Executive Order (E.O.) 11988 Analysis

408 Permission (No. 19380)
Central Valley Flood Protection Board
for the
Tidewater Crossing Stormwater Outfall
San Joaquin County, CA

References

- Central Valley Flood Protection Board Application Permit 19380 dated April 24, 2019.
- Executive Order (EO) 11988 Analysis Phase 1 -Tidewater Crossing Master Development Plan Weber Slough Drainage Outfall and Rock Slope Protection Farmington Project Alteration (Attachment 1).
- Engineering Circular (EC) 1165-2-220, Policy and Procedural Guidance for Processing Requests to Alter U.S. Army Corps of Engineers Civil Works Projects Pursuant to 33 USC 408.
- Engineering Regulation (ER) 1165-2-26, Implementation of Executive Order 11988 on Floodplain Management.
- Water Resources Council, Floodplain Management Guidelines for Implementing E.O. 11988, 10 February 1978 (43 FR 6030).

Introduction

The Central Valley Flood Protection Board (CVFPB) has requested review under Section 14 of the Rivers and Harbors Act of 1899, 33 U.S.C. § 408 (Section 408) for Armoto Partners, LLC to alter the Farmington Project (which includes improvements to the Littlejohn Creek Channel and its tributaries), authorized by the Flood Control Act of 1944, Public Law No. 534, 78th Congress, Second Session. The proposed alteration includes construction of a stormwater outfall located on Weber Slough, southwest of Stockton Metropolitan Airport within San Joaquin County, CA.

EO 11988 requires USACE to provide leadership and take action to (1) avoid development in the base floodplain (1-in-100 annual event) unless such development is the only practicable alternative; (2) reduce the hazards and risk associated with floods; (3) minimize the effect of floods on human safety, health, and welfare; and (4) restore and preserve the natural and beneficial values of the base floodplain.

The Water Resources Council Floodplain Management Guidelines for implementation of EO 11988, as referenced in USACE's Engineer Regulations 1165-2-26, require an eight-step process that agencies are to carry out as part of their decision-making on projects that have potential impacts to or within the floodplain. The following sections discuss the 8 step analysis undertaken by USACE to comply with EO 11988.

Tidewater Crossing Stormwater Project Description

The proposed alteration includes construction of a stormwater outfall located on Weber Slough, southwest of Stockton Metropolitan Airport. A 24-inch diameter outfall pipe would be installed in the upper bank of the stream channel for conveying stormwater flows from a detention basin pump station on the adjacent property. The proposed action will place a 24" flared end section drainage outfall in Weber Slough with approximately 1,400 square feet of rock slope protection ("RSP") within the channel to protect against erosion and scour during discharges from the outfall. Outfall discharges are generated from a submersible pump station that is rated for a peak flow of 2,000gpm (4.5cfs). Approximately 78 cubic yards of soil would be excavated from the bed and banks of Weber Slough. Of the 78 cubic yards, 10 cubic yards would be below the ordinary high water mark for construction of the outfall structure. An equal amount of clean rock slope protection would be installed where soils were excavated. Soil excavated from the channel would be removed from the site or placed in adjacent uplands within the larger development area. Work in the riparian corridor would encompass approximately 0.03 acres with 0.004 acres below the ordinary high water mark.

The Tidewater Crossing Stormwater Outfall is a component (Phase I) of a larger 909.1 acre Tidewater Crossing Master Development Plan Project ("MDP Project"). The underlying MDP Project includes a General Plan Amendment, Rezoning, and MDP review by the Airport Land Use Commission (ALUC) for consistency with the Stockton Metropolitan Airport's (SMA) Airport Land Use Plan (ALUP), prezoning, Tentative Subdivision Map, annexation into the City of Stockton, Sphere of Influence Amendment, and Development Agreement for approximately 909.1 acres predominately in farmland and rural residential uses. The MDP Project includes 224.3 acres of Industrial, 94.1 acres of Medium Density Residential, 10.4 acres of High Density Residential, 265.3 acres of Low Density Residential, 16.6 acres of Retail/ Commercial, 35.3 acres of Park/Open Space, 62 acres of Slough/Easements, 19.4 acres of Elementary School and 8.0 acres of railroad corridor. The MDP Project is located within San Joaquin County near the southeast portion of the City of Stockton, CA. It is generally bounded by the Stockton Metropolitan Airport ("Airport") to the north, Highway 99 to the east, Union Pacific Railroad to the west and East French Camp Road to the south.

Scope of Review for this EO 11988 Analysis

Due to differences in the implementing policies for Section 408 and EO11988, the scopes of the two reviews differ. This section discusses the scopes of each review.

Scope of Section 408 Review – The scope of a Section 408 review is intended to reflect USACE jurisdiction and therefore focuses on proposed actions within the Federal project footprint and adjacent areas that are directly or indirectly affected by the alteration. Although the proposed stormwater outfall is a component of the larger 909.1 acre of the MDP Project, only the stormwater outfall would represent a direct alteration to the Federal project. Therefore, the scope of the Section 408 review and any

subsequent authorization is limited to construction and operation of the proposed stormwater outfall. This scope is consistent with the request #19380 by the Central Valley Flood Protection Board for review of the proposed action under Section 408.

Scope of EO 11988 Analysis – Compliance with EO 11988 is a required component of all USACE actions, including review and authorization of proposed alterations under Section 408. ER 1165-2-26 provides the general guidance and policy for USACE's implementation of EO 11988. EO 11988 has as an objective for avoidance, to the extent possible, of long-and short-term adverse impacts associated with the occupancy and modification of the base floodplain and the avoidance of direct and indirect support of development in the base floodplain wherever a practicable alternative exists. ER 1165-2-26 defines direct support of floodplain development as an action in the floodplain that encourages, allows, serves or otherwise likely induces additional floodplain development.

Based on information provided by the requester, the proposed stormwater outfall would only provide terminal stormwater discharge for an adjacent 52.2 acre site located south of Weber Slough. The 52.2 acre site is identified as Phase 1 of the 909.1-acre MDP Project. Phase 1 comprises 52.2 acres zoned for industrial uses and includes the offsite construction of a stormwater outfall structure in Weber Slough with rock slope protection plus the onsite construction of a stormwater detention basin.

As discussed above, USACE's action is limited to Section 408 review and authorization of the stormwater outfall; however, because the stormwater outfall directly serves, and is integral to, the development of the adjacent 52.2 acre site, the associated development will be included in the EO 11988 analysis as a component of the proposed action. In summary, the action under evaluation in this EO 11988 analysis is the proposed construction of the stormwater outfall and adjacent 52.2 acre site. The action, as defined, will serve as the basis for evaluation of alternatives and application of tests of practicability. The remaining components of the MDP Project would not be served by the stormwater outfall and are not subject to this EO 11988 analysis. Planning efforts for the stormwater outfall and 52.2 acre site are part of a single planning effort for the MDP Project; therefore, although the majority of the MDP Project is not subject to this analysis, discussion of the MDP Project is relevant in some cases. Any future consideration by USACE under Section 408 for implementation of other MDP Project components would require separate consideration under EO 11988 and the scope of that analysis would be commensurate with the USACE action and potential effect of proposed alterations to Federal Projects.

8 Step Analysis

1. Determine if the proposed action is in the base floodplain.

The proposed action is partially located within the Federal Emergency Management Agency's (FEMA) designated 100-year flood zone (base floodplain) as identified in the

effective Flood Insurance Maps (FIRMs) Panel Numbers 06077C0470F and 06077C0490F, effective date October 16, 2009 (Figure 1).

2. If the action is in the base floodplain, identify and evaluate practicable alternatives to the action or to location of the action in the base floodplain.

The Water Resources Council Floodplain Management Guidelines and ER 1165-2-26 define "practicable" as "capable of being done within existing constraints. The test of what is practicable depends upon the situation and includes consideration of the pertinent factors, such as environment, cost, and project objectives. Alternatives discussed below include the proposed action; alternative actions (other means which accomplish the same purpose as the proposed action); alternative siting (carrying out the proposed action outside the floodplain); and no action. Key considerations in the evaluation of alternatives are summarized below:

- Project Objectives – The purpose of the MDP Project is to specifically serve the City's projected growth areas in the southern portion of the City and to compliment the adjacent Airport industrial land uses. The southern portion of the City and adjacency to the Airport are fixed criteria. Key project objectives include:
  - Strengthening the City's Economy. The benefits of the proposed action include generating employment opportunities on both a short-term and a long-term basis, sales tax generated by project resident employees will strengthen the local economy and government, and will assist in offsetting the cost of governmental services both for the MDP Project area and for needs elsewhere in the City.
  - Strengthening Stockton Metropolitan Airport. The proposed action, located near the Stockton Metropolitan Airport, will stimulate commerce for the airport due to the intensive industrial component. Increases in business will occur consistent with the Airport Special Purpose Plan.
- Local Support – The MDP Project was approved by the City of Stockton in 2008. The proposed action is consistent with the proposed land use identified in the City of Stockton's Envision Stockton 2040 General Plan (adopted December 4, 2018). The plan includes provisions to comply with the Central Valley Flood Protection Plan and SB 5.
- Cost of Efforts to Date – The proposed action is part of the larger MDP Project, for which extensive planning efforts have been completed. Alternatives that would require reformulation must also consider the cost and effort of additional planning efforts.

Given these considerations and other relevant factors of practicability (ER 1165-2-26 Sec. 7), an alternative action would be considered practicable if it offers a clear advantage over the proposed action (i.e., meaningful reduction in environmental impacts, with a special focus on impacts related to development within the floodplain) while providing a comparable level of benefits (i.e., meeting project objectives).

a. Tidewater Crossing Stormwater Outfall (Proposed Action)

The proposed action includes installation of a stormwater management system to support development of the adjacent 52.2 acre site. The stormwater management system would include installation of a stormwater outfall structure in Weber Slough and stormwater detention basin. The stormwater outfall structure is a 24-inch diameter outfall pipe installed in the upper bank of Weber Slough to convey stormwater flows from an onsite detention basin. Approximately 1,400 square feet of rock slope protection (RSP) would be installed within the channel of Weber Slough to protect against erosion and scour during discharges from the outfall.

Outfall discharges would be generated from a submersible pump station that is rated for a peak flow of 2,000 gpm (4.5 cfs). Stormwater would be detained in the basin and discharged, at a rate that is less than the rate of naturally occurring runoff, only when the water level in Weber Slough is below the 100-year elevation. The stormwater detention basin will have a design capacity that meets the City of Stockton requirement for 150% of a 10-Year/48- Hour Storm and exceeds the compensatory storage required to accommodate flood water that will be displaced by building pads and other facilities to be constructed within the areas of the 52.2 acre site that are located within Special Flood Hazard Area (SFHA) Zone AO (1' Depth) shown in the effective FIRMs Panel Numbers 06077C0470F and 06077C0490F, effective date October 16, 2009.

b. No Action Alternative

Under the No Action Alternative no Federal Action would occur. The 52.2-acre Project site would remain in its current condition, namely agricultural/ fallow lands. Under this alternative, no site improvement activity or future development would occur.

Under the No Action alternative no short or long term impacts associated with construction or development would occur. Natural and beneficial floodplain values associated with undeveloped/ agricultural lands would be retained.

Under the No Action Alternative, the financial objectives of the City of Stockton and the community as approved through the MDP Project would not be realized. There would be no generation of employment opportunities in the industrial, commercial and construction sectors. There would be no increase the appraised value of the land and no increase in property taxes to assist funding the City's provision of general services. The financial objectives of the requester and other industrial users would also not be met.

While the No Action alternative would be environmentally preferable to the proposed action, the No Action alternative would not meet any project objectives and therefore is not a practicable alternative to the proposed action.

c. Non-Floodplain Alternative

A specific assessment of non-floodplain alternatives for the proposed action is not relevant due to the constraint that the proposed action must occur within the larger footprint of the MDP Project. Plan formulation and design efforts for the proposed action were conducted within the context of the larger MDP Project as a whole, rather than for specific project components (i.e. the stormwater outfall and 52.2 acre site). Therefore, for the purpose of evaluating non-floodplain alternatives, it is necessary to evaluate alternative locations for the stormwater outfall and 52.2 acre site within context of the MDP Project.

The MDP Project was sited as close to the Stockton Metropolitan Airport as possible to be able to minimize trips from the industrial uses to the airport, as the industrial uses are intended to enhance the economic viability of the airport. The location was selected because it is part of the City General Plan's projected growth areas next to the city and the existing airport. The MDP Project was formulated to be responsive to local objectives specific to the project location. Given these considerations, no other location in the City or County in proximity to the Stockton Metropolitan Airport would be anticipated to better meet the goals and purposes of the proposed action. Given that the Airport and other areas within the City are located within the base floodplain and that the project location was selected to meet the planning objectives in coordination with the City, specific consideration of alternative (non-floodplain) sites was not documented. The proposed location of the MDP Project, including the proposed stormwater outfall and 52.2 acre site, cannot be practicably be relocated outside of the base floodplain without comprehensive project redesign and planning.

Although relocation of the MDP Project to an area outside of the floodplain would not be practicable on the sole basis of required cost and effort to modify the proposed action, the EO 11988 analysis requires consideration of non-floodplain alternatives. Therefore, to meet the requirements of the EO 11988 analysis, below is an evaluation of conceptual non-floodplain alternatives at the scale of the MDP Project.

