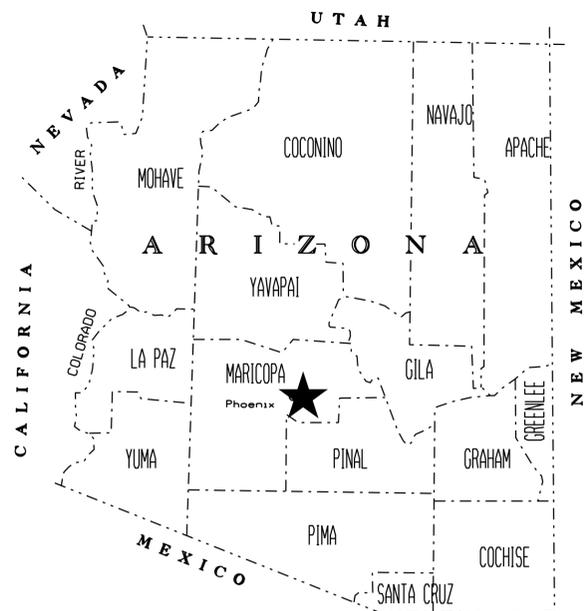


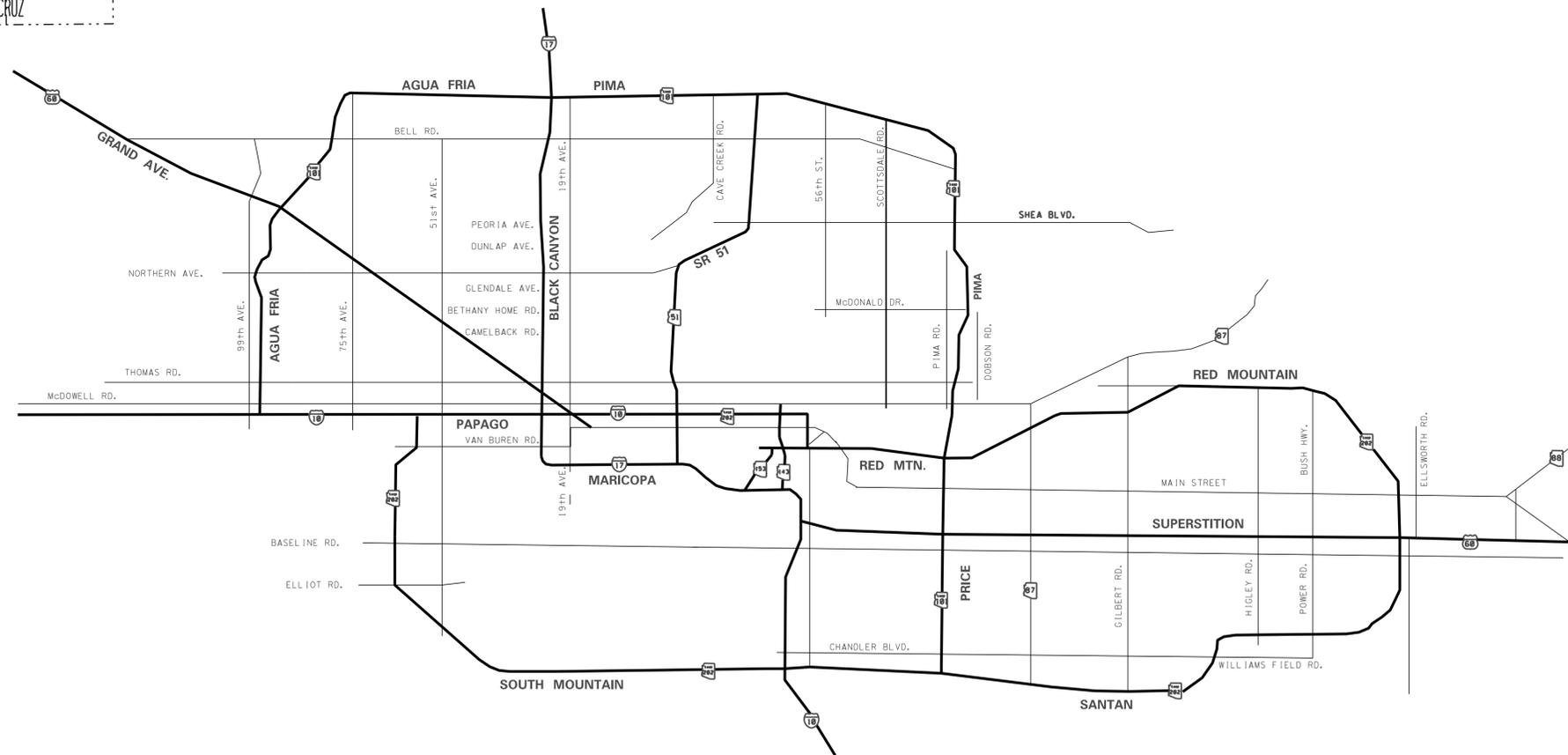
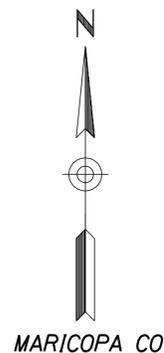
STATE OF ARIZONA
 DEPARTMENT OF TRANSPORTATION
 INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION

PROJECT PLANS

COUNTY WIDE
 MARICOPA COUNTY



PASSIVE ACOUSTIC DETECTORS REPLACEMENT PROJECT



Constructed by:

Construction Company

Completion Date

Red-Lines by:

Construction Administrator Name & Company

Completion Date

Record Drawings by:

Record Drawing Designer Name & Company

Completion Date

VARIOUS LOCATIONS
 PROJECT NO. 888 MA 000 H8809 01C
 FEDERAL NO. CM-888-A(225)T

ARIZONA DEPARTMENT OF TRANSPORTATION
 INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
 DALLAS HAMMIT, P.E., STATE ENGINEER

AS BUILT DATA	AS BUILT DATE	OF
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ADOT STANDARD DRAWINGS
C STANDARDS

ISSUE OR REVISION DATE	STANDARD NO.	SUBJECT CONSTRUCTION
5/12	C-01.10 SH 1	SYMBOL LEGEND
5/12	C-01.10 SH 2	SYMBOL LEGEND
5/12	C-01.10 SH 3	SYMBOL LEGEND
5/12	C-01.10 SH 4	SYMBOL LEGEND
5/12	C-01.30 SH 1	GENERAL ABBREVIATIONS
5/12	C-01.30 SH 2	GENERAL ABBREVIATIONS
5/12	C-01.30 SH 3	GENERAL ABBREVIATIONS
5/12	C-02.10	SLOPES, RURAL DIVIDED HIGHWAYS
5/12	C-02.20	SLOPES, RURAL UNDIVIDED AND FRINGE-URBAN HIGHWAYS
5/12	C-02.30	SLOPES, MISCELLANEOUS ROADWAYS
5/12	C-03.10 SH 1	DITCHES, CHANNELS, DIKES AND BERMS, DITCHES AND CHANNELS
5/12	C-03.10 SH 2	DITCHES, CHANNELS, DIKES AND BERMS, DIKES
5/12	C-03.10 SH 3	DITCHES, CHANNELS, DIKES AND BERMS, DITCH DIKE
5/12	C-03.10 SH 4	DITCHES, CHANNELS, DIKES AND BERMS, PIPE BERMS
5/12	C-03.10 SH 5	DITCHES, CHANNELS, DIKES AND BERMS, HEADWALL BERMS
5/12	C-04.10 SH 1	SPILLWAY, EMBANKMENT SINGLE INLET
5/12	C-04.10 SH 2	SPILLWAY, EMBANKMENT DOUBLE INLET
5/12	C-04.20 SH 1	DOWNDRAIN, EMBANKMENT SINGLE INLET
5/12	C-04.20 SH 2	DOWNDRAIN, EMBANKMENT DOUBLE INLET
5/12	C-04.30	SPILLWAY LENGTH TABLE
5/12	C-04.40	DOWNDRAIN LENGTH TABLE
5/12	C-04.50	DOWNDRAIN ENERGY DISSIPATOR
5/12	C-05.10	CURB & GUTTER, CURB, GUTTER
5/12	C-05.12 SH 1	CURB & GUTTER TRANSITIONS
5/12	C-05.12 SH 2	CURB & GUTTER TRANSITIONS
5/12	C-05.12 SH 3	CURB AND GUTTER TRANSITIONS
5/12	C-05.20 SH 1	CONCRETE DRIVEWAYS & SIDEWALKS, DRIVEWAYS
5/12	C-05.20 SH 2	CONCRETE DRIVEWAYS & SIDEWALKS, SIDEWALKS
5/12	C-05.30 SH 1	SIDEWALK RAMP, TYPE A
5/12	C-05.30 SH 2	SIDEWALK RAMP, TYPE B
5/12	C-05.30 SH 3	SIDEWALK RAMP, TYPE C
5/12	C-05.30 SH 4	SIDEWALK RAMP, TYPE D
5/12	C-05.30 SH 5	SIDEWALK RAMP, TYPE E
5/12	C-05.30 SH 6	SIDEWALK RAMP, TYPE F
5/12	C-05.30 SH 7	SIDEWALK RAMP, DETECTABLE WARNING STRIP
5/12	C-05.40	MEDIAN PAVING AND NOSE TAPER
5/12	C-05.50	CONCRETE BUS BAY
5/12	C-06.10 SH 1	DRIVEWAY & TURNOUT LAYOUTS
5/12	C-06.10 SH 2	DRIVEWAY & TURNOUT LAYOUTS
5/12	C-07.01 SH 1	PCCP JOINTS
5/12	C-07.01 SH 2	PCCP JOINTS
5/12	C-07.02	LOAD TRANSFER DOWEL ASSEMBLY
5/12	C-07.03 SH 1	PCCP JOINT LOCATIONS, MAINLINE SKEWED JOINTS
5/12	C-07.03 SH 2	PCCP JOINT LOCATIONS, MAINLINE SKEWED JOINTS
5/12	C-07.03 SH 3	PCCP JOINT LOCATIONS, MAINLINE SKEWED JOINTS
5/12	C-07.03 SH 4	PCCP JOINT LOCATIONS, MAINLINE SKEWED JOINTS
5/12	C-07.03 SH 5	PCCP JOINT LOCATIONS, MAINLINE NON-SKEWED JOINTS
5/12	C-07.03 SH 6	PCCP JOINT LOCATIONS, MAINLINE NON-SKEWED JOINTS
5/12	C-07.03 SH 7	PCCP JOINT LOCATIONS, MAINLINE NON-SKEWED JOINTS
5/12	C-07.03 SH 8	PCCP JOINT LOCATIONS, MAINLINE NON-SKEWED JOINTS
5/12	C-07.04 SH 1	PCCP JOINT LOCATIONS, PARALLEL TYPE ENTRANCE RAMP WITH AUXILIARY LANE
5/12	C-07.04 SH 2	PCCP JOINT LOCATIONS, PARALLEL TYPE EXIT RAMP WITH AUXILIARY LANE
5/12	C-07.04 SH 3	PCCP JOINT LOCATIONS, TAPER TYPE ENTRANCE RAMP
5/12	C-07.04 SH 4	PCCP JOINT LOCATIONS, TAPER TYPE EXIT RAMP
5/12	C-07.04 SH 5	PCCP JOINT LOCATIONS, CROSSROAD AND RAMP TERMINI
5/12	C-07.06	TRENCH BACKFILL AND PAVEMENT REPLACEMENT
5/12	C-08.20	PAVED GORE AREA
5/12	C-10.00	GUARDRAIL MEASUREMENT LIMITS
5/12	C-10.01	GUARDRAIL INSTALLATION, TYPE A AND REFLECTOR TAB
5/12	C-10.02	GUARDRAIL INSTALLATION, TYPE B AND REFLECTOR TAB
5/12	C-10.03	W-BEAM GUARDRAIL, G4(1W) AND G4(2W), BLOCKED-OUT TIMBER POST
5/12	C-10.04	W-BEAM GUARDRAIL, G4(1S), BLOCKED-OUT STEEL POST
5/12	C-10.05 SH 1	W-BEAM GUARDRAIL, G4(MODIFIED) WITH FREEWAY CURB AND GUTTER
5/12	C-10.05 SH 2	W-BEAM GUARDRAIL, G4(MODIFIED) WITH FREEWAY CURB AND GUTTER
5/12	C-10.06 SH 1	W-BEAM GUARDRAIL, NESTED, TYPES 1 AND 2
5/12	C-10.06 SH 2	W-BEAM GUARDRAIL, NESTED, TYPE 3
5/12	C-10.07 SH 1	W-BEAM GUARDRAIL, BOLTED ANCHOR
5/12	C-10.07 SH 2	W-BEAM GUARDRAIL, BOLTED ANCHOR
5/12	C-10.08	W-BEAM GUARDRAIL, END ANCHOR
5/12	C-10.20	THREE-BEAM GUARDRAIL, G9, BLOCKED-OUT STEEL POST
5/12	C-10.30 SH 1	GUARDRAIL TRANSITION, THREE BEAM TO CONCRETE HALF BARRIER, 32" TYPE 'F'
5/12	C-10.30 SH 2	GUARDRAIL TRANSITION, THREE BEAM TO CONCRETE HALF BARRIER, 32" TYPE 'F'
5/12	C-10.40	CONCRETE MEDIAN BARRIER, 32" TYPE 'F', CAST-IN-PLACE
5/12	C-10.41	CONCRETE MEDIAN BARRIER, 42" TYPE 'F', CAST-IN-PLACE
5/12	C-10.42 SH 1	GLARE SCREEN, CONCRETE MEDIAN BARRIER
5/12	C-10.42 SH 2	GLARE SCREEN, CONCRETE MEDIAN BARRIER
5/12	C-10.42 SH 3	GLARE SCREEN, CONCRETE MEDIAN BARRIER
5/12	C-10.50 SH 1	CONCRETE HALF BARRIER, 32" TYPE 'F', CAST-IN-PLACE
5/12	C-10.50 SH 2	CONCRETE HALF BARRIER, 32" TYPE 'F', PRECAST
5/12	C-10.51	CONCRETE HALF BARRIER, 32" TYPE 'F' WITH SIDEWALK
5/12	C-10.52	CONCRETE HALF BARRIER, 32" TYPE 'F' WITH GUTTER
5/12	C-10.53	CONCRETE HALF BARRIER, 42" TYPE 'F' WITH GUTTER
5/12	C-10.54 SH 1	CONCRETE HALF BARRIER, 32" TYPE 'F' AT PIERS, CAST-IN-PLACE
5/12	C-10.54 SH 2	CONCRETE HALF BARRIER, 32" TYPE 'F' AT PIERS, PRECAST
5/12	C-10.54 SH 3	CONCRETE HALF BARRIER, 32" TYPE 'F' AT PIERS, LAYOUT
5/12	C-10.55 SH 1	CONCRETE HALF BARRIER, 42" TYPE 'F' AT PIERS, CAST-IN-PLACE
5/12	C-10.55 SH 2	CONCRETE HALF BARRIER, 42" TYPE 'F' AT PIERS, PRECAST
5/12	C-10.55 SH 3	CONCRETE HALF BARRIER, 42" TYPE 'F' AT PIERS, LAYOUT
5/12	C-10.70 SH 1	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 32" TYPE 'F' WITH CAISSONS
5/12	C-10.70 SH 2	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 32" TYPE 'F' WITH CAISSONS
5/12	C-10.70 SH 3	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 32" TYPE 'F' WITH CAISSONS

ISSUE OR REVISION DATE	STANDARD NO.	SUBJECT CONSTRUCTION
5/12	C-10.71 SH 1	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 32" TYPE 'F' WITH CURB & GUTTER
5/12	C-10.71 SH 2	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 32" TYPE 'F' WITH CURB & GUTTER
5/12	C-10.72 SH 1	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 42" TO 32" TYPE 'F' WITH CAISSONS
5/12	C-10.72 SH 2	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 42" TO 32" TYPE 'F' WITH CAISSONS
5/12	C-10.72 SH 3	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 42" TO 32" TYPE 'F' WITH CAISSONS
5/12	C-10.73 SH 1	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 42" TO 32" TYPE 'F' WITH GUTTER
5/12	C-10.73 SH 2	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 42" TO 32" TYPE 'F' WITH GUTTER
5/12	C-10.74	CONCRETE HALF-BARRIER TRANSITION, 42" TO 32" TYPE 'F'
5/12	C-10.75 SH 1	CONCRETE HALF-BARRIER TRANSITION, TYPE 'F', TANGENT DEPARTURE TYPE 1
5/12	C-10.75 SH 2	CONCRETE HALF-BARRIER TRANSITION, TYPE 'F', TANGENT DEPARTURE TYPE 2
5/12	C-10.76	CONCRETE HALF-BARRIER TRANSITION, TYPE 'F' AT RADIUS, 32" TO 0"
5/12	C-10.77	CONCRETE HALF-BARRIER TRANSITION, END TERMINAL CURB AND GUTTER
5/12	C-11.10 SH 1	ROADWAY CATTLE GUARD
5/12	C-11.10 SH 2	ROADWAY CATTLE GUARD
5/12	C-11.10 SH 3	ROADWAY CATTLE GUARD
5/12	C-11.10 SH 4	ROADWAY CATTLE GUARD
5/12	C-11.20	CATTLE GUARD, DRAINAGE
5/12	C-12.10 SH 1	FENCE, WOVEN WIRE
5/12	C-12.10 SH 2	FENCE, BARBED WIRE
5/12	C-12.10 SH 3	FENCE, TYPES 1 AND 2 GATES, FLOOD GATE
5/12	C-12.10 SH 4	FENCE, FLOOD GATE INSTALLATION
5/12	C-12.10 SH 5	FENCE, MISCELLANEOUS DETAILS
5/12	C-12.20 SH 1	FENCE, CHAIN LINK, TYPE 1
5/12	C-12.20 SH 2	FENCE, CHAIN LINK, TYPE 2
5/12	C-12.20 SH 3	FENCE, CHAIN LINK, GATES
5/12	C-12.30 SH 1	FENCE, CHAIN LINK CABLE BARRIER
5/12	C-12.30 SH 2	FENCE, CHAIN LINK CABLE BARRIER
5/12	C-12.30 SH 3	FENCE, CHAIN LINK CABLE BARRIER
5/12	C-13.10 SH 1	PIPE CULVERT INSTALLATION
5/12	C-13.10 SH 2	PIPE CULVERT INSTALLATION
5/12	C-13.15	TYPICAL PIPE INSTALLATION
5/12	C-13.20	PIPE, REINFORCED CONCRETE END SECTION
5/12	C-13.25	PIPE, CORRUGATED METAL END SECTION
5/12	C-13.30	PIPE AND PIPE ARCH, CORRUGATED METAL, CONCRETE INVERT PAVING
5/12	C-13.55	PIPE, CATTLE-VEHICLE PASS, MITERED END TREATMENT
5/12	C-13.60	SLOTTED DRAIN DETAILS
5/12	C-13.65	SLOTTED DRAIN INSTALLATION DETAILS
5/12	C-13.70	STORM DRAIN CONNECTION DETAILS
5/12	C-13.75	STORM DRAIN OUTLET BARRIER GATE
5/12	C-13.76	STORM DRAIN OUTLET AND STORM DRAIN PLUG
5/12	C-13.80	PIPE COLLAR DETAILS
5/12	C-15.10	CATCH BASIN, TYPE 1
5/12	C-15.20 SH 1	CATCH BASIN, TYPE 3
5/12	C-15.20 SH 2	CATCH BASIN, TYPE 3
5/12	C-15.20 SH 3	CATCH BASIN, ACCESS FRAME AND COVER DETAILS
5/12	C-15.30	CATCH BASIN, TYPE 4
5/12	C-15.40 SH 1	CATCH BASIN, TYPE 5
5/12	C-15.40 SH 2	CATCH BASIN, TYPE 5
5/12	C-15.50	CATCH BASIN, FRAME AND GRATE
5/12	C-15.70 SH 1	CATCH BASIN, MISCELLANEOUS DETAILS
5/12	C-15.70 SH 2	CATCH BASIN, MISCELLANEOUS DETAILS
5/12	C-15.75	CATCH BASIN, DROP INLET
5/12	C-15.80	CATCH BASIN, FLUSH
5/12	C-15.81	CATCH BASIN, SIDE SLOPE
5/12	C-15.90	CATCH BASIN, MEDIAN DIKE, PRECAST
5/12	C-15.91 SH 1	FREEWAY CATCH BASIN DETAILS
5/12	C-15.91 SH 2	FREEWAY CATCH BASIN DETAILS
5/12	C-15.92 SH 1	CATCH BASIN WITH TYPE 'F' CONCRETE HALF BARRIER
5/12	C-15.92 SH 2	CATCH BASIN WITH TYPE 'F' CONCRETE HALF BARRIER
5/12	C-16.40	IRRIGATION SLEEVES
5/12	C-17.10	RAIL BANK PROTECTION FOR DRAINAGEWAYS, TYPES 1, 2 & 3
5/12	C-17.15	RAIL BANK PROTECTION AT ABUTMENTS, TYPES 4, 5 & 6
5/12	C-17.20	BANK PROTECTION FOR DRAINAGEWAYS, TYPES 7, 8 & 9
5/12	C-18.10 SH 1	MANHOLE, RISER DETAILS
5/12	C-18.10 SH 2	MANHOLE, BASE DETAILS, NORMAL INSTALLATION
5/12	C-18.10 SH 3	MANHOLE, FRAME AND COVER DETAILS
5/12	C-19.10 SH 1	FORD, CONCRETE WALLS
5/12	C-19.10 SH 2	FORD, TYPES 1 AND 2
5/12	C-21.10	SURVEY MONUMENT FRAME AND COVER
5/12	C-21.20	SURVEY MARKER

