TECHNICAL DATA NOTEBOOK

VOLUME 5

CAVE CREEK BELOW CAREFREE HIGHWAY FIS

FLOODPLAIN DELINEATION STUDY

FOR

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

F.C.D. Contract No. 95-30

MAPS

Prepared for:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
2801 W. Durango Avenue
Phoenix, Arizona 85009
(602) 506-1501

Prepared by:

WILLDAN ASSOCIATES
1717 W. Northern Avenue, Suite 112
Phoenix, Arizona 85021
(602) 870-7600

June 23, 1997

Project No. 08855-1008

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Carefree Highway Bridge at Cave Creek, As-built Plans

Hydrology Study Working Maps:

- Basins Boundary
- Land Use
- Soils
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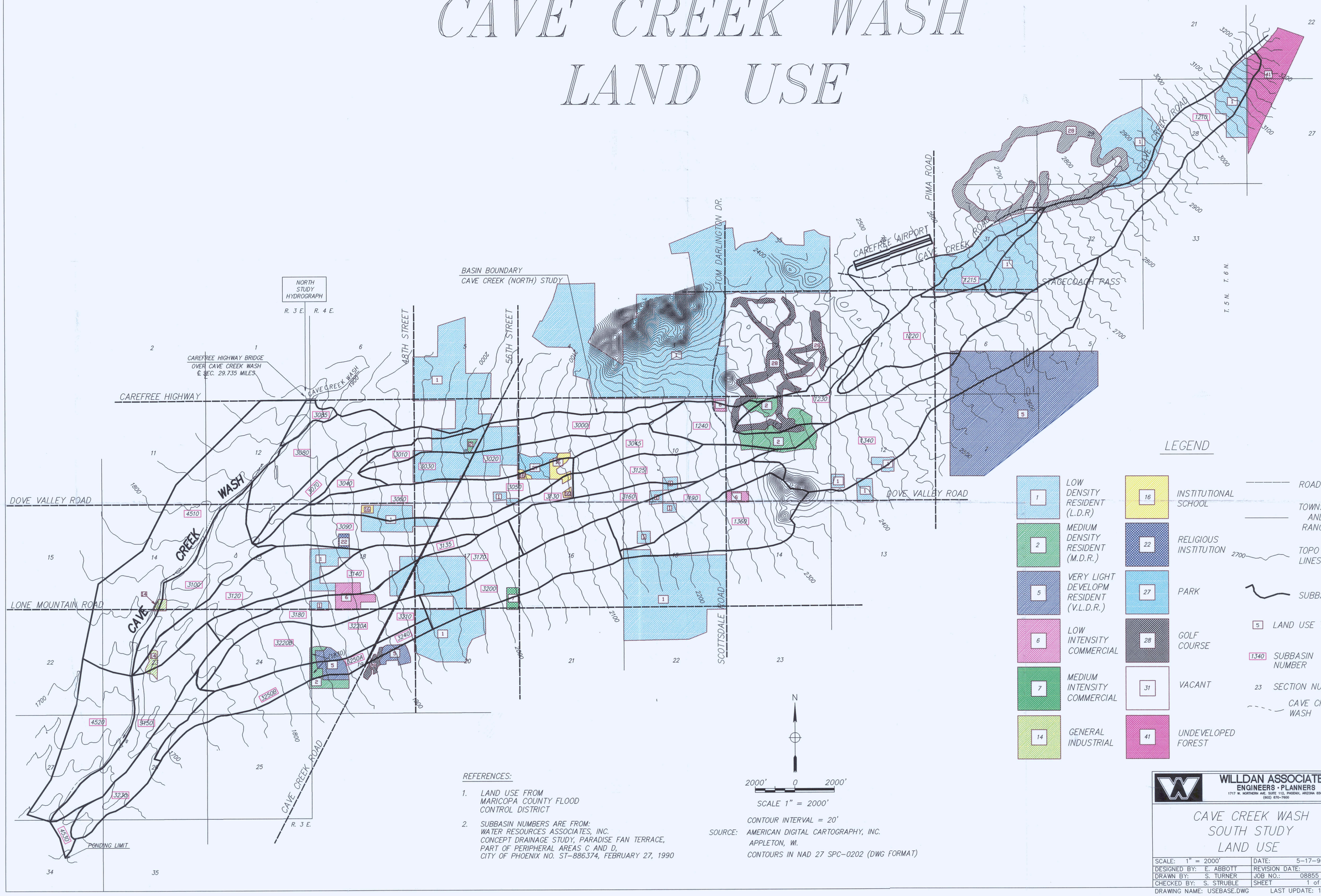
- Routing Lengths
- Culverts

Flood Delineation Maps

Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

CAVE CREEK WASH
LAND USE



LEGEND

- 1 — LOW DENSITY RESIDENT (L.D.R)
- 2 — MEDIUM DENSITY RESIDENT (M.D.R.)
- 5 — VERY LIGHT DEVELOPM RESIDENT (V.L.D.R.)
- 6 — LOW INTENSITY COMMERCIAL
- 7 — MEDIUM INTENSITY COMMERCIAL
- 14 — GENERAL INDUSTRIAL
- 16 — INSTITUTIONAL SCHOOL
- 22 — RELIGIOUS INSTITUTION
- 27 — PARK
- 28 — GOLF COURSE
- 31 — VACANT
- 41 — UNDEVELOPED FOREST

- ROAD
- TOWNSHIP AND RANGE
- 2700 TOPO LINES
- SUBBASIN
- 5 LAND USE TYPE
- 1340 SUBBASIN NUMBER
- 23 SECTION NUMBER
- CAVE CREEK WASH

REFERENCES:

1. LAND USE FROM MARICOPA COUNTY FLOOD CONTROL DISTRICT
2. SUBBASIN NUMBERS ARE FROM: WATER RESOURCES ASSOCIATES, INC. CONCEPT DRAINAGE STUDY, PARADISE FAN TERRACE, PART OF PERIPHERAL AREAS C AND D, CITY OF PHOENIX NO. ST-886374, FEBRUARY 27, 1990

N

2000' 0 2000'

SCALE 1" = 2000'

CONTOUR INTERVAL = 20'

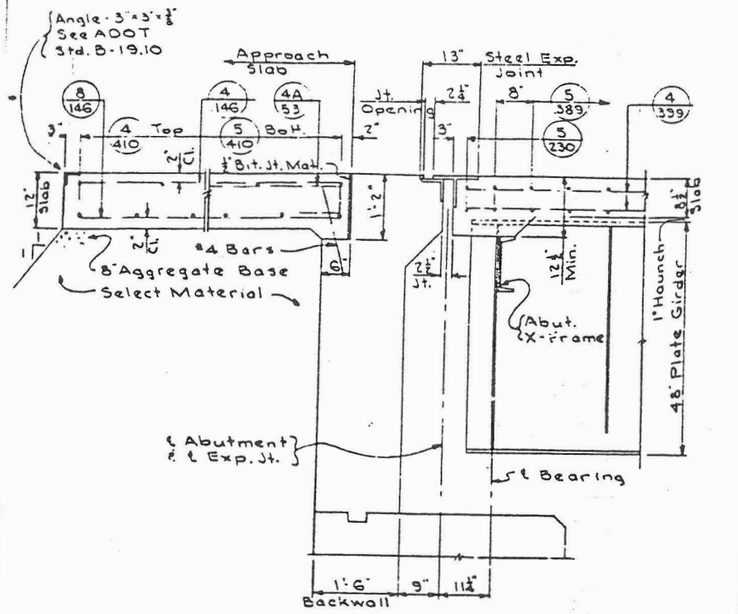
SOURCE: AMERICAN DIGITAL CARTOGRAPHY, INC. APPLETON, WI. CONTOURS IN NAD 27 SPC-0202 (DWG FORMAT)

WILLDAN ASSOCIATES
ENGINEERS • PLANNERS
1717 W. NORTHERN AVE. SUITE 112, PHOENIX, ARIZONA 85021
(602) 870-7800

CAVE CREEK WASH
SOUTH STUDY
LAND USE

SCALE: 1" = 2000'	DATE: 5-17-96
DESIGNED BY: E. ABBOTT	REVISION DATE:
DRAWN BY: S. TURNER	JOB NO.: 08855
CHECKED BY: S. STRUBLE	SHEET 1 of 1

DRAWING NAME: USEBASE.DWG LAST UPDATE: 10-31-96



SECTION AT END OF DECK
INCLUDING APPROACH SLAB
Scale:- ½"=1'-0"

ALTERNATE DECK SECTION
Scale:- ¾"=1'-0"

PRECAST SLAB NOTES

Contractor may use precast concrete slabs, but no separate payment will be made and payment will be made on basis of cast-in-place deck, as if no precast slabs were used.

Fabrication of Slabs shall be equal to Precast Concrete Beams (See Notes on sheet no. 19)

Prestress Force
Initial - 48.2 kips per lin. ft. (18.1 kips per strand)
Final - 36.7 kips per lin. ft. (12.3 kips per strand)

CONCRETE DECK DETAILS
STEEL BEAM ALTERNATE

BILL OF REINFORCING BARS

CONCRETE BEAM ALTERNATE

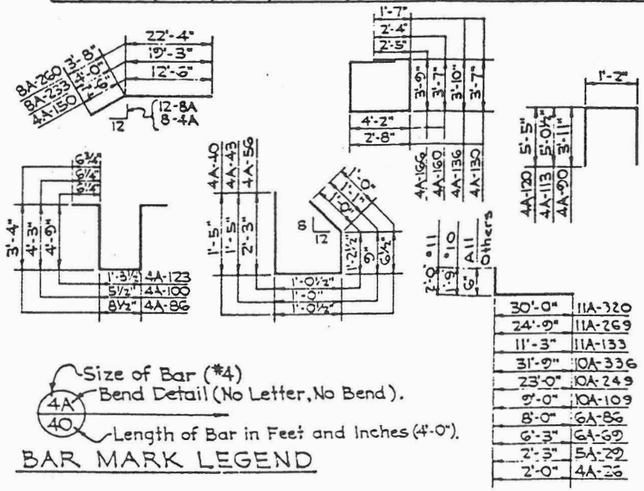
	MARK	No.	Size	Length	Remarks
ABUTMENTS(2)	11A-320	126	11	32'-0"	Bent
	11A-269	126	11	26'-9"	"
	11A-133	126	11	13'-3"	"
	8-263	20	8	26'-3"	Straight
	8-246	40	8	24'-6"	"
	8-216	134	8	21'-6"	"
	8A-260	20	8	26'-0"	Bent
	7-276	64	7	27'-6"	Straight
	7-263	64	7	26'-3"	"
	7-120	30	7	12'-0"	"
	6-216	94	6	21'-6"	Straight
	6-136	4	6	13'-6"	"
	6-80	16	6	8'-0"	"
	6A-169	8	6	16'-9"	Bent
	6A-86	16	6	8'-6"	"
	5-233	24	5	23'-3"	Straight
	5A-29	56	5	2'-9"	Bent
	4-230	40	4	23'-0"	Straight
	4-136	16		13'-6"	"
	4-130	16		13'-0"	"
	4-110	8		11'-0"	"
	4-90	8		9'-0"	"
	4-70	16		7'-0"	"
	4-23	40		2'-3"	"
	4-16	56		1'-6"	"
	4A-166	48		16'-6"	Bent
	4A-160	48		16'-0"	"
	4A-150	8		15'-0"	"
	4A-129	390		12'-9"	"
	4A-120	56		12'-0"	"
	4A-113	32		11'-3"	"
	4A-90	24		9'-0"	"
	4A-56	20		5'-6"	"
	4A-43	56		4'-3"	"
	4A-30	72		3'-0"	"
	4A-26	56	4	2'-6"	"

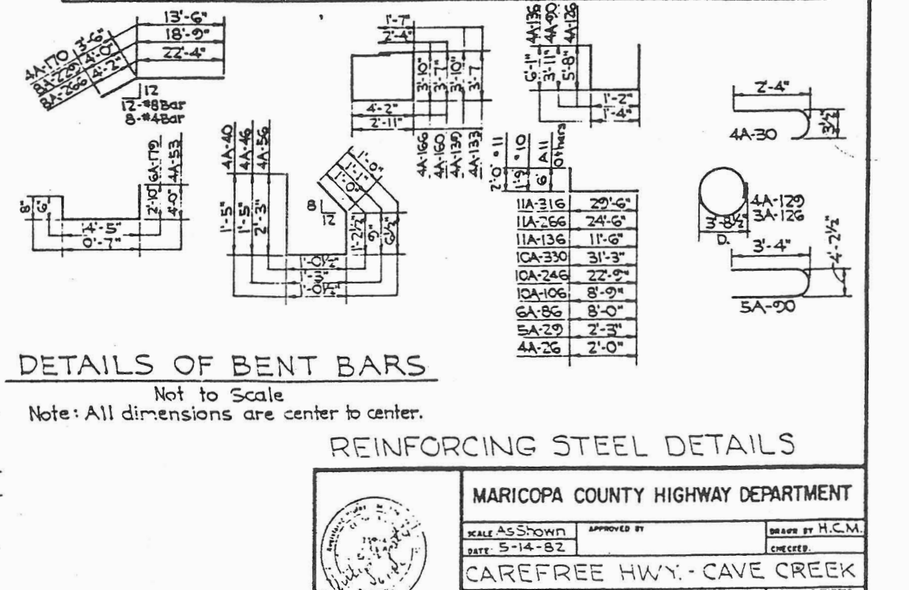
	MARK	No.	Size	Length	Remarks
PIERS(3)	10A-336	117	10	33'-6"	Bent
	10A-249	117	10	24'-9"	"
	10A-109	117	10	10'-9"	"
	8-386	30	8	38'-6"	Straight
	8-259	126		25'-9"	"
	8-233	90		23'-3"	"
	8-116	102		11'-6"	"
	8A-233	30	8	23'-3"	Bent
	6A-99	75	6	9'-9"	Bent
	5-386	18	5	38'-6"	Straight
	5A-90	30	5	9'-0"	Bent
	4-116	102	4	11'-6"	Straight
	4-39	9	4	3'-9"	"
	4-36	9	4	3'-6"	"
	4A-136	114	4	13'-6"	Bent
	4A-130	114	4	13'-0"	"
	3A-129	1035	3	12'-9"	Bent
DECK & APPROACH SLABS					
	8-146	99	8	14'-6"	Straight
	7-310	174	7	31'-0"	Straight
	6-303	24	6	30'-3"	Straight
	5-410	32	5	41'-0"	Straight
	5-389	1050	5	38'-9"	"
	5-230	8	5	23'-0"	"
	5-66	14	5	6'-6"	"
	4-410	22	4	41'-0"	Straight
	4-399	684		39'-9"	"
	4-303	144		30'-3"	"
	4-146	50		14'-6"	"
	4-59	60		5'-9"	"
	4-53	120		5'-3"	"
	4-50	240		5'-0"	"
	4-23	472		2'-3"	"
	4A-123	90		12'-3"	Bent
	4A-100	200		10'-0"	"
	4A-86	60		8'-6"	"
	4A-53	48		5'-3"	"
	4A-40	936		4'-0"	"
	4A-30	936	4	3'-0"	"

STEEL BEAM ALTERNATE

	MARK	No.	Size	Length	Remarks
ABUTMENTS(2)	11A-316	132	11	31'-6"	Bent
	11A-266	132	11	26'-6"	"
	11A-136	132	11	13'-6"	"
	8-266	20	8	26'-6"	Straight
	8-246	40	8	24'-6"	"
	8-216	134	8	21'-6"	"
	8A-266	20	8	26'-6"	Bent
	7-263	64	7	26'-3"	Straight
	7-259	64	7	25'-9"	"
	7-216	94	7	21'-6"	"
	7-120	30	7	12'-0"	"
	6-143	4	6	14'-6"	Straight
	6-80	16	6	8'-0"	"
	6A-179	8	6	17'-9"	Bent
	6A-86	16	6	8'-6"	"
	5-233	24	5	23'-3"	Straight
	5A-29	56	5	2'-9"	Bent
	4-230	40	4	23'-0"	Straight
	4-146	16		14'-6"	"
	4-140	16		14'-0"	"
	4-116	8		11'-6"	"
	4-90	8		9'-0"	"
	4-70	16		7'-0"	"
	4-39	36		3'-9"	"
	4-23	40		2'-3"	"
	4-16	56		1'-6"	"
	4A-170	8		17'-0"	Bent
	4A-166	48		16'-6"	"
	4A-160	48		16'-0"	"
	4A-136	36		13'-6"	"
	4A-129	384		12'-9"	"
	4A-126	40		12'-6"	"
	4A-90	24		9'-0"	"
	4A-56	24		5'-6"	"
	4A-46	56		4'-6"	"
	4A-30	80		3'-0"	"
	4A-26	56	4	2'-6"	"

	MARK	No.	Size	Length	Remarks
PIERS(2)	10A-330	78	10	33'-0"	Bent
	10A-246	78	10	24'-6"	"
	10A-106	78	10	10'-6"	"
	8-376	20	8	37'-6"	Straight
	8-256	64		25'-6"	"
	8-239	52		23'-9"	"
	8-229	20		22'-9"	"
	8A-229	20	8	22'-9"	Bent
	7-116	68	7	11'-6"	Straight
	5-376	12	5	37'-6"	Straight
	5A-90	20	5	9'-0"	Bent
	4-116	80	4	11'-6"	Straight
	4-39	6		3'-9"	"
	4-36	6		3'-6"	"
	4A-139	56		13'-9"	Bent
	4A-133	56	4	13'-3"	"
	3A-126	684	3	12'-6"	Bent
DECK & APPROACH SLABS					
	8-440	58	8	44'-0"	Straight
	8-146	98	8	14'-6"	"
	6-370	12	6	37'-0"	Straight
	6-349	8	6	34'-9"	"
	5-410	32	5	41'-0"	Straight
	5-389	1050		38'-9"	"
	5-230	8		23'-0"	"
	5-66	14	5	6'-6"	"
	4-410	22	4	41'-0"	Straight
	4-399	684		39'-9"	"
	4-366	72		36'-6"	"
	4-343	48		34'-3"	"
	4-146	50		14'-6"	"
	4-23	472		2'-3"	"
	4A-53	48		5'-3"	Bent
	4A-40	934		4'-0"	"
	4A-30	934	4	3'-0"	"





DETAILS OF BENT BARS
Not to Scale
Note: All dimensions are center to center.

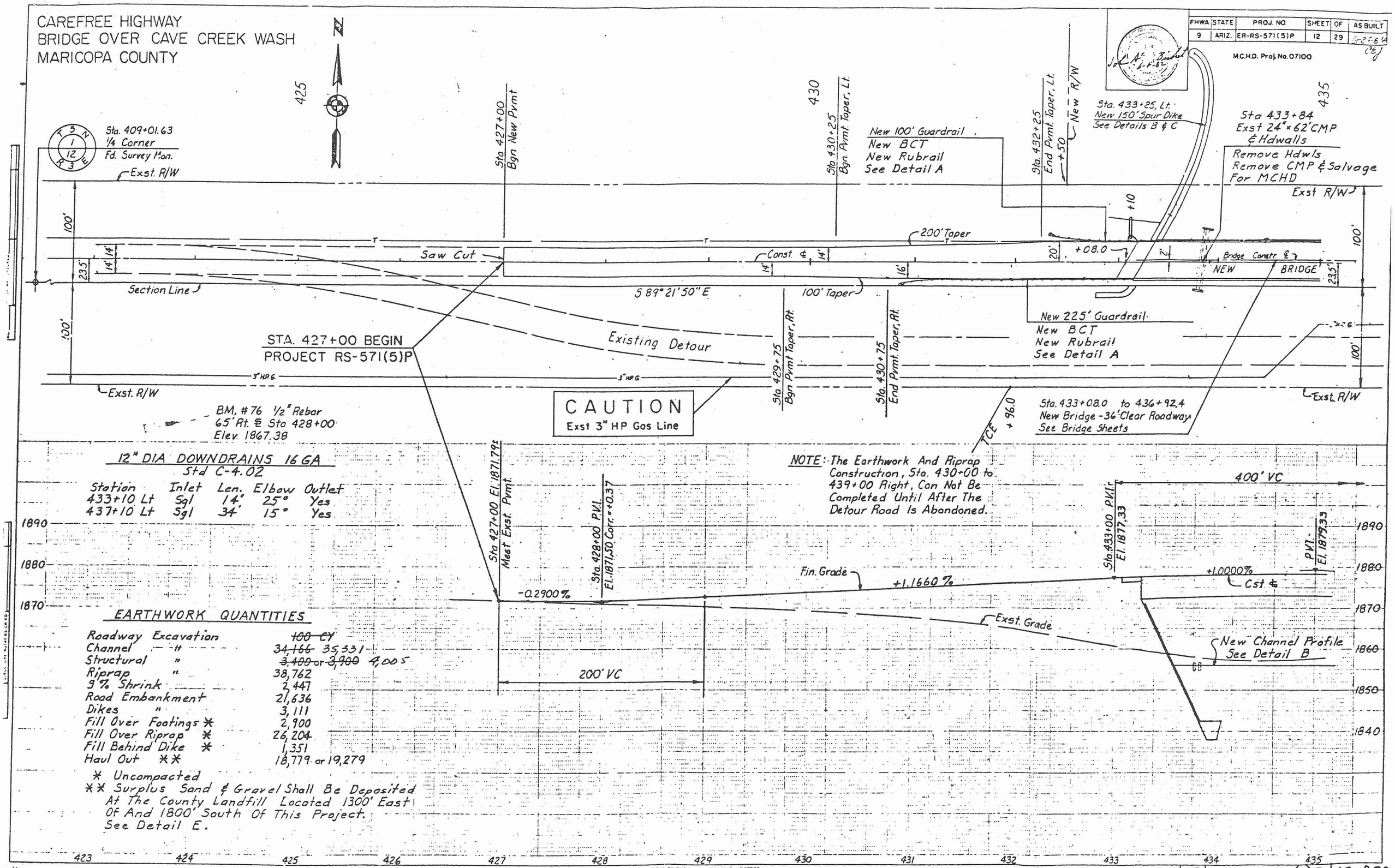
REINFORCING STEEL DETAILS

MARICOPA COUNTY HIGHWAY DEPARTMENT
SCALE As Shown | APPROVED BY | DRAWN BY H.C.M.
DATE 5-14-82 | CHECKED
CAREFREE HWY. - CAVE CREEK
M.C.H.D. Project No. C7100 | DRAWING NUMBER 28

CAREFREE HIGHWAY
BRIDGE OVER CAVE CREEK WASH
MARICOPA COUNTY

FHWA	STATE	PROJ. NO.	SHEET	OF	AS BUILT
9	ARIZ.	ER-RS-571(5)P	12	29	

M.C.H.D. Proj. No. 07100



12" DIA DOWNDRAINS 16 GA
Std C-4.02

Station	Inlet	Len.	Elbow	Outlet
433+10 Lt	Sgl	14'	25°	Yes
437+10 Lt	Sgl	34'	15°	Yes

NOTE: The Earthwork And Riprap Construction, Sta. 430+00 to 439+00 Right, Can Not Be Completed Until After The Detour Road Is Abandoned.

EARTHWORK QUANTITIES

Roadway Excavation	~~100 CY~~
Channel "	~~34,166~~ 35,331
Structural "	~~3,400~~ or ~~3,900~~ 4,005
Riprap "	38,762
9% Shrink	2,447
Road Embankment	21,636
Dikes "	3,111
Fill Over Footings *	2,900
Fill Over Riprap *	26,204
Fill Behind Dike *	1,351
Haul Out **	18,779 or 19,279

* Uncompacted
** Surplus Sand & Gravel Shall Be Deposited At The County Landfill Located 1300' East Of And 1800' South Of This Project. See Detail E.

PLATE 1 SINGLE PLAN - PROFILE - DOTTED
CHARLES BRUNING COMPANY
MADE IN U.S.A.

CAREFREE HIGHWAY
BRIDGE OVER CAVE CREEK WASH
MARICOPA COUNTY

FHWA	STATE	PROJ NO.	SHEET	OF	AS BUILT
9	ARIZ.	ER-RS-571(5)P	13	29	6-25-86

M.C.H.D. Proj. No. 07100

Sta 435+37.67 N.E. Cor. Sec. 12 T.5N., R.3E.
No Monument
Δ ∠ Defl. 0°56'10" Lt.

Sta. 436+75.39, Lt.
New 150' Spur Dike
See Details B & D

New R/W

New 225' Guardrail
New BCT
New Rubrail
See Detail A

Sta. 439+25 Bgn. Pvmt. Taper, Lt. +50

Sta. 441+25 End Pvmt. Taper, Lt.

704.41'
S 59°43'54" E
TCE

Sta. 443+00 End New Pvmt. +61.2

Sta: 461+75.60
¼ Corner
Fd. ¾" Bar

435 440 445

Exst. R/W

CAVE CREEK WASH

Sta. 440+00
Exst. Cattle Guard
Salvage Grill for M.C.H.D.

200' Taper

Bridge Constr. ℄

NEW BRIDGE

+92.4

54°

+10

100' Taper

Construction ℄

Saw Cut

Section Line

N. 89°42'00" E

3" HP G.

Existing Detour

New 162.5' Guardrail
New BCT
New Rubrail
See Detail A

Sta 438+25 Bgn Pvmt Taper Rt

Sta 439+25 End Pvmt Taper, Rt.

TCE

STA. 443+00 END
PROJECT RS-571(5)P

Exist. R/W

Exst R/W

CAUTION
Exst 3" HP Gas Line

BM #77 SE Cor. Angle Iron
65' Rt ℄ Sta. 435+37.67
Elev. 1860.46

NOTE: The Earthwork And Riprap Construction, Sta. 430+00 to 439+00 Right, Can Not Be Completed Until After The Detour Road Is Abandoned.

