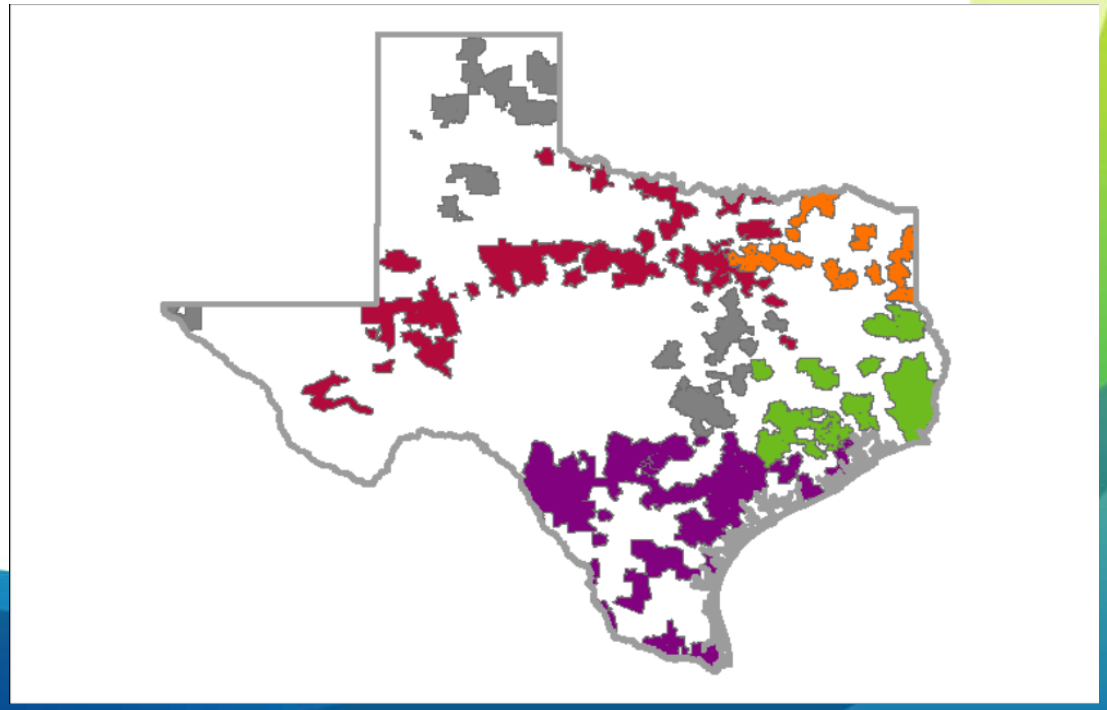
AT&T Texas Wireline Service Areas - Texas



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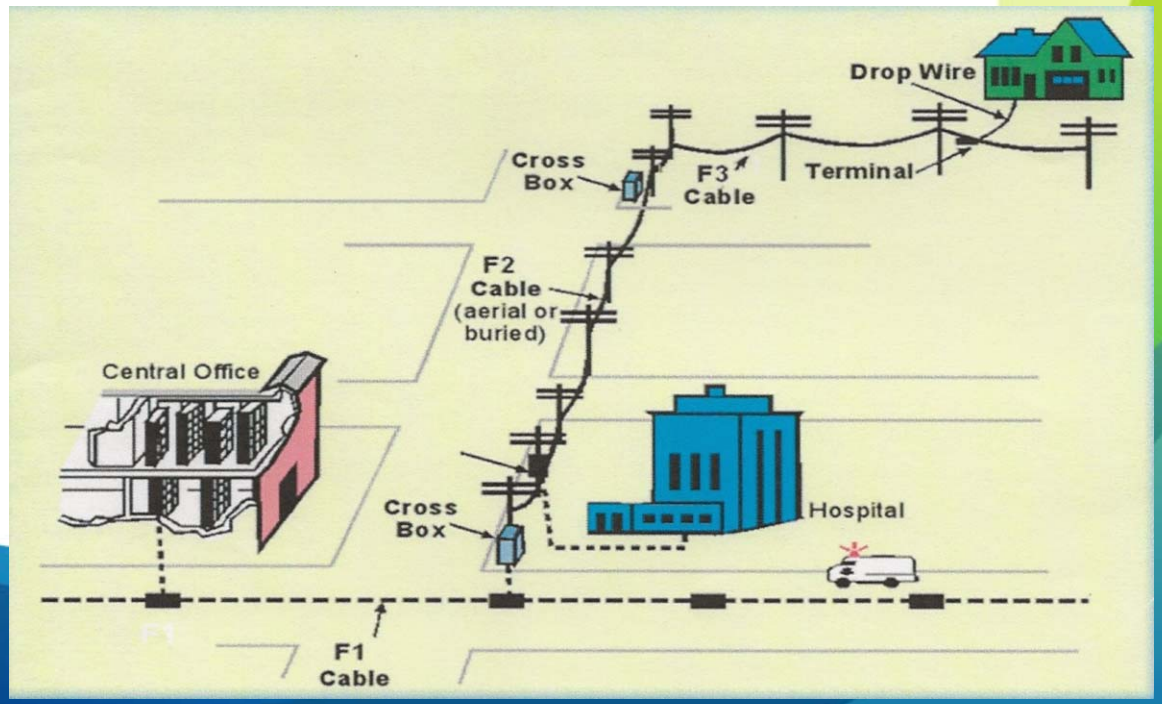
TELECOMMUNICATIONS WIRELINE NETWORK



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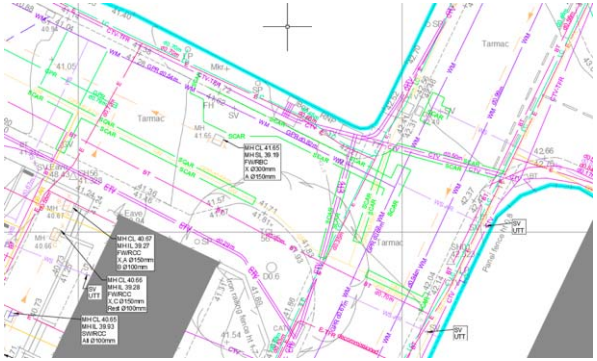

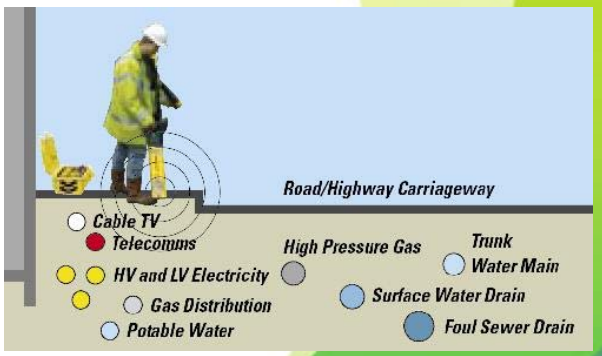

Various Underground Facilities

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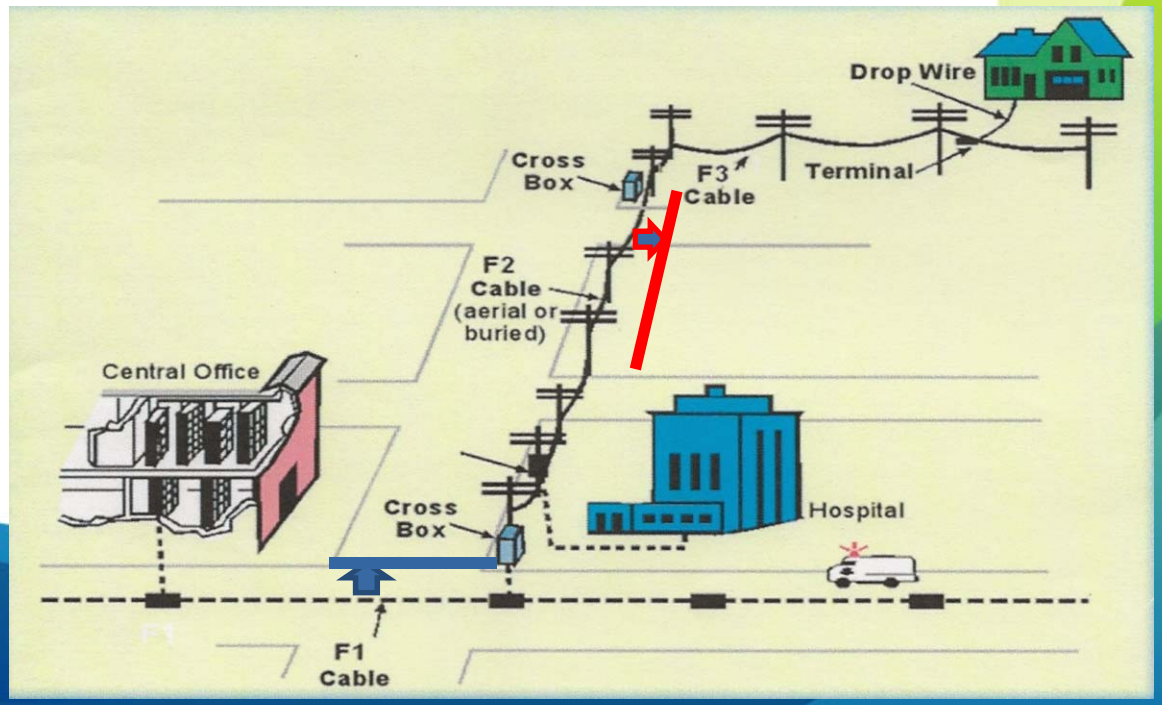
TELECOMMUNICATIONS WIRELINE NETWORK OVERVIEW - **RELOCATION**



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Relocation: A Matter of Time and Cost

The “Big” Steps:

1. Obtain “cleared” Rights-of-Way (i.e., other facilities)
2. Trench and place new fiber or copper and/or
3. Place new poles and attach fiber or copper
4. Prepare for “cutover” (customer notification and negotiation)

   This step is time consuming!
5. Conduct the *splicing* work to cut lines over as quickly/smoothly as possible.

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Relocation Realities: Issues to Manage

- Telecom lines must be spliced one by one. There are no shortcuts to this!
- The number of splicers is limited by space considerations.
- Telecom lines normally are placed lowest on utility poles and, if underground, farthest from center line of highway/road. This means AT&T and other telecoms are the LAST to move!

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The Relocation Process - External

- Receive TXDOT Notification of project and Schematic or 30% Plans
- Review 30% Plans and provide TXDOT As-builts/Redlines to begin SUE coordination
- Work with TXDOT consultant to develop SUE prior to 60% Plans
- Receive 60% Plans
- Review 60% Plans and Confirm or eliminate conflicts
- Develop Relocations Plans
- Receive 90/95% Plans and compare 90% plans to relocation plans
- Submit UIR / Reimbursable Agreement
- Confirm ROW acquisition is Complete

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The Relocation Process - Internal

- Determine Funding
- AT&T Engineering Submits Project to Construction
- Construction review and bid to hire contactor
- Once Permit is approved order structure material and mobilize contractor
- Build Structure
- Hire placing contractor structure build
- Once Structure footages can be proved order cable
- Order and Place electronics
- Place Cable
- Splice Cable (TXDOT projects can have thousands of hours of splicing)

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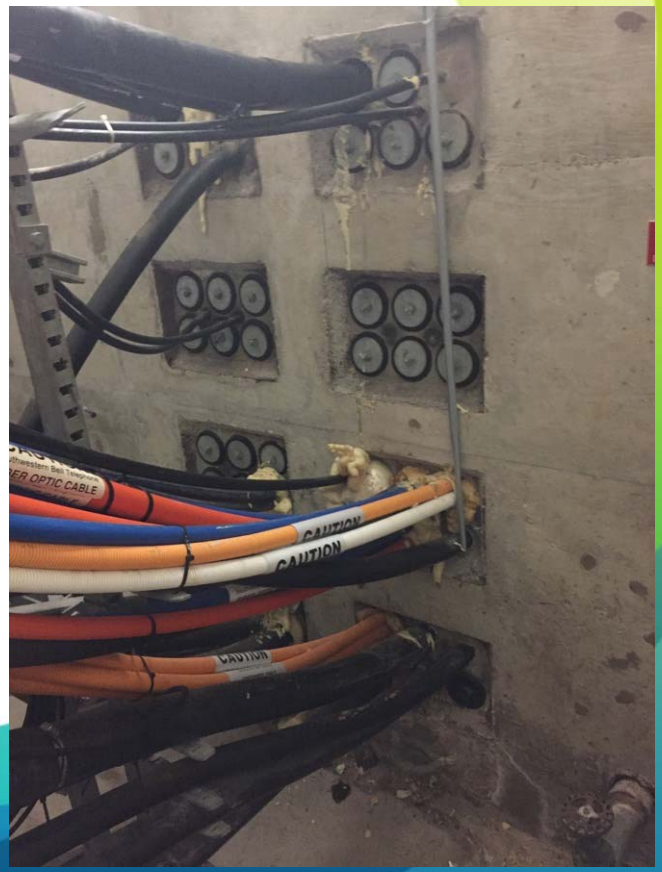
CENTRAL OFFICE VAULT