Non-Floodplain Alternative 1: Relocation of the MDP Project Area – Approximately 63% of the MDP Project area is located within a Special Flood Hazard Area, consisting of Zone A, Zone AE, and Zone AO, subject to inundation in the 1% annual chance flood. Under this alternative either the entire area or portions of the 909.1 acre MDP Project would be relocated to areas outside of the base floodplain. At minimum this alternative would involve relocating any components currently located within the floodplain, including the proposed stormwater outfall and 52.2 acre site. Due to the large percentage of the MDP Project located within the floodplain, partial relocation and complete relocation would likely have similar scales of impacts and for the purpose of this analysis have been combined into a single relocation alternative.

A review of FEMA FIRMs for the area surrounding the airport (~5 miles) indicate that similar areas (agricultural) that are located outside of the base floodplain are present; though it is noted that no areas immediately adjacent to the Airport are outside of the

base floodplain and in fact the Airport is located within the base floodplain. A specific assessment of the availability of these locations was not provided to USACE as part of the 408 Permission request; however, the presence of these areas within proximity to the airport provides a basis for evaluating a conceptual non-floodplain alternative.

Under this alternative, direct development within the floodplain would be minimized; however, it is likely that development associated with the MDP Project, especially the construction of supporting infrastructure, would likely serve as incentive for future infill development within any floodplain areas avoided by the MDP Project. Therefore, this alternative would not likely serve to completely avoid impacts or induced development within the floodplain.

The MDP Project was sited as close to the Stockton Metropolitan Airport as possible to be able to minimize trips from the industrial uses to the airport, as the industrial uses are intended to enhance the economic viability of the airport. Relocation of the entire MDP Project area would likely result in a reduction in the benefits or potentially a failure of the project to meet critical objectives. Implementation of this alternative would require major revisions to the requesters planning and development efforts to date. Planning efforts for the relocation would likely be substantial.

A comprehensive evaluation of the practicability of relocating the MDP Project footprint is beyond the scope of the Section 408 review and this EO 11988 analysis; however, given the assumed impacts of this alternative: to include substantial additional cost and effort associated with additional project planning and development, a reduction or failure to meet project objectives, uncertainty in effect on environmental impacts, and likelihood to induce additional development within the floodplain, relocation of the MDP Project is not a practicable alternative.

Non-Floodplain Alternative 2: Reduction of the MDP Project Area – Under this alternative, the overall footprint for the 909.1 acre MDP Project would be retained, but all components located within the base floodplain would be removed from the proposed development. Approximately 63% of the MDP Project area is located within a Special Flood Hazard Area, consisting of Zone A, Zone AE, and Zone AO, subject to inundation in the 1% annual chance flood. Under this alternative development would be restricted to several disconnected areas located outside of the base floodplain. Some development of supporting infrastructure would still be required within the base floodplain.

Under this alternative, direct development within the floodplain would be minimized; however, it is likely that development associated with the MDP Project, especially the construction of supporting infrastructure, would likely serve as incentive for future infill development within any floodplain areas avoided by the MDP Project. Therefore, this alternative would not likely serve to completely avoid impacts or induced development within the floodplain.

The reductions in project footprint would likely result in a reduction of overall adverse project impacts. Reductions in project footprint would also result in a reduction in the benefits or potentially a failure of the project to meet critical objectives. Implementation of this alternative would require major revisions to the requesters planning and development efforts to date, which may affect the overall economic viability of the MDP Project.

A comprehensive evaluation of the practicability of reducing the MDP Project footprint is beyond the scope of the Section 408 review and this EO 11988 analysis; however, the Reduction of MDP Project Area alternative would result in substantial additional cost and effort associated with additional project planning and development, w, a reduction or failure to meet project objectives, and likelihood to induce additional development within the floodplain, reduction of the MDP Project is not a practicable alternative.

d. Alternative Action Alternative

Alternative action alternatives are intended to evaluate other means which accomplish the same purpose as the proposed action. For the purpose of this analysis, development of the 52.2 acre site within the context of the MDP Project is a fixed project objective. Therefore, this analysis will focus on relevant components of the alternative that may result in different project impacts to the floodplain. The MDP Project planning efforts included an evaluation of 2 alternative stormwater management solutions, including construction of an onsite stormwater retention basin and consideration of an alternative location of the stormwater outfall.

Alternative Action Alternative 1: Stormwater Retention Basin – Under this alternative, a stormwater retention basin would be constructed onsite to meet the stormwater management needs of the 52.2 acre site through natural percolation of captured runoff into native soils.

A geotechnical analysis performed on existing soils at the basin site revealed high concentration of clays with poor infiltration rates up to a depth of approximately 25 feet below the existing ground surface. To compensate for the poor infiltration rates, the retention basin bottom surface area, and overall footprint, would need to be much larger than the proposed detention basin bottom and top areas to achieve full dewatering within the City of Stockton’s prescribed 48 hour requirement following the design storm.

This alternative would not present any meaningful reduction in project related impacts to the floodplain or risks associated with development within the floodplain as compared to the proposed action. Furthermore, the reduction of developable area within the 52.2 acre site would result in a reduction in proposed uses of the site.

The reductions in project footprint would likely result in a reduction of overall adverse project impacts. Reductions in project footprint would also result in a reduction in the benefits or potentially a failure of the project to meet critical objectives. Implementation

of this alternative would require major revisions to the requesters planning and development efforts to date, which may affect the overall economic viability of the MDP Project.

The Stormwater Retention Basin Alternative would result in fewer direct impacts to adjacent waterways and a reduction in associated environmental impacts; however, this alternative has technical limitations due to onsite geology and would require changes to the proposed design that would result in a substantial reduction in project benefits and therefore is not a practicable alternative.

Alternative Action Alternative 2: Stormwater Outfall in Littlejohn Creek – Under this alternative, the stormwater outfall servicing the 52.2 acre site would be located to discharge directly into Littlejohn Creek. Construction of an outfall in Littlejohn Creek would result in an increase for potential project effects to suitable habitat for special status species including Delta smelt, river lamprey, Kern Brook lamprey, Pacific lamprey, Central Valley steelhead, fall run/late-fall run Chinook salmon, and Sacramento splittail. This alternative would result in a direct modification to habitat within Littlejohn Creek (suitable habitat) as opposed to the proposed action which would restrict direct modifications to aquatic habitat to Weber Slough, which only flows into Littlejohn Creek at high flows.

The Stormwater Outfall in Littlejohn Creek Alternative would offer a comparable level of benefits to the proposed action; however, this alternative does not offer a clear advantage over the proposed action and therefore is not a practicable alternative.

3. If the action must be in the floodplain, advise the general public in the affected area and obtain their views and comments.

The general public was notified of the proposed stormwater outfall through public noticing associated with the development of the Environmental Impact Report (EIR) and Master Development Plan for the Tidewater Crossing MDP, which included the proposed stormwater outfall and 52.2 acre development. The general public had an opportunity to express their views during the EIR comment period. Public comments on the EIR were addressed independently from and prior to review of the proposed action by USACE.

Additional public noticing was conducted by USACE in accordance with EC 1165-2-220. USACE posted a 15-day public notice, with the comment period ending July 15th, 2019, to the Sacramento District's website and emailed a notification to potentially interested parties, advising interested parties of the proposed action and soliciting information necessary to inform USACE's evaluation and review. No comments were received.

4. Identify beneficial and adverse impacts due to the action and any expected losses of natural and beneficial floodplain values. Where actions proposed to be located outside the base floodplain will affect the base floodplain, impacts resulting from these actions should also be identified.

Beneficial Impacts – The proposed action is a component of the MDP Project, and while the stormwater outfall and 52.2 acre site do not serve to fulfil all MDP Project objectives, key anticipated benefits are summarized below:

- The project would generate employment opportunities in the industrial, commercial and construction sectors.
- The project would increase the appraised value of the land would increase property taxes that are expected to assist funding the City's provision of general services
- The project would provide opportunity to industrial users to construct, occupy and operate industrial uses.
- The project would protect and enhance the economic viability of the Stockton Metropolitan Airport.

Adverse Impacts – Analysis of the MDP Project, of which the project is a component, identified potential adverse impacts (for the entire MDP Project) to traffic and circulation, air quality (including climate change related to GHG emissions), and land use (including a loss of important agricultural lands). Adverse impacts associated with the proposed action are summarized below:

- Undeveloped agricultural lands will be committed to urban development.
- Air quality will be incrementally degraded. Project emissions will contribute towards the exceedance of ROG levels over the long term operation of the project (for the MDP Project as a whole). On a cumulative basis, construction will adversely affect fugitive dust levels and construction pollutants, and contribute to the non-attainment status of the County.
- Additional impermeable surfaces and increases in runoff will occur.
- New sources for potential surface water pollution will be introduced.
- Potential habitat will be lost with implementation of the project.
- Incremental increases in ambient noise levels will occur.
- Agricultural lands will be irretrievably lost
- Additional traffic will be generated by site land uses, and incremental increases in local and regional congestion will occur.
- Increased levels of public services will be required to serve the proposed action.
- Water supplies for consumption, sewage treatment, and other utility resources will be permanently committed to the project site.
- The current rural agricultural character of the site will be committed to industrial uses. Light effects will incrementally affect the night sky.
- There is potential for disturbing potentially unknown historic and prehistoric cultural resources through site development and occupation.

Expected losses of natural and beneficial floodplain values – The proposed action would result in loss of natural and beneficial floodplain values due to a permanent change in land use. Impacts related to a change in land use include, but are not limited to, loss of habitat or degradation of adjacent habitats, an increase in impermeable surfaces which alters natural hydrology and reduces groundwater recharge, and an increase in conflicts with incompatible adjacent land uses. The proposed action would also result in impacts to the natural and beneficial floodplain values due to construction related impacts, including, but not limited to potential degradation of water and air quality.

5. If the action is likely to induce development in the base floodplain, determine if a practicable non-floodplain alternative for the development exists.

The proposed action would result in development of a 52.2 acre site which is partially located within the base floodplain. Furthermore, construction of the stormwater outfall and development of the 52.2 site would also likely encourage additional development with the surrounding floodplain, including but not limited to the remaining components described under the MDP Project. The analysis in step 2 above demonstrates that a non-floodplain alternative is not practicable.

6. Determine viable methods to minimize any adverse impact of the action including any likely induced development for which there is no practicable alternative and methods to restore and preserve the natural and beneficial floodplain values. This should include reevaluation of the "No Action" alternative.

Construction of the stormwater outfall and development of the 52.2 acre site would be conducted in accordance with the EIR and master development plan prepared for the MDP Project. Those documents provide a comprehensive evaluation of project impacts and list of avoidance and minimization measures which apply broadly to the MDP Project and would be implemented during construction of the stormwater outfall and development of the 52.2 acre site as applicable. Below is a discussion of avoidance and minimization measures related to impacts specific to the proposed stormwater outfall and 52.2 acre site.

Impacts to stormwater runoff – Construction of the stormwater outfall is in itself a mitigation measure to address hydraulic and hydrologic impacts associated with the 52.2 acre site. The stormwater outfall would improve the hydraulic capacity of Weber Slough and Littlejohn Creek by detaining runoff from the 52.2 acre site during a major storm event until the peak flow (and resulting flood levels) have receded. This is achieved by restricting pumping from the detention basin until water surface elevations in Littlejohn Creek and Weber Slough (at the confluence) reach a set level that is well below peak flood levels. These pumping parameters and water surface levels have been set by the Flood Management Division of San Joaquin County Public Works.

Impacts to biological resources – As discussed in step 2 above, the stormwater outfall has been sited within Weber Slough to minimize impacts to suitable habitat for special status fish species. The project would also be conducted in accordance with the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan, which provides take coverage for listed species with potential to be impacted by the proposed action and provides off-site compensatory mitigation.

Best management practices will also be implemented to avoid or minimize impacts to biological resources, including, but not limited to the following:

- The work will be undertaken under dry or low-flow conditions to minimize potential for downstream sedimentation.
- Compaction of soil, use of water trucks, and re-seeding disturbed areas will be employed to minimize dust, erosion, and potential sedimentation.

Increases to risks associated with development and occupation of the floodplain – The proposed development within the 52.2 acre site would be located within FEMA designated Zone AO (1' Depth; base floodplain) and Zone X Shaded areas. As a mitigation measure the proposed building finished floor elevation(s) will be elevated by fill to 2 feet above the highest adjacent 100-year Zone AO water surface elevation per the City of Stockton Municipal Code Section 15.44.150(C)(1), which is more stringent than both the National Flood Insurance Program (NFIP) and ASCE 24, referenced in the 2019 California Building Code regulations.

Reconsideration of the No Action Alternative – The No action alternative would avoid project related impacts; however, the No Action alternative fails to meet project objectives and furthermore, the No Action alternative would result in financial losses to the requester and lost opportunities to the region; therefore, the No Action alternative is not practicable.

7. If the final determination is made that no practicable alternative exists to locating the action in the floodplain, advise the general public in the affected area of the findings.

Following completion of the Section 408 review, the EO 11988 final determination will be made available to the public on the Sacramento District Public noticing website.

8. Issue findings

USACE has prepared this EO 11988 analysis in support of a Section 408 Permission review of request #19380 submitted by the CVFPB. This analysis was conducted based on information provided by the CVPFB and representatives of Armoto Partners, LLC. The proposed action is sited within the floodplain as close to the Stockton Metropolitan Airport as possible to be able to minimize trips from the industrial uses to the airport, as the industrial uses are intended to enhance the economic viability of the airport. There is no other location in the City or County in proximity to the

Stockton Metropolitan Airport that would better meet the goals and purposes of the proposed action. Based on the analysis above there is no practicable alternative to the proposed action. The proposed action conforms to the City of Stockton's General Plan which includes provisions to comply with applicable State and local floodplain protection standards. In addition the proposed action incorporates avoidance and minimization measures to minimize the impacts of floods on human safety, health, and welfare, as well as impacts to the natural and beneficial values of the base floodplain.

