

DATE-

LOCATION-

REVISIONS-

FINISHED PLANS-

SURVEY NO.

DATE-

LOCATION-

REVISIONS-

FINISHED PLANS-

SURVEY NO.

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

- 1

Install 3-3" Conduits
- 2

Install New No. 9 Pull Box
- 3

Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 4

Install 6 6'x6' Detector Loops, and Detection Cabinet
- 5

Install 2-3" Conduits
- 6

Install 8 6'x6' Detector Loops, and Detection Cabinet
- 7

Install DMS Structure, DMS, and Cabinet
- 8

Install 4-3" Conduits
- 9

Existing Structure, DMS to Remain
- 10

Install 12 6'x6' Detector Loops, and Detection Cabinet
- 11

Install 10 6'x6' Detector Loops, and Detection Cabinet
- 12

Remove Existing DMS Structure, DMS
- 13

Install 4 6'x6' Detector Loops, and Detection Cabinet
- 14

Install 2 6'x6' Detector Loops, and Detection Cabinet
- 15

Install New SONET Node Building
- 16

Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 17

Install Wrong Way Driving Detection System
- 18

Existing No. 9 Pull Box to Remain
- 19

Existing ITS Conduit to Remain

- 20

Install 6 6'x6' Detector Loops
- 21

Install 8 6'x6' Detector Loops
- 22

Install 10 6'x6' Detector Loops
- 23

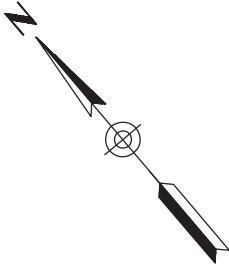
Install 4 6'x6' Detector Loops

	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES		DCR NOT FOR CONSTRUCTION OR RECORDING	
DESIGN	APM	08-17	JACOBS			
DRAWN	JD	08-17				
CHECKED	SMK		PAVEMENT MRKNG, SIGN & FMS PLANS I-10/SR210 Constructioin Notes I-10 SYSTEM ALT I			
ROUTE		LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10		
I-10				SHEET TS01.01		
TRACS NO. H7825 OIL				010-E(210)A	___ OF ___	

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

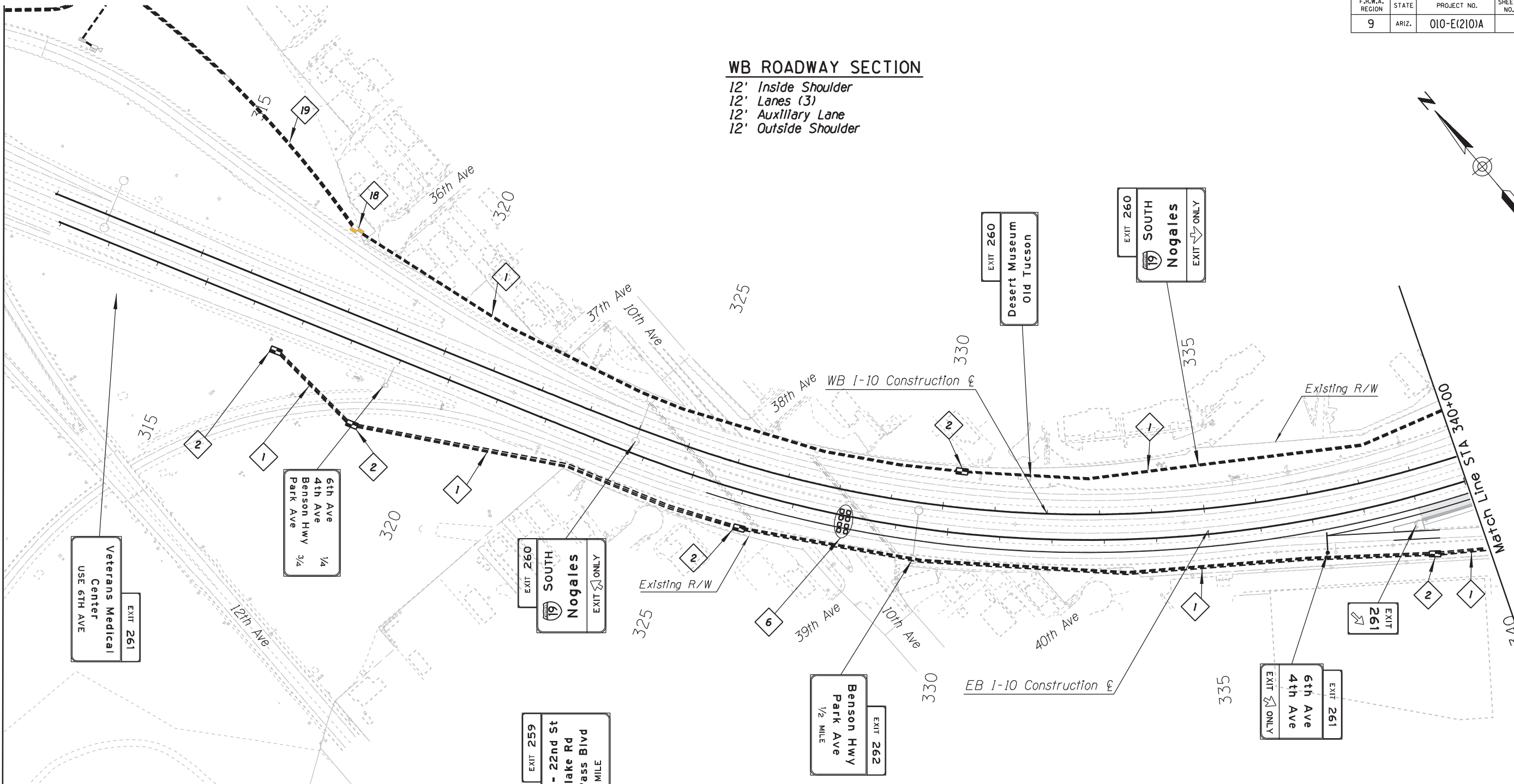
WB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (3)
12' Auxillary Lane
12' Outside Shoulder



Begin Project

SURVEY NO.	FINISHED PLANS	DATE	LOCATION	REVISIONS	DATE	LOCATION	REVISIONS	DATE	LOCATION	REVISIONS



- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 6 Install 8 6' x6' Detector Loops, and Detection Cabinet
- 18 Existing No. 9 Pull Box to Remain
- 19 Existing ITS Conduit to Remain

EXIT 260
SOUTH
Nogales
EXIT ONLY

EXIT 259
29th St - 22nd St
Silverlake Rd
Starr Pass Blvd
1/4 MILE

WEST
Phoenix

EXIT 262
Benson Hwy
Park Ave
1/2 MILE

EXIT 261
6th Ave
4th Ave
EXIT ONLY

EXIT 260
Desert Museum
Old Tucson

EXIT 260
SOUTH
Nogales
EXIT ONLY

EXIT 261
6th Ave
4th Ave
EXIT ONLY

EXIT 261

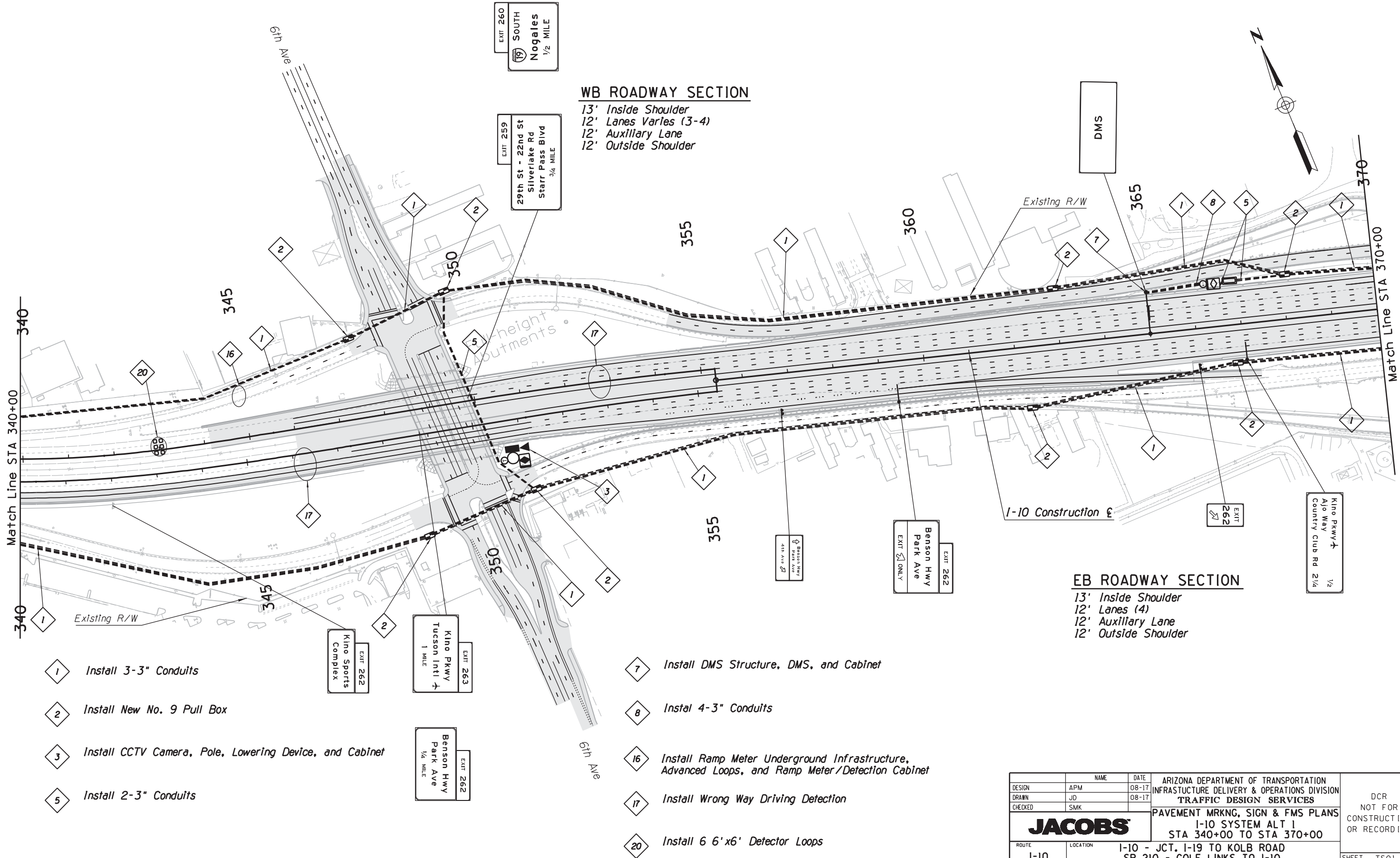
EB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (3)
12' Auxillary Lane
12' Outside Shoulder

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 315+00 TO STA 340+00
DESIGN	APM		08-17	
DRAWN	JD		08-17	
CHECKED	SMK			
JACOBS				
ROUTE		LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10
I-10				
TRACS NO. H7825 OIL				010-E(210)A

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

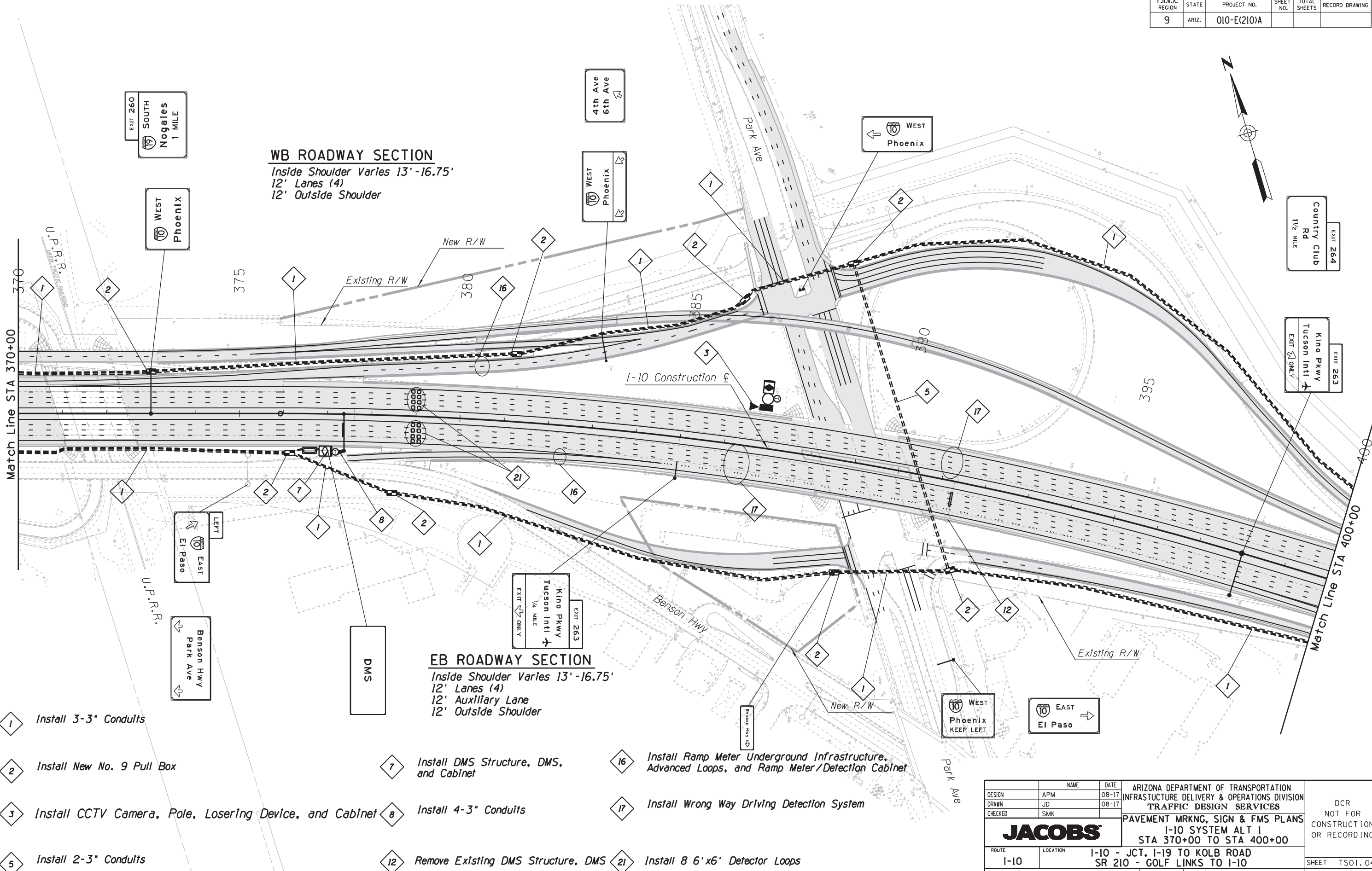
DATE-	LOCATION-	REVISIONS-	FINISHED PLANS-	SURVEY NO.	DATE-	LOCATION-	REVISIONS-	FINISHED PLANS-	SURVEY NO.



- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 5 Install 2-3" Conduits
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Instal 4-3" Conduits
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 17 Install Wrong Way Driving Detection
- 20 Install 6 6'x6' Detector Loops

DESIGN	APM	DATE	08-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES JACOBS PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 340+00 TO STA 370+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	08-17		
CHECKED	SMK				
ROUTE	I-10	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	SHEET	TS01.03
TRACS NO.	H7825 OIL			010-E(210)A	OF

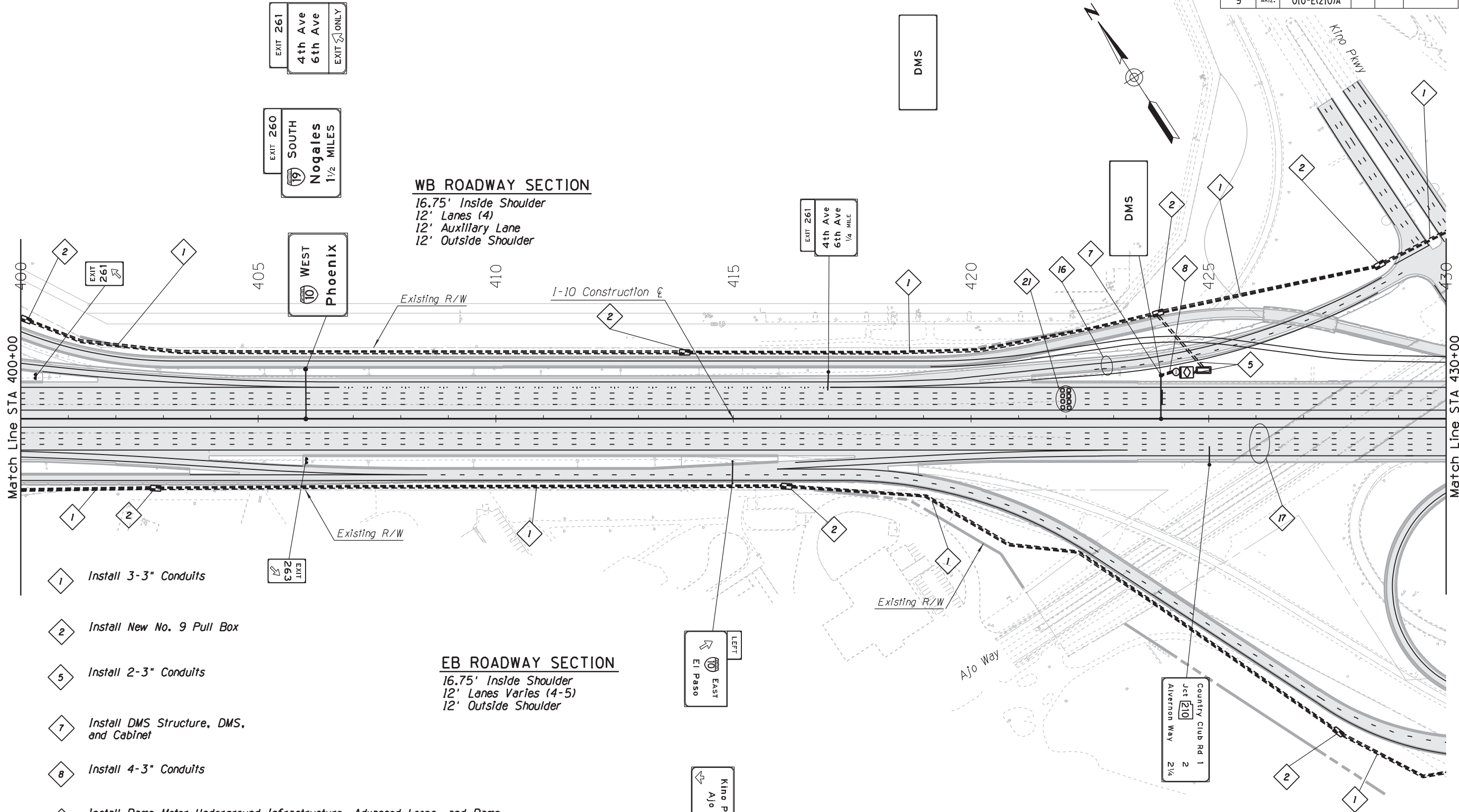
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Losing Device, and Cabinet
- 5 Install 2-3" Conduits
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits
- 12 Remove Existing DMS Structure, DMS
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 17 Install Wrong Way Driving Detection System
- 21 Install 8 6'x6' Detector Loops

DESIGN	APM	DATE	08-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES JACOBS PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 370+00 TO STA 400+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	08-17		
CHECKED	SMK				
ROUTE	I-10	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	SHEET	TS01.04
TRACS NO.	H7825 OIL		010-E(210)A		OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

16.75' Inside Shoulder
12' Lanes (4)
12' Auxiliary Lane
12' Outside Shoulder

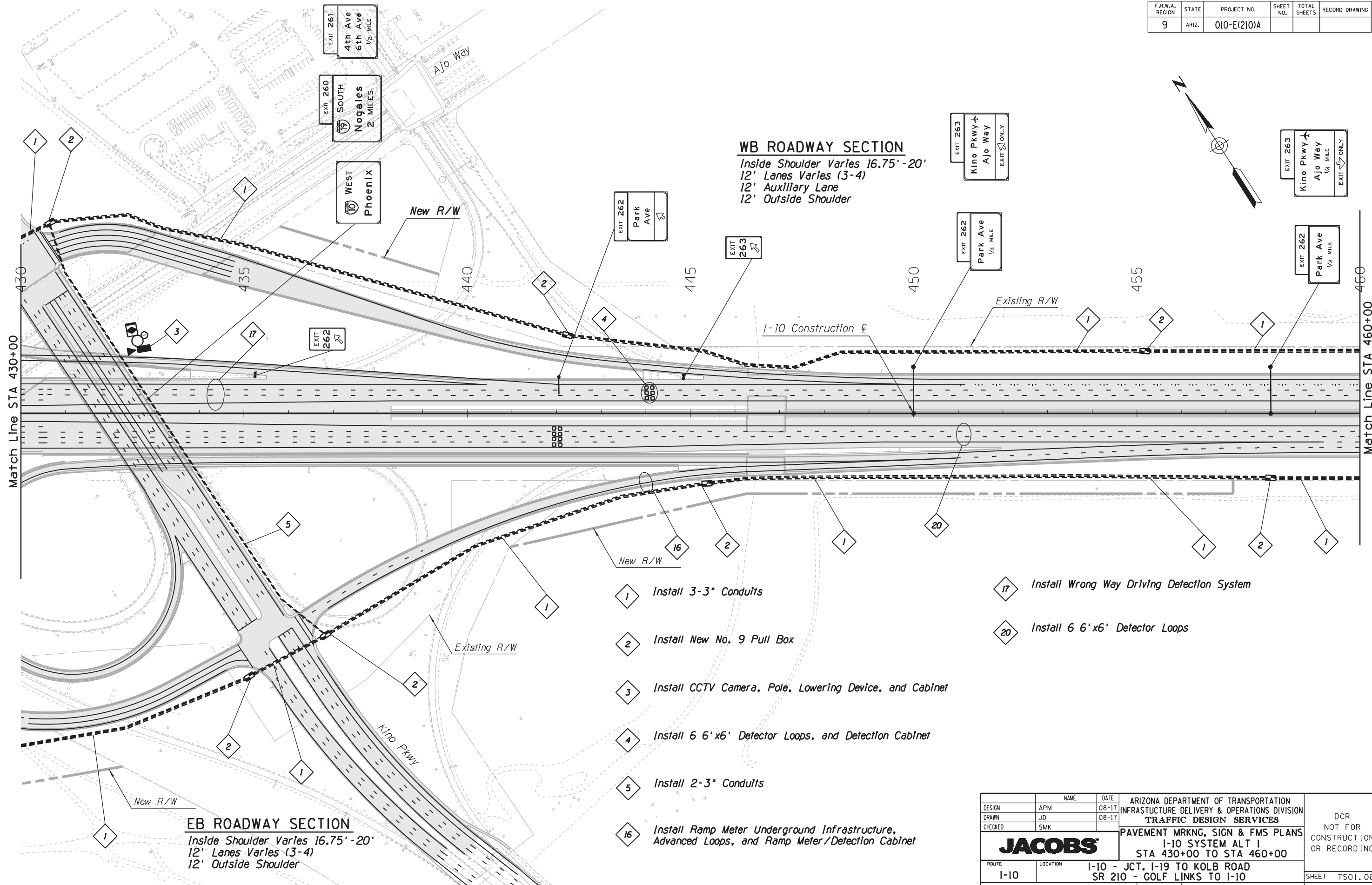
EB ROADWAY SECTION

16.75' Inside Shoulder
12' Lanes Varies (4-5)
12' Outside Shoulder

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 5 Install 2-3" Conduits
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 17 Install Wrong Way Driving Detection System
- 21 Install 8 6'x6' Detector Loops

DESIGN	APM	DATE	08-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	08-17		
CHECKED	SMK				
JACOBS				PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 400+00 TO STA 430+00	
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10			SHEET TS01.05
TRACS NO. H7825 OIL				010-E(210)A	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



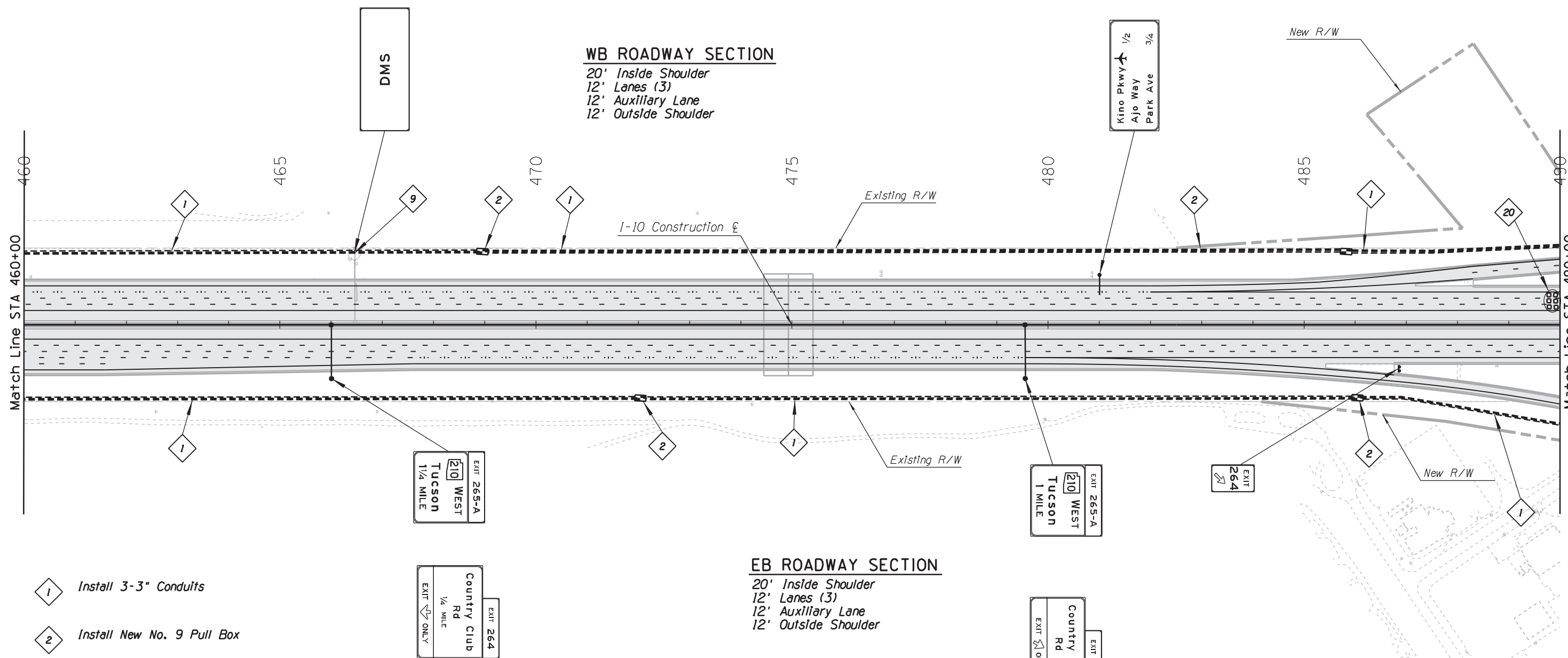
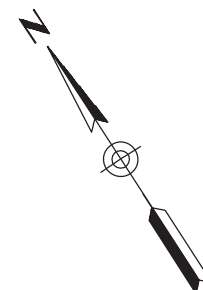
WB ROADWAY SECTION
Inside Shoulder Varies 16.75' - 20'
12' Lanes Varies (3-4)
12' Auxiliary Lane
12' Outside Shoulder

EB ROADWAY SECTION
Inside Shoulder Varies 16.75' - 20'
12' Lanes Varies (3-4)
12' Outside Shoulder

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 4 Install 6 6'x6' Detector Loops, and Detection Cabinet
- 5 Install 2-3" Conduits
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 17 Install Wrong Way Driving Detection System
- 20 Install 6 6'x6' Detector Loops

DESIGN	APM	DATE	08-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	08-17		
CHECKED	SMK				
JACOBS				PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 430+00 TO STA 460+00	
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10			SHEET TS01.06
TRACS NO. H7825 OIL			010-E(210)A		OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



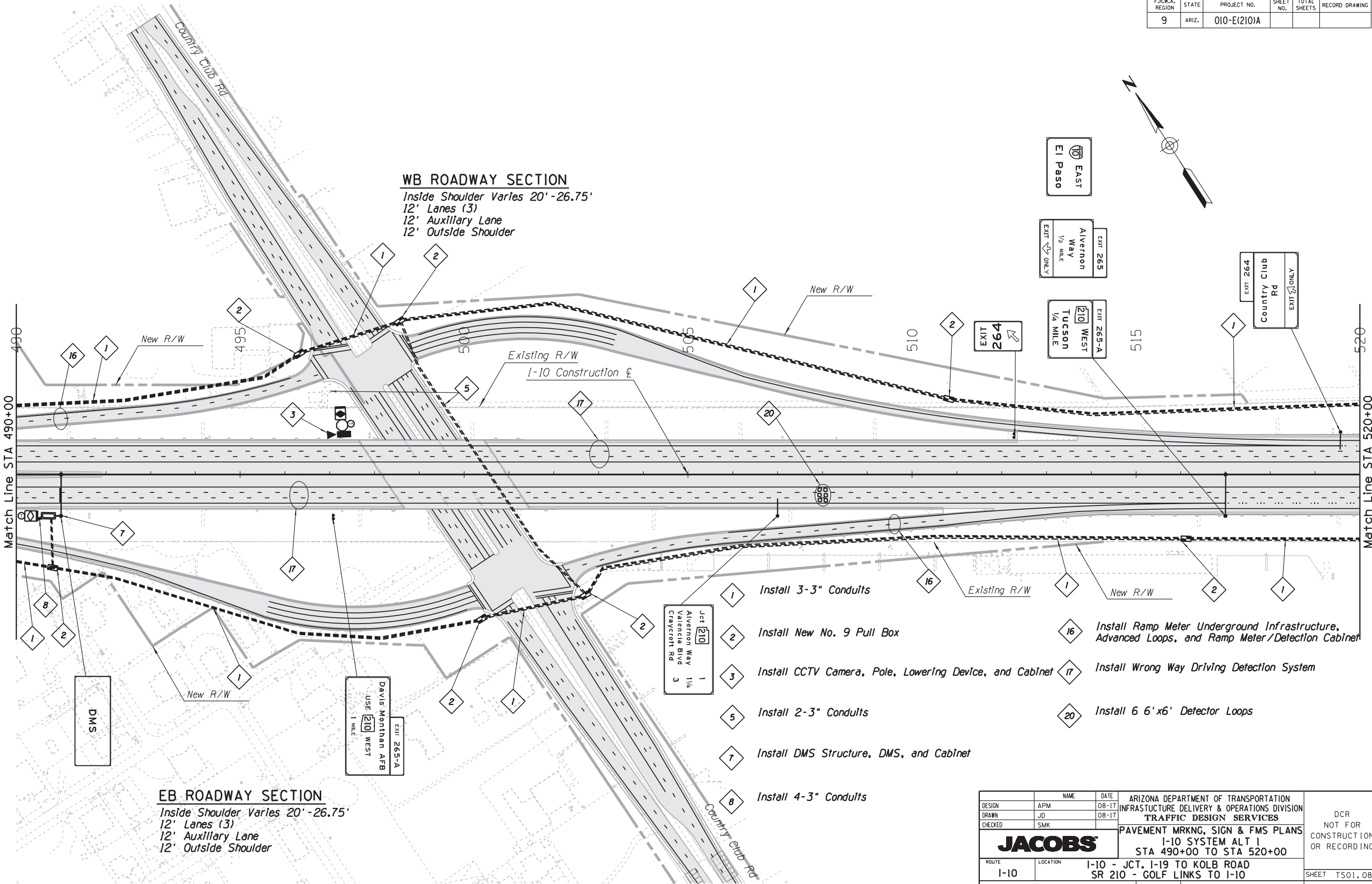
- 1 *Install 3-3" Conduits*
- 2 *Install New No. 9 Pull Box*
- 9 *Existing Structure, DMS to Remain*
- 20 *Install 6 6' x 6' Detector Loops*

