



22 E. Weber Avenue, Room 301 | Stockton, CA 95202 | (209) 937-7900 | www.sjafca.com

BOARD OF DIRECTORS

City of Stockton

Kimberly Warmesley
Dan Wright, Vice-Chair
Alt. Susan Lenz

Public Member

Mike Morowit

San Joaquin County

Katherine M. Miller
Chuck Winn, Chair
Alt. Tom Patti

City of Manteca

Jose Nuño
Gary Singh

Executive Director

Chris Elias

City of Lathrop

Paul Akinjo
Diane Lazard

BOARD MEETING

THURSDAY, MAY 20, 2021

9:00 A.M.

AGENDA IN LIGHT OF COVID-19

TO JOIN MEETING:

By Phone:

Dial by Phone:
213 338 8477
Meeting ID: 922 2403 9940
Passcode: 182229

By Computer:

<https://downeybrand.zoom.us/j/92224039940?pwd=YUZzVVZTbHZZRGVFcml15L2cvbGZOQT09>

By App:

Use the Zoom app:
Meeting ID:
922 2403 9940
Passcode: 182229

1. CALL TO ORDER / ROLL CALL
2. PLEDGE TO FLAG

3. CONSENT ITEMS

- 3.1) Approve minutes from the Board meeting on March 25, 2021
- 3.2) A Resolution to Direct the Agency's General Counsel to Take Appropriate and Necessary Action to Implement a New Agency Retirement Plan

4. NEW BUSINESS

- 4.1) Public Hearing to approve the Annual Engineer's Report and Budget for the Operations and Maintenance (O&M) for the Flood Protection Restoration Assessment District, and order the levy and collection of O&M Assessments within the District for fiscal year 2021/2022
- 4.2) Update – Manteca Dryland Levee Extension Project

5. ORAL REPORT FROM EXECUTIVE DIRECTOR

- 5.1) This is an opportunity to provide timely information to the Board in support of its work

6. PUBLIC COMMENTS

7. BOARD QUESTIONS, COMMENTS, ACTIONS

8. CLOSED SESSION

- 8.1) San Joaquin Area Flood Control Agency v. Stockton Golf and Country Club Case No. STK-CV-UED-2019-11392
- 8.1.5) Closed session pursuant to Government Code section 54956.9B (Anticipated Litigation)
- 8.2) Closed session pursuant to Government Code section 54957 (Employee Performance Evaluation – Executive Director)

9. ADJOURNMENT

In compliance with the Americans with Disabilities Act, the meeting room is wheelchair accessible and disabled parking is available. If you have a disability and need disability-related modifications or accommodations to participate in this meeting, please contact the Board's office at (209) 937-7900 or (209) 937-7115 (fax). Requests must be made one full business day before the start of the meeting.

Agenda Item 3.1

MINUTES
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
BOARD MEETING OF MARCH 25, 2021

STOCKTON, CALIFORNIA

In light of COVID-19 and in compliance with CA Executive Order N-29-20, the majority of members of the Board of Directors participated in this meeting remotely by teleconference. Members of the public were also permitted to participate in this meeting remotely by teleconference. An option was also given to email public comments to SJAFC@stocktonca.gov or to speak via the teleconference during public comment times. In compliance with C.D.C. recommendations, all those who physically attended the meeting sat with six feet of space between them and observed other recommended hygiene practices.

1. CALL TO ORDER / ROLL CALL 9:03 AM

Roll Call

Present:

Director Akinjo
Director Miller
Director Morowit
Director Nuño
Director Singh
Director Warmesley
Director Winn
Director Wright

Absent:

Director Lazard

2. PLEDGE TO FLAG 9:04 AM

3. CONSENT ITEMS 9:05 AM

PUBLIC COMMENT

- None

3.1) Approve minutes of the February 18, 2021 Board Meeting

Motion: To approve minutes

Moved by: Director Miller, Seconded by Director Singh

Vote: Motion carried 8-0

Yes: Director Akinjo, Director Miller, Director Morowit, Director Nuño,
Director Singh, Director Warmesley, Director Winn, Director Wright

Absent: Director Lazard

4. NEW BUSINESS 9:06 AM

4.1) Information – Update on Mossdale element of the Lower San Joaquin River and Delta South Regional Flood Management Plan

PowerPoint Presentation given by Seth Wurzel, Mike Rossiter, and Chris Nuedeck. Dante Nomellini gave an update on RD-17 Levee Seepage Repair Project.

PUBLIC COMMENT

- None

5. ORAL REPORT FROM EXECUTIVE DIRECTOR 10:13 AM

5.1) This is an opportunity to provide timely information to the Board in support of its work.

- *Executive Director shared the March 2021 SJAFCA Bulletin. Representatives Harder & McNerney requested Administration to program \$36.5 Million in New Funding for Flood Protection Project.*
- *The House is considering “Community Projects” funding.*
- *Letters and notices to be sent to the neighbors in the Smith Canal area to advise of the upcoming construction season in Dad’s Point, the Boat Launch, and Parking Lot areas*

PUBLIC COMMENT

- None

6. PUBLIC COMMENTS 10:19 AM

- None

7. BOARD QUESTIONS, COMMENTS, ACTIONS 10:20 AM

Thank you to Chair Winn from Director Akinjo for writing the letters to our representatives in Washington.

8. CLOSED SESSION 10:20 AM

8.1) San Joaquin Area Flood Control Agency v. Stockton Golf and Country Club Case No. STK-CV-UED-2019-11392

8.1.5) Closed session pursuant to Government Code section 54956.9B (Anticipated Litigation)

8.2) Closed session pursuant to Government Code section 54957 (Employee Performance Evaluation – Executive Director)

PUBLIC COMMENTS:

None

REPORT OF ACTION TAKEN IN CLOSED SESSION 11:25 AM

- 8.1) No action or direction given.
- 8.1.5) Board gave direction to Counsel to draft letter and take actions.
- 8.2) Board gave direction to Counsel to have a follow up conversation with Executive Director Elias and to bring action back to open session for approval at the April Board Meeting.

9. ADJOURNMENT 11:26 AM

The meeting adjourned at 11:26 AM. The next meeting is scheduled for April 22, 2021, at 9:00 AM.

In compliance with the Americans with Disabilities Act, the meeting room is wheelchair accessible and disabled parking is available. If you have a disability and need disability-related modifications or accommodations to participate in this meeting, please contact the Board's office at (209) 937-7900 or (209) 937-7115 (fax). Requests must be made one full business day before the start of the meeting.



CHRIS ELIAS
EXECUTIVE DIRECTOR
SAN JOAQUIN AREA FLOOD
CONTROL AGENCY

Agenda Item 3.2

May 20, 2021

TO: San Joaquin Area Flood Control Agency

FROM: Scott L. Shapiro, General Counsel

SUBJECT: **A RESOLUTION TO DIRECT THE AGENCY'S GENERAL COUNSEL TO TAKE APPROPRIATE AND NECESSARY ACTION TO IMPLEMENT A NEW AGENCY RETIREMENT PLAN**

RECOMMENDATION

Staff recommends that the Board of Directors of the San Joaquin Area Flood Control Agency (SJAFCA) approve and adopt a resolution to:

1. Terminate the current Administrative Services Agreement with International City Management Association Retirement Corporation (ICMA-RC) for SJAFCA's 401(a) and 457(b) Deferred Compensation Plans; and
2. Direct the Agency's General Counsel to take necessary actions to implement a new Agency 457(b) Deferred Compensation Retirement Plan; and

DISCUSSION

Background

At a Special Board meeting on May 29, 2018, the SJAFCA's Board of Directors directed the Agency's General Counsel establish a 457(b) Plan for the Executive Director whose hire date was anticipated to be June 16, 2018. During the same meeting, the Board authorized (then) Chair Miller to sign a contract for the hiring of Executive Director, Mr. Chris Elias, who became the first employee of the Agency. Consequently, SJAFCA Resolution 18-15 was adopted to establish a 457(b) plan specifically for Executive Director Chris Elias.

Since that time, a number of positions supporting operations of SJAFCA have become vacant. Those positions, who incumbents were on loan from the City of Stockton, were backfilled through a widely advertised recruitment process. The Board subsequently approve authorization of the Agency's 401(a) and 457(b) plans.

A RESOLUTION TO DIRECT THE AGENCY'S GENERAL COUNSEL TO TAKE APPROPRIATE AND NECESSARY ACTION TO IMPLEMENT A NEW AGENCY RETIREMENT PLAN (Page 2)

Section 401(a) and 457(b) plans are identical in most respects: Both are defined-contribution plans; contributions to the plans are not subject to income taxes; participants' benefits under both plans are based solely on contributions made to the account, adjusted for investment earnings/losses; participants may invest their plan accounts among the plan's investment menu; and plan accounts are subject to income taxes only when distributed to participants or their beneficiaries.

The Board delegated authority to Agency Counsel to take any action deemed appropriate and necessary to effectuate the intent and purpose of the Agency Retirement Plan including but not limited to preparing, executing, and delivering all documents necessary for the implementation of the Agency Retirement Plan, and to adopt any amendment to the Agency Retirement Plan that either is necessary to conform to the relevant plan's terms with governing law, or is ministerial in nature and does not increase Agency costs.

Current Situation

1. Subsequent to Resolution 19-25 Dated May 16, 2019, the Agency has been in an Administrative Services Agreement with International City Management Association Retirement Corporation (ICMA-RC), to provide 401(a) and 457(b) Deferred Compensation Plans. This comes at a Quarterly Agency cost of \$250 per plan equaling \$2,000 annually.
2. Current staffing requires minimal need for Retirement Plan Administrative Services. After thorough review by staff and Agency General Counsel, a new Agency 457(b) Deferred Compensation Retirement Plan was adopted to replace ICMA-RC with The Life Insurance Company of the Southwest, FIT Select Income Flexible Premium Indexed Annuity Plan.
3. The Life Insurance Company of the Southwest, FIT Select Income Flexible Premium Indexed Annuity Plan is a 457(b) Deferred Compensation Retirement Plan and will replace the ICMA-RC, 401(a) and 457(b) Deferred Compensation Plans. Staff retirement contributions of no less than 7.5%, employer paid or matching payroll deduction or combination of, will be deposited into the new plan.
4. A clear statement to cancel the old plan and an Affirmation Statement for adopting the new Section 457(b) Deferred Compensation Plan with The Life Insurance Company of the Southwest, FIT Select Income Flexible Premium Indexed Annuity Plan is attached as part of this staff report.

**A RESOLUTION TO DIRECT THE AGENCY'S GENERAL COUNSEL TO TAKE
APPROPRIATE AND NECESSARY ACTION TO IMPLEMENT A NEW AGENCY
RETIREMENT PLAN**

(Page 3)

FISCAL IMPACT

There is a net reduction in budgetary impact of \$2,000 annually, due to the termination of the existing Administrative Services Agreement with ICMA-RC. There are no costs to the Agency to administer the new Plan.

PREPARED BY: Doug Clark



SCOTT L. SHAPIRO
GENERAL COUNSEL

Attachment 1 – Affirmation Statement for adopting a Section 457 Deferred Compensation Plan

Attachment 2 – ICMA-RC Cancellation Letter

SLS:dc

AFFIRMATIVE STATEMENT FOR ADOPTING A SECTION 457 DEFERRED COMPENSATION PLAN

Name of Employer: SAN JOAQUIN AREA FLOOD CONTROL AGENCY State: CA Plan Number: 0512R

WHEREAS, the Employer has employees rendering valuable services; and

WHEREAS, the establishment of a deferred compensation retirement plan serves the interest of the Employer by enabling it to provide reasonable retirement security for its employees, by providing increased flexibility in its personnel management system, and by assisting in the attraction and retention of competent personnel; and

WHEREAS, the Employer hereby adopts or has previously adopted the Life Insurance Company of the Southwest, FIT Select Income Flexible Premium Indexed Annuity, intending this execution to be operative with respect to any retirement or deferred compensation plan subsequently established, if the assets of the plan are to be invested in the Life Insurance Company of the Southwest, FIT Select Income Flexible Premium Indexed Annuity Plan;

NOW THEREFORE, as a duly authorized agent of the Employer, I hereby:

ESTABLISH the Employer's 457 deferred compensation plan (the "Plan") in the form of:

☒ The Life Insurance Company of the Southwest, FIT Select Income Flexible Premium Indexed Annuity Plan, or
☐ The plan provided by the Employer (executed copy attached hereto).

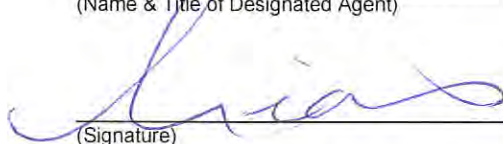
SPECIFY that the assets of the Plan shall be held in trust, with the Employer serving as trustee ("Trustee"), for the exclusive benefit of the Plan participants and their beneficiaries and shall not be diverted to any other purpose. The Employer's beneficial ownership of Plan assets held in The Life Insurance Company of the Southwest, FIT Select Income Flexible Premium Indexed Annuity shall be held for the further exclusive benefit of the Plan Participants and their beneficiaries;

SECIFY that Gary S. Giovanetti, Financial Services & Employee Benefits shall be the coordinator for the Plan; shall receive reports, notices, etc., from The Life Insurance Company of the Southwest, FIT Select Income Flexible Premium Indexed Annuity; shall cast, on behalf of the Employer, any required votes under The Life Insurance Company of the Southwest, FIT Select Income Flexible Premium Indexed Annuity; may delegate any administrative duties relating to the Plan to appropriate departments; and is authorized to execute all necessary agreements with The Life Insurance Company of the Southwest, FIT Select Income Flexible Premium Indexed Annuity incidental to the administration of the Plan; and

AFFIRM that the Employer hereby agrees to serve as Trustee under the Plan.

Date: April 1, 2021

Chris Elias, Executive Director
 (Name & Title of Designated Agent)


 (Signature)



Sent Via Fax: 202-962-4601
Mailed via USPS

April 30, 2021

Legal Department, ICMA Retirement Corporation
777 North Capitol Street, N.E., Suite 600
Washington, D.C. 20002-4240

RE: 457 Plan #300305 & 401 Plan #100034 Agreement Termination

To Whom it May Concern,

Per the Administrative Services Agreement between ICMA Retirement Corporation (ICMA-RC) and San Joaquin Area Flood Control Agency (SJAFCA), Agreement Item 10 - Term. Please acknowledge this 60-day written notice that SJAFCA does hereby terminate referenced agreement.

Termination will be effective June 30, 2021.

Should you have any questions, please contact me at the number listed below.

A blue ink signature of Chris Elias, consisting of a large, stylized 'C' followed by 'hris Elias'.

Chris Elias
Executive Director
209-937-8866

A blue ink signature of Doug Clark, featuring a large, circular 'D' followed by 'oug Clark'.

Doug Clark
Plan Coordinator
209-937-8339/7900

CE:dc

RESOLUTION NO. SJAFCA 21-04

**SAN JOAQUIN AREA
FLOOD CONTROL AGENCY**

=====

**RESOLUTION TO DIRECT THE AGENCY'S GENERAL COUNSEL TO TAKE
APPROPRIATE AND NECESSARY ACTION TO IMPLEMENT A NEW AGENCY
RETIREMENT PLAN**

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE SAN JOAQUIN
AREA FLOOD CONTROL AGENCY, AS FOLLOWS:

1. Terminate the current Administrative Services Agreement with International City Management Association Retirement Corporation (ICMA-RC) for SJAFCA's 401(a) and 457(b) Deferred Compensation Plans; and
2. Direct the Agency' General Counsel to take necessary actions to implement a new Agency 457(b) Deferred Compensation Retirement Plan; and

PASSED, APPROVED AND ADOPTED this 20th day of May 2021.

CHUCK WINN, Chairman of the Board
of the San Joaquin Area Flood Control
Agency

ATTEST:

CHRIS ELIAS, Secretary
of the San Joaquin Area Flood Control Agency

APPROVED AS TO FORM:

SCOTT SHAPIRO, Legal Counsel
for the San Joaquin Area Flood Control Agency

Agenda Item 4.1

May 20, 2021

TO: San Joaquin Area Flood Control Agency

FROM: Chris Elias, Executive Director

SUBJECT: **PUBLIC HEARING TO APPROVE THE ANNUAL ENGINEER'S REPORT FOR THE OPERATIONS AND MAINTENANCE (O&M) FOR THE FLOOD PROTECTION RESTORATION ASSESSMENT DISTRICT, AND ORDER THE LEVY AND COLLECTION OF O&M ASSESSMENTS WITHIN THE DISTRICT FOR FISCAL YEAR 2021/2022**

RECOMMENDATION

It is recommended the Board of Directors of the San Joaquin Area Flood Control Agency (SJAFCA) conduct a public hearing and adopt a resolution to approve the Annual Engineer's Report for the operations and maintenance for the Flood Protection Restoration Assessment District and order the levy and collection of operations and maintenance assessments within the Flood Protection Restoration Assessment District for fiscal year 2021/2022.

DISCUSSION

Background

By approving the formation of the Flood Protection Restoration Assessment District 96-1 (AD 96-1) on February 28, 1996, the Board also approved the levying of annual Operations and Maintenance (O&M) assessments to provide for the maintenance of levee improvements and detention basins constructed by SJAFCA. Each year, the Board must approve the O&M budget for the upcoming fiscal year (FY) and approve the levying of assessments as provided for in the Annual Engineer's Report for AD 96-1/Reassessment and Refunding of 2002. The annual O&M budget report was filed and available for public review on May 10, 2021. A notice of the public hearing was published in The Stockton Record on May 10, 2021.

The maintenance of SJAFCA levee improvements is performed by the San Joaquin County Flood Control and Water Conservation District (District) under the O&M agreement approved by the SJAFCA Board on April 1, 1998, and the San Joaquin County Board of Supervisors on April 14, 1998. The Aquatic Weed Control Program (AWCP) in Five Mile Slough, a component of the O&M activities, has been contracted to a private company since its implementation except for fiscal years 16/17 and 17/18 when the District performed this work.

The AWCP in Five Mile Slough was implemented in 2002 to remove water hyacinth blooms (invasive species) from the slough because the blooms impede full inspection of the levees making it difficult, or nearly impossible in some cases, to identify burrowing holes and eroded areas. When the AWCP was first adopted, an aquatic spray program was implemented which requires regulatory and continuous monitoring and reporting activities to satisfy the permit conditions of regulatory agencies. The Agency ceased its spray program prior to 2006 and after several recent years of costly mechanical removal, the Agency re-started an aquatic spray program in Fall of 2019. The implementation of aquatic spray is a relatively cost-effective method to remove invasive water hyacinth in the five mile slough.

PUBLIC HEARING TO APPROVE THE ANNUAL ENGINEER'S REPORT FOR THE OPERATIONS AND MAINTENANCE (O&M) FOR THE FLOOD PROTECTION RESTORATION ASSESSMENT DISTRICT, AND ORDER THE LEVY AND COLLECTION OF O&M ASSESSMENTS WITHIN THE DISTRICT FOR FISCAL YEAR 2021/22 (Page 2)

Last year on March 19, 2020, staff reported to the Board that because of the timing in obtaining regulatory approvals for the use of aquatic spray to control hyacinth blooms in the slough, dense conditions returned, and it was necessary to mechanically harvest the nuisance growth. The removal of aquatic vegetation has since been completed and was done so under the approved budget request. Continued spraying has been put in place to curb regrowth of the invasive plants.

The proposed O&M budget covers expected costs for materials, equipment, consultants, contractors, personnel, and administration. These costs include:

- Channel maintenance such as levee inspection
- Erosion repair
- Weed and rodent control
- Herbicide spraying
- Graffiti removal from floodwalls and other structures
- Maintenance of detention basin no. 1 pumps
- Maintenance of levee patrol and access roads
- Five Mile Slough AWCP
- Annual administration
- Consultant charges to prepare the Engineer's and Annual Levy reports
- Charges by the San Joaquin County Auditor for including the assessment on the annual tax roll.

The budget also includes annual allowances for items that are expected to occur over the life of the improvements, but not every year (i.e., floodwall replacement, bridge flood proofing repair, repair levee improvements damaged by floods, etc.).

O&M proceeds are set aside annually as follows:

- i) Floodwall replacement fund: This fund accumulates the proceeds for the future replacement of floodwalls. As of April 30, 2021, the amount accumulated in this fund is \$950,000.
- ii) O&M reserve fund: This fund is primarily used to replace and repair levee improvements damaged by flooding and to provide patrols during high water events. With the exception of funds set aside for floodwall replacement, all unexpended funds in the O&M budget are accumulated in the reserve fund. As of April 30, 2021, the amount accumulated in the reserve fund is approximately \$4.1 million.

To apportion the costs of the O&M activities to those parcels which benefit, a method of assigning Maintenance Benefit Unit(s) (MBU) was developed. MBU are assigned to each parcel based upon the relative benefits the property receives from the SJAFCA project. For example, a typical single-family residence is rated at 1.25 MBU, while a grocery store on one acre is rated at 12.30 MBU. The cost per MBU is established each year by dividing the annual O&M budget by the total number of MBU in the SJAFCA assessment district.

The annual assessment rate approved each year may not exceed the adjusted theoretical maximum assessment of \$3.59 per MBU adjusted for annual inflation equal to the National Consumer Price Index. This base rate of \$3.59 was established by dividing the original O&M budget of \$450,000 by the total number of MBU in fiscal year 1996 (125,474 MBU).

PUBLIC HEARING TO APPROVE THE ANNUAL ENGINEER'S REPORT FOR THE OPERATIONS AND MAINTENANCE (O&M) FOR THE FLOOD PROTECTION RESTORATION ASSESSMENT DISTRICT, AND ORDER THE LEVY AND COLLECTION OF O&M ASSESSMENTS WITHIN THE DISTRICT FOR FISCAL YEAR 2021/22 (Page 3)

Present Situation

The District submitted their proposed O&M budget to SJAFCA for FY 21 /22 (Attachment 1). This proposal does not include aquatic weed removal costs because this work is contracted to a local aquatic and ecosystem restoration company. The District's request of \$985,000 reflects the absolute minimum amount of requested resources to adequately maintain the flood protection facilities. The District's expenditures for the past few years have been less than budgeted and this is mainly due to dry conditions which has allowed the District to reduce costs associated with high water events. It should also be mentioned that major repair costs which occurred in 2017 were paid for by the Army Corps of Engineers under PL-84-99.

Like prior years, budgeted maintenance costs continue to exceed revenue from the annual O&M assessments. The District and Agency staff plan to continue to work together towards a solution to remedy the shortfall of resources to adequately maintain facilities.

The proposed O&M budget for FY 21/22 is \$1,225,000 and covers all the anticipated materials, equipment, consultants, contractors, personnel, and administration (see detail in the attached Engineer's Report, pages 8 and 9, Attachment 2). The FY 21/22 budget does not include funds for floodwall replacement. Previous amounts set aside for the floodwall replacement fund averaged \$44,000 annually. This capital outlay is omitted to reduce the amount appropriated from surplus to cover annual maintenance expenses.

The proposed budget utilizes the maximum assessment rate allowed for FY 21/22. The maximum assessment rate allowed has been used for the last several years. The maximum assessment rate for FY 21/22 is equal to the base rate of \$6.16 adjusted for annual inflation equal to the National Consumer Price Index (CPI). The CPI for FY 21/22 is 2.5%, therefore, the maximum assessment rate is \$6.25.

Applying the maximum assessment rate of \$6.25 to the estimated 153,579 MBU, will yield \$959,092 in O&M revenue. This revenue falls short of meeting the operating costs in the proposed \$1,225,000 O&M budget. Therefore, an appropriation in the amount of \$265,907 (\$1,225,000 - \$959,092) from the O&M surplus fund is needed to cover the proposed expenses in the FY 21/22 budget.

It is also requested that the Board approve a \$100,000 appropriation from the O&M reserve fund to authorize the Executive Director to use these funds (up to \$100,000) to promptly deal with emergencies, or to authorize additional work needed, but not included in the O&M budget. Any unused portion of appropriations are returned to the O&M reserve fund at the end of each fiscal year.

In summary, the FY 21/22 O&M budget includes two appropriation requests:

- 1) A one-time \$265,907 appropriation from the O&M reserve fund to cover operating costs in the proposed budget;
- 2) A \$100,000 appropriation from the O&M surplus fund authorizing the Executive Director to use these funds (up to \$100,000) to promptly deal with emergencies, or to authorize additional work needed, but not included in the O&M budget.

PUBLIC HEARING TO APPROVE THE ANNUAL ENGINEER'S REPORT FOR THE OPERATIONS AND MAINTENANCE (O&M) FOR THE FLOOD PROTECTION RESTORATION ASSESSMENT DISTRICT, AND ORDER THE LEVY AND COLLECTION OF O&M ASSESSMENTS WITHIN THE DISTRICT FOR FISCAL YEAR 2021/22 (Page 4)

These appropriations will not affect the proposed FY 21/22 assessment rate. There are sufficient funds in the O&M reserve to cover these appropriations (as of April 30, 2021 there is approximately \$4.1 million in reserve). The following table displays a partial history of the annual assessment rates (theoretical maximum rate allowed and actual assessed) and some typical annual O&M assessments:

HISTORY OF THE ANNUAL SJAFCA O&M ASSESSMENTS										
PROPERTY TYPE	FISCAL YEARS									
	1996/97	2000/01	2004/05	2008/09	2012/13	2017/18	2018/19	2019/20	2020/21	2021/22
Theoretical Maximum Base Rate allowed	\$3.59	\$3.99	\$4.42	\$5.03	\$5.40	\$5.79	\$5.92	\$6.01	\$6.16	\$6.25
Actual Base Rate assessed	\$3.59	\$3.54	\$3.95	\$5.03	\$5.40	\$5.79	\$5.92	\$6.01	\$6.16	\$6.25
Single Family Home between 1000 and 2000 sf (1.25 MBU)	\$4.49	\$4.43	\$4.94	\$6.29	\$6.75	\$7.24	\$7.40	\$7.51	\$7.70	\$7.81
Grocery Store on 1 acre parcel (12.30 MBU)	\$44.16	\$43.54	\$48.59	\$61.87	\$66.42	\$71.22	\$72.82	\$73.92	\$75.77	\$76.88
Office Building on 2 acre parcel (18.375 MBU)	\$65.97	\$65.05	\$72.58	\$92.43	\$99.23	\$106.39	\$108.78	\$110.43	\$113.19	\$114.84

By adopting the proposed resolution at the conclusion of the public hearing, the Board will approve the Annual Report for the Flood Protection Restoration Assessment District and order the levy and collection of annual O&M assessments for FY 21/22.

