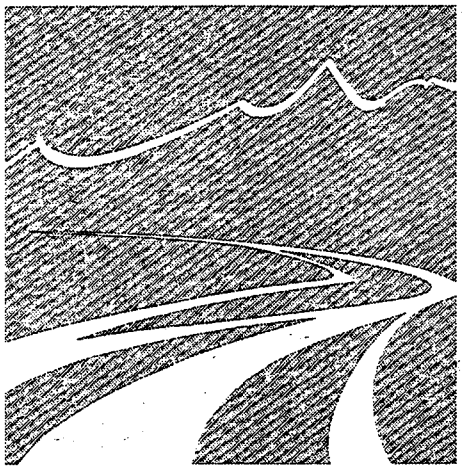
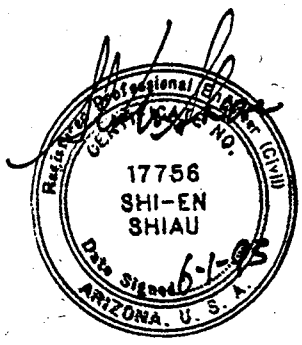
CITY OF SCOTTSDALE
DESERT GREENBELT PROJECT

Reata Pass / Beardsley Wash
CLOMR

by: The Greiner Team





May 1995

VOLUME VII

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Phoenix, AZ 85009

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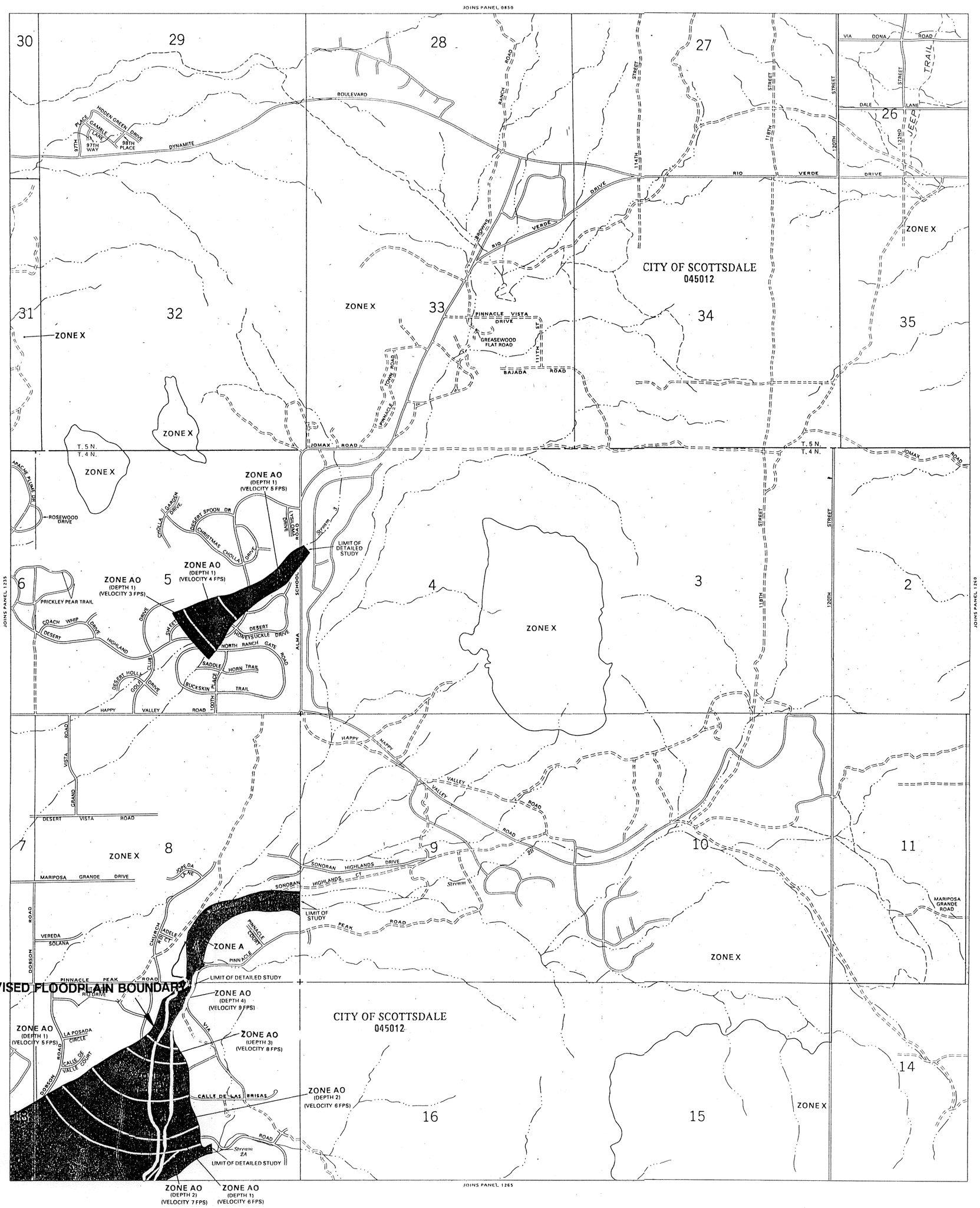
Phoenix, AZ 85009



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A — No base flood elevations determined.
- ZONE AE — Base flood elevations determined.
- ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99 — To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V — Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE — Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X — Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X — Areas determined to be outside 500-year flood plain.
- ZONE D — Areas in which flood hazards are undetermined.

Flood Boundary

Floodway Boundary

Zone D Boundary

Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

513 — Base Flood Elevation Line; Elevation in Feet*

D — D — Cross Section Line

(EL 987) — Base Flood Elevation in Feet Where Uniform Within Zone*

$RM7_X$ — Elevation Reference Mark

*Referenced to the National Geodetic Vertical Datum of 1929

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Areas of special flood hazard (100-year flood) include Zones A, A1-30, AE, AH, AO, A99, V, V1-30 AND VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

Coastal base flood elevations apply only landward of the shoreline.

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of the map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels see separately-printed Map Index.