EB ROADWAY SECTION

20' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder

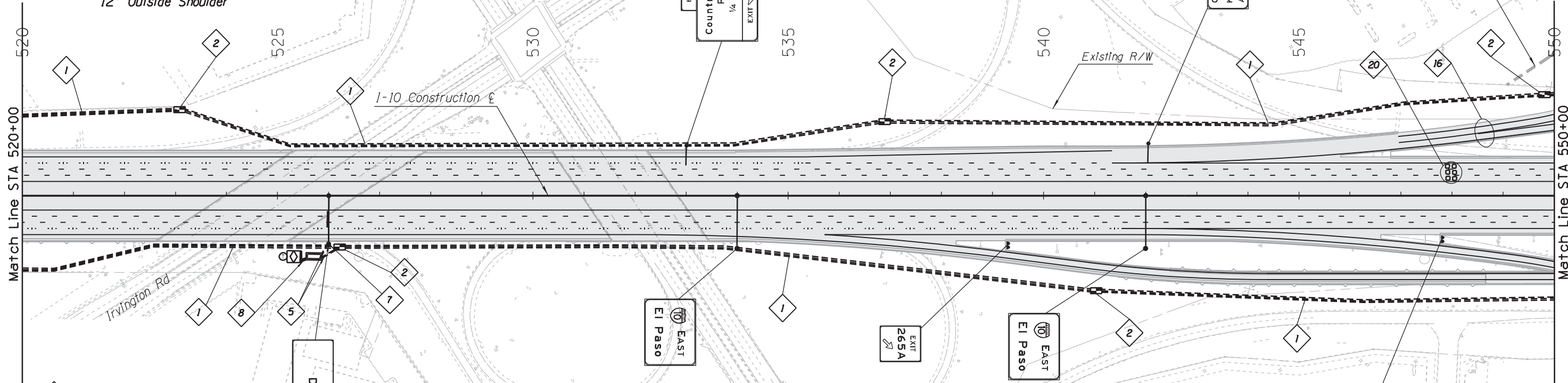
		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION		DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM	08-17	INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION			
DRAWN	JD	08-17	TRAFFIC DESIGN SERVICES			
CHECKED	SMK		PAVEMENT MRKNG, SIGN & FMS PLANS			
				I-10 SYSTEM ALT 1		TS01.0
				STA 460+00 TO STA 490+00		
ROUTE	LOCATION		I-10 - JCT. I-19 TO KOLB ROAD			SHEET
I-10			SR 210 - GOLF LINKS TO I-10			
TRACS NO. H7825 OIL			010-E(210)A			OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	APM	08-17	PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 490+00 TO STA 520+00	SHEET TS01.08
CHECKED	JD	08-17		
ROUTE I-10			LOCATION I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	
TRACS NO. H7825 OIL			010-E(210)A	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



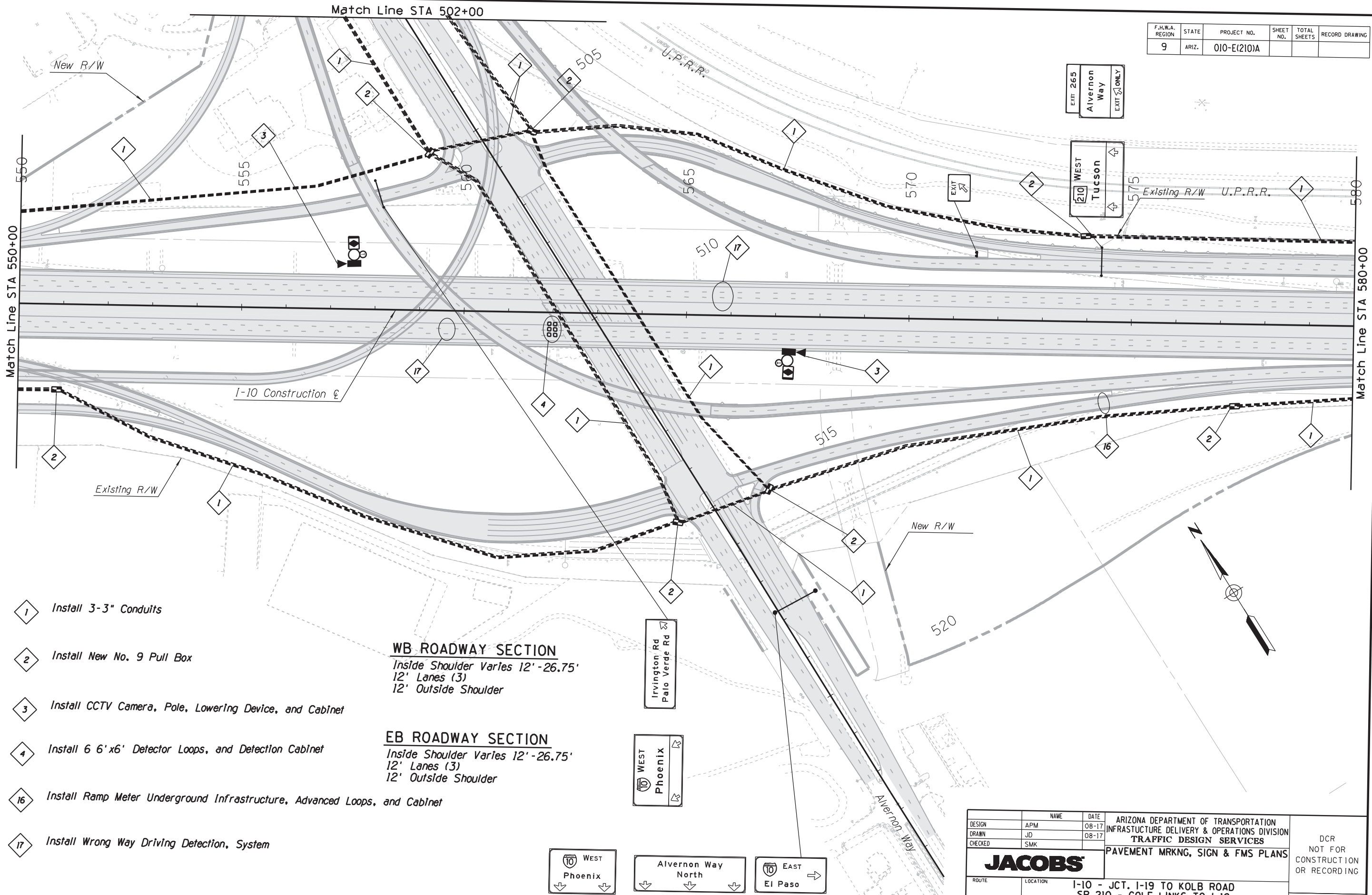
- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 5 Install 2-3" Conduits
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter /Detection Cabinet
- 20 Install 6 6' x6' Detector Loops

EB ROADWAY SECTION

26.75' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder

DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
APM		08-17		
JD		08-17		
SMK				
ROUTE			I-10 - JCT. I-19 TO KOLB ROAD	
LOCATION			SR 210 - GOLF LINKS TO I-10	
TRACS NO. H7825 OIL			010-E(210)A	
			SHEET TS01.09	
			OF	

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 4 Install 6 6'x6' Detector Loops, and Detection Cabinet
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Cabinet
- 17 Install Wrong Way Driving Detection, System

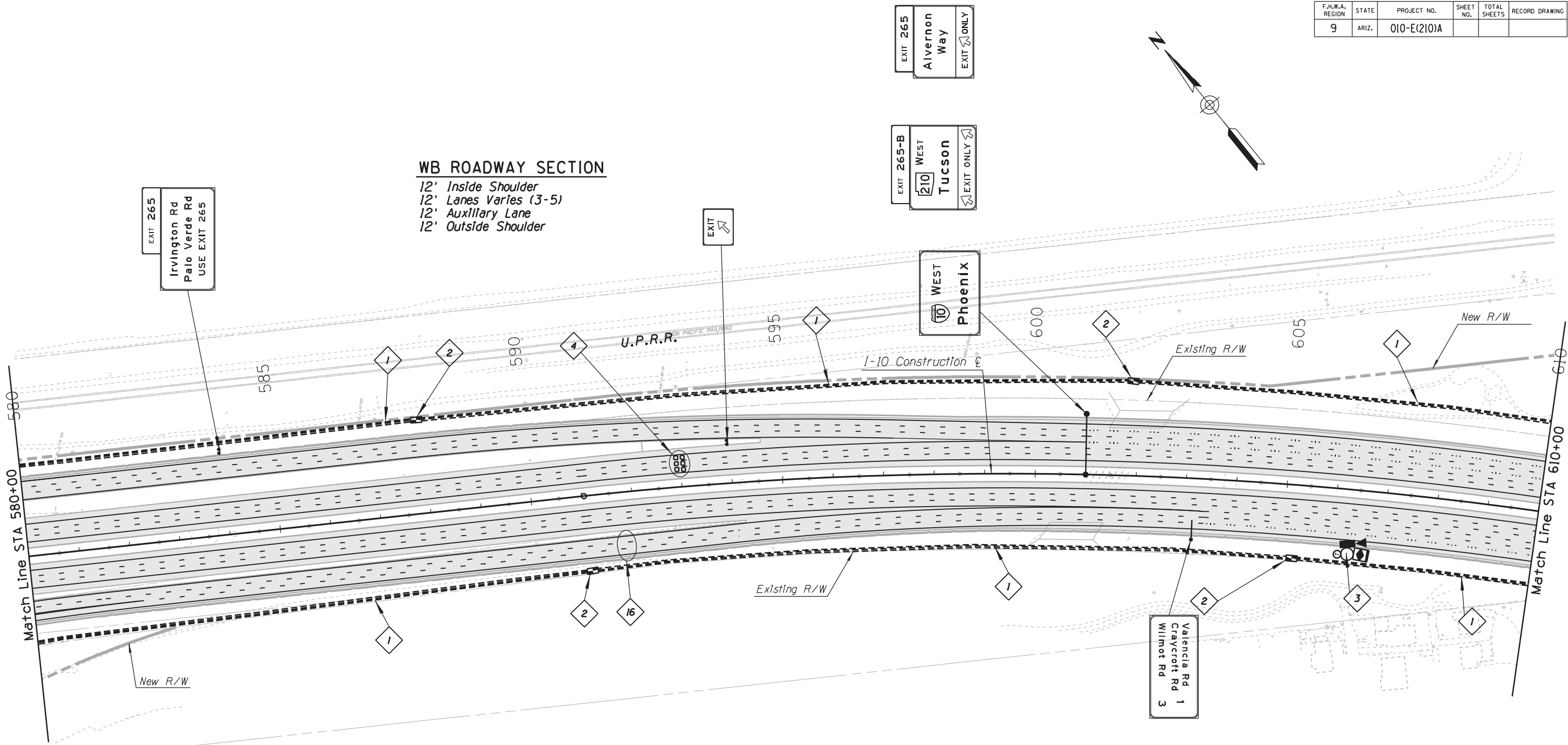
WB ROADWAY SECTION
Inside Shoulder Varies 12' - 26.75'
12' Lanes (3)
12' Outside Shoulder

EB ROADWAY SECTION
Inside Shoulder Varies 12' - 26.75'
12' Lanes (3)
12' Outside Shoulder



DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	APM	08-17		
CHECKED	JD	08-17		
ROUTE			I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	
LOCATION			SR 210 - GOLF LINKS TO I-10	
TRACS NO. H7825 OIL			010-E(210)A	
			SHEET TS01.10	
			OF	

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

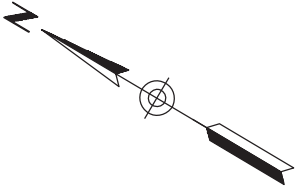


- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 4 Install 6'x6' Detector Loops, and Detection Cabinet
- 5 Install 2-3" Conduits
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter /Detection Cabinet

EB ROADWAY SECTION
12' Inside Shoulder
12' Lanes Varies (3-5)
12' Auxiliary Lane
12' Outside Shoulder

DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	08-17	PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 580+00 TO STA 610+00	
CHECKED	SMK	08-17		
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10		SHEET TS01.11
TRACS NO. H7825 OIL		010-E(210)A		OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

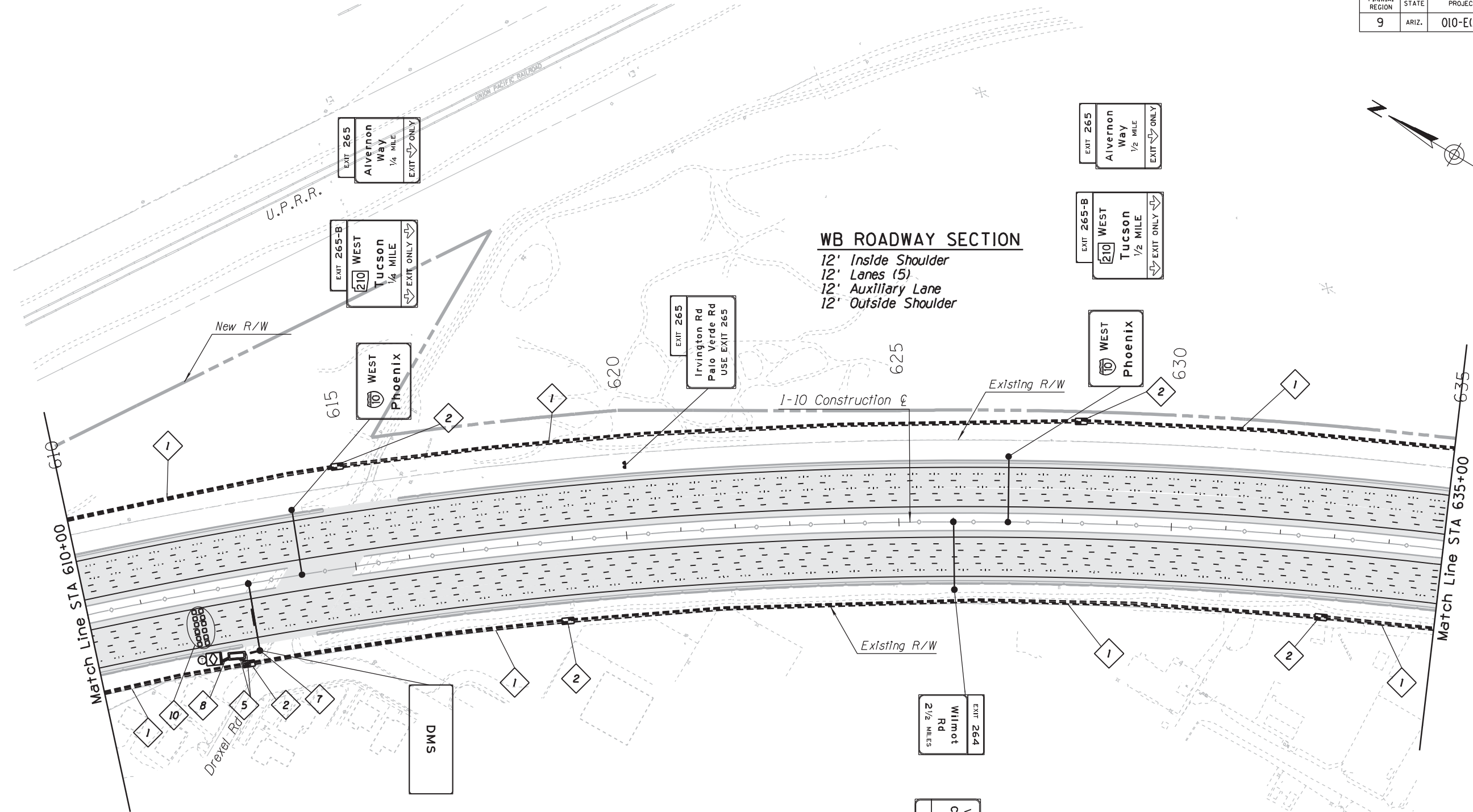


WB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (5)
12' Auxiliary Lane
12' Outside Shoulder

EB ROADWAY SECTION

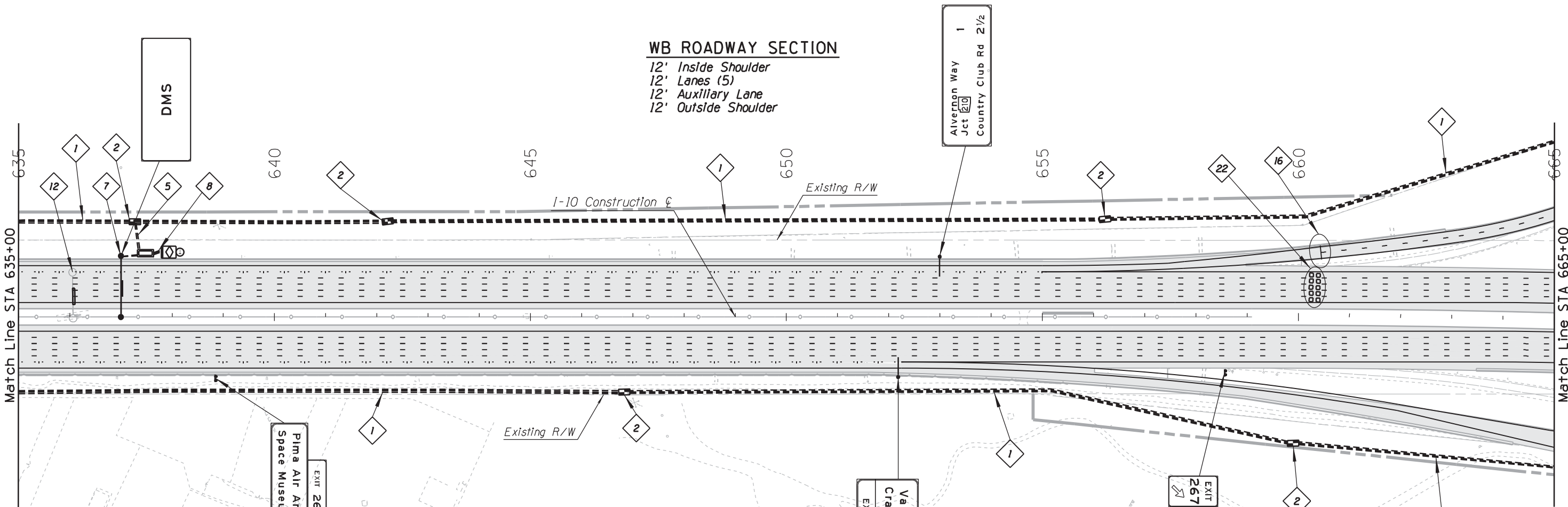
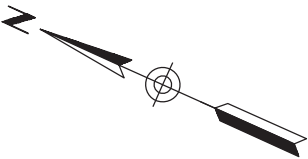
12' Inside Shoulder
12' Lanes (5)
12' Auxiliary Lane
12' Outside Shoulder



- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 5 Install 2-3" Conduits
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits
- 10 Install 10 6'x6' Detector Loops, and Detection Cabinet

DESIGN	APM	DATE	08-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES JACOBS PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 610+00 TO STA 635+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	08-17		
CHECKED	SMK				
ROUTE	I-10	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	SHEET	TS01.12
TRACS NO.	H7825 OIL				OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (5)
12' Auxiliary Lane
12' Outside Shoulder

EB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (5)
12' Auxiliary Lane
12' Outside Shoulder

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 5 Install 2-3" Conduits
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits
- 11 Install 10 6'x6' Detector Loops, and Detection Cabinet
- 12 Remove DMS Structure, DMS
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Cabinet
- 22 Install 10 6'x6' Detector Loops

DESIGN	APM	DATE	08-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 635+00 TO STA 665+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	08-17		
CHECKED	SMK				
ROUTE		LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	SHEET TSO1.13
TRACS NO.		H7825 OIL		010-E(210)A	OF

DATE- LOCATION- REVISIONS- FINISHED PLANS- SURVEY NO. DATE- LOCATION- REVISIONS- FINISHED PLANS- SURVEY NO.

- 1

Install 3-3" Conduits
- 2

Install New No. 9 Pull Box
- 3

Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 5

Install 2-3" Conduits
- 13

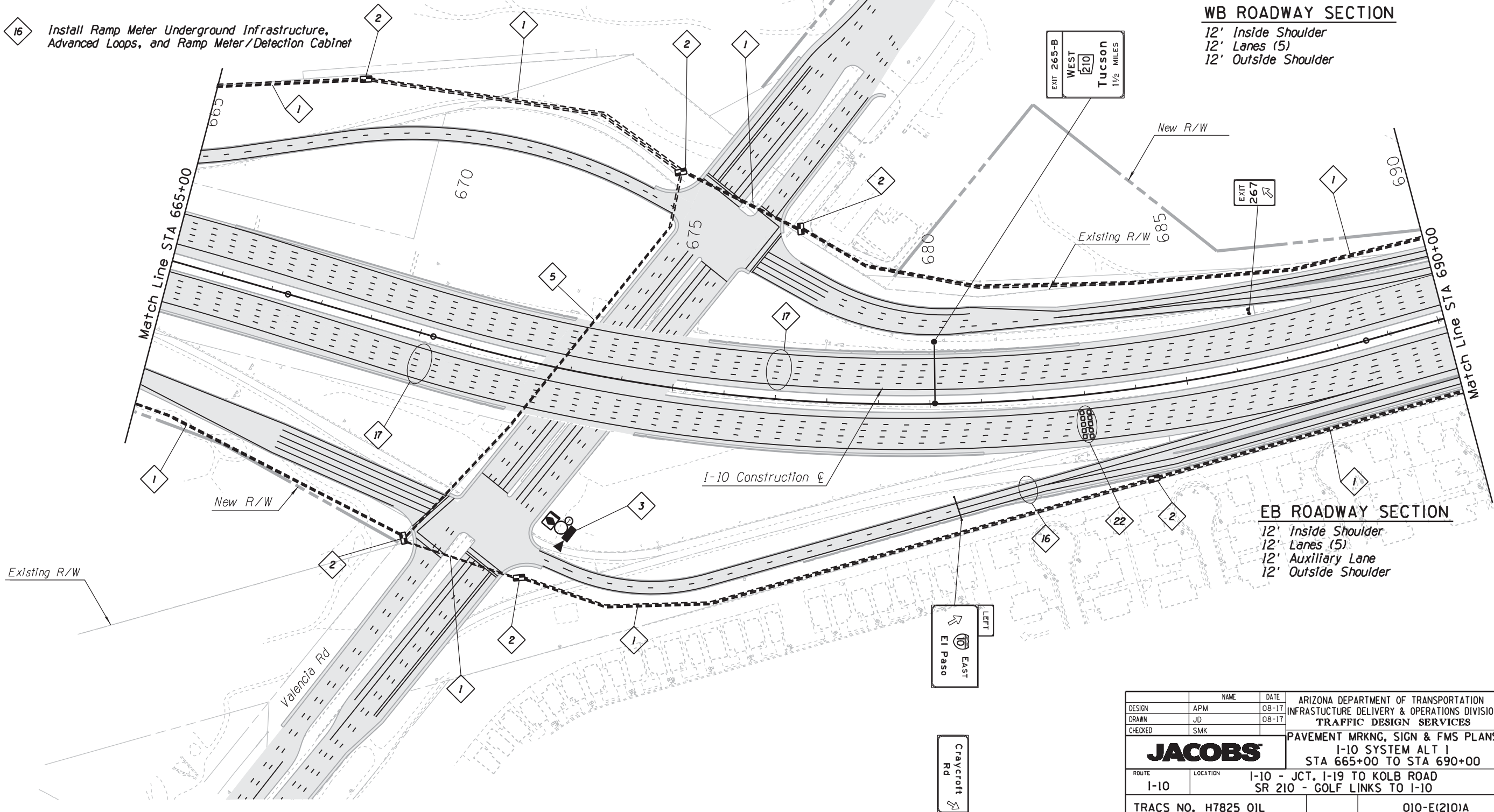
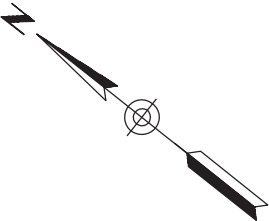
Install 4 6'x6' Detector Loops, and Detection Cabinet
- 16

Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 17

Install Wrong Way Driver Detection System
- 22

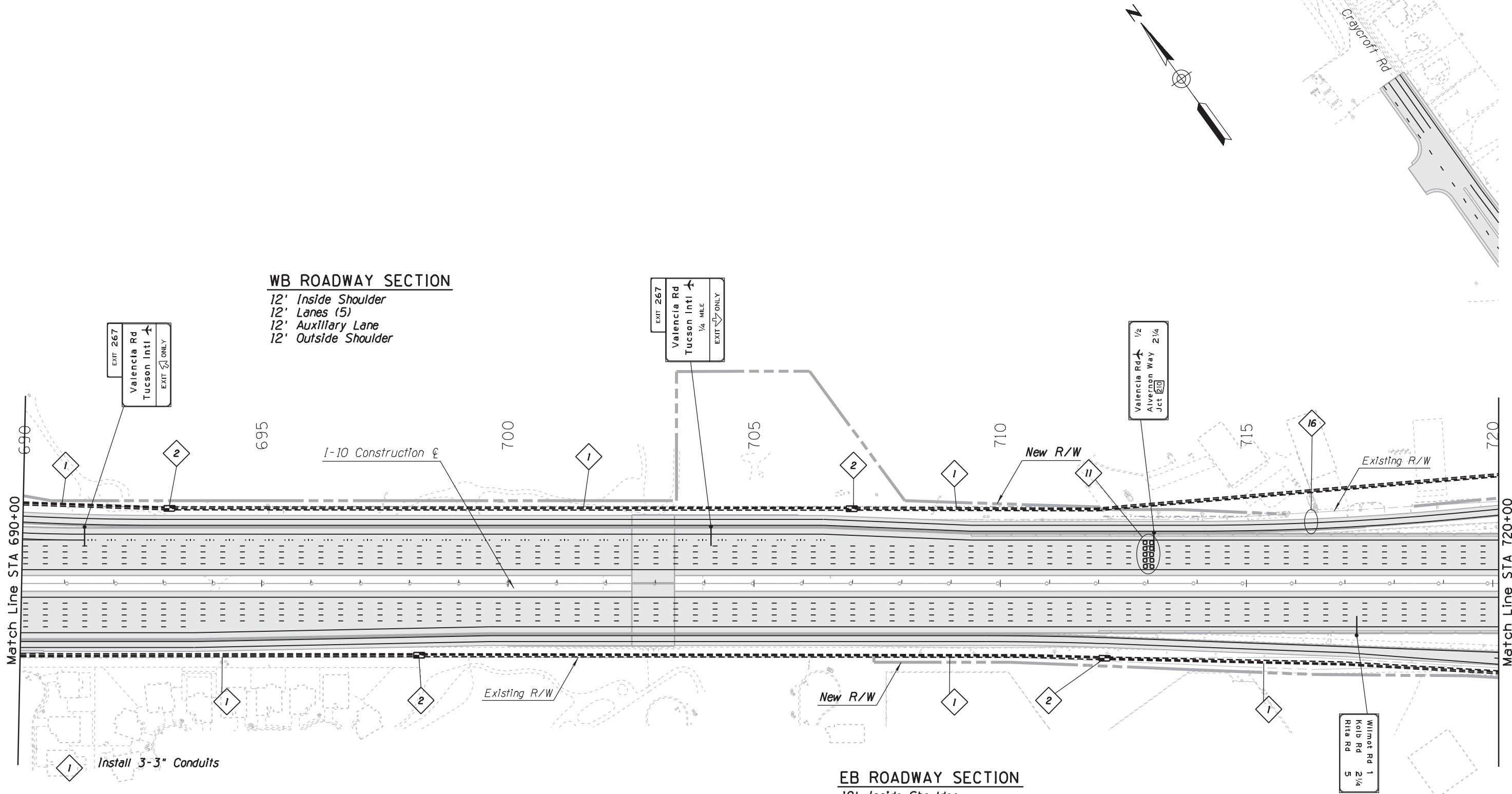
Install 10 6'x6' Detector Loops

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



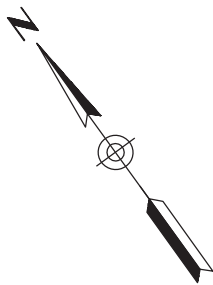
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DRAWN	JD	DATE	08-17		
CHECKED	SMK				
ROUTE LOCATION				PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 665+00 TO STA 690+00	
ROUTE LOCATION				I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	SHEET TS01.14
TRACS NO. H7825 OIL				010-E(210)A	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



