



# BOARD OF SUPERVISORS AGENDA ITEM REPORT

Requested Board Meeting Date: 8/13/2024

\*= Mandatory, information must be provided

Click or tap the boxes to enter text. If not applicable, indicate "N/A".

**\*Title:**

Quarterly Report of Riparian Mitigation Plans Approved by the Regional Flood Control District Chief Engineer

**\*Introduction/Background:**

Section 16.30.050(B) of the Floodplain Management Ordinance requires:  
"The Chief Engineer shall provide a quarterly report to the Board that states the number of Riparian Habitat Mitigation Plans that the Chief Engineer approved during the previous quarter. The quarterly report must include the number of approved plans that used mitigation banking and the number of approved plans that disturbed more than 5% of Important Riparian Area on a property."

**\*Discussion:**

The attached report describes the District's actions to approve Riparian Habitat Mitigation Plans as well as District actions to utilize the In-lieu Fee revenue.

**\*Conclusion:**

NA

**\*Recommendation:**

This item is for the Board's information and no vote or discussion is requested.

**\*Fiscal Impact:**




None

**\*Board of Supervisor District:**

1  2  3  4  5  All

Department: Regional Flood Control District Telephone: 520-724-4600

Contact: Patricia Gilbert Telephone: 520-724-4606

Department Director Signature: _____		Date: <u>7/3/2024</u>
Deputy County Administrator Signature: _____		Date: <u>7/3/2024</u>
County Administrator Signature: _____		Date: <u>7/5/24</u>

**DATE:** July 3, 2024

**TO:** Flood Control District Board of Directors

**FROM:** Eric Shepp, P.E.  
Director



**SUBJECT: Quarterly Report of Riparian Habitat Mitigation Plans Approved by the Pima County Regional Flood Control District Chief Engineer for the Second Quarter of 2024**

The purpose of this memorandum is to provide a quarterly report of the Riparian Habitat Mitigation Plans approved by the Regional Flood Control District (District). Section 16.30.050(B) of the Floodplain Management Ordinance states:

“The chief engineer shall provide a quarterly report to the board that states the number of riparian habitat mitigation plans that the chief engineer approved during the previous quarter. The quarterly report must include the number of approved plans that used mitigation banking and the number of approved plans that disturbed more than 5% of important riparian area on a property.”

At the request of the Flood Control District Board of Directors this report also includes a summary of the District’s use of In-Lieu fees during the second quarter.

**Mitigation Plans Approved by the Chief Engineer for the Second Quarter of 2024**

The table below summarizes the Riparian Habitat Mitigation Plans approved during the second quarter of 2024. The approved riparian habitat mitigation plans are attached to the report and identified as Exhibits A through F.

APPROVAL DATE	DISTRICT	FPUP	ADDRESS/TAX CODE	DISTURBANCE ACRES	ONSITE MITIGATION	IRA DISTURBANCE	IN-LIEU FEE	EXHIBIT
4/11/2024	1	P24FC00239	Linear Project (no address)	5.07	No	Yes	\$137,667	A
4/29/2024	3	P24SC00045	6000 W. Caterpillar TR	5.23	No	No	\$ 96,232	B
5/03/2024	4	P24FC00413	3033 N. El Camino Rinconado	1.36	No	No	\$ 10,166	C
5/06/2024	4	P24SC00023	6950 E. Southpoint	0.44	No	No	\$ 7,084	D
6/19/2024	4	P24FC00520	13585 S. Bird Dog Ave	0.64	No	No	\$ 4,784	E
6/19/2024	4	P23FC01067	15467 S. Candy Lane	0.34	No	Yes	\$ 3,364	F

**Use of In-Lieu Fees During the Second Quarter of 2024**

During the second quarter, the District spent or encumbered approximately \$810,000 on restoration activities. This includes \$711,000 for restoration of District property referred to as Meander Bend, which is located on the west bank of the Santa Cruz River north of Grant Road. It is anticipated that this project will be substantially complete by the end of the third quarter. Exhibit G is a construction plan that shows the restoration proposed.

In addition, the District spent \$23,000 on invasives removal by the Tucson Audubon Society, and \$76,000 on fencing to secure the District’s open space properties.

Please let me know if you have any questions or need further information.

ES/tj

Attachments

c: Jan Leshner, County Administrator  
Carmine DeBonis, Jr., Deputy County Administrator – Public Works

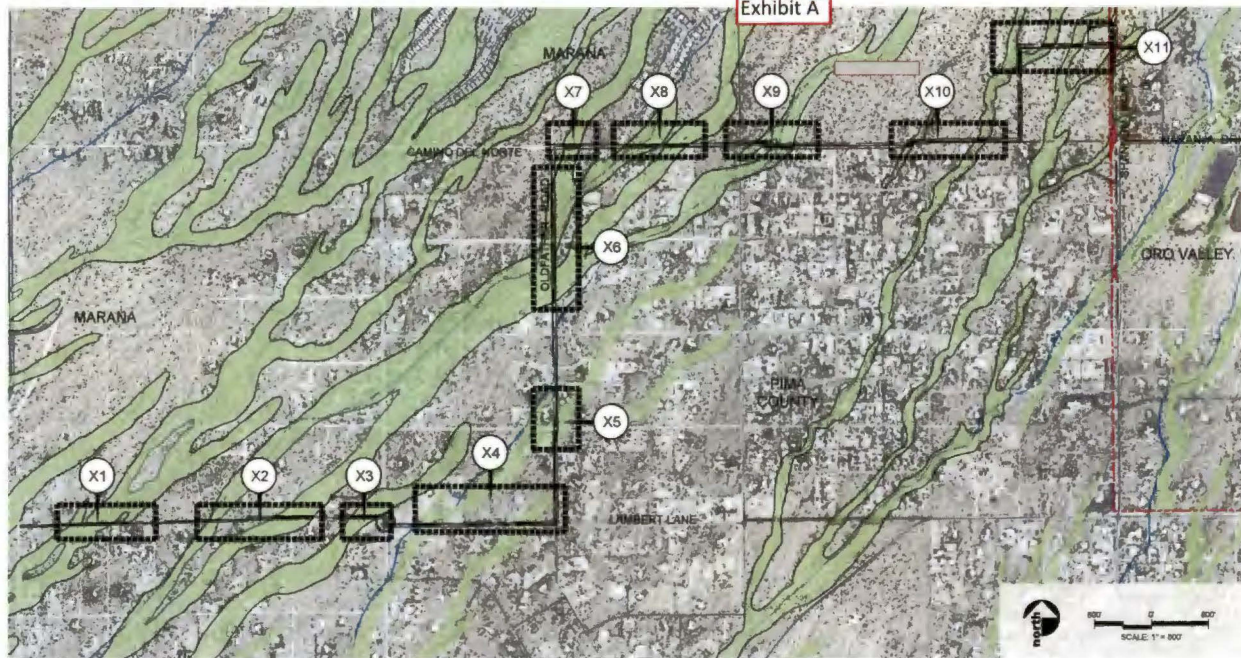
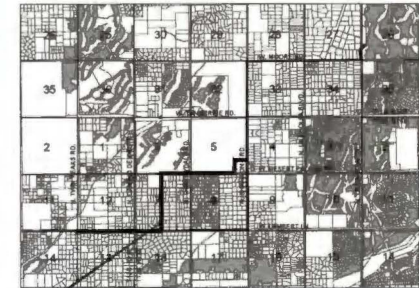


Exhibit A



THIS PROJECT

LOCATION MAP  
A PORTION OF SECTIONS 11-14,  
T-12-S, R-12-E,  
SECTIONS 4, 5, 6, 7, 8, 9, & 10,  
T-12-S, R-13-E,  
G&PM PIMA COUNTY, ARIZONA

SCALE: 1"=1 MILE



LOCATIONS OF RIPARIAN DISTURBANCE- SEE ENLARGEMENTS SHEETS 2-4

**PROJECT OVERVIEW**

THIS PROJECT IS FOR THE INSTALLATION OF A WATER PIPE LINE TO TRANSFER CENTRAL ARIZONA PROJECT (CAP) WATER FROM OASIS RESERVOIR LOCATED NEAR NORTH SHANNON ROAD AND WEST LAMBERT LANE TO THE NORTH LA CAÑADA RESERVOIR LOCATED NEAR WEST MOORE ROAD AND NORTH LA CAÑADA BOULEVARD IN PIMA COUNTY, ARIZONA. THE WATER LINE GENERALLY OCCURS WITHIN 50' OF THE EXISTING ROAD PAVEMENTS.

PORTIONS OF THE ALIGNMENT ARE WITHIN THE TOWN OF ORO VALLEY, PIMA COUNTY, AND THE TOWN OF MARANA. THE MAJORITY OF THE PROPOSED WATER PIPE LINE WILL BE INSTALLED WITHIN IN THE RIGHT OF WAY ALONG EXISTING ROADWAYS. THE PROPOSED ALIGNMENT BEGINS AT THE INTERSECTION OF W LAMBERT LANE AND BLUE BONNET ROAD, RUNS WEST ALONG LAMBERT LANE, TURNS NORTH ALONG OLDFATHER ROAD, TURNING EAST ALONG W. CAMINO DEL NORTE AND TERMINATES AT NORTH SHANNON ROAD.

WESTLAND RESOURCES HAS PREPARED THIS ASSESSMENT OF EXISTING RIPARIAN HABITAT ALONG THE ALIGNMENT WITHIN PIMA COUNTY.

THE PROJECT OCCURS IN THE CENTRAL ARIZONA HIGHLANDS PHYSIOGRAPHIC PROVINCE (FFOLLIOTT 1988) AND IS LOCATED IN THE FLATS BETWEEN THE SANTA RITA MOUNTAINS TO THE TORTOLITA MOUNTAINS IN THE NORTH. THE NORTHERN PORTION OF THE PROJECT AREA IS LOCATED ON THE SOUTHWESTERN SLOPE OF THE TORTOLITA MOUNTAINS IN AN AREA OF MODERATE TOPOGRAPHIC RELIEF THAT IS CHARACTERISTIC OF THE BAJADA FORMATION ASSOCIATED WITH THE DESERT MOUNTAIN RANGES OF CENTRAL AND SOUTHERN ARIZONA. THE SOUTHERN PORTION OF THE PROJECT AREA IS WITHIN FLATTER TERRAIN.

VEGETATION ALONG THE PROPOSED ALIGNMENT IS CHARACTERIZED AS THE PALOVERDE-MIXED CACTI ("ARIZONA UPLAND") SERIES OF THE SONORAN DESERTSCRUB BIOTIC COMMUNITY, WHICH CONTAINS ELEMENTS OF THE CREOSOTE-BURSAGE ("LOWER COLORADO RIVER VALLEY") SERIES (BROWN AND LOWE 1980; TURNER AND BROWN 1982). ON-SITE OBSERVATIONS ARE CONSISTENT WITH THESE DESIGNATIONS. COMMON PLANT SPECIES IN THE VICINITY INCLUDE BAGUARO (*CARNEGIEA GIGANTEA*), VELVET MESQUITE (*PROSOPIS VELUTINA*), BLUE PALOVERDE (*PARKINSONIA FLORIDA*), WHITETHORN ACACIA (*ACACIA CONstricta*), CREOSOTE BUSH (*LARREA TRIDENTATA*), AND A VARIETY OF CHOLLA AND PRICKLY PEAR SPECIES (*OPUNTIA* SP.).