MAP REPOSITORY

Refer to Repository Listing on Index Map

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:

APRIL 15, 1988

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Map revised DECEMBER 3, 1993 to change base flood elevations, to add base flood elevations, to add special flood hazard areas, to change special flood hazard areas, to change zone designations, to update map format, to add roads and road names, to reflect updated topographic information, and to incorporate previously issued letters of map revision.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET

1000 0 1000

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 4 NORTH, RANGE 5 EAST AND TOWNSHIP 5 NORTH, RANGE 5 EAST

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

MARICOPA COUNTY, ARIZONA AND INCORPORATED AREAS

PANEL 1255 OF 4350

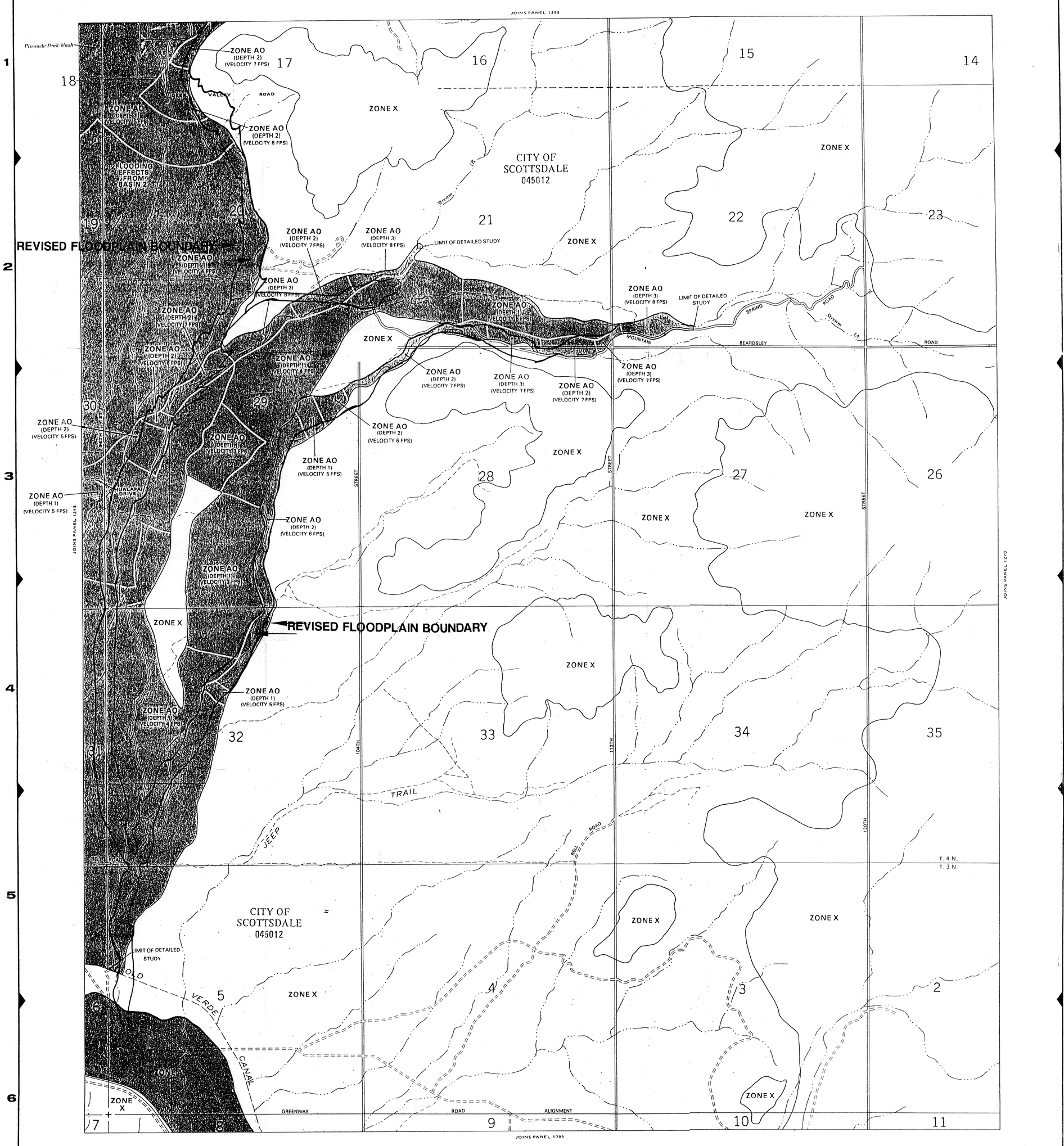
CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SCOTTSDALE, CITY OF	045012	1255	E

MAP NUMBER
04013C1255 E

MAP REVISED:
DECEMBER 3, 1993

Federal Emergency Management Agency



NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 3 NORTH, RANGE 5 EAST AND TOWNSHIP 4 NORTH, RANGE 5 EAST

LEGEND

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MAP REPOSITORY

Refer to Repository Listing on Index Map

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:

APRIL 15, 1988

EFFECTIVE DATE (S) OF REVISION (S) TO THIS PANEL:

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APPROXIMATE SCALE IN FEET

1000 0 1000

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

MARICOPA COUNTY, ARIZONA AND INCORPORATED AREAS

PANEL 1265 OF 4350

CONTAINS:

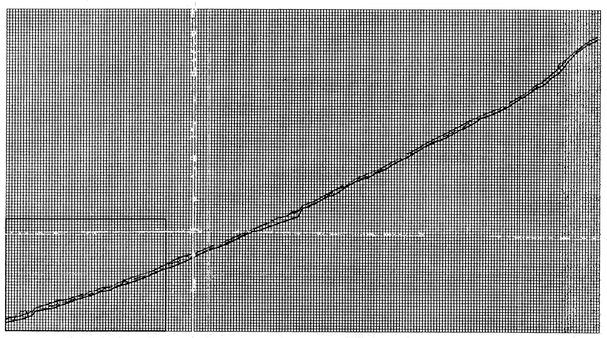
COMMUNITY	NUMBER	PANEL	SUFFIX
SCOTTSDALE, CITY OF	045012	1265	E

MAP NUMBER
04013C1265 E

MAP REVISED:
DECEMBER 3, 1993

Federal Emergency Management Agency

06/29/95 03:57PM CRTFNOI



LEGEND

- HEC2 PROFILE RESULT
- HEC6 PROFILE RESULT
- INITIAL THALWEG
- 100-YEAR EVENT MINIMUM THALWEG
- EXISTING GROUND
- TOP OF LEVEE
- STA: 33+00 XS 10 — SAMPLE SECTION LOCATION.

1690 1680 1670 1660 1650 1640 1630 1620 1610 1600 1590 1580 1570 1560 1550 1540 1530 1520 1510 1500

10+00 15+00 20+00 25+00 30+00 35+00 40+00 45+00 50+00 55+00 60+00

STA: 9+13.85, XS 1
STA: 12+16, XS 1.1
STA: 15+71, XS 2
STA: 17+33, XS 3
STA: 18+35, XS 4
STA: 20+60, XS 5
STA: 23+74, XS 6
STA: 28+69, XS 8
STA: 28+97, XS 9
STA: 30+76, XS 11
STA: 33+68, XS 12
STA: 34+70, XS 13
STA: 37+65, XS 14
STA: 39+20, XS 15
STA: 41+89, XS 16.5
STA: 44+31, XS 17
STA: 44+41, XS 17.2
STA: 44+67, XS 18
STA: 45+92, XS 19
BELL ROAD
STA: 48+43, XS 20
STA: 52+16, XS 21
STA: 53+65, XS 22
STA: 56+13, XS 23
STA: 58+75, XS 24
STA: 60+58, XS 25
STA: 62+34, XS 26

P:\CADD\CLOMR\JOBTHRD.DWG

DESERT GREENBELT

REVISIONS	BY	AUTH.