PREPARED BY: Doug Clark

APPROVED:
CHRIS ELIAS
EXECUTIVE DIRECTOR

CE:DC:lr

Attachments:

1. The San Joaquin County Public Works Department Proposed O&M budget for FY 21 /22.
2. 2021/2022 Engineer's Annual Report – Prepared by Willdan Financial Services.



SAN JOAQUIN
COUNTY
Greatness grows here.



Department of Public Works

Kris Balaji, Director of Public Works

Fritz Buchman, Deputy Director/Development

Jim Stone, Deputy Director/Operations

Najee Zarif, Interim Deputy Director/Engineering

Kristi Rhea, Business Administrator

March 23, 2021

Mr. Chris Elias, Executive Director
San Joaquin Area Flood Control Agency
22 East Weber Avenue, Suite 301
Stockton, California 95202-2317

SUBJECT: SAN JOAQUIN AREA FLOOD CONTROL AGENCY 2021-22
PROPOSED OPERATIONS AND MAINTENANCE BUDGET

Dear Mr. Elias:

The San Joaquin County Department of Public Works (County) is pleased to submit the attached Fiscal Year 2021-22 budget proposal for your consideration. For the third consecutive year, the proposed 2021-22 Operations and Maintenance (O&M) Budget for cost-shared flood protection facilities reflects no change in the total budget request.

Total expenditures for the past several years have been significantly less than our budget request because we have avoided having to pay for significant repairs caused by high water. The weather has generally been dry, and the major repair costs from the 2017 storms were paid for by the U.S. Army Corps of Engineers under PL 84-99. The County is aware that budgeted maintenance costs continue to exceed the O&M revenue available from annual assessments. While some of the cost categories in the budget request have changed to better align with our accounting, the County's request for FY 2021-22 does not even include normal increases in actual labor and equipment operating costs,

This is the absolute minimum amount of resources that allows us to adequately maintain the facilities. Public Works staff looks forward to continuing cooperation with your staff to coordinate our efforts to undertake a Proposition 218 process to increase maintenance assessment revenue.

Please feel free to call me at 468-3031 if you have any questions about this request.

Sincerely,

A handwritten signature in blue ink that reads "Jim Stone".

JIM STONE
Deputy Director/Operations

C: Kris Balaji, Director of Public Works
Matt Zidar, Engineering Services Manager – Flood Management
Eric Ambriz, Channel Maintenance Superintendent

COUNTY OF SAN JOAQUIN 2021-2022 PROPOSED BUDGET
Assessment District No. 96-1 Flood Protection System

Fund - 21116

Department - 2910000000

	APPR BUDGET 2019-20	ACTUAL 2019-20	RCMND BUDGET 2021-22
Expenditures			
6201005600 GENERAL OFFICE SUPPLIES	0	0	100
6206000300 COMMUNICATIONS CELL PHONE	0	0	1,250
6211000000 MAINTENANCE EQUIPMENT	0	0	10,000
6214000000 RENTS & LEASES -EQUIPMENT	0	0	0
6214000200 EQUIPMENT RENTAL-COUNTY OWNED	260,500	112,094	130,000
6220001000 AUDITOR'S PAYROLL & A/P CHARGES	0	140	750
6221004000 PROFESSIONAL SVS-COUNTY	10,000	2,035	0
6221020000 ALLOCATED SERVICE DEPT COSTS	0	0	150,000
6226001600 LICENSES & PERMITS	0	0	250
6226003000 MATERIALS	28,500	22,655	20,000
6226003100 LABOR	686,000	722,011	664,150
6226101800 SPECIAL DEPARTMENT EXPENSE-SAFETY	0	0	1,000
6240000000 CLOTHING & PERSONAL SUPPLIES	0	0	2,500
6269000000 SMALL TOOLS & INSTRUMENTS	0	0	5,000
SERVICES AND SUPPLIES	985,000	858,935	985,000
6451000000 EQUIPMENT	0	0	0
CAPITAL EXPENDITURES	0	0	0
TOTAL EXPENDITURES	985,000	858,935	985,000



San Joaquin Area Flood Control Agency

**FLOOD PROTECTION RESTORATION
ASSESSMENT DISTRICT
(REASSESSMENT AND REFUNDING OF 2002)**

**2021/2022 ENGINEER'S ANNUAL REPORT
FOR THE OPERATION AND MAINTENANCE**

27368 Via Industria
Suite 200
Temecula, CA 92590
T 951.587.3500 | 800.755.6864
F 951.587.3510

www.willdan.com



TABLE OF CONTENTS

<u>I. OVERVIEW</u>	<u>1</u>
A. INTRODUCTION	1
B. COMPLIANCE WITH CURRENT LEGISLATION	1
<u>II. ANNUAL ASSESSMENT</u>	<u>2</u>
A. DEFINITION OF OPERATION AND MAINTENANCE	2
B. OPERATION AND MAINTENANCE BENEFIT	3
C. CALCULATION OF ANNUAL MAINTENANCE AND OPERATION ASSESSMENT	4
D. PROPOSED BUDGET FOR FISCAL YEAR 2021/2022	6
E. CALCULATION OF ASSESSMENT RATE FOR FISCAL YEAR 2021/2022	8
<u>III. METHOD AND FORMULA OF ASSESSMENT SPREAD</u>	<u>8</u>
A. CALCULATION OF BENEFIT UNITS	8
B. IMPROVEMENT BENEFIT	9
C. EQUIVALENT DWELLING UNITS	11
D. LAND BENEFIT	13
E. EXEMPT	14
F. ASSESSMENT DISTRICT BOUNDARY FACTOR	15
<u>IV. DESCRIPTION OF WORKS OF IMPROVEMENTS</u>	<u>15</u>
<u>APPENDIX A — SAMPLE BENEFIT UNIT CALCULATIONS</u>	<u>17</u>
<u>APPENDIX B — LAND USE CLASSIFICATIONS</u>	<u>18</u>
<u>APPENDIX C – DIAGRAM OF ASSESSMENT DISTRICT</u>	<u>19</u>
<u>APPENDIX D — 2021/2022 COLLECTION ROLL</u>	<u>20</u>

I. OVERVIEW

A. INTRODUCTION

The San Joaquin Area Flood Control Agency (“Agency”) is authorized to annually levy and collect special assessments in order to provide and maintain the facilities, improvements and services within Flood Protection Restoration Assessment District (Reassessment and Refunding of 2002) (“District”). The District was formed in 1996 and the Agency annually levies and collects assessments to maintain the improvements installed and constructed within the District pursuant to the Municipal Improvement Act of 1913, Division 12 of the California Streets and Highways Code §10000 (the “1913 Act”).

This Engineer’s Annual Report (“Report”) describes the District, any changes to the District, the method of apportionment established at the time of formation, and the proposed assessments for Fiscal Year 2021/2022. The proposed assessments are based on the estimated cost to maintain the improvements that provide a special benefit to properties assessed within the District. Each parcel within the District is assessed proportionately for the special benefits provided to the parcel from the improvements.

The word “parcel” for the purposes of this Report refers to an individual property assigned its own Assessment Number by the San Joaquin County Assessor’s Office. The San Joaquin County Auditor/Controller uses Assessment Numbers and specific Fund Numbers to identify on the tax roll properties assessed for special district benefit assessments.

Following consideration of all public comments and written protests at an annual noticed public hearing, and review of the Engineer’s Annual Report, the Board of Directors for the Agency may order amendments to the Report or confirm the Report as submitted. Following final approval of the Report, and confirmation of the assessments, the Board will order the levy and collection of assessments for Fiscal Year 2021/2022. In such case, the assessment information will be submitted to the San Joaquin County Auditor/Controller, and included on the property tax roll for each parcel in Fiscal Year 2021/2022.

B. COMPLIANCE WITH CURRENT LEGISLATION

The Agency has reviewed the provisions of the California Constitutional Article XIID (established by the passage of Proposition 218 in November 1996) and has made the following findings and determinations:

Pursuant to Article XIID Section 5 of the California Constitution, certain property related assessments existing on July 1, 1997 (“the effective date”) are exempt from the substantive and procedural requirements of Article XIID Section 4 and property owner balloting for the assessments is not required until such time that the assessments are increased. Specifically, Section 5 of Article XIID reads:

“...the following assessments existing on the effective date of this article shall be exempt from the procedures and approval process set forth in Section 4:

(a) Any assessment imposed exclusively to finance the capital costs or maintenance and operation expenses for sidewalks, streets, sewers, water, flood control, drainage systems or

vector control. Subsequent increases in such assessments shall be subject to the procedures and approval process set forth in Section 4.”

Since, the improvements and the annual assessment for maintaining the District improvements are exclusively for flood control purposes, the method of assessment and maximum assessment rate formula, as established by the Agency prior to the effective of the article (July 1, 1997), are exempt from the procedural requirements of Article XIID Section 4 of the California Constitution.

The proposed assessment for Fiscal Year 2021/2022 may be less than or equal to the maximum assessment rate previously approved and adopted by the Agency. Future assessments that exceed the previously approved schedule of adjustments, including the clearly defined formula for inflation adjustment that was adopted by the Agency prior to November 6, 1996, will be subject to the substantive and procedural requirements of the California Constitution Article XIID Section 4.

// ANNUAL ASSESSMENT

When the District was formed, pursuant to Section 10100.8 of the Streets and Highways Code, the Board approved the levy of assessments to pay in whole or in part: a.) The costs and expenses of constructing or acquiring the Improvements; b.) The estimated annual costs and expenditures required during the ensuing years for the operation and maintenance of those improvements. The assessments so approved are collected through special assessment levied on the County tax rolls upon all lots, parcels and subdivisions of land within the District that benefit from the improvements.

Since the improvements are to be funded by the levying of assessments, the law requires and the statutes provide that assessments levied pursuant to the “1913 Act”, must be based on the special benefit that the properties receive from the works of improvement. However, the statute does not specify the method or formula that should be used in any special assessment district proceedings. The responsibility for apportioning the costs to properties which special benefit from the improvements rests with the Assessment Engineer, who is appointed to make an analysis of the facts and to determine the apportionment of the assessment obligation to properties proportionate to the special benefit which each will receive from the improvements.

To apportion the assessment to each parcel in direct proportion to the special benefit it will receive from the improvements, an analysis was made to initially identify the special benefit that the public improvements would render to the properties within the boundaries of the District. In making the analysis to levy an assessment on a specific parcel, it is necessary that the parcel receive a special benefit distinguished from a benefit to the general public.

A. DEFINITION OF OPERATION AND MAINTENANCE

The costs and expenses for “Operation and Maintenance” include all applicable operation, maintenance and repair costs incurred annually, or that may not be reasonably collected in a single annual assessment to maintain the level of benefit to the assessed parcels in the District. Operation and Maintenance, as determined by the Board of the San Joaquin Area Flood Control Agency, may include, but is not limited to:

- Personnel costs;
- Utilities (water, electric and other);

- Maintenance equipment (purchase and repair);
- Weed abatement (herbicide spraying, mowing, debris burning);
- Rodent control;
- Road maintenance (Access Roads);
- Stream bed and detention basin clearing;
- Sedimentation removal;
- Erosion control;
- Patrolling and inspecting improvements and facilities;
- Pump station operation (including maintenance and repair);
- Flood wall repairs;
- Graffiti removal;
- Administration expenses; and
- Providing for an “Emergency Repair/Replacement Fund”.

B. OPERATION AND MAINTENANCE BENEFIT

The District assessments were established to provide funding and financing for the design construction, maintenance and operation of flood control facilities (improvements) that benefit parcels within the District. Properties within the District have been designated within the 100-year flood plain by the Federal Emergency Management Agency (FEMA)—according to the preliminary revised Flood Insurance Rate Maps (FIRM's), dated February 28, 1995. The District's flood control facilities restore flood protection to properties that are subject to flooding during a storm of 100-year intensity and thereby preserve the ability to use and develop the properties within the District without the requirements placed on parcels located within Special Flood Hazard Areas. Therefore, the improvements and the maintenance and operation of those improvements are a special benefit to the properties within the District.

The following outlines the special benefits properties within the District receive from the construction and maintenance of the flood protection improvements:

- Reduction in the risk of loss that would occur if a flood were to damage the improvements on the property: i.e., structural damage and/or damages affecting the revenue-producing environment.
- Removal of the flood plain disclosure required during the sale of a property.
- Removal of the requirement for properties that are removed from Special Flood Hazard Areas (as designated by FEMA) to adhere to the building and design “flood plain management” criteria required by FEMA for communities participating in the Flood Insurance Program (FIP). These criteria apply to new construction, as well as renovations and additions in most circumstances, and increase the costs of development.
- Removal of the mortgage/lender requirement to purchase flood insurance if a property is within a designated Special Flood Hazard Area shown on the preliminary revised FIRM's, or providing the ability to purchase flood insurance at a reduced cost.
- Protection of public improvements required to provide access and service to properties.

- Enhanced ability to develop property to its “highest and best use” in accordance with existing zoning and land use regulations.

C. CALCULATION OF ANNUAL MAINTENANCE AND OPERATION ASSESSMENT

The benefit formula used for calculating the annual operation and maintenance benefit to each property within the District is based on the Benefit Units (BU's) used to calculate the original benefits and assessments each parcel received from the construction of the District improvements and facilities. However, when the development or land use of a property changes the special benefits the parcel receives from the operation and maintenance of the District improvements also changes. The Maintenance Benefit Units (MBU's) for each parcel is recalculated each year utilizing the same methodology and formula established in the District's original Engineers Report and outlined in Part III of this report (Method of Apportionment) to accurately reflect each parcel's current special benefit from the improvements. Therefore, if the development status or land use of a particular parcel has changed since the previous year, the MBU's and the resulting operation and maintenance portion of the parcel's assessment will likely change.

The assessment rate per MBU is calculated by dividing the total annual Operation and Maintenance Budget by the total number of MBU's in the District each year. The number of MBU's will vary year to year based upon development and land use changes in the District.

In the year the District was formed (Fiscal Year 1996-97), the maximum annual assessment rate (“maximum rate”) for Operation and Maintenance was established at \$3.59 per MBU, plus an annual inflation escalator equal to the National Consumer Price Index (CPI). This maximum rate of \$3.59 was established using an estimated annual operation and maintenance cost of \$450,000 for the first full year of maintenance, and the total number of Maintenance Benefit Units in Fiscal Year 1996-97 (125,474.396 MBU's).

The first assessments for Operation and Maintenance were collected in Fiscal Year 1996-97 pursuant to resolution of the Agency Board approved after a duly noticed public hearing, as provided in the Act. Annual assessments for Operation and Maintenance are anticipated to be levied and collected each fiscal year and shall be approved by resolution at an annual public hearing on the matter. The annual assessment approved each year may not exceed the CPI adjusted maximum assessment (\$3.59 plus the annual inflation escalator) approved, without approval of the property owners subject to the assessment through a property owner protest ballot procedure pursuant to the California Constitution Article XIID.

Based on the initial Annual Assessment Rate of \$3.59 per MBU and the annual CPI inflation factor, the following table summarizes the application of the annual inflation escalator allowed to the assessment rate for the operation and maintenance assessments since Fiscal Year 1996-97. The “Maximum Assessment Rate” reflects the assessment rate per MBU that may be applied for the respective fiscal year without constituting an increased assessment or once again obtaining property owner approval in accordance with the provisions of the California Constitution Article XIID. The “CPI” applied each year is the National Consumer Price Index (CPI) from January 1st of the previous year to January 1st of the current year (or similar period). (Example—the CPI applied for Fiscal Year 1997-98 is based on the CPI calculated from January 1, 1996 to January 1, 1997 to the first decimal place 0.0).

Fiscal Year	Base Year Rate	Calendar Year CPI	CPI Adjustment	Maximum Assessment Rate	Assessment Rate Applied
1996-97	N/A	N/A	N/A	\$3.5900	\$3.59
1997-98	\$3.5900	3.30%	\$0.1185	\$3.7085	\$3.59
1998-99	\$3.7085	1.70%	\$0.0630	\$3.7715	\$3.60
1999-00	\$3.7715	2.95%	\$0.1113	\$3.8828	\$3.56
2000-01	\$3.8826	2.70%	\$0.1048	\$3.9874	\$3.54
2001-02	\$3.9874	3.90%	\$0.1555	\$4.1429	\$3.53
2002-03	\$4.1429	3.50%	\$0.1450	\$4.2879	\$3.51
2003-04	\$4.2879	1.10%	\$0.0472	\$4.3351	\$3.49
2004-05	\$4.3351	1.90%	\$0.0824	\$4.4174	\$3.95
2005-06	\$4.4174	3.00%	\$0.1325	\$4.5500	\$3.95
2006-07	\$4.5500	4.00%	\$0.1820	\$4.7320	\$4.25
2007-08	\$4.7320	2.10%	\$0.0994	\$4.8314	\$4.36
2008-09	\$4.8314	4.30%	\$0.2078	\$5.0392	\$5.03
2009-10	\$5.0392	0.00%	\$0.0000	\$5.0392	\$5.03
2010-11	\$5.0392	2.60%	\$0.1310	\$5.1702	\$5.17
2011-12	\$5.1702	1.60%	\$0.0827	\$5.2529	\$5.25
2012-13	\$5.2529	2.90%	\$0.1523	\$5.4052	\$5.40
2013-14	\$5.4052	1.60%	\$0.0865	\$5.4917	\$5.49
2014-15	\$5.4917	1.60%	\$0.0879	\$5.5796	\$5.57
2015-16	\$5.5796	0.00%	\$0.0000	\$5.5796	\$5.57
2016-17	\$5.5796	1.40%	\$0.0781	\$5.6577	\$5.65
2017-18	\$5.6577	2.50%	\$0.1414	\$5.7991	\$5.79
2018-19	\$5.7991	2.10%	\$0.1218	\$5.9209	\$5.92
2019-20	\$5.9209	1.60%	\$0.0947	\$6.0156	\$6.01
2020-21	\$6.0156	2.50%	\$0.1504	\$6.1660	\$6.16
2021-22	\$6.1660	1.40%	\$0.0863	\$6.2523	\$6.25

The Fiscal Year 2021/2022 Maximum Assessment Rate allowed is \$6.2523.

The Fiscal Year 2021/2022 Assessment Rate proposed is \$6.25.

The "Base Rate" equals the prior year's "Maximum Assessment Rate" allowed.

The "Maximum Assessment Rate" is calculated to four decimal places, however, the actual assessment applied to each parcel is rounded down to the nearest even penny when applied to the tax rolls.

D. PROPOSED BUDGET FOR FISCAL YEAR 2021/2022

Item Descriptions		
San Joaquin County Operation and Maintenance Budget:		
Rents & Leases – Equipment Use of San Joaquin County Flood Control and Water Conservation District equipment to perform operation and maintenance activities and provide emergency services, if needed Equipment Rental County Owned	\$130,000	\$130,000
Professional Services – County Services provided for bridge parapet wall accident repair	\$0	\$0
Materials Includes expenses for vegetation management materials, rodent control materials, and materials and supplies unique to operation and maintenance activities	\$190,850	\$190,850
Labor Costs Services provided by San Joaquin County Flood Control and Water Conservation District for operation and maintenance activities and to provide emergency activities, if needed Operation and Maintenance	\$664,150	\$664,150
Miscellaneous Expense -	\$0	\$0
Fixed Asset Funds needed to acquire additional equipment for the Agency	\$0	\$0
SUB-TOTAL SAN JOAQUIN COUNTY OPERATION AND MAINTENANCE BUDGET		\$985,000

Aquatic Weed Control Program – Five Mile Slough This program is conducted in an approximate 5,100 ft lineal section of Five Mile Slough and is managed by SJAFCA; work during FY 21-22 will be carried out by a professional contractor. Contractor – herbicide application; compliance and monitoring and reporting	\$55,000	\$55,000
SUB-TOTAL SJAFCA OPERATION AND MAINTENANCE BUDGET		\$55,000
<u>SJAFCA Administration Budget:</u> Contribution To Capital Outlay Reserve (future floodwall replacement) Property Tax Administration Charges Charges by the County Tax Collector for the collection of property assessments. Administration Costs Annual General and Administration and Engineer's Report SUB-TOTAL SJAFCA ADMINISTRATION BUDGET	\$0 \$10,000 \$175,000	\$185,000
TOTAL OPERATION AND MAINTENANCE BUDGET FY 2021/2022		<u>\$1,225,000</u>
For FY 2021/2022, there are \$1,210,000 of appropriations available to the district as follows: - - FY 2021-2022 Assessment to be levied FY 2021-2022 Agency Reserve Appropriation for FY 2021/22 Budget FY 2021-2022 Agency Reserve Appropriation for Emergencies or Additional Work		- \$959,093 \$265,907 \$100,000
TOTAL FY 2021/2022 APPROPRIATION		<u>\$1,325,000</u>

- (1) Assessment to be levied may be slightly different from total amount on preliminary roll due to the rounding of assessment to even pennies as required by San Joaquin County.
- (2) The surplus appropriation of \$265,907 is needed to cover the difference between the amount collected by the O&M assessments and the additional amount requested by the District in the proposed FY 2021/2022 budget.
- (3) The surplus appropriation of \$100,000 will allow the Executive Director, without additional Board Authorization, to promptly deal with emergencies, or to authorize additional work not included in the budget.

The appropriations in the budget are funded from the unexpended balance in the O&M reserve, carried forward from previous year's O&M assessments. No increase in the current annual assessment charge is either required or made. The result of this request to the Engineer's Report will not affect the proposed FY 2021/2022 assessment rate of \$6.25 per Maintenance Benefit Unit.

E. CALCULATION OF ASSESSMENT RATE FOR FISCAL YEAR 2021/2022

The assessment rate per MBU is calculated by dividing the total amount to be funded "O&M Budget" by the total "MBU's" estimated for the District.

O&M Budget-Surplus Appropriations/Maintenance Benefit Units (MBU's) = Assessment Rate

- The Total Maintenance Benefit Units (MBU's) that are estimated for the District in Fiscal Year 2021/2022 are 153,579.45 **MBU's**.
- Based on the estimated budget and the surplus appropriation for Fiscal Year 2021/2022, the assessment rate for Fiscal Year 2021/2022 is approximately \$6.25 per Maintenance Benefit Unit.

III. METHOD AND FORMULA OF ASSESSMENT SPREAD

A. CALCULATION OF BENEFIT UNITS

To apportion the costs of the improvements to parcels that benefit, a method of assigning Benefit Units to each parcel was developed and approved when the District was formed. Benefit Units (BUs) were assigned to each parcel based upon the benefits to real property that the District improvements (levee system and other flood control improvements) provided to each parcel in proportion to the estimated benefit the parcel receives relative to the other parcels in the District from the flood protection facilities.

The specific number of Benefit Units assigned to each parcel was calculated based upon the formula shown below:

Improvement BUs + Land BUs = Total BUs

The single-family residence (SFR) was used as a basis of comparison since it represented approximately 70 percent of the assessable parcels of land in the District. BUs assigned to other parcels and land uses were based upon the relative benefit they receive as compared to a single-family residence. The total number of BU's for all assessable parcels in the District were then divided into the total cost to fund the District to determine the assessment rate per Benefit Unit.

The BUs assigned or calculated for each parcel for construction and installation of the improvements was based on the land use for the parcel as shown on the records of the San Joaquin County Assessor's office at the time of formation. Recognizing that under the 1913 Act, the assessment on each parcel may not be increased once it has been levied without further public hearings and property owner approval, the District was formed and the assessments approved provided for annual adjustments to the assessments for operation maintenance of the improvements. The annual operation and maintenance assessment rate was established at \$3.59 per Maintenance Benefit Unit (MBU) plus an annual escalator equal to the National Consumer Price Index (CPI). However, the assessment formula approved also established that the operation and maintenance assessment applied to each parcel would be recalculated annually based on the current development status or land use of each parcel. Therefore, if the development status or land use of a particular parcel changed from the previous year, the MBU's and the resulting assessment would change to more accurately reflect the parcel's current proportional benefit from the District improvements.

The methodology used to calculate the original BUs for the construction and installation of the improvements as well as the Maintenance Benefit Units calculated for future operation and maintenance of the improvements are assigned to each parcel based on land use. The method of apportionment for each land use is described in the following sections, with sample calculations provided in Appendix A.

B. IMPROVEMENT BENEFIT

Since the primary benefit to parcels from the construction, operation and maintenance of the flood control improvements is to remove them from the proposed new Special Flood Hazard Areas (new areas of the 100-year flood plain as identified by FEMA), the risk of loss or damage to improvements installed or constructed on developed parcels of land is significantly reduced.

The construction, operation and maintenance of the flood control improvements within the District significantly reduce the risk of damage and loss of real property, particularly to developed parcels of land. The improvements also facilitate the removal of properties from the proposed new Special Flood Hazard Areas (new areas of the 100-year flood plain as identified by FEMA). As a result, the special benefits to be enjoyed by property owners include:

- elimination of the requirements to purchase flood insurance in order to obtain financing;
- ability to purchase flood insurance at a reduced cost in comparison to parcels which are located within a Special Flood Hazard Area as designated by FEMA; and
- reduction of a flood event occurring and the probability of loss or damage to the property and improvements on the property.

The degree to which each developed property will benefit in relationship to any other property is based upon the intensity of development on the parcel (i.e., the percentage of the total parcel area which has or is allowed to have improvements constructed thereon) and the relative risk

of loss of those improvements in relation to other land uses. The following describes the benefit relationship rational established in the original Engineer's Report.