EPHEMERAL DRAINAGES THAT SUPPORT DESIGNATED RIPARIAN HABITAT INTERSECT EACH OF THESE VEGETATION ASSOCIATIONS. RIPARIAN HABITAT ASSOCIATED WITH EPHEMERAL DRAINAGES THAT CROSS THE PROPOSED ALIGNMENT IS TYPICALLY DOMINATED BY SPECIES FOUND IN ADJACENT UPLAND HABITATS, ALTHOUGH THE PLANTS OFTEN OCCUR IN GREATER DENSITIES AND ARE LARGER THAN INDIVIDUALS FOUND IN THE ADJACENT UPLANDS. THESE XERORIPARIAN HABITATS SUPPORT RELATIVELY DENSE VEGETATION, SUCH AS BLUE PALOVERDE, DESERT HACKBERRY, CATCLAW ACACIA, WHITETHORN ACACIA, AND DESERT BROOM. CANYON RAGWEED AND CHEESEBUSH ARE ALSO ASSOCIATED WITH XERORIPARIAN HABITATS. THERE ARE NO PERENNIAL AQUATIC, HYDRORIPARIAN, OR MESORIPARIAN HABITATS WITHIN THE RIGHT-OF-WAY.

DUE TO THE NATURE OF THE PROJECT IT IS IMPOSSIBLE TO AVOID IMPACTS TO THE RIPARIAN HABITAT RESOURCES. AREAS OF RIPARIAN HABITAT IMPACTED ARE DESIGNATED ON THIS PLAN (SEE AREA ENLARGEMENTS AS WELL AS IMPACT FEE CALCULATIONS)

THE MAP ABOVE DEPICTS THE PROPOSED WATER LINE ALIGNMENT. THERE ARE 11 LOCATIONS WHERE PIMA COUNTY MAPPED RIPARIAN HABITAT WILL BE IMPACTED BY THE CONSTRUCTION OF THE PROJECT. . . XERORIPARIAN C, IMPORTANT RIPARIAN AREA C (IRA/XC) HABITATS ARE EFFECTED. THESE AREAS ARE IDENTIFIED ON THE MAP ABOVE AND EACH AREA IS ENLARGED ON THE FOLLOWING PAGES.

RIPARIAN AREAS IMPACTED WITHIN PIMA COUNTY WILL UTILIZE THE IN LIEU FEE APPROACH TO MITIGATE FOR IMPACTS TO THIS RIPARIAN HABITAT. THESE AREAS WILL BE SEEDED WITH A NATIVE SEED MIX FOLLOWING CONSTRUCTION. THE MIX AND SPECIFICATION FOR SEEDING WILL BE INCLUDED IN THE NATIVE PLANT SALVAGE PLAN. CALCULATIONS FOR REQUIRED MITIGATION PLANTING FOR AREAS IMPACTED WITHIN ORO VALLEY ARE INCLUDED IN A SEPARATE SUBMITTAL. BECAUSE THIS WILL BE A UTILITY EASEMENT, NO MITIGATION PLANTING CAN OCCUR IN THESE AREAS. OFF SITE MITIGATION LOCATIONS WILL BE IDENTIFIED IN CONJUNCTION WITH THE TOWN OF ORO VALLEY.

**PROTECTION OF UNDISTURBED REGULATED RIPARIAN HABITAT**

RIPARIAN HABITAT TO BE PRESERVED SHALL BE FENCED FOR PROTECTION DURING CONSTRUCTION USING MINIMUM 4' HIGH ORANGE MESH BARRICADE FENCING. PROTECTIVE FENCING MUST REMAIN IN PLACE THROUGHOUT THE CONSTRUCTION AND DEVELOPMENT PROCESS.

**IN-LIEU FEE**

TO COMPENSATE FOR DISTURBANCE TO REGULATED RIPARIAN HABITAT (RRH) THE IN-LIEU FEE (ILF) OPTION HAS BEEN CHOSEN (IN-LIEU OF ON-SITE MITIGATION). FEE CALCULATIONS WERE PREPARED USING THE ILF DEVELOPMENT PROJECT FLAT FEE TABLE (TABLE 2) IN THE RRR OFFSITE MITIGATION GUIDELINES FOR UNINCORPORATED PIMA COUNTY MANUAL. THE COST PER ACRE FOR IRA/XC DISTURBANCE FOR DEVELOPMENT IS LISTED AS \$28,750 AND XC IS LISTED AS \$18,100.

**IN-LIEU FEE CALCULATIONS**

IRA/XC	4.43 acres of riparian IRA xeroriparian c habitat will be disturbed in construction. fee per acre is \$28,750 \$28,750 x 4.43 = \$127,363
XC	.64 acres of riparian xeroriparian c habitat will be disturbed in construction. fee per acre is \$18,100 \$18,100 x .64 = \$11,504

TOTAL FEE: \$127,363 + \$11,304 = \$138,667

DESIGNED BY: KAS RWS  
DRAWN BY: KAS JSA  
CHECKED BY: RWS JSA  
DRAWING SCALE(S):



NO.	BY	DESCRIPTION	DATE

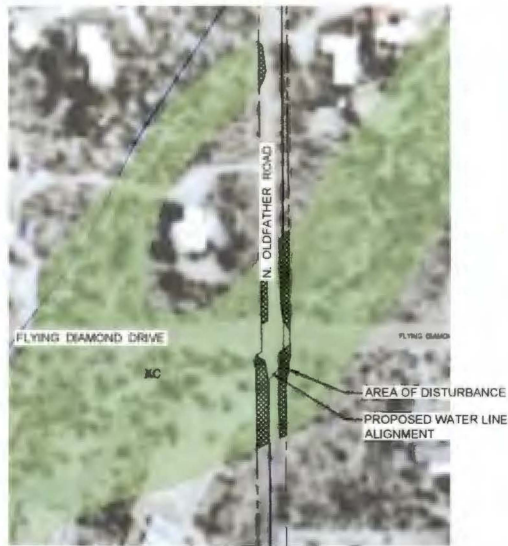
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 NORTHWEST RECHARGE, RECOVERY, AND DELIVERY SYSTEM  
 OWMV INDEPENDENT PROJECT ALIGNMENT  
 RIPARIAN ASSESSMENT- PIMA COUNTY



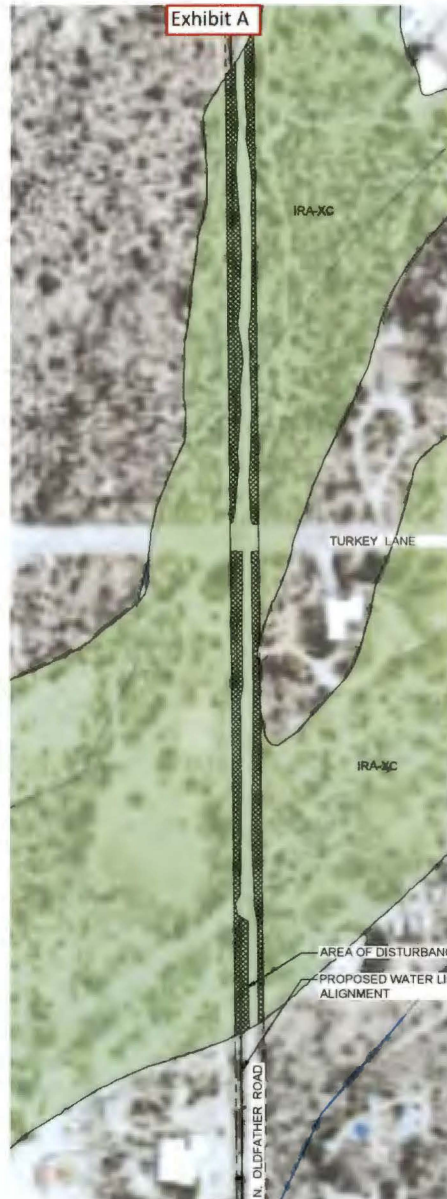
PLAN DATE:  
APRIL 09, 2024  
PROJECT NUMBER:  
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SHEET NO.



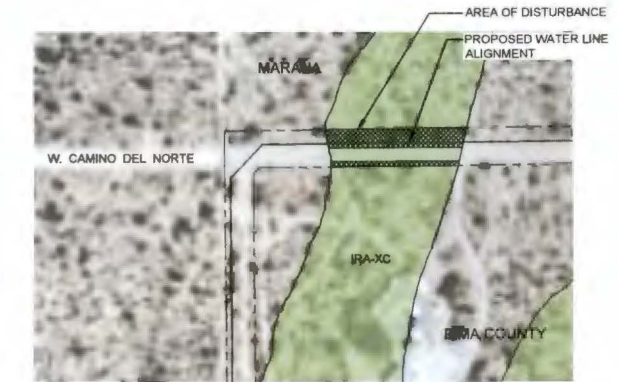
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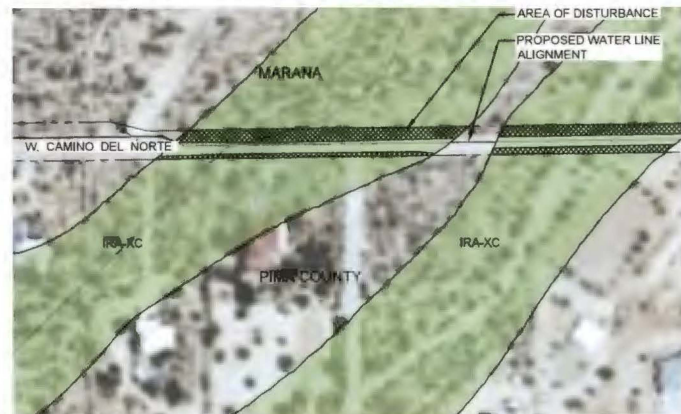
**X5** XERORIPARIAN CLASS C (XC)  
11,177 SF .26 AC



**X6** XERORIPARIAN CLASS IRA/C (IRA-XC)  
50,116 SF 1.15 AC



**X7** XERORIPARIAN CLASS IRA/C (IRA-XC)  
10,016 SF .23 AC



**X8** XERORIPARIAN CLASS IRA/C (IRA-XC)  
24,442 SF .56 AC



DESIGNED BY: KAS RWS  
 DRAWN BY: KAS JSA  
 CHECKED BY: RWS JSA  
 DRAWING SCALE(S):



NO.	BY	DESCRIPTION	APP'D.	DATE

ORO VALLEY WATER UTILITY  
 NORTHWEST RECHARGE, RECOVERY, AND DELIVERY SYSTEM  
 OVMU INDEPENDENT PROJECT ALIGNMENT  
 RIPARIAN ASSESSMENT- PIMA COUNTY



PLAN DATE:  
 APRIL 09, 2024  
 PROJECT NUMBER:  
 206.137  
 SHEET NO:

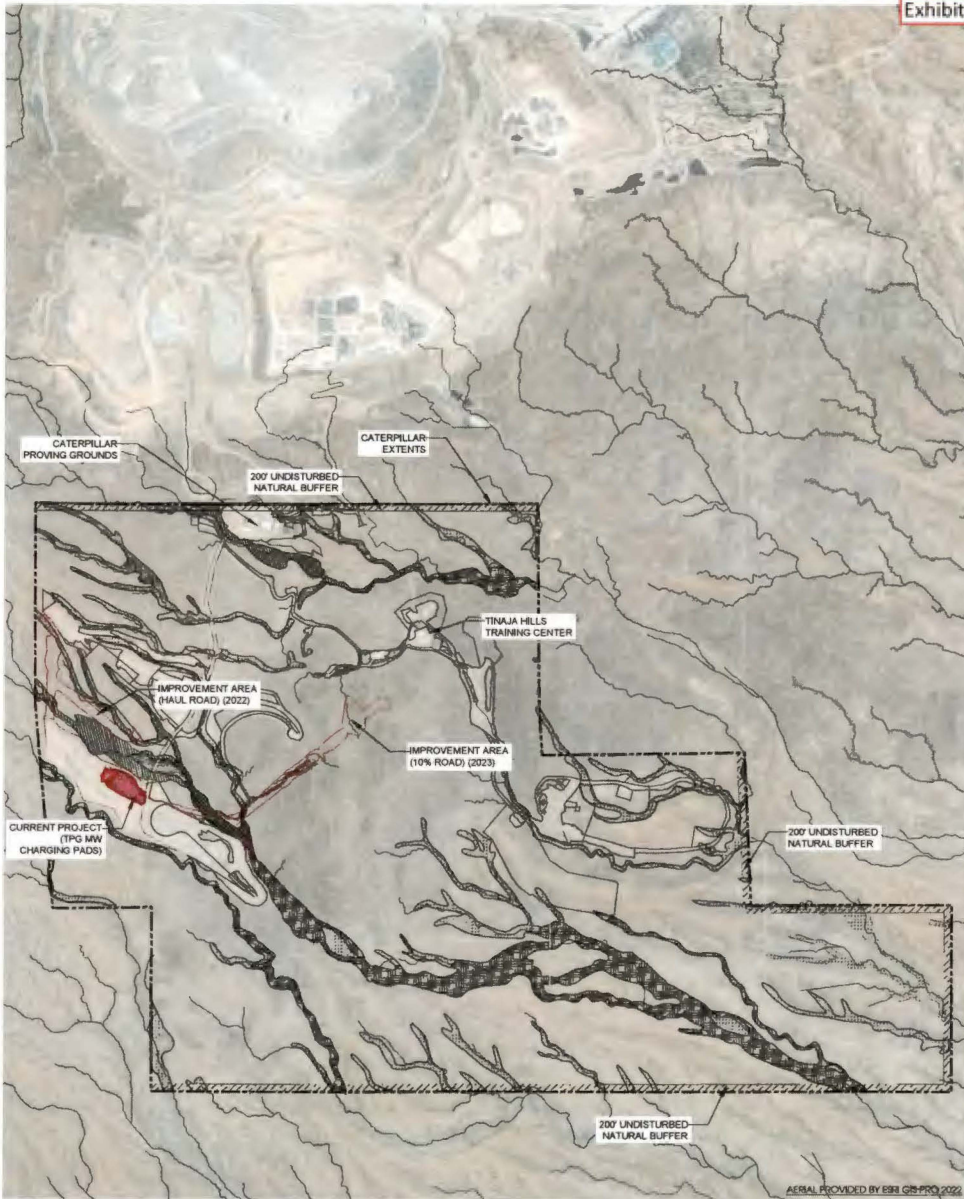


Exhibit B

# CATERPILLAR PROJECT HISTORY

(5/12/1989 - 4/23/24)

NOTE: INFORMATION SHOWN IN THESE TABLES IS TAKEN DIRECTLY FROM PIMA COUNTY GEOGRAPHIC INFORMATION SYSTEMS (GIS).



APN:	DEVELOPMENT PERMITS	NAME BY PIMA COUNTY
304-01-0184, 304-01-0185, 304-01-0186, 304-01-0187, 304-30-0024, 304-30-0025, 304-30-0026, 304-30-0027, 304-30-0028	P13600081	CATERPILLAR INC. TUCSON PROVING GROUND PRIVATE GRADING PLANS, Approved: 10/21/2013
304-01-0189, 304-01-0190	P80120044	CATERPILLAR PROVING GROUND WELL NO 4 PIPELINE AND STORAGE TANK, Approved: 5/23/2018 (7.88% or about 174.66 acres)
304-01-0189, 304-01-0184, 304-01-0185, 304-01-0186, 304-01-0187, 304-30-0024, 304-30-0025, 304-30-0026, 304-30-0027, 304-30-0028	P22500001	CATERPILLAR TUCSON PROVING GROUNDS TESTING AND REHABILITATION FACILITY, Approved: 9/10/2015 (0.41% or about 87.78 acres)
304-01-0189	P22500002	CATERPILLAR INC. TUCSON PROVING GROUND PRIVATE GRADING PLANS, Approved: 10/21/2013
304-01-0189	P22500003	CATERPILLAR TEST SITES 18 & 24, Approved: 11/27/2012 (0.41% or about 87.78 acres)
304-01-0189, 304-01-0184, 304-01-0185, 304-30-0024	P22500009	CATERPILLAR TEST SITE 23, Approved: 10/14/2012 (0.88% or about 63.23 acres - Area less than 5% See note **)
304-01-0189	P23800009	TUCSON PROVING GROUNDS AND SITE, Approved: 10/23/2013 (0.98% or about 15.53 acres - Area less than 5% See note **)
304-01-0189, 304-01-0185, 304-01-0187	P23500005	TUCSON PROVING GROUNDS HALL ROAD SITE 18-17, Approved: 0/13/2012 (0.20% or about 7.18 acres - Area less than 5% See note **)
304-01-0189	P13600003	CATERPILLAR TPC PARKING ADDITION 5E & REV 1, Approved: 10/15/2013 (0.44% or about 7.13 acres - Area less than 5% See note **)
304-01-0189	P22500011	CATERPILLAR TPC STORAGE SITE, Approved: 1/17/2013 (0.40% or about 6.55 acres - Area less than 5% See note **)
304-01-0189, 304-01-0184	P14500007	CATERPILLAR SALES & MARKETING FACILITY, Approved: 7/20/2015 (0.37% or about 5.32 acres - Area less than 5% See note **)
304-01-0189	P23500010	CATERPILLAR THE SOUTH PARKING EXTENSION & REV 1, Approved: 10/23/2013 (0.38% or about 5.44 acres - Area less than 5% See note **)
304-01-0189, 304-01-0187	P22500008	SITE GRADING - CATERPILLAR SITE - 10% ROAD, Approved: 8/21/2013 (0.02% or about 30.42 acres)
304-01-0189	P13600004	CATERPILLAR TINAJA HILLS FACILITY TRUCK WASH STORMWATER DRAINAGE, Approved: 11/29/2018 (1.33% or about 10.86 acres - Area less than 5% See note **)
304-01-0189	P13600009	CATERPILLAR TINAJA HILLS, Approved: 3/24/2018 (0.51% or about 4.92 acres - Area less than 5% See note **)
304-01-0189	P13600015	CATERPILLAR TINAJA HILLS FUEL STORAGE FACILITY, Approved: 01/13/2013 (0.30% or about 2.48 acres - Area less than 5% See note **)
304-01-0189	P14500008	CATERPILLAR TINAJA HILLS NEW GENERATOR BUILDING & REV 3, Approved: 3/17/2015 (0.26% or about 2.15 acres - Area less than 5% See note **)

APN:	DEVELOPMENT PLAN	NAME BY PIMA COUNTY
304-01-0184, 304-01-0185	Book 17, Page 80	TUCSON PROVING GROUND REVISION NO. 3, Project Number: P1313045, Approved: 10/13/2013
304-01-0187, 304-01-0184, 304-30-0024, 304-30-0025	Book 8, Page 81	TUCSON PROVING GROUND MARKETING & SALES FACILITY, Project Number: C01338003, Approved: 5/12/1989 (0.888% or about 605.69 acres)

APN:	DOT IMPROVEMENT PLAN NAME BY PIMA COUNTY
304-01-0184, 304-01-0185	Book 17, Page 80
304-01-0187, 304-01-0184, 304-30-0024, 304-30-0025	Book 8, Page 81

## CATERPILLAR PROJECT HISTORY RIPARIAN HABITAT DISTURBANCE NOTES

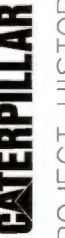
- TOTAL AMOUNT OF REGULATED RIPARIAN HABITAT WITHIN THE PROJECT BOUNDARY: 836.97 AC
  - IRA 1': 14.72 AC
  - IRA 5': 28.98 AC
  - IRA 10': 325.71 AC
  - XERORIPARIAN 1': 85.83 AC
  - XERORIPARIAN 5': 371.82 AC
  - XERORIPARIAN 10': 0.31 AC
- HISTORIC AERIAL PHOTOGRAPHY AND A REVIEW OF ALL PROJECTS APPROVED BY PIMA COUNTY FOR THE CATERPILLAR COMPLEX WERE UTILIZED TO DETERMINE NO DISTURBANCE TO REGULATED RIPARIAN HABITAT HAS OCCURRED SINCE THE ADOPTION OF THE RIPARIAN HABITAT ORDINANCE IN 2005 (DEVELOPMENT PERMITS WERE APPROVED IN 2022 & 2023 FOR: HALL ROAD & 10% ROAD WHICH INCLUDE RIPARIAN HABITAT MITIGATION PLANS).
- ALL DISTURBANCE TO REGULATED RIPARIAN HABITAT FOR THE PROVING GROUNDS AND TINAJA HILLS EXISTED PRIOR TO 2005 AS SHOWN IN 2002 PA6 COLOR ORTHOPHOTO IMAGERY.
- THE HALL ROAD AND 10% ROAD WERE THE FIRST IMPROVEMENT AREAS TO DISTURB RIPARIAN HABITAT SINCE THE ORDINANCE TOOK EFFECT IN 2005 AND INCLUDED MITIGATION PLANS (IN-LIEU FEES).
- TOTAL AMOUNT OF PROPOSED REGULATED RIPARIAN HABITAT DISTURBANCE WITHIN THE CURRENT IMPROVEMENT AREA:
  - TPC MW CHARGING
    - XERORIPARIAN 5': 5.23 AC
- APPLICABILITY: PURSUANT TO CHAPTER 18.30.050 A OF THE PIMA COUNTY FLOODPLAIN AND EROSION HAZARD MANAGEMENT ORDINANCE NO. 2014-025 (ORDINANCE), IF AN APPLICANT DEMONSTRATES TO THE SATISFACTION OF THE DISTRICT THAT ALTERATION OF A REGULATED RIPARIAN HABITAT CANNOT REASONABLY BE AVOIDED, A RIPARIAN HABITAT MITIGATION PLAN (RHMP) SHALL BE SUBMITTED TO THE DISTRICT FOR APPROVAL WHEN MORE THAN 1/2 ACRE (14,520 SQUARE FEET) OF REGULATED RIPARIAN HABITAT (RRH) IS DISTURBED.

### LEGEND

	CATERPILLAR EXTENTS		IRA 1'		XERORIPARIAN 5'
	CURRENT IMPROVEMENT AREA		IRA 5'		XERORIPARIAN 10'
	PREVIOUS HALL & 10% ROAD PROJECTS		IRA 10'		XERORIPARIAN 1'
	WASH NETWORK				
	200' UNDISTURBED NATURAL BUFFER				



The contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing. Any errors or omissions shall be reported to the architect immediately. The copyright of all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.