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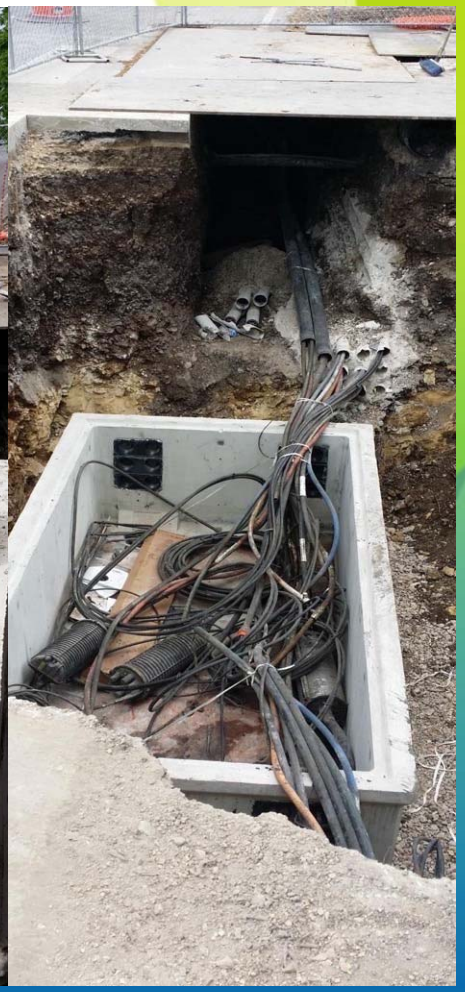

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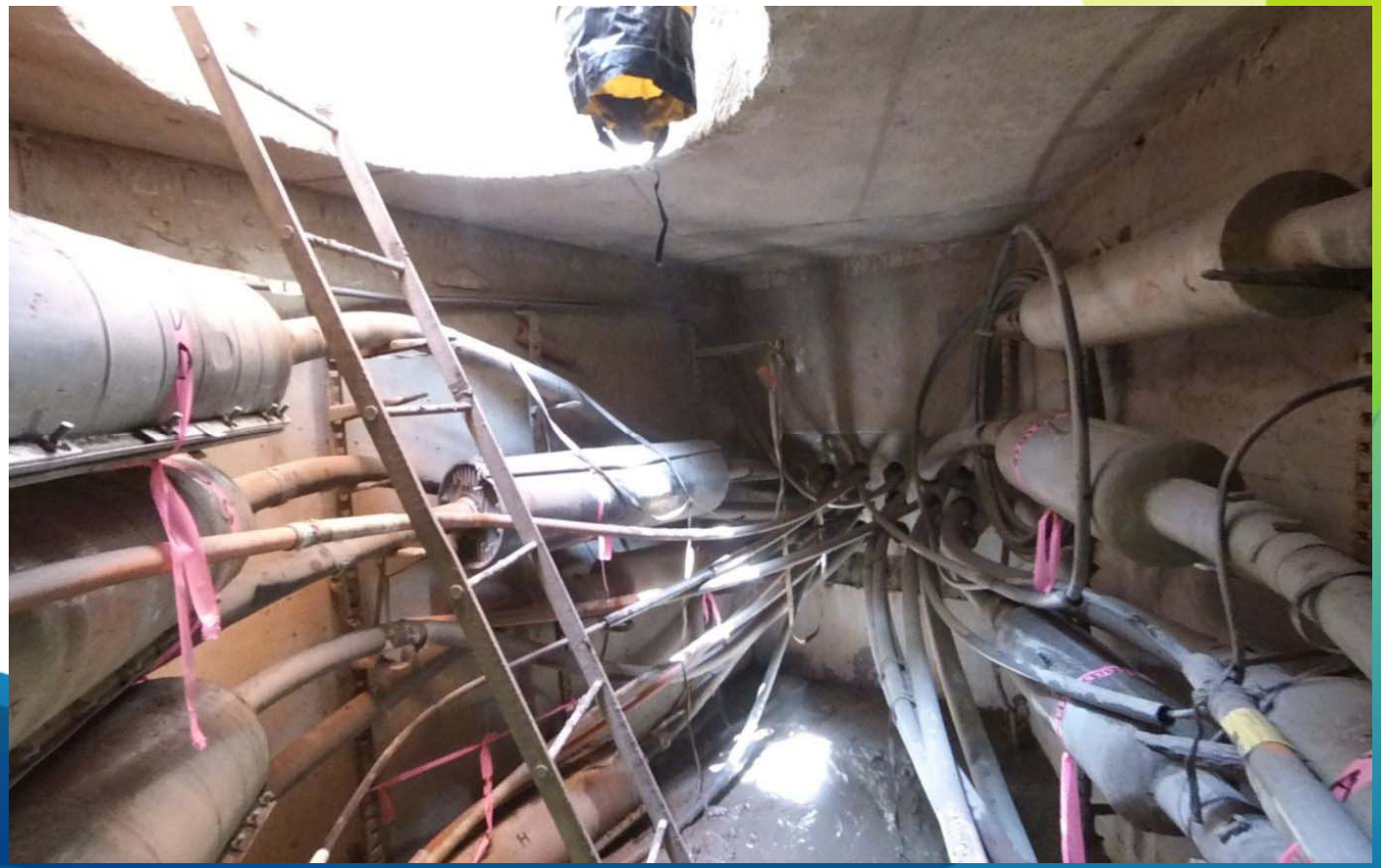
INSIDE MANHOLE



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DUCT BANK INSTALLATION

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CABINETS

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AT&T COPPER PEDESTAL

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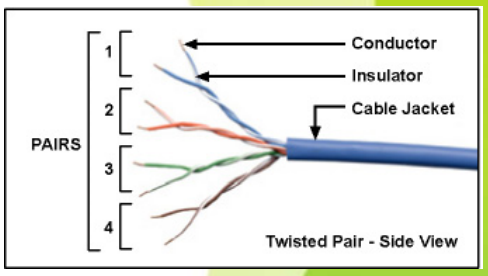
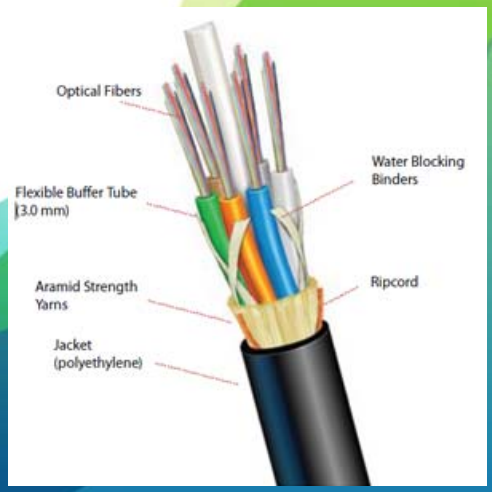
Splicing & Time

- Time associated with splicing varies from job to job:
- <u>Copper</u> – We still utilize the Copper Network. Copper is more time consuming to splice on a "pair by pair" basis.
- <u>Fiber</u> – We need to schedule downtime and notify customers (including businesses), as we maintain service. For example, need to coordinate "cut over" time with banks.
- An overall plan for splicing schedules/timeline must be established.
- FAA, 911 circuits need to be coordinated and must be cleared by the customers.
- This notification and coordination process could take 30-90 days to receive the clearance to cut.





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Copper Splice

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Copper Pulp Splice

"...and we've been doing this for a very long time...."

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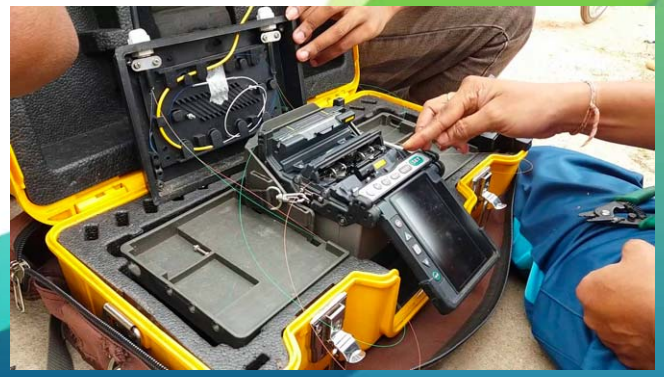

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Relocation Challenges/Successes

- Biggest challenge is the time it takes to build
- TxDOT LET dates
- Timing of ROW actual acquired dates and project LET dates
- Matching up TxDOT schedule to our project duration
- Meeting TxDOT schedule when sizes and scope of our projects vary from job to job
- Frequent communication is the key!

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Questions?

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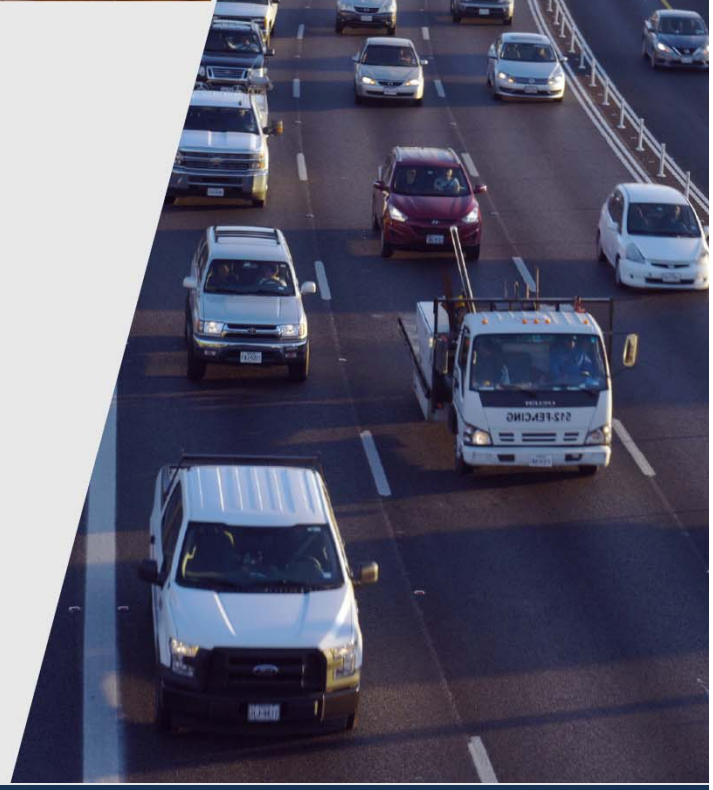
TxDOT Utility Partnering Conference

Track 2



December 3, 2019

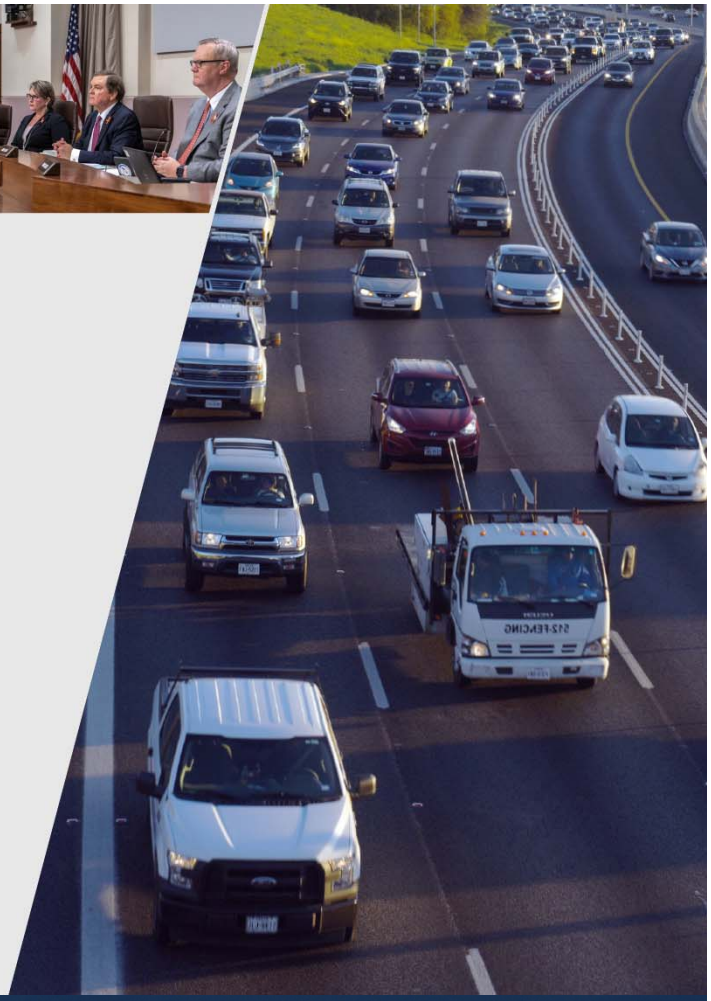
QUESTIONS?

