



# Federal Emergency Management Agency

Washington, D.C. 20472

December 6, 2019

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

The Honorable Jonathan Rothschild  
Mayor  
City of Tucson  
255 West Alameda Street  
Tucson, AZ 85701

IN REPLY REFER TO:

Case No.: 19-09-1100P  
Community Name: City of Tucson, AZ  
Community No.: 040076  
Effective Date of  
This Revision: **April 21, 2020**

Dear Mayor Rothschild:

The Flood Insurance Study Report and Flood Insurance Rate Map for your community have been revised by this Letter of Map Revision (LOMR). Please use the enclosed annotated map panel(s) revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals issued in your community.

Additional documents are enclosed which provide information regarding this LOMR. Please see the List of Enclosures below to determine which documents are included. Other attachments specific to this request may be included as referenced in the Determination Document. If you have any questions regarding floodplain management regulations for your community or the National Flood Insurance Program (NFIP) in general, please contact the Consultation Coordination Officer for your community. If you have any technical questions regarding this LOMR, please contact the Director, Mitigation Division of the Department of Homeland Security's Federal Emergency Management Agency (FEMA) in Oakland, California, at (510) 627-7175, or the FEMA Map Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP). Additional information about the NFIP is available on our website at <http://www.fema.gov/business/nfip>.

Sincerely,

Patrick "Rick" F. Sacbibit, P.E., Branch Chief  
Engineering Services Branch  
Federal Insurance and Mitigation Administration

List of Enclosures:

Letter of Map Revision Determination Document  
Annotated Flood Insurance Rate Map  
Annotated Flood Insurance Study Report

cc: Mr. Fred Felix, P.E.  
Floodplain Administrator  
City of Tucson

Mr. Terry Hendricks, CFM  
Chief Hydrologist  
Pima County Flood Control District

Mr. Jiankang Wang, P.E.  
Senior Hydrologist  
CMG Drainage Engineering, Inc.



# Federal Emergency Management Agency

Washington, D.C. 20472

## LETTER OF MAP REVISION DETERMINATION DOCUMENT

COMMUNITY AND REVISION INFORMATION		PROJECT DESCRIPTION	BASIS OF REQUEST
COMMUNITY	City of Tucson Pima County Arizona	CULVERT	HYDRAULIC ANALYSIS HYDROLOGIC ANALYSIS UPDATED TOPOGRAPHIC DATA
	COMMUNITY NO.: 040076		
IDENTIFIER	El Vado Wash LOMR	APPROXIMATE LATITUDE & LONGITUDE: 32.151, -110.945 SOURCE: USGS QUADRANGLE DATUM: NAD 83	
ANNOTATED MAPPING ENCLOSURES		ANNOTATED STUDY ENCLOSURES	
TYPE: FIRM*	NO.: 04019C2288L DATE: June 16, 2011	DATE OF EFFECTIVE FLOOD INSURANCE STUDY: September 28, 2012	
TYPE: FIRM*	NO.: 04019C2880L DATE: June 16, 2011	PROFILE(S): 80P AND 81P SUMMARY OF DISCHARGES TABLE: 6	

Enclosures reflect changes to flooding sources affected by this revision.

\* FIRM - Flood Insurance Rate Map

### FLOODING SOURCE(S) & REVISED REACH(ES)

El Vado Wash - From just upstream of Interstate 19 to approximately 850 feet upstream of 6th Avenue.

### SUMMARY OF REVISIONS

Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
El Vado Wash	Zone AE	Zone AE	YES	YES
	BFEs*	BFEs	NONE	YES
	No BFEs	BFEs	YES	NONE
	Zone X (Unshaded)	Zone AE	YES	NONE

\* BFEs - Base Flood Elevations

### DETERMINATION

This document provides the determination from the Department of Homeland Security's Federal Emergency Management Agency (FEMA) regarding a request for a Letter of Map Revision (LOMR) for the area described above. Using the information submitted, we have determined that a revision to the flood hazards depicted in the Flood Insurance Study (FIS) report and/or National Flood Insurance Program (NFIP) map is warranted. This document revises the effective NFIP map, as indicated in the attached documentation. Please use the enclosed annotated map panels revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals in your community.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304 6426. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief  
Engineering Services Branch  
Federal Insurance and Mitigation Administration



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## LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

### COMMUNITY INFORMATION

#### APPLICABLE NFIP REGULATIONS/COMMUNITY OBLIGATION

We have made this determination pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Pursuant to Section 1361 of the National Flood Insurance Act of 1968, as amended, communities participating in the NFIP are required to adopt and enforce floodplain management regulations that meet or exceed NFIP criteria. These criteria, including adoption of the FIS report and FIRM, and the modifications made by this LOMR, are the minimum requirements for continued NFIP participation and do not supersede more stringent State/Commonwealth or local requirements to which the regulations apply.