6000 WEST CATERPILLAR TRAIL  
GREEN VALLEY, ARIZONA

PROJECT NUMBER:	TPC 625-18
DRAWN BY:	FB
CHECKED BY:	OB
CAD FILE:	
SCALE:	AS NOTED

## PROJECT HISTORY

P22SC00045

NOTE: THIS CONTRACT PROVIDES FOR BILLING AND PAYMENT TERMS OTHER THAN THOSE SET FORTH IN THE ARIZONA PROMPT PAY ACT (A.R.S. 34-1129 ET. SEQ.). A WRITTEN DESCRIPTION OF THE BILLING AND PAYMENT TERMS APPLICABLE TO THIS PROJECT IS AVAILABLE FROM THE OWNER ON REQUEST.

Exhibit B

# TPG MW CHARGING

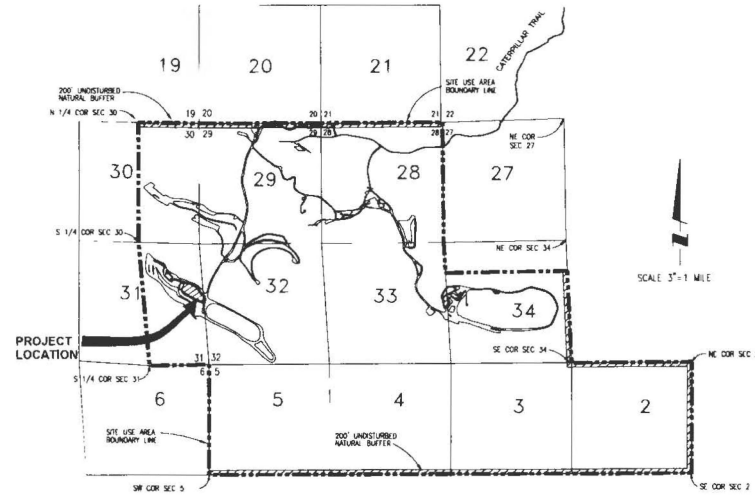
FOR THE TUCSON PROVING GROUNDS  
(WITHIN TEST SITE 17 AND NEW AREA 29)  
MW CHARGING  
LOCATED WITHIN PORTIONS OF SECTIONS 31 AND 32,  
TOWNSHIP 18S, RANGE 12 EAST, G&SRM,  
PIMA COUNTY, ARIZONA

IN LIEU-FEE TABLE

TPG MW CHARGING			
RIPIARIAN TYPE	IN-LIEU FEE PER ACRE	DISTURBED ACRES	TOTAL IN-LIEU FEE
XERORIPARIAN 'B'	\$18,400.00	5.23	\$96,232
<b>TOTAL</b>			<b>\$96,232</b>

GENERAL NOTES

- ZONING: THE EXISTING ZONING IS "RH"
- TAX CODE PARCELS: 304010185, 304010187, 30401018H, 30401018I, 30401018K, 30401018N, 30430002H, 30430002I, 30430002K, 30430002L
- LAND USE: FRODOING GROUNDS
- GROSS SITE AREA: 6,088 ACRES
- IMPROVEMENT AREA (TOTAL NEW DISTURBANCE IN NEW AREA 29): 8.24 ACRES
- TOTAL RIPIARIAN AREA DISTURBED: 5.23 ACRES (XERORIPARIAN 'B')
- RIPIARIAN AREA DISTURBED BY TPG MW CHARGING WILL BE MITIGATED BY PAYMENT OF AN IN LIEU FEE.
- THE IN LIEU FEE FOR XERORIPARIAN 'B' IS \$18,400/ACRE.
- TOTAL IN-LIEU FEE (5.23 AC \* \$18,400) FOR THIS PROJECT IS \$96,232.00
- RIPIARIAN HABITAT TO BE PRESERVED SHALL BE FENCED FOR PROTECTION DURING CONSTRUCTION USING MINIMUM 4-FOOT HIGH ORANGE MESH BARRICADE FENCING. PROTECTIVE FENCING MUST REMAIN IN PLACE THROUGHOUT THE CONSTRUCTION AND DEVELOPMENT PROCESS.



LOCATION MAP

SHEET 1 OF 2  
LOCATED IN SECTIONS 31 AND 32  
TOWNSHIP 18 S, RANGE 12 EAST, G&SRM,  
PIMA COUNTY, ARIZONA



3000  
CHANDLER, AZ 85226  
The contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to the contractor without delay. All dimensions and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.



TPG MW CHARGING

5000 WEST CATERPILLAR TRAIL GREEN VALLEY, ARIZONA

DATE \_\_\_\_\_

PROJECT NUMBER: TPG SCS-18

DRAWN BY: [Signature]

CHECKED BY: [Signature]

CAD FILE: [Signature]

SCALE: AS NOTED

RIPIARIAN HABITAT MITIGATION

P22SC00045

NOTE: THIS CONTRACT PROVIDES FOR BILLING AND PAYMENT TERMS OTHER THAN THOSE SET FORTH IN THE ARIZONA PROMPT PAY ACT (ARS 32-1129 (1), SEC.) A WRITTEN DESCRIPTION OF THE BILLING AND PAYMENT TERMS APPLICABLE TO THIS PROJECT IS AVAILABLE FROM THE OWNER ON REQUEST.

DRAWING: C:\projects\18\180000\working\drawing\18\_18\_ripiarian\_mitigation.dwg PLOTFILE: 4/23/2024 11:40 AM BY: [Signature]





Exhibit C

## 2024 Regulated Riparian Habitat Disturbance

Area A

Area B

Area C

38,836 sq ft

16,714 sq ft

3,820 sq ft

### Legend

- Pre 2005 Mapped Disturbance
- Regulated Riparian Habitat Xeroriparian C
- Unpermitted Riparian Disturbance

Total Regulated Riparian Habitat Xeroriparian C: 1.93 ac

Area A: 38,836 sq ft  
Area B: 16,714 sq ft  
Area C: 3,820 sq ft

Total Disturbance:  
59,370 sq ft (1.36 ac)

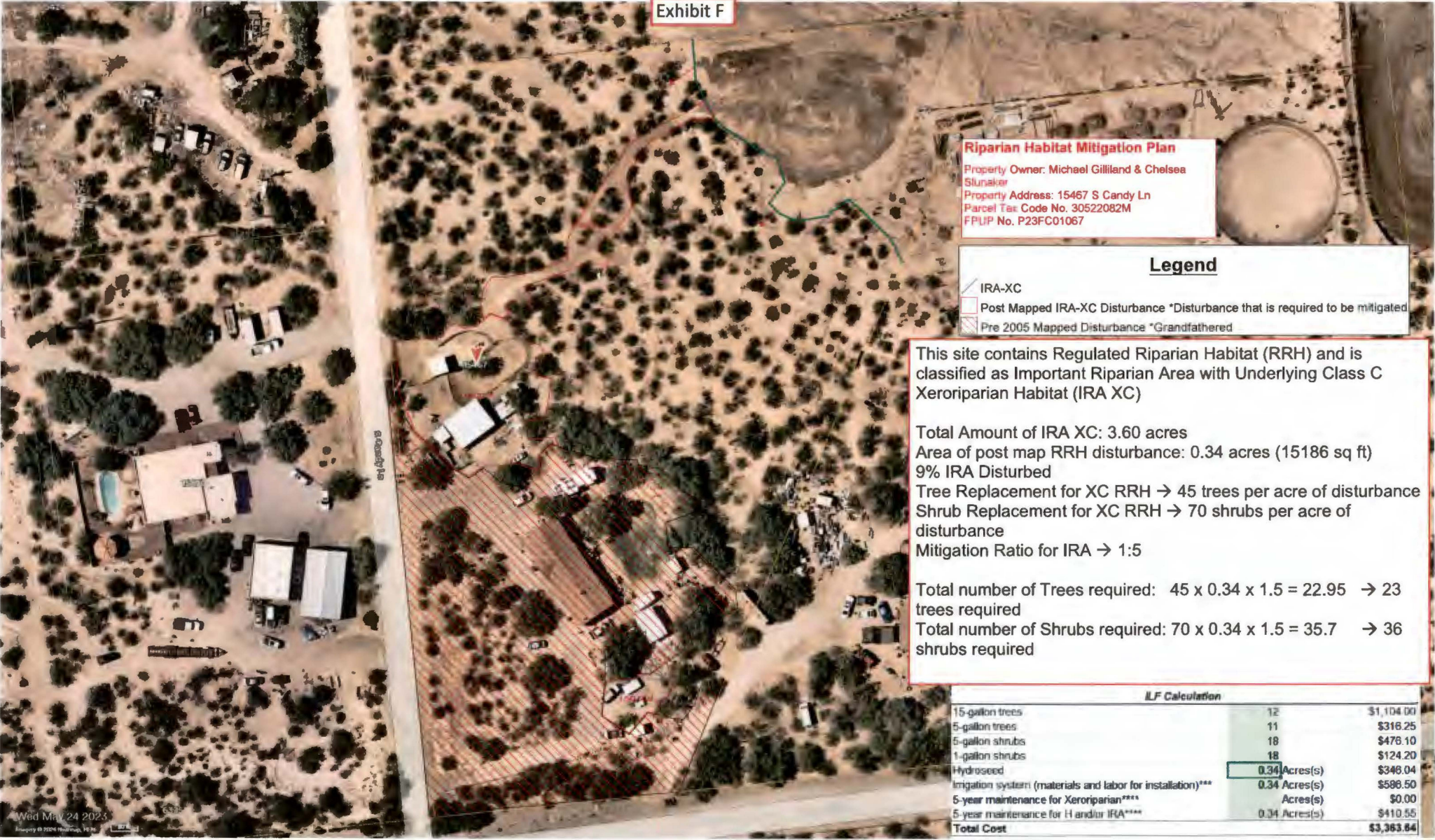
Residence of Michael Vasquez  
3033 N El Camino Rinconado

$\$7,475 \times 1.36ac = \$10,166$





**Exhibit F**



**Riparian Habitat Mitigation Plan**

Property Owner: Michael Gilliland & Chelsea  
 Silunakar  
 Property Address: 15467 S Candy Ln  
 Parcel Tax Code No. 30522082M  
 FPUP No. P23FC01067

**Legend**

- IRA-XC
- Post Mapped IRA-XC Disturbance \*Disturbance that is required to be mitigated
- Pre 2005 Mapped Disturbance \*Grandfathered

This site contains Regulated Riparian Habitat (RRH) and is classified as Important Riparian Area with Underlying Class C Xeroriparian Habitat (IRA XC)

Total Amount of IRA XC: 3.60 acres  
 Area of post map RRH disturbance: 0.34 acres (15186 sq ft)  
 9% IRA Disturbed  
 Tree Replacement for XC RRH → 45 trees per acre of disturbance  
 Shrub Replacement for XC RRH → 70 shrubs per acre of disturbance  
 Mitigation Ratio for IRA → 1:5

Total number of Trees required:  $45 \times 0.34 \times 1.5 = 22.95 \rightarrow 23$  trees required  
 Total number of Shrubs required:  $70 \times 0.34 \times 1.5 = 35.7 \rightarrow 36$  shrubs required

