

**Meeting of the Central Valley Flood Protection Board  
January 26, 2018**

**Permit Staff Report**

**Deane and Edith Williams Testamentary Trust  
Dwelling Replacement, Butte County**

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**1.0 – ITEM**

Consider approval of Permit No. 9082-1. (Attachment B)

**2.0 – APPLICANT**

Deane and Edith Williams Testamentary Trust.

**3.0 – LOCATION**

The project is located at 3288 Larkin Road, Biggs, Butte County.  
(Feather River Designated Floodway, see Attachment A)

**4.0 – PROJECT DESCRIPTION**

To remove an existing 1,960 square feet (sf) dwelling and 1,020-sf carport and replace with a 5,875-sf dwelling with garage.

**5.0 – AUTHORITY OF THE BOARD**

California Water Code § 8534, 8590 – 8610.5, and 8700 – 8710

California Code of Regulations, Title 23, Division 1 (Title 23):

- § 6, Need for a Permit
- § 11, Variances
- § 13, Evidentiary Hearings

- § 107, Permitted Uses in Designated Floodways
- § 108, Existing Encroachments
- § 112, Streams Regulated and Nonpermissible Work Periods
- § 113, Dwellings and Structures Within an Adopted Plan of Flood Control

## **6.0 – PROJECT ANALYSIS**

The existing dwelling is located at 3288 Larkin Road in the City of Biggs within the Feather River Designated Floodway (DF) approximately 1.7 miles downstream of the Thermalito Afterbay. The existing dwelling was built in the 1940s by the Williams family, who has resided at this location for five generations since the 1870s. The existing dwelling was built prior to the construction of the federal levees, which defines the west boundary of the DF, and is shown on the US Army Corps of Engineers' (USACE) as-constructed drawings of the project area (see Attachment C).

The applicant is proposing to replace their existing 1,960 square foot (sf) dwelling and a 1,020-sf carport with a 5,875-sf dwelling with garage. The proposed dwelling would be an improvement over the existing structure as it will have a finish floor elevation of 118.5 feet, North American Vertical Datum of 1988 (NAVD 88), which is approximately 4.5 feet higher than the existing dwelling. See Attachment D for construction plans.

### **6.1 – Hydraulic Analysis**

The Feather River, at this location, is constrained by non-federal levees (dikes) that were constructed by the Department of Water Resources (DWR) under Permit No. 3930 to protect borrow sites used for the construction of Oroville Dam in the 1960s. These dikes were constructed with a crown width of 20 feet, a waterside slope of 1 to 3, a landside slope of 1 to 2.5, and crest elevations were set to prevent overtopping at a flow of 150,000 cubic feet per second (cfs). Overflow weirs were incorporated into the dikes to prevent the possibility of large volumes of water being impounded behind the dikes at an elevation higher than the river, and then being suddenly released down the river by a dike failure. The overflow weir was designed to be overtopped at a flow of approximately 50,000 cfs. DWR continues to maintain these dikes, which are now used

as access roads to the Oroville Wildlife Area. See Attachment A for location maps and photos of the dikes.

The Sutter Butte Flood Control Agency's (SBFCA) hydraulic analysis for the Feather River West Levee Improvement Project (FRWLIP) using USACE's Hydrologic Engineering Center River Analysis System (HEC-RAS) resulted in a water surface elevation (WSE) of approximately 121 feet and 122.3 feet for the 100- and 200-year events, which is lower than the dikes' crown elevation of approximately 124 feet (see Attachment E). As such, the dikes provide flood protection from overtopping at the 100- and 200-year events, which was analyzed at a flow of 150,000 cubic feet per second cfs) and 174,000 cfs. For reference purposes, the right (west) bank federal levee, at this location, has an elevation of approximately 130 feet. All elevations are in NAVD 88 Datum. The project's location is considered as an "ineffective flow area", which is defined as an area where water will accumulate but is not being actively conveyed. Therefore, the project location does not experience flows, but instead has the potential to experience the accumulation of flood waters from the low point of the dikes, which is located at the overflow weir approximately 1.3 miles downstream of the project's location.

The incremental cross-sectional area blockage calculations for the new dwelling resulted in approximately 0.4% (see Attachment E). The incremental blockage calculations are based on the increased cross-sectional dimensions of the proposed dwelling compared to the existing dwelling. Furthermore, the blockage calculations are conservative as it identifies the fill material as being imported even though most of the fill material will come from the applicant's ranch property inside the floodway. Due to the blockage calculations resulting in less than 1%, there will be no adverse hydraulic impacts to the Feather River DF.

## **6.2 – Project Variance**

The applicant has requested a variance to Title 23 § 113 (b) (3) (B), which requires the finish floor to be a minimum of 2-ft above the design flood plane or the 100-year flood elevation. See Attachment F for the applicant's variance request to standard.

The variance to standards request has been reviewed by Board staff and after further review of the area's hydraulics, Board staff recommends that the variance request be approved for this project for the following reasons:

1. The existing dikes provide 100-year flood protection from overtopping from the Feather River. As such, the property does not experience flows from the Feather

River, but instead from the slow accumulation of flood waters entering the low point of the dikes. However, despite the accumulation of flood waters, the applicant stated that their existing dwelling has never been inundated throughout the family's course of residency since the 1870s, including the 1986, 1997, and 2017 flood events, which resulted in peak releases from Oroville Dam of 150,000 cfs (DWR Report, The Floods of February 1986), 135,000 cfs (Final Report of the Governor's Flood Emergency Action Team dated 1997) and 100,000 cfs (DWR ORO Sensor, Oroville Reservoir Outflow).

2. The proposed dwelling is a betterment compared to existing condition as it will be approximately 4.5 feet higher and more securely anchored to its foundation. Further, adhering to the applicable standard would require an additional raise of 4.5 feet, which would result in the need to import a significant amount of fill into the floodway further increasing the hydraulic blockage.

### **6.3 – Geotechnical Analysis**

The proposed project is located more than 500-ft from the waterside levee toe. Therefore, there are no adverse geotechnical impacts to the Federal flood risk management project levees. As such, a geotechnical analysis was not required for this project.

## **7.0 – AGENCY COMMENTS AND ENDORSEMENTS**

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- Department of Water Resources Sutter Maintenance Yard (Maintenance Area 7) has endorsed the project on April 13, 2015 with conditions that have been incorporated into the conditions of the attached Draft Permit No. 9082-1.
- The USACE 33 U.S.C. 408 approval letter has been received for this application. The USACE Sacramento District Engineer approves the request to alter the Federal flood risk reduction project, subject to conditions. The letter is incorporated into the permit as Exhibit A.

## **8.0 – CEQA ANALYSIS**

The Board has determined the project is categorically exempt from CEQA under a Class 3 Categorical Exemption (CEQA Guidelines Section 15303(a)) covering new construction of a single-family residence in a residential zone.

## **9.0 – SECTION 8610.5 CONSIDERATIONS**

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science that relate to the scientific issues presented by the executive officer, legal counsel, the Department of Water Resources or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on facilities of the State Plan of Flood Control (SPFC), and consistency of the proposed project with the Central Valley Flood Protection Plan Update (CVFPP) as adopted by Board Resolution 2017-10 on August 25, 2017:

The proposed dwelling is in the same vicinity as the existing dwelling but with a larger footprint. However, the increased footprint does not result in adverse effect on any SPFC facilities since it is located more than 500-feet from the waterside levee toe and resulted in less than 1% hydraulic blockage of the Feather River DF. Furthermore, the proposed dwelling improves public safety per the CVFPP primary goal as it will have a higher finished floor elevation than the existing dwelling.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

The project location receives flood protection from the existing dikes that provides protection from overtopping from the Feather River for the 100- and 200-year flood events. Furthermore, the proposed dwelling is a betterment than the existing dwelling due to the higher finished floor elevation and more securely anchored to its

foundation to minimize the potential of floatation into the floodway. Therefore, there are no expected adverse effects to the proposed project from reasonable projected future events.

### **10.0 – STAFF RECOMMENDATION**

Staff Recommends that the Board:

**Adopt:**

- The CEQA findings:

**Approve:**

- Draft Encroachment Permit No. 9082-1 in substantially the form provided; and

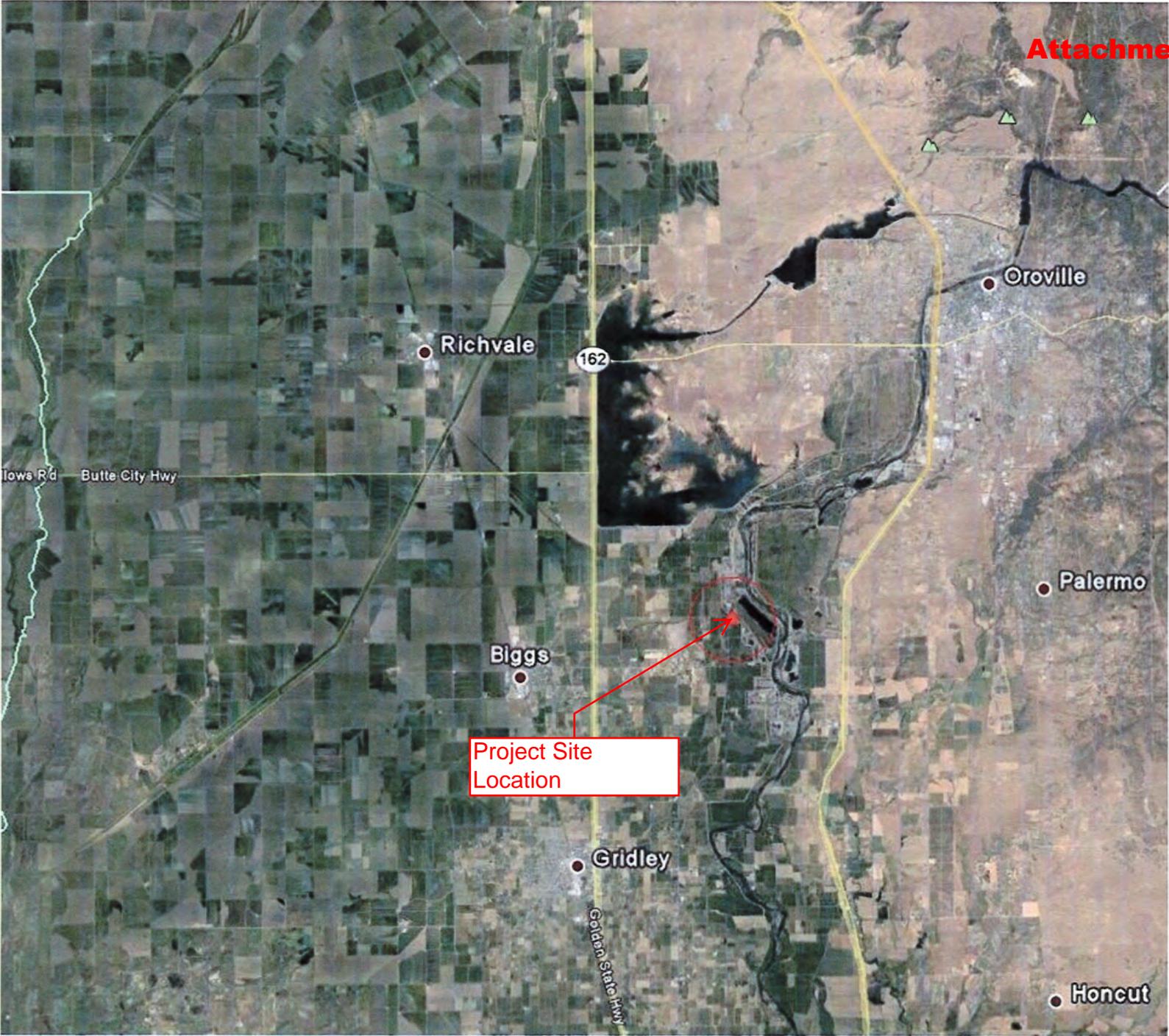
**Direct:**

- The Executive Officer to take the necessary actions to execute the permit and file a Notice of Exemption pursuant to CEQA with the State Clearinghouse.

