

ABCD CENTRAL OHIO

Overview of ODOT's Design Build Program How We Got to Where We Are...and One of the Results



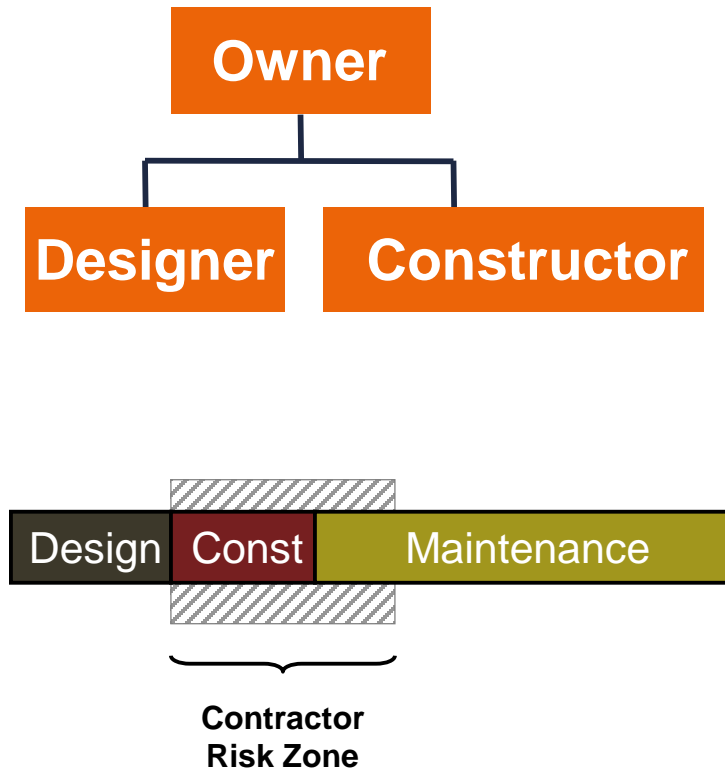
Chase Wells, P.E.
Ohio Department of Transportation

Eric Kahlig, P.E.
Ohio Department of Transportation

THE OBLIGATORY SLIDE....

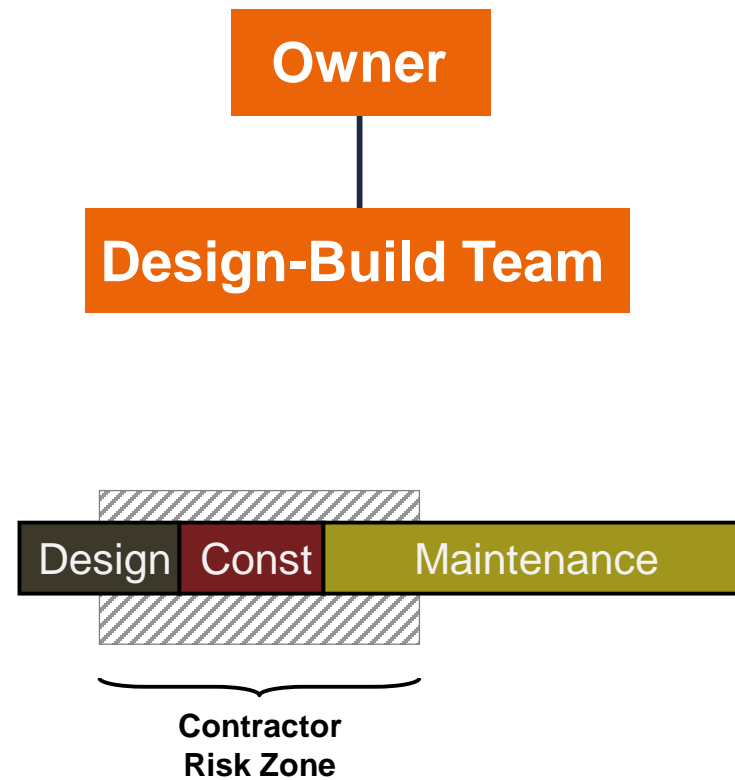
Design-Bid-Build

Multiple contracts | Owner retains all design risk

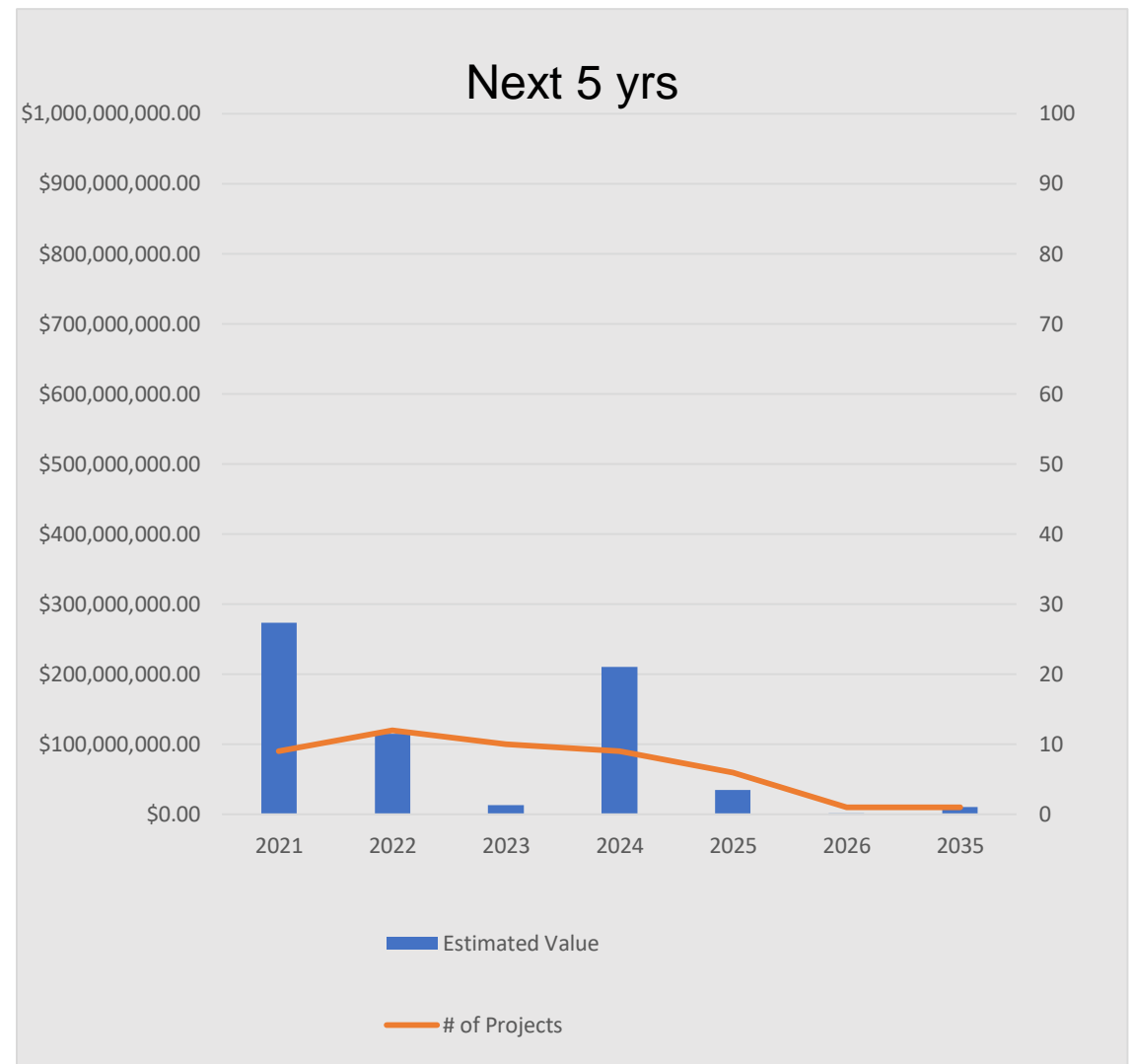
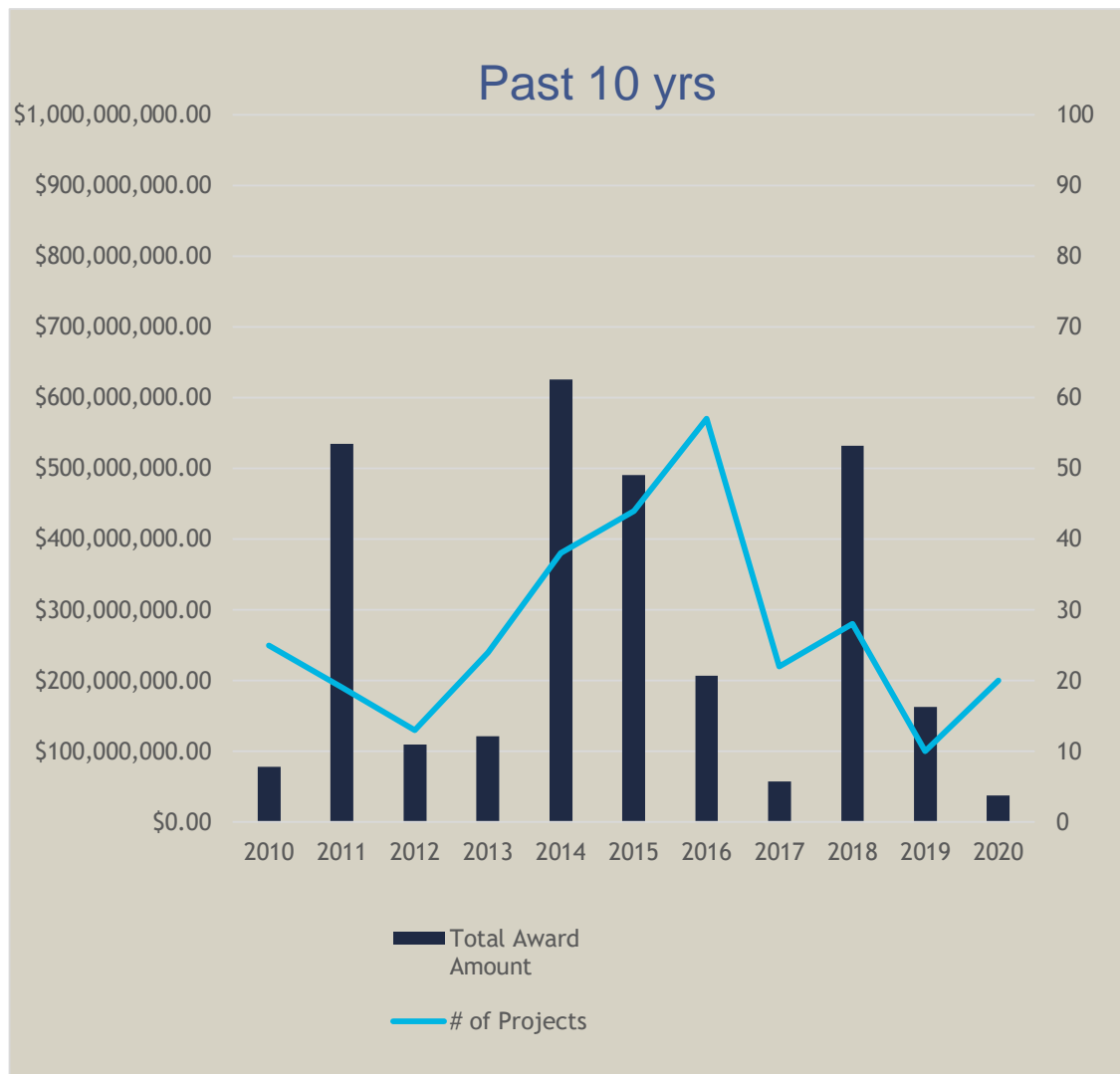