Networking Break

Next session starts at 2:30pm

A Different View of Utility Coordination: Billboards

Wendy Knox, Commercial Signs Regulatory Program Director
TxDOT ROW Division



December 3, 2019

Examples

CONFLICTS & BILLBOARDS

Proactively avoid Billboards

- Always identify them during design phase regardless if in the acquisition area
- Billboards identified in the schematics will be included in the property descriptions
- Billboards can be impacted by utilities needing to move
- Billboards impacted by utilities moving can be mitigated

CONFLICTS & BILLBOARDS

Mitigate Billboards Impacted in Project Design

- Overhead power can “adjust” the arm on the pole to avoid the billboard
- Billboards need a 10’ clearance from primary line
- Billboards missed during the schematic phase negatively impact project success
- Billboards missed significantly impact clearly the right of way and can delay construction

CONFLICTS & BILLBOARDS

What do you do with when you find a Billboard in conflict with Utilities?

- Contact the TxDOT Right of Way Project Manager (PM) asap!

- The PM can coordinate the process of the Impacted Sign
  - Contact the Commercial Signs Regulatory Program for Information on the Sign
  - PM will coordinate the payment of any damages due to the sign owner if any
  - PM will coordinate the movement of the impacted sign with the sign owner

Commercial Signs Regulatory Program Contact

Wendy Knox, MPA, CTCM

Director, Commercial Signs Regulatory Program

TxDOT, ROW Division

Wendy.Knox@txdot.gov

(512) 416-2915

Help Desk Hours: (0800 – 1700 M-F)
ROW_OutdoorAdvertising@txdot.gov
(512) 416-3030

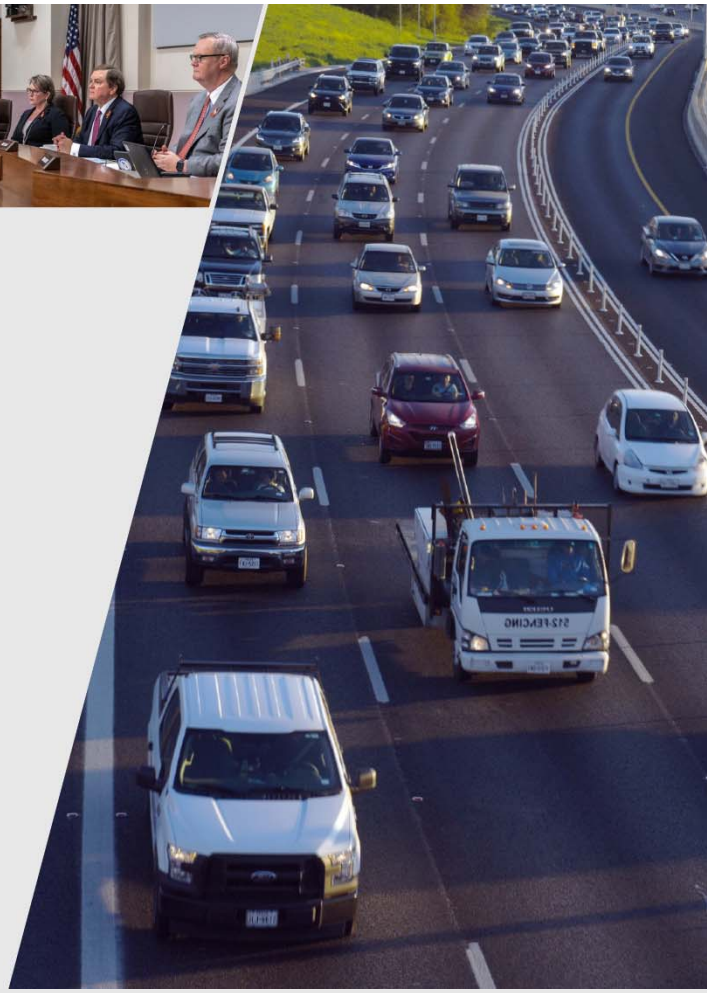
QUESTIONS?

Networking Break

Next session starts at 3:30pm

Acquisition and Utility Coordination the “Right Way”

Lezlie Kirby, Right of Way Project Delivery Director
TxDOT ROW Division



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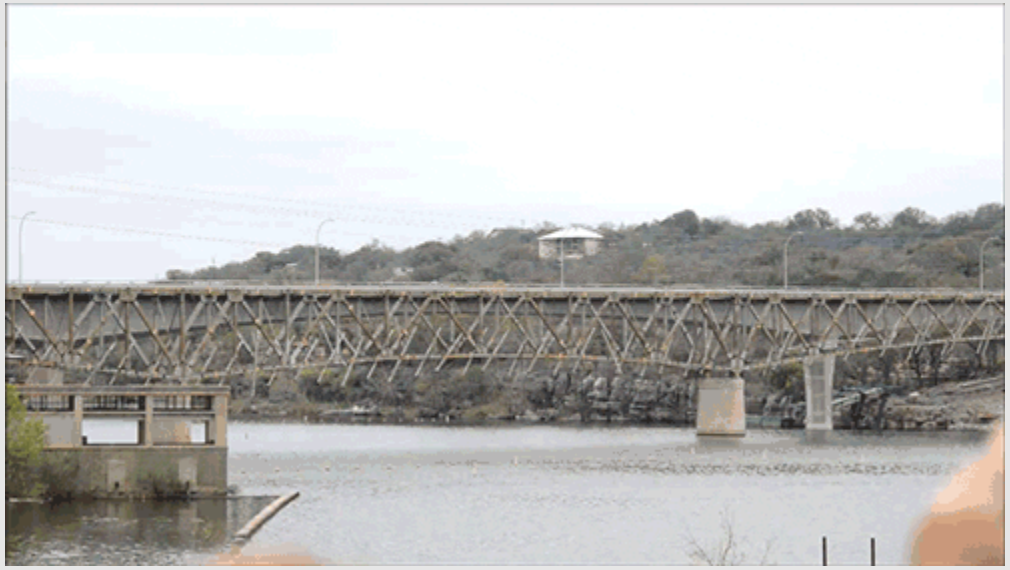
What happens when you do not communicate?



Having a difficult time communicating?

Difficult balancing act….

Closing the gap to success

If we work together we can accomplish great things!

Contact Information

Lezlie Kirby

Director, Right of Way Project Delivery

TxDOT, ROW Division

Lezlie.Kirby@txdot.gov

Office (512) 416-2868

Mobile (469) 387-9993

QUESTIONS?

TxDOT Utility Partnering Conference

Track 3

December 3, 2019

A-M-Azing Cost & Time Savings

Partnering Today to Build a Better Texas Tomorrow

Susan Clanton, YKM District

December 3, 2019

Table of contents

1	Define A-M-A	3
2	SH 72 - Avoid	4-5
3	I 10 - Minimize	6-7
4	US 59 - Minimize	8
5	US 59 - Accommodate	9
6	Take Aways	10

A-M-A

- Avoid – Design roadway around existing utility infrastructure.
- Minimize – Lessen the impact on utility infrastructure by modifying the design plans.
- Accommodate – Utility infrastructure must be relocated or an exception to policy granted to allow for the specific rule violation.

SH 72, Dewitt County - AVOID

4 Alternatives Developed in Schematics to Add 2 lanes for 4 Lane Undivided

- Alternative 1 - $10,538,800
- Alternative 2 - $10,559,100
- Alternative 3 – Not Viable
- Alternative 4 - $11,555,800

SH 72, Dewitt County– Results of Avoidance

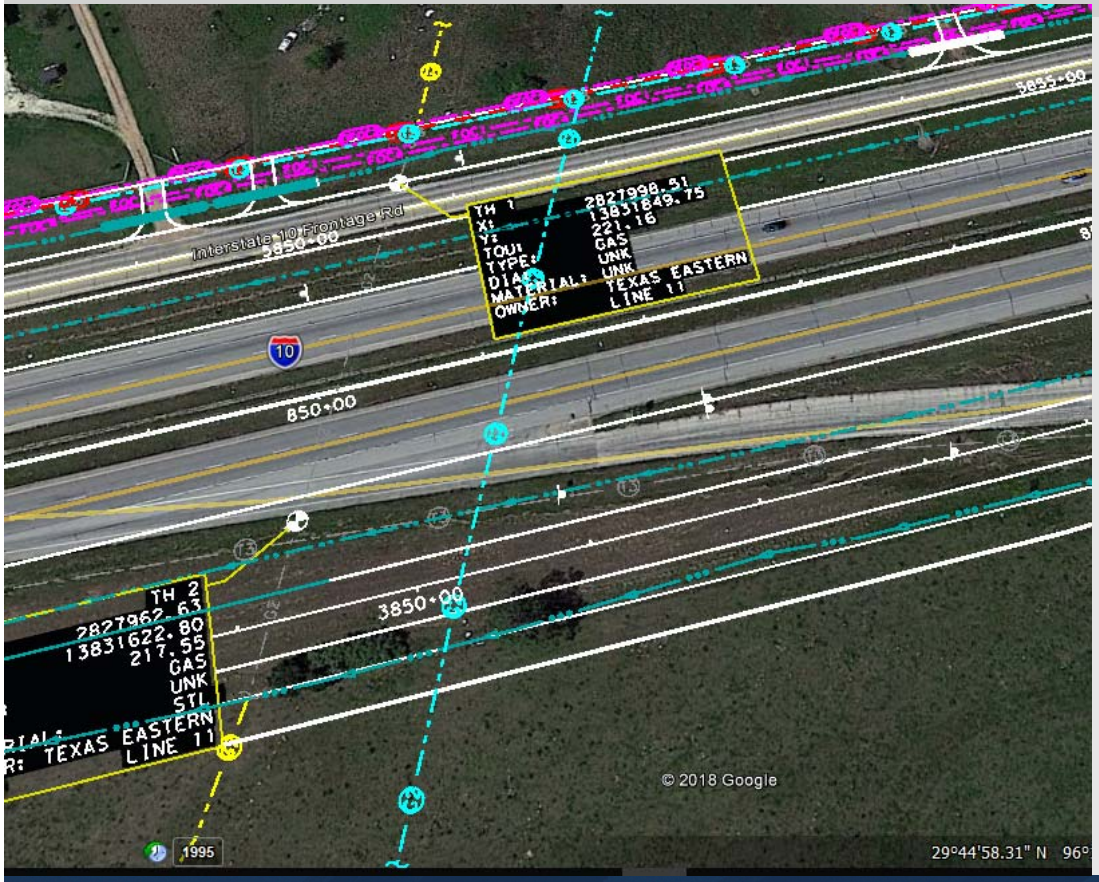
Conducted Public Meeting

Chosen Alignment is Hybrid of Alternative 1 & 2

Projected Expenses for Pipeline Relocations now $7,276,975.