### **11.0 – LIST OF ATTACHMENTS**

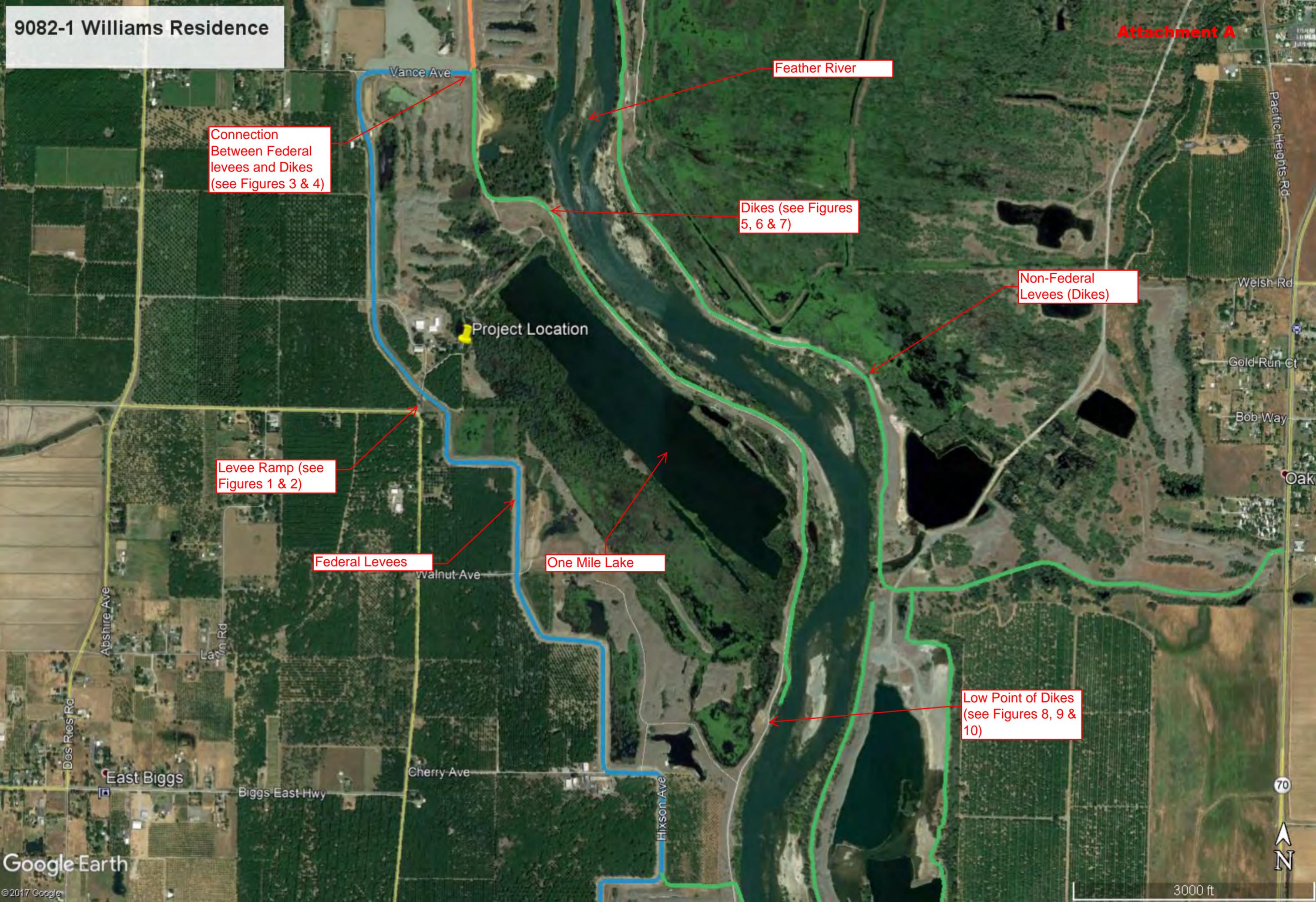
- A. Location Maps and Photos
- B. Draft Permit No. 9082-1
- C. USACE As-Constructed Drawing No. 4-4-349
- D. Construction Plans
- E. SBFCA FRWLIP WSE Profiles and Blockage Calculations
- F. Variance Request to Standards

Design Review:	Minh Chieng, P.E. Permitting Section Staff
Environmental Review:	Ruth Darling, Senior Environmental Scientist
Document Review:	Gary W. Lemon, P.E. Permitting Section Chief Mitra Emami, P.E. Operations Branch Chief Mary J. Jimenez, P.E., Acting Chief Engineer
Legal Review:	Kanwarjit Dua, Board Counsel



3288 Larkin Road, Biggs, Ca

VICINITY MAP NTS



Connection Between Federal levees and Dikes (see Figures 3 & 4)

Feather River

Dikes (see Figures 5, 6 & 7)

Non-Federal Levees (Dikes)

Project Location

Levee Ramp (see Figures 1 & 2)

Federal Levees

One Mile Lake

Low Point of Dikes (see Figures 8, 9 & 10)

Abshire Ave

Lawn Rd

Walnut Ave

Cherry Ave

Hixson Ave

70



3000 ft

ONE MILE LAKE

EX FARM  
OPPERATIONS

POND

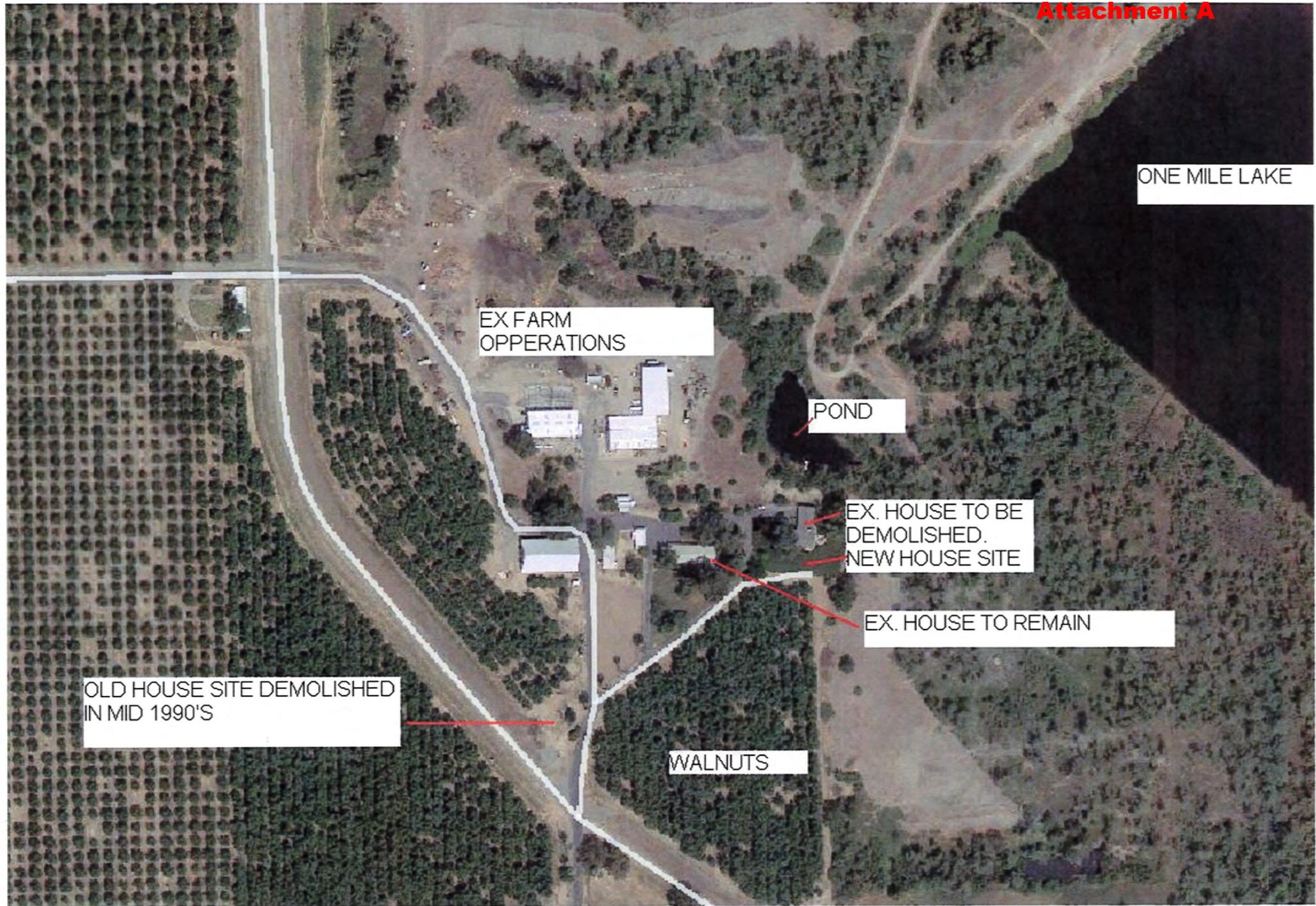
EX. HOUSE TO BE  
DEMOLISHED.  
NEW HOUSE SITE

EX. HOUSE TO REMAIN

OLD HOUSE SITE DEMOLISHED  
IN MID 1990'S

WALNUTS

OVERALL SITE  
NTS





Looking Northerly from ex. house site to pond



**Attachment A**

Looking Easterly through new housesite to river bottom



Looking southerly past tree to be saved to housesite



Looking southerly from new house site to walnuts



**ESTABLISHED BANK**



**SOUTHEASTERLY THRU HOUSESITE**



**SOUTHWESTERLY THRU HOUSESITE**



**LARKIN ROAD ENTRANCE OVER LEVEE**



Figure 1. Federal Levee Waterside Ramp to Property, Looking From Levee Crown



Figure 2. Federal Levee Landside Ramp to Larkin Road, Looking From Levee Crown



Figure 3. Federal Levee Tie-In to Dikes



Figure 4. Federal Levees Tie-In to Dikes, Looking Upstream



Figure 5. Non-federal Levees (Dikes), Looking Upstream



Figure 6. Dikes Waterside Slope, Looking Upstream



Figure 7. Dikes Landside Slope, Looking Upstream



Figure 8. Low Point of Dikes, Looking Upstream



Figure 9. Low Point of Dikes (Outflow Weir), Looking Upstream



Figure 10. Low Point of Dikes, Looking Downstream

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
**THE CENTRAL VALLEY FLOOD PROTECTION BOARD**

**PERMIT NO. 9082-1 BD**

**This Permit is issued to:**

Dean & Edith Williams Trust  
3288 Larkin Road  
Biggs, California 95917

To remove an existing 1960 square foot dwelling and 1020 square foot carport and replace with a 5875 square foot dwelling with garage.

The project is located on the property at 3288 Larkin Road in the town of Biggs, , at 39.43048°N 121.64164°W, Maintenance Area 7, Feather River, Butte County, CA.