Design-Build

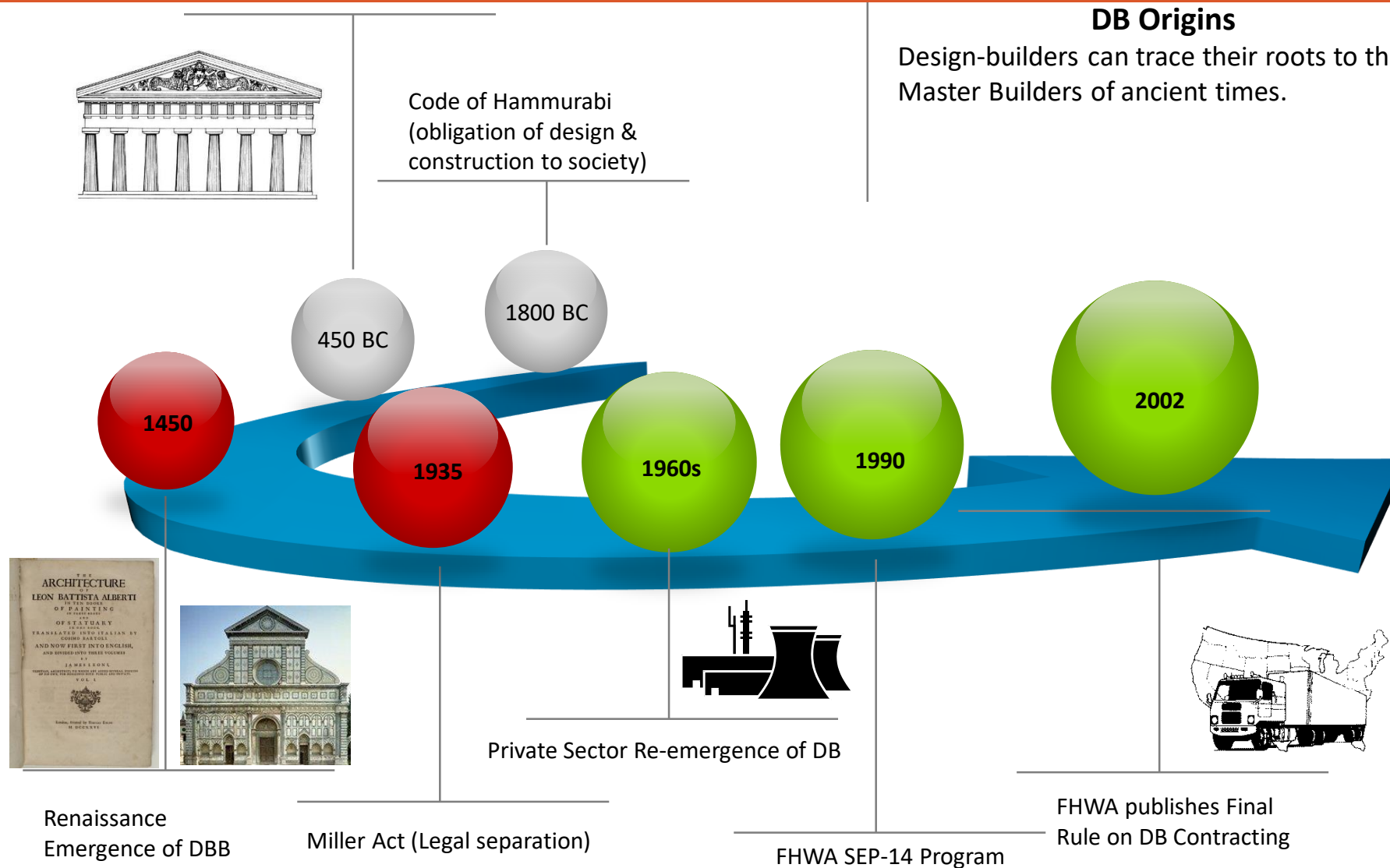
Single contract | Contractor assumes some design risk



PAST AND FUTURE



BEFORE OUR TIME...



ODOT'S DB DELIVERY OPTIONS

- **Low-Bid DB (one step)**
 - Majority of ODOT's DB projects
 - Contract awarded to lowest prequalified bidder
- **Value-Based DB**
 - 5 value-based projects completed to date
 - Contract awarded to bidder with the best combination of bid price and technical qualifications assessment
- **Two-Step Low Bid**
 - MLK Interchange
 - Sum-271
 - CCG6B

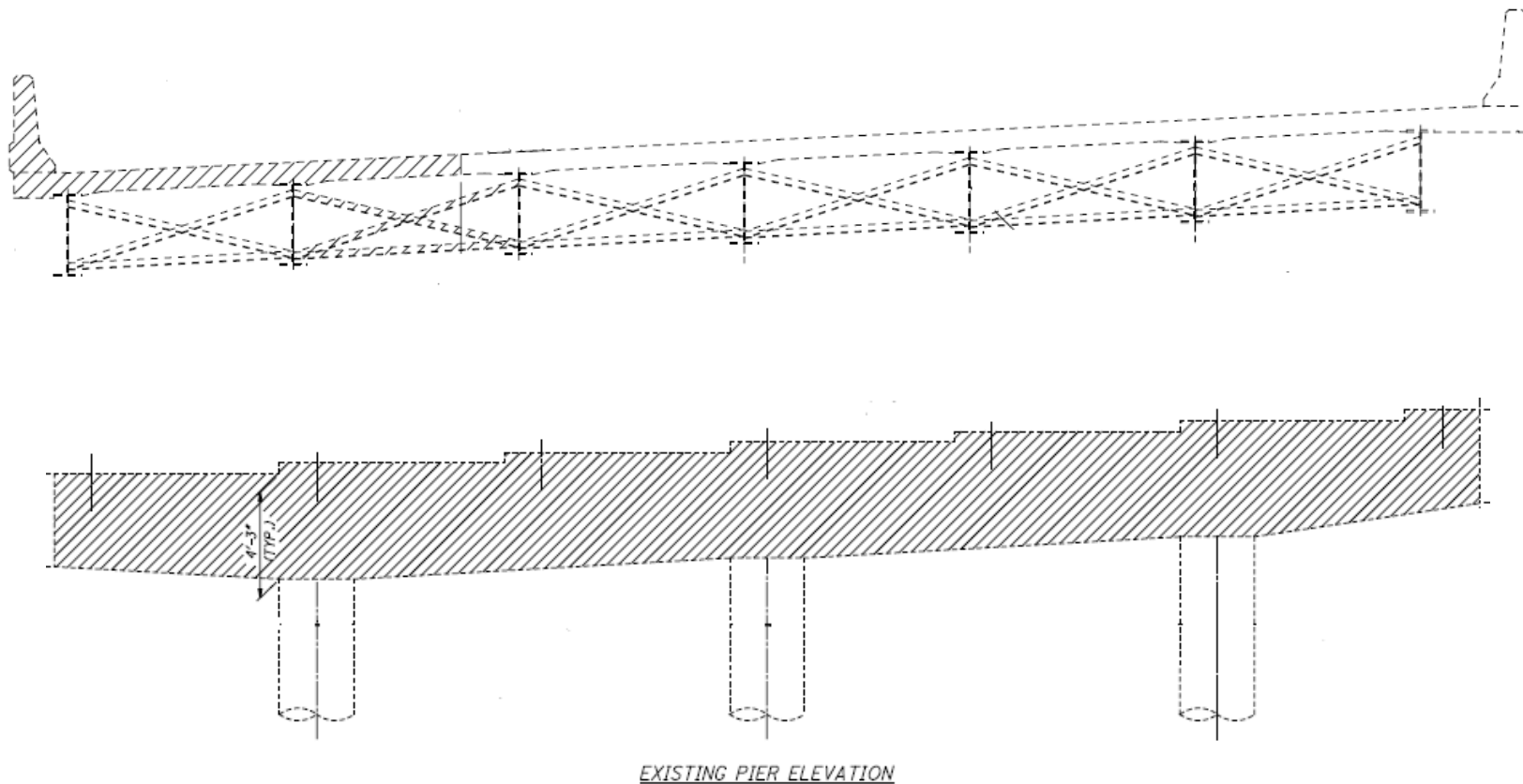
HOW WE GOT TO WHERE WE ARE....

It is because of unintended Consequences through “Creative” Interpretations...with real life examples.

CREATIVE INTERPRETATION #1

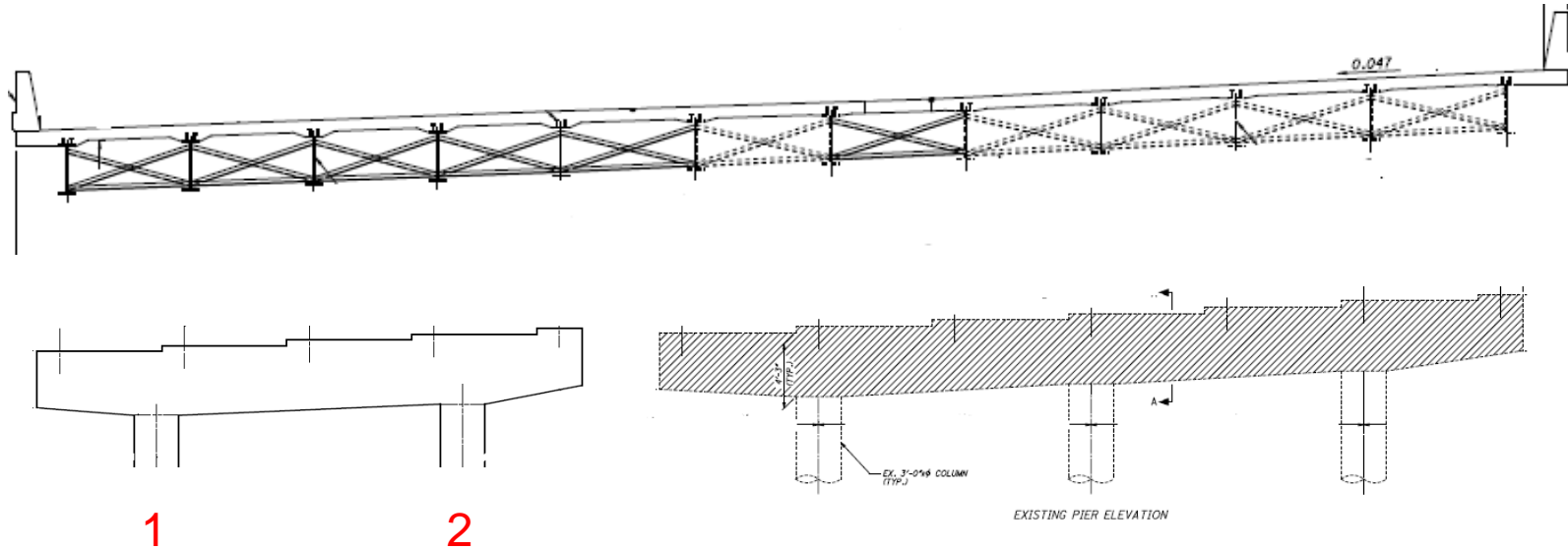
- Widening of existing bridge, and with that, an existing pier
- Project Scope:
“Cap and column piers shall have a minimum of three columns when completed”

