

***ENVIRONMENTAL ASSESSMENT WITH
FINDING OF NO SIGNIFICANT IMPACT
(FONSI)***



***LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA***

***STATE PROJECT NO. H.010116
FEDERAL AID PROJECT NO. H010116***



***US DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
LOUISIANA DEPARTMENT OF TRANSPORTATION AND
DEVELOPMENT***

October 2019

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Prepared for:

***US DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION***

AND

***LOUISIANA DEPARTMENT OF TRANSPORTATION
AND DEVELOPMENT***

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October 2019

FEDERAL HIGHWAY ADMINISTRATION
FINDING OF NO SIGNIFICANT IMPACTS (FONSI)

FOR

STATE PROJECT NO. H.010116
F.A.P. NO. H010116
NAME: LA 1088 CORRIDOR STUDY
ROUTE: LA 1088
PARISH: ST. TAMMANY

The FHWA has determined that this project will not have any significant impact on the human environment. This Finding of No Significant Impacts (FONSI) is based on the Environmental Assessment, which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. It provides sufficient evidence and analysis for determining that an environmental impact statement is not required.

Concur along with funding commitment
letter dated 5-12-2021 with
additional information.

Robert Mahoney

Robert V. Mahoney
EnvrionmCental Coordinator
FHWA Louisiana Division

06-14-2021

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ES.0 Executive Summary

ES.1 Description of Proposed Action

The Louisiana Department of Transportation and Development (LADOTD) in cooperation with the Federal Highway Administration (FHWA) propose to make improvements to LA 1088, St. Tammany Parish Louisiana. LA 1088 is a suburban highway which runs generally in a northeasterly direction from the intersection of LA 59 north of Mandeville to an intersection at LA 36 east of Abita Springs. The proposed project improvements address vehicle, pedestrian, and bicycle traffic along the LA 1088 corridor between LA 59 and the I-12 interchange westbound ramps. The total length of the proposed project is approximately 3.5 miles (**Figure ES-1**). Detailed evaluations included consideration of constructing roundabouts, highway widening, and the possibility of sidewalks and bike paths.

As this project is anticipated to receive funding assistance from the FHWA, it is subject to the requirements of the National Environmental Policy Act (NEPA). This document is an Environmental Assessment (EA), prepared to meet NEPA requirements. The NEPA and Title 40 of the Code of Federal Regulations (CFR), CFR Parts 1500-1508 require Federal agencies to consider the potential environmental consequences of proposed actions and alternatives. Based on the EA, the FHWA either requires preparation of an Environmental Impact Statement (EIS), if one appears warranted, or issues a "Finding of No Significant Impact" (FONSI), which satisfies the NEPA requirement.

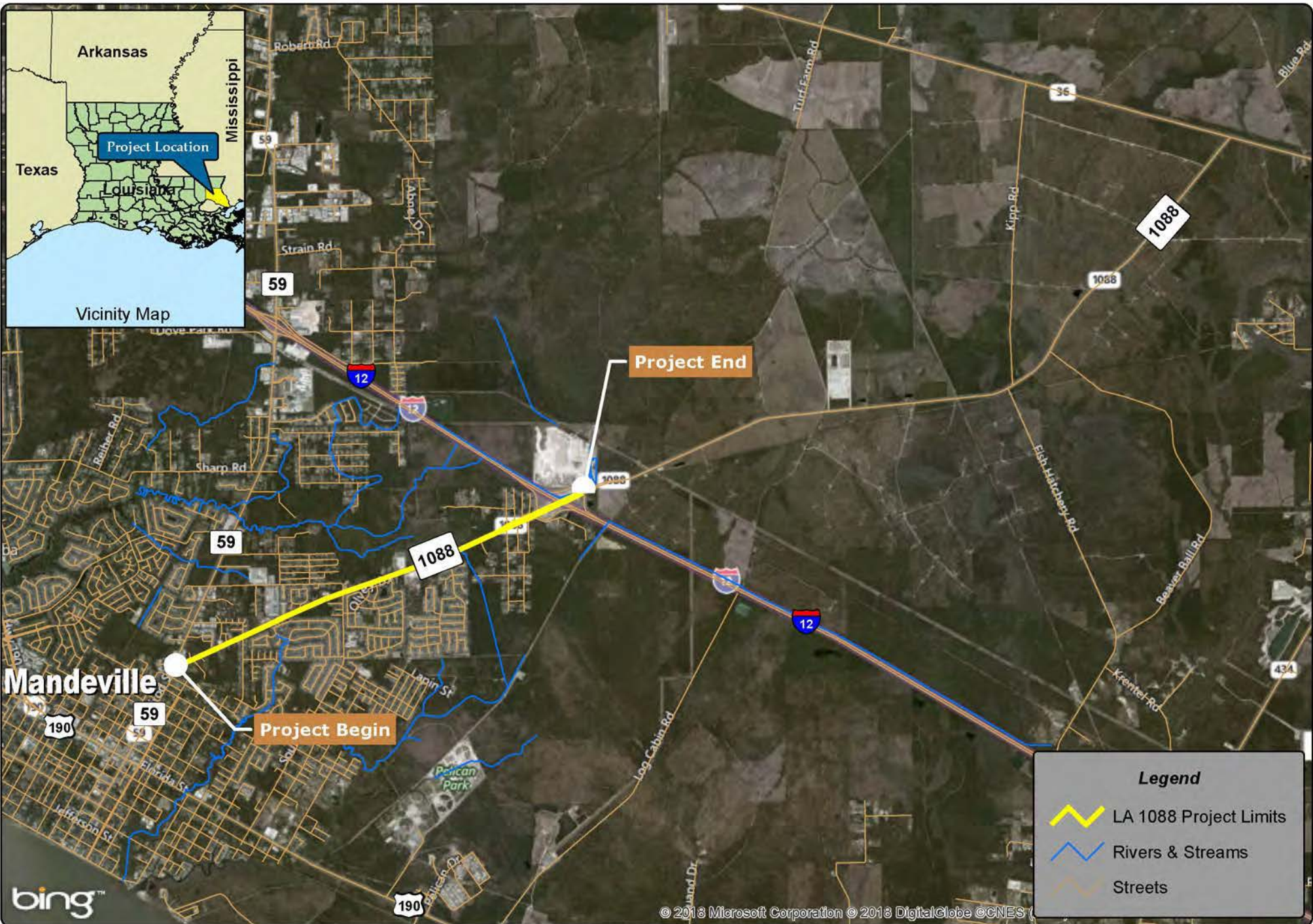
ES.2 Project Purpose

The purpose of the proposed improvements to LA 1088 is to reduce existing congestion and accommodate future traffic demands.

ES.3 Analysis of Alternatives

The original concepts for improvements to the LA 1088 corridor were developed in "Stage 0" of the LADOTD Project Delivery Process. A corridor traffic study, completed in 2014, developed and analyzed conceptual alternatives. It included analysis of traffic volumes, traffic signals, intersections, and roadway segment operations. The study focused on peak hour traffic conditions for 2013 (base year) and 2033 (design year) at 18 intersections from LA 59 to the I-12 interchange. Conceptual alternatives included possible highway widening, installation of roundabouts or traditional signals, and the possibility of sidewalks and bike paths along the LA 1088 corridor from LA 59 to the I-12 interchange westbound ramps.

At the end of 2014 the LADOTD initiated Stage 1 of the LADOTD's project Delivery Process. Stage 1 includes refinement of the Stage 0 concepts and preparation of an EA to evaluate the environmental effects of the alternatives.



0 0.5 1 Miles
1 inch = 1 miles



Note: This map is for presentation use only and not to be used for construction purposes.

LA 1088 Corridor Study
St Tammany Parish
Figure ES-1 Location Map

Alternatives carried forward for detailed evaluation and comparison to the No-Build Alternative include:

- **Build Alternative 1A:** Two-lane segment with roundabouts and no median. It also includes a new four-lane divided section from west of Forest Brook Boulevard to the I-12 interchange with roundabouts replacing the interchange intersections, and shared use path on each side of the four lanes.
- **Build Alternative 1B:** Two-lane segment with roundabouts, no median, bike lanes and a sidewalk. It also includes a new four-lane divided section from west of Forest Brook Boulevard to the I-12 interchange with roundabouts replacing the interchange intersections, and shared use path on each side of the four lanes.
- **Build Alternative 2:** Two-lane segment with roundabouts, a new median, bike lanes and a sidewalk. It also includes a new four-lane divided section from west of Forest Brook Boulevard to the I-12 interchange with roundabouts replacing the interchange intersections, and shared use path on each side of the four lanes.
- **Build Alternative 2A (the Preferred Alternative)** is a refinement of Build Alternative 2 and incorporates the latest *LADOTD Design Guidelines and Complete Streets Policy*. Alternative 2A includes a new two-lane segment with roundabouts, a new median, four-foot shoulders and a sidewalk. It also includes a new four-lane divided section from west of Forest Brook Boulevard to the I-12 interchange with roundabouts replacing the interchange intersections and a sidewalk on both sides of the four-lane. Sidewalks or berms will also be added through all roundabouts in accordance with the LADOTD's *Roundabout Sidewalk Policy*.

The No-Action or No-Build Alternative and the build alternatives are evaluated in this EA. Section 2 of this EA includes a detailed discussion of the alternatives.

ES.4 Comments and Coordination

A Solicitation of Views (SOV) letter was sent to Federal, state, and local agencies as well as tribal interests on March 31, 2015, and a public involvement meeting was held for the project on July 23, 2015.

Following distribution of the Draft EA, a public hearing for the project was held on October 11, 2018. The purpose of the public hearing was to update the public on the status of the Stage 1 studies and seek public input on the EA and proposed improvements to the LA 1088 corridor.

ES.5 Right-of-Way Requirements, Utilities, and Estimated Construction Cost

No relocation of residences or businesses will be required for the proposed improvements to the LA 1088 highway. Additional right-of-way will be required for all of the build alternatives. The project has been designed to utilize existing right-of-way to the maximum extent practicable. Final design of the project will take into consideration the possibility of additional adjustments to the alignment to avoid or minimize impacts to property owners.

Relocation plans for utilities will be developed during the final design phase of the project. Functional or financial responsibility for the relocation of utilities may differ depending on prior agreements between the utility providers, current landowners, local government, and the LADOTD. The determination of responsibility will be in accordance with LADOTD policies and procedures. Utilities that may involve relocation include overhead electrical lines, water lines, fiber optics and telephone lines, storm water retention pond, wastewater utilities, and natural gas service lines.

The preliminary estimated construction cost for the proposed LA 1088 highway project is \$23,316,885 for Build Alternative 1A, \$35,383,871 for Build Alternative 1B, \$37,561,903 for Build Alternative 2, and \$36,530,461 for Build Alternative 2A.

ES.6 Project Impacts

Table ES-6-1 summarizes the potential impacts associated with the build alternatives for the proposed LA 1088 highway project. Section 3 of this EA discusses in detail the existing social/community, economic, cultural, and natural resources within the project's study corridor and the potential impacts the proposed build alternatives may have on these resources (environmental consequences). Temporary construction impacts are discussed in Section 3.19.

Table ES-6-1: LA 1088 Improvements Summary of Impacts

FEATURE OR RESOURCE	Build Alternative 1A	Build Alternative 1B	Build Alternative 2	Build Alternative 2A
Real Estate / Additional Right-of-Way Required	Yes (7.2 Acres)	Yes (9.0 Acres)	Yes (10.2 Acres)	Yes (10.3 acres)
Relocations	No	No	No	No
Cultural and Section 106 Resources				
Section 4(f) or 6(f) Properties	No	No	No	No
Historic Sites	No	No	No	No
Archeological Sites	No	No	No	No
Natural Resources				
Wetlands (Right-of-way) ¹	Yes (12.0 Acres)	Yes (12.0 Acres)	Yes (12.4 Acres)	Yes (12.4 Acres)
Waters of the US (Streams in right-of way)	Yes (0.02 Acre)	Yes (0.02 Acre)	Yes (0.02 Acre)	Yes (0.02Acre)
Other Waters of the US (Ditches in right-of-way)	Yes (6.1 Acres)	Yes (6.1 Acres)	Yes (6.1 Acres)	Yes (6.1 Acres)
Endangered/Threatened Species/Habitat	No	No	No	No
Within 100- Year Floodplain ²	Yes (10.8 Acres)	Yes (11 Acres)	Yes (11.8 Acres)	Yes (11.8Acres)
Within Coastal Zone ³	Yes	Yes	Yes	Yes
Coastal Barrier Island	No	No	No	No
Farmland	No	No	No	No
Sole Source Aquifer (Southern Hills Aquifer)	No	No	No	No
Natural or Scenic Stream	No	No	No	No
Navigable Waterway	No	No	No	No
Physical Impacts				
Noise ⁴	Yes	Yes	Yes	Yes
Air Quality ⁵	No Long-term	No Long-term	No Long-term	No Long-term
Water Quality ⁵	No Long-term	No Long-term	No Long-term	No Long-term
Hazardous sites	No	No	No	No
Water/oil/gas Well	No	No	No	No
Social Impacts				
Land Use Change	No	No	No	No
Title VI Environmental Justice	No	No	No	No
Hospitals, Medical Facilities, Fire, Police	No	No	No	No
Transportation Pattern Changes	No	No	No	No
Community Cohesion ⁶	No	No	No	No
Community Impact during Construction ⁷	Yes	Yes	Yes	Yes

1. Preliminary determination of Wetlands within the existing and required right-of-way. Formal wetlands jurisdictional determination of acres will be made during permitting process
2. 100-year floodplain within the existing and required right-of-way as obtained from Flood Insurance Rate Maps (FIRMS) published by the Federal Emergency Management Agency (FEMA).
3. The project is located within the State Coastal Zone boundaries.
4. Based on Noise Analysis Technical Report.
5. Minor localized short-term during construction
6. Bike lanes and sidewalks in Build Alternatives 1B and 2 would enhance pedestrian mobility in the community. Alternative 2A provides sidewalks and a four-foot shoulder which would also enhance pedestrian mobility.
7. Considerations to reduce impacts include phased construction, construction times, detour routes, Construction Best Management Practices.

Summary of Permits, Mitigation and Commitments

The proposed build alternatives were developed to avoid or minimize impacts to social, economic, cultural, and environmentally sensitive resources. Where resource avoidance is not practical, minimization or mitigation measures will be employed prior to construction. The following are potential permits, mitigation, and commitments that must be filed, approved, and completed prior to construction of the LA 1088 improvements project as it is designed and funded.

Department of the Army Clean Water ACT (CWA) Section 404/10 Permit

The US Army Corps of Engineers (USACE) requires a permit under the authority of Section 404 of the CWA and Section 10 of the Rivers and Harbors Act for impacts to navigable water and waters of the US, including wetlands. Only the USACE can make an impact determination on wetlands and other waters affected by construction of the proposed build alternatives; therefore, a jurisdictional determination will have to be obtained for the study corridor. Should the USACE determine that jurisdictional wetlands or waters of the US are impacted, appropriate mitigation will be completed prior to construction. The *Wetlands Finding Report* prepared as part of this EA indicates that some wetlands and a small area of an un-named tributary to Bayou Castine will be impacted by the build alternatives. This information will be utilized by the USACE in the jurisdictional determination and permitting process.

Section 401 Water Quality Certification

Section 401 of the CWA requires that a Water Quality Certification (WQC) be obtained in conjunction with the submittal of the Section 404/10 permit application. The Louisiana Department of Environment Quality (LDEQ), under the authority contained in the Louisiana Revised Statutes of 1950, Title 30, Chapter 11, Part IV, Section 2074 A (3) and provisions of Section 401 of the CWA (PL 95 217), must certify that any work placing dredged or fill material into waters of the state including wetlands will not violate the state's water quality standards. In accordance with the CWA, a Section 401 WQC will be obtained prior to construction to mitigate for impacts to waters of the state including wetlands.

Louisiana Pollutant Discharge Elimination System (LPDES) Storm Water General Permit for Construction Activities

The LDEQ requires projects with discharges of storm water from construction activities as defined in the Louisiana Administrative Code (LAC) 33:IX.2511.B.14.j to obtain a LPDES Storm Water General Permit for Construction Activities. Storm water runoff from construction activities requires a LPDES permit if it results in the disturbance of greater than one acre. The proposed project will result in the disturbance of greater than one acre; therefore, a LPDES Storm Water General Permit for Construction Activity will be required.

As part of the LDEQ Storm Water General Permit requirements, a Storm Water Pollution Prevention Plan (SWPPP) will be developed for the construction activities. The SWPPP

will provide site specific Best Management Plans (BMPs), maintenance procedures, and an inspection process that will minimize construction impacts to water quality.

Coastal Use Permit (CUP)

Under authority of the Louisiana State and Local Coastal Resources Management Act of 1978, as amended (Act 361, La. R.S. 49:214.21 et seq), the Office of Coastal Management (OCM) of the Louisiana Department of Natural Resources (LDNR) regulates development activities and manages the resources of the coastal zone. The OCM requires that an application for a CUP be submitted for projects that involve dredging or filling within the coastal zone boundary. The proposed project will involve filling within the coastal zone and therefore will require a CUP. The CUP will be obtained to mitigate for impacts to coastal resources.

Floodplain Administrator Approvals

Approval by the St. Tammany Flood Plain Administrator for any modifications to the floodplain. This will include a Letter of No Objection and Engineering "No Rise" Certification.

In addition, the following commitments are required for the proposed project:

- **Maintenance of Traffic:** Adverse impacts can be minimized with phased construction, planned detour routes, and/or limiting construction to off-peak hours. Also, a construction sequencing plan will be prepared prior to construction to minimize disruption of traffic on LA 1088, LA 59, and I-12. The construction sequencing plan will accommodate access to local businesses and residences during construction.
- **Noise:** Noise abatement measures were evaluated at locations where impacts were predicted to occur under the 2033 Build Alternative scenarios. The abatement measures were evaluated using FHWA's guidelines as promulgated by Title 23 CFR Part 772 and guidelines from LADOTD's *Highway Traffic Noise Policy*. Construction of noise barriers was analyzed for the build alternatives and it was determined that noise barriers are feasible at several locations along the corridor. Where noise barriers were found to be feasible, a reasonableness analysis was conducted. Four (4) of the noise barriers under the 2033 Build Alternative 1A, and Alternative 1B conditions were found to be both cost reasonable and met the reasonableness reduction goal criteria. Five (5) of the noise barriers under the 2033 Build Alternative 2 condition were found to be both cost reasonable and met the reasonableness reduction goal criteria. Six (6) of the noise barriers under the 2033 Build Alternative 2A condition were found to be both cost reasonable and met the reasonableness reduction goal criteria. Another criteria is the viewpoint of the community. LADOTD conducted a follow-up survey with the benefitted receptors as required to determine if over 50 percent of them desire the noise barriers. If less than 50 percent of the benefitted receptors are in favor of the noise barriers, then the barriers are no longer considered reasonable. Results of the survey indicate that none of the noise barriers received more than

50 percent negative responses. As such all the proposed noise barriers are still considered reasonable. Noise barriers will continue to be considered as the design progresses for the LA 1088 highway improvements.

Measures to minimize noise impacts during construction will be the responsibility of the construction contractor working with the LADOTD. All construction equipment will be required to comply with Occupational Health and Safety Administration (OSHA) regulations as they apply to the employees' safety, and in accordance with the LADOTD Standard Specifications. All construction equipment used in the construction phase of the project should be properly muffled and all motor panels should be shut during operation. Nighttime activities in noise sensitive areas should also be avoided where possible.

- **Air Quality:** During construction of the project, air quality impacts will be minimized by the contractor through a combination of fugitive dust control, equipment maintenance, and compliance with state and local regulations.
- **Hazardous Materials:** *A Phase I Environmental Site Assessment (ESA)* was conducted as a component of this EA. Results of the ESA investigation identified no recognized environmental conditions that require further investigation. In addition, no historical recognized environmental conditions were identified along the LA1088 corridor. However, if during the course of construction an unknown site is found to contain hazardous materials then it will be remediated and all work will be conducted in conformance with LDEQ, EPA, and OSHA regulations and policy.
- **Utility Relocations:** During the design phase of the project, LADOTD will coordinate the proposed roadway improvements with impacted utility companies.
- **Archaeological/Historic Findings:** *A Phase I Cultural Resources Survey* and inventory was conducted in May 2015. No archeological resources were identified along the limits of the study area and it was also concluded the proposed improvements to LA1088 will have no effect on historic resources. The results of the survey were submitted to the State Historic Preservation Officer (SHPO) for review and concurrence. In a letter dated June 9, 2016, the SHPO concurred with the findings. If archaeological materials are uncovered during construction, all construction work in the area of the find will cease. The LADOTD and recognized Native American tribes will be immediately contacted so that a representative may have the opportunity to examine and evaluate the materials.
- **Plants and Wildlife Protected by Law:** As a part of early coordination efforts for the project, the U.S. Fish and Wildlife Service (USFWS) and the Louisiana Department of Wildlife and Fisheries (LDWF), Louisiana Natural Heritage Program (LNHP), provided information regarding threatened and endangered species occurrence records for the area. Of the nine-listed species provided by the USFWS and the LDWF LNHP, no species were observed during survey conducted by LADOTD

consultant biologist and no areas of suitable habitat were observed in or near the project area limits. There are no critical habitats within the project area. The LDWF noted that swallow-tailed kites, protected under the Migratory Bird Treaty Act, are known to occur within a mile of the proposed project. The LDWF recommends that all potential nesting habitats for this species be protected. If nesting habitat occurs within the project area, a distance of 330 feet must be maintained around the swallow-tailed kites nesting habitat. No swallow-tailed kite nests, preferred nesting habitat, or preferred nesting materials were observed during field surveys conducted by LADOTD consultant biologist. Due to the lack of available nesting material, no sightings during the field survey, and lack of forested river swamp habitat, it is determined that no suitable habitat occurs within the project area limits and the project will have no adverse effects on this species. If nesting is observed during construction, the LADOTD will coordinate with the LDWF and the USFWS to determine appropriate measures for the particular case. The LDWF concluded that no other impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. Also, by letter dated August 24, 2017, the USFWS concluded that the proposed project will have no effect on Federal listed species for St. Tammany Parish.

A discussion of all permits, mitigation, and commitments required for the proposed action is included in Section 3 of this document.

Environmental Determination Checklist

State Project No. H.010116

RPC Project No.

Name: LA 1088 CORRIDOR STUDY

Route: LA 1088

Parish: ST. TAMMANY PARISH

1. General Information

Status: ☒ (X) Conceptual Layout ☐ () Plan-in-Hand
 ☒ (X) Line and Grade ☐ () Preliminary Plans
 ☐ () Survey ☐ () Final Design

2. Class of Action

☐ () Environmental Impact Statement (E.I.S.)
☒ (X) Environmental Assessment (E.A.)
☐ () Categorical Exclusion (C.E.)
☐ () Programmatic C.E. (as defined in letter of agreement dated 03/15/95, does not require FHWA approval)

3. Project Description (use attachment if necessary)

The proposed project improvements address the mobility of vehicle, pedestrian, and bicycle traffic along the LA 1088 corridor between LA 59 and the I-12 interchange westbound ramps. The total length of the proposed project is approximately 3.5 miles. Detailed evaluations included consideration of constructing roundabouts, highway widening, and the possibility of sidewalks and bike paths.

Build Alternative 1A – Utilizes the existing roadway section with roundabout improvements at eight existing intersections: LA 59 (Girod Street), Garon Drive/Jackson Street, Spring Boulevard/Magnolia Trace School, Soutl Street/Viola Street, Trinity Drive, Forest Brook Boulevard, I-12 interchange eastbound ramps and the I-12 interchange westbound ramps. Entry and exit of Roundabouts are designed to accommodate the future roadway section in Build Alternative 2 without any modifications at the roundabouts except for the complete streets (pedestrian and bicycle) component. A new four-lane divided section is necessary from Forest Brook Boulevard to the I-12 interchange with roundabouts replacing the interchange intersections.

Build Alternative 1B – Utilizes the existing roadway section with roundabout improvements at eight existing intersections: LA 59 (Girod Street), Garon Drive/Jackson Street, Spring Boulevard/Magnolia Trace School, Soutl Street/Viola Street, Trinity Drive, Forest Brook Boulevard, I-12 interchange eastbound ramps and the I-12 interchange westbound ramps. Build Alternative 1B utilizes the existing roadway width (LA 59 to Forest Brook Boulevard) with addition of five-foot bike lanes on both sides of the road adjacent to the through lanes with curb & gutter. A new four-lane divided section is necessary from Forest Brook Boulevard to the I-12 interchange with roundabouts replacing the interchange intersections. A sidewalk will be added to the north of the two-lane section and a shared use path will be included on both sides of the four-lane section.

Build Alternative 2 – A new two-lane (12-foot travel lanes) divided curb & gutter section (LA 59 to Forest Brook Boulevard) with a Six-foot median (back of curb to back of curb) with five-foot bike lanes on both sides of the road adjacent to the through lanes. Roundabouts at the previously mentioned locations are also included in this alternative. A new four-lane divided section is necessary from Forest Brook Boulevard to the I-12 interchange with roundabouts replacing the interchange intersections. A sidewalk will be added to the north of the two-lane section and a shared use path will be included on both sides of the four-lane section.

Environmental Determination Checklist

Build Alternative 2A (Preferred Alternative) – This alternative is a refinement of Build Alternative 2 and incorporates the latest *LADOTD Design Guidelines and Complete Streets Policy*. It includes a new two-lane (11-foot travel lanes) divided curb & gutter section (LA 59 to Forest Brook Boulevard) with a six-foot median (back of curb to back of curb) and four-foot shoulders on both sides of the road adjacent to the through lanes. Roundabouts at the previously mentioned locations are also included in this alternative. A new four-lane divided section is necessary from Forest Brook Boulevard to the I-12 interchange with roundabouts replacing the interchange intersections. A five-foot sidewalk will be added on one side of the two-lane section and both sides of the four-lane section. Sidewalks or berms will also be added through all roundabouts in accordance with LADOTD's *Roundabout Sidewalk Policy*.

4. Public Involvement

- (X) Views were solicited on March 31, 2015.
Responses are attached.
- () No adverse comments were received.
- (X) Comments are addressed in Chapter 4.
- () A public hearing (P/H)/Opportunity is not required.
- () An opportunity for requesting a P/H will be afforded upon your concurrence.
- () Opportunity was afforded, with no requests for P/H.
- (X) A Public Hearing was held on October 11, 2018.
- (X) A Public Meeting was held on July 23, 2015.

5. Real Estate

- | | NO | YES |
|---|-----|-----|
| a. Will additional right-of-way be required? | () | (X) |
| b. Will any relocations be required? | (X) | () |
| c. Are construction or drainage servitudes required? | (X) | () |
| d. Will right-of-way be required from a Wetland Reserve Program (WRP) property | (X) | () |

6. Cultural and 106 Impacts

- | | NO | YES |
|---|-----|-----|
| a. Section 4(f) or 6(f) lands | | |
| Are any impacted by the project? (If so, list below) | (X) | () |
| Are any adjacent to the project? (If so, list below) | (X) | () |
| b. Known Historic sites/structures | | |
| Are any impacted by the project? (If so, list below) | (X) | () |
| Are any adjacent to the project? (If so, list below) | (X) | () |
| c. Known Archaeological sites | | |
| Are any impacted by the project? (If so, list site # below) | (X) | () |
| Are any adjacent to the project? (If so, list site # below) | (X) | () |
| d. Cemeteries | | |
| Are any impacted by the project? (If so, list below) | (X) | () |
| Are any adjacent to the project? (If so, list below) | (X) | () |
| e. Historic Bridges | (X) | () |

7. Wetlands

- | | NO | YES |
|---|-----|-----|
| a. Are wetlands being affected? | () | (X) |
| b. Are other waters of the US being affected? | () | (X) |
| c. Can C.O.E. Nationwide Permit be used? | (X) | () |

Environmental Determination Checklist

8. Natural Environment

	NO	YES
a. Endangered/Threatened Species/Habitat?	(X)	()
b. Within 100-Year Floodplain?	()	(X)
Is project a significant encroachment in Floodplain?	(X)	()
c. In Coastal Zone Management Area?	()	(X)
Is the project consistent with the Coastal Management Program?	()	(X)
Will a Coastal Use Permit be required?	()	(X)
d. Coastal Barrier Island (Grand Isle only)?	(X)	()
e. Farmlands (use form AD 1006 if necessary)?	(X)	()
f. Is project on Sole Source Aquifer?	()	(X)
Is coordination with USEPA necessary?	(X)	()
g. Natural & Scenic Stream Permit required?	(X)	()
h. Is project impacting a waterway?	()	(X)
Has navigability determination been made?	(X)	()
Will a US Coast Guard permit or amended permit be required?	(X)	()

9. Physical Impacts

	NO	YES
a. Is a noise analysis warranted (Type I project)?	()	(X)
Are there noise impacts based on violation of the NAC?	()	(X)
Are there noise impacts based on the 10 dBA increase?	(X)	()
Are noise abatement measures reasonable and feasible?	()	(X)
b. Is an air quality study warranted?	(X)	()
Do project level air quality levels exceed the NAAQS for CO?	(X)	()
c. Is project in a non-attainment area for Carbon monoxide (CO), Ozone (O ₃), Nitrogen dioxide (NO ₂), or Particulates (PM-10)?	(X)	()
d. Is project in an approved Transportation Plan, Transportation Improvement Program (TIP) and State Transportation Improvement Program (STIP)?	()	(X)
e. Are construction air, noise, & water impacts major?	(X)	()
Are there any known waste sites or USTs?	(X)	()
Will these sites require further investigation prior to purchase?	(X)	()

10. Social Impacts

	NO	YES
a. Land use changes?	(X)	()
b. Churches and Schools		
Are any impacted by the project? (If so, list below)	(X)	()
Are any adjacent to the project? (If so, list below)	()	(X)
c. Title VI Considerations?	(X)	()
d. Will any specific groups be adversely affected? (i.e., minorities, low-income, elderly, disabled, etc.)?	(X)	()
e. Hospitals, medical facilities, fire police		
Are any impacted by the project? (If so, list below)	(X)	()
Are any adjacent to the project? (If so, list below)	(X)	()
f. Transportation pattern changes?	(X)	()
g. Community cohesion?	(X)	()
h. Are short-term social/economic impacts due to construction considered major?	(X)	()
i. Do conditions warrant special construction times? (i.e., school in session, congestion, tourist season, harvest)?	(X)	()
j. Were Context Sensitive Solutions considered? (If so explain below)	(X)	()
k. Will the highway/bridge be closed? (If yes, answer questions below)	(X)	()
Will a detour bridge be provided?	(X)	()
Will a detour route be signed?	(X)	()

Environmental Determination Checklist

11. Other (Use this space to explain or expand answers to questions above.)

5a. Additional required right-of-way: Alternative 1A – 7.2 acres, Alternative 1B – 9.0 acres, Alternative 2 – 10.2 acres, Alternative 2A – 10.3 acres

7a. Potential impacts to wetlands: Alternative 1A - 12.0 acres, Alternative 1B - 12.0 acres, Alternative 2 - 12.4 acres, Alternative 2A - 12.4 acres

7b. Potential impacts to other waters of the US: Alternative 1A - 6.1 acres, Alternative 1B - 6.1 acres, Alternative 2 - 6.1 acres, Alternative 2A – 6.1 acres

8b. Existing and required right-of-way within 100-year floodplain: Alternative 1A - 10.8 acres, Alternative 1B - 11 acres, Alternative 2 - 11.8 acres, Alternative 2A – 11.8 acres.

8c. Coastal Zone Management Area: The project is located within the Louisiana Coastal zone. A Coastal Use Permit will be required from LDNR, OCM.

8f. Sole source aquifer: The project is located on the Southern Hills Aquifer. By letter dated April 9, 2015, EPA determined the project should not have an adverse effect on the quality of groundwater underlying the site.

8h. Potential impacts to Waters of the US: Alternative 1A – 0.02-acre, Alternative 1B – 0.02-acre, Alternative 2 – 0.02-acre, Alternative 2A – 0.02-acre.

9a. Noise: Noise barriers were found to be feasible and reasonable for all alternatives (four noise barriers for Build Alternatives 1A and 1B, five noise barriers for Build Alternative 2, and six noise barriers for Build Alternative 2A).

9d. STIP: The LA 1088 corridor Study is on the State Transportation Improvement Plan (STIP) version 2015 (Approved), and STIP 2019 Amendment 6-R

10b. Churches and Schools. Schools (Lake Harbor Middle School, Magnolia Trace Elementary School, Mandeville Middle School, Marigny Elementary School, and Lakeshore High School), Churches (Corner Stone, Mandeville Christian Fellowship, and Redeemer Lutheran Church)



Preparer: K. Paul Bradley, P.E.

Title: Manager - Environmental Services

Date: October 10, 2019

Attachments

- (X) S.O.V. and Responses
- (X) Wetlands Report
- () Project Description Sheet
- () Conceptual Stage Relocation Plan
- (X) Noise Analysis
- (X) Air Analysis
- (X) Exhibits and/or Maps
- () 4(f) Evaluation
- () Form AD 1006 (Farmlands)
- () 106 Documentation
- (X) Other: Public Involvement Comments

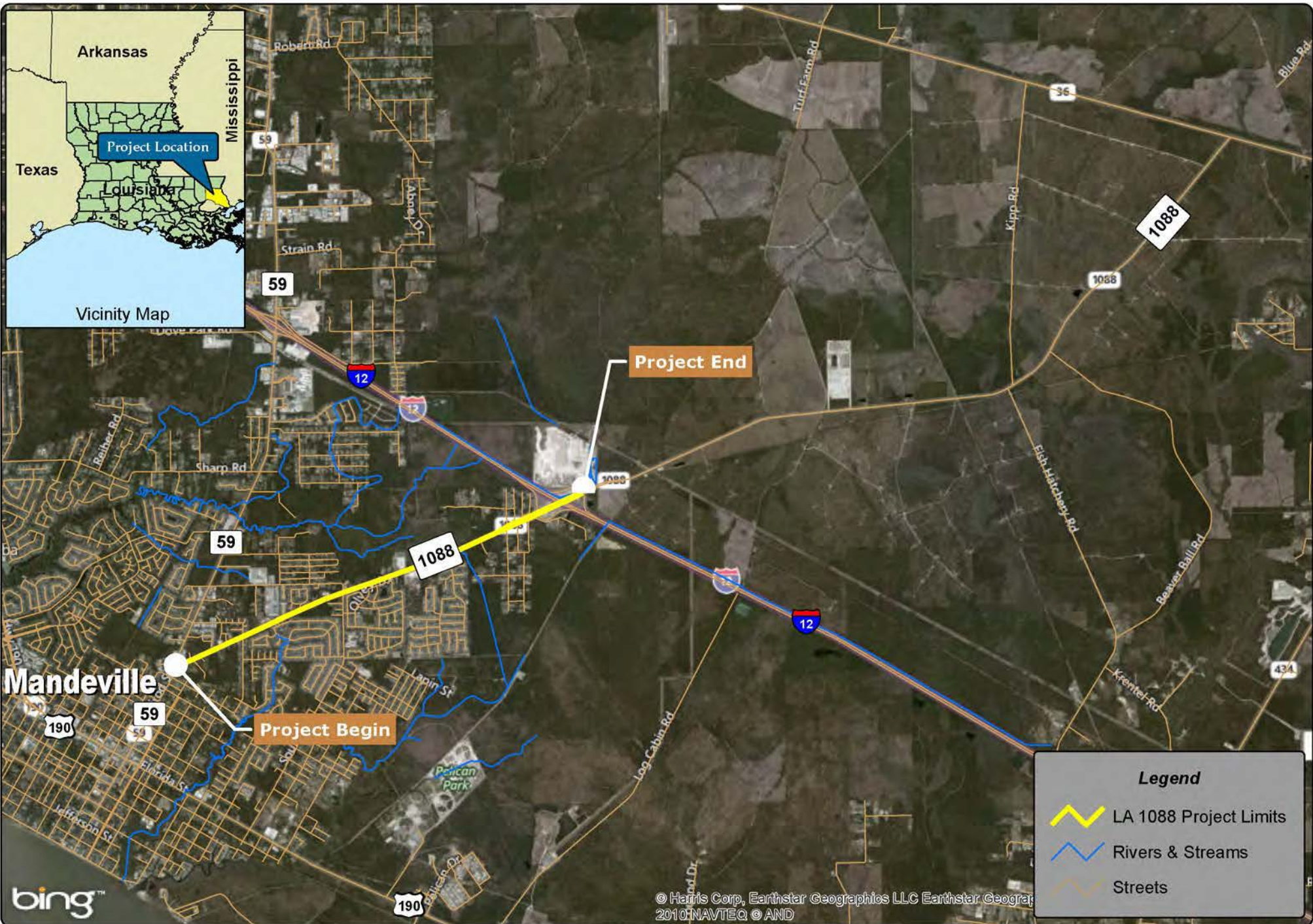
1.0 INTRODUCTION AND PURPOSE AND NEED

1.1 Description and Location of the Proposed Action

The Louisiana Department of Transportation and Development (LADOTD) is proposing to make improvements to LA 1088 between LA 59 and the I-12 interchange westbound ramps (**Figure 1**). The total length of the proposed project is approximately 3.5 miles. LA 1088 is a suburban highway which runs generally in a northeasterly direction from the intersection of LA 59 north of Mandeville to an intersection at LA 36 east of Abita Springs. LA 1088 is an undivided two-lane highway from LA 59 for approximately 2.7 miles where it transitions into a four-lane divided section running approximately 0.8 mile to an interchange at I-12. Past the I-12 interchange, LA 1088 continues as a two-lane undivided highway for approximately 7.5 miles to the intersection at LA 36. The entire LA 1088 corridor is located in St. Tammany Parish.

The original concepts for improvements to the LA 1088 corridor were developed in “Stage 0” of the LADOTD Project Delivery Process. Conceptual alternatives were developed and analyzed in a corridor traffic study completed in 2014. It included analysis of traffic volumes, traffic signals, intersections, and roadway segment operations. The study focused on weekday AM (7:00 a.m.-8:00 a.m.) and PM (5:00 p.m.-6:00 p.m.) peak hour traffic conditions for 2013 (base year) and 2033 (design year) at 18 intersections from LA 59 to the I-12 interchange. The primary operational deficiencies observed during traffic counts were peak hours at Forest Brook Boulevard, LA 59, and Soult Street/Viola Street intersections. Conceptual alternatives included possible highway widening, installation of roundabouts or traditional signals, and the possibility of sidewalks and bike paths along the LA 1088 corridor from LA 59 to the I-12 westbound ramps. The conceptual alternatives were presented for agency and public review on three separate occasions. An Elected Officials Meeting was held on August 21, 2013, with Senator Jack Donahue, and Representative Paul Hollis. A Parish Meeting was held on November 12, 2013, with St. Tammany President Ms. Pat Brister et.al. A Public Information Meeting was held on December 11, 2013, at the St. Tammany Parish Council Chambers. Results of the Stage 0 traffic study and the public involvement efforts are presented in the report titled *LA 1088 Corridor Study Traffic Report* dated April 7, 2014, (LADOTD Traffic Study) and are included as **Appendix A**.

The Stage 0 studies indicate a need for improvements to LA 1088 from LA 59 to the I-12 westbound ramps a total distance of approximately 3.5 miles. The terminus at the southern end of the project at LA 59 is logical because LA 59 is a two-lane highway with a center turn lane both east and west of the LA 1088 intersection. The northern terminus of the project is also logical because the proposed four-lane section of LA 1088 will connect to the existing four-lane section at the westbound ramps at the I-12 Interchange. The proposed improvements do not increase highway capacity as no new through lanes are proposed for the project. The proposed improvements do not depend upon additional transportation improvements in the area and do not restrict consideration of other alternatives for other transportation improvements in the area. Appropriate coordination has occurred for the logical termini and correspondence is contained in the Solicitation of Views **Appendix B**.



VOLKERT

0 0.5 1 Miles
1 inch = 1 miles



LA 1088 Corridor Study
St Tammany Parish
Figure 1 Location Map

At the end of 2014, the LADOTD initiated Stage 1 of the LADOTD's Project Delivery Process. Stage 1 includes refinement of the Stage 0 concepts and preparation of an EA to evaluate the environmental effects of the alternatives.

Alternatives identified for detailed evaluation and comparison to the No-Build Alternative include:

- **Build Alternative 1A:** Two-lane segment with roundabouts and no median. It also includes a new four-lane divided section from west of Forest Brook Boulevard to the I-12 interchange with roundabouts replacing the interchange intersections, and shared use path on each side of the four lanes.
- **Build Alternative 1B:** Two-lane segment with roundabouts, no median, bike lanes and a sidewalk. It also includes a new four-lane divided section from west of Forest Brook Boulevard to the I-12 interchange with roundabouts replacing the interchange intersections, and shared use path on each side of the four lanes.
- **Build Alternative 2:** Two-lane segment with roundabouts, a new median, bike lanes and a sidewalk. It also includes a new four-lane divided section from west of Forest Brook Boulevard to the I-12 interchange with roundabouts replacing the interchange intersections, and shared use path on each side of the four lanes.
- **Build Alternative 2A (the Preferred Alternative)** is a refinement of Build Alternative 2 and incorporates the latest *LADOTD Design Guidelines and Complete Streets Policy*. Alternative 2A includes a new two-lane segment with roundabouts, a new median, four-foot shoulders and a sidewalk. It also includes a new four-lane divided section from west of Forest Brook Boulevard to the I-12 interchange with roundabouts replacing the interchange intersections and a sidewalk on both sides of the four-lane. Sidewalks or berms will also be added through all roundabouts in accordance with the LADOTD's *Roundabout Sidewalk Policy*.

The No-Action or No-Build Alternative and the build alternatives are evaluated in this EA.

1.2 Purpose and Need of the Proposed Action

The purpose of the proposed improvements to LA 1088 is to reduce existing congestion and accommodate future traffic demands. Operational improvements are needed due to existing and projected traffic volumes and the poor level of service (LOS) at the intersections as discussed in following paragraphs.

1.3 Vehicular Traffic Conditions

1.3.1 Existing and Projected Traffic

The 2013 base year average daily traffic (ADT) along LA 1088 from LA 59 to the I-12 east bound ramp ranges from 7,298 to 8,565 vehicles per day. The projected ADT for design year 2033 ranges from 10,844 to 12,727 vehicles. This represents an increase of

approximately 3,546 to 4,161 vehicles per day, depending upon the location along the study corridor, which is equivalent to a 48 percent increase in traffic volume between the base year 2013 and design year 2033. **Table 1-1** summarizes the ADT for the base year 2013 and the design year 2033 for LA 1088 from LA 59 to the I-12 interchange.

Table 1-1: Base Year 2013 and Design Year 2033 Average Daily Traffic

Location	Average Daily Traffic*		Percent Increase from Base Year (2013) to Design Year (2033)
	Base Year (2013)	Design Year (2033)	
LA 1088 between LA 59 and Spring Blvd.	8,565	12,727	48%
LA 1088 from Spring Blvd. to Trinity Dr.	7,298	10,844	48%
LA 1088 from Trinity Dr. to the I-12 East Bound Ramp.	8,286	12,313	48%

* Average Daily Traffic derived from LADOTD Traffic Study.

1.3.2 Existing and Projected Level of Service (LOS)

LOS is a qualitative measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. As described by the *Highway Capacity Manual* (Transportation Research Board 2000), levels of service range from LOS A, a condition of little or no delay, to LOS F, a condition of capacity breakdown represented by heavy delay and congestion. LOS B is characterized as stable flow. LOS C is considered to have a stable traffic flow but is becoming susceptible to congestion with general levels of comfort and convenience declining noticeably. LOS D approaches unstable flow as speed and freedom to maneuver are severely restricted and LOS E represents unstable flow at or near capacity levels with poor levels of comfort and convenience.

LOS was analyzed for both AM and PM peaks at the 18 intersections addressed by the LADOTD Traffic Study for the base year 2013 and design year 2033 traffic volumes. Numerous approaches to intersections experience poor operating levels of service under base year conditions, as well as the design year, which consists of existing geometry with projected 2033 traffic volumes.

In the base year the all-way stop-controlled Soult St./Viola St. intersection operates at an overall LOS E or LOS F (E/F). Seven of the 18 intersections have LOS E/F operations on at least one approach (northbound side streets in the AM and westbound LA1088 in the PM) typically for a 15-minute period during either the AM or PM peak hours.

By 2033, if no improvements are made to LA 1088 intersections, the all-way stop-controlled Soult St./Viola St. and signalized LA 59 intersections would be LOS E/F overall. The increase in traffic over existing conditions would result in all intersections, except Emerald Pines Ct. having at least one approach at LOS E/F.

1.3.3 Capacity

Capacity was analyzed in the LADOTD Traffic study by applying a volume-to-capacity of traffic ratio (V/C) for AM and PM peak hours at the 18 intersections. A ratio of greater than 1 indicates the intersection is over capacity. By 2033, the V/C ratio was over one for 9 of the eighteen intersections with queue lengths varying from 212 feet to 4,659 feet.

1.4 Operational Improvements

As part of the LADOTD Traffic Study, an analysis was performed by comparing the number of conflict points (potential traffic collision points) as well as the combined crash modification factors (CMF's) from the *Highway Safety Manual*. Currently LA 1088 has 230 intersection conflict points from LA 59 to the I-12 interchange. Conversion of intersections to roundabouts, median divided approaches, and stop controlled right only will substantially decrease the number of conflict points and will likely result in a reduction in crashes.

2.0 ALTERNATIVES

Concepts initially considered in the LADOTD Traffic Study for the LA 1088 corridor included possible highway widening, installation of roundabouts or traditional signals, and the possibility of sidewalks and bike paths.

The initial alternatives addressed by the LADOTD Traffic Study, in addition to the No-Build Alternative, are as follows:

- Build Alternative 1A – Utilizes the existing roadway section with roundabout improvements at eight existing intersections: LA 59 (Girod St.), Garon Dr./Jackson St., Spring Blvd/Magnolia Trace School, Soult St./Viola St., Trinity Dr., Forest Brook Blvd., I-12 Eastbound ramps and the I-12 westbound ramps. Entry and exit of roundabouts are designed to accommodate the future roadway section in Alternative 2 without any modifications at the roundabouts except for the complete streets (pedestrian and bicycle) component. A new four-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with Roundabouts replacing the interchange intersections.
- Build Alternative 1B – Utilizes the existing roadway section with roundabout improvements at eight existing intersections: LA 59 (Girod St.), Garon Dr./Jackson St., Spring Blvd/Magnolia Trace School, Soult St./Viola St., Trinity Dr., Forest Brook Blvd., I-12 Eastbound ramps and the I-12 westbound ramps. Utilizes the existing roadway width (LA 59 to Forest Brook Blvd.) with addition of five-foot bike lanes on both sides of the road that will be adjacent to the through lanes with curb & gutter. A sidewalk will be added to the north to meet the complete streets design. A new four-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with roundabouts replacing the interchange intersections.
- Build Alternative 2 – A new two-lane divided curb & gutter section (LA 59 to Forest Brook Blvd.) with a six-foot median (back of curb to back of curb) with five-foot bike

lanes on both sides of the road adjacent to the through lanes. A sidewalk will be added to the north to meet the complete streets design. Roundabouts at the previously mentioned locations are also included in this alternative. A new four-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with roundabouts replacing the interchange intersections.

- Build Alternative 3 – A new three-lane section with full access with five-foot bike lanes on both sides of the road adjacent to the through lanes and a sidewalk on the north side of the roadway.
- Build Alternative 4 – A new four-lane divided roadway with limited access from side streets utilizing U-turns and/or roundabouts. It will include a five-foot bike lane on both sides of the roadway and a sidewalk on the north side of the roadway

It was recognized early in the LADOTD Traffic Study that the LA 1088 corridor is intersection-intensive (18 total intersections, 17 un-signalized and 1 signalized) over a 3.5-mile corridor or one intersection every 1,000 feet with high residential development on both sides of the corridor. It was also noted that the *2010 Highway Capacity Manual* does not provide a direct method for comparing the widening of LA 1088 to the existing two-lane undivided section due to the short segment lengths resulting from the all-way stop controlled Soult St./Viola St. intersection. Therefore, the need for widening LA 1088 is based on traffic operations (LOS and associated delay) for the 18 study intersections. The LA 1088 corridor's overall functionality is driven by the sum of the intersections and not by the capacity of the corridor. By replacing the existing, traditional two-way and four-way stop controlled intersections with roundabouts, the intersections' delays and queues are reduced and thus the corridor's overall functionality is improved without adding capacity between the intersections. Therefore, alternatives with more than two-lane segments for the full project length (Build Alternatives 3 and 4) were removed from further consideration. To accommodate projected traffic demand, all the build alternatives carried forward include a new four-lane divided section from west of Forest Brook Blvd. to the I-12 interchange westbound ramps.

Based on results of Stage 0 analysis three Build Alternatives were identified for detailed evaluation and concept plan development and comparison to the No-Build Alternative:

- **Build Alternative 1A:** Two-lane segment with roundabouts and no median.
- **Build Alternative 1B:** Two-lane segment with roundabouts, no median, curb and gutter, bike lanes and a sidewalk.
- **Build Alternative 2:** Two-lane segment with roundabouts, a new median, curb and gutter, bike lanes and a sidewalk.

All of these build alternatives include a new four-lane divided section from west of Forest Brook Blvd. to the I-12 interchange and a shared use path on each side of the four lanes.

A fourth Build Alternative was developed during the detailed evaluation. This alternative designated as **Build Alternative 2A (the Preferred Alternative)** is a refinement of Build Alternative 2 and incorporates the latest *LADOTD Design Guidelines and Complete Streets Policy*. Build Alternative 2A includes a new two-lane segment with roundabouts, a new median, four-foot shoulders and a sidewalk. It also includes a new four-lane divided section from west of Forest Brook Blvd. to the I-12 interchange with roundabouts replacing the interchange intersections and a sidewalk on both sides of the four-lane. Sidewalks or berms will also be added through all roundabouts in accordance with the LADOTD's *Roundabout Sidewalk Policy*.

The No-Action or No-Build Alternative and the four build alternatives are evaluated in this Environmental Assessment.

2.1 No-Build Alternative

The No-Build Alternative will leave LA 1088 as it currently exists, other than the continuation of routine maintenance as needed. The No-Build or No-Action Alternative constitutes a baseline condition from which to measure impacts. The No-Build Alternative will not relieve the existing traffic congestion problems and will not accommodate the future projected traffic demand along the highway.

2.2 Build Alternatives

Build Alternative 1A – Utilizes the existing roadway section with roundabout improvements at eight existing intersections: LA 59 (Girod St.), Garon Dr./Jackson St., Spring Blvd/Magnolia Trace School, Soult St./Viola St., Trinity Dr., Forest Brook Blvd., I-12 interchange eastbound ramps and the I-12 interchange westbound ramps. Entry and exit of roundabouts will be designed to accommodate the future roadway section proposed by Build Alternative 2 without any modifications at the roundabouts except for the complete streets (pedestrian and bicycle) component. A new four-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with Roundabouts replacing the interchange intersections and a shared use path on each side of the four lanes.

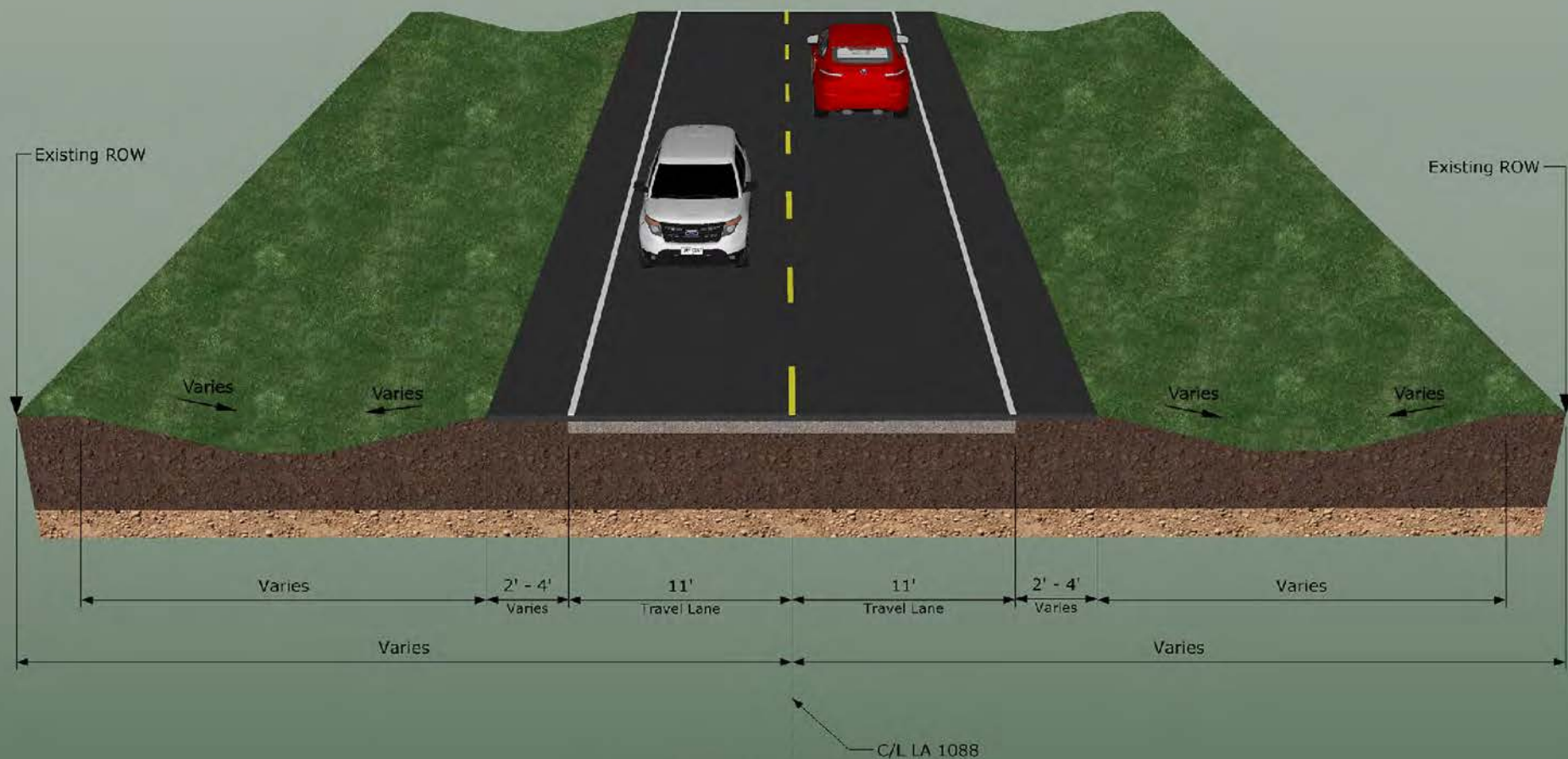
Build Alternative 1B – Utilizes the existing roadway section with roundabout improvements at eight existing intersections: LA 59 (Girod St.), Garon Dr./Jackson St., Spring Blvd/Magnolia Trace School, Soult St./Viola St., Trinity Dr., Forest Brook Blvd., I-12 interchange eastbound ramps and the I-12 interchange westbound ramps. Build Alternative 1B utilizes the existing roadway width (LA 59 to Forest Brook Blvd.) with addition of five-foot bike lanes on both sides of the road adjacent to the through lanes with curb & gutter. A sidewalk will be added to the north to meet the complete streets design. A new four-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with roundabouts replacing the interchange intersections and a shared use path on each side of the four lanes.

Build Alternative 2 – A new two-lane (12-foot travel lanes) divided curb & gutter section (LA 59 to Forest Brook Blvd.) with a six-foot median (back of curb to back of curb) with five-foot bike lanes on both sides of the road adjacent to the through lanes. A sidewalk

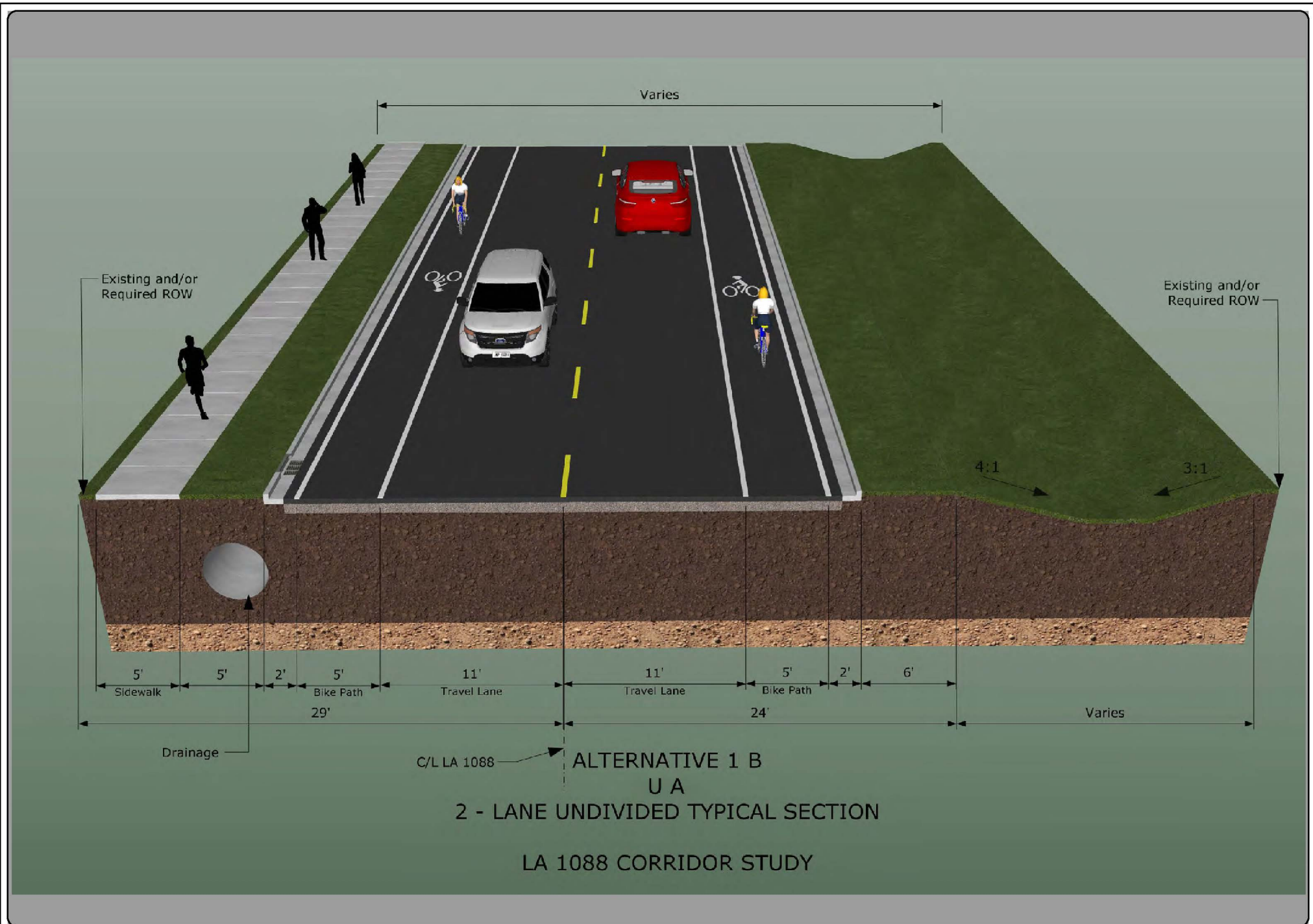
will be added to the north to meet the complete streets design. Roundabouts at the previously mentioned locations are also included in this alternative. A new four-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with Roundabouts replacing the interchange intersections and a shared use path on each side of the four lanes.

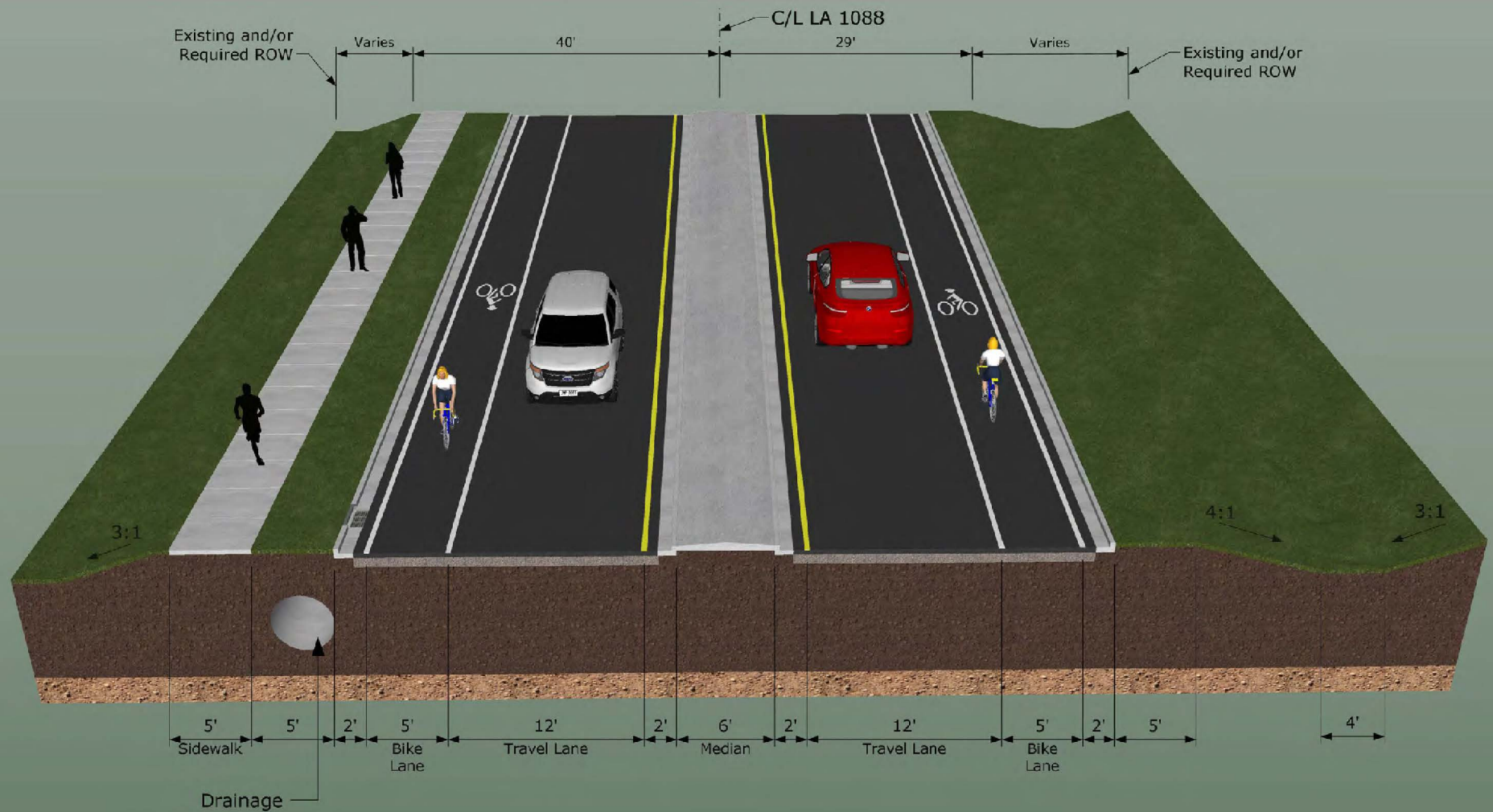
Build Alternative 2A (Preferred Alternative) – A new two-lane (11-foot travel lanes) divided curb & gutter section (LA 59 to Forest Brook Blvd.) with a six-foot median (back of curb to back of curb) with four-foot shoulders on both sides of the road adjacent to the through lanes. Roundabouts at the previously mentioned locations are also included in this alternative. A new four-lane divided section is necessary from Forest Brook Blvd. to the I-12 interchange with roundabouts replacing the interchange intersections. A five-foot sidewalk will be added on one side of the two-lane section and both sides for the four-lane section. Sidewalks or berms will also be added through all roundabouts in accordance with LADOTD's *Roundabout Sidewalk Policy*.

The proposed build alternatives typical sections are illustrated on **Figures 2a through 2f** and aerial maps with an overlay of the alternatives are illustrated in **Appendix C**.

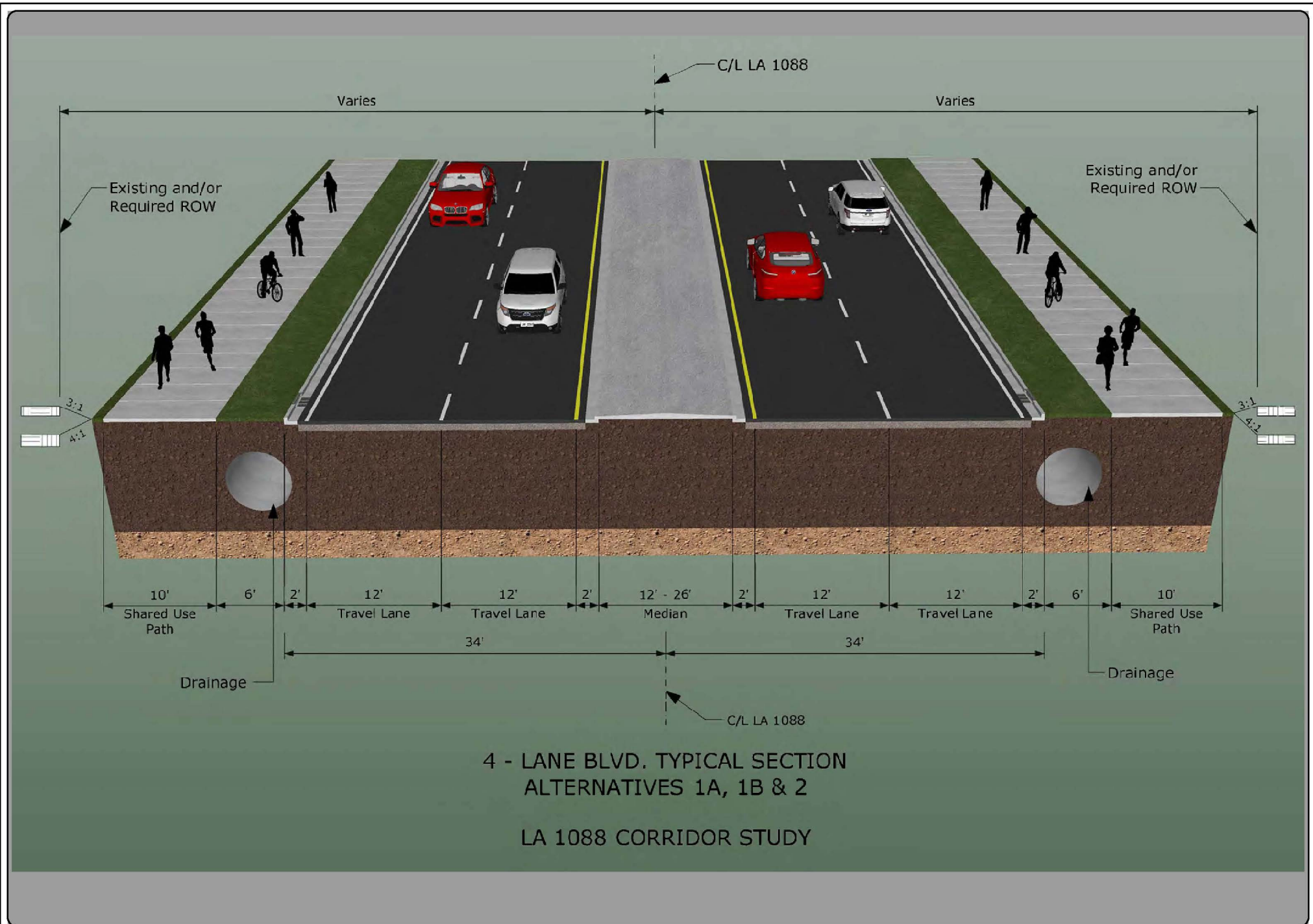


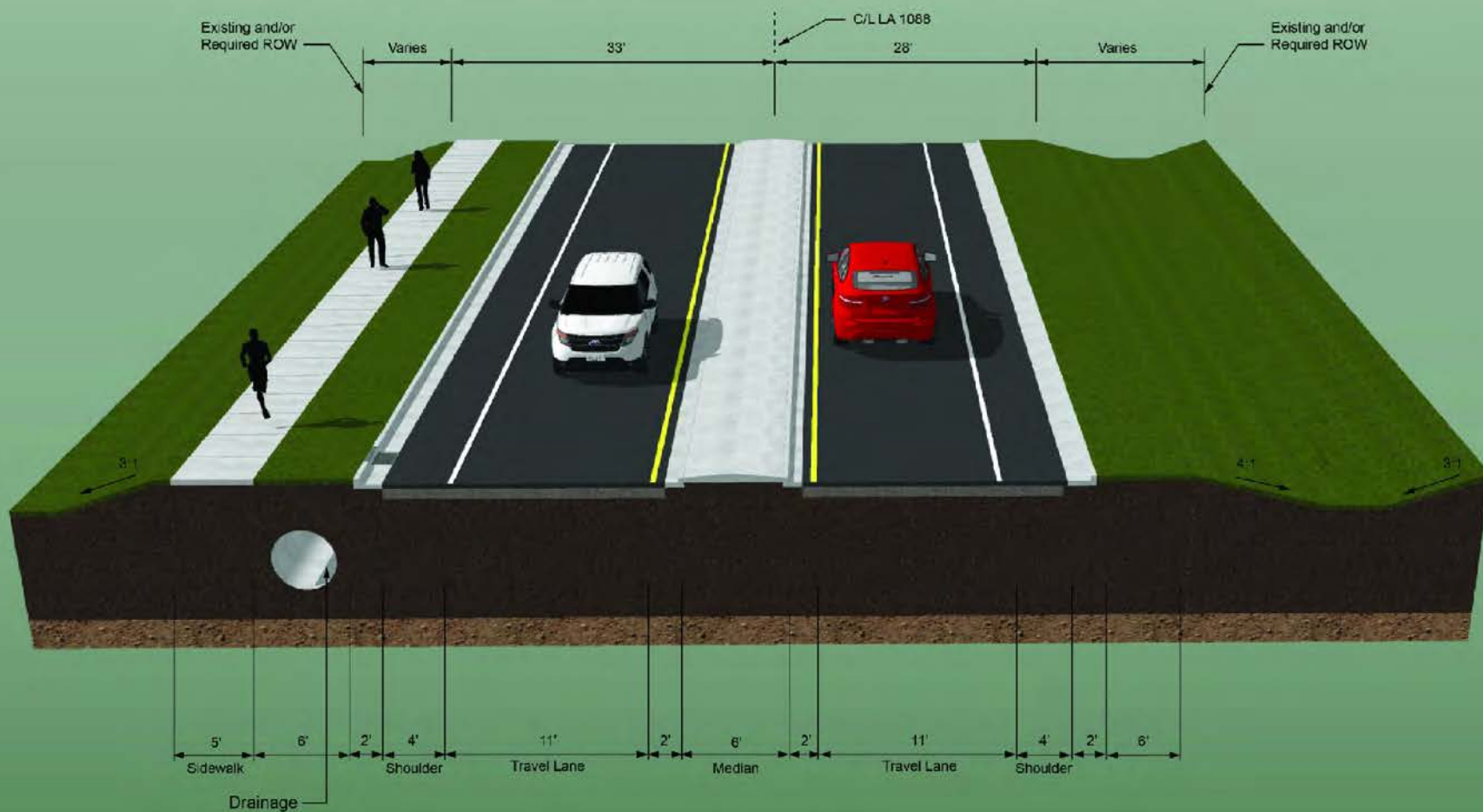
ALTERNATIVE 1 A
EXISTING TYPICAL SECTION
NO SIDEWALKS OR BIKE PATHS
LA 1088 CORRIDOR STUDY



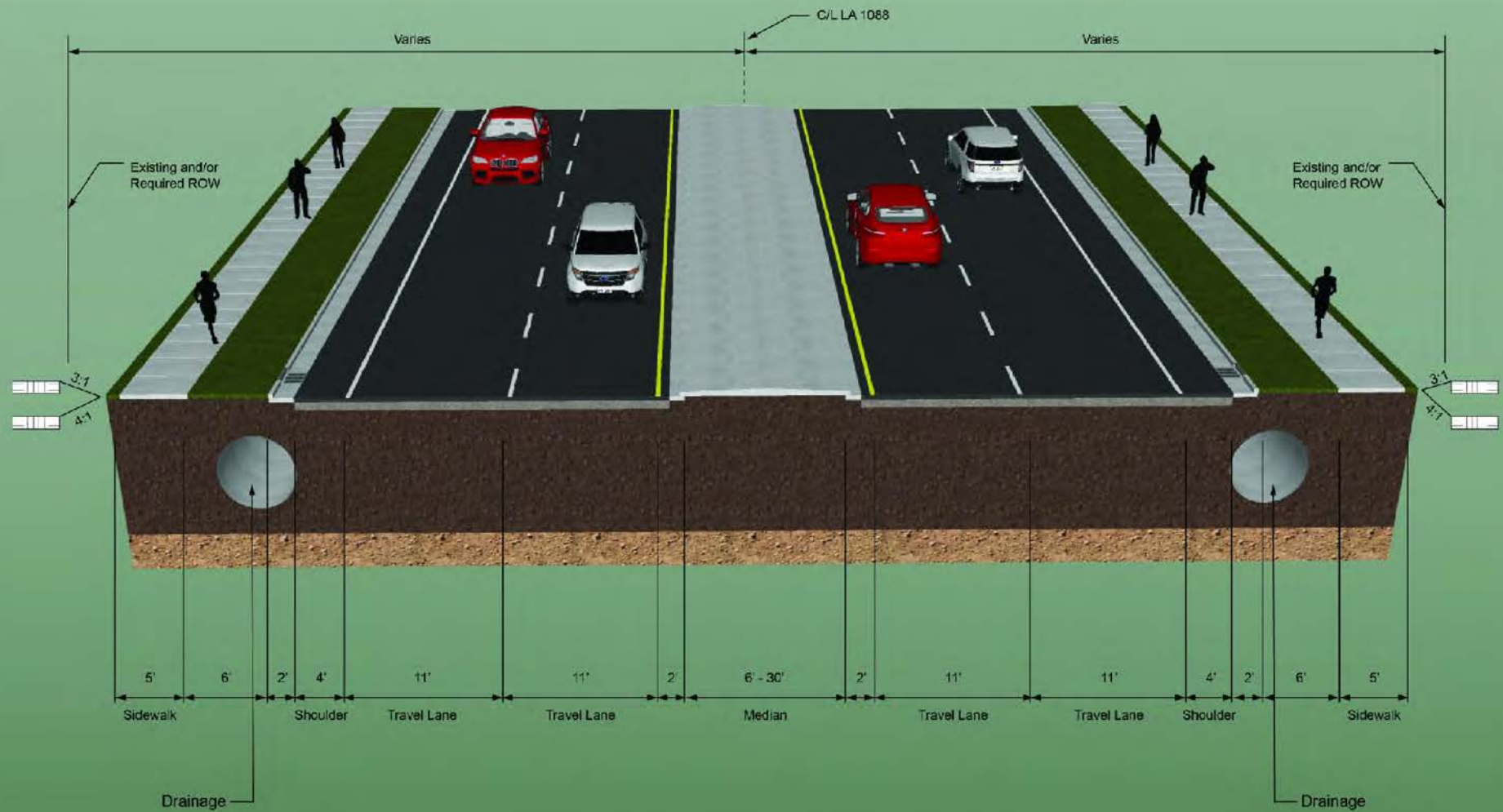


ALTERNATIVE 2
U A
2 - LANE BLVD. TYPICAL SECTION
LA 1088 CORRIDOR STUDY





ALTERNATIVE 2A
U A
2 - LANE BLVD. TYPICAL SECTION
LA 1088 CORRIDOR STUDY



4 - LANE BLVD. TYPICAL SECTION
ALTERNATIVE 2A
U A
LA 1088 CORRIDOR STUDY

The proposed build alternatives will relieve the existing traffic congestion problems and will accommodate the future projected traffic demand along the highway. The LADOTD Traffic Study presents a detailed traffic analysis and comparison of the No-Build and build alternatives. Results of the study show that if the new intersections were constructed today (base year 2013) none would be LOS E/F overall versus one with the existing/No-Build geometry. In addition, only one intersection versus seven with the existing/No-Build geometry would have approach LOS E/F. The results also show that all the intersections would operate under capacity (i.e., V/C less than or equal to 1.0)

In design year 2033 for Build Alternatives 1A and 1B, one intersection will be LOS E/F overall versus two with the No-Build geometry, and five intersections versus 17 with the No-Build geometry will have approach LOS E/F. Alternatives 1A/1B also reduce the total number of intersection conflict points from 230 to 156, a 32 percent reduction. Per the Crash Modification Factors (CMFs) from *The Highway Safety Manual*, the crash reduction is 67 percent at the signalized LA 59 traffic signal when converted to a roundabout. At the all-way stop controlled Soult St./Viola St. intersection, as well as six side street stop-controlled intersections, the crash reduction is 32 percent after conversion to a roundabout. At four of the side street stop controlled full-access intersections, the crash reduction is 39 percent after conversion to stop-controlled right-only intersections with median-divided approaches.

In design year 2033, for Build Alternatives 2 and 2A, no intersections will be LOS E/F overall versus two with the No-Build geometry, and four intersections versus 17 with the No-Build geometry will have approach LOS E/F. Alternatives 2 and 2A also reduce the total number of intersection conflict points from 230 to 81, a 65 percent reduction. Per the CMFs, the crash reduction is 80 percent at the signalized LA 59 traffic signal when converted to a roundabout with a median-divided approach. At the all-way stop-controlled Soult St./Viola St. intersection as well as six side street stop controlled full-access intersections, the crash reduction is 59 percent after conversion to a roundabout with median-divided approaches. At the remaining seven side street stop-controlled full-access intersections, the crash reduction is 39 percent after conversion to stop-controlled right-only intersections with median-divided approaches.

2.3 Design Criteria

The design features and geometric standards for the Preferred Alternative 2A will conform to the latest requirements outlined within “A Policy on Geometric Design of Highways and Streets”, dated 2011, published by AASHTO, and the “Department of Streets General Guide for Design Survey and Preparation of Plans and Specifications”, dated July 1988, including all revisions, Engineering Directives and Standards No.: VI.1.1.6 and the following supplementary criteria from the LADOTD New Minimum Design Guidelines dated March 6, 2017:

Table 2-1: Chosen Design Criteria for Alternative 2A

Item No.	Item	Design Criteria for Alternative 2a
1	Design Speed	
	(a) Main Roadway	45 miles per hour
	(b) Roundabouts	15 miles per hour
2	LOS	C
3	Number of Lanes	2 (min) - 4 (typical)
4	Width of Travel Lanes	11ft
5	Width of Shoulders	
	(a) Inside on multilane facilities	2 ft. with curb
	(b) Outside	4 ft. with curb, 4 ft. without curb
6	Shoulder Type	Paved
7	Clear Zone	
	From edge of Travel Lanes	24
8	Median Width	
	Raised Median	6 ft. minimum
9	Width of Sidewalk	
	(a) When Offset from Curb	5 ft.
	Width of Offset	8 ft.
	(b) When Adjacent to curb	N/A
10	Fore slope	4:1
11	Back slope	3:1
12	Cross Slope	
	(a) Roadway	2.5%
	(b) Shoulder	2.5%
	(c) Roundabout	1.5%
13	Minimum Stopping Sight Distance	See AASHTO
14	Maximum Super-elevation (%)	4%
15	Horizontal Curves Radius	
	(a) Main Roadway (normal crown)	1,080 ft.
	(b) Main Roadway (2.5% Super-elevation)	772 ft.
	(c) Main Roadway (full super-elevation)	711 ft.
	(d) Divisional Islands	3,850 ft. minimum
16	Maximum Grade	5%
17	Minimum Vertical Clearance	16.5 ft.
18	Minimum Lateral Offset (ft)	
	(a) From face of curb	4 ft.
	(b) From shoulder	8 ft.
19	Roundabout Design Speed	15 MPH

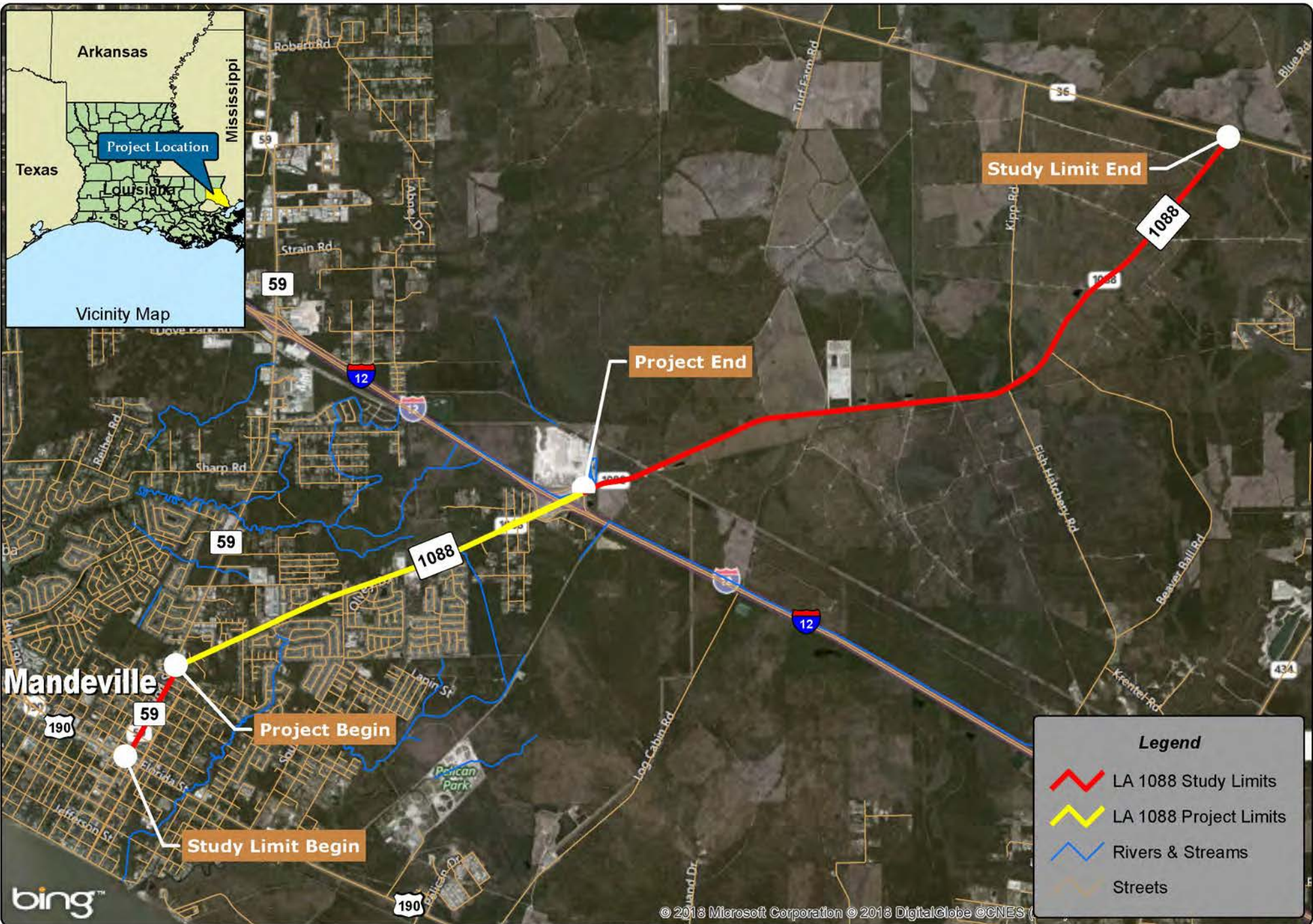
Item No.	Item	Design Criteria for Alternative 2a
20	Design Vehicle	
	(a) Through Traffic (LA 1088)	WB-67
	(b) Minor Streets	Fire Truck
21	Roundabout Splitter Island	
	(a) Length (Along LA 1088 and LA 59)	125 ft.
	(b) Length (On Side Streets)	50 ft.
22	Roundabout Entry Widths	
	(a) Single Lane	18 ft.
	(b) Double Lane	Use Autoturn to determine width
23	Roundabout Curb Radius	
	(a) Entry	100 ft.
	(b) Exit	400 ft. single, 800 ft. double
24	Roundabout Circular Path Width	
	(a) Single Lane	Determined by Autoturn
	(b) Double Lane	Determined by Autoturn Roundabout
25	Truck Apron	
	(a) Cross Slope	3%
	(b) Width	10 ft.-30 ft. (determined by Autoturn)
26	Roundabout Inscribed Circle Diameter	
	(a) Single Lane	110 ft. minimum
	(b) Double Lane	175 ft. minimum

2.4 Estimated Construction Cost

The preliminary estimated construction cost for Build Alternative 1A is \$23,316,885, Build Alternative 1B is \$35,383,871, Build Alternative 2 is \$37,561,903 and Build Alternative 2A is \$36,530,461. The preliminary estimates of the costs are included in **Appendix D**.

3.0 EXISTING CONDITIONS AND ENVIRONMENTAL CONSEQUENCES

This section describes the existing social/community, economic, cultural, and natural resources within the project's study corridor and the potential impacts the proposed build alternatives may have on these resources (environmental consequences). As shown on **Figure 3**, the project limits are the beginning and end points of the project for all of the build alternatives and the EA includes detailed studies and data to identify impacts of these alternatives. The project effects are described as being adverse, beneficial, or having no adverse effect and the duration of the effect is described as being either short-term or long-term. This section also includes discussions of temporary construction impacts and efforts made to avoid, minimize, and/or mitigate for environmental consequences resulting from the proposed project. **Figure 3** also illustrates nearby sensitive resources that could be impacted by future projects. This study area begins at the intersection of LA 59 and US 190 and continues north on LA 59 and then along LA 1088 until the intersection of LA 36.



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LA 1088 Corridor Study
St Tammany Parish
Figure 3 Project/Resource Area Map

3.1 Land Use Impacts

Land use along the highway primarily consists of suburban, residential, commercial, and education uses. Land use as zoned by the St. Tammany Parish Department of Development is illustrated on **Figure 4**.

3.1.1 No-Build Alternative

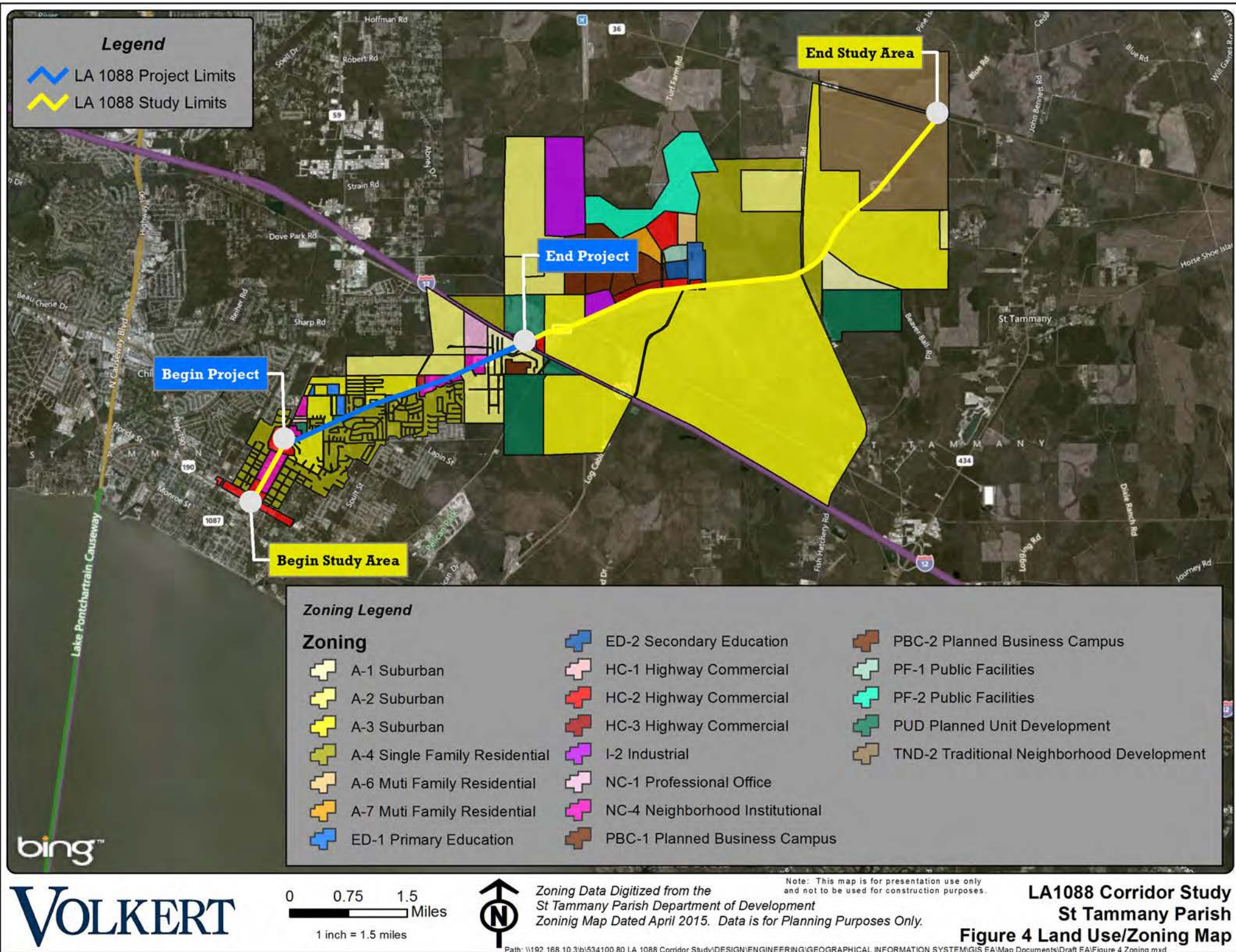
The No-Build Alternative will not change the current development pattern of land use in the study corridor. However, under the No-Build Alternative condition the LOS of LA 1088 will continue to decrease and congestion will increase. The increase in congestion may have a long-term adverse effect on land use by slowing the rate of development along the highway.

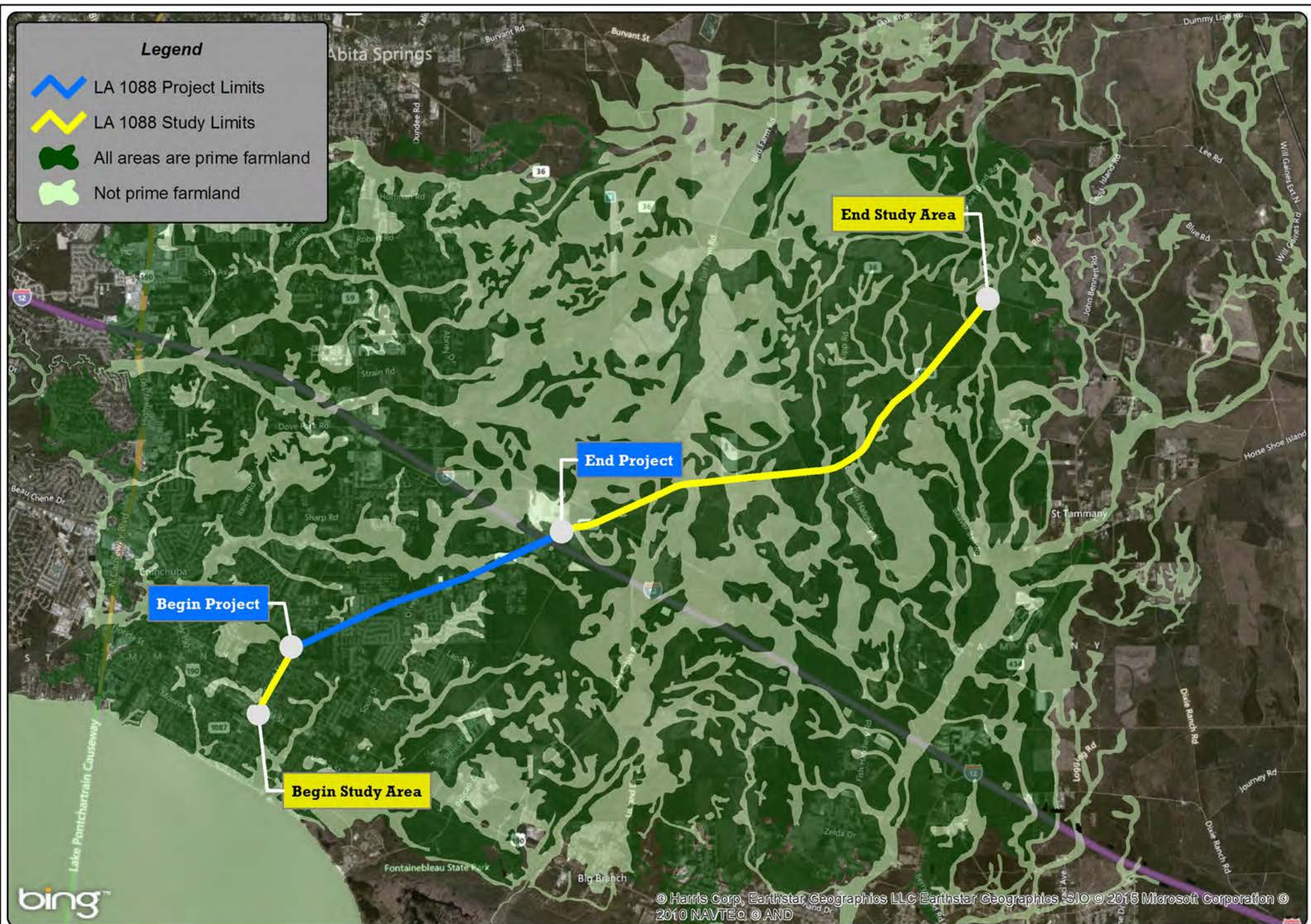
3.1.2 Build Alternatives

The proposed build alternatives will not require relocations; however, all of the alternatives will require additional right-of-way. Build Alternative 1A is estimated to require an additional 7.2 acres of right-of-way, Build Alternative 1B is estimated to require an additional 9.0 acres, Build Alternative 2 is estimated to require an additional 10.2 acres, and Build Alternative 2A is estimated to require an additional 10.3 acres. The build alternatives are expected to increase the LOS of LA 1088 and decrease congestion. As a result, the improved highway may have a long-term beneficial effect on land use by accommodating the development that is occurring in the area.

3.2 Prime and Unique Farmland Impacts

Impacts to prime and unique farmland are assessed by the US Department of Agriculture (USDA) because this resource is vital for meeting the nation's short and long-range needs for food and fiber. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. The Natural Resources Conservation Service (NRCS) data-server lists potential prime farmland areas based on soils classifications. A search of the NRCS data base indicates prime farmland exists within the study corridor as illustrated on **Figure 5**. Farmland does not include land already in or committed to urban development, according to 7 CFR 658.2, Farmland Protection Policy Act. Coordination with the NRCS regarding potential impacts to prime and unique farmlands was conducted by LADOTD on March 31, 2015. On April 8, 2015, the NRCS State Conservationist responded with a determination that the project is exempt from the rules and regulations of the Farmland Protection Policy Act since the proposed construction areas are within urban areas. A copy of the LADOTD correspondence and the NRCS determination letter is included in **Appendix B**. As a result, it is concluded that the build alternatives will not adversely affect prime and unique farmland.





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0 0.75 1.5
Miles
1 inch = 1.5 miles



Soils Data Provided by NRCS
Prime Farmlands Classifications Mapped
via the NRCS Soil Data Viewer 6.1

Note: This map is for presentation use only
and not to be used for construction purposes.

**LA1088 Corridor Study
St Tammany Parish
Figure 5 NRCS Prime Farmlands**

Path: \\192.168.10.3\534100.80 LA 1088 Corridor Study\DESIGN\ENGINEERING\GEOGRAPHICAL INFORMATION SYSTEM\GIS EA\Map Documents\Draft EA\Figure 5 Prime Farmlands.mxd

3.3 Section 4(f) Evaluation

Section 4(f) of the Department of Transportation Act of 1966, as amended, (49 U.S.C. 303) states that the US Department of Transportation may not approve the use of publicly-owned land from a public park, recreation area, or wildlife and waterfowl refuge, or land from any historic site of national, state, or local significance unless determination is made that: 1) there is no feasible and prudent alternative to the use of land from the property; and 2) the action includes all possible planning to minimize harm to the property resulting from such use. By letter dated April 29, 2015, the Louisiana Department of Wildlife and Fisheries indicated there are no state or federal parks, wildlife refuges, scenic streams or wildlife management areas within the LA 1088 study corridor. A search of the St. Tammany Parish Parks and Recreation website revealed no public parks in the LA 1088 project area. There are also no historic sites of national, state, or local significance as discussed in section 3.16 of this EA. Therefore, no Section 4(f) impacts will occur, and a Section 4(f) Evaluation is not required for this project.

3.4 Social Impacts

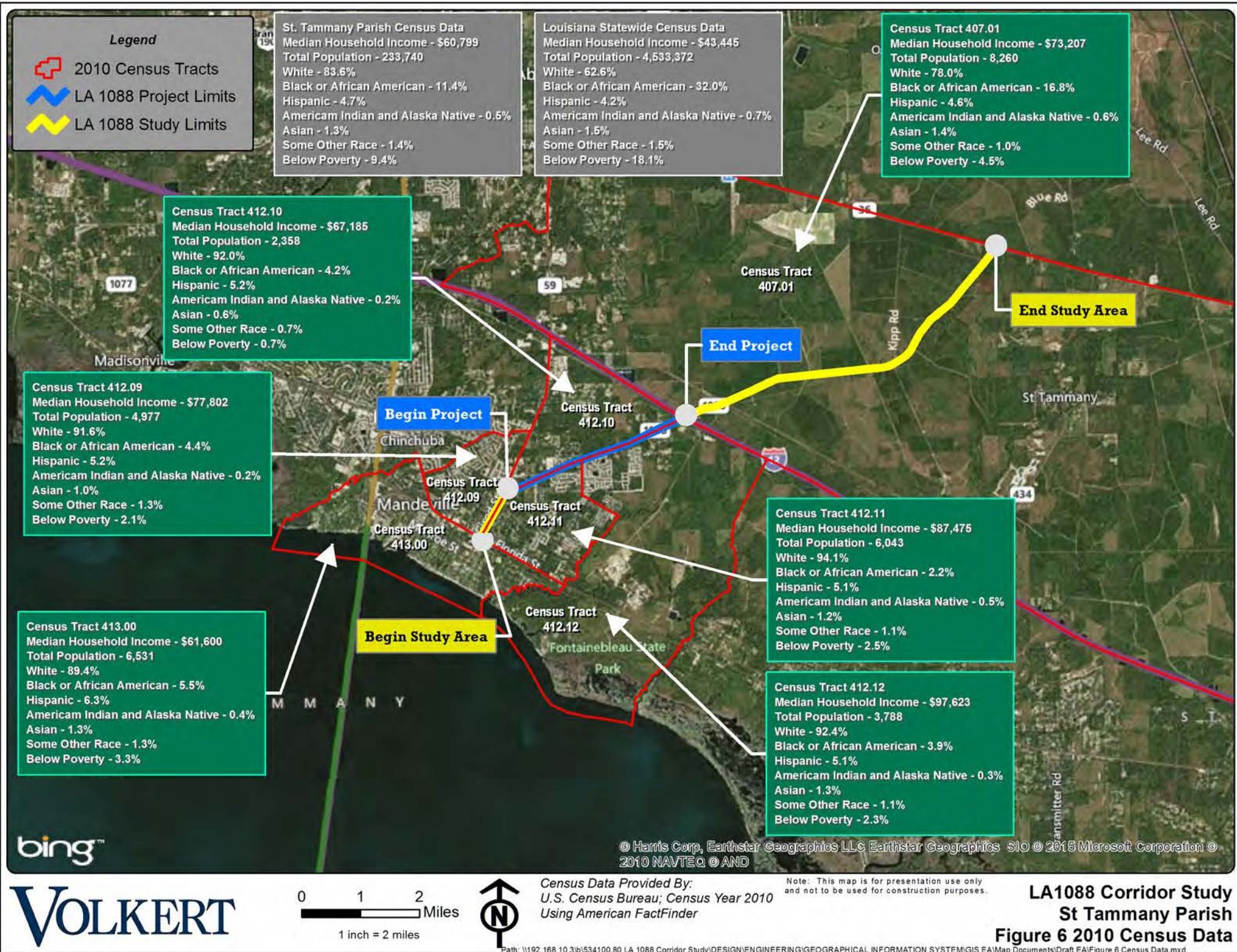
The residents, businesses, schools, and churches located within the project area will directly experience the effects of the build alternatives and construction activities associated with the proposed LA 1088 project. Social data was available at the Census Tract level. As shown on **Figure 6**, the study corridor is comprised of six Census Tracts identified as 407.01, 412.09, 412.10, 412.11, 412.12, and 413.00.

3.4.1 Community Demographics

Demographic data for the census tracts was obtained from the US Census Bureau for the 2010 census year. Of the 31,957 people who live within the six Census Tracts that include the study corridor, approximately 89 percent are white; 5 percent are African American; 5 percent are of Hispanic origin; 0.4 percent is American Indian/Alaska Native; and 1 percent is Asian. Census Tract 407.01 has the highest percentage of minorities.

Poverty status was also obtained from the 2010 census dataset. The poverty percentage is low for all six Census Tracts with Census Tract 407.01 having the highest population percentage, 4.5 percent, below the poverty level.

Data was also obtained from the U.S. Census Bureau, 2009-2013 Five-year American Community Survey. Eighty eight percent of the population surrounding the project area work in management, business, science, and arts; service occupations; or sales and office jobs. The majority of the population (81 percent) commutes to work by car, truck, or van and drive alone.



3.4.1.1 No-Build Alternative

Under the No-Build Alternative scenario and as traffic volumes increase, congestion will increase, and the LOS will decrease. As conditions deteriorate, access to properties along the LA 1088 highway corridor will be diminished. The majority of the population that lives along the study corridor commute to work. Under the No-Build Alternative condition, all residents' ability to commute to and from work through the project area would be long-term adversely affected by the increase in congestion.

3.4.1.2 Build Alternatives

The proposed build alternatives will not require relocations but will require the purchase of additional right-of-way from property owners along the highway. The build alternatives will increase the LOS of LA 1088 and decrease congestion. As such the ability of residents to access the highway is expected to improve. The improved LOS and increased capacity of the highway will accommodate the predicted increase in traffic and will better facilitate commuter traffic. As a result, it is anticipated that the build alternatives will have a long-term beneficial effect on all residents including minority and low-income residents in the area.

3.4.2 Disruption of Neighborhoods / Communities

LA 1088 corridor is primarily a suburban area near the City of Mandeville. The area from LA 59 to the I-12 interchange is the most highly developed with residences including subdivisions and apartment complexes. According to the 2010 census data housing densities range from 41.3 per square mile in Census Tract 407.01 to 1,148 per square mile in Census Tract 412.09. The housing density for St. Tammany Parish as a whole is 112.8 per square mile.

3.4.2.1 No-Build Alternative

Under the No-Build Alternative scenario and as traffic volumes increase, congestion will increase, and the LOS will decrease. Currently seven of the 18 intersections have LOS E/F operations on at least one approach. By 2033 the increase in traffic will result in all intersections except Emerald Pine Ct. having at least one approach at LOS E/F. The congestion currently affects the flow of traffic in and out of the neighborhoods and communities along LA 1088 and will become more problematic as the level of service decreases at the intersections.

3.4.2.2 Build Alternatives

The proposed build alternatives will not require relocations but will require additional right-of-way from neighborhoods or communities along the highway. Some individual property owners will experience a loss of some of their property due to the additional right-of-way requirements. None of the alternatives will have a divisive or disruptive effect on the community such as separation of residences from community facilities or separation of neighbors.

Access to neighborhoods and communities will be maintained with all build alternatives. The build alternatives will increase the LOS of LA 1088, will decrease congestion, and will improve access to neighborhoods and communities along the highway.

The increased capacity and improved LOS of the highway will also accommodate the predicted increase in traffic and will facilitate the predicted increase in development within the neighborhoods and communities along the highway and in the project corridor. As a result, it is expected the build alternatives will result in both short and long-term beneficial effects to neighborhoods and communities within the project corridor.

3.4.3 Changes in Travel Patterns and Traffic Operations

3.4.3.1 No-Build Alternative

It is expected that the No-Build Alternative will have long-term adverse effects on travel patterns along and in the vicinity of LA 1088. The existing highway will not accommodate the projected future traffic volumes and as congestion increases, the LOS will decrease. Under the No-Build Alternative, it is likely that existing travel patterns will change as travelers seeking to avoid traffic related delays take other routes. Residents in the LA 1088 corridor will be subjected to longer delays than currently experienced. Travelers may resort to longer routes to avoid the congestion which could result in increased traffic and congestion along other area roadways.

It is anticipated that the No-Build Alternative will have both short and long-term adverse effects on traffic operations. The existing LA 1088 has 18 intersections with a total of 230 conflict points. The No-Build Alternative will not reduce the number of conflict points and as traffic volumes increase the LOS will reach unacceptable levels for at least one approach at 17 of the 18 intersections by the design year 2033.

3.4.3.2 Build Alternatives

The proposed improvements will accommodate the existing and projected future traffic volumes along the highway. In addition, traffic will be maintained along the highway during construction. As a result, it is expected that the proposed project will not alter traffic patterns in the short-term or long-term.

It is anticipated that the project will have both short-term and long-term beneficial effects on traffic operations. Alternatives 1A and 1B will reduce the total number of intersection conflict points from 230 to 156, a 32 percent reduction. Per the CMF, the crash reduction is 67 percent at the signalized LA 59 traffic signal when converted to a roundabout. At the all-way stop controlled Sault St./Viola St. intersection, as well as six side street stop-controlled intersections, the crash reduction is 32 percent after conversion to a roundabout. At four of the side street stop controlled full-access intersections, the crash reduction is 39 percent after conversion to stop-controlled right-only intersections with median-divided approaches.

Alternatives 2 and 2A will reduce the total number of intersection conflict points from 230 to 81, a 65 percent reduction. Per the CMF, the crash reduction is 80 percent at the signalized LA 59 traffic signal when converted to a roundabout with a median-divided approach. At the all-way stop-controlled Sault St./Viola St. intersection as well as six side street stop controlled full-access intersections, the crash reduction is 59 percent after conversion to a roundabout with median-divided approaches.

At the remaining seven side street stop-controlled full-access intersections, the crash reduction is 39 percent after conversion to stop-controlled right-only intersections with median divided approaches.

The build alternatives will provide operational improvements with Build Alternatives 2 and 2A providing the most benefit. Build Alternatives 2 and 2A have no side-street stop-controlled full-access intersections and fewer intersection conflict points. Build Alternative 1B and Build Alternatives 2 and 2A also include sidewalks as part of the proposed project. This will provide improved access for pedestrian traffic.

3.4.4 Community Facilities

Community facilities and services adjacent to LA 1088 corridor include residences, schools (Lake Harbor Middle School, Magnolia Trace Elementary School, Mandeville Middle School, Marigny Elementary School, and Lakeshore High School), churches (Corner Stone, Mandeville Christian Fellowship, and Redeemer Lutheran Church), and various utility facilities. The utility facilities include electricity (CLECO), gas (Atmos Energy), telephone (MCI Sprint, AT&T), potable water (City of Mandeville), sanitary sewer (St. Tammany Parish), and solid waste disposal provided by City of Mandeville.

3.4.4.1 No-Build Alternative

The No-Build Alternative will not require the relocation of any existing community facilities. However, those facilities which are transportation dependent including the schools, the churches, emergency services and transportation resources serving area schools, senior centers, and other public facilities will be adversely affected by the increase in congestion and decrease in the LOS of the highway. The congestion currently affects the flow of traffic to and from the community facilities along LA 1088 and will become more problematic as the level of service decreases at the intersections.

3.4.4.2 Build Alternatives

The build alternatives will not require the relocation of any existing community facilities. Under the build alternatives condition, facilities which are transportation dependent, *i.e.* the schools, the churches, and emergency services and transportation resources serving area schools, senior centers and other public facilities, would benefit by the reduced congestion. Correspondence dated April 10, 2015, (**Appendix B**) from the Supervisor of Administration for the St. Tammany Public Schools concluded that the road improvements will greatly benefit the five school zones for the described area. Based on the above, it is anticipated that the project will have short-term and long-term beneficial effects on community facilities along the study corridor.

3.4.5 Executive Order 12898 Impacts to Minorities or Low-Income Populations

Executive Order (EO) 12898, Federal Actions to Address Environmental Justice (EJ) in Minority Populations and Low-Income Populations (February 11, 1994), specifies actions to be taken on a range of issues that are intended to promote nondiscrimination in Federal actions and to provide minority and low-income communities equal access to public information regarding a Federal action, and to provide an opportunity for public

participation in the evaluation of a Federal action in matters relating to human health and the environment. A demographic profile of the Census Tracts that comprise the study corridor was compiled and analyzed to address the following questions posed by EO 12898:

- Does the potentially affected community include minority and/or low-income populations?
- Are the environmental impacts likely to fall disproportionately on minority and/or low-income members of the community and/or tribal resources?

3.4.5.1 No-Build Alternative

Under the No-Build Alternative condition as congestion increases and the LOS decreases, all communities along the highway, including minority, low-income communities, and/or tribal resources located within the study corridor will experience both short-term and long-term adverse effects. Emergency response and access to community facilities and neighborhoods along the study corridor will also be impacted by the congestion and decreased LOS.

3.4.5.2 Build Alternative

The build alternatives will reduce congestion and provide operational benefits to all communities along the highway, regardless of community composition or income level. As discussed earlier, **Figure 6** presents data on populations for the Census Tracts traversed by the build alternatives. The low-income and/or minority population located within the study corridor may experience some short-term impacts during construction such as traffic delay, fugitive dust, or construction-related noise but these impacts will not be disproportionate. None of the Census Tracts surrounding the LA 1088 corridor contain a majority of low-income and/or minority population. As such, the build alternatives will not result in short-term or long-term disproportionate adverse impacts on minority and/or low-income populations within the study corridor.

3.4.6 Title VI Assessment

Title VI of the Civil Rights Act of 1964, prohibits discrimination based upon race, color, and national origin. Specifically, 42 USC 2000d states that “no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance.” The proposed project has been developed in accordance with the LADOTD’s 2014 Title VI Program. A Public Information Meeting was held on December 11, 2013 at the St. Tammany Parish Council chambers as a part of Stage 0 studies. Also, as part of the Stage 1 studies, a Public Involvement Meeting for the project was held on July 23, 2015, hosted by the LADOTD. An open house format was utilized to display the proposed improvements, answer questions, and solicit comments. A Public Hearing will be conducted as part of the EA process. Comments will be solicited from Federal, state, and local agencies tribal interest, business owners, and the public.

3.4.7 Emergency Response

3.4.7.1 No-Build Alternative

It is expected that the No-Build Alternative will have short-term and long-term adverse effects on emergency response times. Existing congestion and narrow shoulders along portions of the project area adversely affect response times of emergency services including medical, fire, and police. The estimated decrease in level of service over time will cause greater delays in these response times.

3.4.7.2 Build Alternatives

It is anticipated that the project will have short-term and long-term beneficial effects on emergency response times. The build alternatives will address the current and future traffic demands by improving the LOS and increasing the capacity of the highway at the intersections, which will alleviate congestion and allow for quicker emergency response times. The additional travel lanes (in a portion of the project), improved travel lanes, and improved shoulders will also better allow for traffic to move out of the way of emergency vehicles.

3.4.8 Emergency Evacuation

LA 1088 is not a designated emergency evacuation route. The nearest designated emergency evacuation routes include I-12 to the north and Highway 190 to the south.

3.4.8.1 No-Build Alternative

Under the No-Build Alternative, the ability for residents to evacuate the study corridor will be adversely affected both in the short-term and long-term by the decrease in the LOS and increase in congestion.

3.4.8.2 Build Alternatives

The proposed build alternatives will increase the capacity and LOS of LA 1088, and thereby improve the short-term and long-term access to emergency evacuation routes.

3.5 Relocation Impacts

A Conceptual Stage Relocation Plan Evaluation was conducted for the build alternatives. The alternatives are very similar in nature and will affect many of the same properties. Additional right-of-way will be required for each of the build alternatives as follows: Alternative 1A, 7.2 acres, Alternative 1B, 9.0 acres, Alternative 2, 10.2 acres and Alternative 2A, 10.3 acres. The project has been designed to utilize existing right-of-way to the maximum extent practicable. No residential or commercial relocations will be required, and the project does not preclude property access. The project will not have any divisive or disruptive effect on the community, such as separation of residences from community facilities or separation of neighborhoods. The partial acquisitions will not result in any adverse impacts to businesses or the economy of the community. There are five business signs that may be impacted, and a slight realignment will be necessary for the driveway entrance to CVS from LA 1088. There is ample remainder property to relocate the signs and realign the entrance to CVS. As the design process continues,

LADOTD will consider additional minor alignment adjustments to further avoid or minimize impacts to property owners.

3.6 Economic Impacts

Several commercial facilities are located along LA 1088 from LA 59 to the I-12 interchange. The commercial facilities include a gas station, a pharmacy, a sports complex, a self-storage facility, a pet boarding/grooming facility, and a day care center. Commercial and residential development is expected to occur along the highway and in the region in the future.

3.6.1 No-Build Alternative

The ability to transport or access goods and services is a vital component to the local and regional economy. Under the No-Build Alternative, traffic congestion and the decreased LOS along the study corridor will restrict the ability of area residences and customers to access goods and services. Eventually, patronage at some of the commercial facilities may decrease as the LOS declines at many of the intersections within the project area.

3.6.2 Build Alternatives

It is anticipated that the project will have minor short-term adverse effects and long-term beneficial effects on the area economy. The build alternatives will not require the relocation of existing commercial facilities, and during construction access to the highway from businesses will be maintained. All work will occur within the existing and required right-of-way; minimizing adverse impacts to existing businesses. Any potential impacts to these businesses will be temporary and associated with construction activity. Operational improvements will be beneficial to businesses with possible increased patronage and will also create an environment conducive to new commercial development.

3.7 Air Quality Impacts

An *Air Quality Analysis Report* was prepared for the project in March 2018 to analyze the affects that Build Alternative 1A, Build Alternative 1B, Build Alternative 2, and Build Alternative 2A will have on air quality. The analysis is included as **Appendix E**. National and state Ambient Air Quality Standards (NAAQS) were developed for specific (criteria) pollutants to protect public health, safety, and welfare as a result of the Federal Clean Air Act of 1970. The Clean Air Act Amendments of 1990 (CAAA) mandated a program by which air quality must be improved and maintained so as to meet the NAAQS, with frameworks for state and regional agency jurisdictions, accountability, and an established time schedule. This program involves on-going monitoring and reporting, from which regions are classified as to their attainment status with regard to each criteria pollutant.

The LDEQ Air Quality Assessment website states that St. Tammany Parish is in attainment for all criteria pollutants. Carbon Monoxide (CO) analyses performed, assuming worst-case scenarios, for projects similar to the proposed project have shown no violations of the NAAQS. It was determined that this project will not violate the NAAQS for CO, like similar projects modeled have previously demonstrated. In addition, the traffic projections for the proposed design year 2033 will not exceed 140,000 vehicles per day

(see **Table 1-1**). As a result, it was determined that air quality modeling for CO was not required and that the project will not result in short-term or long-term adverse effects on CO.

Project level ozone, nitrogen dioxide, PM_{2.5}, and PM₁₀ analyses were also not conducted for the build alternatives and No-Build Alternative because the area is in compliance with the NAAQS for these pollutants. No short-term or long-term adverse effects to these NAAQS pollutants are expected.

3.7.1 Mobile Source Air Toxics

In addition to the criteria air pollutants for which there are NAAQS, the US Environmental Protection Agency (USEPA) also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries). The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

A qualitative MSAT analysis was performed for the No-Build Alternative and Build Alternatives. The MSAT analysis is included in the *Air Quality Analysis Report* in **Appendix E**. The analysis determined that the proposed project has a “*Low Potential for MSAT Effects*” since the current and projected vehicle traffic do not exceed the FHWA threshold (140,000 vehicles per day). Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of USEPA's national control programs that are projected to reduce MSAT emissions by over 80 percent between 2010 and 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, vehicle miles traveled (VMT), growth rates, and local control measures. However, the magnitude of the USEPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study corridor are likely to be lower in the future in nearly all cases. The results of the analysis concluded that the project will not result in short-term or long-term increases in MSATs emissions.

3.8 Noise Impacts

A *Noise Analysis Technical Report* was prepared for the project in March 2018 to address potential noise impacts that may result from the proposed LA 1088 Corridor Study project. The report is included as **Appendix F**. The noise levels were analyzed for the 2013 existing and future 2033 No-Build and proposed build alternatives for the project.

The noise analysis was conducted in accordance with procedures for noise studies as set forth in Title 23 CFR Part 772 and the LADOTD's July 2011 *Highway Traffic Noise Policy*. The scope of the analysis was to determine and analyze the effect of traffic noise on properties near the proposed project and analyze noise abatement measures to

mitigate potential impacts giving weight to the benefits and costs of abatement and to overall social, economic, and environmental effects.

3.8.1 Noise Analysis Results

Noise levels were modeled at 234 individual receptor sites representing 405 noise sensitive receptors using FHWA's Traffic Noise Model (TNM) Version 2.5 within the LA 1088 Corridor Study project corridor. The receptor locations and TNM 2.5 results at each receptor are included in the *Noise Analysis Technical Report* in **Appendix F**.

3.8.1.1 2013 Existing Noise Levels

The 2013 existing noise model indicated 49 modeled receptor sites representing 52 individual noise receptors are currently experiencing noise levels above the Noise Abatement Criteria (NAC). The existing noise levels along the LA 1088 Corridor Study range from 48.9 dBA to 71.6 dBA.

3.8.1.2 2033 No-Build Alternative Noise Results

Under the 2033 No-Build Alternative conditions, noise impacts above the NAC were predicted to occur at 66 modeled receptor sites representing 69 individual noise receptors. The 2033 No-Build Alternative noise levels along the LA 1088 Corridor Study were predicted to range from 50.6 dBA to 73.4 dBA. The No-Build Alternative results also indicated no substantial increases in noise (10 dBA or greater) over the existing noise levels will occur.

3.8.1.3 2033 Build Alternative Noise Results

Under the 2033 Build Alternative 1 (Alternative 1A, and Alternative 1B) condition, noise impacts above the NAC were predicted to occur at 64 modeled receptor sites representing 67 individual noise receptors. The 2033 Build Alternative 1 noise levels along the LA 1088 Corridor Study were predicted to range from 51.4 dBA to 73.3 dBA. The Build Alternative 1 results also indicated no substantial increases in noise (10 dBA or greater) over the existing noise levels will occur.

Under the 2033 Build Alternative 2 condition, noise impacts above the NAC were predicted to occur at 65 modeled receptor sites representing 69 individual noise receptors. The 2033 Build Alternative 2 noise levels along the LA 1088 Corridor Study were predicted to range from 51.6 dBA to 73.3 dBA. The Build Alternative 2 results also indicated no substantial increases in noise (10 dBA or greater) over the existing noise levels will occur.

Under the 2033 Build Alternative 2A condition, noise impacts above the NAC were predicted to occur at 64 modeled receptor sites representing 67 individual noise receptors. The 2033 Build Alternative 2A noise levels along the LA 1088 Corridor Study were predicted to range from 51.7 dBA to 73.3 dBA. The Build Alternative 2A results also indicated no substantial increases in noise (10 dBA or greater) over the existing noise levels will occur.

3.8.2 Noise Mitigation Analysis

Noise abatement measures were evaluated at locations where impacts were predicted to occur under the 2033 Build Alternative scenarios. The abatement measures were evaluated using FHWA's guidelines as promulgated by Title 23 CFR Part 772 and guidelines from LADOTD's *Highway Traffic Noise Policy*.

Several abatement measures were analyzed, and it was determined that traffic management measures, alteration of horizontal and vertical alignments, and the acquisition of property rights for the construction of noise barriers were not feasible or reasonable abatement techniques due to environmental, or design constraints. Insulation of public use or non-profit institutional structures was not considered since no impacts of this type are anticipated. Construction of noise barriers was analyzed for the build alternatives and it was determined that noise barriers are feasible at several locations along the corridor. Where noise barriers were found to be feasible, a reasonableness analysis was conducted. Four (4) of the noise barriers under the 2033 Build Alternative 1 (Alternative 1A, and Alternative 1B) condition were found to be both cost reasonable and meet the reasonableness reduction goal criteria. Five (5) of the noise barriers under the 2033 Build Alternative 2 condition were found to be both cost reasonable and meet the reasonableness reduction goal criteria. Six (6) of the noise barriers under the 2033 Build Alternative 2A condition were found to be both cost reasonable and meet the reasonableness reduction goal criteria. Another criteria is the viewpoint of the community. LADOTD conducted a follow-up survey with the benefitted receptors as required to determine if over 50% of them desire the noise barriers. If less than 50 percent of the benefitted receptors are in favor of the noise barriers, then the barriers are no longer considered reasonable. Results of the survey indicate that none of the noise barriers received more than 50% negative responses. As such all the proposed noise barriers are still considered reasonable. Noise barriers will continue to be considered as the design progresses for the LA 1088 highway improvements.

3.9 Water Quality Impacts

3.9.1 Surface Water

The nearest surface water body is Bayou Castine located approximately 0.5 miles southeast of the LA 1088 project area. Swale ditches on either side of LA 1088 transport storm water to an un-named tributary to Bayou Castine which ultimately drains to Lake Pontchartrain. Bayou Castine is not on the Louisiana 2010 Section 303(d) list of impaired waters developed by the LDEQ Water Permits Division.

3.9.1.1 No-Build Alternative

The No-Build Alternative will not result in additional short-term or long-term adverse effects on surface water quality. Appropriate BMPs for sediment and erosion control will continue to be implemented for maintenance activities in accordance with LDEQ requirements.

3.9.1.2 Build Alternatives

During construction, some roadside drainage features will be modified to accommodate proposed improvements and additional drainage features will be installed for all of the build alternatives. Particulate runoff during construction will be regulated by LDEQ. Construction materials will be stored and disposed of in such a way that they are not discharged into surface waters. During construction, BMPs will be followed that will minimize water quality impacts, therefore, it is anticipated that short-term adverse impacts to surface waters will be minimal. No long-term adverse impacts to surface waters are anticipated. Appropriate BMPs for sediment and erosion control will be implemented for future maintenance activities in accordance with LDEQ requirements. Additionally, Alternatives 1B, 2 and 2A include the installation of curb and gutter on portions of the project that currently has open drainage ditches. This will reduce the number of open ditches and the sediment disturbance associated with infrequent maintenance activities.

3.9.2 Groundwater

A Sole Source Aquifer (SSA) is an aquifer that is used to supply 50 percent or more of the drinking water for residents within a particular area. A search of state and Federal databases revealed the LA 1088 study corridor is located on the Southern Hills Aquifer System. This was confirmed by letter dated April 9, 2015, from the US Environmental Protection Agency (EPA) SSA Program Coordinator. However, the EPA determined that the proposed project should not have an adverse effect on the quality of the ground water underlying the project site. A copy of the response is included in **Appendix B**.

A search was performed using the US Geological Survey (USGS) water wells and LDNR Strategic Online Natural Resources Information System (SONRIS) databases for registered water wells located near the study corridor. Well details were reviewed for a total of 25 registered water wells located within or directly adjacent to the LA 1088 project. A total of 18 of the registered wells were listed as “Domestic” wells with 14 presently still active. The remainder of the registered wells reviewed was found to have been utilized for irrigation or public supply. The locations of water wells identified in the LDNR database search are illustrated on **Figure 7**. The registered water well review was conducted as part of the Phase I Environmental Site Assessment discussed in greater detail in Section 3.17 of this EA. Other unregistered waters wells may exist along the study corridor.

3.9.2.1 No-Build Alternative

The No-Build Alternative is not currently affecting groundwater quality or area water wells. Continued maintenance activities also will not be expected to affect groundwater or area water wells.

3.9.2.2 Build Alternatives

Based on correspondence with EPA, the build alternatives will not impact ground water underlying the project site. As a result, it is expected that the project will not result in short-term or long-term adverse effects on groundwater. Numerous water wells have been identified near the area for the proposed improvements to LA 1088. The locations of wells will be better defined and verified as additional study and design of the project progresses. LADOTD will cap any wells in the construction area so that groundwater is not impacted by the project.

3.10 Permits

The build alternatives will involve the preparation and submittal of the following Federal and state permit applications:

3.10.1 Section 404/10 Permit

The USACE requires a permit under the authority of Section 404 of the Department of the Army CWA and Section 10 of the Rivers and Harbors Act for impacts to navigable water and waters of the US, including wetlands. Only the USACE can make an impact determination on wetlands and other waters affected by construction of the proposed build alternatives; therefore, a jurisdictional determination will have to be obtained for the study corridor. A Section 404/10 permit will need to be obtained, if the USACE determines that the proposed build alternatives will impact navigable waters or waters of the US, including wetlands. The *Wetlands Report* (**Appendix G**) indicates that some wetlands and a minor area of un-named tributary to Bayou Castine will be impacted by the build alternatives.

3.10.2 Section 401 Water Quality Certification

The LDEQ must certify that any work placing dredged or fill material into waters of the state including wetlands will not violate the state's water quality standards. Section 401 of the CWA requires that a WQC be obtained in conjunction with the submittal of the Section 404 permit application. A complete copy of the Section 404 permit application is required to initiate the certification process. When applying for the Section 404 permit, the USACE will notify the applicant if they must obtain a project specific WQC, or waiver, before authorization of work in waters of the US.

3.10.3 Storm Water General Permit for Construction Activities

The LDEQ requires projects with discharges of storm water from construction activities to obtain a LPDES Storm Water General Permit for Construction Activities. Storm water runoff from construction activities anticipated with this project will require a LPDES permit since it results in the disturbance of greater than one acre. The development of a SWPPP is required under this permit. Specific BMPs for this project, along with maintenance procedures and an inspection process, will be detailed in this plan.

3.10.4 Coastal Use Permit

The LDNR, OCM requires that an application for a CUP be submitted for projects that involve dredging or filling within the coastal zone boundary. A Joint Permit Application (JPA) for this project will be submitted online to the OCM. The permit will initiate both the CUP and the Section 404 permit process with USACE. The JPA process provides a single public notice to cover the OCM, USACE and LDEQ. Comments were initially solicited in March 2015 based on LADOTD's parish and state mailing list. Through the JPA process comments are solicited from additional agencies including: the LDWF, Coastal Protection and Restoration Authority (CPRA), National Oceanic and Atmospheric Administration (NOAA) Fisheries, USFWS, local parish, and state land office.

3.11 Wetland/ Water Body Impacts

The purpose of the wetland analysis was to identify and delineate any potential wetlands in the vicinity of the proposed project in accordance with USACE guidance found in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (USACE, 2010). The USACE and the USEPA jointly define wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands have the following characteristics: (1) vegetation consisting of macrophytes that are typically adapted to soil conditions found in wetland environments; (2) soils that have been classified as hydric or possess characteristics that are associated with reducing soil conditions; and (3) hydrology, meaning that the area is inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation.

A "Water of the U.S." is defined as any and all waters which are used in interstate or foreign commerce, including interstate wetlands, interstate lakes, rivers, streams, mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce. "Other waters of the U.S.", for the purpose of this assessment, are defined as swale ditches that parallel the highway and were constructed to capture and convey storm water drainage.

3.11.1 No-Build Alternative

The No-Build Alternative will not impact existing wetlands or waters of the U.S. Other waters of the U.S. (ditches) will continue to be subjected to infrequent maintenance activities. Revegetation with similar species is expected to occur between maintenance cycles. As such, the No-Build Alternative will not have short-term or long-term adverse effects on existing wetlands, waters of the U.S., or other waters of the US within the study corridor.

3.11.2 Build Alternatives

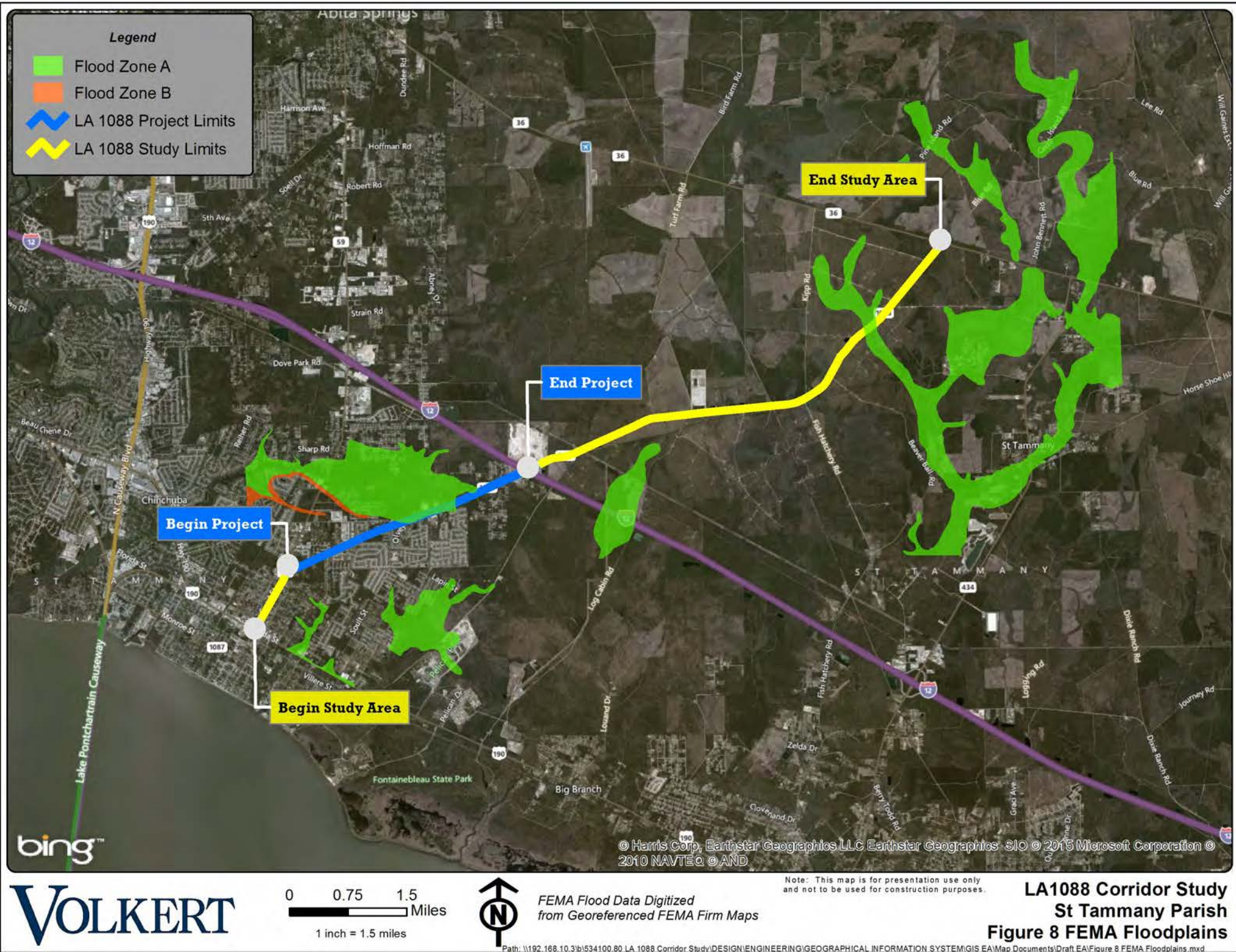
In May 2015, the LA 1088 project area was surveyed, and data was collected to determine potential impacts to wetlands, waters of the U.S., and other waters of the U.S. (ditches) as discussed and illustrated in the *Wetlands Report*, **Appendix G. Table 3-1** displays acreages potentially impacted within the existing and required right-of-way for each of the proposed build alternatives. All of the build alternatives have potential to impact wetlands. Also, an un-named tributary to Bayou Castine will be impacted by the build alternatives as well as some drainage ditches on both sides of the existing highway. The un-named tributary has a straight, non-meandering course which is typical of waters that have been altered by mechanical means for purposes of conveying storm water. Roadside ditches along LA 1088 are connected to the un-named tributary. The information in the *Wetlands Report* is based on available information and observations made during field visits to the project study corridor. As the project progresses, potential impacts to wetlands, waters of the U.S. and other waters of the U.S. will be further evaluated through the permitting process, including the USACE jurisdictional determinations.