**NOTE:** Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

**(SEAL)**

Dated: \_\_\_\_\_

\_\_\_\_\_  
Executive Officer

**GENERAL CONDITIONS:**

**ONE:** This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

**TWO:** Only work described in the subject application is authorized hereby.

**THREE:** This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

**FOUR:** The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

**FIVE:** Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection Board.

**SIX:** This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

**SEVEN:** It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

**EIGHT:** This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

**NINE:** The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

**TEN:** The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

**ELEVEN:** The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

**TWELVE:** Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

### **SPECIAL CONDITIONS FOR PERMIT NO. 9082-1 BD**

**THIRTEEN:** This permit is not valid until the permittee executes the enclosed Agreement Establishing a Covenant Running with the Land and has the permit, to include any attachments, recorded with the appropriate county. A copy of the recorded Covenant must be sent to the Central Valley Flood Protection Board (Board) prior to the commencement of work. Failure to do so may result in this permit being revoked.

**FOURTEEN:** The permittee acknowledges that the proposed dwelling is located on the waterside of a Federal flood risk management project levee and within the Feather River Designated Floodway which may be subject to periodic flooding. The interior non-Federal levee is not a recognized flood control facility and if damaged in the future, may not be repaired. Furthermore, the finish floor elevation of the proposed dwelling is located below the 100-year design flood elevation.

### **LIABILITY AND INDEMNIFICATION**

**FIFTEEN:** The permittee shall defend, indemnify, and hold the Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Board's approval of this permit, including but not limited to claims filed pursuant to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

**SIXTEEN:** The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Board and the State, safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement

or take over its defense, in its sole discretion.

SEVENTEEN: The Board and Department of Water Resources shall not be held liable for any damages to the permitted encroachment(s) resulting from releases of water from reservoirs, flood fight, operation, maintenance, inspection, or emergency repair.

## **AGENCY CONDITIONS**

EIGHTEEN: All work approved by this permit shall be in accordance with the submitted drawings and specifications dated March 25, 2015, except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Board.

NINETEEN: The Board reserves the right to add additional, or modify existing, conditions when there is a change in ownership and/or maintenance responsibility of the work authorized under this permit.

TWENTY: The permittee shall be responsible for the repair of any damages to the project levee, channel, banks, floodway, or other flood control facilities due to construction, operation, or maintenance of the proposed project.

TWENTY-ONE: The permittee shall comply with all conditions set forth in the letter from the Department of the Army (U.S. Army Corps of Engineers, Sacramento District) dated October 3, 2017, which is attached to this permit as Exhibit A and is incorporated by reference.

TWENTY-TWO: No construction work of any kind shall be done during the flood season from November 1 to April 15 without prior approval of the Board. Failure to submit a Time Variance Request to the Board at least 10 working days prior to November 1 may result in a delay of the project.

TWENTY-THREE: The State of California shall not be held liable for any damages caused by operation of the flood control project or by releases of water from storage reservoirs.

TWENTY-FOUR: If damage to the dwelling exceeds 50 percent of its market value within a 10-year period, the dwelling cannot be rebuilt or replaced without approval of the Board. If the dwelling is not repaired or replaced, the remaining portion must be completely removed from the floodway prior to the next flood season.

TWENTY-FIVE: Any additional encroachment(s) within the Feather River Designated Floodway will require an approved permit from the Board and shall be in compliance with the Board's regulations (Title 23 California Code of Regulations).

TWENTY-SIX: Permittee shall pay to the Board, an inspection fee(s) to cover inspection cost(s), including staff and/or consultant time and expenses, for any inspections before, during, post-construction, and regularly thereafter as deemed necessary by the Board.

## **PRE-CONSTRUCTION**

TWENTY-SEVEN: After the enclosed Agreement Establishing a Covenant Running with the Land has been signed, notarized, and returned to the Board, the permittee shall contact the Department of Water Resources by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

## **CONSTRUCTION**

TWENTY-EIGHT: Cleared trees and brush shall be properly removed from the Feather River Designated Floodway, and downed trees or brush shall not remain in the Feather River Designated Floodway during the flood season from November 1 to April 15.

TWENTY-NINE: The finished floor elevation shall be at least 118.5 feet, NAVD 88, as shown on the submitted drawings. Permittee shall provide an elevation certificate indicating compliance with the above elevation requirement prior to completion of the project.

THIRTY: The levee section shall not be used for staging construction or storing materials or equipment.

THIRTY-ONE: The proposed building shall be properly anchored to prevent floatation into the Feather River Designated Floodway in the event of high water.

## **POST-CONSTRUCTION**

THIRTY-TWO: All debris generated by this project shall be properly disposed of outside the Feather River Designated Floodway.

## **OPERATIONS AND MAINTENANCE**

THIRTY-THREE: The permitted encroachment(s) shall not interfere with operation and maintenance of the flood control project. If the permitted encroachment(s) are determined by any agency responsible for operation or maintenance of the flood control project to interfere, the permittee shall be required, at permittee's cost and expense, to modify or remove the permitted encroachment(s) under direction of the Board or Department of Water Resources. If the permittee does not comply, the Board may modify or remove the encroachment(s) at the permittee's expense.

THIRTY-FOUR: The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Board, Department of Water Resources, or any other agency responsible for maintenance and shall, at all times, allow officials from these agencies to access the levee, levee slope, and any adjacent areas as necessary for flood control.

## **PROJECT ABANDONMENT / CHANGE IN PLAN OF FLOOD CONTROL**

THIRTY-FIVE: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if in the discretion of the Board the removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if the project is not maintained or is damaged by any cause. If the permittee does not comply, or in the event of an emergency, the Board may remove the encroachment(s) at the permittee's expense.

THIRTY-SIX: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Board at the permittee's or successor's cost and expense.

**END OF CONDITIONS**

RECORDING REQUESTED BY AND  
WHEN RECORDED MAIL TO:

**The Central Valley Flood  
Protection Board**  
c/o Department of Water Resources  
3310 El Camino Avenue  
Suite 170  
Sacramento, CA 95821

--- SPACE ABOVE IS FOR RECORDER'S USE ---

## **COVENANT RUNNING WITH THE LAND**

1. This COVENANT applies to residential and commercial structures, related improvements, and real property, hereinafter referred to as "OWNER'S PROPERTY", acquired by OWNER(S) by grant deed recorded \_\_\_\_\_, as Document  
(Date)  
Number \_\_\_\_\_, Official Records of Butte County, attached as Exhibit A.  
(Number)
2. These covenants and equitable servitudes shall bind the OWNER(S), any successors, executors, heirs, administrators, and assigns. It is the express intent of OWNER(S) and the Sacramento and San Joaquin Drainage District, acting by and through The Central Valley Flood Protection Board of the State of California, hereinafter referred to as the "BOARD", that these covenants and equitable servitudes touch and concern and that the burdens run with the OWNER'S PROPERTY and inure to the benefit of and be binding on their successors, executors, heirs, administrators, and assigns.
3. OWNER(S) acknowledge that OWNER'S PROPERTY or a portion thereof is located within an adopted plan of flood control and subject to California Code of Regulations, Title 23, Division 1, hereinafter referred to as the "REGULATIONS".
4. OWNER(S), being fully aware that there is a risk that improvements on the OWNER'S PROPERTY may sustain flood damage and may cause flood damage elsewhere, agrees for OWNER(S), any successors, executors, heirs, administrators, and assigns to comply with all conditions of the BOARD'S Permit No. 9082-1 BD, attached as Exhibit B, and any future changes therein, as on file with the Board at 3310 El Camino Avenue, Suite 170, Sacramento, California, 95821 and any BOARD permit governing improvements to which improvements made pursuant to Permit No. 9082-1 BD are physically attached, and to the REGULATIONS.

5. OWNER(S) agrees for OWNER(S), any successors, executors, heirs, administrators, and assigns to release, hold harmless, defend, and indemnify the State of California, its agencies, officers, employees and agents from any and all claims, costs, expenses, and liability for any damages from flood, river, or reservoir operation to OWNER'S PROPERTY and any and all claims, costs, expenses, and liability caused by or contributed to by OWNER(S) improvements or by OWNER(S) failure to comply with the terms and conditions of the BOARD'S Permit No. 9082-1 BD and any future changes therein, as on file with the Board at 3310 El Camino Avenue, Suite 170, Sacramento, California, 95821, or any BOARD permit governing improvements to which improvements made pursuant to Permit No. 9082-1 BD are attached, or for failure to comply with the REGULATIONS.

6. The BOARD will provide timely notice to the OWNER(S) before changing any condition contained in Permit No. 9082-1 BD.

7. The BOARD holds title to interest in real property that is benefited by the covenants and equitable servitudes described above. These interests in real property owned by the BOARD constitute a part of the flood control system of the State over which the BOARD exercises authority pursuant to the laws of the State of California, including Water Code Section 8710.

8. This COVENANT shall be recorded in the Official Records of Butte County.

OWNER(S):

\_\_\_\_\_  
Signature of Property Owner

\_\_\_\_\_  
Printed Name of Property Owner

\_\_\_\_\_  
Signature of Property Owner

\_\_\_\_\_  
Printed Name of Property Owner



**DEPARTMENT OF THE ARMY**  
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT  
1325 J STREET  
SACRAMENTO CA 95814-2922

Executive Office (9082-1)

OCT 03 2017

Ms. Leslie M. Gallagher  
Executive Officer  
Central Valley Flood Protection Board  
3310 El Camino Avenue, Room 170  
Sacramento, CA 95821

Dear Ms. Gallagher:

We have reviewed permit application number 9082-1 submitted by Darin Williams (Dean & Edith Williams Trust) to alter the Sacramento River Flood Control Project authorized by the Flood Control Act of 1917, as amended. These plans include removing an existing 1,960 square foot dwelling and 1,020 square foot carport and replacing with a 5,875 square foot dwelling with garage in the Feather River Floodway. The project is located on the property at 3288 Larkin Road in Biggs, at 39.430484°N 121.641659°W NAD83, Butte County, CA.

The Sacramento District (the Corps) has reviewed this application and determined that the alteration will not be injurious to the public interest and will not impair the usefulness of the project works. Pursuant to Section 14 of the Rivers and Harbors Act of 1899, 33 USC § 408 (Section 408), the District Commander approves the request to alter the Federal flood risk reduction project subject to the following conditions:

- a. That the proposed work shall not be performed during the flood season of November 1 to April 15, unless otherwise approved in writing by your Board.
- b. That the proposed work shall not interfere with the integrity or hydraulic capacity of the flood risk reduction project; easement access; or maintenance, inspection, and flood fighting procedures.
- c. That any debris generated by this project shall be disposed of outside the limits of the project right-of way.
- d. That if the structure is damaged due to any cause, cumulatively to the extent of more than 50 percent of its market value, the structure may not be reconstructed or replaced without the approval of the Board.
- e. That materials or equipment stored within the floodway must be securely anchored or removed prior to the flood season of November 1 to April 15.

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f. That in the event trees and brush are cleared, they shall be properly disposed of either by complete burning or complete removal outside the limits of the project right-of-way.

g. That the design flow of 210,000 cubic feet per second in the Feather River Floodway shall not be compromised by this work.

h. That the proposed structure shall be securely anchored to prevent flotation into the floodway during periods of high water.

i. That appropriate property rights shall be acquired prior to any construction. An approval under Section 408 does not grant property rights or exclusive privileges.

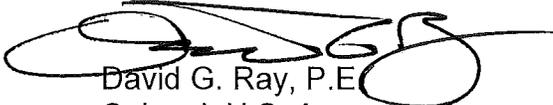
j. That if you discover any previously unknown historic properties (36 CFR § 800.13) while accomplishing the activity authorized by this Section 408 permission, you shall immediately notify the Corps of what you have found. The Corps will initiate any necessary Federal and State coordination to ensure continued compliance with the National Historic Preservation Act.

The proposed project is located in the floodway and, therefore, may be subject to flooding and/or flood damage. The Corps of Engineers strongly discourages development within known flood hazard areas. As a matter of public policy, we strongly recommend the Central Valley Flood Protection Board revise its policies and restrict development of habitable structures within flood hazard areas. Allowing a new structure within the floodway increases risk to both property and human lives.