400' VC

P.V.I. El. 1879.33

Sta 437+00 PVI El 1877.33

-1.0000%

Cst ℄

-1.0733%

Fin. Grade

Exst. Grade

Sta. 441+50 P.V.I. El. 1872.50 Corr. +1.41'

+2.6867%

Sta. 443+00 El. 1876.53 ± Meet Exst. Pvmt

300' V.C.

1890
1880
1870
1860
1850
1840

435 436 437 438 439 440 441 442 443 444 445 446 447

DETAIL E

427+00 443+00 PROJECT ℄ Carefree Hwy

NW Cor Sec 7

N¼ Cor Sec 7

Paved Road

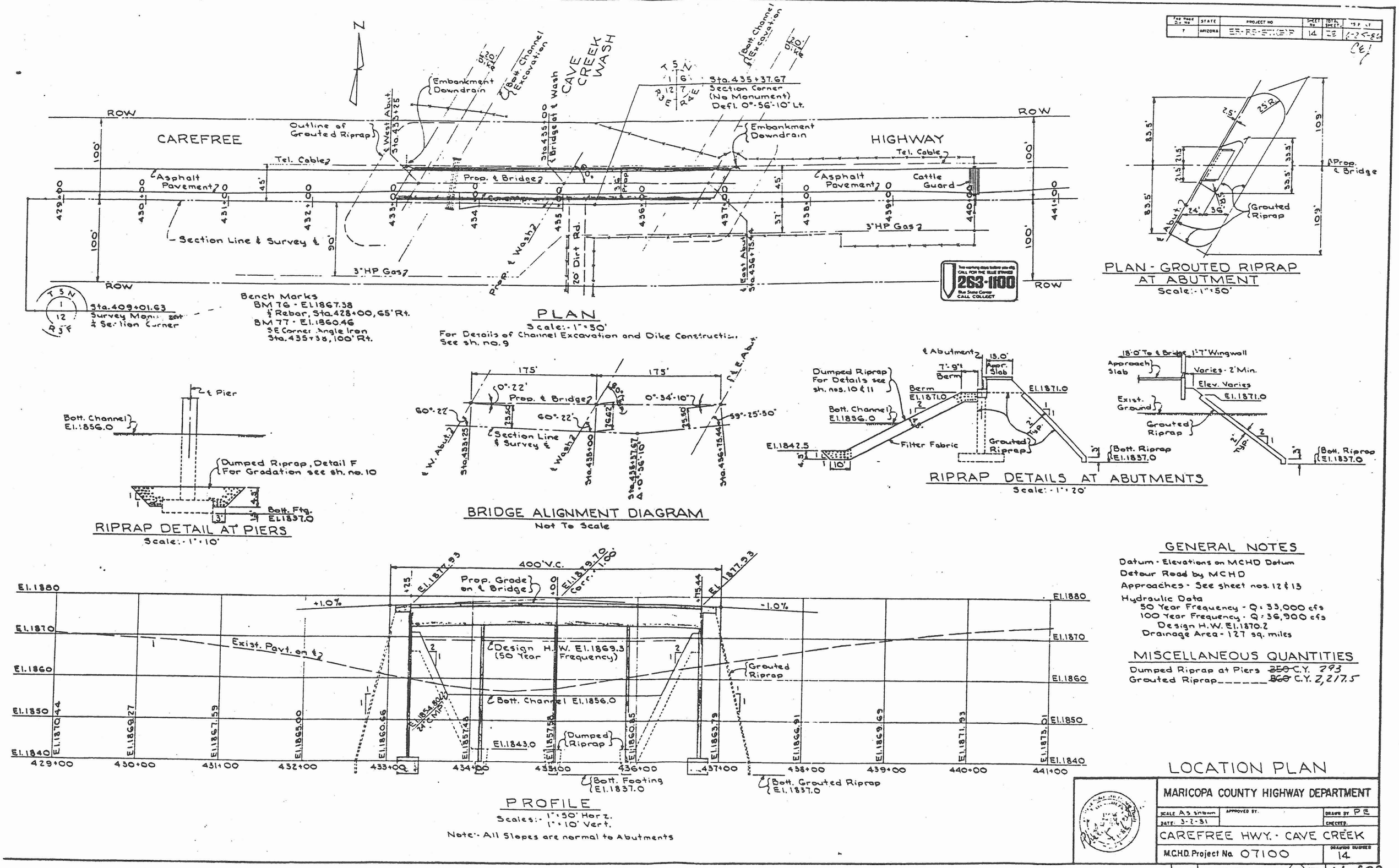
Disposal Area
Open 7:30 AM to 3:30 PM

Gate

W¼ Cor Sec 7

PLATE 1 SINGLE PLAN - PROFILE - DOTTED
CHARLES BRUNING COMPANY

Fed Road Div No	STATE	PROJECT NO	SHEET No	TOTAL SHEETS	TSP LT
7	ARIZONA	ER-RS-571(5)P	14	23	6-25-86



GENERAL NOTES

Datum - Elevations on MCHD Datum
Detour Road by MCHD
Approaches - See sheet nos. 12 & 13
Hydraulic Data
50 Year Frequency - Q = 33,000 cfs
100 Year Frequency - Q = 36,900 cfs
Design H.W. El. 1870.2
Drainage Area - 127 sq. miles

MISCELLANEOUS QUANTITIES

Dumped Riprap at Piers ~~250~~ C.Y. 293
Grouted Riprap _____ ~~860~~ C.Y. 2,217.5

LOCATION PLAN

MARICOPA COUNTY HIGHWAY DEPARTMENT

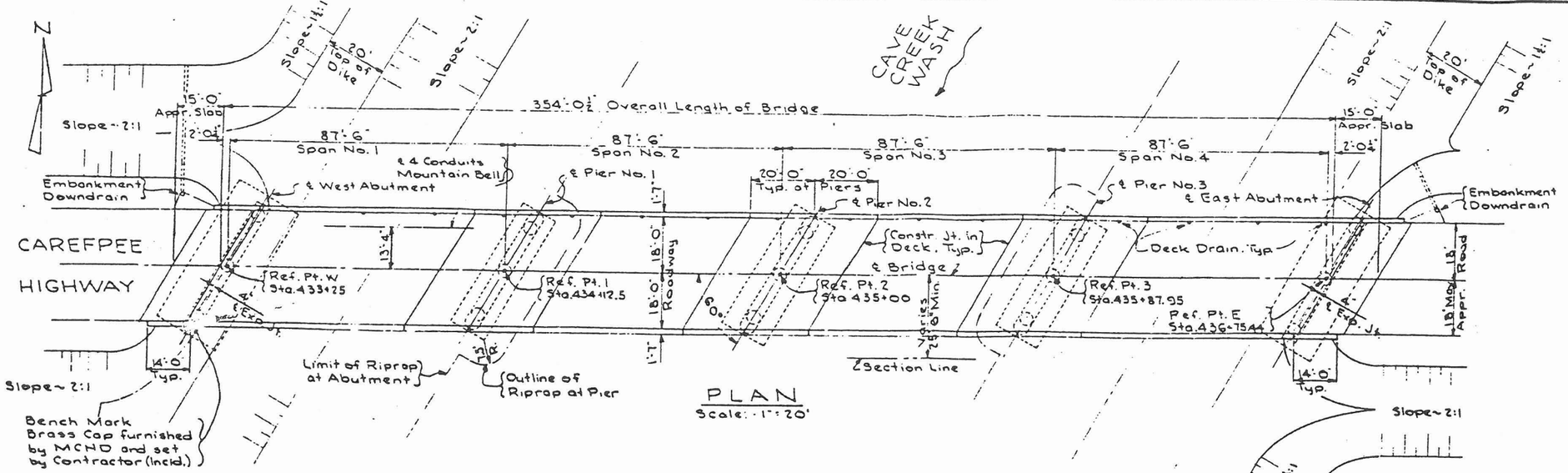
SCALE AS shown	APPROVED BY	DRAWN BY PE
DATE: 3-2-81		CHECKED

CAREFREE HWY. - CAVE CREEK

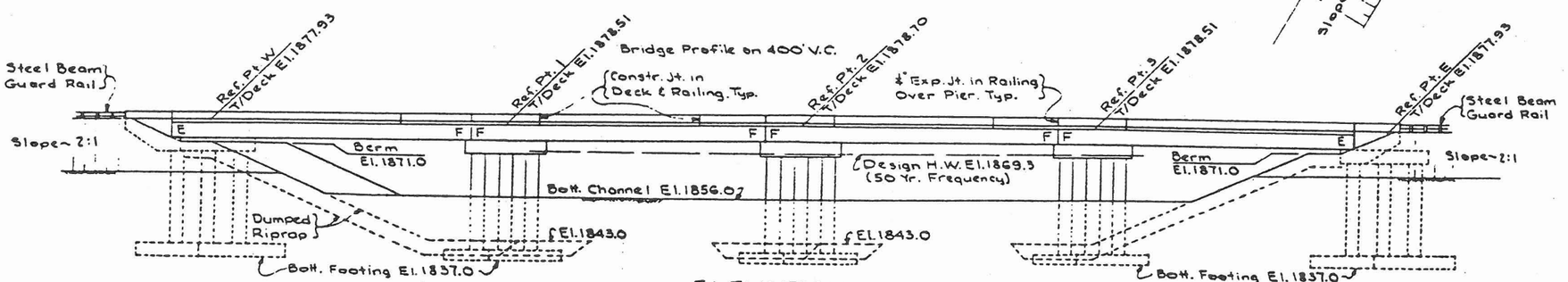
M.C.H.D. Project No. 07100 — DRAWING NUMBER 14

FED. ROAD DIV. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	I.D. & L.T.
7	ARIZONA	EF-FR-ES-571(5)D	16	29	1-2<RL

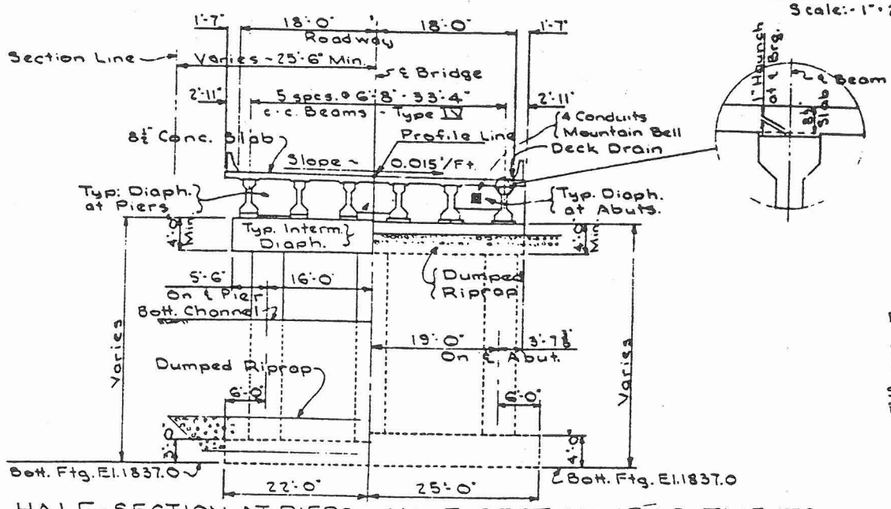
CEF



PLAN
Scale: 1" = 20'

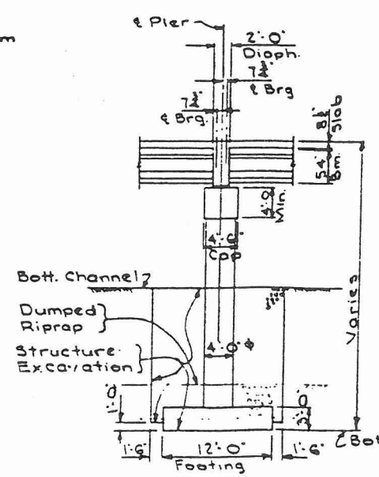


ELEVATION
Scale: 1" = 20'

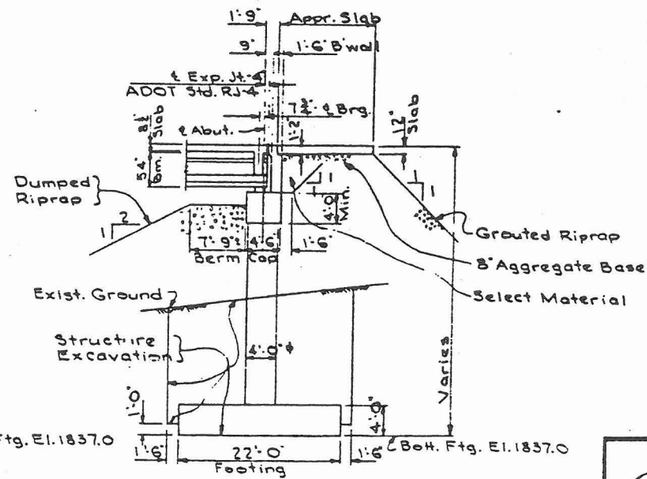


HALF-SECTION AT PIERS HALF-SECTION AT ABUTMENTS

TYPICAL DECK SECTION
Scale: 1" = 10'



TYPICAL SECTION AT PIERS
Scale: 1" = 10'



TYPICAL SECTION AT ABUTMENTS
Scale: 1" = 10'

GENERAL NOTES

Construction - Arizona D.O.T Std. Specs for Road and Bridge Constr., 1969, revised to date

Design - AASHTO Std. Specs. for Hwy. Bridges, 1977 Edition and Current Supplements
Simple Non-composite Spans for Dead Load
Simple Composite Spans for Live Load and Future Wearing Surface

Loading - HS20-44

Reinforcing Steel - ASTM A-615, Grade 60
(Except fs: 20000 psi for Deck

Structural Steel - ASTM A-36

Concrete - Class S
Substructure shall be 4000 psi concrete
Bridge Deck shall be 4500 psi concrete
(Except fc: 1400 psi, n: 8)
Bridge Railing and Approach Slabs shall be 3500 psi concrete

Precast Concrete Beams
Ultimate Strength of Concrete at 28 Days shall be 5000 psi
Minimum Strength at Release shall be 4000 psi
Prestressing Steel - ASTM A-416, Grade 270
Beams shall be prestressed by pretensioning method only

Footing Pressures
Allowable - 6000 psf
Pier
Max. DL + LL - 5700 psf
Max. DL + EQ - 8120 psf
Abutment
Max DL + LL - 6300 psf
Max. DL + EQ - 6560 psf

Mountain Bell Conduits
Conduits and Fasteners not a part of this contract.
Contact Mountain Bell, D.W. Brundage, phone no. 255-1628.

SUMMARY OF QUANTITIES

Class S Concrete (4500 psi)	~~138~~ ~~145~~ C.Y.
Class S Concrete (4000 psi)	~~876~~ ~~897~~ C.Y.
Class S Concrete (3500 psi)	~~109~~ 108 C.Y.
Reinforcing Steel	~~23850~~ ~~23850~~ Lbs.
Precast Concrete Beams	24 Ea.
Structure Excavation	~~4000~~ ~~3900~~ C.Y.
Select Material	70 Tons
Aggregate Base	50 Tons

GENERAL PLAN OF BRIDGE
CONCRETE BEAM ALTERNATE

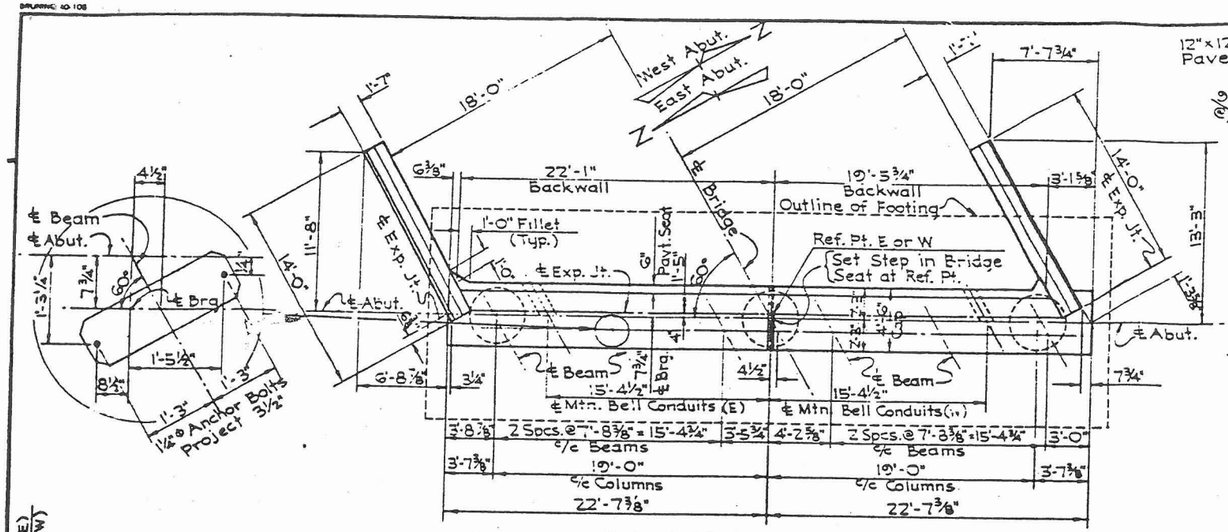
MARICOPA COUNTY HIGHWAY DEPARTMENT

SCALE: As Shown	APPROVED BY:	DRAWN BY: PE
DATE: 12-21-81		CHECKED:

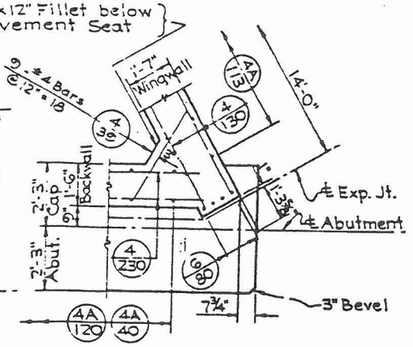
CAREFREE HWY. - CAVE CREEK

M.C.H.D. Project No. 07100 — DRAWING NUMBER 16

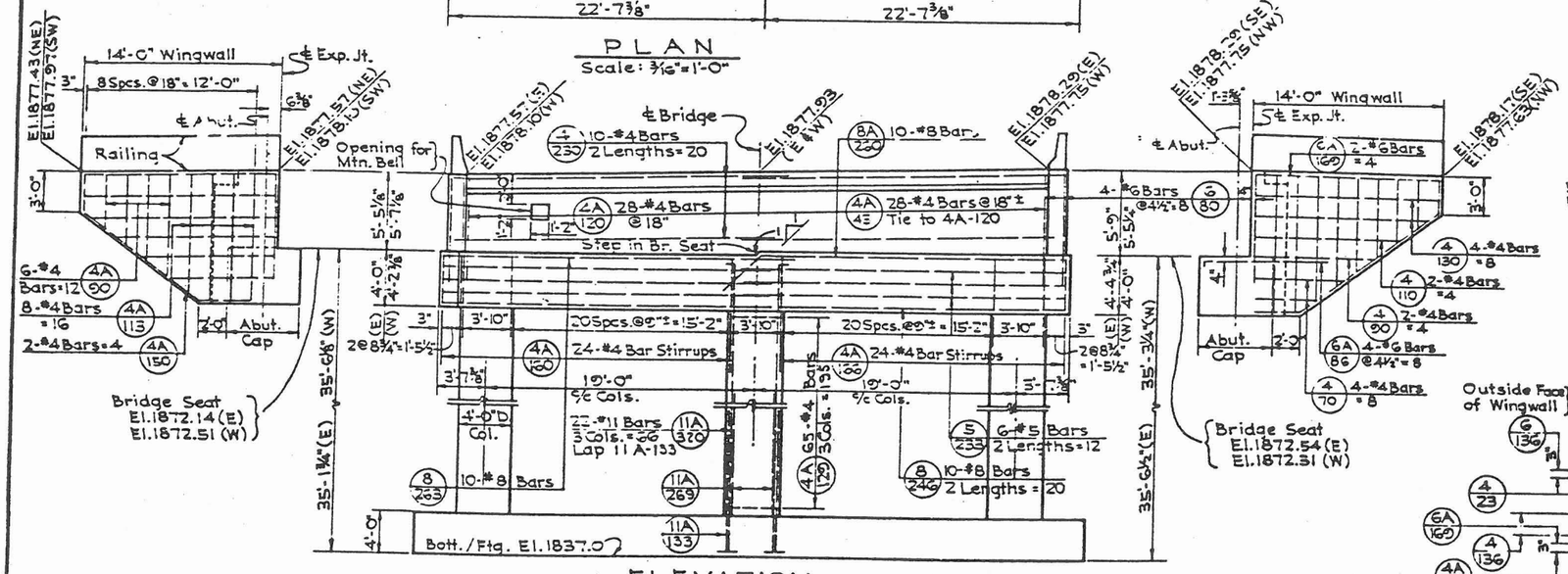
Fed Road Dist. No.	STATE	PROJECT NO	SHEET NO	TOTAL SHEETS	AS BUILT
7	ARIZONA	EF-FS-571(5)E	17	29	6-25-84



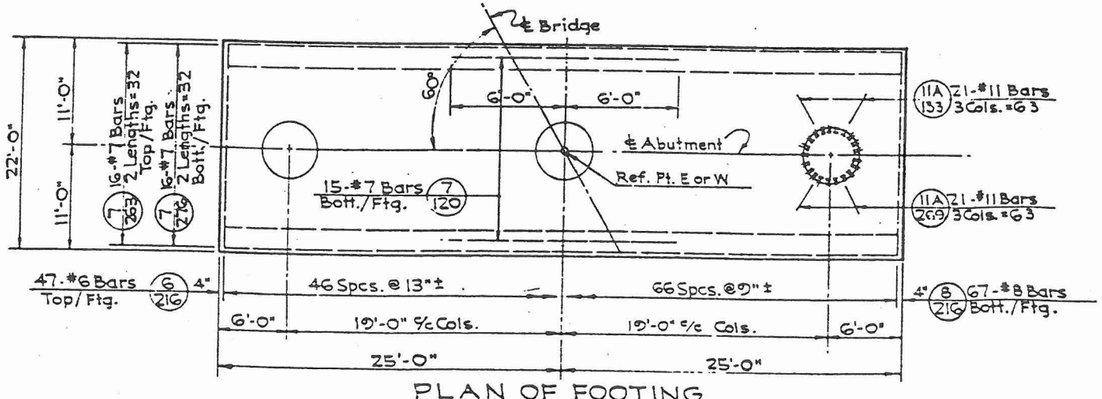
PLAN
Scale: 3/16"=1'-0"



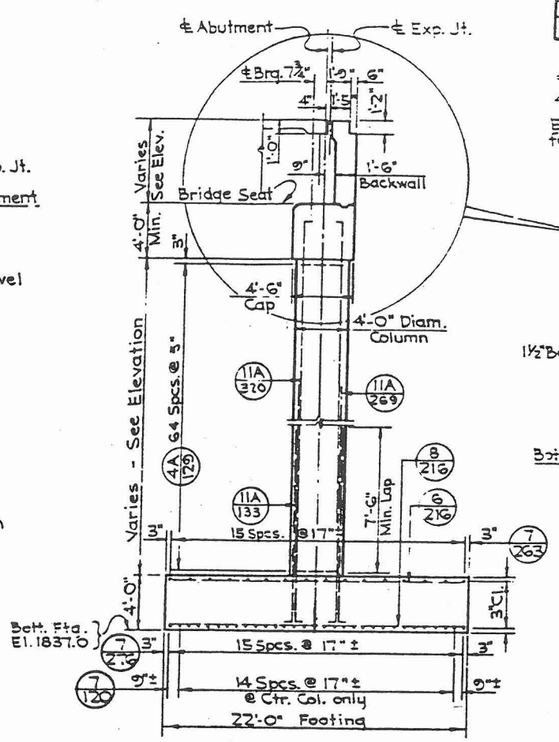
CORNER DETAIL
Scale: 3/8"=1'-0"



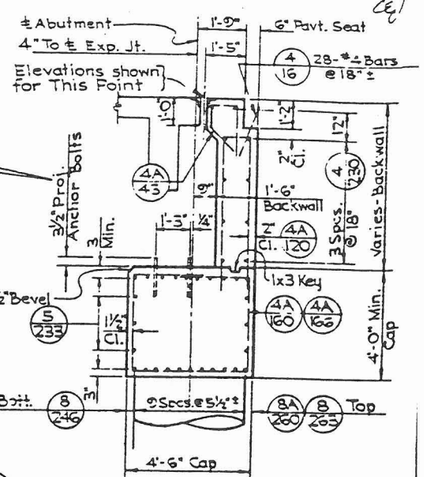
ELEVATION
Scale: 3/16"=1'-0"
East Abutment shown, West Abutment similar as noted.