CREATIVE INTERPRETATION #1



CREATIVE INTERPRETATION #1

New Steel – Widened

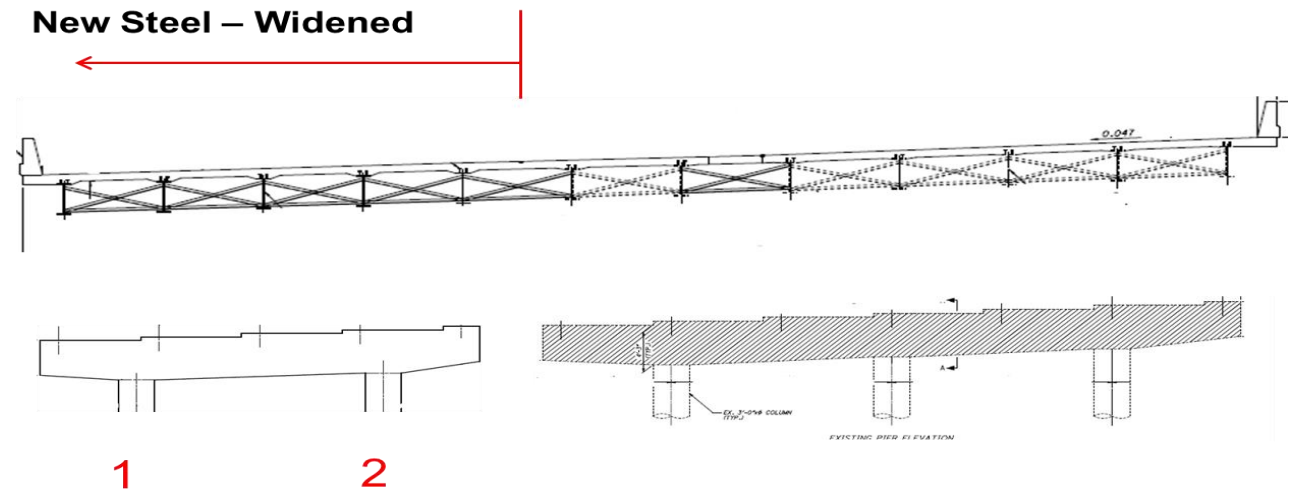


CREATIVE INTERPRETATION #1- LESSON LEARNED

- Question asked (as allowed per ITO):
 - How does this comply with the scope requirement of 3 columns per pier?
- Answer:

“It complies as there are 5 columns when complete. This is a bridge widening and it includes the existing portion with the existing pier element all in that pier, and then we’re extending it making 5 columns all together. It complies with the scope.”

Not the intent, but...also wasn't the winner



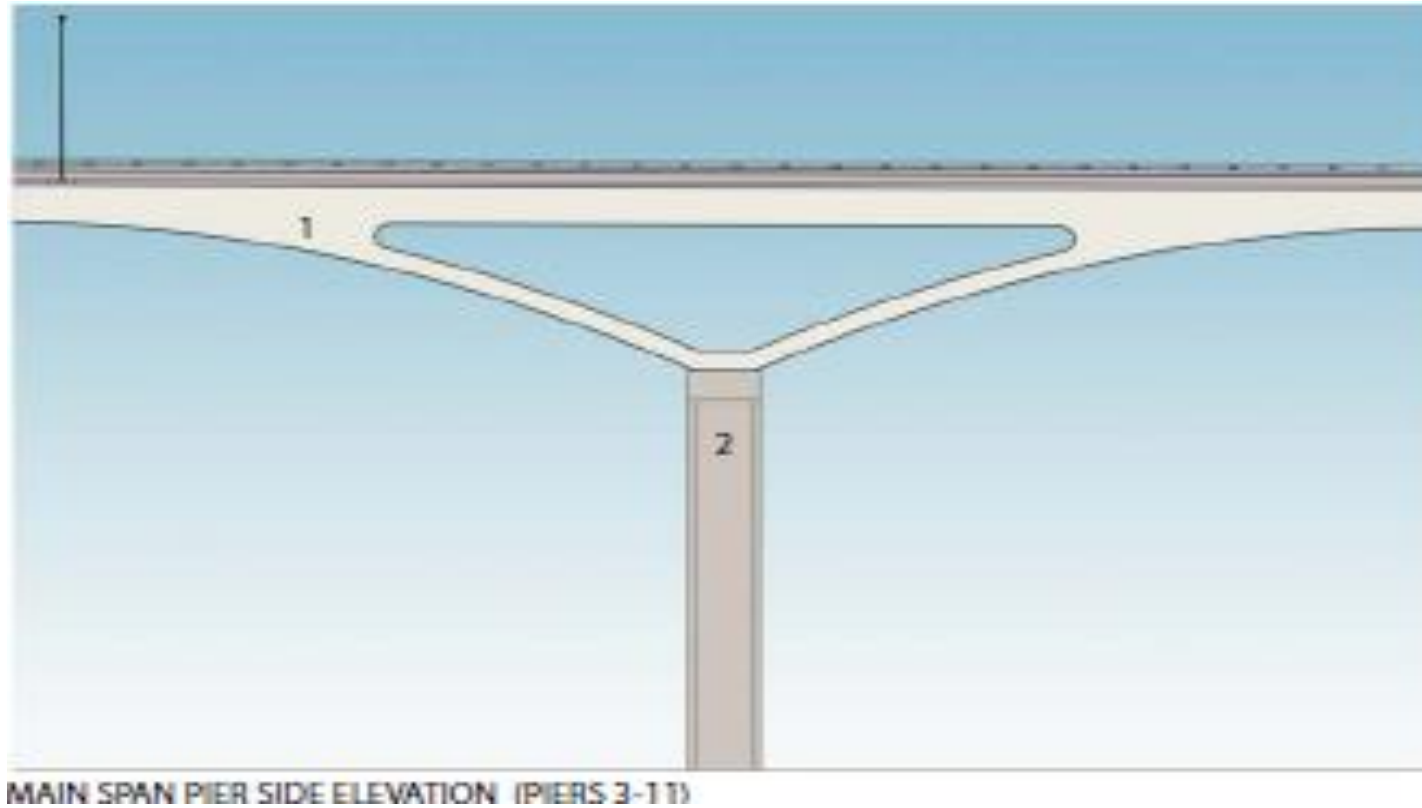
CREATIVE INTERPRETATION #2

- Scope of Services (CUY-90) - CCG1: 1st Voinovich Bridge
“The girder depth for the main span portion of the I-90 viaduct shall vary parabolically ...”
- Definition of a parabola:
“A form of arch defined by a moving point that remains equidistant from a fixed point inside the arch and a moving point along a line. This shape when inverted into an arch structure results in a form that allows equal vertical loading along its length.”

CREATIVE INTERPRETATION #2



CREATIVE INTERPRETATION #2



CREATIVE INTERPRETATION #2



CREATIVE INTERPRETATION #2

- A full parabola was ODOT's *intention*, even though the Scope of Services did not explicitly state this
- Nevertheless, ODOT accepted the design
- 2nd DBT filed an injunction:
“The Winning DBT did not follow the Scope - the bridge beam shape is not a parabola. #1 was nonresponsive. Give us the job.”

CREATIVE INTERPRETATION #2

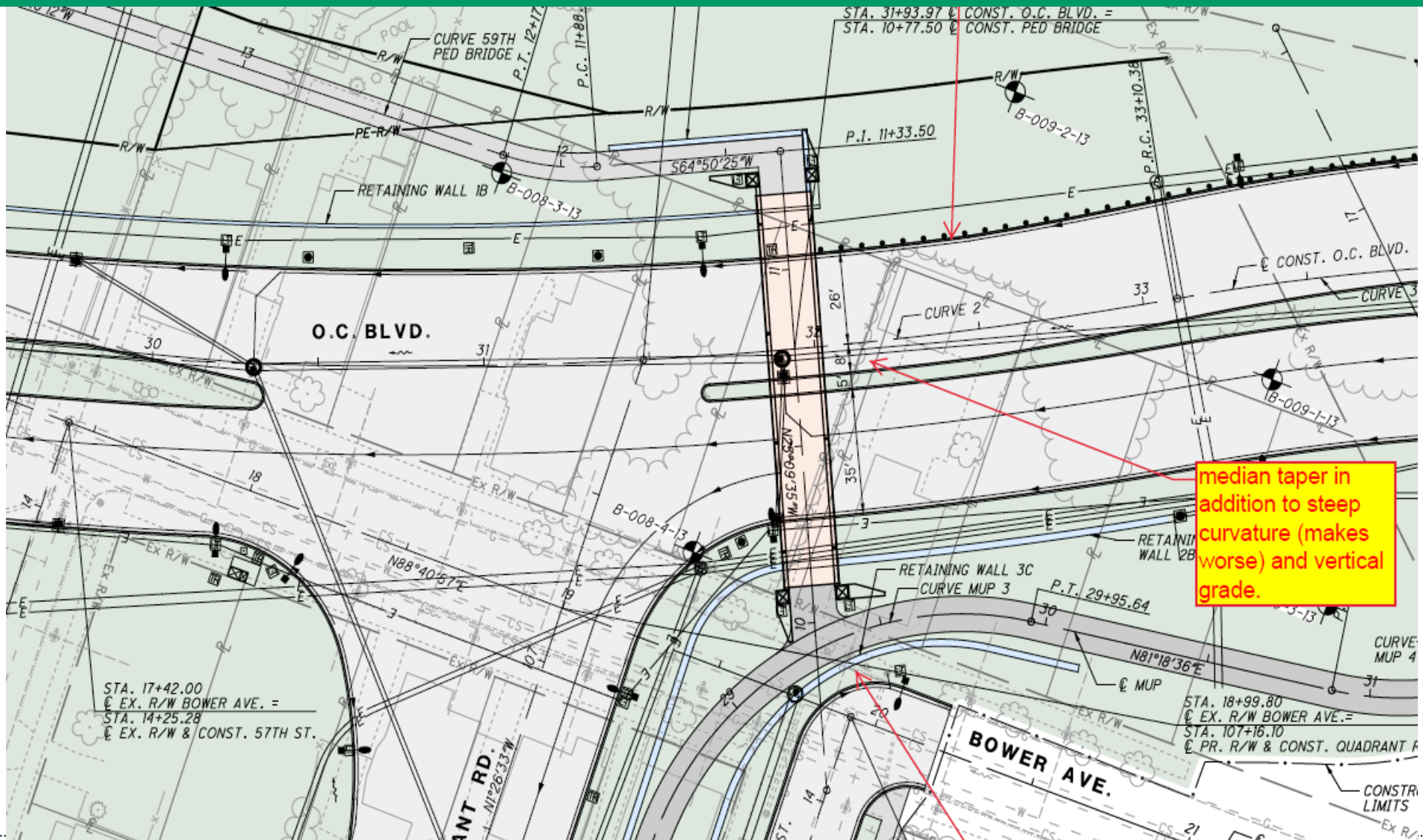
○ Judge's Ruling:

