#### 9-Apr-20 Corrections:

- Slide 40: Bridge Deck SF estimate correction from 405,675 to 367,633
- Slide 76: Proposed Scheduling SP to include cash flow, but not full resource loading



AGC MEETING - MARCH 23, 2020

Base PROJECT NUMBER IMN-080-6(235)239--0E-52

All information herein is Preliminary and Subject to Change

#### **GREETING AND INTRO**



### Linda Narigon



#### **GREETING AND INTRO**



- » Greeting
- » Purpose
- » Introductions



#### **MEETING GOALS**

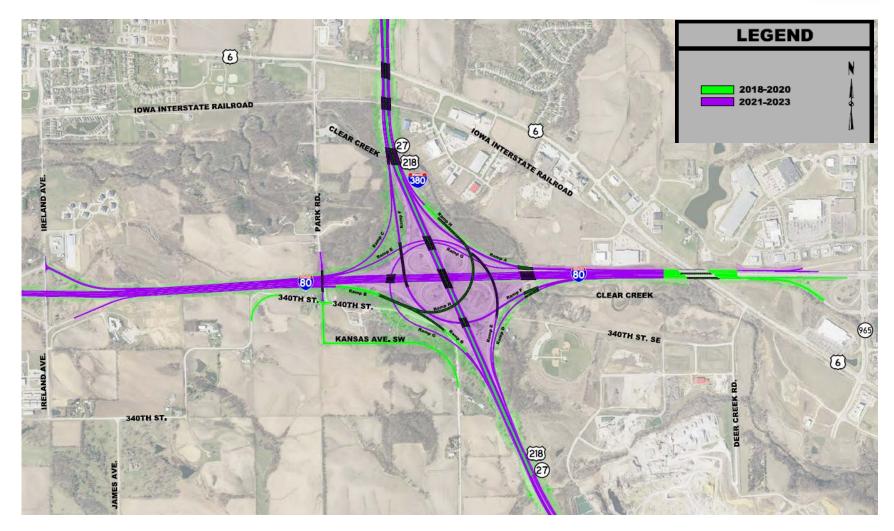


- » Overview of Remaining Program
  - » SFY21 (July 2020) Letting
    - » INFRA Grant
    - » Overview
  - » FY19 and FY20 Current Construction Projects
- » Road, Bridge and Contract's Presentations
- » HDR as GEC in support of DOT
- » Question and Answer session
- » Closing information including submittal of additional questions and comments



#### **WORK OVERVIEW**

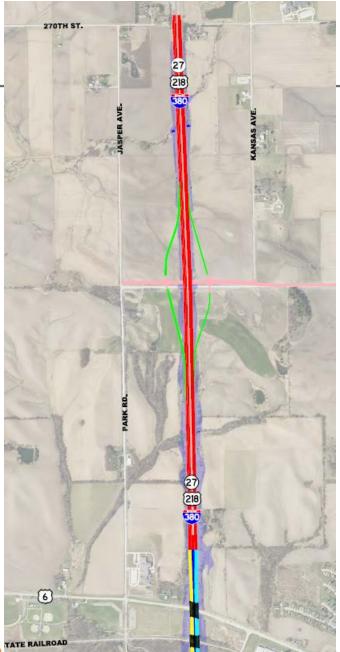




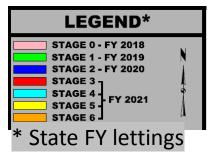


#### WORK OVERVIEW

NB and SB I-380 staged to be completed in the same time period and completed before fall 2022. Coordinated with work to the south.



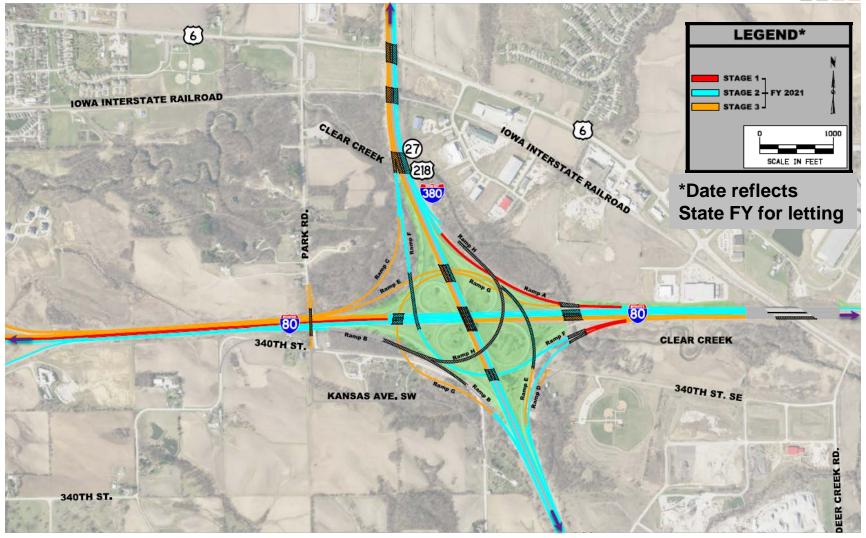






## **STAGING OVERVIEW** – ZOOMED INTO INTERCHANGE AREA







#### **ROAD DESIGN**

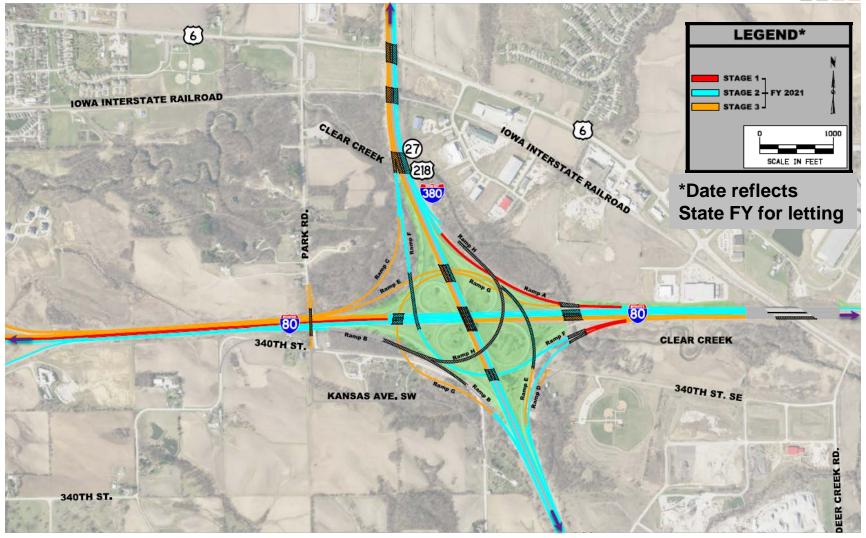


### Jason Holst



## **STAGING OVERVIEW** – ZOOMED INTO INTERCHANGE AREA







#### TRAFFIC





#### HIGH LEVEL QUANTITIES



### » Roadway High Level Quantities

	FY21 Estimate Quantities by Year								
	Earthwork		Pavement		Subbase Material				
	Excavation	Embankment	Permanent	<b>Temporary</b>	Granular	Special	Modified		
Year	(CY)	(CY)	(SY)	(SY)	Subbase (CY)	Backfill (CY)	Subbase (CY)		
Stage 1 Fall 2020									
to Spring 2021	65,000	150,000	90,000	12,000	6,000	15,000	23,000		
Stage 2 - 2021	400,000	175,000	350,000	30,000	25,000	50,000	69,000		
Stage 3 - 2022	200,000	60,000	185,000	2,000	-	-	60,000		

- » 80,000 CY Embankment, Contractor Furnish
- » 19,000 CY Topsoil, Contractor Furnish
- Class 10 Waste is being finalized to determine how much and where it can remain in the infields.



#### STAGING - GENERAL



- Staging scrolls will be provided as part of the contract documents
- Some changes made since the October AGC update meeting
  - Showing opportunities for earlier work
    - » Piers that can be constructed earlier
    - » Notes when early work isn't possible
  - » TBR bid items
    - Extra bid item for the small shifts
    - » Tabulated in plans
    - » Additional field adjustments may be necessary



#### STAGING - WINTER



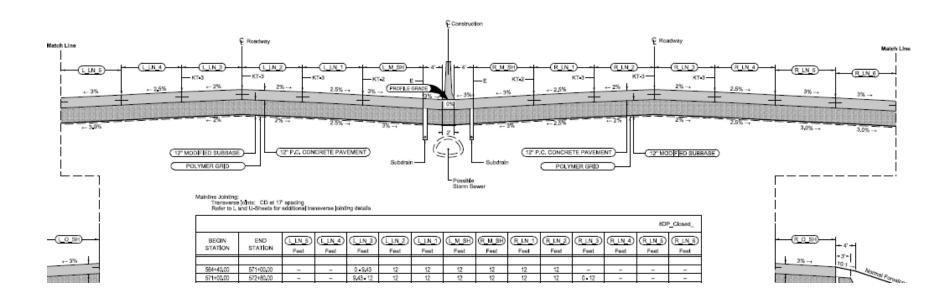
- » Winter configurations
  - » Winter chutes allowed.
  - » Extra TBR shifts
    - » To allow for extra shoulder width when possible
  - » Winter traffic configuration will need to be coordinated between Contractor and the Engineer



#### **STAGING - PAVING**



Width behind TBR for paving. Adjacent to median.