REV.: 05/12

ADOT STANDARD DRAWINGS		
REVISION DATES and STANDARD NO.'s REVIEW		
CONSTRUCTION STANDARDS	NAME F. HENDERSON	DATE FEBRUARY 2016
PROJECT NO. 888 MA 000 H8809 01C	1A OF 23	
RECORD DRAWING FEDERAL AID NO. DATA CM-888-A(225)T	REC. DWG. DATE	OF

ADOT STANDARD DRAWINGS
 TRAFFIC SIGNING & MARKING STANDARDS
 (SHEET 1 OF 2)
 EFFECTIVE MAY 2015

SUBJECT:

REVISION	STANDARD	SIGNING & MARKING DETAILS
6/14	M-1	CURB MARKINGS FOR RAISED MEDIAN AND ISLANDS
6/14	M-2 SHT 1	INTERSECTION STRIPING
5/15	M-2 SHT 2	INTERSECTION STRIPING (TWO-LANE RURAL)
6/14	M-2 SHT 3	CENTERLINE & REVERSE CURVE DETAILS
6/14	M-3	STRIPING AND DELINEATION FOR FREEWAY TERMINALS
6/14	M-4	PASSING LANE STRIPING DETAILS
6/14	M-5	RAILROAD PAVEMENT MARKINGS
6/14	M-6	WORD MARKINGS
6/14	M-7	PAVEMENT LETTERS
6/14	M-8	PAVEMENT LETTERS
6/14	M-9	PAVEMENT NUMBERS
6/14	M-10 SHT 1	PAVEMENT MARKING SYMBOLS
6/14	M-10 SHT 2	PAVEMENT MARKING SYMBOLS
6/14	M-11	TURN LANE PAVEMENT MARKINGS
6/14	M-12	WRONG-WAY ARROWS
6/14	M-13	PREFERENTIAL LANE PAVEMENT MARKINGS
6/14	M-14	STRIPING AND DELINEATION FOR TRUCK ESCAPE RAMPS
6/14	M-15 SHT 1	PAVEMENT MARKING FOR FREEWAY ENTRANCE RAMP - TAPERED ACCELERATION LANE
6/14	M-15 SHT 2	PAVEMENT MARKING FOR FREEWAY ENTRANCE RAMP - PARALLEL ACCELERATION LANE
6/14	M-15 SHT 3	PAVEMENT MARKING FOR FREEWAY ENTRANCE RAMP - PARALLEL ACCELERATION LANE WITH HOV BYPASS
6/14	M-15 SHT 4	PAVEMENT MARKING FOR FREEWAY PARALLEL - ACCELERATION LANE
6/14	M-16 SHT 1	PAVEMENT MARKING FOR FREEWAY EXIT RAMPS - TAPERED DECELERATION LANE
6/14	M-16 SHT 2	PAVEMENT MARKING FOR FREEWAY EXIT RAMP - PARALLEL DECELERATION LANE
5/15	M-17	FREEWAY LANE DROP PAVEMENT MARKINGS
6/14	M-18	RECESSED PAVEMENT MARKER DETAILS
6/14	M-19 SHT 1	RAISED PAVEMENT MARKER PLAN LEGEND
6/14	M-19 SHT 2	NON-REFLECTIVE RAISED PAVEMENT MARKER DETAILS
6/14	M-19 SHT 3	RETROREFLECTIVE RAISED PAVEMENT MARKER DETAILS
6/14	M-19 SHT 4	RETROREFLECTIVE RAISED PAVEMENT MARKER DETAILS
5/15	M-19 SHT 5	PAVEMENT MARKING DETAILS FOR UNDIVIDED HIGHWAYS
6/14	M-19 SHT 6	RETROREFLECTIVE RAISED PAVEMENT MARKERS (RPM) FOR UNDIVIDED HIGHWAYS
6/14	M-19 SHT 7	FREEWAY AND DIVIDED HIGHWAY EDGE LINE AND LANE STRIPING
5/15	M-19 SHT 8	LANE DROP MARKING AND RAMP OR INTERSECTION GUIDE STRIPING
6/14	M-19 SHT 9	PAVEMENT MARKING CROSS-SECTION DETAILS FOR HIGHWAYS AND FREEWAYS

SUBJECT:

REVISION	STANDARD	SIGNING & MARKING DETAILS
6/14	M-20 SHT 1	CHIP SEAL MARKER USAGE FOR TEMPORARY MARKERS
6/14	M-20 SHT 2	CHIP SEAL MARKER USAGE FOR TEMPORARY MARKERS
6/14	M-21	TRANSVERSE RUMBLE STRIP DETAILS
6/14	M-22 SHT 1	LONGITUDINAL RUMBLE STRIP GROOVE, PATTERN - AND LOCATION DETAILS
6/14	M-22 SHT 2	LONGITUDINAL RUMBLE STRIP EXCEPTION DETAILS
6/14	M-22 SHT 3	CENTERLINE RUMBLE STRIP GROOVE, PATTERN - AND LOCATION DETAILS
6/14	M-23	OBJECT MARKER DETAILS
6/14	M-24	OBJECT MARKER PLACEMENT DETAILS
6/14	M-26 SHT 1	DELINEATOR PLACEMENT AND SPACING
6/14	M-26 SHT 2	DELINEATOR PLACEMENT AND SPACING
6/14	M-26 SHT 3	FLEXIBLE DELINEATOR ASSEMBLIES
6/14	M-26 SHT 4	SQUARE STEEL POST DELINEATOR
6/14	M-26 SHT 5	DELINEATOR FOUNDATION DETAILS
6/14	M-27	DELINEATION DETAILS FOR MEDIAN CROSSOVERS
6/14	M-29	OFF-MAINLINE REFERENCE MARKER LOCATION DETAIL
6/14	M-30	OFF-MAINLINE REFERENCE MARKER DETAILS
6/14	M-32	BRIDGE AND BARRIER MARKER DETAILS
6/14	M-33	BRIDGE & BARRIER MARKER PLACEMENT AND INSTALLATION DETAILS
6/14	M-34	GUARDRAIL END TERMINAL DELINEATION DETAILS
6/14	M-35	OBJECT MARKER FOR SAND BARREL CRASH CUSHION

NO.1 DESCRIPTION OF REVISION, REVISED ALL DRAWINGS AND RE-ISSUED, CREATED SHEET 2.
 NO.2 DESCRIPTION OF REVISION, REVISED M2 SHT, M17, M19 SHTS S&E, REVISED S1T SHTS ON P&I, UPDATED BORDER TITLE BLOCK, MADE BY L. LOPEZ, DATE 5/15
 NO.3 DESCRIPTION OF REVISION, REVISED M2 SHT, M17, M19 SHTS S&E, REVISED S1T SHTS ON P&I, UPDATED BORDER TITLE BLOCK, MADE BY L. LOPEZ, DATE 6/14

ADOT STANDARD DRAWINGS			
REVISION DATES and STANDARD NO.'s REVIEW			
SIGNING & MARKING STANDARDS		NAME F. HENDERSON	DATE FEBRUARY 2016
PROJECT NO. 888 MA 000 H8809 01C		IB-1 OF 23	
RECORD DRAWING DATA	FEDERAL AID NO. CM-888-A(225)T	REC. DWG. DATE	OF

ADOT STANDARD DRAWINGS
 TRAFFIC SIGNING & MARKING STANDARDS
 (SHEET 2 OF 2)
 EFFECTIVE MAY 2015

SUBJECT:

REVISION	STANDARD	SIGNING & MARKING DETAILS
6/14	S-1 SHT 1	GENERAL SIGNING NOTES
6/14	S-2 SHT 1	S & W BREAKAWAY POST SELECTION CHART
6/14	S-2 SHT 2	S & W BREAKAWAY POST INSTALLATION DETAILS
6/14	S-3 SHT 1	FLAT SHEET SIGNS SQUARE TUBE POST GENERAL NOTES
6/14	S-3 SHT 2	SINGLE POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 12, 18 AND 24 INCH WIDTHS
6/14	S-3 SHT 3	SINGLE POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 30, 36, 42 AND 54 INCH WIDTHS
6/14	S-3 SHT 4	TWO POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 36, 42 AND 48 INCH WIDTHS
6/14	S-3 SHT 5	TWO POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 54, 60 AND 72 INCH WIDTHS
6/14	S-3 SHT 6	TWO POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 84 - 144 INCH WIDTHS
6/14	S-3 SHT 7	THREE POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 48, 60 AND 72 INCH WIDTHS
6/14	S-3 SHT 8	THREE POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 84 - 144 INCH WIDTHS
6/14	S-3 SHT 9	WARNING SIGN ASSEMBLY - SINGLE POST
6/14	S-3 SHT 10	WARNING SIGN ASSEMBLY - TWO POST
6/14	S-3 SHT 11	WARNING SIGN ASSEMBLY - THREE POST
6/14	S-3 SHT 12	MULTIPLE ROUTE MARKER ASSEMBLIES
6/14	S-3 SHT 13	SPECIAL SIGN ASSEMBLIES
6/14	S-3 SHT 14	STRINGER DETAILS FOR SQUARE TUBE POSTS
6/14	S-3 SHT 15	SQUARE TUBE SIGN POST FOUNDATION
6/14	S-3 SHT 16	SQUARE TUBE POST SLIP BASE DETAILS
6/14	S-4	W SHAPE BREAKAWAY POST FUSE PLATE AND HINGE DETAILS
6/14	S-5	W SHAPE BREAKAWAY POST DETAILS
6/14	S-6	S4x7.7 BREAKAWAY POST DETAILS
6/14	S-7 SHT 1	ALUMINUM EXTRUSION SIGN PANEL DETAILS
6/14	S-7 SHT 2	ALUMINUM EXTRUSION AUXILIARY SIGN INSTALLATION DETAILS
5/15	S-7 SHT 3	ALUMINUM EXTRUSION EXIT PANEL INSTALLATION DETAIL
6/14	S-8 SHT 1	FLAT SHEET ALUMINUM PANEL ON BREAKAWAY POSTS INSTALLATION DETAIL
6/14	S-8 SHT 2	ALUMINUM EXTRUSION SIGN TO PERFORATED POSTS INSTALLATION DETAIL
6/14	S-9 SHT 1	SIGN INSTALLATION ON POLE
6/14	S-9 SHT 2	SIGN INSTALLATION ON SIGNAL POLE
6/14	S-9 SHT 3	SIGN INSTALLATION ON POLE BAND-TYPE CLAMP
6/14	S-10	MILEPOST AND REFERENCE LOCATION SIGNS
6/14	S-11 SHT 1	TAPERED TUBE SIGN STRUCTURE CANTILEVER
6/14	S-11 SHT 2	TAPERED TUBE SIGN STRUCTURE CANTILEVER POST AND MAST ARM DETAILS
6/14	S-11 SHT 3	TAPERED TUBE SIGN STRUCTURE SINGLE BEAM
6/14	S-11 SHT 4	TAPERED TUBE SIGN STRUCTURE SINGLE BEAM POST AND BEAM DETAILS

SUBJECT:

REVISION	STANDARD	SIGNING & MARKING DETAILS
6/14	S-12 SHT 1	TYPE A, B, AND DOWN ARROWS
6/14	S-12 SHT 2	TYPE C AND D ARROWS
6/14	S-12 SHT 3	C2 ARROW DETAIL
6/14	S-13	SIGN IDENTIFICATION DETAILS
6/14	S-14 SHT 1	ROTATING OPEN/CLOSED SIGN
6/14	S-14 SHT 2	ROTATING OPEN/CLOSED SIGN DETAILS
6/14	S-14 SHT 3	ROTATING OPEN/CLOSED SIGN MOUNTING DETAILS
6/14	S-15 SHT 1	FOLDING RECTANGULAR SIGN ASSEMBLY
6/14	S-15 SHT 2	FOLDING RECTANGULAR SIGN OPERATION
6/14	S-15 SHT 3	FOLDING DIAMOND SIGN ASSEMBLY
6/14	S-16 SHT 1	TEMPORARY WOOD POSTS
6/14	S-16 SHT 2	TEMPORARY WOOD POSTS SELECTION CHART
6/14	S-17	END OF ROAD BARRICADE
6/14	C-1	SAND BARREL CRASH CUSHION
6/14	C-2	SAND BARREL CRASH CUSHION TYPICAL INSTALLATION
6/14	C-3 SHT 1	PRECAST CONCRETE BARRIER STRUCTURAL DETAILS
6/14	C-3 SHT 2	PRECAST CONCRETE BARRIER PIN AND LOOP ASSEMBLY
6/14	C-4 SHT 1	MEDIAN CROSSOVER
6/14	C-4 SHT 2	TYPICAL END TREATMENTS FOR DETOURS USING TEMPORARY CONCRETE BARRIER (TCB)
6/14	C-5 SHT 1	APPROACH PLATE AND TRANSITION SECTION FOR TEMPORARY CONCRETE BARRIER
6/14	C-5 SHT 2	APPROACH PLATE AND TRANSITION SECTION FOR TEMPORARY CONCRETE BARRIER

NO.1 | DESCRIPTION OF REVISION, REVISED ALL DRAWINGS AND RE-ISSUED, CREATED SHEET 2. NO.2 | DESCRIPTION OF REVISION, REVISED S.T. SHT. REVISED M.2 SHT.2, M.H. SHT.58 ON P.L. UPDATED BORDER TITLE BLOCK. MADE BY: L. LOPEZ DATE: 5/15

ADOT STANDARD DRAWINGS			
REVISION DATES and STANDARD NO.'s REVIEW			
SIGNING & MARKING STANDARDS		NAME	DATE
PROJECT NO.		F. HENDERSON	FEBRUARY 2016
888 MA 000 H8809 01C		IB-2	OF 23
RECORD DRAWING DATA	FEDERAL AID NO. CM-888-A(225)T	REC. DWG. DATE	OF

ADOT STANDARD DRAWINGS
TRAFFIC SIGNAL AND LIGHTING STANDARDS
(SHEET 1 OF 2)
EFFECTIVE MAY 2015

NO.1 | DESCRIPTION OF REVISION | REVISED STDS 1-2, 1-11, 2-7, 4-22, 5-0, 5-4, MADE BY | L. LOPEZ | DATE | 03/15 | NO.2 | DESCRIPTION OF REVISION | REVISED TS 0-1, UPDATED BORDER TITLE BLOCK, MADE BY | L. LOPEZ | DATE | 05/15

REVISION DATE	STANDARD NUMBER	SUBJECT: TRAFFIC SIGNALS AND LIGHTING DETAILS
	T. S. 0	ABBREVIATIONS, SYMBOLS AND DEFINITIONS
05/15	0-1	STANDARD ABBREVIATIONS
01/12	0-2 SHT 1	PLAN SYMBOLS
01/12	0-2 SHT 2	PLAN SYMBOLS
01/12	0-2 SHT 3	PLAN SYMBOLS
03/10	0-3 SHT 1	STANDARD DEFINITIONS
03/10	0-3 SHT 2	STANDARD DEFINITIONS
03/10	0-4	REFERENCE DOCUMENTS AND GENERAL REQUIREMENTS
	T. S. 1	PULL BOXES
09/11	1-1 SHT 1	LIGHT DUTY - LIGHT WEIGHT NO. 5 AND NO. 7 PULL BOX
09/11	1-1 SHT 2	LIGHT DUTY - LIGHT WEIGHT NO. 5 AND NO. 7 SLOPE WALL BODY PULL BOX DETAILS
03/15	1-2	HEAVY DUTY NO. 5 AND NO. 7 STRAIGHT BODY WALL PULL BOX DETAILS
09/11	1-3	REPLACEMENT LID SIZING FOR EXISTING NO. 5 AND NO. 7 PULL BOXES
09/11	1-4 SHT 1	TYPICAL PULL BOX INSTALLATION AND WIRING DETAILS
09/11	1-4 SHT 2	TYPICAL PULL BOX INSTALLATION AND WIRING DETAILS
09/11	1-4 SHT 3	TYPICAL PULL BOX INSTALLATION DETAILS
09/11	1-5 SHT 1	ELECTRICAL CONDUIT COVER AND TRENCH REQUIREMENTS
09/11	1-5 SHT 2	CONDUIT EXPANSION COUPLINGS
09/11	1-6	CONDUCTOR REQUIREMENTS
03/10	1-7	TRAFFIC SIGNAL IMSA CABLE COLOR CODES
09/11	1-8 SHT 1	FRONT OF BARRIER JUNCTION BOX
09/11	1-8 SHT 2	BACK OF BARRIER JUNCTION BOX
09/11	1-9	TOP OF BARRIER JUNCTION BOX DETAILS
09/11	1-10	TOP OF BARRIER JUNCTION BOX DETAILS
10/13	1-11 SHT 1	HEAVY DUTY LIGHTING NO. 4 AND NO. 6 PULL BOX
10/13	1-11 SHT 2	HEAVY DUTY LIGHTING NO. 4 AND NO. 6 PULL BOX
03/15	1-11 SHT 3	HEAVY DUTY LIGHTING NO. 4 AND NO. 6 PULL BOX LID
03/15	1-12 SHT 1	PRECAST HEAVY DUTY LIGHTING NO. 4B AND NO. 6B PULL BOX
03/15	1-12 SHT 2	PRECAST HEAVY DUTY LIGHTING NO. 4B AND NO. 6B PULL BOX
	T. S. 2	FOUNDATIONS
03/10	2-1	FOUNDATION FOR TYPE II LOAD CENTER CABINET
03/10	2-2	FOUNDATION FOR TYPE IV LOAD CENTER CABINET
03/10	2-3	FOUNDATION FOR TYPE III CONTROL CABINET
03/10	2-4	FOUNDATION FOR TYPE IV AND V CONTROL CABINETS
03/10	2-5	FOUNDATION FOR TYPE 340 CONTROL CABINET
03/10	2-6	METER PEDESTAL CABINET FOUNDATION AND BASE
03/15	2-7	TRAFFIC SIGNAL UPS CABINET FOUNDATION DETAIL
	T. S. 3	CABINETS
12/12	3-0	NOTES FOR TYPE II AND IV LOAD CENTER CABINETS
03/10	3-1	TYPE II LOAD CENTER CABINET
03/10	3-2	TYPE IV LOAD CENTER CABINET
03/10	3-3	TYPE II OR IV LOAD CENTER CABINET WIRING DETAILS 240/480 3W W/DISCONNECT
03/10	3-4 SHT 1	PHOTO ELECTRIC CELL MOUNTING DETAILS
03/10	3-4 SHT 2	PHOTO ELECTRIC CELL MOUNTING DETAILS
03/10	3-5 SHT 1	TYPE I AND II METER PEDESTAL CABINET
12/12	3-5 SHT 2	METER PEDESTAL CABINET
03/10	3-6	TYPE III CONTROL CABINET
03/10	3-7	POLE MOUNTED TYPE III CONTROL CABINET
03/10	3-8 SHT 1	POLE MOUNT DETAILS FOR TYPE III CONTROL CABINET
03/10	3-8 SHT 2	POLE MOUNT DETAILS FOR TYPE III CONTROL CABINET
03/10	3-9 SHT 1	TYPE IV AND V CONTROL CABINET NOTES
03/10	3-9 SHT 2	TYPE IV CONTROL CABINET
03/10	3-9 SHT 3	TYPE V CONTROL CABINET
03/10	3-10	CABINET EXTENSION OR ELEVATOR BASE
03/10	3-11	CONTROL CABINET MOUNTED SERVICE ENCLOSURE
03/10	3-12 SHT 1	120/240 OR 240/480 VOLT, SINGLE PHASE UTILITY PULL SECTION AND SERVICE DISCONNECT DETAILS
03/10	3-12 SHT 2	120/240 OR 240/480 VOLT, SINGLE PHASE UTILITY PULL SECTION AND SERVICE DISCONNECT DETAILS
03/10	3-13 SHT 1	TRAFFIC SIGNALS AND LIGHTING MODEL 345 CABINET DETAILS
03/10	3-13 SHT 2	TRAFFIC SIGNALS AND LIGHTING MODEL 345 CABINET DETAILS
03/10	3-13 SHT 3	TRAFFIC SIGNALS AND LIGHTING MODEL 345 CABINET CAGE DETAILS