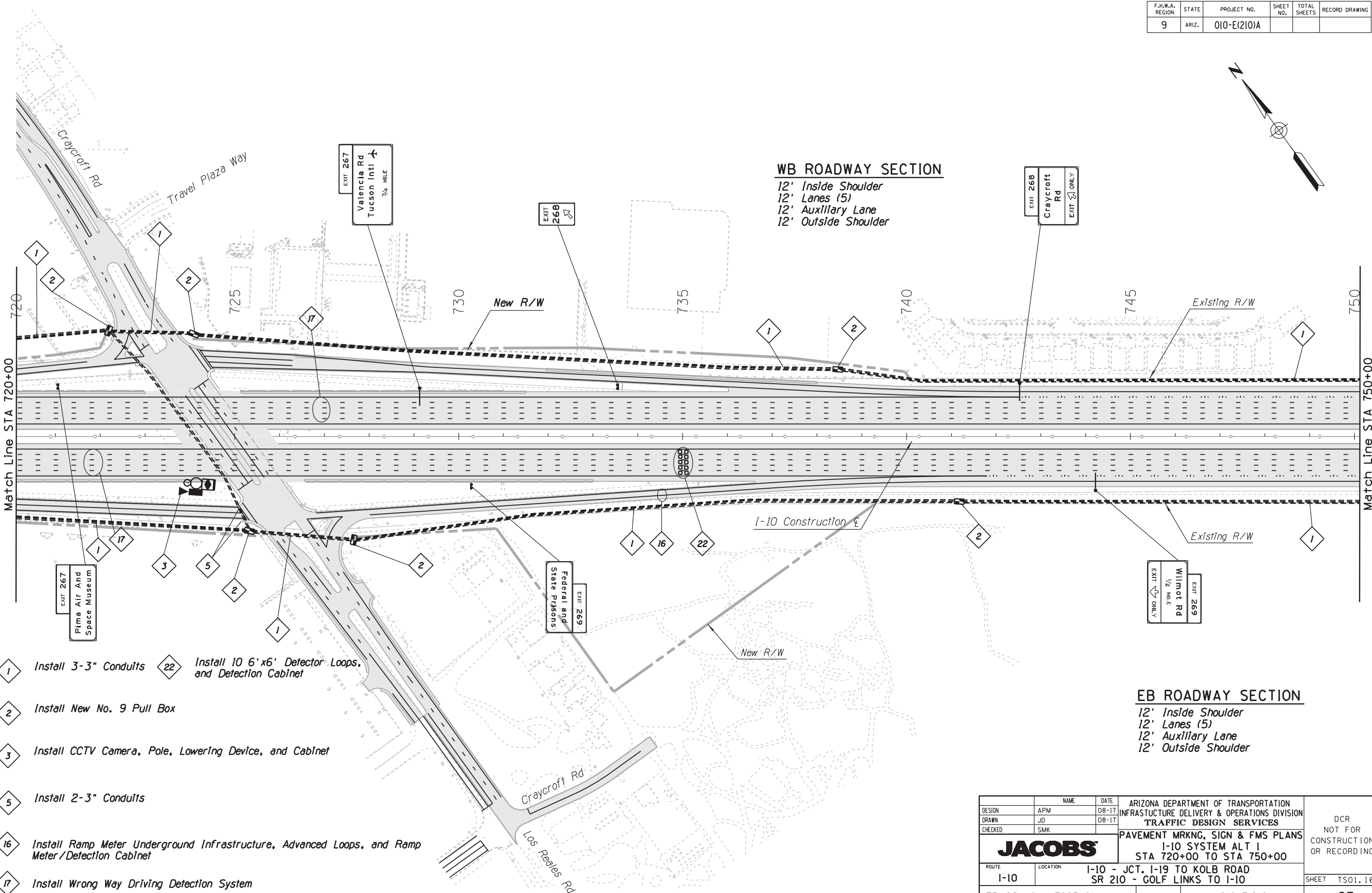
		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 690+00 TO STA 720+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM		08-17		
DRAWN	JD		08-17		
CHECKED	SMK				
JACOBS					
ROUTE		LOCATION			
I-10		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10			SHEET TS01.15
TRACS NO. H7825 OIL				010-E(210)A	___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (5)
12' Auxillary Lane
12' Outside Shoulder



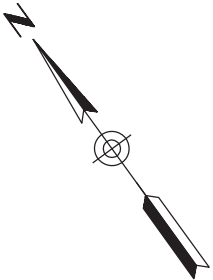
EB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (5)
12' Auxillary Lane
12' Outside Shoulder

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 5 Install 2-3" Conduits
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 17 Install Wrong Way Driving Detection System
- 22 Install 10 6'x6' Detector Loops, and Detection Cabinet

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 720+00 TO STA 750+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM		08-17		
DRAWN	JD		08-17		
CHECKED	SMK				
JACOBS					
ROUTE I-10		LOCATION I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10			SHEET TS01.16
TRACS NO. H7825 OIL				010-E(210)A	___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

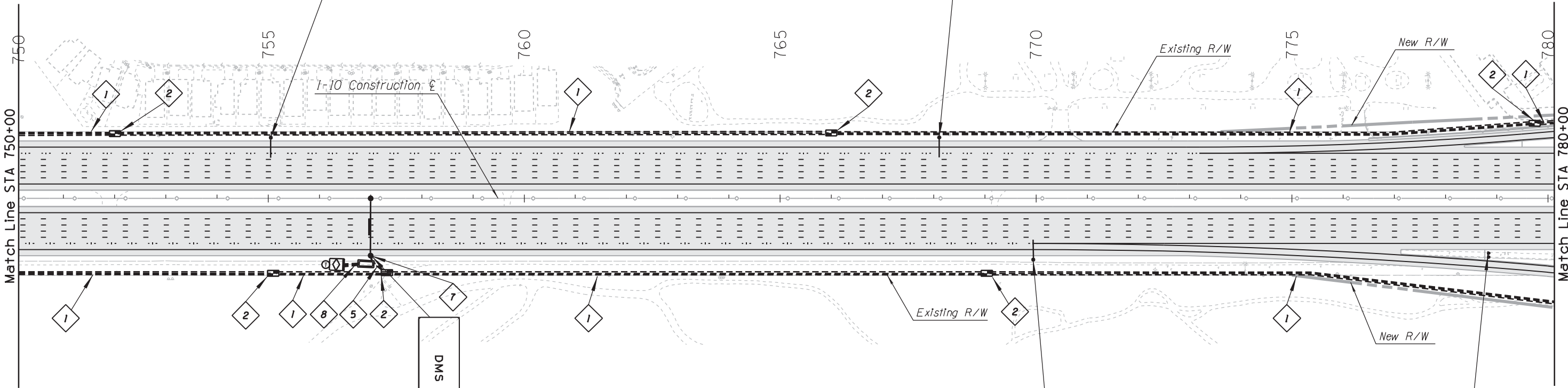


WB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (5)
12' Auxiliary Lane
12' Outside Shoulder

1/2 Craycroft Rd
1/2 Valencia Rd
1/2 Alvernon Way
3/4 Jct 210

EXIT 268
Craycroft Rd
1/4 MILE
EXIT ONLY



- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 5 Install 2-3" Conduits
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits

EB ROADWAY SECTION

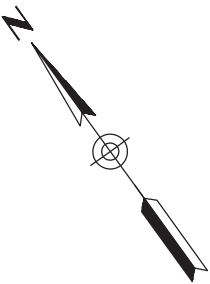
12' Inside Shoulder
12' Lanes (5)
12' Auxiliary Lane
12' Outside Shoulder

EXIT 269
Wimot Rd
EXIT ONLY

EXIT 269
EXIT ONLY

DESIGN	APM	DATE	08-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	08-17	PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 750+00 TO STA 780+00	
CHECKED	SMK				
ROUTE	I-10	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	SHEET	TS01.17
TRACS NO.	H7825 OIL			010-E(210)A	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

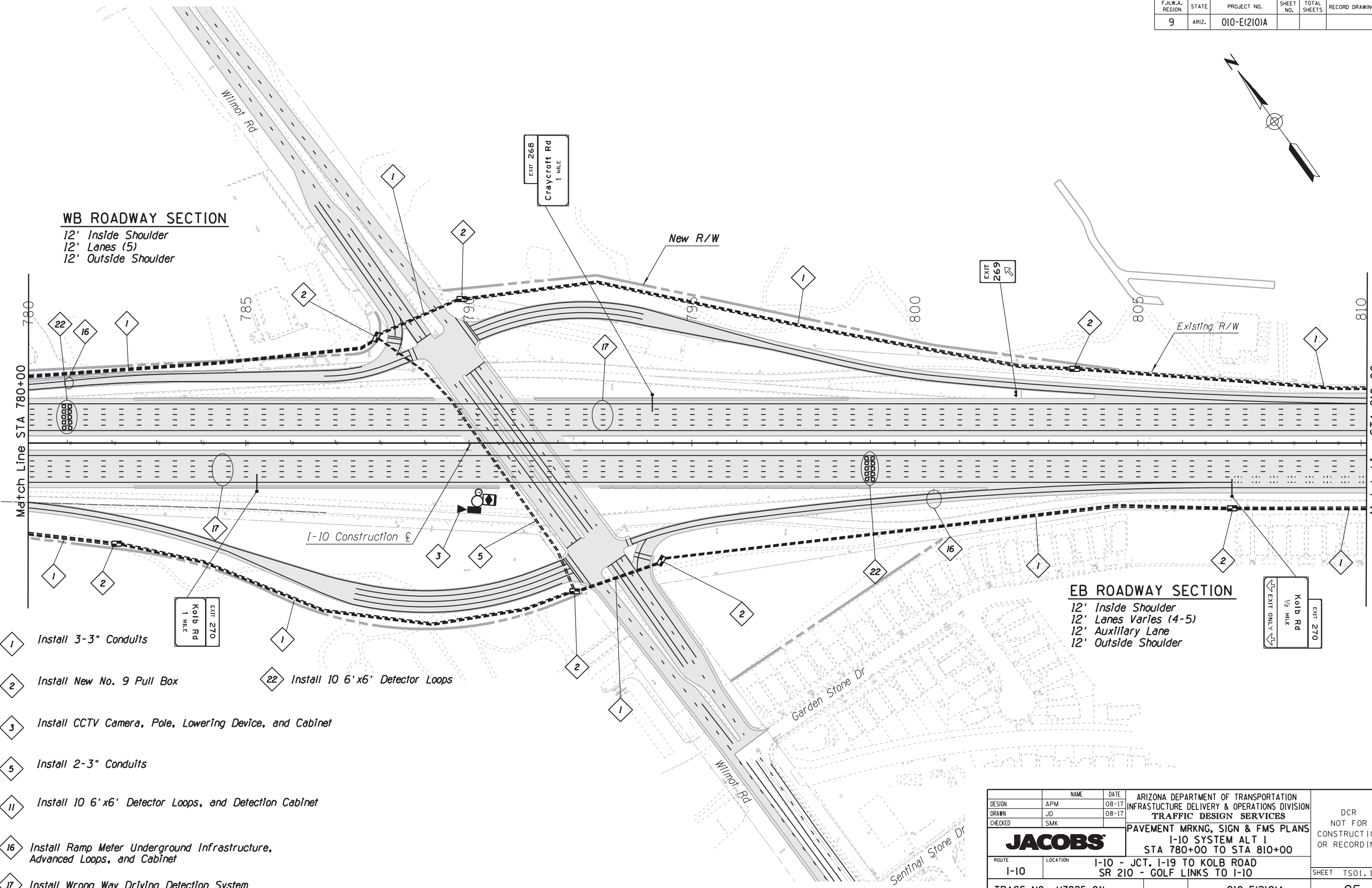


WB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (5)
12' Outside Shoulder

EB ROADWAY SECTION

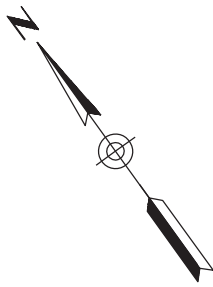
12' Inside Shoulder
12' Lanes Varies (4-5)
12' Auxiliary Lane
12' Outside Shoulder



- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 5 Install 2-3" Conduits
- 11 Install 10 6' x6' Detector Loops, and Detection Cabinet
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Cabinet
- 17 Install Wrong Way Driving Detection System
- 22 Install 10 6' x6" Detector Loops

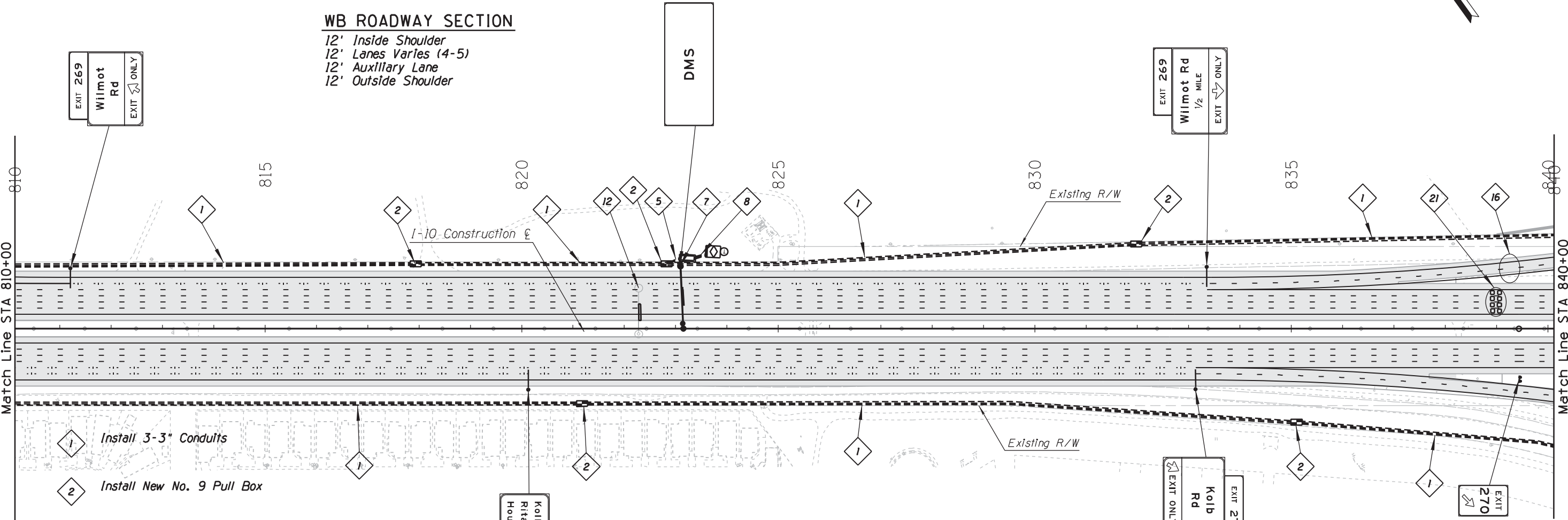
DESIGN	APM	DATE	08-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 780+00 TO STA 810+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	08-17		
CHECKED	SMK				
ROUTE		LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	SHEET TS01.18
TRACS NO.		H7825 OIL		010-E(210)A	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

12' Inside Shoulder
12' Lanes Varies (4-5)
12' Auxiliary Lane
12' Outside Shoulder



EB ROADWAY SECTION

12' Inside Shoulder
12' Lanes Varies (4)
12' Auxiliary Lane (2)
12' Outside Shoulder

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 5 Install 2-3" Conduits
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits
- 12 Remove DMS Structure, DMS
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter / Detection Cabinet
- 21 Install 8 6' x 6' Loop Detectors

Kolb Rd
Rita Rd
Houghton Rd 5 1/2
1/4 3

EXIT 270
Kolb Rd
EXIT ONLY

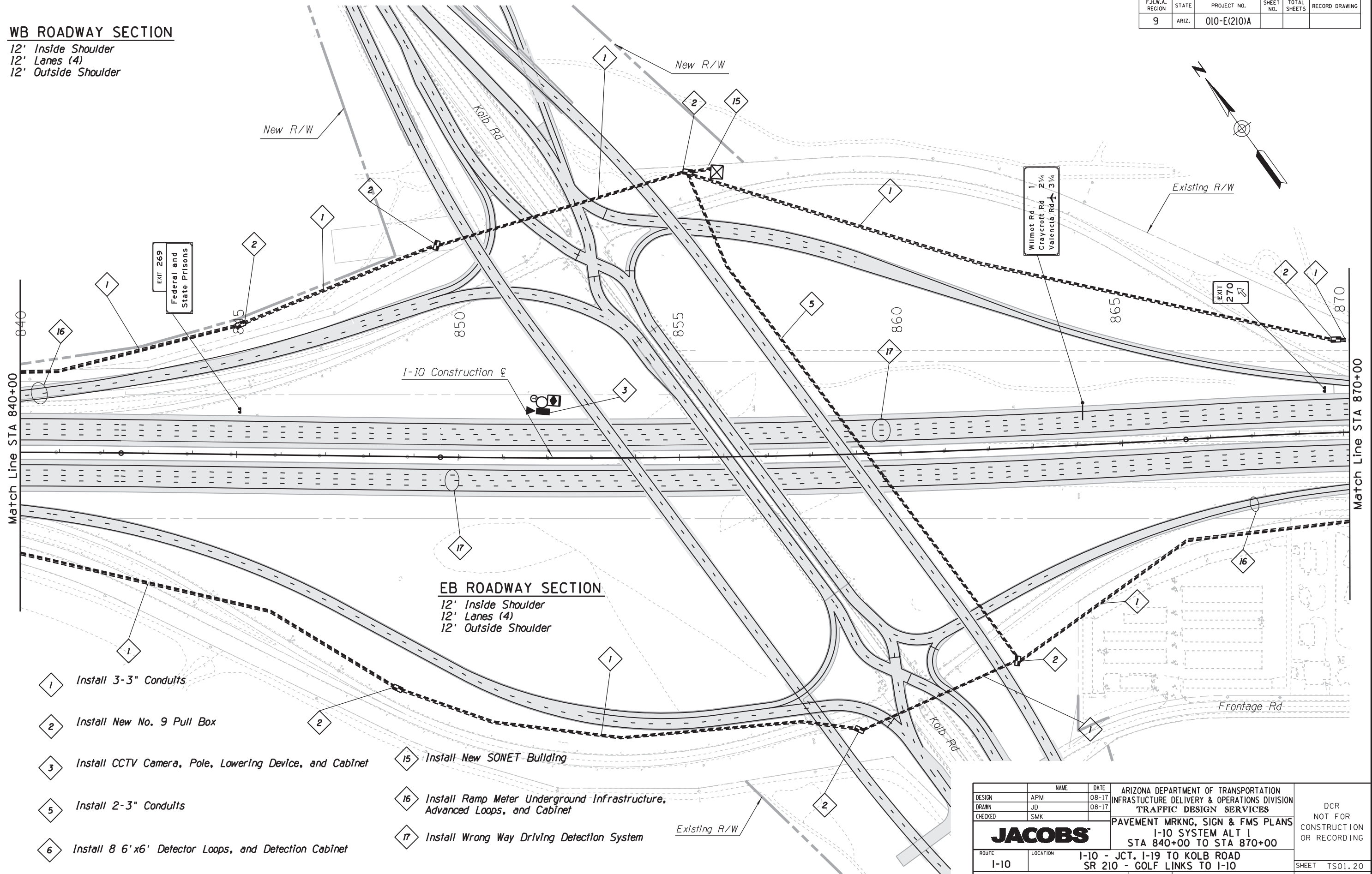
EXIT 270
EXIT ONLY

DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	APM	08-17	PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 810+00 TO STA 840+00	
CHECKED	JD	08-17		
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	SHEET	TS01.19
TRACS NO.	H7825 OIL		010-E(210)A	OF

DATE: LOCATION: REVISIONS: FINISHED PLANS: SURVEY NO. DATE: LOCATION: REVISIONS: FINISHED PLANS: SURVEY NO.

WB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (4)
12' Outside Shoulder



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

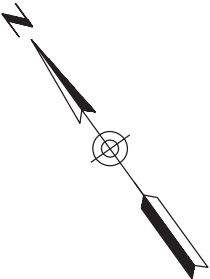
EB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (4)
12' Outside Shoulder

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 5 Install 2-3" Conduits
- 6 Install 8 6' x6' Detector Loops, and Detection Cabinet
- 15 Install New SONY Building
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Cabinet
- 17 Install Wrong Way Driving Detection System

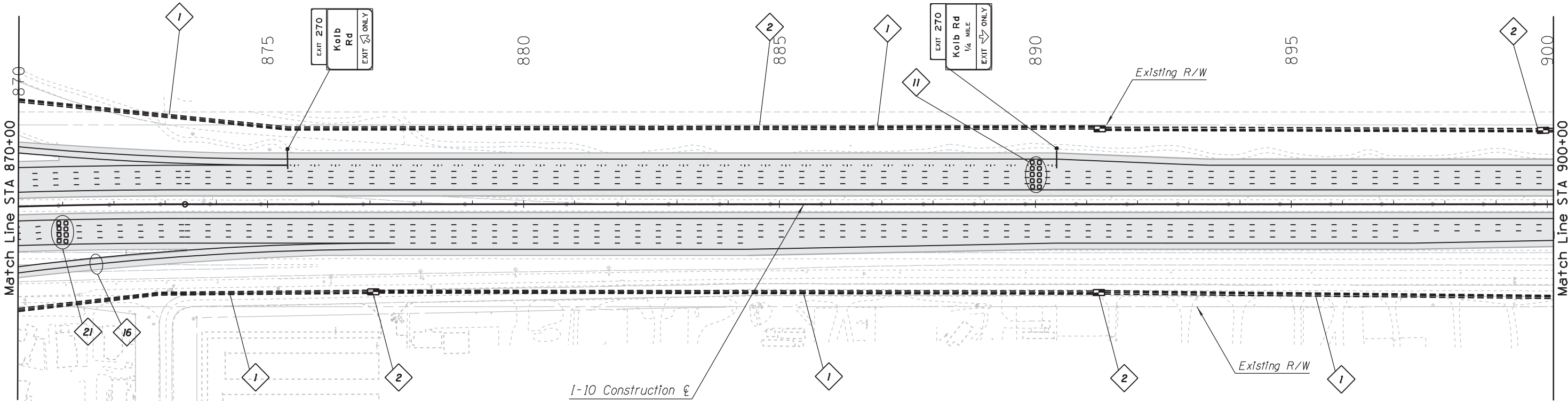
DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	APM	08-17		
CHECKED	JD	08-17		
	SMK			
JACOBS			PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 840+00 TO STA 870+00	
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10		SHEET TS01.20
TRACS NO. H7825 OIL			010-E(210)A	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (4)
12' Auxiliary Lane
12' Outside Shoulder



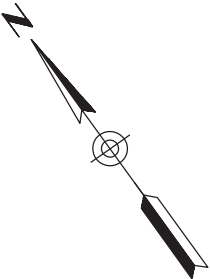
EB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (4)
12' Auxiliary Lane
12' Outside Shoulder

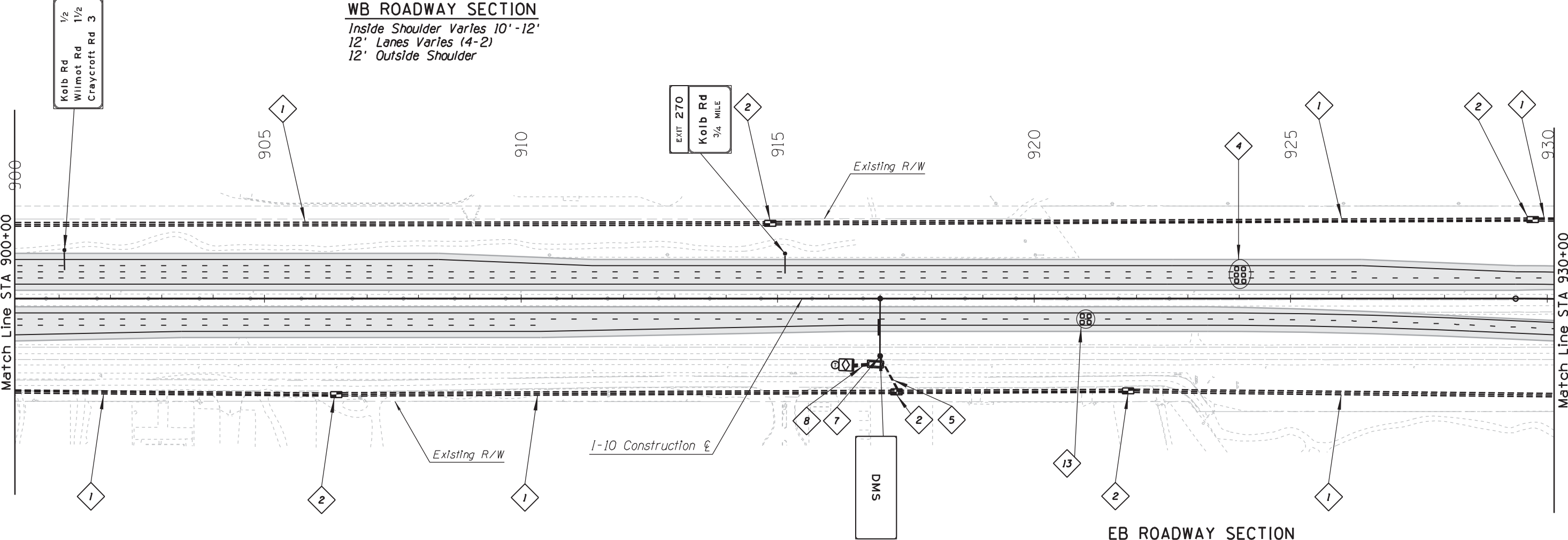
- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 11 Install 10 6'x6' Detector Loops, and Detection Cabinet
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 21 Install 8 6'x6' Detector Loops

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 870+00 TO STA 900+00		DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM	08-17				
DRAWN	JD	08-17				
CHECKED	SMK					
JACOBS						
ROUTE		LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10		SHEET TS01.21
I-10						
TRACS NO. H7825 OIL				010-E(210)A		___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION
Inside Shoulder Varies 10'-12'
12' Lanes Varies (4-2)
12' Outside Shoulder

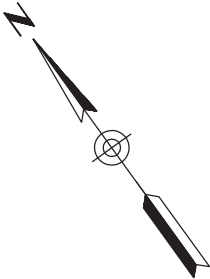


- | | |
|---|--|
| 1 Install 3-3" Conduits | 7 Install DMS Structure, DMS, and Cabinet |
| 2 Install New No. 9 Pull Box | 8 Install 4-3" Conduits |
| 4 Install 6'x6' Detector Loops, and Detection Cabinet | 13 Install 4 6'x6' Detector Loops, and Detection Cabinet |
| 5 Install 2-3" Conduits | |

EB ROADWAY SECTION
Inside Shoulder Varies 4'-12'
12' Lanes Varies (2-4)
12' Outside Shoulder

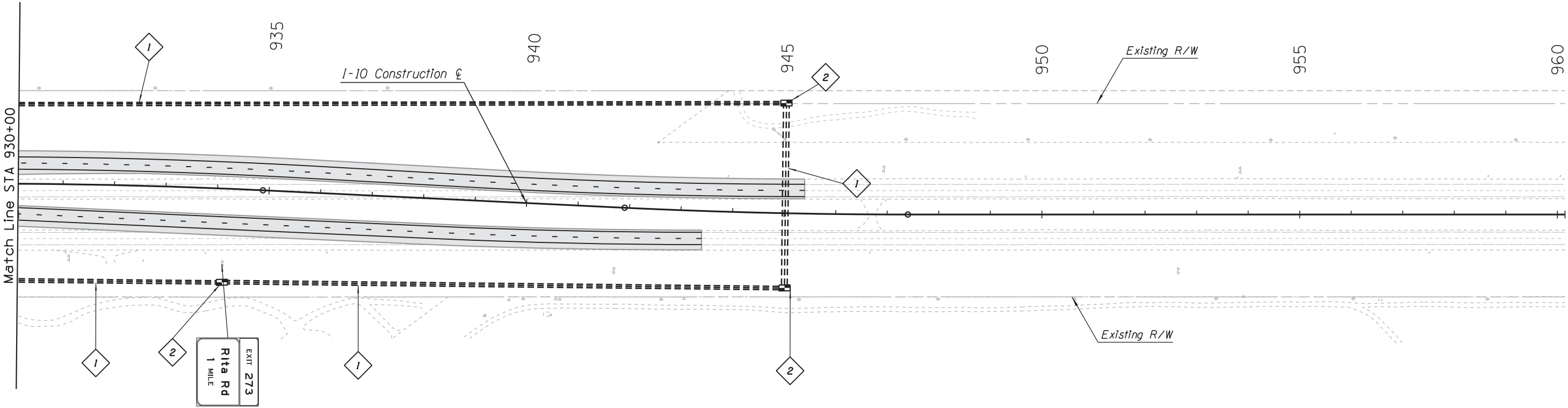
DESIGN	APM	DATE	08-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 900+00 TO STA 930+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	08-17		
CHECKED	SMK				
JACOBS					
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10			SHEET TS01.22
I-10					
TRACS NO. H7825 OIL		010-E(210)A			OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

Inside Shoulder Varies 4'-10'
12' Lanes (2)
12' Auxiliary Lane
12' Outside Shoulder



EB ROADWAY SECTION

4' Inside Shoulder
12' Lanes (2)
12' Auxiliary Lane
12' Outside Shoulder

- 1

Install 3-3" Conduits
- 2

Install New No. 9 Pull Box

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION		DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM		08-17	TRAFFIC DESIGN SERVICES		
DRAWN	JD		08-17	PAVEMENT MRKNG, SIGN & FMS PLANS		
CHECKED	SMK			I-10 SYSTEM ALT 1 STA 930+00 TO STA 960+00		
JACOBS						
ROUTE		LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10		SHEET TS01.23
I-10						
TRACS NO. H7825 OIL				010-E(210)A		___ OF ___

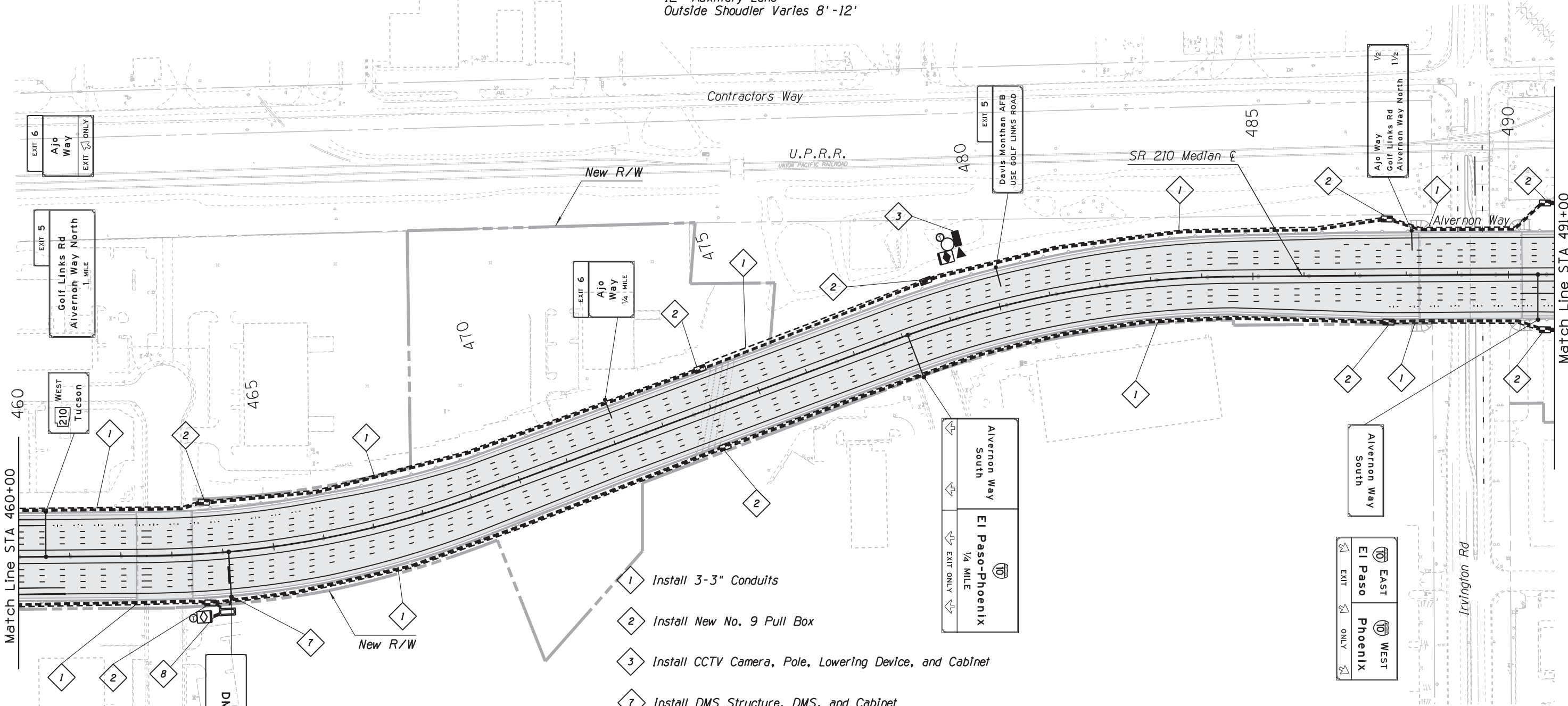
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)S			

010 PM 260



NB ROADWAY SECTION

13' Inside Shoulder
12' Lanes (4)
12' Auxiliary Lane
Outside Shoudler Varies 8'-12'



SB ROADWAY SECTION

13' Inside Shoulder
12' Lanes (4)
12' Auxiliary Lane
Outside Shoudler Varies 8'-12'

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits

DESIGN	APM	DATE	09-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	09-17		
CHECKED	SMK				
JACOBS				PAVEMENT MRKNG, SIGN & FMS PLANS SR 210 SYSTEM ALT 1 STA 460+00 TO STA 491+00	
ROUTE	SR 210	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS ROAD TO I-10		SHEET TS01.27
TRACS NO. H7825 OIL				010-E(210)S	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)S			

010 PM 260



NB ROADWAY SECTION

13' Inside Shoulder
12' Lanes (4)
Outside Shoudler Varies 10'-12'

Contractors Way

U.P.R.R.