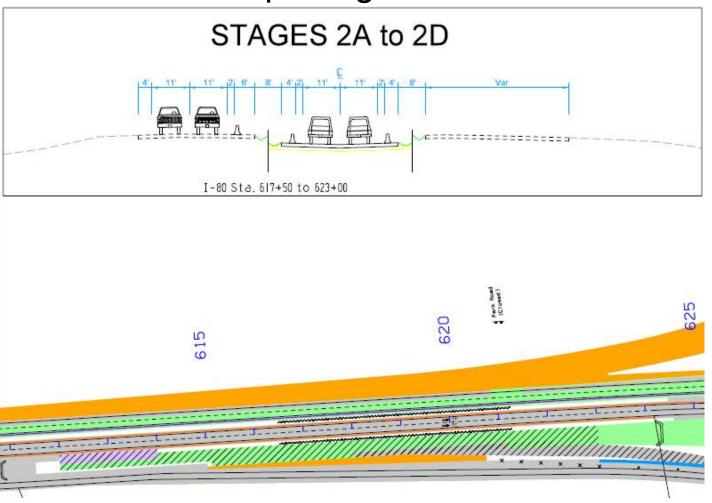




#### **STAGING - PAVING**



#### Width behind TBR for paving

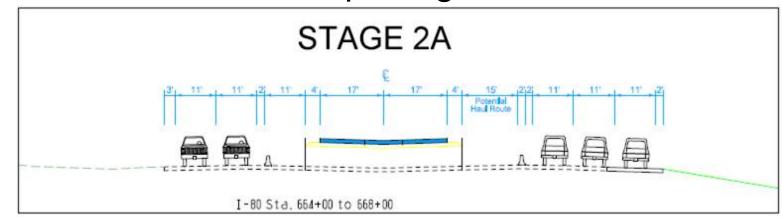


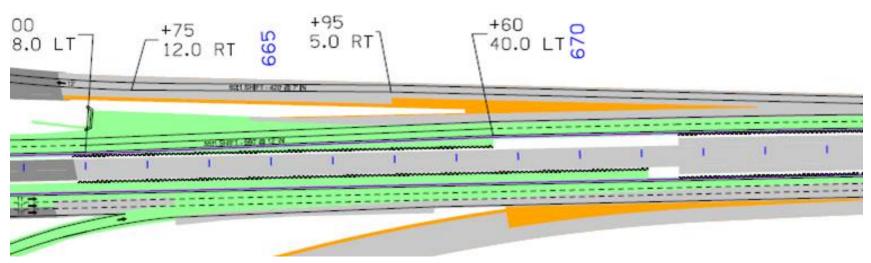


#### **STAGING - PAVING**



#### Width behind TBR for paving







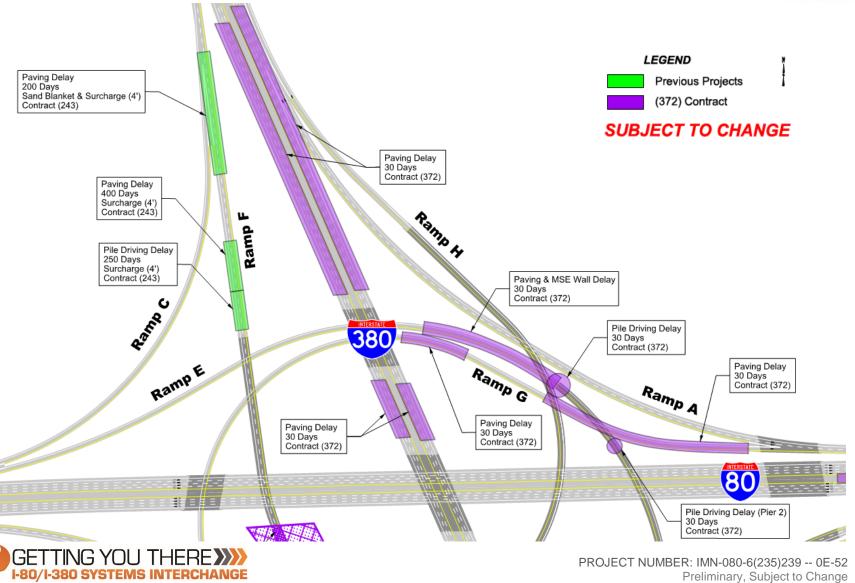
#### **EARTHWORK**



- » Surface models approach
- » Holding time and geotech info on the next slides
  - » Automated settlement readings for some sites

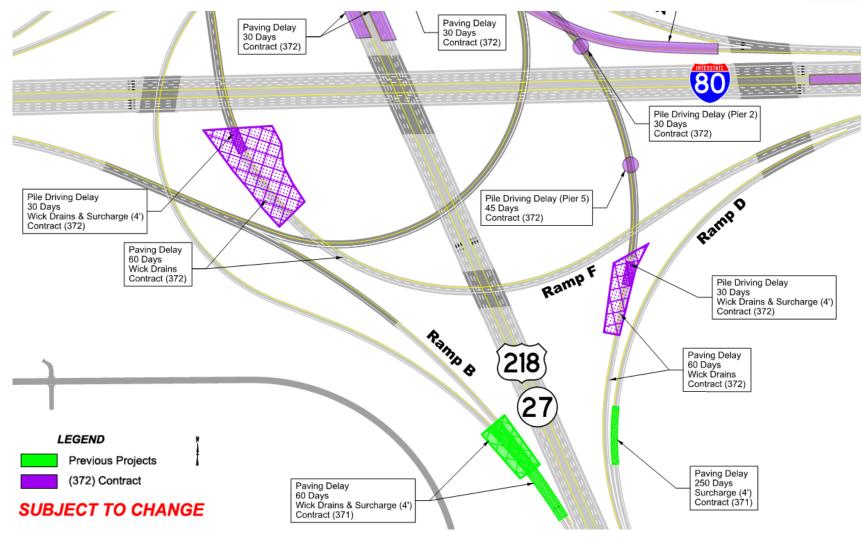






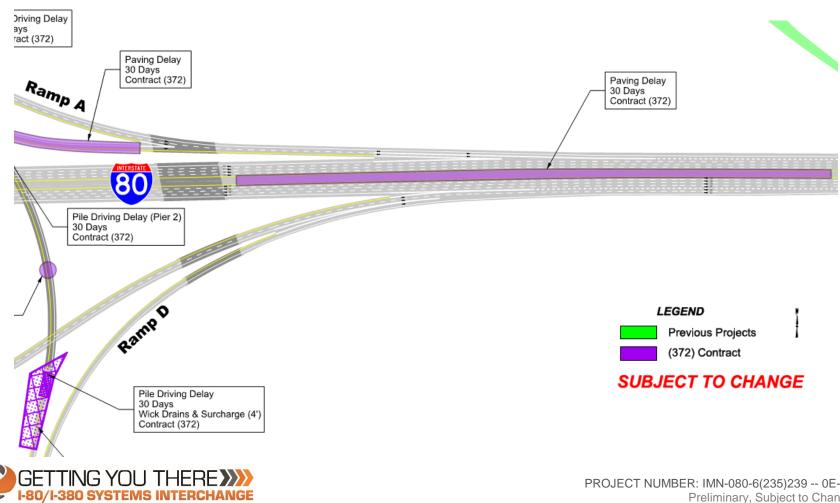
PROJECT NUMBER: IMN-080-6(235)239 -- 0E-52 Preliminary, Subject to Change





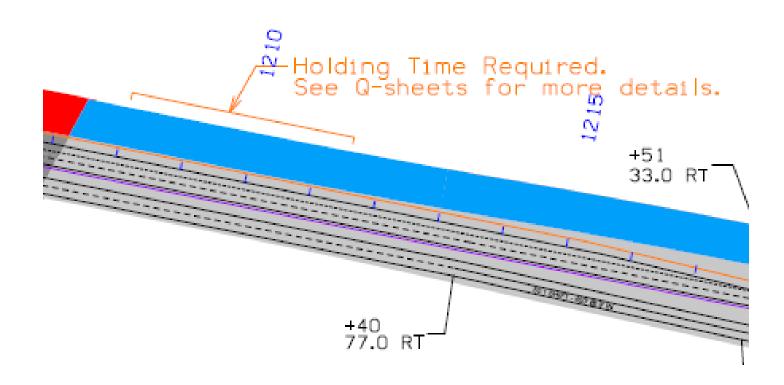








» Holding times shown on Staging Scrolls







	Pa	ving Delay Holding	Times	
Alignment	Direction	Stations Begin	Station End	Delay
1-80	Median	662+50	687+00	30 days
1-380	NB	1165+75	1168+50	30 days
I-380	NB	1172+95	1186+15	30 days
1-380	NB	1191+25	1197+35	30 days
I-380	NB	1201+05	1203+40	60 days
I-380	NB	1207+85	1211+50	60 days
1-380	SB	1166+00	1168+80	30 days
I-380	SB	1173+10	1186+75	30 days
1-380	SB	1191+60	1197+55	30 days
1-380	SB	1201+20	1203+70	30 days
1-380	SB	1203+05	1211+50	60 days
Ramp E		5565+60	5571+00	60 days
Ramp E		5545+50	5552+00	30 days
Ramp F		6532+50	6540+00	60 days
Ramp G		7542+00	7545+00	30 days
Ramp G		7549+00	7558+45	30 days

Pile Driving Delay Holding Times						
Alignment	Direction	Location	Delay			
Ramp E		S. Abutment	30 days			
Ramp F		S. Abutment	30 days			

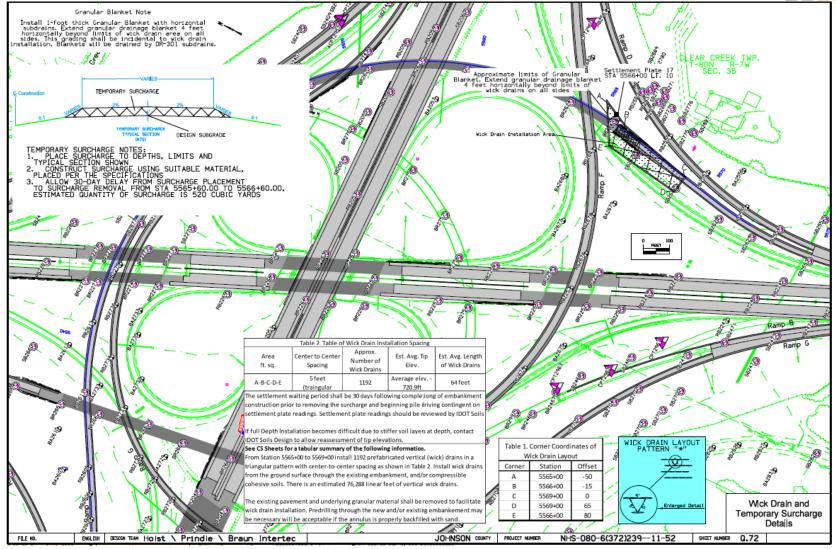
Paving and Pile Driving Delays

FILE NO. BHALBH DESCRIPTION HOIST \ Prindle \ Braun Intertec JOHNSON COUNTY PROJECT NUMBER NHS-080-6(372)239--11-52 SHEET NUMBER Q.74
39(3) Ph 2/13/2020 JE-Floridation - purk North Intertween data into Land Prindle in County Prindle | P