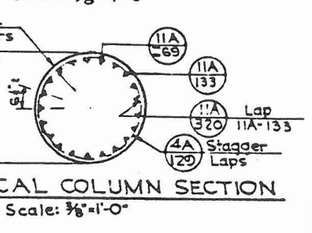
PLAN OF FOOTING
Scale: 3/16"=1'-0"



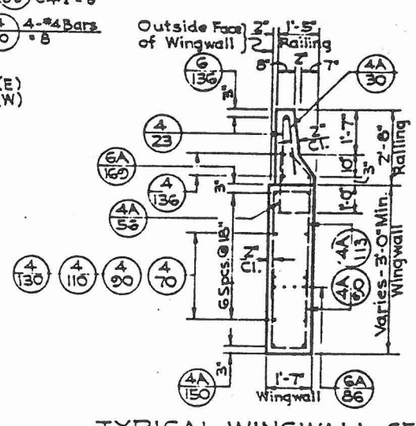
TYPICAL ABUTMENT SECTION
Scale: 3/16"=1'-0"



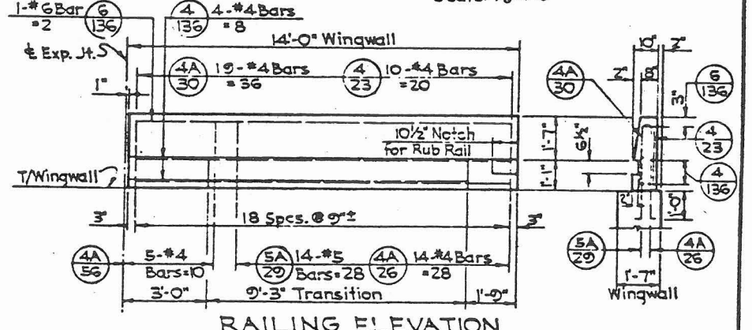
ABUTMENT CAP & BACKWALL DETAILS
Scale: 3/8"=1'-0"



TYPICAL COLUMN SECTION
Scale: 3/8"=1'-0"



TYPICAL WINGWALL SECTION
Scale: 3/8"=1'-0"



RAILING ELEVATION
Scale: 3/8"=1'-0"

NOTES

Concrete - Class S
Substructure shall be 4000 psi concrete.
Bridge Railing shall be 3500 psi concrete.
Bridge Seat shall be finished in a true plane at the elevation shown and shall not vary by more than 1/16" under any bearing.

Reinforcing Steel - Bar Marks shown for one abutment.

Anchor Bolts shall be set accurately to a template.

Bridge Railing - For Details of Transition and Guard Rail attachment see Drawing No. 29.

Abbreviations
(E) - East Abutment
(W) - West Abutment

QUANTITIES FOR ONE ABUTMENT

Class S Concrete (4000 psi)	
East Abutment	257 C.Y.
West Abutment	256 C.Y.
Class S Concrete (3500 psi)	2 C.Y.
Reinforcing Steel	40230 Lbs.

ABUTMENT DETAILS
CONCRETE BEAM ALTERNATE

MARICOPA COUNTY HIGHWAY DEPARTMENT

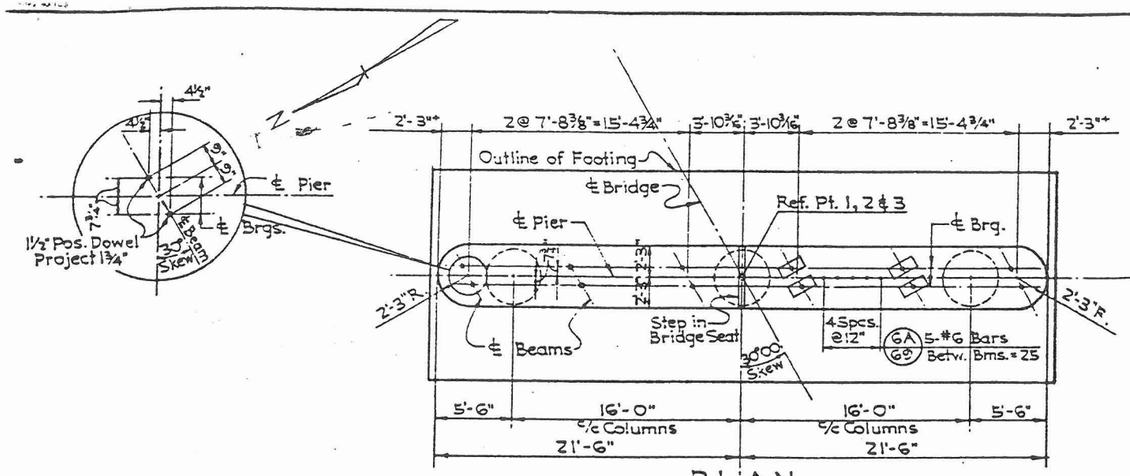
SCALE As Shown	APPROVED BY	DRAWN BY H.C.M.
DATE 3-19-82		CHECKED P.E.

CAREFREE HWY. CAVE CRK.

M.C.H.D. Project No. 07100 — DRAWING NUMBER 17

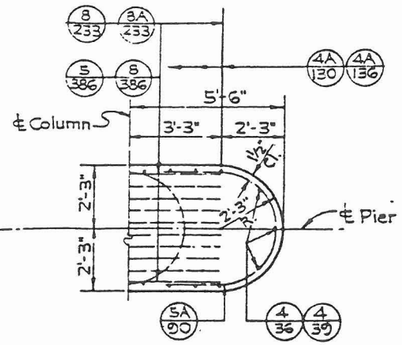
7 | EFRS 571(5)E | 17 of 29

FED ROAD DIV. NO.	STATE	PROJECT NO	SHEET NO.	TOTAL SHEETS	AS BUILT
7	ARIZONA	ER-RS-571(5)P	18	29	



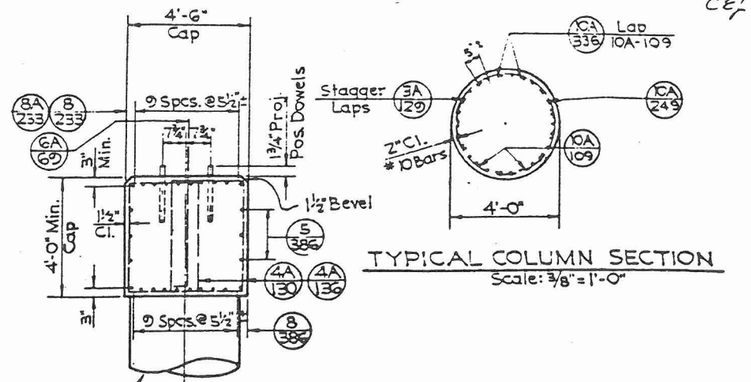
PLAN

Scale: 3/16" = 1'-0"



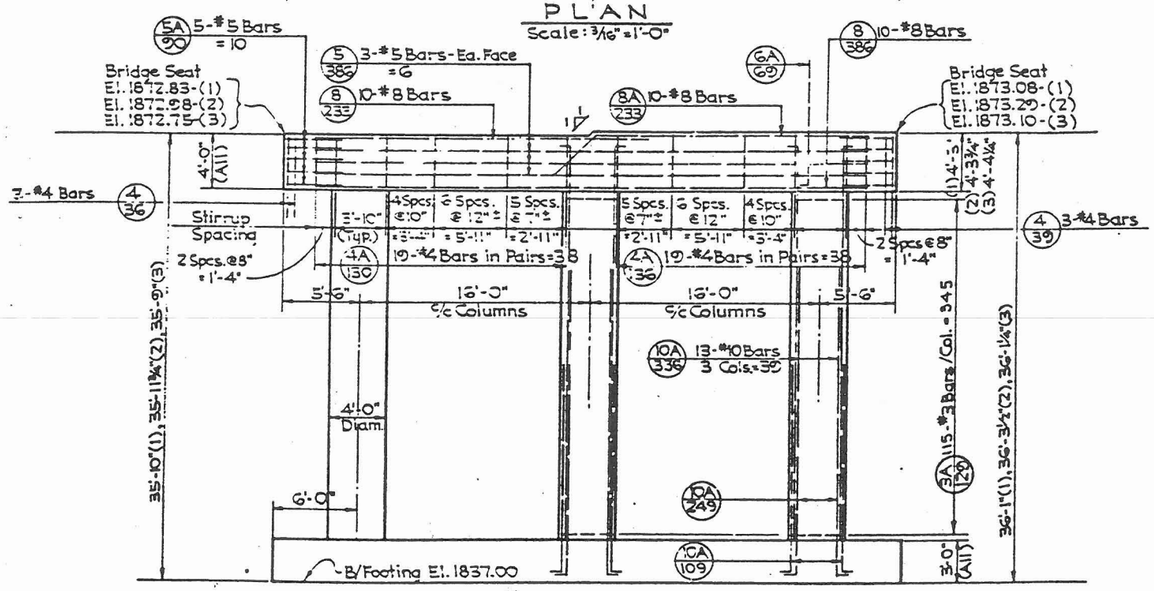
END OF PIER DETAIL

Scale: 3/8" = 1'-0"



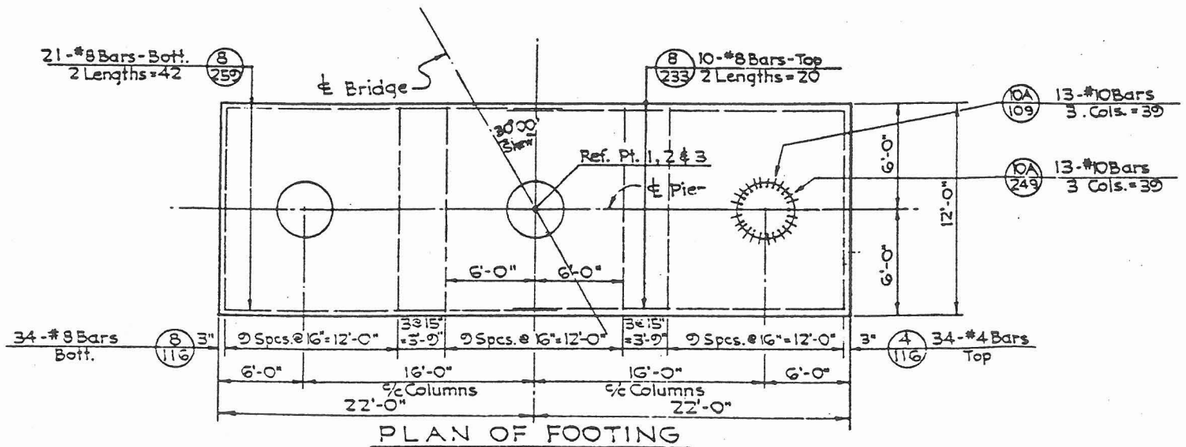
TYPICAL COLUMN SECTION

Scale: 3/8" = 1'-0"



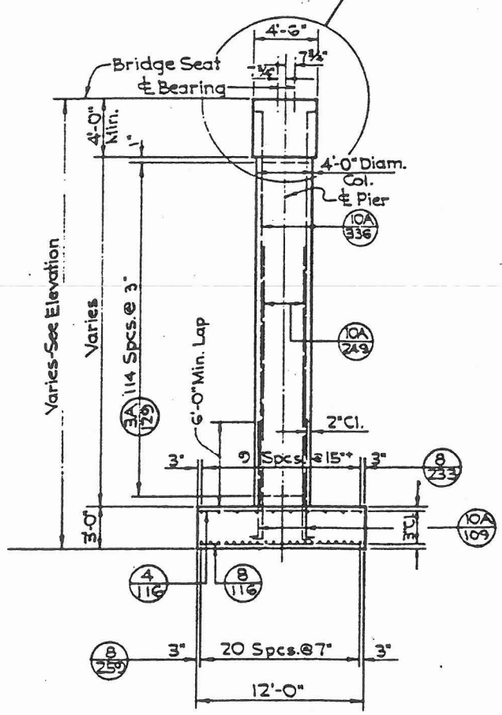
ELEVATION

Scale: 3/16" = 1'-0"



PLAN OF FOOTING

Scale: 3/16" = 1'-0"



TYPICAL PIER SECTION

Scale: 3/16" = 1'-0"

NOTES

Concrete: Class S, 4000 psi.

All exposed corners shall be beveled ¾", unless otherwise noted.

Bridge Seat shall be finished in a true plane at the elevation shown and shall not vary by more than 1/16" under any bearing.

Reinforcing Steel - ASTM A-615, Grade 60. Bar Marks shown for one pier.

Position Dowels - Set accurately to template.

Abbreviations:

(1) - Pier No. 1
(2) - Pier No. 2
(3) - Pier No. 3

QUANTITIES FOR ONE PIER

Class S Concrete 4000 psi

Pier No. 1	128 C.Y.
Pier No. 2	128 C.Y.
Pier No. 3	128 C.Y.
Reinforcing Steel	22210 Lbs.

PIER DETAILS
CONCRETE BEAM ALTERNATE

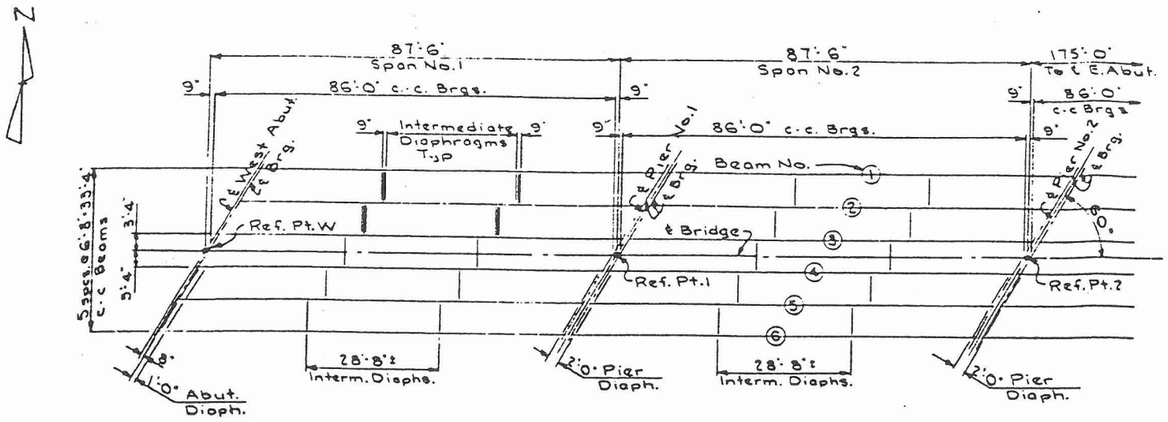
MARICOPA COUNTY HIGHWAY DEPARTMENT

SCALE: AS Shown	APPROVED BY:	DRAWN BY: H.C.M.
DATE: 3-17-82		CHECKED: P.E.

CAREFREE HWY-CAVE CRK.

M.C.H.D. Project No. 07100 — DRAWING NUMBER 18

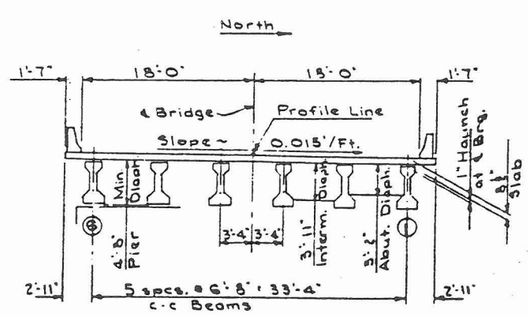
Fed Road Div. No.	STATE	PROJECT NO	SHEET NO	TOTAL SHEETS	AS BUILT
*	ARIZONA	ER-RS-ST(L)P	19	22	6-30-81



PARTIAL PLAN

Scale:- ⅛"=1'-0"

West Half of Bridge shown
East Half symmetrical about ℄ Pier No.2
by rotation thru 180°



TYPICAL DECK SECTION

Scale:- ⅜"=1'-0"

NOTES

Construction - Arizona D.O.T. Std. Specs. for Road and Bridge Constr., 1969 Edition, revised to date. Beams shall be prestressed by the pretensioning method only.

Concrete - Ultimate Strength at 28 Days = 5000 psi
Minimum Strength at Release = 4500 psi

Prestressing Steel - ASTM A-416, Grade 270

Reinforcing Steel - ASTM A-615, Grade 40

Structural Steel - ASTM A-36
Bearing Plates 3" or more in thickness may be fabricated from thinner plates, bevel welded together and ground smooth.

Bearing Pads - AASHTO, Division 2, Section 28, Elastomeric Bearings, 60 Durometer.

Prestress Force per Beam
Initial - 926 kips (28.9 Kips/strand)
Final - 706 kips (22.0 kips/strand)

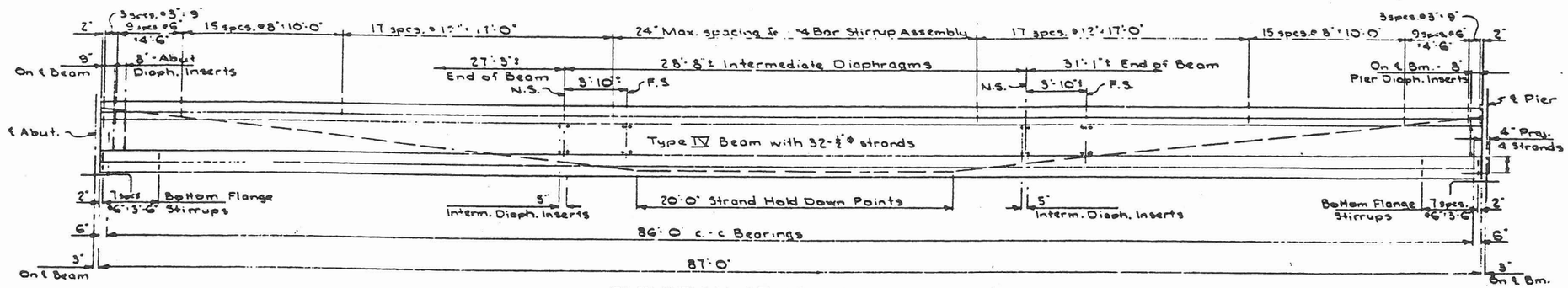
Inserts, Insert Bars, Anchor Bolts, Position Dowels and Bearing Details are incidental to Precast Beams

Painting - No shop paint required
After erection, 2 coats of approved paint required on all exposed bearing plates and bolts.

Camber at Transfer due to Prestress and Weight of Beam is 1⅝" up (↑).

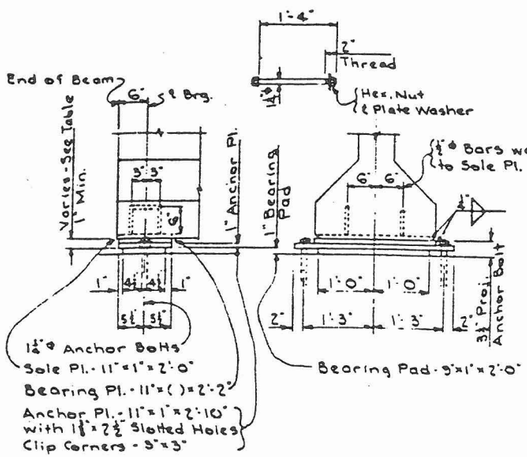
QUANTITIES

Precast Concrete Beams -- 24 Ea.



ELEVATION OF BEAM

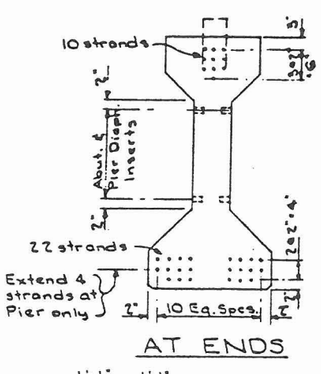
Scale:- ½"=1'-0"



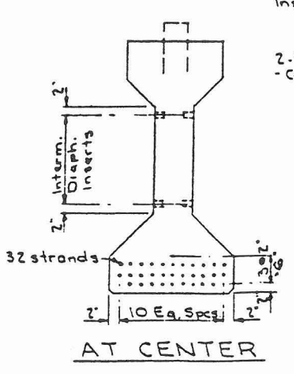
BEARING DETAILS AT ABUTMENTS

Scale. ½"=1'-0"

BEARING THICKNESS TABLE						
BEAM NOS.	1	2	3	4	5	6
West Abut.	1"	1⅛"	2⅝"	1⅛"	1⅛"	2⅝"
East Abut.	1"	2⅝"	4½"	1"	2⅝"	4½"



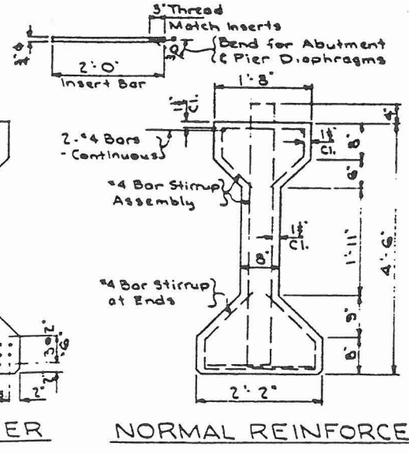
AT ENDS



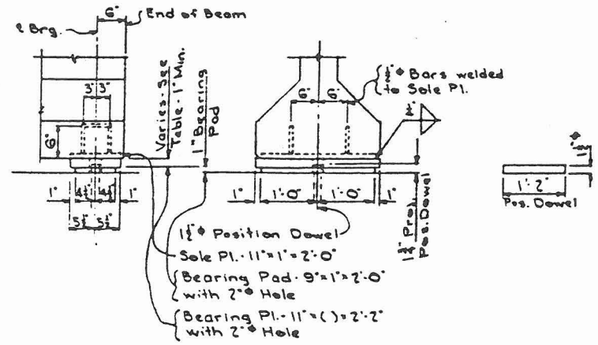
AT CENTER

BEAM SECTIONS

Scale:- ½"=1'-0"

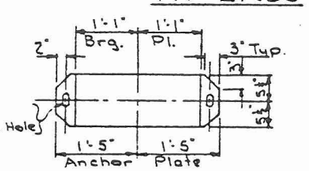


NORMAL REINFORCEMENT



BEARING DETAILS AT PIERS

Scale:- ½"=1'-0"



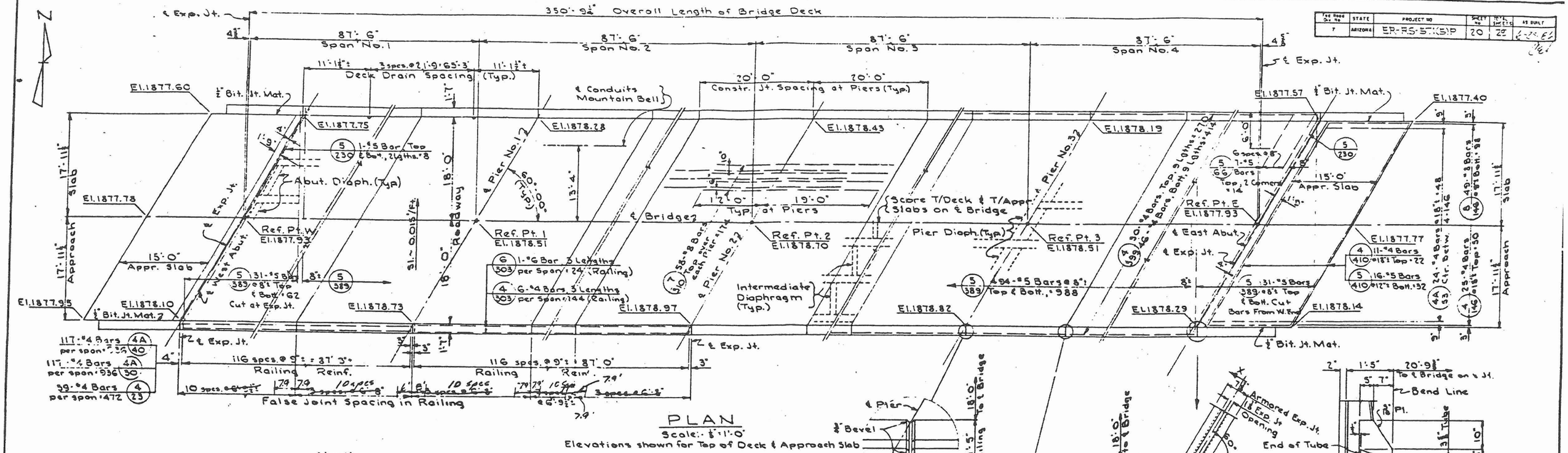
BEARING PLATE THICKNESS TABLE							
BEAM NOS.		1	2	3	4	5	6
Pier No.1	Span No.1	1⅛"	2⅛"	3⅛"	1⅛"	2⅛"	3"
	Span No.2	1⅛"	2⅛"	3⅛"	1⅛"	2⅛"	3⅛"
Pier No.2	Span No.2&3	1⅛"	2⅛"	3½"	1"	2½"	3½"
Pier No.3	Span No.3	1⅛"	2⅛"	3⅛"	1⅛"	2⅛"	3⅛"
	Span No.4	1"	2⅛"	3⅛"	1"	2⅛"	3½"

PRECAST CONCRETE BEAMS
CONCRETE BEAM ALTERNATE

MARICOPA COUNTY HIGHWAY DEPARTMENT

SCALE As Shown	APPROVED BY:	DRAWN BY PE
DATE 2-9-82		CHECKED
CAREFREE HWY. - CAVE CREEK		
M.C.H.D. Project No. 07100		DRAWING NUMBER 19

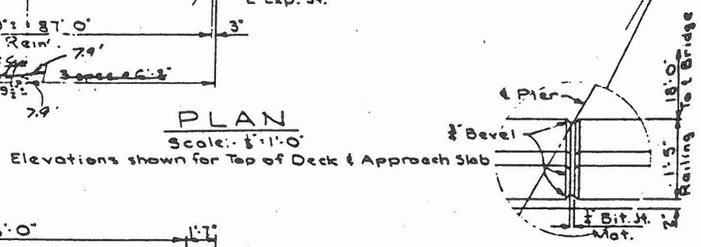
Fed Road Div. No.	STATE	PROJECT NO	SHEET No.	TOTAL SHEETS	AS BUILT
7	ARIZONA	ER-RS-571(5)P	20	29	

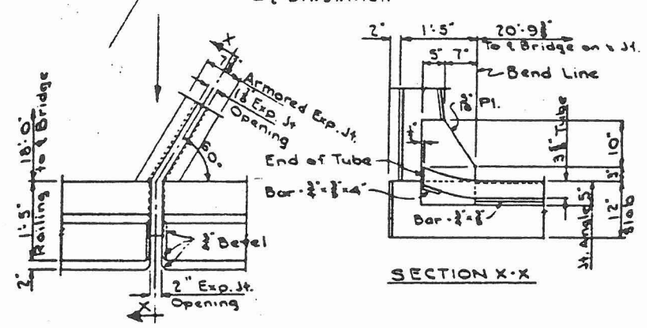


PLAN

Scale:- ⅛"=1'-0"

Elevations shown for Top of Deck & Approach Slab

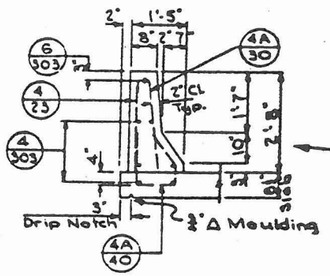




EXPANSION JOINT DETAIL

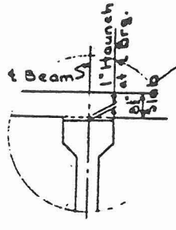
Scale:- ½"=1'-0"

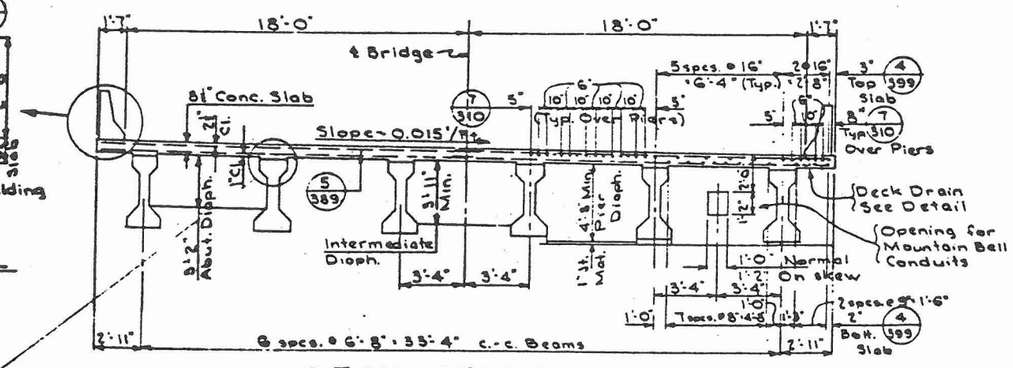
For Details not shown, See A.O.D.T. Std. No. RJ-4



RAILING DETAIL

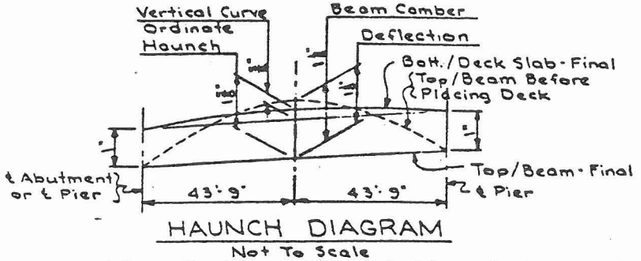
Scale:- ½"=1'-0"





DECK SECTION

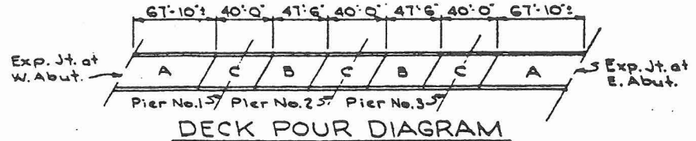
Scale:- ⅛"=1'-0"



HAUNCH DIAGRAM

Not To Scale

Note:- Adjust Haunch for Actual Beam Camber



DECK POUR DIAGRAM

Not To Scale

Deck Pours shall be made in alphabetical order.