"#2 is correct, it is not a parabola

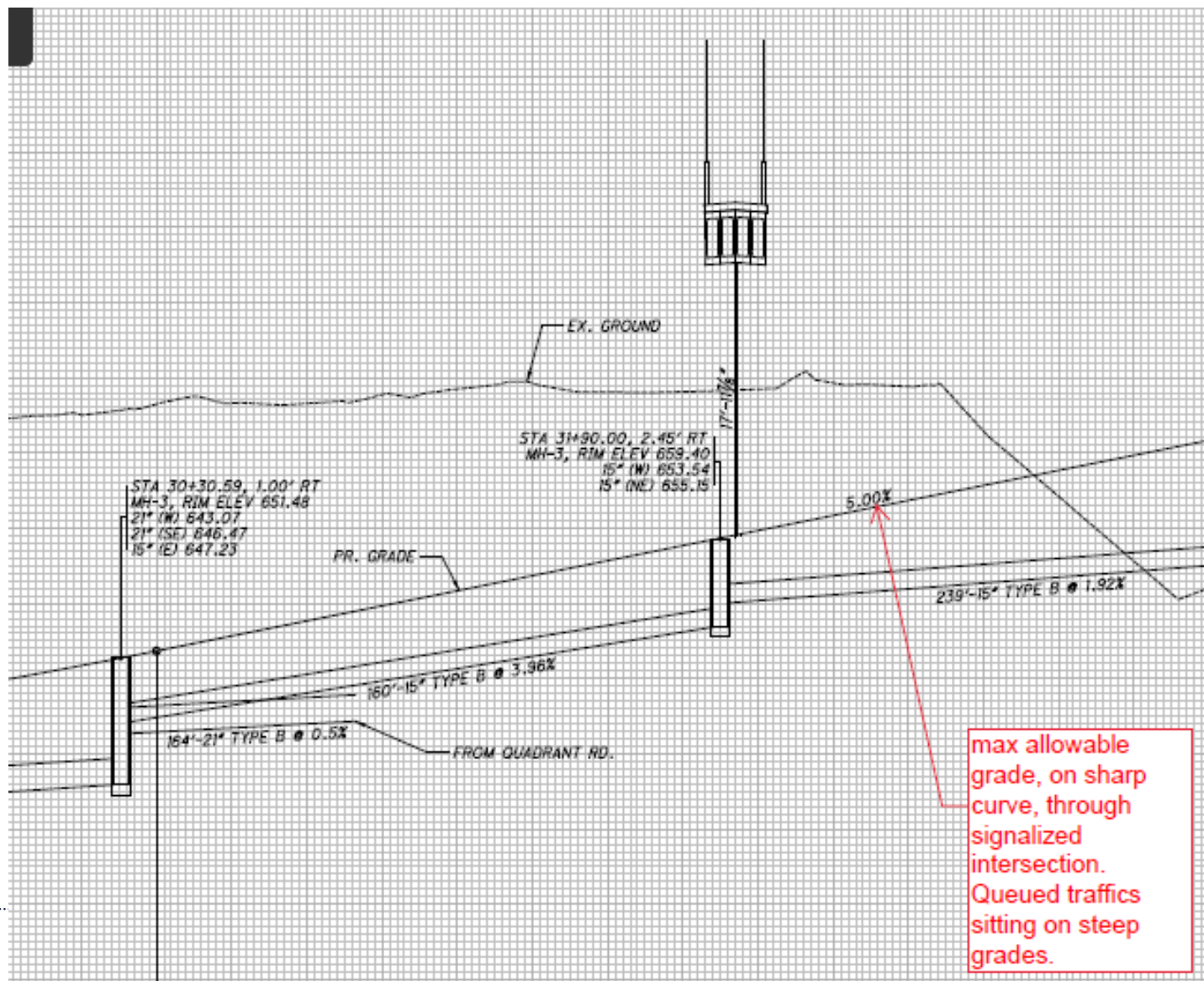
but...

the winner has a reasonable interpretation. When it does vary, it is varying in a parabolic shape. The parabolic variation wasn't required across the entire length"

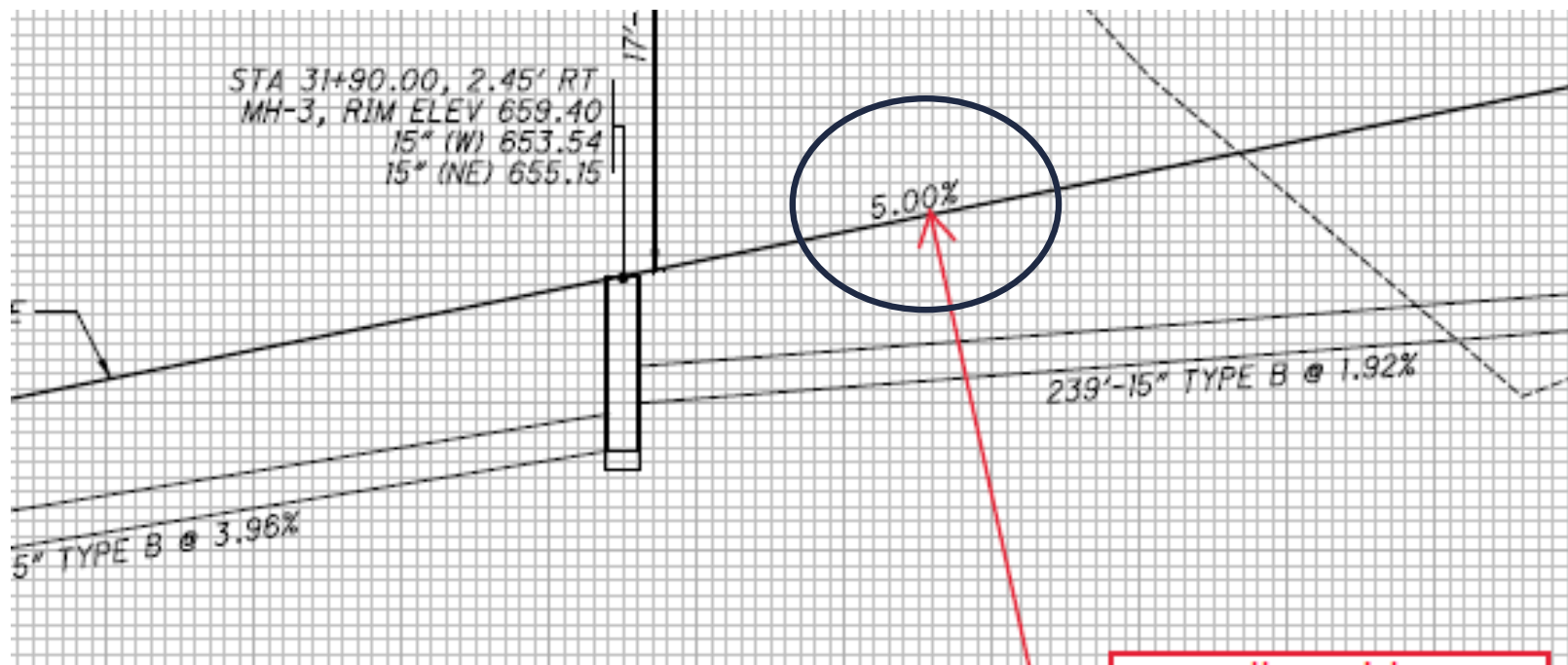
CREATIVE INTERPRETATION #3



CREATIVE INTERPRETATION #3



CREATIVE INTERPRETATION #3



ODOT L&D: 401.1: "It is also recommended that intersections be located where the grade on the mainline roadway is 6 percent or less, with 3 percent being the desirable maximum."

max allowable grade, on sharp curve, through signalized intersection. Queued traffics sitting on steep grades.

CREATIVE INTERPRETATION #3

- ODOT Comment:

“OC mainline is placed at 5% grade through intersection at Quadrant Roadway. While grade is allowable per scope, it is not appropriate at an intersection, especially at the first intersection off the freeway where truck % is the greatest. Also, not appropriate if placed in conjunction with sharp horizontal curvature.”

- “Interpret all references to guidelines, recommendations and considerations within applicable design manuals as minimum requirements except when specifically excluded within the Scope of Services”
- “recommended that intersections be located where the grade on the mainline roadway is 6 percent or less, with 3 percent being the desirable maximum”

Contractor Response:

“The proposed grade is acceptable per the Scope Requirements of Article 1.5 F, “Basic Configuration” which allows a maximum vertical alignment grade of 5%.”

Result: \$5M Change Order

That enough....