Cost savings of $3,000,000
Time savings of 120 days

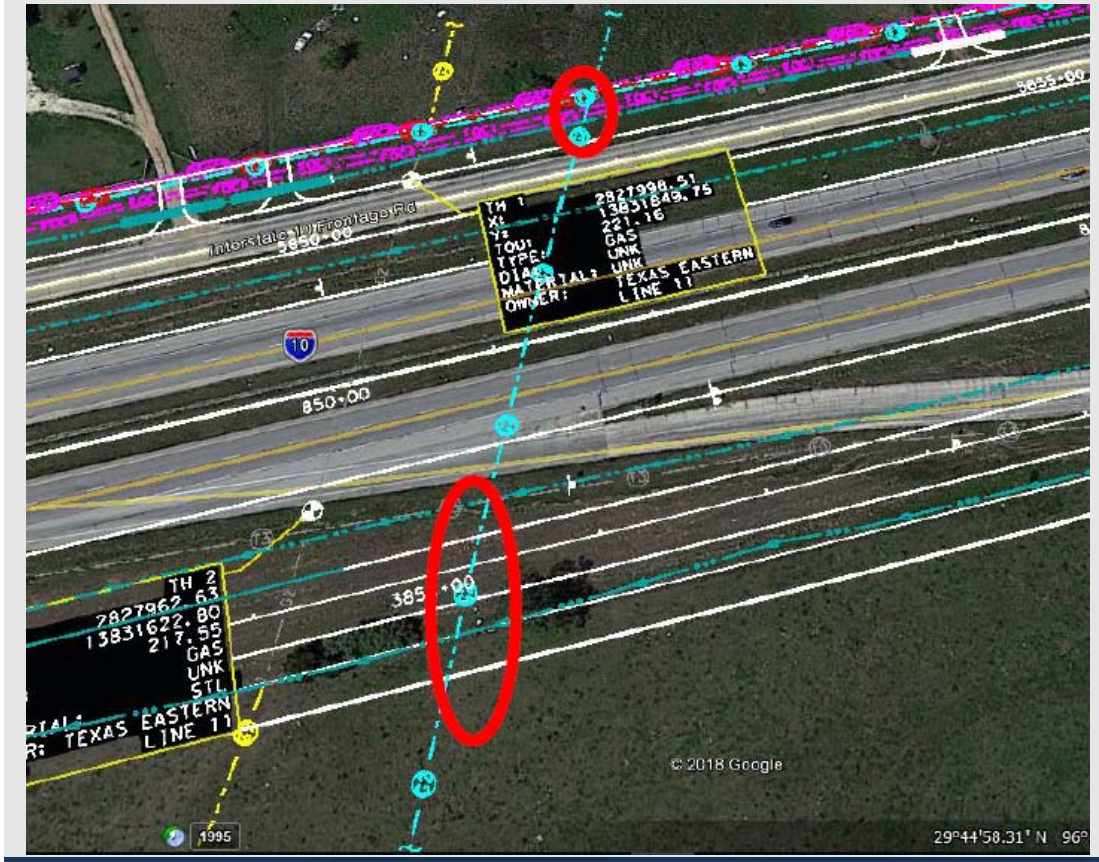
IH-10, Austin County - Minimize



Add Lanes for 6-lane Facility, includes addition of frontage roads

At 90% design, estimate to lower line was $4,067,130.

IH-10, Austin County – Results of Minimization



Areas of conflict were NOT under pavement.

Added embankment/pipe for driveway and protection slab for $231,722.

Cost savings of $3,835,408.
Time savings of 30 days.

US 59, Wharton County - Minimize

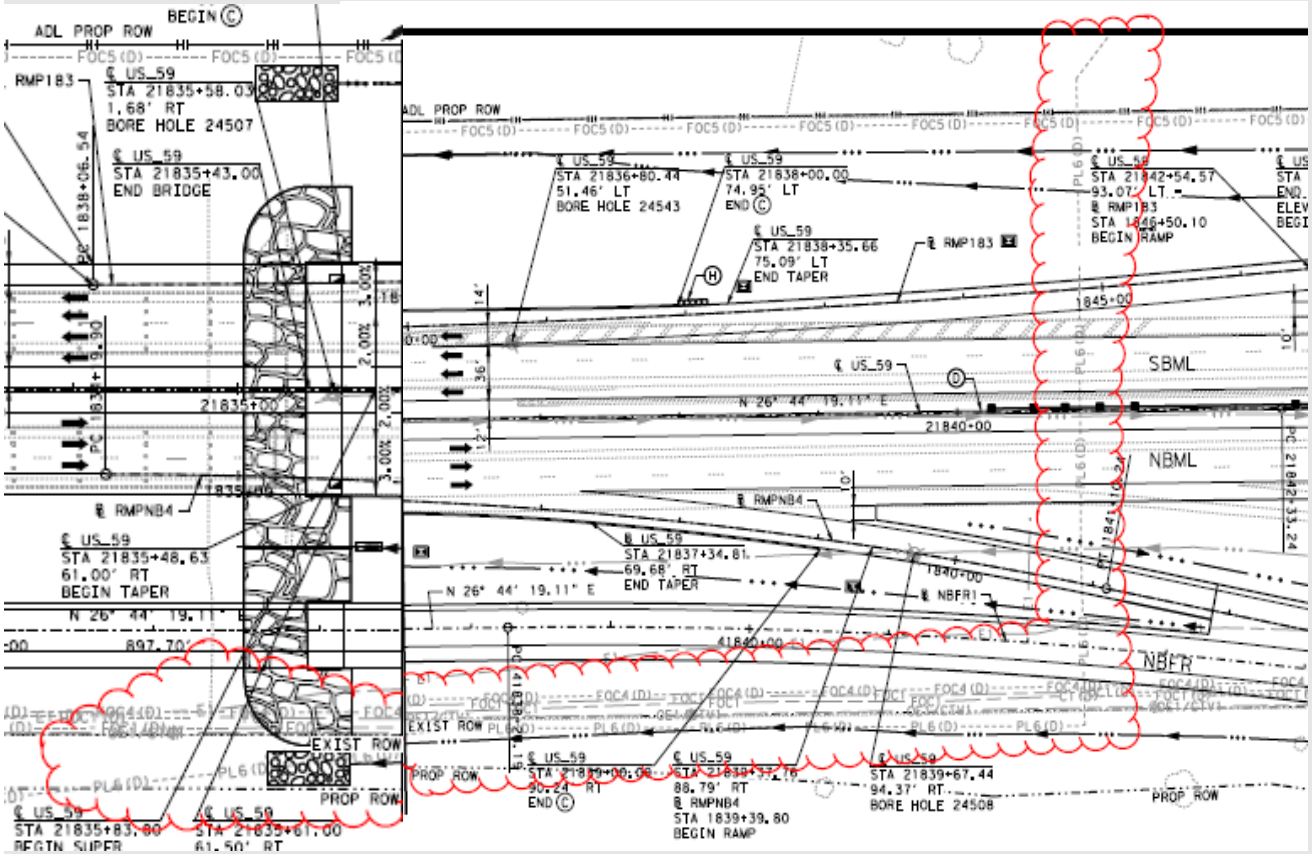
Upgrade Rural Freeway to Interstate Standards

28” Pipeline Crossing Predates Roadway

AT 60% Design the Estimate to lower the PL was $2,641,208.

Reworked ditches, will now extend the casing for $646,245. Cost savings of nearly $2,000,000. Time savings of 5 days.

US 59, Wharton County – Accommodate



Pipeline requested accommodation to avoid $350,000 in reimbursable costs to relocate.

Official estimate submitted for $900,000.

Intangible Benefits: Avoiding construction delays when litigation seems inevitable.

TAKE AWAYS – You can never start TOO EARLY!

AVOID

- Know location of pipelines before ROW Acquisition begins.
- Know pipeline depths before 30% PS&E. Shift ditches to avoid conflicts wherever possible.

MINIMIZE

- If the pipeline is NOT in conflict with existing pavement, you can likely find a way to Minimize the need for full adjustment.

ACCOMMODATE

- Know the cost and schedules of alternatives before requesting an accommodation to the rules or a utility relocate.

Gather Data, Ask Questions, Gather MORE Data

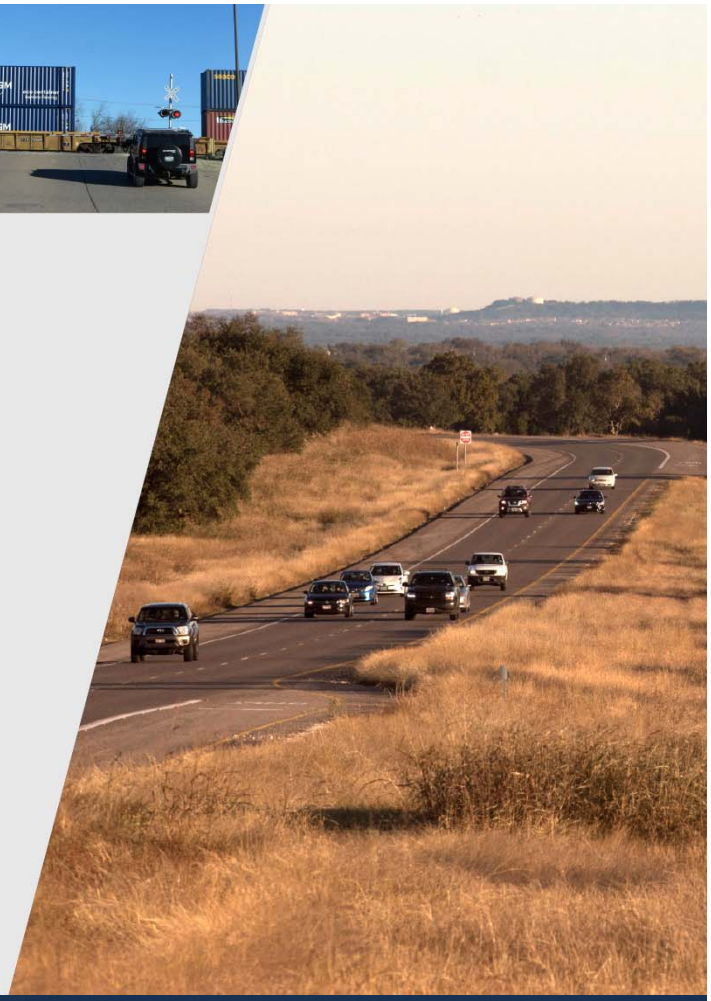
QUESTIONS?

Networking Break

Next session starts at 2:30pm

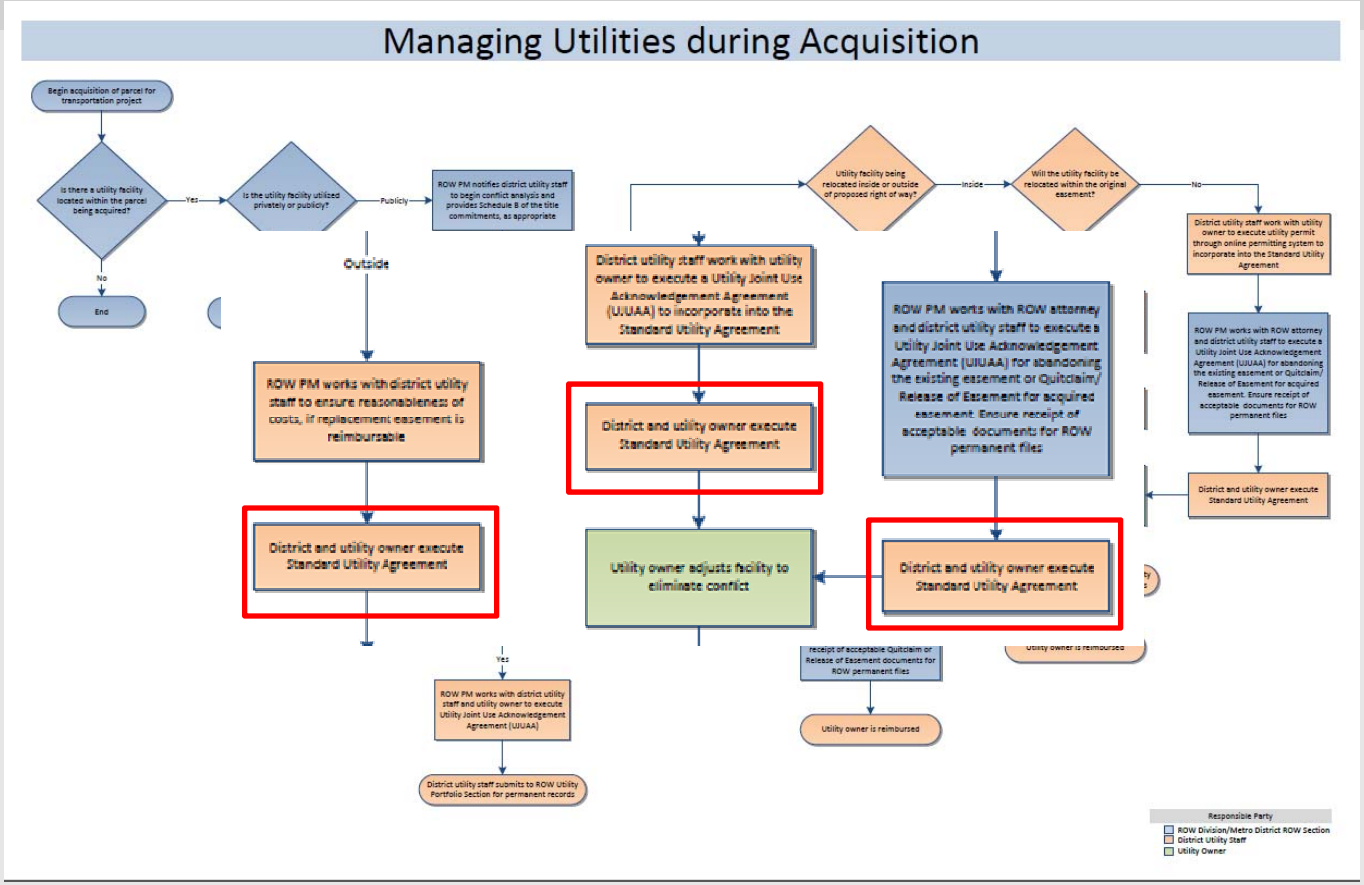
Track 3: TxDOT Utility Agreements

Wayne Robinson, TxDOT, ROW Division



December 3, 2019

Managing Utilities during Acquisition



Why do we need Agreements?