Railing shall not be poured until all deck pours are completed.

QUANTITIES

Class S Concrete (3500 psi)	104 C.Y.
Class S Concrete (4500 psi)	445 C.Y.
Reinforcing Steel	91280 Lbs.
Aggregate Base	50 Tons

NOTES

Concrete - Class S
Railing and Approach Slabs shall be Class S (3500 psi)
All other concrete shall be Class S (4500 psi)
All exposed corners shall be beveled ¾ unless otherwise noted

Reinforcing Steel - ASTM A-615, Grade 60
Minimum Bar Laps - #6 Bar = 1'-8"
#5 Bar = 1'-6"
#4 Bar = 1'-0"

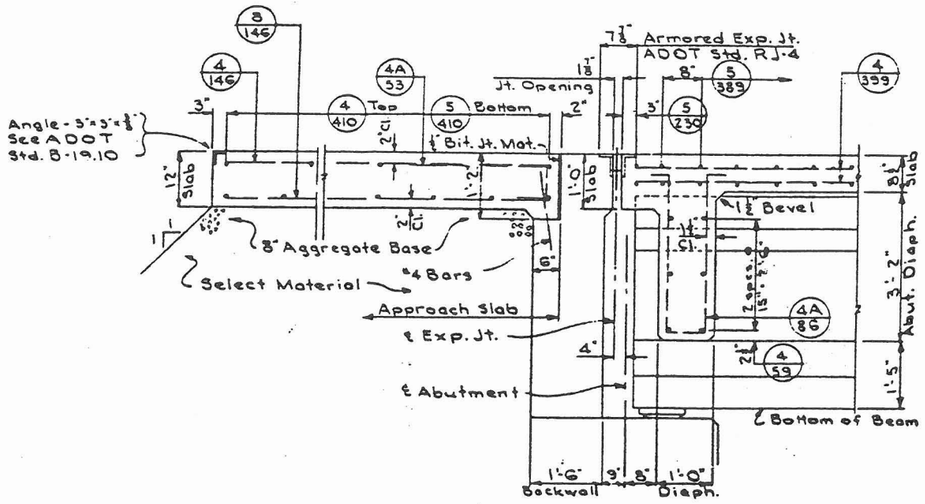
Armored Expansion Joint - Incidental to Deck Concrete
For Details not shown, See A.D.O.T. Standard No. RJ-4
1½" Joint Opening is set for 70°. For every 10° difference in temperature at time of installation adjust joint opening by ½"

Work this sheet with sheet no. 21

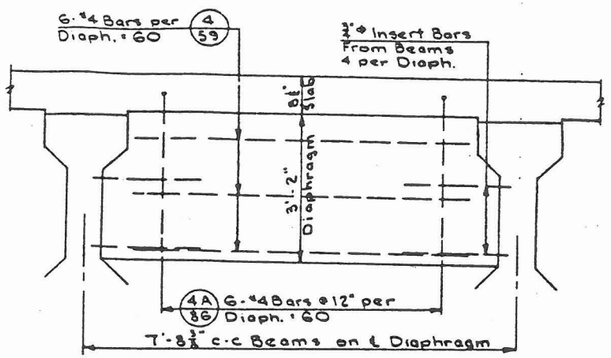
CONCRETE DECK DETAILS
CONCRETE BEAM ALTERNATE

MARICOPA COUNTY HIGHWAY DEPARTMENT	
SCALE As Shown	APPROVED BY
DATE 11-30-79	DRAWN BY P.E. CHECKED
CAREFREE HWY. - CAVE CREEK	
M.C.H.D. Project No. 07100	DRAWING NUMBER 20

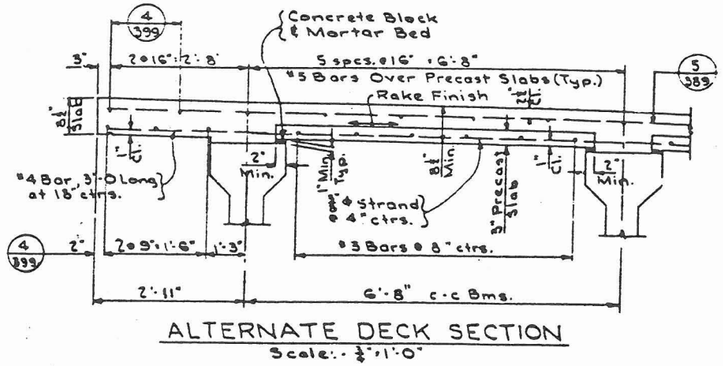
Fed Road Div No	STATE	PROJECT NO	SHEET No	TOTAL SHEETS	AS BUILT
7	ARIZONA	ER-RS-571(5)P	21	29	6-25-80



SECTION AT END OF BRIDGE
Scale:- ¾"=1'-0"



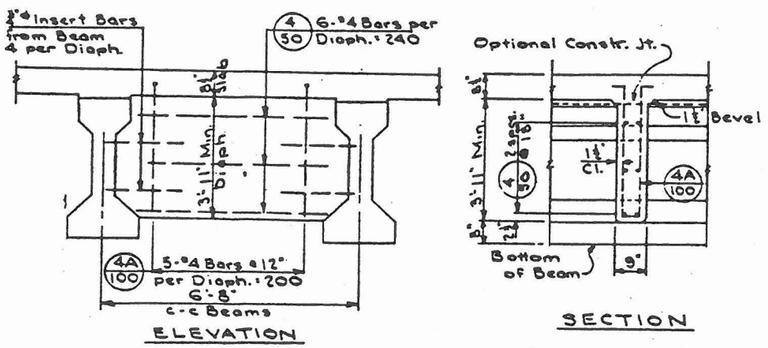
ELEVATION OF ABUTMENT DIAPHRAGM
Scale:- ¾"=1'-0"



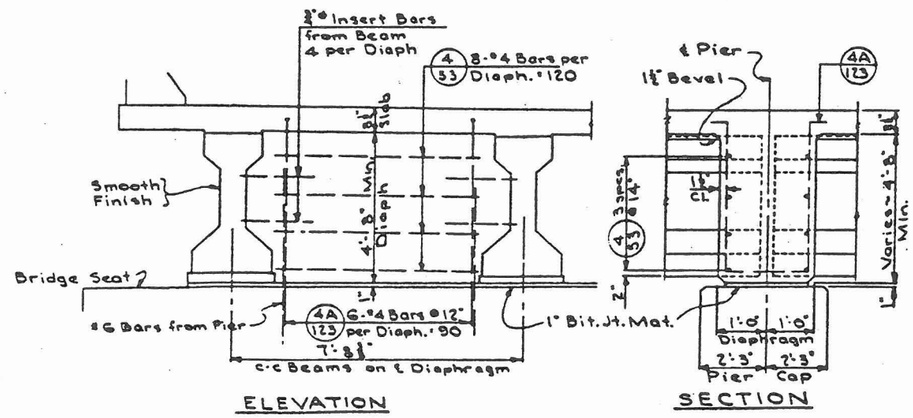
ALTERNATE DECK SECTION
Scale:- ¾"=1'-0"

PRECAST SLAB NOTES

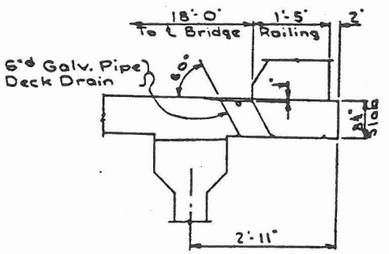
Contractor may use precast concrete slabs, but no separate payment will be made and payment will be made on basis of cast-in-place deck, as if no precast slabs were used.
Fabrication of Slabs shall be equal to Precast Concrete Beams. (See Notes on sheet no.19)
Prestress Force
Initial -48.2 kips per lin.ft. (16.1 kips per strand)
Final -36.7 kips per lin.ft. (12.3 kips per strand)



INTERMEDIATE DIAPHRAGM
Scale:- ¾"=1'-0"



DIAPHRAGM AT PIER
Scale:- ¾"=1'-0"



DECK DRAIN DETAIL
Scale:- ¾"=1'-0"
For Details see ADOT Std. BM-1

Note:- Provide opening in diaphragms for Mountain Bell Conduits as shown on sheet no.
Adjust reinforcing bars to clear opening by 2" min.

Note:-
Work this sheet with sheet no. 20

CONCRETE DECK DETAILS
CONCRETE BEAM ALTERNATE

MARICOPA COUNTY HIGHWAY DEPARTMENT

SCALE As shown	APPROVED BY.	DRAWN BY P.E.
DATE: 12-3-79		CHECKED.
CAREFREE HWY. - CAVE CRK.		
M.C.H.D. Project No. 07100		DRAWING NUMBER 21

Fed Road Div. No.	STATE	PROJECT NO	SHEET NO	TOTAL SHEETS	AS BUILT
7	ARIZONA	ER-RS-571(5)P	22	29	

GENERAL NOTES

Construction - Arizona D.O.T. Std. Specs for Road and Bridge Constr., 1969 revised to date

Design: A.A.S.H.T.O. Std Specs. for Hwy. Bridges, 1977 Edition and Current Supplements.
Continuous Non-composite Spans for Dead Load.
Continuous Composite Spans for Live Load and Future Wearing Surface.

Loading - HS20-44

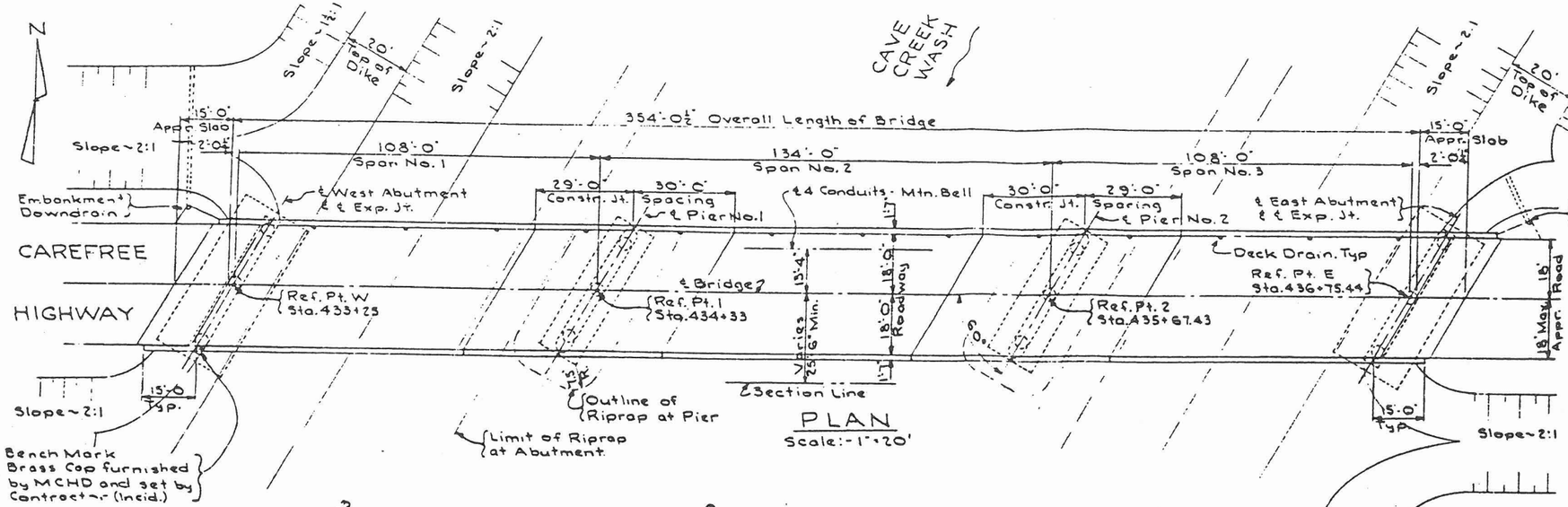
Reinforcing Steel - ASTM A-615, Grade 60 (Except fs = 20000 psi for Deck)

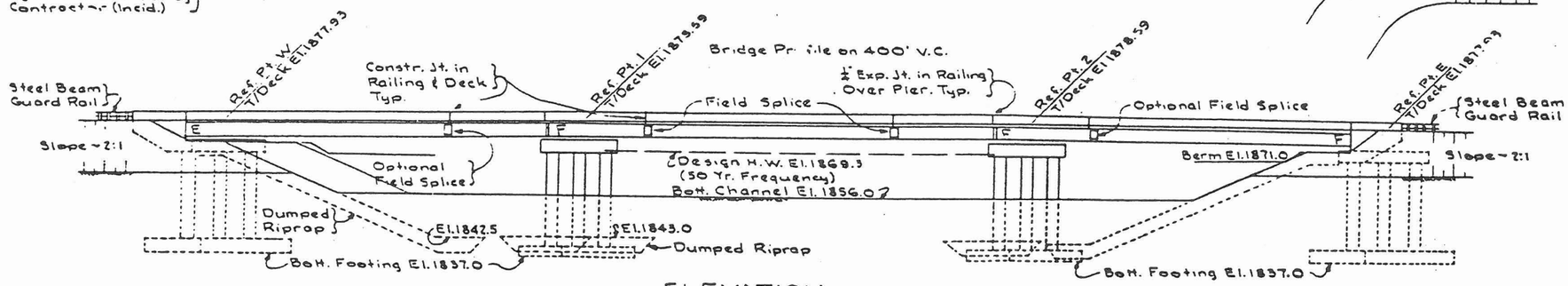
Structural Steel - ASTM A-36

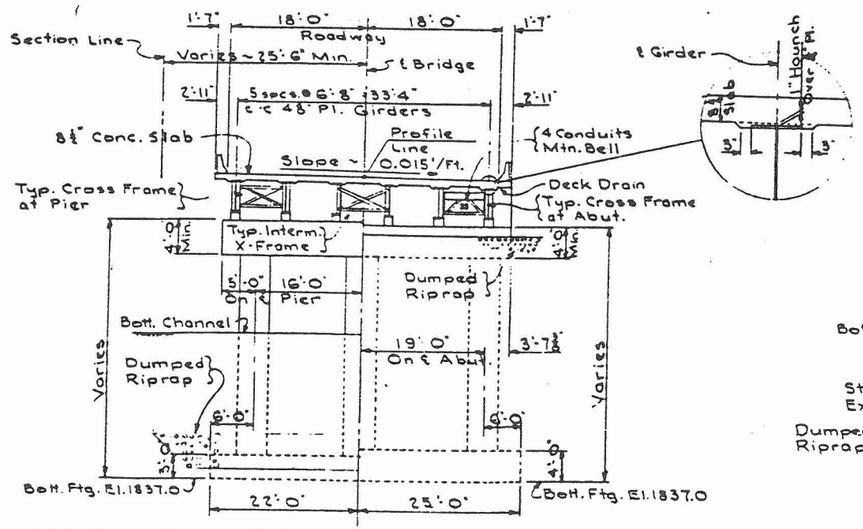
Concrete - Class S
Substructure shall be 4000 psi concrete
Bridge Deck shall be 4500 psi concrete (Except fc = 1400 psi, n = 8)
Bridge Railing and Approach Slabs shall be 3500 psi concrete.

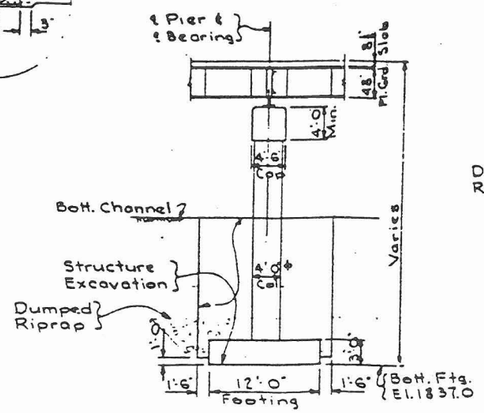
Footing Pressures
Allowable - 6000 psf
Pier
Max. DL + LL - 4760 psf
Max. DL + EQ - 7310 psf
Abutment
Max. DL + LL - 6290 psf
Max. DL + LL - 8360 psf

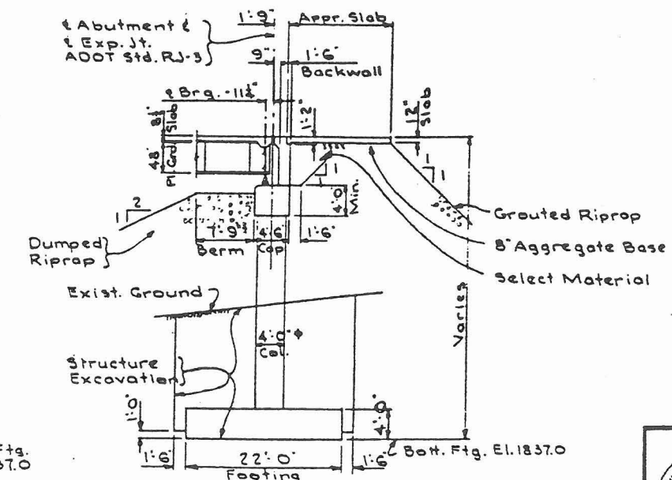
Mountain Bell Conduits
Conduits and Fasteners not a part of this contract.
Contact Mountain Bell, D.W. Brundage, phone no. 255-1628











SUMMARY OF QUANTITIES

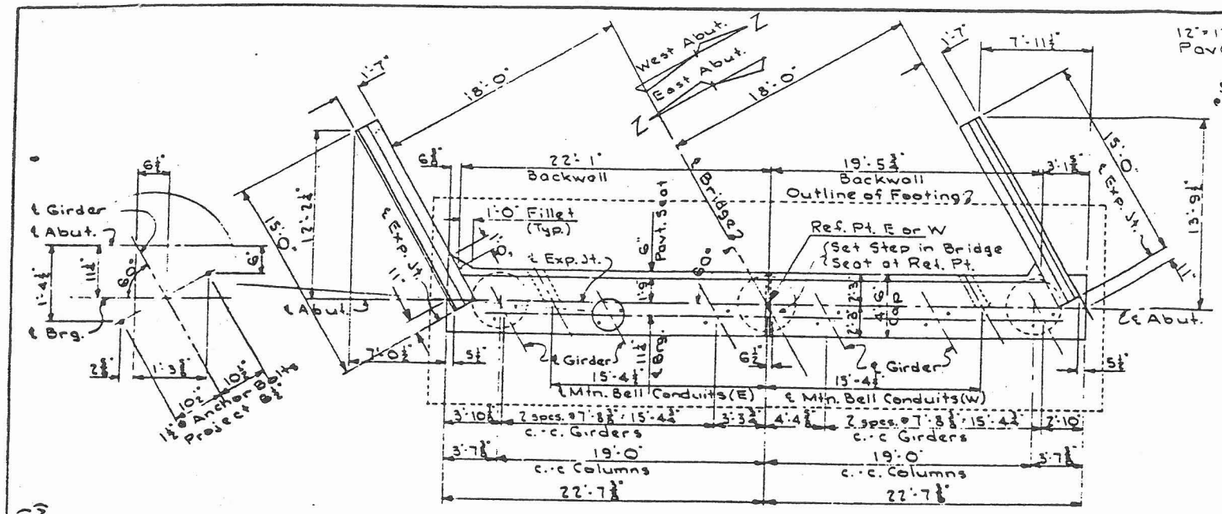
Class S Concrete (4500 psi)	377 C.Y.
Class S Concrete (4000 psi)	772 C.Y.
Class S Concrete (3500 psi)	110 C.Y.
Reinforcing Steel	207490 Lbs.
Structurol Steel	441500 Lbs.
Structure Excavation	3400 C.Y.
Select Material	90 Tons
Aggregate Base	50 Tons

GENERAL PLAN OF BRIDGE STEEL BEAM ALTERNATE

MARICOPA COUNTY HIGHWAY DEPARTMENT

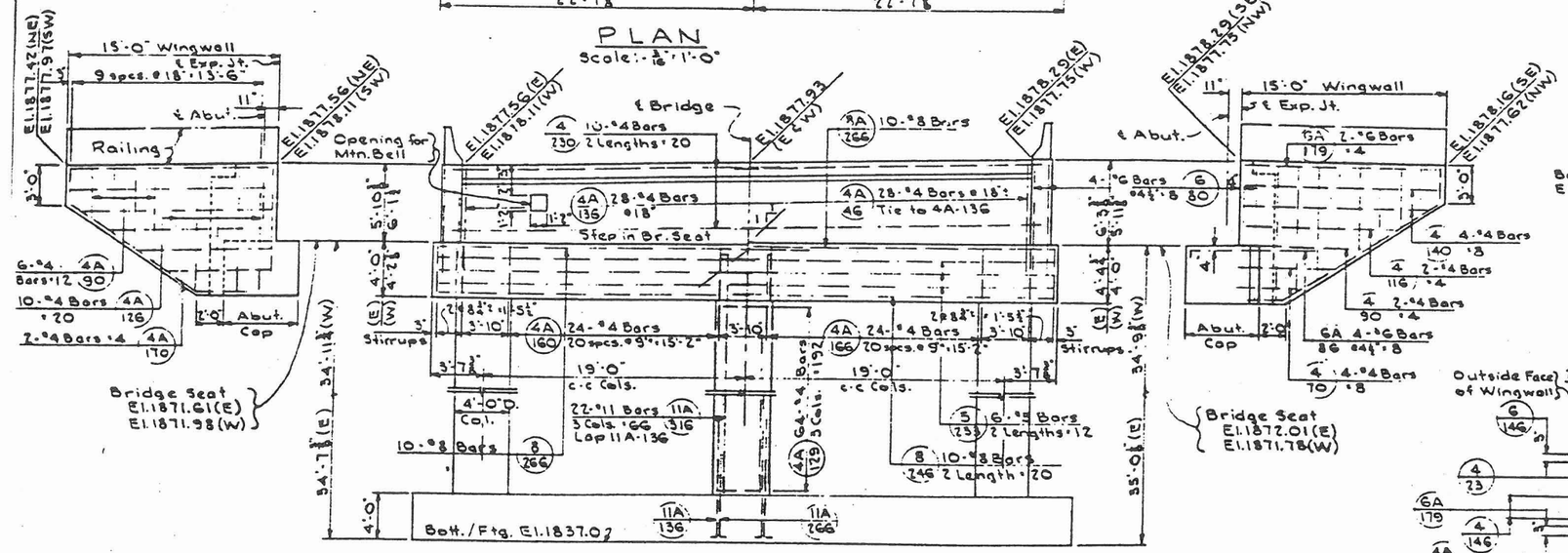
SCALE As shown	APPROVED BY:	DRAWN BY P.E.
DATE: 2-5-82		CHECKED
CAREFREE HWY. - CAVE CREEK		
M.C.H.D. Project No. 07100		DRAWING NUMBER 22