Intensity of Development — Based upon an average parcel size of 1/6 acre for single-family development and a typical building footprint of about 1,600 sq. ft., the intensity of development on single-family residential parcels is approximately 20 percent. By comparison, a review of land use data within the Agency's sphere of influence showed that on retail/service commercial parcels of one acre or less, the average intensity of development is approximately 40 percent of the parcel area. This means that for each acre of land used for single-family residential, on average approximately 20 percent of the area (or about 9600 square feet per acre) is covered by improvements; whereas, on each acre of land used for retail/service commercial, over 40 percent is covered by improvements (or about 19,500 square feet per acre). Since an acre of land developed for retail/service commercial use has a higher intensity of development than an acre of land used for single-family residential, it receives a greater benefit because there is more that would be damaged should a flood occur. Based upon a review of parcel area and intensity of development by land use for over 2,500 parcels, the following represents the average intensity of development per acre relative to single-family residential development within the District. The average intensity of development, by land use category (retail/service commercial, office/professional, personal care/recreational, manufacturing/industrial, institutional), was calculated by computing the average building coverage on the parcels analyzed after excluding those parcels that were significantly underdeveloped. Underdeveloped parcels were defined as those parcels within each land use category, which had the lowest 20th percentile current improvement density.

Unlike non-residential parcels, SFR parcels do not have a strong correlation between parcel size and the area which can be covered by improvements; therefore, they are assessed according to the size of the building footprint based on adjusting the improvement density factor for single-family residential as a function of the area of the structure footprint. A review of the available data showed that approximately 25 percent of the homes have a building footprint that would be 1,000 square feet or less, approximately 50 percent of the homes would fall in the 1-2,000 square foot range and the remainder would be over 2,000 square feet. Considering the number of houses in each category and the relative amount of replacement necessary should flooding occur, the improvement density factor reflects a 20% differentiation in replacement costs for the three categories of SFR, as shown in the table below.

Land Use	Improvement Density Factor
Single-Family Residential	
Less than 1,000 SF	0.8
1,000 to 2,000 SF	1.0
More than 2,000 SF	1.2
Multi-Family Residential	1.0
Retail/Service Commercial	2.0
Office/Professional	2.0
Personal Care/Recreational	2.0
Manufacturing/Industrial	2.0
Institutional	1.5

Risk of Loss — In determining the benefit that a parcel receives, it was also necessary to look at the relative replacement costs of the improvements constructed on the parcel relative to other

land uses since the relative risk of loss in the event of a flood is directly proportional to the relative cost of the improvements at risk. For example, a review of published building construction cost data showed that the average cost range per square foot for single-family residential improvements was \$45-60/square foot while the average cost range per square foot for industrial improvements was \$25-45/square foot. Therefore, each developed single-family residential parcel receives a greater benefit than developed manufacturing/industrial parcels per unit of improvement since the loss or damage would be significantly higher should a flood occur. Also, since the cost of flood insurance is based on the value of improvements to be insured, it would cost the single-family property owner more to purchase flood insurance per 100 square feet of single-family residential improvements in comparison to 100 square feet of manufacturing/industrial improvements; therefore, the single-family residential property would receive a greater benefit.

Based upon an analysis of the average cost per square foot for structures allowed under existing land use regulations for each land use, the table below shows the relative benefit per unit (i.e., square foot) for improvements by land use relative to single-family residential development within the District:

Land Use	Risk Factor
Single-family Residential	1.0
Multi-Family Residential	0.9
Retail/Service Commercial	0.9
Office/Professional	1.1
Personal Care/Recreational	1.2
Manufacturing/Industrial	0.7
Institutional	1.1

Therefore, it was determined that developed properties benefit differently from the flood protection facilities depending on the type of land use on the property and the average intensity of development; the potential damage to the structure, its contents, and/or the financial loss in revenues in the event of a flood would be different for the different types of land use based upon the relative cost per unit of improvement within the different land use categories.

In order to allocate benefit fairly between the land uses, an Equivalent Dwelling Unit (EDU) methodology was established that equated different residential and non-residential land uses to each other, thereby allowing a uniform method of assessment.

Therefore, the improvement benefit formula is summarized as:

$$(\text{EDU's}) \times (\text{Improvement Density Factor}) \times (\text{Risk Factor}) = \text{Improvement Benefit Units}$$

C. EQUIVALENT DWELLING UNITS

Land use as shown on the San Joaquin County Assessor's records is used to assign Equivalent Dwelling Units (EDU's) to each improved parcel based on the following methodology.

- **Single-family Residential** — Since the single-family residential (SFR) parcel is the most common land use and represents over 70 percent of the assessable parcels within the

District, it is used as the standard and is assigned one (1) EDU. Other improved land uses are converted to EDU's by comparing them to the SFR. Included in the SFR category are condominiums, mobile homes not in mobile home parks and agricultural-residential parcels.

- **Multi-Family Residential** — Multi-family residential improved land uses are equated to the SFR land use based upon the number of dwelling units per parcel. Studies have consistently shown that the average apartment unit's relative size and population density compared to the typical size and impacts of single-family units is approximately 80 percent as much as a single-family residence. By virtue of their reduced size, each multi-family residential unit receives a lesser benefit or enhancement per unit to property values and therefore benefits less per unit than a single-family residence. Also, a review of parcel data finds that flood protection benefits do not increase proportionately as the number of units increase on a Multi-Family Residential (MFR) parcel, due to the nature of the building layouts and the fact that the value per unit generally decreases as the number of unit's increases.

EDU's for Multi-Family Residential parcels are calculated based upon the actual number of dwelling units as shown below:

Number of Dwelling Units	Equivalent Dwelling Unit Formula
Four (4) Units or less	0.8 EDU/DU for the first 4 DU's
More than four (4) but less than or equal to twenty (20)	0.6 EDU/DU for each DU over 4 and up to 20
More than twenty (20)	0.4 EDU/DU for each DU over 20

- **Non-Residential** — All Non-Residential improved land uses are equated to the SFR based upon parcel size. A review of the County land use records showed that the average SFR parcel size in the City of Stockton is 1/6 acre. Therefore, the factor of 6 EDU's per acre is used as the basis of comparison, and each Non-Residential parcel will be assigned 6 EDU's per acre or fraction thereof.

To more accurately reflect the benefit that some parcels receive from the flood control improvements, an additional adjustment in the EDU's assigned to the parcel is required. The data used to develop the density factors for each land use indicated that, on the larger parcels of land, the average density of development was significantly lower than on parcels that were less than one (1) acre in size. Even if it is assumed that the owner of land will ultimately develop that land to receive the maximum economic return from the land based upon allowed intensities of development and other land use regulations, there are a number of factors that limit the density of development on larger parcels of land. These include requirements based upon the specific land use which may include the need to provide large areas for the storage of materials or goods, to provide internal circulation roadways, to provide open areas or extensive buffer zones, to provide increased areas for employee/customer parking and other similar requirements.

Therefore, based upon an analysis of data relating the development intensity and parcel size for different types of land uses the number of EDU's assigned to non-residential parcels is adjusted on parcels which are larger than one (1) acre as shown below:

Parcel Size	Equivalent Dwelling Unit Formula
One (1) Acre or less	6.0 EDU/Acre
More than one (1) acre but less than or equal to four (4) acres	1.5 EDU/Acre for each acre over one (1) acre up to four (4) acres
More than four (4) acres	0.5 EDU/Acre for each acre over four (4) acres

Parcel area for non-residential condominiums will be calculated based on the individual parcel size and a proportional share of the common area attributed to the condominium complex.

- **Vacant** — Vacant properties have no improvements constructed on them; therefore, vacant properties are assigned zero (0) Improvement Benefit Units per parcel.
- **Vacant-like Developed Property** — This includes those parcels with land uses that closely resemble vacant property in that they have large land areas comprised of mostly park-like open space or vacant land and only a few buildings. These properties have very low land utilization and almost no potential for additional development; therefore, these land uses are assigned 1.0 BU per parcel for the ancillary structures on the property. These land uses include radio and television transmission facilities or towers, mineral processing, parcels with only parking lots, airports, mobile home parks, cemeteries, golf courses and other miscellaneous recreational uses.

A list of Land Use Classifications used in this report, with the corresponding County Assessor's use codes, is provided in Appendix B.

D. LAND BENEFIT

In addition to benefits that improvements on a property will receive, parcels within the District are assigned Land Benefit Units in proportion to the benefits that they receive by virtue of:

- Having the ability to economically use or fully develop a property consistent with zoning and land use regulations.
- Not having to adhere to the "Flood Plain Management" requirements for building and design of new construction, as well as renovations and additions, required for parcels in Special Flood Hazard Areas; and
- Not having to disclose during the sale of a property that it is located in a Special Flood Hazard Area of the 100-year flood plain.

Based on the benefits previously described, the benefit to the land is preserved whether it is improved or not, and the benefit to each parcel is directly related to the size of the land. In addition, if the land were to remain in the flood plain, the cost of elevating the building pad area by filling the land would be proportional to the size of the parcel and the intensity of development allowed upon it based upon current land use and development standards. Therefore, the benefit received by the parcel varies as land varies in size.

For the City of Stockton, the San Joaquin County Assessor's Roll indicates that over 70 percent of the parcels of land are single-family residences (SFR's) and that the average land value for an average SFR located on 1/6 acre is between 20 and 30 percent of the total value of property. Therefore, 0.25 BU is assigned to each single-family residential parcel of land. Since the development potential of a SFR parcel is restricted to one house, no matter how big the parcel, the Benefit Units assigned to the land will not vary as parcel size increases for single-family residential parcels of land.

Benefit Units for all other land uses are based upon the size of the parcel at the rate of 0.25 BU for each 1/6 acre (1.5 BU/acre) to estimate the benefit to the land, since the amount of development which could occur is directly related to the size of the parcel. Each parcel of land, both developed and undeveloped and having no development restrictions on it, will be assigned Benefit Units at the rate of 1.5 BU/Acre to reflect the benefit that the land receives. Since the level of development or the potential for development would be similar for developed parcels of a similar size, the BU's assigned to the land for parcels larger than one (1) acre in size will be reduced in the same manner as the EDU's are reduced for the improvements on developed non-residential parcels as shown below:

Parcel Size	Land Benefit Unit
One (1) Acre or less	1.5 per Acre
More than one (1) acre but less than or equal to four (4) acres	0.375 per Acre
More than four (4) acres	0.125 per Acre

Parcel area for non-residential condominiums will be calculated based on the individual parcel size and a proportional share of the common area attributed to the condominium complex.

E. EXEMPT

Several land uses have been determined to be exempt because they would not benefit from the proposed flood control facilities, or they have a supporting use to a land use already being charged. Examples of exempt land uses are as follows:

- Common areas associated with residential condominiums, open spaces and green belts.
- Parcels with total property values of less than one dollar per the San Joaquin County Assessor's Roll.
- Properties owned by public agencies, such as cities, the County, the State or the Federal government, are exempt except when such property is not devoted to a public use.
- Rights-of-way owned by utilities and railroads.
- Agricultural parcels under the Williamson Act or within a General Plan area designated, as "Agricultural" has no potential for immediate development. By contrast, the Williamson Act parcels remain agricultural to take advantage of special tax treatments. The Williamson Act agricultural parcels and the General Plan Agricultural parcels are not assigned any benefit. If these parcels develop in the future, then the appropriate benefit will be collected under the "Flood Control Facilities Fee" mechanism. (Agricultural parcels that are not within the

General Plan designated areas and which do not have Williamson Act contracts are assessed as Vacant.)

- Parcels which are designated as Special Flood Hazard Areas on the Preliminary Revised FIRM's, dated February 28, 1995, and which were previously designated as Special Flood Hazard Areas on the previous FIRM's; these parcels are considered to have no benefit and will not be assessed.

F. ASSESSMENT DISTRICT BOUNDARY FACTOR

Parcels that are bisected by the flood line, as delineated on the preliminary Revised FIRM's, would have the total BUs for the property reduced by the percentage of the parcel within the proposed flood plain since they would receive a reduced benefit. The BUs for the parcel are reduced based on the following:

- If a parcel has less than 1/3 its area in the flood plain, the BU's for that parcel would be multiplied by 0.17.
- If a parcel has more than 1/3 but less than 2/3 its area in the flood plain, the BU's for that parcel would be multiplied by 0.50.
- If a parcel has more than 2/3 its area in the flood plain, the BU's for that parcel would be multiplied by 83.

IV. DESCRIPTION OF WORKS OF IMPROVEMENTS

Section 10102 of the Act provides for the legislative body of any agency authorized under the Act to finance certain capital facilities and services. The following is a list of improvements as allowed under the Act to be constructed, installed, maintained, repaired or improved under the provisions of the Act. The facilities diagram, on file in the Office of the Secretary, shows the general location of the improvements. Copies are also on file at the Office of the Clerk of the Board of Supervisors of the County of San Joaquin and at the Office of the City Clerk of the City of Stockton.

The improvements consist of, but are not limited to:

- A. Flood protection improvements including the construction, strengthening and/or raising the height of levees, flood walls and wing levees; construction and/or improvements to detention basins and reservoirs; improvements to bridges, roadways and access ways; channel improvements; and related improvements along, but not limited to, the following waterways:
 - Bear Creek - confluence with Disappointment Slough to Tully Road.
 - Paddy Creek - confluence with Bear Creek to approximately Jack Tone Road.
 - Bear Creek - approximately 700 downstream of Interstate 5 to confluence with Paddy Creek.
 - Paddy Creek - confluence with Bear Creek to confluence with South Paddy Creek.
 - South Paddy Creek - confluence with Paddy Creek to approximately Jack Tone Road.

- Mosher Creek & Mosher Creek Diversion - confluence with Bear Creek to approximately 6300 feet upstream of Highway 88.
 - Mosher Slough - 2,000 feet upstream of Interstate 5 to approximately 150 feet upstream of Thornton Road.
 - Calaveras River - confluence with the San Joaquin River to approximately Solari Ranch Road.
 - Stockton Diverting Canal - confluence with the Calaveras River to Mormon Slough.
 - Mormon Slough - confluence Stockton Diverting Canal to approximately 500 upstream of confluence with Potter Creek.
 - Potter Creek A - confluence with Mormon Slough to approximately Jack Tone Road.
 - Potter Creek B - confluence with Mormon Slough to 1,500 feet east of Fine Avenue.
 - Mosher Slough Detention Basins No.1 & 2.
 - Little Bear Creek - confluence with Mosher Slough to Davis Road.
 - Pixley Slough - confluence with Bear Creek to Lower Sacramento Road.
 - Five Mile Slough – confluence with Fourteen Mile Slough to the north/south land levee at the east boundary line of Shima Tract.
- B. The acquisition of all interest in real property necessary or useful for the above described improvements or other improvements constructed by the District; and,
- C. The acquisition and/or construction of any other work, auxiliary to any of the above and necessary or useful to complete the same and to reduce the risk of flooding within the District.

Appendix A — SAMPLE BENEFIT UNIT CALCULATIONS

Land – Use	Land Benefit	Improvement Benefit (EDU) x (Imp. Density Factor) x (Risk Factor)	Total MBU's
Single-family Res. ftprint < 1000sf	All parcels = .25 BU	(1DU x 1EDU/DU) x .8 x 1 = 0.8 BU	1.05
Single-family Res. 1000 > ftprint > 2000	All parcels = .25 BU	(1DU x 1EDU/DU) x 1 x 1 = 1.0 BU	1.25
Single-family Res. ftprint > 2000 sf	All parcels = .25 BU	(1DU x 1EDU/DU) x 1.2 x 1 = 1.2 BU	1.45
Agricultural Res.	All parcels = .25 BU	(1DU x 1EDU/DU) x 1 x 1 = 1.0 BU	1.25
3-Unit Apartment 1/2 acre parcel	.5ac x 1.5BU/ac = .75 BU	(3DU x .8EDU/DU) x 1 x .9 = 2.16 BU	2.91
11 Unit Apt. 3/4 acre parcel	.75ac x 1.5BU/ac = 1.125BU	[(4DU x .8EDU/DU) + (7DU x .6EDU/DU)] x 1 x .9 = 6.66 BU	7.785
41 Unit Apt. 3 acre parcel	3ac x 1.5BU/ac = 4.5 BU	[(4DU x .8EDU/DU) + (16DU x .6EDU/DU) + (21DU x .4EDU/DU)] x 1 x .9 = 19.8 BU	23.58
Grocery Store 1 acre parcel	1ac x 1.5BU/ac = 1.5 BU	(1ac x 6EDU/ac) x 2 x .9 = 10.8 BU	12.3
Regional Shopping 5 acre parcel	1ac x 1.5BU/ac + 3ac x .375BU/ac + 1ac x .125BU/ac = 2.75BU	[(1ac x 6EDU/ac) + (3ac x 1.5EDU/ac) + (1ac x 0.5EDU/ac)] x 2 x .9 = 19.8 BU	22.55
Service Station 1/4 acre parcel	.25ac x 1.5BU/ac = .375BU	(1/4ac x 6EDU/ac) x 2 x .9 = 2.7 BU	3.075
Office Building 2 acre parcel	1ac x 1.5BU/ac + 1ac x .375BU/ac = 1.875BU	[(1ac x 6EDU/ac) + (1ac x 1.5EDU/ac)] x 2 x 1.1 = 16.5 BU	18.375
Church 2 acre parcel	1ac x 1.5BU/ac + 1ac x .375BU/ac = 1.875BU	[(1ac x 6EDU/ac) + (1ac x 1.5EDU/ac)] x 1.5 x 1.1 = 12.375BU	14.25
Industrial Building 10 acre parcel	1ac x 1.5BU/ac + 3ac x .375BU/ac + 6ac x .125BU/ac = 3.375BU	[(1ac x 6EDU/ac) + (3ac x 1.5EDU/ac) + (6ac x 0.5EDU/ac)] x 2 x .7 = 18.9 BU	22.275
Vacant SFR	All parcels = .25 BU	No imp. benefit = 0 BU	0.25
Vacant 1 acre parcel	1ac x 1.5BU/ac = 1.5 BU	No imp. benefit = 0 BU	1.5
Mobile Home Park 2 acre parcel	1ac x 1.5BU/ac + 1ac x .375BU/ac = 1.875BU	All parcels = 1 BU	2.875
Golf Course 20 acre parcel	1ac x 1.5BU/ac + 3ac x .375BU/ac + 16ac x .125BU/ac = 4.625 BU	All parcels = 1 BU	5.625
Vacant 40 acre parcel	1ac x 1.5BU/ac + 3ac x .375BU/ac + 36ac x .125BU/ac = 7.125 BU	No imp. benefit = 0 BU	7.125
Agricultural (Williamson Act or General Plan)	Not assessed	Not assessed	0.0

Note: For those properties that are bisected by the flood line, the Total BU's are multiplied by the appropriate Boundary Factor.

Appendix B — LAND USE CLASSIFICATIONS

Assessor's Use Codes	San Joaquin County Assessor's Use Descriptions
10-17, 51, 56, 94, 96, 401, 421, 451, 461, 463, 471, 481, 501, 511, 521	Single-Family Residential SFR, condominium, Agricultural Residential, Mobile home not in mobile home park
21, 22, 31-32, 34-35, 41-48, 52	Multi-Family Residential Duplex, triplex, four-plex Apartments
110-114, 120-121, 130-132, 140-144, 150-155, 201-203, 210-214, 250-252, 255-256, 260-263, 270-272, 280-285, 290-291, 771	Retail and Service Commercial Stores & store combos, Department stores & super markets, Community & regional shopping centers, Restaurants, Service shops & service stations, Equipment sales and service, Misc. commercial
170-173, 190-197, 240	Office/Professional Professional & office buildings, Medical and dental offices, Banks, savings and loans
55, 59-65, 68, 70-71, 78, 180-184, 189, 204, 230, 231, 610-615, 620, 630-632, 640, 650, 651, 740-742, 750-752, 760	Care/ Personal Recreational Hospitals & nursing homes, Rooming houses, Homes for the aged, Day care facility, Hotels/motels, Theaters & bowling alleys & skating rinks, Clubs, lodge halls
253-254, 310-314, 320-324, 330-332, 340-342, 350-355, 360-363, 370-371, 381-382, 391, 392, 811, 812	Manufacturing/Industrial Manufacturing outlets, Misc. industrial, Warehousing, Distribution and Storage, Lumber yards, Truck Terminal, Bulk Plants, Winery
710-711, 720-722, 730	Institutional Institutional & Churches, Private schools & colleges
90-93, 380, 393, 660-664, 670, 681, 690, 691, 772, 810, 813, 814, 820, 830, 890-892	Vacant-Like Developed Golf Courses & Driving Ranges, Parking Lots, Drive-in Theaters, Swimming Pools, Airports, Mineral Processing, Mobile Home Park, Cemeteries, Radio/TV Transmission Sites, Privately Owned Race Track, Privately Own Camps
1-7, 20, 30, 40, 50, 53-54	Vacant Residential Vacant Residential Lots
100-102, 107, 300-302, 307	Vacant Vacant Lots
80-82, 95, 156, 200, 390, 400, 420, 450, 460, 462, 470, 480, 490, 500, 510, 520, 530, 550, 551, 590, 591, 770, 780, 815, 821-824, 840-841, 850-851, 860-862, 900-951	Exempt Common Areas, Right of Ways, Agricultural Parcels, Public Agency Properties

Appendix C – DIAGRAM OF ASSESSMENT DISTRICT

Full-sized copies of the Assessment Diagram are on file in the Office of the Secretary, of the San Joaquin Area Flood Control Agency. Copies are also on file at the Office of the Clerk of the Board of Supervisors of the County of San Joaquin and at the Office of the City Clerk of the City of Stockton.

As required by the Act, the Assessment Diagram shows the exterior boundaries of the Assessment District and the assessment number assigned to each parcel of land corresponding to its number as it appears in the Assessment Roll contained in Appendix D. (The assessment number for each parcel is the San Joaquin County Assessor's Parcel Number.)

The lines and dimensions of each lot or parcel within the Assessment District are those lines and dimensions shown on the maps of the Assessor of the County of San Joaquin for the year in when this Report is prepared. The Assessor's maps and records are incorporated by reference herein and made part of this report.

Appendix D — 2021/2022 COLLECTION ROLL

Parcel identification, for each lot or parcel within the District, shall be the parcel as shown on the San Joaquin County Assessor's map for the year in which this Report is prepared.

The Assessments have been levied in proportion to the estimated benefit that each parcel receives from the improvements in accordance with the method and formula of assessment as presented and approved upon formation of the District.

A listing of parcels of land, and the proposed assessment amount to each parcel for the Operation and Maintenance of the improvements is provided under a separate cover and by reference is made part of this report. For current ownership of each parcel of land, reference is made to the most recent equalized tax roll for the County of San Joaquin, which is by reference also made part of this report. The assessment amount for each parcel pursuant to approval of this report shall be submitted to the San Joaquin County Tax Collector for collection on the property tax bill for Fiscal Year 2021/2022.

RESOLUTION NO. SJAFCA 21-05

**SAN JOAQUIN AREA
FLOOD CONTROL AGENCY**

=====

**RESOLUTION TO APPROVE THE ANNUAL ENGINEER'S REPORT FOR THE
OPERATIONS AND MAINTENANCE (O&M) FOR THE FLOOD PROTECTION
RESTORATION ASSESSMENT DISTRICT, AND ORDER THE LEVY AND
COLLECTION OF OPERATIONS AND MAINTENANCE ASSESSMENTS WITHIN
THE FLOOD PROTECTION RESTORATION ASSESSMENT DISTRICT
FOR FISCAL YEAR 2021-2022**

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE SAN JOAQUIN AREA
FLOOD CONTROL AGENCY, AS FOLLOWS:

1. That the Annual Engineer's Report (Report) as presented, is hereby approved, and is ordered to be filed in the Office of the Secretary of the Board as a permanent record and to remain open to public inspection.

2. That the following notice duly given, the Board of Directors has held a full and fair public hearing regarding the San Joaquin Area Flood Control Agency's Assessment District (District), the levy and collection of assessments, the Report prepared in connection therewith, and considered all oral and written statements, protests and communications made or filed by interested persons regarding these matters.

3. That based upon its review of the Report, a copy of which has been presented to the Board of Directors and which has been filed with the Secretary of the Board, the Board of Directors hereby finds and determines that:

- i. The land within the District will be benefited by the operation, maintenance and servicing of the improvements located within the boundaries of the District;
- ii. The District includes all of the lands so benefited; and,
- iii. The net amount to be assessed upon the lands within the District for the fiscal year commencing July 1, 2021, and ending June 30, 2022, is apportioned by a formula and method which fairly distributes the net amount among all eligible parcels in proportion to the benefits to be received by each parcel from the improvements and services.

4. That the maintenance and operation of the improvements shall be performed pursuant to the *Municipal Improvement Act of 1913, being Part 2 Division 12, of the Streets and Highways Code of the State of California, beginning with Section 10000* (Act) and shall include costs for personnel, utilities (water, electric, and other), purchase of maintenance equipment, weed abatement (herbicide spraying, mowing, and debris burning), rodent control, Aquatic Weed Control

Program on Five Mile Slough, maintenance of levee patrol and access roads, sedimentation removal, erosion control, patrolling and inspecting of facilities, maintenance of detention basin No. 1 pumps, pump station operation and maintenance, flood wall repairs, graffiti removal, providing an “emergency repair fund” and other applicable operation, maintenance and repair costs to be incurred annually as determined by the Board of the San Joaquin Area Flood Control Agency to maintain the level of benefit to the assessed parcels in the District.

5. That the County of San Joaquin Auditor-Controller shall enter on the County Assessment Roll, opposite each eligible parcel of land, the amount of levy so apportioned by the formula and method outlined in the Report, and such levies shall be collected at the same time and in the same manner as the County taxes are collected, pursuant to *Chapter 2, Section 10100.8* of the Act.

6. That the County of San Joaquin Auditor-Controller shall deposit all money representing assessments collected by the County for the District to the credit of a fund for the District and such money shall be expended only for the maintenance, operation and servicing of the improvements described in Section 4.

7. That the adoption of this Resolution constitutes the District levy for the fiscal year commencing July 1, 2021 and ending June 30, 2022.