DATE

PROJ. NO. E029102
JOB NO. ____
DESIGN W.C.L.
DRAWN M.T.C.
CHECKED S.E.S.
SCALE AS NOTED

CITY OF SCOTTSDALE ARIZONA

Greiner
Greiner, Inc.
Phoenix, AZ
Engineers, Architects and Planners

PROJECT NAME
FEMA CLOMR REPORT

DRAWING TITLE
REATA PASS WASH PROFILE

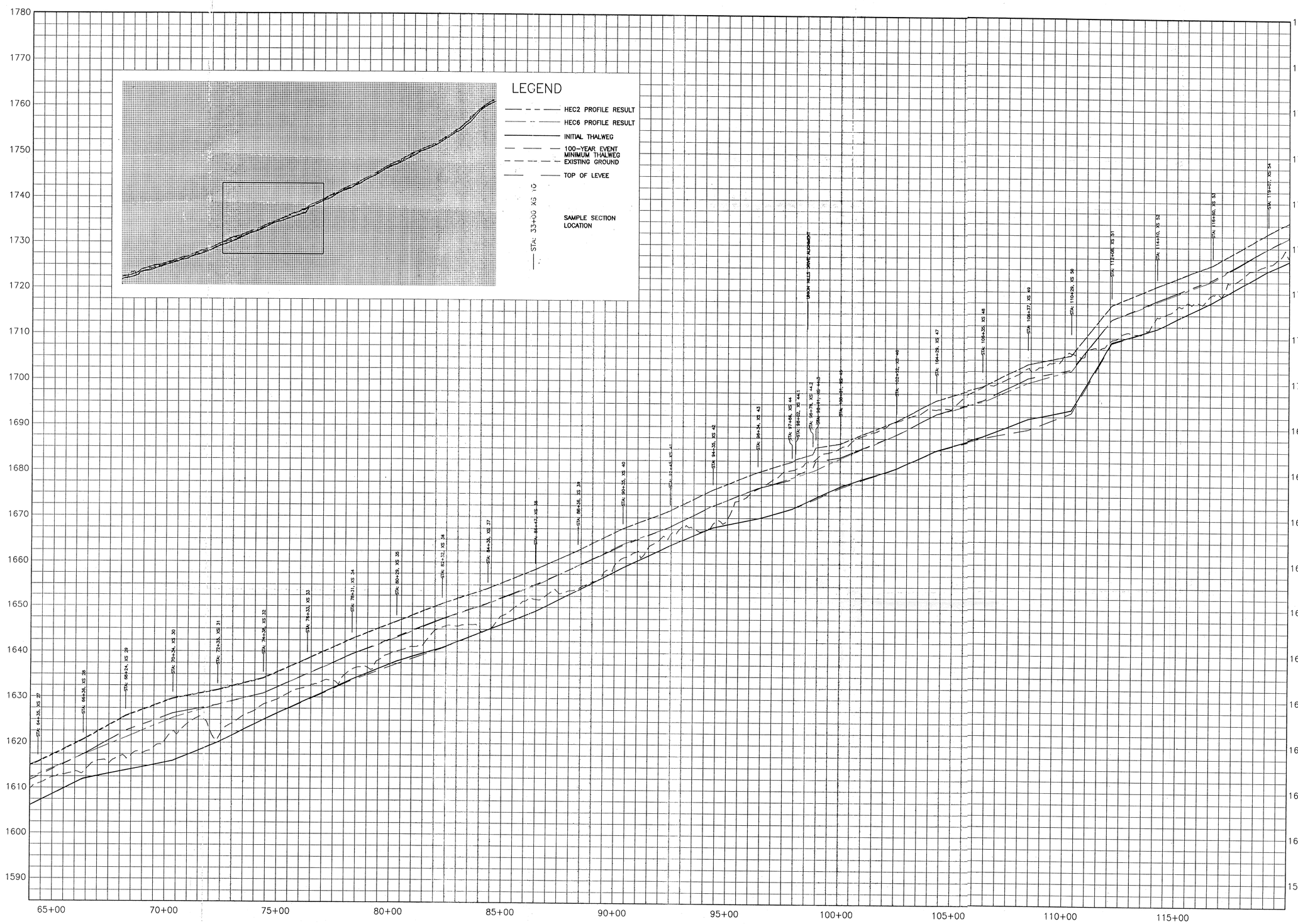
DRAWING NO.
CPR1 of CPR4

The Desert Greenbelt

06/29/95 03:44PM CRTPR02

LEGEND

- HEC2 PROFILE RESULT
- HEC6 PROFILE RESULT
- INITIAL THALWEG
- 100-YEAR EVENT MINIMUM THALWEG
- EXISTING GROUND
- TOP OF LEVEE
- STA: 33+00 XS 16 — SAMPLE SECTION LOCATION



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DESERT GREENBELT

REVISIONS	BY	AUTH.

DATE

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JOB NO. ____
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DRAWN M.T.O.
CHECKED S.E.S.

SCALE: AS NOTED

CITY OF SCOTTSDALE ARIZONA

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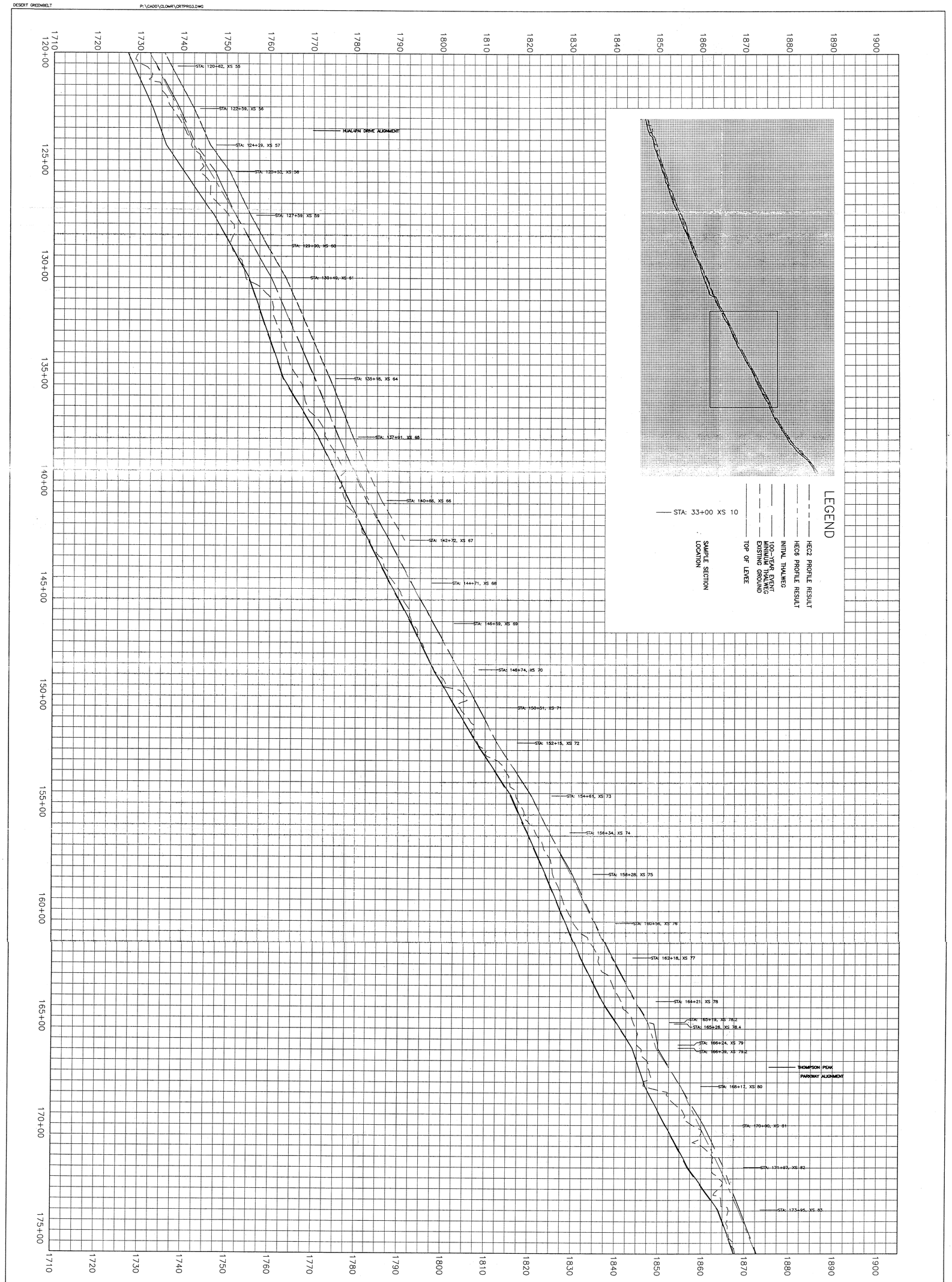
PROJECT NAME
FEMA CLOMR REPORT