ODOT'S DB DELIVERY OPTIONS

- **Low-Bid DB (one step)**
 - Majority of ODOT's DB projects
 - Contract awarded to lowest prequalified bidder
- **Value-Based DB**
 - 5 value-based projects completed to date
 - Contract awarded to bidder with the best combination of bid price and technical qualifications assessment
- **Two-Step Low Bid**
 - MLK Interchange
 - Sum-271
 - CCG6B
- **Two-Step Technically Responsive Low-Bid**
 - Contract awarded to a bidder with a technically responsive proposal and lowest bid...**and we have the perfect job for it!!!!**

PROJECT BACKGROUND - I-480 VALLEY VIEW BRIDGE



PROJECT BACKGROUND



PROJECT BACKGROUND



- 4,155 ft long
- 15 spans
- 300 ft span lengths
- 200 ft high

- Steel Girders, Floor Beams & Intermediate Stringers
- Built in 1975
- Opened in 1978
- Carries 8 lanes



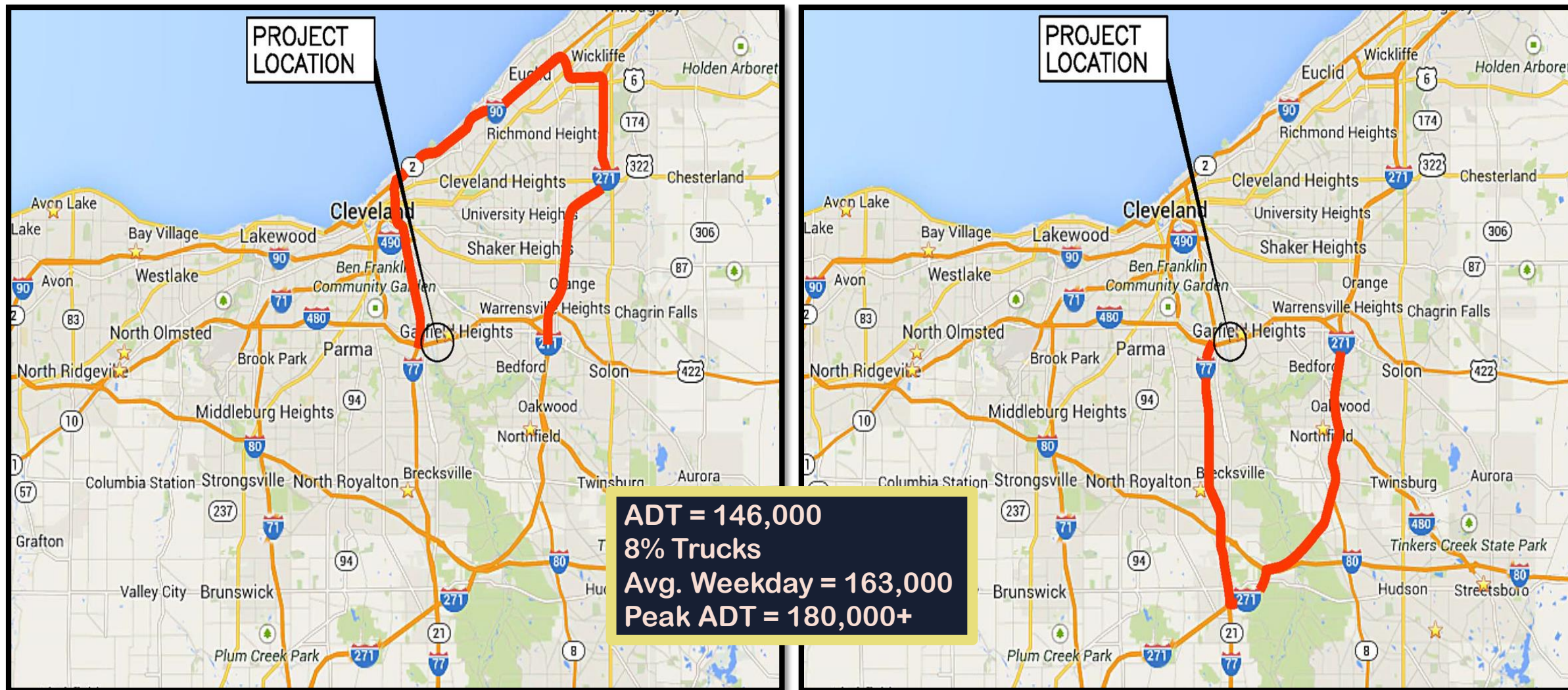
PROJECT BACKGROUND - SCOPE DEVELOPMENT



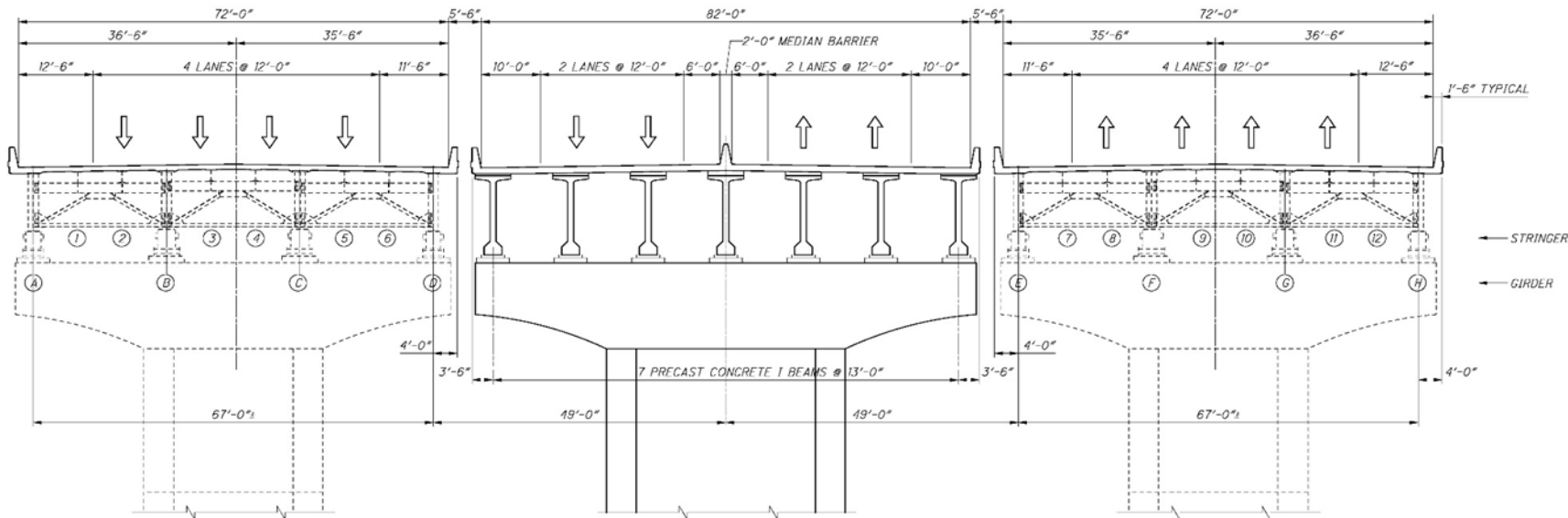
PROJECT BACKGROUND - SCOPE DEVELOPMENT



PROJECT BACKGROUND

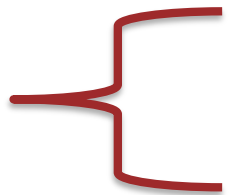


PROJECT BACKGROUND



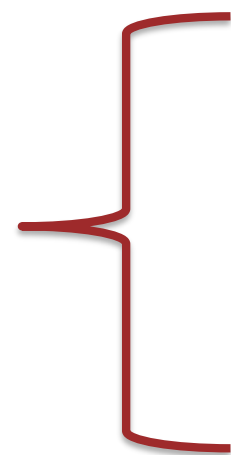
IR 480 VALLEY VIEW PROCUREMENT

4 Weeks



Milestone	Date
Advertise RFQ	Friday, January 27, 2017
Deadline to submit questions	Friday, February 10, 2017
Deadline for Department response to questions	Friday, February 17, 2017
SOQ submission	Friday, February 24, 2017
Notification to Offerors of short-listing	Thursday, March 30, 2017
Short-listed Teams must respond to advancing	Tuesday, April 4, 2017
Pre-RFP Meeting	TBD
Begin Advertise (RFP Issued)	Thursday, May 4, 2017
1 st Proprietary Technical Information Meeting	Tuesday, May 23, 2017
2 nd Proprietary Technical Information Meeting	Thursday, June 15, 2017
3 rd Proprietary Technical Information Meeting	Thursday, July 6, 2017
Deadline for submittal of ATCs	Thursday, July 13, 2017
Last day for the Department to respond to ATC	Thursday, July 20, 2017
Last day to submit questions/comments on RFP	Thursday, July 20, 2017
Last recommended day for RFP Addendum	Thursday, July 27, 2017
Technical and Price Proposals Due	Thursday, August 17, 2017
Bids Opened	Thursday, August 31, 2017
Anticipated Award Date	Monday, September 11, 2017