Fed Road Div No	STATE	PROJECT NO	SHEET No	TOTAL SHEETS	AS BUILT
7	ARIZONA	ER-RS-571(5)P	23	29	



PLAN

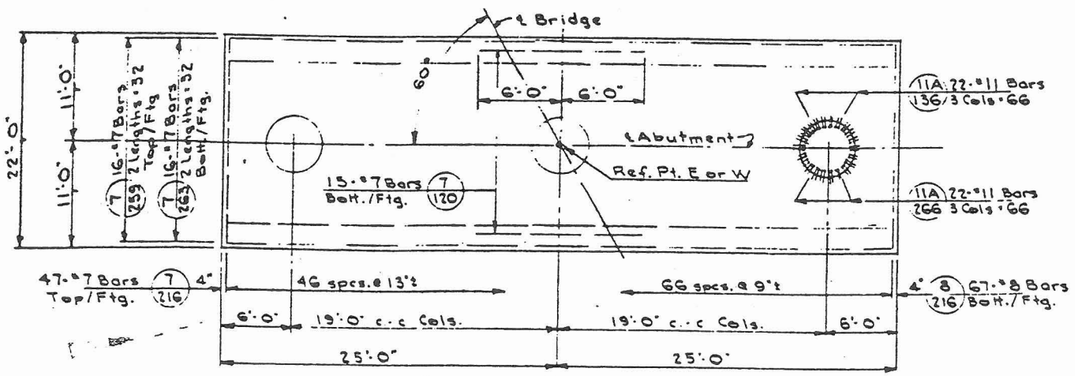
Scale:- ⅛"=1'-0"



ELEVATION

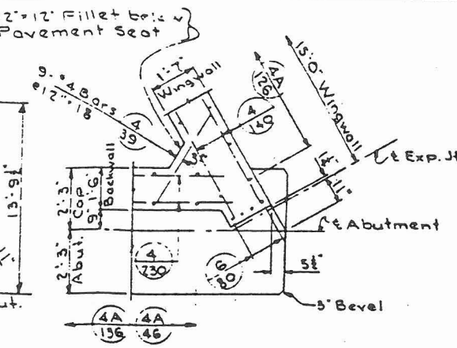
Scale:- ⅛"=1'-0"

East Abutment shown, West Abutment similar as noted



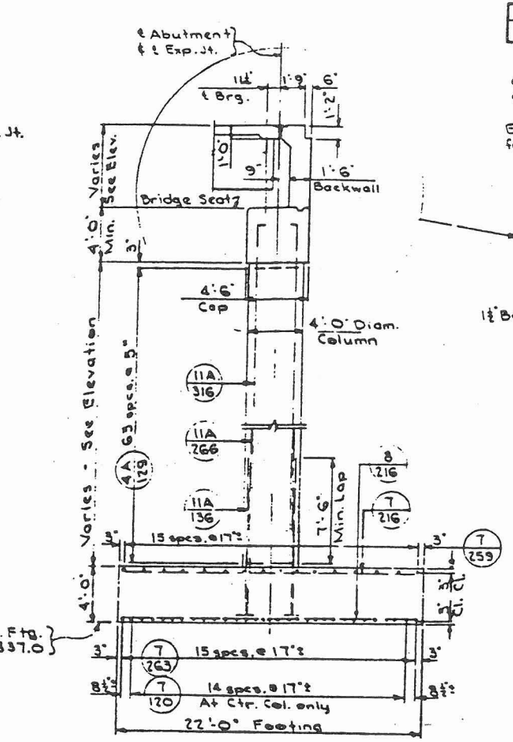
PLAN OF FOOTING

Scale:- ⅛"=1'-0"



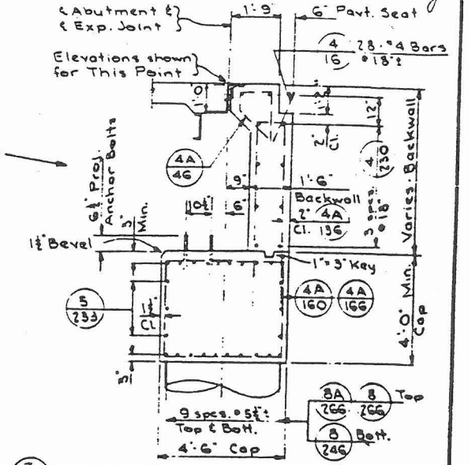
CORNER DETAIL

Scale:- ½"=1'-0"



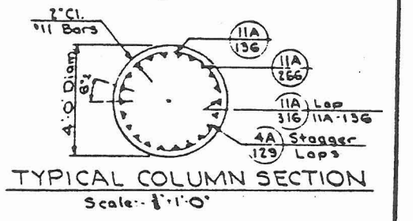
TYPICAL ABUTMENT SECTION

Scale:- ⅛"=1'-0"



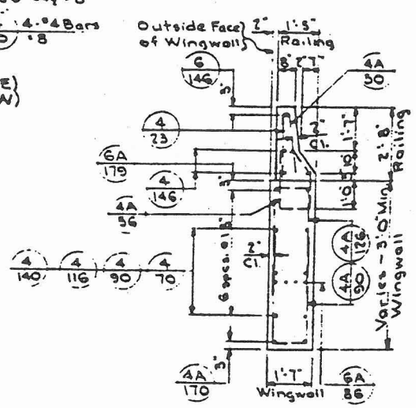
ABUTMENT CAP & BACKWALL DETAILS

Scale:- ½"=1'-0"



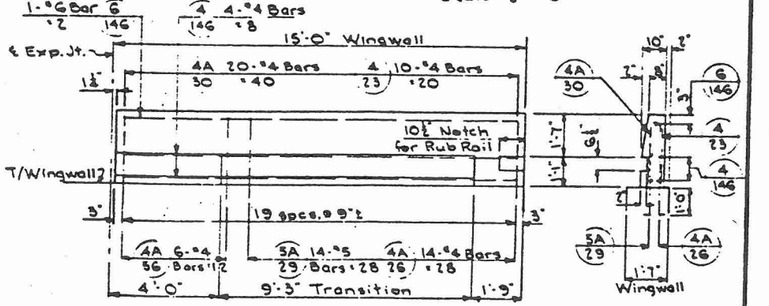
TYPICAL COLUMN SECTION

Scale:- ½"=1'-0"



TYPICAL WINGWALL SECTION

Scale:- ½"=1'-0"



RAILING ELEVATION

Scale:- ½"=1'-0"

NOTES

Concrete - Class S
- Substructure shall be 4000 psi concrete
- Bridge Railing shall be 3500 psi concrete
- Bridge Seat shall be finished in a true plane at the elevation shown and shall not vary by more than 1/16" under any bearing

Reinforcing Steel - Bar Marks shown for one abutment

Anchor Bolts shall be set accurately to a template

Bridge Railing - For Details of Transition and Guard Rail attachment see Drawing No. 29

Abbreviations
- (E) - East Abutment
- (W) - West Abutment

QUANTITIES FOR ONE ABUTMENT

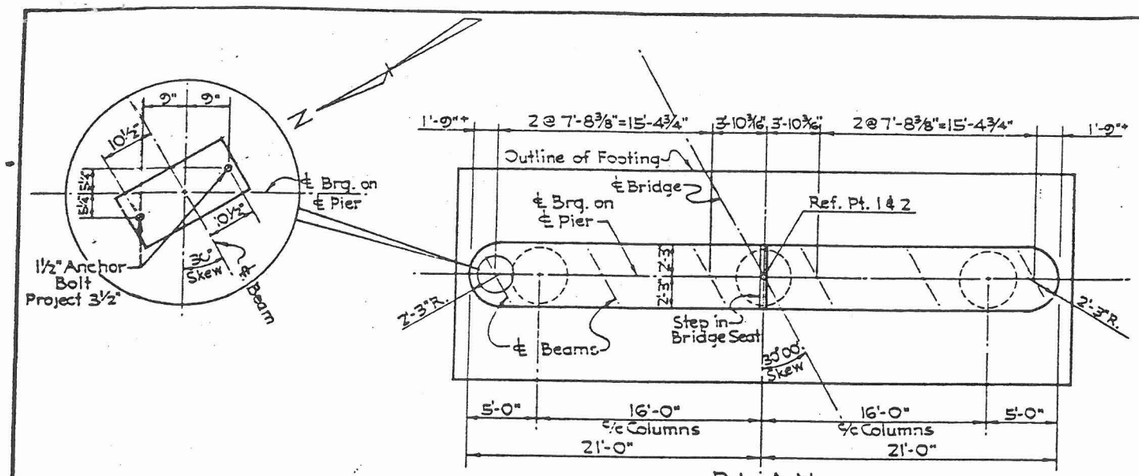
Class S Concrete (4000 psi)	
East Abutment	259 C.Y.
West Abutment	259 C.Y.
Class S Concrete (3500 psi)	3 C.Y.
Reinforcing Steel	41 800 Lbs.

ABUTMENT DETAILS
STEEL BEAM ALTERNATE

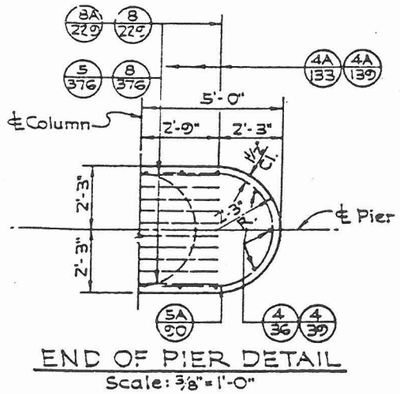
MARICOPA COUNTY HIGHWAY DEPARTMENT

SCALE As shown	APPROVED BY	DRAWN BY P.E.
DATE: 3-4-82		CHECKED
CAREFREE HWY. - CAVE CREEK		
M.C.H.D. Project No. 07100		DRAWING NUMBER 23

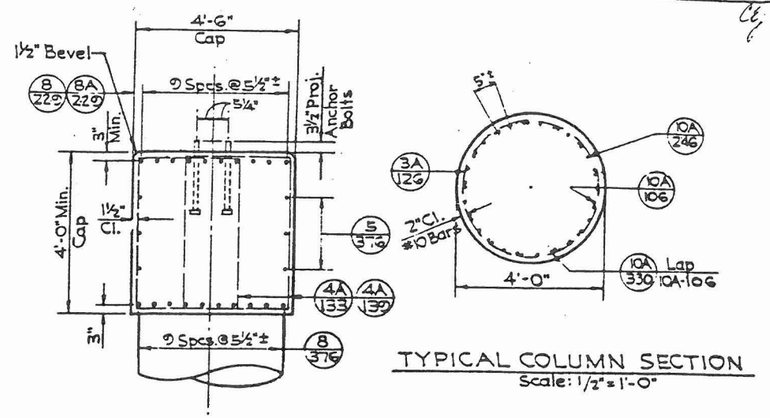
Fed. Road Grant No.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	NET LENGTH OF PROJECT
7	ARIZONA	ER-RS-571(5)P	24	29	6.755 mi.



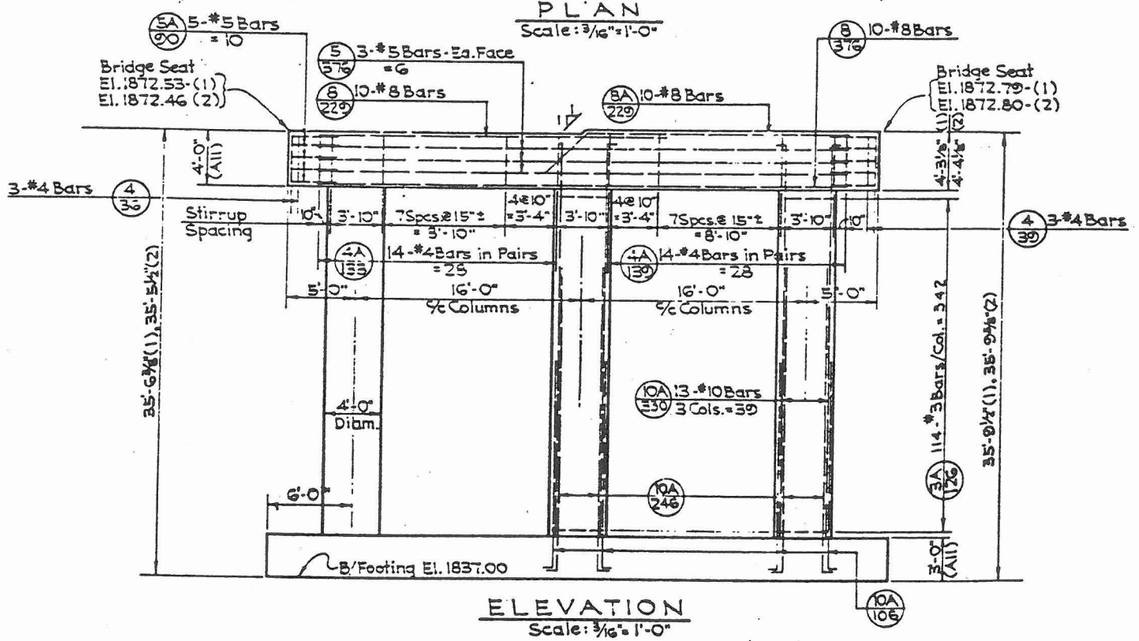
PLAN
Scale: 3/16"=1'-0"



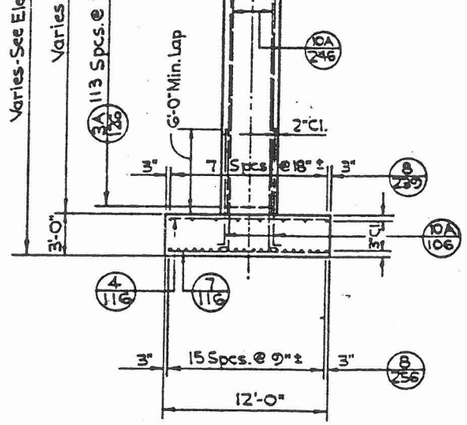
END OF PIER DETAIL
Scale: 3/8"=1'-0"



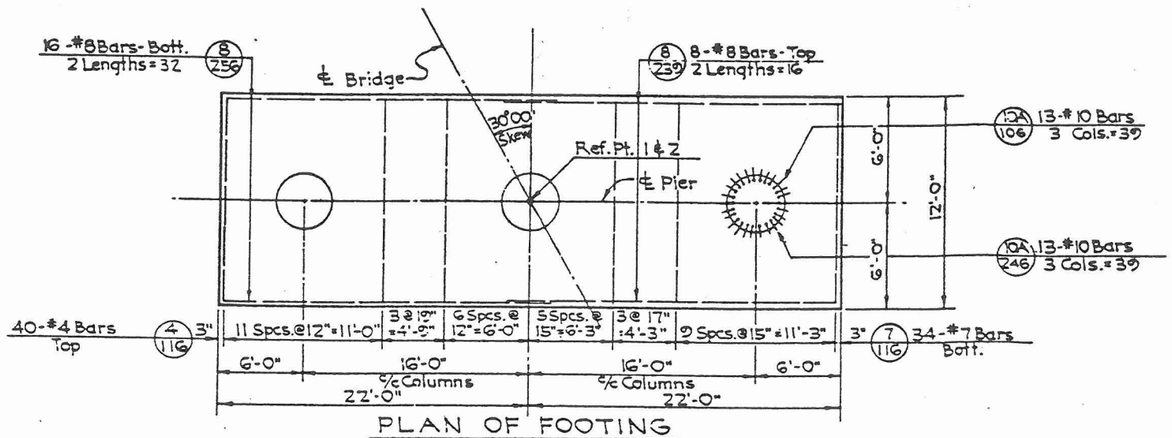
TYPICAL COLUMN SECTION
Scale: 1/2"=1'-0"



ELEVATION
Scale: 3/16"=1'-0"



TYPICAL PIER SECTION
Scale: 3/16"=1'-0"



PLAN OF FOOTING
Scale: 3/16"=1'-0"

NOTES

Concrete: Class S, 4000 psi.
All exposed corners shall be beveled ¾", unless otherwise noted.
Bridge Seat shall be finished in a true plane at the elevation shown and shall not vary by more than 1/16" under any bearing.
Reinforcing Steel-ASTM A-615, Grade 60.
Bar Marks shown for one pier.
Anchor Bolts shall be set accurately to template.
Abbreviations:
(1) - Pier No. 1
(2) - Pier No. 2

QUANTITIES FOR ONE PIER

Class S Concrete 4000psi
Pier No. 1 _____ 127 C.Y.
Pier No. 2 _____ 127 C.Y.

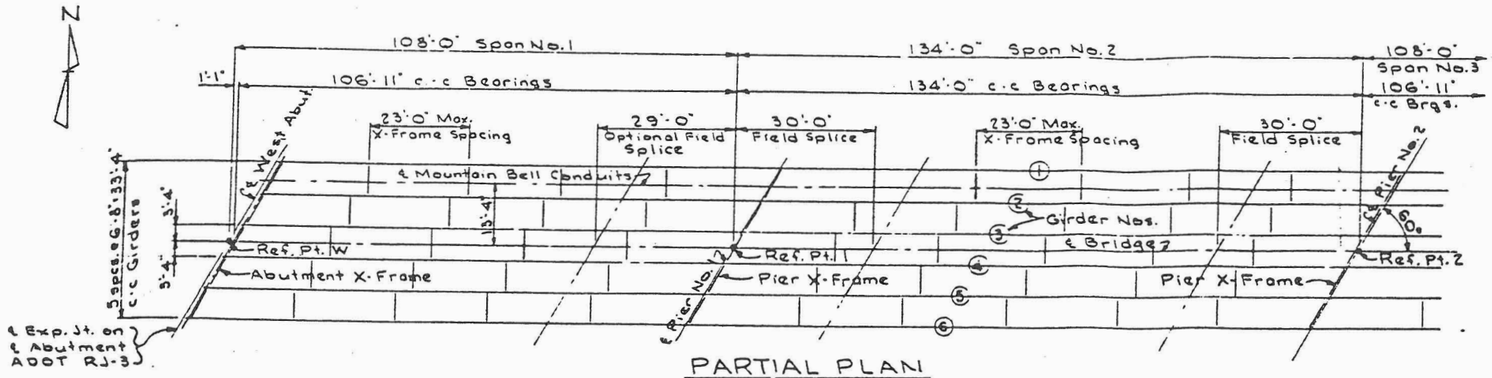
Reinforcing Steel _____ 20380 Lbs.

PIER DETAILS
STEEL BEAM ALTERNATE

MARICOPA COUNTY HIGHWAY DEPARTMENT

SCALE AS SHOWN	APPROVED BY:	DRAWN BY M.C.M.	
DATE 3/4/92		CHECKED P.E.	
CAREFREE HWY-CAVE CRK.			
M.C.H.D. Project No. 07100		DRAWING NUMBER 24	

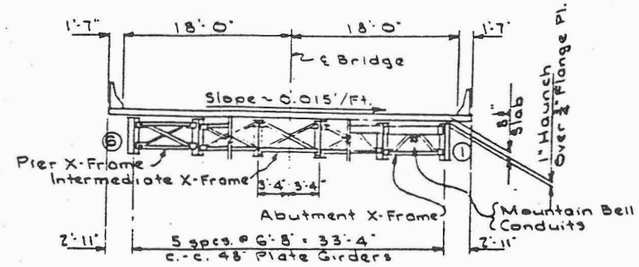
Fed Road Div No	STATE	PROJECT NO	SHEET NO	TOTAL SHEETS	AS BUILT
7	ARIZONA	ER-RS-571(5)P	25	29	



PARTIAL PLAN

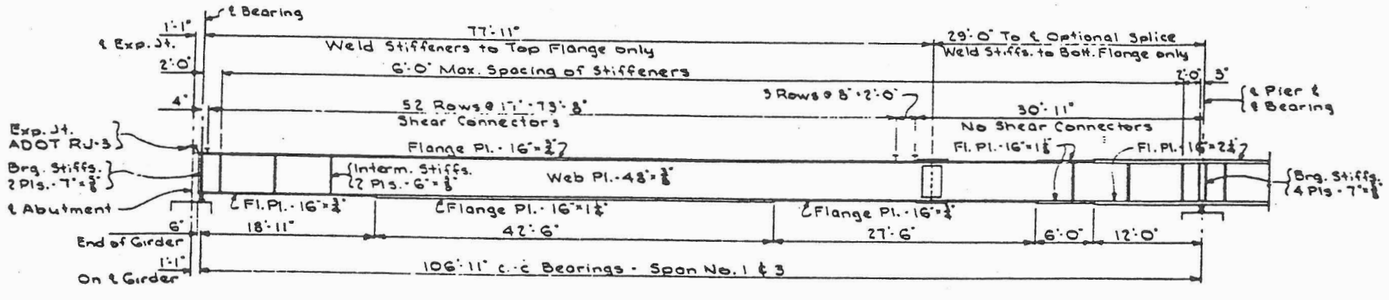
Scale:- $\frac{1}{16}$"=1'-0"

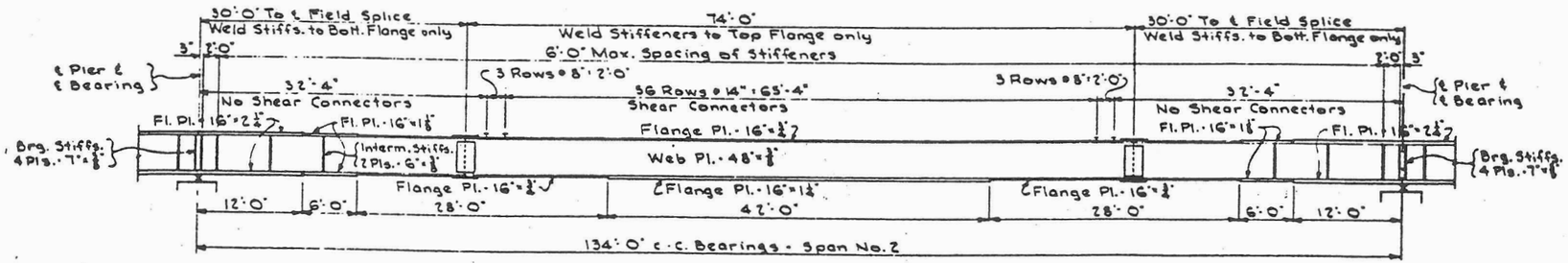
Span No. 3 similar to Span No. 1 by rotation thru 180°



TYPICAL SECTION

Scale:- $\frac{1}{8}$"=1'-0"





GIRDER ELEVATIONS

Scale:- $\frac{1}{16}$"=1'-0"

Note:- Fascia Girders ① & ⑥, Intermediate Stiffeners on Inside Face only

NOTES

Construction - Arizona D.O.T. Std. Specs. for Road and Bridge Constr., 1969 Edition, revised to date.

Structural Steel - ASTM A-36
Pay weight includes bearing details, shear connectors and expansion joints.
If Contractor decides to use optional field splice, pay weight will be adjusted accordingly.

Shop Connections shall be welded as shown on the Plans.
All welds shall conform to the current A.W.S. Specs., D1.1-80, revised to date.
A shop splice will be permitted in flange plates over 50 feet in length and must be located at a minimum distance of 10 feet from the center of the plate.
The web plate may be spliced at the option of the fabricator.
Minimum size of fillet welds shall be ¼"

Field Connections shall be bolted with high strength bolts, except for expansion joints, of the size indicated on the Plans
All bolts in field splices of fascia girders shall be inserted so that the nuts will be located either up or in.

Shear Connectors shall be Solid Flux Studs and shall be automatically end welded to the top flange

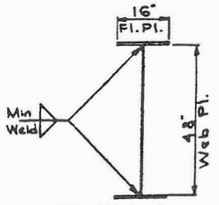
Camber - Girders shall have a parabolic camber as indicated on the Girder Control Diagram.
Camber tolerance shall be as specified by AWS Specs. and heating is to be used, if necessary, to assure camber permanency within these tolerances.

Painting
Shop Coat - 1 Coat Paint No.1
Field Coats - 1 Coat Paint No.2
Final - 1 Coat Paint No.10

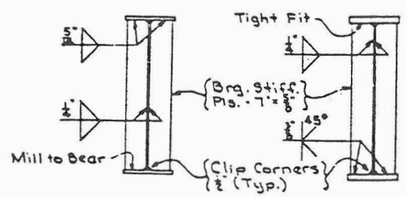
Work this sheet with sheet no. 26

QUANTITIES

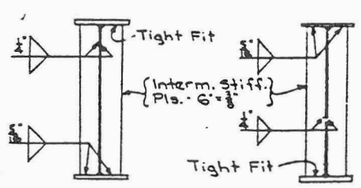
Structural Steel _____ 441,500 Lbs.