REVISION DATE	STANDARD NUMBER	SUBJECT: TRAFFIC SIGNALS AND LIGHTING DETAILS
	T. S. 4	POLES AND POSTS
10/13	4-1	TYPE "A" POLE
10/13	4-2	TYPE "E" POLE
10/13	4-3	TYPE "F" POLE
10/13	4-4	TYPE "G" POLE
10/13	4-5	ALUMINUM TYPE "G" POLE
10/13	4-6	ALUMINUM TYPE "H" POLE
10/13	4-7	ALUMINUM TYPE "I" POLE
10/13	4-8	TYPE "J" POLE
10/13	4-9	TYPE "K" POLE
10/13	4-10	TYPE "Q" POLE
10/13	4-11	TYPE "R" POLE
10/13	4-12	TYPE "S" POLE
10/13	4-13	ALUMINUM TYPE "S" POLE
10/13	4-14 SHT 1	TYPE "T" POLE
10/13	4-14 SHT 2	TYPE "S" AND "T" STEEL TWIN LUMINAIRE MOUNTING BRACKET AND EXTENSIONS
10/13	4-15	ALUMINUM TYPE "T" POLE
10/13	4-16	TYPE "U" POLE ELLIPTICAL BASE DETAILS
10/13	4-17 SHT 1	TYPE "U" POLE SQUARE BASE
10/13	4-17 SHT 2	TYPE "U" POLE ROUND POLE / SQUARE BASE
03/10	4-17 SHT 3	TYPE "U" POLE ROUND POLE / SQUARE BASE
10/13	4-17 SHT 4	TYPE "U" POLE ROUND POLE / SQUARE BASE
10/13	4-17 SHT 5	TYPE "U" POLE ROUND POLE / SQUARE BASE
10/13	4-17 SHT 6	TYPE "U" POLE ROUND POLE / SQUARE BASE
10/13	4-18	TYPE "V" POLE AND 60' OR 65' MAST ARM
10/13	4-19	TYPE "W" POLE AND 60' OR 65' MAST ARM
03/10	4-20	POLE HAND HOLE DETAIL
03/10	4-21	EQUIPMENT MOUNTING HEIGHT DETAILS
03/15	4-22	PEDESTRIAN PUSH BUTTON POST "TYPE PB POLE"
10/13	4-23	POLE FOUNDATION ANCHOR BOLTS
03/10	4-26	STEEL MAST ARM DETAILS LUMINAIRE AND SIGNAL ARMS TO 20'
03/10	4-27	ALUMINUM TRUSS ARM DETAILS TYPE G, H, AND I POLES
03/10	4-28	SIGNAL MAST ARM CONNECTION DETAIL TYPE J AND Q POLES
03/10	4-29	SIGNAL MAST ARM CONNECTION DETAIL TYPE K AND R POLES
03/10	4-30	MAST ARM CONNECTION DETAIL TYPE V AND W POLES
03/10	4-31	SIGNAL MAST ARM TENON DETAIL
12/12	4-32	TYPICAL HIGHWAY LIGHTING OFFSETS IN CUT AND FILL SECTIONS
	T. S. 5	POLE BASES - SPECIAL
03/15	5-0	TYPE 2 AND 3 CAST ALUMINUM BREAK-AWAY BASES
12/12	5-1	TYPE 2 CAST ALUMINUM BREAK-AWAY BASE
12/12	5-2	TYPE 3 CAST ALUMINUM BREAK-AWAY BASE
12/12	5-3	INSTALLATION DETAILS FOR POLE FOUNDATIONS WITH TYPE 2 AND 3 BREAK-AWAY BASES
	T. S. 6	HIGHWAY TRAFFIC DATA DETECTORS
03/10	6-1	TYPE C VEHICLE DETECTOR LOOPS FOR TRAFFIC COUNTERS
03/10	6-2 SHT 1	TYPE SA AND SB SPEED/VEHICLE CLASSIFICATION SYSTEMS
03/10	6-2 SHT 2	TYPE SA SPEED/VEHICLE CLASSIFICATION SYSTEMS
03/10	6-2 SHT 3	TYPE SB SPEED/VEHICLE CLASSIFICATION SYSTEMS
12/12	6-3	PIEZOELECTRIC WEIGHT SENSOR AND LOOP LANE LAYOUT
12/12	6-4 SHT 1	DETECTOR LOOPS AND PIEZOELECTRIC SENSOR DETAILS
12/12	6-4 SHT 2	DETECTOR LOOPS AND PIEZOELECTRIC SENSOR DETAILS
03/15	6-4 SHT 3	DETAIL A PIEZOELECTRIC SENSOR DETAILS
12/12	6-4 SHT 4	DETAIL B DETECTOR LOOP DETAILS
12/12	6-4 SHT 5	DETECTOR LOOPS AND PIEZOELECTRIC SENSOR DETAILS
03/10	6-5	MICROLOOPS FOR SPEED/VEHICLE CLASSIFICATION
03/10	6-6	QUARTZ PIEZOELECTRIC WEIGHT SENSOR AND LOOP LANE LAYOUT
03/10	6-7	TRAFFIC DATA COLLECTION CABINET INSTALLATION DETAILS
03/10	6-8	TYPE MPD CABINET POLE, BASE AND FOUNDATION INSTALLATION DETAILS

ADOT STANDARD DRAWINGS			
REVISION DATES and STANDARD NO.'s REVIEW			
TRAFFIC SIGNAL & LIGHTING STANDARDS	NAME F. HENDERSON	DATE FEBRUARY 2016	
PROJECT NO. 888 MA 000 H8809 01C	IC-1	OF	23
RECORD DRAWING DATA	FEDERAL AID NO. CM-888-A(225)T	REC. DWG. DATE	OF

ADOT STANDARD DRAWINGS
TRAFFIC SIGNAL AND LIGHTING STANDARDS
(SHEET 2 OF 2)
EFFECTIVE MAY 2015

NO.1 | DESCRIPTION OF REVISION | REVISED STDS 7-1, 11-1, 11-2, 13-3, ADDED NEW STD 1-12, 3/15 | DATE | MADE BY | L. LOPEZ | 5/15
NO.2 | DESCRIPTION OF REVISION | REVISED TS 0-1 ON SHT, UPDATED BORDER TITLE BLOCK, 01/12 | DATE | MADE BY | L. LOPEZ | 5/15

REVISION DATE	STANDARD NUMBER	SUBJECT:
		TRAFFIC SIGNALS AND LIGHTING DETAILS
	T. S. 7	TRAFFIC SIGNAL DETECTORS
03/10	7-1 SHT 1	LOOP DETECTOR LOCATION SAWCUT PATTERNS AND INSTALLATION DETAILS
03/10	7-1 SHT 2	SAW CUT AND CORING DETAILS
03/15	7-1 SHT 3	SAW CUT AND CORING DETAILS
03/10	7-1 SHT 4	TYPICAL DETECTOR LOOP LEAD-IN ROAD TO PULL BOX DETAIL
03/10	7-1 SHT 5	LOOP DETECTOR LOCATION AND INSTALLATION DETAILS
03/10	7-2	PRE-FORMED LOOP DETECTORS FOR RAMP METERING AND COUNTING
03/10	7-3	PRE-FORMED LOOP DETECTORS IN BRIDGE DECK
03/10	7-4	PRE-FORMED LOOP DETECTORS IN PCCP
03/10	7-5	TYPICAL PRE-FORMED LOOP DETECTOR STUB-OUT DETAIL
	T. S. 8	SIGNAL ASSEMBLIES
01/12	8-0	TRAFFIC SIGNAL VEHICLE FACE ASSEMBLY REQUIREMENTS AND DETAILS
01/12	8-1	VEHICLE TRAFFIC SIGNAL FACE ASSEMBLY
01/12	8-2	VEHICLE TRAFFIC SIGNAL FACE ASSEMBLY
01/12	8-3	VEHICLE TRAFFIC SIGNAL FACE ASSEMBLY
10/13	8-4 SHT 1	12-INCH VEHICLE TRAFFIC SIGNAL HOUSING/SECTION
01/12	8-4 SHT 2	12-INCH VEHICLE TRAFFIC SIGNAL HOUSING/SECTION NOTES
01/12	8-4 SHT 3	VEHICLE TRAFFIC SIGNAL HOUSING/SECTION DETAILS
03/10	8-4 SHT 4	VISORS FOR 8-INCH AND 12-INCH VEHICLE TRAFFIC SIGNAL FACE ASSEMBLIES
01/12	8-5	FLASHING BEACON SIGNAL FACE ASSEMBLY
01/12	8-6	LED LAMP FOR PROGRAMMED VISIBILITY SIGNAL
01/12	8-7 SHT 1	PEDESTRIAN SIGNAL ASSEMBLY REQUIREMENTS AND DETAILS
01/12	8-7 SHT 2	PEDESTRIAN SIGNAL ASSEMBLY HOUSING
01/12	8-7 SHT 3	PEDESTRIAN SIGNAL ASSEMBLY VISOR
	T. S. 9	MOUNTING ASSEMBLIES - SIGNAL
03/10	9-0 SHT 1	MOUNTING ASSEMBLY GENERAL REQUIREMENTS
03/10	9-0 SHT 2	MOUNTING ASSEMBLY GENERAL REQUIREMENTS
03/10	9-1	TYPE I AND II MOUNTING ASSEMBLIES
03/10	9-2	TYPE III AND IV MOUNTING ASSEMBLIES
10/13	9-3	TYPE V MOUNTING ASSEMBLY
03/10	9-4	TYPE VI MOUNTING ASSEMBLY
03/10	9-5	TYPE VII MOUNTING ASSEMBLY
03/10	9-6	TYPE VIII MOUNTING ASSEMBLY
03/10	9-7	TYPE IX MOUNTING ASSEMBLY
03/10	9-8	TYPE X MOUNTING ASSEMBLY
03/10	9-9	TYPE XI MOUNTING ASSEMBLY
	T. S. 10	MOUNTING CASTINGS - SIGNAL
03/10	10-1	MISCELLANEOUS SIGNAL MOUNTING PARTS
03/10	10-2	MAST ARM SIGNAL MOUNTING PLUMBIZER
03/10	10-3	SIGNAL MOUNTING POLE PLATE DETAILS
03/10	10-4	TERMINAL COMPARTMENT, SIDE MOUNTED AND POLE TOP MOUNTED
	T. S. 11	PEDESTRIAN DETAILS
03/15	11-1	TYPE I PEDESTRIAN PUSH BUTTON HOUSING ASSEMBLY
03/15	11-2	CAN STYLE PEDESTRIAN PUSH BUTTON
	T. S. 12	FLASHERS
03/10	12-1 SHT 1	ADVANCE WARNING FLASHER POLE DETAIL
03/10	12-1 SHT 2	ADVANCE WARNING FLASHER POLE SIGN MOUNTING DETAILS
03/10	12-1 SHT 3	ADVANCE WARNING FLASHER POLE DETAIL
	T. S. 13	ILLUMINATION - SIGNS
03/10	13-1	SIGN LIGHTING DETAIL FOR TUBULAR SIGN STRUCTURES
03/10	13-2	FUSE PANEL DETAILS FOR SIGN LIGHTING
03/15	13-3	PLACEMENT OF LIGHTING FIXTURES FOR OVERHEAD SIGNS
	T. S. 14	ILLUMINATION - SPECIAL
03/10	14-1 SHT 1	HIGH PRESSURE SODIUM (HPS) LAMPS
03/10	14-1 SHT 2	HIGH PRESSURE SODIUM (HPS) LAMPS
03/10	14-1 SHT 3	HIGH PRESSURE SODIUM (HPS) LAMPS
03/10	14-2	PEDESTRIAN BRIDGE LIGHTING DETAILS

REVISION DATE	STANDARD NUMBER	SUBJECT:
		TRAFFIC SIGNALS AND LIGHTING DETAILS
	T. S. 15	SPAN WIRE SIGNALS AND LIGHTING
01/12	15-0 SHT 1	GENERAL NOTES
01/12	15-0 SHT 2	GENERAL NOTES
01/12	15-0 SHT 3	GENERAL NOTES
01/12	15-1 SHT 1	STEEL POLE TYPICAL DETAILS
01/12	15-1 SHT 2	STEEL POLE FOUNDATION DETAILS
01/12	15-1 SHT 3	STEEL POLE ATTACHMENT DETAILS
01/12	15-1 SHT 4	WOOD POLE TYPICAL DETAILS
01/12	15-1 SHT 5	WOOD POLE TYPICAL DETAILS
01/12	15-1 SHT 6	TYPICAL DETAILS
01/12	15-2	HANGER AND BALANCE ADJUSTER TYPICAL DETAILS
01/12	15-3 SHT 1	SIGNAL ASSEMBLY DETAILS
01/12	15-3 SHT 2	CONDUCTOR ENTRANCE HEADS TYPE A, B AND C
01/12	15-3 SHT 3	ALUMINUM PIPE EXTENSION AND TYPICAL DETAILS
01/12	15-4 SHT 1	ADJUSTABLE SIGN HANGER TYPICAL DETAILS
01/12	15-4 SHT 2	ADJUSTABLE SIGN HANGER TYPICAL DETAILS
01/12	15-4 SHT 3	ADJUSTABLE SIGN HANGER TYPICAL DETAILS
01/12	15-5	ADJUSTABLE HANGER TOP AND EXTENSION DETAILS
01/12	15-6	SIGNAL TETHER CLAMP TYPICAL DETAILS
01/12	15-7	POLE BAND TYPICAL DETAILS
01/12	15-8	WEATHERHEAD TYPICAL DETAILS

ADOT STANDARD DRAWINGS			
REVISION DATES AND STANDARD NO.'s REVIEW			
PROJECT NO.	NAME	DATE	
888 MA 000 H8809 01C	F. HENDERSON	FEBRUARY 2016	
RECORD DRAWING DATA	FEDERAL AID NO. CM-888-A(225)T	REC. DWG. DATE	
			IC-2 OF 23

ADOT STANDARD DRAWINGS

ITS STANDARDS
EFFECTIVE JULY 2014

REVISION DATE	STANDARD NUMBER	SUBJECT: ITS DETAILS
July-14	FM-0.01	SYMBOLS AND ABBREVIATIONS
Aug-13	FM-1.01	TRENCH DETAILS, FMS TRUNKLINE
Aug-13	FM-1.02	TRENCH UNDER PAVEMENT, FMS TRUNKLINE
Aug-13	FM-1.03	BURIED CONDUIT AROUND OBSTRUCTION, DIRECTIONAL DRILLING
Aug-13	FM-1.04	CONDUIT REQUIREMENTS FOR DMS, RMC TO PVC CONDUIT CONNECTION, THROUGH WALL CONDUIT
Aug-13	FM-1.05	CONDUIT MOUNTING DETAILS
Aug-13	FM-1.06	CONDUIT EXPANSION, COUPLING AND JUNCTION BOX, INSTALLATION PLAN
Aug-13	FM-1.07	FMS TRUNK LINE IN BOX GIRDER BRIDGE
Aug-13	FM-1.08	FMS TRUNKLINE IN I-BEAM OR I-GIRDER BRIDGE
Aug-13	FM-2.01	PULL BOX ADJACENT TO FMS PULL BOX
Aug-13	FM-2.02	PULL BOX NO. 9 CABINET CONDUIT INTERFACE PLANS
Aug-13	FM-2.03	PULL BOX NO. 9 DETAILS
Aug-13	FM-2.04	NO. 9 PULL BOX CONDUIT ROUTING AND CABLE RACKING DETAILS
Aug-13	FM-2.05	NO. 9 PULL BOX TORSION ASSIST COVER
Aug-13	FM-2.06	PULL BOX NO. 7 TYPICAL INSTALLATION
Aug-13	FM-2.07	BURIED PULL BOX NO. 7 TYPICAL INSTALLATION
Aug-13	FM-2.08	SPLIT NO. 9 PULL BOX
Aug-13	FM-3.01	RAMP METER CABINET DETAILS (SHEET 1 of 2)
Aug-13	FM-3.02	RAMP METER CABINET DETAILS (SHEET 2 of 2)
Aug-13	FM-3.03	RAMP METER CABINET SPECIAL DETAILS
Aug-13	FM-3.04	RAMP METER CABINET ACCESSORIES
Aug-13	FM-3.05	RAMP METER FIELD PANEL DETAILS
Aug-13	FM-3.06	RAMP METER FIELD PANEL CONNECTIONS
Aug-13	FM-3.07	RAMP METER SIGNAL POWER INTERRUPT RELAY AND PIN ASSIGNMENTS
Aug-13	FM-3.08	POWER DISTRIBUTION ASSEMBLY CONNECTOR AND INSTALLATION DETAILS
Aug-13	FM-3.09	POWER DISTRIBUTION ASSEMBLY #4 (PDA4) SCHEMATIC DIAGRAM
Aug-13	FM-3.10	RAMP METER CI HARNESS CONNECTIONS
Aug-13	FM-3.11	CCTV CABINET DETAILS (SHEET 1 of 2)
Aug-13	FM-3.12	CCTV CABINET DETAILS (SHEET 2 of 2)
Aug-13	FM-3.13	CABINET NUMBER DECAL DETAIL
Aug-13	FM-3.14	TRANSFORMER CABINET, EXTERNAL POWER DISCONNECT
Aug-13	FM-3.15	TRANSFORMER, 3kVA & 7.5kVA, DRY TYPE DETAILS AND WIRING DIAGRAMS
Aug-13	FM-3.16	TRANSFORMER, 10kVA & 25kVA, DRY TYPE DETAILS AND WIRING DIAGRAMS
Aug-13	FM-3.17	CLEAR ZONES, UNPROTECTED EQUIPMENT
Aug-13	FM-3.18	TYPE II LOAD CENTER
Aug-13	FM-3.19	TYPE IV LOAD CENTER FOUNDATION AND CABINET DETAIL
Aug-13	FM-3.20	TYPE IV MODIFIED LOAD CENTER
July-14	FM-3.21	RAMP METER CABINET FOUNDATION W/O TRANSFORMER
July-14	FM-3.22	RAMP METER CABINET WITH TRANSFORMER, FOUNDATION
July-14	FM-3.23	SKYLINE 336S DMS CABINET FOUNDATION DETAILS
July-14	FM-3.23A	SKYLINE 332 DMS CABINET FOUNDATION DETAILS
July-14	FM-3.24	SKYLINE 336S DMS & TRANSFORMER CABINET FOUNDATION DETAILS
July-14	FM-3.24A	SKYLINE 332 DMS & TRANSFORMER CABINET FOUNDATION DETAILS
July-14	FM-3.25	NOT USED
Aug-13	FM-3.26	TRANSFORMER CABINET FOUNDATION
July-14	FM-3.27	DAKTRONICS DMS CABINET FOUNDATION DETAILS
July-14	FM-3.28	DAKTRONICS DMS & TRANSFORMER CABINET FOUNDATION DETAILS
Aug-13	FM-3.29	DMS CABINET ADAPTER AND ELEVATOR BASE DETAILS
Aug-13	FM-4.01	CCTV CABINET BLOCK DIAGRAM
Aug-13	FM-4.02	FREEWAY MANAGEMENT SYSTEM CABINET BLOCK ETHERNET DIAGRAM
Aug-13	FM-4.03	DMS CABINET ETHERNET BLOCK DIAGRAM
Aug-13	FM-5.01	DETECTION DEFINITION
Aug-13	FM-5.02	TYPICAL DETECTOR LOOP INSTALLATION DETAILS
Aug-13	FM-5.03	TYPICAL PREFORMED DETECTOR LOOP INSTALLATION DETAILS
Aug-13	FM-5.04	DETECTOR LOOP IN AC PAVEMENT INSTALLATION LAYOUT
Aug-13	FM-5.05	DETECTOR LOOP IN PCCP PAVEMENT INSTALLATION LAYOUT
Aug-13	FM-5.06	DETECTOR LOOP TEST FORM 1
Aug-13	FM-5.07	DETECTOR LOOP TEST FORM 2 PART A
Aug-13	FM-5.08	DETECTOR LOOP TEST FORM 2 PART B
Aug-13	FM-6.01	RAMP METER DETAILS
Aug-13	FM-6.02	SINGLE-LANE RAMP METER
Aug-13	FM-6.03	SINGLE-LANE RAMP METER WITH FRONTAGE ROAD
Aug-13	FM-6.04	TWO-LANE RAMP METER
Aug-13	FM-6.05	TWO-LANE RAMP METER WITH FRONTAGE ROAD
Aug-13	FM-6.06	RAMP METER WITH OBSTRUCTION INSTALLATION DETAILS
Aug-13	FM-7.01	CCTV POLE CCTV CABINET MOUNTING DETAILS AND FIELD ORIENTATION
Aug-13	FM-7.02	CCTV POLE AND MOUNTING DETAILS
Aug-13	FM-7.03	CCTV POLE MOUNTING PLATE DETAILS