8. That the Secretary of the Board, or their designate, is hereby authorized and directed to file the levy with the County of San Joaquin Auditor-Controller upon adoption of this Resolution.

9. That the adoption of this Resolution approves the following appropriations:

- a. A one-time \$265,907 transfer from the O&M reserve fund to cover the additional funding requested by the District in the proposed FY 2021-2022 budget.
- b. A \$100,000 appropriation from the O&M reserve fund authorizing the Executive Director to use these funds (up to \$100,000) to promptly deal with emergencies, or to authorize additional work needed, but not included in the O&M budget.

These appropriations will not affect the proposed fiscal year 2021-2022 assessment rate and will be funded from the unexpended balance in the O&M reserve fund carried forward from the previous years’ O&M assessments.

PASSED, APPROVED AND ADOPTED this 20TH day of May, 2021.

CHUCK WINN, Chair
of the San Joaquin Area
Flood Control Agency

ATTEST:

CHRIS ELIAS, Secretary
of the San Joaquin Area
Flood Control Agency

APPROVED AS TO FORM:

SCOTT L. SHAPIRO, Legal Counsel
for the San Joaquin Area
Flood Control Agency

Agenda Item 4.2

May 20, 2021

TO: San Joaquin Area Flood Control Agency

FROM: Chris Elias, Executive Director

SUBJECT: **UPDATE ON THE MANTECA DRYLAND LEVEE EXTENSION PROJECT**

RECOMMENDATION

It is recommended that the Board of Directors receive an informational update on the Manteca dryland levee extension project and provide feedback to guide the next steps in the project delivery.

DISCUSSION

Background

In 2014, to achieve 200-year flood protection, and to demonstrate “adequate progress”, the cities of Lathrop and Manteca jointly funded agreements with Peterson Brustad Inc., (PBI), to provide 200-year water surface profiles in the San Joaquin River, develop 200-year floodplains (and depths), complete Urban Levee Design Criteria (ULDC) Analysis and Identification of Deficiencies required to provide an urban level of flood protection (ULOP) for Reclamation District 17 (RD 17) levees within their respective cities. These efforts provided Lathrop and Manteca with the critical information necessary to make a “finding of adequate progress” (Adequate Progress) toward providing ULOP 200-year flood protection for the urbanized and urbanizing areas of the cities.

On July 5, 2016, the Manteca City Council adopted the Findings of Adequate Progress toward providing a 200-year urban level of protection in RD 17. As part of this effort, PBI developed a multi-phase levee improvement plan, which included the extension of the dry land levee in the southern portion of Manteca. A preliminary alignment was developed for the dry land levee extension and Adequate Progress Findings that extended the dry land levee to the east. Although this alignment achieves the project goal of providing 200-year flood protection, there were a number of concerns from property owners in the vicinity of the proposed improvements. In response to these concerns, the Manteca City Council approved a Professional Services Agreement with Drake Haglan and Associates. The scope of work for this contract included public outreach, project management, and developing conceptual alignments for the purpose of working with stakeholders to build consensus on the preferred alignment for the dry land levee extension. The staff report provided to the Manteca City Council in 2016 is included as Attachment 1.

Drake Haglan and Associates developed seven alternatives for evaluation based upon the following criteria:

- Meets Department of Water Resources criteria for “wise use of floodplains”
- Minimize impacts to farmland
- Minimize impacts to property owner access
- Stay on property lines as much as possible
- Utilize existing easements

AGENDA ITEM 4.2

UPDATE ON THE MANTECA DRYLAND LEVEE EXTENSION PROJECT (Page 2)

- Accommodate entitled properties
- Consensus among stakeholders
- Cost

The final recommended alternative (called Alternative 2A) met all criteria with a projected cost of approximately \$12.1 million at the time of the recommendation (2016). Other alternatives that were explored in that study were deemed either non-compliant or cost prohibitive.

In 2018 the Cities of Lathrop and Manteca became members of SJAFCA. As a result, SJAFCA became the sole Local Flood Management Agency (LFMA) for the Mossdale Tract area (area protected by RD 17 levees) with the responsibility to prepare the adequate progress report. Most recently, in June 2020, Larsen Wurzel & Associates prepared the "Mossdale Tract Area: 2020 Annual Adequate Progress Report for Urban Level of Protection Final Report" the "APR" which is available on SJAFCA's website (<https://www.sjafca.com/pdf/mossdale/Report0418.pdf>). It has been determined the existing levees protecting the Mossdale Tract Area do not meet the updated Department of Water Resources (DWR) ULDC standards adopted in May 2012, and the existing levees are not currently certified to provide 200-year protection. Accordingly, SJAFCA, in close coordination with its member agencies, is pursuing efforts to achieve ULOP by 2028.

The LFMA's plan, described in the APR, for flood protection through the year 2028 consists of two components: (1) RD 17's ongoing Levee Seepage Repair Project (LSRP) and (2) SJAFCA Levee Improvements to achieve ULDC 200-year requirements, which includes an extension of the existing dry land levee.

A review of the (i) project scope, (ii) project schedule, and (iii) the cost of the previously developed alternatives, all as proposed in 2016, demonstrates that they were developed to meet the appropriate standard of protection based on information known at that time. During this last year, information has been shared by the State of California regarding potential changes in hydraulics and hydrology due to climate change. That information is being considered to determine what changes, if any, need to be made to the previously explored alternatives to ensure that they continue to meet the appropriate standard of protection.

On August 18, 2020, SJAFCA entered into a consultant agreement with Wood Rogers, Inc. to determine the appropriate alignment for extension of the Manteca Dry Land Levee that will take careful consideration of the technical issues, community impacts, and stakeholder input throughout the process. The consulting team was given direction to build from work that has been previously completed and further define a preferred alternative to deliver 200-year protection beyond the existing dry land levee. This is expected to involve the consideration of one or more new alternative alignments in combination with some of the alternatives already studied.

The consulting team of Wood Rodgers/MBK/Kleinfelder has completed the foundational geotechnical and hydraulic studies and has used that information to develop an array of alternatives to be evaluated. The current array of alternatives consists of approximately three alignments with seepage mitigation measures consisting of cutoff walls and seepage berms. The six alternatives (i.e. three alignment alternatives with two seepage mitigation measures) are displayed in **Attachment 2** as were developed from technical staff sessions and meetings with stakeholders.

AGENDA ITEM 4.2

UPDATE ON THE MANTECA DRYLAND LEVEE EXTENSION PROJECT (Page 3)

FISCAL IMPACT

This is an informational item only. There is no net budgetary impact because of the Board's consideration of staff's presentation.

STRATEGIC PLAN CONSISTENCY ANALYSIS

Consideration of this informational update on the Manteca dryland levee extension project is consistent with the Mission and Goals of the Board-adopted Strategic Plan. Specifically, it is consistent with the Goal #1, "to Plan for and Implement System Resilience", and the Goal #3, "Facilitate Funding Structures that are most Beneficial to Local Interests."

PREPARED BY: Chris Elias with input by Jesse Patchett/WR



CHRIS ELIAS
EXECUTIVE DIRECTOR

Attachment 1 – August 16, 2016 Manteca City Council Staff Report received from Drake Haglan & Associates and Council approval of Alternative 2A as the Preferred Alignment for the Dryland Levee extension.

Attachment 2 – May 20, 2021 Manteca Dry Land Levee Planning, Evaluation, and Concept Design Project Presentation.



Legislation Details (With Text)

File #: 16-347 **Version:** 1 **Name:**

Type: Community Development **Status:** Agenda Ready

File created: 7/11/2016 **In control:** City Council

On agenda: 8/16/2016 **Final action:**

Title: Receive presentation from Drake Haglan & Associates and approve Alternative 2A as the Preferred Alignment for the Dryland Levee, and advance the preferred alternative for study.

Sponsors:

Indexes:

Code sections:

Attachments: 1. Attachment 1, 2. Attachment 2, 3. Attachment 3

Date	Ver.	Action By	Action	Result
------	------	-----------	--------	--------

City Council Agenda

Memo to: Manteca City Council

From: Frederic Clark, Community Development Director

Date: August 16, 2016

Subject: Preferred Alignment for the Dryland Levee

Receive presentation from Drake Haglan & Associates and approve Alternative 2A as the Preferred Alignment for the Dryland Levee, and advance the preferred alternative for study.

Background:

Senate Bill 5

In 2007, the State of California approved Senate Bill 5 (2007) and a series of related Senate and Assembly Bills intended to set new flood protection standards for urban areas. This group of bills is referred to collectively in this document as "SB 5 Bills". The SB 5 Bills establish the State standard for flood protection in urban areas as protection from the 200-year frequency flood. Under the SB 5 Bills, urban and urbanizing areas must be provided with 200-year flood protection no later than 2025. New development in areas potentially exposed to 200-year flooding more than three feet deep will be prohibited, unless the local land use agency certifies that 200-year flood protection has been provided or that "adequate progress" has been made toward provision of 200-year flood protection by 2025. Furthermore, these requirements are to be instituted in local general plans and zoning.

As of the date of this report, the cities of Lathrop and Manteca have been leading the effort to evaluate the flooding risk, assess the capability of the existing levee system to provide 200-year

flood protection, and determine what improvements are needed in order to demonstrate “adequate progress” and provide the required level of protection.

Reclamation District 17 Levees (Attachment 1)

Reclamation District 17 (RD 17) includes portions of the cities of Lathrop, Manteca, Stockton and unincorporated San Joaquin County. The RD 17 levees were initially constructed or reconstructed in about 1863. The Lower San Joaquin River Levee Project was authorized by the Flood Control Act of 22 December 1944, Public Law 534, 78th Congress, 2nd Session, Section 10. The RD 17 levee system is comprised of about 16.2 miles of project levees including the RD 17 levees along the left bank of French Camp Slough, the levees along the right bank of the San Joaquin River, and the levees along the right bank of Walthall Slough. The RD 17 levee system also includes about 2.8 miles of dryland levees mostly located at the southern end of RD 17 in the City of Manteca and within the City’s Sphere of Influence.

In RD 17, the early agricultural, residential, commercial and industrial development was followed by increased urban growth of the Stockton, Lathrop and Manteca communities into unincorporated areas of San Joaquin County. FEMA accreditation of the RD17 levees to provide 100-year flood protection in 1990 was particularly significant in contributing to such increase. Due to the urbanization which has transpired over many decades, large populations already exist within the RD 17 Basin. Today, RD 17 includes over 6,345 acres of highly developed agricultural lands that produce a variety of tree, row and field crops, and the basin also includes urban areas within San Joaquin County, the cities of Stockton, Lathrop, and Manteca, and the urbanizing areas between these cities.

The RD 17 Basin extends beyond the present boundaries of RD 17 and includes urban portions of Stockton, Lathrop, and Manteca, and the urbanizing areas between these cities. The existing population in RD 17 is estimated to be approximately 46,000 residents. The RD 17 levee system currently provides 100-year flood protection for approximately 10,698 dwelling units, and 182 non-residential (commercial/industrial and public) properties with a total floor area of approximately 11,858,000 square feet.

Some of the critical federal and local government facilities located and planned within RD 17 include the existing Veterans Affairs Clinic, the pending VA Expanded Clinic and 120-bed Nursing Home, the San Joaquin General Hospital, the County Jail and Honor Farm, the County Juvenile Hall, two high schools, six elementary schools, and 28 other facilities that house and/or provide services to special needs populations throughout the community.

To comply with the requirements of the SB 5 Bills, the cities of Manteca, Lathrop and Stockton are seeking protection from 200-year flooding for these areas.

Dryland Levee Public Outreach

In 2014, to achieve 200-year flood protection, and to demonstrate “adequate progress”, the cities of Lathrop and Manteca jointly funded agreements with Peterson Brustad Inc. (PBI) to provide 200-year water surface profiles in the San Joaquin River, develop 200-year floodplains (and depths), complete Urban Levee Design Criteria (ULDC) Analysis and Identification of Deficiencies required to provide an urban level of flood protection (ULOP) for Reclamation District 17 levees within their respective cities. These efforts provided Lathrop and Manteca with the critical information necessary to make a “finding of adequate progress” (Adequate Progress) toward providing ULOP 200-year flood protection for the urbanized areas of the cities.

On July 5, 2016, the Manteca City Council adopted the Findings of Adequate Progress toward providing a 200-year urban level of protection in RD 17. As part of this effort, PBI developed a multi-phase levee improvement plan, which included the extension of the dryland levee in the southern portion of Manteca. A preliminary alignment (Alignment 1A) was developed for the dryland levee extension and Adequate Progress Findings that extended the dryland levee to the east. Although this alignment achieves the project goal of providing 200-year flood protection, there were a number of concerns from property owners in the vicinity of the proposed improvements. There were also concerns about how the proposed dryland levee extension would be planned in conjunction with the future extension of McKinley Avenue (Antone Raymus Expressway).

In response to these concerns, the Manteca City Council at their regular meeting of March 1, 2016 approved a Professional Services Agreement with Drake Haglan and Associates. The scope of work for this contract included public outreach, project management, and developing conceptual alignments for the purpose of working with stakeholders to build consensus on preferred alignments for both the dryland levee extension and the future Antone Raymus Expressway. The consultants had several meetings with City staff, stakeholders, and property owners, and conducted the first of a series of three workshops on March 30, 2016. At the March 30th workshop, attendees expressed concern about the expressway and whether it was ultimately needed. At the April 5, 2016 Manteca City Council meeting, the City Council received comments on this matter and after much discussion, amended the agreement with Drake Haglan and Associates to delete from the scope of work the alignment of the future Antone Raymus Expressway, and postpone further work on the Expressway until work on the full General Plan Update was underway, and further options could be studied. Below is a summary of the milestones and work that has been conducted by Drake Haglan and Associates:

- March 1, 2016- City Council awarded contract to Drake Haglan and Associates to conduct outreach and develop consensus on preferred alignments for both the dryland levee and expressway.
- March 16, 2016- Notifications for the 3 workshops were mailed out to all legal property owners within a 300-foot radius of the potential alignment zone for the expressway and dryland levee that are within the Manteca General Plan boundary. (See Attachment 2- <[http://www.ci.manteca.ca.us/CommunityDevelopment/Agendas/2016%20Planning%](http://www.ci.manteca.ca.us/CommunityDevelopment/Agendas/2016%20Planning%20Agenda)
- March 30, 2016- First workshop at the Manteca Transit Center conducted by Drake Haglan and Associates on developing consensus on preferred alignments for both the dryland levee and expressway alignment.
- April 5, 2016- City Council discussed contract and directed staff to amend contract with Drake Haglan and Associates to remove the expressway alignments from the workshops and to only develop a preferred alignment for the dryland levee extension.
- April 21, 2016- Second workshop conducted by Drake Haglan and Associates on developing consensus on preferred alignments for the dryland levee alignment.
- May 18, 2016- Third workshop conducted by Drake Haglan and Associates on developing consensus on preferred alignments for the dryland levee alignment. A package of Frequently Asked Questions was distributed at this workshop and posted on the website as

well.

- June 28, 2016 - Presentation to Manteca Planning Commission of conceptual alternatives and recommendation on alternative to carry forward into the environmental study.

In addition to the presentations and comments received at the three workshops, the team developed a dedicated website (www.raymusexpresswayplan.com <<http://www.raymusexpresswayplan.com>>) to solicit comments and provide information to all stakeholders for the project. The website was used as the primary method for disseminating information to the public and receiving written comments outside of the workshops. As a result of the input from the meetings, workshops, and website, a list of Frequently Asked Questions (FAQs) were developed to address and clarify many issues surrounding this project. Additional questions were submitted by the public after the third workshop on May 24th and the team provided answers to those questions on June 18, 2016. Further questions were again submitted by the public after the Planning Commission meeting on July 4, 2016, and responses to those questions were provided on July 22, 2016.

Dryland Levee Alternatives

In developing alternatives for the dryland levee extension, the team reviewed stakeholder concerns from previous council meetings, letters to the council from stakeholders and feedback from the website and workshops to develop the following criteria for evaluating alternatives:

- Meets DWR criteria for “wise use of floodplains”
- Minimize impact to farmland
- Minimize impacts to property owner access
- Stay on property lines as much as possible
- Utilize existing easements
- Accommodate entitled properties
- Consensus among stakeholders
- Cost

It is important to note that to obtain the State’s support for funding opportunities, the proposed levee improvements need to be consistent with the State’s approach to flood risk reduction. The State’s approach is governed by the Central Valley Flood Protection Act of 2008 - enacted by Senate Bill 5; the 2012 Central Valley Flood Protection Plan (CVFPP); the Governor’s California Water Action Plan stating the need for a resilient flood management system; and the Federal Government’s Executive Orders 11988 and 13690 (wise use of floodplains). One of the State’s key criteria in evaluating potential flood risk reduction projects is to ensure that the investment reduces flood risk and State liability, and does not increase them over time. As such, the State has stated that the following elements should be considered when developing alternatives:

- No increase in loss of life and expected damages; showing a significant reduction in

losses will result in a more competitive project;

- Promote wise use of floodplains with binding limitation on development in deep floodplains;
- Achieve multiple benefits in accordance with the Governor's California Water Action Plan;
- Preservation of agricultural land consistent with the 2012 CVFPP and the Delta Plan; and
- Obtaining federal interest in the urban flood risk reduction project for this basin.

The seven (7) alternatives displayed in **Attachment 3** were developed from the workshops and meetings with stakeholders. An evaluation of how the alternative meets the evaluation criteria is also provided in **Attachment 3** to this report.

Following is a summary and comparison of the alternatives in meeting the evaluation criteria:

Alternatives Comparison							
Principles/Criteria	Alt 1	Alt 1A	Alt 2	Alt 2A	Alt 3	Alt 4	Alt 5
Meets DWR Criteria for "Wise Use of Floodplains"	○	○	◐	○	●	●	○
Minimize Farmland Impact	○	○	○	○	◐	●	○
Minimize Impacts to Property Owner Access	◐	◐	○	○	○	○	●
Follow Property Lines	◐	●	○	○	◐	◐	◐
Utilize Existing Easements	◐	◐	◐	◐	◐	◐	◐
Accommodate Entitled Properties	○	○	○	○	○	○	○
Consensus Among Stakeholders	●	●	○	◐	◐	●	●
Cost	○	○	●	○	●	●	○

○ Meets Criteria
 ◐ Partially Meets Criteria
 ● Does Not Meet Criteria

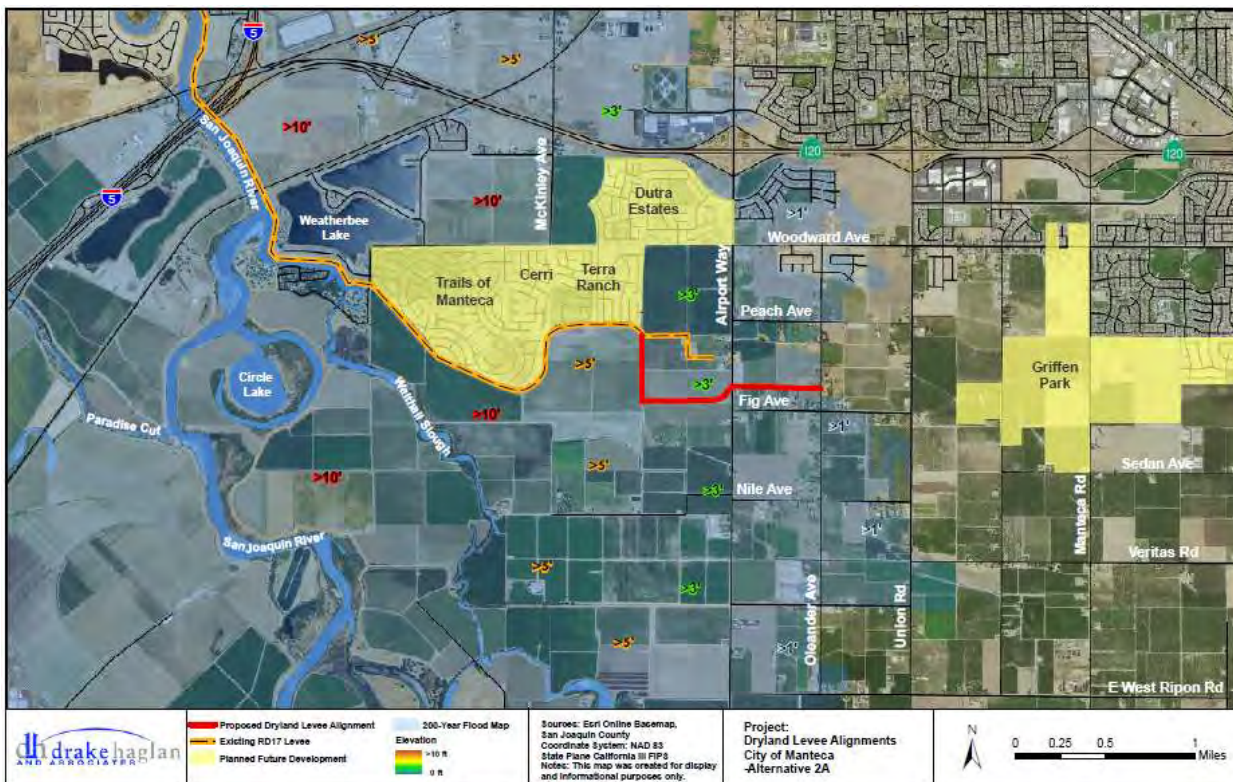
Recommendation:

When comparing the alternatives against the evaluation criteria:

- Alternatives 3 and 4 are inconsistent with the State Department of Water Resources criteria for the "Wise Use of Floodplains" as they protect hundreds of acres of farmland that potentially could be developed in the future. Alternatives 3 and 4 could be made consistent

with the State Department of Water Resources' "Wise Use of Floodplains" by placing farmland conservation easements on the farmland property protected, however, the cost of Alternatives 3, 4 and 2 make them fiscally imprudent at this time.

- Alternatives 1, 1A, 4 and 5 had very little or no support from stakeholders and in particular the property owners in the vicinity of the proposed improvements.
- Alternative 2A (displayed on the following page) is the only alternative that meets all of the evaluation criteria and has general consensus from stakeholders, and is therefore recommended as the preferred alternative to move forward into the environmental study.



The Next Steps

The next step for the levee extension project will be for the RD 17 group (Manteca, Lathrop, RD 17 and potentially Stockton and San Joaquin County) to initiate the environmental review process which will require review under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) if there is federal involvement. This process is anticipated to begin in 2017 and be completed in 2020.

It is important to note that the Council's potential action on selecting a preferred alignment is not the final selection of an alignment. The final selection of an alignment will occur as part of the CEQA process, and additional public outreach will be required, and a "no build" alternative will be studied in addition to the preferred alternative and possible variations of the preferred alternative.

The SB 5 Bills (2007) require annual documentation of "Adequate Progress" finding and in particular, requires the local flood management agency to document annually that:

- 90% of the required revenue scheduled to be received has been appropriated and is being expended;

- Critical features of the flood protection system are under construction and progressing based on the actual expenditures of the construction budget;
- The City or County has not been responsible for a significant delay in the completion of the system.
- An annually report to the Central Valley Flood Protection Board on the status of progress toward completion of the flood protection system has been submitted; and,
- Validate that the adequate progress finding is still effective.