New R/W

DMS

EXIT 6

SR 210 Median E

New R/W

SB ROADWAY SECTION

13' Inside Shoulder
12' Lanes (4)
Outside Shoudler Varies 10'-12'

Ajo Way

Alvernon Way
South
El Paso-Phoenix
1 MILE

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 6 Install 8 6'x6' Detector Loops, and Detection Cabinet
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 5 Install 2-3" Conduits
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 17 Install Wrong Way Driving Detection System
- 21 Install 8 6'x6' Loop Detectors

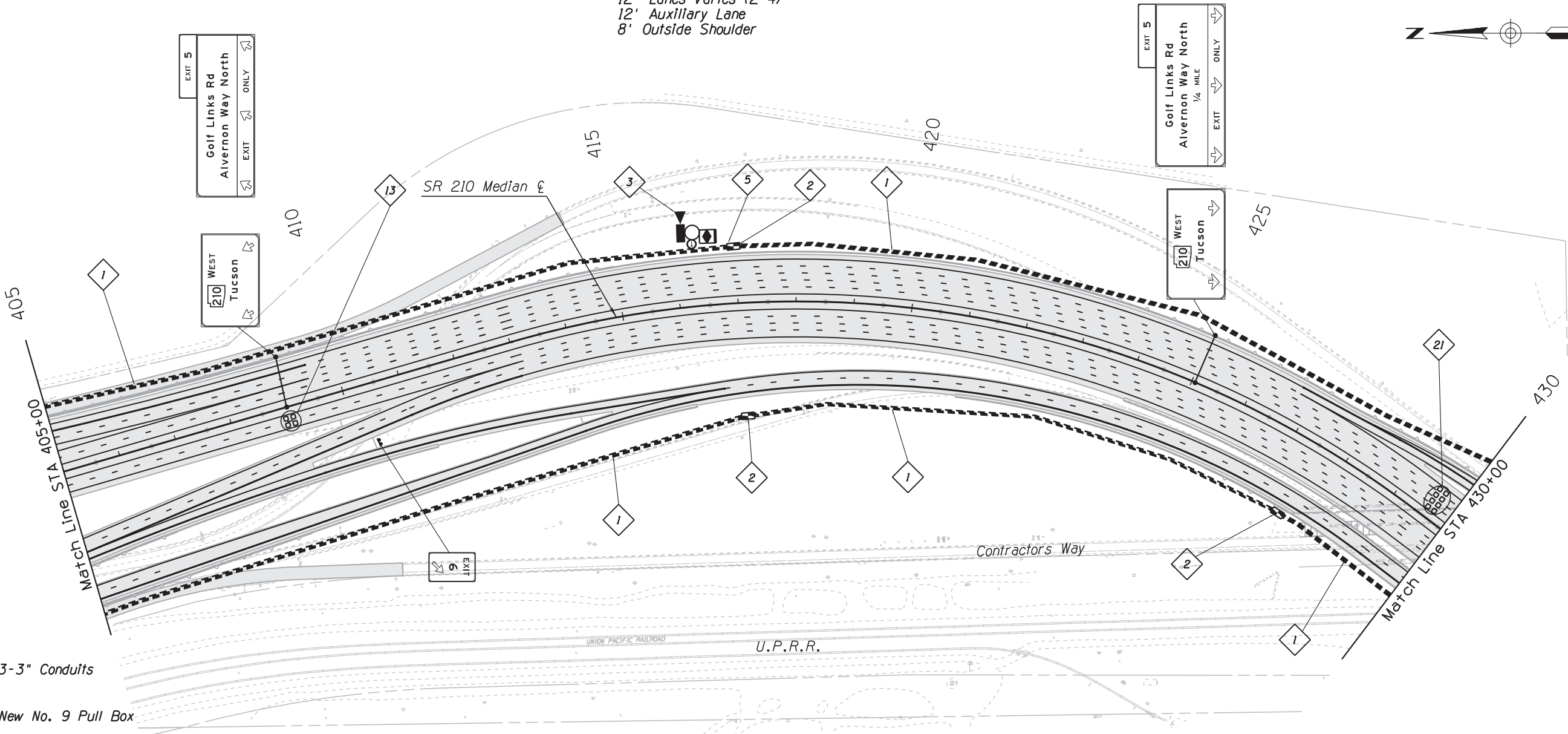
		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS SR 210 SYSTEM ALT 1 STA 430+00 TO STA 460+00		DCR NOT FOR CONSTRUCTION OR RECORDING	
DESIGN	APM	09-17					
DRAWN	JD	09-17					
CHECKED	SMK						
JACOBS							
ROUTE		LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS ROAD TO I-10		SHEET TS01.26	
SR 210							
TRACS NO. H7825 OIL				010-E(210)S		___ OF ___	

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)S			

010 PM 260

NB ROADWAY SECTION

13' Inside Shoulder
12' Lanes Varies (2-4)
12' Auxiliary Lane
8' Outside Shoulder



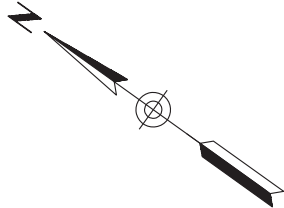
- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 5 Install 2-3" Conduits
- 13 Install 4 6'x6' Detector Loops, and Detection Cabinet
- 21 Install 8 6'x6' Detector Loops

SB ROADWAY SECTION

Inside Shoulder Varies 7'-13'
12' Lanes Varies (2-4)
Outside Shoulder Varies 8'-10'

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN		APM	09-17		
DRAWN		JD	09-17		
CHECKED		SMK			
JACOBS				PAVEMENT MRKNG, SIGN & FMS PLANS SR 210 SYSTEM ALT 1 STA 405+00 TO STA 430+00	
ROUTE		LOCATION			
SR 210		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS ROAD TO I-10			SHEET TS01.25
TRACS NO. H7825 OIL				010-E(210)S	___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)S			
010 PM 260					

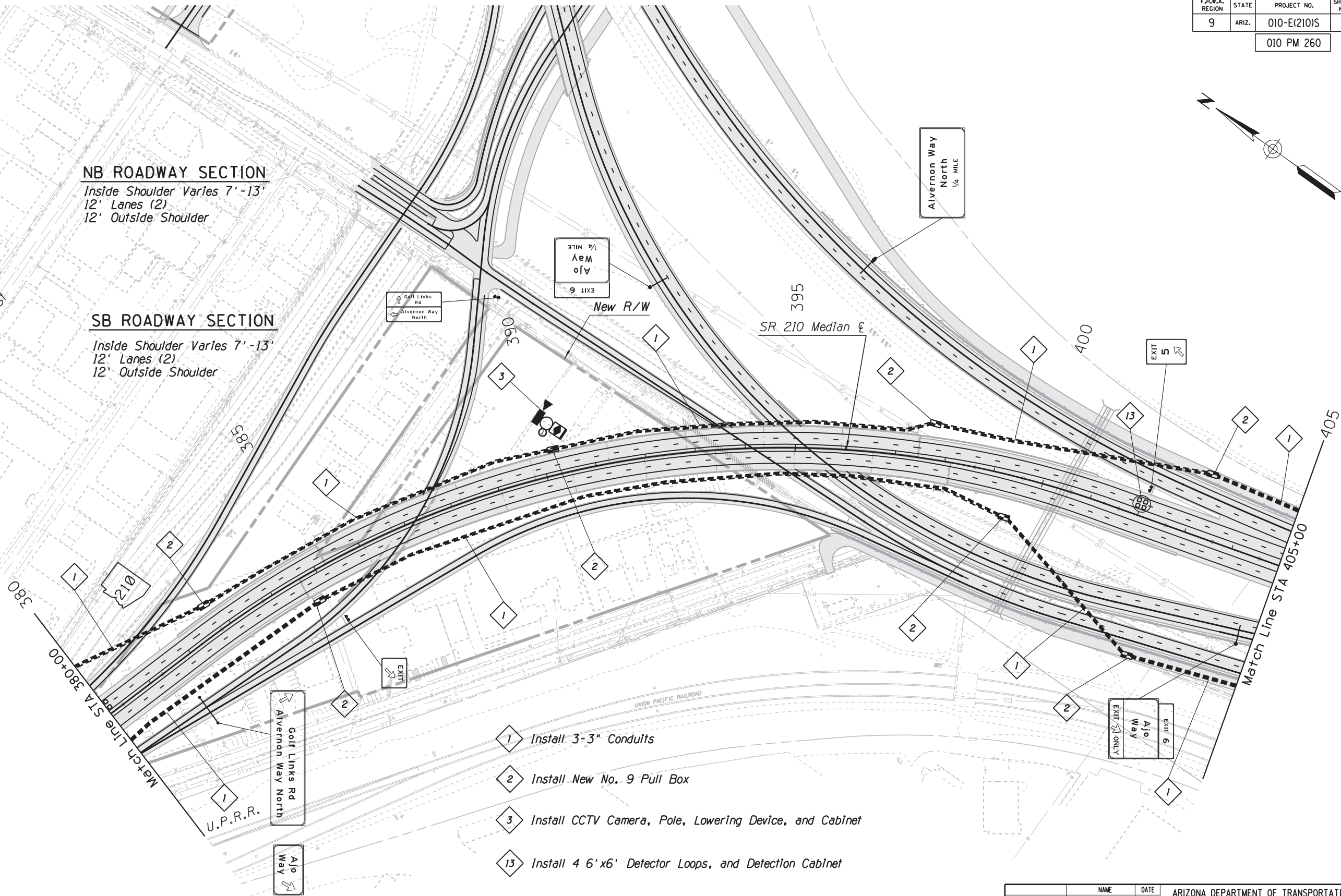


NB ROADWAY SECTION

Inside Shoulder Varies 7'-13'
12' Lanes (2)
12' Outside Shoulder

SB ROADWAY SECTION

Inside Shoulder Varies 7'-13'
12' Lanes (2)
12' Outside Shoulder

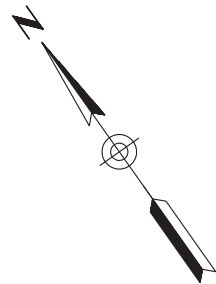


- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 13 Install 4 6' x6' Detector Loops, and Detection Cabinet

DESIGN	APM	DATE	09-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	09-17		
CHECKED	SMK				
JACOBS				PAVEMENT MRKNG, SIGN & FMS PLANS SR 210 SYSTEM ALT 1 STA 380+00 TO STA 405+00	
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - SR 210 - GOLF LINKS ROAD TO I-10			SHEET TS01.24
TRACS NO. H7825 OIL		010-E(210)S			OF

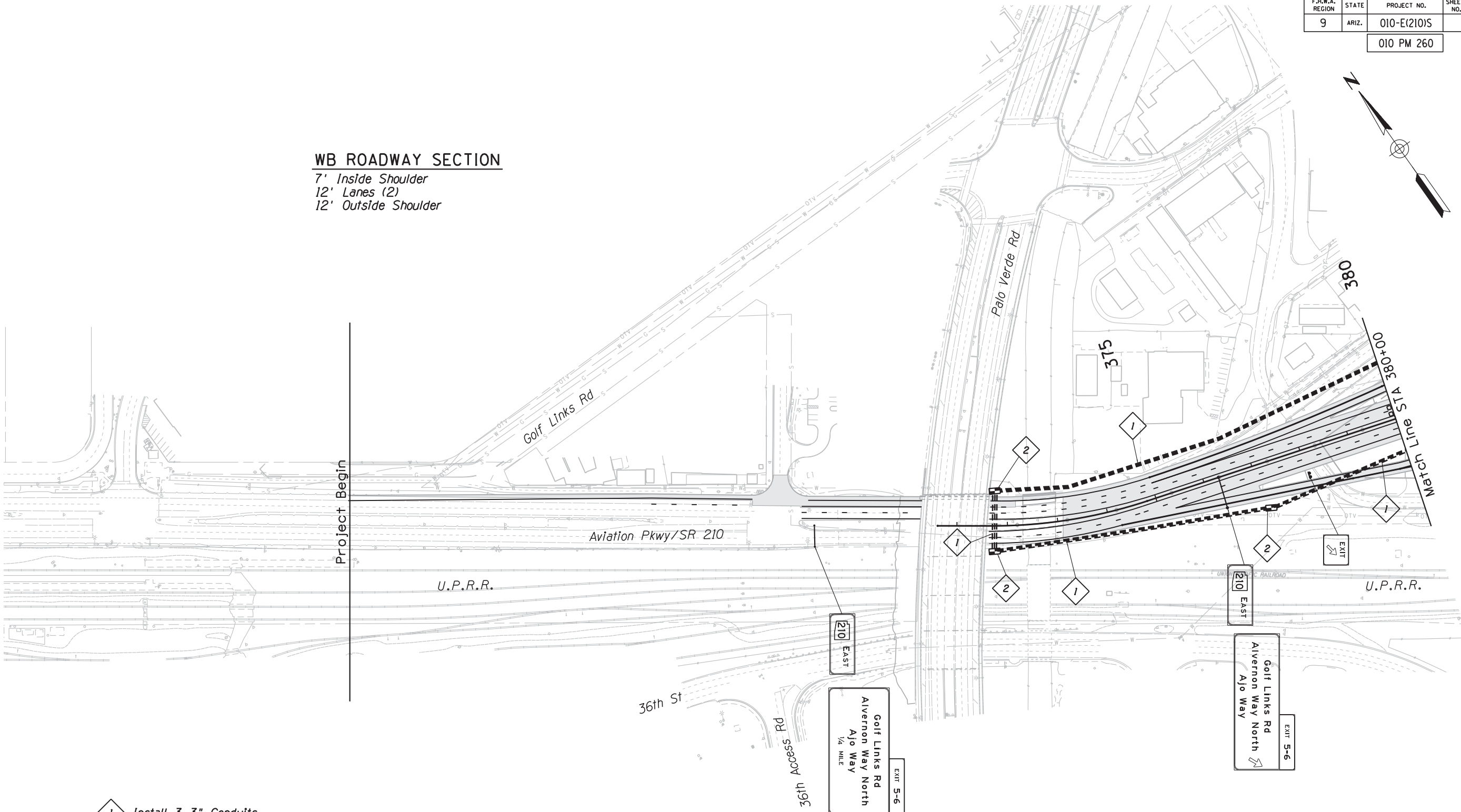
DATE- LOCATION- REVISIONS- FINISHED PLANS- SURVEY NO. DATE- LOCATION- REVISIONS- FINISHED PLANS- SURVEY NO.

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)S			
010 PM 260					



WB ROADWAY SECTION

7' Inside Shoulder
12' Lanes (2)
12' Outside Shoulder



- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box

EB ROADWAY SECTION

7' Inside Shoulder
12' Lanes (2)
12' Outside Shoulder

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS SR 210 SYSTEM ALT 1 STA 370+0 TO STA 380+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN		APM	09-17		
DRAWN		JD	09-17		
CHECKED		SMK			
JACOBS					
ROUTE		LOCATION			
SR 210		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS ROAD TO I-10			SHEET TS01.23
TRACS NO. H7825 OIL				010-E(210)S	___ OF ___

DATE-

LOCATION-

REVISIONS-

FINISHED PLANS-

SURVEY NO.

DATE-

LOCATION-

REVISIONS-

FINISHED PLANS-

SURVEY NO.

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

- 1

Install 3-3" Conduits
- 2

Install New No. 9 Pull Box
- 3

Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 4

Install 6 6'x6' Detector Loops, and Detection Cabinet
- 5

Install 2-3" Conduits
- 6

Install 8 6'x6' Detector Loops, and Detection Cabinet
- 7

Install DMS Structure, DMS, and Cabinet
- 8

Install 4-3" Conduits
- 9

Existing Structure, DMS to Remain
- 10

Install 12 6'x6' Detector Loops, and Detection Cabinet
- 11

Install 10 6'x6' Detector Loops, and Detection Cabinet
- 12

Remove Existing DMS Structure, DMS
- 13

Install 4 6'x6' Detector Loops, and Detection Cabinet
- 14

Install 2 6'x6' Detector Loops, and Detection Cabinet
- 15

Install New SONET Node Building
- 16

Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 17

Install Wrong Way Driving Detection System
- 18

Existing No. 9 Pull Box to Remain
- 19

Existing ITS Conduit to Remain

- 20

Install 6 6'x6' Detector Loops
- 21

Install 8 6'x6' Detector Loops
- 22

Install 10 6'x6' Detector Loops
- 23

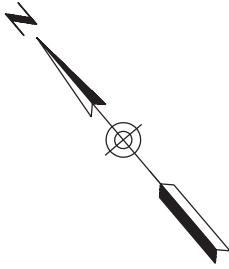
Install 4 6'x6' Detector Loops

	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES		DCR NOT FOR CONSTRUCTION OR RECORDING	
DESIGN	APM	08-17	PAVEMENT MRKNG, SIGN & FMS PLANS I-10/SR210 Constructioin Notes I-10 SYSTEM ALT 4			
DRAWN	JD	08-17				
CHECKED	SMK		JACOBS			
ROUTE	LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10			SHEET TS02.01
I-10						
TRACS NO. H7825 OIL				010-E(210)A		___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

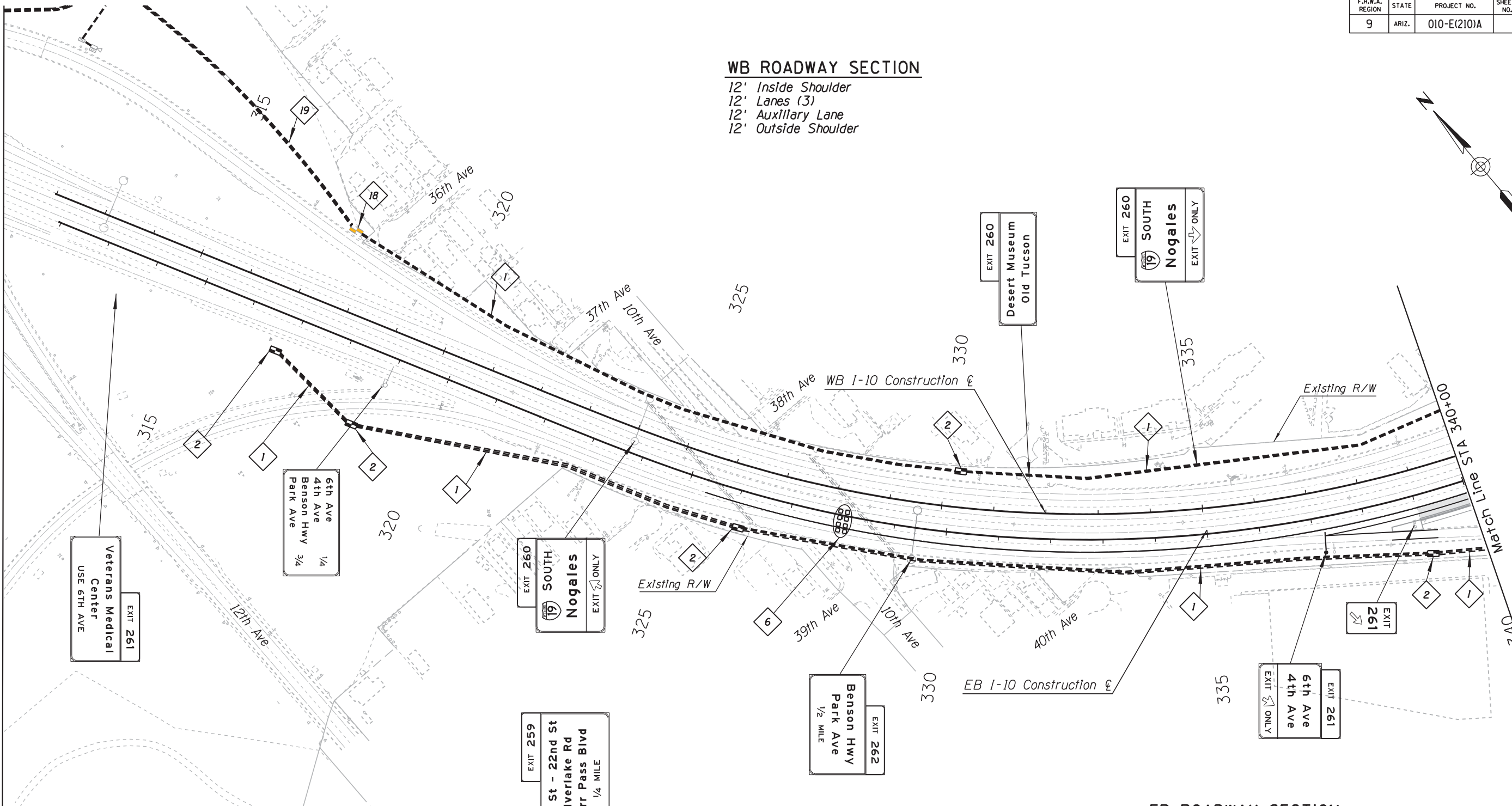
WB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (3)
12' Auxillary Lane
12' Outside Shoulder



Begin Project

DATE-	LOCATION-	REVISIONS-	SURVEY NO.	DATE-	LOCATION-	REVISIONS-	FINISHED PLANS-



- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 6 Install 8 6' x6' Detector Loops, and Detection Cabinet
- 18 Existing No. 9 Pull Box to Remain
- 19 Existing ITS Conduit to Remain



EB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (3)
12' Auxillary Lane
12' Outside Shoulder

I-10 SYSTEM ALT 4

DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	APM	08-17	PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 315+00 TO STA 340+00	SHEET TS02.02
CHECKED	JD	08-17		
ROUTE LOCATION			I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	
TRACS NO. H7825 OIL			010-E(210)A	OF

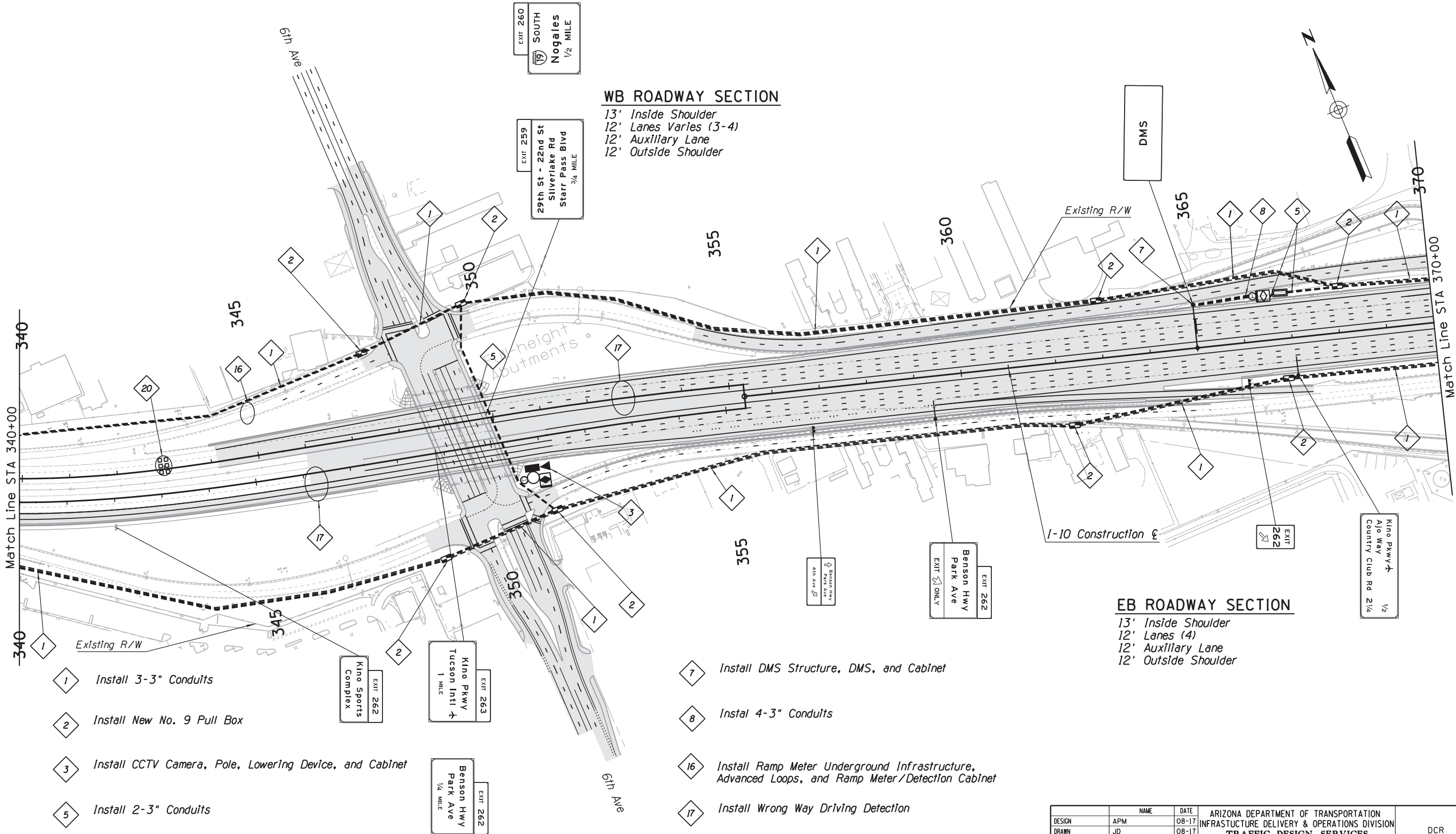
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

WB ROADWAY SECTION

13' Inside Shoulder
12' Lanes Varies (3-4)
12' Auxiliary Lane
12' Outside Shoulder

EB ROADWAY SECTION

13' Inside Shoulder
12' Lanes (4)
12' Auxiliary Lane
12' Outside Shoulder

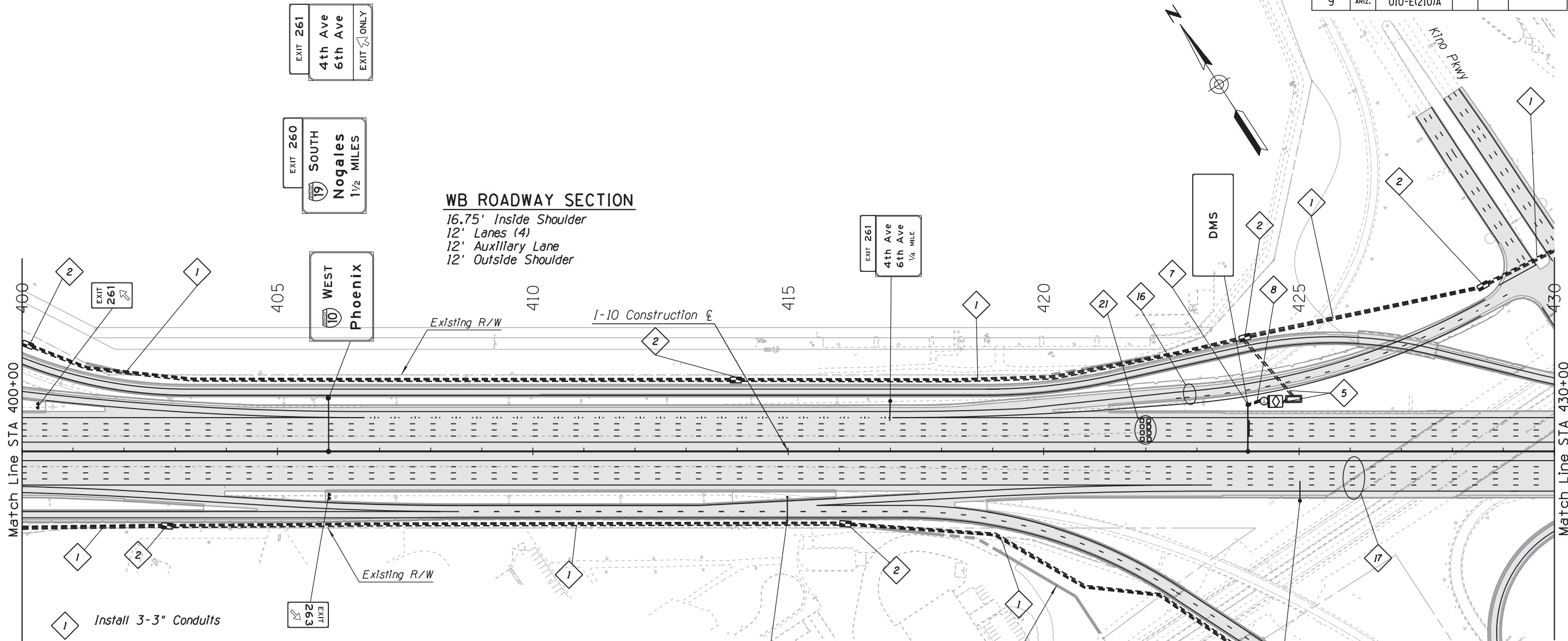


- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 5 Install 2-3" Conduits

- 7 Install DMS Structure, DMS, and Cabinet
- 8 Instal 4-3" Conduits
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 17 Install Wrong Way Driving Detection
- 20 Install 6' x6' Detector Loops

DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	APM	08-17	PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 340+00 TO STA 370+00	
CHECKED	JD	08-17		
	SMK			
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10		SHEET TS02.03
TRACS NO.	H7825 OIL		010-E(210)A	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