TYPICAL



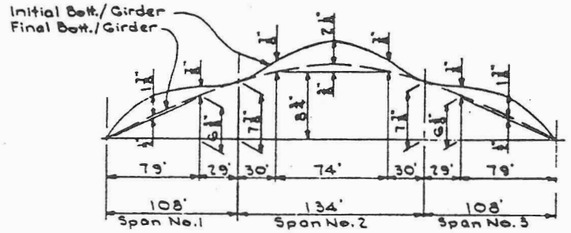
ABUTMENTS PIERS



NEAR PIERS MID-SPAN

GIRDER SECTIONS

Scale:- $\frac{1}{2}$"=1'-0"



GIRDER CONTROL DIAGRAM

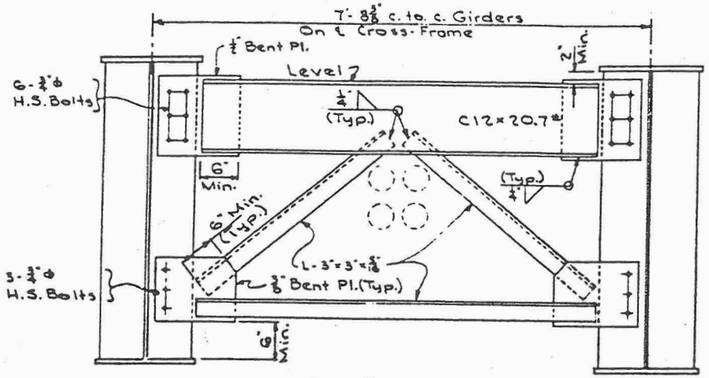
Not to Scale

STRUCTURAL STEEL DETAILS
STEEL BEAM ALTERNATE

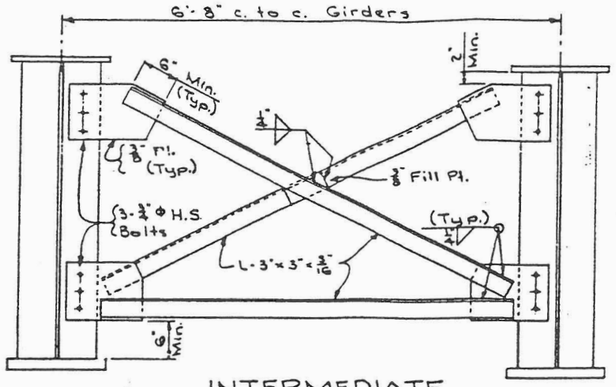
MARICOPA COUNTY HIGHWAY DEPARTMENT

SCALE As shown	APPROVED BY:	DRAWN BY	P.E
DATE 2-18-82		CHECKED	
CAREFREE HWY. - CAVE CREEK			
M.C.H.D. Project No. 07100		Designed Bridge No.	25

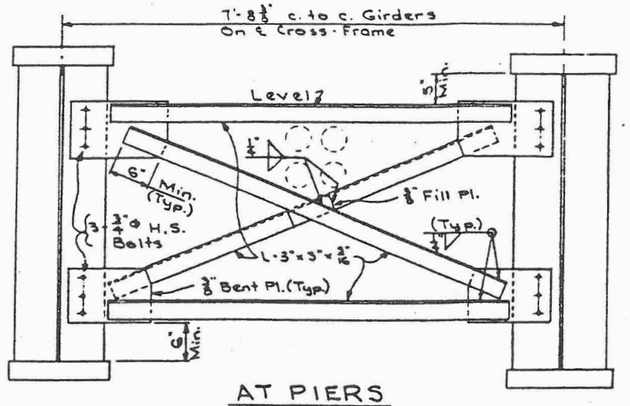
Fed Roads Div No	STATE	PROJECT NO	SHEET NO	TOTAL SHEETS	AS BUILT
7	ARIZONA	ER-RS-571(5)P	26	29	



AT ABUTMENTS



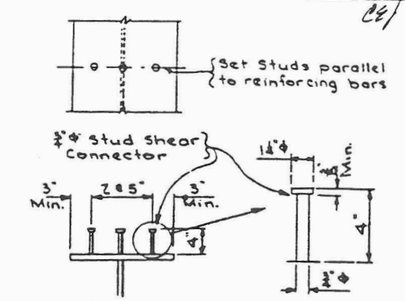
INTERMEDIATE



AT PIERS

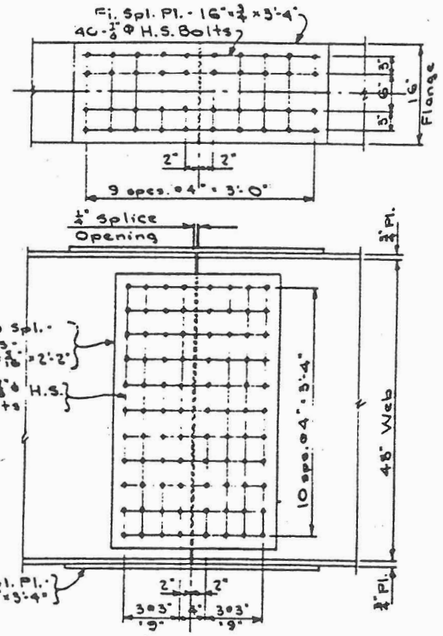
CROSS-FRAME DETAILS

Scale:- 1"=1'-0"



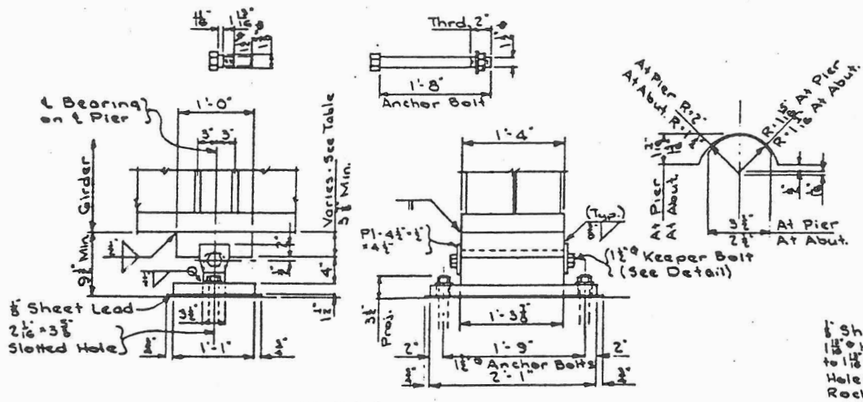
SHEAR CONNECTOR DETAILS

Scale:- 1"=1'-0"



SPLICE DETAIL

Scale:- 1"=1'-0"



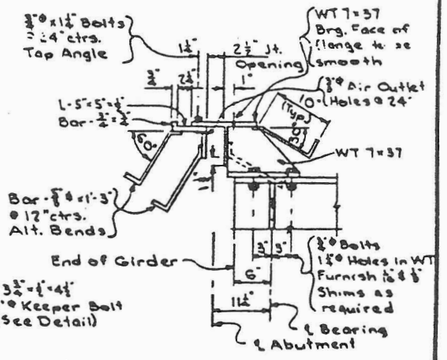
AT PIERS

AT ABUTMENTS

BEARING DETAILS

Scale:- 1"=1'-0"

BEARING THICKNESS TABLE						
Girder No.	1	2	3	4	5	6
West Abut.	2¾"	3⅜"	4⅛"	2¾"	3⅜"	4⅛"
Pier No.1	3⅜"	5"	6"	4"	5"	6"
Pier No.2	4"	5⅛"	6¼"	4"	5⅛"	6⅛"
East Abut.	2¾"	4⅛"	6"	2⅞"	4⅛"	6"



EXPANSION JOINT DETAIL

Scale:- 1"=1'-0"

For Details not shown see ADOT Std. No RJ-3

STRUCTURAL STEEL DETAILS
STEEL BEAM ALTERNATE

Work This Sheet with Sh. No. 25

MARICOPA COUNTY HIGHWAY DEPARTMENT

SCALE As Shown	APPROVED BY	DRAWN BY P.E.
DATE 2-18-82		CHECKED
CAREFREE HWY.- CAVE CREEK		
M.C.H.D. Project No. 07100		SHEET NO. 26

7 | ER-RS-571(5)P | 26 of 29

FED ROAD DIV NO	STATE	PROJECT NO	SHEET NO	TOTAL SHEETS	NO OF SHT
7	ARIZONA	ER-RS-571(5)P	27	29	

350'-0" Overall Length of Deck

108'-0" Span No. 1 | 134'-0" Span No. 2 | 108'-0" Span No. 3

℄ Exp. Jt. | ℄ Exp. Jt.

29'-0" Constr. Joint Spacing | 30'-0" Spacing | 30'-0" Constr. Joint | 29'-0" Spacing

13'-6" Span No. 1 & 3 - Deck Drain Spacing | 3 spcs. @ 27'-0" = 81'-0" | 13'-6" | 13'-0" Deck Drain Spacing | 4 spcs. @ 27'-0" = 108'-0" | 13'-0"

El. 1877.60 | El. 1877.76 | El. 1878.35 | El. 1878.28 | El. 1877.56 | El. 1877.40

½" Bit. Jt. Mat.

(5) 389 31-#5 Bars @ 8" Top & Bott. = 62 Field cut at Exp. Jt.

(5) 730 1-#5 Bar Top & Bott., 2 Lgths = 8

℄ Exp. Jt. & ℄ W. Abut.

℄ Pier No. 1-2

℄ Mtn. Bell Conduits

Score T/Deck & T/Appr. Slab on ℄ Bridge

6 spcs. @ 8"

(5) 66 7-#4 Bars Top, 2 Corners = 14

(5) 230

½" Bit. Jt. Mat.

17'-11½" Approach Slab

El. 1877.78

Ref. Pt. W El. 1877.83

Ref. Pt. 1 El. 1878.59

Ref. Pt. 2 El. 1878.59

Ref. Pt. E El. 1877.93

15'-0" Appr. Slab

(6) 370 1-#6 Bar, 3 Lengths Span No. 1 & 3 = 12

(4) 366 6-#4 Bars, 3 Lengths Span No. 1 & 3 = 72

(8) 60 29-#8 Bars Top & Bott. Ea. Pier = 58

14'-6" Typ. at Pier | 15'-0"

(6) 349 1-#6 Bar, 4 Lgths Span No. 2 = 8

(4) 343 6-#4 Bars, 4 Lgths Span No. 2 = 48

(4) 399 30-#4 Bars Top & Bott. 9 Lengths = 540

31'-0.015'/Ft.

18'-0" Roadway ℄ Bridge

(5) 389 494-#5 Bars @ 8" Top & Bott. = 988

(5) 410 Top = 22

(5) 410 Bott. = 32

11-#4 Bars @ 18"

16-#5 Bars @ 12"

(5) 389 31-#5 Bars @ 8" Top & Bott. Cut Bars from W. End

(4A) 33 24-#4 Bars @ 18" = 48 Ctr. Bent

(4) 146 25-#4 Bars Top = 30 Bott. = 98

(8) 146 49-#8 Bars @ 6" Bott. = 98

17'-11½" Approach Slab

El. 1877.95 | El. 1878.11 | El. 1878.82 | El. 1878.39 | El. 1878.29 | El. 1878.14

½" Bit. Jt. Mat.

℄ E. Abut. & ℄ Exp. Jt.

144-#4 Bars Span No. 1 & 3 = 576 (4A) 10

144-#4 Bars Span No. 1 & 3 = 576 (4A) 30

73-#4 Bars @ 18" Span No. 1 & 3 = 292 (4) 23

4" | 3" | 3" | 1'-9"

143 spcs. @ 9" = 107'-5" Railing Reinf. - Span No. 1 & 3

10 spcs. @ 7'-10½" = 79'-0" | 4 spcs. @ 7'-3" = 29'-0"

178 spcs. @ 9" = 133'-6" Railing Reinf. - Span No. 2

4 spcs. @ 7'-6" = 30'-0" | 10 spcs. @ 7'-4½" = 74'-0" | 4 spcs. @ 7'-6" = 30'-0"

Span No. 1 & 3 - False Joint Spacing in Railing - Span No. 2

(4A) 40 179-#4 Bars Span No. 2 = 358

(4A) 30 179-#4 Bars Span No. 2 = 358

(4) 23 90-#4 Bars @ 18" Span No. 2 = 180

PLAN

Scale:- ⅛" = 1'-0"

Elevations shown for Top of Deck & Approach Slab

(G) 370 | (G) 349 | (4) 23 | (4) 366 | (4) 343 | (4A) 30 | (4A) 40

2" | 1'-5" | 5" | 2" Cl. Typ. | 11'-7" | 2'-8" Slab Railing | 8" Slab | 3" Drip Notch | ¾" Δ Moulding

RAILING DETAIL

Scale:- ½" = 1'-0"

1'-7" | 18'-0" | 18'-0" | 1'-7"

℄ Bridge

12" Min. Haunch @ Abut. & Pier | 8½" Conc. Slab | 2½" Cl. | Slope ~ 0.015'/Ft. | 1" Cl.

(4) 399 5 spcs. @ 16" = 6'-8" (Typ.) | 2'-8" | 3" Top

8" | 4 spcs. @ 16" = 5'-4" (Typ. over Piers) | 8" | (8) 440 | 8" | 11"

3'-4" | 3'-4" | 1'-0" | 7 spcs. @ 8" = 4'-8" (Typ.) | 2" Bott.

(5) 389 | (4) 399

7'-8½" c. to c. Girders on ℄ Diaphragm | 3'-4" | 3'-4"

5 spcs. @ 6'-8" = 33'-4" c. to c. Girders

2'-11" | 2'-11"

Deck Drain | ℄ Mtn. Bell Conduits | 2 spcs. @ 9" = 1'-6"

DECK SECTION

Scale:- ⅛" = 1'-0"

℄ Pier

¾" Bevel | 1'-5" Railing | 18'-0" ℄ Bridge | 2"

¾" Bit. Jt. Mat.

Constr. Jt. in Deck

Constr. Jt. in Railing. Double ¾" Δ Moulding Each Face

Note:- Use Double ¾" Δ Moulding Each Face at all Railing False Joints.

℄ Girder | 1" Haunch Over ½" Pl. | 8½" Slab | 3"

6" ϕ Galv. Pipe Deck Drain | 18'-0" To ℄ Bridge | 1'-5" Railing | 2" | 8½" Slab | 2'-11"

DECK DRAIN DETAIL

Scale:- ½" = 1'-0"

For Details see ADOT Std. BM-1

Exp. Jt. at W. Abut. | ℄ Pier No. 1 | ℄ Pier No. 2 | Exp. Jt. at E. Abut.

A | B | C | A

79'-0" | 59'-0" | 74'-0" | 59'-0" | 79'-0"

DECK POUR DIAGRAM

Not to Scale

Deck Pours shall be made in alphabetical order

Railing shall not be poured until all deck pours are completed

QUANTITIES

Class S Concrete (3500 psi) -- 104 C.Y.

Class S Concrete (4500 psi) -- 377 C.Y.

Reinforcing Steel ------ 83130 Lbs.

Aggregate Base ---------- 50 Tons

Steel Exp. Jt. | ℄ Exp. Jt. & ℄ Abut.

3" | 2½" Jt. Opening | Curb Plate | ¾" Bevel | 1'-5" Railing | 2" | 2½" Joint Opening

EXPANSION JOINT DETAIL

Scale:- ½" = 1'-0"

For Details not shown, See ADOT Std. No. RJ-9

NOTES

Concrete - Class S

Railing and Approach Slabs shall be Class S (3500 psi.)

All other concrete shall be Class S (4500 psi)

All exposed corners shall be bevelled ¾ unless otherwise noted.

Reinforcing Steel - ASTM A-615, Grade 60

Minimum Bar Laps - #6 Bar = 1'-8"

#5 Bar = 1'-6"

#4 Bar = 1'-0"

Steel Expansion Joint - Included in Structural Steel

2½" Joint Opening is set for 70°. For every 10° difference in temperature at time of installation adjust joint opening by ½"

For Details of End of Deck, Approach Slabs and Alternate Deck Section, see sheet no. 28

CONCRETE DECK DETAILS STEEL BEAM ALTERNATE

MARICOPA COUNTY HIGHWAY DEPARTMENT

SCALE: As shown | APPROVED BY: | DRAWN BY: PE

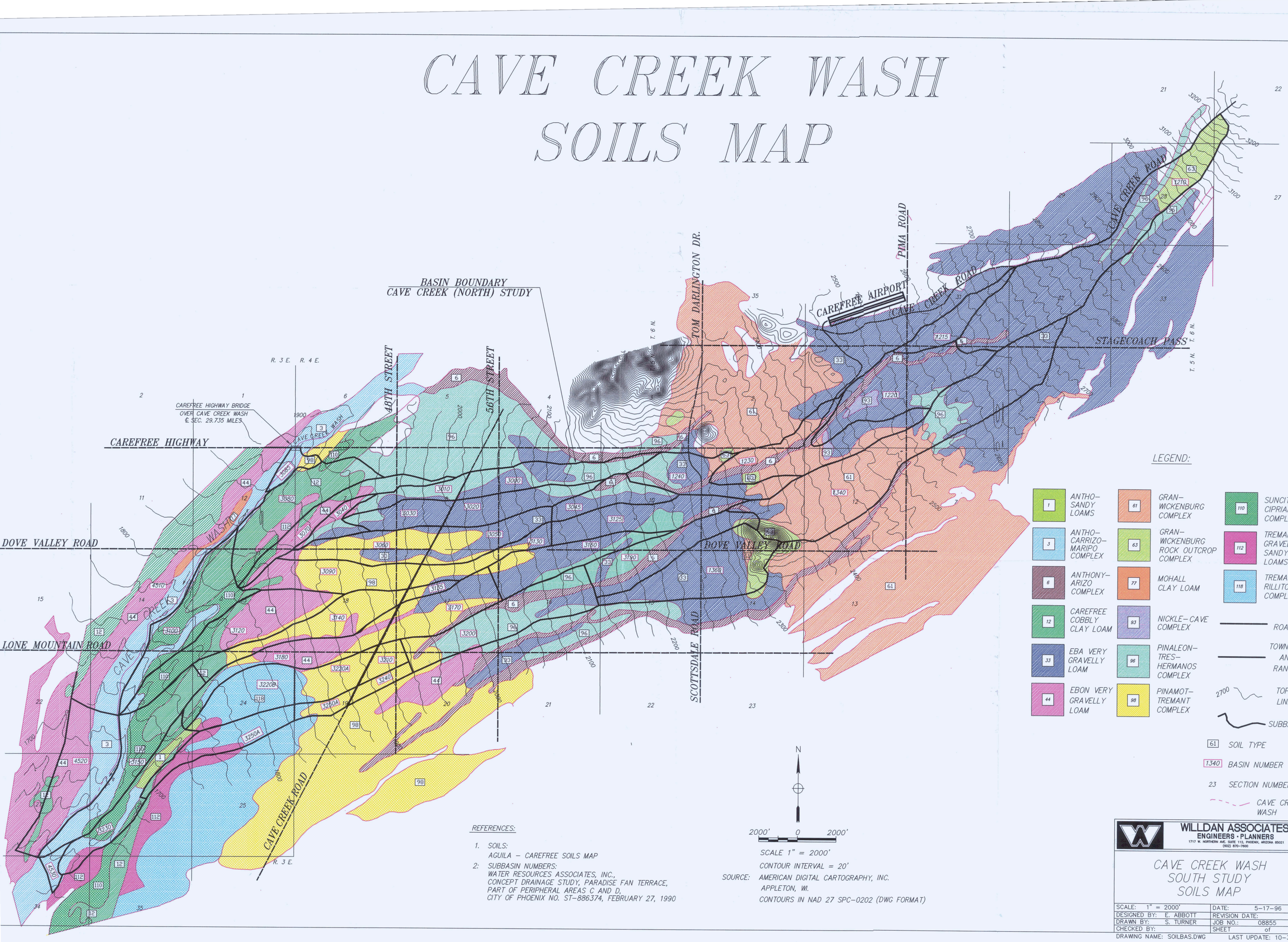
DATE: 3-30-81 | CHECKED:

CAREFREE HWY. - CAVE CREEK

M.C.H.D. Project No. 07100 | SHEET NUMBER 27

7 | FR-RS-571(5)P | 27 of 29

CAVE CREEK WASH
SOILS MAP



LEGEND:

- 1 ANTHO–SANDY LOAMS
- 3 ANTHO–CARRIZO–MARIPO COMPLEX
- 6 ANTHONY–ARIZO COMPLEX
- 12 CAREFREE COBBLY CLAY LOAM
- 33 EBA VERY GRAVELLY LOAM
- 44 EBON VERY GRAVELLY LOAM
- 61 GRAN–WICKENBURG COMPLEX
- 63 GRAN–WICKENBURG ROCK OUTCROP COMPLEX
- 77 MOHALL CLAY LOAM
- 93 NICKLE–CAVE COMPLEX
- 96 PINALEON–TRES–HERMANOS COMPLEX
- 98 PINAMOT–TREMANT COMPLEX
- 110 SUNCITY–CIPRIANO COMPLEX
- 112 TREMANT GRAVELLY SANDY LOAMS
- 118 TREMANT–RILLITO COMPLEX
- ROAD
- TOWNSHIP AND RANGE
- 2700 TOPO LINES
- SUBBASIN
- 61 SOIL TYPE
- 1340 BASIN NUMBER
- 23 SECTION NUMBER
- CAVE CREEK WASH

N

2000' 0 2000'

SCALE 1" = 2000'

CONTOUR INTERVAL = 20'

SOURCE: AMERICAN DIGITAL CARTOGRAPHY, INC. APPLETON, WI. CONTOURS IN NAD 27 SPC–0202 (DWG FORMAT)

REFERENCES:

1. SOILS:
   AGUILA – CAREFREE SOILS MAP
2. SUBBASIN NUMBERS:
   WATER RESOURCES ASSOCIATES, INC., CONCEPT DRAINAGE STUDY, PARADISE FAN TERRACE, PART OF PERIPHERAL AREAS C AND D, CITY OF PHOENIX NO. ST–886374, FEBRUARY 27, 1990

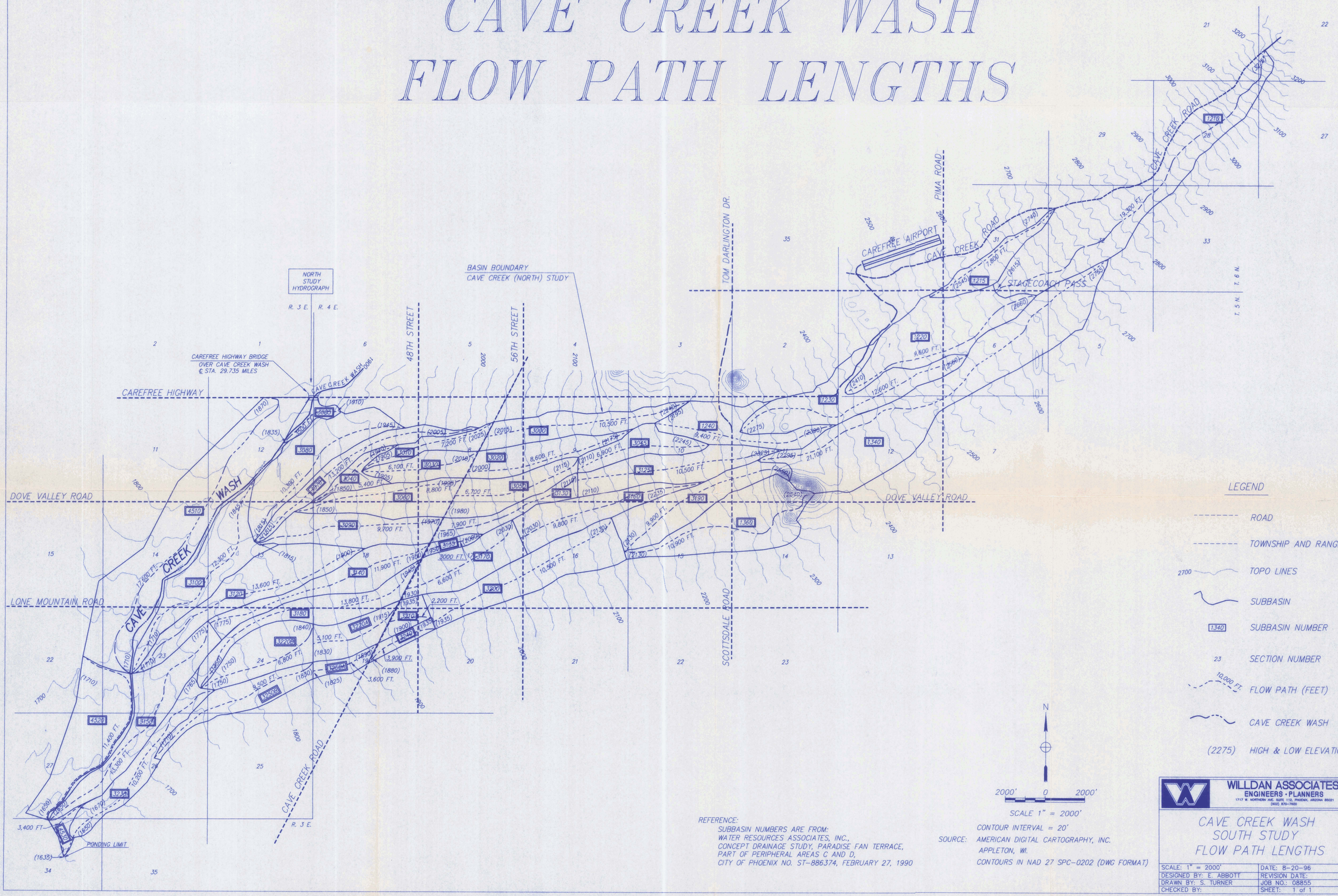
WILLDAN ASSOCIATES
ENGINEERS · PLANNERS
1717 W. NORTHERN AVE. SUITE 112, PHOENIX, ARIZONA 85021
(602) 870–7600

CAVE CREEK WASH
SOUTH STUDY
SOILS MAP

SCALE: 1" = 2000'	DATE: 5–17–96
DESIGNED BY: E. ABBOTT	REVISION DATE:
DRAWN BY: S. TURNER	JOB NO.: 08855
CHECKED BY:	SHEET of

DRAWING NAME: SOILBAS.DWG LAST UPDATE: 10–31–96

CAVE CREEK WASH
FLOW PATH LENGTHS



LEGEND

- ROAD
- TOWNSHIP AND RANGE
- 2700 TOPO LINES
- SUBBASIN
- 1340 SUBBASIN NUMBER
- 23 SECTION NUMBER
- 10,000 FT. FLOW PATH (FEET)
- CAVE CREEK WASH
- (2275) HIGH & LOW ELEVATION

N

2000' 0 2000'

SCALE 1" = 2000'

CONTOUR INTERVAL = 20'

SOURCE: AMERICAN DIGITAL CARTOGRAPHY, INC. APPLETON, WI.

