INFRASTRUCTURE 4

4.1 OVERVIEW

Chapter 4 provides a plan for the orderly and cost-effective development of on-site and nearby infrastructure needed to support each phase of development envisioned for the Crows Landing Industrial Business Park (CLIBP) Specific Plan area (Plan Area). Infrastructure includes a surface transportation system; a potable and non-potable water supply and distribution system; wastewater collection and treatment; stormwater management, including features for groundwater recharge; dry utility networks; and solid waste service. This chapter also addresses key environmental considerations associated with water quality and conservation.

"Backbone" infrastructure is defined as major public improvements designed to serve the entire Plan Area or substantial portions of the Plan Area, and is the minimum required to support phased on-site development based on proposed land uses and development densities/intensities. The backbone infrastructure systems described in this chapter are conceptual in nature and may be modified during CLIBP build-out based on changes in technology or the location and intensity of future development.

The County will initially make infrastructure improvements for development in the southern portion of the Plan Area (Fink Road Corridor) during the first five years of development, which is referred to as Phase 1A (see Chapter 2, "Land Uses," Figure 2-2). Initial Plan Area development in the Fink Road Corridor takes advantage of the CLIBP's proximity to Interstate Highway 5 (I-5) using the Fink Road/I-5 interchange. The Fink Road Corridor is envisioned to support primarily logistics, warehouse, and distribution uses because of its proximity to I-5, but it may accommodate other uses. Infrastructure improvements for development in the Bell Road Corridor, airport, and southern portion of the Public Facilities Area will be made during years 6 to 10 (Phase 1B). A strategy for infrastructure phasing and financing is provided in the CLIBP Infrastructure Financing Plan (Appendix K).

4.1.1 Infrastructure Goal

The following goal applies to all components of the CLIBP Plan Area's proposed infrastructure:

IG 1: Provide infrastructure, including roads; potable and non-potable water supply and distribution; wastewater collection and treatment; stormwater management, including features for groundwater recharge; electricity, natural gas, and communication networks; and solid waste service that will be sufficient to serve the projected growth and build-out of the CLIBP Plan Area.

4.1.2 Infrastructure Policies

The following policies apply to all components of the CLIBP Plan Area's proposed infrastructure:

IP 1: Promote the orderly and efficient construction or expansion of infrastructure and utilities to meet projected needs.

IP 2: Implement capital improvements for needed service infrastructure in coordination with the direction, extent, and timing of Plan Area growth.

IP 3: Establish equitable methods for distributing costs associated with Plan Area development, including the costs of on-site backbone infrastructure and regional serving off-site improvements needed for Plan Area development.

IP 4: Design new infrastructure systems to consider life-cycle costs and to promote innovation in energy and water conservation.

4.2 TRANSPORTATION

The 1,528-acre former Air Facility property is generally bounded by W. Marshall Road to the north, State Route (SR) 33 to the northeast, Bell Road to the east, Fink Road to the south, and agricultural land and Davis Road to the west. Regional access to the Plan Area is provided by I-5 and SR 33, with local access provided by W. Marshall Road at the Plan Area's northern boundary and W. Ike Crow Road at its eastern boundary. Fink Road, to the south, provides regional access between the CLIBP and I-5 (see Figure 4-1). Currently, no public roadways provide access through the Plan Area.

4.2.1 Transportation Plan

The Transportation Infrastructure Plan – Crows Landing Industrial Business Park (Appendix F), referred to herein as the Transportation Plan, identifies the on-site interior or "backbone" roads that will be constructed in accordance with the phased site development presented in Chapter 2, "Land Uses," and road design in Chapter 3, "Built Environment and Design," as well as needed off-site improvements. The backbone roads will provide primary internal circulation and connections to the adjacent off-site roadway network.

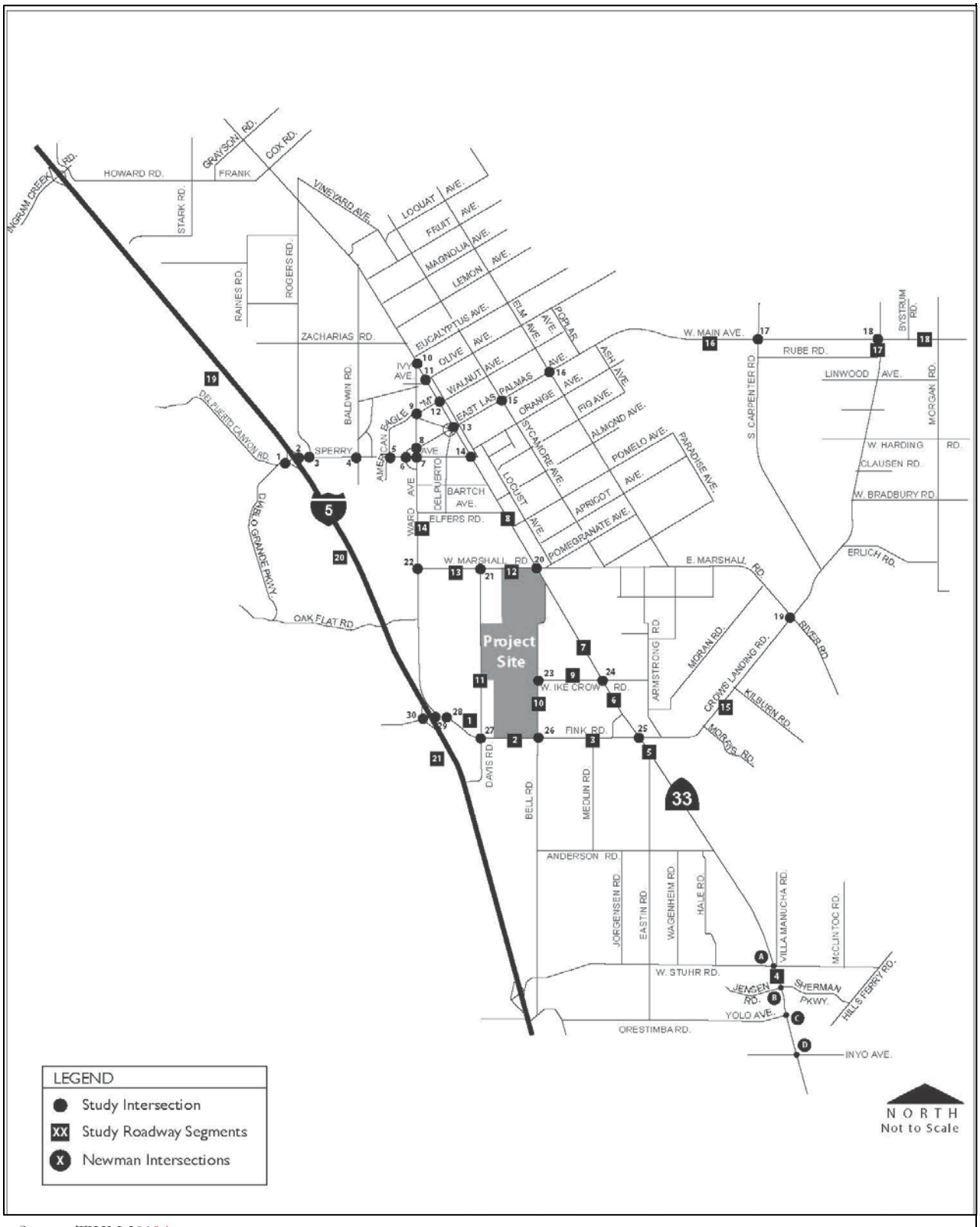
Figure 4-1 illustrates the existing roadways in the vicinity of the Plan Area. The 18 roadway segments, 3 freeway segments, and 34~~0~~ intersections identified in the figure were studied in the Transportation Plan. All roadways studied are two-lane roads serving agricultural activities, incorporated areas, and nearby communities. According to the Transportation Plan, all 34~~0~~ study area intersections currently operate at acceptable conditions. Furthermore, none of the non-signalized study area intersections currently exceed the County's congestion threshold for signal warrants based on their level of service (LOS). The County's current acceptable LOS for intersections is LOS C.

Approximately 14.3 million square feet of development and 14,447 jobs[1] are projected at CLIBP build-out. The Transportation Plan examines traffic impacts under existing conditions and analyzed impacts for three potential future scenarios:

- Existing conditions plus the CLIBP project;
- Anticipated year 2035 traffic conditions, based on projected growth without the CLIBP project; and
- Anticipated year 2035 traffic conditions, based on projected growth with the CLIBP project.

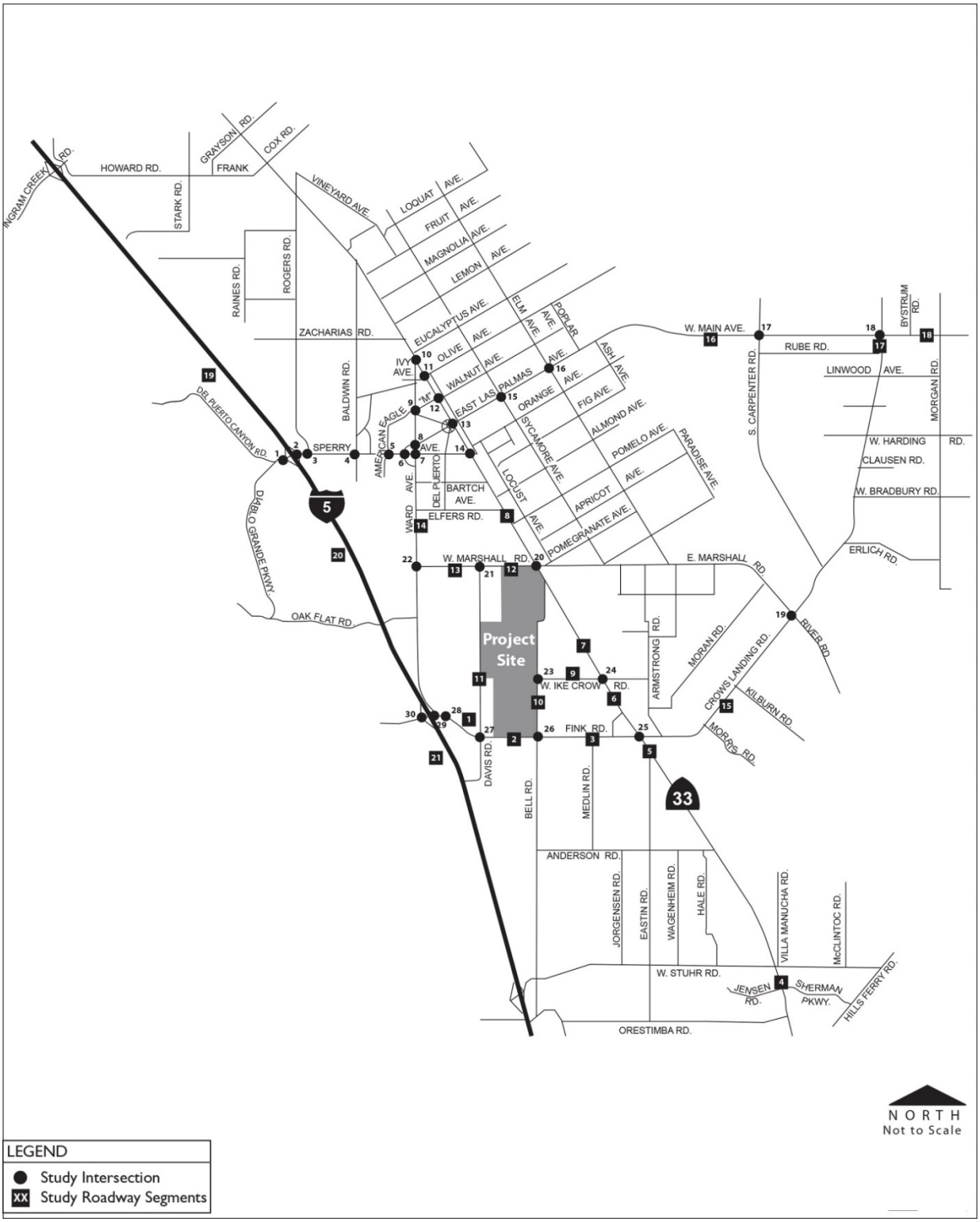
Transportation network and land use information for the Tri-County area, (which is the basis for traffic projections in the Transportation Plan), including Merced, San Joaquin, and Stanislaus Counties was available through 2035, so the 2035 conditions assumes full CLIBP build-out and, thus, represents a conservative analysis. The Transportation Plan utilized near-term (next 20 years) with existing conditions to determine traffic impacts triggered by CLIBP development and therefore, the CLIBP's transportation improvement responsibilities, including cost. Additionally, the study analyzed traffic impacts and improvements needed based on CLIBP development and/or regional growth over the long-term (at 2035 and beyond), and the CLIBP's fair share of traffic demand, impacts, and additional transportation improvement responsibilities.

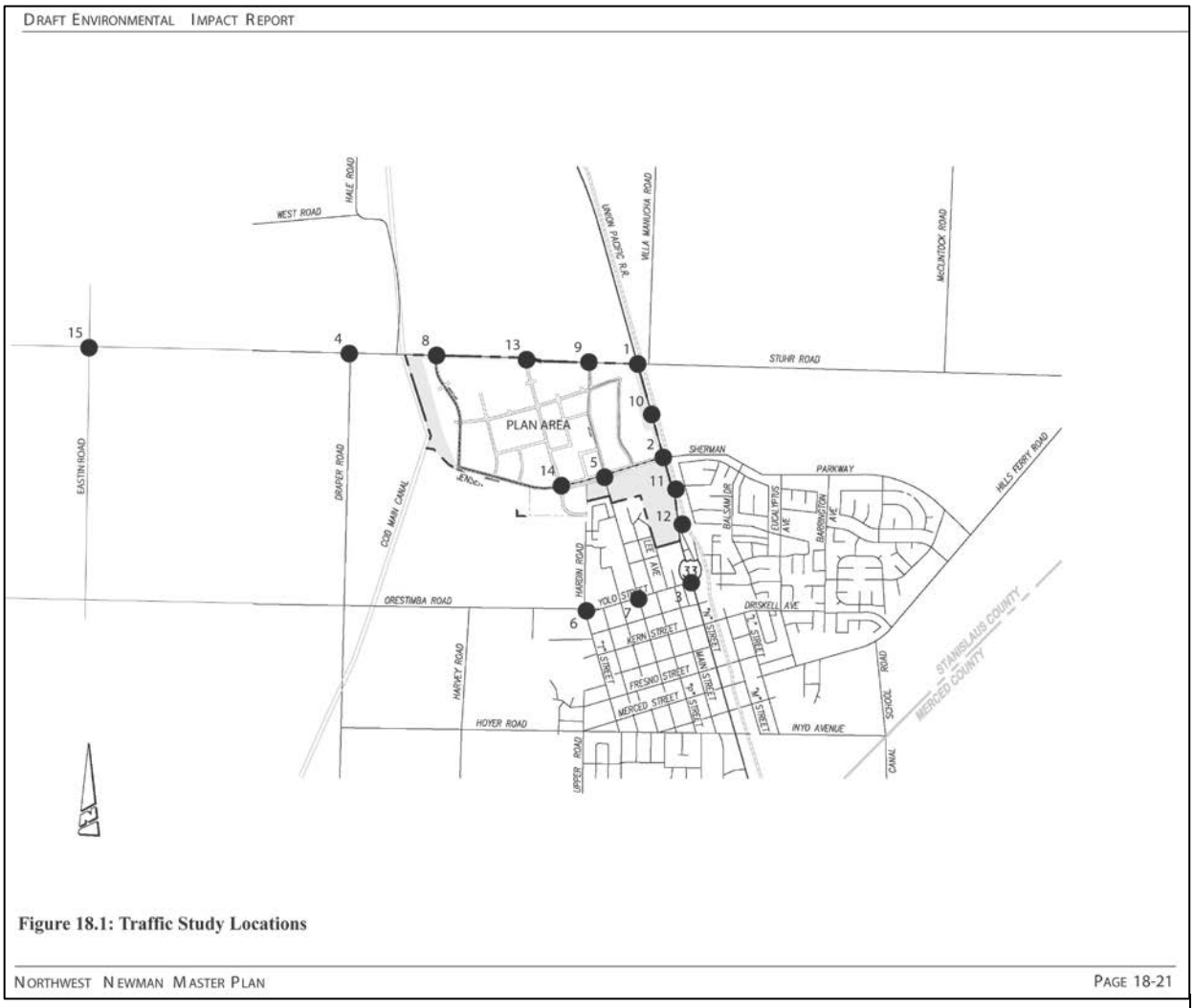
[1] Refer to the detailed Land Use and Employement Summary table, which is provided in Appendix A of the CLIBP Specific Plan, for additional information on estimated land use categories, extent of development associated with each phase, and employment projection at CLIBP build-out.



Source: TJKM 2018~~6~~

Figure 4-1: Project Vicinity


INGRAM CREEK RD.
HOWARD RD.
GRAYSON RD.
COX RD.
FRANK
STARK RD.
VINEYARD AVE
LOQUAT AVE.
FRUIT AVE.
MAGNOLIA AVE.
LEMON AVE.
EUCALYPTUS AVE.
ELM AVE.
POPLAR AVE.
RAINES RD.
ROGERS RD.
ZACHARIAS RD.
OLIVE AVE.
IVY AVE.
WALNUT AVE.
PALMAS AVE.
ASH AVE
ORANGE AVE.
FIG AVE.
ALMOND AVE.
SYCAMORE AVE.
POMELO AVE.
PARADISE AVE
LOCUST AVE.
APRICOT AVE.
POMEGRANATE AVE.
BALDWIN RD.
AMERICAN EAGLE
"M" AVE.
EAST LAS
DEL PUERTO
WARD AVE.
BARTCH AVE.
ELFERS RD.
SPERRY
DEL PUERTO CANYON RD.
DIABLO GRANDE PKWY.
OAK FLAT RD.
W. MAIN AVE.
RUBE RD.
BYSTRUM RD.
LINWOOD AVE.
MORGAN RD.
S. CARPENTER RD.
W. HARDING RD.
CLAUSEN RD.
W. BRADBURY RD.
ERLICH RD.
E. MARSHALL RD.
W. MARSHALL RD.
Project Site
ARMSTRONG RD.
MORAN RD.
CROWS LANDING RD.
RIVER RD.
KILBURN RD.
MORRIS RD.
W. IKE CROW RD.
FINK RD.
DAVIS RD.
BELL RD.
MEDLIN RD.
33
ANDERSON RD.
JORGENSEN RD.
EASTIN RD.
WAGENHEIM RD.
HALE RD.
VILLA MANUCHA RD.
McCLINTOC RD.
W. STUHR RD.
JENSEN RD.
SHERMAN PKWY.
HILLS FERRY RD.
ORESTIMBA RD.
5
NORTH
Not to Scale
LEGEND
Study Intersection
XX Study Roadway Segments



Source: KD Anderson (2014)
Figure 4-2: Northwest Newman Master Plan EIR Traffic

Based on the results of the transportation analysis, several road segment, signalization, and interchange improvements were identified to support CLIBP development during both the near-term (through 2035) and long-term (beyond 2035). The Transportation Plan estimated the associated phase for each needed roadway project; however, the timing of roadway improvements will be based on monitoring of roadway conditions during CLIBP build-out.

To accommodate the development envisioned for the CLIBP Plan Area, the following types of transportation improvements will be needed:

- On-site backbone roads;
- Off-site roadway rehabilitation;
- Off-site roadway widening;
- Off-site signals; and
- Fink Road / I-5 interchange improvements.

The following sections identify the anticipated development or improvement of transportation infrastructure to facilitate CLIBP build-out as envisioned in three 10-year phases. However, the timing of proposed transportation improvements may be subject to change based on the needs of site users.

