FINAL WITHOUT PROJECT ANALYSIS REPORT – VOLUME 3

VA SHLY' AY AKIMEL HYDRAULIC & SEDIMENTATION ANALYSIS

Salt River Pima-Maricopa Indian Community adjacent to the City of Mesa, Maricopa County, Arizona

September 20, 2002

Prepared For:

LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS

Prepared By:

Dennis L. Richards, P.E.
Selena M. Forman, Ph.D., P.E.
Iwan M. Thomas

WEST CONSULTANTS, INC.

2151 East Broadway Road
Suite 116
Tempe, AZ 85282

11848 Bernardo Plaza Court
Suite 140-B
San Diego, CA 92128

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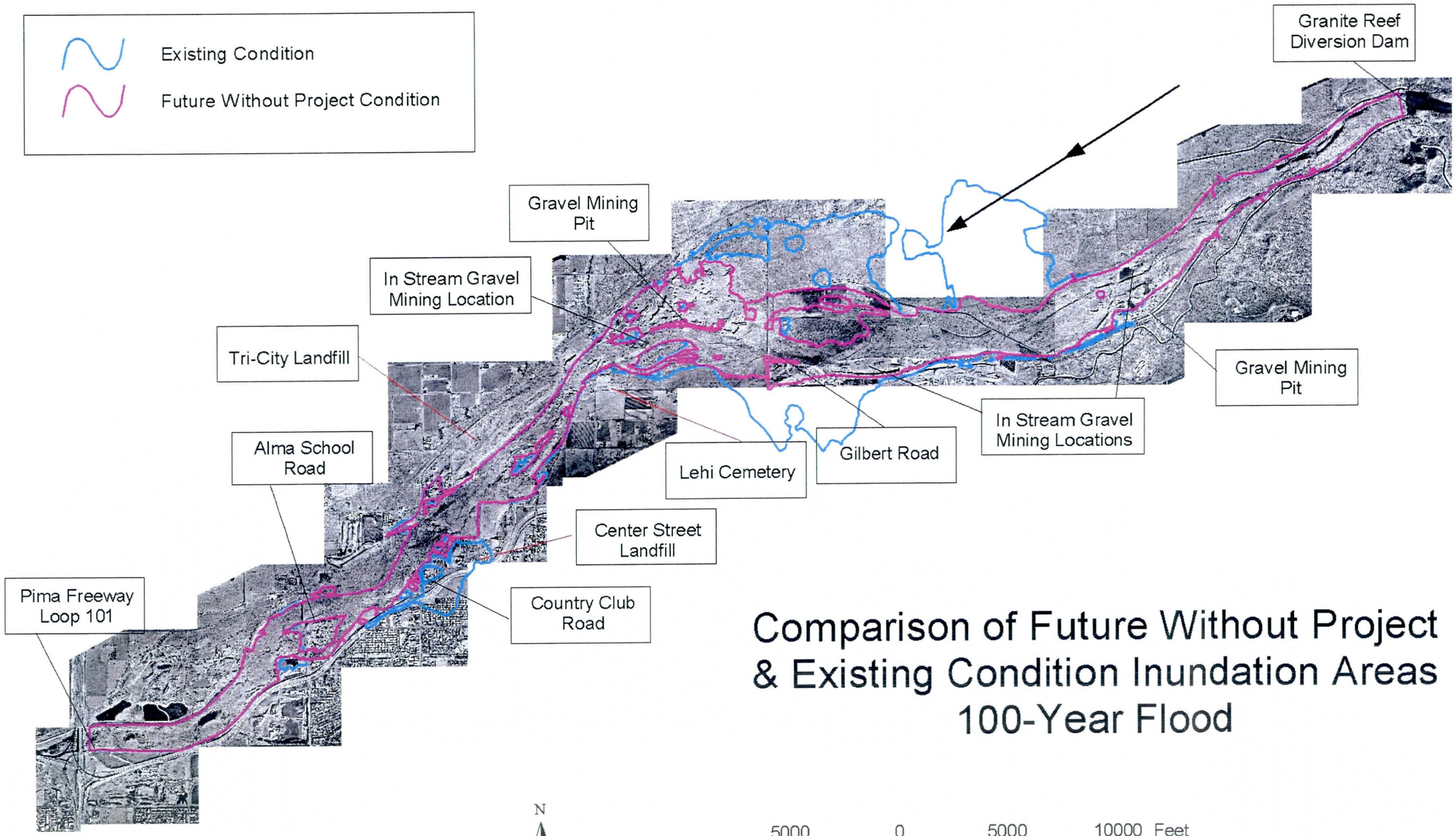
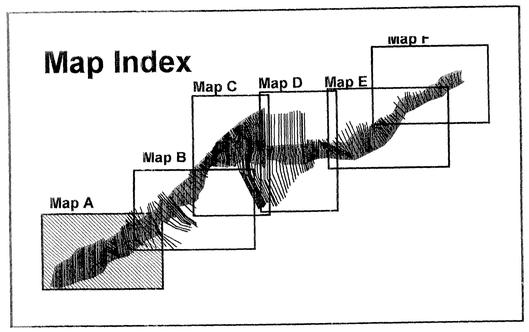
APPENDIX 14

DETAILED MAPS FOR THE 100-YEAR INUNDATION AREAS



Comparison of Future Without Project & Existing Condition Inundation Areas 100-Year Flood



Country Club Road

Alma School Road

Matchline for Map B

Va Shly' Downstream Reach

0.00 0.11 0.23 0.36 0.51 0.65 0.78 0.89 1.00 1.12 1.22 1.30 1.39 1.52 1.65 1.76 1.80 1.86 1.95 2.02 2.04 2.07 2.12 2.13 2.21 2.29 2.33 2.38 2.40 2.41 2.42 2.47 2.53 2.59 2.65 2.71 2.78 2.87 2.98 3.10

Legend

- HEC-RAS Cross-sections
- Existing Condition Inundation Area
- Future Without Project Inundation Area (After 50 Years)

Scale: 1 Inch = 500 Feet

500 0 500 1000 Feet

Contour Interval: 2 Feet

Date of Photography: December 28, 2001
Vertical Datum: NGVD 1929

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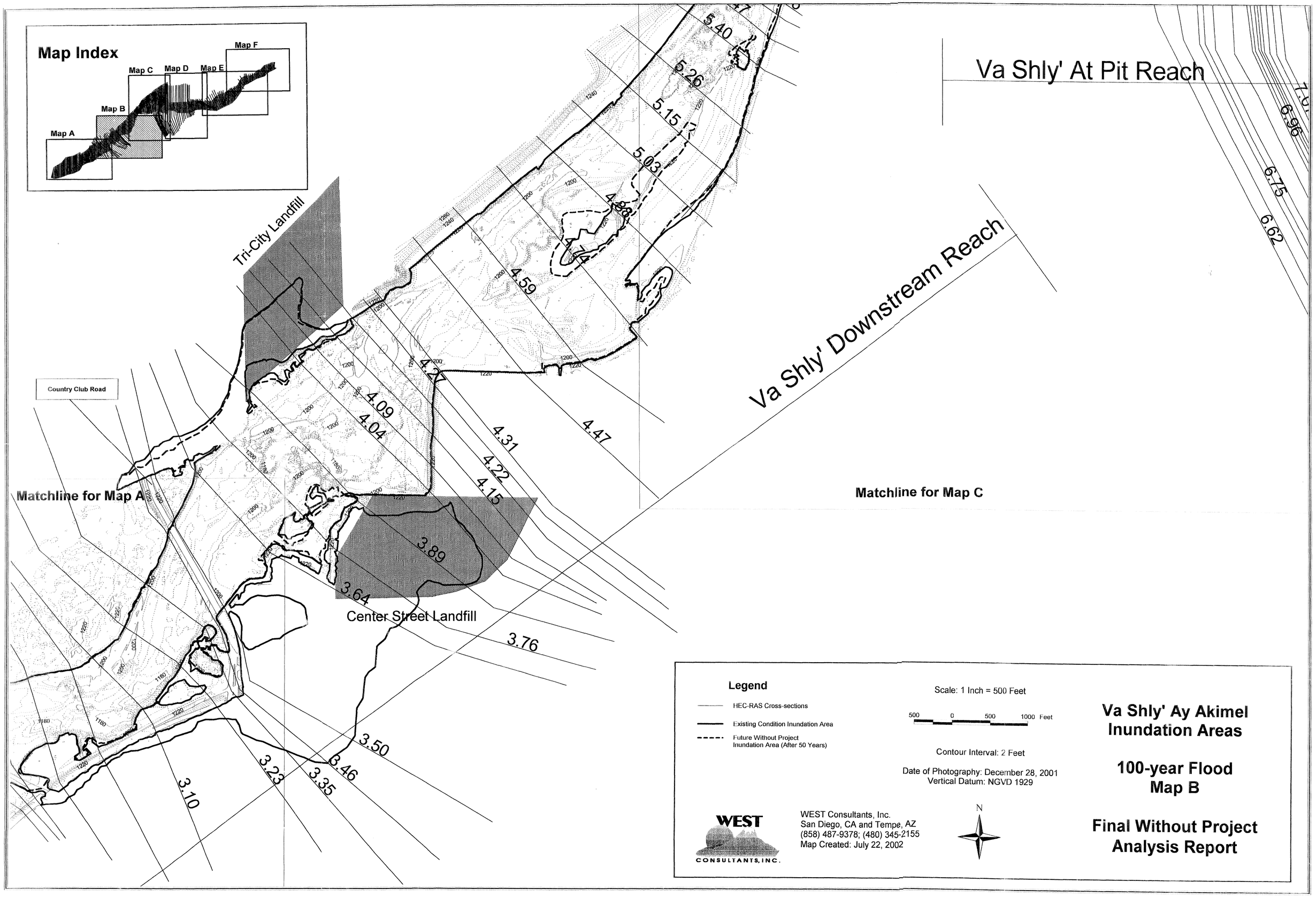
N

Va Shly' Ay Akimel Inundation Areas

100-year Flood Map A

Final Without Project Analysis Report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Matchline for Map A
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5.26
5.15
5.03
4.88
4.74
4.59
4.47
4.31
4.22
4.15
4.09
4.04
3.89
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3.46
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3.23
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6.96
6.75
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Legend
HEC-RAS Cross-sections
Existing Condition Inundation Area
Future Without Project Inundation Area (After 50 Years)
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500 0 500 1000 Feet
Contour Interval: 2 Feet
Date of Photography: December 28, 2001
Vertical Datum: NGVD 1929
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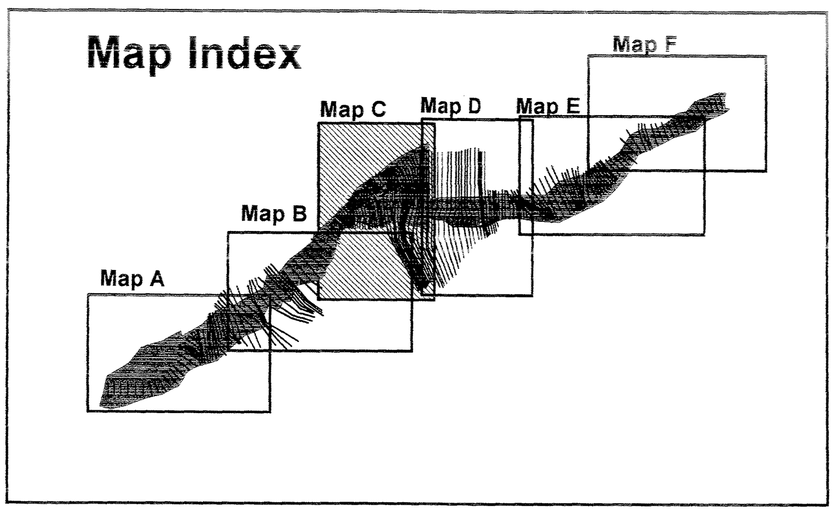
Va Shly' Ay Akimel Inundation Areas
100-year Flood
Map B
Final Without Project Analysis Report