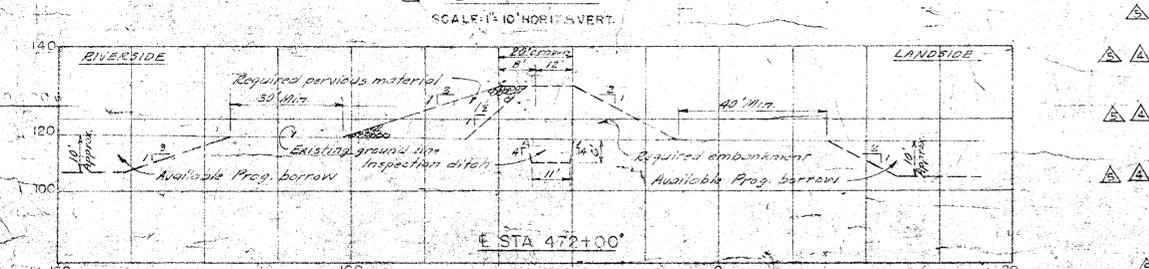
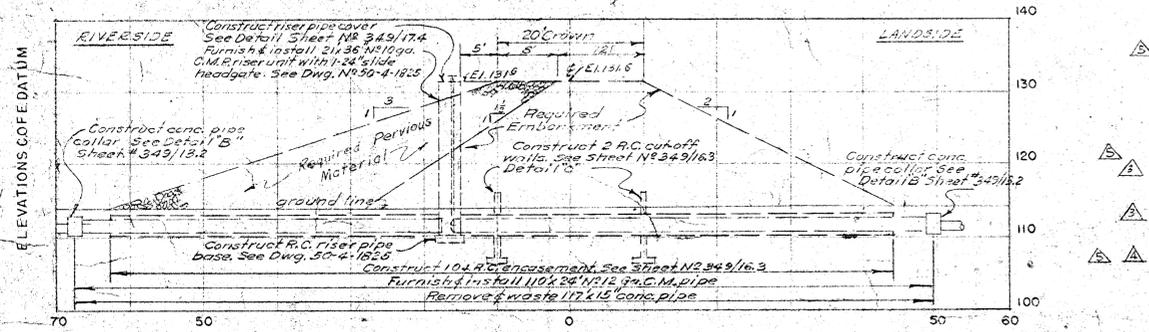
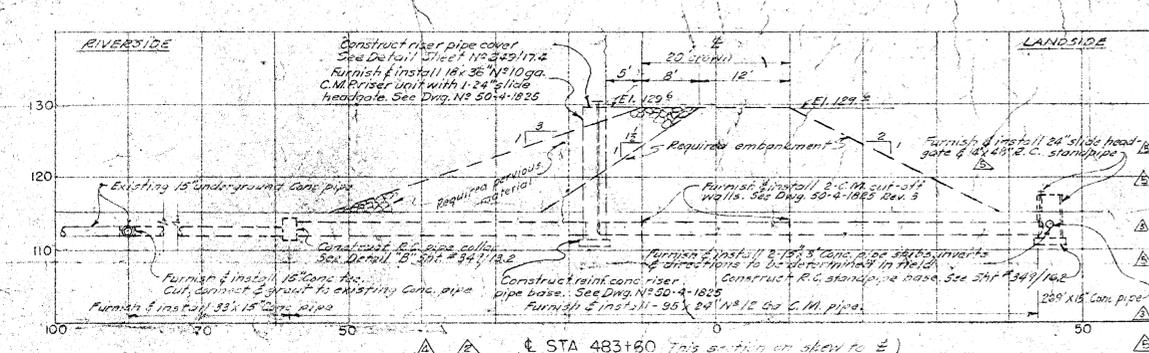
Based upon the information provided, no Section 10 or Section 404 permit is needed.

A copy of this letter is being furnished to Mr. Don Rasmussen, Chief, Flood Project Integrity and Inspection Branch, 3310 El Camino Avenue, Suite 200, Sacramento, CA 95821.

Sincerely,

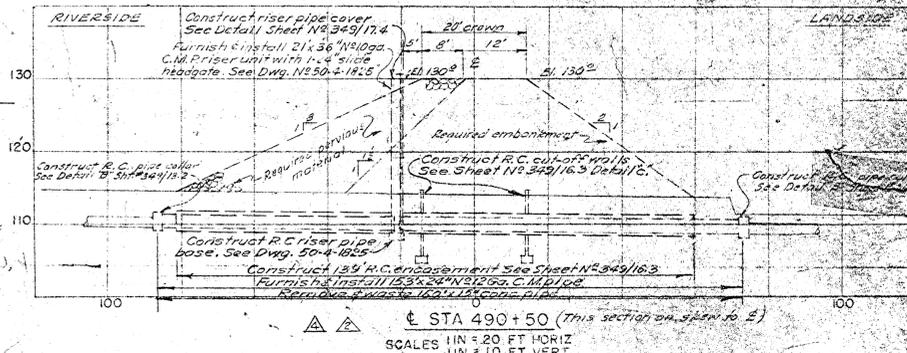


David G. Ray, P.E.  
Colonel, U.S. Army  
District Commander

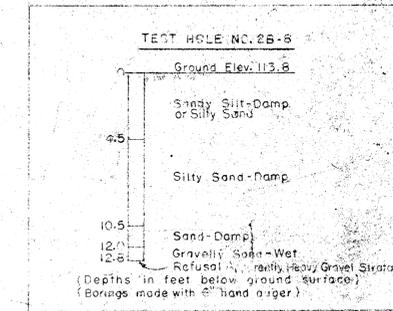


STRUCTURE NOTES

- Sta. 452+30 E - Construct H-Type road crossing surfaced, (14'x12'), 6% grade.
- Sta. 465+50 E - Constructed drainage facility thru levee in accordance with typical sheet 349/174. Furnish & install 2 1/2\"/>
- Sta. 479+50 E - Remove 400 lin ft cross fence.
- Sta. 480+50 E - Construct 18 wide modified H-type road crossing, surfaced (14'x16'), 6% grade. Furnish & install 24\"/>
- Sta. 494+50 E - Furnish & install 11 1/2\"/>
- Sta. 496+00 E - Construct 20 wide H-type road crossing, landside surfaced (14'x18'), 6% grade.
- Sta. 502+00 E - Constructed H-type road approach R.S. 6% grade, surfaced 4'x12'.
- Sta. 502+20 E - Remove, furnish and install U.G. irrigation line. See sheet #349/174.
- Sta. 508+70 E - Remove, furnish and install U.G. irrigation line. See detail this sheet.
- Sta. 505+50 E - Construct R.S-Type road approaches, L.S. and R.S. surfaced (14'x12'), 6% grade. Furnish & install 24\"/>
- Sta. 516+20 E - Construct S-Type road approach, landside, surfaced (14'x12'), 6% grade.
- Sta. 517+40 E - Remove, furnish and install U.G. irrigation line. See sheet #349/174.
- Sta. 519+40 E - Constructed S-Type road approaches, R.S. & L.S. 6% grade, surfaced 4'x12' L.S. only.
- Sta. 527+50 E - Construct S-Type road approach, riverside, 6% grade.
- Sta. 524+75 E - Construct S-Type road approach and filler, landside, 6% grade. See detail this sheet.
- Sta. 476+60 E - Furnish & install 11 1/2\"/>
- Sta. 459+00 E to 458+00 E - Construct beam fill L.S. See sheet No. 349/62.
- Sta. 483+60 E - Remove, furnish & install underground irrigation line. (See details this sheet)
- Sta. 483+85 E - Construct and shape concrete retaining wall R.S.
- Sta. 470+50 E - Remove, furnish & install underground irrigation line. (See details this sheet)
- Sta. 490+70 E - Furnish & install 11 1/2\"/>
- Sta. 490+30 E - Furnish & install 11 1/2\"/>
- Sta. 508+40 E - Furnish & install 11 1/2\"/>
- Sta. 524+75 E to 527+40 E - Remove road surfacing.
- Sta. 517+60 - Constructed drainage structure thru levee in accordance with typical sheet 349/174.
- Sta. 524+40 - Constructed H-type approach R.S. 6% grade.

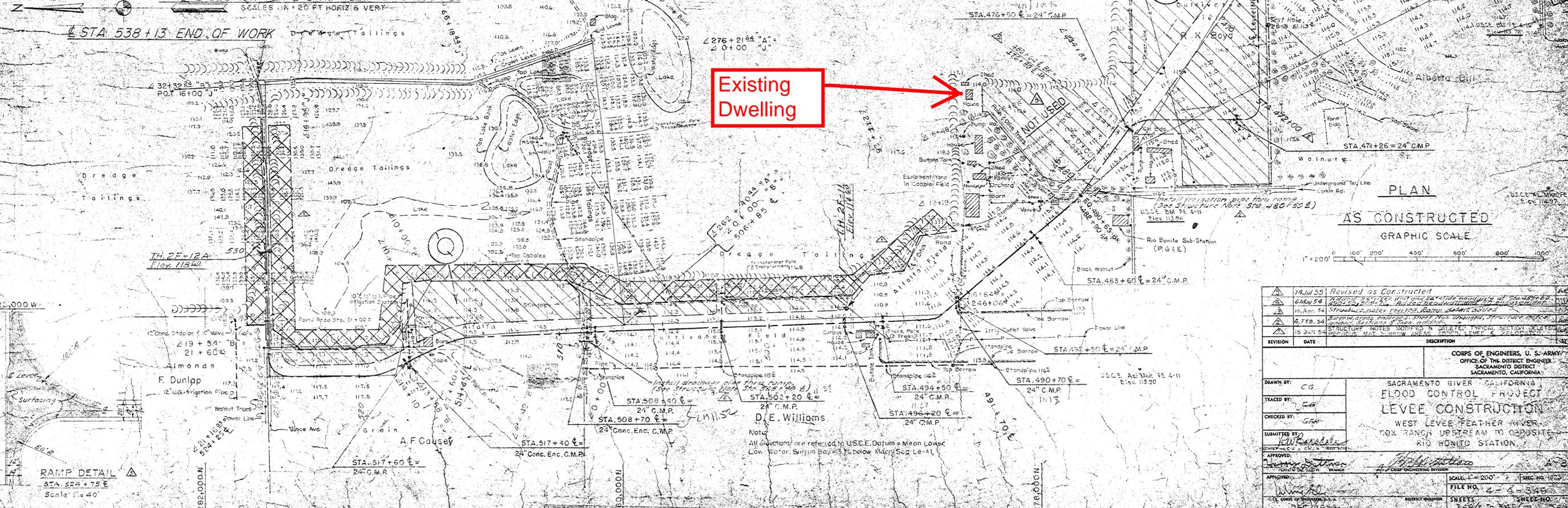


NOTE: For levee crown and road approach, See Sheet No. 349/172.