4.2.2 Near Term Improvements Triggered by the CLIBP Project

On-Site Backbone Road Requirements

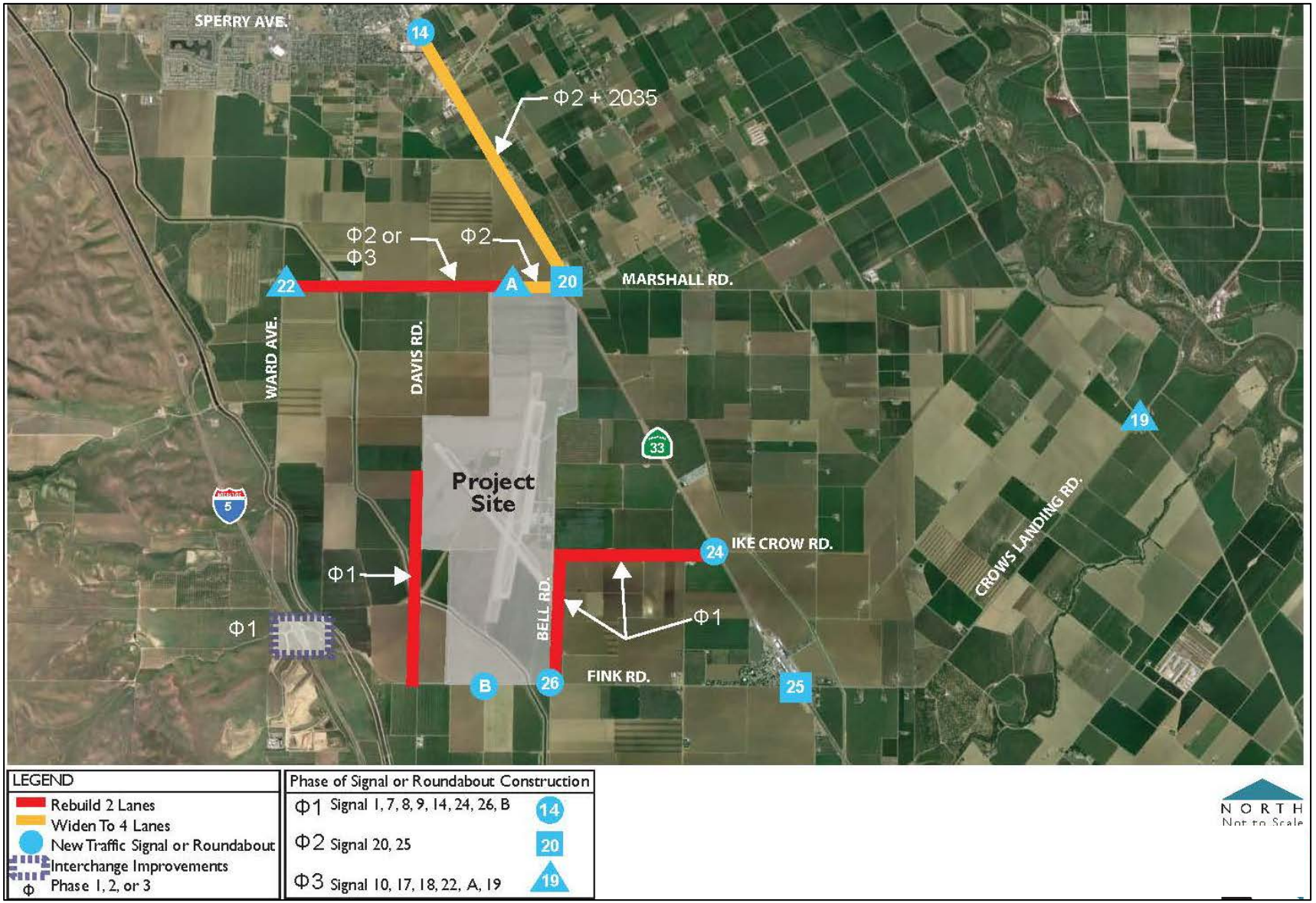
Most Plan Area roadways will be constructed as local industrial roads using a two-lane cross section design (two travel lanes and one center-aligned left-turn lane) to provide internal site circulation (see Chapter 3, Figure 3-6). The only exception will be a four-lane cross section design (four travel lanes and one center-aligned left-turn lane) associated with the CLIBP north access point from W. Marshall Road, where a larger volume of traffic is expected to enter the Plan Area at a single intersection (see Chapter 3, Figure 3-7). Based on user need or as demand warrants, internal circulation roads with greater traffic demand may require additional improvements. Figure 2-2 (see Chapter 2) identifies the first four roadway segments that will be constructed during Phase 1 of Plan Area development. On-site backbone roads to be constructed during Phases 2 and 3 are shown as broken lines north of the airport.

Off-site Roadways Requiring Rehabilitation/Rebuilding

Four segments of two-lane roadways adjacent to the CLIBP will be rehabilitated to support CLIBP-related traffic (see Figure 4-~~32~~33).

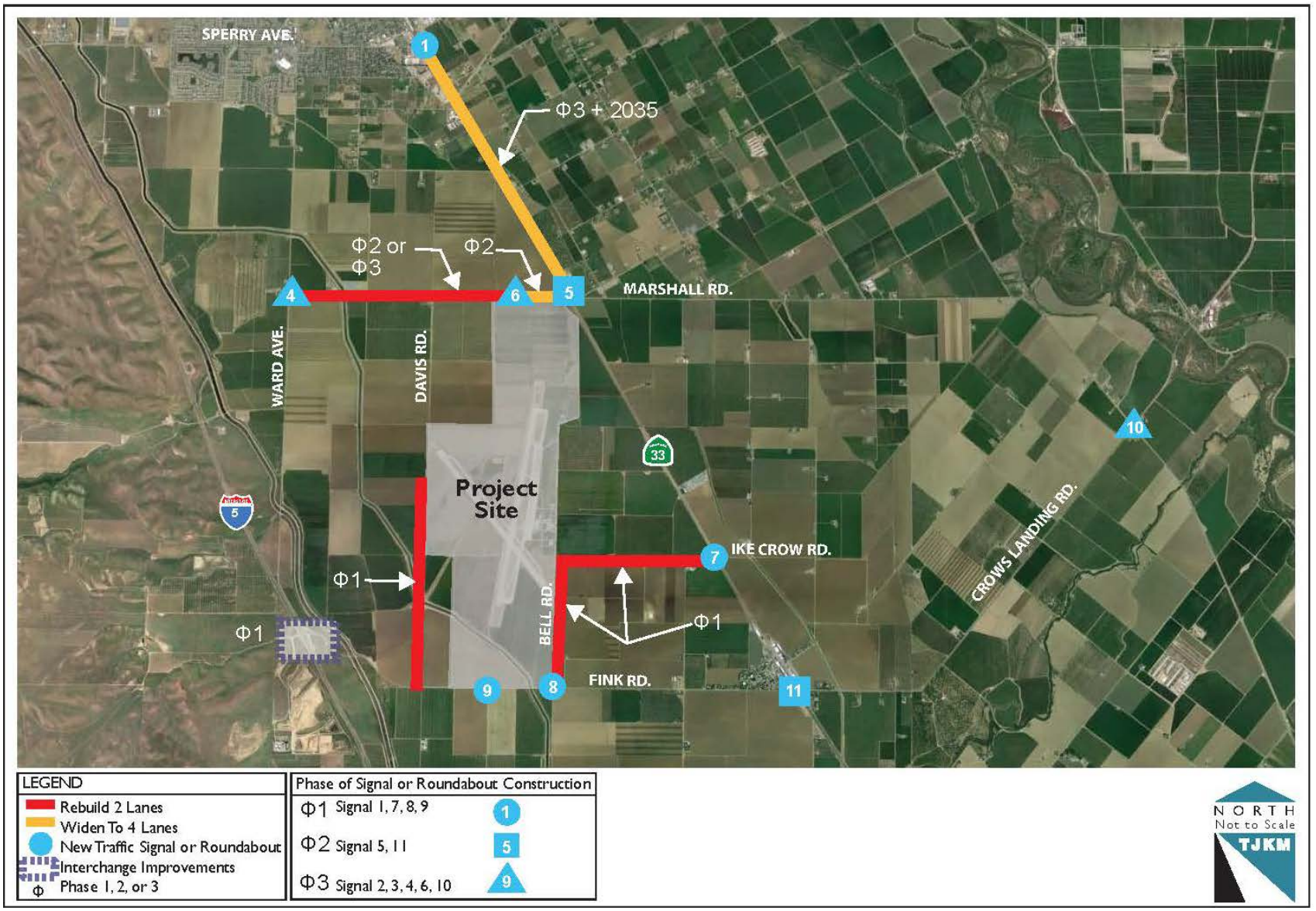
- **W. Ike Crow Road – Bell Road to SR 33.** This segment of W. Ike Crow Road should likely be improved beginning or during Phase 1A, to comply with Stanislaus County Department of Public Works (SCDPW) roadway standards required from Plate 3-A12, 60 FT Minor Collector, and to allow a future bike lane, if needed. The County will begin improving W. Ike Crow Road in Phase 1A.

- **Bell Road – Fink Road to W. Ike Crow Road.** Improvements to this segment of Bell Road will be required during Phase 1 of Plan Area development, and will include a bicycle/pedestrian path (see Chapter 3, Figure 3-5). This roadway will also connect to a bicycle/pedestrian path and greenway that continues north from W. Ike Crow Road to W. Marshall Road/SR 33. The County will begin improving Bell Road in Phase 1A.



Source: TJKM 2018~~6~~

Figure 4-~~3~~2: Off-Site Road Improvements, CLIBP Project Area


SPERRY AVE.
Φ3 + 2035
Φ2 or Φ3
Φ2
MARSHALL RD.
WARD AVE.
DAVIS RD.
Project Site
IKE CROW RD.
CROWS LANDING RD.
BELL RD.
FINK RD.
Φ1
Φ1
Φ1
1
4
5
6
7
8
9
10
11
33
LEGEND
Rebuild 2 Lanes
Widen To 4 Lanes
New Traffic Signal or Roundabout
Interchange Improvements
Φ Phase 1, 2, or 3
Phase of Signal or Roundabout Construction
Φ1 Signal 1, 7, 8, 9
Φ2 Signal 5, 11
Φ3 Signal 2, 3, 4, 6, 10
NORTH
Not to Scale
TJKM

- **Davis Road – Fink Road to CLIBP west entrance.** This segment of Davis Road is located west of and partially adjacent to the Plan Area. Improvements to Davis Road will be required during Phase 1 and will include the construction of the western entrance to the CLIBP. The portion of Davis Road that is not adjacent to the CLIBP will be improved to comply with SCDPW roadway standards required from Plate 3-A11, 60 FT Local Rural. The section of Davis Road adjacent to the CLIBP has a unique design that is based on a modified County standard to include a wide drainage swale (see Chapter 3, Figure 3-4). Davis Road includes a bridge that crosses over the Delta Mendota Canal (DMC). The existing bridge appears to have adequate width to accommodate the improvements. The County will begin improving Davis Road in Phase 1B.

- **W. Marshall Road – Ward Avenue to CLIBP entrance.** This segment of W. Marshall Road will be improved to comply with SCDPW roadway standards required from Plate 3-A13, 80 FT Major Collector. This segment of W. Marshall Road includes a series of power poles, which are considered immovable objects. The poles are located on the north side of the road between the CLIBP and the east side of the DMC, and on the south side of the road west of the electrical substation located just east of the DMC. A 20- to 22-foot-wide bridge conveys W. Marshall Road across the DMC, and the bridge was determined to be marginally acceptable, at least during the initial phases of site development. Improvements to this segment of W. Marshall Road should occur in Phase 2 or 3 of Plan Area development.

Although not requiring additional capacity improvements, the County will enhance Fink Road between I-5 and Bell Road with an added overlay and striping during Phase 1A to provide a clean, functional south entrance to the CLIBP.

Off-Site Roadway Requiring Additional Travel Lanes

The portion of W. Marshall Road from the CLIBP to SR 33 is the only roadway segment adjacent to the site that will be widened to four travel lanes and one center-aligned left-turn lane to accommodate existing and CLIBP-related traffic (see Chapter 3, Figure 3-3). The additional lanes will be needed by the midpoint of Phase 2 development.

Off-Site Signals

As shown in Figure 4-32, ~~eleven~~ non-signalized intersections adjacent to or near the Plan Area, including the intersections at the proposed CLIBP entrances on W. Marshall Road and Fink Road, will need to be signalized or reconfigured to include a roundabout to accommodate existing and CLIBP-related traffic. ~~The~~ The following ~~eleven~~ intersections are expected to satisfy peak hour signal warrants, meaning that they will need to be signalized or reconfigured to support peak-hour traffic demand. Four of these locations, intersections 1, 7, 8, and 9, are the highest priority and will be needed during the end of Phase 1 or at the beginning of Phase 2 development.

1. Sperry Avenue at SR 33
2. Carpenter Road at W. Main Avenue
3. Crows Landing Road at W. Main Avenue
4. W. Marshall Road at Ward Avenue
5. W. Marshall Road at SR 33
6. W. Marshall Road at CLIBP entrance
7. W. Ike Crow Road at SR 33
8. Fink Road at Bell Road
9. Fink Road at CLIBP entrance

10. Crows Landing Road at E. Marshall Road
11. Fink Road at SR 33

Fink Road/I-5 Interchange Improvements

The Fink Road/I-5 interchange is less likely to be used than other travel routes by CLIBP employees because I-5 does not provide direct access to some of the communities in which employees are likely to reside, such as Newman, Gustine, and the SR 99 corridor cities in Stanislaus County. However, the interchange will be an important link for trucks traveling to and from the CLIBP.

Improvements to the Fink Road/I-5 interchange will include:

- Signalizing Fink Road at I-5 northbound ramps by Phase 1B; and
- Widening the roadway beneath the freeway to create a westbound left-turn lane at the southbound ramps intersection by Phase 1B.

City of Patterson Impacts

Two intersections in the City of Patterson will have unacceptable levels of service under existing plus project conditions:

- Sperry Avenue at the I-5 southbound ramps, which is part of interchange improvement being planned as a joint City/County/State project.
- Ward Avenue and Sperry Avenue will have a level of service of F in the am and pm peaks times; however, construction of the South County Corridor (the precise alignment of which is to be determined) should provide some traffic relief to Patterson streets, including Sperry Avenue.

4.2.3 2035 Regional Growth and CLIBP-Triggered Off-Site Improvements

Additional off-site intersection and roadway improvements will be required to accommodate regional growth- and/or CLIBP-related traffic, such as the widening of roadway sections and additional traffic signals. A traffic impact fee will be established based on the traffic analysis and projections in the Transportation Plan to determine the fair share contribution required from CLIBP tenants/leaseholders/contractors for off-site improvements. Other future off-site projects that are not part of the CLIBP but benefit from proposed off-site transportation improvements will also be required to reimburse the County for their proportionate share of the cost. The specific methodology, timing of payment, and other details related to fair share cost allocation for such transportation improvements will be determined by the County separately from this Specific Plan according to the requirements of California's Mitigation Fee Act (California Government Code sections 66000 *et seq.*). This state law sets forth the procedural requirements for establishing and collecting development impact fees and requires public agencies imposing a fee to demonstrate a reasonable relationship, or nexus, between the fee and the purpose for which the fee is collected. This nexus is typically established through a study (in this case, a road impact mitigation fee nexus study) that establishes the extent to which future developments benefit from the off-site roadway improvements needed to serve the Plan area.

Off-Site Roadway Widening and Signal Requirements to Accommodate 2035 Regional Growth

Sections of two roadways will require widening to accommodate anticipated regional growth.

- W. Main Avenue/E. Las Palmas Ave. - S. Carpenter Road to SR 33
- I-5 north of Sperry Avenue requires widening to six lanes.

Four intersections will meet signal warrants during one or more peak hour periods:

1. Olive Avenue/SR 33
2. Ward Avenue/SR 33
3. I-5 SB Ramps/Sperry Avenue
4. I-5 NB Ramps/Sperry Avenue

Off-Site Roadway Widening and Signal Requirements to Accommodate 2035 Regional Growth Plus CLIBP Project

Sections of three roadways, not previously identified will require widening to accommodate anticipated regional growth- and CLIBP-related traffic.

- **SR 33 – Sperry Avenue to Marshall Road**. The portion of SR 33 between Sperry Avenue in the City of Patterson and Marshall Road will be widened to accommodate Phase 2 CLIBP development and regional traffic conditions in 2035. The ideal width in this section would be 78 feet of pavement including four travel lanes, an approximately 14-foot median or center-aligned left-turn lane, and two 8-foot shoulders. This corresponds to SCDPW 110 FT Minor Arterial roadway standard (Plate 3-A15). The County may consider intermittent spot improvements (e.g., adding center left turn lanes at existing public intersections) during Phases 2 and 3 of CLIBP development to enhance capacity and safety.

- **SR 33 – Stuhr Road to Fink Road**. The portion of SR 33 through Newman may be restricted to an ultimate width of three lanes. However, if a three-lane road section were extended north to Stuhr Road, with signalization and other intersection improvements at Stuhr Road, these improvements could potentially supply adequate capacity. Traffic resulting from completion of CLIBP Phase 3 development combined with regional traffic conditions in 2035 will exceed this roadway segment's two-lane capacity and will require widening to three lanes.

- **I-5 Between Fink Road and Sperry Avenue** requires widening from four to six lanes by completion of CLIBP Phase 3 development combined with regional traffic conditions in 2035.

Four additional intersections, not previously identified, will meet signal warrants during one or more peak hour periods:

1. Fink Road/Davis Road
2. Fink Road/Ward Avenue
3. I-5 NB Ramps/Fink Road
4. I-5 SB Ramps/Fink Road

Fink Road Interchange Improvements

- Signalizing the southbound ramp intersection by the completion of the 30-year CLIBP build-out timeframe.

City of Patterson Impacts

Under cumulative conditions, one signalized intersection will have unacceptable levels of service without the project. No intersection in the City of Patterson will degrade to unacceptable conditions when CLIBP traffic is included in the cumulative traffic. The intersection with unacceptable conditions without the project occurs at:

- Ward Avenue and Sperry Avenue (also cited as a problem under near term plus project conditions). The level of service at this intersection fails even without CLIBP. Development of the South County Corridor, an expressway linking SR 99 and I-5 immediately north of Patterson, should improve the level of service associated with the intersection. The portion of Ward Avenue in the unincorporated county will not require widening beyond two lanes. Within the Patterson city limits, Ward Avenue, between Las Palmas and Sperry Avenues, can currently accommodate four lanes. South of Las Palmas Avenue, the existing curb to curb width can accommodate a three-lane cross section. No additional widening should be required due to the Project.

- With regard to specific intersections:

  - I-5 and Sperry Road is being planned for signalization; the Transportation Infrastructure Plan (TIP) identifies the Project fair share;

  - Ward Avenue and Sperry Avenue have no feasible mitigation due to the presence of residential development in the southeast quadrant. The TIP indicates that the future South County Corridor (not accounted for in the analysis) will likely relieve Sperry Avenue congestion;

  - Ward Avenue and Las Palmas Avenue was recently improved and has no level of service issues under cumulative traffic conditions;

  - Sperry Avenue and State Route 33 will require signalization; the Project fair share is indicated in the TIP; and

  - Sperry Avenue and Rogers Road has no level of service issues.

City of Newman Impacts

The City of Newman 2030 General Plan (adopted in 2007) traffic report (Table 6) and the Northwest Newman Master Plan (April 29, 2014 Traffic Impact Study) indicates that traffic within the City SR 33 will average 36,000 vehicles per day (vpd) at buildout. The General Plan indicates that within the City SR 33 will eventually be widened to four lanes. With 8,200 vpd existing, SR 33 will grow by 27,800 vpd. Traffic from Specific Plan will contribute to all four of the new traffic signals. At the busiest location along SR 33, the Specific Plan will contribute approximately 7,700 vehicles per day (vpd).

Based on an analysis of traffic studies for the Newman General Plan and the Northwest Newman Master Plan, it is expected that future traffic signals in the SR 33 corridor in and near Newman will include intersections at Stuhr Road, Jensen Road, Yolo Street, and Inyo Street. The General Plan indicates that SR 33 will eventually be widened to four lanes. There are not likely to be any intersections needing improvements between Fink Road and Stuhr Road.

All four of the signals may not be warranted for many years. However, about 28 percent of the future traffic will be related to buildout. As noted, one half of these trips are generated locally from homes or businesses. For this reason, the Specific Plan's fair share of these impacts is about 14 percent.

- Inyo Street is one of the four locations along SR 33 identified as likely to meet traffic signal warrants as a result of growth in traffic. When the General Plan traffic studies were conducted, Inyo Street at SR 33 appeared to be the most congested downtown intersection on SR 33. Therefore, it is likely that it may be the first to meet signal warrants. When these and other SR 33 intersections meet signal warrants, the 14 percent fair share described above would be a reasonable contribution from the Specific Plan.

- SR 33 – South of Stuhr Road north of Newman. This section of roadway will exceed two-lane capacity by the end of Phase 3 when combined with 2035 growth traffic. SR 33 through Newman is projected in its General Plan to have an ultimate width of four lanes south of Stuhr Road in and north of the existing city limits.

Fair Share Analysis - Segments

No.	Roadway Improvements (lanes)	Existing (A)	2035 + P (B)	Project (C)	D = (C) / (B-A)	LOS Before	LOS After
12	Marshall Rd - SR 33 to Entrance (4)	656	32,663	31,336	98%	E	D
9	Ike Crow Rd - SR 33 to Bell Rd (2)	27	2,865	2,842	100%	B	B
10	Bell Rd - Ike Crow to Fink Rd (2)	50	6,806	6,762	100%	B	B
13	Marshall Rd - Ward to Entrance (2)	641	5,006	3,697	85%	B	B
8	SR 33 - Marshal Rd to Sperry (4)	4,161	25,030	14,733	71%	F	D
4	SR 33 - Stuhr Road to Newman (4)	8,200	36,000	7,700	28%	E	D
16	W. Main - West of Carpenter (4)	7,342	22,318	1,122	7%	E	B
F1	I-5 - North of Sperry Road (6)	40,000	71,690	1,322	4%	E	B
F2	I-5 - Fink Rd to Sperry Ave (6)	38,000	69,628	2,745	9%	E	B
Source: TJKM 2018							

Based on estimated traffic volumes from land uses proposed in the Specific Plan, the Plan will constitute 30 percent of the growth in vpd. Projections of future traffic volumes and patterns in the TIP assume that a major portion of the trips will be current and future residents of Newman who will be employed within the Specific Plan Area.