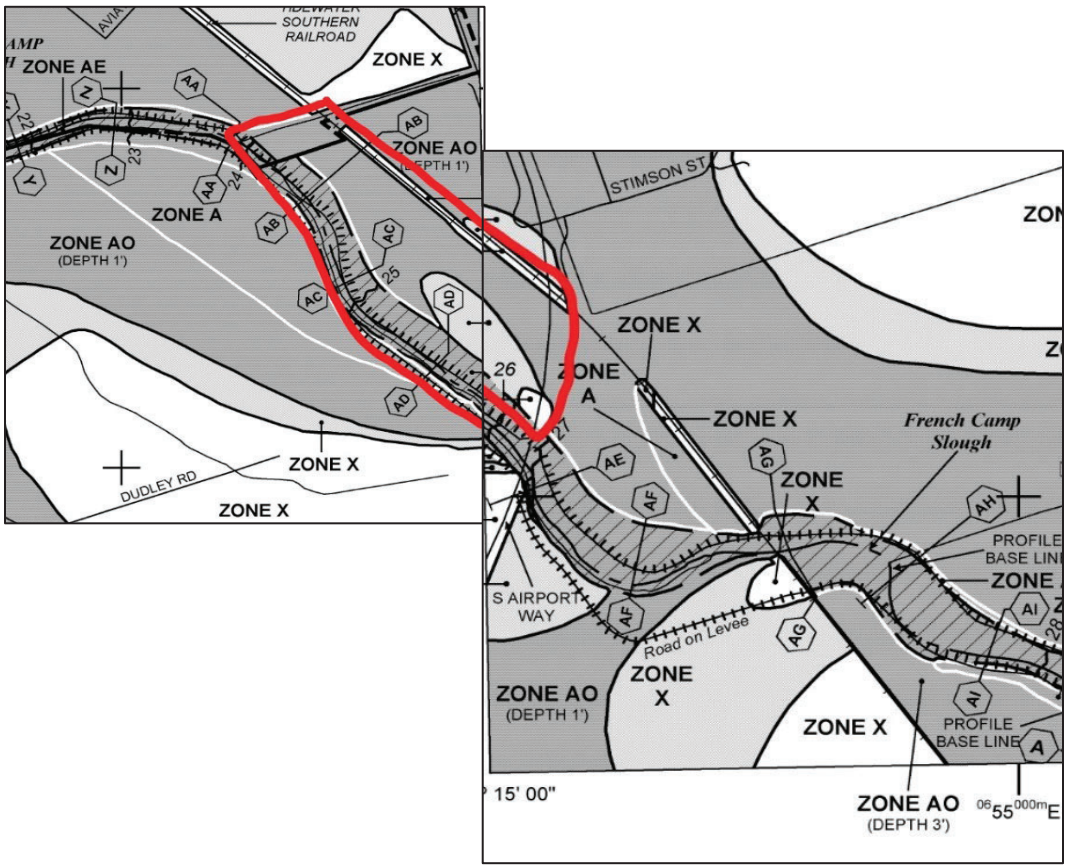


Figure 1. FEMA Flood Insurance Rate Map – Approximate Project Area (Excerpts from FIRM Panel 06077CD470F 10/16/2009 and FIRM Panel 06077CD490F 10/16/2009)

ABBOTT & KINDERMANN, INC.
ATTORNEYS AT LAW

EO 11988 ANALYSIS

Phase 1 -Tidewater Crossing Master Development Plan
Weber Slough Drainage Outfall and Rock Slope Protection
Farmington Project Alteration

The purpose of this analysis is to comprehensively address criteria required for issuance of a Section 408 Permission from the U.S. Army Corp of Engineers ("USACE") for the construction of a storm water outfall structure in Weber Slough for a 52.2 acre Project which is Phase 1 of the larger 909.1 acre Tidewater Crossing Master Development Plan Project ("MDP") approved by the City of Stockton in 2008 (Exhibit A). Phase 1 of the MDP is comprised of 52.2 acres of industrial development on a single parcel (the "Project") (Exhibit B). The Project requires an offsite outfall structure and associated rock slope protection in Weber Slough (Exhibit C). The offsite stormwater outfall structure is part of a stormwater management system that also includes an onsite stormwater detention basin for the 52.2-acre single parcel Project (Exhibit D). This Project is Phase 1 of the larger 909.1-acre MDP.

This Analysis is organized as follows:

I. Project Scope

In compliance with U.S.C. Title 33, Chapter 9, Subchapter 1, Section 408, Armoto Partners, LLC has requested permission through the Central Valley Flood Protection Board (non-federal sponsor of the federally authorized project) from the U.S. Army Corps of Engineers (USACE) to alter the Farmington Project, which includes Littlejohn Creek, an existing federal flood risk management project, authorized by the Flood Control Act of 1944. The proposed Project is located on Littlejohn Creek (Weber Slough), southwest of Stockton Metropolitan

Airport, 1.9 miles west of State Route 99, and 0.8 miles northeast of East French Camp Road, San Joaquin County, California (Exhibit A).

The proposed project is Phase 1 of an approved, phased 909.1-acre MDP (Exhibit B). Phase 1 comprises 52.2 acres zoned for industrial uses and includes the offsite construction of a stormwater outfall structure in Weber Slough with rock slope protection (Exhibit C) plus the onsite construction of a stormwater detention basin ("Project") (Exhibit D).

The underlying MDP included a General Plan Amendment, Rezoning, and MDP review by the Airport Land Use Commission (ALUC) for consistency with the Stockton Metropolitan Airport's (SMA) Airport Land Use Plan (ALUP), prezoning, Tentative Subdivision Map, annexation into the City of Stockton, Sphere of Influence Amendment, and Development Agreement for approximately 909.1 acres predominately in farmland and rural residential uses. The MDP includes 224.3 acres of Industrial, 94.1 acres of Medium Density Residential, 10.4 acres of High Density Residential, 265.3 acres of Low Density Residential, 16.6 acres of Retail/ Commercial, 35.3 acres of Park/Open Space, 62 acres of Slough/Easements, 19.4 acres of Elementary School and 8.0 acres of railroad corridor. The MDP is located within San Joaquin County near the southeast portion of the City of Stockton, California. It is generally bounded by the Stockton Metropolitan Airport ("Airport") to the north, Highway 99 to the east, Union Pacific Railroad to the west and East French Camp Road to the south.

Once again, the Project herein is Phase 1 of the MDP and is 52.2 acres comprising an industrial zoned parcel and stormwater facilities associated therewith. The Project provides approximately one quarter or 25% of the total industrial uses approved for the MDP.

II. Project Purposes

Project Objectives and Goals

The Project objectives are to implement Phase 1 of the MDP which includes 52.2 acres of industrial development and installation of an independent stormwater discharge system and flood management for Phase 1 of the MDP. The MDP's objectives applicable to the Project include:

- Providing a jobs/housing relationship, which can result in the reduction of commuting distances between residential concentrations and employment opportunities.
- Minimizing land use and operational conflicts between existing and planned residential uses and proposed industrial uses.
- Creating a community designed to enhance social interaction.
- Minimizing impacts to existing neighborhoods.
- Recognizing the historic/cultural resources within the community of French Camp, and minimize conflicts with incompatible neighboring uses.
- Protecting and enhancing the economic viability of the Stockton Metropolitan Airport.

The primary intent and purpose of the MDP are to create the framework for the development and provide design solutions for residential uses to interface with the proposed industrial, commercial and recreational uses within the MDP, while remaining consistent with the policies, general land uses and programs of the City's General Plan. These purposes apply to the Project as well.

Industrial Design Principles

The Project purposes include the application of the specific industrial design principles. Industrial land use design principles applicable to the Project include:

1. Achieving a high level of quality development by ensuring that development fits within the context of its surroundings, does not negatively impact adjacent uses, provides superior architectural detailing, incorporates high quality, durable materials, includes significant landscape improvements, and achieves an efficient/aesthetic arrangement of onsite facilities.

2. Ensuring that the arrangement of on-site facilities (e.g., buildings, parking areas, accessory uses, etc.) are planned appropriately to establish an efficient, safe and aesthetically pleasing site layout.

3. Ensuring that development is aesthetically pleasing especially when viewed from adjacent properties and arterial and collector streets.

4. Providing safe, convenient, and efficient vehicular access, circulation, parking, loading and maneuvering.

5. Maintaining a high level of architectural design through appropriate detailing, use of quality/durable materials, and the avoidance of blank, uninteresting roof designs consistent with the overall design of the building and surrounding quality development.

6. Encouraging the extensive use of landscaping in order to achieve visually pleasing development, provide a unified development scheme through a cohesive arrangement of landscape and hardscape elements, provide pedestrian comfort, and enhance views of the site by screening potentially unattractive elements (e.g., trash enclosures, parking areas, etc.).

7. Maintaining a high level of public safety through appropriate design of spaces and amenities, including pedestrian areas, parking/loading areas, landscaping and lighting.

Stormwater Management and Flood Protection

The Project purposes include the provision of stormwater management and flood protection. The onsite stormwater management and flood protection for the MDP is designed to sheet drain all surface water flows into catch basins. Prior to discharging the treated storm water into French Camp Slough, the collected storm water is diverted to a variety of water quality elements designed to accommodate and treat local watershed areas. Each water quality element utilizes best management practices to protect water quality, which may include filtration, detention of runoff to allow collection of sediments, incorporating sumps into storm drainage basins, installation of grease collectors at locations, and routing of storm drainage flows through grassy swales to aid filtration of the water. The MDP area also includes a 93.1-acre regional flood control detention basin designed to detain floodwaters from French Camp Slough. The flood control basin is supported by off-site levee enhancements which channel flood waters to the regional basin.

Similarly, the Project stormwater management and flood protection for the 52.2-acre site entails providing an offsite outfall structure installed in the upper bank of Weber Slough, plus an onsite stormwater detention basin. Installation of the structure includes the placement of a 24-inch flared end section drainage outfall in Weber Slough with approximately 1,400 square feet of rock slope protection (RSP) within the channel to protect against erosion and scour during discharges from the outfall. Outfall discharges would be generated from a submersible pump that is rated for a peak flow of 2,000 gpm (4.5 cfs). Domenichelli & Associate's report titled "Tidewater Crossing Phase 1 Hydraulic Study of Weber Slough", dated April 23, 2019 demonstrates that the outfall features and the associated peak flows, do not negatively impact 100-year water surfaces and flows in Weber Slough. Outfall water levels will be monitored, and the pump station controlled so that no pumping will occur during extreme water levels in Weber Slough. In addition, the hydraulic study mentioned above shows that the relatively small footprint of the outfall with the RSP placed flush to the existing channel slope surface, does not measurably increase water surface elevation or change flow velocities.

Implementation of the Project ensures that stormwater will be detained in the basin and discharged at a rate that is less than the rate of naturally occurring runoff, only when the water level in Weber Slough is below the 100-year elevation. The stormwater detention basin will have a design capacity that meets the City of Stockton requirement for 150% of a 10 Year / 48 Hour Storm and exceeds the compensatory storage required to accommodate flood water that will be displaced by building pads and other facilities to be constructed within the areas of the Site that are located within Special Flood Hazard Area (SFHA) Zone AO (1' Depth) shown in the effective Flood Insurance Maps (FIRMs) Panel Numbers 06077C0470F and 06077C0490F, effective date October 16, 2009 (Exhibit E). Based on the anticipated design capacity of the basin, construction of the stormwater outfall structure to discharge stormwater from the basin to facilitate development of the Site that is partially within the 100-year floodplain will not have any adverse impact on the floodplain.

The outfall would only serve the 52.2-acre Project Site located south of Weber Slough (between French Camp Slough and the railroad tracks) and the South Airport Way public right-of-way along the Phase 1 public street frontage, which are a part of the MDP (Exhibit F). The USACE actions would cover the outfall structure, which is the only Project component located within waters of the United States and within the federal flood risk management project. A 24-inch diameter outfall pipe would be installed in the upper bank of the stream channel for conveying storm water flows from the detention basin pump station of the Approved Project on the adjacent property. The proposed project will place a 24" flared end section drainage outfall in Weber Slough with approximately 1,400 square feet of rock slope protection ("RSP") within the channel to protect against erosion and scour during discharges from the outfall. Outfall discharges are generated from a submersible pump station that is rated for a peak flow of 2,000gpm (4.5cfs). Approximately 78 cubic yards of soil would be excavated from the bed and banks of Weber Slough. Of the 78 cubic yards, 10 cubic yards would be below the ordinary high water mark for construction of the outfall structure. An equal amount of clean rock slope protection would be installed where soils were excavated. Soil excavated from the channel would be removed from the site or placed in adjacent uplands within the larger development area. Work in the riparian corridor would encompass approximately 0.03 acres with 0.004 acres below the ordinary high water mark.