Gilbert Road

Gravel Mining Pit
Modeled as Separate
Flow Reach

In Stream Gravel
Mining Location

Lehi Cemetery

Matchline for Map B

Va Shly' At Pit Reach

Matchline for Map D

Legend

- HEC-RAS Cross-sections
- Existing Condition Inundation Area
- Future Without Project Inundation Area (After 50 Years)

Scale: 1 Inch = 500 Feet

500 0 500 1000 Feet

Contour Interval: 2 Feet

Date of Photography: December 28, 2001
Vertical Datum: NGVD 1929

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Va Shly' Ay Akimel Inundation Areas

100-year Flood Map C

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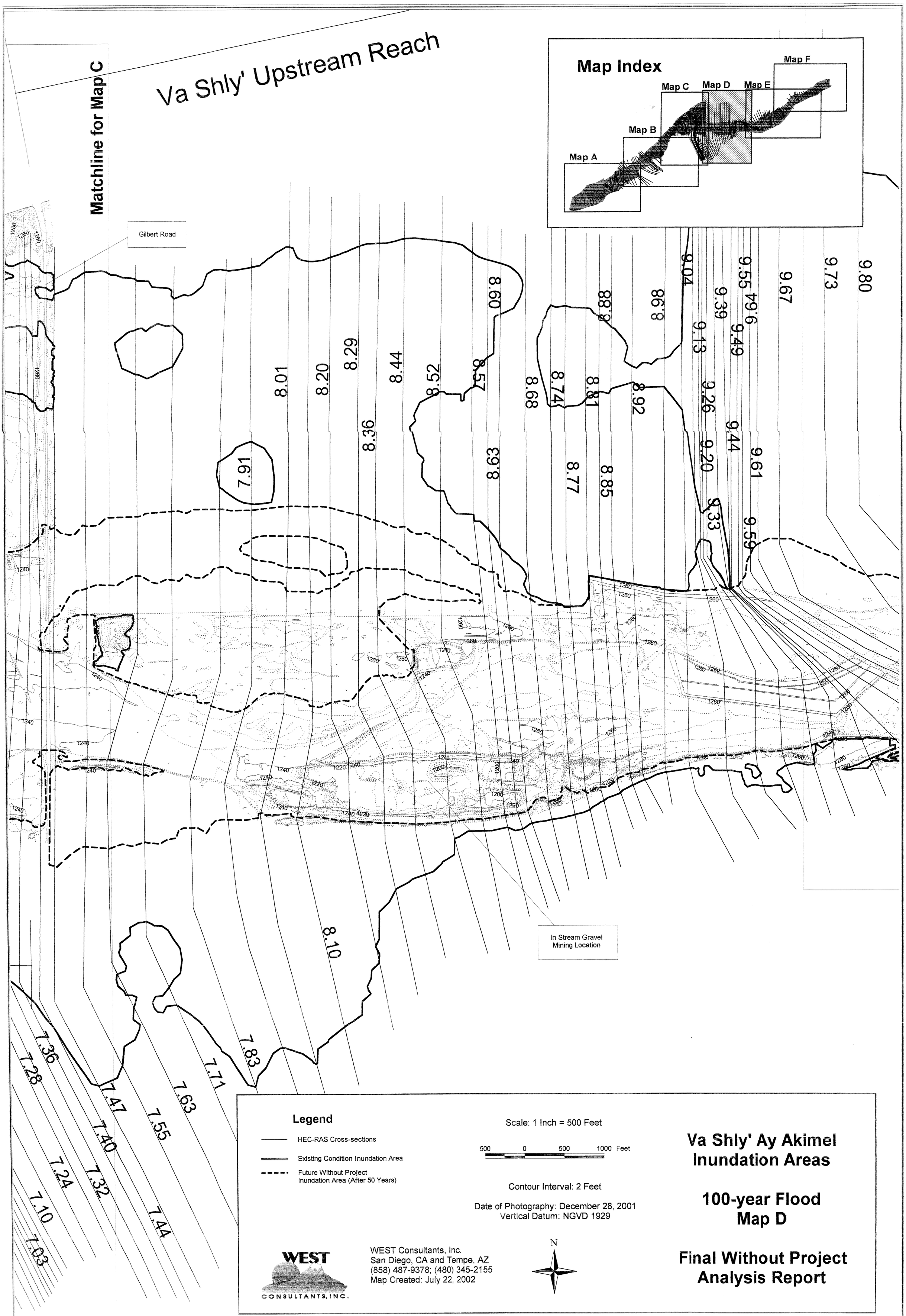
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Contour Interval: 2 Feet
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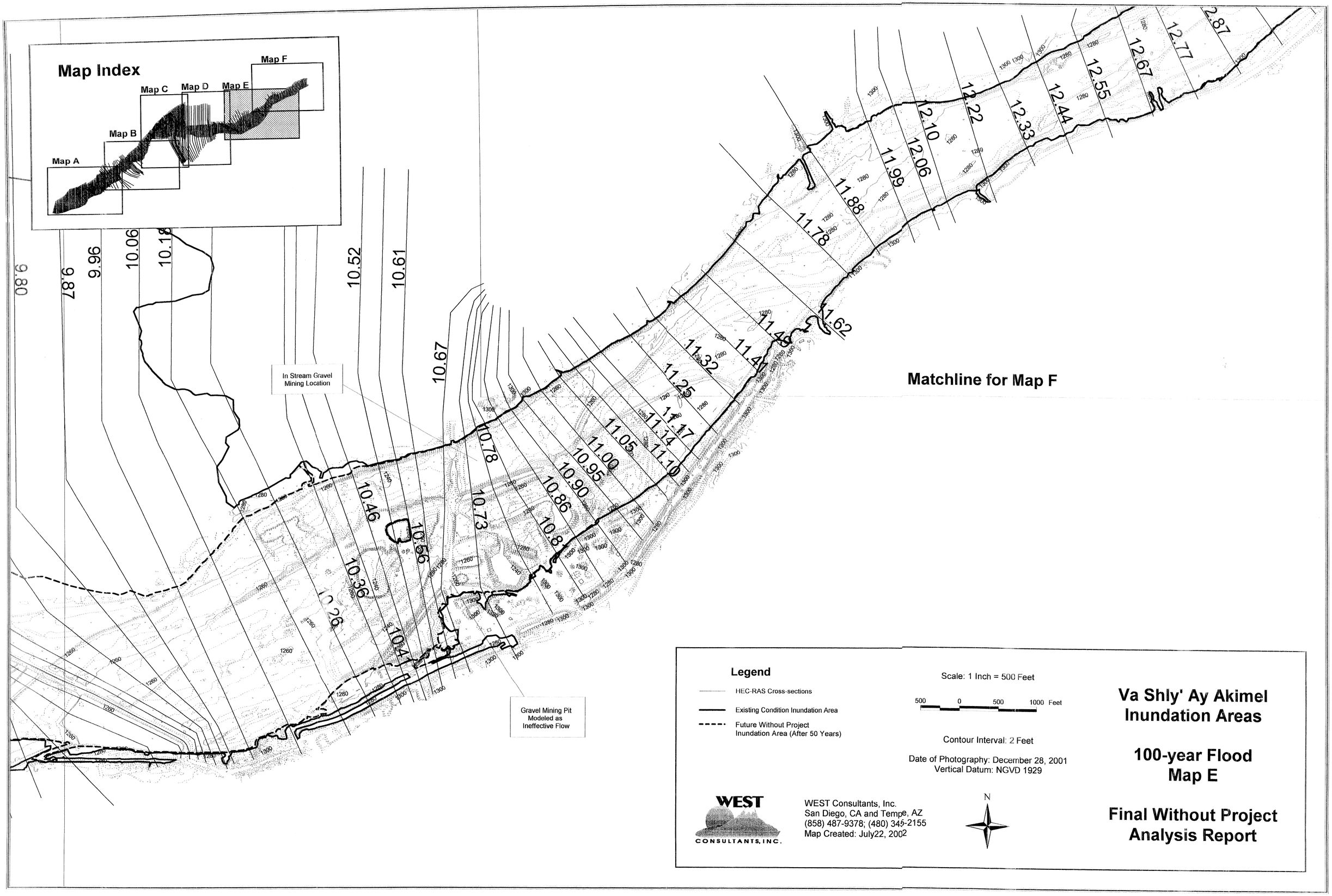
Va Shly' Ay Akimel Inundation Areas
100-year Flood
Map D
Final Without Project Analysis Report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Gravel Mining Pit Modeled as Ineffective Flow
Matchline for Map F
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HEC-RAS Cross-sections
Existing Condition Inundation Area
Future Without Project Inundation Area (After 50 Years)
Scale: 1 Inch = 500 Feet
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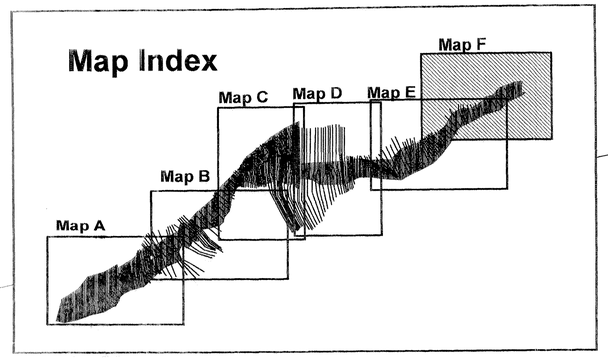
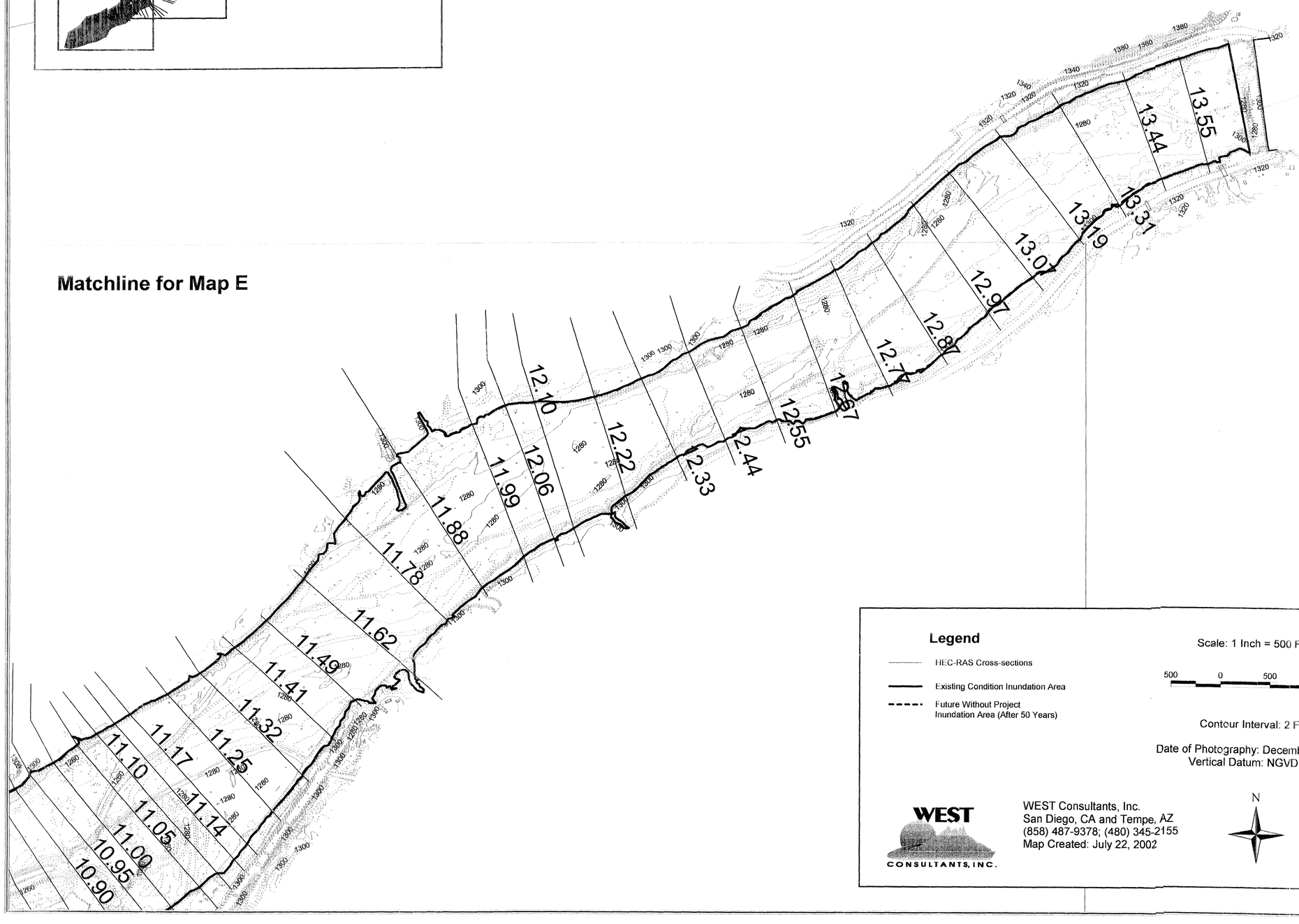
Va Shly' Ay Akimel Inundation Areas
100-year Flood
Map E
Final Without Project Analysis Report