Table 3-1: Potential Impacts to Wetlands/Waterbodies

Alternative	Wetland (Acres)	Waters of the US (acres)	Other Waters of the US (Acres)
1A	12.0	0.02	6.1
1B	12.0	0.02	6.1
2	12.4	0.02	6.1
2A	12.4	0.02	6.1

3.12 Floodplain Impacts

EO 11988 "Floodplain Management" requires Federal agencies to avoid actions, to the extent practicable that will result in the location of facilities within floodplains and/or affect floodplain values. Facilities located in a floodplain may be damaged or destroyed by a flood or may change the flood-handling capability of the floodplain or the pattern or magnitude of the flood flow. **Figure 8** shows the 100-year floodplain data for the study corridor. The data was obtained from the Flood Insurance Rate Maps (FIRMS) published by the Federal Emergency Management Agency (FEMA).



3.12.1 No-Build Alternative

The No-Build Alternative will have no short-term or long-term adverse effect on floodplains or future flooding in the study corridor since the project will not impact the drainage function of the floodplain.

3.12.2 Build Alternatives

The area of existing right-of-way within the 100-year floodplain is approximately 9 acres. Additional acreage for the required right-of-way within the 100-year floodplain for each of the build alternatives includes Alternative 1A, 1.8 acres, Alternative 1B, 2 acres, and Alternatives 2 and 2A, 2.8 acres. All drainage structures as well as new roadway will be designed to minimize impacts to the 100-year floodplain and approval from the St. Tammany Parish Floodplain Administrator will be required prior to construction. Coordination with the St. Tammany Parish Floodplain Administrator has been initiated (see **Appendix B**). Any drainage ditches or culverts affected by the proposed project, as well as new roadway within the 100-year floodplain, will be designed to maintain pre-construction hydrologic conditions and will not result in any substantive effect to base flood elevations of the surrounding area. The hydraulic design practices for construction of any of the build alternatives will be in accordance with current LADOTD and FHWA design policies and standards. All elements of project design and construction will meet Federal requirements, resulting in no adverse impacts on the drainage function of the floodplain.

3.13 Biotic Community Impacts

The biotic community within the existing right-of-way along the LA 1088 highway consists of a mowed and maintained habitat with roadside ditches. Emergent plant species typically found in the roadside ditches include rushes (*Juncus spp.*), cattails (*Typha domingensis*), alligator weeds (*Alternanthera spp.*), and sedges (*Cyperus spp.*). The property adjacent to the existing highway right-of-way is comprised mainly of residential development, community facilities, and undeveloped land. Plant species associated with residential development and community facilities are generally characterized as mowed grasses, ornamental plants, and some interspersed areas of native species dominated by pines (*Pinus ellioti*) and oaks (*Quercus spp.*). Undeveloped areas near the highway include forested wetlands, a small altered stream as described earlier, and upland habitat dominated by pines (*Pinus ellioti*) and mixed hardwoods, mainly oak (*Quercus spp.*). The main wildlife usage of these areas is expected to be by birds, small mammals, reptiles and small aquatic species.

3.13.1 No-Build Alternative

It is expected that the No-Build Alternative will have no short-term or long-term adverse effects on biotic communities within the study corridor. Under the No-Build Alternative, the areas adjacent to the highway will continue to be mowed, brush will be trimmed, and the ditches will be maintained. No disturbance of existing vegetation or wildlife outside of the existing right-of-way will occur.

3.13.2 Build Alternatives

It is anticipated that the proposed build alternatives will have short-term and minimal adverse effects on biotic communities along the study corridor. The build alternatives will disturb existing grass shoulders and manmade drainage ditches along the LA 1088 highway project corridor. Also, the build alternatives will impact a relatively small area for additional required right-of-way. The additional required right-of-way, whether currently developed or undeveloped, is within an area that has previously been affected by urbanization activities such as residential and commercial development, roadway drainage, and utility installation. These features do not provide unique or unusual habitat for wildlife. Construction activity will require wildlife that inhabits existing or additional required right-of-way areas to relocate as their shelter and food resources will be disturbed or removed. Other adjacent areas are available for shelter and food sources. Disturbed areas will be seeded and maintained in accordance with LADOTD's highway maintenance program. Once constructed, the habitat along the shoulder of the highway and some other right-of-way areas will be available for the return of wildlife that is displaced during construction. As such, no long-term adverse effect on biotic communities is anticipated for the proposed project.

3.14 Threatened and Endangered Species

As a part of early coordination efforts for the project, the USFWS and the LDWF, Louisiana Natural Heritage Program (LNHP), provided information regarding threatened and endangered species occurrence records for the area. Correspondence from the USFWS and LDWF is included in **Appendix B. Table 3-2** displays the threatened and endangered species lists obtained from these agencies.

Table 3-2: USFWS and LDWF Threatened and Endangered Species List

Name	Federal Status	State Status
BIRDS		
Red-Cockaded woodpecker (<i>Picoides borealis</i>)	Endangered	Endangered
Sprague's pipit (<i>Anthus spragueii</i>)	Candidate	Not listed
Swallow-Tailed kite (<i>Elanoides forficatus</i>)	Not listed	Critically Imperiled to Imperiled
MUSSELS		
Alabama heelsplitter (<i>Potamilus inflatus</i>)	Threatened	Threatened
PLANTS		
Louisiana quillwort (<i>Isoetes louisianensis</i>)	Endangered	Critically Imperiled to Imperiled
FISH		
Atlantic sturgeon (Gulf sub-species) (<i>Acipenser oxyrinchus desotoi</i>)	Threatened	Threatened

Name	Federal Status	State Status
MAMMALS		
West Indian manatee (<i>Trichechus manatus</i>)	Endangered	Threatened
REPTILES		
Gopher tortoise (<i>Gopherus polyphemus</i>)	Threatened	Threatened
Ringed map turtle (<i>Graptemys oculifera</i>)	Threatened	Threatened

3.14.1 No-Build Alternative

The No-Build Alternative will not have short-term or long-term adverse effects on threatened or endangered species or their critical habitat. Field surveys were conducted by LADOTD consultant biologist over a two-week period in May 2015. Of the nine (9) listed species provided by the USFWS and the LDWF LNHP, no species were observed over the two-week survey and no areas of suitable habitat were observed in or near the project limits.

3.14.2 Build Alternatives

Considering the nine-listed species provided by the USFWS and the LDWF LNHP, no species were observed during field surveys and no areas of suitable habitat were observed in or near the proposed project limits. There are no critical habitats within the project area. By letter dated April 29, 2015, the LDWF noted that Swallow-tailed kites, protected under the Migratory Bird Treaty Act, have been identified as occurring within a mile of the proposed project. The LDWF recommended that all potential nesting habitats for this species be protected. If nesting habitat occurs within the project area, a distance of 330 feet must be maintained around the Swallow-tailed kites nesting habitat. The LDWF concluded that no other impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. During the field survey, no Swallow-tailed kite nests or preferred nesting habitat were observed in or near the project area limits. Also, no patches of preferred nesting materials (Spanish moss (*Tillandsia usneoides*)) were observed during the field surveys. Due to the lack of available nesting material, no sightings (survey was conducted during the breeding season), and lack of forested river swamp habitat, it is determined that no suitable habitat occurs within the project area limits and that the project will have no adverse effects on this species. If nesting is observed during construction, the LADOTD will coordinate with the LDWF and the USFWS to determine appropriate measures for the particular case. Also, by letter dated August 24, 2017, the USFWS concluded that the proposed project will have no effect on Federal listed species for St. Tammany Parish.

3.15 Natural and Scenic Rivers

The Louisiana Natural and Scenic River Act of 1970 established the Louisiana Natural and Scenic River System, a state river protection initiative to limit impacts to those rivers, streams, and bayous afforded protection through the Act. Louisiana's natural and scenic rivers system is one of the oldest and largest in the nation, with 64 rivers, streams and

bayous receiving protection. The LDWF is charged with regulatory authority over the program. A search of state and federal designated natural/wild and scenic rivers determined that the nearest protected stream, Bayou Cane, is located approximately two miles east of the LA 1088 corridor. It is a part of the State of Louisiana Natural and Scenic River System. It is of sufficient distance from LA 1088 that it will not be impacted by either the No-Build or build alternatives. By letter dated April 29, 2015, the LDWF confirmed that there are no state designated scenic streams at the LA 1088 corridor. Also, there are no federally listed Wild and Scenic Streams near the 1088 corridor. As a result, it was determined that the No-Build and proposed build alternatives will have no short-term or long-term adverse effect on natural or scenic rivers protected under the Federal Wild and Scenic Rivers program, or Louisiana Natural and Scenic Rivers program.

3.16 Historic and Archaeological Resources

A Phase I Cultural Resources Survey for the LA 1088 highway project was conducted in May 2015 in compliance with Section 106 of the National Historic Preservation Act (NHPA). The survey was performed to determine the presence of archaeological sites, standing structures approaching fifty years old or older, and other places or objects eligible for listing on the National Register of Historic Places (NRHP). The direct Area of Potential Effect (APE) for the purposes of the archaeological survey included the proposed right-of-way or the corridor where actual construction is anticipated. For the purposes of the standing structure survey, the APE included the direct APE and indirect APE; a .25 mi diameter buffer of the highway centerline. The APE extended from just north of the I-12 interchange southward to LA 59 and encompassed 131.6 acres.

3.16.1 Historic Resources

Eight standing structures greater than 47 years of age were recorded. None of the standing structures are recommended eligible for nomination to the NRHP. As a result, it was determined that neither the No-Build nor build alternatives will impact historic resources. The State Historic Preservation Officer (SHPO) concurred with the findings in a letter dated June 9, 2016. The concurrence is included in **Appendix B**.

3.16.2 Archaeological Resources

Archaeological survey, including shovel testing, did not identify any archaeological remains. No archaeological sites were recorded. As such it was determined that neither the Build nor No-Build Alternatives will impact archaeological resources. The SHPO concurred with the findings in the above referenced letter dated June 9, 2016.

3.17 Potential Hazardous Waste Sites and Oil & Gas Wells

A Phase I Environmental Site Assessment (ESA) was conducted in May 2015. The purpose of the ESA is to identify potential hazardous substances or petroleum products as expressed by use of the term Recognized Environmental Condition (REC). REC is defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. The ESA was conducted in accordance with American Society for Testing and Materials (ASTM) *Standard Guide for*

Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-13.

Components of the ESA include 1) a description of the existing conditions such as current use of the property, topography, surface water bodies, geology and hydrology, and minerals extraction; 2) prior use history including interviews with present and past property owners and government officials, previous reports, historical maps and aerial photography, city directories, and deed/title information; 3) environmental database review as provided through Environmental Data Resources, Inc. (EDR), and additional State and local sites such as the Louisiana Department of Natural Resources SONRIS oil and gas well search, the Louisiana Department of Natural Resources water well search, the USEPA Envirofacts Warehouse, and the LDEQ online Electronic Data Management System (EDMS); and 4) a property reconnaissance for on-site observation of possible storage tanks, PCB-containing equipment, preliminary asbestos evaluation, radon review, and potential vapor encroachment.

The ESA included investigation of the largest footprint of right-of-way that may be required by the project alternatives. This was referenced in the ESA as “the subject property”. Results of the ESA investigation identified no recognized environmental conditions that require further investigation of the subject property. No historical recognized environmental conditions were identified on the subject property. Also, no controlled recognized environmental conditions that cause property use restrictions, activity use limitations, institutional controls, or engineering controls were identified.

The ESA indicated the presence of underground fuel storage tanks located near the intersection of LA 1088 and LA 59. Records reviews, interviews with local officials and landowners, and general observation did not reveal evidence that these UST’s currently represent a recognized environmental condition to the proposed project. The ESA indicated the UST’s are currently outside the LA 1088 and LA 59 right-of-way but expanding the footprint of those right-of-way could potentially involve UST’s being located within the proposed project limits. A closer examination of the design detail revealed the USTs will not be impacted by the additional right-of-way required for the proposed project.

A sewer treatment plant was observed near the Jackson St. /LA 1088 intersection. Records reviews, interviews with local officials, and general observation did not reveal evidence that this sewer treatment plant currently represents a recognized environmental condition to the proposed project. The ESA indicated the plant is currently outside the LA 1088 right-of-way but expanding the footprint of the right-of-way could potentially involve this sewer plant being located within the proposed project limits. A closer examination of the design detail revealed the sewer plant will not be impacted by the additional right-of-way required for the proposed project.

There were no oil or gas wells observed on the subject property and wells were not depicted on the EDR Historical Topographic Map. On-site reconnaissance did not identify any oil and gas equipment on the property. According to the Louisiana Department of Natural Resources (LDNR) Strategic Online Natural Resources Information System

(SONRIS), there were no oil/gas wells on the property or adjacent properties. In addition, the SONRIS database did not reveal the presence of any wells or reserve pits within 1 mile of the project area as illustrated on **Figure 7**.

3.17.1 No-Build Alternative

The ESA investigations identified no recognized environmental conditions that require further investigation of the subject LA 1088 property. There are no active oil and gas wells within or adjacent to the project.

3.17.2 Build Alternatives

The ESA investigations identified no recognized environmental conditions that require further investigation of the subject LA 1088 property. There are no active oil and gas wells within or adjacent to the project area.

3.18 Visual Impacts

The project setting consists of an existing highway, LA 1088.

3.18.1 No-Build Alternative

The No-Build Alternative will not result in short-term or long-term adverse visual impacts on the study corridor. The existing highway has been in the area for many years and development has occurred coexisting with the view scape of the highway.

3.18.2 Build Alternative

The proposed build alternatives include widening LA 1088 to four-lanes east of Forest Brook Blvd. and construction of roundabouts at eight of the existing intersections. The widening would tie into the existing four-lanes and would be in keeping with similar visual features. Build Alternatives 1B, 2 and 2A would replace some of the roadside ditches in the two-lane segment with below surface drainage along with inclusion of sidewalks. This will be more visually appealing to some interests. Construction of the roundabouts will enhance aesthetics at the intersections by providing the opportunity for more landscaping. Therefore, no short-term or long-term adverse visual impacts are anticipated as a result of the project's construction.

3.19 Construction Impacts

The project setting consists of an existing highway, LA 1088.

3.19.1 Traffic Congestion

Temporary traffic congestion will likely occur during construction. These short-term adverse impacts can be minimized with phased construction, planned detour routes, and/or limiting construction to off-peak hours. Also, a construction sequencing plan will be prepared prior to construction to minimize disruption of traffic on LA 1088, LA 59, and I-12. The appropriate sequencing of construction operations and maintenance of traffic will ensure that LA 1088 and the businesses and residences remain accessible.

3.19.2 Air Quality Construction Impacts

Temporary impacts to air quality may occur during construction. Some fugitive dust may be generated from construction activities and could cause localized, short-term adverse impacts to air quality. The potential impacts will be minimized by using fugitive dust control measures such as covering or treating disturbed areas with dust suppression techniques, sprinkling, covering loaded trucks, and other dust abatement controls, as appropriate.

3.19.3 Water Quality Construction Impacts

The headwater of an un-named tributary to Bayou Castine terminates at LA 1088. Swale ditches on either side of LA 1088 transport storm water to the tributary. There is a potential for short-term adverse impacts to receiving waters during construction activities. As discussed in Section 3.10.3, LDEQ requires projects with discharges of storm water from construction activities to obtain a Storm Water General Permit for Construction Activities. The SWPPP required by this permit will discuss specific BMPs for the project that will reduce any short-term adverse impacts to water quality during construction.

3.19.4 Construction Noise Impacts

The construction of the project will result in temporary noise increases at businesses and residences along LA 1088. The short-term construction noise impacts will be generated primarily from heavy equipment used in hauling materials and highway improvements.

The construction contractor has the responsibility for protection of the general public in all aspects of construction through the duration of the project. All construction equipment will be required to comply with Occupational Health and Safety Administration (OSHA) regulations as they apply to the employees' safety, and in accordance with the LADOTD Standard Specifications. All construction equipment used in the construction phase of the project should be properly muffled and all motor panels should be shut during operation. Avoidance of nighttime operations in noise sensitive areas would also minimize the potential for impacts of construction noise on the local businesses and residents.

3.19.5 Public Health and Safety

The construction contractor will be required to comply with all applicable federal, state, parish, and local laws governing general public safety, health, and sanitation. All reasonable safety precautions will be taken to ensure the life and health of employees, safety of the public, and protection of property. In the event that hazardous materials or hazardous waste are encountered during construction, support will be provided by personnel trained in the proper handling and disposal of these materials. Proper storage, use, and handling protocols will be followed for any hazardous materials used during construction. Material safety data sheets will be available for all hazardous materials.

Temporary traffic congestion will likely occur during construction. Short-term construction-related traffic congestion could have an adverse effect on the response times of emergency vehicles traveling the highway. These short-term adverse impacts can be minimized with phased construction, planned detour routes, and/or limiting

construction to off-peak hours. Also, a construction sequencing plan will be prepared prior to construction to minimize disruption of traffic on LA 1088, LA 59, and I-12.

No long-term adverse public health and safety impacts are expected to occur as a result of the project's construction. By letter dated April 10, 2015, (**Appendix B**), the State of Louisiana Department of Health and Hospitals Office of Public health stated no objection to the project.

3.19.6 Vibration Impacts

Localized and temporary vibration impacts are likely to occur along the study corridor during construction. The short-term vibration will be generated primarily from heavy equipment used in hauling materials and building the highway improvements. Sensitive areas located close to the highway may temporarily experience increased vibration. These areas include the residential neighborhoods, schools, churches, and businesses located along LA 1088 between LA 59 and I-12. Once the project is built, vibration from the highway is not expected to increase over that which would be experienced under the No-Build Alternative.

During construction, short-term vibration will be minimized to the greatest extent practicable through adherence to controls listed in the latest edition of LADOTD's Standard Specifications for highway construction. The construction contractor has the responsibility for protection of the general public in all aspects of construction through the duration of the project. All construction equipment will be required to comply with OSHA regulations as they apply to the employees' safety, and in accordance with the LADOTD Standard Specifications. All construction equipment used in the construction phase of the project should be properly muffled and all motor panels should be shut during operation. Avoidance of nighttime operations in sensitive areas will also minimize the potential for impacts of construction vibration on the local businesses and residents.

3.19.7 Construction Staging Areas

The proposed build alternatives will be constructed within the existing right-of-way and additional required right-of-way areas. Staging or landfill disposal areas required outside of the right-of-way areas will be the responsibility of the construction contractor. The construction contractor will be required to abide by all applicable federal, state, and local environmental protection requirements.

3.19.8 Best Management Practices

To minimize the release of sediments and to control potential pollutants from the construction site to nearby water bodies, BMPs will be implemented prior to and during the construction phase, until final stabilization of the project is complete. Specific BMPs for the project, along with maintenance procedures and an inspection process, will be detailed in the SWPPP. These measures may include the use of sediment barriers, temporary and permanent vegetative cover for soil stabilization, dust control, and the use of riprap for the protection of soils from erosion. Implementation of BMPs will minimize environmental impacts during construction.

3.20 Coastal Zone Consistency

The project area is located within the Louisiana Coastal Zone. As required by Section 307 of the Coastal Zone Management Act of 1972, activities within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs. Coordination with the Louisiana Department of Natural Resources Office of Coastal Management has been initiated. Coordination will continue as the design and funding progresses.

3.20.1 No-Build Alternative

The No-Build Alternative will have no short-term or long-term adverse effects on the Louisiana Coastal Zone since no additional construction is associated with the No Build Alternative.

3.20.2 Build Alternatives

The build alternatives are within the Louisiana Coastal Zone and a CUP is required. Once the detailed plans have been developed, a CUP application will be submitted to determine coastal zone impacts and potential mitigation requirements.

3.21 Essential Fish Habitat

Under the Magnuson-Stevens Fisheries Conservation and Management Act of 1996 (Public Law 104-297), the Gulf of Mexico Fishery Management Council identified Essential Fish Habitats (EFHs) for those species managed under its fishery management plans. EFH is defined as being “those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.”

3.21.1 No-Build Alternative

The No-Build Alternative will have no short-term or long-term adverse effects on EFHs since there is no EFH in the project area.

3.21.2 Build Alternative

The EFH Mapper on the NOAA Fisheries website was utilized to determine EFHs in the study corridor. No EFHs, habitat areas of particular concern, or EFH areas protected from fishing were identified in the study corridor. As such, the build alternatives will have no short-term or long-term effects on EFHs. During the JPA process comments will be solicited from NOAA Fisheries. Additionally, as part of the USACE Section 404/10 permit process, the National Marine Fisheries Service will be forwarded a copy of the PCN or individual application.

3.22 On-going, Proposed, and Future Projects in the Area

The proposed project will not conflict with any other projects planned in the area. St. Tammany Parish and the City of Mandeville are sponsoring the Mandeville Bypass Road Project. The Mandeville Bypass is a proposed connector roadway to connect US Highway 190 near Pelican Park and Monteleone Junior High School to LA highway 1088 near Forest Brook subdivision and Interstate 12. A public meeting for the project was

held on July 8, 2015. The parish and city are working with the LADOTD to coordinate the design with the LA 1088 project.

Another nearby project is the proposed I-12 to Bush highway in St. Tammany Parish, Louisiana. The FHWA, in cooperation with the LADOTD, adopted an approved Final EIS for the I-12 to Bush highway in St. Tammany Parish, Louisiana. The EIS was prepared by the U.S. Army Corps of Engineers, New Orleans District, as part of a Section 404 Permit Application. The project includes the construction of a new four-lane highway connecting I-12 to Bush, Louisiana, in St. Tammany Parish. The preferred alternative is approximately 19.8 miles in length and begins at LA 434, north of the existing LA 434 interchange, and traverses in a northeasterly direction until encountering an abandoned rail corridor. It then follows the rail corridor terminating at the LA 21/LA 41 intersection near Bush, Louisiana. A public meeting for the project was held on August 3, 2015.

3.23 Indirect and Cumulative Impacts

The Council on Environmental Quality's (CEQ) *Regulations for Implementing the Procedural Provisions of the NEPA* (40 CFR §1500-1508) requires that not only direct impacts, but indirect and cumulative impacts (ICI) also be evaluated for the Build Alternatives condition. Sections 3.1 through 3.22 described the potential direct impacts the Build Alternative may have on resources located within the project study corridor. This section describes the potential ICI impacts the proposed project may have on resources in the vicinity of or outside the project study corridor.

3.23.1 Indirect Impacts

Indirect impacts are effects caused by an action that occur later in time than direct impacts or are farther removed in distance but are still reasonably foreseeable (40 CFR 1508.8).

3.23.1.1 No-Build Alternative Indirect Impacts

The No-Build Alternative will have no short-term adverse impact on the potential for inducing changes in the patterns of land use or population density. The long-term rate of growth in the area may be adversely affected by the increase in congestion as traffic volumes increase. However, growth in the area is projected to occur with or without the project.

3.23.1.2 Build Alternatives Indirect Impacts

Potential indirect impacts to land use include new residential, commercial, or industrial developments on vacant land adjacent to or in the vicinity of the LA 1088 highway. Because the proposed improvements will be located along an existing well-established highway corridor, the indirect effects on land use associated with the proposed project are expected to be minor. In addition, the development and growth are expected to occur along the highway with or without the project being constructed and much of the land capable of being developed has already been converted to residential or commercial uses. As a result, it is anticipated that the project will have little or no short-term or long-term adverse indirect effects. A potential beneficial indirect effect the project may have is a short-term boost to the economy in the study corridor during construction derived from an influx of construction related jobs and associated commercial activity.

In addition, should new development arise in the study corridor, the proposed project would accommodate any additional traffic volumes better than the No-Build Alternative condition.

3.23.2 Cumulative Impacts

Cumulative impacts are defined as “the impacts on the environment which result from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.7).

3.23.2.1 No-Build Alternative Cumulative Impacts

Under the No-Build Alternative condition, the deficiencies of the LA 1088 highway will not be addressed and as traffic volumes increase, congestion will increase, and the LOS will decrease. These conditions will likely contribute to higher crash rates along the study corridor. As previously discussed, land use along the highway in the project area primarily consists of suburban, residential, commercial, and education uses. As traffic volumes increase, it will become more difficult for the public to travel the highway to reach destination points. The No-Build Alternative condition may also detract from new residents, businesses, or industries looking to possibly relocate to the area. As a result, it is likely that the No-Build Alternative would result in both short-term and long-term adverse cumulative impacts in the area.

3.23.2.2 Build Alternatives Cumulative Impacts

Potential cumulative impacts include the combined impacts new residential, commercial, and industrial developments would have on currently vacant land adjacent to the LA 1088 highway. Other transportation projects would also contribute to the cumulative impacts to resources in the area. Once the projects are constructed, it is possible that proposals for projects (especially private development projects) will emerge to take advantage of the improved access to under developed or undeveloped land adjacent to the study corridor. As previously mentioned, development and growth are expected to occur along the highway with or without the project being constructed. As a result, it is expected that the project will have minimal short-term or long-term adverse cumulative impacts to resources in the area.

4.0 COMMENTS AND COORDINATION

4.1 Advance Coordination

A SOV letter was sent to appropriate Federal, state, and local agencies as well as tribal interests on March 31, 2015. Responses received are included in **Appendix B**. Responses from resource and regulatory agencies were utilized in the preparation of this EA and will be used during the final design and permitting phase of the project.

4.2 Public Involvement

A Public Involvement Meeting for the LA 1088 Corridor Study was held on July 23, 2015 and hosted by the LADOTD. The purpose of the public meeting was to update the public on the status of the Stage 1 studies, including the preparation of an EA, and seek public input on the proposed improvements to the LA 1088 corridor. An open house format was utilized to display the proposed improvements, answer questions, and solicit comments. Twenty-three written comments were received from the public involvement effort and are included in **Appendix H**. A summary of the comments and responses are provided in the following paragraphs.

Comment 1: Are you in favor of the project? **Yes**. What Alternative do you prefer?

Alternative 2

I would strongly suggest Alternative 1A not be considered. Hwy 1088 is frequently used by cyclists. They often ride in groups of 10-15 in a single line on Highway 1088. This is extremely dangerous for the cyclists and motorists because there is no bike lane and no shoulder. They often ride in late afternoon which increases the danger because of heavy vehicular traffic. Passing these bikes by driving in the oncoming lane is not safe.

Response: Comment noted concerning alternative preference. As discussed in the EA, all of the alternatives were subjected to a comprehensive resources evaluation, traffic studies, and coordination with public, local, state, and federal officials or agencies. As a result of the detailed evaluation, Alternative 2A was developed and proposed as the Preferred Alternative. Alternative 2A includes eleven-foot travel lanes, four-foot shoulders, barrier curbs on both sides of the roadway, and concrete medians. Alternative 2A also includes a five-foot sidewalk on one side of the two-lane typical section and both sides for the four-lane typical section. The alternative conforms to the most recent LADOTD Design Guidelines and Complete Streets Policy. Sidewalks or berms would also be added through all roundabouts in accordance with LADOTD's *Roundabout Sidewalk Policy*.

Comment 2: Are you in favor of the project? **Yes**. What Alternative do you prefer?

Alternative 1A

There are entirely too many roundabouts proposed! The real need is for roundabouts at Hwy 59 and Soult St. A possible need could be for one at Forest Brook. However, their concerns may change with construction of the Mandeville By Pass Road which will provide the subdivision with a second exit not on Hwy 1088. I see there is no consideration given to the By Pass Road to be constructed with an intersection at Hwy 1088. This intersection will require a roundabout. The sidewalks are a complete waste of tax money. There is little, if any foot traffic on Hwy 1088. I can see no future use for foot traffic. There is, nor will there be in the future, no place for anyone to walk to in this area. Bike lane will have some, if limited, use.

Response: The number and location of the proposed roundabouts is based on the results of a traffic study completed in 2014. It included analysis of traffic volumes, traffic signals, intersections, and roadway segment operations. The analysis focused on weekday AM (7:00 a.m.-8:00 a.m.) and PM (5:00 p.m.-6:00 p.m.) peak hour traffic conditions for 2013 (base year) and 2033 (design year) at 18 intersections from LA 59 to the I-12 interchange. The primary operational deficiencies observed during traffic counts were peak hours at Forest Brook Blvd., LA 59, and Soult St./Viola St. intersections. The traffic study recommended roundabouts be constructed at a total of eight intersections by 2033 to meet the design year traffic demands. The roundabouts will likely be constructed in phases over time and as traffic conditions warrant them. Traffic observations will continue between phases. The Mandeville By Pass Road is a St. Tammany Parish and City of Mandeville sponsored project. The parish and city are working with the LADOTD to coordinate the design with the LA 1088 project. Comment noted that you are in favor of Alternative 1A, no sidewalk or bike lane.

Comment 3: Are you in favor of the project? **Yes.** What Alternative do you prefer?
Alternative 2

- 1. Combined bike path/sidewalk, even if only on one side, will be safer*
- 2. Currently, the area between the Woodlands and Hwy 59 is not safe: many pedestrians walk on Hwy 1088 between the apartment complex and Hwy 59.*
- 3. The turn into the Woodlands coming from I-12 is unsafe; the roundabout will improve safety.*
- 4. Bike paths on Hwy 1088 (as opposed to set back) will be unsafe.*
- 5. The divider for Alternative 2 will be better for traffic than Alternative 1A or 1B.*
- 6. Need to pay for the moving of the Woodlands gate.*

Response: See response to comment 1. The Woodlands gate will be evaluated as the design progresses and in the real estate acquisition process.

Comment 4: Are you in favor of the project? **Yes.** What Alternative do you prefer?
Alternative 2

No additional comment.

Response: Alternative preference noted.

Comment 5: Are you in favor of the project? **Yes.** What Alternative do you prefer?
Alternative 2

Please have DOTD put some reflective paint on the median south bound off the ramp when coming from Slidell going south at 1088.

Response: Alternative preference noted. This comment relates to the existing condition and will be addressed by the LADOTD separate from this project. Also, the LADOTD will evaluate the appropriate signage and highway markings for the proposed improvements to LA 1088.

Comment 6: Are you in favor of the project? **Yes.** What Alternative do you prefer?
Alternative 1A

Roundabouts look like the most cost-effective and least disruptive option. If the By Pass is built it should relieve traffic enough so that new lanes on 1088 should not be necessary

Response: Comment noted. Also, see response to Comment 2.

Comment 7: Are you in favor of the project? **Yes.** What Alternative do you prefer?
Alternative 2

Please look into the design of the roundabout at Forest Brook the street on the north side of the roundabout needs to be added.

Response: The existing design can accommodate an entrance on the north side in the future if needed.

Comment 8: Are you in favor of the project? **Yes.** What Alternative do you prefer?
Alternative 1B

No additional comment.

Response: Alternative preference noted.

Comment 9: Are you in favor of the project? **Yes.** What Alternative do you prefer?
Alternative 1B

No additional comment.

Response: Alternative preference noted.

Comment 10: Are you in favor of the project? **Yes.** What Alternative do you prefer?
Alternative 2

I believe in the big picture, this area has the potential to spur large corporate development, and with the right infrastructure in place, big business can come here. We need a large

business park in this area, and it starts with roads, lighting, etc. Housing will eventually come. I am in favor of spending the dollars now and doing the right thing. This is your chance to do it right. Do what is right for the Parish as a whole and improve our economy. Do not appease the few citizens who live in this area. I want big development in my neighborhood

Response: Alternative preference noted. Comment noted.

Comment 11: Are you in favor of the project? **Yes**. What Alternative do you prefer?
Alternative 2

No additional comment.

Response: Alternative preference noted.

Comment 12: Are you in favor of the project? **Yes**. What Alternative do you prefer?
Alternative 2

Thanks again for explaining the possible 1088 changes at the meeting the other night. I read through the different alternatives and I'm very much behind Alternative 2. I think it is inevitable for 1088 to face further growing pains and would like to advance as far as possible to prevent further necessary expansion later.

I do not think the shared bike lanes next to traffic lanes would be a good idea. In this day and age of distracted drivers, and the amount of teenagers who travel 1088, I think shared bike lanes would be very unsafe. I would love to have sidewalks wide enough for bicycles as well. As we talked about, I'd like a way to reach Tammany Trace once the sidewalks reach Highway 59. I'm not sure if the parish would be responsible, but a way to get from Hwy 59 to Labarre would be fantastic. The Trace is accessible from Destin St., but Labarre connects and is one block closer to proposed Hwy 59 roundabout.

Response: See response to comment 1. Additional sidewalks on LA 59 is beyond the scope of this project. The suggestion is noted and is available for review by local and state officials.

Comment 13: Are you in favor of the project? **Yes** (if the noted modifications are done at the Hwy 1088 and Soult St. intersection). What Alternative do you prefer? **Alternative 1B**

My home is on the corner of Hwy 1088 and Soult St. in the Quail Creek subdivision. Taking a portion of my property is not acceptable when there is open land on the other three corners of this intersection (with no homes on the land). I propose the following: (1) Shift the roundabout north and west at this intersection to eliminate the need to take any property with an existing home. This is doable without any impact to any home owner.

(2) Bringing traffic closer to my home increases the noise level and reduces our quality of life. A noise barrier needs to be installed between my property and the street.

Response: As discussed in the EA, the project is being designed to minimize impacts to developed property. A shift of the referenced roundabout to the west would impact other developed property and possibly impact an existing structure on Soult Street. A noise analysis was conducted as part of the Stage 1 study and the findings are discussed in the Environmental Assessment. Noise abatement measures were evaluated at locations where impacts were predicted to occur under the 2033 build alternatives conditions. The abatement measures were evaluated using the FHWA's guidelines as promulgated by title 23 CFR part 772 and the LADOTD's highway traffic noise policy. Construction of noise barriers was evaluated using preliminary design information and barriers were determined to be feasible and reasonable at some locations. The barriers will be re-assessed as more design information becomes available.

Comment 14: Are you in favor of the project? **Yes** (*Assuming the modifications noted below are implemented at 1088 and Soult St.*). What Alternative do you prefer?
Alternative 1B

My home is on the corner of Hwy 1088 and Soult St. in the Quail Creek subdivision. This project in its current design projects taking a portion of my property. This is unacceptable, particularly when there is open land on the other three corners of the intersection. I would ask that you strongly consider shifting the roundabout north and west at this intersection to eliminate the need to take any property with an existing home on the land. Secondly, bringing traffic closer to my home will greatly increase the noise level and reduce the quality of life at my home. I would ask that you consider installing a noise barrier between my property and the street in this area to reduce the anticipated increase in the noise.

Response: Alternative preference noted. See response to Comment 13.

Comment 15: Are you in favor of the project? **Yes**. What Alternative do you prefer?
Alternative 1B

I am concerned about traffic stopping at the entrance gate at woodlands subdivision (Spring Blvd.) causing a blockage at the roundabout. Occasionally, cars stop at the closed gate and don't have the code to open it and other cars stack up behind the first car. Also, at times the gate has malfunctioned and no one could open it even with the code. These situations could become hazardous if cars block Highway 1088.

Response: Comment noted. The comment relates to the existing condition of the gate blocking access to private development and possibly affecting traffic on LA 1088. That will be addressed by the LADOTD separate from this project. Also, see response to comment 3.

Comment 16: Are you in favor of the project? **Yes.** What Alternative do you prefer?
Alternative 2

Alternative 2 seems to provide the safest option all around. I urge all involved to begin as soon as possible. This project is needed to slow cars down and provide safe access for those in subdivisions that are off of 1088. No one observes stop signs at Soult/Viola. I have personally removed people from cars involved in accidents at this site twice! For safety reasons, Soult/Viola needs a roundabout ASAP.

Response: Comment noted. Your input based on your personal experience in the area is appreciated and recommendations will be taken into consideration for selection of a Preferred Alternative and sequencing of construction.

Comment 17: Are you in favor of the project? **Yes.** What Alternative do you prefer?
Alternative 2

My biggest concern is with all of the roundabouts. It is entirely too many for such a short link of Hwy. Plus the addition of one more when the connecting 1088 to 190 Rd is added. I can't see how in peak traffic time it will help the traffic flow if at some point there is not a halt in traffic from a traffic light at some point to allow cars to enter the circle. Maybe put sidewalk only on one side to start with. The side with all the subdivisions are on, from Soult to I-12.

Response: See response to Comments 1 and 2 about the number of roundabouts and the location of sidewalks. The roundabouts will reduce delays in traffic by yielding rather than stopping and waiting for a green light

Comment 18: Are you in favor of the project? **Yes.** What Alternative do you prefer?
Alternative 2

No additional comment.

Response: Alternative preference is noted.

Comment 19: Are you in favor of the project? **Yes.** What Alternative do you prefer?
Alternative 2

The Board of Directors of the Forest Brook Home Owners Association strongly supports this project. The Board represents 433 home sites in the subdivision.

The Board supports alternative 2 as the best solution for the area residents. The Board recommends construction priority be given to the roundabouts at Forest Brook Blvd. and at Soult/Viola streets.

Response: Comment noted. The roundabouts may be constructed in phases over time. Your recommendations for priority will be included in additional evaluation of the project.

Comment 20: Are you in favor of the project? **Yes**. What Alternative do you prefer? **Alternative 1A**

A roundabout is necessary at Soult St. and Forest Brook. The total number proposed is a waste of money.

Response: Comment noted. See response to comments 2 and 19.

Comment 21: Are you in favor of the project? **Yes**. What Alternative do you prefer? **No Alternative chosen**

Roundabout at Soult Street.

Response: Comment noted. See response to comments 2 and 19.

Comment 22: Are you in favor of the project? **No**. What Alternative do you prefer? **Alternative 1A**

Roundabout at Soult Street o.k. Maybe one at Forest Brook. So many in such a short distance is foolish. A waste of money.

Response: Comment noted. See response to comments 2 and 19.

Comment 23: Are you in favor of the project? **No**. What Alternative do you prefer? **Alternative 1A**

Soult St. and Hwy 1088 needs a roundabout. Maybe one at Forest Brook. There are too many within 3 miles being proposed. Take some of the money and widen Hwy 59 instead.

Response: Comment noted. See response to comments 2 and 19.

4.3 Business Community Meetings

Meetings will be held, as appropriate, during further project development.

4.4 Local Community Meetings

Input from the local community was received from the Public Involvement Meeting on July 23, 2015. A public Information meeting was also held on December 11, 2013, as part of Stage 0 studies. Additional meetings will be conducted as appropriate.

4.5 Agency Meetings

No agency meetings have been held for the project. Agency meetings will be conducted as needed during the final design and permitting phases of the project.

4.6 Supplemental Coordination

Supplemental coordination will be conducted on an as needed basis as project development continues.

4.6.1 Agency Coordination

A SOV packet was distributed on March 31, 2015, to everyone on the LADOTD State, and St. Tammany mailing list. A copy of the SOV Packet, the distribution list and responses can be found in **Appendix B**.

4.6.2 Business Owners

Coordination with businesses will continue through the development of the project. Issues related to access during construction will be evaluated to minimize adverse impacts.

4.6.3 Public Involvement

A public hearing for the LA 1088 Corridor Study was held on October 11, 2018 and hosted by the LADOTD. The purpose of the public hearing was to update the public on the status of the Stage 1 studies, and seek public input on the EA and proposed improvements to the LA 1088 corridor. An open house format was utilized to display the proposed improvements, answer questions, and solicit comments. Fifteen written comments were received from the public involvement effort and are included in **Appendix H**. A summary of the comments and responses are provided in the following paragraphs.

Comment 1: Are you in favor of the project? Yes.

- *Impressed with effectiveness of roundabouts at Hammond and I-12.*
- *Proposed roundabouts would benefit safety and traffic flow.*
- *If you need an advocate let me know*

Response: Comment noted no response is necessary.

Comment 2: Are you in favor of the project? *Yes with changes.*

- *Four lane from I-12 to Highway 59.*
- *No median.*

Response: As discussed in the EA, the traffic study considered numerous lane concepts, intersection alternatives, as well as medians or no medians to accommodate projected traffic demand. Based on the analysis, the recommended alternative from an operational stand point included the four lane segment from west of Forest Brook Blvd to the I-12 interchange, roundabouts and a new median. Additional four lane segment is not considered necessary to accommodate projected traffic demand.

Comment 3: Are you in favor of the project? No.

- *Enjoy traveling existing LA 1088 much more than Highway 59 or 190 which are more congested and constant accidents.*
- *Should consider improvements to Highway 59 and 190 or even I-12.*
- *Please leave what little peace is undisturbed.*
- *In favor of roundabout at Soult.*

Response: The purpose of the proposed project is to reduce existing congestion and accommodate future traffic demand on LA 1088 from the Highway 59 intersection to the I-12 interchange. The project is anticipated to be constructed in phases. Phase I would include a roundabout at Trinity Drive and Soult Street.

Comment 4: Are you in favor of the project? No preference provided

- *The draft Assessment does not consider the fact that the Woodlands is a private gated subdivision. The proposed roundabout at the intersection of Highway 1088 and Spring Blvd. does not take into account the need for gates, a u-turn, and traffic staging prior to the gates.*
- *Section 3.4.4.2 of the Draft Assessment incorrectly states that the “build alternatives will not require the relocation of any existing community facilities”.*
- *Recommend shifting the Spring Blvd roundabout to the north.*
- *The Woodlands owns Spring Blvd. Does the 9.9 acres of required right-of-way include any portion of Spring Blvd.*
- *Recommend sound barriers be through adequate green space and plantings, not massive concrete walls*
- *Recommend consideration of less intrusive and less costly alternatives to the Spring Blvd. roundabout.*
- *The Draft Assessment does not adequately factor the predominantly residential nature of the Highway 1088 corridor. Recommend green space in the medians as opposed to all concrete medians*

Response: The following response is based on the Public Hearing comments provided by the Woodlands Property Owner Association (POA) and their subsequent correspondence and coordination with the LADOTD.

The subdivision entrance features will have to be located in an area such that they will not affect the functionality of the roundabout and also accommodate the needs for entering and exiting the Woodlands subdivision. The LADOTD performed a traffic analysis and determined the roundabout will operate properly with relocation of the gate and U-Turn closer to the Sweet Bay Drive intersection.

The POA also stated that Section 3.4.4.2 of the EA was incorrect because the relocation of the subdivision's gate was a relocation of a community facility. To clarify, community facilities refer to resources that are valuable to the entire community (for example nursing homes, hospitals, churches, schools, recreation centers, etc.). Community facilities identified in the project area are listed in the first paragraph of Section 3.4.4 of the EA. As the gate is a feature for a private subdivision, the gate does not qualify as a community facility.

The POA asked whether the roundabout could be shifted north to avoid impacts on the Woodlands entrance entirely. The roundabout cannot be shifted north due to the retention ponds located on both sides of the school entrance. Since the ponds are in the hydraulic system, removing them would increase the flood risk in the community. In addition, this may affect the school entrance, which would be an impact to a community facility.

The POA also asked whether the roundabout at Spring Blvd. could be removed and replaced with an alternative intersection. Discussions with the LADOTD traffic section were held to determine whether a right-in/ right-out intersection at Spring Blvd was feasible. However, this type of intersection would not only restrict turning volumes for the Woodlands, but for Magnolia Trace Elementary as well. Implementing the right-in/right out would cause the restricted volumes from both the Woodlands and Magnolia Trace Elementary to be rerouted to the adjacent roundabouts at Jackson St. and Soult St. Both of these roundabouts already have heavy volumes and adding more traffic would only deteriorate their operations. As such, removing the roundabout would only heavily increase traffic in the area.

Another concern from the POA was that the amount of ROW and cost of ROW was incorrect because Spring Blvd was assumed to be a public roadway. Since the St. Tammany Tax Assessor Site does not show the property of the roadway as private, it was incorrectly calculated in the report. The calculation of ROW acquisition acreage and cost have been amended in the EA.

The POA also expressed concern over whether the cost of the landscaping, new sign, and new gate for the Woodlands entrance was included in the cost of the project. As this is a preliminary design, those factors are not calculated directly but are accounted as part of contingency costs of the project. Once the project is in final design, the cost of those features will be incorporated.

The POA requested green space buffer and planting instead of noise barriers. There are a couple problems with this suggestion. First, undeveloped land as a buffer zone is only

an acceptable form of noise abatement if land development has not yet occurred next to the highway, which is not the case. The noise analysis report determined that some of the residents of the Woodlands already have noise impacts from the highway, so acquiring land from residences to create an area for a sound buffer is not practical. Second, LADOTD policy states that landscaping is not a viable noise barrier. All noise barriers in the state are built using federal funds with material approved by LADOTD for barrier construction. Using federal funds to construct walls out of other materials would be a violation of state policy.

Additionally, the noise abatement measures were evaluated using the FHWA's guidelines as promulgated by title 23 CFR part 772 and the LADOTD's highway traffic noise policy. Results of this evaluation indicate noise barriers are feasible at several locations along the corridor. Where noise barriers are considered to be feasible, a reasonableness analysis must be conducted. According to the policy, noise barriers are only considered reasonable if they meet the noise reduction design goal, are cost effective, and have concurrence by a majority of the benefitted receptors. The noise barriers were found to be both cost reasonable and meet the reasonableness reduction goal criteria. Viewpoints of the community is the third criteria. Comments from the Public Hearing indicate some residents in the Woodlands subdivision are opposed to the noise barriers. LADOTD conducted a follow-up survey with the benefitted receptors as required to determine if over 50% of them desire the noise barriers. If less than 50 percent of the benefitted receptors are in favor of the noise barriers, then the barriers are no longer considered reasonable. Results of the survey indicate that none of the noise barriers received more than 50% negative responses. As such all the proposed noise barriers are still considered reasonable.

The POA asked about green areas in the roundabouts and medians in the corridor. The center of the roundabouts will be green areas; however, they will also include truck aprons surrounding the green areas. This is because there needs to be adequate turning radius for the trucks that utilize this highway. The medians in the corridor are planned to be concrete because the grass is considered a maintenance issue. The medians centers could be grass if the parish requested it and agreed to pay and maintain the landscaping. In addition, the POA's opinion of the visual impacts analysis is noted.

Comment 5: Are you in favor of the project? Partial.

- *As a resident of the Woodlands, the proposed roundabout at Spring Blvd. does not have provisions for the neighborhood to retain its private/gate status. The effect of that issue will have a dramatic negative effect on the aesthetic appeal and most importantly property value of the 374 home neighborhood.*
- *The current proposed plan of expropriating our entire entrance road and gates needs to be revised considerably*
- *The concept of a noise barrier would be an eyesore, and reduce the visual appeal of our neighborhood*

Response: See response to comment 4.

Comment 6: Are you in favor of the project? Yes.

- *Recommended a roundabout to a new back entrance to Pelican Park from Quail Creek.*
- *Recommend four lane where there are more houses.*

Response: The recommended roundabout is beyond the scope of this study. LADOTD will consider the recommendation. See response to comment 2 concerning the four lane segment.

Comment 7: Are you in favor of the project? Yes.

- *Too many roundabouts. Roundabout at Trinity is extraneous. Roundabout at Soult St. will help flow of traffic.*
- *Why four lanes to two? There will not be any significant amount of traffic exiting Highway 1088 to the residential streets in the four lane zone. Either make all two lane or all four lane.*
- *Focus on more important projects such as Highway 190/I-12 interchange, and Highway 190 at Bogue Falaya Bridge/Claiborne Hill*
- *Back entrance to Pelican*

Response: As discussed in the EA, the number and location of the proposed roundabouts is based on the results of a traffic study completed in 2014. It included analysis of traffic volumes, traffic signals, intersections, and roadway segment operations. The analysis focused on weekday AM (7:00 a.m.-8:00 a.m.) and PM (5:00 p.m.-6:00 p.m.) peak hour traffic conditions for 2013(base year) and 2033 (design year) at 18 intersections from LA 59 to the I-12 interchange. The traffic study recommended roundabouts be constructed at a total of eight intersections by 2033 to meet the design year traffic demands. The roundabouts will likely be constructed in phases over time and as traffic conditions warrant them. Traffic observations will continue between phases. See response to comment 2 relative to two lane and four lane sections. Your recommendations for other projects are beyond the scope of this study, but they will be considered by LADOTD.

Comment 8: Are you in favor of the project? No.

- *Comments on not using proper turning signals, improper merging and yielding, and distracted driving.*
- *Forrest Brook will still have hard time going into town at five PM.*

Response: Comments noted, see response to comments 2 and 7 for the proposed project operational improvements.

Comment 9: Are you in favor of the project? No.

- *Considers the project not necessary.*

- *Hurts homes all along LA 1088 near I-12.*
- *Need wider bridges on Highway 190N first.*
- *Need center stripe down Parrileaux Rd.*
- *Need infrastructure in West parish far more than this proposed project.*

Response: As discussed in the EA the purpose of the proposed project is to reduce existing congestion and accommodate future traffic demand on LA 1088 from the Highway 59 intersection to the I-12 interchange. The proposed project will not result in any residential relocations. The project is being designed to minimize additional right-of-way required for construction. Recommendations for other projects are beyond the scope of this study. LADOTD will consider the recommendations.

Comment 10: Are you in favor of the project? No preference provided.

- *Add one multi-purpose bike/walk path separated from the 1088 roadway.*
- *Integrate this into the St. Tammany Trace system.*
- *Correct bicycling safety issues with I-12 overpass.*
- *Extend the multi-purpose path to Lake Shore High School.*
- *Signage for any alternative needs to be sufficient to meet Current Best Approach.*
- *Any pedestrian path needs shade, resting points, and trash cans.*
- *Consider using the roundabouts for community space in addition to functional. Make them distinct, much like river communities (i.e. Cincinnati) color their bridges for visual appeal.*
- *How about designating the LA 1088 path part of a park (albeit narrow), connect it to the Trace, and sell the naming rights. Call it the CVS Spur.*
- *Speed limit: Currently the LA 1088 speed limit is 45 mph transitioning to 55 mph west of Loretha/Oak. From a bicyclist safety perspective maintaining the 45 mph until east of the I-12 overpass would be better.*
- *What is the process for deciding on selected plan?*
- *How do outside agencies participate in the process?*
- *What is the projected timing for final design?*

Response: The LA 1088 Corridor study included consideration of vehicle, pedestrian, and bicycle traffic along LA 1088 between LA 59 and the I-12 interchange west bound ramps. Proposed improvements incorporate the latest LADOTD *Design Guidelines and Complete Streets Policy* as well as the LADOTD's *Roundabout Sidewalk Policy*. The process also included coordination with Tammany Trace.

Safe and reasonable speed limits are established by the LADOTD based on engineering and traffic studies. Your perspective on the speed limit is noted.

After consideration of the Public Hearing comments the LADOTD and FHWA will make a decision regarding an alternative to move forward through the NEPA and design process. At the conclusion of the NEPA process, if the EA has shown the project will not have significant impacts to the human or natural environment, the FHWA will issue a Finding

of No Significant Impact (FONSI). The FONSI will allow Federal funding to be used in the engineering and construction of the LA 1088 project.

Federal and State agencies participate in the process in a number of ways. Among these include “a solicitation of Views” early in the project process, coordination required by law such as the Endangered Species Act, coordination related to Federal and State permit requirements such as Section 404/10 permits related navigable waters and wetlands, and coordination of the NEPA documentation.

As discussed in the EA the project may be constructed in Phases. Phase I would include the roundabouts at Trinity Dr. and Soult St. and a portion of the two-lane divided section. Timing will depend upon funding.

Comment 11: Are you in favor of the project? Yes.

- *Need to address immediate needs like roundabout at LA 1088 and Soult St.*
- *Significant improvements were made with the light at Forrest Brook and the right turn lane off Highway 59 onto LA 1088 northbound.*
- *Recommend less roundabouts and no median*
- *Low need for roundabout at Garon/Jackson.*
- *Also, eliminate consideration for bike paths and sidewalks*

Response: The roundabout at Soult Street is expected to be in the Phase I design and construction. Also, see response to comment 7 concerning the need for recommended project features.

Comment 12: Are you in favor of the project? Yes.

- *Support Alternative 2A.*
- *Recommend construction priority for roundabout at Soult/Viola Streets.*

Response: Comments noted. The roundabout at Soult/Viola streets is included in the Phase I recommendation for design and construction.

Comment 13: Are you in favor of the project? No.

- *Reconsider a turn lane for the Fountains Subdivision which has 56 homes. Without turn lane, EMS and Fire rescue vehicles will have to drive additional mile to roundabout to enter the subdivision.*
- *Strongly disagree with median on Highway 1088 in front of Fountains subdivision without turn lane for residents and emergency vehicles.*

Response: The proposed project will reduce congestion which will allow for quicker emergency response. Traffic going toward I-12 will utilize the roundabout at Jackson St. and Garon Drive to access the Fountains Subdivision. The roundabout is approximately 1,300 feet from the entrance to the Fountains Subdivision.

Comment 14: Are you in favor of the project? No.

- *The project will increase through traffic in a primarily residential area. Would be more appropriate to widen LA 59.*
- *People are not accustomed to roundabouts and there will be an increase in accidents*
- *Roundabouts are only effective in low to medium traffic patterns and this project will result in an increase in traffic flow beyond this point.*
- *Living on Trinity Drive in the Quail Creek subdivision we already see an increase in traffic avoiding the Soult/1088 cross road.*

Response: The proposed project provides improvements to reduce existing congestion and accommodate future traffic demand on LA 1088 from the Highway 59 intersection to the I-12 interchange. Roundabouts are designed to improve safety. Most significantly, roundabouts reduce the types of crashes where people are seriously hurt or killed by 78-82% when compared to conventional stop-controlled and signalized intersections, per the AASHTO Highway Safety Manual. See response to comment 7 concerning the results of traffic studies and the effectiveness of the roundabouts.

Comment 15: Are you in favor of the project? No.

- *The proposed changes to 1088 are an overkill. Need a stop light at Soult Road.*
- *Exit to I-12 took away a lot of greenspace and barriers to noise. Also, more clearing for development has allowed more traffic noise to reach further off 1088.*
- *Changes will bring more traffic to our area and roundabouts will only serve to confuse drivers and slow traffic.*

Response: Comments noted, see response to comments 2 and 7 for the proposed project operational improvements.

5.0 PREFERRED ALTERNATIVE

The final phase of the alternatives development process is the selection of a Preferred Alternative by the FHWA and LADOTD. The Preferred Alternative takes into account the potential impacts on the human and natural resources; the public's need for efficient transportation improvements; and is the least environmentally damaging practicable alternative as required by NEPA and the Section 404 (b)(1) guidelines of the CWA.

5.1 Operations

The Stage 0 LADOTD Traffic Study recommended Alternative 2 “roundabouts with a new median” as the recommended Build Alternative from a traffic operations perspective. Build Alternative 2 has no side-street stop-controlled full-access intersections and fewer intersection conflict points. A refinement of Build Alternative 2 described as Build Alternative 2A was developed during Stage 1 of the LADOTD's project Delivery Process and included in this EA. Build Alternative 2A includes a new two-lane segment with roundabouts, a new median, four-foot shoulders and a sidewalk. It also includes a new four-lane divided section from west of Forest Brook Blvd. to the I-12 interchange with

roundabouts replacing the interchange intersections and a sidewalk on both sides of the four-lane. Sidewalks or berms will also be added through all roundabouts in accordance with the LADOTD's *Roundabout Sidewalk Policy*. Build Alternative 2A incorporates the latest *LADOTD Design Guidelines and Complete Streets policy*.

5.2 Summary of Impacts

Table 5-1 summarizes the potential impacts associated with the proposed LA 1088 highway project build alternatives as discussed in this EA. The main differences between the alternatives is the additional right-of-way required, wetlands acreage impacted, and the area of right-of-way in the 100-year floodplain.

Additional right-of-way will be required for each of the build alternatives with Alternative 2A requiring 3.1 acres more than Alternative 1A, 1.3 acres more than Alternative 1B, and 0.1 acre more than Alternative 2. All four build alternatives include roundabouts and a four-lane widening segment. Alternative 1B and Alternative 2 require more right-of-way than Alternative 1A due mainly to their inclusion of sidewalks, bike paths, and with Alternative 2 a median. Alternative 2A right-of-way requirements are the same as Alternative 2 except at the intersection of LA 1088 and Highway 59 where Alternative 2A will require slightly more right-of-way (0.1 acre) incorporating LADOTD's latest *Roundabout Sidewalk Policy*. There will be no relocations required for any of the build alternatives. All build alternatives will result in zero households and businesses being displaced. Some individual property owners will experience a loss of some of their property due to the additional right-of-way requirements. None of the build alternatives will have divisive or disruptive effect on the community, such as separation of residences from community facilities or separation of neighborhoods. The required areas will be partial acquisitions and will not result in any adverse economic impact to businesses or the economy of the community. Each build alternative avoids impacts to the greatest extent practicable, resulting in minimal disruption to neighborhoods and services in the general project area. As the design process continues, LADOTD will consider additional minor alignment adjustments to avoid or minimize impacts to property owners.

Wetlands will be impacted by all of the build alternatives. Alternatives 2 and 2A will impact 0.4 acre more than Alternatives 1A and 1B. Jurisdictional wetlands and waters of the U.S. exist on both sides of the proposed project. Shifting the proposed project to a new location without utilizing the existing roadway will not avoid impacts to jurisdictional wetlands and waters of the U.S and could potentially increase impacts to these resources.

Table 5-1: LA 1088 Improvements Summary of Impacts

FEATURE OR RESOURCE	Build Alternative 1A	Build Alternative 1B	Build Alternative 2	Build Alternative 2A
Real Estate / Additional Right-of-Way Required	Yes (7.2 Acres)	Yes (9.0 Acres)	Yes (10.2 Acres)	Yes (10.3 acres)
Relocations	No	No	No	No
Cultural and Section 106 Resources				
Section 4(f) or 6(f) Properties	No	No	No	No
Historic Sites	No	No	No	No
Archeological Sites	No	No	No	No
Natural Resources				
Wetlands (Right-of-way) ¹	Yes (12.0 Acres)	Yes (12.0 Acres)	Yes (12.4 Acres)	Yes (12.4 Acres)
Waters of the US (Streams in right-of way)	Yes (0.02 Acre)	Yes (0.02 Acre)	Yes (0.02 Acre)	Yes (0.02Acre)
Other Waters of the US (Ditches in right-of-way)	Yes (6.1 Acres)	Yes (6.1 Acres)	Yes (6.1 Acres)	Yes (6.1 Acres)
Endangered/Threatened Species/Habitat	No	No	No	No
Within 100- Year Floodplain ²	Yes (10.8 Acres)	Yes (11 Acres)	Yes (11.8 Acres)	Yes (11.8Acres)
Within Coastal Zone ³	Yes	Yes	Yes	Yes
Coastal Barrier Island	No	No	No	No
Farmland	No	No	No	No
Sole Source Aquifer (Southern Hills Aquifer)	No	No	No	No
Natural or Scenic Stream	No	No	No	No
Navigable Waterway	No	No	No	No
Physical Impacts				
Noise ⁴	Yes	Yes	Yes	Yes
Air Quality ⁵	No Long-term	No Long-term	No Long-term	No Long-term
Water Quality ⁵	No Long-term	No Long-term	No Long-term	No Long-term
Hazardous sites	No	No	No	No
Water/oil/gas Well	No	No	No	No
Social Impacts				
Land Use Change	No	No	No	No
Title VI Environmental Justice	No	No	No	No
Hospitals, Medical Facilities, Fire, Police	No	No	No	No
Transportation Pattern Changes	No	No	No	No
Community Cohesion ⁶	No	No	No	No
Community Impact during Construction ⁷	Yes	Yes	Yes	Yes

1. Preliminary determination of Wetlands within the existing and required right-of-way. Formal wetlands jurisdictional determination of acres will be made during permitting process
2. 100-year floodplain within the existing and required right-of-way as obtained from Flood Insurance Rate Maps (FIRMS) published by the Federal Emergency Management Agency (FEMA).
3. The project is located within the State Coastal Zone boundaries.
4. Based on Noise Analysis Technical Report.
5. Minor localized short-term during construction
6. Bike lanes and sidewalks in Build Alternatives 1B and 2 would enhance pedestrian mobility in the community. Alternative 2A provides sidewalks and a four-foot shoulder which would also enhance pedestrian mobility.
7. Considerations to reduce impacts include phased construction, construction times, detour routes, Construction Best Management Practices.

It is anticipated that the proposed project will require a Section 404 permit from the USACE. Potential impact to wetlands will be further evaluated through the permitting process, including the USACE jurisdictional determination and implementation of appropriate mitigation for unavoidable impacts to wetlands and streams. Strict erosion control measures will be employed to minimize impacts to water quality. Based on the above considerations, it is concluded that there is no practicable alternative to the proposed project that avoids impacts to jurisdictional wetlands and waters of the U.S. and that the proposed action includes all practicable measures to minimize harm to wetlands and waters of the U.S. which may result from such use.

All build alternatives will also expand the area of right-of-way within the 100-year floodplain. Alternatives 2 and 2A will encompass 1.0 acre more of the 100-year floodplain than Alternative 1A and 0.8 acre more than Alternative 1B. Encroachments upon the floodplains are not expected to violate applicable floodplain regulations by adversely impacting the Base Flood Elevation. The proposed project will incorporate appropriately designed drainage structures.

The existing alignment of LA 1088 is on the southeastern edge of the 100-year floodplain in the proposed project area. It is possible the project alignment could be shifted southeasterly outside of the 100-year floodplain. However, this alternative is not practicable due to the extensive residential development in that area. Shifting the alignment northwesterly would result in more encroachment on the 100-year floodplain. As such, there are no practicable alternatives which would result in less impact to the 100-year floodplain.

5.3 Preliminary Cost Estimate

The preliminary estimated construction cost for Build Alternative 1A is \$23,316,885, Build Alternative 1B is \$35,383,871, Build Alternative 2 is \$37,561,903 and Build Alternative 2A is \$36,530,461. Build Alternative 1A is substantially less costly than Build Alternatives 1B, 2 and 2A. Build Alternative 1A does not include a Complete Streets component.

5.4 Public Involvement

Public Meetings were included as part of Stage 0 and Stage 1 of the LADOTD's project delivery process. During Stage 0, a Public Information Meeting was held on December 11, 2013, at the St. Tammany Parish Council Chambers. Attendance included 29 individuals representing the general public, six elected officials, 15 LADOTD, FHWA, and other agency officials, and two media representatives. A total of 13 sets of comments were received from individuals and organizations. All of the commenters were in support of improvements to the project. As a part of Stage 1, a Public Involvement Meeting for the LA 1088 Corridor Study was held on July 23, 2015 at the St. Tammany Parish Council Chambers. Attendance included 30 individuals representing the general public, 10 agency representatives from LADOTD and the St. Tammany Parish Government, 2 elected officials, and 1 media representative. Twenty-three comments were received from the public involvement effort. The majority of individuals (12) preferred Alternative 2 over the other two build alternatives. Five people preferred Build Alternative 1A and five preferred Build Alternative 1B. One person had no preference. A Public Hearing for

the project was held on October 11, 2018 at the St. Tammany Parish Council Chambers. Attendance included 34 individuals representing the general public, 11 agency representatives from LADOTD and the St. Tammany Parish Government, and 3 media representatives. Fifteen comments were received from the public involvement effort. Seven were in favor of the proposed project, six said no, and two did not indicate a preference

5.5 Preferred Alternative

After consideration of traffic operations, environmental impacts, cost, and coordination with public, local, state and federal officials or agencies, sufficient information exists to identify **Build Alternative 2A** as the **Preferred Alternative**. Build Alternative 2A meets the established purpose and need of the project. It addresses public input and stays within required NEPA, FHWA, LADOTD, and AASHTO guidelines.

5.6 Construction Sequencing

Build Alternative 2A may be constructed in phases depending upon funding. The current plan development and construction sequencing is shown below. The preliminary plan layout and station numbers can be found in **Appendix C**.

- Phase 1 - Roundabout at Trinity Dr. and Soult St. and two-lane divided between Sta. 80+00 and Sta. 109+00.
- Phase 2 - Roundabouts at Forest Brook Blvd and four-lane divided between Sta. 109+00 to Sta. 138+00.
- Phase 3 - Roundabouts at I-12 N and I-12 S. Already four-lane divided between Sta. 170+00 and Sta. 200+00.
- Phase 4 – four-lane divided between Sta. 138+00 and Sta. 170+00.
- Phase 5 - Roundabouts at LA 59, Jackson St. and Spring Blvd, J-turn at Sta. 22+00 and two-lane divided between Sta. 8+00 and 80+00.

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7.0 ACRONYMS AND ABBREVIATIONS

ACS.....	American Community Survey
ADT	Average Daily Traffic
AI.....	Agency Interest
AASHTO	American Association of State Highway and Transportation Officials
ASTM	American Society for Testing and Materials
BMPs.....	Best Management Practices
CAAA	Clean Air Act Amendments
CEQ	Council of Environmental Quality
CESQG	Conditionally Exempt Small Quantity Generators
CMFs.....	Crash Modification Factors
CO.....	Carbon Monoxide
CO ₂	Carbon Dioxide
CPRA	Coastal Protection and Restoration Authority
CUP.....	Coastal Use Permit
CWA.....	Clean Water Act
EA	Environmental Assessment
EDMS.....	Electronic Document Management System
EDSM.....	Engineering Directives and Standards Manual
EDR.....	Environmental Data Resources
EFH.....	Essential Fish Habitat
EIS	Environmental Impact Statement
EJ.....	Environmental Justice
EO.....	Executive Order
FEMA	Federal Emergency Management Agency
FHWA.....	Federal Highway Administration
FINDS	Facility Index System
FIRMS	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
HIST LUSTs	Historical Incident Leaking Underground Storage Tanks
ICI.....	Indirect and Cumulative
JPA.....	Joint Permit Application
LAC	Louisiana Administrative Code
LADOTD.....	Louisiana Department of Transportation and Development
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
LDWF	Louisiana Department of Wildlife
LRFD.....	Load and Resistance Factor Design
LOS.....	Level of Service
LOSCO.....	Louisiana Oil Spill Coordinator's Office
LPDES	Louisiana Pollutant Discharge Elimination System
LUSTs	Leaking Underground Storage Tanks
LQG.....	Large Quantity Generators
MPO	Metropolitan Planning Organization
MSATs	Mobile Source Air Toxics

MTP.....	Metropolitan Transportation Plan
NAC.....	Noise Abatement Criteria
NAAQS.....	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFA.....	No Further Action
NOAA	National Oceanic and Atmospheric Administration
MVD	USACE New Orleans District
NPDES.....	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OCM.....	Office of Coastal Management
OSHA	Occupational Health and Safety Administration
PCN.....	Pre-Construction Notification
PGP.....	Programmatic General Permit
PM.....	Particulate Matter
RCRA	Resource Conservation and Recovery Act
RECAP	Risk Evaluation/Corrective Action Program
SHPO	State Historic Preservation Officer
SONRIS	Strategic Online Natural Resources Information System
SOV.....	Solicitation of View
SQG	Small Quantity Generators
SSA.....	Sole Source Aquifer
STIP	State Transportation Improvement Program
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
TNM	Traffic Noise Model
TIP.....	Transportation Implementation Plan
TPH.....	Total Petroleum Hydrocarbons
UA-2	Urban Arterial-2
USACE.....	United States Army Corps of Engineers
USCB	United States Census Bureau
USDA	United States Department of Agriculture
USEPA.....	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS.....	United States Geological Survey
UST	Underground Storage Tanks
VRP.....	Voluntary Remediation Program
VMT.....	Vehicle Miles Traveled
WQC	Water Quality Certification

APPENDIX A

Traffic Report



NEEL-SCHAFFER

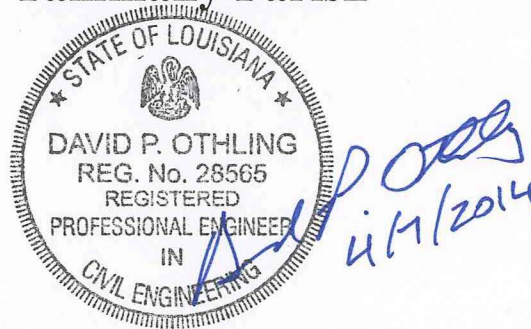
Solutions you can build upon

LA 1088 Corridor Study Traffic Report

S.P. No. 4400002630

T.O. No. H.010116.1

St. Tammany Parish



Prepared for:

**Louisiana Department of Transportation
and Development**

FINAL

April 7, 2014

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Appendix C: Traffic Signal Warrant Analysis

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Appendix E: SIDRA Intersection Analysis Results: 2033 No-Build Peak Hour

Appendix F: Build Alternative 1A & 1B Concept Plans & Traffic Volumes

Appendix G: SIDRA Intersection Analysis Results: 2013 & 2033 Build Alternative 1
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Figure H-1 2013 Build Alternative 2 Peak Hour Volumes

Figure H-2 2033 Build Alternative 2 Peak Hour Volumes

1. INTRODUCTION

This study was performed by Neel-Schaffer, Inc. for the Louisiana Department of Transportation and Development (DOTD) under the Statewide Retainer Contract for Traffic Engineering (State Project No. 4400002630; Task Order No. H.010116.1; Purchase Order No. 2-31400). Copies of the study data, analysis, concept alternatives, appendices and report are included in the **CD** located inside of the back cover of this document.

1.1. Study Purpose and Location

The primary purpose of this study is to develop and compare concept alternatives for installing roundabouts or traditional signals with the possibility of a sidewalk or shared-use path along the LA 1088 corridor from LA 59 to the I-12 westbound ramps (**see Figure 1**), a distance of approximately 3.5 miles. The goal of the recommended Concept Plan is to improve the capacity of the LA 1088 corridor.

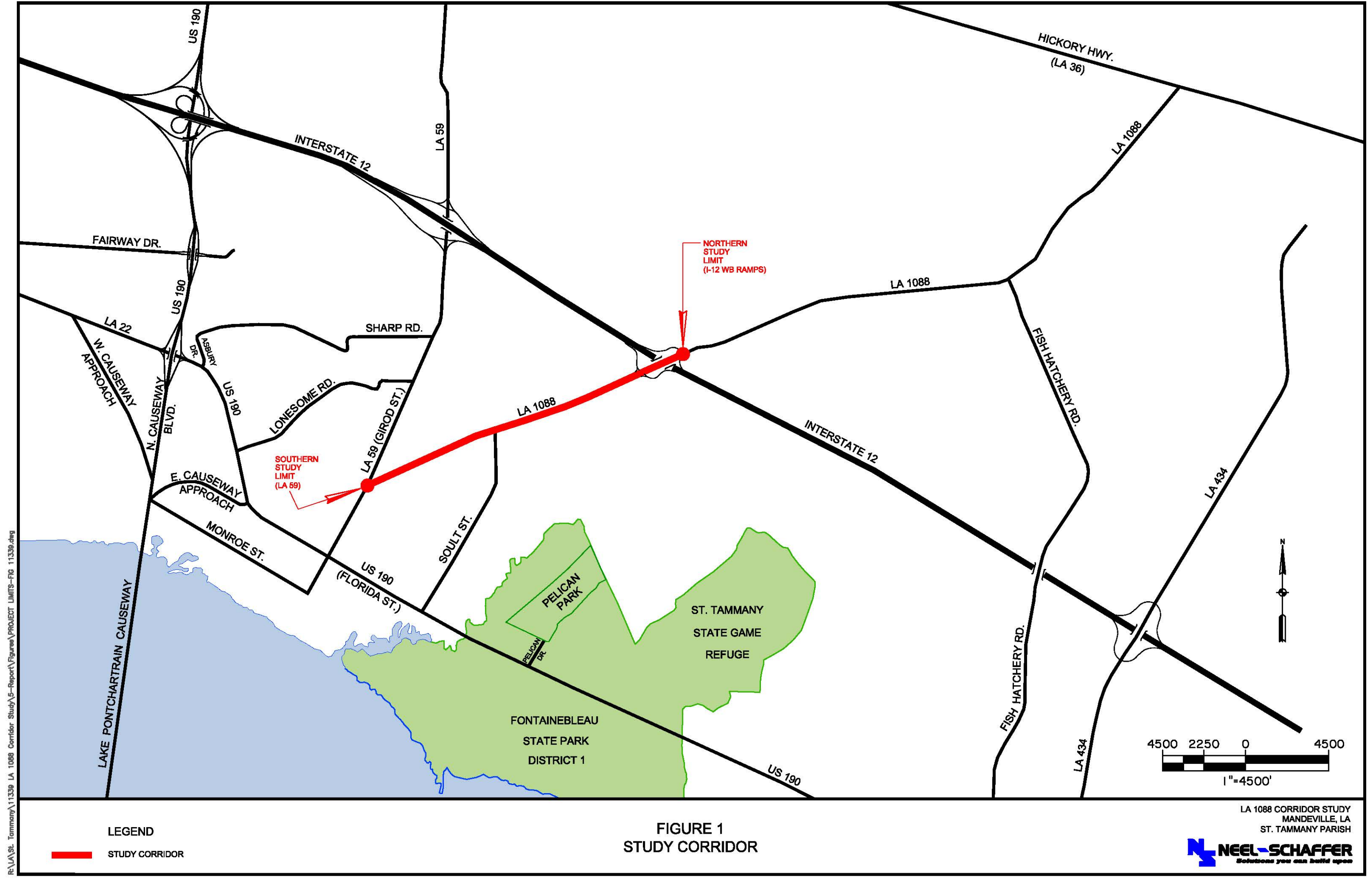
1.2. Methodology

Roadway Network and Traffic Control

The LA 1088 study corridor is a suburban two-lane highway generally running in an east-west direction. LA 1088 is undivided from LA 59 to west of the Hickory St./Mulberry St. intersection (approximately 2.7 miles) where it transitions to a four-lane divided section. The study intersections are shown in **Figure 2**. Of these, 18 were considered intersections requiring analysis. One is signalized (LA 59), one is all-way stop-controlled (Soult St./Viola St.) and 14 are full-access side street stop-controlled. The remaining two intersections (Cypress St. and Holly St.) are right-only, side street stop-controlled in the existing median-divided section. LA 1088 is 45 mph from LA 59 to east of Forest Brook Blvd. and 55 mph from east of Forest Brook Blvd. to north of the I-12 westbound ramps. A 35 mph school zone directly serving Magnolia Trace Elementary School and Lake Harbor Middle school is in effect during the AM peak hour near Spring Blvd. (between Emerald Pines Ct. to the east and Casa Bella Ct. to the west). For the purposes of this study, the Existing (2013) and No-Build (2033) roadway network and traffic control are the same.

Traffic Volumes

Traffic counts were conducted in January 2013 by Quality Counts, LLC. The corridor weekday morning (AM) and evening (PM) peak hours selected for analysis are based on peak hour frequency weighted average hourly volumes over a three-day (Tuesday, Wednesday and Thursday) period: 7:00 a.m.–8:00 a.m. and 5:00 p.m.–6:00 p.m. The turning movement counts (TMC's) were then balanced and used for the Existing Conditions intersection analysis. Traffic forecasts were developed for the 2033 Design Year intersection analysis using the New Orleans Regional Planning Commission (RPC) travel demand model. Model results indicate a steady



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increase in traffic demand from 2013 to 2033 (ranging from about 2.5 percent to about 4.5 percent compounded annual growth) within the study area because of the anticipated future land use development and roadway improvements in the surrounding area. The annually-compounded growth rate used for the LA 1088 study corridor was approximately three percent.

Traffic Signal Warrants

Traffic signal warrant analysis was conducted at the signalized LA 59/LA 1088 intersection using HCS 2010 Warrants (Version 6.40). Approach volumes were analyzed using the nine *2009 Manual on Uniform Traffic Control Devices* (MUTCD) warrants for signal installation. The peak hour approach volumes utilized were from approach tube counts conducted Thursday, January 24, 2013.

Intersection Analysis

The intersection analysis for the worst-case weekday AM and PM peak hours was performed for 2013 (the Base Year) and 2033 (the Design Year) using SIDRA Intersection (Version 5.1.13.2093). The Existing Conditions and future No-Build Conditions analyses reflect results based on Traffic Signal Inventories (TSI's) provided by the DOTD. The evaluation was conducted in accordance with the LADOTD *EDSM VI.1.1.5 Roundabout Study and Approval* guidelines and the *Roundabout Analysis: Required Settings and Standards for Sidra 5.1* brochure. The primary intent of the analysis is to determine the lane configuration and traffic control that could best accommodate the projected Design Year 2033 AM and PM peak hour traffic. A field visit by a Professional Engineer (P.E.)/Professional Traffic Operations Engineer (P.T.O.E.) was performed Wednesday, March 6, 2013 to collect and verify data required for the intersection analysis. In addition, SIDRA Design Life analysis was conducted for all locations with intersection or approach levels-of-service (LOS) E or LOS F. The Design Life analysis objective is to predict the last year before any of the subject intersection movements exceed a volume-to-capacity ratio (V/C) of 1.0 (i.e., capacity).

Roadway Segment Operations

The *2010 Highway Capacity Manual* (HCM) does not provide a direct method for comparing the widening of LA 1088 to the existing two-lane undivided section due to the short segment lengths resulting from the all-way stop-controlled Soult St./Viola St. intersection. Therefore, the need for widening LA 1088 is based on the traffic operations (LOS and associated delay) of the 18 study intersections.

Safety Analysis

A safety analysis of each Concept Alternative was performed by comparing the number of conflict points as well as the combined crash modification factors (CMF's) from the *Highway Safety Manual*.

Concept Alternatives

Four corridor concepts were initially considered for the LA 1088 corridor:

- Two-lane segment with full access
- Two-lane segment with a median
- Three-lane segment with full access
- Four-lane divided roadway with limited access from side streets utilizing U-turns and/or roundabouts

Intersection alternatives that were considered included:

- Roundabouts
- Traditional signals

Based on initial analysis results, two corridor concepts were selected for detailed evaluation and concept plan development and comparison to the No-Build Alternative:

- Alternative 1: Two-lane segment with Roundabouts and no median
- Alternative 2: Two-lane segment with Roundabouts and a new median

To accommodate projected traffic demand, both alternatives include a new four-lane divided section from west of Forest Brook Blvd. to the east.

Comparison of Alternatives

Conceptual horizontal geometry for each alternative was developed on the latest available (2010) geo-referenced aerial base. The Build Conditions intersection geometry is based on the results from the SIDRA intersection analysis. Modified or new median openings were designed in accordance with the DOTD *Access Connections Policy* (October 2012) and the DOTD *EDSM IV.2.1.4 Multi-lane Roadways and Median Openings*. The conceptual roundabouts and roadway modifications were developed in accordance with the DOTD *EDSM VI.1.1.6 Roundabout Design and Minimum Design Guidelines for Urban Arterial Roads and Streets*.

2. EXISTING CONDITIONS

2.1. Field Observations

A P.E./P.T.O.E. observed existing traffic conditions and performed travel time runs on Wednesday, March 6, 2013 during the AM (7:00 a.m.-8:00 a.m.), Noon (12:00 a.m.-1:00 p.m.) and PM (5:00 p.m.-6:00 p.m.) corridor peak hours determined from the traffic counts. Details of the observations and a summary of the travel time runs are located in **Appendix A**.

The primary traffic operational deficiencies observed during the AM peak hour were at the Forest Brook Blvd. (exiting traffic), LA 59 (northbound approach), and Soult St./Viola St. (northbound Soult St. and westbound LA 1088 approaches) intersections.

The primary traffic operational deficiencies observed during the PM peak hour were at the Soult St./Viola St. (westbound LA 1088 approach, including a number of vehicles not coming to a complete stop) and LA 59 intersections (northbound approach). No significant PM peak hour queues were caused by LA 1088 westbound or eastbound left turns (e.g., drivers returning home) blocking LA 1088 through traffic. During the Noon peak hour, the deficiencies were at the LA 59/LA 1088 signalized intersection, but were relatively minor compared to the AM and PM peak hours. Therefore the analyses focus on the AM and PM peak hours.

2.2. Traffic Volumes

The 2013 Existing peak hour traffic volumes used for the Existing Conditions analysis are summarized in **Figure B-1** located in **Appendix B**.

2.3. Traffic Signal Warrants

LA 59 is the only intersection within the study corridor that is signalized. The warrant analysis results indicate that the following warrants are currently met: Warrant 1 (Eight-Hour Vehicular Volume Conditions A and B); Warrant 2 (Four-Hour Vehicular Volume); Warrant 3 (Peak Hour Vehicular Volume) and Warrant 7 (Crash Experience per 80% volumes for Warrant 1). Accordingly the LA 59 traffic signal is not considered a good candidate for removal in its current lane configuration (i.e., traditional “T” intersection with full access). A summary of the Traffic Signal Warrant analysis is shown in **Table 1**. The traffic signal warrant analysis results are included in **Appendix C**.

Table 1
Summary of LA 59 Traffic Signal Warrant Analysis: 2013 Existing

MUTCD Warrants ¹	LA 59 at LA 1088
Warrant 1: 8-Hour Vehicular Volume (Condition A)	✓
Warrant 1: 8-Hour Vehicular Volume (Condition B)	✓
Warrant 1: 8-Hour Vehicular Volume (Combination of Conditions A & B)	✓
Warrant 2: 4-Hour Vehicular Volume	✓
Warrant 3: Peak-Hour	✓
Warrant 4: Pedestrian Volume	N/A
Warrant 5: School Crossing	N/A
Warrant 6: Coordinated Signal System	N/A
Warrant 7: Crash Experience	✓
Warrant 8: Roadway Network	N/A
Warrant 9: Intersection Near a Grade Crossing	N/A

✓ = Warrant Satisfied

N/A = Warrant not applicable or not satisfied

¹Approach volumes analyzed using the 2009 Manual on Uniform Traffic Control Devices (MUTCD) warrants for signal installation and 24-hour approach counts performed on January 24, 2013.

2.4. Intersection Analysis

The detailed intersection analysis results are shown in **Appendix D. Table 2** summarizes the results. The all-way stop-controlled Soult St./Viola St. intersection is the only one operating at an overall LOS E or LOS F. However, seven of 18 (approximately 39 percent) of the intersections have LOS E/F operations on at least one approach (northbound side streets in the AM and westbound LA 1088 in the PM). It should be noted that these intersections typically operate with a LOS E/F only for a 15-minute period during either the AM or PM peak hours.

Table 2
Summary of SIDRA Intersection Analysis Results: 2013 Existing

LA 1088 Intersection	Intersection Type	Intersection LOS “E” or F”?		Approach LOS “E” or “F”?	
		AM	PM	AM	PM
*LA 59	Signalized full-access	No	No	No	Yes (WB)
Fountains Park Blvd.	Stop-controlled full-access	--	--	No	No
Swenson Dr.	Stop-controlled full-access	--	--	No	No
Garon Dr./Jackson St.	Stop-controlled full-access	--	--	No	No
Spring Blvd.	Stop-controlled full-access	--	--	No	No
Magnolia Trace School.	Stop-controlled full-access	--	--	No	No
Emerald Pines Ct.	Stop-controlled full-access	--	--	No	No
Frenchmen Dr.	Stop-controlled full-access	--	--	No	No
Soult St./Viola St.	All-way stop-controlled full-access	Yes	Yes	Yes (NB)	Yes (WB)
Trinity Dr.	Stop-controlled full-access	--	--	Yes (NB)	No
Forest Brook Blvd.	Stop-controlled full-access	--	--	Yes (NB)	Yes (WB)
Elm St.	Stop-controlled full-access	--	--	No	No
Hickory St./Mulberry St.	Stop-controlled full-access	--	--	Yes (NB)	No
Cypress St.	Stop-controlled right-only	--	--	No	No
Holly St.	Stop-controlled right-only	--	--	No	No
Oak St./Loretta Dr.	Stop-controlled full-access	--	--	Yes (NB)	No
I-12 Eastbound Ramp	Stop-controlled full-access	--	--	No	No
I-12 Westbound Ramp	Stop-controlled full-access	--	--	Yes (NB)	No

*Signalized intersection

“Red” indicates an intersection or approach is LOS “E” or “F”; NOTE: The analysis is based on peak one-hour flow rates derived from 15-minute volumes. Therefore, the results shown are not indicative of operations during the entire peak hour or non-peak periods. Accordingly, the need for roadway and traffic control improvements (e.g., signals) is not solely based on average peak hour LOS.

3. NO-BUILD ALTERNATIVE

3.1. Concept Plans

For the purposes of this study, the No-Build Condition lane geometry within the study area is the same as for the Existing Condition. The No-Build Condition, as with the Existing Condition, is comprised of one traffic signal, one all-way stop-controlled intersection, 14 stop-controlled full access intersections and two stop-controlled right-only intersections.

3.2. Intersection Analysis

The traffic volumes used for the No-Build traffic analysis are summarized in **Figure B-2** in **Appendix B**, alongside the Existing Condition volumes. The No-Build intersection analysis results are shown in **Appendix E**. **Table 3A** and **Table 3B** summarize the results. By 2033, the all-way stop-controlled Soult St./Viola St. and signalized LA 59 intersections are LOS E/F overall. The increase in traffic over existing conditions results in all intersections, except Emerald Pines Ct., having at least one approach at LOS E/F.

Table 3A
Summary of SIDRA Intersection Analysis Results: 2033 No-Build Alternative

LA 1088 Intersection	Intersection Type	Intersection LOS "E" or "F"?		Approach LOS "E" or "F"?	
		AM	PM	AM	PM
LA 59	Signalized full-access	Yes	Yes	Yes (NB, WB)	Yes (NB, WB)
Fountains Park Blvd.	Stop-controlled full-access	--	--	Yes (SB)	Yes (SB)
Swenson Dr.	Stop-controlled full-access	--	--	Yes (SB)	No
Garon Dr./Jackson St.	Stop-controlled full-access	--	--	Yes (NB, SB)	Yes (NB, SB)
Spring Blvd.	Stop-controlled full-access	--	--	Yes (NB)	Yes (NB)
Magnolia Trace School	Stop-controlled full-access	--	--	Yes (SB)	Yes (SB)
Emerald Pines Ct.	Stop-controlled full-access	--	--	No	No
Frenchmen Dr.	Stop-controlled full-access	--	--	Yes (SB)	Yes (SB)
Soult St./Viola St.	All-way stop-controlled full-	Yes	Yes	Yes (NB, WB,	Yes (NB, WB,
Trinity Dr.	Stop-controlled full-access	--	--	Yes (NB)	Yes (NB)
Forest Brook Blvd.	Stop-controlled full-access	--	--	Yes (NB)	Yes (NB)
Elm St.	Stop-controlled full-access	--	--	Yes (SB)	Yes (SB)
Hickory St./Mulberry St.	Stop-controlled full-access	--	--	Yes (NB, SB)	Yes (NB, SB)
Cypress St.	Stop-controlled right-only	--	--	No	Yes (SB)
Holly St.	Stop-controlled right-only	--	--	Yes (NB)	No
Oak St./Loretta Dr.	Stop-controlled full-access	--	--	Yes (NB, SB)	Yes (NB, SB)
I-12 Eastbound Ramp	Stop-controlled full-access	--	--	Yes (SB)	Yes (SB)
I-12 Westbound Ramp	Stop-controlled full-access	--	--	Yes (NB)	Yes (NB)

"Red" indicates an intersection or approach is LOS "E" or "F"; NOTE: The analysis is based on peak one-hour flow rates derived from 15-minute volumes. Therefore, the results shown are not indicative of operations during the entire peak hour or non-peak periods. Accordingly, the need for roadway and traffic control improvements (e.g., signals) is not solely based on average peak hour LOS.

Table 3B
Summary of SIDRA Intersection Analysis Results: 2033 No-Build Alternative

LA 1088 Intersection	Intersection Type	Intersection V/C		Queue Length (feet) ¹	
		AM	PM	AM	PM
LA 59	Signalized full-access	1.5	1.6	2,823	4,659
Fountains Park Blvd.	Stop-controlled full-access	0.5	0.6	--	--
Swenson Dr.	Stop-controlled full-access	0.5	0.5	--	--
Garon Dr./Jackson St.	Stop-controlled full-access	1.5	1.2	524	360
Spring Blvd.	Stop-controlled full-access	2.7	1.5	1,574	445
Magnolia Trace School	Stop-controlled full-access	0.6	0.5	--	--
Emerald Pines Ct.	Stop-controlled full-access	0.5	0.4	--	--
Frenchmen Dr.	Stop-controlled full-access	0.5	0.5	--	--
Soult St./Viola St.	All-way stop-controlled full-access	3.1	5.7	2,988	1,879
Trinity Dr.	Stop-controlled full-access	2.6	1.2	1,903	645
Forest Brook Blvd.	Stop-controlled full-access	5.6	2.6	3,315	1,276
Elm St.	Stop-controlled full-access	0.9	0.7	--	--
Hickory St./Mulberry St.	Stop-controlled full-access	1.0	0.7	--	--
Cypress St.	Stop-controlled right-only	0.5	0.7	--	--
Holly St.	Stop-controlled right-only	0.5	0.7	--	--
Oak St./Loretta Dr.	Stop-controlled full-access	1.1	0.5	212	--
I-12 Eastbound Ramp	Stop-controlled full-access	2.6	2.4	2,230	4,111
I-12 Westbound Ramp	Stop-controlled full-access	3.8	1.6	1,904	1,182

“Red” indicates an intersection has a Volume-to-Capacity (V/C) ratio over 1.0 (i.e., over capacity); NOTE: The analysis is based on peak one-hour flow rates derived from 15-minute volumes. Therefore, the results shown are not indicative of operations during the entire peak hour or non-peak periods. Accordingly, the need for roadway and traffic control improvements (e.g., signals) is not solely based on average peak hour V/C.

¹Design Year (2033) 95th Percentile Back of Queue for intersections with V/C's over 1.0

4. BUILD ALTERNATIVE 1

4.1. Concept Plans

Conceptual plan view drawings of Alternative 1 are included in **Appendix F**. Alternative 1 is comprised of eight roundabouts, four stop-controlled full access intersections and five stop-controlled right-only intersections. Note that due to their proximity to each other, the Spring Blvd. and school driveway approaches are incorporated into one roundabout. Alternative 1 is presented in two sets of drawings as Alternative 1A and Alternatives 1B, the primary difference being the inclusion of pedestrian and bicycle features in Alternative 1B. One set of analyses (Alternative 1) was performed since there is no significant difference in the vehicular traffic operations. The description of each alternative is as follows:

- Alternative 1A – Utilizes the existing roadway section with roundabout improvements at eight existing intersections: LA 59 (Girod St.), Garon Dr./Jackson St., Spring Blvd/Magnolia Trace School, Soult St./Viola St., Trinity Dr., Forest Brook Blvd., I-12 Eastbound ramps and the I-12 Westbound ramps. Entry and exit of Roundabouts are designed to accommodate the future roadway section in Alternative 2 without any modifications at the roundabouts except for the complete streets (pedestrian and bicycle) component. A new 4-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with roundabouts replacing the interchange intersections.
- Alternative 1B – Utilizes the existing roadway section with roundabout improvements at eight existing intersections: LA 59 (Girod St.), Garon Dr./Jackson St., Spring Blvd/Magnolia Trace School, Soult St./Viola St., Trinity Dr., Forest Brook Blvd., I-12 Eastbound ramps and the I-12 westbound ramps. Utilizes the existing roadway width (LA 59 to Forest Brook Blvd.) with addition of 5' bike lanes on both sides of the road that will be adjacent to the through lanes with curb & gutter. A sidewalk will be added to the north to meet the complete streets design. A new 4-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with roundabouts replacing the interchange intersections.

4.2. Intersection Analysis

The lane configurations and traffic control shown on the concept drawings, along with the traffic volumes shown on appendix **Figure F-1** and **Figure F-2** were used for the intersection analysis. The intersection analysis results are shown in **Appendix G. Table 4A, Table 4B** and

Table 4C summarize the results. The results show that if the new intersections were installed today (2013), none would be LOS E/F overall (versus one) with the Existing/No-Build geometry. In addition, only one intersection approach (versus seven with the existing geometry) would be LOS E/F. In 2033, one intersection would be LOS E/F overall (versus two with the No-Build geometry) and eight intersection approaches (versus 17 with the No-Build geometry) would be LOS E/F. The results show that all of the intersections will operate under capacity (i.e., V/C less than or equal to 1.0).

Table 4A
Summary of SIDRA Intersection Analysis Results: 2013 Build Alternative 1

LA 1088 Intersection	Intersection Type	Intersection LOS "E" or "F"?		Approach LOS "E" or "F"?	
		AM	PM	AM	PM
LA 59	Roundabout	No	No	No	No
Fountains Park Blvd.	Stop-controlled full-access	--	--	No	No
Swenson Dr.	Stop-controlled full-access	--	--	No	No
Garon Dr./Jackson St.	Roundabout	No	No	No	No
Spring Blvd.	Roundabout	No	No	No	No
Magnolia Trace School					
Emerald Pines Ct.	Stop-controlled right-only	--	--	No	No
Frenchmen Dr.	Stop-controlled full-access	--	--	No	No
Soult St./Viola St.	Roundabout	No	No	No	No
Trinity Dr.	Roundabout	No	No	No	No
Forest Brook Blvd.	Roundabout	No	No	No	No
Elm St.	Stop-controlled right-only	--	--	No	No
Hickory St./Mulberry St.	Stop-controlled right-only	--	--	No	No
Cypress St.	Stop-controlled right-only	--	--	No	No
Holly St.	Stop-controlled right-only	--	--	No	No
Oak St./Loretta Dr.	Stop-controlled right-only	--	--	Yes (NB)	No
I-12 Eastbound Ramp	Roundabout	No	No	No	No
I-12 Westbound Ramp	Roundabout	No	No	No	No

"Red" indicates an intersection or approach is LOS "E" or "F"; NOTE: The analysis is based on peak one-hour flow rates derived from 15-minute volumes. Therefore, the results shown are not indicative of operations during the entire peak hour or non-peak periods. Accordingly, the need for roadway and traffic control improvements (e.g., signals) is not solely based on average peak hour LOS.

Table 4B
Summary of SIDRA Intersection Analysis Results: 2033 Build Alternative 1

LA 1088 Intersection	Intersection Type	Intersection LOS “E” or “F”?		Approach LOS “E” or “F”?	
		AM	PM	AM	PM
LA 59	Roundabout	No	No	No	No
Fountains Park Blvd.	Stop-controlled full-access	--	--	Yes (SB)	Yes (SB)
Swenson Dr.	Stop-controlled full-access	--	--	No	No
Garon Dr./Jackson St.	Roundabout	No	No	No	No
Spring Blvd.	Roundabout	No	No	No	No
Magnolia Trace School					
Emerald Pines Ct.	Stop-controlled right-only	--	--	No	No
Frenchmen Dr.	Stop-controlled full-access	--	--	No	No
Soult St./Viola St.	Roundabout	No	No	No	No
Trinity Dr.	Roundabout	No	No	No	No
Forest Brook Blvd.	Roundabout	No	No	No	No
Elm St.	Stop-controlled right-only	--	--	No	No
Hickory St./Mulberry St.	Stop-controlled right-only	--	--	Yes (NB, SB)	Yes (SB)
Cypress St.	Stop-controlled right-only	--	--	No	Yes (SB)
Holly St.	Stop-controlled right-only	--	--	Yes (NB)	No
Oak St./Loretta Dr.	Stop-controlled right-only	--	--	Yes (NB)	Yes (SB)
I-12 Eastbound Ramp	Roundabout	No	No	No	No
I-12 Westbound Ramp	Roundabout	No	No	No	No

“Red” indicates an intersection or approach is LOS “E” or “F”; NOTE: The analysis is based on peak one-hour flow rates derived from 15-minute volumes. Therefore, the results shown are not indicative of operations during the entire peak hour or non-peak periods. Accordingly, the need for roadway and traffic control improvements (e.g., signals) is not solely based on average peak hour LOS.

Table 4C
Summary of SIDRA Intersection Analysis Results: 2033 Build Alternative 1

LA 1088 Intersection	Intersection Type	Intersection V/C		Queue Length (feet) ¹	
		AM	PM	AM	PM
LA 59	Roundabout	1.4	1.1	2,688 (SB)	1,519 (SB)
Fountains Park Blvd.	Stop-controlled full-access	0.5	0.6	--	--
Swenson Dr.	Stop-controlled full-access	0.5	0.5	--	--
Garon Dr./Jackson St.	Roundabout	0.7	0.7	--	--
Spring Blvd.	Roundabout	0.8	0.7	--	--
Magnolia Trace School					
Emerald Pines Ct.	Stop-controlled right-only	0.5	0.4	--	--
Frenchmen Dr.	Stop-controlled full-access	0.5	0.5	--	--
Soult St./Viola St.	Roundabout	0.8	0.9	--	--
Trinity Dr.	Roundabout	0.8	0.8	--	--
Forest Brook Blvd.	Roundabout	0.7	0.8	--	--
Elm St.	Stop-controlled right-only	0.5	0.4	--	--
Hickory St./Mulberry St.	Stop-controlled right-only	0.7	0.4	--	--
Cypress St.	Stop-controlled right-only	0.5	0.4	--	--
Holly St.	Stop-controlled right-only	0.5	0.4	--	--
Oak St./Loretta Dr.	Stop-controlled right-only	1.0	0.4	--	--
I-12 Eastbound Ramp	Roundabout	0.8	0.7	--	--
I-12 Westbound Ramp	Roundabout	0.8	0.4	--	--

“Red” indicates an intersection Volume-to-Capacity (V/C) ratio is greater than 1.0 (i.e., capacity); NOTE: The analysis is based on peak one-hour flow rates derived from 15-minute volumes. Therefore, the results shown are not indicative of operations during the entire peak hour or non-peak periods. Accordingly, the need for roadway and traffic control improvements (e.g., signals) is not solely based on V/C or queues

¹Design Year (2033) 95th Percentile Back of Queue for intersections with V/C's over 1.0.

5. BUILD ALTERNATIVE 2

5.1. Concept Plans

Conceptual plan view drawings of Alternative 2 are included in **Appendix H**. Alternative 2 is comprised of eight roundabouts, one stop-controlled full-access intersection and eight stop-controlled right-only intersections. Note that due to their proximity to each other, the Spring Blvd. and school driveway approaches are incorporated into one roundabout. The description of Concept Alternative 2 is as follows:

- Alternative 2 – A new 2-lane divided curb & gutter section (LA 59 to Forest Brook Blvd.) with a 6' median (back of curb to back of curb) with 5' bike lanes on both sides of the road adjacent to the through lanes. A sidewalk will be added to the north to meet the complete streets design. A new 4-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with Roundabouts replacing the interchange intersections.

5.2. Intersection Analysis

The lane configurations and traffic control shown on the concept drawings, along with the traffic volumes shown on appendix **Figure H-1** and **Figure H-2** were used for the intersection analysis. The intersection analysis results are shown in **Appendix I**. **Table 5A**, **Table 5B** and **Table 5C** summarize the results. The results show that if the new intersections were installed today (2013), none would be LOS E/F overall (versus one with the existing geometry). In addition, only one intersection approach (versus seven with the existing geometry) would be LOS E/F. In 2033, no intersections would be LOS E/F overall (versus two with the No-Build geometry) and six intersection approaches (versus 17 with the No-Build geometry) would be LOS E/F.

Table 5A
Summary of SIDRA Intersection Analysis Results: 2013 Build Alternative 2

LA 1088 Intersection	Intersection Type	Intersection LOS "E" or F"?		Approach LOS "E" or "F"?	
		AM	PM	AM	PM
LA 59	Roundabout	No	No	No	No
Fountains Park Blvd.	Stop-controlled right-only	--	--	No	No
Swenson Dr.	Stop-controlled right-only	--	--	No	No
Garon Dr./Jackson St.	Roundabout	No	No	No	No
Spring Blvd.	Roundabout	No	No	No	No
Magnolia Trace School					
Emerald Pines Ct.	Stop-controlled right-only	--	--	No	No
Frenchmen Dr.	Stop-controlled right-only	--	--	No	No
Soult St./Viola St.	Roundabout	No	No	No	No
Trinity Dr.	Roundabout	No	No	No	No
Forest Brook Blvd.	Roundabout	No	No	No	No
Elm St.	Stop-controlled right-only	--	--	No	No
Hickory St./Mulberry St.	Stop-controlled right-only	--	--	No	No
Cypress St.	Stop-controlled right-only	--	--	No	No
Holly St.	Stop-controlled right-only	--	--	No	No
Oak St./Loretta Dr.	Stop-controlled full-access	--	--	Yes (NB)	No
I-12 Eastbound Ramp	Roundabout	No	No	No	No
I-12 Westbound Ramp	Roundabout	No	No	No	No

"Red" indicates an intersection or approach is LOS "E" or "F"; NOTE: The analysis is based on peak one-hour flow rates derived from 15-minute volumes. Therefore, the results shown are not indicative of operations during the entire peak hour or non-peak periods. Accordingly, the need for roadway and traffic control improvements (e.g., signals) is not solely based on average peak hour LOS.

Table 5B

Summary of SIDRA Intersection Analysis Results: 2033 Build Alternative 2

LA 1088 Intersection	Intersection Type	Intersection LOS “E” or “F”?		Approach LOS “E” or “F”?	
		AM	PM	AM	PM
LA 59	Roundabout	No	No	No	No
Fountains Park Blvd.	Stop-controlled right-only	--	--	No	No
Swenson Dr.	Stop-controlled right-only	--	--	No	No
Garon Dr./Jackson St.	Roundabout	No	No	No	No
Spring Blvd.	Roundabout	No	No	No	No
Magnolia Trace School					
Emerald Pines Ct.	Stop-controlled right-only	--	--	No	No
Frenchmen Dr.	Stop-controlled right-only	--	--	No	No
Soult St./Viola St.	Roundabout	No	No	No	No
Trinity Dr.	Roundabout	No	No	No	No
Forest Brook Blvd.	Roundabout	No	No	No	No
Elm St.	Stop-controlled right-only	--	--	No	No
Hickory St./Mulberry St.	Stop-controlled right-only	--	--	Yes (NB, SB)	Yes (SB)
Cypress St.	Stop-controlled right-only	--	--	No	Yes (SB)
Holly St.	Stop-controlled right-only	--	--	Yes (NB)	No
Oak St./Loretta Dr.	Stop-controlled full-access	--	--	Yes (NB)	Yes (SB)
I-12 Eastbound Ramp	Roundabout	No	No	No	No
I-12 Westbound Ramp	Roundabout	No	No	No	No

“Red” indicates an intersection or approach is LOS “E” or “F”; NOTE: The analysis is based on peak one-hour flow rates derived from 15-minute volumes. Therefore, the results shown are not indicative of operations during the entire peak hour or non-peak periods. Accordingly, the need for roadway and traffic control improvements (e.g., signals) is not solely based on average peak hour LOS.

Table 5C
Summary of SIDRA Intersection Analysis Results: 2033 Build Alternative 2

LA 1088 Intersection	Intersection Type	Intersection V/C		Queue Length (feet) ¹	
		AM	PM	AM	PM
LA 59	Roundabout	1.4	1.1	2,688 (SB)	1,590 (SB)
Fountains Park Blvd.	Stop-controlled right-only	0.6	0.6	--	--
Swenson Dr.	Stop-controlled right-only	0.5	0.6	--	--
Garon Dr./Jackson St.	Roundabout	0.8	0.8	--	--
Spring Blvd.	Roundabout	0.8	0.7	--	--
Magnolia Trace School					
Emerald Pines Ct.	Stop-controlled right-only	0.5	0.5	--	--
Frenchmen Dr.	Stop-controlled right-only	0.5	0.5	--	--
Soult St./Viola St.	Roundabout	0.8	0.9	--	--
Trinity Dr.	Roundabout	0.9	0.9	--	--
Forest Brook Blvd.	Roundabout	0.7	0.8	--	--
Elm St.	Stop-controlled right-only	0.5	0.4	--	--
Hickory St./Mulberry St.	Stop-controlled right-only	0.7	0.4	--	--
Cypress St.	Stop-controlled right-only	0.5	0.4	--	--
Holly St.	Stop-controlled right-only	0.5	0.4	--	--
Oak St./Loretta Dr.	Stop-controlled full-access	1.0	0.4	--	--
I-12 Eastbound Ramp	Roundabout	0.8	0.8	--	--
I-12 Westbound Ramp	Roundabout	0.8	0.4	--	--

“Red” indicates an intersection Volume-to-Capacity (V/C) ratio is greater than 1.0 (i.e., capacity); NOTE: The analysis is based on peak one-hour flow rates derived from 15-minute volumes. Therefore, the results shown are not indicative of operations during the entire peak hour or non-peak periods. Accordingly, the need for roadway and traffic control improvements (e.g., signals) is not solely based on V/C or queues.

¹Design Year (2033) 95th Percentile Back of Queue for intersections with V/C's over 1.0.

6. COMPARISON OF ALTERNATIVES

The intersection types comprising each alternative are shown in **Table 6**. Both Alternative 1 and 2 have eight roundabouts and eliminate the LA 59 signal and the Soult St./Viola St. all-way stop. Alternative 2 eliminates all full-access side street intersections.

Table 6
Intersection Types

Intersection Type	No-Build Alternative (Existing)	Alternatives 1A & 1B (Roundabouts without new median)	Alternative 2 (Roundabouts with new median)
Signalized full-access	1	0	0
All-way stop-controlled full-access	1	0	0
Side street stop-controlled full-access	14	3	0
Yield-entry Roundabout	0	8	8
Stop-controlled right-only	2	6	9
TOTAL	18	17¹	17¹

¹Alternatives 1 and 2 have one less intersection than Existing because Spring Blvd. and the Magnolia Trace school driveway are combined into a single roundabout

6.1. Alternative 1 versus No-Build Alternative

The traffic operations and safety comparison is shown in **Table 7**. Compared to No-Build, Alternative 1 (that is, Alternatives 1A and 1B) has fewer (eight versus 17) intersections with an approach LOS E/F. Alternative 1 also reduces the total number of intersection conflict points from 230 to 156, a 32 percent reduction. Per the CMF, the crash reduction is 67 percent at the signalized LA 59 traffic signal when converted to a roundabout. At the all-way stop-controlled Soult St./Viola St. intersection, as well as six side street stop-controlled intersections, the crash reduction is 32 percent after conversion to a roundabout. At four of the side street stop-controlled full-access intersections, the crash reduction is 39 percent (0.61 CMF for median installation) after conversion to stop-controlled right-only intersections with median-divided approaches.

Table 7
Traffic Operations and Safety Comparison: Alternative 1 vs. No-Build Alternative

Intersection Modification			Alternative 1 vs. No-Build
From No-Build	To Alternative 1	Locations	
Signalized full-access	Yield-entry Roundabout	1	- Alternative 1 reduces V/C at LA 59 intersection - Alternative 1 reduces SB queues at LA 59 intersection (by 135 feet AM and 3,140 feet PM) Both alternatives have an approach LOS “E/F” in the Design Year 0.33 CMF; Alternative 1 increases the total number of intersection conflicts by 22% (11 versus 9) - Alternative 1 reduces the LA 1088 and side street design speed to approximately 15 mph for all vehicles entering the roundabout² - A roundabout (Alternative 1) requires less maintenance compared to a traffic signal (No-Build) - Roundabout (Alternative 1) traffic control is not affected by power outages compared to a traffic signal (No-Build)
All-way stop-controlled full-access	Yield-entry Roundabout	1 ¹	Only No-Build has an approach LOS “E/F” in the Design Year 0.68 CMF; Alternative 1 reduces the total number of intersection conflict points by 66% (11 versus 32) - Alternative 1 reduces the LA 1088 and side street design speed to approximately 15 mph for all vehicles entering the roundabout² - A roundabout (Alternative 1) requires less maintenance compared to a traffic signal (No-Build) - Roundabout (Alternative 1) traffic control is not affected by power outages compared to a traffic signal (No-Build)
Side street stop-controlled full-access	Yield-entry Roundabout	6	- Alternative 1 has zero intersections (compared to six No-Build intersections) with an approach LOS “E/F” in the Design Year 0.68 CMF; Alternative 1 reduces the total number of intersection conflict points by 50% (49 versus 98) - Alternative 1 reduces the LA 1088 and side street design speed to approximately 15 mph for all vehicles entering the roundabout² - A roundabout (Alternative 1) requires less maintenance compared to a traffic signal (No-Build) - Roundabout (Alternative 1) traffic control is not affected by power outages compared to a traffic signal (No-Build)
Side street stop-controlled full-access	Stop-controlled right-only	4	- Alternative 1 has zero intersections (compared to three No-Build intersections) with an approach LOS “E/F” in the Design Year 0.61 CMF; Alternative 1 reduces the total number of intersection conflict points by 7% (85 versus 91) - Both alternatives have the same LA 1088 and side street design speeds
Side street stop-controlled full-access	Side street stop-controlled full-access	3	No change
Stop-controlled right-only	Stop-controlled right-only	2	No change

CMF: Crash Modification Factor

¹Spring Blvd. and the Magnolia Trace school driveway are combined into a single roundabout

²Source: *Roundabout Design* (LADOTD EDSM No. VI.1.1.6, October 25, 2011)

6.2. Alternative 2 versus No-Build Alternative

The traffic operations and safety comparison is shown in **Table 8**. Compared to No-Build, Alternative 2 has fewer (four versus 17) intersections with an approach LOS E/F.

Alternative 2 also reduces the total number of intersection conflict points from 230 to 81, a 65 percent reduction. Per the CMF, the crash reduction is 80 percent (0.33 CMF for intersection modification times 0.61 CMF for median installation, for a combined CMF equal to 0.20) at the signalized LA 59 traffic signal when converted to a roundabout with a median-divided approach. At the all-way stop-controlled Soult St./Viola St. intersection as well as six side street stop-controlled full-access intersections, the crash reduction is 59 percent (0.68 CMF for intersection modification times 0.61 CMF for median installation, for a combined CMF equal to 0.41) after conversion to a roundabout with median-divided approaches. At the remaining seven side street stop-controlled full-access intersections, the crash reduction is 39 percent (0.61 CMF for median installation) after conversion to stop-controlled right-only intersections with median-divided approaches.

Table 8
Traffic Operations and Safety Comparison: Alternative 2 vs. No-Build Alternative

Intersection Modification			Alternative 2 vs. No-Build
From No-Build	To Alternative 2	Locations	
Signalized full-access	Yield-entry Roundabout	1	- Alternative 2 reduces V/C at LA 59 intersection - Alternative 2 reduces SB queues at LA 59 intersection (by 135 feet AM and 3,069 feet PM) Both alternatives have an approach LOS “E/F” in the Design Year 0.20 CMF; Alternative 2 increases the total number of intersection conflicts by 22% (11 versus 9) - Alternative 2 reduces the LA 1088 and side street design speed to approximately 15 mph for all vehicles entering the roundabout² - A roundabout (Alternative 2) requires less maintenance compared to a traffic signal (No-Build) - Roundabout (Alternative 2) traffic control is not affected by power outages compared to a traffic signal (No-Build)
All-way stop-controlled full-access	Yield-entry Roundabout	1 ¹	Only No-Build has an approach LOS “E/F” in the Design Year 0.41 CMF; Alternative 2 reduces the total number of intersection conflict points by 66% (11 versus 32) - Alternative 2 reduces the LA 1088 and side street design speed to approximately 15 mph for all vehicles entering the roundabout² - A roundabout (Alternative 2) requires less maintenance compared to a traffic signal (No-Build) - Roundabout (Alternative 2) traffic control is not affected by power outages compared to a traffic signal (No-Build)
Side street stop-controlled full-access	Yield-entry Roundabout	6	- Alternative 2 has zero intersections (compared to six No-Build intersections) with an approach LOS “E/F” in the Design Year 0.41 CMF; Alternative 2 reduces the total number of intersection conflict points by 50% (49 versus 98) - Alternative 2 reduces the LA 1088 and side street design speed to approximately 15 mph for all vehicles entering the roundabout² - A roundabout (Alternative 2) requires less maintenance compared to a traffic signal (No-Build) - Roundabout (Alternative 2) traffic control is not affected by power outages compared to a traffic signal (No-Build)
Side street stop-controlled full-access	Stop-controlled right-only	7	- Alternative 2 has two intersections (compared to six No-Build intersections) with an approach LOS “E/F” in the Design Year 0.61 CMF; Alternative 2 reduces the total number of intersection conflict points by 88% (10 versus 85) - Both alternatives have the same LA 1088 and side street design speeds
Stop-controlled right-only	Stop-controlled right-only	2	No change

CMF: Crash Modification Factor

¹Spring Blvd. and the Magnolia Trace school driveway are combined into a single roundabout

²Source: *Roundabout Design* (LADOTD EDSM No. VI.1.1.6, October 25, 2011)

7. CONCLUSIONS

Alternative 2, the “Roundabouts with a new median” alternative, is recommended from a traffic operations and safety perspective. As discussed in **Section 6.1** and **Section 6.2** above, Alternative 2 has no side-street stop-controlled full-access intersections and fewer intersection conflict points.

7.1. Cost Estimates

An estimated opinion of probable construction cost for Alternatives 1A, 1B and 2 is shown in **Table 9**. Detailed breakdowns are shown in **Appendix J**. The cost assumes that the existing pavement will be removed and replaced within the limits of the roundabouts to tie to existing pavement. The Right-of-way Acquisition includes the acquisition services required to obtain the necessary right-of-way. Some right-of-way may be necessary at the roundabout locations and it is assumed that additional utility or sidewalk servitude may be necessary to construct the sidewalks near the right-of-way line. The required servitude could be determined during the Environmental Assessment (EA) phase of the project where detailed cross sections can be investigated.

Table 9
Estimated Opinion of Probable Construction Costs

Cost Item	Alt. 1A	Alt. 1B	Alt. 2
Environmental (Document and Mitigation)	\$278,113	\$385,919	\$502,726
Engineering Design	\$1,112,453	\$1,543,678	\$2,010,902
Construction, Engineering and Inspection	\$1,390,567	\$1,929,597	\$2,513,628
Right-of-way Acquisition	\$1,575,000	\$2,250,000	\$2,703,000
Land Acquisition Services	\$157,500	\$225,000	\$270,300
Utility Relocation	\$1,080,000	\$1,675,000	\$2,150,000
Roadway Construction	\$13,905,668	\$19,295,969	\$25,136,281
TOTAL	\$19,499,301	\$27,305,163	\$35,286,837

7.2. Implementation Plan

The Project team currently envisions that the construction of the recommended alternative will be phased in as right-of-way is acquired. Pending the results of the Environmental phase, right-of-way to facilitate the build-out of Alternative 2 could be acquired on a continual basis. Options for implementation include, but are not limited to:

- Construction of a single roundabout (e.g., Soult St./Viola St. or Forest Brook Blvd.)
- Construction of a pair of roundabouts (e.g., Soult St./Viola St. and Forest Brook Blvd.)
- Construction of Alternative 1A, followed by Alternative 2
- Construction of Alternative 1B, followed by Alternative 2
- Construction of Alternative 2

7.3. Public Involvement

The Concept Alternatives were presented for agency and public review and comments on three separate occasions:

- *Elected Officials Meeting* on August 21, 2013 with Senator Jack Donahue and Representative Paul Hollis
- *Parish Meeting* on November 12, 2013 with St. Tammany Parish President Ms. Pat Brister et.al.
- *Public Information Meeting* on December 11, 2013 held at the St. Tammany Parish Council chambers

Note that copies of the written comments received are located in **Appendix K**. These comments are provided for use in the environmental phase. A total of 13 sets of comments were received from individuals and organizations. The comments are summarized in **Table 10**.

Table 10
Project Need
Based on Comments from Public Information Meeting

Comment Source No.	Summary of Comments	Project Needed? ¹
1	• Add a median opening	Yes
2	• Address speeding problem (including considering a traffic signal at Forest Brook Blvd.)	Yes
3	• Sidewalks are not needed (will be underutilized)	Yes
4	• Roundabouts are a good idea (and preferable to a traffic signal at Forest Brook Blvd.)	Yes
5	• Roundabouts are a good idea • The plan should include four-laning the entire corridor	Yes
6	• Address impacts of proposed office park development at the I-12 interchange	Yes
7	• Lessen the side street turnaround times (including considering striping to reduce the length of the raised barrier)	Yes
8	• In favor of Alternatives 1A of 1B because they use existing right-of-way and are less expensive	Yes
9	• In favor of Alternatives 1A and 1B • Does not favor roundabouts at Garon Dr./Jackson St., Trinity Dr. or at I-12 ramps • Four-lane Forest Brook Blvd. to I-12 section immediately • Sidewalks and bike lanes add cost and are not needed (can use the "Trace" instead)	Yes
10	• Commence the Project ASAP (traffic through Quail Creek has increased due to LA 1088 congestion)	Yes
11 & 12	• Alternative 2 offers the most comprehensive solution • Expedite improvements at the Soult St. and Forest Brook Blvd. intersections • Shift the Project alignment to the north between Soult St. and Forest Brook Blvd. (to mitigate property takings within the Quail Creek Subdivision) • Address impacts of a major new development proposed to access LA 1088 north of I-12 • Make Project funding the highest priority • Complete the Project within 36 months after construction begins	Yes
13	• Shift the Soult St. roundabout north and slightly west to mitigate Quail Creek subdivision property taking	Yes

¹The Summary of Comments and Need for the Project is based on Consultant review of the written comments

APPENDIX B

Solicitation of Views

Agency/Tribal Responses



Environmental Section 28
PO Box 94245 | Baton Rouge, LA 70804-9245
phone: 225.242.4502 | fax: 225.242.4500

Bobby Jindal, Governor
Sherri H. LeBas, P.E., Secretary

March 31, 2015

STATE PROJECT NO. H.010116
FEDERAL AID PROJECT NO. H010116
LA 1088 CORRIDOR STUDY
ST TAMMANY PARISH

TO: Solicitation of Views Mailing List

SUBJECT: SOLICITATION OF VIEWS

Early in the planning stages of a transportation facility, views from federal, state, and local agencies, organizations, and individuals are solicited. The special expertise of these groups can assist DOTD with the early identification of possible adverse economic, social, or environmental effects or concerns. Your assistance in this regard will be appreciated.

Due to the earliness of this request for your views, very limited data concerning the proposed project exists. We have, however, attached a map showing the general location of the proposed project, along with a preliminary project description.

It is requested that you review the attached information and furnish us with your views and comments by April 30, 2015. Replies should be addressed to LDOTD Environmental Engineer Administrator; P.O. Box 94245; Baton Rouge, Louisiana 70804-9245. Please reference the State Project Number in your reply.

If you have any questions or require additional information, please contact Joseph Brown at 225.242.4510.

Sincerely,


for Noel Ardoin
Environmental Engineer Administrator

Attachments

NA/jb

cc: District Administrator
District Traffic Operations Engineer

DRAFT

PRELIMINARY PROJECT DESCRIPTION

State Project No. H.010116

F.A.P. No. H010116

Route LA 1088

St. Tammany Parish

The Louisiana Department of Transportation and Development (LADOTD) is proposing to make improvements to LA 1088, St. Tammany Parish Louisiana. LA 1088 is a suburban highway which runs generally in a northeasterly direction from the intersection of LA 59 north of Mandeville to an intersection at LA 36 east of Abita Springs. LA 1088 is an undivided two lane highway from LA 59 for approximately 2.7 miles where it transitions into a four lane divided section running approximately 0.8 miles to an interchange at I-12. Past the I-12 interchange, LA 1088 continues as a two lane undivided highway for approximately 7.5 miles to the intersection at LA 36. Attached is map showing the location of the project.

The purpose of the proposed improvements to LA 1088 is to reduce existing congestion and accommodate future traffic demands. The improvements are needed due to existing and anticipated land use development and other roadway improvements in the surrounding area. The project proposes to improve the mobility and safety of vehicle, pedestrian, and bicycle traffic along the LA 1088 corridor between LA 59 (Girod St.) and the I-12 westbound ramps. The total length of the proposed project is approximately 3.5 miles. The study area for this project will be considered from the intersection of LA 59 and US 190 north along LA 1088 until its intersection with LA 36.

Stage 0 studies were completed for the project in 2014. A Corridor Traffic Report was completed in April 2014. The alternatives presented in the traffic report in addition to the No Build Alternative are as follows:

- Alternative 1A – Utilizes the existing roadway section with roundabout improvements at eight existing intersections: LA 59 (Girod St.), Garon Dr./Jackson St., Spring Blvd/Magnolia Trace School, Soult St./Viola St., Trinity Dr., Forest Brook Blvd., I-12 Eastbound ramps and the I-12 westbound ramps. Entry and Exit of Roundabouts are designed to accommodate the future roadway section in Alternative 2 without any modifications at the roundabouts except for the complete streets (pedestrian and bicycle) component. A new 4-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with Roundabouts replacing the interchange intersections.
- Alternative 1B – Utilizes the existing roadway section with roundabout improvements at eight existing intersections: LA 59 (Girod St.), Garon Dr./Jackson St., Spring Blvd/Magnolia Trace School, Soult St./Viola St., Trinity Dr., Forest Brook Blvd., I-12 Eastbound ramps and the I-12 westbound ramps. Utilizes the existing roadway width (LA 59 to Forest Brook Blvd.) with addition of 5' bike lanes on both sides of the road that shall be adjacent to the through lanes with curb & gutter. A sidewalk shall be added to the north to meet the complete streets design. A new 4-lane divided section is necessary

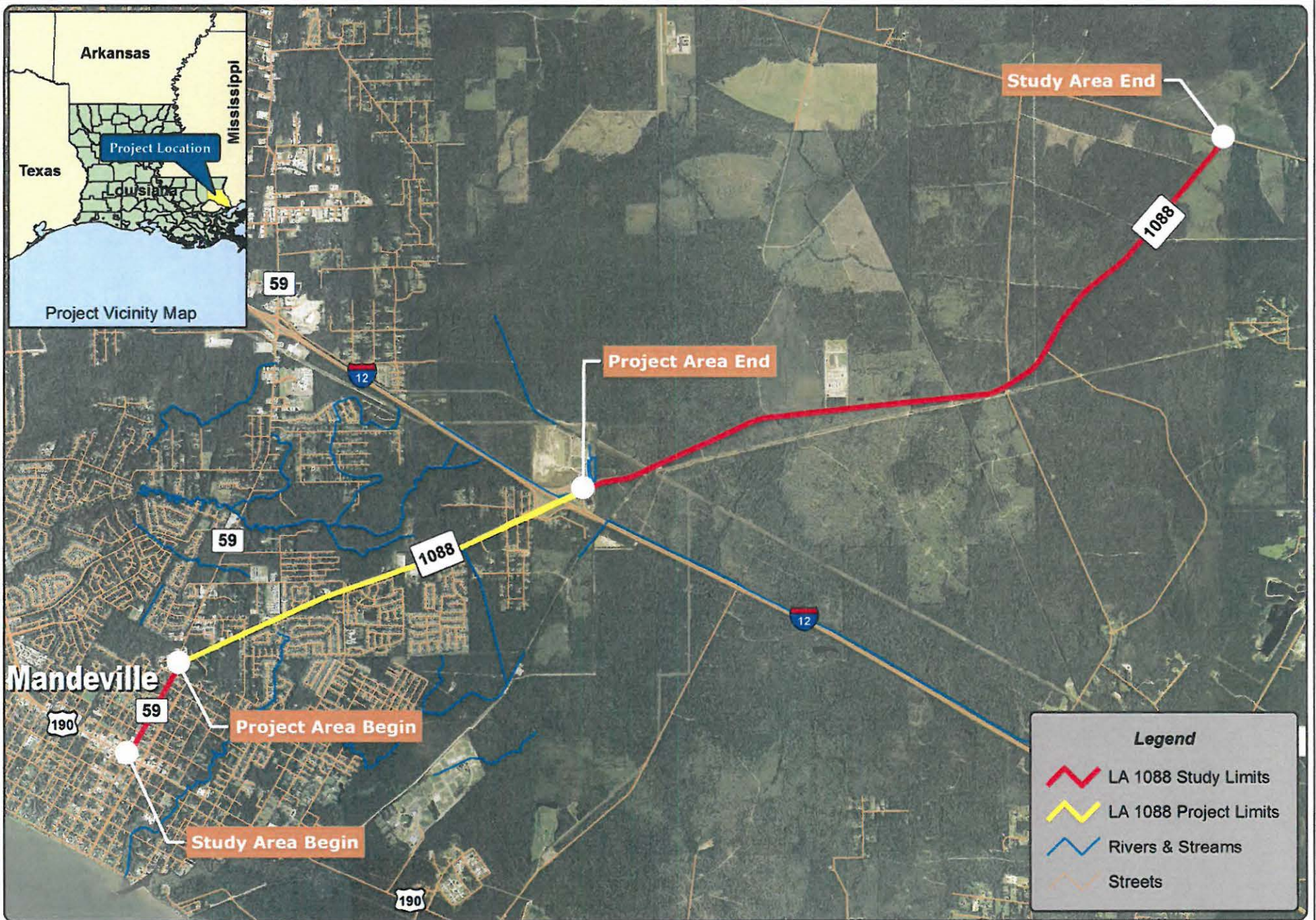
from Forest Brook Blvd. to the interstate interchange with roundabouts replacing the interchange intersections.

- Alternative 2 – A new 2-lane divided curb & gutter section (LA 59 to Forest Brook Blvd.) with a 6' median (back of curb to back of curb) with 5' bike lanes on both sides of the road adjacent to the through lanes. A sidewalk shall be added to the north to meet the complete streets design. A new 4-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with Roundabouts replacing the interchange intersections.
- Alternative 3 – A new 3-lane section with full access with 5' bike lanes on both sides of the road adjacent to the through lanes and a sidewalk on the north side of the roadway.
- Alternative 4 – A new 4-lane divided roadway with limited access from side streets utilizing U-turns and/or roundabouts. It shall include a 5' bike lane on both sides of the roadway and a sidewalk on the north side of the roadway.

Additional right-of-way may be required at the roundabout locations and other roadway areas depending upon the alternative considered.

The Stage 0 study found improvements to the project are feasible. The Corridor study is now progressing to Stage 1 planning and environmental analysis. It is anticipated that the project will be processed environmentally through preparation of an Environmental Assessment (EA). Analysis of each alternative, including the No-Build, will be made and discussed in the EA. Items to consider include, but are not limited to, traffic patterns, permits, land use, community/social, economic, historic, cultural, recreational, archaeological, noise, air, hazardous waste sites, wetlands, floodplains, farmland, and endangered or threatened species and/or their habitats. It is anticipated that the EA will be completed in twelve months.

The Stage 0 study included two stake holder meetings with public officials and one public information meeting. The Stage 1 study may include a public meeting during preparation of the Draft EA and a public hearing when the Draft EA is made available to the public.



Note: This map is for presentation use only
and not to be used for construction purposes.

VOLKERT

0 0.5 1
Miles
1 inch = 1 miles



**LA 1088 Corridor Study
St Tammany Parish
Project Location Map**

Path: \\192.168.10.3\\b\\534100.60 LA 1088 Corridor Study\\DESIGN\\ENGINEERING\\GEOGRAPHICAL INFORMATION SYSTEM\\GIS EA\\Map Documents\\Project Location Map.mxd



Environmental Section
P.O. Box 94245 | Baton Rouge, LA 70804-9245
phone: 225-242-4502 | fax: 225-242-4500

Jon Bel Edwards, Governor
Shawn D. Wilson, Secretary

March 21, 2018

State Project No. H.010116
F.A.P. No. H010116
Name: LA 1088 CORRIDOR STUDY
St. Tammany Parish

Mr. Wes Bolinger
Division Administrator
Federal Highway Administration
5304 Flanders Drive, Suite A
Baton Rouge, Louisiana 70808

Attn: Bob Mahoney

SUBJECT: Logical Termini for Environmental Assessment

Dear Mr. Bolinger:

The Louisiana Department of Transportation and Development (LADOTD) is preparing an Environmental Assessment addressing proposed improvements to LA 1088 between LA 59 and the I-12 interchange westbound ramps as shown on the attached map. The purpose of the proposed improvements is to reduce existing congestion and accommodate future traffic demands. Proposed improvements include constructing roundabouts, highway widening, and the possibility of sidewalks and bike paths. The total length of the proposed project is approximately 3.5 miles.

LADOTD proposes that LA 59 (Girod St.) and the I-12 westbound ramps be established as logical termini for the project limits. The southern terminus at LA 59 is logical because LA 59 is a two-lane highway with a center turn lane both east and west of the two lane LA 1088 intersection. The northern terminus of the project is also logical because the proposed four-lane section of LA 1088 will connect to the existing four-lane section at the I-12 Interchange. The proposed improvements do not increase highway capacity as no new through lanes are proposed for the project. The proposed improvements do not depend upon additional transportation improvements in the area and do not restrict consideration of other alternatives for other transportation improvements in the area. It is requested that the Federal Highway Administration concur with the proposed logical termini for the project limits.

The initial logical termini for this project were approved by your office on October 1, 2015, but when this project was initially scoped, we anticipated impacts on the north side of the interchange. However, as the study progressed, the traffic issues were able to be resolved with access

APPROVED
[Signature]
ASST. DIVISION ADMINISTRATOR
PROJECT DELIVERY TEAM LEADER
FEDERAL HIGHWAY ADMINISTRATION
DATE 3/22/18

Mr. Wes Bolinger
March 21, 2018
Page 2

management and roundabouts instead of the addition of extra lanes for capacity. The reduction in scope has resulted in a smaller area of analysis than previously approved. We are requesting that your office approve these logical termini to coincide with the reduced project limits.

We appreciate your concurrence or comments. If you have any questions or need additional information, please contact Mr. Robert Lott at (225) 242-4504.

Sincerely,

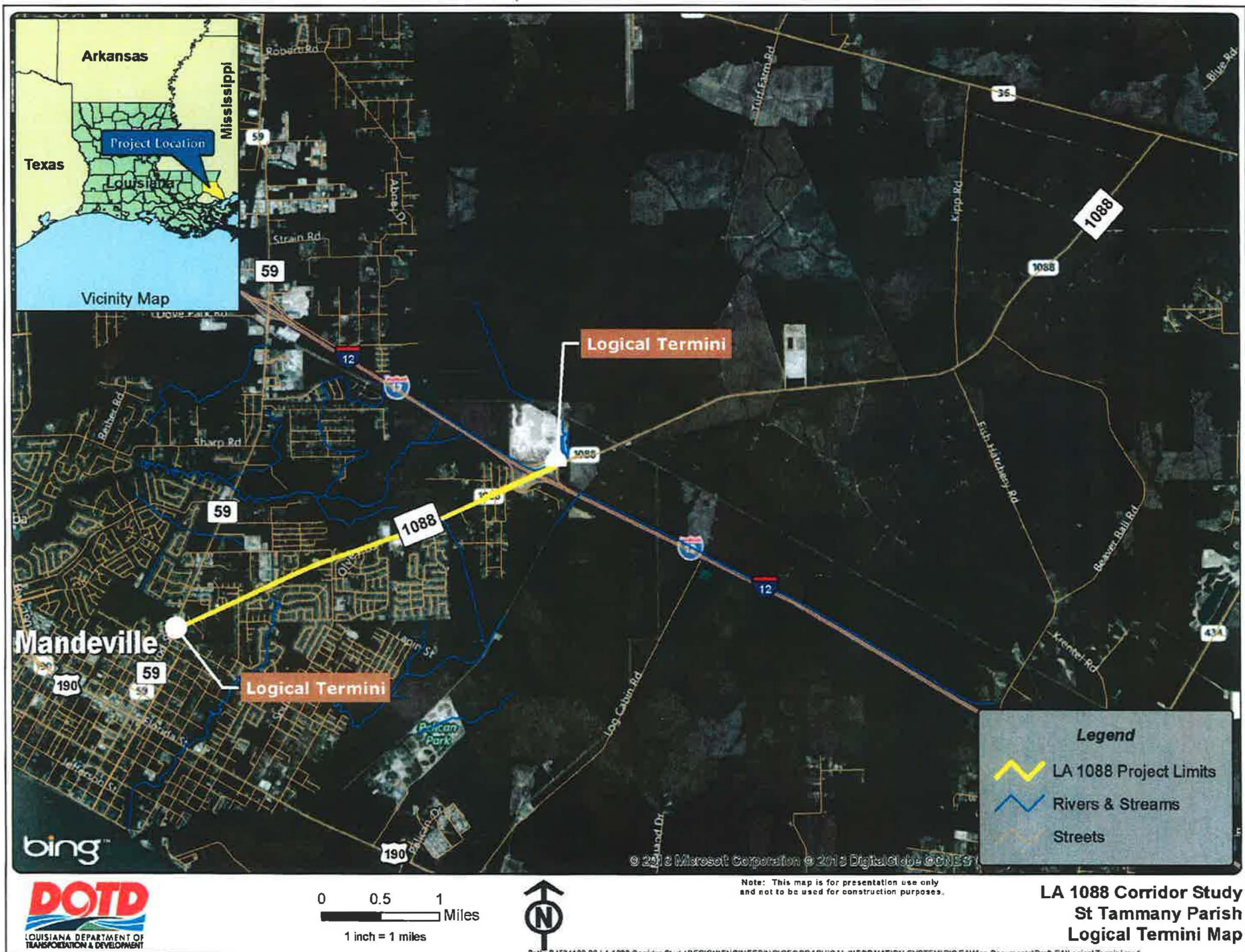


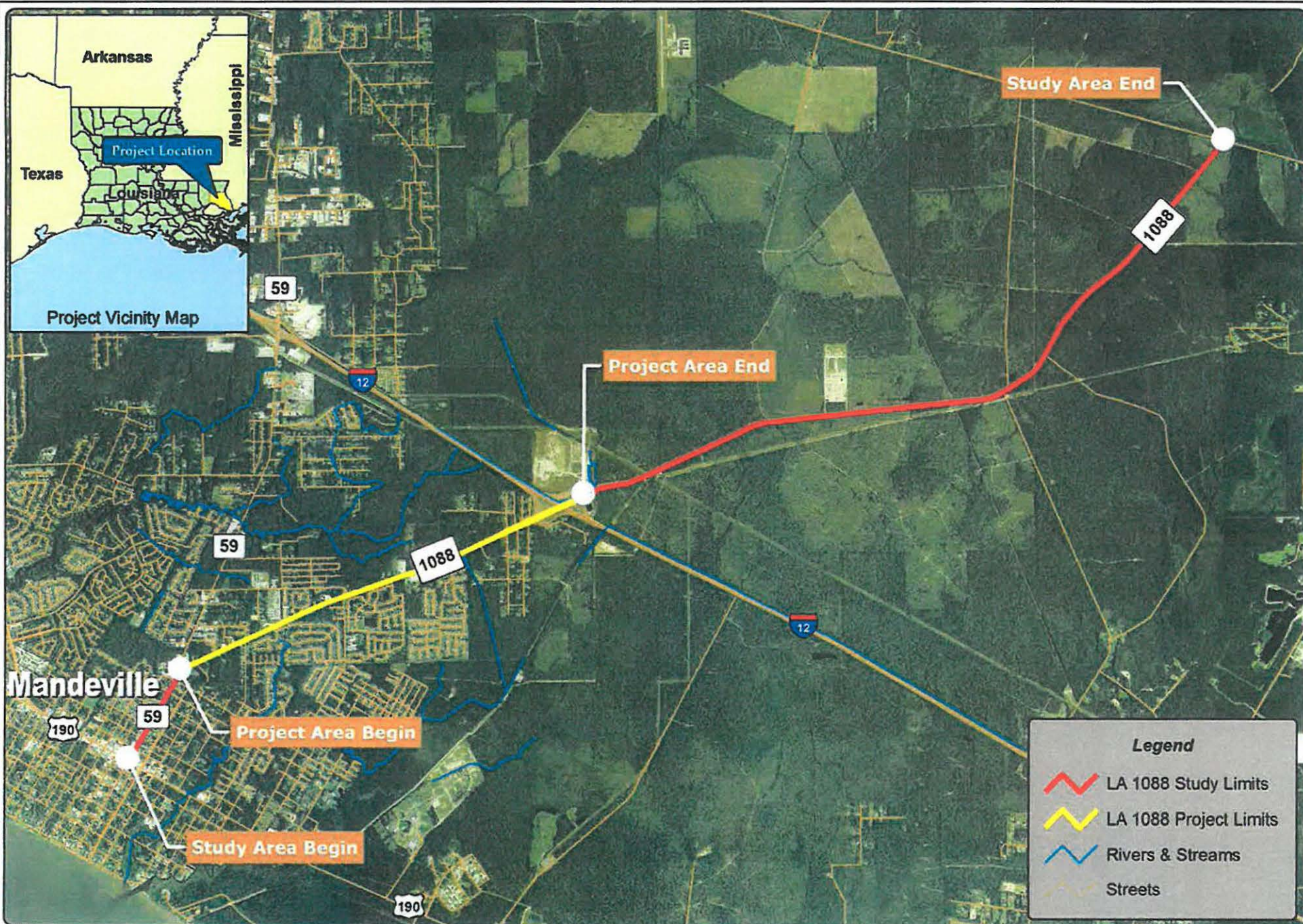
for Noel Ardoin
Environmental Engineer Administrator

NA/rll
Attachment

cc: Mr. Elnur Musa, P.E.