No. 1 Revised Details 0.01, 3.21, 3.22, 3.23, 3.23A, 3.24, 3.24A, 3.27 and 3.28. Deleted 3.25.
 No. 2 Description of Revision
 DATE: 7/21/14
 MADE BY: Bruggeman

ADOT STANDARD DRAWINGS			
REVISION DATES and STANDARD NO.'s REVIEW			
ITS STANDARD DRAWINGS		NAME	DATE
PROJECT NO.		F. HENDERSON	FEBRUARY 2016
888 MA 000 H8809 01C		IE	OF 23
RECORD DWG DATA	FEDERAL AID NO. CM-888-A(225)T	REC. DWG. DATE	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	2	23	

888 MA 000

MIDPOINT OF PROJECT

Western Zone
State Plane Coordinates

<i>I-10:</i>	<i>I-17:</i>	<i>US 60:</i>	<i>SR 51:</i>
X=896,000	X=913,000	X=868,400	X=904,900
Y=612,800	Y=640,400	Y=727,400	Y=661,700

DESIGN DATA

I-10:
2013 AADT = 200,989
2030 AADT = 345,835
I-17:
2013 AADT = 163,764
2030 AADT = 231,125
US 60:
2013 AADT = 179,758
2030 AADT = 359,571
SR 51:
2013 AADT = 132,780
2030 AADT = 188,750

Speed Limits	Posted
<i>I-10 & US 60 MAINLINE</i>	65 MPH
<i>I-17 & SR 51 MAINLINE</i>	55 MPH

INDEX OF SHEETS

Sheet No.	Dwg No.	Sheet Type
-	-	Face Sheet
1A - 1C, 1E	-	ADOT Standard Drawings
2	G-01.01	Index of Sheets
3	G-01.02	I-10, I-17 & SR 51 Key Map
4	G-01.03	I-10 & US 60 Key Map
5	F-01.01	FMS General Notes
6 - 10	F-01.02 - F-01.06	FMS Typical Installation 1 Sheets
11 - 12	F-01.07 - F-01.08	FMS Typical Installation 2 Sheets
13 - 15	F-01.09 - F-01.11	FMS Typical Installation 3 Sheets
16 - 18	F-01.12 - F-01.14	FMS Site-Specific Installation Detail Sheets
19	F-01.15	FMS Conduit Special Details
20	T-01.01	Traffic Control General Notes and Quantities
21 - 23	T-01.02 - T-01.04	Traffic Control Full Closure Details

AVERAGE PROJECT ELEVATION (VERTICAL DATUM NAVD 88)

The Average Project Elevation for I-10 is 1,060'
The Average Project Elevation for I-17 is 1,170'
The Average Project Elevation for US 60 is 1,273'
The Average Project Elevation for SR 51 is 1,160'

LENGTH OF PROJECT

I-10
MILE POST 135.85 to 143.76 = 7.9 Miles
GROSS LENGTH = 41,765.00'
I-17
MILE POST 197.94 to 208.54 = 10.6 Miles
GROSS LENGTH = 55,968.00'
US 60
MILE POST 172.37 to 188.26 = 15.9 Miles
GROSS LENGTH = 83,950.00'
SR 51
MILE POST 0.40 to 5.48 = 5.1 Miles
GROSS LENGTH = 26,822.00'

GENERAL NOTES

The roadway plans have been designed utilizing the 2012 Construction Standard Drawings (C-Series) and current revisions. Refer to the 1A sheet for a listing of current revision dates.

Where only the horizontal location of an existing utility is shown, the location is approximate. Where both the horizontal and vertical location of an existing utility is shown, the location has been verified by field survey methods. The Contractor shall comply with all current Blue Stake laws and Section 107.15 of the Specifications.

New Right-of-Way and Easements are not required.

I-10 REFERENCES

- 1-10-2(119)
- 1-10-2(134)
- 1-10-2(136)
- 1-10-2(80)
- 1-10-2(82)
- 1-10-2(107)
- 1-10-2(108)
- AC1-10-2(117)
- 1-10-2-903

I-17 REFERENCES

- 1-17-1-901
- 1-017-A-505
- 1-17-1-982
- 1-17-1-919
- 1-17-1-906
- 1-17-1-908
- IM-017-A(227)T
- IR-17-1(165)

US 60 REFERENCES

- 060-B-NFA
- AC-060-C-(001)B
- STP-060-C-(2)P
- F-022-3(15)
- F-022-3-949
- F-022-3-986
- F-022-3-518
- F-022-3(49)
- STP-060-C(013)B

SR 51 REFERENCES

- CM-900-0(196)P
- RAM-600-2-502D
- RAM-600-2-502E
- RAM-600-2-521
- RAM-600-2-524
- STP-900-0(96)
- S-051-A-502
- S-051-A-503

DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION	
DRAWN	J. LaKose	5/16		
CHECKED	A. Gonzalez	5/16		
		INDEX OF SHEETS AND DESIGN DATA		EXPIRES 03/31/2019 DWG NO. G-01.01
ROUTE	LOCATION	VARIOUS LOCATIONS		
000		TRACS NO. H8809 01C		CM-888-A(225)T

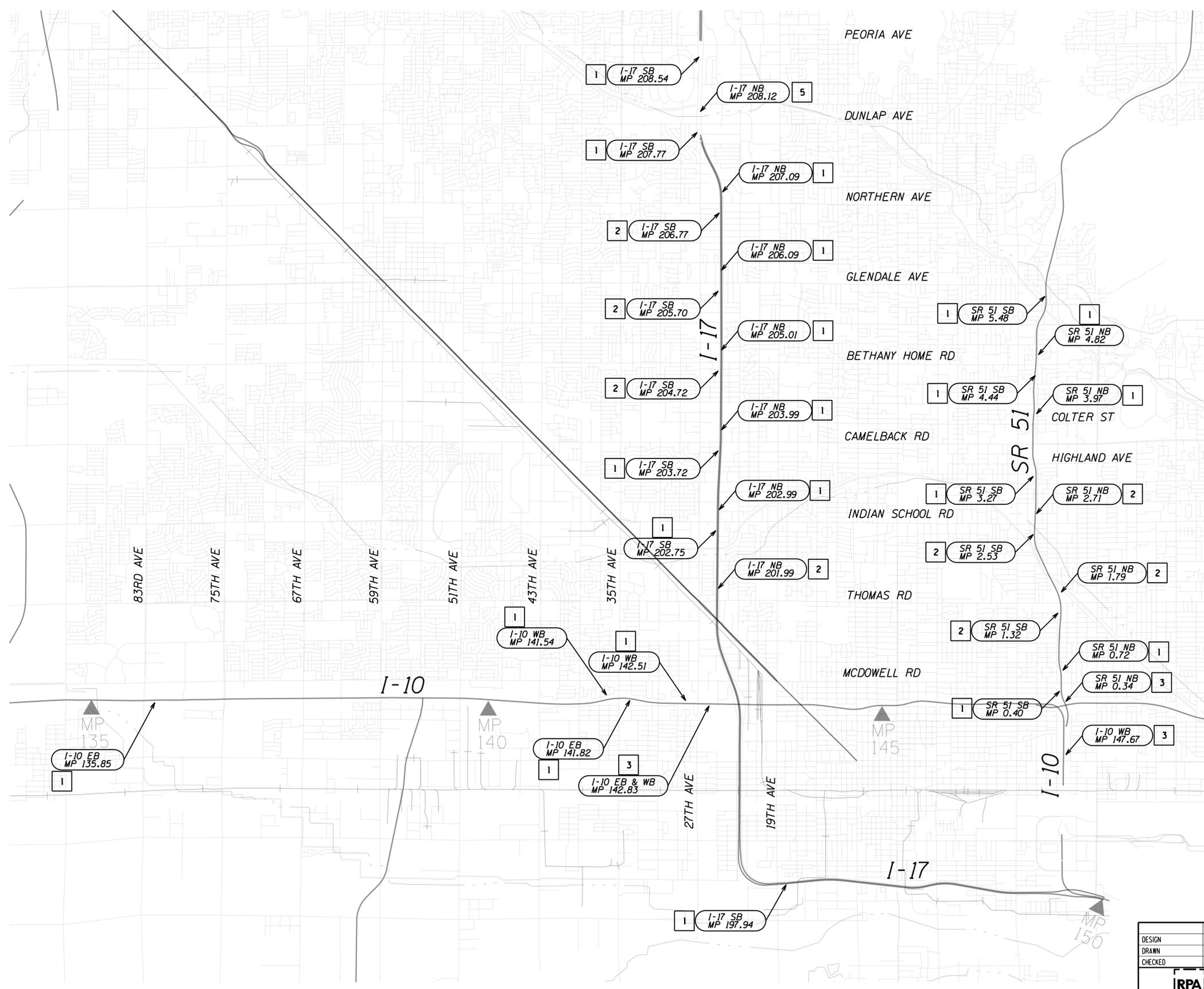
5/20/2016

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REVISIONS-	FINISHED PLANS-	SURVEY NO.	DATE-	LOCATION-	DATE-	REVISIONS-	FINISHED PLANS-	SURVEY NO.	DATE-	LOCATION-	DATE-
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F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	3	23	

888 MA 000

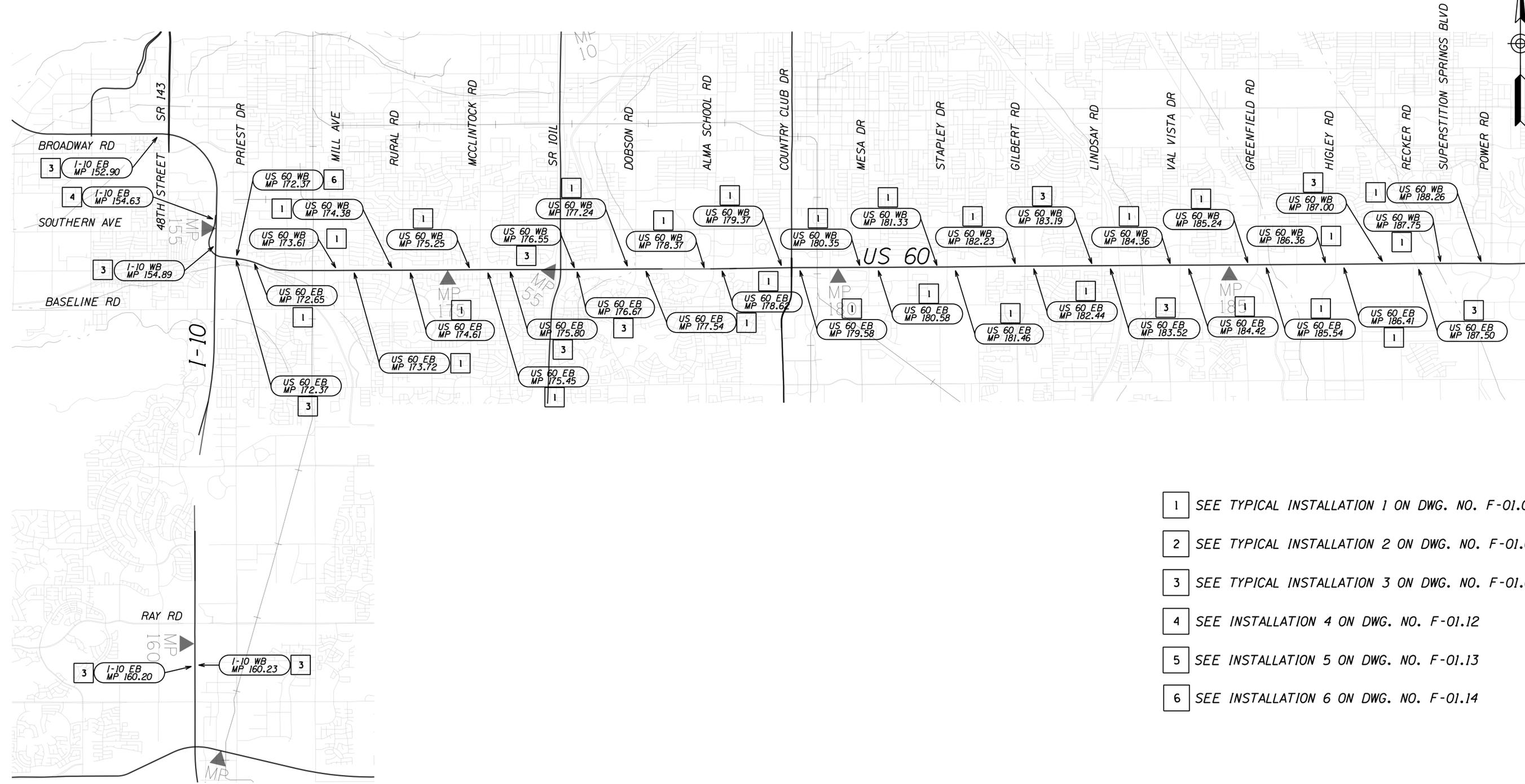


- 1 SEE TYPICAL INSTALLATION 1 ON DWG. NO. F-01.02
- 2 SEE TYPICAL INSTALLATION 2 ON DWG. NO. F-01.07
- 3 SEE TYPICAL INSTALLATION 3 ON DWG. NO. F-01.09
- 4 SEE INSTALLATION 4 ON DWG. NO. F-01.12
- 5 SEE INSTALLATION 5 ON DWG. NO. F-01.13
- 6 SEE INSTALLATION 6 ON DWG. NO. F-01.14

DESIGN	F. Henderson	DATE	5/16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION	
DRAWN	J. LaKose	DATE	5/16		
CHECKED	A. Gonzalez	DATE	5/16		
		KEY MAP			
ROUTE	000	LOCATION	VARIOUS LOCATIONS		
TRACS NO. H8809 01C			CM-888-A(225)T		
					EXPRES 03/31/2019 DWG NO. G-01.02 OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	4	23	

888 MA 000



- 1 SEE TYPICAL INSTALLATION 1 ON DWG. NO. F-01.02
- 2 SEE TYPICAL INSTALLATION 2 ON DWG. NO. F-01.07
- 3 SEE TYPICAL INSTALLATION 3 ON DWG. NO. F-01.09
- 4 SEE INSTALLATION 4 ON DWG. NO. F-01.12
- 5 SEE INSTALLATION 5 ON DWG. NO. F-01.13
- 6 SEE INSTALLATION 6 ON DWG. NO. F-01.14

DESIGN	F..Henderson	5/16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAWN	J. LaKose	5/16	
CHECKED	A. Gonzalez	5/16	
		KEY MAP	
ROUTE	000	LOCATION	VARIOUS LOCATIONS
TRACS NO. H8809 01C		CM-888-A(225)T	



EXPIRES 03/31/2019
DWG NO. G-01.03

OF

5/20/2016

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

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	5	23	

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GENERAL NOTES:

- This project has been designed using ADOT's 2015 ITS Design Guide, 2014 ITS standard drawings, the most recent signing & marking standards, 2012 construction standard drawings, and the 2008 Standard Specifications for Road and Bridge Construction.
- Exact conduit route to be verified with the Engineer prior to installation to account for field conditions.
- All communications and electrical cable shall be installed according to NEC and EIA requirements.
- Where spare conduit runs are not available, contractor must pull out all existing conductors from the existing conduit and reinstall existing conductors when pulling through new wires for the new loops. If the existing conductors that are removed have existing damage, or are damaged as a result of this project, they cannot be reused and must be replaced with all new conductors. Any existing conductors damaged as a result of this project shall be replaced at the contractor's expense. The contractor is responsible to make all existing FMS components operational after reinstallation.
- Elbows in conduit runs shall not be permitted except as specified in the standard drawings and plans.
- The plans show typical paths and routes of conduit and equipment and are not site specific unless otherwise indicated on the plans. The location of utility poles, fire hydrants, irrigation devices, vegetation, and other stationary objects along the conduit path may not be shown but shall be identified by the contractor as the conduit route is marked prior to installation. The contractor shall place all conduit in a manner that minimizes bending both horizontally and vertically, thus minimizing induced stresses on cables during cable installation. All locations and routes shall be approved by the engineer prior to installation.
- Milepost locations of existing control cabinets were provided by ADOT through ADOT's control cabinet numbering scheme and have not been verified for this project. Milepost locations of pull boxes, removals, and other features were determined based on their relative distance from the control cabinet.
- Mileposts and dimensional distances for pull boxes, controller cabinets, and conduit locations are approximate on the manifest and provided to assist the contractor.
- The contractor is responsible for field locating conduit around existing utilities and obstructions and obtaining approval from the engineer prior to installation.
- All underground rigid metal conduit bends shall be wrapped with an approved PVC tape.
- The contractor shall notify the Blue Stake Center at least two working days prior to any excavation. The contractor shall execute a Blue Stake agreement with ADOT stating that ADOT will blue stake ADOT owned facilities in the area one time and any additional blue staking shall be the contractor's responsibility and at his own expense.
- Existing utility information is not included on the typical details. The contractor shall determine the exact location of all existing utilities before commencing work, and agrees to be fully responsible for any and all damages which might result from the contractor's failure to exactly locate and preserve all underground and overhead utilities.
- New right-of-way and easements are not required.
- All existing landscape shall not be without existing irrigation system supplied water for a period longer than 24 hours. The contractor shall be responsible for maintaining the healthy condition of all existing plant material and maintaining the proper function of the water and electrical services affected by construction including hand watering if needed. The irrigation system shall be repaired, flushed, and tested at operating pressure for leaks in the system within 24 hours of being damaged by construction activities. The irrigation system shall be repaired with comparable materials and installation methods as per the original landscaping plans. Maintaining existing vegetation, including watering, will be at the contractor's expense and will not be measured or paid.
- If the conduit must deviate from a tangent path to avoid obstructions, the contractor shall route the conduit curvature (both horizontally and vertically) of one inch deflection per foot of length as shown in the ITS standard drawing.

