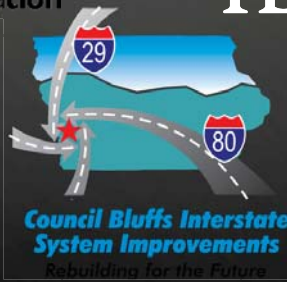


ACCELERATED CONSTRUCTION

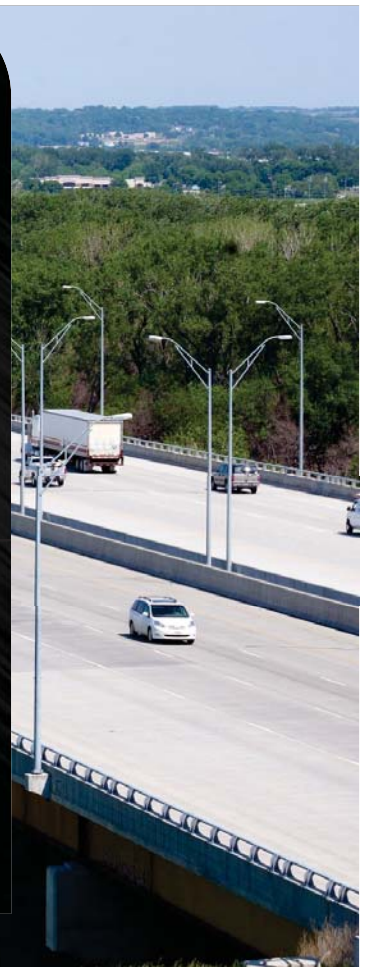
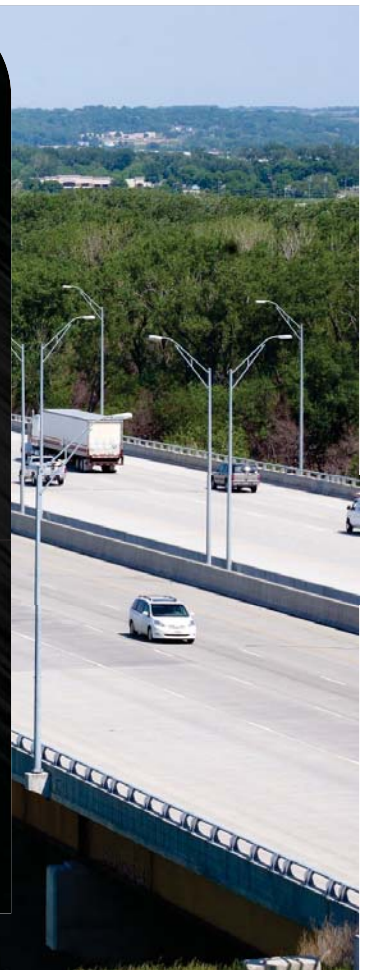