CONTOURS IN NAD 27 SPC-0202 (DWG FORMAT)

REFERENCE:
SUBBASIN NUMBERS ARE FROM:
WATER RESOURCES ASSOCIATES, INC.,
CONCEPT DRAINAGE STUDY, PARADISE FAN TERRACE,
PART OF PERIPHERAL AREAS C AND D,
CITY OF PHOENIX NO. ST-886374, FEBRUARY 27, 1990

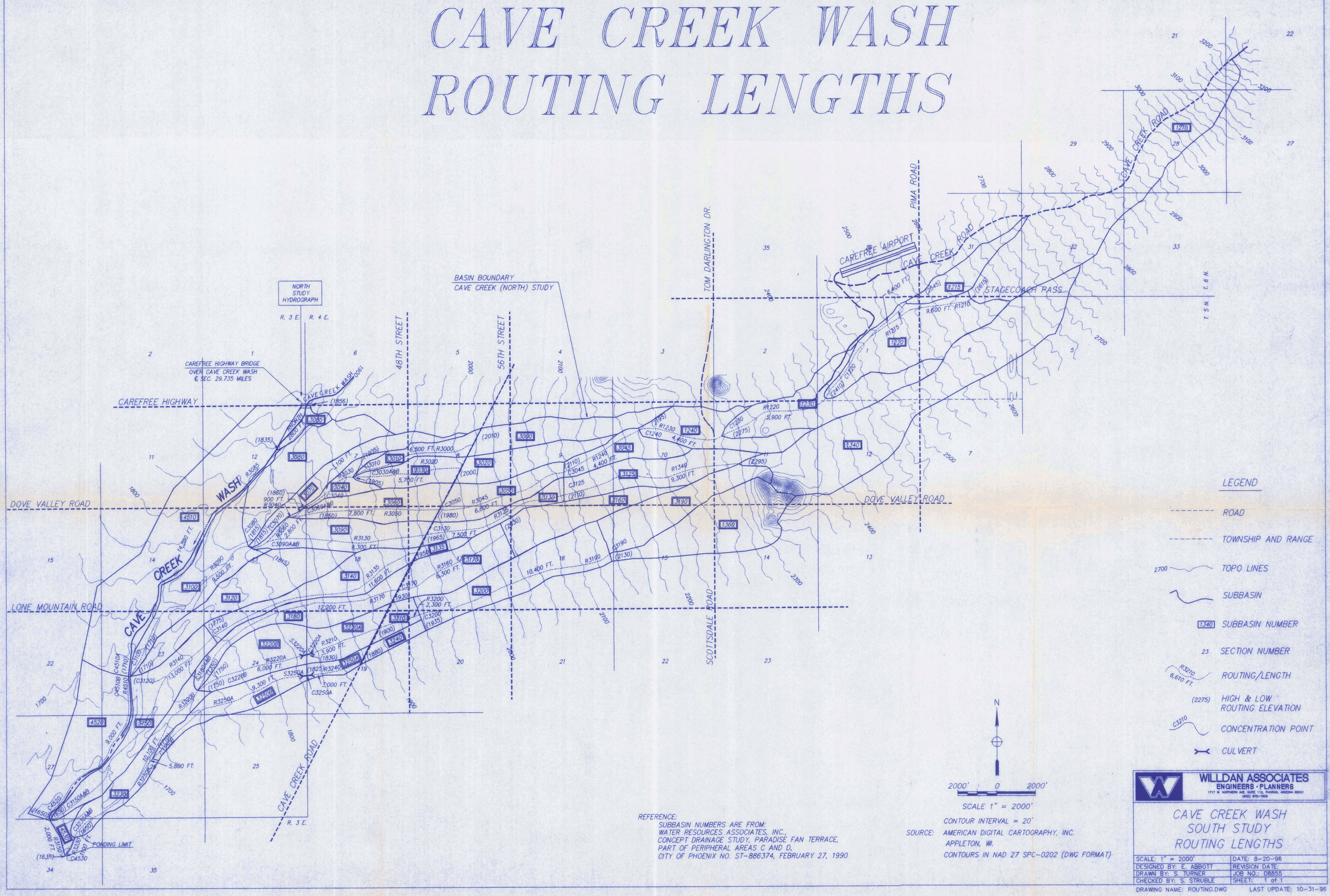
WILLDAN ASSOCIATES
ENGINEERS • PLANNERS
1717 W. NORTHERN AVE. SUITE 112, PHOENIX, ARIZONA 85021
(602) 870-7800

CAVE CREEK WASH
SOUTH STUDY
FLOW PATH LENGTHS

SCALE: 1" = 2000'	DATE: 8-20-96
DESIGNED BY: E. ABBOTT	REVISION DATE:
DRAWN BY: S. TURNER	JOB NO.: 08855
CHECKED BY:	SHEET: 1 of 1

DRAWING NAME: FLOWPATH.DWG LAST UPDATE: 10-31-96

CAVE CREEK WASH
ROUTING LENGTHS



LEGEND

- ROAD
- TOWNSHIP AND RANGE
- 2700 TOPO LINES
- SUBBASIN
- 1340 SUBBASIN NUMBER
- 23 SECTION NUMBER
- R3210 6,610 FT. ROUTING/LENGTH
- (2275) HIGH & LOW ROUTING ELEVATION
- C3210 CONCENTRATION POINT
- CULVERT

N

2000' 0 2000'

SCALE 1" = 2000'

CONTOUR INTERVAL = 20'

SOURCE: AMERICAN DIGITAL CARTOGRAPHY, INC. APPLETON, WI. CONTOURS IN NAD 27 SPC-0202 (DWG FORMAT)

REFERENCE:
SUBBASIN NUMBERS ARE FROM:
WATER RESOURCES ASSOCIATES, INC.,
CONCEPT DRAINAGE STUDY, PARADISE FAN TERRACE,
PART OF PERIPHERAL AREAS C AND D,
CITY OF PHOENIX NO. ST-886374, FEBRUARY 27, 1990

WILLDAN ASSOCIATES
ENGINEERS · PLANNERS
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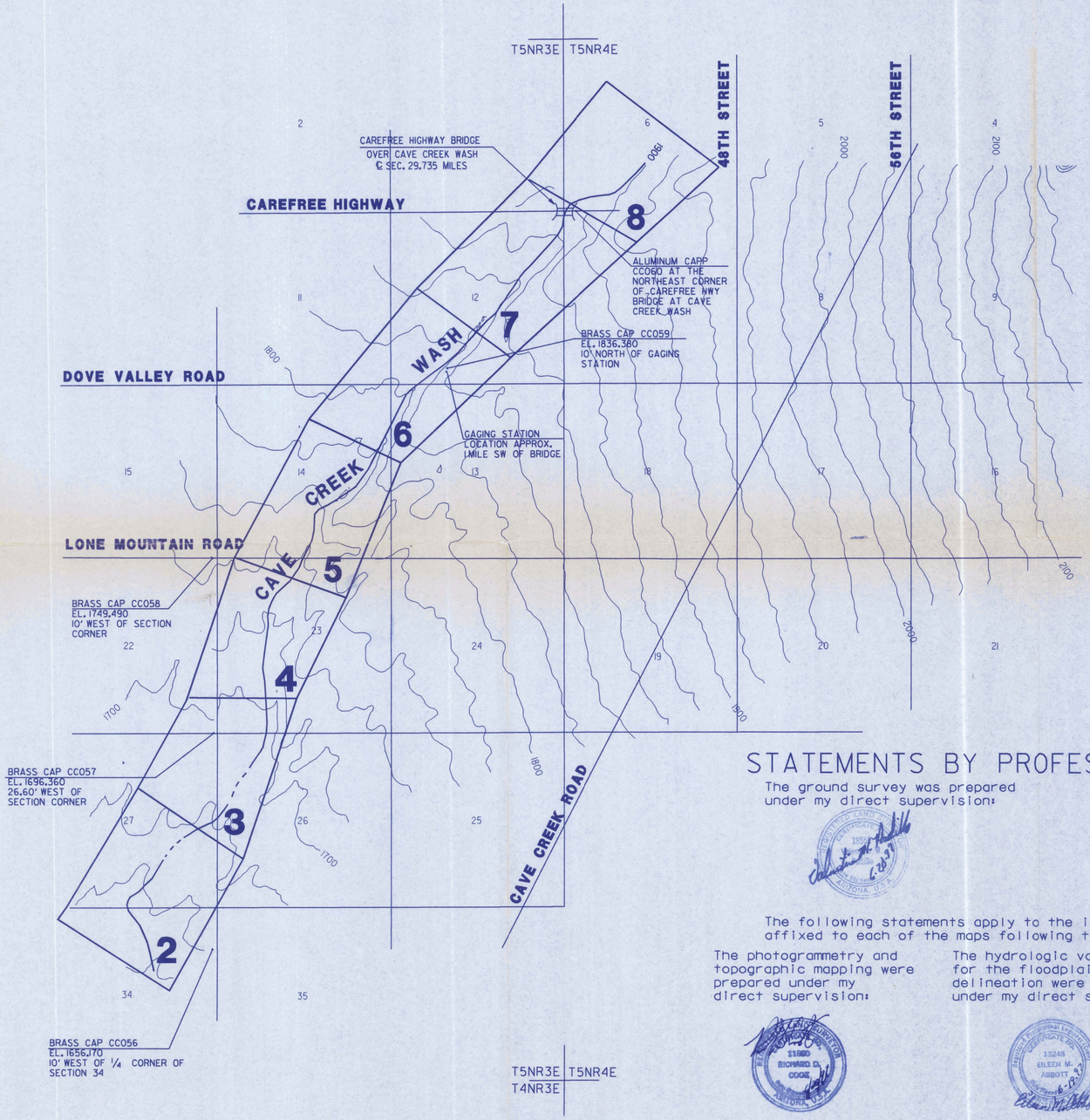
(602) 870-7800

CAVE CREEK WASH
SOUTH STUDY
ROUTING LENGTHS

SCALE: 1" = 2000'	DATE: 8-20-96
DESIGNED BY: E. ABBOTT	REVISION DATE:
DRAWN BY: S. TURNER	JOB NO.: 08855
CHECKED BY: S. STRUBLE	SHEET: 1 of 1

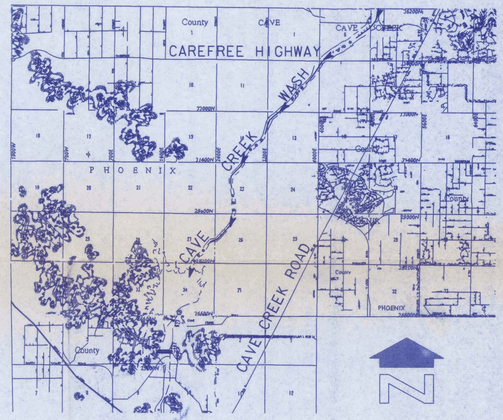
DRAWING NAME: ROUTING.DWG LAST UPDATE: 10-31-96

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
CAVE CREEK BELOW CAREFREE HIGHWAY FIS
FLOODPLAIN DELINEATION STUDY
F.C.D. CONTRACT 95-30



100-YEAR FLOODPLAIN DELINEATION DISCHARGES

Flooding Source	Reach	Discharge (cfs)
Cave Creek Wash	At Cave Buttes Recreation Area Ponding Limits	38,200
Cave Creek Wash	D/S Lone Mountain Road	36,800
Cave Creek Wash	Lone Mountain Road	33,800
Cave Creek Wash	Care Free Highway	33,800



VICINITY MAP
NO SCALE

Study Date: 1996

Mapping Date: 1/12/96

Aerial Mapping: Aerial Mapping Company Inc.

GIS: Aerial Mapping Company Inc.

STATEMENTS BY PROFESSIONAL REGISTRANTS

The ground survey was prepared under my direct supervision:

The following statements apply to the individual seals affixed to each of the maps following this cover sheet.

The photogrammetry and topographic mapping were prepared under my direct supervision:

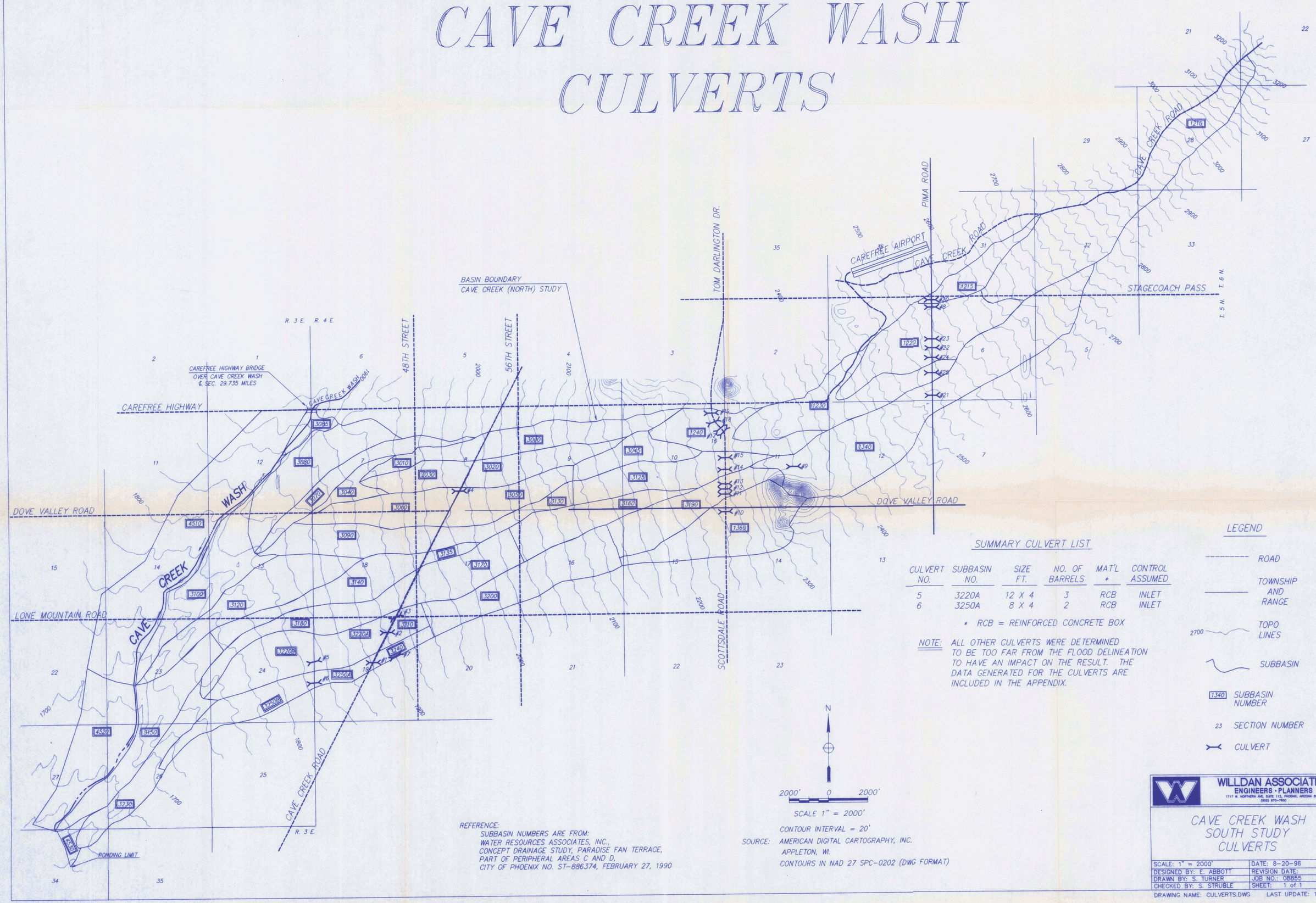
The hydrologic values used for the floodplain and floodway delineation were prepared under my direct supervision:

The floodplain and floodway delineation were prepared under my direct supervision:

WILLDAN ASSOCIATES
ENGINEERS PLANNERS
1717 W. NORTHERN AVE., SUITE 112, PHOENIX, ARIZONA 85021
(602) 870-7600

Date: 18-JUN-1997 Plotted by: Plotter Dgnspc: Q:\jn08855\hec\title.dgn

CAVE CREEK WASH
CULVERTS



SUMMARY CULVERT LIST

CULVERT NO.	SUBBASIN NO.	SIZE FT.	NO. OF BARRELS	MAT'L *	CONTROL ASSUMED
5	3220A	12 X 4	3	RCB	INLET
6	3250A	8 X 4	2	RCB	INLET

* RCB = REINFORCED CONCRETE BOX

NOTE: ALL OTHER CULVERTS WERE DETERMINED TO BE TOO FAR FROM THE FLOOD DELINEATION TO HAVE AN IMPACT ON THE RESULT. THE DATA GENERATED FOR THE CULVERTS ARE INCLUDED IN THE APPENDIX.

LEGEND

- ROAD
- TOWNSHIP AND RANGE
- 2700 TOPO LINES
- SUBBASIN
- 1340 SUBBASIN NUMBER
- 23 SECTION NUMBER
- CULVERT

N

2000' 0 2000'

SCALE 1" = 2000'

CONTOUR INTERVAL = 20'

SOURCE: AMERICAN DIGITAL CARTOGRAPHY, INC.
APPLETON, WI.
CONTOURS IN NAD 27 SPC-0202 (DWG FORMAT)

REFERENCE:
SUBBASIN NUMBERS ARE FROM:
WATER RESOURCES ASSOCIATES, INC.,
CONCEPT DRAINAGE STUDY, PARADISE FAN TERRACE,
PART OF PERIPHERAL AREAS C AND D,
CITY OF PHOENIX NO. ST-886374, FEBRUARY 27, 1990

WILLDAN ASSOCIATES
ENGINEERS · PLANNERS
1717 W. NORTHERN AVE. SUITE 110, PHOENIX, ARIZONA 85021
(602) 870-7600

CAVE CREEK WASH
SOUTH STUDY
CULVERTS

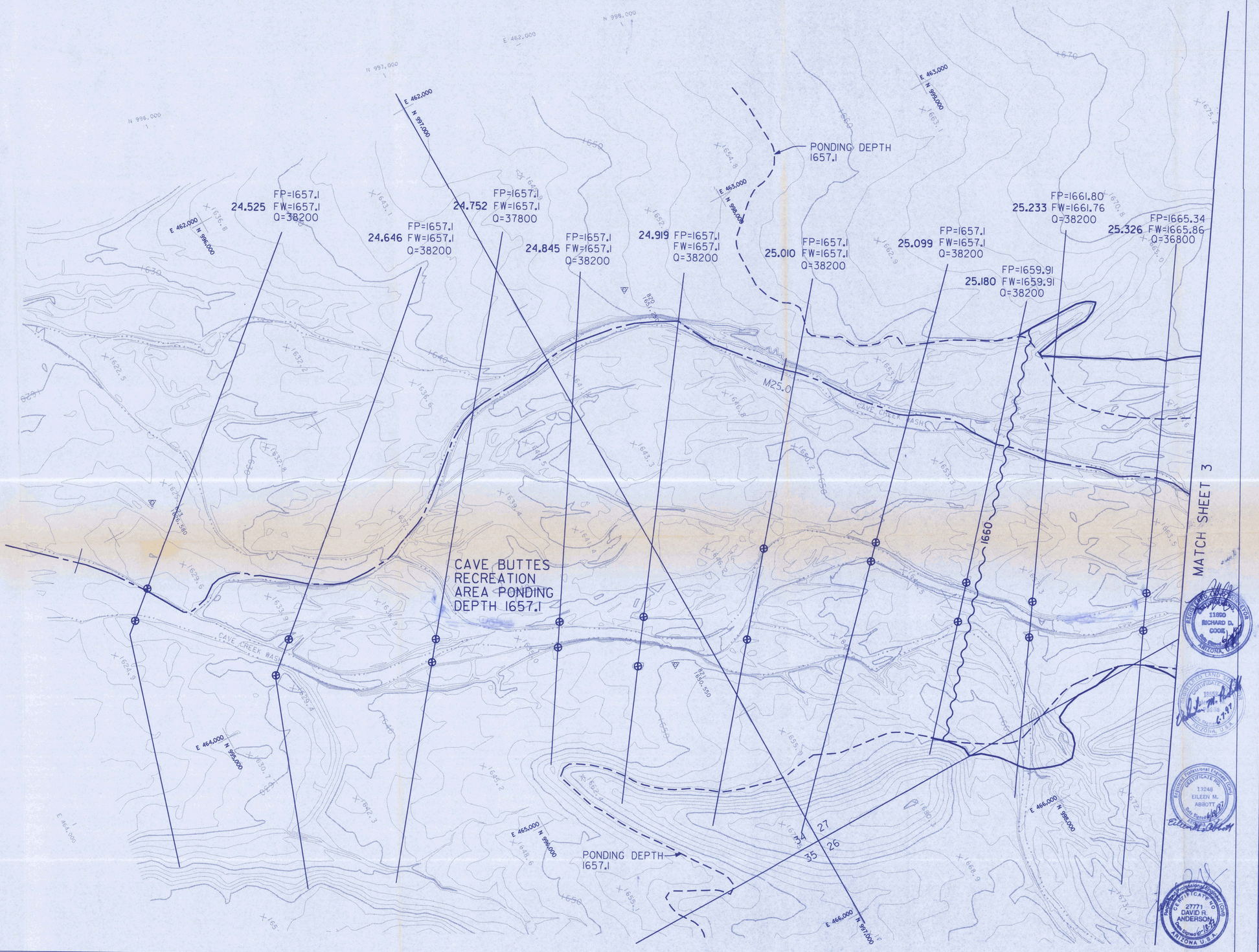
SCALE: 1" = 2000'	DATE: 8-20-96
DESIGNED BY: E. ABBOTT	REVISION DATE:
DRAWN BY: S. TURNER	JOB NO.: 08855
CHECKED BY: S. STRUBLE	SHEET: 1 of 1

DRAWING NAME: CULVERTS.DWG LAST UPDATE: 10-31-96

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF CAVE CREEK BELOW CAREFREE HIGHWAY

F.C.D. CONTRACT NO. 95-30



LEGEND

100-YR FLOODPLAIN BOUNDARY	
FLOODWAY BOUNDARY	
HYDRAULIC BASE LINE WITH RIVER MILE	M12.0 — M13.0
CROSS SECTION	5.519 FP=100 Yr WSEL FW=Floodway WSEL Q =100 Yr Flow
HEC-2 BANK LOCATION	⊕
ELEVATION REFERENCE MARK	
BASE FLOOD ELEVATIONS	1221
ZONE DESIGNATIONS	ZONE AE
CORPORATE LIMITS	
PONDING LIMITS	
SECTION LINES	

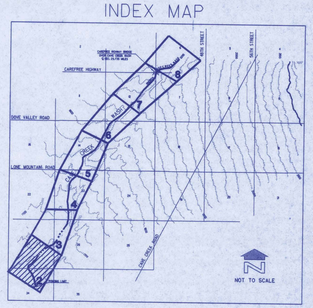
ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929

I.D. NUMBER	ELEVATION (FT)	LOCATION E,N
CC056	1656.170	TOP OF BRASS CAP 10 FEET WEST OF 1/4 CORNER OF SECTION 34

NOTES

INDEX MAP



200 0' 200 400

SCALE: 1" = 200'

CONTOUR INTERVAL = 2' FEET

WILLDAN ASSOCIATES
ENGINEERS PLANNERS
1717 E. NORTHERN AVE. SUITE 113 PHOENIX, ARIZONA 85021
(602) 870-7600

	BY	DATE
DESIGN		
DESIGN CHK.		
PLANS	KK	6/97
PLANS CHK.	DH	6/97
SUBMITTED BY:		DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 2 OF 8

AERIAL MAPPING COMPANY, INC.
SURVEYING AND PHOTOGRAMMETRY
FLIGHT DATE: 1/12/96

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS
1" = 200' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY
DATA PROVIDED BY (VALCO)

Date: 18-JUN-1997 Plotted by: Plotter Dgnspc: d:\jn08855\hec\sheet2.dgn

FP=1669.17
25.388 FW=1669.99
Q=36800

FP=1673.33
25.458 FW=1674.35
Q=36800

FP=1674.75
25.519 FW=1675.62
Q=36800

FP=1676.35
25.580 FW=1677.05
Q=36800

FP=1678.52
25.644 FW=1679.05
Q=36800

FP=1682.46
25.699 FW=1682.90
Q=36800

FP=1684.90
25.750 FW=1685.05
Q=36800

FP=1685.95
25.843 FW=1686.21
Q=36800

FP=1689.02
25.919 FW=1689.64
Q=36800

FP=1695.28
26.044 FW=1696.24
Q=36800

FP=1698.90
26.137 FW=1699.67
Q=36800

FP=1701.16
26.239 FW=1702.03
Q=36800

BRASS CAP CC057
26.60' WEST OF
SECTION CORNER

E 464.000
N 1,000,000

E 465.000
N 1,002,000

E 465.000
N 1,003,000

E 466.000
N 999,000

E 466.000
N 1,003,000

E 467.000
N 999,000

E 468.000
N 1,001,000

MATCH SHEET 2

MATCH SHEET 4

1670

1680

1690

1700

M26.0

CAVE CREEK ROAD

100-YR FLOODPLAIN
AND FLOODWAY BOUNDARY

AERIAL MAPPING COMPANY, INC.
SURVEYING AND PHOTOGRAMMETRY
FLIGHT DATE: 1/12/96

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS
1" = 200' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY
DATA PROVIDED BY (VALCO)

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF CAVE CREEK BELOW CAREFREE HIGHWAY

F.C.D. CONTRACT NO. 95-30

LEGEND

- 100-YR FLOODPLAIN BOUNDARY
- FLOODWAY BOUNDARY
- HYDRAULIC BASE LINE WITH RIVER MILE — MI2.0 — MI3.0
- CROSS SECTION — 5.519 — FP=100 Yr WSEL, FW=Floodway WSEL, Q =100 Yr Flow
- HEC-2 BANK LOCATION
- ELEVATION REFERENCE MARK
- BASE FLOOD ELEVATIONS — 1221
- ZONE DESIGNATIONS — ZONE AE
- CORPORATE LIMITS
- PONDING LIMITS
- SECTION LINES

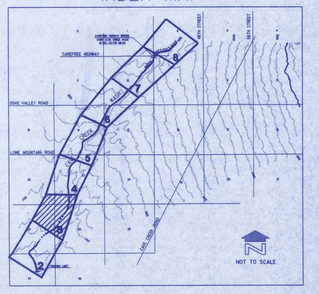
ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929

I.D. NUMBER	ELEVATION (FT)	LOCATION E,N
CC057	1696.360	TOP OF BRASS CAP 26.60 FEET WEST OF SECTION CORNER

NOTES

INDEX MAP



200 0' 200 400
SCALE: 1" = 200'
CONTOUR INTERVAL = 2' FEET

REGISTERED LAND SURVEYOR
11850
RICHARD D. COOK
ARIZONA, U.S.A.