Domenichelli & Associates' report titled "Tidewater Crossing Phase 1 Hydraulic Study of Weber Slough", dated April 23, 2019 demonstrates that the outfall features and the associated peak flows, do not negatively impact 100-year water surfaces and flows in Weber Slough. This report was submitted to the USACE on April 24, 2019. Outfall water levels will be monitored, and the pump station controlled so that no pumping will occur during extreme water levels in Weber Slough. In addition, the hydraulic study mentioned above shows that the relatively small footprint of the outfall with the RSP placed flush to the existing channel slope surface, does not measurably increase water surface elevation or change flow velocities. The Project will not interfere with the integrity or hydraulic capacity of the flood risk management project; easement access; or maintenance, inspection, and instead provides flood fighting procedures, and improves the hydraulic capacity of Weber Slough and French Camp Slough by detaining runoff from the 52.2 acre site during a major storm event until the peak flow (and resulting flood levels) have receded. This is achieved by restricting pumping from the detention basin when water surface elevations in French Camp and Weber Slough (at the confluence) reach a set level that is well below peak flood levels. These pumping parameters and water surface levels have been set by the Flood Management Division of San Joaquin County Public Works. Regarding access for flood fighting, maintenance and inspection, the Project does not change access to French Camp Slough or Weber Slough and will maintain the required setbacks per USACE and CVFCB requirements.

Regional Flood Control System

A regional flood control system is part of the MDP, designed to protect the proposed project uses from potential flooding hazards. As a result of the relationship of the project/applicant holdings to adjacent non-applicant parcels, the flood protection requirements

were expanded to reduce flood hazards for an area larger than defined by the MDP site such that flood protection would be enhanced for the MDP areas as well as for adjacent properties downstream of the MDP site. The proposed Phase 1 detention basin will receive stormwater runoff from the single 52.2-acre site and the adjacent South Airport Way public right-of-way. The detention basin is an integral component to reducing the post-project peak discharge rate into the Weber Slough relative to the pre-project peak discharge rate for storm intensities up to 150% of the 10 year / 48 hour storm event. The post-project discharge reduction is achieved through stormwater runoff attenuation within the detention basin and this flow reduction will benefit properties downstream of the MDP area, the Phase 1 area, and will slightly benefit the remainder of MDP areas, thus the absence of the outfall and detention basin may negatively affect the MDP area and downstream properties. The Project will provide terminal stormwater discharge for the single 52.2-acre parcel and the South Airport Way public right-of-way along the single parcel's street frontage as part of the larger regional flood control system for the MDP of which it is a part. The Project therefore benefits the regional flood control system.

Mitigation Measure Compliance Objectives

The Project is one component of the stormwater and flood control plans to be implemented for the MDP that will prevent flooding from occurring on-site (Mitigation Measures FC-1a-e). As noted above, the Project will provide this mitigation for Phase 1; the 52.2-acre industrial project, which is a component of the MDP and provides approximately 25% of all of the industrial uses approved under the MDP.

Financial Objectives

The MDP will generate employment opportunities in the industrial, commercial and construction sectors. It will significantly increase the appraised value of the land and the increase in property taxes will assist funding the City's provision of general services, including the services necessary to serve the MDP. Approval of the Project is necessary as industrial users are anxious to seek permits to construct, occupy and operate industrial uses at Phase 1 as approved under the MDP. The applicant and City seek the immediate generation of employment opportunities to be presented by the industrial uses, and seeks enhanced land appraisal values and increase in property taxes associated with the implementation of the MDP, commencing with the Project which is Phase 1 of the MDP.

III. Identification of Alternatives

The alternatives considered are as follows:

a. The Proposed Action (Preferred Alternative);
b. No Action Alternative;
c. Non-Floodplain Alternative; and
d. Alternative Action Alternative.

a. The Proposed Action (Preferred Alternative)

The 52.2-acre Project site is Phase 1 of the 909.1-acre MDP and is a standalone industrial use element of the MDP. The total the MDP area is approved for 224 acres of light industrial and warehouse development and therefore, this Project constitutes one quarter or 25% of the total industrial development approved under the MDP. The Project is regulated by the MDP and the design guidelines for development in this 52.2-acre site are identified at page 3 above under "Industrial Design Principles".

The Project is adjacent to Weber Slough and as set forth above, the offsite storm water outfall structure in Weber Slough plus the onsite stormwater detention basin are mitigation obligations of the MDP, approved by the City of Stockton in 2008. The offsite outfall structure is a 24-inch diameter outfall pipe installed in the upper bank of the stream channel to convey storm water flows from an onsite detention basin. Rock slope protection will be installed in Weber Slough as well. These are the necessary flood control elements associated with the 52.2-acre Project.

b. No Action Alternative

The No Action Alternative would retain the 52.2-acre Project site in its current condition, namely agricultural and fallow lands. With this alternative, no further site improvement activity would occur. No development would occur, and the current County General Plan land-use zoning designations would remain in place. Without the proposed Project, the stormwater management and flood protection for the 52.2-acre site will not occur. These features include an offsite outfall structure installed in the upper bank of Weber Slough, plus an onsite stormwater detention basin. Installation of the structure includes the placement of a 24-inch flared end section drainage outfall in Weber Slough with approximately 1,400 square feet of rock slope protection (RSP) within the channel to protect against erosion and scour during discharges from the outfall. These specific measures are but one piece of the overall the storm water management and flood protection mitigation measures required part of the MDP. Without the Project, they would not be installed as anticipated in the MDP. The proposed Phase 1 detention basin is an essential improvement for reducing the post-project peak discharge rate into the Weber Slough relative to the pre-project discharge rate for storm intensities up to 150% of the 10 year / 48 hour storm event. With the no action alternative, the existing peak discharge rates prevail and would exceed the mitigated post-project peak discharge rates afforded by the proposed detention basin. The post-project flow reduction will benefit properties downstream of the MDP area, the Phase 1 area, and will slightly benefit the remainder of MDP areas, thus the absence of the outfall and detention basin may negatively affect the MDP area and downstream properties.

Under the No Action Alternative, the financial objectives of the City and the community as approved through the MDP would not be realized. There would be no generation of employment opportunities in the industrial, commercial and construction sectors. There would be no increase the appraised value of the land and no increase in property taxes to assist funding the

City's provision of general services, including the services necessary to serve the MDP. The financial objectives of the applicant and other industrial users would also not be met. Those anxious to seek permits to construct, occupy and operate industrial uses at Phase 1 as approved under the MDP would not be able to develop the 52.2-acre Project site.

c. Non-Floodplain Alternative

A non-floodplain alternative would move the entire MDP to another location outside of the considerably sized floodplain. Approximately 63% of the MDP area is located within a Special Flood Hazard Area, consisting of Zone A, Zone AE, and Zone AO, subject to inundation in the 1% annual chance flood. There are no practicable non-floodplain alternatives for the MDP.

The purpose of the approved MDP is to specifically serve the City's projected growth areas in the southern portion of the City and to compliment the adjacent Airport industrial land uses. The southern portion of the City and adjacency to the Airport are fixed criteria. In terms of local and regional setting, the MDP area is located within San Joaquin County near the southeast portion of the City. The MDP site is generally bounded by the Airport to the north, Highway 99 to the east, Union Pacific Railroad to the west and East French Camp Road to the south.

The City continues to experience population growth and the associated need for additional housing and employment near existing urbanized areas. The MDP offers a range of housing densities, including low, medium, and high density residential, parks and industrial and commercial land uses. The MDP site is located immediately south of the City's boundary and the City's General Plan designates the land for Village and industrial uses, consistent with what the MDP offers. The MDP represents a logical expansion of City limits to the South

The MDP area is characterized by flat, featureless landforms notwithstanding the hydrological feature associated with French Camp Slough. The MDP includes the construction of major flood control improvements to the MDP site, including the construction of a regional detention basin and levee enhancements. Properties in the MDP vicinity will benefit by the flood control improvements.

The MDP reflects land uses that are responsive to the demands of the known market while complying with the policies and programs of the current General Plan and the General Plan Update of the City. These southern growth areas, including the Project 52.2-acre site, are located in the floodplain. The MDP location was selected because it is part of the City General Plan's projected growth areas next to the city and the existing airport. The MDP meets regional development goals and the City's approved General Plan growth patterns.

The MDP integrates the existing airport with industrial and warehouse development within the northeast portion of the plan area, and it includes a variety of distinct housing types and lot sizes at different housing densities separate from industrial land uses, and provides a commercial retail element to serve the community as well as the residents who reside in South

Stockton. The Project site itself is located in the northeast portion of the MDP to be as close to the Stockton Metropolitan Airport as possible to be able to minimize trips from the industrial uses to the airport, as the industrial uses are intended to enhance the economic viability of the airport.

Consequently, there are no practicable non-floodplain alternatives for the MDP because it is situated exactly where the growth is planned and necessary and is adjacent to the fixed features: the City and the Airport.

As to Phase 1 of the MDP, which is the 52.2-acre Project, it is intended to fulfill approximately 25% of the total industrial development of the MDP and it will provide an important piece of the stormwater management and flood protection tapestry for the MDP. The proposed Phase 1 detention basin and outfall structure will fully satisfy stormwater management and flood protection requirements for the Phase 1 area. Once again, the 52.2 acre Project site itself is located in the northeast portion of the MDP to be as close to the Stockton Metropolitan Airport as possible to be able to minimize trips from the industrial uses to the airport, as the industrial uses are intended to enhance the economic viability of the airport. The Project must develop in this location on this site. Therefore, there are no non-floodplain alternatives for the Project.

d. Alternative Action Alternative

A storm water retention basin management alternative to the EIR Alternative 3 (Mixed Use / Agriculture) would also mitigate impacts to the floodplain within the Phase 1 Project area. A retention basin would not require an outfall into the Weber Slough because stored stormwater would slowly percolate into native soils instead. A retention basin was initially a desirable design option, however geotechnical analysis performed on existing soils at the basin site revealed high concentration of clays with poor infiltration rates up to a depth of approximately 25 feet below the existing ground surface. To compensate for the poor infiltration rates, the retention basin bottom surface area, and overall footprint, would need to be significantly larger than the proposed detention basin bottom and top areas to achieve full dewatering within the City of Stockton's prescribed 48 hour requirement following the design storm.

The reduction of Phase 1 developable area would not require alternative land uses, although all uses of the site (industrial, commercial, residential, and agricultural) would be more limited. In the context of the broader MDP, the additional land area required by regional retention basins located throughout the MDP would restrict all MDP developed uses.

IV. Evaluation of the Alternatives

The identified alternatives are evaluated herein below for practicability, specifically, whether the property for the alternative is available and the Approved Project would be capable of being constructed at that location when considering cost, existing technology, and logistics, in light of the overall Approved Project purposes (40 C.F.R. § 230.20(a)(2)). Specific criteria

include the following: availability, approved Project purpose, logistics, costs, impacts to aquatic ecosystems and other environmental impacts. As evaluated below, the conclusion is that there are no practicable alternatives to the proposed Project

a. The Proposed Action (Preferred Alternative)

The Proposed Action is also the Preferred Alternative. As Phase 1, it is inextricably linked to the comprehensively planned and approved MDP, a project designated for that exact location adjacent to existing City development, including the Airport. It fulfills long term planning goals and opportunities for the proper growth of the community and it has carefully balanced local and regional developmental goals for a proper growth pattern adjacent to existing land uses, while taking into consideration, all environmental, social and economic benefits to the community of the MDP.

Project (Preferred Alternative) Benefits

The Project will fulfill the following objectives:

- Providing a jobs/housing relationship, that will result in the reduction of commuting distances between residential concentrations and employment opportunities.
- Minimizing land use and operational conflicts between existing and planned residential uses and proposed industrial uses.
- Minimizing impacts to existing neighborhoods.
- Protecting and enhancing the economic viability of the Stockton Metropolitan Airport.

Project benefits include but are not limited to the following:

Stormwater Management and Flood Protection. The Project provides the Weber Slough outfall stormwater management and flood protection for the 52.2-acre site and the South Airport Way public right-of-way along the Project's frontage (Exhibit F). These features include an offsite outfall structure installed in the upper bank of Weber Slough (Exhibit C), plus an onsite stormwater detention basin (Exhibit D). Installation of the structure includes the placement of a 24-inch flared end section drainage outfall in Weber Slough with approximately 1,400 square feet of rock slope protection (RSP) within the channel to protect against erosion and scour during discharges from the outfall. Discharging to Weber Slough is the preferred alternative to discharging elsewhere (i.e. to French Camp Slough). Weber Slough has a low water crossing with a 36-inch RCP culvert at its downstream location before it connects to French Camp Slough (Exhibit G). The low water crossing, and culvert help detain and meter flows from Weber Slough to French Camp Slough. To reiterate, the location of the discharge is a mitigation measure set forth in the MDP (FC-1 a-e) Without the proposed Project, the stormwater management and flood protection for the 52.2-acre site will not occur**.** The proposed Phase 1 detention basin is an essential improvement for reducing the post-project peak discharge rate into

the Weber Slough relative to the pre-project discharge rate for storm intensities up to 150% of the 10 year / 48 hour storm event. Without the detention basin, the existing peak discharge rates prevail and would exceed the mitigated post-project peak discharge rates afforded by the proposed detention basin. The post-project flow reduction will benefit properties downstream of the MDP area, the Phase 1 area, and will slightly benefit the remainder of MDP areas, thus the absence of the outfall and detention basin may negatively affect the MDP area and downstream properties.

Economic and Employment Opportunities. Under the Project, the financial objectives of the City and the community will be realized. The Project, providing 25% of the total industrial uses for the MDP, will generate employment opportunities in the industrial, commercial and construction sectors. There will be an increase in the appraised value of the land and an increase in property taxes to assist funding the City's provision of general services, including the services necessary to serve the MDP. The financial objectives of the applicant and other industrial users will be met with the Project which will develop the 52.2-acre Project site into industrial uses.