Va Shly' Upstream Reach

Granite Reef Diversion Dam

Matchline for Map E



Legend

- HEC-RAS Cross-sections
- Existing Condition Inundation Area
- Future Without Project Inundation Area (After 50 Years)

Scale: 1 Inch = 500 Feet

500 0 500 1000 Feet

Contour Interval: 2 Feet

Date of Photography: December 28, 2001
Vertical Datum: NGVD 1929

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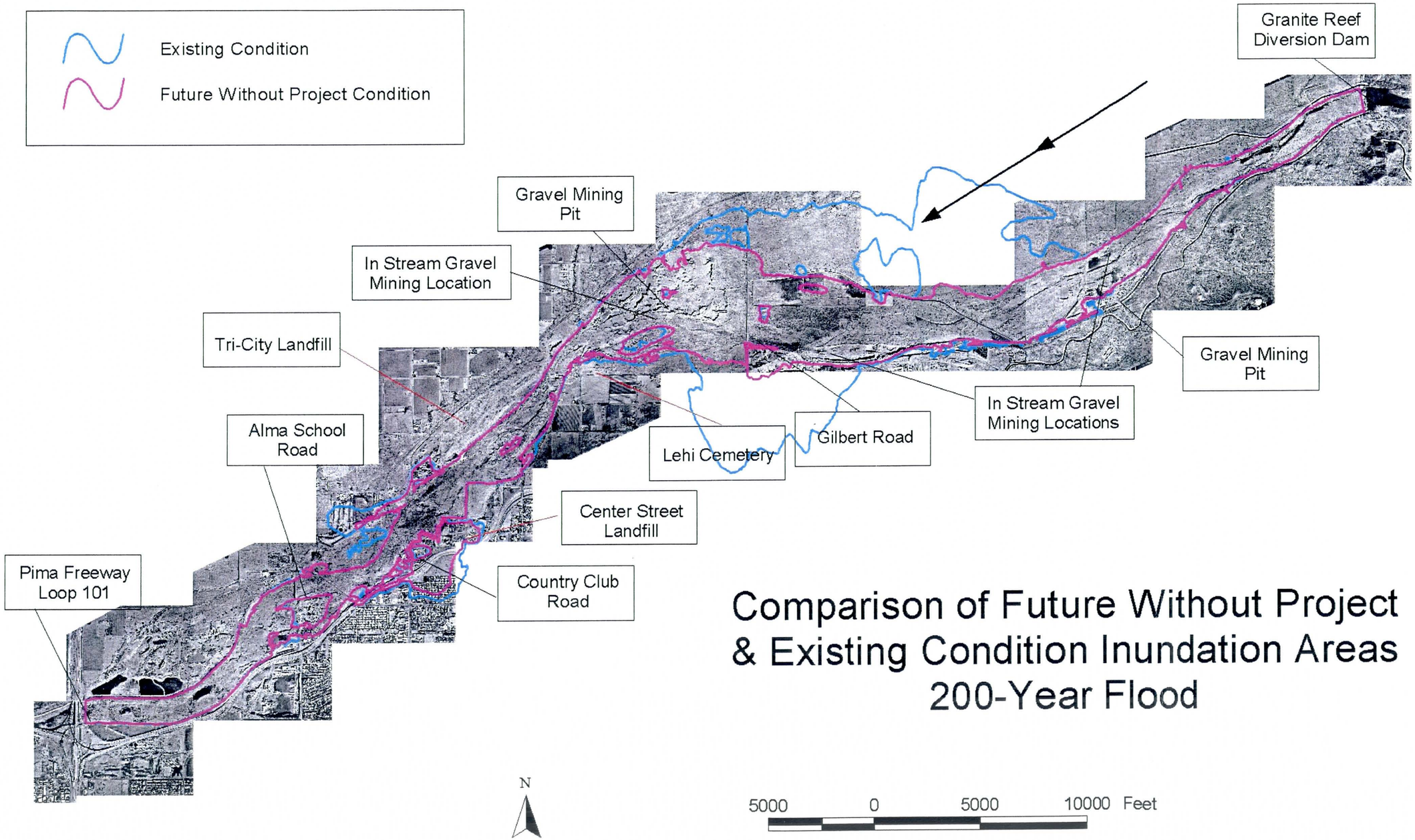
Va Shly' Ay Akimel Inundation Areas

100-year Flood Map F

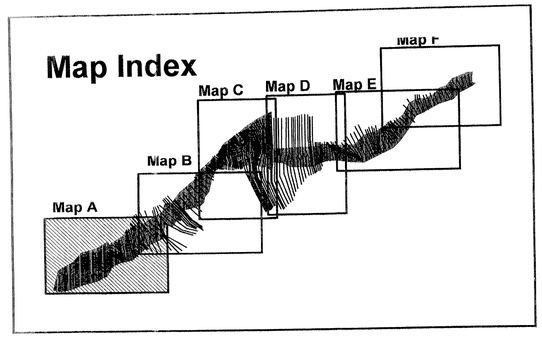
Final Without Project Analysis Report

APPENDIX 15

DETAILED MAPS FOR THE 200-YEAR INUNDATION AREAS



Comparison of Future Without Project & Existing Condition Inundation Areas 200-Year Flood



Country Club Road

Alma School Road

Matchline for Map B

Va Shly' Downstream Reach

Legend

- HEC-RAS Cross-sections
- Existing Condition Inundation Area
- Future Without Project Inundation Area (After 50 Years)

Scale: 1 Inch = 500 Feet

500 0 500 1000 Feet

Contour Interval: 2 Feet

Date of Photography: December 28, 2001
Vertical Datum: NGVD 1929

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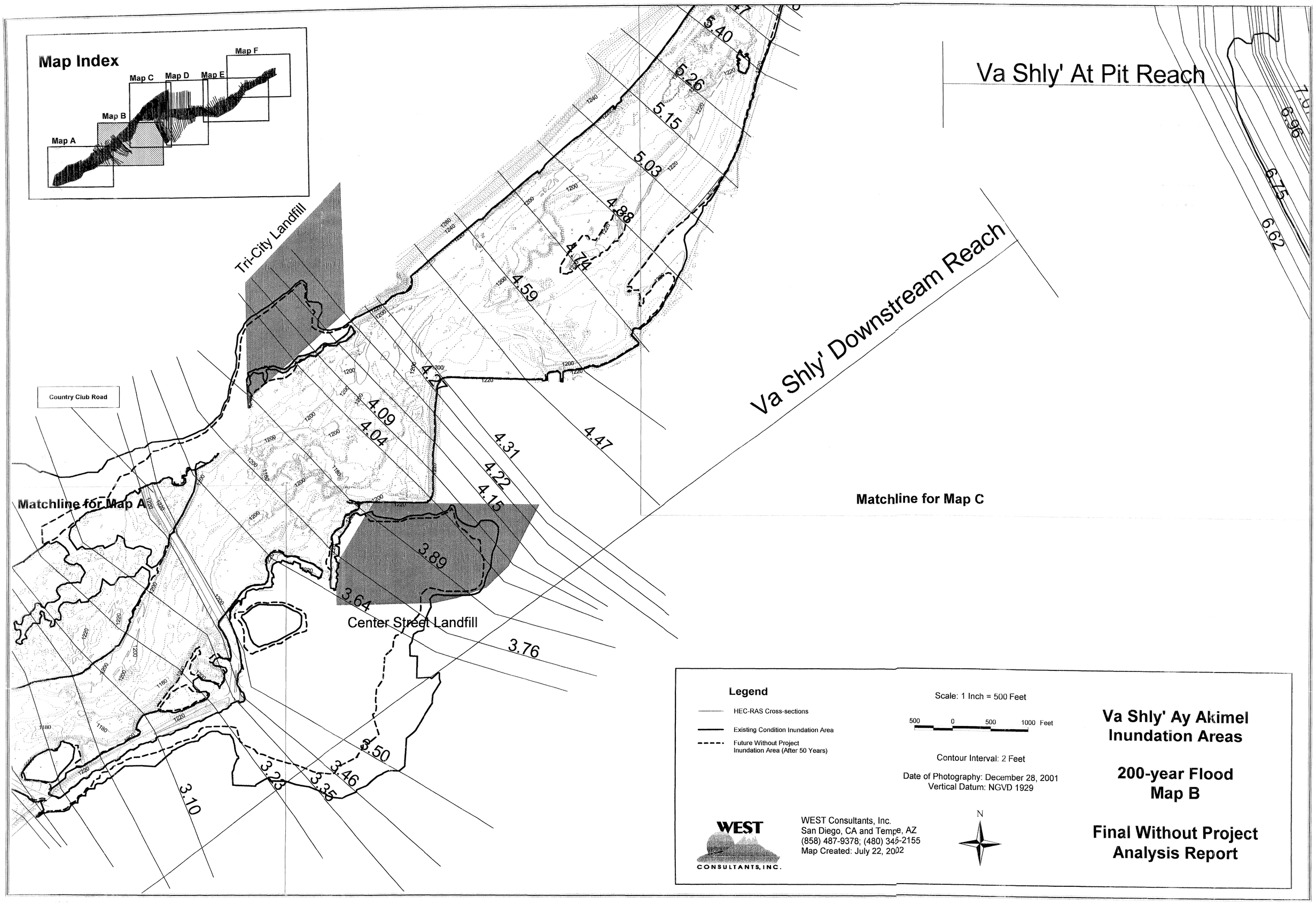
Va Shly' Ay Akimel Inundation Areas