If the traffic is split 50-50 to account for one trip end in Newman and one trip end in the Specific Plan Area, a reasonable fair share for the Specific Plan is approximately 15 percent. This information will need to be considered in determining the final cost sharing procedures for the Specific Plan. Business-to-business interactions between Newman and CLIBP are likely to form the balance of the traffic demand in the corridor.

4.2.4 Transportation Demand Management

Transportation Demand Management (TDM) is a term referring to strategies to influence or encourage changes to travel behavior that result in more efficient use of land and transportation resources. A TDM program for CLIBP will be organized to provide employees with safe and convenient travel options to commute to work that will serve as an alternative to the use of single-occupant vehicles, particularly during peak travel times; as well as, and that will promote the health and environmental benefits of more sustainable transportation modes such as walking, biking, and transit use. Business participation in the TDM program will be mandatory and require the following elements to benefit employees, tenants, CLIBP, and the surrounding community.

Stanislaus County, in consultation with StanCOG, Stanislaus Regional Transit, the cities in Stanislaus County, and private sector business organizations to prepare a TDM plan that identifies public and private entities responsible for implementing the plan and specific TDM strategies, and tracking achievement of the plan's objectives. Among the elements of a TDM plan and implementation will be:

- A comprehensive strategy for reducing solo occupant vehicle travel by employees, business vehicles, and visitors.
- Mandatory participation by all companies within the CLIBP, with a responsible point person assigned to represent CLIBP and coordinate with individual businesses.
- A designated TDM representative from each individual business.
- Annual mandatory employee surveys, with a required response of 90 percent of employees. Surveys will identify, at a minimum, mode and time of travel by employees.
- An annual report indicating status of compliance with TDM goals, established by the County.
- Individual companies and the CLIBP TDM organization shall consider the following measures to achieve compliance with TDM goals:
  - Encourage employees to use flex time;
  - Carpool matching programs;
  - Preferred parking for carpoolers;
  - Van pool programs;
  - On-site facilities, such as breakrooms and shower facilities;
  - Employer sponsor shuttles from Turlock and Modesto;
  - On-site secure bicycle racks;
  - Bike share program for employee use at lunchtime; and
  - Other measures

4.2.5 Transportation Goal

The following goals apply to the transportation plan and improvements for CLIBP:

TG 1: Provide primary on-site ("backbone") roadways and make off-site roadway improvements sufficient to serve the projected growth and build-out of the CLIBP Plan Area, and coordinate with Caltrans and the Federal Highway Administration on any roadway or interchange improvements to state or federal highways required by development at the CLIBP.

TG 2: Establish and require businesses within CLIBP to participate in a TDM program designed to: reduce the stress of commuting and travel congestion on the County's roadways; support alternative modes of travel that also enhance the health and well-being of employees; conserve energy and natural resources; and enhance community livability by reducing the pollution and greenhouse gas emissions resulting from single-occupant vehicle use.

4.2.6 Transportation Policies

The following policies apply to the transportation plan and improvements for CLIBP:

TP 1: The construction of on-site backbone roads identified as part of Phase 1 is anticipated to start in the portion of the site between southern CLIBP entrance on Fink Road to the DMC, and construction will expand northward as needed during Plan Area build-out.

TP 2: Two-lane roads listed in Sections 4.2.2 will be rehabilitated to accommodate CLIBP-related traffic and maintain acceptable traffic service levels.

TP 3: Fink Road, W. Ike Crow Road, and Bell Road will be initially rehabilitated with an overlay and striping.

TP 4: Traffic levels of service shall be monitored and improvements shall be implemented prior to deterioration below applicable jurisdictional standards identified in the Stanislaus County General Plan, Circulation Element.

TP 5: Traffic signals will be installed at specified intersections in a timely manner to avoid deterioration of intersection service levels, beginning with the four high-priority locations identified in Section 4.2.2.

TP 6: The County shall work with Caltrans and any other applicable agencies to implement improvements to the Fink Road/I-5 interchange to support CLIBP-related truck traffic, according to the phasing of truck-intensive land uses within the Plan Area.

TP 7: Provisions for trucks shall be incorporated into the design of designated truck routes.

TP 8: A signage system shall be established to direct trucks to the designated truck routes.

TP 9: Interior roads shall be constructed to accommodate the flow of trucks and peak employee traffic. Interior roadway alignments shall be determined as development plans for specific building sites are submitted for approval.

TP 10: Equitable methods shall be established to distribute fair share costs associated with constructing off-site transportation improvements required as a result of regional growth- and CLIBP-related land uses.

TP 11: A Transportation Demand Management Program shall be implemented for CLIBP that includes measures for mandatory participation by all businesses; annual monitoring for compliance with TDM goals; commute and travel options to, from, and at work; incentives for carpooling, transit use, and bicycling; promotion of flexible work schedules; and other measures.

4.3 WATER SUPPLY AND DISTRIBUTION

The Plan Area is located within the Del Puerto Water District, which provides agricultural water supplies and incidental municipal and industrial water deliveries. The majority of the area surrounding the Plan Area relies heavily upon groundwater for agricultural and urban uses, both potable and non-potable. Four active wells are on the CLIBP project site.

As described in greater detail in the *Crows Landing Industrial Business Park Water Supply (Potable & Non-Potable) Infrastructure and Facilities Study* (Appendix G), referred to herein as the Water Supply Study, both potable and non-potable water will be provided by on-site extraction and treatment of groundwater through the use of existing wells and new public wells. The Water Supply Study includes a Groundwater Resources Impact Assessment. As documented in the Water Supply Study, some decline in local groundwater elevations has occurred due to abnormally low rainfall that resulted in increased groundwater pumping, but more recent studies indicate that groundwater elevations are relatively stable over time. Pursuant to state law and County ordinance, the CLIBP project must demonstrate that the new groundwater pumping facilities will not create an unsustainable extraction of groundwater. The County will establish the site baseline conditions prior to project implementation and develop a groundwater monitoring plan that outlines the monitoring well

network and procedures for the groundwater level monitoring program. The extent and frequency of monitoring will be evaluated every five years. Groundwater extracted from new wells will be treated at the wellheads for potable use. Fluctuations in surface water deliveries and the lack of existing entitlements or rights makes the use of surface water infeasible; however, a conjunctive use strategy that incorporates surface water to augment groundwater sources may be considered in the future.

Analyses performed as part of the Water Supply Study indicate that existing wells will be capable of supporting groundwater extraction for non-potable use at their historical annual extraction volumes of 834 acre feet /year (AFY) when pumped year round. If the existing wells fail to supply the assumed volumes, the water supply volume would be supplemented as needed through the installation of new wells of similar construction. Any non-potable water demand in excess of 834 AFY will be supplied using new, on-site shallow aquifer wells. Optimal locations for the new shallow aquifer wells will be selected based on performance of the existing wells, groundwater level monitoring data developed during CLIBP operation, and additional water supply development studies, as needed. Other components of the water supply strategy, including ensuring sustainable groundwater yield, include:

- Shallow groundwater demand in excess of the historical average shallow aquifer extraction rate – 183 AFY at Phase 2 build-out and 489 AFY at Phase 3 build-out – will be offset by an equivalent volume of increased recharge, such that the net groundwater extraction rate from the shallow aquifer does not increase above historical levels. This increased shallow aquifer recharge will be derived from a combination of the following sources:
    - A stormwater pond along the northeastern boundary of the Plan Area will be constructed to detain runoff from Little Salado Creek and allow for groundwater recharge. (See Section 4.5, "Stormwater Management," for details about the stormwater pond.)
    - Developers of individual leaseholds (lots) will be required to meet specified net recharge increase/demand reduction (to be determined) through the implementation of a combination of Low Impact Development (LID) standards that promote on-site stormwater detention and recharge and in-lieu recharge derived from non-potable water demand reduction.

      LID elements for future development may include features such as on-site detention/infiltration basins, rock wells, permeable pavements, street planters, vegetated swales, drainage area disconnection, and other elements that will not create habitat for potentially hazardous wildlife. (See Appendix B design and development standards for streetscape/landscape guidance.) In lieu recharge may be derived from landscape development using xeriscape techniques. It is anticipated that the CLIBP non-potable water demand can be decreased by an additional 200 AFY through the application of these methods.

The CLIBP potable water supply will be developed as follows:

- New water supply wells will be installed into the aquifer at the approximate locations shown in the Water Supply Study. The potable supply wells will be constructed to pump water from the full usable depth of this aquifer.
- Groundwater extracted from the aquifer for potable use will be treated to meet applicable water quality standards.

CLIBP water demand projections were developed based on the total acreage of developable area within the Plan Area and a total water rate of 2,500 gallons per day/acre (gpd/ac), from the SCDPW. The SCDPW estimates that the potable water necessary to meet CLIBP demand will be 60 percent of the total water demand and the non-potable water demand for fire protection and irrigation uses makes up the remaining 40 percent. The projected average daily demand for the CLIBP at build-out is 2.5 million gpd (1.34 million gpd potable and 1.18 million gpd non-potable), which equates to approximately 1,501 AFY of potable water and 1,322 AFY of non-potable water. Actual demands may vary somewhat from the projections based on factors such as the types of industry developed, density, employees per acre, conservation, or other factors. However, land uses that include intensive water uses are not permitted on site. Non-potable water may be utilized for irrigation and fire protection, which will significantly reduce water treatment costs required to achieve drinking water standards. While providing potential flood and groundwater quality protection, the LID standards incorporated into site development, such as vegetated swales and infiltration planters along roadways, will also promote stormwater detention and on-site irrigation use.

4.3.1 Water System Plan

CLIBP build-out will require approximately 2.71 million gallons (MG) of potable water storage and 0.72 MG of non-potable water storage. Three alternatives were identified to supply water to CLIBP, with each alternative assumed to provide the same supply capacity. Based on these water storage requirements, it is estimated that a total of four water storage tanks (three for potable water and one for non-potable water) will be required in the Plan Area. A water plant at the southeast corner of CLIBP at the juncture of Fink and Bell Roads is common to all three alternatives. Both potable and non-potable water piping systems have been shown for each alternative. Non-potable water may or may not be split out after water is piped to the water plant. A split of non-potable from potable water supplies would occur if water treatment is required for potable water or there is a need by the County for piping facilities to accept non-potable water from other sources (e.g., use of highly treated reclaimed water). Each of the three alternatives also envisions using two or more wells in each phase to:

- ensure reliability in supply (redundancy in the event a well should fail in the first phase or water quality should drop in a well); and
- provide more flexibility during operations to minimize and better control aquifer drawdown if project-related subsidence effects are believed to be occurring.

In addition, compliance with acceptable potable water standards can be very expensive and can sometimes require the use of reverse osmosis (RO) and/or blending to achieve allowable levels.

Section 4.3.2 describes the alternatives for the anticipated development or improvement of infrastructure to facilitate CLIBP build-out as envisioned in three 10-year phases. However, the timing of proposed water system improvements may be subject to change based on the needs of site users and timing/location of proposed on-site development.

4.3.2 Water Supply and Distribution System

The County will explore three alternatives and select a preferred alternative prior to initiation of Phase 1:

- Option 1: extending the Crows Landing Community Services District (CSD) service area to include the CLIBP to enable the development of a shared water system under the CSD's existing drinking water supply permit;

- Option 2: Obtaining a new water supply permit to enable the County to develop a standalone water supply for the CLIBP, or
- Option 3: extending the City of Patterson's water service area to include the CLIBP under its existing drinking water supply permit.

Option 1

Under Option 1, the County would combine the water supply at the CLIBP with the water supply from the Crow's Landing Community Service District (CLCSD) by extending the CLCSD service area along Fink road to include the CLIBP site (Figure 4-4~~3~~). A combined water supply system would provide the following benefits:

- Provide blended water for improved water quality. Blending the waters from each area could reduce the chemical concentrations of concern associated with each area to produce good quality drinking water and potentially reduce or eliminate the need for treatment. (Refer to the E-PUR Technical Memorandum, CLIBP Water Supply Alternatives for Consideration (October 24, 2017), which is appended to this document as Appendix C of Appendix G, CLIBP Water Supply (Potable & Non-Potable) Infrastructure and Facilities Study.)
- Provide a single, consolidated single water system. A consolidated water system could provide efficiency in administration, operation, and maintenance; enable the County able to obtain state grant funding for water meters more easily; allow for the use of a tiered rate structure to make water more affordable to residential customers; and provide additional reserve funds for capital planning and system maintenance, to minimize service disruptions.

The raw water transmission system and the potable and non-potable water pipe system, wells, and storage tanks associated with Option 1 are illustrated in Figures 4-4~~3~~ through 4-7~~6~~ and summarized by phase below.

Phase 1

Backbone infrastructure constructed during Phase 1 will include the development of a raw water supply system from two existing wells at the CSD, which would be conveyed through a pipeline to the CLIBP (Figure 4-5~~4~~). Potable and non-potable water would be delivered to the Fink Road Corridor during Phase 1A and to the airport, southern Public Facilities Area, and Bell Road Corridor during Phase 1B (Figure 4-6~~5~~).

- Phase 1A: Potable water improvements include a water treatment system plant and potable water storage tank (1.19 MG) and booster pump (BP) station at the corner of Bell Road and Fink Road; two water wells and wellhead treatment system (indicated by red triangles) in the northern part of the Plan Area to supply water to both the potable and non-potable water tanks; and distribution pipes and valves (Figure 4-6~~5~~). Non-potable water infrastructure improvements include distribution pipes, valves, and fire hydrants, and a non-potable water storage tank (0.72 MG) (Figure 4-7~~6~~). Two existing wells at the CLCSD would provide additional water, which would be conveyed through a water supply pipeline along Fink Road.
- Phase 1B: Construction of backbone infrastructure for potable water is limited to distribution piping and valves for service to the Bell Road Corridor, airport, and southern Public Facilities Area (Figure

4-6~~5~~). Non-potable water infrastructure improvements include distribution pipes, valves, and fire hydrants (Figure 4-7~~6~~).[2]

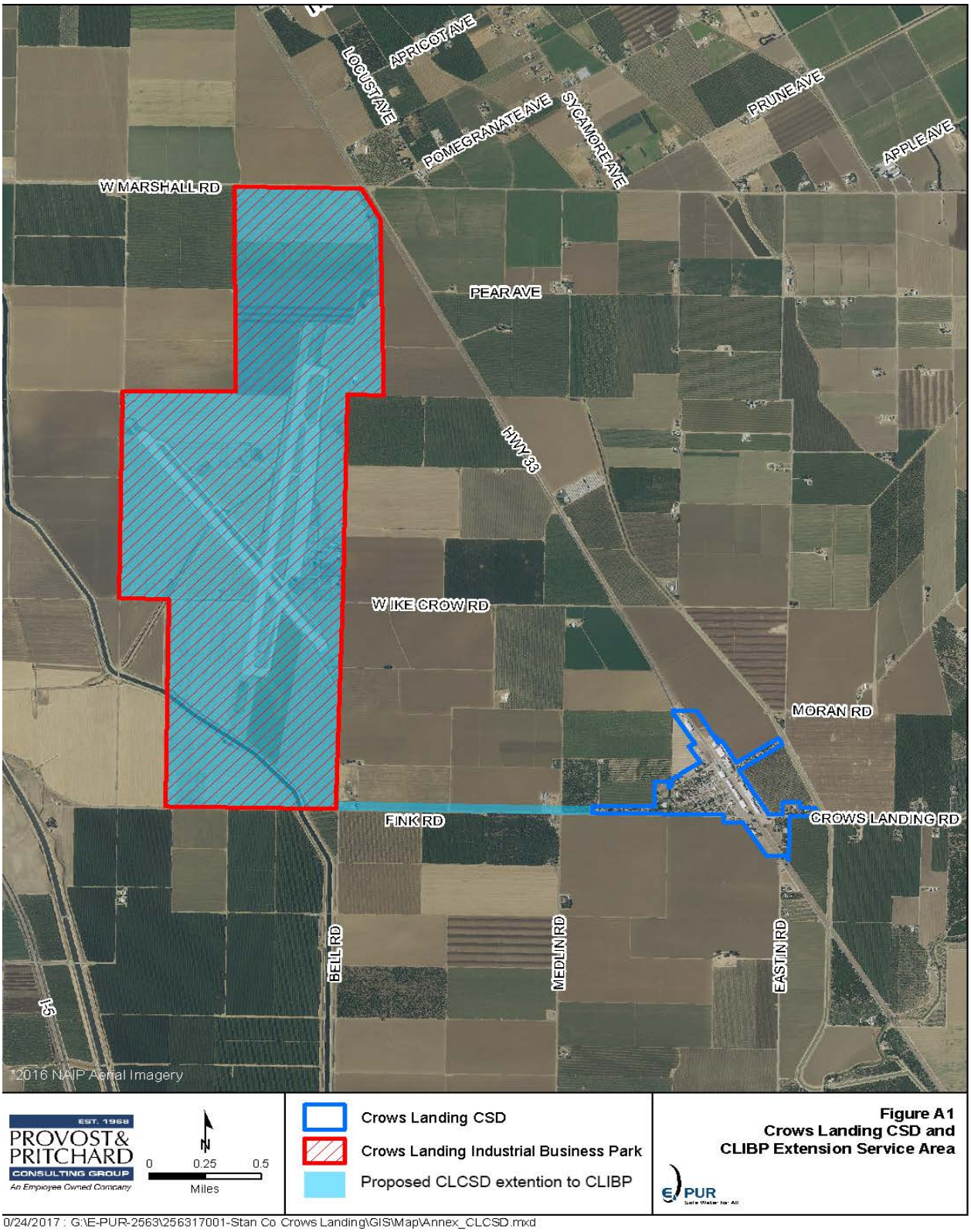
Phase 2

Construction of Phase 2 infrastructure includes the extension of raw water transmission lines from the wells and storage tanks to the raw water transmission lines and water treatment plant installed in Phase 1 (Figure 4-5~~4~~). Potable water infrastructure includes a potable water storage tank, Tank 2B (1.52 MG), and a BP station at the northern part of the Specific Plan Area, two new water wells and wellhead treatment system (as indicated by the blue triangles) also located in the northern part of the Specific Plan Area to supply water to both the potable and non-potable water systems, and distribution pipes and valves (Figure 4-6~~5~~). Non-potable water infrastructure required for Phase 2 is primarily limited to distribution pipes, valves, and fire hydrants, with connections to the non-potable water tank and raw water transmission line in Bell Road (Figure 4-7~~6~~).

Phase 3

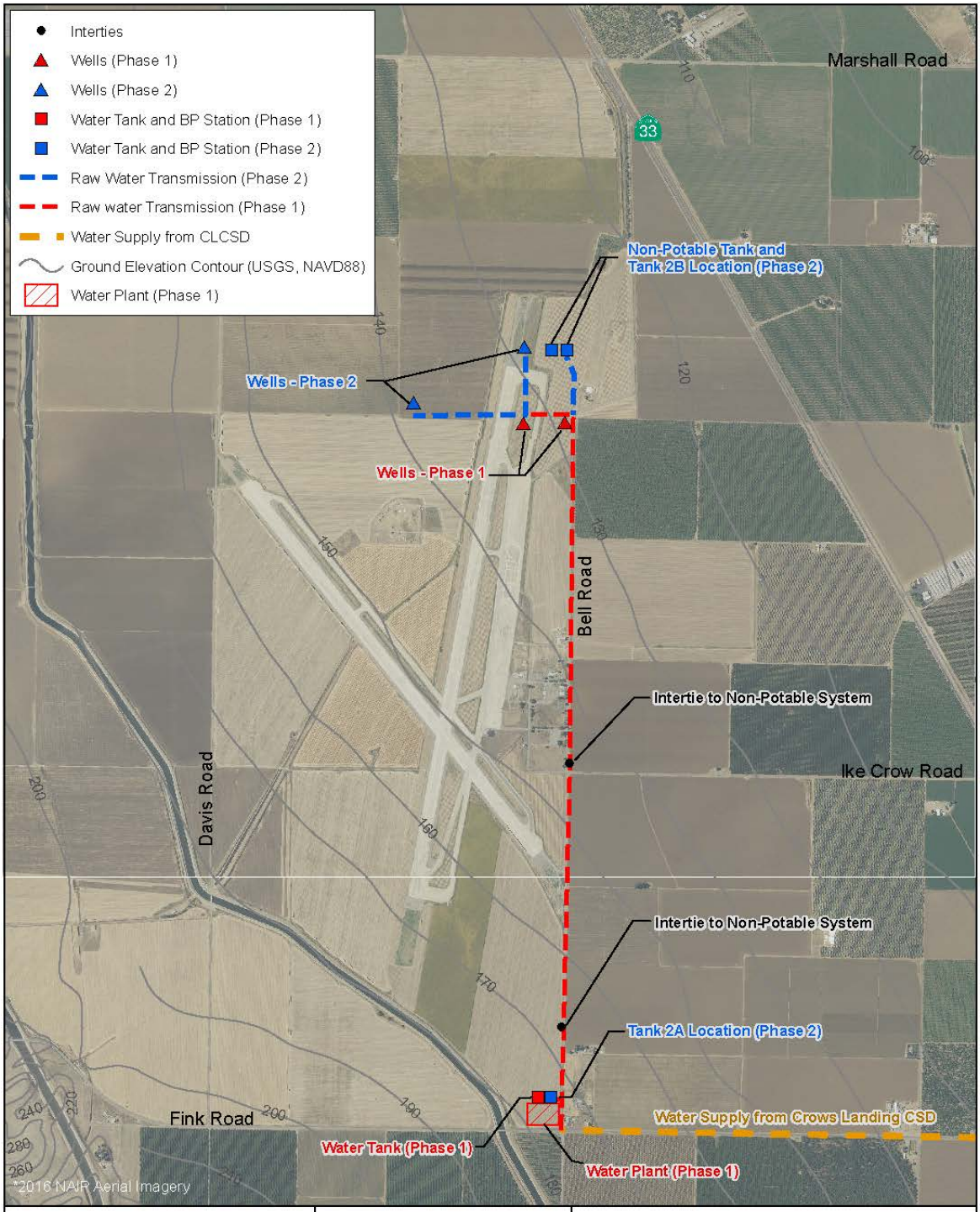
Phase 3 infrastructure improvements for potable water service to the Phase 3 areas south of W. Marshall Road includes distribution pipes and valves (Figure 4-6~~5~~). Non-potable water infrastructure required for Phase 3 includes distribution pipes, valves, and fire hydrants (Figure 4-7~~6~~).