**ILF Calculation**

15-gallon trees	12	\$1,104.00
5-gallon trees	11	\$316.25
5-gallon shrubs	18	\$476.10
1-gallon shrubs	18	\$124.20
Hydroseed	0.34 Acres(s)	\$348.04
Irrigation system (materials and labor for installation)***	0.34 Acres(s)	\$586.50
5-year maintenance for Xeroriparian****	Acres(s)	\$0.00
5-year maintenance for H and/or IFA****	0.34 Acres(s)	\$410.55
<b>Total Cost</b>		<b>\$3,363.64</b>

# MEANDER BEND PARK

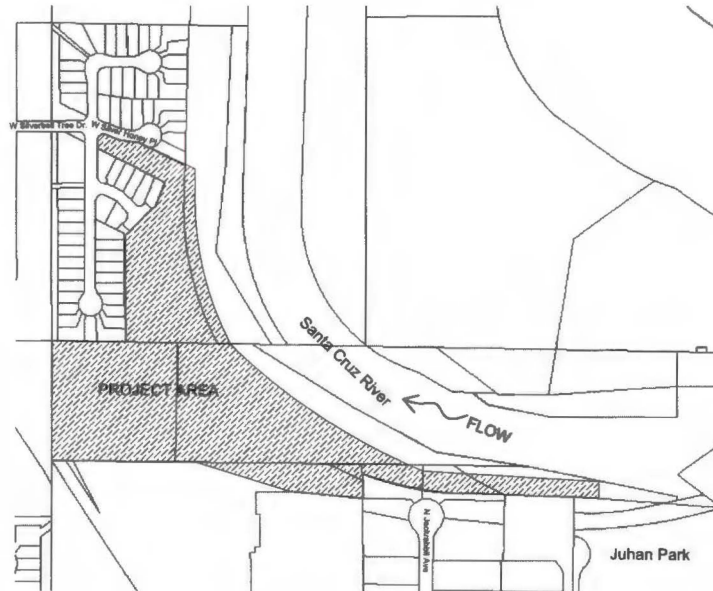
2055 W SILVER HONEY PL, TUCSON, AZ 85745

SCOPE OF WORK INCLUDES STORMWATER HARVESTING BERMS, DECOMPOSED GRANITE PATH, LANDSCAPE AND IRRIGATION

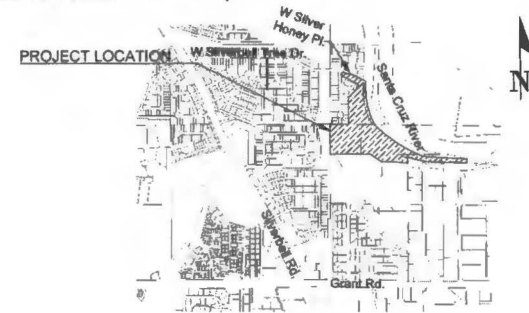


ADELITA GRIJALVA	CHAIR	DISTRICT 5
REX SCOTT	VICE CHAIR	DISTRICT 1
MATT HEINZ	MEMBER	DISTRICT 2
SHARON BRONSON	MEMBER	DISTRICT 3
STEVE CHRISTY	MEMBER	DISTRICT 4

THIS PROJECT LOCATED IN SUPERVISOR DISTRICT 3



PROJECT INDEX MAP  
Scale 1" = 250'



LOCATION MAP  
Scale 1" = 1000'

SHEET INDEX

SHEET DESCRIPTION	PAGE NO.
COVER	1
SHEET CUTS	2
CONSTRUCTION NOTES	3
LANDSCAPE PLAN	4-10
LANDSCAPE DETAILS	11-13
LANDSCAPE NOTES	14
IRRIGATION PLANS	15-21
IRRIGATION NOTES/DETAILS	22-23

APPROXIMATE  
EARTHWORK  
NET IMPORT (CY)  
188



NO.	Revisions	Engineer	Date
NO.	Revisions	Engineer	Date

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT  
201 N Stone Ave. 9th floor Tucson, Arizona 85701  
Phone Number: (520) 724-4800  
ERIC SHEPP, P.E., DIRECTOR

Approved: \_\_\_\_\_  
Director

Project No.

SCALES: HORIZ: N/A  
VERT: N/A





**Planting Schedule**

SYM	NAME	QTY	SIZE
<b>TREES</b>			
○	Whitebark Acacia <i>Acacia constricta</i> (ACACON)	38	5 gal.
○	Catclaw Acacia <i>Acacia greggii</i> (ACAGRE)	38	5 gal.
○	Desert Willow <i>Chilopsis linearis</i> (CHILN)	45	5 gal.
○	Blue Palo Verde <i>Parkinsonia florida</i> (PARFLO)	44	5 gal.
○	Velvet Mesquite <i>Prosopis velutina</i> (PROVEL)	90	5 gal.

SYM	NAME	QTY	SIZE
<b>SHRUBS</b>			
○	Beebrush <i>Aloysia gratissima</i> (ALOGRA)	20	15" TP
○	Tricot <i>Tricot californica</i> (TRICAL)	20	6 gal.
○	Pinelawn Milkwed <i>Andropogon brevifolius</i> (ASCLIN)	19	1 gal.
○	Desert Marigold <i>Bulbosa multiflora</i> (BAMUL)	19	1 gal.
○	Desert Hackberry <i>Celtis pallida</i> (CELPAL)	50	5 gal.
○	Detara <i>Detara virgata</i> (DATVIR)	19	1 gal.
○	Brittlebush <i>Encelia farinosa</i> (ENCFAF)	18	1 gal.
○	Cresote <i>Larrea tridentata</i> (LARTR)	28	15" TP
○	Waltwherry <i>Lytham fremontii</i> (LYCFRE)	28	5 gal.
○	Globe-willow <i>Sphaeralcea ambigua</i> (SPHAMB)	12	1 gal.
○	Trailing Milkwed <i>Funestrum cyranchoides</i> (SARCYA)	9	1 gal.
○	Dogweed <i>Thymophylla pentachaeta</i> (THYPEN)	19	1 gal.
○	Graythorn <i>Ziziphium obtusifolium</i> (ZIZOBT)	36	5 gal.

SYM	NAME	QTY	SIZE
<b>ACCENTS</b>			
○	Murphy's Agave <i>Agave murphyi</i> (AGAMUR)	22	3 gal.
○	Cane Cholla <i>Cylindropuntia spinosior</i> (CYLSP)	26	3 gal.
○	Staghorn cholla <i>Cylindropuntia versicolor</i> (CYLVER)	22	3 gal.
○	Hedgehog Cactus <i>Echinocactus sp.</i> (ECHSP)	20	1 gal.
○	Prickly Pear <i>Opuntia engelmannii</i> (OPUENG)	25	3 gal.
○	Santa Rita Prickly Pear <i>Opuntia 'Santa Rita'</i> (OPUSAN)	15	3 gal.
○	Queen of the Night <i>Peniocereus greggii</i> (PENGRE)	7	3 gal.

**Hardscape Schedule**

SYM	NAME	QTY	SIZE
○	Large Boulder	68	3' x 3' x 3'
○	Small Boulder	74	2' x 2' x 2'
○	Standard Concrete Bench	2	See Landscape Details
○	Interpretive Signage Base	2	See Landscape Details
○	Preservation Fencing	421 LF	See Landscape Details
○	4 Strand Fence	1829 LF	See Landscape Details
○	Bike Rack	1	See Landscape Details
○	Trash Can- 55 Gal Drum	1	See Landscape Details
○	Pet Waste Station	1	See Landscape Details

▽	Desert Cobble (See Detail)
+	Hydroseed (Class II)

ERIC SHEPP, P.E., DIRECTOR

DATE	BY	REVISION

NO.	REVISION	DESCRIPTION	DATE	BY



**MEANDER BEND**  
Landscape Plan

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

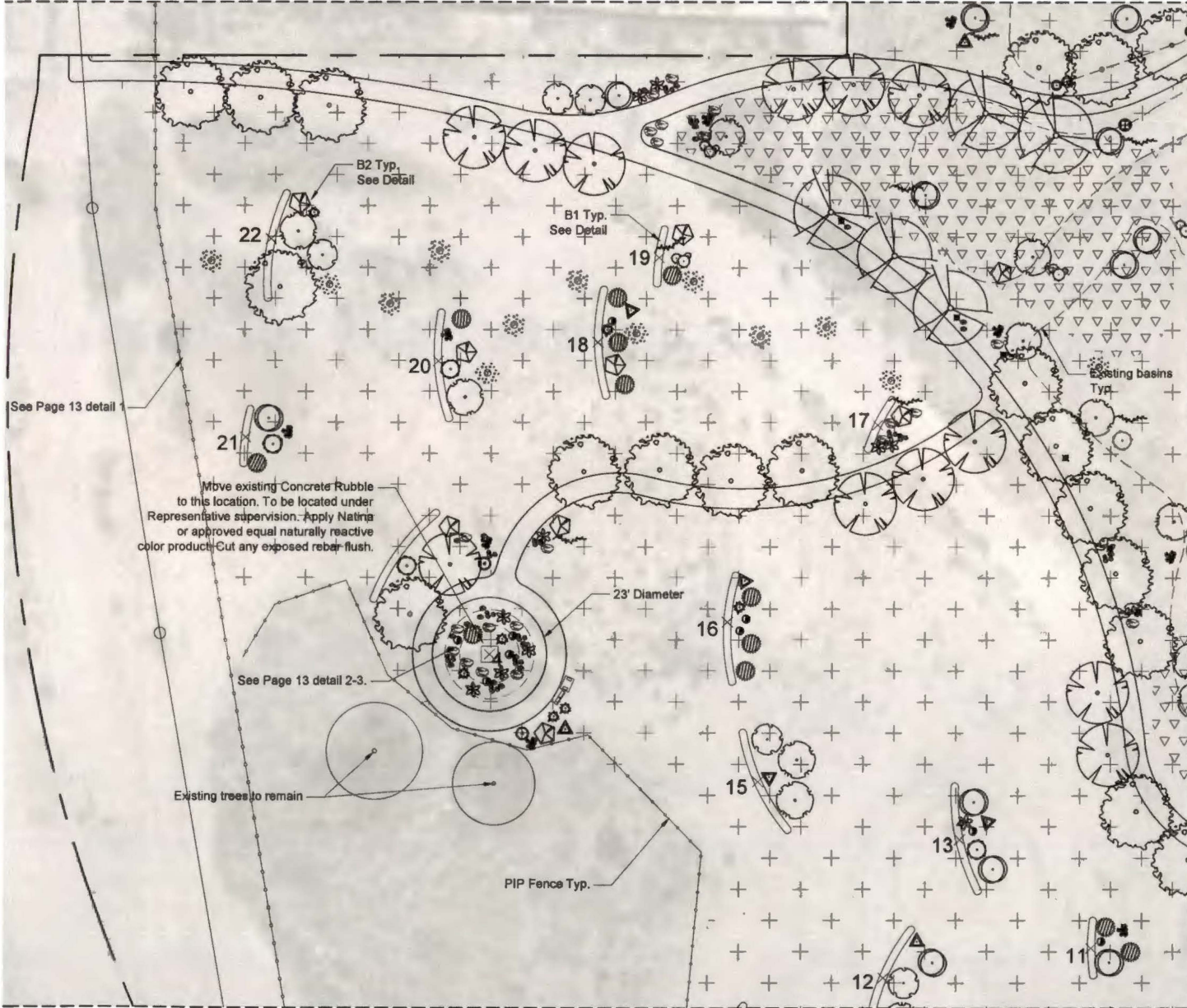


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VERT: N/A

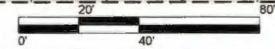




Match Line See Page 5



Match Line See Page 8



**Planting Schedule**

SYM	NAME	QTY.	SIZE
<b>TREES</b>			
○	Whitehorn Acacia <i>Acacia constricta</i> (ACACON)	38	6 gal.
○	Goldfinch Acacia <i>Acacia greggii</i> (ACAGRE)	30	5 gal.
○	Desert Willow <i>Chilopsis linearis</i> (CHILIN)	45	5 gal.
○	Blue Palo Verde <i>Parthenocissis florida</i> (PARFLC)	44	5 gal.
○	Velvet Mesquite <i>Prosopis velutina</i> (PROVEL)	90	5 gal.

