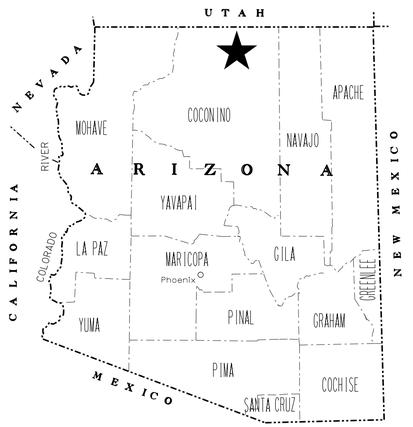
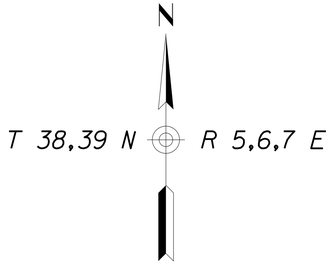


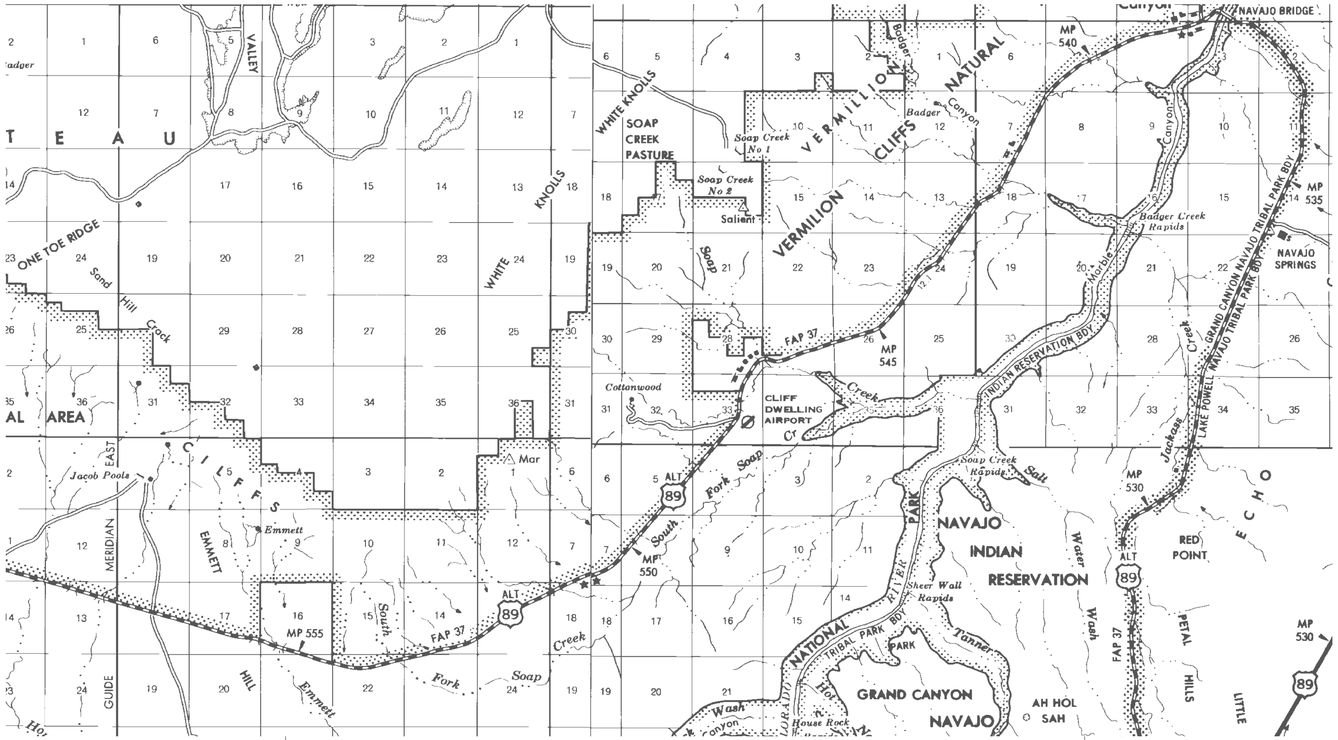


STATE OF ARIZONA
DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION

ADOT

PROJECT PLANS

STATE HIGHWAY
BITTER SPRINGS – FREDONIA HIGHWAY
US 89A



Constructed by:

Construction Company

Completion Date

Red-Lines by:

Construction Administrator Name & Company

Completion Date

Record Drawing:

Record Drawing Designer Name & Company

Completion Date

COLORADO RIVER – HOUSE ROCK (PHASE II)

PROJECT NO. 089A CN 540 H7775 01C
FEDERAL AID NO. STP–A89–C(206)T

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

RECORD DRAWING DATA	REC. DWG. DATE	OF

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	THRIE-BEAM GUARDRAIL, G9, BLOCKED-OUT STEEL POST
5/12	C-10.30 SH 1	GUARDRAIL TRANSITION, THRIE BEAM TO CONCRETE HALF BARRIER, 32" TYPE 'F'
5/12	C-10.30 SH 2	GUARDRAIL TRANSITION, THRIE 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

	NAME	DATE
CONSTRUCTION Standards	JFS	06/20/2016

PROJECT NO. 089A CN 540 H7775 01 C — 1A OF 27

RECORD DRAWING DATA — FEDERAL AID NO. A89-C(206)T — REC. DWG. DATE — OF

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ADOT STANDARD DRAWINGS

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

REVISION	STANDARD	SUBJECT: 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
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. | MADE BY L. LOPEZ | DATE 6/14 | NO.2 | DESCRIPTION OF REVISION REVISED M-2 SHTS, M-15, M-19 SHTS S&B. REVISED 5-7 SHTS ON PKG. UPDATED BORDER TITLE BLOCK. | MADE BY L. LOPEZ | DATE 5/15

ADOT STANDARD DRAWINGS REVISION DATES and STANDARD NO.'s REVIEW		
	NAME	DATE
SIGNING & MARKING STANDARDS	JFS	06/20/2016
PROJECT NO. 089A CN 540 H7775 01 C	1B-1	OF 27
RECORD DRAWING DATA / FEDERAL AID NO. A89-C(206)T / REC. DWG. DATE		OF

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ADOT STANDARD DRAWINGS

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

REVISION	STANDARD	SUBJECT: 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

REVISION	STANDARD	SUBJECT: 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 S-7 SHTS, REVISED W-2 SHTS, W-11, W-19 SHTS S&B ON PGL, UPDATED BORDER TITLE BLOCK. | MADE BY: L. LOPEZ | DATE: 5/15
NO.2 | DESCRIPTION OF REVISION: REVISED ALL DRAWINGS AND RE-ISSUED, CREATED SHEET 2. | MADE BY: L. LOPEZ | DATE: 6/14

ADOT STANDARD DRAWINGS REVISION DATES and STANDARD NO.'s REVIEW		
	NAME	DATE
SIGNING & MARKING STANDARDS	JFS	06/20/2016
PROJECT NO. 089A CN 540 H7775 01 C	IB-2 OF 27	
RECORD DRAWING DATA	FEDERAL AID NO. A89-C(206)T	REC. DWG. DATE — OF —

3:13:52 PM 6/23/2016 P:\Jobs\CK Arizona\CK2015Proj\2015-04 2011-25TE ADOT District Minor On-Call US89A MP536 to MP564.71\Job Products\Plans\100%\Sheet_IB-2.dgn

ADOT STANDARD DRAWINGS

STRUCTURE DETAIL DRAWINGS

REVISION DATE	SD NUMBER	SUBJECT
RAILINGS		
6/12	SD 1.01	F-SHAPE BRIDGE CONCRETE BARRIER AND TRANSITION (34")
6/12	SD 1.02	F-SHAPE BRIDGE CONCRETE BARRIER AND TRANSITION (44")
6/12	SD 1.03	THRIE BEAM GUARD RAIL TRANSITION SYSTEM
3/09	SD 1.04	COMBINATION PEDESTRIAN-TRAFFIC BRIDGE RAILING
3/09	SD 1.05	PEDESTRIAN FENCE FOR BRIDGE RAILING SD1.04
6/09	SD 1.06 (1 OF 4)	TWO TUBE BRIDGE RAIL
6/09	SD 1.06 (2 OF 4)	TWO TUBE BRIDGE RAIL
6/09	SD 1.06 (3 OF 4)	TWO TUBE BRIDGE RAIL
6/09	SD 1.06 (4 OF 4)	TWO TUBE BRIDGE RAIL
4/10	SD 1.11	BARRIER JUNCTION BOX
APPROACHES		
12/07	SD 2.01	APPROACH SLAB DETAILS
12/07	SD 2.02	TYPE 1 ANCHOR SLAB DETAILS
12/07	SD 2.03	TYPE 2 ANCHOR SLAB DETAILS
9/09	SD 2.04	SLOPE PAVING DETAILS
DECK JOINTS		
6/09	SD 3.01	DECK JOINT ASSEMBLY - COMPRESSION SEAL
12/09	SD 3.02	DECK JOINT ASSEMBLY - STRIP SEAL
12/09	SD 3.03	DECK JOINT ASSEMBLY - RAISED STRIP SEAL
SUBSTRUCTURE		
11/12	SD 5.01	STRUCTURAL EXCAVATION - PAYMENT LIMITS
11/12	SD 5.02	STRUCTURE BACKFILL - PAYMENT LIMITS
DRAINAGE STRUCTURES		
5/15	SD 6.01 (1 OF 5)	REINFORCED CONCRETE BOX CULVERTS - MISCELLANEOUS DETAILS
2/12	SD 6.01 (2 OF 5)	REINFORCED CONCRETE BOX CULVERTS - MISCELLANEOUS DETAILS
2/12	SD 6.01 (3 OF 5)	REINFORCED CONCRETE BOX CULVERTS - EXTENSION DETAILS
2/12	SD 6.01 (4 OF 5)	REINFORCED CONCRETE BOX CULVERTS - STRUCTURAL EXCAVATION & STRUCTURE BACKFILL
5/15	SD 6.01 (5 OF 5)	REINFORCED CONCRETE BOX CULVERTS - SINGLE BARREL (0'-30' FILLS)
5/15	SD 6.02 (1 OF 2)	REINFORCED CONCRETE BOX CULVERTS - DOUBLE BARREL (0'-15' FILLS)
5/15	SD 6.02 (2 OF 2)	REINFORCED CONCRETE BOX CULVERTS - DOUBLE BARREL (15'-30' FILLS)
5/15	SD 6.03 (1 OF 2)	REINFORCED CONCRETE BOX CULVERTS - TRIPLE BARREL (0'-15' FILLS)
5/15	SD 6.03 (2 OF 2)	REINFORCED CONCRETE BOX CULVERTS - TRIPLE BARREL (15'-30' FILLS)
5/15	SD 6.04 (1 OF 2)	REINFORCED CONCRETE BOX CULVERTS - FOUR BARREL (0'-15' FILLS)
5/15	SD 6.04 (2 OF 2)	REINFORCED CONCRETE BOX CULVERTS - FOUR BARREL (15'-30' FILLS)
5/15	SD 6.05 (1 OF 2)	REINFORCED CONCRETE BOX CULVERTS - FIVE BARREL (0'-15' FILLS)
5/15	SD 6.05 (2 OF 2)	REINFORCED CONCRETE BOX CULVERTS - FIVE BARREL (15'-30' FILLS)
5/15	SD 6.06 (1 OF 2)	REINFORCED CONCRETE BOX CULVERTS - SIX BARREL (0'-15' FILLS)
5/15	SD 6.06 (2 OF 2)	REINFORCED CONCRETE BOX CULVERTS - SIX BARREL (15'-30' FILLS)
2/12	SD 6.07	REINFORCED CONCRETE BOX CULVERTS - 16'x 14' EQUIPMENT PASS (0'-20' FILLS)
5/15	SD 6.08 (1 OF 8)	REINFORCED CONCRETE BOX CULVERTS - OUTLET WINGS - SKEW 0°to 20° - CULVERT HEIGHT 3' to 7'
2/12	SD 6.08 (2 OF 8)	REINFORCED CONCRETE BOX CULVERTS - OUTLET WINGS - SKEW 0°to 20° - CULVERT HEIGHT 8' to 12'
5/15	SD 6.08 (3 OF 8)	REINFORCED CONCRETE BOX CULVERTS - INLET WINGS - SKEW 0°to 20° - CULVERT HEIGHT 3' to 7'
2/12	SD 6.08 (4 OF 8)	REINFORCED CONCRETE BOX CULVERTS - INLET WINGS - SKEW 0°to 20° - CULVERT HEIGHT 8' to 12'
5/15	SD 6.08 (5 OF 8)	REINFORCED CONCRETE BOX CULVERTS - OUTLET WINGS - SKEW 25°to 45° - CULVERT HEIGHT 3' to 7'
2/12	SD 6.08 (6 OF 8)	REINFORCED CONCRETE BOX CULVERTS - OUTLET WINGS - SKEW 25°to 45° - CULVERT HEIGHT 8' to 12'
5/15	SD 6.08 (7 OF 8)	REINFORCED CONCRETE BOX CULVERTS - INLET WINGS - SKEW 25°to 45° - CULVERT HEIGHT 3' to 7'
2/12	SD 6.08 (8 OF 8)	REINFORCED CONCRETE BOX CULVERTS - INLET WINGS - SKEW 25°to 45° - CULVERT HEIGHT 8' to 12'
5/15	SD 6.09 (1 OF 3)	REINFORCED CONCRETE BOX CULVERTS - HEADWALL QUANTITIES - 2 :1 SLOPE
5/15	SD 6.09 (2 OF 3)	REINFORCED CONCRETE BOX CULVERTS - HEADWALL QUANTITIES - 4 :1 SLOPE
5/15	SD 6.09 (3 OF 3)	REINFORCED CONCRETE BOX CULVERTS - HEADWALL QUANTITIES - 6 :1 SLOPE
5/15	SD 6.10 (1 OF 2)	REINFORCED CONCRETE BOX CULVERTS - INLET OR OUTLET - LEVEL WINGS - CULVERT HEIGHT 3' to 7'
2/12	SD 6.10 (2 OF 2)	REINFORCED CONCRETE BOX CULVERTS - INLET OR OUTLET - LEVEL WINGS - CULVERT HEIGHT 8' to 12'
2/12	SD 6.11 (1 OF 4)	REINFORCED CONCRETE BOX CULVERTS - OUTLET APRON DETAILS
5/15	SD 6.11 (2 OF 4)	REINFORCED CONCRETE BOX CULVERTS - OUTLET APRON - DIMENSIONS & QUANTITIES (2 :1 SLOPE)
5/15	SD 6.11 (3 OF 4)	REINFORCED CONCRETE BOX CULVERTS - OUTLET APRON - DIMENSIONS & QUANTITIES (4 :1 SLOPE)
5/15	SD 6.11 (4 OF 4)	REINFORCED CONCRETE BOX CULVERTS - OUTLET APRON - DIMENSIONS & QUANTITIES (6 :1 SLOPE)
7/12	SD 6.30 (1 OF 5)	PIPE CULVERT HEADWALLS - MISCELLANEOUS DETAILS
7/12	SD 6.30 (2 OF 5)	PIPE CULVERT HEADWALLS - INLET AND OUTLET - 18" to 42" PIPES
7/12	SD 6.30 (3 OF 5)	PIPE CULVERT HEADWALLS - RIGHT ANGLE INLET AND OUTLET - 48" to 84" PIPES
7/12	SD 6.30 (4 OF 5)	PIPE CULVERT HEADWALLS - SKEWED INLET AND OUTLET - 48" to 84" PIPES
7/12	SD 6.30 (5 OF 5)	PIPE CULVERT HEADWALLS - MULTI-PIPE - 48" to 84" PIPES
7/12	SD 6.31 (1 OF 8)	PIPE CULVERT HEADWALLS - RIGHT ANGLE INLET
7/12	SD 6.31 (2 OF 8)	PIPE CULVERT HEADWALLS - RIGHT ANGLE INLET - 2 :1 SLOPE
7/12	SD 6.31 (3 OF 8)	PIPE CULVERT HEADWALLS - RIGHT ANGLE INLET - 4 :1 SLOPE
7/12	SD 6.31 (4 OF 8)	PIPE CULVERT HEADWALLS - RIGHT ANGLE INLET - 6 :1 SLOPE
7/12	SD 6.31 (5 OF 8)	PIPE CULVERT HEADWALLS - RIGHT ANGLE OUTLET
7/12	SD 6.31 (6 OF 8)	PIPE CULVERT HEADWALLS - RIGHT ANGLE OUTLET - 2 :1 SLOPE
7/12	SD 6.31 (7 OF 8)	PIPE CULVERT HEADWALLS - RIGHT ANGLE OUTLET - 4 :1 SLOPE
7/12	SD 6.31 (8 OF 8)	PIPE CULVERT HEADWALLS - RIGHT ANGLE OUTLET - 6 :1 SLOPE