- The contractor shall submit a directional drilling plan and utility profile to the Engineer. All directionally drilled conduit installations crossing ADOT facilities shall adhere to a 2 foot vertical and horizontal clearance, for review and approval prior to commencement of directional drilling activities. Directional drilling shall be performed under all roadways.
- The horizontal and vertical locations of existing utilities are not shown. The contractor shall be responsible to adhere to all current Blue Stake laws and Section 107.15 of the Standard Specifications when locating all existing utilities in the project limits.
- Plant material may be pruned to provide construction access. The pruning shall be performed by trained and experienced landscape personnel. The pruning methods shall be approved by the Engineer prior to any pruning.
- The Engineer shall be contacted prior to starting any underground work near landscaping a minimum of 5 working days prior to start of construction.
- All landscape work shall conform to the requirements of Section 806 and irrigation work shall conform to the requirements of Section 808 of the ADOT 2008 Standard Specifications for Road and Bridge Construction.
- The information shown on the plans concerning the location of the field devices is for relationship only and is not shown to scale. All placement and construction of field devices shall be within ADOT right-of-way.
- All pull boxes shall be located approximately as shown on the typical details and manifest and approved by the Engineer.
- All conduit installations crossing ADOT facilities shall adhere to a 2 foot vertical and horizontal clearance.

SIGN RELOCATION MANIFEST

Mainline	Direction	Location	Existing Sign Code	Existing Sign Milepost (Approx.)	Notes	6070038 Slip Base (Square Tube Post)	6070055 Sign Post (Perforated 1/2 S)	6070057 Sign Post (Perforated 1/2 T)	6070060 Foundation for Sign Post (Concrete)	6080110 Remove and Reinstall Sign
I-10	EB	35th Ave	R2-1	141.80	Relocate existing R2-1 sign on PAD pole to new posts directly behind existing sign location per Signing and Marking Std Dwg S-3.	2		29	2	1
I-10	EB	48th St	R2-1	152.90	Relocate existing R2-1 sign on PAD pole to new posts directly behind existing sign location per Signing and Marking Std Dwg S-3.	2		29	2	1
US 60	WB	W. of Val Vista Dr	R2-1	183.20	Relocate existing R2-1 sign on PAD pole to new posts directly behind existing sign location and behind barrier per Signing and Marking Std Dwg S-3.			29	2	1
SR-51	NB	Thomas Rd	R6-1	1.78	Relocate existing R6-1 sign on PAD pole to new post directly in front of existing sign location and behind barrier per Signing and Marking Std Dwg S-3.		9		1	1
TOTAL						4	9	87	7	4

I-10 EB 19th AVENUE PAD RELOCATION

Mainline	Direction	Location	Existing Cabinet No.	Existing Cabinet Milepost (Approx.)	Work notes
I-10	EB	19th Ave	1114376	143.76	Relocate existing Passive Acoustic Detector on the existing DMS structure located at approximate milepost 143.67 12 feet toward the freeway centerline/median as specified and paid for under Item 9240050.

DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAWN	KAW	DATE	05-16	
CHECKED	SAS	DATE	05-16	
 United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		FMS GENERAL NOTES		 EXPIRES 12-31-2018 DWG NO. F-01.01
ROUTE	000	LOCATION	Various Locations	
TRACS NO.	H8809 01C		CM-888-A(225)T	

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	6	23	

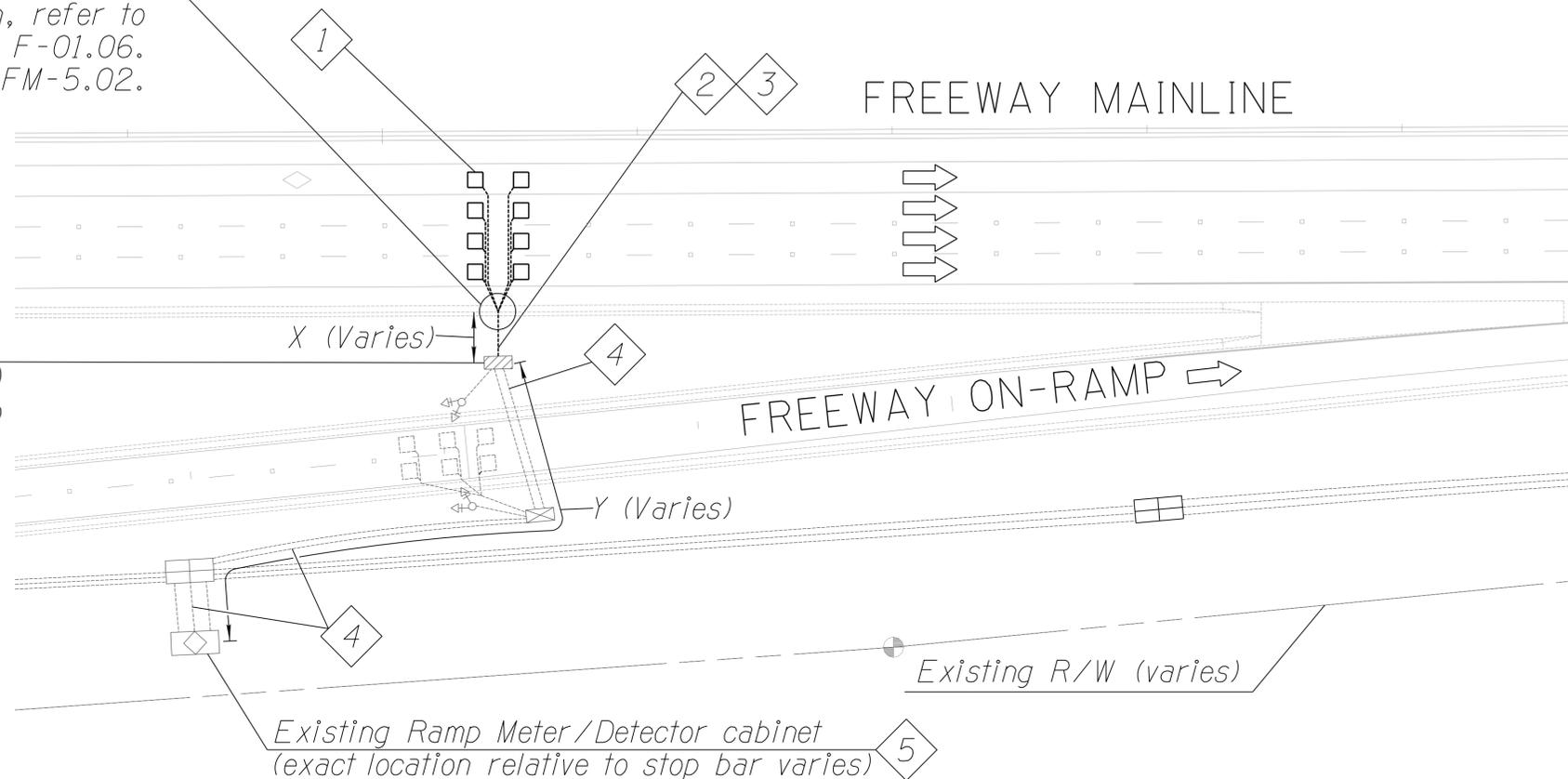
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TYPICAL INSTALLATION 1

Loops installed adjacent to ramp meter

Mountable curb and gutter or concrete traffic barrier and gutter varies by location, refer to DWG F-01.03, F-01.04, F-01.05, or F-01.06. Loop installation per ITS Std Dwg FM-5.02.

Existing pull box. Pull box type (No. 5, No. 7, No. 9) varies by location, refer to DWG F-01.03, F-01.04, F-01.05, or F-01.06.



CONSTRUCTION NOTES:

1. Install new 6' x 6' loops per ITS standard drawings. Number of mainline traffic lanes varies by location. Refer to Typical Installation 1 manifest for more information.
2. Install new 2 inch schedule 40 PVC conduit from existing pull box to lead-in access at roadway edge.
3. New 14 AWG IMSA 51-7 loop detector cable in orange loop duct, one cable per loop.
4. New 14 AWG IMSA 50-2 loop detector lead-in cable (1-pair shielded) in existing conduit, one cable per loop.
5. Furnish and install new model 222 loop detector cards. One card per lane. Refer to Typical Installation 1 manifest for more information.

NOTES:

1. Unless otherwise noted on plan, all conduit shown is existing and its location is shown for schematic purposes only. Conduit lengths vary by location and may include multiple pull boxes along run to cabinet.
2. All ramp metering and FMS components shown including the ramp meter stop bar, ramp meter loops, ramp meter poles, conduit and pull boxes are existing and are for schematic purposes only and vary by location.
3. Spare conduit does not exist at all locations. Contractor must determine most viable conduit to run loop lead-in back to cabinet. Some locations will require removing all existing wire and repulling as necessary.

DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAWN	KAW	DATE	05-16	
CHECKED	SAS	DATE	05-16	
 United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		TYPICAL INSTALLATION 1		 EXPIRES 12-31-2018
ROUTE	000	LOCATION	Various Locations	
TRACS NO.	H8809 01C		CM-888-A(225)T	

DWG NO. F-01.02

OF

NO.1 DESCRIPTION OF REVISION DATE MADE BY NO.2 DESCRIPTION OF REVISION DATE MADE BY

TYPICAL INSTALLATION 1 MANIFEST

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	7	23	

888 MA 000

Mainline	Direction	Location	No. of Lanes	Existing Cabinet No.	Existing Cabinet Milepost (Approx.)	Existing Pull Box Type	Existing Pull Box Milepost (Approx.)	Dimension X (Approx. LF) See Typical Installation 1	Dimension Y (Approx. LF) See Typical Installation 1	Curb and Gutter Type	Notes	7320050 Electrical Conduit (2") (PVC) (L.F.T.)	7320070 Electrical Conduit (3") (PVC) (L.F.T.)	7350030 Loop Detector for Traffic Surveillance (Each)	7350051 Defector Card (Each)	7350165 Loop Detector Lead-In Cable (L.F.T.)	Removals	2020053 Remove (Passive Acoustic Detector) (Each)	2020054 Remove (Concrete Foundation) (Each)	2020155 Remove (Passive Acoustic Detector Pole) (Each)	Approx. Milepost of Removals
US 60	EB	Priest Dr	5	3117265	172.65	No. 7	172.63	11	200	Mountable curb		11		10	5	2,000	PAD, PAD pole, PAD Foundation	1	1	1	172.57
US 60	EB	Mill Ave	5	3117372	173.72	N/A	N/A	N/A	N/A	N/A	Location has working existing loops in mainline. Decommission PAD site. Disconnect PAD cabling and remove PAD cards from cabinet.						PADs on median light pole	2			173.75
US 60	EB	Rural Rd	5	3117461	174.61	N/A	N/A	N/A	N/A	N/A	Location has working existing loops in mainline. Decommission PAD site. Disconnect PAD cabling and remove PAD cards from cabinet.						PADs on median light pole	2			174.61
US 60	EB	McClintock Dr	4	3117545	175.45	No. 5	175.63	3	1,320	Concrete barrier	Stabilizing concrete present at pull box.	3		8	4	10,560	PAD on shoulder light pole	1			175.57
US 60	EB	Dobson Rd	6	3117754	177.54	No. 7	177.60	11	396	Mountable curb		11		12	6	4,752	PAD, PAD pole, Foundation on shoulder. PADs on median light pole.	3	1	1	177.59
US 60	EB	Alma School Rd	6	3117862	178.62	No. 7	178.65	10	190	Mountable curb		10		12	6	2,280	PAD, PAD pole, Foundation on shoulder. PADs on median light pole.	3	1	1	178.60
US 60	EB	Country Club Dr	6	3117958	179.58	No. 7	179.59	5	177	Mountable curb	Existing pull box is adjacent to PAD pole.	5		12	6	2,124	PAD, PAD pole, Foundation on shoulder. PADs on median light pole.	3	1	1	179.59
US 60	EB	Mesa Dr	6	3118058	180.58	No. 7	180.60	9	116	Mountable curb		9		12	6	1,392	PAD, PAD pole, Foundation on shoulder. PAD on median light pole.	2	1	1	180.58
US 60	EB	Stapley Dr	6	3118146	181.46	No. 7	181.58	11	884	Mountable curb	Existing pull box is adjacent to PAD pole.	11		12	6	10,608	PAD, PAD pole, Foundation on shoulder. PAD on median light pole.	2	1	1	181.34
US 60	EB	Gilbert Rd	6	3118244	182.44	No. 7	182.58	7	984	Mountable curb		7		12	6	11,808	PAD, PAD pole, Foundation on shoulder. PAD on median light pole.	2	1	1	182.30
US 60	EB	Val Vista Dr	6	3118442	184.42	No. 7	184.57	10	984	Mountable curb		10		12	6	11,808	PAD on median light pole	1			184.29
US 60	WB	Val Vista Dr	6	3018436	184.36	No. 7	184.19	10	1,158	Mountable curb		10		12	6	13,896	PAD, PAD pole, Foundation on shoulder. PAD on median light pole.	2	1	1	184.21
US 60	WB	Gilbert Rd	6	3018223	182.23	No. 7	182.22	15	48	Mountable curb	Existing pull box is adjacent to PAD pole.	15		12	6	576	PAD, PAD pole, Foundation on shoulder. PADs on median light pole.	3	1	1	182.22
US 60	WB	Stapley Dr	6	3018133	181.33	No. 7	181.21	8	786	Mountable curb		8		12	6	9,432	PAD, PAD pole, Foundation on shoulder. PADs on median light pole.	3	1	1	181.22
US 60	WB	Mesa Dr	6	3018035	180.35	No. 7	180.20	8	970	Mountable curb		8		12	6	11,640	PAD, PAD pole, Foundation on shoulder. PADs on median light pole.	3	1	1	180.29
US 60	WB	Country Club Dr	6	3017937	179.37	No. 7	179.21	8	1,073	Mountable curb		8		12	6	12,876	PAD, PAD pole, Foundation on shoulder. PADs on median light pole.	3	1	1	179.24
SHEET TOTAL												126		162	81	105,752		36	12	12	

DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAWN	KAW	DATE	05-16	
CHECKED	SAS	DATE	05-16	
 United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		TYPICAL INSTALLATION 1 MANIFEST		
ROUTE	000	LOCATION	Various Locations	
TRACS NO.	H8809 01C	PROJECT NO.	CM-888-A(225)T	
				DWG NO. F-01.03
				OF

NO. 1 DESCRIPTION OF REVISION DATE MADE BY NO. 2 DESCRIPTION OF REVISION DATE MADE BY

TYPICAL INSTALLATION 1 MANIFEST

(Continued)

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	8	23	

888 MA 000

Mainline	Direction	Location	No. of Lanes	Existing Cabinet No.	Existing Cabinet Milepost (Approx.)	Existing Pull Box Type	Existing Pull box Milepost (Approx.)	Dimension X (Approx. LF) See Typical Installation 1	Dimension Y (Approx. LF) See Typical Installation 1	Curb and Gutter Type	Notes	7320050 Electrical Conduit (2") (PVC) (L.F.T.)	7320070 Electrical Conduit (3") (PVC) (L.F.T.)	7350030 Loop Detector for Traffic Surveillance (Each)	7350051 Detector Card (Each)	7350165 Loop Detector Lead-In Cable (L.F.T.)	Removals	2020053 Remove (Passive Acoustic Detector) (Each)	2020054 Remove (Concrete Foundation) (Each)	2020155 Remove (Passive Acoustic Detector Pole) (Each)	Approx. Milepost of Removals
US 60	WB	Alma School Rd	6	3017837	178.37	No. 7	178.15	8	1,452	Mountable curb		8		12	6	17,424	PAD, PAD pole, Foundation on shoulder. PADS on median light pole.	3	1	1	178.25
US 60	WB	Dobson Rd	4	3017724	177.24	No. 7	177.22	7	134	Mountable curb		7		8	4	1,072	PAD, PAD pole, Foundation on shoulder. PADS on median light pole.	3	1	1	177.28
US 60	WB	McClintock Dr	6	3017525	175.25	N/A	175.25	N/A	N/A	N/A	Location has working existing loops in mainline. Decommission PAD site. Disconnect PAD cabling and remove PAD cards from cabinet.						PADS on median light pole	2			175.23
US 60	WB	Rural Rd	5	3017438	174.38	N/A	174.38	N/A	N/A	N/A	Location has working existing loops in mainline. Decommission PAD site. Disconnect PAD cabling and remove PAD cards from cabinet.						PADS on median light pole	2			174.26
US 60	WB	Mill Ave	5	3017361	173.61	N/A	173.61	N/A	N/A	N/A	Location has working existing loops in mainline. Decommission PAD site. Disconnect PAD cabling and remove PAD cards from cabinet.						PADS on median light pole	2			173.51
US 60	EB	Greenfield Rd	6	3118554	185.54	No. 7	185.55	11	212	Mountable curb		11		12	6	2,544	PAD, PAD pole, Foundation on shoulder. PAD on median light pole.	2	1	1	185.50
US 60	EB	Higley Rd	6	3118641	186.41	No. 5	186.57	13	1,074	Mountable curb		13		12	6	12,888	PAD, PAD pole, Foundation on shoulder. PAD on median light pole.	2	1	1	186.49
US 60	WB	Power Rd	6	3018826	188.26	No. 7	188.22	12	321	Mountable curb		12		12	6	3,852	PAD, PAD pole, Foundation on shoulder. PAD on median light pole.	2	1	1	188.30
US 60	WB	Superstition Springs Blvd	6	3018775	187.75	No. 7	187.74	11	142	Mountable curb		11		12	6	1,704	PADS, PAD pole, Foundation on shoulder. PAD on median light pole.	3	1	1	188.77
US 60	WB	Greenfield Rd	6	3018524	185.24	No. 7	185.15	10	584	Mountable curb		10		12	6	7,008	PAD, PAD pole, Foundation on shoulder. PAD on median light pole.	2	1	1	185.21
US 60	WB	Higley Rd	6	6018636	186.36	No. 7	186.19	9	1,143	Mountable curb		9		12	6	13,716	PAD, PAD pole, Foundation on shoulder. PAD on median light pole.	2	1	1	186.27
SHEET TOTAL												81		92	46	60,208		25	8	8	

NO.1 DESCRIPTION OF REVISION DATE MADE BY NO.2 DESCRIPTION OF REVISION DATE MADE BY

DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION	
DRAWN	KAW	DATE	05-16		
CHECKED	SAS	DATE	05-16		
 United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		TYPICAL INSTALLATION 1 MANIFEST		EXPIRES 12-31-2018 DWG NO. F-01.04	
ROUTE	000	LOCATION	Various Locations		
TRACS NO.	H8809 01C	PROJECT NO.	CM-888-A(225)T	OF	

TYPICAL INSTALLATION 1 MANIFEST

(Continued)

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	9	23	

888 MA 000

Mainline	Direction	Location	No. of Lanes	Existing Cabinet No.	Existing Cabinet Milepost (Approx.)	Existing Pull Box Type	Existing Pull box Milepost (Approx.)	Dimension X (Approx. LF) See Typical Installation 1	Dimension Y (Approx. LF) See Typical Installation 1	Curb and Gutter Type	Notes	7320050 Electrical Conduit (2") (PVC) (L.F.T.)	7320070 Electrical Conduit (3") (PVC) (L.F.T.)	7350030 Loop Detector for Traffic Surveillance (Each)	7350051 Detector Card (Each)	7350165 Loop Detector Lead-In Cable (L.F.T.)	Removals	2020053 Remove (Passive Acoustic Detector) (Each)	2020054 Remove (Concrete Foundation) (Each)	2020155 Remove (Passive Acoustic Detector Pole) (Each)	Approx. Milepost of Removals
I-17	NB	Indian School Rd	4	2120299	202.99	No. 7	203.03	8	347	Concrete barrier		8		8	4	2,776	PADs on median light pole	2			203.07
I-17	NB	Camelback Rd	4	2120399	203.99	No. 7	204.07	6	519	Concrete barrier		6		8	4	4,152	PADs on median light pole	2			204.08
I-17	NB	Bethany Home Rd	4	2120501	205.01	No. 7	205.03	6	122	Concrete barrier		6		8	4	976	PADs on median light pole	2			205.05
I-17	NB	Glendale Ave	4	2120609	206.09	No. 7	206.16	4	448	Concrete barrier	Stabilizing concrete present at pull box.	4		8	4	3,584	PADs on median light pole	2			206.17
I-17	NB	Northern Ave	4	2120709	207.09	No. 9	207.12	8	167	Mountable curb	Install 3" conduit (not 2" as per detail) from exist. No. 9 p.b. to lead-in access.	8	See Notes	8	4	1,336	PADs, PAD pole in median	2		1	207.11
I-17	SB	Peoria Ave	4	2020854	208.54	No. 9	208.44	9	670	None	Install 3" conduit (not 2" as per detail) from exist. No. 9 p.b. to lead-in access.	9	See Notes	8	4	5,360	PADs on median light pole	2			208.57
I-17	SB	Dunlap Ave	4	2020777	207.77	No. 5	207.75	4	108	Mountable curb		4		8	4	864	PADs on median light pole	2			207.74
I-17	SB	Camelback Rd	4	2020372	203.72	No. 7	203.64	5	492	Concrete barrier		5		8	4	3,936	PADs on median light pole	2			203.62
I-17	SB	Indian School Rd	4	2020275	202.75	No. 7	202.69	3	358	Mountable curb		3		8	4	2,864	PADs on median light pole	2			202.69
I-17	SB	19th Ave	3	2019794	197.94	No. 5	197.77	4	1,054	Concrete barrier	Stabilizing concrete present at pull box.	4		6	3	6,324	PAD, PAD pole, Foundation	1	1	1	197.93
SHEET TOTAL												40	17	78	39	32,172		19	1	2	

DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION	
DRAWN	KAW	DATE	05-16		
CHECKED	SAS	DATE	05-16		
United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		TYPICAL INSTALLATION 1 MANIFEST			
ROUTE	000	LOCATION	Various Locations		EXPIRES 12-31-2018
TRACS NO.	H8809 01C			CM-888-A(225)T	DWG NO. F-01.05
					OF

NO.1 DESCRIPTION OF REVISION DATE MADE BY NO.2 DESCRIPTION OF REVISION DATE MADE BY

TYPICAL INSTALLATION 1 MANIFEST

(Continued)

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	10	23	

888 MA 000

Mainline	Direction	Location	No. of Lanes	Existing Cabinet No.	Existing Cabinet Milepost (Approx.)	Existing Pull Box Type	Existing Pull box Milepost (Approx.)	Dimension X (Approx. LF) See Typical Installation 1	Dimension Y (Approx. LF) See Typical Installation 1	Curb and Gutter Type	Notes	7320050 Electrical Conduit (2") (PVC) (L.F.T.)	7320070 Electrical Conduit (3") (PVC) (L.F.T.)	7350030 Loop Detector for Traffic Surveillance (Each)	7350051 Detector Card (Each)	7350165 Loop Detector Lead-In Cable (L.F.T.)	Removals	2020053 Remove (Passive Acoustic Detector) (Each)	2020054 Remove (Concrete Foundation) (Each)	2020155 Remove (Passive Acoustic Detector Pole) (Each)	Approx. Milepost of Removals
SR 51	NB	McDowell Rd	5	5100072	0.72	No. 7	0.72	18	104	Concrete barrier	Location includes auxiliary lane for loop installation.	18		10	5	1,040	PAD, PAD pole, Foundation	1	1	1	0.72
SR 51	NB	Colter St	4	5100397	3.97	No. 7	4.04	9	443	Mountable curb		9		8	4	3,544	PAD on Missouri Ave overpass	1			4.13
SR 51	NB	Bethany Home Rd	4	5100482	4.82	No. 7	4.82	5	60	Mountable curb		5		8	4	480	PAD, PAD pole, Foundation	1	1	1	4.81
SR 51	SB	Glendale Ave	4	5000548	5.48	No. 7	5.47	16	114	Mountable curb		16		8	4	912	PAD, PAD pole, Foundation	1	1	1	5.49
SR 51	SB	Bethany Home Rd	4	5000444	4.44	No. 7	4.43	5	93	Concrete barrier		5		8	4	744	PAD, PAD pole, Foundation	1	1	1	4.44
SR 51	SB	Highland Ave	4	5000327	3.27	No. 7	3.22	9	338	Mountable curb		9		8	4	2,704	PAD, PAD pole, Foundation	1	1	1	3.26
SR 51	SB	McDowell Rd	3	5000040	0.40	No. 7	0.40	6	105	Mountable curb		6		6	3	630	PAD, PAD pole, Foundation	1	1	1	0.41
I-10	WB	27th Ave	6	1014251	142.51	No. 7	142.50	23	118	Mountable curb		23		12	6	1,416	PADs on shoulder light pole	2			142.48
I-10	WB	35th Ave	5	1014154	141.54	No. 7	141.51	5	250	Mountable curb	Utilize existing No. 7 pull box of abandoned loops.	5		10	5	2,500	PAD, PAD pole, Foundation	1	1	1	141.52
I-10	EB	35th Ave	5	1114182	141.82	No. 7	141.82	16	68	Mountable curb	Utilize ex. No. 7 p.b. of abandoned loops. Relocate existing sign on PAD pole per Sign Relocation Manifest on DWG F-01.01.	16		10	5	680	PAD, PAD pole, Foundation	1	1	1	141.80
I-10	EB	83rd Ave	6	1113585	135.85	No. 5	135.85	11	100	Mountable curb		11		12	6	1,200	PAD, PAD pole, Foundation in median. PAD on shoulder light pole.	2	1	1	135.82
SHEET TOTAL												123		100	50	15,850		13	9	9	

NO.1 DESCRIPTION OF REVISION
NO.2 DESCRIPTION OF REVISION
MADE BY
DATE

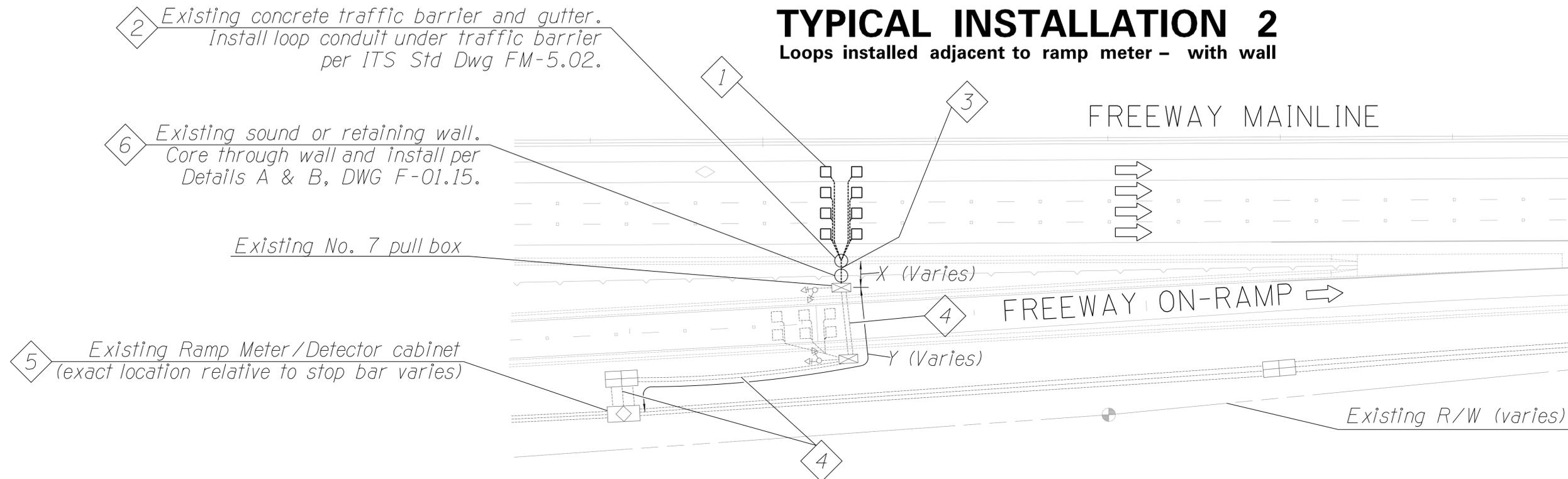
DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION	
DRAWN	KAW	05-16			
CHECKED	SAS	05-16			
 United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		TYPICAL INSTALLATION 1 MANIFEST		EXPIRES 12-31-2018 DWG NO. F-01.06	
ROUTE	000	LOCATION	Various Locations		
TRACS NO.	H8809 01C			CM-888-A(225)T	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	11	23	

888 MA 000

TYPICAL INSTALLATION 2

Loops installed adjacent to ramp meter - with wall



CONSTRUCTION NOTES:

1. Install new 6' x 6' loops per ITS standard drawings. Refer to Typical Installation 2 manifest for more information.
2. Install new 2 inch schedule 40 PVC conduit under traffic barrier to lead-in access at roadway edge per ITS Std Dwg FM-5.02.
3. New 14 AWG IMSA 51-7 loop detector cable in orange loop duct, one cable per loop.
4. New 14 AWG IMSA 50-2 loop detector lead-in cable (1-pair shielded) in existing conduit, one cable per loop.
5. Furnish and install new model 222 loop detector cards. One card per lane. Refer to Typical Installation 2 manifest for more information.
6. Core through wall and install new 3 inch rigid metal conduit per Details A & B, DWG F-01.15.

NOTES:

1. Unless otherwise noted on plan, all conduit shown is existing and its location is shown for schematic purposes only. Conduit lengths vary by location and may include multiple pull boxes along run to cabinet.
2. All ramp metering and FMS components shown including the ramp meter stop bar, ramp meter loops, ramp meter poles, conduit and pull boxes are existing and are for schematic purposes only and vary by location.
3. Spare conduit does not exist at all locations. Contractor must determine most viable conduit to run loop lead-in back to cabinet. Some locations will require removing all existing wire and repulling as necessary.

DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAWN	KAW	DATE	05-16	
CHECKED	SAS	DATE	05-16	
 United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		TYPICAL INSTALLATION 2		 EXPIRES 12-31-2018 DWG NO. F-01.07
ROUTE	000	LOCATION	Various Locations	
TRACS NO.	H8809 01C		CM-888-A(225)T	

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	12	23	

888 MA 000

TYPICAL INSTALLATION 2 MANIFEST

Mainline	Direction	Location	No. of Lanes	Existing Cabinet No.	Existing Milepost (Approx.)	Dimension X (Approx. LF) See Typical Installation 2	Dimension Y (Approx. LF) See Typical Installation 2	Notes	7320050 Electrical Conduit (2") (PVC) (L.F.T.)	7320150 Electrical Conduit (3") (Rigid Metal) (L.F.T.)	7350030 Loop Detector for Traffic Surveillance (Each)	7350051 Defector Card (Each)	7350165 Loop Detector Lead-In Cable (L.F.T.)	Removals	2020053 Remove (Passive Acoustic Detector) (Each)	2020054 Remove (Concrete Foundation) (Each)	2020155 Remove (Passive Acoustic Detector Pole) (Each)	Approx. Milepost of Removals
I-17	NB	Thomas Rd	4	2120199	201.99	12	356	Use existing No. 7 p.b. located at approx. milepost 202.05. Stabilizing concrete present on mainline side of wall.	12	10	8	4	2,848	PADs, PAD pole in median	2		1	201.94
I-17	SB	Northern Ave	4	2020677	206.77	5	570	Use existing No. 7 p.b. located at approx. milepost 206.68. Stabilizing concrete present on mainline side of wall.	5	10	8	4	4,560	PADs on median light pole	2			206.68
I-17	SB	Glendale Ave	4	2020570	205.70	7	526	Use existing No. 7 p.b. located at approx. milepost 205.62. Stabilizing concrete present on mainline side of wall.	7	10	8	4	4,280	PADs on median light pole	2			205.59
I-17	SB	Bethany Home Rd	4	2020472	204.72	14	220	Use existing No. 7 p.b. located at approx. milepost 204.69. Stabilizing concrete present on mainline side of wall.	14	10	8	4	1,760	PADs on median light pole	2			204.67
SR-51	NB	Thomas Rd	4	5100179	1.79	7	197	Use existing No. 7 p.b. located at approx. milepost 204.67. Relocate existing sign on PAD pole per Sign Relocation Manifest on DWG F-01.01.	7	12	8	4	1,576	PAD, PAD pole, Foundation	1	1	1	1.78
SR-51	NB	Indian School Rd	4	5100271	2.71	9	504	Use existing No. 7 pull box located at approx. milepost 2.78.	9	12	8	4	4,032	PAD, PAD pole, Foundation	1	1	1	2.74
SR-51	SB	Indian School Rd	4	5000253	2.53	7	435	Use existing No. 7 pull box located at approx. milepost 2.47.	7	15	8	4	3,480	PAD, PAD pole, Foundation	1	1	1	2.50
SR-51	SB	Thomas Rd	4	5000132	1.32	5	279	Use existing No. 7 p.b located at approx. milepost 1.28. Protect existing MPD loops in place.	5	12	8	4	2,232	PAD, PAD pole, Foundation	1	1	1	1.32
TOTAL									66	91	64	32	24,768		12	4	5	

NO.1 DESCRIPTION OF REVISION DATE MADE BY NO.2 DESCRIPTION OF REVISION DATE MADE BY

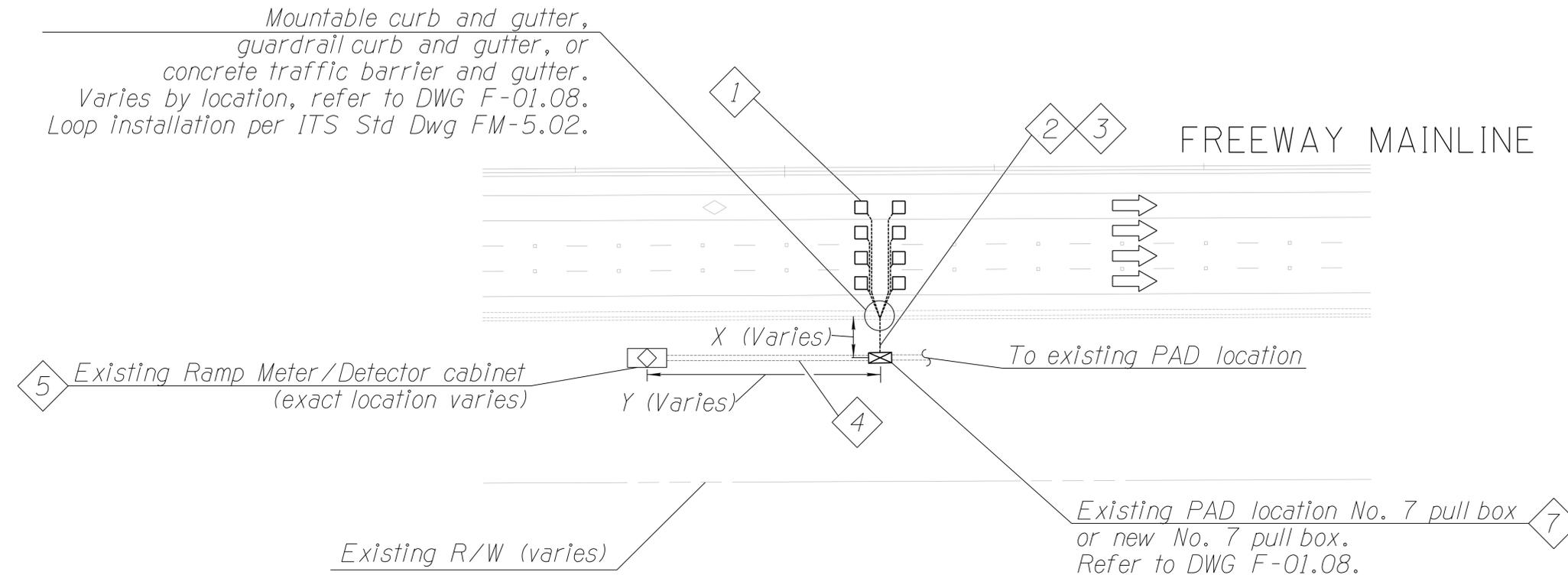
DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAWN	KAW	DATE	05-16	
CHECKED	SAS	DATE	05-16	
 United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		TYPICAL INSTALLATION 2 MANIFEST		
ROUTE	000	LOCATION	Various Locations	
TRACS NO.	H8809 01C		CM-888-A(225)T	DWG NO. F-01.08
				OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	13	23	

888 MA 000

TYPICAL INSTALLATION 3

Side of freeway only



CONSTRUCTION NOTES:

- 1 Install new 6' x 6' loops per ITS standard drawings. Number of mainline traffic lanes varies by location. Refer to Typical Installation 3 manifest for more information.
- 2 Install new 2 inch schedule 40 PVC conduit from pull box to lead-in access at roadway edge.
- 3 New 14 AWG IMSA 51-7 loop detector cable in orange loop duct, one cable per loop.
- 4 New 14 AWG IMSA 50-2 loop detector lead-in cable (1-pair shielded) in existing conduit, one cable per loop.
- 5 Furnish and install new model 222 loop detector cards. Refer to Typical Installation 3 manifest for more information.
- 7 If no existing No. 7 pull box, install new No. 7 FMS pull box by intercepting conduit run from existing PAD pole foundation to existing cabinet and remove PAD cabling.

NOTE:

- 1. Unless otherwise noted on plan or in manifest, all conduit and pull boxes shown are existing and their location is shown for schematic purposes only. Conduit lengths vary by location and may include multiple pull boxes along run to cabinet.

DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAWN	KAW	DATE	05-16	
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		United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		TYPICAL INSTALLATION 3
ROUTE	000	LOCATION	Various Locations	
TRACS NO.	H8809 01C		CM-888-A(225)T	EXPIRES 12-31-2018 DWG NO. F-01.09 OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	14	23	

888 MA 000

TYPICAL INSTALLATION 3 MANIFEST

Mainline	Direction	Location	No. of Lanes	Existing Cabinet No.	Existing Milepost (Approx.)	Dimension X (Approx. LF) See Typical Installation 3	Dimension Y (Approx. LF) See Typical Installation 3	Curb and Gutter Type	Notes	7320050 Electrical Conduit (2") (PVC) (L.F.T.)	7320450 Pull Box (NO. 7) (FMS STD FM-2.06) (Each)	7350030 Loop Detector for Traffic Surveillance (Each)	7350051 Detector Card (Each)	7350165 Loop Detector Lead-In Cable (L.F.T.)	Removals	2020053 Remove (Passive Acoustic Detector) (Each)	2020054 Remove (Concrete Foundation) (Each)	2020155 Remove (Passive Acoustic Detector Pole) (Each)	Approx. Milepost of Removals
US 60	EB	E. of McClintock	5	3117580	175.80	N/A	N/A	N/A	PAD site is decommissioned.					EB PAD for mainline lanes on shoulder light pole only	1			175.97	
US 60	EB	W. of Dobson Rd	4	3117667	176.67	36	60	Mountable curb	Use existing No. 7 pull box at approx. milepost 176.67.	36		8	4	480	PAD, PAD pole, Foundation	1	1	1	176.67
US 60	EB	W. of Val Vista Dr	6	3118352	183.52	15	18	Concrete traffic barrier	New No. 7 pull box. Intercept conduit run from ex. PAD pole to ex. cabinet.	15	1	12	6	216	PAD, PAD pole, Foundation on shoulder. PAD on median light pole.	2	1	1	183.58
US 60	WB	W. of Val Vista Dr	6	3018319	183.19	27	38	Concrete traffic barrier	Use existing No. 7 pull box at approx. milepost 183.52. Relocate existing sign on PAD pole per Sign Relocation Manifest on DWG F-01.01.	27		12	6	456	PAD, PAD pole, Foundation	1	1	1	183.20
US 60	WB	W. of Dobson Rd	5	3017655	176.55	13	406	Concrete traffic barrier	Use existing No. 7 pull box at approx. milepost 176.61. Include loop detectors in WB US 60 to SB SR101L ramp lane.	38		10	5	4,060	PADs, PAD pole, Foundation	2	1	1	176.61
US 60	EB	W. of Priest Dr	4	3017237	172.37	N/A	N/A	N/A	Decommission PAD site. Disconnect PAD cabling and remove PAD cards from cabinet.						PAD, PAD pole, Foundation on shoulder. EB PAD on median light pole.	2	1	1	172.32
US 60	EB	E. of Recker Rd	6	3118750	187.50	7	54	Mountable curb	New No. 7 pull box. Intercept conduit run from ex. PAD pole to ex. cabinet.	7	1	12	6	648	PAD, PAD pole, Foundation on shoulder. PAD on median light pole.	2	1	1	187.50
US 60	WB	W. of Recker Rd	6	3018700	187.00	30	83	Mountable curb	Use existing No. 7 pull box at approx. milepost 186.99.	30		12	6	996	PAD, PAD pole, Foundation on shoulder. PAD on median light pole.	2	1	1	187.02
SHEET TOTAL										153	2	66	33	6,856		13	7	7	