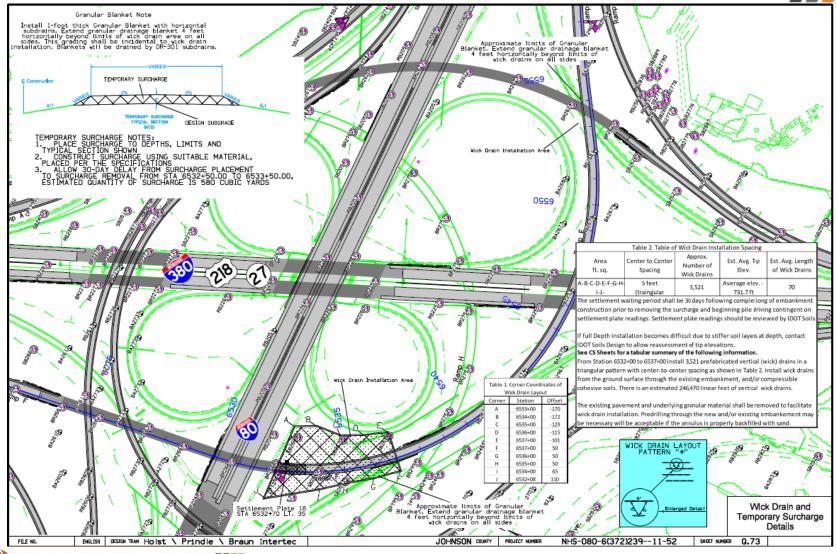
#### **GEOTECH – WICK DRAINS**





#### **GEOTECH – WICK DRAINS**





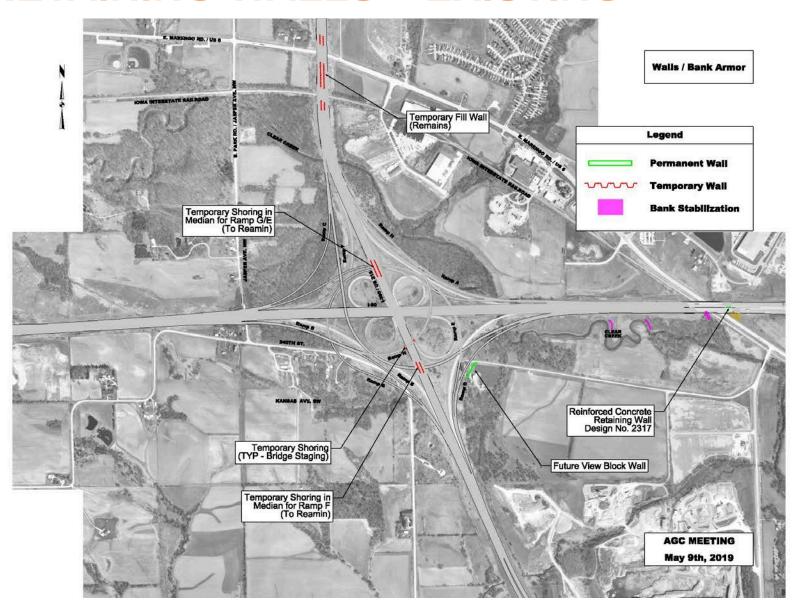
#### RETAINING WALLS



- » Permanent Retaining Walls
  - » MSE Wall
  - » Noise Wall / View Block Wall
- "Temporary" Walls
  - » Fill Walls
    - » Temporary MSE Wall
  - » Cut Walls
    - » Buy America for piling left in place

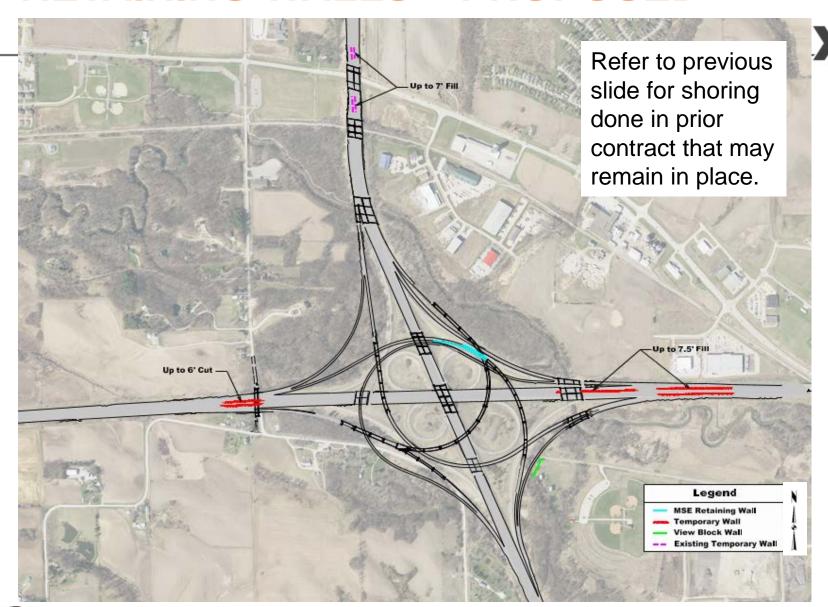


#### **RETAINING WALLS – EXISTING**





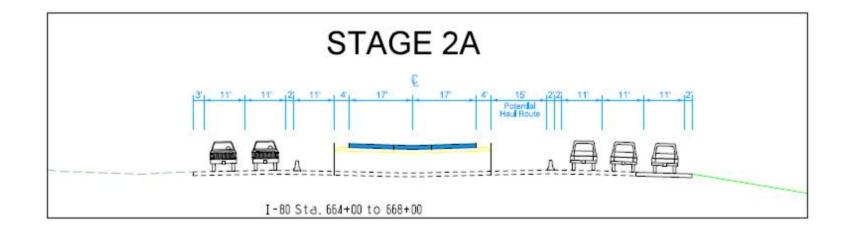
#### **RETAINING WALLS – PROPOSED**





#### **RETAINING WALLS – I-80 TYPICAL**

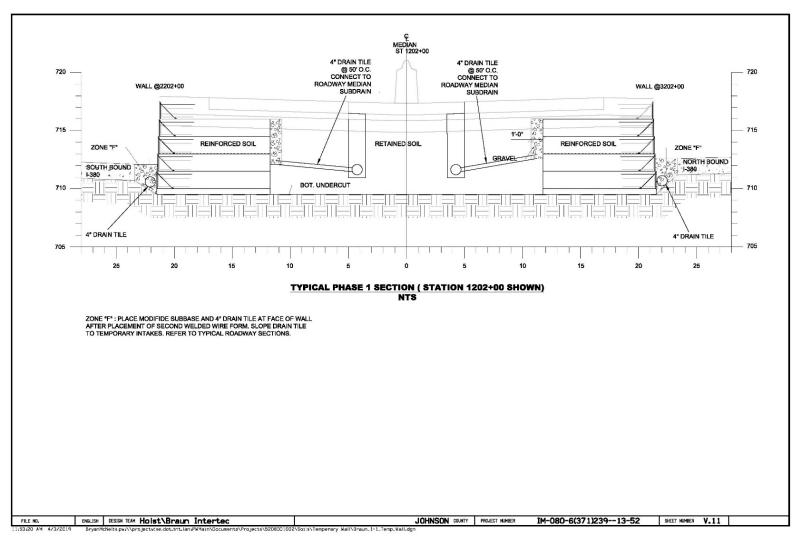






#### **RETAINING WALLS**







#### STAGING - INGRESS / EGRESS





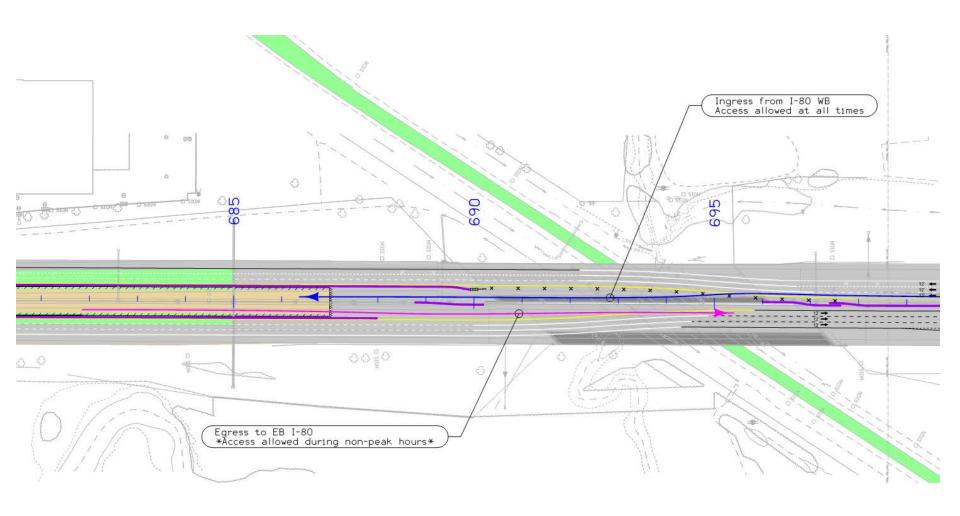
Peak hours are defined as:

- o Monday 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.
- o Tuesday 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.
- o Wednesday 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.
- o Thursday 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.
- o Friday 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.
- » Notes to provide clarity and intent:
  - » Access allowed at all times.
  - » Access allowed during non-peak hour traffic, requires shoulder closure per TC-402.
  - » Access allowed during non-peak hour traffic, requires partial ramp narrowing per TC-416.
  - » Access only allowed at night, per the J.1 lane closures times, requires lane closure per TC-418.