STRUCTURE DETAIL DRAWINGS

REVISION DATE	SD NUMBER	SUBJECT
DRAINAGE STRUCTURES (Continued)		
7/12	SD 6.32 (1 OF 8)	PIPE CULVERT HEADWALLS - 15° SKEW INLET
7/12	SD 6.32 (2 OF 8)	PIPE CULVERT HEADWALLS - 15° SKEW INLET - 2 :1 SLOPE
7/12	SD 6.32 (3 OF 8)	PIPE CULVERT HEADWALLS - 15° SKEW INLET - 4 :1 SLOPE
7/12	SD 6.32 (4 OF 8)	PIPE CULVERT HEADWALLS - 15° SKEW INLET - 6 :1 SLOPE
7/12	SD 6.32 (5 OF 8)	PIPE CULVERT HEADWALLS - 15° SKEW OUTLET
7/12	SD 6.32 (6 OF 8)	PIPE CULVERT HEADWALLS - 15° SKEW OUTLET - 2 :1 SLOPE
7/12	SD 6.32 (7 OF 8)	PIPE CULVERT HEADWALLS - 15° SKEW OUTLET - 4 :1 SLOPE
7/12	SD 6.32 (8 OF 8)	PIPE CULVERT HEADWALLS - 15° SKEW OUTLET - 6 :1 SLOPE
7/12	SD 6.33 (1 OF 8)	PIPE CULVERT HEADWALLS - 30° SKEW INLET
7/12	SD 6.33 (2 OF 8)	PIPE CULVERT HEADWALLS - 30° SKEW INLET - 2 :1 SLOPE
7/12	SD 6.33 (3 OF 8)	PIPE CULVERT HEADWALLS - 30° SKEW INLET - 4 :1 SLOPE
7/12	SD 6.33 (4 OF 8)	PIPE CULVERT HEADWALLS - 30° SKEW INLET - 6 :1 SLOPE
7/12	SD 6.33 (5 OF 8)	PIPE CULVERT HEADWALLS - 30° SKEW OUTLET
7/12	SD 6.33 (6 OF 8)	PIPE CULVERT HEADWALLS - 30° SKEW OUTLET - 2 :1 SLOPE
7/12	SD 6.33 (7 OF 8)	PIPE CULVERT HEADWALLS - 30° SKEW OUTLET - 4 :1 SLOPE
7/12	SD 6.33 (8 OF 8)	PIPE CULVERT HEADWALLS - 30° SKEW OUTLET - 6 :1 SLOPE
7/12	SD 6.34 (1 OF 8)	PIPE CULVERT HEADWALLS - 45° SKEW INLET
7/12	SD 6.34 (2 OF 8)	PIPE CULVERT HEADWALLS - 45° SKEW INLET - 2 :1 SLOPE
7/12	SD 6.34 (3 OF 8)	PIPE CULVERT HEADWALLS - 45° SKEW INLET - 4 :1 SLOPE
7/12	SD 6.34 (4 OF 8)	PIPE CULVERT HEADWALLS - 45° SKEW INLET - 6 :1 SLOPE
7/12	SD 6.34 (5 OF 8)	PIPE CULVERT HEADWALLS - 45° SKEW OUTLET
7/12	SD 6.34 (6 OF 8)	PIPE CULVERT HEADWALLS - 45° SKEW OUTLET - 2 :1 SLOPE
7/12	SD 6.34 (7 OF 8)	PIPE CULVERT HEADWALLS - 45° SKEW OUTLET - 4 :1 SLOPE
7/12	SD 6.34 (8 OF 8)	PIPE CULVERT HEADWALLS - 45° SKEW OUTLET - 6 :1 SLOPE
7/12	SD 6.35 (1 OF 2)	PIPE CULVERT HEADWALLS - MULTI-PIPE WITHOUT APRON
7/12	SD 6.35 (2 OF 2)	PIPE CULVERT HEADWALLS - MULTI-PIPE WITH OUTLET APRON
7/12	SD 6.36 (1 OF 4)	PIPE CULVERT HEADWALLS - OUTLET APRONS
7/12	SD 6.36 (2 OF 4)	PIPE CULVERT HEADWALLS - OUTLET APRON STEEL LIST - 2 :1 SLOPE
7/12	SD 6.36 (3 OF 4)	PIPE CULVERT HEADWALLS - OUTLET APRON STEEL LIST - 4 :1 SLOPE
7/12	SD 6.36 (4 OF 4)	PIPE CULVERT HEADWALLS - OUTLET APRON STEEL LIST - 6 :1 SLOPE
RETAINING WALLS		
1/15	SD 7.01 (1 OF 5)	RETAINING WALL (REINFORCED CONCRETE CANTILEVER)
1/15	SD 7.01 (2 OF 5)	RETAINING WALL (REINFORCED CONCRETE CANTILEVER)
1/15	SD 7.01 (3 OF 5)	RETAINING WALL (REINFORCED CONCRETE CANTILEVER)
1/15	SD 7.01 (4 OF 5)	RETAINING WALL (REINFORCED CONCRETE CANTILEVER)
1/15	SD 7.01 (5 OF 5)	RETAINING WALL (REINFORCED CONCRETE CANTILEVER)
9/10	SD 7.02 (1 OF 2)	RETAINING WALL (MASONRY CANTILEVER)
9/10	SD 7.02 (2 OF 2)	RETAINING WALL (MASONRY CANTILEVER)
SOUND BARRIER WALLS		
4/10	SD 8.01	SOUND BARRIER WALL (CONCRETE)
1/13	SD 8.02 (1 OF 2)	SOUND BARRIER WALL (MASONRY)
1/13	SD 8.02 (2 OF 2)	SOUND BARRIER WALL (MASONRY)
TRAFFIC STRUCTURES		
11/04	SD 9.01 (1 OF 5)	MEDIAN SIGN STRUCTURE (TWO SIDED) - ELEVATION & NOTES
4/00	SD 9.01 (2 OF 5)	MEDIAN SIGN STRUCTURE (TWO SIDED) - FOUNDATION DETAILS
4/00	SD 9.01 (3 OF 5)	MEDIAN SIGN STRUCTURE (TWO SIDED) - TYPE A SIGN MOUNT ASSEMBLY
4/00	SD 9.01 (4 OF 5)	MEDIAN SIGN STRUCTURE (TWO SIDED) - TYPE B SIGN MOUNT ASSEMBLY
4/00	SD 9.01 (5 OF 5)	MEDIAN SIGN STRUCTURE (TWO SIDED) - LIGHT SUPPORT AND MISC. DETAILS
11/04	SD 9.02 (1 OF 5)	MEDIAN SIGN STRUCTURE (ONE SIDED) - ELEVATION & NOTES
5/00	SD 9.02 (2 OF 5)	MEDIAN SIGN STRUCTURE (ONE SIDED) - FOUNDATION DETAILS
5/00	SD 9.02 (3 OF 5)	MEDIAN SIGN STRUCTURE (ONE SIDED) - TYPE A SIGN MOUNT ASSEMBLY
5/00	SD 9.02 (4 OF 5)	MEDIAN SIGN STRUCTURE (ONE SIDED) - TYPE B SIGN MOUNT ASSEMBLY
5/00	SD 9.02 (5 OF 5)	MEDIAN SIGN STRUCTURE (ONE SIDED) - LIGHT SUPPORT AND MISC. DETAILS
3/11	SD 9.10 (1 OF 5)	TUBULAR SIGN STRUCTURES - TUBULAR CANTILEVER - GENERAL PLAN
3/11	SD 9.10 (2 OF 5)	TUBULAR SIGN STRUCTURES - TUBULAR CANTILEVER - FOUNDATION DETAILS
3/11	SD 9.10 (3 OF 5)	TUBULAR SIGN STRUCTURES - TUBULAR CANTILEVER - POST AND MAST ARM DETAILS
3/11	SD 9.10 (4 OF 5)	TUBULAR SIGN STRUCTURES - TUBULAR CANTILEVER - SIGN SUPPORT DETAILS
3/11	SD 9.10 (5 OF 5)	TUBULAR SIGN STRUCTURES - TUBULAR CANTILEVER - LIGHT SUPPORT DETAILS
3/11	SD 9.20 (1 OF 5)	TUBULAR SIGN STRUCTURES - TUBULAR FRAME - GENERAL PLAN
3/11	SD 9.20 (2 OF 5)	TUBULAR SIGN STRUCTURES - TUBULAR FRAME - FOUNDATION DETAILS
3/11	SD 9.20 (3 OF 5)	TUBULAR SIGN STRUCTURES - TUBULAR FRAME - POST AND MAST ARM DETAILS
3/11	SD 9.20 (4 OF 5)	TUBULAR SIGN STRUCTURES - TUBULAR FRAME - SIGN SUPPORT DETAILS
3/11	SD 9.20 (5 OF 5)	TUBULAR SIGN STRUCTURES - TUBULAR FRAME - LIGHT SUPPORT AND MISC. DETAILS
8/02	SD 9.50 (1 OF 5)	VARIABLE MESSAGE SIGN - TUBULAR FRAME - PLAN & ELEVATION
8/02	SD 9.50 (2 OF 5)	VARIABLE MESSAGE SIGN - TUBULAR FRAME - MOUNTING DETAILS
8/02	SD 9.50 (3 OF 5)	VARIABLE MESSAGE SIGN - TUBULAR FRAME - MOUNTING & SIGN BRACKET DETAILS
7/00	SD 9.50 (4 OF 5)	VARIABLE MESSAGE SIGN - CATWALK - HANDRAIL DETAILS
7/00	SD 9.50 (5 OF 5)	VARIABLE MESSAGE SIGN - CATWALK - MISCELLANEOUS DETAILS
8/02	SD 9.51	DUAL VARIABLE MESSAGE SIGN - TUBULAR FRAME
5/07	SD 9.52 (1 of 5)	DYNAMIC MESSAGE SIGN - TUBULAR FRAME - PLAN & ELEVATION
5/07	SD 9.52 (2 of 5)	DYNAMIC MESSAGE SIGN - TUBULAR FRAME - MOUNTING DETAILS
5/07	SD 9.52 (3 of 5)	DYNAMIC MESSAGE SIGN - TUBULAR FRAME - MOUNTING DETAILS
5/07	SD 9.52 (4 of 5)	DYNAMIC MESSAGE SIGN - CATWALK - HANDRAIL DETAILS
5/07	SD 9.52 (5 of 5)	DYNAMIC MESSAGE SIGN - CATWALK - MISCELLANEOUS DETAILS
1/15	SD 9.53 (1 of 5)	DMS (VARIABLE TILT CABINET) - TUBULAR FRAME - PLAN & ELEVATION
1/15	SD 9.53 (2 of 5)	DMS (VARIABLE TILT CABINET) - TUBULAR FRAME - MOUNTING DETAILS
1/15	SD 9.53 (3 of 5)	DMS (VARIABLE TILT CABINET) - TUBULAR FRAME - MOUNTING DETAILS
1/15	SD 9.53 (4 of 5)	DMS (VARIABLE TILT CABINET) - CATWALK - HANDRAIL DETAILS
1/15	SD 9.53 (5 of 5)	DMS (VARIABLE TILT CABINET) - CATWALK - MISCELLANEOUS DETAILS

ADOT STANDARD DRAWINGS
REVISION DATES and STANDARD NO.'s REVIEW

	NAME	DATE
STRUCTURES Standards	JFS	06/20/2016

PROJECT NO. 089A CN 540 H7775 01 C — 1D OF 27

RECORD DRAWING DATA — FEDERAL AID NO. A89-C(206)T — REC. DWG. DATE — OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	2	27	
		089A CN 540			

MIDPOINT OF PROJECT

Central Zone
State Plane Coordinates

X=745283
Y=2085365

DESIGN DATA

2013 AADT = 412
2030 AADT = 1,300
Design Speed = 65 & 75 MPH

REFERENCES

E4A & 95D
FL-E-4B-AFE 8981
R05-037-2(9)

LENGTH OF PROJECT

MP 540.82 to MP 555.36

Sta 154+65 To Sta 922+77

Gross Length = 76,812' = 14.54 Miles

Box Culvert Extension 1 = 300'
Box Culvert Extension 2 = 300'
Box Culvert Extension 3 = 300'
Box Culvert Extension 4 = 300'
Box Culvert Extension 5 = 300'

Net Length = 1,500' =0.28 Miles

EARTHWORK QUANTITIES

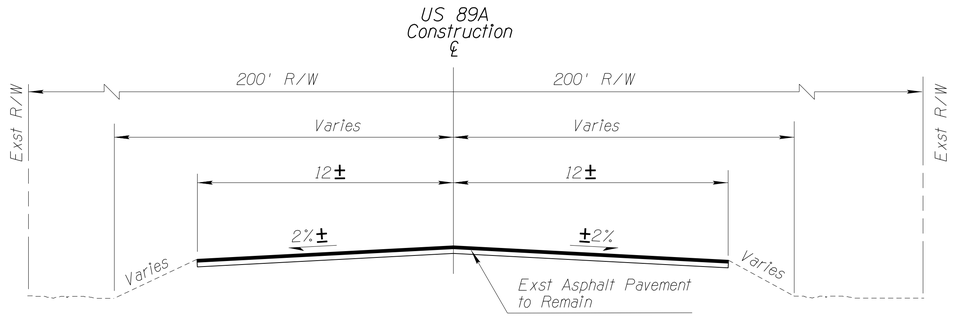
Berm Embankment	*2,380 CY*
Concrete Box Culvert	
Drainage Excavation	*700 CY*
Riprap Ditch Excavation	*75 CY*
Structural Excavation	*1420 CY*
Structure Backfill	*925 CY*
Balance	
Borrow (In Place)	*1110 CY*

No Shrink / Swell Or Compaction Factors Have Been Included In The Earthwork Quantity

Drainage Excavation Includes Material To Be Removed From The Interior Of The Box Culverts

INDEX OF SHEETS

Sheet No.	Drawing No.	Sheet Type
1	---	*Face Sheet*
1A, 1B-1, 1B-2, 1D	*1A, 1B-1, 1B-2, 1D*	*ADOT Standard Drawings*
2	*G-01.01*	*Design Sheet*
3	*G-02.01*	*Box Culvert Summary Sheets*
4	*C-1.01*	*Culvert Survey Control Sheet*
5	*C-2.01*	*Detail Sheets*
6-8	*D-01.01 - D-01.03*	*Plan Sheets*
9-13	*D-02.01 - D-02.05*	*Culvert Plan & Profile Detail Sheets*
14	*S-01.01*	*Box Culvert Extensions General Notes & Quantities*
15	*S-01.02*	*Box Culvert Extensions Sections & Details*
16	*TN-01.01*	*Pavement Marking & Signing General Notes*
17-22	*T-01.01 - T-01.06*	*Maintenance of Traffic Plans*
23-27	*E-01.01 - E-01.05*	*Erosion Control Plans*



BC Extension #1: Sta 155+64.97; MP 540.84
BC Extension #2: Sta 505+48.26; MP 547.45
BC Extension #3: Sta 631+45.20; MP 549.85
BC Extension #4: Sta 703+95.10; MP 551.24
BC Extension #5: Sta 921+77.37; MP 555.34

TYPICAL SECTION

NTS

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.

The project roadway shall be striped by the contractor in accordance with the current edition of the Signing and Marking Standard Drawings (M&S-Series).

Bench markers will be furnished by the state and shall be placed by the contractor: Std C-21.20.

The average project elevation is 4420'.

New RIght of Way or easements are not required.

For Right-of-Way information not shown, see Right of Way plans No. D-3-T-123.

Slope rounding shall be applied per Std C-02 series unless otherwise noted.

The information on these drawings showing the type, size and location of existing utilities is based on the best information available. It is the contractor's responsibility to determine the exact location and protect all utilities that are to remain. Unless otherwise noted or specified, all utilities within the Right-of-Way are to remain.

Overhead power lines exist within the limits of the project. The contractor shall exercise extreme caution and comply with OSHA and line owner requirements when working in the vicinity of the overhead power lines.

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

Design Sheet

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	G-01.01
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

ADOT-subdue.1-ScreenREF.tbl

Plotted By: default at 1:25:44 PM P:\Jobs\CK Arizona\CK2015Proj\2015-04 2011-25TE ADOT District Minor On-Call US89A MP536 to MP564.71\Job Products\Plans\100%\2_h6896ds1.dgn

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	3	27	

089A CN 540

DESCRIPTION																		END TREATMENT												LENGTH OF BARREL & BARREL EXTENSIONS										APPROXIMATE QUANTITIES									
																		WINGS			APRONS		MISCELLANEOUS																													
Plan Reference Number ◯ & ◉	Structure Number	New	Extend	Number of Barrels	Barrel Span (0.0)	Barrel Height (0.0)	Culvert Length (0.0)	Skew (Degree) (0)	SD 6.01 Miscellaneous Details	SD 6.01 Extension Details	◪ Standard or Detail	▼ Location	Inlet Wings	Outlet Wings	◪ Standard or Detail	Apron	◪ Standard or Detail	Scour/Bank Protection	◪ Standard or Detail	Energy Dissipators	Detail	Construction ℄	Existing & Construction ℄	Extension Length	Barrel Length	Barrel Length	Linear Feet (0.0)	▲ Left of ℄	▲ Right of ℄	I	II	III	IV	V	V	IV	III	II	I	◑ Reinforcing Steel (0)	◑ Place Dowels	◑ Class S Concrete f'c=3,000 PSI	◑ Remove Str Concrete (0)	◑ Structural Excavation (0)	◑ Structure Backfill (0)	Berm Embankment (0)	Dike Embankment (0)	Drainage Excavation (0)	REMARKS
BE1	5203		X	2	10	8	61.3	30°43'Lt	X	X	SD 6.02	Left		X	SD 6.08	X	SD 6.11													30.9																							
Station:		155+64.97										Right	X		SD 6.08																						30.4													
Existing:		2 - 10' x 8' x 40.5' RCBC																																			Box Culvert Total													
BE2	5204		X	2	10	10	57.5	01°38'Lt	X	X	SD 6.02	Left		X	SD 6.08	X	SD 6.11													29.8																							
Station:		505+48.26										Right	X		SD 6.08																						27.7													
Existing:		2 - 10 x10 x 30.5' RCBC																																			Box Culvert Total													
BE3	5205		X	2	10	8	51.6	29°18'Lt	X	X	SD 6.02	Left		X	SD 6.08	X	SD 6.11													25.6																							
Station:		631+45.20										Right	X		SD 6.08																						26.0													
Existing:		2 - 10 x 8' x 48.8' RCBC																																			Box Culvert Total													
BE4	5206		X	2	10	8	62.1	29°37'Lt	X	X	SD 6.02	Left		X	SD 6.08	X	SD 6.11													29.9																							
Station:		703+95.10										Right	X		SD 6.08																						32.2													
Existing:		2 - 10' x 8 x 38.6' RCBC																																			Box Culvert Total													
BE5	5207		X	2	10	8	58.0	0°07'Rt	X	X	SD 6.02	Left		X	SD 6.08	X	SD 6.11													28.3																							
Station:		921+77.37										Right	X		SD 6.08																						29.7													
Existing:		2 - 10' x 8' x 29.50' RCBC																																			Box Culvert Total													
																																					Sheet Total:	135575	140	974	46	1420	925	2380	0	480				

NOTE:
The zeros in parenthesis (0, 0.0 & 0.00) indicate the dimensional precision for that column.

◑ Totals shown for the box culvert include the quantities for the headwalls, wings, aprons, curbs cut- off walls and laps at construction joints

NOTE:
For structural excavation, structure backfill placement and measurement, see structure detail drawing SD 6.01 (4 of 5)

◪ Bridge group structure detail drawings SD 6.01 to SD 6.11

▲ Construction ℄ Looking Ahead

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

REINFORCED CONC BOX CULVERT AND BOX CULVERT EXTENSION SUMMARY SHEET

23785 JAMES F. SCHUMANN Date Signed 06/21/16 ARIZONA, U.S.A.
EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	G-02.01

TRACS NO. H7775 01C | A89-C(206)T | ___ OF ___

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

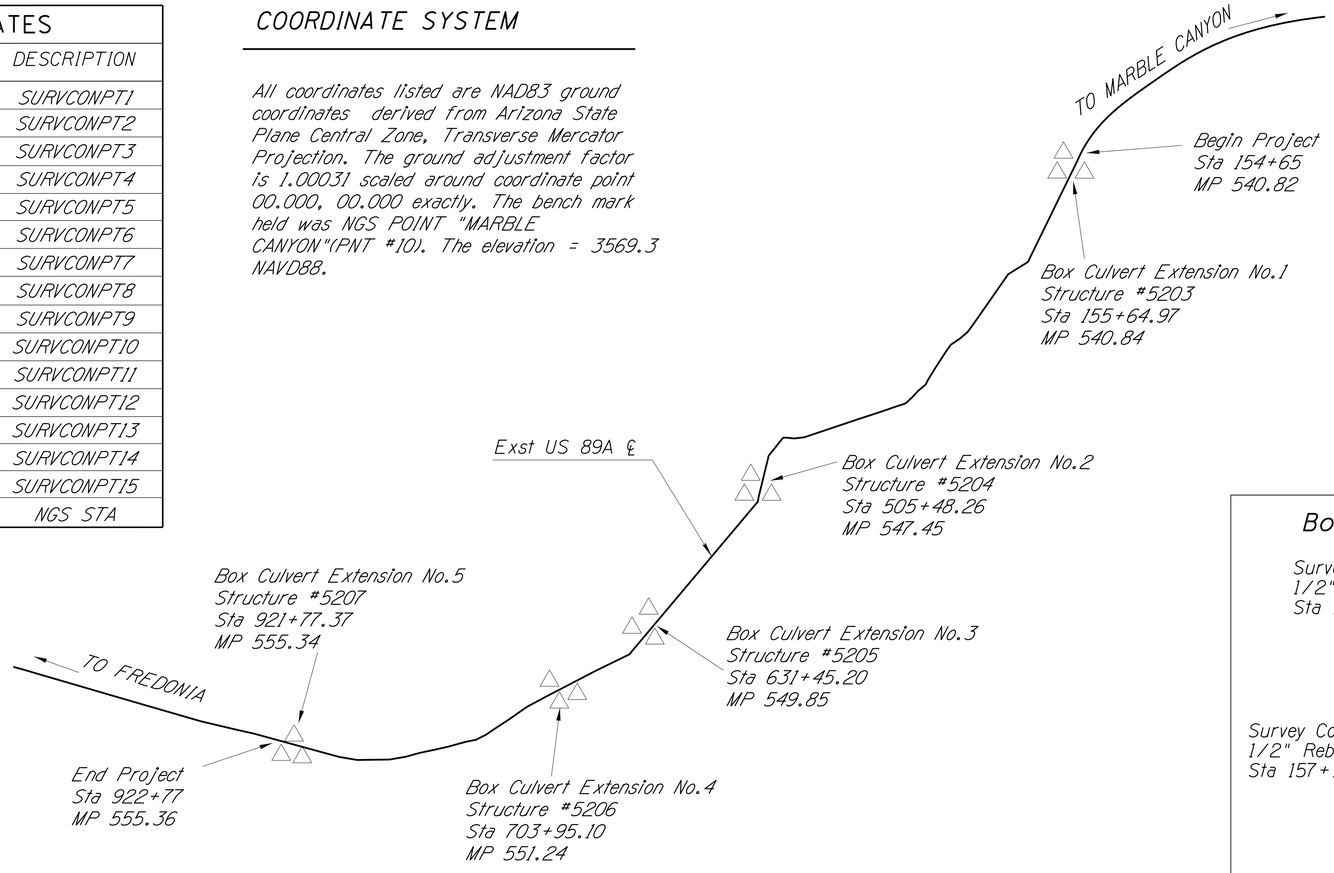
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	4	27	
		089A CN 540			

POINT TABLE, GROUND COORDINATES

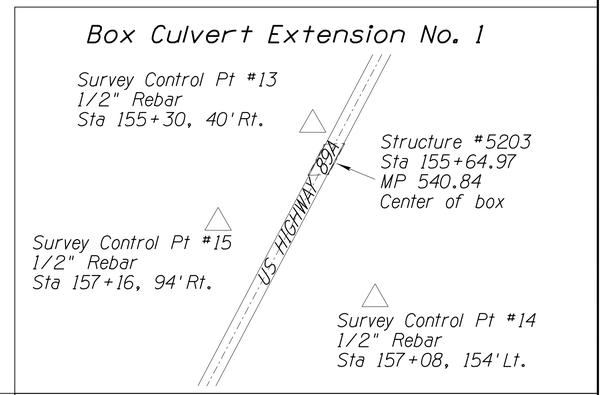
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	2070111.695	714031.330	4852.19	SURVCONPT1
2	2070171.933	713810.467	4845.94	SURVCONPT2
3	2070300.704	713987.654	4859.64	SURVCONPT3
4	2074485.085	734206.642	4541.22	SURVCONPT4
5	2074386.970	734043.818	4547.58	SURVCONPT5
6	2074472.252	733959.389	4547.68	SURVCONPT6
7	2078618.459	740019.480	4370.23	SURVCONPT7
8	2078466.917	739905.991	4368.65	SURVCONPT8
9	2078350.523	739993.261	4367.61	SURVCONPT9
10	2088465.790	747642.992	4162.33	SURVCONPT10
11	2088297.309	747660.034	4173.24	SURVCONPT11
12	2088331.948	747506.313	4160.30	SURVCONPT12
13	2111759.076	770396.743	3706.46	SURVCONPT13
14	2111511.049	770485.371	3705.71	SURVCONPT14
15	2111619.778	770262.167	3710.63	SURVCONPT15
16	2117141.128	781969.483	3569.30	NGS STA

COORDINATE SYSTEM

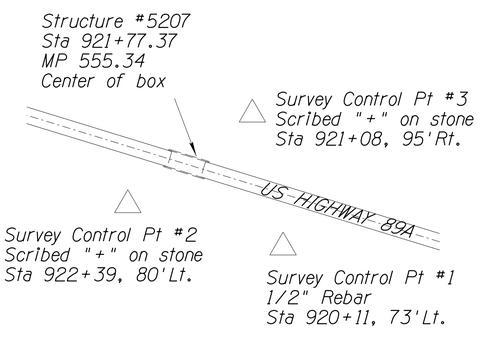
All coordinates listed are NAD83 ground coordinates derived from Arizona State Plane Central Zone, Transverse Mercator Projection. The ground adjustment factor is 1.00031 scaled around coordinate point 00.000, 00.000 exactly. The bench mark held was NGS POINT "MARBLE CANYON"(PNT #10). The elevation = 3569.3 NAVD88.