16.75' Inside Shoulder
12' Lanes (4)
12' Auxiliary Lane
12' Outside Shoulder

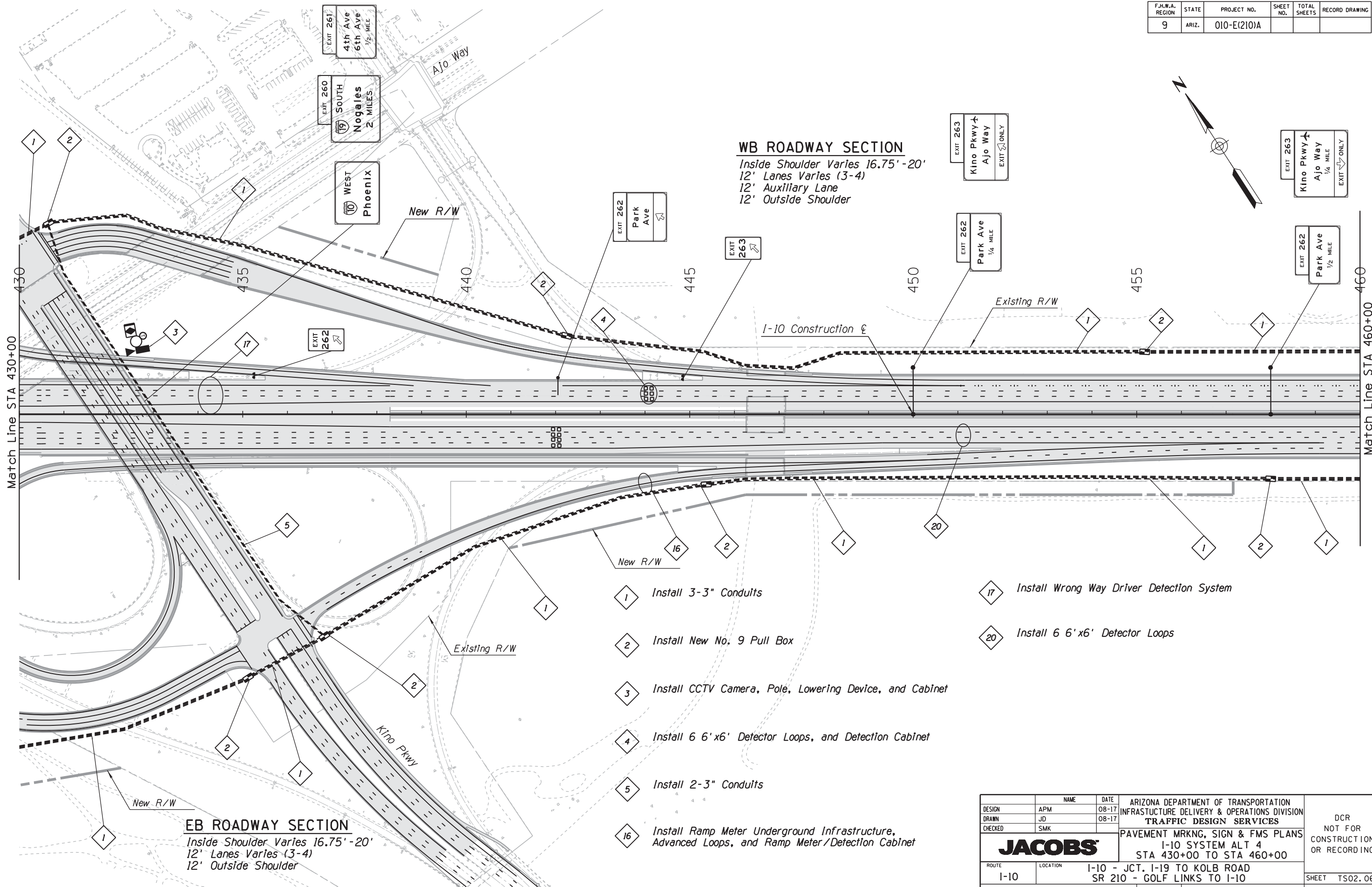
EB ROADWAY SECTION

16.75' Inside Shoulder
12' Lanes Varies (4-5)
12' Outside Shoulder

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 5 Install 2-3" Conduits
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 17 Install Wrong Way Driving Detection System
- 21 Install 8 6'x6' Detector Loops

DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
APM	JD	08-17	JACOBS PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 400+00 TO STA 430+00	SHEET TS02.05 OF
DRAWN	JD	08-17		
CHECKED	SMK			
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	TRACS NO. H7825 OIL	010-E(210)A

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



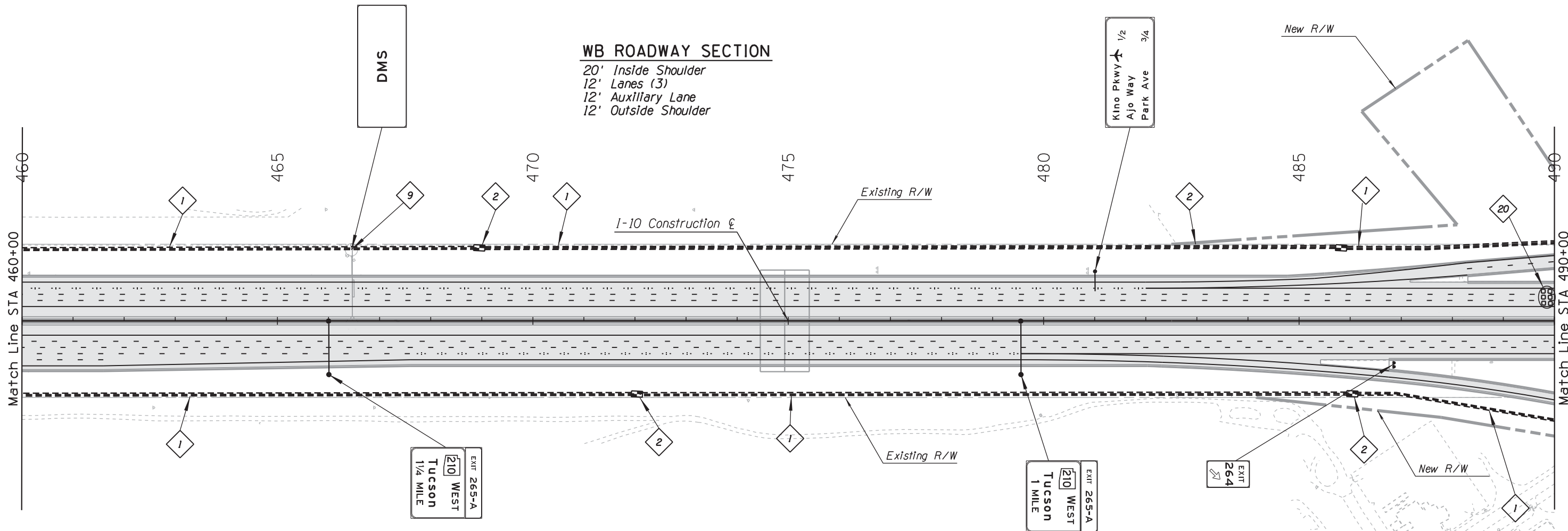
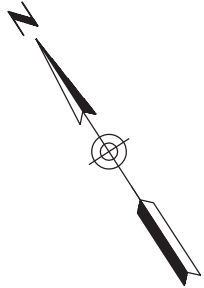
WB ROADWAY SECTION
Inside Shoulder Varies 16.75' - 20'
12' Lanes Varies (3-4)
12' Auxillary Lane
12' Outside Shoulder

EB ROADWAY SECTION
Inside Shoulder Varies 16.75' - 20'
12' Lanes Varies (3-4)
12' Outside Shoulder

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 4 Install 6 6'x6' Detector Loops, and Detection Cabinet
- 5 Install 2-3" Conduits
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 17 Install Wrong Way Driver Detection System
- 20 Install 6 6'x6' Detector Loops

	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM	08-17		
DRAWN	JD	08-17		
CHECKED	SMK		PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 430+00 TO STA 460+00	
JACOBS				
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10		SHEET TS02.06
I-10				
TRACS NO. H7825 OIL			010-E(210)A	___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

20' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder

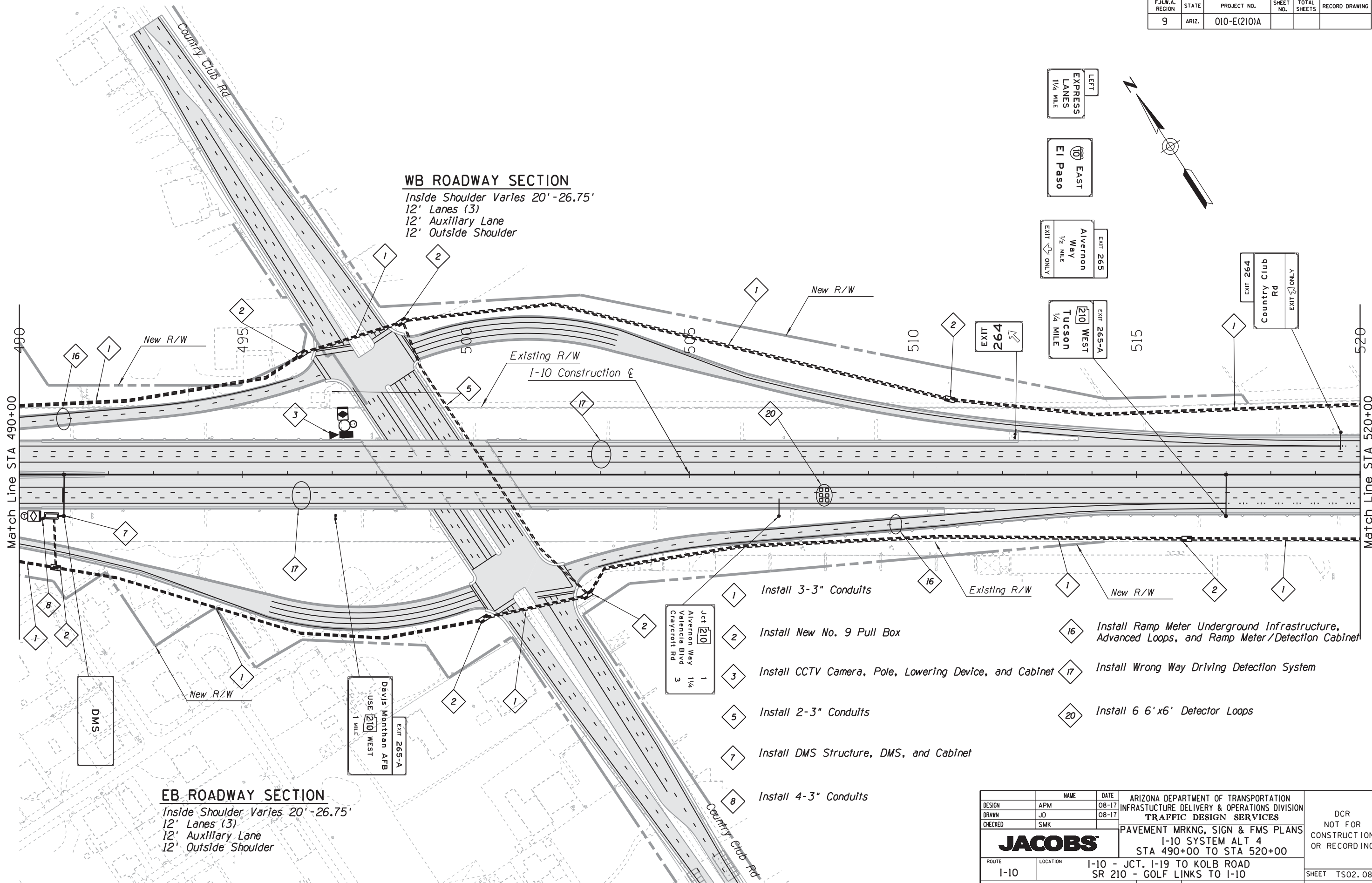
EB ROADWAY SECTION

20' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 9 Existing Structure, DMS to Remain
- 20 Install 6 6'x6' Detector Loops

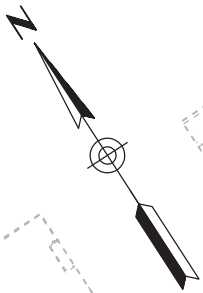
	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 460+00 TO STA 490+00		DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM	08-17			
DRAWN	JD	08-17			
CHECKED	SMK				
JACOBS					
ROUTE	LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10		
I-10					
TRACS NO. H7825 OIL			010-E(210)A		SHEET TS02.07 ___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	APM	08-17	PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 490+00 TO STA 520+00	
CHECKED	JD	08-17		
	SMK			
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10		SHEET TS02.08
TRACS NO. H7825 OIL		010-E(210)A		OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

Inside Shoulder Varies (12'-28')
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder

Match Line STA 520+00

Match Line STA 550+00

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 5 Install 2-3" Conduits
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter / Detection Cabinet
- 20 Install 6 6' x 6' Detector Loops

DMS

Existing R/W

I-10 Construction E

EXIT 264
Country Club Rd
1/4 MILE
EXIT ONLY

EXIT 265
Alvernon Way
1/4 MILE
EXIT ONLY

EXIT 265-A
210 WEST
Tucson

EXIT 265A

LEFT
EXPRESS LANES
1/2 MILE

EXIT 265
EAST
El Paso

EXIT 267
Valencia Rd
2 MILES

EXIT 265
Alvernon Way
EXIT ONLY

Country Club Rd 1/2
Kino Pkwy 1 3/4
Ajo Way

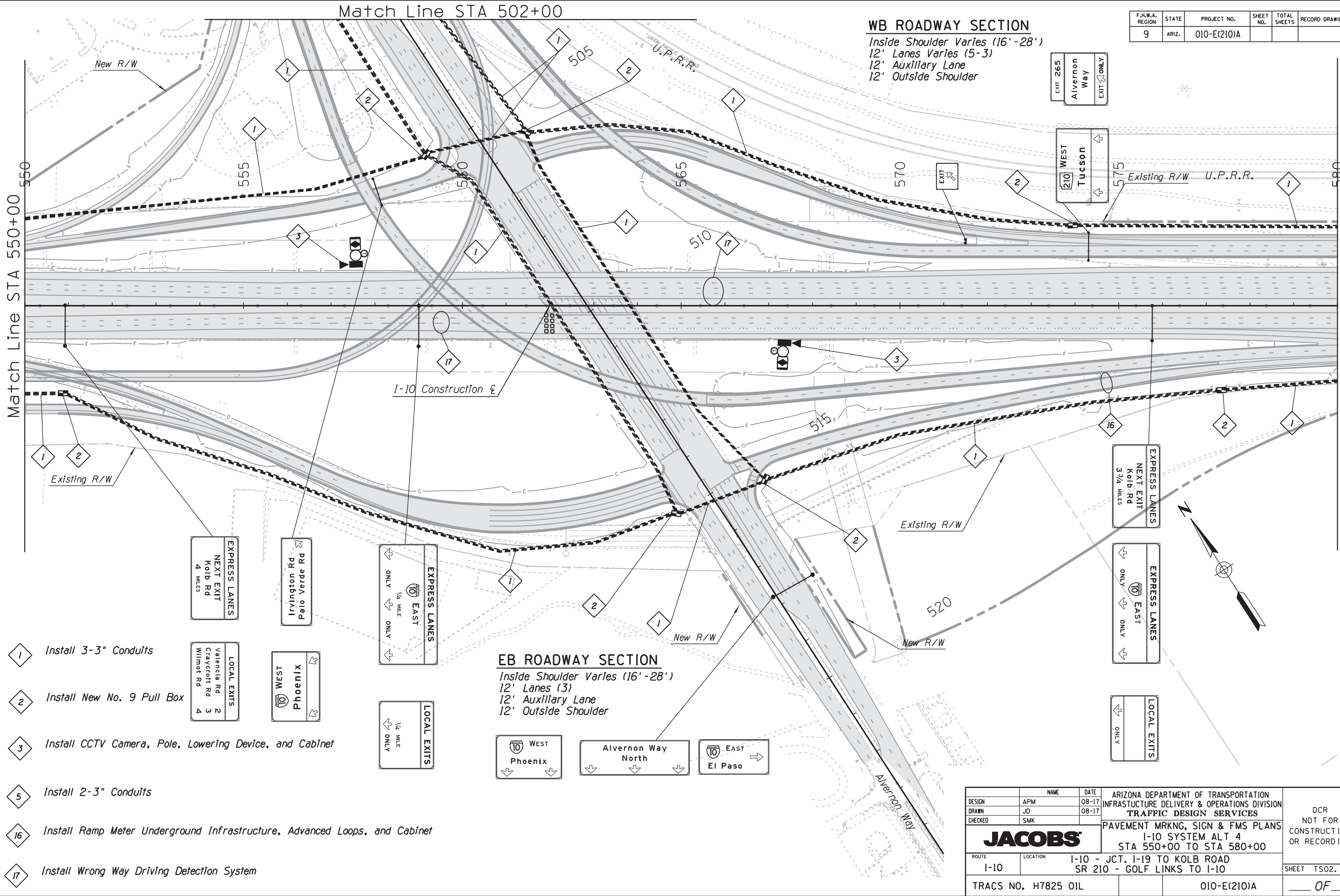
Existing R/W

New R/W

EB ROADWAY SECTION

Inside Shoulder Varies (12'-28')
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder

DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	APM	08-17	PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 520+00 TO STA 550+00	
CHECKED	JD	08-17		
	SMK			
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10		SHEET TS02.09
TRACS NO.	H7825 OIL		010-E(210)A	OF



WB ROADWAY SECTION

Inside Shoulder Varies (16'-28')
12' Lanes Varies (5-3)
12' Auxiliary Lane
12' Outside Shoulder

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

EXIT 265
Alvernon Way
EXIT ONLY

WEST
EXIT 210
Tucson
EXIT ONLY

EXPRESS LANES
NEXT EXIT
Kold Rd
3 3/4 MILES

EXPRESS LANES
10 EAST
ONLY

LOCAL EXITS
ONLY

EB ROADWAY SECTION

Inside Shoulder Varies (16'-28')
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder

10 WEST
Phoenix

Alvernon Way
North

10 EAST
El Paso

1 Install 3-3" Conduits

2 Install New No. 9 Pull Box

3 Install CCTV Camera, Pole, Lowering Device, and Cabinet

5 Install 2-3" Conduits

16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Cabinet

17 Install Wrong Way Driving Detection System

EXPRESS LANES
NEXT EXIT
Kold Rd
4 MILES

Irvington Rd
Palo Verde Rd

LOCAL EXITS
Valencia Rd
Craycroft Rd
Wilnot Rd
2
3
4

WEST
10
Phoenix

EXPRESS LANES
10 EAST
1/4 MILE
ONLY

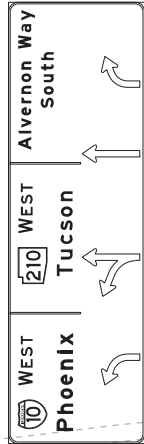
LOCAL EXITS
1/4 MILE
ONLY

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES JACOBS PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 550+00 TO STA 580+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM		08-17		
DRAWN	JD		08-17		
CHECKED	SMK				
ROUTE		LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	SHEET TS02.10
I-10					
TRACS NO. H7825 OIL			010-E(210)A		___ OF ___

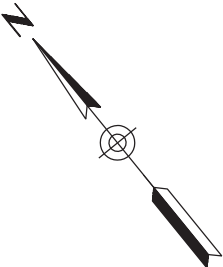
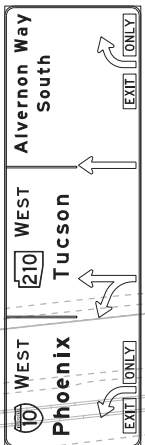
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

WB ROADWAY SECTION

16' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder
12' Exit Lanes Varies (3-2)



END EXPRESS LANES



Match Line STA 580+00

Match Line STA 610+00

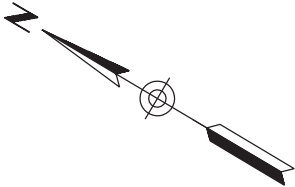
- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 4 Install 6 6'x6' Detector Loops, and Detection Cabinet
- 5 Install 2-3" Conduits

EB ROADWAY SECTION

16' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder
12' Exit Lanes Varies (3-2)

DESIGN	APM	DATE	08-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	08-17		
CHECKED	SMK				
JACOBS				PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 580+00 TO STA 610+00	
ROUTE	I-10	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10		SHEET TS02.11
TRACS NO. H7825 OIL			010-E(210)A		OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

16' Inside Shoulder
12' Lanes (3)
12' Auxillary Lane
12' Outside Shoulder
12' Exit Lanes (2)

EXIT 265
Aivernon Way
1/2 MILE
EXIT ONLY

EXIT 265-B
WEST
Tucson
1/2 MILE
EXIT ONLY

EXIT 265
Irvington Rd
Palo Verde Rd
USE EXIT 265

EXIT 210
WEST
Phoenix
1/2 MILE
EXIT ONLY

EXPRESS LANES
ENDS
1/2 MILE

EXIT 268
Craycroft Rd
1 1/2 MILES
EXIT ONLY

EXIT 267
Valencia Rd
1/2 MILE
EXIT ONLY

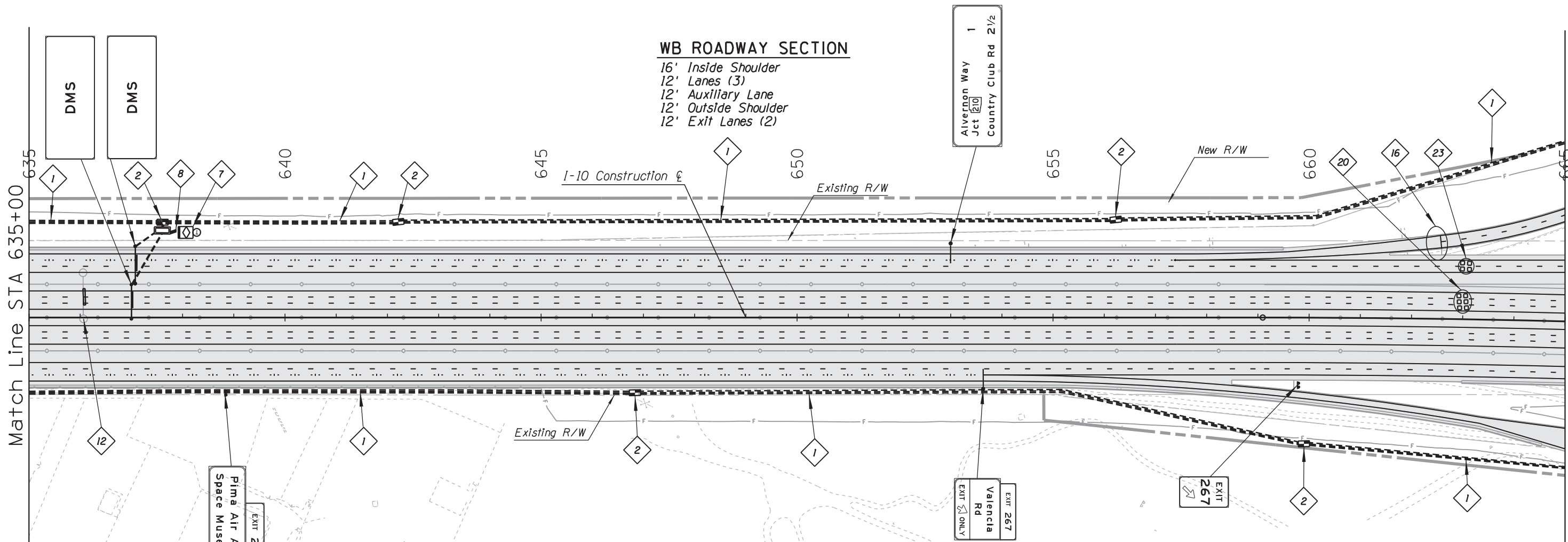
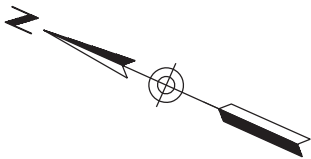
EB ROADWAY SECTION

16' Inside Shoulder
12' Lanes (3)
12' Auxillary Lane
12' Outside Shoulder
12' Exit Lanes (2)

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 5 Install 2-3" Conduits
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits
- 20 Install 6 6'x6' Detector Loops

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 610+00 TO STA 635+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM		08-17		
DRAWN	JD		08-17		
CHECKED	SMK				
JACOBS					
ROUTE		LOCATION			
I-10		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10			SHEET TS02.12
TRACS NO. H7825 OIL			010-E(210)A		___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

16' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder
12' Exit Lanes (2)

EB ROADWAY SECTION

16' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder
12' Exit Lanes (2)

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits
- 12 Remove DMS Structure, DMS
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Cabinet
- 20 Install 6 6'x6' Detector Loops
- 23 Install 4 6'x6' Detector Loops

DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	APM	08-17	PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 635+00 TO STA 665+00	
CHECKED	JD	08-17		
	SMK			
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10		SHEET TS02.13
TRACS NO. H7825 OIL		010-E(210)A		OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

- 1

Install 3-3" Conduits
- 2

Install New No. 9 Pull Box
- 3

Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 13

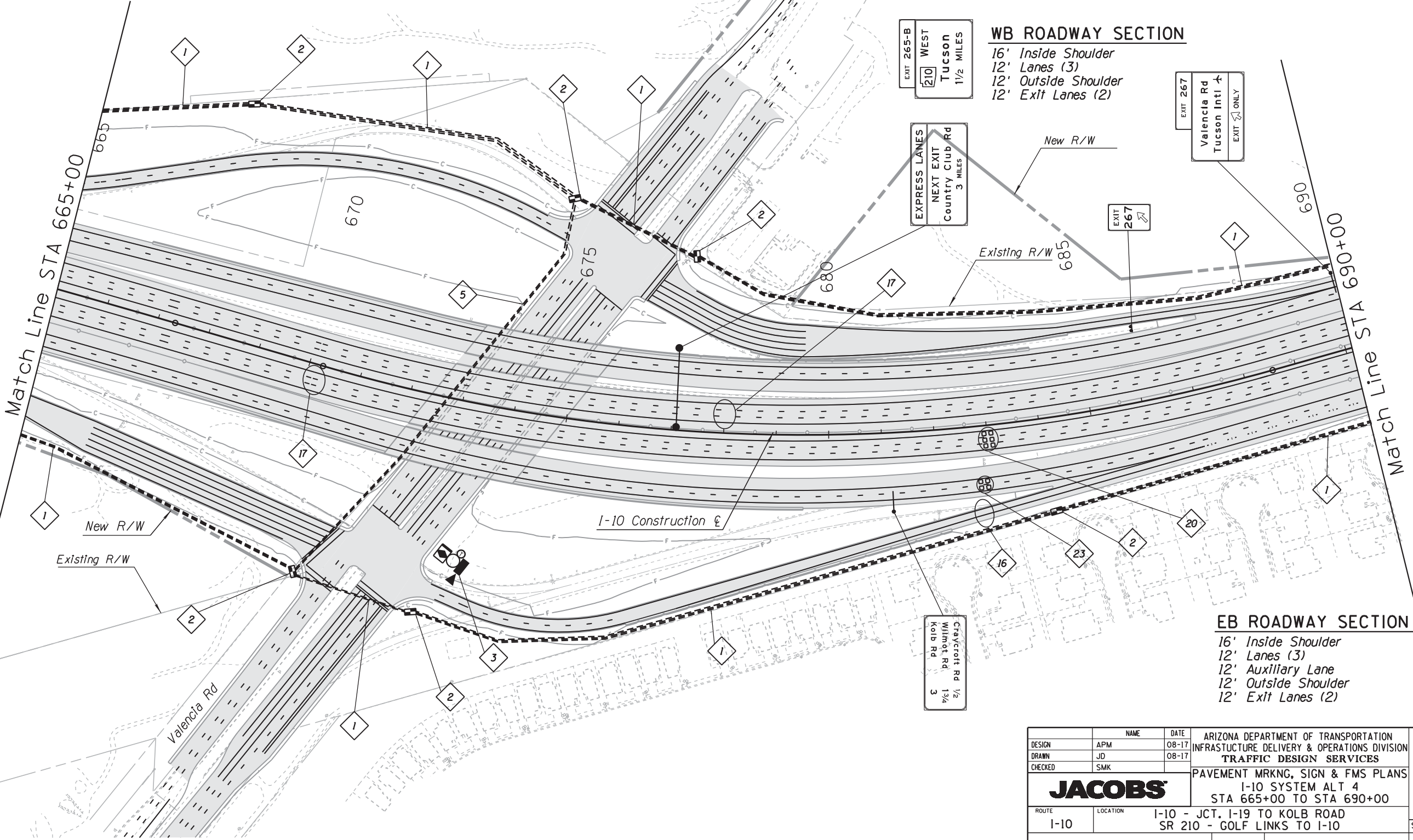
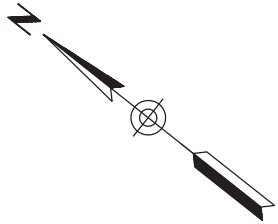
Install Ramp Meter Underground Infrastructure, Advanced Loops, and Cabinet
- 16

Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter/Detection Cabinet
- 17

Install Wrong Way Driver Detection System
- 20

Install 6 6'x6' Detector Loops
- 23

Install 4 6'x6' Detector Loops

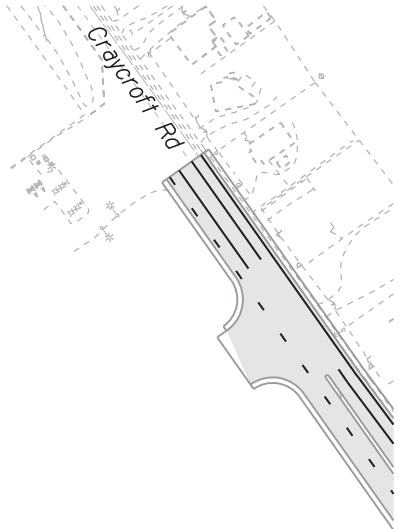
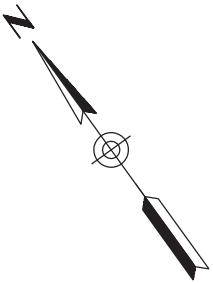


WB ROADWAY SECTION
16' Inside Shoulder
12' Lanes (3)
12' Outside Shoulder
12' Exit Lanes (2)

EB ROADWAY SECTION
16' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder
12' Exit Lanes (2)