DRAWING TITLE
REATA PASS WASH PROFILE

DRAWING NO.
CPR2 of CPR4

The Desert Greenbelt

DESERT GREENBELT P:\CADD\CLOMR\CRTPRO3.DWG



The Desert Greenbelt
SCOTTSDALE, ARIZONA

DRAWING NO. CPR3 of CPR4

PROJECT NAME

FEMA CLOMR REPORT

DRAWING TITLE

REATA PASS WASH PROFILE

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CITY OF SCOTTSDALE ARIZONA

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JOB NO.	
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DATE	REVISIONS	BY	AUTH.

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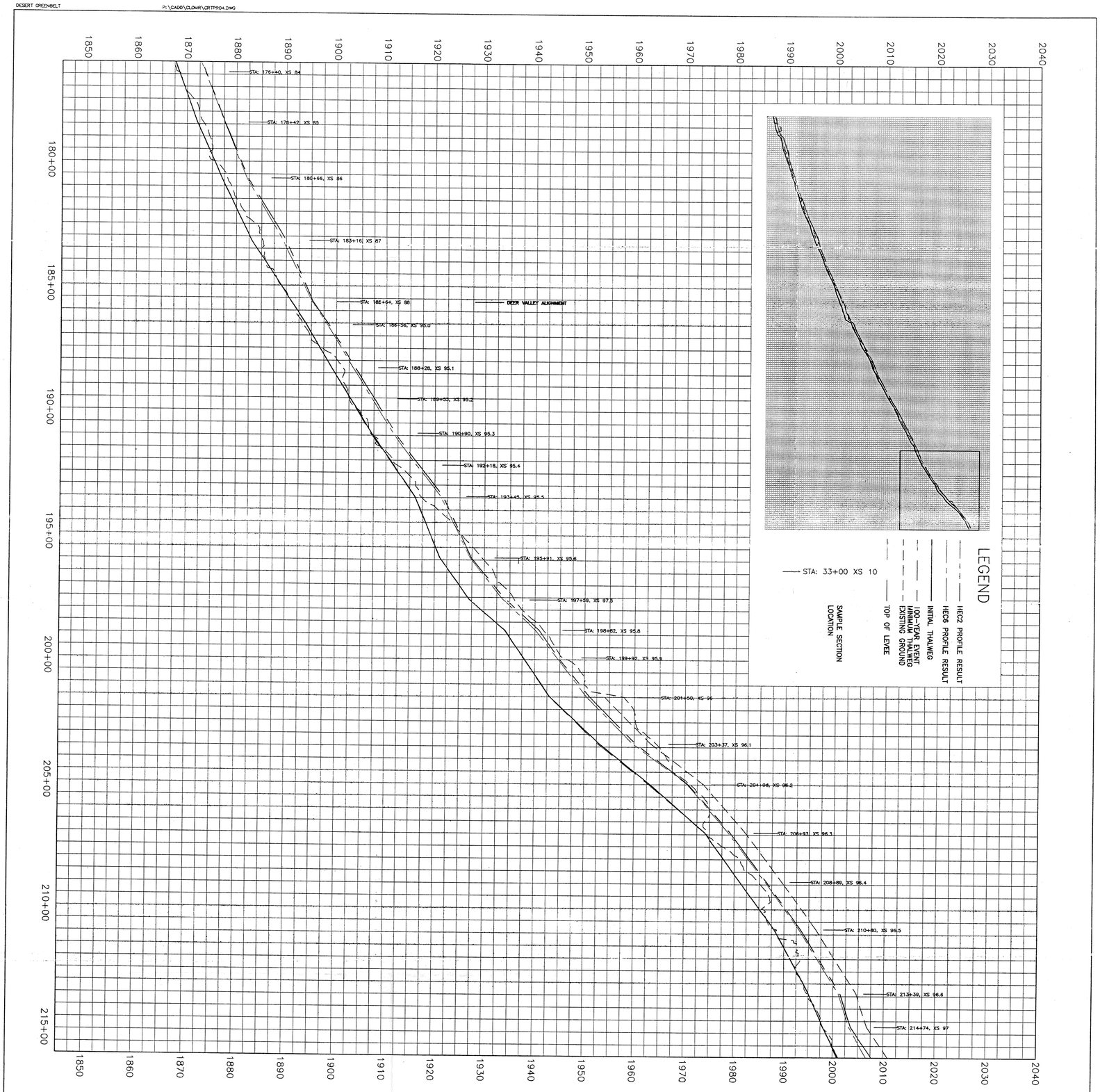

The Desert Greenbelt SCOTTSDALE ARIZONA

DRAWING NO. CPR4 of CPR4

PROJECT NAME

FEMA CLOMR REPORT

DRAWING TITLE

REATA PASS WASH PROFILE

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JOB NO.	
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SCALE:	AS NOTED

DATE	REVISIONS	BY	AUTH.