200-year Flood Map A

Final Without Project Analysis Report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Tri-City Landfill
Country Club Road
Matchline for Map A
Matchline for Map C
Center Street Landfill
7.07
6.96
6.75
6.62
5.40
5.26
5.15
5.03
4.88
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4.59
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Future Without Project Inundation Area (After 50 Years)
Scale: 1 Inch = 500 Feet
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Va Shly' Ay Akimel Inundation Areas
200-year Flood
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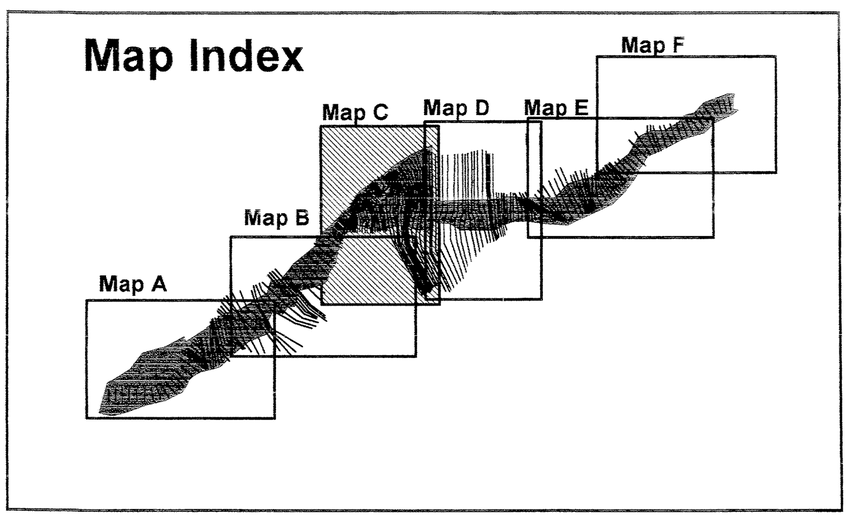
Final Without Project Analysis Report



Gilbert Road

Gravel Mining Pit Modeled as Separate Flow Reach

In Stream Gravel Mining Location

Lehi Cemetery

Matchline for Map B

Va Shly' At Pit Reach

Matchline for Map D

Legend

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- Future Without Project Inundation Area (After 50 Years)

Scale: 1 Inch = 500 Feet

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Contour Interval: 2 Feet

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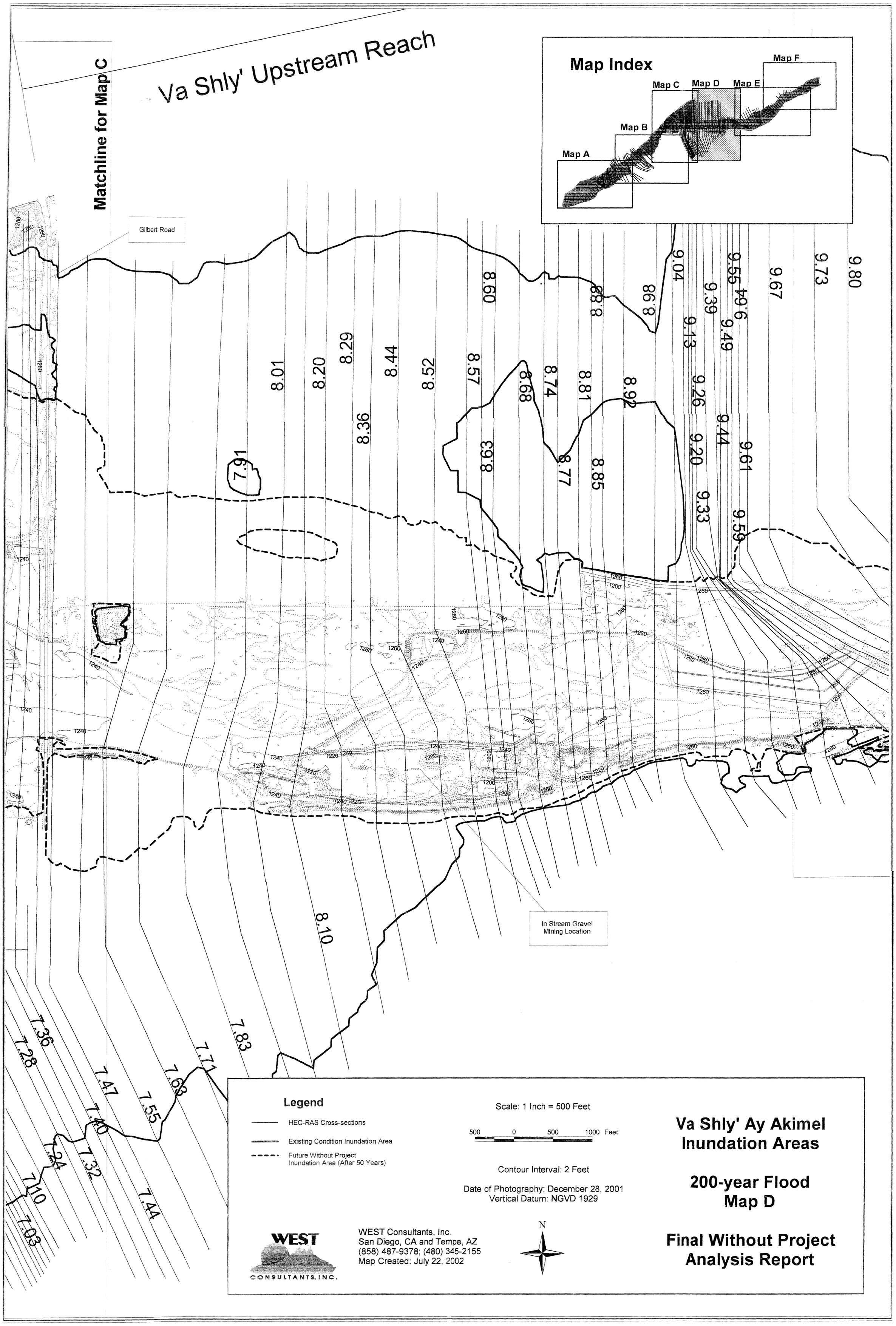
Va Shly' Ay Akimel Inundation Areas