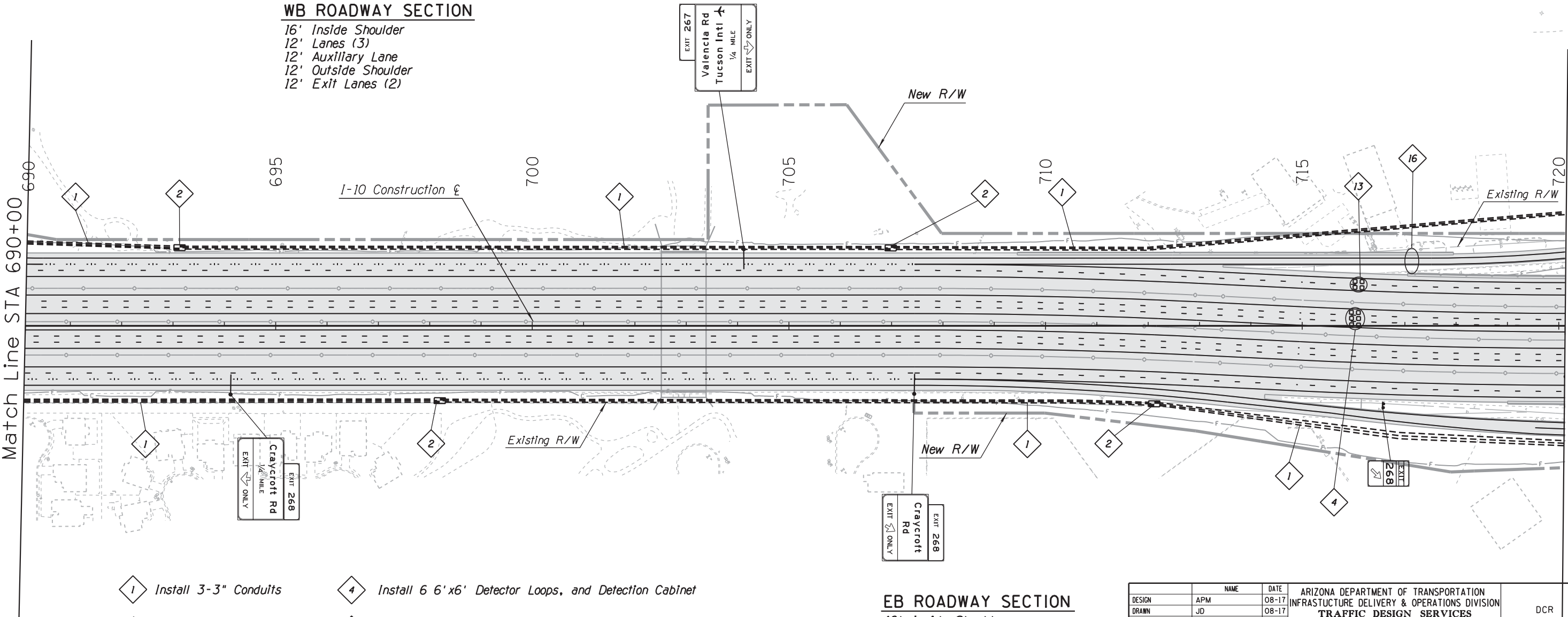
		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION		DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM		08-17	INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION		
DRAWN	JD		08-17	TRAFFIC DESIGN SERVICES		
CHECKED	SMK			JACOBS		
				PAVEMENT MRKNG, SIGN & FMS PLANS		SHEET TS02.14
				I-10 SYSTEM ALT 4		
				STA 665+00 TO STA 690+00		
ROUTE		LOCATION		I-10 - JCT. I-19 TO KOLB ROAD		SHEET TS02.14
I-10				SR 210 - GOLF LINKS TO I-10		
TRACS NO. H7825 OIL				010-E(210)A		___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

- 16' Inside Shoulder
- 12' Lanes (3)
- 12' Auxiliary Lane
- 12' Outside Shoulder
- 12' Exit Lanes (2)



- 1

Install 3-3" Conduits
- 2

Install New No. 9 Pull Box
- 4

Install 6 6'x6' Detector Loops, and Detection Cabinet
- 13

Install 4 6'x6' Detector Loops, and Detection Cabinet
- 16

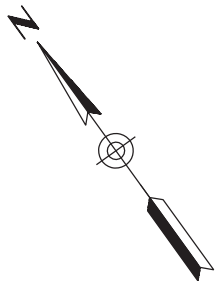
Install Ramp Meter Underground Infrastructure, Advanced Loops, and Cabinet

EB ROADWAY SECTION

- 16' Inside Shoulder
- 12' Lanes (3)
- 12' Auxiliary Lane
- 12' Outside Shoulder
- 12' Exit Lanes (2)

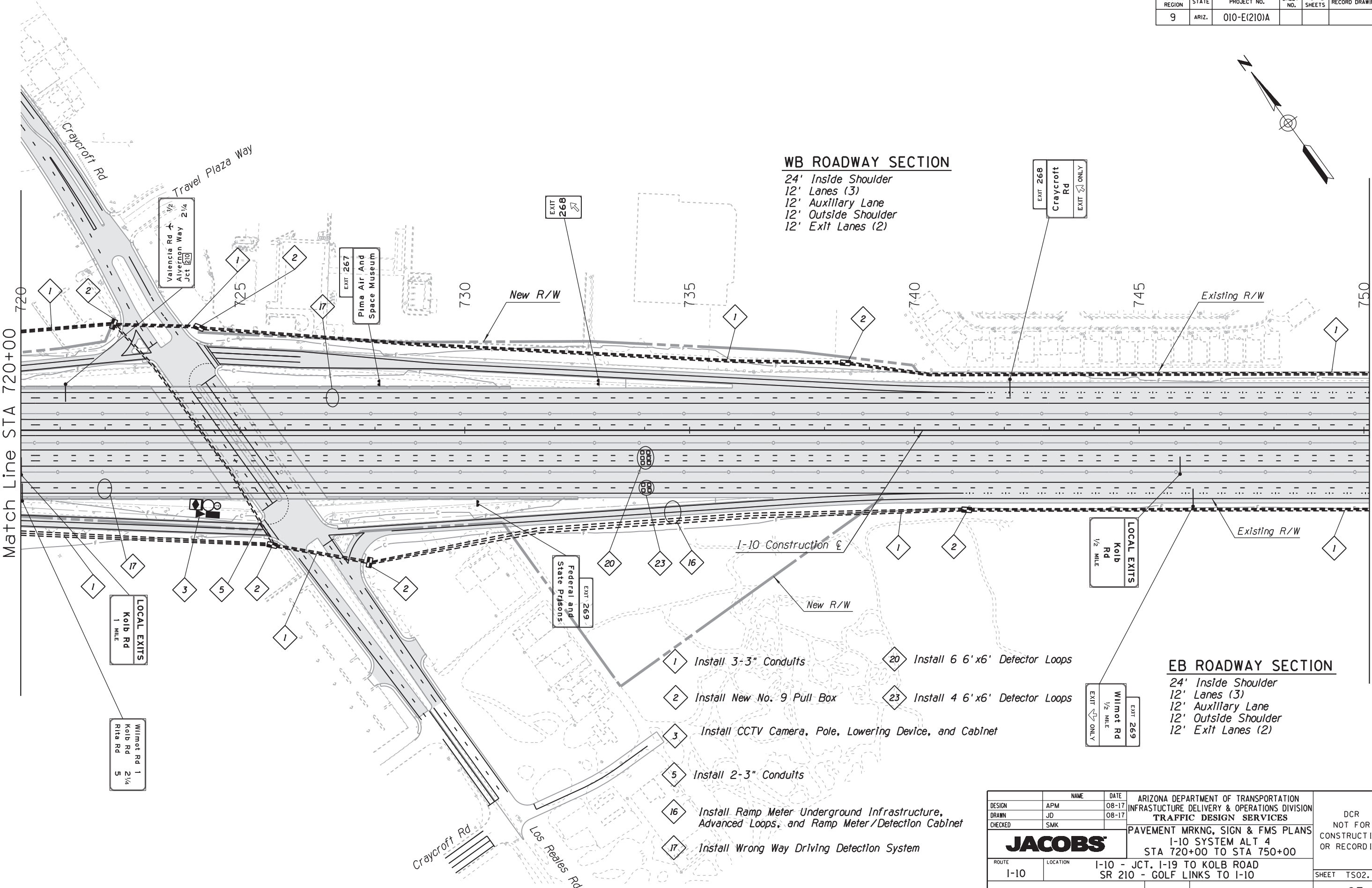
		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES		DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN		APM	08-17			
DRAWN		JD	08-17			
CHECKED		SMK		PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 690+00 TO STA 720+00		SHEET TS02.15 OF
JACOBS						
ROUTE		LOCATION				
I-10		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10				
TRACS NO. H7825 OIL				010-E(210)A		

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

24' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder
12' Exit Lanes (2)

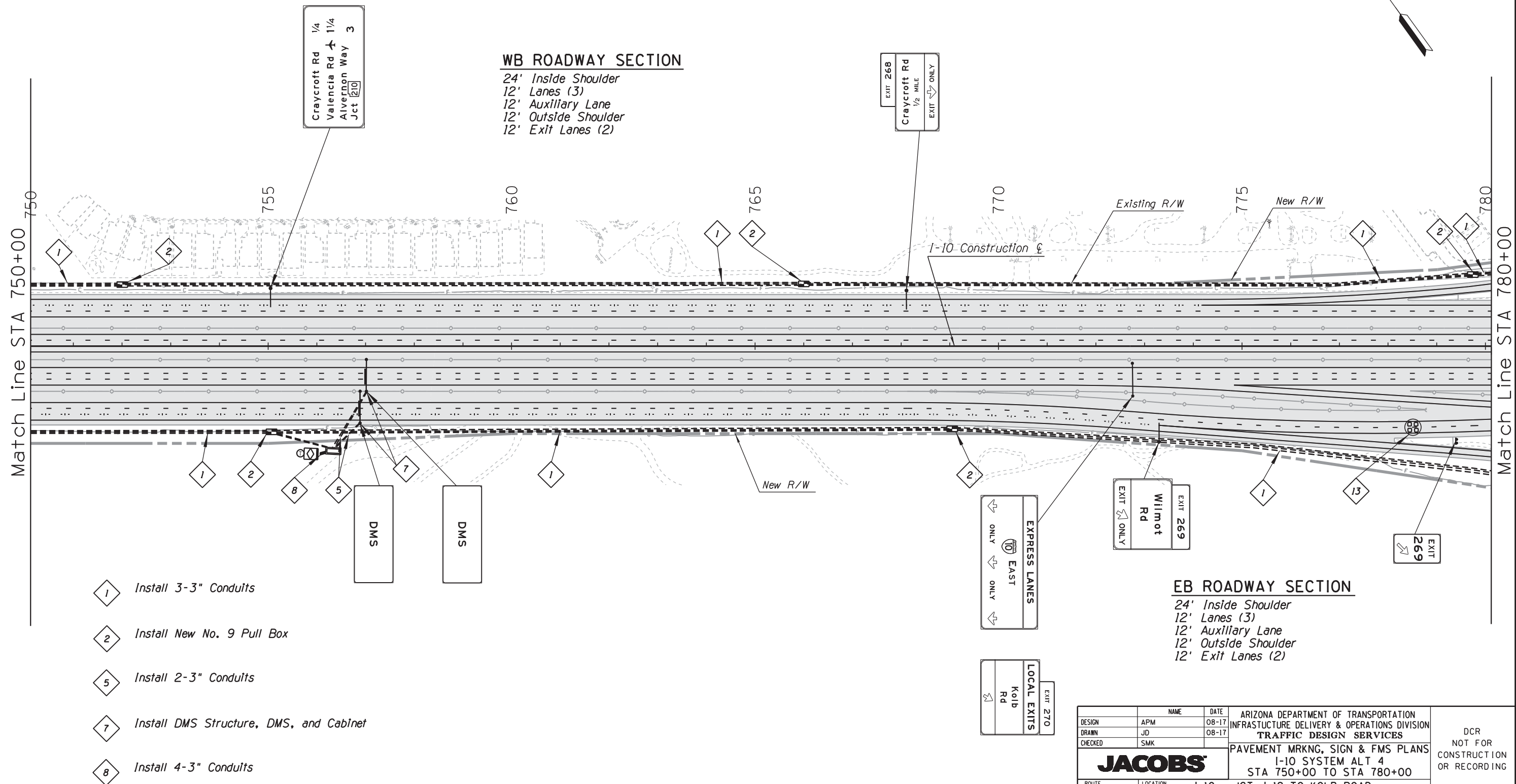
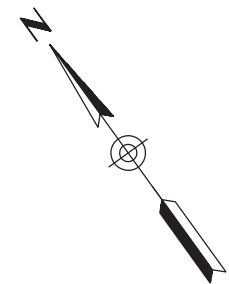


EB ROADWAY SECTION

24' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder
12' Exit Lanes (2)

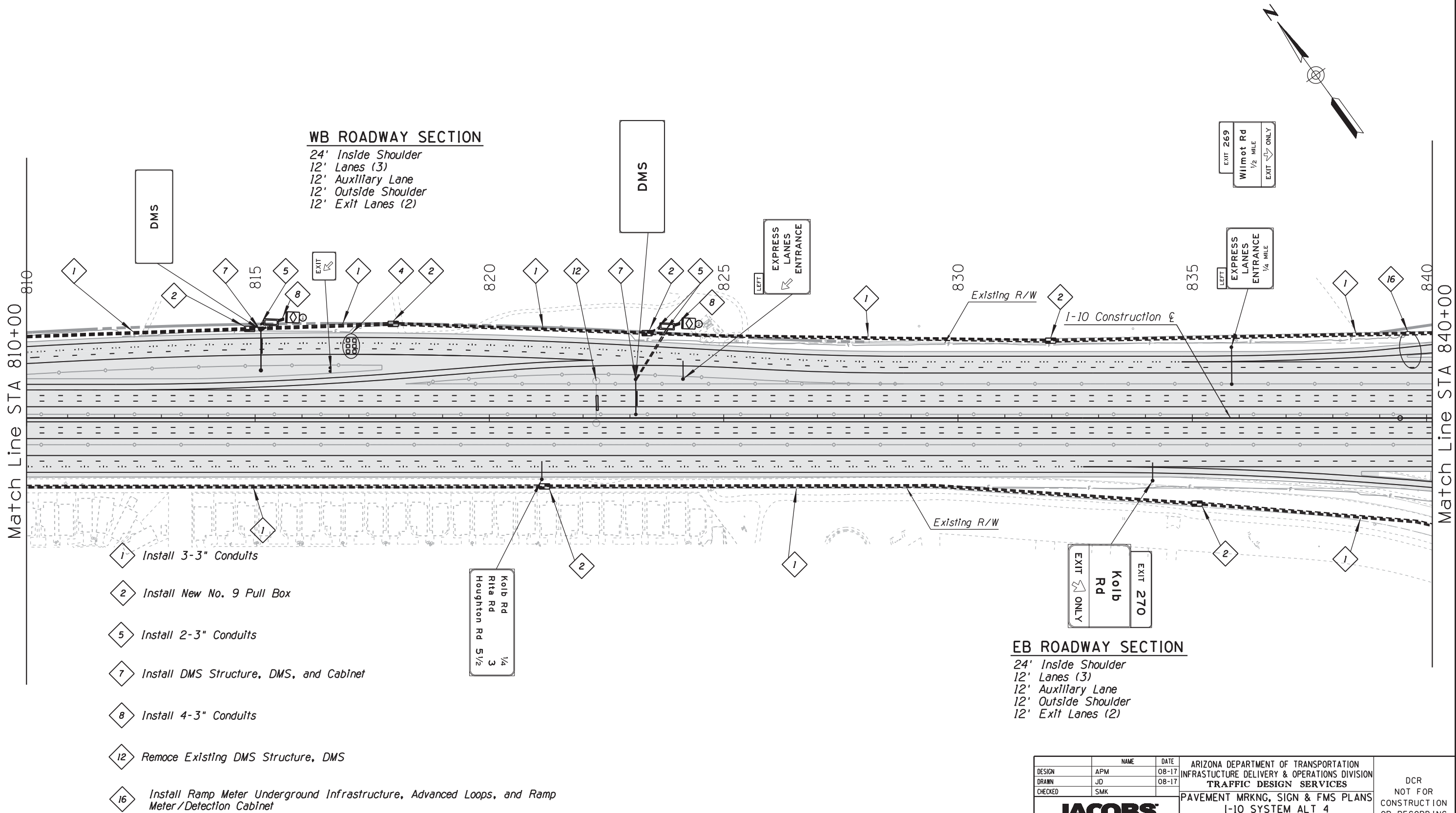
DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	APM	08-17	PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 720+00 TO STA 750+00	SHEET TS02.16
CHECKED	JD	08-17		
JACOBS			ROUTE I-10	
			LOCATION I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	
TRACS NO. H7825 OIL			010-E(210)A	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION		DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM	08-17	INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION			
DRAWN	JD	08-17	TRAFFIC DESIGN SERVICES			
CHECKED	SMK		PAVEMENT MRKNG, SIGN & FMS PLANS			
JACOBS			I-10 SYSTEM ALT 4			
			STA 750+00 TO STA 780+00			
ROUTE	LOCATION		I-10 - JCT. I-19 TO KOLB ROAD			SHEET
I-10			SR 210 - GOLF LINKS TO I-10			
TRACS NO. H7825 OIL				010-E(210)A		___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



DESIGN	APM	DATE	08-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	08-17		
CHECKED	SMK				
JACOBS				PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 810+00 TO STA 840+00	
ROUTE	I-10			LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10
TRACS NO. H7825 OIL				010-E(210)A	SHEET TS02.19 OF

DATE: LOCATION: REVISIONS: FINISHED PLANS: SURVEY NO. DATE: LOCATION: REVISIONS: FINISHED PLANS: SURVEY NO.

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

WB ROADWAY SECTION

16' Inside Shoulder
12' Lanes (5)
12' Outside Shoulder
12' Exit Lanes (2)

EB ROADWAY SECTION

16' Inside Shoulder
12' Lanes (5)
12' Outside Shoulder
12' Exit Lanes Varies (2-1)

- 1

Install 3-3" Conduits
- 2

Install New No. 9 Pull Box
- 3

Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 4

Install 6 6'x6' Detector Loops, and Detection Cabinet
- 5

Install 2-3" Conduits
- 13

Install 4 6'x6' Detector Loops, and Detection Cabinet
- 14

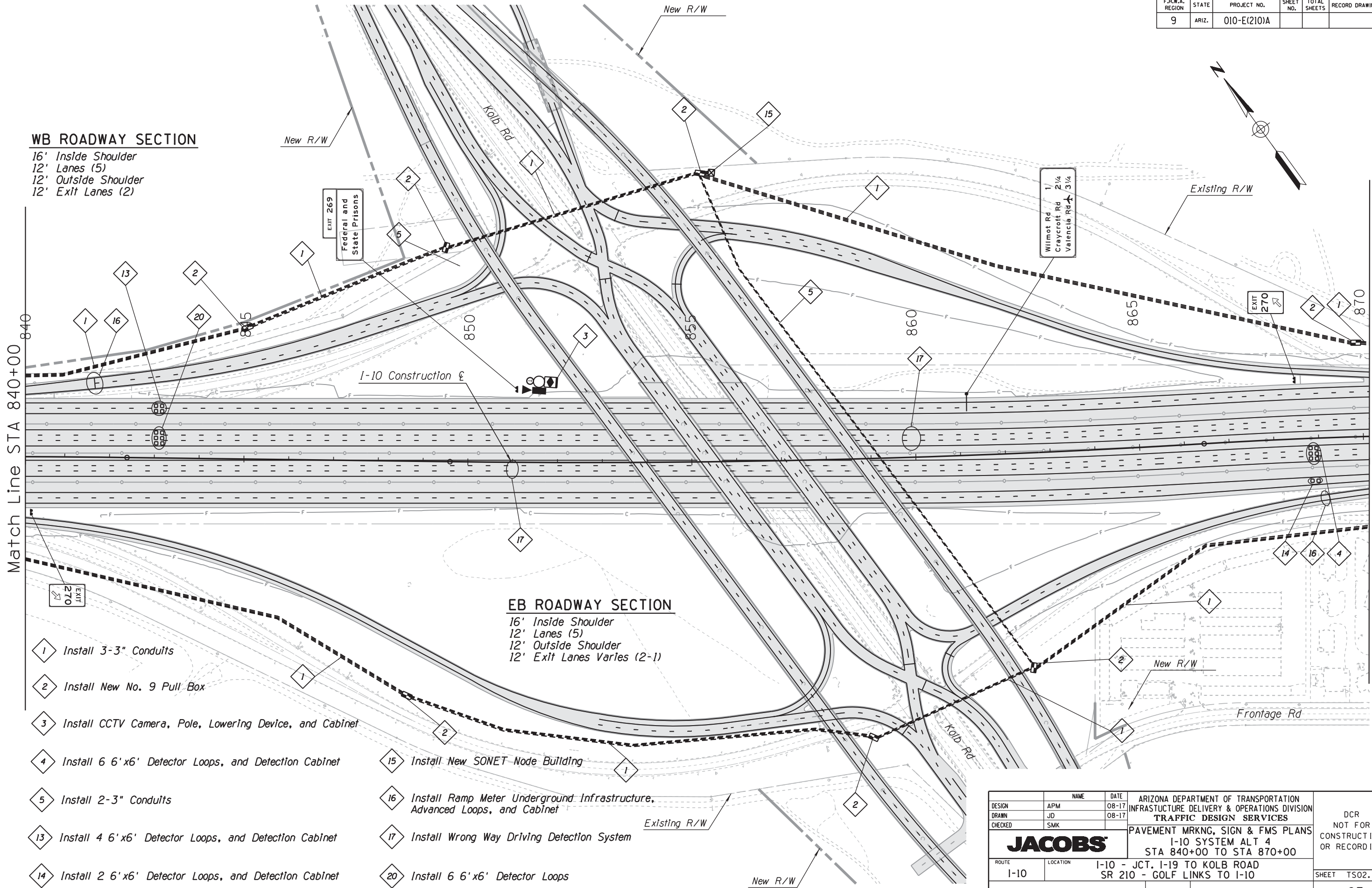
Install 2 6'x6' Detector Loops, and Detection Cabinet
- 15

Install New SONET Node Building
- 16

Install Ramp Meter Underground Infrastructure, Advanced Loops, and Cabinet
- 17

Install Wrong Way Driving Detection System
- 20

Install 6 6'x6' Detector Loops



	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 4 STA 840+00 TO STA 870+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM	08-17		
DRAWN	JD	08-17		
CHECKED	SMK			
JACOBS				
ROUTE	LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	SHEET TS02.20
I-10				
TRACS NO. H7825 OIL			010-E(210)A	___ OF ___

Match Line STA 870+00

Match Line STA 900+00

WB ROADWAY SECTION
Inside Shoulder Varies (12'-28')
12' Lanes Varies (4-3)
12' Auxiliary Lanes (2)
12' Outside Shoulder

EB ROADWAY SECTION
Inside Shoulder Varies (12'-28')
12' Lanes Varies (3)
12' Auxiliary Lane
12' Outside Shoulder

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			

EXIT 270
Kolb Rd
1/2 MILE

LOCAL EXITS
WEST
210
1/4 MILE
ONLY

EXPRESS LANES
WEST
10
1/4 MILE
ONLY

EXIT 270
Kolb Rd
1/4 MILE

LOCAL EXITS
WEST
210
ONLY

EXPRESS LANES
WEST
10
ONLY

EXPRESS LANES
NEXT EXIT
Country Club Rd
7 MILES

END
EXPRESS
LANES

I-10 Construction E

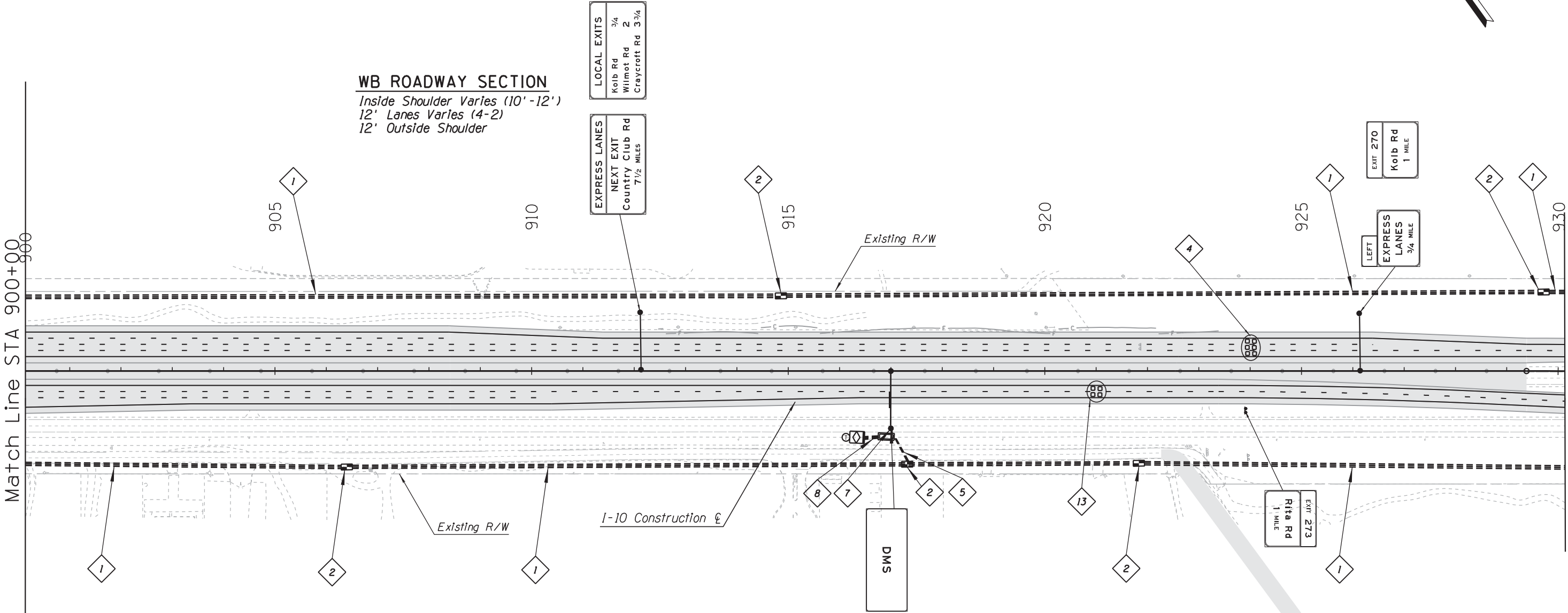
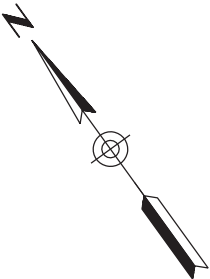
Existing R/W

Existing R/W

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 6 Install 8 6'x6' Detector Loops, and Detection Cabinet
- 11 Install 10 6'x6' Detector Loops

DESIGN	APM	DATE	08-17	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 870+00 TO STA 900+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DRAWN	JD	DATE	08-17		
CHECKED	SMK				
JACOBS					
ROUTE	LOCATION	I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10			SHEET TS02.21
TRACS NO. H7825 OIL		010-E(210)A			OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION
Inside Shoulder Varies (10'-12')
12' Lanes Varies (4-2)
12' Outside Shoulder

LOCAL EXITS
Kolb Rd 3/4
Wilmot Rd 2
Craycroft Rd 3 3/4

EXPRESS LANES
NEXT EXIT
Country Club Rd
7 1/2 MILES

EXIT 270
Kolb Rd
1 MILE

LEFT EXPRESS LANES
3/4 MILE

EXIT 273
Rita Rd
1 MILE

- 1

Install 3-3" Conduits
- 2

Install New No. 9 Pull Box
- 4

Install 6 6'x6' Detector Loops, and Detection Cabinet
- 5

Install 2-3" Conduits

7

Install DMS Structure, DMS, and Cabinet

8

Install 4-3" Conduits

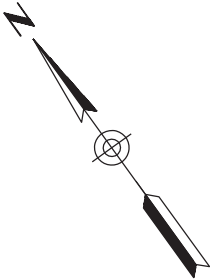
13

Install 4 6'x6' Detector Loops, and Detection Cabinet

EB ROADWAY SECTION
Inside Shoulder Varies (4'-12')
12' Lanes Varies (3-2)
12' Outside Shoulder

	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 900+00 TO STA 930+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM	08-17		
DRAWN	JD	08-17		
CHECKED	SMK			
JACOBS				
ROUTE	LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	SHEET TS02.22
I-10				
TRACS NO. H7825 OIL			010-E(210)A	___ <i>OF</i> ___

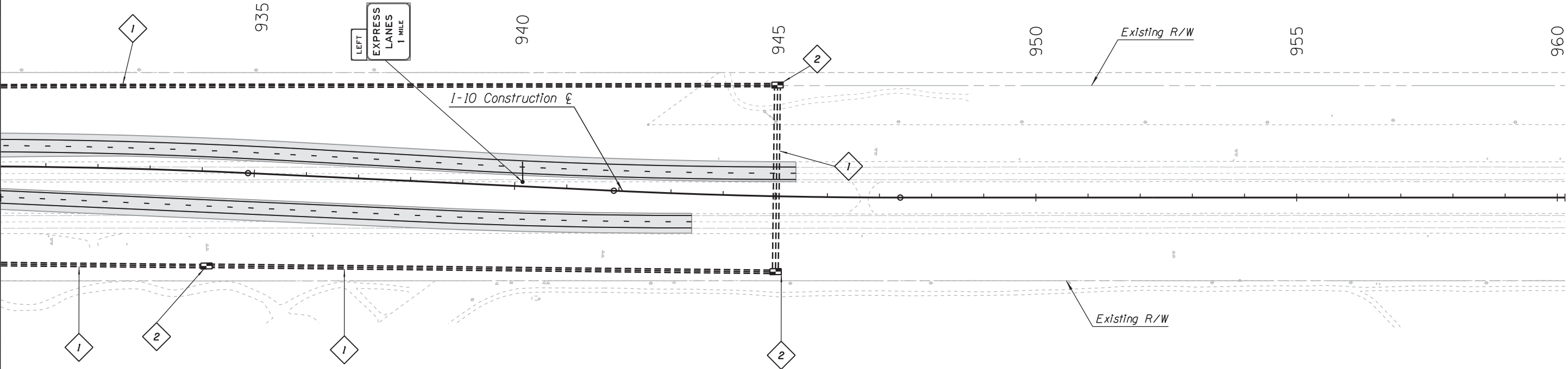
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

*Inside Shoulder Varies (4'-10')
12' Lanes (2)
12' Outside Shoulder*

Match Line STA 930+00



EB ROADWAY SECTION

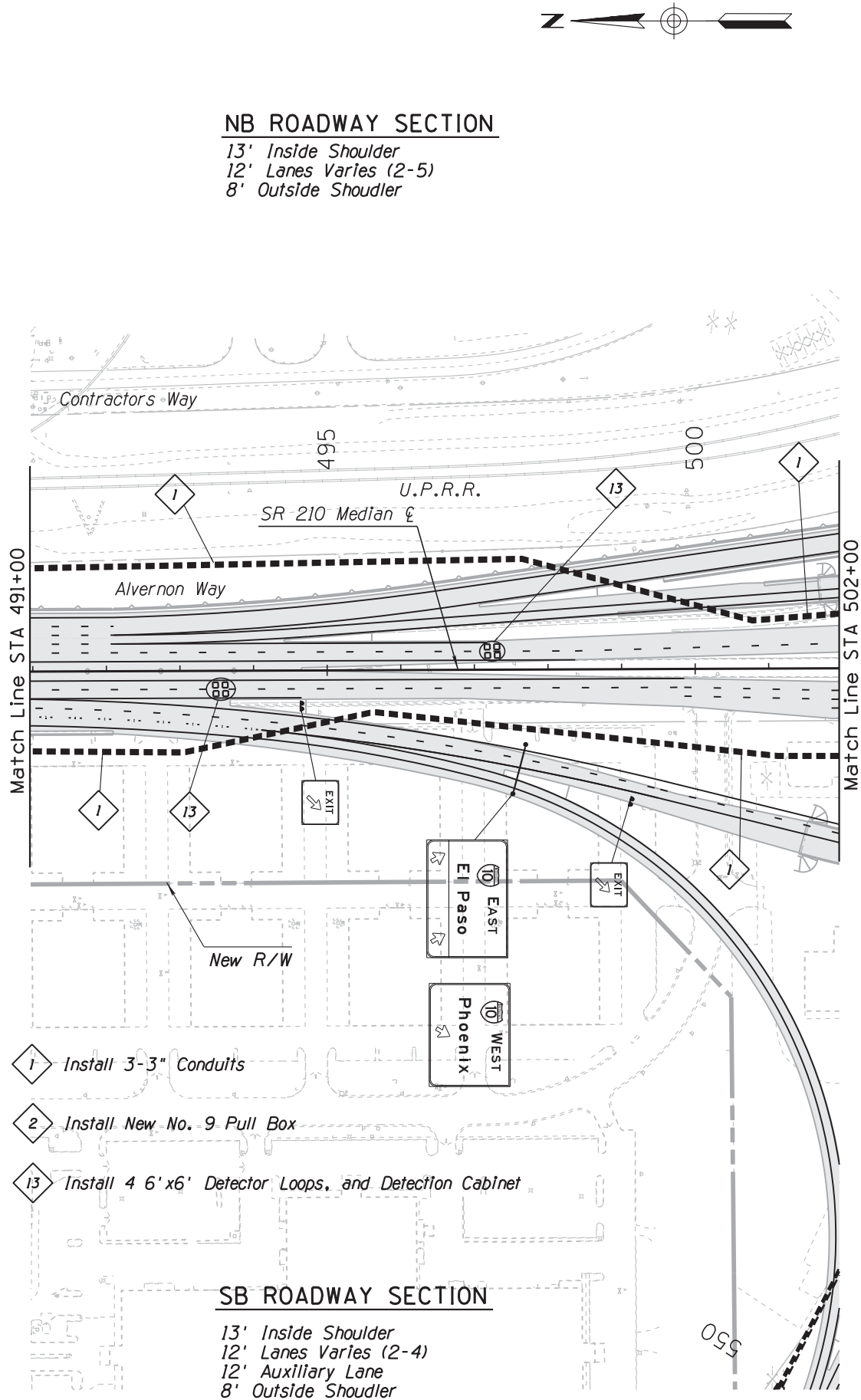
*4' Inside Shoulder
12' Lanes (2)
12' Outside Shoulder*

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 SYSTEM ALT 1 STA 930+00 TO STA 960+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM		08-17		
DRAWN	JD		08-17		
CHECKED	SMK				
JACOBS					
ROUTE		LOCATION			
I-10		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10			SHEET TS02.23
TRACS NO. H7825 OIL				010-E(210)A	___ OF ___

DATE- LOCATION- REVISIONS- FINISHED PLANS- SURVEY NO. DATE- LOCATION- REVISIONS- FINISHED PLANS- SURVEY NO.