#### STAGING - INGRESS / EGRESS

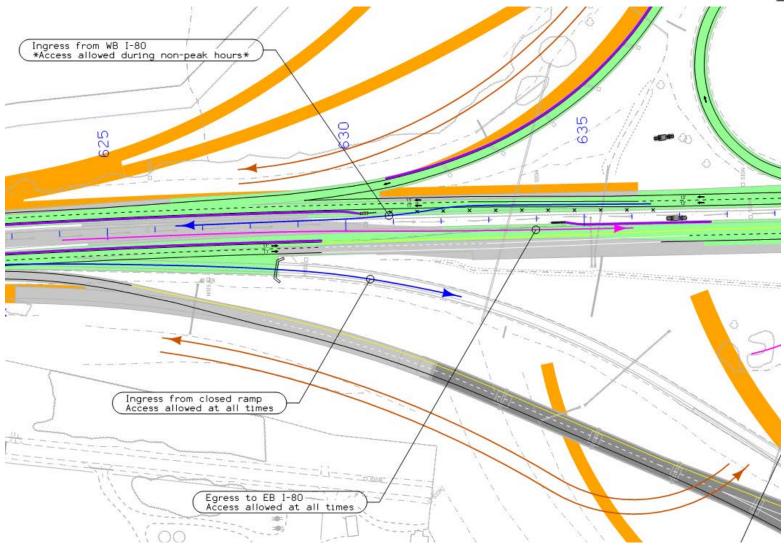






#### **STAGING – INGRESS / EGRESS**

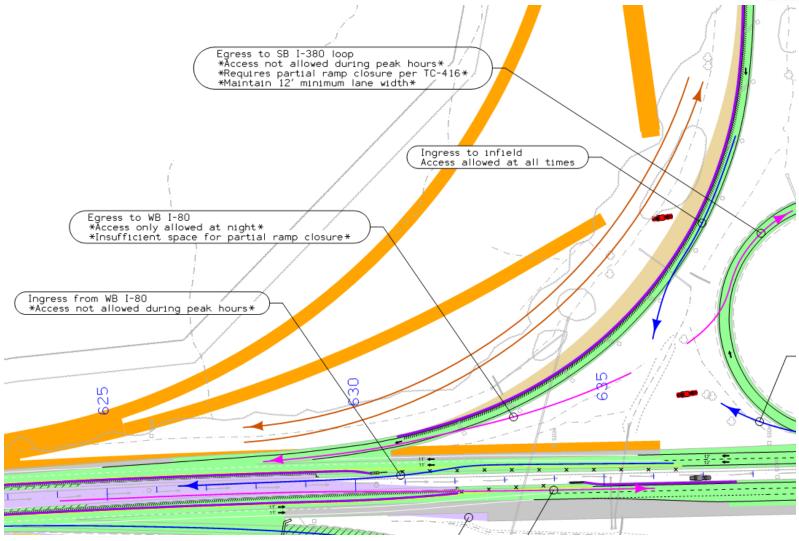






#### **STAGING – INGRESS / EGRESS**







#### **BARRIER RAIL - FINAL**



- » I-80 Median Barrier
  - » Aesthetics
  - » Matches I-80 to the East
- » I-380
  - » Same shape
  - » No aesthetic treatments
    - » No texture
    - » No color



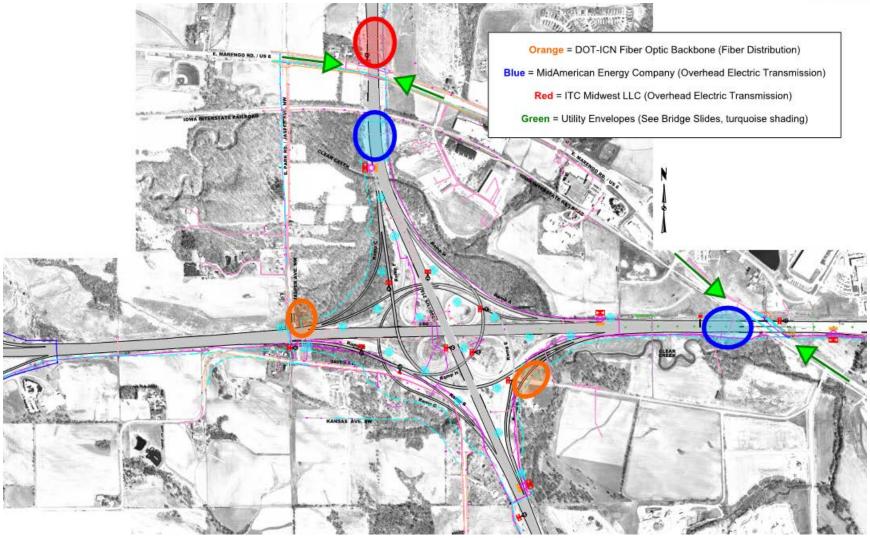


# Matt McLaughlin



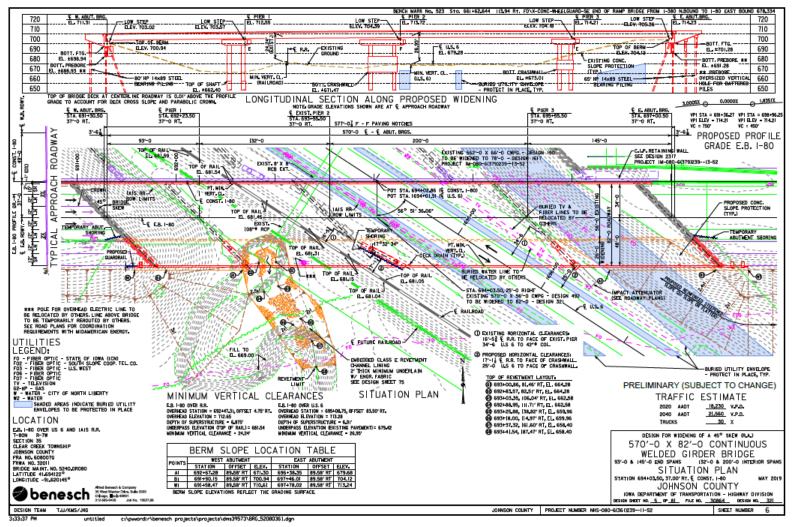
#### UTILITIES





## EXAMPLE OF UTILITY RELOCATION ENVELOPES





### **BREAK!**







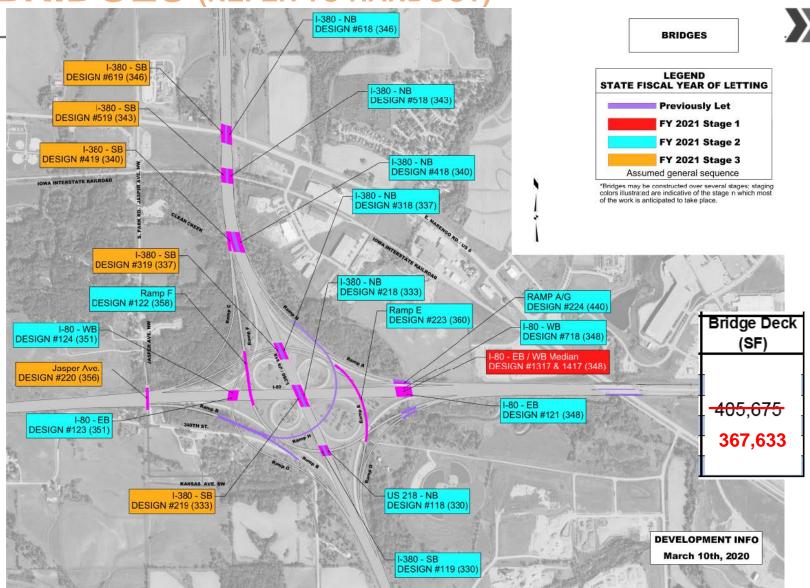
### **BRIDGES AND STRUCTURES**



### Steve Maifield

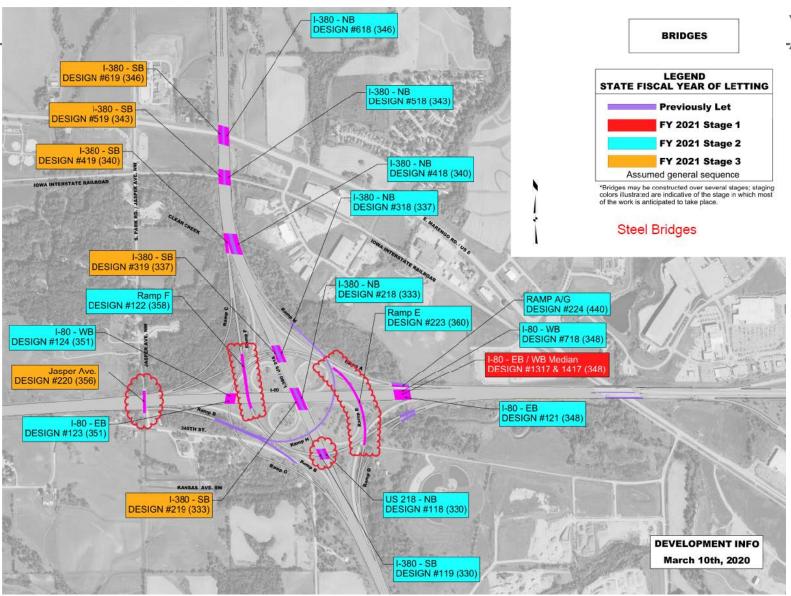


9-Apr-20 Bridge Deck SF estimate correction (REFER TO HANDOUT)