Why Do We Need Agreements?

Code of Federal Regulations (CFR)

§ 645.113 Agreements and authorizations.

(b) When applicable, the written agreement shall specify the terms and amounts of any contribution or repayments made or to be made by the utility to the TD in connection with payments by the TD to the utility under the provisions of §645.107 of this regulation.

Texas Constitution and Statute: Transportation Code

Sec. 203.0935: Timely Agreement

If the department and the affected utility enter into an agreement after negotiations under Subsection (a), the terms and conditions of the agreement shall govern the relocation of the utility's facility covered by the agreement.

Why Do We Need Agreements?

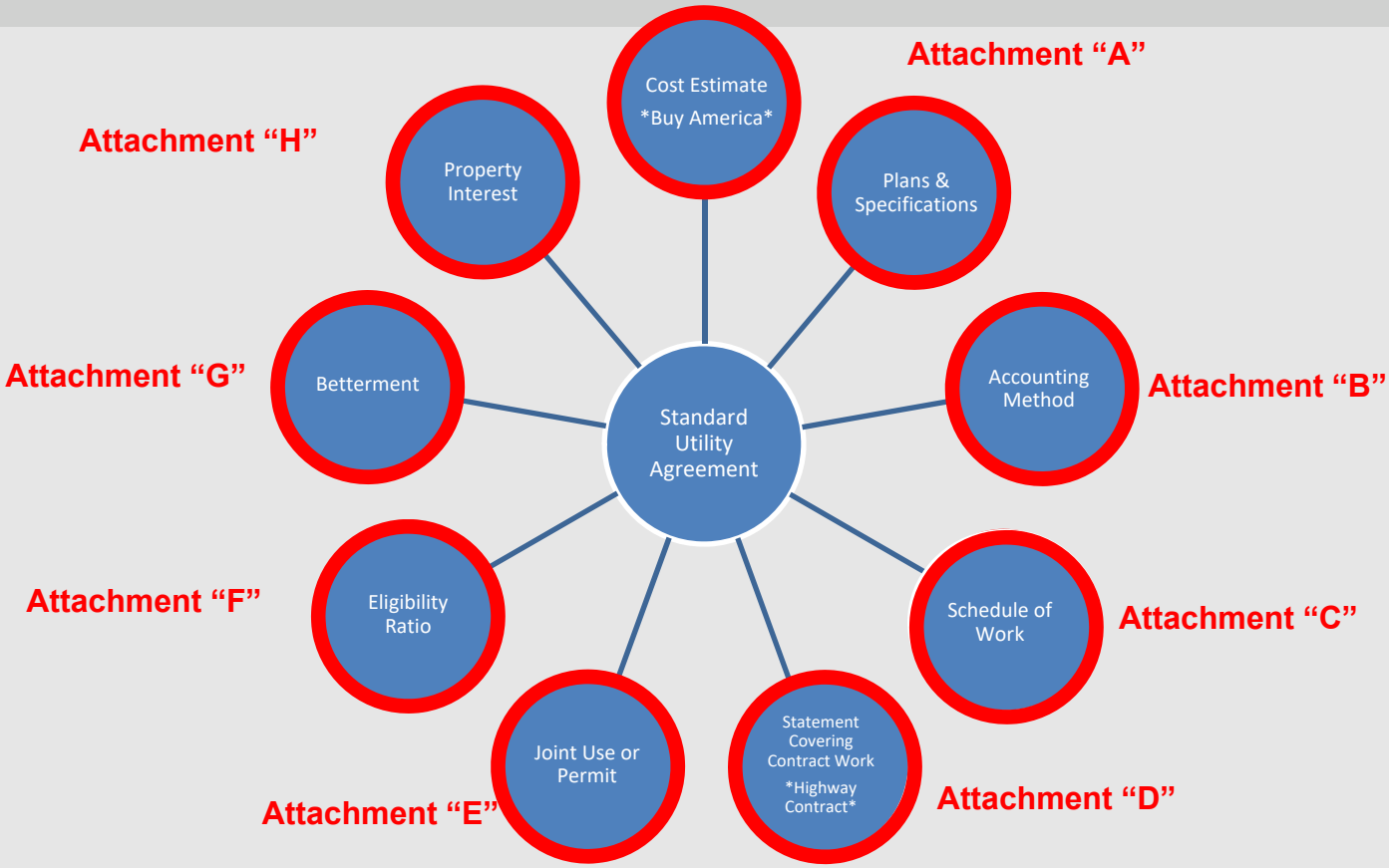
Texas Administrative Code (TAC)

Title 43, Part 1, Chapter 21, Subchapter B, § Rule 21.22: Agreements

(b) The utility shall negotiate with the department in **good faith** to reach an agreement on the terms of the relocation.

Why do we need Attachments?

Development of Standard Utility Agreement



Attachment "A"

Form ROW-U-35
(Rev. 08/19)
Page 5

Attachment "A"
Plans, Specifications, and Estimated Costs

All material items that must meet Buy America or Steel and Iron Preference Provision requirements must be indicated with an asterisk (*).

CFR: 645.113
(c) The agreement shall be supported by plans, specifications when required, and <u>itemized cost estimates</u> of the work agreed upon, including appropriate credits to the project, and shall be sufficiently informative and complete to provide the TD and the FHWA with a clear description of the work required.

Plans – TAC: 21.22
(2) plans and specifications sufficient to determine the proposed location of the facility;

Attachment “A” - Buy America

- 23 USC 313
- 23 CFR 635.410
- Transportation Code 223.045
- Senate Bill 1289
- Buy America Guidelines

Attachment "B"

Form ROW-U-35
(Rev. 08/19)
Page 6

Attachment "B"
Accounting Method

CFR- 645.113

The preferred method for the development of relocation costs by a utility is on the basis of actual direct and related indirect costs accumulated in accordance with a work order accounting procedure prescribed by the applicable Federal or State regulatory body

Attachment "C"

Form ROW-U-35
(Rev. 08/19)
Page 7

Attachment "C"
Schedule of Work

CFR – 645.113
furnished a schedule for accomplishing the work
TAC – 21.22
(5) a date by which the utility will begin and an estimated date of completion of the adjustment, modification, relocation, or removal.

Attachment "D"

Form ROW-U-35
(Rev. 08/19)
Page 8

Attachment "D"
Statement Covering Contract Work

CFR – 645.115 Construction
When the utility is not adequately staffed and equipped to perform such work with its own forces and equipment at a time convenient to and in coordination with the associated highway construction, such work may be done by:

(1) A contract awarded by the TD or utility to the lowest qualified bidder based on appropriate solicitation,
(2) Inclusion as part of the TD's highway construction contract let by the TD as agreed to by the utility,
(3) An existing continuing contract, provided the costs are reasonable, or
(4) A contract for low-cost incidental work, such as tree trimming and the like, awarded by the TD or utility without competitive bidding, provided the costs are reasonable.

Attachment "E"

Form ROW-U-35
(Rev. 08/19)
Page 9

Attachment "E"
Utility Joint Use Acknowledgment – (ROW-U-JUAA)
and/or Utility Installation Request – (Form 1082)

TAC – 21.53

(a) Joint use agreement forms are to be used when a utility has a prior property interest which is being retained within the highway right of way, and:

(1) when in connection with active highway projects an adjusted or relocated utility facility occupies that part of the highway right of way; or

(2) when a utility facility is retained within that part of the highway right of way without adjustment unless the utility has a previously approved department joint use agreement covering the right of way limits and which includes provisions for control of access when applicable.

Attachment "F"

Form ROW-U-35
(Rev. 08/19)
Page 10

Attachment "F"
Eligibility Ratio

Transportation Code – 203.092: REIMBURSEMENT FOR RELOCATION OF UTILITY FACILITIES.
(a) A utility shall make a relocation of a utility facility at the expense of this state if relocation of the utility facility is required by improvement of:
(1) a highway in this state established by appropriate authority as part of the National System of Interstate and Defense Highways and the relocation is eligible for federal participation;
(2) any segment of the state highway system and the utility has a compensable property interest in the land occupied by the facility to be relocated; or
(3) a segment of the state highway system that was designated by the commission as a turnpike project or toll project before September 1, 2005.

Attachment "G"

Form ROW-U-35
(Rev. 08/19)
Page 11

Attachment "G"
Betterment Calculation and Estimate

CFR 645.117
Elected Betterments
(h) Credits. (1) Credit to the highway project will be required for the cost of any betterments to the facility being replaced or adjusted, and for the salvage value of the materials removed

CFR 645.117
Forced Betterments
(3) No betterment credit is required for additions or improvements which are: (i) Required by the highway project, (ii) Replacement devices or materials that are of equivalent standards although not identical, (iii) Replacement of devices or materials no longer regularly manufactured with next highest grade or size, (iv) Required by law under governmental and appropriate regulatory commission code, or (v) Required by current design practices regularly followed by the company in its own work, and there is a direct benefit to the highway project.

Attachment "H"

Form ROW-U-35
(Rev. 08/19)
Page 12

Attachment "H"
Proof of Property Interest

Transportation Code – 203.092: REIMBURSEMENT FOR RELOCATION OF UTILITY FACILITIES.

(a) A utility shall make a relocation of a utility facility at the expense of this state if relocation of the utility facility is required by improvement of:

(2) any segment of the state highway system and the utility has a <u>compensable property interest</u> in the land occupied by the facility to be relocated; or

Wayne's Tips

Wayne's
Top
Tips

Tip # 1

#1 This is a Contract

Standard Utility Agreement = Contract

#1 This is a Contract

- Modifications to standard forms requires approval from legal.
- Once the Utility signs the Agreement, the District cannot make changes to the package.
  - This includes: adding notes, extra sheets, markings to maps, or modifying/adding information.
  - Any change will need the Utility's sign off
    - Can initial changes.

Tip #2

2 Know Your Project

- Do you understand the agreement?
  - If you don't understand it , who can?
- The Agreement Package should be clear and comprehensible.

#2 Know Your Project

- The agreement should outline:
  - Who
    - Who is paying for the adjustment?
      - Eligibility Ratio
      - Local Participation (Contribution)
      - Advance Funding Agreement (AFA)
      - LUP Process
      - SP2125
    - Who is doing the work?
      - In-House Engineering
      - In-House Labor
      - Contracted Engineering
      - Contracted Labor
      - TxDOT Engineer Consultant
      - TxDOT – Highway Contract (Joint Bid)

#2 Know Your Project

- What
  - What is the property interest?
  - What is the date that the utility needs to be cleared?

- Interstate Highway
- Deeds (Utility own the land)
- Easement Documentation
- Affidavits

- Ready to Let Date
- Construction Phasing
- Management Plan

#2 Know Your Project

- Where
  - Where is the existing and proposed ROW?
    - Is the existing facility in a easement?
    - Is the proposed facility inside or outside the proposed ROW?
  - Where is the conflict?
    - Is it a direct or indirect conflict?
    - Is the relocation/adjustment justified?

#2 Know Your Project

- How

– How is the conflict being resolved?

- Relocation
- Abandonment of the facility
- Adjustment – such as lowering in place
- Exception to Policy
- Steel Encasement
- Any action to minimize the adjustment

– How much will it cost?

- Allocation of Funds
- Budgeting
- Collecting contributing funds from local participating agency (LPA)
- Collecting funds the utility is responsible for (Outlined in AFA)

#2 Know Your Project

- Why
  - Why does all this matters?