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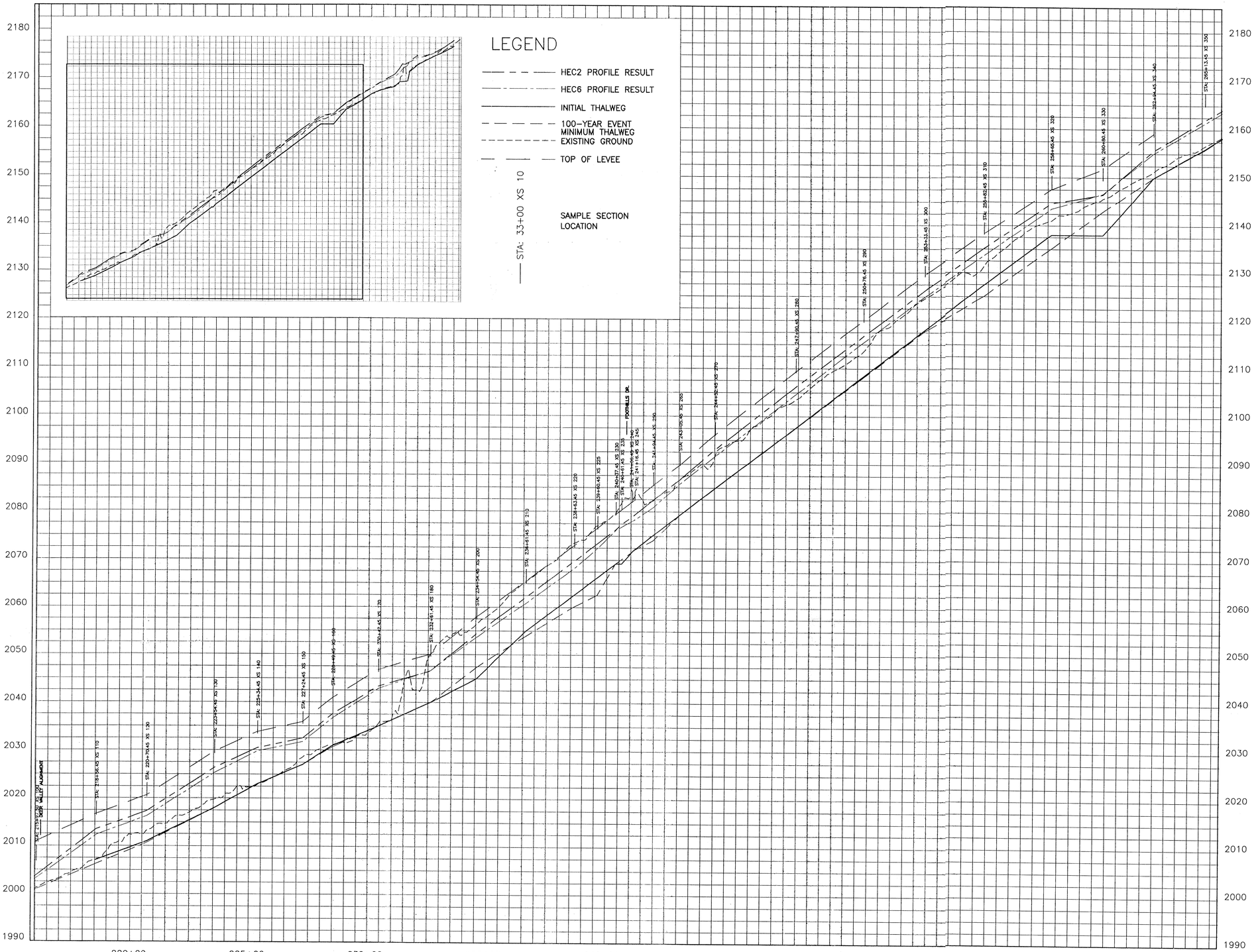

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JOB NO.
DESIGN W.C.L.
DRAWN M.T.C.
CHECKED S.E.S.
DATE
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Phoenix, AZ
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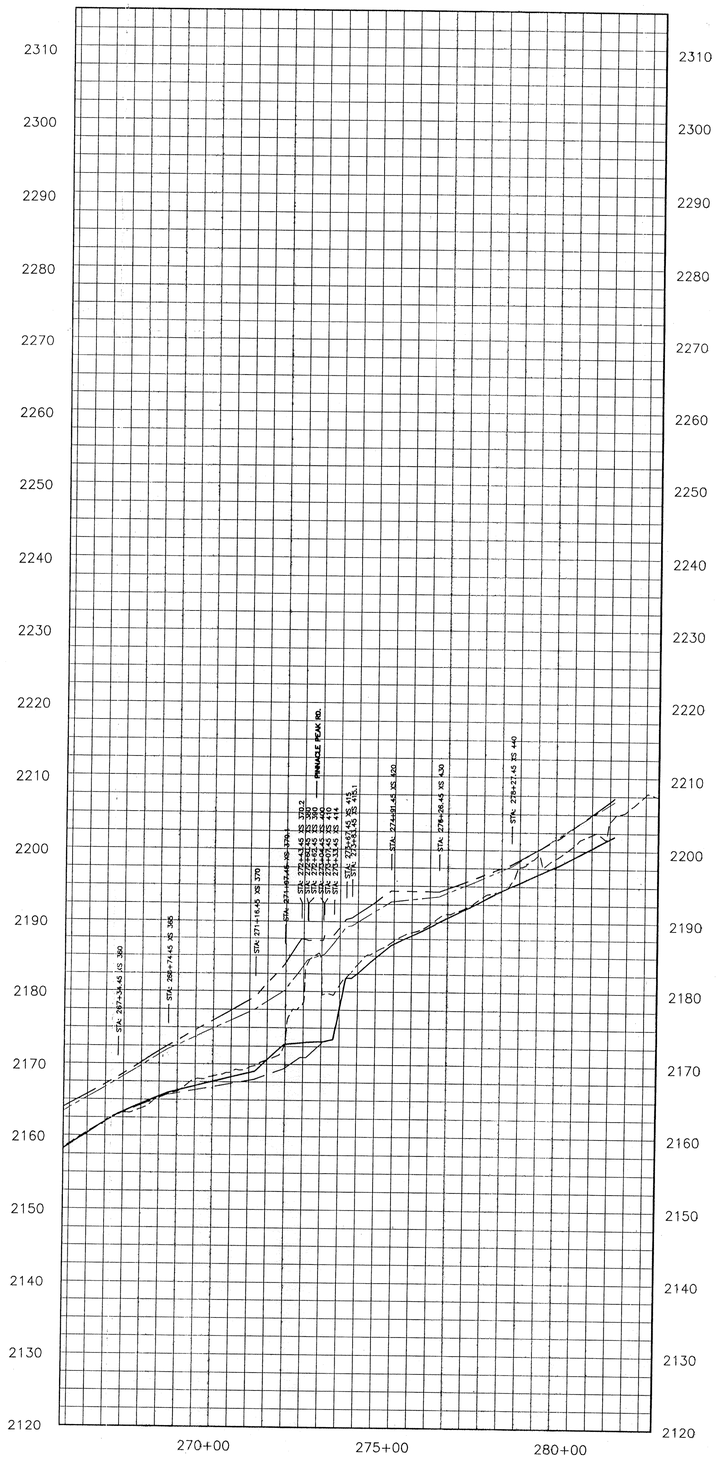
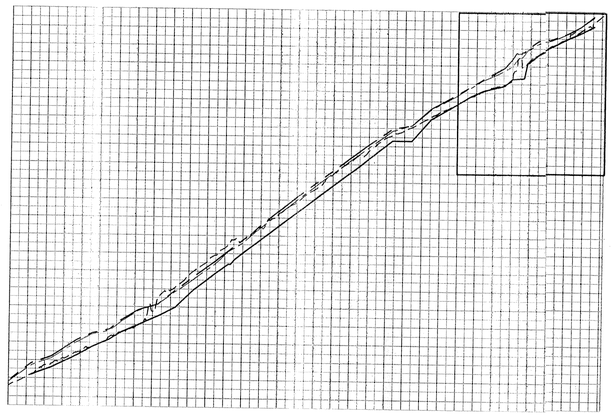
PROJECT NAME
FEMA CLOMR REPORT