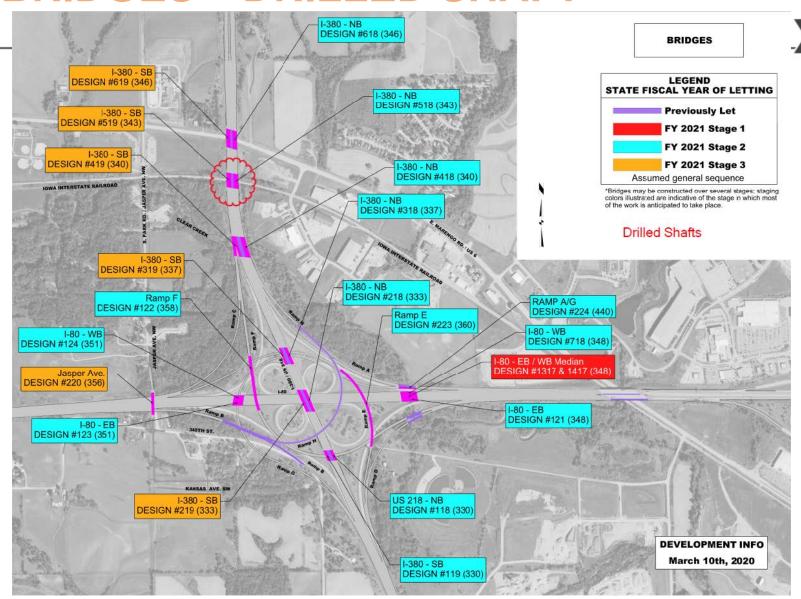


### **BRIDGES - STEEL**



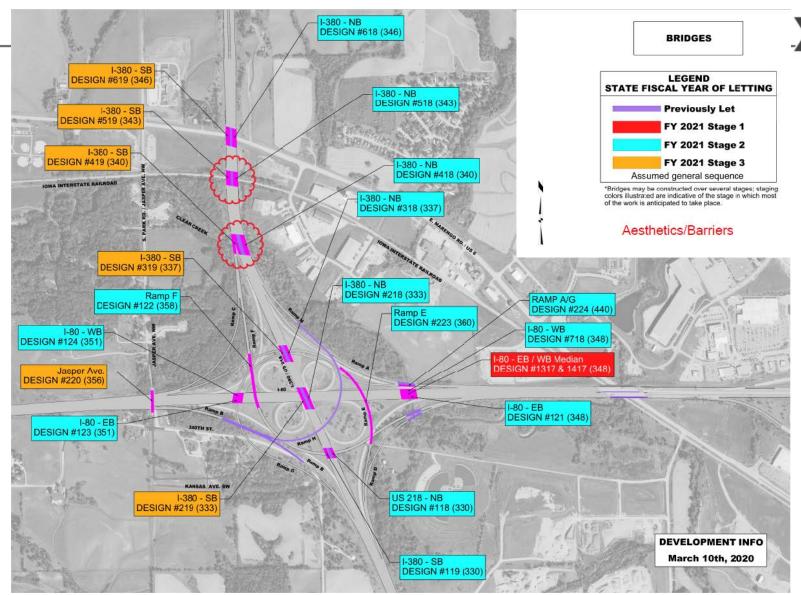


### **BRIDGES - DRILLED SHAFT**



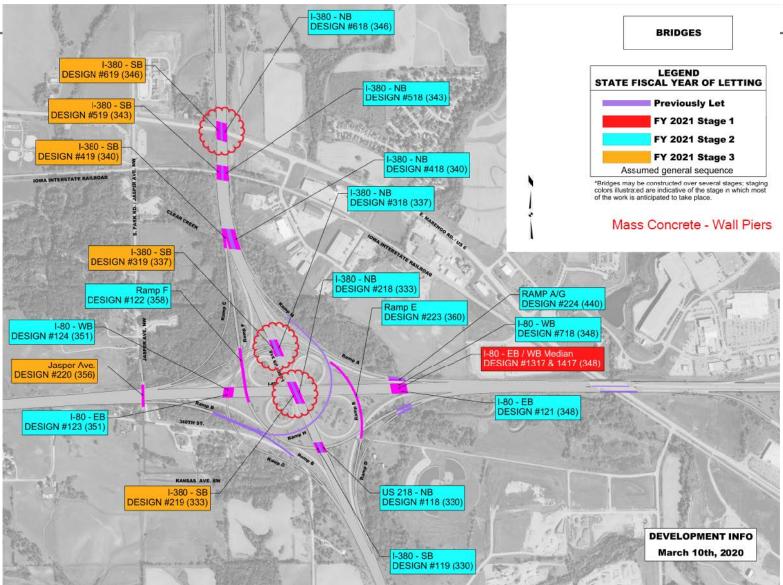


### **BRIDGES – AESTHETICS**



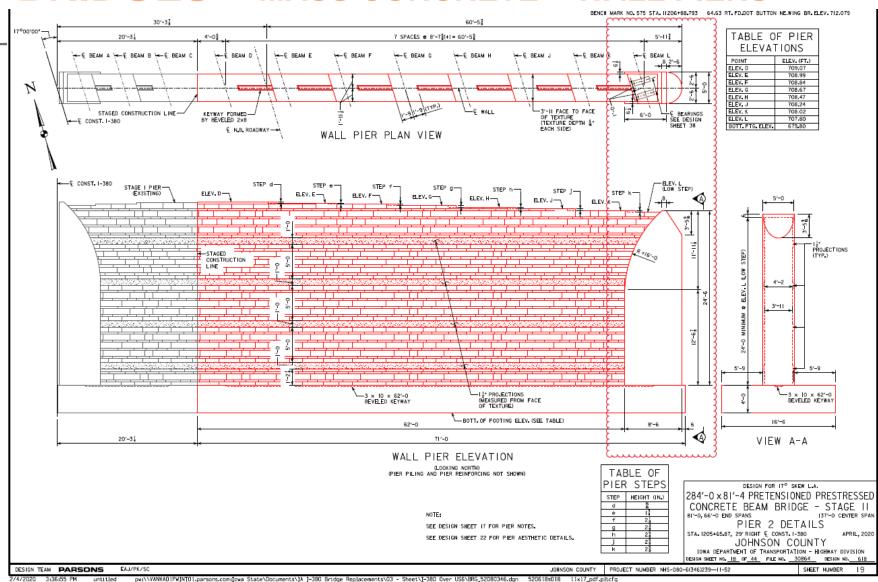


### **BRIDGES** – MASS CONCRETE – WALL PIERS



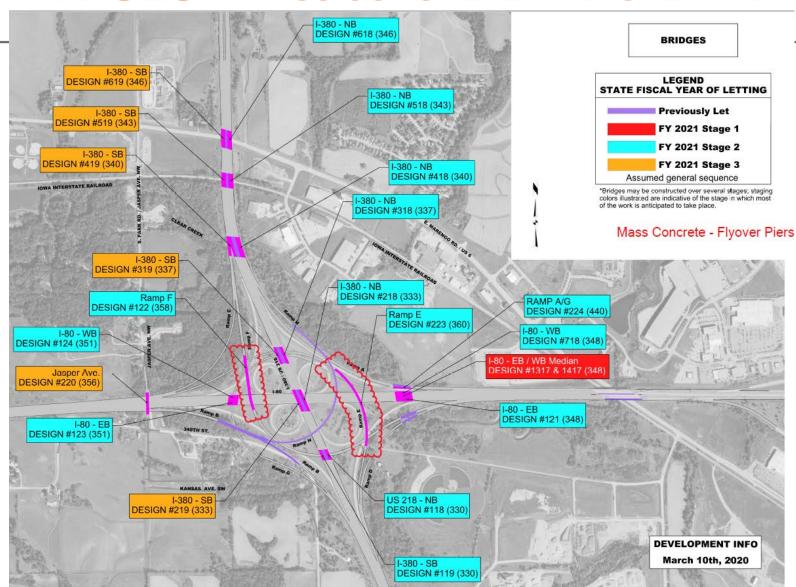


### **BRIDGES** - MASS CONCRETE - WALL PIERS



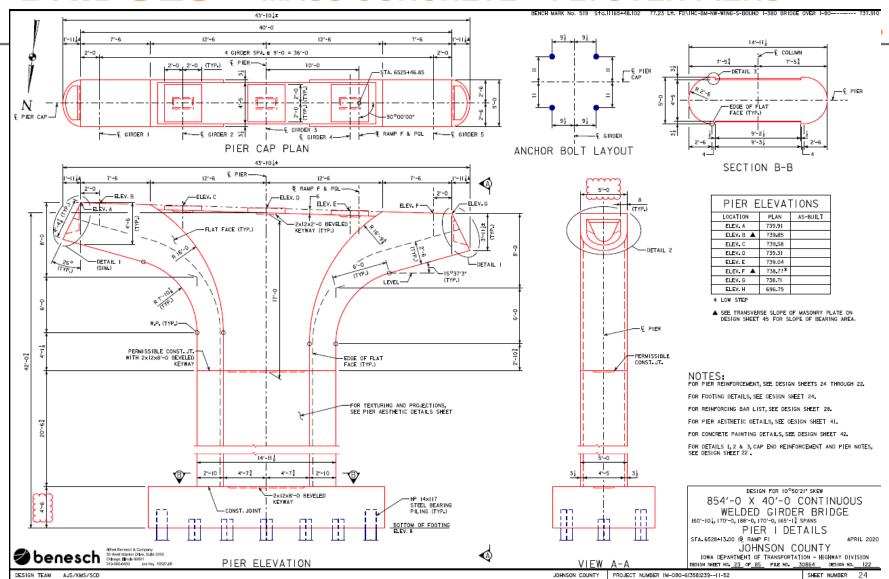


### **BRIDGES** – MASS CONCRETE – FLYOVER PIERS





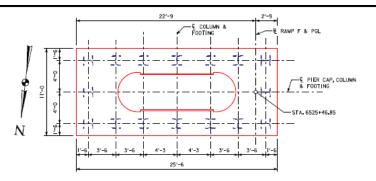
### **BRIDGES** – MASS CONCRETE – FLYOVER PIERS



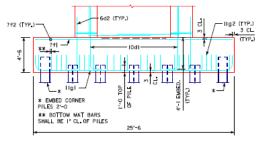


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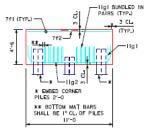
### BRIDGES - MASS CONCRETE - FLYOVER PIERS



PILE LAYOUT



FOOTING ELEVATION



FOOTING SIDE ELEVATION

NOTES:

### PIER I PILING NOTES:

THE CONTRACT LENGTH OF 75 FEET FOR THE PIER I PILES IS BASED ON A COHESIVE SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 425 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.7 FOR ROCK END BEARING, PILES WERE ALSO DESIGNED FOR A FACTORED TENSION FORCE OF 23 KIPS.

THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A COHESIVE SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI)OF 0.7 FOR ROCK END BEARING. PILES ARE ASSUMED TO BE DRIVEN FROM A START ELEVATION AT THE BOTTOM OF FOOTING.

THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR THE PIER I PILES IS 304 TONS AT END OF DRIVE OR RETAP. THE PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. IN NO CASE SHALL A PILE BE EMBEDDED LESS THAN 25 FEET. CONSTRUCTION CONTROL REQUIRES A WEAP ANALYSIS WITH BEARING GRAPH.

PIER PILES ARE DESIGNED TO ACCOMMODATE DOWNDRAG FORCE DUE TO SOIL CONSOLIDATION UNDER THE NEW EARTH FILL, PILES SHALL BE DRIVEN TO 213 TONS OF RESISTANCE BASED ON THEORETICAL DRIVING RESISTANCE THIS INCLUDES 9 TONS RESISTANCE FOR DOWNDRAG FORCES AND 204 TONS RESISTANCE FOR DEAD AND LIVE LOAD BEARING CAPACITY.

PILE DIMENSIONS ARE AT BOTTOM OF FOOTING.

16 - HPI4xII7 STEEL BEARING PILES ARE REQUIRED.

CAST IN-ONE-PIECE STEEL PILE POINTS ARE REQUIRED FOR THE PIER PILES IN ACCORDANCE WITH ARTICLE 4167,02 OF THE CURRENT STANDARD SPECIFICATIONS AND MATERIALS IM 468.

BUNDLED BARS SHALL BE TIED, WIRED, OR OTHERWISE FASTENED TO ENSURE THAT THEY REMAIN IN THEIR RELATIVE POSITION,



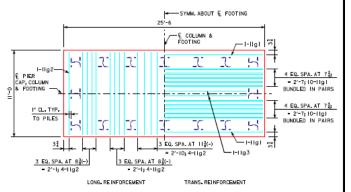
AJS/KMS/SCD

Affred Benesch & Compan 35 West Wacker Drive, Suite 3300 Chicago, I II nois 93901 312 565 0450 July No. 10527,06

FOR PIER REINFORCING, SEE DESIGN SHEETS 24 THROUGH 27 AND 22. FOR REINFORCING BAR LIST, SEE DESIGN SHEET 28.