REVIEWED AND RECOMMENDED FOR
APPROVAL Tim Mahoney
DATE 3-21-18





VOLKERT

0 0.5 1
Miles
1 inch = 1 miles



Note: This map is for presentation use only
and not to be used for construction purposes

**LA 1088 Corridor Study
St Tammany Parish
Project Location Map**

Path: \\192.168.10.3\534100.80 LA 1088 Corridor Study\DESIGN\ENGINEERING\GEOGRAPHICAL INFORMATION SYSTEM\GIS EA\Map Documents\Project Location Map.mxd



United States Department of Agriculture

April 8, 2015

Noel Ardoin
Environmental Engineer Administrator
LA DOTD
P.O. Box 94245
Baton Rouge, Louisiana 70804-9245

RE: State Project No. H.010116
Federal Aid Project No. H010116
LA 1088 Corridor Study
St. Tammany Parish
Solicitation of Views

Dear Mr. Ardoin:

I have reviewed the above referenced project for potential requirements of the Farmland Protection Policy Act (FPPA) and potential impact to Natural Resources Conservation Service projects in the immediate vicinity.

Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

The project map and description submitted with your request indicates that the proposed construction areas are within urban areas and therefore is exempt from the rules and regulations of the Farmland Protection Policy Act (FPPA)—Subtitle I of Title XV, Section 1539-1549. Furthermore, we predict no impact to NRCS projects in the vicinity.

For specific information about the soils found in the project area, please visit our Web Soil Survey at the following location:

<http://websoilsurvey.nrcs.usda.gov/>

Please direct all future correspondence to me at the address shown below.

Respectfully,

(ACTING FOR)
Kevin D. Norton
State Conservationist

Natural Resources Conservation Service
State Office
3737 Government Street
Alexandria, Louisiana 71302
Voice: (318) 473-7751 Fax: 1-844-325-6947
An Equal Opportunity Provider and Employer



LOUISIANA DEPARTMENT OF AGRICULTURE & FORESTRY
MIKE STRAIN DVM
COMMISSIONER



April 21, 2015

Agricultural &
Environmental
Sciences
P.O. Box 3596
Baton Rouge,
LA 70821
(225) 925-3770
Fax: 925-3760

Agro-Consumer
Services
P.O. Box 3098
Baton Rouge,
LA 70821
(225) 922-1341
Fax: 923-4877

Animal Health
& Food Safety
P.O. Box 1951
Baton Rouge,
LA 70821
(225) 925-3962
Fax: 925-4103

Forestry
P.O. Box 1628
Baton Rouge,
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(225) 925-4500
Fax: 922-1356

Management
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Baton Rouge,
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Fax: 925-6012

Soil & Water
Conservation
P.O. Box 3554
Baton Rouge,
LA 70821
(225) 922-1269
Fax: 922-2577

DOTD
Environmental Engineer Administrator
P.O. Box 94245
Baton Rouge, Louisiana 70804-9245

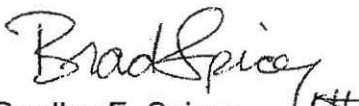
RE: Solicitation of Views

STATE PROJECT NOS.: H.010116
FEDERAL AID PROJECT NOS.: H010116
NAME: LA 1088 CORRIDOR STUDY
PARISH: ST. TAMMANY

Dear Ms. Ardoin,

I have no comment at this time regarding the above referenced project.

Sincerely,


Bradley E. Spicer
Assistant Commissioner

BES:kh



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

April 9, 2015

Ms. Noel A. Ardoin
Environmental Engineer Administrator
LADOTD
P.O. Box 94245
Baton Rouge, LA 70804-9245

Dear Ms. Ardoin:

We have received your March 31, 2015, letter requesting our evaluation of the potential environmental impacts which might result from the following project:

**Improvements to LA 1088
Intersection of LA 1088 & LA 59 (Mandeville) to the
Intersection of LA 1088 & LA 36 (Abita Springs)
STP No. H.010116 & FAP No. H010116
Tammany Parish
Mandeville & Abita Springs, Louisiana**

The project, proposed for financial assistance through the Louisiana Department of Transportation and Development funds, is located on the Southern Hills aquifer system which has been designated a sole source aquifer (SSA) by the EPA. Based on the information provided for the project, we have determined that the project, as proposed, should not have an adverse effect on the quality of the ground water underlying the project site.

This approval of the proposed project does not relieve the applicant from adhering to other State and Federal requirements, which may apply. This approval is based solely upon the potential impact to the quality of ground water as it relates to the EPA's authority pursuant to Section 1424(e) of the Safe Drinking Water Act.

If you did not include the parish, project description, project location or the federal funding agency, please do so in future SSA correspondence.

If you have any questions on this letter or the SSA program please contact me at (214) 665-8485.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Omar T. Martinez", is written over a horizontal line.

Omar T. Martinez, Coordinator
Sole Source Aquifer Program
Ground Water/UIC Section

cc: Jesse Means, LDEQ



W. L. "Trey" Folsie, III
Superintendent

Pete Jabbla
Assistant Superintendent

Regina Sanford
Assistant Superintendent

TRANSPORTATION DEPARTMENT
68391 James Street
Mandeville, LA 70471
985.898.3373 • Fax 985.898.3378

District	Board Members
4	Stephen J. "Jack" Laup, III, President
13	Robin P. Mullett, Vice President
1	Neal M. Hennegan
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5	Charles T. Harrell
6	Michael C. Nation
7	Willie B. Jeter
8	Peggy H. Seeley
9	Sharon Lo Drucker
10	Ronald "Ron" Bettencourt
11	Robert R. "Bob" Womack
12	Richard "Rickey" Hursey, Jr.
14	Dennis S. Cousin
15	Mary K. Bellisario

April 10, 2015

LDOTD Environmental Engineer Administrator
P.O. Box 94245
Baton Rouge, LA 70804-9245

SUBJECT: SOLICITATION OF VIEWS

I have reviewed the information furnished to us by your department. I believe that the road improvements will greatly benefit the five school zones for the described areas.

If I can assist you in any way, please do not hesitate to contact me at 985-898-3373.

Sincerely,


Cathy B. Aime
Supervisor of Administration

Learning to Last a Lifetime.®



Office of the Secretary
PO Box 94245 | Baton Rouge, LA 70804-9245
ph: 225-379-3005 | fx: 225-379-3002

Bobby Jindal, Governor
Sherri H. LeBas, P.E., Secretary

May 21, 2015

STATE PROJECT NO: H.010116
FEDERAL AID PROJECT NO: H010116
NAME: LA 1088 CORRIDOR STUDY
ROUTE: LA 1088
PARISHES: ST. TAMMANY

Noel Ardoin
Louisiana Department of Transportation and Development
P.O. Box 94245
Baton Rouge, LA 70804

Subject: Solicitation of Views

Dear Noel:

Enclosed is a copy of St. Tammany Parish's Flood Insurance Rate Maps (FIRM) indicating the proposed project.

During the improvements and construction, there must be allowance for the adequate flow of water and assurance that there will be no back up of water. There must be no instance of the creation of flooding where there was no flooding prior to construction. At this time, consideration must be given to the responsibility for cleaning debris and keeping the surrounding area clear so as not to interfere with its function.

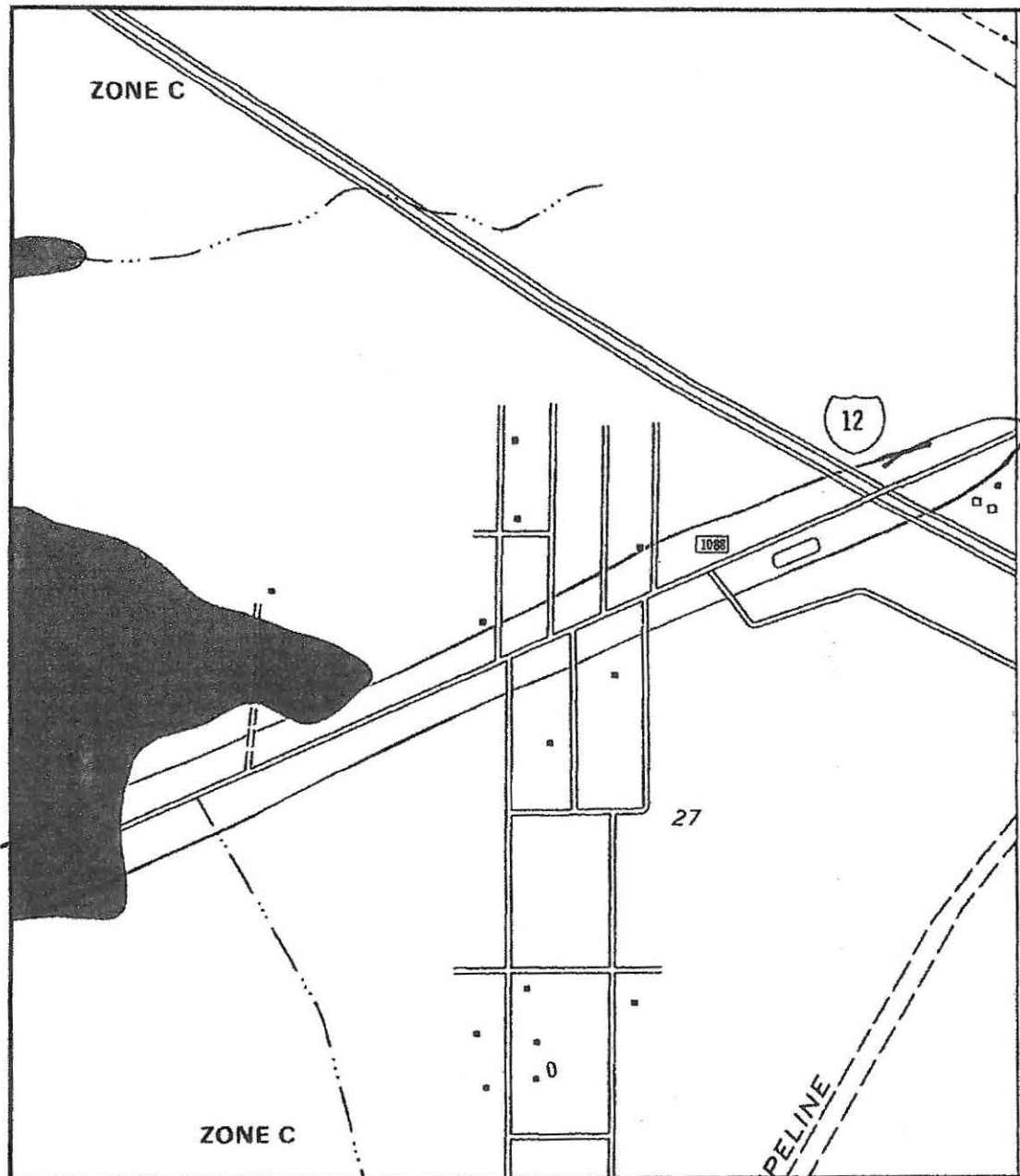
In order to assure compliance with the St. Tammany Parish's requirements for the National Flood Insurance Program (NFIP), and ensure that appropriate permits are obtained, please contact the floodplain administrators for the Parish. The contact person for the St. Tammany Parish is Alan Pelegrin, 21490 Koop Drive, Mandeville, LA 70448, and telephone number (985) 369-2390.

We thank you for the opportunity to comment on this project. If you need additional information, please contact our office, (225) 379-3005.

Sincerely,

Jennifer Deglandon Rachal
Floodplain Management Program Coordinator

Enclosure
pc: Alan Pelegrin



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

**ST. TAMMANY PARISH,
LOUISIANA**
(UNINCORPORATED AREAS)

PANEL 245 OF 600
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
225205 0245 C

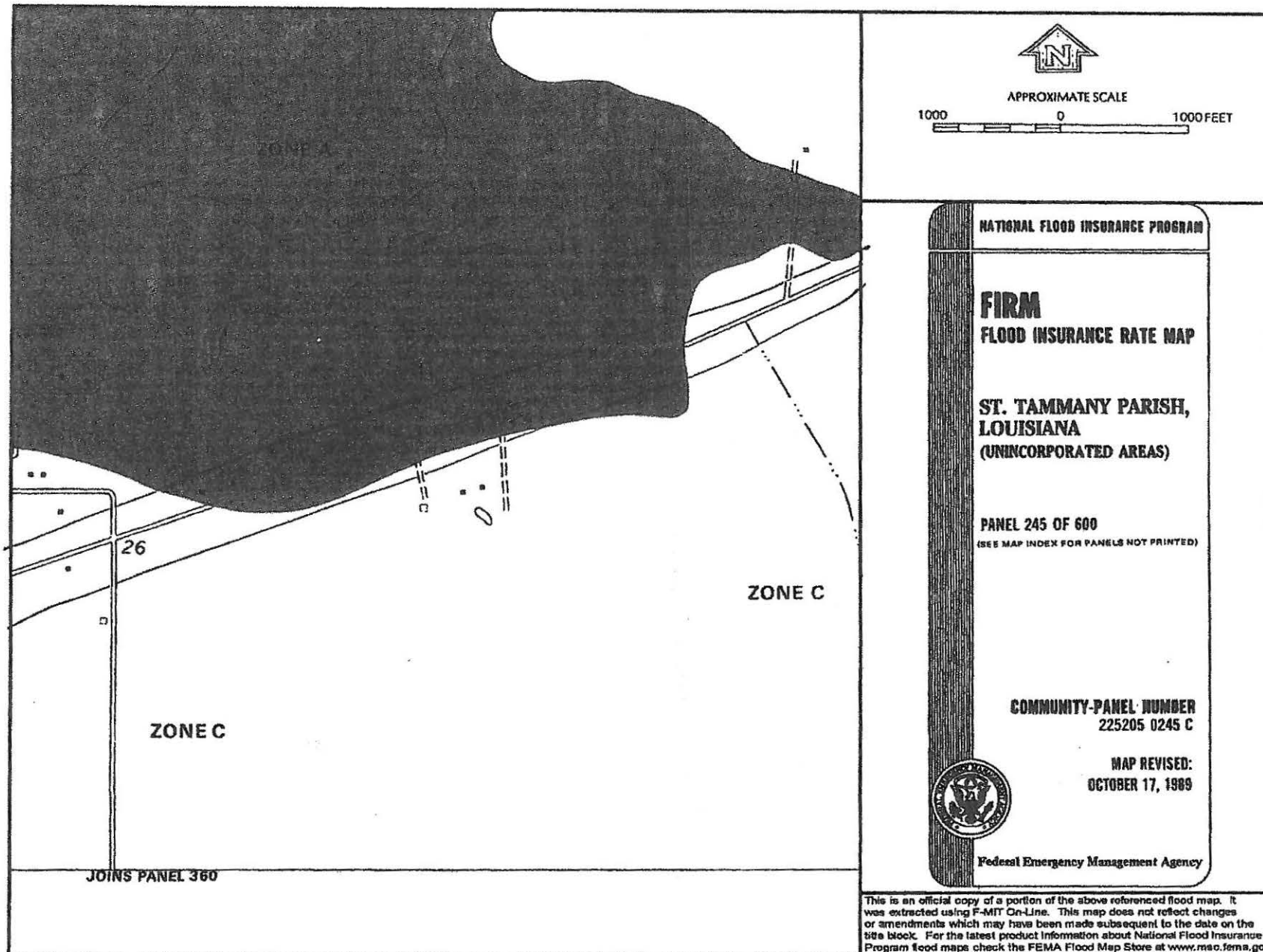
MAP REVISED:
OCTOBER 17, 1989



Federal Emergency Management Agency

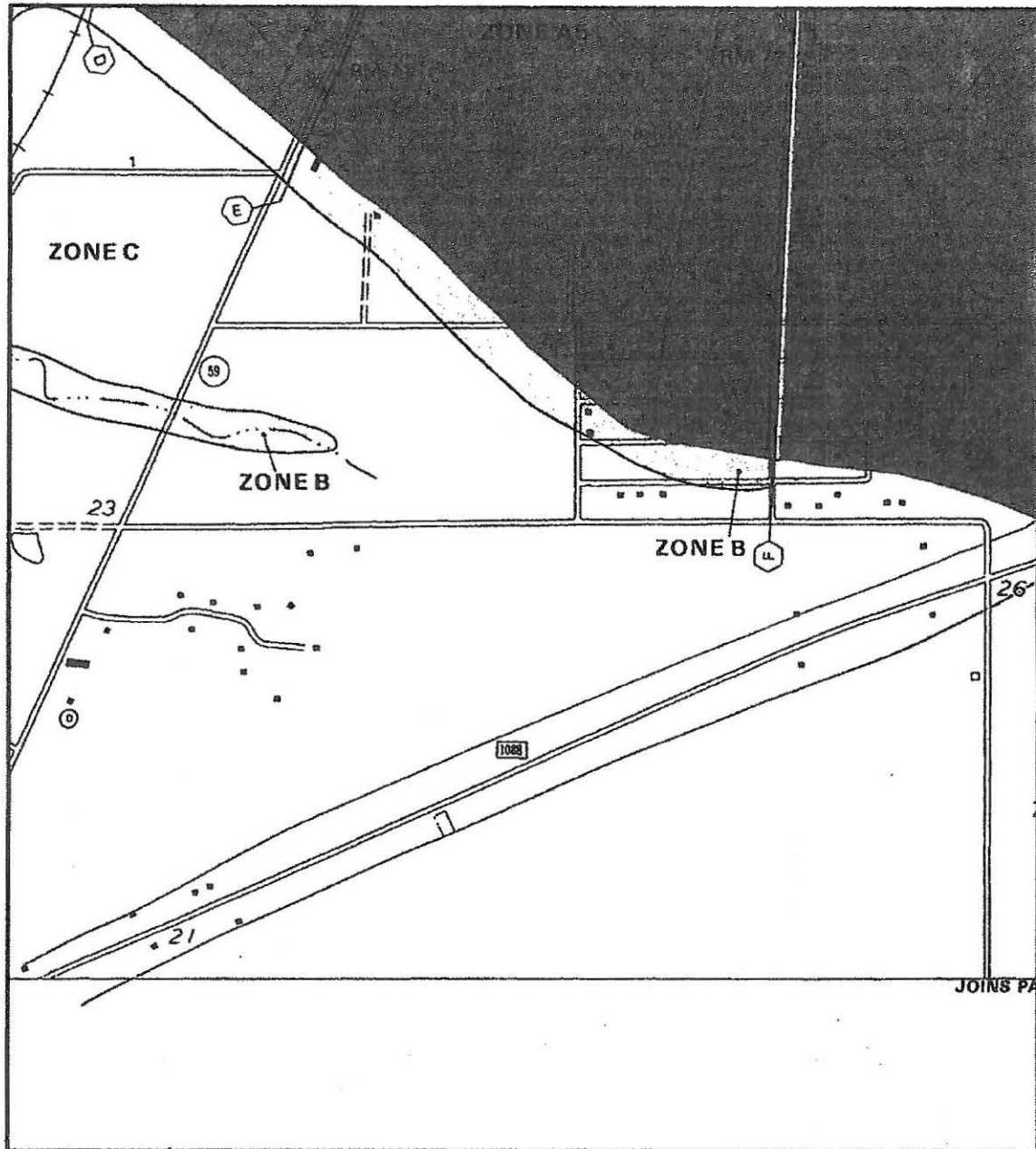
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

1 of 4: H.010116 - LA 1088 Corridor Study



This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.msc.fema.gov

2 of 4: H.010116 - LA 1088 Corridor Study



NATIONAL FLOOD INSURANCE PROGRAM

**FIRM
FLOOD INSURANCE RATE MAP**

**ST. TAMMANY PARISH,
LOUISIANA
(UNINCORPORATED AREAS)**

**PANEL 245 OF 600
(SEE MAP INDEX FOR PANELS NOT PRINTED)**

**COMMUNITY-PANEL NUMBER
225205 0245 C**

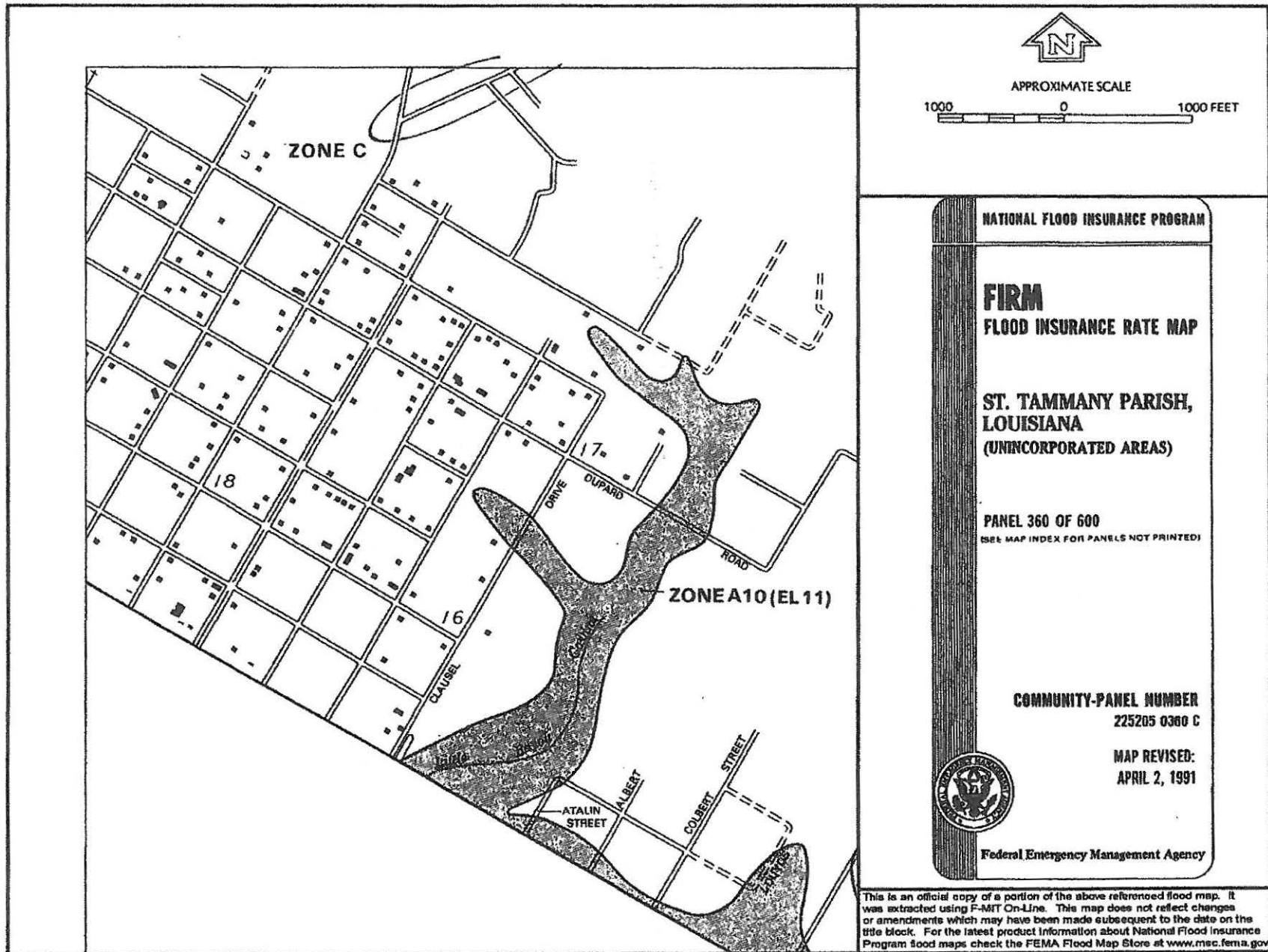
**MAP REVISED:
OCTOBER 17, 1989**



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

3 of 4: H.010116 - LA 1088 Corridor Study



4 of 4: H.010116- LA 1088 Corridor Study



FEMA

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION VI
MITIGATION DIVISION

NOTICE REVIEW/ENVIRONMENTAL CONSULTATION

☐ We have no comments to offer. ☒ We offer the following comments:

**WE WOULD REQUEST THAT THE COMMUNITIES' FLOODPLAIN
ADMINISTRATORS BE CONTACTED FOR THE REVIEW AND POSSIBLE PERMIT
REQUIREMENTS FOR THIS PROJECT. IF FEDERALLY FUNDED, WE WOULD
REQUEST PROJECT TO BE IN COMPLIANCE WITH EO13690 & EO 13990.**

REVIEWER:

Mayra G. Diaz
Floodplain Management and Insurance Branch
Mitigation Division
(940) 898-5541

DATE: April 20, 2015

Bobby Jindal
GOVERNOR



Kathy H. Kliebert
SECRETARY

State of Louisiana
Department of Health and Hospitals
Office of Public Health

April 10, 2015

LA DOTD
Environmental Engineer Administrator
P.O. Box 94245
Baton Rouge, LA 70804-9245

**Re: Solicitation of Views; State Project Number H.010116; F.A.P. No. H010116;
Name: LA1088 Corridor Study
Route: LA 1088
Parish: St Tammany Parish**

This office is in receipt of a Solicitation of Views regarding the above referenced project(s).

Based upon the information received from your office we have no objection to the referenced project(s) at this time. The applicant shall be aware of and comply with any and all applicable Louisiana State Sanitary Code regulations (LAC 51, as applicable). Furthermore, should additional project data become available to this office that in any way amend the information upon which this office's response has been based, we reserve the right of additional comments on the referenced project(s).

In the event of any future discovery of evidence of non-compliance with the Louisiana Administrative Code Title 51 (Public Health-Sanitary Code) and the Title 48 (Public Health-General) regulations or any applicable public health laws or statutes which may have escaped our awareness during the course of this cursory review, please be advised that this office's preliminary determination on this Solicitation of View of the project(s) shall not be construed as absolving the applicant of responsibility, if any, with respect to compliance with the Louisiana Administrative Code Title 51 (Public Health-Sanitary Code) and the Title 48 (Public Health-General) regulations or any other applicable public health laws or statutes.

Sincerely,

A handwritten signature in black ink, appearing to read "Yuanda Zhu".

Yuanda Zhu, P.G., Ph.D.
Louisiana Department of Health and Hospitals
Office of Public Health Engineering Services
Telephone: (225) 342-7432
Electronic mail: yuanda.zhu@la.gov



BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF WILDLIFE AND FISHERIES
OFFICE OF WILDLIFE

ROBERT J. BARHAM
SECRETARY
JIMMY L. ANTHONY
ASSISTANT SECRETARY

Date April 29, 2015
Name Noel Ardoin
Company LA DOTD
Street Address P.O. Box 94245
City, State, Zip Baton Rouge, LA 70804
Project State Project No. H.010116
LA 1088 Corridor Study
Project ID 842015
Invoice Number 15042920

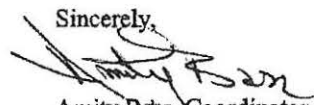
Personnel of the Coastal & Nongame Resources Division have reviewed the preliminary data for the captioned project.

Swallow-tailed kites (*Elanoides forficatus*) have been identified as occurring within a mile of the proposed project. This species is federally protected under the Migratory Bird Treaty Act and considered critically imperiled to imperiled (S1S2B) in the state of Louisiana. Swallow-tailed kites nest from mid-March to mid-May near water in large pine and cypress trees. The LNHP recommends that you protect all potential nesting habitat for this species. If nesting habitat occurs within the project area, a distance of 330 feet must be maintained around the Swallow-tailed kites nesting habitat. If you have any questions, please contact Michael Seymour at 225-763-3554.

After careful review of our database, no other impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. No state or federal parks, wildlife refuges, scenic streams, or wildlife management areas are known at the specified site within Louisiana's boundaries.

The Louisiana Natural Heritage Program (LNHP) has compiled data on rare, endangered, or otherwise significant plant and animal species, plant communities, and other natural features throughout the state of Louisiana. Heritage reports summarize the existing information known at the time of the request regarding the location in question. The quantity and quality of data collected by the LNHP are dependent on the research and observations of many individuals. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Louisiana have not been surveyed. This report does not address the occurrence of wetlands at the site in question. Heritage reports should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. LNHP requires that this office be acknowledged in all reports as the source of all data provided here. If at any time Heritage tracked species are encountered within the project area, please contact the LNHP Data Manager at 225-765-2643. If you have any questions, or need additional information, please call 225-765-2357.

Sincerely,



Amity Bass, Coordinator
Natural Heritage Program



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Louisiana Ecological Services Field Office
646 CAJUNDOME BOULEVARD, SUITE 400
LAFAYETTE, LA 70506
PHONE: (337)291-3100 FAX: (337)291-3139

Consultation Code: 04EL1000-2015-SLI-0235

June 05, 2015

Event Code: 04EL1000-2015-E-00170

Project Name: LA1088 Roadway Improvements

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered and candidate species, as well as designated and proposed critical habitat that may occur within the boundary of your proposed project and may be affected by your proposed project. The Fish and Wildlife Service (Service) is providing this list under section 7 (c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Changes in this species list may occur due to new information from updated surveys, changes in species habitat, new listed species and other factors. Because of these possible changes, feel free to contact our office (337/291-3126) for more information or assistance regarding impacts to federally listed species. The Service recommends visiting the ECOS-IPaC site or the Louisiana Ecological Services website (www.fws.gov/lafayette) at regular intervals during project planning and implementation for updated species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the habitats upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of Federal trust resources and to determine whether projects may affect Federally listed species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected (e.g. adverse, beneficial, insignificant or discountable) by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the “Endangered Species Consultation Handbook” at <http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF> or by contacting our office at the number above.

Bald eagles have recovered and were removed from the List of Endangered and Threatened Species as of August 8, 2007. Although no longer listed, please be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668 *et seq.*). The Service developed the National Bald Eagle Management (NBEM) Guidelines to provide landowners, land managers, and others with information and recommendations to minimize potential project impacts to bald eagles, particularly where such impacts may constitute “disturbance,” which is prohibited by the BGEPA. A copy of the NBEM Guidelines is available at:

<http://www.fws.gov/southeast/es/baldeagle/NationalBaldEagleManagementGuidelines.pdf>.

Those guidelines recommend: (1) maintaining a specified distance between the activity and the nest (buffer area); (2) maintaining natural areas (preferably forested) between the activity and nest trees (landscape buffers); and (3) avoiding certain activities during the breeding season. On-site personnel should be informed of the possible presence of nesting bald eagles within the project boundary, and should identify, avoid, and immediately report any such nests to this office. If a bald eagle nest occurs or is discovered within or adjacent to the proposed project area, then an evaluation must be performed to determine whether the project is likely to disturb nesting bald eagles. That evaluation may be conducted on-line at:

<http://www.fws.gov/southeast/es/baldeagle>. Following completion of the evaluation, that website will provide a determination of whether additional consultation is necessary. The Division of Migratory Birds for the Southeast Region of the Service (phone: 404/679-7051, e-mail: SEmigratorybirds@fws.gov) has the lead role in conducting any necessary consultation. Should you need further assistance interpreting the guidelines or performing an on-line project evaluation, please contact this office.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g. cellular, digital television, radio and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm> ;

<http://www.towerkill.com>; and

<http://fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

Activities that involve State-designated scenic streams and/or wetlands are regulated by the Louisiana Department of Wildlife and Fisheries and the U.S. Army Corps of Engineers, respectively. We, therefore, recommend that you contact those agencies to determine their interest in proposed projects in these areas.

Activities that would be located within a National Wildlife Refuge are regulated by the refuge staff. We, therefore, recommend that you contact them to determine their interest in proposed projects in these areas.

Additional information on Federal trust species in Louisiana can be obtained from the Louisiana Ecological Services website at: www.fws.gov/lafayette or by calling 337/291-3100.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: LA1088 Roadway Improvements

Official Species List

Provided by:

Louisiana Ecological Services Field Office
646 CAJUNDOME BOULEVARD, SUITE 400
LAFAYETTE, LA 70506
(337) 291-3100

Consultation Code: 04EL1000-2015-SLI-0235

Event Code: 04EL1000-2015-E-00170

Project Type: TRANSPORTATION

Project Name: LA1088 Roadway Improvements

Project Description: The proposed project location is located in the City of Mandeville, St. Tammany Parish, Louisiana. The proposed project begins north of I-12 at Latitude 30.396654° N and Longitude -89.990104° W. The project then travels south west along LA-1088 for approximately 4.2 miles where it intersects LA-59 (Girod Street) at Latitude 30.374109° N and Longitude -90.054623° W. The project is to improve roadway conditions for pedestrians and vehicles. There are five alternatives, all of which stay within ROW.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: LA1088 Roadway Improvements

Project Location Map:



Project Coordinates: The coordinates are too numerous to display here.

Project Counties: St. Tammany, LA



United States Department of Interior
Fish and Wildlife Service

Project name: LA1088 Roadway Improvements

Endangered Species Act Species List

There are a total of 8 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Red-Cockaded woodpecker (<i>Picoides borealis</i>) Population: Entire	Endangered		
Sprague's Pipit (<i>Anthus spragueii</i>)	Candidate		
Clams			
Alabama heelsplitter (<i>Potamilus inflatus</i>) Population: Entire	Threatened		
Ferns and Allies			
Louisiana quillwort (<i>Isoetes louisianensis</i>)	Endangered		
Fishes			
Atlantic sturgeon (Gulf subspecies) (<i>Acipenser oxyrinchus</i> (=oxyrhynchus) <i>desotoi</i>) Population: Entire	Threatened	Final designated	
Mammals			



United States Department of Interior
Fish and Wildlife Service

Project name: LA1088 Roadway Improvements

West Indian Manatee (<i>Trichechus manatus</i>) Population: Entire	Endangered	Final designated	
Reptiles			
Gopher tortoise (<i>Gopherus polyphemus</i>) Population: W of of Mobile/Tombigbee Rs.	Threatened		
Ringed Map turtle (<i>Graptemys oculifera</i>) Population: Entire	Threatened		



United States Department of Interior
Fish and Wildlife Service

Project name: LA1088 Roadway Improvements

Critical habitats that lie within your project area

There are no critical habitats within your project area.



Environmental Section

PO Box 94245 | Baton Rouge, LA 70804-9245
Phone: 225-242-4502 | fax: 225.242.4500

John Bel Edwards, Governor
Shawn D. Wilson, Ph.D., Secretary

August 17, 2017

STATE PROJECT NO.: H.010116
FEDERAL AID PROJECT NO.: H010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH

Mr. Brad S. Rieck
Deputy Supervisor
U.S. Fish and Wildlife Service
Louisiana Ecological Services Office
646 Cajundome Boulevard, Suite 400
Lafayette, LA 70506

This project has been reviewed for effects to Federal trust resources under our jurisdiction and currently protected by the Endangered Species Act of 1973 (Act). The project, as proposed, (X) Will have no effect on those resources () is not likely to adversely effect those resources

Joseph L. Rieck
Supervisor
Louisiana Ecological Services Office
U.S. Fish and Wildlife Service

24 Aug 17
Date

SUBJECT: Effects Determinations/CONSULTATION CODE: 04EL1000-2015-SLI-0235

Dear Mr. Rieck:

Under contract supervision by the Louisiana Department of Transportation and Development (DOTD), Volkert Inc. contacted your office to obtain a species list for St. Tammany Parish for surveys along LA 1088 near the City of Mandeville. The list was printed on June 5, 2015. Volkert, Inc. conducted field work along the LA 1088 project corridor in May 2015 and provided the attached Biological Report in July 2015. This letter summarizes the project description and effects determinations on listed species.

Project Description

DOTD, in cooperation with the Federal Highway Administration (FHWA), is studying proposed improvements to the accessibility, safety, and mobility of vehicle, pedestrian, and bicycle traffic through the LA 1088 corridor. Proposed improvements include constructing roundabouts, highway widening, and the possibility of sidewalks and bike paths. The total length of the proposed project is approximately 3.5 miles.

Project study area limits were established to encompass the maximum possible extent of construction. The project study area limits begin approximately 0.5 mile (~2,600 feet) north of Interstate 12 at Latitude 30.394994°N and Longitude -89.995446°W and encompass LA 1088. LA 1088 continues southwest to the intersection of LA 59 (Girod Street) at Latitude 30.37109°N and Longitude -90.054623°W. From the intersection of LA 1088 and LA 59, the project study area limits extend north-northeast along LA 59 for approximately 670 linear feet ending at Latitude 30.376075°N and Longitude -90.054003°W. The proposed project study area limits also extend south-southwest from the intersection of LA 1088 and LA 59 for approximately 1,140 linear feet along LA 59 ending at Latitude 30.371283°N and Longitude -90.056268°W.

Volkert, Inc. conducted pedestrian field surveys within the project study area limits during the weeks of May 11-15, 2015, and May 18-22, 2015. Biologists determined the presence or absence of threatened and endangered species and their suitable habitats in or near the project study area limits. Photographs of habitats were taken throughout the project study area limits and are provided as Exhibit A in the attached Biological Report.

Mr. Brad Rieck
August 17, 2017
Page 2



Effects Determinations for Listed Species for St. Tammany Parish

NAME	FEDERAL STATUS	SUITABLE HABITAT IN PROJECT AREA?	EFFECTS DETERMINATION
Red-cockaded Woodpecker (<i>Picoides borealis</i>)	Endangered	No	No effect
Sprague's Pipit (<i>Anthus spragueii</i>)	Candidate	No	No effect
Alabama heelsplitter (<i>Potamilus inflatus</i>)	Threatened	No	No effect
Louisiana quillwort (<i>Isoetes louisianensis</i>)	Endangered	No	No effect
Atlantic sturgeon (Gulf sub-species) (<i>Acipenser oxyrinchus desotoi</i>)	Threatened	No	No effect
West Indian manatee (<i>Trichechus manatus</i>)	Endangered	No	No effect
Gopher tortoise (<i>Gopherus polyphemus</i>)	Threatened	No	No effect
Ringed map turtle (<i>Graptemys oculifera</i>)	Threatened	No	No effect

None of the listed species were observed over the two week survey and no areas of suitable habitat were observed within or near the project study area limits. No Bald Eagles or their nests were observed within or near the project study area.

DOTD is dedicated to good stewardship and will implement and maintain stormwater pollution prevention measures, and best management practices during construction as outlined in the 2016 Edition of the Louisiana Standard Specifications for Roads and Bridges (available online at: http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Standard_Specifications/Pages/Standard%20Specifications.aspx).

DOTD has determined that this project will have no effect on the listed species for St. Tammany Parish due to the lack of suitable habitat within and near the project area.

DOTD appreciates the continued cooperation from your office. We look forward to future opportunities to work together. If you have any questions, please contact Maria Bernard Reid at (225) 242-4506 or maria.reid@la.gov.

Sincerely,


for Noel Ardoin
Environmental Engineer Administrator

NA/MBR/mbtr

enclosure



ALABAMA-COUSHATTA TRIBE OF TEXAS

571 State Park Road 56 • Livingston, Texas 77351 • (936) 563-1100

May 15, 2015

DOTD

Environmental Engineer Administrator

P.O. Box 94245

Baton Rouge, LA 70804-9245

Dear Administrator:

On behalf of Mikko Colabe III Clem Sylestine and the Alabama-Coushatta Tribe, our appreciation is expressed on your efforts to consult us regarding H010116: LA 1088 Corridor Study proposal in St. Tammany Parish.

Our Tribe maintains ancestral associations throughout the state of Louisiana despite the absence of written records to completely identify Tribal activities, villages, trails, or burial sites. However, it is our objective to ensure significances of American Indian ancestry, especially of Alabama-Coushatta origin, are administered with the utmost considerations.

Upon review of your March 31, 2015 submission, no known impacts to cultural assets of the Alabama-Coushatta Tribe of Texas are anticipated in conjunction with this proposal. In the event of the inadvertent discovery of archaeological artifacts and/or human remains, activity in proximity to the location must cease and appropriate authorities, including our Office, notified without delay for additional consultations.

Should you require further assistance, please do not hesitate to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Bryant J. Celestine".

Bryant J. Celestine

Historic Preservation Officer



JAY DARDENNE
LIEUTENANT GOVERNOR

State of Louisiana
OFFICE OF THE LIEUTENANT GOVERNOR
DEPARTMENT OF CULTURE, RECREATION & TOURISM
OFFICE OF CULTURAL DEVELOPMENT

CHARLES R. DAVIS
DEPUTY SECRETARY

PAM BREAU
ASSISTANT SECRETARY

April 13, 2015

Noel Ardoin
Environmental Engineer Administrator
LDOTD
P.O. Box 94245
Baton Rouge, LA 70804-9245

Re: Section 106 Review
Request for Additional Information
State Project No. H.0010116
LA 1088 Corridor Study
St. Tammany Parish, LA

Dear Ms. Ardoin:

Thank you for your letter of March 31, 2015, concerning the above-referenced undertaking. We are unable to complete the Section 106 review at this time due to the submittal of insufficient documentation. We will need the following information to complete our review for the aforementioned project:

- ☐ Name of federal agency, agency involvement (Funding, license/permit, etc. and description of the undertaking (Detailed description of project).
- ☐ Applicant contact information (Name, address, phone number and email address).
- ☐ Agency contact information (Name, address, phone number and email address).
- ☒ Description of the Area of Potential Effects (APE). The APE can be direct or indirect. It is defined as "the geographic area or areas within which an undertaking may cause changes in the character or use of historic properties, if any such properties exist." (Include the latitude/longitude of the undertaking location and APE)
- ☒ Description of all historic properties within and adjacent to the APE. The historic standing structure is any structure fifty years of age and older. Under Section 106, it is the responsibility of the federal agency or its designee to identify all structures listed or eligible for listing in the National Register of Historic Places.
- ☒ Detailed project scope of work including design plans.
- ☒ Map and site plan showing APE and exact location of project undertaking.
- ☒ Photographs of the entire APE and project location. Photographs of all historic (fifty years of age and older) within the APE. Buildings should be documented showing diagonal views of front and side and rear and opposite side of the building. All photos should be keyed to a site map and project plans if applicable.

Noel Ardoin
April 13, 2015
Page 2

If you have any questions, please contact Mike Varnado in the Division of Historic Preservation at (225) 219-4596 or mvarnado@crt.la.gov.

Sincerely,

A handwritten signature in cursive script that reads "Pam Breaux". The signature is written in dark ink and is positioned above the printed name and title.

Pam Breaux
State Historic Preservation Officer

PB:MV:s



Jack Donahue
State Senator
District 11

Senate
State of Louisiana

COMMITTEES:

Finance, *Chairman*
Education
Judiciary A
Senate & Governmental Affairs
Joint Legislative Committee
on the Budget, *Chairman*
Legislative Budgetary
Control Council
State Bond Commission

April 16, 2015

Noel Ardoin
Environmental Engineer Administrator
LADOTD
P.O. Box 94245
Baton Rouge, LA 70804-9245

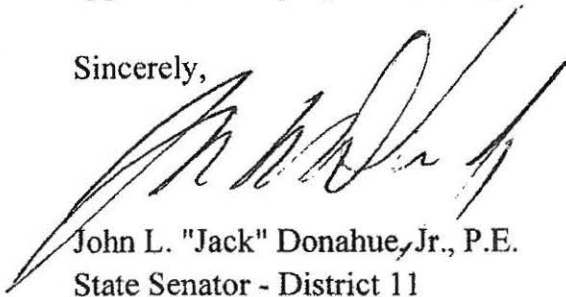
Re: State Project No: H.010116

Dear Mr. Ardoin:

Thank you for submitting to me the preliminary description of project number H010116: LA 1088 Corridor Study.

I do support efforts to improve the LA 1088 corridor and ask that you please keep me apprised of the project's developments, plans and any meetings regarding the same.

Sincerely,



John L. "Jack" Donahue, Jr., P.E.
State Senator - District 11



Jack Donahue
State Senator
District 11

Senate
State of Louisiana

April 16, 2015

COMMITTEES:

Finance, Chairman
Education
Judiciary A
Senate & Governmental Affairs
Joint Legislative Committee
on the Budget, Chairman
Legislative Budgetary
Control Council
State Bond Commission

Noel Ardoin
Environmental Engineer Administrator
LADOTD
P.O. Box 94245
Baton Rouge, LA 70804-9245

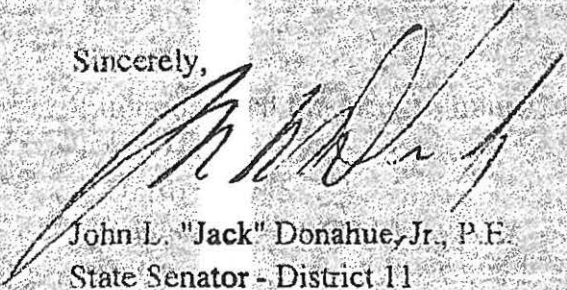
Re: State Project No: H010116

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Sincerely,


John L. "Jack" Donahue, Jr., P.E.
State Senator - District 11



LOUISIANA DEPARTMENT OF AGRICULTURE & FORESTRY
MIKE STRAIN DVM
COMMISSIONER



April 21, 2015

Agricultural &
Environmental
Sciences
P.O. Box 3596
Baton Rouge,
LA 70821
(225) 925-3770
Fax: 925-3760

Agro-Consumer
Services
P.O. Box 3098
Baton Rouge,
LA 70821
(225) 922-1341
Fax: 923-4877

Animal Health
& Food Safety
P.O. Box 1951
Baton Rouge,
LA 70821
(225) 925-3962
Fax: 925-4103

Forestry
P.O. Box 1628
Baton Rouge,
LA 70821
(225) 925-4500
Fax: 922-1356

Management
& Finance
P.O. Box 3481
Baton Rouge,
LA 70821
(225) 922-1255
Fax: 925-6012

Soil & Water
Conservation
P.O. Box 3554
Baton Rouge,
LA 70821
(225) 922-1269
Fax: 922-2577

DOTD
Environmental Engineer Administrator
P.O. Box 94245
Baton Rouge, Louisiana 70804-9245

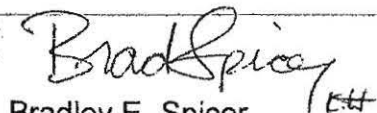
RE: Solicitation of Views

STATE PROJECT NOS.: H.010116
FEDERAL AID PROJECT NOS.: H010116
NAME: LA 1088 CORRIDOR STUDY
PARISH: ST. TAMMANY

Dear Ms. Ardoin,

I have no comment at this time regarding the above referenced project.

Sincerely,


Bradley E. Spicer
Assistant Commissioner

BES:kh



BILLY NUNGESSER
LIEUTENANT GOVERNOR

State of Louisiana
OFFICE OF THE LIEUTENANT GOVERNOR
DEPARTMENT OF CULTURE, RECREATION & TOURISM
OFFICE OF CULTURAL DEVELOPMENT
DIVISION OF ARCHAEOLOGY

RENNIE S. BURAS, II
DEPUTY SECRETARY

PHIL BOGGAN
ASSISTANT SECRETARY

9 June 2016

Stacie Palmer
Dept of Transportation and Development
PO Box 94245
Baton Rouge, LA 70804-9245

Re: Draft Report

La Division of Archaeology Report No. 22-5258

Phase I Cultural Resources Survey for the Louisiana Highway 1088 (LA 1088) Corridor Study, St. Tammany Parish, Louisiana

Dear Ms. Palmer:

We acknowledge receipt of your letter dated 25 May 2016 and two copies of the above-referenced report. We have completed our review of this report and have no comments to offer.

We concur that no historic properties will be impacted by this project. Our office has no further concerns for this project.

We look forward to receiving two bound copies of the final report along with a pdf of the report. If you have any questions please contact Chip McGimsey at the Division of Archaeology by email at cmcgimsey@crt.la.gov or by phone at 225-219-4598.

Sincerely,

A handwritten signature in blue ink that reads "Phil Boggan".

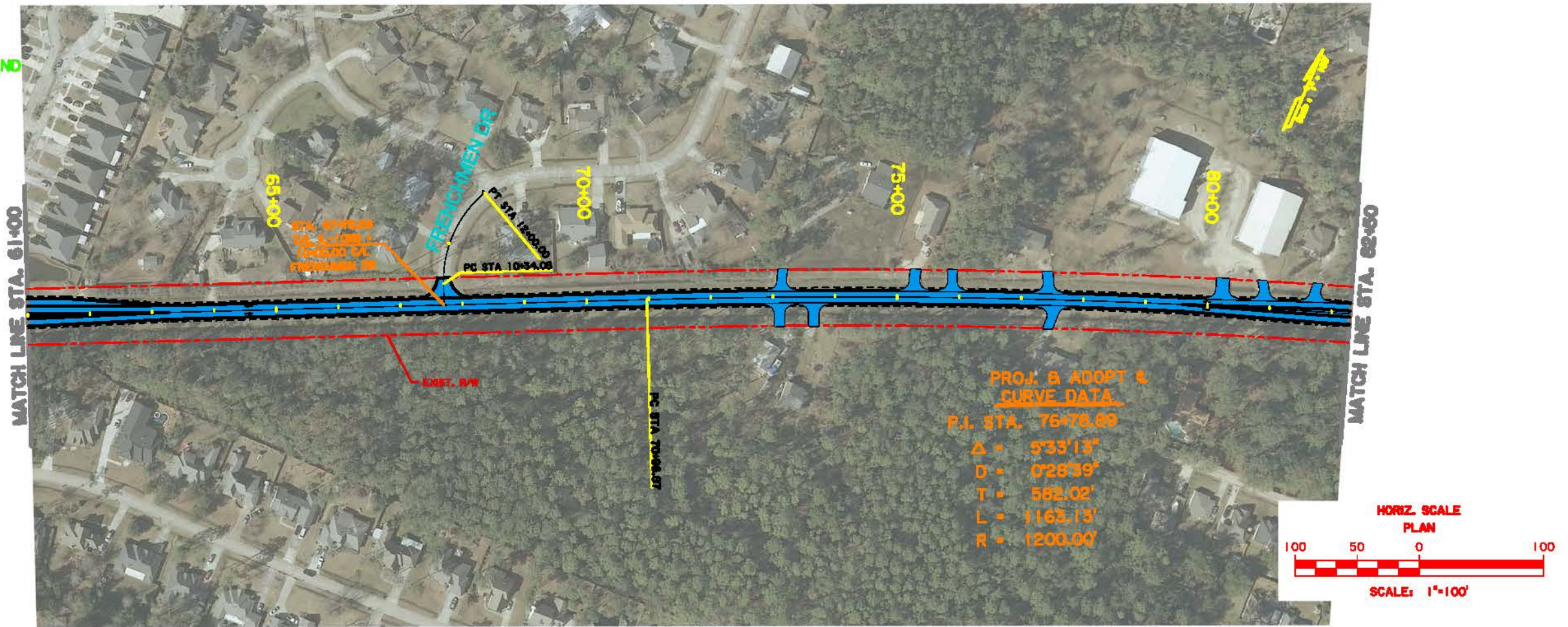
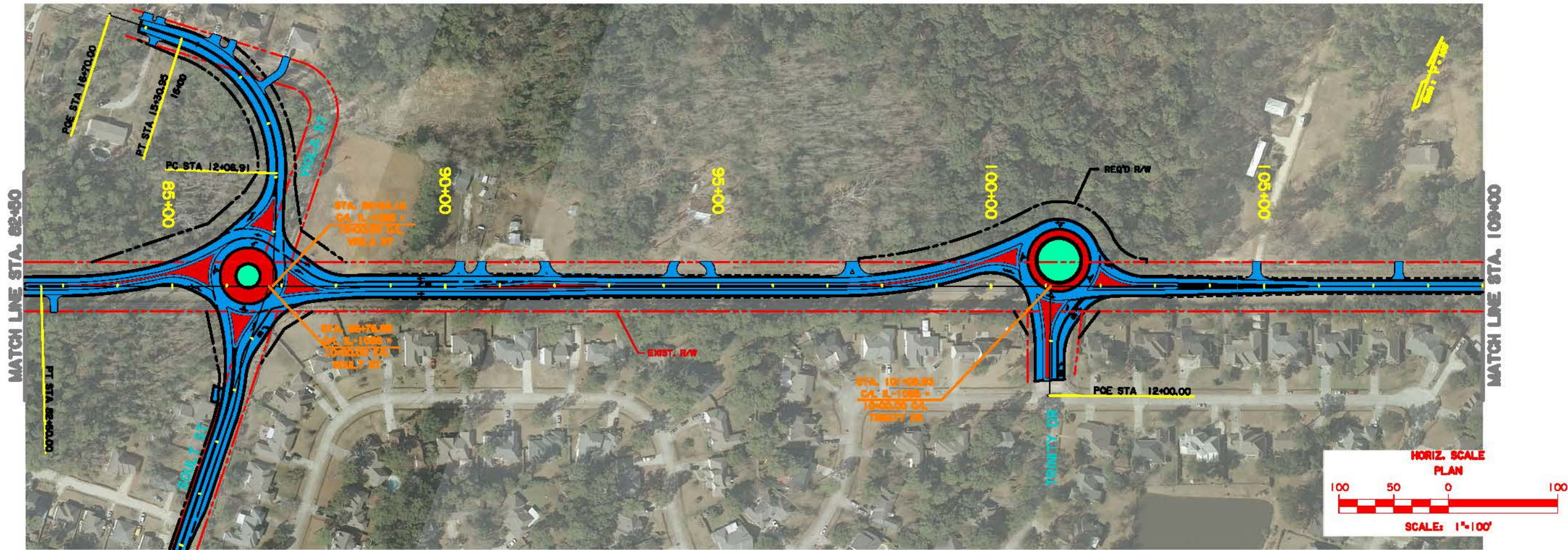
Phil Boggan
State Historic Preservation Officer

APPENDIX C

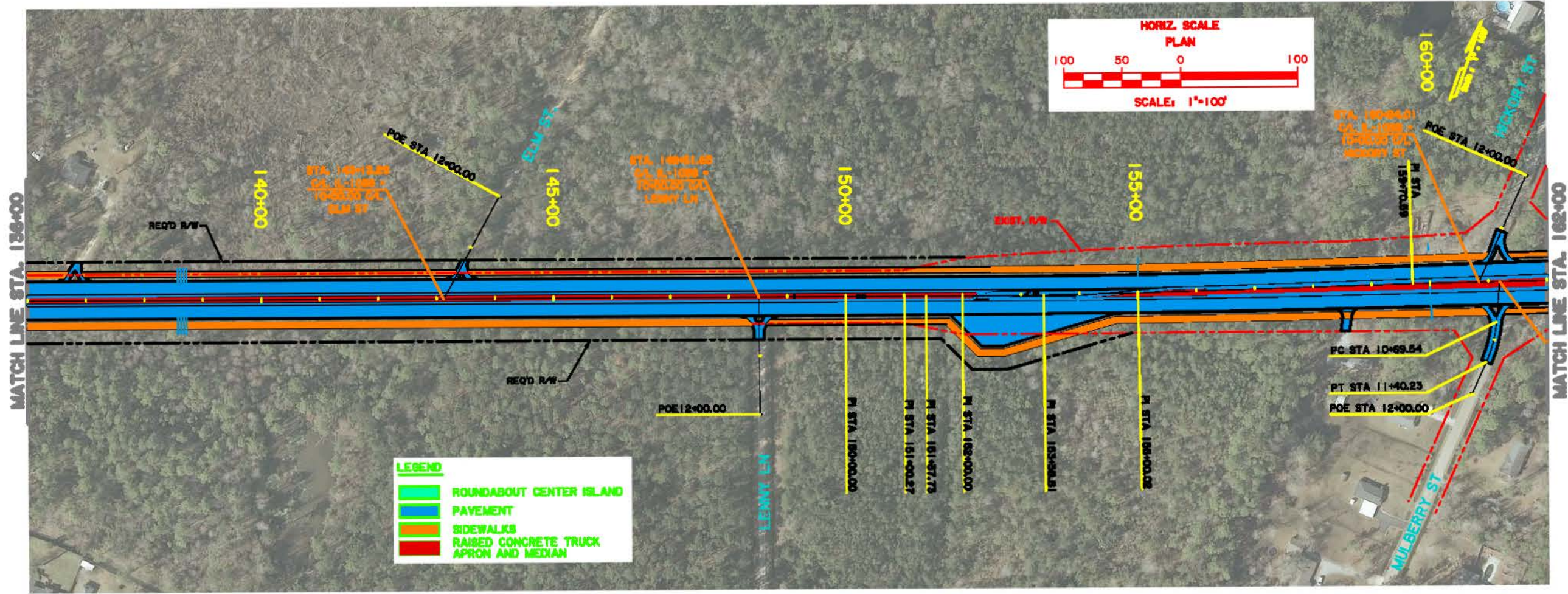
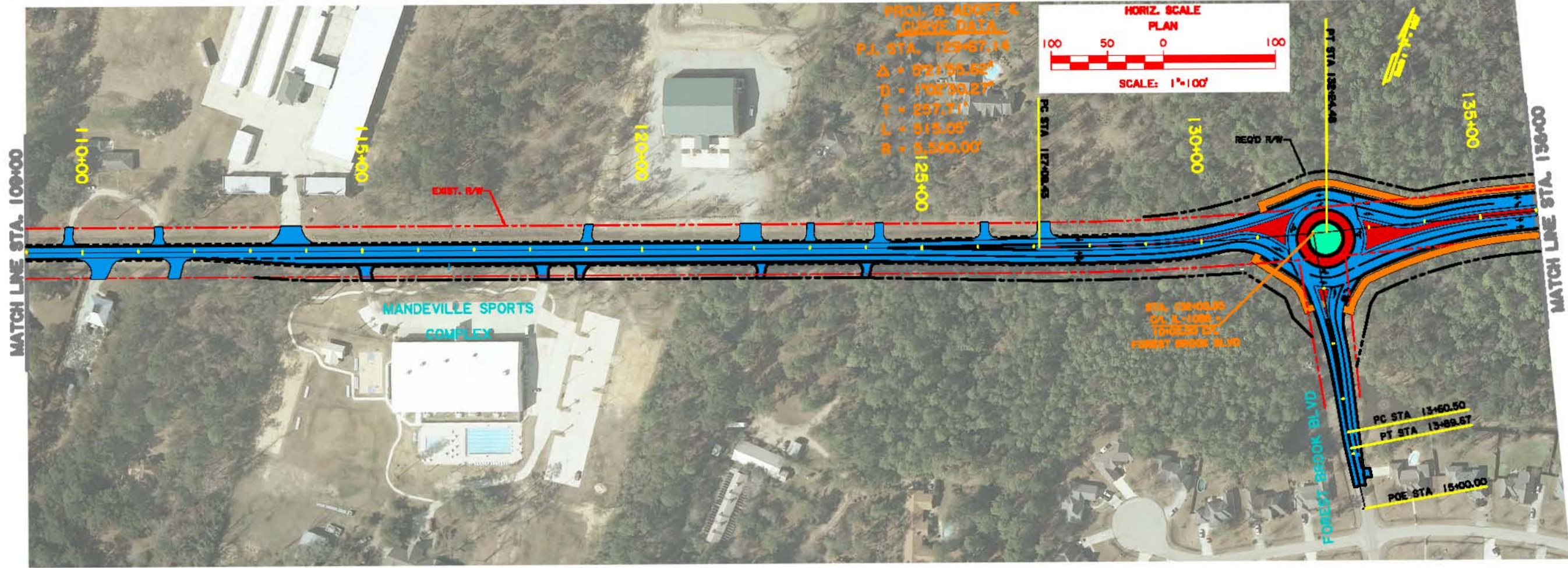
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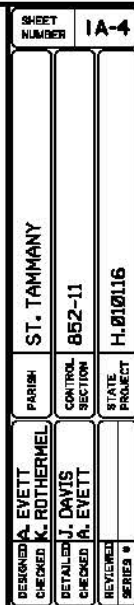
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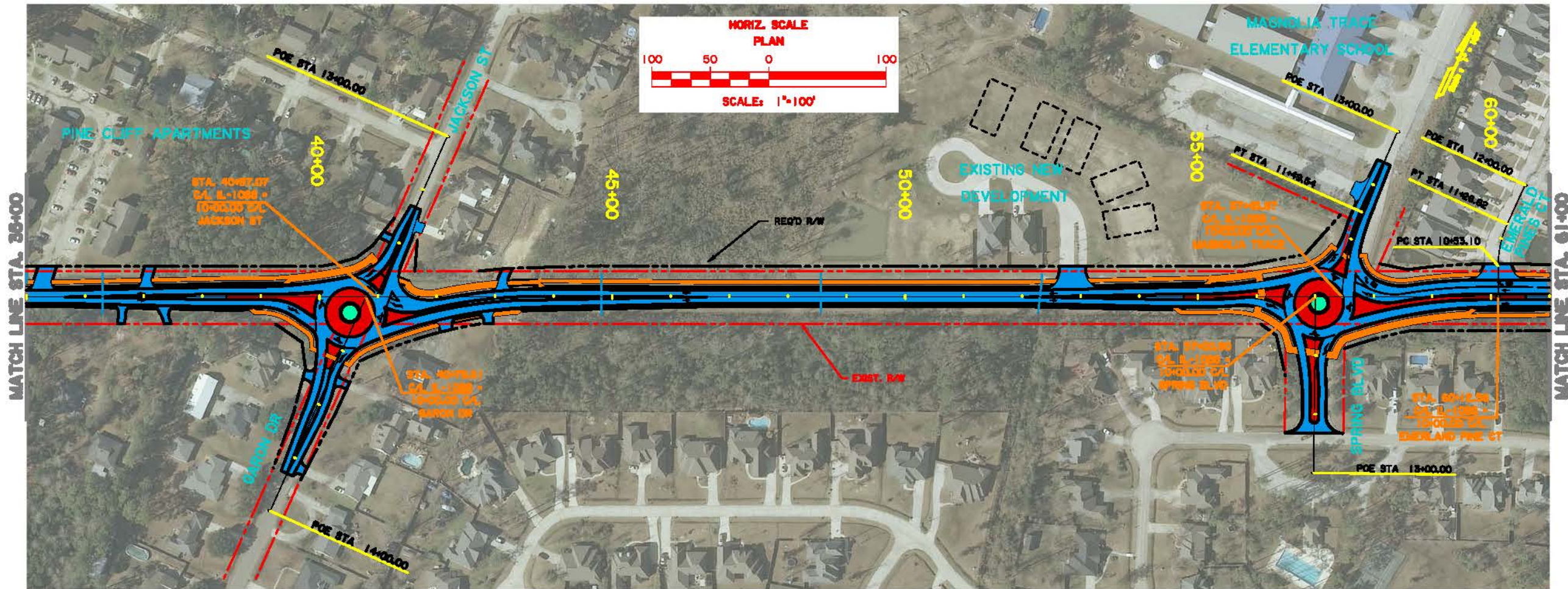
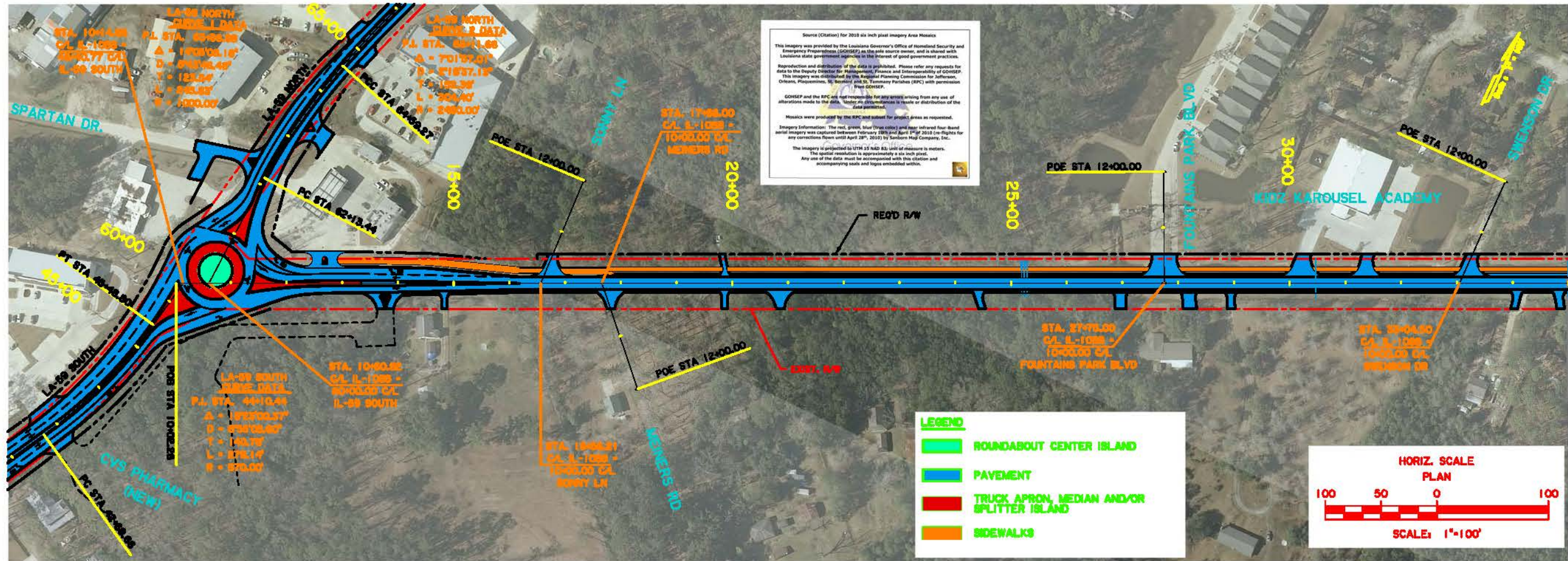


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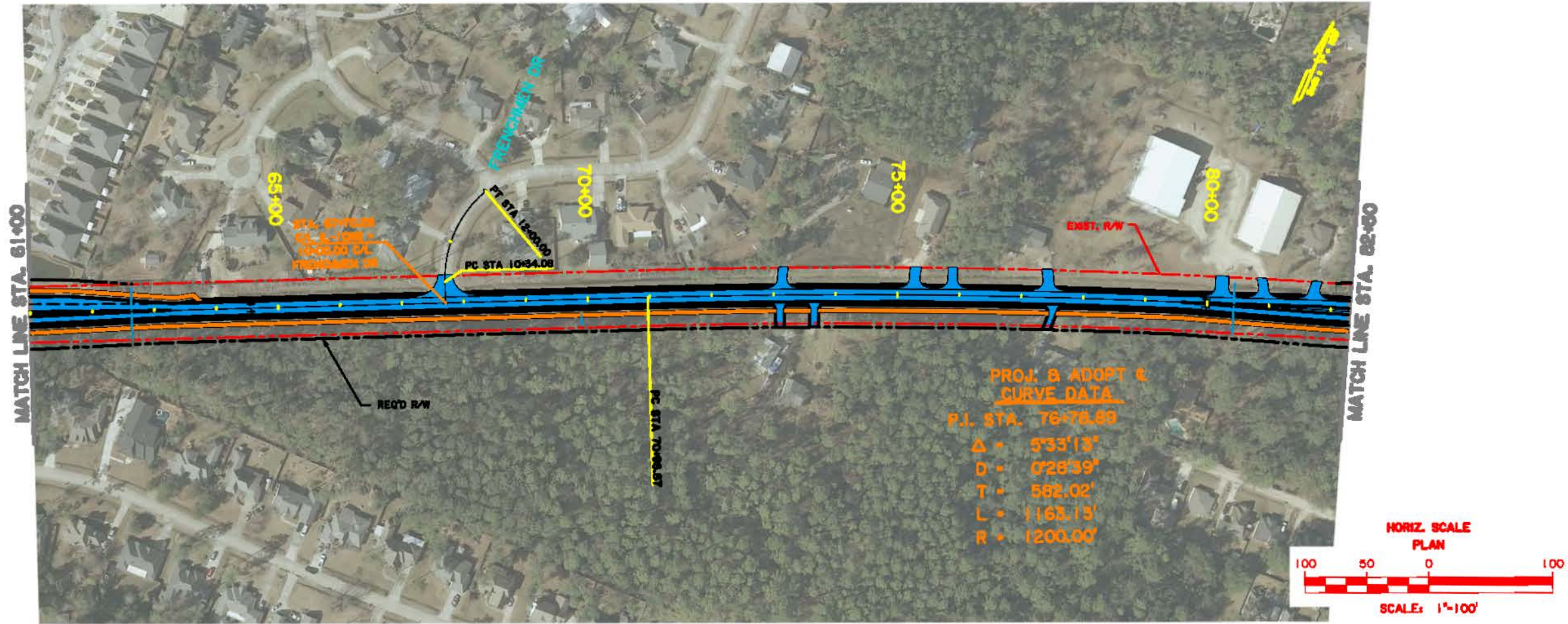
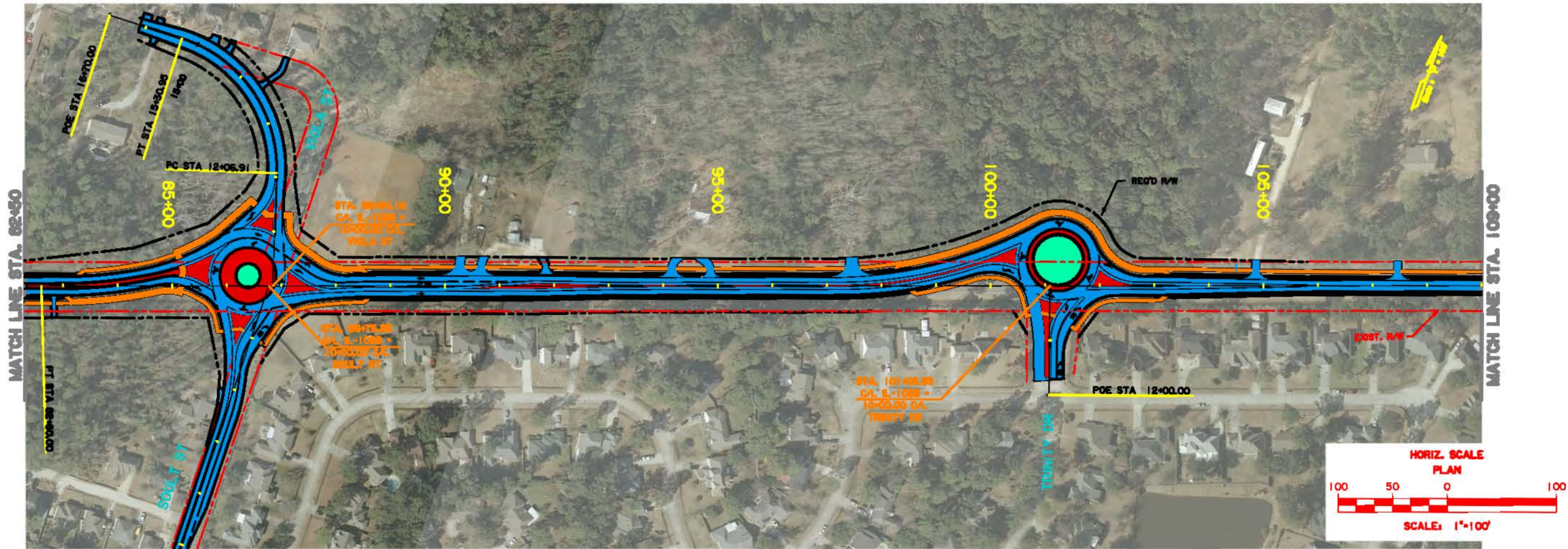
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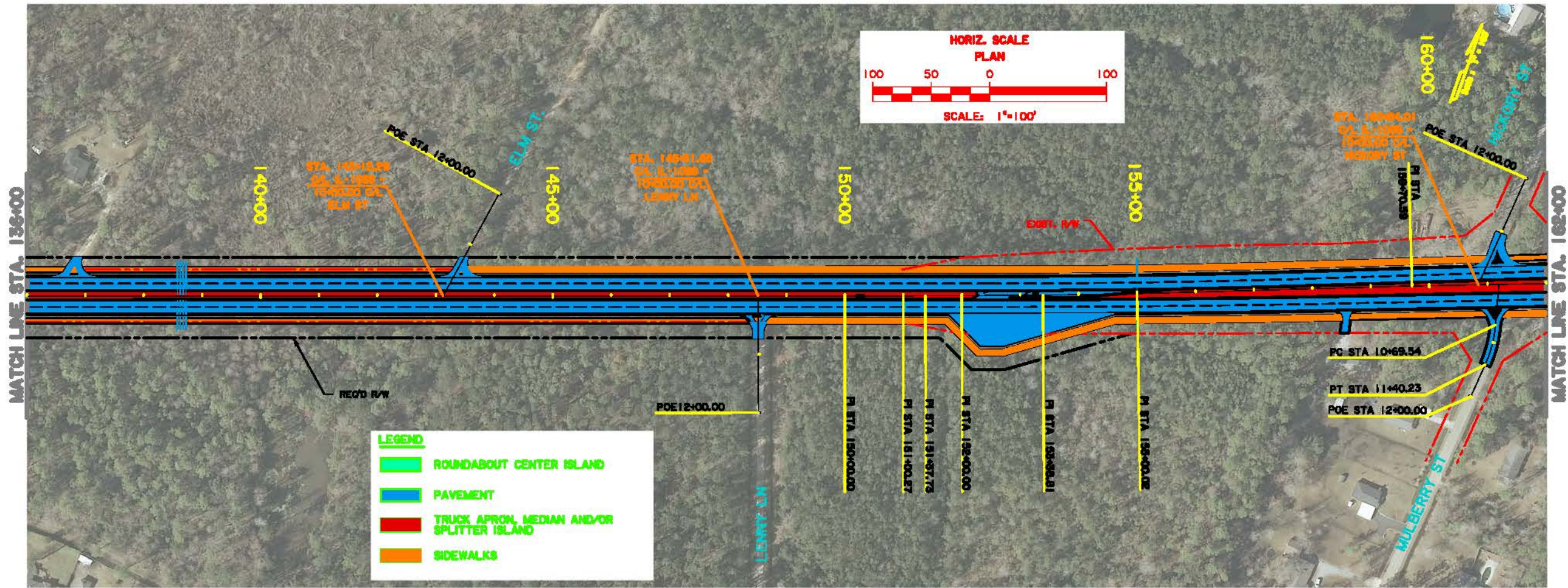


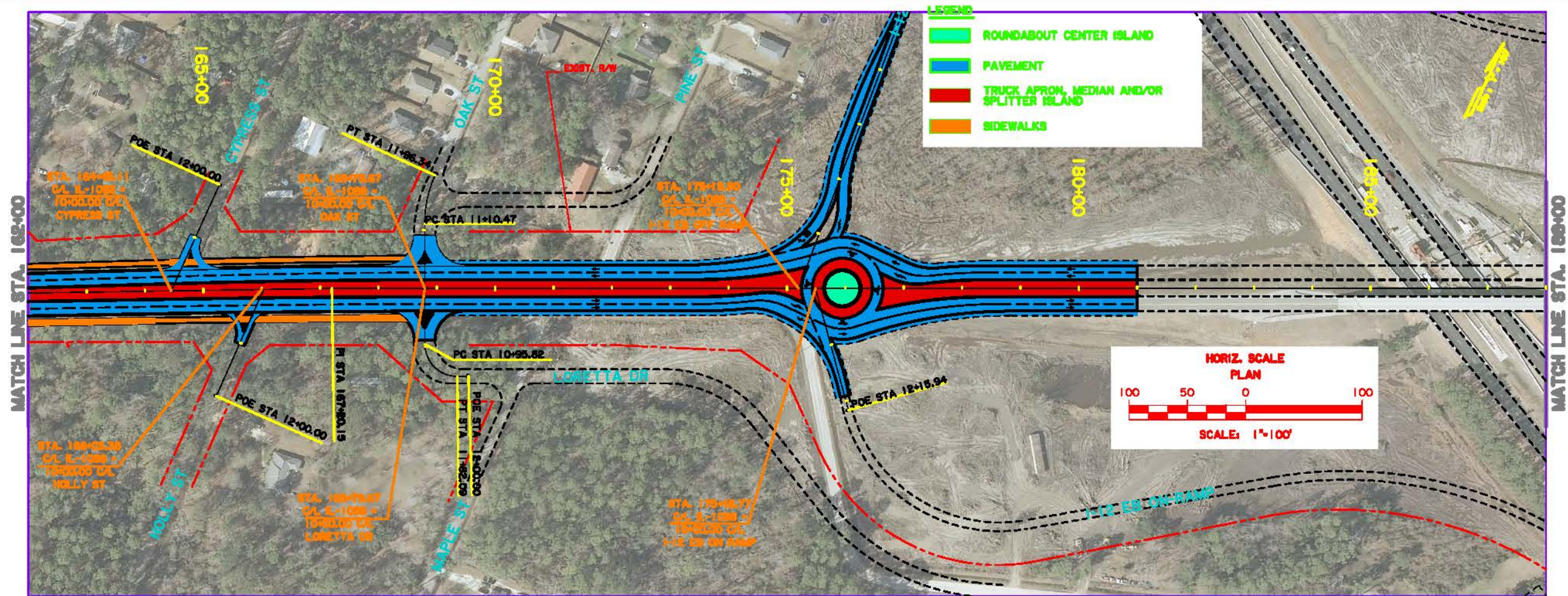
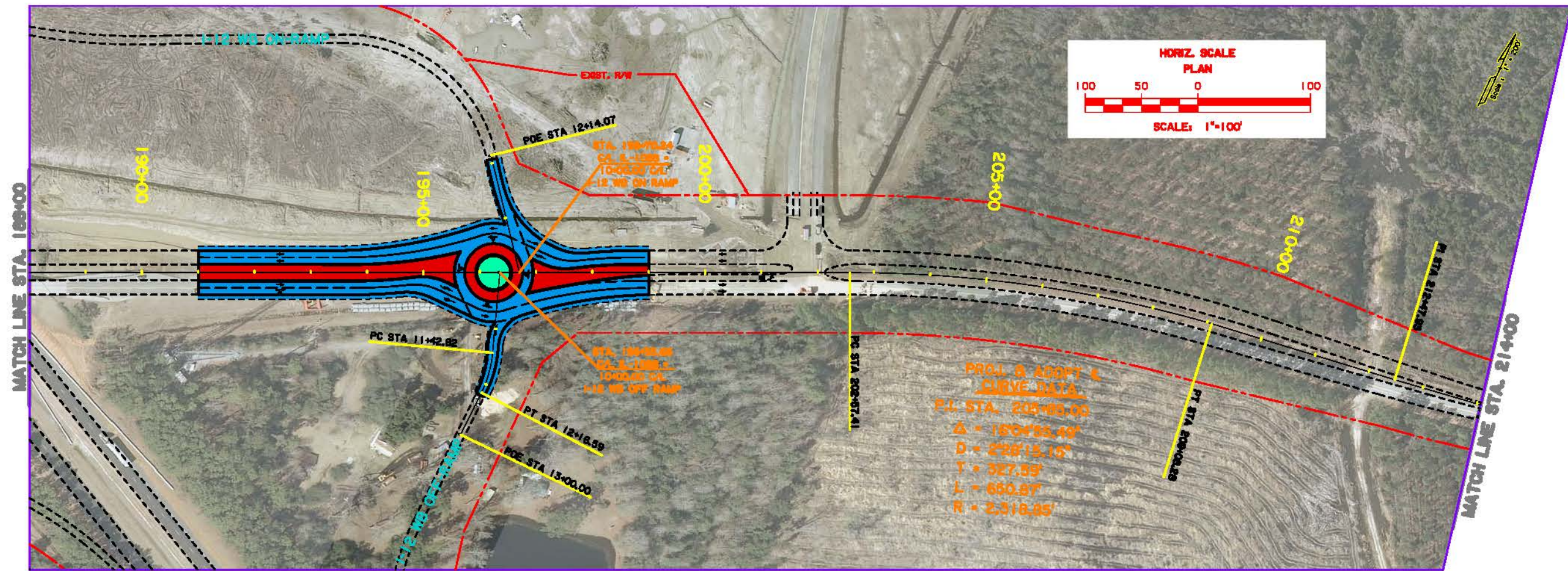
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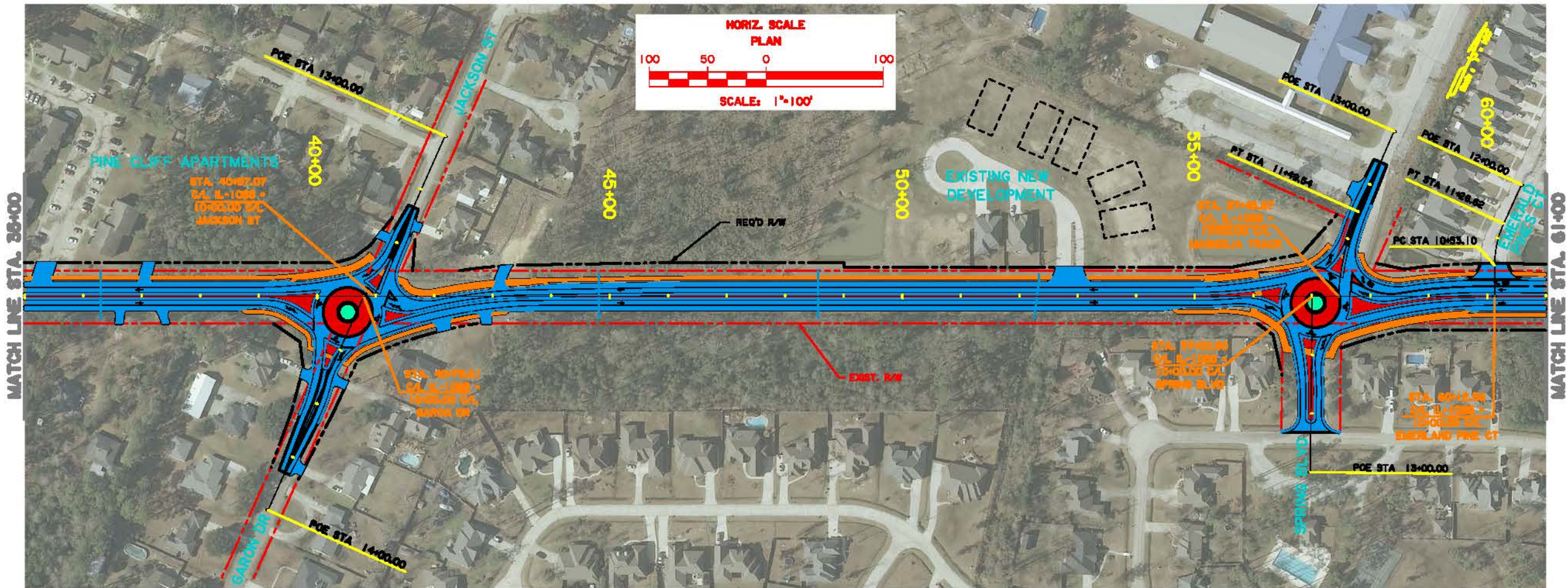
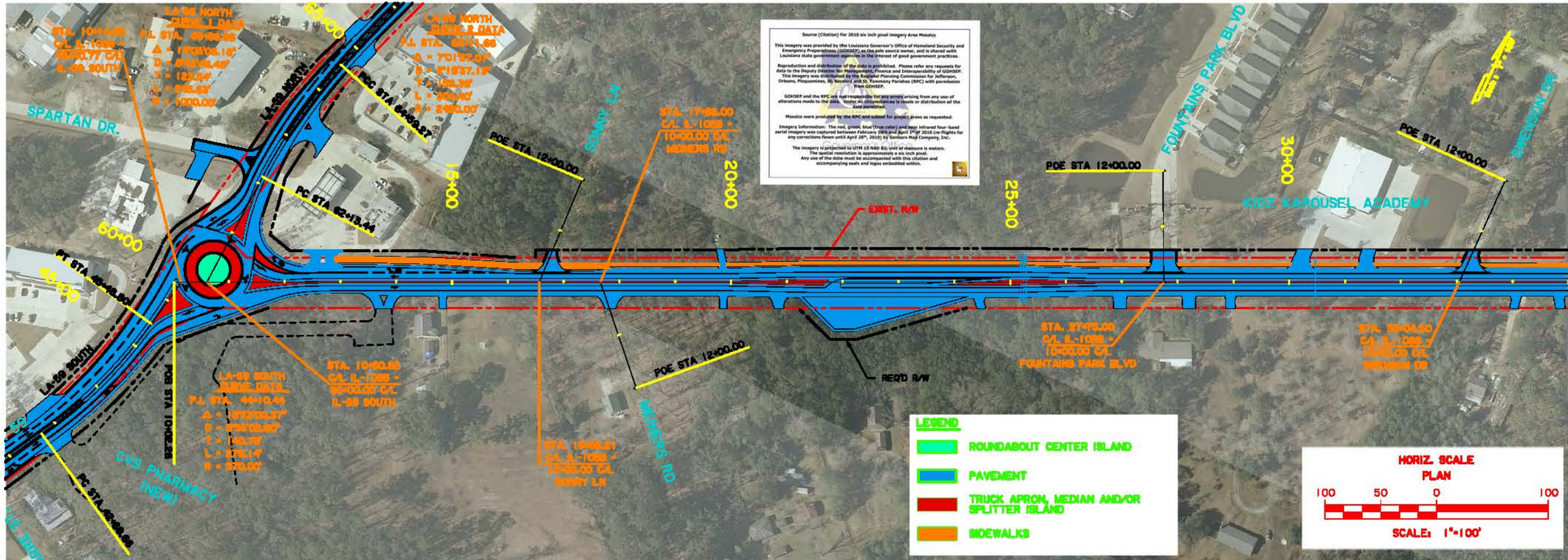
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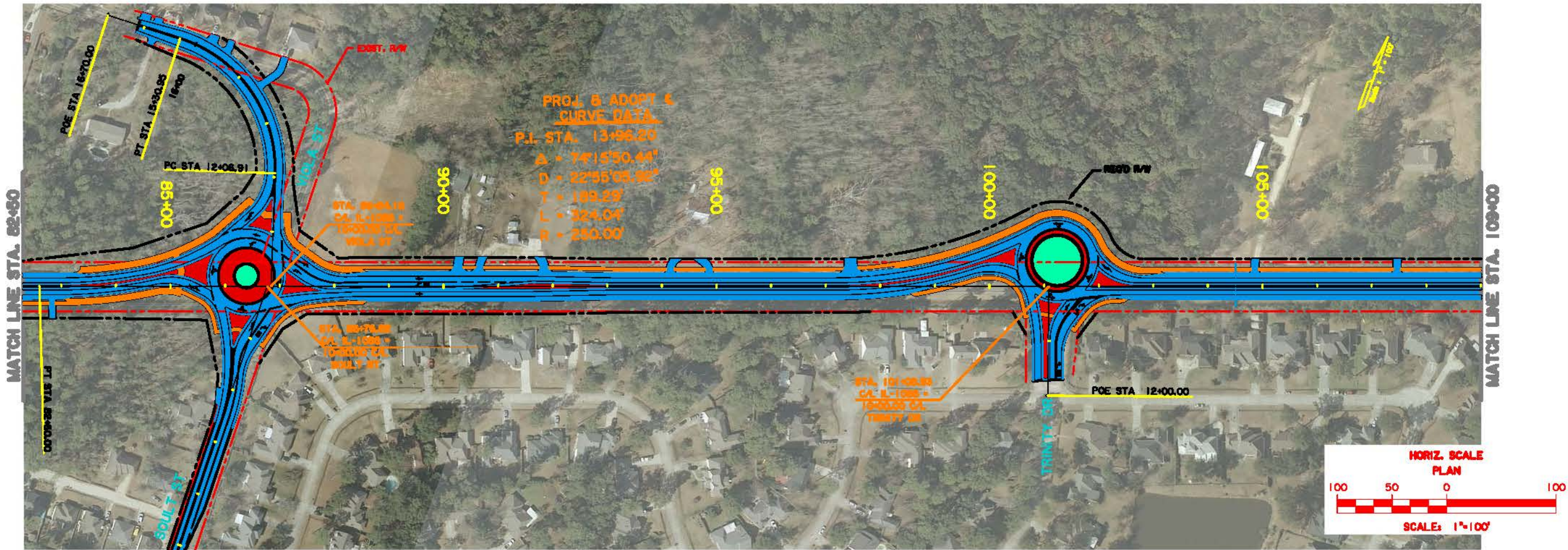




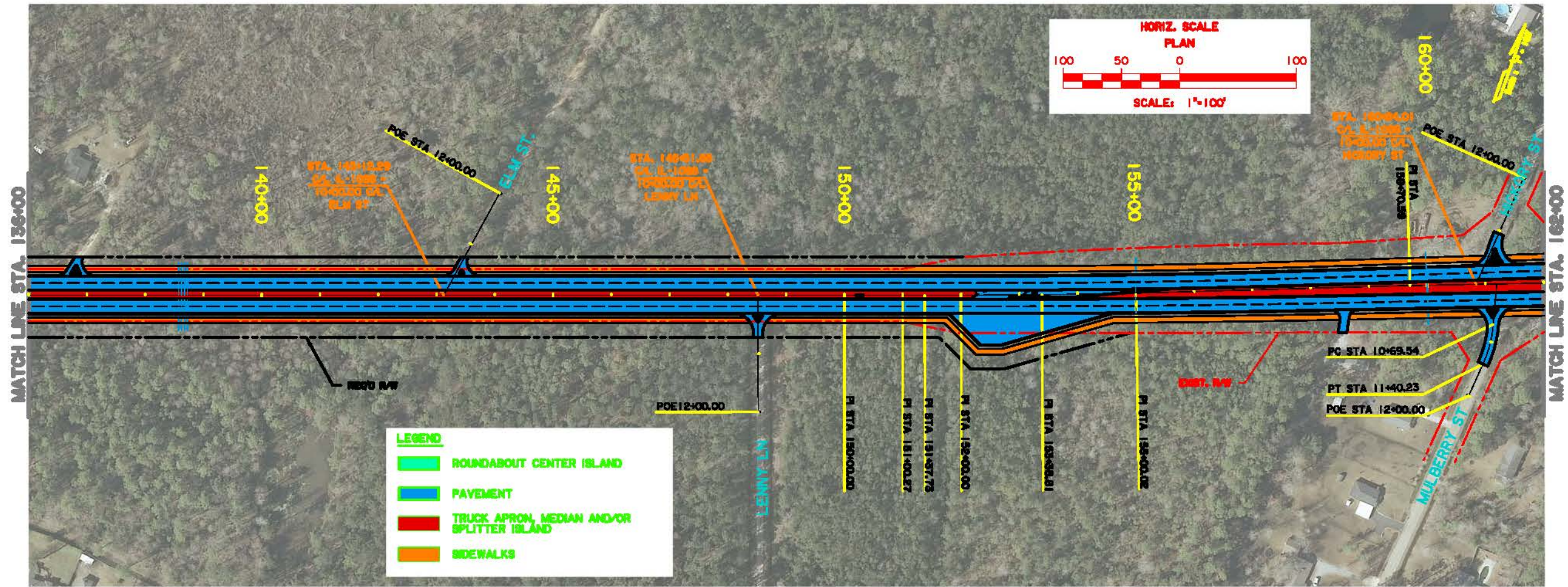
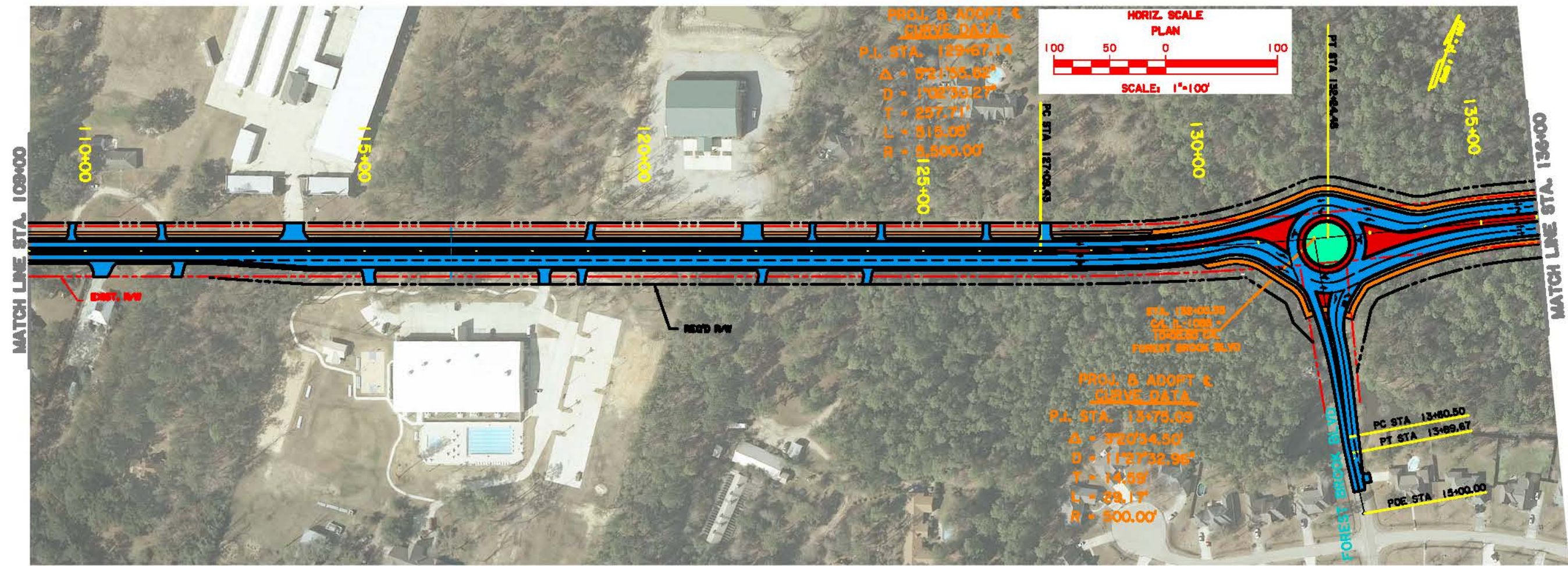


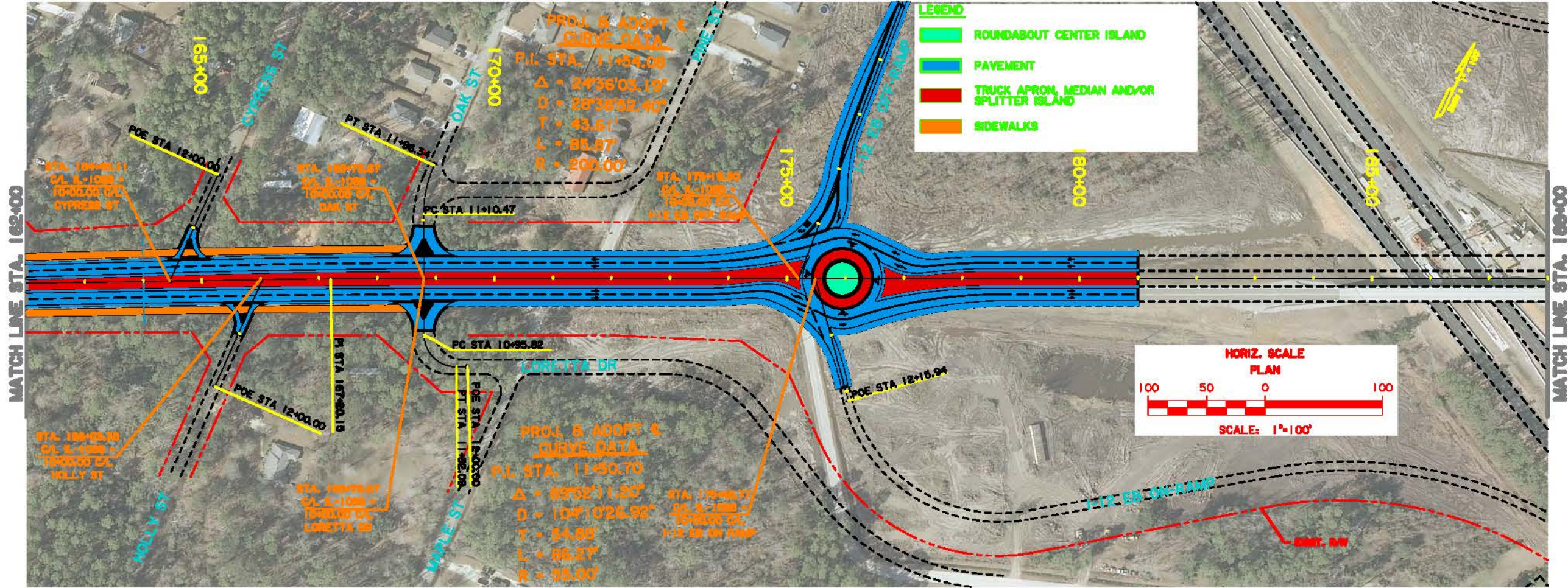
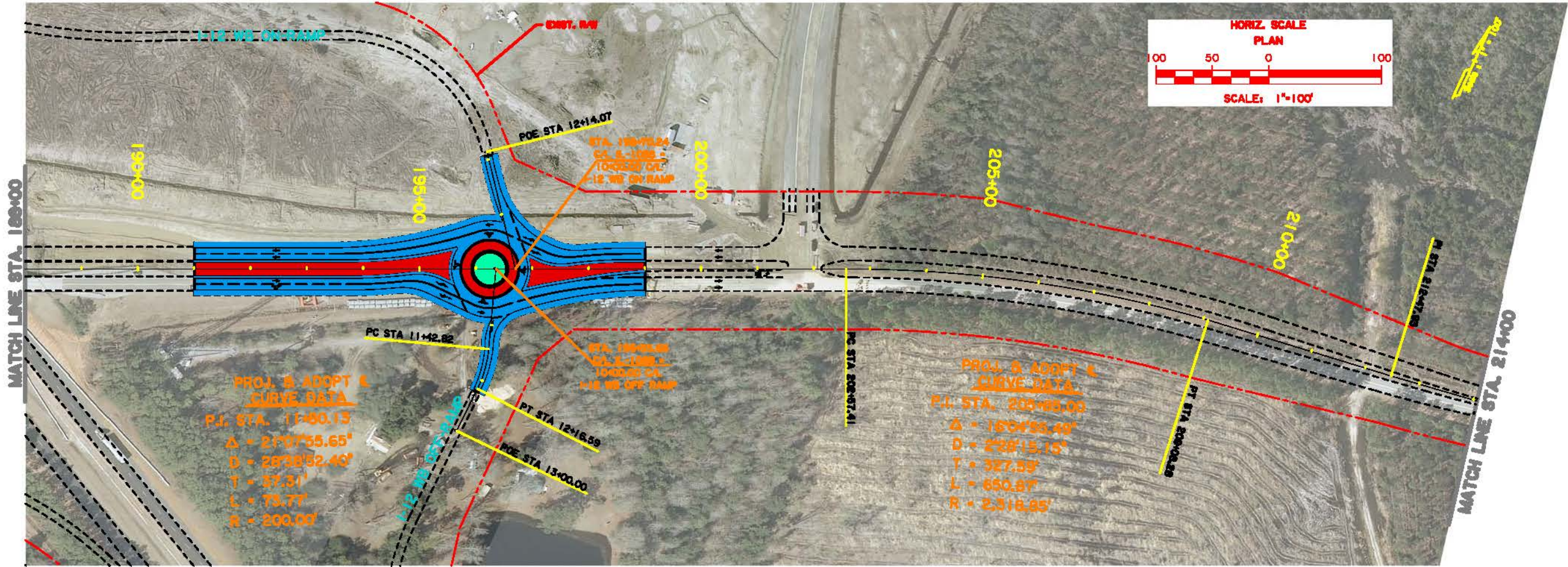
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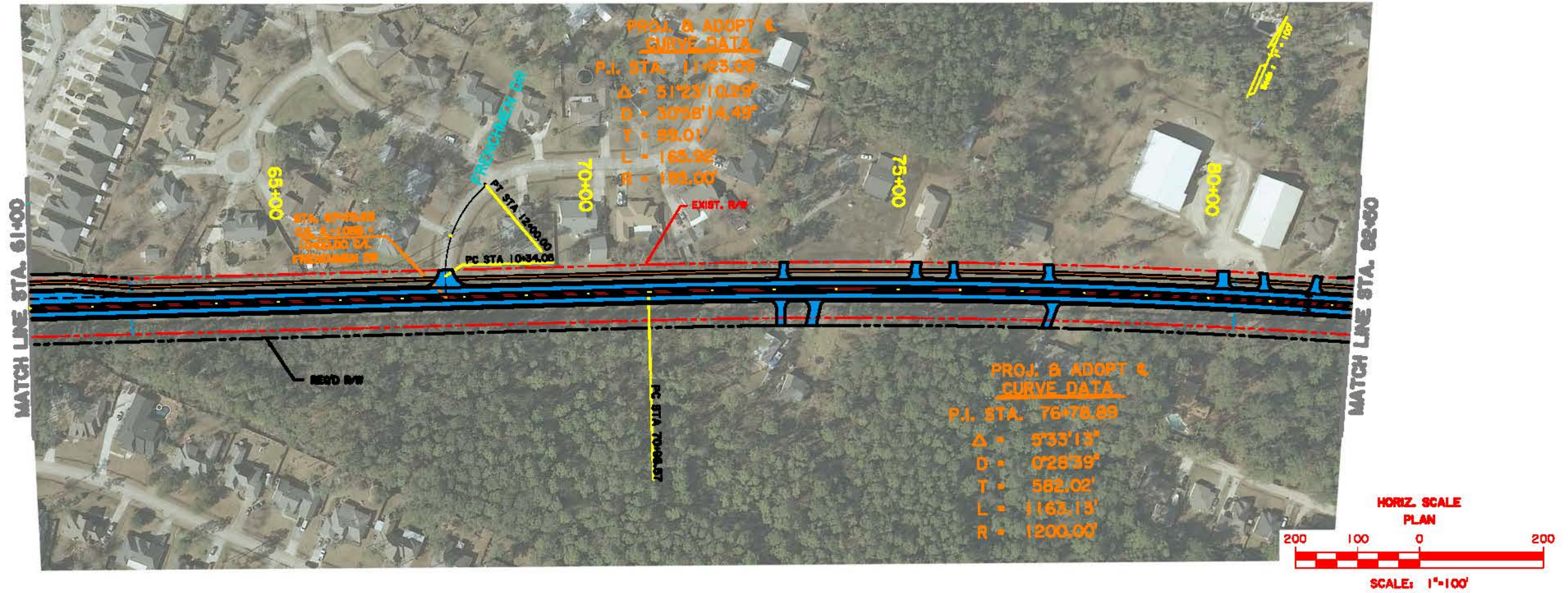
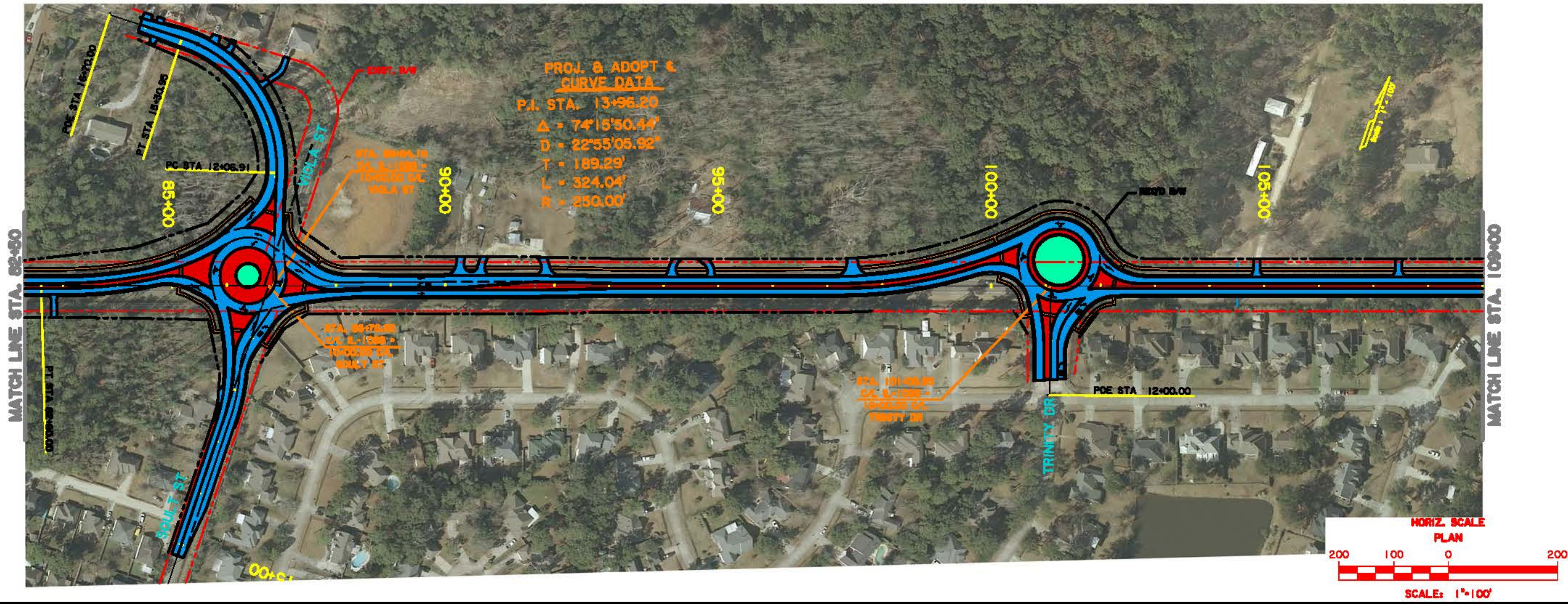


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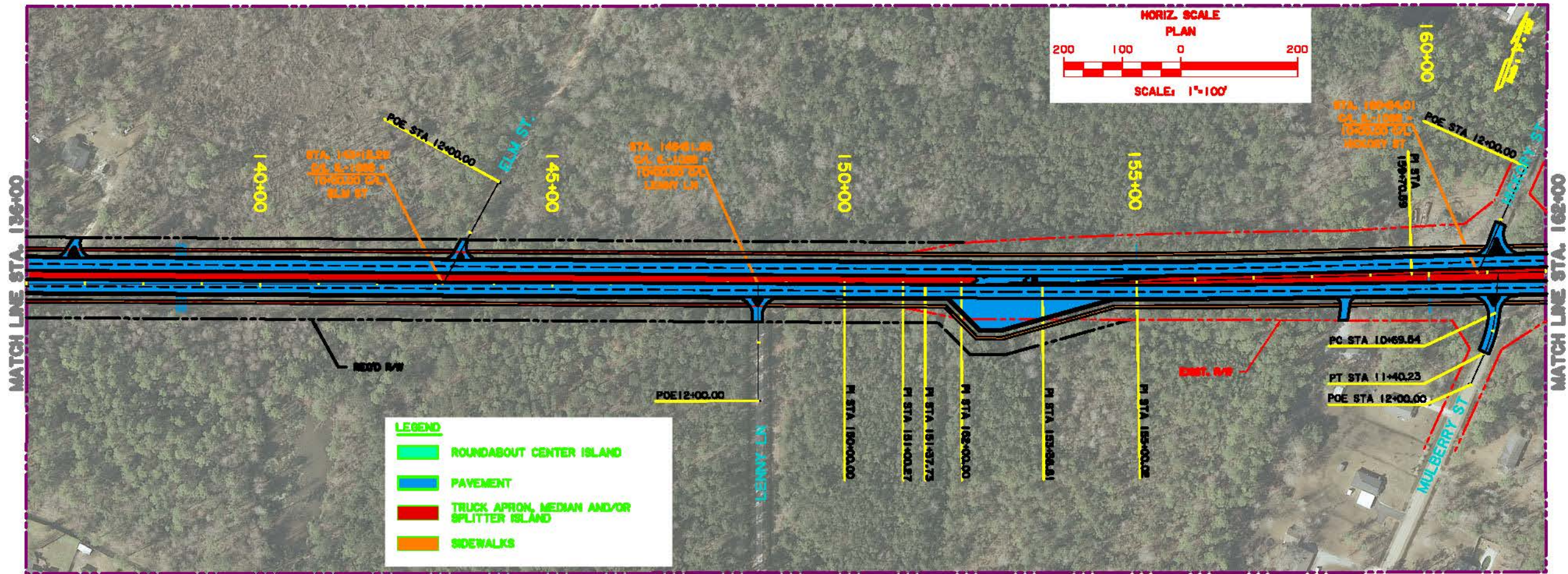
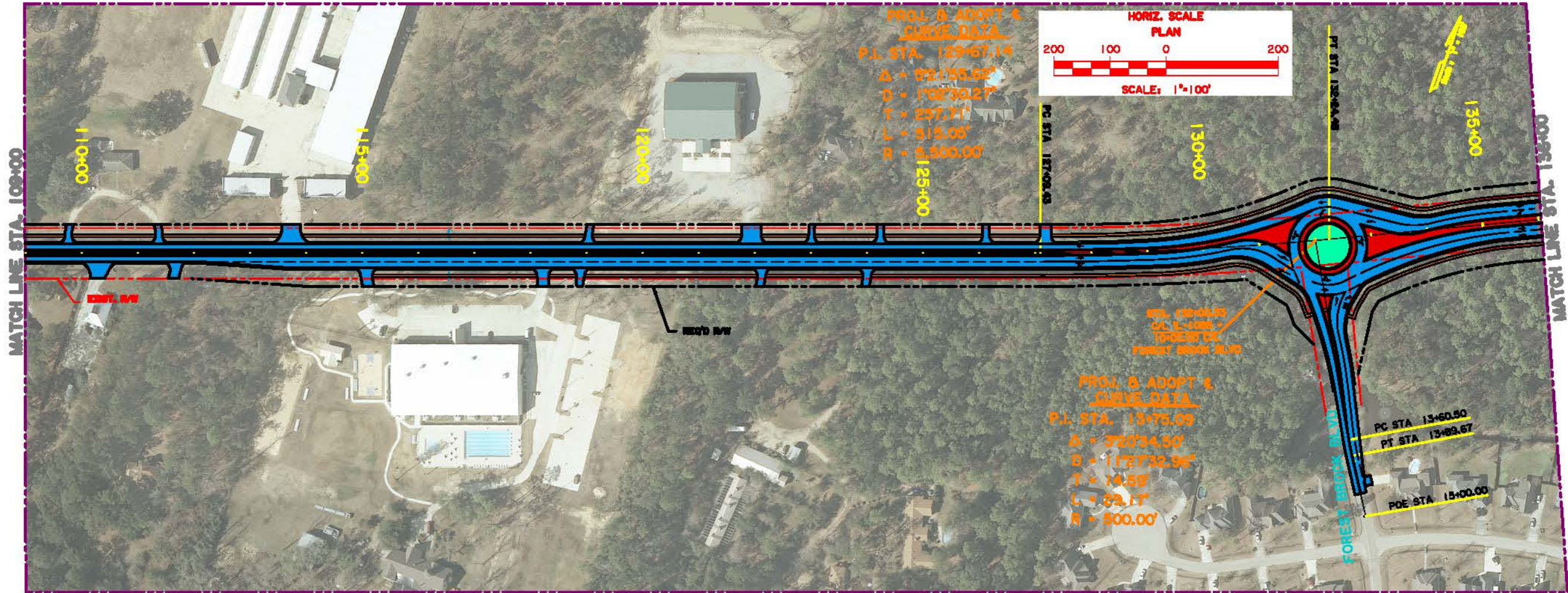




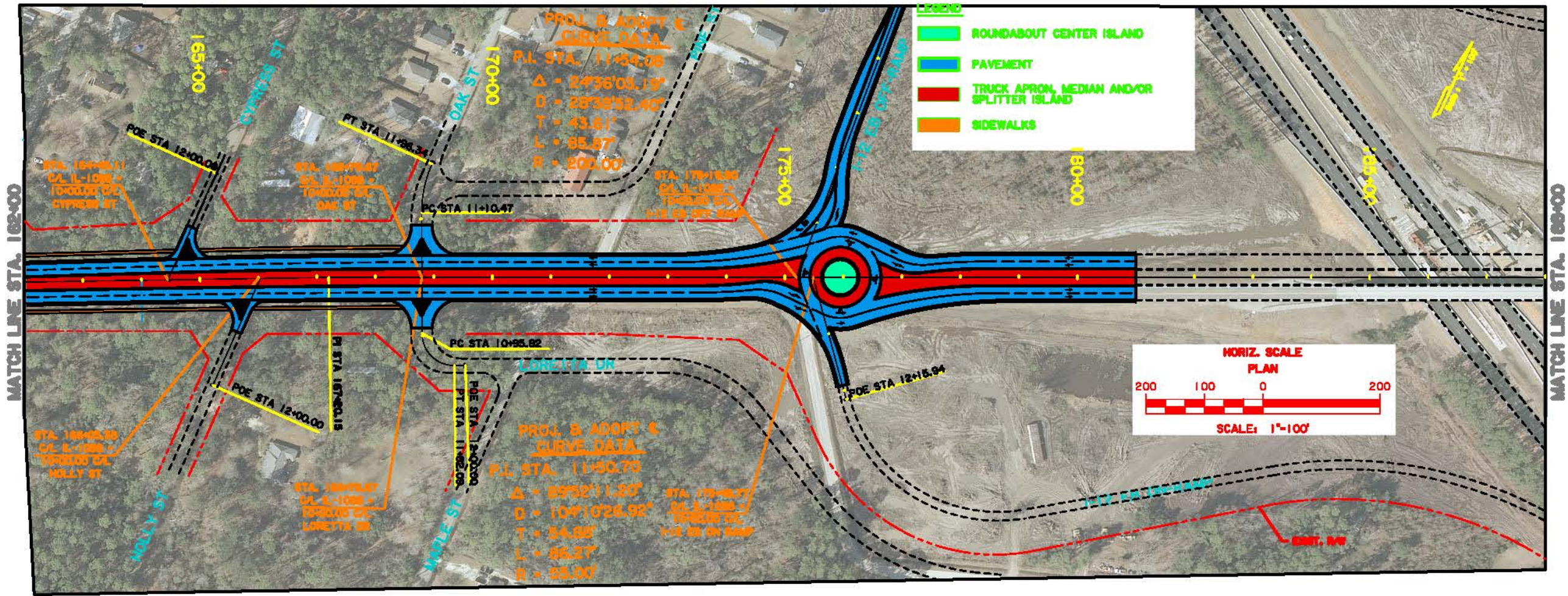
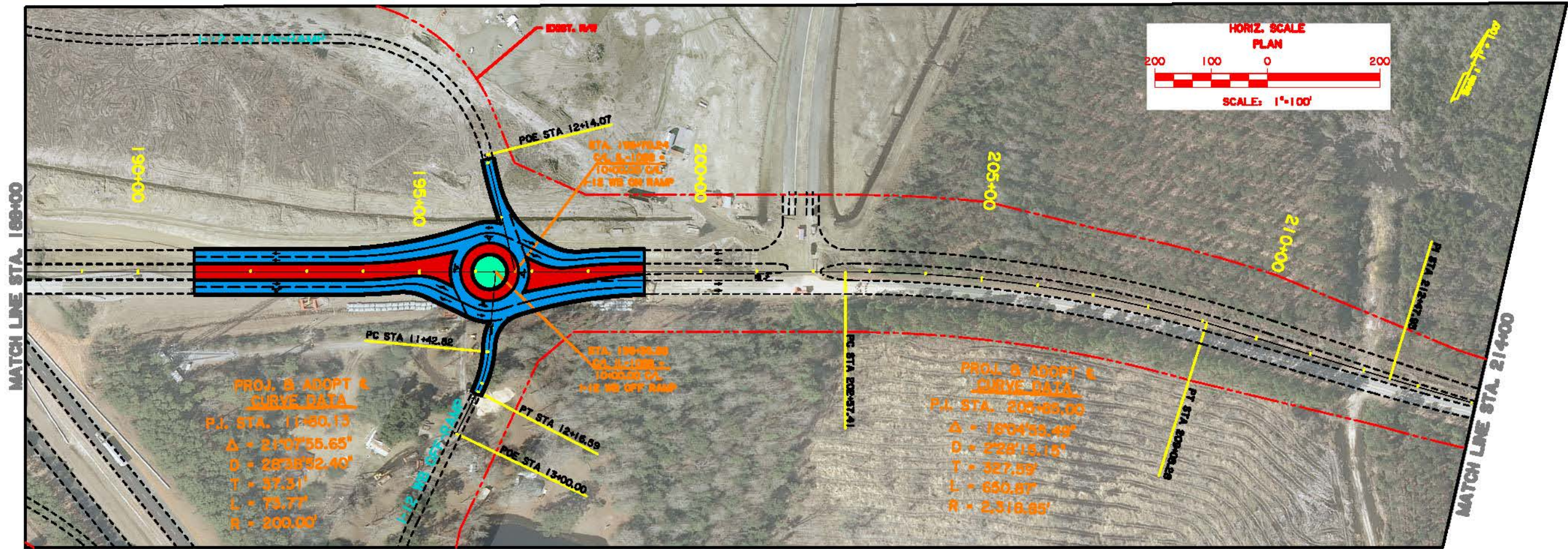
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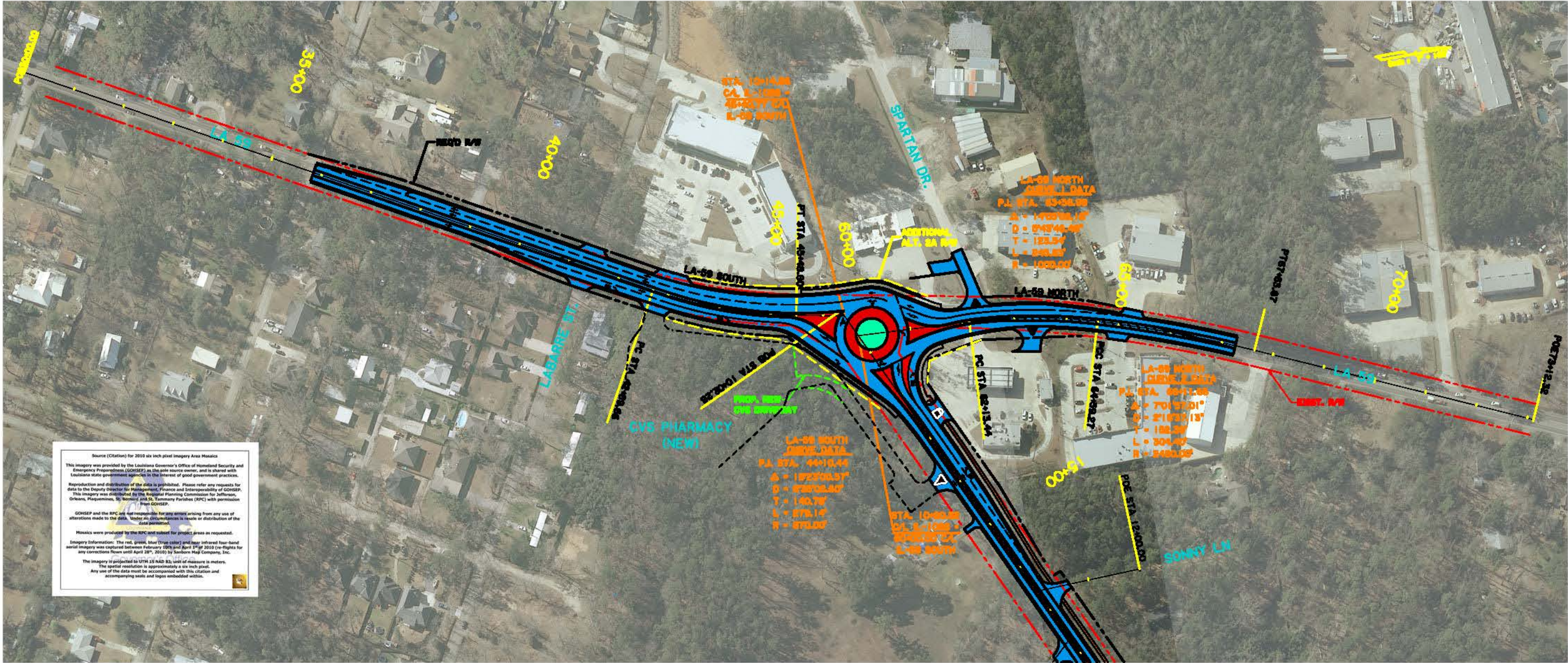


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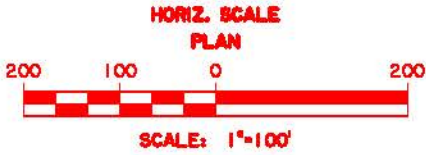
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- LEGEND**
- ROUNDABOUT CENTER ISLAND
 - PAVEMENT
 - TRUCK APRON, MEDIAN AND/OR SPLITTER ISLAND
 - SIDEWALKS



SHEET NUMBER	25
DESIGNED BY	A. EVETT
CHECKED BY	K. ROTHERMEL
DETAILS BY	J. DAVIS
CHECKED BY	A. EVETT
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APPENDIX D

Preliminary Cost Estimate

**OPINION OF PROBABLE CONSTRUCTION COST SUMMARY
ALTERNATIVE 1A**

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
A) GENERAL & MISCELLANEOUS <i>Including Embankment, General Excavation, Right -of-way Monuments, Mobilization and Construction Layout</i>	1	LUMP SUM	\$2,098,964.90	\$2,098,964.90
B) DEMOLITION <i>Including Clearing and Grubbing, Removal of Structures and Obstructions, Removal of Drives, Removal of Pavement, Removal of Traffic Signal, Milling and Saw Cutting</i>	1	LUMP SUM	\$603,889.66	\$603,889.66
C) EROSION CONTROL <i>Including Temporary Hay Bales, Slope Drains, Check Dams, Silt Fence, Riprap, Fertilizer and Hydro-seeding</i>	1	LUMP SUM	\$82,333.54	\$82,333.54
D) DRAINAGE <i>Including Removal of Catch Basins, Removal of Pipe, General Excavation, Cross Drain Pipe, Storm Drain Pipe, Side Drain Pipe and Catch Basins</i>	1	LUMP SUM	\$1,856,473.20	\$1,856,473.20
E) ROADWAY <i>Including Class II Base, Subgrade, Asphalt Pavement, Portland Cement Concrete Pavement, Concrete Drives, Incidental Concrete Paving, Combination Curb and Gutter</i>	1	LUMP SUM	\$7,081,282.40	\$7,081,282.40
F) SIGNING & STRIPING <i>Including Relocation of Signs, Sign Type A Furnished and Installed, U-channel Posts, Reflectorized Pavement Markings, Plastic Pavement Stripes, Plastic Pavement Legends and Symbols</i>	1	LUMP SUM	\$222,589.34	\$222,589.34
G) PEDESTRIAN & MULTI-USE PATHS <i>Including Concrete Walks and Handicapped Curb Ramps</i>	1	LUMP SUM	\$342,419.40	\$342,419.40
H) TEMPORARY TRAFFIC CONTROL	1	LUMP SUM	\$114,612.50	\$114,612.50
I) ROUNDABOUT ILLUMINATION		EACH	N/A	N/A
J) CONTINGENCY (15%)	1	LUMP SUM	\$1,860,384.74	\$1,860,384.74

CONSTRUCTION SUBTOTAL:	\$14,262,949.68
ENGINEERING BASIC SERVICES:	\$902,480.75
CONSTRUCTION MANAGEMENT AND INSPECTION:	\$1,426,294.97
RIGHT OF WAY (7.2 ACRES):	\$4,329,000.00
UTILITY RELOCATION:	\$1,916,160.00
ENVIRONMENTAL MITIGATION:	\$480,000.00
TOTAL ESTIMATED PROJECT COST:	\$23,316,885.40

**OPINION OF PROBABLE CONSTRUCTION COST SUMMARY
ALTERNATIVE 1B**

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
A) GENERAL & MISCELLANEOUS <i>Including Embankment, General Excavation, Right-of-way Monuments, Mobilization and Construction Layout</i>	1	LUMP SUM	\$3,665,225.50	\$3,665,225.50
B) DEMOLITION <i>Including Clearing and Grubbing, Removal of Structures and Obstructions, Removal of Drives, Removal of Pavement, Removal of Traffic Signal, Milling and Saw Cutting</i>	1	LUMP SUM	\$1,114,911.59	\$1,114,911.59
C) EROSION CONTROL <i>Including Temporary Hay Bales, Slope Drains, Check Dams, Silt Fence, Riprap, Fertilizer and Hydro-seeding</i>	1	LUMP SUM	\$185,455.04	\$185,455.04
D) DRAINAGE <i>Including Removal of Catch Basins, Removal of Pipe, General Excavation, Cross Drain Pipe, Storm Drain Pipe, Side Drain Pipe and Catch Basins</i>	1	LUMP SUM	\$3,512,957.83	\$3,512,957.83
E) ROADWAY <i>Including Class II Base, Subgrade, Asphalt Pavement, Portland Cement Concrete Pavement, Concrete Drives, Incidental Concrete Paving, Combination Curb and Gutter</i>	1	LUMP SUM	\$10,587,389.04	\$10,587,389.04
F) SIGNING & STRIPING <i>Including Relocation of Signs, Sign Type A Furnished and Installed, U-channel Posts, Reflectorized Pavement Markings, Plastic Pavement Stripes, Plastic Pavement Legends and Symbols</i>	1	LUMP SUM	\$306,826.87	\$306,826.87
G) PEDESTRIAN & MULTI-USE PATHS <i>Including Concrete Walks and Handicapped Curb Ramps</i>	1	LUMP SUM	\$765,064.00	\$765,064.00
H) TEMPORARY TRAFFIC CONTROL	1	LUMP SUM	\$223,837.50	\$223,837.50
I) ROUNDABOUT ILLUMINATION <i>Including Conduit, Light Poles, Luminares, Service Pole, Light Pole Foundation and Junction Boxes</i>	8	EACH	\$71,000.00	\$568,000.00
J) CONTINGENCY (15%)	1	LUMP SUM	\$3,139,450.10	\$3,139,450.10

CONSTRUCTION SUBTOTAL:	\$24,069,117.47
ENGINEERING BASIC SERVICES:	\$1,479,682.64
CONSTRUCTION MANAGEMENT AND INSPECTION:	\$2,406,911.75
RIGHT OF WAY (9.0 ACRES):	\$5,032,000.00
UTILITY RELOCATION:	\$1,916,160.00
ENVIRONMENTAL MITIGATION:	\$480,000.00
TOTAL ESTIMATED PROJECT COST:	\$35,383,871.85

**OPINION OF PROBABLE CONSTRUCTION COST SUMMARY
ALTERNATIVE 2**

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
A) GENERAL & MISCELLANEOUS <i>Including Embankment, General Excavation, Right-of-way Monuments, Mobilization and Construction Layout</i>	1	LUMP SUM	\$4,051,776.50	\$4,051,776.50
B) DEMOLITION <i>Including Clearing and Grubbing, Removal of Structures and Obstructions, Removal of Drives, Removal of Pavement, Removal of Traffic Signal, Milling and Saw Cutting</i>	1	LUMP SUM	\$1,215,872.95	\$1,215,872.95
C) EROSION CONTROL <i>Including Temporary Hay Bales, Slope Drains, Check Dams, Silt Fence, Riprap, Fertilizer and Hydro-seeding</i>	1	LUMP SUM	\$186,431.18	\$186,431.18
D) DRAINAGE <i>Including Removal of Catch Basins, Removal of Pipe, General Excavation, Cross Drain Pipe, Storm Drain Pipe, Side Drain Pipe and Catch Basins</i>	1	LUMP SUM	\$3,524,945.18	\$3,524,945.18
E) ROADWAY <i>Including Class II Base, Subgrade, Asphalt Pavement, Portland Cement Concrete Pavement, Concrete Drives, Incidental Concrete Paving, Combination Curb and Gutter</i>	1	LUMP SUM	\$11,253,325.40	\$11,253,325.40
F) SIGNING & STRIPING <i>Including Relocation of Signs, Sign Type A Furnished and Installed, U-channel Posts, Reflectorized Pavement Markings, Plastic Pavement Stripes, Plastic Pavement Legends and Symbols</i>	1	LUMP SUM	\$306,826.87	\$306,826.87
G) PEDESTRIAN & MULTI-USE PATHS <i>Including Concrete Walks and Handicapped Curb Ramps</i>	1	LUMP SUM	\$765,064.00	\$765,064.00
H) TEMPORARY TRAFFIC CONTROL	1	LUMP SUM	\$255,110.00	\$255,110.00
I) ROUNDABOUT ILLUMINATION <i>Including Conduit, Light Poles, Luminares, Service Pole, Light Pole Foundation and Junction Boxes</i>	8	EACH	\$71,000.00	\$568,000.00
J) CONTINGENCY (15%)	1	LUMP SUM	\$3,319,102.81	\$3,319,102.81

CONSTRUCTION SUBTOTAL:	\$25,446,454.89
ENGINEERING BASIC SERVICES:	\$1,559,643.07
CONSTRUCTION MANAGEMENT AND INSPECTION:	\$2,544,645.49
RIGHT OF WAY (10.2 ACRES):	\$5,599,000.00
UTILITY RELOCATION:	\$1,916,160.00
ENVIRONMENTAL MITIGATION:	\$496,000.00
TOTAL ESTIMATED PROJECT COST:	\$37,561,903.45

**OPINION OF PROBABLE CONSTRUCTION COST SUMMARY
ALTERNATIVE 2A**

DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
A) GENERAL & MISCELLANEOUS <i>Including Embankment, General Excavation, Right-of-way Monuments, Mobilization and Construction Layout</i>	1	LUMP SUM	\$4,030,202.00	\$4,030,202.00
B) DEMOLITION <i>Including Clearing and Grubbing, Removal of Structures and Obstructions, Removal of Drives, Removal of Pavement, Removal of Traffic Signal, Milling and Saw Cutting</i>	1	LUMP SUM	\$1,215,872.95	\$1,215,872.95
C) EROSION CONTROL <i>Including Temporary Hay Bales, Slope Drains, Check Dams, Silt Fence, Riprap, Fertilizer and Hydro-seeding</i>	1	LUMP SUM	\$186,431.18	\$186,431.18
D) DRAINAGE <i>Including Removal of Catch Basins, Removal of Pipe, General Excavation, Cross Drain Pipe, Storm Drain Pipe, Side Drain Pipe and Catch Basins</i>	1	LUMP SUM	\$3,541,826.28	\$3,541,826.28
E) ROADWAY <i>Including Class II Base, Subgrade, Asphalt Pavement, Portland Cement Concrete Pavement, Concrete Drives, Incidental Concrete Paving, Combination Curb and Gutter</i>	1	LUMP SUM	\$10,715,620.94	\$10,715,620.94
F) SIGNING & STRIPING <i>Including Relocation of Signs, Sign Type A Furnished and Installed, U-channel Posts, Reflectorized Pavement Markings, Plastic Pavement Stripes, Plastic Pavement Legends and Symbols</i>	1	LUMP SUM	\$273,642.88	\$273,642.88
G) PEDESTRIAN & MULTI-USE PATHS <i>Including Concrete Walks and Handicapped Curb Ramps</i>	1	LUMP SUM	\$525,060.00	\$525,060.00
H) TEMPORARY TRAFFIC CONTROL	1	LUMP SUM	\$255,110.00	\$255,110.00
I) ROUNDABOUT ILLUMINATION <i>Including Conduit, Light Poles, Luminares, Service Pole, Light Pole Foundation and Junction Boxes</i>	8	EACH	\$71,000.00	\$568,000.00
J) CONTINGENCY (15%)	1	LUMP SUM	\$3,196,764.93	\$3,196,764.93
CONSTRUCTION SUBTOTAL:				\$24,508,531.16
ENGINEERING BASIC SERVICES:				\$1,505,217.31
CONSTRUCTION MANAGEMENT AND INSPECTION:				\$2,450,853.12
RIGHT OF WAY (10.3 ACRES):				\$5,653,700.00
UTILITY RELOCATION:				\$1,916,160.00
ENVIRONMENTAL MITIGATION:				\$496,000.00
TOTAL ESTIMATED PROJECT COST:				\$36,530,461.58

APPENDIX E

Air Quality Analysis

Air Quality Analysis Technical Report

For The

***LA 1088 Corridor Study
LA 59 to I-12 Westbound Ramps***



***LDOTD Project No. H.010116
St. Tammany Parish, Louisiana***

Prepared For:



March 2018

ACRONYMS AND ABBREVIATIONS

ACRO	Acrolein
AADT	Annual Average Daily Traffic
BENZ	Benzene
BUTA	1,3-Butadiene
CO ₂	Carbon Dioxide
CO	Carbon Monoxide
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CFR	Code of Federal Regulations
DPM	Diesel Particulate Matter
DOTD	Department of Transportation and Development
FHWA	Federal Highways Administration
FORM	Formaldehyde
GHG	Greenhouse Gas
PB	Lead
MTP	Metropolitan Transportation Plan
MSATs	Mobile Source Air Toxics
MOVES	Motor Vehicle Emission Simulator
NAAQS	National Ambient Air Quality Standards
NAPH	Naphthalene
NHTSA	National Highway Traffic Safety Administration
NO ₂	Nitrogen Dioxide
O ₃	Ozone
PM	Particulate Matter
PM ₁₀	Particulate Matter (diameter between 2.5 and 10 micrometers)
PM _{2.5}	Particulate Matter (diameter of 2.5 micrometers or smaller)
RPC	Regional Planning Commission
ROW	Right-of-Way
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
TIP	Transportation Implementation Plan
USEPA	United States Environmental Protection
VMT	Vehicle Miles Traveled

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1.0 INTRODUCTION

Air quality is measured by the type and level of pollutants in the air. The 1990 Clean Air Act (CAA) amendment requires the United States Environmental Protection Agency (USEPA) to set National Ambient Air Quality Standards (NAAQS) (40 Code of Federal Regulations (CFR) Part 50) for pollutants considered harmful to public health and the environment.

