

**River Islands at Lathrop Project  
Subsequent Environmental Impact Report  
Addendum V**

State Clearinghouse No. 1993112027

**PREPARED FOR:**  
City of Lathrop  
Community Development/  
Planning Department  
390 Towne Centre Drive  
Lathrop, CA 95330

**May 14, 2015**





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## ACRONYMS AND ABBREVIATIONS

CEQA	California Environmental Quality Act
EIR	environmental impact report
GHG	greenhouse gas
I-	interstate
LOS	level of service
PDP	preliminary development plans
SJMSP	San Joaquin Multi-Species Habitat Conservation and Open Space Plan
SR	State Route
VTM	vesting tentative map
WRP	water recycling plant

# 1 INTRODUCTION

## 1.1 SITE DESCRIPTION AND LOCATION

The River Islands at Lathrop Project site is located on Stewart Tract in the City of Lathrop, northwest of Interstate 5 (I-5) and the Union Pacific Railroad tracks, and bordered by the San Joaquin River and Old River. Access to the site is provided from Paradise Road, Manthey Road and Stewart Road. The River Islands at Lathrop Project is being developed in phases. Construction of the Community at South Bend has begun in the southeast corner of the tract.

## 1.2 BACKGROUND AND ACTION TRIGGERING THE ADDENDUM

In February 2003, the City Council certified the Final Subsequent Environmental Impact Report (SEIR) for the River Islands at Lathrop Project (State Clearinghouse No. 1993112027). The SEIR covered the whole suite of entitlements at a project level for the first phase of development within River Islands. In March 2007, the City Council approved Tract 3694 for the River Islands at Lathrop master planned community. Tract 3694 is a vesting tentative map (VTM) that includes the first 4,284 dwelling units within River Islands, along with a large portion of the Employment Center and all of the proposed Town Center.

This addendum to the SEIR for the River Islands at Lathrop Project evaluates modifications to the configuration and operational characteristics of some elements of the River Islands development within the area encompassed by the Tract 3694 VTM and changes to the conditions associated of Mitigation Measure 4.4-m relative to peak hour vehicle trips on the Manthey Road/I-5 interchange and traffic conditions on I-5.

As the lead agency under the California Environmental Quality Act (CEQA), the City of Lathrop has determined that with the proposed modifications the project would differ sufficiently from the development scenario described in the SEIR for the River Islands project as to warrant preparation of an addendum.

## 1.3 PREVIOUS ADDENDA AND OTHER ENVIRONMENTAL ANALYSIS

There have been four previous addenda prepared for the River Islands at Lathrop SEIR. In 2005, an addendum was prepared to address a revised VTM. The proposed VTM application would subdivide approximately 1,500 acres of the Stewart Tract to support development of Phase 1a and Phase 1 of the River Islands project. Tract 3491 is the identifier given by San Joaquin County for this new VTM. In 2007, a second addendum was prepared to address additional modifications to the VTM (now identified as Tract 3494), which would subdivide approximately 1,793 acres of Stewart Tract to support development of Phase 1 of the project. A third addendum was prepared in 2012, which addressed: (1) the adoption of the Tract 3765 VTM, a large lot vesting subdivision map for development of Phase 2 of the River Islands project consistent with the West Lathrop Specific Plan; and (2) implementation of project modifications reflected in the Environment Impact Statement prepared by the US Army Corps of Engineers for Phase 2 of the River Islands at Lathrop Project. The fourth addendum, prepared in 2014, analyzed location of recycled water storage and disposal sites on Stewart Tract, immediately south of the project area analyzed in the SEIR.

## 1.4 CALIFORNIA ENVIRONMENTAL QUALITY ACT GUIDELINES REGARDING AN ADDENDUM TO AN ENVIRONMENTAL IMPACT REPORT

Altered conditions, changes, or additions to the description of a project that occur after certification of an environmental impact report (EIR) may require additional analysis under CEQA. The legal principles that guide decisions regarding whether additional environmental documentation is required are provided in the State CEQA Guidelines, which establish three mechanisms to address these changes: a SEIR, a Supplement to an EIR, and an Addendum to an EIR.

Section 15162 of the State CEQA Guidelines describes the conditions under which a SEIR would be prepared. In summary, when an EIR has been certified for a project, no SEIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

- (1) Substantial changes are proposed in the project, which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified effects;
- (2) Substantial changes have occurred with respect to the circumstances under which the project is undertaken, which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:
  - (A) The project will have one or more significant effects not discussed in the previous EIR;
  - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
  - (C) Mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternatives; or
  - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Section 15163 of the State CEQA Guidelines states that a lead agency may choose to prepare a supplement to an EIR rather than a Subsequent EIR if:

- (1) any of the conditions described above for Section 15162 would require the preparation of a SEIR; and
- (2) only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation.

An addendum is appropriate where a previously certified EIR has been prepared and some changes or revisions to the project are proposed, or the circumstances surrounding the project have changed, but none



of the changes or revisions would result in significant new or substantially more severe environmental impacts, consistent with CEQA Section 21166 and State CEQA Guidelines Sections 15162, 15163, 15164, and 15168.

This addendum is intended to evaluate and confirm CEQA compliance for proposed changes to River Islands project characteristics on Tract 3694 VTM, refinements to the implementation of Mitigation Measure 4.4-m relative to what is described and evaluated in the River Islands at Lathrop SEIR, and amendments to the West Lathrop Specific Plan and River Islands Urban Design Concept that incorporate those changes. This addendum is organized as an environmental checklist, and is intended to evaluate all environmental topic areas for any changes in circumstances or the project description, as compared to the approved SEIR, and determine whether such changes were or were not adequately covered in the certified SEIR. This checklist is not the traditional CEQA Environmental Checklist, per Appendix G of the State CEQA Guidelines. As explained below in Section 3.1, the purpose of this checklist is to evaluate the checklist categories in terms of any “changed condition” (i.e., changed circumstances, project changes, or new information of substantial importance) that may result in a different environmental impact significance conclusion from the River Islands SEIR. The column titles of the checklist have been modified from the Appendix G presentation to help answer the questions to be addressed pursuant to CEQA Section 21166 and State CEQA Guidelines Section 15162, 15163, 15164 and 15168.



## 2 DESCRIPTION OF THE PROPOSED ACTION

The proposed actions evaluated in this addendum to the SEIR for the River Islands at Lathrop Project generally consist of modifications to the configuration and operational characteristics of some elements of the River Islands development within the area encompassed by the Tract 3694 VTM. These changes include:

- ▲ minor modification to the boundaries of some zoning districts;
- ▲ adjustments to the alignments of some roadways;
- ▲ a change in the mix of single-family and multi-family housing units, increasing the number of multi-family units by approximately 140, but not altering the total unit count of 4,284 residential units in Tract 3694;
- ▲ replacing canals between internal lakes with paseos, open space, and parkland;
- ▲ changing the internal lake configuration from a “Central Lake” to smaller decentralized lakes connected hydraulically by underground pipe;
- ▲ placing the proposed Lathrop Landing Marina on the water side of the San Joaquin River project levee, rather than in a back bay;
- ▲ minor changes to park land and open space locations with a small net increase in the acreage of land within the parks and open space land use category; and
- ▲ refinements to the implementation of Mitigation Measure 4.4-m related to peak hour vehicle trips on the Manthey Road/I-5 interchange and timing for completion of the River Islands Parkway bridge.

All other features associated with the updated Tract 3694 VTM proposal (e.g., utilities, access) would remain as evaluated in the existing SEIR and the previous addenda. In addition, all other mitigation measures from the SEIR applicable to the Tract 3694 VTM location and activities would apply.

### 2.1 PROJECT CHARACTERISTICS AND CHANGES TO THE PREVIOUSLY-APPROVED PROJECT

#### 2.1.1 Land Use

The existing Tract 3694 VTM was approved in 2007 with the following lands use/zoning districts: RL-RI (residential low), RM-RI (residential medium), RH-RI (residential high), MU-RI (mixed-use Town Center), and CR-RI (Employment Center). The existing Tract 3694 VTM area includes the following development districts: Town Center, East Village, Employment Center (portion), Lakeside (portion), and Old River (portion).

The revised Tract 3694 VTM proposal includes the subdivision of approximately 1,793 acres of land comprising Phase 1 of the River Islands project in the same footprint and location as the currently adopted VTM, as shown on Exhibit 2-1. The proposed revised Tract 3694 VTM is also consistent with previously approved Preliminary Development Plans (PDPs) for each of the development districts, with exception of a new PDP for the Town Center District.

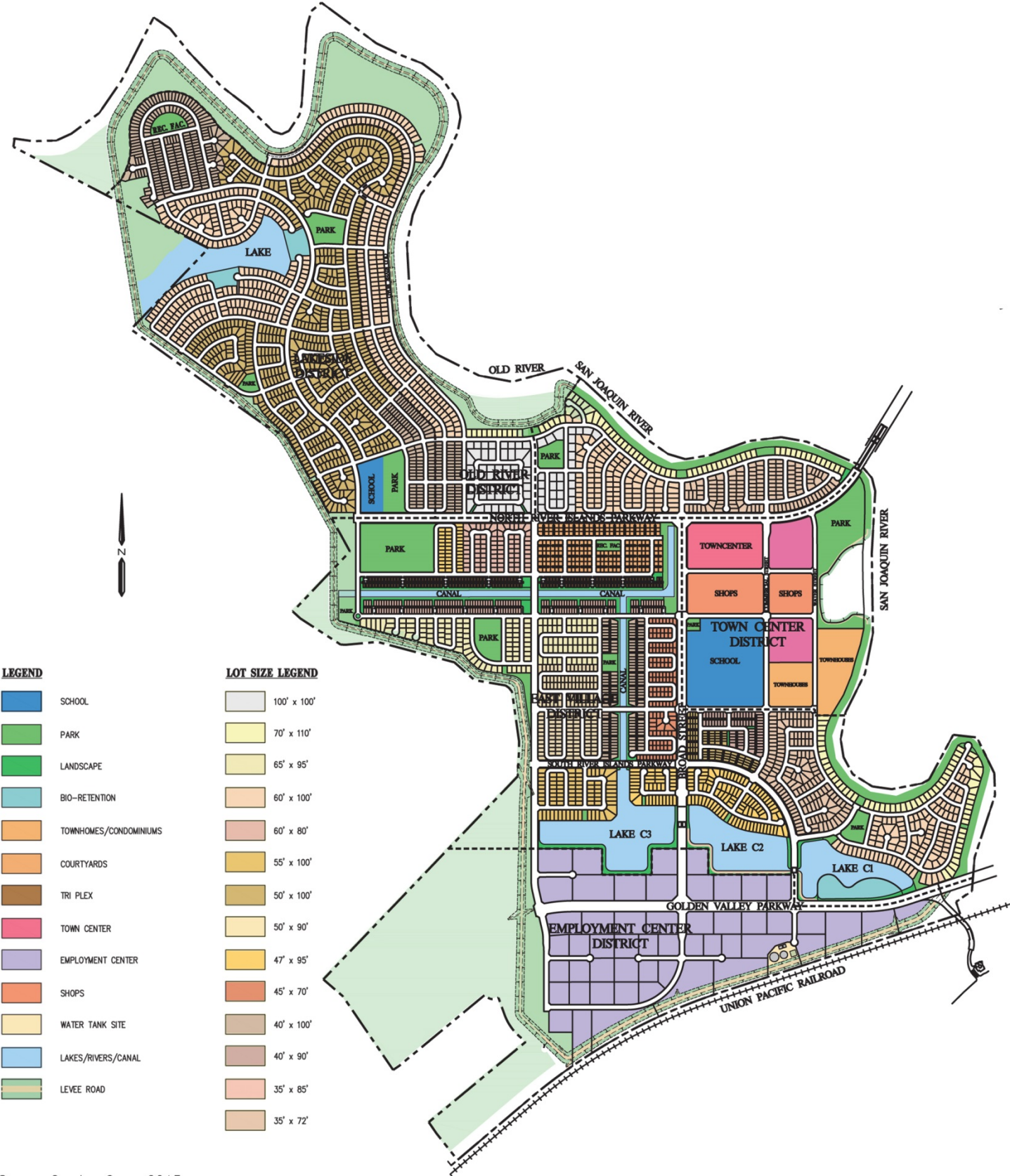
The existing Tract 3694 VTM contains 4,284 residential units, consisting of 3,741 single-family units and 543 multifamily units. The revised Tract 3694 contains the same number of residential units, although the mix is slightly different: 3,611 single -family units and 673 multifamily units. General land use categories

associated with both the existing and proposed Tract 3694 VTM include a Town Center, an Employment Center, residential areas, lakes and water features, schools, and parks and trails.

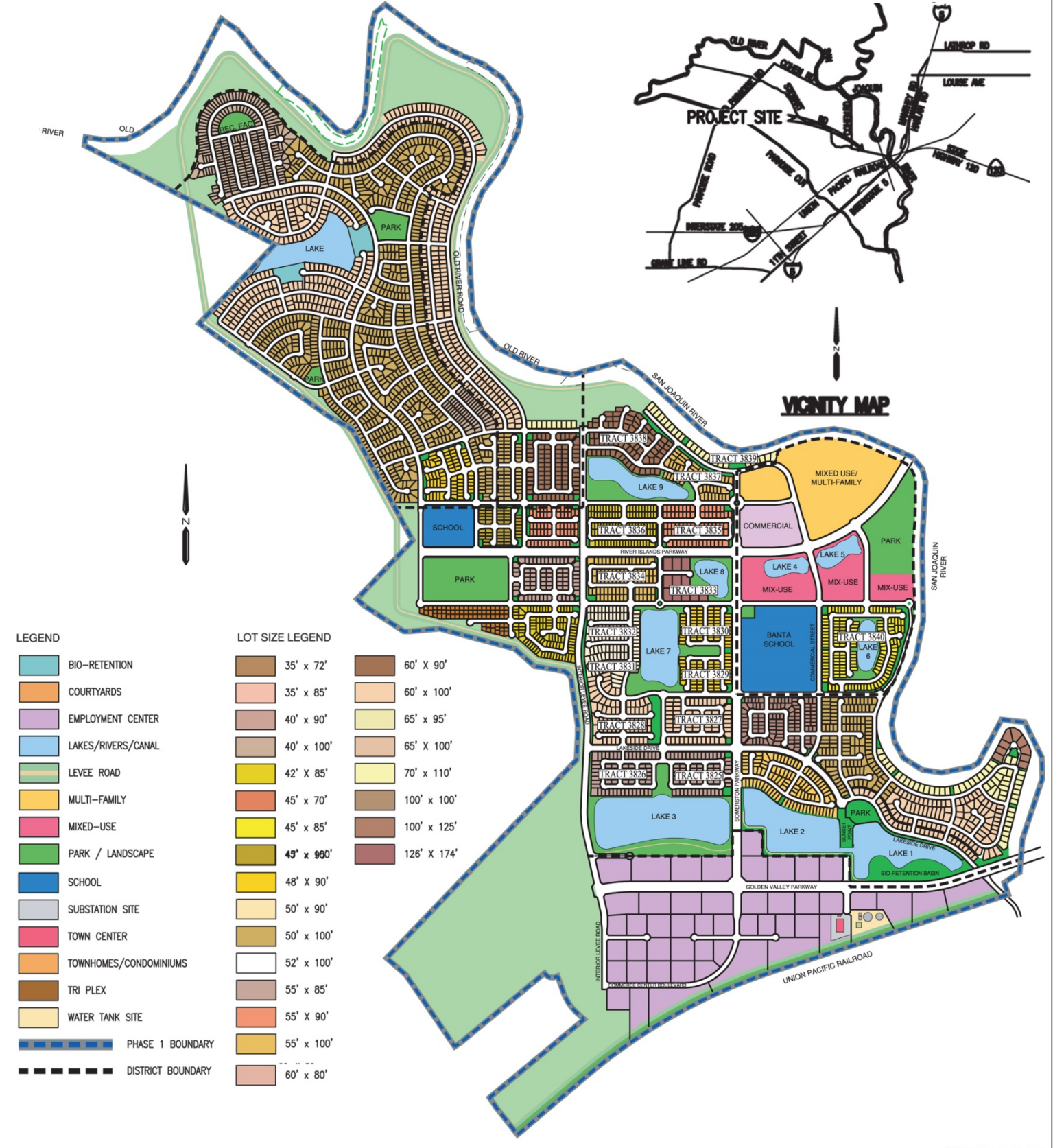
Table 2-1 outlines the differences between the two versions of the Tract 3694 VTM in terms of uses and respective acreages.