26 SPA. AT II = 24'-II; 27-7f2 -K 741-€ COLUMN & (-)(=)(-)(=) II SPA. AT -7f2 -61 25'-6

> TOP FOOTING REINFORCING LAYOUT



BOTTOM FOOTING REINFORCING LAYOUT

> 854'-0 X 40'-0 CONTINUOUS WELDED GIRDER BRIDGE 160'-104, 170'-0, 188'-0, 170'-0, 165'-13 SPANS PIER I DETAILS STA 6528+13.00 (B RAMP F) APRIL 2020

JOHNSON COUNTY IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION DESIGN SHEET NO. 24 OF 85 FILE NO. 30864 DESIGN NO.

DESIGN FOR 10°50'21" SKEW

JOHNSON COUNTY

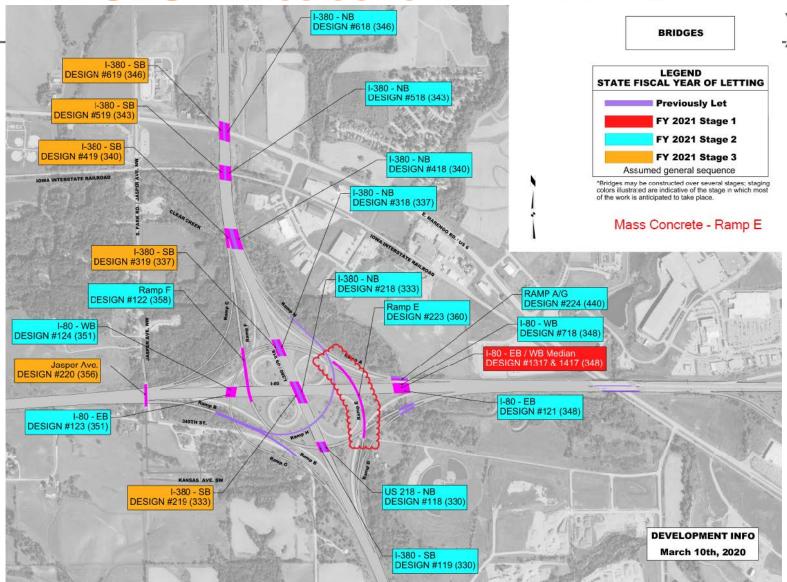
PROJECT NUMBER IM-080-6(358)239--11-52

DESIGN TEAM

c:\pwordir\benesch projects\projects\dms39575\BRG\_52080358.dgn

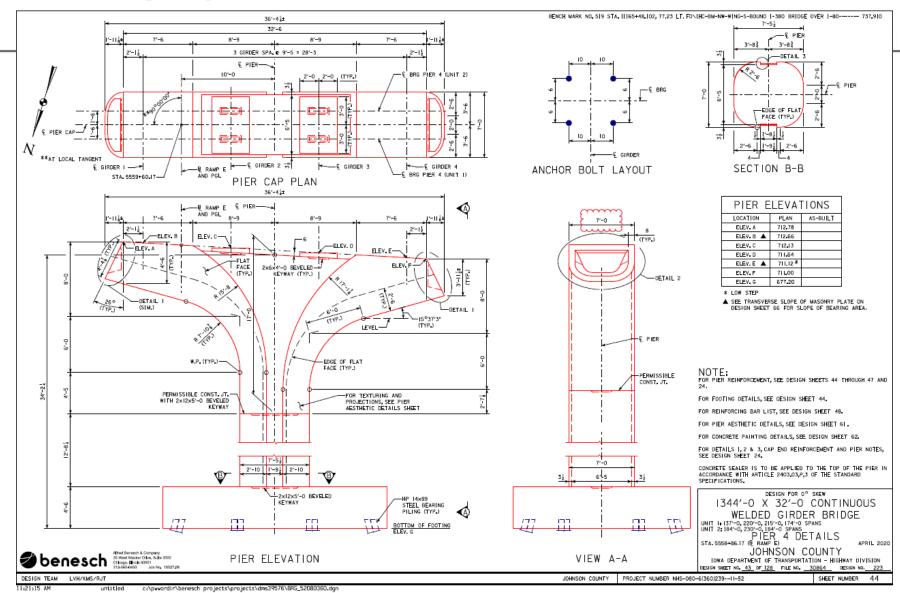


### **BRIDGES** - MASS CONCRETE - RAMP E





### **BRIDGES** - MASS CONCRETE - RAMP E





### **CONTRACT INFORMATION**



### Stacy Ryan



### CONTRACT - FY21



- » Advertisement May 19, 2020
- » Special Letting July 15, 2020
- Site Milestones and Completion
- » Bonuses
- » Special Provisions



## FY21 CONSTRUCTION COMMITMENTS AND SCHEDULE



- » July 2020 Letting
- » Substantial Completion Fall 2022 including:
  - » New Interstate lanes and outside shoulders open
  - » New Ramps open
- Work allowed to be completed in 2023
  - » Listed on slide for site 00 at end of sites
- » Contract completed Summer 2023



### **CONTRACT OVERVIEW**



### **Draft Contract Time**

Proposal ID- 52-0806-372 Letting: July 15, 2020

Site ID	Site Details		Liquidated Damages
00	Completion Date	7/15/2023	\$4,000
	Overall Project		
01	Completion Date	11/18/2022	\$14,500
	Complete I-80 WB to I-380 NB Ramp A		
02	Completion Date	11/18/2022	\$14,500
	Complete I-380 SB to I-80EB Ramp F		
03	Completion Date	11/18/2022	\$10,000
	Complete I-80 WB		
04	Completion Date	11/18/2022	\$10,000
	Complete I-80 EB		
05	Completion Date	11/18/2022	\$6,000
	Complete US-218 NB to I-80 WB Ramp E		
06	Completion Date	11/18/2022	\$6,000
	Complete I-80 WB to US-218 SB Ramp G		
07	Completion Date	11/18/2022	\$10,000
	Substantial Completion of Interchanges. See	details below.	

### **CONTRACT OVERVIEW**



### **Draft Contract Time**

Proposal ID- 52-0806-372 Letting: July 15, 2020

Site ID		Site Details		Liquidated Damages
08	No Specified Start Date		10 Calendar Days	\$10,500
	Critical Closure Ramp H.			
09	No Specified Start Date		5 Calendar Days	\$22,000
	Critical Closure Ramp H / B.			
10	No Specified Start Date		90 Calendar Days	\$10,000
	Critical Closure Ireland Ramp D.			
11	No Specified Start Date		5 Calendar Days	\$11,500
	Critical Closure Ramp B.			
12	No Specified Start Date		14 Calendar Days	\$19,500
	Critical Closure IA 965 Ramp C.			
13	No Specified Start Date		14 Calendar Days	\$20,000
	Critical Closure Ramp C.			
14	No Specified Start Date		90 Calendar Days	\$17,500
	Critical Closure Ramp D.			



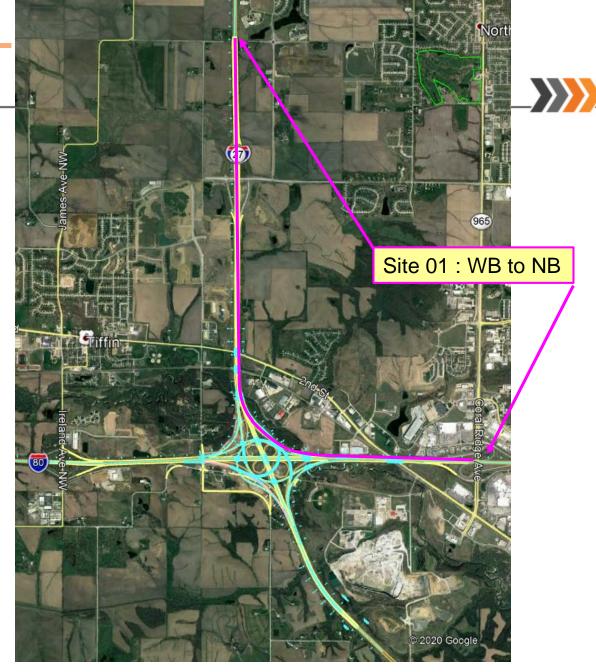
### **CONTRACT OVERVIEW**



### **Draft No Excuse Bonuses**

	Bonus	Date	Amount
No.1	Complete I-380 SB Stage 2F Traffic Switch	11/17/2021	\$350,000
No.2	Complete I-80 WB to I-80/I-380 Ramp A to I-380 NB	11/18/2020	\$2,175,000
No.3	Complete I-380 SB to I-80/I-380 Ramp F to I-80 EB	11/18/2020	\$2,175,000
No.4	Complete I-80 WB	11/18/2020	\$1,500,000
No.5	Complete I-80 EB	11/18/2020	\$1,500,000