Highway agencies are required to consider the impacts of transportation improvement projects on a regional level in the Transportation Conformity analysis and at a statewide level in the State Implementation Plan (SIP). Since this project is in an attainment/unclassifiable area, an air quality conformity analysis to conform to the SIP for attainment and maintenance of the NAAQS is not required.

The project is located within St. Tammany Parish, which is currently in attainment for carbon monoxide (CO), ozone, nitrogen dioxide, and particulate matter (PM_{2.5} and PM₁₀).

1.1 Existing Condition and Proposed Build

Currently, (Louisiana Highway (LA) 1088) is a two lane, bi-directional facility, located in St. Tammany Parish. The volume on this facility is projected to increase due to continued residential and commercial development along LA 1088 as well as area developments. Taking this into consideration, the Louisiana Department of Transportation and Development (LADOTD) propose improvements to LA 1088 between LA 59 (Girod St.) and the I-12 westbound ramps. The proposed improvements address the mobility of vehicle, pedestrian, and bicycle traffic along the LA 1088 corridor. The total length of the project is approximately 3.5 miles. **Figure 1** shows the project area. Average daily traffic (ADT) for the projected for 2033 No-Build and build alternatives for different sections of the facility are shown in **Table 1-1**.

There were three (3) proposed build alternatives evaluated in this air assessment, Build Alternative 1 (1A and 1B), Build Alternative 2, and Build Alternative 2A.

All build alternatives include a four-lane divided section from west of Forest Brook Blvd. to the I-12 interchange. Detailed build alternative descriptions are provided in the following paragraphs:

Build Alternative 1A – Utilizes the existing roadway section but includes roundabout improvements at eight (8) existing intersections: LA 59 (Girod St.), Garon Dr./Jackson St., Spring Blvd./Magnolia Trace School, Soult St./Viola St., Trinity Dr., Forest Brook Blvd., I-12 eastbound ramps and the I-12 westbound ramps. Entry and exit of roundabouts are designed to accommodate the future roadway section in Alternative 2 without any modifications at the roundabouts except for the Complete Streets (pedestrian and bicycle) component. A new four-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with roundabouts replacing the existing ramp intersections at the I-12 interchange.

Build Alternative 1B – Utilizes the existing roadway section but includes roundabout improvements at eight (8) existing intersections: LA 59 (Girod St.), Garon Dr./Jackson St., Spring Blvd./Magnolia Trace School, Soult St./Viola St., Trinity Dr., Forest Brook Blvd., I-12 eastbound ramps and the I-12 westbound ramps. Alternative 1B utilizes the existing roadway width (LA 59 (Girod St.) to Forest Brook Blvd.) with addition of five-foot bike lanes on both sides of the road. A sidewalk will be added to the north to meet the Complete Streets design. A new four-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with roundabouts replacing the existing ramp intersections at the I-12 interchange.

Build Alternative 2 – A new two-lane (12-foot travel lanes) divided curb & gutter section (LA 59 to Forest Brook Blvd.) with a six-foot median (back of curb to back of curb) with five-foot bike lanes on both sides of the road adjacent to the through lanes. A sidewalk will be added to the north to meet the complete streets design. Roundabouts at the previously mentioned locations are also included in this alternative. A new four-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with Roundabouts replacing the interchange intersections and a shared use path on each side of the four lanes.

Build Alternative 2A- A new two-lane (11-foot travel lanes) divided curb & gutter section (LA 59 to Forest Brook Blvd.) with a six-foot median (back of curb to back of curb) with four-foot shoulders on both sides of the road adjacent to the through lanes. Roundabouts at the previously mentioned locations are also included in this alternative. A new four-lane divided section is necessary from Forest Brook Blvd. to the I-12 interchange with roundabouts replacing the interchange intersections. A five-foot sidewalk will be added on one side of the two-lane section and both sides for the four-lane section. Sidewalks or berms will also be added through all roundabouts in accordance with LADOTD's Roundabout Sidewalk Policy

Table 1-1: Traffic Volumes for No-Build and Future Build Conditions

Link ID	Description	Average Daily Traffic (vehicles per day)	
		2033 No-Build Case	2033 Build Case
1	LA 1088 (Section 1)	12,727	12,727
2	LA 1088 (Section 2)	10,844	10,844
3	LA 1088 (Section 3)	12,313	12,313
4	LA 1088 (Section 4)	7,969	7,969

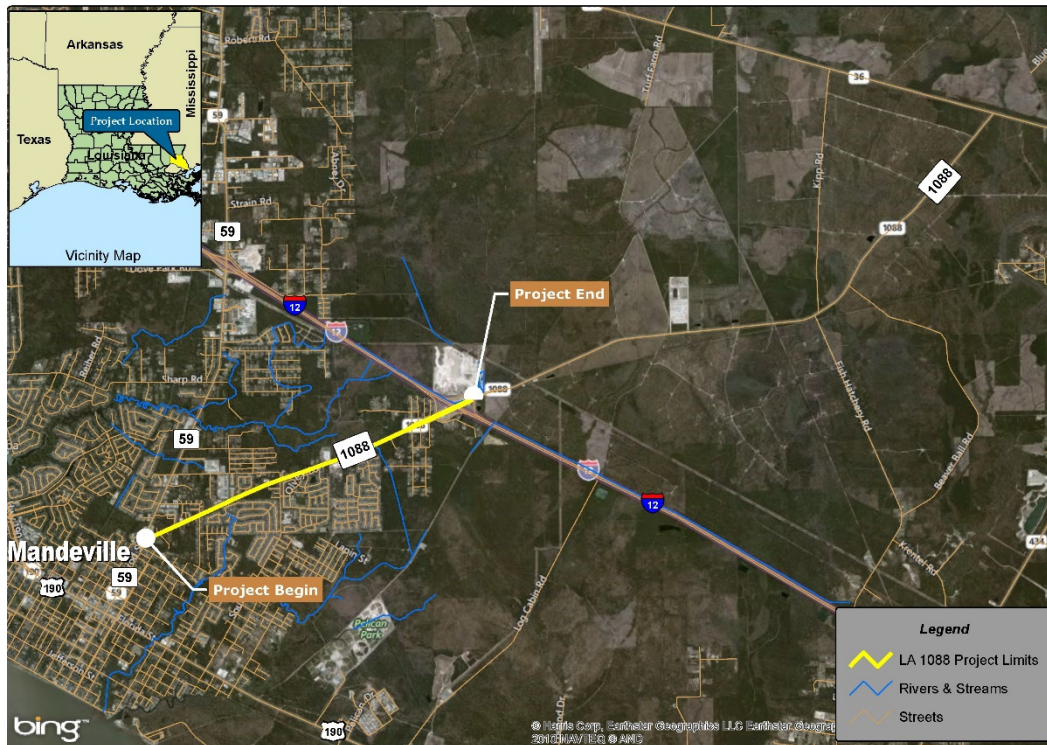


Figure 1-1: Project Area Map

2.0 AIR QUALITY ANALYSIS

2.1 Carbon Monoxide

CO is a colorless, odorless gas emitted from combustion processes. The majority of CO emissions to ambient air come from mobile sources. CO is toxic because it combines with the hemoglobin of the blood to produce carboxyhemoglobin which reduces the blood's ability to carry oxygen (<http://www.epa.gov/air/carbonmonoxide/>). At extremely high levels, CO can cause death. Since 1990, there has been a decrease in maximum CO concentrations measured across the US. With the decline in the magnitude of maximum ambient CO concentrations nationwide, there has been a subsequent decline in the number of stations reporting observations that exceed the NAAQS (FHWA).

Louisiana is currently in attainment statewide for CO. The traffic projections for the proposed action as shown in **Table 1-2** do not exceed 140,000 vehicles per day. CO analyses performed, assuming worst-case scenarios, for projects similar to the proposed project have shown no violations of the NAAQS. It was determined that this proposed project will not violate the NAAQS for CO, like similar projects modeled have previously demonstrated. Hence, air quality modeling for CO will not be required.

2.2 Particulate Matter

PM is a complex mixture of extremely small particles and liquid droplets. PM is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. PM includes inhalable coarse particles (PM₁₀) and fine particles (PM_{2.5}). PM₁₀ are between 2.5 micrometers and 10 micrometers in diameter and can be found near roadways and dusty industries. PM_{2.5} are 2.5 micrometers and smaller in diameter and are directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air (<http://www.epa.gov/pm/>). The project is located in St. Tammany Parish, an area designated as attainment for PM₁₀ and PM_{2.5}. Therefore, no hot-spot analysis is necessary, since the area has not been identified as nonattainment or maintenance and is in compliance with the NAAQS.

2.3 Ozone

This project is located in an area designated by the U.S. EPA as being in attainment for ozone; therefore, an assessment is not required.

2.4 Mobile Source Air Toxics Analysis (MSAT)

2.4.1 Introduction

On February 3, 2006, the FHWA released “*Interim Guidance on Air Toxic Analysis in NEPA Documents.*” This guidance was superseded on September 30, 2009, December 6, 2012, and most recently on October 18, 2016 by FHWA’s “*Updated Interim Guidance Update on Air Toxic Analysis in NEPA Documents.*” The purpose of FHWA’s guidance is to advise on when and how to analyze MSATs in the NEPA process for highways. This guidance is interim, because MSAT science is still evolving. As the science progresses, FHWA will update the guidance.

The FHWA developed a tiered approach with three categories for analyzing MSAT in NEPA documents, depending on specific project circumstances:

- (1) No analysis for projects with no potential for meaningful MSAT effects;
- (2) Qualitative analysis for projects with low potential MSAT effects; or
- (3) Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

For projects warranting MSAT analysis, all nine priority MSAT should be considered.

(1) Projects with No Meaningful Potential MSAT Effects, or Exempt Projects.

The types of projects included in this category are:

- Projects qualifying as a categorical exclusion under 23 CFR 771.117;
- Projects exempt under the Clean Air Act conformity rule under 40 CFR 93.126; and
- Other projects with no meaningful impacts on traffic volumes or vehicle mix.

For projects that are categorically excluded under 23 CFR 771.117, or are exempt from conformity requirements under the Clean Air Act pursuant to 40 CFR 93.126, no analysis or discussion of MSAT is necessary. Documentation sufficient to demonstrate that the project qualifies as a categorical exclusion and/or exempt project will suffice. For other projects with no or negligible traffic impacts, regardless of the class of NEPA environmental document, no MSAT analysis is recommended. However, the project record should document in the EA or EIS the basis for the determination of no meaningful potential impacts with a brief description of the factors considered. Example language, which must be modified to correspond with local and project-specific circumstances, is provided in Appendix A.

(2) Projects with Low Potential MSAT Effects

The types of projects included in this category are those that serve to improve operations of highway, transit, or freight without adding substantial new capacity or without creating a facility that is likely to meaningfully increase MSAT emissions. This category covers a broad range of projects.

It is anticipated that most highway projects that need an MSAT assessment will fall into this category. Examples of these types of projects are minor widening projects; new interchanges; replacing a signalized intersection on a surface street; and projects where design year traffic is projected to be less than 140,000 to 150,000 annual average daily traffic (AADT).

For these projects, a qualitative assessment of emissions projections should be conducted. This qualitative assessment should compare, in narrative form, the expected effect of the project on traffic volumes, vehicle mix, or routing of traffic and the associated changes in MSAT for the project alternatives, including no-build, based on VMT, vehicle mix, and speed. It should also discuss national trend data projecting substantial overall reductions in emissions due to stricter engine and fuel regulations issued by EPA. Because the emission effects of these projects typically are low, we expect there would be no appreciable difference in overall MSAT emissions among the various alternatives.

(3) Projects with Higher Potential MSAT Effects

- This category includes projects that have the potential for meaningful differences in MSAT emissions among project alternatives. We expect a limited number of projects to meet this two-pronged test. To fall into this category, a project should:
- Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel particulate matter in a single location, involving a significant number of diesel vehicles for new projects or accommodating with a significant increase in the number of diesel vehicles for expansion projects; or
- Create new capacity or add significant capacity to urban highways such as Interstates, urban arterials, or urban collector-distributor routes with traffic volumes where the AADT is projected to be in the range of 140,000 to 150,000 or greater by the design year;
- Be proposed to be located in proximity to populated areas.

The Build Alternative condition for the LA 1088 Project improves operations of a highway without adding substantial new capacity or without creating a facility that is likely to meaningfully increase MSAT emissions. As a result, the project is considered to be a “Project with Low Potential MSAT Effects.” As such, this project will not result in changes in vehicle mix, basic project location, or any other factor that would cause an increase in MAST impacts of the project from the No-Build Alternative.

2.4.2 Background

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. Environmental Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants. The EPA assessed this expansive list in its rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are part of EPA’s [Integrated Risk Information System](#) (IRIS). In addition, EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers or contributors and non-cancer hazard contributors from the [2011 National Air Toxics](#) Assessment (NATA). These are *1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter*. While FHWA considers these the

priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules.

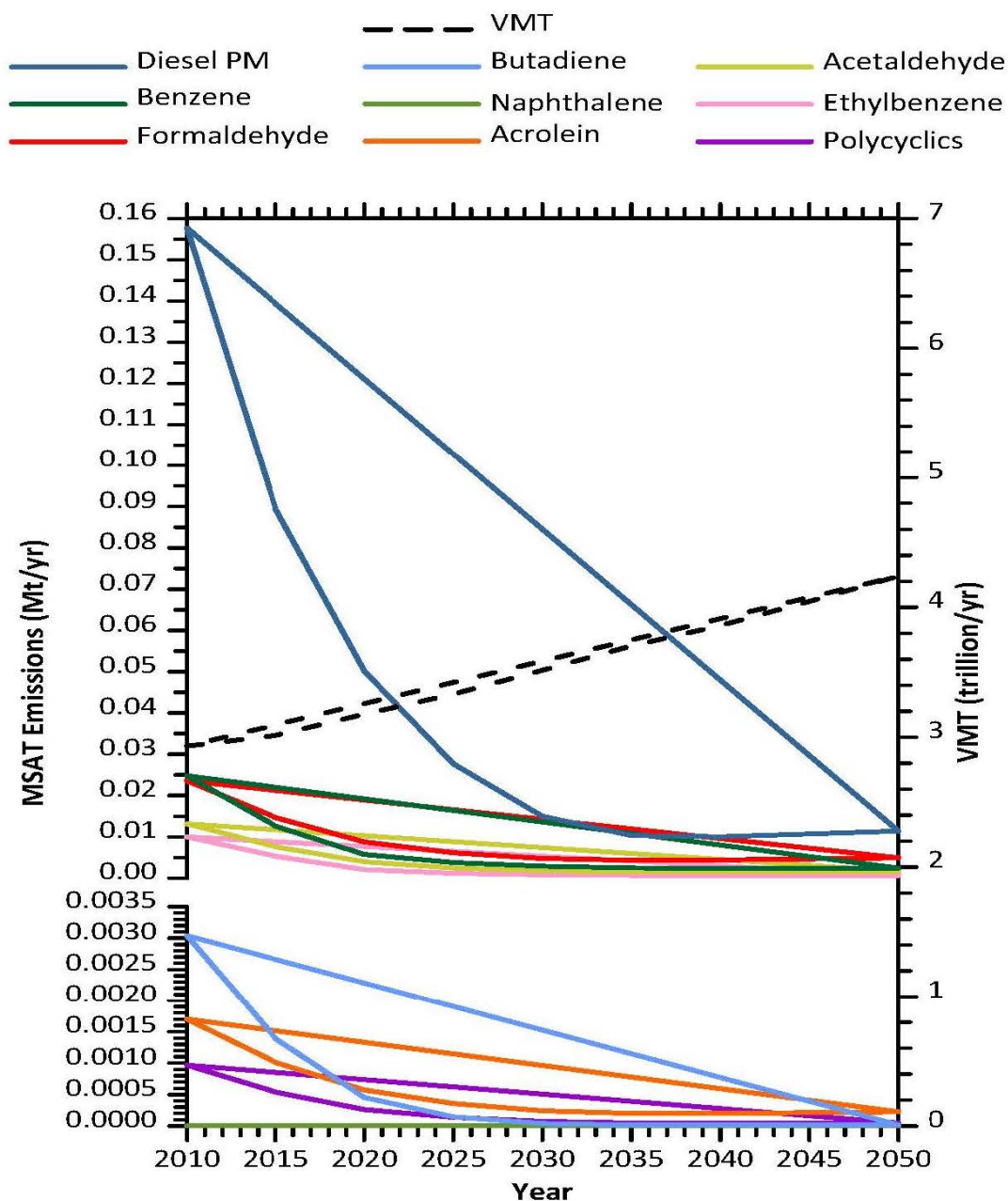
2.4.3 Motor Vehicle Emissions Simulator (MOVES)

According to EPA, MOVES2014 is a major revision to MOVES2010 and improves upon it in many respects. MOVES2014 includes new data, new emissions standards, and new functional improvements and features. It incorporates substantial new data for emissions, fleet, and activity developed since the release of MOVES2010. These new emissions data are for light- and heavy-duty vehicles, exhaust and evaporative emissions, and fuel effects. MOVES2014 also adds updated vehicle sales, population, age distribution, and vehicle miles travelled (VMT) data. MOVES2014 incorporates the effects of three new Federal emissions standard rules not included in MOVES2010. These new standards are all expected to impact MSAT emissions and include Tier 3 emissions and fuel standards starting in 2017 (79 FR 60344), heavy-duty greenhouse gas regulations that phase in during model years 2014-2018 (79 FR 60344), and the second phase of light duty greenhouse gas regulations that phase in during model years 2017-2025 (79 FR 60344). Since the release of MOVES2014, EPA has released MOVES2014a. In the November 2015 [MOVES2014a Questions and Answers Guide](#), EPA states that for on-road emissions, MOVES2014a adds new options requested by users for the input of local VMT, includes minor updates to the default fuel tables, and corrects an error in MOVES2014 brake wear emissions. The change in brake wear emissions results in small decreases in PM emissions, while emissions for other criteria pollutants remain essentially the same as MOVES2014.

Using EPA's MOVES2014a model, as shown in Figure 1, FHWA estimates that even if VMT increases by 45 percent from 2010 to 2050 as forecast, a combined reduction of 91 percent in the total annual emissions for the priority MSAT is projected for the same time period.

Diesel PM is the dominant component of MSAT emissions, making up 50 to 70 percent of all priority MSAT pollutants by mass, depending on calendar year. Users of MOVES2014a will notice some differences in emissions compared with MOVES2010b. MOVES2014a is based on updated data on some emissions and pollutant processes compared to MOVES2010b, and also reflects the latest Federal emissions standards in place at the time of its release. In addition, MOVES2014a emissions forecasts are based on lower VMT projections than MOVES2010b, consistent with recent trends suggesting reduced nationwide VMT growth compared to historical trends.

Figure 2-1: FHWA Projected National MSAT Emission Trends 2010-2050 for Vehicles Operating on Roadways using EPA's MOVES 2014a Model



Note: Trends for specific locations may be different, depending on locally derived information representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors

Source: EPA MOVES2014a model runs conducted by FHWA, September 2016.

2.4.4 MSAT Research

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how potential public health risks posed by MSAT exposure should be factored into project-level decision-making within the context of NEPA.

Nonetheless, air toxics concerns continue to arise on highway projects during the NEPA process. Even as the science emerges, the public and other agencies expect FHWA to address MSAT impacts in its environmental documents. The FHWA, EPA, the Health Effects Institute, and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this field.

2.4.5 Qualitative MSAT Assessment

A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives.

For both the Design Year 2033 No-Build and Build conditions, the amount of MSATs emitted would be proportional to the vehicle miles traveled (VMT). The project is to be constructed along existing LA 1088. An assessment of VMT for the No-Build the Build conditions is included in **Table 2-1**. As shown, the projected VMT for the No-Build condition is 51,809. The VMTs for the Build condition are the same as the VMTs for the No-Build condition.

Table 2-1: Vehicle Miles of Travel for Future No-Build and Build Conditions

Link ID	Description	Vehicle Miles of Travel (miles/day)	
		2033 No-Build Case	2033 Build Case
1	LA 1088 (Section 1)	13,236	13,236
2	LA 1088 (Section 2)	10,410	10,410
3	LA 1088 (Section 3)	20,193	20,193
4	LA 1088 (Section 4)	7,969	7,969
Total VMT		51,809	51,809

Emissions will likely be lower than the existing levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by over 80 percent from 2010 to 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in virtually all locations.

The construction of the proposed improvements would have the effect of moving some traffic slightly closer to nearby homes, and businesses; therefore, under the Build Alternative there may be localized areas where ambient concentrations of MSATs could be higher than the No-Build Alternative. The localized increases in MSAT concentrations would likely be most pronounced at locations near the segments of LA 1088 that will be widened closer to homes and businesses. However, the magnitude and the duration of these potential increases compared to the No-Build Alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts.

2.4.6 Incomplete or Unavailable Information for Project-Specific MSAT Health Impacts Analysis

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in mobile source air toxic (MSAT) emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The Environmental Protection Agency (EPA) is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA, <https://www.epa.gov/iris/>) Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). A number of HEI studies are summarized in Appendix D of FHWA's Updated Interim

Guidance on Mobile Source Air Toxic Analysis in NEPA Documents. Among the adverse health effects linked to MSAT compounds at high exposures are: cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI Special Report 16, <https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects>) or in the future as vehicle emissions substantially decrease.

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts – each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (Special Report 16, <https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects>). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA states that with respect to diesel engine exhaust, “[t]he absence of adequate data to develop a sufficiently confident dose-response relationship from the epidemiologic studies has prevented the estimation of inhalation carcinogenic risk (<https://www.epa.gov/iris>).”

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The

decision framework is a two-step process. The first step requires EPA to determine an “acceptable” level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA’s approach to addressing risk in its two step decision framework.

Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable ([https://www.cadc.uscourts.gov/internet/opinions.nsf/284E23FFE079CD59852578000050C9DA/\\$file/07-1053-1120274.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/284E23FFE079CD59852578000050C9DA/$file/07-1053-1120274.pdf)).

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

Due to the limitations cited, a discussion such as the example provided in this Appendix (reflecting any local and project-specific circumstances), should be included regarding incomplete or unavailable information in accordance with Council on Environmental Quality (CEQ) regulations [40 CFR 1502.22(b)]. The FHWA Headquarters and Resource Center staff, Victoria Martinez (787) 771-2524, James Gavin (202) 366-1473, and Michael Claggett (505) 820-2047, are available to provide guidance and technical assistance and support.

2.5 Construction Impacts

During the construction phase of this project, temporary increases in air pollutant emissions may occur from construction activities. PM (fugitive dust) from site preparation will be the primary construction-related emissions. These emissions are only occurring during construction phase. The potential impacts of PM emissions will be minimized by using fugitive dust control measures such as covering or treating disturbed areas with dust suppression techniques, sprinkling, covering loaded trucks, and other dust abatement controls, as appropriate.

3.0 CONCLUSIONS

Air quality modeling for CO will not be required. No PM hot-spot analysis is necessary, since the area has not been identified as being in a nonattainment or maintenance area and is in compliance with the NAAQS. The project has low potential MSAT effects since the current and projected vehicle traffic does not exceed the FHWA threshold (140,000 vehicles per day). Also emissions for the year 2033 Build Condition will likely be lower than 2033 No-Build levels as a result of USEPA's national control programs that are projected to reduce annual MSAT. Based on the results of the air quality analysis, the project is not expected to cause or contribute to any violations of the NAAQS.

APPENDIX F

Traffic Noise Analysis

Noise Analysis Technical Report
For The
LA 1088 Corridor Study
LA 59 (Girod St.) to I-12 Westbound Ramps



LADOTD Project No. H.010116
St. Tammany Parish, Louisiana

Prepared For:



June 2018

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Appendix G – Feasibility and Reasonableness Worksheets

LADOTD Project No. H.010116

LA 1088 Corridor Study LA Highway 59 to I-12 Westbound Ramps St. Tammany Parish, Louisiana

Noise Analysis Technical Report

Executive Summary

The noise levels were analyzed for the 2013 Existing, and future 2033 No-Build and three (3) proposed build alternatives for the LA 1088 Corridor Study project. The Louisiana Department of Transportation and Development (LADOTD) propose improvements of Louisiana Highway (LA 1088) for a distance of approximately four miles in St. Tammany Parish, Louisiana.

A map of the study area is shown on **Figure 1-1**.

This report addresses potential noise impacts that may result from the proposed LA 1088 Corridor Study project. This noise analysis was conducted in accordance with procedures for noise studies as set forth in Title 23 CFR Part 772. The scope of this analysis was to determine and analyze the effect of traffic noise on properties near the proposed project and analyze noise abatement measures to mitigate potential impacts giving weight to the benefits and costs of abatement and to overall social, economic, and environmental effects. Included in this analysis are the modeled 2013 Existing and 2033 No-Build and build alternatives traffic noise results.

The noise analysis was performed using the Federal Highway Administration's (FHWA) Traffic Noise Model (TNM) Version 2.5. The noise barrier analyses were also performed using the TNM model. TNM predicted noise impacts that approach or exceed the Noise Abatement Criteria (NAC) at 64 modeled receptor sites representing 67 individual noise sensitive receptor sites for the 2033 Build Alternative 1 (1A and 1B), 65 modeled receptor sites representing 69 individual noise sensitive receptor sites for the 2033 Build Alternative 2, and 64 modeled receptor sites representing 67 individual noise sensitive receptor sites for the 2033 Build Alternative 2A. As a result, noise mitigation measures were evaluated at several locations along the study corridor. Several mitigation and abatement measures were analyzed, and it was determined that traffic management measures, the alteration of horizontal and vertical alignments, and the acquisition of real property or interests therein to serve as a buffer zone to preempt development are not reasonable abatement techniques. Noise insulation of Activity Category D land uses was also found not to be reasonable. Construction of noise barriers was analyzed for the build alternatives and it was determined that noise barriers are feasible at several locations along the corridor. Where noise barriers were found to be feasible, a reasonableness analysis was conducted. Four (4) of the noise barriers were found to be both cost reasonable and meet the reasonableness reduction goal criteria for Alternative 1, five (5) of the noise

barriers were found to be both cost reasonable and meet the reasonableness reduction goal criteria for Alternative 2, and six (6) of the noise barriers were found to be both cost reasonable and meet the reasonableness reduction goal criteria for Alternative 2A.

1 Introduction

The purpose of the proposed improvements to LA 1088 is to reduce existing congestion and accommodate future traffic demands. The proposed improvements address the mobility of vehicle, pedestrian, and bicycle traffic along the LA 1088 corridor between LA 59 (Girod St.) and the I-12 westbound ramps.

The LADOTD Traffic Study assessed the need for improvements to the LA 1088 corridor. It included analysis of traffic volumes, traffic signals, intersections, and roadway segment operations. Detailed analysis focused on weekday A.M. (7:00 A.M.-8:00 A.M.) and P.M. (5:00 P.M.-6:00 P.M.) peak hour traffic conditions for 2013 (base year) and 2033 (design year) for 18 intersections from LA 59 (Girod St.) to the I-12 interchange.

1.1 Existing Land Use and Transportation Network

The existing land use in the LA 1088 Corridor Study project corridor consists primarily of single-family residences. There are also several schools and churches located within the project corridor. The existing transportation network in the project corridor includes LA 1088, LA 59 (Girod St.), I-12, and several residential streets.

1.2 Build Alternatives

There were three (3) proposed build alternatives evaluated in this noise assessment, Build Alternative 1 (1A and 1B), Build Alternative 2, and Build Alternative 2A (Preferred Alternative).

All build alternatives include a four-lane divided section from west of Forest Brook Blvd. to the I-12 interchange. Detailed build alternative descriptions are provided in the following paragraphs:

Build Alternative 1A – Utilizes the existing roadway section but includes roundabout improvements at eight (8) existing intersections: LA 59 (Girod St.), Garon Dr./Jackson St., Spring Blvd./Magnolia Trace School, Soult St./Viola St., Trinity Dr., Forest Brook Blvd., I-12 eastbound ramps and the I-12 westbound ramps. Entry and exit of roundabouts are designed to accommodate the future roadway section in Alternative 1A without any modifications at the roundabouts except for the Complete Streets (pedestrian and bicycle) component. A new four-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with roundabouts replacing the existing ramp intersections at the I-12 interchange.

Build Alternative 1B – Utilizes the existing roadway section but includes roundabout improvements at eight (8) existing intersections: LA 59 (Girod St.), Garon Dr./Jackson St., Spring Blvd./Magnolia Trace School, Soult St./Viola St., Trinity Dr., Forest Brook

Blvd., I-12 eastbound ramps and the I-12 westbound ramps. Alternative 1B utilizes the existing roadway width (LA 59 (Girod St.) to Forest Brook Blvd.) with addition of five-foot bike lanes on both sides of the road. A sidewalk will be added to the north to meet the Complete Streets design. A new four-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with roundabouts replacing the existing ramp intersections at the I-12 interchange.

Build Alternative 2 – A new two-lane (12-foot travel lanes) divided curb & gutter section (LA 59 to Forest Brook Blvd.) with a six-foot median (back of curb to back of curb) with five-foot bike lanes on both sides of the road adjacent to the through lanes. A sidewalk will be added to the north to meet the complete streets design. Roundabouts at the previously mentioned locations are also included in this alternative. A new four-lane divided section is necessary from Forest Brook Blvd. to the interstate interchange with Roundabouts replacing the interchange intersections and a shared use path on each side of the four lanes.

Build Alternative 2A (Preferred Alternative) - A new two-lane (11-foot travel lanes) divided curb & gutter section (LA 59 to Forest Brook Blvd.) with a six-foot median (back of curb to back of curb) with four-foot shoulders on both sides of the road adjacent to the through lanes. Roundabouts at the previously mentioned locations are also included in this alternative. A new 4-lane divided section is necessary from Forest Brook Blvd. to the I-12 interchange with roundabouts replacing the interchange intersections. A five-foot sidewalk will be added on one side of the two-lane section and both sides for the four-lane section. Sidewalks or berms will also be added through all roundabouts in accordance with LADOTD's Roundabout Sidewalk Policy

Figure 1-1: Project Location



2 Data Input

2.1 Traffic

Existing noise levels were determined using 2013 average daily traffic (ADT) volumes. For the design year 2033 noise analyses, noise levels at receptors were predicted for the No-Build and three (3) build alternative scenarios using projected ADT traffic data.

2.2 Receptor Locations

A receptor is defined as a location where noise levels are calculated using a model. Receptors are located at sites where noise sensitive activities occur within a corridor. **Table 3-1** defines noise sensitive activities typically encountered within a corridor. A total of 234 receptor sites were modeled along the LA 1088 Corridor Study project corridor. The 234 modeled sites represent 405 individual noise sensitive receptor sites in the project corridor. The locations of the receptors are illustrated on **Figures B-2** through **B-8** included in **Appendix B**.

3 Methodology and Regulations

3.1 Methodology of Noise Modeling

The traffic noise analysis conducted for this project consists of a comparison of computer modeled noise levels for existing and future conditions. The computer software used for the noise analysis was the FHWA's approved TNM Version 2.5 program. Traffic data, roadway geometry, and receptor site location information were entered into this computer model. The TNM model results yield an hourly equivalent steady-state sound level at each receptor.

3.2 Terminology and Sound Theory

The TNM program represents noise levels as $Leq_{(h)}$. Leq is defined as the equivalent steady-state sound level which, in a stated period of time, contains the same acoustic energy as the time-varying sound level during the same period. $Leq_{(h)}$ is the hourly value of Leq . $Leq_{(h)}$ is based on the more commonly known decibel (dB) and "A-weighted" decibel (dBA) units. Decibels are logarithmic units as opposed to the more common linear units. Consequently, a one (1) dB increase in sound energy results in a much larger increase in magnitude than normally expected. For instance, an increase in three (3) dB from a noise source results in a doubling of sound energy.

Noise is composed of different frequencies, each of which is perceived differently by the human ear. Human hearing is not sensitive to low and very high frequencies. To compensate for low and high-end frequency insensitivity and render noise levels readings more meaningful, an "A-weighting" scale is used to approximate the response of the human ear. The A-weighted decibel (dBA) unit measures perceptible sound energy and factors out the fringe frequencies.

Three (3) dBA is the smallest change in sound level an average person can detect under ideal conditions. Usually, an observer cannot detect an increase of sound level of three to four dBA if the increase takes place at a uniform rate over several years. Research has indicated that a difference of 10 dBA is perceived half as loud or twice as loud to an average listener. In addition, the listener typically has difficulty determining if the sound changed at all when the difference was only one dBA and the two observations were separated by an interlude of a few seconds of quiet (FHWA, 2011).

3.3 TNM Description

The TNM program predicts noise levels taking into account roadway geometry, traffic volume, traffic composition, traffic speed, and source-receiver path characteristics such as barriers, topography, and ground absorption. TNM analyzes the three-dimensional, spatial relationship between the roadway and receivers using a grid system and calculates the resulting traffic noise level that would exist at each receiver. The roadway geometry is entered as x, y, and z coordinates and reduced to a series of straight-line segments.

The TNM model also analyzes barrier designs helping the user design the most functional, cost effective noise barrier. TNM determines the noise level at the various receptors for different noise barrier designs. The model also calculates the area (in square feet) of different barrier designs and calculates the cost. Based on the effectiveness of the noise barrier (in terms of the lowering of the dBA at the receiver) and the cost of the various barrier heights, TNM calculates the cost effectiveness ratio of various barrier designs. The program allows the user to determine feasibility and reasonableness of utilizing a noise barrier for noise mitigation.

3.4 Regulations

The FHWA policies and procedures, as promulgated in the Title 23 CFR Part 772, served as the procedural guidelines for this analysis. Incorporated into Title 23 Part CFR 772 are NAC that are based on the type of land use and activities performed at receptors (**Table 3-1**). For example, at residences, churches, and schools, noise abatement measures must be examined and evaluated if an equivalent steady state sound level for an hourly period is approached (66 dBA) or exceeded (67 dBA). In accordance with the FHWA Title 23 CFR Part 772 guidelines, LADOTD defines noise impacts as occurring under the following circumstances:

- when noise levels approach one dBA below the NAC values or exceed values defined by the NAC, or
- when noise levels increase over the existing condition by 10 dBA, regardless of the NAC.

The FHWA defines seven noise activity categories based on land uses and existing sound levels. Each land use has its own NAC. If the project would result in $Leq_{(h)}$ levels higher than the NAC, abatement measures must be evaluated.

Table 3-1: FHWA Noise Abatement Criteria
Hourly "A-weighted" Sound Level - Decibels (dBA)

<i>Activity Category</i>	<i>L_{Aeq}(h)</i>	<i>Evaluation Location</i>	<i>Description of Activity Category</i>
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B⁽¹⁾	67	Exterior	Residential.
C⁽¹⁾	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structure, radio stations, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structure, radio studios, recording studios, schools, and television studios.
E⁽¹⁾	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D, or F.
F	----	----	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	----	----	Undeveloped lands that are not permitted.

(1) Includes undeveloped lands permitted for this activity category.

Source: FHWA, 23 CFR, Part 722

In addition to defining noise impacts, LADOTD's Highway Traffic Noise Policy provides guidance when determining the feasibility and reasonableness of noise abatement measures. To be considered feasible, noise abatement measures must reduce the noise level by a minimum of five dBA at 75 percent or more of the first row impacted receptors. In order for noise abatement measures to be considered reasonable, the following criteria must be achieved: A reduction in noise of eight dBA must be achieved by a least one receptor, the cost of the abatement measure must be equal to or less than \$35,000 per benefited receptor, and 50 percent or more of benefitted receptor responses must be positive.

3.5 Construction Noise

Construction noise is expected to have temporary impacts upon all of the receptors in the area. Receptors located within 500 feet of the project are of particular concern. It is recommended that all construction operations be restricted to working hours whenever possible.

Measures to minimize construction noise should be employed whenever possible. All construction equipment such as pumps, compressors, generators, bulldozers, cranes, trucks, etc., should be properly muffled and all motor panels should be closed to reduce the noise impacts. Section 107.14 of the Louisiana Standard Specification for Roads and Bridges, 2006 edition, and the FHWA Highway Construction Noise Handbook (FHWA-HEP-06-015, August 2006) can be referenced for further details on the sources and abatement of construction noise.

4 Model Validation Analysis

Noise measurements were collected at three locations in the project corridor between the hours of 8 AM and 11 AM on July 16th, 2015. **Table 4-1** summarizes the average existing sound level at each measurement location.

A 15-minute noise measurement was collected at each location. The noise meter recorded the sound level each second for 15 minutes for a total of 900 measurements. The average of the 900 measurements was recorded as the noise level at the location. Unusual background noise (i.e. dog barking, sirens, airplanes, etc.) during each measurement period was noted, and when necessary, anomalies in the corresponding measurement data were removed.

Sound levels vary through the day depending on the proximity of noise-sensitive land uses to local roads and to other noise sources. Sound levels can also vary with environmental changes, including shifts in wind speed and direction and changes in the vertical temperature profile.

Table 4-1: Model Validation Results

Measurement Location	Distance from the Existing Edge-of-Pavement (<i>Feet</i>)	Measured Sound Levels TNM Modeled Sound Levels (dBA)	Difference between Measured and Modeled Sound Levels (dBA)
Site 1	~20 feet from LA 59 (Girod St.)	69.6 69.4	0.2
Site 2	~25 feet from LA 1088	61.7 64.2	2.5
Site 3	~40 feet from LA 1088	60.3 63.2	2.9

The validation procedure includes the comparison of field noise measurement results with the existing conditions modeled using TNM 2.5. The validation results were found to be within the three dBA tolerance limit considered acceptable by LADOTD. Therefore, it was determined that the model is capable of accurately portraying existing and future conditions.

5 Noise Analysis Results

Noise levels were modeled at 234 individual receptor sites representing 405 noise sensitive receptors within the LA 1088 Corridor Study project corridor. The TNM results at each receptor are included in **Appendix A**. The locations where impacts were predicted to occur are illustrated on the figures included in **Appendix B**.

5.1 2013 Existing Noise Results

The 2013 existing noise model indicated 49 modeled receptor sites representing 52 individual noise sensitive receptors are currently experiencing noise levels above the NAC.

5.2 2033 No-Build Alternative Noise Results

For the 2033 No-Build Alternative scenario, noise impacts above the NAC are predicted to occur at 66 modeled receptor sites representing 69 individual noise sensitive receptors. The No-Build results also indicate no substantial increases in noise (10 dBA or greater) over the existing noise levels will occur.

5.3 2033 Build Alternatives Noise Results

For the proposed 2033 Alternative 1 (1A and 1B) scenario, noise impacts above the NAC are predicted to occur at 64 modeled receptor sites representing 67 individual noise sensitive receptor sites. The Alternative 1 (1A and 1B) results also indicate no substantial increases in noise (10 dBA or greater) over the existing noise levels will occur.

For the proposed 2033 Build Alternative 2 scenario, noise impacts above the NAC are predicted to occur at 65 modeled receptor sites representing 69 individual noise sensitive receptor sites. The Build Alternative 2 results also indicate no substantial increases in noise (10 dBA or greater) over the existing noise levels will occur.

For the proposed 2033 Build Alternative 2A (Preferred Alternative) scenario, noise impacts above the NAC are predicted to occur at 64 modeled receptor sites representing 67 individual noise sensitive receptor sites. **The Build Alternative 2A (Preferred Alternative) results also indicate no substantial increases in noise (10 dBA or greater) over the existing noise levels will occur.**

6 Noise Mitigation Analysis

6.1 Introduction

Noise abatement measures were evaluated at locations where impacts were predicted to occur under the 2033 build alternatives scenarios. The abatement measures were evaluated using FHWA's guidelines as promulgated by Title 23 CFR Part 772. The abatement measures evaluated included traffic management measures, the alteration of horizontal and vertical alignments, the construction of noise barriers, the acquisition of real property or interests therein, and noise insulation.

6.2 Traffic Management Measures (e.g., traffic control devices and signing for prohibition of certain vehicle types, time use restrictions for certain vehicle types, modified speed limits, and exclusive lane designations)

Traffic management measures applied for the purpose of noise abatement would be inconsistent with the purpose of this project (i.e. to improve traffic operations on the LA 1088 corridor). Use restrictions, including the restriction of vehicle types and time use restrictions, would prohibit certain traffic from using LA 1088 which would be inconsistent with the purpose of the project. The installation of traffic control devices, the modification of speed limits, or exclusive lane designations would result in an increase in congestion and decreased efficiency of the proposed facility. Therefore, the implementation of the traffic management measures for the purpose of noise abatement is not deemed reasonable or likely for this project.

6.3 Alteration of Horizontal and Vertical Alignments

Effective horizontal and/or vertical shifts of LA 1088 would require additional right-of-way, would likely require relocations, and noise impacts would likely occur to sensitive receptors currently not affected by the proposed project. As a result, alterations of horizontal and vertical alignments are not deemed reasonable or likely noise abatement measures for this project.

6.4 Acquisition of Real Property or Interests therein (predominantly unimproved property) to serve as a Buffer Zone to Preempt Development.

The acquisition of real property rights to act as a buffer zone would include the acquisition of the affected sites along the developed portion of the corridor. The purchase of these properties to serve as a buffer zone does not appear to be an economically reasonable mitigation measures for the project.

6.5 Construction of Noise Barriers (including landscaping for aesthetic purposes) Whether Within or Outside the Right-of-Way

LADOTD's Highway Traffic Noise Policy provides guidance when determining the feasibility and reasonableness of noise barriers. To be considered feasible, noise abatement measures must reduce the noise level by a minimum of five dBA for 75 percent or more of the first row impacted receptors. In order for noise abatement measures to be

considered reasonable, the following criteria must be achieved: A reduction in noise of eight dBA must be achieved by a least one receptor, the cost of the abatement measure must be equal to or less than \$35,000 per benefited receptor, and 50 percent or more of benefitted receptor responses are positive.

For a noise barrier to effectively shield receptors, the barrier design must be relatively continuous. Numerous driveways and cross streets intersect LA 59 (Girod St.) and LA 1088 along the developed portions of the project corridor. Gaps incorporated into the design to accommodate access roads, subdivision entrance roads, or driveways lessen the effectiveness of a barrier. The proposed build alternatives will maintain existing accesses to the highway. Therefore, construction of noise barriers for the purpose of the noise abatement was not considered feasible at impacted receptors Res 1, Res 2, Res 3, Res 4, Res 9, Res 10, Res 11, Res 12, Res 13, Res 14, Res 15, Res 16, Res 25, Res 31, Res 35, School 43, Apartments 49, Apartments 51, Res 62, Res 80, Res 110, Res 112, Res 141, Res 142, Church 144, Res 150, Res 152, Church 204, Res 209, Res 213, and Res 216. Many driveways and cross streets intersect LA 1088 at these locations to allow for effective noise barriers.

Noise barriers were modeled at eight (8) locations where impacts were predicted to occur under the 2033 Build Alternative 1 (1A and 1B), Build Alternative 2, and Build Alternative 2A (Preferred Alternative) scenarios. At six locations, noise barriers were determined to be feasible for Build Alternative 1 (1A and 1B). Noise barriers were determined to be not feasible at two locations. At five (5) locations, noise barriers were determined to be feasible for Build Alternative 2. Noise barriers were determined not to be feasible at three (3) locations. At six locations, noise barriers were determined to be feasible for Build Alternative 2A (Preferred Alternative). Noise barriers were determined to be not feasible at two (2) locations.

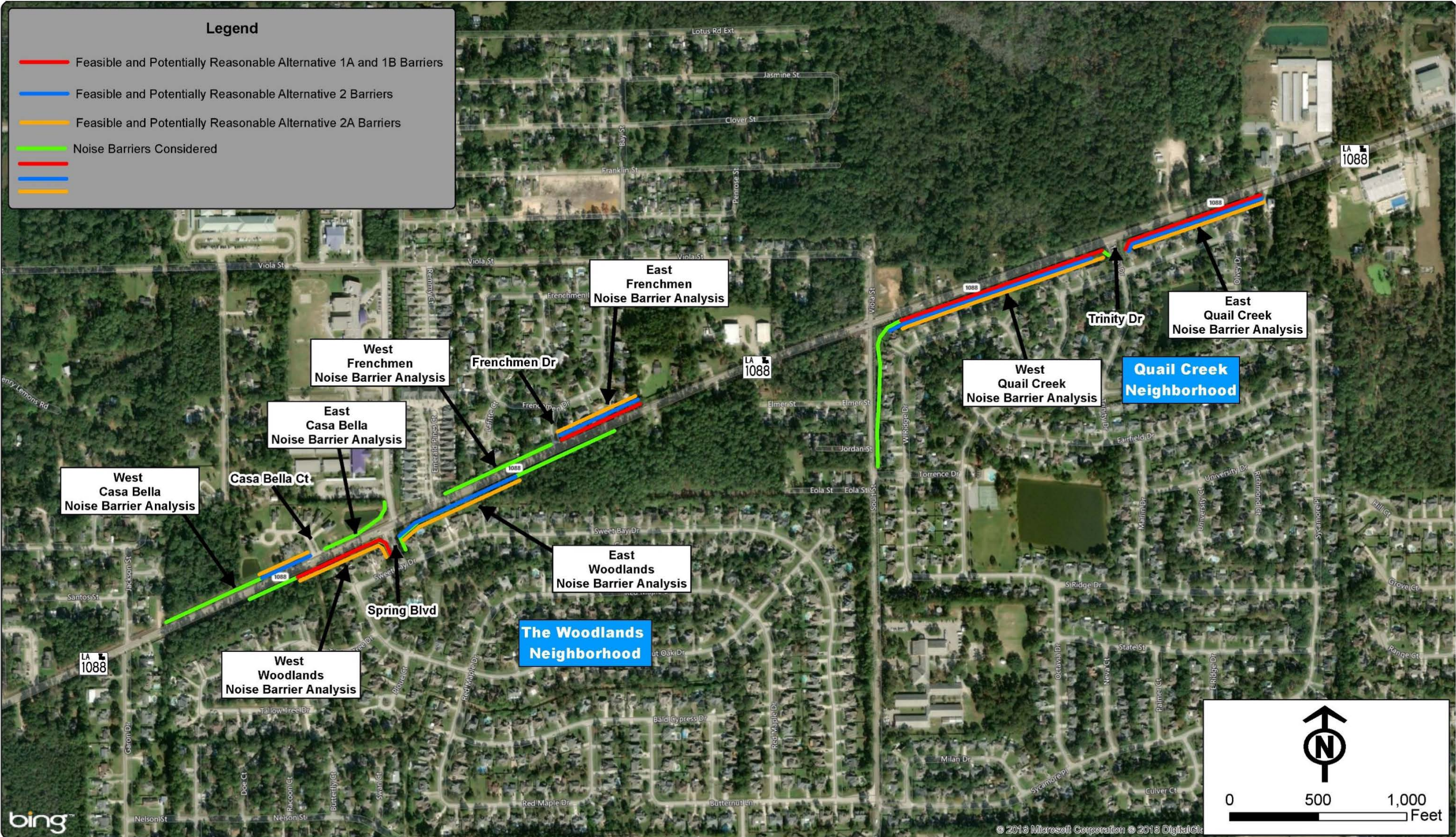
The six (6) feasible barriers for Build Alternative 1 (1A and 1B) were analyzed relative to the LADTOD's reasonableness criteria. All of the barriers were found to meet the eight (8) dBA reduction goal and four (4) were able to meet the LADOTD's \$35,000 cost-per-benefitted-receptor goal. The noise barriers that were found to be potentially reasonable for Build Alternative 1 (1A and 1B) were the East Frenchmen Noise Barrier (east of Frenchmen Drive), the West Woodlands Noise Barrier (west of Spring Boulevard), the West Quail Creek Noise Barrier (west of Trinity Drive), and the East Quail Creek Noise Barrier (east of Trinity Drive). The feasibility and reasonableness worksheets for the noise barriers are included in **Appendix G**. The locations of the noise barrier analyses and the locations of the feasible and potentially reasonable noise barriers are illustrated on **Figure 6-1**.

The five feasible barriers for Build Alternative 2 were analyzed relative to the LDTOD's reasonableness criteria. All of the barriers were found to meet the eight (8) dBA reduction goal and were able to meet the LADOTD's \$35,000 cost-per-benefitted-receptor goal. The noise barriers that were found to be potentially reasonable for Build Alternative 2 were the West Casa Bella Noise Barrier (west of Casa Bella Court), the East Frenchmen Noise Barrier (east of Frenchmen Drive), the East Woodlands Noise Barrier (east of

Spring Boulevard), the West Quail Creek Noise Barrier (west of Trinity Drive), and the East Quail Creek Noise Barrier (east of Trinity Drive). The feasibility and reasonableness worksheets for the noise barriers are included in **Appendix G**. The locations of the noise barrier analyses and the locations of the feasible and potentially reasonable noise barriers are illustrated on **Figure 6-1**.

The six (6) feasible barriers for Build Alternative 2A (Preferred Alternative) were analyzed relative to the LADOTD's reasonableness criteria. All of the barriers were found to meet the eight (8) dBA reduction goal and were able to meet the LADOTD's \$35,000 cost-per-benefitted-receptor goal. The noise barriers that were found to be potentially reasonable for Build Alternative 2A (Preferred Alternative) were the West Casa Bella Noise Barrier (west of Casa Bella Court), the East Frenchmen Noise Barrier (east of Frenchmen Drive), the West Woodlands Noise Barrier (west of Spring Boulevard), the East Woodlands Noise Barrier (east of Spring Boulevard), the West Quail Creek Noise Barrier (west of Trinity Drive), and the East Quail Creek Noise Barrier (east of Trinity Drive). The feasibility and reasonableness worksheets for the noise barriers are included in **Appendix G**. The locations of the noise barrier analyses and the locations of the feasible and potentially reasonable noise barriers are illustrated on **Figure 6-1**.

Figure 6-1: Noise Barriers Considered Feasible and Potentially Reasonable



6.6 Noise Insulation of Activity Category D Land Use Facilities listed in Table 3-1.

Exterior noise impacts to Activity Category D land uses are predicted to occur at three locations for the 2033 Build Alternative 1 (1A and 1B), Build Alternative 2, and Build Alternative 2A (Preferred Alternative) scenarios. **Table 6-1** summarizes the exterior noise results at the Activity Category D land uses along the LA 1088 Corridor Study project

Table 6-1: LA 1088 Corridor Study Exterior Noise Results at Activity Category D Land Uses

Receptor	No. of Rec. Rep.	Construction Materials	2013 Existing Noise Level (Exterior dBA)	2033 No-Build Noise Level (Exterior dBA)	2033 Build Alt 1 Noise Level (Exterior dBA)	2033 Build Alt 2 Noise Level (Exterior dBA)	2033 Build Alt 2A Noise Level (Exterior dBA)	Structural Insertion Loss	Adj. 2013 Existing Noise Level (Interior dBA)	Adj. 2033 No-Build Noise Level (Interior dBA)	Adj. 2033 Build Alt 1 Noise Level (Interior dBA)	Adj. 2033 Build Alt 2 Noise Level (Interior dBA)	Adj. 2033 Build Alt 2A Noise Level (Interior dBA)
School 43	1	Masonry/ Double Glazed Windows	64.4	66.1	67.2	67.1	66.8	35	29.4	31.1	32.2	32.1	31.8
School 79	1	Masonry/ Double Glazed Windows	54.0	55.7	56.7	56.8	56.8	35	19.0	20.7	21.8	21.9	21.8
Church 144	2	Masonry/ Double Glazed Windows	66.1	67.8	68.1	68.1	68.0	35	31.1	32.8	33.1	33.1	33.0
Church 204	1	Masonry/ Double Glazed Windows	66.0	67.8	67.9	68.0	67.6	35	31.0	32.8	32.9	33.0	32.6
Church 205	1	Masonry/ Double Glazed Windows	58.9	60.6	61.3	61.7	61.6	35	23.9	25.6	26.3	26.7	26.6

The predicted exterior noise levels at the Activity Category D land uses are predicted to range from 56.7 dBA to 68.1 dBA. Given that the primary activities at these sites are indoor activities and the structures are of recent construction and are climate controlled, it is expected that the interior noise levels would be well below the NAC at these sites. Therefore, noise insulation at Activity Category D land uses was not considered for the project.

7 Undeveloped Land Analysis

There are four (4) areas where undeveloped land analyses for Activity Category G land uses were performed within the LA 1088 Corridor Study project corridor. Noise contours were generated at these locations for the 66 dBA and 71 dBA noise levels. Locations of the undeveloped land analyses are shown on **Figure B-1, Figure B-2, Figure B-6, Figure B-7, and Figure B-9** through **Figure B-18** in **Appendix B**. The results from the undeveloped land analyses are included in **Table 7-1**. This information is included for local officials to be aware of anticipated highway noise so that future development can be

compatible with traffic noise. For example if a residence is planned with an NAC criteria of 66 dBA, officials may choose to locate the development 105 to 140 feet from the proposed project. If a business is planned with an NAC criteria of 71 dBA, officials may choose to locate the development 40 to 60 feet from the proposed project.

Table 7-1: Undeveloped Land Analysis and Study Area Noise Level Contours

Site	<u>2033 Build Alternatives</u>					
	66 dBA Contour Distance from Edge-of-Pavement (feet)			71 dBA Contour Distance from Edge-of-Pavement (feet)		
	Build Alt 1 (1A and 1B)	Build Alt 2	Build Alt 2A	Build Alt 1 (1A and 1B)	Build Alt 2	Build Alt 2A
From LA 190 to Beginning of Project	140	140	140	50	50	140
UL 1	140	140	140	55	55	140
UL 2	135	135	135	60	60	135
End of Project Area to LA 36	105	105	105	40	40	105

8 **References**

Louisiana Department of Transportation and Development, Highway Traffic Noise Policy. July 2011.

U.S. National Archives and Records Administration, Office of Federal Register. Title 23, Code of Federal Regulations, Part 772. Procedures for Abatement of Highway Traffic Noise and Construction Noise. 2010.

U.S. Department of Transportation, Federal Highway Administration. Highway Traffic Noise: Analysis and Abatement Guidance. December 2011.

APPENDIX A
LA 1088 Corridor Study Noise
Report
Noise Results Table

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>				<u>Build Alternative 2</u>				<u>Build Alternative 2A</u>			
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Site
Res 1 (Residential)	1	B	81	67.7	69.4	Yes	73	69.4	1.7	Yes	73	69.4	1.7	Yes	Res 1 (Residential)
Res 2 (Residential)	1	B	58	69.1	70.8	Yes	51	70.8	1.7	Yes	51	70.8	1.7	Yes	Res 2 (Residential)
Res 3 (Residential)	1	B	59	69.0	70.8	Yes	54	70.8	1.8	Yes	54	70.8	1.8	Yes	Res 3 (Residential)
Res 4 (Residential)	1	B	100	66.9	68.6	Yes	96	67.4	0.5	Yes	96	67.4	0.5	Yes	Res 4 (Residential)
Res 5 (Residential)	6	B	189	61.7	63.4	No	185	62.4	0.7	No	185	62.4	0.7	No	Res 5 (Residential)
Res 6 (Residential)	6	B	290	57.3	59.0	No	288	58.7	1.4	No	288	58.7	1.4	No	Res 6 (Residential)
Res 7 (Residential)	3	B	411	53.6	55.3	No	409	55.6	2.0	No	409	55.6	2.0	No	Res 7 (Residential)
Res 8 (Residential)	1	B	140	64.7	66.5	Yes	137	65.0	0.3	No	137	65.1	0.4	No	Res 8 (Residential)
Res 9 (Residential)	1	B	37	70.6	72.3	Yes	26	73.3	2.7	Yes	26	73.3	2.7	Yes	Res 9 (Residential)
Res 10 (Residential)	1	B	106	66.6	68.3	Yes	96	66.9	0.3	Yes	96	66.9	0.3	Yes	Res 10 (Residential)

			<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>				<u>Build Alternative 2</u>				<u>Build Alternative 2A</u>			
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?
Res 11 (Residential)	1	B	58	69.0	70.7	Yes	46	71.2	2.2	Yes	46	71.2	2.2	Yes	45	71.2	2.2	Yes
Res 12 (Residential)	1	B	36	70.6	72.4	Yes	48	72.4	1.8	Yes	48	72.4	1.8	Yes	47	72.4	1.8	Yes
Res 13 (Residential)	1	B	25	71.6	73.4	Yes	34	73.3	1.7	Yes	34	73.3	1.7	Yes	33	73.3	1.7	Yes
Res 14 (Residential)	1	B	83	67.6	69.3	Yes	91	69.2	1.6	Yes	91	69.2	1.6	Yes	90	69.2	1.6	Yes
Res 15 (Residential)	1	B	44	70.0	71.7	Yes	52	71.3	1.3	Yes	52	71.3	1.3	Yes	51	71.3	1.3	Yes
Res 16 (Residential)	1	B	87	67.4	69.1	Yes	86	68.3	0.9	Yes	86	68.4	1.0	Yes	85	68.4	1.0	Yes
Res 17 (Residential)	3	B	214	60.1	61.8	No	212	61.4	1.3	No	212	61.5	1.4	No	211	61.5	1.4	No
Res 18 (Residential)	3	B	320	55.9	57.7	No	317	58.1	2.2	No	317	58.2	2.3	No	316	58.2	2.3	No
Res 19 (Residential)	3	B	442	52.8	54.5	No	441	54.8	2.0	No	441	55.0	2.2	No	440	54.9	2.1	No
Office 20 (Office)	1	E	77	68.0	69.7	No	71	68.9	0.9	No	71	69.0	1.0	No	70	69.0	1.0	No

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>				<u>Build Alternative 2</u>				<u>Build Alternative 2A</u>			
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	
Office 21 (Office)	1	E	59	69.0	70.8	No	54	70.4	1.4	No	54	70.4	1.4	No	No
Restaurant 22 (Restaurant)	1	E	88	68.1	69.9	No	86	66.8	-1.3	No	86	66.8	-1.3	No	No
Bank 23 (Bank)	1	E	95	67.9	69.6	No	76	65.7	-2.2	No	76	65.7	-2.2	No	No
Office 24 (Office)	1	E	371	55.8	57.5	No	355	57.0	1.2	No		57.3	1.5	No	No
Res 25 (Residential)	1	B	44	69.5	71.2	Yes	37	70.5	1.0	Yes	34	71.3	1.8	Yes	Yes
Res 26 (Residential)	1	B	188	59.1	60.8	No	185	61.5	2.4	No	178	62.2	3.1	No	No
Res 27 (Residential)	1	B	243	56.5	58.2	No	240	58.9	2.4	No	233	60.2	3.7	No	No
Res 28 (Residential)	1	B	343	53.4	55.1	No	340	55.6	2.2	No	332	56.7	3.3	No	No
Res 29 (Residential)	1	B	430	51.6	53.3	No	427	53.7	2.1	No	419	54.6	3.0	No	No
Res 30 (Residential)	1	B	201	58.2	59.9	No	198	60.8	2.6	No	188	61.4	3.2	No	No

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>				<u>Build Alternative 2</u>				<u>Build Alternative 2A</u>			
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	
Res 31 (Residential)	1	B	79	67.0	68.7	Yes	76	68.7	1.7	Yes	69	68.4	1.4	Yes	Yes
Res 32 (Residential)	1	B	416	51.4	53.1	No	413	53.6	2.2	No	406	54.5	3.1	No	No
Res 33 (Residential)	1	B	145	61.4	63.1	No	141	63.4	2.0	No	135	63.6	2.2	No	No
Res 34 (Residential)	1	B	235	56.5	58.2	No	230	58.9	2.4	No	225	60.0	3.5	No	No
Res 35 (Residential)	1	B	79	66.0	67.7	Yes	59	67.6	1.6	Yes	59	67.6	1.6	Yes	Yes
Res 36 (Residential)	1	B	81	58.5	60.2	No	77	60.5	2.0	No	76	60.6	2.1	No	No
Res 37 (Residential)	1	B	91	55.3	57.0	No	92	57.2	1.9	No	92	57.5	2.2	No	No
Res 38 (Residential)	1	B	81	54.9	56.6	No	82	56.5	1.6	No	81	56.6	1.7	No	No
Res 39 (Residential)	1	B	94	53.3	55.0	No	95	54.9	1.6	No	95	55.1	1.8	No	No
Res 40 (Residential)	1	B	318	58.5	60.2	No	318	60.2	1.7	No	318	60.7	2.2	No	No

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>					<u>Build Alternative 2</u>					<u>Build Alternative 2A</u>				
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?
Res 41 (Residential)	1	B	147	61.7	63.5	No	144	64.2	2.5	No	137	64.2	2.5	No	136	63.9	2.2	No
Res 42 (Residential)	1	B	234	56.7	58.4	No	231	59.1	2.4	No	224	60.4	3.7	No	223	60.2	3.5	No
School 43 (School)	1	C	107	64.4	66.1	Yes	104	67.2	2.8	Yes	97	67.1	2.7	Yes	96	66.8	2.4	Yes
Res 44 (Residential)	3	B	310	51.7	53.4	No	307	53.9	2.2	No	300	55.0	3.3	No	299	54.8	3.1	No
Res 45 (Residential)	4	B	363	50.8	52.5	No	360	53.0	2.2	No	353	53.9	3.1	No	352	53.7	2.9	No
Res 46 (Residential)	2	B	394	50.4	52.1	No	391	52.5	2.1	No	384	53.3	2.9	No	383	53.2	2.8	No
Res 47 (Residential)	4	B	465	49.5	51.3	No	462	51.5	2.0	No	455	52.2	2.7	No	454	52.1	2.6	No
Res 48 (Residential)	1	B	238	54.6	56.3	No	235	57.0	2.4	No	228	58.4	3.8	No	227	58.1	3.5	No
Apartments 49 (Apartments - 1st Floor)	2	B	72	67.1	68.9	Yes	69	68.7	1.6	Yes	62	68.6	1.5	Yes	61	68.5	1.4	Yes
Apartments 49 (Apartments - 2nd Floor)	2	B	72	67.2	69.0	Yes	69	68.9	1.7	Yes	62	69.0	1.8	Yes	61	69.0	1.8	Yes
Apartments 50 (Apartments - 1st Floor)	2	B	82	63.3	65.0	No	78	64.8	1.5	No	72	64.6	1.3	No	71	64.3	1.0	No

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>				<u>Build Alternative 2</u>				<u>Build Alternative 2A</u>			
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	
Apartments 50 (Apartments - 2nd Floor)	2	B	82	63.6	65.3	No	78	65.3	1.7	No	72	65.4	1.8	No	No
Apartments 51 (Apartments - 1st Floor)	2	B	111	62.6	64.4	No	108	64.7	2.1	No	101	64.3	1.7	No	No
Apartments 51 (Apartments - 2nd Floor)	2	B	111	64.2	65.9	No	108	65.9	1.7	No	101	66.0	1.8	Yes	No
Apartments 52 (Apartments - 1st Floor)	2	B	119	54.8	56.5	No	115	57.7	2.9	No	109	56.7	1.9	No	No
Apartments 52 (Apartments - 2nd Floor)	2	B	119	57.2	58.9	No	115	58.9	1.7	No	109	59.0	1.8	No	No
Apartments 53 (Apartments - 1st Floor)	2	B	210	54.3	56.0	No	207	56.2	1.9	No	200	57.6	3.3	No	No
Apartments 53 (Apartments - 2nd Floor)	2	B	210	58.8	60.6	No	207	60.4	1.6	No	200	60.4	1.6	No	No
Apartments 54 (Apartments - 1st Floor)	2	B	243	53.1	54.9	No	240	55.5	2.4	No	233	56.8	3.7	No	No

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>				<u>Build Alternative 2</u>				<u>Build Alternative 2A</u>			
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	
Apartments 54 (Apartments - 2nd Floor)	2	B	243	58.5	60.2	No	240	60.1	1.6	No	233	60.1	1.6	No	
Apartments 55 (Apartments - 1st Floor)	2	B	386	50.1	51.8	No	382	52.4	2.3	No	376	52.9	2.8	No	
Apartments 55 (Apartments - 2nd Floor)	2	B	386	56.7	58.4	No	382	58.1	1.4	No	376	57.6	0.9	No	
Apartments 56 (Apartments - 1st Floor)	2	B	377	50.6	52.3	No	374	52.9	2.3	No	367	53.5	2.9	No	
Apartments 56 (Apartments - 2nd Floor)	2	B	377	57.3	59.0	No	374	58.6	1.3	No	367	58.2	0.9	No	
Res 57 (Residential)	3	B	312	53.2	54.9	No	304	55.3	2.1	No	302	55.7	2.5	No	
Res 58 (Residential)	2	B	261	55.1	56.8	No	254	57.1	2.0	No	251	57.4	2.3	No	
Res 59 (Residential)	3	B	296	50.3	52.0	No	299	52.2	1.9	No	299	52.6	2.3	No	
Res 60 (Residential)	2	B	169	51.9	53.6	No	172	53.8	1.9	No	172	54.2	2.3	No	
Res 61 (Residential)	3	B	110	58.5	60.2	No	113	59.9	1.4	No	112	60.1	1.6	No	

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>					<u>Build Alternative 2</u>					<u>Build Alternative 2A</u>				
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?
Res 62 (Residential)	1	B	53	67.7	69.4	Yes	38	67.3	-0.4	Yes	38	67.3	-0.4	Yes	37	67.2	-0.5	Yes
Res 63 (Residential)	1	B	51	61.6	63.3	No	51	62.3	0.7	No	51	62.3	0.7	No	50	62.3	0.7	No
Res 64 (Residential)	1	B	54	55.6	57.3	No	57	57.2	1.6	No	57	57.6	2.0	No	56	57.6	2.0	No
Res 65 (Residential)	2	B	57	53.7	55.3	No	57	55.4	1.7	No	57	55.6	1.9	No	56	55.6	1.9	No
Res 66 (Residential)	1	B	48	65.9	67.6	Yes	47	65.7	-0.2	No	46	65.6	-0.3	No	45	65.6	-0.3	No
Res 67 (Residential)	1	B	50	60.6	62.3	No	54	61.7	1.1	No	52	61.9	1.3	No	51	62.1	1.5	No
Res 68 (Residential)	1	B	43	57.7	59.4	No	45	59.1	1.4	No	46	59.5	1.8	No	45	59.7	2.0	No
Res 69 (Residential)	1	B	57	54.4	56.0	No	50	55.9	1.5	No	50	56.3	1.9	No	49	56.2	1.8	No
Res 70 (Residential)	2	B	195	58.5	60.2	No	191	60.1	1.6	No	188	61.1	2.6	No	187	61.0	2.5	No
Res 71 (Residential)	3	B	177	53.4	55.1	No	180	55.0	1.6	No	180	55.7	2.3	No	179	55.8	2.4	No
Res 72 (Residential)	1	B	146	51.2	52.9	No	150	53.2	2.0	No	150	53.8	2.6	No	149	53.7	2.5	No
Res 73 (Residential)	1	B	62	68.0	69.7	Yes	59	69.8	1.8	Yes	52	69.9	1.9	Yes	51	69.8	1.8	Yes

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>				<u>Build Alternative 2</u>				<u>Build Alternative 2A</u>			
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	
Res 74 (Residential)	1	B	57	68.3	70.0	Yes	53	70.2	1.9	Yes	47	70.4	2.1	Yes	Yes
Res 75 (Residential)	1	B	84	66.6	68.3	Yes	76	68.0	1.4	Yes	74	68.1	1.5	Yes	Yes
Res 76 (Residential)	1	B	146	61.3	63.0	No	140	63.4	2.1	No	136	63.8	2.5	No	No
Res 77 (Residential)	3	B	198	58.2	59.9	No	194	60.7	2.5	No	188	61.6	3.4	No	No
Res 78 (Residential)	1	B	465	50.0	51.7	No	463	52.4	2.4	No	455	53.0	3.0	No	No
School 79 (School)	1	C	114	54.0	55.7	No	107	56.7	2.7	No	106	56.8	2.8	No	No
Res 80 (Residential)	1	B	74	66.6	68.4	Yes	32	70.5	3.9	Yes	32	70.5	3.9	Yes	Yes
Res 81 (Residential)	1	B	109	58.4	60.1	No	105	61.0	2.6	No	107	61.1	2.7	No	No
Res 82 (Residential)	1	B	81	56.6	58.3	No	78	58.6	2.0	No	78	58.8	2.2	No	No
Res 83 (Residential)	1	B	77	55.5	57.2	No	78	57.2	1.7	No	77	57.4	1.9	No	No
Res 84 (Residential)	1	B	82	54.5	56.2	No	83	56.3	1.8	No	83	56.4	1.9	No	No
Res 85 (Residential)	1	B	264	55.0	56.7	No	246	57.5	2.5	No	245	58.1	3.1	No	No

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>					<u>Build Alternative 2</u>					<u>Build Alternative 2A</u>				
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?
Res 86 (Residential)	1	B	342	50.7	52.4	No	340	52.7	2.0	No	340	53.2	2.5	No	339	53.2	2.5	No
Res 87 (Residential)	9	B	212	57.5	59.2	No	208	59.6	2.1	No	202	60.9	3.4	No	201	60.9	3.4	No
Res 88 (Residential)	5	B	412	50.7	52.4	No	408	52.6	1.9	No	402	53.2	2.5	No	401	53.2	2.5	No
Res 89 (Residential)	1	B	92	65.8	67.6	Yes	86	67.1	1.3	Yes	82	67.2	1.4	Yes	81	66.9	1.1	Yes
Res 90 (Residential)	1	B	88	66.2	67.9	Yes	80	67.4	1.2	Yes	78	67.5	1.3	Yes	77	67.2	1.0	Yes
Res 91 (Residential)	2	B	300	53.4	55.1	No	295	55.5	2.1	No	290	56.6	3.2	No	289	56.4	3.0	No
Res 92 (Residential)	2	B	395	51.1	52.8	No	390	53.3	2.2	No	385	54.0	2.9	No	384	53.8	2.7	No
Res 93 (Residential)	1	B	213	56.3	58.0	No	208	58.5	2.2	No	203	59.7	3.4	No	202	59.5	3.2	No
Res 94 (Residential)	1	B	109	64.1	65.8	No	102	65.6	1.5	No	101	65.5	1.4	No	100	65.3	1.2	No
Res 95 (Residential)	1	B	62	65.4	67.1	Yes	68	66.2	0.8	Yes	68	66.2	0.8	Yes	67	66.0	0.6	Yes
Res 96 (Residential)	1	B	69	64.1	65.8	No	70	66.4	2.3	Yes	70	66.4	2.3	Yes	69	66.2	2.1	Yes
Recreation 97 (Recreation)	1	C	344	50.9	52.6	No	244	53.0	2.1	No	244	53.3	2.4	No	243	53.2	2.3	No

<u>Existing Alignment</u>							<u>Build Alternative 1 (1A and 1B)</u>				<u>Build Alternative 2</u>				<u>Build Alternative 2A</u>			
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?
Res 98 (Residential)	1	B	119	62.7	64.4	No	100	64.9	2.2	No	100	64.8	2.1	No	99	64.6	1.9	No
Res 99 (Residential)	1	B	124	62.1	63.9	No	116	64.2	2.1	No	113	64.1	2.0	No	112	63.9	1.8	No
Res 100 (Residential)	4	B	260	52.6	54.3	No	276	55.1	2.5	No	273	55.6	3.0	No	272	55.4	2.8	No
Res 101 (Residential)	1	B	131	61.6	63.3	No	124	63.7	2.1	No	124	63.7	2.1	No	123	63.5	1.9	No
Res 102 (Residential)	1	B	159	59.7	61.4	No	155	62.1	2.4	No	155	62.1	2.4	No	154	62.0	2.3	No
Res 103 (Residential)	1	B	216	56.5	58.2	No	213	59.0	2.5	No	206	59.7	3.2	No	205	59.6	3.1	No
Res 104 (Residential)	1	B	245	55.4	57.1	No	242	57.9	2.5	No	235	58.8	3.4	No	234	58.5	3.1	No
Res 105 (Residential)	1	B	278	54.1	55.9	No	275	56.6	2.5	No	268	57.6	3.5	No	267	57.3	3.2	No
Res 106 (Residential)	2	B	360	51.0	52.7	No	356	53.2	2.2	No	350	53.7	2.7	No	349	53.6	2.6	No
Res 107 (Residential)	2	B	406	50.3	52.0	No	403	52.4	2.1	No	396	52.9	2.6	No	395	52.7	2.4	No
Res 108 (Residential)	2	B	441	49.8	51.5	No	438	51.9	2.1	No	431	52.3	2.5	No	430	52.2	2.4	No
Res 109 (Residential)	2	B	474	49.4	51.1	No	471	51.4	2.0	No	464	51.8	2.4	No	463	51.7	2.3	No

Existing Alignment							Build Alternative 1 (1A and 1B)				Build Alternative 2				Build Alternative 2A			
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?
Res 110 (Residential)	1	B	71	67.1	68.9	Yes	68	68.3	1.2	Yes	61	68.7	1.6	Yes	60	68.6	1.5	Yes
Res 111 (Residential)	1	B	127	62.6	64.3	No	124	64.7	2.1	No	116	64.9	2.3	No	115	64.7	2.1	No
Res 112 (Residential)	1	B	65	68.0	69.7	Yes	62	68.7	0.7	Yes	55	68.9	0.9	Yes	54	68.8	0.8	Yes
Res 113 (Residential)	1	B	106	64.7	66.4	Yes	103	65.5	0.8	No	96	65.6	0.9	No	95	65.3	0.6	No
Res 114 (Residential)	3	B	277	54.8	56.5	No	274	56.9	2.1	No	267	58.0	3.2	No	266	57.8	3.0	No
Res 115 (Residential)	3	B	335	53.4	55.1	No	327	55.6	2.2	No	325	56.2	2.8	No	324	56.1	2.7	No
Res 116 (Residential)	3	B	115	58.7	60.4	No	118	59.7	1.0	No	118	59.7	1.0	No	117	59.7	1.0	No
Res 117 (Residential)	1	B	46	64.6	66.3	Yes	47	65.4	0.8	No	47	65.5	0.9	No	46	65.4	0.8	No
Res 118 (Residential)	1	B	54	63.4	65.1	No	57	64.0	0.6	No	57	64.0	0.6	No	56	64.0	0.6	No
Res 119 (Residential)	1	B	38	64.5	66.2	Yes	41	65.6	1.1	No	41	65.6	1.1	No	40	65.6	1.1	No
Res 120 (Residential)	1	B	65	66.9	68.7	Yes	49	68.5	1.6	Yes	48	68.5	1.6	Yes	47	68.5	1.6	Yes
Res 121 (Residential)	2	B	110	62.6	64.3	No	93	65.4	2.8	No	92	65.4	2.8	No	91	65.3	2.7	No

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>					<u>Build Alternative 2</u>					<u>Build Alternative 2A</u>				
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?
Res 122 (Residential)	2	B	140	58.8	60.5	No	142	62.3	3.5	No	142	62.3	3.5	No	141	62.4	3.6	No
Res 123 (Residential)	2	B	145	55.5	57.2	No	152	59.0	3.5	No	152	59.1	3.6	No	151	59.3	3.8	No
Res 124 (Residential)	2	B	146	53.4	55.1	No	153	57.0	3.6	No	153	57.1	3.7	No	152	57.2	3.8	No
Res 125 (Residential)	2	B	148	51.8	53.5	No	155	55.1	3.3	No	155	55.5	3.7	No	154	55.6	3.8	No
Res 126 (Residential)	2	B	150	50.8	52.5	No	158	53.8	3.0	No	158	54.0	3.2	No	157	54.1	3.3	No
Res 127 (Residential)	2	B	146	49.7	51.4	No	156	52.5	2.8	No	153	52.6	2.9	No	152	52.7	3.0	No
Res 128 (Residential)	1	B	161	48.9	50.6	No	188	51.5	2.6	No	167	51.6	2.7	No	166	51.7	2.8	No
Res 129 (Residential)	1	B	124	62.1	63.8	No	121	64.9	2.8	No	117	64.8	2.7	No	116	64.7	2.6	No
Res 130 (Residential)	1	B	92	65.1	66.8	Yes	89	67.1	2.0	Yes	82	67.1	2.0	Yes	81	66.5	1.4	Yes
Res 131 (Residential)	1	B	106	63.8	65.5	No	103	66.5	2.7	Yes	96	66.3	2.5	Yes	95	65.5	1.7	Yes
Res 132 (Residential)	1	B	82	66.0	67.7	Yes	79	67.7	1.7	Yes	72	68.0	2.0	Yes	71	67.6	1.6	Yes
Res 133 (Residential)	4	B	146	59.5	61.2	No	143	62.2	2.7	No	136	61.8	2.3	No	135	62.0	2.5	No

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>				<u>Build Alternative 2</u>				<u>Build Alternative 2A</u>			
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	
Res 134 (Residential)	1	B	65	66.9	68.7	Yes	62	68.7	1.8	Yes	55	69.2	2.3	Yes	Yes
Res 135 (Residential)	7	B	256	53.3	55.0	No	253	55.7	2.4	No	246	55.5	2.2	No	No
Res 136 (Residential)	8	B	422	49.8	51.5	No	419	52.0	2.2	No	412	52.1	2.3	No	No
Res 137 (Residential)	1	B	84	65.8	67.5	Yes	81	67.6	1.8	Yes	74	67.9	2.1	Yes	Yes
Res 138 (Residential)	1	B	82	66.0	67.7	Yes	79	67.7	1.7	Yes	72	68.0	2.0	Yes	Yes
Res 139 (Residential)	1	B	93	64.6	66.3	Yes	90	67.1	2.5	Yes	83	67.2	2.6	Yes	Yes
Res 140 (Residential)	1	B	151	59.5	61.2	No	148	62.9	3.4	No	141	62.6	3.1	No	No
Res 141 (Residential)	1	B	81	64.8	66.6	Yes	78	67.7	2.9	Yes	71	68.1	3.3	Yes	Yes
Res 142 (Residential)	1	B	65	66.2	67.9	Yes	62	68.7	2.5	Yes	55	69.1	2.9	Yes	Yes
Res 143 (Residential)	3	B	345	50.9	52.6	No	342	53.1	2.2	No	335	53.1	2.2	No	No
Church 144 (Church)	2	C	73	66.1	67.8	Yes	67	68.1	2.0	Yes	63	68.1	2.0	Yes	Yes
Res 145 (Residential)	3	B	265	50.9	52.6	No	258	53.2	2.3	No	258	53.6	2.7	No	No

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>				<u>Build Alternative 2</u>				<u>Build Alternative 2A</u>			
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	
Res 146 (Residential)	1	B	160	53.9	55.6	No	158	56.3	2.4	No	158	56.7	2.8	No	No
Res 147 (Residential)	1	B	221	56.3	58.0	No	220	59.3	3.0	No	220	59.6	3.3	No	No
Res 148 (Residential)	3	B	29	62.5	64.2	No	30	64.3	1.8	No	30	64.3	1.8	No	No
Res 149 (Residential)	1	B	158	60.1	61.8	No	146	62.5	2.4	No	143	62.4	2.3	No	No
Res 150 (Residential)	1	B	64	67.0	68.7	Yes	53	68.7	1.7	Yes	53	68.7	1.7	Yes	Yes
Res 151 (Residential)	1	B	100	64.3	66.0	Yes	91	65.9	1.6	No	91	65.9	1.6	No	No
Res 152 (Residential)	1	B	69	66.8	68.6	Yes	60	68.5	1.7	Yes	60	68.5	1.7	Yes	Yes
Res 153 (Residential)	1	B	89	66.0	67.7	Yes	70	67.0	1.0	Yes	70	67.0	1.0	Yes	Yes
Res 154 (Residential)	1	B	83	63.3	65.0	No	74	64.1	0.8	No	71	64.2	0.9	No	No
Res 155 (Residential)	1	B	70	62.7	64.5	No	50	64.3	1.6	No	50	64.3	1.6	No	No
Res 156 (Residential)	1	B	91	60.9	62.6	No	71	62.7	1.8	No	71	62.8	1.9	No	No
Res 157 (Residential)	1	B	78	61.7	63.4	No	62	63.3	1.6	No	62	63.3	1.6	No	No

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>					<u>Build Alternative 2</u>					<u>Build Alternative 2A</u>				
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?
Res 158 (Residential)	1	B	51	63.4	65.1	No	43	65.1	1.7	No	43	65.1	1.7	No	42	65.1	1.7	No
Res 159 (Residential)	1	B	87	65.7	67.4	Yes	76	67.1	1.4	Yes	74	67.1	1.4	Yes	73	67.0	1.3	Yes
Res 160 (Residential)	1	B	75	66.5	68.2	Yes	63	68.3	1.8	Yes	62	68.3	1.8	Yes	61	68.2	1.7	Yes
Res 161 (Residential)	3	B	293	52.9	54.6	No	272	55.2	2.3	No	270	55.3	2.4	No	269	55.2	2.3	No
Res 162 (Residential)	1	B	80	66.1	67.9	Yes	68	67.9	1.8	Yes	67	67.9	1.8	Yes	66	67.7	1.6	Yes
Res 163 (Residential)	7	B	255	53.4	55.1	No	243	56.1	2.7	No	242	56.2	2.8	No	241	56.1	2.7	No
Res 164 (Residential)	5	B	379	51.1	52.8	No	367	53.4	2.3	No	366	53.5	2.4	No	365	53.4	2.3	No
Res 165 (Residential)	4	B	457	49.6	51.3	No	445	51.8	2.2	No	444	51.9	2.3	No	443	51.8	2.2	No
Res 166 (Residential)	1	B	82	66.0	67.7	Yes	70	67.6	1.6	Yes	69	67.5	1.5	Yes	68	67.3	1.3	Yes
Res 167 (Residential)	1	B	87	65.6	67.3	Yes	76	66.9	1.3	Yes	75	66.9	1.3	Yes	74	66.6	1.0	Yes
Res 168 (Residential)	1	B	93	65.0	66.7	Yes	83	66.4	1.4	Yes	82	66.4	1.4	Yes	81	66.1	1.1	Yes
Res 169 (Residential)	1	B	100	64.3	66.0	Yes	91	65.9	1.6	No	90	65.8	1.5	No	89	65.6	1.3	No

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>					<u>Build Alternative 2</u>					<u>Build Alternative 2A</u>				
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?
Res 170 (Residential)	1	B	136	61.1	62.8	No	127	63.5	2.4	No	126	63.5	2.4	No	125	63.3	2.2	No
Res 171 (Residential)	2	B	215	55.6	57.3	No	206	59.0	3.4	No	205	59.1	3.5	No	204	58.9	3.3	No
Res 172 (Residential)	3	B	308	51.6	53.3	No	299	54.6	3.0	No	298	54.7	3.1	No	297	54.5	2.9	No
Res 173 (Residential)	1	B	115	62.7	64.4	No	106	64.8	2.1	No	105	64.8	2.1	No	104	64.5	1.8	No
Res 174 (Residential)	1	B	65	67.0	68.7	Yes	56	68.7	1.7	Yes	55	68.7	1.7	Yes	54	68.6	1.6	Yes
Res 175 (Residential)	1	B	72	66.5	68.2	Yes	68	67.8	1.3	Yes	64	67.8	1.3	Yes	63	67.7	1.2	Yes
Res 176 (Residential)	1	B	76	66.3	68.0	Yes	81	66.6	0.3	Yes	79	66.5	0.2	Yes	78	66.3	0.0	Yes
Res 177 (Residential)	1	B	78	66.2	67.9	Yes	102	65.1	-1.1	No	102	65.1	-1.1	No	101	64.8	-1.4	No
Res 178 (Residential)	3	B	190	53.6	55.3	No	190	55.9	2.3	No	190	56.1	2.5	No	189	55.9	2.3	No
Res 179 (Residential)	3	B	225	51.8	53.5	No	225	53.4	1.6	No	225	53.6	1.8	No	224	53.5	1.7	No
Res 180 (Residential)	4	B	332	50.0	51.7	No	332	51.7	1.7	No	332	51.9	1.9	No	331	51.8	1.8	No
Res 181 (Residential)	1	B	52	66.7	68.5	Yes	41	66.8	0.1	Yes	41	66.8	0.1	Yes	40	66.6	-0.1	Yes

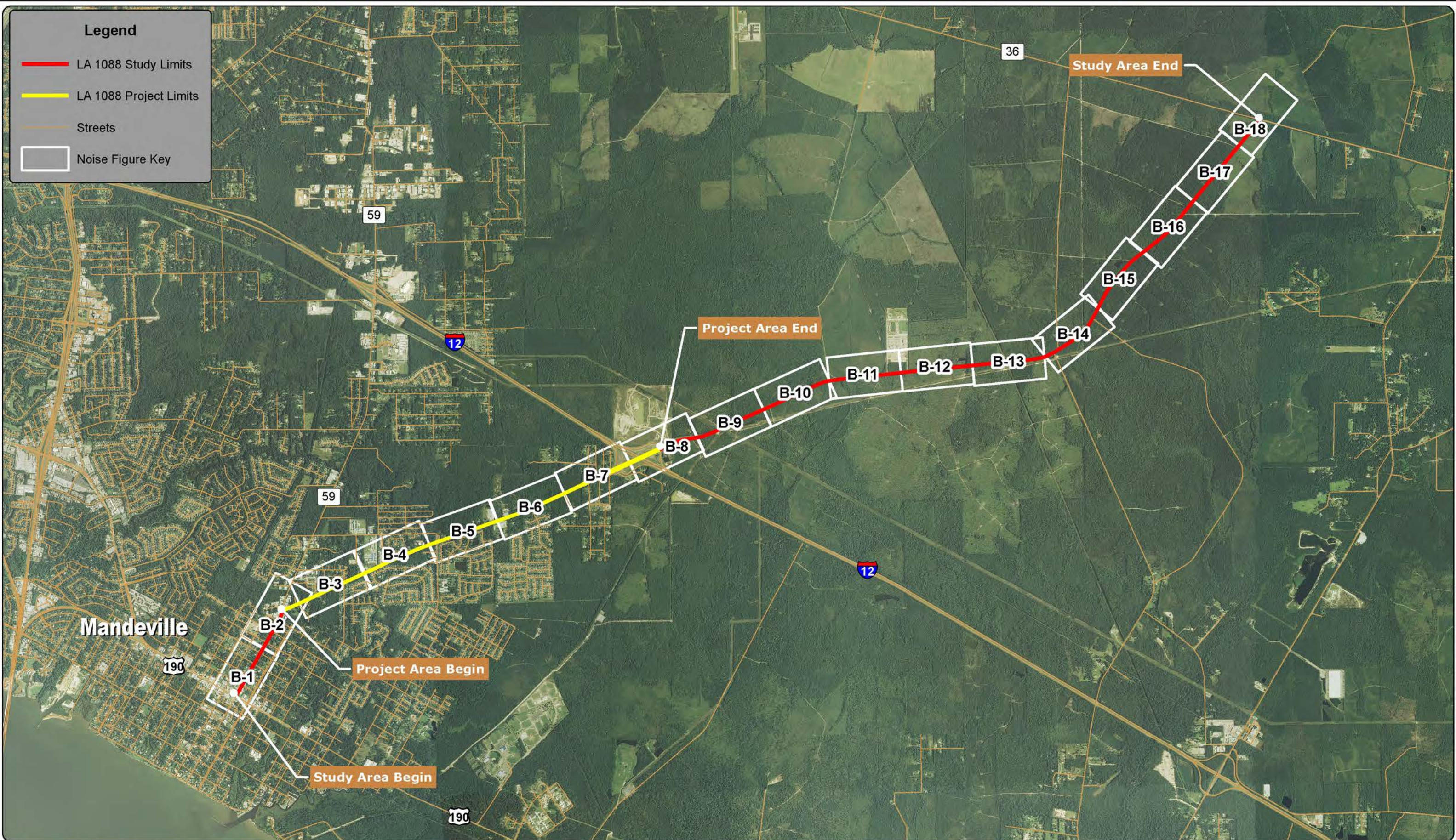
<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>					<u>Build Alternative 2</u>					<u>Build Alternative 2A</u>				
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?
Res 182 (Residential)	1	B	75	66.9	68.6	Yes	68	68.1	1.2	Yes	65	68.2	1.3	Yes	64	68.1	1.2	Yes
Res 183 (Residential)	1	B	66	67.5	69.2	Yes	58	69.1	1.6	Yes	56	69.2	1.7	Yes	55	69.1	1.6	Yes
Res 184 (Residential)	1	B	73	67.1	68.8	Yes	68	68.7	1.6	Yes	63	68.7	1.6	Yes	62	68.6	1.5	Yes
Res 185 (Residential)	1	B	71	67.2	69.0	Yes	67	68.9	1.7	Yes	61	68.9	1.7	Yes	60	68.8	1.6	Yes
Res 186 (Residential)	1	B	67	67.5	69.2	Yes	64	69.1	1.6	Yes	57	69.3	1.8	Yes	56	69.2	1.7	Yes
Res 187 (Residential)	1	B	69	67.3	69.0	Yes	66	68.9	1.6	Yes	59	69.1	1.8	Yes	58	69.0	1.7	Yes
Office 188 (Office)	1	E	68	67.4	69.1	No	65	69.0	1.6	No	58	69.2	1.8	No	57	69.1	1.7	No
Res 189 (Residential)	1	B	107	64.2	65.9	No	104	66.9	2.7	Yes	97	67.0	2.8	Yes	96	66.7	2.5	Yes
Res 190 (Residential)	7	B	255	53.4	55.1	No	253	55.6	2.2	No	250	56.2	2.8	No	249	56.0	2.6	No
Res 191 (Residential)	3	B	338	51.6	53.3	No	335	53.7	2.1	No	328	54.4	2.8	No	327	54.2	2.6	No
Res 192 (Residential)	3	B	405	50.4	52.1	No	402	52.5	2.1	No	395	52.9	2.5	No	394	52.8	2.4	No
Office 193 (Office)	1	E	72	67.2	68.9	No	69	68.9	1.7	No	62	68.9	1.7	No	61	68.8	1.6	No

<u>Existing Alignment</u>							<u>Build Alternative 1 (1A and 1B)</u>				<u>Build Alternative 2</u>				<u>Build Alternative 2A</u>			
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?
Recreation 194 (Recreation)	1	E	148	61.1	62.8	No	137	63.2	2.1	No	136	63.6	2.5	No	135	63.3	2.2	No
Vet Office 195 (Vet Office)	1	C	321	53.4	55.1	No	300	57.9	4.5	No	301	58.2	4.8	No	300	57.9	4.5	No
Res 196 (Residential)	1	B	416	51.0	52.8	No	395	55.3	4.3	No	399	55.6	4.6	No	398	55.4	4.4	No
Res 197 (Residential)	1	B	322	53.6	55.3	No	302	58.0	4.4	No	306	58.4	4.8	No	305	58.1	4.5	No
Res 198 (Residential)	2	B	284	52.6	54.3	No	289	56.5	3.9	No	289	56.9	4.3	No	288	56.6	4.0	No
Res 199 (Residential)	3	B	60	57.4	59.2	No	65	59.4	2.0	No	65	59.6	2.2	No	64	59.5	2.1	No
Res 200 (Residential)	3	B	96	55.5	57.2	No	94	58.6	3.1	No	94	58.8	3.3	No	93	58.6	3.1	No
Res 201 (Residential)	2	B	452	51.0	52.7	No	457	55.5	4.5	No	453	55.8	4.8	No	452	55.4	4.4	No
Res 202 (Residential)	1	B	302	53.9	55.6	No	298	56.4	2.5	No	292	57.4	3.5	No	291	57.2	3.3	No
Res 203 (Residential)	2	B	191	58.4	60.1	No	186	60.7	2.3	No	181	61.5	3.1	No	180	61.4	3.0	No
Church 204 (Church)	1	B	127	66.0	67.8	Yes	124	67.9	1.9	No	117	68.0	2.0	Yes	116	67.6	1.6	Yes
Church 205 (Church)	1	C	182	58.9	60.6	No	179	61.3	2.4	No	172	61.7	2.8	No	171	61.6	2.7	No

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>				<u>Build Alternative 2</u>				<u>Build Alternative 2A</u>			
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of- Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	
Res 206 (Residential)	1	B	144	61.3	63.0	No	141	62.9	1.6	No	134	63.6	2.3	No	No
Res 207 (Residential)	1	B	217	57.2	58.9	No	213	60.0	2.8	No	207	60.7	3.5	No	No
Res 208 (Residential)	1	B	179	60.5	62.3	No	156	64.2	3.7	No	156	64.4	3.9	No	No
Res 209 (Residential)	1	B	84	67.5	69.2	Yes	67	70.1	2.6	Yes	67	70.1	2.6	Yes	Yes
Res 210 (Residential)	3	B	179	60.5	62.2	No	165	63.8	3.3	No	165	63.8	3.3	No	No
Res 211 (Residential)	1	B	312	55.8	57.5	No	291	59.4	3.6	No	291	59.4	3.6	No	No
Res 212 (Residential)	3	B	459	52.4	54.1	No	446	56.0	3.6	No	446	56.0	3.6	No	No
Res 213 (Residential)	1	B	100	65.4	67.1	Yes	96	68.2	2.8	Yes	96	68.2	2.8	Yes	Yes
Res 214 (Residential)	1	B	152	61.5	63.2	No	158	64.1	2.6	No	158	64.1	2.6	No	No
Res 215 (Residential)	1	B	138	62.4	64.0	No	143	65.1	2.7	No	143	65.1	2.7	No	No
Res 216 (Residential)	1	B	118	63.9	65.5	No	119	66.9	3.0	Yes	119	66.9	3.0	Yes	Yes
Res 217 (Residential)	8	B	336	54.7	56.3	No	339	57.5	2.8	No	339	57.5	2.8	No	No

<u>Existing Alignment</u>				<u>Build Alternative 1 (1A and 1B)</u>					<u>Build Alternative 2</u>					<u>Build Alternative 2A</u>				
Site	No. of Receivers Rep.	Act Cat	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2013 Noise Level (dBA)	2033 No Build Level (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?	Dist. From Nearest Modeled Edge-of-Pavement (feet)	2033 Build Level (dBA)	Diff Between Existing and Build (dBA)	Noise Impact?
Res 218 (Residential)	1	B	157	61.1	62.8	No	157	64.1	3.0	No	157	64.1	3.0	No	156	63.7	2.6	No
Res 219 (Residential)	2	B	230	57.5	59.1	No	229	60.3	2.8	No	229	60.3	2.8	No	228	60.0	2.5	No
Res 220 (Residential)	4	B	302	55.4	57.0	No	301	58.2	2.8	No	301	58.2	2.8	No	300	57.9	2.5	No
Res 221 (Residential)	1	B	174	60.2	61.8	No	173	63.1	2.9	No	173	63.0	2.8	No	172	62.7	2.5	No
Res 222 (Residential)	1	B	169	56.8	58.4	No	163	59.5	2.7	No	163	59.4	2.6	No	162	59.3	2.5	No
Res 223 (Residential)	1	B	151	55.8	57.4	No	151	58.5	2.7	No	151	58.5	2.7	No	150	58.4	2.6	No
Res 224 (Residential)	1	B	150	55.2	56.8	No	155	57.8	2.6	No	155	57.7	2.5	No	154	57.6	2.4	No
Res 225 (Residential)	1	B	207	53.6	55.5	No	207	55.6	2.0	No	207	55.6	2.0	No	206	55.5	1.9	No
Res 226 (Residential)	1	B	121	57.1	58.8	No	111	58.8	1.7	No	111	58.8	1.7	No	110	58.7	1.6	No

APPENDIX B
LA 1088 Corridor Study Noise
Report
Figures B-1 – B-18



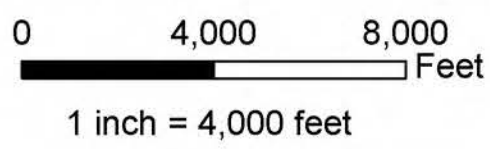
Legend

LA 1088 Study Limits

LA 1088 Project Limits

Streets

Noise Figure Key



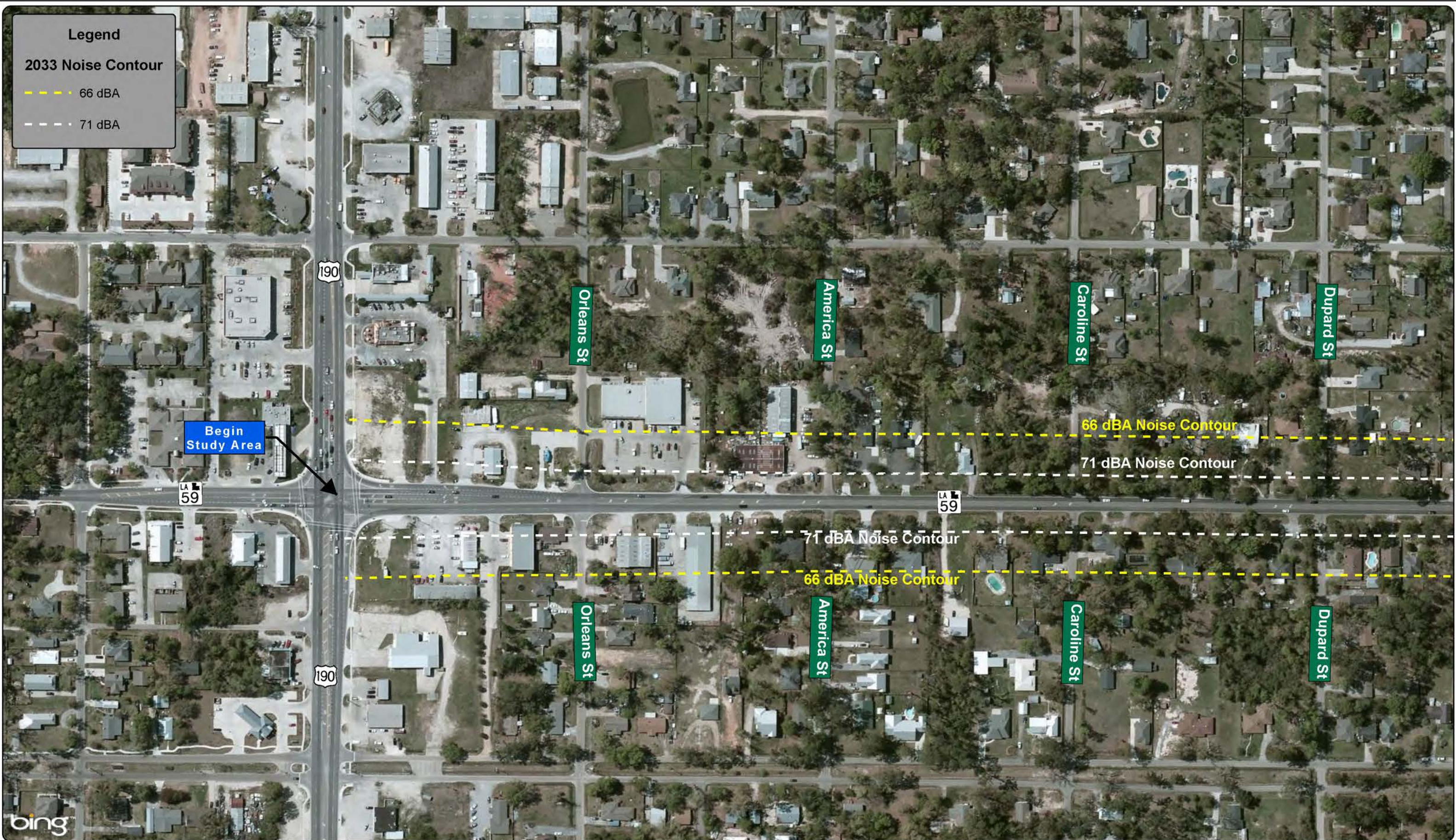
Note: This map is for presentation use only and not to be used for construction purposes.

Noise Figure Key

Project No. H.010116

LA 1088 Corridor Study

from LA 59 to I-12 Westbound Ramps



Legend

2033 Noise Contour

--- 66 dBA

--- 71 dBA

Begin
Study Area

LA
59

190

Orleans St

America St

Caroline St

Dupard St

66 dBA Noise Contour

71 dBA Noise Contour

71 dBA Noise Contour

66 dBA Noise Contour

Orleans St

America St

Caroline St

Dupard St

190

bing

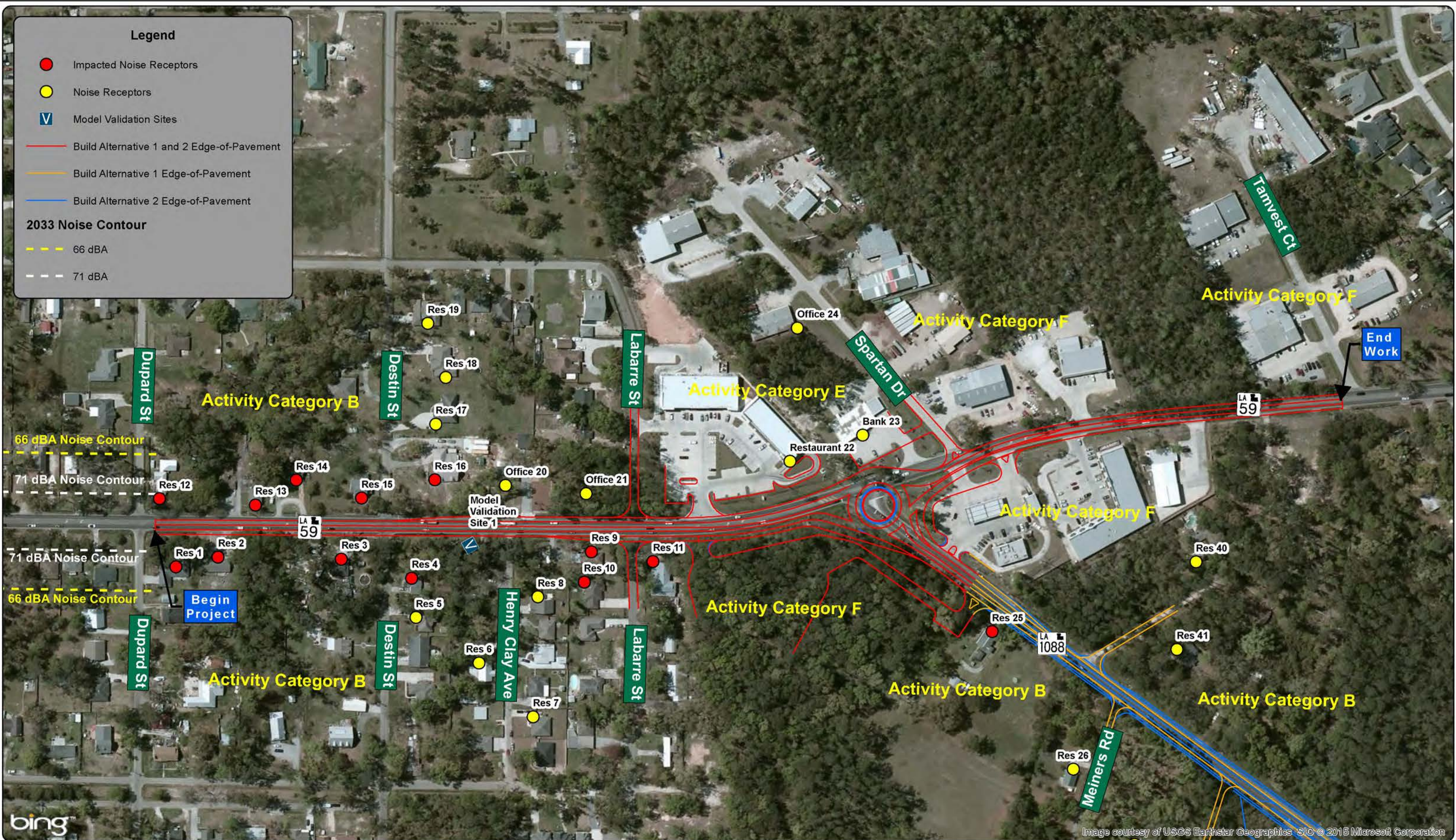


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Feet
1 inch = 200 feet



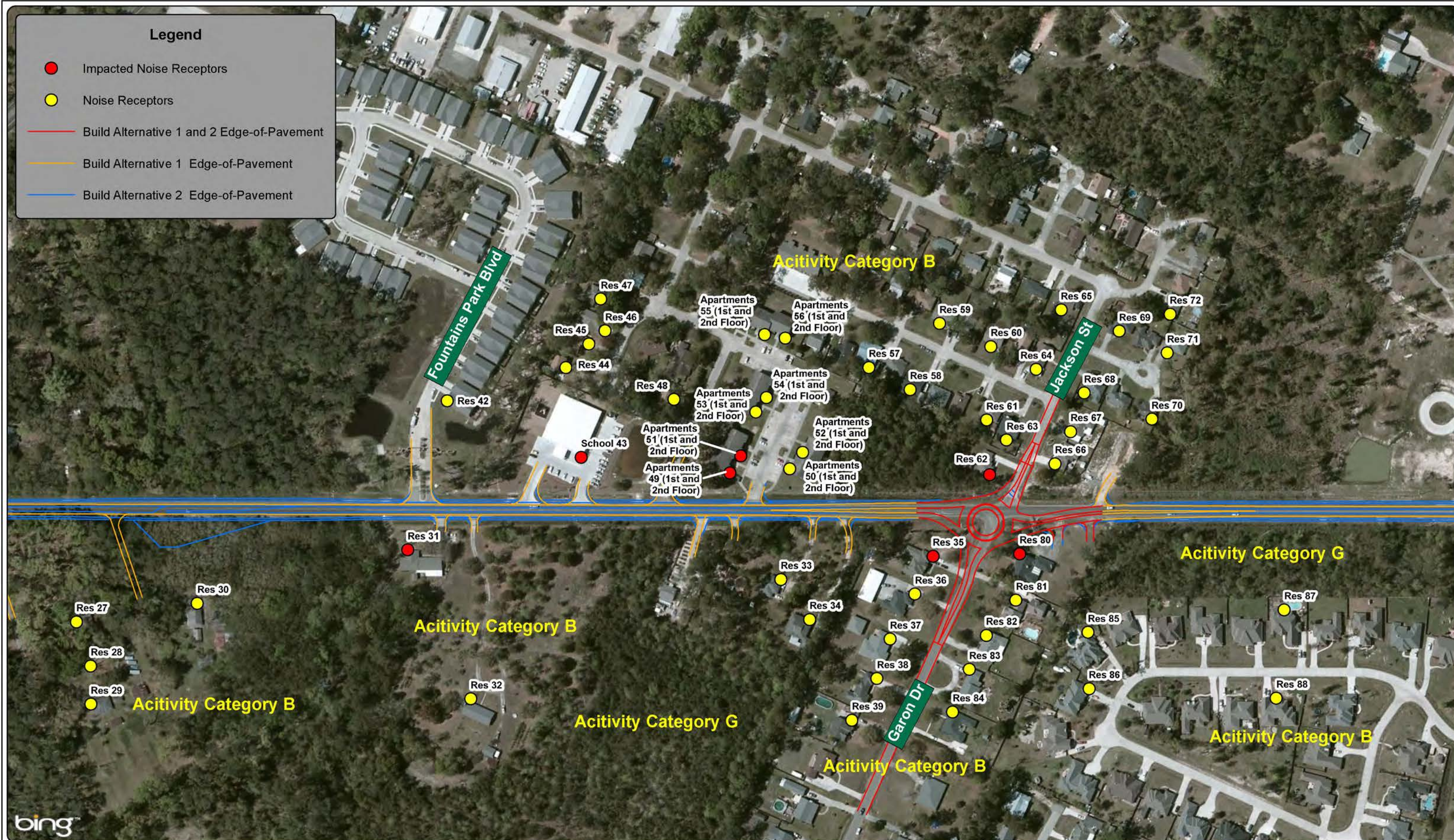
Note: This map is for presentation use only
and not to be used for construction purposes.

Noise Figure B-1
Project No. H.010116
LA 1088 Corridor Study
from LA 59 to I-12 Westbound Ramps



Legend

- Impacted Noise Receptors
- Noise Receptors
- Build Alternative 1 and 2 Edge-of-Pavement
- Build Alternative 1 Edge-of-Pavement
- Build Alternative 2 Edge-of-Pavement



bing

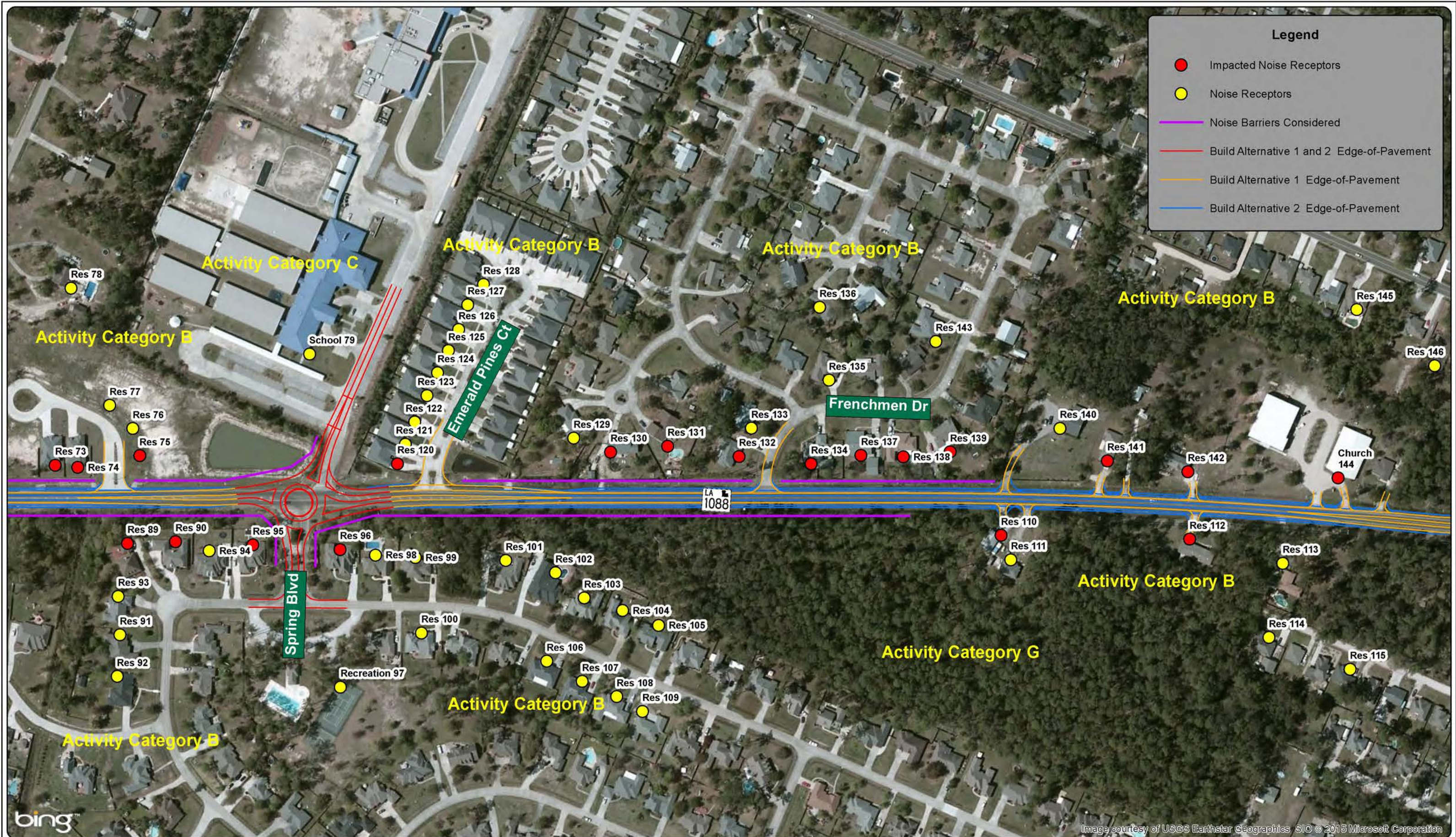


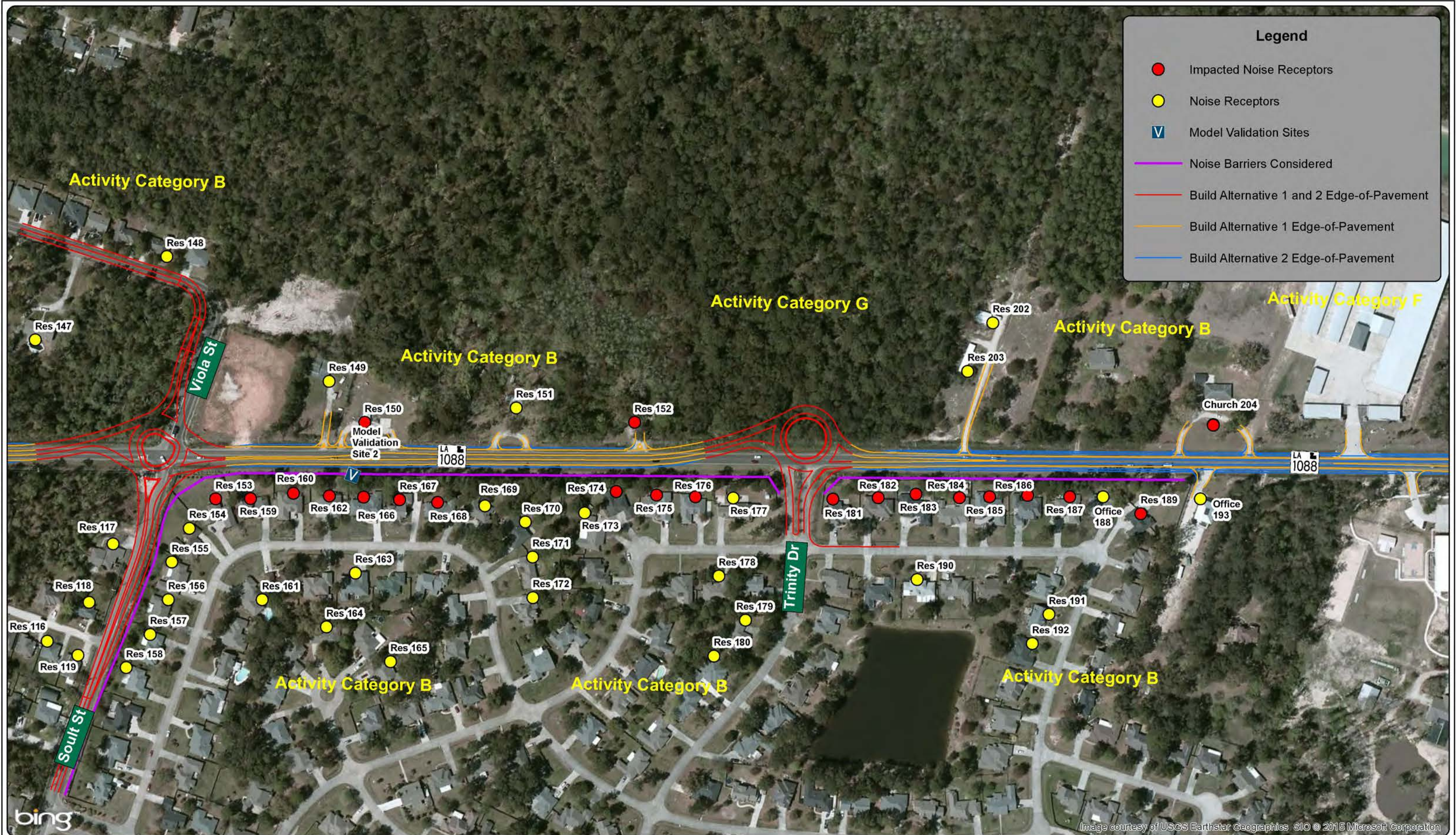
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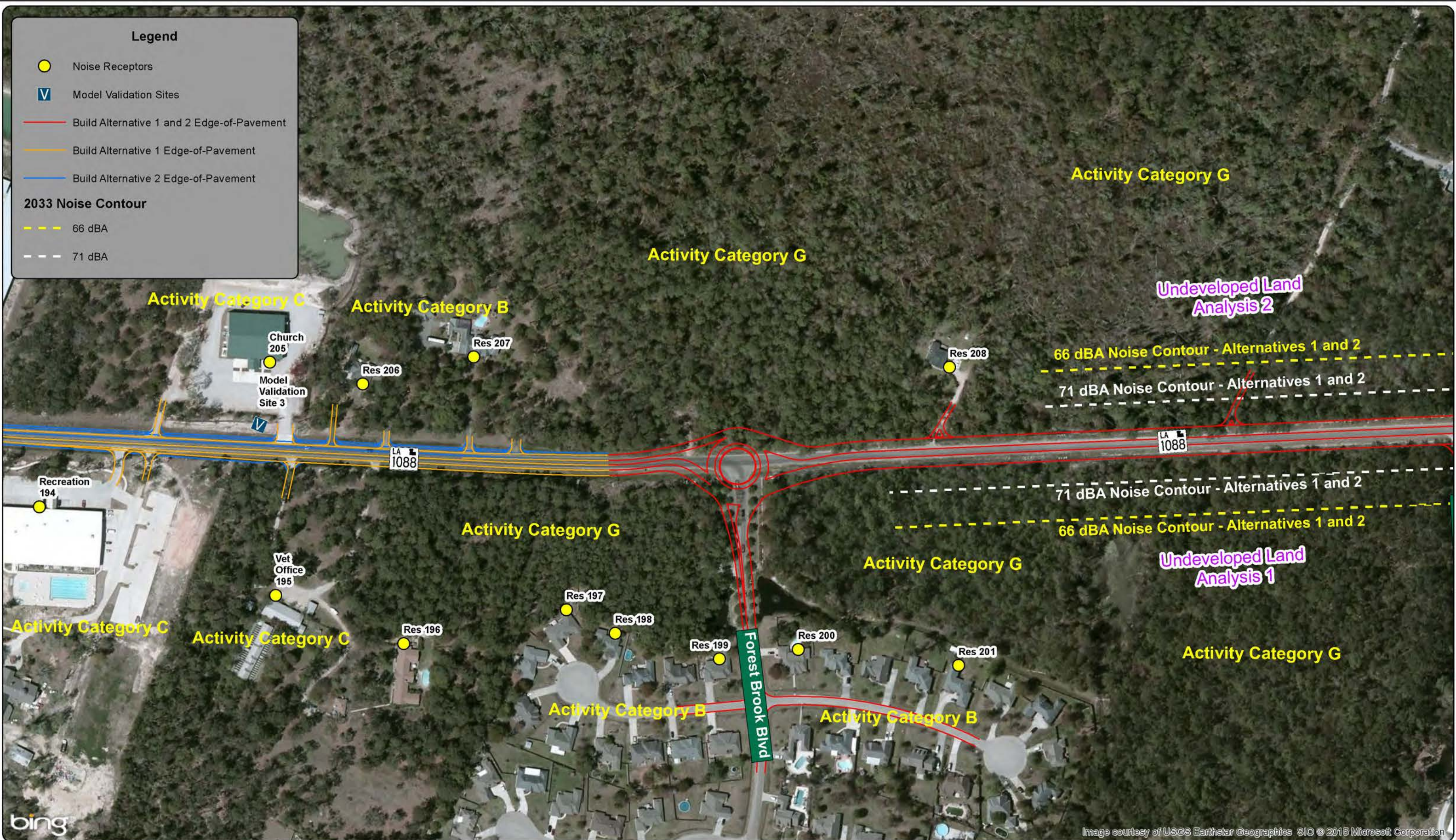


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Noise Figure B-3
Project No. H.010116
LA 1088 Corridor Study
from LA 59 to I-12 Westbound Ramps







Legend

- Impacted Noise Receptors
 - Noise Receptors
 - Build Alternative 1 and 2 Edge-of-Pavement
- 2033 Noise Contour**
- - - 66 dBA
 - - - 71 dBA

Activity Category G

Undeveloped Land
Analysis 2

66 dBA Noise Contour - Alternatives 1 and 2

71 dBA Noise Contour - Alternatives 1 and 2

71 dBA Noise Contour - Alternatives 1 and 2

66 dBA Noise Contour - Alternatives 1 and 2

Undeveloped Land
Analysis 1

Activity Category G

Activity Category B

Activity Category B

Activity Category B

Hickory St

Cypress St

Oak St

Pine St

Mulberry St

Holly St

Maple St

Loretta Dr

12

LA 1088

LA 1088

Res 209

Res 210

Res 211

Res 212

Res 217

Res 215

Res 216

Res 218

Res 219

Res 220

Res 221

Res 222

Res 223

Res 224

Res 213

bing



0 200 400 Feet
1 inch = 200 feet



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Noise Figure B-7
Project No. H.010116
LA 1088 Corridor Study
from LA 59 to I-12 Westbound Ramps

Legend

- Noise Receptors
- Build Alternative 1 and 2 Edge-of-Pavement



Legend

— Build Alternative 1 and 2 Edge-of-Pavement

Noise Contour

- - - 66 dBA

- - - 71 dBA



bing



0 200 400 Feet
1 inch = 200 feet



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Noise Figure B-9
Project No. H.010116
LA 1088 Corridor Study
from LA 59 to I-12 Westbound Ramps

Legend

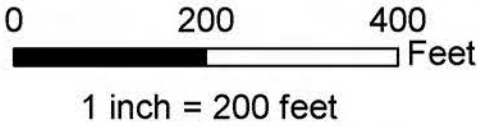
2033 Noise Contour

--- 66 dBA

--- 71 dBA

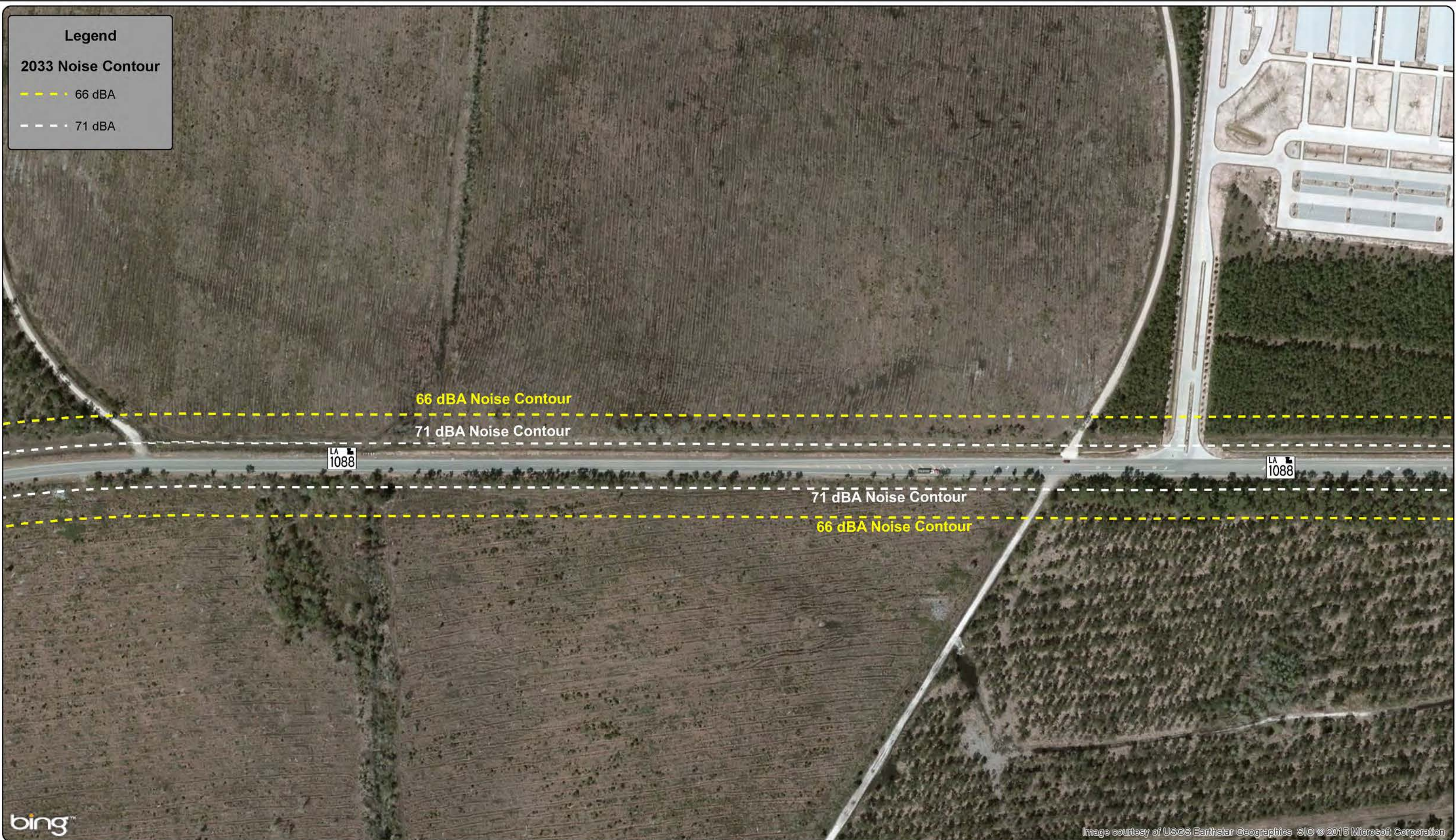


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Noise Figure B-10
Project No. H.010116
LA 1088 Corridor Study
from LA 59 to I-12 Westbound Ramps



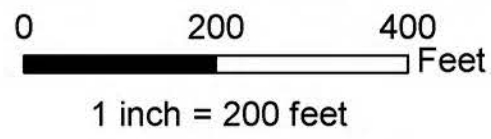
Legend

2033 Noise Contour

--- 66 dBA

--- 71 dBA

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Noise Figure B-11
Project No. H.010116
LA 1088 Corridor Study
from LA 59 to I-12 Westbound Ramps

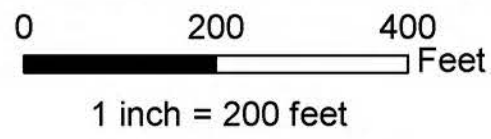


Legend

2033 Noise Contour

--- 66 dBA

--- 71 dBA



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Noise Figure B-12
Project No. H.010116
LA 1088 Corridor Study
from LA 59 to I-12 Westbound Ramps

Legend

2033 Noise Contour

--- 66 dBA

--- 71 dBA

66 dBA Noise Contour

71 dBA Noise Contour

LA
1088

LA
1088

71 dBA Noise Contour

66 dBA Noise Contour

bing

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Noise Figure B-13
Project No. H.010116
LA 1088 Corridor Study
from LA 59 to I-12 Westbound Ramps

Legend

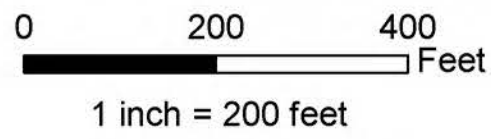
2033 Noise Contour

--- 66 dBA

--- 71 dBA



bing



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Noise Figure B-14
Project No. H.010116
LA 1088 Corridor Study
from LA 59 to I-12 Westbound Ramps



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Noise Figure B-15
Project No. H.010116
LA 1088 Corridor Study
from LA 59 to I-12 Westbound Ramps

Legend

2033 Noise Contour

- 66 dBA
- - - 71 dBA

66 dBA Noise Contour

71 dBA Noise Contour

LA 1088

71 dBA Noise Contour

66 dBA Noise Contour

LA 1088

bing



0 200 400 Feet
1 inch = 200 feet



Note: This map is for presentation use only
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Noise Figure B-16
Project No. H.010116
LA 1088 Corridor Study
from LA 59 to I-12 Westbound Ramps

Legend

2033 Noise Contour

--- 66 dBA

--- 71 dBA

66 dBA Noise Contour

71 dBA Noise Contour

LA
1088

71 dBA Noise Contour

66 dBA Noise Contour

LA
1088

bing™

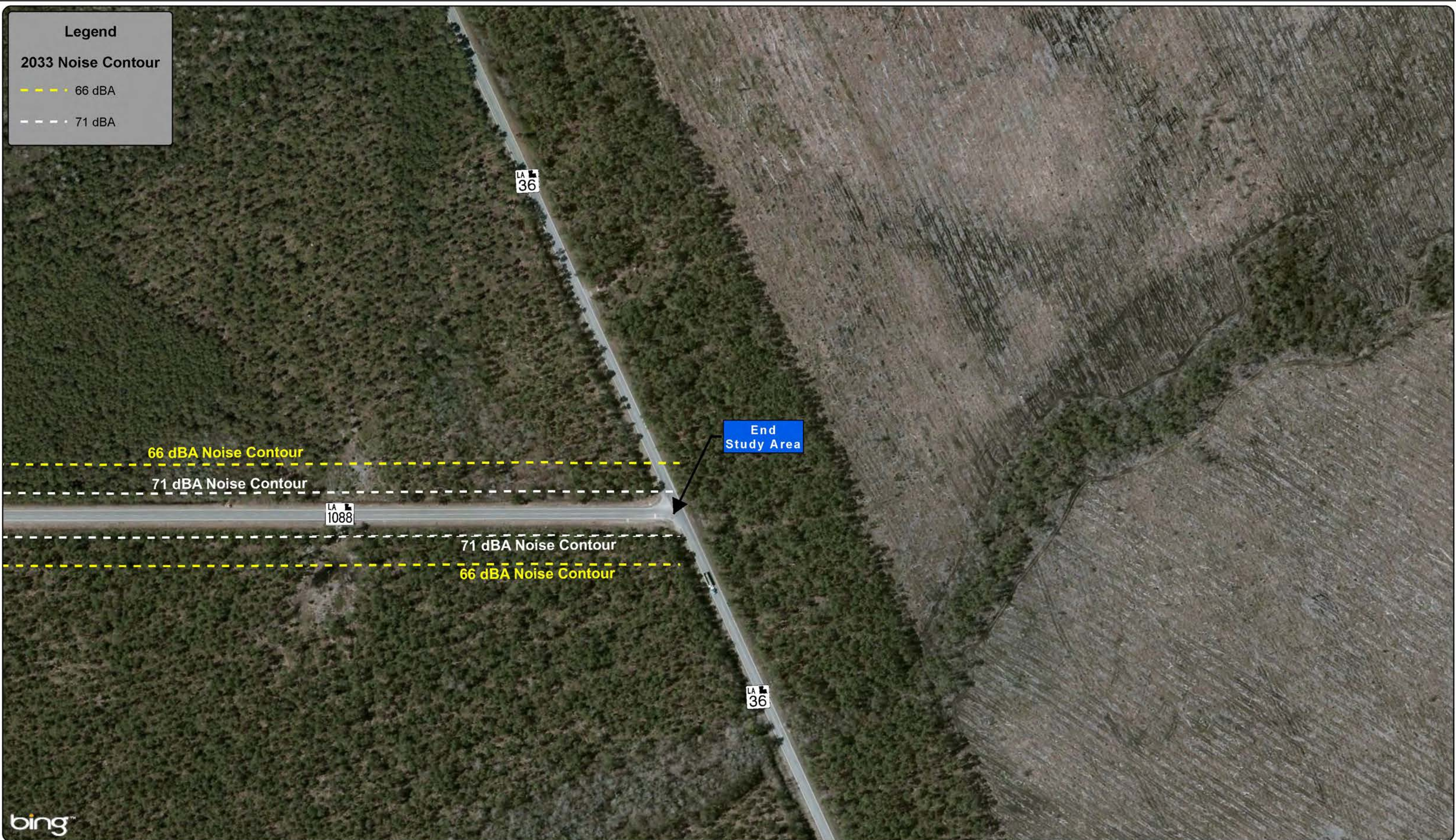


0 200 400 Feet
1 inch = 200 feet



Note: This map is for presentation use only
and not to be used for construction purposes.