NFIP regulations Subparagraph 60.3(b)(7) requires communities to ensure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained. This provision is incorporated into your community's existing floodplain management ordinances; therefore, responsibility for maintenance of the altered or relocated watercourse, including any related appurtenances such as bridges, culverts, and other drainage structures, rests with your community. We may request that your community submit a description and schedule of maintenance activities necessary to ensure this requirement.

#### COMMUNITY REMINDERS

We based this determination on the 1-percent-annual-chance discharges computed in the submitted hydrologic model. Future development of projects upstream could cause increased discharges, which could cause increased flood hazards. A comprehensive restudy of your community's flood hazards would consider the cumulative effects of development on discharges and could, therefore, indicate that greater flood hazards exist in this area.

Your community must regulate all proposed floodplain development and ensure that permits required by Federal and/or State/Commonwealth law have been obtained. State/Commonwealth or community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction or may limit development in floodplain areas. If your State/Commonwealth or community has adopted more restrictive or comprehensive floodplain management criteria, those criteria take precedence over the minimum NFIP requirements.

We will not print and distribute this LOMR to primary users, such as local insurance agents or mortgage lenders; instead, the community will serve as a repository for the new data. We encourage you to disseminate the information in this LOMR by preparing a news release for publication in your community's newspaper that describes the revision and explains how your community will provide the data and help interpret the NFIP maps. In that way, interested persons, such as property owners, insurance agents, and mortgage lenders, can benefit from the information.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304 6426. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

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Patrick "Rick" F. Sacbbit, P.E., Branch Chief  
Engineering Services Branch  
Federal Insurance and Mitigation Administration



Federal Emergency Management Agency  
Washington, D.C. 20472

**LETTER OF MAP REVISION  
DETERMINATION DOCUMENT (CONTINUED)**

We have designated a Consultation Coordination Officer (CCO) to assist your community. The CCO will be the primary liaison between your community and FEMA. For information regarding your CCO, please contact:

Ms. Juliette Hayes  
Director, Mitigation Division  
Federal Emergency Management Agency, Region IX  
1111 Broadway, Suite 1200  
Oakland, CA 94607-4052  
(510) 627-7211

**STATUS OF THE COMMUNITY NFIP MAPS**

We will not physically revise and republish the FIRM and FIS report for your community to reflect the modifications made by this LOMR at this time. When changes to the previously cited FIRM panel(s) and FIS report warrant physical revision and republication in the future, we will incorporate the modifications made by this LOMR at that time.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304 6426. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

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Engineering Services Branch  
Federal Insurance and Mitigation Administration



Federal Emergency Management Agency  
Washington, D.C. 20472

**LETTER OF MAP REVISION  
DETERMINATION DOCUMENT (CONTINUED)**

**PUBLIC NOTIFICATION OF REVISION**

A notice of changes will be published in the *Federal Register*. This information also will be published in your local newspaper on or about the dates listed below, and through FEMA's Flood Hazard Mapping website at [https://www.floodmaps.fema.gov/fhm/bfe\\_status/bfe\\_main.asp](https://www.floodmaps.fema.gov/fhm/bfe_status/bfe_main.asp)

LOCAL NEWSPAPER

Name: *Arizona Daily Star*

Dates: December 16, 2019 and December 23, 2019

Within 90 days of the second publication in the local newspaper, any interested party may request that we reconsider this determination. Any request for reconsideration must be based on scientific or technical data. Therefore, this letter will be effective only after the 90-day appeal period has elapsed and we have resolved any appeals that we receive during this appeal period. Until this LOMR is effective, the revised flood hazard determination presented in this LOMR may be changed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304 6426. Additional Information about the NFIP is available on our website at <http://www.fema.gov/nfip>.