SYM	NAME	QTY.	SIZE
<b>SHRUBS</b>			
○	Seebush <i>Aloysia gratissima</i> (ALOGRA)	20	15" TP
○	Tricus <i>Tricus californicus</i> (TRICAL)	20	6 gal.
○	Pinelob Millweed <i>Asclepias linearis</i> (ASCULIN)	19	1 gal.
○	Desert Marigold <i>Ballaria multiflora</i> (BAMUL)	19	1 gal.
○	Desert Hackberry <i>Celtis pallida</i> (CELPAL)	50	5 gal.
○	Datura <i>Datura weightii</i> (DATWRI)	10	1 gal.
○	Brittlebush <i>Eriodictyon fasciculatum</i> (ERIFAS)	18	1 gal.
○	Croton <i>Larrea tridentata</i> (LARTRD)	20	15" TP
○	Waltwherry <i>Lycium frutescens</i> (LYCFRE)	26	5 gal.
○	Globeamallow <i>Sphaeralcea ambigua</i> (SPHAM)	12	1 gal.
○	Twinning Millweed <i>Furcraea cymatocarpa</i> (FURCYA)	9	1 gal.
○	Dogwood <i>Thymophylla pentachaeta</i> (THYPEN)	19	1 gal.
○	Graythorn <i>Ziziphus obtusifolia</i> (ZIZOBT)	30	5 gal.

SYM	NAME	QTY.	SIZE
<b>ACCENTS</b>			
○	Murphy's Agave <i>Agave murphyi</i> (AGAMUR)	22	3 gal.
○	Cane Cholla <i>Cylindropuntia spinosa</i> (CYLSPI)	28	3 gal.
○	Staghorn cholla <i>Cylindropuntia versicolor</i> (CYLVER)	22	3 gal.
○	Hedgehog Cactus <i>Echinocactus sp.</i> (ECHSP)	20	1 gal.
○	Prickly Pear <i>Opuntia engelmannii</i> (OPUENG)	25	3 gal.
○	Santa Rita Prickly Pear <i>Opuntia 'Santa Rita'</i> (OPUSAN)	15	3 gal.
○	Queen of the Night <i>Peniocereus greggii</i> (PENGRE)	7	3 gal.

**Hardscape Schedule**

SYM	NAME	QTY.	SIZE
○	Large Boulder	86	3' x 3' x 3'
○	Small Boulder	74	2' x 2' x 2'
○	Standard Concrete Bench	2	See Landmark Data
○	Interpretive Signage Base	2	See Landmark Data
○	Preservation Fencing	421 LF	See Landmark Data
○	4 Strand Fence	1829 LF	See Landmark Data
○	Bike Rack	1	See Landmark Data
○	Traffic Cam-55 Gal Drum	1	See Landmark Data
○	Pat Waste Station	1	See Landmark Data

▽▽▽	Desert Cobble (See Detail)
+	Hydroseed (Class II)

ERIC SHEPP, P.E., DIRECTOR

DATE	BY	REVISION

DATE	BY	DESCRIPTION



**MEANDER BEND**  
Landscape Plan

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT



SCALES: HORIZ: N/A  
VERT: N/A

Match Line See Page 5

Existing basins Typ.

Match Line See Page 8

Match Line See Page 6

Match Line See Page 9

### Planting Schedule

SYM	NAME	QTY.	SIZE
<b>TREES</b>			
○	Whitehorn Acacia <i>Acacia constricta</i> (ACACON)	30	5 gal.
○	Catalina Acacia <i>Acacia greggii</i> (ACAGRE)	26	5 gal.
○	Desert Willow <i>Chilopsis linearis</i> (CHLIN)	45	5 gal.
○	Blue Palo Verde <i>Parthenocissis florida</i> (PARFLC)	44	5 gal.
○	Velvet Mesquite <i>Prosopis velutina</i> (PROVEL)	80	5 gal.

SYM	NAME	QTY.	SIZE
<b>SHRUBS</b>			
⊙	Beebrush <i>Aloysia gratissima</i> (ALOGRA)	20	15" TrP
⊙	Tristis <i>Tristis oahuensis</i> (TRICAL)	20	5 gal.
⊙	Plumbago <i>Plumbago auriculata</i> (ASCLIN)	19	1 gal.
⊙	Desert Marigold <i>Baileya multiradiata</i> (BAMBUL)	19	1 gal.
⊙	Desert Hackberry <i>Celtis pallida</i> (CELPAL)	50	5 gal.
⊙	Datura <i>Datura wrightii</i> (DATWRI)	19	1 gal.
⊙	Datura <i>Datura wrightii</i> (DATWRI)	19	1 gal.
⊙	Brittlebush <i>Eriodendron latifolium</i> (ENCFAR)	18	1 gal.
⊙	Crocodile <i>Larrea tridentata</i> (LARTRI)	28	15" TrP
⊙	Walberry <i>Lythrum fremontii</i> (LYCFRE)	28	5 gal.
⊙	Globeblossom <i>Sphaeralcea ambigua</i> (SPHAMB)	12	1 gal.
⊙	Twinning Milkweed <i>Funastrum cyanochlois</i> (SARCYA)	9	1 gal.
⊙	Dogwood <i>Thymophylla pentachaeta</i> (THYPEN)	19	1 gal.
⊙	Graythorn <i>Ziziphus obtusifolia</i> (ZIZOBT)	35	5 gal.

SYM	NAME	QTY.	SIZE
<b>ACCENTS</b>			
⊙	Murphy's Agave <i>Agave murphyi</i> (AGAMUR)	22	3 gal.
⊙	Cane Cholla <i>Cylindropuntia spinosa</i> (CYLSP)	26	3 gal.
⊙	Staghorn cholla <i>Cylindropuntia versicolor</i> (CYLVER)	22	3 gal.
⊙	Hedgehog Cactus <i>Echinocactus</i> sp. (ECHSP)	20	1 gal.
⊙	Prickly Pear <i>Opuntia engelmannii</i> (OPUENG)	25	3 gal.
⊙	Santa Rita Prickly Pear <i>Opuntia 'Santa Rita'</i> (OPUSAN)	15	3 gal.
⊙	Queen of the Night <i>Peniocereus greggii</i> (PENGRE)	7	3 gal.

### Hardscape Schedule

SYM	NAME	QTY.	SIZE
⊙	Large Boulder	66	3' x 3' x 3'
⊙	Small Boulder	74	2' x 2' x 2'
⊙	Standard Concrete Bench	2	See Landmark Book
⊙	Interpretive Signage Base	2	See Landmark Book
⊙	Preservation Fencing	421 LF	See Landmark Book
⊙	4 Strand Fence	1820 LF	See Landmark Book
⊙	Bike Rack	1	See Landmark Book
⊙	Trash Can-55 Gall Drum	1	See Landmark Book
⊙	Pet Waste Station	1	See Landmark Book

⊙	Desert Cactile (See Detail)
⊙	Hydroseed (Class II)



SCALES: HORIZ: N/A  
VERT: N/A

ERIC SHEPP, P. E., DIRECTOR

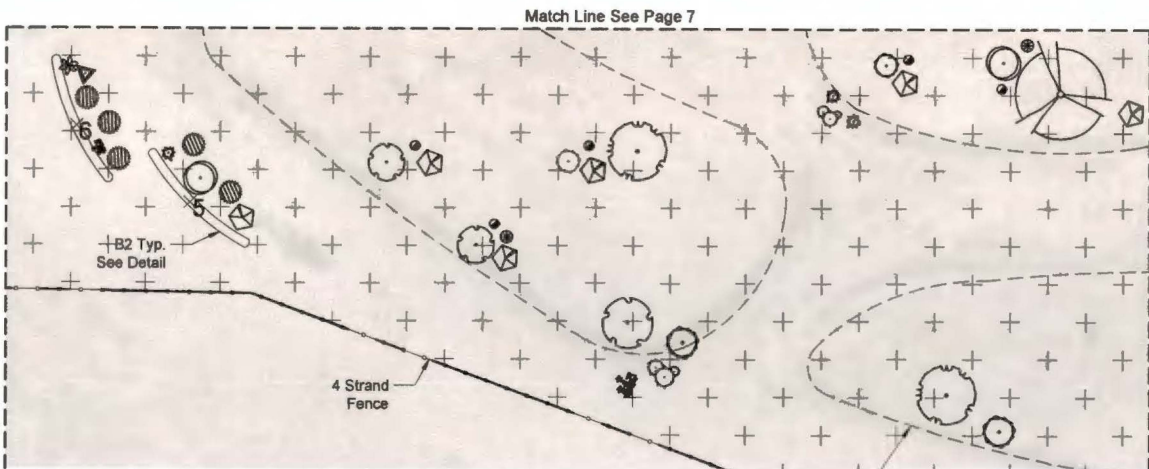
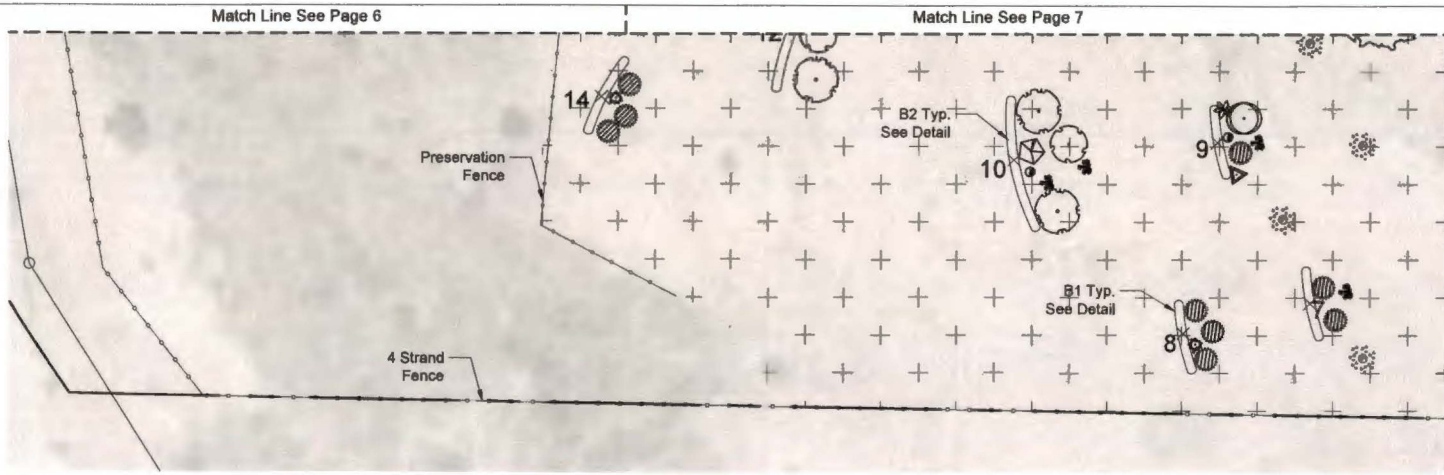
DATE	10/22/23
DESIGNED	ER/S
PERFORMED	ER/S
CHECKED	ER/S
APPROVED	ER/S

DATE	
DESIGNED	
PERFORMED	
CHECKED	
APPROVED	



MEANDER BEND  
Landscape Plan

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT



### Planting Schedule

SYM	TREE	NAME	QTY.	SIZE
		Whiteflorn Acacia <i>Acacia constricta</i> (ACACON)	30	5 gal.
		Coldlow Acacia <i>Acacia greggii</i> (ACAAGRE)	30	5 gal.
		Desert Willow <i>Chrysalidocarpus lutescens</i> (CHLWIL)	45	5 gal.
		Blue Palo Verde <i>Parsonsia florida</i> (PARFLO)	44	5 gal.
		Velvet Mesquite <i>Prosopis velutina</i> (PROVEL)	80	5 gal.