DRAWING TITLE
UPPER REATA PASS WASH PROFILE

DRAWING NO.
CUR1 of CUR2

The Desert Greenbelt





LEGEND

- HEC2 PROFILE RESULT
- HEC6 PROFILE RESULT
- INITIAL THALWEG
- 100-YEAR EVENT MINIMUM THALWEG
- EXISTING GROUND
- TOP OF LEVEE
- STA: 33+00 XS 10 — SAMPLE SECTION LOCATION

DATE	REVISIONS	BY	AUTH.

PROJ. NO. E029102
JOB NO.
DESIGN W.C.L.
DRAWN M.T.C.
CHECKED S.E.S.
SCALE: AS NOTED

CITY OF SCOTTSDALE ARIZONA

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Phoenix, AZ
Engineers, Architects and Planners

PROJECT NAME
FEMA CLOMR REPORT

DRAWING TITLE
UPPER REATA PASS WASH PROFILE

DRAWING NO.
CUR2 of CUR2

The Desert Greenbelt
SCOTTSDALE, ARIZONA

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DESERT GREENBELT

06/29/95 04:02PM CUBPRO1

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DESERT GREENBELT

REVISIONS	BY	AUTH.

DATE

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JOB NO.
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CITY OF SCOTTSDALE ARIZONA

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PROJECT NAME
FEMA CLOMR REPORT

DRAWING TITLE
NORTH BEARDSLEY WASH PROFILE

DRAWING NO.
CNB1 of CNB1

The Desert Greenbelt
SCOTTSDALE ARIZONA

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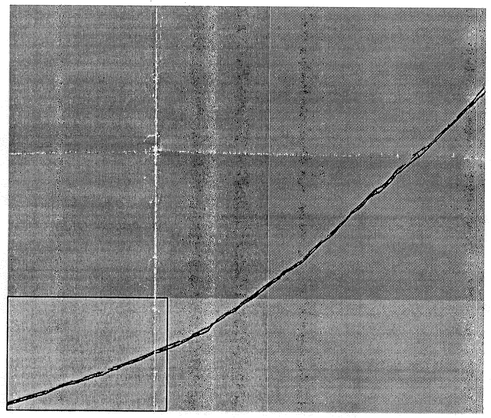

LEGEND

- HEC2 PROFILE RESULT
- HEC6 PROFILE RESULT
- INITIAL THALWEG
- 100-YEAR EVENT MINIMUM THALWEG EXISTING GROUND
- TOP OF LEVEE
- STA. 33+00 XS 10 — SAMPLE SECTION LOCATION

1740 1730 1720 1710 1700 1690 1680 1670 1660 1650 1640 1630 1620 1610 1600 1590 1580 1570 1560 1550

100+00 105+00 110+00 115+00 120+00 125+00 130+00 135+00 140+00 145+00 150+00 155+00

BELL ROAD

STA. 113+43, XS 2
STA. 115+61, XS 3
STA. 117+39, XS 4
STA. 119+27, XS 5
STA. 120+72, XS 6
STA. 122+78, XS 7
STA. 124+62, XS 8
STA. 126+19, XS 9
STA. 128+34, XS 9.1
STA. 130+22, XS 9.2
STA. 132+48, XS 9.3
STA. 134+72, XS 9.4
STA. 136+41, XS 9.5
STA. 138+57, XS 12
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STA. 142+57, XS 15
STA. 144+17, XS 16
STA. 146+79, XS 17
STA. 148+58, XS 18
STA. 151+11, XS 19
STA. 153+59, XS 20

REVISIONS	BY	AUTH.
DATE		

PROJ. NO. E029102
JOB NO.
DESIGN W.C.L.
DRAWN M.T.C.
CHECKED S.E.S.
SCALE AS NOTED

CITY OF SCOTTSDALE ARIZONA

Greiner
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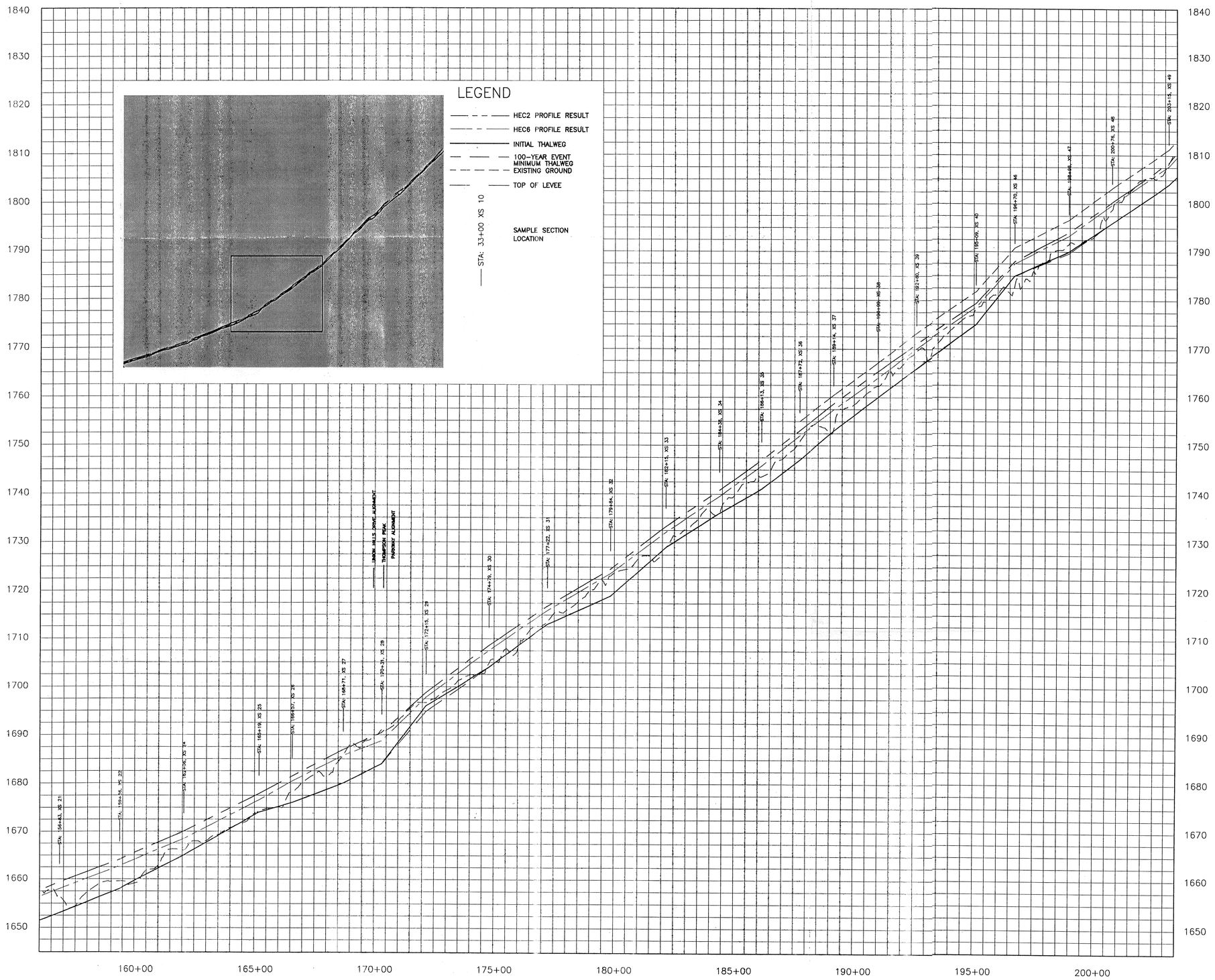
Phoenix, AZ
Engineers, Architects and Planners