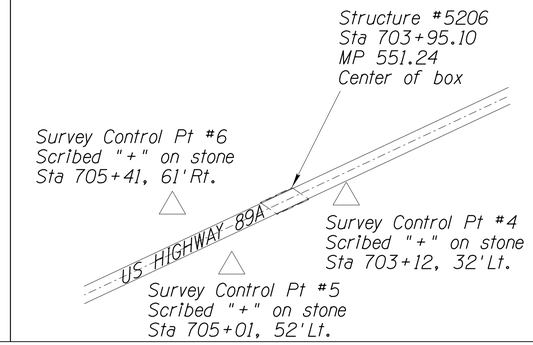
Box Culvert Extension No. 1



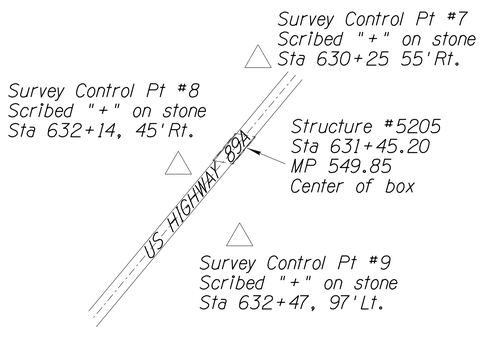
Box Culvert Extension No. 5



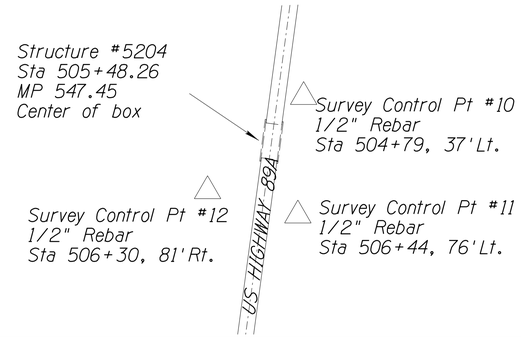
Box Culvert Extension No. 4



Box Culvert Extension No. 3



Box Culvert Extension No. 2



	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

CULVERT SURVEY CONTROL

23785 JAMES F. SCHUMANN Date Signed 06/21/16 REGISTERED ARIZONA, U.S.A. EXPIRES 06/30/2016

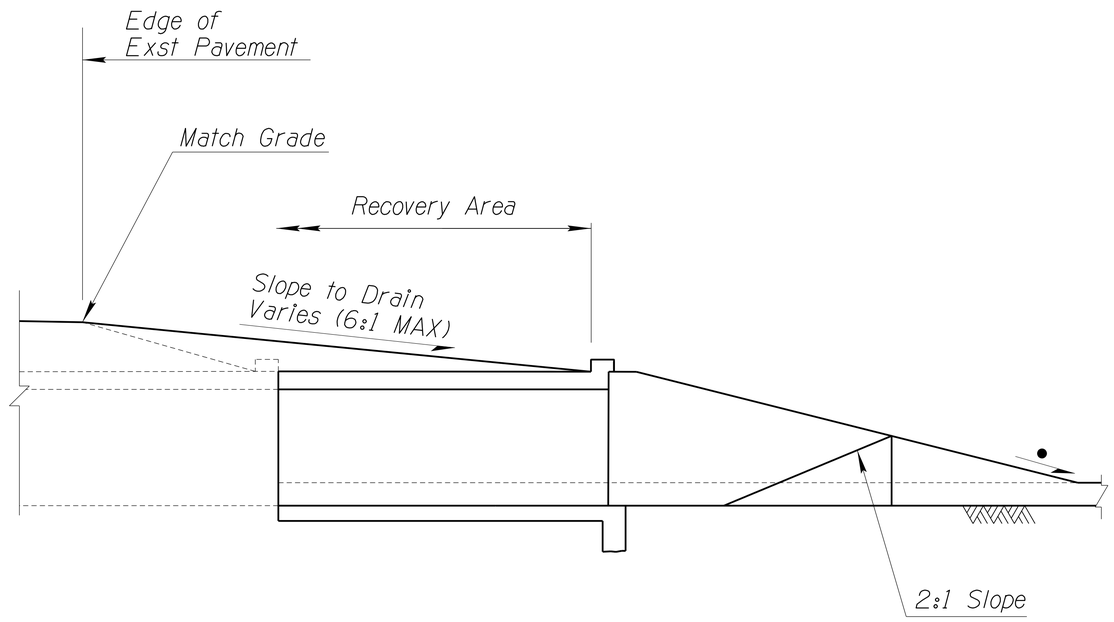
ROUTE	LOCATION		
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)		DWG. NO. C-01.01
TRACS NO. H7775 01C		A89-C(206)T	____ OF ____

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

ADOT_subdue1_ScreenREF.tbl

Plotted By: default at 1:29:43 PM P:\Jobs\CK Arizona\CK2015Proj\2015-04 2011-25TE ADOT District Minor On-Call US89A MP536 to MP564.71\Job Products\Plans\100%\4_h7775Geol_4_of_27.dgn

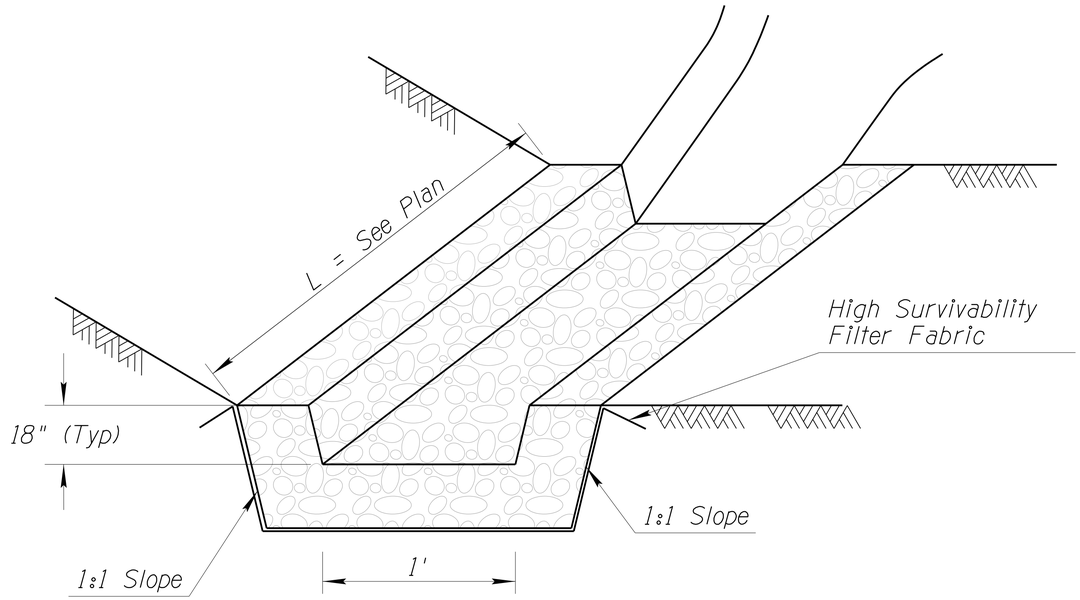
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	5	27	
		089A CN 540			



SECTION A-A
(FOR CBC)

DETAIL A

For Information Not Shown
See ADOT C-03.10



D_{50} =6" (Gradation B, 810-2.03)

18" Thick

Hand Placed Riprap

DETAIL B

RIPRAP DITCH

Riprap Quantities	
Location	*Quantity (CY)*
BE1	*20*
BE2	*24*
BE5	*31*
Total	*75*

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

DETAIL SHEET
DETAILS A AND B

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	C-2.01
TRACS NO. H7775 01C	A89-C(206)T	____ OF ____

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

ADOT_subdet_1_ScreenREF.tbl

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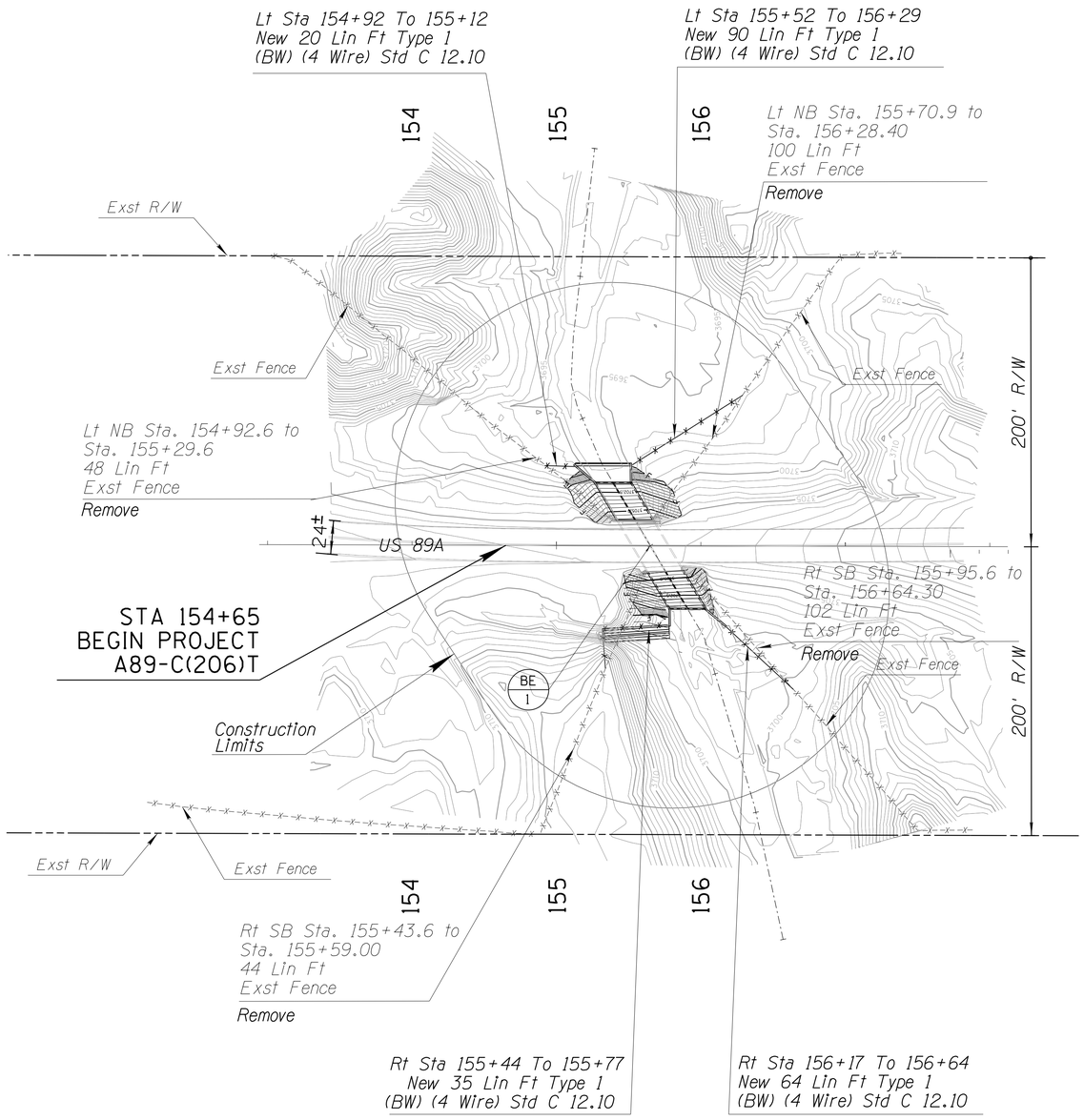
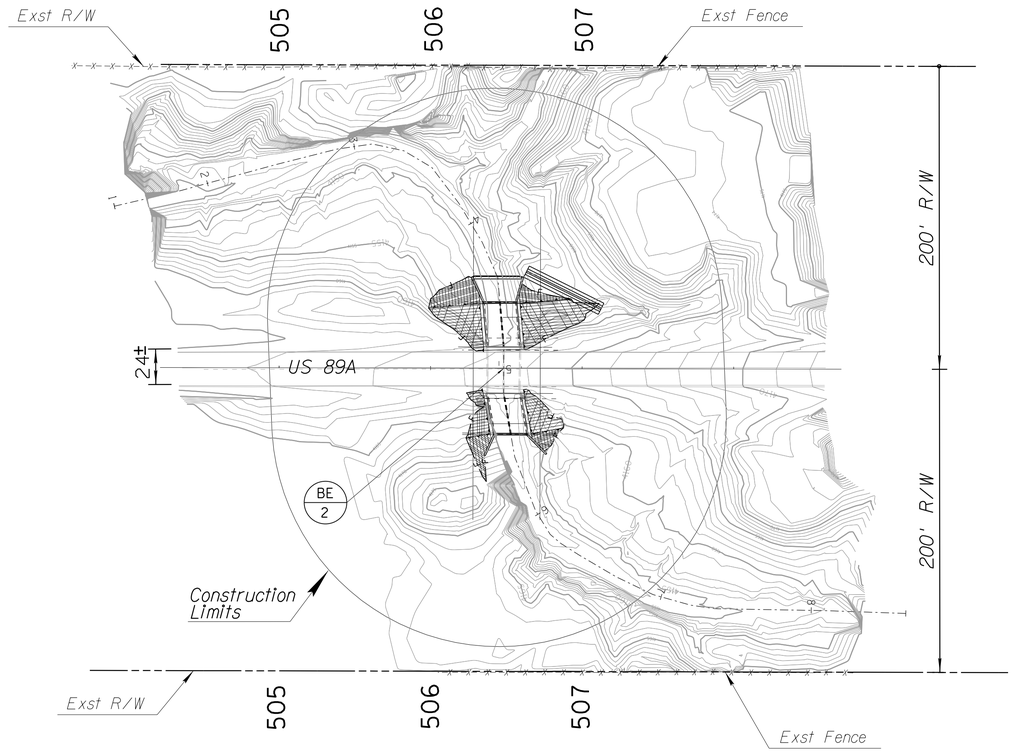
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	6	27	
		089A CN 540			



Box Culvert Extension No.1
SN 5203
Sta 155+64.97
MP 540.84

SCALE : 1"=50'



Box Culvert Extension No.2
SN 5204
Sta 505+48.26
MP 547.45

SCALE : 1"=50'

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

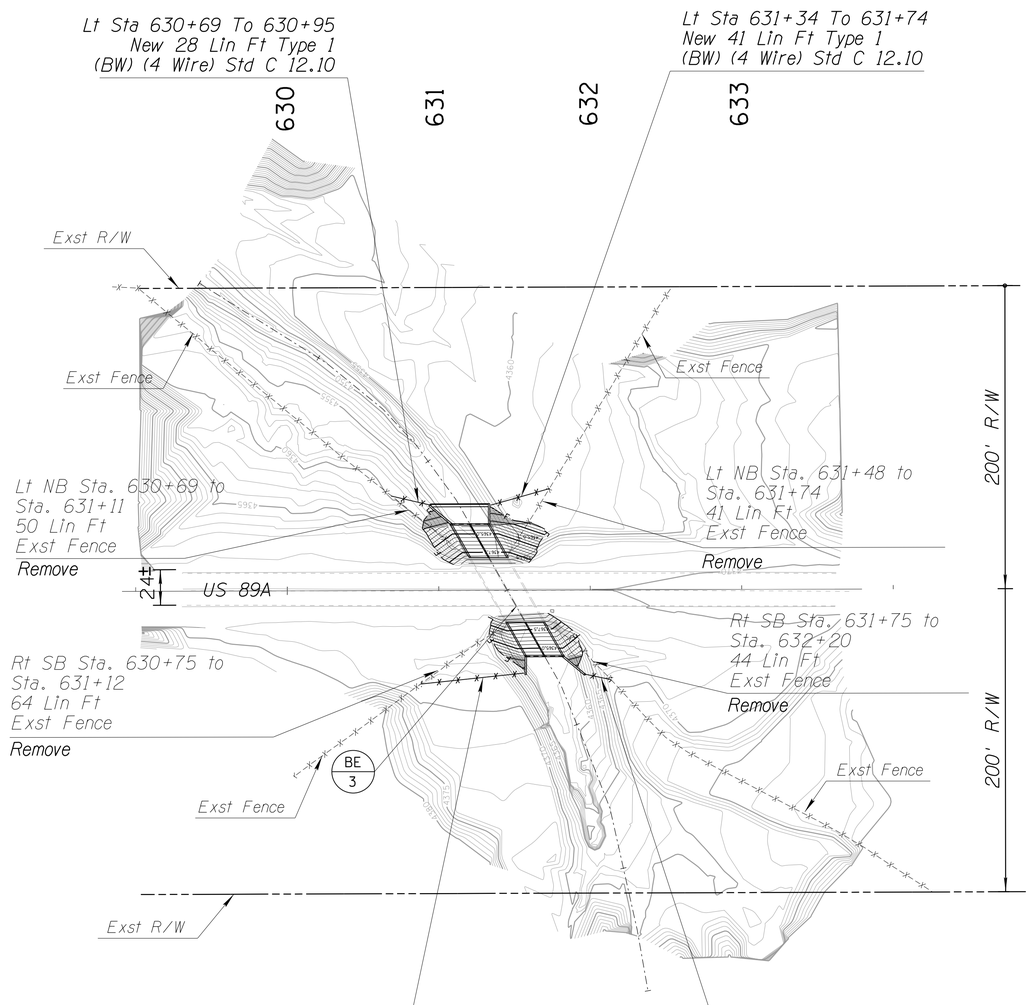
PLAN SHEET
STA 155+65 & 505+48

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

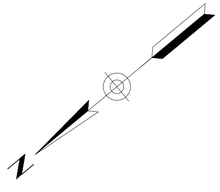
ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	D-01.01
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

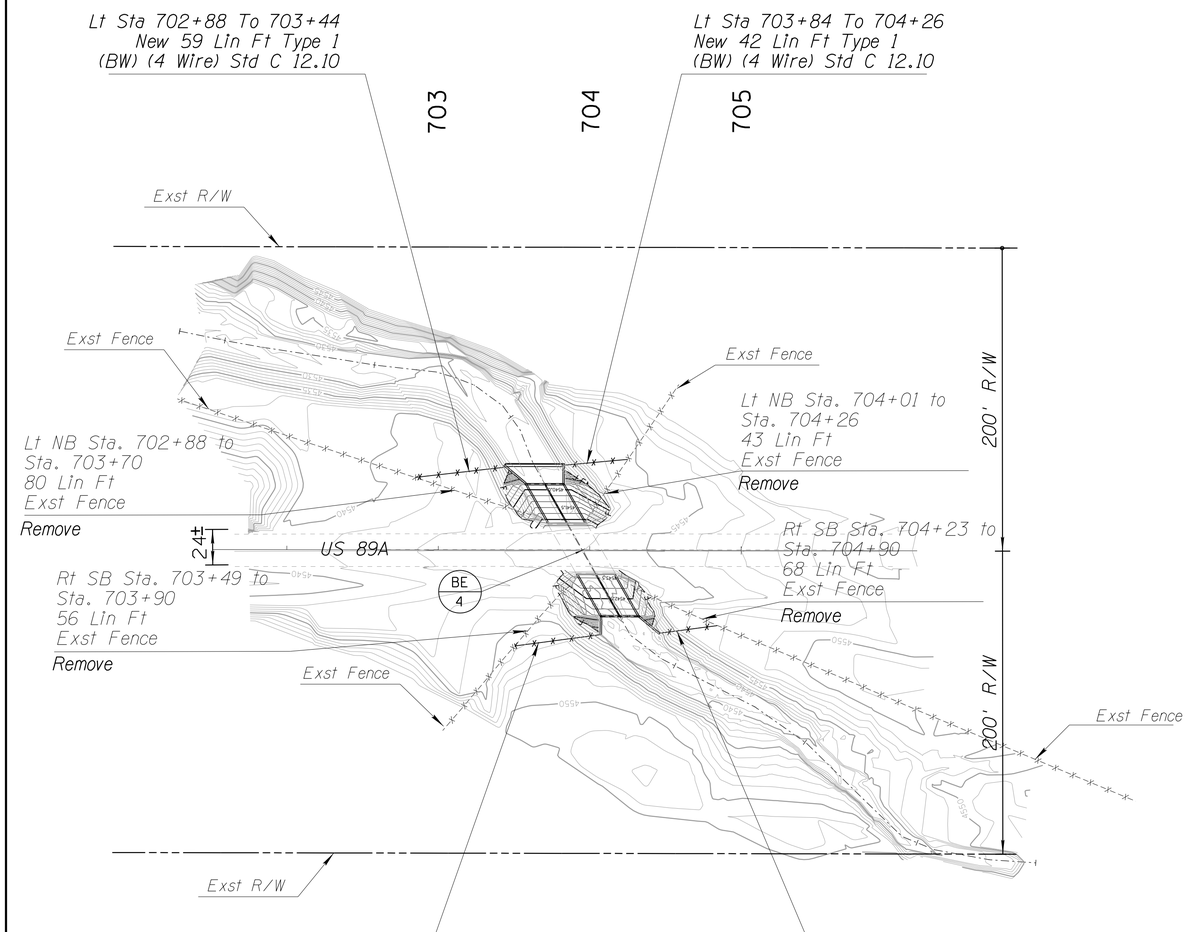
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	7	27	
		089A CN 540			



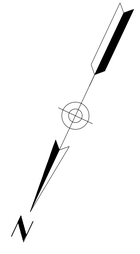
Box Culvert Extension No.3
SN 5205
Sta 631+45.20
MP 549.85



SCALE : 1" = 50'



Box Culvert Extension No.4
SN 5206
Sta 703+95.10
MP 551.24



SCALE : 1" = 50'

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

PLAN SHEET
STA 631+45 & 703+95

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	D-01.02
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

ADOT_subdue.1.ScreenREF.tbl

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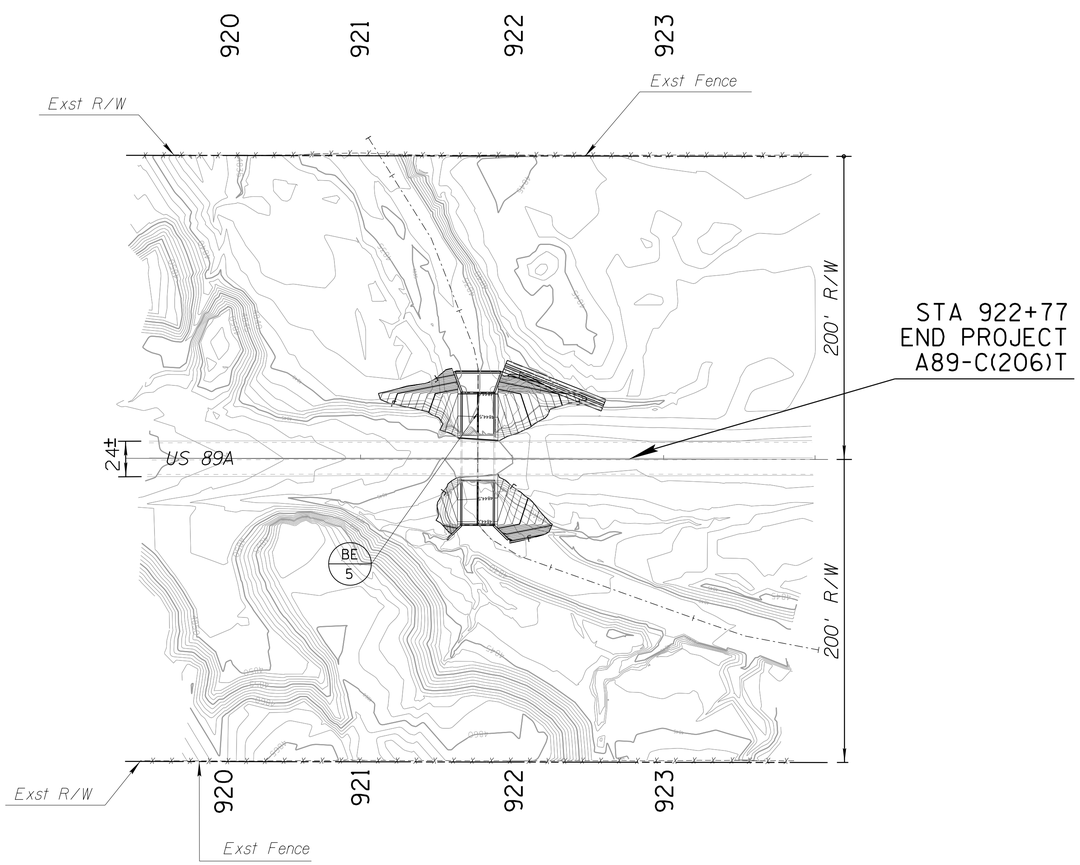
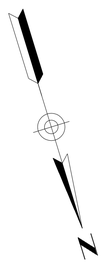
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	8	27	
		089A CN 540			