200-year Flood Map C

Final Without Project Analysis Report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Va Shly' Ay Akimel Inundation Areas
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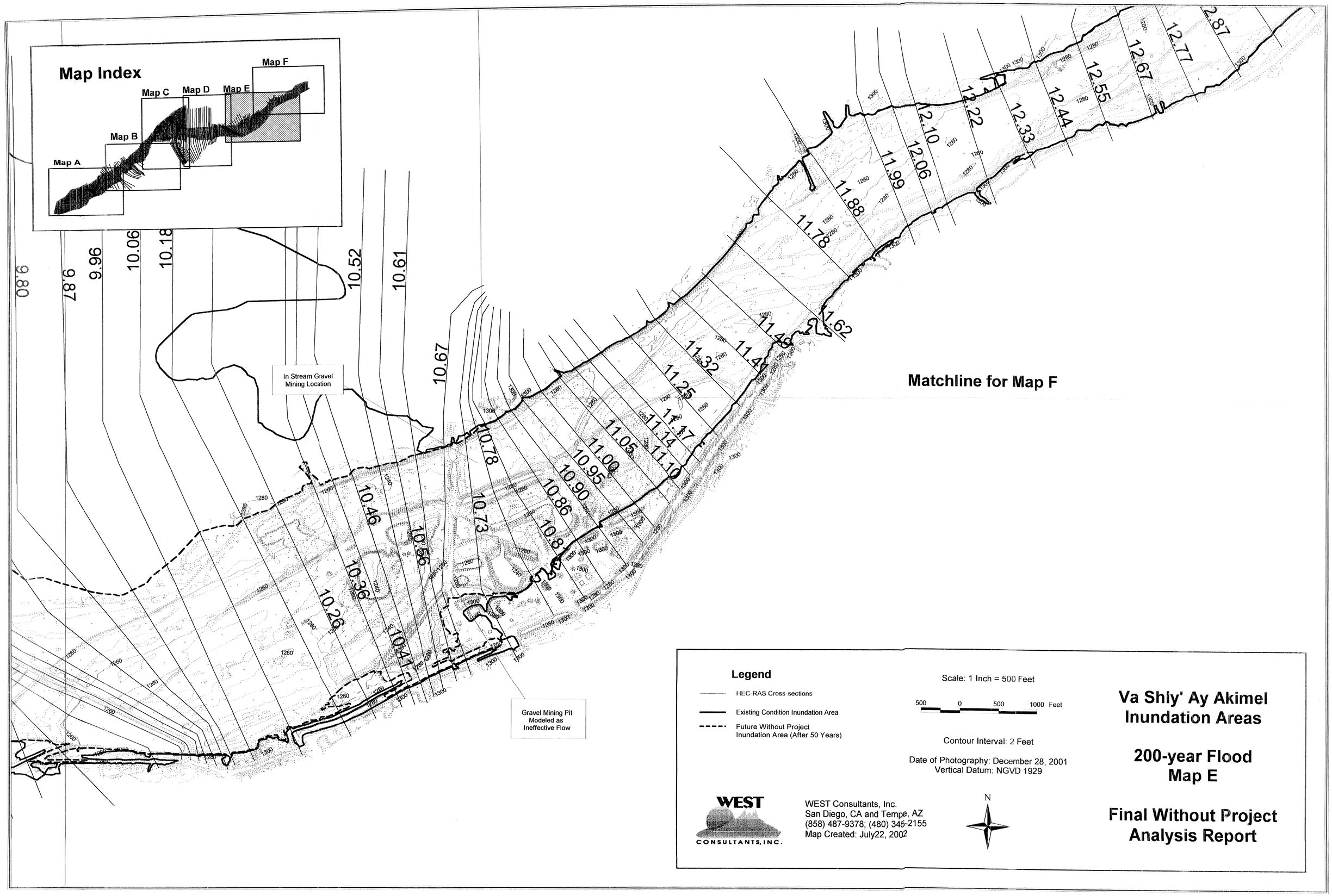
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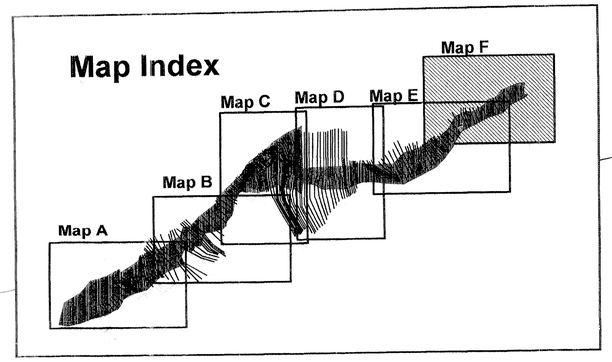
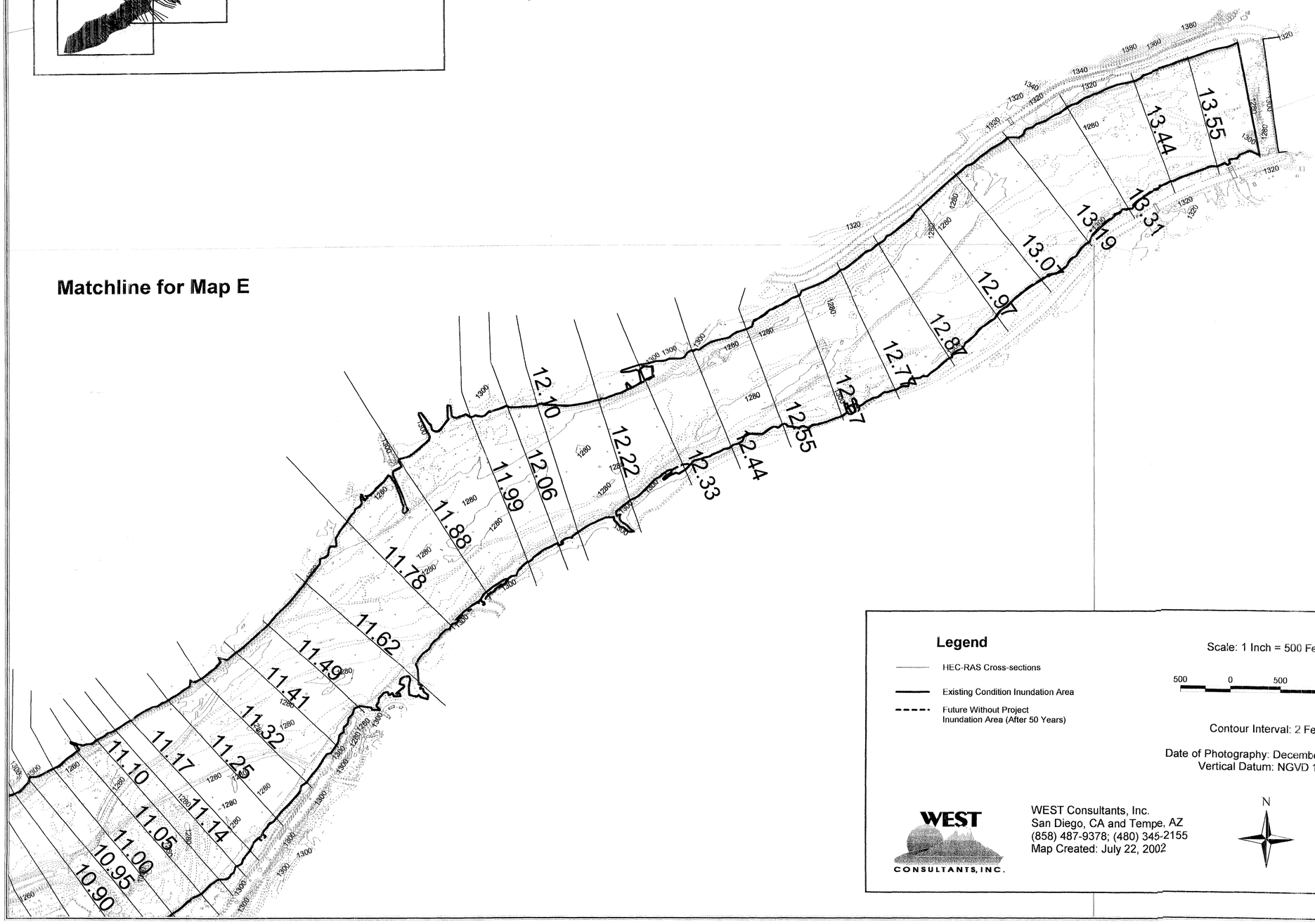


Va Shly' Upstream Reach

Granite Reef Diversion Dam

Matchline for Map E



Legend

- HEC-RAS Cross-sections
- Existing Condition Inundation Area
- Future Without Project Inundation Area (After 50 Years)

Scale: 1 Inch = 500 Feet

500 0 500 1000 Feet

Contour Interval: 2 Feet

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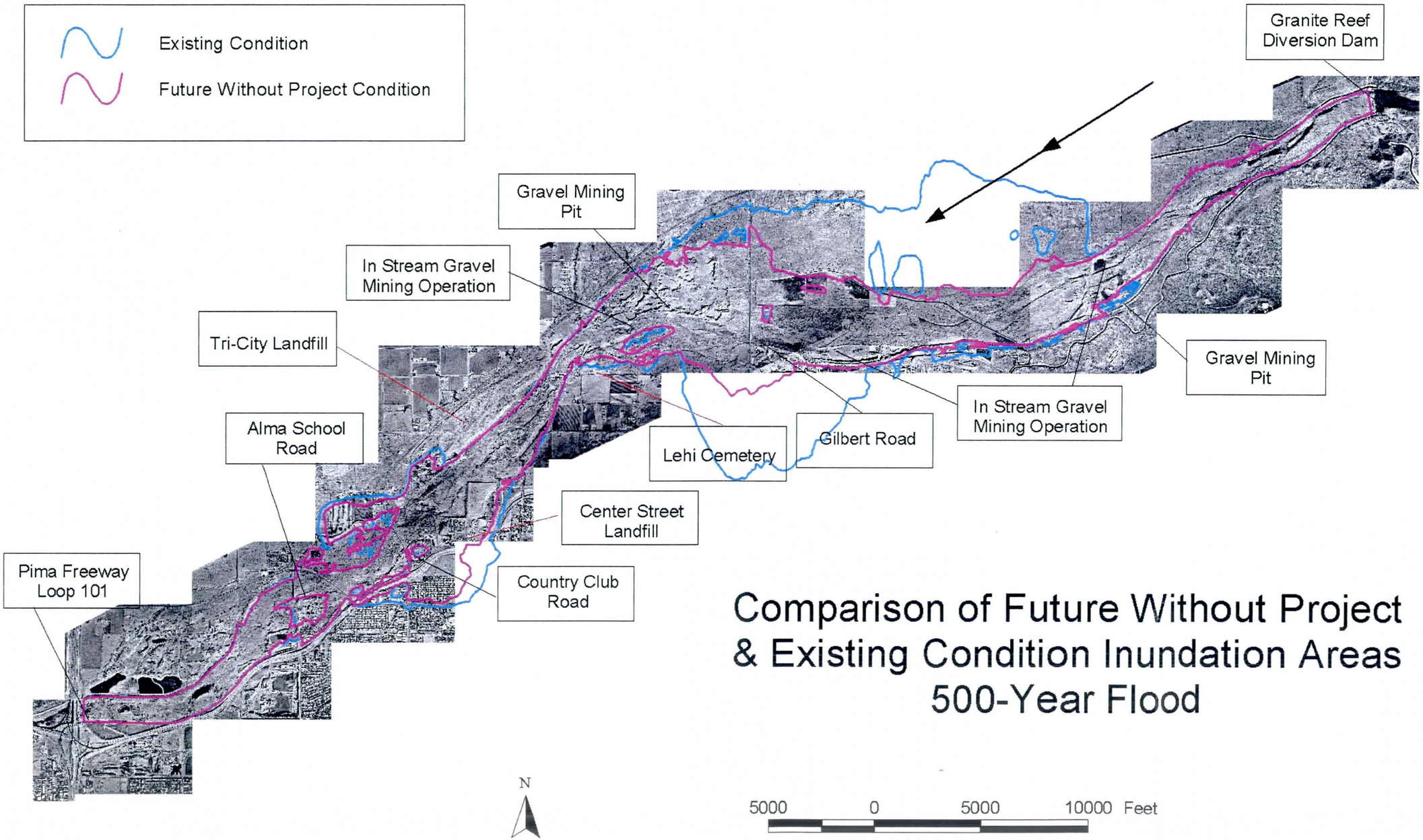
Va Shly' Ay Akimel Inundation Areas

200-year Flood Map F

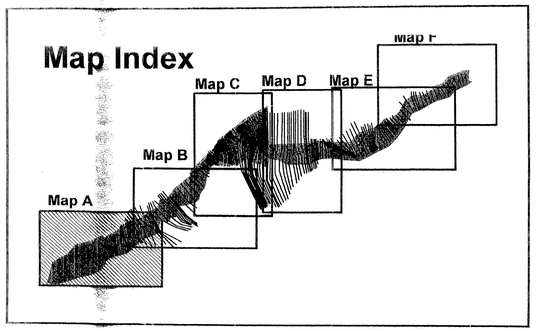
Final Without Project Analysis Report

APPENDIX 16

DETAILED MAPS FOR THE 500-YEAR INUNDATION AREAS



Comparison of Future Without Project & Existing Condition Inundation Areas 500-Year Flood



Country Club Road

Alma School Road

Matchline for Map F

Va Shly' Downstream Reach

Legend

- HEC-RAS Cross-sections
- Existing Condition Inundation Area
- Future Without Project Inundation Area (After 50 Years)

Scale: 1 Inch = 500 Feet

500 0 500 1000 Feet

Contour Interval: 2 Feet

Date of Photography: December 28, 2001
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Va Shly' Ay Akimel Inundation Areas