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)S			
010 PM 260					



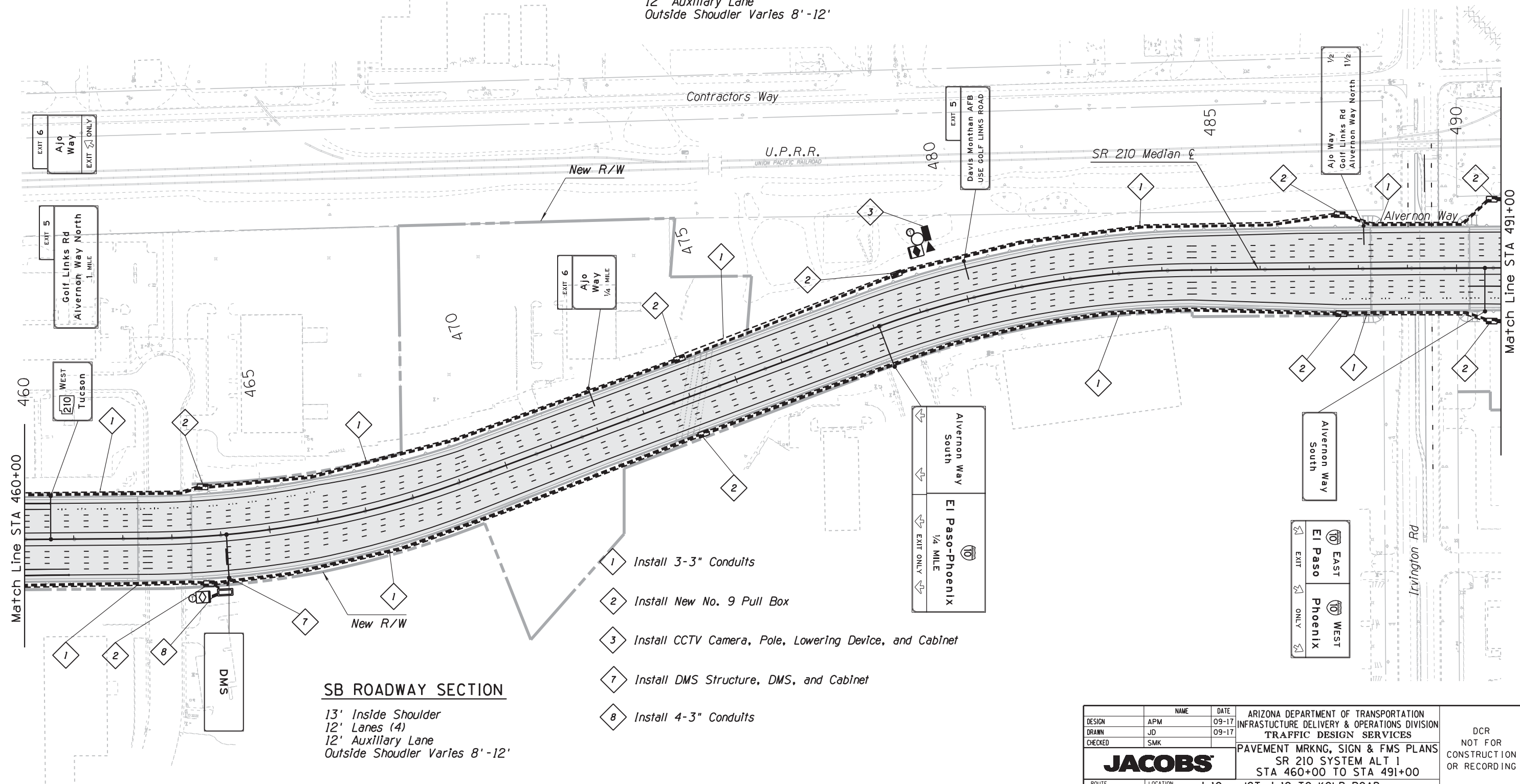
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DESIGN	APM		09-17		
DRAWN	JD		09-17		
CHECKED	SMK			PAVEMENT MRKNG, SIGN & FMS PLANS SR 210 SYSTEM ALT 1 STA 491+00 TO STA 502+00	SHEET TS01.28
JACOBS					
ROUTE		LOCATION			
SR 210		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS ROAD TO I-10			
TRACS NO. H7825 OIL				010-E(210)S	___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)S			

010 PM 260

NB ROADWAY SECTION

13' Inside Shoulder
12' Lanes (4)
12' Auxiliary Lane
Outside Shoudler Varies 8'-12'

SB ROADWAY SECTION

13' Inside Shoulder
12' Lanes (4)
12' Auxiliary Lane
Outside Shoudler Varies 8'-12'

- 1 *Install 3-3" Conduits*
 - 2 *Install New No. 9 Pull Box*
 - 3 *Install CCTV Camera, Pole, Lowering Device, and Cabinet*
 - 7 *Install DMS Structure, DMS, and Cabinet*
 - 8 *Install 4-3" Conduits*

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES		DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM		09-17			
DRAWN	JD		09-17			
CHECKED	SMK					
JACOBS			PAVEMENT MRKNG, SIGN & FMS PLANS SR 210 SYSTEM ALT 1 STA 460+00 TO STA 491+00			
ROUTE		LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS ROAD TO I-10		
SR 210						SHEET TS01.27
TRACS NO. H7825 OIL				010-E(210)S		___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)S			

010 PM 260



NB ROADWAY SECTION

13' Inside Shoulder
12' Lanes (4)
Outside Shoudler Varies 10'-12'

Contractors Way

U.P.R.R.

New R/W

DMS

EXIT 6

SR 210 Median E

New R/W

SB ROADWAY SECTION

13' Inside Shoulder
12' Lanes (4)
Outside Shoudler Varies 10'-12'

- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 6 Install 8 6'x6' Detector Loops, and Detection Cabinet
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 5 Install 2-3" Conduits
- 7 Install DMS Structure, DMS, and Cabinet
- 8 Install 4-3" Conduits
- 16 Install Ramp Meter Underground Infrastructure, Advanced Loops, and Ramp Meter /Detection Cabinet
- 17 Install Wrong Way Driving Detection System
- 21 Install 8 6'x6' Loop Detectors

Alvernon Way
South
El Paso-Phoenix
1 MILE

New R/W

Ajo Way

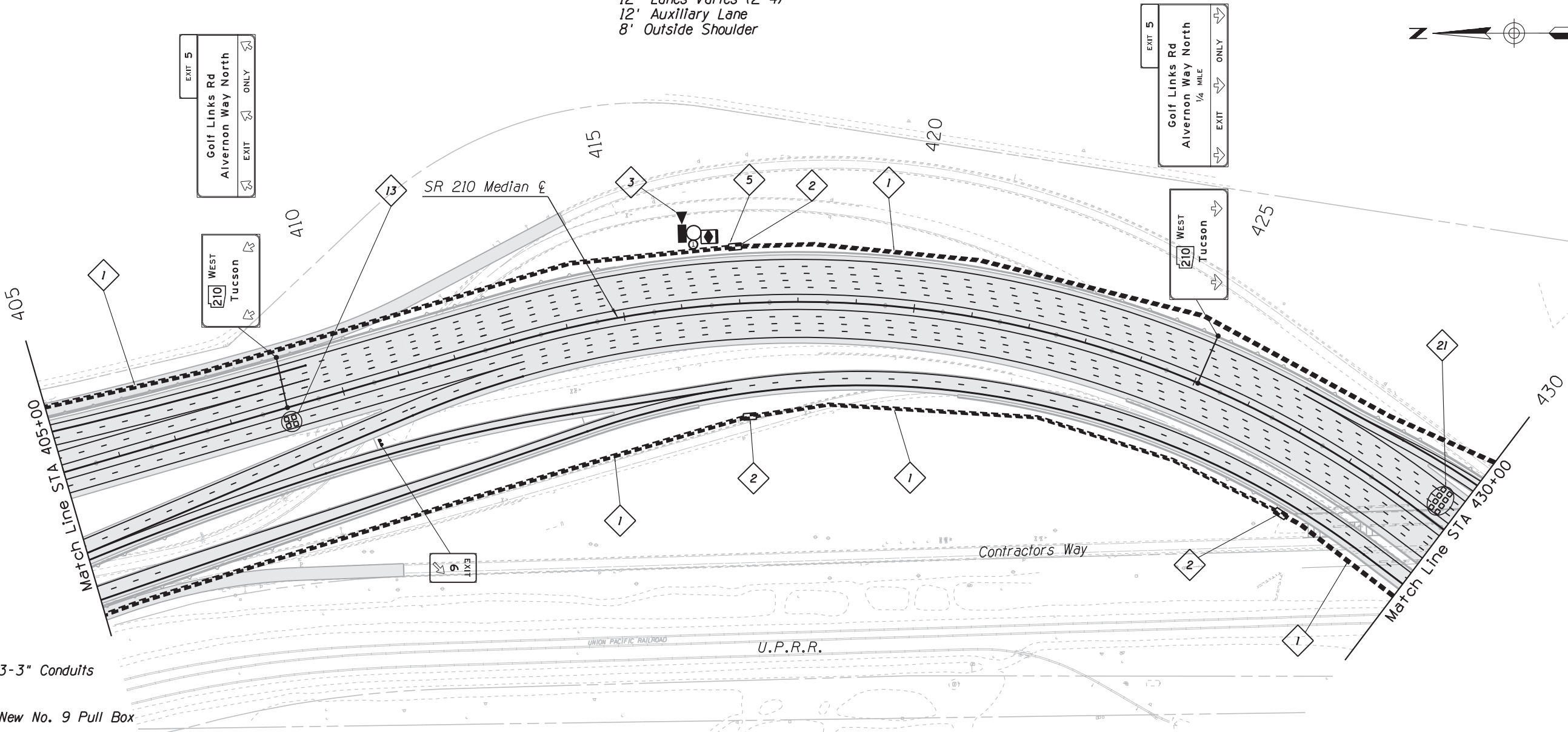
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DESIGN	APM		09-17		
DRAWN	JD		09-17		
CHECKED	SMK				
JACOBS				PAVEMENT MRKNG, SIGN & FMS PLANS SR 210 SYSTEM ALT 1 STA 430+00 TO STA 460+00	
ROUTE		LOCATION			
SR 210		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS ROAD TO I-10			SHEET TS01.26
TRACS NO. H7825 OIL				010-E(210)S	___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)S			

010 PM 260

NB ROADWAY SECTION

13' Inside Shoulder
12' Lanes Varies (2-4)
12' Auxiliary Lane
8' Outside Shoulder



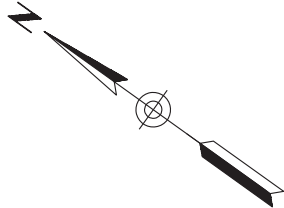
- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 5 Install 2-3" Conduits
- 13 Install 4 6'x6' Detector Loops, and Detection Cabinet
- 21 Install 8 6'x6' Detector Loops

SB ROADWAY SECTION

Inside Shoulder Varies 7'-13'
12' Lanes Varies (2-4)
Outside Shoulder Varies 8'-10'

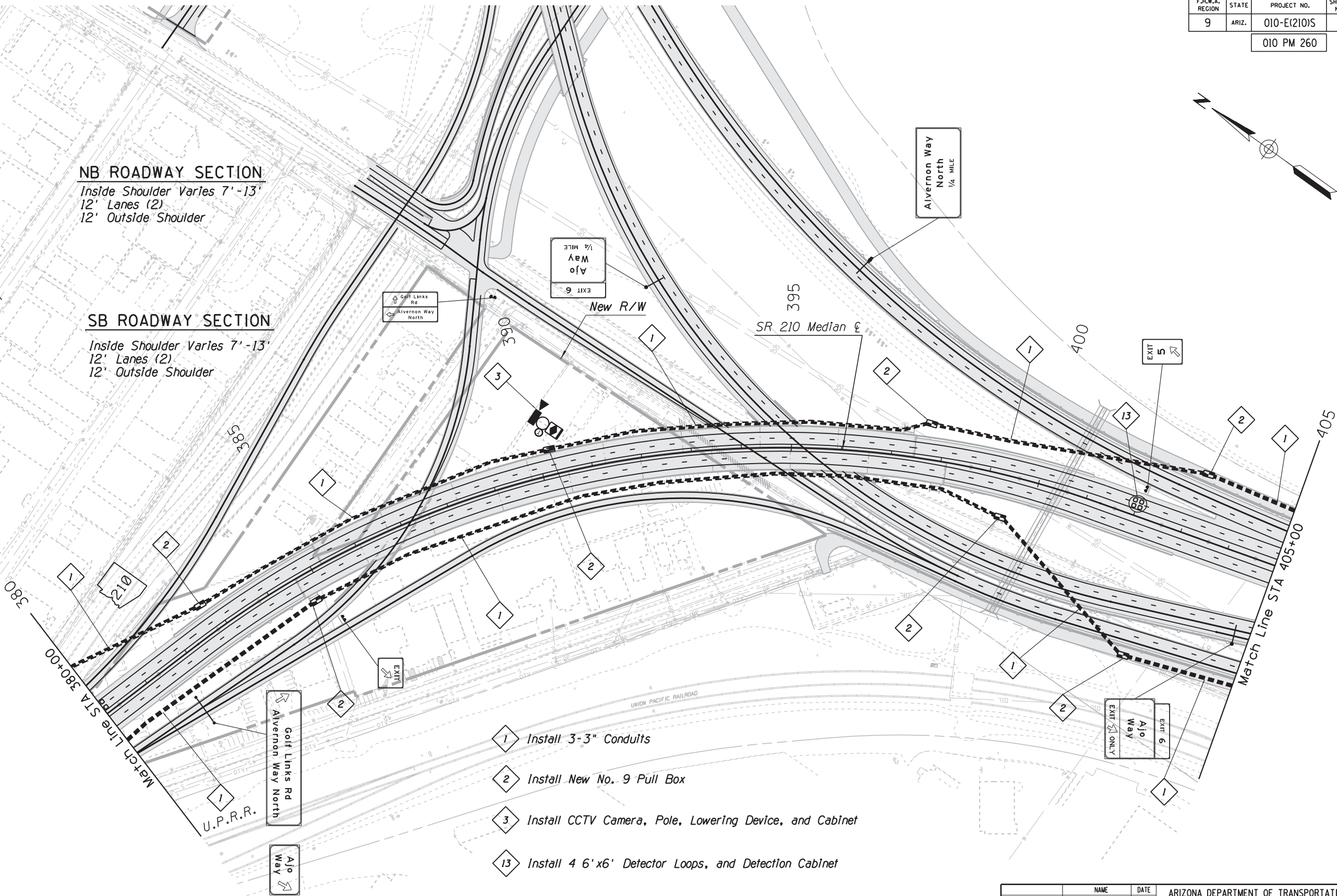
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DESIGN		APM	09-17		
DRAWN		JD	09-17		
CHECKED		SMK			
JACOBS				PAVEMENT MRKNG, SIGN & FMS PLANS SR 210 SYSTEM ALT 1 STA 405+00 TO STA 430+00	
ROUTE		LOCATION			
SR 210		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS ROAD TO I-10			SHEET TS01.25
TRACS NO. H7825 OIL				010-E(210)S	___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)S			
010 PM 260					



NB ROADWAY SECTION
Inside Shoulder Varies 7'-13'
12' Lanes (2)
12' Outside Shoulder

SB ROADWAY SECTION
Inside Shoulder Varies 7'-13'
12' Lanes (2)
12' Outside Shoulder

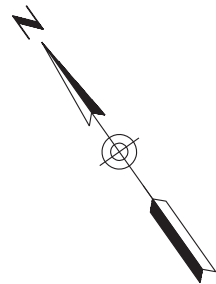


- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box
- 3 Install CCTV Camera, Pole, Lowering Device, and Cabinet
- 13 Install 4 6' x6' Detector Loops, and Detection Cabinet

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES		DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM		09-17			
DRAWN	JD		09-17			
CHECKED	SMK			PAVEMENT MRKNG, SIGN & FMS PLANS SR 210 SYSTEM ALT 1 STA 380+00 TO STA 405+00		
JACOBS						
ROUTE		LOCATION				
SR 210		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS ROAD TO I-10				SHEET TS01.24
TRACS NO. H7825 OIL				010-E(210)S		___ OF ___

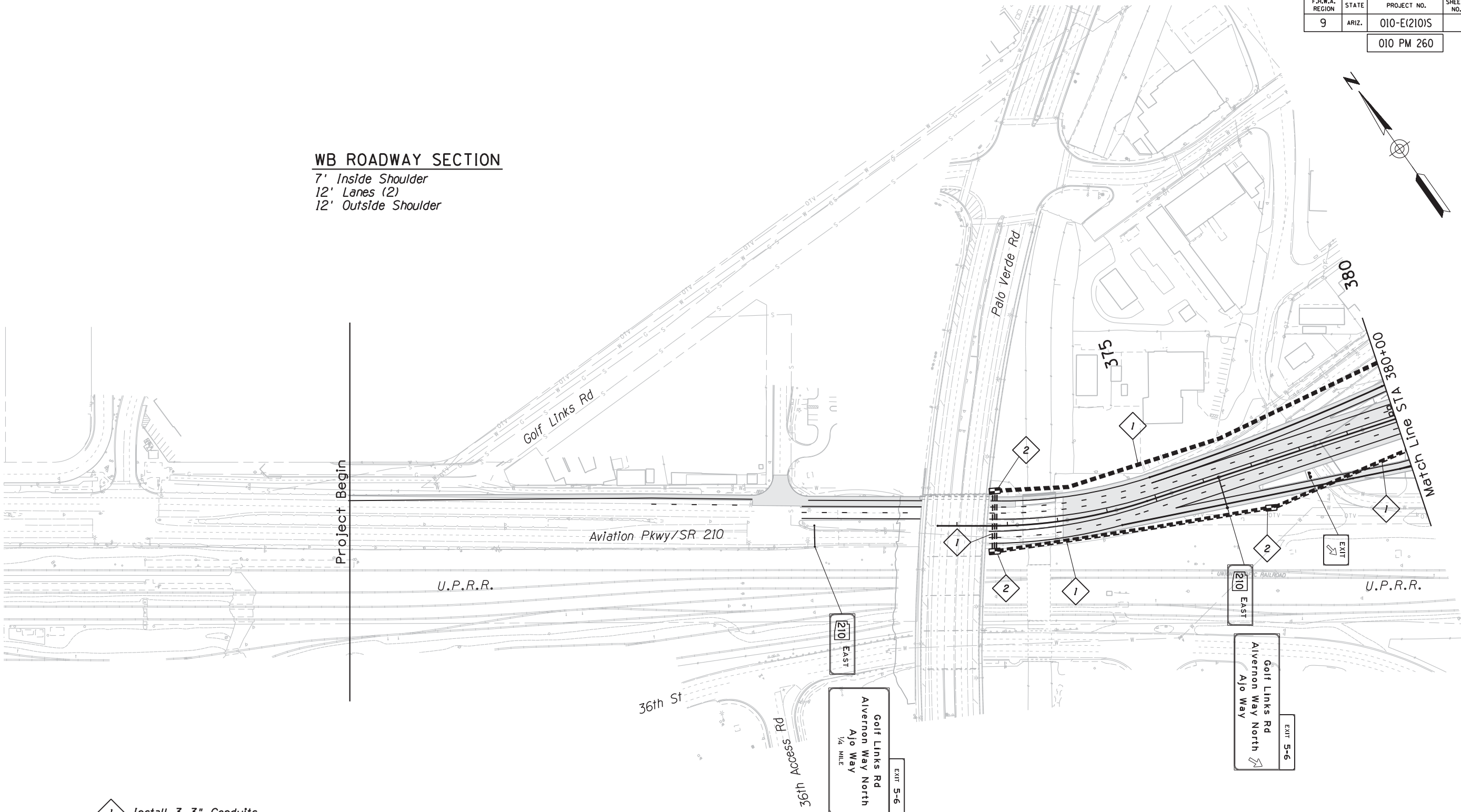
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F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)S			
010 PM 260					



WB ROADWAY SECTION

7' Inside Shoulder
12' Lanes (2)
12' Outside Shoulder



- 1 Install 3-3" Conduits
- 2 Install New No. 9 Pull Box

EB ROADWAY SECTION

7' Inside Shoulder
12' Lanes (2)
12' Outside Shoulder

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS SR 210 SYSTEM ALT 1 STA 370+0 TO STA 380+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM		09-17		
DRAWN	JD		09-17		
CHECKED	SMK				
JACOBS					
ROUTE		LOCATION			
SR 210		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS ROAD TO I-10			SHEET TS01.23
TRACS NO. H7825 OIL				010-E(210)S	___ OF ___

LIGHTING CRITERIA MEMORANDUM
FOR
INTERSTATE 10 FROM I-19 TO KOLB ROAD /
STATE ROUTE 210 FROM GOLF LINKS ROAD TO I-10
DESIGN CONCEPT REPORT

ADOT TRACS No: H7825 01L
FEDERAL AID No: 010-E(210)A

January 2019

Prepared for:

Arizona Department of Transportation

Prepared by:

101 North First Avenue, Suite 2600
Phoenix, AZ 85003
602.253.1200 (P)
602.253.1202 (F)



Lighting Analysis Basis of Design

Introduction

The Arizona Department of Transportation (ADOT) in cooperation with the Federal Highway Administration (FHWA) prepared a Feasibility Study to identify and evaluate alternatives for the improvement of Interstate 10 (I-10) from the Junction of I-19 to State Route 83 (SR 83) and the extension of the Barraza-Aviation Parkway (State Route 210) from Golf Links Road to I-10 in 2012. Two System Alternatives were identified as viable. Due to dramatic changes in the economic and growth outlook for the region, the 2012 Feasibility Study had to be updated to reflect these changes and to identify the effects these changes had on System Alternatives I and II. The Updated Feasibility Study presented the new analysis results for the new System IV concept, developed after the 2012 Feasibility Report was completed.

The Study area is located in the ADOT Southcentral District within the City of Tucson, the City of South Tucson and Pima County. A brief description of the proposed system alternatives is shown below:

Alternative I

In System Alternative I, SR 210 is extended southerly along Alvernon Way alignment to connect to I-10 at a system interchange. The extension is classified as an urban freeway and is elevated from north of the Union Pacific Railroad (UPRR) overpass to south of Irvington Road. Access to Ajo Way is provided via a diamond TI. SR 210 is grade-separated over Irvington Road.

Alternative IV

In System Alternative IV, SR 210 is extended southerly along the Alvernon Way alignment to connect to I-10 at a system interchange. The extension is classified as an urban freeway and is elevated from north of the UPRR overpass to south of Irvington Road. Access to Ajo Way is provided via a diamond TI. SR 210 is grade-separated over Irvington Road. Additionally, System Alternative IV involves the addition of collector distributor (CD) roadways adjacent to both the eastbound and westbound I-10 mainline roadway from Alvernon Way easterly through the Kolb Road TI.

Lighting Assumptions

1. LED luminaires will be used throughout the project limits.
2. Pole foundations, poles, mast arms, and junction boxes will comply with ADOT standard details.
3. The Light Loss Factor (LLF) for all LED lighting is 0.8.
4. RP-8-00 Illuminance standard for freeway class B
 - Average Illuminance of 0.6 (cd/m²)
 - Avg/Min Illum Ratio of 4:1
 - Minimum Illuminance of 0.2

Lighting Options

Upon review of the two roadway system alternatives, two separate lighting options were created for each alternative. It is to be noted that all lighting options described below use American Electric Luminaire with 10ft mast arms atop 30ft type G poles, for all ramps.

System Alternative I Lighting Option 1

In this option, American Electric Luminaires are mounted with 20-foot mast arms atop 40-foot type H poles on opposite sides of roadway in a staggered formation along the shoulders.

System Alternative I Lighting Option 2

In this option, Holophane high mast luminaires are mounted with twin luminaires atop 50-foot type U poles along the median.

System Alternative IV Lighting Option 1

In System Alternative IV Option 1, American Electric Luminaires are mounted with 20-foot mast arms atop 40-foot type H poles on opposite sides of roadway in a staggered formation along the shoulders, except for the roadway section with the collector distributor. For the roadway section with the collector distributor, American Electric Luminaires are mounted with 20 ft mast arms atop 40 ft H poles on opposite sides of roadway along the shoulders and Holophane high mast luminaires mounted with twin luminaires atop 50-foot type U poles along the median, in a staggered formation.

System Alternative IV Lighting Option 2

In System Alternative IV Option 2, on I-10, Holophane High Mast luminaires are mounted on the outer medians (between the mainline and the collector-distributor road for each direction) with twin luminaire brackets atop 50-foot type U poles. On SR210, Holophane high mast luminaires are mounted with twin luminaire brackets atop 69 ft type U poles along the Median.

A depiction of the scenarios described above is included in **Appendix A** of this memorandum.

Lighting Analysis

Analysis to determine the layout of the luminaires was conducted by determining cross sectional lengths of the roadways lane configurations. **AGI32-17.5** software was utilized to determine spacing of the luminaires along the project limits for each system alternative. Table 1 and Table 2 show the roadway cross section widths for each roadway section and the typical pole spacing and the number of poles for the options 1 and 2 of system alternative I. Table 3 and Table 4 show the roadway cross section widths for each roadway section and the typical pole spacing and the number of poles for the options 1 and 2 of system alternative IV. Table 5 shows the pole spacing and the total number of poles for each type of ramp configuration.

Table 1: Alt I Option 1 roadway configuration and pole spacing on the I-10 and SR210.

I-10 lighting Alt I Option 1							
Station Numbers		Length of Section (ft)	WB Width (ft)	Median (ft)	EB Width (ft)	Typical Pole Spacing (ft)	Number of H Poles
325+35	355+42	3008	72	8	72	215	28
355+42	359+00	359	100	2	112	205	4
359+00	370+00	1100	117.4	2	112	205	12
370+00	375+93	594	112	2	100	205	6
375+93	397+99	2206	75	6	87	195	24
397+99	430+50	3251	76	4	76	215	32
430+50	438+30	780	86	4	86	185	10
438+30	591+05	15274	60	32	60	220	140
591+05	692+00	10095	96	32	96	205	100
692+00	715+00	2300	110	32	106	205	24
715+00	877+50	16250	84	32	84	205	160
877+50	892+10	1460	84	32	84	205	16
892+10	902+10	1000	72	32	72	195	12
902+10	911+40	930	72	32	60	195	10
911+40	925+00	1360	60	32	48	220	14
SR 210 lighting Alt I Option 1							
413+04	426+70	1366	83	4	69	200	14
426+70	460+50	3380	69	4	71	235	30
460+50	470+00	950	72	4	83	200	10
470+00	484+60	1460	71	4	71	235	14
484+60	490+15	555	83	4	72	200	6
490+15	494+60	445	79	4	39	210	6
494+60	496+95	235	37	4	37	425	2
496+95	499+90	295	58	4	54	270	4
499+90	502+00	210	66	4	54	300	2
502+00	506+90	490	66	4	64	300	4
506+90	513+85	695	66	4	54	300	6
Total Number of H Poles							690

Table 2: Alt I Option 2 roadway configuration and pole spacing on the I-10 and SR210.

I-10 lighting Alt I Option 2							
Station Numbers		Length of Section (ft)	WB Width (ft)	Median (ft)	EB Width (ft)	Typical Pole Spacing (ft)	Number of U Poles
325+35	355+42	3008	72	8	72	325	10
355+42	359+00	359	100	2	112	275	2
359+00	370+00	1100	117.4	2	112	240	5
370+00	375+93	594	112	2	100	270	3
375+93	397+99	2206	75	6	87	260	9
397+99	430+50	3251	76	4	76	315	11
430+50	438+30	780	86	4	86	300	3
438+30	591+05	15274	60	32	60	320	48
591+05	692+00	10095	96	32	96	275	37
692+00	715+00	2300	110	32	106	260	9
715+00	877+50	16250	84	32	84	300	55
877+50	892+10	1460	84	32	84	300	5
892+10	902+10	1000	72	32	72	300	4
902+10	911+40	930	72	32	60	300	4
911+40	925+00	1360	60	32	48	320	5
SR 210 lighting Alt I Option 2							
413+04	426+70	1366	83	4	69	315	5
426+70	460+50	3380	69	4	71	325	11
460+50	470+00	950	72	4	83	315	4
470+00	484+60	1460	71	4	71	325	5
484+60	490+15	555	83	4	72	315	2
490+15	494+60	445	79	4	39	315	2
494+60	496+95	235	37	4	37	345	1
496+95	499+90	295	58	4	54	330	1
499+90	502+00	210	66	4	54	330	1
502+00	506+90	490	66	4	64	330	2
506+90	513+85	695	66	4	54	330	3
Total Number of U Poles							247

Table 3: Alt IV Option 1 roadway configuration and pole spacing on the I-10 and SR210.