To maintain the Finding of Adequate Progress, it will be critical for the RD 17 group to meet the following schedule:

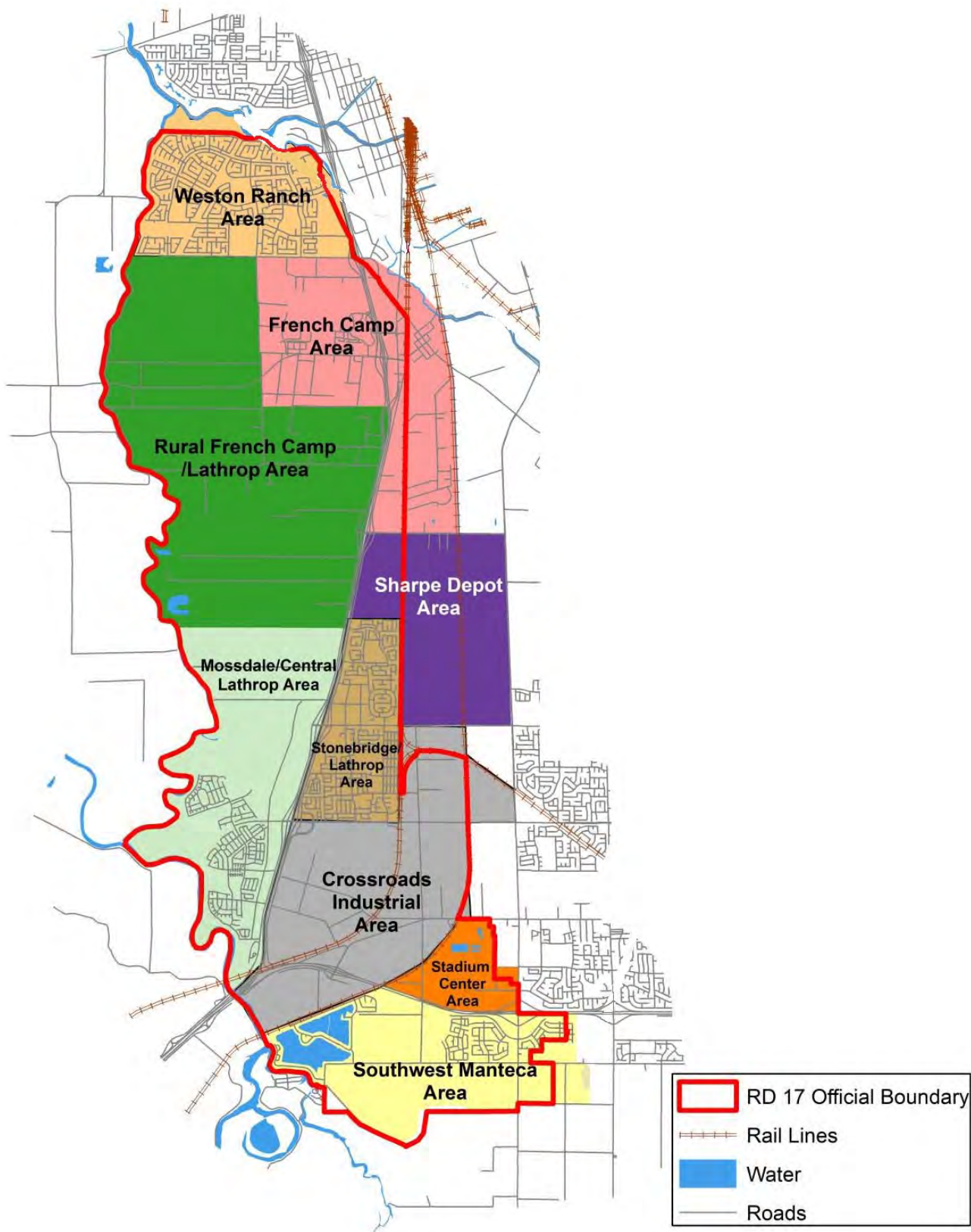
Begin Environmental Review Process	2017
Complete Environmental Review Process & Begin Final Engineering	2020
Begin Right-of-Way Appraisal and Negotiations	2020
Complete Right-of-Way Acquisitions & Begin Permitting	2022
Start Construction	2024

Fiscal Impact

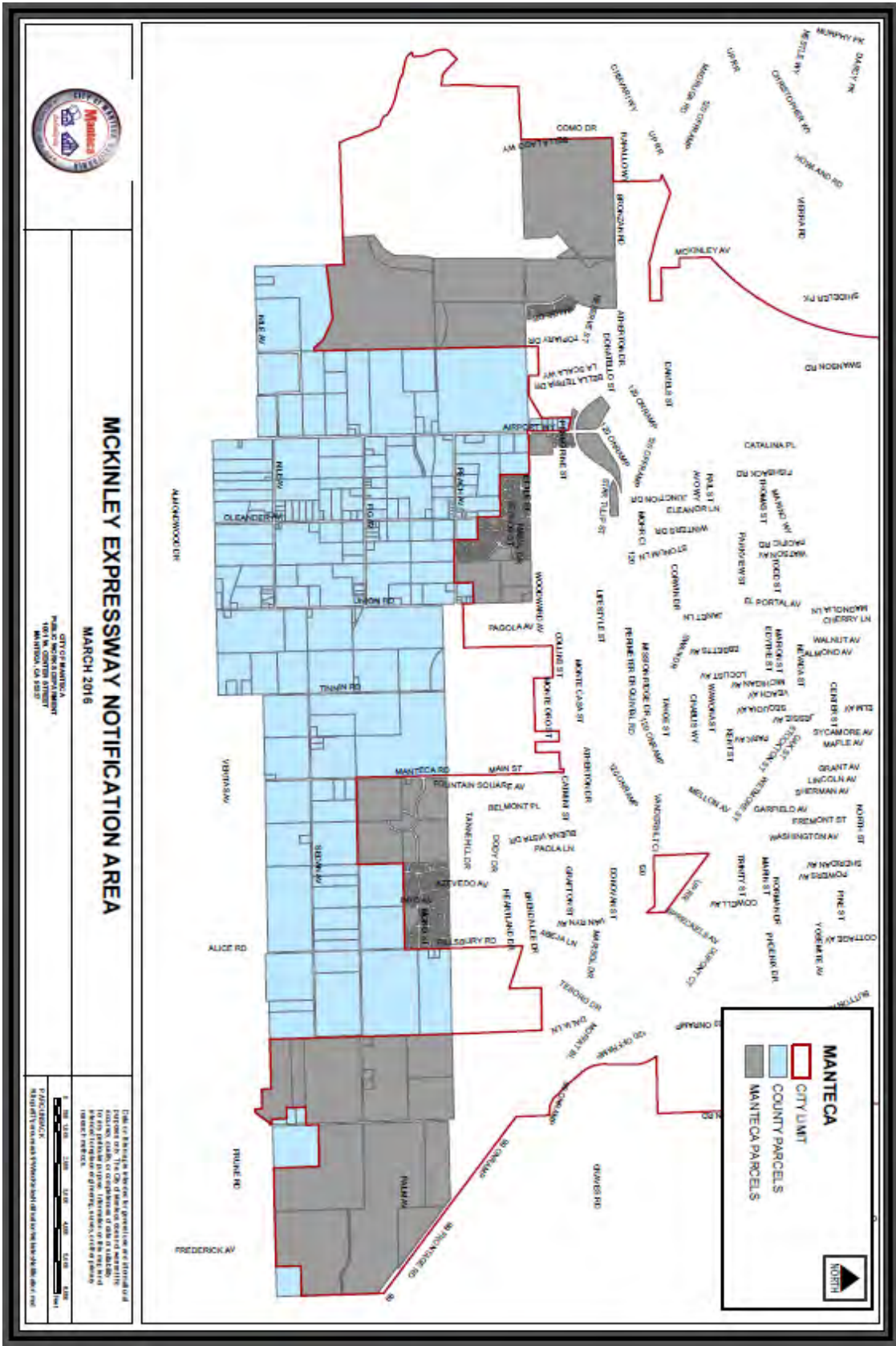
There is no fiscal impact related to the recommended action, other than staff time.

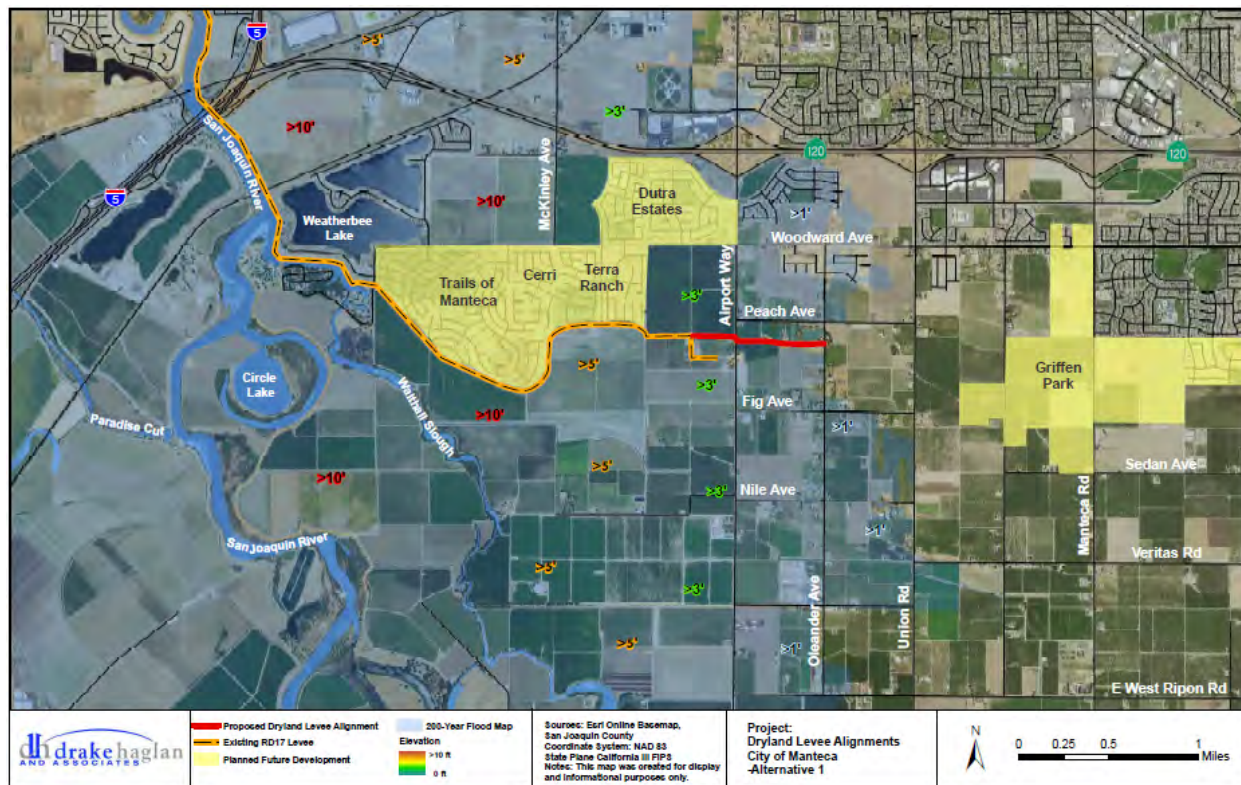
Future fiscal impact related to selecting a preferred alignment for the Dryland Levee and for advancing the preferred alternative for study would be the City's portion of the cost of the final project, which is unknown at this time. Costs related to the design, engineering and construction of the final alignment will be determined as the project advances. Potential sources for project funding will be identified as part of the current efforts of the SB5 working group comprised of the cities of Manteca, Lathrop, Stockton, the County of San Joaquin and the RD 17.

ATTACHMENT 1 – Reclamation District 17 Boundary

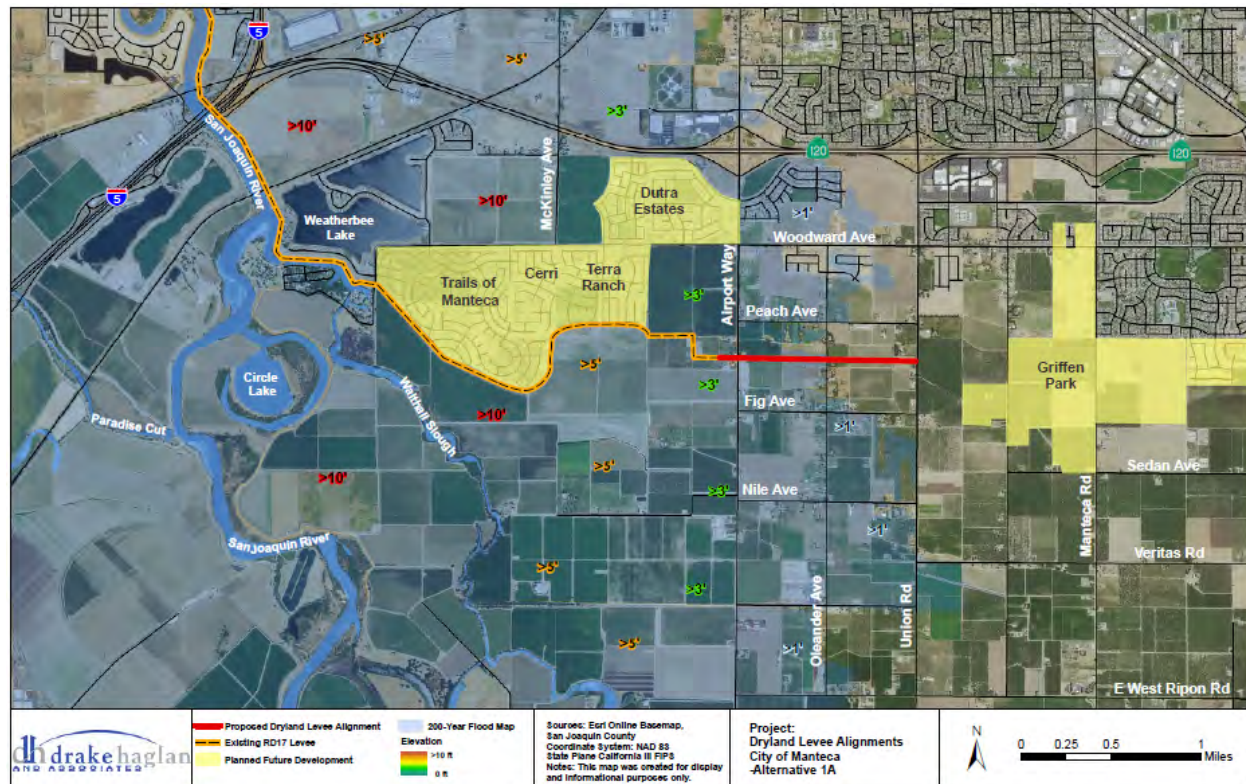


ATTACHMENT 2 – Notification Map



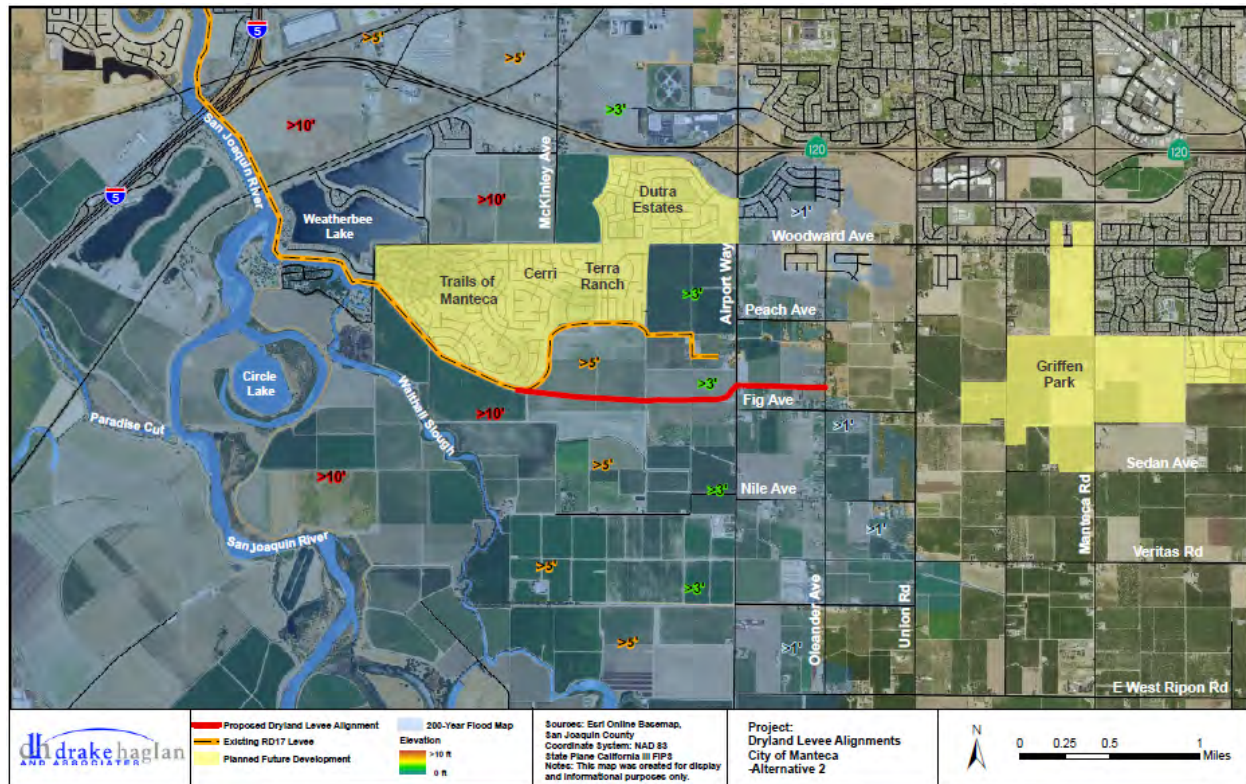
ATTACHMENT 3 – ALTERNATIVES CONSIDERED AND EVALUATION CRITERIA**Alt 1: Conformance with Evaluation Criteria**

- Meets DWR criteria for “wise use of floodplains”
 - Minimize impact to farmland
 - Minimize impacts to property owner access
 - Stay on property lines as much as possible
 - Utilize existing easements
 - Accommodate entitled properties
 - Consensus among stakeholders
 - Cost – Approx. \$8.5M
- Meets Criteria
 ● Partially Meets
 ● Does Not Meet



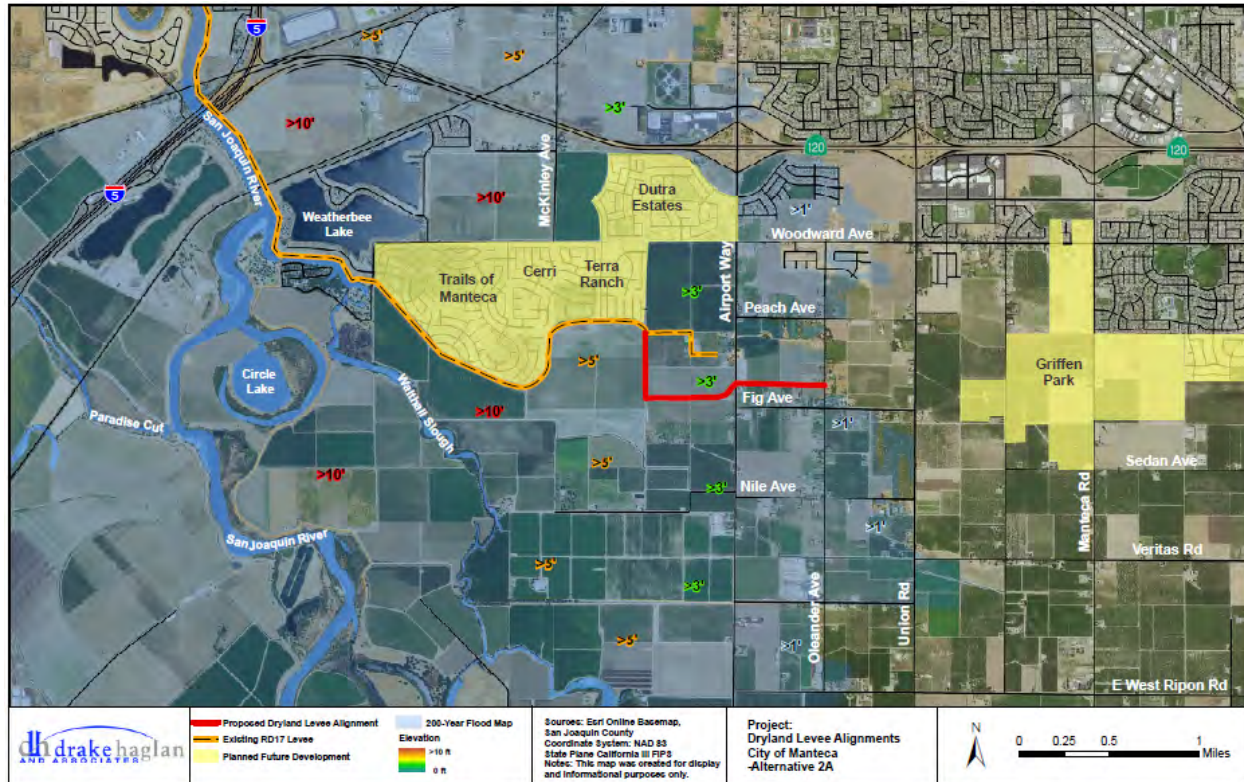
Alt 1A: Conformance with Principles & Constraints

- Meets DWR criteria for “wise use of floodplains”
 - Minimize impact to farmland
 - Minimize impacts to property owner access
 - Stay on property lines as much as possible
 - Utilize existing easements
 - Accommodate entitled properties
 - Consensus among stakeholders
 - Cost – Approx. \$12.1M
- Meets Criteria
 ■ Partially Meets
 ● Does Not Meet



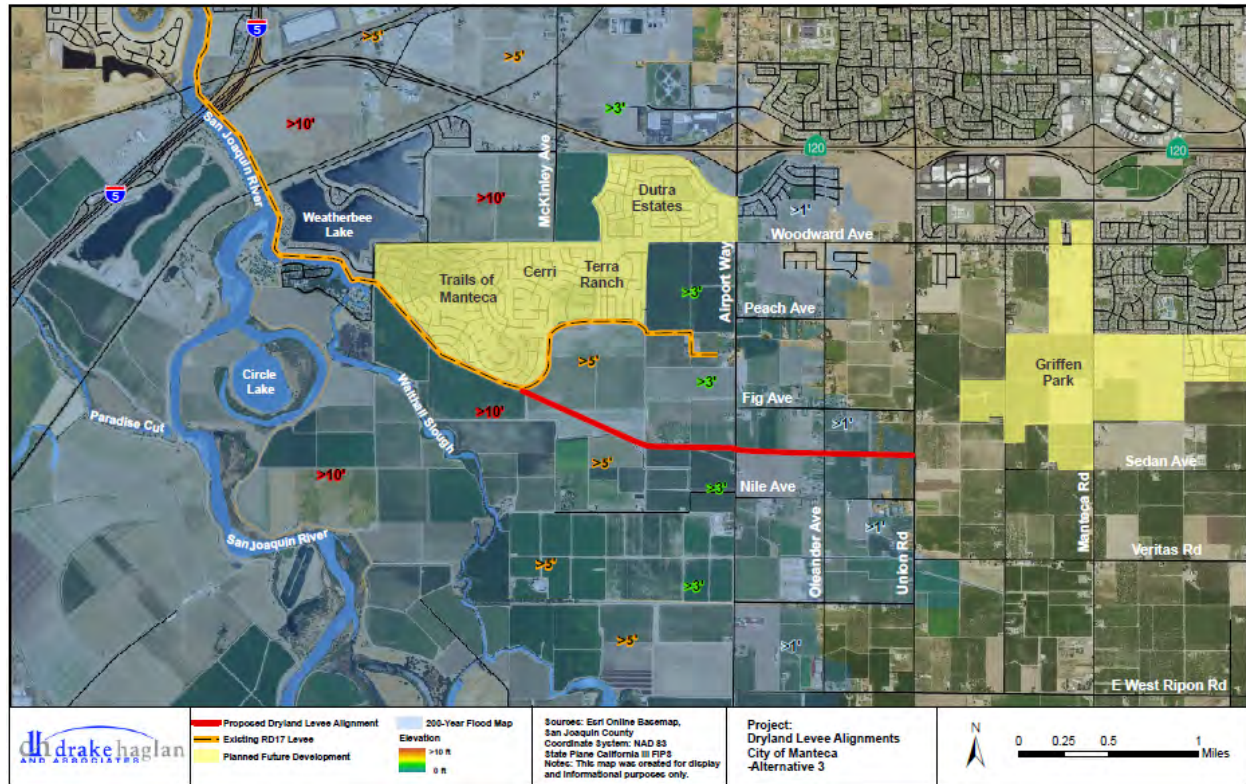
Alt 2: Conformance with Principles & Constraints

- Meets DWR criteria for “wise use of floodplains”
 - Minimize impact to farmland
 - Minimize impacts to property owner access
 - Stay on property lines as much as possible
 - Utilize existing easements
 - Accommodate entitled properties
 - Consensus among stakeholders
 - Cost – Approx. \$25.1M
- Meets Criteria
● Partially Meets
● Does Not Meet



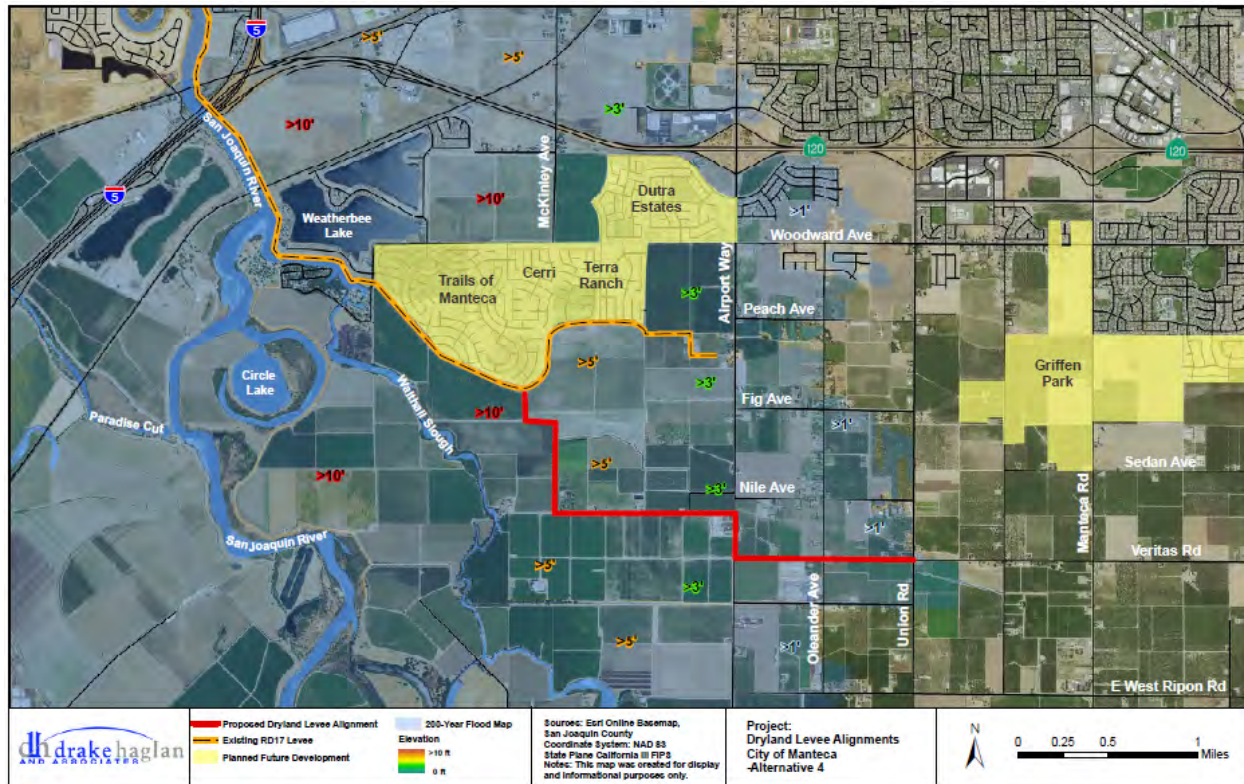
Alt 2A: Conformance with Principles & Constraints

- Meets DWR criteria for “wise use of floodplains”
 - Minimize impact to farmland
 - Minimize impacts to property owner access
 - Stay on property lines as much as possible
 - Utilize existing easements
 - Accommodate entitled properties
 - Consensus among stakeholders
 - Cost – Approx. \$12.1M
- Meets Criteria
 ● Partially Meets
 ● Does Not Meet