LOG OF BORINGS  
JULY 23, 1955

Existing Dwelling

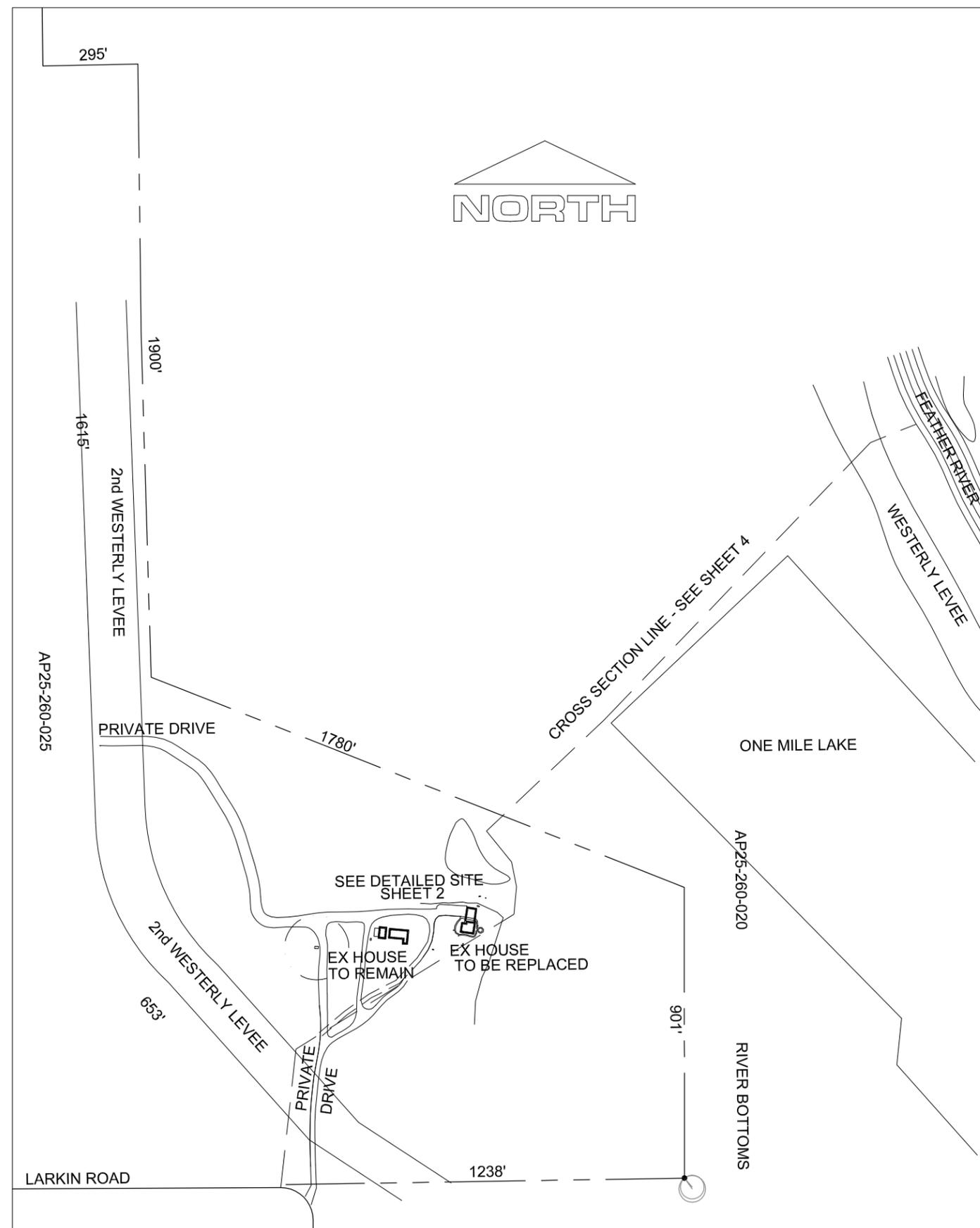


REVISION	DATE	DESCRIPTION	BY
1	14 Jul 55	Revised as Constructed	CG
2	6 May 54	Revised as Constructed	CG
3	13 Apr 54	Structural notes added	CG
4	9 Feb 54	Structural notes added	CG
5	15 Jun 54	Structural notes added	CG

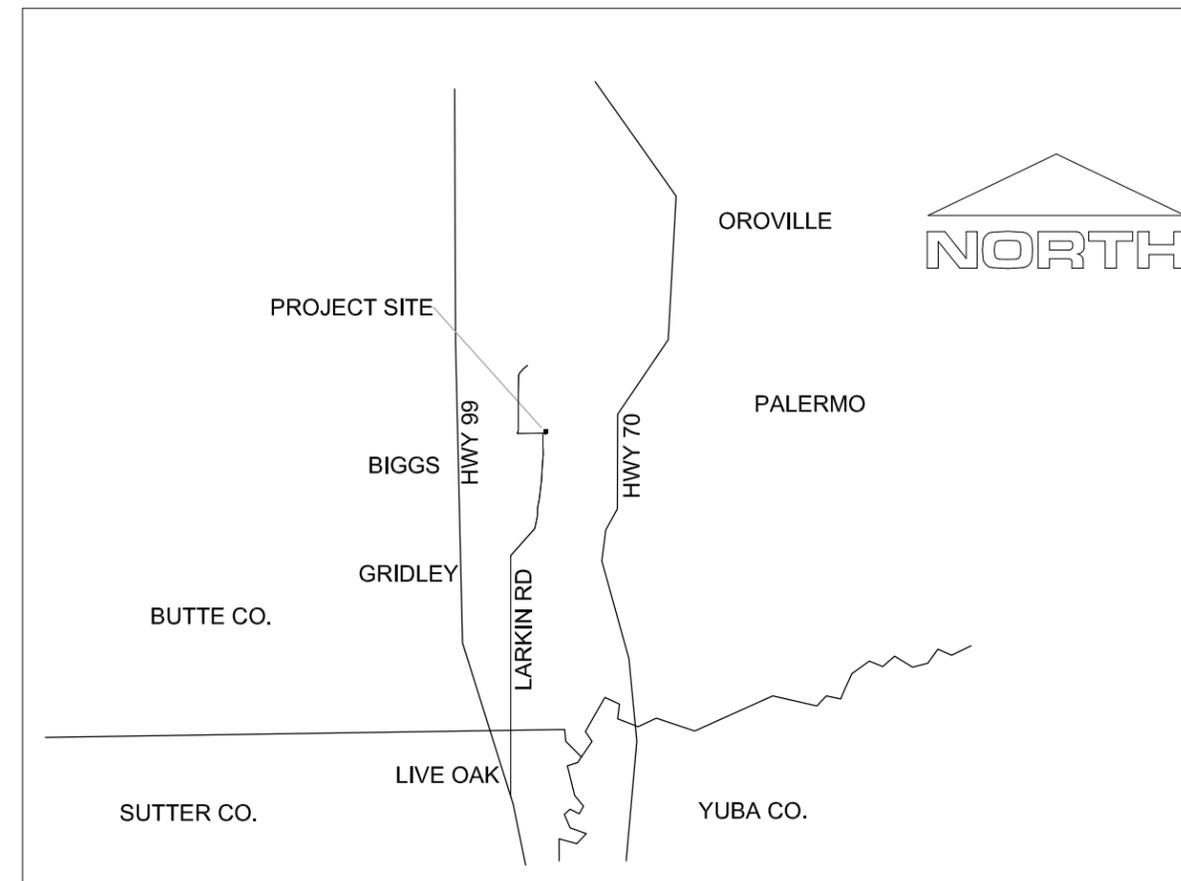
CORPS OF ENGINEERS, U. S. ARMY  
OFFICE OF THE DISTRICT ENGINEER  
SACRAMENTO DISTRICT  
SACRAMENTO, CALIFORNIA

SACRAMENTO RIVER - CALIFORNIA  
FLOOD CONTROL PROJECT  
LEVEE CONSTRUCTION  
WEST LEVEE FEATHER RIVER  
COX RANCH UPSTREAM TO OPPOSITE  
RIO BONITO STATION.

SCALE: 1" = 200'  
FILE NO. 4-6-345  
SHEETS 349/1 to 349/18  
DATE: DEC 1955



OVERALL SITE  
 FILE: 15-1057  
 SCALE: 1"=300'



VICINITY MAP  
 FILE: 15-1057  
 SCALE: NTS

EXISTING USE: AG & RESIDENTIAL  
 PROPOSED USE: AG & RESIDENTIAL

PROJECT LOCATION: 3288 LARKIN ROAD, BIGGS CA 95917  
 SITE ADDRESS: 3288 LARKIN ROAD, BIGGS CA 95917  
 ASSESSORS # : 25-290-021  
 GLO: SEC 9, T18N, R3E, MDB&M  
 39.430484 N LAT, 121.641659 W LONG

APPLICANT: DARIN WILLIAMS  
 3288 LARKIN ROAD  
 BIGGS, CA 95917

OWNER: DEANE & EDITH WILLIAMS TESTAMENTARY TRUST  
 DAVID WILLIAMS TRUSTEE  
 5900 CANYON VIEW DR.  
 PARADISE, CA 95965

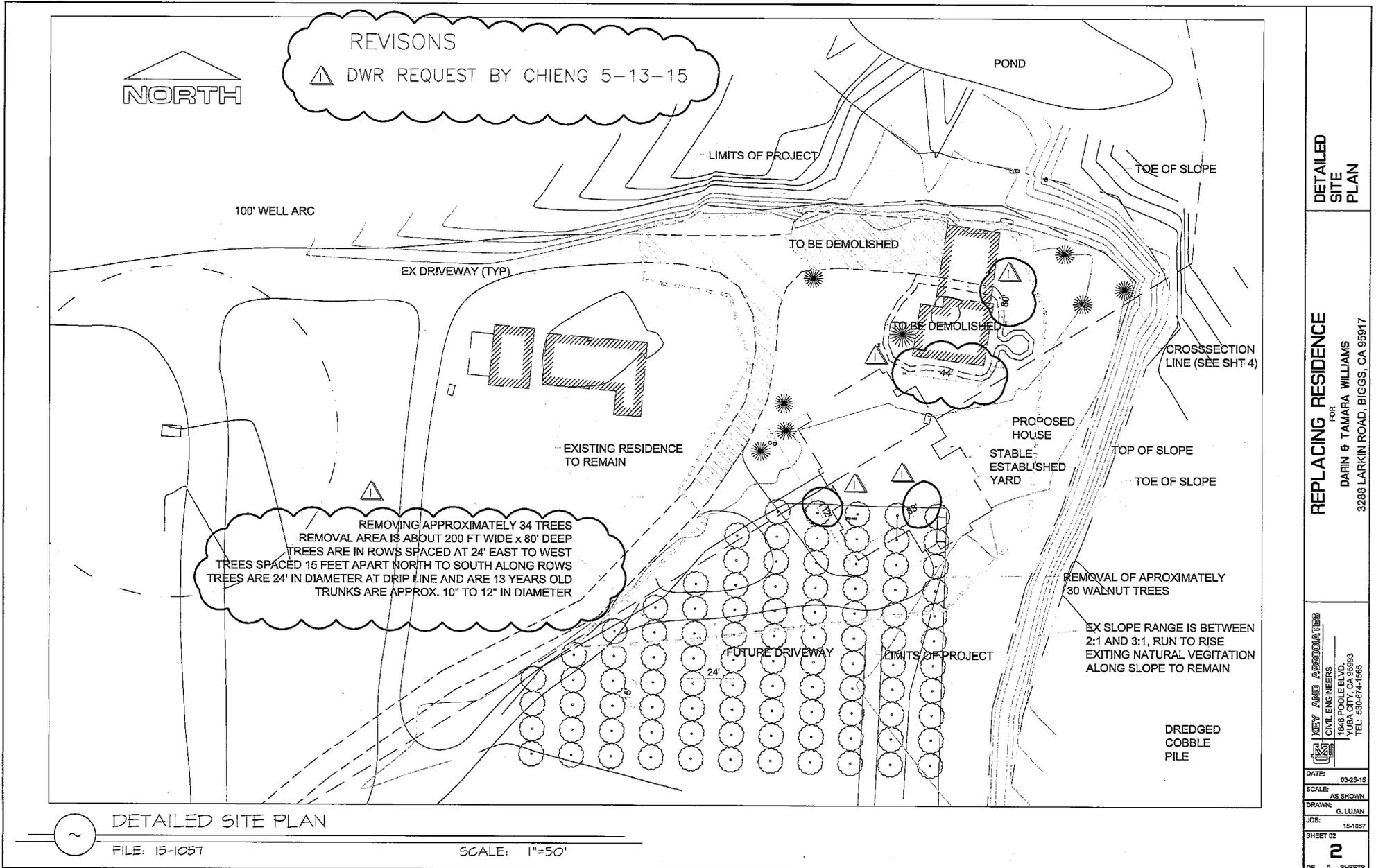
ENGINEER: ROGER KEY  
 KEY & ASSOCIATES CIVIL ENGINEERS  
 1646 POOLE BLVD  
 YUBA CITY, CA 95993