Iowa Department
of Transportation

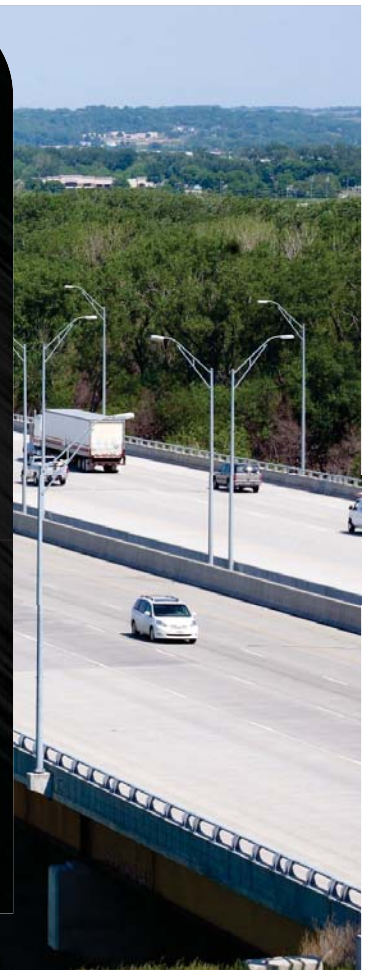
HDR



DOT GOALS AND OBJECTIVES

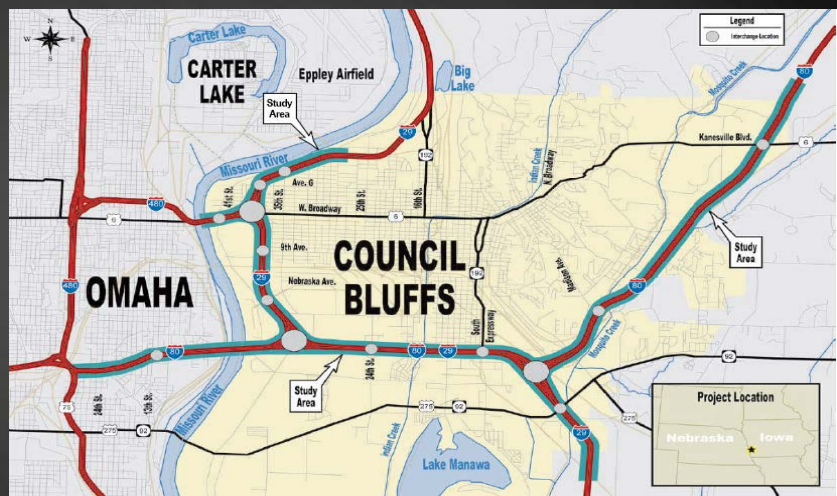


CBIS PROGRAM OVERVIEW



CBIS PROJECT OVERVIEW

- I-80, I-29, I-480
- 18 Miles
- 14 Interchanges
 - 3 system
 - 11 service
- River Crossing
- Two States, Two Counties, Two Cities



CBIS PROJECT OVERVIEW

- Multi-Year Iowa DOT Study and Design Process
- Outcome of Initial Study Phase
 - Develop a preferred set of transportation improvements for the Council Bluffs Interstate system
- Major Long-Term Investment
 - Similar in scope to the NDOR I-80 – Omaha Interstate Reconstruction and the Iowa DOT I-235 – Des Moines Interstate Reconstruction
- Stemmed from 1999 Needs Study

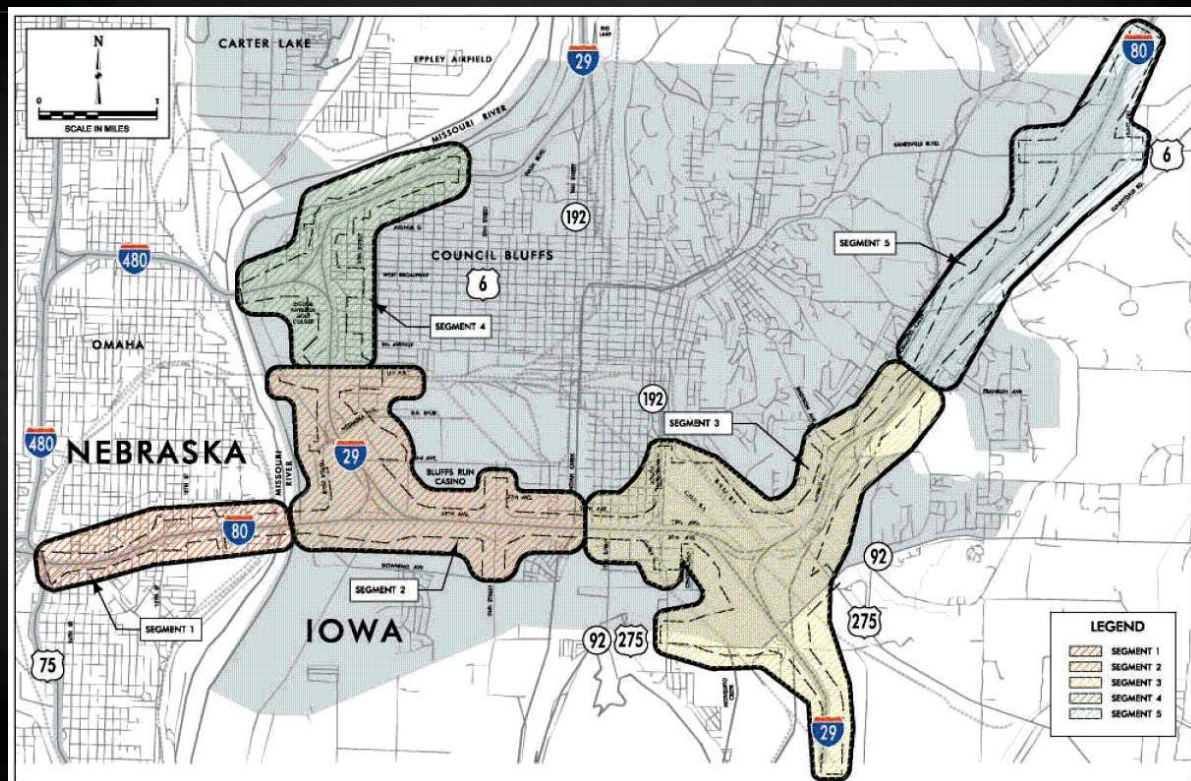
CBIS PROJECT OVERVIEW

- Agencies
 - Iowa Department of Transportation
 - FHWA – Iowa Division
 - Nebraska Department of Road
 - FHWA – Nebraska Division
 - City of Council Bluffs