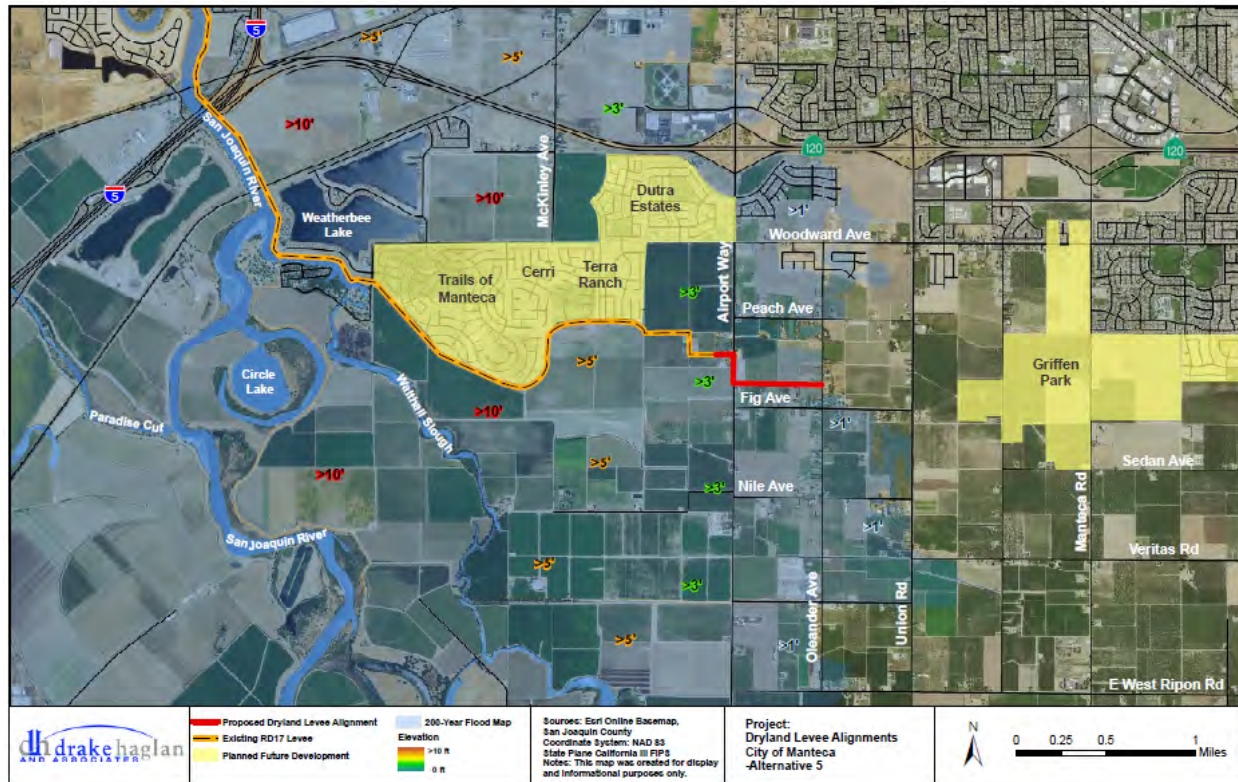
Alt 3: Conformance with Principles & Constraints

- Meets DWR criteria for “wise use of floodplains”
 - Minimize impact to farmland
 - Minimize impacts to property owner access
 - Stay on property lines as much as possible
 - Utilize existing easements
 - Accommodate entitled properties
 - Consensus among stakeholders
 - Cost – Approx. \$30.6M
- Meets Criteria
 ● Partially Meets
 ● Does Not Meet



Alt 4: Conformance with Principles & Constraints

- Meets DWR criteria for “wise use of floodplains”
 - Minimize impact to farmland
 - Minimize impacts to property owner access
 - Stay on property lines as much as possible
 - Utilize existing easements
 - Accommodate entitled properties
 - Consensus among stakeholders
 - Cost – Approx. \$52.4M
- Meets Criteria
 ● Partially Meets
 ● Does Not Meet

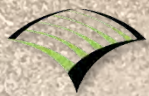


Alt 5: Conformance with Principles & Constraints

- ☐ Meets DWR criteria for “wise use of floodplains”
 - ☐ Minimize impact to farmland
 - ☒ Minimize impacts to property owner access
 - ☐ Stay on property lines as much as possible
 - ☐ Utilize existing easements
 - ☐ Accommodate entitled properties
 - ☒ Consensus among stakeholders
 - ☐ Cost – Approx. \$11.6M
- Legend:**
- ☒ Meets Criteria
 - ☐ Partially Meets
 - ☒ Does Not Meet

Manteca Dry Land Levee Planning, Evaluation, and Concept Design Project Presentation

May 20, 2021



WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME



Introductions

Wood Rodgers Staff

Jesse Patchett – Project Manager



Chuck Hilliard – Civil Designer



Goal for Today's Presentation

- Provide an Overview of the Manteca Dryland Levee Planning, Evaluation, and Concept Design Project
 - General Overview
 - Project Approach
 - Work Completed Thus Far
 - Present our Preliminary Array of Alternatives
 - Next Steps
- Receive Input from Stakeholders on the Preliminary Array of Alternatives Being Considered

Project Overview

Location

South of Manteca & RD 17

Lead Agency

SJAFCA

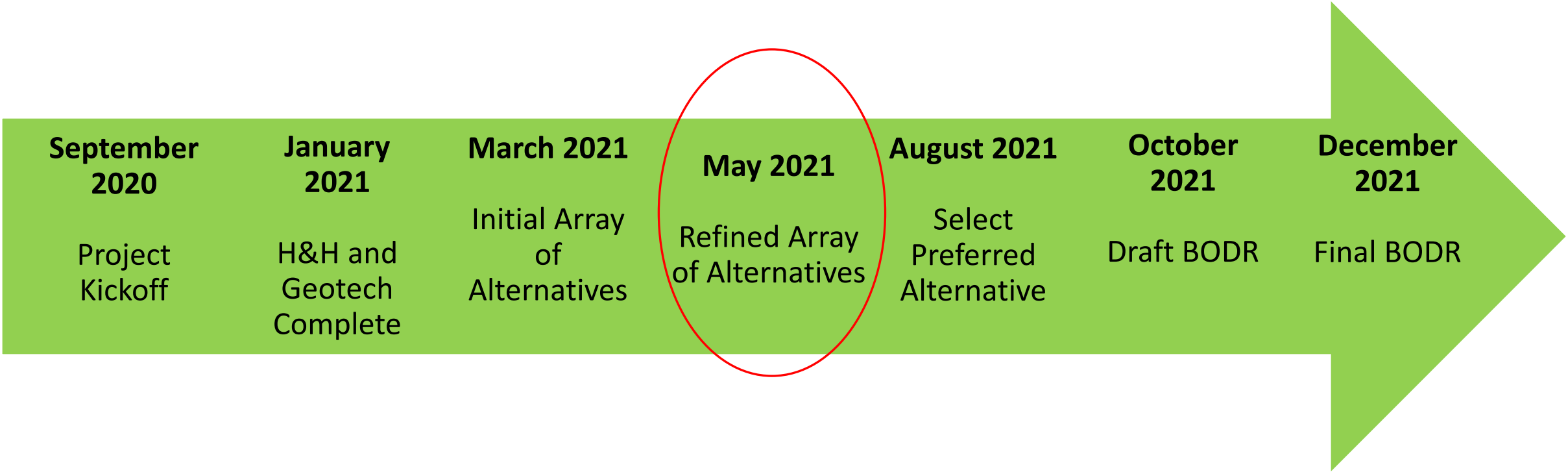
Need for the Project

- Senate Bill 5
- A breach of the Walthall Slough Levee during a 200-yr flood event results in Outflanking of the Existing Dryland Levee, impacting RD17 and Manteca

Project Goal

Leverage previous efforts in the development of a recommended 200-yr Flood Protection Project Description that is consistent with SB 5 that can be advanced to preliminary design & environmental permitting.

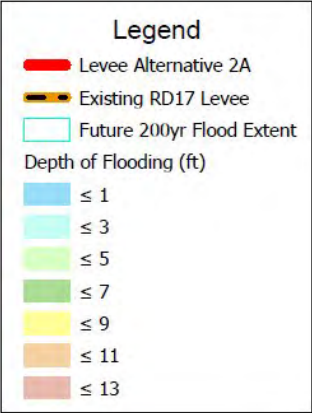
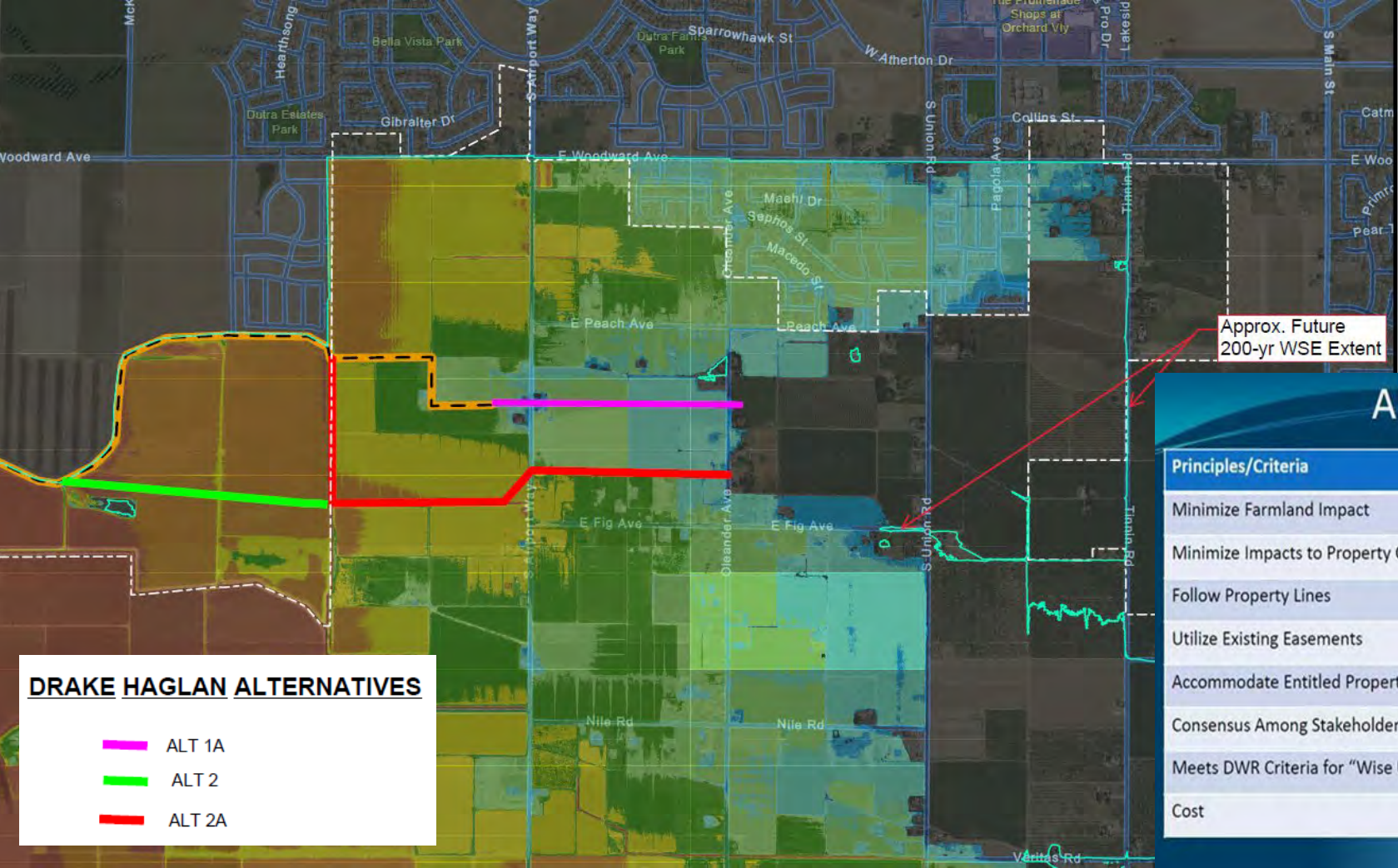
Project Timeline



Project Approach - Development of Alternatives

- Build Upon Previous Efforts by Drake Haglan and PBI
(i.e. use the Drake Haglan Alternative 2A as a starting point; scope expanded to evaluate one of the northern alignments from Drake Haglan)
- Evaluate the Drake Haglan alignments through a technical lens (i.e. geotech, H&H, environmental, etc.)
- Refine the alignments to incorporate geotechnical mitigation measures, eliminate end-around effects, balance impacts to property owners and SSJID facilities
- Evaluate Levee Footprints for a variety of WSE's
 - Current 200-yr WSE + 3.8' (Wind/Wave)
 - Current 200-yr WSE + 3.8' + 1' (Uncertainty)
 - Future 200-yr WSE

Project Approach – Revisiting Drake Haglan Alts



Alternatives Comparison							
Principles/Criteria	Alt 1	Alt 1A	Alt 2	Alt 2A	Alt 3	Alt 4	Alt 5
Minimize Farmland Impact	○	○	○	○	◐	●	○
Minimize Impacts to Property Owner Access	◐	◐	○	○	○	○	●
Follow Property Lines	◐	●	○	○	◐	◐	◐
Utilize Existing Easements	◐	◐	◐	◐	◐	◐	◐
Accommodate Entitled Properties	○	○	○	○	○	○	○
Consensus Among Stakeholders	●	●	○	◐	◐	●	●
Meets DWR Criteria for "Wise Use of Floodplains"	○	○	◐	○	●	●	○
Cost	○	○	◐	○	●	●	○
	\$8.5M	\$12M	\$25M	\$12M	\$31M	\$52M	\$11.6M

○ Meets Criteria
◐ Partially Meets Criteria
● Does Not Meet Criteria

Project Approach

Preliminary Basis for Evaluation of Alternatives

- Flood Risk Reduction Benefits
- Flood System Flexibility and Resiliency
- Hydraulic Impacts/Transfer of Risk Considerations
- Floodplain Management/Wise Use of the Floodplain
- Ecosystem Enhancement
- Multi-Benefit Potential
- Operation and Maintenance Considerations
- Landowner Support
- Stakeholder Support
- Real Estate Impacts
- Estimated Costs, Including Identifying Incremental Costs Associated with “future” ROW and Levee Height/Footprint for the Future 200-yr WSE

Work Completed Thus Far

Hydrologic and Hydraulic Modeling

- Current and Future (2065) 200-yr Floodplains Developed by MBK
- Findings:
 - Current 1/200 AEP WSE = 31.9' NAVD88
 - Minimum TOL = 31.9' + 3.8 (wind-wave) = 35.7' NAVD88
 - Future 1/200 AEP (2065) = 35.5' NAVD88
- Comparison to Prior Efforts

Description	MBK elevation (NAVD88)	PBI elevation (NAVD88)
Current 200-year WSE	31.9	28.9
Future (2040) 200-year WSE, (capped at current + 3' as per SJAFCA climate change policy)	N/A	31.9
Future (2065) 200-year WSE	35.5	37.4

- Description of Differences:
 - PBI Assumptions: Upstream Levee Overtop, but don't fail; Manning's "n" value ~ >0.1
 - MBK Assumption: Upstream Levees fail since they are not FEMA certified, not ULDC compliant; Manning's "n" ~ 0.04 – 0.07

Work Completed Thus Far

Geotechnical Analysis

- Seepage Mitigation Required: 45' – 70' Deep Cutoff Wall or 300' wide Seepage Berm
- Recommended Seepage Mitigation Measures are Preliminary and will be refined during later phases of design
- Eastern extent of seepage mitigation is assumed to be where there is less than 2' of head against the levee. This will be refined in future phases of design.
- Cutoff wall is not expected to impact the static groundwater in existing wells

Alternatives Considered

Alignment Alternatives

- Alignment 1A
 - Developed from the Drake Haglan Alt 1A Alignment but extended to the Future 200-yr Floodplain boundary
- Alignment 2
 - Developed from the Drake Haglan Alt 2 Alignment but extended to the Future 200-yr Floodplain boundary
- Alignment 2A
 - Developed from the Drake Haglan Alt 2A Alignment but extended to the Future 200-yr Floodplain boundary

Seepage Mitigation Alternatives¹

- Option 1 (C)
 - Cutoff Wall (45'-70' Deep)
- Option 2 (S)
 - Seepage Berm (300' Wide)

1. Cutoff Wall Depth and Seepage Berm Width are conservative estimates and will be refined as more geotechnical explorations are conducted

CONSIDERED ALTERNATIVES SUMMARY TABLE			
Figure Number	Alternative Designation	Alignment Alternative	Seepage Mitigation Alternative
2	1C	1	C - Cutoff Wall
3	1S	1	S -Seepage Berm
4	2A-C	2	C - Cutoff Wall
5	2A-S	2	S -Seepage Berm
6	2C	2A	C - Cutoff Wall
7	2S	2A	S -Seepage Berm

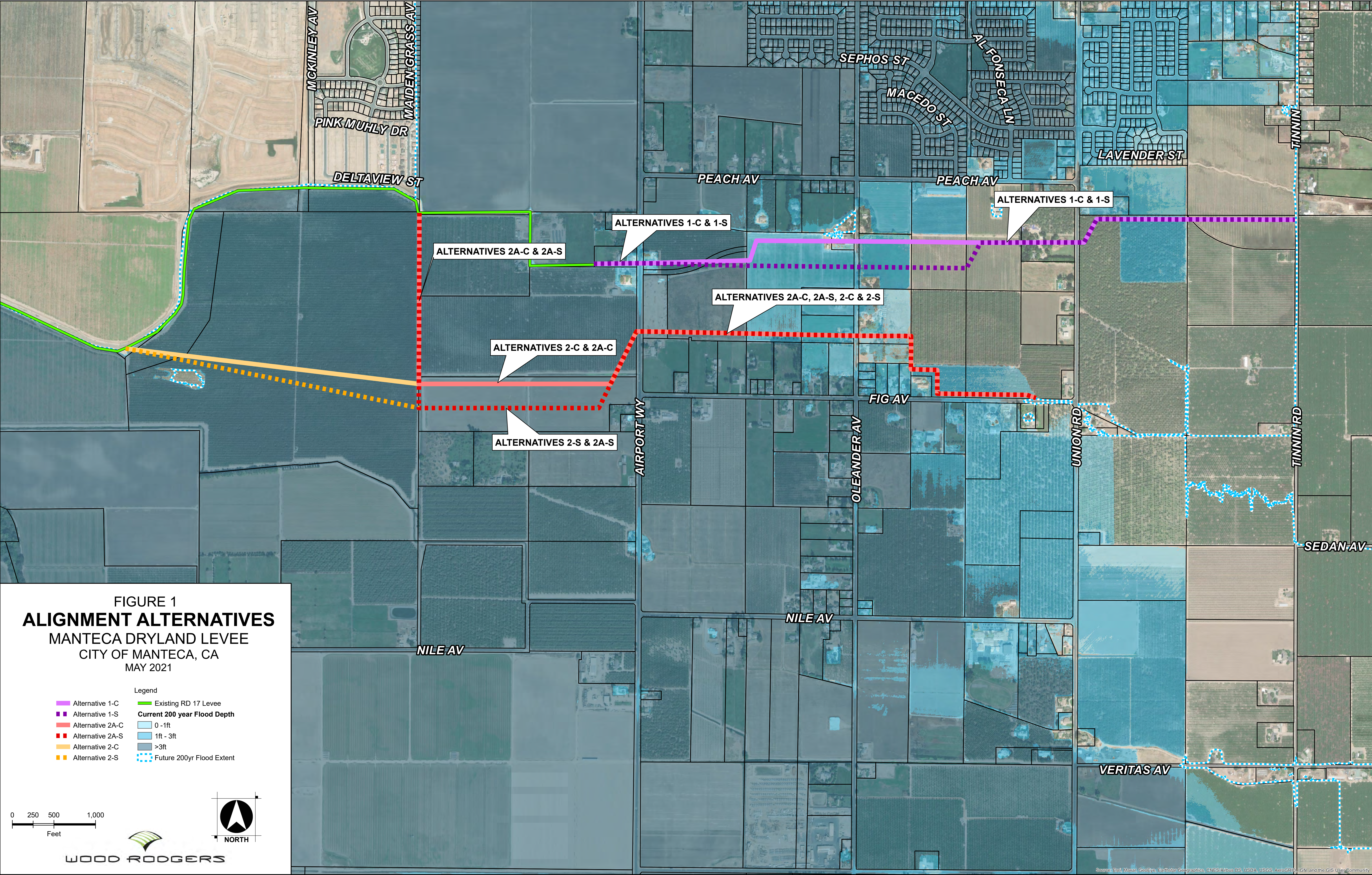
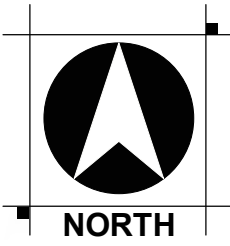


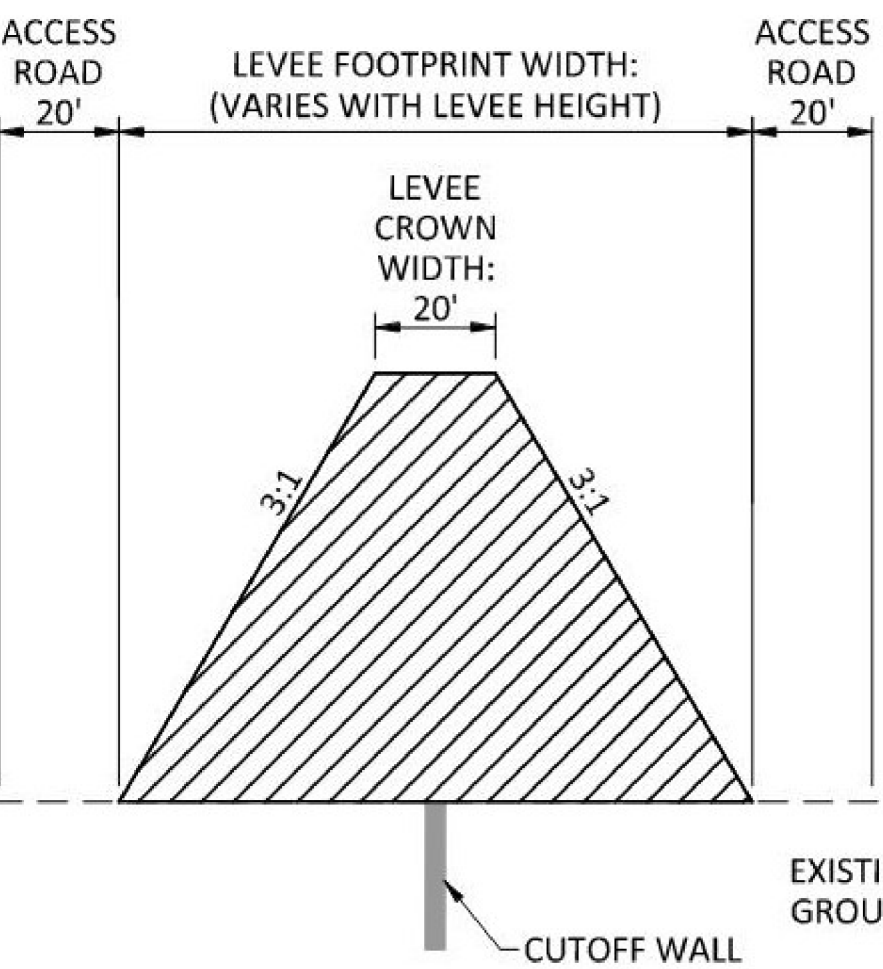
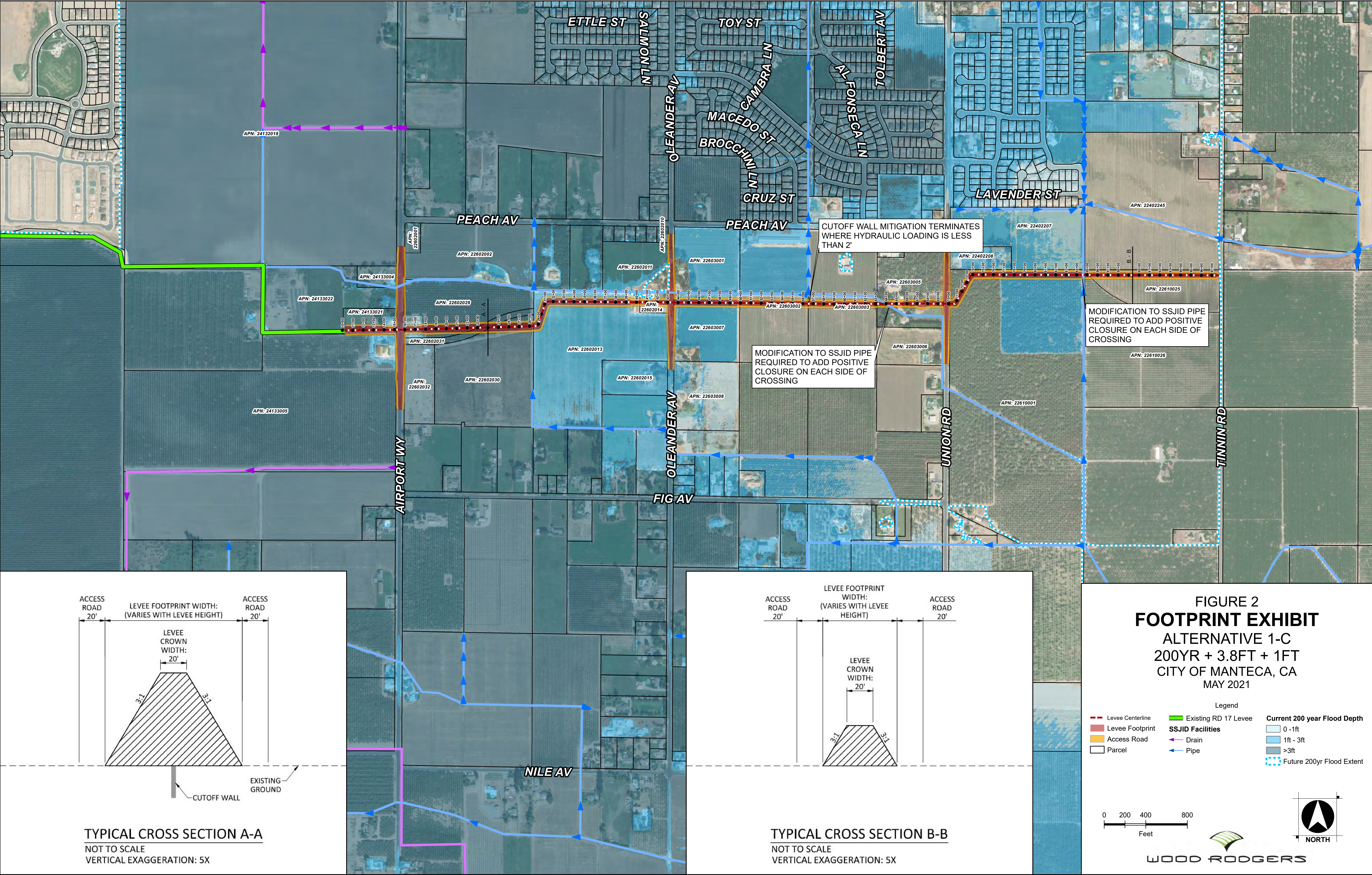
FIGURE 1
ALIGNMENT ALTERNATIVES
MANTECA DRYLAND LEVEE
CITY OF MANTECA, CA
MAY 2021