- Comply with Federal and State Laws and Regulations
- Steward of Tax Payers' money
- Protecting the Rights of the Utility
- Protecting the traveling public

Tip #3

#3 Ask Questions

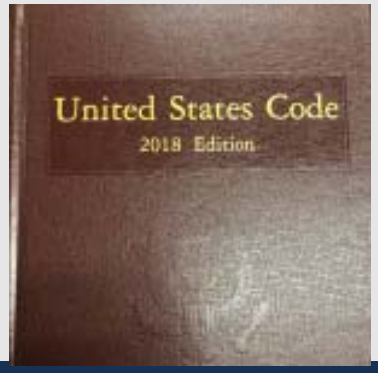
- Don't be afraid to ask questions!
- Use all resources
  - Teammates
  - Design Project Manager
  - ROW Project Manager
  - Utility Company Coordinator
  - Utility Portfolio Section (UPS) Utility Specialists
  - UPS Program Office
  - UPS Toolkit
  - Anyone that may be able to provide an answer (Example TCEQ or Railroad Commission)
  - ROW Utility Manual

Helpful Resources

Helpful Resources

- **U.S. Code, Title 23 – Highways**
  - 23 USC 313 – Buy America
    - https://www.gpo.gov/fdsys/granule/USCODE-2011-title23/USCODE-2011-title23-chap3-sec313

- **U.S. Code, Title 49 – Transportation**
  - 49 USC – Subtitle VIII – Pipelines
    - https://www.gpo.gov/fdsys/pkg/USCODE-2011-title49/html/USCODE-2011-title49.htm



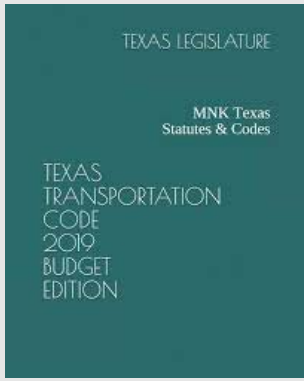
Helpful Resources

- **Code of Federal Regulations, Title 23 – Highways**
  - 635.410 – Buy America Requirements
    - *https://www.ecfr.gov/cgi-bin/text-idx?SID=ce6d8dea25fa7228c170625f88164960&mc=true&node=se23.1.635_1410&rgn=div8*
  - Part 645 – Utilities
    - *https://www.ecfr.gov/cgi-bin/text-idx?SID=ce6d8dea25fa7228c170625f88164960&mc=true&node=pt23.1.645&rgn=div5*

Helpful Resources

- **Texas Transportation Code, Title 6, Subtitle A, Chapter 203**
  - Subchapter E – Relocation of Utility Facilities
    - http://www.statutes.legis.state.tx.us/Docs/TN/htm/TN.203.htm

- **Texas Administrative Code, Title 43, Part 1, Chapter 21**
  - Subchapter B – Utility Adjustment, Relocation, or Removal
  - Subchapter C – Utility Accommodation (**UAR**)
    - https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=4&ti=43&pt=1&ch=21



Questions

Thank you!

Networking Break

Next session starts at 3:30pm

TxDOT Utility Partnering Conference

Update on Buy America Guidelines

December 3, 2019

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Buy America Compliance - Foundation

- Set forth in 23 USC 313
  - The requirements under this section shall apply to all contracts eligible for assistance under this chapter for a project carried out within the scope of the applicable finding, determination, or decision under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), regardless of the funding source of such contracts, if at least 1 contract for the project is funded with amounts made available to carry out this title.
  - https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title23-section313&num=0&edition=prelim

Buy America Compliance - Foundation

- Set forth in 23 CFR 635.410
  - The project either:
    - (i) Includes no permanently incorporated steel or iron materials, or
    - (ii) if steel or iron materials are to be used, all manufacturing processes, including application of a coating, for these materials must occur in the United States. Coating includes all processes which protect or enhance the value of the material to which the coating is applied.
  - https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=df77aee403b235af5e0b8828a01d24de&mc=true&r=SECTION&n=se23.1.635_1410

Buy America Compliance - Foundation

- Set forth in TTC 223.045
  - IRON AND STEEL PREFERENCE PROVISIONS IN IMPROVEMENT CONTRACTS.
    - A contract awarded by the department for the improvement of the state highway system without federal aid must contain the same preference provisions for iron and steel and iron and steel products that are required under federal law for an improvement made with federal aid.
  - Senate Bill 1289 – September 1, 2017
  - https://statutes.capitol.texas.gov/Docs/TN/htm/TN.223.htm

2019 Buy America Guidelines

- Removed 90% and 100% iron and steel composition requirements – replaced with predominately
- Language addressing the need to verify compliance prior to installation of materials
- Language addressing the acceptance of written certifications when Mill Test Reports are not available
- Language addressing betterment utility facilities must comply with Buy America Requirements

2019 Buy America Guidelines - Updates

Guidelines

On federal-aid projects, utility facility owners will use domestically manufactured products that are composed predominately of steel and/or iron to incorporate into the permanent installation of the utility facility in compliance with the Buy America provisions of 23 CFR 635.410 as amended. Examples of such products may include poles, cross arms, and structural support members; towers and girders used to comprise transmission towers and stand-alone structures; conductor support cables; high-strength bolts used as anchor bolts and anchor rods; iron or steel baseplates; encasement pipes, pipes and valves; rebar and other reinforcing iron/steel for all cast-in-place and precast installations; conduit and ducting; fire hydrants; manhole covers, rims, and drop-inlet grates.

Prior to the installation of products subject to Buy America compliance, the utility facility owner will submit an executed TxDOT Form 1818 with attached Mill Test Reports, issued and signed by the initial fabricator, supplier of materials, or utility owner. Mill Test Reports should state that the materials were manufactured domestically. In certain instances, the utility facility owner may demonstrate Buy America compliance by providing a written certification signed by the vendor or manufacturer on company letterhead or other acceptable documentation signed by an authorized representative declaring that all supplied materials subject to the Buy America provisions are fully compliant. The written certification will include the specific project information pertaining to the Standard Utility Agreement and state that all products that are composed predominately of steel and/or iron were manufactured domestically and in compliance with the Buy America provisions of 23 CFR 635.410 as amended.

Certain utility agreements, executed before Dec. 31, 2013, that do not have federal funding for utility materials or relocation are not subject to Buy America (even if other contracts associated with the project were reimbursed with federal funds). The date of the original utility agreement will be used as the date to determine Buy America compliance if the utility agreement is amended after December 31, 2013 unless the amendment includes major changes in the scope of work.

Betterments as part of a reimbursable Utility Agreement must be Buy America compliant.

Buy America does not apply to assembly materials, attachment materials, housing encasements, or miscellaneous electronics, as defined below.

Buy America does not apply to any associated materials (including spare materials) required for maintenance.

Removed percentages

Provide example of materials that may be subject to Buy America Requirements

Added language – verify compliance prior to installation

Added language – acceptance of written certification – in certain instances

Added language – betterments

2019 Buy America Guidelines - Updates

- Added the definitions from the 2017 guidelines
- Miscellaneous items do NOT have to be Buy America compliant
- Included option for utility owner to sign Form 1818
- Added language on what to include on written certification letter

2019 Buy America Guidelines - Updates

Definitions

Buy America: Utility Accommodations

Definitions:

TxDOT intends to use the following definitions to provide clarity and to assist utility-service providers as they develop internal processes to ensure compliance with Buy America.

Buy America: Utility Accommodations

Definitions:

TxDOT intends to use the following definitions to provide clarity and to assist utility-service providers as they develop internal processes to ensure compliance with Buy America.

TxDOT and the utility will identify the proposed utility structures and their components that will be monitored in the Utility Agreement Estimate.

Conductor – A material (specifically wires and cables) that allows the flow of energy including electricity, heat, data, audio/video transmission, etc.

Conductor Support Cables – Iron or steel cables that support conductor lines between towers or poles.

Fittings – Individual parts used to join, adjust or adapt a system of pipes including but not limited to elbows, tees, wyes, crosses, nipples, reducers,

2019 Buy America Guidelines - Updates

Included option for utility owner to sign Form 1818

Added language on what to include in written certification

Guidelines

On federal-aid projects, utility facility owners will use domestically manufactured products that are composed predominately of steel and/or iron to incorporate into the permanent installation of the utility facility – in compliance with the Buy America provisions of 23 CFR 635.410 as amended. Examples of such products may include poles, cross arms, and structural support members; towers and girders used to comprise transmission towers and stand-alone structures; conductor support cables; high-strength bolts used as anchor bolts and anchor rods; iron or steel baseplates; encasement pipes, pipes and valves; rebar and other reinforcing iron/steel for all cast-in-place and precast installations; conduit and ducting; fire hydrants; manhole covers, rims, and drop-inlet grates.

Prior to the installation of products subject to Buy America compliance, the utility facility owner will submit an executed TxDOT Form 1818 with attached Mill Test Reports, issued and signed by the initial fabricator, supplier of materials, or utility owner. Mill Test Reports should state that the materials were manufactured domestically. In certain instances, the utility facility owner may demonstrate Buy America compliance by providing a written certification signed by the vendor or manufacturer on company letterhead or other acceptable documentation signed by an authorized representative declaring that all supplied materials subject to the Buy America provisions are fully compliant. The written certification will include the specific project information pertaining to the Standard Utility Agreement and state that all products that are composed predominately of steel and/or iron were manufactured domestically and in compliance with the Buy America provisions of 23 CFR 635.410 as amended.

Certain utility agreements, executed before Dec. 31, 2013, that do not have federal funding for utility materials or relocation are not subject to Buy America (even if other contracts associated with the project were reimbursed with federal funds). The date of the original utility agreement will be used as the date to determine Buy America compliance if the utility agreement is amended after December 31, 2013 unless the amendment includes major changes in the scope of work.

Betterments as part of a reimbursable Utility Agreement must be Buy America compliant.

Buy America does not apply to assembly materials, attachment materials, housing encasements, or miscellaneous electronics, as defined below.

Buy America does not apply to any associated materials (including spare materials) required for maintenance.

Miscellaneous items

Buy America - Utility Agreement Revisions

Form ROW-U-35
(Rev. 08/19)
Page 1

STANDARD UTILITY AGREEMENT

U-Number:

District:	County:
Federal Project No.:	Highway:
ROW CSJ:	From:
Highway Project Letting Date:	To:

This Agreement by and between the State of Texas, acting by and through the Texas Transportation Commission, (**"State"**), and , (**"Utility"**), acting by and through its duly authorized representative, shall be effective on the date of approval and execution by and on behalf of the **State**.

WHEREAS, the **State** has deemed it necessary to make certain highway improvements as designated by the **State** and approved by the Federal Highway Administration within the limits of the highway as indicated above (the **"Highway Project"**);

WHEREAS, the proposed Highway Project will necessitate the adjustment, removal, and/or relocation of certain facilities of the Utility as indicated in the following statement of work: [Enter scope of work here or submission will

NOW, THEREFORE, BE IT AGREED:

The **State** will pay to the **Utility** the costs incurred in adjustment, removal, and relocation of the **Utility's** facilities up to the amount said costs may be eligible for **State** participation.

All conduct under this agreement, including but not limited to the adjustment, removal, and relocation of the facility, the development and reimbursement of costs, any environmental requirements, and retention of records will be in accordance with all applicable federal and state laws, rules and regulations, including, without limitation, the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act, 42 U.S.C. §§ 4601, et seq., the National Environmental Policy Act, 42 U.S.C. §§ 4321, et seq., the Buy America provisions of 23 U.S.C. § 313 and 23 CFR 635.410, as amended, Texas Transportation Code § 223.045, the Utility Relocations, Adjustments, and Reimbursements provisions of 23 CFR 645, Subpart A, and the Utility Accommodation provisions of 23 CFR 645, Subpart B.

The **Utility** shall supply, upon request by the **State**, proof of compliance with the aforementioned laws, rules, regulations, and guidelines prior to the commencement of the adjustment, removal, and relocation of the facility.

work upon TxDOT's completion and clearance of its environmental review of the Highway Project. Any such work by the Utility prior to TxDOT's written authorization to proceed will not be eligible for reimbursement and the Utility is responsible for entering any property within the proposed limits of the Highway Project that has not yet been

Initial Date TxDOT Initial Date Utility

Buy America - Utility Agreement Revisions

Added language – specifically referring to Buy America and Steel and Iron Preference Provisions

Form ROW-U-35
(Rev. 08/19)
Page 2

acquired by TxDOT. This written authorization to proceed with the physical work is in addition to the authorization to commence work outlined below. Notwithstanding the foregoing, the provisions of this paragraph are required only when TxDOT has not obtained completion and clearance of its environmental review of the Highway Project prior to the execution of this Agreement by the State and the Utility.