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Engineering Services Branch  
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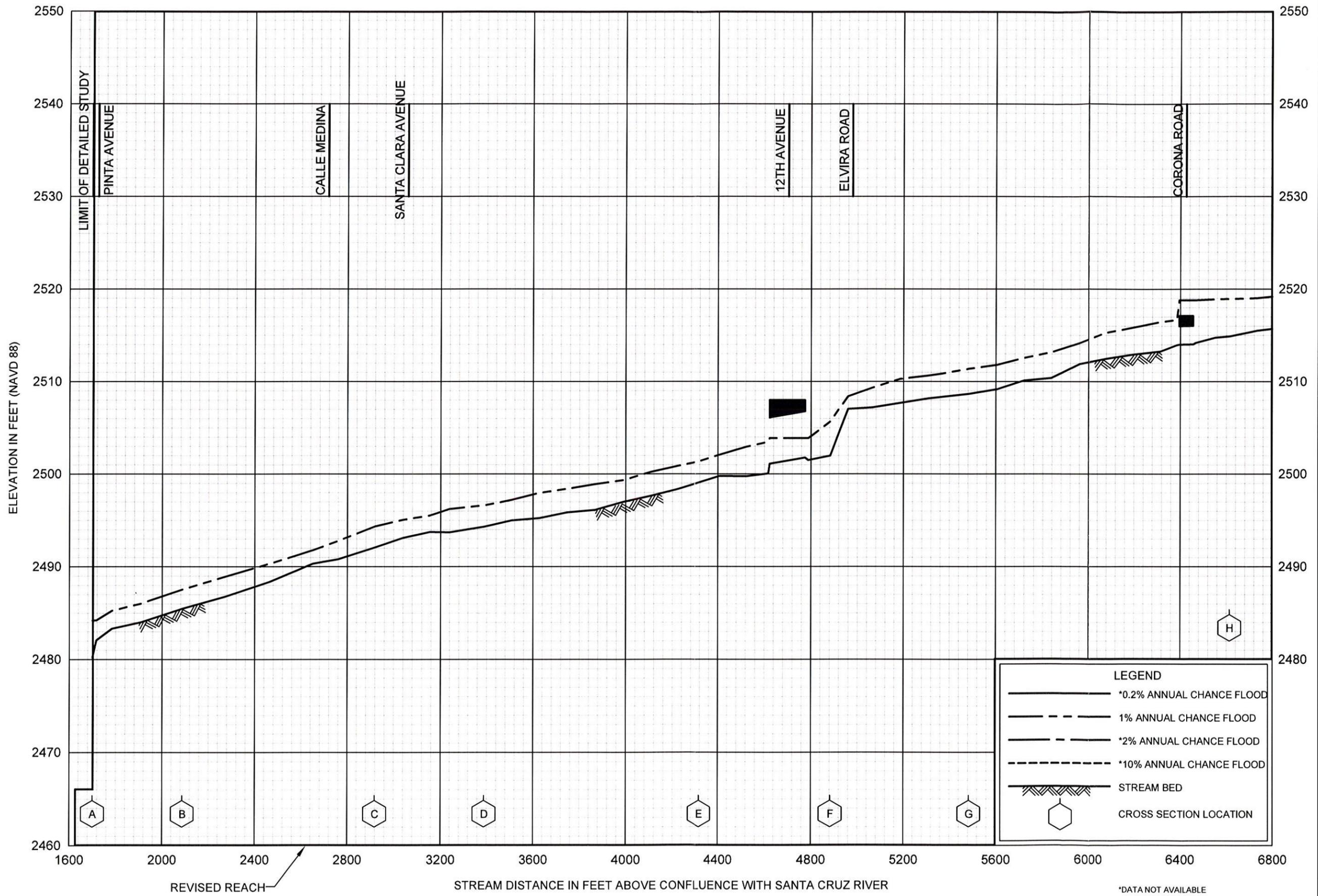
TABLE 6- SUMMARY OF DISCHARGES - continued