[2] Figures 4-6~~5~~ and 4-7~~6~~ do not break down Phase 1 into sub-phases "A" and "B."



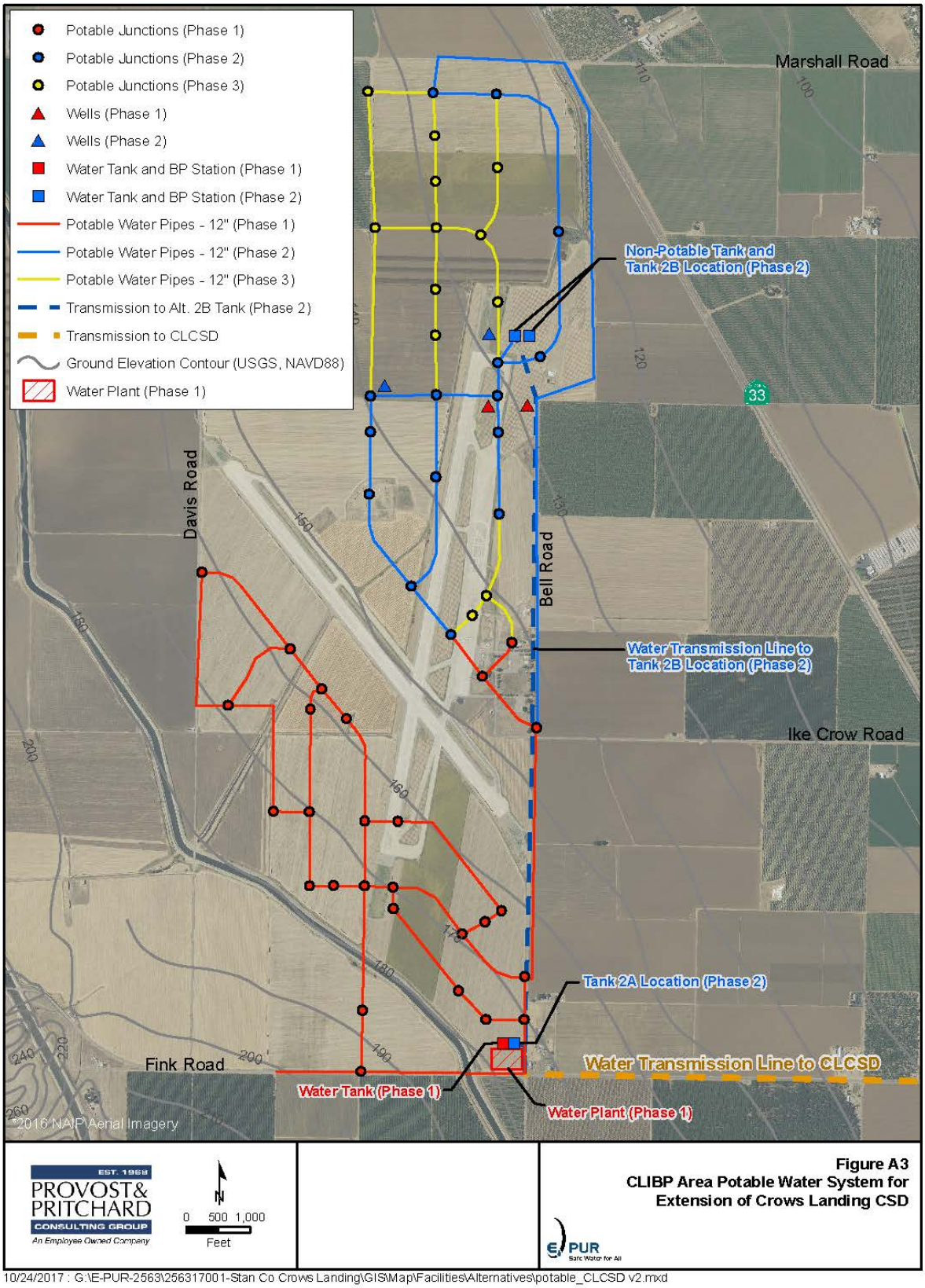
Source: E-PUR, Provost & Pritchard 2017

Figure 4-~~4~~3: Alternative A – Crows Landing CSD Water Supply



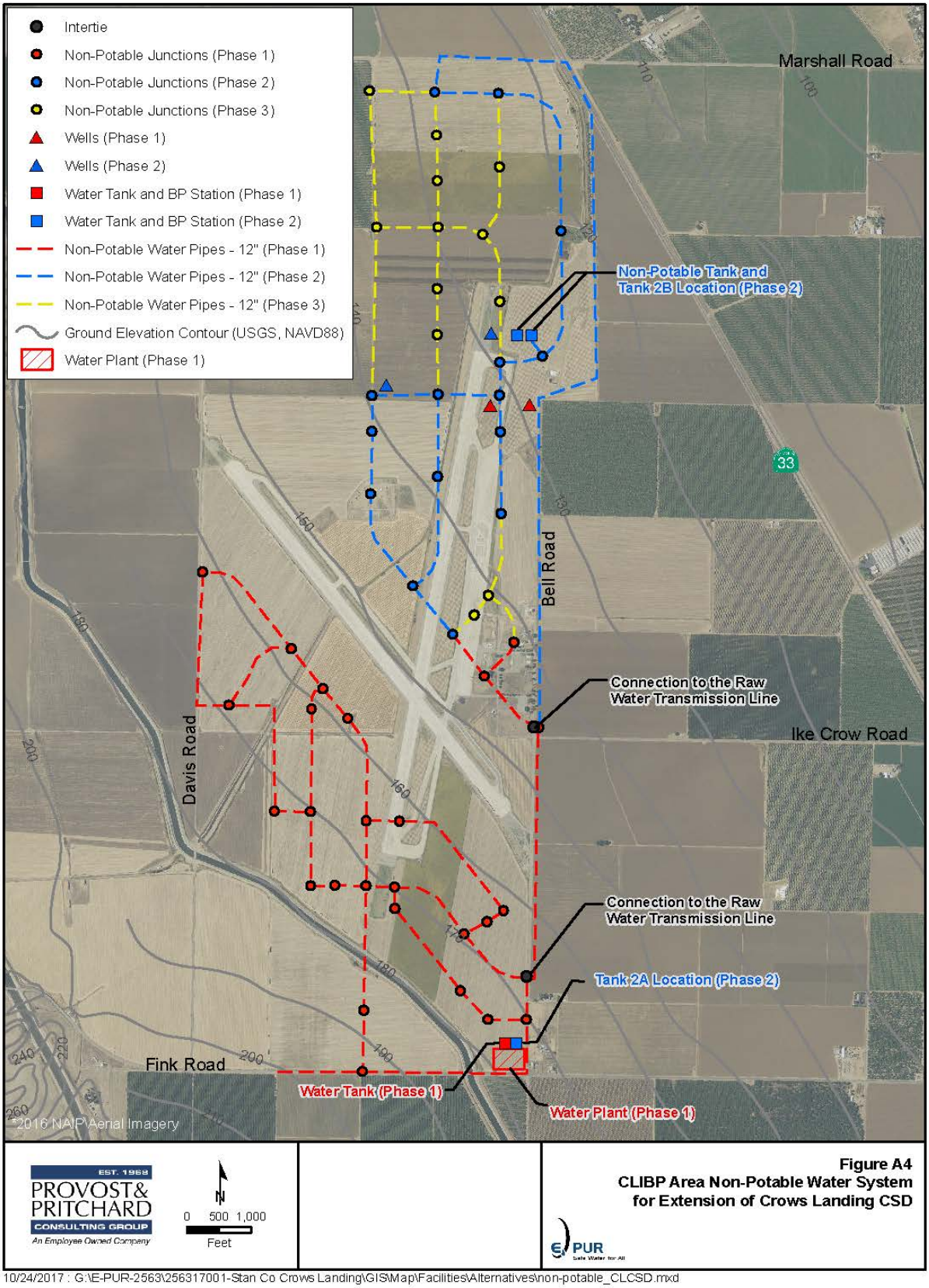
Source: E-PUR, Provost & Pritchard 2017

Figure 4-~~5~~4: Alternative A CLIBP Raw Water System



Source: E-PUR, Provost & Pritchard 2017

Figure 4-~~6~~5: Alternative A CLIBP Potable Water System



Source: E-PUR, Provost & Pritchard 2017

Figure 4-76: Alternative A CLIBP Non-Potable Water System

Option 2

Under Option 2, the County would provide a standalone water supply the CLIBP by undertaking all steps necessary to obtain a new drinking water permit to CLIBP, including the performance of valuations of nearby CLCSD and City of Patterson systems (Figure 4-8~~7~~). The raw water transmission system and the potable- and non-potable water pipe system, wells, and storage tanks for Alterative B are illustrated in Figures 4-9~~8~~ through 4-~~10~~11 and summarized by phase below.

Phase 1

Backbone infrastructure constructed during Phase 1 would include the installation of two new wells and a raw water transmission line that would supply potable and non-potable water tanks and a new water treatment plant near the intersection of Bell Road and Fink Road (Figure 4-9~~8~~). Potable and non-potable water would be delivered to the Fink Road Corridor during Phase 1A and to the airport, southern Public Facilities Area, and Bell Road Corridor in Phase 1B.

- Phase 1A: Potable water improvements includes a water treatment system plant, potable water storage tank (1.19 MG), and booster pump (BP) station at the corner of Bell Road and Fink Road; two water wells and wellhead treatment system (indicated by red triangles) in the northern part of the Plan Area to supply water to both the potable and non-potable water tanks; and distribution pipes and valves (Figure 4-10~~9~~). Non-potable water infrastructure improvements include distribution pipes, valves, and a non-potable water storage tank (0.72 MG) (Figure 4-11~~0~~).

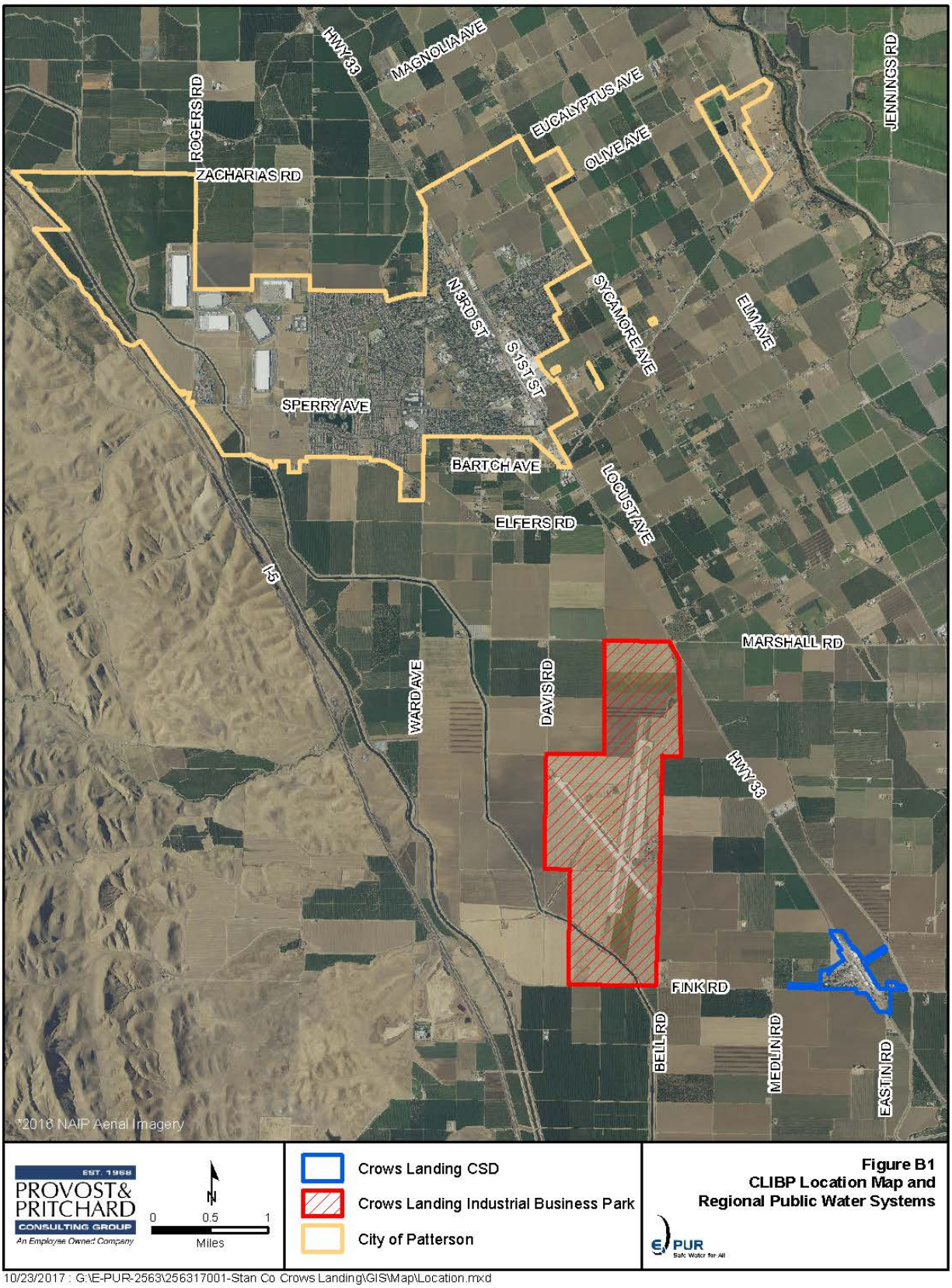
- Phase 1B: Construction of backbone infrastructure for potable water is limited to distribution piping and valves for service to the Bell Road Corridor, airport, and southern Public Facilities Area (Figure 4-10~~9~~). Non-potable water infrastructure improvements include distribution pipes, valves, and fire hydrants (Figure 4-11~~0~~).

Phase 2

Construction of Phase 2 infrastructure includes the extension of raw water transmission lines from the new wells and storage tanks to the raw water transmission lines and water treatment plant installed during Phase 1 (Figure 4-9~~8~~). New potable water infrastructure include a potable water storage tank (1.52 MG), Tank 2B, and a BP station at the northern part of the Specific Plan Area, two new water wells and wellhead treatment system (as indicated by the blue triangles) also located in the northern part of the Specific Plan Area, supplying water to both the potable and non-potable water systems, and distribution pipes and valves (Figure 4-10~~9~~). Non-potable water infrastructure required for Phase 2 is limited primarily to distribution pipes, valves, and fire hydrants, with connections to the non-potable water tank and raw water transmission line in Bell Road (Figure 4-~~10~~11).

Phase 3

Phase 3 infrastructure improvements for potable water service to the Phase 3 areas south of W. Marshall Road includes distribution pipes and valves (Figure 4-10~~9~~). Non-potable water infrastructure required for Phase 3 includes distribution pipes, valves, and fire hydrants (Figure 4-11~~0~~).



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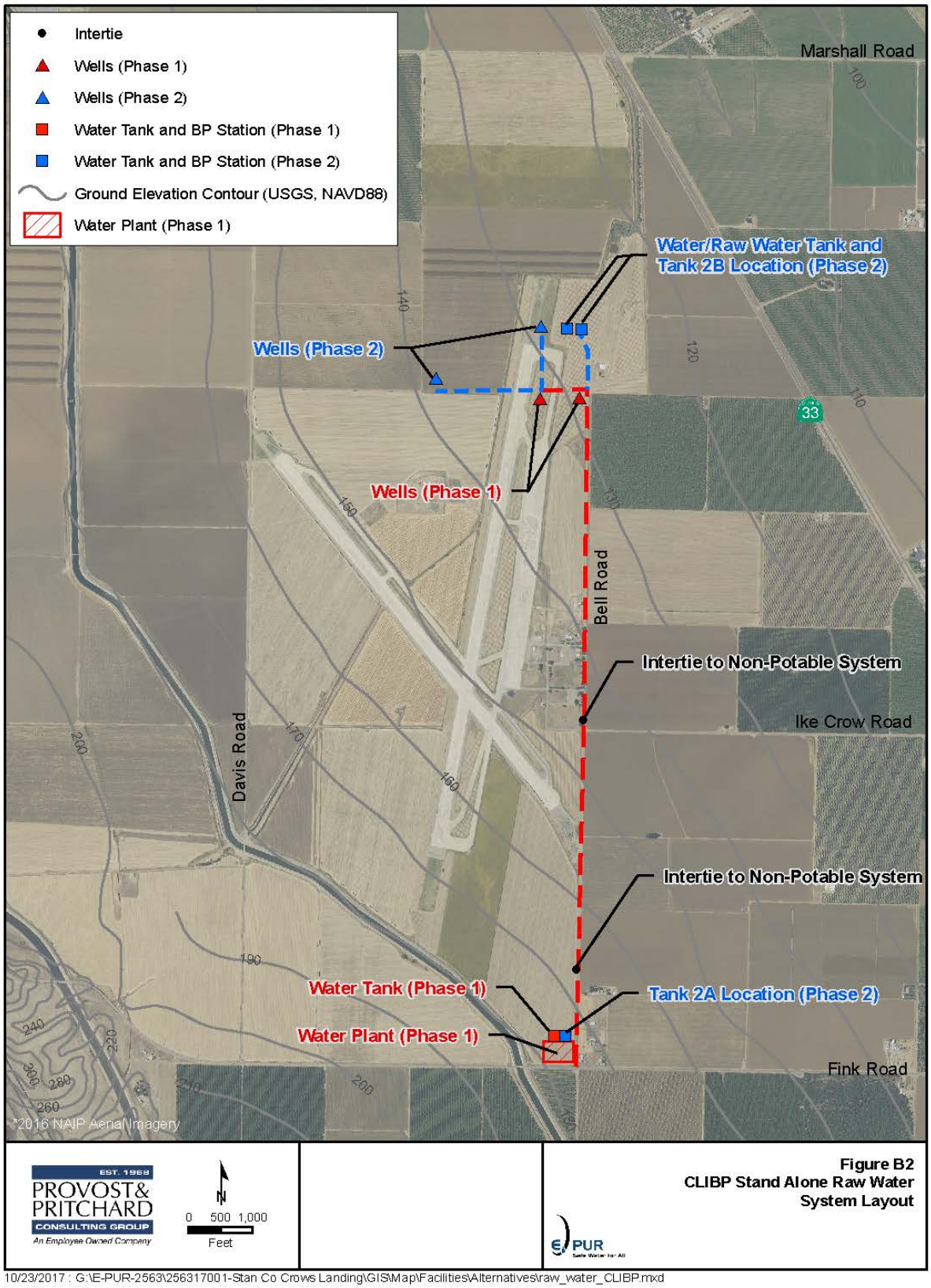
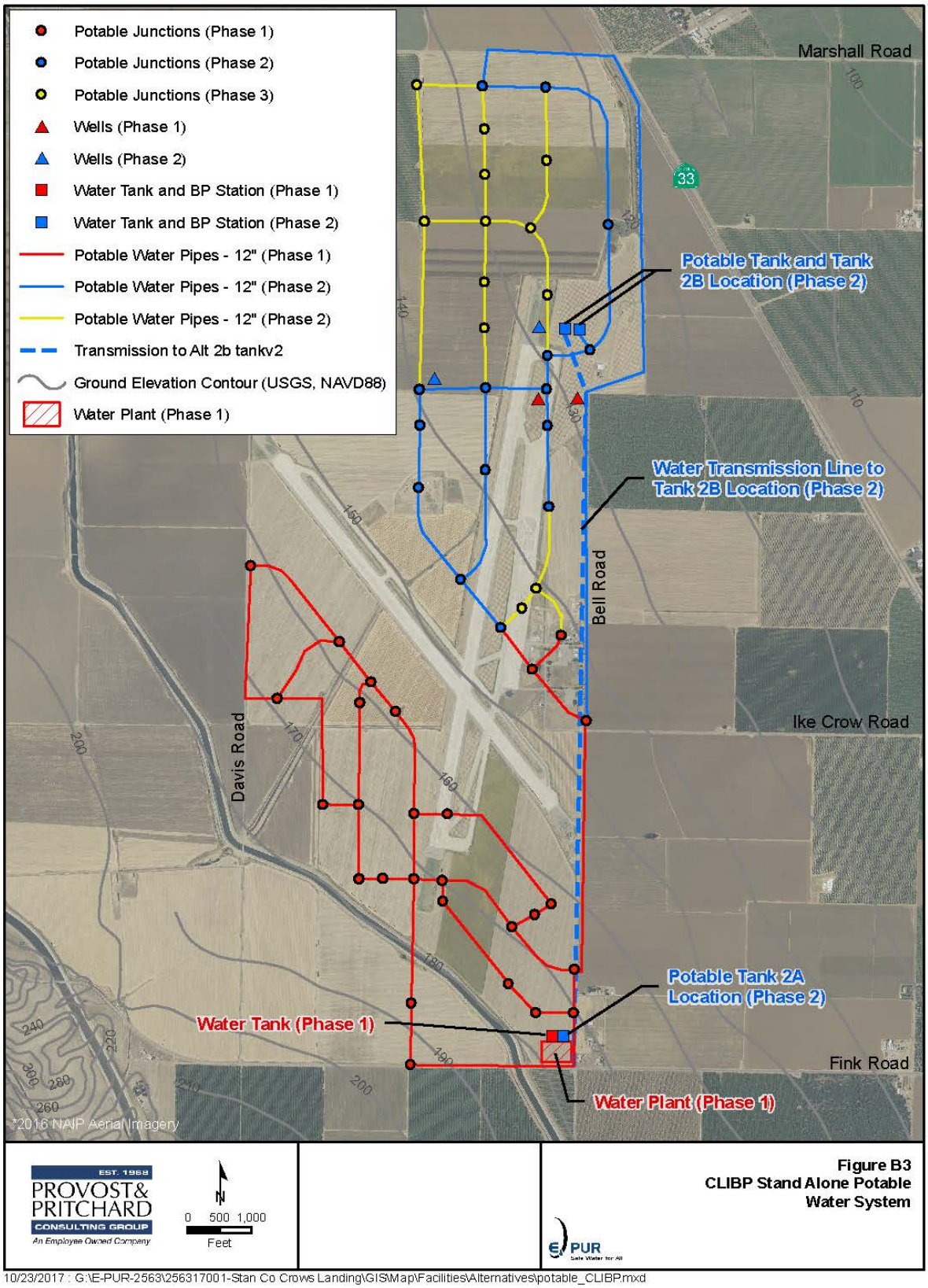
Source: E-PUR, Provost & Pritchard 2017