Reduction in Vehicle Miles Traveled. The Project provides industrial development that would encourage walking and bicycling to nearby employment uses for the approved residential components of the MDP. This in turn reduces the amount of greenhouse gas emissions in the region. There is no other location that could provide this type of mixed-use concept in proximity to the Airport and the City.

Strengthening the City's Economy. The benefits of approving the Approved Project include generating employment opportunities on both a short-term and a long-term basis, sales tax generated by project resident employees will strengthen the local economy and government, and will assist in offsetting the cost of governmental services both for the Approved Project and for needs elsewhere in the City.

Strengthen Stockton Metropolitan Airport. The proposed Project, located near the Stockton Metropolitan Airport, will stimulate commerce for the airport due to the intensive industrial component. Increase business will occur consistent with the Airport Special Purpose Plan. There is no other location in the City or County in proximity to the Stockton Metropolitan Airport that can serve the goals and purposes of the Approved Project.

Conclusion

In conclusion, there are important environmental, land use, economic, technical and logistical factors that support the Project and its necessity to efficiently implement the MDP, rendering any alternative impracticable. The Project's benefits outweigh any impacts to the floodplain.

b. No Action Alternative

The No Action Alternative would retain the 52.2-acre Project site in its current condition, namely agricultural and fallow lands. With this alternative, no further site improvement activity would occur. No development would occur, and the current County General Plan land-use zoning designations would remain in place.

Impacts of the No Action Alternative

The No Action Alternative would maintain the status quo on the Project site. Current agricultural uses would persist. Potential impacts to water quality and wind erosion would continue unabated under this alternative. Potential impacts of the Project are avoided with the No Project Alternative due to the absence of development. With the proposed Project, impacts for most environmental topic areas are either less than significant or can be adequately mitigated. For these areas, the No Action Alternative often presents further reduced levels of impact.

As to biological resources, the No Action Alternative would retain the undeveloped, agricultural conditions which possess only limited biological habitat value. Although existing conditions on the Project site provide only limited habitat value, special-status species such as Swainson's hawk have the potential to or are known to occur on the Project site. The Project would eliminate habitat for these species, but the payment of fees for the loss of habitat and compliance with applicable laws and permitting requirements would reduce these impacts to less than significant levels. While it is true that impacts to biological resources will be less than significant with the proposed Project, the No Action Alternative will not eliminate potential habitat, and as a result, there would be no impacts to biological resources under the No Action Alternative.

With regard to cultural resources, the No Action Alternative would retain the undeveloped, agricultural conditions that are present at the Project site. Therefore, this alternative will not have effects on known or unknown historic resources, prehistoric resources, or unique geological features. Development of the Project has the potential for less than significant impacts resulting from disturbance to both known and unknown cultural resources. Field surveys of the Project site revealed the presence of several prehistoric artifacts. Project site development could result in less than significant impacts to these potentially important cultural resources or to previously undiscovered cultural or paleontological resources. Despite the absence of impacts to some resources identified above under the No Action Alternative, these impacts would be eliminated.

Similarly, as with all other impact categories, including traffic, air quality, water resources and water quality impacts would be avoided with the No Action Alternative.

Nonetheless, as explained below, the benefits of the Project clearly outweigh any of the potential less than significant impacts to resources identified above.

Project Benefits

The Project will fulfill the following objectives:

- Providing a jobs/housing relationship, which can result in the reduction of commuting distances between residential concentrations and employment opportunities.
- Minimizing land use and operational conflicts between existing and planned residential uses and proposed industrial uses.
- Minimizing impacts to existing neighborhoods.
- Protecting and enhancing the economic viability of the Stockton Metropolitan Airport.

Other Project benefits include but are not limited to the following:

Stormwater Management and Flood Protection. The Project provides the Weber Slough outfall stormwater management and flood protection for the 52.2-acre site and the South Airport Way public right-of-way along the Project's frontage (Exhibit F). These features include an offsite outfall structure installed in the upper bank of Weber Slough (Exhibit C), plus an onsite stormwater detention basin (Exhibit D). Installation of the structure includes the placement of a 24-inch flared end section drainage outfall in Weber Slough with approximately 1,400 square feet of rock slope protection (RSP) within the channel to protect against erosion and scour during discharges from the outfall. Discharging to Weber Slough is the preferred alternative to discharging elsewhere (i.e. to French Camp Slough) Weber Slough has a low water crossing with a 36-inch RCP culvert at its downstream location before it connects to French Camp Slough (Exhibit G). The low water crossing, and culvert help detain and meter flows from Weber Slough to French Camp Slough. To reiterate, the location of the discharge is a mitigation measure set forth in the MDP (FC-1 a-e) Without the proposed Project, the stormwater management and flood protection for the 52.2-acre site will not occur. The proposed Phase 1 detention basin is an essential improvement for reducing the post-project peak discharge rate into the Weber Slough relative to the pre-project discharge rate for storm intensities up to 150% of the 10 year / 48 hour storm event. Without the detention basin, the existing peak discharge rates prevail and would exceed the mitigated post-project peak discharge rates afforded by the proposed detention basin. The post-project flow reduction will benefit properties downstream of the MDP area, the Phase 1 area, and will slightly benefit the remainder of MDP areas, thus the absence of the outfall and detention basin may negatively affect the MDP area and downstream properties.

Economic and Employment Opportunities. Under the Project, the financial objectives of the City and the community will be realized. The Project, implementing 25% of the industrial uses for the MPD, will generate employment opportunities in the industrial, commercial and construction sectors. There will be an increase in the appraised value of the land and an increase in property taxes to assist funding the City's provision of general services, including the services

necessary to serve the MDP. The financial objectives of the applicant and other industrial users will be met with the Project which will develop the 52.2-acre Project site into industrial uses.

Reduction in Vehicle Miles Traveled. The Project provides industrial development that would encourage walking and bicycling to nearby employment uses from the approved residential uses. This in turn reduces the amount of greenhouse gas emissions in the region. There is no other location that could provide this type of mixed-use concept in proximity to the Airport and the City.

Strengthening the City's Economy. The benefits of approving the Approved Project include generating employment opportunities on both a short-term and a long-term basis, sales tax generated by project resident employees will strengthen the local economy and government, and will assist in offsetting the cost of governmental services both for the Approved Project and for needs elsewhere in the City.

Strengthen Stockton Metropolitan Airport. The proposed Project, located near the Stockton Metropolitan Airport, will stimulate commerce for the airport due to the intensive industrial component. Increase business will occur consistent with the Airport Special Purpose Plan. There is no other location in the City or County in proximity to the Stockton Metropolitan Airport that can serve the goals and purposes of the Approved Project.

Conclusion

In conclusion, there are important environmental, land use, economic, technical and logistical factors that support the Project and its necessity to efficiently implement the MDP, thereby rendering the No Action Alternative impracticable. The Project's benefits outweigh any impacts to the floodplain.

a. Non-Floodplain Alternative

A non-floodplain alternative would move the entire MDP to another location outside of the considerably sized floodplain**.** Approximately 63% of the MDP area is located within a Special Flood Hazard Area, consisting of Zone A, Zone AE, and Zone AO, subject to inundation in the 1% annual chance flood. There are no practicable non-floodplain alternatives for the MDP.

The purpose of the approved Project is to specifically serve the City 's projected growth areas in the southern portion of the City and to compliment the adjacent Airport industrial land uses. The southern portion of the city and its adjacency to the Airport are fixed criteria. In terms of local and regional setting, the Project is located within San Joaquin County near the southeast portion of the City. The MDP is generally bounded by the Airport to the north, Highway 99 to the east, Union Pacific Railroad to the west and East French Camp Road to the south. The 52.2-acre Project site is in the northeast portion of the MDP and is Phase 1 of the MDP. The offsite outfall would serve the area located south of Weber Slough (between French

Camp Slough and the Union Pacific (SPRR) tracks) and the South Airport Way public right-of-way along the Project's frontage.

The City continues to experience population growth and the associated need for employment near existing urbanized areas. The Project offers 52.2 acres of industrial land uses. The Project site is located immediately south of the City's boundary and the City's General Plan designates the land for industrial uses, as it is a logical expansion of City limits to the South. The Project stormwater management and flood protection for the 52.2-acre site entails providing an offsite outfall structure installed in the upper bank of Weber Slough, plus an onsite stormwater detention basin. Installation of the structure includes the placement of a 24-inch flared end section drainage outfall in Weber Slough with approximately 1,400 square feet of rock slope protection (RSP) within the channel to protect against erosion and scour during discharges from the outfall (Exhibit C). The proposed Phase 1 detention basin provides flood protection primarily for the Phase 1 project area, with some benefits to properties downstream and upstream of the Phase 1 parcel.

The Project reflects land uses that are responsive to the demands of the known market while complying with the policies and programs of the City's General Plan. The southern growth areas, including the Project 52.2-acre site, are located in the floodplain. The Project location was selected because it is part of the City's General Plan projected growth areas next to the City and the existing airport. The Project meets regional development goals and the City's approved General Plan growth patterns. The Project integrates the existing airport with industrial and warehouse development as close to the Airport as possible to be able to minimize trips from the industrial uses to the airport, and the industrial uses are intended to enhance the economic viability of the airport. A non-floodplain alternative would not meet any of these goals because it would relocate the MDP and the Project to property that is not in proximity to these existing uses and there is no non-floodplain land available for development that meets these goals for this area. A review of the effective FEMA FIRM maps, the current City of Stockton limits, and land available for new development confirms these findings. The City of Stockton Municipal Code Section 15.44.150(C)(1), the National Flood Insurance Program, and ASCE 24 referenced in the California Building Code all provide for constructing buildings within a Special Flood Hazard Area, thus it is reasonable for the City to plan for development in areas located with a Special Flood Hazard Area and for land owners to rely upon the published standards and regulation when making investment decisions.

Consequently, there are no practicable non-floodplain alternatives for the Project because as explained above it is logistically situated exactly where the growth is planned and necessary, adjacent to the fixed feature: the Airport and the southern boundary of the City.

Impacts of the Non-Floodplain Alternative

If the Project were constructed outside the floodplain, impacts in the categories of Land Use, Air Quality, Noise, Water Quality, Biological Resources, Water Supply, Utilities and Service Systems, Aesthetics, Cultural Resources would be the same or similar in a non-

floodplain location. The only impact that could be less would be Water Resources as relevant to stormwater maintenance and flood protection concepts. The impacts would be similar since that project would still have the same industrial uses and footprint, but it would simply not be in the floodplain. Impacts such as Traffic and Air Quality would be worse if the industrial complex were moved to a non-floodplain location further away from the City and the Airport.

Therefore, there is no impact avoidance benefit to a Non-floodplain Alternative since most of the impacts would be the same. Furthermore, as explained below, the benefits of the Project in the floodplain clearly outweigh any of the similar impacts to resources identified above and would result in more intensive impacts in other areas such as Traffic and Air Quality, to name a few.

Project Benefits

The Project will fulfill the following objectives:

- Providing a jobs/housing relationship, which can result in the reduction of commuting distances between residential concentrations and employment opportunities.
- Minimizing land use and operational conflicts between existing and planned residential uses and proposed industrial uses.
- Minimizing impacts to existing neighborhoods.
- Protecting and enhancing the economic viability of the Airport.

Other Project benefits include but are not limited to the following:

Stormwater Management and Flood Protection. The Project provides the Weber Slough outfall stormwater management and flood protection for the 52.2-acre site. These features include an offsite outfall structure installed in the upper bank of Weber Slough, plus an onsite stormwater detention basin. Installation of the structure includes the placement of a 24-inch flared end section drainage outfall in Weber Slough with approximately 1,400 square feet of rock slope protection (RSP) within the channel to protect against erosion and scour during discharges from the outfall. Discharging to Weber Slough is the preferred alternative to discharging elsewhere (i.e. to French Camp Slough) Weber Slough has a low water crossing with a 36-inch RCP culvert at its downstream location before it connects to French Camp Slough. The low water crossing, and culvert help detain and meter flows from Weber Slough to French Camp Slough. To reiterate, the location of the discharge is a mitigation measure set forth in the MDP (FC-1 a-e) Without the proposed Project, the stormwater management and flood protection for the 52.2-acre site will not occur. The proposed Phase 1 detention basin is an essential improvement for reducing the post-project peak discharge rate into the Weber Slough relative to the pre-project discharge rate for storm intensities up to 150% of the 10 year / 48 hour storm event. Without the detention basin, the existing peak discharge rates prevail and would exceed the mitigated post-project peak discharge rates afforded by the proposed detention basin. The post-project flow reduction will benefit properties downstream of the MDP area, the Phase 1 area, and will slightly

benefit the remainder of MDP areas, thus the absence of the outfall and detention basin may negatively affect the MDP area and downstream properties.

Economic and Employment Opportunities. Under the Project, the financial objectives of the City and the community will be realized. The Project, providing 25% of the total industrial uses for the MDP, will generate employment opportunities in the industrial, commercial and construction sectors. There will be an increase in the appraised value of the land and an increase in property taxes to assist funding the City's provision of general services, including the services necessary to serve the MDP. The financial objectives of the applicant and other industrial users will be met with the Project which will develop the 52.2-acre Project site into industrial uses.

Reduction in Vehicle Miles Traveled. The Project provides industrial development that would encourage walking and bicycling to nearby employment uses for the approved residential components of the MDP. This in turn reduces the amount of greenhouse gas emissions in the region. There is no other location that could provide this type of mixed-use concept in proximity to the Airport and the City**.**

Strengthening the City's Economy. The benefits of approving the Approved Project include generating employment opportunities on both a short-term and a long-term basis, sales tax generated by project resident employees will strengthen the local economy and government, and will assist in offsetting the cost of governmental services both for the Approved Project and for needs elsewhere in the City.