15 Weeks

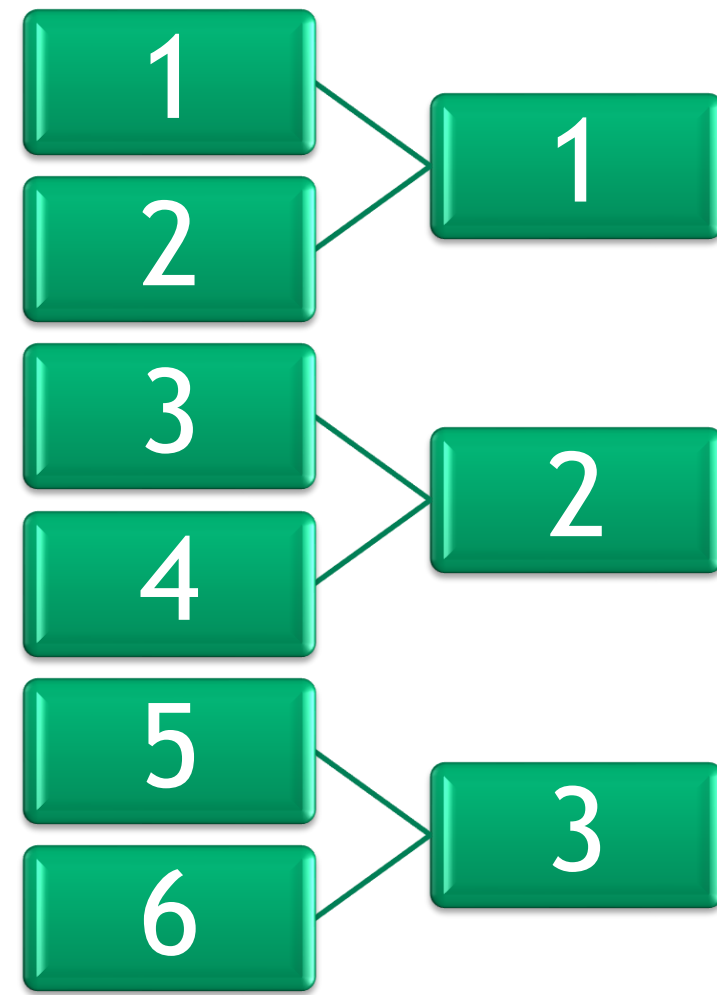


19 Days



IR 480 VALLEY VIEW PROCUREMENT - RFQ PHASE

Part B - Project Understanding and Approach (30 points max)			Section Rankings (out of 10)						Proposal Point Breakdown										
Section No.	Section	Score Weight (out of 30)																	
1	Managing risks specific to the Project during procurement and after Award Approach to ensure timely initiation of design and physical project construction Approach to monitor the quality of the Work to ensure high quality	5	9.0	6.0	6.5	7.0	7.0	6.5	4.5	3.0	3.3	3.5	3.5	3.3					
2a	Risk: Construction access for equipment and material deliveries	3	8.5	6.0	7.0	7.5	6.5	7.0	2.6	1.8	2.1	2.3	2.0	2.1					
2b	Risk: High level deck replacement of existing bridges	5	7.0	6.0	7.0	8.5	7.0	7.5	3.5	3.0	3.5	4.3	3.5	3.8					
2c	Risk: High level superstructure construction of new bridges	5	7.0	4.5	7.0	7.5	6.5	7.0	3.5	2.3	3.5	3.8	3.3	3.5					
2d	Risk: Bridge construction with no adverse effect to the existing structural steel	5	7.0	7.0	8.0	7.0	6.0	7.5	3.5	3.5	4.0	3.5	3.0	3.8					
2e	Risk: Ability of the IQF to ensure quality of the work.	3	7.0	8.0	7.5	7.0	7.0	7.0	2.1	2.4	2.3	2.1	2.1	2.1					
2f	Risk: Applicability of the identified one additional significant task & Approach to address the additional identified task	4	6.5	6.0	8.5	7.5	6.5	7.0	2.6	2.4	3.4	3.0	2.6	2.8					
30			Part B Total (out of 30)						22.25	18.35	22.00	22.35	19.90	21.25					
			Normalized to 30:						29	24	29	30	26	28					
Part C - Design Build Project Team (40 points max)			Section Rankings (out of 10)						Proposal Point Breakdown										
Section No.	Section	Score Weight (out of 40)																	
1	Organizational Chart	2	8.0	9.0	9.0	9.0	8.5	8.5	1.6	1.8	1.8	1.8	1.7	1.7					
2	Experience of Firms	1	9.5	8.5	10.0	9.5	9.0	10.0	1.0	0.9	1.0	1.0	0.9	1.0					
3a	DB Project Manager	6	8.0	5.5	6.5	9.0	9.0	7.5	4.8	3.3	3.9	5.4	5.4	4.5					
3b	DBT Design Project Manager	4	9.5	8.0	9.0	8.5	9.5	8.0	3.8	3.2	3.6	3.4	3.8	3.2					
3c	DBT Construction Manager	6	5.5	9.0	7.5	9.0	8.0	9.5	3.3	3.0	4.5	5.4	4.8	5.7					
3d	DBT Construction QC Manager	3	8.0	7.0	6.5	7.0	9.5	8.0	2.4	2.1	2.0	2.1	2.9	2.4					
3e	DBT Design QC Manager	2	7.5	7.5	7.5	8.5	7.5	8.0	1.5	1.5	1.5	1.7	1.5	1.6					
3f	DBT Structural Lead (Design)	5	9.5	9.0	9.0	8.0	9.0	9.0	4.8	4.5	4.5	4.0	4.5	4.5					
3g	DBT Structural Lead/Superintendent (Construction)	4	7.5	7.0	7.0	9.0	9.0	9.0	3.0	2.8	2.8	3.6	3.6	3.6					
3h	Independent Design Quality Manager (IDQM)	3	7.5	8.5	8.5	8.5	7.5	9.0	2.3	2.6	2.6	2.6	2.3	2.7					
3i	Independent Highway Lead (Design)	1	8.5	7.5	7.5	7.5	7.5	7.5	0.9	0.8	0.8	0.8	0.8	0.8					
3j	Independent Structural Lead (Design)	3	8.0	6.0	5.0	8.0	8.0	9.0	2.4	1.8	1.5	2.4	2.4	2.7					
40			Part C Total (out of 40)						31.60	28.15	30.35	34.05	34.45	34.35					
			Normalized to 40:						36	32	35	39	40	39					
Part D - Design Build Capabilities and Experience (30 points max)			Section Rankings (out of 10)						Proposal Point Breakdown										
Section No.	Section	Score Weight (out of 30)																	
1	Resources	5	7.5	8.5	7.5	7.0	7.0	8.5	3.8	4.3	3.8	3.5	3.5	4.3					
2	Project Management Methodologies	10	8.5	7.5	8.5	8.5	9.0	7.5	8.5	7.5	8.5	8.5	9.0	7.5					
3	Past Projects	15	8.5	7.0	6.5	9.5	9.0	9.0	12.8	10.5	9.8	14.3	13.5	13.5					
30			Part D Total (out of 30)						25.00	22.25	22.00	26.25	26.00	25.25					
			Normalized to 30:						28	25	25	30	29	28					
								Raw Overall SOQ Scores(out of 100):						78.85	68.75	74.35	82.65	80.35	80.85
								Normalized Overall SOQ Scores(out of 100):						93	81	85	95	95	95



IR 480 VALLEY VIEW PROCUREMENT - RFP PHASE

PTI #1

- Anticipated New Structure Type
- Anticipated Pier Locations
- Conceptual Erection Plan
- Conceptual Deck Removal
- Conceptual MOT Plan

PTI #2

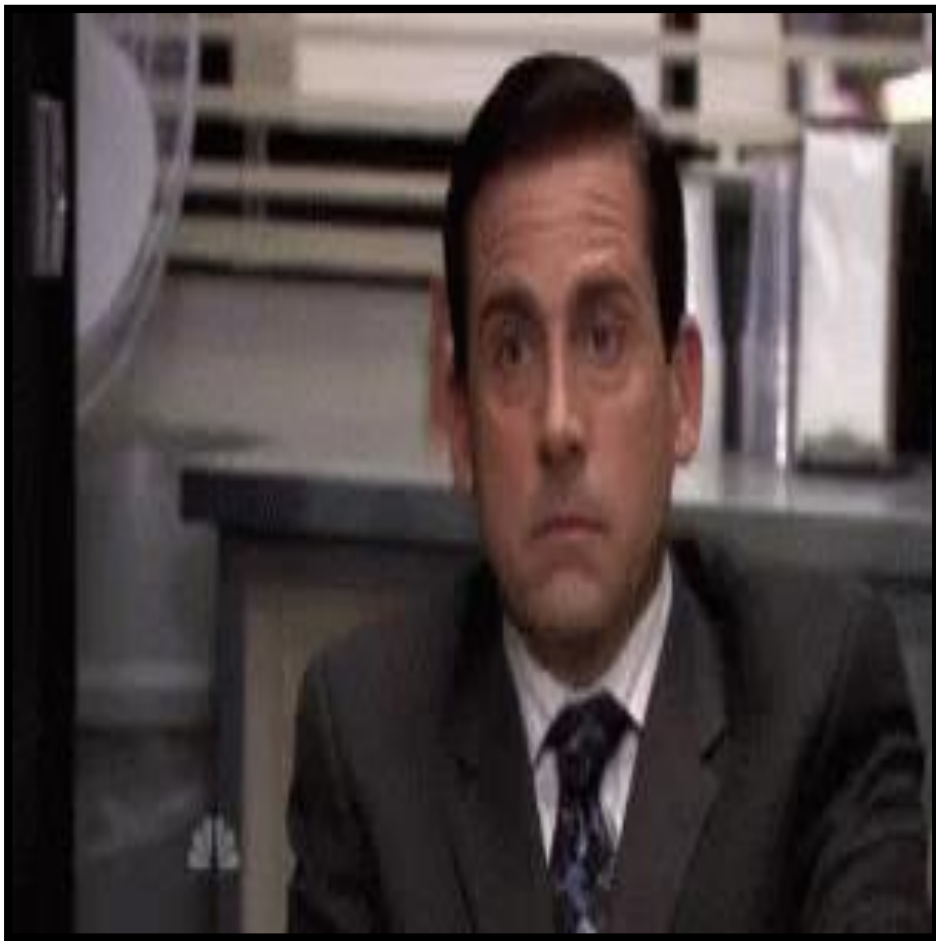
- Deviations from PTI #1
- Utility Conflicts & Relocates, R/W (if needed)
- New Superstructure Type & Pier Locations
- New Structure Exp. Joint type and
- Concrete weight and form type for
- Construction access for New & Ex. S
- Conceptual Deck Removal of Ex. S
- Conceptual MOT Plan

PTI #3

- Deviations from PTI #3
- Final Structure Site Plan & Traverse Section per BDM 202.2.1
- Final Structure Foundation Report Analyses per BDM 202.2.3.B
- 3D Grid Analysis w/ transverse load analysis (HS20 on Ex and HL93 on New)
- DBE Outreach Plan