VICINITY MAP  
 OVERALL SITE  
 AND GENERAL INFO

REPLACING RESIDENCE  
 FOR  
 DARIN & TAMARA WILLIAMS  
 3288 LARKIN ROAD, BIGGS, CA 95917

KEY AND ASSOCIATES  
 CIVIL ENGINEERS  
 1646 POOLE BLVD.  
 YUBA CITY, CA 95993  
 TEL: 530-674-1565

DATE: 03-25-15  
 SCALE: AS SHOWN  
 DRAWN: G. LUJAN  
 JOB: 15-1057  
 SHEET 01  
 1  
 OF 5 SHEETS



DETAILED  
SITE  
PLAN

REPLACING RESIDENCE  
FOR  
DARIN & TAMARA WILLIAMS  
3288 LARKIN ROAD, BIGGS, CA 95917

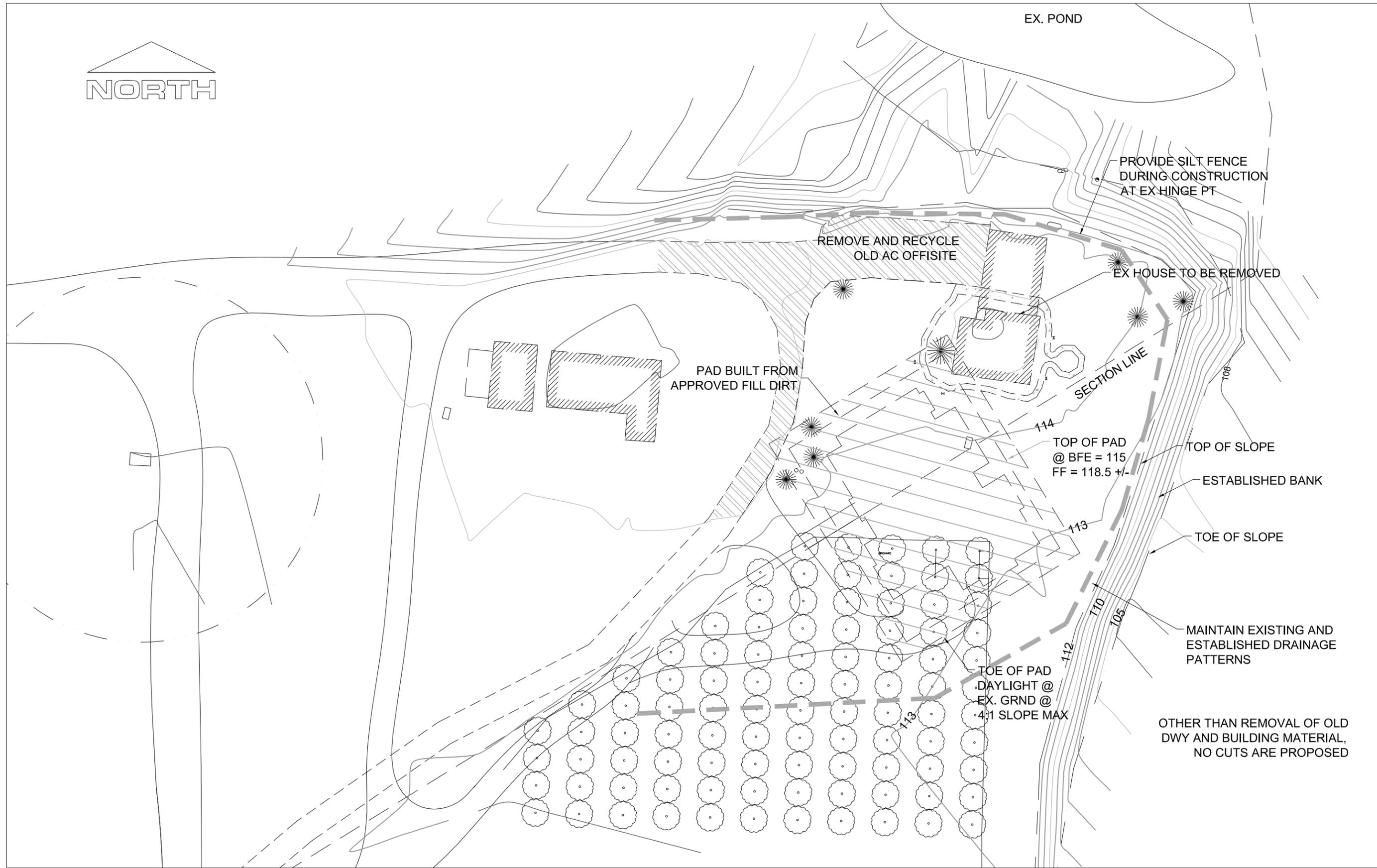
KEY AND ASSOCIATES  
CIVIL ENGINEERS  
1946 POOLE BLVD.  
YUBA CITY, CA 95993  
TEL: 530-974-1565

DATE: 03-25-15  
 SCALE: AS SHOWN  
 DRAWN: G. LUJAN  
 JOB: 15-1057  
 SHEET 02  
 OF 5 SHEETS

DETAILED SITE PLAN

FILE: 15-1057

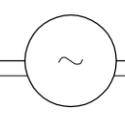
SCALE: 1"=50'

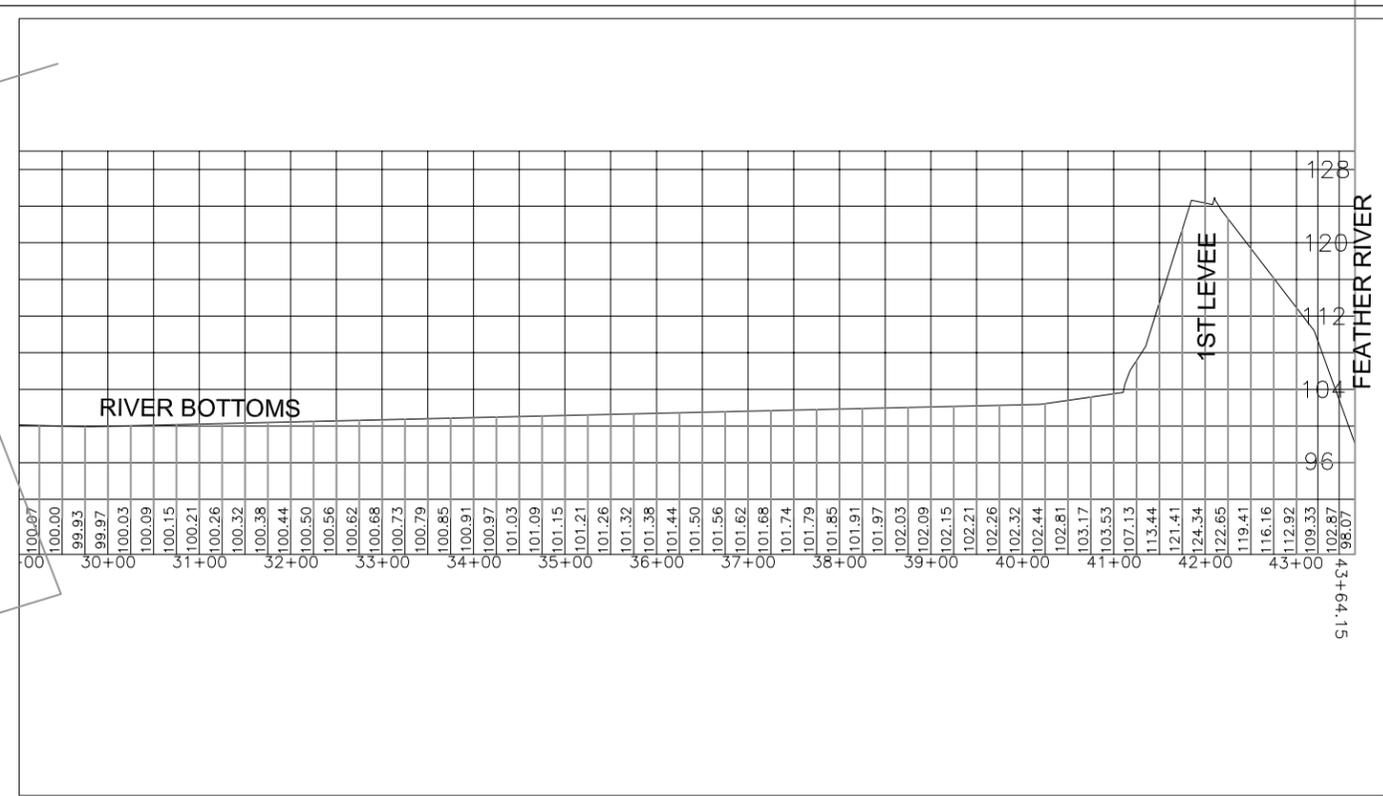
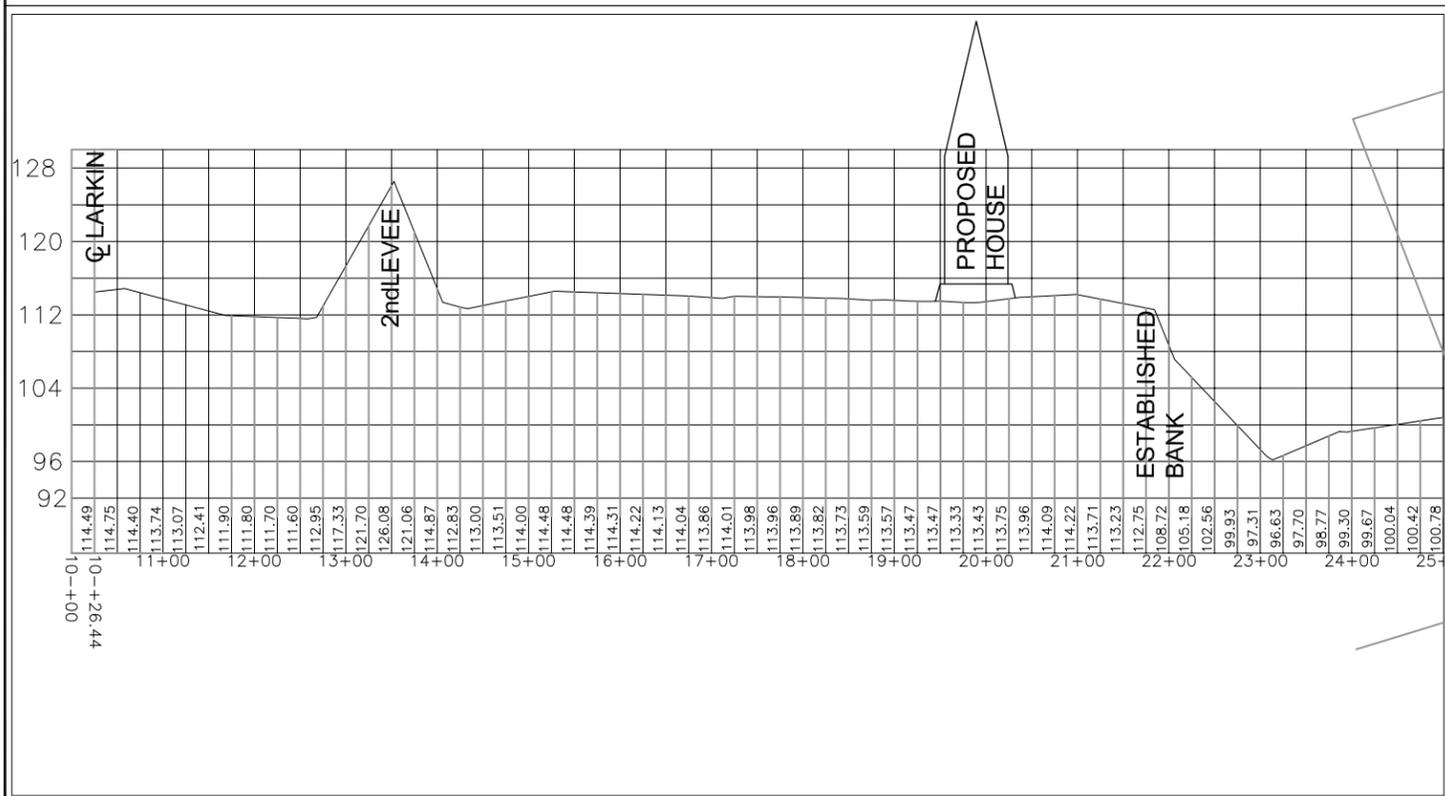
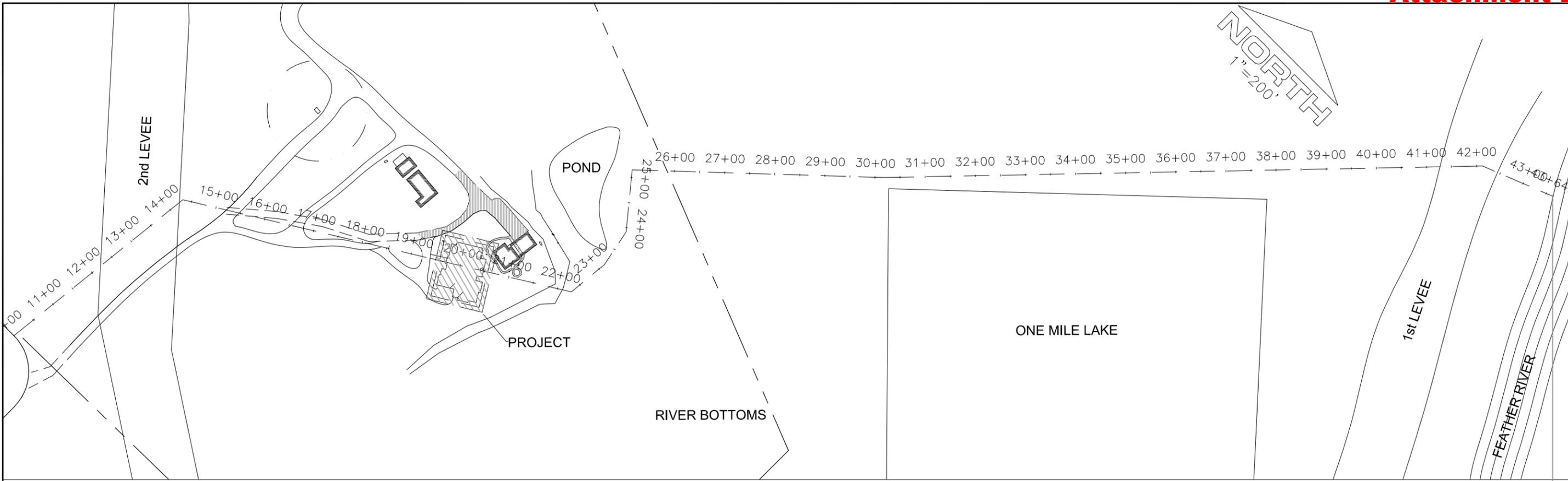