Box Culvert Extension No.5
SN 5207
Sta 921+77.37
MP 555.34

SCALE : 1" = 50'

THIS SIDE INTENTIONALLY LEFT BLANK

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

PLAN SHEET
STA 921+77

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO. D-01.03
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

ADOT_subdue.1_ScreenREF.tbl

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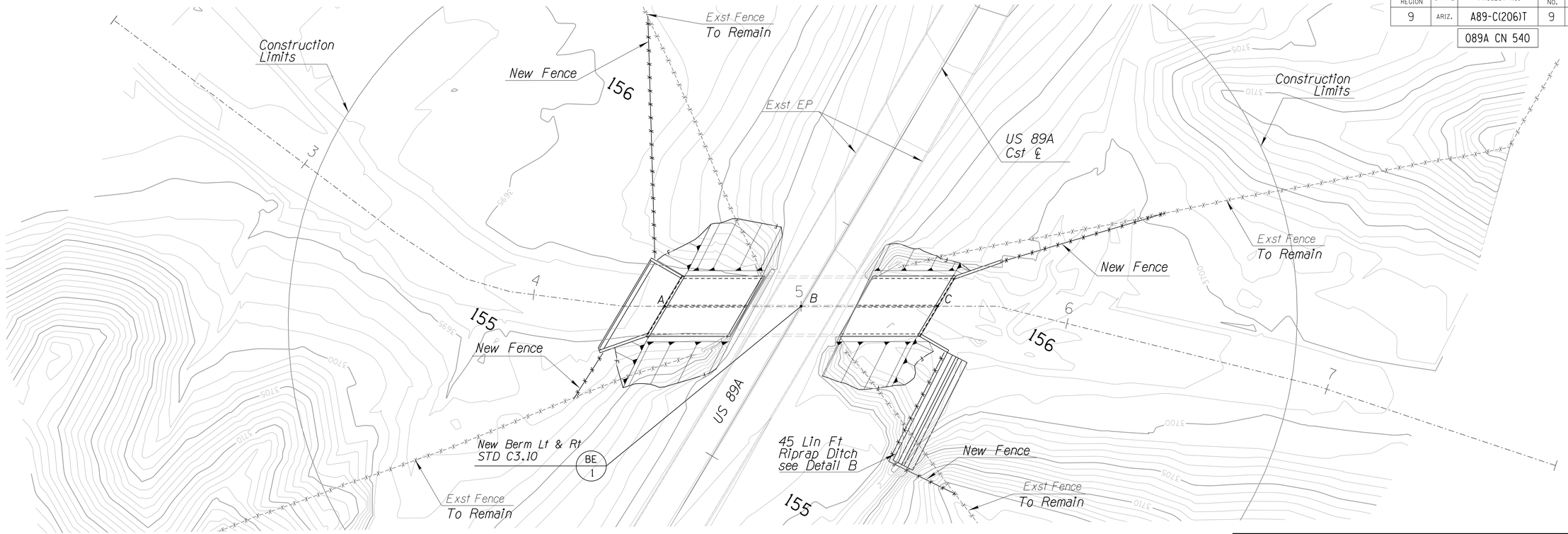
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	9	27	
		089A CN 540			



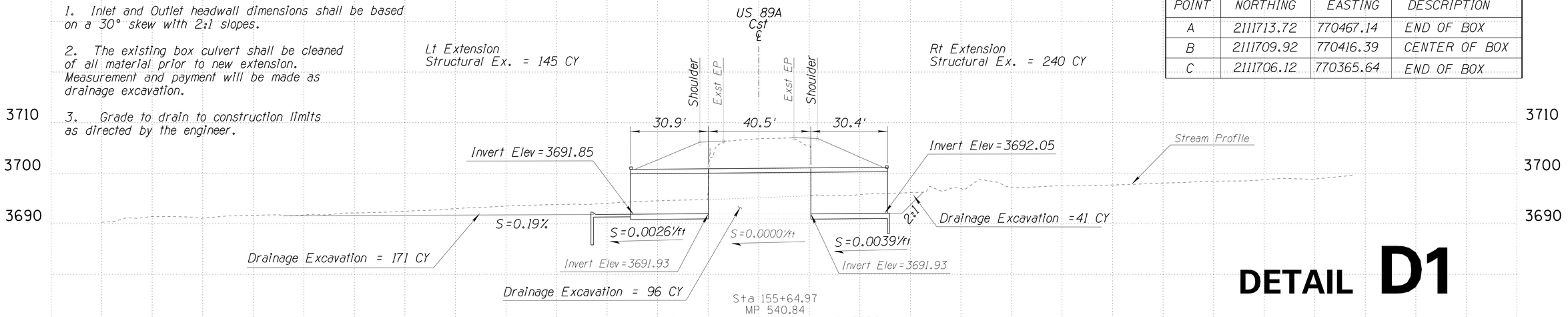
NOTES:

1. Inlet and Outlet headwall dimensions shall be based on a 30° skew with 2:1 slopes.

2. The existing box culvert shall be cleaned of all material prior to new extension. Measurement and payment will be made as drainage excavation.

3. Grade to drain to construction limits as directed by the engineer.

POINT DATA			
POINT	NORTHING	EASTING	DESCRIPTION
A	2111713.72	770467.14	END OF BOX
B	2111709.92	770416.39	CENTER OF BOX
C	2111706.12	770365.64	END OF BOX



Sta 155+64.97
MP 540.84
Existing 2 - 10' x 8' x 40.5' RCBC
Skew = 30°43' LT
Remove part of Exst Wingwalls, Headwall and Cut-off wall

Extend 30.9' Lt Skew 30° 43' Lt
Extend 30.4' Rt Skew 30° 43' Lt
New Concrete Apron Lt
New Wingwalls Lt and Rt

DETAIL D1

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

CULVERT DETAIL SHEET
US 89A Sta 155+64.97

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

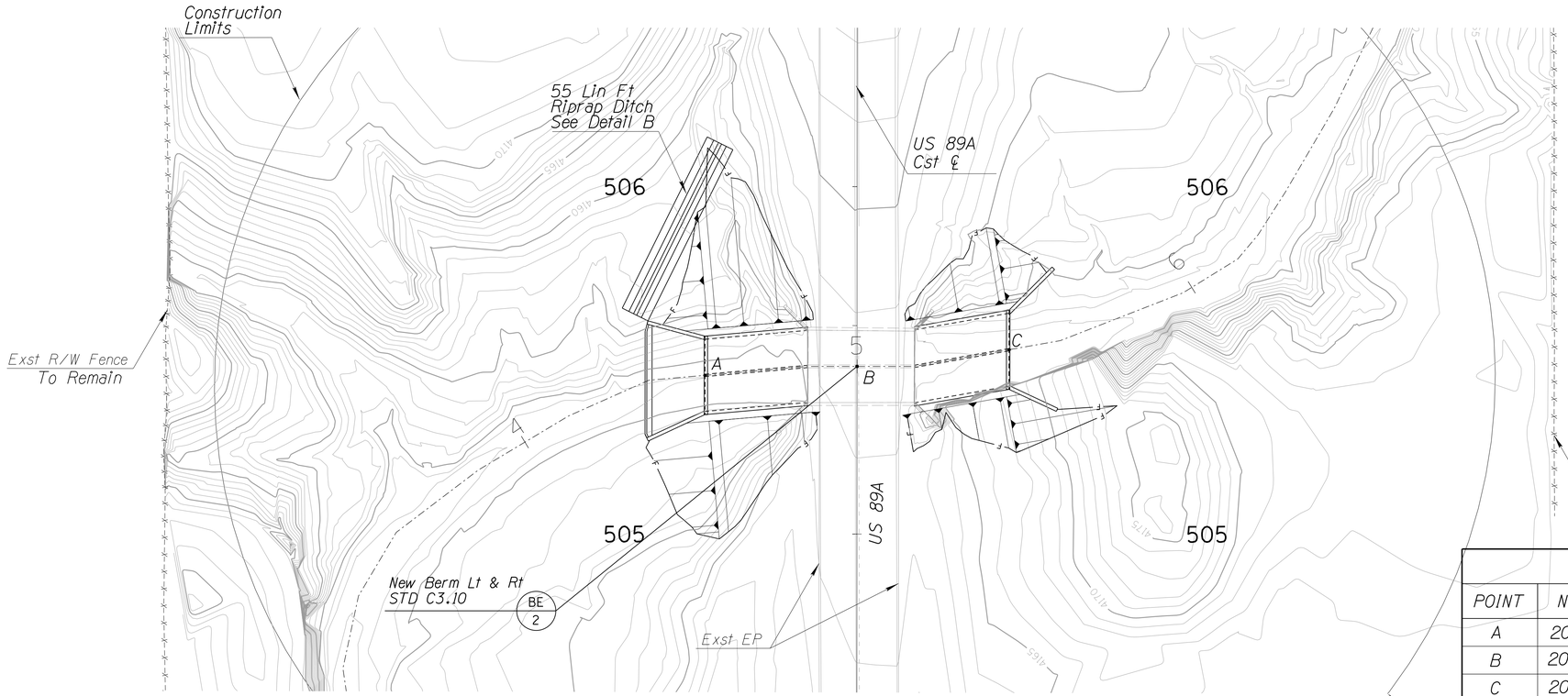
ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	D-02.01
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

ADOT_subdiv_1_ScreenREF.tbl

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	10	27	

089A CN 540



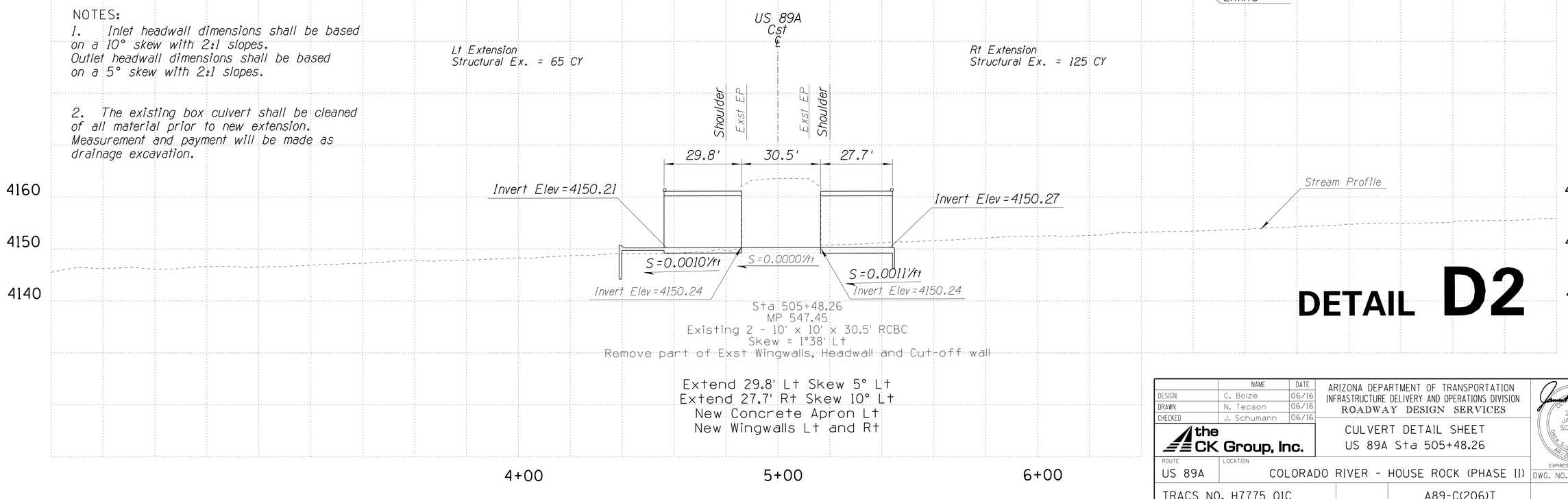
POINT DATA

POINT	NORTHING	EASTING	DESCRIPTION
A	2088399.14	747640.79	END OF BOX
B	2088402.52	747597.15	CENTER OF BOX
C	2088403.75	747553.15	END OF BOX

NOTES:

1. Inlet headwall dimensions shall be based on a 10° skew with 2:1 slopes. Outlet headwall dimensions shall be based on a 5° skew with 2:1 slopes.

2. The existing box culvert shall be cleaned of all material prior to new extension. Measurement and payment will be made as drainage excavation.



Sta 505+48.26
MP 547.45
Existing 2 - 10' x 10' x 30.5' RCBC
Skew = 1°38' Lt
Remove part of Exst Wingwalls, Headwall and Cut-off wall

Extend 29.8' Lt Skew 5° Lt
Extend 27.7' Rt Skew 10° Lt
New Concrete Apron Lt
New Wingwalls Lt and Rt

DETAIL D2

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

CULVERT DETAIL SHEET
US 89A Sta 505+48.26

23785 JAMES F. SCHUMANN Date Signed 06/21/16 ARIZONA, U.S.A.
EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO. D-02.02
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

ADOT_subdue_1_ScreenREF.tbl

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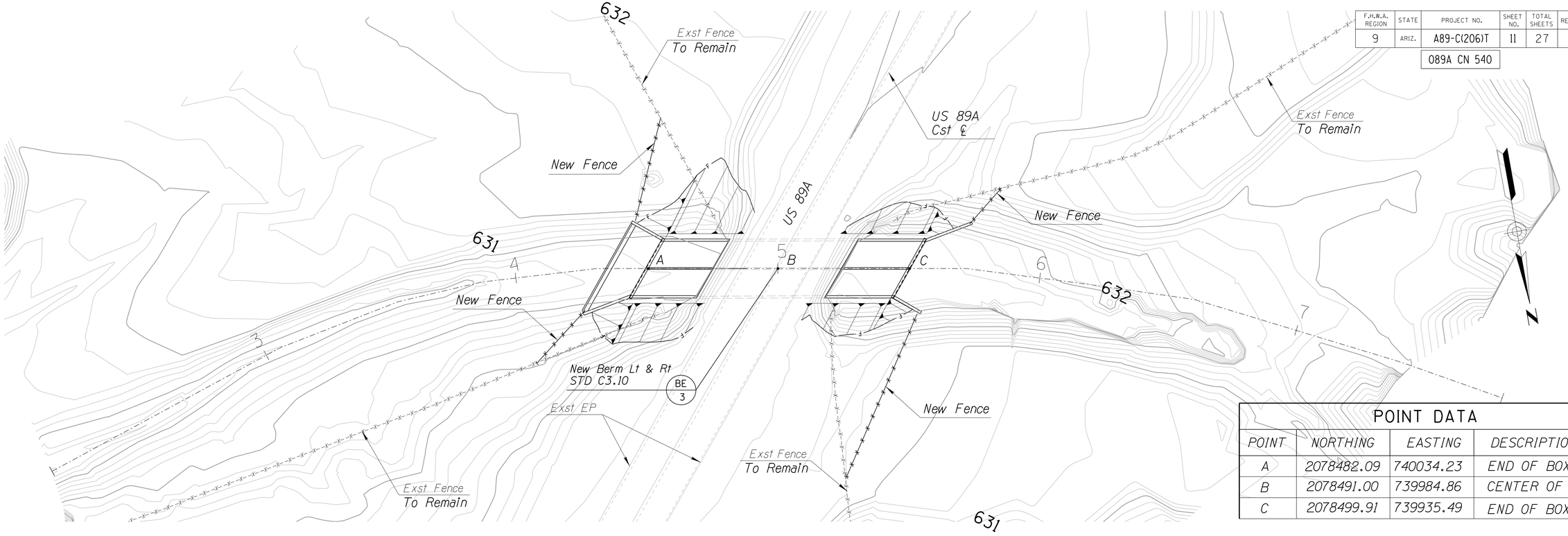
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	11	27	

089A CN 540

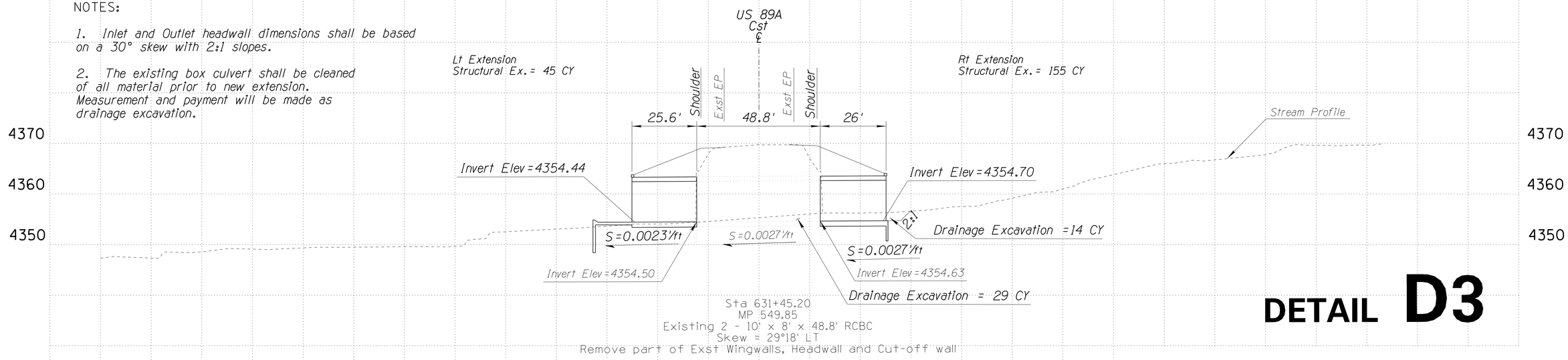


POINT DATA			
POINT	NORTHING	EASTING	DESCRIPTION
A	2078482.09	740034.23	END OF BOX
B	2078491.00	739984.86	CENTER OF BOX
C	2078499.91	739935.49	END OF BOX

NOTES:

1. Inlet and Outlet headwall dimensions shall be based on a 30° skew with 2:1 slopes.

2. The existing box culvert shall be cleaned of all material prior to new extension. Measurement and payment will be made as drainage excavation.



Sta 631+45.20
MP 549.85
Existing 2 - 10' x 8' x 48.8' RCBC
Skew = 29°18' LT
Remove part of Exst Wingwalls, Headwall and Cut-off wall

Extend 25.6' Lt Skew 29° 18" Lt
Extend 26.0' Rt Skew 29° 18" Lt
New Concrete Apron Lt
New Wingwalls Lt and Rt

DETAIL D3

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

CULVERT DETAIL SHEET
US 89A Sta 631+45.20

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

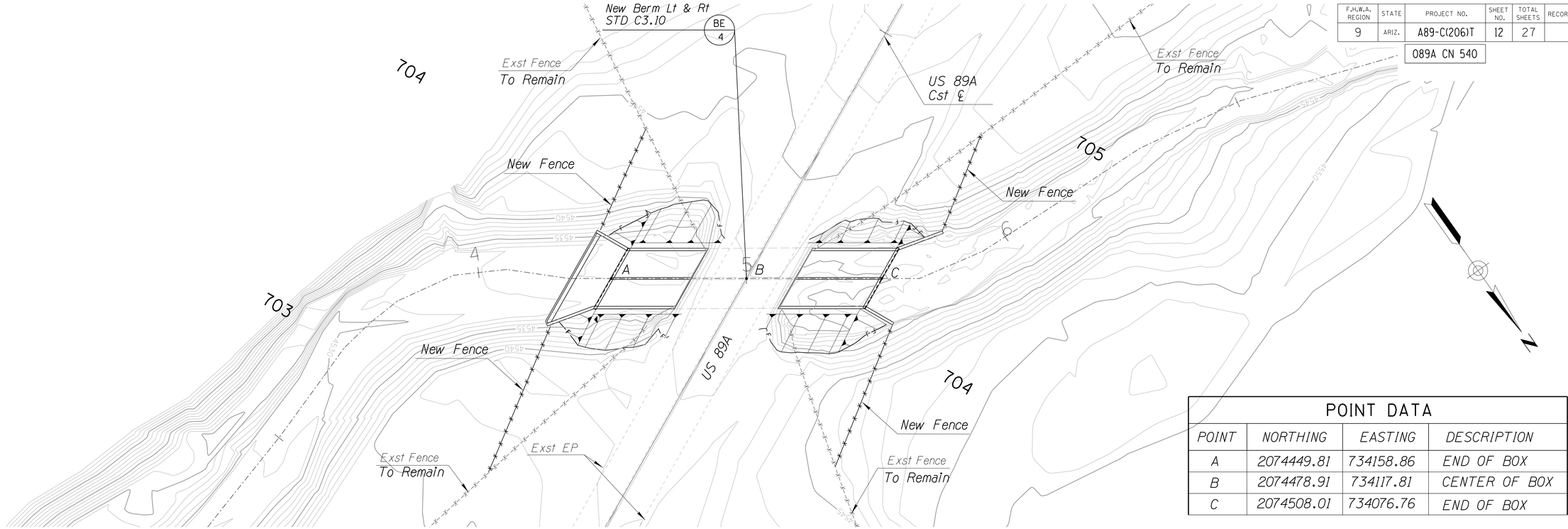
ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	D-02.03
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

ADOT_subdue_1_ScreenREF.tbl

Plotted By: default at 2:28:21 PM P:\Jobs\CK Arizona\CK2015Proj\2015-04 2011-25TE ADOT District Minor On-Call US89A MP536 to MP564.71\Job Products\Plans\100%\11_h7775D3.dgn

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	12	27	
		089A CN 540			

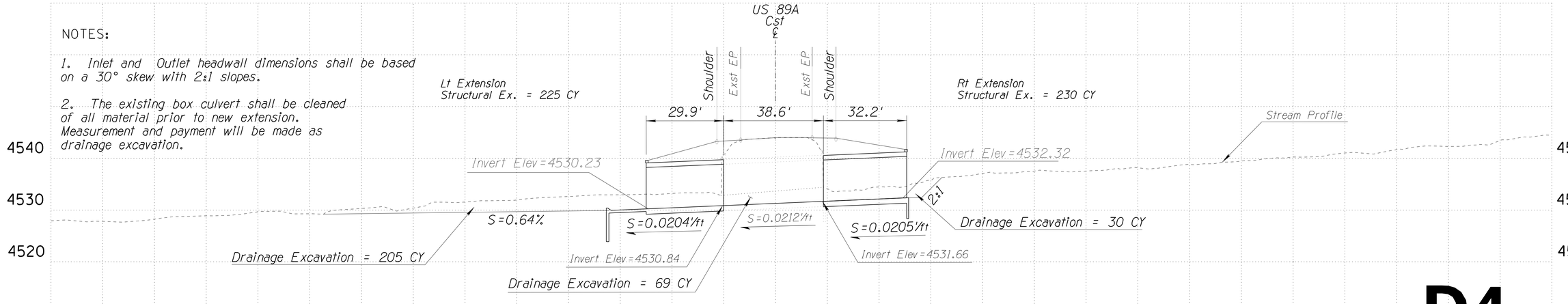


POINT DATA			
POINT	NORTHING	EASTING	DESCRIPTION
A	2074449.81	734158.86	END OF BOX
B	2074478.91	734117.81	CENTER OF BOX
C	2074508.01	734076.76	END OF BOX

NOTES:

1. Inlet and Outlet headwall dimensions shall be based on a 30° skew with 2:1 slopes.

2. The existing box culvert shall be cleaned of all material prior to new extension. Measurement and payment will be made as drainage excavation.