<b>Table 2-1 Proposed Modifications to Tract 3694 VTM</b>						
Land Use	2007 VTM Tract 3694		2014 VTM Proposed Amendment		Proposed Difference	
	Units	Acres	Units	Acres	Units	Acres
<b>Residential</b>						
Single Family	3,741	715.0	3,611	741	(130)	26.3
Multi Family	543	32.1	673	48	130	15.8
<i>Subtotal:</i>	4,284	747.1	4,284	789	0	42.1
<b>Commercial</b>						
Town Center		61.9		56.6		(5.3)
Employment Center		164.3		156.7		(7.6)
<i>Subtotal:</i>		226.2		213.3		(12.9)
<b>Educational Facilities</b>						
Schools		41.1		41.1		0.0
<i>Subtotal:</i>		41.1		41.1		0.0
<b>Parks &amp; Open Space/Streets</b>						
Parks		59.5		76.4		16.9
Lakes		81.8		101.8		20.0
Bio-Retention Basins		10.8		11.8		1.0
Public/Private Facilities		3.6		2.5		(1.1)
Canals		16.3		0.0		(16.3)
Landscape Parcels		23.8		21.3		(2.5)
Trails		6.4		3.7		(2.7)
River Front Park		16.0		14.5		(1.5)
Backbays		11.7		0.0		(11.7)
<i>Subtotal:</i>		229.9		232.0		2.1
<b>Streets</b>						
Arterial Streets		77.5		47.6		(29.9)
Collector Streets		53.3		51.9		(1.4)
<i>Subtotal:</i>		130.8		99.5		(31.3)
<b>Remainder Parcels</b>						
All Remainders		417.9		417.9		0.0
<b>Total - All Acreage</b>		<b>1,793.0</b>		<b>1,793.0</b>		<b>0.0</b>

# ORIGINAL TRACT 3694 VTM



# PROPOSED REVISION - TRACT 3694 VTM



Source: Cambay Group 2015

X15010044 01 001



With the exception of overall parkland, lakes, bio-retention basins, and multi-family residential uses, there is a reduction in acreage for the various uses associated with the existing Tract 3694 VTM. These reductions in acreages are due to the following specific elements that are proposed for revision/update:

- ▲ Canals have been replaced with paseos, open space, and/or parkland.
- ▲ Lakes are now decentralized (rather than a “Central Lake”), but are still connected hydraulically via pipes; overall lake acreage has increased.
- ▲ River Islands Parkway right of way alignment has been moved to the south from the existing VTM location via the adoption of a Precise Plan Line for this roadway by the Lathrop City Council from Bradshaw’s Crossing Bridge to Somerston Parkway.
- ▲ Town Center District land uses have been modified to remove single family dwellings north of River Islands Parkway and replace them with mixed use areas, and replace townhomes and multi-family uses with single family dwellings east of the Town Center School site. Additional lakes would also be located within the Town Center District.
- ▲ Minor changes to lot layouts that have increased multi-family units by 130 units and decreased single-family units by the same amount.
- ▲ Lathrop Landing Marina may be constructed on the waterside of the San Joaquin River project levee, rather than in a back bay. A community park for Lathrop Landing would still be constructed with roughly the same acreage.
- ▲ Minor changes to park land and open space locations and acreages, as previously mentioned.

The building envelope, acreage, and affected parcels would not change with the proposed update. Both VTM scenarios cover 1,793 acres, of which roughly 1,375 acres is proposed for development. The approximately 420 acres not currently proposed for development would be considered temporary open space until subdivided in the future. All existing levees and flood protection would remain the same with the updated proposal, although internal drainage within the 900 acres that is currently flood protected to urban standards would be modified with the addition of the new lakes. The additional lakes would provide more storage than the central lake proposed in the SEIR, and would allow for isolation of water quality problems to a particular lake without affecting the entire system. Exhibit 1 shows the current proposal and the existing VTM side-by-side to illustrate the differences between them.

## 2.1.2 Transportation and Roadways

Mitigation Measure 4.4-m from the SEIR limits the use of the Manthey Road/I-5 interchange by requiring that access from the River Islands project site southbound on Manthey Road to the interchange be discontinued when the River Islands Parkway bridge is completed over the San Joaquin River and that no more than 800 residential units are built before San Joaquin River bridge is open. The intent of this measure is to avoid significant adverse effects due to weaving movements at the southbound I-5/westbound I-205 interchange. However, recent studies have indicated that vehicles using the Manthey Road/I-5 interchange may not be as disruptive to the weaving movement as initially anticipated in the SEIR.

The mitigation reads:

“...the City of Lathrop shall ensure that access from the project to Manthey Road is discontinued when the River Islands Parkway bridge is completed over the San Joaquin River and that no more than 800 residential units ever have access to Manthey Road.”

This mitigation was based on the basic understanding that up to 800 p.m. peak trips could utilize the Manthey Road/I-5 interchange without creating an impact that would require mitigation. Since preparation of the SEIR, the City and Caltrans have concluded that the number of housing units does not directly correlate to the quantity of vehicle trips in the peak p.m. time frame.

Under the proposed project modifications, Mitigation 4.4-m would remain in place, but implementation of the measure would be refined to respond to the 800 p.m. peak vehicle trip performance criteria instead of 800 housing units and to expand the options to limit vehicle trips at the interchange to the 800 peak vehicle trip limit. The City of Lathrop shall add and enforce a condition of approval to the River Islands project that includes the following elements to avoid or reduce merge/diverge impacts associated with peak use of the Manthey Road/I-5 interchange:

1. An annual monitoring program coordinated with Caltrans shall be implemented as part of the City's Transportation Management Program. The applicant shall provide annual traffic reports to the City and Caltrans regarding interchange operations. The reports shall include a projection of the expected interchange volume in two and in four years, based upon anticipated development. Mitigation measures at and beyond the 800 p.m. peak trip limitation will be required to either limit traffic capacity and movements (such as metering lights or restricting access between Stewart Road and Manthey Road), improve capacity or movements (such as acceleration and/or deceleration lane improvements), or a combination of the two. Such mitigation measures shall be determined by the City in consultation with Caltrans and the applicant. If satisfactory mitigations are not agreed upon, then prior to reaching the 800 p.m. peak trip cap, Stewart Road shall be disconnected from access to Manthey Road in order to avoid impact from the River Islands project upon the Manthey Road and Mossdale Road interchanges with I-5.
2. When the 801st residential occupancy occurs, at least two lanes of traffic on Bradshaw's Crossing Bridge must be open and accessible to the project to allow access to the Louise Avenue/River Islands Parkway interchange with I-5.

### **2.1.3 Amendment of the West Lathrop Specific Plan and River Islands Urban Design Concept**

The above described changes to the River Islands project are incorporated in the previously adopted versions of the West Lathrop Specific Plan and River Islands Urban Design Concept. The proposed amendments address the above described changes only and do not involve any other material changes to the project.



## **3 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION**

### **3.1 EXPLANATION OF CHECKLIST EVALUATION CATEGORIES**

This checklist and analysis are not a traditional CEQA “Initial Study” checklist and analysis. The purpose of this checklist is to evaluate the categories in terms of any “changed condition” (i.e., changed circumstances, project changes, or new information of substantial importance) that may result in a different environmental impact significance conclusion from the certified SEIR for the River Islands at Lathrop project. The row titles of the checklist correspond to environmental topics as presented in Appendix G of the State CEQA Guidelines, with some issues scoped out of the impact evaluation analysis as described in Section 3.3 below. The column titles of the checklist have been modified from the Appendix G presentation to help answer the questions to be addressed pursuant to CEQA Section 21166 and State CEQA Guidelines Section 15162, 15163, 15164, and 15168. A “no” answer does not necessarily mean that there are no potential impacts relative to the environmental category, but that there is no change in the condition or status of the impact since it was analyzed and addressed with mitigations in the SEIR. The purpose of each column of the checklist is described below.

#### **3.1.1 Where Impact was Analyzed in the River Islands SEIR**

This column provides a cross-reference to the pages of the prior environmental documents where information and analysis may be found relative to the impact criteria listed under each topic.

#### **3.1.2 Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?**

Pursuant to Section 15162(a)(1) of the State CEQA Guidelines, this column indicates whether the changes represented by the current project will result in new significant impacts that have not already been considered by the prior environmental review or a substantial increase in the severity of a previously identified impact.

#### **3.1.3 Do Any new Circumstances Involve New or Substantially More Severe Significant Impacts?**

Pursuant to Section 15162(a)(2) of the CEQA Guidelines, this column indicates whether there have been changes to the project site or the vicinity (circumstances under which the project is undertaken) that have occurred subsequent to the prior environmental documents, which would result in the current project having new significant environmental impacts that were not considered in the prior environmental documents or that substantially increase the severity of a previously identified impact.

### 3.1.4 Any New Information of Substantial Importance Requiring New Analysis or Verification?

Pursuant to Section 15162(a)(3)(A-D) of the State CEQA Guidelines, this column indicates whether new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous environmental documents were certified as complete is available. This would require an update to the analysis of the previous environmental documents to verify that the environmental conclusions and mitigations remain valid. If the new information shows that: (A) the project will have one or more significant effects not discussed in the prior environmental documents; or (B) that significant effects previously examined will be substantially more severe than shown in the prior environmental documents; or (C) that mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or (D) that mitigation measures or alternatives which are considerably different from those analyzed in the prior environmental documents would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative, the question would be answered 'Yes' requiring the preparation of a SEIR or supplement to the EIR. However, if the additional analysis completed as part of this environmental checklist review finds that the conclusions of the prior environmental documents remain the same and no new significant impacts are identified, or identified environmental impacts are not found to be substantially more severe, the question would be answered 'Yes, but no significant impact would occur' and no additional EIR documentation (supplement to the EIR or SEIR) would be required.

### 3.1.5 Do Mitigation Measures in the River Islands SEIR Address/Resolve Impacts?

Pursuant to Section 15162(a)(3) of the CEQA Guidelines, this column indicates whether the prior environmental documents provide mitigation for the River Islands at Lathrop Project that would also apply to impacts associated with the proposed modified components of the plan. If "N/A" is indicated, there is no significant impact requiring mitigation with implementation of the River Islands at Lathrop Project as analyzed in the River Islands SEIR or with the proposed project modifications evaluated in this addendum.

## 3.2 EXPLANATION OF DISCUSSION, MITIGATION MEASURES, AND CONCLUSIONS SECTIONS

### 3.2.1 Discussion

A discussion of the elements of the checklist is provided under each environmental category to clarify the answers. The discussion provides information about the particular environmental issue, how the project relates to the issue, and the status of any mitigation that may be required or that has already been implemented.

### 3.2.2 Mitigation Measures

New mitigation measures, if needed, are identified here.

### **3.2.3 Conclusions**

A discussion of the specific conclusion for each topical section relating to the need for additional environmental documentation is contained at the end of each separate section.

## **3.3 ISSUES SCOPED OUT OF THE IMPACT EVALUATION CHECKLIST ANALYSIS**

For the following resource areas, there would be no change in the environmental effects resulting from the project with the proposed VTM update and traffic mitigation measure implementation refinement relative to those already identified in the SEIR. These topics are not evaluated further in this addendum.

### **3.3.1 Land Use Consistency and Compatibility**

The River Islands SEIR determined that the River Islands at Lathrop Project would have a less-than-significant impact on land use because the project would not conflict with any City of Lathrop environmental plans, goals, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. This addendum analyzes changes to the River Islands at Lathrop Project including modifications to zoning district boundaries, conversion of single family housing units to multifamily housing, and changes to the traffic mitigation. The land use and zoning districts would be consistent with those proposed in the SEIR and the approved PDPs. No new land use and zoning districts, or changes to the characteristics of existing land use and zoning districts are proposed. No new significant impacts or increase in the severity of previously-identified impacts to land use would occur as a result of the proposed project modifications. No further evaluation is required.

### **3.3.2 Population, Employment, and Housing**

The SEIR found that the impacts related to population growth and housing demand during project construction and operation, as well as potential housing displacement, would be less than significant. No impacts were identified in association with housing policies.

The proposed project modifications would not change the net housing units available in VMT 3694. There would not be an appreciable difference in construction effort. There would be minor reductions in the acreage of land devoted to commercial use due to modified roadway alignments, additional acreage for lakes, and other land use refinements within the Town Center District; however, if there were any net changes in overall commercial square footage, it would be minor and overall conditions relative to population and employment would not differ from those described in the original SEIR and subsequent environmental documents. No new significant impacts or increase in the severity of previously-identified impacts to population and housing would occur as a result of the proposed project modifications. No further evaluation is required.

### **3.3.3 Air Quality and Greenhouse Gas Emissions**

The River Islands project would result in significant or potentially significant impacts related to increases in regional criteria pollutants during construction, increases in mobile source toxic air contaminants, and increases in long-term regional emissions. Increases in regional criteria pollutants during construction would be reduced to a less-than-significant impact with mitigation; increases in mobile source air contaminants

and long-term regional emissions would be significant and unavoidable. The SEIR identified less-than-significant impacts associated with increases in odorous emissions, increases in stationary-source toxic air contaminants, increases in mobile source carbon monoxide concentrations, and consistency with air quality plans.

The River Islands SEIR did not analyze greenhouse gas (GHG) emissions or associated climate change impacts of the project because GHG did not arise as a widely considered CEQA environmental impact issue until the declaration of global warming as a threat to the California environment in Assembly Bill 32, the Global Warming Solutions Act, signed into law in 2006. GHG emissions were not raised during scoping or public review of the SEIR, although the concepts of GHG emissions and climate change were known at the time. Changes to the proposed project since the time of prior environmental review would not result in new or more severe impacts because the proposed land uses remain fundamentally the same and there would not be a negative impact on traffic (the primary generator of mobile source emissions).

No new air quality impacts would result from implementation of the proposed project description changes evaluated in this addendum. No further evaluation is required.

### **3.3.4 Noise**

The River Islands SEIR identified significant impacts related to increases in short-term construction-generated noise, stationary source noise generated by offsite land uses, and compatibility of the proposed land uses with projected onsite noise levels. Some impacts related to the compatibility of the proposed land uses with projected onsite noise levels would be significant and unavoidable; all other significant impacts would be reduced to less than significant with mitigation identified in the SEIR. Increases in existing traffic noise levels were determined to result in a less-than-significant impact.