PROJECT SEGMENTATION

- Segmentation
 - Project implemented over long period of time
 - 3 options developed based on independent utility and logical termini requirements
 - Option recommended by Iowa DOT, NDOR, and FHWA Iowa Division: 5 segments

TIER 1 – PROJECT SEGMENTATION



ACCELERATED CONSTRUCTION

AUGUST 7TH WORKSHOP



ACCELERATED DELIVERY STRATEGIES

- Accelerated **Design-Bid-Build** Delivery
 - A+B Bidding
 - A+B+C Bidding
 - Incentive / Disincentive
 - Performance Specifications
- Construction Phasing
 - Construction Contract Size
 - Shovel Ready Reserve Projects
 - Minimize High Speed Temporary Detour Connections
 - Incrementally Increase Capacity
- Consider Cost and Schedule Risks
 - Utilities, Railroad Agreements, Right-of-Way, Soils, Levees
- “**Accountable**” Construction Schedule
- Public Relations “Communication Plan”



CHARRETTE PARTICIPANTS



John Carns - Iowa DOT	George Feazell - Iowa DOT	Jon Ranney - Iowa DOT	Mike DiGregorio - HDR
Dave Skogerboe - Iowa DOT	Stacy Ryan - Iowa DOT	Scott Hanson - Iowa DOT	John Smith - HDR
Don Stevens - Iowa DOT	Scott Suhr - Iowa DOT	Kevin Merryman - Iowa DOT	Will Sharp - HDR
Bob Schoenrock - Iowa DOT	Paul Trombino - Iowa DOT	Patricia Schwarz - Iowa DOT	Bill Gilmore - Gilmore Consulting
Eric Keiner - Iowa DOT	Dave Dorsett - Iowa DOT	Andy Wilson - FHWA	Bhooshan Karnik - CH2M Hill
Ed Kasper - Iowa DOT	Steve Gent - Iowa DOT	Lisa McDaniel - FHWA	Emad Farouz- CH2M Hill
Bryan Bradley - Iowa DOT	John Smythe - Iowa DOT	Ken Smith - HDR	Robert Cramer - Cramer and Associates, Inc.
Marty Sankey - Iowa DOT	Michael Kennerly - Iowa DOT	Blane Long – HDR	Jesse Spain - Peterson Contractors
Maria Hobbs - Iowa DOT	Norm McDonald - Iowa DOT	Alia Friedel – HDR	
Steve Maifield - Iowa DOT	Ahmad Abu-Hawash - Iowa DOT	Doug Jackson - HDR	
Jim Muetzel - Iowa DOT	Mitchell Dillavou - Iowa DOT	Phil Rossbach - HDR	
Janet Vine - Iowa DOT	Wayne Sunday - Iowa DOT	Craig Hunter - HDR	



ADDITIONAL GUIDANCE DURING CHARRETTE



- Manage CBIS as a Program
 - Proactive cost and schedule management
- Consider Innovative Approaches
 - Use alternate delivery techniques in the Design-Bid-Build process
 - Consider innovative contractual methods
 - Lump sum bidding, Owner Controlled Insurance Program
- Consider all ideas that could shorten schedule while maintaining value
 - Stage program based on construction first, then review funding
 - Accelerated bridge construction
 - Interstate closures
- Avoid extended schedule or construction inactivity (damages public trust)



CONSOLIDATION OF CONSTRUCTION PACKAGES

- Potential Benefits :
 - Economies of scale
 - Reduces MOT
 - Reduces mobilization
 - Reduces impact to traveling public
 - Reduces temporary pavement
 - Larger incentives possible for contracts
 - Shortens construction schedule
 - Simplifies DOT construction administration
 - Construct as more of a linear project
 - Improves public relations
 - Reduce conflict between contractors
- Considerations:
 - Project development needs to be advanced
 - Larger multiyear contracts have a different risk profile
 - Iowa DOT cash flow