Strengthen Stockton Metropolitan Airport. The proposed Project, located near the Stockton Metropolitan Airport, will stimulate commerce for the airport due to the intensive industrial component. Increase business will occur consistent with the Airport Special Purpose Plan. There is no other location in the City or County in proximity to the Stockton Metropolitan Airport that can serve the goals and purposes of the Approved Project.

Conclusion

In conclusion, there are important environmental, land use, economic, technical and logistical factors that support the Project and its necessity to efficiently implement the MDP, thereby rendering the No Action Alternative impracticable. The Project's benefits outweigh any impacts to the floodplain.

b. Alternative Action Alternative

A storm water retention basin management alternative to the EIR Alternative 3 (Mixed Use / Agriculture) would also mitigate impacts to the floodplain within the Phase 1 Project area. A retention basin would not require an outfall into the Weber Slough because stored stormwater would slowly percolate into native soils instead. A retention basin was initially a desirable design option, however geotechnical analysis performed on existing soils at the basin site revealed high concentration of clays with poor infiltration rates up to a depth of approximately 25 feet below

the existing ground surface. To compensate for the poor infiltration rates, the retention basin bottom surface area, and overall footprint, would need to be significantly larger than the proposed detention basin bottom and top areas to achieve full dewatering within the City of Stockton's prescribed 48 hour requirement following the design storm.

The reduction of Phase 1 developable area would not require alternative land uses, although all uses of the site (industrial, commercial, residential, and agricultural) would be more limited. In the context of the broader MDP, the additional land area required by regional retention basins located throughout the MDP would restrict all MDP developed uses.

Impacts With Alternative Action Alternative

The Alternative Action Alternative would allow agricultural uses to persist. Potential impacts to water quality and wind erosion would continue unabated under this alternative. Potential impacts of the Project are avoided with the Alternative Action Alternative due to the absence of development in specific areas. With the proposed Project, impacts for most other environmental issue areas are either less than significant or can be adequately mitigated. For these areas, the No Project alternative often presents reduced levels of impact.

As to biological resources, the Alternative Action Alternative would retain the undeveloped, agricultural conditions with limited biological habitat value. Although existing conditions on the Project site provide limited habitat value, special-status species have the potential to or are known to occur on the Project site. The Project would eliminate habitat for these species. Payment of fees for the loss of habitat and compliance with applicable laws and permitting requirements would reduce these impacts to less than significant levels. Although impacts to biological resources will be less than significant with the proposed project, the No Action Alternative will not eliminate potential habitat.

As to cultural resources, the Alternative Action Alternative would retain the undeveloped, agricultural conditions that are present at the Project site. Therefore, this alternative will not have effects on known or unknown historic resources, prehistoric resources, or unique geological features. Development of the Project, however, has the potential for less than significant impacts resulting from disturbance to both known and unknown cultural resources. Field surveys of the Project site revealed the presence of several prehistoric artifacts. Project site development could result in less than significant impacts to these potentially important cultural resources or to previously undiscovered cultural or paleontological resources.

Despite the absence of impacts to some resources identified above under the Alternative Action Alternative, these impacts were identified as less than significant. Furthermore, as explained below, the benefits of the Project clearly outweigh any of the potential less than significant impacts to resources identified above.

Project Benefits

The Project will fulfill the following objectives:

- Providing a jobs/housing relationship, which can result in the reduction of commuting distances between residential concentrations and employment opportunities.
- Minimizing land use and operational conflicts between existing and planned residential uses and proposed industrial uses.
- Minimizing impacts to existing neighborhoods.
- Protecting and enhancing the economic viability of the Stockton Metropolitan Airport.

Other Project benefits include but are not limited to the following:

Stormwater Management and Flood Protection. The Project, provides the Weber Slough outfall stormwater management and flood protection for the 52.2-acre site and the South Airport Way public right-of-way along the Project's frontage. These features include an offsite outfall structure installed in the upper bank of Weber Slough, plus an onsite stormwater detention basin. Installation of the structure includes the placement of a 24-inch flared end section drainage outfall in Weber Slough with approximately 1,400 square feet of rock slope protection (RSP) within the channel to protect against erosion and scour during discharges from the outfall. Discharging to Weber Slough is the preferred alternative to discharging elsewhere (i.e. to French Camp Slough) Weber Slough has a low water crossing with a 36-inch RCP culvert at its downstream location before it connects to French Camp Slough. The low water crossing, and culvert help detain and meter flows from Weber Slough to French Camp Slough. To reiterate, the location of the discharge is a mitigation measure set forth in the MDP (FC-1 a-e) Without the proposed Project, the stormwater management and flood protection for the 52.2-acre site will not occur. The proposed Phase 1 detention basin is an essential improvement for reducing the post-project peak discharge rate into the Weber Slough relative to the pre-project discharge rate for storm intensities up to 150% of the 10 year / 48 hour storm event. Without the detention basin, the existing peak discharge rates prevail and would exceed the mitigated post-project peak discharge rates afforded by the proposed detention basin. The post-project flow reduction will benefit properties downstream of the MDP area, the Phase 1 area, and will slightly benefit the remainder of MDP areas, thus the absence of the outfall and detention basin may negatively affect the MDP area and downstream properties.

Economic and Employment Opportunities. Under the Project, the financial objectives of the City and the community will be realized. The Project, implementing 25% of the industrial uses for the MPD, will generate employment opportunities in the industrial, commercial and construction sectors. There will be an increase in the appraised value of the land and an increase in property taxes to assist funding the City's provision of general services, including the services necessary to serve the MDP. The financial objectives of the applicant and other industrial users will be met with the Project which will develop the 52.2-acre Project site into industrial uses.

Reduction in Vehicle Miles Traveled. The Project provides industrial development that would encourage walking and bicycling to nearby employment uses from the approved residential uses. This in turn reduces the amount of greenhouse gas emissions in the region. There is no other location that could provide this type of mixed-use concept in proximity to the Airport and the City.

Strengthening the City's Economy. The benefits of approving the Approved Project include generating employment opportunities on both a short-term and a long-term basis, sales tax generated by project resident employees will strengthen the local economy and government, and will assist in offsetting the cost of governmental services both for the Approved Project and for needs elsewhere in the City.

Strengthen Stockton Metropolitan Airport. The proposed Project, located near the Stockton Metropolitan Airport, will stimulate commerce for the airport due to the intensive industrial component. Increase business will occur consistent with the Airport Special Purpose Plan. There is no other location in the City or County in proximity to the Stockton Metropolitan Airport that can serve the goals and purposes of the Approved Project.

Conclusion

In conclusion, there are important environmental, land use, economic, technical and logistical factors that support the Project and its necessity to efficiently implement the MDP, thereby rendering the Alternative Action Alternative impracticable. The Project's benefits outweigh any impacts to the floodplain.

V. Beneficial and Adverse Impacts

The Project Supports Natural and Beneficial Flood Plain Values

The project will not result in a loss of any natural or beneficial flood plain values. With respect to stormwater management, the Project reduces the post-project peak discharge rate into the Weber Slough relative to the pre-project discharge rate for storm intensities up to 150% of the 10 year / 48 hour storm event and stormwater is treated in accordance with the City of Stockton's Municipal Separate Storm Sewer System (MS4) Post-Construction requirements documented in the City's Storm Water Quality Control Criteria Plan (SWQCCP). The proposed detention basin also provides compensatory floodplain volume storage to offset floodplain storage eliminated by placing fill at structure locations to elevate finish floors above the Base Flood Elevations.

The Project also improves the hydraulic capacity of Weber Slough and French Camp Slough by detaining runoff from the 52.2 acre site during a major storm event until the peak flow (and resulting flood levels) have receded. This is achieved by restricting pumping from the detention basin when water surface elevations in French Camp and Weber Slough (at the

confluence) reach a set level that is well below peak flood levels. This pumping parameters and water surface levels have been set by the Flood Management Division of San Joaquin County Public Works.

Land Use

The project site consists primarily of agricultural fields. Drainage (French Camp Slough, South Fork Little John's Creek) and irrigation ditches transect the project site. These ditches provide aquatic habitat and riparian vegetation. The project site is surrounded by a variety of land uses. To the north of the project is the Stockton Metropolitan Airport. To the south and east are agricultural and rural residential. The historic community of French Camp is located west of the Project site.

Implementation of the proposed Project may result in land use incompatibilities. Mitigation measures will minimize most conflicts and reduce them to less-than-significant levels. The Project will however convert 52.2 acres of agricultural lands to industrial uses. As San Joaquin County has 775,114 acres of agricultural land, the conversion of 52.2 acres of that agricultural land is a small loss for the County. Nonetheless the land conversion could contribute cumulatively to the loss of important farmland in San Joaquin County. Therefore, this particular Land Use Impact could be deemed significant even after mitigation as the mitigation may not completely offset this impact.

Hydrology and Water Resources

Some or all of the 52.2 acres is within the Federal Emergency Management Agency's (FEMA) designated 100-year flood zone (See Figure 4.3.1). A Flood Insurance Study (FIS), dated 1980, was performed by the US Army Corps of Engineers (Army Corps) on behalf of FEMA to determine the flooding limits. To safely remove the proposed development from the 100-year floodplain, several flood control features must be incorporated into the project development.

Lower Watershed On-site Conditions

The watershed area contributing to Weber Slough at the confluence with French Camp Slough is approximately 7.7 square miles of agricultural, residential, commercial and industrial uses east of Highway 99 and the south portion of Stockton Metropolitan Airport, west of Highway 99. A new channel between the airport and Highway 99 was constructed sometime after the flood insurance rate map ("FIRM") was prepared. The new channel has capacity for approximately 1,000 cfs, whereas the channel beginning near the Project boundary's northeast corner has capacity for only 300 cfs. Floodwaters could break out of the smaller section and flood the project area to the south and east of the Union Pacific Railroad (UPRR) to a depth of one foot according to the FIRM map. By observation, it appears because of the realignment and

improvement of Weber Slough, the flooding is less severe at the airport than is shown on the FIRM and consequently more severe at the project site.

Hydrologic Results

A hydrology study was conducted by Domenichelli and Associates for the proposed project to determine improvements necessary to develop the site. As part of this study analysis, a new hydrology model using the Army Corps HEC HMS (Hydrologic Engineering Centers Hydrologic Modeling System) program and detailed site topography surveys have been developed to update the flood flow and confirm the extent of flooding.

The proposed Project will increase the number of impermeable surfaces which will increase site runoff quantities. With the increase in site runoff due to the proposed project, a detention basin will be constructed to maintain existing flows and base flood elevations through and at the end of the project. Hydrology modeling and stream profiling were used to determine the flood control improvements needed for the proposed project. These improvements are EIR Mitigation Measures FC-1 a-e and they address the following:

1. *Construct a flow-by detention basin* - Construct a flow by detention basin with storage volume of 1,700 ac-ft. A weir will be included, approximately 960 feet long, so flood flows will not spill overland, through and beyond the project limits, until critical levels are reached. Peak overflow, of approximately 1,000 cfs. After a major storm event, the basin will be emptied by a pump station which will be sized to empty the basin in an appropriate number of days and conform to an agreed upon standard which will be adequately determined with the appropriate maintenance entity prior to approval of the flood control design.

2. *Construct an overflow channel on Weber Slough* - Construct a new overflow channel to the detention basin to convey approximately 200cfs. The channel will be approximately 30 feet wide if earthen lined or as narrow as 10 feet wide if concrete lined with vertical walls.

3. *Replace undersized culvert on Weber Slough* - Install a new culvert at the Army National Guard driveway on Weber Slough to convey flow of approximately 275 cfs, to meet the capacity of the existing downstream channel.

4. *Levee upgrades* - Fill from the detention basin will Implementation of the stormwater and flood control plans will prevent flooding from occurring on-site. Additionally, the surrounding area north of French Camp Road will not be impacted as the proposed improvements will reinstate the previous flow conditions and will result in no net change.

Therefore, all impacts to Hydrology and water resources will be mitigated to a level of insignificance.

Water Quality

Project implementation could result in the potential degradation of water quality during project construction and operation. During construction, disturbance of soil and operation of construction equipment can lead to increased sediments and vehicle fluids in stormwater or surface runoff. Following development of the Project site, pollutants from parking lot and roadway runoff could contain heavy metals and hydrocarbons from vehicle fluid. Chemicals used in landscaping maintenance would also impact water quality through stormwater runoff. The City of Stockton has developed a Storm Water Quality Control Criteria Plan (SWQCCP) that is intended to establish uniform requirements for the selection and incorporation of storm water quality into the planning, design, construction and maintenance of flood management projects and new developments in a manner consistent with the Federal Clean Water Act (CWA) and the City's Storm Water Management Plan. All projects that require municipal approval for the division of land and construction of improvements are subject to the SWQCCP's requirements. Accordingly, the proposed Project incorporates a stormwater management system (see Figure 3.3.11) into the project to manage water quality issues. Implementation of the SWQCCP components and the following mitigation measures will ensure that any impacts to water quality will be mitigated to a level of insignificance. The Project applicant will comply with the applicable water quality and storm drainage discharge requirements consistent with any waste discharge or water quality certification requirements authorized by the SWQCCP. A Water Quality Certification may also be required. Implementation of the above mitigation measures will reduce potential water degradation impacts to a less than significant level.

Therefore, potential impacts associated with water resources, including stormwater and flooding, and water quality impacts will be mitigated to less than significant levels with implementation of mitigation measures.