Figure 4-8~~7~~: Alternative B – Stand Alone Water Supply for CLIBP



Source: E-PUR, Provost & Pritchard 2017

Figure 4-~~9~~8: Alternative B CLIBP Raw Water System



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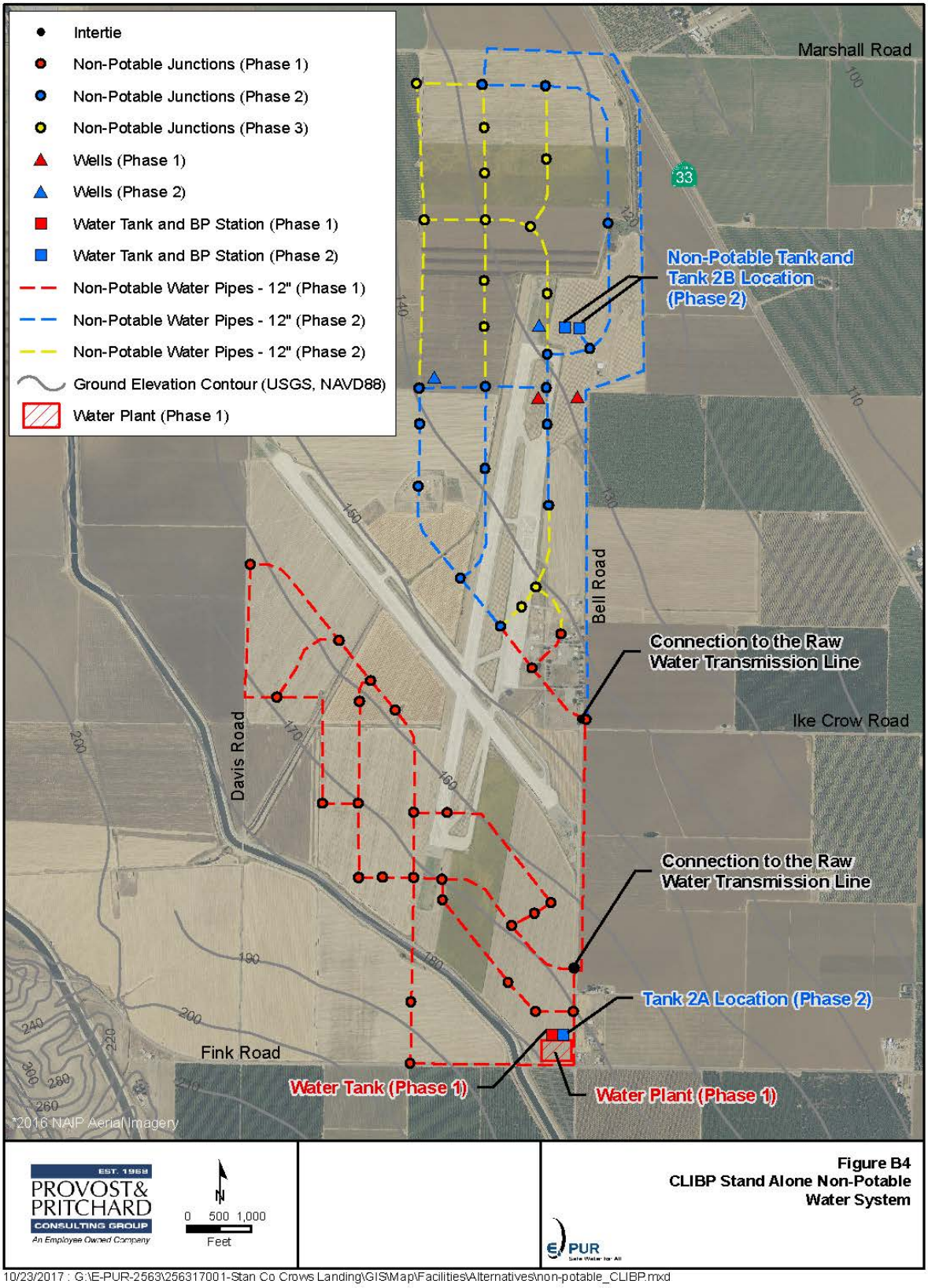
Source: E-PUR, Provost & Pritchard 2017

Figure 4-10~~9~~: Alternative B CLIBP Potable Water System



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Source: E-PUR, Provost & Pritchard 2017

Figure 4-1~~0~~: Alternative B CLIBP Non-potable Water System

Option 3

Based on discussion with the City of Patterson, there is inadequate capacity to supply the CLIBP with potable water, and the City's recently updated Water Master Plan does not provide for an extension of water service to the CLIBP.. Under Option 3, the County will drill and install a series of groundwater potable water supply wells at the CLIBP to provide the required water supply capacity for the project and install an interconnecting water supply pipeline between the CLIBP and current Patterson service area to provide additional water service reliability (Figure 4-124). The raw water transmission system, potable and non-potable water pipe system, wells, and storage tanks for Alterative C, are illustrated in Figures 4-132 through 4-154 and summarized by phase below.

Phase 1

Backbone infrastructure constructed during Phase 1 will include two new wells and a raw water transmission line that will supply water to potable and non-potable water tanks and the water treatment plant proposed near the intersection of Bell Road and Fink Road (Figure 4-132). Potable and non-potable water will be delivered to the Fink Road Corridor during Phase 1A and to the airport, southern Public Facilities Area, and Bell Road Corridor in Phase 1B.

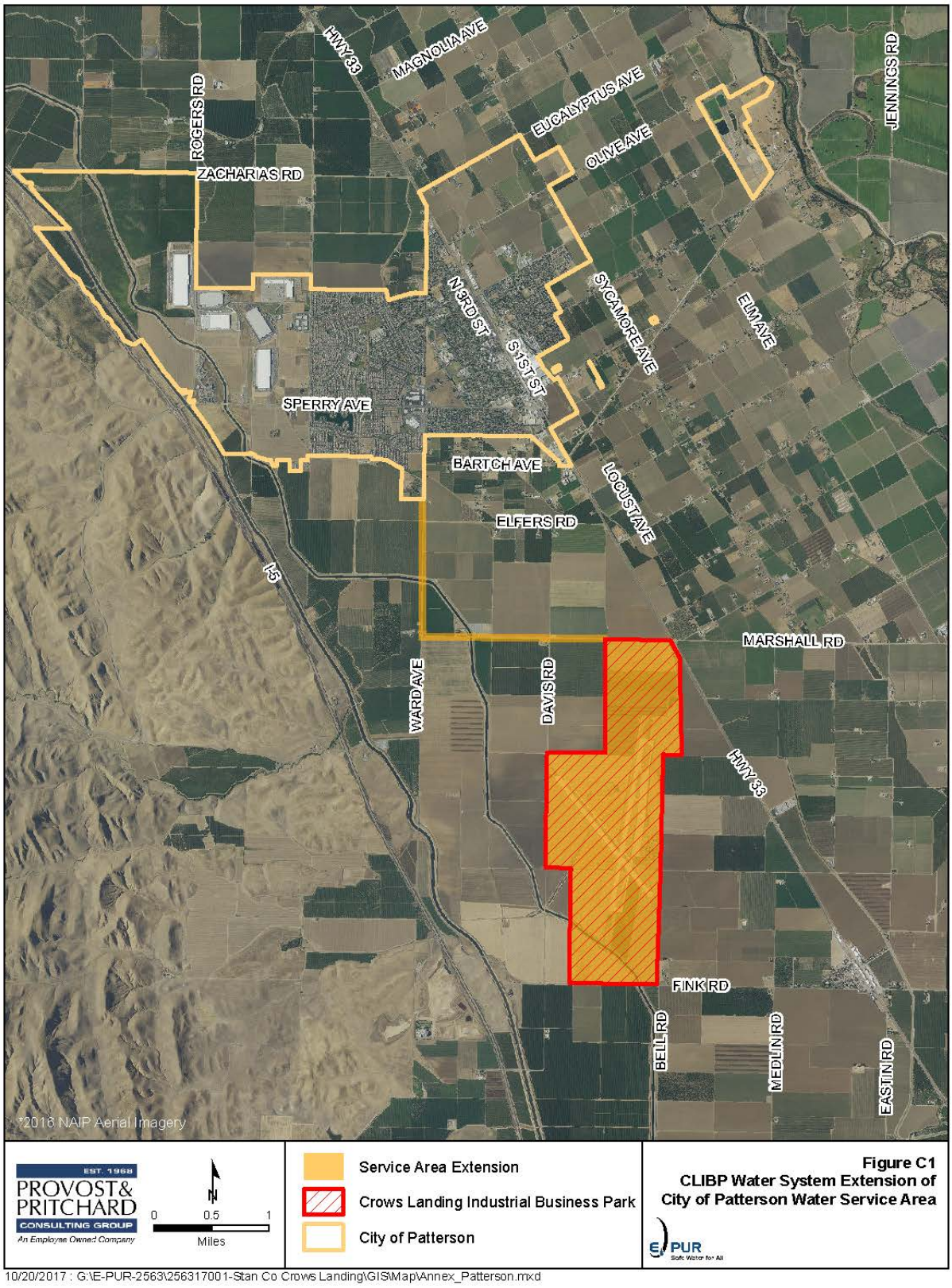
- Phase 1A: Potable water improvements include a water treatment system plant, potable water storage tank (1.19 MG), and booster pump (BP) station at the corner of Bell Road and Fink Road; two water wells and wellhead treatment system (indicated by red triangles) in the northern part of the Plan Area to supply water to both the potable and non-potable water tanks; and distribution pipes and valves (Figure 4-143). Non-potable water infrastructure improvements include distribution pipes, valves, and fire hydrants, and a non-potable water storage tank (0.72 MG) (Figure 4-154).
- Phase 1B: Backbone infrastructure for potable water is limited to distribution piping and valves for service to the Bell Road Corridor, airport, and southern Public Facilities Area (Figure 4-143). Non-potable water infrastructure improvements include distribution pipes, valves, and fire hydrants (Figure 4-154).

Phase 2

Construction of Phase 2 infrastructure includes the extension of raw water transmission lines from the wells and storage tanks to the raw water transmission lines and water treatment plant installed in Phase 1 (Figure 4-132). Potable water infrastructure includes a potable water storage tank (1.52 MG), Tank 2B, and a BP station at the northern part of the Specific Plan Area; two new water wells and wellhead treatment system (as indicated by the blue triangles) also located in the northern part of the Specific Plan Area, supplying water to both the potable and non-potable water systems; and distribution pipes and valves (Figure 4-143). Non-potable water infrastructure required for Phase 2 is primarily limited to distribution pipes, valves, and fire hydrants, with connections to the non-potable water tank and raw water transmission line in Bell Road (Figure 4-154). Additional water supply would come from the City of Patterson and conveyed through a water supply pipeline located along Marshall Road and Ward Avenue.

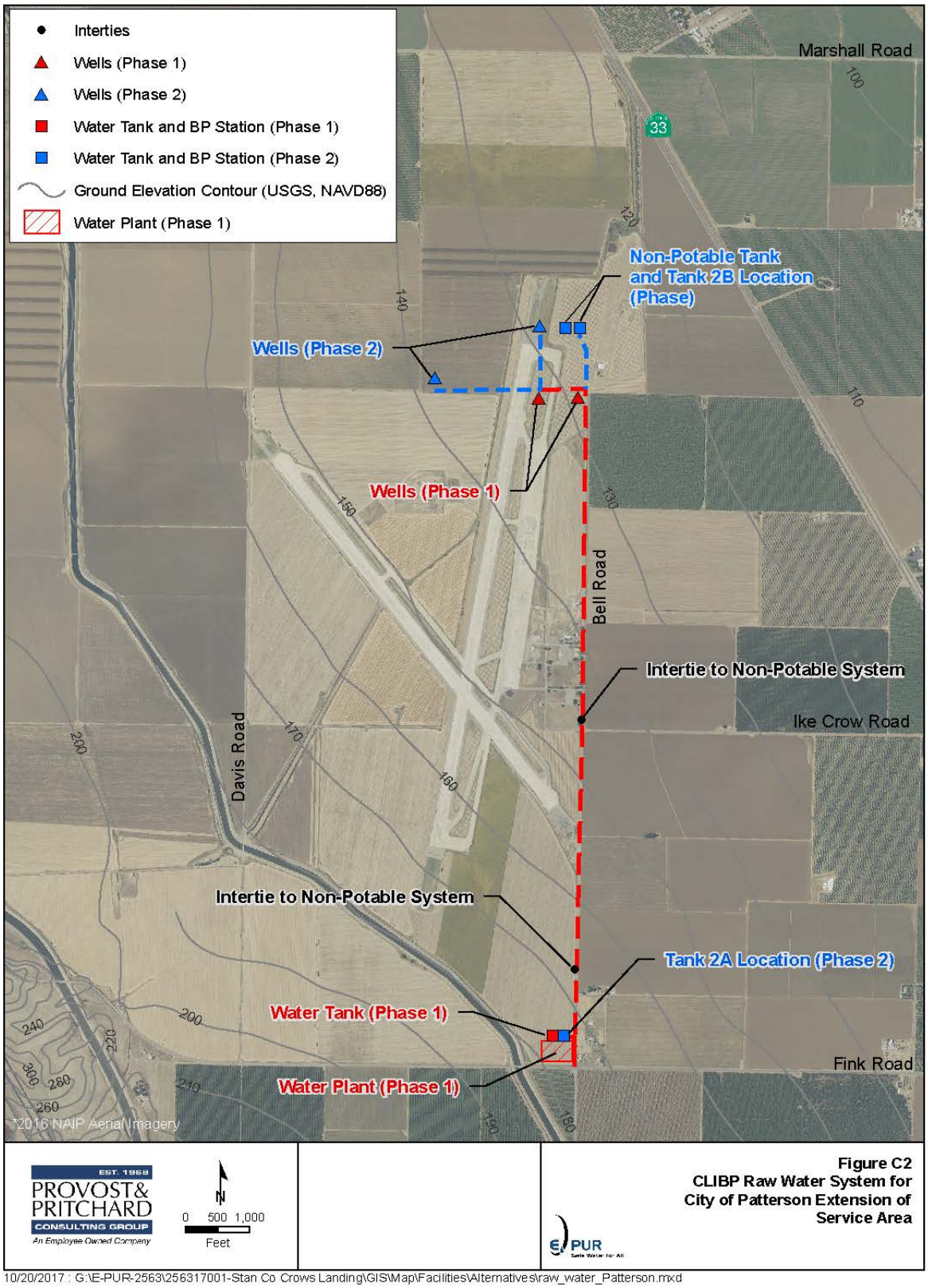
Phase 3

Phase 3 infrastructure improvements for potable water service to the Phase 3 areas south of W. Marshall Road includes distribution pipes and valves (Figure 4-143). Non-potable water infrastructure required for Phase 3 includes distribution pipes, valves, and fire hydrants (Figure 4-154).