500-year Flood Map A

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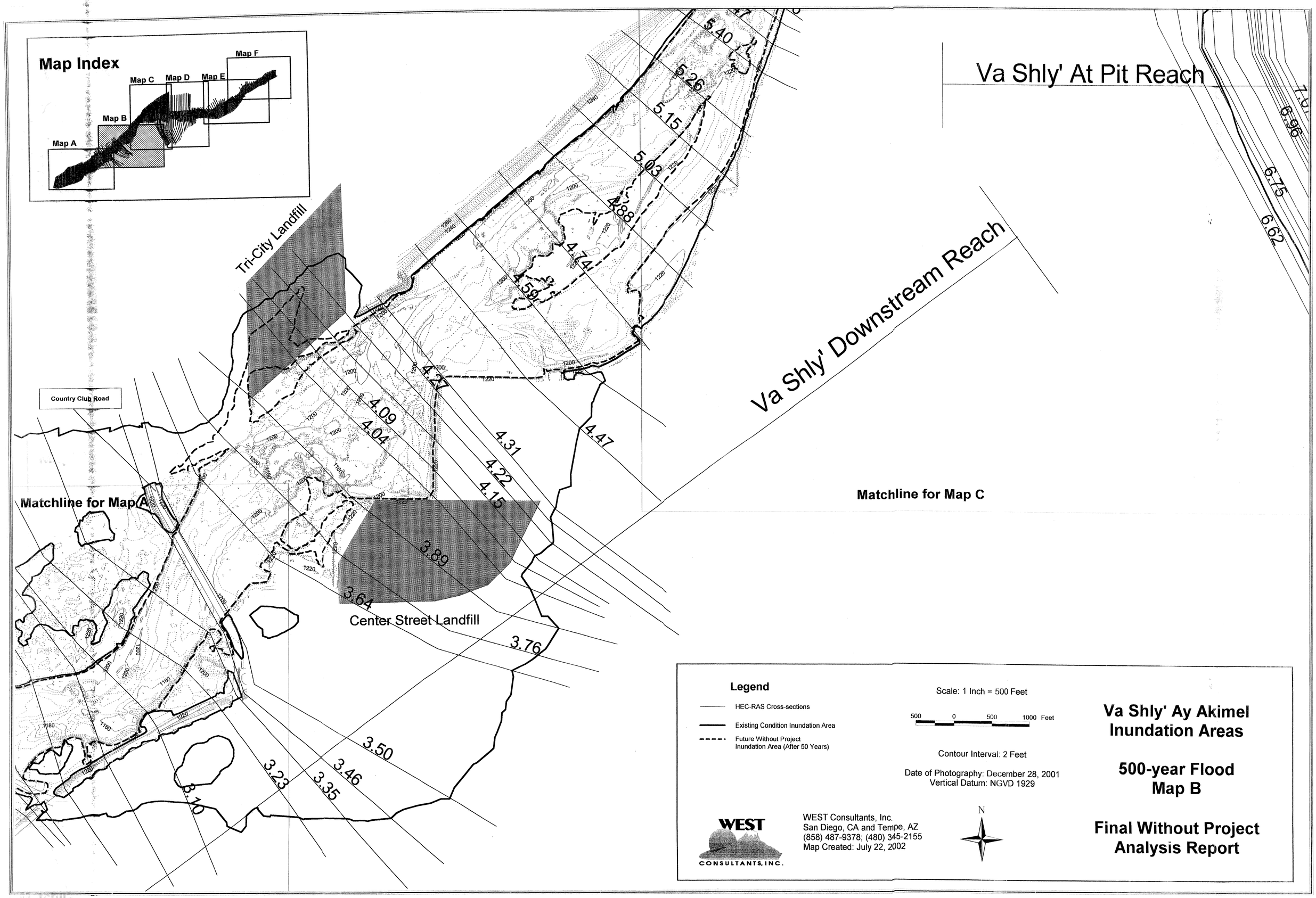
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Va Shly' Ay Akimel Inundation Areas
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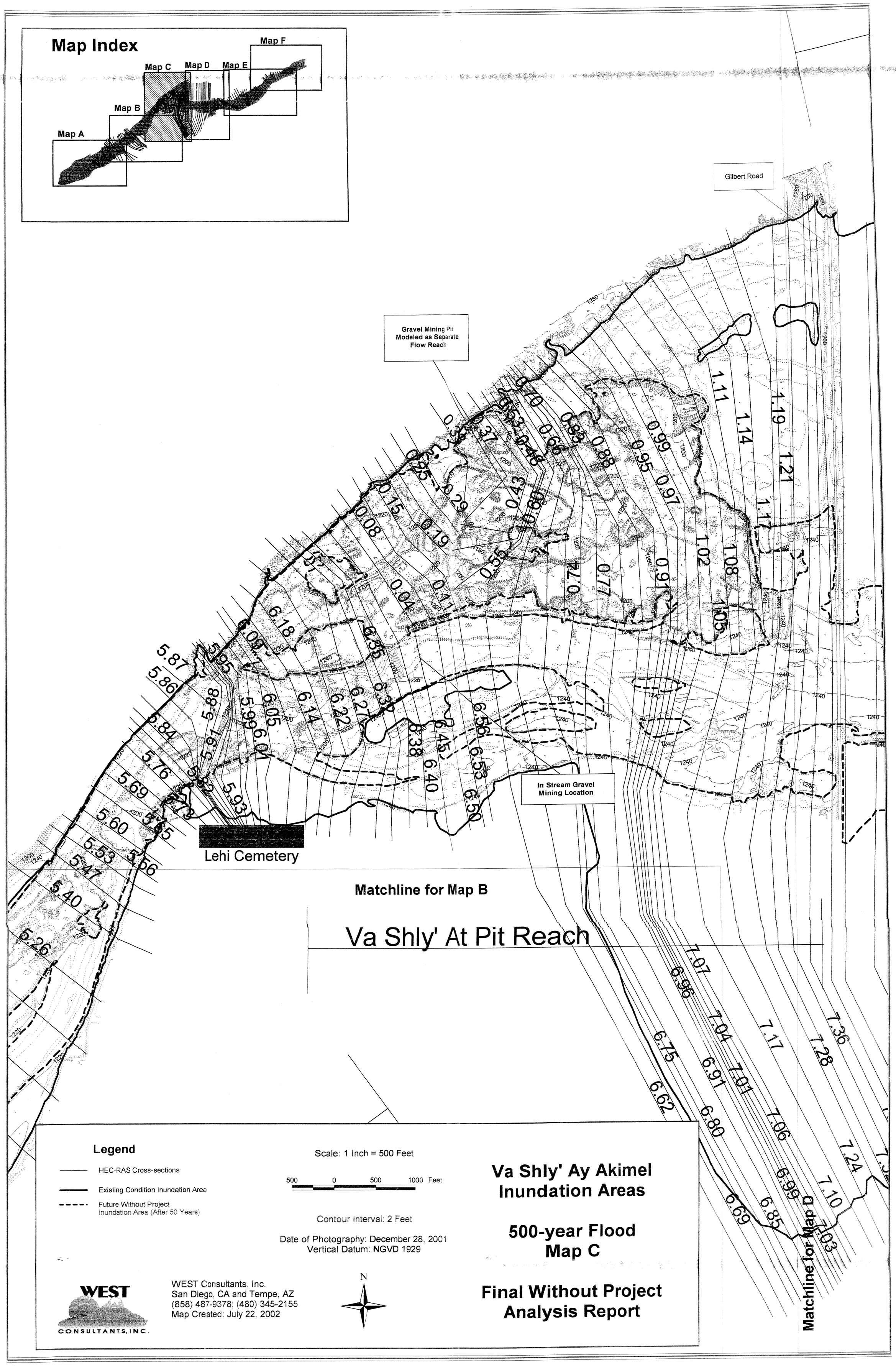
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Future Without Project Inundation Area (After 50 Years)
Scale: 1 Inch = 500 Feet
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Va Shly' Ay Akimel Inundation Areas
500-year Flood