SYM	SHRUBS	NAME	QTY.	SIZE
⊙		Beebrush <i>Aloysia gratissima</i> (ALOGRA)	20	15" TIP
⊙		Tricus <i>Tricus californicus</i> (TRICAL)	20	6 gal.
⊙		Pinelawn Millweed <i>Andropogon brevifolius</i> (ANDBLN)	19	1 gal.
⊙		Desert Marigold <i>Balsamorhiza hirsuta</i> (BAMHUL)	19	1 gal.
⊙		Desert Hackberry <i>Celtis pallida</i> (CELPAL)	50	5 gal.
⊙		Datura <i>Datura wrightii</i> (DATWRI)	19	1 gal.
⊙		Bottlebrush <i>Encelia farinosa</i> (ENCFAR)	18	1 gal.
⊙		Crocodile <i>Larrea tridentata</i> (LARTRI)	26	15" TIP
⊙		Wolfberry <i>Lycium frutescens</i> (LYCFRE)	26	5 gal.
⊙		Globeamallow <i>Sphaeralcea ambigua</i> (SPHAMB)	12	1 gal.
⊙		Trailing Millweed <i>Furnessia cynanchoides</i> (SARCYA)	9	1 gal.
⊙		Dogwood <i>Thymophylla pentachaeta</i> (THYPEN)	18	1 gal.
⊙		Graythorn <i>Ziziphus obtusifolia</i> (ZIZOBT)	36	5 gal.

SYM	ACCENTS	NAME	QTY.	SIZE
⊙		Murphy's Agave <i>Agave murphyi</i> (AGAMUR)	22	3 gal.
⊙		Cane Cholla <i>Cylindropuntia echinocarpa</i> (CYLSP1)	28	3 gal.
⊙		Staghorn cholla <i>Cylindropuntia versicolor</i> (CYLVER)	22	3 gal.
⊙		Hedgehog Cactus <i>Echinocactus sp.</i> (ECHISP)	20	1 gal.
⊙		Prickly Pear <i>Opuntia engelmannii</i> (OPUENG)	25	3 gal.
⊙		Santa Rita Prickly Pear <i>Opuntia 'Santa Rita'</i> (OPUSAN)	15	3 gal.
⊙		Queen of the Night <i>Penstemon greggii</i> (PENGRE)	7	3 gal.

### Hardscape Schedule

SYM	NAME	QTY.	SIZE
⊙	Large Boulder	66	2' x 3' x 3'
⊙	Small Boulder	74	2' x 2' x 2'
⊙	Standard Concrete Bench	2	See Landscape Detail
⊙	Interpretive Signage Base	2	See Landscape Detail
⊙	Preservation Fencing	421 LF	See Landscape Detail
⊙	4 Strand Fence	1829 LF	See Landscape Detail
⊙	Bike Rack	1	See Landscape Detail
⊙	Trash Can-55 Gall Drum	1	
⊙	Pet Waste Station	1	See Landscape Detail

▽	Desert Cactile (See Detail)
+	Hydrant (Class II)

ERIC SHEPP, P.E., DIRECTOR

DATE	BY	REVISION

DATE	DIV.	ENGINEER



**MEANDER BEND**  
Landscape Plan

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT



SCALES: HORIZ: N/A  
VERT: N/A



### Planting Schedule

SYM	NAME	QTY.	SIZE
<b>TREES</b>			
○	Whiteflm Acacia <i>Acacia constricta</i> (ACACON)	38	5 gal.
○	Catclaw Acacia <i>Acacia greggii</i> (ACAGRE)	30	5 gal.
○	Desert Willow <i>Chippewa linearis</i> (CHLIN)	45	5 gal.
○	Blue Palo Verde <i>Parkinsonia florida</i> (PARFLO)	44	5 gal.
○	Velvet Mesquite <i>Prosopis velutina</i> (PROVEL)	80	5 gal.

SYM	NAME	QTY.	SIZE
<b>SHRUBS</b>			
○	Beebrush <i>Aloysia gratissima</i> (ALOGRA)	20	15" TrP
○	Trifida <i>Trifida californica</i> (TRICAL)	20	5 gal.
○	Pinelawn Milkwed <i>Asclepias linearis</i> (ASCLIN)	19	1 gal.
○	Desert Marigold <i>Baccharis multiflora</i> (BAMUL)	19	1 gal.
○	Desert Hackberry <i>Celtis pallida</i> (CELPAL)	50	5 gal.
○	Datura <i>Datura wrightii</i> (DATWRI)	19	1 gal.
○	Brittishbush <i>Encelia farinosa</i> (ENCFAR)	18	1 gal.
○	Cresote <i>Leuca tridentata</i> (LARTRI)	28	15" TrP
○	Walwortery <i>Lycium frummentii</i> (LYCFRE)	28	5 gal.
○	Gibbermilkweed <i>Sphaeralcea ambigua</i> (SPHAME)	12	1 gal.
○	Twining Milkweed <i>Funastrum clypeoides</i> (SARCYA)	8	1 gal.
○	Dogwood <i>Thymophylla pentachaeta</i> (THYPEN)	19	1 gal.
○	Graythorn <i>Ziziphus obtusifolia</i> (ZZOBT)	35	5 gal.

SYM	NAME	QTY.	SIZE
<b>ACCENTS</b>			
○	Murphy's Agave <i>Agave murphyi</i> (AGAMUR)	22	3 gal.
○	Cane Cholla <i>Cylindropuntia spinosior</i> (CYLSP)	28	3 gal.
○	Staghorn cholla <i>Cylindropuntia versicolor</i> (CYLVER)	32	3 gal.
○	Hedgehog Cactus <i>Echinocactus sp.</i> (ECHSP)	20	1 gal.
○	Prickly Pear <i>Opuntia engelmannii</i> (OPUENG)	25	3 gal.
○	Santa Rita Prickly Pear <i>Opuntia 'Santa Rita'</i> (OPUSAN)	15	3 gal.
○	Queen of the Night <i>Penstemon greggii</i> (PENGRE)	7	3 gal.

### Hardscape Schedule

SYM	NAME	QTY.	SIZE
○	Large Boulder	85	2' x 3' x 3'
○	Small Boulder	74	2' x 2' x 2'
○	Standard Concrete Bench	2	See Landmark Schedule
○	Interpretive Signage Base	2	See Landmark Schedule
○	Preservation Fencing	421 LF	See Landmark Schedule
○	4 Strand Fence	1829 LF	See Landmark Schedule
○	Bike Rack	1	See Landmark Schedule
○	Trash Can-55 Gal Drum	1	See Landmark Schedule
○	Pet Waste Station	1	See Landmark Schedule

○	Desert Cobble (See Detail)
+	Hydroseed (Class II)

Match Line See Page 10

Match Line See Page 7

Match Line See Page 8



SCALES: HORIZ: N/A  
VERT: N/A

ERIC SHEPP, P.E., DIRECTOR

DATE	BY	REVISION

NO.	REVISION	DESCRIPTION	DATE	DIV.	ENGINEER

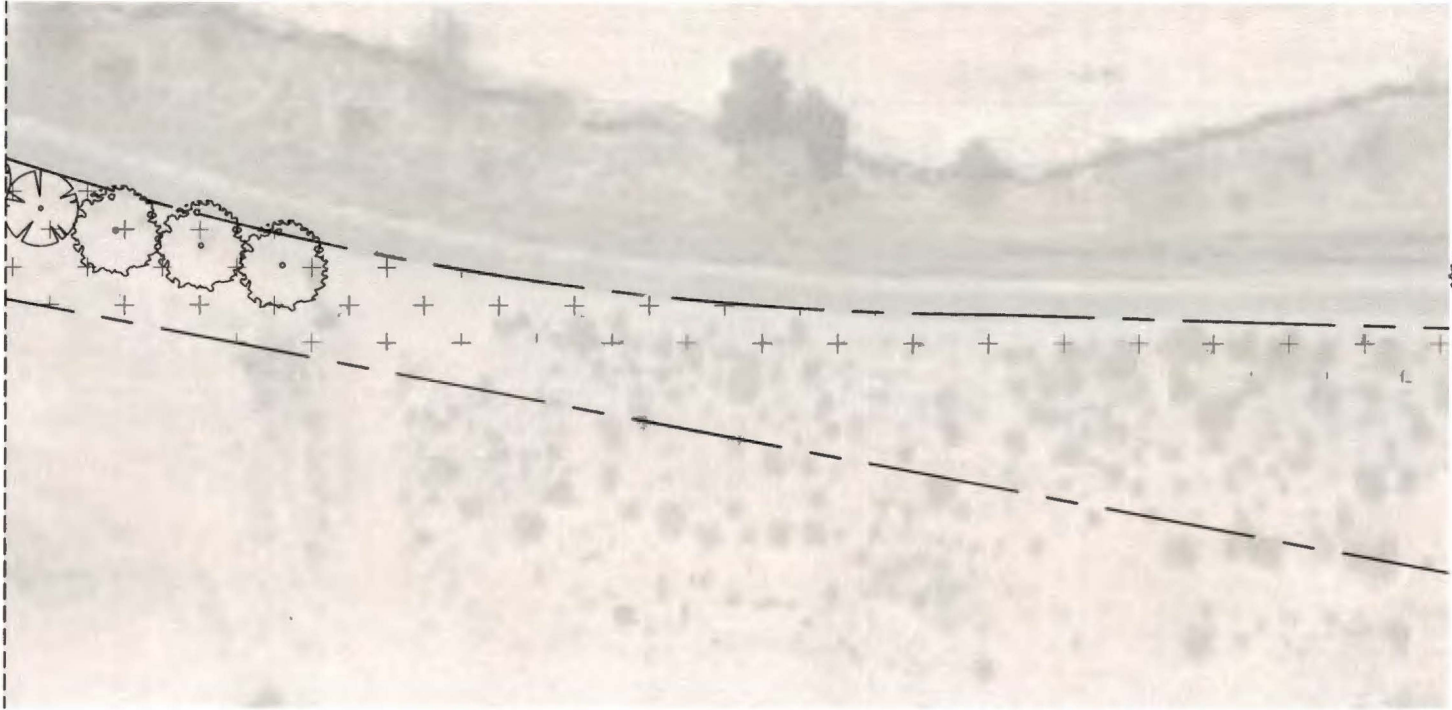


**MEANDER BEND**  
Landscape Plan

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT



Match Line See Page 9



### Planting Schedule

SYM	NAME	QTY.	SIZE
<b>TREES</b>			
	Whitehorn Acacia <i>Acacia constricta</i> (ACACON)	38	5 gal.
	Cedraw Acacia <i>Acacia greggii</i> (ACAGRE)	30	5 gal.
	Desert Willow <i>Chippewa linearis</i> (CHLIN)	45	5 gal.
	Blue Palo Verde <i>Parsonsia florida</i> (PARFLC)	44	5 gal.
	Velvet Mesquite <i>Prosopis velutina</i> (PROVEL)	90	5 gal.