I-10 lighting Alt IV Option 1								
Station Numbers		Length of Section (ft)	WB Width (ft)	Median (ft)	EB Width (ft)	Typical Pole Spacing (ft)	Number of H Poles	Number of U Poles
325+35	355+42	3008	72	8	72	215	28	0
355+42	359+00	359	100	2	112	205	4	0
359+00	370+00	1100	117.4	2	112	205	12	0
370+00	375+93	594	112	2	100	205	6	0
375+93	397+99	2206	75	6	87	195	24	0
397+99	430+50	3251	76	4	76	215	32	0
430+50	438+30	780	86	4	86	185	10	0
438+30	548+00	10970	60	32	60	220	100	0
548+00	568+80	2080	98	4	98	495	10	5
568+80	591+05	2225	86	4	132	445	10	5
591+05	634+85	4381	134	4	146	400	22	11
634+85	669+90	3505	134	4	134	440	16	8
669+90	692+00	2210	147	4	147	400	12	6
692+00	715+00	2300	134	4	132	440	12	6
715+00	877+50	16250	132	4	132	445	74	37
877+50	892+10	1460	84	32	84	205	16	0
892+10	902+10	1000	72	32	72	195	12	0
902+10	911+40	930	72	32	60	195	10	0
911+40	925+00	1360	60	32	48	220	14	0
SR 210 lighting Alt IV Option 1								
413+04	426+70	1366	83	4	69	200	14	0
426+70	460+50	3380	69	4	71	235	30	0
460+50	470+00	950	72	4	83	200	10	0
470+00	484+60	1460	71	4	71	235	14	0
484+60	490+15	555	83	4	72	200	6	0
490+15	494+60	445	79	4	39	210	6	0
494+60	496+95	235	37	4	37	425	2	0
496+95	499+90	295	58	4	54	270	4	0
499+90	502+00	210	66	4	54	300	2	0
502+00	506+90	490	66	4	64	300	4	0
506+90	513+85	695	66	4	54	300	6	0
Total Number of H Poles							522	N/A
Total Number of U Poles							N/A	78
Total Number of Poles							600	

Table 4:Alt IV Option 2 roadway configuration and pole spacing on the I-10 and SR210.

I-10 lighting Alt IV Option 2									
Station Numbers		Length of Section (ft)	WB Width (ft)	Median (ft)	EB Width (ft)		Typical Pole Spacing (ft)		Number of U Poles
325+35	355+42	3008	72	8	72		325		10
355+42	359+00	359	100	2	112		275		2
359+00	370+00	1100	117.4	2	112		240		5
370+00	375+93	594	112	2	100		270		3
375+93	397+99	2206	75	6	87		260		9
397+99	430+50	3251	76	4	76		315		11
430+50	438+30	780	86	4	86		300		3
438+30	548+00	10970	60	32	60		320		35
548+00	568+80	2080	98	4	98		300		7
568+80	591+05	2225	86	4	132		330		7
Station Numbers		Length of Section (ft)	WB Width		EB Width		Typical Pole Spacing WB (ft)	Typical Pole Spacing EB (ft)	Number of U Poles
			Outer Lanes	Inner Lanes	Inner Lanes	Outer Lanes			
591+05	634+85	4381	64	82	70	64	325	310	28
634+85	669+90	3505	64	70	70	64	325	325	22
669+90	692+00	2210	64	58	58	64	275	320	15
692+00	715+00	2300	64	68	70	64	325	330	15
715+00	877+50	16250	64	68	68	64	330	330	99
877+50	892+10	1460	84	32	84		300		5
892+10	902+10	1000	72	32	72		300		4
902+10	911+40	930	72	32	60		300		4
911+40	925+00	1360	60	32	48		320		5
SR 210 lighting Alt IV Option 2									
413+04	426+70	1366	83	4	69		315		5
426+70	460+50	3380	69	4	71		325		11
460+50	470+00	950	72	4	83		315		4
470+00	484+60	1460	71	4	71		325		5
484+60	490+15	555	83	4	72		315		2
490+15	494+60	445	79	4	39		315		2
494+60	496+95	235	37	4	37		345		1
496+95	499+90	295	58	4	54		330		1
499+90	502+00	210	66	4	54		330		1
502+00	506+90	490	66	4	64		330		2
506+90	513+85	695	66	4	54		330		3
Total Number of U Poles									326

Table 5: Ramp classifications and Spacing.

Ramp Classification	Inside Shoulder (ft)	# Lanes (12')	Outside Shoulder (ft)	Ramp Width (ft)	Spacing ATBL_G (ft)	Total Length of Ramps (ft)	Number of G Poles
1 Lane	2	1	8	22	190	44085	246
2 Lanes	2	2	2	28	190	30872	188
3 Lanes	2	3	2	40	170	1410	9
Total Number of G Poles							443

Preliminary Cost Analysis

Using the Arizona Department of Transportation standards, the cost of each component within the system alternatives and each option for the lighting design of the I-10 DCR and SR210 were chosen. The quantity for each Item within the lighting alternatives, were then determined, these items consist of but are not limited to: Poles, Foundations, Twin Luminaire Brackets, Mast arms, Conduits, and Conductors. Table 6, shows the construction sub-total cost for Alternative I option 1. Table 7, shows the construction sub-total cost for Alternative I option 2. Table 8 shows the construction sub-total cost for Alternative IV option 1. Lastly, Table 9, shows the construction sub-total cost for Alternative IV option 2.

Table 6: Alternative I Option 1 Cost Estimate.

Alternative I Option 1 Cost Estimate					
ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	AMOUNT
7310170	POLE (TYPE U)	EACH	0	\$ 2,800.00	\$ -
7310090	POLE (TYPE H) (STANDARD BASE)	EACH	690	\$ 1,470.00	\$ 1,014,300.00
7310071	POLE (TYPE G) (SLIP AWAY BASE)	EACH	443	\$ 2,600.00	\$ 1,151,800.00
7310350	POLE FOUNDATION (TYPE U)	EACH	0	\$ 4,000.00	\$ -
7310270	POLE FOUNDATION (TYPE H) (STANDARD BASE)	EACH	690	\$ 1,200.00	\$ 828,000.00
7310261	POLE FOUNDATION (TYPE G) (SLIP AWAY BASE)	EACH	443	\$ 2,040.00	\$ 903,720.00
7360104	LUMINAIRE (High) (LED Holophane High Mast)	EACH	0	\$ 1,400.00	\$ -
7360105	LUMINAIRE (LED American Electric Luminaire)	EACH	1,133	\$ 1,000.00	\$ 1,133,000.00
7310511	MAST ARM (10 FT.) (TAPERED)	EACH	443	\$ 370.00	\$ 163,910.00
7310551	MAST ARM (20 FT.) (TAPERED)	EACH	690	\$ 660.00	\$ 455,400.00
7310710	TWIN LUMINAIRE BRACKET	EACH	0	\$ 170.00	\$ -
7360243	LOAD CENTER CABINET TYPE IV (240/480 VOLT)	EACH	16	\$ 7,878.00	\$ 126,048.00
7360290	LOAD CENTER CABINET FOUNDATION	EACH	16	\$ 675.00	\$ 10,800.00
7320410	PULL BOX (NO. 5)	EACH	1,133	\$ 480.00	\$ 543,840.00
7320070	ELECTRICAL CONDUIT (3") (PVC)	L.FT.	165,585	\$ 11.00	\$ 1,821,435.00
7320520	CONDUCTOR (NO. 8)	L.FT.	489,790	\$ 0.60	\$ 293,874.00
7320585	CONDUCTOR (INSULATED BOND) (NO. 8 GREEN BOND)	L.FT.	244,895	\$ 0.60	\$ 146,937.00
CONSTRUCTION SUB-TOTAL					\$ 8,593,064.00

Table 7: Alternative I Option 2 Cost Estimate.

Alternative I Option 2 Cost Estimate					
ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	AMOUNT
7310170	POLE (TYPE U)	EACH	247	\$ 2,800.00	\$ 691,600.00
7310090	POLE (TYPE H) (STANDARD BASE)	EACH	0	\$ 1,470.00	\$ -
7310071	POLE (TYPE G) (SLIP AWAY BASE)	EACH	443	\$ 2,600.00	\$ 1,151,800.00
7310350	POLE FOUNDATION (TYPE U)	EACH	247	\$ 4,000.00	\$ 988,000.00
7310270	POLE FOUNDATION (TYPE H) (STANDARD BASE)	EACH	0	\$ 1,200.00	\$ -
7310261	POLE FOUNDATION (TYPE G) (SLIP AWAY BASE)	EACH	443	\$ 2,040.00	\$ 903,720.00
7360104	LUMINAIRE (High) (LED Holophane High Mast)	EACH	494	\$ 1,400.00	\$ 691,600.00
7360105	LUMINAIRE (LED American Electric Luminaire)	EACH	443	\$ 1,000.00	\$ 443,000.00
7310511	MAST ARM (10 FT.) (TAPERED)	EACH	443	\$ 370.00	\$ 163,910.00
7310551	MAST ARM (20 FT.) (TAPERED)	EACH	0	\$ 660.00	\$ -
7310710	TWIN LUMINAIRE BRACKET	EACH	247	\$ 170.00	\$ 41,990.00
7360243	LOAD CENTER CABINET TYPE IV (240/480 VOLT)	EACH	16	\$ 7,878.00	\$ 126,048.00
7360290	LOAD CENTER CABINET FOUNDATION	EACH	16	\$ 675.00	\$ 10,800.00
7320410	PULL BOX (NO. 5)	EACH	690	\$ 480.00	\$ 331,200.00
7320070	ELECTRICAL CONDUIT (3") (PVC)	L.FT.	82,793	\$ 11.00	\$ 910,723.00
7320520	CONDUCTOR (NO. 8)	L.FT.	262,186	\$ 0.60	\$ 157,311.60
7320585	CONDUCTOR (INSULATED BOND) (NO. 8 GREEN BOND)	L.FT.	131,093	\$ 0.60	\$ 78,655.80
CONSTRUCTION SUB-TOTAL					\$ 6,690,358.40

Table 8: Alternative IV Option 1 Cost Estimate.

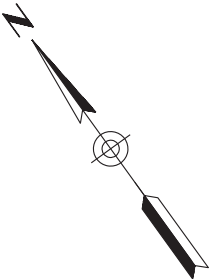
Alternative IV Option 1 Cost Estimate					
ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	AMOUNT
7310170	POLE (TYPE U)	EACH	78	\$ 2,800.00	\$ 218,400.00
7310090	POLE (TYPE H) (STANDARD BASE)	EACH	522	\$ 1,470.00	\$ 767,340.00
7310071	POLE (TYPE G) (SLIP AWAY BASE)	EACH	443	\$ 2,600.00	\$ 1,151,800.00
7310350	POLE FOUNDATION (TYPE U)	EACH	78	\$ 4,000.00	\$ 312,000.00
7310270	POLE FOUNDATION (TYPE H) (STANDARD BASE)	EACH	522	\$ 1,200.00	\$ 626,400.00
7310261	POLE FOUNDATION (TYPE G) (SLIP AWAY BASE)	EACH	443	\$ 2,040.00	\$ 903,720.00
7360104	LUMINAIRE (High) (LED Holophane High Mast)	EACH	156	\$ 1,400.00	\$ 218,400.00
7360105	LUMINAIRE (LED American Electric Luminaire)	EACH	965	\$ 1,000.00	\$ 965,000.00
7310511	MAST ARM (10 FT.) (TAPERED)	EACH	443	\$ 370.00	\$ 163,910.00
7310551	MAST ARM (20 FT.) (TAPERED)	EACH	522	\$ 660.00	\$ 344,520.00
7310710	TWIN LUMINAIRE BRACKET	EACH	78	\$ 170.00	\$ 13,260.00
7360243	LOAD CENTER CABINET TYPE IV (240/480 VOLT)	EACH	16	\$ 7,878.00	\$ 126,048.00
7360290	LOAD CENTER CABINET FOUNDATION	EACH	16	\$ 675.00	\$ 10,800.00
7320410	PULL BOX (NO. 5)	EACH	1,043	\$ 480.00	\$ 500,640.00
7320070	ELECTRICAL CONDUIT (3") (PVC)	L.FT.	165,585	\$ 11.00	\$ 1,821,435.00
7320520	CONDUCTOR (NO. 8)	L.FT.	463,890	\$ 0.60	\$ 278,334.00
7320585	CONDUCTOR (INSULATED BOND) (NO. 8 GREEN BOND)	L.FT.	231,945	\$ 0.60	\$ 139,167.00
CONSTRUCTION SUB-TOTAL					\$ 8,561,174.00

Table 9: Alternative IV Option 2 Cost Estimate.

Alternative IV Option 2 Cost Estimate					
ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	AMOUNT
7310170	POLE (TYPE U)	EACH	326	\$ 2,800.00	\$ 912,800.00
7310090	POLE (TYPE H) (STANDARD BASE)	EACH	0	\$ 1,470.00	\$ -
7310071	POLE (TYPE G) (SLIP AWAY BASE)	EACH	443	\$ 2,600.00	\$ 1,151,800.00
7310350	POLE FOUNDATION (TYPE U)	EACH	326	\$ 4,000.00	\$ 1,304,000.00
7310270	POLE FOUNDATION (TYPE H) (STANDARD BASE)	EACH	0	\$ 1,200.00	\$ -
7310261	POLE FOUNDATION (TYPE G) (SLIP AWAY BASE)	EACH	443	\$ 2,040.00	\$ 903,720.00
7360104	LUMINAIRE (High) (LED Holophane High Mast)	EACH	652	\$ 1,400.00	\$ 912,800.00
7360105	LUMINAIRE (LED American Electric Luminaire)	EACH	443	\$ 1,000.00	\$ 443,000.00
7310511	MAST ARM (10 FT.) (TAPERED)	EACH	443	\$ 370.00	\$ 163,910.00
7310551	MAST ARM (20 FT.) (TAPERED)	EACH	0	\$ 660.00	\$ -
7310710	TWIN LUMINAIRE BRACKET	EACH	326	\$ 170.00	\$ 55,420.00
7360243	LOAD CENTER CABINET TYPE IV (240/480 VOLT)	EACH	16	\$ 7,878.00	\$ 126,048.00
7360290	LOAD CENTER CABINET FOUNDATION	EACH	16	\$ 675.00	\$ 10,800.00
7320410	PULL BOX (NO. 5)	EACH	769	\$ 480.00	\$ 369,120.00
7320070	ELECTRICAL CONDUIT (3") (PVC)	L.FT.	82,793	\$ 11.00	\$ 910,723.00
7320520	CONDUCTOR (NO. 8)	L.FT.	273,246	\$ 0.60	\$ 163,947.60
7320585	CONDUCTOR (INSULATED BOND) (NO. 8 GREEN BOND)	L.FT.	136,623	\$ 0.60	\$ 81,973.80
CONSTRUCTION SUB-TOTAL					\$ 7,510,062.40

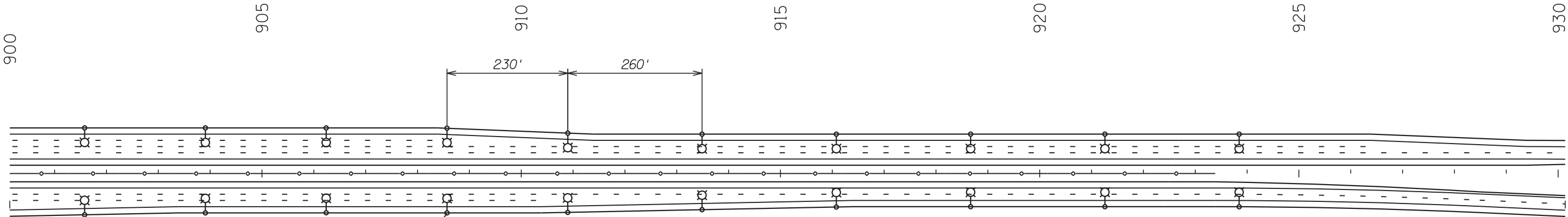
Appendix A

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (5)
12' Auxiliary Lane
12' Outside Shoulder



American Electric Luminaire
(45' MH) Typ.

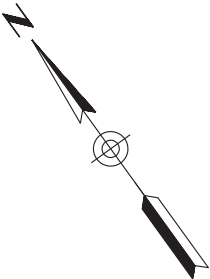
EB ROADWAY SECTION

12' Inside Shoulder
12' Lanes (5)
12' Auxiliary Lane
12' Outside Shoulder

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM		06-17		
DRAWN	JD		06-17		
CHECKED	SMK		06-17	PAVEMENT MRKNG, SIGN & FMS PLANS I-10 Alt 1 Option 1 STA 900+00 TO STA 930+00	
JACOBS					
ROUTE		LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	SHEET
I-10					
TRACS NO. H7825 OIL			010-E(210)A		___ OF ___

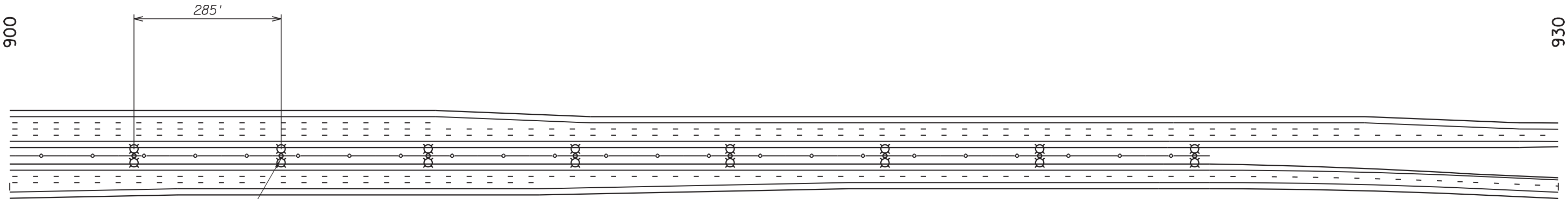
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F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

12' Inside Shoulder
12' Lanes Varies (3-4)
12' Outside Shoulder



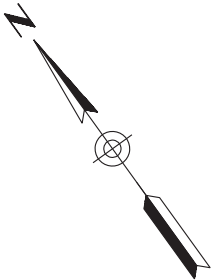
Holophane High Mast
(69' MH) Typ.

EB ROADWAY SECTION

12' Inside Shoulder
12' Lanes Varies (3-4)
12' Outside Shoulder

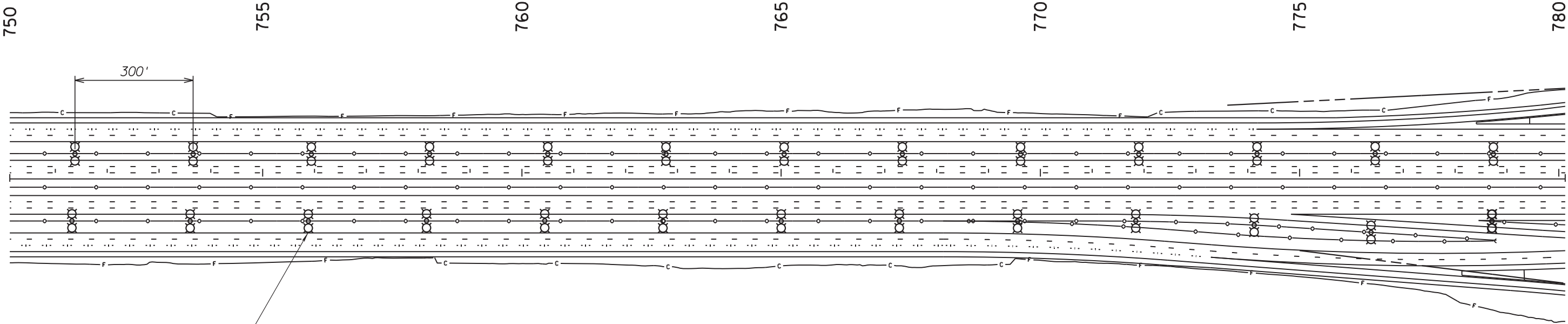
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DESIGN	APM		06-17		
DRAWN	JD		06-17		
CHECKED	SMK		06-17		
JACOBS					
ROUTE		LOCATION			SHEET
I-10		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10			
TRACS NO. H7825 OIL				010-E(210)A	
				___ OF ___	

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

24' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder
12' Exit Lanes (2)



Holophane High Mast
(69' MH) Typ.

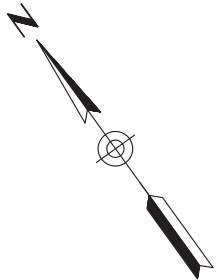
EB ROADWAY SECTION

24' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder
12' Exit Lanes (2)

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS I-10 Alt IV Option 2 STA 750+00 TO STA 780+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM		06-17		
DRAWN	JD		06-17		
CHECKED	SMK		06-17		
JACOBS					
ROUTE		LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10	SHEET
I-10					
TRACS NO. H7825 OIL			010-E(210)A		___ OF ___

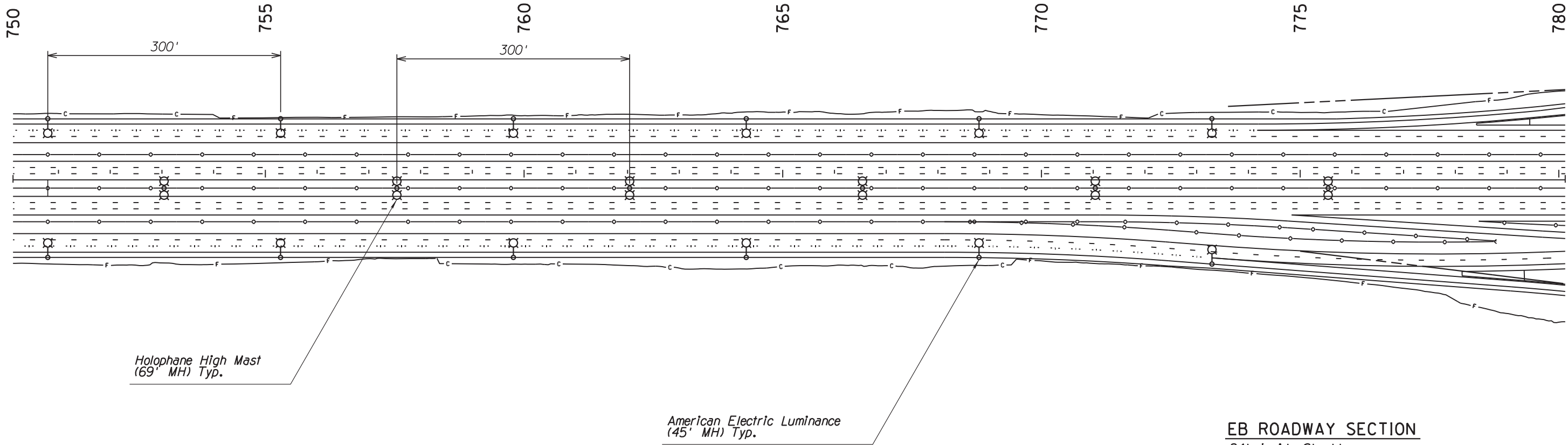
DATE- LOCATION- REVISIONS- FINISHED PLANS- SURVEY NO. DATE- LOCATION- REVISIONS- FINISHED PLANS- SURVEY NO.

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



WB ROADWAY SECTION

24' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder
12' Exit Lanes (2)



EB ROADWAY SECTION

24' Inside Shoulder
12' Lanes (3)
12' Auxiliary Lane
12' Outside Shoulder
12' Exit Lanes (2)

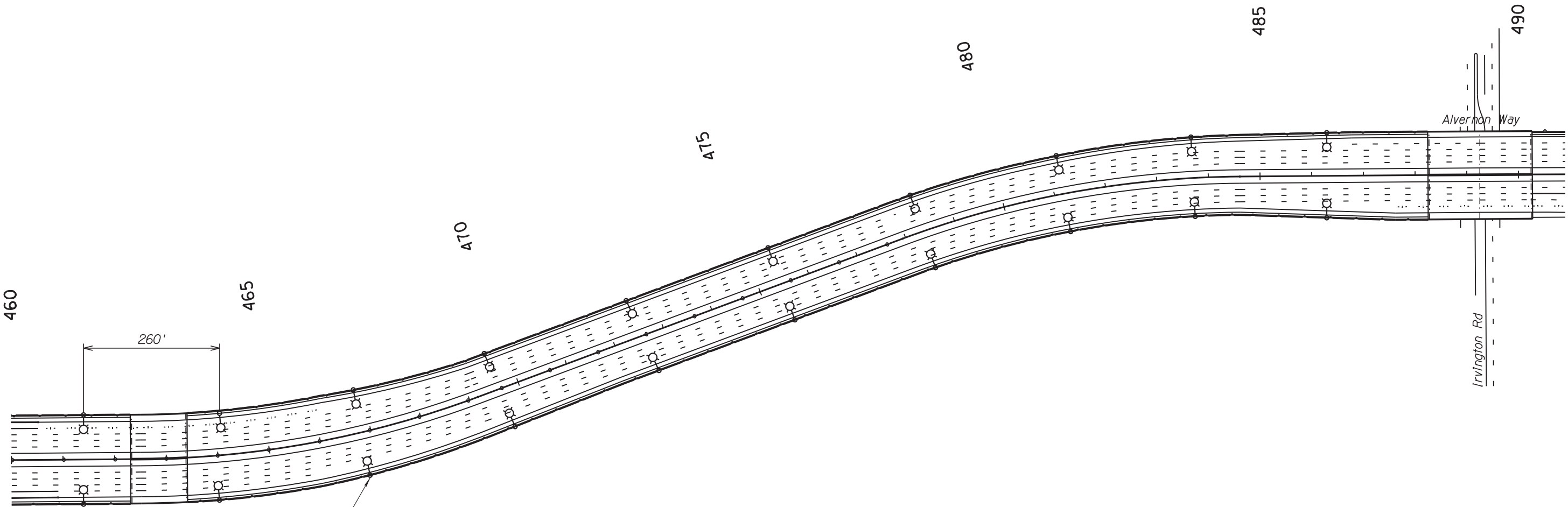
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DESIGN	APM		08-17		
DRAWN	JD		08-17		
CHECKED	SMK				
JACOBS					
ROUTE		LOCATION			
I-10		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10			SHEET
TRACS NO. H7825 OIL				010-E(210)A	___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



NB ROADWAY SECTION

13' Inside Shoulder
12' Lanes (4)
12' Auxiliary Lane
Outside Shoudler Varies 8'-12'



SB ROADWAY SECTION

13' Inside Shoulder
12' Lanes (4)
12' Auxiliary Lane
Outside Shoudler Varies 8'-12'

American Electric Luminance
(45' MH) Typ.

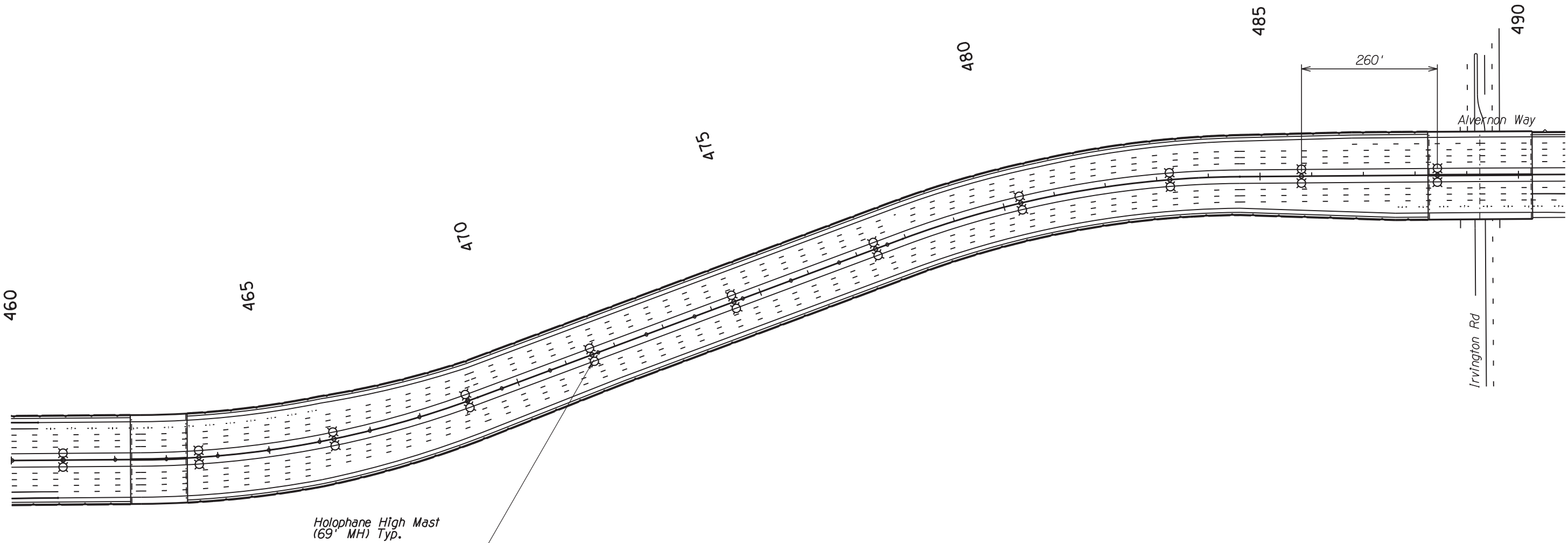
		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES		DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN		APM	06-17	PAVEMENT MRKNG, SIGN & FMS PLANS SR 210 SYSTEM ALT 1-4 Option 1 STA 460+00 TO STA 491+00		
DRAWN		JD	06-17			
CHECKED		SMK	06-17			
JACOBS						
ROUTE		LOCATION		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10		SHEET
SR 210						
TRACS NO. H7825 OIL				010-E(210)A		___ OF ___

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	010-E(210)A			



NB ROADWAY SECTION

13' Inside Shoulder
12' Lanes (4)
12' Auxiliary Lane
Outside Shoudler Varies 8' -12'



SB ROADWAY SECTION

13' Inside Shoulder
12' Lanes (4)
12' Auxilliary Lane
Outside Shoudler Varies 8' -12'

		NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY & OPERATIONS DIVISION TRAFFIC DESIGN SERVICES PAVEMENT MRKNG, SIGN & FMS PLANS SR 210 SYSTEM ALT 1-4 Option 2 STA 460+00 TO STA 491+00	DCR NOT FOR CONSTRUCTION OR RECORDING
DESIGN	APM		06-17		
DRAWN	JD		06-17		
CHECKED	SMK		06-17		
JACOBS					
ROUTE		LOCATION			
SR 210		I-10 - JCT. I-19 TO KOLB ROAD SR 210 - GOLF LINKS TO I-10			SHEET
TRACS NO. H7825 OIL				010-E(210)A	___ OF ___