The proposed revisions to VTM 3694 include modification to the proposed locations of residences and mixed use areas: single family homes north of River Islands Parkway would be replaced with mixed use, and townhomes and multi-family uses east of the Town Center School would be replaced with single family homes. However, the overall type and mix of land uses would not change. Therefore, the proposed modifications would not substantially alter the potential noise sources or spatial relationship between noise sources and sensitive receptors evaluated in the SEIR. There would not be a substantial alteration to noise impacts as determined in the SEIR. No further evaluation is required.

### **3.3.5 Geology, Soils, and Mineral Resources**

The River Islands project area is located in the northern portion of the San Joaquin Valley, in an area that is characteristically flat. There has not been a change in circumstances since certification of the SEIR that would influence geology, soils, and mineral resources impacts associated with the proposed VTM and mitigation measure changes evaluated in this addendum.

The River Islands SEIR identified significant impacts related to ground shaking, liquefaction, lateral spreading and landslide, shrink-swell potential, and corrosive soils. These impacts would be reduced to a less-than-significant level with mitigation. Impacts related to erosion as a result of construction, as well as ground lurching and settlement, were determined to be less than significant. No changes in circumstances or revisions of the proposed project would result in new or substantially more severe significant geology and soils impacts, compared to the analysis presented in the SEIR. The previous discussions regarding geology and soils in the SEIR are still applicable and changes to the proposed project would not alter the previous conclusions. No further evaluation is required.

### 3.3.6 Hazardous Materials and Public Health

The project site was not identified as a location of soil or groundwater contamination in the SEIR. A search of public databases maintained by the California Department of Toxic Substances Control and State Water Resources Control Board conducted in 2014 for Addendum IV indicated that no additional sites of potential contamination have been identified since the River Islands SEIR analysis.

The SEIR and previous addenda identify hazardous materials and public health impacts related to storage, use, and transport of hazardous materials during project construction and operation (less than significant); potential exposure of construction workers, residents, and others to hazardous materials that may currently be on the project site (significant); and use of recycled water to irrigate public areas at the project site (less than significant). The proposed project modifications would not change the conditions related to storage, use, transport, or potential for exposure to, hazardous materials. Use of recycled water would not be affected by the proposed project modifications. No further evaluation is required.

### 3.3.7 Public Services and Energy

The SEIR and previous addenda identify public service impacts related to: obstruction of roadways during construction that could potentially slow emergency vehicle access; increased demand for fire protection facilities and services; increased demand for water-related emergency facilities and services; increased demand for water flows for fire suppression (fire flow); increased demand for police protection facilities and services; increased demand for animal control facilities and services; and increased demand for school facilities and services. All of these impacts are considered significant and would be reduced to a less-than-significant level with mitigation. The project was determined to have a beneficial impact on the demand for neighborhood and community parks.

The proposed modifications to the project would not increase the projected demand for public facilities relative to what was evaluated in the SEIR and subsequent documents. In addition, the acreage of parks and open space would increase under this proposal. No further evaluation is required.

### 3.3.8 Agricultural Resources

The River Islands SEIR identified significant and potentially significant impacts related to conversion of important farmland, Williamson Act cancellations, and adjacent landowner/user conflicts. With mitigation, adjacent landowner/user conflicts would be less than significant; however, the impacts associated with conversion of important farmland and cancellation of Williamson Act contracts would be significant and unavoidable. The proposed changes to the project would have no effect on the amount of agricultural land proposed for conversion to other uses, and there would be no change to the conclusions of the SEIR. No further evaluation is required.

### 3.3.9 Terrestrial Biological Resources

The project proponent would seek coverage under the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) to mitigate for project impacts and obtain incidental take authorization for SJMSCP-covered species under the City's Section 10(a) and Section 2081 permits. The Section 10(a) permit also serves as a special purpose permit for the incidental take of those species that are also covered under the Migratory Bird Treaty Act. Coverage under the SJMSCP would fully mitigate all impacts to special-status wildlife addressed in the SEIR, with the exception of riparian brush rabbit.

The project modifications addressed in this addendum would not alter the potential for impacts to terrestrial species because the building envelope and potential for land disturbance would remain the same as analyzed in the SEIR. No further evaluation is required.

### 3.3.10 Cultural Resources

The SIER identified significant or potentially significant impacts to listed archaeological sites, recorded archaeological sites, historic properties, undiscovered/unrecorded archaeological sites and human remains, and offsite resources. All impacts would be reduced to a less-than-significant level with mitigation.

The proposed project changes evaluated in this addendum would not change the area of disturbance analyzed in the SEIR, and would not change the potential for impacts to cultural resources relative to those identified in the SEIR and subsequent documents. No further evaluation is required.

### 3.3.11 Aesthetic Resources

The SEIR identified less-than-significant impacts associated with views of the site from surrounding lands, views from I-5 and the I-5/I-205/State Route (SR) 120 merge, views for recreational boaters, nighttime views, and views of the grain silos and the railroad bridge. The potentially significant impact associated with the design and function of walls and fences was reduced to a less-than-significant impact with mitigation. The project modifications evaluated in this addendum are visually consistent with the project as proposed in the SEIR and would not generate any new significant impacts related to aesthetics. No further evaluation is required.

## 3.4 IMPACT EVALUATION CHECKLIST

Environmental Issue Area	Where Impact was Analyzed in the River Islands SEIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the River Islands SEIR Address/Resolve Impacts?
<b>1. Biological Resources (fisheries). Would the project:</b>					
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	4.14-25 to 4.14-31, 4.14-32 to 4.14-33 4.15-28 to 4.15-40	No	No	No	Yes
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	4.14-32 to 4.14-33	No	No	No	Yes

Environmental Issue Area	Where Impact was Analyzed in the River Islands SEIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the River Islands SEIR Address/Resolve Impacts?
<b>1. Biological Resources (fisheries). Would the project:</b>					
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	4.14-31 to 4.14-32	No	No	No	Yes
d. Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	4.14-32	No	No	No	Yes
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Not evaluated	No	No	No	N/A
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	4.14-32	No	No	No	Yes

## DISCUSSION

As stated above in Section 3.3.9, the proposed project modifications would result in no changes in effects to terrestrial biological resources relative to the SEIR and subsequent documents and terrestrial biological resources are no analyzed further in this addendum. The following discussion addresses aquatic biological resources. The proposed project modifications include an alternative configuration for the Lathrop Landing Marina that would locate the facility on the waterside of the levee in the San Joaquin River rather than in a constructed back bay. As discussed below, this would not result in any new or substantially more severe effects on fisheries relative to those already identified in the SEIR and subsequent documents. Although construction may have more direct effects on fish habitat in the San Joaquin River, the new marina design would have less potential to create sheltered refugia habitat for nonnative predatory fish and would require less maintenance, such as dredging, during operation of the project. The effect of the proposed project modifications on water quality are discussed further below in the evaluation of Hydrology and Water Quality, with no new significant effects or substantial in increases in significant effects identified.

The SEIR and/or the previous addenda identified fisheries impacts related to:

- ▲ River Islands development area construction sediment (less than significant),
- ▲ levee breaching (significant),
- ▲ bridge and utility crossings (significant),
- ▲ the Paradise Cut Bridges (significant),
- ▲ dock construction (less than significant),
- ▲ structural habitat features (ranges from less than significant to beneficial),
- ▲ entrainment in project pumps (beneficial),
- ▲ maintenance dredging of back bays (significant),

- ▲ habitat modification in Paradise Cut (beneficial),
- ▲ diversion of chinook salmon smolts (less than significant),
- ▲ creation of new fish habitat in the River Islands development area (beneficial),
- ▲ introduction of exotic fish into the Delta (less than significant), and
- ▲ increased water consumption (less than significant).

All the significant impacts listed above would be reduced to less than significant with mitigation identified in the SEIR.

**a, d)** Elimination of the Lathrop Landing back bay would substantially reduce the potential for impacts to native fish species related to levee breaching and maintenance dredging identified in the SEIR and previous addenda. Effects of the proposed action on native and resident fish species, including anadromous species, associated with increased sedimentation and turbidity during construction would be less than significant for the following reasons:

- ▲ Environmental commitments have been incorporated into the project to avoid and minimize potential effects associated with increased sediment load and turbidity. These include constraining all in-water work to authorized work windows, installing silt curtains, and disposing of dredged spoils on land rather than in the water.
- ▲ Any increases in turbidity and sedimentation that may occur during construction and maintenance would be temporary and would be diluted quickly because of river currents and tidal flushing.
- ▲ Migratory and resident fish would likely move upstream, downstream, or laterally to an unaffected portion of the river in response to in-channel work and would therefore be unaffected by any increases in turbidity or sedimentation should they occur.
- ▲ If present, migratory species, such as adult and juvenile salmonids, would be expected to bypass channel reaches with elevated turbidity and sediment levels because a sufficient portion of the channel's width (i.e., zone of passage) would remain unaffected. In addition, the Central Valley Water Board regulates turbidity in the channel. This threshold combined with slow flow/mixing of the channel would allow for adequate fish passage.
- ▲ Because the study area is downstream of all salmon, steelhead, lamprey, and sturgeon spawning areas, no effects on spawning success or habitat suitability in the context of spawning substrate for these anadromous fish species would occur.

Back bays can create warm, slow-moving, relatively shallow water that is habitat for nonnative fish that are predatory towards native fish species. During operation, there would be less potential impacts to native fish because the marina, as opposed to a back bay, would not create this habitat for nonnative predatory fish and would not require regular dredging, which increases sedimentation and turbidity. There would be no change in anticipated boat activity, and impacts associated with boating activity would be unchanged.

**b, c)** Constructing the Lathrop Landing Marina on the waterside of the levee, rather than in a back bay, would reduce the land disturbance and potential for impacts to wetlands, riparian habitats, and other natural communities.

**e)** There are not any applicable local policies or ordinances regarding fisheries. Therefore, there would be no impact associated with the project modifications evaluated in this addendum.

**f)** The project proponent would continue to seek coverage under the SJMSCP to mitigate for project impacts and obtain incidental take authorization for SJMSCP-covered species under the City's Section 10(a) and Section 2081 permits. No changes in the use of, or compliance with the SHMSCP would occur.



### Mitigation Measures

No new biological resources impacts would result from the project modifications evaluated in this addendum, and no new mitigation measures are required.

### Conclusion

The proposed modifications to the Lathrop Landing Marina would not result in any new significant impacts related to aquatic biological resources, significant changes in the severity of previously identified impacts related to aquatic biological resources, or significant changes in the effectiveness or applicability of mitigation measures and project alternatives related to aquatic biological resources. The combined analysis of aquatic biological resource issues in the SEIR and subsequent documents, and the proposed project modifications evaluated in this addendum is sufficient to meet CEQA requirements and support the approval of the proposed project modifications, if the City of Lathrop so chooses.

Environmental Issue Area	Where Impact was Analyzed in the River Islands SEIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the River Islands SEIR Address/Resolve Impacts?
<b>2. Hydrology and Water Quality. Would the Project:</b>					
a. Violate any water quality standards or waste discharge requirements?	4.8-40 to 4.8-41	No	No	No	Yes
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	4.8-48 to 4.8-50	No	No	No	No
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or offsite?	4.8-38 to 4.8-39, 4.8-40 to 4.8-42	No	No	No	Yes
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	4.8-39 to 4.8-40	No	No	No	No
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	4.11-19 to 4.11-20	No	No	No	No
f. Otherwise substantially degrade water quality?	4.8-33 to 4.8-38 4.8-42 to 4.8-43 4.8-48 to 4.8-49	No	No	No	Yes

Environmental Issue Area	Where Impact was Analyzed in the River Islands SEIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the River Islands SEIR Address/Resolve Impacts?
<b>2. Hydrology and Water Quality. Would the Project:</b>					
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	4.8-43 to 4.8-47	No	No	No	No
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	4.8-43 to 4.8-47	No	No	No	No
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	4.8-43 to 4.8-47	No	No	No	No
j. Inundation by seiche, tsunami, or mudflow?	Not evaluated	No	No	No	N/A

## DISCUSSION

The River Islands project site is located adjacent to Paradise Cut, the San Joaquin River, and Old River. The proposed project analyzed in the SEIR included development of a central lake and a system of canals to manage stormwater runoff. The project modifications evaluated in this addendum include changes to the lake system operations, replacing the central lake with several smaller lakes and replacing the canals with underground piping. The additional lakes would provide more storage than the central lake proposed in the SEIR. Similarly, the decentralized nature of the lakes would allow any potential future water quality problems to be isolated to a particular lake without affecting other lakes. The process of managing lake levels through pumping water from surrounding waterways as needed and discharging excess volumes to Paradise Cut would be the same as described in the SEIR and the same stormwater and water quality management measures would be applied. The proposed project modifications also include an alternative configuration for the Lathrop Landing Marina that would locate the facility on the waterside of the levee in the San Joaquin River rather than in a constructed back bay. By not constructing a back bay, there would be less alteration to the river configuration and breaching of the levee to initially connect the river to the back bay would not be needed.

The River Islands SEIR identified significant and potentially significant impacts associated with construction sediment and water quality contamination, earth moving in or adjacent to waterbodies, in-water project features, utility crossing of the San Joaquin River, maintenance dredging of back bays, increased boat traffic, and groundwater quality during construction. These impacts would be less than significant after mitigation. Less than significant or beneficial impacts were identified in association with the water quality of the interior lake, diversion effects on Old River hydrology and water quality, water discharges to the delta, flood protection, nonflood hydrology in surrounding waterways, groundwater quality and supply during project operation, and water supplies to other users.

- a) Groundwater quality in the Lathrop area is generally considered poor because of saltwater intrusion and infiltration and runoff from the San Joaquin River and agricultural and urban areas. Potable water is derived from the deep aquifer, which is generally of better quality.

The proposed use of recycled water for irrigation of public landscaping and the potential for percolation of pollutants from the recycled water was determined to have less-than-significant impacts to potable groundwater used for local private and municipal wells in the River Islands SEIR because the recycled water would be treated to tertiary levels, it would be applied following Title 22 standards, and the depth to potable groundwater is substantial (75 feet or more).

As established in the SEIR, no storage pond water surface would be closer than 100 feet to any domestic well, no irrigation of effluent would occur within 50 feet of a surface water body or an irrigation canal, and infiltration basins would not be located within 150 feet of a surface water body or an irrigation canal drainage course.

The Regional Water Quality Control Board requires the installation of monitoring wells both before and after the application of reclaimed water. Groundwater data are typically collected quarterly and compared to background data to identify any indications of groundwater degradation. In addition, application rates are limited to avoid excessive percolation into underlying aquifers. Violations of water quality criteria or permit conditions are enforced by the Regional Water Quality Control Board with requirements to repair faulty equipment, adjust application rates, or cease operations. These precautions, together with the tertiary treatment given to the recycled water itself, would be sufficient to protect the quality of water in existing wells in surrounding areas. These conditions would not be altered by the proposed project modifications.