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs)			
		10-PERCENT	2-PERCENT	1-PERCENT	0.2-PERCENT
COLUMBUS WASH					
At confluence with Alvernon wash	1.71	*	*	2,500	*
At glenn street	1.55	*	*	1,100	*
CITRUS WASH					
Approximately 2,500 feet upstream of Oracle Jaynes Station Road	0.80	*	*	1,562	*
At Oracle Jaynes Station Road	0.80	*	*	1,152	*
COCHIE CANYON					
At East Apex	2.82	*	*	1,777	*
COTTONWOOD CANYON					
At Pinal/Pima County Boundary	10.24	*	*	4,225	*
DERRIO CANYON					
At Pinal/Pima County Boundary	15.98	*	*	5,344	*
EARP WASH					
At confluence with Julian Wash	1.1	*	*	1,360	*
At Country Club Road	0.8	*	*	1,220	*
EAST BRANCH BRAWLEY WASH					
At Avra Valley Road	*	*	*	21,000	*
EASTERN LIMIT BASIN					
At upstream limit of detailed study	15.8	*	*	4,084	*
EL RIO WASH					
At Riverview and Dragoon Avenues	1.1	*	*	1,084	*
EL VADO WASH					
At 6th Avenue	0.32	*	*	212	*
At Santa Clara Avenue	0.78	*	*	465	*
At confluence with Santa Cruz River	0.91	*	*	786	*
ENCHANTED HILLS WASH					
At confluence with West Branch Santa Cruz River	3.2	*	*	4,680	*
Approximately 400 feet upstream of Mission Road	3.1	*	*	4,775	*
At La Cholla Boulevard	3.0	*	*	5,045	*
Approximately 1,100 feet upstream of Greasewood Road	2.8	*	*	5,380	*

REVISED  
DATA →

EL VADO WASH					
At 6th Avenue	0.32	*	*	212	*
At Santa Clara Avenue	0.78	*	*	465	*
At confluence with Santa Cruz River	0.91	*	*	786	*

\*Data not available



**FLOOD PROFILES**

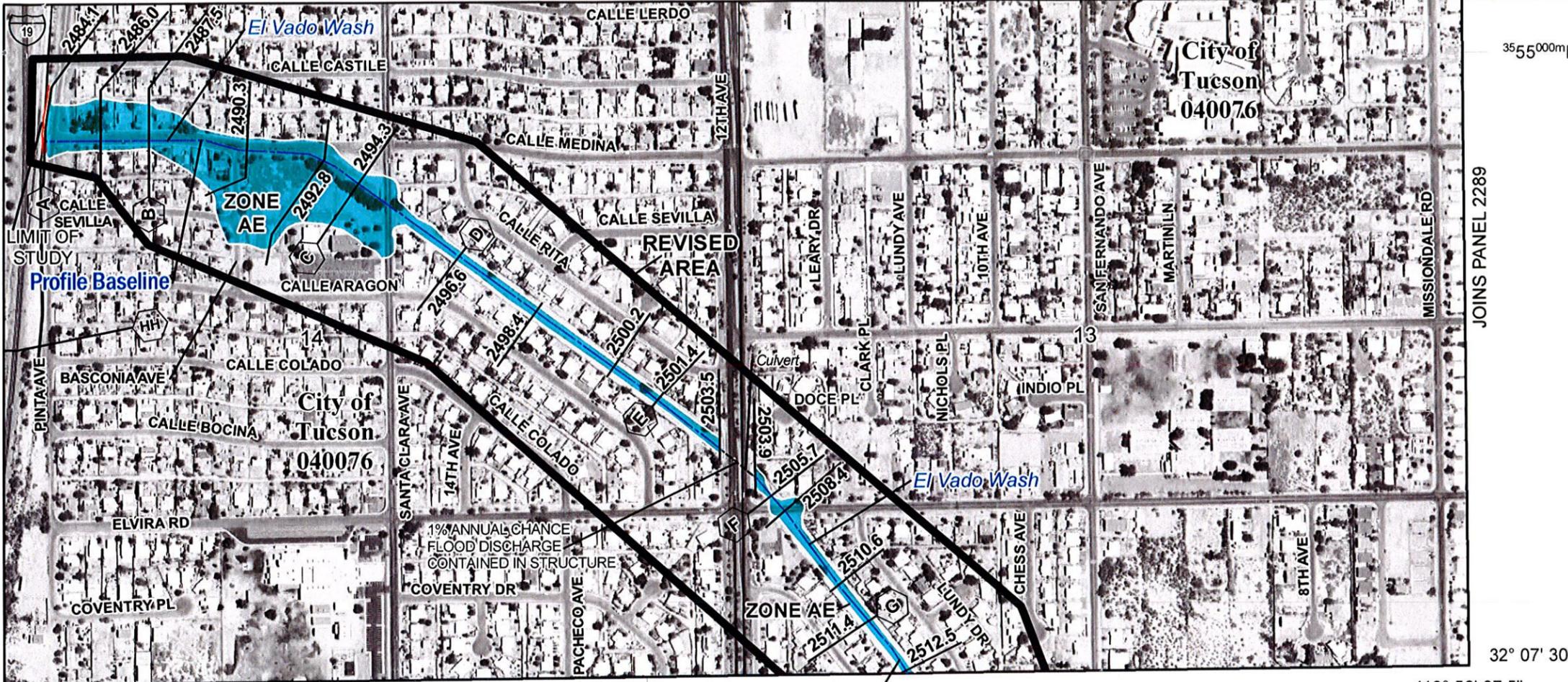
**REVISED TO REFLECT LOMR**  
**EFFECTIVE: April 21, 2020**