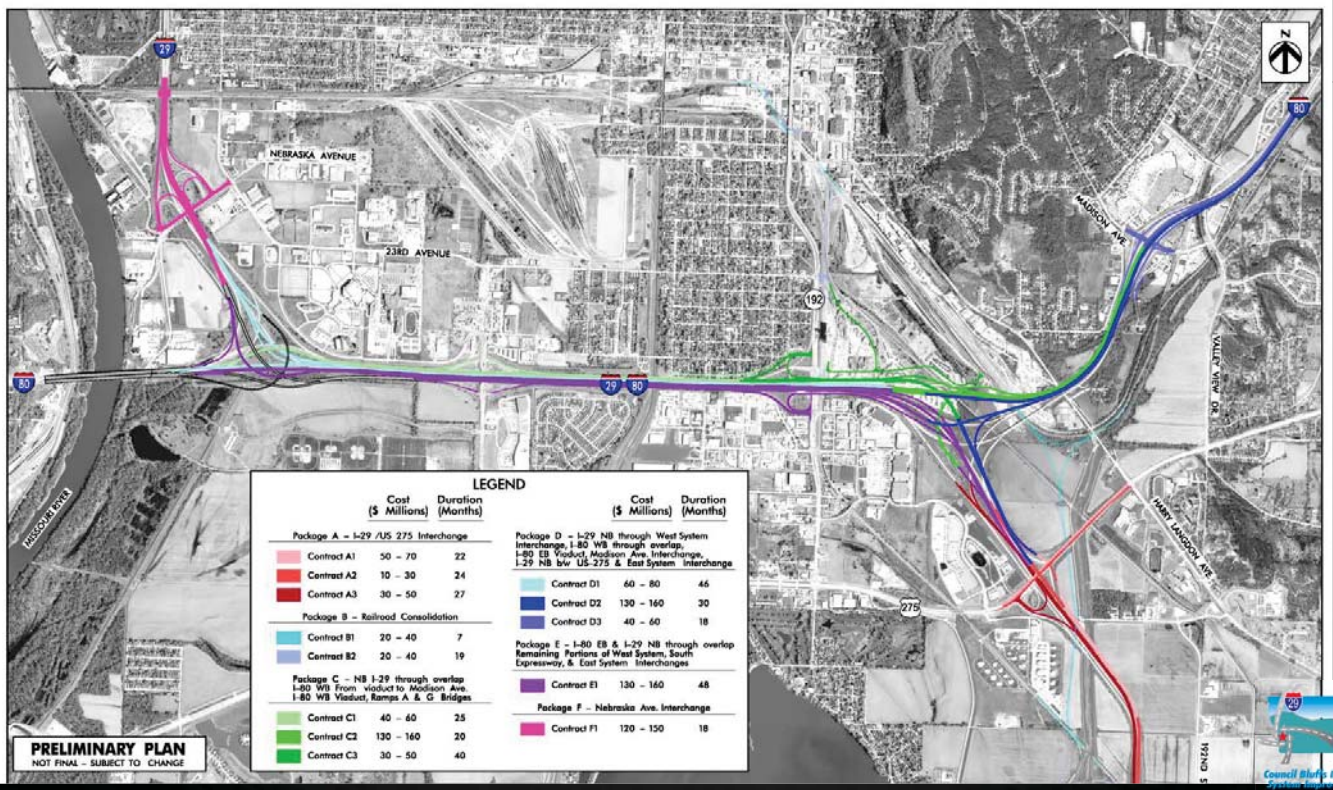


BASELINE

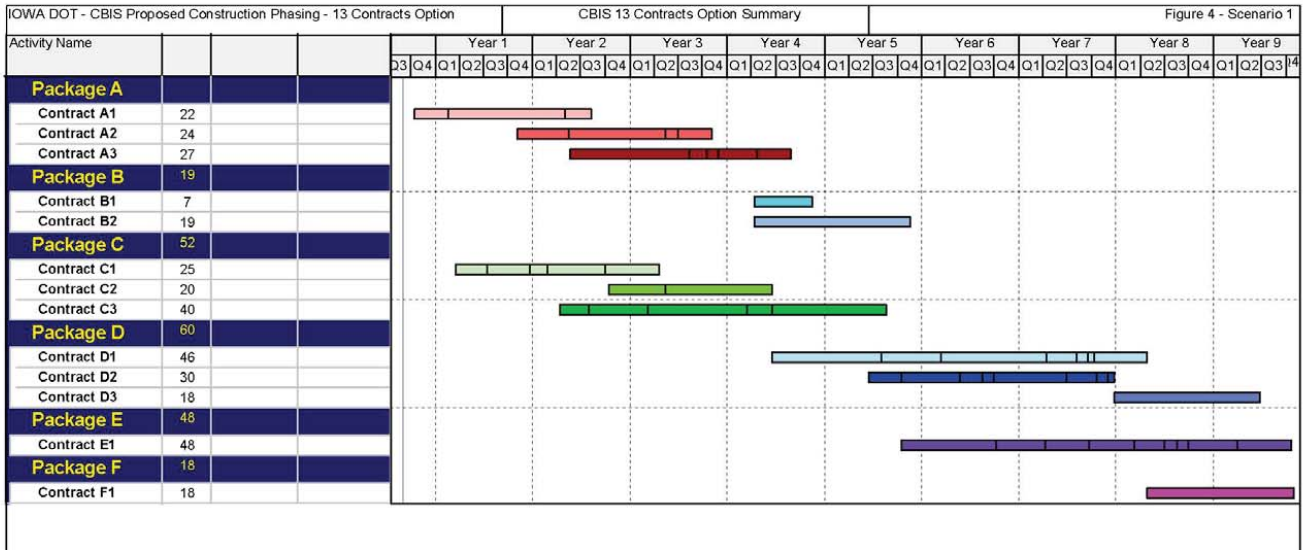
- Based on CBIS Funding Guide
- Schedule - 8/2012 - 4/2023
- 66 contracts - Range from less than \$1M to \$70M
- Over \$800 M total construction costs
- Over \$400 M in current DOT 5 Year Program