Biologic Resources

Common Resident Plant and Wildlife Species. The project will result in impacts to common resident plant and wildlife species, including associated habitats. Impacts to plant communities and associated wildlife will occur as a result of development of the project site, including the development/excavation of the detention basin. Both native and nonnative plant communities will be converted to development, and associated wildlife habitat occurring on the site will be affected. Common plant communities affected will include agricultural land, orchard, and ruderal habitat. Common wildlife species using these areas, such as western fence lizard, gopher snake, western meadowlark, California vole, and California ground squirrel, could be killed outright or displaced to other adjacent habitats, ultimately leading to locally reduced wildlife populations. Impacts to wildlife may be greater if work begins in spring, when many species are breeding/nesting. The loss of habitat in this region will contribute to the regional cumulative loss of wildlife habitat. However, agricultural land, orchards, and ruderal habitat are locally and regionally abundant. In addition, common wildlife species associated with the Project site are also locally and regionally abundant, and implementation of the proposed Project is not expected to substantially reduce their populations. Therefore, the project is not expected to

substantially affect common plant and wildlife species. The loss of habitat for common wildlife species is considered less than significant.

Special-Status Wildlife Species. The proposed Project could result in potentially significant impacts to special-status wildlife species and wetlands/jurisdictional waters. The following discussion describes and evaluates significant impacts to these resources and proposes measures that would mitigate these impacts to less than significant levels.

- The Project may result in impacts to valley oak woodland and valley oak riparian habitat and may remove native trees, including trees classified as heritage trees under the City of Stockton Heritage Tree Ordinance. Impacts to heritage oak trees would be mitigated in accordance with the City of Stockton Heritage Tree Ordinance.

- Implementation of the Project will result in the development of upland habitat areas suitable for use by several special-status bird species, including tricolored blackbird, short-eared owl, western burrowing owl, Swainson's hawk, white-tailed kite, northern harrier, loggerhead shrike, and Nuttall's woodpecker. Implementation of Mitigation Measures would mitigate these impacts to a level of insignificance.

- Project implementation could affect several special-status bat species that could occur on the project site. Many species of bats are known to occur in San Joaquin County, and potential roost sites (i.e., buildings, trees, etc.) exist on the project site. Project construction could result in direct impacts to bats, bat roosting habitat, and foraging habitat, Implementation of Mitigation Measures would mitigate these impacts to a level of insignificance.

- The proposed Project has the potential to impact habitat that is suitable for the giant garter snake. Implementation of the proposed project along French Camp Slough has the potential to impact habitat that is suitable for special-status fish species including Delta smelt, river lamprey, Kern Brook lamprey, Pacific lamprey, Central Valley steelhead, fall run/late-fall run chinook salmon, and Sacramento splittail. Impacts to Delta smelt and Sacramento splittail and other fish species are covered under the San Joaquin County Habitat Conservation Plan (SJMSCP) by the riparian habitat Incidental Take Minimization Measures. All mitigation measures combined will result in less than significant impacts to all species.

- Implementation of the proposed Project has the potential to impact wetlands and/or other waters regulated by the ACOE, RWQCB, and/or CDFW. Aquatic resources (i.e., French Camp Slough) on the project site may be subject to U.S. Army Corps of Engineers, State or Regional Water Quality Control Board, and/or California Department of Fish and Wildlife jurisdiction as waters of the United States (WOTUS) or waters of the State (WOTS). Fill of jurisdictional areas would require appropriate permits from the agencies named above and this would result is less than significant impacts to WOTUS and WOTS.

Impact Categories that Remain Significant After Mitigation

Existing analysis concludes that potential impacts remaining significant after mitigation includes impacts to traffic and circulation, which are based primarily on Level of Service, a now inapplicable standard when used solely for analyzing significant impacts to the environment. In reality, the Project's proximity to the airport will facilitate minimization of LOS and environmental impacts based on truck delivery traffic for goods delivered to and from the airport and the industrial warehouses. Global climate change impacts associated with implementation of the Project could remain significant in terms of Project-related GHG emission that could increase the total contribution of GHG emission above current levels.

There are no other Project impacts that would remain significant after mitigation.

The Project Enhances Regional Flood Protection

The outfall and the onsite detention will enhance regional flood protection in addition to addressing stormwater management of the 52.2-acre site. The Project improves the hydraulic capacity of Weber Slough and French Camp Slough by detaining runoff from the 52.2 acre site during a major storm event until the peak flow (and resulting flood levels) have receded. This is achieved by restricting pumping from the detention basin when water surface elevations in French Camp and Weber Slough (at the confluence) reach a set level that is well below peak flood levels. These pumping parameters and water surface levels have been set by the Flood Management Division of San Joaquin County Public Works.

The stormwater detention basin will have a design capacity that meets the City of Stockton requirement for 150% of a 10 Year / 48 Hour Storm and exceeds the compensatory storage required to accommodate flood water that will be displaced by building pads and other facilities to be constructed within the areas of the Site that are located within Special Flood Hazard Area (SFHA) Zone AO (1' Depth) shown in the effective Flood Insurance Maps (FIRMs) Panel Numbers 06077C0470F and 06077C0490F, effective date October 16, 2009 (Exhibit E). Based on the anticipated design capacity of the basin, construction of the stormwater outfall structure to discharge stormwater from the basin to facilitate development of the Site, including areas that are partially within SFHA Zone AO (1' Depth), will not have any adverse impact on the floodplain.

Due to the City of Stockton requirement for any structure constructed within a 100-year floodplain to have a finished floor elevation that is 2-feet above the 100-year base flood elevation, the volume of material to be removed from the stormwater detention basin will exceed the volume of floodwater that would be displaced by the structure(s). The stormwater detention basin will provide greater floodwater storage capacity than the currently exists on the Site.

The stormwater detention basin and outfall structure are both mitigation measures and conditions of approval and have been fully analyzed in the underlying Tidewater Crossing Development Project environmental documentation pursuant to the California Environmental

Quality Act ("CEQA"). The Environmental Impact Report prepared pursuant to CEQA has concluded that there are no significant environmental impacts as a result of these actions.

Specifically, the placement of a 20'x70' rock slope mat within Weber Slough will require excavation of the native soils within Weber Slough. The rock mattress will be placed flush with the native soils such that no losses to in-channel storage are encountered in Weber Slough. The drainage outfall pipe is also proposed to be metered to the channel slope so that it does not obstruct channel conveyance capacity. During high flows in French Camp Slough, Weber Slough acts as a lateral storage area to French Camp Slough. By maintaining existing storage volumes and channel capacities within Weber Slough, the natural and beneficial flood plain values in Weber Slough will experience negligible change. There are no proposed actions outside of the base flood plain. Therefore, there are no adverse impacts resulting from the proposed project. An important beneficial impact of the outfall and the associated development on 52.2 acres of the Approved Project to the south, is the enhancement of regional flood protection. Beneficial impacts include maintaining the floodwater storage capacity of the Site by providing compensatory storage in the detention basin.

VI. Avoidance and Minimization Measures

Construction of the Outfall is a Mitigation Measure of the MDP

The proposed Project is the most responsive plan to provide positive drainage from the Site and is consistent with City and County mitigation measures and condition of approval obligations from the MDP EIR (Mitigation Measures FC-1 a-e. All CEQA mitigations measure becomes conditions of approval per CEQA). This renders it applicable to Phase 1 of the MDP, which is the Project. The stormwater detention basin will provide compensatory storage and the outfall footprint is minimized by incorporating an upstream detention basin to reduce outflow. Rock slope protection as an outfall mattress provides protection from scour, while maintaining a semi-natural state using local rock for materials. The outfall is sized for the Project only and the South Airport Way public right-of-way along the Project's frontage. Therefore, it is not inducing unapproved development within the floodplain, and the proposed Project is the most responsive to planning objectives and is consistent with the MDP EIR.

Siting the Outfall in Weber Slough in Lieu of French Camp Slough

Siting the outfall in Weber Slough rather than French Camp Slough avoids any modifications within the French Camp Slough right bank and floodway and provides better protection of the outfall away from the higher flows of French Camp Slough. All practicable means to avoid, minimize, and mitigate potential adverse impacts on the environmental resources have been incorporated into the proposed Project.

The outfall proposed project is confined to a 20 ft. x 70 ft. footprint and does not reduce channel storage or conveyance capacity. The outfall will only serve the 52.2-acre Site and the South Airport Way public right-of-way along the Project's frontage which is already approved

for development. There are no adverse impacts resulting from this action and the natural and beneficial floodplain values will be preserved as a result of the detention basin design capacity that will accommodate any floodwater that will be displaced by structures and other facilities constructed on the Site. The proposed stormwater detention basin and outfall are designed and intended only for development of the Site and will not provide any additional stormwater discharge capacity that could otherwise induce further development in the base flood plain.

The Tidewater Crossing Drainage Outfall proposed project is the most responsive plan to provide positive drainage from the Site and is consistent with City and County mitigation and condition of approval obligations from the MDP EIR (Mitigation Measures FC-1 a-e). The stormwater detention basin will provide compensatory storage and the outfall footprint is minimized by incorporating an upstream detention basin to reduce outflow. Rock slope protection as an outfall mattress provides protection from scour, while maintaining a semi-natural state using local rock for materials. The project is sized for the Site only. Therefore, it is not inducing additional development within the floodplain, and the proposed project is the most responsive to planning objectives and is consistent with the mandates of the Executive Order.

All practicable means to avoid, minimize, and mitigate potential adverse impacts on the environmental resources have been incorporated into the proposed project and therefore there would not be any unavoidable significant effects and no mitigation is required.

Consideration of Onsite Capture of Runoff (Percolation found to be infeasible)

A storm water retention basin management alternative to the EIR Alternative 3 (Mixed Use / Agriculture) would also mitigate impacts to the floodplain within the Phase 1 Project area. A retention basin would not require an outfall into the Weber Slough because stored stormwater would slowly percolate into native soils instead. A retention basin was initially a desirable design option, however geotechnical analysis performed on existing soils at the basin site revealed high concentration of clays with poor infiltration rates up to a depth of approximately 25 feet below the existing ground surface. To compensate for the poor infiltration rates, the retention basin bottom surface area, and overall footprint, would need to be significantly larger than the proposed detention basin bottom and top areas to achieve full dewatering within the City of Stockton's prescribed 48 hour requirement following the design storm.

The reduction of Phase 1 developable area would not require alternative land uses, although all uses of the site (industrial, commercial, residential, and agricultural) would be more limited. In the context of the broader MDP, the additional land area required by regional retention basins located throughout the MDP would restrict all MDP developed uses.

Minimum Floor Elevations for Structures

The proposed building footprint(s) are within Zone AO (1' Depth) and Zone X Shaded areas. The proposed building finished floor elevation(s) will be elevated by fill to 2 feet above

the highest adjacent 100-year Zone AO water surface elevation per the City of Stockton Municipal Code Section 15.44.150(C)(1), which is more stringent than both the National Flood Insurance Program (NFIP) and ASCE 24, referenced in the 2019 California Building Code regulations.

Other Avoidance or Minimization Measures

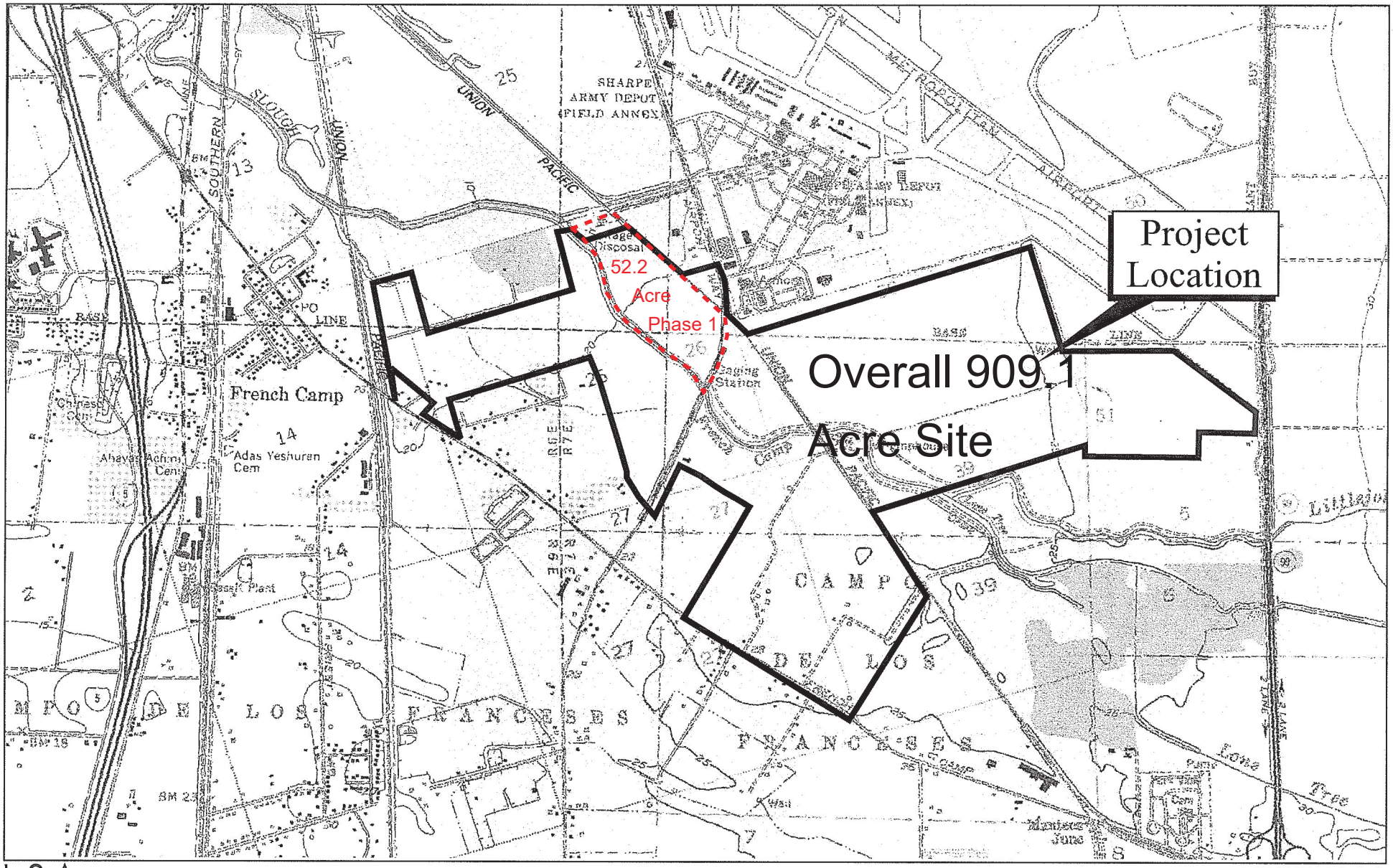
The project will not result in significant adverse impacts to biological resources. Other than the bed and banks of a short section of Weber Slough being blanketed by rock slope protection, post-construction conditions along Weber Slough are expected to be comparable to existing conditions. The work will be undertaken under dry or low-flow conditions to minimize potential for downstream sedimentation. Standard construction Best Management Practices such as compaction of soil, use of water trucks, and re-seeding disturbed areas will be employed to minimize dust, erosion, and potential sedimentation. The project is also participating in the SJMSHCP, which provides take coverage for listed species with potential to be impacted by the proposed project and provides off-site compensatory mitigation