- b) Impacts related to potential depletion of groundwater supplies or interference with groundwater recharge would remain less than significant, as identified in the SEIR. With the proposed project modifications, there would be a 2.1-acre increase in the parks and open space areas that would generally accommodate infiltration to groundwater. There would be no changes in numbers of housing units or other land uses that would appreciably alter water demand from the project.
- c) As discussed in the River Islands SEIR, the River Islands development would substantially alter the drainage of the area. All alterations, including those made directly to Paradise Cut, the San Joaquin River, and Old River, would comply with state and federal regulations and would be designed and monitored ensure that the project is implemented in a manner that would not result in substantial erosion or siltation on- or offsite. Although the proposed project modifications alter the configuration of the interior lakes, the overall drainage system within the developed project area would perform the same functions and meet the same performance criteria as identified in the SEIR. Potential alterations in surrounding waterways would be reduced if the Lathrop Landing back bay were no longer constructed.
- d) The River Islands project includes upgrade of Stewart Tract's levee system to substantially reduce the potential for flooding of the project area. Modeling completed for the SEIR and the 2012 Addendum indicate that improvements to the Paradise Cut levees would not change the potential for areas south and west of Paradise Cut to be inundated in the event of a 200-year flood. (Flooding would occur both with and without the levee improvements, and would not be exacerbated by the project.) Additionally, flood flows less than 200 year events would be accommodated within Paradise Cut with no negative effects to upstream areas because of the restoration of the trestle within the Union Pacific Railroad right-of-way in place of the existing box culverts, as discussed in the 2012 Addendum. As discussed in the River Islands SEIR, the project would have a less-than-significant impact on surface water runoff and management. The proposed project modifications do not alter the project's flood control system and continue surface water runoff management with an internal lake system that meets the same performance criteria identified in the SEIR.
- e) Decentralization of the lakes would increase the capacity of the stormwater retention system. As discussed in the River Islands SEIR, the project would have a less-than-significant impact on

stormwater runoff and management and the modified internal lake system does not alter this conclusion.

- f) Adverse impacts on Paradise Cut and groundwater water quality from use of recycled water are considered highly unlikely as identified in the SEIR. Recycled water leaving the City's treatment plant would be disinfected and would undergo tertiary treatment to Title 22 standards for unrestricted use. Tertiary treatment includes the removal of nutrients such as phosphorous and nitrogen, and practically all suspended and organic matter from wastewater. Therefore, the recycled water would contain minimal to no water quality constituents that could be directly (via runoff of recycled water) or indirectly (via deposition in the recycled water disposal areas then subsequent mobilization through stormwater runoff) transported to the San Joaquin River, or reach groundwater aquifers via percolation through the soil. The proposed project modifications do not alter the use of recycled water associated with the project. Discharges from the internal lake system must meet the same water quality performance criteria identified in the SEIR.
- g, h, i) Based on Flood Insurance Rate Maps published by the Federal Emergency Management Agency, Stewart Tract is located within Flood Zone A (within the 100-year flood plain), and properties within this zone are subject to flooding from 100-year stormwater flows. The project modifications analyzed in this addendum would not substantially change the quantity of housing, people, or structures that would be located within the 100-year flood plain; and no people or structures would be exposed to a significant risk of loss, injury, or death involving flooding from this project modification. In addition, the proposed project modifications do not alter the flood control system included in the project and evaluated in the SEIR.
- j) Seiche and tsunami are unlikely to occur at the River Islands site because it is not located in proximity to the ocean or a lake. Mudflows have potential to occur where there are steep slopes, abundant loose sediment, and sufficient water to completely saturate the loose sediment. The levees surrounding the site are the only locations where gravitation pull could induce localized mudflow; however, the construction of the levees is regulated, and the materials and design are not prone to mudflow. The proposed project modifications do not change conditions related to seiche, tsunami, or mudflow.

### **Mitigation Measures**

Mitigation measures included in the River Islands SEIR would be applicable to the proposed project modifications and would mitigate potential impacts to surface and groundwater quality. No new hydrology and water quality impacts would result from the project modifications evaluated in this addendum, and no new mitigation measures are required.

### **Conclusion**

The combined analysis of hydrology and water quality issues in the SEIR and subsequent documents, and the proposed project modifications in this addendum is sufficient to meet CEQA requirements and support the approval of the proposed project modifications, if the City of Lathrop so chooses.

Environmental Issue Area	Where Impact was Analyzed in the River Islands SEIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the River Islands SEIR Address/Resolve Impacts?
<b>3. Recreation.</b>					
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	4.12-7 to 4.12-11	No	No	No	No
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	4.12-7 to 4.12-11	No	No	No	No

## DISCUSSION

Preparation of a Master Parks and Open Space Plan that provides illustrative guidance to the developer and the City for future facilities for the entire Phase 1 area was a condition of the City Council’s March 2007 approval of the River Islands project. This addendum reflects an amendment to that plan. The Conditions of Approval for Tract 3694 also require that the project applicant show compliance with the Master Parks and Open Space Plan with any final map that contains residential development.

The proposed modifications to VTM 3694 would result in approximately 16.9 additional parkland acres and 20.0 additional acres of lakes. The canals proposed in the SEIR would be replaced with underground infrastructure, permitting use of these areas for paseos, open space, and parkland; and the decentralization of the lake feature would result in more lake area overall, as well as increase shoreline that can be accessed by recreationalists. With the loss of 1.5 acres of river front park due to modifications to the Lathrop Landing Marina, there would be a net increase of 15.4 acres of park lands.

In addition, the proposed project modifications would reduce the Quimby Act parkland requirements because single family residences would be replaced with multi-family housing. As established in the EIS prepared for the project (USACE 2014), the City anticipates an occupancy rate of 3.2 persons per household for single-family homes and 2.5 persons per household for multi-family homes. Therefore, the proposed project modifications would reduce the park requirement while increasing the acreage pf parkland proposed.

- a, b) The River Islands project proposes a system of parks and open space that would exceed the recreation services demand generated by the project. This excess of available parkland is expected to alleviate demand on, and therefore increase the availability of, existing parkland in the City of Lathrop.

## Mitigation Measures

Impacts to recreation were determined to be beneficial or less than significant in the SEIR. No new impacts to recreational facilities are anticipated. Therefore, no mitigation is required.

## Conclusion

No changes in circumstances or revisions of the proposed project would result in new or substantially more severe significant environmental impacts. The combined analysis of recreation issues in the SEIR, subsequent documents, and this addendum is sufficient to meet CEQA requirements and support the approval of the proposed project modifications, if the City of Lathrop so chooses.

Environmental Issue Area	Where Impact was Analyzed in the River Islands SEIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the River Islands SEIR Address/Resolve Impacts?
<b>4. Transportation/Traffic. Would the project:</b>					
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	4.4-57 to 4.4-71	No	No	No	Yes
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	4.4-57 to 4.4-58, 4.4-61, 4.4-64 to 4.4-66	No	No	No	Yes
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	Not evaluated	No	No	No	N/A
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	4.4-59 to 4.4-61, 4.4-66 to 4.4-69, 4.4-71	No	No	No	No
e. Result in inadequate emergency access?	4.10-9	No	No	No	Yes
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	4.4-69 to 4.4-71	No	No	No	No

## DISCUSSION

I-5 is a major north-south thoroughfare in the City of Lathrop. It continues north to Stockton, Sacramento, and Oregon, and south through the San Joaquin Valley to Los Angeles and San Diego. In the project vicinity, I-5 currently has five travel lanes in each direction (there were three lanes in each direction when the SEIR was prepared). There are buttonhook ramps onto I-5 from Manthey Road, which parallels I-5. Since completion of the SEIR in 2003 and adoption of previous addenda, some planned transportation infrastructure improvements have been implemented and some traffic generating land uses have been developed.

As indicated in the project description, this addendum evaluates adjustment to the alignments of some internal roadways, land use modifications that would replace single family homes with multi-family homes and increase park land, and modification of aspects of the implementation of Mitigation Measure 4.4-m related to controlling traffic volumes on the Manthey Road/I-5 interchange. Multi-family housing would generate less traffic than the single-family housing in the original proposal that was analyzed in the SEIR and

the adjusted internal roadway system modifies the location of some roadways but does not alter the ability of the system to accommodate the project-generated traffic flow. These changes are consistent with the traffic model assumptions used in the SEIR and would not alter the results of the model. No traffic delays or roadway hazards are anticipated.

Implementation of Mitigation Measure 4.4-m would be modified through addition of conditions for annual monitoring and forecasting to limit the traffic at the Manthey Road and Mossdale Road interchanges with I-5 to 800 trips during peak hours and requiring that Bradshaw's Crossing Bridge is open when the 801st residential occupancy occurs. This modification would clarify the units-to-trips conversion that was used in developing the mitigation measure and more precisely defines the City's role in monitoring. Since the mitigation would be consistent with the existing 800 peak hour trip limit, tying the mitigation more closely to the original success criteria that informed the 800 home threshold would not change the intent or effect of the original mitigation. Monitoring would be conducted annually by the City and the project proponent, in consultation with Caltrans, to determine when access from the River Islands project site southbound on Manthey Road to the Manthey Road/I-5 interchange would be discontinued. Additional vehicle trip management measures may be required on an interim basis, which would allow access to continue as long as the City and Caltrans mutually agree that merge/diverge, weaving, and level of service (LOS) on I-5 are not significantly affected. Monitoring would take place as part of the City's Transportation Management Program, in which the project proponent already participates.

The SEIR identified significant and potentially significant impacts related to: degradation of levels of service at signalized and unsignalized intersections; vehicle backups extending from one intersection through an adjacent intersection; degradation of freeway operations; degradation of freeway ramp/freeway mainline merge/diverge operations; degradation of rural two-lane roadway, Stewart Road, and the Manthey Road San Joaquin River Bridge operation; construction traffic; and the proposed onsite vehicle, pedestrian, and bicycle circulation. The potential for construction to delay emergency access due to roadway obstruction was also considered a significant impact. All impacts would be reduced to a less-than-significant level with mitigation except degradation of freeway operations and degradation of freeway ramp/freeway mainline merge/diverge operation, which would be significant and unavoidable. Impacts associated with degradation of weaving movements on I-5 to/from the Mossdale Road and Manthey Road hook ramps and provisions for public transit were considered less than significant with mitigation.

Therefore, although some conditions relative to traffic and transportation have changed since completion of the SEIR and the previous addenda, these changes would not result in new significant or substantially more severe traffic impacts which would require subsequent environmental review to assess the impacts of the proposed project modifications. In fact, analysis of freeway operations indicates that the mitigation prescribed in the SEIR to reduce weaving impacts to traffic flow on I-5 may not be necessary.

- a, b)** The River Islands SEIR predicted that in 2015, without implementation of the River Islands project, the Manthey Road/I-5 southbound ramps (on-ramp and off-ramp) would operate at a LOS F in the AM peak hour and the Manthey Road/I-5 southbound on-ramp would operate at LOS E. The analysis indicates that adding lanes to I-5, which has occurred, would result in acceptable freeway ramp operation.

With the proposed modifications to the implementation of Mitigation Measure 4.4-m, access to I-5 via Manthey Road would continue past the 800 housing unit threshold established in the SEIR. The I-5 Freeway Operations Analysis (Appendix A) provides additional analysis of the operations and loading of I-5 between I-205 and the SR 120 split using new baseline data for existing conditions collected at stations along I-5, I-205, and SR 120, and Caltrans data on freeway loading. Future residents of the River Islands project are expected to follow observed use patterns. Observations conducted as part of the I-5 Freeway Operations Analysis found that peak traffic occurred southbound on I-5 and westbound on SR 120 in the morning as people commuted, presumably, to employment centers in the Bay Area. In the evening, peak traffic was observed on I-5 north and I-205

east. The portion of existing traffic currently traveling on area freeways was used to derive a percentage of vehicles headed to destinations along I-5 or I-205 and SR 120, and assess merging and weaving of traffic on I-5. The analysis determined that some areas of I-5 would be reduced from LOS C to LOS D during peak traffic times. Most traffic generated by the project would make “non-weaving” movements. In addition, the proposed modification to the implementation of Mitigation Measure 4.4-m would make implementation more in line with the previously established 800 peak hour vehicle trip criteria rather than a housing unit criteria, which does not equate one-to-one with vehicle trip generation on the Manthey Road/I-5 interchange.

- c) The project is not in the vicinity of a private airstrip or within 2 miles of a public airport. In addition, the project would not result in a direct increase in air travel.
- d, f) The proposed realignment of planned project roadways would not change the basic design principles of the internal roadway system such that potential for hazards would increase. The project would not conflict with adopted policies, plans, or programs related to public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.
- e) Construction activities could result in temporary lane closures, increased truck traffic, and other roadway effects that could slow or stop emergency vehicles, which could temporarily increase response times and impede existing service. However, the proposed project modifications would not appreciably alter construction activity as anticipated in the SEIR and project effects would not change.

**Mitigation Measures**

The details of the various mitigation measures for traffic impacts are provided in Appendix B of the River Islands SEIR. These mitigation measures have been incorporated into the project to address identified impacts. The proposed modifications to the implementation of Mitigation Measure 4.4-m would not change the impact conclusions of the SEIR, and no additional mitigation would be required.

**Conclusion**

No changes in circumstances or revisions of the proposed project would result in new or substantially more severe significant traffic and transportation impacts, compared to the analysis presented in the SEIR. The combined analysis of the transportation issues for the River Islands at Lathrop Project in the SEIR, subsequent documents, and this addendum is sufficient to meet CEQA requirements and support the approval of the proposed project modifications, if the City of Lathrop so chooses.

Environmental Issue Area	Where Impact was Analyzed in the River Islands SEIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the River Islands SEIR Address/ Resolve Impacts?
<b>5. Utilities and Service Systems. Would the Project:</b>					
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	4.11-15	No	No	No	Yes
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	4.11-15 to 4.11-17	No	No	No	Yes



Environmental Issue Area	Where Impact was Analyzed in the River Islands SEIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the River Islands SEIR Address/Resolve Impacts?
<b>5. Utilities and Service Systems. Would the Project:</b>					
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	4.11-19 to 4.11-20	No	No	No	No
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	4.11-9 to 4.11-15	No	No	No	No
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	4.11-15 to 4.11-16	No	No	No	Yes
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	4.10-16	No	No	No	No
g. Comply with federal, state, and local statutes and regulations related to solid waste?	4.10-16	No	No	No	No

## DISCUSSION

The SEIR and previous addenda identified public utilities impacts related to:

- ▲ demand for potable water (significant),
- ▲ environmental impacts associated with the development of new city wells (less than significant based on previously adopted mitigation identified in the City's Water, Wastewater, and Recycled Water Master Plan EIR),
- ▲ demand for wastewater treatment capacity (significant),
- ▲ environmental impacts associated with the expansion of water recycling plant (WRP) #1 and construction of WRPs #2 and #3 (significant),
- ▲ demand for recycled water storage and disposal capacity during Phases 1a and 1 of project development (less than significant),
- ▲ demand for recycled water storage and disposal capacity for Phase 2 of project development (significant), and
- ▲ stormwater/surface water runoff management (less than significant).

Of the four significant impacts that are identified above, all but one of them (the environmental impact associated with the expansion of WRP #1 and construction of WRPs #2 and #3) could be reduced to less-

than-significant levels with mitigation adopted as part of the River Islands project. (Note that since preparation of the SEIR, WRP #1 has been expanded and is now part of a planned consolidated treatment facility that would provide the treatment capacity for WRPs #2 and #3.)