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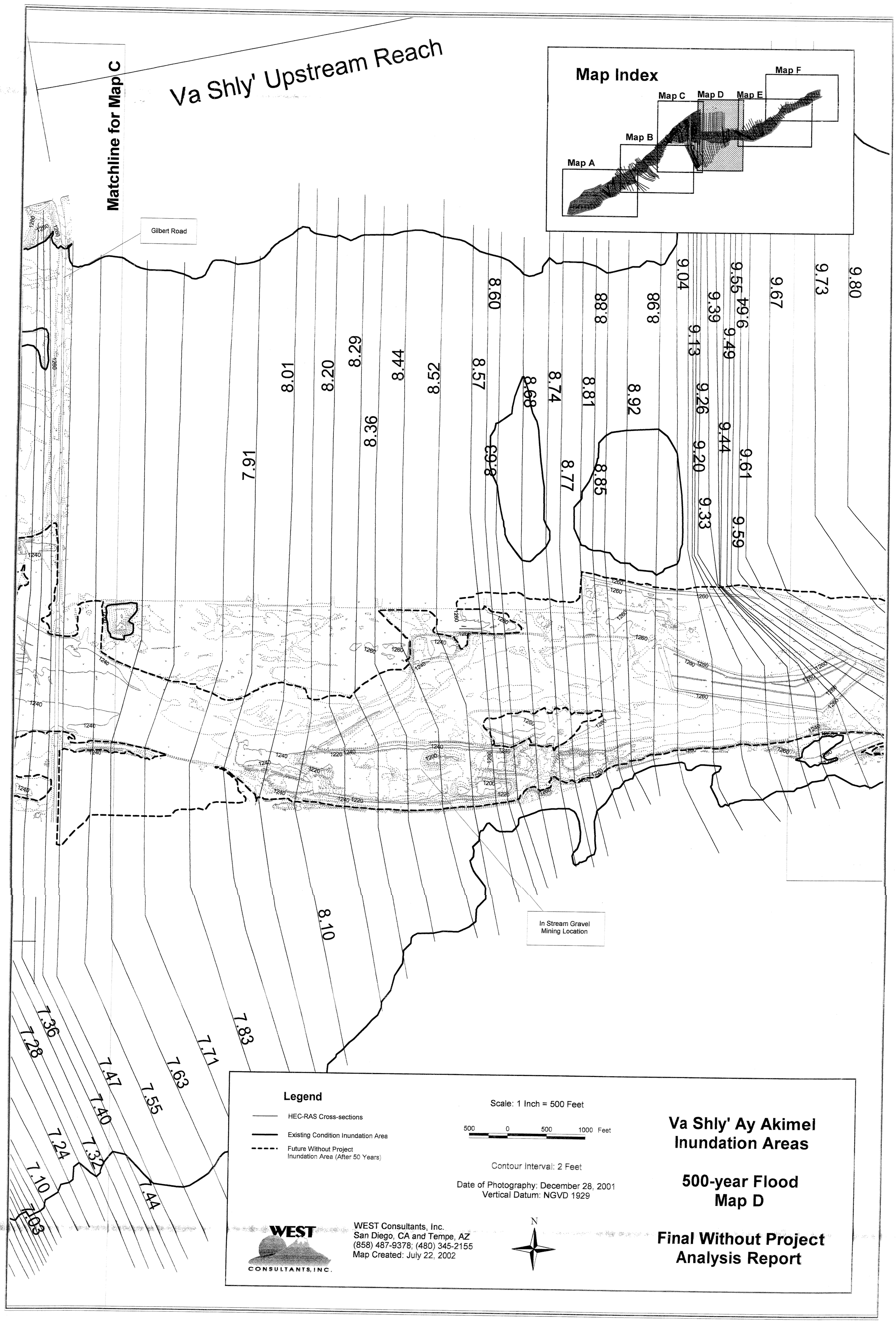
Final Without Project Analysis Report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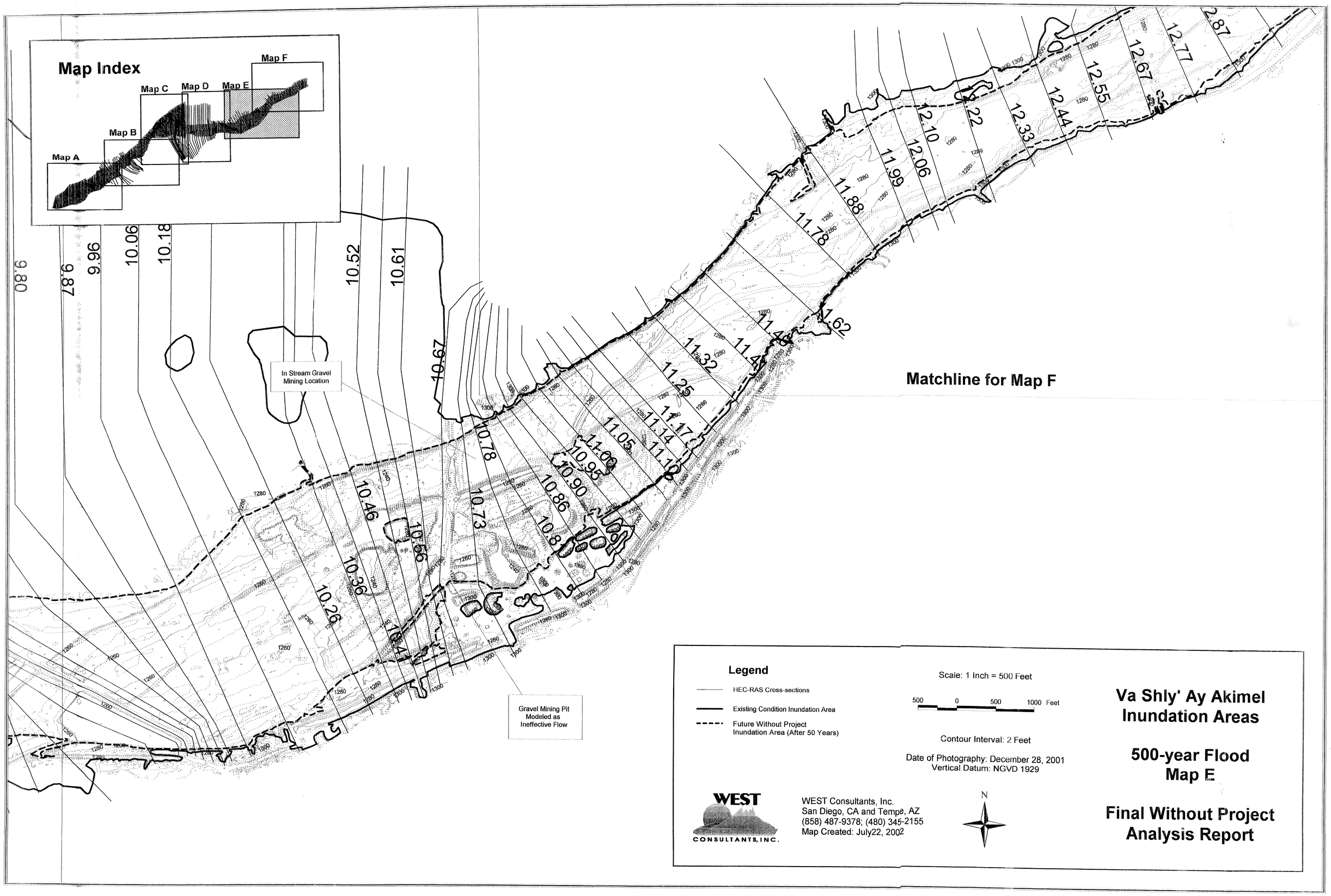
N
Va Shly' Ay Akimel Inundation Areas
500-year Flood
Map D
Final Without Project Analysis Report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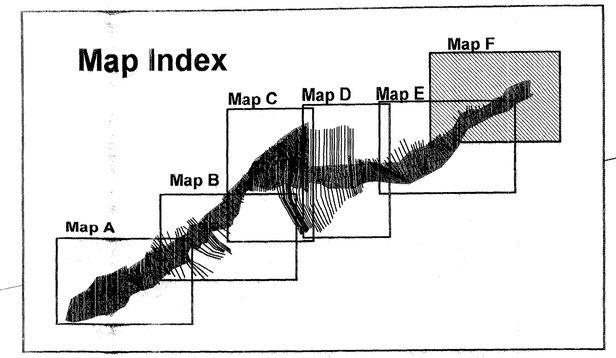
(858) 487-9378; (480) 345-2155
Map Created: July22, 2002
N
Va Shly' Ay Akimel Inundation Areas
500-year Flood
Map E
Final Without Project Analysis Report