PROJECT NAME
FEMA CLOMR REPORT

DRAWING TITLE
SOUTH BEARDSLEY WASH PROFILE

DRAWING NO.
CSB1 of CSB4

The Desert Greenbelt



REVISIONS	BY	AUTH.
DATE		

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FEMA CLOMR REPORT

DRAWING TITLE
SOUTH BEARDSLEY WASH PROFILE

DRAWING NO.
CSB2 of CSB4

The Desert Greenbelt
SCOTTSDALE, ARIZONA

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DESERT GREENBELT
06/29/95 04:07PM CLBPR02

DESERT GREENBELT P:\CADD\CLOMR\CLBPRO3.DWG

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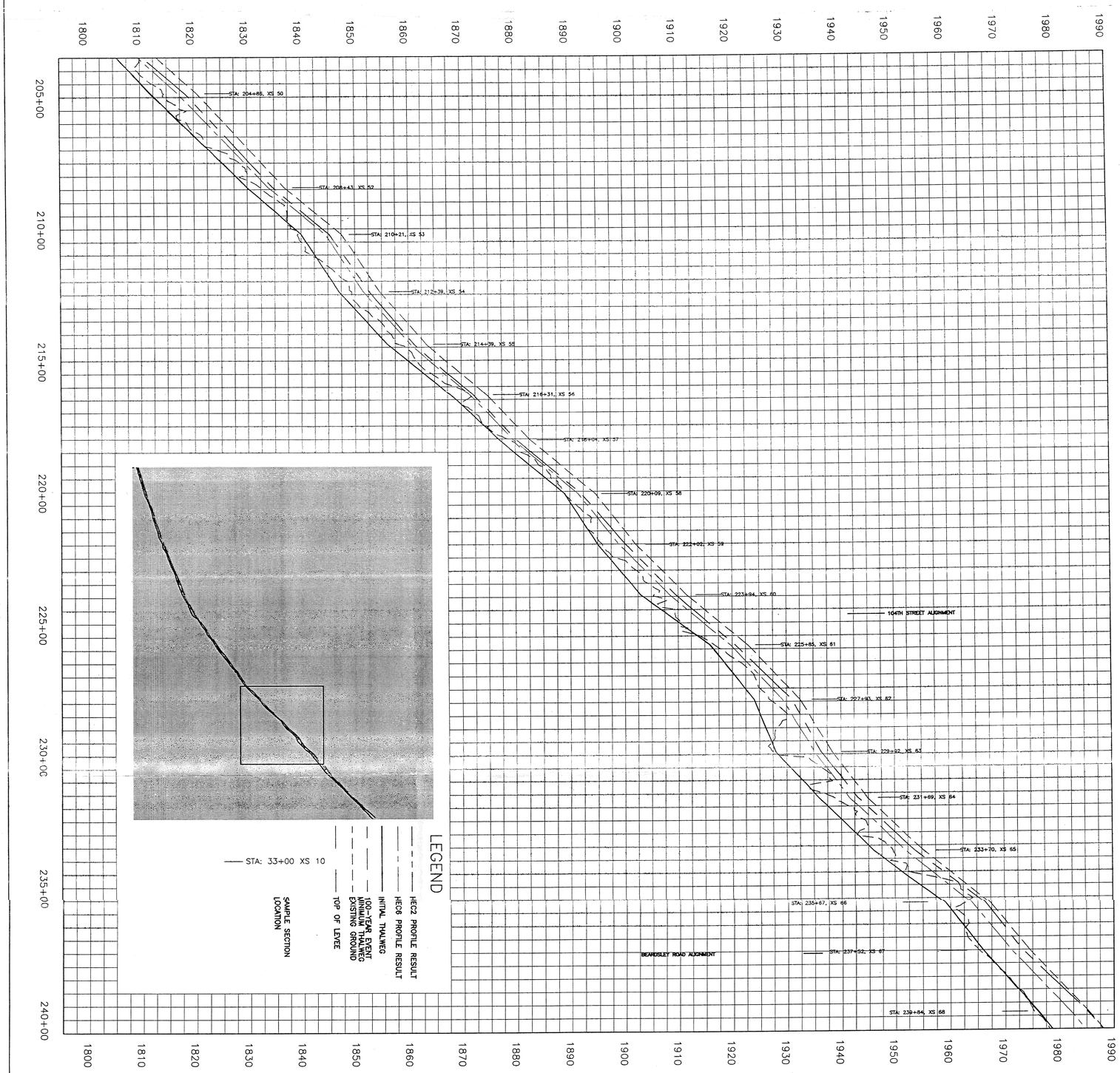

The Desert Greenbelt
SCOTTSDALE, ARIZONA

DRAWING NO. CSB3 of CSB4

PROJECT NAME
FEMA CLOMR REPORT

DRAWING TITLE
SOUTH BEARDSLEY WASH PROFILE

Greiner
Greiner, Inc.
Phoenix, AZ
Engineers, Architects and Planners

CITY OF SCOTTSDALE ARIZONA

PROJ. NO. E029102
JOB NO.
DESIGN W.C.L.
DRAWN M.T.C.
CHECKED S.E.S.
SCALE: AS NOTED

DATE	REVISIONS	BY	AUTH.