GRADING PLAN

FILE: 15-1057

SCALE: 1"=50'





CROSS SECTION PLAN  
FILE: 15-1057  
SCALE: 1"=50'

PLAN AND PROFILE

REPLACING RESIDENCE FOR  
DARIN & TAMARA WILLIAMS  
3288 LARKIN ROAD, BIGGS, CA 95917

KEY AND ASSOCIATES  
CIVIL ENGINEERS  
1646 POOLE BLVD.  
YUBA CITY, CA 95993  
TEL: 530-674-1565

DATE: 03-25-15  
SCALE: 1"=200'  
DRAWN: G. LUJAN  
JOB: 15-1057  
SHEET 04  
**4**  
OF 5 SHEETS

PROPOSED  
BUILDING  
ELEVATIONS

REPLACING RESIDENCE  
FOR  
DARIN & TAMARA WILLIAMS  
3288 LARKIN ROAD, BIGGS, CA 95917

KEY AND ASSOCIATES  
CIVIL ENGINEERS  
1646 POOLE BLVD.  
YUBA CITY, CA 95993  
TEL: 530-674-1565

DATE: 03-25-15

SCALE: 1"=200'

DRAWN: G. LUJAN

JOB: 15-1057

SHEET 05

5  
OF 5 SHEETS

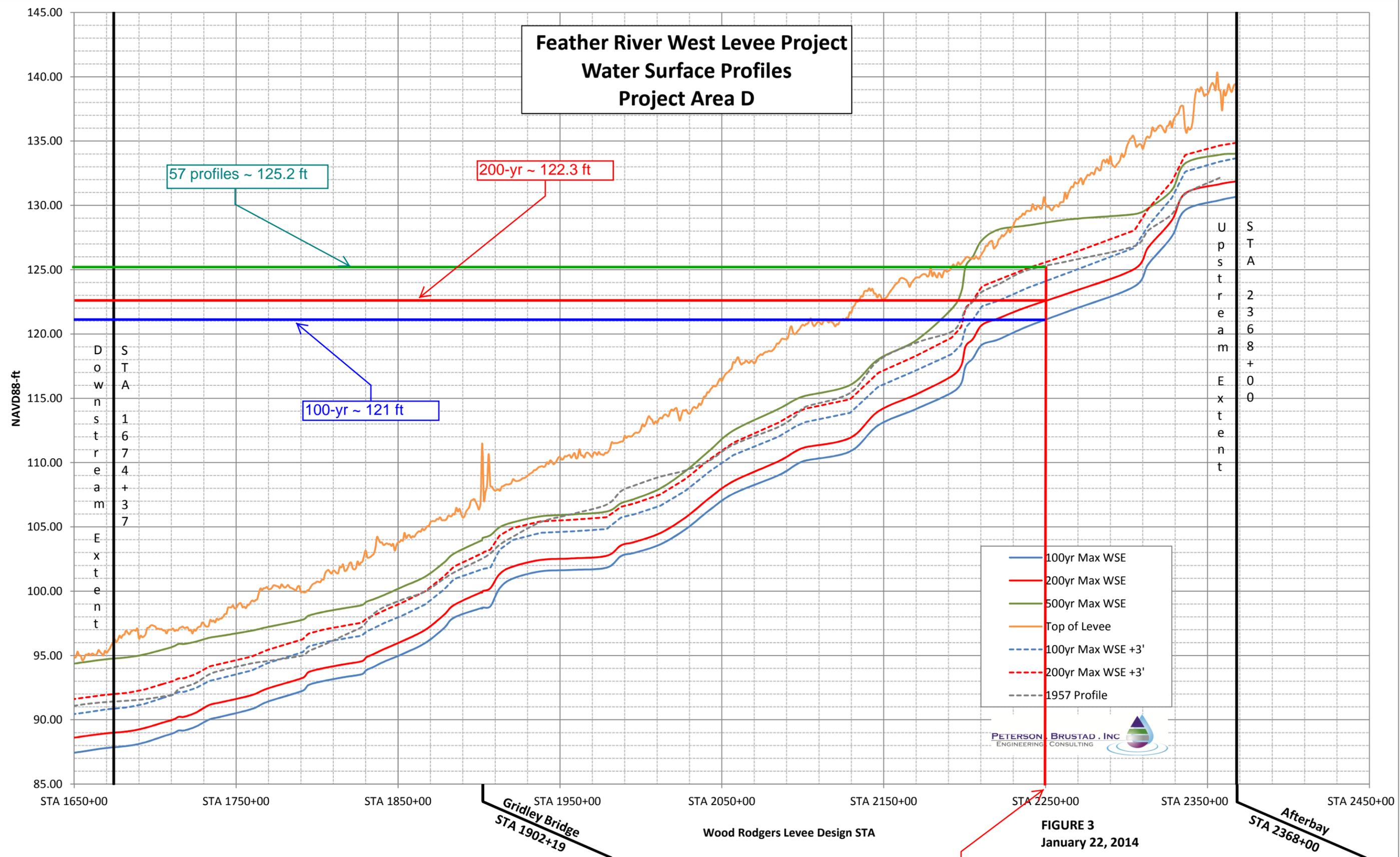


WEST ELEVATION (FRONT)



EAST ELEVATION (REAR)

### Feather River West Levee Project Water Surface Profiles Project Area D



Project Site  
Location

FIGURE 3  
January 22, 2014

LEFT BANK

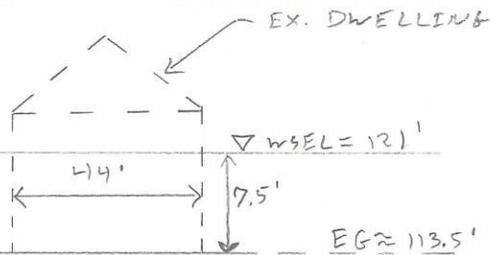
RIGHT BANK

Plan: 1997 LSR Feather\_Trib\_A 1 RS: 0.770 Profile: Max WS

Plan: 1997 LSR Feather 1 RS: 138.088 Profile: 02JAN1997 1200

E.G. Elev (ft)	120.21	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.00	Wt. n-Val.		0.044	
W.S. Elev (ft)	120.21	Reach Len. (ft)	216.17	216.17	216.17
Crit W.S. (ft)		Flow Area (sq ft)		101640.60	
E.G. Slope (ft/ft)	0.000004	Area (sq ft)		101640.60	
Q Total (cfs)	41377.73	Flow (cfs)		41377.73	
Top Width (ft)	6554.90	Top Width (ft)		6554.90	
Vel Total (ft/s)	0.41	Avg. Vel. (ft/s)		0.41	
Max Chl Dpth (ft)	19.81	Hydr. Depth (ft)		15.51	
Conv. Total (cfs)	21289450.0	Conv. (cfs)		21289450.0	
Length Wtd. (ft)	216.17	Wetted Per. (ft)		6580.14	
Min Ch EI (ft)	100.40	Shear (lb/sq ft)		0.00	
Alpha	1.00	Stream Power (lb/ft s)	8083.35	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)		1902.88	
C & E Loss (ft)		Cum SA (acres)		122.83	