Noise Figure B-17
Project No. H.010116
LA 1088 Corridor Study
from LA 59 to I-12 Westbound Ramps



Note: This map is for presentation use only and not to be used for construction purposes.

Noise Figure B-18
Project No. H.010116
LA 1088 Corridor Study
from LA 59 to I-12 Westbound Ramps

APPENDIX C
LA 1088 Corridor Study Noise
Report
LADOTD's Highway Traffic
Noise Policy

STATE OF LOUISIANA



DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT



HIGHWAY TRAFFIC NOISE POLICY

July 2011

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INTRODUCTION

This document contains the Louisiana Department of Transportation and Development's (DOTD) policy on highway traffic noise. This policy describes the implementation of the requirements of the Federal Highway Administration (FHWA) noise regulations for Federal-aid projects found in 23 Code of Federal Regulations Part 772 (23 CFR Part 772).¹ DOTD developed this policy in accordance with FHWA regulations and guidance, and FHWA reviewed and approved this policy for implementation.

In the 1972 Federal-aid Highway Act, Congress required FHWA to develop a noise standard for new Federal-aid highway projects. In accordance with 23 United States Code section 109(i) (23 USC 109(i)), FHWA promulgated noise regulations which applied to Federal-aid projects. In June 1995, FHWA mandated that state transportation agencies adopt a written Highway Traffic Noise Policy consistent with the regulations and their June 1995 guidance. DOTD complied, with its first written policy approved by FHWA in August 1996. Since its initial approval, the DOTD highway traffic noise policy has been revised three times, in 1997, 2004 and 2009. Each revision required FHWA review and approval prior to implementation. On July 13, 2010, FHWA published their new noise regulations in the Federal Register² and mandated that state transportation agencies rewrite their noise policies to be consistent with the new regulations. The states were given until January 2011 to submit proposed policies for FHWA review. To assist states in rewriting their policies, FHWA published guidance dated June 2010 and revised January 2011 which can be found on FHWA's web site.³ The effective date of the new regulations is July 13, 2011.

The policy herein contains information on how highway traffic noise impacts are defined, how noise abatement is evaluated, and how noise abatement decisions are made in Louisiana. **This policy as written assumes that the noise analyst is familiar with the provisions of the Federal regulation on which this policy is based.** If you need further information regarding the policy, contact the DOTD Environmental Section at (225) 242-4502.

PURPOSE

The purpose of this written policy is to outline DOTD's policy and procedures for compliance with the FHWA Noise regulations found at 23 CFR 772.

¹ Access CFR regulations from <http://www.gpoaccess.gov/cfr/retrieve.html>

² Access Federal Register, Vol. 75, page 39820 from FR Main page at <http://www.gpoaccess.gov/fr/index.html>

³ Access FHWA noise guidance, regulations, and related material from <http://www.fhwa.dot.gov/environment/noise/>

DEFINITIONS

Reference is made to the definitions contained in the regulations (23 CFR 772.5). Defined below are some of the terms specifically referenced in the policy or which require additional refinement.

Benefited Receptor - a recipient of an abatement measure, whether impacted or not, receiving 5 dBA or more reduction in the noise level as a result of the proposed abatement.

Common Noise Environment – a group of receptors within the same Activity Category in Table 1 that are exposed to similar noise sources and levels; traffic volumes, traffic mix, and speed; and topographic features.

Date of Public Knowledge - the date of approval of the Record of Decision, Finding of No Significant Impact, or Categorical Exclusion. The date of public knowledge is the date at which the DOTD will no longer be responsible for providing noise abatement for new development which occurs adjacent to the proposed project. Provision of such abatement measures becomes the responsibility of the local communities or private developers.

Design Year – the future year used to estimate the probable traffic volume for which a highway is designed. The design year will normally be 20 years from the projected start of project construction.

Existing Noise Levels – the worst noise hour, resulting from the natural and mechanical sources and human activity, usually present in a particular area.

Leq – the equivalent steady-state sound level which in a stated period of time contains the same acoustic energy as a time-varying sound level during the same period.

Leq(h) – the hourly value of Leq.

Multifamily Dwelling – A residential structure containing more than one residence. Each residence in a multifamily dwelling shall be counted as one receptor when determining impacted and benefited receptors.

Noise Reduction Design Goal – the optimum desired noise reduction determined from calculating the difference between future build noise levels with abatement to future build noise levels without abatement. The noise reduction design goal in Louisiana is 8 dBA.

Permitted – A definite commitment to develop land with an approved specific design of land use activities as evidenced by the issuance of a building permit.

Property Owner – an individual or group of individuals that hold a title, deed, or other legal documentation of ownership of a property or a residence.

Receptor – A discrete or representative location of a noise sensitive area(s), for any of the land uses listed in Table 1.

Residence – a dwelling unit. Either a single family residence or each dwelling unit in a multifamily dwelling.

Statement of Likelihood – A statement provided in an environmental document based on the feasibility and reasonableness analysis at the time the document is being approved.

Traffic Noise Impacts – design year build condition noise levels that *approach* or exceed the FHWA Noise Abatement Criteria for the future build condition, or design year build condition noise levels that exceed the existing noise levels by 10 dBA. (*Approach* is defined as 1 dBA less than the FHWA Noise Abatement Criteria.)

Type I Project –

- (1) The construction of a highway on new location; or
- (2) The physical alteration of an existing highway where there is either:
 - (a) Substantial Horizontal Alteration (a project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition), or
 - (b) Substantial Vertical Alteration (a project that removes shielding therefore exposing the line-of-sight between the receptor and the traffic noise source by altering the vertical alignment of the highway or by altering the topography); or
- (3) The addition of a through-traffic lane. This includes the addition of a through-traffic lane that functions as a HOV, HOT, bus, or truck climbing lane; or
- (4) The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane; or
- (5) The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange; or
- (6) Restriping existing pavement for the purpose of adding a through-traffic lane or an auxiliary lane; or
- (7) The addition of a new or substantial alteration of a weight station, rest stop, ride-share lot or toll plaza.

*Note that if a project is determined to be a Type I project, then the entire project area as defined in the environmental document is a Type I project.

Type II Project – a proposed project to provide noise abatement on an existing highway. DOTD does not have a Type II program.

Type III Project – a proposed project that does not meet the classification of a Type I or Type II project. Type III projects do not require a noise analysis.

APPLICABILITY

This policy applies to all Federal highway projects in the State of Louisiana; that is, any projects that receive Federal-aid funds or are otherwise subject to FHWA approval.

This policy also applies to the construction of new control of access highways that are funded through DOTD with no FHWA involvement.

Type II programs to provide noise abatement along existing highways are voluntary. DOTD does not have a Type II program; therefore, DOTD will not consider Type II projects.

DOTD will consider and construct barriers when sufficient funds (Federal or State) are appropriated by either State or Federal legislature specific to the construction of a barrier. These legislative mandated barriers may or may not be part of a Type I project. These barriers will be designed in accordance with the legislation as to location, height, and other parameters. If the design parameters are not specified in the legislation, the barrier will be designed to achieve a reasonable noise reduction in accordance with this policy.

This policy shall not prohibit the application of visual screens or security fences. Visual screens and security fences are not eligible for Federal-aid funding as noise abatement.

TRAFFIC NOISE ANALYSIS

The traffic noise analysis will include the steps listed below for each alternative under detailed study. Note that if any segment or component of an alternative meets the definition of a Type I project, then the entire alternative is considered to be Type I and is subject to the noise analysis requirements below.

1. **Identification of Existing Land Uses Affected by Noise:** The following types of activities and land uses affected by noise from the highway will be identified for analysis:
 - a. Category A: Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose;
 - b. Category B: residential;
 - c. Category C: active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings;
 - d. Category D: auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios;
 - e. Category E: hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F;
 - f. Category F: agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing; and
 - g. Category G: undeveloped lands that are not permitted.

Justification for the designation of lands as Category A must be submitted to FHWA on a case-by-case basis for concurrence. Justifications will be submitted through the FHWA Division Office to FHWA Headquarters.

2. **Determination of Existing Noise Levels:** The determination of existing noise levels will be made utilizing field measurements of actual noise levels. A log will be kept noting the time of day, meteorological conditions, calibration results, and any unusual ambient noise sources experienced during each measurement.

Noise measurements will be taken utilizing ANSI Type 1 or Type 2 Sound Level Meters used in accordance with the manufacturer's operations manual. Meters are to be calibrated before and after each measurement. Meters should have valid factory calibration certification. Measurements should be done in accordance with the FHWA publication entitled, "Measurement of Highway – Related Noise," dated May 1996.⁴

Noise measurements will be taken in time intervals no shorter than 15 minutes and no longer than one hour unless alternate intervals are given prior approval by DOTD.

Actual traffic counts will be made during each field measurement. These traffic counts will be categorized according to the following vehicle classes:

Automobiles (A) – all vehicles with two axles and four wheels designed primarily for transportation of nine or less passengers or transportation of cargo.

Medium Trucks (MT) – all vehicles with two axles and six wheels designed for the transportation of cargo.

Heavy Trucks (HT) – all vehicles having three or more axles designed for the transportation of cargo.

Buses (B) – all vehicles designed to carry more than nine passengers.

Motorcycles (M) – all vehicles with two or three wheels and an open-air driver/passenger compartment.

Sites selected for field measurements will receive prior approval of DOTD. These sites will represent noise sensitive receptors in each Activity Category which are likely to be affected by the project. Sites outside of the immediate vicinity of the project may also be chosen to determine the ambient noise levels unaffected by the roadway. For proposed highways on new alignments where no highway currently exists, measurements must be taken at representative receptor locations. Unless specifically approved by DOTD, field measurements will be taken to represent exterior activities only.

Field measurements will be taken at approved sites at peak and off-peak times. Peak hour noise levels will be the hour with the highest noise levels, not necessarily the hour with the highest traffic volumes.

Upon the consent of the Environmental Engineer Administrator, existing noise levels may be determined by utilizing other methodology, including computer models consistent with the current FHWA highway traffic noise prediction model. Traffic characteristics, data, selection of receptor locations, and other input parameters utilized will be at the discretion of DOTD.

⁴ Located on web at <http://www.fhwa.dot.gov/environment/noise/measurement/measure.cfm>

3. **Prediction of Traffic Noise Levels:** Any traffic noise prediction methodology is approved for use in any traffic noise analysis required by this policy if the methodology used at the time the noise study is consistent with the requirements of 23 CFR 772.9.⁵

Report predicted noise levels in the noise report and related documents in the same format as reported by the model used.⁶

To validate model results, it is necessary to compare the noise levels measured in the field to the noise levels predicted by the model using the roadway parameters and traffic data collected in the field. If the modeled results are within 3 dBA of the measured noise levels, no further action is required, and the model can be used to determine future noise levels. If the modeled results are not within 3 dBA of the measured noise levels, then further investigation is warranted into the reason(s) for the discrepancy prior to using the model to determine future noise levels.

In predicting noise levels and assessing noise impacts, traffic characteristics that will yield the worst hourly traffic noise impact on a regular basis for the design year will be used. The period with the highest sound levels may not be at the peak traffic hour but instead, during some period when traffic volumes are lower but the truck mix or vehicle speeds are higher.

Future noise levels will be based on modeling results utilizing data for the design year. This data, including traffic volumes, composition and speed, other reasonably foreseeable development, and the implementation of other transportation projects, will be based on accepted engineering practice and local planning assumptions.

4. **Determination of Traffic Noise Impacts:** Traffic noise impacts occur when the future (predicted, design year, build condition) noise levels *approach or exceed* the FHWA Noise Abatement Criteria, or when the future (predicted, design year, build condition) noise levels exceed the existing noise levels at any sensitive receptor by 10 dBA. FHWA requires that the States define *approach* as at least 1 dBA below their Noise Abatement Criteria.

⁵ The approved model in effect on July 13, 2011, the effective date of the regulations, is FHWA TNM version 2.5. When running the TNM 2.5 model, average pavement type must be used for prediction of future noise levels unless FHWA approves use of another type.

⁶ The current approved model, TNM, reports results in tenths, a decimal format (##.#).

FHWA Noise Abatement Criteria
Hourly A-weighted Sound Level decibels (dBA)

ACTIVITY CATEGORY	ACTIVITY LEQ (H)	EVALUATION LOCATION	ACTIVITY DESCRIPTION	IN LOUISIANA, IMPACT OCCURS WHEN NOISE LEVEL <u>IS EQUAL TO OR GREATER THAN</u> THE VALUES BELOW*
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.	56
B	67	Exterior	Residential (includes undeveloped lands permitted for residential).	66
C	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings. (Includes undeveloped lands permitted for these activities).	66
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.	51
E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F. (Includes undeveloped lands permitted for these activities).	71
F	-----	-----	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.	n/a
G	-----	-----	Undeveloped lands that are not permitted.	n/a

*These values are consistent with the FHWA's requirement for consideration of traffic noise impacts 1 dBA below their noise abatement criteria.

The noise analysis must include analysis for each type of receptor present in the study area. Noise contour lines shall not be used to determine noise impacts, but noise contour lines can be used for project alternative screening or for land use planning purposes.

In determining and abating traffic noise impacts, primary consideration is to be given to exterior areas of frequent human use. Examples of possible receptor locations for residential receivers are patios, courtyards, front or back yard, pool areas, etc. Generally, the receptor location which lies between the noise source and the receiver is chosen as the location to model. If the circumstances of a particular receiver are atypical, contact the DOTD Environmental Section Coordinator for guidance.

In determining the number of receptors impacted/benefited, the number will include all dwelling units (i.e., owner-occupied, rental units, mobile homes, etc.). Each unit in a multifamily building is counted as one receptor.

For hotels, motels, offices, and other developed lands, receptor locations will be sited at outdoor areas of frequent human use such as patios, courtyards, pool areas, locations of outdoor seating, etc.

For parks and recreational areas, model each designated use area as a receptor location. For example, the park may have ball fields, basketball courts, playground equipment, tennis courts, picnic area, pool, etc. Each of these specific activity areas would be modeled to determine noise impact at each of these locations.

In those situations where there are no exterior activities to be affected by the traffic noise, or where exterior activities are far from or physically shielded from the roadway in a manner that prevents an impact on exterior activities, the interior criterion, Activity Category D, shall be used as the basis of determining noise impacts. An indoor analysis shall only be done after exhausting all outdoor analysis options. Interior noise level predictions may be estimated by using the information in Table 6 of FHWA's guidance document entitled, "Highway Traffic Noise: Analysis and Abatement Guidance," dated June 2010 and revised January 2011.⁷

When applying the interior criterion, consideration is given to the impact and abatement of interior rooms facing the roadway that are occupied frequently with a use that would benefit from a reduction in noise. For example, a classroom, prayer room, or meeting room would benefit from a reduction in noise, but a storage room or boiler room would not. When determining the cost for reasonableness, one building is one receptor, although multiple rooms may be insulated or provided noise reduction windows.

For Category F, no highway noise analysis is required under 23 CFR 772.

For Category G, if the undeveloped land is not permitted for development by the date of public knowledge, the noise levels are determined in accordance with 23 CFR 772.17(a) and results are documented in the environmental document.

⁷ On-line guidance available at FHWA website,
http://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/

5. **Evaluation of Noise Abatement:** When traffic noise impacts are identified, noise abatement shall be considered and evaluated for *feasibility* and *reasonableness*. Traffic noise impacts will be determined and alternative noise abatement measures analyzed by giving weight to the benefits and cost of abatement, and to the overall social, economic and environmental impacts.

In abating traffic noise impacts, primary consideration is given to exterior areas where frequent human use occurs and a lowered noise level would be of benefit.

The noise abatement measures listed below may be incorporated into Type I Federal or Federal-aid projects to reduce traffic noise impacts.

- (1) Construction of noise barriers, including acquisition of property rights, either within or outside the highway right-of-way. Landscaping is not a viable noise barrier;
- (2) Traffic management measures (e.g., traffic control devices and signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits and exclusive lane designations);
- (3) Alteration of horizontal and vertical alignments;
- (4) Acquisition of property rights (predominantly unimproved property) to serve as a buffer zone to preempt development which would be adversely impacted by traffic noise;
- (5) Noise insulation of Activity Category D land use facilities listed in Table 1. Post-installation maintenance and operational costs for noise insulation are not eligible for Federal-aid funding.

Feasibility:

For a noise barrier to be considered acoustically feasible, 75% of the first row of impacted receptors adjacent to the barrier must achieve at least a 5 dBA reduction in highway traffic noise.

Other feasibility factors that will be considered are safety, barrier height, topography, drainage, utilities, maintenance of the abatement measure, and access to adjacent properties.

DOTD will not build noise barriers that it considers unsafe to the traveling public or adjacent properties. Topography and drainage may impact the design of the barrier or make the barrier unfeasible to construct. Utilities may render a barrier unfeasible when a conflict between the utility and barrier exists and the utility cannot be moved or cannot be moved without creating other insurmountable problems. (Note that the cost to relocate a utility will be added to the cost of the barrier when the relocation is necessary for the construction of the barrier. If this relocation cost is large, the barrier, although feasible, may become unreasonable due to cost.) DOTD must be able to access the barrier for maintenance purposes. If access cannot be obtained, the barrier is unfeasible. When access to adjacent properties must be maintained, a barrier may be unfeasible if it cannot be designed to provide the needed access. Noise barriers

that block existing driveways are considered unfeasible; however, there may be situations whereby the property owners agree in writing to forfeit their access eliminating this concern. Situations may arise whereby access is needed for seasonal activities such as maintenance or management of adjacent properties. These situations will be considered on case by case basis.

Noise barriers on bridges are limited to a maximum height of 14 feet, measured from top of noise barrier to bridge slab. Costs associated with mounting the barrier to the bridge, including the cost to modify the bridge structure to support the barrier, will be added to the cost of the barrier for determining reasonableness.

Reasonableness:

For abatement measure to be considered reasonable all of the following three criteria must be met: (a) achievement of the noise reduction design goal, (b) cost effectiveness, and (c) concurrence of benefited receptors.

- (a) Noise Reduction Design Goal: When noise abatement measures are being considered, every effort will be made to obtain a substantial noise reduction of at least 8 dBA. At a minimum, at least one receptor must receive an 8 dBA reduction for the noise abatement system to be reasonable. For noise barriers meeting the abovementioned criteria, the height and length of the barrier will be optimized using the cost/benefited receptor ratio.
- (b) Cost Effectiveness: The cost estimate of the noise abatement measure (including but not limited to the costs of real estate acquisition, construction servitude or utility relocation) should be equal to or less than \$35,000 per benefited receptor. The unit cost used to estimate the cost of likely barriers will be updated regularly (at least every five years) and published on DOTD's web site. *The final analysis regarding cost effectiveness will occur during design when more detail information is available regarding the cost of the barrier system, and*
- (c) Consideration of Viewpoints: As part of the NEPA public involvement process, viewpoints from the community, including benefited receptors, will be solicited for all aspects of the project, including noise impacts and abatement. Public Involvement will be tailored to the project. If no relevant objections to the proposed noise abatement are made at this level of public involvement, this criterion is deemed met and abatement considered reasonable from the viewpoint of benefited receptors. If relevant objections are identified, a follow-up solicitation will occur with property owners and residents of the benefited receptors. The abatement measure will be considered reasonable from the viewpoint of benefitting receptors if 50% or more of the responses received are positive. *Follow-up coordination with benefited receptors may occur during the design stage when more detail information is available regarding barrier design.*

Follow-up Coordination with Benefited Receptors during Final Design

For noise barriers, the most common type of abatement, the Department will contact benefited receptors when the barrier design changes substantially from what was

presented in the NEPA document. The abatement measure will be considered reasonable from the viewpoint of benefitting receptors if 50% or more of the responses received are positive.

To ascertain desires, property owners and residents may be invited to attend a meeting specifically to discuss the proposed barrier, or they may be asked to complete a survey (paper, electronic, phone, etc.). Contact may be made through a variety of means such as in person, letters, flyers left at the receptor site, public notices, web sites, phone calls, emails or other reliable means or combination of means. Names and/or addresses may be obtained from the tax assessor's roll, clerk of court records, neighborhood associations, local government databases, reliable internet sources, or other reliable sources or combination of sources. Those who do not respond as requested will be deemed as not interested in the barrier. DOTD will give more weight to the desire of the property owner than to the desire of the lessee. (When conflicting responses are received, DOTD will consider the property owner's response over that of the lessee's.)

The criteria above must be met collectively for a noise abatement measure to be deemed reasonable. Failure to achieve all criteria collectively will result in the noise abatement measure being deemed not reasonable. **During stage 1 of project development (NEPA stage), the analysis will identify noise abatement measures that are likely to be incorporated into the project's design. The final determination of any proposed noise abatement measure will be made during the design stage.** During the design stage, only abatement measures identified in stage 1 as likely will be reevaluated for reasonableness. If the decision to provide an abatement measure changes during final design, the Department will inform the public.

The following optional factors are considered when determining justification for additional cost allowances to an already determined reasonable barrier:

- date of development (implementation requires public outreach),
Favorable consideration will be given to residential developments that existed prior to the initial construction of the highway. (This factor applies to projects along existing highways and not to new alignments.)

Residential development existed prior to the original construction of the highway	Added to Reasonableness Criteria (b)
No	\$0
Yes	\$2,000

- changes between existing and future build-conditions,
Favorable consideration will be given to impacted receptors that experience future build noise levels that are 30 dBA more than future no-build noise levels.

Incremental Increase in Noise Level Between the Future No-build and the Future Build Noise Levels Before Noise Abatement	Added to Reasonableness Criteria (b)
Less than 30 dBA	\$0
30 dBA or greater	\$2,000

- exposure to higher absolute highway traffic noise levels, Favorable consideration will be given to impacted receptors that have predicted future noise levels above 76 dBA

Predicted Future Build Noise Level Before Noise Abatement	Added to Reasonableness Criteria (b)
66-75 dBA	\$0
76-79 dBA	\$1,000
80 dBA or greater	\$2,000

and

- use of noise compatible planning concepts by the local government, Favorable consideration will be given to areas that have noise compatible (relevant to highway noise) zoning requirements in place that include the project area.

Noise compatible zoning in place for study area	Added to Reasonableness Criteria (b)
No	\$0
Yes, in place for 1 to 2 years	\$1,000
Yes, in place for 2 or more years	\$1,500

DOCUMENTATION

The noise study report will document the results of the noise study. This report may be a standalone document incorporated into the NEPA document by reference, or it may be included in the appendix of the NEPA document.

Before adoption of a Final Environmental Impact Statement, Finding of No Significant Impact, or Categorical Exclusion, for Federal-aid projects, the DOTD will identify noise abatement measures which

are both reasonable and feasible and likely to be incorporated in the project. The statement of likelihood included in the environmental document will give the locations and physical description of the noise abatement measures as well as explain that the final recommendation will be determined during final design with input from benefited receptors. The DOTD will also identify noise impacts for which no apparent solution is available.

MISCELLANEOUS PROVISIONS

Third party funding is not allowed if the funding is required to make the abatement measure feasible or reasonable. Third party funding is acceptable to make functional enhancements such as absorptive treatment, access doors, or aesthetic enhancements to a noise abatement measure already determined to be both reasonable and feasible.

DOTD allows the use of either absorptive or reflective barriers. DOTD generally assumes reflective barriers in its noise analyses. This does not preclude the use of absorptive barriers or absorptive treatments. For example, a contractor may be given the option of using any barrier system on the Qualified Products List (QPL)⁸ for construction. The QPL includes both reflective and absorptive systems. Therefore, the contract may choose either an absorptive or a reflective system as long as the system is on the QPL. Using an absorptive barrier when a reflective barrier was assumed for modeling purposes is not considered a substantial change in design for the purposes of soliciting viewpoints of benefited receptors. Note that decorative features often requested for visual enhancements may preclude use of absorptive treatments or some QPL barrier systems. If separate absorptive treatments are requested, the cost for the treatment will be added to the cost of the barrier system to determine reasonableness. If the additional absorptive treatment increases the cost above the maximum cost/benefited receptor value, it will not be considered for implementation unless the optional reasonableness factors apply. Use of absorptive barriers or treatments on a project is discretionary.

Cost averaging is used when a common noise environment exists. Common noise environments occur when the traffic mix and speeds are the same. For instance, a common noise environment could occur along a road segment between interchanges on a controlled access highway if the traffic speed is constant. Application requires that no single common noise environment exceeds \$70,000/benefited receptor and that collectively all common noise environments being averaged do not exceed \$35,000/benefited receptor.

Information for Local Officials: In an effort to prevent future traffic noise impacts on currently undeveloped lands, DOTD will inform local officials, within whose jurisdiction the highway project is located, of the best estimation of future noise levels for both developed and undeveloped lands or properties in the immediate vicinity of the project and information that may be useful to local communities to limit future land development to that which will be compatible with anticipated highway noise levels.

A copy of the environmental document (with included noise study) and/or noise study report (if one is prepared) will be provided to local officials upon approval of the environmental document. Local

⁸ QPL 69, Noise Reduction Systems (Noise Barriers), can be found at <http://www.dotd.la.gov/highways/construction/lab/qpl/tableofcontents.shtml>

officials or agencies, which may have jurisdiction, include the Mayor's office, city/town/parish council, parish police jury, and metropolitan planning organization, as applicable.

Construction Noise: The following general steps are to be performed for all Type I projects:

- a. Identify land uses or activities that may be affected by noise from the construction of the project. The identification is to be performed during the project development studies.
- b. Determine the measures that are needed in the plans and specifications to minimize or eliminate adverse construction noise impacts to the community including alternate designs to keep noise levels to a minimum (e.g. the use of drilled shafts vs. driven piles in noise sensitive areas).⁹ This determination will include a weighing of benefits achieved and the overall adverse social, economic, and environmental effects and costs of abatement measures.
- c. Incorporate the needed abatement measures in the plans and specifications, as appropriate.

When practicable, DOTD will construct any permanent noise abatement measures as the first phase of a highway construction project to abate construction noise impacts of subsequent phases of the same project.

Revision: DOTD may revise this policy as necessary to keep current with the state-of-the-art technology, legislation, regulation, and guidance, as well as construction cost indices in the fields of highway traffic noise prediction, impact, and abatement.

The unit cost used in the noise analysis for determining reasonableness of noise abatement measures will be updated regularly at least every five years. It is the responsibility of the analyst to ensure that they are using the correct unit cost. Contact the DOTD Environmental Coordinator for more information.

Revisions to this policy affecting Federal or Federal-aid projects must be concurred with by the FHWA prior to adoption.

DOTD and FHWA are not responsible for notification of revisions to this policy. Inquiries as to the latest revision that may be applicable should be made in writing to:

Environmental Engineer Administrator
Louisiana Department of Transportation and Development
Post Office Box 94245
Baton Rouge, Louisiana 70804-9245

Implementation Plan: This policy will become effective July 13, 2011. It will apply to all projects started on or after the above effective date, and to all projects currently being evaluated pursuant to NEPA that do not have a completed noise study. A noise study is deemed completed if it was reviewed and commented on by DOTD and/or FHWA and considered final.

⁹ The FHWA Roadway Construction Noise Model (FHWA RCNM) may be used to model construction noise at a sensitive receptor. For highly complex and controversial projects in urban areas, the "Highway Construction Noise: Measurement, Prediction and Mitigation" (HICNOM) method may be used, but requires specific input.

For noise studies performed under past policies: If, during later stages of project development, changes occur that affect only a portion of the project requiring a reevaluation of the noise study for that portion, the policy in effect at the time of the original study will be applicable. When these situations arise, DOTD will consult with FHWA Division office on the project specific issues to ensure that FHWA is in agreement.

APPENDIX D
LA 1088 Corridor Study Noise
Report
TNM Inputs

INPUT: ROADWAYS

LA 1088

Volkert
Thomas Lee30 July 2015
TNM 2.5INPUT: ROADWAYS
PROJECT/CONTRACT:
RUN:LA 1088
Existing AM Peak 2013Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
LA 1088 Comb 2 Lane Area 1	24.0	point4	4	3,684,032.2	683,782.9	21.00				Average	
		point5	5	3,684,308.8	683,910.2	21.00				Average	
		point6	6	3,684,630.8	684,059.2	21.00				Average	
		point7	7	3,684,944.8	684,203.9	21.00				Average	
		point8	8	3,685,215.5	684,330.2	21.00				Average	
		point9	9	3,685,490.5	684,456.0	21.00				Average	
		point10	10	3,685,647.0	684,529.1	21.00				Average	
		point11	11	3,685,851.8	684,622.3	21.00				Average	
		point12	12	3,686,128.0	684,750.9	21.00				Average	
		point13	13	3,686,396.5	684,874.6	21.00				Average	
		point14	14	3,686,670.8	684,998.8	21.00				Average	
		point15	15	3,686,832.5	685,075.2	21.00				Average	
		point99	99	3,686,848.0	685,082.1	21.00				Average	
		point16	16	3,687,122.8	685,209.6	21.00				Average	
		point17	17	3,687,395.5	685,336.1	21.00				Average	
		point18	18	3,687,668.2	685,459.9	21.00				Average	
		point19	19	3,687,941.8	685,586.4	21.00				Average	
		point20	20	3,688,212.5	685,712.6	21.00				Average	
		point21	21	3,688,279.8	685,742.6	21.00				Average	
		point121	121	3,688,324.0	685,762.9	21.00					
Garon Dr 2 Lane	24.0	point100	100	3,686,849.0	684,090.2	21.00				Average	
		point101	101	3,686,836.8	684,643.1	21.00				Average	
		point102	102	3,686,833.0	684,938.3	21.00				Average	
		point103	103	3,686,832.5	685,075.2	21.00					
Jackson St 2 Lane	24.0	point105	105	3,686,848.0	685,082.1	21.00				Average	

INPUT: ROADWAYS

LA 1088

		point106	106	3,686,844.8	685,315.0	21.00			Average	
		point107	107	3,686,839.0	685,637.0	21.00				
Soult St 2 Lane	24.0	point113	113	3,691,050.2	686,102.2	21.00			Average	
		point114	114	3,691,045.5	686,698.9	21.00			Average	
		point115	115	3,691,043.8	686,911.4	21.00				
Spring Blvd SB 1 Lane	12.0	point122	122	3,688,279.8	685,742.6	21.00			Average	
		point123	123	3,688,316.5	685,676.2	21.00			Average	
		point124	124	3,688,346.2	685,635.1	21.00			Average	
		point125	125	3,688,393.5	685,538.7	21.00				
Spring Blvd NB 1 Lane	12.0	point126	126	3,688,420.8	685,549.4	21.00			Average	
		point127	127	3,688,373.5	685,649.0	21.00			Average	
		point128	128	3,688,352.5	685,696.2	21.00			Average	
		point129	129	3,688,324.0	685,762.9	21.00				
School Dr 2 Lane	24.0	point131	131	3,688,360.0	685,779.9	21.00			Average	
		point132	132	3,688,330.5	685,964.9	21.00			Average	
		point133	133	3,688,321.2	686,063.6	21.00			Average	
		point134	134	3,688,317.8	686,299.8	21.00			Average	
		point135	135	3,688,309.2	686,672.2	21.00				
Viola St 2 Lane	24.0	point136	136	3,691,036.0	686,909.1	21.00			Average	
		point137	137	3,691,034.0	687,095.2	21.00			Average	
		point138	138	3,691,035.0	687,192.2	21.00			Average	
		point139	139	3,691,041.5	687,232.5	21.00			Average	
		point140	140	3,691,036.5	687,256.5	21.00			Average	
		point141	141	3,691,024.8	687,271.2	21.00			Average	
		point142	142	3,690,993.2	687,290.9	21.00			Average	
		point143	143	3,690,786.5	687,290.4	21.00			Average	
		point144	144	3,690,555.0	687,283.0	21.00				
Trinity Dr SB 1 Lane	12.0	point146	146	3,692,368.2	687,373.6	21.00			Average	
		point147	147	3,692,391.5	687,336.9	21.00			Average	
		point148	148	3,692,419.2	687,275.4	21.00			Average	
		point149	149	3,692,441.5	687,215.5	21.00				
Trinity Dr NB 2 Lane	24.0	point150	150	3,692,472.2	687,227.3	21.00			Average	
		point151	151	3,692,450.2	687,286.9	21.00			Average	
		point152	152	3,692,431.8	687,349.1	21.00			Average	
		point153	153	3,692,420.8	687,391.6	21.00				
Forest Brook Blvd 2 Lane	24.0	point154	154	3,695,557.5	687,975.9	21.00			Average	
		point155	155	3,695,466.8	688,124.1	21.00			Average	
		point156	156	3,695,442.0	688,164.1	21.00			Average	

INPUT: ROADWAYS

LA 1088

		point157	157	3,695,382.5	688,305.7	21.00			Average	
		point158	158	3,695,322.0	688,427.7	21.00				
I-12 EB OnRamp 1 Lane	24.0	point161	161	3,699,262.8	690,236.2	22.00			Average	
		point162	162	3,699,282.8	690,209.7	22.00			Average	
		point163	163	3,699,342.2	690,144.1	22.00			Average	
		point164	164	3,699,376.8	690,103.0	22.00			Average	
		point165	165	3,699,406.8	690,068.5	22.00			Average	
		point166	166	3,699,432.5	690,047.4	22.00			Average	
		point167	167	3,699,473.2	690,023.2	22.00			Average	
		point168	168	3,699,527.5	690,003.1	22.00			Average	
		point169	169	3,699,592.2	689,995.0	22.00			Average	
		point170	170	3,699,633.8	689,999.2	22.00			Average	
		point171	171	3,699,684.2	690,010.2	22.00			Average	
		point172	172	3,699,741.5	690,040.1	22.00			Average	
		point173	173	3,699,819.0	690,092.8	22.00			Average	
		point174	174	3,699,963.2	690,193.8	22.00			Average	
		point175	175	3,700,093.0	690,282.4	22.00			Average	
		point176	176	3,700,127.8	690,305.4	22.00			Average	
		point177	177	3,700,199.0	690,345.5	22.00			Average	
		point178	178	3,700,260.5	690,371.1	22.00			Average	
		point179	179	3,700,319.8	690,390.6	22.00			Average	
		point180	180	3,700,408.8	690,407.8	22.00			Average	
		point181	181	3,700,507.0	690,414.9	22.00			Average	
		point182	182	3,700,608.5	690,406.0	22.00			Average	
		point183	183	3,700,704.0	690,385.2	22.00			Average	
		point184	184	3,700,773.8	690,360.4	22.00			Average	
		point185	185	3,700,846.2	690,333.5	22.00			Average	
		point186	186	3,700,912.2	690,305.9	22.00			Average	
		point187	187	3,701,006.2	690,262.4	22.00			Average	
		point188	188	3,701,190.5	690,173.3	22.00			Average	
		point189	189	3,701,436.8	690,049.4	22.00				
I-12 EB OffRamp 1 Lane	24.0	point191	191	3,698,094.2	691,853.9	22.00			Average	
		point192	192	3,698,519.2	691,558.8	22.00			Average	
		point193	193	3,698,733.5	691,411.9	22.00			Average	
		point194	194	3,698,888.5	691,304.1	22.00			Average	
		point195	195	3,698,985.0	691,237.4	22.00			Average	
		point196	196	3,699,056.0	691,170.1	22.00			Average	
		point197	197	3,699,109.2	691,089.9	22.00			Average	

INPUT: ROADWAYS

LA 1088

		point198	198	3,699,149.8	690,997.6	22.00			Average
		point199	199	3,699,166.5	690,923.2	22.00			Average
		point200	200	3,699,178.0	690,789.2	22.00			Average
		point201	201	3,699,189.2	690,674.8	22.00			Average
		point202	202	3,699,207.8	690,469.8	22.00			Average
		point203	203	3,699,226.8	690,351.8	22.00			Average
		point204	204	3,699,237.0	690,285.4	22.00			
I-12 WB OffRamp	24.0	point205	205	3,701,938.8	689,950.9	30.00			Average
		point206	206	3,701,761.5	690,049.7	30.00			Average
		point207	207	3,701,556.5	690,162.8	30.00			Average
		point208	208	3,701,462.5	690,214.3	30.00			Average
		point209	209	3,701,385.8	690,260.7	30.00			Average
		point210	210	3,701,302.5	690,340.0	30.00			Average
		point211	211	3,701,238.8	690,437.9	30.00			Average
		point212	212	3,701,210.5	690,512.0	30.00			Average
		point213	213	3,701,192.8	690,594.3	30.00			Average
		point214	214	3,701,191.5	690,727.8	30.00			Average
		point215	215	3,701,191.0	690,907.6	30.00			Average
		point216	216	3,701,192.0	690,944.8	30.00			Average
		point217	217	3,701,167.8	691,113.1	30.00			
LA 57 south of LA 1088 3 Lane	36.0	point218	218	3,682,808.5	681,467.9	21.00			Average
		point219	219	3,683,063.0	681,915.2	21.00			Average
		point220	220	3,683,212.5	682,178.6	21.00			Average
		point221	221	3,683,303.5	682,338.2	21.00			Average
		point222	222	3,683,405.8	682,511.9	21.00			Average
		point223	223	3,683,504.8	682,684.9	21.00			Average
		point224	224	3,683,603.8	682,858.6	21.00			Average
		point225	225	3,683,702.8	683,032.3	21.00			Average
		point226	226	3,683,799.8	683,206.9	21.00			Average
		point227	227	3,683,898.5	683,381.4	21.00			Average
		point228	228	3,683,944.2	683,471.9	21.00			Average
		point229	229	3,683,977.2	683,561.8	21.00			Average
		point231	231	3,684,007.8	683,662.8	21.00			Average
		point230	230	3,684,032.2	683,782.9	21.00			
LA 57 north of LA 1088 3 Lane	36.0	point232	232	3,684,032.2	683,782.9	21.00			Average
		point233	233	3,684,065.8	683,950.8	21.00			Average
		point234	234	3,684,109.0	684,147.0	21.00			Average
		point235	235	3,684,165.5	684,339.8	21.00			Average

INPUT: ROADWAYS

LA 1088

		point236	236	3,684,242.0	684,525.2	21.00			Average	
		point237	237	3,684,361.0	684,801.1	21.00			Average	
		point238	238	3,684,442.5	684,980.7	21.00			Average	
		point239	239	3,684,579.8	685,291.6	21.00			Average	
		point240	240	3,684,701.0	685,565.9	21.00			Average	
		point241	241	3,684,809.5	685,815.2	21.00			Average	
		point242	242	3,684,878.5	685,964.8	21.00				
LA 1088 WB 2 Lane Area 3	24.0	point254	254	3,699,237.0	690,285.4	22.00			Average	
		point253	253	3,698,918.5	690,138.4	22.00			Average	
		point252	252	3,698,627.5	690,004.1	21.00			Average	
		point251	251	3,698,368.2	689,883.7	21.00			Average	
		point250	250	3,698,195.2	689,803.6	21.00			Average	
		point249	249	3,697,937.5	689,674.5	21.00			Average	
		point248	248	3,697,749.0	689,573.8	21.00			Average	
		point247	247	3,697,484.0	689,435.2	21.00			Average	
		point246	246	3,697,252.8	689,311.8	21.00				
LA 1088 EB 2 Lane Area 3	24.0	point274	274	3,697,252.8	689,311.8	21.00			Average	
		point57	57	3,697,489.0	689,419.4	21.00			Average	
		point58	58	3,697,761.0	689,545.2	21.00			Average	
		point59	59	3,697,951.5	689,633.1	21.00			Average	
		point60	60	3,698,216.5	689,756.5	21.00			Average	
		point61	61	3,698,390.8	689,835.2	21.00			Average	
		point62	62	3,698,649.5	689,955.8	21.00			Average	
		point63	63	3,698,941.5	690,089.4	21.00			Average	
		point190	190	3,699,215.5	690,215.3	22.00			Average	
		point64	64	3,699,262.8	690,236.2	22.00				
LA 1088 EB 2 Lane bt Ramps	24.0	point275	275	3,699,262.8	690,236.2	22.00			Average	
		point284	284	3,699,375.2	690,287.8	25.00			Average	
		point65	65	3,699,487.8	690,339.4	30.00			Average	
		point66	66	3,699,760.2	690,465.8	35.00			Average	
		point280	280	3,699,896.5	690,528.4	40.00			Average	
		point67	67	3,700,033.0	690,590.9	45.00			Average	
		point68	68	3,700,305.0	690,716.1	45.00			Average	
		point283	283	3,700,441.8	690,779.0	45.00			Average	
		point69	69	3,700,578.5	690,841.9	40.00			Average	
		point70	70	3,700,851.5	690,967.8	35.00			Average	
		point71	71	3,701,167.8	691,113.1	30.00			Average	
		point72	72	3,701,395.5	691,218.8	30.00			Average	

INPUT: ROADWAYS

LA 1088

		point73	73	3,701,668.8	691,345.2	30.00			Average	
		point74	74	3,701,946.5	691,454.9	30.00			Average	
		point75	75	3,702,233.2	691,530.1	30.00			Average	
		point76	76	3,702,532.2	691,581.5	30.00			Average	
		point77	77	3,702,731.8	691,612.4	30.00			Average	
		point78	78	3,703,020.0	691,678.9	30.00			Average	
		point79	79	3,703,303.2	691,776.2	30.00				
LA 1088 Comb 2 Lane Area 2	24.0	point277	277	3,688,324.0	685,762.9	21.00			Average	
		point130	130	3,688,360.0	685,779.9	21.00			Average	
		point22	22	3,688,576.5	685,879.8	21.00			Average	
		point23	23	3,688,848.5	686,005.4	21.00			Average	
		point24	24	3,689,121.8	686,131.2	21.00			Average	
		point25	25	3,689,392.8	686,255.4	21.00			Average	
		point26	26	3,689,572.5	686,339.0	21.00			Average	
		point27	27	3,689,853.2	686,452.5	21.00			Average	
		point28	28	3,690,132.8	686,564.9	21.00			Average	
		point29	29	3,690,409.2	686,676.8	21.00			Average	
		point30	30	3,690,648.8	686,775.1	21.00			Average	
		point31	31	3,690,876.8	686,854.2	21.00			Average	
		point32	32	3,691,036.0	686,909.1	21.00			Average	
		point112	112	3,691,043.8	686,911.4	21.00			Average	
		point33	33	3,691,350.5	687,018.0	21.00			Average	
		point34	34	3,691,632.5	687,116.4	21.00			Average	
		point35	35	3,691,915.0	687,216.2	21.00			Average	
		point36	36	3,692,197.5	687,315.0	21.00			Average	
		point37	37	3,692,368.2	687,373.6	21.00			Average	
		point145	145	3,692,420.8	687,391.6	21.00				
LA 1088 Comb 2 Lane Area 3	24.0	point278	278	3,692,420.8	687,391.6	21.00			Average	
		point38	38	3,692,670.8	687,478.1	21.00			Average	
		point39	39	3,692,955.2	687,577.9	21.00			Average	
		point40	40	3,693,236.8	687,676.4	21.00			Average	
		point41	41	3,693,522.8	687,775.4	21.00			Average	
		point42	42	3,693,805.2	687,873.9	21.00			Average	
		point43	43	3,694,088.0	687,972.0	21.00			Average	
		point44	44	3,694,371.8	688,072.5	21.00			Average	
		point45	45	3,694,652.5	688,169.9	21.00			Average	
		point46	46	3,694,850.5	688,238.8	21.00			Average	
		point47	47	3,695,124.2	688,341.9	21.00			Average	

INPUT: ROADWAYS
LA 1088

		point48	48	3,695,322.0	688,427.7	21.00				
LA 1088 WB 2 Lane bt Ramps	24.0	point279	279	3,703,303.2	691,776.2	30.00			Average	
		point268	268	3,703,013.0	691,697.4	30.00			Average	
		point267	267	3,702,726.5	691,651.9	30.00			Average	
		point266	266	3,702,528.0	691,630.0	30.00			Average	
		point265	265	3,702,218.5	691,592.1	30.00			Average	
		point264	264	3,701,924.8	691,513.0	30.00			Average	
		point263	263	3,701,646.5	691,397.2	30.00			Average	
		point262	262	3,701,372.5	691,270.8	30.00			Average	
		point261	261	3,701,151.8	691,169.5	30.00			Average	
		point260	260	3,700,826.5	691,020.3	35.00			Average	
		point259	259	3,700,554.0	690,894.4	40.00			Average	
		point282	282	3,700,419.5	690,831.9	45.00			Average	
		point258	258	3,700,284.8	690,769.4	45.00			Average	
		point257	257	3,700,010.0	690,643.2	45.00			Average	
		point281	281	3,699,873.5	690,580.6	40.00			Average	
		point256	256	3,699,737.0	690,517.9	35.00			Average	
		point255	255	3,699,468.2	690,393.1	30.00			Average	
		point285	285	3,699,352.5	690,339.2	25.00			Average	
		point276	276	3,699,237.0	690,285.4	22.00				
LA 1088 Comb 2 Lane bt Ramps	24.0	point286	286	3,703,303.2	691,776.2	30.00			Average	
		point80	80	3,703,487.8	691,856.8	30.00			Average	
		point81	81	3,703,762.5	691,982.6	30.00			Average	
		point82	82	3,704,035.8	692,104.8	30.00			Average	
		point83	83	3,704,307.2	692,227.5	30.00				
LA 1088 Comb 2 Lane Area 3-2	24.0	point287	287	3,695,322.0	688,427.7	21.00			Average	
		point49	49	3,695,579.8	688,545.3	21.00			Average	
		point50	50	3,695,853.8	688,671.1	21.00			Average	
		point51	51	3,696,125.8	688,795.4	21.00			Average	
		point52	52	3,696,397.8	688,919.9	21.00			Average	
		point53	53	3,696,670.8	689,044.0	21.00			Average	
		point54	54	3,696,809.2	689,108.7	21.00			Average	
		point55	55	3,697,034.8	689,213.1	21.00			Average	
		point56	56	3,697,252.8	689,311.8	21.00				

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT:
LA 1088
RUN:
Existing AM Peak 2013

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
LA 1088 Comb 2 Lane Area 1	point4	4	455	45	43	45	4	45	266	45	6	45
	point5	5	455	45	43	45	4	45	266	45	6	45
	point6	6	455	45	43	45	4	45	266	45	6	45
	point7	7	455	45	43	45	4	45	266	45	6	45
	point8	8	455	45	43	45	4	45	266	45	6	45
	point9	9	455	45	43	45	4	45	266	45	6	45
	point10	10	455	45	43	45	4	45	266	45	6	45
	point11	11	455	45	43	45	4	45	266	45	6	45
	point12	12	455	45	43	45	4	45	266	45	6	45
	point13	13	455	45	43	45	4	45	266	45	6	45
	point14	14	455	45	43	45	4	45	266	45	6	45
	point15	15	455	45	43	45	4	45	266	45	6	45
	point99	99	455	45	43	45	4	45	266	45	6	45
	point16	16	455	45	43	45	4	45	266	45	6	45
	point17	17	455	45	43	45	4	45	266	45	6	45
	point18	18	455	45	43	45	4	45	266	45	6	45
	point19	19	455	45	43	45	4	45	266	45	6	45
	point20	20	455	45	43	45	4	45	266	45	6	45
	point21	21	455	45	43	45	4	45	266	45	6	45
	point121	121										
Garon Dr 2 Lane	point100	100	70	25	4	25	0	0	19	25	1	25
	point101	101	70	25	4	25	0	0	19	25	1	25

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

	point102	102	70	25	4	25	0	0	19	25	1	25
	point103	103										
Jackson St 2 Lane	point105	105	22	25	3	25	0	0	11	25	0	0
	point106	106	22	25	3	25	0	0	11	25	0	0
	point107	107										
Soult St 2 Lane	point113	113	348	25	32	25	4	25	141	25	3	25
	point114	114	348	25	32	25	4	25	141	25	3	25
	point115	115										
Spring Blvd SB 1 Lane	point122	122	49	20	3	20	0	0	19	20	0	0
	point123	123	49	20	3	20	0	0	19	20	0	0
	point124	124	49	20	3	20	0	0	19	20	0	0
	point125	125										
Spring Blvd NB 1 Lane	point126	126	62	20	4	20	0	0	25	20	0	0
	point127	127	62	20	4	20	0	0	25	20	0	0
	point128	128	62	20	4	20	0	0	25	20	0	0
	point129	129										
School Dr 2 Lane	point131	131	32	25	2	25	0	0	10	25	0	0
	point132	132	32	25	2	25	0	0	10	25	0	0
	point133	133	32	25	2	25	0	0	10	25	0	0
	point134	134	32	25	2	25	0	0	10	25	0	0
	point135	135										
Viola St 2 Lane	point136	136	62	25	1	25	0	0	94	25	0	0
	point137	137	62	25	1	25	0	0	94	25	0	0
	point138	138	62	25	1	25	0	0	94	25	0	0
	point139	139	62	25	1	25	0	0	94	25	0	0
	point140	140	62	25	1	25	0	0	94	25	0	0
	point141	141	62	25	1	25	0	0	94	25	0	0
	point142	142	62	25	1	25	0	0	94	25	0	0
	point143	143	62	25	1	25	0	0	94	25	0	0
	point144	144										
Tinity Dr SB 1 Lane	point146	146	51	20	1	20	0	0	8	20	3	20
	point147	147	51	20	1	20	0	0	8	20	3	20
	point148	148	51	20	1	20	0	0	8	20	3	20
	point149	149										

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

Trinity Dr NB 2 Lane	point150	150	83	20	1	20	0	0	13	20	5	20
	point151	151	83	20	1	20	0	0	13	20	5	20
	point152	152	83	20	1	20	0	0	13	20	5	20
	point153	153										
Forest Brook Blvd 2 Lane	point154	154	269	20	6	20	2	20	44	20	1	20
	point155	155	269	20	6	20	2	20	44	20	1	20
	point156	156	269	20	6	20	2	20	44	20	1	20
	point157	157	269	20	6	20	2	20	44	20	1	20
	point158	158										
I-12 EB OnRamp 1 Lane	point161	161	157	35	3	35	1	35	30	35	1	35
	point162	162	157	35	3	35	1	35	30	35	1	35
	point163	163	157	35	3	35	1	35	30	35	1	35
	point164	164	157	35	3	35	1	35	30	35	1	35
	point165	165	157	35	3	35	1	35	30	35	1	35
	point166	166	157	35	3	35	1	35	30	35	1	35
	point167	167	157	35	3	35	1	35	30	35	1	35
	point168	168	157	35	3	35	1	35	30	35	1	35
	point169	169	157	35	3	35	1	35	30	35	1	35
	point170	170	157	35	3	35	1	35	30	35	1	35
	point171	171	157	35	3	35	1	35	30	35	1	35
	point172	172	157	35	3	35	1	35	30	35	1	35
	point173	173	157	35	3	35	1	35	30	35	1	35
	point174	174	157	35	3	35	1	35	30	35	1	35
	point175	175	157	35	3	35	1	35	30	35	1	35
	point176	176	157	35	3	35	1	35	30	35	1	35
	point177	177	157	35	3	35	1	35	30	35	1	35
	point178	178	157	35	3	35	1	35	30	35	1	35
	point179	179	157	35	3	35	1	35	30	35	1	35
	point180	180	157	35	3	35	1	35	30	35	1	35
	point181	181	157	35	3	35	1	35	30	35	1	35
	point182	182	157	35	3	35	1	35	30	35	1	35
	point183	183	157	35	3	35	1	35	30	35	1	35
	point184	184	157	35	3	35	1	35	30	35	1	35
	point185	185	157	35	3	35	1	35	30	35	1	35

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

	point186	186	157	35	3	35	1	35	30	35	1	35
	point187	187	157	35	3	35	1	35	30	35	1	35
	point188	188	157	35	3	35	1	35	30	35	1	35
	point189	189										
I-12 EB OffRamp 1 Lane	point191	191	219	35	4	35	2	35	42	35	1	35
	point192	192	219	35	4	35	2	35	42	35	1	35
	point193	193	219	35	4	35	2	35	42	35	1	35
	point194	194	219	35	4	35	2	35	42	35	1	35
	point195	195	219	35	4	35	2	35	42	35	1	35
	point196	196	219	35	4	35	2	35	42	35	1	35
	point197	197	219	35	4	35	2	35	42	35	1	35
	point198	198	219	35	4	35	2	35	42	35	1	35
	point199	199	219	35	4	35	2	35	42	35	1	35
	point200	200	219	35	4	35	2	35	42	35	1	35
	point201	201	219	35	4	35	2	35	42	35	1	35
	point202	202	219	35	4	35	2	35	42	35	1	35
	point203	203	219	35	4	35	2	35	42	35	1	35
	point204	204										
I-12 WB OffRamp	point205	205	119	35	37	35	2	35	21	35	1	35
	point206	206	119	35	37	35	2	35	21	35	1	35
	point207	207	119	35	37	35	2	35	21	35	1	35
	point208	208	119	35	37	35	2	35	21	35	1	35
	point209	209	119	35	37	35	2	35	21	35	1	35
	point210	210	119	35	37	35	2	35	21	35	1	35
	point211	211	119	35	37	35	2	35	21	35	1	35
	point212	212	119	35	37	35	2	35	21	35	1	35
	point213	213	119	35	37	35	2	35	21	35	1	35
	point214	214	119	35	37	35	2	35	21	35	1	35
	point215	215	119	35	37	35	2	35	21	35	1	35
	point216	216	119	35	37	35	2	35	21	35	1	35
	point217	217										
LA 57 south of LA 1088 3 Lane	point218	218	1142	45	61	45	14	45	208	45	19	45
	point219	219	1142	45	61	45	14	45	208	45	19	45
	point220	220	1142	45	61	45	14	45	208	45	19	45

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

	point221	221	1142	45	61	45	14	45	208	45	19	45
	point222	222	1142	45	61	45	14	45	208	45	19	45
	point223	223	1142	45	61	45	14	45	208	45	19	45
	point224	224	1142	45	61	45	14	45	208	45	19	45
	point225	225	1142	45	61	45	14	45	208	45	19	45
	point226	226	1142	45	61	45	14	45	208	45	19	45
	point227	227	1142	45	61	45	14	45	208	45	19	45
	point228	228	1142	45	61	45	14	45	208	45	19	45
	point229	229	1142	45	61	45	14	45	208	45	19	45
	point231	231	1142	45	61	45	14	45	208	45	19	45
	point230	230										
LA 57 north of LA 1088 3 Lane	point232	232	731	45	63	45	59	45	267	45	8	45
	point233	233	731	45	63	45	59	45	267	45	8	45
	point234	234	731	45	63	45	59	45	267	45	8	45
	point235	235	731	45	63	45	59	45	267	45	8	45
	point236	236	731	45	63	45	59	45	267	45	8	45
	point237	237	731	45	63	45	59	45	267	45	8	45
	point238	238	731	45	63	45	59	45	267	45	8	45
	point239	239	731	45	63	45	59	45	267	45	8	45
	point240	240	731	45	63	45	59	45	267	45	8	45
	point241	241	731	45	63	45	59	45	267	45	8	45
	point242	242										
LA 1088 WB 2 Lane Area 3	point254	254	234	55	17	55	3	55	80	55	1	55
	point253	253	234	55	17	55	3	55	80	55	1	55
	point252	252	234	55	17	55	3	55	80	55	1	55
	point251	251	234	55	17	55	3	55	80	55	1	55
	point250	250	234	55	17	55	3	55	80	55	1	55
	point249	249	234	55	17	55	3	55	80	55	1	55
	point248	248	234	55	17	55	3	55	80	55	1	55
	point247	247	234	55	17	55	3	55	80	55	1	55
	point246	246										
LA 1088 EB 2 Lane Area 3	point274	274	381	55	28	55	5	55	130	55	2	55
	point57	57	381	55	28	55	5	55	130	55	2	55
	point58	58	381	55	28	55	5	55	130	55	2	55

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

	point59	59	381	55	28	55	5	55	130	55	2	55
	point60	60	381	55	28	55	5	55	130	55	2	55
	point61	61	381	55	28	55	5	55	130	55	2	55
	point62	62	381	55	28	55	5	55	130	55	2	55
	point63	63	381	55	28	55	5	55	130	55	2	55
	point190	190	381	55	28	55	5	55	130	55	2	55
	point64	64										
LA 1088 EB 2 Lane bt Ramps	point275	275	254	55	14	55	3	55	86	55	3	55
	point284	284	254	55	14	55	3	55	86	55	3	55
	point65	65	254	55	14	55	3	55	86	55	3	55
	point66	66	254	55	14	55	3	55	86	55	3	55
	point280	280	254	55	14	55	3	55	86	55	3	55
	point67	67	254	55	14	55	3	55	86	55	3	55
	point68	68	254	55	14	55	3	55	86	55	3	55
	point283	283	254	55	14	55	3	55	86	55	3	55
	point69	69	254	55	14	55	3	55	86	55	3	55
	point70	70	254	55	14	55	3	55	86	55	3	55
	point71	71	254	55	14	55	3	55	86	55	3	55
	point72	72	254	55	14	55	3	55	86	55	3	55
	point73	73	254	55	14	55	3	55	86	55	3	55
	point74	74	254	55	14	55	3	55	86	55	3	55
	point75	75	254	55	14	55	3	55	86	55	3	55
	point76	76	254	55	14	55	3	55	86	55	3	55
	point77	77	254	55	14	55	3	55	86	55	3	55
	point78	78	254	55	14	55	3	55	86	55	3	55
	point79	79										
LA 1088 Comb 2 Lane Area 2	point277	277	478	45	17	45	8	45	200	45	12	45
	point130	130	478	45	17	45	8	45	200	45	12	45
	point22	22	478	45	17	45	8	45	200	45	12	45
	point23	23	478	45	17	45	8	45	200	45	12	45
	point24	24	478	45	17	45	8	45	200	45	12	45
	point25	25	478	45	17	45	8	45	200	45	12	45
	point26	26	478	45	17	45	8	45	200	45	12	45
	point27	27	478	45	17	45	8	45	200	45	12	45

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

	point28	28	478	45	17	45	8	45	200	45	12	45
	point29	29	478	45	17	45	2	45	200	45	12	45
	point30	30	478	45	17	45	8	45	200	45	12	45
	point31	31	478	45	17	45	8	45	200	45	12	45
	point32	32	478	45	17	45	8	45	200	45	12	45
	point112	112	478	45	17	45	8	45	200	45	12	45
	point33	33	478	45	17	45	8	45	200	45	12	45
	point34	34	478	45	17	45	8	45	200	45	12	45
	point35	35	478	45	17	45	8	45	200	45	12	45
	point36	36	478	45	17	45	8	45	200	45	12	45
	point37	37	478	45	17	45	8	45	200	45	12	45
	point145	145										
LA 1088 Comb 2 Lane Area 3	point278	278	615	45	45	45	8	45	209	45	3	45
	point38	38	615	45	45	45	8	45	209	45	3	45
	point39	39	615	45	45	45	8	45	209	45	3	45
	point40	40	615	45	45	45	8	45	209	45	3	45
	point41	41	615	45	45	45	8	45	209	45	3	45
	point42	42	615	45	45	45	8	45	209	45	3	45
	point43	43	615	45	45	45	8	45	209	45	3	45
	point44	44	615	45	45	45	8	45	209	45	3	45
	point45	45	615	45	45	45	8	45	209	45	3	45
	point46	46	615	45	45	45	8	45	209	45	3	45
	point47	47	615	45	45	45	8	45	209	45	3	45
	point48	48										
LA 1088 WB 2 Lane bt Ramps	point279	279	156	55	9	55	2	55	53	55	2	55
	point268	268	156	55	9	55	2	55	53	55	2	55
	point267	267	156	55	9	55	2	55	53	55	2	55
	point266	266	156	55	9	55	2	55	53	55	2	55
	point265	265	156	55	9	55	2	55	53	55	2	55
	point264	264	156	55	9	55	2	55	53	55	2	55
	point263	263	156	55	9	55	2	55	53	55	2	55
	point262	262	156	55	9	55	2	55	53	55	2	55
	point261	261	156	55	9	55	2	55	53	55	2	55
	point260	260	156	55	9	55	2	55	53	55	2	55

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

	point259	259	156	55	9	55	2	55	53	55	2	55
	point282	282	156	55	9	55	2	55	53	55	2	55
	point258	258	156	55	9	55	2	55	53	55	2	55
	point257	257	156	55	9	55	2	55	53	55	2	55
	point281	281	156	55	9	55	2	55	53	55	2	55
	point256	256	156	55	9	55	2	55	53	55	2	55
	point255	255	156	55	9	55	2	55	53	55	2	55
	point285	285	156	55	9	55	2	55	53	55	2	55
	point276	276										
LA 1088 Comb 2 Lane bt Ramps	point286	286	409	55	23	55	5	55	139	55	4	55
	point80	80	409	55	23	55	5	55	139	55	4	55
	point81	81	409	55	23	55	5	55	139	55	4	55
	point82	82	409	55	23	55	5	55	139	55	4	55
	point83	83										
LA 1088 Comb 2 Lane Area 3-2	point287	287	615	55	45	55	8	55	209	55	3	55
	point49	49	615	55	45	55	8	55	209	55	3	55
	point50	50	615	55	45	55	8	55	209	55	3	55
	point51	51	615	55	45	55	8	55	209	55	3	55
	point52	52	615	55	45	55	8	55	209	55	3	55
	point53	53	615	55	45	55	8	55	209	55	3	55
	point54	54	615	55	45	55	8	55	209	55	3	55
	point55	55	615	55	45	55	8	55	209	55	3	55
	point56	56										

INPUT: RECEIVERS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: RECEIVERS

PROJECT/CONTRACT:

LA 1088

RUN:

Existing AM Peak 2013

Receiver

Name	No.	#DUs	Coordinates (ground)			Height above Ground	Input Sound Levels and Criteria				Active in Calc.
			X	Y	Z		Existing LAeq1h	Impact Criteria		NR Goal	
			ft	ft	ft		dBA	dBA	dB	dB	
Res 1	253	1	3,683,441.2	682,376.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 2	254	1	3,683,468.2	682,470.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 3	255	1	3,683,608.2	682,712.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 4	256	1	3,683,723.2	682,831.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 5	257	6	3,683,805.8	682,796.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 6	258	6	3,683,965.2	682,871.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 7	259	3	3,684,131.2	682,918.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 8	260	1	3,683,899.0	683,059.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 9	261	1	3,683,868.8	683,216.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 10	262	1	3,683,920.8	683,168.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 11	263	1	3,683,955.5	683,326.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 25	277	1	3,684,467.8	683,922.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 26	278	1	3,684,829.8	683,931.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 27	279	1	3,685,046.0	683,969.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 28	280	1	3,685,117.0	683,892.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 29	281	1	3,685,153.5	683,813.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 30	282	1	3,685,276.5	684,122.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 31	283	1	3,685,658.0	684,432.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 32	284	1	3,685,928.8	684,186.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 33	285	1	3,686,452.2	684,726.7	21.00	4.92	0.00	66	10.0	8.0	Y
Res 34	286	1	3,686,550.0	684,672.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 35	287	1	3,686,742.5	684,919.4	21.00	4.92	0.00	66	10.0	8.0	Y

INPUT: RECEIVERS
LA 1088

Res 36	288	1	3,686,741.2	684,824.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 37	289	1	3,686,733.5	684,708.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 38	290	1	3,686,744.0	684,614.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 39	291	1	3,686,732.2	684,505.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 80	332	1	3,686,918.5	685,006.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 81	333	1	3,686,954.8	684,907.7	21.00	4.92	0.00	66	10.0	8.0	Y
Res 82	334	1	3,686,927.5	684,807.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 83	335	1	3,686,925.0	684,721.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 84	336	1	3,686,931.0	684,618.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 85	337	1	3,687,133.2	684,910.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 86	338	1	3,687,189.2	684,795.7	21.00	4.92	0.00	66	10.0	8.0	Y
Res 87	339	9	3,687,514.8	685,143.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 88	340	5	3,687,582.5	684,954.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 89	341	1	3,687,999.0	685,498.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 90	342	1	3,688,096.8	685,548.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 91	343	2	3,688,070.8	685,302.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 92	344	2	3,688,104.5	685,213.7	21.00	4.92	0.00	66	10.0	8.0	Y
Res 93	345	1	3,688,030.2	685,380.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 94	346	1	3,688,175.0	685,561.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 95	347	1	3,688,259.5	685,614.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 96	348	1	3,688,444.5	685,688.9	21.00	4.92	0.00	66	10.0	8.0	Y
Recreation 97	349	1	3,688,576.2	685,404.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 98	350	1	3,688,522.5	685,711.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 99	351	1	3,688,607.2	685,743.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 100	352	4	3,688,691.8	685,593.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 101	353	1	3,688,797.2	685,824.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 102	354	1	3,688,911.8	685,846.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 103	355	1	3,688,995.2	685,821.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 104	356	1	3,689,086.2	685,832.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 105	357	1	3,689,175.0	685,836.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 106	358	2	3,688,978.2	685,655.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 107	359	2	3,689,070.8	685,647.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 108	360	2	3,689,156.8	685,648.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 109	361	2	3,689,223.5	685,642.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 110	362	1	3,689,797.2	686,349.1	21.00	4.92	0.00	66	10.0	8.0	Y

INPUT: RECEIVERS
LA 1088

Res 111	363	1	3,689,840.2	686,307.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 112	364	1	3,690,190.5	686,521.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 113	365	1	3,690,406.0	686,560.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 114	366	3	3,690,448.2	686,393.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 115	367	3	3,690,646.2	686,405.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 116	368	3	3,690,921.0	686,415.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 117	369	1	3,690,988.0	686,675.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 118	370	1	3,690,981.5	686,531.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 119	371	1	3,690,997.8	686,409.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 153	405	1	3,691,173.5	686,850.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 154	406	1	3,691,139.8	686,767.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 155	407	1	3,691,128.0	686,681.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 156	408	1	3,691,148.8	686,597.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 157	409	1	3,691,137.2	686,509.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 158	410	1	3,691,110.5	686,419.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 159	411	1	3,691,247.8	686,877.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 160	412	1	3,691,336.2	686,922.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 161	413	4	3,691,350.8	686,669.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 162	414	1	3,691,415.8	686,944.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 163	415	7	3,691,530.2	686,798.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 164	416	5	3,691,509.5	686,660.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 165	417	4	3,691,673.5	686,634.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 166	418	1	3,691,490.0	686,967.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 167	419	1	3,691,569.5	686,989.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 168	420	1	3,691,652.8	687,013.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 169	421	1	3,691,757.0	687,041.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 170	422	1	3,691,856.0	687,037.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 171	423	2	3,691,898.8	686,968.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 172	424	3	3,691,930.0	686,881.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 173	425	1	3,691,977.0	687,103.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 174	426	1	3,692,027.8	687,173.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 175	427	1	3,692,117.5	687,196.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 176	428	1	3,692,202.2	687,222.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 177	429	1	3,692,284.2	687,248.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 178	430	3	3,692,313.0	687,070.4	21.00	4.92	0.00	66	10.0	8.0	Y

INPUT: RECEIVERS
LA 1088

Res 179	431	3	3,692,404.0	686,996.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 180	432	4	3,692,363.8	686,894.7	21.00	4.92	0.00	66	10.0	8.0	Y
Res 181	433	1	3,692,499.0	687,323.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 182	434	1	3,692,595.5	687,360.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 183	435	1	3,692,673.5	687,397.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 184	436	1	3,692,770.0	687,423.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 185	437	1	3,692,833.8	687,448.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 186	438	1	3,692,914.5	687,480.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 187	439	1	3,693,005.5	687,509.2	21.00	4.92	0.00	66	10.0	8.0	Y
Office 188	440	1	3,693,077.2	687,535.3	21.00	4.92	0.00	71	10.0	8.0	Y
Res 189	441	1	3,693,171.0	687,527.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 190	442	7	3,692,741.2	687,215.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 191	443	3	3,693,051.2	687,241.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 192	444	3	3,693,038.2	687,165.5	21.00	4.92	0.00	66	10.0	8.0	Y
Office 193	445	1	3,693,288.2	687,605.6	21.00	4.92	0.00	71	10.0	8.0	Y
Recreation 194	446	1	3,693,900.2	687,738.4	21.00	4.92	0.00	66	10.0	8.0	Y
Vet Office 195	447	1	3,694,471.8	687,754.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 196	448	1	3,694,781.8	687,761.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 197	449	1	3,695,094.2	687,971.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 198	450	2	3,695,216.5	687,963.7	21.00	4.92	0.00	66	10.0	8.0	Y
Res 199	451	3	3,695,457.5	687,998.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 200	452	3	3,695,615.0	688,086.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 201	453	2	3,695,965.2	688,189.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 209	461	1	3,697,750.5	689,435.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 210	462	3	3,697,888.5	689,393.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 211	463	1	3,697,897.5	689,251.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 212	464	3	3,698,121.5	689,192.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 213	465	1	3,698,596.8	689,807.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 225	477	1	3,700,395.2	690,187.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 226	478	1	3,701,318.2	690,825.0	30.00	4.92	0.00	66	10.0	8.0	Y

INPUT: BUILDING ROWS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: BUILDING ROWS

PROJECT/CONTRACT:

LA 1088

RUN:

Existing AM Peak 2013

Building Row			Points			
Name	Average Height	Building Percent	No.	Coordinates (ground)		
	ft	%		X ft	Y ft	Z ft
Building1	20.00	70	1	3,686,677.2	684,918.6	21.00
			2	3,686,730.5	684,916.3	21.00
			3	3,686,726.0	684,433.4	21.00
			4	3,686,684.2	684,444.7	21.00
Building2	20.00	70	5	3,686,995.2	685,011.1	21.00
			6	3,686,935.2	685,008.7	21.00
			7	3,686,978.2	684,893.3	21.00
			8	3,686,950.0	684,744.8	21.00
			9	3,686,945.0	684,555.7	21.00
			10	3,686,994.0	684,556.9	21.00
Building3	20.00	70	11	3,687,181.0	684,824.8	21.00
			12	3,687,140.5	684,833.4	21.00
			13	3,687,163.8	684,934.1	21.00
			14	3,687,263.2	685,005.2	21.00
			15	3,687,523.5	685,129.2	21.00
			16	3,687,693.0	685,194.3	21.00
			17	3,687,923.8	685,244.6	21.00
			18	3,687,938.5	685,204.1	21.00
Building4	20.00	70	19	3,687,998.2	685,431.8	21.00
			20	3,687,977.0	685,470.6	21.00
			21	3,688,287.2	685,597.1	21.00
			22	3,688,299.8	685,570.6	21.00
Building5	20.00	70	23	3,688,428.8	685,633.3	21.00

INPUT: BUILDING ROWS
LA 1088

			24	3,688,417.2	685,659.9	21.00
			25	3,688,562.8	685,710.5	21.00
			26	3,688,690.5	685,775.0	21.00
			27	3,688,812.0	685,810.4	21.00
			28	3,689,042.0	685,807.9	21.00
			29	3,689,218.0	685,819.2	21.00
			30	3,689,479.8	685,820.5	21.00
			31	3,689,484.8	685,778.8	21.00
Building6	20.00	70	32	3,691,156.8	686,276.9	21.00
			33	3,691,130.5	686,278.5	21.00
			34	3,691,156.8	686,483.8	21.00
			35	3,691,166.2	686,647.1	21.00
			36	3,691,166.2	686,741.9	21.00
			37	3,691,194.2	686,832.1	21.00
			38	3,691,298.2	686,878.8	21.00
			39	3,691,471.0	686,937.9	21.00
			40	3,691,654.5	687,000.1	21.00
			41	3,691,769.5	687,025.0	21.00
			42	3,691,849.0	687,009.4	21.00
			43	3,691,929.8	686,872.6	21.00
			44	3,692,002.8	686,715.5	21.00
			45	3,691,987.2	686,703.1	21.00
Building7	20.00	70	46	3,692,085.8	686,879.4	21.00
			47	3,692,050.0	686,888.7	21.00
			48	3,692,009.5	687,048.9	21.00
			49	3,692,022.0	687,134.4	21.00
			50	3,692,345.5	687,247.9	21.00
			51	3,692,364.0	687,218.4	21.00
Building8	20.00	70	52	3,692,500.5	687,262.2	21.00
			53	3,692,483.2	687,296.4	21.00
			54	3,692,768.0	687,400.6	21.00
			55	3,692,973.2	687,475.3	21.00
			56	3,693,124.0	687,509.5	21.00
			57	3,693,152.0	687,509.5	21.00

INPUT: BUILDING ROWS**LA 1088**

			58	3,693,201.8	687,425.6	21.00
			59	3,693,205.0	687,060.1	21.00
			60	3,693,167.5	687,058.5	21.00

INPUT: ROADWAYS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: ROADWAYS

PROJECT/CONTRACT:

LA 1088

RUN:

Existing PM Peak 2013

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)		Z	Flow Control			Segment	
				X	Y		Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
LA 1088 Comb 2 Lane Area 1	24.0	point4	4	3,684,032.2	683,782.9	21.00				Average	
		point5	5	3,684,308.8	683,910.2	21.00				Average	
		point6	6	3,684,630.8	684,059.2	21.00				Average	
		point7	7	3,684,944.8	684,203.9	21.00				Average	
		point8	8	3,685,215.5	684,330.2	21.00				Average	
		point9	9	3,685,490.5	684,456.0	21.00				Average	
		point10	10	3,685,647.0	684,529.1	21.00				Average	
		point11	11	3,685,851.8	684,622.3	21.00				Average	
		point12	12	3,686,128.0	684,750.9	21.00				Average	
		point13	13	3,686,396.5	684,874.6	21.00				Average	
		point14	14	3,686,670.8	684,998.8	21.00				Average	
		point15	15	3,686,832.5	685,075.2	21.00				Average	
		point99	99	3,686,848.0	685,082.1	21.00				Average	
		point16	16	3,687,122.8	685,209.6	21.00				Average	
		point17	17	3,687,395.5	685,336.1	21.00				Average	
		point18	18	3,687,668.2	685,459.9	21.00				Average	
		point19	19	3,687,941.8	685,586.4	21.00				Average	
		point20	20	3,688,212.5	685,712.6	21.00				Average	
		point21	21	3,688,279.8	685,742.6	21.00				Average	
		point121	121	3,688,324.0	685,762.9	21.00					
Garon Dr 2 Lane	24.0	point100	100	3,686,849.0	684,090.2	21.00				Average	
		point101	101	3,686,836.8	684,643.1	21.00				Average	
		point102	102	3,686,833.0	684,938.3	21.00				Average	
		point103	103	3,686,832.5	685,075.2	21.00					
Jackson St 2 Lane	24.0	point105	105	3,686,848.0	685,082.1	21.00				Average	

INPUT: ROADWAYS
LA 1088

		point106	106	3,686,844.8	685,315.0	21.00			Average	
		point107	107	3,686,839.0	685,637.0	21.00				
Soult St 2 Lane	24.0	point113	113	3,691,050.2	686,102.2	21.00			Average	
		point114	114	3,691,045.5	686,698.9	21.00			Average	
		point115	115	3,691,043.8	686,911.4	21.00				
Spring Blvd SB 1 Lane	12.0	point122	122	3,688,279.8	685,742.6	21.00			Average	
		point123	123	3,688,316.5	685,676.2	21.00			Average	
		point124	124	3,688,346.2	685,635.1	21.00			Average	
		point125	125	3,688,393.5	685,538.7	21.00				
Spring Blvd NB 1 Lane	12.0	point126	126	3,688,420.8	685,549.4	21.00			Average	
		point127	127	3,688,373.5	685,649.0	21.00			Average	
		point128	128	3,688,352.5	685,696.2	21.00			Average	
		point129	129	3,688,324.0	685,762.9	21.00				
School Dr 2 Lane	24.0	point131	131	3,688,360.0	685,779.9	21.00			Average	
		point132	132	3,688,330.5	685,964.9	21.00			Average	
		point133	133	3,688,321.2	686,063.6	21.00			Average	
		point134	134	3,688,317.8	686,299.8	21.00			Average	
		point135	135	3,688,309.2	686,672.2	21.00				
Viola St 2 Lane	24.0	point136	136	3,691,036.0	686,909.1	21.00			Average	
		point137	137	3,691,034.0	687,095.2	21.00			Average	
		point138	138	3,691,035.0	687,192.2	21.00			Average	
		point139	139	3,691,041.5	687,232.5	21.00			Average	
		point140	140	3,691,036.5	687,256.5	21.00			Average	
		point141	141	3,691,024.8	687,271.2	21.00			Average	
		point142	142	3,690,993.2	687,290.9	21.00			Average	
		point143	143	3,690,786.5	687,290.4	21.00			Average	
		point144	144	3,690,555.0	687,283.0	21.00				
Trinity Dr SB 1 Lane	12.0	point146	146	3,692,368.2	687,373.6	21.00			Average	
		point147	147	3,692,391.5	687,336.9	21.00			Average	
		point148	148	3,692,419.2	687,275.4	21.00			Average	
		point149	149	3,692,441.5	687,215.5	21.00				
Trinity Dr NB 2 Lane	24.0	point150	150	3,692,472.2	687,227.3	21.00			Average	
		point151	151	3,692,450.2	687,286.9	21.00			Average	
		point152	152	3,692,431.8	687,349.1	21.00			Average	
		point153	153	3,692,420.8	687,391.6	21.00				
Forest Brook Blvd 2 Lane	24.0	point154	154	3,695,557.5	687,975.9	21.00			Average	
		point155	155	3,695,466.8	688,124.1	21.00			Average	
		point156	156	3,695,442.0	688,164.1	21.00			Average	

INPUT: ROADWAYS
LA 1088

		point157	157	3,695,382.5	688,305.7	21.00			Average	
		point158	158	3,695,322.0	688,427.7	21.00				
I-12 EB OnRamp 1 Lane	24.0	point161	161	3,699,262.8	690,236.2	22.00			Average	
		point162	162	3,699,282.8	690,209.7	22.00			Average	
		point163	163	3,699,342.2	690,144.1	22.00			Average	
		point164	164	3,699,376.8	690,103.0	22.00			Average	
		point165	165	3,699,406.8	690,068.5	22.00			Average	
		point166	166	3,699,432.5	690,047.4	22.00			Average	
		point167	167	3,699,473.2	690,023.2	22.00			Average	
		point168	168	3,699,527.5	690,003.1	22.00			Average	
		point169	169	3,699,592.2	689,995.0	22.00			Average	
		point170	170	3,699,633.8	689,999.2	22.00			Average	
		point171	171	3,699,684.2	690,010.2	22.00			Average	
		point172	172	3,699,741.5	690,040.1	22.00			Average	
		point173	173	3,699,819.0	690,092.8	22.00			Average	
		point174	174	3,699,963.2	690,193.8	22.00			Average	
		point175	175	3,700,093.0	690,282.4	22.00			Average	
		point176	176	3,700,127.8	690,305.4	22.00			Average	
		point177	177	3,700,199.0	690,345.5	22.00			Average	
		point178	178	3,700,260.5	690,371.1	22.00			Average	
		point179	179	3,700,319.8	690,390.6	22.00			Average	
		point180	180	3,700,408.8	690,407.8	22.00			Average	
		point181	181	3,700,507.0	690,414.9	22.00			Average	
		point182	182	3,700,608.5	690,406.0	22.00			Average	
		point183	183	3,700,704.0	690,385.2	22.00			Average	
		point184	184	3,700,773.8	690,360.4	22.00			Average	
		point185	185	3,700,846.2	690,333.5	22.00			Average	
		point186	186	3,700,912.2	690,305.9	22.00			Average	
		point187	187	3,701,006.2	690,262.4	22.00			Average	
		point188	188	3,701,190.5	690,173.3	22.00			Average	
		point189	189	3,701,436.8	690,049.4	22.00				
I-12 EB OffRamp 1 Lane	24.0	point191	191	3,698,094.2	691,853.9	22.00			Average	
		point192	192	3,698,519.2	691,558.8	22.00			Average	
		point193	193	3,698,733.5	691,411.9	22.00			Average	
		point194	194	3,698,888.5	691,304.1	22.00			Average	
		point195	195	3,698,985.0	691,237.4	22.00			Average	
		point196	196	3,699,056.0	691,170.1	22.00			Average	
		point197	197	3,699,109.2	691,089.9	22.00			Average	

INPUT: ROADWAYS

LA 1088

		point198	198	3,699,149.8	690,997.6	22.00			Average	
		point199	199	3,699,166.5	690,923.2	22.00			Average	
		point200	200	3,699,178.0	690,789.2	22.00			Average	
		point201	201	3,699,189.2	690,674.8	22.00			Average	
		point202	202	3,699,207.8	690,469.8	22.00			Average	
		point203	203	3,699,226.8	690,351.8	22.00			Average	
		point204	204	3,699,237.0	690,285.4	22.00				
I-12 WB OffRamp	24.0	point205	205	3,701,938.8	689,950.9	30.00			Average	
		point206	206	3,701,761.5	690,049.7	30.00			Average	
		point207	207	3,701,556.5	690,162.8	30.00			Average	
		point208	208	3,701,462.5	690,214.3	30.00			Average	
		point209	209	3,701,385.8	690,260.7	30.00			Average	
		point210	210	3,701,302.5	690,340.0	30.00			Average	
		point211	211	3,701,238.8	690,437.9	30.00			Average	
		point212	212	3,701,210.5	690,512.0	30.00			Average	
		point213	213	3,701,192.8	690,594.3	30.00			Average	
		point214	214	3,701,191.5	690,727.8	30.00			Average	
		point215	215	3,701,191.0	690,907.6	30.00			Average	
		point216	216	3,701,192.0	690,944.8	30.00			Average	
		point217	217	3,701,167.8	691,113.1	30.00				
LA 59 south of LA 1088 3 Lane	36.0	point218	218	3,682,808.5	681,467.9	21.00			Average	
		point219	219	3,683,063.0	681,915.2	21.00			Average	
		point220	220	3,683,212.5	682,178.6	21.00			Average	
		point221	221	3,683,303.5	682,338.2	21.00			Average	
		point222	222	3,683,405.8	682,511.9	21.00			Average	
		point223	223	3,683,504.8	682,684.9	21.00			Average	
		point224	224	3,683,603.8	682,858.6	21.00			Average	
		point225	225	3,683,702.8	683,032.3	21.00			Average	
		point226	226	3,683,799.8	683,206.9	21.00			Average	
		point227	227	3,683,898.5	683,381.4	21.00			Average	
		point228	228	3,683,944.2	683,471.9	21.00			Average	
		point229	229	3,683,977.2	683,561.8	21.00			Average	
		point231	231	3,684,007.8	683,662.8	21.00			Average	
		point230	230	3,684,032.2	683,782.9	21.00				
LA 59 north of LA 1088 3 Lane	36.0	point232	232	3,684,032.2	683,782.9	21.00			Average	
		point233	233	3,684,065.8	683,950.8	21.00			Average	
		point234	234	3,684,109.0	684,147.0	21.00			Average	
		point235	235	3,684,165.5	684,339.8	21.00			Average	

INPUT: ROADWAYS

LA 1088

		point236	236	3,684,242.0	684,525.2	21.00			Average	
		point237	237	3,684,361.0	684,801.1	21.00			Average	
		point238	238	3,684,442.5	684,980.7	21.00			Average	
		point239	239	3,684,579.8	685,291.6	21.00			Average	
		point240	240	3,684,701.0	685,565.9	21.00			Average	
		point241	241	3,684,809.5	685,815.2	21.00			Average	
		point242	242	3,684,878.5	685,964.8	21.00				
LA 1088 WB 2 Lane Area 3	24.0	point254	254	3,699,237.0	690,285.4	22.00			Average	
		point253	253	3,698,918.5	690,138.4	22.00			Average	
		point252	252	3,698,627.5	690,004.1	21.00			Average	
		point251	251	3,698,368.2	689,883.7	21.00			Average	
		point250	250	3,698,195.2	689,803.6	21.00			Average	
		point249	249	3,697,937.5	689,674.5	21.00			Average	
		point248	248	3,697,749.0	689,573.8	21.00			Average	
		point247	247	3,697,484.0	689,435.2	21.00			Average	
		point246	246	3,697,252.8	689,311.8	21.00				
LA 1088 EB 2 Lane Area 3	24.0	point274	274	3,697,252.8	689,311.8	21.00			Average	
		point57	57	3,697,489.0	689,419.4	21.00			Average	
		point58	58	3,697,761.0	689,545.2	21.00			Average	
		point59	59	3,697,951.5	689,633.1	21.00			Average	
		point60	60	3,698,216.5	689,756.5	21.00			Average	
		point61	61	3,698,390.8	689,835.2	21.00			Average	
		point62	62	3,698,649.5	689,955.8	21.00			Average	
		point63	63	3,698,941.5	690,089.4	21.00			Average	
		point190	190	3,699,215.5	690,215.3	22.00			Average	
		point64	64	3,699,262.8	690,236.2	22.00				
LA 1088 EB 2 Lane bt Ramps	24.0	point275	275	3,699,262.8	690,236.2	22.00			Average	
		point284	284	3,699,375.2	690,287.8	25.00			Average	
		point65	65	3,699,487.8	690,339.4	30.00			Average	
		point66	66	3,699,760.2	690,465.8	35.00			Average	
		point280	280	3,699,896.5	690,528.4	40.00			Average	
		point67	67	3,700,033.0	690,590.9	45.00			Average	
		point68	68	3,700,305.0	690,716.1	45.00			Average	
		point283	283	3,700,441.8	690,779.0	45.00			Average	
		point69	69	3,700,578.5	690,841.9	40.00			Average	
		point70	70	3,700,851.5	690,967.8	35.00			Average	
		point71	71	3,701,167.8	691,113.1	30.00			Average	
		point72	72	3,701,395.5	691,218.8	30.00			Average	

INPUT: ROADWAYS

LA 1088

		point73	73	3,701,668.8	691,345.2	30.00			Average	
		point74	74	3,701,946.5	691,454.9	30.00			Average	
		point75	75	3,702,233.2	691,530.1	30.00			Average	
		point76	76	3,702,532.2	691,581.5	30.00			Average	
		point77	77	3,702,731.8	691,612.4	30.00			Average	
		point78	78	3,703,020.0	691,678.9	30.00			Average	
		point79	79	3,703,303.2	691,776.2	30.00				
LA 1088 Comb 2 Lane Area 2	24.0	point277	277	3,688,324.0	685,762.9	21.00			Average	
		point130	130	3,688,360.0	685,779.9	21.00			Average	
		point22	22	3,688,576.5	685,879.8	21.00			Average	
		point23	23	3,688,848.5	686,005.4	21.00			Average	
		point24	24	3,689,121.8	686,131.2	21.00			Average	
		point25	25	3,689,392.8	686,255.4	21.00			Average	
		point26	26	3,689,572.5	686,339.0	21.00			Average	
		point27	27	3,689,853.2	686,452.5	21.00			Average	
		point28	28	3,690,132.8	686,564.9	21.00			Average	
		point29	29	3,690,409.2	686,676.8	21.00			Average	
		point30	30	3,690,648.8	686,775.1	21.00			Average	
		point31	31	3,690,876.8	686,854.2	21.00			Average	
		point32	32	3,691,036.0	686,909.1	21.00			Average	
		point112	112	3,691,043.8	686,911.4	21.00			Average	
		point33	33	3,691,350.5	687,018.0	21.00			Average	
		point34	34	3,691,632.5	687,116.4	21.00			Average	
		point35	35	3,691,915.0	687,216.2	21.00			Average	
		point36	36	3,692,197.5	687,315.0	21.00			Average	
		point37	37	3,692,368.2	687,373.6	21.00			Average	
		point145	145	3,692,420.8	687,391.6	21.00				
LA 1088 Comb 2 Lane Area 3	24.0	point278	278	3,692,420.8	687,391.6	21.00			Average	
		point38	38	3,692,670.8	687,478.1	21.00			Average	
		point39	39	3,692,955.2	687,577.9	21.00			Average	
		point40	40	3,693,236.8	687,676.4	21.00			Average	
		point41	41	3,693,522.8	687,775.4	21.00			Average	
		point42	42	3,693,805.2	687,873.9	21.00			Average	
		point43	43	3,694,088.0	687,972.0	21.00			Average	
		point44	44	3,694,371.8	688,072.5	21.00			Average	
		point45	45	3,694,652.5	688,169.9	21.00			Average	
		point46	46	3,694,850.5	688,238.8	21.00			Average	
		point47	47	3,695,124.2	688,341.9	21.00			Average	

INPUT: ROADWAYS
LA 1088

		point48	48	3,695,322.0	688,427.7	21.00				
LA 1088 WB 2 Lane bt Ramps	24.0	point279	279	3,703,303.2	691,776.2	30.00			Average	
		point268	268	3,703,013.0	691,697.4	30.00			Average	
		point267	267	3,702,726.5	691,651.9	30.00			Average	
		point266	266	3,702,528.0	691,630.0	30.00			Average	
		point265	265	3,702,218.5	691,592.1	30.00			Average	
		point264	264	3,701,924.8	691,513.0	30.00			Average	
		point263	263	3,701,646.5	691,397.2	30.00			Average	
		point262	262	3,701,372.5	691,270.8	30.00			Average	
		point261	261	3,701,151.8	691,169.5	30.00			Average	
		point260	260	3,700,826.5	691,020.3	35.00			Average	
		point259	259	3,700,554.0	690,894.4	40.00			Average	
		point282	282	3,700,419.5	690,831.9	45.00			Average	
		point258	258	3,700,284.8	690,769.4	45.00			Average	
		point257	257	3,700,010.0	690,643.2	45.00			Average	
		point281	281	3,699,873.5	690,580.6	40.00			Average	
		point256	256	3,699,737.0	690,517.9	35.00			Average	
		point255	255	3,699,468.2	690,393.1	30.00			Average	
		point285	285	3,699,352.5	690,339.2	25.00			Average	
		point276	276	3,699,237.0	690,285.4	22.00				
LA 1088 Comb 2 Lane bt Ramps	24.0	point286	286	3,703,303.2	691,776.2	30.00			Average	
		point80	80	3,703,487.8	691,856.8	30.00			Average	
		point81	81	3,703,762.5	691,982.6	30.00			Average	
		point82	82	3,704,035.8	692,104.8	30.00			Average	
		point83	83	3,704,307.2	692,227.5	30.00				
LA 1088 Comb 2 Lane Area 3 2	24.0	point287	287	3,695,322.0	688,427.7	21.00			Average	
		point49	49	3,695,579.8	688,545.3	21.00			Average	
		point50	50	3,695,853.8	688,671.1	21.00			Average	
		point51	51	3,696,125.8	688,795.4	21.00			Average	
		point52	52	3,696,397.8	688,919.9	21.00			Average	
		point53	53	3,696,670.8	689,044.0	21.00			Average	
		point54	54	3,696,809.2	689,108.7	21.00			Average	
		point55	55	3,697,034.8	689,213.1	21.00			Average	
		point56	56	3,697,252.8	689,311.8	21.00				

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes

PROJECT/CONTRACT:

LA 1088

RUN:

Existing PM Peak 2013

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
LA 1088 Comb 2 Lane Area 1	point4	4	455	45	43	45	4	45	266	45	6	45
	point5	5	455	45	43	45	4	45	266	45	6	45
	point6	6	455	45	43	45	4	45	266	45	6	45
	point7	7	455	45	43	45	4	45	266	45	6	45
	point8	8	455	45	43	45	4	45	266	45	6	45
	point9	9	455	45	43	45	4	45	266	45	6	45
	point10	10	455	45	43	45	4	45	266	45	6	45
	point11	11	455	45	43	45	4	45	266	45	6	45
	point12	12	455	45	43	45	4	45	266	45	6	45
	point13	13	455	45	43	45	4	45	266	45	6	45
	point14	14	455	45	43	45	4	45	266	45	6	45
	point15	15	455	45	43	45	4	45	266	45	6	45
	point99	99	455	45	43	45	4	45	266	45	6	45
	point16	16	455	45	43	45	4	45	266	45	6	45
	point17	17	455	45	43	45	4	45	266	45	6	45
	point18	18	455	45	43	45	4	45	266	45	6	45
	point19	19	455	45	43	45	4	45	266	45	6	45
	point20	20	455	45	43	45	4	45	266	45	6	45
	point21	21	455	45	43	45	4	45	266	45	6	45
	point121	121										
Garon Dr 2 Lane	point100	100	70	25	4	25	0	0	19	25	1	25
	point101	101	70	25	4	25	0	0	19	25	1	25

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

	point102	102	70	25	4	25	0	0	19	25	1	25
	point103	103										
Jackson St 2 Lane	point105	105	22	25	3	25	0	0	11	25	0	0
	point106	106	22	25	3	25	0	0	11	25	0	0
	point107	107										
Soult St 2 Lane	point113	113	348	25	32	25	4	25	141	25	3	25
	point114	114	348	25	32	25	4	25	141	25	3	25
	point115	115										
Spring Blvd SB 1 Lane	point122	122	62	20	4	20	0	0	25	20	0	0
	point123	123	62	20	4	20	0	0	25	20	0	0
	point124	124	62	20	4	20	0	0	25	20	0	0
	point125	125										
Spring Blvd NB 1 Lane	point126	126	49	20	3	20	0	0	19	20	0	0
	point127	127	49	20	3	20	0	0	19	20	0	0
	point128	128	49	20	3	20	0	0	19	20	0	0
	point129	129										
School Dr 2 Lane	point131	131	32	25	2	25	0	0	10	25	0	0
	point132	132	32	25	2	25	0	0	10	25	0	0
	point133	133	32	25	2	25	0	0	10	25	0	0
	point134	134	32	25	2	25	0	0	10	25	0	0
	point135	135										
Viola St 2 Lane	point136	136	62	25	1	25	0	0	94	25	0	0
	point137	137	62	25	1	25	0	0	94	25	0	0
	point138	138	62	25	1	25	0	0	94	25	0	0
	point139	139	62	25	1	25	0	0	94	25	0	0
	point140	140	62	25	1	25	0	0	94	25	0	0
	point141	141	62	25	1	25	0	0	94	25	0	0
	point142	142	62	25	1	25	0	0	94	25	0	0
	point143	143	62	25	1	25	0	0	94	25	0	0
	point144	144										
Tinity Dr SB 1 Lane	point146	146	83	20	1	20	0	0	13	20	5	20
	point147	147	83	20	1	20	0	0	13	20	5	20
	point148	148	83	20	1	20	0	0	13	20	5	20
	point149	149										

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

Trinity Dr NB 2 Lane	point150	150	51	20	1	20	0	0	8	20	3	20
	point151	151	51	20	1	20	0	0	8	20	3	20
	point152	152	51	20	1	20	0	0	8	20	3	20
	point153	153										
Forest Brook Blvd 2 Lane	point154	154	269	20	6	20	2	20	44	20	1	20
	point155	155	269	20	6	20	2	20	44	20	1	20
	point156	156	269	20	6	20	2	20	44	20	1	20
	point157	157	269	20	6	20	2	20	44	20	1	20
	point158	158										
I-12 EB OnRamp 1 Lane	point161	161	282	35	5	35	2	35	55	35	1	35
	point162	162	282	35	5	35	2	35	55	35	1	35
	point163	163	282	35	5	35	2	35	55	35	1	35
	point164	164	282	35	5	35	2	35	55	35	1	35
	point165	165	282	35	5	35	2	35	55	35	1	35
	point166	166	282	35	5	35	2	35	55	35	1	35
	point167	167	282	35	5	35	2	35	55	35	1	35
	point168	168	282	35	5	35	2	35	55	35	1	35
	point169	169	282	35	5	35	2	35	55	35	1	35
	point170	170	282	35	5	35	2	35	55	35	1	35
	point171	171	282	35	5	35	2	35	55	35	1	35
	point172	172	282	35	5	35	2	35	55	35	1	35
	point173	173	282	35	5	35	2	35	55	35	1	35
	point174	174	282	35	5	35	2	35	55	35	1	35
	point175	175	282	35	5	35	2	35	55	35	1	35
	point176	176	282	35	5	35	2	35	55	35	1	35
	point177	177	282	35	5	35	2	35	55	35	1	35
	point178	178	282	35	5	35	2	35	55	35	1	35
	point179	179	282	35	5	35	2	35	55	35	1	35
	point180	180	282	35	5	35	2	35	55	35	1	35
	point181	181	282	35	5	35	2	35	55	35	1	35
	point182	182	282	35	5	35	2	35	55	35	1	35
	point183	183	282	35	5	35	2	35	55	35	1	35
	point184	184	282	35	5	35	2	35	55	35	1	35
	point185	185	282	35	5	35	2	35	55	35	1	35

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

	point186	186	282	35	5	35	2	35	55	35	1	35
	point187	187	282	35	5	35	2	35	55	35	1	35
	point188	188	282	35	5	35	2	35	55	35	1	35
	point189	189										
I-12 EB OffRamp 1 Lane	point191	191	219	35	4	35	2	35	42	35	1	35
	point192	192	219	35	4	35	2	35	42	35	1	35
	point193	193	219	35	4	35	2	35	42	35	1	35
	point194	194	219	35	4	35	2	35	42	35	1	35
	point195	195	219	35	4	35	2	35	42	35	1	35
	point196	196	219	35	4	35	2	35	42	35	1	35
	point197	197	219	35	4	35	2	35	42	35	1	35
	point198	198	219	35	4	35	2	35	42	35	1	35
	point199	199	219	35	4	35	2	35	42	35	1	35
	point200	200	219	35	4	35	2	35	42	35	1	35
	point201	201	219	35	4	35	2	35	42	35	1	35
	point202	202	219	35	4	35	2	35	42	35	1	35
	point203	203	219	35	4	35	2	35	42	35	1	35
	point204	204										
I-12 WB OffRamp	point205	205	119	45	37	45	2	45	21	45	1	45
	point206	206	119	45	37	45	2	45	21	45	1	45
	point207	207	119	45	37	45	2	45	21	45	1	45
	point208	208	119	45	37	45	2	45	21	45	1	45
	point209	209	119	45	37	45	2	45	21	45	1	45
	point210	210	119	45	37	45	2	45	21	45	1	45
	point211	211	119	45	37	45	2	45	21	45	1	45
	point212	212	119	45	37	45	2	45	21	45	1	45
	point213	213	119	45	37	45	2	45	21	45	1	45
	point214	214	119	45	37	45	2	45	21	45	1	45
	point215	215	119	45	37	45	2	45	21	45	1	45
	point216	216	119	45	37	45	2	45	21	45	1	45
	point217	217										
LA 59 south of LA 1088 3 Lane	point218	218	1142	45	61	45	14	45	208	45	19	45
	point219	219	1142	45	61	45	14	45	208	45	19	45
	point220	220	1142	45	61	45	14	45	208	45	19	45

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

	point221	221	1142	45	61	45	14	45	208	45	19	45
	point222	222	1142	45	61	45	14	45	208	45	19	45
	point223	223	1142	45	61	45	14	45	208	45	19	45
	point224	224	1142	45	61	45	14	45	208	45	19	45
	point225	225	1142	45	61	45	14	45	208	45	19	45
	point226	226	1142	45	61	45	14	45	208	45	19	45
	point227	227	1142	45	61	45	14	45	208	45	19	45
	point228	228	1142	45	61	45	14	45	208	45	19	45
	point229	229	1142	45	61	45	14	45	208	45	19	45
	point231	231	1142	45	61	45	14	45	208	45	19	45
	point230	230										
LA 59 north of LA 1088 3 Lane	point232	232	731	45	63	45	59	45	267	45	8	45
	point233	233	731	45	63	45	59	45	267	45	8	45
	point234	234	731	45	63	45	59	45	267	45	8	45
	point235	235	731	45	63	45	59	45	267	45	8	45
	point236	236	731	45	63	45	59	45	267	45	8	45
	point237	237	731	45	63	45	59	45	267	45	8	45
	point238	238	731	45	63	45	59	45	267	45	8	45
	point239	239	731	45	63	45	59	45	267	45	8	45
	point240	240	731	45	63	45	59	45	267	45	8	45
	point241	241	731	45	63	45	59	45	267	45	8	45
	point242	242										
LA 1088 WB 2 Lane Area 3	point254	254	381	55	28	55	5	55	130	55	2	55
	point253	253	381	55	28	55	5	55	130	55	2	55
	point252	252	381	55	28	55	5	55	130	55	2	55
	point251	251	381	55	28	55	5	55	130	55	2	55
	point250	250	381	55	28	55	5	55	130	55	2	55
	point249	249	381	55	28	55	5	55	130	55	2	55
	point248	248	381	55	28	55	5	55	130	55	2	55
	point247	247	381	55	28	55	5	55	130	55	2	55
	point246	246										
LA 1088 EB 2 Lane Area 3	point274	274	234	55	17	55	3	55	80	55	3	55
	point57	57	234	55	17	55	3	55	80	55	3	55
	point58	58	234	55	17	55	3	55	80	55	3	55

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

	point59	59	234	55	17	55	3	55	80	55	3	55
	point60	60	234	55	17	55	3	55	80	55	3	55
	point61	61	234	55	17	55	3	55	80	55	3	55
	point62	62	234	55	17	55	3	55	80	55	3	55
	point63	63	234	55	17	55	3	55	80	55	3	55
	point190	190	234	55	17	55	3	55	80	55	3	55
	point64	64										
LA 1088 EB 2 Lane bt Ramps	point275	275	156	55	9	55	2	55	53	55	2	55
	point284	284	156	55	9	55	2	55	53	55	2	55
	point65	65	156	55	9	55	2	55	53	55	2	55
	point66	66	156	55	9	55	2	55	53	55	2	55
	point280	280	156	55	9	55	2	55	53	55	2	55
	point67	67	156	55	9	55	2	55	53	55	2	55
	point68	68	156	55	9	55	2	55	53	55	2	55
	point283	283	156	55	9	55	2	55	53	55	2	55
	point69	69	156	55	9	55	2	55	53	55	2	55
	point70	70	156	55	9	55	2	55	53	55	2	55
	point71	71	156	55	9	55	2	55	53	55	2	55
	point72	72	156	55	9	55	2	55	53	55	2	55
	point73	73	156	55	9	55	2	55	53	55	2	55
	point74	74	156	55	9	55	2	55	53	55	2	55
	point75	75	156	55	9	55	2	55	53	55	2	55
	point76	76	156	55	9	55	2	55	53	55	2	55
	point77	77	156	55	9	55	2	55	53	55	2	55
	point78	78	156	55	9	55	2	55	53	55	2	55
	point79	79										
LA 1088 Comb 2 Lane Area 2	point277	277	478	45	17	45	8	45	200	45	12	45
	point130	130	478	45	17	45	8	45	200	45	12	45
	point22	22	478	45	17	45	8	45	200	45	12	45
	point23	23	478	45	17	45	8	45	200	45	12	45
	point24	24	478	45	17	45	8	45	200	45	12	45
	point25	25	478	45	17	45	8	45	200	45	12	45
	point26	26	478	45	17	45	8	45	200	45	12	45
	point27	27	478	45	17	45	8	45	200	45	12	45

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

	point28	28	478	45	17	45	8	45	200	45	12	45
	point29	29	478	45	17	45	8	45	200	45	12	45
	point30	30	478	45	17	45	8	45	200	45	12	45
	point31	31	478	45	17	45	8	45	200	45	12	45
	point32	32	478	45	17	45	8	45	200	45	12	45
	point112	112	478	45	17	45	8	45	200	45	12	45
	point33	33	478	45	17	45	8	45	200	45	12	45
	point34	34	478	45	17	45	8	45	200	45	12	45
	point35	35	478	45	17	45	8	45	200	45	12	45
	point36	36	478	45	17	45	8	45	200	45	12	45
	point37	37	478	45	17	45	8	45	200	45	12	45
	point145	145										
LA 1088 Comb 2 Lane Area 3	point278	278	615	45	45	45	8	45	209	45	3	45
	point38	38	615	45	45	45	8	45	209	45	3	45
	point39	39	615	45	45	45	8	45	209	20	3	45
	point40	40	615	45	45	45	8	45	209	45	3	45
	point41	41	615	45	45	45	8	45	209	45	3	45
	point42	42	615	45	45	45	8	45	209	45	3	45
	point43	43	615	45	45	45	8	45	209	45	3	45
	point44	44	615	45	45	45	8	45	209	45	3	45
	point45	45	615	45	45	45	8	45	209	45	3	45
	point46	46	615	45	45	45	8	45	209	45	3	45
	point47	47	615	45	45	45	8	45	209	45	3	45
	point48	48										
LA 1088 WB 2 Lane bt Ramps	point279	279	254	55	14	55	3	55	86	55	3	55
	point268	268	254	55	14	55	3	55	86	55	3	55
	point267	267	254	55	14	55	3	55	86	55	3	55
	point266	266	254	55	14	55	3	55	86	55	3	55
	point265	265	254	55	14	55	3	55	86	55	3	55
	point264	264	254	55	14	55	3	55	86	55	3	55
	point263	263	254	55	14	55	3	55	86	55	3	55
	point262	262	254	55	14	55	3	55	86	55	3	55
	point261	261	254	55	14	55	3	55	86	55	3	55
	point260	260	254	55	14	55	3	55	86	55	3	55

INPUT: TRAFFIC FOR LAeq1h Volumes
LA 1088

	point259	259	254	55	14	55	3	55	86	55	3	55
	point282	282	254	55	14	55	3	55	86	55	3	55
	point258	258	254	55	14	55	3	55	86	55	3	55
	point257	257	254	55	14	55	3	55	86	55	3	55
	point281	281	254	55	14	55	3	55	86	55	3	55
	point256	256	254	55	14	55	3	55	86	55	3	55
	point255	255	254	55	14	55	3	55	86	55	3	55
	point285	285	254	55	14	55	3	55	86	55	3	55
	point276	276										
LA 1088 Comb 2 Lane bt Ramps	point286	286	409	55	23	55	5	55	139	55	4	55
	point80	80	409	55	23	55	5	55	139	55	4	55
	point81	81	409	55	23	55	5	55	139	55	4	55
	point82	82	409	55	23	55	5	55	139	55	4	55
	point83	83										
LA 1088 Comb 2 Lane Area 3 2	point287	287	615	55	45	55	8	55	209	55	3	55
	point49	49	615	55	45	55	8	55	209	55	3	55
	point50	50	615	55	45	55	8	55	209	55	3	55
	point51	51	615	55	45	55	8	55	209	55	3	55
	point52	52	615	55	45	55	8	55	209	55	3	55
	point53	53	615	55	45	55	8	55	209	55	3	55
	point54	54	615	55	45	55	8	55	209	55	3	55
	point55	55	615	55	45	55	8	55	209	55	3	55
	point56	56										

INPUT: RECEIVERS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: RECEIVERS

PROJECT/CONTRACT:

LA 1088

RUN:

Existing PM Peak 2013

Receiver

Name	No.	#DUs	Coordinates (ground)			Height above Ground	Input Sound Levels and Criteria				Active in Calc.
			X	Y	Z		Existing LAeq1h	Impact Criteria		NR Goal	
								LAeq1h	Sub'l		
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Res 12	15	1	3,683,288.2	682,418.7	21.00	4.92	0.00	66	10.0	8.0	Y
Res 13	16	1	3,683,406.5	682,602.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 14	17	1	3,683,402.2	682,710.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 15	18	1	3,683,509.5	682,820.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 16	19	1	3,683,554.0	682,985.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 17	20	3	3,683,444.5	683,048.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 18	21	3	3,683,363.0	683,119.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 19	22	3	3,683,236.2	683,143.5	21.00	4.92	0.00	66	10.0	8.0	Y
Office 20	23	1	3,683,642.8	683,119.1	21.00	4.92	0.00	66	10.0	8.0	Y
Office 21	24	1	3,683,747.2	683,269.4	21.00	4.92	0.00	71	10.0	8.0	Y
Restaurant 22	25	1	3,683,907.8	683,708.8	21.00	4.92	0.00	71	10.0	8.0	Y
Bank 23	26	1	3,683,936.0	683,881.4	21.00	4.92	0.00	71	10.0	8.0	Y
Office 24	27	1	3,683,651.5	683,869.9	21.00	4.92	0.00	71	10.0	8.0	Y
Res 40	43	1	3,684,553.8	684,402.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 41	44	1	3,684,706.2	684,268.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 42	45	1	3,685,596.8	684,776.2	21.00	4.92	0.00	66	10.0	8.0	Y
School 43	46	1	3,685,926.2	684,787.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 44	47	3	3,685,809.0	684,957.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 45	48	4	3,685,833.8	685,027.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 46	49	2	3,685,854.5	685,070.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 47	50	4	3,685,815.5	685,131.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 48	51	1	3,686,061.5	684,994.9	21.00	4.92	0.00	66	10.0	8.0	Y

INPUT: RECEIVERS
LA 1088

Apartments 49 (1st Floor)	52	2	3,686,246.5	684,897.2	21.00	4.92	0.00	66	10.0	8.0	Y
Apartments 50 (1st Floor)	53	2	3,686,365.0	684,962.4	21.00	4.92	0.00	66	10.0	8.0	Y
Apartments 51 (1st Floor)	54	2	3,686,252.2	684,942.4	21.00	4.92	0.00	66	10.0	8.0	Y
Apartments 52 (1st Floor)	55	2	3,686,376.0	685,008.9	21.00	4.92	0.00	66	10.0	8.0	Y
Apartments 53 (1st Floor)	56	2	3,686,241.2	685,047.0	21.00	4.92	0.00	66	10.0	8.0	Y
Apartments 54 (1st Floor)	57	2	3,686,249.8	685,086.9	21.00	4.92	0.00	66	10.0	8.0	Y
Apartments 55 (1st Floor)	58	2	3,686,185.8	685,214.4	21.00	4.92	0.00	66	10.0	8.0	Y
Apartments 56 (1st Floor)	59	2	3,686,231.5	685,226.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 57	60	3	3,686,431.5	685,246.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 58	61	2	3,686,536.8	685,239.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 59	62	3	3,686,534.8	685,403.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 60	63	2	3,686,661.8	685,404.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 61	64	3	3,686,723.0	685,250.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 62	65	1	3,686,781.8	685,140.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 63	66	1	3,686,783.0	685,228.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 64	67	1	3,686,776.8	685,401.7	21.00	4.92	0.00	66	10.0	8.0	Y
Res 65	68	2	3,686,771.2	685,547.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 66	69	1	3,686,905.2	685,225.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 67	70	4	3,686,906.8	685,306.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 68	71	1	3,686,897.5	685,398.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 69	72	1	3,686,910.5	685,558.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 70	73	2	3,687,061.5	685,409.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 71	74	3	3,687,030.2	685,560.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 72	75	1	3,686,999.0	685,642.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 73	76	1	3,687,775.2	685,591.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 74	77	1	3,687,823.2	685,608.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 75	78	1	3,687,940.5	685,691.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 76	79	1	3,687,900.2	685,741.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 77	80	3	3,687,830.5	685,767.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 78	81	1	3,687,638.2	685,972.4	21.00	4.92	0.00	66	10.0	8.0	Y
School 79	82	1	3,688,194.5	686,063.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 120	123	1	3,688,481.0	685,920.7	21.00	4.92	0.00	66	10.0	8.0	Y
Res 121	124	2	3,688,478.2	685,968.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 122	125	2	3,688,477.0	686,023.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 123	126	2	3,688,477.0	686,090.0	21.00	4.92	0.00	66	10.0	8.0	Y

INPUT: RECEIVERS
LA 1088

Res 124	127	2	3,688,477.0	686,147.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 125	128	2	3,688,478.2	686,203.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 126	129	2	3,688,479.5	686,256.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 127	130	2	3,688,474.2	686,316.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 128	131	1	3,688,488.0	686,373.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 129	132	1	3,688,820.8	686,142.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 130	133	1	3,688,910.5	686,148.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 131	134	1	3,689,022.5	686,215.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 132	135	1	3,689,180.0	686,261.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 133	136	4	3,689,178.8	686,332.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 134	137	1	3,689,336.2	686,315.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 135	138	7	3,689,293.5	686,505.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 136	139	8	3,689,204.5	686,647.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 137	140	1	3,689,431.5	686,380.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 138	141	1	3,689,520.0	686,418.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 139	142	1	3,689,612.5	686,472.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 140	143	1	3,689,816.8	686,626.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 141	144	1	3,689,945.8	686,604.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 142	145	1	3,690,122.8	686,659.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 143	146	3	3,689,477.0	686,687.6	21.00	4.92	0.00	66	10.0	8.0	Y
Church 144	147	2	3,690,439.2	686,789.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 145	148	3	3,690,317.2	687,155.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 146	149	1	3,690,531.8	687,113.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 147	150	1	3,690,664.5	687,053.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 148	151	3	3,690,883.2	687,333.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 149	152	1	3,691,327.2	687,190.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 150	153	1	3,691,435.2	687,129.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 151	154	1	3,691,749.0	687,276.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 152	155	1	3,692,014.8	687,336.1	21.00	4.92	0.00	66	10.0	8.0	Y
Res 202	205	1	3,692,707.5	687,824.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 203	206	2	3,692,690.5	687,700.6	21.00	4.92	0.00	66	10.0	8.0	Y
Church 204	207	1	3,693,267.2	687,792.8	21.00	4.92	0.00	66	10.0	8.0	Y
Church 205	208	1	3,694,260.8	688,238.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 206	209	1	3,694,474.2	688,272.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 207	210	1	3,694,684.0	688,423.3	21.00	4.92	0.00	66	10.0	8.0	Y

INPUT: RECEIVERS**LA 1088**

Res 208	211	1	3,695,691.8	688,807.4	21.00	4.92	0.00	66	10.0	8.0	Y
Res 214	217	1	3,697,978.2	689,880.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 215	218	1	3,698,171.0	689,958.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 216	219	1	3,698,342.8	690,015.8	21.00	4.92	0.00	66	10.0	8.0	Y
Res 217	220	8	3,698,169.8	690,175.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 218	221	1	3,698,505.5	690,134.2	21.00	4.92	0.00	66	10.0	8.0	Y
Res 219	222	2	3,698,512.2	690,217.6	21.00	4.92	0.00	66	10.0	8.0	Y
Res 220	223	4	3,698,513.5	690,297.0	21.00	4.92	0.00	66	10.0	8.0	Y
Res 221	224	1	3,698,820.8	690,298.3	21.00	4.92	0.00	66	10.0	8.0	Y
Res 222	225	1	3,699,025.8	690,529.9	21.00	4.92	0.00	66	10.0	8.0	Y
Res 223	226	1	3,699,028.2	690,601.5	21.00	4.92	0.00	66	10.0	8.0	Y
Res 224	227	1	3,699,019.5	690,662.1	21.00	4.92	0.00	66	10.0	8.0	Y
Apartments 49 (2nd Floor)	230	2	3,686,246.5	684,897.2	21.00	20.00	0.00	66	10.0	8.0	Y
Apartments 50 (2nd Floor)	232	2	3,686,365.0	684,962.4	21.00	20.00	0.00	66	10.0	8.0	Y
Apartments 51 (2nd Floor)	234	2	3,686,252.2	684,942.4	21.00	20.00	0.00	66	10.0	8.0	Y
Apartments 52 (2nd Floor)	236	2	3,686,376.0	685,008.9	21.00	20.00	0.00	66	10.0	8.0	Y
Apartments 53 (2nd Floor)	238	2	3,686,241.2	685,047.0	21.00	20.00	0.00	66	10.0	8.0	Y
Apartments 54 (2nd Floor)	240	2	3,686,249.8	685,086.9	21.00	20.00	0.00	66	10.0	8.0	Y
Apartments 55 (2nd Floor)	242	2	3,686,185.8	685,214.4	21.00	20.00	0.00	66	10.0	8.0	Y
Apartments 56 (2nd Floor)	244	2	3,686,231.5	685,226.4	21.00	20.00	0.00	66	10.0	8.0	Y

INPUT: BARRIERS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: BARRIERS

PROJECT/CONTRACT:

LA 1088

RUN:

Existing PM Peak 2013

Barrier									Points												
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height at Point	Segment						
		Min	Max		\$ per Unit Area	\$ per Unit Vol.	Top Width				Run:Rise	\$ per Unit Length	X		Y	Z	Seg	Ht	Perturbs	On	Important
		ft	ft		\$/sq ft	\$/cu yd	ft				ft:ft	\$/ft	ft		ft	ft	ft	ft	ft	ft	ft
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	3,685,813.8	684,888.2	21.00	20.00	0.00	0	0				
									point2	2	3,685,813.8	684,804.9	21.00	20.00	0.00	0	0				
									point3	3	3,685,919.2	684,808.2	21.00	20.00	0.00	0	0				
									point4	4	3,685,921.0	684,888.2	21.00	20.00							
Barrier2	W	0.00	99.99	0.00				0.00	point5	5	3,686,195.2	684,980.8	21.00	30.00	0.00	0	0				
									point6	6	3,686,195.2	684,938.2	21.00	30.00	0.00	0	0				
									point7	7	3,686,183.2	684,937.3	21.00	30.00	0.00	0	0				
									point8	8	3,686,183.2	684,884.6	21.00	30.00	0.00	0	0				
									point9	9	3,686,233.2	684,884.6	21.00	30.00	0.00	0	0				
									point10	10	3,686,235.0	684,935.4	21.00	30.00	0.00	0	0				
									point11	11	3,686,245.2	684,937.3	21.00	30.00	0.00	0	0				
									point12	12	3,686,244.2	684,979.9	21.00	30.00							
Barrier3	W	0.00	99.99	0.00				0.00	point13	13	3,686,191.5	685,120.5	21.00	30.00	0.00	0	0				
									point14	14	3,686,191.5	685,080.8	21.00	30.00	0.00	0	0				
									point15	15	3,686,183.2	685,080.8	21.00	30.00	0.00	0	0				
									point16	16	3,686,184.0	685,028.9	21.00	30.00	0.00	0	0				
									point17	17	3,686,232.2	685,028.9	21.00	30.00	0.00	0	0				
									point18	18	3,686,235.0	685,072.4	21.00	30.00	0.00	0	0				
									point19	19	3,686,241.5	685,074.2	21.00	30.00	0.00	0	0				
									point20	20	3,686,243.2	685,121.4	21.00	30.00							
Barrier4	W	0.00	99.99	0.00				0.00	point21	21	3,686,369.2	684,994.7	21.00	30.00	0.00	0	0				
									point22	22	3,686,370.2	684,943.8	21.00	30.00	0.00	0	0				
									point23	23	3,686,388.8	684,945.6	21.00	30.00	0.00	0	0				
									point24	24	3,686,392.2	685,043.7	21.00	30.00	0.00	0	0				
									point25	25	3,686,374.8	685,044.6	21.00	30.00							

INPUT: BUILDING ROWS

LA 1088

**Volkert
Thomas Lee**

**30 July 2015
TNM 2.5**

INPUT: BUILDING ROWS

PROJECT/CONTRACT:

LA 1088

RUN:

Existing PM Peak 2013

Building Row			Points			
Name	Average Height	Building Percent	No.	Coordinates (ground)		
				X	Y	Z
	ft	%		ft	ft	ft
Building1	20.00	70	1	3,686,135.0	685,272.2	21.00
			2	3,686,130.5	685,226.9	21.00
			3	3,686,454.2	685,264.9	21.00
			4	3,686,796.8	685,251.9	21.00
			5	3,686,795.8	685,266.8	21.00
Building2	20.00	70	6	3,688,397.0	686,418.2	21.00
			7	3,688,448.0	686,415.7	21.00
			8	3,688,459.8	685,904.3	21.00
			9	3,688,403.8	685,904.3	21.00
Building3	20.00	70	10	3,688,672.2	686,427.4	21.00
			11	3,688,607.0	686,419.1	21.00
			12	3,688,618.0	686,027.4	21.00
			13	3,688,687.5	686,021.5	21.00
Building4	20.00	70	14	3,688,776.0	686,219.0	21.00
			15	3,688,763.5	686,184.7	21.00
			16	3,688,798.8	686,166.3	21.00
			17	3,688,912.5	686,164.6	21.00
			18	3,688,994.5	686,229.1	21.00
			19	3,689,158.5	686,270.1	21.00
			20	3,689,150.2	686,379.7	21.00
			21	3,689,129.2	686,378.9	21.00
Building5	20.00	70	22	3,689,278.2	686,373.1	21.00
			23	3,689,303.5	686,317.9	21.00

INPUT: BUILDING ROWS**LA 1088**

			24	3,689,594.8	686,512.9	21.00
			25	3,689,630.8	686,622.6	21.00
			26	3,689,636.5	686,798.3	21.00
			27	3,689,583.8	686,811.7	21.00
Building6	20.00	70	28	3,698,941.8	690,988.4	21.00
			29	3,698,989.5	690,986.9	21.00
			30	3,699,006.0	690,501.6	21.00
			31	3,698,956.8	690,502.4	21.00

INPUT: ROADWAYS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT:
RUN:

LA 1088
No Build AM Peak 2033

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
LA 1088 Comb 2 Lane Area 1	24.0	point4	4	3,684,032.2	683,782.9	21.00				Average	
		point5	5	3,684,308.8	683,910.2	21.00				Average	
		point6	6	3,684,630.8	684,059.2	21.00				Average	
		point7	7	3,684,944.8	684,203.9	21.00				Average	
		point8	8	3,685,215.5	684,330.2	21.00				Average	
		point9	9	3,685,490.5	684,456.0	21.00				Average	
		point10	10	3,685,647.0	684,529.1	21.00				Average	
		point11	11	3,685,851.8	684,622.3	21.00				Average	
		point12	12	3,686,128.0	684,750.9	21.00				Average	
		point13	13	3,686,396.5	684,874.6	21.00				Average	
		point14	14	3,686,670.8	684,998.8	21.00				Average	
		point15	15	3,686,832.5	685,075.2	21.00				Average	
		point99	99	3,686,848.0	685,082.1	21.00				Average	
		point16	16	3,687,122.8	685,209.6	21.00				Average	
		point17	17	3,687,395.5	685,336.1	21.00				Average	
		point18	18	3,687,668.2	685,459.9	21.00				Average	
		point19	19	3,687,941.8	685,586.4	21.00				Average	
		point20	20	3,688,212.5	685,712.6	21.00				Average	
		point21	21	3,688,279.8	685,742.6	21.00				Average	
		point121	121	3,688,324.0	685,762.9	21.00					
Garon Dr 2 Lane	24.0	point100	100	3,686,849.0	684,090.2	21.00				Average	
		point101	101	3,686,836.8	684,643.1	21.00				Average	
		point102	102	3,686,833.0	684,938.3	21.00				Average	
		point103	103	3,686,832.5	685,075.2	21.00					
Jackson St 2 Lane	24.0	point105	105	3,686,848.0	685,082.1	21.00				Average	

INPUT: ROADWAYS
LA 1088

		point106	106	3,686,844.8	685,315.0	21.00			Average	
		point107	107	3,686,839.0	685,637.0	21.00				
Soult St 2 Lane	24.0	point113	113	3,691,050.2	686,102.2	21.00			Average	
		point114	114	3,691,045.5	686,698.9	21.00			Average	
		point115	115	3,691,043.8	686,911.4	21.00				
Spring Blvd SB 1 Lane	12.0	point122	122	3,688,279.8	685,742.6	21.00			Average	
		point123	123	3,688,316.5	685,676.2	21.00			Average	
		point124	124	3,688,346.2	685,635.1	21.00			Average	
		point125	125	3,688,393.5	685,538.7	21.00				
Spring Blvd NB 1 Lane	12.0	point126	126	3,688,420.8	685,549.4	21.00			Average	
		point127	127	3,688,373.5	685,649.0	21.00			Average	
		point128	128	3,688,352.5	685,696.2	21.00			Average	
		point129	129	3,688,324.0	685,762.9	21.00				
School Dr 2 Lane	24.0	point131	131	3,688,360.0	685,779.9	21.00			Average	
		point132	132	3,688,330.5	685,964.9	21.00			Average	
		point133	133	3,688,321.2	686,063.6	21.00			Average	
		point134	134	3,688,317.8	686,299.8	21.00			Average	
		point135	135	3,688,309.2	686,672.2	21.00				
Viola St 2 Lane	24.0	point136	136	3,691,036.0	686,909.1	21.00			Average	
		point137	137	3,691,034.0	687,095.2	21.00			Average	
		point138	138	3,691,035.0	687,192.2	21.00			Average	
		point139	139	3,691,041.5	687,232.5	21.00			Average	
		point140	140	3,691,036.5	687,256.5	21.00			Average	
		point141	141	3,691,024.8	687,271.2	21.00			Average	
		point142	142	3,690,993.2	687,290.9	21.00			Average	
		point143	143	3,690,786.5	687,290.4	21.00			Average	
		point144	144	3,690,555.0	687,283.0	21.00				
Trinity Dr SB 1 Lane	12.0	point146	146	3,692,368.2	687,373.6	21.00			Average	
		point147	147	3,692,391.5	687,336.9	21.00			Average	
		point148	148	3,692,419.2	687,275.4	21.00			Average	
		point149	149	3,692,441.5	687,215.5	21.00				
Trinity Dr NB 2 Lane	24.0	point150	150	3,692,472.2	687,227.3	21.00			Average	
		point151	151	3,692,450.2	687,286.9	21.00			Average	
		point152	152	3,692,431.8	687,349.1	21.00			Average	
		point153	153	3,692,420.8	687,391.6	21.00				
Forest Brook Blvd 2 Lane	24.0	point154	154	3,695,557.5	687,975.9	21.00			Average	
		point155	155	3,695,466.8	688,124.1	21.00			Average	
		point156	156	3,695,442.0	688,164.1	21.00			Average	

INPUT: ROADWAYS

LA 1088

		point157	157	3,695,382.5	688,305.7	21.00				Average	
		point158	158	3,695,322.0	688,427.7	21.00					
I-12 EB OnRamp 1 Lane	24.0	point161	161	3,699,262.8	690,236.2	22.00				Average	
		point162	162	3,699,282.8	690,209.7	22.00				Average	
		point163	163	3,699,342.2	690,144.1	22.00				Average	
		point164	164	3,699,376.8	690,103.0	22.00				Average	
		point165	165	3,699,406.8	690,068.5	22.00				Average	
		point166	166	3,699,432.5	690,047.4	22.00				Average	
		point167	167	3,699,473.2	690,023.2	22.00				Average	
		point168	168	3,699,527.5	690,003.1	22.00				Average	
		point169	169	3,699,592.2	689,995.0	22.00				Average	
		point170	170	3,699,633.8	689,999.2	22.00				Average	
		point171	171	3,699,684.2	690,010.2	22.00				Average	
		point172	172	3,699,741.5	690,040.1	22.00				Average	
		point173	173	3,699,819.0	690,092.8	22.00				Average	
		point174	174	3,699,963.2	690,193.8	22.00				Average	
		point175	175	3,700,093.0	690,282.4	22.00				Average	
		point176	176	3,700,127.8	690,305.4	22.00				Average	
		point177	177	3,700,199.0	690,345.5	22.00				Average	
		point178	178	3,700,260.5	690,371.1	22.00				Average	
		point179	179	3,700,319.8	690,390.6	22.00				Average	
		point180	180	3,700,408.8	690,407.8	22.00				Average	
		point181	181	3,700,507.0	690,414.9	22.00				Average	
		point182	182	3,700,608.5	690,406.0	22.00				Average	
		point183	183	3,700,704.0	690,385.2	22.00				Average	
		point184	184	3,700,773.8	690,360.4	22.00				Average	
		point185	185	3,700,846.2	690,333.5	22.00				Average	
		point186	186	3,700,912.2	690,305.9	22.00				Average	
		point187	187	3,701,006.2	690,262.4	22.00				Average	
		point188	188	3,701,190.5	690,173.3	22.00				Average	
		point189	189	3,701,436.8	690,049.4	22.00					
I-12 EB OffRamp 1 Lane	24.0	point191	191	3,698,094.2	691,853.9	22.00				Average	
		point192	192	3,698,519.2	691,558.8	22.00				Average	
		point193	193	3,698,733.5	691,411.9	22.00				Average	
		point194	194	3,698,888.5	691,304.1	22.00				Average	
		point195	195	3,698,985.0	691,237.4	22.00				Average	
		point196	196	3,699,056.0	691,170.1	22.00				Average	
		point197	197	3,699,109.2	691,089.9	22.00				Average	

INPUT: ROADWAYS

LA 1088

		point198	198	3,699,149.8	690,997.6	22.00			Average
		point199	199	3,699,166.5	690,923.2	22.00			Average
		point200	200	3,699,178.0	690,789.2	22.00			Average
		point201	201	3,699,189.2	690,674.8	22.00			Average
		point202	202	3,699,207.8	690,469.8	22.00			Average
		point203	203	3,699,226.8	690,351.8	22.00			Average
		point204	204	3,699,237.0	690,285.4	22.00			
I-12 WB OffRamp	24.0	point205	205	3,701,938.8	689,950.9	30.00			Average
		point206	206	3,701,761.5	690,049.7	30.00			Average
		point207	207	3,701,556.5	690,162.8	30.00			Average
		point208	208	3,701,462.5	690,214.3	30.00			Average
		point209	209	3,701,385.8	690,260.7	30.00			Average
		point210	210	3,701,302.5	690,340.0	30.00			Average
		point211	211	3,701,238.8	690,437.9	30.00			Average
		point212	212	3,701,210.5	690,512.0	30.00			Average
		point213	213	3,701,192.8	690,594.3	30.00			Average
		point214	214	3,701,191.5	690,727.8	30.00			Average
		point215	215	3,701,191.0	690,907.6	30.00			Average
		point216	216	3,701,192.0	690,944.8	30.00			Average
		point217	217	3,701,167.8	691,113.1	30.00			
LA 57 south of LA 1088 3 Lane	36.0	point218	218	3,682,808.5	681,467.9	21.00			Average
		point219	219	3,683,063.0	681,915.2	21.00			Average
		point220	220	3,683,212.5	682,178.6	21.00			Average
		point221	221	3,683,303.5	682,338.2	21.00			Average
		point222	222	3,683,405.8	682,511.9	21.00			Average
		point223	223	3,683,504.8	682,684.9	21.00			Average
		point224	224	3,683,603.8	682,858.6	21.00			Average
		point225	225	3,683,702.8	683,032.3	21.00			Average
		point226	226	3,683,799.8	683,206.9	21.00			Average
		point227	227	3,683,898.5	683,381.4	21.00			Average
		point228	228	3,683,944.2	683,471.9	21.00			Average
		point229	229	3,683,977.2	683,561.8	21.00			Average
		point231	231	3,684,007.8	683,662.8	21.00			Average
		point230	230	3,684,032.2	683,782.9	21.00			
LA 57 north of LA 1088 3 Lane	36.0	point232	232	3,684,032.2	683,782.9	21.00			Average
		point233	233	3,684,065.8	683,950.8	21.00			Average
		point234	234	3,684,109.0	684,147.0	21.00			Average
		point235	235	3,684,165.5	684,339.8	21.00			Average