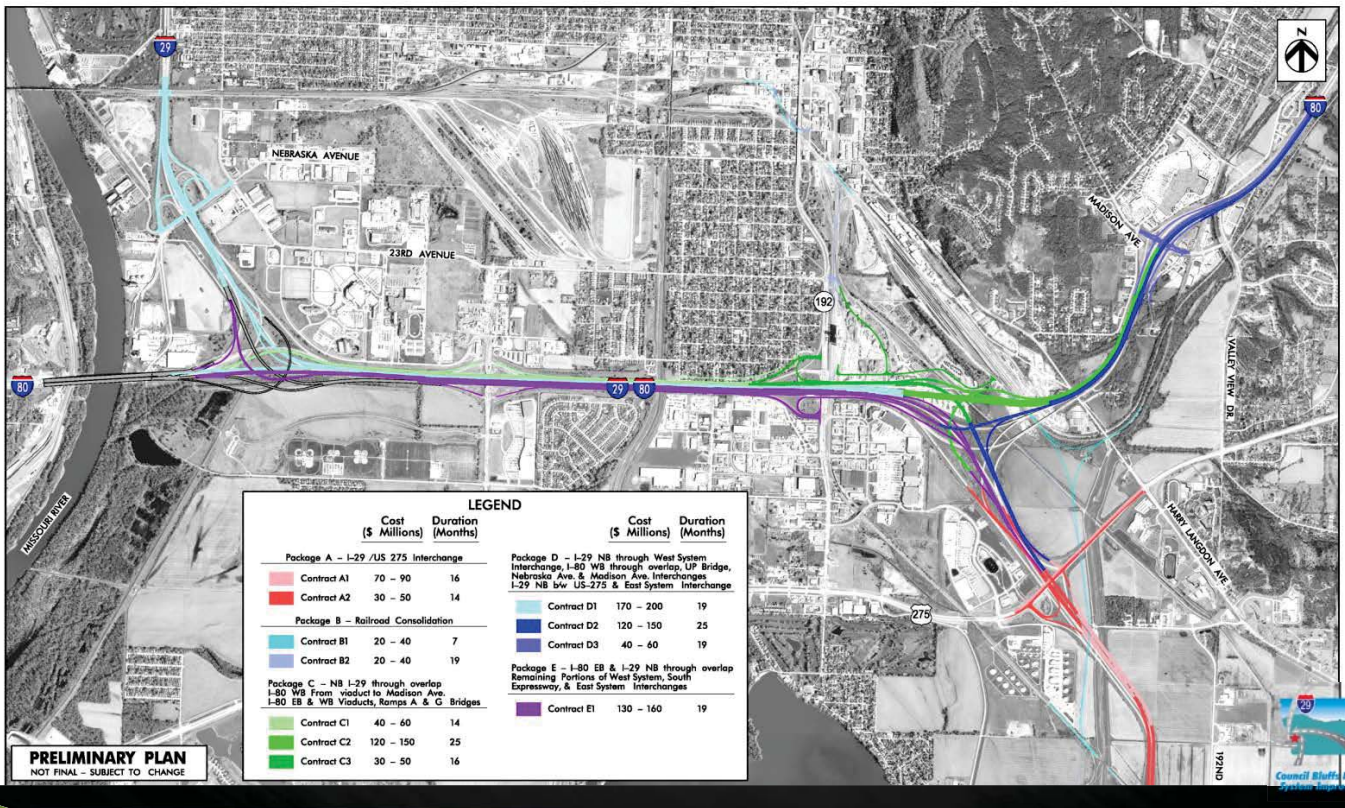
13 CONTRACTS OPTION



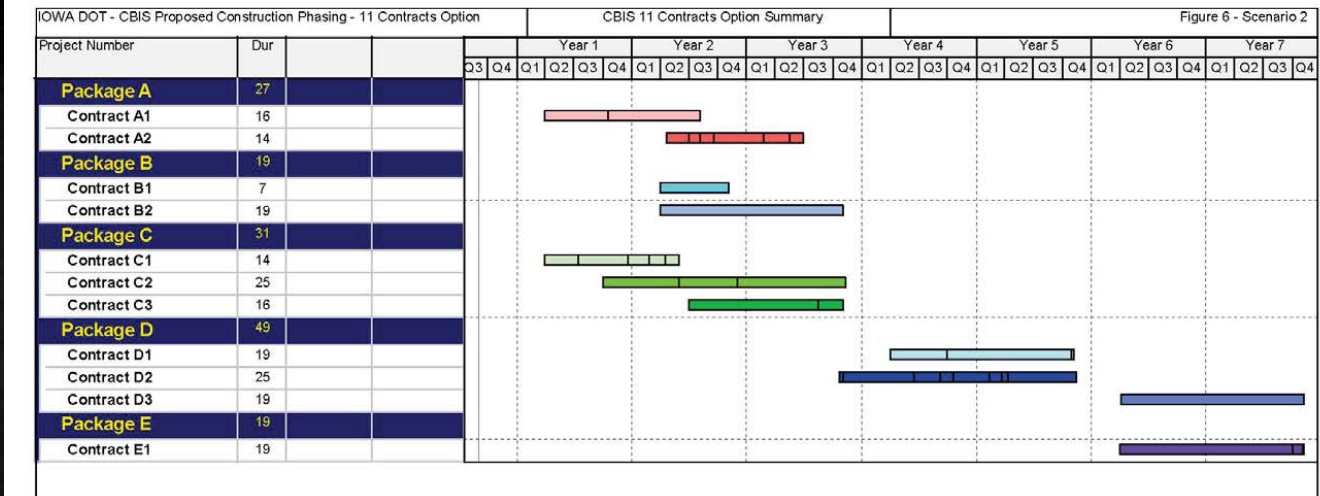
13 CONTRACTS OPTION



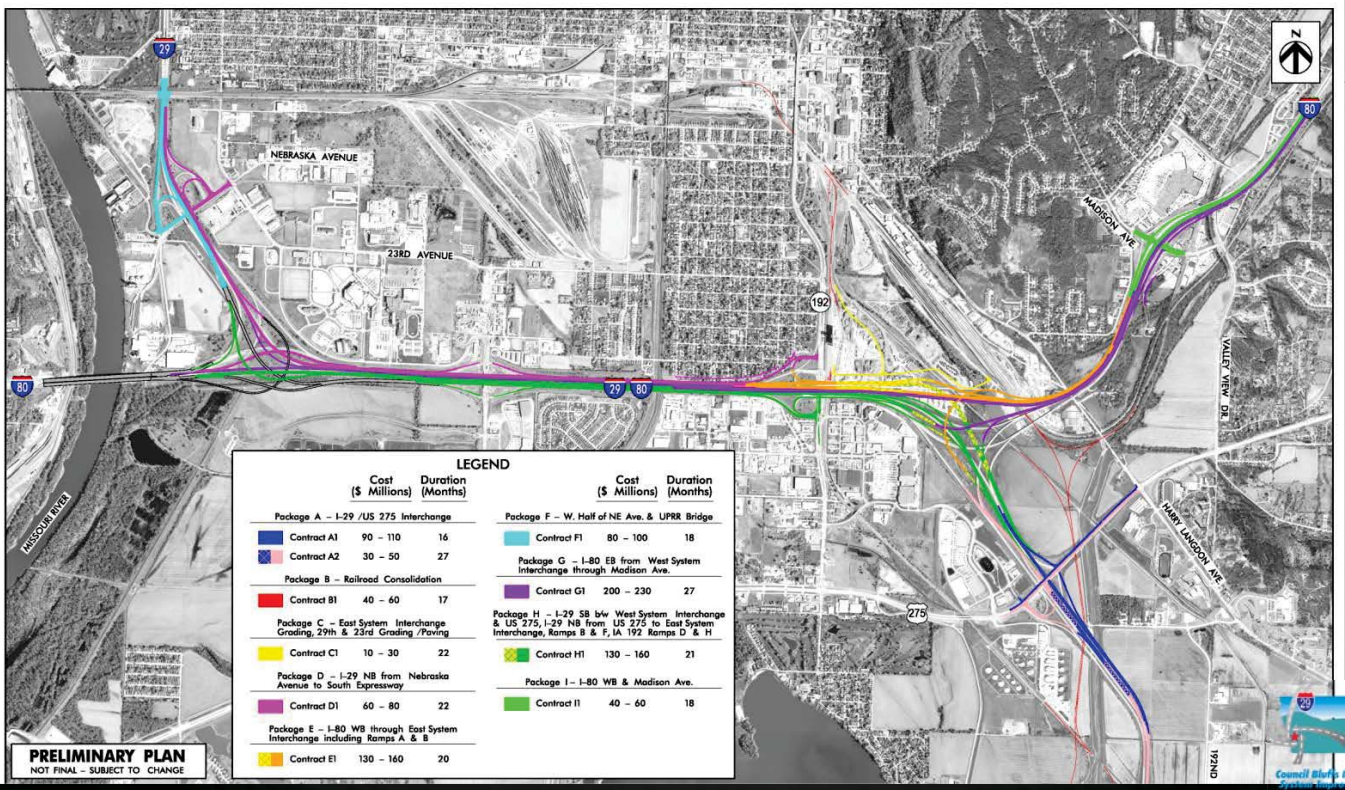
11 CONTRACTS OPTION



11 CONTRACTS OPTION



10 CONTRACTS OPTION



PRELIMINARY PLAN
NOT FINAL - SUBJECT TO CHANGE

10 CONTRACTS OPTION

IOWA DOT - CBIS Proposed Construction Phasing - 10 Contracts Option

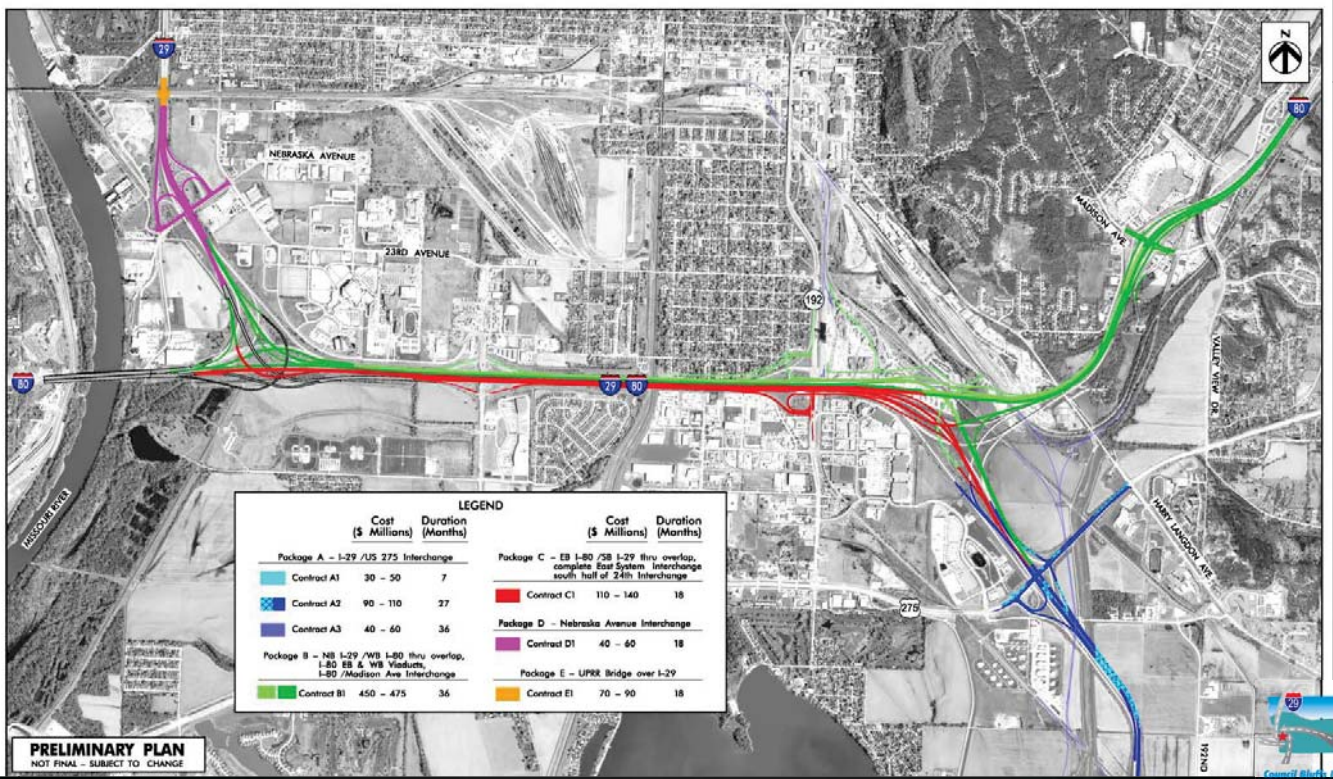
CBIS 10 Contracts Option Summary

Figure 8 - Scenario 3

Project Number	Activity ID	Activity Name	Dur	Year																											
				Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7			
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Package A			39	[Gantt bars for Package A]																											
Contract A1			16	[Gantt bars for Contract A1]																											
Contract A2			27	[Gantt bars for Contract A2]																											