Sta 703+95.10
MP 551.24
Existing 2 - 10' x 8' x 38.6' RCBC
Skew = 29°37' LT
Remove part of Exst Wingwalls, Headwall and Cut-off wall

Extend 29.9' Lt Skew 29° 37' Lt
Extend 32.2' Rt Skew 29° 37' Lt
New Concrete Apron Lt
New Wingwalls Lt and Rt

3+00 4+00 5+00 6+00

DETAIL D4

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

CULVERT DETAIL SHEET
US 89A Sta 703+95.10

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE: US 89A
LOCATION: COLORADO RIVER - HOUSE ROCK (PHASE II)
DWG. NO. D-02.04
TRACS NO. H7775 01C
A89-C(206)T
___ OF ___

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

ADOT_subdue_1_ScreenREF.tbl

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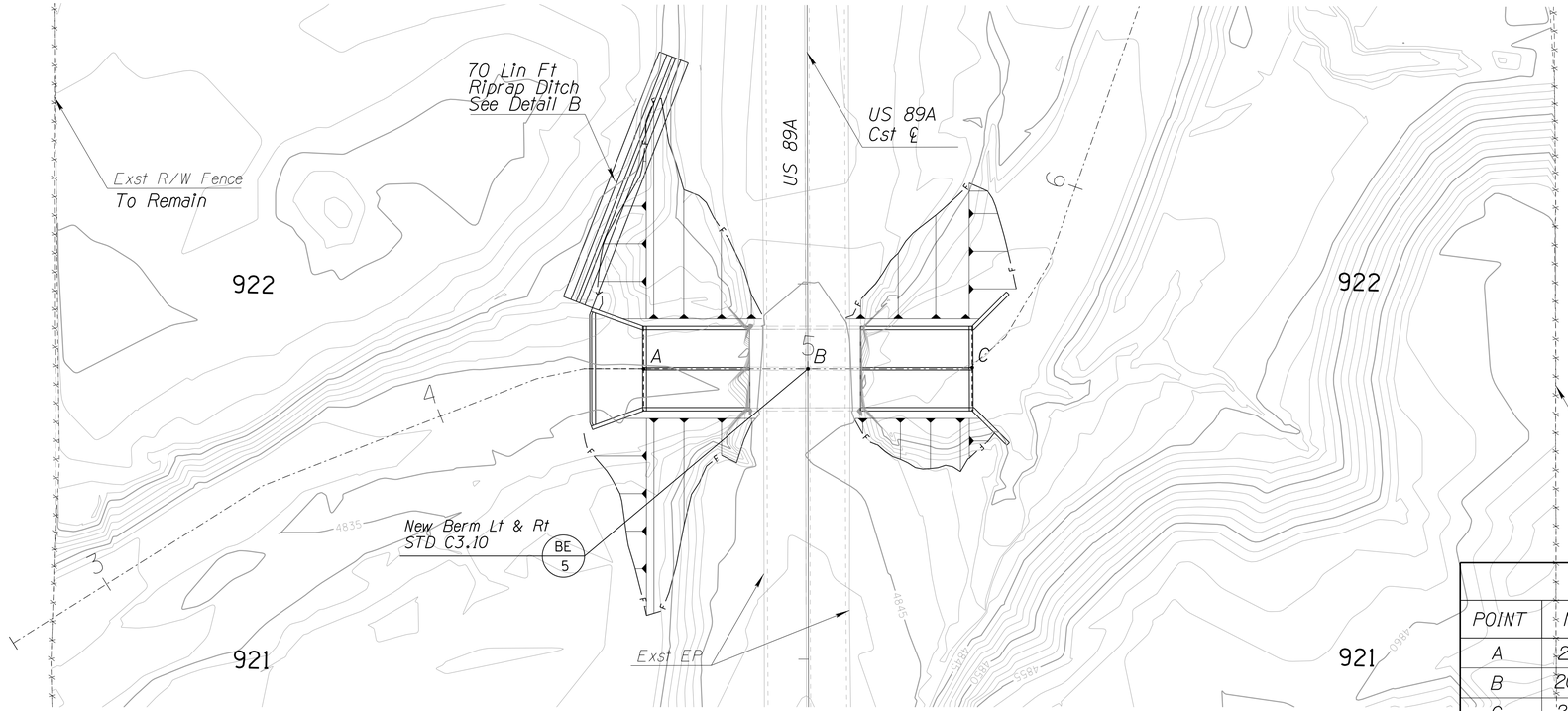
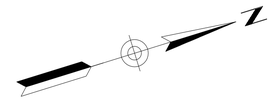
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	13	27	

089A CN 540





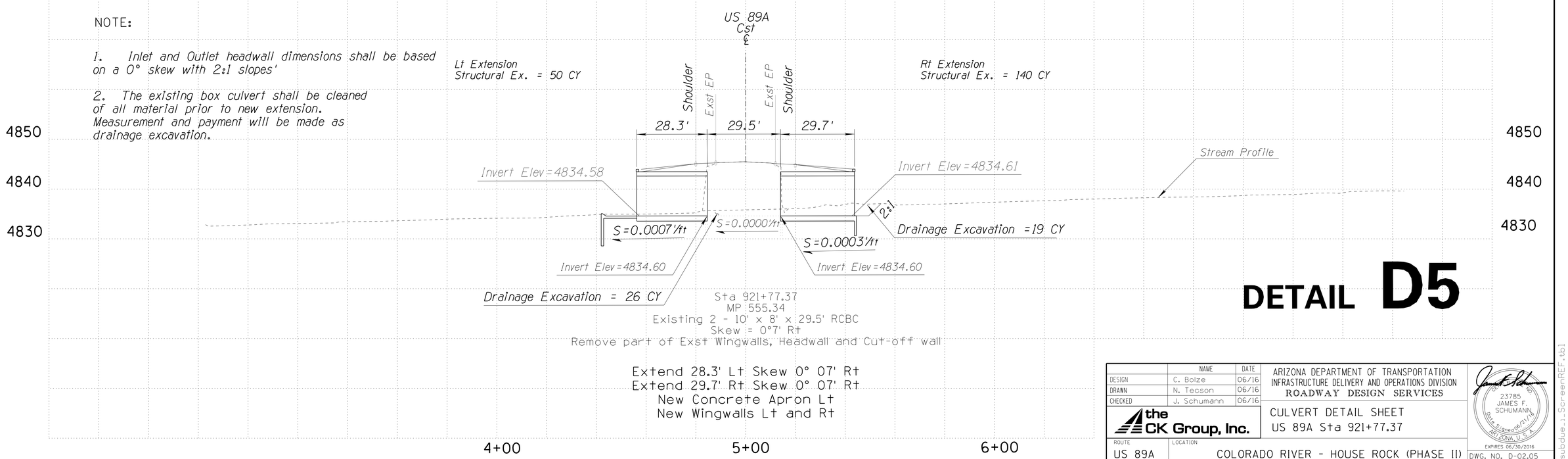
POINT DATA

POINT	NORTHING	EASTING	DESCRIPTION
A	2070188.19	713880.67	END OF BOX
B	2070229.97	713893.65	CENTER OF BOX
C	2070271.85	713906.31	END OF BOX

NOTE:

1. Inlet and Outlet headwall dimensions shall be based on a 0° skew with 2:1 slopes'

2. The existing box culvert shall be cleaned of all material prior to new extension. Measurement and payment will be made as drainage excavation.



DETAIL D5

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

CULVERT DETAIL SHEET
US 89A Sta 921+77.37

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	D-02.05
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

ADOT_subdue.1_ScreenREF.tbl

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F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	14	27	

089A CN 540

BOX CULVERT EXTENSION APPROXIMATE QUANTITIES						Structural Concrete Removal	
BE No.	Structural Excavation (CY)	Structure Backfill (CY)	Class 'S' Concrete (CY)	Reinf Steel (lbs)	Place Dowels (EA)	Curb Removal	Concrete (CY) *
1	385	180	200	28085	28		8
2	190	225	211	28580	28	●	12
3	200	160	177	24215	28		8
4	455	185	201	28405	28		8
5	190	175	185	26290	28	●	10

● Location requires removal of existing curbs, see Detail 2 on S-1.02.

* The concrete removal quantity includes removal of existing curb.

See SD 6.01 (4 of 5) for structural excavation and structure backfill measurements and payment limits.

The cost of concrete repairs and concrete patching for existing damaged concrete shall be included in the Class 'S' Concrete cost. Concrete repairs are limited to areas within 1'-6 from each end of the box culvert barrel.

GENERAL NOTES:

Construction Specification -
Arizona Department of Transportation Standard Specification for Road and Bridge Construction, Edition of 2008 and Special Provisions.

Design Specifications -
AASHTO LRFD Bridge Design Specifications, 7th Edition, 2014.

All culvert extensions shall be per ADOT Standard Drawings and Details for Reinforced Concrete Box Culverts drawing series SD 6.01 - 6.11, unless noted otherwise.

Live Load -
Loading Class HL-93

All concrete shall be Class "S" (f'c = 3000 psi).

Reinforcing steel shall conform to ASTM Specification A615/A615M. All reinforcing steel shall be furnished as Grade 60.

All bends and hooks shall meet the requirements of AASHTO LRFD Article 5.10. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.

All reinforcing steel shall have 2 inches clear cover unless noted otherwise.

All mechanical splices shall conform to the requirements for mechanical connections in Section 605-3.02 of the Standard Specifications.

All construction joints shall be intentionally roughened to an amplitude of ¼" unless noted otherwise.

Material Strengths:
Class "S" Concrete ..... f'c = 3000 psi
Grade 60 Reinforcing Steel ..... fy = 60 ksi

Chamfer all exposed corners ¾" unless noted otherwise.

Dimensions shall not be scaled from drawings.

The existing box culverts were constructed in 1933 and 1934 by the Arizona Highway Department under project numbers FLE-4(A), FLE-4(B) and FLH-4(B).

CONCRETE REMOVAL AND PATCHING NOTES:

1. The contractor shall exercise due care during all removal operations to prevent any damage to concrete or reinforcing to remain. Any required repairs shall be submitted to the engineer for review and approval and shall be carried out by the contractor at no additional cost to the Department.

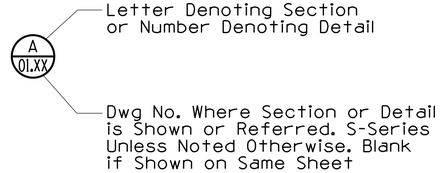
2. All existing reinforcing to be incorporated into the box extensions shall be clean and free of all loose and deleterious materials prior to placement of new concrete.

3. Where cut reinforcing will be permanently exposed to earth or weather it shall be ground down to a minimum of ½ inch below the existing concrete surface and the resulting recess filled with an approved epoxy. The cost of filling the recess with epoxy shall be included in the concrete removal cost.

4. Where box culvert curbs are to remain, loose and cracked concrete shall be removed. Exposed reinforcing and locations where loose and cracked concrete has been removed shall be patched during concrete placement of the box culvert extension. It is acceptable for the patch to use of the same concrete as used for the box culvert extension. The cost associated with concrete patching shall be included in the Class 'S' Concrete costs.

5. Prior to placing dowels in roof slabs all loose or damaged concrete with exposed reinforcing shall be removed and repaired. See S-1.02, Detail 1, similar.

LEGEND



		DATE
DESIGN	JML	06-16
DRAWN	NRD	06-16
CHECKED	BPD	06-16

Stanley Consultants INC.
1661 East Camelback Road, Suite 400
Phoenix, Arizona 85016
Phone: (602) 333-2200

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
STATEWIDE PROJECT MANAGEMENT GROUP

US 89A
BOX CULVERT EXTENSIONS
GENERAL NOTES & QUANTITIES

ROUTE	MILEPOST	STRUCTURE NO.	LOCATION
US 89A	-	-	COLORADO RIVER - HOUSE ROCK (PHASE II)

TRACS NO. H7775 01C | A89-C(206)T | DWG NO. S-1.01 | ___ OF ___

Registered Professional Engineer
44705
JOHN M. LANGE
Date Signed 6-21-16
ARIZONA, U.S.A.
EXPIRES 06/30/2018

NO. | DESCRIPTION OF REVISIONS | MADE BY | DATE

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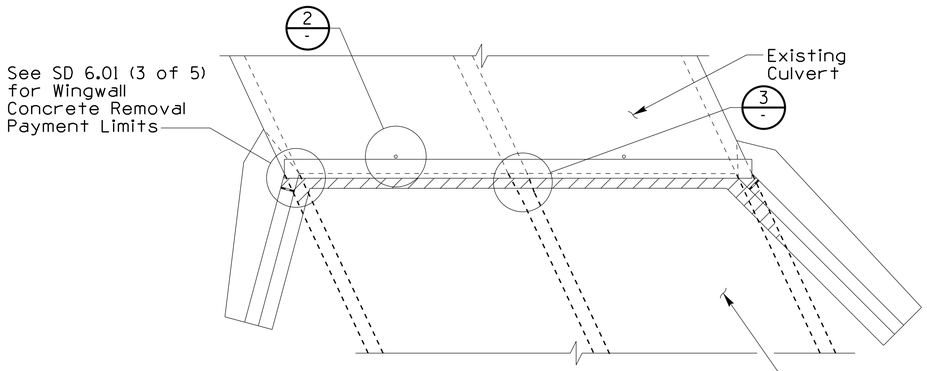
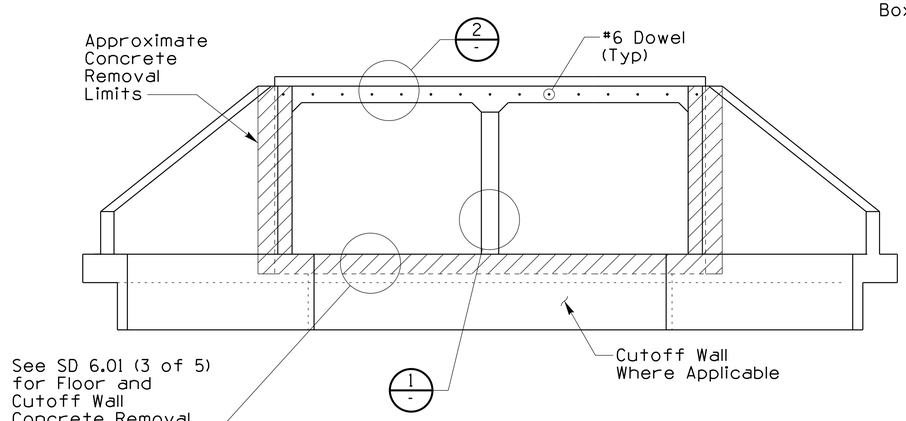
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	15	27	

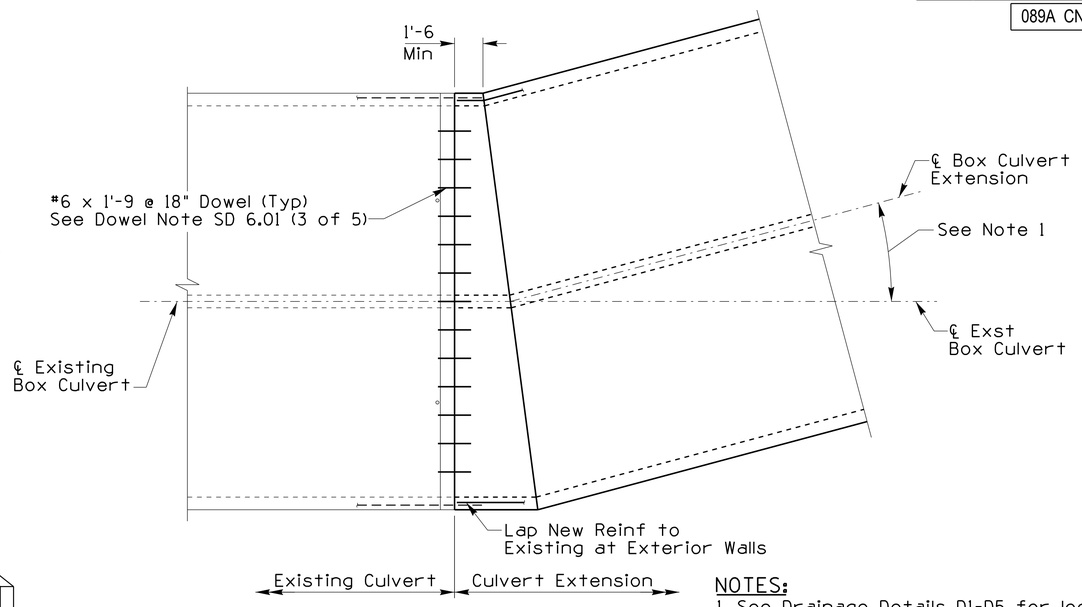
089A CN 540



EXISTING CULVERT PARTIAL PLAN
Scale: None

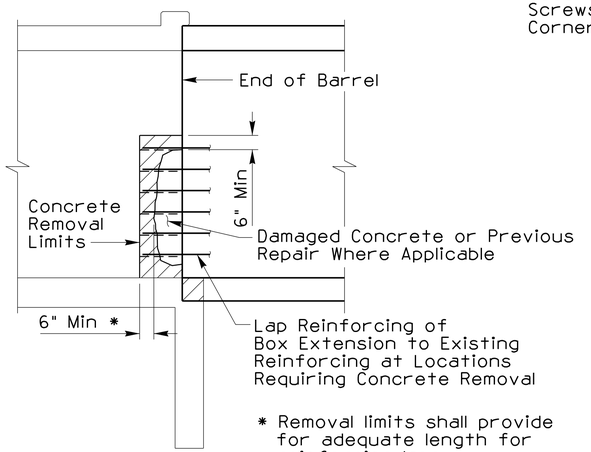


EXISTING CULVERT ELEVATION
Scale: None



ANGLED CULVERT EXTENSION
PARTIAL PLAN
Scale: ¼"=1'-0

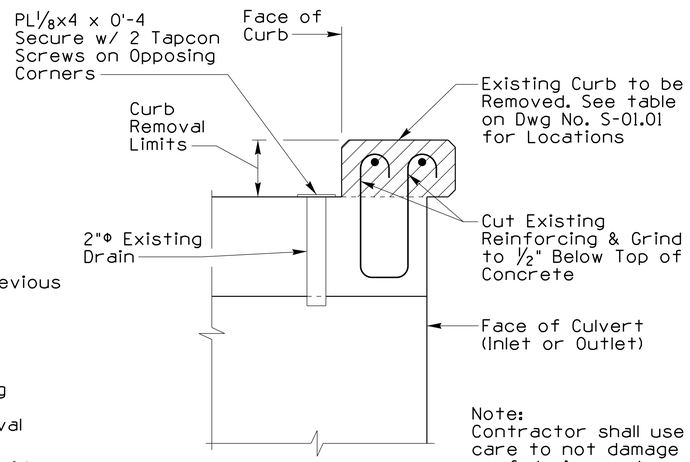
NOTES:
1. See Drainage Details D1-D5 for locations where angled culvert extension applies.
2. See SD 6.01 (2 of 5) for reinforcement placement and additional information not shown.
3. Existing wingwalls not shown for clarity.



* Removal limits shall provide for adequate length for reinforcing laps.

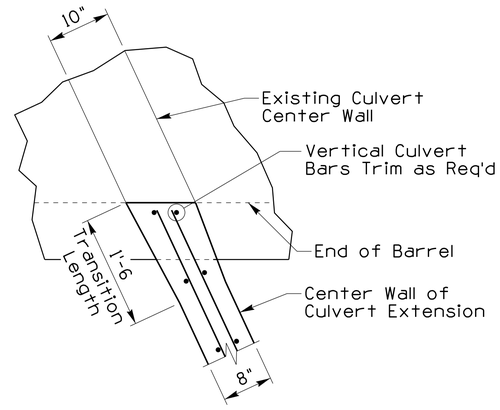
DETAIL 1
SCALE: ⅜"=1'-0

Concrete
Removal
Limits



DETAIL 2
Scale: 1½"=1'-0

Note:
Contractor shall use due care to not damage culvert roof during curb removal.