SYM	NAME	QTY.	SIZE
<b>SHRUBS</b>			
	Beebrush <i>Aloysia gratissima</i> (ALOGRA)	20	15" TrP
	Tricus <i>Tricus californicus</i> (TRICAL)	20	5 gal.
	Pinelawn Millweed <i>Andropogon linearis</i> (ASCLIN)	19	1 gal.
	Desert Marigold <i>Bellera multicaulis</i> (BAMULA)	19	1 gal.
	Desert Hackberry <i>Celtis pallida</i> (CELPAL)	50	5 gal.
	Datum <i>Datura weightii</i> (DATWRI)	19	1 gal.
	Britchesbush <i>Encelia farinosa</i> (ENCFAR)	18	1 gal.
	Croscote <i>Leuca tridentata</i> (LARTRI)	26	15" TrP
	Walloony <i>Lycium fremontii</i> (LYCFRE)	26	5 gal.
	Globeamallow <i>Sphaeralcea ambigua</i> (SPHAMB)	12	1 gal.
	Twining Millweed <i>Furcraea cynanchoides</i> (SARCYA)	9	1 gal.
	Dogwood <i>Thymophylla pentachaeta</i> (THYPEN)	19	1 gal.
	Graythorn <i>Ziziphos obtusiloba</i> (ZIZOBT)	35	6 gal.

SYM	NAME	QTY.	SIZE
<b>ACCENTS</b>			
	Murphy's Agave <i>Agave murphyi</i> (AGAMUR)	22	3 gal.
	Cane Cholla <i>Cylindropuntia spinosior</i> (CYLSP)	28	3 gal.
	Staghorn cholla <i>Cylindropuntia versicolor</i> (CYLVER)	22	3 gal.
	Hedgehog Cactus <i>Echinocactus</i> sp. (ECHSP)	20	1 gal.
	Prickly Pear <i>Opuntia engelmannii</i> (OPUENG)	25	3 gal.
	Santa Rita Prickly Pear <i>Opuntia 'Santa Rita'</i> (OPUSAN)	16	3 gal.
	Queen of the Night <i>Peniocereus greggii</i> (PENGRE)	7	3 gal.

### Hardscape Schedule

SYM	NAME	QTY.	SIZE
	Large Boulder	66	3' x 3' x 3'
	Small Boulder	74	2' x 2' x 2'
	Standard Concrete Bench	2	See Landscape Detail
	Interpretive Signage Base	2	See Landscape Detail
	Preservation Fencing	421 LF	See Landscape Detail
	4 Strand Fence	1829 LF	See Landscape Detail
	Bike Rack	1	See Landscape Detail
	Trash Can-55 Gal Drum	1	See Landscape Detail
	Pet Waste Station	1	See Landscape Detail

▽▽	Desert Cobble (See Detail)
+	Hydrant (Class ID)



SCALES: HORIZ: N/A  
VERT: N/A

ERIC SHEPP, P.E., DIRECTOR

DATE	DESCRIPTION

NO.	REVISION	DESCRIPTION	DATE	BY	CHK.	APP.



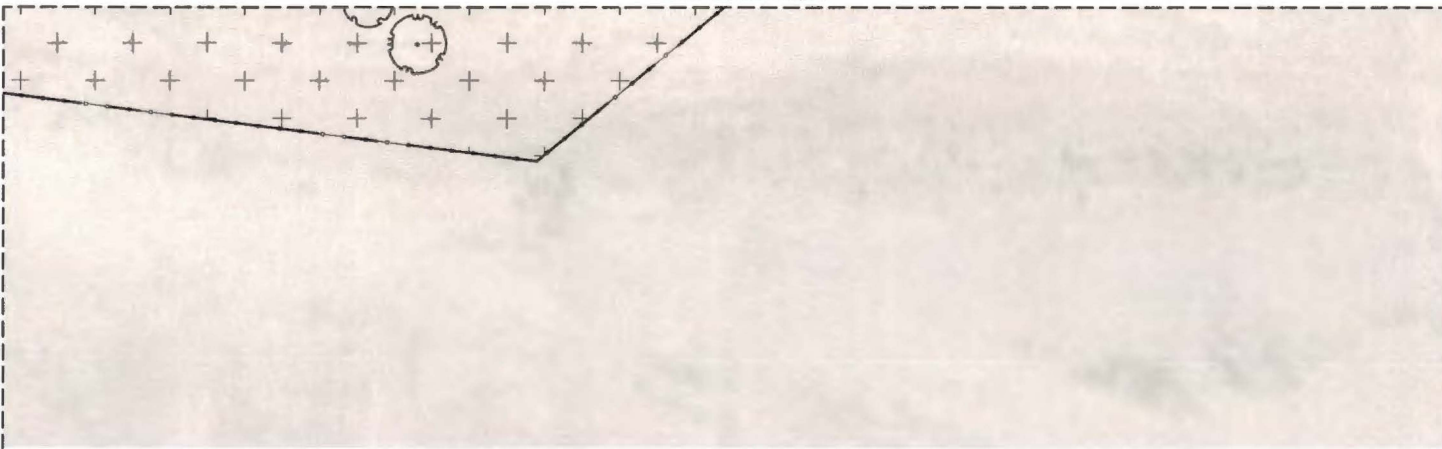
**MEANDER BEND**  
Landscape Plan

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

Match Line See Page 8



Match Line See Page 9



Match Line See Above

Match Line See Below  
Match Line See Page 9

**Planting Schedule**

SYM	NAME	QTY	SIZE
(Tree Symbol)	Whiteflom Acacia <i>Acacia constricta</i> (ACACON)	38	5 gal.
(Tree Symbol)	Califlow Acacia <i>Acacia greggii</i> (ACAGRE)	36	5 gal.
(Tree Symbol)	Desert Willow <i>Chilopsis linearis</i> (CHILIN)	45	5 gal.
(Tree Symbol)	Blue Palo Verde <i>Parkinsonia florida</i> (PARFLO)	44	5 gal.
(Tree Symbol)	Velvet Mesquite <i>Prosopis velutina</i> (PROVEL)	90	5 gal.

SHRUBS	SYM	NAME	QTY	SIZE
(Shrub Symbol)	(A)	Beebrush <i>Aloysia gratissima</i> (ALQGRA)	20	15" TrP
(Shrub Symbol)	(B)	Trilete <i>Trilete californica</i> (TRICAL)	20	5 gal.
(Shrub Symbol)	(C)	Pineluf Milkweed <i>Asclepias linearis</i> (ASCLIN)	19	1 gal.
(Shrub Symbol)	(D)	Desert Marigold <i>Besleria multicaulis</i> (BAMULA)	19	1 gal.
(Shrub Symbol)	(E)	Desert Hackberry <i>Celtis pallida</i> (CELPAI)	50	5 gal.
(Shrub Symbol)	(F)	Datura <i>Datura wrightii</i> (DATWR)	19	1 gal.
(Shrub Symbol)	(G)	Brittlebush <i>Encelia farinosa</i> (ENCFAR)	18	1 gal.
(Shrub Symbol)	(H)	Croscote <i>Larrea tridentata</i> (LARTRI)	26	15" TrP
(Shrub Symbol)	(I)	Walberry <i>Lycium frumontii</i> (LYCFRE)	26	5 gal.
(Shrub Symbol)	(J)	Globeamallow <i>Sphaeralcea ambigua</i> (SPHAMB)	12	1 gal.
(Shrub Symbol)	(K)	Training Milkweed <i>Furcraea cymatoceras</i> (SARCYA)	9	1 gal.
(Shrub Symbol)	(L)	Dogwood <i>Thymophylla pentachaeta</i> (THYPEN)	19	1 gal.
(Shrub Symbol)	(M)	Graythorn <i>Ziziphus obtusifolia</i> (ZIZOBT)	35	5 gal.

ACCENTS	SYM	NAME	QTY	SIZE
(Accent Symbol)	(A)	Murphy's Agave <i>Agave murpheyi</i> (AGAMUR)	22	3 gal.
(Accent Symbol)	(B)	Cane Cholla <i>Cylindropuntia spinosior</i> (CYLSP)	26	3 gal.
(Accent Symbol)	(C)	Staghorn cholla <i>Cylindropuntia versicolor</i> (CYLVER)	22	3 gal.
(Accent Symbol)	(D)	Hedgehog Cactus <i>Echinocactus</i> sp. (ECHSP)	20	1 gal.
(Accent Symbol)	(E)	Priety Pear <i>Cupressus engelmannii</i> (OPUENG)	25	3 gal.
(Accent Symbol)	(F)	Santa Rita Priety Pear <i>Cupressus 'Santa Rita'</i> (OPUSAN)	15	3 gal.
(Accent Symbol)	(G)	Queen of the Night <i>Peniocereus greggii</i> (PENGRE)	7	3 gal.

**Hardscape Schedule**

SYM	NAME	QTY	SIZE
(Boulder Symbol)	Large Boulder	66	3' x 3' x 3'
(Boulder Symbol)	Small Boulder	74	2' x 2' x 2'
(Bench Symbol)	Standard Concrete Bench	2	See Landscape Plan
(Signage Symbol)	Interpretive Signage Base	2	See Landscape Plan
(Fencing Symbol)	Preservation Fencing	421 LF	See Landscape Plan
(Fencing Symbol)	4 Strand Fence	1829 LF	See Landscape Plan
(Bike Rack Symbol)	Bike Rack	1	See Landscape Plan
(Trash Can Symbol)	Trash Can- 55 Gal Drum	1	See Landscape Plan
(Pet Waste Station Symbol)	Pet Waste Station	1	See Landscape Plan

(Cactus Symbol)	Desert Cactids (See Detail)
(Cross Symbol)	Hydroseed (Class II)

ERIC SHEPP, P.E., DIRECTOR

DATE	DESCRIPTION

NO.	REVISION	DESCRIPTION	DATE	BY	CHKD.



**MEANDER BEND**  
Landscape Plan

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT



SCALES: HORIZ: N/A  
VERT: N/A