Professional Engineer
CERTIFICATE NO.
13248
EILEEN M. ABBOTT
ARIZONA U.S.A.

Professional Engineer
CERTIFICATE NO.
27771
DAVID R. ANDERSON
ARIZONA U.S.A.

WILLDAN ASSOCIATES
ENGINEERS PLANNERS
1717 W. NORTHERN AVE. SUITE 115, PHOENIX, ARIZONA 85021
(602) 870-7600

	BY	DATE
DESIGN		
DESIGN CHK.		
PLANS	KK	6/97
PLANS CHK.	DH	6/97
SUBMITTED BY:		DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 3 OF 8

Date: 18-JUN-1997 Plotted by: Platter Dgnspc: O:\jn08855\hec\sheet3.dgn

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF CAVE CREEK BELOW CAREFREE HIGHWAY

F.C.D. CONTRACT NO. 95-30

FP=1705.64
26.335 FW=1706.56
Q=36800

FP=1707.78
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Q=36800

FP=1711.54
26.529 FW=1711.66
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FP=1716.40
26.623 FW=1716.97
Q=36800

FP=1720.60
26.695 FW=1721.19
Q=36800

FP=1723.99
26.775 FW=1724.09
Q=36800

FP=1727.72
26.845 FW=1728.23
Q=36800

FP=1731.00
26.921 FW=1731.14
Q=33800

FP=1734.50
27.008 FW=1734.75
Q=33800

E 465.000 N 1,004.000

E 466.000 N 1,005.000

E 467.000 N 1,007.000

E 468.000 N 1,004.000

E 469.000 N 1,006.000

E 469.000 N 1,005.000

M27.0

1730

1720

1710

MATCH SHEET 3

MATCH SHEET 5

100-YR FLOODPLAIN AND FLOODWAY BOUNDARY

100-YR FLOODPLAIN AND FLOODWAY BOUNDARY

LEGEND

100-YR FLOODPLAIN BOUNDARY	
FLOODWAY BOUNDARY	
HYDRAULIC BASE LINE WITH RIVER MILE	M12.0 — M13.0
CROSS SECTION	5.519 FP=100 Yr WSEL FW=Floodway WSEL Q =100 Yr Flow
HEC-2 BANK LOCATION	
ELEVATION REFERENCE MARK	
BASE FLOOD ELEVATIONS	1221
ZONE DESIGNATIONS	ZONE AE
CORPORATE LIMITS	
PONDING LIMITS	
SECTION LINES	

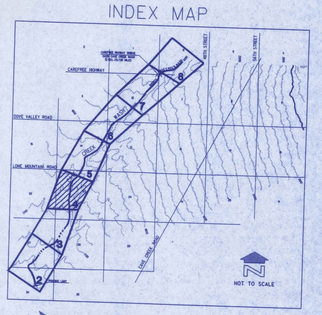
ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929

I.D. NUMBER	ELEVATION (FT.)	LOCATION E,N
CC058	1749.490	TOP OF BRASS CAP 10 FEET WEST OF SECTION CORNER.

NOTES

INDEX MAP



200 0' 200 400

SCALE: 1" = 200'

CONTOUR INTERVAL = 2' FEET

AERIAL MAPPING COMPANY, INC.
SURVEYING AND PHOTOGRAMMETRY
FLIGHT DATE: 1/12/96

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS
1" = 200' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY
DATA PROVIDED BY (VALCO)

WILLDAN ASSOCIATES
ENGINEERS PLANNERS
1717 N. NORTHERN AVE. SUITE 1/2, PHOENIX, ARIZONA 85021
(602) 870-7600

	BY	DATE
DESIGN		
DESIGN CHK.		
PLANS	KK	6/97
PLANS CHK.	DH	6/97
SUBMITTED BY:		DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 4 OF 8

Date: 18-JUN-1997 Plotted by: Plotter Dgnspc: O:\ln08855\hec\sheet4.dgn

FP=1738.47
27.106 FW=1738.48
Q=33800

FP=1741.54
27.169 FW=1741.80
Q=33800

FP=1743.08
27.226 FW=1743.39
Q=33800

FP=1749.27
27.265 FW=1750.10
Q=33800

FP=1752.39
27.320 FW=1753.42
Q=33800

FP=1755.30
27.366 FW=1756.23
Q=33800

FP=1757.21
27.417 FW=1757.87
Q=33800

FP=1764.57
27.502 FW=1764.88
Q=33800

FP=1768.51
27.604 FW=1769.18
Q=33800

FP=1774.29
27.693 FW=1774.31
Q=33800

FP=1779.81
27.797 FW=1780.78
Q=33800

FP=1783.23
27.913 FW=1784.06
Q=33800

FP=1787.52
28.023 FW=1788.46
Q=33800

N 1,008,000
E 467,000

E 468,000
N 1,009,000

1740
1750
1760
1770
1780

M28.0

MATCH SHEET 4

MATCH SHEET 6

100-YR FLOODPLAIN
AND FLOODWAY BOUNDARY

N 1,007,000
E 469,000

N 1,008,000
E 470,000

N 1,009,000
E 470,000

N 1,000,000
E 471,000

N 1,007,000
E 470,000

N 1,000,000
E 471,000

CAVE CREEK WASH

14
23

AERIAL MAPPING COMPANY, INC.
SURVEYING AND PHOTOGRAMMETRY
FLIGHT DATE: 1/12/96

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS
1" = 200' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY
DATA PROVIDED BY (VALCO)

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF CAVE CREEK BELOW CAREFREE HIGHWAY

F.C.D. CONTRACT NO. 95-30

LEGEND

- 100-YR FLOODPLAIN BOUNDARY
- FLOODWAY BOUNDARY
- HYDRAULIC BASE LINE WITH RIVER MILE — M12.0 — M13.0
- CROSS SECTION — 5.5\9 — FP=100 Yr WSEL, FW=Floodway WSEL, Q =100 Yr Flow
- HEC-2 BANK LOCATION
- ELEVATION REFERENCE MARK ⊕
- BASE FLOOD ELEVATIONS — 1221
- ZONE DESIGNATIONS — ZONE AE
- CORPORATE LIMITS
- PONDING LIMITS
- SECTION LINES

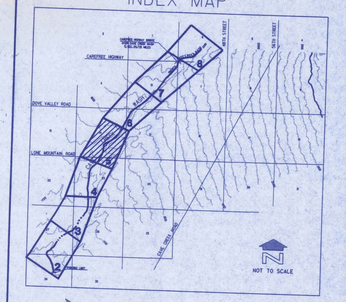
ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929

I.D. NUMBER	ELEVATION (FT)	LOCATION E,N
CC058	1749.490	TOP OF BRASS CAP 10 FEET WEST OF SECTION CORNER.

NOTES

INDEX MAP



200 0' 200 400
SCALE: 1" = 200'
CONTOUR INTERVAL = 2' FEET

WILLDAN ASSOCIATES
ENGINEERS PLANNERS
1717 W. NORTHERN AVE. SUITE 112, PHOENIX, ARIZONA 85021
(602) 870-7600

DESIGN	BY	DATE
DESIGN CHK.		
PLANS	KK	6/97
PLANS CHK.	DH	6/97
SUBMITTED BY:		DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

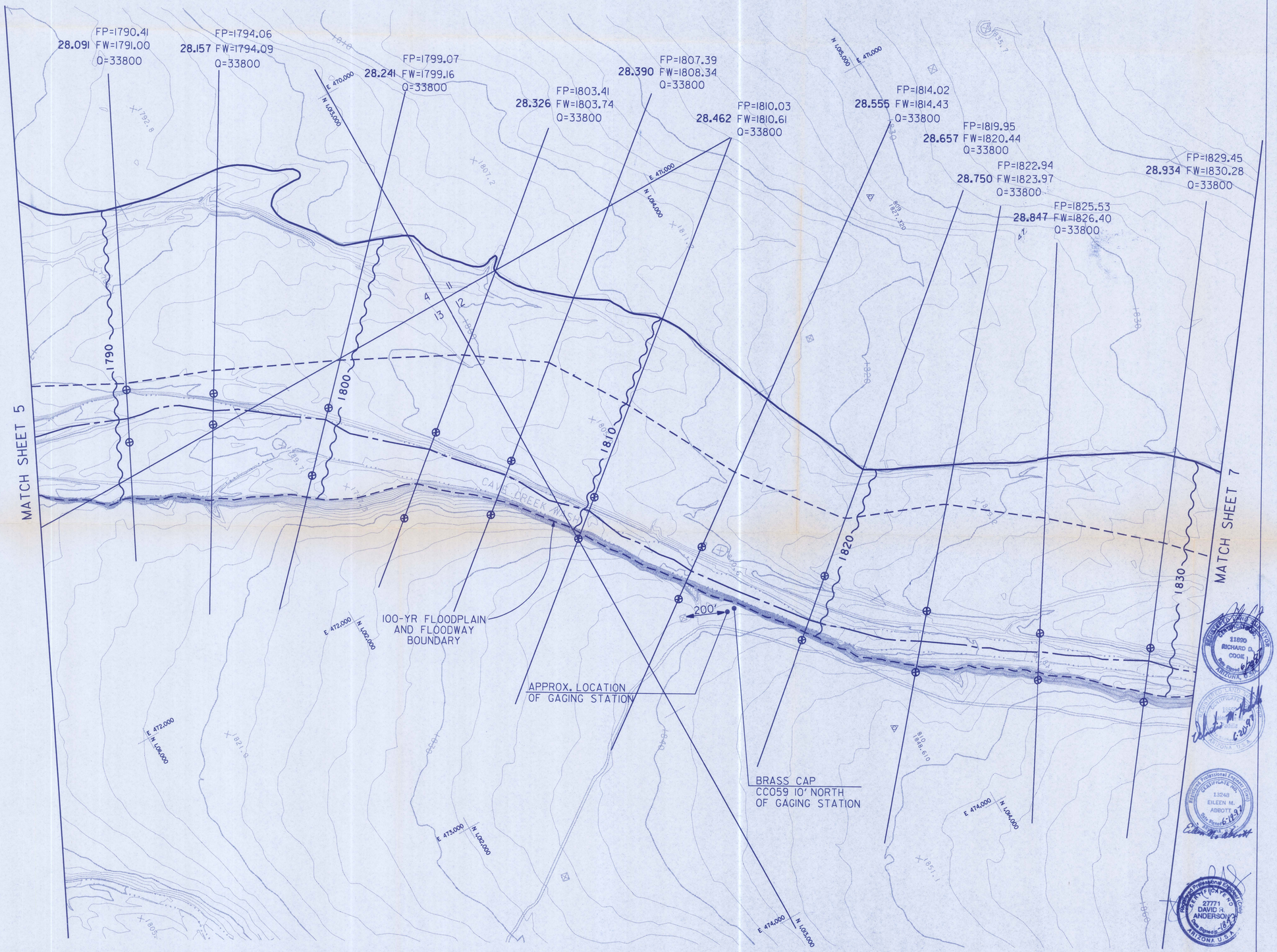
SHEET 5 OF 8

Date: 18-JUN-1997 Plotted by: Plotter Dgnspc:0:\jn08855\hec\sheet5.dgn

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF CAVE CREEK BELOW CAREFREE HIGHWAY

F.C.D. CONTRACT NO. 95-30



LEGEND

100-YR FLOODPLAIN BOUNDARY	
FLOODWAY BOUNDARY	
HYDRAULIC BASE LINE WITH RIVER MILE	MI2.0 — MI3.0
CROSS SECTION	5.519 — FP=100 Yr WSEL FW=Floodway WSEL Q =100 Yr Flow
HEC-2 BANK LOCATION	⊕
ELEVATION REFERENCE MARK	
BASE FLOOD ELEVATIONS	1221
ZONE DESIGNATIONS	ZONE AE
CORPORATE LIMITS	
PONDING LIMITS	
SECTION LINES	

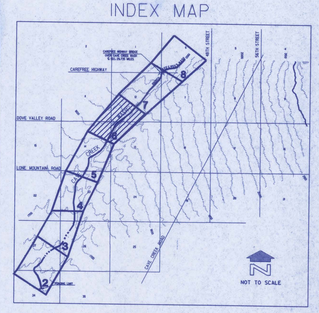
ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929

I.D. NUMBER	ELEVATION (FT.)	LOCATION E,N
CC059	1836.380	TOP OF BRASS CAP 10 FEET NORTH OF GAGING STATION

NOTES

INDEX MAP



200 0' 200 400

SCALE: 1" = 200'
CONTOUR INTERVAL = 2' FEET

AERIAL MAPPING COMPANY, INC.
SURVEYING AND PHOTOGRAMMETRY
FLIGHT DATE: 1/12/96

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1" = 200' HORIZONTAL SCALE AND 2' CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY
DATA PROVIDED BY (VALCO)

WILLDAN ASSOCIATES
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1717 N. NORTHERN AVE., SUITE 112, PHOENIX, ARIZONA 85021
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	BY	DATE
DESIGN		
DESIGN CHK.		
PLANS	KK	6/97
PLANS CHK.	DH	6/97
SUBMITTED BY:		DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

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APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

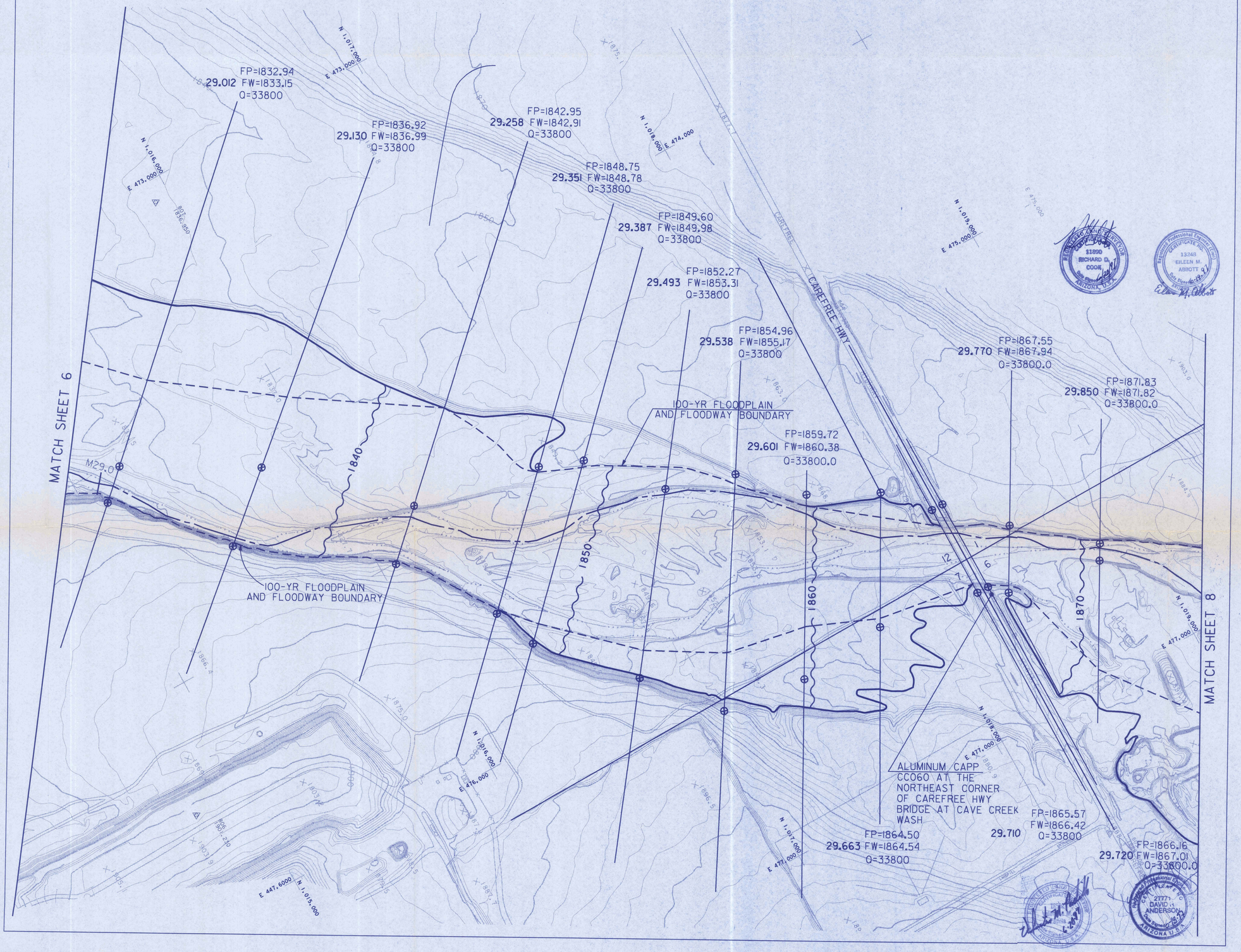
SHEET 6 OF 8

Date: 18-JUN-1997 Plotted by: Plotter Dgnspc: Q:\jn08855\hec\sheet6.dgn

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF CAVE CREEK BELOW CAREFREE HIGHWAY

F.C.D. CONTRACT NO. 95-30



LEGEND

100-YR FLOODPLAIN BOUNDARY	
FLOODWAY BOUNDARY	
HYDRAULIC BASE LINE WITH RIVER MILE	M12.0 M13.0
CROSS SECTION	FP=100 Yr WSEL 5.519 FW=Floodway WSEL Q =100 Yr Flow
HEC-2 BANK LOCATION	
ELEVATION REFERENCE MARK	
BASE FLOOD ELEVATIONS	1221
ZONE DESIGNATIONS	ZONE AE
CORPORATE LIMITS	
PONDING LIMITS	
SECTION LINES	

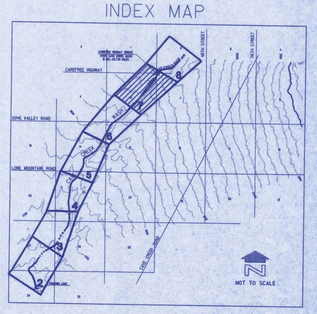
ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929

I.D. NUMBER	ELEVATION (FT)	LOCATION E,N
CC060	1878.994	TOP OF ALUMINUM CAP AT THE NORTHEAST CORNER OF CAREFREE HWY BRIDGE AT CAVE CREEK WASH

NOTES

INDEX MAP



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SCALE: 1" = 200'
CONTOUR INTERVAL = 2' FEET

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SURVEYING AND PHOTOGRAMMETRY
FLIGHT DATE: 1/12/96

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WILLDAN ASSOCIATES
ENGINEERS PLANNERS
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(602) 870-7600

	BY	DATE
DESIGN		
DESIGN CHK.		
PLANS	KK	6/97
PLANS CHK.	DH	6/97
SUBMITTED BY:		DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

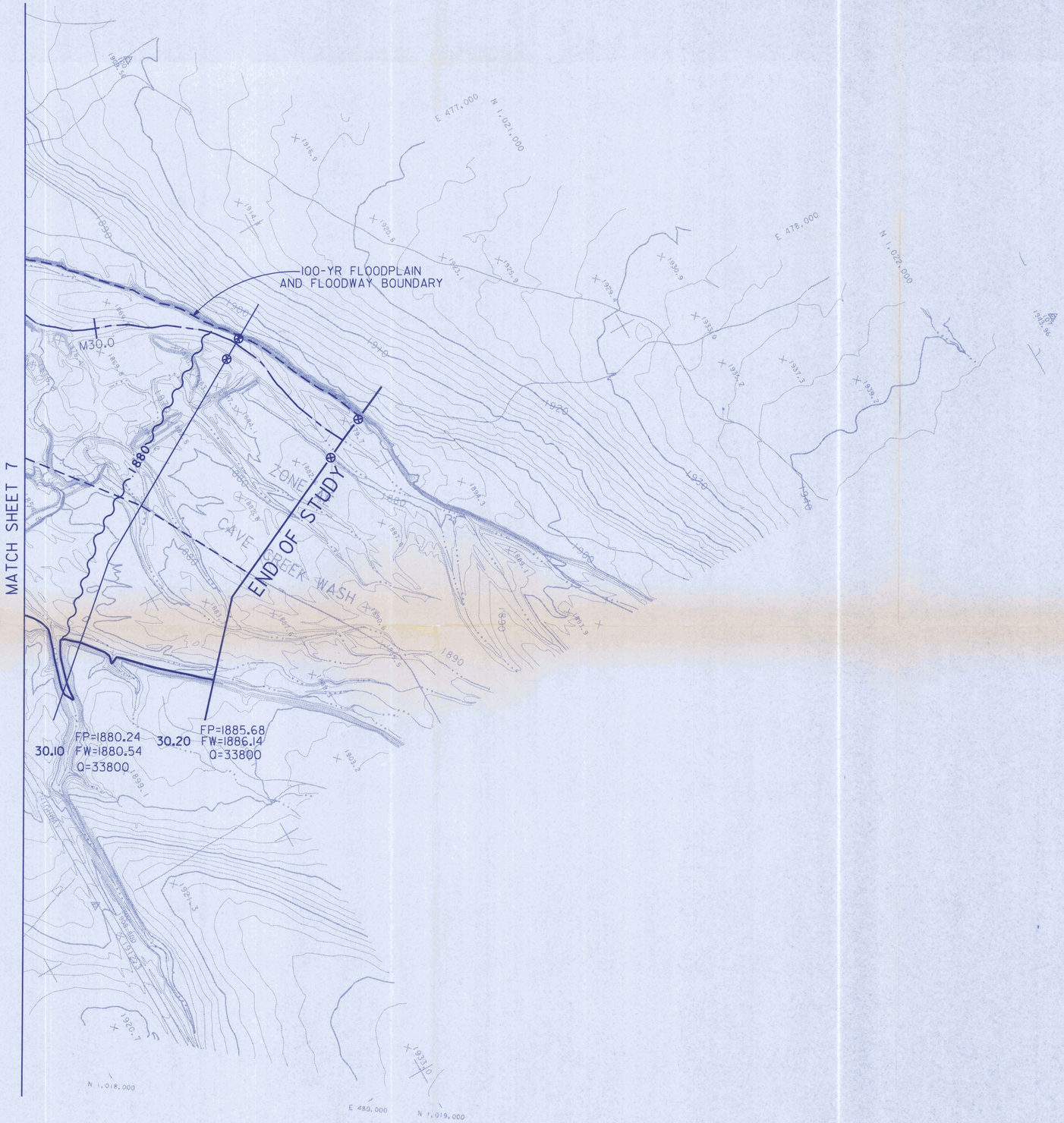
RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 7 OF 8

Date: 18-JUN-1997 Plotted by: Plotter Dgnspc:0:\jn08855\hec\sheet7.dgn



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOOD DELINEATION STUDY OF CAVE CREEK BELOW CAREFREE HIGHWAY

F.C.D. CONTRACT NO. 95-30

LEGEND

100-YR FLOODPLAIN BOUNDARY	
FLOODWAY BOUNDARY	
HYDRAULIC BASE LINE WITH RIVER MILE	M12.0 — M13.0
CROSS SECTION	5.519 FP=100 Yr WSEL FW=Floodway WSEL Q =100 Yr Flow
HEC-2 BANK LOCATION	
ELEVATION REFERENCE MARK	
BASE FLOOD ELEVATIONS	1221
ZONE DESIGNATIONS	ZONE AE
CORPORATE LIMITS	
PONDING LIMITS	
SECTION LINES	

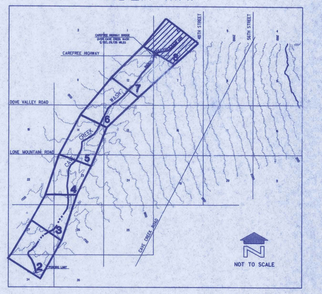
ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929

I.D. NUMBER	ELEVATION (FT)	LOCATION E,N
CC060	1878.994	TOP OF ALUMINUM CAP AT THE NORTEAST CORNER OF CAREFREE HWY BRIDGE AT CAVE CREEK WASH

NOTES

INDEX MAP



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CHIEF ENGINEER AND GENERAL MANAGER

SHEET 8 OF 8

AERIAL MAPPING COMPANY, INC.
SURVEYING AND PHOTOGRAMMETRY
FLIGHT DATE: 1/12/96

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Date: 18-JUN-1997 Plotted by: Plotter Dgnspc:Q:\jn08855\hec\sheet8.dgn