INTERIOR WALL TRANSITION 3
Scale: 1"=1'-0

		DATE
DESIGN	JML	06-16
DRAWN	NRD	06-16
CHECKED	BPD	06-16

Stanley Consultants INC.
1661 East Camelback Road, Suite 400
Phoenix, Arizona 85016
Phone: (602) 333-2200

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
STATEWIDE PROJECT MANAGEMENT GROUP

US 89A
BOX CULVERT EXTENSIONS
SECTIONS & DETAILS

ROUTE	MILEPOST	STRUCTURE NO.	LOCATION
US 89A	-	-	COLORADO RIVER - HOUSE ROCK (PHASE II)

Registered Professional Engineer (Civil)
14705
JOHN M. LANGE
Date Signed 5/31/16
ARIZONA, U.S.A.
EXPIRES 06/30/2018

DWG NO. S-1.02

TRACS NO. H7775 01C | A89-C(206)T | ___ OF ___

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

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F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	16	27	
		089A CN 540			

PAVEMENT MARKING GENERAL NOTES

1. *All Marking shall be in compliance with the latest ADOT Signing and Marking Standard Drawings and the 2009 Edition of the Manual on Uniform Traffic Control Devices (MUTCD) including the Arizona supplement.*
2. *It is the responsibility of the contractor to ensure the surface course is placed so that the striping is offset 1 foot clear of the construction joint unless otherwise directed by the Engineer.*
3. *The contractor shall be responsible for the layout and installation of permanent pavement markings on the existing surface course following control points that have been set no more than 50 feet apart along the line to striped.*
4. *The final pavement marking shall be thick dual component epoxy striping placed over the existing striping, as directed by the engineer. All other permanent markings shall be applied at this time.*
5. *The contractor shall clean the roadway surface to the satisfaction of the engineer by sweeping and air-jet blowing immediately prior to the placement of all pavement markings. The roadway surface shall be dry and the air temperature and wind chill factor shall not be less than 35°F and the pavement temperature shall be 40°F or higher for the placement of dual epoxy striping.*
6. *The contractor shall notify the Engineer two weeks prior to the application of any pavement markings to schedule a "NO PASSING ZONE" survey by State forces. State "NO PASSING ZONE" crew phone numbers: (602) 228-2508, (602) 228-0889 or (602) 228-4932.*
7. *It is the contractor's responsibility to develop an "As-Built" plan of the existing striping and have the plan approved by the Engineer before any construction activities. The center line striping log is from ADOT office records which needs to be field verified. Layout of traffic markings will be part of the work included in item 9250001-Construction Surveying and Layout. Existing striping damaged or obliterated as a result of construction activities shall be replaced in kind by the contractor at no additional cost to ADOT.*
8. *When stripe obliteration is necessary, it shall be accomplished by means approved by the Engineer. Painting over striping, removal of pavement, and overlaying pavement do not constitute stripe obliteration.*

SIGNING GENERAL NOTES

1. *All signs shall be in compliance with the Manual on Uniform Traffic Control Devices (MUTCD), the ADOT Signing and Marking Standard Drawings, and the Traffic Engineering Manual of Approved Signs.*
2. *The contractor shall install new Type 3 Object Markers per ADOT Standard Drawing M23 and M24.*
3. *The contractor shall preserve all roadway signs, sign supports, object markers, and milepost markers. The contractor shall replace any signs, sign supports or markers damaged as a result of the construction at the contractor's expense.*
4. *The contractor shall replace all delineators with new flexible delineators. All delineators shall be installed in accordance with ADOT Standard Drawings and as directed by the Engineer. All flexible delineators shall be on ADOT's Approved Products List.*
5. *New delineators for curves shall be installed per ADOT Standard Drawing M26.*
6. *Cost for removal of the existing delineators that are adjacent existing culvert headwall are included in the cost of the new Type 3 Object Markers.*

APPROXIMATE PAVEMENT MARKING QUANTITIES (PER SITE)

BID ITEM NO.	ELEMENT OF WORK		UNIT	QUANTITY
7090001	DUAL COMPONENT PAVEMENT MARKING (WHITE EPOXY)	4" WHITE	L. FT.	600
7090002	DUAL COMPONENT PAVEMENT MARKING (YELLOW EPOXY)	4" YELLOW	L.FT.	3,720

APPROXIMATE SIGNING QUANTITIES

BID ITEM NO.	ELEMENT OF WORK	UNIT	QUANTITY
2020053	REMOVE (EXISTING OBJECT MARKERS)	EACH	12
7030026	DELINEATOR ASSEMBLY (FLEXIBLE) (CONCRETE FOUNDATION)	EACH	140
7030080	OBJECT MARKER (M-23/24) (TYPE 3)	EACH	20

	NAME	DATE
DESIGN	A. Ibeji	06/16
DRAWN	A. Ibeji	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE AND DELIVERY OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

PAVEMENT MARKING & SIGNING GENERAL NOTES

23785 JAMES F. SCHUMANN Date Signed 06/21/16 ARIZONA, U.S.A.
EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	TN-01.01
TRACS NO. H7775 01C	A89-C(206)T	____ OF ____

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

ADOT_subdue.1_ScreenREF.tbl

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F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	17	27	
		089A CN 540			

TRAFFIC CONTROL NOTES

1. The traffic control plans represent a suggested method for traffic control during construction. The contractor may prepare another traffic control plan in accordance with the requirements of Section 701 of the Specifications. All traffic control plans are subject to the approval by the Engineer prior to construction. No measurement or direct payment will be made for developing the traffic control plans, the cost being considered as included in the price of contract items.

2. Adjustments to the details of these traffic control plans and requirements may be necessary due to construction activities. All adjustments shall be as directed by the Engineer.

3. 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 at no additional cost to the department. Any signs damaged during the course of construction shall be replaced at no additional cost to the department.

4. The retroreflective sheeting on all construction signs shall meet the minimum criteria established for Type IX or XI sheeting in AASHTO M268, and the standard specifications.

5. All construction signs shall have black legend on orange flourescent background, except as otherwise noted.

6. Signs mounting height is a minimum of 7 feet as measured from the bottom of the sign to the near edge of the pavement.

7. The nearest edge or corner of a sign shall be approximately 12 feet from the nearest edge of the pavement or 2 feet behind guardrail or concrete barrier, for all signs mounted on embedded posts.

8. Flags shall be mounted on top of all construction signs except the "END ROAD WORK THANK YOU " sign. Type "A" flashing warning lights shall be required on all nighttime construction signs except the "END ROAD WORK THANK YOU".

9. A Type "C" steady burning light shall be mounted on every Type II barricade, drums and vertical panel during nighttime activities.

10. Type II barricade channeling devices shall be placed 40 feet o.c. on tapers and 80 feet o.c. on tangents, except as otherwise noted on plans.

11. Immediately prior to the placement of all temporary and permanent markings, the contractor shall clean and dry the roadway surface to the satisfaction of the Engineer by sweeping and/or air-jet blowing. Chip seal markers if placed prior to placement of pavement markings, shall be done at no additional cost to the department.

12. Speed limit signing (W3-5Aaz and R2-1, for each 10 mph reduction) is subject to review and change by the Engineer as dictated by field conditions.

13. Construction signs and changeable message signs, except advance warning signs, shall not be displayed to traffic more than 24 hours prior to the actual start of the 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 the construction activities. Advance warning signs shall be displayed a minimum of three (3) days prior to the start of the construction activities.

14. Existing pavement markings which may be in conflict with the traffic control striping plan shall be removed by methods approved by the Engineer. Painting over pavement markings does not constitute obliteration. Grinding will not be permitted on this project.

15. All signs shall be mounted on embedded posts, rigid, or spring stands, except as indicated in these plans. Signs on spring stand shall be minimum 3' from the bottom. Sign mounting height for embedded posts or portable stands is a minimum of 7 feet as measured from the bottom of the sign to the nearest edge of the pavement. Signs on temporary stands shall be set at the height the stand was tested at and approved for NCHRP 350 certification.

16. When traffic control devices are not in use, the contractor shall remove these items to at least 30 feet from the roadway. This includes all sign supports without sign sign panels. Any signs which are not in use but which cannot be moved at least 30 feet from the roadway shall be covered so the public cannot read them.

17. Signing for double fines in work zones, when allowed by the Engineer, shall generally conform to figure SA-12 of the 2010 ADOT TCDG. Such signing shall only be in place during working periods when workers are present in accordance with the guidelines for signing for double fines in work zones. The cost of covering or moving signs before and after work periods is considered included in the prices of the contract items.

18. The contractor shall position changeable message signs as directed by the Engineer. Cycle time and duration of the messages shall be such that the entire message can be read twice at operating speed from no further than 650 feet. The contractor shall locate the changeable message signs just off the paved roadway in compliance with the clear zone requirements or as directed by the Engineer. The Engineer will determine the messages on the changeable message signs to coincide with construction activities. Changeable message signs shall be in place at least 3 days prior to construction activities.

19. The contractor shall install shoulder closures for changeable message signs per figures SA-15 thru SA-17 of the ADOT TCDG. The contractor shall install a minimum of 10 Type II Barricades w/Type "C" lights around the changeable message sign as indicated in the special provisions.

20. An adequate number of Type III Barricades shall be placed to close the roadway. A Type "A" flashing warning light shall be mounted on each end of each barricade during nighttime activities.

21. For Temporary Concrete Barrier (TCB) details, see ADOT Standard Drawings Number C-3. Barrier markers conforming to standard drawings M-32 and M-33 shall be installed at 20 foot spacing. The installed price for the marker shall be considered part of the barrier cost.

22. Off-duty uniformed police officers and their vehicles shall be included as part of the contractor's traffic control when the Engineer determines they should be present or as indicated in these traffic control plans.

23. Where no closure is necessary, but there is construction along adjacent roadway, the contractor shall place 48 inch x 48 inch "ROAD WORK AHEAD " and "SHOULDER WORK AHEAD " signing as directed by the Engineer to alert the public to the construction activities.

24. All drawings are schematic only and not to scale.

REFERENCES:

MUTCD - Part 6 of the Manual On Uniform Traffic Control Devices (MUTCD) 2009 Edition, and the ADOT supplement to the Manual On Uniform Traffic Control Devices (2009).

TCDG - ADOT Traffic Control Design Guidelines, Latest Edition

	NAME	DATE
DESIGN	A. Ibeji	06/16
DRAWN	A. Ibeji	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE AND DELIVERY OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

TRAFFIC CONTROL PLAN
GENERAL NOTES

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	T-01.01
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

ADOT_subdue_1_ScreenREF.tbl

Plotted By: default at 2:51:30 PM 6/23/2016 P:\Jobs\CK Arizona\CK2015Proj\2015-04 2011-25TE ADOT District Minor On-Call US89A MP536 to MP564.7\1\Job Products\Plans\100%\17_TrafCon01.dgn

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	18	27	

089A CN 540

MAINTENANCE OF TRAFFIC

ACTIVITY NO.	CONSTRUCTION ACTIVITY	TRAFFIC CONTROL	COMMENTS
1	Install Project Advance Signing	Provide Standard Long Term and Vicinity Area Signing as shown on Dwg No. T-01.04 and T-01.05 of the Traffic Control Plans.	Traffic control shall remain for the duration of the work and shall be placed on embedded sign posts.
2	Culvert Extension Work (Using Temporary Signal Operation)	Provide lane closure per Figure SA-3 of the ADOT TCDG and Figure TA-10 of the MUTCD. See Dwg No. T-01.06. Reduce the speed limit to 35 MPH through the construction area during working hours. Traffic control double fines signing shall be as shown in Figure SA-12 of the ADOT TCDG.	Provide uniformed police officer (DPS) with vehicle in advance of lane closures or as directed by the Engineer. Install speed display monitoring system as directed by Engineer. Provide flaggers and pilot car with driver for all necessary operations per approval of the Engineer. The contractor shall ensure that all flagger stations and signing are placed at locations that provide optimum visibility and meet stopping sight distance requirements. Channelization devices shall be temporary concrete barrier, and vertical panels on tapers and tangents. The sign size for all W-Series signs shall be a minimum of 48"x48". The sign size for all R-series shall be a minimum of 36"x48" unless otherwise shown in the plans. Type C Steady Burning Lights shall be placed on TCB.
3	Install Permanent Pavement Markings.	Traffic control shall be as shown on Figure TA-17 of the MUTCD. Traffic control for sign installation and seeding shall be per Figure TA-3 and TA-1 of the MUTCD respectively.	Provide a uniformed police officer (DPS) with vehicle to control speed. Provide Changeable Message Signs at beginning of Striping Operation as directed by Engineer. Provide Truck Mounted Attenuator to protect the work zone.

Note:
The order of activities does not constitute a sequence of construction. The contractor shall perform the work in the most expeditious manner consistent with these plans, ADOT special provisions and approval of the Engineer.

	NAME	DATE
DESIGN	A. Ibeji	06/16
DRAWN	A. Ibeji	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE AND DELIVERY OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

TRAFFIC CONTROL PLAN
MAINTENANCE OF TRAFFIC

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE: US 89A
LOCATION: COLORADO RIVER - HOUSE ROCK (PHASE II)
DWG. NO. T-01.02
TRACS NO. H7775 01C
A89-C(206)T
___ OF ___

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

ADOT_subdue1_ScreenREF.tbl

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F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	19	27	
		089A CN 540			

TRAFFIC CONTROL QUANTITIES (Per Each Work Zone)

Item No.	Bid Item Description	Units	Activity NO. 1	Activity NO. 2	Activity NO. 3	TOTAL
		Days*	45	43	2	
2020365	Remove Lead-Based Striping	L.FT.	-	2,080	-	2,080
7010025	Temporary Impact Attenuation Device (Energy Absorbing Terminal)	Each-day	-	2	-	2
7010026	Temporary Impact Attenuation Device (Energy Absorbing Terminal) (In Use)	Each-day	-	86	-	86
7015010	Temporary Concrete Barrier (Installation & Removal)	L.FT.	-	680	-	680
7015042	Temporary Painted Marking (Stripe)	L.FT.	-	1,100	-	1,100
7015052	Obliterate Painted Marking (Stripe)	L.FT.	-	980	-	980
7015070	Obliterate Pavement Markers	Each-day	-	33	-	33
7015091+	Specialty Sign (Fluorescent Orange)	SQ.FT.	384	-	-	384
7016020	Temporary Concrete Barrier (In use)	L.FT. day	-	29,240	-	29,240
7016030	Type II Barricade, Vertical Panel, Tubular Marker	Each-day	3,600	1,204	140	4,944
7016031	Type III Barricade, Flag Tree	Each-day	-	2	-	2
7016032	Portable Sign Stand (Rigid Type)	Each-day	-	86	-	86
7016033	Portable Sign Stand (Spring Type)	Each-day	-	258	16	274
7016035	Flashing Warning Light (Type A)	Each-day	900	1,032	38	1,970
7016037	Warning Light (Type C)	Each-day	3,600	3,010	140	6,750
7016038	Traffic Cone (28 Inch)	Each-day	-	430	-	430
7016039	Embedded Sign post	Each-day	1,845	688	-	2,533
7016050	Truck Mounted Attenuator	Each-day	-	2	1	3
7016051	Temporary Sign (Less than 10 S.F.)	Each-day	90	258	4	352
7016052	Temporary Sign (10 S.F. or More)	Each-day	768	774	32	1,574
7016067	Changeable Message Sign (Contractor-Furnished)	Each-day	336	-	-	336
7016068	Drum (High Visability)	Each-day	-	344	-	344
7016071	Pilot Vehicle With Driver	Hours	-	-	12	12
7016075	Flagging Service (Civilian)	Hours	-	32	-	32
7016080	Flagging Service (DPS)	Hours	-	24	8	32
7370210	Temporary Traffic Signals (Portable)	L.Sum	-	1	-	1
9240130	Miscellaneous Work (Portable Speed Monitoring System)	Each-day	96	-	-	96

* Calendar Days

\+ Specialty Signs for Entire Project

	NAME	DATE
DESIGN	A. Ibeji	06/16
DRAWN	A. Ibeji	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE AND DELIVERY OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

TRAFFIC CONTROL/
PVMT MARKING AND SIGNING
QUANTITY SUMMARY SHEET

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	T-01.03
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

ADOT subdue.1.ScreenREF.tbl

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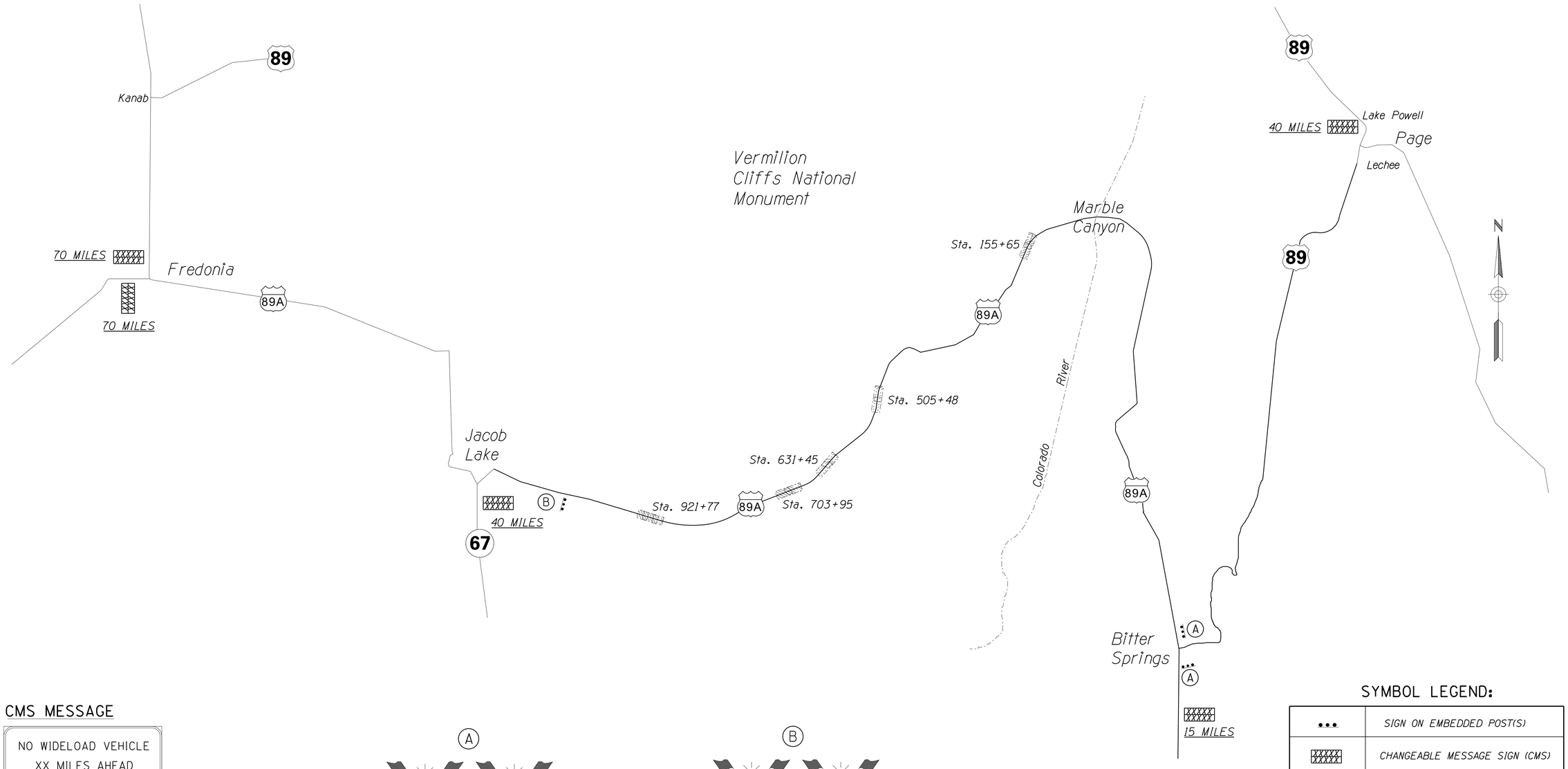
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	20	27	

089A CN 540



CMS MESSAGE

NO WIDELOAD VEHICLE
XX MILES AHEAD
USE ALTERNATE ROUTES

NOTE:
1. *Final location of signs to be coordinated with the Engineer.*
2. *Each culvert extension location shall be considered one (1) work zone.*

A

89A NORTH
RESTRICTED TO ONE LANE
EXPECT DELAYS

Speciality Sign
24"x 24" Shield (6" Letters)
(6" Capital Letters)
(16'x 8')
Black on Orange

B

89A SOUTH
RESTRICTED TO ONE LANE
EXPECT DELAYS

Speciality Sign
24"x 24" Shield (6" Letters)
(6" Capital Letters)
(16'x 8')
Black on Orange

SYMBOL LEGEND:

•••	SIGN ON EMBEDDED POST(S)
	CHANGEABLE MESSAGE SIGN (CMS)
	WORK AREA

	NAME	DATE
DESIGN	A. Ibeji	06/16
DRAWN	A. Ibeji	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE AND DELIVERY OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

TRAFFIC CONTROL PLAN
ADVANCE VICINITY SIGNING

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	T-01.04
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