- Legend
- Alternative 1-C
 - Alternative 1-S
 - Alternative 2A-C
 - Alternative 2A-S
 - Alternative 2-C
 - Alternative 2-S
 - Existing RD 17 Levee
 - Current 200 year Flood Depth
 - 0 - 1ft
 - 1ft - 3ft
 - >3ft
 - Future 200yr Flood Extent

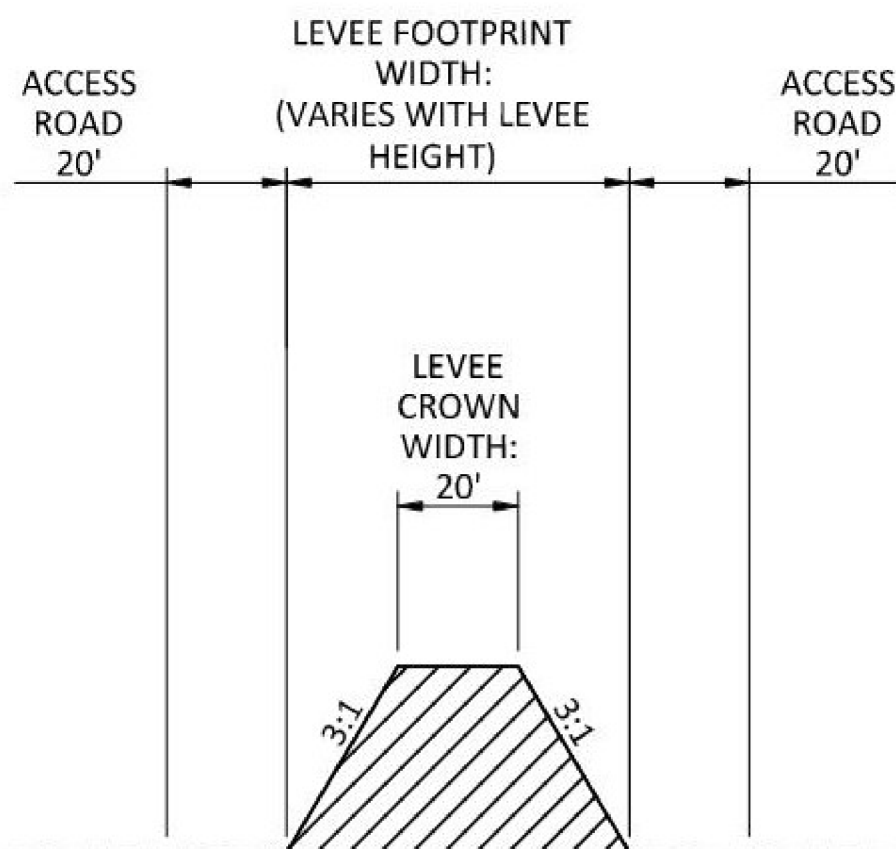
0 250 500 1,000
Feet



WOOD RODGERS

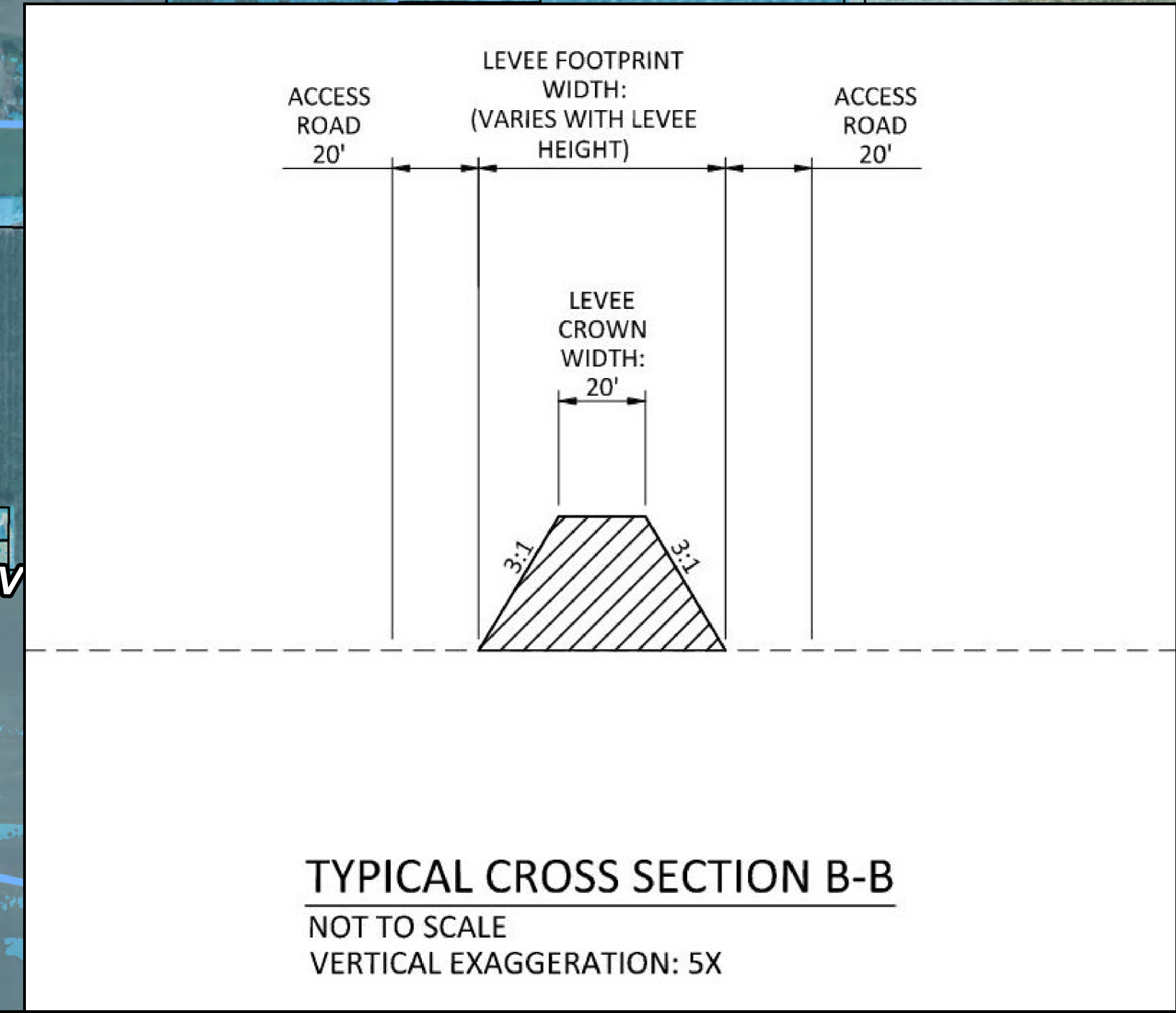
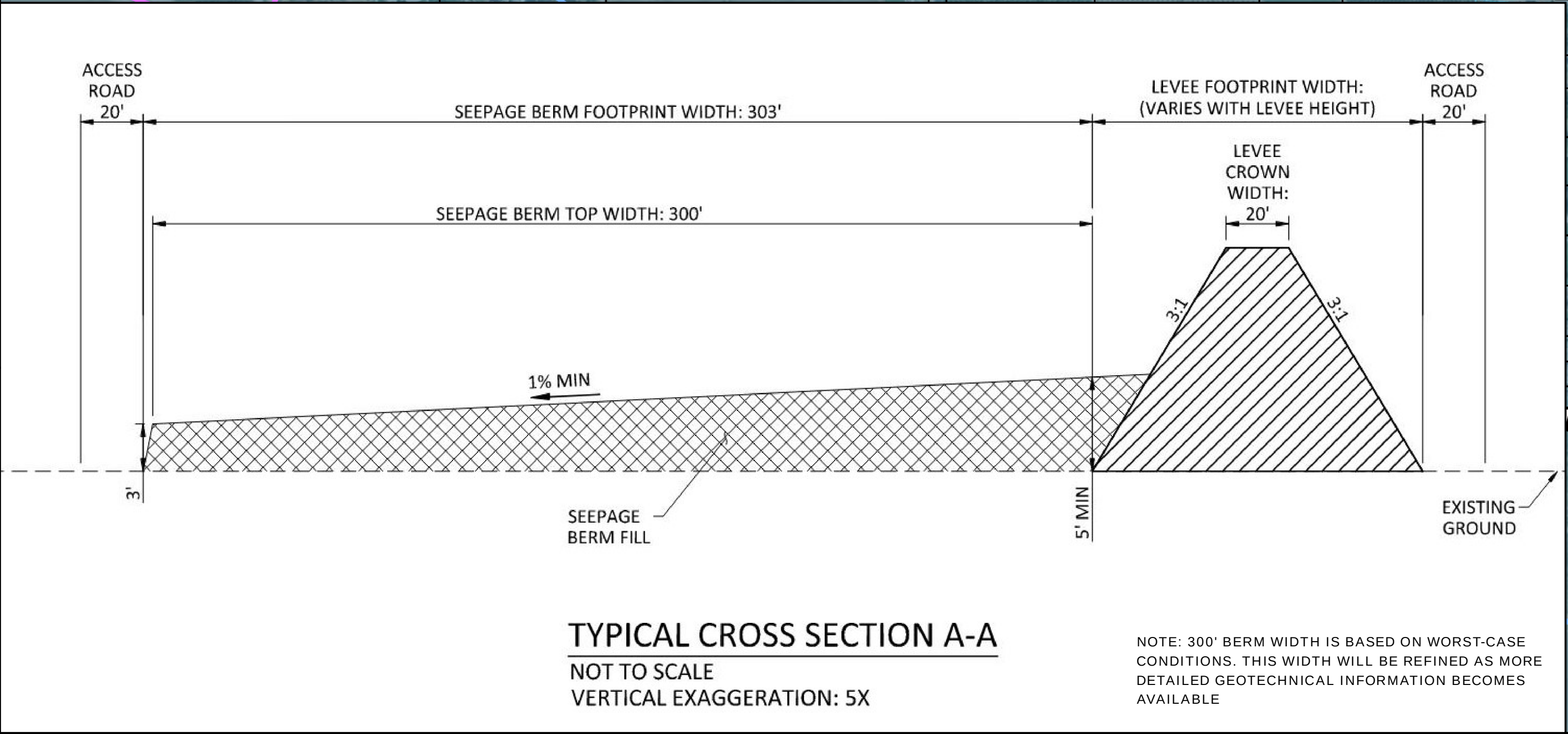
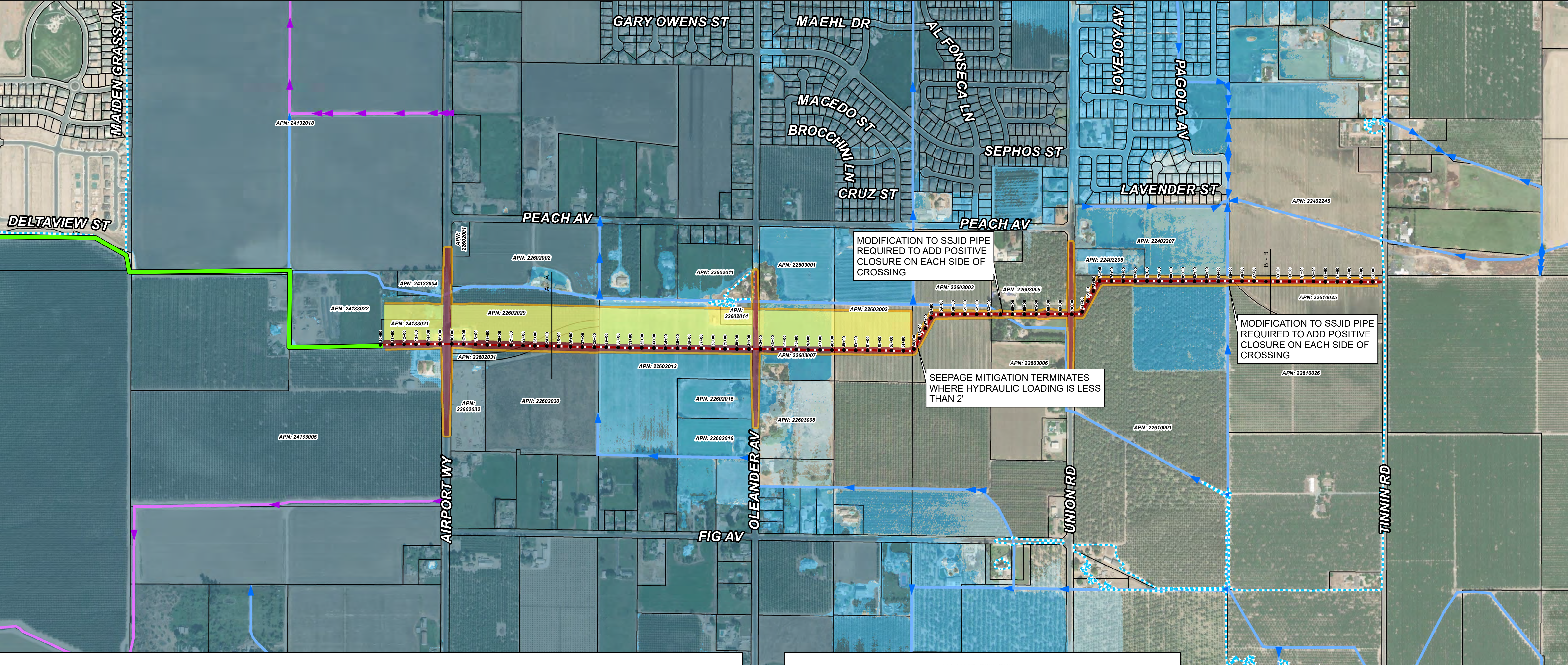


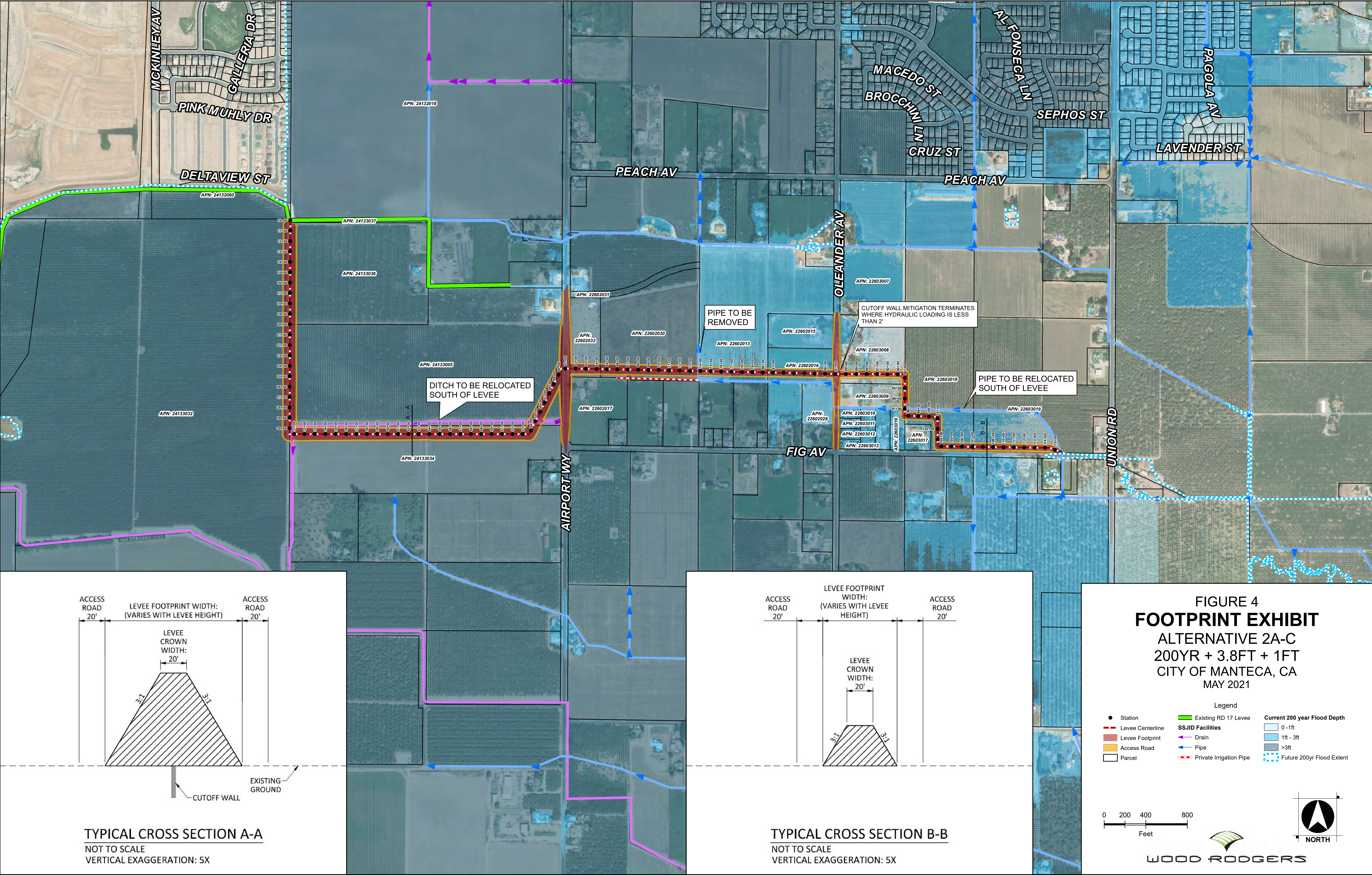
TYPICAL CROSS SECTION A-A
NOT TO SCALE
VERTICAL EXAGGERATION: 5X

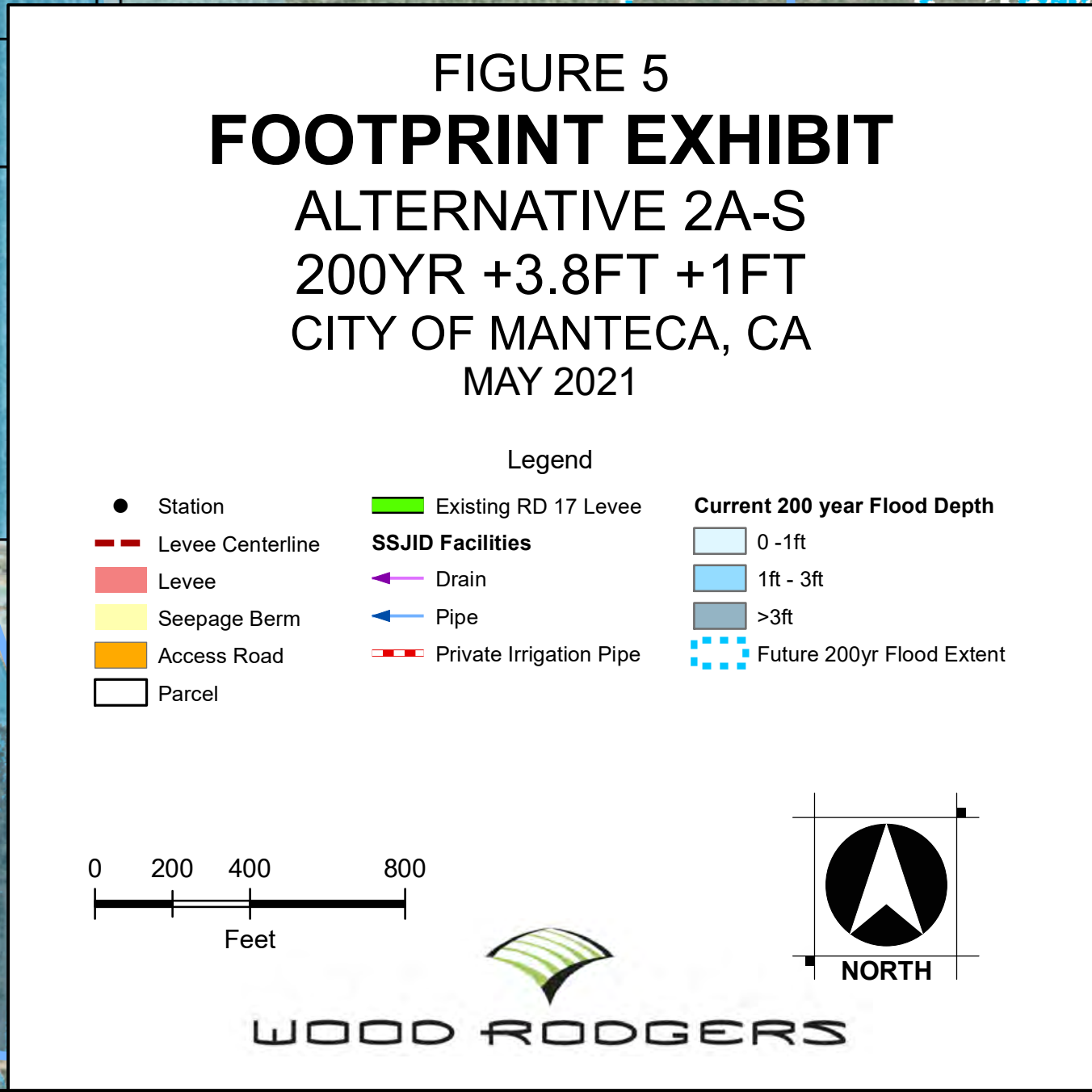
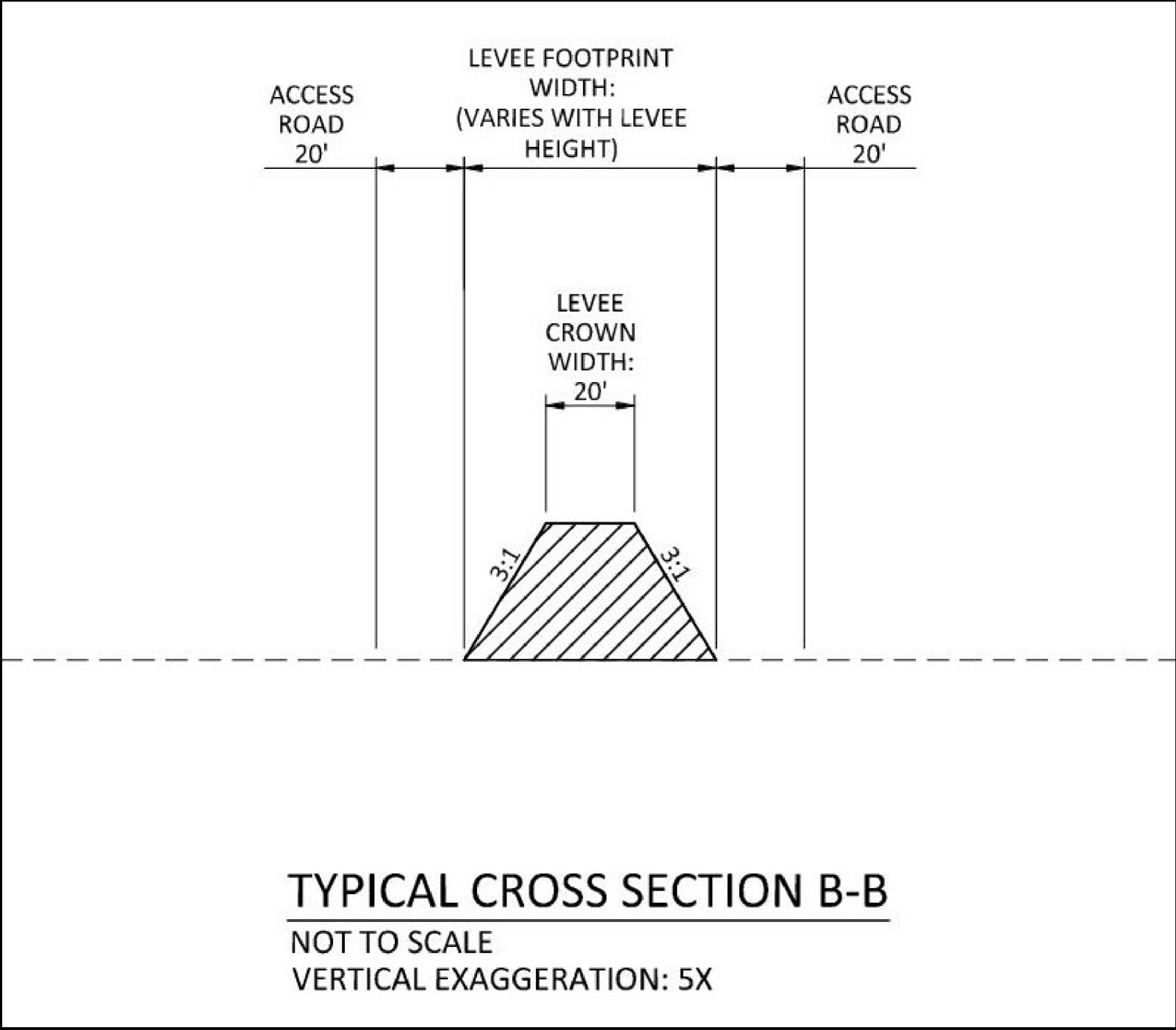
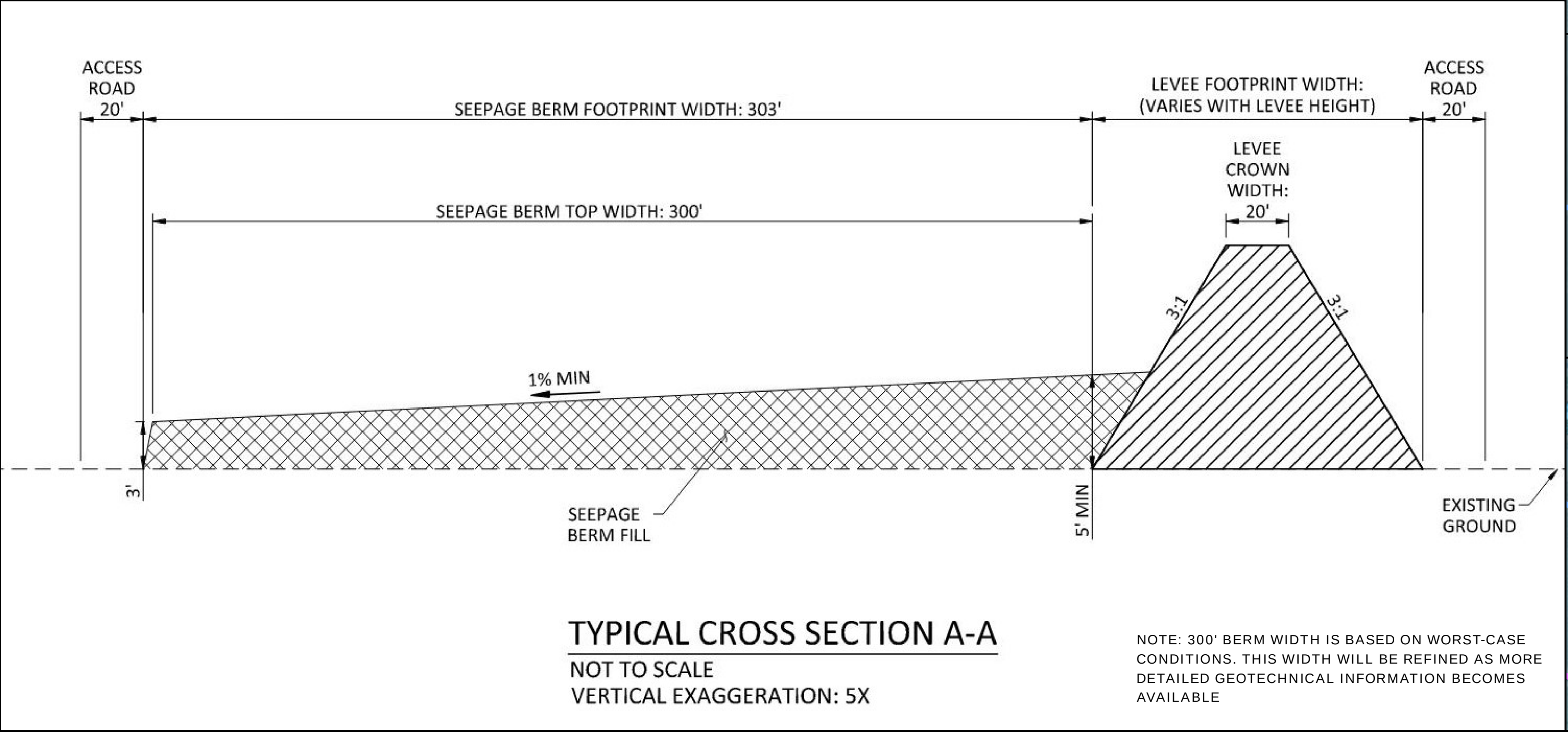
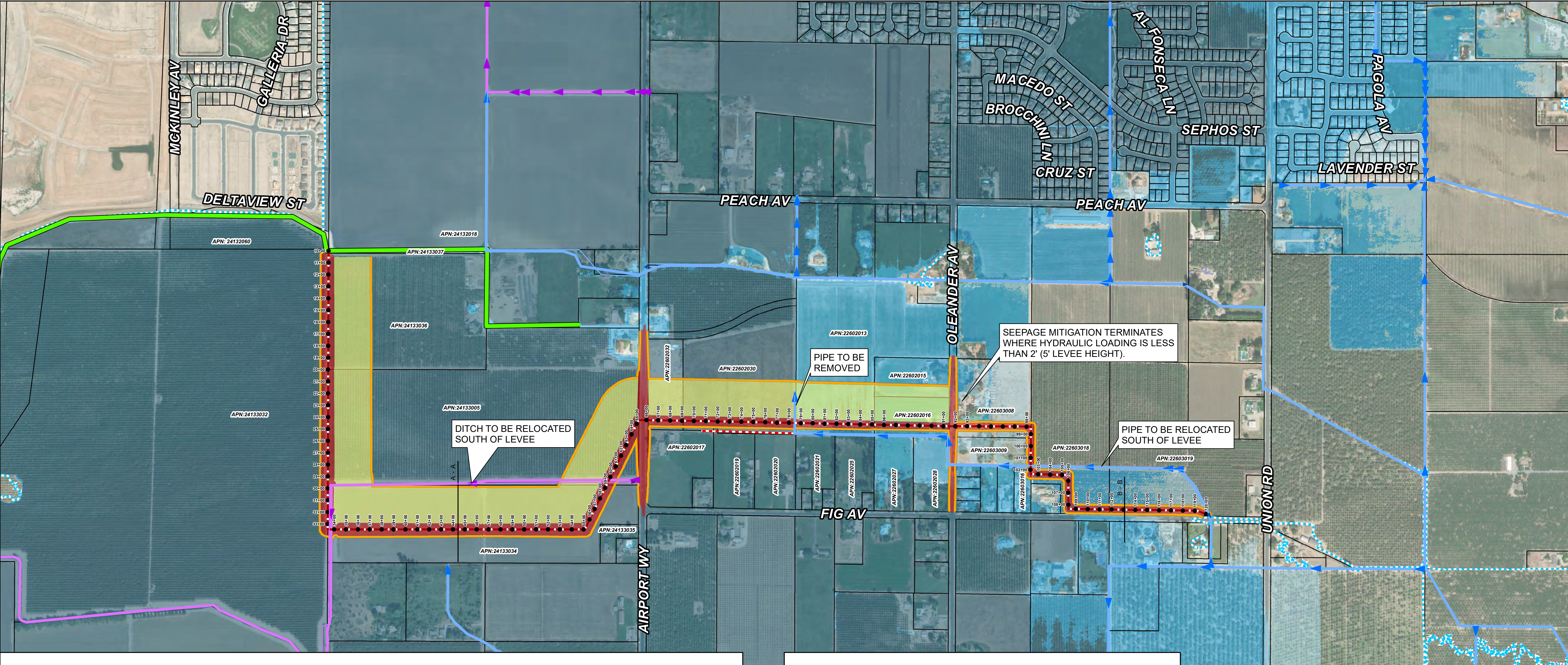