**EL VADO WASH**

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FEDERAL EMERGENCY MANAGEMENT AGENCY  
**PIMA COUNTY, AZ**  
 AND INCORPORATED AREAS





SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A.V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
OTHER AREAS OF FLOOD HAZARD		Regulatory Floodway
		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
OTHER AREAS		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee See Notes. Zone X
		Area of Undetermined Flood Hazard Zone D

**SCALE**

Map Projection:  
NAD 1983 HARN StatePlane Arizona Central FIPS 0202 Feet Intl  
Western Hemisphere Vertical Datum NAVD 88

1 inch = 500 feet      1:6,000

0 250 500 1,000 Feet

0 75 150 300 Meters

**FEMA**  
National Flood Insurance Program

**NATIONAL FLOOD INSURANCE PROGRAM**  
FLOOD INSURANCE RATE MAP  
PIMA COUNTY, ARIZONA  
and Incorporated Areas

PANEL **2288** OF 4750

Panel Contains:  
COMMUNITY: TUCSON, CITY OF      NUMBER: 040076      PANEL: 2288      SUFFIX: L

**REVISED TO REFLECT LOMR EFFECTIVE: April 21, 2020**

VERSION NUMBER  
2.1.3.0

MAP NUMBER  
04019C2288L

EFFECTIVE DATE  
JUNE 16, 2011

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 15 SOUTH, RANGE 13 EAST.

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 15 SOUTH, RANGE 13 EAST AND TOWNSHIP 15 SOUTH, RANGE 14 EAST AND TOWNSHIP 16 SOUTH, RANGE 13 EAST AND TOWNSHIP 16 SOUTH, RANGE 14 EAST.

	Without Base Flood Elevation (BFE) <i>Zone AE, AO, AH, VE, AR</i>
	With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
	Regulatory Floodway
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
	Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
	Area with Reduced Flood Risk due to Levee <i>Zone X</i>
	See Notes. <i>Zone X</i>
	Area of Undetermined Flood Hazard <i>Zone D</i>

**SPECIAL FLOOD HAZARD AREAS**

**OTHER AREAS OF FLOOD HAZARD**

**OTHER AREAS**

**SCALE**

Map Projection: NAD 1983 HARN StatePlane Arizona Central FIPS 0202 Feet Intl. Western Hemisphere Vertical Datum NAVD 88