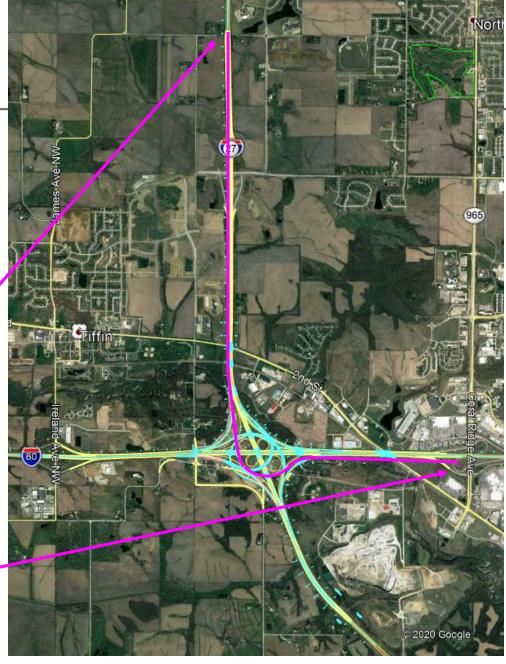




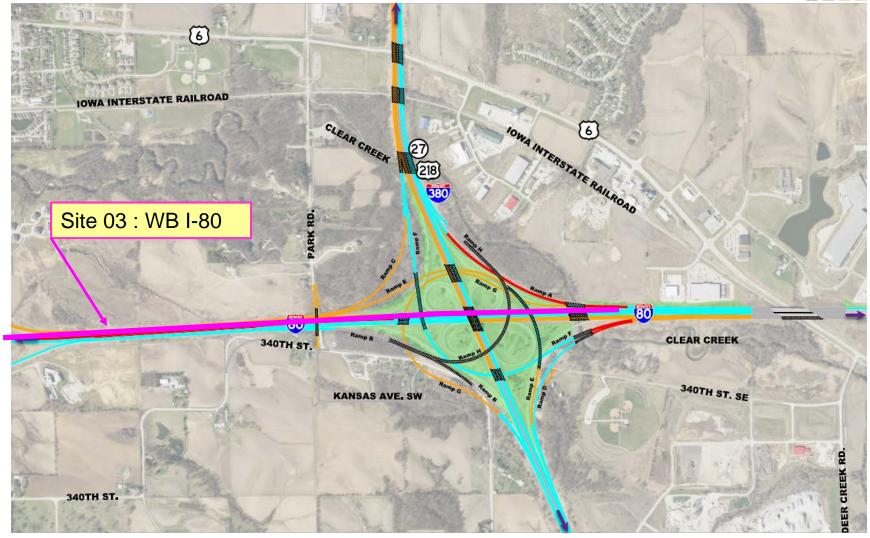




Site 02: SB to EB

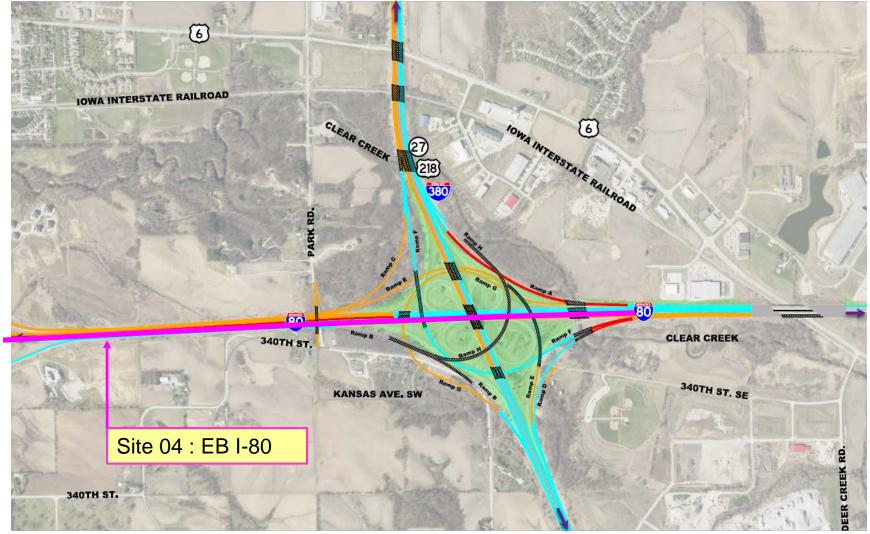






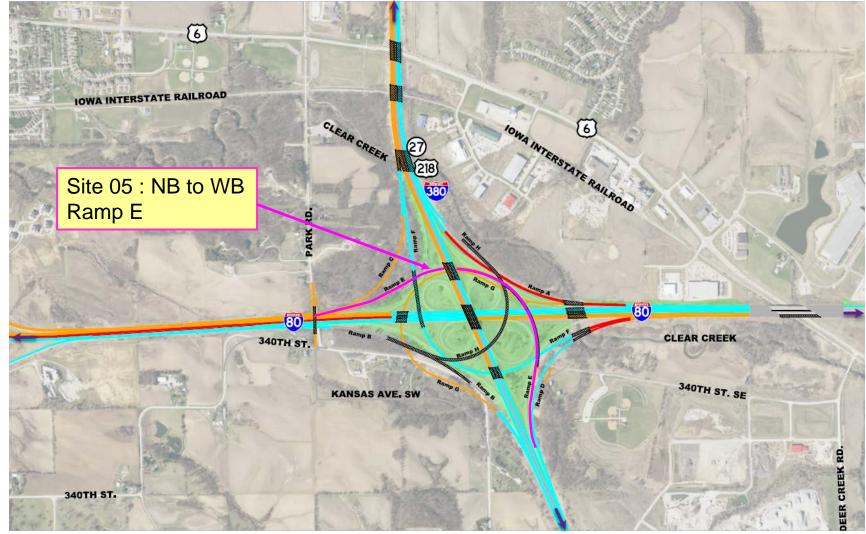






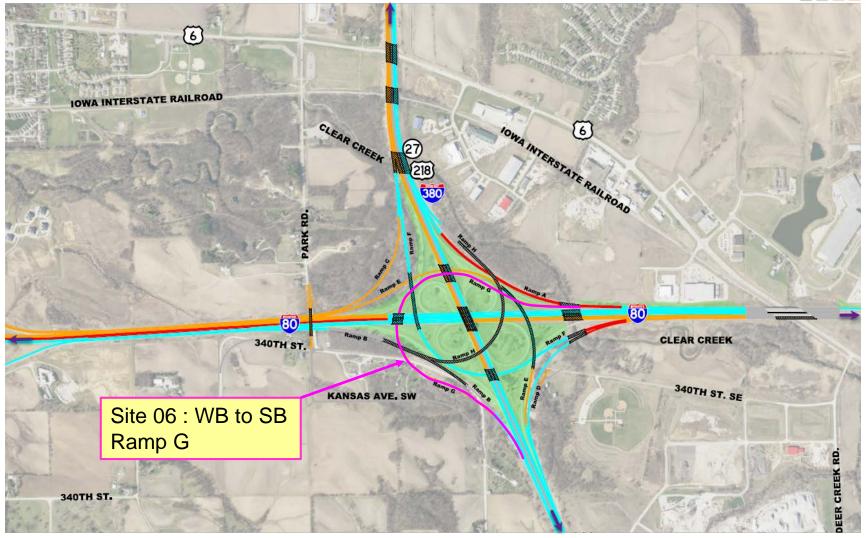








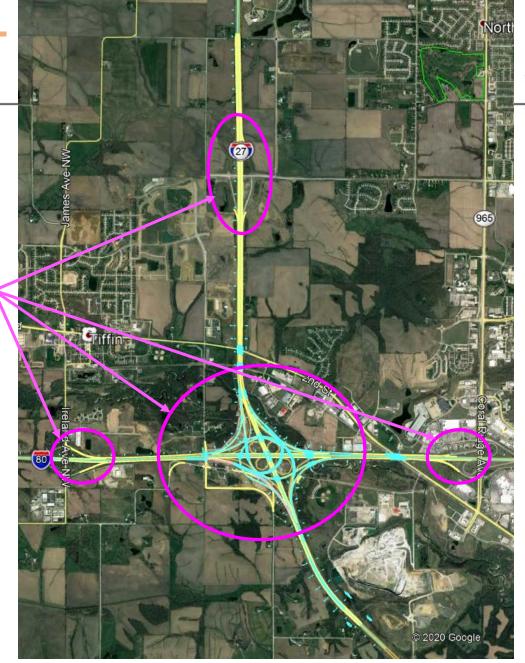






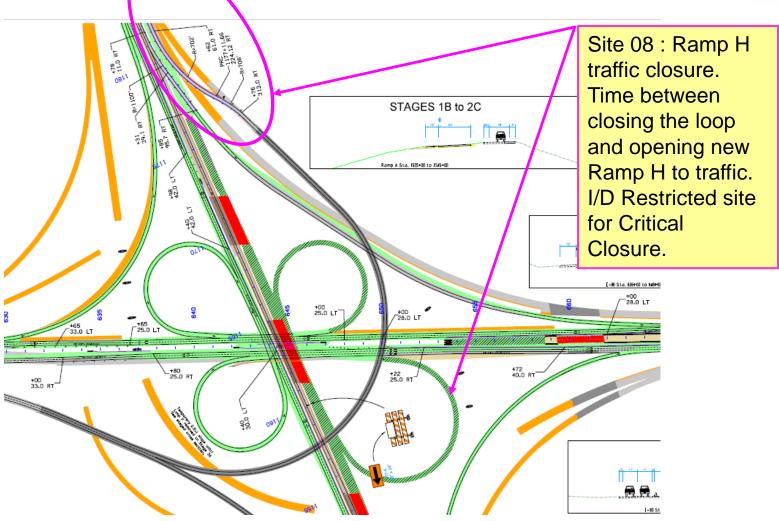
Site 07 : All remaining interchange ramps including:

- 80/380,
- Forevergreen Road,
- Ireland Ave,
- Coral Ridge Ave



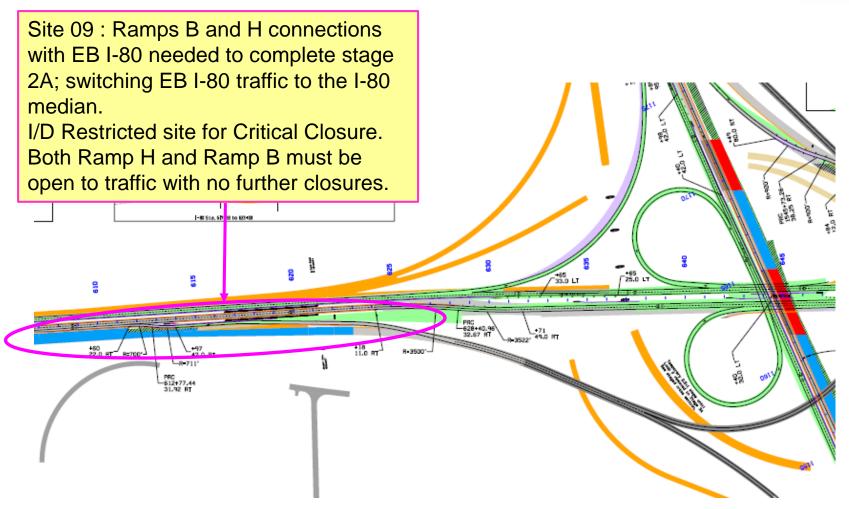












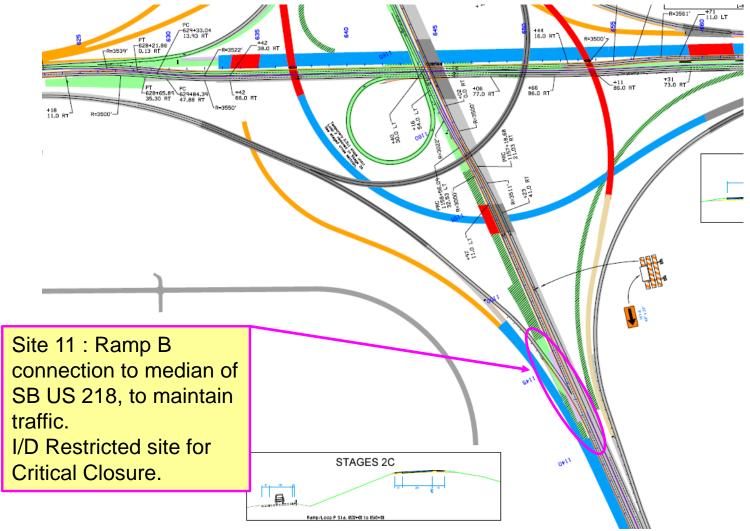




Site 10 : Ireland Ramp D open to traffic. I/D Restricted site for Critical Closure.