INPUT: ROADWAYS

LA 1088

		point236	236	3,684,242.0	684,525.2	21.00			Average
		point237	237	3,684,361.0	684,801.1	21.00			Average
		point238	238	3,684,442.5	684,980.7	21.00			Average
		point239	239	3,684,579.8	685,291.6	21.00			Average
		point240	240	3,684,701.0	685,565.9	21.00			Average
		point241	241	3,684,809.5	685,815.2	21.00			Average
		point242	242	3,684,878.5	685,964.8	21.00			
LA 1088 WB 2 Lane Area 3	24.0	point254	254	3,699,237.0	690,285.4	22.00			Average
		point253	253	3,698,918.5	690,138.4	22.00			Average
		point252	252	3,698,627.5	690,004.1	21.00			Average
		point251	251	3,698,368.2	689,883.7	21.00			Average
		point250	250	3,698,195.2	689,803.6	21.00			Average
		point249	249	3,697,937.5	689,674.5	21.00			Average
		point248	248	3,697,749.0	689,573.8	21.00			Average
		point247	247	3,697,484.0	689,435.2	21.00			Average
		point246	246	3,697,252.8	689,311.8	21.00			
LA 1088 EB 2 Lane Area 3	24.0	point274	274	3,697,252.8	689,311.8	21.00			Average
		point57	57	3,697,489.0	689,419.4	21.00			Average
		point58	58	3,697,761.0	689,545.2	21.00			Average
		point59	59	3,697,951.5	689,633.1	21.00			Average
		point60	60	3,698,216.5	689,756.5	21.00			Average
		point61	61	3,698,390.8	689,835.2	21.00			Average
		point62	62	3,698,649.5	689,955.8	21.00			Average
		point63	63	3,698,941.5	690,089.4	21.00			Average
		point190	190	3,699,215.5	690,215.3	22.00			Average
		point64	64	3,699,262.8	690,236.2	22.00			
LA 1088 EB 2 Lane bt Ramps	24.0	point275	275	3,699,262.8	690,236.2	22.00			Average
		point284	284	3,699,375.2	690,287.8	25.00			Average
		point65	65	3,699,487.8	690,339.4	30.00			Average
		point66	66	3,699,760.2	690,465.8	35.00			Average
		point280	280	3,699,896.5	690,528.4	40.00			Average
		point67	67	3,700,033.0	690,590.9	45.00			Average
		point68	68	3,700,305.0	690,716.1	45.00			Average
		point283	283	3,700,441.8	690,779.0	45.00			Average
		point69	69	3,700,578.5	690,841.9	40.00			Average
		point70	70	3,700,851.5	690,967.8	35.00			Average
		point71	71	3,701,167.8	691,113.1	30.00			Average
		point72	72	3,701,395.5	691,218.8	30.00			Average

INPUT: ROADWAYS

LA 1088

		point73	73	3,701,668.8	691,345.2	30.00			Average
		point74	74	3,701,946.5	691,454.9	30.00			Average
		point75	75	3,702,233.2	691,530.1	30.00			Average
		point76	76	3,702,532.2	691,581.5	30.00			Average
		point77	77	3,702,731.8	691,612.4	30.00			Average
		point78	78	3,703,020.0	691,678.9	30.00			Average
		point79	79	3,703,303.2	691,776.2	30.00			
LA 1088 Comb 2 Lane Area 2	24.0	point277	277	3,688,324.0	685,762.9	21.00			Average
		point130	130	3,688,360.0	685,779.9	21.00			Average
		point22	22	3,688,576.5	685,879.8	21.00			Average
		point23	23	3,688,848.5	686,005.4	21.00			Average
		point24	24	3,689,121.8	686,131.2	21.00			Average
		point25	25	3,689,392.8	686,255.4	21.00			Average
		point26	26	3,689,572.5	686,339.0	21.00			Average
		point27	27	3,689,853.2	686,452.5	21.00			Average
		point28	28	3,690,132.8	686,564.9	21.00			Average
		point29	29	3,690,409.2	686,676.8	21.00			Average
		point30	30	3,690,648.8	686,775.1	21.00			Average
		point31	31	3,690,876.8	686,854.2	21.00			Average
		point32	32	3,691,036.0	686,909.1	21.00			Average
		point112	112	3,691,043.8	686,911.4	21.00			Average
		point33	33	3,691,350.5	687,018.0	21.00			Average
		point34	34	3,691,632.5	687,116.4	21.00			Average
		point35	35	3,691,915.0	687,216.2	21.00			Average
		point36	36	3,692,197.5	687,315.0	21.00			Average
		point37	37	3,692,368.2	687,373.6	21.00			Average
		point145	145	3,692,420.8	687,391.6	21.00			
LA 1088 Comb 2 Lane Area 3	24.0	point278	278	3,692,420.8	687,391.6	21.00			Average
		point38	38	3,692,670.8	687,478.1	21.00			Average
		point39	39	3,692,955.2	687,577.9	21.00			Average
		point40	40	3,693,236.8	687,676.4	21.00			Average
		point41	41	3,693,522.8	687,775.4	21.00			Average
		point42	42	3,693,805.2	687,873.9	21.00			Average
		point43	43	3,694,088.0	687,972.0	21.00			Average
		point44	44	3,694,371.8	688,072.5	21.00			Average
		point45	45	3,694,652.5	688,169.9	21.00			Average
		point46	46	3,694,850.5	688,238.8	21.00			Average
		point47	47	3,695,124.2	688,341.9	21.00			Average

INPUT: ROADWAYS

LA 1088

LA 1088 WB 2 Lane bt Ramps			point48	48	3,695,322.0	688,427.7	21.00				
	24.0		point279	279	3,703,303.2	691,776.2	30.00				Average
			point268	268	3,703,013.0	691,697.4	30.00				Average
			point267	267	3,702,726.5	691,651.9	30.00				Average
			point266	266	3,702,528.0	691,630.0	30.00				Average
			point265	265	3,702,218.5	691,592.1	30.00				Average
			point264	264	3,701,924.8	691,513.0	30.00				Average
			point263	263	3,701,646.5	691,397.2	30.00				Average
			point262	262	3,701,372.5	691,270.8	30.00				Average
			point261	261	3,701,151.8	691,169.5	30.00				Average
			point260	260	3,700,826.5	691,020.3	35.00				Average
			point259	259	3,700,554.0	690,894.4	40.00				Average
			point282	282	3,700,419.5	690,831.9	45.00				Average
			point258	258	3,700,284.8	690,769.4	45.00				Average
			point257	257	3,700,010.0	690,643.2	45.00				Average
			point281	281	3,699,873.5	690,580.6	40.00				Average
			point256	256	3,699,737.0	690,517.9	35.00				Average
LA 1088 Comb 2 Lane bt Ramps			point255	255	3,699,468.2	690,393.1	30.00				Average
			point285	285	3,699,352.5	690,339.2	25.00				Average
			point276	276	3,699,237.0	690,285.4	22.00				
	24.0		point286	286	3,703,303.2	691,776.2	30.00				Average
			point80	80	3,703,487.8	691,856.8	30.00				Average
			point81	81	3,703,762.5	691,982.6	30.00				Average
			point82	82	3,704,035.8	692,104.8	30.00				Average
			point83	83	3,704,307.2	692,227.5	30.00				
	24.0		point287	287	3,695,322.0	688,427.7	21.00				Average
			point49	49	3,695,579.8	688,545.3	21.00				Average
			point50	50	3,695,853.8	688,671.1	21.00				Average
			point51	51	3,696,125.8	688,795.4	21.00				Average
			point52	52	3,696,397.8	688,919.9	21.00				Average
			point53	53	3,696,670.8	689,044.0	21.00				Average
			point54	54	3,696,809.2	689,108.7	21.00				Average
			point55	55	3,697,034.8	689,213.1	21.00				Average
			point56	56	3,697,252.8	689,311.8	21.00				

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT:
RUN:

LA 1088
No Build AM Peak 2033

Roadway	Name	No.	Segment									
			Autos		MTTrucks		HTTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
LA 1088 Comb 2 Lane Area 1	point4	4	677	45	63	45	45	45	395	45	45	45
	point5	5	677	45	63	45	45	45	395	45	45	45
	point6	6	677	45	63	45	45	45	395	45	45	45
	point7	7	677	45	63	45	45	45	395	45	45	45
	point8	8	677	45	63	45	45	45	395	45	45	45
	point9	9	677	45	63	45	45	45	395	45	45	45
	point10	10	677	45	63	45	45	45	395	45	45	45
	point11	11	677	45	63	45	45	45	395	45	45	45
	point12	12	677	45	63	45	45	45	395	45	45	45
	point13	13	677	45	63	45	45	45	395	45	45	45
	point14	14	677	45	63	45	45	45	395	45	45	45
	point15	15	677	45	63	45	45	45	395	45	45	45
	point99	99	677	45	63	45	45	45	395	45	45	45
	point16	16	677	45	63	45	45	45	395	45	45	45
	point17	17	677	45	63	45	45	45	395	45	45	45
	point18	18	677	45	63	45	45	45	395	45	45	45
	point19	19	677	45	63	45	45	45	395	45	45	45
	point20	20	677	45	63	45	45	45	395	45	45	45
	point21	21	677	45	63	45	45	45	395	45	45	45
	point121	121										
Garon Dr 2 Lane	point100	100	104	25	6	25	25	0	28	25	1	25
	point101	101	104	25	6	25	25	0	28	25	1	25

C:\Noise Projects\LA 1088 Noise\Runs\No Build AM Peak

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point102	102	104	25	6	25	0	0	28	25	1	25
	point103	103										
Jackson St 2 Lane	point105	105	32	25	4	25	0	0	16	25	0	0
	point106	106	32	25	4	25	0	0	16	25	0	0
	point107	107										
Soult St 2 Lane	point113	113	517	25	48	25	5	25	210	25	4	25
	point114	114	517	25	48	25	5	25	210	25	4	25
	point115	115										
Spring Blvd SB 1 Lane	point122	122	72	20	4	20	0	0	29	20	1	20
	point123	123	72	20	4	20	0	0	29	20	1	20
	point124	124	72	20	4	20	0	0	29	20	1	20
	point125	125										
Spring Blvd NB 1 Lane	point126	126	93	20	6	20	0	0	37	20	1	20
	point127	127	93	20	6	20	0	0	37	20	1	20
	point128	128	93	20	6	20	0	0	37	20	1	20
	point129	129										
School Dr 2 Lane	point131	131	48	25	2	25	0	0	16	25	0	0
	point132	132	48	25	2	25	0	0	16	25	0	0
	point133	133	48	25	2	25	0	0	16	25	0	0
	point134	134	48	25	2	25	0	0	16	25	0	0
	point135	135										
Viola St 2 Lane	point136	136	91	25	2	25	0	0	140	25	0	0
	point137	137	91	25	2	25	0	0	140	25	0	0
	point138	138	91	25	2	25	0	0	140	25	0	0
	point139	139	91	25	2	25	0	0	140	25	0	0
	point140	140	91	25	2	25	0	0	140	25	0	0
	point141	141	91	25	2	25	0	0	140	25	0	0
	point142	142	91	25	2	25	0	0	140	25	0	0
	point143	143	91	25	2	25	0	0	140	25	0	0
	point144	144										
Tinity Dr SB 1 Lane	point146	146	75	20	1	20	0	0	12	20	4	20
	point147	147	75	20	1	20	0	0	12	20	4	20
	point148	148	75	20	1	20	0	0	12	20	4	20
	point149	149										

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

Trinity Dr NB 2 Lane	point150	150	123	20	2	20	0	0	19	20	7	20
	point151	151	123	20	2	20	0	0	19	20	7	20
	point152	152	123	20	2	20	0	0	19	20	7	20
	point153	153										
Forest Brook Blvd 2 Lane	point154	154	400	20	9	20	3	20	66	20	1	20
	point155	155	400	20	9	20	3	20	66	20	1	20
	point156	156	400	20	9	20	3	20	66	20	1	20
	point157	157	400	20	9	20	3	20	66	20	1	20
	point158	158										
I-12 EB OnRamp 1 Lane	point161	161	282	35	5	35	2	35	55	35	1	35
	point162	162	282	35	5	35	2	35	55	35	1	35
	point163	163	282	35	5	35	2	35	55	35	1	35
	point164	164	282	35	5	35	2	35	55	35	1	35
	point165	165	282	35	5	35	2	35	55	35	1	35
	point166	166	282	35	5	35	2	35	55	35	1	35
	point167	167	282	35	5	35	2	35	55	35	1	35
	point168	168	282	35	5	35	2	35	55	35	1	35
	point169	169	282	35	5	35	2	35	55	35	1	35
	point170	170	282	35	5	35	2	35	55	35	1	35
	point171	171	282	35	5	35	2	35	55	35	1	35
	point172	172	282	35	5	35	2	35	55	35	1	35
	point173	173	282	35	5	35	2	35	55	35	1	35
	point174	174	282	35	5	35	2	35	55	35	1	35
	point175	175	282	35	5	35	2	35	55	35	1	35
	point176	176	282	35	5	35	2	35	55	35	1	35
	point177	177	282	35	5	35	2	35	55	35	1	35
	point178	178	282	35	5	35	2	35	55	35	1	35
	point179	179	282	35	5	35	2	35	55	35	1	35
	point180	180	282	35	5	35	2	35	55	35	1	35
	point181	181	282	35	5	35	2	35	55	35	1	35
	point182	182	282	35	5	35	2	35	55	35	1	35
	point183	183	282	35	5	35	2	35	55	35	1	35
	point184	184	282	35	5	35	2	35	55	35	1	35
	point185	185	282	35	5	35	2	35	55	35	1	35

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point186	186	282	35	5	35	2	35	55	35	1	35
	point187	187	282	35	5	35	2	35	55	35	1	35
	point188	188	282	35	5	35	2	35	55	35	1	35
	point189	189										
I-12 EB OffRamp 1 Lane	point191	191	325	35	5	35	2	35	63	35	2	35
	point192	192	325	35	5	35	2	35	63	35	2	35
	point193	193	325	35	5	35	2	35	63	35	2	35
	point194	194	325	35	5	35	2	35	63	35	2	35
	point195	195	325	35	5	35	2	35	63	35	2	35
	point196	196	325	35	5	35	2	35	63	35	2	35
	point197	197	325	35	5	35	2	35	63	35	2	35
	point198	198	325	35	5	35	2	35	63	35	2	35
	point199	199	325	35	5	35	2	35	63	35	2	35
	point200	200	325	35	5	35	2	35	63	35	2	35
	point201	201	325	35	5	35	2	35	63	35	2	35
	point202	202	325	35	5	35	2	35	63	35	2	35
	point203	203	325	35	5	35	2	35	63	35	2	35
	point204	204										
I-12 WB OffRamp	point205	205	177	35	54	35	3	35	31	35	1	35
	point206	206	177	35	54	35	3	35	31	35	1	35
	point207	207	177	35	54	35	3	35	31	35	1	35
	point208	208	177	35	54	35	3	35	31	35	1	35
	point209	209	177	35	54	35	3	35	31	35	1	35
	point210	210	177	35	54	35	3	35	31	35	1	35
	point211	211	177	35	54	35	3	35	31	35	1	35
	point212	212	177	35	54	35	3	35	31	35	1	35
	point213	213	177	35	54	35	3	35	31	35	1	35
	point214	214	177	35	54	35	3	35	31	35	1	35
	point215	215	177	35	54	35	3	35	31	35	1	35
	point216	216	177	35	54	35	3	35	31	35	1	35
	point217	217										
LA 57 south of LA 1088 3 Lane	point218	218	1697	45	90	45	21	45	309	45	28	45
	point219	219	1697	45	90	45	21	45	309	45	28	45
	point220	220	1697	45	90	45	21	45	309	45	28	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point221	221	1697	45	90	45	21	45	309	45	28	45
	point222	222	1697	45	90	45	21	45	309	45	28	45
	point223	223	1697	45	90	45	21	45	309	45	28	45
	point224	224	1697	45	90	45	21	45	309	45	28	45
	point225	225	1697	45	90	45	21	45	309	45	28	45
	point226	226	1697	45	90	45	21	45	309	45	28	45
	point227	227	1697	45	90	45	21	45	309	45	28	45
	point228	228	1697	45	90	45	21	45	309	45	28	45
	point229	229	1697	45	90	45	21	45	309	45	28	45
	point231	231	1697	45	90	45	21	45	309	45	28	45
	point230	230										
LA 57 north of LA 1088 3 Lane	point232	232	1087	45	94	45	87	45	397	45	12	45
	point233	233	1087	45	94	45	87	45	397	45	12	45
	point234	234	1087	45	94	45	87	45	397	45	12	45
	point235	235	1087	45	94	45	87	45	397	45	12	45
	point236	236	1087	45	94	45	87	45	397	45	12	45
	point237	237	1087	45	94	45	87	45	397	45	12	45
	point238	238	1087	45	94	45	87	45	397	45	12	45
	point239	239	1087	45	94	45	87	45	397	45	12	45
	point240	240	1087	45	94	45	87	45	397	45	12	45
	point241	241	1087	45	94	45	87	45	397	45	12	45
	point242	242										
	point254	254	347	55	25	55	5	55	118	55	2	55
	point253	253	347	55	25	55	5	55	118	55	2	55
LA 1088 WB 2 Lane Area 3	point252	252	347	55	25	55	5	55	118	55	2	55
	point251	251	347	55	25	55	5	55	118	55	2	55
	point250	250	347	55	25	55	5	55	118	55	2	55
	point249	249	347	55	25	55	5	55	118	55	2	55
	point248	248	347	55	25	55	5	55	118	55	2	55
	point247	247	347	55	25	55	5	55	118	55	2	55
	point246	246										
	point274	274	566	55	41	55	7	55	193	55	2	55
	point57	57	566	55	41	55	7	55	193	55	2	55
	point58	58	566	55	41	55	7	55	193	55	2	55

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point59	59	566	55	41	55	7	55	193	55	2	55
	point60	60	566	55	41	55	7	55	193	55	2	55
	point61	61	566	55	41	55	7	55	193	55	2	55
	point62	62	566	55	41	55	7	55	193	55	2	55
	point63	63	566	55	41	55	7	55	193	55	2	55
	point190	190	566	55	41	55	7	55	193	55	2	55
	point64	64										
LA 1088 EB 2 Lane bt Ramps	point275	275	377	55	21	55	4	55	128	55	4	55
	point284	284	377	55	21	55	4	55	128	55	4	55
	point65	65	377	55	21	55	4	55	128	55	4	55
	point66	66	377	55	21	55	4	55	128	55	4	55
	point280	280	377	55	21	55	4	55	128	55	4	55
	point67	67	377	55	21	55	4	55	128	55	4	55
	point68	68	377	55	21	55	4	55	128	55	4	55
	point283	283	377	55	21	55	4	55	128	55	4	55
	point69	69	377	55	21	55	4	55	128	55	4	55
	point70	70	377	55	21	55	4	55	128	55	4	55
	point71	71	377	55	21	55	4	55	128	55	4	55
	point72	72	377	55	21	55	4	55	128	55	4	55
	point73	73	377	55	21	55	4	55	128	55	4	55
	point74	74	377	55	21	55	4	55	128	55	4	55
	point75	75	377	55	21	55	4	55	128	55	4	55
	point76	76	377	55	21	55	4	55	128	55	4	55
	point77	77	377	55	21	55	4	55	128	55	4	55
	point78	78	377	55	21	55	4	55	128	55	4	55
	point79	79										
LA 1088 Comb 2 Lane Area 2	point277	277	710	45	25	45	12	45	297	45	17	45
	point130	130	710	45	25	45	12	45	297	45	17	45
	point22	22	710	45	25	45	12	45	297	45	17	45
	point23	23	710	45	25	45	12	45	297	45	17	45
	point24	24	710	45	25	45	12	45	297	45	17	45
	point25	25	710	45	25	45	12	45	297	45	17	45
	point26	26	710	45	25	45	12	45	297	45	17	45
	point27	27	710	45	25	45	12	45	297	45	17	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point28	28	710	45	25	45	12	45	297	45	17	45
	point29	29	710	45	25	45	12	45	297	45	17	45
	point30	30	710	45	25	45	12	45	297	45	17	45
	point31	31	710	45	25	45	12	45	297	45	17	45
	point32	32	710	45	25	45	12	45	297	45	17	45
	point112	112	710	45	25	45	12	45	297	45	17	45
	point33	33	710	45	25	45	12	45	297	45	17	45
	point34	34	710	45	25	45	12	45	297	45	17	45
	point35	35	710	45	25	45	12	45	297	45	17	45
	point36	36	710	45	25	45	12	45	297	45	17	45
	point37	37	710	45	25	45	12	45	297	45	17	45
	point145	145										
LA 1088 Comb 2 Lane Area 3	point278	278	914	45	66	45	12	45	311	45	4	45
	point38	38	914	45	66	45	12	45	311	45	4	45
	point39	39	914	45	66	45	12	45	311	45	4	45
	point40	40	914	45	66	45	12	45	311	45	4	45
	point41	41	914	45	66	45	12	45	311	45	4	45
	point42	42	914	45	66	45	12	45	311	45	4	45
	point43	43	914	45	66	45	12	45	311	45	4	45
	point44	44	914	45	66	45	12	45	311	45	4	45
	point45	45	914	45	66	45	12	45	311	45	4	45
	point46	46	914	45	66	45	12	45	311	45	4	45
	point47	47	914	45	66	45	12	45	311	45	4	45
	point48	48										
LA 1088 WB 2 Lane bt Ramps	point279	279	231	55	13	55	3	55	79	55	2	55
	point268	268	231	55	13	55	3	55	79	55	2	55
	point267	267	231	55	13	55	3	55	79	55	2	55
	point266	266	231	55	13	55	3	55	79	55	2	55
	point265	265	231	55	13	55	3	55	79	55	2	55
	point264	264	231	55	13	55	3	55	79	55	2	55
	point263	263	231	55	13	55	3	55	79	55	2	55
	point262	262	231	55	13	55	3	55	79	55	2	55
	point261	261	231	55	13	55	3	55	79	55	2	55
	point260	260	231	55	13	55	3	55	79	55	2	55

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point259	259	231	55	13	55	3	55	79	55	2	55
	point282	282	231	55	13	55	3	55	79	55	2	55
	point258	258	231	55	13	55	3	55	79	55	2	55
	point257	257	231	55	13	55	3	55	79	55	2	55
	point281	281	231	55	13	55	3	55	79	55	2	55
	point256	256	231	55	13	55	3	55	79	55	2	55
	point255	255	231	55	13	55	3	55	79	55	2	55
	point285	285	231	55	13	55	3	55	79	55	2	55
	point276	276										
LA 1088 Comb 2 Lane bt Ramps	point286	286	608	55	34	55	7	55	207	55	6	55
	point80	80	608	55	34	55	7	55	207	55	6	55
	point81	81	608	55	34	55	7	55	207	55	6	55
	point82	82	608	55	34	55	7	55	207	55	6	55
	point83	83										
LA 1088 Comb 2 Lane Area 3-2	point287	287	914	55	66	55	12	55	311	55	4	55
	point49	49	914	55	66	55	12	55	311	55	4	55
	point50	50	914	55	66	55	12	55	311	55	4	55
	point51	51	914	55	66	55	12	55	311	55	4	55
	point52	52	914	55	66	55	12	55	311	55	4	55
	point53	53	914	55	66	55	12	55	311	55	4	55
	point54	54	914	55	66	55	12	55	311	55	4	55
	point55	55	914	55	66	55	12	55	311	55	4	55
	point56	56										

INPUT: RECEIVERS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: RECEIVERS

PROJECT/CONTRACT: LA 1088

RUN: No Build AM Peak 2033

Receiver

Name	No.	#DUs	Coordinates (ground)			Z	Height above Ground	Input Sound Levels and Criteria				Active in Calc.
			X	Y	ft			Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	
			ft		ft		ft	dBA	dBA		dB	
Res 1	253	1	3,683,441.2	682,376.4	21.00		4.92	67.70	66	10.0	8.0	Y
Res 2	254	1	3,683,468.2	682,470.8	21.00		4.92	69.10	66	10.0	8.0	Y
Res 3	255	1	3,683,608.2	682,712.8	21.00		4.92	69.00	66	10.0	8.0	Y
Res 4	256	1	3,683,723.2	682,831.0	21.00		4.92	66.90	66	10.0	8.0	Y
Res 5	257	6	3,683,805.8	682,796.2	21.00		4.92	61.70	66	10.0	8.0	Y
Res 6	258	6	3,683,965.2	682,871.1	21.00		4.92	57.30	66	10.0	8.0	Y
Res 7	259	3	3,684,131.2	682,918.9	21.00		4.92	53.60	66	10.0	8.0	Y
Res 8	260	1	3,683,899.0	683,059.9	21.00		4.92	64.70	66	10.0	8.0	Y
Res 9	261	1	3,683,868.8	683,216.2	21.00		4.92	70.60	66	10.0	8.0	Y
Res 10	262	1	3,683,920.8	683,168.4	21.00		4.92	66.60	66	10.0	8.0	Y
Res 11	263	1	3,683,955.5	683,326.9	21.00		4.92	69.00	66	10.0	8.0	Y
Res 25	277	1	3,684,467.8	683,922.0	21.00		4.92	69.50	66	10.0	8.0	Y
Res 26	278	1	3,684,829.8	683,931.1	21.00		4.92	59.10	66	10.0	8.0	Y
Res 27	279	1	3,685,046.0	683,969.3	21.00		4.92	56.50	66	10.0	8.0	Y
Res 28	280	1	3,685,117.0	683,892.1	21.00		4.92	53.40	66	10.0	8.0	Y
Res 29	281	1	3,685,153.5	683,813.9	21.00		4.92	51.60	66	10.0	8.0	Y
Res 30	282	1	3,685,276.5	684,122.5	21.00		4.92	58.20	66	10.0	8.0	Y
Res 31	283	1	3,685,658.0	684,432.4	21.00		4.92	67.00	66	10.0	8.0	Y
Res 32	284	1	3,685,928.8	684,186.3	21.00		4.92	51.40	66	10.0	8.0	Y
Res 33	285	1	3,686,452.2	684,726.7	21.00		4.92	61.40	66	10.0	8.0	Y
Res 34	286	1	3,686,550.0	684,672.0	21.00		4.92	56.50	66	10.0	8.0	Y
Res 35	287	1	3,686,742.5	684,919.4	21.00		4.92	66.00	66	10.0	8.0	Y

INPUT: RECEIVERS

LA 1088

Res 36	288	1	3,686,741.2	684,824.4	21.00	4.92	58.50	66	10.0	8.0	Y
Res 37	289	1	3,686,733.5	684,708.5	21.00	4.92	55.30	66	10.0	8.0	Y
Res 38	290	1	3,686,744.0	684,614.8	21.00	4.92	54.90	66	10.0	8.0	Y
Res 39	291	1	3,686,732.2	684,505.3	21.00	4.92	53.30	66	10.0	8.0	Y
Res 80	332	1	3,686,918.5	685,006.6	21.00	4.92	66.60	66	10.0	8.0	Y
Res 81	333	1	3,686,954.8	684,907.7	21.00	4.92	58.40	66	10.0	8.0	Y
Res 82	334	1	3,686,927.5	684,807.4	21.00	4.92	56.60	66	10.0	8.0	Y
Res 83	335	1	3,686,925.0	684,721.5	21.00	4.92	55.50	66	10.0	8.0	Y
Res 84	336	1	3,686,931.0	684,618.0	21.00	4.92	54.50	66	10.0	8.0	Y
Res 85	337	1	3,687,133.2	684,910.3	21.00	4.92	55.00	66	10.0	8.0	Y
Res 86	338	1	3,687,189.2	684,795.7	21.00	4.92	50.70	66	10.0	8.0	Y
Res 87	339	9	3,687,514.8	685,143.4	21.00	4.92	57.50	66	10.0	8.0	Y
Res 88	340	5	3,687,582.5	684,954.6	21.00	4.92	50.70	66	10.0	8.0	Y
Res 89	341	1	3,687,999.0	685,498.8	21.00	4.92	65.80	66	10.0	8.0	Y
Res 90	342	1	3,688,096.8	685,548.3	21.00	4.92	66.20	66	10.0	8.0	Y
Res 91	343	2	3,688,070.8	685,302.2	21.00	4.92	53.40	66	10.0	8.0	Y
Res 92	344	2	3,688,104.5	685,213.7	21.00	4.92	51.10	66	10.0	8.0	Y
Res 93	345	1	3,688,030.2	685,380.3	21.00	4.92	56.30	66	10.0	8.0	Y
Res 94	346	1	3,688,175.0	685,561.3	21.00	4.92	64.10	66	10.0	8.0	Y
Res 95	347	1	3,688,259.5	685,614.8	21.00	4.92	65.40	66	10.0	8.0	Y
Res 96	348	1	3,688,444.5	685,688.9	21.00	4.92	64.10	66	10.0	8.0	Y
Recreation 97	349	1	3,688,576.2	685,404.6	21.00	4.92	50.90	66	10.0	8.0	Y
Res 98	350	1	3,688,522.5	685,711.1	21.00	4.92	62.70	66	10.0	8.0	Y
Res 99	351	1	3,688,607.2	685,743.6	21.00	4.92	62.10	66	10.0	8.0	Y
Res 100	352	4	3,688,691.8	685,593.9	21.00	4.92	52.60	66	10.0	8.0	Y
Res 101	353	1	3,688,797.2	685,824.4	21.00	4.92	61.60	66	10.0	8.0	Y
Res 102	354	1	3,688,911.8	685,846.5	21.00	4.92	59.70	66	10.0	8.0	Y
Res 103	355	1	3,688,995.2	685,821.8	21.00	4.92	56.50	66	10.0	8.0	Y
Res 104	356	1	3,689,086.2	685,832.2	21.00	4.92	55.40	66	10.0	8.0	Y
Res 105	357	1	3,689,175.0	685,836.1	21.00	4.92	54.10	66	10.0	8.0	Y
Res 106	358	2	3,688,978.2	685,655.1	21.00	4.92	51.00	66	10.0	8.0	Y
Res 107	359	2	3,689,070.8	685,647.2	21.00	4.92	50.30	66	10.0	8.0	Y
Res 108	360	2	3,689,156.8	685,648.6	21.00	4.92	49.80	66	10.0	8.0	Y
Res 109	361	2	3,689,223.5	685,642.6	21.00	4.92	49.40	66	10.0	8.0	Y
Res 110	362	1	3,689,797.2	686,349.1	21.00	4.92	67.10	66	10.0	8.0	Y

INPUT: RECEIVERS

LA 1088

Res 111	363	1	3,689,840.2	686,307.4	21.00	4.92	62.60	66	10.0	8.0	Y
Res 112	364	1	3,690,190.5	686,521.0	21.00	4.92	68.00	66	10.0	8.0	Y
Res 113	365	1	3,690,406.0	686,560.0	21.00	4.92	64.70	66	10.0	8.0	Y
Res 114	366	3	3,690,448.2	686,393.4	21.00	4.92	54.80	66	10.0	8.0	Y
Res 115	367	3	3,690,646.2	686,405.1	21.00	4.92	53.40	66	10.0	8.0	Y
Res 116	368	3	3,690,921.0	686,415.5	21.00	4.92	58.70	66	10.0	8.0	Y
Res 117	369	1	3,690,988.0	686,675.6	21.00	4.92	64.60	66	10.0	8.0	Y
Res 118	370	1	3,690,981.5	686,531.2	21.00	4.92	63.40	66	10.0	8.0	Y
Res 119	371	1	3,690,997.8	686,409.0	21.00	4.92	64.50	66	10.0	8.0	Y
Res 153	405	1	3,691,173.5	686,850.4	21.00	4.92	66.00	66	10.0	8.0	Y
Res 154	406	1	3,691,139.8	686,767.1	21.00	4.92	63.30	66	10.0	8.0	Y
Res 155	407	1	3,691,128.0	686,681.1	21.00	4.92	62.70	66	10.0	8.0	Y
Res 156	408	1	3,691,148.8	686,597.8	21.00	4.92	60.90	66	10.0	8.0	Y
Res 157	409	1	3,691,137.2	686,509.2	21.00	4.92	61.70	66	10.0	8.0	Y
Res 158	410	1	3,691,110.5	686,419.5	21.00	4.92	63.40	66	10.0	8.0	Y
Res 159	411	1	3,691,247.8	686,877.8	21.00	4.92	65.70	66	10.0	8.0	Y
Res 160	412	1	3,691,336.2	686,922.0	21.00	4.92	66.50	66	10.0	8.0	Y
Res 161	413	4	3,691,350.8	686,669.4	21.00	4.92	52.90	66	10.0	8.0	Y
Res 162	414	1	3,691,415.8	686,944.1	21.00	4.92	66.10	66	10.0	8.0	Y
Res 163	415	7	3,691,530.2	686,798.3	21.00	4.92	53.40	66	10.0	8.0	Y
Res 164	416	5	3,691,509.5	686,660.3	21.00	4.92	51.10	66	10.0	8.0	Y
Res 165	417	4	3,691,673.5	686,634.9	21.00	4.92	49.60	66	10.0	8.0	Y
Res 166	418	1	3,691,490.0	686,967.6	21.00	4.92	66.00	66	10.0	8.0	Y
Res 167	419	1	3,691,569.5	686,989.8	21.00	4.92	65.60	66	10.0	8.0	Y
Res 168	420	1	3,691,652.8	687,013.1	21.00	4.92	65.00	66	10.0	8.0	Y
Res 169	421	1	3,691,757.0	687,041.8	21.00	4.92	64.20	66	10.0	8.0	Y
Res 170	422	1	3,691,856.0	687,037.9	21.00	4.92	61.10	66	10.0	8.0	Y
Res 171	423	2	3,691,898.8	686,968.9	21.00	4.92	55.50	66	10.0	8.0	Y
Res 172	424	3	3,691,930.0	686,881.6	21.00	4.92	51.60	66	10.0	8.0	Y
Res 173	425	1	3,691,977.0	687,103.0	21.00	4.92	62.70	66	10.0	8.0	Y
Res 174	426	1	3,692,027.8	687,173.3	21.00	4.92	67.00	66	10.0	8.0	Y
Res 175	427	1	3,692,117.5	687,196.8	21.00	4.92	66.50	66	10.0	8.0	Y
Res 176	428	1	3,692,202.2	687,222.8	21.00	4.92	66.30	66	10.0	8.0	Y
Res 177	429	1	3,692,284.2	687,248.8	21.00	4.92	66.20	66	10.0	8.0	Y
Res 178	430	3	3,692,313.0	687,070.4	21.00	4.92	53.60	66	10.0	8.0	Y

INPUT: RECEIVERS

LA 1088

Res 179	431	3	3,692,404.0	686,996.2	21.00	4.92	51.80	66	10.0	8.0	Y
Res 180	432	4	3,692,363.8	686,894.7	21.00	4.92	50.00	66	10.0	8.0	Y
Res 181	433	1	3,692,499.0	687,323.1	21.00	4.92	66.70	66	10.0	8.0	Y
Res 182	434	1	3,692,595.5	687,360.8	21.00	4.92	66.90	66	10.0	8.0	Y
Res 183	435	1	3,692,673.5	687,397.2	21.00	4.92	67.50	66	10.0	8.0	Y
Res 184	436	1	3,692,770.0	687,423.3	21.00	4.92	67.10	66	10.0	8.0	Y
Res 185	437	1	3,692,833.8	687,448.1	21.00	4.92	67.20	66	10.0	8.0	Y
Res 186	438	1	3,692,914.5	687,480.6	21.00	4.92	67.50	66	10.0	8.0	Y
Res 187	439	1	3,693,005.5	687,509.2	21.00	4.92	67.30	66	10.0	8.0	Y
Office 188	440	1	3,693,077.2	687,535.3	21.00	4.92	67.40	71	10.0	8.0	Y
Res 189	441	1	3,693,171.0	687,527.5	21.00	4.92	64.20	66	10.0	8.0	Y
Res 190	442	7	3,692,741.2	687,215.0	21.00	4.92	53.30	66	10.0	8.0	Y
Res 191	443	3	3,693,051.2	687,241.0	21.00	4.92	51.60	66	10.0	8.0	Y
Res 192	444	3	3,693,038.2	687,165.5	21.00	4.92	50.40	66	10.0	8.0	Y
Office 193	445	1	3,693,288.2	687,605.6	21.00	4.92	67.20	71	10.0	8.0	Y
Recreation 194	446	1	3,693,900.2	687,738.4	21.00	4.92	61.10	66	10.0	8.0	Y
Vet Office 195	447	1	3,694,471.8	687,754.1	21.00	4.92	53.40	66	10.0	8.0	Y
Res 196	448	1	3,694,781.8	687,761.9	21.00	4.92	51.00	66	10.0	8.0	Y
Res 197	449	1	3,695,094.2	687,971.5	21.00	4.92	53.60	66	10.0	8.0	Y
Res 198	450	2	3,695,216.5	687,963.7	21.00	4.92	52.60	66	10.0	8.0	Y
Res 199	451	3	3,695,457.5	687,998.8	21.00	4.92	57.40	66	10.0	8.0	Y
Res 200	452	3	3,695,615.0	688,086.1	21.00	4.92	55.50	66	10.0	8.0	Y
Res 201	453	2	3,695,965.2	688,189.2	21.00	4.92	51.00	66	10.0	8.0	Y
Res 209	461	1	3,697,750.5	689,435.0	21.00	4.92	67.50	66	10.0	8.0	Y
Res 210	462	3	3,697,888.5	689,393.4	21.00	4.92	60.50	66	10.0	8.0	Y
Res 211	463	1	3,697,897.5	689,251.4	21.00	4.92	55.80	66	10.0	8.0	Y
Res 212	464	3	3,698,121.5	689,192.8	21.00	4.92	52.40	66	10.0	8.0	Y
Res 213	465	1	3,698,596.8	689,807.4	21.00	4.92	65.40	66	10.0	8.0	Y
Res 225	477	1	3,700,395.2	690,187.1	21.00	4.92	53.60	66	10.0	8.0	Y
Res 226	478	1	3,701,318.2	690,825.0	30.00	4.92	57.10	66	10.0	8.0	Y

INPUT: BUILDING ROWS

LA 1088

**Volkert
Thomas Lee**

**30 July 2015
TNM 2.5**

INPUT: BUILDING ROWS

PROJECT/CONTRACT:

LA 1088

RUN:

No Build AM Peak 2033

Building Row Name	Average Height ft	Building Percent %	Points			
			No.	Coordinates (ground)		
				X	Y	Z
				ft	ft	ft
Building2	20.00	70	1	3,686,677.2	684,918.6	21.00
			2	3,686,730.5	684,916.3	21.00
			3	3,686,726.0	684,433.4	21.00
			4	3,686,684.2	684,444.7	21.00
Building3	20.00	70	5	3,686,995.2	685,011.1	21.00
			6	3,686,935.2	685,008.7	21.00
			7	3,686,978.2	684,893.3	21.00
			8	3,686,950.0	684,744.8	21.00
			9	3,686,945.0	684,555.7	21.00
			10	3,686,994.0	684,556.9	21.00
Building4	20.00	70	11	3,687,181.0	684,824.8	21.00
			12	3,687,140.5	684,833.4	21.00
			13	3,687,163.8	684,934.1	21.00
			14	3,687,263.2	685,005.3	21.00
			15	3,687,523.5	685,129.3	21.00
			16	3,687,693.0	685,194.3	21.00
			17	3,687,923.8	685,244.6	21.00
			18	3,687,938.5	685,204.1	21.00
Building5	20.00	70	19	3,687,998.2	685,431.8	21.00
			20	3,687,977.0	685,470.6	21.00
			21	3,688,287.2	685,597.1	21.00
			22	3,688,299.8	685,570.6	21.00
Building6	20.00	70	23	3,688,428.8	685,633.3	21.00

INPUT: BUILDING ROWS

LA 1088

				24	3,688,417.2	685,659.9	21.00
				25	3,688,562.8	685,710.5	21.00
				26	3,688,690.5	685,775.0	21.00
				27	3,688,812.0	685,810.4	21.00
				28	3,689,042.0	685,807.9	21.00
				29	3,689,218.0	685,819.3	21.00
				30	3,689,479.8	685,820.5	21.00
				31	3,689,484.8	685,778.8	21.00
Building7	20.00	70		32	3,691,156.8	686,276.9	21.00
				34	3,691,130.5	686,278.5	21.00
				35	3,691,156.8	686,483.8	21.00
				36	3,691,166.2	686,647.1	21.00
				37	3,691,166.2	686,741.9	21.00
				38	3,691,194.2	686,832.1	21.00
				39	3,691,298.2	686,878.8	21.00
				40	3,691,471.0	686,937.9	21.00
				41	3,691,654.5	687,000.1	21.00
				42	3,691,769.5	687,025.0	21.00
				43	3,691,849.0	687,009.4	21.00
				44	3,691,929.8	686,872.6	21.00
				45	3,692,002.8	686,715.5	21.00
				46	3,691,987.2	686,703.1	21.00
Building8	20.00	70		47	3,692,085.8	686,879.4	21.00
				48	3,692,050.0	686,888.7	21.00
				49	3,692,009.5	687,048.9	21.00
				50	3,692,022.0	687,134.4	21.00
				51	3,692,345.5	687,247.9	21.00
				52	3,692,364.0	687,218.4	21.00
Building9	20.00	70		53	3,692,500.5	687,262.3	21.00
				54	3,692,483.2	687,296.4	21.00
				55	3,692,768.0	687,400.6	21.00
				56	3,692,973.2	687,475.3	21.00
				57	3,693,124.0	687,509.5	21.00
				58	3,693,152.0	687,509.5	21.00

INPUT: BUILDING ROWS

LA 1088				
		59	3,693,201.8	687,425.6
		60	3,693,205.0	687,060.1
		61	3,693,167.5	687,058.5
				21.00
				21.00
				21.00

INPUT: ROADWAYS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT:
RUN:

LA 1088
No Build PM Peak 2033

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with the approval of FHWA

Roadway Name	Width ft	Points				Coordinates (pavement)				Flow Control			Segment	
		Name	No.	X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?	mph	%	
LA 1088 Comb 2 Lane Area 1	24.0	point4	4	3,684,032.2	683,782.9	21.00				Average				
		point5	5	3,684,308.8	683,910.2	21.00				Average				
		point6	6	3,684,630.8	684,059.2	21.00				Average				
		point7	7	3,684,944.8	684,203.9	21.00				Average				
		point8	8	3,685,215.5	684,330.2	21.00				Average				
		point9	9	3,685,490.5	684,456.0	21.00				Average				
		point10	10	3,685,647.0	684,529.1	21.00				Average				
		point11	11	3,685,851.8	684,622.3	21.00				Average				
		point12	12	3,686,128.0	684,750.9	21.00				Average				
		point13	13	3,686,396.5	684,874.6	21.00				Average				
		point14	14	3,686,670.8	684,998.8	21.00				Average				
		point15	15	3,686,832.5	685,075.2	21.00				Average				
		point99	99	3,686,848.0	685,082.1	21.00				Average				
		point16	16	3,687,122.8	685,209.6	21.00				Average				
		point17	17	3,687,395.5	685,336.1	21.00				Average				
Garon Dr 2 Lane	24.0	point18	18	3,687,668.2	685,459.9	21.00				Average				
		point19	19	3,687,941.8	685,586.4	21.00				Average				
		point20	20	3,688,212.5	685,712.6	21.00				Average				
		point21	21	3,688,279.8	685,742.6	21.00				Average				
		point121	121	3,688,324.0	685,762.9	21.00				Average				
Jacksone St 2 Lane	24.0	point100	100	3,686,849.0	684,090.2	21.00				Average				
		point101	101	3,686,836.8	684,643.1	21.00				Average				
		point102	102	3,686,833.0	684,938.3	21.00				Average				
		point103	103	3,686,832.5	685,075.2	21.00				Average				
		point105	105	3,686,848.0	685,082.1	21.00				Average				

INPUT: ROADWAYS

LA 1088

			point106	106	3,686,844.8	685,315.0	21.00			Average
			point107	107	3,686,839.0	685,637.0	21.00			
Soult St 2 Lane	24.0		point113	113	3,691,050.2	686,102.2	21.00			Average
			point114	114	3,691,045.5	686,698.9	21.00			Average
			point115	115	3,691,043.8	686,911.4	21.00			
Spring Blvd SB 1 Lane	12.0		point122	122	3,688,279.8	685,742.6	21.00			Average
			point123	123	3,688,316.5	685,676.2	21.00			Average
			point124	124	3,688,346.2	685,635.1	21.00			Average
			point125	125	3,688,393.5	685,538.7	21.00			
Spring Blvd NB 1 Lane	12.0		point126	126	3,688,420.8	685,549.4	21.00			Average
			point127	127	3,688,373.5	685,649.0	21.00			Average
			point128	128	3,688,352.5	685,696.2	21.00			Average
			point129	129	3,688,324.0	685,762.9	21.00			
School Dr 2 Lane	24.0		point131	131	3,688,360.0	685,779.9	21.00			Average
			point132	132	3,688,330.5	685,964.9	21.00			Average
			point133	133	3,688,321.2	686,063.6	21.00			Average
			point134	134	3,688,317.8	686,299.8	21.00			Average
			point135	135	3,688,309.2	686,672.2	21.00			
Viola St 2 Lane	24.0		point136	136	3,691,036.0	686,909.1	21.00			Average
			point137	137	3,691,034.0	687,095.2	21.00			Average
			point138	138	3,691,035.0	687,192.2	21.00			Average
			point139	139	3,691,041.5	687,232.5	21.00			Average
			point140	140	3,691,036.5	687,256.5	21.00			Average
			point141	141	3,691,024.8	687,271.2	21.00			Average
			point142	142	3,690,993.2	687,290.9	21.00			Average
			point143	143	3,690,786.5	687,290.4	21.00			Average
			point144	144	3,690,555.0	687,283.0	21.00			
Tinity Dr SB 1 Lane	12.0		point146	146	3,692,368.2	687,373.6	21.00			Average
			point147	147	3,692,391.5	687,336.9	21.00			Average
			point148	148	3,692,419.2	687,275.4	21.00			Average
			point149	149	3,692,441.5	687,215.5	21.00			
Trinity Dr NB 2 Lane	24.0		point150	150	3,692,472.2	687,227.3	21.00			Average
			point151	151	3,692,450.2	687,286.9	21.00			Average
			point152	152	3,692,431.8	687,349.1	21.00			Average
			point153	153	3,692,420.8	687,391.6	21.00			
Forest Brook Blvd 2 Lane	24.0		point154	154	3,695,557.5	687,975.9	21.00			Average
			point155	155	3,695,466.8	688,124.1	21.00			Average
			point156	156	3,695,442.0	688,164.1	21.00			Average

INPUT: ROADWAYS

LA 1088

		point157	157	3,695,382.5	688,305.7	21.00			Average
		point158	158	3,695,322.0	688,427.7	21.00			
I-12 EB OnRamp 1 Lane	24.0	point161	161	3,699,262.8	690,236.2	22.00			Average
		point162	162	3,699,282.8	690,209.7	22.00			Average
		point163	163	3,699,342.2	690,144.1	22.00			Average
		point164	164	3,699,376.8	690,103.0	22.00			Average
		point165	165	3,699,406.8	690,068.5	22.00			Average
		point166	166	3,699,432.5	690,047.4	22.00			Average
		point167	167	3,699,473.2	690,023.2	22.00			Average
		point168	168	3,699,527.5	690,003.1	22.00			Average
		point169	169	3,699,592.2	689,995.0	22.00			Average
		point170	170	3,699,633.8	689,999.2	22.00			Average
		point171	171	3,699,684.2	690,010.2	22.00			Average
		point172	172	3,699,741.5	690,040.1	22.00			Average
		point173	173	3,699,819.0	690,092.8	22.00			Average
		point174	174	3,699,963.2	690,193.8	22.00			Average
		point175	175	3,700,093.0	690,282.4	22.00			Average
		point176	176	3,700,127.8	690,305.4	22.00			Average
		point177	177	3,700,199.0	690,345.5	22.00			Average
		point178	178	3,700,260.5	690,371.1	22.00			Average
		point179	179	3,700,319.8	690,390.6	22.00			Average
		point180	180	3,700,408.8	690,407.8	22.00			Average
		point181	181	3,700,507.0	690,414.9	22.00			Average
		point182	182	3,700,608.5	690,406.0	22.00			Average
		point183	183	3,700,704.0	690,385.2	22.00			Average
		point184	184	3,700,773.8	690,360.4	22.00			Average
		point185	185	3,700,846.2	690,333.5	22.00			Average
		point186	186	3,700,912.2	690,305.9	22.00			Average
		point187	187	3,701,006.2	690,262.4	22.00			Average
		point188	188	3,701,190.5	690,173.3	22.00			Average
		point189	189	3,701,436.8	690,049.4	22.00			
I-12 EB OffRamp 1 Lane	24.0	point191	191	3,698,094.2	691,853.9	22.00			Average
		point192	192	3,698,519.2	691,558.8	22.00			Average
		point193	193	3,698,733.5	691,411.9	22.00			Average
		point194	194	3,698,888.5	691,304.1	22.00			Average
		point195	195	3,698,985.0	691,237.4	22.00			Average
		point196	196	3,699,056.0	691,170.1	22.00			Average
		point197	197	3,699,109.2	691,089.9	22.00			Average

INPUT: ROADWAYS

LA 1088

		point198	198	3,699,149.8	690,997.6	22.00			Average
		point199	199	3,699,166.5	690,923.2	22.00			Average
		point200	200	3,699,178.0	690,789.2	22.00			Average
		point201	201	3,699,189.2	690,674.8	22.00			Average
		point202	202	3,699,207.8	690,469.8	22.00			Average
		point203	203	3,699,226.8	690,351.8	22.00			Average
		point204	204	3,699,237.0	690,285.4	22.00			
I-12 WB OffRamp	24.0	point205	205	3,701,938.8	689,950.9	30.00			Average
		point206	206	3,701,761.5	690,049.7	30.00			Average
		point207	207	3,701,556.5	690,162.8	30.00			Average
		point208	208	3,701,462.5	690,214.3	30.00			Average
		point209	209	3,701,385.8	690,260.7	30.00			Average
		point210	210	3,701,302.5	690,340.0	30.00			Average
		point211	211	3,701,238.8	690,437.9	30.00			Average
		point212	212	3,701,210.5	690,512.0	30.00			Average
		point213	213	3,701,192.8	690,594.3	30.00			Average
		point214	214	3,701,191.5	690,727.8	30.00			Average
		point215	215	3,701,191.0	690,907.6	30.00			Average
		point216	216	3,701,192.0	690,944.8	30.00			Average
		point217	217	3,701,167.8	691,113.1	30.00			
LA 59 south of LA 1088 3 Lane	36.0	point218	218	3,682,808.5	681,467.9	21.00			Average
		point219	219	3,683,063.0	681,915.2	21.00			Average
		point220	220	3,683,212.5	682,178.6	21.00			Average
		point221	221	3,683,303.5	682,338.2	21.00			Average
		point222	222	3,683,405.8	682,511.9	21.00			Average
		point223	223	3,683,504.8	682,684.9	21.00			Average
		point224	224	3,683,603.8	682,858.6	21.00			Average
		point225	225	3,683,702.8	683,032.3	21.00			Average
		point226	226	3,683,799.8	683,206.9	21.00			Average
		point227	227	3,683,898.5	683,381.4	21.00			Average
		point228	228	3,683,944.2	683,471.9	21.00			Average
		point229	229	3,683,977.2	683,561.8	21.00			Average
		point231	231	3,684,007.8	683,662.8	21.00			Average
		point230	230	3,684,032.2	683,782.9	21.00			
LA 59 north of LA 1088 3 Lane	36.0	point232	232	3,684,032.2	683,782.9	21.00			Average
		point233	233	3,684,065.8	683,950.8	21.00			Average
		point234	234	3,684,109.0	684,147.0	21.00			Average
		point235	235	3,684,165.5	684,339.8	21.00			Average

INPUT: ROADWAYS

LA 1088

		point236	236	3,684,242.0	684,525.2	21.00			Average
		point237	237	3,684,361.0	684,801.1	21.00			Average
		point238	238	3,684,442.5	684,980.7	21.00			Average
		point239	239	3,684,579.8	685,291.6	21.00			Average
		point240	240	3,684,701.0	685,565.9	21.00			Average
		point241	241	3,684,809.5	685,815.2	21.00			Average
		point242	242	3,684,878.5	685,964.8	21.00			
LA 1088 WB 2 Lane Area 3	24.0	point254	254	3,699,237.0	690,285.4	22.00			Average
		point253	253	3,698,918.5	690,138.4	22.00			Average
		point252	252	3,698,627.5	690,004.1	21.00			Average
		point251	251	3,698,368.2	689,883.7	21.00			Average
		point250	250	3,698,195.2	689,803.6	21.00			Average
		point249	249	3,697,937.5	689,674.5	21.00			Average
		point248	248	3,697,749.0	689,573.8	21.00			Average
		point247	247	3,697,484.0	689,435.2	21.00			Average
		point246	246	3,697,252.8	689,311.8	21.00			
LA 1088 EB 2 Lane Area 3	24.0	point274	274	3,697,252.8	689,311.8	21.00			Average
		point57	57	3,697,489.0	689,419.4	21.00			Average
		point58	58	3,697,761.0	689,545.2	21.00			Average
		point59	59	3,697,951.5	689,633.1	21.00			Average
		point60	60	3,698,216.5	689,756.5	21.00			Average
		point61	61	3,698,390.8	689,835.2	21.00			Average
		point62	62	3,698,649.5	689,955.8	21.00			Average
		point63	63	3,698,941.5	690,089.4	21.00			Average
		point190	190	3,699,215.5	690,215.3	22.00			Average
		point64	64	3,699,262.8	690,236.2	22.00			
LA 1088 EB 2 Lane bt Ramps	24.0	point275	275	3,699,262.8	690,236.2	22.00			Average
		point284	284	3,699,375.2	690,287.8	25.00			Average
		point65	65	3,699,487.8	690,339.4	30.00			Average
		point66	66	3,699,760.2	690,465.8	35.00			Average
		point280	280	3,699,896.5	690,528.4	40.00			Average
		point67	67	3,700,033.0	690,590.9	45.00			Average
		point68	68	3,700,305.0	690,716.1	45.00			Average
		point283	283	3,700,441.8	690,779.0	45.00			Average
		point69	69	3,700,578.5	690,841.9	40.00			Average
		point70	70	3,700,851.5	690,967.8	35.00			Average
		point71	71	3,701,167.8	691,113.1	30.00			Average
		point72	72	3,701,395.5	691,218.8	30.00			Average

INPUT: ROADWAYS

LA 1088

			point73	73	3,701,668.8	691,345.2	30.00			Average
			point74	74	3,701,946.5	691,454.9	30.00			Average
			point75	75	3,702,233.2	691,530.1	30.00			Average
			point76	76	3,702,532.2	691,581.5	30.00			Average
			point77	77	3,702,731.8	691,612.4	30.00			Average
			point78	78	3,703,020.0	691,678.9	30.00			Average
			point79	79	3,703,303.2	691,776.2	30.00			
LA 1088 Comb 2 Lane Area 2	24.0		point277	277	3,688,324.0	685,762.9	21.00			Average
			point130	130	3,688,360.0	685,779.9	21.00			Average
			point22	22	3,688,576.5	685,879.8	21.00			Average
			point23	23	3,688,848.5	686,005.4	21.00			Average
			point24	24	3,689,121.8	686,131.2	21.00			Average
			point25	25	3,689,392.8	686,255.4	21.00			Average
			point26	26	3,689,572.5	686,339.0	21.00			Average
			point27	27	3,689,853.2	686,452.5	21.00			Average
			point28	28	3,690,132.8	686,564.9	21.00			Average
			point29	29	3,690,409.2	686,676.8	21.00			Average
			point30	30	3,690,648.8	686,775.1	21.00			Average
			point31	31	3,690,876.8	686,854.2	21.00			Average
			point32	32	3,691,036.0	686,909.1	21.00			Average
			point112	112	3,691,043.8	686,911.4	21.00			Average
			point33	33	3,691,350.5	687,018.0	21.00			Average
			point34	34	3,691,632.5	687,116.4	21.00			Average
			point35	35	3,691,915.0	687,216.2	21.00			Average
			point36	36	3,692,197.5	687,315.0	21.00			Average
			point37	37	3,692,368.2	687,373.6	21.00			Average
			point145	145	3,692,420.8	687,391.6	21.00			
LA 1088 Comb 2 Lane Area 3	24.0		point278	278	3,692,420.8	687,391.6	21.00			Average
			point38	38	3,692,670.8	687,478.1	21.00			Average
			point39	39	3,692,955.2	687,577.9	21.00			Average
			point40	40	3,693,236.8	687,676.4	21.00			Average
			point41	41	3,693,522.8	687,775.4	21.00			Average
			point42	42	3,693,805.2	687,873.9	21.00			Average
			point43	43	3,694,088.0	687,972.0	21.00			Average
			point44	44	3,694,371.8	688,072.5	21.00			Average
			point45	45	3,694,652.5	688,169.9	21.00			Average
			point46	46	3,694,850.5	688,238.8	21.00			Average
			point47	47	3,695,124.2	688,341.9	21.00			Average

INPUT: ROADWAYS

LA 1088

LA 1088 WB 2 Lane bt Ramps			point48	48	3,695,322.0	688,427.7	21.00			
	24.0	point279	279	3,703,303.2	691,776.2	30.00			Average	
		point268	268	3,703,013.0	691,697.4	30.00			Average	
		point267	267	3,702,726.5	691,651.9	30.00			Average	
		point266	266	3,702,528.0	691,630.0	30.00			Average	
		point265	265	3,702,218.5	691,592.1	30.00			Average	
		point264	264	3,701,924.8	691,513.0	30.00			Average	
		point263	263	3,701,646.5	691,397.2	30.00			Average	
		point262	262	3,701,372.5	691,270.8	30.00			Average	
		point261	261	3,701,151.8	691,169.5	30.00			Average	
		point260	260	3,700,826.5	691,020.3	35.00			Average	
		point259	259	3,700,554.0	690,894.4	40.00			Average	
		point282	282	3,700,419.5	690,831.9	45.00			Average	
		point258	258	3,700,284.8	690,769.4	45.00			Average	
		point257	257	3,700,010.0	690,643.2	45.00			Average	
		point281	281	3,699,873.5	690,580.6	40.00			Average	
		point256	256	3,699,737.0	690,517.9	35.00			Average	
		point255	255	3,699,468.2	690,393.1	30.00			Average	
		point285	285	3,699,352.5	690,339.2	25.00			Average	
		point276	276	3,699,237.0	690,285.4	22.00				
LA 1088 Comb 2 Lane bt Ramps	24.0	point286	286	3,703,303.2	691,776.2	30.00			Average	
		point80	80	3,703,487.8	691,856.8	30.00			Average	
		point81	81	3,703,762.5	691,982.6	30.00			Average	
		point82	82	3,704,035.8	692,104.8	30.00			Average	
		point83	83	3,704,307.2	692,227.5	30.00				
LA 1088 Comb 2 Lane Area 3 2	24.0	point287	287	3,695,322.0	688,427.7	21.00			Average	
		point49	49	3,695,579.8	688,545.3	21.00			Average	
		point50	50	3,695,853.8	688,671.1	21.00			Average	
		point51	51	3,696,125.8	688,795.4	21.00			Average	
		point52	52	3,696,397.8	688,919.9	21.00			Average	
		point53	53	3,696,670.8	689,044.0	21.00			Average	
		point54	54	3,696,809.2	689,108.7	21.00			Average	
		point55	55	3,697,034.8	689,213.1	21.00			Average	
		point56	56	3,697,252.8	689,311.8	21.00			Average	

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

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PROJECT/CONTRACT:

LA 1088

RUN: No Build PM Peak 2033

Roadway		Points											
Name	No.	Segment		Autos		MTrucks		HTrucks		Buses		Motorcycles	
		V	S	veh/hr	mph	V	S	veh/hr	mph	V	S	veh/hr	mph
LA 1088 Comb 2 Lane Area 1		4	677	45	63	45	45	6	45	395	45	9	45
		5	677	45	63	45	45	6	45	395	45	9	45
		6	677	45	63	45	45	6	45	395	45	9	45
		7	677	45	63	45	45	6	45	395	45	9	45
		8	677	45	63	45	45	6	45	395	45	9	45
		9	677	45	63	45	45	6	45	395	45	9	45
		10	677	45	63	45	45	6	45	395	45	9	45
		11	677	45	63	45	45	6	45	395	45	9	45
		12	677	45	63	45	45	6	45	395	45	9	45
		13	677	45	63	45	45	6	45	395	45	9	45
		14	677	45	63	45	45	6	45	395	45	9	45
		15	677	45	63	45	45	6	45	395	45	9	45
		99	677	45	63	45	45	6	45	395	45	9	45
		16	677	45	63	45	45	6	45	395	45	9	45
		17	677	45	63	45	45	6	45	395	45	9	45
		18	677	45	63	45	45	6	45	395	45	9	45
		19	677	45	63	45	45	6	45	395	45	9	45
		20	677	45	63	45	45	6	45	395	45	9	45
		21	677	45	63	45	45	6	45	395	45	9	45
		121											
Garon Dr 2 Lane		100	104	25	6	25	25	0	0	28	25	1	25
		101	104	25	6	25	25	0	0	28	25	1	25

C:\Noise Projects\LA 1088 Noise\Runs\No Build PM Peak

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LA 1088

	point102	102	104	25	6	25	0	0	28	25	1	25
	point103	103										
Jacksone St 2 Lane	point105	105	32	25	4	25	0	0	16	25	0	0
	point106	106	32	25	4	25	0	0	16	25	0	0
	point107	107										
Soult St 2 Lane	point113	113	517	25	48	25	5	25	210	25	4	25
	point114	114	517	25	48	25	5	25	210	25	4	25
	point115	115										
Spring Blvd SB 1 Lane	point122	122	93	20	6	20	0	0	37	20	1	20
	point123	123	93	20	6	20	0	0	37	20	1	20
	point124	124	93	20	6	20	0	0	37	20	1	20
	point125	125										
Spring Blvd NB 1 Lane	point126	126	72	20	4	20	0	0	29	20	1	20
	point127	127	72	20	4	20	0	0	29	20	1	20
	point128	128	72	20	4	20	0	0	29	20	1	20
	point129	129										
School Dr 2 Lane	point131	131	48	25	2	25	0	0	16	25	0	0
	point132	132	48	25	2	25	0	0	16	25	0	0
	point133	133	48	25	2	25	0	0	16	25	0	0
	point134	134	48	25	2	25	0	0	16	25	0	0
	point135	135										
Viola St 2 Lane	point136	136	91	25	2	25	0	0	140	25	0	0
	point137	137	91	25	2	25	0	0	140	25	0	0
	point138	138	91	25	2	25	0	0	140	25	0	0
	point139	139	91	25	2	25	0	0	140	25	0	0
	point140	140	91	25	2	25	0	0	140	25	0	0
	point141	141	91	25	2	25	0	0	140	25	0	0
	point142	142	91	25	2	25	0	0	140	25	0	0
	point143	143	91	25	2	25	0	0	140	25	0	0
	point144	144										
Tinity Dr SB 1 Lane	point146	146	123	20	2	20	0	0	19	20	7	20
	point147	147	123	20	2	20	0	0	19	20	7	20
	point148	148	123	20	2	20	0	0	19	20	7	20
	point149	149										

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Trinity Dr NB 2 Lane	point150	150	75	20	1	20	0	0	12	20	4	20
	point151	151	75	20	1	20	0	0	12	20	4	20
	point152	152	75	20	1	20	0	0	12	20	4	20
	point153	153										
Forest Brook Blvd 2 Lane	point154	154	400	20	9	20	3	20	66	20	1	20
	point155	155	400	20	9	20	3	20	66	20	1	20
	point156	156	400	20	9	20	3	20	66	20	1	20
	point157	157	400	20	9	20	3	20	66	20	1	20
	point158	158										
I-12 EB OnRamp 1 Lane	point161	161	282	35	5	35	2	35	55	35	1	35
	point162	162	282	35	5	35	2	35	55	35	1	35
	point163	163	282	35	5	35	2	35	55	35	1	35
	point164	164	282	35	5	35	2	35	55	35	1	35
	point165	165	282	35	5	35	2	35	55	35	1	35
	point166	166	282	35	5	35	2	35	55	35	1	35
	point167	167	282	35	5	35	2	35	55	35	1	35
	point168	168	282	35	5	35	2	35	55	35	1	35
	point169	169	282	35	5	35	2	35	55	35	1	35
	point170	170	282	35	5	35	2	35	55	35	1	35
	point171	171	282	35	5	35	2	35	55	35	1	35
	point172	172	282	35	5	35	2	35	55	35	1	35
	point173	173	282	35	5	35	2	35	55	35	1	35
	point174	174	282	35	5	35	2	35	55	35	1	35
	point175	175	282	35	5	35	2	35	55	35	1	35
	point176	176	282	35	5	35	2	35	55	35	1	35
	point177	177	282	35	5	35	2	35	55	35	1	35
	point178	178	282	35	5	35	2	35	55	35	1	35
	point179	179	282	35	5	35	2	35	55	35	1	35
	point180	180	282	35	5	35	2	35	55	35	1	35
	point181	181	282	35	5	35	2	35	55	35	1	35
	point182	182	282	35	5	35	2	35	55	35	1	35
	point183	183	282	35	5	35	2	35	55	35	1	35
	point184	184	282	35	5	35	2	35	55	35	1	35
	point185	185	282	35	5	35	2	35	55	35	1	35

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I-12 EB OffRamp 1 Lane	point186	186	282	35	5	35	2	35	55	35	1	35
	point187	187	282	35	5	35	2	35	55	35	1	35
	point188	188	282	35	5	35	2	35	55	35	1	35
	point189	189										
	point191	191	325	35	5	35	2	35	63	35	2	35
	point192	192	325	35	5	35	2	35	63	35	2	35
	point193	193	325	35	5	35	2	35	63	35	2	35
	point194	194	325	35	5	35	2	35	63	35	2	35
	point195	195	325	35	5	35	2	35	63	35	2	35
	point196	196	325	35	5	35	2	35	63	35	2	35
	point197	197	325	35	5	35	2	35	63	35	2	35
	point198	198	325	35	5	35	2	35	63	35	2	35
	point199	199	325	35	5	35	2	35	63	35	2	35
	point200	200	325	35	5	35	2	35	63	35	2	35
	point201	201	325	35	5	35	2	35	63	35	2	35
	point202	202	325	35	5	35	2	35	63	35	2	35
	point203	203	325	35	5	35	2	35	63	35	2	35
	point204	204										
I-12 WB OffRamp	point205	205	177	35	54	35	3	35	31	35	1	35
	point206	206	177	35	54	35	3	35	31	35	1	35
	point207	207	177	35	54	35	3	35	31	35	1	35
	point208	208	177	35	54	35	3	35	31	35	1	35
	point209	209	177	35	54	35	3	35	31	35	1	35
	point210	210	177	35	54	35	3	35	31	35	1	35
	point211	211	177	35	54	35	3	35	31	35	1	35
	point212	212	177	35	54	35	3	35	31	35	1	35
	point213	213	177	35	54	35	3	35	31	35	1	35
	point214	214	177	35	54	35	3	35	31	35	1	35
	point215	215	177	35	54	35	3	35	31	35	1	35
	point216	216	177	35	54	35	3	35	31	35	1	35
	point217	217										
LA 59 south of LA 1088 3 Lane	point218	218	1697	45	90	45	21	45	309	45	28	45
	point219	219	1697	45	90	45	21	45	309	45	28	45
	point220	220	1697	45	90	45	21	45	309	45	28	45

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	point221	221	1697	45	90	45	21	45	309	45	28	45
	point222	222	1697	45	90	45	21	45	309	45	28	45
	point223	223	1697	45	90	45	21	45	309	45	28	45
	point224	224	1697	45	90	45	21	45	309	45	28	45
	point225	225	1697	45	90	45	21	45	309	45	28	45
	point226	226	1697	45	90	45	21	45	309	45	28	45
	point227	227	1697	45	90	45	21	45	309	45	28	45
	point228	228	1697	45	90	45	21	45	309	45	28	45
	point229	229	1697	45	90	45	21	45	309	45	28	45
	point231	231	1697	45	90	45	21	45	309	45	28	45
	point230	230										
LA 59 north of LA 1088 3 Lane	point232	232	1087	45	94	45	87	45	397	45	12	45
	point233	233	1087	45	94	45	87	45	397	45	12	45
	point234	234	1087	45	94	45	87	45	397	45	12	45
	point235	235	1087	45	94	45	87	45	397	45	12	45
	point236	236	1087	45	94	45	87	45	397	45	12	45
	point237	237	1087	45	94	45	87	45	397	45	12	45
	point238	238	1087	45	94	45	87	45	397	45	12	45
	point239	239	1087	45	94	45	87	45	397	45	12	45
	point240	240	1087	45	94	45	87	45	397	45	12	45
	point241	241	1087	45	94	45	87	45	397	45	12	45
	point242	242										
LA 1088 WB 2 Lane Area 3	point254	254	566	55	41	55	7	55	193	55	2	55
	point253	253	566	55	41	55	7	55	193	55	2	55
	point252	252	566	55	41	55	7	55	193	55	2	55
	point251	251	566	55	41	55	7	55	193	55	2	55
	point250	250	566	55	41	55	7	55	193	55	2	55
	point249	249	566	55	41	55	7	55	193	55	2	55
	point248	248	566	55	41	55	7	55	193	55	2	55
	point247	247	566	55	41	55	7	55	193	55	2	55
	point246	246										
LA 1088 EB 2 Lane Area 3	point274	274	347	55	25	55	5	55	118	55	2	55
	point57	57	347	55	25	55	5	55	118	55	2	55
	point58	58	347	55	25	55	5	55	118	55	2	55

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point59	59	347	55	25	55	5	55	118	55	2	55
	point60	60	347	55	25	55	5	55	118	55	2	55
	point61	61	347	55	25	55	5	55	118	55	2	55
	point62	62	347	55	25	55	5	55	118	55	2	55
	point63	63	347	55	25	55	5	55	118	55	2	55
	point190	190	347	55	25	55	5	55	118	55	2	55
	point64	64										
LA 1088 EB 2 Lane bt Ramps	point275	275	231	55	13	55	3	55	79	55	2	55
	point284	284	231	55	13	55	3	55	79	55	2	55
	point65	65	231	55	13	55	3	55	79	55	2	55
	point66	66	231	55	13	55	3	55	79	55	2	55
	point280	280	231	55	13	55	3	55	79	55	2	55
	point67	67	231	55	13	55	3	55	79	55	2	55
	point68	68	231	55	13	55	3	55	79	55	2	55
	point283	283	231	55	13	55	3	55	79	55	2	55
	point69	69	231	55	13	55	3	55	79	55	2	55
	point70	70	231	55	13	55	3	55	79	55	2	55
	point71	71	231	55	13	55	3	55	79	55	2	55
	point72	72	231	55	13	55	3	55	79	55	2	55
	point73	73	231	55	13	55	3	55	79	55	2	55
	point74	74	231	55	13	55	3	55	79	55	2	55
	point75	75	231	55	13	55	3	55	79	55	2	55
	point76	76	231	55	13	55	3	55	79	55	2	55
	point77	77	231	55	13	55	3	55	79	55	2	55
LA 1088 Comb 2 Lane Area 2	point78	78	231	55	13	55	3	55	79	55	2	55
	point79	79										
	point277	277	710	45	25	45	12	45	297	45	17	45
	point130	130	710	45	25	45	12	45	297	45	17	45
	point22	22	710	45	25	45	12	45	297	45	17	45
	point23	23	710	45	25	45	12	45	297	45	17	45
	point24	24	710	45	25	45	12	45	297	45	17	45
	point25	25	710	45	25	45	12	45	297	45	17	45
	point26	26	710	45	25	45	12	45	297	45	17	45
	point27	27	710	45	25	45	12	45	297	45	17	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point28	28	710	45	25	45	12	45	297	45	17	45
	point29	29	710	45	25	45	12	45	297	45	17	45
	point30	30	710	45	25	45	12	45	297	45	17	45
	point31	31	710	45	25	45	12	45	297	45	17	45
	point32	32	710	45	25	45	12	45	297	45	17	45
	point112	112	710	45	25	45	12	45	297	45	17	45
	point33	33	710	45	25	45	12	45	297	45	17	45
	point34	34	710	45	25	45	12	45	297	45	17	45
	point35	35	710	45	25	45	12	45	297	45	17	45
	point36	36	710	45	25	45	12	45	297	45	17	45
	point37	37	710	45	25	45	12	45	297	45	17	45
	point145	145										
LA 1088 Comb 2 Lane Area 3	point278	278	914	45	66	45	12	45	311	45	4	45
	point38	38	914	45	66	45	12	45	311	45	4	45
	point39	39	914	45	66	45	12	45	311	45	4	45
	point40	40	914	45	66	45	12	45	311	45	4	45
	point41	41	914	45	66	45	12	45	311	45	4	45
	point42	42	914	45	66	45	12	45	311	45	4	45
	point43	43	914	45	66	45	12	45	311	45	4	45
	point44	44	914	45	66	45	12	45	311	45	4	45
	point45	45	914	45	66	45	12	45	311	45	4	45
	point46	46	914	45	66	45	12	45	311	45	4	45
	point47	47	914	45	66	45	12	45	311	45	4	45
	point48	48										
LA 1088 WB 2 Lane bt Ramps	point279	279	377	55	21	55	4	55	128	55	4	55
	point268	268	377	55	21	55	4	55	128	55	4	55
	point267	267	377	55	21	55	4	55	128	55	4	55
	point266	266	377	55	21	55	4	55	128	55	4	55
	point265	265	377	55	21	55	4	55	128	55	4	55
	point264	264	377	55	21	55	4	55	128	55	4	55
	point263	263	377	55	21	55	4	55	128	55	4	55
	point262	262	377	55	21	55	4	55	128	55	4	55
	point261	261	377	55	21	55	4	55	128	55	4	55
	point260	260	377	55	21	55	4	55	128	55	4	55

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point259	259	377	55	21	55	4	55	128	55	4	55
	point282	282	377	55	21	55	4	55	128	55	4	55
	point258	258	377	55	21	55	4	55	128	55	4	55
	point257	257	377	55	21	55	4	55	128	55	4	55
	point281	281	377	55	21	55	4	55	128	55	4	55
	point256	256	377	55	21	55	4	55	128	55	4	55
	point255	255	377	55	21	55	4	55	128	55	4	55
	point285	285	377	55	21	55	4	55	128	55	4	55
	point276	276										
LA 1088 Comb 2 Lane bt Ramps	point286	286	608	55	34	55	7	55	207	55	6	55
	point80	80	608	55	34	55	7	55	207	55	6	55
	point81	81	608	55	34	55	7	55	207	55	6	55
	point82	82	608	55	34	55	7	55	207	55	6	55
	point83	83										
LA 1088 Comb 2 Lane Area 3 2	point287	287	914	55	66	55	12	55	311	55	4	55
	point49	49	914	55	66	55	12	55	311	55	4	55
	point50	50	914	55	66	55	12	55	311	55	4	55
	point51	51	914	55	66	55	12	55	311	55	4	55
	point52	52	914	55	66	55	12	55	311	55	4	55
	point53	53	914	55	66	55	12	55	311	55	4	55
	point54	54	914	55	66	55	12	55	311	55	4	55
	point55	55	914	55	66	55	12	55	311	55	4	55
	point56	56										

INPUT: RECEIVERS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: RECEIVERS

PROJECT/CONTRACT: LA 1088

RUN: No Build PM Peak 2033

Receiver

Name	No.	#DUs	Coordinates (ground)			Z	Height above Ground	Input Sound Levels and Criteria				Active in Calc.
			X	Y	ft			Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	
			ft			ft	ft	dBA	dBA		dB	
Res 12	15	1	3,683,288.2	682,418.7	21.00		4.92	70.60	66	10.0	8.0	Y
Res 13	16	1	3,683,406.5	682,602.1	21.00		4.92	71.60	66	10.0	8.0	Y
Res 14	17	1	3,683,402.2	682,710.6	21.00		4.92	67.60	66	10.0	8.0	Y
Res 15	18	1	3,683,509.5	682,820.1	21.00		4.92	70.00	66	10.0	8.0	Y
Res 16	19	1	3,683,554.0	682,985.1	21.00		4.92	67.40	66	10.0	8.0	Y
Res 17	20	3	3,683,444.5	683,048.0	21.00		4.92	60.10	66	10.0	8.0	Y
Res 18	21	3	3,683,363.0	683,119.6	21.00		4.92	55.90	66	10.0	8.0	Y
Res 19	22	3	3,683,236.2	683,143.5	21.00		4.92	52.80	66	10.0	8.0	Y
Office 20	23	1	3,683,642.8	683,119.1	21.00		4.92	68.00	66	10.0	8.0	Y
Office 21	24	1	3,683,747.2	683,269.4	21.00		4.92	69.00	71	10.0	8.0	Y
Restaurant 22	25	1	3,683,907.8	683,708.8	21.00		4.92	68.10	71	10.0	8.0	Y
Bank 23	26	1	3,683,936.0	683,881.4	21.00		4.92	67.90	71	10.0	8.0	Y
Office 24	27	1	3,683,651.5	683,869.9	21.00		4.92	55.80	71	10.0	8.0	Y
Res 40	43	1	3,684,553.8	684,402.5	21.00		4.92	58.50	66	10.0	8.0	Y
Res 41	44	1	3,684,706.2	684,268.4	21.00		4.92	61.70	66	10.0	8.0	Y
Res 42	45	1	3,685,596.8	684,776.2	21.00		4.92	56.70	66	10.0	8.0	Y
School 43	46	1	3,685,926.2	684,787.9	21.00		4.92	64.40	66	10.0	8.0	Y
Res 44	47	3	3,685,809.0	684,957.2	21.00		4.92	51.70	66	10.0	8.0	Y
Res 45	48	4	3,685,833.8	685,027.5	21.00		4.92	50.80	66	10.0	8.0	Y
Res 46	49	2	3,685,854.5	685,070.4	21.00		4.92	50.40	66	10.0	8.0	Y
Res 47	50	4	3,685,815.5	685,131.5	21.00		4.92	49.50	66	10.0	8.0	Y
Res 48	51	1	3,686,061.5	684,994.9	21.00		4.92	54.60	66	10.0	8.0	Y

INPUT: RECEIVERS

LA 1088

Apartment 49 (1st Floor)	52	2	3,686,246.5	684,897.2	21.00	4.92	67.10	66	10.0	8.0	Y
Apartment 50 (1st Floor)	53	2	3,686,365.0	684,962.4	21.00	4.92	63.30	66	10.0	8.0	Y
Apartment 51 (1st Floor)	54	2	3,686,252.2	684,942.4	21.00	4.92	62.60	66	10.0	8.0	Y
Apartment 52 (1st Floor)	55	2	3,686,376.0	685,008.9	21.00	4.92	54.80	66	10.0	8.0	Y
Apartment 53 (1st Floor)	56	2	3,686,241.2	685,047.0	21.00	4.92	54.30	66	10.0	8.0	Y
Apartment 54 (1st Floor)	57	2	3,686,249.8	685,086.9	21.00	4.92	53.10	66	10.0	8.0	Y
Apartment 55 (1st Floor)	58	2	3,686,185.8	685,214.4	21.00	4.92	50.10	66	10.0	8.0	Y
Apartment 56 (1st Floor)	59	2	3,686,231.5	685,226.4	21.00	4.92	50.60	66	10.0	8.0	Y
Res 57	60	3	3,686,431.5	685,246.2	21.00	4.92	53.20	66	10.0	8.0	Y
Res 58	61	2	3,686,536.8	685,239.8	21.00	4.92	55.10	66	10.0	8.0	Y
Res 59	62	3	3,686,534.8	685,403.9	21.00	4.92	50.30	66	10.0	8.0	Y
Res 60	63	2	3,686,661.8	685,404.9	21.00	4.92	51.90	66	10.0	8.0	Y
Res 61	64	3	3,686,723.0	685,250.1	21.00	4.92	58.50	66	10.0	8.0	Y
Res 62	65	1	3,686,781.8	685,140.8	21.00	4.92	67.70	66	10.0	8.0	Y
Res 63	66	1	3,686,783.0	685,228.0	21.00	4.92	61.60	66	10.0	8.0	Y
Res 64	67	1	3,686,776.8	685,401.7	21.00	4.92	55.60	66	10.0	8.0	Y
Res 65	68	2	3,686,771.2	685,547.1	21.00	4.92	53.70	66	10.0	8.0	Y
Res 66	69	1	3,686,905.2	685,225.4	21.00	4.92	65.90	66	10.0	8.0	Y
Res 67	70	4	3,686,906.8	685,306.1	21.00	4.92	60.60	66	10.0	8.0	Y
Res 68	71	1	3,686,897.5	685,398.6	21.00	4.92	57.70	66	10.0	8.0	Y
Res 69	72	1	3,686,910.5	685,558.8	21.00	4.92	54.40	66	10.0	8.0	Y
Res 70	73	2	3,687,061.5	685,409.0	21.00	4.92	58.50	66	10.0	8.0	Y
Res 71	74	3	3,687,030.2	685,560.0	21.00	4.92	53.40	66	10.0	8.0	Y
Res 72	75	1	3,686,999.0	685,642.1	21.00	4.92	51.20	66	10.0	8.0	Y
Res 73	76	1	3,687,775.2	685,591.2	21.00	4.92	68.00	66	10.0	8.0	Y
Res 74	77	1	3,687,823.2	685,608.2	21.00	4.92	68.30	66	10.0	8.0	Y
Res 75	78	1	3,687,940.5	685,691.6	21.00	4.92	66.60	66	10.0	8.0	Y
Res 76	79	1	3,687,900.2	685,741.3	21.00	4.92	61.30	66	10.0	8.0	Y
Res 77	80	3	3,687,830.5	685,767.1	21.00	4.92	58.20	66	10.0	8.0	Y
Res 78	81	1	3,687,638.2	685,972.4	21.00	4.92	50.00	66	10.0	8.0	Y
School 79	82	1	3,688,194.5	686,063.9	21.00	4.92	54.00	66	10.0	8.0	Y
Res 120	123	1	3,688,481.0	685,920.7	21.00	4.92	66.90	66	10.0	8.0	Y
Res 121	124	2	3,688,478.2	685,968.9	21.00	4.92	62.60	66	10.0	8.0	Y
Res 122	125	2	3,688,477.0	686,023.6	21.00	4.92	58.80	66	10.0	8.0	Y
Res 123	126	2	3,688,477.0	686,090.0	21.00	4.92	55.50	66	10.0	8.0	Y

INPUT: RECEIVERS

LA 1088

Res 124	127	2	3,688,477.0	686,147.2	21.00	4.92	53.40	66	10.0	8.0	Y
Res 125	128	2	3,688,478.2	686,203.2	21.00	4.92	51.80	66	10.0	8.0	Y
Res 126	129	2	3,688,479.5	686,256.6	21.00	4.92	50.80	66	10.0	8.0	Y
Res 127	130	2	3,688,474.2	686,316.6	21.00	4.92	49.70	66	10.0	8.0	Y
Res 128	131	1	3,688,488.0	686,373.9	21.00	4.92	48.90	66	10.0	8.0	Y
Res 129	132	1	3,688,820.8	686,142.1	21.00	4.92	62.10	66	10.0	8.0	Y
Res 130	133	1	3,688,910.5	686,148.6	21.00	4.92	65.10	66	10.0	8.0	Y
Res 131	134	1	3,689,022.5	686,215.0	21.00	4.92	63.80	66	10.0	8.0	Y
Res 132	135	1	3,689,180.0	686,261.9	21.00	4.92	66.00	66	10.0	8.0	Y
Res 133	136	4	3,689,178.8	686,332.2	21.00	4.92	59.50	66	10.0	8.0	Y
Res 134	137	1	3,689,336.2	686,315.2	21.00	4.92	66.90	66	10.0	8.0	Y
Res 135	138	7	3,689,293.5	686,505.3	21.00	4.92	53.30	66	10.0	8.0	Y
Res 136	139	8	3,689,204.5	686,647.2	21.00	4.92	49.80	66	10.0	8.0	Y
Res 137	140	1	3,689,431.5	686,380.3	21.00	4.92	65.80	66	10.0	8.0	Y
Res 138	141	1	3,689,520.0	686,418.1	21.00	4.92	66.00	66	10.0	8.0	Y
Res 139	142	1	3,689,612.5	686,472.8	21.00	4.92	64.60	66	10.0	8.0	Y
Res 140	143	1	3,689,816.8	686,626.4	21.00	4.92	59.50	66	10.0	8.0	Y
Res 141	144	1	3,689,945.8	686,604.3	21.00	4.92	64.80	66	10.0	8.0	Y
Res 142	145	1	3,690,122.8	686,659.0	21.00	4.92	66.20	66	10.0	8.0	Y
Res 143	146	3	3,689,477.0	686,687.6	21.00	4.92	50.90	66	10.0	8.0	Y
Church 144	147	2	3,690,439.2	686,789.2	21.00	4.92	66.10	66	10.0	8.0	Y
Res 145	148	3	3,690,317.2	687,155.2	21.00	4.92	50.90	66	10.0	8.0	Y
Res 146	149	1	3,690,531.8	687,113.4	21.00	4.92	53.90	66	10.0	8.0	Y
Res 147	150	1	3,690,664.5	687,053.5	21.00	4.92	56.30	66	10.0	8.0	Y
Res 148	151	3	3,690,883.2	687,333.5	21.00	4.92	62.50	66	10.0	8.0	Y
Res 149	152	1	3,691,327.2	687,190.2	21.00	4.92	60.10	66	10.0	8.0	Y
Res 150	153	1	3,691,435.2	687,129.1	21.00	4.92	67.00	66	10.0	8.0	Y
Res 151	154	1	3,691,749.0	687,276.2	21.00	4.92	64.30	66	10.0	8.0	Y
Res 152	155	1	3,692,014.8	687,336.1	21.00	4.92	66.80	66	10.0	8.0	Y
Res 202	205	1	3,692,707.5	687,824.4	21.00	4.92	53.90	66	10.0	8.0	Y
Res 203	206	2	3,692,690.5	687,700.6	21.00	4.92	58.40	66	10.0	8.0	Y
Church 204	207	1	3,693,267.2	687,792.8	21.00	4.92	66.00	66	10.0	8.0	Y
Church 205	208	1	3,694,260.8	688,238.4	21.00	4.92	58.90	66	10.0	8.0	Y
Res 206	209	1	3,694,474.2	688,272.2	21.00	4.92	61.30	66	10.0	8.0	Y
Res 207	210	1	3,694,684.0	688,423.3	21.00	4.92	57.20	66	10.0	8.0	Y

INPUT: RECEIVERS

LA 1088

Res 208	211	1	3,695,691.8	688,807.4	21.00	4.92	60.50	66	10.0	8.0	Y
Res 214	217	1	3,697,978.2	689,880.3	21.00	4.92	61.50	66	10.0	8.0	Y
Res 215	218	1	3,698,171.0	689,958.5	21.00	4.92	62.40	66	10.0	8.0	Y
Res 216	219	1	3,698,342.8	690,015.8	21.00	4.92	63.90	66	10.0	8.0	Y
Res 217	220	8	3,698,169.8	690,175.9	21.00	4.92	54.70	66	10.0	8.0	Y
Res 218	221	1	3,698,505.5	690,134.2	21.00	4.92	61.10	66	10.0	8.0	Y
Res 219	222	2	3,698,512.2	690,217.6	21.00	4.92	57.50	66	10.0	8.0	Y
Res 220	223	4	3,698,513.5	690,297.0	21.00	4.92	55.40	66	10.0	8.0	Y
Res 221	224	1	3,698,820.8	690,298.3	21.00	4.92	60.20	66	10.0	8.0	Y
Res 222	225	1	3,699,025.8	690,529.9	21.00	4.92	56.80	66	10.0	8.0	Y
Res 223	226	1	3,699,028.2	690,601.5	21.00	4.92	55.80	66	10.0	8.0	Y
Res 224	227	1	3,699,019.5	690,662.1	21.00	4.92	55.20	66	10.0	8.0	Y
Apartments 49 (2nd Floor)	230	2	3,686,246.5	684,897.2	21.00	20.00	67.20	66	10.0	8.0	Y
Apartments 50 (2nd Floor)	232	2	3,686,365.0	684,962.4	21.00	20.00	63.60	66	10.0	8.0	Y
Apartments 51 (2nd Floor)	234	2	3,686,252.2	684,942.4	21.00	20.00	64.20	66	10.0	8.0	Y
Apartments 52 (2nd Floor)	236	2	3,686,376.0	685,008.9	21.00	20.00	57.20	66	10.0	8.0	Y
Apartments 53 (2nd Floor)	238	2	3,686,241.2	685,047.0	21.00	20.00	58.80	66	10.0	8.0	Y
Apartments 54 (2nd Floor)	240	2	3,686,249.8	685,086.9	21.00	20.00	58.50	66	10.0	8.0	Y
Apartments 55 (2nd Floor)	242	2	3,686,185.8	685,214.4	21.00	20.00	56.70	66	10.0	8.0	Y
Apartments 56 (2nd Floor)	244	2	3,686,231.5	685,226.4	21.00	20.00	57.30	66	10.0	8.0	Y

INPUT: BARRIERS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT:
RUN:

LA 1088
No Build PM Peak 2033

Barrier Name	Type	Height		If Wall	If Berm	Add'l ml	Points		No.	Coordinates (bottom)			Height at Point	Segment		Important Reflec-tions?
		Min	Max	\$ per Unit Area	\$ per Unit Vol.	Run: Rise	ft	ft		X	Y	Z		Incre- #Up	Perturbs #Dn	
Barrier2	W	0.00	99.99	0.00			0.00			ft	ft	ft	ft	ft	ft	
								point1	1	3,685,813.8	684,888.2	21.00	20.00	0.00	0	
								point2	2	3,685,813.8	684,804.9	21.00	20.00	0.00	0	
								point3	3	3,685,919.2	684,808.3	21.00	20.00	0.00	0	
								point4	4	3,685,921.0	684,888.2	21.00	20.00			
Barrier3	W	0.00	99.99	0.00			0.00									
								point5	5	3,686,195.2	684,980.8	21.00	30.00	0.00	0	
								point6	6	3,686,195.2	684,938.2	21.00	30.00	0.00	0	
								point7	7	3,686,183.2	684,937.3	21.00	30.00	0.00	0	
								point8	8	3,686,183.2	684,884.6	21.00	30.00	0.00	0	
								point9	9	3,686,233.2	684,884.6	21.00	30.00	0.00	0	
								point10	10	3,686,235.0	684,935.4	21.00	30.00	0.00	0	
								point11	11	3,686,245.2	684,937.3	21.00	30.00	0.00	0	
								point12	12	3,686,244.2	684,979.9	21.00	30.00			
Barrier4	W	0.00	99.99	0.00			0.00									
								point13	13	3,686,191.5	685,120.5	21.00	30.00	0.00	0	
								point14	14	3,686,191.5	685,080.8	21.00	30.00	0.00	0	
								point15	15	3,686,183.2	685,080.8	21.00	30.00	0.00	0	
								point16	16	3,686,184.0	685,028.9	21.00	30.00	0.00	0	
								point17	17	3,686,232.2	685,028.9	21.00	30.00	0.00	0	
								point18	18	3,686,235.0	685,072.4	21.00	30.00	0.00	0	
								point19	19	3,686,241.5	685,074.3	21.00	30.00	0.00	0	
								point20	20	3,686,243.2	685,121.4	21.00	30.00			
Barrier5	W	0.00	99.99	0.00			0.00									
								point21	21	3,686,369.2	684,994.7	21.00	30.00	0.00	0	
								point22	22	3,686,370.2	684,943.8	21.00	30.00	0.00	0	
								point23	23	3,686,388.8	684,945.6	21.00	30.00	0.00	0	
								point24	24	3,686,392.2	685,043.7	21.00	30.00	0.00	0	
								point25	25	3,686,374.8	685,044.6	21.00	30.00			

INPUT: BUILDING ROWS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: BUILDING ROWS

PROJECT/CONTRACT:

LA 1088

RUN: No Build PM Peak 2033

Building Row Name	Average Height ft	Building Percent %	Points			
			No.	Coordinates (ground)		
				X ft	Y ft	Z ft
Building2	20.00	70	1	3,686,135.0	685,272.3	21.00
			2	3,686,130.5	685,226.9	21.00
			3	3,686,454.2	685,264.9	21.00
			4	3,686,796.8	685,251.9	21.00
			5	3,686,795.8	685,266.8	21.00
Building3	20.00	70	6	3,688,397.0	686,418.2	21.00
			7	3,688,448.0	686,415.7	21.00
			8	3,688,459.8	685,904.3	21.00
			9	3,688,403.8	685,904.3	21.00
Building4	20.00	70	10	3,688,672.2	686,427.4	21.00
			11	3,688,607.0	686,419.1	21.00
			12	3,688,618.0	686,027.4	21.00
			13	3,688,687.5	686,021.5	21.00
Building5	20.00	70	14	3,688,776.0	686,219.0	21.00
			15	3,688,763.5	686,184.7	21.00
			16	3,688,798.8	686,166.3	21.00
			17	3,688,912.5	686,164.6	21.00
			18	3,688,994.5	686,229.1	21.00
			19	3,689,158.5	686,270.1	21.00
			20	3,689,150.2	686,379.7	21.00
			21	3,689,129.2	686,378.9	21.00
Building6	20.00	70	22	3,689,278.2	686,373.1	21.00
			23	3,689,303.5	686,317.9	21.00

C:\Noise Projects\LA 1088 Noise\Runs\No Build PM Peak

INPUT: BUILDING ROWS

INPUT: BUILDING ROWS				LA 1088			
				24	3,689,594.8	686,512.9	21.00
				25	3,689,630.8	686,622.6	21.00
				26	3,689,636.5	686,798.3	21.00
				27	3,689,583.8	686,811.7	21.00
Building7		20.00	70	28	3,698,941.8	690,988.4	21.00
				29	3,698,989.5	690,986.9	21.00
				30	3,699,006.0	690,501.6	21.00
				31	3,698,956.8	690,502.4	21.00

INPUT: ROADWAYS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: ROADWAYS

PROJECT/CONTRACT:

RUN:

LA 1088

Build Alt 1 AM Peak 2033

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with the approval of FHWA

Roadway		Points																
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment								
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?							
	ft			ft	ft	ft		mph	%									
Garon Dr Comb 1 2 Lane	24.0	point100	100	3,686,849.0	684,090.2	21.00				Average								
		point101	101	3,686,836.2	684,712.6	21.00												
	24.0	point106	106	3,686,845.2	685,274.9	21.00				Average								
Jackson St Comb 2 Lane		point107	107	3,686,839.0	685,637.0	21.00												
	24.0	point162	162	3,699,282.8	690,209.7	22.00				Average								
		point163	163	3,699,342.2	690,144.1	22.00				Average								
I-12 EB OnRamp 1 Lane		point164	164	3,699,376.8	690,103.0	22.00				Average								
		point165	165	3,699,406.8	690,068.5	22.00				Average								
		point166	166	3,699,432.5	690,047.4	22.00				Average								
		point167	167	3,699,473.2	690,023.2	22.00				Average								
		point168	168	3,699,527.5	690,003.1	22.00				Average								
		point169	169	3,699,592.2	689,995.0	22.00				Average								
		point170	170	3,699,633.8	689,999.2	22.00				Average								
		point171	171	3,699,684.2	690,010.2	22.00				Average								
		point172	172	3,699,741.5	690,040.1	22.00				Average								
		point173	173	3,699,819.0	690,092.8	22.00				Average								
		point174	174	3,699,963.2	690,193.8	22.00				Average								
		point175	175	3,700,093.0	690,282.4	22.00				Average								
		point176	176	3,700,127.8	690,305.4	22.00				Average								
		point177	177	3,700,199.0	690,345.5	22.00				Average								
		point178	178	3,700,260.5	690,371.1	22.00				Average								
		point179	179	3,700,319.8	690,390.6	22.00				Average								
		point180	180	3,700,408.8	690,407.8	22.00				Average								
		point181	181	3,700,507.0	690,414.9	22.00				Average								
		point182	182	3,700,608.5	690,406.0	22.00				Average								

INPUT: ROADWAYS

LA 1088

		point183	183	3,700,704.0	690,385.2	22.00			Average
		point184	184	3,700,773.8	690,360.4	22.00			Average
		point185	185	3,700,846.2	690,333.5	22.00			Average
		point186	186	3,700,912.2	690,305.9	22.00			Average
		point187	187	3,701,006.2	690,262.4	22.00			Average
		point188	188	3,701,190.5	690,173.3	22.00			Average
		point189	189	3,701,436.8	690,049.4	22.00			
LA 59 S of LA 1088 1	36.0	point218	218	3,682,808.5	681,467.9	21.00			Average
		point219	219	3,683,063.0	681,915.2	21.00			Average
		point220	220	3,683,212.5	682,178.6	21.00			Average
		point221	221	3,683,303.5	682,338.2	21.00			Average
		point222	222	3,683,405.8	682,511.9	21.00			Average
		point223	223	3,683,504.8	682,684.9	21.00			Average
		point224	224	3,683,597.2	682,835.0	21.00			
LA 1088 Comb 1 Area 1 2 Lane	30.0	point243	243	3,684,597.8	684,043.8	21.00			Average
		point17	7	3,684,944.8	684,203.9	21.00			Average
		point8	8	3,685,215.5	684,330.2	21.00			Average
		point9	9	3,685,490.5	684,456.0	21.00			Average
		point10	10	3,685,647.0	684,529.1	21.00			Average
		point11	11	3,685,851.8	684,622.3	21.00			Average
		point12	12	3,686,128.0	684,750.9	21.00			Average
		point13	13	3,686,344.5	684,849.6	21.00			
LA 1088 Comb 2 Area 1 2 Lane	30.0	point245	245	3,687,395.5	685,336.1	21.00			Average
		point18	18	3,687,668.2	685,459.9	21.00			Average
		point19	19	3,687,856.5	685,547.2	21.00			
LA 1088 Comb 1 Area 3 2 Lane	30.0	point250	250	3,692,839.8	687,538.1	21.00			Average
		point39	39	3,692,955.2	687,577.9	21.00			Average
		point40	40	3,693,236.8	687,676.4	21.00			Average
		point41	41	3,693,522.8	687,775.4	21.00			Average
		point251	251	3,693,626.0	687,810.8	21.00			
LA 59 N of LA 1088 1	36.0	point255	255	3,684,142.8	684,260.9	21.00			Average
		point235	235	3,684,165.5	684,339.8	21.00			Average
		point236	236	3,684,242.0	684,525.2	21.00			Average
		point237	237	3,684,361.0	684,801.1	21.00			Average
		point238	238	3,684,442.5	684,980.7	21.00			Average
		point239	239	3,684,579.8	685,291.6	21.00			Average
		point240	240	3,684,701.0	685,565.9	21.00			Average
		point241	241	3,684,809.5	685,815.2	21.00			Average

INPUT: ROADWAYS

LA 1088

			point310	310	3,686,709.5	685,002.4	21.00			Average	
			point311	311	3,686,763.5	684,996.3	21.00				
LA 1088 WB 2 Area 1 1 Lane	20.0		point323	323	3,687,395.5	685,336.1	21.00			Average	
			point324	324	3,687,354.2	685,321.9	21.00			Average	
			point325	325	3,687,256.0	685,276.7	21.00			Average	
			point326	326	3,687,112.5	685,211.7	21.00			Average	
			point327	327	3,687,020.2	685,163.8	21.00			Average	
			point328	328	3,686,954.8	685,120.9	21.00			Average	
			point329	329	3,686,906.2	685,087.8	21.00			Average	
			point330	330	3,686,877.0	685,082.9	21.00				
Jackson St NB 1 Lane	12.0		point343	343	3,686,856.8	685,073.7	21.00			Average	
			point344	344	3,686,861.5	685,093.2	21.00			Average	
			point345	345	3,686,856.8	685,163.2	21.00			Average	
			point346	346	3,686,852.0	685,226.2	21.00			Average	
			point347	347	3,686,845.2	685,274.9	21.00				
Jackson St SB 1 Lane	12.0		point348	348	3,686,845.2	685,274.9	21.00			Average	
			point349	349	3,686,839.0	685,226.9	21.00			Average	
			point350	350	3,686,836.0	685,150.3	21.00			Average	
			point351	351	3,686,811.2	685,089.0	21.00				
Garon Dr NB 1 Lane	12.0		point352	352	3,686,836.2	684,712.6	21.00			Average	
			point353	353	3,686,843.5	684,783.8	21.00			Average	
			point354	354	3,686,844.8	684,844.6	21.00			Average	
			point355	355	3,686,846.0	684,876.4	21.00			Average	
			point356	356	3,686,835.2	684,943.4	21.00			Average	
			point357	357	3,686,849.8	684,997.6	21.00				
Garon Dr SB 1 Lane	12.0		point358	358	3,686,791.0	684,996.3	21.00			Average	
			point359	359	3,686,808.8	684,941.8	21.00			Average	
			point360	360	3,686,822.5	684,878.4	21.00			Average	
			point361	361	3,686,823.2	684,842.9	21.00			Average	
			point362	362	3,686,827.5	684,778.4	21.00			Average	
			point363	363	3,686,836.2	684,712.6	21.00				
LA 1088 EB 3 Area 1 1 Lane	20.0		point365	365	3,687,856.5	685,547.2	21.00			Average	
			point366	366	3,687,939.8	685,577.9	21.00			Average	
			point367	367	3,688,103.8	685,649.1	21.00			Average	
			point368	368	3,688,219.5	685,707.5	21.00				
LA 1088 EB 1 Area 2 1 Lane	20.0		point373	373	3,688,328.5	685,697.2	21.00			Average	
			point374	374	3,688,354.0	685,712.7	21.00			Average	
			point375	375	3,688,402.2	685,755.9	21.00				

INPUT: ROADWAYS

LA 1088

LA 1088 WB 1 Area 2 2 Lane	32.0	point382	382	3,688,872.5	686,014.3	21.00			Average
		point383	383	3,688,817.5	686,004.3	21.00			Average
		point384	384	3,688,744.5	685,972.4	21.00			Average
		point385	385	3,688,611.5	685,915.0	21.00			Average
		point386	386	3,688,519.5	685,871.3	21.00			Average
		point387	387	3,688,444.5	685,825.4	21.00			Average
		point388	388	3,688,388.5	685,802.8	21.00			Average
LA 1088 WB 3 Area 2 1 Lane	20.0	point391	391	3,688,317.2	685,797.9	21.00			Average
		point392	392	3,688,288.2	685,791.5	21.00			Average
		point393	393	3,688,273.0	685,777.2	21.00			Average
		point394	394	3,688,238.2	685,752.8	21.00			Average
		point395	395	3,688,208.2	685,730.6	21.00			
Spring Blvd NB 1 Lane	12.0	point399	399	3,688,416.0	685,544.1	21.00			Average
		point400	400	3,688,378.5	685,619.1	21.00			Average
		point401	401	3,688,359.0	685,656.1	21.00			Average
		point402	402	3,688,354.0	685,712.7	21.00			
Spring Blvd SB 1 Lane	12.0	point403	403	3,688,287.2	685,703.1	21.00			Average
		point404	404	3,688,329.5	685,648.6	21.00			Average
		point405	405	3,688,353.5	685,608.4	21.00			Average
		point406	406	3,688,387.5	685,532.9	21.00			
School NB 1 Lane	12.0	point407	407	3,688,342.2	685,788.1	21.00			Average
		point408	408	3,688,339.8	685,824.3	21.00			Average
		point409	409	3,688,329.0	685,874.9	21.00			Average
		point410	410	3,688,322.8	685,936.5	21.00			Average
		point411	411	3,688,319.8	686,011.2	21.00			Average
		point412	412	3,688,313.2	686,047.8	21.00			
School SB 1 Lane	12.0	point413	413	3,688,313.2	686,047.8	21.00			Average
		point414	414	3,688,307.5	686,010.9	21.00			Average
		point415	415	3,688,306.5	685,935.6	21.00			Average
		point416	416	3,688,309.0	685,873.7	21.00			Average
		point417	417	3,688,309.8	685,838.8	21.00			Average
		point418	418	3,688,288.2	685,791.5	21.00			
LA 1088 EB 2 Area 2 1 Lane	20.0	point424	424	3,690,327.2	686,655.8	21.00			Average
		point425	425	3,690,455.0	686,696.9	21.00			Average
		point426	426	3,690,577.5	686,735.9	21.00			Average
		point427	427	3,690,695.5	686,780.3	21.00			Average
		point428	428	3,690,780.8	686,814.0	21.00			Average
		point429	429	3,690,840.0	686,847.4	21.00			Average

INPUT: ROADWAYS

LA 1088

			point430	430	3,690,873.8	686,865.2	21.00			Average
			point431	431	3,690,906.5	686,868.7	21.00			
LA 1088 EB 1 Area 3 1 Lane	20.0		point450	450	3,692,409.5	687,367.6	21.00			Average
			point451	451	3,692,430.8	687,378.1	21.00			Average
			point452	452	3,692,445.0	687,391.3	21.00			Average
			point453	453	3,692,484.8	687,399.9	21.00			
LA 1088 WB 1 Area 3 1 Lane	20.0		point458	458	3,692,839.8	687,538.1	21.00			Average
			point459	459	3,692,786.2	687,525.4	21.00			Average
			point460	460	3,692,676.2	687,490.6	21.00			Average
			point461	461	3,692,563.8	687,453.4	21.00			Average
			point462	462	3,692,526.5	687,444.8	21.00			Average
			point463	463	3,692,493.8	687,445.2	21.00			
LA 1088 WB 4 Area 2 1 Lane	20.0		point468	468	3,692,381.8	687,498.2	21.00			Average
			point469	469	3,692,361.8	687,490.6	21.00			Average
			point470	470	3,692,340.8	687,471.9	21.00			Average
			point471	471	3,692,312.8	687,445.6	21.00			Average
			point472	472	3,692,279.8	687,413.9	21.00			
LA 1088 WB 3 Area 2 2 Lane	32.0		point482	482	3,691,408.0	687,047.9	21.00			Average
			point483	483	3,691,198.8	686,973.5	21.00			
LA 1088 WB 2 Area 2 1 Lane	20.0		point491	491	3,690,947.5	686,959.9	21.00			Average
			point492	492	3,690,893.0	686,912.2	21.00			
Soult St Comb 2 Lane	24.0		point500	500	3,691,051.2	686,100.9	21.00			Average
			point501	501	3,691,049.2	686,328.8	21.00			
Soult St NB 2 Lane	24.0		point502	502	3,691,049.2	686,328.8	21.00			Average
			point503	503	3,691,060.8	686,418.9	21.00			Average
			point504	504	3,691,064.2	686,573.1	21.00			Average
			point505	505	3,691,066.8	686,667.2	21.00			Average
			point506	506	3,691,060.8	686,728.1	21.00			Average
			point507	507	3,691,047.2	686,787.8	21.00			Average
			point508	508	3,691,050.8	686,829.4	21.00			Average
			point509	509	3,691,066.2	686,883.8	21.00			
Soult St SB 1 Lane	12.0		point510	510	3,690,988.2	686,851.9	21.00			Average
			point511	511	3,691,021.5	686,777.6	21.00			Average
			point512	512	3,691,035.2	686,726.2	21.00			Average
			point513	513	3,691,043.0	686,664.6	21.00			Average
			point514	514	3,691,043.5	686,572.0	21.00			Average
			point515	515	3,691,043.8	686,417.3	21.00			Average
			point516	516	3,691,049.2	686,328.8	21.00			

INPUT: ROADWAYS

LA 1088

Viola St NB 1 Lane	12.0	point517	517	3,691,046.0	686,963.1	21.00			Average
		point518	518	3,691,016.0	687,063.4	21.00			Average
		point519	519	3,691,005.0	687,207.5	21.00			Average
		point520	520	3,690,998.0	687,226.2	21.00			
Viola St Comb 2 Lane	24.0	point521	521	3,690,998.0	687,226.2	21.00			Average
		point522	522	3,690,992.8	687,253.0	21.00			Average
		point523	523	3,690,973.5	687,276.9	21.00			Average
		point524	524	3,690,935.5	687,292.1	21.00			Average
		point525	525	3,690,785.0	687,289.2	21.00			Average
		point526	526	3,690,547.5	687,283.9	21.00			
Viola St SB 1 Lane	12.0	point527	527	3,690,998.0	687,226.2	21.00			Average
		point528	528	3,690,991.0	687,205.2	21.00			Average
		point529	529	3,690,990.5	687,120.6	21.00			Average
		point530	530	3,690,998.0	687,061.1	21.00			Average
		point531	531	3,690,996.2	687,025.5	21.00			Average
		point532	532	3,690,972.0	686,967.1	21.00			
Trinity Dr NB 2 Lane	24.0	point533	533	3,692,465.2	687,226.6	21.00			Average
		point534	534	3,692,442.0	687,289.6	21.00			Average
		point535	535	3,692,438.2	687,313.9	21.00			Average
		point536	536	3,692,446.8	687,353.8	21.00			Average
		point537	537	3,692,445.0	687,391.3	21.00			
Trinity Dr SB 1 Lane	12.0	point538	538	3,692,358.0	687,379.2	21.00			Average
		point539	539	3,692,381.0	687,336.0	21.00			Average
		point540	540	3,692,409.0	687,283.7	21.00			Average
		point541	541	3,692,435.5	687,214.7	21.00			
LA 1088 WB 3 BT Bridges 2 Lane	32.0	point273	552	3,704,280.0	692,279.9	30.00			Average
		point272	553	3,704,009.5	692,159.6	30.00			Average
		point271	554	3,703,739.8	692,036.6	30.00			Average
		point270	555	3,703,463.5	691,911.6	30.00			Average
		point269	556	3,703,280.0	691,831.7	30.00			Average
		point268	557	3,703,003.5	691,737.0	30.00			Average
		point267	558	3,702,718.5	691,672.5	30.00			Average
		point266	559	3,702,524.8	691,642.6	30.00			Average
		point265	560	3,702,218.5	691,592.1	30.00			Average
		point264	561	3,701,924.8	691,513.0	30.00			Average
		point263	562	3,701,646.5	691,397.2	30.00			Average
		point262	563	3,701,372.5	691,270.8	30.00			
LA 1088 EB 1 BT Bridges 2 Lane	32.0	point65	583	3,699,487.8	690,339.4	30.00			Average

INPUT: ROADWAYS

LA 1088

			point66	584	3,699,760.2	690,465.8	35.00			Average
			point770	770	3,699,896.5	690,528.4	40.00			Average
			point67	585	3,700,033.0	690,590.9	45.00			Average
			point68	586	3,700,305.0	690,716.1	45.00			Average
			point771	771	3,700,441.8	690,779.0	45.00			Average
			point69	587	3,700,578.5	690,841.9	40.00			Average
			point70	588	3,700,851.5	690,967.8	35.00			Average
LA 1088 EB 2 Area 3 1 Lane	20.0		point602	602	3,693,626.0	687,810.8	21.00			Average
			point603	603	3,693,697.5	687,828.8	21.00			Average
			point604	604	3,693,945.8	687,910.8	21.00			Average
			point605	605	3,694,124.5	687,973.2	21.00			Average
			point606	606	3,694,181.2	687,986.7	21.00			Average
LA 1088 EB 3 Area 3 2 Lane	32.0		point609	609	3,694,181.2	687,986.7	21.00			Average
			point610	610	3,694,459.8	688,083.8	21.00			Average
			point611	611	3,694,705.5	688,169.9	21.00			Average
			point612	612	3,694,955.8	688,258.3	21.00			Average
			point613	613	3,695,107.0	688,320.6	21.00			Average
LA 1088 WB 3 Area 3 2 Lane	32.0		point644	644	3,699,468.2	690,393.1	30.00			Average
			point645	645	3,699,395.8	690,351.1	25.00			Average
LA 1088 WB 2 Area 3 1 Lane	12.0		point671	671	3,695,303.2	688,482.2	21.00			Average
			point672	672	3,695,279.5	688,478.1	21.00			Average
			point673	673	3,695,241.2	688,444.6	21.00			Average
			point674	674	3,695,188.0	688,403.7	21.00			Average
Forest Brook Blvd Comb 2 Lane	24.0		point683	683	3,695,575.0	687,949.6	21.00			Average
			point684	684	3,695,514.2	688,049.9	21.00			Average
Forest Brook Blvd NB 2 Lane	24.0		point685	685	3,695,514.2	688,049.9	21.00			Average
			point686	686	3,695,505.5	688,084.2	21.00			Average
			point687	687	3,695,470.5	688,145.6	21.00			Average
			point688	688	3,695,426.5	688,234.8	21.00			Average
			point689	689	3,695,392.0	688,294.1	21.00			Average
			point690	690	3,695,385.5	688,323.2	21.00			Average
			point691	691	3,695,389.0	688,378.8	21.00			Average
Forest Brook Blvd SB 1 Lane	12.0		point692	692	3,695,314.8	688,350.9	21.00			Average
			point693	693	3,695,371.0	688,280.9	21.00			Average
			point694	694	3,695,409.2	688,227.5	21.00			Average
			point695	695	3,695,454.0	688,142.3	21.00			Average
			point696	696	3,695,483.8	688,088.2	21.00			Average
			point697	697	3,695,514.2	688,049.9	21.00			Average

INPUT: ROADWAYS

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I-12 EB OffRamp 1 1 Lane	24.0	point698	698	3,698,014.8	691,921.6	22.00			Average
		point699	699	3,698,313.8	691,715.9	22.00			Average
		point700	700	3,698,466.5	691,611.1	22.00			Average
		point701	701	3,698,643.0	691,488.0	22.00			Average
		point702	702	3,698,809.8	691,371.4	22.00			Average
		point703	703	3,698,913.0	691,299.7	22.00			Average
		point704	704	3,699,015.0	691,224.4	22.00			Average
		point705	705	3,699,066.5	691,169.3	22.00			Average
		point706	706	3,699,102.0	691,117.9	22.00			Average
		point707	707	3,699,133.0	691,060.7	22.00			Average
		point708	708	3,699,151.8	691,005.9	22.00			Average
		point709	709	3,699,168.5	690,940.0	22.00			Average
		point710	710	3,699,178.5	690,848.0	22.00			Average
		point711	711	3,699,183.5	690,667.9	22.00			
I-12 EB OffRamp 2 2 Lane	48.0	point712	712	3,699,183.5	690,667.9	22.00			Average
		point713	713	3,699,191.5	690,561.7	22.00			Average
		point714	714	3,699,206.0	690,454.5	22.00			
I-12 EB OffRamp 4 1 Lane	24.0	point715	715	3,699,206.0	690,454.5	22.00			Average
		point716	716	3,699,204.5	690,423.8	22.00			Average
		point717	717	3,699,208.2	690,406.4	22.00			Average
		point718	718	3,699,206.0	690,355.8	22.00			Average
		point719	719	3,699,179.2	690,278.1	22.00			
I-12 EB OffRamp 3 1 Lane	24.0	point720	720	3,699,206.0	690,454.5	22.00			Average
		point721	721	3,699,235.0	690,401.4	23.00			Average
		point722	722	3,699,248.2	690,335.4	23.00			
I-12 WB OffRamp 1 Lane	24.0	point723	723	3,702,061.0	689,877.3	30.00			Average
		point724	724	3,701,791.5	690,041.3	30.00			Average
		point725	725	3,701,630.0	690,137.3	30.00			Average
		point726	726	3,701,521.0	690,202.4	30.00			Average
		point727	727	3,701,440.2	690,252.1	30.00			Average
		point728	728	3,701,376.2	690,292.1	30.00			Average
		point729	729	3,701,321.8	690,340.8	30.00			Average
		point730	730	3,701,277.8	690,397.6	30.00			Average
		point731	731	3,701,232.0	690,481.5	30.00			Average
		point732	732	3,701,211.2	690,535.1	30.00			Average
		point733	733	3,701,196.0	690,616.7	30.00			Average
		point734	734	3,701,197.0	690,775.9	30.00			Average
		point735	735	3,701,201.8	690,930.2	30.00			Average

INPUT: ROADWAYS

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			point736	736	3,701,200.0	690,974.2	30.00			Average
			point737	737	3,701,182.5	691,025.4	30.00			Average
			point738	738	3,701,177.8	691,075.8	30.00			
LA 1088 EB 2 Lane Past I-12 OffRamp	32.0		point740	740	3,701,395.5	691,218.8	30.00			Average
			point73	591	3,701,668.8	691,345.2	30.00			Average
			point74	592	3,701,946.5	691,454.9	30.00			Average
			point75	593	3,702,233.2	691,530.1	30.00			Average
			point76	594	3,702,532.2	691,581.5	30.00			Average
			point77	595	3,702,731.8	691,612.4	30.00			Average
			point78	596	3,703,020.0	691,678.9	30.00			Average
			point79	597	3,703,303.2	691,776.3	30.00			Average
			point80	598	3,703,487.8	691,856.8	21.00			Average
			point81	599	3,703,762.5	691,982.6	30.00			Average
			point82	600	3,704,035.8	692,104.8	30.00			Average
			point83	601	3,704,307.2	692,227.5	30.00			
LA 1088 WB 1 BT Bridges 2 Lane	32.0		point741	741	3,700,826.5	691,020.3	35.00			Average
			point259	566	3,700,554.0	690,894.4	40.00			Average
			point772	772	3,700,419.5	690,831.9	45.00			Average
			point258	567	3,700,284.8	690,769.4	45.00			Average
			point257	568	3,700,010.0	690,643.3	45.00			Average
			point773	773	3,699,873.5	690,580.6	40.00			Average
			point256	569	3,699,737.0	690,517.9	35.00			Average
			point255	570	3,699,468.2	690,393.1	30.00			
LA 1088 EB 2 BT Bridges 2 Lane	32.0		point748	748	3,700,851.5	690,967.8	35.00			Average
			point749	749	3,700,961.2	691,019.6	30.00			Average
			point750	750	3,701,024.5	691,052.4	30.00			Average
			point751	751	3,701,045.2	691,059.2	30.00			Average
			point752	752	3,701,109.0	691,057.6	30.00			Average
			point753	753	3,701,152.2	691,060.8	30.00			Average
			point754	754	3,701,177.8	691,075.8	30.00			Average
			point755	755	3,701,221.5	691,111.8	30.00			Average
			point756	756	3,701,322.5	691,181.2	30.00			Average
			point757	757	3,701,395.5	691,218.8	30.00			
LA 1088 WB 2 BT Bridges 2 Lane	32.0		point758	758	3,701,372.5	691,270.8	30.00			Average
			point759	759	3,701,294.0	691,228.1	30.00			Average
			point760	760	3,701,236.5	691,199.4	30.00			Average
			point761	761	3,701,159.0	691,197.3	30.00			Average
			point762	762	3,701,120.2	691,195.8	30.00			Average

INPUT: ROADWAYS

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			point763	763	3,701,095.2	691,186.9	30.00			Average
			point764	764	3,701,063.0	691,158.8	30.00			Average
			point765	765	3,701,011.5	691,118.1	30.00			Average
			point766	766	3,700,942.5	691,073.8	30.00			Average
			point767	767	3,700,826.5	691,020.3	35.00			
LA 1088 Comb 1 Area 2 2 Lane	30.0		point247	247	3,688,872.5	686,014.3	21.00			Average
			point24	24	3,689,121.8	686,131.2	21.00			Average
			point25	25	3,689,392.8	686,255.4	21.00			Average
			point419	419	3,689,572.5	686,339.0	21.00			Average
			point420	420	3,689,787.8	686,436.6	21.00			Average
			point421	421	3,689,992.8	686,523.6	21.00			Average
			point422	422	3,690,177.2	686,598.2	21.00			Average
			point423	423	3,690,327.2	686,655.8	21.00			
School Comb 2 Lane	24.0		point768	768	3,688,316.5	686,046.2	21.00			Average
			point364	364	3,688,317.8	686,299.8	21.00			Average
			point135	135	3,688,309.2	686,672.2	21.00			
LA 1088 EB 2 Area 2 1 Lane-2	20.0		point774	774	3,691,211.0	686,955.7	21.00			Average
			point438	438	3,691,434.5	687,032.9	21.00			Average
			point439	439	3,691,590.5	687,090.2	21.00			Average
			point440	440	3,691,724.5	687,139.1	21.00			Average
			point441	441	3,691,900.2	687,198.5	21.00			Average
			point442	442	3,692,003.0	687,234.6	21.00			Average
			point443	443	3,692,098.8	687,270.1	21.00			Average
			point444	444	3,692,177.8	687,310.9	21.00			
LA 1088 WB 3 Area 2 2 Lane-2	32.0		point775	775	3,691,198.8	686,973.5	21.00			Average
			point484	484	3,691,126.2	686,949.0	21.00			
LA 1088 EB 2 Area 2 1 Lane-2-2	20.0		point776	776	3,692,177.8	687,310.9	21.00			Average
			point445	445	3,692,247.0	687,357.0	21.00			Average
			point446	446	3,692,294.0	687,383.6	21.00			
LA 1088 WB 4 Area 2 1 Lane-2	20.0		point777	777	3,692,165.2	687,330.9	21.00			Average
			point475	475	3,692,091.2	687,292.3	21.00			Average
			point476	476	3,691,995.8	687,254.7	21.00			Average
			point477	477	3,691,893.5	687,218.9	21.00			Average
			point478	478	3,691,715.8	687,158.1	21.00			Average
			point479	479	3,691,581.8	687,112.2	21.00			Average
			point480	480	3,691,500.0	687,085.9	21.00			Average
			point481	481	3,691,408.0	687,047.9	21.00			
LA 1088 EB 3 Area 3 2 Lane-2	32.0		point778	778	3,695,107.0	688,320.6	21.00			Average

INPUT: ROADWAYS

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			point614	614	3,695,176.2	688,359.4	21.00			Average
			point615	615	3,695,215.5	688,370.3	21.00			
LA 1088 WB 2 Area 3 1 Lane-2	12.0		point779	779	3,695,095.8	688,347.1	21.00			Average
			point676	676	3,694,944.0	688,283.8	21.00			Average
			point677	677	3,694,696.2	688,190.2	21.00			Average
			point678	678	3,694,451.2	688,104.9	21.00			Average
			point679	679	3,694,175.8	688,008.8	21.00			Average
			point680	680	3,693,939.8	687,926.2	21.00			Average
			point681	681	3,693,688.0	687,839.0	21.00			Average
			point682	682	3,693,626.0	687,810.8	21.00			Average
LA 1088 EB 3 Area 3 2 Lane-2-2	32.0		point780	780	3,695,596.2	688,532.5	21.00			Average
			point624	624	3,695,874.2	688,660.1	21.00			Average
			point625	625	3,696,175.2	688,797.5	21.00			Average
			point626	626	3,696,413.0	688,906.7	21.00			Average
			point627	627	3,696,627.5	689,004.0	21.00			Average
			point628	628	3,696,904.8	689,130.8	21.00			Average
			point629	629	3,697,127.5	689,232.5	21.00			Average
			point630	630	3,697,338.8	689,329.9	21.00			Average
			point631	631	3,697,522.8	689,416.8	21.00			Average
			point632	632	3,697,808.2	689,552.8	21.00			Average
			point633	633	3,698,093.2	689,690.5	21.00			Average
			point634	634	3,698,234.0	689,758.9	21.00			Average
			point635	635	3,698,508.8	689,888.9	21.00			Average
			point636	636	3,698,800.8	690,023.9	21.00			Average
			point637	637	3,699,077.0	690,151.6	21.00			
LA 1088 WB 3 Area 3 2 Lane-2	32.0		point781	781	3,695,589.0	688,573.7	21.00			Average
			point666	666	3,695,500.8	688,524.5	21.00			Average
			point667	667	3,695,450.0	688,500.6	21.00			Average
			point668	668	3,695,404.2	688,495.2	21.00			
LA 1088 EB 3 Area 3 2 Lane-2-2-2	32.0		point782	782	3,699,077.0	690,151.6	21.00			Average
			point638	638	3,699,163.8	690,196.8	21.00			Average
			point639	639	3,699,196.0	690,208.7	22.00			
LA 1088 WB 3 Area 3 2 Lane-2	32.0		point783	783	3,699,050.5	690,200.1	21.00			Average
			point652	652	3,698,780.2	690,073.8	21.00			Average
			point653	653	3,698,491.0	689,939.4	21.00			Average
			point654	654	3,698,210.8	689,803.8	21.00			Average
			point655	655	3,698,073.0	689,734.9	21.00			Average
			point656	656	3,697,790.0	689,594.7	21.00			Average

INPUT: ROADWAYS

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			point657	657	3,697,509.0	689,456.9	21.00			Average
			point658	658	3,697,324.0	689,368.2	21.00			Average
			point659	659	3,697,109.2	689,269.4	21.00			Average
			point660	660	3,696,888.2	689,167.0	21.00			Average
			point661	661	3,696,613.5	689,040.2	21.00			Average
			point662	662	3,696,396.2	688,941.9	21.00			Average
			point663	663	3,696,153.0	688,831.5	21.00			Average
			point664	664	3,695,857.5	688,695.7	21.00			Average
			point665	665	3,695,589.0	688,573.7	21.00			
LA 1088 EB 2 Area 1 1 Lane-2	20.0		point784	784	3,686,763.5	684,996.3	21.00			Average
			point312	312	3,686,791.0	684,996.3	21.00			Average
			point314	314	3,686,817.5	684,987.8	21.00			Average
			point315	315	3,686,849.8	684,997.6	21.00			Average
			point316	316	3,686,863.2	685,014.7	21.00			
LA 1088 WB 2 Area 1 1 Lane-2	20.0		point785	785	3,686,752.0	685,055.9	21.00			Average
			point338	338	3,686,697.5	685,027.1	21.00			Average
			point339	339	3,686,665.8	685,011.8	21.00			Average
			point340	340	3,686,515.5	684,938.2	21.00			Average
			point341	341	3,686,362.0	684,863.9	21.00			Average
			point342	342	3,686,344.5	684,849.6	21.00			
LA 1088 WB 2 Area 1 1 Lane-2	20.0		point786	786	3,686,877.0	685,082.9	21.00			Average
			point331	331	3,686,856.8	685,073.7	21.00			Average
			point332	332	3,686,845.8	685,082.9	21.00			Average
			point333	333	3,686,823.5	685,090.2	21.00			Average
			point334	334	3,686,811.2	685,089.0	21.00			Average
			point335	335	3,686,790.5	685,082.2	21.00			Average
			point336	336	3,686,778.8	685,071.8	21.00			Average
			point337	337	3,686,752.0	685,055.9	21.00			
LA 1088 EB 2 Area 1 1 Lane-2-2	20.0		point787	787	3,686,863.2	685,014.7	21.00			Average
			point317	317	3,686,963.8	685,102.3	21.00			Average
			point318	318	3,687,034.2	685,150.0	21.00			Average
			point319	319	3,687,120.8	685,196.0	21.00			Average
			point320	320	3,687,263.8	685,265.5	21.00			Average
			point321	321	3,687,364.8	685,315.1	21.00			Average
			point322	322	3,687,395.5	685,336.1	21.00			
LA 1088 EB 3 Area 1 1 Lane-2	20.0		point788	788	3,688,219.5	685,707.5	21.00			Average
			point369	369	3,688,254.8	685,710.9	21.00			Average
			point370	370	3,688,287.2	685,703.1	21.00			Average

LA 1088

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INPUT: ROADWAYS

LA 1088

LA 1088 EB 1 Area 3 1 Lane-2	20.0	point490	490	3,690,947.5	686,959.9	21.00				Average
		point796	796	3,692,484.8	687,399.9	21.00				Average
		point454	454	3,692,571.0	687,432.4	21.00				Average
		point455	455	3,692,683.0	687,473.1	21.00				Average
		point456	456	3,692,793.2	687,512.2	21.00				Average
		point457	457	3,692,839.8	687,538.1	21.00				
LA 1088 WB 1 Area 3 1 Lane-2	20.0	point797	797	3,692,493.8	687,445.2	21.00				Average
		point464	464	3,692,450.2	687,466.9	21.00				Average
		point465	465	3,692,437.0	687,483.3	21.00				Average
		point466	466	3,692,413.8	687,496.0	21.00				Average
		point467	467	3,692,381.8	687,498.2	21.00				
LA 1088 EB 2 Area 2 1 Lane-2-2-2	20.0	point798	798	3,692,294.0	687,383.6	21.00				Average
		point447	447	3,692,358.0	687,379.2	21.00				Average
		point448	448	3,692,378.2	687,368.6	21.00				Average
		point449	449	3,692,409.5	687,367.6	21.00				
LA 1088 WB 4 Area 2 1 Lane-2	20.0	point799	799	3,692,279.8	687,413.9	21.00				Average
		point473	473	3,692,236.0	687,378.6	21.00				Average
		point474	474	3,692,165.2	687,330.9	21.00				
LA 1088 EB 3 Area 3 2 Lane-2-2	32.0	point800	800	3,695,215.5	688,370.3	21.00				Average
		point616	616	3,695,276.0	688,360.9	21.00				Average
		point617	617	3,695,314.8	688,350.9	21.00				Average
		point618	618	3,695,351.8	688,352.4	21.00				Average
		point619	619	3,695,369.2	688,360.9	21.00				Average
		point620	620	3,695,389.0	688,378.8	21.00				Average
		point621	621	3,695,440.2	688,424.7	21.00				
LA 1088 WB 2 Area 3 1 Lane-2	12.0	point801	801	3,695,188.0	688,403.7	21.00				Average
		point675	675	3,695,095.8	688,347.1	21.00				
LA 1088 EB 3 Area 3 2 Lane-2-2-2	32.0	point802	802	3,695,440.2	688,424.7	21.00				Average
		point622	622	3,695,519.8	688,487.3	21.00				Average
		point623	623	3,695,596.2	688,532.5	21.00				
LA 1088 WB 3 Area 3 2 Lane-2-2	32.0	point803	803	3,695,404.2	688,495.2	21.00				Average
		point669	669	3,695,353.0	688,491.1	21.00				Average
		point670	670	3,695,303.2	688,482.2	21.00				
LA 1088 EB 3 Area 3 2 Lane-2-2-2-2	32.0	point804	804	3,699,196.0	690,208.7	22.00				Average
		point640	640	3,699,282.8	690,209.7	22.00				Average
		point641	641	3,699,310.0	690,212.9	24.00				Average
		point642	642	3,699,413.0	690,289.9	25.00				
LA 1088 WB 3 Area 3 2 Lane-2	32.0	point805	805	3,699,179.2	690,278.1	22.00				Average

INPUT: ROADWAYS

LA 1088

			point650	650	3,699,134.5	690,245.8	21.00			Average
			point651	651	3,699,050.5	690,200.1	21.00			
LA 1088 EB 3 Area 3 2 Lane-2-2-2-2	32.0		point806	806	3,699,413.0	690,289.9	25.00			Average
			point643	643	3,699,487.8	690,339.4	30.00			
LA 1088 WB 3 Area 3 2 Lane-2	32.0		point807	807	3,699,395.8	690,351.1	25.00			Average
			point646	646	3,699,326.8	690,348.4	24.00			Average
			point647	647	3,699,274.2	690,347.1	24.00			Average
			point648	648	3,699,248.2	690,335.4	23.00			Average
			point649	649	3,699,179.2	690,278.1	22.00			
LA 59 NB S of LA 1088 2 2 Lane-2	24.0		point808	808	3,684,047.8	683,690.2	21.00			Average
			point266	266	3,684,127.0	683,774.9	21.00			Average
			point267	267	3,684,152.5	683,800.9	21.00			
LA 59 SB S of LA 1088 1 2 Lane-2	24.0		point809	809	3,684,010.2	683,696.6	21.00			Average
			point288	288	3,683,993.2	683,623.1	21.00			Average
			point289	289	3,683,969.8	683,551.4	21.00			Average
			point290	290	3,683,928.5	683,458.6	21.00			Average
			point291	291	3,683,808.8	683,247.5	21.00			Average
			point292	292	3,683,708.2	683,067.5	21.00			Average
			point293	293	3,683,624.8	682,918.1	21.00			Average
			point294	294	3,683,597.2	682,835.0	21.00			
LA 59 SB N of LA 1088 1 2 Lane-2	24.0		point810	810	3,684,092.5	683,966.2	21.00			Average
			point283	283	3,684,052.0	683,898.4	21.00			Average
			point284	284	3,684,024.5	683,848.6	21.00			Average
			point285	285	3,684,022.0	683,819.9	21.00			
LA 59 NB N of LA 1088 1 1 Lane-2	12.0		point811	811	3,684,121.8	683,980.6	21.00			Average
			point273	273	3,684,118.8	684,062.8	21.00			Average
			point274	274	3,684,125.0	684,128.2	21.00			Average
			point275	275	3,684,139.2	684,204.8	21.00			Average
			point276	276	3,684,142.8	684,260.9	21.00			

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT:
RUN:

LA 1088
Build Alt 1 AM Peak 2033

Roadway		Points													
Name		No.		Segment											
				Autos		MTrucks		HTTrucks		Buses		Motorcycles			
		V	S	V	S	V	S	V	S	V	S	V	S		
		veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph		
Garon Dr Comb 1 2 Lane	point100	100	104	25	6	25	0	0	28	25	1	25			
	point101	101													
Jackson St Comb 2 Lane	point106	106	32	25	4	25	0	0	16	25	0	0			
	point107	107													
I-12 EB OnRamp 1 Lane	point162	162	282	35	5	35	2	35	55	35	1	35			
	point163	163	282	35	5	35	2	35	55	35	1	35			
	point164	164	282	35	5	35	2	35	55	35	1	35			
	point165	165	282	35	5	35	2	35	55	35	1	35			
	point166	166	282	35	5	35	2	35	55	35	1	35			
	point167	167	282	35	5	35	2	35	55	35	1	35			
	point168	168	282	35	5	35	2	35	55	35	1	35			
	point169	169	282	35	5	35	2	35	55	35	1	35			
	point170	170	282	35	5	35	2	35	55	35	1	35			
	point171	171	282	35	5	35	2	35	55	35	1	35			
	point172	172	282	35	5	35	2	35	55	35	1	35			
	point173	173	282	35	5	35	2	35	55	35	1	35			
	point174	174	282	35	5	35	2	35	55	35	1	35			
	point175	175	282	35	5	35	2	35	55	35	1	35			
	point176	176	282	35	5	35	2	35	55	35	1	35			
	point177	177	282	35	5	35	2	35	55	35	1	35			
	point178	178	282	35	5	35	2	35	55	35	1	35			
	point179	179	282	35	5	35	2	35	55	35	1	35			