VII. Conclusion

The proposed Project does not impair the usefulness of the existing Farmington Project and it is not injurious to the public interest. There are few significant environmental impacts from the proposed Project. Therefore the benefits of the proposed Project- to provide approved industrial uses and increased flood protection for the proposed Project site and beyond into the full MDP site - outweigh any of those identified impacts.

Exhibit A

909.1 Acre “Tidewater Crossing” Master Development Plan Project & 52.2 Acre “Phase 1” Site



LSA

FIGURE 4.1.1

Tidewater Crossing

Topographical Features

SOURCE: USGS 7.5' QUAD - STOCKTON EAST, 2002

P:\HDA530\GRAPHICS\4.1.1.cdr (12/6/05)

Exhibit B

52.2 Acre Tidewater Crossing “Phase 1” Site

Source (Basemap): Google Earth

Scale: 1 inch = 550+/- feet

N
W E
S

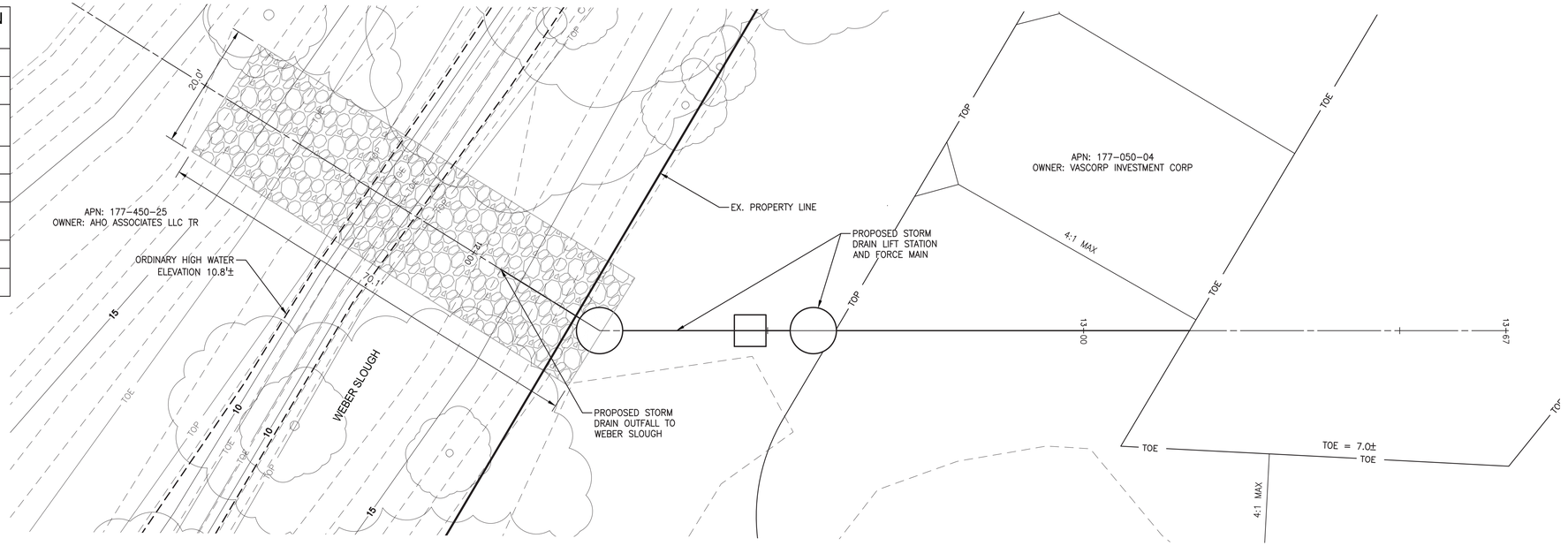
52.2+/- Acre Phase 1 Parcel

AERIAL PHOTOGRAPH

Exhibit C

Storm Drain Outfall Plan & Profile Exhibits

VOLUME OF EARTH EXCAVATION WITHIN RIPARIAN AREA	
VOLUME ABOVE ORDINARY HIGH WATER MARK	1,847 CU. FT.
VOLUME BELOW ORDINARY HIGH WATER MARK	256 CU. FT.
VOLUME OF ROCK PLACED WITHIN RIPARIAN AREA	
VOLUME ABOVE ORDINARY HIGH WATER MARK	1,847 CU. FT.
VOLUME BELOW ORDINARY HIGH WATER MARK	256 CU. FT.
AREA OF ROCK PROTECTION	
AREA PLACED ABOVE ORDINARY HIGH WATER MARK	1,231 SF
AREA PLACED BELOW ORDINARY HIGH WATER MARK	171 SF

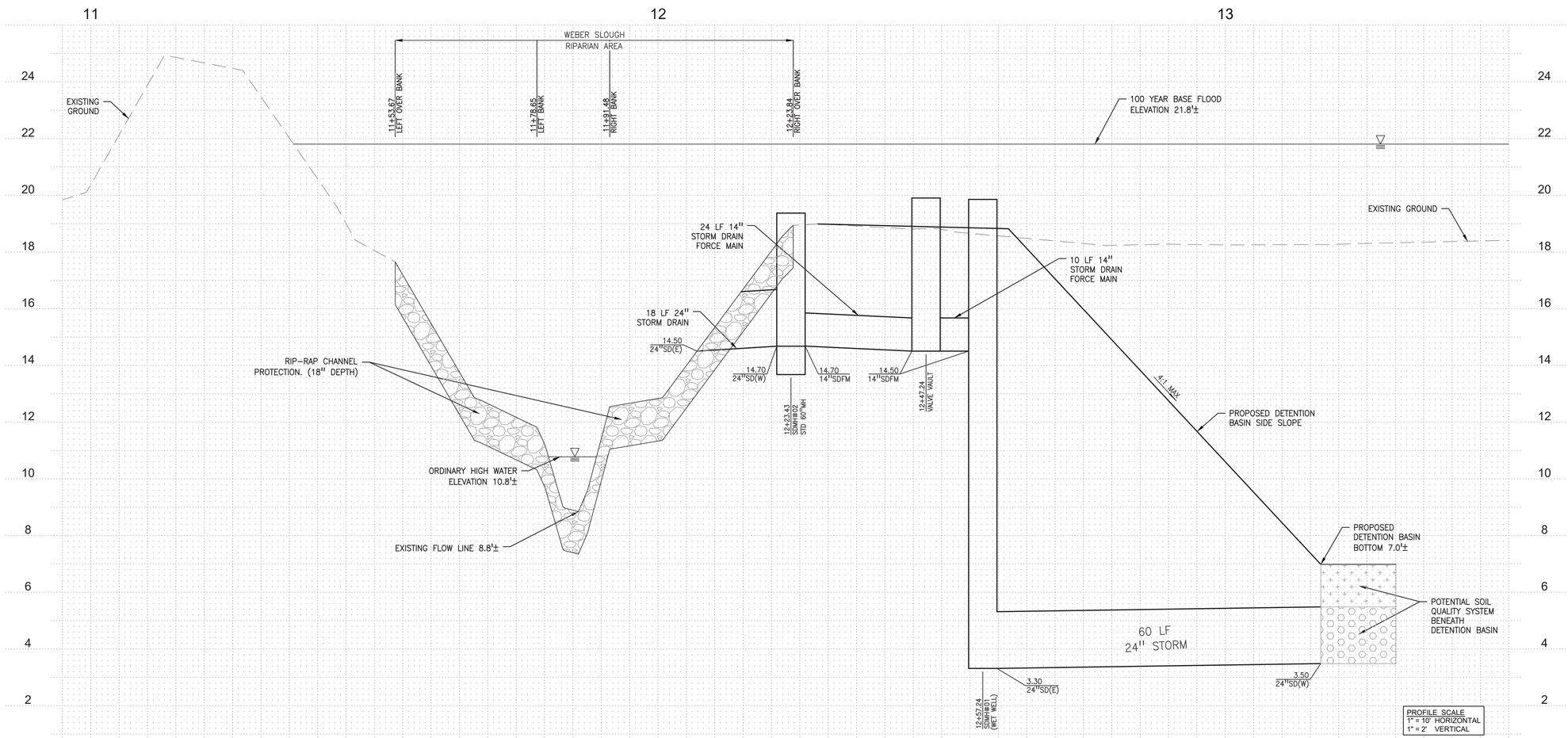


N

10 5 0 10 20

SCALE: 1" = 10'

STORM DRAIN OUTFALL



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No.	MM.YY	Description	By	Appd.

Revision

Client/Project
TIDEWATER CROSSING
STOCKTON, CALIFORNIA

Title
STORM DRAIN OUTFALL PLAN AND PROFILE

Engineer's Seal

Know what's below. Call before you dig.

Engineer's Signature:
Signature Date:

TIDEWATER CROSSING
STOCKTON, CALIFORNIA
STORM DRAIN OUTFALL PLAN AND PROFILE
MUNICIPAL UTILITIES DEPARTMENT
CITY OF STOCKTON, CALIFORNIA

SCALE: SHOWN	SHEET NO. 1 OF 2
DESIGNED BY: BV	
DRAWN BY: IY	JOB NO. 11110100
CHECKED BY: BV	
RECORD DWG:	

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2019-7-08 15:43 By: bvelton

ORIGINAL SHEET – ARCH D

Exhibit D

Storm Drain Detention Basin Exhibit

SAN JOAQUIN COUNTY
CITY OF STOCKTON

UNION PACIFIC (TIDEWATER SOUTHERN) RAILROAD

TIDEWATER SOUTHERN (UNION PACIFIC) RAILROAD

EX. BERM WITH 12" CULVERT BETWEEN DRAINAGE / IRRIGATION DITCH AND WEBER SLOUGH

EXISTING DRAINAGE/IRRIGATION DITCH

EX. PROPERTY LINE

DETENTION BASIN AREA

PROPOSED DETENTION BASIN
(15.3 AC-FT STORM WATER STORAGE REQUIRED)

APN: 177-450-25
OWNER: AHO ASSOCIATES LLC TR

APN: 177-050-04
OWNER: VASCORP INVESTMENT CORP

APN:177-050-05
OWNER: ARMOTO PARTNERS LLC

WEBER SLOUGH

PROPOSED STORM DRAIN LIFT STATION AND FORCE MAIN

PROPOSED STORM DRAIN OUTFALL TO WEBER SLOUGH

EX. 36" CONCRETE PIPE CULVERT

EX. STATE R/W FOR FRENCH CAMP SLOUGH

FRENCH CAMP SLOUGH

4:1 MAX

N

40 20 0 40 80
SCALE: 1" = 40'

811
Know what's below.
Call before you dig.

CONSULTING ENGINEERS
430 10th Street
Modesto, CA 95354
Tel.: 209.568.4477
Fax: 209.568.4478

No.	M.M.YY	Description	By	Appd.

Revision

Client/Project
TIDEWATER CROSSING
STOCKTON, CALIFORNIA

Title
STORM DRAIN DETENTION BASIN

Engineer's Seal

Engineer's Signature:
Signature Date:

TIDEWATER CROSSING
STOCKTON, CALIFORNIA
STORM DRAIN DETENTION BASIN
MUNICIPAL UTILITIES DEPARTMENT
CITY OF STOCKTON, CALIFORNIA

SCALE: SHOWN	SHEET NO. 2 OF 2
DESIGNED BY: BV	
DRAWN BY: IY	
CHECKED BY: BV	JOB NO. 11110100
RECORD DWG:	

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2018-7-09 15:42 By: bretsch

ORIGINAL SHEET - ARCH D

Exhibit E

Flood Insurance Rate Map

Panels 06077C0470F & 06077C0490F