The SEIR and previous addenda also identify a public services impact related to increased generation of solid waste and an associated increase in demand for landfill capacity. However, this impact is considered less than significant because of sufficient available capacity at existing landfills.

Multi-family residences tend to require less utility services per dwelling unit than single family residences. Therefore, the utility demands of the project would be expected to decrease slightly with the reallocation of housing units from single family to multi-family housing. Although water demand and subsequent wastewater generation may decrease, any such change would not change the analysis and conclusions in the SEIR.

**a, b, d, e)** The City of Lathrop would provide potable water to the River Islands development. The River Islands project would exceed the capacity of the City wells available to serve the project in 2002. Operation of the project would be dependent on operation of planned wells and the South County Surface Water Supply Project.

The River Islands SEIR concluded that the River Islands development area may have sufficient land application area to dispose of recycled water generated by the proposed project. There would not, however, be enough area on the project site at full buildout to construct storage ponds sufficient to store all of the recycled water generated by the proposed project. Therefore, offsite recycled water disposal and/or river discharge, as evaluated in the Master Plan and Master Plan EIR, would be required for Phase 2 of the River Islands project. Permanent stormwater storage and disposal was subsequently identified south of the SEIR project area and evaluated in Addendum IV to the SEIR. The proposed project modifications do not appreciably alter the demand for domestic water, wastewater treatment, or recycled water storage, or the availability of recycled water disposal. The increase of park acreage would potentially also increase the area available for recycled water disposal. Impacts would not be different from those identified in the SEIR and subsequent documents.

**c)** The River Islands project would not result in a significant impact related to stormwater and surface water management. The project evaluated in this addendum includes a system of parks, created wetlands, and lakes to manage, store, and clean stormwater runoff. The lake system, as currently proposed, would provide stormwater management services commensurate with those provided by the central lake and canal system evaluated in the SEIR.

**f, g)** The Foothill Sanitary Landfill has sufficient capacity to accommodate the solid waste generated by the River Islands project through at least 2040, and the project would comply with all federal, state, and local statutes and regulations related to solid waste reduction and recycling.

## Mitigation Measures

The mitigation measures identified in the SEIR would continue to mitigate potential impacts to utilities. Project modifications would not result in new significant or potentially significant impacts that would require mitigation.

## Conclusion

The combined analysis of utilities and service systems for the River Islands at Lathrop Project in the SEIR, subsequent documents, and this addendum is sufficient to meet CEQA requirements and support the approval of the proposed project modifications, if the City of Lathrop so chooses.

Environmental Issue Area	Where Impact was Analyzed in the River Islands SEIR.	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the River Islands SEIR Address/Resolve Impacts?
<b>6. Mandatory Findings of Significance.</b>					
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	4. Affected Environment, Environmental Consequences, and Mitigation Measures	No	No	No	Yes
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when view in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	5. Cumulative Impacts	No	No	No	No
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	4. Affected Environment, Environmental Consequences, and Mitigation Measures	No	No	No	Yes

**Conclusion**

- a, c) As described in the preceding sections, the proposed project modifications evaluated in this addendum would not change any of the impact conclusions of the SEIR, and would not substantially increase the severity of identified impacts. As described in the SEIR, the project would have significant and unavoidable adverse impacts related to short term degradation of freeway operations, degradation of freeway ramp/freeway mainline merge/diverge operation, increases in mobile source toxic air contaminants, increases in long-term regional emissions, compatibility of the proposed land uses with projected onsite noise, conversion of important farmland, and Williamson Act contract cancellations. All other impacts would be less than significant. The proposed project modifications addressed in this addendum do not change these conclusions.
  
- b) In Chapter 5, Cumulative Impacts, of the Draft SEIR, the River Islands at Lathrop Project is considered together with related projects and regional development for each of the environmental issue areas evaluated in the SEIR. Consistent with the intent of a cumulative analysis, where the combined effects of multiple projects are to be considered, the various elements of the River Islands at Lathrop Project are generally evaluated as a whole. The River Islands at Lathrop Project would result in direct and indirect cumulatively considerable incremental contributions to significant cumulative impacts related to traffic, noise, public services, agricultural resources, and aesthetic resources. As described above, the proposed project modifications addressed in this addendum do not increase the project’s adverse environmental effects, and therefore would not alter the project’s contribution to cumulative effects. Therefore, conclusions related to cumulative effects identified in the SEIR and subsequent documents would not be altered.

### **3.5 CONCLUSIONS REGARDING THE ENVIRONMENTAL ANALYSIS OF THE PROPOSED PROJECT MODIFICATIONS**

Based on the analysis of the categories of environmental impacts evaluated above, implementing the River Islands at Lathrop Project with the modifications described in this document would result in none of the conditions described in Section 15162 of the State CEQA Guidelines calling for preparation of a SEIR. In summary, no altered circumstances or new information of substantial importance has been identified since certification of the SEIR, and the project modifications evaluated in this addendum would not: 1) result in any new environmental effects; 2) substantially increase the severity of any previously identified effects; 3) result in mitigation measures or alternatives previously found to be infeasible becoming feasible; and 4) result in availability/implementation of mitigation measures or alternatives that are considerable different from those analyzed in the previous document that would substantially reduce one or more significant effects on the environment. These conclusions confirm that this addendum to the SEIR is the appropriate CEQA document to evaluate the record the minor project modifications described in this document.

## 4 LIST OF PREPARERS AND PERSONS CONSULTED

### 4.1 LIST OF PREPARERS

#### Ascent Environmental

Gary Jakobs ..... Principal-in-Charge  
Sean Bechta..... Project Manager  
Jessica Babcock ..... Environmental Planner  
Gayiety Lane ..... Document Production

### 4.2 PERSONS CONSULTED

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Greg Gibson ..... Senior Civil Engineer  
Glenn Gebhardt ..... City Engineer

#### Cambay Group

Ramon Batista ..... Director of Planning and Entitlements  
Susan Dell’Osso..... Project Director  
Ryan Alameda..... Project Engineer



## 5 REFERENCES

USACE. 2014 (October). *Draft Environmental Impact Statement: River Islands at Lathrop, Phase 2B.*





# **Appendix A**

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**I-5 Freeway Operations Analysis,  
Draft Memorandum**





## Draft Memorandum

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**Date:** January 12, 2015  
**To:** Ramon Batista  
**From:** At van den Hout, Trisha Dudala  
**Subject:** I-5 Freeway Operations Analysis

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### Introduction

There is an existing Condition of Approval (CoA) that requires eliminating access to the River Islands development via Stewart Road and the Manthey Road/Mosssdale Road Ramps with I-5 after 800 residential units have been constructed and occupied. It is anticipated that 800 residential units would be constructed and occupied by the spring of 2016. The CoA is based on the assumption that, with development levels beyond the 800 units, traffic conditions on the I-5 freeway at the Manthey Road and Mosssdale Road Ramps would become unacceptable. Although this CoA has been issued, there is no documentation or technical analysis that supports this future condition.

This Technical Memorandum documents a freeway and ramp junction analysis to determine operational existing and existing + (partial) project conditions of the freeway and aforementioned ramps on the segments of I-5 between its connections with SR 120 and I-205. The analysis assumes partial completion of the project and includes construction of the Town Center, most of the units within the Stage 1 area and a portion of the Stage 2 area, including the second school site. Figure 1 shows the area (within the red dashed stripes) that is assumed to be developed, which includes approximately 2,860 residential units, 42 acres of commercial development, and two schools. The analysis assumes completion of the internal roadways within the development area as well as the completion of the Bradshaw's Crossing to provide a connection to I-5.

### Existing Conditions

This section summarizes the existing traffic conditions along I-5, between I-205 and SR-120. The following freeway segments were analyzed:

1. I-5 South/West – between SR-120 merge and Manthey Road Off-Ramp (segment 1)
2. I-5 South/West – between Manthey Road On-Ramp and I-205 split (segment 2)
3. I-5 North/East – between the I-205 merge and Mosssdale Road Off-Ramp (segment 3)
4. I-5 North/East – between Mosssdale Road On-Ramp and the SR-120 Split (segment 4)

### Existing Traffic Volumes

In order to accurately analyze traffic conditions and weaving operations on the study freeway segments, Hexagon collected origin-destination data of the traffic flows on the sections of I-5 between the I-205 and the SR-120 splits. Sensors were placed at four stations along I-5, I-205 and the SR-120 freeways. The map on Figure 2 shows the approximate locations of the stations labeled A, B, C and D. Cell phone blue tooth signals were recorded at these stations to track vehicles in the corridor. The number of vehicles traveling between those stations was recorded on Tuesday, Wednesday and Thursday, November 18 through 2014, between 7:00 – 9:00 AM and between 4:00 to 6:00 PM. While most drivers carry cell phones in their cars, not all of them have blue tooth technology so the recorded data is only a sample and does not represent actual traffic counts. However, the intent of the data was to calculate percentages that then can be applied to actual traffic counts to estimate traffic flows between the four stations. These traffic flows are then used to analyze merging and weaving of traffic on the segments of I-5.



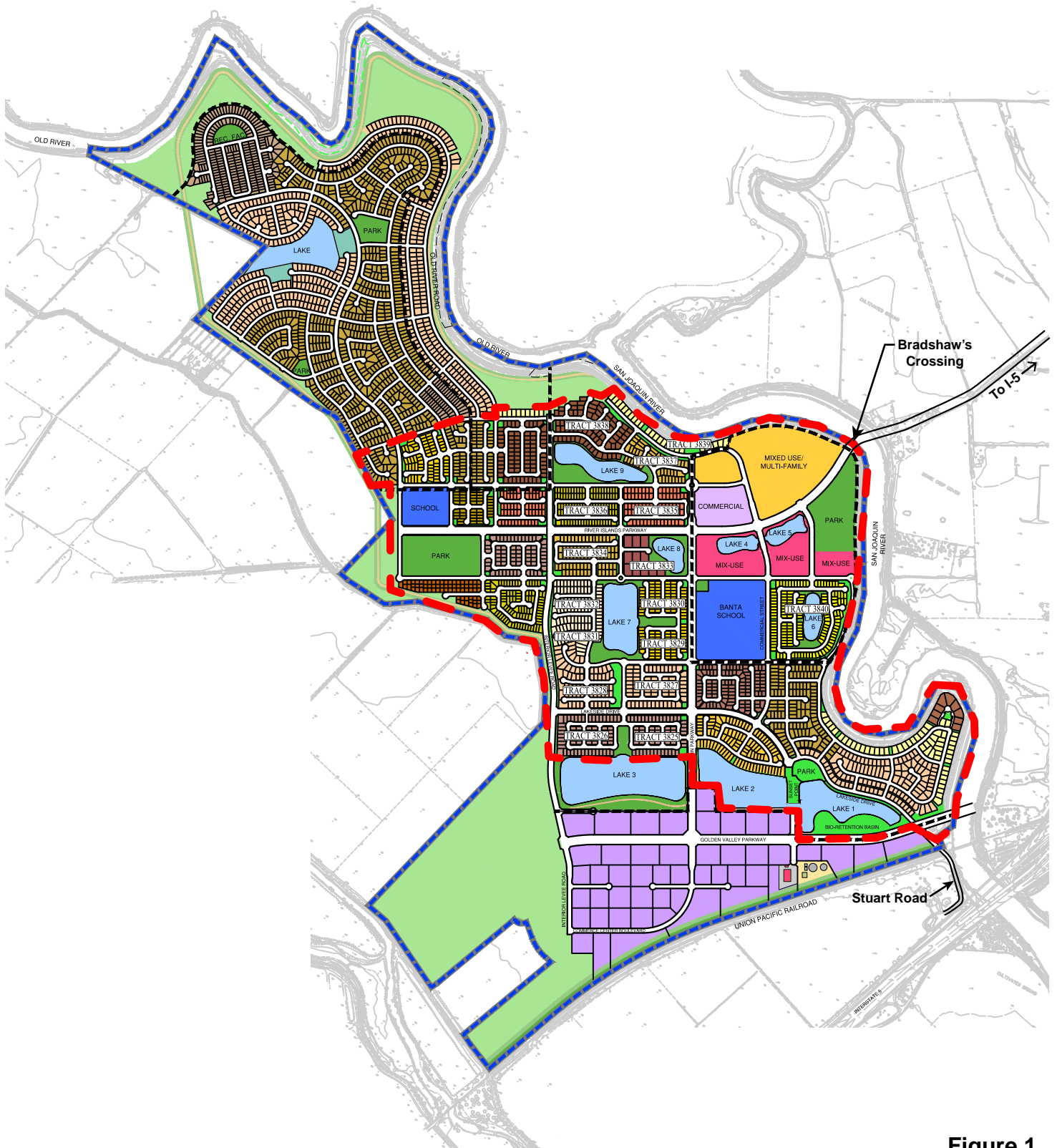
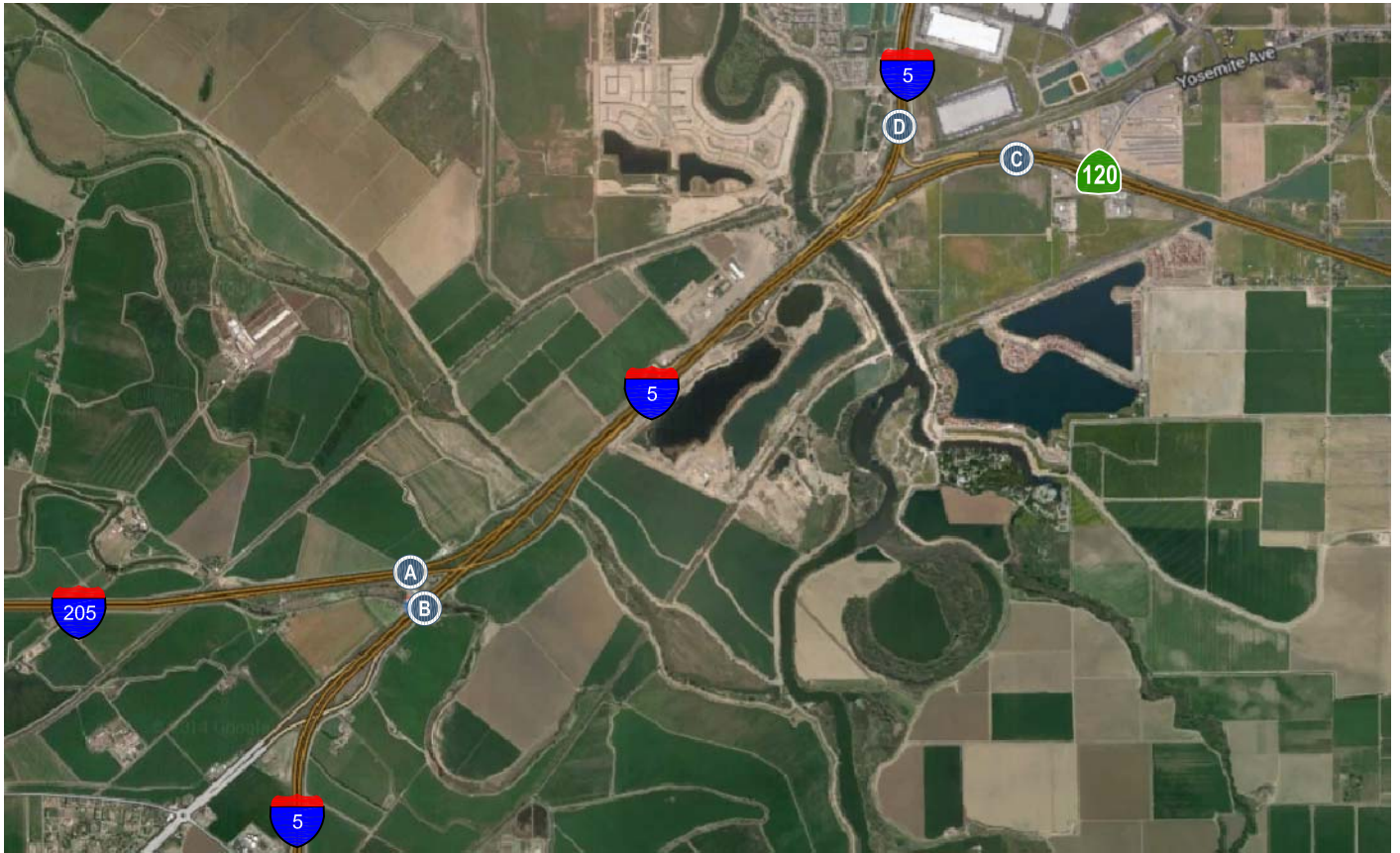


Figure 1  
Phase 1 River Islands Land Use Map



LEGEND

- Ⓐ = I-205
- Ⓑ = I-5 (West of I-205 Merge/Diverge)
- Ⓒ = SR 120
- Ⓓ = I-5 (North of SR 120 Merge/Diverge)

**Figure 2**  
**Bluetooth Station Locations**

Tables 1 and 2 below show the percentages of traffic between the stations during the AM and PM peak periods, respectively.