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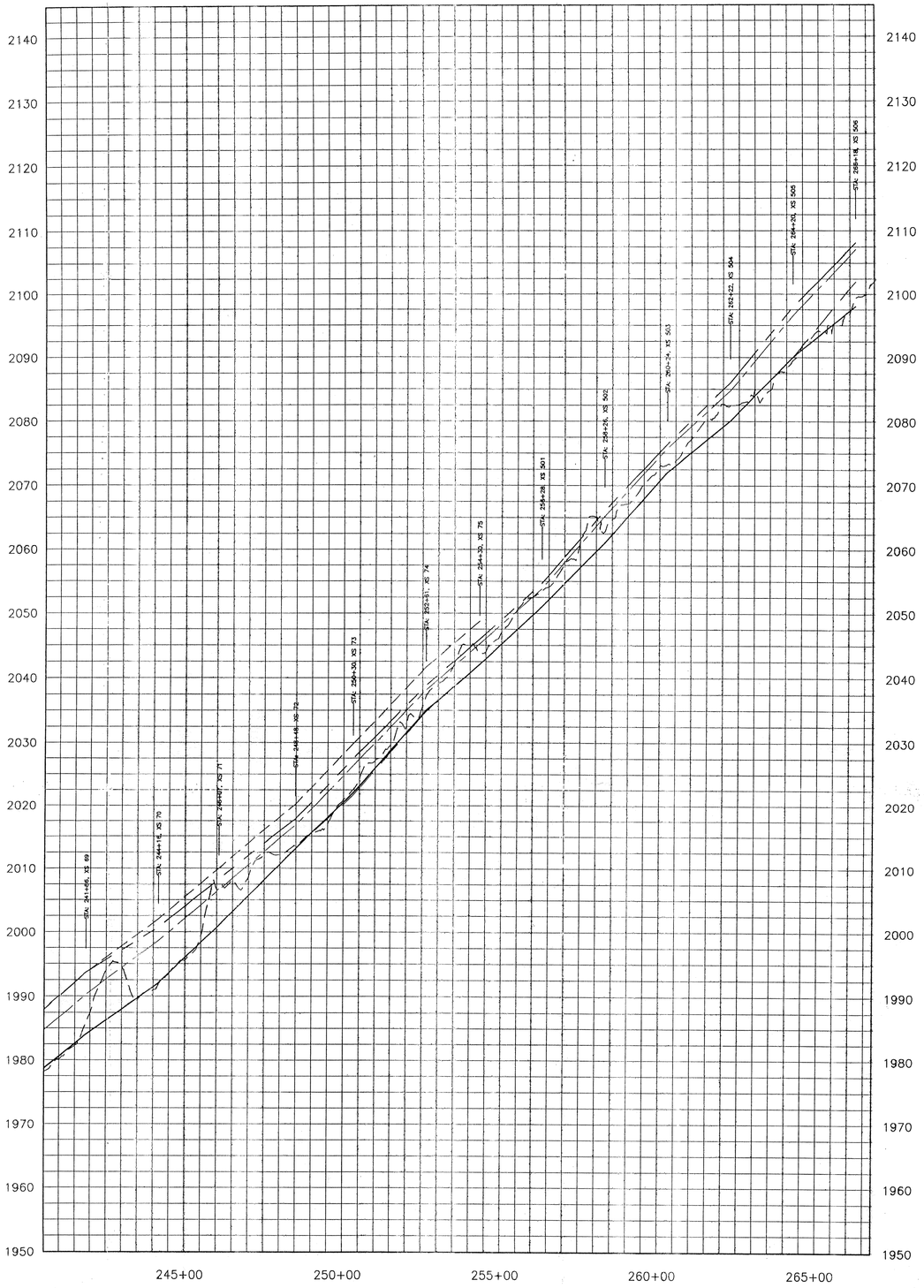

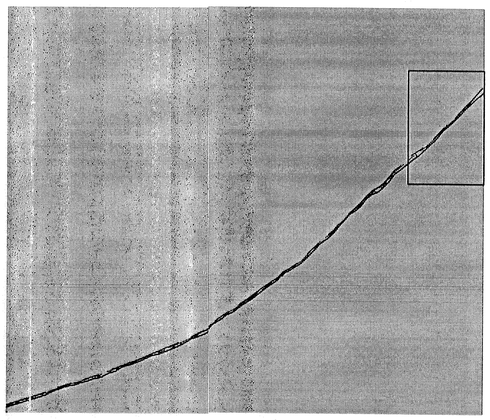

LEGEND

- HEC2 PROFILE RESULT
- HEC6 PROFILE RESULT
- INITIAL THALWEG
- 100-YEAR EVENT MINIMUM THALWEG
- EXISTING GROUND
- TOP OF LEVEE

STA: 33+00 XS 10

SAMPLE SECTION LOCATION

REVISIONS	BY	AUTH.

DATE

PROJ. NO. E029102
JOB NO. ____
DESIGN W.C.L.
DRAWN M.T.C.
CHECKED S.E.S.
SCALE: AS NOTED

CITY OF SCOTTSDALE ARIZONA

Greiner
Greiner, Inc.
Phoenix, AZ
Engineers, Architects and Planners

PROJECT NAME
FEMA CLOMR REPORT

DRAWING TITLE
SOUTH BEARDSLEY WASH PROFILE

DRAWING NO.
CSB4 of CSB4

The Desert Greenbelt
SCOTTSDALE, ARIZONA

DESERT GREENBELT
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Greiner

Job D&B - Reata Project No. E10029101 Sheet 1 of 1

Description Local Scours Calculations Computed By D.Y. Date 5/19/95

HEC-18 Checked By WCL Date 5/20/95

(1) Pier Scour (at Cross-Section 17)

$$\frac{Y_s}{Y_1} = 2.0\, K_1\, K_2\, K_3 \left(\frac{a}{Y_1}\right)^{0.65} F_r^{0.43}$$

$$= 2.0 \times 1.0 \times 1.0 \times 1.1 \times \left(\frac{3}{11}\right)^{0.65} \left[\frac{16.73}{(32.2 \times 11)^{1/2}}\right]^{0.43}$$

$$= 0.9$$

$$Y_s = Y_1 \times 0.9 = 11 \times 0.9 = \underline{\underline{9.9 \text{ (feet)}}} \#$$

(2) Abutment Scour (at Cross-Section 67)

$$\frac{Y_s}{Y_a} = \left[2.27\, K_1\, K_2 \left(\frac{a'}{Y_a}\right)^{0.43} F_r^{0.61}\right] + 1$$

$$= \left\{2.27 \times 0.55 \times 1.0 \times \left(\frac{5}{5}\right)^{0.43} \left[\frac{14.16}{(32.2 \times 5)^{1/2}}\right]^{0.61}\right\} + 1$$

$$= 2.3$$

$$Y_s = 2.3\, Y_a = 2.3 \times 5 = \underline{\underline{11.5 \text{ (feet)}}} \#$$