Package B			17	[Gantt bars for Package B]																											
Contract B1			17	[Gantt bars for Contract B1]																											
Package C			22	[Gantt bars for Package C]																											
Contract C1			22	[Gantt bars for Contract C1]																											
Package D			22	[Gantt bars for Package D]																											
Contract D1			22	[Gantt bars for Contract D1]																											
Package E			20	[Gantt bars for Package E]																											
Contract E1			20	[Gantt bars for Contract E1]																											
Package F			18	[Gantt bars for Package F]																											
Contract F1			18	[Gantt bars for Contract F1]																											
Package G			27	[Gantt bars for Package G]																											
Contract G1			27	[Gantt bars for Contract G1]																											
Package H			21	[Gantt bars for Package H]																											
Contract H1			21	[Gantt bars for Contract H1]																											
Package I			18	[Gantt bars for Package I]																											
Contract I1			18	[Gantt bars for Contract I1]																											



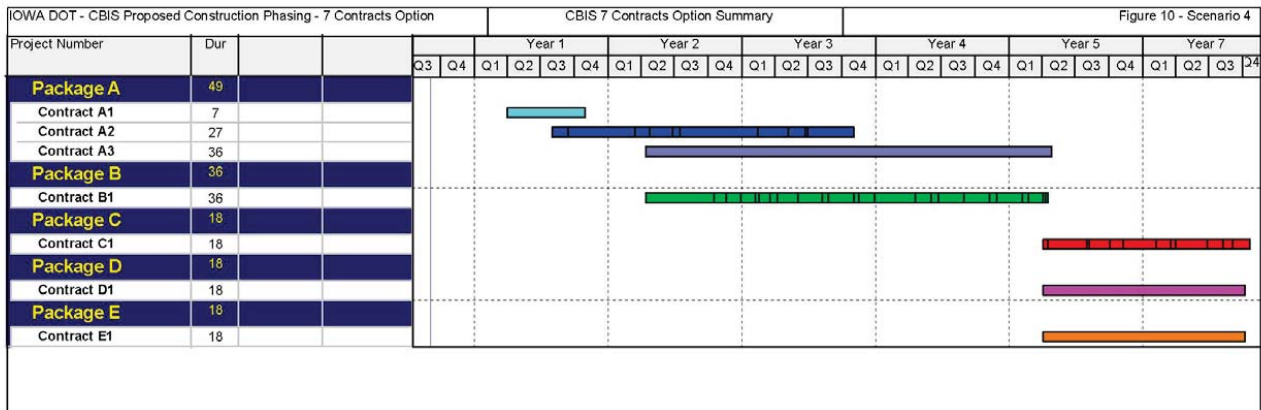
7 CONTRACTS OPTION



PRELIMINARY PLAN
NOT FINAL - SUBJECT TO CHANGE



7 CONTRACTS OPTION



SUMMARY OF SCENARIOS

Summary of Scenarios Council Bluffs Interstate System Improvements Segments 2 & 3

#	Description	Schedule Savings	Total Cost ¹	Average Annual Cost ^{1,3}	Largest Single Contract Cost ¹	Peak Cost / Year ^{1,2}
1	13 Contracts	1.5 years	\$890 Million	\$100 Million	\$130 - \$160 Million	\$180 Million / 2020
2	11 Contracts	3.5 years	\$840 Million	\$120 Million	\$170 - \$200 Million	\$300 Million / 2016
3	10 Contracts	3.5 years	\$855 Million	\$120 Million	\$200 - \$230 Million	\$340 Million / 2016
4	7 Contracts	4.5 years	\$850 Million	\$140 Million	\$450 - \$475 Million	\$500 Million / 2014

- ¹ Costs shown do not include ROW costs and are inflated based on each scenario's schedule to account for savings due to schedule reduction.
- ² Assumes that the total contract cost will be expended on the contract letting date. Includes multiple contracts let in a single year.
- ³ Average expenditures over the construction period.



ACCELERATED DELIVERY STRATEGIES

Strategies being evaluated:

- Program Delivery Approach
- Risk Mitigation /Management
- Accelerated Bridge Construction
- Performance Specifications
- Right-of-Way Schedule Management
- Utility Relocation Schedule Management
- Lump Sum Contracts
- Multi-year contracts, winter work schedules
- Alternative Technical Concepts
- Incentive/Disincentive Provisions



ACCELERATED CONSTRUCTION



Iowa Department
of Transportation

HDR