**Table 1: AM Peak Hour**

From/To	I-205 [A]	I-5S [B]	SR-120 [C]	I-5N [D]	Total
I-205 [A]	-	0%	46%	54%	<b>100%</b>
I-5S [B]	0%	-	10%	90%	<b>100%</b>
SR-120 [C]	74%	5%	-	21%	<b>100%</b>
I-5N [D]	65%	20%	15%	-	<b>100%</b>

**Table 2: PM Peak Hour**

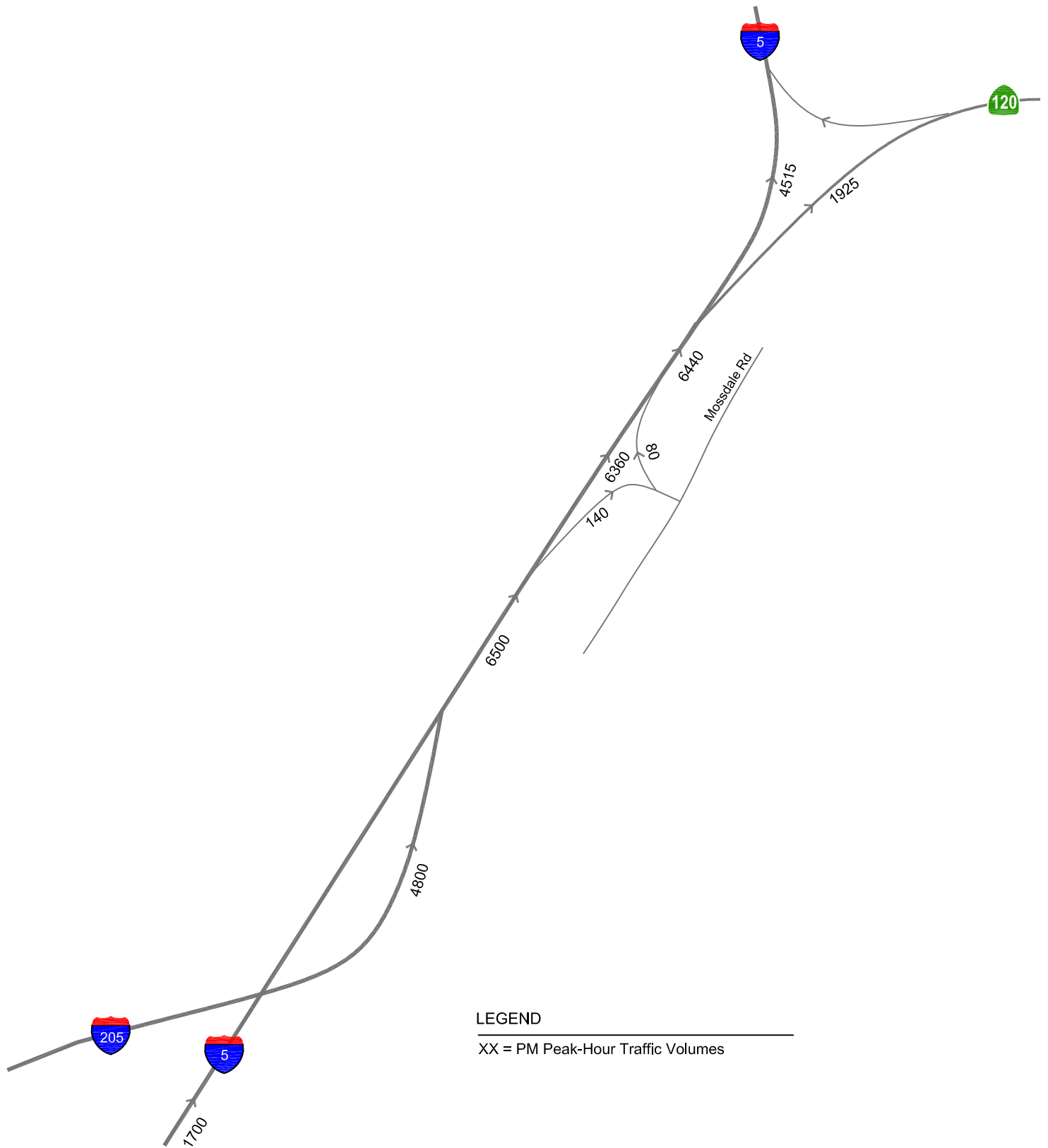
From/To	I-205 [A]	I-5S [B]	SR-120 [C]	I-5N [D]	Total
I-205 [A]	-	0%	38%	62%	<b>100%</b>
I-5S [B]	0%	-	7%	93%	<b>100%</b>
SR-120 [C]	66%	4%	-	30%	<b>100%</b>
I-5N [D]	50%	30%	19%	-	<b>100%</b>

For example, during the AM peak hour, 65% of the traffic on I-5 North (Station [D]) travels to I-205 (Station [A]), 20% of the vehicles travel to I-5 South (Station [B]), and 15% are destined to SR-120 (Station [C]). Similarly, during the PM peak hour, 0% of the traffic on I-205 (Station [A]) travels to I-5 South (Station [B]), 38% of the vehicles are traveling to SR-120 (Station [C]), and 62% are destined to I-5 North (Station [D]).

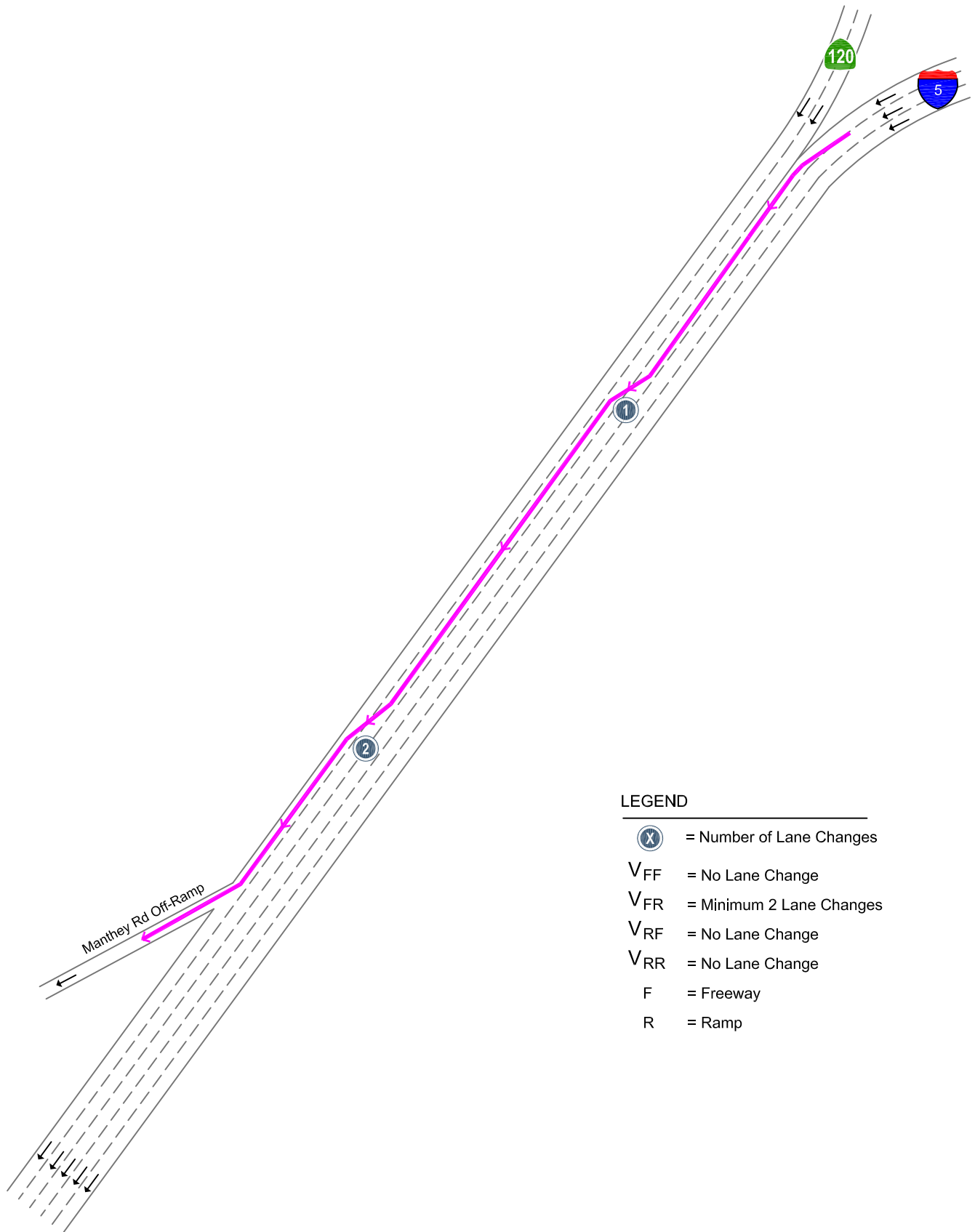
The corresponding AM and PM peak hour percentages were applied to the existing freeway volumes to determine the weaving and non-weaving volumes on each of the freeway segments. Existing AM and PM peak hour volumes were obtained from the Caltrans Performance Measurement System (PeMS) website. Caltrans collects “real time” traffic data at over 39,000 individual detectors. These sensors span the freeway system across all major metropolitan areas of the state of California. Existing freeway volumes were based on data from detectors on I-5, SR 120 and I-205 north of the SR-120 split and south of the I-205 merge. Existing volumes represent the average peak hour traffic collected during a three month (September through November 2014) time period. Any outliers observed as a result of accidents were removed from the calculations. Truck percentages assumed in this analysis were based on truck percentages reported in the traffic study for the River Islands Phase 2B Development conducted by TJKM Transportation consultants in June 2010. Existing (2014) AM peak-hour southbound and PM peak-hour northbound freeway and ramp volumes along the corridor are shown on Figures 3 and 4, respectively.

### **Field Observations**

Based on field observations conducted in the study area, it was observed that during the AM peak hour, the peak direction of traffic occurs in the southbound direction on I-5 and on westbound SR 120 as people commute to employment sites in the Bay Area. During the PM peak hour period, peak direction of traffic occurs on I-5 north and I-205 east as people return home from work. Future River Islands residents are assumed to show similar commute patterns during the morning and afternoon. Given this peak directionality in traffic, freeway segments 1 and 2 were analyzed for weaving operations during the AM peak commute hours and segments 3 and 4 were analyzed for weaving operations during the PM peak hour. Freeway weaving operations were analyzed using HCS 2010 software. The AM peak hour occurs between 7:00 AM and 9:00 AM and the PM peak hour occurs between 4:00 PM and 6:00 PM on a typical weekday. The posted speed limit on the freeways in the study area is 65 mph. A detailed description of each of the freeway segments is provided below:



**Figure 4**  
**Existing PM Peak-Hour Volumes**  
**(North / Eastbound)**



**Figure 5**  
**Segment 1 - I-5 Southbound**  
**(I-5 / SR 120 Merge to Manthey Road Off-Ramp)**



**Segment 1: I-5 SB (SR-120 W Merge to Manthey Road Off-Ramp):** This segment represents the section of I-5 south, between the SR 120 west merge and the Manthey Road off-ramp. This section is approximately 1,600 feet long. On this segment, three lanes continue from I-5 south and SR 120 west adds two lanes resulting in a five lane section. The following movements occur on this section:

- I-5 South to I-5 South – No lane change
- I-5 South to Manthey Road off-ramp – Minimum of two lane changes
- SR 120 West to I-5 – No lane change
- SR 120 West to Manthey Road off-ramp – No lane change

This segment of the freeway is illustrated on Figure 5. Vehicles on I-5 traveling southbound and getting off at Manthey Road are required to make at least two lane changes. These vehicles cross paths with traffic continuing on I-5 south. Field observations indicated that traffic flowed at free flow speed during both AM peak hour and vehicles were able to complete the lane change maneuvers without any significant deceleration in speed.