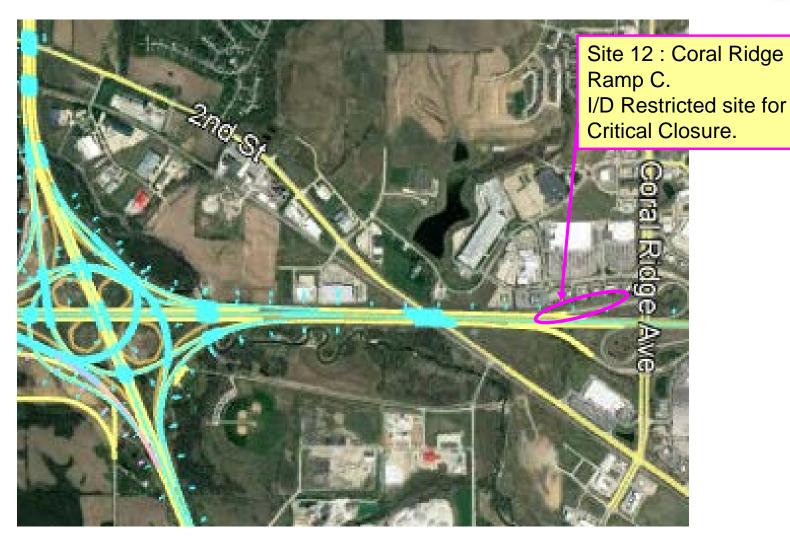






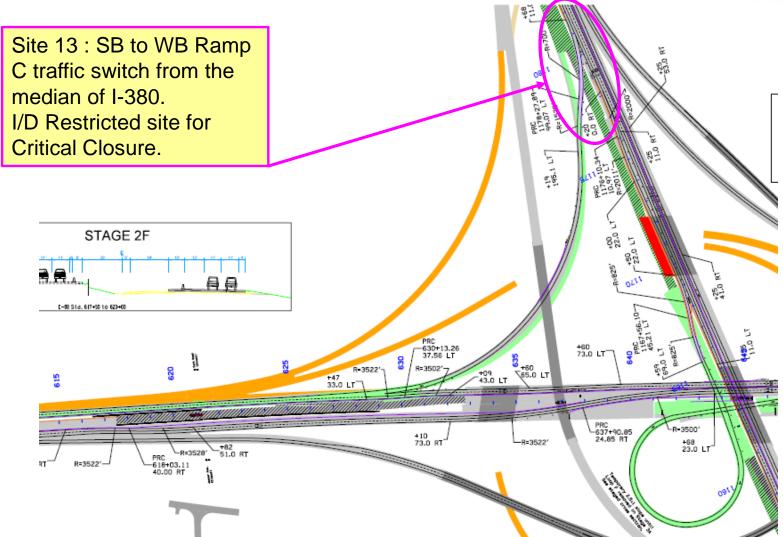




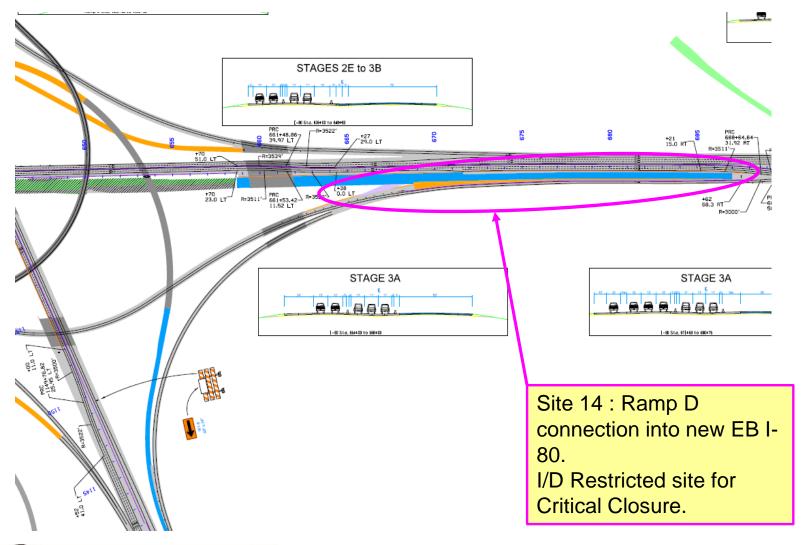












GETTING YOU THERE >>>> I-80/I-380 SYSTEMS INTERCHANGE

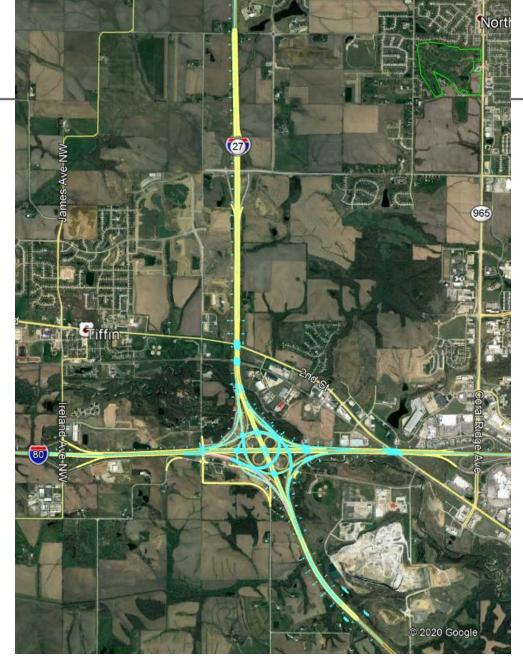
### CONTRACT – SITES

Site 00 – Contract Completion

- -LD
- -Completion Date 7/15/2023
- -This site covers all work not covered by the other sites

Work allowed to be completed in 2023 may include:

- Jasper Ave (a.k.a. Park Road) Bridge
- I-80 and I-380 Median Barriers
- Final signing and lighting
- Component pavement markings
- Wall near City Park
- Off-roadway work





### **SPECIAL PROVISIONS**



# Matt McLaughlin Linda Narigon





- » Contracting Times and Bonuses (SP to be developed)
- » Project Partnering
- » Progress Scheduling
- » e-Builder
- » Railroad Work on Iowa Interstate RR ROW
- Instrumentation and Monitoring
- » Mass Concrete
- » Aesthetic Treatment for Concrete Barrier





- » Cement Treated Subgrade
- » Aesthetic Treatment of MSE Retaining Wall Concrete Panels
- » Girder Erection Plan
- » Anti-Graffiti Coating (at RR under discussion and consideration to include)
- » Multi-Component Liquid Pavement Markings
- » Preformed Thermoplastic Pavement Markings
- » ITS Infrastructure
- » Lane Rental



### » Lane Rental (Overnight Closures)

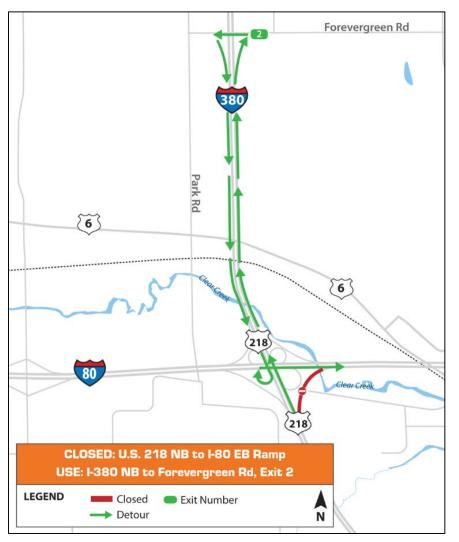


Table 1 – Weekday Full Closure Lane Rental Assessment Rates					
Time of Day	I-80 Eastbound Closure at Jasper Ave Bridge Demo (\$/hour)	I-80 Westbound Closure at Jasper Ave Bridge Demo (\$/hour)	I-80 Eastbound Closure (\$/hour)		
12:00 AM - 1:00 AM	\$500	\$500	\$500		
1:00 AM - 2:00 AM	\$500	\$500	\$500		
2:00 AM - 3:00 AM	\$500	\$500	\$500		
3:00 AM - 4:00 AM	\$500	\$500	\$500		
4:00 AM - 5:00 AM	\$500	\$500	\$500		
5:00 AM - 6:00 AM	\$1,500	\$1,000	\$4,000		
6:00 AM - 7:00 AM	-	-	-		
7:00 AM - 8:00 AM	-	-	-		
8:00 AM - 9:00 AM	-	-	-		
9:00 AM - 10:00 AM	-	-	-		
10:00 AM - 11:00 AM	-	-	-		
11:00 AM - 12:00 PM	-	-	-		
12:00 PM - 1:00 PM	-	-	-		
1:00 PM - 2:00 PM	-	-	-		
2:00 PM - 3:00 PM	-	-	-		
3:00 PM - 4:00 PM	-	-	-		
4:00 PM - 5:00 PM	-	-	-		
5:00 PM - 6:00 PM	-	-	-		
6:00 PM - 7:00 PM	-	-	-		
7:00 PM - 8:00 PM	-	-	-		
8:00 PM - 9:00 PM	\$3,500	\$2,500	\$7,000		
9:00 PM - 10:00 PM	\$2,000	\$1,500	\$5,000		
10:00 PM - 11:00 PM	\$2,000	\$1,000	\$3,500		
11:00 PM - 12:00 AM	\$500	\$500	\$500		
- Prohibited Full Closure Times					





- » Progress Scheduling planned changes to the SP (compared to last letting)
  - » More frequent updates
  - \*\*- Resource Cost Loading 9-Apr-20 correction





» IAIS RR Agreement and Special Provision



### **QUESTIONS/FEEDBACK**







### **CLOSING REMARKS**









AGC MEETING - MARCH 23, 2020

PROJECT NUMBER IMN-080-6(235)239--0E-52