E.G. Elev (ft)	121.69	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.72	Wt. n-Val.	0.070	0.050	0.065
W.S. Elev (ft)	120.97	Reach Len. (ft)	210.76	725.21	820.08
Crit W.S. (ft)		Flow Area (sq ft)	943.79	12919.72	703.12
E.G. Slope (ft/ft)	0.001162	Area (sq ft)	943.79	12919.72	38801.29
Q Total (cfs)	94943.05	Flow (cfs)	2928.47	89927.77	2086.80
Top Width (ft)	3421.80	Top Width (ft)	103.81	710.25	2607.75
Vel Total (ft/s)	6.52	Avg. Vel. (ft/s)	3.10	6.96	2.97
Max Chl Dpth (ft)	25.22	Hydr. Depth (ft)	9.09	18.19	7.57
Conv. Total (cfs)	2785632.0	Conv. (cfs)	85921.5	2638484.0	61226.8
Length Wtd. (ft)	675.97	Wetted Per. (ft)	106.28	717.20	94.58
Min Ch EI (ft)	95.75	Shear (lb/sq ft)	0.64	1.31	0.54
Alpha	1.09	Stream Power (lb/ft s)	11790.38	0.00	11623.69
Frctn Loss (ft)	0.80	Cum Volume (acre-ft)	18511.65	24895.20	12825.69
C & E Loss (ft)		Cum SA (acres)	4801.80	1196.13	1281.87



$$\begin{aligned} \text{TOTAL FLOW AREA} &= 943 + 12919 + 703 + 101,640 \\ &= 116,205 \text{ SF} \end{aligned}$$

$$\text{Ex. Dwelling Blockage} = 44 \text{ ft} (7.5 \text{ ft}) = 330 \text{ SF}$$

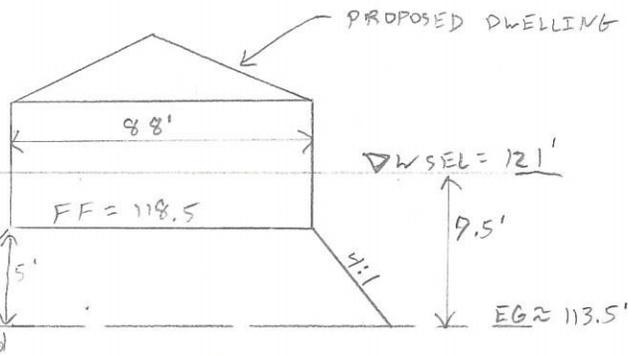
$$\text{Proposed Dwelling Blockage} = 2 \left( \frac{1}{2} \right) (20') (5') + 88 \text{ ft} (7.5 \text{ ft}) = 760 \text{ SF}$$

$$\text{Incremental change} = \text{Proposed} - \text{Ex.} = 760 \text{ SF} - 330 \text{ SF} = 430 \text{ SF}$$

$$\text{HYDRAULIC BLOCKAGE} = \frac{430 \text{ SF}}{116,205 \text{ SF}} \times 100\% = 0.37\%$$

$$= 0.4\% < 1\% \checkmark \text{ ok}$$

NTS



RECEIVED

DEC 01 2015

BY: \_\_\_\_\_

Darin and Tamara Williams  
3288 Larkin Road  
Biggs, CA 95917

RECEIVED

DEC 01 2015

BY: \_\_\_\_\_

December 1, 2015

Gary Lemon, Chief  
Permitting Section  
Central Valley Flood Protection Board  
3310 El Camino Ave, Suite # 151  
Sacramento, CA 95821

Via E-mail, First Class Mail and Hand Delivery

RE: Variance Request for Encroachment Permit Application No. T2015031

Dear Mr. Lemon,

We have reviewed and carefully considered Title 23, your letter dated June 3, 2015, and other resources regarding flooding on the Feather River and have concluded that the elevation required by the U.S. Army Corps of Engineers (USACE) is infeasible and not appropriate based upon our site's history and operational constraints. We currently live on the water side of the levee and we simply seek to replace our outdated and inefficient home on our fifth-generation family farm. Our proposed dwelling would be substantially safer than our existing home as it will comply better with current building codes, will be better anchored to its foundation, and will be built on a significantly higher building pad than the existing dwellings. We request a Variance to the Board's standard, to allow us to rebuild our existing home at our same, current location at a proposed elevation of 118.5 feet (NAVD 88).

**History At This Same Location**

Our existing home is a long-standing structure located within the levees in the floodway of the Feather River in Butte County, about a mile and a half south of the Thermalito Afterbay. The original 1870s ranch house was built at our current home site because it was the highest ground during floods on the then-unregulated Feather River. Our home was built before the levee system—the levees were built around us later in the 1950s. Despite the placement of the levees, this continues to be the best place for our farm buildings and our home.

Our family's personal history on the property has shown us that our existing buildings, farming headquarters, walnut processing facility, and millions of dollars of machinery and equipment are located at safe elevations as they have consistently remained above the floodwaters since the 1870s, even during extreme flood events that caused property damage and resulted in the loss of life further downstream. We and our family have lived through multiple flood events and have seen how our property can sustain flood waters and avoid damage to persons or property year in and year out from the 1870's up to the present day at this unique location.

Our existing residence was built at 114' elevation in the 1940s and another home about 100 yards away was built in the 1970s at 116' elevation. Neither home has ever been inundated, including during the 1955, 1964, 1983, 1986, and 1997 floods. We propose to build a replacement home with a finished floor elevation of 118.5 feet, which would be 4.5 feet above our existing home's elevation. The width of the designated floodway near our home is approximately 8,000 feet. With a floodway this wide, we are confident that elevating our home an additional 4.5 feet above our existing height will provide more

Gary Lemon  
December 1, 2015  
Page | 2

than ample protection against inundation in future floods, especially since our existing homes have never been inundated in over 140 years at their current, lower elevations at this exact same location.

Our home is located 2,000 feet away from the main river channel. Furthermore, a second inner levee prevents our property from any inundation in most flood events. In an extreme flood event, when the river backfills close to our property, the inner levee further delays the water's rise. By the time any water backfills around the inner levee on our ranch, farms and cities downriver are at severe risk of inundation and downstream levees are at risk of overtopping.

### **Elevation and River Flows**

According to email correspondence with Board Staff, our finished floor is requested to be at 127.8 (NAVD 88) to meet USACE standards. Board Staff has indicated this elevation is based upon the design floodway as identified by the 1957 Operations and Maintenance Manual of the California Department of Water Resources (DWR). As we all know, this is an obsolete basis by which to define the floodway since it predates the completion of the Oroville Dam and Lake Oroville by a decade. Oroville Dam now regulates the flow of the Feather River and is jointly controlled by DWR and the USACE.

The October 2013 Administrative Draft of the Feather River Regional Flood Management Plan (FRRFMP) notes that the USACE design flow is 210,000 cfs at our location (approximately Mile 57) on the Feather River. However, it goes on to note that the USACE is constrained by a "safe operational threshold of 180,000 cfs." Furthermore, the report characterizes the 100-year design flow above Honcut Creek as between 130,000 and 150,000 cfs.

The FRRFMP reports overtopping of the levee outside of Oroville during the 1997 flood and notes that the 1997 flood was "the largest in northern California since measured records began in 1906." According to information available at the California Data Exchange Center, during the 1997 flood river flows at the Gridley gauge peaked at 124,997 cfs. Flood waters did not inundate our homes at 114 ft during this extreme flood event in 1997 or in any other prior year. Clearly, a 127.8 finished floor elevation is unnecessary and excessive in our location.

### **Infeasibility and Inappropriateness**

Our proposal has a de minimus impact upon the floodway. Assuming ten feet of level ground around the perimeter of the house before beginning a 4:1 slope, our home would be built on about 3,000 cubic yards of fill at the 118.5 foot elevation, much of which could come from inside the levee at our ranch effectively offsetting any loss of flood plain and avoiding any adverse impact to the floodway. In stark contrast, the USACE's suggested 127.8-foot elevation would require a gargantuan and unsightly building pad comprised of 15,000 cubic yards of fill which would have to be trucked in from outside the levees and impede the floodway five (5) times as much as our proposed design, by requiring a 14-foot high building pad to reach the USACE's proposed elevation of 127.8 feet. There is simply no way we could get enough dirt from our property to build such a pad at the 127.8 foot elevation. That amount of fill simply does not exist making that idea completely infeasible. Furthermore, the cost of acquiring and trucking that estimated 15,000 cubic yards of fill to our location would be totally cost-prohibitive.

Further still, as stated above, the USACE's suggested 127.8-foot elevation pad would dramatically increase floodway impedance five-fold in direct contradiction to the USACE's and your own Board's floodway obstruction avoidance policies. For all these reasons, building at this proposed elevation is

Gary Lemon  
December 1, 2015  
Page | 3

completely infeasible (in cost and logistically) and is absolutely inappropriate as it militates in direct contradiction to your Board's own floodway policies.

**Our Family's Safety**

We are making this request for the safety of ourselves and our family. Our existing home is at greater risk of fire damage and flood inundation than our proposed replacement at our proposed higher 118.5 foot elevation. It is in the State's best interest to allow us to replace our current home because the new structure will better comply with current building, fire, and safety standards.

Our extensive on-site history is highly relevant and should be taken into consideration where we have proof that we avoided flood damage in every major flood event on record (1955, 1964, 1983, 1986, and 1997). Understanding our site-specific situation on the local landscape is absolutely essential in this case and we invite Board Members and Board Staff to come visit our property to personally observe and understand our unique location.

Please contact us by phone at (530) 321-8425 or via email at [tamaralw26@gmail.com](mailto:tamaralw26@gmail.com) to schedule a visit to our property. We look forward to discussing our proposal in greater detail as our Variance is reviewed by Board Staff and the Board. Thank you very much for your consideration of this request to build our improvements which will increase human safety and improve floodway flow passage over current conditions.

Sincerely,



Darin and Tamara Williams  
3288 Larkin Road  
Biggs, CA 95917

Enclosure

CC: Minh Chieng, Central Valley Flood Protection Board  
George Kammerer, Attorney at Law

**CENTRAL VALLEY FLOOD PROTECTION BOARD**

3310 El Camino Ave., Rm. 151  
SACRAMENTO, CA 95821  
(916) 574-0609 FAX: (916) 574-0682  
PERMITS: (916) 574-0685 FAX: (916) 574-0682



June 3, 2015

Dean & Edith Williams Trust  
3288 Larkin Road  
Biggs, California 95917

SUBJECT: Encroachment Permit Application No. T2015031

Dear Applicant:

Thank you for submitting an encroachment permit application with the Central Valley Flood Protection Board (CVFPB).

CVFPB staff has completed a preliminary review of your application and has determined it to be incomplete at this time. Please re-submit your encroachment permit application and include the following checked items with your new submittal:

- ✓ Maps, exhibits, plans and drawings depicting the proposed project.
  - Please revise plans to show a finished floor elevation be a minimum of 2-feet higher than the design water surface elevation per Title 23 Section 113 or submit a variance explaining why it is infeasible or not appropriate to abide by Title 23 Section 113 Standards and provide all supporting documentations.

Once CVFPB staff receives your re-submitted application, it will be reviewed once again for completeness. During this review, additional information may be requested from you in order for CVFPB staff to determine whether or not your permit application is complete.

If a response is not received within six (6) months from the date of this letter, your application will be administratively closed. Please be advised that failure to obtain a permit for your project may result in an enforcement action which may subject you to fines or other penalties per California Code of Regulations Title 23, Section 27.

Per our permitting procedures, once a permit application is deemed complete, the applicant is notified via letter from the Board. It is at this point the permitting process timeline begins.

If you have any questions regarding your encroachment permit application, please call Minh Chieng at (916) 574-2646 or e-mail at [Minh.Chieng@water.ca.gov](mailto:Minh.Chieng@water.ca.gov). For questions

concerning environmental documents, please contact Andrea Buckley of the Environmental Review Committee at (916) 574-0332.

You can access the CVFPB website at <http://www.cvfpb.ca.gov/>. Please resubmit your fully completed application with four additional copies.

Sincerely,

A handwritten signature in blue ink, appearing to read "Gary Lemon", with a long horizontal flourish extending to the right.

Gary Lemon, Chief  
Permitting Section  
Central Valley Flood Protection Board

T2015031