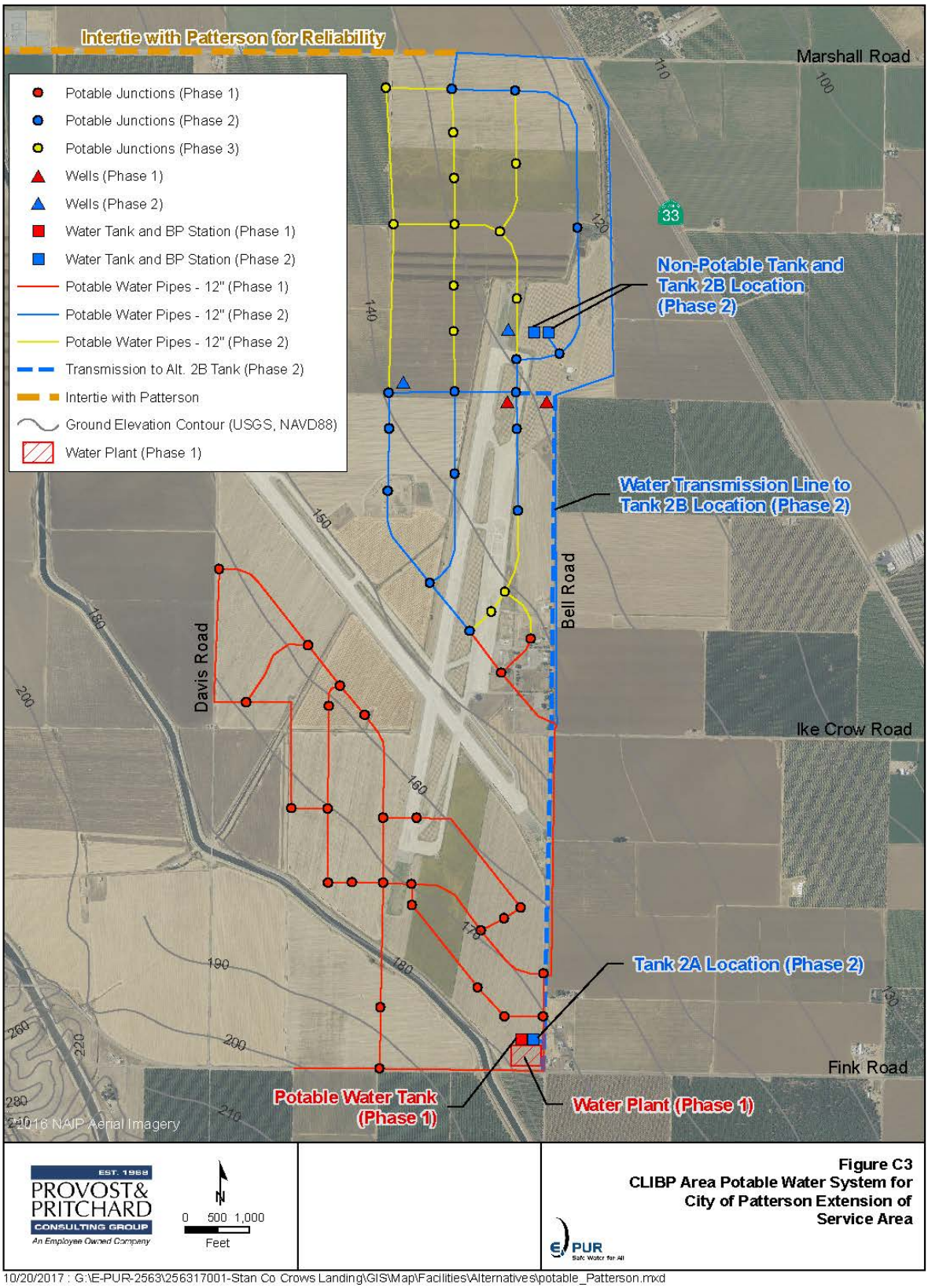
Source: E-PUR, Provost & Pritchard 2017

Figure 4-12~~4~~: Alternative C – Extension to CLIBP from the City of Patterson



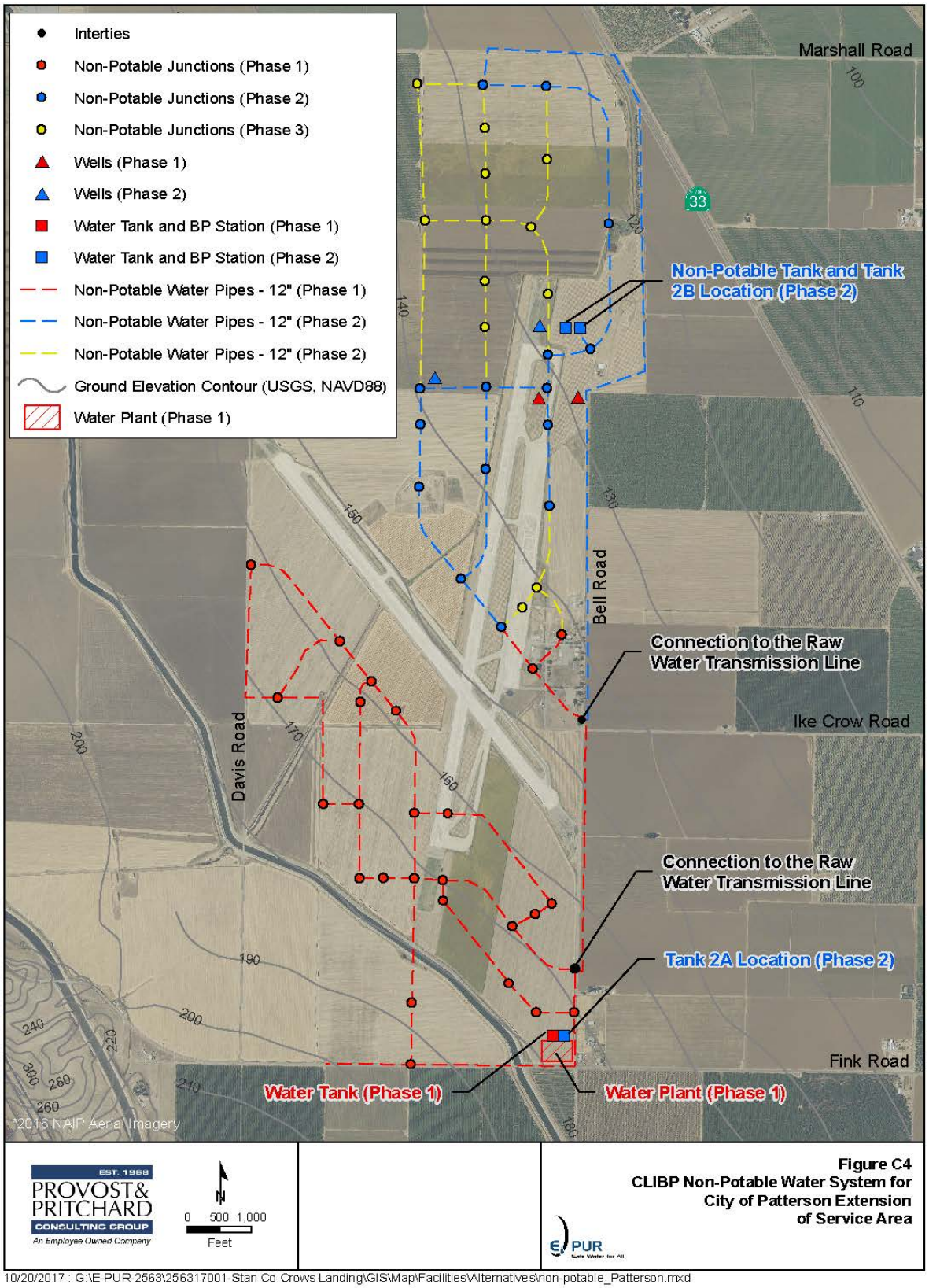
Source: E-PUR, Provost & Pritchard 2017

Figure 4-1~~3~~2: Alternative C CLIBP Raw Water System



Source: E-PUR, Provost & Pritchard 2017

Figure 4-1~~4~~2: Alternative C CLIBP Potable Water System



Source: E-PUR, Provost & Pritchard 2017

Figure 4-154: Alternative C CLIBP Non-Potable Water System

4.3.3 Water System Goals

The following goals apply to CLIBP on-site water supply and distribution system improvements:

WG 1: Provide a water supply and distribution system that is sufficient to serve the projected build-out of the CLIBP Plan Area; if feasible, does not rely on water supply from other providers; and results in sustainable groundwater extraction.

WG 2: Identify baseline conditions and develop a groundwater-monitoring plan prior to CLIBP project implementation.

4.3.4 Water System Policies

The following polices apply to CLIBP on-site water supply and distribution system improvements:

WP 1: Initial water system infrastructure shall be constructed to provide water supply to the Fink Road Corridor and extends to the Bell Road Corridor, airport, and southern portion of the Public Facilities Area.

WP 2: Water conservation shall be encouraged in industrial processes by making reclaimed wastewater available for cooling and other industrial use in the Plan Area.

WP 3: Water conservation methods shall be incorporated into site and streetscape landscaping. Potable water will be restricted from use in site landscaping and streetscape landscaping.

WP 4: Groundwater for potable and non-potable use shall result in a sustainable yield through both water conservation and groundwater recharge measures, such as:

- Compliance with state and County conservation requirements for potable water use;
- Requirement for climate-appropriate landscaping in both the public and private realms that reduces applied water to the greatest extent feasible once plants are established; and
- Construction of naturalized stormwater management systems (e.g., natural swales, improved/restored creekways, and detention areas) that maximize opportunities for groundwater recharge without creating potential wildlife hazards to aircraft operations.

WP 5: Placement and design of above ground water systems (such as tanks and water plant) shall enhance the overall project design through use of setbacks and landscaping to scale the systems with surrounding development.

4.4 WASTEWATER COLLECTION AND TREATMENT

Although remnants of a sewage storage and treatment system are located within the CLIBP Plan Area, the system is inadequate for Plan Area wastewater collection and treatment. The County's preferred strategy is for the CLIBP to connect to the Western Hills Water District (WHWD) sanitary sewer effluent conveyance system, which will transport CLIBP effluent to the City of Patterson's wastewater conveyance system for treatment at the City of Patterson Water Quality Control Facility (WQCF).

4.4.1 Wastewater Collection System Plan

Although the Specific Plan proposes to transport CLIBP effluent to the City of Patterson's wastewater conveyance system for treatment, in the event that the County determines this option is infeasible, the County will develop a plan to provide on-site wastewater treatment through a package treatment plant system that can be expanded as development of each project phase proceeds. The specific on-site septic system facilities option selected by the County will meet Stanislaus County's Guidelines for Septic System Design.[3]

A package treatment plant system can accommodate the wastewater discharge from multiple lots or different buildings on the same lot and can potentially include tertiary treatment. "Specific on-site septic system facilities" are individual onsite wastewater treatment systems (OWTS) developed for a building or lot. This type of system would treat effluent only to a primary and secondary level.

At the time of preparation of this Specific Plan, the County cannot determine which type of system will be necessary for any specific development within the Specific Plan area. Soil composition and size, use, and occupancy of buildings/lots (among other factors) would determine the size and type of system needed. A system that treats industrial waste would also need to comply with different requirements and permitting/ oversight of the Central Valley Regional Water Quality Control Board (RWQCB).

According to a Technical Memorandum prepared by Blackwater Engineering, Potential Impacts to Patterson Wastewater Facilities from Crows Landing Industrial Business Park (August 25, 2017), the City of Patterson's existing wastewater collection system does not have sufficient capacity to accept CLIBP Phase 1 flows and accommodate known potential developments in the City. of Patterson. Flows to the Patterson WQCF are projected to exceed the existing reliable capacity of 1.85 mgd ADWF within the next five years. The process for design, permitting, and construction for expansion of the WQCF could take up to 12 years total. Depending on timing of development in Phases 1 and 2, the County may need to construct a temporary on-site septic system (temporary package treatment plant or other suitable option) to handle wastewater needs for part, or all, of Phase 1 and part of Phase 2. The County could subsequently connect to Patterson's system. However, the following improvements to the collection system can be implemented to increase capacity in the existing system to accept CLIBP Phase 1 flows.

a. Replacing pipe segment E5-6:E5:5 on M Street, as previously identified in the WWMP.

b. Upsizing of approximately 1,300 feet of 21-inch pipe in Ward Avenue.

The following sections identify the anticipated development or improvement of infrastructure to facilitate CLIBP build-out as envisioned in three 10-year phases. However, the timing of proposed wastewater collection system improvements may be subject to change based on the needs of site users and

[3] A package treatment plant is a pre-manufactured facility to treat wastewater in small communities or on individual properties.

timing/location of proposed on-site development. Phasing of the wastewater collection system will coincide with on-site roadway construction and phasing of development to supply adequate services.

4.4.2 Wastewater Collection System

Service to the City of Patterson

Phase 1

Backbone infrastructure constructed during Phase 1 will include a wastewater collection system for the Fink Road Corridor during Phase 1A and for the airport, southern Public Facilities Area, and Bell Road Corridor in Phase 1B.

- Phase 1A: Construction of backbone infrastructure, includes:
    - Gravity trunk main;
    - 2.70-MGD sanitary sewer lift station southwest of the W. Marshall Road and SR 33 intersection;
    - 0.32-MGD sanitary sewer lift station south of the airport near the DMC;
    - A force main within W. Marshall Road to convey effluent to the existing WHWD trunk main in Ward Avenue;
    - Tunneled crossing of the DMC south of the airport;
    - Replacement of pipe segment: E5-6:E5:5 on M Street in the City of Patterson; and
    - Upsizing the existing 21-inch sections of the Ward Avenue trunk sewer to 24-inches to accommodate potential growth in Patterson and CLIBP Phase 1 flows.

  Construction of the Phase 1A gravity trunk main system includes installation of lines with pipes ranging from 8 inches to 18 inches in diameter and manholes. The gravity trunk mains and the lift stations to be constructed in Phase 1A are sized to accommodate ultimate expansion within the Plan Area and the force main constructed in Phase 1A is sized to accommodate effluent from all phases. The County may allow leaseholders/tenants initiating development during Phase 1 to use new on-site septic systems (packaged wastewater treatment facility) until the permanent sewer system and connection to the City of Patterson WQCF has been completed for their area. The specific on-site septic system facilities will meet Stanislaus County's Guidelines for Septic System Design. Permanent on-site facilities are anticipated to serve development during part or all of Phase 1A.

  During Phase 1A, the County will convey the CLIBP sewer flows from Phase 1A development to the WHWD Ward Ave. trunk line down to the City of Patterson Ward Ave. trunk line, which flows to the City of Patterson's WQCF.

- Phase 1B: Construction of backbone infrastructure for wastewater improvements are limited to collection system piping ranging from 8-inches to 15-inches in diameter and manholes. During Phase 1B, the County will tie in to the Phase 1A corridor sanitary sewer infrastructure to convey the combined Phase 1A and Phase 1B CLIBP sewer flows to the WHWD Ward Ave. trunk.

Phase 2

Construction of Phase 2 infrastructure for wastewater service includes installation of gravity trunk mains to connect to existing sanitary sewer infrastructure constructed in Phase 1, with pipes ranging from 8 inches to 12 inches in diameter and manholes, removal of the temporary connection to the WHWD's sanitary sewer trunk line, and installation of a 12-inch diameter force main parallel to the existing WHWD sewer trunk line along Ward Avenue between W. Marshall Road and Bartch Avenue for connection to the proposed South Patterson Trunk Sewer (SPTS) line (City of Patterson's Wastewater Master Plan, 2010). This new trunk line will be utilized to convey CLIBP-generated sewage to the City of Patterson WQCF.

Construction of the SPTS system was recommended by Blackwater before accepting CLIBP flows up to the estimated project buildout average dry weather flow (ADWF). The system would be built to accommodate full buildout flows from Diablo Grande, CLIBP, and South Patterson

Phase 3

Construction of Phase 3 infrastructure for wastewater service includes installation of lines with pipes ranging from 8-inches to 10-inches in diameter and manholes. This phase will utilize the newly constructed parallel force main system in Ward Ave. to convey CLIBP sewer flows to the City of Patterson. The SPTS will carry build-out flows from the CLIBP to the expanded City of Patterson WQCF.

Figures 4-16~~5~~ to 4-17~~8~~ illustrate phasing of the wastewater system improvements. The d/D ratios referenced in the figures is a measure of the depth of flow to the pipe diameter. The ratio helps to determine how full the pipe is in gravity systems.

According to the City of Patterson's Wastewater Master Plan (2010), the permitted capacity of 3.5 MGD does not account for development outside the City's 2004 sphere of influence; therefore, facility expansion may be required to handle project-related effluent. The timing of such expansion will be determined through coordination with the City of Patterson.

Comparing projected CLIBP sewer flows to the existing and anticipated available capacities of the City of Patterson trunk lines, the following trunk line infrastructure phasing plan for each phase of CLIBP build-out is described as follows:

On-Site Treatment Alternatives

If the preferred option to transport CLIBP effluent to the City of Patterson WQCF is infeasible, the County will develop a plan to provide on-site wastewater treatment through a package treatment plant system that can be expanded as development of each project phase proceeds (see Section 7.2 of the *Crows Landing Industrial Business Park Sanitary Sewer Infrastructure and Facilities Study* in Appendix H). Packaged or custom wastewater treatment systems, complying with California Title 22 recycled water regulations and State Water Board wastewater discharge regulations can be constructed on the CLIBP property to manage its wastewater over time. Modular treatment systems can be matched to the treatment capacity required for each phase and constructed as needed, not unlike the phased expansion projects that the City of Patterson is planning with its WQCF.

To compare an on-site wastewater treatment system (OWTS) to the option of disposal at the Patterson WQCF, an assessment was made of treatment systems for the full buildout wastewater ADWF. Two types of modular, packaged treatment systems were considered: Sequencing Batch Reactor (SBR) and Membrane Bioreactor (MBR) Process. For initial developments with OWTS for individual facilities, the County has permitting authority and mechanisms available to evaluate, approve and permit such systems. State criteria are

mostly siting based and the County would remain the lead agency as long as treated effluent cannot percolate into groundwater or migrate into surface waters.

4.4.3 Wastewater Goal

The following goal applies to CLIBP on-site and off-site wastewater collection system improvements:

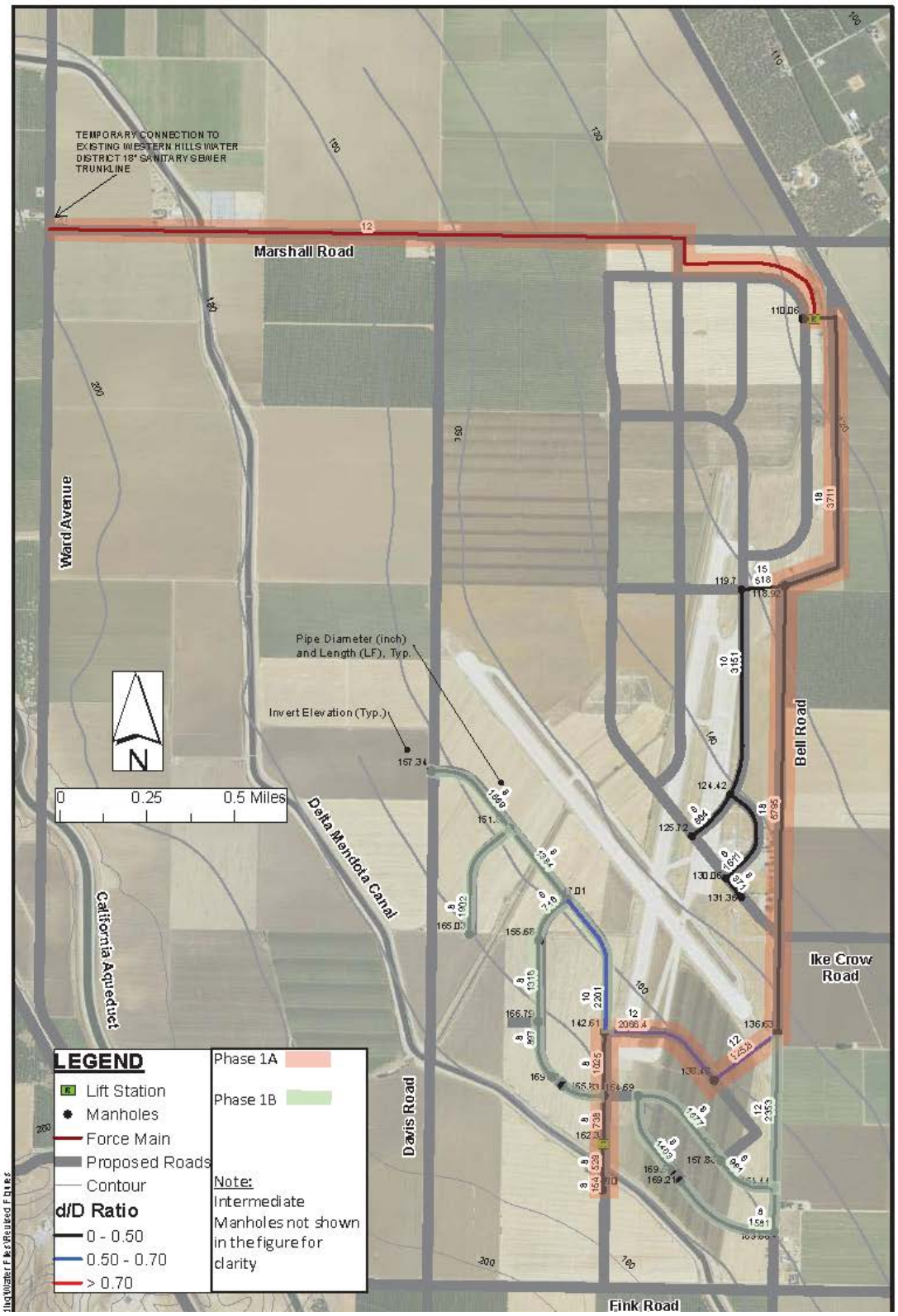
WWG 1: Provide a wastewater collection system and treatment sufficient to serve build-out of the CLIBP Plan Area.

4.4.4 Wastewater Policies

The following polices apply to CLIBP on-site and off-site wastewater collection system improvements:

WWP 1: Initial wastewater system infrastructure shall be constructed to provide service to the Fink Road Corridor and extend to the Bell Road Corridor, airport, and southern Public Facilities Area, and accommodate effluent from all phases.

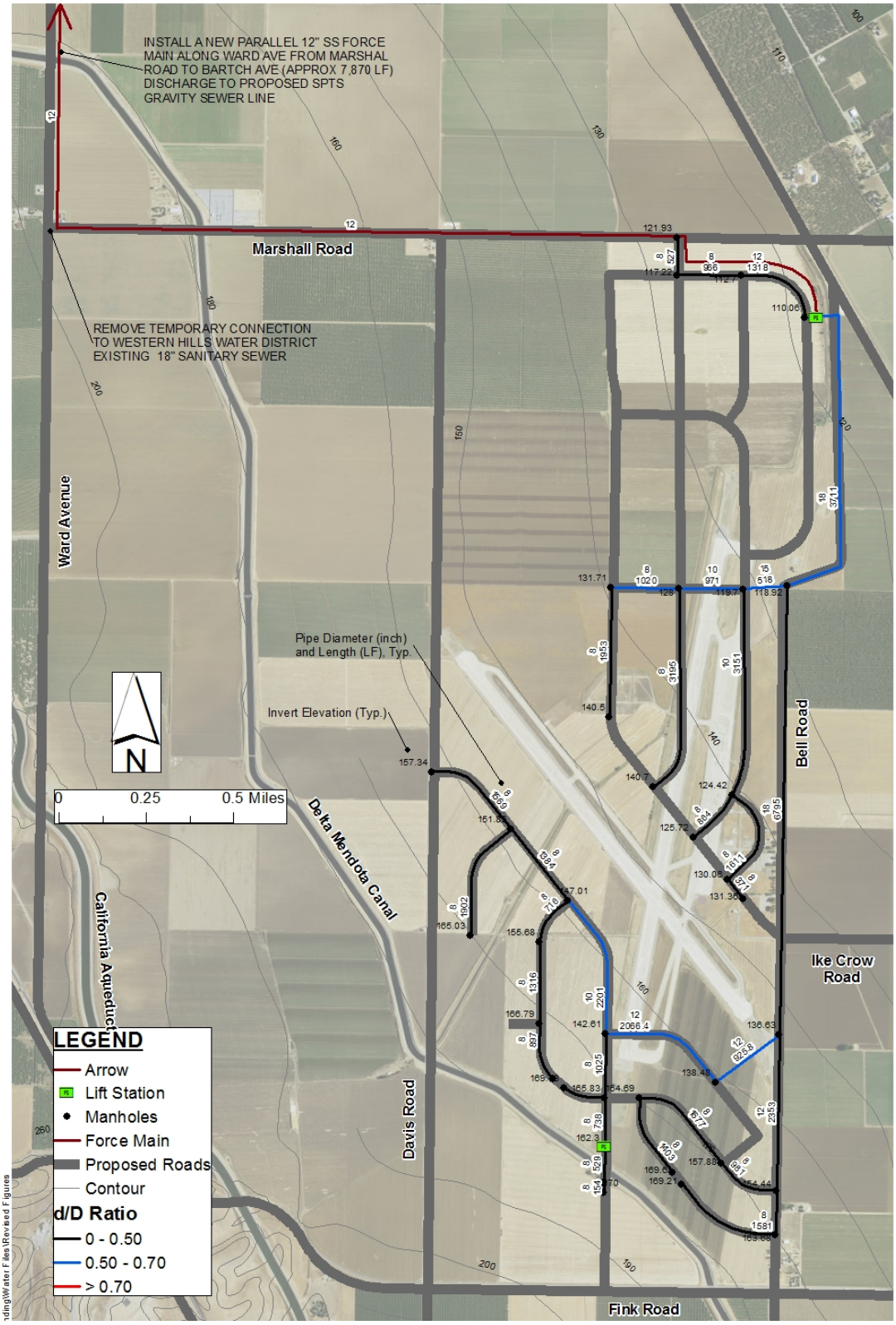
WWP 2: Future leaseholders/developers/contractors shall submit a wastewater budget indicating the total wastewater demand, the quality of the wastewater, and the opportunities for use of reclaimed wastewater, where appropriate.