IR 480 VALLEY VIEW PROCUREMENT - RFP PHASE

PTI Discussions

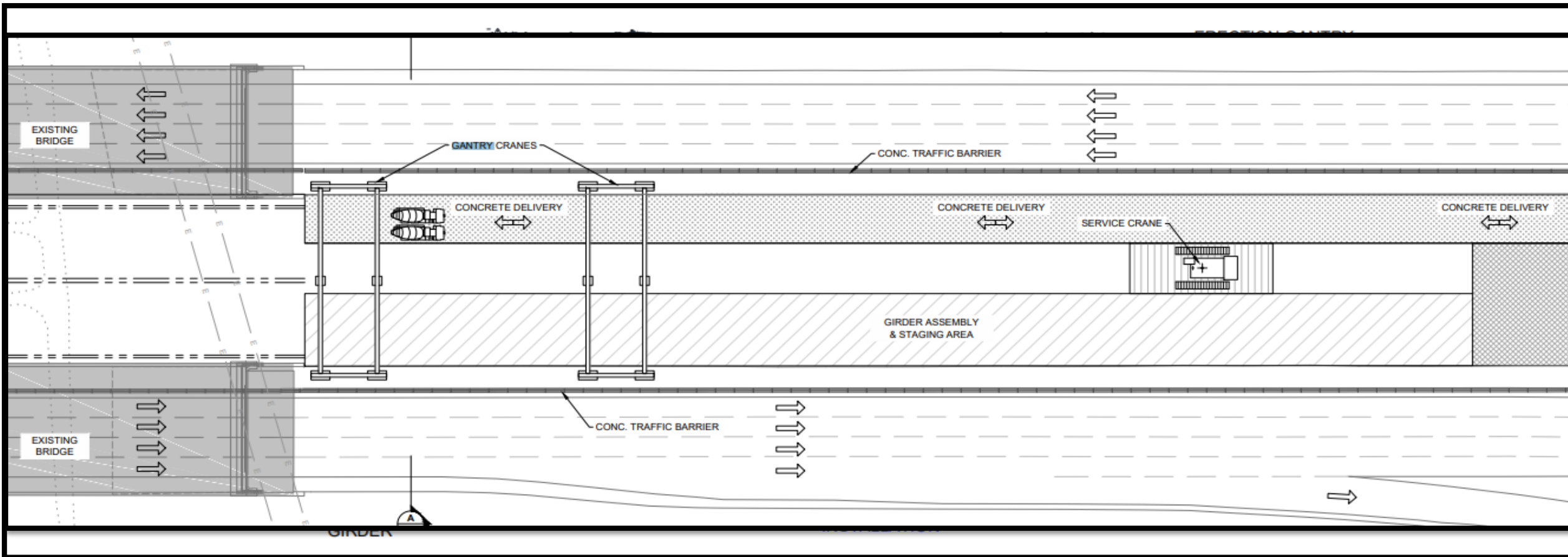


Alternative Technical Concept Discussions



IR 480 VALLEY VIEW PROCUREMENT - RFP PHASE

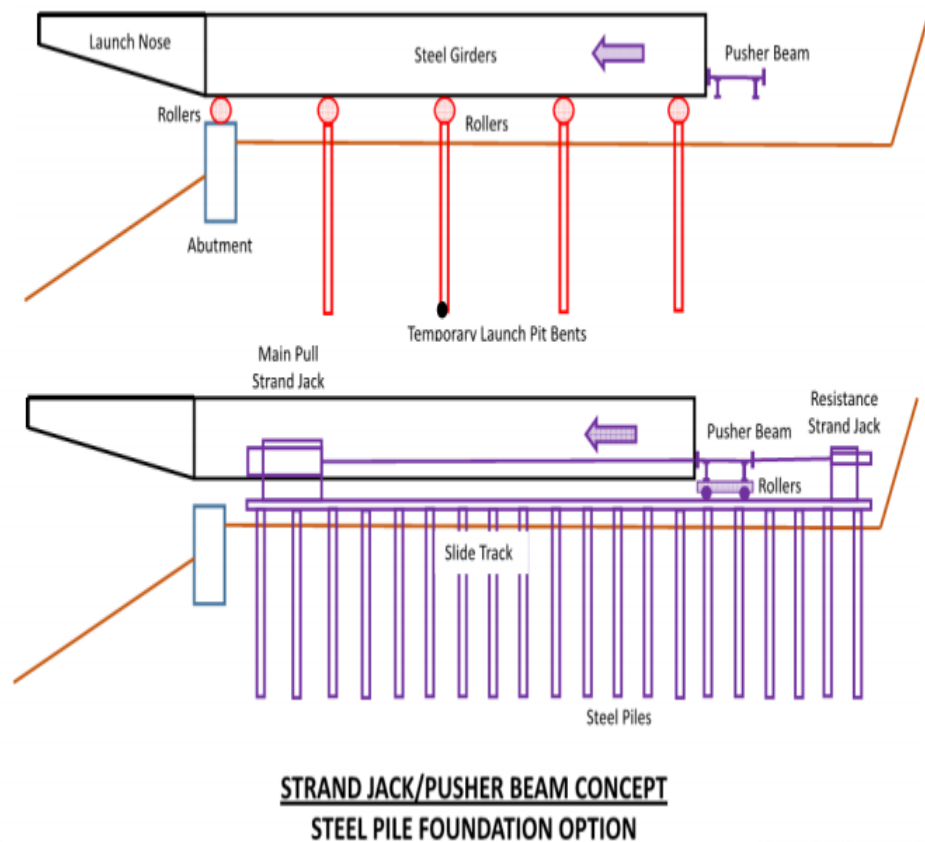
PTI Meeting #2



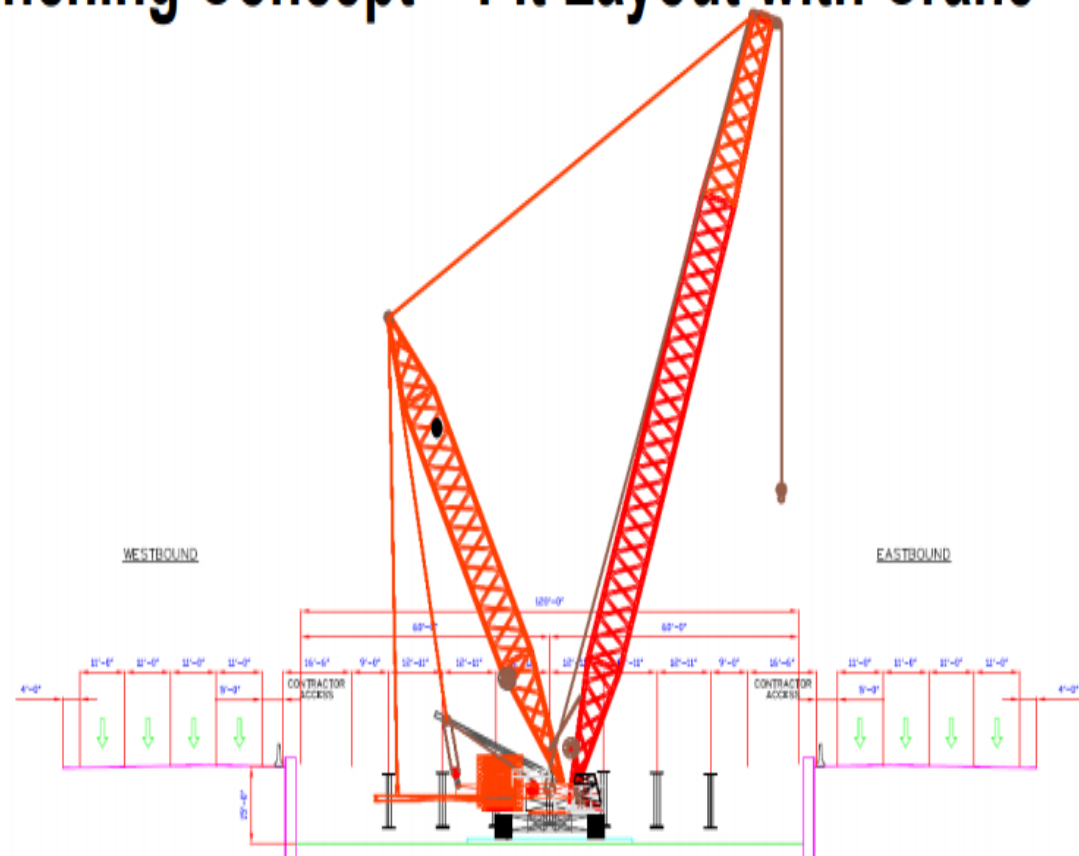
IR 480 VALLEY VIEW PROCUREMENT - RFP PHASE

PTI Meeting #2

Launching Concept – Steel Pile Foundation

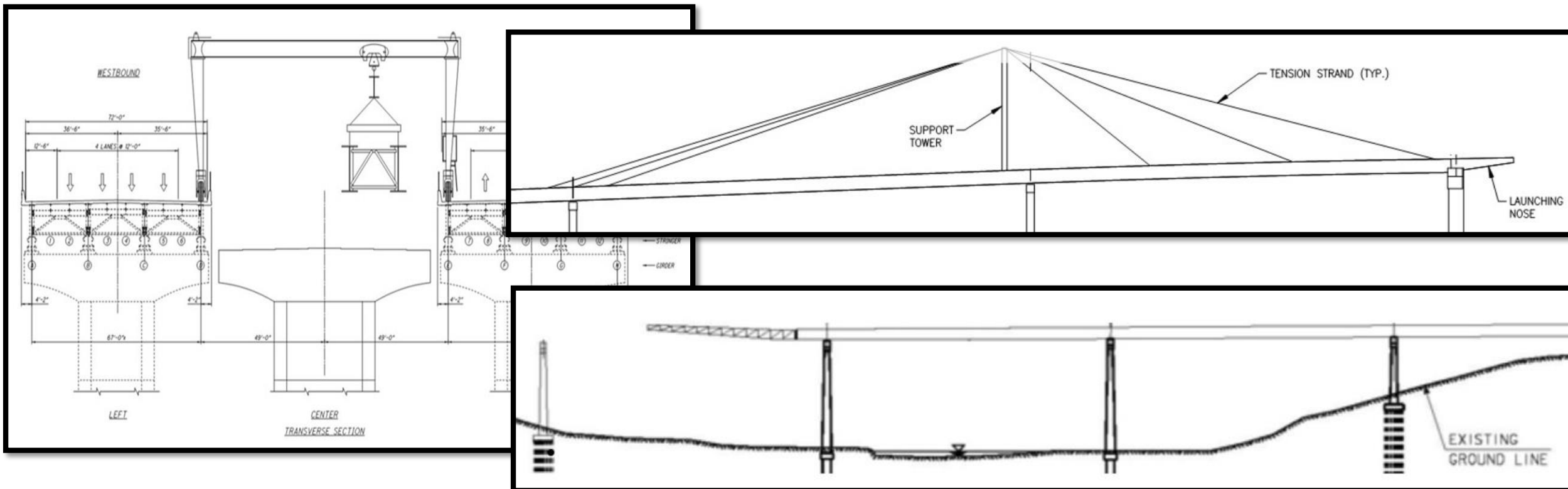


Launching Concept – Pit Layout with Crane



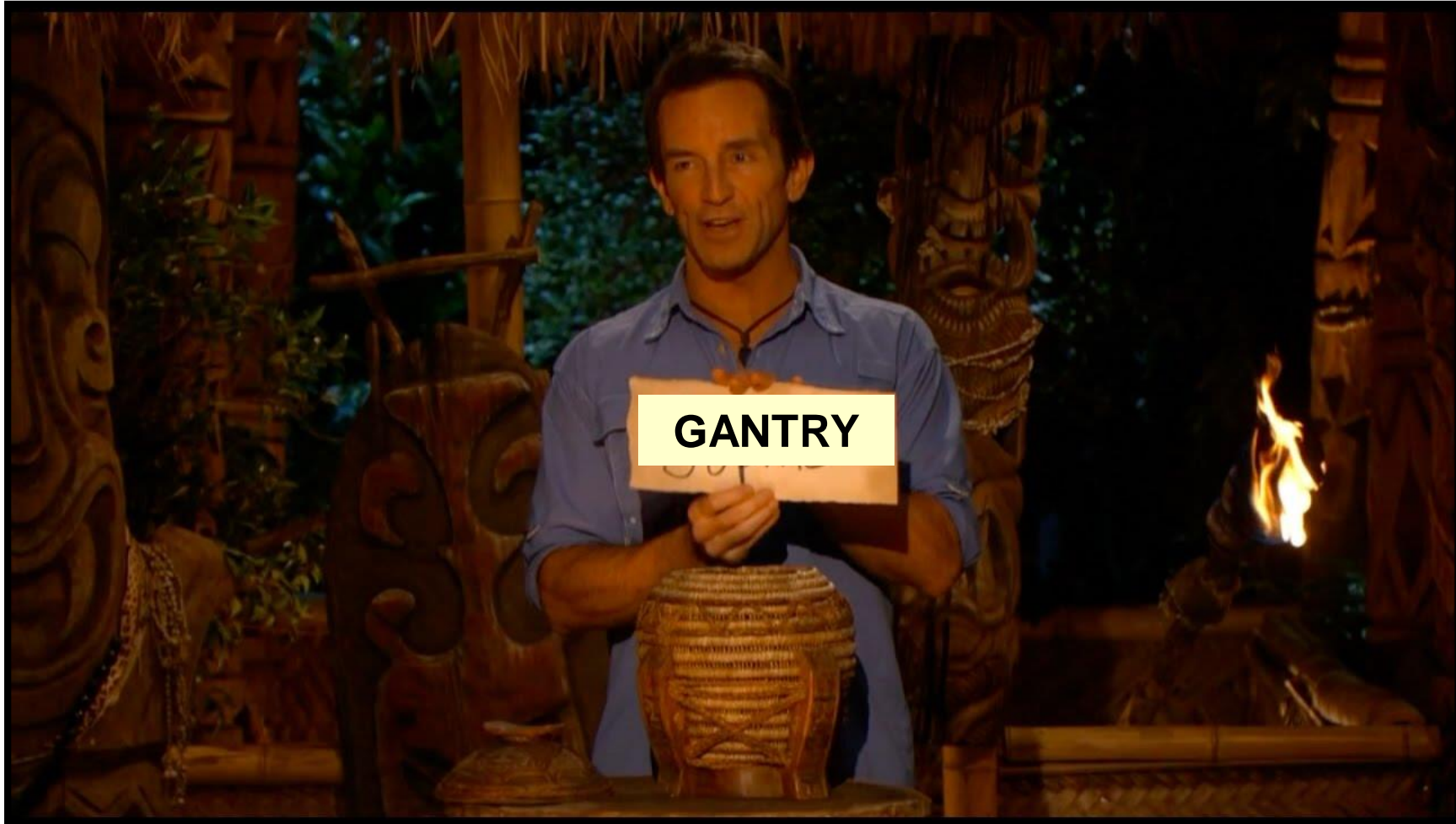
IR 480 VALLEY VIEW PROCUREMENT - RFP PHASE