NO.1 | DESCRIPTION OF REVISION | DATE | MADE BY | NO.2 | DESCRIPTION OF REVISION | DATE | MADE BY

DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAWN	KAW	DATE	05-16	
CHECKED	SAS	DATE	05-16	
 United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		TYPICAL INSTALLATION 3 MANIFEST		
ROUTE	000	LOCATION	Various Locations	
TRACS NO.	H8809 01C		CM-888-A(225)T	EXPIRES 12-31-2018 DWG NO. F-01.10 OF

TYPICAL INSTALLATION 3 MANIFEST

(Continued)

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	15	23	

888 MA 000

Mainline	Direction	Location	No. of Lanes	Existing Cabinet No.	Existing Cabinet Milepost (Approx.)	Dimension X (Approx. LF) See Typical Installation 3	Dimension Y (Approx. LF) See Typical Installation 3	Curb and Gutter Type	Notes	7320050 Electrical Conduit (2") (PVC) (L.F.T.)	7320450 Pull Box (NO. 7) (FMS STD FM-2.06) (Each)	7350030 Loop Detector for Traffic Surveillance (Each)	7350051 Detector Card (Each)	7350165 Loop Detector Lead-In Cable (L.F.T.)	Removals	2020053 Remove (Passive Acoustic Detector) (Each)	2020054 Remove (Concrete Foundation) (Each)	2020155 Remove (Passive Acoustic Detector Pole) (Each)	Approx. Milepost of Removals
SR 51	NB	S. of McDowell Rd	4	5100034	0.34	9	178	Mountable curb	New No. 7 pull box. Intercept conduit run from ex. PAD pole to ex. cabinet. Include loop detectors in McDowell Rd off ramp lane.	59	1	8	4	1,424	PAD, PAD pole, Foundation	1	1	1	0.36
I-10	WB	US 60 WB	4	1015489	154.89	6	18	Concrete traffic barrier	Use existing No. 7 pull box at approx. milepost 154.89.	6		8	4	144	PAD, PAD pole, Foundation	1	1	1	154.89
I-10	EB	26th Ave	6	1114283	142.83	28	138	Guardrail and curb	Use existing No. 7 pull box at approx. milepost 142.81. Existing pull box is located in median.	28		12	6	1,656	EB PAD on CCTV pole	1			142.81
I-10	WB	N. of Washington	4	1014767	147.67	23	309	Guardrail and gutter	Use existing No. 7 pull box at approx. milepost 147.72.	23		8	4	2,472	PAD, PAD pole, Foundation	1	1	1	147.79
I-10	EB	48th St	5	1115290	152.90	12	12	Mountable curb	Use existing No. 7 pull box at approx. milepost 152.90. Relocate existing sign on PAD pole per Sign Relocation Manifest on DWG F-01.01.	12		10	5	120	PAD, PAD pole, Foundation	1	1	1	152.90
I-10	EB	S. of Ray Rd	6	1116025	160.25	N/A	N/A	N/A	Decommission PAD site. Disconnect PAD cabling and remove PAD cards from cabinet.						PADs on CCTV pole	2			160.25
I-10	WB	S. of Ray Rd	6	1016023	106.23	N/A	N/A	N/A	Decommission PAD site. Disconnect PAD cabling and remove PAD cards from cabinet.						PAD, PAD pole, Foundation	1	1	1	160.22
SHEET TOTAL										128	1	46	23	5,816		8	5	5	

NO.1 DESCRIPTION OF REVISION DATE MADE BY NO.2 DESCRIPTION OF REVISION DATE MADE BY

DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAWN	KAW	DATE	05-16	
CHECKED	SAS	DATE	05-16	
United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		TYPICAL INSTALLATION 3 MANIFEST		
ROUTE	LOCATION			
000	Various Locations			
TRACS NO.	H8809 01C	PROJECT NO.	CM-888-A(225)T	



EXPIRES 12-31-2018
DWG NO. F-01.11

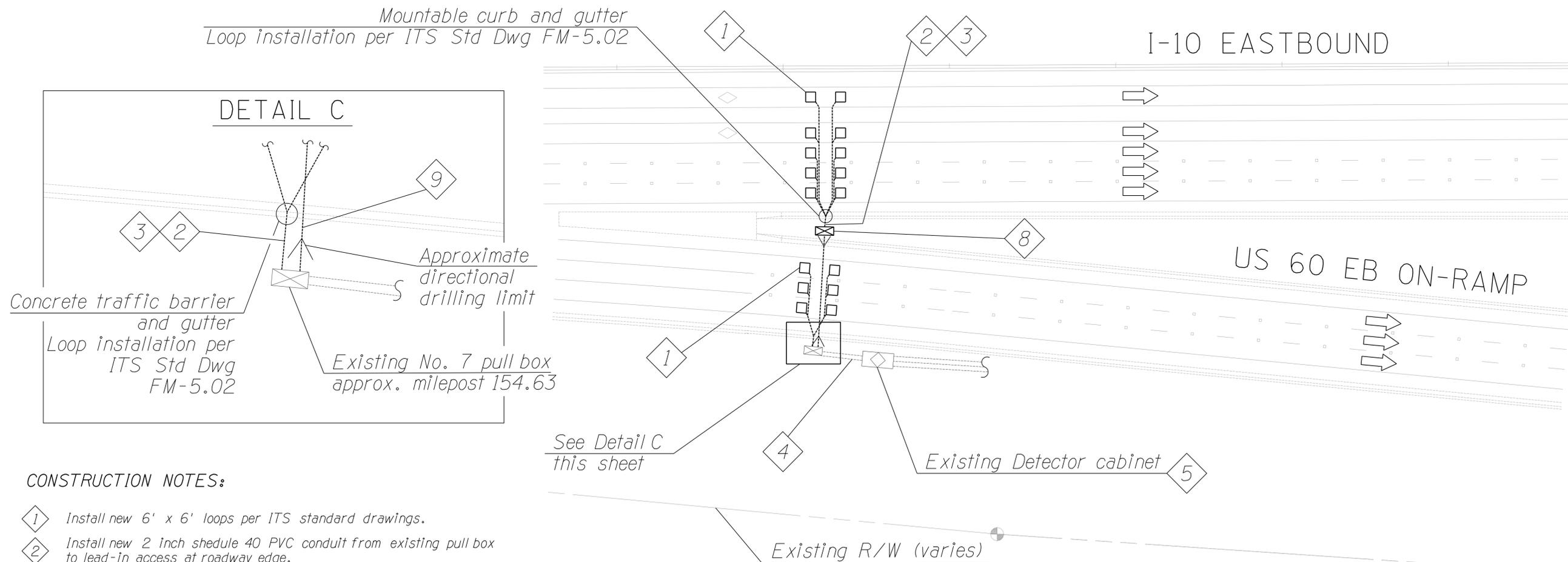
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I-10 EB SOUTHERN INSTALLATION DETAIL

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	16	23	

888 MA 000

Mainline	Direction	Location	No. of Lanes	Existing Cabinet No.	Existing Cabinet Milepost (Approx.)	Notes	7320050 Electrical Conduit (2") (PVC) (L.F.T.)	7320291 Electrical Conduit (2") (HDPE Directional Drill) (L.F.T.)	7320450 Pull Box (NO. 7) (FMS STD FM-2.06) (Each)	7350030 Loop Detector for Traffic Surveillance (Each)	7350051 Detector Card (Each)	7350165 Loop Detector Lead-In Cable (L.F.T.)	Removals	2020053 Remove (Passive Acoustic Detector) (Each)	2020054 Remove (Concrete Foundation) (Each)	2020155 Remove (Passive Acoustic Detector Pole) (Each)	Approx. Milepost of Removals
I-10	EB	Southern Ave	8	1115463	154.63		11	80	1	16	8	1,212	EB & WB PADs on median light pole PAD, PAD pole and foundation on shoulder	3	1	1	154.63



CONSTRUCTION NOTES:

- 1 Install new 6' x 6' loops per ITS standard drawings.
- 2 Install new 2 inch schedule 40 PVC conduit from existing pull box to lead-in access at roadway edge.
- 3 New 14 AWG IMSA 51-7 loop detector cable in orange loop duct, one cable per loop.
- 4 New 14 AWG IMSA 50-2 loop detector lead-in cable (1-pair shielded) in existing conduit, one cable per loop.
- 5 Furnish and install new model 222 loop detector cards. One card per lane.
- 8 Install new No. 7 FMS pull box.
- 9 New 14 AWG IMSA 50-2 loop detector lead-in cable (1-pair shielded), one cable per loop, in new 2 inch directionally drilled conduit. Directional drilling limits shown are approximate.

NOTES:

1. Unless otherwise noted on plan, all conduit and pull boxes shown are existing and their locations are shown for schematic purposes only.

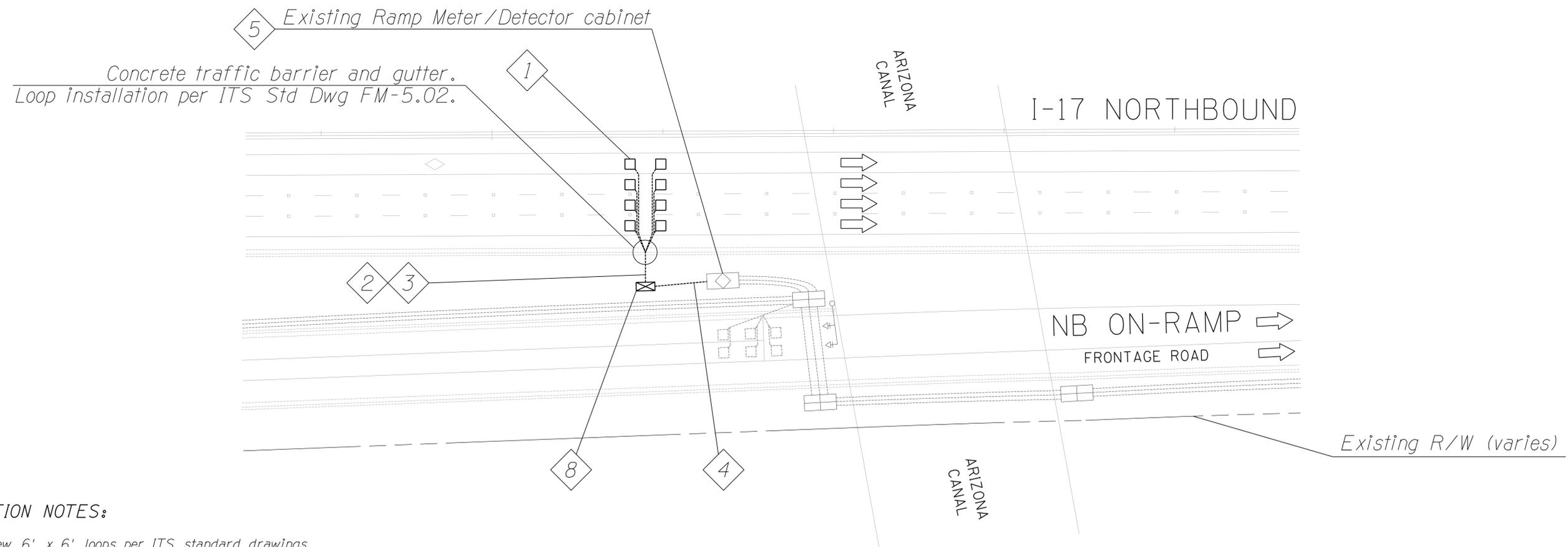
DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION		
DRAWN	KAW	DATE	05-16			
CHECKED	SAS	DATE	05-16			
United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		I-10 EB SOUTHERN INSTALLATION		EXPIRES 12-31-2018		
ROUTE	000	LOCATION	Various Locations		DWG NO.	F-01.12
TRACS NO.	H8809 01C			CM-888-A(225)T		OF

I-17 NB DUNLAP INSTALLATION DETAIL

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	17	23	

888 MA 000

Mainline	Direction	Location	No. of Lanes	Existing Cabinet No.	Existing Cabinet Milepost (Approx.)	Notes	7320050 Electrical Conduit (2") (PVC) (L.F.T.)	7320070 Electrical Conduit (3") (PVC) (L.F.T.)	7320450 Pull Box (NO. 7) (FMS STD FM-2.06) (Each)	7350030 Loop Detector for Traffic Surveillance (Each)	7350051 Detector Card (Each)	7350165 Loop Detector Lead-In Cable (L.F.T.)	Removals	2020053 Remove (Passive Acoustic Detector) (Each)	2020054 Remove (Concrete Foundation) (Each)	2020155 Remove (Passive Acoustic Detector Pole) (Each)	Approx. Milepost of Removals
I-17	NB	Dunlap Ave	4	2120812	208.12	Due to Arizona Canal bridge, loops must be installed upstream from stop bar.	14	15	1	8	4	96	NB & SB PADs, PAD Pole in median	2		1	208.10



CONSTRUCTION NOTES:

- 1 Install new 6' x 6' loops per ITS standard drawings.
- 2 Install new 2 inch schedule 40 PVC conduit from new pull box to lead-in access at roadway edge.
- 3 New 14 AWG IMSA 51-7 loop detector cable in orange loop duct, one cable per loop.
- 4 New 14 AWG IMSA 50-2 loop detector lead-in cable (1-pair shielded) in existing conduit, one cable per loop, in new 3 inch schedule 40 PVC conduit. Intercept existing spare 3 inch conduit run to existing cabinet and splice conduit.
- 5 Furnish and install new model 222 loop detector cards. One card per lane.
- 8 Install new No. 7 FMS pull box.

NOTES:

1. Unless otherwise noted on plan, all conduit and pull boxes shown are existing and their locations are shown for schematic purposes only.
2. All ramp metering and FMS components shown including the ramp meter stop bar, ramp meter loops, ramp meter poles, conduit and pull boxes are existing and are for schematic purposes only.



DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAWN	KAW	DATE	05-16	
CHECKED	SAS	DATE	05-16	
UCG		United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		I-17 NB DUNLAP INSTALLATION
ROUTE	000	LOCATION	Various Locations	
TRACS NO.	H8809 01C		CM-888-A(225)T	EXPIRES 12-31-2018 DWG NO. F-01.13

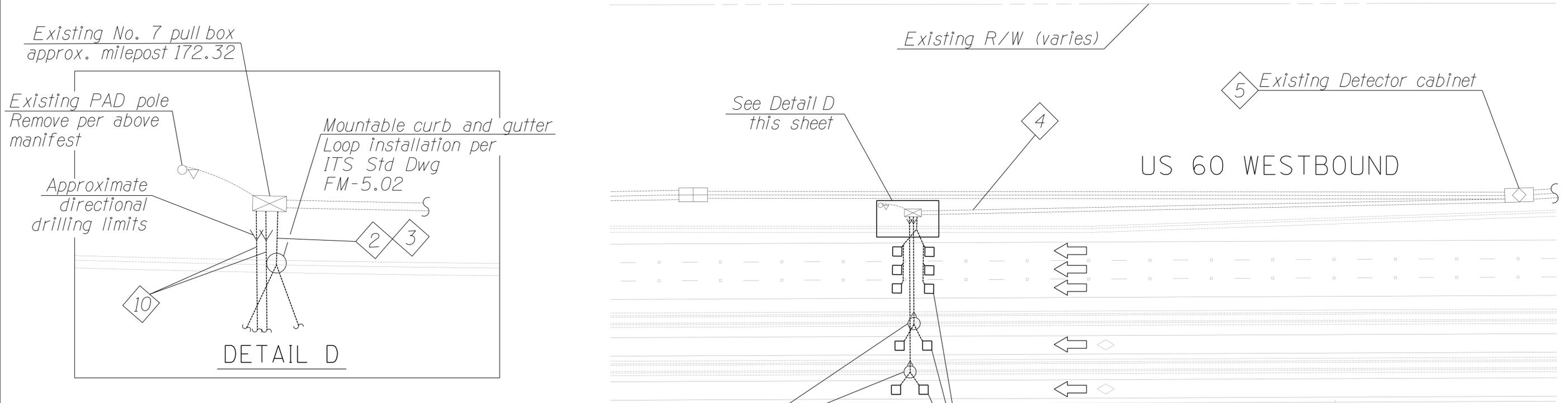


US 60 WB W OF PRIEST DR INSTALLATION DETAIL

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	18	23	

888 MA 000

Mainline	Direction	Location	No. of Lanes	Existing Cabinet No.	Existing Cabinet Milepost (Approx.)	Notes	7320050 Electrical Conduit (2") (PVC) (L.F.T.)	7320291 Electrical Conduit (2") (HDPE Directional Drill) (L.F.T.)	7350030 Loop Detector for Traffic Surveillance (Each)	7350051 Detector Card (Each)	7350165 Loop Detector Lead-In Cable (L.F.T.)	Removals	2020053 Remove (Passive Acoustic Detector) (Each)	2020054 Remove (Concrete Foundation) (Each)	2020155 Remove (Passive Acoustic Detector Pole) (Each)	Approx. Milepost of Removals
US 60	WB	W. of Priest Dr	5	3017237	172.37		10	210	10	5	3,120	WB PAD on median light pole PAD, PAD pole and foundation on shoulder	2	1	1	172.32



DETAIL D

CONSTRUCTION NOTES:

- 1 Install new 6' x 6' loops per ITS standard drawings.
- 2 Install new 2 inch schedule 40 PVC conduit from pull box to lead-in access at roadway edge.
- 3 New 14 AWG IMSA 51-7 loop detector cable in orange loop duct, one cable per loop.
- 4 New 14 AWG IMSA 50-2 loop detector lead-in cable (1-pair shielded) in existing conduit, one cable per loop.
- 5 Furnish and install new model 222 loop detector cards. One card per lane.
- 10 New 14 AWG IMSA 51-7 loop detector cable in orange loop duct, one cable per loop, in new 2 inch directionally drilled conduit. New directionally drilled conduit extends from existing No. 7 pull box to lead-in access at edge of HOV lane. Directional drilling limits shown are approximate.

Concrete traffic barrier and gutter Loop installation per ITS Std Dwg FM-5.02

NOTES:

- 1. Unless otherwise noted on plan, all conduit and pull boxes shown are existing and their locations are shown for schematic purposes only.



DESIGN	KAW	DATE	05-16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAWN	KAW	DATE	05-16	
CHECKED	SAS	DATE	05-16	
UCG		United Civil Group 2803 North 7th Avenue Phoenix, Arizona 85007 (602) 265-6155		US 60 WB W OF PRIEST DR INSTALLATION
ROUTE	000	LOCATION	Various Locations	
TRACS NO.	H8809 01C		CM-888-A(225)T	



EXPIRES 12-31-2018
DWG NO. F-01.14

NO.1 DESCRIPTION OF REVISION DATE MADE BY NO.2 DESCRIPTION OF REVISION DATE MADE BY

TRAFFIC CONTROL NOTES:

1. All existing signs in conflict with the construction signs shall be removed, relocated, or covered in place, as directed by the Engineer. The contractor shall store and reinstall items which have been removed or relocated in a manner approved by the Engineer. Any items damaged by the contractor shall be replaced by the contractor at no cost to the Department.
2. The retroreflective sheeting on all construction signs shall meet criteria established in Section 1007 of the Specifications.
3. All signs shown on the plans are short-term signs to be installed on spring stands, at the height recommended by the spring stand manufacturer.
4. The nearest edge or corner of a sign shall be approximately 12 feet from the nearest edge of pavement.
5. Two flags shall be mounted on top of all construction signs except the "END ROAD WORK THANK YOU" sign.
6. Type A flashing warning lights shall be required on all nighttime construction signs except the "END ROAD WORK THANK YOU" sign.
7. Type C steady-burning yellow lights shall be mounted on every barricade and vertical panels in tapers and alternating barricades along tangent sections during nighttime activities.
8. Channelizing devices shall be placed 40 feet on center in tapers and 80 feet on center in tangents, except as otherwise noted on plans.
9. Construction signs shall not be displayed to traffic more than 24 hours prior to the actual start of construction. These signs may be installed sooner but they must be covered or turned away from traffic. The cost for covering or turning them shall be considered part of the sign installation cost. No further compensation will be made. These signs shall be removed within 24 hours after the completion of construction activities.
10. All construction signs shall have black letters on an orange background, except as otherwise noted.
11. Speed limit signing is preliminary and is subject to review and change by the Engineer as dictated by field conditions.
12. Where no closure is necessary but where there is construction alongside a roadway under construction, the contractor shall place a 48 x 48 inch "ROAD WORK AHEAD" and "SHOULDER WORK AHEAD" sign as directed by the Engineer to alert the public to the construction activities.
13. The contractor may substitute Type I barricades for Type II barricades as long as the reflective area on the top panel of each Type I barricades is equivalent or greater than the reflective area of a Type II barricade.
14. When traffic control devices are not in use, they shall be moved at least 30 feet from the roadway.
15. An adequate number of Type III barricades shall be placed across each roadway to be closed. A 48 x 30 inch "ROAD CLOSED" or "RAMP CLOSED" sign, as appropriate, shall be attached to one of the Type III barricades closing the roadway. A Type A flashing warning light shall be mounted on each end of each type III barricade.