C:\Noise Projects\LA 1088 Noise\Runs\Build\Build Alt 1 AM Peak

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point180	180	282	35	5	35	2	35	55	35	1	35
	point181	181	282	35	5	35	2	35	55	35	1	35
	point182	182	282	35	5	35	2	35	55	35	1	35
	point183	183	282	35	5	35	2	35	55	35	1	35
	point184	184	282	35	5	35	2	35	55	35	1	35
	point185	185	282	35	5	35	2	35	55	35	1	35
	point186	186	282	35	5	35	2	35	55	35	1	35
	point187	187	282	35	5	35	2	35	55	35	1	35
	point188	188	282	35	5	35	2	35	55	35	1	35
	point189	189										
LA 59 S of LA 1088 1	point1218	218	1697	45	90	45	21	45	309	45	28	45
	point1219	219	1697	45	90	45	21	45	309	45	28	45
	point1220	220	1697	45	90	45	21	45	309	45	28	45
	point1221	221	1697	45	90	45	21	45	309	45	28	45
	point1222	222	1697	45	90	45	21	45	309	45	28	45
	point1223	223	1697	45	90	45	21	45	309	45	28	45
	point1224	224										
	point1243	243	677	45	63	45	6	45	395	45	9	45
	point7	7	677	45	63	45	6	45	395	45	9	45
	point8	8	677	45	63	45	6	45	395	45	9	45
	point9	9	677	45	63	45	6	45	395	45	9	45
	point10	10	677	45	63	45	6	45	395	45	9	45
	point11	11	677	45	63	45	6	45	395	45	9	45
	point12	12	677	45	63	45	6	45	395	45	9	45
	point13	13										
LA 1088 Comb 2 Area 1 2 Lane	point245	245	677	45	63	45	6	45	395	45	9	45
	point18	18	677	45	63	45	6	45	395	45	9	45
	point19	19										
LA 1088 Comb 1 Area 3 2 Lane	point250	250	914	45	66	45	12	45	311	45	4	45
	point39	39	914	45	66	45	12	45	311	45	4	45
	point40	40	914	45	66	45	12	45	311	45	4	45
	point41	41	914	45	66	45	12	45	311	45	4	45
	point251	251										
LA 59 N of LA 1088 1	point255	255	1087	45	94	45	87	45	397	45	12	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point235	235	1087	45	94	45	87	45	397	45	12	45
	point236	236	1087	45	94	45	87	45	397	45	12	45
	point237	237	1087	45	94	45	87	45	397	45	12	45
	point238	238	1087	45	94	45	87	45	397	45	12	45
	point239	239	1087	45	94	45	87	45	397	45	12	45
	point240	240	1087	45	94	45	87	45	397	45	12	45
	point241	241	1087	45	94	45	87	45	397	45	12	45
	point242	242										
LA 59 NB S of LA 1088 1 1 Lane	point257	257	925	45	49	45	12	45	168	45	15	45
	point258	258	925	45	49	45	12	45	168	45	15	45
	point259	259	925	45	49	45	12	45	168	45	15	45
	point260	260										
LA 59 NB S of LA 1088 2 2 Lane	point261	261	925	45	49	45	12	45	168	45	15	45
	point262	262	925	45	49	45	12	45	168	45	15	45
	point263	263	925	45	49	45	12	45	168	45	15	45
	point264	264	925	45	49	45	12	45	168	45	15	45
	point265	265										
LA 59 NB N of LA 1088 1 1 Lane	point268	268	494	15	43	15	40	15	181	15	5	15
	point269	269	494	15	43	15	40	15	181	15	5	15
	point270	270	494	15	43	15	40	15	181	15	5	15
	point271	271	494	15	43	15	40	15	181	15	5	15
	point272	272										
LA 59 SB N of LA 1088 1 2 Lane	point277	277	592	45	51	45	48	45	217	45	6	45
	point278	278	592	45	51	45	48	45	217	45	6	45
	point279	279	592	45	51	45	48	45	217	45	6	45
	point280	280	592	45	51	45	48	45	217	45	6	45
	point281	281	592	45	51	45	48	45	217	45	6	45
	point282	282										
LA 59 SB S of LA 1088 1 2 Lane	point286	286	772	15	41	15	10	15	141	15	13	15
	point287	287										
	point295	295	369	45	34	45	3	45	215	45	5	45
	point296	296	369	45	34	45	3	45	215	45	5	45
	point297	297	369	45	34	45	3	45	215	45	5	45
	point298	298	369	45	34	45	3	45	215	45	5	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point356	356	57	25	3	25	0	0	15	25	0	0
	point357	357										
Garon Dr SB 1 Lane	point358	358	47	25	3	25	0	0	13	25	0	0
	point359	359	47	25	3	25	0	0	13	25	0	0
	point360	360	47	25	3	25	0	0	13	25	0	0
	point361	361	47	25	3	25	0	0	13	25	0	0
	point362	362	47	25	3	25	0	0	13	25	0	0
	point363	363										
LA 1088 EB 3 Area 1 1 Lane	point365	365	369	45	34	45	3	45	215	45	5	45
	point366	366	369	45	34	45	3	45	215	45	5	45
	point367	367	369	45	34	45	3	45	215	45	5	45
	point368	368										
LA 1088 EB 1 Area 2 1 Lane	point373	373	414	15	15	15	7	15	173	15	10	15
	point374	374	414	15	15	15	7	15	173	15	10	15
	point375	375										
LA 1088 WB 1 Area 2 2 Lane	point382	382	296	45	10	45	5	45	124	45	7	45
	point383	383	296	45	10	45	5	45	124	45	7	45
	point384	384	296	45	10	45	5	45	124	45	7	45
	point385	385	296	45	10	45	5	45	124	45	7	45
	point386	386	296	45	10	45	5	45	124	45	7	45
	point387	387	296	45	10	45	5	45	124	45	7	45
	point388	388										
LA 1088 WB 3 Area 2 1 Lane	point391	391	308	15	29	15	3	15	180	15	4	15
	point392	392	308	15	29	15	3	15	180	15	4	15
	point393	393	308	15	29	15	3	15	180	15	4	15
	point394	394	308	15	29	15	3	15	180	15	4	15
	point395	395										
Spring Blvd NB 1 Lane	point399	399	93	20	6	20	0	0	37	20	1	20
	point400	400	93	20	6	20	0	0	37	20	1	20
	point401	401	93	20	6	20	0	0	37	20	1	20
	point402	402										
Spring Blvd SB 1 Lane	point403	403	72	20	4	20	0	0	29	20	1	20
	point404	404	72	20	4	20	0	0	29	20	1	20
	point405	405	72	20	4	20	0	0	29	20	1	20

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point471	471	296	15	10	15	5	15	124	15	7	15
	point472	472										
LA 1088 WB 3 Area 2 2 Lane	point482	482	296	45	10	45	5	45	124	45	7	45
	point483	483										
LA 1088 WB 2 Area 2 1 Lane	point491	491	296	15	10	15	5	15	124	15	7	15
	point492	492										
Soult St Comb 2 Lane	point500	500	517	25	48	25	5	25	210	25	4	25
	point501	501										
Soult St NB 2 Lane	point502	502	277	25	26	25	3	25	113	25	2	25
	point503	503	277	25	26	25	3	25	113	25	2	25
	point504	504	277	25	26	25	3	25	113	25	2	25
	point505	505	277	25	26	25	3	25	113	25	2	25
	point506	506	277	25	26	25	3	25	113	25	2	25
	point507	507	277	25	26	25	3	25	113	25	2	25
	point508	508	277	25	26	25	3	25	113	25	2	25
	point509	509										
Soult St SB 1 Lane	point510	510	198	25	18	25	2	25	81	25	2	25
	point511	511	198	25	18	25	2	25	81	25	2	25
	point512	512	198	25	18	25	2	25	81	25	2	25
	point513	513	198	25	18	25	2	25	81	25	2	25
	point514	514	198	25	18	25	2	25	81	25	2	25
	point515	515	198	25	18	25	2	25	81	25	2	25
	point516	516										
Viola St NB 1 Lane	point517	517	35	25	1	25	0	0	54	25	0	0
	point518	518	35	25	1	25	0	0	54	25	0	0
	point519	519	35	25	1	25	0	0	54	25	0	0
	point520	520										
Viola St Comb 2 Lane	point521	521	91	25	2	25	0	0	140	25	0	0
	point522	522	91	25	2	25	0	0	140	25	0	0
	point523	523	91	25	2	25	0	0	140	25	0	0
	point524	524	91	25	2	25	0	0	140	25	0	0
	point525	525	91	25	2	25	0	0	140	25	0	0
	point526	526										
Viola St SB 1 Lane	point527	527	49	25	1	25	0	0	75	25	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point528	528	49	25	1	25	0	0	75	25	0	0
	point529	529	49	25	1	25	0	0	75	25	0	0
	point530	530	49	25	1	25	0	0	75	25	0	0
	point531	531	49	25	1	25	0	0	75	25	0	0
	point532	532										
Trinity Dr NB 2 Lane	point533	533	123	20	2	20	0	0	19	20	7	20
	point534	534	123	20	2	20	0	0	19	20	7	20
	point535	535	123	20	2	20	0	0	19	20	7	20
	point536	536	123	20	2	20	0	0	19	20	7	20
	point537	537										
Trinity Dr SB 1 Lane	point538	538	75	20	1	20	0	0	12	20	4	20
	point539	539	75	20	1	20	0	0	12	20	4	20
	point540	540	75	20	1	20	0	0	12	20	4	20
	point541	541										
	point273	552	231	55	13	55	3	55	79	55	2	55
LA 1088 WB 3 BT Bridges 2 Lane	point272	553	231	55	13	55	3	55	79	55	2	55
	point271	554	231	55	13	55	3	55	79	55	2	55
	point270	555	231	55	13	55	3	55	79	55	2	55
	point269	556	231	55	13	55	3	55	79	55	2	55
	point268	557	231	55	13	55	3	55	79	55	2	55
	point267	558	231	55	13	55	3	55	79	55	2	55
	point266	559	231	55	13	55	3	55	79	55	2	55
	point265	560	231	55	13	55	3	55	79	55	2	55
	point264	561	231	55	13	55	3	55	79	55	2	55
	point263	562	231	55	13	55	3	55	79	55	2	55
LA 1088 EB 1 BT Bridges 2 Lane	point262	563										
	point65	583	377	55	21	55	4	55	128	55	4	55
	point66	584	377	55	21	55	4	55	128	55	4	55
	point770	770	377	55	21	55	4	55	128	55	4	55
	point67	585	377	55	21	55	4	55	128	55	4	55
	point68	586	377	55	21	55	4	55	128	55	4	55
	point771	771	377	55	21	55	4	55	128	55	4	55
	point69	587	377	55	21	55	4	55	128	55	4	55
	point70	588										

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LA 1088

LA 1088 EB 2 Area 3 1 Lane	point602	602	566	45	41	45	7	45	193	45	2	45
	point603	603	566	45	41	45	7	45	193	45	2	45
	point604	604	566	45	41	45	7	45	193	45	2	45
	point605	605	566	45	41	45	7	45	193	45	2	45
	point606	606										
LA 1088 EB 3 Area 3 2 Lane	point609	609	566	45	41	45	7	45	193	45	2	45
	point610	610	566	45	41	45	7	45	193	45	2	45
	point611	611	566	45	41	45	7	45	193	45	2	45
	point612	612	566	45	41	45	7	45	193	45	2	45
	point613	613										
LA 1088 WB 3 Area 3 2 Lane	point644	644	347	55	25	55	5	55	118	55	2	55
	point645	645										
LA 1088 WB 2 Area 3 1 Lane	point671	671	347	15	25	15	5	15	118	15	2	15
	point672	672	347	15	25	15	5	15	118	15	2	15
	point673	673	347	15	25	15	5	15	118	15	2	15
	point674	674										
Forest Brook Blvd Comb 2 Lane	point683	683	400	20	9	20	3	20	66	20	1	20
	point684	684										
Forest Brook Blvd NB 2 Lane	point685	685	211	20	5	20	2	20	35	20	1	20
	point686	686	211	20	5	20	2	20	35	20	1	20
	point687	687	211	20	5	20	2	20	35	20	1	20
	point688	688	211	20	5	20	2	20	35	20	1	20
	point689	689	211	20	5	20	2	20	35	20	1	20
	point690	690	211	20	5	20	2	20	35	20	1	20
	point691	691										
Forest Brook Blvd SB 1 Lane	point692	692	129	20	3	20	1	20	21	20	0	0
	point693	693	129	20	3	20	1	20	21	20	0	0
	point694	694	129	20	3	20	1	20	21	20	0	0
	point695	695	129	20	3	20	1	20	21	20	0	0
	point696	696	129	20	3	20	1	20	21	20	0	0
	point697	697										
I-12 EB OffRamp 1 1 Lane	point698	698	325	35	5	35	2	35	63	35	2	35
	point699	699	325	35	5	35	2	35	63	35	2	35
	point700	700	325	35	5	35	2	35	63	35	2	35

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	point701	701	325	35	5	35	2	35	63	35	2	35
	point702	702	325	35	5	35	2	35	63	35	2	35
	point703	703	325	35	5	35	2	35	63	35	2	35
	point704	704	325	35	5	35	2	35	63	35	2	35
	point705	705	325	35	5	35	2	35	63	35	2	35
	point706	706	325	35	5	35	2	35	63	35	2	35
	point707	707	325	35	5	35	2	35	63	35	2	35
	point708	708	325	35	5	35	2	35	63	35	2	35
	point709	709	325	35	5	35	2	35	63	35	2	35
	point710	710	325	35	5	35	2	35	63	35	2	35
	point711	711										
I-12 EB OffRamp 2 2 Lane	point712	712	325	35	5	35	2	35	63	35	2	35
	point713	713	325	35	5	35	2	35	63	35	2	35
	point714	714										
I-12 EB OffRamp 4 1 Lane	point715	715	174	35	3	35	1	35	34	35	1	35
	point716	716	174	35	3	35	1	35	34	35	1	35
	point717	717	174	35	3	35	1	35	34	35	1	35
	point718	718	174	35	3	35	1	35	34	35	1	35
	point719	719										
I-12 EB OffRamp 3 1 Lane	point720	720	125	35	2	35	1	35	24	35	1	35
	point721	721	125	35	2	35	1	35	24	35	1	35
	point722	722										
I-12 WB OffRamp 1 Lane	point723	723	177	35	54	35	3	35	31	35	1	35
	point724	724	177	35	54	35	3	35	31	35	1	35
	point725	725	177	35	54	35	3	35	31	35	1	35
	point726	726	177	35	54	35	3	35	31	35	1	35
	point727	727	177	35	54	35	3	35	31	35	1	35
	point728	728	177	35	54	35	3	35	31	35	1	35
	point729	729	177	35	54	35	3	35	31	35	1	35
	point730	730	177	35	54	35	3	35	31	35	1	35
	point731	731	177	35	54	35	3	35	31	35	1	35
	point732	732	177	35	54	35	3	35	31	35	1	35
	point733	733	177	35	54	35	3	35	31	35	1	35
	point734	734	177	35	54	35	3	35	31	35	1	35

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point735	735	177	35	54	35	3	35	31	35	1	35
point736	736	177	35	54	35	3	35	31	35	1	35
point737	737	177	35	54	35	3	35	31	35	1	35
point738	738										
LA 1088 EB 2 Lane Past I-12 OffRamp	point740	740	377	55	21	55	55	128	55	4	55
	point73	591	377	55	21	55	55	128	55	4	55
	point74	592	377	55	21	55	55	128	55	4	55
	point75	593	377	55	21	55	55	128	55	4	55
	point76	594	377	55	21	55	55	128	55	4	55
	point77	595	377	55	21	55	55	128	55	4	55
	point78	596	377	55	21	55	55	128	55	4	55
	point79	597	377	55	21	55	55	128	55	4	55
	point80	598	377	55	21	55	55	128	55	4	55
	point81	599	377	55	21	55	55	128	55	4	55
	point82	600	377	55	21	55	55	128	55	4	55
	point83	601									
LA 1088 WB 1 BT Bridges 2 Lane	point741	741	231	55	13	55	55	79	55	2	55
	point259	566	231	55	13	55	55	79	55	2	55
	point772	772	231	55	13	55	55	79	55	2	55
	point258	567	231	55	13	55	55	79	55	2	55
	point257	568	231	55	13	55	55	79	55	2	55
	point773	773	231	55	13	55	55	79	55	2	55
	point256	569	231	55	13	55	55	79	55	2	55
	point255	570									
LA 1088 EB 2 BT Bridges 2 Lane	point748	748	377	15	21	15	15	128	15	4	15
	point749	749	377	15	21	15	15	128	15	4	15
	point750	750	377	15	21	15	15	128	15	4	15
	point751	751	377	15	21	15	15	128	15	4	15
	point752	752	377	15	21	15	15	128	15	4	15
	point753	753	377	15	21	15	15	128	15	4	15
	point754	754	377	15	21	15	15	128	15	4	15
	point755	755	377	15	21	15	15	128	15	4	15
	point756	756	377	15	21	15	15	128	15	4	15
	point757	757									

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LA 1088 WB 2 BT Bridges 2 Lane	point758	758	231	15	13	15	3	15	79	15	2	15
	point759	759	231	15	13	15	3	15	79	15	2	15
	point760	760	231	15	13	15	3	15	79	15	2	15
	point761	761	231	15	13	15	3	15	79	15	2	15
	point762	762	231	15	13	15	3	15	79	15	2	15
	point763	763	231	15	13	15	3	15	79	15	2	15
	point764	764	231	15	13	15	3	15	79	15	2	15
	point765	765	231	15	13	15	3	15	79	15	2	15
	point766	766	231	15	13	15	3	15	79	15	2	15
	point767	767										
LA 1088 Comb 1 Area 2 2 Lane	point247	247	710	45	25	45	12	45	297	45	17	45
	point24	24	710	45	25	45	12	45	297	45	17	45
	point25	25	710	45	25	45	12	45	297	45	17	45
	point419	419	710	45	25	45	12	45	297	45	17	45
	point420	420	710	45	25	45	12	45	297	45	17	45
	point421	421	710	45	25	45	12	45	297	45	17	45
	point422	422	710	45	25	45	12	45	297	45	17	45
	point423	423										
School Comb 2 Lane	point768	768	48	25	2	25	0	0	16	25	0	0
	point364	364	48	25	2	25	0	0	16	25	0	0
	point135	135										
LA 1088 EB 2 Area 2 1 Lane-2	point774	774	414	45	15	45	7	45	173	45	10	45
	point438	438	414	45	15	45	7	45	173	45	10	45
	point439	439	414	45	15	45	7	45	173	45	10	45
	point440	440	414	45	15	45	7	45	173	45	10	45
	point441	441	414	45	15	45	7	45	173	45	10	45
	point442	442	414	45	15	45	7	45	173	45	10	45
	point443	443	414	45	15	45	7	45	173	45	10	45
	point444	444										
LA 1088 WB 3 Area 2 2 Lane-2	point775	775	296	45	10	45	5	45	124	45	7	45
	point484	484										
LA 1088 EB 2 Area 2 1 Lane-2-2	point776	776	414	45	15	45	7	45	173	45	10	45
	point445	445	414	45	15	45	7	45	173	45	10	45
	point446	446										

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LA 1088 WB 4 Area 2 1 Lane-2	point777	777	296	45	10	45	5	45	124	45	7	45
	point475	475	296	45	10	45	5	45	124	45	7	45
	point476	476	296	45	10	45	5	45	124	45	7	45
	point477	477	296	45	10	45	5	45	124	45	7	45
	point478	478	296	45	10	45	5	45	124	45	7	45
	point479	479	296	45	10	45	5	45	124	45	7	45
	point480	480	296	45	10	45	5	45	124	45	7	45
	point481	481										
LA 1088 EB 3 Area 3 2 Lane-2	point778	778	566	45	41	45	7	45	193	45	2	45
	point614	614	566	45	41	45	7	45	193	45	2	45
	point615	615										
LA 1088 WB 2 Area 3 1 Lane-2	point779	779	347	45	25	45	5	45	118	45	2	45
	point676	676	347	45	25	45	5	45	118	45	2	45
	point677	677	347	45	25	45	5	45	118	45	2	45
	point678	678	347	45	25	45	5	45	118	45	2	45
	point679	679	347	45	25	45	5	45	118	45	2	45
	point680	680	347	45	25	45	5	45	118	45	2	45
	point681	681	347	45	25	45	5	45	118	45	2	45
	point682	682										
LA 1088 EB 3 Area 3 2 Lane-2-2	point780	780	566	55	41	55	7	55	193	55	2	55
	point624	624	566	55	41	55	7	55	193	55	2	55
	point625	625	566	55	41	55	7	55	193	55	2	55
	point626	626	566	55	41	55	7	55	193	55	2	55
	point627	627	566	55	41	55	7	55	193	55	2	55
	point628	628	566	55	41	55	7	55	193	55	2	55
	point629	629	566	55	41	55	7	55	193	55	2	55
	point630	630	566	55	41	55	7	55	193	55	2	55
	point631	631	566	55	41	55	7	55	193	55	2	55
	point632	632	566	55	41	55	7	55	193	55	2	55
	point633	633	566	55	41	55	7	55	193	55	2	55
	point634	634	566	55	41	55	7	55	193	55	2	55
	point635	635	566	55	41	55	7	55	193	55	2	55
	point636	636	566	55	41	55	7	55	193	55	2	55
	point637	637										

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LA 1088 WB 3 Area 3 2 Lane-2	point781	781	347	45	25	45	5	45	118	45	2	45
	point666	666	347	45	25	45	5	45	118	45	2	45
	point667	667	347	45	25	45	5	45	118	45	2	45
	point668	668										
LA 1088 EB 3 Area 3 2 Lane-2-2	point782	782	566	55	41	55	7	55	193	55	2	55
	point638	638	566	55	41	55	7	55	193	55	2	55
	point639	639										
LA 1088 WB 3 Area 3 2 Lane-2	point783	783	347	55	25	55	5	55	118	55	2	55
	point652	652	347	55	25	55	5	55	118	55	2	55
	point653	653	347	55	25	55	5	55	118	55	2	55
	point654	654	347	55	25	55	5	55	118	55	2	55
	point655	655	347	55	25	55	5	55	118	55	2	55
	point656	656	347	55	25	55	5	55	118	55	2	55
	point657	657	347	55	25	55	5	55	118	55	2	55
	point658	658	347	55	25	55	5	55	118	55	2	55
	point659	659	347	55	25	55	5	55	118	55	2	55
	point660	660	347	55	25	55	5	55	118	55	2	55
	point661	661	347	55	25	55	5	55	118	55	2	55
	point662	662	347	55	25	55	5	55	118	55	2	55
	point663	663	347	55	25	55	5	55	118	55	2	55
	point664	664	347	55	25	55	5	55	118	55	2	55
	point665	665										
LA 1088 EB 2 Area 1 1 Lane-2	point784	784	369	15	34	15	3	15	215	15	5	15
	point312	312	369	15	34	15	3	15	215	15	5	15
	point314	314	369	15	34	15	3	15	215	15	5	15
	point315	315	369	15	34	15	3	15	215	15	5	15
	point316	316										
LA 1088 WB 2 Area 1 1 Lane-2	point785	785	308	45	29	45	3	45	180	45	4	45
	point338	338	308	45	29	45	3	45	180	45	4	45
	point339	339	308	45	29	45	3	45	180	45	4	45
	point340	340	308	45	29	45	3	45	180	45	4	45
	point341	341	308	45	29	45	3	45	180	45	4	45
	point342	342										
LA 1088 WB 2 Area 1 1 Lane-2	point786	786	308	15	29	15	3	15	180	15	4	15

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	point331	331	308	15	29	15	3	15	180	15	4	15
	point332	332	308	15	29	15	3	15	180	15	4	15
	point333	333	308	15	29	15	3	15	180	15	4	15
	point334	334	308	15	29	15	3	15	180	15	4	15
	point335	335	308	15	29	15	3	15	180	15	4	15
	point336	336	308	15	29	15	3	15	180	15	4	15
	point337	337										
LA 1088 EB 2 Area 1 1 Lane-2-2	point787	787	369	45	34	45	3	45	215	45	5	45
	point317	317	369	45	34	45	3	45	215	45	5	45
	point318	318	369	45	34	45	3	45	215	45	5	45
	point319	319	369	45	34	45	3	45	215	45	5	45
	point320	320	369	45	34	45	3	45	215	45	5	45
	point321	321	369	45	34	45	3	45	215	45	5	45
	point322	322										
LA 1088 EB 3 Area 1 1 Lane-2	point788	788	369	15	34	15	3	15	215	15	5	15
	point369	369	369	15	34	15	3	15	215	15	5	15
	point370	370	369	15	34	15	3	15	215	15	5	15
	point371	371	369	15	34	15	3	15	215	15	5	15
	point372	372										
LA 1088 WB 3 Area 2 1 Lane-2	point789	789	308	45	29	45	3	45	180	45	4	45
	point396	396	308	45	29	45	3	45	180	45	4	45
	point397	397	308	45	29	45	3	45	180	45	4	45
	point398	398										
LA 1088 EB 1 Area 2 1 Lane-2	point790	790	414	45	15	45	7	45	173	45	10	45
	point376	376	414	45	15	45	7	45	173	45	10	45
	point377	377	414	45	15	45	7	45	173	45	10	45
	point378	378	414	45	15	45	7	45	173	45	10	45
	point379	379	414	45	15	45	7	45	173	45	10	45
	point380	380	414	45	15	45	7	45	173	45	10	45
	point381	381										
LA 1088 WB 1 Area 2 2 Lane-2	point791	791	296	15	10	15	5	15	124	15	7	15
	point389	389	296	15	10	15	5	15	124	15	7	15
	point390	390										
LA 1088 EB 2 Area 2 1 Lane-2	point792	792	414	15	15	15	7	15	173	15	10	15

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LA 1088 WB 2 Area 2 1 Lane-2	point432	432	414	15	15	15	7	15	173	15	10	15
	point433	433	414	15	15	15	7	15	173	15	10	15
	point434	434	414	15	15	15	7	15	173	15	10	15
	point435	435	414	15	15	15	7	15	173	15	10	15
	point436	436										
	point793	793	296	45	10	45	5	45	124	45	7	45
	point493	493	296	45	10	45	5	45	124	45	7	45
	point494	494	296	45	10	45	5	45	124	45	7	45
	point495	495	296	45	10	45	5	45	124	45	7	45
	point496	496	296	45	10	45	5	45	124	45	7	45
	point497	497	296	45	10	45	5	45	124	45	7	45
	point498	498	296	45	10	45	5	45	124	45	7	45
LA 1088 EB 2 Area 2 1 Lane-2-2	point499	499										
	point794	794	414	45	15	45	7	45	173	45	10	45
	point437	437										
	point795	795	296	15	10	15	5	15	124	15	7	15
	point485	485	296	15	10	15	5	15	124	15	7	15
	point486	486	296	15	10	15	5	15	124	15	7	15
	point487	487	296	15	10	15	5	15	124	15	7	15
	point488	488	296	15	10	15	5	15	124	15	7	15
	point489	489	296	15	10	15	5	15	124	15	7	15
	point490	490										
	point796	796	566	45	41	45	7	45	193	45	2	45
	point454	454	566	45	41	45	7	45	193	45	2	45
LA 1088 EB 1 Area 3 1 Lane-2	point455	455	566	45	41	45	7	45	193	45	2	45
	point456	456	566	45	41	45	7	45	193	45	2	45
	point457	457										
	point797	797	347	15	25	15	5	15	118	15	2	15
	point464	464	347	15	25	15	5	15	118	15	2	15
	point465	465	347	15	25	15	5	15	118	15	2	15
LA 1088 WB 1 Area 3 1 Lane-2	point466	466	347	15	25	15	5	15	118	15	2	15
	point467	467										
	point798	798	414	15	15	15	7	15	173	15	10	15
	point447	447	414	15	15	15	7	15	173	15	10	15

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LA 1088

	point448	448	414	15	15	15	7	15	173	15	10	15
	point449	449										
LA 1088 WB 4 Area 2 1 Lane-2	point799	799	296	45	10	45	5	45	124	45	7	45
	point473	473	296	45	10	45	5	45	124	45	7	45
	point474	474										
LA 1088 EB 3 Area 3 2 Lane-2-2	point800	800	566	15	41	15	7	15	193	15	2	15
	point616	616	566	15	41	15	7	15	193	15	2	15
	point617	617	566	15	41	15	7	15	193	15	2	15
	point618	618	566	15	41	15	7	15	193	15	2	15
	point619	619	566	15	41	15	7	15	193	15	2	15
	point620	620	566	15	41	15	7	15	193	15	2	15
	point621	621										
LA 1088 WB 2 Area 3 1 Lane-2	point801	801	347	45	25	45	5	45	118	45	2	45
	point675	675										
LA 1088 EB 3 Area 3 2 Lane-2-2-2	point802	802	566	45	41	45	7	45	193	45	2	45
	point622	622	566	45	41	45	7	45	193	45	2	45
	point623	623										
LA 1088 WB 3 Area 3 2 Lane-2-2	point803	803	347	15	25	15	5	15	118	15	2	15
	point669	669	347	15	25	15	5	15	118	15	2	15
	point670	670										
LA 1088 EB 3 Area 3 2 Lane-2-2-2-2	point804	804	566	15	41	15	7	15	193	15	2	15
	point640	640	566	15	41	15	7	15	193	15	2	15
	point641	641	566	15	41	15	7	15	193	15	2	15
	point642	642										
LA 1088 WB 3 Area 3 2 Lane-2	point805	805	347	55	25	55	5	55	118	55	2	55
	point650	650	347	55	25	55	5	55	118	55	2	55
	point651	651										
LA 1088 EB 3 Area 3 2 Lane-2-2-2-2-2	point806	806	566	55	41	55	7	55	193	55	2	55
	point643	643										
LA 1088 WB 3 Area 3 2 Lane-2	point807	807	347	15	25	15	5	15	118	15	2	15
	point646	646	347	15	25	15	5	15	118	15	2	15
	point647	647	347	15	25	15	5	15	118	15	2	15
	point648	648	347	15	25	15	5	15	118	15	2	15
	point649	649										

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LA 1088

LA 59 NB S of LA 1088 2 2 Lane-2	point808	808	925	15	49	15	12	15	15	168	15	15	15
	point266	266	925	15	49	15	12	15	15	168	15	15	15
	point267	267											
LA 59 SB S of LA 1088 1 2 Lane-2	point809	809	772	45	41	45	10	45	45	141	45	13	45
	point288	288	772	45	41	45	10	45	45	141	45	13	45
	point289	289	772	45	41	45	10	45	45	141	45	13	45
	point290	290	772	45	41	45	10	45	45	141	45	13	45
	point291	291	772	45	41	45	10	45	45	141	45	13	45
	point292	292	772	45	41	45	10	45	45	141	45	13	45
	point293	293	772	45	41	45	10	45	45	141	45	13	45
	point294	294											
LA 59 SB N of LA 1088 1 2 Lane-2	point810	810	592	15	51	15	48	15	15	217	15	6	15
	point283	283	592	15	51	15	48	15	15	217	15	6	15
	point284	284	592	15	51	15	48	15	15	217	15	6	15
	point285	285											
LA 59 NB N of LA 1088 1 1 Lane-2	point811	811	494	45	43	45	40	45	45	181	45	5	45
	point273	273	494	45	43	45	40	45	45	181	45	5	45
	point274	274	494	45	43	45	40	45	45	181	45	5	45
	point275	275	494	45	43	45	40	45	45	181	45	5	45
	point276	276											

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30 July 2015
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PROJECT/CONTRACT:

LA 1088

RUN: Build Alt 1 AM Peak 2033

Receiver

Name	No.	#DUs	Coordinates (ground)			Height above Ground	Input Sound Levels and Criteria				Active in Calc.
			X	Y	Z		Existing LAeq1h	Impact Criteria LAeq1h	Sub'I	NR Goal	
			ft	ft	ft	ft	dBA	dBA		dB	
Res 1	4	1	3,683,441.2	682,376.4		21.00	4.92	67.70	66	10.0	8.0
Res 2	5	1	3,683,468.2	682,470.8		21.00	4.92	69.10	66	10.0	8.0
Res 3	6	1	3,683,608.2	682,712.8		21.00	4.92	69.00	66	10.0	8.0
Res 4	7	1	3,683,723.2	682,831.0		21.00	4.92	66.90	66	10.0	8.0
Res 5	8	6	3,683,805.8	682,796.2		21.00	4.92	61.70	66	10.0	8.0
Res 6	9	6	3,683,965.2	682,871.1		21.00	4.92	57.30	66	10.0	8.0
Res 7	10	3	3,684,131.2	682,918.9		21.00	4.92	53.60	66	10.0	8.0
Res 8	11	1	3,683,886.5	683,064.1		21.00	4.92	64.70	66	10.0	8.0
Res 9	12	1	3,683,868.8	683,216.2		21.00	4.92	70.60	66	10.0	8.0
Res 10	13	1	3,683,920.8	683,168.4		21.00	4.92	66.60	66	10.0	8.0
Res 11	14	1	3,683,955.5	683,326.9		21.00	4.92	69.00	66	10.0	8.0
Res 25	28	1	3,684,467.8	683,922.0		21.00	4.92	69.50	66	10.0	8.0
Res 26	29	1	3,684,829.8	683,931.1		21.00	4.92	59.10	66	10.0	8.0
Res 27	30	1	3,685,046.0	683,969.3		21.00	4.92	56.50	66	10.0	8.0
Res 28	31	1	3,685,117.0	683,892.1		21.00	4.92	53.40	66	10.0	8.0
Res 29	32	1	3,685,153.5	683,813.9		21.00	4.92	51.60	66	10.0	8.0
Res 30	33	1	3,685,276.5	684,122.5		21.00	4.92	58.20	66	10.0	8.0
Res 31	34	1	3,685,658.0	684,432.4		21.00	4.92	67.00	66	10.0	8.0
Res 32	35	1	3,685,928.8	684,186.3		21.00	4.92	51.40	66	10.0	8.0
Res 33	36	1	3,686,452.2	684,726.7		21.00	4.92	61.40	66	10.0	8.0
Res 34	37	1	3,686,550.0	684,672.0		21.00	4.92	56.50	66	10.0	8.0
Res 35	38	1	3,686,742.5	684,919.4		21.00	4.92	66.00	66	10.0	8.0

INPUT: RECEIVERS

LA 1088

Res 36	39	1	3,686,741.2	684,824.4	21.00	4.92	58.50	66	10.0	8.0	Y
Res 37	40	1	3,686,733.5	684,708.5	21.00	4.92	55.30	66	10.0	8.0	Y
Res 38	41	1	3,686,744.0	684,614.8	21.00	4.92	54.90	66	10.0	8.0	Y
Res 39	42	1	3,686,732.2	684,505.3	21.00	4.92	53.30	66	10.0	8.0	Y
Res 80	83	1	3,686,918.5	685,006.6	21.00	4.92	66.60	66	10.0	8.0	Y
Res 81	84	1	3,686,954.8	684,907.7	21.00	4.92	58.40	66	10.0	8.0	Y
Res 82	85	1	3,686,927.5	684,807.4	21.00	4.92	56.60	66	10.0	8.0	Y
Res 83	86	1	3,686,925.0	684,721.5	21.00	4.92	55.50	66	10.0	8.0	Y
Res 84	87	1	3,686,931.0	684,618.0	21.00	4.92	54.50	66	10.0	8.0	Y
Res 85	88	1	3,687,133.2	684,910.3	21.00	4.92	55.00	66	10.0	8.0	Y
Res 86	89	1	3,687,189.2	684,795.7	21.00	4.92	50.70	66	10.0	8.0	Y
Res 87	90	9	3,687,514.8	685,143.4	21.00	4.92	57.50	66	10.0	8.0	Y
Res 88	91	5	3,687,582.5	684,954.6	21.00	4.92	50.70	66	10.0	8.0	Y
Res 89	92	1	3,687,999.0	685,498.8	21.00	4.92	65.80	66	10.0	8.0	Y
Res 90	93	1	3,688,096.8	685,548.3	21.00	4.92	66.20	66	10.0	8.0	Y
Res 91	94	2	3,688,070.8	685,302.2	21.00	4.92	53.40	66	10.0	8.0	Y
Res 92	95	2	3,688,104.5	685,213.7	21.00	4.92	51.10	66	10.0	8.0	Y
Res 93	96	1	3,688,030.2	685,380.3	21.00	4.92	56.30	66	10.0	8.0	Y
Res 94	97	1	3,688,175.0	685,561.3	21.00	4.92	64.10	66	10.0	8.0	Y
Res 95	98	1	3,688,259.5	685,614.8	21.00	4.92	65.40	66	10.0	8.0	Y
Res 96	99	1	3,688,444.5	685,688.9	21.00	4.92	64.10	66	10.0	8.0	Y
Recreation 97	100	1	3,688,576.2	685,404.6	21.00	4.92	50.90	66	10.0	8.0	Y
Res 98	101	1	3,688,522.5	685,711.1	21.00	4.92	62.70	66	10.0	8.0	Y
Res 99	102	1	3,688,607.2	685,743.6	21.00	4.92	62.10	66	10.0	8.0	Y
Res 100	103	4	3,688,691.8	685,593.9	21.00	4.92	52.60	66	10.0	8.0	Y
Res 101	104	1	3,688,797.2	685,824.4	21.00	4.92	61.60	66	10.0	8.0	Y
Res 102	105	1	3,688,911.8	685,846.5	21.00	4.92	59.70	66	10.0	8.0	Y
Res 103	106	1	3,688,995.2	685,821.8	21.00	4.92	56.50	66	10.0	8.0	Y
Res 104	107	1	3,689,086.2	685,832.2	21.00	4.92	55.40	66	10.0	8.0	Y
Res 105	108	1	3,689,175.0	685,836.1	21.00	4.92	54.10	66	10.0	8.0	Y
Res 106	109	2	3,688,978.2	685,655.1	21.00	4.92	51.00	66	10.0	8.0	Y
Res 107	110	2	3,689,070.8	685,647.2	21.00	4.92	50.30	66	10.0	8.0	Y
Res 108	111	2	3,689,156.8	685,648.6	21.00	4.92	49.80	66	10.0	8.0	Y
Res 109	112	2	3,689,223.5	685,642.6	21.00	4.92	49.40	66	10.0	8.0	Y
Res 110	113	1	3,689,797.2	686,349.1	21.00	4.92	67.10	66	10.0	8.0	Y

INPUT: RECEIVERS

LA 1088

Res 111	114	1	3,689,840.2	686,307.4	21.00	4.92	62.60	66	10.0	8.0	Y
Res 112	115	1	3,690,190.5	686,521.0	21.00	4.92	68.00	66	10.0	8.0	Y
Res 113	116	1	3,690,406.0	686,560.0	21.00	4.92	64.70	66	10.0	8.0	Y
Res 114	117	3	3,690,448.2	686,393.4	21.00	4.92	54.80	66	10.0	8.0	Y
Res 115	118	3	3,690,646.2	686,405.1	21.00	4.92	53.40	66	10.0	8.0	Y
Res 116	119	3	3,690,921.0	686,415.5	21.00	4.92	58.70	66	10.0	8.0	Y
Res 117	120	1	3,690,988.0	686,675.6	21.00	4.92	64.60	66	10.0	8.0	Y
Res 118	121	1	3,690,981.5	686,531.2	21.00	4.92	63.40	66	10.0	8.0	Y
Res 119	122	1	3,690,997.8	686,409.0	21.00	4.92	64.50	66	10.0	8.0	Y
Res 153	156	1	3,691,173.5	686,850.4	21.00	4.92	66.00	66	10.0	8.0	Y
Res 154	157	1	3,691,139.8	686,767.1	21.00	4.92	63.30	66	10.0	8.0	Y
Res 155	158	1	3,691,128.0	686,681.1	21.00	4.92	62.70	66	10.0	8.0	Y
Res 156	159	1	3,691,148.8	686,597.8	21.00	4.92	60.90	66	10.0	8.0	Y
Res 157	160	1	3,691,137.2	686,509.2	21.00	4.92	61.70	66	10.0	8.0	Y
Res 158	161	1	3,691,110.5	686,419.5	21.00	4.92	63.40	66	10.0	8.0	Y
Res 159	162	1	3,691,247.8	686,877.8	21.00	4.92	65.70	66	10.0	8.0	Y
Res 160	163	1	3,691,336.2	686,922.0	21.00	4.92	66.50	66	10.0	8.0	Y
Res 161	164	4	3,691,350.8	686,669.4	21.00	4.92	52.90	66	10.0	8.0	Y
Res 162	165	1	3,691,415.8	686,944.1	21.00	4.92	66.10	66	10.0	8.0	Y
Res 163	166	7	3,691,530.2	686,798.3	21.00	4.92	53.40	66	10.0	8.0	Y
Res 164	167	5	3,691,509.5	686,660.3	21.00	4.92	51.10	66	10.0	8.0	Y
Res 165	168	4	3,691,673.5	686,634.9	21.00	4.92	49.60	66	10.0	8.0	Y
Res 166	169	1	3,691,490.0	686,967.6	21.00	4.92	66.00	66	10.0	8.0	Y
Res 167	170	1	3,691,569.5	686,989.8	21.00	4.92	65.60	66	10.0	8.0	Y
Res 168	171	1	3,691,652.8	687,013.1	21.00	4.92	65.00	66	10.0	8.0	Y
Res 169	172	1	3,691,757.0	687,041.8	21.00	4.92	64.20	66	10.0	8.0	Y
Res 170	173	1	3,691,856.0	687,037.9	21.00	4.92	61.10	66	10.0	8.0	Y
Res 171	174	2	3,691,898.8	686,968.9	21.00	4.92	55.50	66	10.0	8.0	Y
Res 172	175	3	3,691,930.0	686,881.6	21.00	4.92	51.60	66	10.0	8.0	Y
Res 173	176	1	3,691,977.0	687,103.0	21.00	4.92	62.70	66	10.0	8.0	Y
Res 174	177	1	3,692,027.8	687,173.3	21.00	4.92	67.00	66	10.0	8.0	Y
Res 175	178	1	3,692,117.5	687,196.8	21.00	4.92	66.50	66	10.0	8.0	Y
Res 176	179	1	3,692,202.2	687,222.8	21.00	4.92	66.30	66	10.0	8.0	Y
Res 177	180	1	3,692,284.2	687,248.8	21.00	4.92	66.20	66	10.0	8.0	Y
Res 178	181	3	3,692,313.0	687,070.4	21.00	4.92	53.60	66	10.0	8.0	Y

INPUT: RECEIVERS

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Res 179	182	3	3,692,404.0	686,996.2	21.00	4.92	51.80	66	10.0	8.0	Y
Res 180	183	4	3,692,363.8	686,894.7	21.00	4.92	50.00	66	10.0	8.0	Y
Res 181	184	1	3,692,499.0	687,323.1	21.00	4.92	66.70	66	10.0	8.0	Y
Res 182	185	1	3,692,595.5	687,360.8	21.00	4.92	66.90	66	10.0	8.0	Y
Res 183	186	1	3,692,673.5	687,397.2	21.00	4.92	67.50	66	10.0	8.0	Y
Res 184	187	1	3,692,770.0	687,423.3	21.00	4.92	67.10	66	10.0	8.0	Y
Res 185	188	1	3,692,833.8	687,448.1	21.00	4.92	67.20	66	10.0	8.0	Y
Res 186	189	1	3,692,914.5	687,480.6	21.00	4.92	67.50	66	10.0	8.0	Y
Res 187	190	1	3,693,005.5	687,509.2	21.00	4.92	67.30	66	10.0	8.0	Y
Office 188	191	1	3,693,077.2	687,535.3	21.00	4.92	67.40	71	10.0	8.0	Y
Res 189	192	1	3,693,171.0	687,527.5	21.00	4.92	64.20	66	10.0	8.0	Y
Res 190	193	7	3,692,741.2	687,215.0	21.00	4.92	53.30	66	10.0	8.0	Y
Res 191	194	3	3,693,051.2	687,241.0	21.00	4.92	51.60	66	10.0	8.0	Y
Res 192	195	3	3,693,038.2	687,165.5	21.00	4.92	50.40	66	10.0	8.0	Y
Office 193	196	1	3,693,288.2	687,605.6	21.00	4.92	67.20	71	10.0	8.0	Y
Recreation 194	197	1	3,693,900.2	687,738.4	21.00	4.92	61.10	66	10.0	8.0	Y
Vet Office 195	198	1	3,694,471.8	687,754.1	21.00	4.92	53.40	66	10.0	8.0	Y
Res 196	199	1	3,694,781.8	687,761.9	21.00	4.92	51.00	66	10.0	8.0	Y
Res 197	200	1	3,695,094.2	687,971.5	21.00	4.92	53.60	66	10.0	8.0	Y
Res 198	201	2	3,695,216.5	687,963.7	21.00	4.92	52.60	66	10.0	8.0	Y
Res 199	202	3	3,695,457.5	687,998.8	21.00	4.92	57.40	66	10.0	8.0	Y
Res 200	203	3	3,695,615.0	688,086.1	21.00	4.92	55.50	66	10.0	8.0	Y
Res 201	204	2	3,695,965.2	688,189.2	21.00	4.92	51.00	66	10.0	8.0	Y
Res 209	212	1	3,697,750.5	689,435.0	21.00	4.92	67.50	66	10.0	8.0	Y
Res 210	213	3	3,697,888.5	689,393.4	21.00	4.92	60.50	66	10.0	8.0	Y
Res 211	214	1	3,697,891.5	689,266.4	21.00	4.92	55.80	66	10.0	8.0	Y
Res 212	215	3	3,698,121.5	689,192.8	21.00	4.92	52.40	66	10.0	8.0	Y
Res 213	216	1	3,698,596.8	689,807.4	21.00	4.92	65.40	66	10.0	8.0	Y
Res 225	217	1	3,700,395.2	690,187.1	21.00	4.92	53.60	66	10.0	8.0	Y
Res 226	218	1	3,701,318.2	690,825.0	30.00	4.92	57.10	66	10.0	8.0	Y

INPUT: BUILDING ROWS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: BUILDING ROWS

PROJECT/CONTRACT:

LA 1088

RUN: Build Alt 1 AM Peak 2033

Building Row	Name	Average Height ft	Building Percent %	Points			
				No.	Coordinates (ground)		
					X	Y	Z
					ft	ft	ft
Building2		20.00	70	1	3,686,677.2	684,918.6	21.00
				2	3,686,730.5	684,916.3	21.00
				3	3,686,726.0	684,433.4	21.00
				4	3,686,684.2	684,444.7	21.00
Building3		20.00	70	5	3,686,995.2	685,011.1	21.00
				6	3,686,935.2	685,008.7	21.00
				7	3,686,978.2	684,893.3	21.00
				8	3,686,950.0	684,744.8	21.00
				9	3,686,945.0	684,555.7	21.00
				10	3,686,994.0	684,556.9	21.00
Building4		20.00	70	11	3,687,181.0	684,824.8	21.00
				12	3,687,140.5	684,833.4	21.00
				13	3,687,163.8	684,934.1	21.00
				14	3,687,263.2	685,005.3	21.00
				15	3,687,523.5	685,129.3	21.00
				16	3,687,693.0	685,194.3	21.00
				17	3,687,923.8	685,244.6	21.00
				18	3,687,938.5	685,204.1	21.00
Building5		20.00	70	19	3,687,998.2	685,431.8	21.00
				20	3,687,977.0	685,470.6	21.00
				21	3,688,287.2	685,597.1	21.00
				22	3,688,299.8	685,570.6	21.00
Building6		20.00	70	23	3,688,428.8	685,633.3	21.00

C:\Noise Projects\LA 1088 Noise\Runs\Build\Build Alt 1 AM Peak

INPUT: BUILDING ROWS

LA 1088

				24	3,688,417.2	685,659.9	21.00
				25	3,688,562.8	685,710.5	21.00
				26	3,688,690.5	685,775.0	21.00
				27	3,688,812.0	685,810.4	21.00
				28	3,689,042.0	685,807.9	21.00
				29	3,689,218.0	685,819.3	21.00
				30	3,689,479.8	685,820.5	21.00
				31	3,689,484.8	685,778.8	21.00
Building7	20.00	70		32	3,691,156.8	686,276.9	21.00
				33	3,691,130.5	686,278.5	21.00
				34	3,691,156.8	686,483.8	21.00
				35	3,691,166.2	686,647.1	21.00
				36	3,691,166.2	686,741.9	21.00
				37	3,691,194.2	686,832.1	21.00
				38	3,691,298.2	686,878.8	21.00
				39	3,691,471.0	686,937.9	21.00
				40	3,691,654.5	687,000.1	21.00
				41	3,691,769.5	687,025.0	21.00
				42	3,691,849.0	687,009.4	21.00
				43	3,691,929.8	686,872.6	21.00
				44	3,692,002.8	686,715.5	21.00
				45	3,691,987.2	686,703.1	21.00
Building8	20.00	70		46	3,692,085.8	686,879.4	21.00
				47	3,692,050.0	686,888.7	21.00
				48	3,692,009.5	687,048.9	21.00
				49	3,692,022.0	687,134.4	21.00
				50	3,692,345.5	687,247.9	21.00
				51	3,692,364.0	687,218.4	21.00
Building9	20.00	70		52	3,692,500.5	687,262.3	21.00
				53	3,692,483.2	687,296.4	21.00
				54	3,692,768.0	687,400.6	21.00
				55	3,692,973.2	687,475.3	21.00
				56	3,693,124.0	687,509.5	21.00
				57	3,693,152.0	687,509.5	21.00

INPUT: BUILDING ROWS

LA 1088				
			58	3,693,201.8
			59	3,693,205.0
			60	3,693,167.5

	687,425.6	21.00
	687,060.1	21.00
	687,058.5	21.00

INPUT: ROADWAYS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: ROADWAYS

PROJECT/CONTRACT:

RUN: LA 1088
Build Alt 1 PM Peak 2033

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with the approval of FHWA

Roadway		Points										Flow Control				Segment	
Name	Width	Name	No.	Coordinates (pavement)			Z			Speed			Control	Device	Percent	Pvmt	On
	ft			X	Y										mph	Type	Struct?
				ft	ft		ft										
Garon Dr Comb 1 2 Lane	24.0	point100	100	3,686,849.0	684,090.2		21.00									Average	
		point101	101	3,686,836.2	684,712.6		21.00										
Jackson St Comb 2 Lane	24.0	point106	106	3,686,845.2	685,274.9		21.00									Average	
		point107	107	3,686,839.0	685,637.0		21.00										
I-12 EB OnRamp 1 Lane	24.0	point162	162	3,699,282.8	690,209.7		22.00									Average	
		point163	163	3,699,342.2	690,144.1		22.00									Average	
		point164	164	3,699,376.8	690,103.0		22.00									Average	
		point165	165	3,699,406.8	690,068.5		22.00									Average	
		point166	166	3,699,432.5	690,047.4		22.00									Average	
		point167	167	3,699,473.2	690,023.2		22.00									Average	
		point168	168	3,699,527.5	690,003.1		22.00									Average	
		point169	169	3,699,592.2	689,995.0		22.00									Average	
		point170	170	3,699,633.8	689,999.2		22.00									Average	
		point171	171	3,699,684.2	690,010.2		22.00									Average	
		point172	172	3,699,741.5	690,040.1		22.00									Average	
		point173	173	3,699,819.0	690,092.8		22.00									Average	
		point174	174	3,699,963.2	690,193.8		22.00									Average	
		point175	175	3,700,093.0	690,282.4		22.00									Average	
		point176	176	3,700,127.8	690,305.4		22.00									Average	
		point177	177	3,700,199.0	690,345.5		22.00									Average	
		point178	178	3,700,260.5	690,371.1		22.00									Average	
		point179	179	3,700,319.8	690,390.6		22.00									Average	
		point180	180	3,700,408.8	690,407.8		22.00									Average	
		point181	181	3,700,507.0	690,414.9		22.00									Average	
		point182	182	3,700,608.5	690,406.0		22.00									Average	

INPUT: ROADWAYS

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		point183	183	3,700,704.0	690,385.2	22.00			Average
		point184	184	3,700,773.8	690,360.4	22.00			Average
		point185	185	3,700,846.2	690,333.5	22.00			Average
		point186	186	3,700,912.2	690,305.9	22.00			Average
		point187	187	3,701,006.2	690,262.4	22.00			Average
		point188	188	3,701,190.5	690,173.3	22.00			Average
		point189	189	3,701,436.8	690,049.4	22.00			Average
LA 59 S of LA 1088 1	36.0	point218	218	3,682,808.5	681,467.9	21.00			Average
		point219	219	3,683,063.0	681,915.2	21.00			Average
		point220	220	3,683,212.5	682,178.6	21.00			Average
		point221	221	3,683,303.5	682,338.2	21.00			Average
		point222	222	3,683,405.8	682,511.9	21.00			Average
		point223	223	3,683,504.8	682,684.9	21.00			Average
		point224	224	3,683,597.2	682,835.0	21.00			Average
LA 1088 Comb 1 Area 1 2 Lane	30.0	point243	243	3,684,597.8	684,043.8	21.00			Average
		point17	7	3,684,944.8	684,203.9	21.00			Average
		point8	8	3,685,215.5	684,330.2	21.00			Average
		point9	9	3,685,490.5	684,456.0	21.00			Average
		point10	10	3,685,647.0	684,529.1	21.00			Average
		point11	11	3,685,851.8	684,622.3	21.00			Average
		point12	12	3,686,128.0	684,750.9	21.00			Average
		point13	13	3,686,344.5	684,849.6	21.00			Average
LA 1088 Comb 2 Area 1 2 Lane	30.0	point245	245	3,687,395.5	685,336.1	21.00			Average
		point18	18	3,687,668.2	685,459.9	21.00			Average
		point19	19	3,687,856.5	685,547.2	21.00			Average
LA 1088 Comb 1 Area 3 2 Lane	30.0	point250	250	3,692,839.8	687,538.1	21.00			Average
		point39	39	3,692,955.2	687,577.9	21.00			Average
		point40	40	3,693,236.8	687,676.4	21.00			Average
		point41	41	3,693,522.8	687,775.4	21.00			Average
		point251	251	3,693,626.0	687,810.8	21.00			Average
LA 59 N of LA 1088 1	36.0	point255	255	3,684,142.8	684,260.9	21.00			Average
		point235	235	3,684,165.5	684,339.8	21.00			Average
		point236	236	3,684,242.0	684,525.2	21.00			Average
		point237	237	3,684,361.0	684,801.1	21.00			Average
		point238	238	3,684,442.5	684,980.7	21.00			Average
		point239	239	3,684,579.8	685,291.6	21.00			Average
		point240	240	3,684,701.0	685,565.9	21.00			Average
		point241	241	3,684,809.5	685,815.2	21.00			Average

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LA 59 NB S of LA 1088 1 1 Lane		point242	242	3,684,878.5	685,964.8	21.00			
	12.0	point257	257	3,683,597.2	682,835.0	21.00			Average
		point258	258	3,683,647.0	682,904.3	21.00			Average
		point259	259	3,683,729.8	683,050.2	21.00			Average
		point260	260	3,683,832.8	683,223.6	21.00			
LA 59 NB S of LA 1088 2 2 Lane	24.0	point261	261	3,683,832.8	683,223.6	21.00			Average
		point262	262	3,683,953.5	683,445.4	21.00			Average
		point263	263	3,683,998.8	683,538.9	21.00			Average
		point264	264	3,684,027.5	683,616.2	21.00			Average
		point265	265	3,684,047.8	683,690.2	21.00			
LA 59 NB N of LA 1088 1 1 Lane	12.0	point268	268	3,684,152.5	683,800.9	21.00			Average
		point269	269	3,684,154.2	683,831.8	21.00			Average
		point270	270	3,684,146.8	683,868.5	21.00			Average
		point271	271	3,684,134.2	683,902.1	21.00			Average
		point272	272	3,684,121.8	683,980.6	21.00			
LA 59 SB N of LA 1088 1 2 Lane	24.0	point277	277	3,684,142.8	684,260.9	21.00			Average
		point278	278	3,684,118.8	684,210.4	21.00			Average
		point279	279	3,684,101.8	684,129.4	21.00			Average
		point280	280	3,684,096.2	684,070.9	21.00			Average
		point281	281	3,684,096.8	683,984.9	21.00			Average
LA 59 SB S of LA 1088 1 2 Lane		point282	282	3,684,092.5	683,966.2	21.00			
	24.0	point286	286	3,684,022.0	683,819.9	21.00			Average
		point287	287	3,684,010.2	683,696.6	21.00			
	12.0	point295	295	3,684,152.5	683,800.9	21.00			Average
		point296	296	3,684,205.2	683,843.9	21.00			Average
LA 1088 EB 1 Area 1 1 Lane		point297	297	3,684,355.8	683,922.2	21.00			Average
		point298	298	3,684,571.8	684,025.9	21.00			Average
		point299	299	3,684,597.8	684,043.8	21.00			
	12.0	point300	300	3,684,597.8	684,043.8	21.00			Average
		point301	301	3,684,561.2	684,041.2	21.00			Average
LA 1088 WB 1 Area 1 2 Lane		point302	302	3,684,344.2	683,946.5	21.00			Average
		point303	303	3,684,227.8	683,889.8	21.00			Average
		point304	304	3,684,175.5	683,885.3	21.00			Average
		point305	305	3,684,134.2	683,902.1	21.00			
	20.0	point306	306	3,686,344.5	684,849.6	21.00			Average
LA 1088 EB 2 Area 1 1 Lane		point307	307	3,686,368.2	684,855.4	21.00			Average
		point308	308	3,686,524.5	684,922.8	21.00			Average
		point309	309	3,686,675.8	684,990.8	21.00			Average

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			point310	310	3,686,709.5	685,002.4	21.00			Average
			point311	311	3,686,763.5	684,996.3	21.00			
LA 1088 WB 2 Area 1 1 Lane	20.0		point323	323	3,687,395.5	685,336.1	21.00			Average
			point324	324	3,687,354.2	685,321.9	21.00			Average
			point325	325	3,687,256.0	685,276.7	21.00			Average
			point326	326	3,687,112.5	685,211.7	21.00			Average
			point327	327	3,687,020.2	685,163.8	21.00			Average
			point328	328	3,686,954.8	685,120.9	21.00			Average
			point329	329	3,686,906.2	685,087.8	21.00			Average
			point330	330	3,686,877.0	685,082.9	21.00			
Jackson St NB 1 Lane	12.0		point343	343	3,686,856.8	685,073.7	21.00			Average
			point344	344	3,686,861.5	685,093.2	21.00			Average
			point345	345	3,686,856.8	685,163.2	21.00			Average
			point346	346	3,686,852.0	685,226.2	21.00			Average
			point347	347	3,686,845.2	685,274.9	21.00			
Jackson St SB 1 Lane	12.0		point348	348	3,686,845.2	685,274.9	21.00			Average
			point349	349	3,686,839.0	685,226.9	21.00			Average
			point350	350	3,686,836.0	685,150.3	21.00			Average
			point351	351	3,686,811.2	685,089.0	21.00			
Garon Dr NB 1 Lane	12.0		point352	352	3,686,836.2	684,712.6	21.00			Average
			point353	353	3,686,843.5	684,783.8	21.00			Average
			point354	354	3,686,844.8	684,844.6	21.00			Average
			point355	355	3,686,846.0	684,876.4	21.00			Average
			point356	356	3,686,835.2	684,943.4	21.00			Average
			point357	357	3,686,849.8	684,997.6	21.00			
Garon Dr SB 1 Lane	12.0		point358	358	3,686,791.0	684,996.3	21.00			Average
			point359	359	3,686,808.8	684,941.8	21.00			Average
			point360	360	3,686,822.5	684,878.4	21.00			Average
			point361	361	3,686,823.2	684,842.9	21.00			Average
			point362	362	3,686,827.5	684,778.4	21.00			Average
			point363	363	3,686,836.2	684,712.6	21.00			
LA 1088 EB 3 Area 1 1 Lane	20.0		point365	365	3,687,856.5	685,547.2	21.00			Average
			point366	366	3,687,939.8	685,577.9	21.00			Average
			point367	367	3,688,103.8	685,649.1	21.00			Average
			point368	368	3,688,219.5	685,707.5	21.00			
LA 1088 EB 1 Area 2 1 Lane	20.0		point373	373	3,688,328.5	685,697.2	21.00			Average
			point374	374	3,688,354.0	685,712.7	21.00			Average
			point375	375	3,688,402.2	685,755.9	21.00			

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LA 1088 WB 1 Area 2 2 Lane	32.0	point382	382	3,688,872.5	686,014.3	21.00			Average
		point383	383	3,688,817.5	686,004.3	21.00			Average
		point384	384	3,688,744.5	685,972.4	21.00			Average
		point385	385	3,688,611.5	685,915.0	21.00			Average
		point386	386	3,688,519.5	685,871.3	21.00			Average
		point387	387	3,688,444.5	685,825.4	21.00			Average
		point388	388	3,688,388.5	685,802.8	21.00			
LA 1088 WB 3 Area 2 1 Lane	20.0	point391	391	3,688,317.2	685,797.9	21.00			Average
		point392	392	3,688,288.2	685,791.5	21.00			Average
		point393	393	3,688,273.0	685,777.2	21.00			Average
		point394	394	3,688,238.2	685,752.8	21.00			Average
		point395	395	3,688,208.2	685,730.6	21.00			
Spring Blvd NB 1 Lane	12.0	point399	399	3,688,416.0	685,544.1	21.00			Average
		point400	400	3,688,378.5	685,619.1	21.00			Average
		point401	401	3,688,359.0	685,656.1	21.00			Average
		point402	402	3,688,354.0	685,712.7	21.00			
Spring Blvd SB 1 Lane	12.0	point403	403	3,688,287.2	685,703.1	21.00			Average
		point404	404	3,688,329.5	685,648.6	21.00			Average
		point405	405	3,688,353.5	685,608.4	21.00			Average
		point406	406	3,688,387.5	685,532.9	21.00			
School NB 1 Lane	12.0	point407	407	3,688,342.2	685,788.1	21.00			Average
		point408	408	3,688,339.8	685,824.3	21.00			Average
		point409	409	3,688,329.0	685,874.9	21.00			Average
		point410	410	3,688,322.8	685,936.5	21.00			Average
		point411	411	3,688,319.8	686,011.2	21.00			Average
		point412	412	3,688,313.2	686,047.8	21.00			
School SB 1 Lane	12.0	point413	413	3,688,313.2	686,047.8	21.00			Average
		point414	414	3,688,307.5	686,010.9	21.00			Average
		point415	415	3,688,306.5	685,935.6	21.00			Average
		point416	416	3,688,309.0	685,873.7	21.00			Average
		point417	417	3,688,309.8	685,838.8	21.00			Average
		point418	418	3,688,288.2	685,791.5	21.00			
LA 1088 EB 2 Area 2 1 Lane	20.0	point424	424	3,690,327.2	686,655.8	21.00			Average
		point425	425	3,690,455.0	686,696.9	21.00			Average
		point426	426	3,690,577.5	686,735.9	21.00			Average
		point427	427	3,690,695.5	686,780.3	21.00			Average
		point428	428	3,690,780.8	686,814.0	21.00			Average
		point429	429	3,690,840.0	686,847.4	21.00			Average

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			point430	430	3,690,873.8	686,865.2	21.00			Average
			point431	431	3,690,906.5	686,868.7	21.00			
LA 1088 EB 1 Area 3 1 Lane	20.0		point450	450	3,692,409.5	687,367.6	21.00			Average
			point451	451	3,692,430.8	687,378.1	21.00			Average
			point452	452	3,692,445.0	687,391.3	21.00			Average
			point453	453	3,692,484.8	687,399.9	21.00			
LA 1088 WB 1 Area 3 1 Lane	20.0		point458	458	3,692,839.8	687,538.1	21.00			Average
			point459	459	3,692,786.2	687,525.4	21.00			Average
			point460	460	3,692,676.2	687,490.6	21.00			Average
			point461	461	3,692,563.8	687,453.4	21.00			Average
			point462	462	3,692,526.5	687,444.8	21.00			Average
			point463	463	3,692,493.8	687,445.2	21.00			
LA 1088 WB 4 Area 2 1 Lane	20.0		point468	468	3,692,381.8	687,498.2	21.00			Average
			point469	469	3,692,361.8	687,490.6	21.00			Average
			point470	470	3,692,340.8	687,471.9	21.00			Average
			point471	471	3,692,312.8	687,445.6	21.00			Average
			point472	472	3,692,279.8	687,413.9	21.00			
LA 1088 WB 3 Area 2 2 Lane	32.0		point482	482	3,691,408.0	687,047.9	21.00			Average
			point483	483	3,691,198.8	686,973.5	21.00			
LA 1088 WB 2 Area 2 1 Lane	20.0		point491	491	3,690,947.5	686,959.9	21.00			Average
			point492	492	3,690,893.0	686,912.2	21.00			
Soult St Comb 2 Lane	24.0		point500	500	3,691,051.2	686,100.9	21.00			Average
			point501	501	3,691,049.2	686,328.8	21.00			
Soult St NB 2 Lane	24.0		point502	502	3,691,049.2	686,328.8	21.00			Average
			point503	503	3,691,060.8	686,418.9	21.00			Average
			point504	504	3,691,064.2	686,573.1	21.00			Average
			point505	505	3,691,066.8	686,667.2	21.00			Average
			point506	506	3,691,060.8	686,728.1	21.00			Average
			point507	507	3,691,047.2	686,787.8	21.00			Average
			point508	508	3,691,050.8	686,829.4	21.00			Average
			point509	509	3,691,066.2	686,883.8	21.00			
Soult St SB 1 Lane	12.0		point510	510	3,690,988.2	686,851.9	21.00			Average
			point511	511	3,691,021.5	686,777.6	21.00			Average
			point512	512	3,691,035.2	686,726.2	21.00			Average
			point513	513	3,691,043.0	686,664.6	21.00			Average
			point514	514	3,691,043.5	686,572.0	21.00			Average
			point515	515	3,691,043.8	686,417.3	21.00			Average
			point516	516	3,691,049.2	686,328.8	21.00			

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Viola St NB 1 Lane	12.0	point517	517	3,691,046.0	686,963.1	21.00			Average
		point518	518	3,691,016.0	687,063.4	21.00			Average
		point519	519	3,691,005.0	687,207.5	21.00			Average
		point520	520	3,690,998.0	687,226.2	21.00			
Viola St Comb 2 Lane	24.0	point521	521	3,690,998.0	687,226.2	21.00			Average
		point522	522	3,690,992.8	687,253.0	21.00			Average
		point523	523	3,690,973.5	687,276.9	21.00			Average
		point524	524	3,690,935.5	687,292.1	21.00			Average
		point525	525	3,690,785.0	687,289.2	21.00			Average
		point526	526	3,690,547.5	687,283.9	21.00			
Viola St SB 1 Lane	12.0	point527	527	3,690,998.0	687,226.2	21.00			Average
		point528	528	3,690,991.0	687,205.2	21.00			Average
		point529	529	3,690,990.5	687,120.6	21.00			Average
		point530	530	3,690,998.0	687,061.1	21.00			Average
		point531	531	3,690,996.2	687,025.5	21.00			Average
		point532	532	3,690,972.0	686,967.1	21.00			
Trinity Dr NB 2 Lane	24.0	point533	533	3,692,465.2	687,226.6	21.00			Average
		point534	534	3,692,442.0	687,289.6	21.00			Average
		point535	535	3,692,438.2	687,313.9	21.00			Average
		point536	536	3,692,446.8	687,353.8	21.00			Average
		point537	537	3,692,445.0	687,391.3	21.00			
Trinity Dr SB 1 Lane	12.0	point538	538	3,692,358.0	687,379.2	21.00			Average
		point539	539	3,692,381.0	687,336.0	21.00			Average
		point540	540	3,692,409.0	687,283.7	21.00			Average
		point541	541	3,692,435.5	687,214.7	21.00			
LA 1088 WB 3 BT Bridges 2 Lane	32.0	point273	552	3,704,280.0	692,279.9	30.00			Average
		point272	553	3,704,009.5	692,159.6	30.00			Average
		point271	554	3,703,739.8	692,036.6	30.00			Average
		point270	555	3,703,463.5	691,911.6	30.00			Average
		point269	556	3,703,280.0	691,831.7	30.00			Average
		point268	557	3,703,003.5	691,737.0	30.00			Average
		point267	558	3,702,718.5	691,672.5	30.00			Average
		point266	559	3,702,524.8	691,642.6	30.00			Average
		point265	560	3,702,218.5	691,592.1	30.00			Average
		point264	561	3,701,924.8	691,513.0	30.00			Average
		point263	562	3,701,646.5	691,397.2	30.00			Average
		point262	563	3,701,372.5	691,270.8	30.00			
LA 1088 EB 1 BT Bridges 2 Lane	32.0	point65	583	3,699,487.8	690,339.4	30.00			Average

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			point66	584	3,699,760.2	690,465.8	35.00			Average
			point770	770	3,699,896.5	690,528.4	40.00			Average
			point67	585	3,700,033.0	690,590.9	45.00			Average
			point68	586	3,700,305.0	690,716.1	45.00			Average
			point771	771	3,700,441.8	690,779.0	45.00			Average
			point69	587	3,700,578.5	690,841.9	40.00			Average
			point70	588	3,700,851.5	690,967.8	35.00			
LA 1088 EB 2 Area 3 1 Lane	20.0		point602	602	3,693,626.0	687,810.8	21.00			Average
			point603	603	3,693,697.5	687,828.8	21.00			Average
			point604	604	3,693,945.8	687,910.8	21.00			Average
			point605	605	3,694,124.5	687,973.2	21.00			Average
			point606	606	3,694,181.2	687,986.7	21.00			
LA 1088 EB 3 Area 3 2 Lane	32.0		point609	609	3,694,181.2	687,986.7	21.00			Average
			point610	610	3,694,459.8	688,083.8	21.00			Average
			point611	611	3,694,705.5	688,169.9	21.00			Average
			point612	612	3,694,955.8	688,258.3	21.00			Average
			point613	613	3,695,107.0	688,320.6	21.00			
LA 1088 WB 3 Area 3 2 Lane	32.0		point644	644	3,699,468.2	690,393.1	30.00			Average
			point645	645	3,699,395.8	690,351.1	25.00			
LA 1088 WB 2 Area 3 1 Lane	12.0		point671	671	3,695,303.2	688,482.2	21.00			Average
			point672	672	3,695,279.5	688,478.1	21.00			Average
			point673	673	3,695,241.2	688,444.6	21.00			Average
			point674	674	3,695,188.0	688,403.7	21.00			
Forest Brook Blvd Comb 2 Lane	24.0		point683	683	3,695,575.0	687,949.6	21.00			Average
			point684	684	3,695,514.2	688,049.9	21.00			
Forest Brook Blvd NB 2 Lane	24.0		point685	685	3,695,514.2	688,049.9	21.00			Average
			point686	686	3,695,505.5	688,084.2	21.00			Average
			point687	687	3,695,470.5	688,145.6	21.00			Average
			point688	688	3,695,426.5	688,234.8	21.00			Average
			point689	689	3,695,392.0	688,294.1	21.00			Average
			point690	690	3,695,385.5	688,323.2	21.00			Average
			point691	691	3,695,389.0	688,378.8	21.00			
Forest Brook Blvd SB 1 Lane	12.0		point692	692	3,695,314.8	688,350.9	21.00			Average
			point693	693	3,695,371.0	688,280.9	21.00			Average
			point694	694	3,695,409.2	688,227.5	21.00			Average
			point695	695	3,695,454.0	688,142.3	21.00			Average
			point696	696	3,695,483.8	688,088.2	21.00			Average
			point697	697	3,695,514.2	688,049.9	21.00			

INPUT: ROADWAYS

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I-12 EB OffRamp 1 1 Lane	24.0	point698	698	3,698,014.8	691,921.6	22.00			Average
		point699	699	3,698,313.8	691,715.9	22.00			Average
		point700	700	3,698,466.5	691,611.1	22.00			Average
		point701	701	3,698,643.0	691,488.0	22.00			Average
		point702	702	3,698,809.8	691,371.4	22.00			Average
		point703	703	3,698,913.0	691,299.7	22.00			Average
		point704	704	3,699,015.0	691,224.4	22.00			Average
		point705	705	3,699,066.5	691,169.3	22.00			Average
		point706	706	3,699,102.0	691,117.9	22.00			Average
		point707	707	3,699,133.0	691,060.7	22.00			Average
		point708	708	3,699,151.8	691,005.9	22.00			Average
		point709	709	3,699,168.5	690,940.0	22.00			Average
		point710	710	3,699,178.5	690,848.0	22.00			Average
		point711	711	3,699,183.5	690,667.9	22.00			
I-12 EB OffRamp 2 2 Lane	48.0	point712	712	3,699,183.5	690,667.9	22.00			Average
		point713	713	3,699,191.5	690,561.7	22.00			Average
		point714	714	3,699,206.0	690,454.5	22.00			
I-12 EB OffRamp 4 1 Lane	24.0	point715	715	3,699,206.0	690,454.5	22.00			Average
		point716	716	3,699,204.5	690,423.8	22.00			Average
		point717	717	3,699,208.2	690,406.4	22.00			Average
		point718	718	3,699,206.0	690,355.8	22.00			Average
		point719	719	3,699,179.2	690,278.1	22.00			
I-12 EB OffRamp 3 1 Lane	24.0	point720	720	3,699,206.0	690,454.5	22.00			Average
		point721	721	3,699,235.0	690,401.4	23.00			Average
		point722	722	3,699,248.2	690,335.4	23.00			
I-12 WB OffRamp 1 Lane	24.0	point723	723	3,702,061.0	689,877.3	30.00			Average
		point724	724	3,701,791.5	690,041.3	30.00			Average
		point725	725	3,701,630.0	690,137.3	30.00			Average
		point726	726	3,701,521.0	690,202.4	30.00			Average
		point727	727	3,701,440.2	690,252.1	30.00			Average
		point728	728	3,701,376.2	690,292.1	30.00			Average
		point729	729	3,701,321.8	690,340.8	30.00			Average
		point730	730	3,701,277.8	690,397.6	30.00			Average
		point731	731	3,701,232.0	690,481.5	30.00			Average
		point732	732	3,701,211.2	690,535.1	30.00			Average
		point733	733	3,701,196.0	690,616.7	30.00			Average
		point734	734	3,701,197.0	690,775.9	30.00			Average
		point735	735	3,701,201.8	690,930.2	30.00			Average

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			point736	736	3,701,200.0	690,974.2	30.00			Average
			point737	737	3,701,182.5	691,025.4	30.00			Average
			point738	738	3,701,177.8	691,075.8	30.00			
LA 1088 EB 2 Lane Past I-12 OffRamp	32.0		point740	740	3,701,395.5	691,218.8	30.00			Average
			point73	591	3,701,668.8	691,345.2	30.00			Average
			point74	592	3,701,946.5	691,454.9	30.00			Average
			point75	593	3,702,233.2	691,530.1	30.00			Average
			point76	594	3,702,532.2	691,581.5	30.00			Average
			point77	595	3,702,731.8	691,612.4	30.00			Average
			point78	596	3,703,020.0	691,678.9	30.00			Average
			point79	597	3,703,303.2	691,776.3	30.00			Average
			point80	598	3,703,487.8	691,856.8	21.00			Average
			point81	599	3,703,762.5	691,982.6	30.00			Average
			point82	600	3,704,035.8	692,104.8	30.00			Average
			point83	601	3,704,307.2	692,227.5	30.00			
LA 1088 WB 1 BT Bridges 2 Lane	32.0		point741	741	3,700,826.5	691,020.3	35.00			Average
			point259	566	3,700,554.0	690,894.4	40.00			Average
			point772	772	3,700,419.5	690,831.9	45.00			Average
			point258	567	3,700,284.8	690,769.4	45.00			Average
			point257	568	3,700,010.0	690,643.3	45.00			Average
			point773	773	3,699,873.5	690,580.6	40.00			Average
			point256	569	3,699,737.0	690,517.9	35.00			Average
			point255	570	3,699,468.2	690,393.1	30.00			
LA 1088 EB 2 BT Bridges 2 Lane	32.0		point748	748	3,700,851.5	690,967.8	35.00			Average
			point749	749	3,700,961.2	691,019.6	30.00			Average
			point750	750	3,701,024.5	691,052.4	30.00			Average
			point751	751	3,701,045.2	691,059.2	30.00			Average
			point752	752	3,701,109.0	691,057.6	30.00			Average
			point753	753	3,701,152.2	691,060.8	30.00			Average
			point754	754	3,701,177.8	691,075.8	30.00			Average
			point755	755	3,701,221.5	691,111.8	30.00			Average
			point756	756	3,701,322.5	691,181.2	30.00			Average
			point757	757	3,701,395.5	691,218.8	30.00			
LA 1088 WB 2 BT Bridges 2 Lane	32.0		point758	758	3,701,372.5	691,270.8	30.00			Average
			point759	759	3,701,294.0	691,228.1	30.00			Average
			point760	760	3,701,236.5	691,199.4	30.00			Average
			point761	761	3,701,159.0	691,197.3	30.00			Average
			point762	762	3,701,120.2	691,195.8	30.00			Average

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			point763	763	3,701,095.2	691,186.9	30.00			Average
			point764	764	3,701,063.0	691,158.8	30.00			Average
			point765	765	3,701,011.5	691,118.1	30.00			Average
			point766	766	3,700,942.5	691,073.8	30.00			Average
			point767	767	3,700,826.5	691,020.3	35.00			
LA 1088 Comb 1 Area 2 2 Lane	30.0		point247	247	3,688,872.5	686,014.3	21.00			Average
			point24	24	3,689,121.8	686,131.2	21.00			Average
			point25	25	3,689,392.8	686,255.4	21.00			Average
			point419	419	3,689,572.5	686,339.0	21.00			Average
			point420	420	3,689,787.8	686,436.6	21.00			Average
			point421	421	3,689,992.8	686,523.6	21.00			Average
			point422	422	3,690,177.2	686,598.2	21.00			Average
			point423	423	3,690,327.2	686,655.8	21.00			
School Comb 2 Lane	24.0		point768	768	3,688,313.2	686,047.8	21.00			Average
			point364	364	3,688,317.8	686,299.8	21.00			Average
			point135	135	3,688,309.2	686,672.2	21.00			
LA 1088 EB 2 Area 2 1 Lane-2	20.0		point774	774	3,691,211.0	686,955.7	21.00			Average
			point438	438	3,691,434.5	687,032.9	21.00			Average
			point439	439	3,691,590.5	687,090.2	21.00			Average
			point440	440	3,691,724.5	687,139.1	21.00			Average
			point441	441	3,691,900.2	687,198.5	21.00			Average
			point442	442	3,692,003.0	687,234.6	21.00			Average
			point443	443	3,692,098.8	687,270.1	21.00			Average
			point444	444	3,692,177.8	687,310.9	21.00			
LA 1088 WB 3 Area 2 2 Lane-2	32.0		point775	775	3,691,198.8	686,973.5	21.00			Average
			point484	484	3,691,126.2	686,949.0	21.00			
LA 1088 EB 2 Area 2 1 Lane-2-2	20.0		point776	776	3,692,177.8	687,310.9	21.00			Average
			point445	445	3,692,247.0	687,357.0	21.00			Average
			point446	446	3,692,294.0	687,383.6	21.00			
LA 1088 WB 4 Area 2 1 Lane-2	20.0		point777	777	3,692,165.2	687,330.9	21.00			Average
			point475	475	3,692,091.2	687,292.3	21.00			Average
			point476	476	3,691,995.8	687,254.7	21.00			Average
			point477	477	3,691,893.5	687,218.9	21.00			Average
			point478	478	3,691,715.8	687,158.1	21.00			Average
			point479	479	3,691,581.8	687,112.2	21.00			Average
			point480	480	3,691,500.0	687,085.9	21.00			Average
			point481	481	3,691,408.0	687,047.9	21.00			
LA 1088 EB 3 Area 3 2 Lane-2	32.0		point778	778	3,695,107.0	688,320.6	21.00			Average

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		point614	614	3,695,176.2	688,359.4	21.00			Average
		point615	615	3,695,215.5	688,370.3	21.00			
LA 1088 WB 2 Area 3 1 Lane-2	12.0	point779	779	3,695,095.8	688,347.1	21.00			Average
		point676	676	3,694,944.0	688,283.8	21.00			Average
		point677	677	3,694,696.2	688,190.2	21.00			Average
		point678	678	3,694,451.2	688,104.9	21.00			Average
		point679	679	3,694,175.8	688,008.8	21.00			Average
		point680	680	3,693,939.8	687,926.2	21.00			Average
		point681	681	3,693,688.0	687,839.0	21.00			Average
		point682	682	3,693,626.0	687,810.8	21.00			
LA 1088 EB 2 Area 1 1 Lane-2	20.0	point784	784	3,686,763.5	684,996.3	21.00			Average
		point312	312	3,686,791.0	684,996.3	21.00			Average
		point314	314	3,686,817.5	684,987.8	21.00			Average
		point315	315	3,686,849.8	684,997.6	21.00			Average
		point316	316	3,686,863.2	685,014.7	21.00			
LA 1088 WB 2 Area 1 1 Lane-2	20.0	point785	785	3,686,752.0	685,055.9	21.00			Average
		point338	338	3,686,697.5	685,027.1	21.00			Average
		point339	339	3,686,665.8	685,011.8	21.00			Average
		point340	340	3,686,515.5	684,938.2	21.00			Average
		point341	341	3,686,362.0	684,863.9	21.00			Average
		point342	342	3,686,344.5	684,849.6	21.00			
LA 1088 WB 2 Area 1 1 Lane-2	20.0	point786	786	3,686,877.0	685,082.9	21.00			Average
		point331	331	3,686,856.8	685,073.7	21.00			Average
		point332	332	3,686,845.8	685,082.9	21.00			Average
		point333	333	3,686,823.5	685,090.2	21.00			Average
		point334	334	3,686,811.2	685,089.0	21.00			Average
		point335	335	3,686,790.5	685,082.2	21.00			Average
		point336	336	3,686,778.8	685,071.8	21.00			Average
		point337	337	3,686,752.0	685,055.9	21.00			
LA 1088 EB 2 Area 1 1 Lane-2-2	20.0	point787	787	3,686,863.2	685,014.7	21.00			Average
		point317	317	3,686,963.8	685,102.3	21.00			Average
		point318	318	3,687,034.2	685,150.0	21.00			Average
		point319	319	3,687,120.8	685,196.0	21.00			Average
		point320	320	3,687,263.8	685,265.5	21.00			Average
		point321	321	3,687,364.8	685,315.1	21.00			Average
		point322	322	3,687,395.5	685,336.1	21.00			
LA 1088 EB 3 Area 1 1 Lane-2	20.0	point788	788	3,688,219.5	685,707.5	21.00			Average
		point369	369	3,688,254.8	685,710.9	21.00			Average

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			point370	370	3,688,287.2	685,703.1	21.00			Average
			point371	371	3,688,306.8	685,695.7	21.00			Average
			point372	372	3,688,328.5	685,697.2	21.00			
LA 1088 WB 3 Area 2 1 Lane-2	20.0		point789	789	3,688,208.2	685,730.6	21.00			Average
			point396	396	3,688,093.0	685,668.8	21.00			Average
			point397	397	3,687,931.8	685,590.6	21.00			Average
			point398	398	3,687,856.5	685,547.2	21.00			
LA 1088 EB 1 Area 2 1 Lane-2	20.0		point790	790	3,688,402.2	685,755.9	21.00			Average
			point376	376	3,688,459.0	685,801.1	21.00			Average
			point377	377	3,688,534.8	685,846.7	21.00			Average
			point378	378	3,688,626.5	685,890.2	21.00			Average
			point379	379	3,688,757.8	685,954.8	21.00			Average
			point380	380	3,688,831.2	685,989.6	21.00			Average
			point381	381	3,688,872.5	686,014.3	21.00			
LA 1088 WB 1 Area 2 2 Lane-2	32.0		point791	791	3,688,388.5	685,802.8	21.00			Average
			point389	389	3,688,342.2	685,788.1	21.00			Average
			point390	390	3,688,317.2	685,797.9	21.00			
LA 1088 EB 2 Area 2 1 Lane-2	20.0		point792	792	3,690,906.5	686,868.7	21.00			Average
			point432	432	3,690,988.2	686,851.9	21.00			Average
			point433	433	3,691,022.8	686,853.6	21.00			Average
			point434	434	3,691,045.8	686,869.6	21.00			Average
			point435	435	3,691,066.2	686,883.8	21.00			Average
			point436	436	3,691,131.0	686,921.1	21.00			
LA 1088 WB 2 Area 2 1 Lane-2	20.0		point793	793	3,690,893.0	686,912.2	21.00			Average
			point493	493	3,690,864.5	686,891.4	21.00			Average
			point494	494	3,690,829.5	686,870.1	21.00			Average
			point495	495	3,690,770.2	686,836.5	21.00			Average
			point496	496	3,690,690.2	686,800.6	21.00			Average
			point497	497	3,690,571.2	686,758.0	21.00			Average
			point498	498	3,690,449.2	686,710.9	21.00			Average
			point499	499	3,690,327.2	686,655.8	21.00			
LA 1088 EB 2 Area 2 1 Lane-2-2	20.0		point794	794	3,691,131.0	686,921.1	21.00			Average
			point437	437	3,691,211.0	686,955.7	21.00			
LA 1088 WB 3 Area 2 2 Lane-2-2	32.0		point795	795	3,691,126.2	686,949.0	21.00			Average
			point485	485	3,691,099.0	686,949.4	21.00			Average
			point486	486	3,691,046.0	686,963.1	21.00			Average
			point487	487	3,691,013.8	686,973.0	21.00			Average
			point488	488	3,690,994.8	686,974.4	21.00			Average

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			point489	489	3,690,972.0	686,967.1	21.00			Average
			point490	490	3,690,947.5	686,959.9	21.00			
LA 1088 EB 1 Area 3 1 Lane-2	20.0		point796	796	3,692,484.8	687,399.9	21.00			Average
			point454	454	3,692,571.0	687,432.4	21.00			Average
			point455	455	3,692,683.0	687,473.1	21.00			Average
			point456	456	3,692,793.2	687,512.2	21.00			Average
			point457	457	3,692,839.8	687,538.1	21.00			
LA 1088 WB 1 Area 3 1 Lane-2	20.0		point797	797	3,692,493.8	687,445.2	21.00			Average
			point464	464	3,692,450.2	687,466.9	21.00			Average
			point465	465	3,692,437.0	687,483.3	21.00			Average
			point466	466	3,692,413.8	687,496.0	21.00			Average
			point467	467	3,692,381.8	687,498.2	21.00			
LA 1088 EB 2 Area 2 1 Lane-2-2-2	20.0		point798	798	3,692,294.0	687,383.6	21.00			Average
			point447	447	3,692,358.0	687,379.2	21.00			Average
			point448	448	3,692,378.2	687,368.6	21.00			Average
			point449	449	3,692,409.5	687,367.6	21.00			
LA 1088 WB 4 Area 2 1 Lane-2	20.0		point799	799	3,692,279.8	687,413.9	21.00			Average
			point473	473	3,692,236.0	687,378.6	21.00			Average
			point474	474	3,692,165.2	687,330.9	21.00			
LA 1088 EB 3 Area 3 2 Lane-2-2	32.0		point800	800	3,695,215.5	688,370.3	21.00			Average
			point616	616	3,695,276.0	688,360.9	21.00			Average
			point617	617	3,695,314.8	688,350.9	21.00			Average
			point618	618	3,695,351.8	688,352.4	21.00			Average
			point619	619	3,695,369.2	688,360.9	21.00			Average
			point620	620	3,695,389.0	688,378.8	21.00			Average
			point621	621	3,695,440.2	688,424.7	21.00			
LA 1088 WB 2 Area 3 1 Lane-2	12.0		point801	801	3,695,188.0	688,403.7	21.00			Average
			point675	675	3,695,095.8	688,347.1	21.00			
LA 1088 WB 3 Area 3 2 Lane-2-2	32.0		point803	803	3,695,404.2	688,495.2	21.00			Average
			point669	669	3,695,353.0	688,491.1	21.00			Average
			point670	670	3,695,303.2	688,482.2	21.00			
LA 1088 EB 3 Area 3 2 Lane-2-2-2-2	32.0		point804	804	3,699,196.0	690,208.7	22.00			Average
			point640	640	3,699,282.8	690,209.7	22.00			Average
			point641	641	3,699,310.0	690,212.9	24.00			
			point642	642	3,699,413.0	690,289.9	25.00			
LA 1088 EB 3 Area 3 2 Lane-2-2-2-2-2	32.0		point806	806	3,699,413.0	690,289.9	25.00			Average
			point643	643	3,699,487.8	690,339.4	30.00			
LA 1088 WB 3 Area 3 2 Lane-2	32.0		point807	807	3,699,395.8	690,351.1	25.00			Average

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LA 59 NB S of LA 1088 2 2 Lane-2			point646	646	3,699,326.8	690,348.4	24.00			Average
			point647	647	3,699,274.2	690,347.1	24.00			Average
			point648	648	3,699,248.2	690,335.4	23.00			Average
			point649	649	3,699,179.2	690,278.1	22.00			
	24.0		point808	808	3,684,047.8	683,690.2	21.00			Average
LA 59 SB S of LA 1088 1 2 Lane-2			point266	266	3,684,127.0	683,774.9	21.00			Average
			point267	267	3,684,152.5	683,800.9	21.00			
	24.0		point809	809	3,684,010.2	683,696.6	21.00			Average
			point288	288	3,683,993.2	683,623.1	21.00			Average
			point289	289	3,683,969.8	683,551.4	21.00			Average
			point290	290	3,683,928.5	683,458.6	21.00			Average
			point291	291	3,683,808.8	683,247.5	21.00			Average
			point292	292	3,683,708.2	683,067.5	21.00			Average
			point293	293	3,683,624.8	682,918.1	21.00			Average
			point294	294	3,683,597.2	682,835.0	21.00			
LA 59 SB N of LA 1088 1 2 Lane-2	24.0		point810	810	3,684,092.5	683,966.2	21.00			Average
			point283	283	3,684,052.0	683,898.4	21.00			Average
			point284	284	3,684,024.5	683,848.6	21.00			Average
			point285	285	3,684,022.0	683,819.9	21.00			
	12.0		point811	811	3,684,121.8	683,980.6	21.00			Average
			point273	273	3,684,118.8	684,062.8	21.00			Average
			point274	274	3,684,125.0	684,128.2	21.00			Average
			point275	275	3,684,139.2	684,204.8	21.00			Average
			point276	276	3,684,142.8	684,260.9	21.00			
	32.0		point843	812	3,699,179.2	690,278.1	22.00			Average
Roadway146			point650	813	3,699,134.5	690,245.8	21.00			Average
			point651	814	3,699,050.5	690,200.1	21.00			Average
			point652	815	3,698,780.2	690,073.8	21.00			Average
			point653	816	3,698,491.0	689,939.4	21.00			Average
			point654	817	3,698,210.8	689,803.8	21.00			Average
			point655	818	3,698,073.0	689,734.9	21.00			Average
			point656	819	3,697,790.0	689,594.7	21.00			Average
			point657	820	3,697,509.0	689,456.9	21.00			Average
			point658	821	3,697,324.0	689,368.2	21.00			Average
			point659	822	3,697,109.2	689,269.4	21.00			Average
			point660	823	3,696,888.2	689,167.0	21.00			Average
			point661	824	3,696,613.5	689,040.2	21.00			Average
			point662	825	3,696,396.2	688,941.9	21.00			Average

INPUT: ROADWAYS

LA 1088

		point663	826	3,696,153.0	688,831.5	21.00			Average
		point664	827	3,695,857.5	688,695.7	21.00			Average
		point665	828	3,695,589.0	688,573.7	21.00			Average
		point666	829	3,695,500.8	688,524.5	21.00			Average
		point667	830	3,695,450.0	688,500.6	21.00			Average
		point668	831	3,695,404.2	688,495.2	21.00			
Roadway147	32.0	point839	832	3,695,440.2	688,424.7	21.00			Average
		point622	833	3,695,519.8	688,487.3	21.00			Average
		point623	834	3,695,596.2	688,532.5	21.00			Average
		point624	835	3,695,874.2	688,660.1	21.00			Average
		point625	836	3,696,175.2	688,797.5	21.00			Average
		point626	837	3,696,413.0	688,906.7	21.00			Average
		point627	838	3,696,627.5	689,004.0	21.00			Average
		point628	839	3,696,904.8	689,130.8	21.00			Average
		point629	840	3,697,127.5	689,232.5	21.00			Average
		point630	841	3,697,338.8	689,329.9	21.00			Average
		point631	842	3,697,522.8	689,416.8	21.00			Average
		point632	843	3,697,808.2	689,552.8	21.00			Average
		point633	844	3,698,093.2	689,690.5	21.00			Average
		point634	845	3,698,234.0	689,758.9	21.00			Average
		point635	846	3,698,508.8	689,888.9	21.00			Average
		point636	847	3,698,800.8	690,023.9	21.00			Average
		point637	848	3,699,077.0	690,151.6	21.00			Average
		point638	849	3,699,163.8	690,196.8	21.00			Average
		point639	850	3,699,196.0	690,208.7	22.00			

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes

PROJECT/CONTRACT:

LA 1088

RUN: Build Alt 1 PM Peak 2033

Roadway	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Garon Dr Comb 1 2 Lane	point100	100	104	25	6	25	0	0	28	25	1	25
	point101	101										
Jackson St Comb 2 Lane	point106	106	32	25	4	25	0	0	16	25	0	0
	point107	107										
I-12 EB OnRamp 1 Lane	point162	162	282	35	5	35	2	35	55	35	1	35
	point163	163	282	35	5	35	2	35	55	35	1	35
	point164	164	282	35	5	35	2	35	55	35	1	35
	point165	165	282	35	5	35	2	35	55	35	1	35
	point166	166	282	35	5	35	2	35	55	35	1	35
	point167	167	282	35	5	35	2	35	55	35	1	35
	point168	168	282	35	5	35	2	35	55	35	1	35
	point169	169	282	35	5	35	2	35	55	35	1	35
	point170	170	282	35	5	35	2	35	55	35	1	35
	point171	171	282	35	5	35	2	35	55	35	1	35
	point172	172	282	35	5	35	2	35	55	35	1	35
	point173	173	282	35	5	35	2	35	55	35	1	35
	point174	174	282	35	5	35	2	35	55	35	1	35
	point175	175	282	35	5	35	2	35	55	35	1	35
	point176	176	282	35	5	35	2	35	55	35	1	35
	point177	177	282	35	5	35	2	35	55	35	1	35
	point178	178	282	35	5	35	2	35	55	35	1	35
	point179	179	282	35	5	35	2	35	55	35	1	35

C:\Noise Projects\LA 1088 Noise\Runs\Build\Build Alt 1 PM Peak

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point180	180	282	35	5	35	2	35	55	35	1	35
	point181	181	282	35	5	35	2	35	55	35	1	35
	point182	182	282	35	5	35	2	35	55	35	1	35
	point183	183	282	35	5	35	2	35	55	35	1	35
	point184	184	282	35	5	35	2	35	55	35	1	35
	point185	185	282	35	5	35	2	35	55	35	1	35
	point186	186	282	35	5	35	2	35	55	35	1	35
	point187	187	282	35	5	35	2	35	55	35	1	35
	point188	188	282	35	5	35	2	35	55	35	1	35
	point189	189										
LA 59 S of LA 1088 1	point218	218	1697	45	90	45	21	45	309	45	28	45
	point219	219	1697	45	90	45	21	45	309	45	28	45
	point220	220	1697	45	90	45	21	45	309	45	28	45
	point221	221	1697	45	90	45	21	45	309	45	28	45
	point222	222	1697	45	90	45	21	45	309	45	28	45
	point223	223	1697	45	90	45	21	45	309	45	28	45
	point224	224										
	point243	243	677	45	63	45	6	45	395	45	9	45
	point7	7	677	45	63	45	6	45	395	45	9	45
	point8	8	677	45	63	45	6	45	395	45	9	45
LA 1088 Comb 1 Area 1 2 Lane	point9	9	677	45	63	45	6	45	395	45	9	45
	point10	10	677	45	63	45	6	45	395	45	9	45
	point11	11	677	45	63	45	6	45	395	45	9	45
	point12	12	677	45	63	45	6	45	395	45	9	45
	point13	13										
	point245	245	677	45	63	45	6	45	395	45	9	45
	point18	18	677	45	63	45	6	45	395	45	9	45
	point19	19										
	point250	250	914	45	66	45	12	45	311	45	4	45
	point39	39	914	45	66	45	12	45	311	45	4	45
LA 1088 Comb 2 Area 1 2 Lane	point40	40	914	45	66	45	12	45	311	45	4	45
	point41	41	914	45	66	45	12	45	311	45	4	45
	point251	251										
	point255	255	1087	45	94	45	87	45	397	45	12	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point235	235	1087	45	94	45	87	45	397	45	12	45
	point236	236	1087	45	94	45	87	45	397	45	12	45
	point237	237	1087	45	94	45	87	45	397	45	12	45
	point238	238	1087	45	94	45	87	45	397	45	12	45
	point239	239	1087	45	94	45	87	45	397	45	12	45
	point240	240	1087	45	94	45	87	45	397	45	12	45
	point241	241	1087	45	94	45	87	45	397	45	12	45
	point242	242										
LA 59 NB S of LA 1088 1 1 Lane	point257	257	772	45	41	45	10	45	141	45	13	45
	point258	258	772	45	41	45	10	45	141	45	13	45
	point259	259	772	45	41	45	10	45	141	45	13	45
	point260	260										
LA 59 NB S of LA 1088 2 2 Lane	point261	261	772	45	41	45	10	45	141	45	13	45
	point262	262	772	45	41	45	10	45	141	45	13	45
	point263	263	772	45	41	45	10	45	141	45	13	45
	point264	264	772	45	41	45	10	45	141	45	13	45
	point265	265										
LA 59 NB N of LA 1088 1 1 Lane	point268	268	592	15	51	15	48	15	217	15	6	15
	point269	269	592	15	51	15	48	15	217	15	6	15
	point270	270	592	15	51	15	48	15	217	15	6	15
	point271	271	592	15	51	15	48	15	217	15	6	15
	point272	272										
LA 59 SB N of LA 1088 1 2 Lane	point277	277	494	45	43	45	40	45	181	45	5	45
	point278	278	494	45	43	45	40	45	181	45	5	45
	point279	279	494	45	43	45	40	45	181	45	5	45
	point280	280	494	45	43	45	40	45	181	45	5	45
	point281	281	494	45	43	45	40	45	181	45	5	45
	point282	282										
LA 59 SB S of LA 1088 1 2 Lane	point286	286	925	15	49	15	12	15	168	15	15	15
	point287	287										
	point295	295	308	45	29	45	3	45	180	45	4	45
	point296	296	308	45	29	45	3	45	180	45	4	45
	point297	297	308	45	29	45	3	45	180	45	4	45
	point298	298	308	45	29	45	3	45	180	45	4	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point356	356	47	25	3	25	0	0	13	25	0	0
	point357	357										
Garon Dr SB 1 Lane	point358	358	57	25	3	25	0	0	15	25	0	0
	point359	359	57	25	3	25	0	0	15	25	0	0
	point360	360	57	25	3	25	0	0	15	25	0	0
	point361	361	57	25	3	25	0	0	15	25	0	0
	point362	362	57	25	3	25	0	0	15	25	0	0
	point363	363										
LA 1088 EB 3 Area 1 1 Lane	point365	365	369	45	34	45	3	45	215	45	5	45
	point366	366	369	45	34	45	3	45	215	45	5	45
	point367	367	369	45	34	45	3	45	215	45	5	45
	point368	368										
LA 1088 EB 1 Area 2 1 Lane	point373	373	296	15	10	15	5	15	124	15	7	15
	point374	374	296	15	10	15	5	15	124	15	7	15
	point375	375										
	point382	382	414	45	15	45	7	45	173	45	10	45
LA 1088 WB 1 Area 2 2 Lane	point383	383	414	45	15	45	7	45	173	45	10	45
	point384	384	414	45	15	45	7	45	173	45	10	45
	point385	385	414	45	15	45	7	45	173	45	10	45
	point386	386	414	45	15	45	7	45	173	45	10	45
	point387	387	414	45	15	45	7	45	173	45	10	45
	point388	388										
LA 1088 WB 3 Area 2 1 Lane	point391	391	369	15	34	15	3	15	215	15	5	15
	point392	392	369	15	34	15	3	15	215	15	5	15
	point393	393	369	15	34	15	3	15	215	15	5	15
	point394	394	369	15	34	15	3	15	215	15	5	15
	point395	395										
Spring Blvd NB 1 Lane	point399	399	72	20	4	20	0	0	29	20	1	20
	point400	400	72	20	4	20	0	0	29	20	1	20
	point401	401	72	20	4	20	0	0	29	20	1	20
	point402	402										
Spring Blvd SB 1 Lane	point403	403	93	20	6	20	0	0	37	20	1	20
	point404	404	93	20	6	20	0	0	37	20	1	20
	point405	405	93	20	6	20	0	0	37	20	1	20

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point471	471	414	15	15	15	7	15	173	15	10	15
	point472	472										
LA 1088 WB 3 Area 2 2 Lane	point482	482	414	45	15	45	7	45	173	45	10	45
	point483	483										
LA 1088 WB 2 Area 2 1 Lane	point491	491	414	15	15	15	7	15	173	15	10	15
	point492	492										
Soult St Comb 2 Lane	point500	500	517	25	48	25	5	25	210	25	4	25
	point501	501										
Soult St NB 2 Lane	point502	502	198	25	18	25	2	25	81	25	2	25
	point503	503	198	25	18	25	2	25	81	25	2	25
	point504	504	198	25	18	25	2	25	81	25	2	25
	point505	505	198	25	18	25	2	25	81	25	2	25
	point506	506	198	25	18	25	2	25	81	25	2	25
	point507	507	198	25	18	25	2	25	81	25	2	25
	point508	508	198	25	18	25	2	25	81	25	2	25
	point509	509										
Soult St SB 1 Lane	point510	510	277	25	26	25	3	25	113	25	2	25
	point511	511	277	25	26	25	3	25	113	25	2	25
	point512	512	277	25	26	25	3	25	113	25	2	25
	point513	513	277	25	26	25	3	25	113	25	2	25
	point514	514	277	25	26	25	3	25	113	25	2	25
	point515	515	277	25	26	25	3	25	113	25	2	25
	point516	516										
Viola St NB 1 Lane	point517	517	49	25	1	25	0	0	75	25	0	0
	point518	518	49	25	1	25	0	0	75	25	0	0
	point519	519	49	25	1	25	0	0	75	25	0	0
	point520	520										
Viola St Comb 2 Lane	point521	521	91	25	2	25	0	0	140	25	0	0
	point522	522	91	25	2	25	0	0	140	25	0	0
	point523	523	91	25	2	25	0	0	140	25	0	0
	point524	524	91	25	2	25	0	0	140	25	0	0
	point525	525	91	25	2	25	0	0	140	25	0	0
	point526	526										
Viola St SB 1 Lane	point527	527	35	25	1	25	0	0	54	25	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point528	528	35	25	1	25	0	0	54	25	0	0
	point529	529	35	25	1	25	0	0	54	25	0	0
	point530	530	35	25	1	25	0	0	54	25	0	0
	point531	531	35	25	1	25	0	0	54	25	0	0
	point532	532										
Trinity Dr NB 2 Lane	point533	533	75	20	1	20	0	0	12	20	4	20
	point534	534	75	20	1	20	0	0	12	20	4	20
	point535	535	75	20	1	20	0	0	12	20	4	20
	point536	536	75	20	1	20	0	0	12	20	4	20
	point537	537										
Trinity Dr SB 1 Lane	point538	538	123	20	2	20	0	0	19	20	7	20
	point539	539	123	20	2	20	0	0	19	20	7	20
	point540	540	123	20	2	20	0	0	19	20	7	20
	point541	541										
	point273	552	377	55	21	55	4	55	128	55	4	55
LA 1088 WB 3 BT Bridges 2 Lane	point272	553	377	55	21	55	4	55	128	55	4	55
	point271	554	377	55	21	55	4	55	128	55	4	55
	point270	555	377	55	21	55	4	55	128	55	4	55
	point269	556	377	55	21	55	4	55	128	55	4	55
	point268	557	377	55	21	55	4	55	128	55	4	55
	point267	558	377	55	21	55	4	55	128	55	4	55
	point266	559	377	55	21	55	4	55	128	55	4	55
	point265	560	377	55	21	55	4	55	128	55	4	55
	point264	561	377	55	21	55	4	55	128	55	4	55
	point263	562	377	55	21	55	4	55	128	55	4	55
	point262	563										
LA 1088 EB 1 BT Bridges 2 Lane	point65	583	231	55	13	55	3	55	79	55	2	55
	point66	584	231	55	13	55	3	55	79	55	2	55
	point770	770	231	55	13	55	3	55	79	55	2	55
	point67	585	231	55	13	55	3	55	79	55	2	55
	point68	586	231	55	13	55	3	55	79	55	2	55
	point771	771	231	55	13	55	3	55	79	55	2	55
	point69	587	231	55	13	55	3	55	79	55	2	55
	point70	588										

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

LA 1088 EB 2 Area 3 1 Lane	point602	602	347	45	25	45	5	45	118	45	2	45
	point603	603	347	45	25	45	5	45	118	45	2	45
	point604	604	347	45	25	45	5	45	118	45	2	45
	point605	605	347	45	25	45	5	45	118	45	2	45
	point606	606										
LA 1088 EB 3 Area 3 2 Lane	point609	609	347	45	25	45	5	45	118	45	2	45
	point610	610	347	45	25	45	5	45	118	45	2	45
	point611	611	347	45	25	45	5	45	118	45	2	45
	point612	612	347	45	25	45	5	45	118	45	2	45
	point613	613										
LA 1088 WB 3 Area 3 2 Lane	point644	644	566	55	41	55	7	55	193	55	2	55
	point645	645										
LA 1088 WB 2 Area 3 1 Lane	point671	671	566	15	41	15	7	15	193	15	2	15
	point672	672	566	15	41	15	7	15	193	15	2	15
	point673	673	566	15	41	15	7	15	193	15	2	15
	point674	674										
Forest Brook Blvd Comb 2 Lane	point683	683	400	20	9	20	3	20	66	20	1	20
	point684	684										
Forest Brook Blvd NB 2 Lane	point685	685	129	20	3	20	2	20	21	20	0	0
	point686	686	129	20	3	20	2	20	21	20	0	0
	point687	687	129	20	3	20	2	20	21	20	0	0
	point688	688	129	20	3	20	2	20	21	20	0	0
	point689	689	129	20	3	20	2	20	21	20	0	0
	point690	690	129	20	3	20	2	20	21	20	0	0
	point691	691										
Forest Brook Blvd SB 1 Lane	point692	692	211	20	5	20	2	20	35	20	1	20
	point693	693	211	20	5	20	2	20	35	20	1	20
	point694	694	211	20	5	20	2	20	35	20	1	20
	point695	695	211	20	5	20	2	20	35	20	1	20
	point696	696	211	20	5	20	2	20	35	20	1	20
	point697	697										
I-12 EB OffRamp 1 1 Lane	point698	698	325	35	5	35	2	35	63	35	2	35
	point699	699	325	35	5	35	2	35	63	35	2	35
	point700	700	325	35	5	35	2	35	63	35	2	35

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point701	701	325	35	5	35	2	35	63	35	2	35
	point702	702	325	35	5	35	2	35	63	35	2	35
	point703	703	325	35	5	35	2	35	63	35	2	35
	point704	704	325	35	5	35	2	35	63	35	2	35
	point705	705	325	35	5	35	2	35	63	35	2	35
	point706	706	325	35	5	35	2	35	63	35	2	35
	point707	707	325	35	5	35	2	35	63	35	2	35
	point708	708	325	35	5	35	2	35	63	35	2	35
	point709	709	325	35	5	35	2	35	63	35	2	35
	point710	710	325	35	5	35	2	35	63	35	2	35
	point711	711										
I-12 EB OffRamp 2 2 Lane	point712	712	325	35	5	35	2	35	63	35	2	35
	point713	713	325	35	5	35	2	35	63	35	2	35
	point714	714										
I-12 EB OffRamp 4 1 Lane	point715	715	174	35	3	35	1	35	34	35	1	35
	point716	716	174	35	3	35	1	35	34	35	1	35
	point717	717	174	35	3	35	1	35	34	35	1	35
	point718	718	174	35	3	35	1	35	34	35	1	35
	point719	719										
I-12 EB OffRamp 3 1 Lane	point720	720	125	35	2	35	1	35	24	35	1	35
	point721	721	125	35	2	35	1	35	24	35	1	35
	point722	722										
I-12 WB OffRamp 1 Lane	point723	723	177	35	54	35	3	35	31	35	1	35
	point724	724	177	35	54	35	3	35	31	35	1	35
	point725	725	177	35	54	35	3	35	31	35	1	35
	point726	726	177	35	54	35	3	35	31	35	1	35
	point727	727	177	35	54	35	3	35	31	35	1	35
	point728	728	177	35	54	35	3	35	31	35	1	35
	point729	729	177	35	54	35	3	35	31	35	1	35
	point730	730	177	35	54	35	3	35	31	35	1	35
	point731	731	177	35	54	35	3	35	31	35	1	35
	point732	732	177	35	54	35	3	35	31	35	1	35
	point733	733	177	35	54	35	3	35	31	35	1	35
	point734	734	177	35	54	35	3	35	31	35	1	35

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point735	735	177	35	54	35	3	35	31	35	1	35
	point736	736	177	35	54	35	3	35	31	35	1	35
	point737	737	177	35	54	35	3	35	31	35	1	35
	point738	738										
LA 1088 EB 2 Lane Past I-12 OffRamp	point740	740	231	55	13	55	3	55	79	55	2	55
	point73	591	231	55	13	55	3	55	79	55	2	55
	point74	592	231	55	13	55	3	55	79	55	2	55
	point75	593	231	55	13	55	3	55	79	55	2	55
	point76	594	231	55	13	55	3	55	79	55	2	55
	point77	595	231	55	13	55	3	55	79	55	2	55
	point78	596	231	55	13	55	3	55	79	55	2	55
	point79	597	231	55	13	55	3	55	79	55	2	55
	point80	598	231	55	13	55	3	55	79	55	2	55
	point81	599	231	55	13	55	3	55	79	55	2	55
	point82	600	231	55	13	55	3	55	79	55	2	55
	point83	601										
LA 1088 WB 1 BT Bridges 2 Lane	point741	741	377	55	21	55	4	55	128	55	4	55
	point259	566	377	55	21	55	4	55	128	55	4	55
	point772	772	377	55	21	55	4	55	128	55	4	55
	point258	567	377	55	21	55	4	55	128	55	4	55
	point257	568	377	55	21	55	4	55	128	55	4	55
	point773	773	377	55	21	55	4	55	128	55	4	55
	point256	569	377	55	21	55	4	55	128	55	4	55
	point255	570										
LA 1088 EB 2 BT Bridges 2 Lane	point748	748	231	15	13	15	3	15	79	15	2	15
	point749	749	231	15	13	15	3	15	79	15	2	15
	point750	750	231	15	13	15	3	15	79	15	2	15
	point751	751	231	15	13	15	3	15	79	15	2	15
	point752	752	231	15	13	15	3	15	79	15	2	15
	point753	753	231	15	13	15	3	15	79	15	2	15
	point754	754	231	15	13	15	3	15	79	15	2	15
	point755	755	231	15	13	15	3	15	79	15	2	15
	point756	756	231	15	13	15	3	15	79	15	2	15
	point757	757										

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

LA 1088 WB 2 BT Bridges 2 Lane	point758	758	377	15	21	15	4	15	128	15	4	15
	point759	759	377	15	21	15	4	15	128	15	4	15
	point760	760	377	15	21	15	4	15	128	15	4	15
	point761	761	377	15	21	15	4	15	128	15	4	15
	point762	762	377	15	21	15	4	15	128	15	4	15
	point763	763	377	15	21	15	4	15	128	15	4	15
	point764	764	377	15	21	15	4	15	128	15	4	15
	point765	765	377	15	21	15	4	15	128	15	4	15
	point766	766	377	15	21	15	4	15	128	15	4	15
	point767	767										
LA 1088 Comb 1 Area 2 2 Lane	point247	247	710	45	25	45	12	45	297	45	17	45
	point24	24	710	45	25	45	12	45	297	45	17	45
	point25	25	710	45	25	45	12	45	297	45	17	45
	point419	419	710	45	25	45	12	45	297	45	17	45
	point420	420	710	45	25	45	12	45	297	45	17	45
	point421	421	710	45	25	45	12	45	297	45	17	45
	point422	422	710	45	25	45	12	45	297	45	17	45
	point423	423										
School Comb 2 Lane	point768	768	48	25	2	25	0	0	16	25	0	0
	point364	364	48	25	2	25	0	0	16	25	0	0
	point135	135										
LA 1088 EB 2 Area 2 1 Lane-2	point774	774	296	45	10	45	5	45	124	45	7	45
	point438	438	296	45	10	45	5	45	124	45	7	45
	point439	439	296	45	10	45	5	45	124	45	7	45
	point440	440	296	45	10	45	5	45	124	45	7	45
	point441	441	296	45	10	45	5	45	124	45	7	45
	point442	442	296	45	10	45	5	45	124	45	7	45
	point443	443	296	45	10	45	5	45	124	45	7	45
	point444	444										
LA 1088 WB 3 Area 2 2 Lane-2	point775	775	414	45	15	45	7	45	173	45	10	45
	point484	484										
LA 1088 EB 2 Area 2 1 Lane-2-2	point776	776	296	45	10	45	5	45	124	45	7	45
	point445	445	296	45	10	45	5	45	124	45	7	45
	point446	446										

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

LA 1088 WB 4 Area 2 1 Lane-2	point777	777	414	45	15	45	7	45	173	45	10	45
	point475	475	414	45	15	45	7	45	173	45	10	45
	point476	476	414	45	15	45	7	45	173	45	10	45
	point477	477	414	45	15	45	7	45	173	45	10	45
	point478	478	414	45	15	45	7	45	173	45	10	45
	point479	479	414	45	15	45	7	45	173	45	10	45
	point480	480	414	45	15	45	7	45	173	45	10	45
	point481	481										
LA 1088 EB 3 Area 3 2 Lane-2	point778	778	347	45	25	45	5	45	118	45	2	45
	point614	614	347	45	25	45	5	45	118	45	2	45
	point615	615										
LA 1088 WB 2 Area 3 1 Lane-2	point779	779	566	45	41	45	7	45	193	45	2	45
	point676	676	566	45	41	45	7	45	193	45	2	45
	point677	677	566	45	41	45	7	45	193	45	2	45
	point678	678	566	45	41	45	7	45	193	45	2	45
	point679	679	566	45	41	45	7	45	193	45	2	45
	point680	680	566	45	41	45	7	45	193	45	2	45
	point681	681	566	45	41	45	7	45	193	45	2	45
	point682	682										
LA 1088 EB 2 Area 1 1 Lane-2	point784	784	308	15	29	15	3	15	180	15	4	15
	point312	312	308	15	29	15	3	15	180	15	4	15
	point314	314	308	15	29	15	3	15	180	15	4	15
	point315	315	308	15	29	15	3	15	180	15	4	15
	point316	316										
LA 1088 WB 2 Area 1 1 Lane-2	point785	785	369	45	34	45	3	45	215	45	5	45
	point338	338	369	45	34	45	3	45	215	45	5	45
	point339	339	369	45	34	45	3	45	215	45	5	45
	point340	340	369	45	34	45	3	45	215	45	5	45
	point341	341	369	45	34	45	3	45	215	45	5	45
	point342	342										
LA 1088 WB 2 Area 1 1 Lane-2	point786	786	369	15	34	15	3	15	215	15	5	15
	point331	331	369	15	34	15	3	15	215	15	5	15
	point332	332	369	15	34	15	3	15	215	15	5	15
	point333	333	369	15	34	15	3	15	215	15	5	15

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point334	334	369	15	34	15	3	15	215	15	5	15
	point335	335	369	15	34	15	3	15	215	15	5	15
	point336	336	369	15	34	15	3	15	215	15	5	15
	point337	337										
LA 1088 EB 2 Area 1 1 Lane-2-2	point787	787	308	45	29	45	3	45	180	45	4	45
	point317	317	308	45	29	45	3	45	180	45	4	45
	point318	318	308	45	29	45	3	45	180	45	4	45
	point319	319	308	45	29	45	3	45	180	45	4	45
	point320	320	308	45	29	45	3	45	180	45	4	45
	point321	321	308	45	29	45	3	45	180	45	4	45
	point322	322										
LA 1088 EB 3 Area 1 1 Lane-2	point788	788	369	15	34	15	3	15	215	15	5	15
	point369	369	369	15	34	15	3	15	215	15	5	15
	point370	370	369	15	34	15	3	15	215	15	5	15
	point371	371	369	15	34	15	3	15	215	15	5	15
	point372	372										
LA 1088 WB 3 Area 2 1 Lane-2	point789	322	369	45	34	45	3	45	215	45	5	45
	point396	396	369	45	34	45	3	45	215	45	5	45
	point397	397	369	45	34	45	3	45	215	45	5	45
	point398	398										
LA 1088 EB 1 Area 2 1 Lane-2	point790	790	296	45	10	45	5	45	124	45	7	45
	point376	376	296	45	10	45	5	45	124	45	7	45
	point377	377	296	45	10	45	5	45	124	45	7	45
	point378	378	296	45	10	45	5	45	124	45	7	45
	point379	379	296	45	10	45	5	45	124	45	7	45
	point380	380	296	45	10	45	5	45	124	45	7	45
	point381	381										
LA 1088 WB 1 Area 2 2 Lane-2	point791	791	414	15	15	15	7	15	173	15	10	15
	point389	389	414	15	15	15	7	15	173	15	10	15
	point390	390										
LA 1088 EB 2 Area 2 1 Lane-2	point792	792	296	15	10	15	5	15	124	15	7	15
	point432	432	296	15	10	15	5	15	124	15	7	15
	point433	433	296	15	10	15	5	15	124	15	7	15
	point434	434	296	15	10	15	5	15	124	15	7	15

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point435	435	296	15	10	15	5	15	124	15	7	15
	point436	436										
LA 1088 WB 2 Area 2 1 Lane-2	point793	793	414	45	15	45	7	45	173	45	10	45
	point493	493	414	45	15	45	7	45	173	45	10	45
	point494	494	414	45	15	45	7	45	173	45	10	45
	point495	495	414	45	15	45	7	45	173	45	10	45
	point496	496	414	45	15	45	7	45	173	45	10	45
	point497	497	414	45	15	45	7	45	173	45	10	45
	point498	498	414	45	15	45	7	45	173	45	10	45
	point499	499										
LA 1088 EB 2 Area 2 1 Lane-2-2	point794	794	296	45	10	45	5	45	124	45	7	45
	point437	437										
LA 1088 WB 3 Area 2 2 Lane-2-2	point795	795	414	15	15	15	7	15	173	15	10	15
	point485	485	414	15	15	15	7	15	173	15	10	15
	point486	486	414	15	15	15	7	15	173	15	10	15
	point487	487	414	15	15	15	7	15	173	15	10	15
	point488	488	414	15	15	15	7	15	173	15	10	15
	point489	489	414	15	15	15	7	15	173	15	10	15
	point490	490										
LA 1088 EB 1 Area 3 1 Lane-2	point796	796	347	45	25	45	5	45	118	45	2	45
	point454	454	347	45	25	45	5	45	118	45	2	45
	point455	455	347	45	25	45	5	45	118	45	2	45
	point456	456	347	45	25	45	5	45	118	45	2	45
	point457	457										
LA 1088 WB 1 Area 3 1 Lane-2	point797	797	566	15	41	15	7	15	193	15	2	15
	point464	464	566	15	41	15	7	15	193	15	2	15
	point465	465	566	15	41	15	7	15	193	15	2	15
	point466	466	566	15	41	15	7	15	193	15	2	15
	point467	467										
LA 1088 EB 2 Area 2 1 Lane-2-2-2	point798	798	296	15	10	15	5	15	124	15	7	15
	point447	447	296	15	10	15	5	15	124	15	7	15
	point448	448	296	15	10	15	5	15	124	15	7	15
	point449	449										
LA 1088 WB 4 Area 2 1 Lane-2	point799	799	414	45	15	45	7	45	173	45	10	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point473	473	414	45	15	45	7	45	173	45	10	45
	point474	474										
LA 1088 EB 3 Area 3 2 Lane-2-2	point800	800	347	15	25	15	5	15	118	15	2	15
	point616	616	347	15	25	15	5	15	118	15	2	15
	point617	617	347	15	25	15	5	15	118	15	2	15
	point618	618	347	15	25	15	5	15	118	15	2	15
	point619	619	347	15	25	15	5	15	118	15	2	15
	point620	620	347	15	25	15	5	15	118	15	2	15
	point621	621										
LA 1088 WB 2 Area 3 1 Lane-2	point801	801	566	45	41	45	7	45	193	45	2	45
	point675	675										
LA 1088 WB 3 Area 3 2 Lane-2-2	point803	803	566	15	41	15	7	15	193	15	2	15
	point669	669	566	15	41	15	7	15	193	15	2	15
	point670	670										
LA 1088 EB 3 Area 3 2 Lane-2-2-2-2	point804	804	347	15	25	15	5	15	118	15	2	15
	point640	640	347	15	25	15	5	15	118	15	2	15
	point641	641	347	15	25	15	5	15	118	15	2	15
	point642	642										
LA 1088 EB 3 Area 3 2 Lane-2-2-2-2	point806	806	347	55	25	55	5	55	118	55	2	55
	point643	643										
LA 1088 WB 3 Area 3 2 Lane-2	point807	807	566	15	41	15	7	15	193	15	2	15
	point646	646	566	15	41	15	7	15	193	15	2	15
	point647	647	566	15	41	15	7	15	193	15	2	15
	point648	648	566	15	41	15	7	15	193	15	2	15
	point649	649										
LA 59 NB S of LA 1088 2 2 Lane-2	point808	808	772	15	41	15	10	15	141	15	13	15
	point266	266	772	15	41	15	10	15	141	15	13	15
	point267	267										
LA 59 SB S of LA 1088 1 2 Lane-2	point809	809	925	45	49	45	12	45	168	45	15	45
	point288	288	925	45	49	45	12	45	168	45	15	45
	point289	289	925	45	49	45	12	45	168	45	15	45
	point290	290	925	45	49	45	12	45	168	45	15	45
	point291	291	925	45	49	45	12	45	168	45	15	45
	point292	292	925	45	49	45	12	45	168	45	15	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point293	293	925	45	49	45	12	45	168	45	15	45
	point294	294										
LA 59 SB N of LA 1088 1 2 Lane-2	point810	810	494	15	43	15	40	15	181	15	5	15
	point283	283	494	15	43	15	40	15	181	15	5	15
	point284	284	494	15	43	15	40	15	181	15	5	15
	point285	285										
LA 59 NB N of LA 1088 1 1 Lane-2	point811	811	592	45	51	45	48	45	217	45	6	45
	point273	273	592	45	51	45	48	45	217	45	6	45
	point274	274	592	45	51	45	48	45	217	45	6	45
	point275	275	592	45	51	45	48	45	217	45	6	45
Roadway146	point276	276										
	point843	812	566	55	41	55	7	55	193	55	2	55
	point650	813	566	55	41	55	7	55	193	55	2	55
	point651	814	566	55	41	55	7	55	193	55	2	55
	point652	815	566	55	41	55	7	55	193	55	2	55
	point653	816	566	55	41	55	7	55	193	55	2	55
	point654	817	566	55	41	55	7	55	193	55	2	55
	point655	818	566	55	41	55	7	55	193	55	2	55
	point656	819	566	55	41	55	7	55	193	55	2	55
	point657	820	566	55	41	55	7	55	193	55	2	55
	point658	821	566	55	41	55	7	55	193	55	2	55
	point659	822	566	55	41	55	7	55	193	55	2	55
	point660	823	566	55	41	55	7	55	193	55	2	55
	point661	824	566	55	41	55	7	55	193	55	2	55
	point662	825	566	55	41	55	7	55	193	55	2	55
	point663	826	566	55	41	55	7	55	193	55	2	55
Roadway147	point664	827	566	55	41	55	7	55	193	55	2	55
	point665	828	566	55	41	55	7	55	193	55	2	55
	point666	829	566	55	41	55	7	55	193	55	2	55
	point667	830	566	55	41	55	7	55	193	55	2	55
	point668	831										
	point839	832	347	55	25	55	5	55	118	55	2	55
	point622	833	347	55	25	55	5	55	118	55	2	55
	point623	834	347	55	25	55	5	55	118	55	2	55

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

point624	835	347	55	25	55	5	55	118	55	2	55
point625	836	347	55	25	55	5	55	118	55	2	55
point626	837	347	55	25	55	5	55	118	55	2	55
point627	838	347	55	25	55	5	55	118	55	2	55
point628	839	347	55	25	55	5	55	118	55	2	55
point629	840	347	55	25	55	5	55	118	55	2	55
point630	841	347	55	25	55	5	55	118	55	2	55
point631	842	347	55	25	55	5	55	118	55	2	55
point632	843	347	55	25	55	5	55	118	55	2	55
point633	844	347	55	25	55	5	55	118	55	2	55
point634	845	347	55	25	55	5	55	118	55	2	55
point635	846	347	55	25	55	5	55	118	55	2	55
point636	847	347	55	25	55	5	55	118	55	2	55
point637	848	347	55	25	55	5	55	118	55	2	55
point638	849	347	55	25	55	5	55	118	55	2	55
point639	850										

INPUT: RECEIVERS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: RECEIVERS

PROJECT/CONTRACT:

LA 1088

RUN: Build Alt 1 PM Peak 2033

Receiver												
Name	No.	#DUs	Coordinates (ground)			Height above Ground	Input Sound Levels and Criteria					Active in Calc.
			X	Y	Z		Existing LAeq1h	Impact Criteria		NR		
								LAeq1h	Sub'l		Goal	
			ft	ft	ft	ft	dBA	dBA	dB			
Res 12		15	1	3,683,288.2	682,418.7	21.00	4.92	70.60	66	10.0	8.0	Y
Res 13		16	1	3,683,406.5	682,602.1	21.00	4.92	71.60	66	10.0	8.0	Y
Res 14		17	1	3,683,402.2	682,710.6	21.00	4.92	67.60	66	10.0	8.0	Y
Res 15		18	1	3,683,509.5	682,820.1	21.00	4.92	70.00	66	10.0	8.0	Y
Res 16		19	1	3,683,554.0	682,985.1	21.00	4.92	67.40	66	10.0	8.0	Y
Res 17		20	3	3,683,444.5	683,048.0	21.00	4.92	60.10	66	10.0	8.0	Y
Res 18		21	3	3,683,363.0	683,119.6	21.00	4.92	55.90	66	10.0	8.0	Y
Res 19		22	3	3,683,236.2	683,143.5	21.00	4.92	52.80	66	10.0	8.0	Y
Office 20		23	1	3,683,642.8	683,119.1	21.00	4.92	68.00	71	10.0	8.0	Y
Office 21		24	1	3,683,747.2	683,269.4	21.00	4.92	69.00	71	10.0	8.0	Y
Restaurant 22		25	1	3,683,907.8	683,708.8	21.00	4.92	68.10	71	10.0	8.0	Y
Bank 23		26	1	3,683,936.0	683,881.4	21.00	4.92	67.90	71	10.0	8.0	Y
Office 24		27	1	3,683,651.5	683,869.9	21.00	4.92	55.80	71	10.0	8.0	Y
Res 40		43	1	3,684,553.8	684,402.5	21.00	4.92	58.50	66	10.0	8.0	Y
Res 41		44	1	3,684,706.2	684,268.4	21.00	4.92	61.70	66	10.0	8.0	Y
Res 42		45	1	3,685,596.8	684,776.2	21.00	4.92	56.70	66	10.0	8.0	Y
School 43		46	1	3,685,926.2	684,787.9	21.00	4.92	64.40	66	10.0	8.0	Y
Res 44		47	3	3,685,809.0	684,957.2	21.00	4.92	51.70	66	10.0	8.0	Y
Res 45		48	4	3,685,833.8	685,027.5	21.00	4.92	50.80	66	10.0	8.0	Y
Res 46		49	2	3,685,854.5	685,070.4	21.00	4.92	50.40	66	10.0	8.0	Y
Res 47		50	4	3,685,815.5	685,131.5	21.00	4.92	49.50	66	10.0	8.0	Y
Res 48		51	1	3,686,061.5	684,994.9	21.00	4.92	54.60	66	10.0	8.0	Y

INPUT: RECEIVERS

LA 1088

Apartment 49 (1st Floor)	52	2	3,686,246.5	684,897.2	21.00	4.92	67.10	66	10.0	8.0	Y
Apartment 50 (1st Floor)	53	2	3,686,365.0	684,962.4	21.00	4.92	63.30	66	10.0	8.0	Y
Apartment 51 (1st Floor)	54	2	3,686,252.2	684,942.4	21.00	4.92	62.60	66	10.0	8.0	Y
Apartment 52 (1st Floor)	55	2	3,686,376.0	685,008.9	21.00	4.92	54.80	66	10.0	8.0	Y
Apartment 53 (1st Floor)	56	2	3,686,241.2	685,047.0	21.00	4.92	54.30	66	10.0	8.0	Y
Apartment 54 (1st Floor)	57	2	3,686,249.8	685,086.9	21.00	4.92	53.10	66	10.0	8.0	Y
Apartment 55 (1st Floor)	58	2	3,686,185.8	685,214.4	21.00	4.92	50.10	66	10.0	8.0	Y
Apartment 56 (1st Floor)	59	2	3,686,231.5	685,226.4	21.00	4.92	50.60	66	10.0	8.0	Y
Res 57	60	3	3,686,431.5	685,246.2	21.00	4.92	53.20	66	10.0	8.0	Y
Res 58	61	2	3,686,536.8	685,239.8	21.00	4.92	55.10	66	10.0	8.0	Y
Res 59	62	3	3,686,534.8	685,403.9	21.00	4.92	50.30	66	10.0	8.0	Y
Res 60	63	2	3,686,661.8	685,404.9	21.00	4.92	51.90	66	10.0	8.0	Y
Res 61	64	3	3,686,723.0	685,250.1	21.00	4.92	58.50	66	10.0	8.0	Y
Res 62	65	1	3,686,781.8	685,140.8	21.00	4.92	67.70	66	10.0	8.0	Y
Res 63	66	1	3,686,783.0	685,228.0	21.00	4.92	61.60	66	10.0	8.0	Y
Res 64	67	1	3,686,776.8	685,401.7	21.00	4.92	55.60	66	10.0	8.0	Y
Res 65	68	2	3,686,771.2	685,547.1	21.00	4.92	53.70	66	10.0	8.0	Y
Res 66	69	1	3,686,905.2	685,225.4	21.00	4.92	65.90	66	10.0	8.0	Y
Res 67	70	4	3,686,906.8	685,306.1	21.00	4.92	60.60	66	10.0	8.0	Y
Res 68	71	1	3,686,897.5	685,398.6	21.00	4.92	57.70	66	10.0	8.0	Y
Res 69	72	1	3,686,910.5	685,558.8	21.00	4.92	54.40	66	10.0	8.0	Y
Res 70	73	2	3,687,061.5	685,409.0	21.00	4.92	58.50	66	10.0	8.0	Y
Res 71	74	3	3,687,030.2	685,560.0	21.00	4.92	53.40	66	10.0	8.0	Y
Res 72	75	1	3,686,999.0	685,642.1	21.00	4.92	51.20	66	10.0	8.0	Y
Res 73	76	1	3,687,775.2	685,591.2	21.00	4.92	68.00	66	10.0	8.0	Y
Res 74	77	1	3,687,823.2	685,608.2	21.00	4.92	68.30	66	10.0	8.0	Y
Res 75	78	1	3,687,940.5	685,691.6	21.00	4.92	66.60	66	10.0	8.0	Y
Res 76	79	1	3,687,900.2	685,741.3	21.00	4.92	61.30	66	10.0	8.0	Y
Res 77	80	3	3,687,830.5	685,767.1	21.00	4.92	58.20	66	10.0	8.0	Y
Res 78	81	1	3,687,638.2	685,972.4	21.00	4.92	50.00	66	10.0	8.0	Y
School 79	82	1	3,688,194.5	686,063.9	21.00	4.92	54.00	66	10.0	8.0	Y
Res 120	123	1	3,688,481.0	685,920.7	21.00	4.92	66.90	66	10.0	8.0	Y
Res 121	124	2	3,688,478.2	685,968.9	21.00	4.92	62.60	66	10.0	8.0	Y
Res 122	125	2	3,688,477.0	686,023.6	21.00	4.92	58.80	66	10.0	8.0	Y
Res 123	126	2	3,688,477.0	686,090.0	21.00	4.92	55.50	66	10.0	8.0	Y