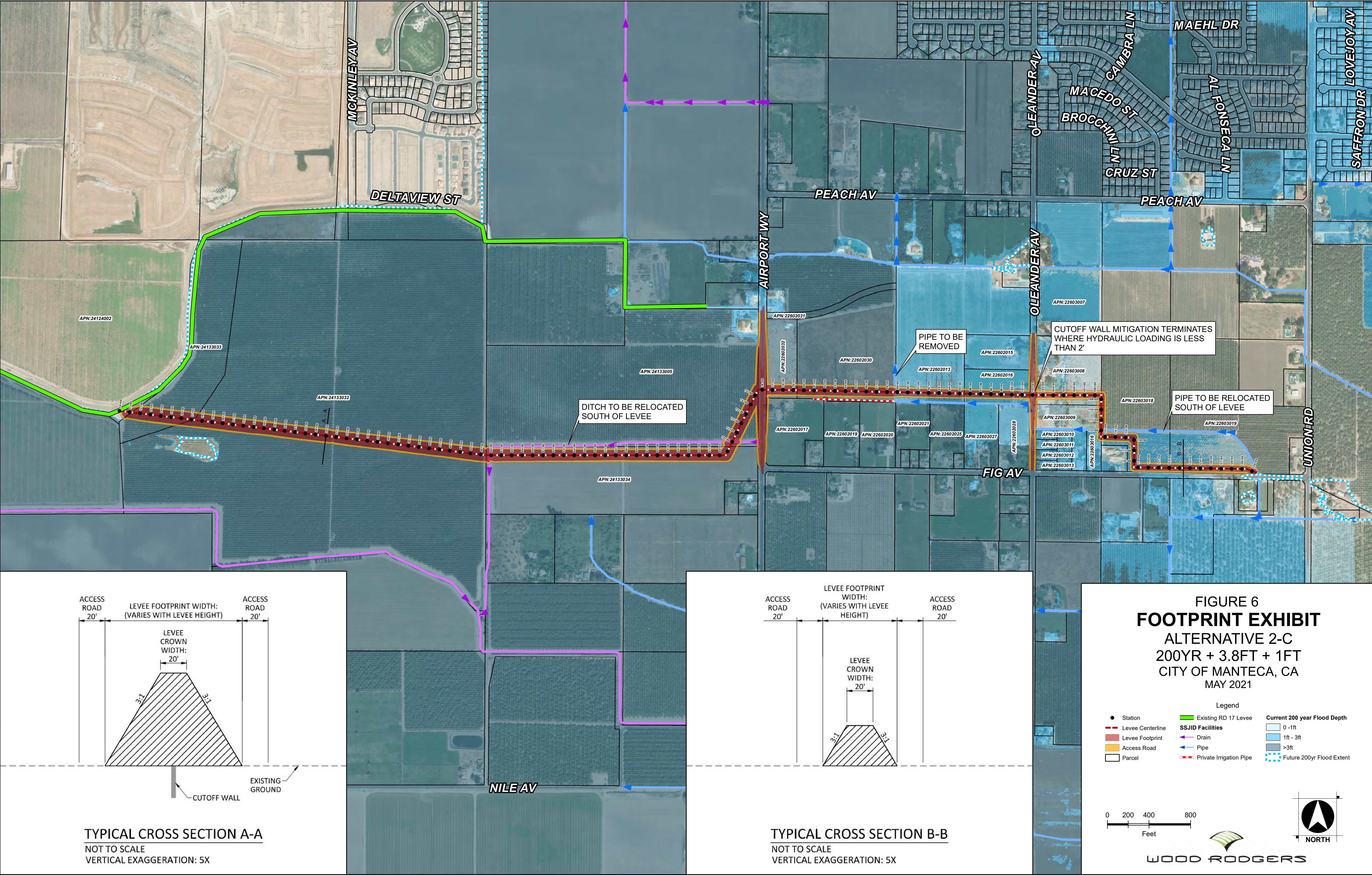
TYPICAL CROSS SECTION B-B
NOT TO SCALE
VERTICAL EXAGGERATION: 5X

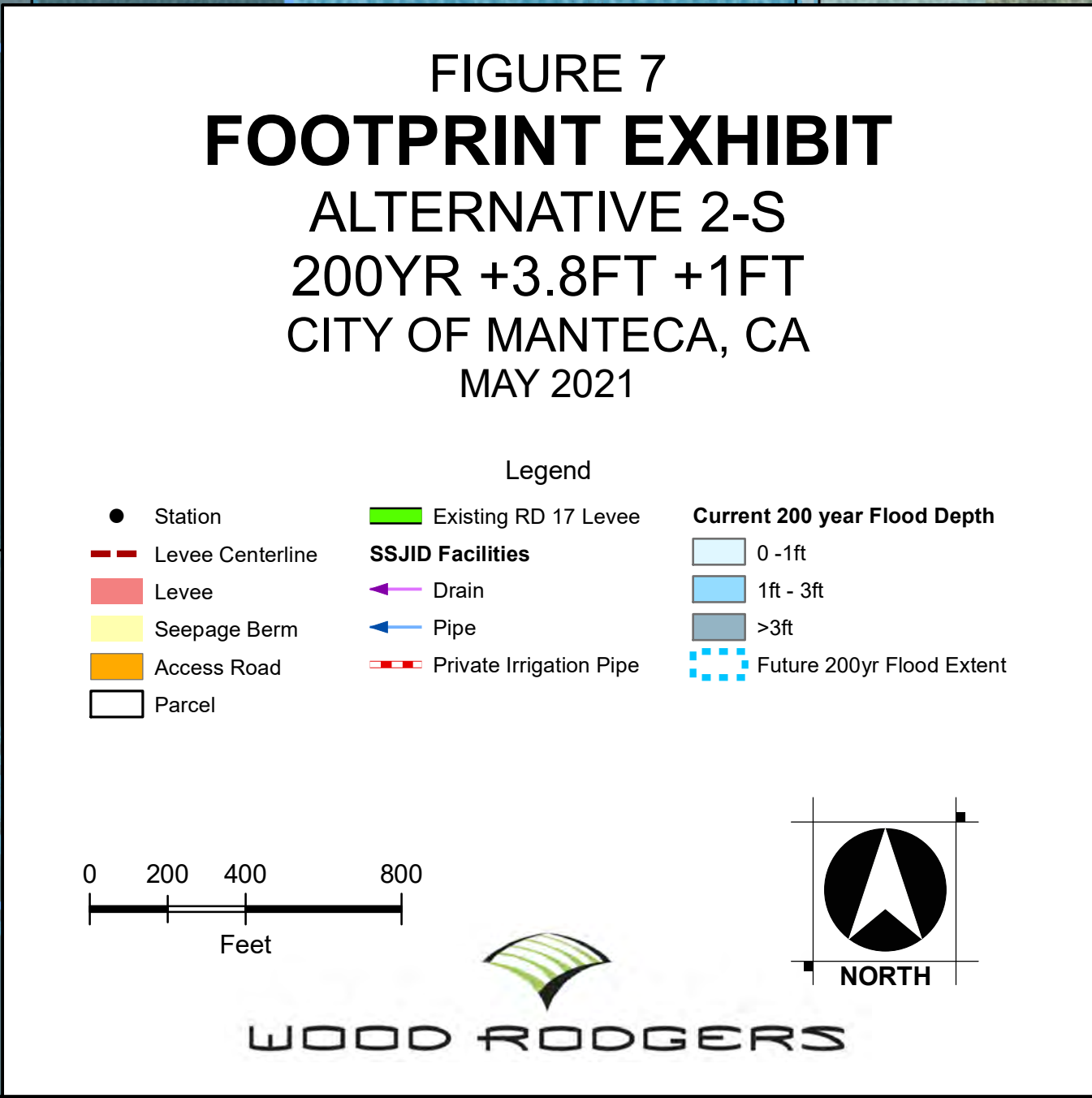
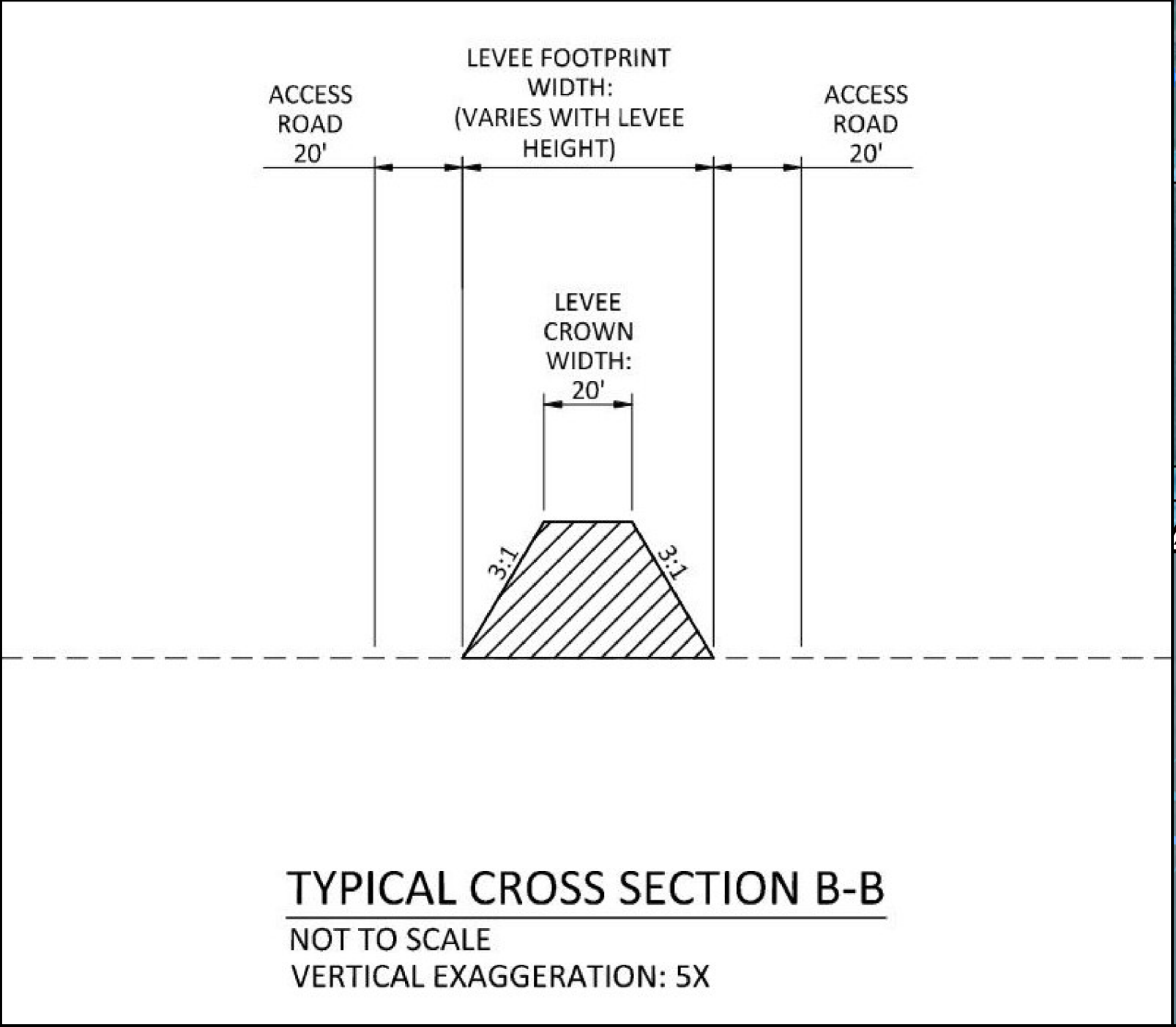
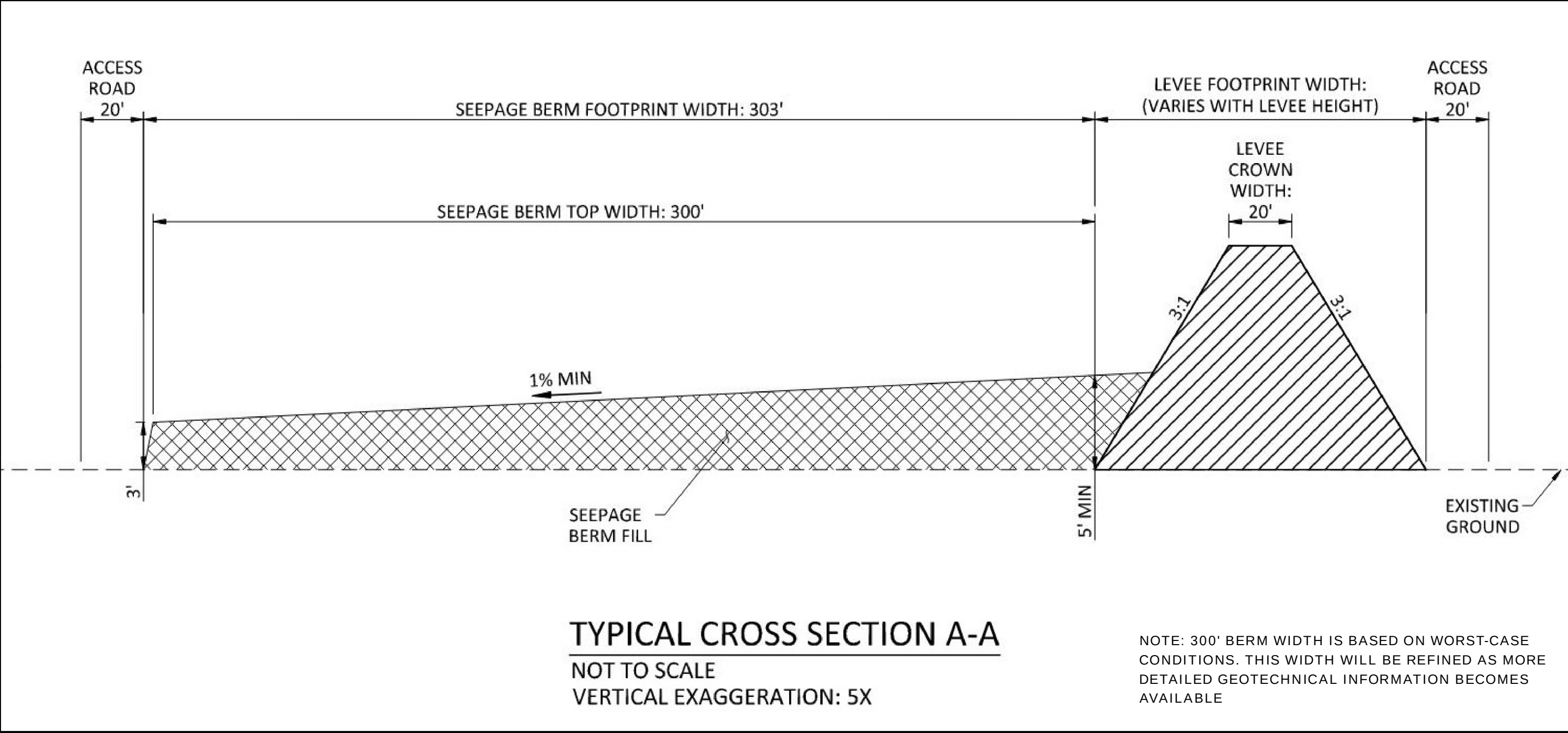
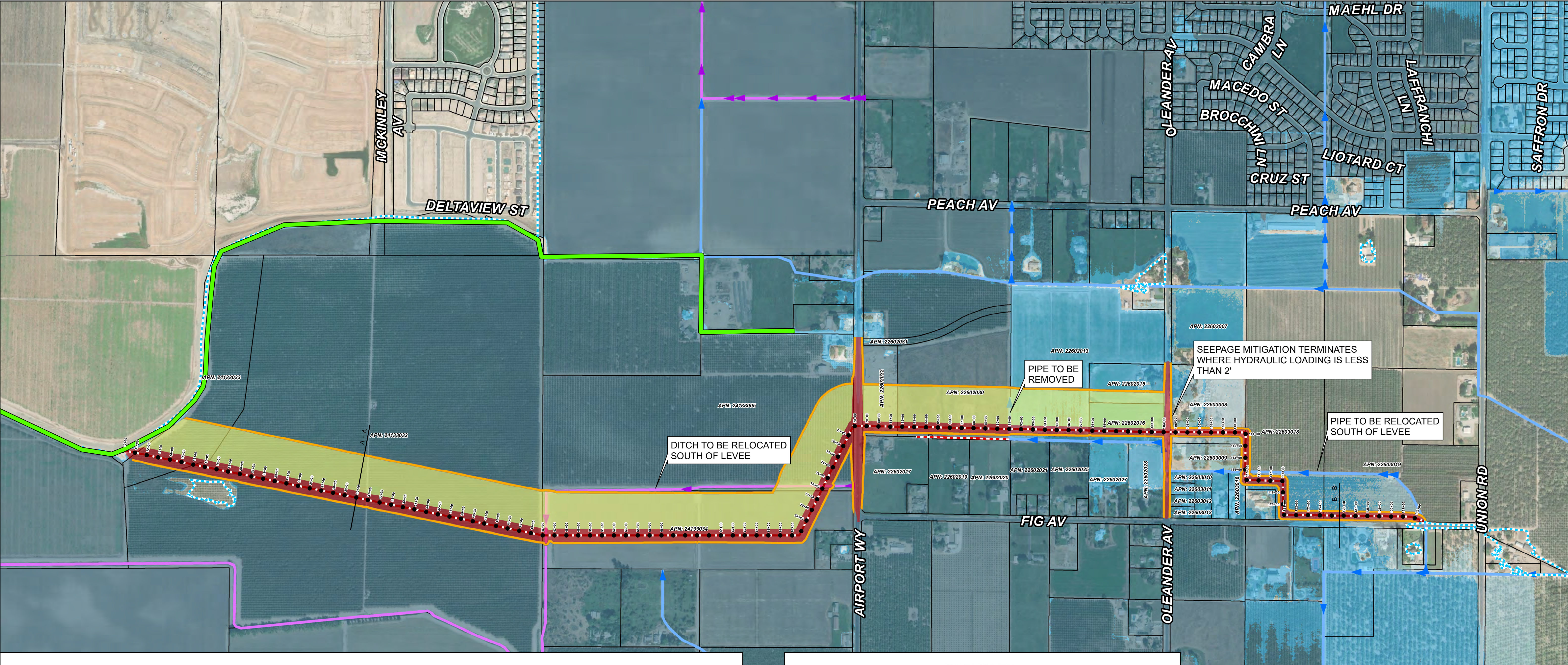
FIGURE 2
FOOTPRINT EXHIBIT
ALTERNATIVE 1-C
200YR + 3.8FT + 1FT
CITY OF MANTECA, CA
MAY 2021











Next Steps

- Continue Refining Alternatives (Spring 2021)
- Evaluate and Rank Alternatives (Summer 2021)
- Develop Recommended Alternative and Draft BODR (Late Fall 2021)

**End of
Agenda Packet**