16. The contractor shall utilize a flashing arrow panel in the sequential chevron mode for each closure of a through lane. The contractor shall not utilize a flashing arrow panel in connection with any shifting taper.
17. All drawings are schematic only and not to scale.
18. The traffic control plans represent a suggested method for traffic control during construction. The contractor may prepare another traffic control plan in accordance with Section 701 of the Specifications. All traffic control plans are subject to the approval of the Engineer before beginning construction.

19. Adjustments to the details of these traffic control plans and requirements maybe necessary due to construction activities or as directed by the Engineer.
20. Work hours for full closures will be allowed only at night, Sunday night through Thursday morning between the hours of 9PM and 5AM and Friday night through Sunday morning between the hours of 10PM and 5AM. Roadway shall remain open to traffic during the day and holidays.

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	20	23	

888 MA 000

MAINTENANCE OF TRAFFIC		
PHASE	CONSTRUCTION ACTIVITY	TRAFFIC CONTROL
1	Mobilization Sawcut mainline pavement and install loop detectors. Remove existing PAD equipment.	Full or partial closures required for loop installation. See sheets T-01.02 - T-01.04.
2	Install conduit and controller equipment. Activate loops.	Shoulder closure per 2009 MUTCD TA-4.

APPROXIMATE TRAFFIC CONTROL QUANTITIES					
BID ITEM NO.	ELEMENT OF WORK	UNIT	PHASE 1 FULL OR PARTIAL CLOSURES	PHASE 2 REMAINING WORK	TOTAL QTYS.
ESTIMATED DURATION (CALENDAR DAYS)		DAYS	1	5	6
7016029	Portable Sign Stands-Barrier Mounted	Each-Day	384	400	784
7016030	Barricade (Type II, Vert.Panel, Tubular Marker)	Each-Day	39,396	0	39,396
7016031	Barricade (Type III, High Level Flag Trees)	Each-Day	408	0	408
7016032	Portable Sign Stands (Rigid)	Each-Day	200	0	200
7016033	Portable Sign Stands (Spring Type)	Each-Day	1,427	400	1,827
7016035	Warning Lights (Type A)	Each-Day	1,498	0	1,498
7016037	Warning Lights (Type C)	Each-Day	27,000	0	27,000
7016050	Truck Mounted Attenuator	Each-Day	160	400	560
7016051	Temporary Sign (Less Than 10 S.F.)	Each-Day	1,056	1,200	2,256
7016052	Temporary Sign (10 S.F. or More)	Each-Day	1,652	0	1,652
7016061	Flashing Arrow Panel	Each-Day	293	0	293
7016067	Changeable Message Board (Contractor Furnished)	Each-Day	1,560	0	1,560
7016078	Flagging Services (Local Enforcement Officer)	Hour	352	0	352
7016080	Flagging Services (DPS)	Hour	768	0	768

DESIGN	F..Henderson	5/16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION	
DRAWN	J. LaKose	5/16		
CHECKED	A. Gonzalez	5/16		
			TRAFFIC CONTROL NOTES AND QUANTITIES	
ROUTE	LOCATION		VARIOUS LOCATIONS	
000				
TRACS NO. H8809 01C			CM-888-A(225)T	OF

FULL OR PARTIAL CLOSURES DETAILS

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	21	23	

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ROUTE	DIR	LOCATION	MP (CABINET)	FULL CLOSURE TRAFFIC CONTROL ALTERNATIVE	COMMENTS
I-10	EB	83rd Ave	135.85	Close EB I-10 at 83rd Ave per TCDG Figure SA-9.	
I-10	WB	35th Ave	141.54	Close WB I-10 at 35th Ave per TCDG Figure SA-9.	Add R3-5e "CENTER LANE" plaque above detour signage.
I-10	EB	35th Ave	141.82	Close EB I-10 at 35th Ave per TCDG Figure SA-9.	Add R3-5e "CENTER LANE" plaque above detour signage.
I-10	WB	27th Ave	142.51	Close WB I-10 at 27th Ave per TCDG Figure SA-9. Close I-17 Ent Ramps to WB I-10 per SA-10.	Detour to 19th Ave, McDowell Road, and 27th Ave.
I-10	EB	26th Ave	142.83	Close EB I-10 at 27th Ave per TCDG Figure SA-9.	Detour to 27th Ave, McDowell Road, and 19th Ave.
I-10	EB	19TH Ave	143.76	Close Interior Lane and Shoulder per SA-5(L)	
I-10	WB	N of Washington	147.67	Close WB I-10 at Jefferson St per TCDG Figure SA-9.	
I-10	EB	48th St	152.90	Close EB I-10 at 48th St per TCDG Figure SA-9.	
I-10	EB	Southern Ave.	154.63	Close EB I-10 at 48th St per TCDG Figure SA-9. Close Broadway Road Ent Ramp per TCDG Fig SA-2. Close SR 143 Ent Ramp per TCDG Fig SA-2.	Detour to 48th Street and Baseline Road.
I-10	WB	US 60WB	154.89	Close WB I-10 at Baseline Rd per TCDG Figure SA-9. Close Baseline Road Ent Ramp per TCDG Fig SA-2.	Detour to Baseline Rd, Priest Dr, and Broadway Road
I-17	SB	19th Ave	197.94	Close SB I-17 at Durango St per TCDG Figure SA-9.	Exit at Durango Street. Enter I-17 at 19th Avenue.
I-17	NB	Thomas Rd.	201.99	Close NB I-17 at Thomas Rd per TCDG Figure SA-9.	
I-17	SB	Indian School Rd.	202.75	Close SB I-17 at Indian School Rd per TCDG Figure SA-9.	
I-17	NB	Indian School Rd.	202.99	Close NB I-17 at Indian School Rd per TCDG Figure SA-9.	
I-17	SB	Camelback Rd.	203.72	Close SB I-17 at Camelback Rd per TCDG Figure SA-9.	
I-17	NB	Camelback Rd.	203.99	Close NB I-17 at Camelback Rd per TCDG Figure SA-9.	
I-17	SB	Bethany Home Rd.	204.72	Close SB I-17 at Bethany Home Rd per TCDG Figure SA-9.	
I-17	NB	Bethany Home Rd.	205.01	Close NB I-17 at Bethany Home Rd per TCDG Figure SA-9.	
I-17	SB	Glendale Ave.	205.70	Close SB I-17 at Glendale Ave per TCDG Figure SA-9.	
I-17	NB	Glendale Ave.	206.09	Close NB I-17 at Glendale Ave per TCDG Figure SA-9.	
I-17	SB	Northern Ave.	206.77	Close SB I-17 at Northern Ave per TCDG Figure SA-9.	
I-17	NB	Northern Ave.	207.09	Close NB I-17 at Northern Ave per TCDG Figure SA-9.	
I-17	SB	Dunlap Ave.	207.77	Close SB I-17 at Dunlap Ave per TCDG Figure SA-9.	
I-17	NB	Dunlap Ave.	208.12	Close NB I-17 at Dunlap Ave per TCDG Figure SA-9.	
I-17	SB	Peoria Ave.	208.54	Close SB I-17 at Peoria Ave per TCDG Figure SA-9.	
US 60	WB	W of Priest	172.37	Close WB US 60 at Priest Dr per TCDG Figure SA-9.	Detour to Priest Dr and Broadway Rd
US 60	EB	Priest Dr.	172.65	Close I-10 Ramps to EB US 60 per TCDG Figure SA-10.	
US 60	WB	Mill Ave	173.61	Close WB US 60 at Mill Ave per TCDG Figure SA-9.	
US 60	EB	Mill Ave	173.72	Close EB US 60 at Mill Ave per TCDG Figure SA-9.	
US 60	WB	Rural Rd	174.38	Close WB US 60 at Rural Rd per TCDG Figure SA-9.	
US 60	EB	Rural Rd	174.61	Close EB US 60 at Rural Rd per TCDG Figure SA-9.	
US 60	WB	McClintock Rd.	175.25	Close WB US 60 at McClintock Rd per TCDG Figure SA-9.	
US 60	EB	McClintock Rd.	175.45	Close EB US 60 at McClintock Rd per TCDG Figure SA-9.	

DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAWN	F..Henderson	5/16	
CHECKED	J. LaKose	5/16	
	A. Gonzalez	5/16	FULL CLOSURE DETAILS
	IRPA RITTOCH-POWELL & Associates 602-263-1177 www.rittochpowell.com		
ROUTE	LOCATION	VARIOUS LOCATIONS	
000			
TRACS NO. H8809 01C			CM-888-A(225)T



EXPRES 03/31/2019
DWG NO. T-01.02
OF

5/20/2016

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

FULL OR PARTIAL CLOSURES DETAILS

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	22	23	

888 MA 000

ROUTE	DIR	LOCATION	MP (CABINET)	FULL CLOSURE TRAFFIC CONTROL ALTERNATIVE	COMMENTS
US 60	WB	W of Dobson Rd.	176.55	Close WB US 60 at Dobson Rd per TCDG Figure SA-9.	Detour to Dobson Rd, Southern Ave, and McClintock Rd.
US 60	EB	W of Dobson Rd.	176.67	Close EB US 60 at Dobson Rd per TCDG Figure SA-9.	
US 60	WB	Dobson Rd.	177.24	Close WB US 60 at Dobson Rd per TCDG Figure SA-9. Close Dobson Rd Ent Ramp per TCDG Fig SA-2.	
US 60	EB	Dobson Rd.	177.54	Close EB US 60 at Dobson Rd per TCDG Figure SA-9.	
US 60	WB	Alma School Rd.	178.37	Close WB US 60 at Alma School Rd per TCDG Figure SA-9.	
US 60	EB	Alma School Rd.	178.62	Close EB US 60 at Alma School Rd per TCDG Figure SA-9.	
US 60	WB	Country Club Dr.	179.37	Close WB US 60 at Country Club Dr per TCDG Figure SA-9.	
US 60	EB	Country Club Dr.	179.58	Close EB US 60 at Country Club Dr per TCDG Figure SA-9.	
US 60	WB	Mesa Dr.	180.35	Close WB US 60 at Mesa Dr per TCDG Figure SA-9.	
US 60	EB	Mesa Dr.	180.58	Close EB US 60 at Mesa Dr per TCDG Figure SA-9.	
US 60	WB	Stapley Rd.	181.33	Close WB US 60 at Stapley Rd per TCDG Figure SA-9.	
US 60	EB	Stapley Rd.	181.46	Close EB US 60 at Stapley Dr per TCDG Figure SA-9.	
US 60	WB	Gilbert Rd.	182.23	Close WB US 60 at Gilbert Rd per TCDG Figure SA-9.	
US 60	EB	Gilbert Rd.	182.44	Close EB US 60 at Gilbert Rd per TCDG Figure SA-9.	
US 60	WB	W of Val Vista Rd.	183.19	Close WB US 60 at Val Vista Rd per TCDG Figure SA-9. Close Val Vista Ent Ramp per TCDG Fig SA-2.	Detour to Val Vista Rd, Southern Ave, and Gilbert Rd.
US 60	EB	W of Val Vista Rd.	183.52	Close EB US 60 at Gilbert Rd per TCDG Figure SA-9. Close Gilbert Rd Ent Ramp per TCDG Fig SA-2.	Detour to Gilbert Rd, Baseline Rd, and Val Vista Dr
US 60	WB	Val Vista Rd.	184.36	Close WB US 60 at Val Vista Rd per TCDG Figure SA-9.	
US 60	EB	Val Vista Rd.	184.42	Close EB US 60 at Val Vista Dr per TCDG Figure SA-9.	
US 60	WB	Greenfield Rd	185.24	Close WB US 60 at Greenfield Rd per TCDG Figure SA-9.	
US 60	EB	Greenfield Rd.	185.54	Close EB US 60 at Greenfield Rd per TCDG Figure SA-9.	
US 60	WB	Higley Rd.	186.36	Close WB US 60 at Higley Rd per TCDG Figure SA-9.	
US 60	EB	Higley Rd.	186.41	Close EB US 60 at Higley Rd per TCDG Figure SA-9.	
US 60	WB	E of Recker Rd	187.00	Close WB US 60 at Power Rd per TCDG Figure SA-9. Close Power Rd Ent Ramp per TCDG Fig SA-2. Close Superstition Blvd Ent Ramp per TCDG Figure SA-2.	Detour to Power Rd, Southern Ave, and Higley Rd.
US 60	EB	E of Recker Rd	187.50	Close EB US 60 at Higley Rd per TCDG Figure SA-9. Close Higley Rd Ent Ramp per TCDG Figure SA-2.	Detour to Higley Rd, Baseline Rd, and Power Rd.
US 60	WB	Superstition Spr	187.75	Close WB US 60 at Power Rd per TCDG Figure SA-9. Close Power Rd Ent Ramp per TCDG Fig SA-2.	
US 60	WB	Power Rd	188.26	Close WB US 60 at Power Rd per TCDG Figure SA-9.	

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

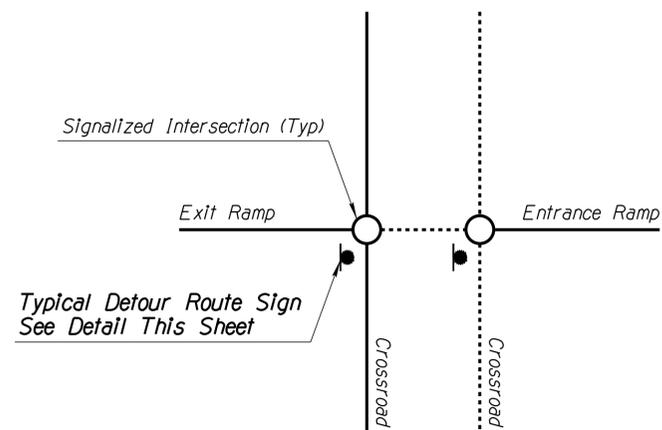
DESIGN	F. Henderson	5/16	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION	
DRAWN	J. LaKose	5/16		
CHECKED	A. Gonzalez	5/16		
			FULL CLOSURE DETAILS	
ROUTE	LOCATION		VARIOUS LOCATIONS	
000				
TRACS NO. H8809 01C			CM-888-A(225)T	OF

FULL OR PARTIAL CLOSURES DETAILS

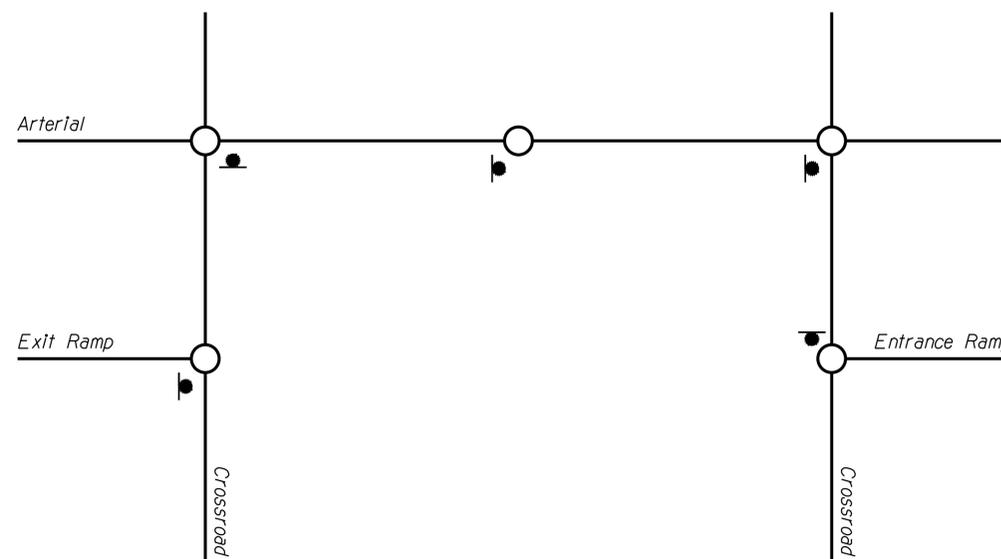
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	CM-888-A(225)T	23	23	

888 MA 000

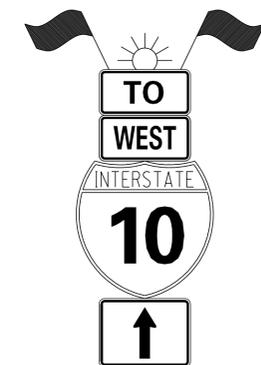
ROUTE	DIR	LOCATION	MP (CABINET)	FULL CLOSURE TRAFFIC CONTROL ALTERNATIVE	COMMENTS
SR 51	NB	S. of McDowell Rd.	0.34	Close WB I-10 Ent Ramp to SR 51 per TCDG Figure SA-10. Close HOV Ent Ramp to SR 51 per TDCG Figure SA-10.	
SR 51	SB	McDowell Rd.	0.40	Close SB SR 51 at Thomas Rd per TCDG Figure SA-9.	Detour to Thomas Rd, 16th St and McDowell Rd
SR 51	NB	McDowell Rd.	0.72	Close NB SR 51 at McDowell Rd per TCDG Figure SA-9.	Detour to McDowell Rd, 16th St and Thomas Rd
SR 51	SB	Thomas Rd.	1.32	Close SB SR 51 at Thomas Rd per TCDG Figure SA-9.	
SR 51	NB	Thomas Rd.	1.79	Close NB SR 51 at Thomas Rd per TCDG Figure SA-9.	
SR 51	SB	Indian School Rd.	2.53	Close SB SR 51 at Indian School Rd per TCDG Figure SA-9.	Detour to Indian School Rd, 16th St, and Thomas Rd
SR 51	NB	Indian School Rd.	2.71	Close NB SR 51 at Thomas Rd per TCDG Figure SA-9.	Detour to Thomas Rd, 16th St and Indian School Rd
SR 51	SB	Highland Ave.	3.27	Close SB SR 51 at Colter Ave per TCDG Figure SA-9.	Detour to Colter Ave, 16th St, and Highland Ave
SR 51	NB	Colter Ave.	3.97	Close NB SR 51 at Highland Ave per TCDG Figure SA-9.	Detour to Highland Ave, 16th St, and Colter Ave
SR 51	SB	Bethany Home Rd.	4.44	Close SB SR 51 at Bethany Home Rd per TCDG Figure SA-9.	Detour to Bethany Home Rd, 16th St, and Glendale Ave
SR 51	NB	Bethany Home Rd.	4.82	Close NB SR 51 at Bethany Home Rd per TCDG Figure SA-9.	Detour to Bethany Home Rd, 16th St, and Glendale Ave
SR 51	SB	Glendale Ave.	5.48	Close SB SR 51 at Glendale Ave per TCDG Figure SA-9.	Detour to Glendale Ave, 16th St, and Bethany Home Rd



DETOUR THROUGH TRAFFIC INTERCHANGE



DETOUR ON ARTERIAL STREETS



TYPICAL DETOUR ROUTE SIGN

- M4-5
24" x 12"
- M3-X
24" x 12"
- M1-1
30" x 24"
- M6-x
24" x 18"

DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION	
DRAWN	J. LaKose	5/16		
CHECKED	A. Gonzalez	5/16		
		FULL CLOSURE DETAILS		
ROUTE	LOCATION	VARIOUS LOCATIONS		EXPIRES 03/31/2019 DWG NO. T-01.04
000		TRACS NO. H8809 01C		CM-888-A(225)T OF