**Segment 2: I-5 SB (Manthey Road On-Ramp to I-5/I-205 split):** This segment is located to the south of segment 1 and represents the segment between the Manthey Road on-ramp and the I-205 / I-5 split. On this segment, three lanes continue south on I-5 from the upstream section, while two lanes drop off as exit-only lanes onto I-205 West ramps with lane balance. A third lane exists on the I-205 West ramp that can be accessed from the third lane on I-5 South. Vehicles in the third lane on I-5 can either continue on I-5 or exit onto the third lane on I-205 West. This section has turbulence as a result of weaving between vehicles from the Manthey Road on-ramp going towards I-5 South that have to cross paths with the I-205 West traffic. The following movements occur on this section:

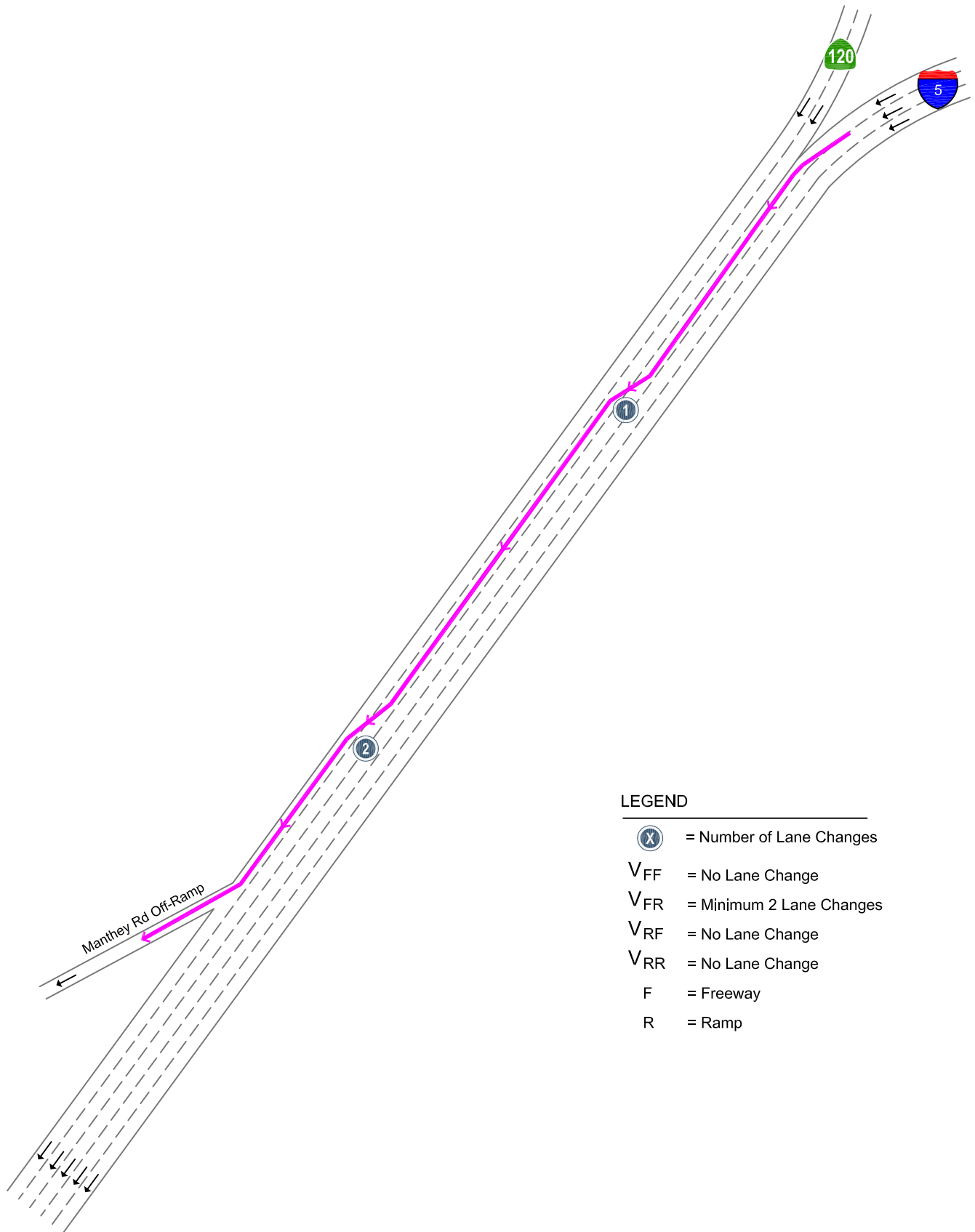
- I-5 South to I-5 South – No lane change
- I-5 South to I-205 West – No lane change
- Manthey Road on-ramp to I-205 West – No lane change
- Manthey Road on-ramp to I-5 South – Minimum two lane changes

This segment of the freeway is illustrated on Figure 6. Field observations in this segment during the AM peak-hour indicated that traffic flowed at free flow speed and vehicles were able to complete lane changes without significant deceleration in speed.

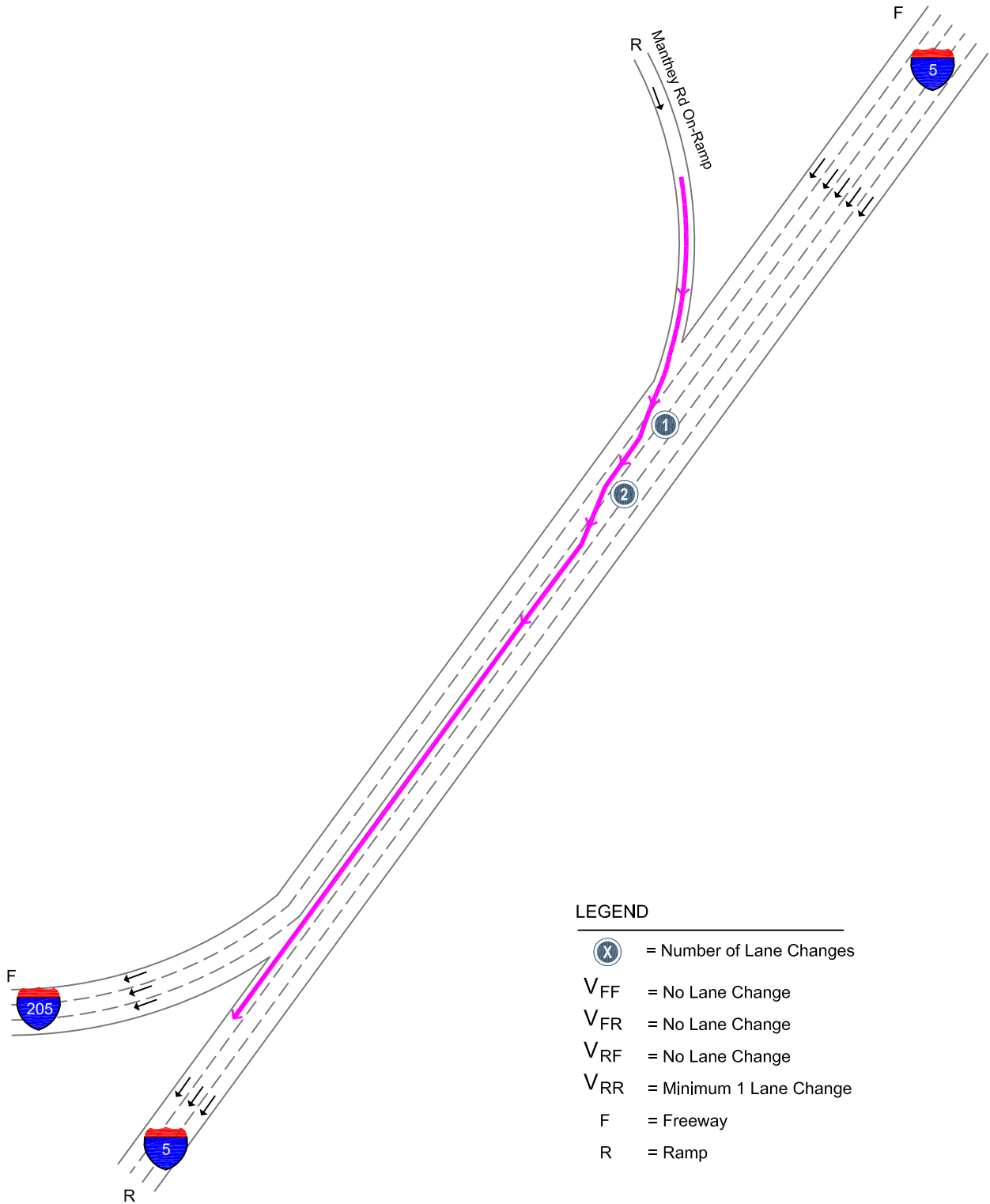
**Segment 3: I-5 NB (I-205 Merge to Mossdale Road Off-Ramp):** This segment consists of five travel lanes in the northbound direction, two lanes from I-5 North and three lanes from I-205 East. The Mossdale Road off-ramp is located on I-5 approximately 2,300 feet north of the I-205 merge. Vehicles travelling on I-205, that are getting off at Mossdale Road can exit the freeway without changing lanes (assuming that vehicles are positioned in the right most lane). Vehicles coming from I-5 that are getting off at Mossdale Road are required to make at least three lane changes within the 2,300 feet distance. These vehicles cross paths with the I-205 through traffic resulting in some turbulence in this section. The following movements occur on this segment:

- I-5 North to I-5 North – No lane change
- I-5 North to Mossdale Road off-ramp – Minimum three lane changes
- I-205 East to I-5 North – No lane change
- I-205 East to Mossdale Road off-ramp – No lane change

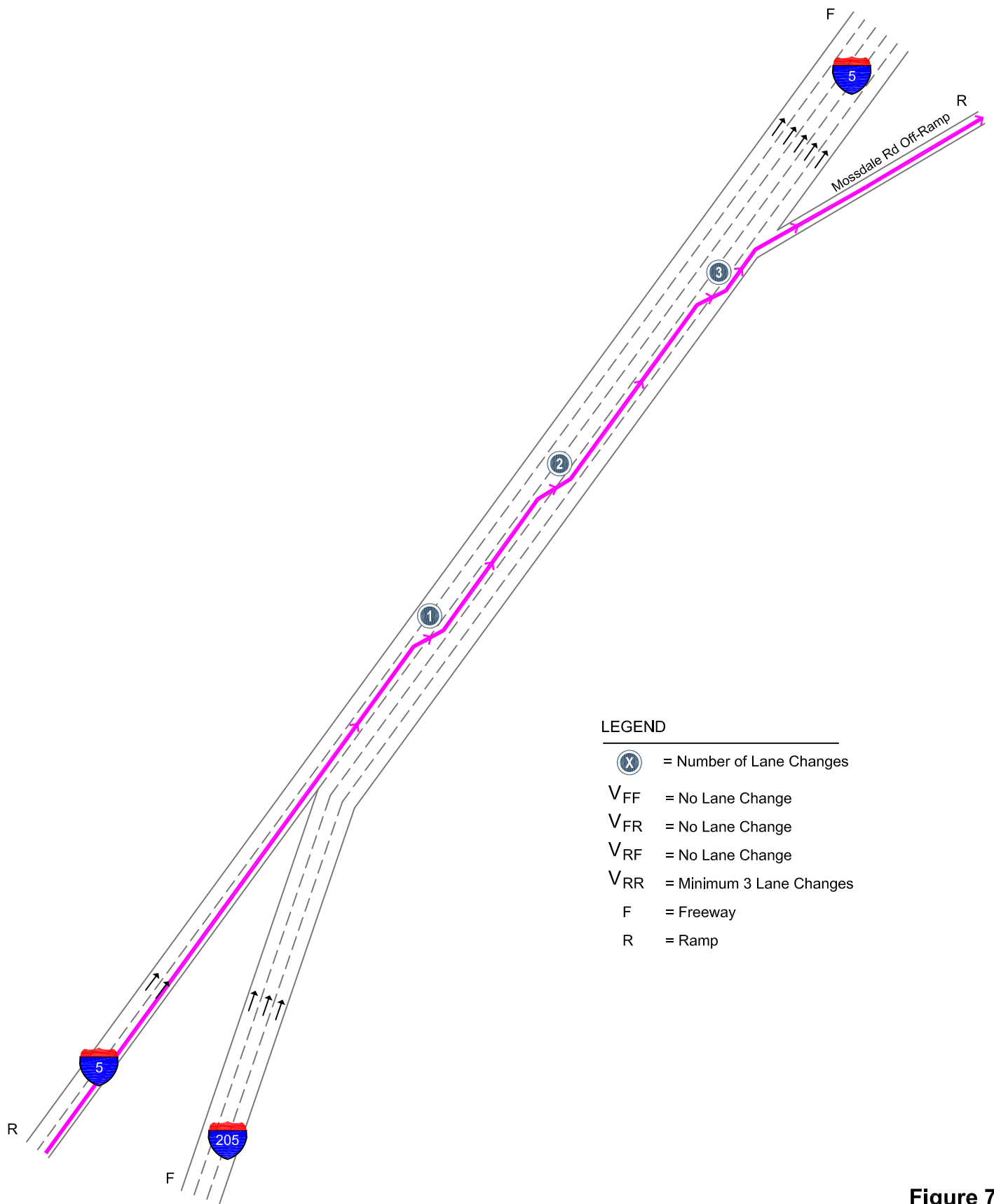
This section of the freeway is illustrated on Figure 7. This section of the freeway was analyzed as a two sided weave. Field observations indicated that during the PM peak hours, it was observed that vehicles slowed down to 55 - 60 mph in this section because of weaving in the downstream segment of I-5 between the Mossdale Road off-ramp and I-5/SR 120 East split.



**Figure 5**  
**Segment 1 - I-5 Southbound**  
**(I-5 / SR 120 Merge to Manthey Road Off-Ramp)**



**Figure 6**  
**Segment 2 - I-5 Southbound**  
**(Manthey Road On-Ramp to I-5 / I-205 Split)**



**Figure 7**  
**Segment 3- I-5 Northbound**  
**(I-205 Merge to Mossdale Road Off-Ramp)**

**Segment 4: I-5 NB (Mossdale Road On-Ramp to I-5/SR-120 Split):** This segment is located north of segment 3 and represents the segment between the Mossdale Road on-ramp and the I-5/SR 120 East split. On this segment, four lanes continue north on I-5 from the upstream section (segment 3), while one lane drops off as an exit-only lane onto SR 120 East with a lane balance at the SR 120 East ramp. A second lane is added to the SR-120 East ramp that can be accessed from the second lane on I-5 North. Vehicles in the second lane on I-5 can either continue on I-5 North or exit onto the second lane on SR 120 East. This section has turbulence as a result of weaving between vehicles coming from the Mossdale Road on-ramp heading towards I-5 that have to cross paths with the SR-120 East traffic. The following movements occur on this section:

- I-5 North to I-5 North – No lane change
- I-5 North to SR 120 East – No lane change
- Mossdale Road on-ramp to SR 120 East – No lane change
- Mossdale Road on-ramp to I-5 North – Minimum one lane change

This segment of the freeway is illustrated on Figure 8. Field observations in this segment indicated that during the PM peak hour traffic slowed down to 50 to 55 mph in this area due to weaving between traffic from I-5 North continuing onto SR 120 East and traffic from Mossdale Road on-ramp continuing onto I-5 North within a short distance.

### **Freeway Operations**

The existing weaving operations of the four study freeway segments were analyzed using methodologies presented in the *Highway Capacity Manual (HCM) 2010 Chapter 12 - Freeway Weaving Segments*. The Level of Service (LOS) in a weaving segment is related to the density (passenger cars per mile per lane) in the segment. Table 3 provides LOS criteria for weaving segments on freeways.