The **Utility** shall comply with the Buy America provisions of 23 U.S.C. § 313, 23 CFR 635.410, as amended, and the Steel and Iron Preference provisions of Texas Transportation Code § 223.045 and, when products that are composed predominately of steel and/or iron are incorporated into the permanent installation of the utility facility, use domestically manufactured products. TxDOT Form 1818 (Material Statement), along with all required attachments, must be submitted, prior to the commencement of the adjustment, removal, and relocation of the facility, as evidence of compliance with the aforementioned provisions. Failure to submit the required documentation or to comply with the Buy America, and Steel and Iron Preference requirements shall result in: (1) the **Utility** becoming ineligible to receive any contract or subcontract made with funds authorized under the Intermodal Surface Transportation Efficiency Act of 1991; (2) the **State** withholding reimbursement for the costs incurred by the **Utility** in the adjustment, removal, and relocation of the **Utility's** facilities; and (3) removal and replacement of the non-compliant products.

The **Utility** shall comply with the Buy America provisions of 23 U.S.C. § 313, 23 CFR 635.410, as amended, and the Steel and Iron Preference provisions of Texas Transportation Code § 223.045 and, when products that are composed predominately of steel and/or iron are incorporated into the permanent installation of the utility facility, use domestically manufactured products. TxDOT Form 1818 (Material Statement), along with all required attachments, must be submitted, prior to the commencement of the adjustment, removal, and relocation of the facility, as evidence of compliance with the aforementioned provisions. Failure to submit the required documentation or to comply with the Buy America, and Steel and Iron Preference requirements shall result in: (1) the **Utility** becoming ineligible to receive any contract or subcontract made with funds authorized under the Intermodal Surface Transportation Efficiency Act of 1991; (2) the **State** withholding reimbursement for the costs incurred by the **Utility** in the adjustment, removal, and relocation of the **Utility's** facilities; and (3) removal and replacement of the non-compliant products.

Standard Utility Agreement – ROW-U-35;

- Plans, Specifications, and Estimated Costs (Attachment "A");
- Accounting Method (Attachment "B");
- Schedule of Work (Attachment "C");
- Statement Covering Contract Work – ROW-U-48 (Attachment "D");
- Utility Joint Use Acknowledgment – ROW-U-JUAA and/or Utility Installation Request – Form 1082 (Attachment "E");
- Eligibility Ratio (Attachment "F");

Initial Date TxDOT Initial Date Utility

Buy America - Utility Agreement Revisions

Revised language – reimbursement requests to be submitted within one year of work being completed

Added language – consequences of non-compliance

Added language – consequence of untimely submission

Form ROW-U-35
(Rev. 08/19)
Page 2

acquired by TxDOT. This written authorization to proceed with the physical work is in addition to the authorization to commence work outlined below. Notwithstanding the foregoing, the provisions of this paragraph are required only when TxDOT has not obtained completion and clearance of its environmental review of the Highway Project prior to the execution of this Agreement by the State and the Utility.

The **Utility** shall comply with the Buy America provisions of 23 U.S.C. § 313, 23 CFR 635.410, as amended, and the Steel and Iron Preference provisions of Texas Transportation Code § 223.045 and, when products that are composed predominately of steel and/or iron are incorporated into the permanent installation of the utility facility, use domestically manufactured products. TxDOT Form 1818 (Material Statement), along with all required attachments, must be submitted, prior to the commencement of the adjustment, removal, and relocation of the facility, as evidence of compliance with the aforementioned provisions. Failure to submit the required documentation or to comply with the Buy America, and Steel and Iron Preference requirements shall result in: (1) the **Utility** becoming ineligible to receive any contract or subcontract made with funds authorized under the Intermodal Surface Transportation Efficiency Act of 1991; (2) the **State** withholding reimbursement for the costs incurred by the **Utility** in the adjustment, removal, and relocation of the **Utility's** facilities; and (3) removal and replacement of the non-compliant products.

The **Utility** agrees to develop relocation or adjustment costs by accumulating actual direct and related indirect costs in accordance with a work order accounting procedure prescribed by the **State**, or may, with the **State's** approval, accumulate actual direct and related indirect costs in accordance with an established accounting procedure developed by the **Utility**. Bills for work hereunder are to be submitted to the **State** not later than one (1) year after completion of the work. Failure to submit the request for final payment, in addition to all supporting documentation, within one (1) year after completion of the work may result in forfeiture of payment for said work.

When requested, the **State** will make intermediate payments at not less than monthly intervals to the **Utility** when properly billed. Such payments will not exceed 90 percent (90%) of the eligible cost as shown in each such billing. Intermediate payments shall not be construed as final payment for any items included in the intermediate payment.

The **State** will, upon satisfactory completion of the adjustment, removal, and/or relocation and upon receipt of final billing prepared in an approved form and manner and accounting for any intermediate payments, make payment in the amount of 90 percent (90%) of the eligible costs as shown in the final billing prior to audit and after such audit shall make an additional final payment totaling the reimbursement amount found eligible for **State** reimbursement.

Alternatively, the **State** agrees to pay the **Utility** an agreed lump sum of $ as supported by the attached

Initial Date TxDOT Initial Date Utility

The **Utility** agrees to develop relocation or adjustment costs by accumulating actual direct and related indirect costs in accordance with a work order accounting procedure prescribed by the **State**, or may, with the **State's** approval, accumulate actual direct and related indirect costs in accordance with an established accounting procedure developed by the **Utility**. Bills for work hereunder are to be submitted to the **State** not later than one (1) year after completion of the work. Failure to submit the request for final payment, in addition to all supporting documentation, within one (1) year after completion of the work may result in forfeiture of payment for said work.

Utility Agreement Revisions

Form ROW-U-36
(Rev. 08/19)
Page 4

The signatories to this agreement warrant that each has the authority to enter into this agreement on behalf of the party represented.

UTILITY

Utility: _____
Name of Utility

By: _____
Authorized Signature

_____
Print or Type Name

Title: _____

Date: _____

EXECUTION RECOMMENDED:

_____
Director of TP&D (or designee), District

THE STATE OF TEXAS

Executed and approved for the Texas Transportation Commission for the purpose and effect of activating and/or carrying out the orders, established policies or work programs heretofore approved and authorized by the Texas Transportation Commission.

By: _____
District Engineer (or designee)

Date: _____

_____ Initial _____ Date
TxDOT

_____ Initial _____ Date
Utility

Buy America Documentation

- What should you document?
  - Notifications to third parties that project is Buy America / Iron and Steel Preference Provision Compliant
  - Cost estimates and plan sheets
  - Verification prior to installation
    - Form 1818
    - Mill Test Reports or Certifications
  - Inspections during installation

Buy America Documentation

Texas Department of Transportation
Form 1818
Rev. 08/12)
(a.k.a. Form D-9-USA-1)

Material Statement

Sheet ____ of ____

Supplier: _____
Address: _____
_____
Contract No.: _____

County: _____
Project: _____
Control: _____
Contractor: _____

Purchase Order No.	Quantity (Amt./Units)	Material Description	Mill Name	Heat No.	Material Use	Required Spec.	Documentation MTR	Cert.

This is to certify that the materials listed above and on the attached supplement (if attached) are in conformance with the governing specification(s). This is to also certify that all manufacturing processes for steel and iron materials or for the application of coatings (epoxy, galvanizing, painting or any other coating that protects or enhances the value of the steel or iron metal) to these materials occurred in the United States of America. Manufacturing processes are defined as all processes required to change the raw ore or scrap metal into the finished in-place steel or iron product. The attached mill test reports (MTRs) and Certifications (Cert.) are offered as proof of Domestic Origin.

Subscribed and sworn to before me this _____ day of

_____, _____

Notary Public _____

My Commission expires: _____, _____

I declare under penalty of perjury under the laws of the United States of America and the State of Texas that the foregoing is true and correct and that I am authorized to sign for the Firm listed below.

_____
(Authorized Corporate Official Signature) Date

_____
(Type Name and Title)

_____
(Firm Name)

Buy America Documentation

Material Statement

Texas Department of Transportation
Form 1818
Rev. 08/12
(a.k.a. Form D-9-USA-1)

Sheet 1 of 1

Supplier:
Address:
Supplier Name
Address

County: Hopkins County
Project: -
Control: -
Contractor:
Project Name
ROW/CSJ
Contractor Name

Contract No.:

Purchase Order No.	Quantity (Amt./Units)	Material Description	Mill Name	Heat No.	Material Use	Required Spec.	Documentation MTR	Cert.
Y788-3364	50' LF	18" .250 Wall Steel Split Casing Pipe	Atlas	X 1027	Casing	A252	x	n/a

This is to certify that the materials listed above and on the attached supplement (if attached) are in conformance with the governing specification(s). This is to also certify that all manufacturing processes for steel and iron materials or for the application of coatings (epoxy, galvanizing, painting or any other coating that protects or enhances the value of the steel or iron metal) to these materials occurred in the United States of America. Manufacturing processes are defined as all processes required to change the raw ore or scrap metal into the finished in-place steel or iron product. The attached mill test reports (MTRs) and Certifications (Cert.) are offered as proof of Domestic Origin.

Subscribed and sworn to before me this 16 day of October, 2019

Notary Public Shayle Baxter

My Commission expires: 10-16-2022

SHAYLE BAXTER
Notary Public
State of Texas
ID # 131757165
My Comm. Expires 10-16-2022

I declare under penalty of perjury under the laws of the United States of America and the State of Texas that the foregoing is true and correct and that I am authorized to sign for the Firm listed below.

(Authorized Corporate Official Signature) Date 10/16/19

- Sales
(Type Name and Title)

Supplier/Vendor, Manufacture, or Utility
(Firm Name)

Buy America Documentation

Atlas Tube Corp. Chicago
1855 East 122nd Street
Chicago Illinois USA
60633
Tel: 773-646-4500

Atlas Tube
A DIVISION OF ZEKELMAN INDUSTRIES

REF.B/L: 80877357
Date: 04/05/2019
Customer: 1561

Atlas Tube Corp. Chicago
1855 East 122nd Street
Chicago Illinois USA
60633
Tel: 773-646-4500
Fax: 773-646-6128

Atlas Tube
A DIVISION OF ZEKELMAN INDUSTRIES

MATERIAL TEST REPORT

REF.B/L: 80877357
Date: 04/05/2019
Customer: 1561

Material: 18.000x250x40'0"0(1x1).A2523

Material No: R180002504000-A252

Made in: USA
Melted in: USA

Sales Order: 1376198

Purchase Order: 126050

Heat No	C	Mn	P	S	Si	Al	Cu	Cb	Mo	Ni	Cr	V	Ti	B	N	Ca
X1027	0.060	0.760	0.012	0.004	0.030	0.033	0.150	0.025	0.010	0.050	0.070	0.003	0.002	0.0000	0.0070	0.0021

Bundle No	PCs	Yield	Tensile	Eln.2in	Certification	
M901055131	1	062000 Psi	071300 Psi	35 %	ASTM A252-10 GR 3	CE: 0.22

Heat	MILL	Mill Location	Method	Recycled Content	Post Consumer	Pre-Consumer (Post Industrial)
X1027	BETA	PORTAGE,IN	EAF	85.00%	50.00%	40.00%

Material Note:
Sales Or. Note:

CE calculated using the AWS D1.1 method.

Steel Tube Institute OF NORTH AMERICA

Metals Service Center Institute

Page: 1 of 10

Buy America Documentation

Texas Department of Transportation
Weekly Utility Coordination Verification Report

Utility Verification	
Roadway: SH 11	DATE: Monday, October 28, 2019
Limits: 6.19 Miles East of FM 2653 to SH 19	ROW CSJ:
	CON CSJ: 0083-02-051, 0083-02-057
	WEATHER: Cloudy (60°F)

UTILITY OWNER	PERSONNEL
City of Sulphur Springs	Patterson Professional Services

COMMENTS

Arrived on-site approximately 11:15 AM

City of Sulphur Springs

Patterson was on site welding the 18" split casing today. The split casing had been verified on site. The 30" steel casing and the 8" T valve were also present on the site and verified as well. The site was still heavily flooded, and Patterson mentioned that they did not expect any further construction this week due to the weather.