ADOT_subdue.1_ScreenREF.tbl

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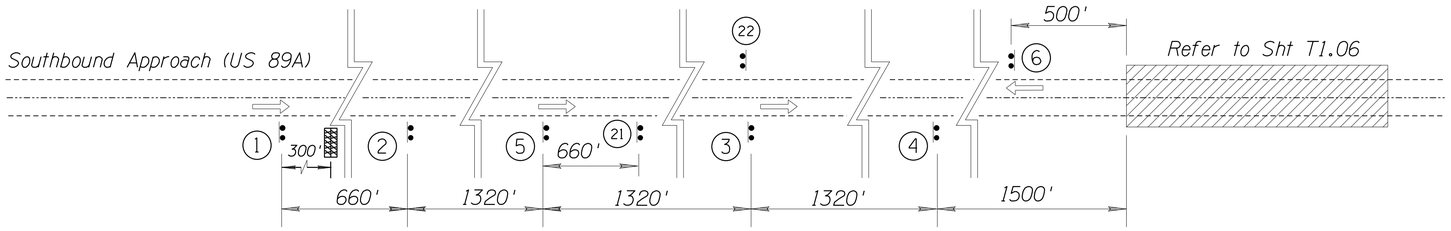
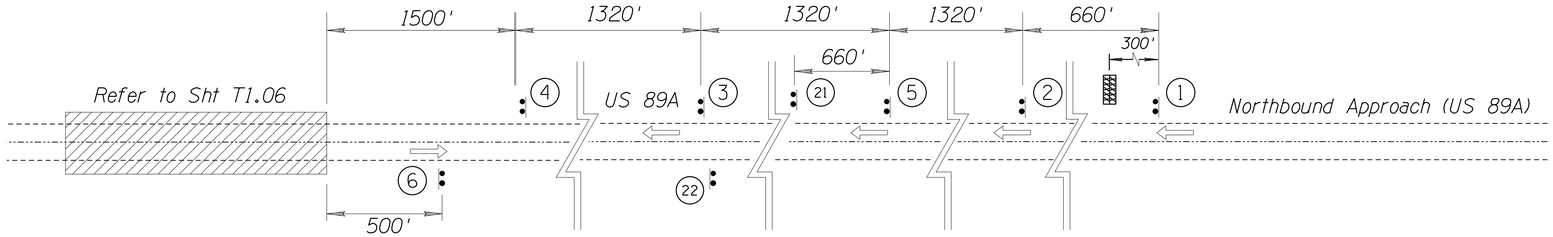
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	21	27	

089A CN 540





ADVANCE WARNING SIGNS

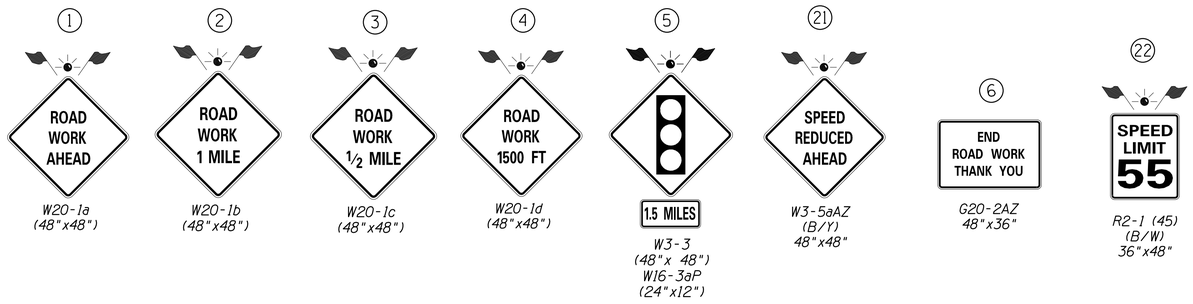
THE ABOVE SIGNS SHALL BE POSITIONED RELATIVE TO EACH PROJECT WORKZONE SITE

Note:

1. *Speed limit signing is preliminary and subject to review and change as directed by the Engineer.*
2. *The contractor shall install Changeable Message Signs at both ends of the project as directed by the Engineer.*
3. *The contractor shall install a Speed Display Monitoring System at both ends of the project as directed by the Engineer.*

SYMBOL LEGEND:

	SIGN ON EMBEDDED POST(S)
	DIRECTION OF TRAVEL
	CHANGEABLE MESSAGE SIGN
	WORK AREA



	NAME	DATE
DESIGN	A. Ibeji	06/16
DRAWN	A. Ibeji	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE AND DELIVERY OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

TRAFFIC CONTROL PLAN
ADVANCE SIGNAGE

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

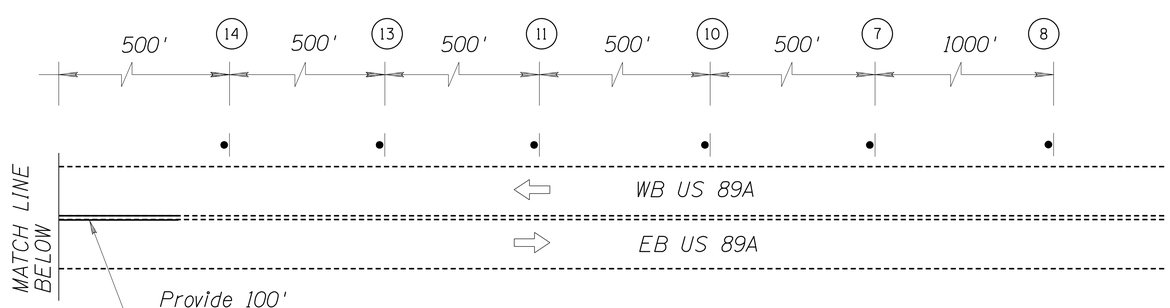
ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	T-01.05
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

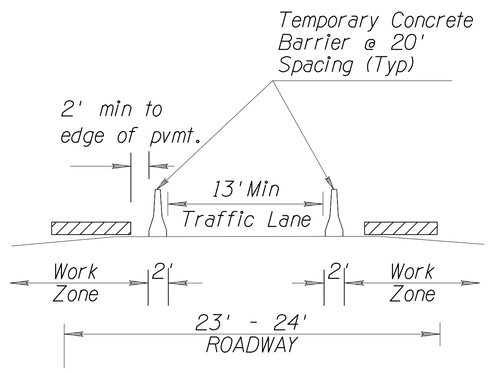
DATE: | LOCATION: | REVISIONS: | FINISHED PLANS: | SURVEY NO.

ADOT subdue.1.ScreenREF.tbl

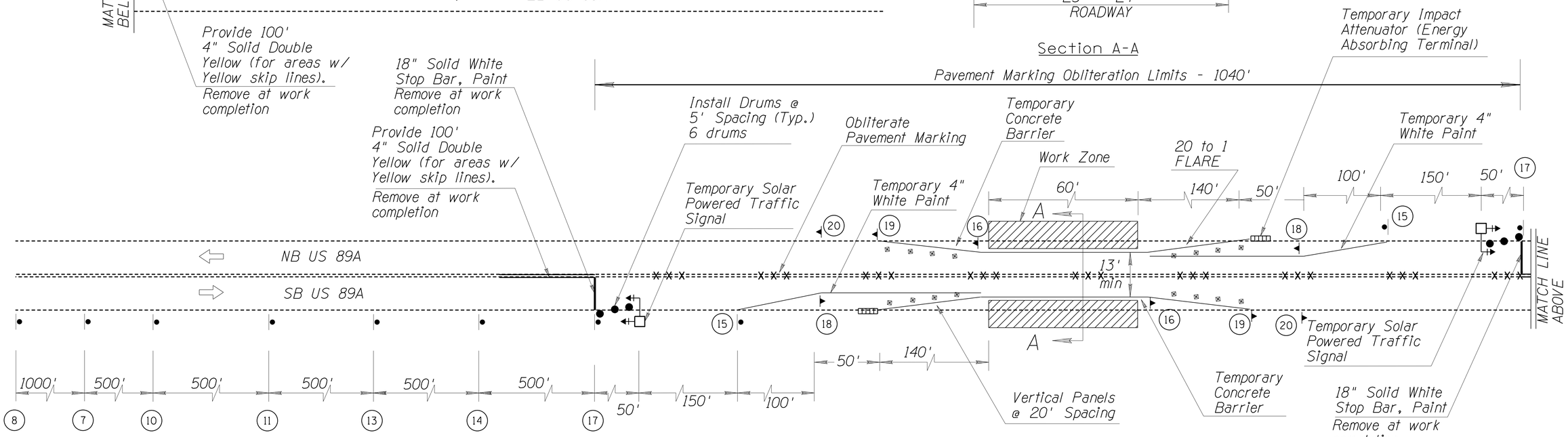
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	22	27	

089A CN 540



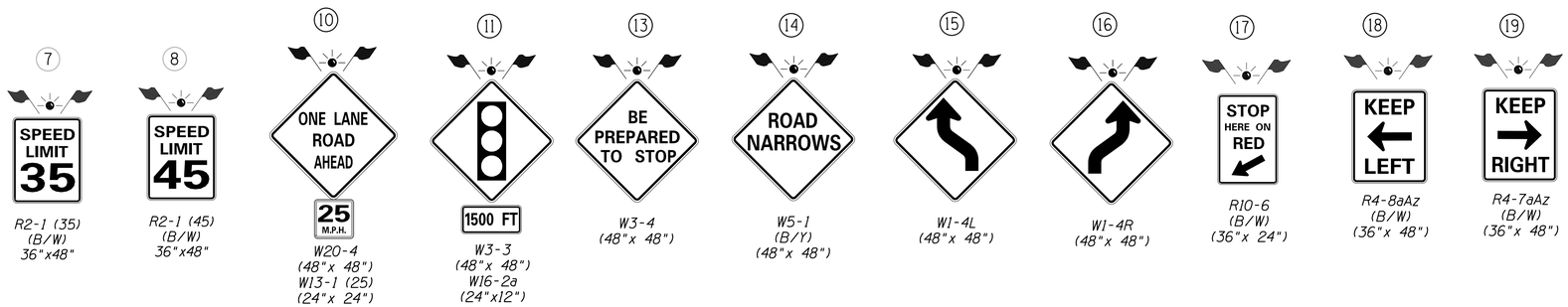


Section A-A



NOTE:

1. Centerline striping may vary. Striping shown on plan is for information only.
2. Coordinate additional speed limit reduction and location placement with Engineer.
3. Lane width shall be 13' minimum between temporary concrete barriers.



SYMBOL LEGEND:

	SIGN ON EMBEDDED POST(S)
	VERTICAL PANEL
	CRASH CUSHION
	SIGN ON SPRING STAND
	DIRECTION OF TRAVEL
	TEMPORARY CONCRETE BARRIER
	WORK AREA
	IMPACT ATTENUATION DEVICE

	NAME	DATE
DESIGN	A. Ibeji	06/16
DRAWN	A. Ibeji	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

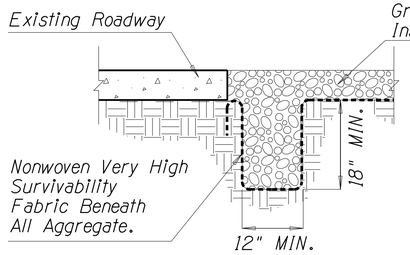
ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE AND DELIVERY OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

TRAFFIC CONTROL PLAN
TEMPORARY SIGNAL

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	T-01.06
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

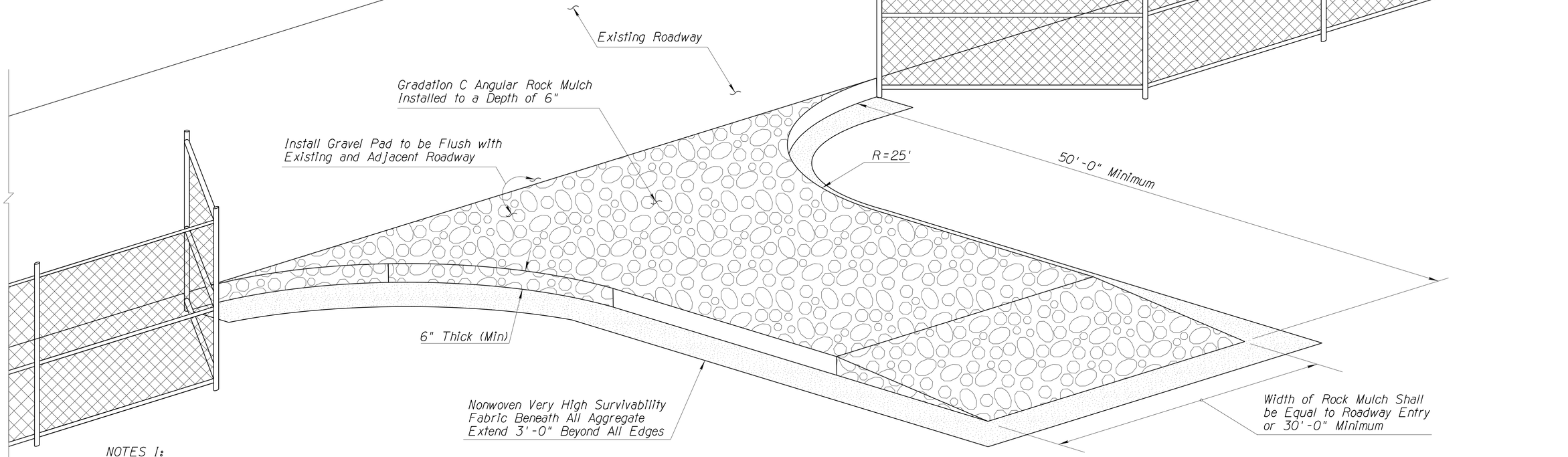
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	23	27	
		089A CN 540			



EDGE TREATMENT TRENCHING
TYPICAL SECTION (NTS)

NOTES II:

1. Install nonwoven fabric when water is applied for construction vehicle/equipment cleaning on Gravel Pad.
2. Edge treatment trenching and nonwoven fabric shall not be required if NO wash water is used for vehicle/equipment cleaning.
3. The depth of Gravel Pad varies from 6" to 12" based on the necessities of construction vehicle/equipment as per the approval of the Engineer.



BIRD'S EYE VIEW (NTS)

NOTES I:

1. Install Stabilized Construction Entrance/Exit Gravel Pad BMP for traffic entering or exiting a construction site where sedimentation, clay, silt or other pollutants can be tracked onto public roads and/or adjacent water bodies, as approved by the Engineer. It may also be applied for construction entrance/exit wind erosion/dust control, as approved by the Engineer.
2. Locate new Construction Entrance(s)/Exit(s) at appropriate project entrance/exit points as determined in field with the approval of the Engineer. Relocate Stabilized Construction Entrance/Exit Gravel Pad BMP as needed as project progresses. Replace Rock Mulch materials in drive paths when dirt or mud accumulates.
3. Nonwoven Very High Survivability Fabric shall conform to the standards of Sub-section 1014-4.04 of the Standard Specifications.
4. Rock Mulch materials shall be fractured/crushed rocks in angular shape and as defined in the Sub-section 810-2.03 of the Standard Specifications. Natural river-run materials, especially rounded natural river rocks are not acceptable.
5. Make field adjustments and corrections of Construction Entrance/Exit Gravel Pad BMP immediately if it is causing flooding and/or affecting roadway safety.
6. When paid separately, the Stabilized Construction Entrance/Exit Gravel Pad BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, final removal, and disposal of this temporary BMP, as well as returning the area to an acceptable condition as approved by the Engineer.
7. Make field adjustments and corrections to ensure NO sensitive biological resources (native species / habitats) will be adversely impacted.

DETAIL E1

STABILIZED CONSTRUCTION ENTRANCE/EXIT GRAVEL PAD

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

EROSION CONTROL
DETAIL E1

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	E-01.01
TRACS NO. H7775 01C	A89-C(206)T	____ OF ____

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

ADOT_subdue.1_ScreenREF.tbl

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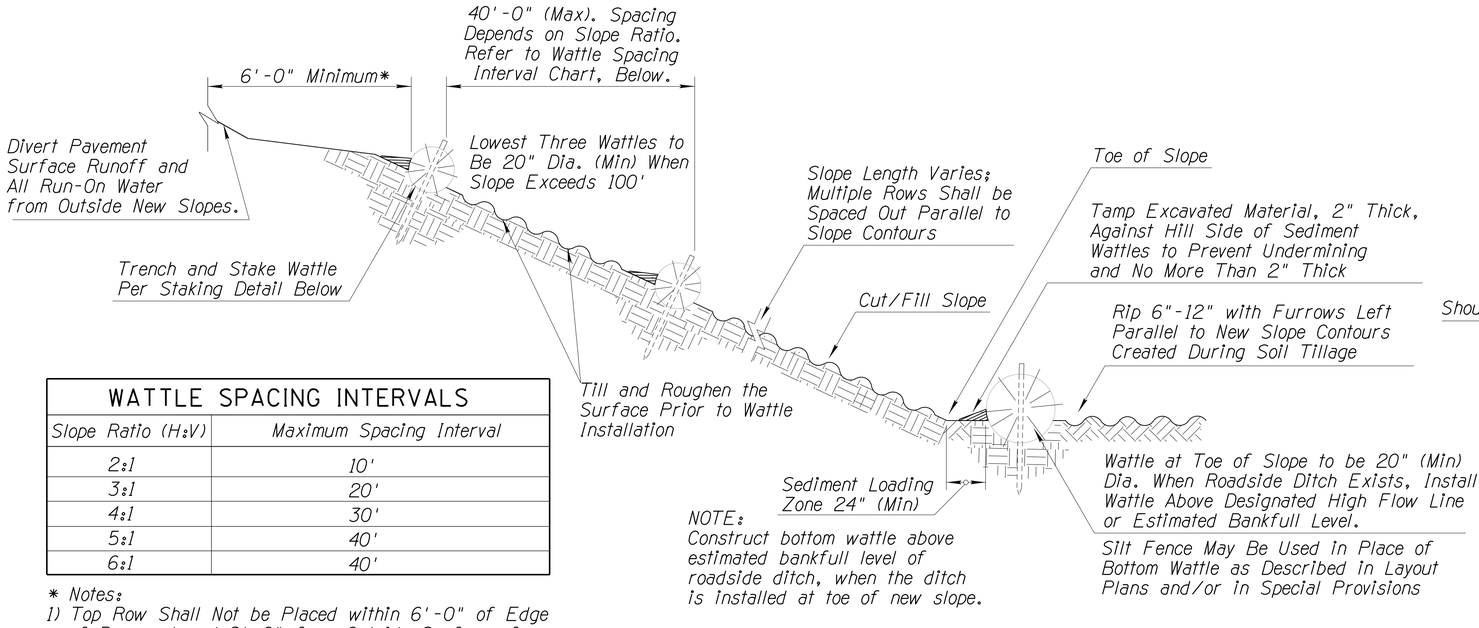
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	24	27	
		089A CN 540			

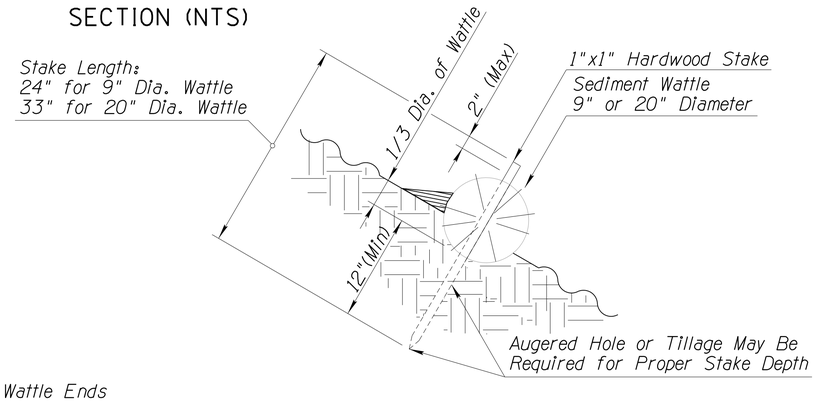


NOTE:
Construct bottom wattle above estimated bankfull level of roadside ditch, when the ditch is installed at toe of new slope.

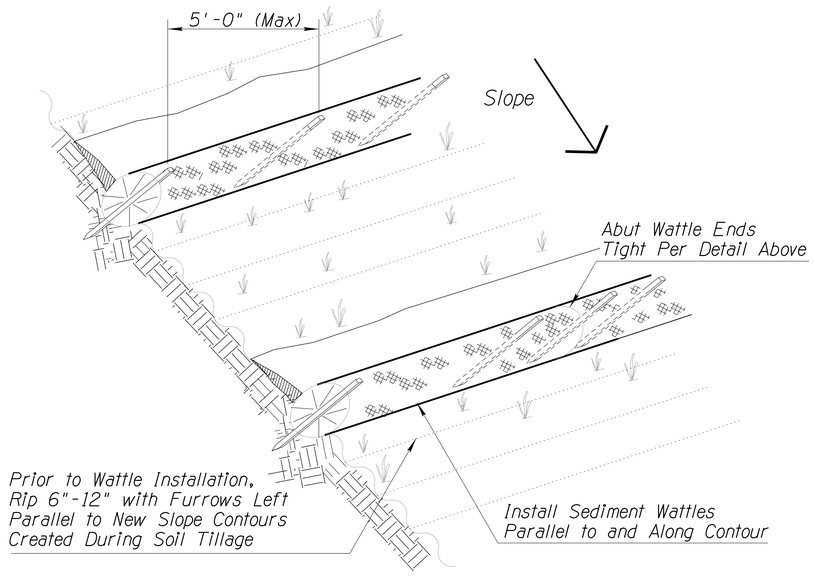
SECTION (NTS)

WATTLE SPACING INTERVALS	
Slope Ratio (H:V)	Maximum Spacing Interval
2:1	10'
3:1	20'
4:1	30'
5:1	40'
6:1	40'

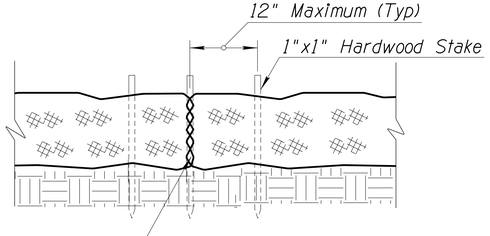
* Notes:
1) Top Row Shall Not be Placed within 6'-0" of Edge of Pavement and 9'-0" from Outside Surface of Barrier.
2) For erosive soils, place rows of wattles closer together.
3) For soils with low erosive potential, place rows of wattles further apart.



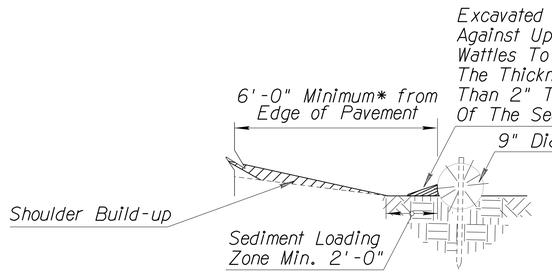
SEDIMENT WATTLE STAKING DETAIL (NTS)



SEDIMENT WATTLE LAYOUT (NTS)



SEDIMENT WATTLE OVERLAP (NTS)



** Note:
Applicable only in the areas of concentrated flow - to include but not be limited to roadway sag spots and drop-off repair locations as per the direction of the Engineer.