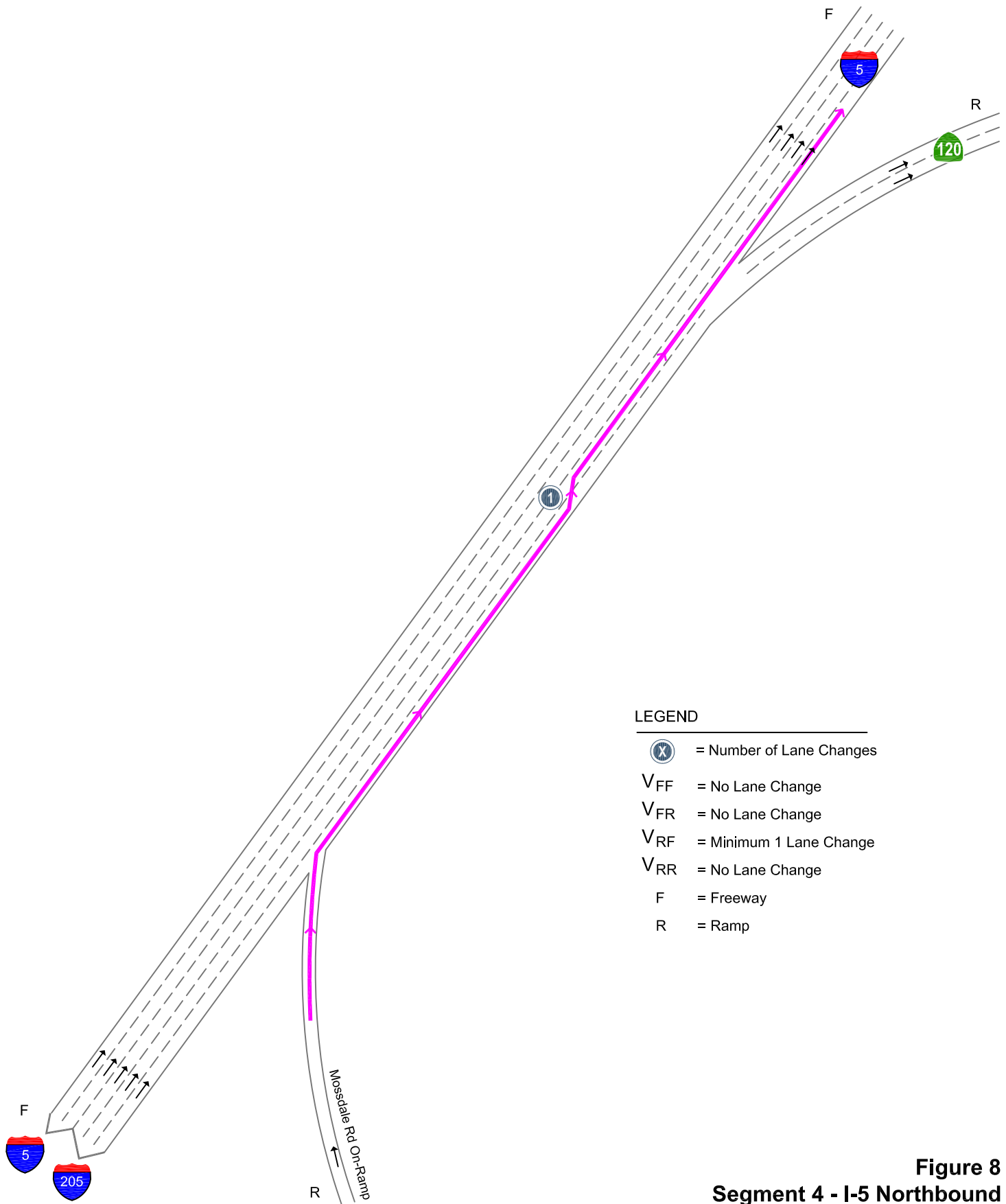
**Table 3 – LOS Criteria for Freeway Weaving Segments**

Level of Service	Maximum Density (pc/mi/ln)
A	10
B	20
C	28
D	35
E	43
F	>43

*Source: Transportation Research Board, 2010 Highway Capacity Manual, Exhibit 12-10.*

*Notes: pc/mi/ln = passenger car per mile per lane*

Weaving operations were analyzed using Highway Capacity Software (HCS) 2010. Table 4 shows the existing levels of service for weaving operations in the study area.



**Figure 8**  
**Segment 4 - I-5 Northbound**  
**(Mosssdale Road On-Ramp to I-5 / SR 120 Split)**

**Table 4 – Existing Weaving Operations Level of Service**

Southbound I-5		L <sub>s</sub> (Feet)	AM Peak Hour		PM Peak Hour	
ID	Location		Weaving Density pc/mil/ln	LOS	Weaving Density pc/mil/ln	LOS
1	From SR-120 Merge to Manthey Road Off-Ramp	1,630	26.8	C	N/A	
2	From Manthey Road On-Ramp Merge to I-205 Diverge	3,300	24.7	C	N/A	
Northbound I-5		L <sub>s</sub> (Feet)	AM Peak Hour		PM Peak Hour	
ID	Location		Weaving Density pc/mil/ln	LOS	Weaving Density pc/mil/ln	LOS
3	From I-205 Merge to Mossdale Road Off-Ramp	2,300	N/A		27.3	C
4	From Mossdale Road On-Ramp to SR-120 Diverge	800	N/A		26.7	C

*Note: Density in passenger cars per mile per lane, LOS = Level of Service*  
*L<sub>s</sub> - The distance in feet between the end points of any barrier markings (solid white lines) that prohibit or discourage lane changing.*

As shown in Table 4, all study freeway segments currently operate at LOS C during both the AM and PM peak hour durations under existing conditions.

**Existing Plus Project Conditions**

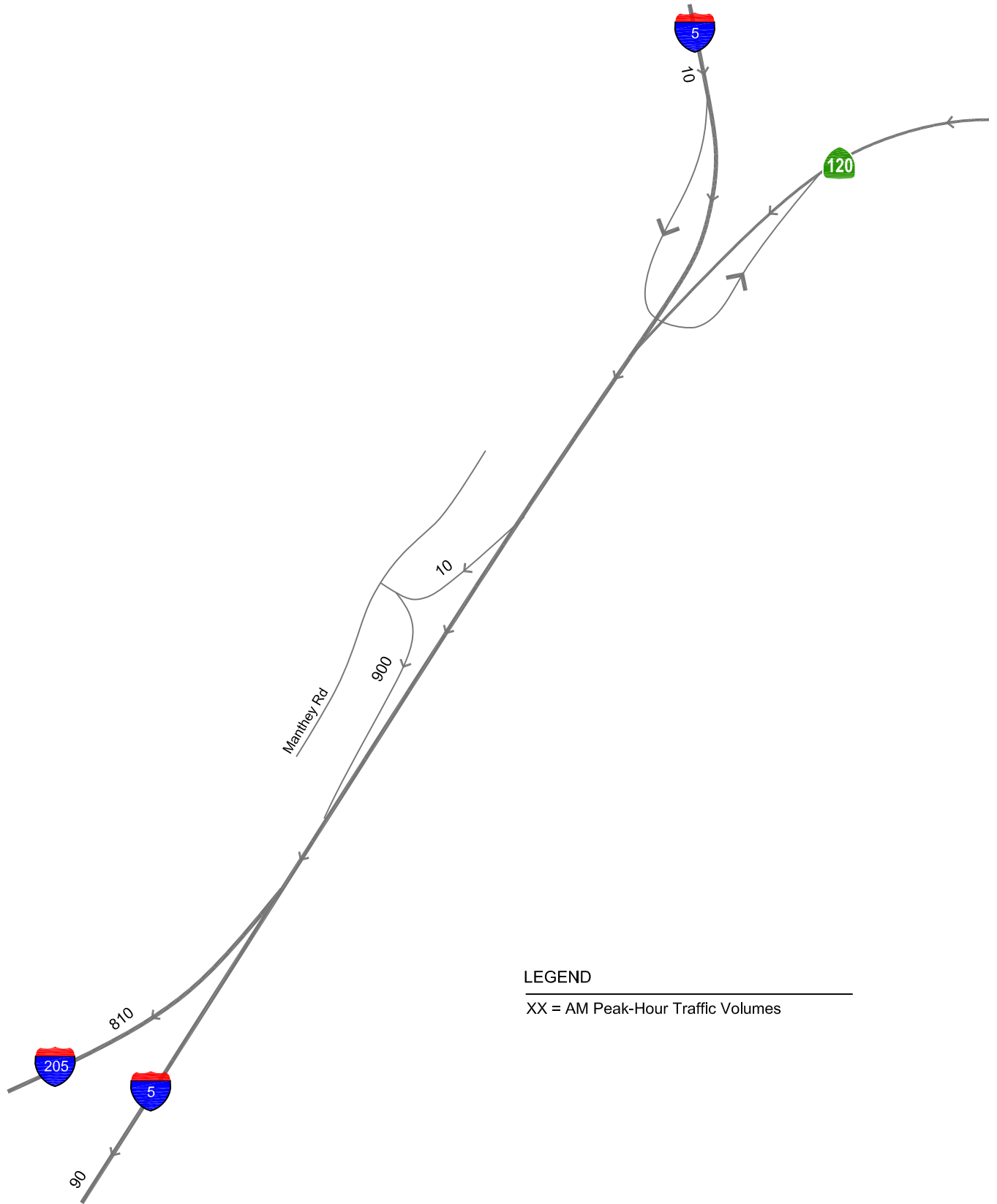
Access to the proposed River Islands development would be provided via River Islands Parkway and the new bridge across the San Joaquin River (Bradshaw’s Crossing), and via the existing Stuart Road connection and the I-5 Manthey Road/Mossdale Road ramps. AM and PM peak-hour project traffic volumes were developed with TJKM’s traffic model for River Islands that was recently updated by Hexagon. Project traffic volumes on the study freeway segments on I-5 southbound during the AM peak hour and on I-5 northbound during the PM peak hour are shown on Figures 9 and 10, respectively. The model forecast shows that approximately 900 vehicles from River Islands would access I-5 via the Manthey Road interchange during the AM peak hour. About 90% (810) of these vehicles would continue onto I-205 and only 10% (90 cars) would travel onto southbound I-5. Similarly, approximately 750 project trips would return to the River Islands area via the Mossdale Road interchange during the PM peak hour. The majority of project traffic (675 vehicles) would come from westbound I-205 and only 75 vehicles would come from I-5. Based on these existing plus project traffic volumes, weaving operations were conducted for the four segments on I-5. The results of these analyses are presented in Table 5. Note that, in addition to the traffic shown on the ramps and on I-5, the River Islands project would generate traffic that (1) would stay within the River Islands area and (2) travel to other areas of Lathrop and toward Sacramento via River Island Parkway and I-5.

**Table 5 – Existing Plus Project Weaving Operations Level of Service**

Southbound I-5		L <sub>s</sub> (Feet)	AM Peak Hour		PM Peak Hour	
ID	Location		Weaving Density pc/mil/ln	LOS	Weaving Density pc/mil/ln	LOS
1	From SR-120 Merge to Manthey Road Off-Ramp	1,630	27.0	C	N/A	
2	From Manthey Road On-Ramp Merge to I-205 Diverge	3300	29.8	D	N/A	
Northbound I-5		L <sub>s</sub> (Feet)	AM Peak Hour		PM Peak Hour	
ID	Location		Weaving Density pc/mil/ln	LOS	Weaving Density pc/mil/ln	LOS
3	From I-205 Merge to Mossdale Road Off-Ramp	2,300	N/A		31.9	D
4	From Mossdale Road On-Ramp to SR-120 Diverge	800	N/A		27.0	C

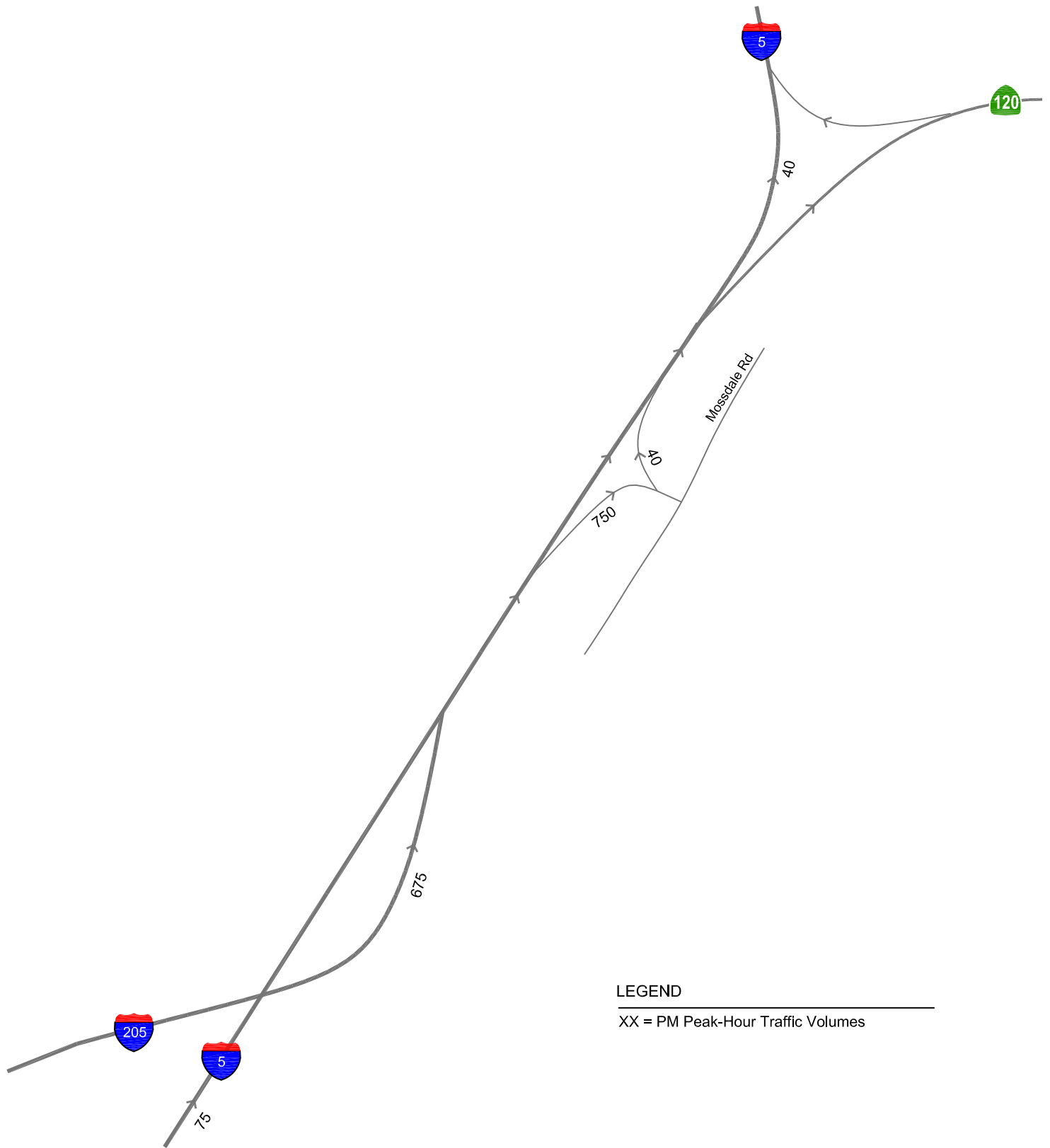
*Note: Density in passenger cars per mile per lane, LOS = Level of Service*  
*L<sub>s</sub> - The distance in feet between the end points of any barrier markings (solid white lines) that prohibit or discourage lane changing.*

As shown in Table 5, the segment of I-5 southbound between the Manthey Road on-ramps and I-205 split would operate at LOS D during the AM peak hour period and the segment of I-5 northbound between the I-205 merge and Mossdale Road off-ramp would operate at LOS D during the PM peak hour period.



**Figure 9**  
**Southbound Project Only Traffic**  
**(with Stuart Road)**





**Figure 10**  
**I-5 Northbound Project Only Traffic**  
**(with Stuart Road)**

**Conclusion**

Even though the River Islands project would add a significant amount of peak hour traffic to I-5 (900 vehicles in the AM peak and 750 vehicles during the PM peak-hour), by far most of the River Islands traffic would make “non-weaving movements” and very few project trips would have to weave with other traffic on I-5. Under Existing plus project conditions, which assumes expected River Islands development by the year 2020 and includes approximately 2,860 residential units, 42 acres of commercial development, and two schools, the weaving operations on the I-5 freeway segments between I-205 and SR-120 would result in LOS D or better conditions.