Source: AECOM 2016

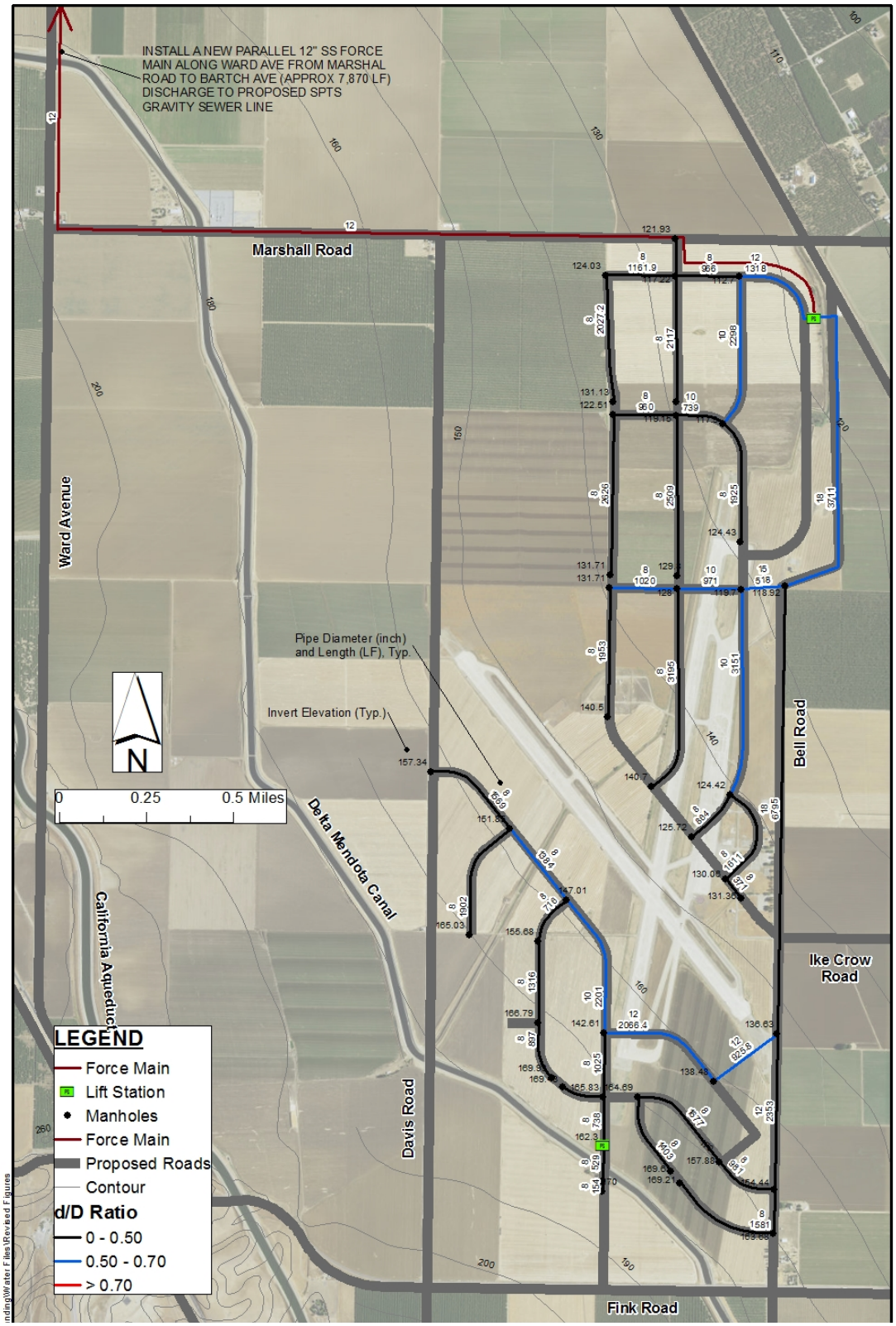
Figure 4-16~~5~~: Wastewater System, Phase 1

Note: The d/D Ratio represents the relationship between the maximum depth of flow and diameter of the pipe and is used to model the ability of a pipeline to convey wastewater flow under both dry weather and wet weather conditions.



Source: AECOM 2016

Figure 4-17: Wastewater System, Phases 1 and 2



Source: AECOM 2016

Figure 4-1~~8~~: Wastewater System, Phases 1, 2, and 3

4.5 STORMWATER MANAGEMENT

The terrain west of I-5 is characterized by rolling hills with elevations ranging from 220 feet to 1,400 feet above mean sea level (msl). Upstream watersheds east of I-5 between the California Aqueduct and the DMC consist of land that generally slopes to the northeast. Stormwater runoff from the Little Salado Creek watershed west of the California Aqueduct crosses both I-5 and the California Aqueduct and then flows toward the DMC. Flow is conveyed under the DMC by two, 5-foot-square box culverts that have capacity for 700 cubic feet/second (cfs). During a 100-year, 24-hour storm event, the creek would result in a peak flow discharge of 700 cfs of stormwater to the Plan Area.

On the east side of the DMC, box culverts drain into an open channel that continues in a northeasterly direction through the Plan Area and passes through the culverts that convey flows beneath the former military runways. The open channel ultimately drains toward the low point of the Plan Area, which is located near the intersection of SR 33 and Marshall Road. From this low point, runoff drains through a linear sedimentation basin towards a raised concrete control structure. The control structure contains a 24-inch outlet controlled by a slide-gate valve, which discharges to the 24-inch "Marshall Drain." The Marshall Drain runs parallel to Marshall Road for approximately 4.3 miles to its final discharge point at the San Joaquin River.

Specific development projects in the Plan Area will be required to detain stormwater runoff associated with a 100-year storm event on site. This requirement will reduce the amount of runoff to be conveyed or detained downstream and reduce the amount of drainage infrastructure required. However, excess runoff is known to accumulate in the northeast portion of the Plan Area, primarily as a result of limited discharge capacity within the Marshall Drain. During heavy rainfall events under existing conditions, runoff pools against the adjacent railroad tracks located on the east side of SR 33, eventually over-tops the railroad, and then flows northwesterly towards the San Joaquin River. In addition, flows migrate north towards the City of Patterson and contribute to flooding. Development of the Plan Area will require the construction of stormwater drainage infrastructure to accommodate off-site runoff from upstream tributary areas.

The following sections identify the anticipated development or improvement of infrastructure to facilitate CLIBP build-out as envisioned in three 10-year phases. However, the timing of proposed stormwater management improvements may be subject to change based on the needs of site users and timing/location of proposed on-site development.

4.5.1 Stormwater Management Plan

As further described in the Drainage Study for Crows Landing Industrial Business Park (Appendix I), referred to herein as the Drainage Study, Plan Area development will include new stormwater management and groundwater recharge infrastructure as part of the backbone infrastructure provided by the County. Such facilities will include:

- Raising an approximately 750-foot segment of Davis Road located off site and south of the DMC by approximately 4 feet during Phase 1A to protect the area west of the DMC and block flows from ponding in the Plan Area;
- Increasing the capacity of Little Salado Creek during Phase 1B by widening the channel downstream of the runway and increasing the capacity of the culverts that convey water flows beneath the runway. Off-site runoff flows will be conveyed to the northeastern corner of the Plan Area through the expanded open channel and culverts;

- Constructing an on-site stormwater pond in the northeastern portion of the Plan Area, beginning in Phase 1B. The linear pond will be constructed along the northeastern site boundary to accommodate the increased flows coming from Little Salado Creek and culverts beneath the runway and also to detain and infiltrate runoff from Little Salado Creek, to promote groundwater recharge.

Figure 4-19~~8~~ shows the segment of Davis Road that will be raised, the segments of Little Salado Creek that will be widened, and the location of the proposed stormwater pond.

In addition, on-site stormwater will be collected from rooftops, parking lots, and roadways and conveyed through a system of pipes, swales, and ditches, on-site detention/infiltration basins, Little Salado Creek channel and the stormwater pond, such as the County may require on site for individual developments. The stormwater pond will be used to detain and infiltrate stormwater runoff for groundwater recharge.

Based on its proximity to the runway, the channel design must address guidance set forth in Federal Aviation Administration (FAA) orders and guidance. FAA Order 13, Design, provides guidance for drainage facilities constructed on airports. FAA Advisory Circular 150/5200-33B, "Wildlife Hazard Attractants on and Near Airports," provides guidance for open water facilities constructed within the critical zone for wildlife hazards, which is defined as the area within 10,000 feet of aircraft movement and within 5 miles of approach departure areas. Such guidance requires that water associated with a 10-year storm drain within 24 to 48 hours of the storm event.

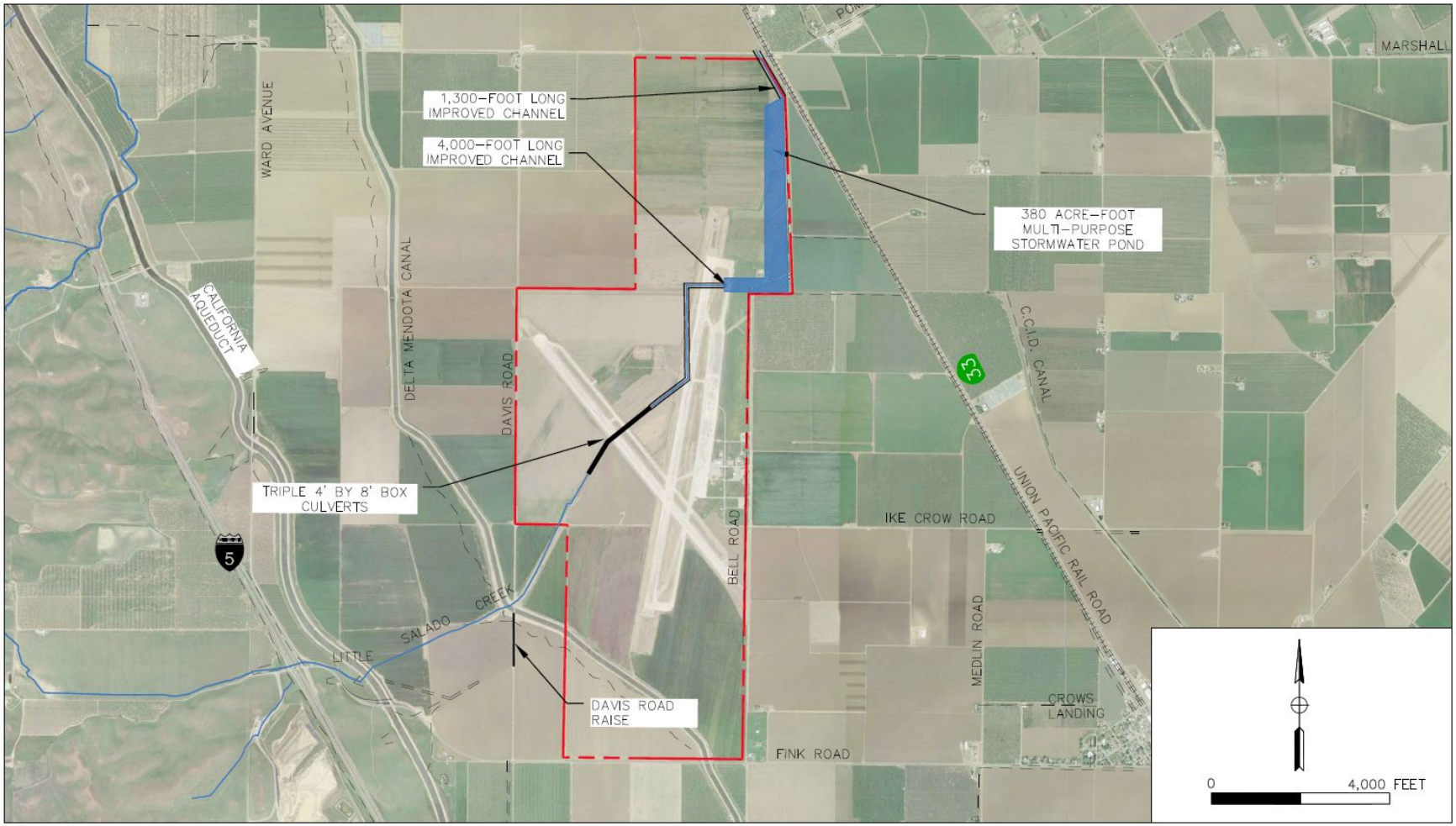
Widening Little Salado Creek channel and increasing the capacity of the culverts under the airport runway will allow runoff that currently accumulates on-site to be conveyed across the Plan Area and will eliminate off-site pooling along the adjacent railroad tracks. However, peak flows that travel north towards Patterson would be increased without mitigation. An on-site stormwater pond will be constructed to mitigate the northward flows towards Patterson. The stormwater pond will be constructed on site along the northeastern boundary. The pond will be constructed to detain runoff from Little Salado Creek. The pond will have a capacity of 380-acre feet over an area of approximately 40 acres, consisting of 200-acre feet of runoff retention storage (for infiltration) in the bottom and 180-acre feet of runoff detention storage above. Based on the ponds proximity to the airport, the pond will be designed and constructed in accordance with guidance set forth in FAA Advisory Circular 150/5200-33B, and it will include a small outlet structure to allow the pond to drain completely within 48-hours of a 10-year storm event.

If the County selects an on-site wastewater treatment alternative (refer to the *CLIBP Wastewater Master Plan* for additional details), one option will be to discharge highly treated effluent to the stormwater pond for infiltration into the upper aquifer. This would require a re-evaluation of the area of pond bottom that would receive engineered improvements to enhance infiltration.

If necessary and feasible to provide adequate flood protection and minimize stormwater runoff, the County may also implement one or more of the following improvements:

- Increase the capacity of the culvert under the DMC to allow runoff to pass under the canal to prevent Plan Area ponding. This option would require increasing the capacity of the proposed stormwater pond and the channel. These improvements would begin as part of Phase 1B.

- Placing fill on the parcel to raise the site to prevent ponding. The fill would result in a similar condition as the raising of Davis Road and require other improvements to address runoff on properties to the northwest. These improvements would begin as part of Phase 1A.



Source: AECOM 2016

Figure 4-12: Stormwater Drainage Improvements

***** Note: An on-site wastewater treatment alternative, with the option to discharge highly treated effluent to the stormwater pond, may require engineering improvements to the pond.*

- Restrict development to areas outside the floodplain. This would result in about 20 acres of land that could not be developed but could be used as open space and for the required detention from the on-site runoff (see Section 4.6.2).
- Engineering improvements to enhance infiltration of the stormwater pond if an on-site wastewater treatment system is required.

According to the March 2017 *Drainage Study for Crows Landing Industrial Business Park* (Appendix H to the Specific Plan, Section 3, Table 6), the open space/detention pond would be constructed in phases as the project develops and additional stormwater detention is required. The total volume of planned detention is 615,000 cubic yards (cy), of which 368,807 cy would be constructed in Phase 1B, 113, 925 cy in Phase 2, and 132,268 cy in Phase 3. Along with the detention basin, earthworks will be the construction of supporting drainage infrastructure in Phase 1B and infiltration trenches in Phases 1B, 2, and 3, as detailed in Table 6 of the Drainage Study.

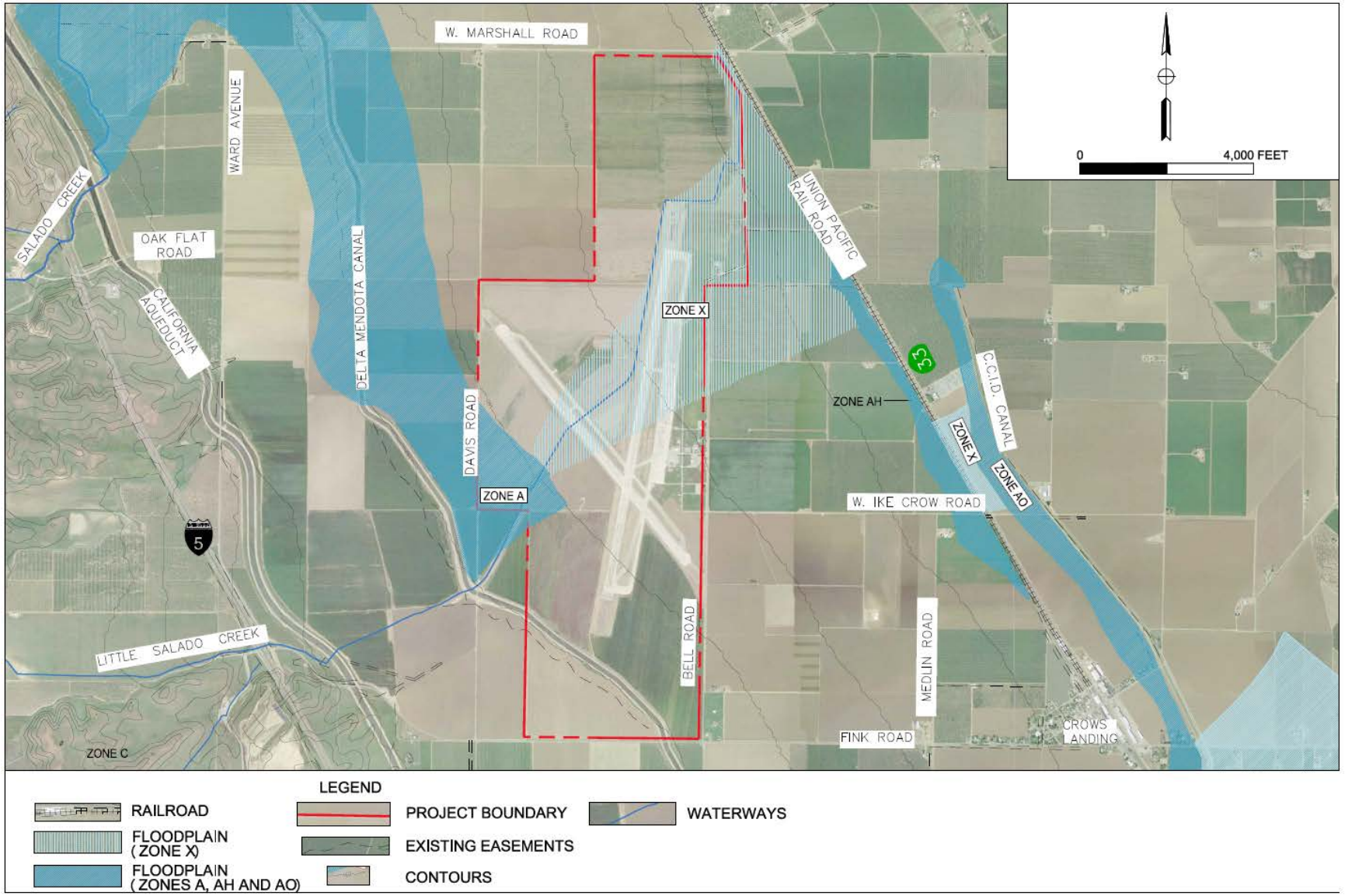
Groundwater Recharge

In 2014, California adopted the Sustainable Groundwater Management Act (SGMA), which provides a framework for sustainable management of groundwater supplies by local authorities. Subsequently, in 2015, California updated its Model Water Efficient Landscape Ordinance (California Water Code, Title 23, Chapter 2.7) to promote water efficient landscapes, better manage landscape water use to prevent waste, and reduce water use to the lowest practical amount. Prior to SGMA, Stanislaus County adopted a Groundwater Ordinance (chapter 9.37 of the County Code) to prevent the unsustainable extraction of groundwater within unincorporated areas and promote no net drawdown of aquifers. Chapter 3 and Appendix B contain policies, development standards, and design guidelines to implement the State of California's and the County's policies and requirements related to sustainable groundwater extraction and use.