Inspector: Clint Owens Date: 10/28/19

Buy America Docume

Patterson on site welding the 18" split casing

Buy America Documentation – Not Acceptable

NORFOLK IRON & METAL COMPAN

CHW

Near Hapur Road Flyover, Maliwara
Ghaziabad - 201001, Uttar Pradesh, India
120 4388000, Fax: +91 120 4376970 - 71

Ashheja, P.O. Dujana, G.T. Road
Greater Noida (Phase II) - 203207, Uttar Pradesh, India
Phone: +91 120 4188600, Fax: +91 120 4188641

TEST CERTIFICATE

Customer Name : TDW India Ltd.
Customer P.O. No. and Date : PP00011781-1 Date : 21-05-14
Order Acceptance No. and Date : OA/14-15/A-192 Date :23-05-14
Invoice No. and Date : NA

Group No.	PO Item No.	Description	Qty	Dimension Std./Drg.No. /Size
G1638J	3)	DISC : 105 OD X 70 MM THK, NACE	2	AS PER SIZE
G1727D	10)	DISC : 392 OD X 79 MM THK, NACE	15	AS PER SIZE

Heat Analysis (Weight%)

Group No.	Steel Maker Melt/Heat No.	C	Mn	Si	P	S	Cr	Ni	Mo	Ti	As	V	Nb	Al	Cu	Sn	Pb	N	Sb	CE
G1638J	4303643	0.200	1.250	0.240	0.014	0.005	0.012	0.008	0.001	-	-	0.002	0.001	0.031	0.005	-	-	-	-	0.412
G1727D	4309433	0.210	1.280	0.200	0.017	0.003	0.007	0.009	0.001	-	-	0.001	000	0.028	0.007	-	-	-	-	0.426

Mechanical Properties

Group No.	Direction	Tensile Strength MPa	Yield Strength MPa 0.2% Offset method	Elongation in % age L = 4D	Reduction Area %age	Impact Test Charpy (10x10x55 mm) 2 mm V Notch at minu 50°C	Bend Test	Hardness BHN	Micro Test
G1638J	Tangential	498	310	28.4	58.63	60,56,54 AVG= 60 Joule	NA	148, 152	NA
G1727D	Tangential	493	316	33.6	72.57	66,80,54 AVG= 66.67 Joule	NA	146, 149	NA

Heat Treatment

Group No.	Material Specification	Supply Conditions
G1638J	ASTM A350 Gr. LF2 CL.1, 2013	Normalised AT 900°C Soaking Time 3.00 Hrs.
G1727D	ASTM A350 Gr. LF2 CL.1, 2013	Normalised AT 920°C Soaking Time 4.00 Hrs.

Product Marking/Identification Marks

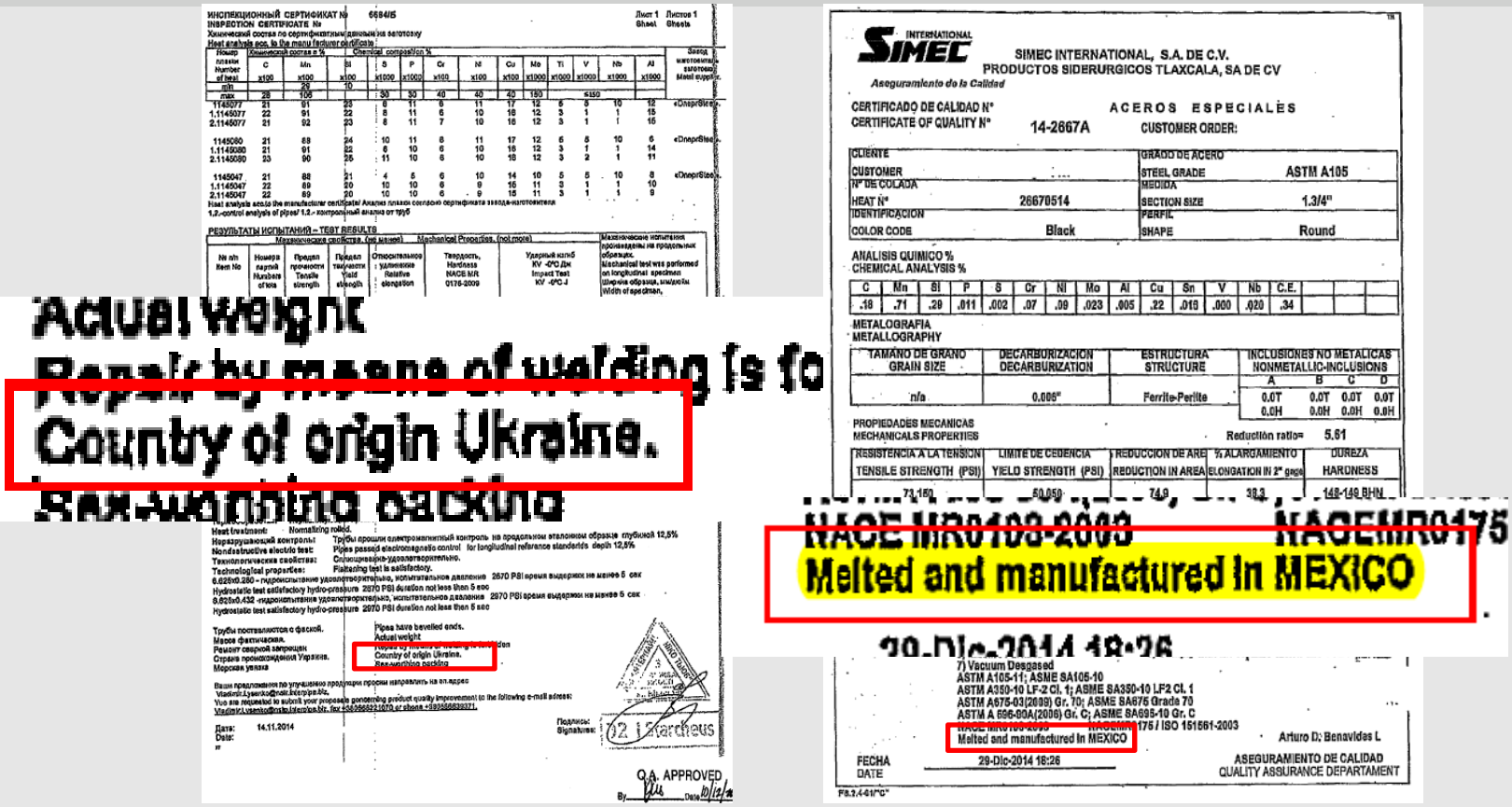
Group No.	PO Item No.	Identification Marks
G1638J	3)	A-192-3 105 OD X 70 MM THK A350 GR LF2 CL1 N. G.No. G1638J H.NO. 4303643 NACE
G1727D	10)	A-192-10 392 OD X 79 MM THK A350 GR LF2 CL1 N. G.No. G1727D H.NO. 4309433 NACE

Page 1 of 2 of TC. No CHW/QC/14-15/1311

GRN: 16018

Format No. QAQC/F/16 Rev. E1

Buy America Documentation – Not Acceptable



Buy America Documentation – Not Acceptable

TEXAS TUBES

P.O. BOX 55710 • HOUSTON, TEXAS 77255-5710
(713) 686-4351 x 219 PHONE
(713) 685-3247 FAX
www.tex-tube.com

Purchase Order: S7A7163371

Sales Order: SO42336

Heat Number	Vendor Name	Description	Mfg Date: 03/13/18
1711860	Ternium -MC3 Mexico Monterrey,MS,Mexico	API5L X52 8-5/8"X.322" WALL(28.58#)BARE,DRL,PEB	28.58 lb/ft

CHEMICAL ANALYSIS

"Coil Manufacturer: Ternium MC3-Lazaro Cardenas, Mexico"

The products manufactured from this coil will not be Buy America compliant. The creation of the coil from the iron ore is a manufacturing process, and it was accomplished in Mexico. That fact disqualifies all of the products manufactured from the coil, even if all of that later manufacturing was done domestically.

FLATTENING TEST PASSED
1.5 INCH T180 STRIP SPECIMEN
THIS MATERIAL MEETS : ASTM A53B, ASME SA53B LATEST EDITION
API 5L PSL 2 GRADE X52M
MEETS HARDNESS REQUIREMENTS OF NACE MRO 175/ISO 15156-2, CLAUSE A.2.1.1
MEETS ISO 10474 3.1.B/EN 10204: 3.1 / STANDARDS ARE LATEST REVISION
STEEL SUPPLIER:TERNIUM MC3-MONTERREY,NL, MEXICO
COIL MANUFACTURER:TERNIUM MC3-LAZARO CARDENAS,MEXICO

Buy America Documentation – FHWA

- According to FHWA
  - *All manufacturing processes of the steel material in a project (i.e., smelting, and any subsequent process which alters the steel material's physical form or shape or changes its chemical composition) must occur within the United States to be considered of domestic origin. This includes processes such as rolling, extruding, machining, bending, grinding, and drilling.*

Certificate of Compliance Letter

Company Letterhead

CERTIFICATE OF COMPLIANCE WITH
BUY AMERICA

Date:
Customer:
Attention:
Customer Order:
(*Producer/Fabricator*) Order:

Re: *(project name; CSJ)*
Material:

The following products, provided by (*producer/fabricator*) for the above order, are fabricated from steel or iron that is melted and manufactured, and any coating applied, in the United States and meet the requirements of Buy America 23 CFR 635.410:

(*Product*)
(*Product*)
(*Product*)…

This certification has been issued for only the products listed above for domestic compliance. Alterations to this document by any agency other than (*producer/fabricator*) will void the certification.

Please contact me if you have any questions regarding this certification.

Very truly yours,

(*name*)
(*producer/fabricator*)
(*position*)
Phone:
Email :

cc:

Project Information

Product description name from approved estimate, invoice and Form 1818

Signed by an authorized representative

Company Letterhead

Buy America 23 CFR 635.410

Certificate of Compliance Letter - Acceptable

Company Logo

Address

BUY AMERICA CERTIFICATION

January 29, 2019

Project:
Location: San Antonio, TX
Quote Nr.: 42749
Letter Ref. Nr.: 4250 – Buy America – DOT – Provisional Certificate

Please accept this letter as certification that the following products are manufactured in the United States. All gate valve components are cast, machined, assembled, and tested in the U.S. with the exception of fasteners, which represent a minimal amount of the manufacturing cost of the product. All hydrant components are cast, machined, painted, assembled and tested in the United States with the exception of bolts, nuts, chains and one casting (stem coupling), which represent a minimal amount of the manufacturing cost of the product. The manufacturing locations are noted below.

In accordance with the requirements contained in 23 CFR 635.410, a minimal use of foreign steel and iron materials is allowed, provided the cost of such materials does not exceed 0.1 percent of the contract price or $2500 whichever is greater.

Product		Size	Quantity	Manufacturing Location
A-2361-23RN	E364, MJ x MJ Resilient Wedge Gate Valve	4", 6", 8"	1, 32, 1	Chattanooga, TN
A-2361-23RN	E364, MJ x MJ Resilient Wedge Gate Valve	12"	18	Chattanooga, TN
DA-2361-23RN	E364, MJ x MJ Resilient Wedge Gate Valve	16"	16	Chattanooga, TN
423-526975, Super Centurion Fire Hydrant		5' Bury	32	Albertville, AL

Sincerely,

Name and Signature

Actual Certifications will be provided after the order is placed. Please contact your Customer Service Representative with your Order Number and Letter Reference Number (noted in the header above).

GB.

PROVISIONAL

Project Information

Product description name from approved estimate, invoice and Form 1818

Signed by an authorized representative

Company Letterhead

Buy America 23 CFR 635.410

Buy America Summary

2019 Buy America Guidelines

- Verify compliance prior to installation of material
- Buy America does not apply to Misc. items
- Option for Utility Owner to sign
- Language on what to include on Certificate of Compliance Letter

Buy America Documentation

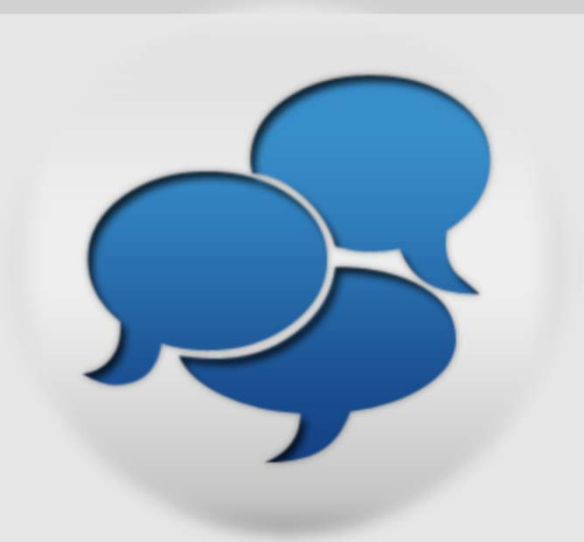
- Form 1818
  - Mill Test Reports or Certificate of Compliance
- Review prior to sending to ROW Utility inbox
- Form 1818 executed and legible documentation

Certificate of Compliance Letter

- Company Letterhead
- Project Information
- 23 CFR 635.410
- Material Description from approved estimate & Form 1818
- Signature

Prior to the installation of products subject to Buy America compliance, the utility facility owner will submit an executed TxDOT Form 1818

Q&A



Mario Mendez – Utility Specialist
Mario.Mendez@txdot.gov
(214) 320-6103