PTI Meeting #2



IR 480 VALLEY VIEW PROCUREMENT - PROPOSALS

Tech Proposal – Team A



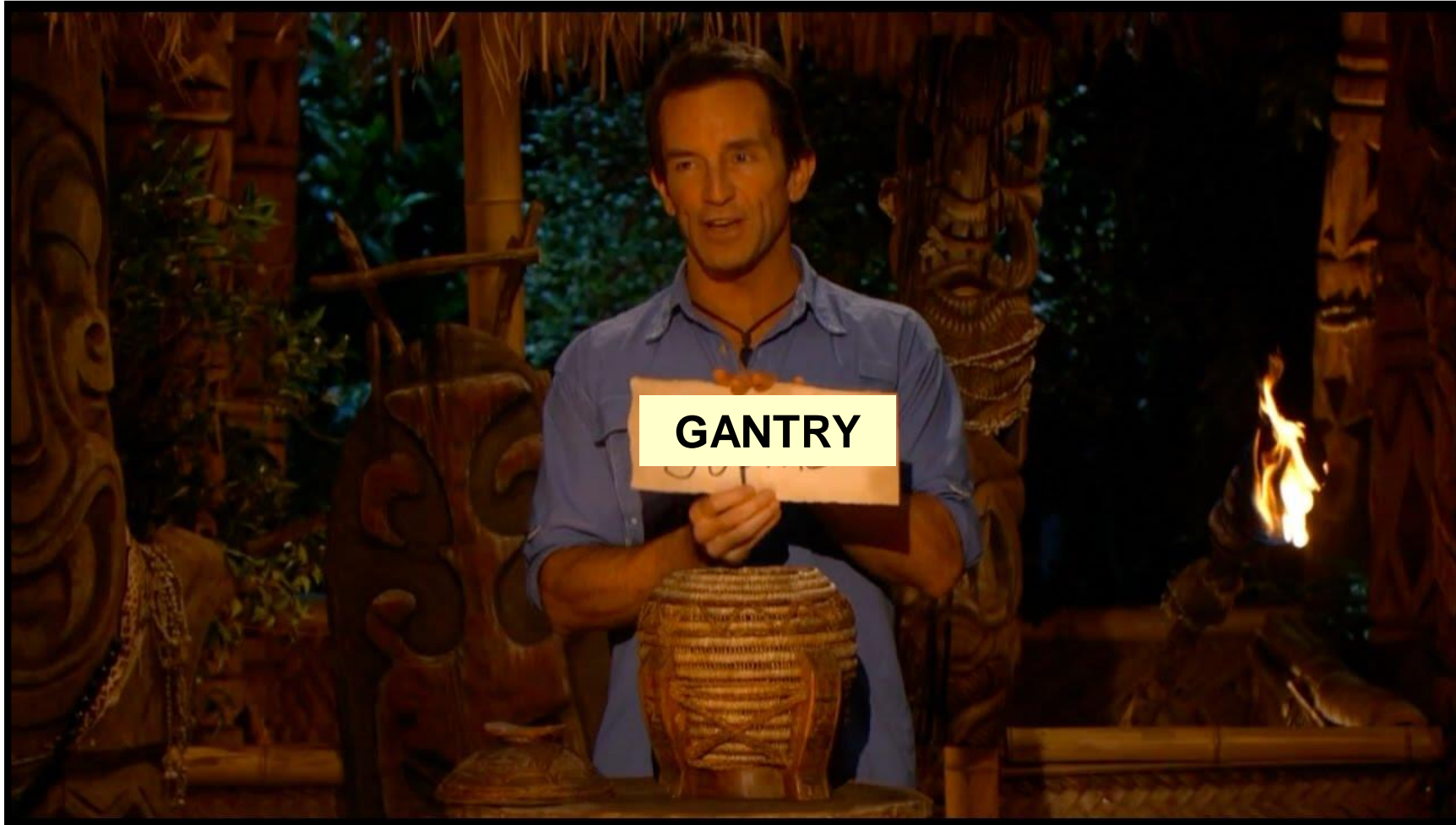
IR 480 VALLEY VIEW PROCUREMENT - PROPOSALS

Tech Proposal – Team B

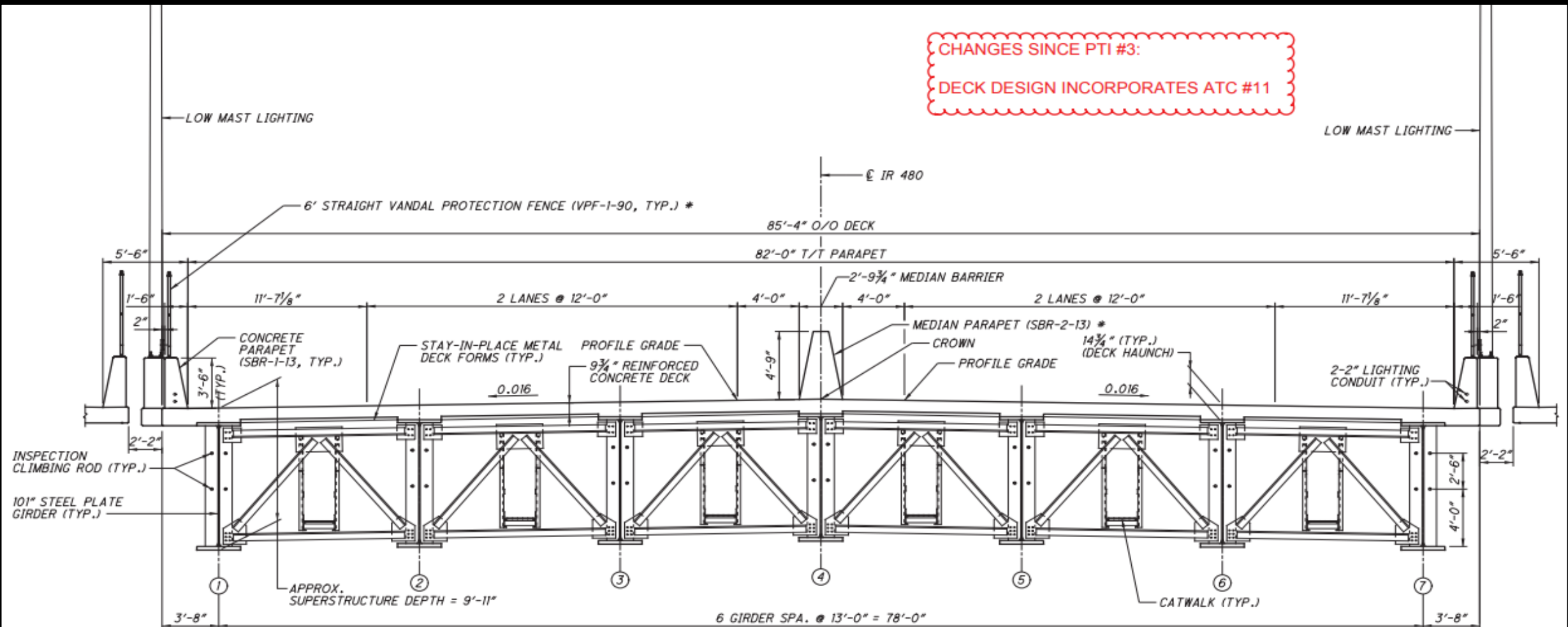


IR 480 VALLEY VIEW PROCUREMENT - PROPOSALS

Tech Proposal – Walsh Construction Company



IR 480 VALLEY VIEW PROCUREMENT - PROPOSALS



* AS MODIFIED PER RFP SCOPE OF SERVICES SECTION 16.3

TRANSVERSE SECTION - UNITS 1, 2, & 3

IR 480 VALLEY VIEW PROCUREMENT - LESSONS LEARNED

~~4 Weeks~~
5 Weeks

Milestone	Date
Advertise RFQ	Friday, October 20, 2017
Recommended Deadline to submit questions	Friday, November 10, 2017
Recommended Deadline for Department response to questions	Friday, November 17, 2017
SOQ submission	Wednesday, November 22, 2017
Notification to Offerors of short-listing	Tuesday, January 16, 2018
Short-listed Teams must respond to advancing	Monday, January 22, 2018
Begin Advertise (RFP Issued)	Monday, January 29, 2018
1 st ATC Discussion	Tuesday, February 27, 2018
2 nd ATC Discussion	Monday, March 19, 2018
Deadline for submittal of ATCs	Friday, April 13, 2018
Last day for the Department to respond to ATCs	Friday, April 27, 2018
Proprietary Technical Information Discussion	Thursday, May 10, 2018
Last recommended day for RFP Addendum	Friday, May 18, 2018
Cut-off for Prebid questions	Thursday, June 1, 2018
Technical and Price Proposals Due	Friday, June 8, 2018
Bids Opened (Ellis Sale Date)	Thursday, June 28, 2018
Anticipated Award Date	Monday, July 09, 2018

~~15 Weeks~~
18 Weeks

~~19 Days~~
29 Days

IR 480 VALLEY VIEW PROCUREMENT - LESSONS LEARNED

RFQ

- 45 Pages vs. 55 Pages
- Project Team Evaluations
 - DB Project Manager, DBT Design Project Manager, DBT Construction Project Manager, DBT Structural Lead (Design), DBT Structural Lead (Construction), DBT MOT Lead
 - 6 vs. 10

General Feedback

- Early Procurement Industry Meetings
 - Scope Development, Proposal Requirements, Stipend Values, etc.
- Early RFP Meetings
 - One on One
 - General ATC and Tech Proposal requirements

QUESTIONS



QUESTIONS



QUESTIONS