With the application of water efficient landscape standards and the construction of the stormwater pond with retention storage for infiltration and groundwater recharge, potential groundwater extraction to serve the CLIBP at build-out is intended to provide sustainable groundwater yields. As noted in Section 4.3, "Water Supply and Distribution," to meet the County's objective of no net drawdown of groundwater, a sustainable groundwater recharge strategy, including potential use of reclaimed water, will be adopted in order to maximize groundwater recharge. The details of the strategy will be developed separately from the Specific Plan, but would generally consist of the design and construction of water detention facilities to reduce flow and increase permeability and water infiltration.

4.5.2 Floodplain Mapping

Figure 4-20~~19~~ shows that the existing Federal Emergency Management Agency (FEMA)-defined floodplain covering the project site includes designations for Zone A (100-year no elevations determined) and Zone X (500-year or 100-year with depths less than 1 foot). FEMA permits the County Flood Plain Manager to allow development in A Zones if base flood elevations have been determined and the development is outside the limits of the 100-year floodplain. Zone X areas allow development without flood insurance.



Source: AECOM 2016

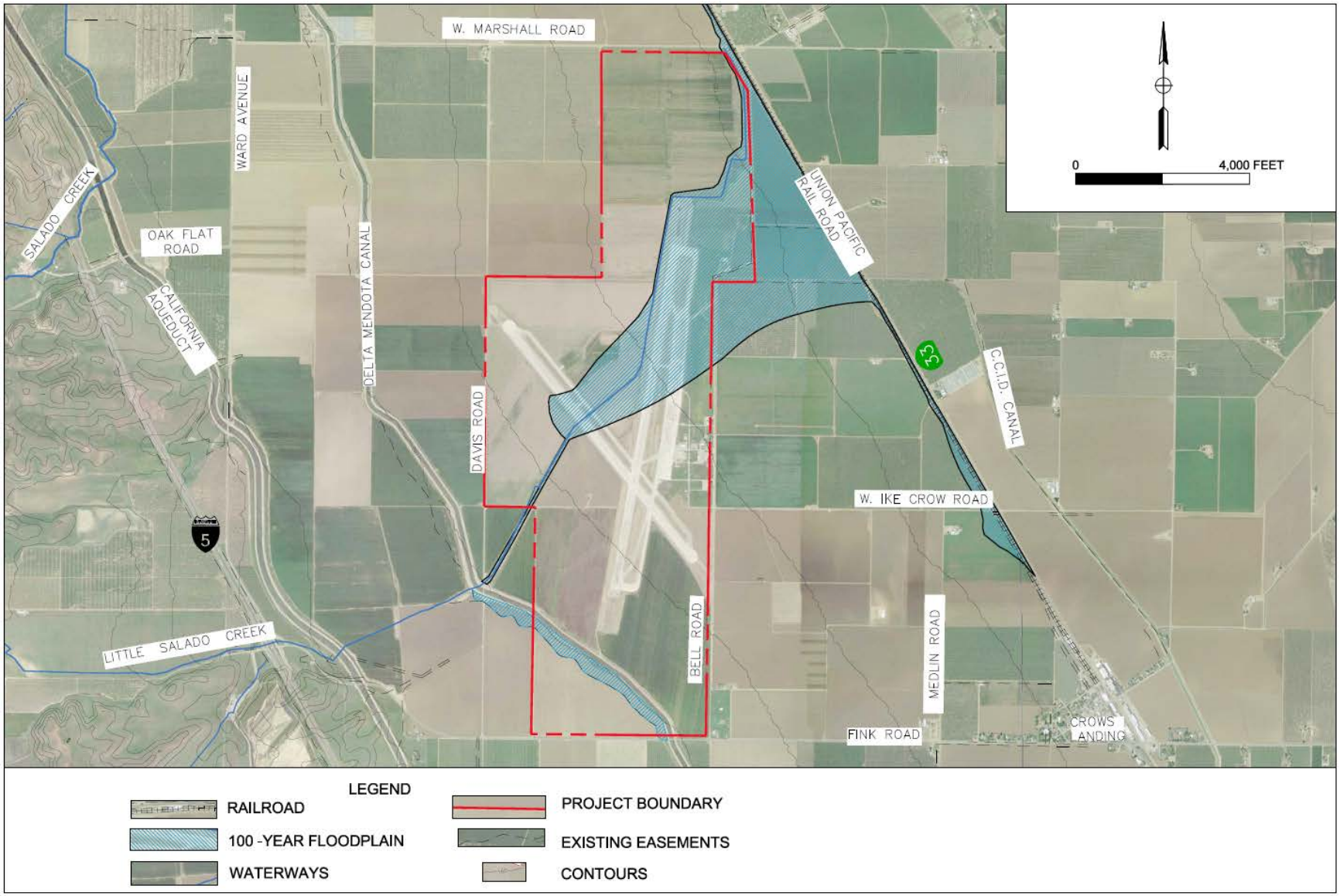
Figure 4-1~~09~~: FEMA Floodplain

Based on the Drainage Study, the County has determined that the existing FEMA floodplain designation for Zone A (see Figure 4-2049) is incorrect. As part of the study, peak flows on Salado Creek were investigated to determine whether runoff from the watershed was combining with runoff from Little Salado Creek to create the larger floodplain shown in the FEMA map. Using a one-dimensional hydraulic model to simulate a 100-year flood event, the analysis indicated that flood elevation would be contained within the channel in the Zone A area. However, as shown in Figure 4-2001, hydraulic modeling results indicate that Little Salado Creek would experience overtopping at locations where the channel is too narrow and where the culverts convey flow under the existing airport. Figure 4-224 compares the location of the 100-year flood event as indicated by the hydraulic model compared to the floodplain shown by the existing FEMA map.

The capacity of the culverts beneath the runway must be increased, and the Little Salado Creek channel must be improved prior to and during development. The analytical results obtained from the hydraulic model showed that flood flows would be conveyed without overtopping the creek by widening the channel, providing better maintenance, and increasing the capacity of the culverts under the runway. The stormwater pond will mitigate for the resulting increased flow (see Figure 4-232).

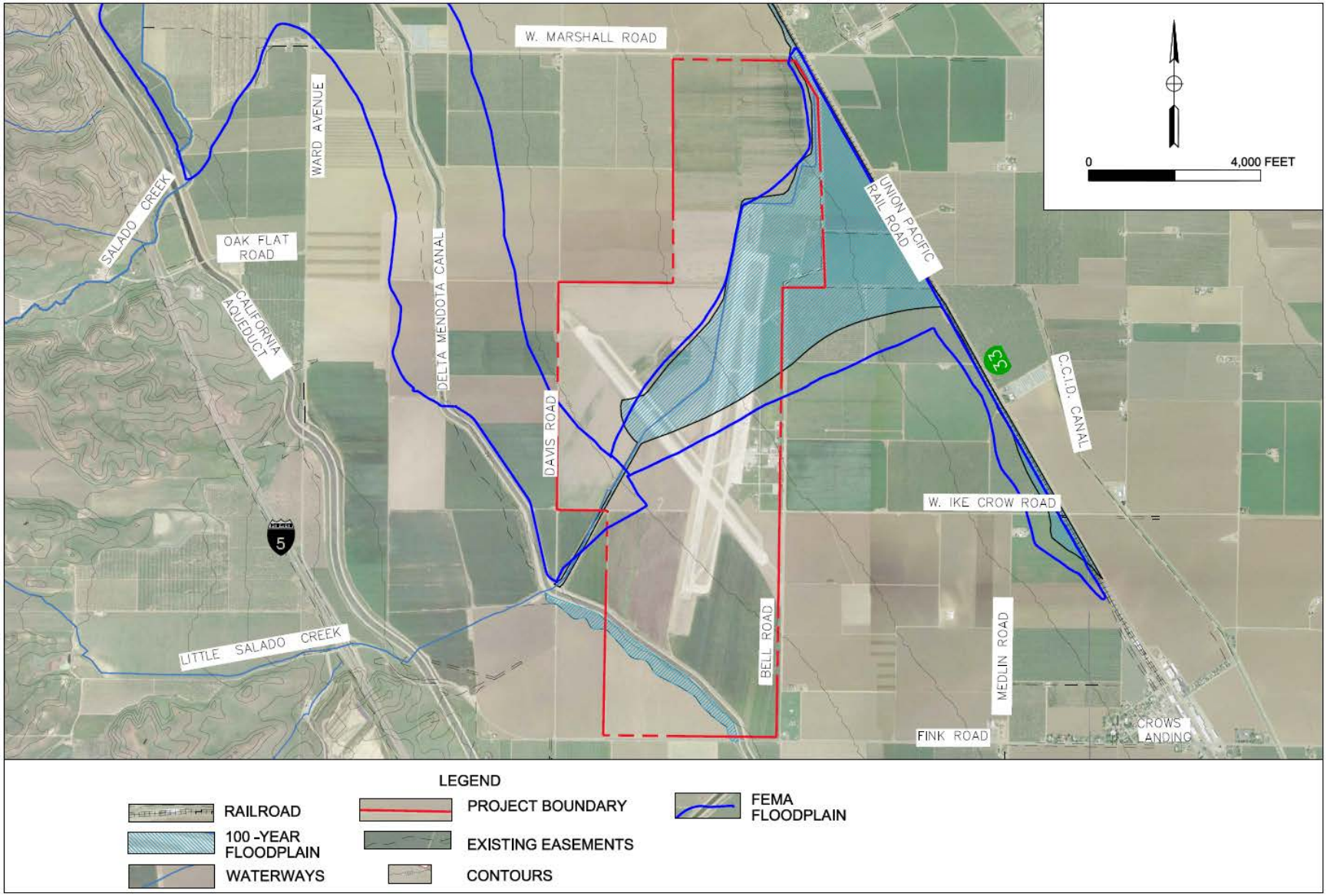
A Conditional Letter of Map Revision (CLOMR) is not necessary for project entitlement; only a small portion of the site is in the FEMA floodplain, and project development can still be permitted. However, after the stormwater improvements have been made, the County will need to process a Letter of Map Revision (LOMR) for the section of Plan Area currently in FEMA Zone A, so that development on this portion of the project will not be subject to development restrictions, including flood insurance.

Raising Davis Road will protect the portion of Plan Area west of the DMC from flooding, but will cause more area to the west of Davis Road to be inundated during large flood events. The inundation will be deeper than under current conditions, however, the duration will be short. The existing floodplain west of the DMC is not currently mapped by FEMA so no letter of map change will be required as part of this development. In the future, if the area west of Davis Road is mapped by FEMA it would probably be categorized as a Zone A or Zone AE (100-year elevations determined).



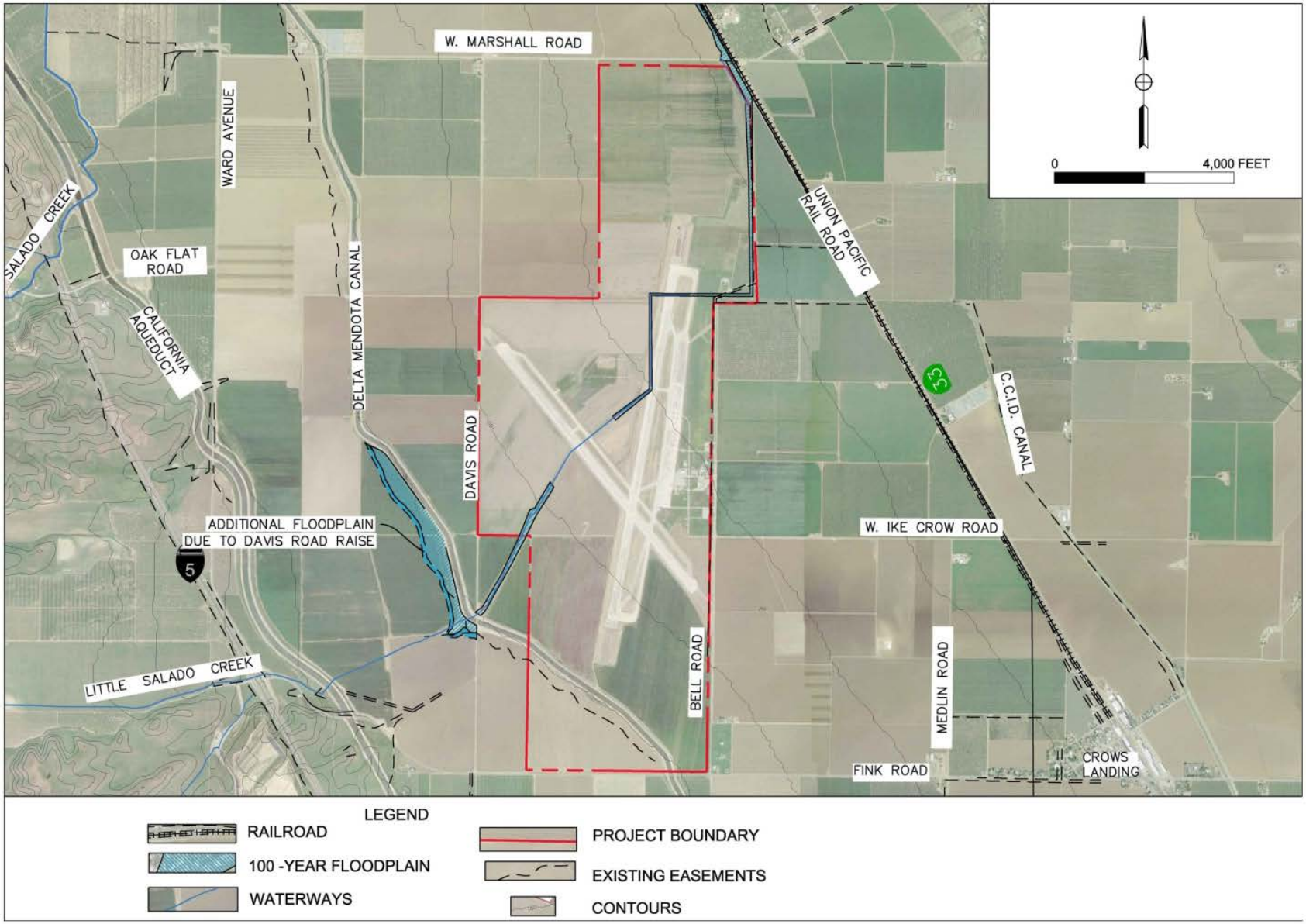
Source: AECOM 2016

Figure 4-2~~10~~: Existing Floodplain (Based on Hydraulic Modeling Results)



Source: AECOM 2016

Figure 4-2~~4~~: FEMA and Existing Floodplain Comparison



Source: AECOM 2016

Figure 4-2~~3~~2: Proposed FEMA Floodplain (Following Project-related Improvements)

4.5.3 Stormwater Management Goal

The following goal applies to CLIBP on-site stormwater management improvements:

SG 1: Provide a stormwater management system, incorporating groundwater recharge facilities, sufficient to serve the projected growth and build-out of the CLIBP Plan Area.

4.5.4 Stormwater Management Policies

The following policies apply to CLIBP on-site stormwater management improvements:

SP 1: All development shall detain stormwater runoff associated with the 100-year storm event, on site.

SP 2: All on-site detention facilities shall be designed according to guidance set forth in FAA Advisory Circular 150/5200-33B.

SP 3: Grassy swales and other best management practices to filter stormwater shall be encouraged and shall comply with the Landscape Design Policies in Section 3.3.2 of Chapter 3, "Built Environment and Design."

SP 4: On-site stormwater detention features, basins or swales, used as a landscape design feature may be considered for credit against the required landscape area on any site, provided that:

- The detention basin or swale is visually incorporated in the adjacent site landscape;
- The detention basin or swale may be landscaped to include grass, trees, and other improvements that are similar to, and visually compatible with, the adjacent landscaping, but the features shall not create large areas of open water or other habitat for potentially hazardous wildlife; and
- The detention basin or swale is located in the front setback where it is visible from the road, or is part of the on-site landscaped area in the side yard or rear yard setback areas visible from the road or the occupied area of buildings on site.

SP 5: Stormwater management swales shall be landscaped with appropriate erosion control plant materials.

4.6 DRY UTILITIES PLAN

All dry utilities, including electricity, gas, telephone, cable, and internet will be conveyed through the major Plan Area roads in a "joint trench" and parallel to backbone roads. The Crows Landing Industrial Business Park Dry Utilities Infrastructure and Facilities Study (Appendix J), herein referred to as the Dry Utilities Study, identifies the major infrastructure elements required to provide sufficient electricity, natural gas, and communications to the Plan Area.

Electricity

According to the Dry Utilities Study, representatives of the Turlock Irrigation District (TID), which currently serves the project area, state that TID has electrical capacity to serve the CLIBP; however, electrical distribution infrastructure is required. TID is capable of generating slightly more than 505 megawatts (MW) of electricity throughout a 662-square-mile service area, including the Plan Area. A TID substation is located at the northeast corner of W. Marshall and Davis roads. This substation is fed from a double circuit 115 kilovolt (kV) line with a 12kV under build located along W. Marshall Road on the northern boundary of the CLIBP Plan Area. TID will require 15- to 20-foot-wide public utility easement to accommodate electricity

facilities. Manholes will be required at 800-foot-intervals to accommodate underground electrical facilities, which will include 4-inch and 6-inch diameter conduits. Pad-mounted switchgear and pad-mounted capacitor banks could also be required.

Natural Gas

Pacific Gas and Electric Company (PG&E) provides natural gas and electric service throughout a 70,000-square-mile service area in northern and central California. A 24-inch diameter transportation pipeline is present on the northern boundary of the Plan Area, and a 3-inch diameter gas-distribution pipeline runs from I-5 along the southern boundary of the Plan Area to serve the community of Crows Landing. PG& E would realign the gas lines to serve the CLIBP.

Communications

AT&T and Global Valley Networks (GVN) currently provide telephone communications to the CLIBP project area, and both have stated that they will provide telephone services to the Plan Area (CLIBP Dry Utilities Infrastructure and Facilities Study, 2015). AT&T provides local phone service, long distance phone service, and high-speed internet service throughout Stanislaus County. GVN provides telephone and internet services to the nearby communities of Patterson, Livingston, Diablo Grande, Westley, and Grayson. Manholes will be required at 600-foot intervals to accommodate underground communication facilities, which will include 4-inch diameter conduits for telecommunication cable distribution.

Comcast provides service to the Crows Landing community, but it will need to extend its existing fiber optic cable from the Crows Landing community to provide cable television and internet service to the Plan Area. Underground facilities will include a 2-inch diameter conduit and manholes for cable distribution.

4.6.1 Dry Utilities Goal

The following goal applies to CLIBP dry utilities improvements:

DUG 1: Ensure that infrastructure for dry utilities, including electricity, natural gas, and communication services is sufficient to serve the projected build-out and growth of the CLIBP Plan Area.

4.6.2 Dry Utilities Policies

The following policies apply to CLIBP dry utilities improvements:

DUP 1: Specific infrastructure requirements for TID, PG&E, AT&T, GVN, and Comcast shall be determined prior to initiating Plan Area development.

DUP 2: The County shall work with TID to ensure that the local electricity distribution grid is in place in a timely manner to serve CLIBP users.

DUP 3: Electric lines 12kV and smaller shall be located underground.

DUP 4: All facilities shall be constructed to avoid conflicts with on-site aviation.

DUP 5: The County shall work with PG&E to ensure timely provision of natural gas service to CLIBP users.

DUP 6: The County shall work with AT&T, GVN, and Comcast to design and site necessary communication service infrastructure to serve CLIBP users.

DUP 7: Proposed site landscaping designs and architecture shall consider the use of energy conservation to reduce building heating and cooling loads.

4.7 SOLID WASTE COLLECTION PLAN

The diversity of light industrial, warehouse, distribution, logistics, aviation-related, business, and public facility uses that may occur in the Plan Area indicates that most uses will be served by local franchise or industrial waste haulers under contract with CLIBP users.

Stanislaus County maintains franchise agreements with four different waste hauling companies to operate in four areas of the County. The CLIBP project site is within the area served by Bertolotti Disposal, which provides residential and commercial waste and recycling collection services, as well as temporary small bin and roll-off dumpster rentals.

Solid waste collected from the CLIBP would be hauled to the Fink Road Landfill, which is anticipated to have capacity until 2029 for Class III (inert, nonhazardous solid waste) and 2043 for Class II (waste that may be designated as hazardous or nonhazardous). (Stanislaus County 2014). The County has initiated plans to expand and reconfigure the existing facility to extend its useful life by another 10 to 15 years (2058) (Stanislaus County 2009).

4.7.1 Solid Waste Goal

The following goal applies to CLIBP solid waste collection services:

SWG 1: Ensure the provision of sufficient solid waste facilities and services to serve CLIBP tenants and compliance with state and local laws, regulations, or executive orders regarding commercial recycling.

4.7.2 Solid Waste Policies

The following policy applies to CLIBP solid waste collection services:

SWP 1: The County shall work with CLIBP tenants to provide adequate solid waste facilities and ensure compliance with commercial recycling requirements mandated by local or state law, California Department of Waste Management (CalRecyle) regulation, or executive order.

SWP 2: Site users must provide appropriate receptacles that must remain covered or closed at all times.