Va Shly' Upstream Reach

Granite Reef Diversion Dam

Matchline for Map E

Legend

- HEC-RAS Cross-sections
- Existing Condition Inundation Area
- Future Without Project Inundation Area (After 50 Years)

Scale: 1 Inch = 500 Feet

500 0 500 1000 Feet

Contour Interval: 2 Feet

Date of Photography: December 28, 2001
Vertical Datum: NGVD 1929

WEST CONSULTANTS, INC.

WEST Consultants, Inc.
San Diego, CA and Tempe, AZ
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Map Created: July 22, 2002

N

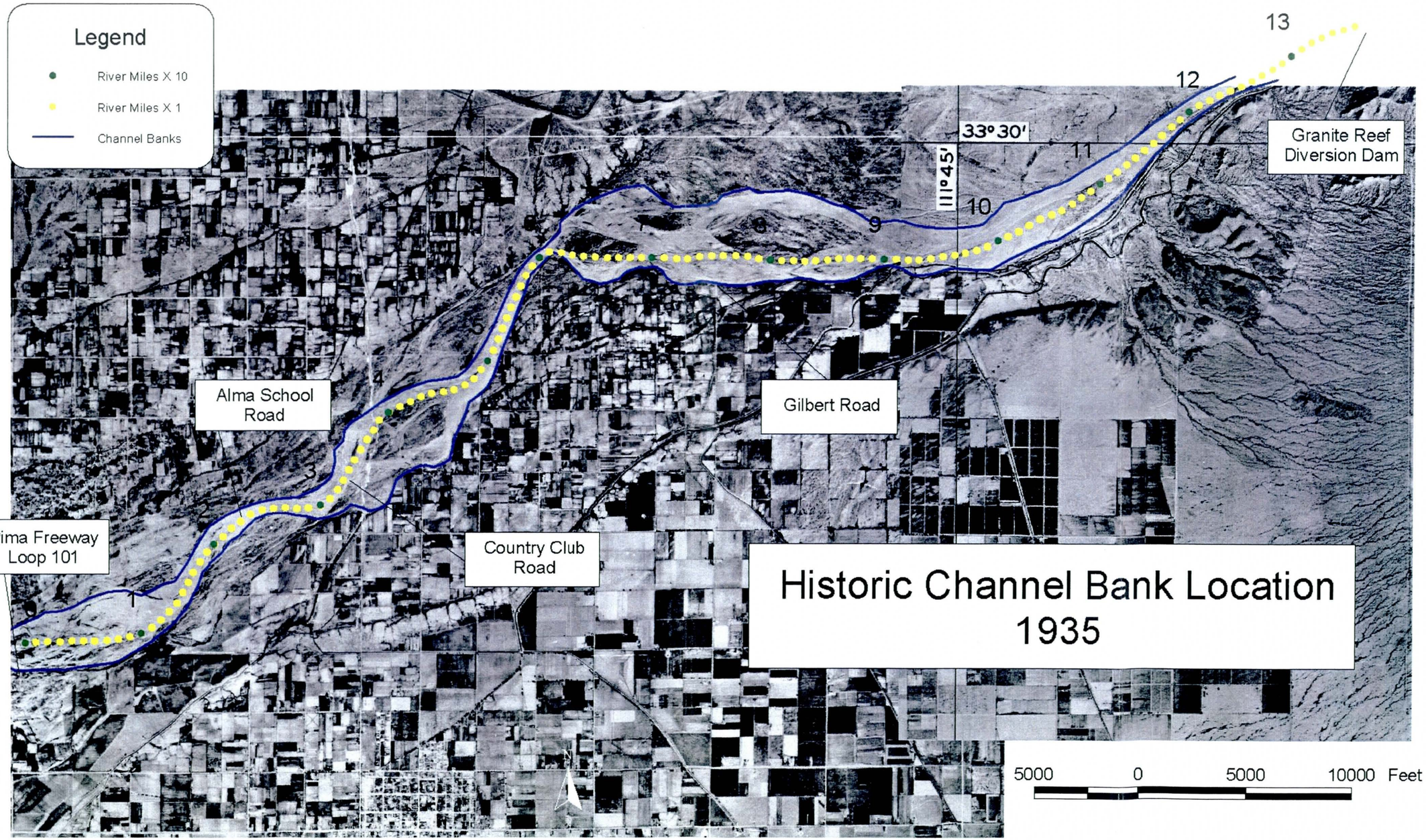
Va Shly' Ay Akimel Inundation Areas

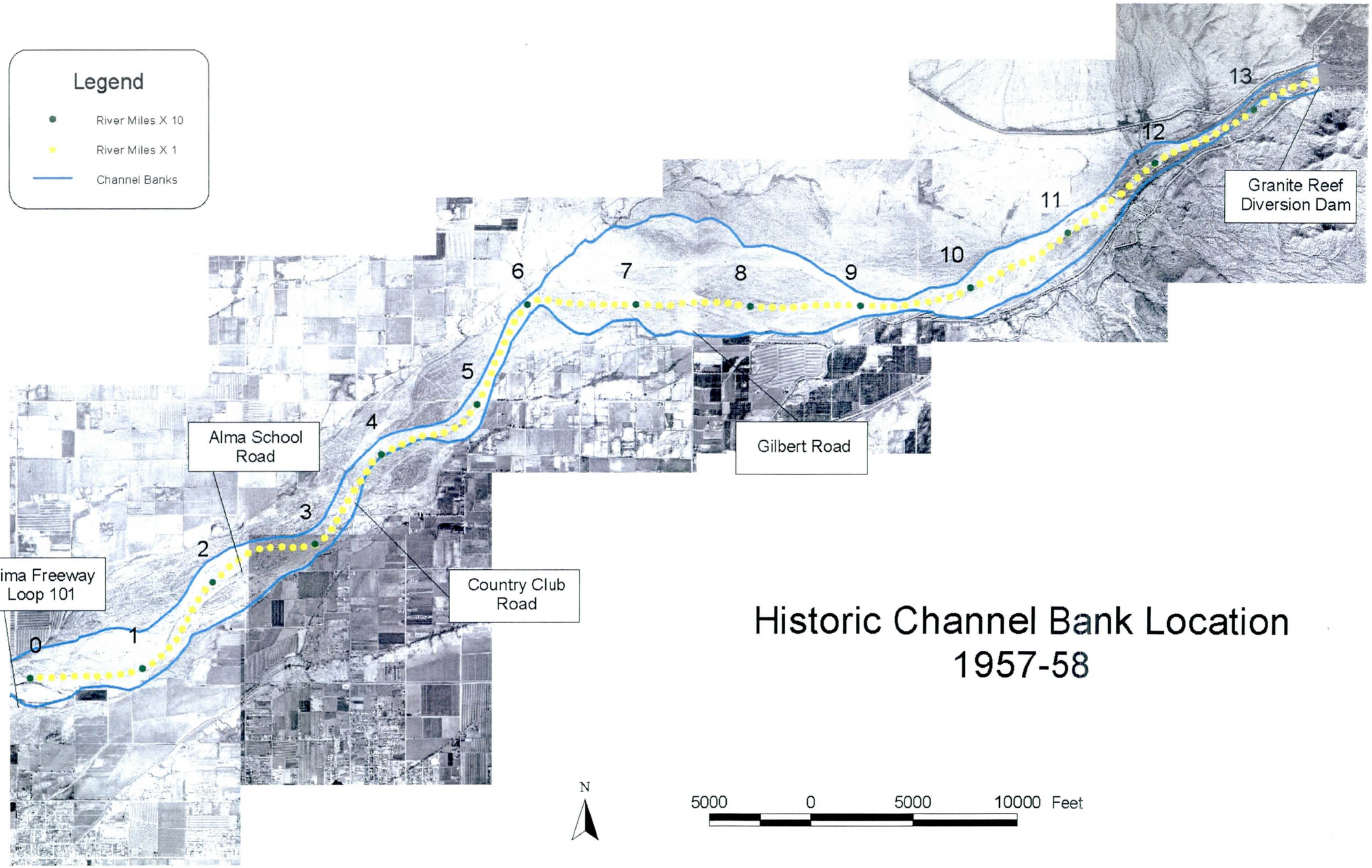
500-year Flood Map F

Final Without Project Analysis Report

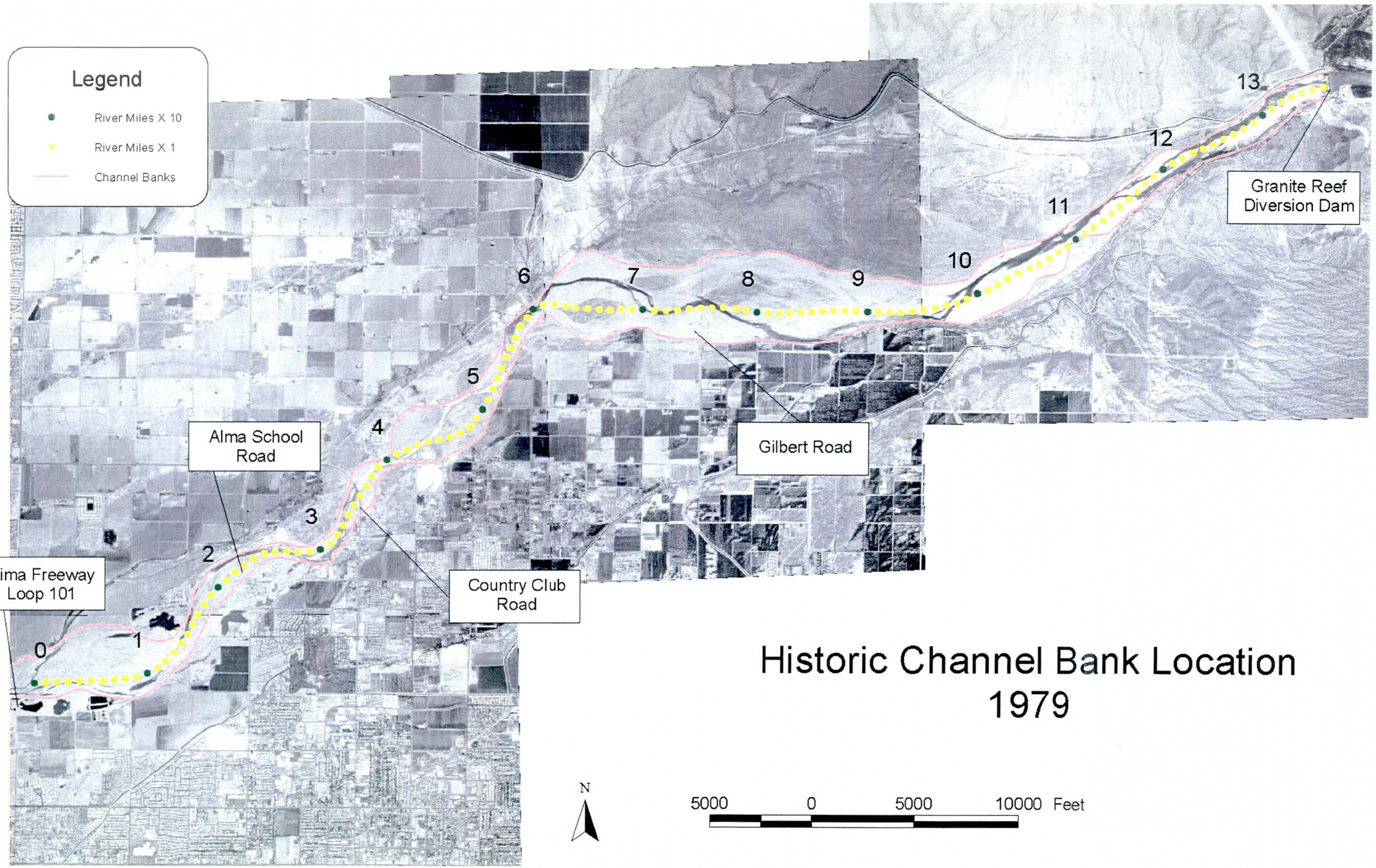
APPENDIX 17

HISTORICAL AERIAL PHOTOGRAPHS AND CHANNEL BANKS

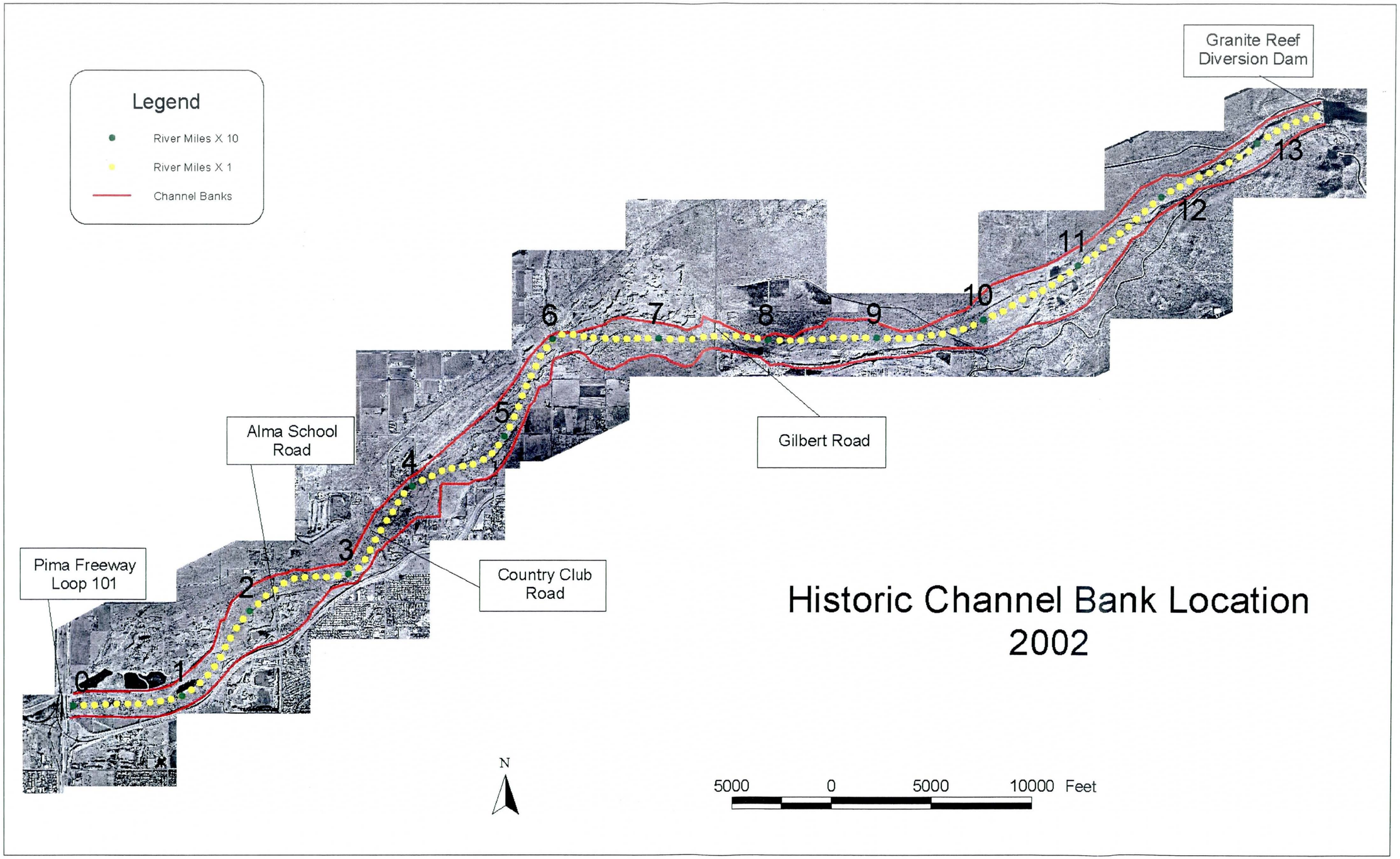

Legend
River Miles X 10
River Miles X 1
Channel Banks
13
12
11
10
9
8
7
6
5
4
3
2
1
33° 30'
111° 45'
Granite Reef Diversion Dam
Alma School Road
Gilbert Road
Pima Freeway Loop 101
Country Club Road
Historic Channel Bank Location
1935
5000
0
5000
10000 Feet



Historic Channel Bank Location 1957-58



Historic Channel Bank Location
1979



Historic Channel Bank Location 2002