NEW SHOULDER BUILDUP ** PROTECTION SECTION (NTS)

NOTES:

1. Install Sediment Wattles as slopes are constructed to grade or as directed by the Engineer. Select, install and maintain in conformance with manufacturers' specifications to meet site conditions for slope protection and in accordance with good engineering practices. No Sediment Wattles shall be installed in urban freeway medians, nor where cable barrier systems are employed.
2. Sediment Wattles shall be in continuous contact with trench bottom and sides. Do not overlap wattle ends on top of each other. A 20" Dia. wattle may be made from 2-3 rolled excelsior or straw blankets.
3. Butt adjoining wattles tightly against each other. Drive the first end stake of the second wattle at an angle toward the first wattle to help abut them tightly.
4. Repair any rills or gullies promptly. Make field adjustments and corrections of Wattle BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
5. Construction of cut slopes 2:1 and steeper in soil and rock materials that can be ripped shall be constructed, whenever possible, by Minibenching. Refer to Slope Minibenching BMP Detail.
6. Loosening surface soil is not required where Minibenches are used. For seeded areas, tillage shall be performed to form minor ridges and furrows parallel to new slope contours and as specified in Section 805 of the Standard Specifications and these special provisions.
7. Divert and direct run-on water from outside of the slopes to the spillways and/or rock riprap/rock mulch. Diversion dikes and/or ditches are necessary on natural undisturbed slopes beyond the top limits of new slopes to divert run-on water.
8. Installation and maintenance of Sediment Wattle BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities.
9. Install and maintain Sediment Wattle BMPs to carry the stormwater of at least 2-year, 24-hour events.
10. The Sediment Wattle BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, maintenance, final removal, and disposal of this temporary BMP, as well as returning the area to an acceptable condition as approved by the Engineer.
11. Refer to Standard Specification Section 810-2.06(C) for Sediment Wattle material specifications.
12. Make field adjustments and corrections to ensure NO sensitive biological resources (native species / habitats) will be adversely impacted.

DETAIL E2
SEDIMENT WATTLE SLOPE PROTECTION

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

EROSION CONTROL DETAIL E2

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	E-01.02
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

ADOT subdue.1.ScreenREF.tbl

Plotted By: default at 3:02:27 PM P:\Jobs\CK Arizona\CK2015Proj\2015-04 2011-25TE ADOT District Minor On-Call US89A MP536 to MP564.71\Job Products\Plans\100%\24_E2_Sediment_Wattle.dgn

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
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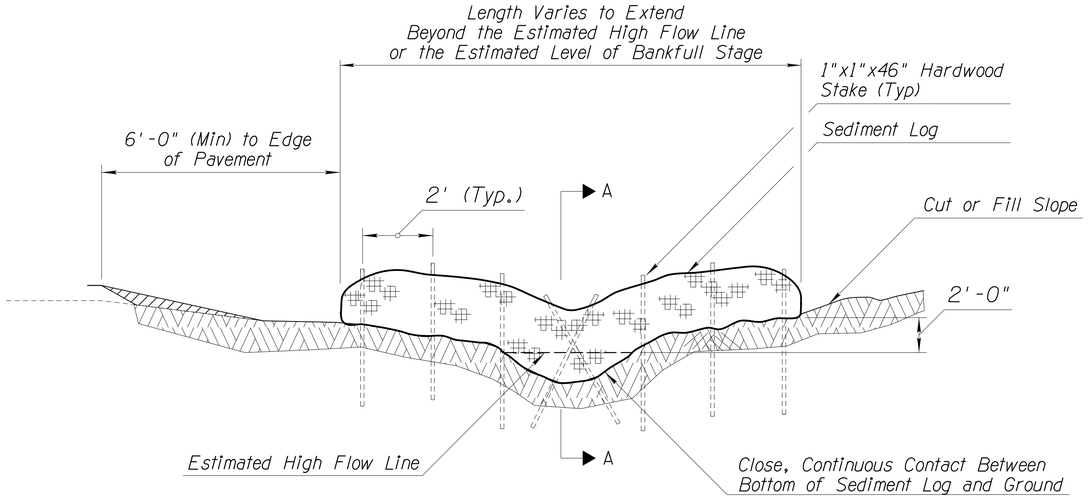
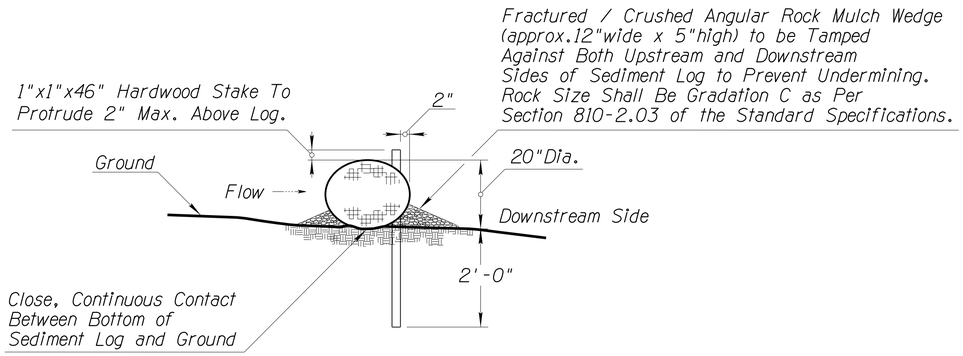
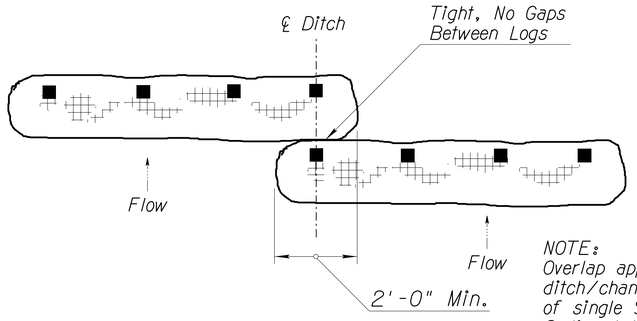
		089A CN 540			



SEDIMENT LOG IN DITCH/CHANNEL
SECTIONAL ELEVATION (NTS)



SECTION A-A (NTS)



TYPICAL OVERLAP
PLAN (NTS)

NOTE:
Overlap applies to situations where ditch/channel is wider than length of single Sediment Log. Two or multiple Sediment Logs may be necessary.

NOTES:
1. Sediment Logs shall not be installed in the urban freeway medians, nor where cable barrier systems are employed.
2. Locate Sediment Logs as indicated in plans, SWPPP or as directed by the Engineer.
3. Select, install and maintain Logs per manufacturers' specifications and good engineering practices.
4. Lay Sediment Log across prepared roadside ditch or channel. Trenching or burial of Sediment Logs is not required. The close, continuous contact between the bottom of the Log and the ground is mandatory. The Logs shall be installed in the roadside ditch, swale or channel bottom perpendicular to the flow of water as shown on detail this sheet.
5. Stake Log as shown. Stakes shall be placed through downstream side only as shown.
6. DO NOT drive stakes through center of the Log. Stakes must be driven into the ground as shown.
7. Ensure that no gaps exist between soil and bottom of Sediment Log. Repair any rills or undercuts promptly.
8. Placement of Sediment Logs shall be evaluated by the Engineer in rocky soil conditions.
9. Remove Sediment Log BMPs within the ditches/channels and around the storm drain inlets as per the direction of the Engineer or as soon as practicable upon stabilization of the construction disturbed area.
10. Dispose of Sediment Logs and trapped sediment material and fill trench created by Sediment Log.
11. The installation and maintenance of Sediment Log BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities. Sediment Logs shall be installed and maintained to carry the stormwater of at least 2-year, 24-hour events.
12. Make field adjustments and corrections of Sediment Log BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
13. Rock mulch/riprap may be required for channel/ditch lining or rock check dams for longitudinal ditch slopes that exceed 5% and/or for soil conditions not suitable for Log installation.
14. The Sediment Log BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, maintenance, final removal, and disposal, as well as returning the area to an acceptable condition as approved by the Engineer.
15. Refer to Standard Specification Section 810-2.06(B) for Sediment Log material specifications.
16. Make field adjustments and corrections to ensure NO sensitive biological resources (native species / habitats) will be adversely impacted.
17. Construct Rock Wedge with angular-shaped Gradation C Rock Mulch as defined in Section 810-2.03 of the Standard Specifications and these special provisions. Natural river-run materials such as rounded river rocks/cobblestones and pebbles are NOT acceptable.

DETAIL E3
SEDIMENT LOG

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

EROSION CONTROL
DETAIL E3

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	E-01.03
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

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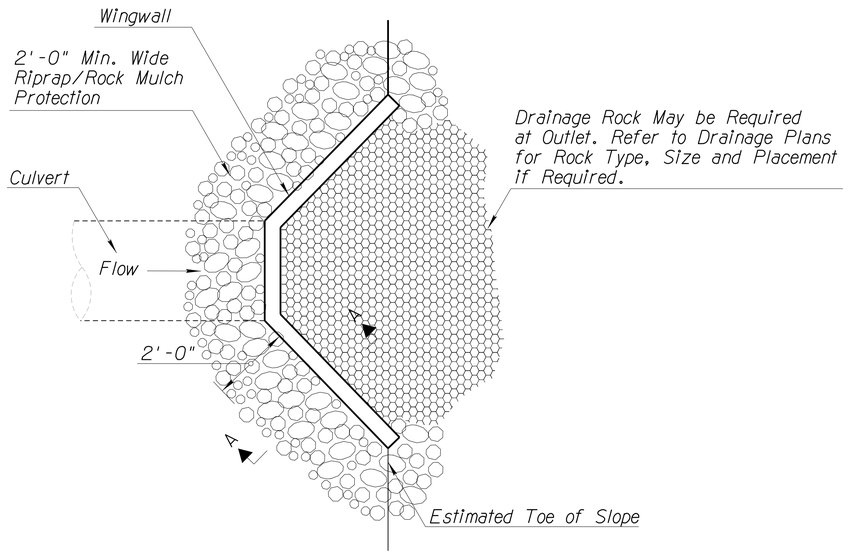
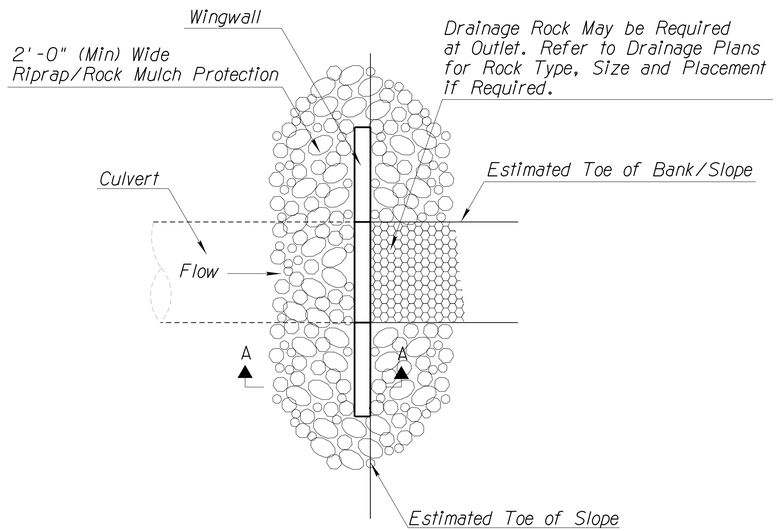
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	A89-C(206)T	26	27	

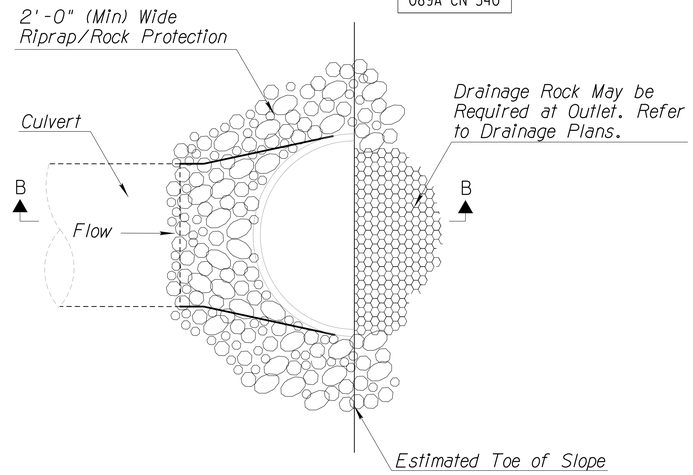
089A CN 540



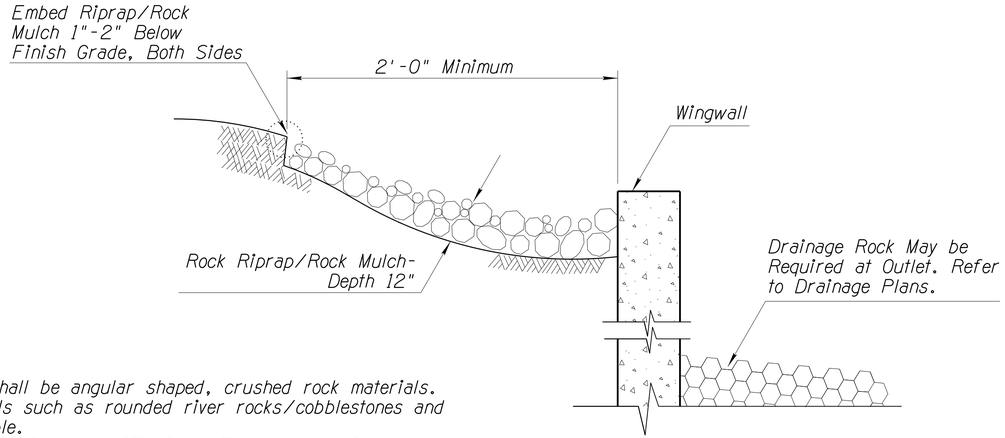
ANGLED HEADWALL
PLAN VIEW (NTS)



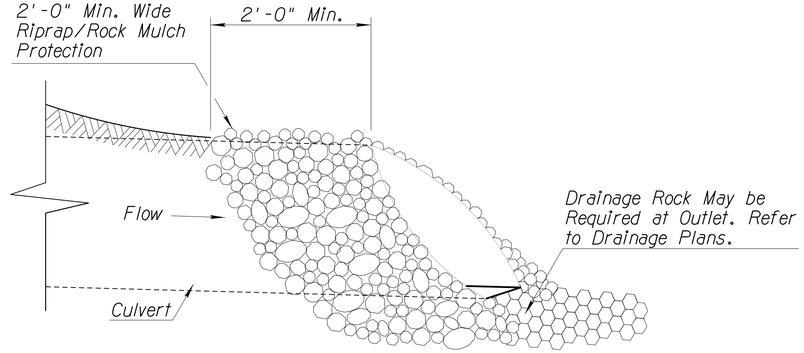
FLUSH HEADWALL
PLAN VIEW (NTS)



FLARED END
PLAN VIEW (NTS)



WINGWALL
SECTION A-A (NTS)



FLARED END
SECTION B-B (NTS)

NOTES:

1. Rock Riprap/Rock Much shall be angular shaped, crushed rock materials. Natural river-run materials such as rounded river rocks/cobblestones and pebbles are NOT acceptable.
2. Rock Riprap/Rock Mulch within the traffic Clear Zone shall conform to the requirements of Section 810-2.03 Sieve Size Gradation A and/or Gradation C, and Section 913 of the Standard Specifications.
3. Embed rock within traffic recovery area/clear zone into the finished grade so that any portion of the rock above the grade will be less than 4" in height.
4. The installation and maintenance of Rock Protection BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities. Rock Protection BMPs shall be installed and maintained to carry the stormwater of at least 2-year, 24-hour events.
5. Make field adjustments and corrections of Rock Protection BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
6. The Rock Protection BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, maintaining as well as returning the area to an acceptable condition as approved by the Engineer.
7. Make field adjustments and corrections to ensure NO sensitive biological resources (native species / habitats) will be adversely impacted.

DETAIL E4

ROCK PROTECTION FOR INLETS, OUTLETS AND HEADWALL TRANSITION

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

the CK Group, Inc.

EROSION CONTROL
DETAIL E4

23785 JAMES F. SCHUMANN Date Signed 06/21/16 ARIZONA, U.S.A.
EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	E-01.04

TRACS NO. H7775 01C | A89-C(206)T | ___ OF ___

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

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Plotted By: default at 3:05:23 PM P:\Jobs\CK Arizona\CK2015Proj\2015-04 2011-25TE ADOT District Minor On-Call US89A MP536 to MP564.71\Job Products\Plans\100%\26_E4_Rock_Protection_Inlet_Outlet_Headwall.dgn

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
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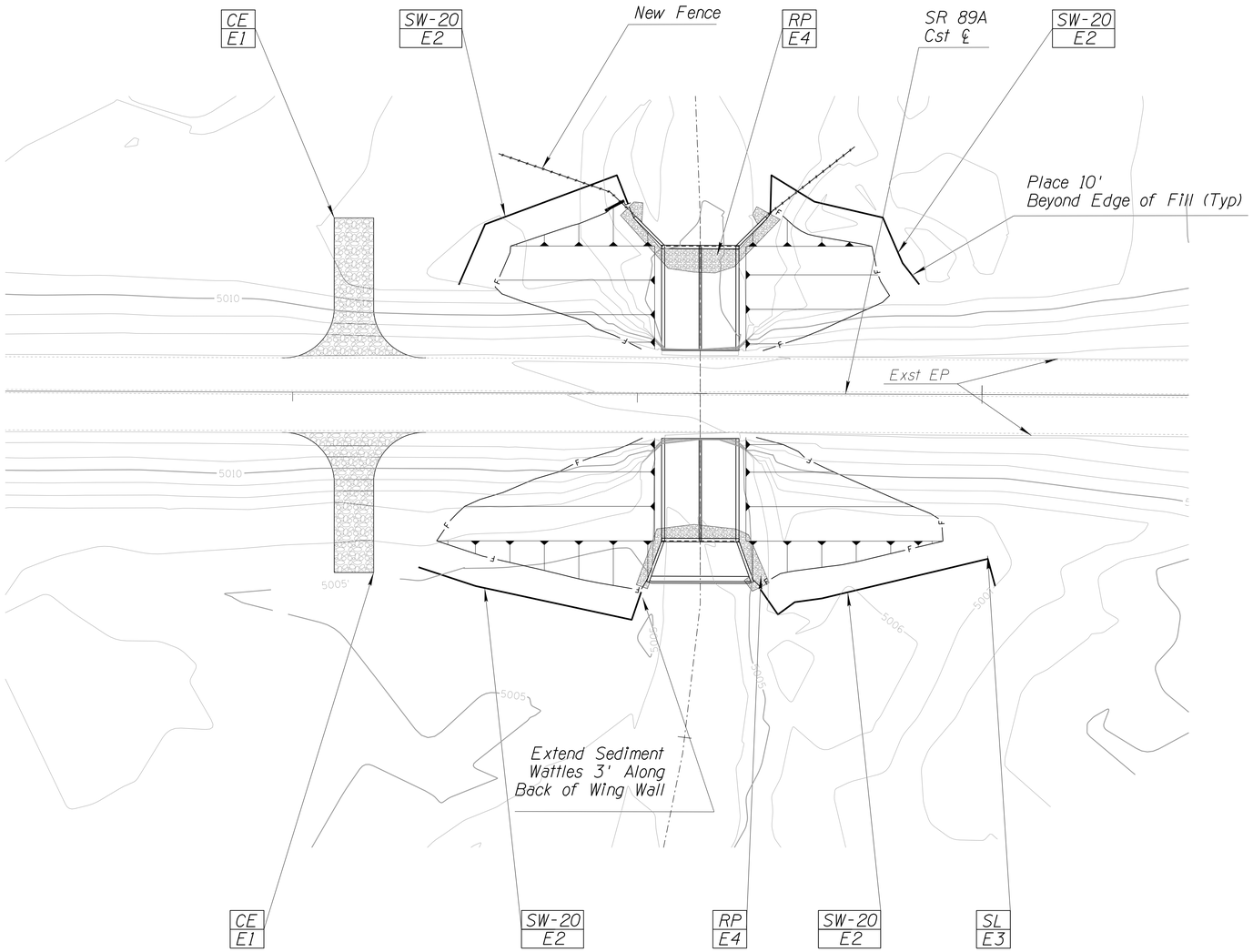
		089A CN 540			



BOX EXTENSION	CE E1 (250 SY EA)	SW-20 E2 LF	SL E3 (20 LF EA)	RP E4 CY*
1	500	140	40	14
2	500	180	40	14
3	500	180	40	14
4	500	180	40	14
5	500	190	40	14
TOTAL	2500	870	200	70

* Gradation A

EROSION CONTROL PLAN (TYPICAL)

NOTES:

1. Contractor is required to monitor/maintain all Control measures during shutdown periods.
2. Area To Be Seeded Includes All Disturbed Areas Including Ten (10) Feet Beyond Cut And Fill Limits Including Construction Access Roads, Areas Disturbed By Construction Traffic And Construction Activities And Any Staging Or Stockpile Areas.

RP / E4 — Erosion Control Method / Detail Number Reference

SW-20 = Sediment Wattles - 20"
SL = Sediment Log
CE = Construction Entrance
RP = Rock Protection (Riprap)

	NAME	DATE
DESIGN	C. Bolze	06/16
DRAWN	N. Tecson	06/16
CHECKED	J. Schumann	06/16

the CK Group, Inc.

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SERVICES

EROSION CONTROL PLAN (TYPICAL)

23785 JAMES F. SCHUMANN — Date Signed 06/21/16 — ARIZONA, U.S.A. — EXPIRES 06/30/2016

ROUTE	LOCATION	DWG. NO.
US 89A	COLORADO RIVER - HOUSE ROCK (PHASE II)	E-01.05
TRACS NO. H7775 01C	A89-C(206)T	___ OF ___

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

ADOT_subdue_1_ScreenREF.tbl

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