1 inch = 1,000 feet

1:12,000

0 500 1,000 2,000 Feet

0 150 300 600 Meters

**FEMA**

**NATIONAL FLOOD INSURANCE PROGRAM**

FLOOD INSURANCE RATE MAP

PIMA COUNTY, ARIZONA  
and Incorporated Areas

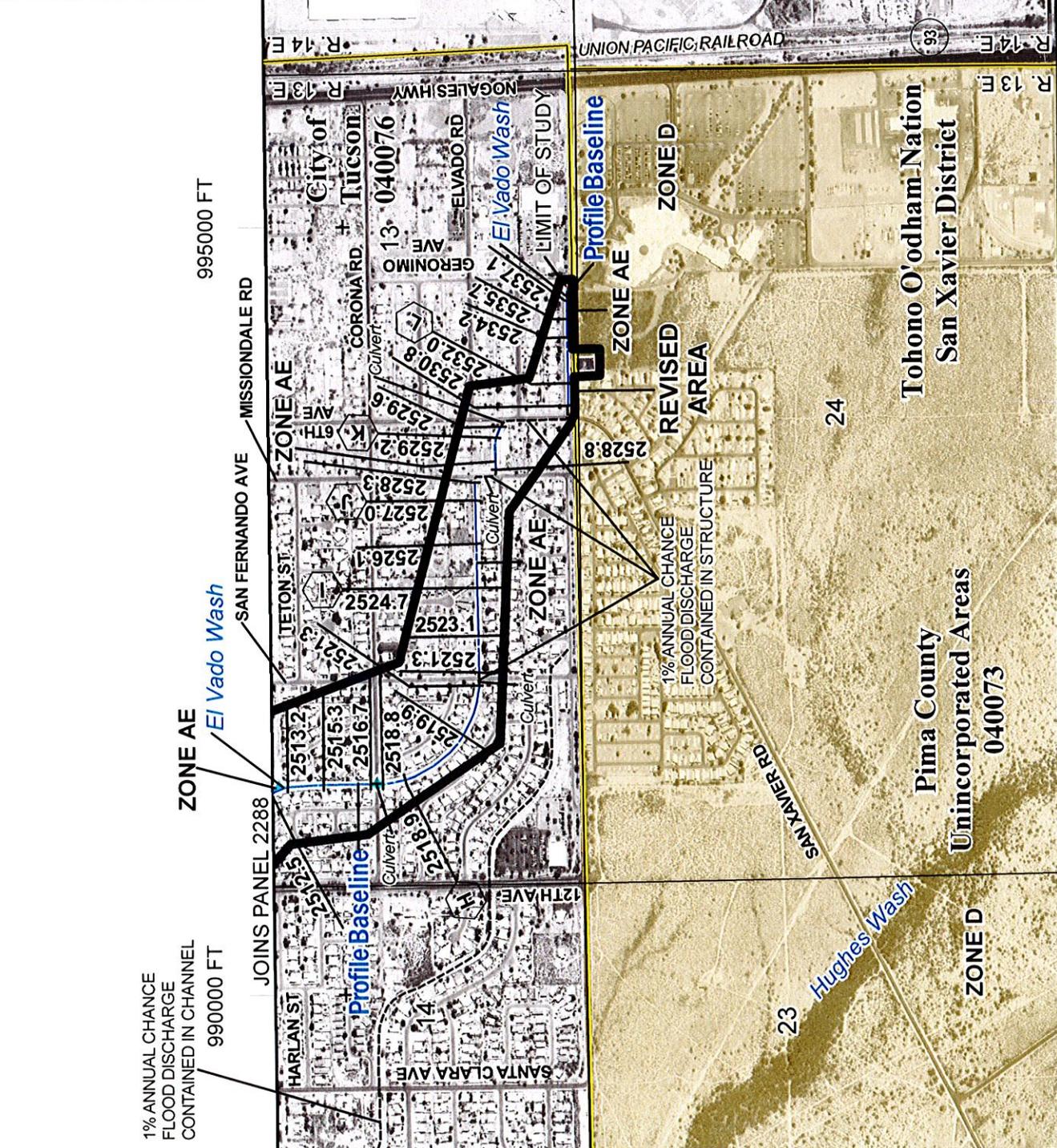
**2880 OF 4750**

Panel Contains:  
COMMUNITY NUMBER 040073  
PIMA COUNTY TUCSON, CITY OF

Panel SUFFIX:  
L 2880  
L 2880

**REVISED TO REFLECT LOMR EFFECTIVE: April 21, 2020**

VERSION NUMBER 2.1.3.0  
MAP NUMBER 04019C2880L  
EFFECTIVE DATE JUNE 16, 2011



1% ANNUAL CHANCE FLOOD DISCHARGE CONTAINED IN CHANNEL  
990000 FT

995000 FT

MISSIONDALE RD

JOINS PANEL 2288

Profile Baseline

Profile Baseline