INPUT: RECEIVERS

LA 1088

Res 124	127	2	3,688,477.0	686,147.2	21.00	4.92	53.40	66	10.0	8.0	Y
Res 125	128	2	3,688,478.2	686,203.2	21.00	4.92	51.80	66	10.0	8.0	Y
Res 126	129	2	3,688,479.5	686,256.6	21.00	4.92	50.80	66	10.0	8.0	Y
Res 127	130	2	3,688,474.2	686,316.6	21.00	4.92	49.70	66	10.0	8.0	Y
Res 128	131	1	3,688,488.0	686,373.9	21.00	4.92	48.90	66	10.0	8.0	Y
Res 129	132	1	3,688,820.8	686,142.1	21.00	4.92	62.10	66	10.0	8.0	Y
Res 130	133	1	3,688,910.5	686,148.6	21.00	4.92	65.10	66	10.0	8.0	Y
Res 131	134	1	3,689,022.5	686,215.0	21.00	4.92	63.80	66	10.0	8.0	Y
Res 132	135	1	3,689,180.0	686,261.9	21.00	4.92	66.00	66	10.0	8.0	Y
Res 133	136	4	3,689,178.8	686,332.2	21.00	4.92	59.50	66	10.0	8.0	Y
Res 134	137	1	3,689,336.2	686,315.2	21.00	4.92	66.90	66	10.0	8.0	Y
Res 135	138	7	3,689,293.5	686,505.3	21.00	4.92	53.30	66	10.0	8.0	Y
Res 136	139	8	3,689,204.5	686,647.2	21.00	4.92	49.80	66	10.0	8.0	Y
Res 137	140	1	3,689,431.5	686,380.3	21.00	4.92	65.80	66	10.0	8.0	Y
Res 138	141	1	3,689,520.0	686,418.1	21.00	4.92	66.00	66	10.0	8.0	Y
Res 139	142	1	3,689,612.5	686,472.8	21.00	4.92	64.60	66	10.0	8.0	Y
Res 140	143	1	3,689,816.8	686,626.4	21.00	4.92	59.50	66	10.0	8.0	Y
Res 141	144	1	3,689,945.8	686,604.3	21.00	4.92	64.80	66	10.0	8.0	Y
Res 142	145	1	3,690,122.8	686,659.0	21.00	4.92	66.20	66	10.0	8.0	Y
Res 143	146	3	3,689,477.0	686,687.6	21.00	4.92	50.90	66	10.0	8.0	Y
Church 144	147	2	3,690,439.2	686,789.2	21.00	4.92	66.10	66	10.0	8.0	Y
Res 145	148	3	3,690,317.2	687,155.2	21.00	4.92	50.90	66	10.0	8.0	Y
Res 146	149	1	3,690,531.8	687,113.4	21.00	4.92	53.90	66	10.0	8.0	Y
Res 147	150	1	3,690,664.5	687,053.5	21.00	4.92	56.30	66	10.0	8.0	Y
Res 148	151	3	3,690,883.2	687,333.5	21.00	4.92	62.50	66	10.0	8.0	Y
Res 149	152	1	3,691,327.2	687,190.2	21.00	4.92	60.10	66	10.0	8.0	Y
Res 150	153	1	3,691,435.2	687,129.1	21.00	4.92	67.00	66	10.0	8.0	Y
Res 151	154	1	3,691,749.0	687,276.2	21.00	4.92	64.30	66	10.0	8.0	Y
Res 152	155	1	3,692,014.8	687,336.1	21.00	4.92	66.80	66	10.0	8.0	Y
Res 202	205	1	3,692,707.5	687,824.4	21.00	4.92	53.90	66	10.0	8.0	Y
Res 203	206	2	3,692,690.5	687,700.6	21.00	4.92	58.40	66	10.0	8.0	Y
Church 204	207	1	3,693,267.2	687,792.8	21.00	4.92	66.00	66	10.0	8.0	Y
Church 205	208	1	3,694,260.8	688,238.4	21.00	4.92	58.90	66	10.0	8.0	Y
Res 206	209	1	3,694,474.2	688,272.2	21.00	4.92	61.30	66	10.0	8.0	Y
Res 207	210	1	3,694,684.0	688,423.3	21.00	4.92	57.20	66	10.0	8.0	Y

INPUT: RECEIVERS

LA 1088

Res 208	211	1	3,695,691.8	688,807.4	21.00	4.92	60.50	66	10.0	8.0	Y
Apartment 49 (2nd Floor)	219	2	3,686,246.5	684,897.2	21.00	20.00	67.20	66	10.0	8.0	Y
Apartment 50 (2nd Floor)	220	2	3,686,365.0	684,962.4	21.00	20.00	63.60	66	10.0	8.0	Y
Apartment 51 (2nd Floor)	221	2	3,686,252.2	684,942.4	21.00	20.00	64.20	66	10.0	8.0	Y
Apartment 52 (2nd Floor)	222	2	3,686,376.0	685,008.9	21.00	20.00	57.20	66	10.0	8.0	Y
Apartment 53 (2nd Floor)	223	2	3,686,241.2	685,047.0	21.00	20.00	58.80	66	10.0	8.0	Y
Apartment 54 (2nd Floor)	224	2	3,686,249.8	685,086.9	21.00	20.00	58.50	66	10.0	8.0	Y
Apartment 55 (2nd Floor)	225	2	3,686,185.8	685,214.4	21.00	20.00	56.70	66	10.0	8.0	Y
Apartment 56 (2nd Floor)	226	2	3,686,231.5	685,226.4	21.00	20.00	57.30	66	10.0	8.0	Y
Res 214	227	1	3,697,978.2	689,880.3	21.00	4.92	61.50	66	10.0	8.0	Y
Res 215	228	1	3,698,171.0	689,958.5	21.00	4.92	62.40	66	10.0	8.0	Y
Res 216	229	1	3,698,342.8	690,015.8	21.00	4.92	63.90	66	10.0	8.0	Y
Res 217	230	8	3,698,169.8	690,175.9	21.00	4.92	54.70	66	10.0	8.0	Y
Res 218	231	1	3,698,505.5	690,134.2	21.00	4.92	61.10	66	10.0	8.0	Y
Res 219	232	2	3,698,512.2	690,217.6	21.00	4.92	57.50	66	10.0	8.0	Y
Res 220	233	4	3,698,513.5	690,297.0	21.00	4.92	55.40	66	10.0	8.0	Y
Res 221	234	1	3,698,820.8	690,298.3	21.00	4.92	60.20	66	10.0	8.0	Y
Res 222	235	1	3,699,025.8	690,529.9	21.00	4.92	56.80	66	10.0	8.0	Y
Res 223	236	1	3,699,028.2	690,601.5	21.00	4.92	55.80	66	10.0	8.0	Y
Res 224	237	1	3,699,019.5	690,662.1	21.00	4.92	55.20	66	10.0	8.0	Y

INPUT: BARRIERS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT:
RUN:

LA 1088
Build Alt 1 PM Peak 2033

Barrier Name	Type	Height		If Wall	If Berm	Top		Run: Rise	Add'tnl \$ per Unit Length	Points			Coordinates (bottom)			No.	Height at Point			Segment		Important
		Min	Max	\$ per Unit Area	\$ per Unit Vol.	Width	ft	ft/ft	\$/ft	Name	X	Y	Z	ft	ft		Incr-	#Up	#Dn	Struct?	Reflec-	tions?
Barrier2	W	0.00	99.99	0.00					0.00	point1	1	3,685,813.8	684,888.2	21.00	20.00	0.00	0	0	0			
										point2	2	3,685,813.8	684,804.9	21.00	20.00	0.00	0	0	0			
										point3	3	3,685,919.2	684,808.3	21.00	20.00	0.00	0	0	0			
										point4	4	3,685,921.0	684,888.2	21.00	20.00							
										point5	5	3,686,195.2	684,980.8	21.00	30.00	0.00	0	0	0			
Barrier3	W	0.00	99.99	0.00					0.00	point6	6	3,686,195.2	684,938.2	21.00	30.00	0.00	0	0	0			
										point7	7	3,686,183.2	684,937.3	21.00	30.00	0.00	0	0	0			
										point8	8	3,686,183.2	684,884.6	21.00	30.00	0.00	0	0	0			
										point9	9	3,686,233.2	684,884.6	21.00	30.00	0.00	0	0	0			
										point10	10	3,686,235.0	684,935.4	21.00	30.00	0.00	0	0	0			
Barrier4	W									point11	11	3,686,245.2	684,937.3	21.00	30.00	0.00	0	0	0			
										point12	12	3,686,244.2	684,979.9	21.00	30.00							
									0.00	point13	13	3,686,191.5	685,120.5	21.00	30.00	0.00	0	0	0			
										point14	14	3,686,191.5	685,080.8	21.00	30.00	0.00	0	0	0			
										point15	15	3,686,183.2	685,080.8	21.00	30.00	0.00	0	0	0			
Barrier5	W									point16	16	3,686,184.0	685,028.9	21.00	30.00	0.00	0	0	0			
										point17	17	3,686,232.2	685,028.9	21.00	30.00	0.00	0	0	0			
										point18	18	3,686,235.0	685,072.4	21.00	30.00	0.00	0	0	0			
										point19	19	3,686,241.5	685,074.3	21.00	30.00	0.00	0	0	0			
										point20	20	3,686,243.2	685,121.4	21.00	30.00							
Barrier5	W	0.00	99.99	0.00					0.00	point21	21	3,686,369.2	684,994.7	21.00	30.00	0.00	0	0	0			
										point22	22	3,686,370.2	684,943.8	21.00	30.00	0.00	0	0	0			
										point23	23	3,686,388.8	684,945.6	21.00	30.00	0.00	0	0	0			
										point24	24	3,686,392.2	685,043.7	21.00	30.00	0.00	0	0	0			
										point25	25	3,686,374.8	685,044.6	21.00	30.00							

INPUT: BUILDING ROWS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: BUILDING ROWS

PROJECT/CONTRACT:

RUN: LA 1088
Build Alt 1 PM Peak 2033

Building Row		Points			Coordinates (ground)		
		Average Height ft	Building Percent %	No.			
					X	Y	Z
Building2		20.00	70	1	3,686,135.0	685,272.3	21.00
				2	3,686,130.5	685,226.9	21.00
				3	3,686,454.2	685,264.9	21.00
				4	3,686,796.8	685,251.9	21.00
				5	3,686,795.8	685,266.8	21.00
Building3		20.00	70	6	3,688,397.0	686,418.2	21.00
				7	3,688,448.0	686,415.7	21.00
				8	3,688,459.8	685,904.3	21.00
				9	3,688,403.8	685,904.3	21.00
Building4		20.00	70	10	3,688,672.2	686,427.4	21.00
				11	3,688,607.0	686,419.1	21.00
				12	3,688,618.0	686,027.4	21.00
				13	3,688,687.5	686,021.5	21.00
Building5		20.00	70	14	3,688,776.0	686,219.0	21.00
				15	3,688,763.5	686,184.7	21.00
				16	3,688,798.8	686,166.3	21.00
				17	3,688,912.5	686,164.6	21.00
				18	3,688,994.5	686,229.1	21.00
				19	3,689,158.5	686,270.1	21.00
				20	3,689,150.2	686,379.7	21.00
				21	3,689,129.2	686,378.9	21.00
Building6		20.00	70	22	3,689,278.2	686,373.1	21.00
				23	3,689,303.5	686,317.9	21.00

C:\Noise Projects\LA 1088 Noise\Runs\Build\Build Alt 1 PM Peak

INPUT: BUILDING ROWS

LA 1088

				24	3,689,594.8	686,512.9	21.00
				25	3,689,630.8	686,622.6	21.00
				26	3,689,636.5	686,798.3	21.00
				27	3,689,583.8	686,811.7	21.00
Building7	20.00	70		28	3,698,941.8	690,988.4	21.00
				29	3,698,989.5	690,986.9	21.00
				30	3,699,006.0	690,501.6	21.00
				31	3,698,956.8	690,502.4	21.00

INPUT: ROADWAYS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT:
RUN:

LA 1088
Build Alt 2 AM Peak 2033

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with the approval of FHWA

Roadway		Points									
Name	Width	No.	Name	Coordinates (pavement)		Z	Flow Control		Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			X	Y	ft	Control Device	Speed Constraint	%		
Garon Dr Comb 1 2 Lane	24.0	100	point100	3,686,849.0	684,090.2	21.00				Average	
		101	point101	3,686,836.2	684,712.6	21.00					
Jackson St Comb 2 Lane	24.0	106	point106	3,686,845.2	685,274.9	21.00				Average	
		107	point107	3,686,839.0	685,637.0	21.00					
I-12 EB OnRamp 1 Lane	24.0	162	point162	3,699,282.8	690,209.7	22.00				Average	
		163	point163	3,699,342.2	690,144.1	22.00				Average	
		164	point164	3,699,376.8	690,103.0	22.00				Average	
		165	point165	3,699,406.8	690,068.5	22.00				Average	
		166	point166	3,699,432.5	690,047.4	22.00				Average	
		167	point167	3,699,473.2	690,023.2	22.00				Average	
		168	point168	3,699,527.5	690,003.1	22.00				Average	
		169	point169	3,699,592.2	689,995.0	22.00				Average	
		170	point170	3,699,633.8	689,999.2	22.00				Average	
		171	point171	3,699,684.2	690,010.2	22.00				Average	
		172	point172	3,699,741.5	690,040.1	22.00				Average	
		173	point173	3,699,819.0	690,092.8	22.00				Average	
		174	point174	3,699,963.2	690,193.8	22.00				Average	
		175	point175	3,700,093.0	690,282.4	22.00				Average	
		176	point176	3,700,127.8	690,305.4	22.00				Average	
		177	point177	3,700,199.0	690,345.5	22.00				Average	
		178	point178	3,700,260.5	690,371.1	22.00				Average	
		179	point179	3,700,319.8	690,390.6	22.00				Average	
		180	point180	3,700,408.8	690,407.8	22.00				Average	
		181	point181	3,700,507.0	690,414.9	22.00				Average	
		182	point182	3,700,608.5	690,406.0	22.00				Average	

INPUT: ROADWAYS

LA 1088

		point183	183	3,700,704.0	690,385.2	22.00			Average
		point184	184	3,700,773.8	690,360.4	22.00			Average
		point185	185	3,700,846.2	690,333.5	22.00			Average
		point186	186	3,700,912.2	690,305.9	22.00			Average
		point187	187	3,701,006.2	690,262.4	22.00			Average
		point188	188	3,701,190.5	690,173.3	22.00			Average
		point189	189	3,701,436.8	690,049.4	22.00			
LA 57 S of LA 1088 1	36.0	point218	218	3,682,808.5	681,467.9	21.00			Average
		point219	219	3,683,063.0	681,915.2	21.00			Average
		point220	220	3,683,212.5	682,178.6	21.00			Average
		point221	221	3,683,303.5	682,338.2	21.00			Average
		point222	222	3,683,405.8	682,511.9	21.00			Average
		point223	223	3,683,504.8	682,684.9	21.00			Average
		point224	224	3,683,597.2	682,835.0	21.00			
LA 57 N of LA 1088 1	36.0	point255	255	3,684,142.8	684,260.9	21.00			Average
		point235	235	3,684,165.5	684,339.8	21.00			Average
		point236	236	3,684,242.0	684,525.2	21.00			Average
		point237	237	3,684,361.0	684,801.1	21.00			Average
		point238	238	3,684,442.5	684,980.7	21.00			Average
		point239	239	3,684,579.8	685,291.6	21.00			Average
		point240	240	3,684,701.0	685,565.9	21.00			Average
		point241	241	3,684,809.5	685,815.2	21.00			Average
		point242	242	3,684,878.5	685,964.8	21.00			
LA 57 NB S of LA 1088 1 1 Lane	12.0	point257	257	3,683,597.2	682,835.0	21.00			Average
		point258	258	3,683,647.0	682,904.3	21.00			Average
		point259	259	3,683,729.8	683,050.2	21.00			Average
		point260	260	3,683,832.8	683,223.6	21.00			
LA 57 NB S of LA 1088 2 2 Lane	24.0	point261	261	3,683,832.8	683,223.6	21.00			Average
		point262	262	3,683,953.5	683,445.4	21.00			Average
		point263	263	3,683,998.8	683,538.9	21.00			Average
		point264	264	3,684,027.5	683,616.2	21.00			Average
		point265	265	3,684,047.8	683,690.2	21.00			
LA 57 NB N of LA 1088 1 1 Lane	12.0	point268	268	3,684,152.5	683,800.9	21.00			Average
		point269	269	3,684,154.2	683,831.8	21.00			Average
		point270	270	3,684,146.8	683,868.5	21.00			Average
		point271	271	3,684,134.2	683,902.1	21.00			Average
		point272	272	3,684,121.8	683,980.6	21.00			
LA 57 SB N of LA 1088 1 2 Lane	24.0	point277	277	3,684,142.8	684,260.9	21.00			Average

INPUT: ROADWAYS

LA 1088

			point278	278	3,684,118.8	684,210.4	21.00			Average
			point279	279	3,684,101.8	684,129.4	21.00			Average
			point280	280	3,684,096.2	684,070.9	21.00			Average
			point281	281	3,684,096.8	683,984.9	21.00			Average
			point282	282	3,684,092.5	683,966.2	21.00			
LA 57 SB S of LA 1088 1 2 Lane	24.0		point286	286	3,684,022.0	683,819.9	21.00			Average
			point287	287	3,684,010.2	683,696.6	21.00			
LA 1088 EB 2 Area 1 1 Lane	20.0		point306	306	3,686,346.0	684,837.8	21.00			Average
			point307	307	3,686,371.2	684,849.9	21.00			Average
			point308	308	3,686,524.5	684,922.8	21.00			Average
			point309	309	3,686,675.8	684,990.8	21.00			Average
			point310	310	3,686,709.5	685,002.4	21.00			Average
			point311	311	3,686,763.5	684,996.3	21.00			
LA 1088 WB 2 Area 1 1 Lane	20.0		point323	323	3,687,389.0	685,344.4	21.00			Average
			point324	324	3,687,351.0	685,326.2	21.00			Average
			point325	325	3,687,252.8	685,281.0	21.00			Average
			point326	326	3,687,112.5	685,211.7	21.00			Average
			point327	327	3,687,020.2	685,163.8	21.00			Average
			point328	328	3,686,954.8	685,120.9	21.00			Average
			point329	329	3,686,906.2	685,087.8	21.00			Average
			point330	330	3,686,877.0	685,082.9	21.00			
Jackson St NB 1 Lane	12.0		point343	343	3,686,856.8	685,073.7	21.00			Average
			point344	344	3,686,861.5	685,093.2	21.00			Average
			point345	345	3,686,856.8	685,163.2	21.00			Average
			point346	346	3,686,852.0	685,226.2	21.00			Average
			point347	347	3,686,845.2	685,274.9	21.00			
Jackson St SB 1 Lane	12.0		point348	348	3,686,845.2	685,274.9	21.00			Average
			point349	349	3,686,839.0	685,226.9	21.00			Average
			point350	350	3,686,836.0	685,150.3	21.00			Average
			point351	351	3,686,811.2	685,089.0	21.00			
Garon Dr NB 1 Lane	12.0		point352	352	3,686,836.2	684,712.6	21.00			Average
			point353	353	3,686,843.5	684,783.8	21.00			Average
			point354	354	3,686,844.8	684,844.6	21.00			Average
			point355	355	3,686,846.0	684,876.4	21.00			Average
			point356	356	3,686,835.2	684,943.4	21.00			Average
			point357	357	3,686,849.8	684,997.6	21.00			
Garon Dr SB 1 Lane	12.0		point358	358	3,686,791.0	684,996.3	21.00			Average
			point359	359	3,686,808.8	684,941.8	21.00			Average

INPUT: ROADWAYS

LA 1088

			point360	360	3,686,822.5	684,878.4	21.00			Average
			point361	361	3,686,823.2	684,842.9	21.00			Average
			point362	362	3,686,827.5	684,778.4	21.00			Average
			point363	363	3,686,836.2	684,712.6	21.00			
LA 1088 EB 3 Area 1 1 Lane	20.0		point365	365	3,687,862.5	685,538.6	21.00			Average
			point366	366	3,687,942.0	685,575.1	21.00			Average
			point367	367	3,688,103.8	685,649.1	21.00			Average
			point368	368	3,688,219.5	685,707.5	21.00			
LA 1088 EB 1 Area 2 1 Lane	20.0		point373	373	3,688,328.5	685,697.2	21.00			Average
			point374	374	3,688,354.0	685,712.7	21.00			Average
			point375	375	3,688,402.2	685,755.9	21.00			
LA 1088 WB 1 Area 2 2 Lane	32.0		point382	382	3,688,865.8	686,025.3	21.00			Average
			point383	383	3,688,819.0	686,002.8	21.00			Average
			point384	384	3,688,746.0	685,970.9	21.00			Average
			point385	385	3,688,611.5	685,915.0	21.00			Average
			point386	386	3,688,519.5	685,871.3	21.00			Average
			point387	387	3,688,444.5	685,825.4	21.00			Average
			point388	388	3,688,388.5	685,802.8	21.00			
LA 1088 WB 3 Area 2 1 Lane	20.0		point391	391	3,688,317.2	685,797.9	21.00			Average
			point392	392	3,688,288.2	685,791.5	21.00			Average
			point393	393	3,688,273.0	685,777.2	21.00			Average
			point394	394	3,688,238.2	685,752.8	21.00			Average
			point395	395	3,688,208.2	685,730.6	21.00			
Spring Blvd NB 1 Lane	12.0		point399	399	3,688,416.0	685,544.1	21.00			Average
			point400	400	3,688,378.5	685,619.1	21.00			Average
			point401	401	3,688,359.0	685,656.1	21.00			Average
			point402	402	3,688,354.0	685,712.7	21.00			
Spring Blvd SB 1 Lane	12.0		point403	403	3,688,287.2	685,703.1	21.00			Average
			point404	404	3,688,329.5	685,648.6	21.00			Average
			point405	405	3,688,353.5	685,608.4	21.00			Average
			point406	406	3,688,387.5	685,532.9	21.00			
School NB 1 Lane	12.0		point407	407	3,688,342.2	685,788.1	21.00			Average
			point408	408	3,688,339.8	685,824.3	21.00			Average
			point409	409	3,688,329.0	685,874.9	21.00			Average
			point410	410	3,688,322.8	685,936.5	21.00			Average
			point411	411	3,688,319.8	686,011.2	21.00			Average
			point412	412	3,688,313.2	686,047.8	21.00			
School SB 1 Lane	12.0		point413	413	3,688,313.2	686,047.8	21.00			Average

INPUT: ROADWAYS

LA 1088

			point414	414	3,688,307.5	686,010.9	21.00			Average
			point415	415	3,688,306.5	685,935.6	21.00			Average
			point416	416	3,688,309.0	685,873.7	21.00			Average
			point417	417	3,688,309.8	685,838.8	21.00			Average
			point418	418	3,688,288.2	685,791.5	21.00			
LA 1088 EB 2 Area 2 1 Lane	20.0		point424	424	3,690,330.5	686,646.1	21.00			Average
			point425	425	3,690,456.5	686,693.2	21.00			Average
			point426	426	3,690,577.5	686,735.9	21.00			Average
			point427	427	3,690,695.5	686,780.3	21.00			Average
			point428	428	3,690,780.8	686,814.0	21.00			Average
			point429	429	3,690,840.0	686,847.4	21.00			Average
			point430	430	3,690,873.8	686,865.2	21.00			Average
			point431	431	3,690,906.5	686,868.7	21.00			
LA 1088 EB 1 Area 3 1 Lane	20.0		point450	450	3,692,409.5	687,367.6	21.00			Average
			point451	451	3,692,430.8	687,378.1	21.00			Average
			point452	452	3,692,445.0	687,391.3	21.00			Average
			point453	453	3,692,484.8	687,399.9	21.00			
LA 1088 WB 1 Area 3 1 Lane	20.0		point458	458	3,692,834.8	687,548.1	21.00			Average
			point459	459	3,692,785.5	687,530.5	21.00			Average
			point460	460	3,692,676.2	687,490.6	21.00			Average
			point461	461	3,692,563.8	687,453.4	21.00			Average
			point462	462	3,692,526.5	687,444.8	21.00			Average
			point463	463	3,692,493.8	687,445.2	21.00			
LA 1088 WB 4 Area 2 1 Lane	20.0		point468	468	3,692,381.8	687,498.2	21.00			Average
			point469	469	3,692,361.8	687,490.6	21.00			Average
			point470	470	3,692,340.8	687,471.9	21.00			Average
			point471	471	3,692,312.8	687,445.6	21.00			Average
			point472	472	3,692,279.8	687,413.9	21.00			
LA 1088 WB 3 Area 2 2 Lane	32.0		point482	482	3,691,408.0	687,047.9	21.00			Average
			point483	483	3,691,198.8	686,973.5	21.00			Average
			point484	484	3,691,126.2	686,949.0	21.00			
LA 1088 WB 2 Area 2 1 Lane	20.0		point491	491	3,690,947.5	686,959.9	21.00			Average
			point492	492	3,690,893.0	686,912.2	21.00			
Soult St Comb 2 Lane	24.0		point500	500	3,691,051.2	686,100.9	21.00			Average
			point501	501	3,691,049.2	686,328.8	21.00			
Soult St NB 2 Lane	24.0		point502	502	3,691,049.2	686,328.8	21.00			Average
			point503	503	3,691,060.8	686,418.9	21.00			Average
			point504	504	3,691,064.2	686,573.1	21.00			Average

INPUT: ROADWAYS

LA 1088

			point505	505	3,691,066.8	686,667.2	21.00			Average
			point506	506	3,691,060.8	686,728.1	21.00			Average
			point507	507	3,691,047.2	686,787.8	21.00			Average
			point508	508	3,691,050.8	686,829.4	21.00			Average
			point509	509	3,691,066.2	686,883.8	21.00			
Soult St SB 1 Lane	12.0		point510	510	3,690,988.2	686,851.9	21.00			Average
			point511	511	3,691,021.5	686,777.6	21.00			Average
			point512	512	3,691,035.2	686,726.2	21.00			Average
			point513	513	3,691,043.0	686,664.6	21.00			Average
			point514	514	3,691,043.5	686,572.0	21.00			Average
			point515	515	3,691,043.8	686,417.3	21.00			Average
			point516	516	3,691,049.2	686,328.8	21.00			
Viola St NB 1 Lane	12.0		point517	517	3,691,046.0	686,963.1	21.00			Average
			point518	518	3,691,016.0	687,063.4	21.00			Average
			point519	519	3,691,005.0	687,207.5	21.00			Average
			point520	520	3,690,998.0	687,226.2	21.00			
Viola St Comb 2 Lane	24.0		point521	521	3,690,998.0	687,226.2	21.00			Average
			point522	522	3,690,992.8	687,253.0	21.00			Average
			point523	523	3,690,973.5	687,276.9	21.00			Average
			point524	524	3,690,935.5	687,292.1	21.00			Average
			point525	525	3,690,785.0	687,289.2	21.00			Average
			point526	526	3,690,547.5	687,283.9	21.00			
Viola St SB 1 Lane	12.0		point527	527	3,690,998.0	687,226.2	21.00			Average
			point528	528	3,690,991.0	687,205.2	21.00			Average
			point529	529	3,690,990.5	687,120.6	21.00			Average
			point530	530	3,690,998.0	687,061.1	21.00			Average
			point531	531	3,690,996.2	687,025.5	21.00			Average
			point532	532	3,690,972.0	686,967.1	21.00			
Trinity Dr NB 2 Lane	24.0		point533	533	3,692,465.2	687,226.6	21.00			Average
			point534	534	3,692,442.0	687,289.6	21.00			Average
			point535	535	3,692,438.2	687,313.9	21.00			Average
			point536	536	3,692,446.8	687,353.8	21.00			Average
			point537	537	3,692,445.0	687,391.3	21.00			
Trinity Dr SB 1 Lane	12.0		point538	538	3,692,358.0	687,379.2	21.00			Average
			point539	539	3,692,381.0	687,336.0	21.00			Average
			point540	540	3,692,409.0	687,283.7	21.00			Average
			point541	541	3,692,435.5	687,214.7	21.00			
LA 1088 WB 3 BT Bridges 2 Lane	32.0		point273	552	3,704,280.0	692,279.9	30.00			Average

INPUT: ROADWAYS

LA 1088

			point272	553	3,704,009.5	692,159.6	30.00			Average
			point271	554	3,703,739.8	692,036.6	30.00			Average
			point270	555	3,703,463.5	691,911.6	30.00			Average
			point269	556	3,703,280.0	691,831.7	30.00			Average
			point268	557	3,703,003.5	691,737.0	30.00			Average
			point267	558	3,702,718.5	691,672.5	30.00			Average
			point266	559	3,702,524.8	691,642.6	30.00			Average
			point265	560	3,702,218.5	691,592.1	30.00			Average
			point264	561	3,701,924.8	691,513.0	30.00			Average
			point263	562	3,701,646.5	691,397.2	30.00			Average
			point262	563	3,701,372.5	691,270.8	30.00			
LA 1088 EB 1 BT Bridges 2 Lane	32.0		point65	583	3,699,487.8	690,339.4	30.00			Average
			point66	584	3,699,760.2	690,465.8	35.00			Average
			point770	770	3,699,896.5	690,528.4	40.00			Average
			point67	585	3,700,033.0	690,590.9	45.00			Average
			point68	586	3,700,305.0	690,716.1	45.00			Average
			point771	771	3,700,441.8	690,779.0	45.00			Average
			point69	587	3,700,578.5	690,841.9	40.00			Average
			point70	588	3,700,851.5	690,967.8	35.00			
LA 1088 EB 2 Area 3 1 Lane	20.0		point602	602	3,693,632.2	687,802.2	21.00			Average
			point603	603	3,693,698.8	687,825.6	21.00			Average
			point604	604	3,693,945.8	687,910.8	21.00			Average
			point605	605	3,694,125.8	687,967.6	21.00			Average
			point606	606	3,694,181.2	687,986.7	21.00			
LA 1088 EB 3 Area 3 2 Lane	32.0		point609	609	3,694,181.2	687,986.7	21.00			Average
			point610	610	3,694,459.8	688,083.8	21.00			Average
			point611	611	3,694,705.5	688,169.9	21.00			Average
			point612	612	3,694,955.8	688,258.3	21.00			Average
			point613	613	3,695,107.0	688,320.6	21.00			Average
			point614	614	3,695,176.2	688,359.4	21.00			Average
			point615	615	3,695,215.5	688,370.3	21.00			
LA 1088 WB 3 Area 3 2 Lane	32.0		point644	644	3,699,468.2	690,393.1	30.00			Average
			point645	645	3,699,395.8	690,351.1	25.00			
LA 1088 WB 2 Area 3 1 Lane	12.0		point671	671	3,695,303.2	688,482.2	21.00			Average
			point672	672	3,695,279.5	688,478.1	21.00			Average
			point673	673	3,695,241.2	688,444.6	21.00			Average
			point674	674	3,695,188.0	688,403.7	21.00			
Forest Brook Blvd Comb 2 Lane	24.0		point683	683	3,695,575.0	687,949.6	21.00			Average

INPUT: ROADWAYS

LA 1088

Forest Brook Blvd NB 2 Lane	24.0	point684	684	3,695,514.2	688,049.9	21.00			
		point685	685	3,695,514.2	688,049.9	21.00			Average
		point686	686	3,695,505.5	688,084.2	21.00			Average
		point687	687	3,695,470.5	688,145.6	21.00			Average
		point688	688	3,695,426.5	688,234.8	21.00			Average
		point689	689	3,695,392.0	688,294.1	21.00			Average
		point690	690	3,695,385.5	688,323.2	21.00			Average
		point691	691	3,695,389.0	688,378.8	21.00			
		point692	692	3,695,314.8	688,350.9	21.00			Average
		point693	693	3,695,371.0	688,280.9	21.00			Average
		point694	694	3,695,409.2	688,227.5	21.00			Average
		point695	695	3,695,454.0	688,142.3	21.00			Average
		point696	696	3,695,483.8	688,088.2	21.00			Average
		point697	697	3,695,514.2	688,049.9	21.00			
		point698	698	3,698,014.8	691,921.6	22.00			Average
I-12 EB OffRamp 1 1 Lane	24.0	point699	699	3,698,313.8	691,715.9	22.00			Average
		point700	700	3,698,466.5	691,611.1	22.00			Average
		point701	701	3,698,643.0	691,488.0	22.00			Average
		point702	702	3,698,809.8	691,371.4	22.00			Average
		point703	703	3,698,913.0	691,299.7	22.00			Average
		point704	704	3,699,015.0	691,224.4	22.00			Average
		point705	705	3,699,066.5	691,169.3	22.00			Average
		point706	706	3,699,102.0	691,117.9	22.00			Average
		point707	707	3,699,133.0	691,060.7	22.00			Average
		point708	708	3,699,151.8	691,005.9	22.00			Average
		point709	709	3,699,168.5	690,940.0	22.00			Average
		point710	710	3,699,178.5	690,848.0	22.00			Average
		point711	711	3,699,183.5	690,667.9	22.00			
		point712	712	3,699,183.5	690,667.9	22.00			Average
		point713	713	3,699,191.5	690,561.7	22.00			Average
I-12 EB OffRamp 2 2 Lane	48.0	point714	714	3,699,206.0	690,454.5	22.00			
		point715	715	3,699,206.0	690,454.5	22.00			Average
		point716	716	3,699,204.5	690,423.8	22.00			Average
		point717	717	3,699,208.2	690,406.4	22.00			Average
		point718	718	3,699,206.0	690,355.8	22.00			Average
		point719	719	3,699,179.2	690,278.1	22.00			
		point720	720	3,699,206.0	690,454.5	22.00			Average
		point721	721	3,699,235.0	690,401.4	23.00			Average

INPUT: ROADWAYS

LA 1088

			point749	749	3,700,961.2	691,019.6	30.00			Average
			point750	750	3,701,024.5	691,052.4	30.00			Average
			point751	751	3,701,045.2	691,059.2	30.00			Average
			point752	752	3,701,109.0	691,057.6	30.00			Average
			point753	753	3,701,152.2	691,060.8	30.00			Average
			point754	754	3,701,177.8	691,075.8	30.00			Average
			point755	755	3,701,221.5	691,111.8	30.00			Average
			point756	756	3,701,322.5	691,181.2	30.00			Average
			point757	757	3,701,395.5	691,218.8	30.00			Average
LA 1088 WB 2 BT Bridges 2 Lane	32.0		point758	758	3,701,372.5	691,270.8	30.00			Average
			point759	759	3,701,294.0	691,228.1	30.00			Average
			point760	760	3,701,236.5	691,199.4	30.00			Average
			point761	761	3,701,159.0	691,197.3	30.00			Average
			point762	762	3,701,120.2	691,195.8	30.00			Average
			point763	763	3,701,095.2	691,186.9	30.00			Average
			point764	764	3,701,063.0	691,158.8	30.00			Average
			point765	765	3,701,011.5	691,118.1	30.00			Average
			point766	766	3,700,942.5	691,073.8	30.00			Average
			point767	767	3,700,826.5	691,020.3	35.00			Average
School Comb 2 Lane	24.0		point768	768	3,688,316.5	686,046.2	21.00			Average
			point364	364	3,688,317.8	686,299.8	21.00			Average
			point135	135	3,688,309.2	686,672.2	21.00			Average
Roadway110	20.0		point786	790	3,687,396.8	685,323.5	21.00			Average
			point787	791	3,687,673.2	685,450.5	21.00			Average
			point788	792	3,687,862.5	685,538.6	21.00			Average
Roadway111	20.0		point789	793	3,687,853.8	685,558.4	21.00			Average
			point790	794	3,687,660.5	685,469.6	21.00			Average
			point791	795	3,687,389.0	685,344.4	21.00			Average
Roadway112	20.0		point794	796	3,688,875.2	686,005.1	21.00			Average
			point795	797	3,689,125.8	686,121.3	21.00			Average
			point796	798	3,689,395.5	686,245.5	21.00			Average
			point797	799	3,689,575.8	686,325.4	21.00			Average
			point798	800	3,689,793.0	686,423.2	21.00			Average
			point799	801	3,689,997.0	686,509.7	21.00			Average
			point800	802	3,690,179.0	686,587.1	21.00			Average
			point801	803	3,690,330.5	686,646.1	21.00			Average
Roadway113	20.0		point802	804	3,690,321.5	686,666.4	21.00			Average
			point803	805	3,690,169.2	686,607.0	21.00			Average

INPUT: ROADWAYS

LA 1088

			point804	806	3,689,985.5	686,527.8	21.00			Average
			point805	807	3,689,783.0	686,441.1	21.00			Average
			point806	808	3,689,566.8	686,344.9	21.00			Average
			point807	809	3,689,389.0	686,263.1	21.00			Average
			point808	810	3,689,115.5	686,140.3	21.00			Average
			point809	811	3,688,865.8	686,025.3	21.00			
Roadway114	20.0		point813	812	3,692,841.0	687,526.3	21.00			Average
			point814	813	3,692,958.2	687,566.5	21.00			Average
			point815	814	3,693,239.8	687,665.4	21.00			Average
			point816	815	3,693,523.5	687,764.9	21.00			Average
			point817	816	3,693,632.2	687,802.2	21.00			
Roadway115	20.0		point818	817	3,693,623.0	687,822.8	21.00			Average
			point819	818	3,693,516.8	687,785.6	21.00			Average
			point820	819	3,693,230.0	687,685.6	21.00			Average
			point821	820	3,692,948.2	687,586.9	21.00			Average
			point822	821	3,692,834.8	687,548.1	21.00			
LA 1088 EB 2 Area 1 1 Lane-2	20.0		point822	822	3,686,763.5	684,996.3	21.00			Average
			point312	312	3,686,791.0	684,996.3	21.00			Average
			point314	314	3,686,817.5	684,987.8	21.00			Average
			point315	315	3,686,849.8	684,997.6	21.00			Average
			point316	316	3,686,863.2	685,014.7	21.00			
LA 1088 EB 2 Area 1 1 Lane-2-2	20.0		point823	823	3,686,863.2	685,014.7	21.00			Average
			point317	317	3,686,963.8	685,102.3	21.00			Average
			point318	318	3,687,034.2	685,150.0	21.00			Average
			point319	319	3,687,120.8	685,196.0	21.00			Average
			point320	320	3,687,267.2	685,262.8	21.00			Average
			point321	321	3,687,368.2	685,312.4	21.00			Average
			point322	322	3,687,396.8	685,323.5	21.00			
LA 1088 WB 2 Area 1 1 Lane-2	20.0		point824	824	3,686,752.0	685,055.9	21.00			Average
			point338	338	3,686,697.5	685,027.1	21.00			Average
			point339	339	3,686,665.8	685,011.8	21.00			Average
			point340	340	3,686,515.5	684,938.2	21.00			Average
			point341	341	3,686,357.5	684,868.0	21.00			Average
			point342	342	3,686,335.0	684,857.9	21.00			
LA 1088 WB 2 Area 1 1 Lane-2	20.0		point825	825	3,686,877.0	685,082.9	21.00			Average
			point331	331	3,686,856.8	685,073.7	21.00			Average
			point332	332	3,686,845.8	685,082.9	21.00			Average
			point333	333	3,686,823.5	685,090.2	21.00			Average

INPUT: ROADWAYS

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			point334	334	3,686,811.2	685,089.0	21.00			Average
			point335	335	3,686,790.5	685,082.2	21.00			Average
			point336	336	3,686,778.8	685,071.8	21.00			Average
			point337	337	3,686,752.0	685,055.9	21.00			
LA 1088 EB 3 Area 1 1 Lane-2	20.0		point826	826	3,688,219.5	685,707.5	21.00			Average
			point369	369	3,688,254.8	685,710.9	21.00			Average
			point370	370	3,688,287.2	685,703.1	21.00			Average
			point371	371	3,688,306.8	685,695.7	21.00			Average
			point372	372	3,688,328.5	685,697.2	21.00			
LA 1088 EB 1 Area 2 1 Lane-2	20.0		point827	827	3,688,402.2	685,755.9	21.00			Average
			point376	376	3,688,459.0	685,801.1	21.00			Average
			point377	377	3,688,534.8	685,846.7	21.00			Average
			point378	378	3,688,626.5	685,890.2	21.00			Average
			point379	379	3,688,760.8	685,952.4	21.00			Average
			point380	380	3,688,832.0	685,985.7	21.00			Average
			point381	381	3,688,875.2	686,005.1	21.00			
LA 1088 WB 3 Area 2 1 Lane-2	20.0		point828	828	3,688,208.2	685,730.6	21.00			Average
			point396	396	3,688,093.0	685,668.8	21.00			Average
			point397	397	3,687,930.0	685,593.4	21.00			Average
			point398	398	3,687,853.8	685,558.4	21.00			
LA 1088 WB 1 Area 2 2 Lane-2	32.0		point829	829	3,688,388.5	685,802.8	21.00			Average
			point389	389	3,688,342.2	685,788.1	21.00			Average
			point390	390	3,688,317.2	685,797.9	21.00			
LA 1088 EB 2 Area 2 1 Lane-2	20.0		point830	830	3,690,906.5	686,868.7	21.00			Average
			point432	432	3,690,988.2	686,851.9	21.00			Average
			point433	433	3,691,022.8	686,853.6	21.00			Average
			point434	434	3,691,045.8	686,869.6	21.00			Average
			point435	435	3,691,066.2	686,883.8	21.00			Average
			point436	436	3,691,131.0	686,921.1	21.00			
LA 1088 EB 2 Area 2 1 Lane-2-2	20.0		point831	831	3,691,131.0	686,921.1	21.00			Average
			point437	437	3,691,211.0	686,955.7	21.00			Average
			point438	438	3,691,434.5	687,032.9	21.00			Average
			point439	439	3,691,590.5	687,090.2	21.00			Average
			point440	440	3,691,724.5	687,139.1	21.00			Average
			point441	441	3,691,900.2	687,198.5	21.00			Average
			point442	442	3,692,003.0	687,234.6	21.00			Average
			point443	443	3,692,098.8	687,270.1	21.00			Average
			point444	444	3,692,177.8	687,310.9	21.00			Average

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			point445	445	3,692,247.0	687,357.0	21.00			Average
			point446	446	3,692,294.0	687,383.6	21.00			
LA 1088 WB 3 Area 2 2 Lane-2	32.0		point832	832	3,691,126.2	686,949.0	21.00			Average
			point485	485	3,691,099.0	686,949.4	21.00			Average
			point486	486	3,691,046.0	686,963.1	21.00			Average
			point487	487	3,691,013.8	686,973.0	21.00			Average
			point488	488	3,690,994.8	686,974.4	21.00			Average
			point489	489	3,690,972.0	686,967.1	21.00			Average
			point490	490	3,690,947.5	686,959.9	21.00			
LA 1088 WB 2 Area 2 1 Lane-2	20.0		point833	833	3,690,893.0	686,912.2	21.00			Average
			point493	493	3,690,864.5	686,891.4	21.00			Average
			point494	494	3,690,829.5	686,870.1	21.00			Average
			point495	495	3,690,770.2	686,836.5	21.00			Average
			point496	496	3,690,690.2	686,800.6	21.00			Average
			point497	497	3,690,571.2	686,758.0	21.00			Average
			point498	498	3,690,449.2	686,714.1	21.00			Average
			point499	499	3,690,321.5	686,666.4	21.00			
LA 1088 WB 1 Area 3 1 Lane-2	20.0		point834	834	3,692,493.8	687,445.2	21.00			Average
			point464	464	3,692,450.2	687,466.9	21.00			Average
			point465	465	3,692,437.0	687,483.3	21.00			Average
			point466	466	3,692,413.8	687,496.0	21.00			Average
			point467	467	3,692,381.8	687,498.2	21.00			
LA 1088 WB 4 Area 2 1 Lane-2	20.0		point835	835	3,692,279.8	687,413.9	21.00			Average
			point473	473	3,692,236.0	687,378.6	21.00			Average
			point474	474	3,692,165.2	687,330.9	21.00			Average
			point475	475	3,692,091.2	687,292.3	21.00			Average
			point476	476	3,691,995.8	687,254.7	21.00			Average
			point477	477	3,691,893.5	687,218.9	21.00			Average
			point478	478	3,691,715.8	687,158.1	21.00			Average
			point479	479	3,691,581.8	687,112.2	21.00			Average
			point480	480	3,691,500.0	687,085.9	21.00			Average
			point481	481	3,691,408.0	687,047.9	21.00			
LA 1088 EB 2 Area 2 1 Lane-2-2	20.0		point836	836	3,692,294.0	687,383.6	21.00			Average
			point447	447	3,692,358.0	687,379.2	21.00			Average
			point448	448	3,692,378.2	687,368.6	21.00			Average
			point449	449	3,692,409.5	687,367.6	21.00			
LA 1088 EB 1 Area 3 1 Lane-2	20.0		point837	837	3,692,484.8	687,399.9	21.00			Average
			point454	454	3,692,571.0	687,432.4	21.00			Average

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			point455	455	3,692,683.5	687,471.9	21.00			Average
			point456	456	3,692,795.0	687,510.4	21.00			Average
			point457	457	3,692,841.0	687,526.3	21.00			
LA 1088 EB 3 Area 3 2 Lane-2	32.0		point838	838	3,695,215.5	688,370.3	21.00			Average
			point616	616	3,695,276.0	688,360.9	21.00			Average
			point617	617	3,695,314.8	688,350.9	21.00			Average
			point618	618	3,695,351.8	688,352.4	21.00			Average
			point619	619	3,695,369.2	688,360.9	21.00			Average
			point620	620	3,695,389.0	688,378.8	21.00			Average
			point621	621	3,695,440.2	688,424.7	21.00			
LA 1088 EB 3 Area 3 2 Lane-2-2	32.0		point839	839	3,695,440.2	688,424.7	21.00			Average
			point622	622	3,695,519.8	688,487.3	21.00			Average
			point623	623	3,695,596.2	688,532.5	21.00			Average
			point624	624	3,695,874.2	688,660.1	21.00			Average
			point625	625	3,696,175.2	688,797.5	21.00			Average
			point626	626	3,696,413.0	688,906.7	21.00			Average
			point627	627	3,696,627.5	689,004.0	21.00			Average
			point628	628	3,696,904.8	689,130.8	21.00			Average
			point629	629	3,697,127.5	689,232.5	21.00			Average
			point630	630	3,697,338.8	689,329.9	21.00			Average
			point631	631	3,697,522.8	689,416.8	21.00			Average
			point632	632	3,697,808.2	689,552.8	21.00			Average
			point633	633	3,698,093.2	689,690.5	21.00			Average
			point634	634	3,698,234.0	689,758.9	21.00			Average
			point635	635	3,698,508.8	689,888.9	21.00			Average
			point636	636	3,698,800.8	690,023.9	21.00			Average
			point637	637	3,699,077.0	690,151.6	21.00			Average
			point638	638	3,699,163.8	690,196.8	21.00			Average
			point639	639	3,699,196.0	690,208.7	22.00			
LA 1088 WB 3 Area 3 2 Lane-2	32.0		point840	840	3,695,404.2	688,495.2	21.00			Average
			point669	669	3,695,353.0	688,491.1	21.00			Average
			point670	670	3,695,303.2	688,482.2	21.00			
LA 1088 WB 2 Area 3 1 Lane-2	20.0		point841	841	3,695,188.0	688,403.7	21.00			Average
			point675	675	3,695,095.8	688,347.1	21.00			Average
			point676	676	3,694,944.0	688,283.8	21.00			Average
			point677	677	3,694,696.2	688,195.2	21.00			Average
			point678	678	3,694,450.5	688,110.6	21.00			Average
			point679	679	3,694,173.8	688,014.5	21.00			Average

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			point680	680	3,693,937.8	687,931.9	21.00		Average
			point681	681	3,693,686.0	687,844.0	21.00		Average
			point682	682	3,693,623.0	687,822.8	21.00		
LA 1088 WB 3 Area 3 2 Lane-2	32.0		point842	842	3,699,395.8	690,351.1	25.00		Average
			point646	646	3,699,326.8	690,348.4	24.00		Average
			point647	647	3,699,274.2	690,347.1	24.00		Average
			point648	648	3,699,248.2	690,335.4	23.00		Average
			point649	649	3,699,179.2	690,278.1	22.00		
LA 1088 WB 3 Area 3 2 Lane-2-2	32.0		point843	843	3,699,179.2	690,278.1	22.00		Average
			point650	650	3,699,134.5	690,245.8	21.00		Average
			point651	651	3,699,050.5	690,200.1	21.00		Average
			point652	652	3,698,780.2	690,073.8	21.00		Average
			point653	653	3,698,491.0	689,939.4	21.00		Average
			point654	654	3,698,210.8	689,803.8	21.00		Average
			point655	655	3,698,073.0	689,734.9	21.00		Average
			point656	656	3,697,790.0	689,594.7	21.00		Average
			point657	657	3,697,509.0	689,456.9	21.00		Average
			point658	658	3,697,324.0	689,368.2	21.00		Average
			point659	659	3,697,109.2	689,269.4	21.00		Average
			point660	660	3,696,888.2	689,167.0	21.00		Average
			point661	661	3,696,613.5	689,040.2	21.00		Average
			point662	662	3,696,396.2	688,941.9	21.00		Average
			point663	663	3,696,153.0	688,831.5	21.00		Average
			point664	664	3,695,857.5	688,695.7	21.00		Average
			point665	665	3,695,589.0	688,573.7	21.00		Average
			point666	666	3,695,500.8	688,524.5	21.00		Average
			point667	667	3,695,450.0	688,500.6	21.00		Average
			point668	668	3,695,404.2	688,495.2	21.00		
LA 1088 EB 3 Area 3 2 Lane-2-2-2	32.0		point844	844	3,699,196.0	690,208.7	22.00		Average
			point640	640	3,699,282.8	690,209.7	22.00		Average
			point641	641	3,699,310.0	690,212.9	24.00		Average
			point642	642	3,699,413.0	690,289.9	25.00		
LA 1088 EB 3 Area 3 2 Lane-2-2-2-2	32.0		point845	845	3,699,413.0	690,289.9	25.00		Average
			point643	643	3,699,487.8	690,339.4	30.00		
LA 57 NB S of LA 1088 2 2 Lane-2	24.0		point846	846	3,684,047.8	683,690.2	21.00		Average
			point266	266	3,684,127.0	683,774.9	21.00		Average
			point267	267	3,684,152.5	683,800.9	21.00		
LA 57 NB N of LA 1088 1 1 Lane-2	12.0		point847	847	3,684,121.8	683,980.6	21.00		Average

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LA 57 SB N of LA 1088 1 2 Lane-2	24.0	point273	273	3,684,118.8	684,062.8	21.00			Average
		point274	274	3,684,125.0	684,128.2	21.00			Average
		point275	275	3,684,139.2	684,204.8	21.00			Average
		point276	276	3,684,142.8	684,260.9	21.00			
LA 57 SB S of LA 1088 1 2 Lane-2	24.0	point848	848	3,684,092.5	683,966.2	21.00			Average
		point283	283	3,684,052.0	683,898.4	21.00			Average
		point284	284	3,684,024.5	683,848.6	21.00			Average
		point285	285	3,684,022.0	683,819.9	21.00			
LA 1088 EB 1 Area 1 1 Lane	20.0	point849	849	3,684,010.2	683,696.6	21.00			Average
		point288	288	3,683,993.2	683,623.1	21.00			Average
		point289	289	3,683,969.8	683,551.4	21.00			Average
		point290	290	3,683,928.5	683,458.6	21.00			Average
LA 1088 WB 1 Area 1 2 Lane	20.0	point291	291	3,683,808.8	683,247.5	21.00			Average
		point292	292	3,683,708.2	683,067.5	21.00			Average
		point293	293	3,683,624.8	682,918.1	21.00			Average
		point294	294	3,683,597.2	682,835.0	21.00			
LA 1088 WB 1 Area 1 2 Lane	20.0	point295	295	3,684,152.5	683,800.9	21.00			Average
		point296	296	3,684,205.2	683,843.9	21.00			Average
		point297	297	3,684,355.8	683,922.2	21.00			Average
		point298	298	3,684,576.2	684,021.2	21.00			Average
LA 1088 WB 1 Area 1 2 Lane	20.0	point770	774	3,684,607.2	684,035.9	21.00			Average
		point771	775	3,684,949.0	684,194.5	21.00			Average
		point772	776	3,685,222.5	684,316.9	21.00			Average
		point773	777	3,685,495.0	684,443.8	21.00			Average
LA 1088 WB 1 Area 1 2 Lane	20.0	point774	778	3,685,653.2	684,518.2	21.00			Average
		point775	779	3,685,854.8	684,611.0	21.00			Average
		point776	780	3,686,132.5	684,739.4	21.00			Average
		point777	781	3,686,346.0	684,837.8	21.00			Average
LA 1088 WB 1 Area 1 2 Lane	20.0	point778	782	3,686,335.0	684,857.9	21.00			Average
		point779	783	3,686,121.2	684,758.9	21.00			Average
		point780	784	3,685,845.5	684,631.1	21.00			Average
		point781	785	3,685,640.2	684,536.6	21.00			Average
LA 1088 WB 1 Area 1 2 Lane	20.0	point782	786	3,685,483.2	684,466.4	21.00			Average
		point783	787	3,685,207.5	684,340.1	21.00			Average
		point784	788	3,684,939.2	684,214.1	21.00			Average
		point300	300	3,684,594.8	684,053.9	21.00			Average
LA 1088 WB 1 Area 1 2 Lane-2	32.0	point301	301	3,684,562.2	684,039.1	21.00			Average
		point850	850	3,684,562.2	684,039.1	21.00			Average

INPUT: ROADWAYS

LA 1088

		point302	302	3,684,344.2	683,946.5	21.00			Average
		point303	303	3,684,227.8	683,889.8	21.00			Average
		point304	304	3,684,175.5	683,885.3	21.00			Average
		point305	305	3,684,134.2	683,902.1	21.00			

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT:
RUN:

LA 1088
Build Alt 2 AM Peak 2033

Roadway		Points																	
Name		No.	Segment		Autos			MTucks			HTucks			Buses			Motorcycles		
			V	S	mph	V	S	mph	V	S	mph	V	S	mph	V	S	mph		
			veh/hr	veh/hr	mph	veh/hr	veh/hr	mph	veh/hr	veh/hr	mph	veh/hr	veh/hr	mph	veh/hr	veh/hr	mph		
Garon Dr Comb 1 2 Lane	point100	100	104	25	6	25	0	0	28	25	1	25							
	point101	101																	
Jackson St Comb 2 Lane	point106	106	32	25	4	25	0	0	16	25	0	0							
	point107	107																	
I-12 EB OnRamp 1 Lane	point162	162	282	35	5	35	2	35	55	35	1	35							
	point163	163	282	35	5	35	2	35	55	35	1	35							
	point164	164	282	35	5	35	2	35	55	35	1	35							
	point165	165	282	35	5	35	2	35	55	35	1	35							
	point166	166	282	35	5	35	2	35	55	35	1	35							
	point167	167	282	35	5	35	2	35	55	35	1	35							
	point168	168	282	35	5	35	2	35	55	35	1	35							
	point169	169	282	35	5	35	2	35	55	35	1	35							
	point170	170	282	35	5	35	2	35	55	35	1	35							
	point171	171	282	35	5	35	2	35	55	35	1	35							
	point172	172	282	35	5	35	2	35	55	35	1	35							
	point173	173	282	35	5	35	2	35	55	35	1	35							
	point174	174	282	35	5	35	2	35	55	35	1	35							
	point175	175	282	35	5	35	2	35	55	35	1	35							
	point176	176	282	35	5	35	2	35	55	35	1	35							
	point177	177	282	35	5	35	2	35	55	35	1	35							
	point178	178	282	35	5	35	2	35	55	35	1	35							
	point179	179	282	35	5	35	2	35	55	35	1	35							

C:\Noise Projects\LA 1088 Noise\Runs\Build\Build Alt 2 AM T

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point180	180	282	35	5	35	2	35	55	35	1	35
	point181	181	282	35	5	35	2	35	55	35	1	35
	point182	182	282	35	5	35	2	35	55	35	1	35
	point183	183	282	35	5	35	2	35	55	35	1	35
	point184	184	282	35	5	35	2	35	55	35	1	35
	point185	185	282	35	5	35	2	35	55	35	1	35
	point186	186	282	35	5	35	2	35	55	35	1	35
	point187	187	282	35	5	35	2	35	55	35	1	35
	point188	188	282	35	5	35	2	35	55	35	1	35
	point189	189										
LA 57 S of LA 1088 1	point218	218	1697	45	90	45	21	45	309	45	28	45
	point219	219	1697	45	90	45	21	45	309	45	28	45
	point220	220	1697	45	90	45	21	45	309	45	28	45
	point221	221	1697	45	90	45	21	45	309	45	28	45
	point222	222	1697	45	90	45	21	45	309	45	28	45
	point223	223	1697	45	90	45	21	45	309	45	28	45
	point224	224										
	point255	255	1087	45	94	45	87	45	397	45	12	45
	point235	235	1087	45	94	45	87	45	397	45	12	45
	point236	236	1087	45	94	45	87	45	397	45	12	45
	point237	237	1087	45	94	45	87	45	397	45	12	45
	point238	238	1087	45	94	45	87	45	397	45	12	45
	point239	239	1087	45	94	45	87	45	397	45	12	45
	point240	240	1087	45	94	45	87	45	397	45	12	45
	point241	241	1087	45	94	45	87	45	397	45	12	45
	point242	242										
LA 57 NB S of LA 1088 1 1 Lane	point257	257	925	45	49	45	12	45	168	45	15	45
	point258	258	925	45	49	45	12	45	168	45	15	45
	point259	259	925	45	49	45	12	45	168	45	15	45
	point260	260										
	point261	261	925	45	49	45	12	45	168	45	15	45
LA 57 NB S of LA 1088 2 2 Lane	point262	262	925	45	49	45	12	45	168	45	15	45
	point263	263	925	45	49	45	12	45	168	45	15	45
	point264	264	925	45	49	45	12	45	168	45	15	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point349	349	18	25	2	25	0	0	9	25	0	0
	point350	350	18	25	2	25	0	0	9	25	0	0
	point351	351										
Garon Dr NB 1 Lane	point352	352	57	25	3	25	0	0	15	25	0	0
	point353	353	57	25	3	25	0	0	15	25	0	0
	point354	354	57	25	3	25	0	0	15	25	0	0
	point355	355	57	25	3	25	0	0	15	25	0	0
	point356	356	57	25	3	25	0	0	15	25	0	0
	point357	357										
Garon Dr SB 1 Lane	point358	358	47	25	3	25	0	0	13	25	0	0
	point359	359	47	25	3	25	0	0	13	25	0	0
	point360	360	47	25	3	25	0	0	13	25	0	0
	point361	361	47	25	3	25	0	0	13	25	0	0
	point362	362	47	25	3	25	0	0	13	25	0	0
	point363	363										
LA 1088 EB 3 Area 1 1 Lane	point365	365	369	45	34	45	3	45	215	45	5	45
	point366	366	369	45	34	45	3	45	215	45	5	45
	point367	367	369	45	34	45	3	45	215	45	5	45
	point368	368										
LA 1088 EB 1 Area 2 1 Lane	point373	373	414	15	15	15	7	15	173	15	10	15
	point374	374	414	15	15	15	7	15	173	15	10	15
	point375	375										
LA 1088 WB 1 Area 2 2 Lane	point382	382	296	45	10	45	5	45	124	45	7	45
	point383	383	296	45	10	45	5	45	124	45	7	45
	point384	384	296	45	10	45	5	45	124	45	7	45
	point385	385	296	45	10	45	5	45	124	45	7	45
	point386	386	296	45	10	45	5	45	124	45	7	45
	point387	387	296	45	10	45	5	45	124	45	7	45
	point388	388										
LA 1088 WB 3 Area 2 1 Lane	point391	391	308	15	29	15	3	15	180	15	4	15
	point392	392	308	15	29	15	3	15	180	15	4	15
	point393	393	308	15	29	15	3	15	180	15	4	15
	point394	394	308	15	29	15	3	15	180	15	4	15
	point395	395										

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

Spring Blvd NB 1 Lane	point399	399	93	20	6	20	0	0	37	20	1	20
	point400	400	93	20	6	20	0	0	37	20	1	20
	point401	401	93	20	6	20	0	0	37	20	1	20
	point402	402										
Spring Blvd SB 1 Lane	point403	403	72	20	4	20	0	0	29	20	1	20
	point404	404	72	20	4	20	0	0	29	20	1	20
	point405	405	72	20	4	20	0	0	29	20	1	20
	point406	406										
School NB 1 Lane	point407	407	20	25	0	0	0	0	5	25	0	0
	point408	408	20	25	0	0	0	0	5	25	0	0
	point409	409	20	25	0	0	0	0	5	25	0	0
	point410	410	20	25	0	0	0	0	5	25	0	0
	point411	411	20	25	0	0	0	0	5	25	0	0
	point412	412										
School SB 1 Lane	point413	413	26	25	1	25	0	0	8	25	0	0
	point414	414	26	25	1	25	0	0	8	25	0	0
	point415	415	26	25	1	25	0	0	8	25	0	0
	point416	416	26	25	1	25	0	0	8	25	0	0
	point417	417	26	25	1	25	0	0	8	25	0	0
	point418	418										
LA 1088 EB 2 Area 2 1 Lane	point424	424	414	45	15	45	7	45	173	45	10	45
	point425	425	414	45	15	45	7	45	173	45	10	45
	point426	426	414	45	15	45	7	45	173	45	10	45
	point427	427	414	45	15	45	7	45	173	45	10	45
	point428	428	414	45	15	45	7	45	173	45	10	45
	point429	429	414	45	15	45	7	45	173	45	10	45
	point430	430	414	45	15	45	7	45	173	45	10	45
	point431	431										
LA 1088 EB 1 Area 3 1 Lane	point450	450	566	15	41	15	7	15	193	15	2	15
	point451	451	566	15	41	15	7	15	193	15	2	15
	point452	452	566	15	41	15	7	15	193	15	2	15
	point453	453										
LA 1088 WB 1 Area 3 1 Lane	point458	458	347	45	25	45	5	45	118	45	2	45
	point459	459	347	45	25	45	5	45	118	45	2	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point460	460	347	45	25	45	5	45	118	45	2	45
	point461	461	347	45	25	45	5	45	118	45	2	45
	point462	462	347	45	25	45	5	45	118	45	2	45
	point463	463										
LA 1088 WB 4 Area 2 1 Lane	point468	468	296	15	10	15	5	15	124	15	7	15
	point469	469	296	15	10	15	5	15	124	15	7	15
	point470	470	296	15	10	15	5	15	124	15	7	15
	point471	471	296	15	10	15	5	15	124	15	7	15
	point472	472										
LA 1088 WB 3 Area 2 2 Lane	point482	482	296	45	10	45	5	45	124	45	7	45
	point483	483	296	45	10	45	5	45	124	45	7	45
	point484	484										
LA 1088 WB 2 Area 2 1 Lane	point491	491	296	15	10	15	5	15	124	15	7	15
	point492	492										
Soult St Comb 2 Lane	point500	500	517	25	48	25	5	25	210	25	4	25
	point501	501										
Soult St NB 2 Lane	point502	502	277	25	26	25	3	25	113	25	2	25
	point503	503	277	25	26	25	3	25	113	25	2	25
	point504	504	277	25	26	25	3	25	113	25	2	25
	point505	505	277	25	26	25	3	25	113	25	2	25
	point506	506	277	25	26	25	3	25	113	25	2	25
	point507	507	277	25	26	25	3	25	113	25	2	25
	point508	508	277	25	26	25	3	25	113	25	2	25
	point509	509										
Soult St SB 1 Lane	point510	510	198	25	18	25	2	25	81	25	2	25
	point511	511	198	25	18	25	2	25	81	25	2	25
	point512	512	198	25	18	25	2	25	81	25	2	25
	point513	513	198	25	18	25	2	25	81	25	2	25
	point514	514	198	25	18	25	2	25	81	25	2	25
	point515	515	198	25	18	25	2	12	81	25	2	25
	point516	516										
Viola St NB 1 Lane	point517	517	35	25	1	25	0	0	54	25	0	0
	point518	518	35	25	1	25	0	0	54	25	0	0
	point519	519	35	25	1	25	0	0	54	25	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

LA 1088 EB 1 BT Bridges 2 Lane	point65	583	377	55	21	55	4	55	128	55	4	4	55
	point66	584	377	55	21	55	4	55	128	55	4	4	55
	point770	770	377	55	21	55	4	55	128	55	4	4	55
	point67	585	377	55	21	55	4	55	128	55	4	4	55
	point68	586	377	55	21	55	4	55	128	55	4	4	55
	point771	771	377	55	21	55	4	55	128	55	4	4	55
	point69	587	377	55	21	55	4	55	128	55	4	4	55
	point70	588											
LA 1088 EB 2 Area 3 1 Lane	point602	602	566	45	41	45	7	45	193	45	2	2	45
	point603	603	566	45	41	45	7	45	193	45	2	2	45
	point604	604	566	45	41	45	7	45	193	45	2	2	45
	point605	605	566	45	41	45	7	45	193	45	2	2	45
	point606	606											
LA 1088 EB 3 Area 3 2 Lane	point609	609	566	45	41	45	7	45	193	45	2	2	45
	point610	610	566	45	41	45	7	45	193	45	2	2	45
	point611	611	566	45	41	45	7	45	193	45	2	2	45
	point612	612	566	45	41	45	7	45	193	45	2	2	45
	point613	613	566	45	41	45	7	45	193	45	2	2	45
	point614	614	566	45	41	45	7	45	193	45	2	2	45
	point615	615											
LA 1088 WB 3 Area 3 2 Lane	point644	644	231	55	13	55	3	55	79	55	2	2	55
	point645	645											
LA 1088 WB 2 Area 3 1 Lane	point671	671	347	15	25	15	5	15	118	15	2	2	15
	point672	672	347	15	25	15	5	15	118	15	2	2	15
	point673	673	347	15	25	15	5	15	118	15	2	2	15
	point674	674											
Forest Brook Blvd Comb 2 Lane	point683	683	400	20	9	20	3	20	66	20	1	1	20
	point684	684											
Forest Brook Blvd NB 2 Lane	point685	685	211	20	5	20	2	20	35	20	1	1	20
	point686	686	211	20	5	20	2	20	35	20	1	1	20
	point687	687	211	20	5	20	2	20	35	20	1	1	20
	point688	688	211	20	5	20	2	20	35	20	1	1	20
	point689	689	211	20	5	20	2	20	35	20	1	1	20
	point690	690	211	20	5	20	2	20	35	20	1	1	20

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point725	725	177	35	54	35	3	35	31	35	1	35
	point726	726	177	35	54	35	3	35	31	35	1	35
	point727	727	177	35	54	35	3	35	31	35	1	35
	point728	728	177	35	54	35	3	35	31	35	1	35
	point729	729	177	35	54	35	3	35	31	35	1	35
	point730	730	177	35	54	35	3	35	31	35	1	35
	point731	731	177	35	54	35	3	35	31	35	1	35
	point732	732	177	35	54	35	3	35	31	35	1	35
	point733	733	177	35	54	35	3	35	31	35	1	35
	point734	734	177	35	54	35	3	35	31	35	1	35
	point735	735	177	35	54	35	3	35	31	35	1	35
	point736	736	177	35	54	35	3	35	31	35	1	35
	point737	737	177	35	54	35	3	35	31	35	1	35
	point738	738										
LA 1088 EB 2 Lane Past I-12 OffRamp	point740	740	377	55	21	55	4	55	128	55	4	55
	point73	591	377	55	21	55	4	55	128	55	4	55
	point74	592	377	55	21	55	4	55	128	55	4	55
	point75	593	377	55	21	55	4	55	128	55	4	55
	point76	594	377	55	21	55	4	55	128	55	4	55
	point77	595	377	55	21	55	4	55	128	55	4	55
	point78	596	377	55	21	55	4	55	128	55	4	55
	point79	597	377	55	21	55	4	55	128	55	4	55
	point80	598	377	55	21	55	4	55	128	55	4	55
	point81	599	377	55	21	55	4	55	128	55	4	55
	point82	600	377	55	21	55	4	55	128	55	4	55
	point83	601										
LA 1088 WB 1 BT Bridges 2 Lane	point741	741	231	55	13	55	3	55	79	55	2	55
	point259	566	231	55	13	55	3	55	79	55	2	55
	point772	772	231	55	13	55	3	55	79	55	2	55
	point258	567	231	55	13	55	3	55	79	55	2	55
	point257	568	231	55	13	55	3	55	79	55	2	55
	point773	773	231	55	13	55	3	55	79	55	2	55
	point256	569	231	55	13	55	3	55	79	55	2	55
	point255	570										

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

LA 1088 EB 2 BT Bridges 2 Lane	point748	748	377	15	21	15	4	15	128	15	4	15
	point749	749	377	15	21	15	4	15	128	15	4	15
	point750	750	377	15	21	15	4	15	128	15	4	15
	point751	751	377	15	21	15	4	15	128	15	4	15
	point752	752	377	15	21	15	4	15	128	15	4	15
	point753	753	377	15	21	15	4	15	128	15	4	15
	point754	754	377	15	21	15	4	15	128	15	4	15
	point755	755	377	15	21	15	4	15	128	15	4	15
	point756	756	377	15	21	15	4	15	128	15	4	15
	point757	757										
LA 1088 WB 2 BT Bridges 2 Lane	point758	758	231	15	13	15	3	15	79	15	2	15
	point759	759	231	15	13	15	3	15	79	15	2	15
	point760	760	231	15	13	15	3	15	79	15	2	15
	point761	761	231	15	13	15	3	15	79	15	2	15
	point762	762	231	15	13	15	3	15	79	15	2	15
	point763	763	231	15	13	15	3	15	79	15	2	15
	point764	764	231	15	13	15	3	15	79	15	2	15
	point765	765	231	15	13	15	3	15	79	15	2	15
	point766	766	231	15	13	15	3	15	79	15	2	15
	point767	767										
School Comb 2 Lane	point768	768	48	25	2	25	0	0	16	25	0	0
	point364	364	48	25	2	25	0	0	16	25	0	0
	point135	135										
Roadway110	point786	790	369	45	34	45	3	45	215	45	5	45
	point787	791	369	45	34	45	3	45	215	45	5	45
	point788	792										
Roadway111	point789	793	308	45	29	45	3	45	180	45	4	45
	point790	794	308	45	29	45	3	45	180	45	4	45
	point791	795										
Roadway112	point794	796	414	45	15	45	7	45	173	45	10	45
	point795	797	414	45	15	45	7	45	173	45	10	45
	point796	798	414	45	15	45	7	45	173	45	10	45
	point797	799	414	45	15	45	7	45	173	45	10	45
	point798	800	414	45	15	45	7	45	173	45	10	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point799	801	414	45	15	45	7	45	173	45	10	45
	point800	802	414	45	15	45	7	45	173	45	10	45
	point801	803										
Roadway113	point802	804	296	45	10	45	5	45	124	45	7	45
	point803	805	296	45	10	45	5	45	124	45	7	45
	point804	806	296	45	10	45	5	45	124	45	7	45
	point805	807	296	45	10	45	5	45	124	45	7	45
	point806	808	296	45	10	45	5	45	124	45	7	45
	point807	809	296	45	10	45	5	45	124	45	7	45
	point808	810	296	45	10	45	5	45	124	45	7	45
	point809	811										
Roadway114	point813	812	566	45	41	45	7	45	193	45	2	45
	point814	813	566	45	41	45	7	45	193	45	2	45
	point815	814	566	45	41	45	7	45	193	45	2	45
	point816	815	566	45	41	45	7	45	193	45	2	45
	point817	816										
Roadway115	point818	817	347	45	25	45	5	45	118	45	2	45
	point819	818	347	45	25	45	5	45	118	45	2	45
	point820	819	347	45	25	45	5	45	118	45	2	45
	point821	820	347	45	25	45	5	45	118	45	2	45
	point822	821										
LA 1088 EB 2 Area 1 1 Lane-2	point822	822	369	15	34	15	3	15	215	15	5	15
	point312	312	369	15	34	15	3	15	215	15	5	15
	point314	314	369	15	34	15	3	15	215	15	5	15
	point315	315	369	15	34	15	3	15	215	15	5	15
	point316	316										
LA 1088 EB 2 Area 1 1 Lane-2-2	point823	823	369	45	34	45	3	45	215	45	5	45
	point317	317	369	45	34	45	3	45	215	45	5	45
	point318	318	369	45	34	45	3	45	215	45	5	45
	point319	319	369	45	34	45	3	45	215	45	5	45
	point320	320	369	45	34	45	3	45	215	45	5	45
	point321	321	369	45	34	45	3	45	215	45	5	45
	point322	322										
LA 1088 WB 2 Area 1 1 Lane-2	point824	824	308	45	29	45	3	45	180	45	4	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point338	338	308	45	29	45	3	45	180	45	4	45
	point339	339	308	45	29	45	3	45	180	45	4	45
	point340	340	308	45	29	45	3	45	180	45	4	45
	point341	341	308	45	29	45	3	45	180	45	4	45
	point342	342										
LA 1088 WB 2 Area 1 1 Lane-2	point825	825	308	15	29	15	3	15	180	15	4	15
	point331	331	308	15	29	15	3	15	180	15	4	15
	point332	332	308	15	29	15	3	15	180	15	4	15
	point333	333	308	15	29	15	3	15	180	15	4	15
	point334	334	180	15	29	15	3	15	180	15	4	15
	point335	335	308	15	29	15	3	15	180	15	4	15
	point336	336	308	15	29	15	3	15	180	15	4	15
	point337	337										
	point826	826	369	15	34	15	3	15	215	15	5	15
	point369	369	369	15	34	15	3	15	215	15	5	15
	point370	370	369	15	34	15	3	15	215	15	5	15
	point371	371	369	15	34	15	3	15	215	15	5	15
	point372	372										
LA 1088 EB 1 Area 2 1 Lane-2	point827	827	414	45	15	45	7	45	173	45	10	45
	point376	376	414	45	15	45	7	45	173	45	10	45
	point377	377	414	45	15	45	7	45	173	45	10	45
	point378	378	414	45	15	45	7	45	173	45	10	45
	point379	379	414	45	15	45	7	45	173	45	10	45
	point380	380	414	45	15	45	7	45	173	45	10	45
	point381	381										
	point828	828	308	45	29	45	3	45	180	45	4	45
	point396	396	308	45	29	45	3	45	180	45	4	45
	point397	397	308	45	29	45	3	45	180	45	4	45
	point398	398										
LA 1088 WB 1 Area 2 2 Lane-2	point829	829	296	15	10	15	5	15	124	15	7	15
	point389	389	296	15	10	15	5	15	124	15	7	15
	point390	390										
	point830	830	414	15	15	15	7	15	173	15	10	15
	point432	432	414	15	15	15	7	15	173	15	10	15

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point433	433	414	15	15	15	7	15	173	15	10	15
	point434	434	414	15	15	15	7	15	173	15	10	15
	point435	435	414	15	15	15	7	15	173	15	10	15
	point436	436										
LA 1088 EB 2 Area 2 1 Lane-2-2	point831	831	414	45	15	45	7	45	173	45	10	45
	point437	437	414	45	15	45	7	45	173	45	10	45
	point438	438	414	45	15	45	7	45	173	45	10	45
	point439	439	414	45	15	45	7	45	173	45	10	45
	point440	440	414	45	15	45	7	45	173	45	10	45
	point441	441	414	45	15	45	7	45	173	45	10	45
	point442	442	414	45	15	45	7	45	173	45	10	45
	point443	443	414	45	15	45	7	45	173	45	10	45
	point444	444	414	45	15	45	7	45	173	45	10	45
	point445	445	414	45	15	45	7	45	173	45	10	45
	point446	446										
LA 1088 WB 3 Area 2 2 Lane-2	point832	832	296	15	10	15	5	15	124	15	7	15
	point485	485	296	15	10	15	5	15	124	15	7	15
	point486	486	296	15	10	15	5	15	124	15	7	15
	point487	487	296	15	10	15	5	15	124	15	7	15
	point488	488	296	15	10	15	5	15	124	15	7	15
	point489	489	296	15	10	15	5	15	124	15	7	15
	point490	490										
	point833	833	296	45	10	45	5	45	124	45	7	45
	point493	493	296	45	10	45	5	45	124	45	7	45
	point494	494	296	45	10	45	5	45	124	45	7	45
	point495	495	296	45	10	45	5	45	124	45	7	45
	point496	496	296	45	10	45	5	45	124	45	7	45
	point497	497	296	45	10	45	5	45	124	45	7	45
	point498	498	296	45	10	45	5	45	124	45	7	45
	point499	499										
LA 1088 WB 1 Area 3 1 Lane-2	point834	834	347	15	25	15	5	15	118	15	2	15
	point464	464	347	15	25	15	5	15	118	15	2	15
	point465	465	347	15	25	15	5	15	118	15	2	15
	point466	466	347	15	25	15	5	15	118	15	2	15

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point628	628	566	55	41	55	7	55	193	55	2	55
	point629	629	566	55	41	55	7	55	193	55	2	55
	point630	630	566	55	41	55	7	55	193	55	2	55
	point631	631	566	55	41	55	7	55	193	55	2	55
	point632	632	566	55	41	55	7	55	193	55	2	55
	point633	633	566	55	41	55	7	55	193	55	2	55
	point634	634	566	55	41	55	7	55	193	55	2	55
	point635	635	566	55	41	55	7	55	193	55	2	55
	point636	636	566	55	41	55	7	55	193	55	2	55
	point637	637	566	55	41	55	7	55	193	55	2	55
	point638	638	566	55	41	55	7	55	193	55	2	55
	point639	639										
LA 1088 WB 3 Area 3 2 Lane-2	point840	840	347	15	25	15	5	15	118	15	2	15
	point669	669	347	15	25	15	5	15	118	15	2	15
	point670	670										
LA 1088 WB 2 Area 3 1 Lane-2	point841	841	347	45	25	45	5	45	118	45	2	45
	point675	675	347	45	25	45	5	45	118	45	2	45
	point676	676	347	45	25	45	5	45	118	45	2	45
	point677	677	347	45	25	45	5	45	118	45	2	45
	point678	678	347	45	25	45	5	45	118	45	2	45
	point679	679	347	45	25	45	5	45	118	45	2	45
	point680	680	347	45	25	45	5	45	118	45	2	45
	point681	681	347	45	25	45	5	45	118	45	2	45
	point682	682										
LA 1088 WB 3 Area 3 2 Lane-2	point842	842	347	15	25	15	5	15	118	15	2	15
	point646	646	347	15	25	15	5	15	118	15	2	15
	point647	647	347	15	25	15	5	15	118	15	2	15
	point648	648	347	15	25	15	5	15	118	15	2	15
	point649	649										
LA 1088 WB 3 Area 3 2 Lane-2-2	point843	843	347	55	25	55	5	55	118	55	2	55
	point650	650	347	55	25	55	5	55	118	55	2	55
	point651	651	347	55	25	55	5	55	118	55	2	55
	point652	652	347	55	25	55	5	55	118	55	2	55
	point653	653	347	55	25	55	5	55	118	55	2	55

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point654	654	347	55	25	55	5	55	118	55	2	55
	point655	655	347	55	25	55	5	55	118	55	2	55
	point656	656	347	55	25	55	5	55	118	55	2	55
	point657	657	347	55	25	55	5	55	118	55	2	55
	point658	658	347	55	25	55	5	55	118	55	2	55
	point659	659	347	55	25	55	5	55	118	55	2	55
	point660	660	347	55	25	55	5	55	118	55	2	55
	point661	661	347	55	25	55	5	55	118	55	2	55
	point662	662	347	55	25	55	5	55	118	55	2	55
	point663	663	347	55	25	55	5	55	118	55	2	55
	point664	664	347	55	25	55	5	55	118	55	2	55
	point665	665	347	55	25	55	5	55	118	55	2	55
	point666	666	347	55	25	55	5	55	118	55	2	55
	point667	667	347	55	25	55	5	55	118	55	2	55
	point668	668										
LA 1088 EB 3 Area 3 2 Lane-2-2-2	point844	844	566	15	41	15	7	15	193	15	2	15
	point640	640	566	15	41	15	7	15	193	15	2	15
	point641	641	566	15	41	15	7	15	193	15	2	15
	point642	642										
LA 1088 EB 3 Area 3 2 Lane-2-2-2-2	point845	845	377	55	21	55	4	55	128	55	4	55
	point643	643										
LA 57 NB S of LA 1088 2 2 Lane-2	point846	846	925	15	49	15	12	15	168	15	15	15
	point266	266	925	15	49	15	12	15	168	15	15	15
	point267	267										
LA 57 NB N of LA 1088 1 1 Lane-2	point847	847	494	45	43	45	40	45	181	45	5	45
	point273	273	494	45	43	45	40	45	181	45	5	45
	point274	274	494	45	43	45	40	45	181	45	5	45
	point275	275	494	45	43	45	40	45	181	45	5	45
	point276	276										
LA 57 SB N of LA 1088 1 2 Lane-2	point848	848	592	15	51	15	48	15	217	15	6	15
	point283	283	592	15	51	15	48	15	217	15	6	15
	point284	284	592	15	51	15	48	15	217	15	6	15
	point285	285										
LA 57 SB S of LA 1088 1 2 Lane-2	point849	849	772	45	41	45	10	45	141	45	13	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point288	288	772	45	41	45	10	45	141	45	13	45
	point289	289	772	45	41	45	10	45	141	45	13	45
	point290	290	772	45	41	45	10	45	141	45	13	45
	point291	291	772	45	41	45	10	45	141	45	13	45
	point292	292	772	45	41	45	10	45	141	45	13	45
	point293	293	772	45	41	45	10	45	141	45	13	45
	point294	294										
LA 1088 EB 1 Area 1 1 Lane	point295	295	369	45	34	45	3	45	215	45	5	45
	point296	296	369	45	34	45	3	45	215	45	5	45
	point297	297	369	45	34	45	3	45	215	45	5	45
	point298	298	369	45	34	45	3	45	215	45	5	45
	point770	774	369	45	34	45	3	45	215	45	5	45
	point771	775	369	45	34	45	3	45	215	45	5	45
	point772	776	369	45	34	45	3	45	215	45	5	45
	point773	777	369	45	34	45	3	45	215	45	5	45
	point774	778	369	45	34	45	3	45	215	45	5	45
	point775	779	369	45	34	45	3	45	215	45	5	45
	point776	780	369	45	34	45	3	45	215	45	5	45
	point777	781										
	point778	782	308	45	29	45	3	45	180	45	4	45
	point779	783	308	45	29	45	3	45	180	45	4	45
	point780	784	308	45	29	45	3	45	180	45	4	45
	point781	785	308	45	29	45	3	45	180	45	4	45
LA 1088 WB 1 Area 1 2 Lane-2	point782	786	308	45	29	45	3	45	180	45	4	45
	point783	787	308	45	29	45	3	45	180	45	4	45
	point784	788	308	45	29	45	3	45	180	45	4	45
	point300	300	308	45	29	45	3	45	180	45	4	45
	point301	301										
	point850	850	308	45	29	45	3	45	180	45	4	45
	point302	302	308	45	29	45	3	45	180	45	4	45
	point303	303	308	45	29	45	3	45	180	45	4	45
	point304	304	308	45	29	45	3	45	180	45	4	45
	point305	305										

INPUT: RECEIVERS

LA 1088

Volkert

Thomas Lee

30 July 2015

TNM 2.5

INPUT: RECEIVERS

PROJECT/CONTRACT:

LA 1088

Build Alt 2 AM Peak 2033

RUN:

Receiver												
Name	No.	#DUs	Coordinates (ground)			Height above Ground	Input Sound Levels and Criteria				Active in Calc.	
			X	Y	Z		Existing LAeq1h	Impact Criteria		NR Goal		
								ft	ft			ft
Res 1		4	1	3,683,441.2	682,376.4	21.00	4.92	67.70	66	10.0	8.0	
Res 2		5	1	3,683,468.2	682,470.8	21.00	4.92	69.10	66	10.0	8.0	
Res 3		6	1	3,683,608.2	682,712.8	21.00	4.92	69.00	66	10.0	8.0	
Res 4		7	1	3,683,723.2	682,831.0	21.00	4.92	66.90	66	10.0	8.0	
Res 5		8	6	3,683,805.8	682,796.2	21.00	4.92	61.70	66	10.0	8.0	
Res 6		9	6	3,683,965.2	682,871.1	21.00	4.92	57.30	66	10.0	8.0	
Res 7		10	3	3,684,131.2	682,918.9	21.00	4.92	53.60	66	10.0	8.0	
Res 8		11	1	3,683,886.5	683,064.1	21.00	4.92	64.70	66	10.0	8.0	
Res 9		12	1	3,683,868.8	683,216.2	21.00	4.92	70.60	66	10.0	8.0	
Res 10		13	1	3,683,920.8	683,168.4	21.00	4.92	66.60	66	10.0	8.0	
Res 11		14	1	3,683,955.5	683,326.9	21.00	4.92	69.00	66	10.0	8.0	
Res 25		15	1	3,684,467.8	683,922.0	21.00	4.92	69.50	66	10.0	8.0	
Res 26		16	1	3,684,829.8	683,931.1	21.00	4.92	59.10	66	10.0	8.0	
Res 27		17	1	3,685,046.0	683,969.3	21.00	4.92	56.50	66	10.0	8.0	
Res 28		18	1	3,685,117.0	683,892.1	21.00	4.92	53.40	66	10.0	8.0	
Res 29		19	1	3,685,153.5	683,813.9	21.00	4.92	51.60	66	10.0	8.0	
Res 30		20	1	3,685,276.5	684,122.5	21.00	4.92	58.20	66	10.0	8.0	
Res 31		21	1	3,685,658.0	684,432.4	21.00	4.92	67.00	66	10.0	8.0	
Res 32		22	1	3,685,928.8	684,186.3	21.00	4.92	51.40	66	10.0	8.0	
Res 33		23	1	3,686,452.2	684,726.7	21.00	4.92	61.40	66	10.0	8.0	
Res 34		24	1	3,686,550.0	684,672.0	21.00	4.92	56.50	66	10.0	8.0	
Res 35		25	1	3,686,742.5	684,919.4	21.00	4.92	66.00	66	10.0	8.0	

INPUT: RECEIVERS

LA 1088

Res 36	26	1	3,686,741.2	684,824.4	21.00	4.92	58.50	66	10.0	8.0
Res 37	27	1	3,686,733.5	684,708.5	21.00	4.92	55.30	66	10.0	8.0
Res 38	28	1	3,686,744.0	684,614.8	21.00	4.92	54.90	66	10.0	8.0
Res 39	29	1	3,686,732.2	684,505.3	21.00	4.92	53.30	66	10.0	8.0
Res 80	30	1	3,686,918.5	685,006.6	21.00	4.92	66.60	66	10.0	8.0
Res 81	31	1	3,686,954.8	684,907.7	21.00	4.92	58.40	66	10.0	8.0
Res 82	32	1	3,686,927.5	684,807.4	21.00	4.92	56.60	66	10.0	8.0
Res 83	33	1	3,686,925.0	684,721.5	21.00	4.92	55.50	66	10.0	8.0
Res 84	34	1	3,686,931.0	684,618.0	21.00	4.92	54.50	66	10.0	8.0
Res 85	35	1	3,687,133.2	684,910.3	21.00	4.92	55.00	66	10.0	8.0
Res 86	36	1	3,687,189.2	684,795.7	21.00	4.92	50.70	66	10.0	8.0
Res 87	37	9	3,687,514.8	685,143.4	21.00	4.92	57.50	66	10.0	8.0
Res 88	38	5	3,687,582.5	684,954.6	21.00	4.92	50.70	66	10.0	8.0
Res 89	39	1	3,687,999.0	685,498.8	21.00	4.92	65.80	66	10.0	8.0
Res 90	40	1	3,688,096.8	685,548.3	21.00	4.92	66.20	66	10.0	8.0
Res 91	41	2	3,688,070.8	685,302.2	21.00	4.92	53.40	66	10.0	8.0
Res 92	42	2	3,688,104.5	685,213.7	21.00	4.92	51.10	66	10.0	8.0
Res 93	43	1	3,688,030.2	685,380.3	21.00	4.92	56.30	66	10.0	8.0
Res 94	44	1	3,688,175.0	685,561.3	21.00	4.92	64.10	66	10.0	8.0
Res 95	45	1	3,688,259.5	685,614.8	21.00	4.92	65.40	66	10.0	8.0
Res 96	46	1	3,688,444.5	685,688.9	21.00	4.92	64.10	66	10.0	8.0
Recreation 97	47	1	3,688,576.2	685,404.6	21.00	4.92	50.90	66	10.0	8.0
Res 98	48	1	3,688,522.5	685,711.1	21.00	4.92	62.70	66	10.0	8.0
Res 99	49	1	3,688,607.2	685,743.6	21.00	4.92	62.10	66	10.0	8.0
Res 100	50	4	3,688,691.8	685,593.9	21.00	4.92	52.60	66	10.0	8.0
Res 101	51	1	3,688,797.2	685,824.4	21.00	4.92	61.60	66	10.0	8.0
Res 102	52	1	3,688,911.8	685,846.5	21.00	4.92	59.70	66	10.0	8.0
Res 103	53	1	3,688,995.2	685,821.8	21.00	4.92	56.50	66	10.0	8.0
Res 104	54	1	3,689,086.2	685,832.2	21.00	4.92	55.40	66	10.0	8.0
Res 105	55	1	3,689,175.0	685,836.1	21.00	4.92	54.10	66	10.0	8.0
Res 106	56	2	3,688,978.2	685,655.1	21.00	4.92	51.00	66	10.0	8.0
Res 107	57	2	3,689,070.8	685,647.2	21.00	4.92	50.30	66	10.0	8.0
Res 108	58	2	3,689,156.8	685,648.6	21.00	4.92	49.80	66	10.0	8.0
Res 109	59	2	3,689,223.5	685,642.6	21.00	4.92	49.40	66	10.0	8.0
Res 110	60	1	3,689,795.8	686,349.9	21.00	4.92	67.10	66	10.0	8.0

INPUT: RECEIVERS

LA 1088

Res 111	61	1	3,689,836.2	686,314.0	21.00	4.92	62.60	66	10.0	8.0
Res 112	62	1	3,690,190.5	686,521.0	21.00	4.92	68.00	66	10.0	8.0
Res 113	63	1	3,690,405.0	686,561.6	21.00	4.92	64.70	66	10.0	8.0
Res 114	64	3	3,690,448.2	686,393.4	21.00	4.92	54.80	66	10.0	8.0
Res 115	65	3	3,690,646.2	686,405.1	21.00	4.92	53.40	66	10.0	8.0
Res 116	66	3	3,690,921.0	686,415.5	21.00	4.92	58.70	66	10.0	8.0
Res 117	67	1	3,690,988.0	686,675.6	21.00	4.92	64.60	66	10.0	8.0
Res 118	68	1	3,690,981.5	686,531.2	21.00	4.92	63.40	66	10.0	8.0
Res 119	69	1	3,690,997.8	686,409.0	21.00	4.92	64.50	66	10.0	8.0
Res 153	70	1	3,691,173.5	686,850.4	21.00	4.92	66.00	66	10.0	8.0
Res 154	71	1	3,691,139.8	686,767.1	21.00	4.92	63.30	66	10.0	8.0
Res 155	72	1	3,691,128.0	686,681.1	21.00	4.92	62.70	66	10.0	8.0
Res 156	73	1	3,691,148.8	686,597.8	21.00	4.92	60.90	66	10.0	8.0
Res 157	74	1	3,691,137.2	686,509.2	21.00	4.92	61.70	66	10.0	8.0
Res 158	75	1	3,691,110.5	686,419.5	21.00	4.92	63.40	66	10.0	8.0
Res 159	76	1	3,691,247.8	686,877.8	21.00	4.92	65.70	66	10.0	8.0
Res 160	77	1	3,691,336.2	686,922.0	21.00	4.92	66.50	66	10.0	8.0
Res 161	78	4	3,691,350.8	686,669.4	21.00	4.92	52.90	66	10.0	8.0
Res 162	79	1	3,691,415.8	686,944.1	21.00	4.92	66.10	66	10.0	8.0
Res 163	80	7	3,691,530.2	686,798.3	21.00	4.92	53.40	66	10.0	8.0
Res 164	81	5	3,691,509.5	686,660.3	21.00	4.92	51.10	66	10.0	8.0
Res 165	82	4	3,691,673.5	686,634.9	21.00	4.92	49.60	66	10.0	8.0
Res 166	83	1	3,691,490.0	686,967.6	21.00	4.92	66.00	66	10.0	8.0
Res 167	84	1	3,691,569.5	686,989.8	21.00	4.92	65.60	66	10.0	8.0
Res 168	85	1	3,691,652.8	687,013.1	21.00	4.92	65.00	66	10.0	8.0
Res 169	86	1	3,691,757.0	687,041.8	21.00	4.92	64.20	66	10.0	8.0
Res 170	87	1	3,691,856.0	687,037.9	21.00	4.92	61.10	66	10.0	8.0
Res 171	88	2	3,691,898.8	686,968.9	21.00	4.92	55.50	66	10.0	8.0
Res 172	89	3	3,691,930.0	686,881.6	21.00	4.92	51.60	66	10.0	8.0
Res 173	90	1	3,691,977.0	687,103.0	21.00	4.92	62.70	66	10.0	8.0
Res 174	91	1	3,692,027.8	687,173.3	21.00	4.92	67.00	66	10.0	8.0
Res 175	92	1	3,692,117.5	687,196.8	21.00	4.92	66.50	66	10.0	8.0
Res 176	93	1	3,692,202.2	687,222.8	21.00	4.92	66.30	66	10.0	8.0
Res 177	94	1	3,692,284.2	687,248.8	21.00	4.92	66.20	66	10.0	8.0
Res 178	95	3	3,692,313.0	687,070.4	21.00	4.92	53.60	66	10.0	8.0

INPUT: RECEIVERS
LA 1088

Res 179	96	3	3,692,404.0	686,996.2	21.00	4.92	51.80	66	10.0	8.0
Res 180	97	4	3,692,363.8	686,894.7	21.00	4.92	50.00	66	10.0	8.0
Res 181	98	1	3,692,499.0	687,323.1	21.00	4.92	66.70	66	10.0	8.0
Res 182	99	1	3,692,595.5	687,360.8	21.00	4.92	66.90	66	10.0	8.0
Res 183	100	1	3,692,673.5	687,397.2	21.00	4.92	67.50	66	10.0	8.0
Res 184	101	1	3,692,770.0	687,423.3	21.00	4.92	67.10	66	10.0	8.0
Res 185	102	1	3,692,833.8	687,448.1	21.00	4.92	67.20	66	10.0	8.0
Res 186	103	1	3,692,914.5	687,480.6	21.00	4.92	67.50	66	10.0	8.0
Res 187	104	1	3,693,005.5	687,509.2	21.00	4.92	67.30	66	10.0	8.0
Office 188	105	1	3,693,077.2	687,535.3	21.00	4.92	67.40	71	10.0	8.0
Res 189	106	1	3,693,166.0	687,539.9	21.00	4.92	64.20	66	10.0	8.0
Res 190	107	7	3,692,741.2	687,215.0	21.00	4.92	53.30	66	10.0	8.0
Res 191	108	3	3,693,051.2	687,241.0	21.00	4.92	51.60	66	10.0	8.0
Res 192	109	3	3,693,038.2	687,165.5	21.00	4.92	50.40	66	10.0	8.0
Office 193	110	1	3,693,288.2	687,605.6	21.00	4.92	67.20	71	10.0	8.0
Recreation 194	111	1	3,693,900.2	687,738.4	21.00	4.92	61.10	66	10.0	8.0
Vet Office 195	112	1	3,694,471.8	687,754.1	21.00	4.92	53.40	66	10.0	8.0
Res 196	113	1	3,694,781.8	687,761.9	21.00	4.92	51.00	66	10.0	8.0
Res 197	114	1	3,695,094.2	687,971.5	21.00	4.92	53.60	66	10.0	8.0
Res 198	115	2	3,695,216.5	687,963.7	21.00	4.92	52.60	66	10.0	8.0
Res 199	116	3	3,695,457.5	687,998.8	21.00	4.92	57.40	66	10.0	8.0
Res 200	117	3	3,695,615.0	688,086.1	21.00	4.92	55.50	66	10.0	8.0
Res 201	118	2	3,695,965.2	688,189.2	21.00	4.92	51.00	66	10.0	8.0
Res 209	119	1	3,697,750.5	689,435.0	21.00	4.92	67.50	66	10.0	8.0
Res 210	120	3	3,697,888.5	689,393.4	21.00	4.92	60.50	66	10.0	8.0
Res 211	121	1	3,697,891.5	689,266.4	21.00	4.92	55.80	66	10.0	8.0
Res 212	122	3	3,698,121.5	689,192.8	21.00	4.92	52.40	66	10.0	8.0
Res 213	123	1	3,698,596.8	689,807.4	21.00	4.92	65.40	66	10.0	8.0
Res 225	124	1	3,700,395.2	690,187.1	21.00	4.92	53.60	66	10.0	8.0
Res 226	125	1	3,701,318.2	690,825.0	30.00	4.92	57.10	66	10.0	8.0

INPUT: BUILDING ROWS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: BUILDING ROWS

PROJECT/CONTRACT:

LA 1088

RUN: Build Alt 2 AM Peak 2033

Building Row				Points			
Name	Average Height ft	Building Percent %	No.	Coordinates (ground)			
				X ft	Y ft	Z ft	
Building2	20.00	70	1	3,686,677.2	684,918.6	21.00	
			2	3,686,730.5	684,916.3	21.00	
			3	3,686,726.0	684,433.4	21.00	
			4	3,686,684.2	684,444.7	21.00	
Building3	20.00	70	5	3,686,995.2	685,011.1	21.00	
			6	3,686,935.2	685,008.7	21.00	
			7	3,686,978.2	684,893.3	21.00	
			8	3,686,950.0	684,744.8	21.00	
			9	3,686,945.0	684,555.7	21.00	
			10	3,686,994.0	684,556.9	21.00	
	20.00	70	11	3,687,181.0	684,824.8	21.00	
			12	3,687,140.5	684,833.4	21.00	
			13	3,687,163.8	684,934.1	21.00	
			14	3,687,263.2	685,005.3	21.00	
			15	3,687,523.5	685,129.3	21.00	
			16	3,687,693.0	685,194.3	21.00	
			17	3,687,923.8	685,244.6	21.00	
			18	3,687,938.5	685,204.1	21.00	
	20.00	70	19	3,687,998.2	685,431.8	21.00	
			20	3,687,977.0	685,470.6	21.00	
			21	3,688,287.2	685,597.1	21.00	
			22	3,688,299.8	685,570.6	21.00	
			23	3,688,428.8	685,633.3	21.00	
	Building6	20.00	70				

INPUT: BUILDING ROWS

LA 1088

				24	3,688,417.2	685,659.9	21.00
				25	3,688,562.8	685,710.5	21.00
				26	3,688,690.5	685,775.0	21.00
				27	3,688,812.0	685,810.4	21.00
				28	3,689,042.0	685,807.9	21.00
				29	3,689,218.0	685,819.3	21.00
				30	3,689,479.8	685,820.5	21.00
				31	3,689,484.8	685,778.8	21.00
Building7	20.00	70		32	3,691,156.8	686,276.9	21.00
				33	3,691,130.5	686,278.5	21.00
				34	3,691,156.8	686,483.8	21.00
				35	3,691,166.2	686,647.1	21.00
				36	3,691,166.2	686,741.9	21.00
				37	3,691,194.2	686,832.1	21.00
				38	3,691,298.2	686,878.8	21.00
				39	3,691,471.0	686,937.9	21.00
				40	3,691,654.5	687,000.1	21.00
				41	3,691,769.5	687,025.0	21.00
				42	3,691,849.0	687,009.4	21.00
				43	3,691,929.8	686,872.6	21.00
				44	3,692,002.8	686,715.5	21.00
				45	3,691,987.2	686,703.1	21.00
Building8	20.00	70		46	3,692,085.8	686,879.4	21.00
				47	3,692,050.0	686,888.7	21.00
				48	3,692,009.5	687,048.9	21.00
				49	3,692,022.0	687,134.4	21.00
				50	3,692,345.5	687,247.9	21.00
				51	3,692,364.0	687,218.4	21.00
Building9	20.00	70		52	3,692,500.5	687,262.3	21.00
				53	3,692,483.2	687,296.4	21.00
				54	3,692,768.0	687,400.6	21.00
				55	3,692,973.2	687,475.3	21.00
				56	3,693,124.0	687,509.5	21.00
				57	3,693,152.0	687,509.5	21.00

INPUT: BUILDING ROWS

LA 1088				
		58	3,693,201.8	687,425.6
		59	3,693,205.0	687,060.1
		60	3,693,167.5	687,058.5
				21.00
				21.00
				21.00

INPUT: ROADWAYS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: ROADWAYS

PROJECT/CONTRACT:

LA 1088

RUN: Build Alt 2 PM Peak 2033

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
	ft			X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
				ft	ft	ft		mph	%		
Garon Dr Comb 1 2 Lane	24.0	point100	100	3,686,849.0	684,090.2	21.00				Average	
		point101	101	3,686,836.2	684,712.6	21.00					
Jackson St Comb 2 Lane	24.0	point106	106	3,686,845.2	685,274.9	21.00				Average	
		point107	107	3,686,839.0	685,637.0	21.00					
I-12 EB OnRamp 1 Lane	24.0	point162	162	3,699,282.8	690,209.7	22.00				Average	
		point163	163	3,699,342.2	690,144.1	22.00				Average	
		point164	164	3,699,376.8	690,103.0	22.00				Average	
		point165	165	3,699,406.8	690,068.5	22.00				Average	
		point166	166	3,699,432.5	690,047.4	22.00				Average	
		point167	167	3,699,473.2	690,023.2	22.00				Average	
		point168	168	3,699,527.5	690,003.1	22.00				Average	
		point169	169	3,699,592.2	689,995.0	22.00				Average	
		point170	170	3,699,633.8	689,999.2	22.00				Average	
		point171	171	3,699,684.2	690,010.2	22.00				Average	
		point172	172	3,699,741.5	690,040.1	22.00				Average	
		point173	173	3,699,819.0	690,092.8	22.00				Average	
		point174	174	3,699,963.2	690,193.8	22.00				Average	
		point175	175	3,700,093.0	690,282.4	22.00				Average	
		point176	176	3,700,127.8	690,305.4	22.00				Average	
		point177	177	3,700,199.0	690,345.5	22.00				Average	
		point178	178	3,700,260.5	690,371.1	22.00				Average	
		point179	179	3,700,319.8	690,390.6	22.00				Average	
		point180	180	3,700,408.8	690,407.8	22.00				Average	
		point181	181	3,700,507.0	690,414.9	22.00				Average	
		point182	182	3,700,608.5	690,406.0	22.00				Average	

INPUT: ROADWAYS

LA 1088

			point183	183	3,700,704.0	690,385.2	22.00			Average
			point184	184	3,700,773.8	690,360.4	22.00			Average
			point185	185	3,700,846.2	690,333.5	22.00			Average
			point186	186	3,700,912.2	690,305.9	22.00			Average
			point187	187	3,701,006.2	690,262.4	22.00			Average
			point188	188	3,701,190.5	690,173.3	22.00			Average
			point189	189	3,701,436.8	690,049.4	22.00			
LA 57 S of LA 1088 1	36.0		point183	183	3,682,808.5	681,467.9	21.00			Average
			point184	184	3,683,063.0	681,915.2	21.00			Average
			point185	185	3,683,212.5	682,178.6	21.00			Average
			point186	186	3,683,303.5	682,338.2	21.00			Average
			point187	187	3,683,405.8	682,511.9	21.00			Average
			point188	188	3,683,504.8	682,684.9	21.00			Average
			point189	189	3,683,597.2	682,835.0	21.00			
LA 57 N of LA 1088 1	36.0		point183	183	3,684,142.8	684,260.9	21.00			Average
			point184	184	3,684,165.5	684,339.8	21.00			Average
			point185	185	3,684,242.0	684,525.2	21.00			Average
			point186	186	3,684,361.0	684,801.1	21.00			Average
			point187	187	3,684,442.5	684,980.7	21.00			Average
			point188	188	3,684,579.8	685,291.6	21.00			Average
			point189	189	3,684,701.0	685,565.9	21.00			Average
			point190	190	3,684,809.5	685,815.2	21.00			Average
			point191	191	3,684,878.5	685,964.8	21.00			
LA 57 NB S of LA 1088 1 1 Lane	12.0		point183	183	3,683,597.2	682,835.0	21.00			Average
			point184	184	3,683,647.0	682,904.3	21.00			Average
			point185	185	3,683,729.8	683,050.2	21.00			Average
			point186	186	3,683,832.8	683,223.6	21.00			
LA 57 NB S of LA 1088 2 2 Lane	24.0		point183	183	3,683,832.8	683,223.6	21.00			Average
			point184	184	3,683,953.5	683,445.4	21.00			Average
			point185	185	3,683,998.8	683,538.9	21.00			Average
			point186	186	3,684,027.5	683,616.2	21.00			Average
			point187	187	3,684,047.8	683,690.2	21.00			
LA 57 NB N of LA 1088 1 1 Lane	12.0		point183	183	3,684,152.5	683,800.9	21.00			Average
			point184	184	3,684,154.2	683,831.8	21.00			Average
			point185	185	3,684,146.8	683,868.5	21.00			Average
			point186	186	3,684,134.2	683,902.1	21.00			Average
			point187	187	3,684,121.8	683,980.6	21.00			
LA 57 SB N of LA 1088 1 2 Lane	24.0		point183	183	3,684,142.8	684,260.9	21.00			Average

INPUT: ROADWAYS

LA 1088

			point278	278	3,684,118.8	684,210.4	21.00			Average
			point279	279	3,684,101.8	684,129.4	21.00			Average
			point280	280	3,684,096.2	684,070.9	21.00			Average
			point281	281	3,684,096.8	683,984.9	21.00			Average
			point282	282	3,684,092.5	683,966.2	21.00			
LA 57 SB S of LA 1088 1 2 Lane	24.0		point286	286	3,684,022.0	683,819.9	21.00			Average
			point287	287	3,684,010.2	683,696.6	21.00			
LA 1088 EB 2 Area 1 1 Lane	20.0		point306	306	3,686,346.0	684,837.8	21.00			Average
			point307	307	3,686,371.2	684,849.9	21.00			Average
			point308	308	3,686,524.5	684,922.8	21.00			Average
			point309	309	3,686,675.8	684,990.8	21.00			Average
			point310	310	3,686,709.5	685,002.4	21.00			Average
			point311	311	3,686,763.5	684,996.3	21.00			
LA 1088 WB 2 Area 1 1 Lane	20.0		point323	323	3,687,389.0	685,344.4	21.00			Average
			point324	324	3,687,351.0	685,326.2	21.00			Average
			point325	325	3,687,252.8	685,281.0	21.00			Average
			point326	326	3,687,112.5	685,211.7	21.00			Average
			point327	327	3,687,020.2	685,163.8	21.00			Average
			point328	328	3,686,954.8	685,120.9	21.00			Average
			point329	329	3,686,906.2	685,087.8	21.00			Average
			point330	330	3,686,877.0	685,082.9	21.00			
Jackson St NB 1 Lane	12.0		point343	343	3,686,856.8	685,073.7	21.00			Average
			point344	344	3,686,861.5	685,093.2	21.00			Average
			point345	345	3,686,856.8	685,163.2	21.00			Average
			point346	346	3,686,852.0	685,226.2	21.00			Average
			point347	347	3,686,845.2	685,274.9	21.00			
Jackson St SB 1 Lane	12.0		point348	348	3,686,845.2	685,274.9	21.00			Average
			point349	349	3,686,839.0	685,226.9	21.00			Average
			point350	350	3,686,836.0	685,150.3	21.00			Average
			point351	351	3,686,811.2	685,089.0	21.00			
Garon Dr NB 1 Lane	12.0		point352	352	3,686,836.2	684,712.6	21.00			Average
			point353	353	3,686,843.5	684,783.8	21.00			Average
			point354	354	3,686,844.8	684,844.6	21.00			Average
			point355	355	3,686,846.0	684,876.4	21.00			Average
			point356	356	3,686,835.2	684,943.4	21.00			Average
			point357	357	3,686,849.8	684,997.6	21.00			
Garon Dr SB 1 Lane	12.0		point358	358	3,686,791.0	684,996.3	21.00			Average
			point359	359	3,686,808.8	684,941.8	21.00			Average

INPUT: ROADWAYS

LA 1088

			point360	360	3,686,822.5	684,878.4	21.00		Average
			point361	361	3,686,823.2	684,842.9	21.00		Average
			point362	362	3,686,827.5	684,778.4	21.00		Average
			point363	363	3,686,836.2	684,712.6	21.00		
LA 1088 EB 3 Area 1 1 Lane	20.0		point365	365	3,687,862.5	685,538.6	21.00		Average
			point366	366	3,687,942.0	685,575.1	21.00		Average
			point367	367	3,688,103.8	685,649.1	21.00		Average
			point368	368	3,688,219.5	685,707.5	21.00		
LA 1088 EB 1 Area 2 1 Lane	20.0		point373	373	3,688,328.5	685,697.2	21.00		Average
			point374	374	3,688,354.0	685,712.7	21.00		Average
			point375	375	3,688,402.2	685,755.9	21.00		
LA 1088 WB 3 Area 2 1 Lane	20.0		point391	391	3,688,317.2	685,797.9	21.00		Average
			point392	392	3,688,288.2	685,791.5	21.00		Average
			point393	393	3,688,273.0	685,777.2	21.00		Average
			point394	394	3,688,238.2	685,752.8	21.00		Average
			point395	395	3,688,208.2	685,730.6	21.00		
Spring Blvd NB 1 Lane	12.0		point399	399	3,688,416.0	685,544.1	21.00		Average
			point400	400	3,688,378.5	685,619.1	21.00		Average
			point401	401	3,688,359.0	685,656.1	21.00		Average
			point402	402	3,688,354.0	685,712.7	21.00		
Spring Blvd SB 1 Lane	12.0		point403	403	3,688,287.2	685,703.1	21.00		Average
			point404	404	3,688,329.5	685,648.6	21.00		Average
			point405	405	3,688,353.5	685,608.4	21.00		Average
			point406	406	3,688,387.5	685,532.9	21.00		
School NB 1 Lane	12.0		point407	407	3,688,342.2	685,788.1	21.00		Average
			point408	408	3,688,339.8	685,824.3	21.00		Average
			point409	409	3,688,329.0	685,874.9	21.00		Average
			point410	410	3,688,322.8	685,936.5	21.00		Average
			point411	411	3,688,319.8	686,011.2	21.00		Average
			point412	412	3,688,313.2	686,047.8	21.00		
School SB 1 Lane	12.0		point413	413	3,688,313.2	686,047.8	21.00		Average
			point414	414	3,688,307.5	686,010.9	21.00		Average
			point415	415	3,688,306.5	685,935.6	21.00		Average
			point416	416	3,688,309.0	685,873.7	21.00		Average
			point417	417	3,688,309.8	685,838.8	21.00		Average
			point418	418	3,688,288.2	685,791.5	21.00		
LA 1088 EB 2 Area 2 1 Lane	20.0		point424	424	3,690,330.5	686,646.1	21.00		Average
			point425	425	3,690,456.5	686,693.2	21.00		Average

INPUT: ROADWAYS

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		point426	426	3,690,577.5	686,735.9	21.00			Average
		point427	427	3,690,695.5	686,780.3	21.00			Average
		point428	428	3,690,780.8	686,814.0	21.00			Average
		point429	429	3,690,840.0	686,847.4	21.00			Average
		point430	430	3,690,873.8	686,865.2	21.00			Average
		point431	431	3,690,906.5	686,868.7	21.00			
LA 1088 EB 1 Area 3 1 Lane	20.0	point450	450	3,692,409.5	687,367.6	21.00			Average
		point451	451	3,692,430.8	687,378.1	21.00			Average
		point452	452	3,692,445.0	687,391.3	21.00			Average
		point453	453	3,692,484.8	687,399.9	21.00			
LA 1088 WB 1 Area 3 1 Lane	20.0	point458	458	3,692,834.8	687,548.1	21.00			Average
		point459	459	3,692,785.5	687,530.5	21.00			Average
		point460	460	3,692,676.2	687,490.6	21.00			Average
		point461	461	3,692,563.8	687,453.4	21.00			Average
		point462	462	3,692,526.5	687,444.8	21.00			Average
		point463	463	3,692,493.8	687,445.2	21.00			
LA 1088 WB 4 Area 2 1 Lane	20.0	point468	468	3,692,381.8	687,498.2	21.00			Average
		point469	469	3,692,361.8	687,490.6	21.00			Average
		point470	470	3,692,340.8	687,471.9	21.00			Average
		point471	471	3,692,312.8	687,445.6	21.00			
		point472	472	3,692,279.8	687,413.9	21.00			
LA 1088 WB 3 Area 2 2 Lane	32.0	point482	482	3,691,408.0	687,047.9	21.00			Average
		point483	483	3,691,198.8	686,973.5	21.00			Average
		point484	484	3,691,126.2	686,949.0	21.00			
LA 1088 WB 2 Area 2 1 Lane	20.0	point491	491	3,690,947.5	686,959.9	21.00			Average
		point492	492	3,690,893.0	686,912.2	21.00			
Soult St Comb 2 Lane	24.0	point500	500	3,691,051.2	686,100.9	21.00			Average
		point501	501	3,691,049.2	686,328.8	21.00			
Soult St NB 2 Lane	24.0	point502	502	3,691,049.2	686,328.8	21.00			Average
		point503	503	3,691,060.8	686,418.9	21.00			Average
		point504	504	3,691,064.2	686,573.1	21.00			Average
		point505	505	3,691,066.8	686,667.2	21.00			Average
		point506	506	3,691,060.8	686,728.1	21.00			Average
		point507	507	3,691,047.2	686,787.8	21.00			Average
		point508	508	3,691,050.8	686,829.4	21.00			Average
		point509	509	3,691,066.2	686,883.8	21.00			
Soult St SB 1 Lane	12.0	point510	510	3,690,988.2	686,851.9	21.00			Average
		point511	511	3,691,021.5	686,777.6	21.00			Average

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			point512	512	3,691,035.2	686,726.2	21.00			Average
			point513	513	3,691,043.0	686,664.6	21.00			Average
			point514	514	3,691,043.5	686,572.0	21.00			Average
			point515	515	3,691,043.8	686,417.3	21.00			Average
			point516	516	3,691,049.2	686,328.8	21.00			
Viola St NB 1 Lane	12.0		point517	517	3,691,046.0	686,963.1	21.00			Average
			point518	518	3,691,016.0	687,063.4	21.00			Average
			point519	519	3,691,005.0	687,207.5	21.00			Average
			point520	520	3,690,998.0	687,226.2	21.00			
Viola St Comb 2 Lane	24.0		point521	521	3,690,998.0	687,226.2	21.00			Average
			point522	522	3,690,992.8	687,253.0	21.00			Average
			point523	523	3,690,973.5	687,276.9	21.00			Average
			point524	524	3,690,935.5	687,292.1	21.00			Average
			point525	525	3,690,785.0	687,289.2	21.00			Average
			point526	526	3,690,547.5	687,283.9	21.00			
Viola St SB 1 Lane	12.0		point527	527	3,690,998.0	687,226.2	21.00			Average
			point528	528	3,690,991.0	687,205.2	21.00			Average
			point529	529	3,690,990.5	687,120.6	21.00			Average
			point530	530	3,690,998.0	687,061.1	21.00			Average
			point531	531	3,690,996.2	687,025.5	21.00			Average
			point532	532	3,690,972.0	686,967.1	21.00			
Trinity Dr NB 2 Lane	24.0		point533	533	3,692,465.2	687,226.6	21.00			Average
			point534	534	3,692,442.0	687,289.6	21.00			Average
			point535	535	3,692,438.2	687,313.9	21.00			Average
			point536	536	3,692,446.8	687,353.8	21.00			Average
			point537	537	3,692,445.0	687,391.3	21.00			
Trinity Dr SB 1 Lane	12.0		point538	538	3,692,358.0	687,379.2	21.00			Average
			point539	539	3,692,381.0	687,336.0	21.00			Average
			point540	540	3,692,409.0	687,283.7	21.00			Average
			point541	541	3,692,435.5	687,214.7	21.00			
LA 1088 WB 3 BT Bridges 2 Lane	32.0		point273	552	3,704,280.0	692,279.9	30.00			Average
			point272	553	3,704,009.5	692,159.6	30.00			Average
			point271	554	3,703,739.8	692,036.6	30.00			Average
			point270	555	3,703,463.5	691,911.6	30.00			Average
			point269	556	3,703,280.0	691,831.7	30.00			Average
			point268	557	3,703,003.5	691,737.0	30.00			Average
			point267	558	3,702,718.5	691,672.5	30.00			Average
			point266	559	3,702,524.8	691,642.6	30.00			Average

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			point265	560	3,702,218.5	691,592.1	30.00			Average
			point264	561	3,701,924.8	691,513.0	30.00			Average
			point263	562	3,701,646.5	691,397.2	30.00			Average
			point262	563	3,701,372.5	691,270.8	30.00			
LA 1088 EB 1 BT Bridges 2 Lane	32.0		point65	583	3,699,487.8	690,339.4	30.00			Average
			point66	584	3,699,760.2	690,465.8	35.00			Average
			point770	770	3,699,896.5	690,528.4	40.00			Average
			point67	585	3,700,033.0	690,590.9	45.00			Average
			point68	586	3,700,305.0	690,716.1	45.00			Average
			point771	771	3,700,441.8	690,779.0	45.00			Average
			point69	587	3,700,578.5	690,841.9	40.00			Average
			point70	588	3,700,851.5	690,967.8	35.00			
LA 1088 EB 2 Area 3 1 Lane	20.0		point602	602	3,693,632.2	687,802.2	21.00			Average
			point603	603	3,693,698.8	687,825.6	21.00			Average
			point604	604	3,693,945.8	687,910.8	21.00			Average
			point605	605	3,694,125.8	687,967.6	21.00			Average
			point606	606	3,694,181.2	687,986.7	21.00			
LA 1088 EB 3 Area 3 2 Lane	32.0		point609	609	3,694,181.2	687,986.7	21.00			Average
			point610	610	3,694,459.8	688,083.8	21.00			Average
			point611	611	3,694,705.5	688,169.9	21.00			Average
			point612	612	3,694,955.8	688,258.3	21.00			Average
			point613	613	3,695,107.0	688,320.6	21.00			Average
			point614	614	3,695,176.2	688,359.4	21.00			Average
			point615	615	3,695,215.5	688,370.3	21.00			
LA 1088 WB 3 Area 3 2 Lane	32.0		point644	644	3,699,468.2	690,393.1	30.00			Average
			point645	645	3,699,395.8	690,351.1	25.00			
LA 1088 WB 2 Area 3 1 Lane	12.0		point671	671	3,695,303.2	688,482.2	21.00			Average
			point672	672	3,695,279.5	688,478.1	21.00			Average
			point673	673	3,695,241.2	688,444.6	21.00			Average
			point674	674	3,695,188.0	688,403.7	21.00			
Forest Brook Blvd Comb 2 Lane	24.0		point683	683	3,695,575.0	687,949.6	21.00			Average
			point684	684	3,695,514.2	688,049.9	21.00			
Forest Brook Blvd NB 2 Lane	24.0		point685	685	3,695,514.2	688,049.9	21.00			Average
			point686	686	3,695,505.5	688,084.2	21.00			Average
			point687	687	3,695,470.5	688,145.6	21.00			Average
			point688	688	3,695,426.5	688,234.8	21.00			Average
			point689	689	3,695,392.0	688,294.1	21.00			Average
			point690	690	3,695,385.5	688,323.2	21.00			Average

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Forest Brook Blvd SB 1 Lane	12.0	point691	691	3,695,389.0	688,378.8	21.00				
		point692	692	3,695,314.8	688,350.9	21.00				Average
		point693	693	3,695,371.0	688,280.9	21.00				Average
		point694	694	3,695,409.2	688,227.5	21.00				Average
		point695	695	3,695,454.0	688,142.3	21.00				Average
		point696	696	3,695,483.8	688,088.2	21.00				Average
		point697	697	3,695,514.2	688,049.9	21.00				
I-12 EB OffRamp 1 1 Lane	24.0	point698	698	3,698,014.8	691,921.6	22.00				Average
		point699	699	3,698,313.8	691,715.9	22.00				Average
		point700	700	3,698,466.5	691,611.1	22.00				Average
		point701	701	3,698,643.0	691,488.0	22.00				Average
		point702	702	3,698,809.8	691,371.4	22.00				Average
		point703	703	3,698,913.0	691,299.7	22.00				Average
		point704	704	3,699,015.0	691,224.4	22.00				Average
		point705	705	3,699,066.5	691,169.3	22.00				Average
		point706	706	3,699,102.0	691,117.9	22.00				Average
		point707	707	3,699,133.0	691,060.7	22.00				Average
		point708	708	3,699,151.8	691,005.9	22.00				Average
		point709	709	3,699,168.5	690,940.0	22.00				Average
		point710	710	3,699,178.5	690,848.0	22.00				Average
		point711	711	3,699,183.5	690,667.9	22.00				
I-12 EB OffRamp 2 2 Lane	48.0	point712	712	3,699,183.5	690,667.9	22.00				Average
		point713	713	3,699,191.5	690,561.7	22.00				Average
		point714	714	3,699,206.0	690,454.5	22.00				
I-12 EB OffRamp 4 1 Lane	24.0	point715	715	3,699,206.0	690,454.5	22.00				Average
		point716	716	3,699,204.5	690,423.8	22.00				Average
		point717	717	3,699,208.2	690,406.4	22.00				Average
		point718	718	3,699,206.0	690,355.8	22.00				Average
		point719	719	3,699,179.2	690,278.1	22.00				
I-12 EB OffRamp 3 1 Lane	24.0	point720	720	3,699,206.0	690,454.5	22.00				Average
		point721	721	3,699,235.0	690,401.4	23.00				Average
		point722	722	3,699,248.2	690,335.4	23.00				
I-12 WB OffRamp 1 Lane	24.0	point723	723	3,702,061.0	689,877.3	30.00				Average
		point724	724	3,701,791.5	690,041.3	30.00				Average
		point725	725	3,701,630.0	690,137.3	30.00				Average
		point726	726	3,701,521.0	690,202.4	30.00				Average
		point727	727	3,701,440.2	690,252.1	30.00				Average
		point728	728	3,701,376.2	690,292.1	30.00				Average

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		point729	729	3,701,321.8	690,340.8	30.00			Average
		point730	730	3,701,277.8	690,397.6	30.00			Average
		point731	731	3,701,232.0	690,481.5	30.00			Average
		point732	732	3,701,211.2	690,535.1	30.00			Average
		point733	733	3,701,196.0	690,616.7	30.00			Average
		point734	734	3,701,197.0	690,775.9	30.00			Average
		point735	735	3,701,201.8	690,930.2	30.00			Average
		point736	736	3,701,200.0	690,974.2	30.00			Average
		point737	737	3,701,182.5	691,025.4	30.00			Average
		point738	738	3,701,177.8	691,075.8	30.00			
LA 1088 EB 2 Lane Past I-12 OffRamp	32.0	point740	740	3,701,395.5	691,218.8	30.00			Average
		point73	591	3,701,668.8	691,345.2	30.00			Average
		point74	592	3,701,946.5	691,454.9	30.00			Average
		point75	593	3,702,233.2	691,530.1	30.00			Average
		point76	594	3,702,532.2	691,581.5	30.00			Average
		point77	595	3,702,731.8	691,612.4	30.00			Average
		point78	596	3,703,020.0	691,678.9	30.00			Average
		point79	597	3,703,303.2	691,776.3	30.00			Average
		point80	598	3,703,487.8	691,856.8	21.00			Average
		point81	599	3,703,762.5	691,982.6	30.00			Average
		point82	600	3,704,035.8	692,104.8	30.00			Average
		point83	601	3,704,307.2	692,227.5	30.00			
LA 1088 WB 1 BT Bridges 2 Lane	32.0	point741	741	3,700,826.5	691,020.3	35.00			Average
		point259	566	3,700,554.0	690,894.4	40.00			Average
		point772	772	3,700,419.5	690,831.9	45.00			Average
		point258	567	3,700,284.8	690,769.4	45.00			Average
		point257	568	3,700,010.0	690,643.3	45.00			Average
		point773	773	3,699,873.5	690,580.6	40.00			Average
		point256	569	3,699,737.0	690,517.9	35.00			Average
		point255	570	3,699,468.2	690,393.1	30.00			
LA 1088 EB 2 BT Bridges 2 Lane	32.0	point748	748	3,700,851.5	690,967.8	35.00			Average
		point749	749	3,700,961.2	691,019.6	30.00			Average
		point750	750	3,701,024.5	691,052.4	30.00			Average
		point751	751	3,701,045.2	691,059.2	30.00			Average
		point752	752	3,701,109.0	691,057.6	30.00			Average
		point753	753	3,701,152.2	691,060.8	30.00			Average
		point754	754	3,701,177.8	691,075.8	30.00			Average
		point755	755	3,701,221.5	691,111.8	30.00			Average

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			point756	756	3,701,322.5	691,181.2	30.00			Average
			point757	757	3,701,395.5	691,218.8	30.00			
LA 1088 WB 2 BT Bridges 2 Lane	32.0		point758	758	3,701,372.5	691,270.8	30.00			Average
			point759	759	3,701,294.0	691,228.1	30.00			Average
			point760	760	3,701,236.5	691,199.4	30.00			Average
			point761	761	3,701,159.0	691,197.3	30.00			Average
			point762	762	3,701,120.2	691,195.8	30.00			Average
			point763	763	3,701,095.2	691,186.9	30.00			Average
			point764	764	3,701,063.0	691,158.8	30.00			Average
			point765	765	3,701,011.5	691,118.1	30.00			Average
			point766	766	3,700,942.5	691,073.8	30.00			Average
			point767	767	3,700,826.5	691,020.3	35.00			
School Comb 2 Lane	24.0		point768	768	3,688,313.2	686,047.8	21.00			Average
			point364	364	3,688,317.8	686,299.8	21.00			Average
			point135	135	3,688,309.2	686,672.2	21.00			
Roadway110	20.0		point786	790	3,687,396.8	685,323.5	21.00			Average
			point787	791	3,687,673.2	685,450.5	21.00			Average
			point788	792	3,687,862.5	685,538.6	21.00			
Roadway111	20.0		point789	793	3,687,853.8	685,558.4	21.00			Average
			point790	794	3,687,660.5	685,469.6	21.00			Average
			point791	795	3,687,389.0	685,344.4	21.00			
Roadway112	25.0		point794	796	3,688,875.2	686,005.1	21.00			Average
			point795	797	3,689,125.8	686,125.1	21.00			Average
			point796	798	3,689,395.0	686,250.2	21.00			Average
			point797	799	3,689,573.5	686,331.8	21.00			Average
			point798	800	3,689,791.0	686,430.2	21.00			Average
			point799	801	3,689,994.8	686,516.9	21.00			Average
			point800	802	3,690,178.2	686,591.2	21.00			Average
			point801	803	3,690,330.5	686,646.1	21.00			
Roadway113	25.0		point802	804	3,690,321.5	686,666.4	21.00			Average
			point803	805	3,690,169.8	686,609.2	21.00			Average
			point804	806	3,689,985.0	686,536.4	21.00			Average
			point805	807	3,689,780.2	686,448.8	21.00			Average
			point806	808	3,689,564.2	686,350.6	21.00			Average
			point807	809	3,689,386.8	686,269.7	21.00			Average
			point808	810	3,689,114.5	686,143.2	21.00			Average
			point809	811	3,688,865.8	686,025.3	21.00			
Roadway114	20.0		point813	812	3,692,841.0	687,526.3	21.00			Average

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		point814	813	3,692,958.2	687,566.5	21.00			Average
		point815	814	3,693,239.8	687,665.4	21.00			Average
		point816	815	3,693,523.5	687,764.9	21.00			Average
		point817	816	3,693,632.2	687,802.2	21.00			
Roadway115	20.0	point818	817	3,693,623.0	687,822.8	21.00			Average
		point819	818	3,693,516.8	687,785.6	21.00			Average
		point820	819	3,693,230.0	687,685.6	21.00			Average
		point821	820	3,692,948.2	687,586.9	21.00			Average
		point822	821	3,692,834.8	687,548.1	21.00			
LA 1088 EB 2 Area 1 1 Lane-2	20.0	point822	822	3,686,763.5	684,996.3	21.00			Average
		point312	312	3,686,791.0	684,996.3	21.00			Average
		point314	314	3,686,817.5	684,987.8	21.00			Average
		point315	315	3,686,849.8	684,997.6	21.00			Average
		point316	316	3,686,863.2	685,014.7	21.00			
LA 1088 EB 2 Area 1 1 Lane-2-2	20.0	point823	823	3,686,863.2	685,014.7	21.00			Average
		point317	317	3,686,963.8	685,102.3	21.00			Average
		point318	318	3,687,034.2	685,150.0	21.00			Average
		point319	319	3,687,120.8	685,196.0	21.00			Average
		point320	320	3,687,267.2	685,262.8	21.00			Average
		point321	321	3,687,368.2	685,312.4	21.00			Average
		point322	322	3,687,396.8	685,323.5	21.00			
LA 1088 WB 2 Area 1 1 Lane-2	20.0	point824	824	3,686,752.0	685,055.9	21.00			Average
		point338	338	3,686,697.5	685,027.1	21.00			Average
		point339	339	3,686,665.8	685,011.8	21.00			Average
		point340	340	3,686,515.5	684,938.2	21.00			Average
		point341	341	3,686,357.5	684,868.0	21.00			Average
		point342	342	3,686,335.0	684,857.9	21.00			
LA 1088 WB 2 Area 1 1 Lane-2	20.0	point825	825	3,686,877.0	685,082.9	21.00			Average
		point331	331	3,686,856.8	685,073.7	21.00			Average
		point332	332	3,686,845.8	685,082.9	21.00			Average
		point333	333	3,686,823.5	685,090.2	21.00			Average
		point334	334	3,686,811.2	685,089.0	21.00			Average
		point335	335	3,686,790.5	685,082.2	21.00			Average
		point336	336	3,686,778.8	685,071.8	21.00			Average
		point337	337	3,686,752.0	685,055.9	21.00			
LA 1088 EB 3 Area 1 1 Lane-2	20.0	point826	826	3,688,219.5	685,707.5	21.00			Average
		point369	369	3,688,254.8	685,710.9	21.00			Average
		point370	370	3,688,287.2	685,703.1	21.00			Average

INPUT: ROADWAYS

LA 1088

			point371	371	3,688,306.8	685,695.7	21.00			Average
			point372	372	3,688,328.5	685,697.2	21.00			
LA 1088 EB 1 Area 2 1 Lane-2	20.0		point827	827	3,688,402.2	685,755.9	21.00			Average
			point376	376	3,688,459.0	685,801.1	21.00			Average
			point377	377	3,688,534.8	685,846.7	21.00			Average
			point378	378	3,688,626.5	685,890.2	21.00			Average
			point379	379	3,688,760.8	685,952.4	21.00			Average
			point380	380	3,688,832.0	685,985.7	21.00			Average
			point381	381	3,688,875.2	686,005.1	21.00			
LA 1088 WB 3 Area 2 1 Lane-2	20.0		point828	828	3,688,208.2	685,730.6	21.00			Average
			point396	396	3,688,093.0	685,668.8	21.00			Average
			point397	397	3,687,930.0	685,593.4	21.00			Average
			point398	398	3,687,853.8	685,558.4	21.00			
LA 1088 WB 1 Area 2 2 Lane-2	32.0		point829	829	3,688,388.5	685,802.8	21.00			Average
			point389	389	3,688,342.2	685,788.1	21.00			Average
			point390	390	3,688,317.2	685,797.9	21.00			
LA 1088 EB 2 Area 2 1 Lane-2	20.0		point830	830	3,690,906.5	686,868.7	21.00			Average
			point432	432	3,690,988.2	686,851.9	21.00			Average
			point433	433	3,691,022.8	686,853.6	21.00			Average
			point434	434	3,691,045.8	686,869.6	21.00			Average
			point435	435	3,691,066.2	686,883.8	21.00			Average
			point436	436	3,691,131.0	686,921.1	21.00			
LA 1088 EB 2 Area 2 1 Lane-2-2	20.0		point831	831	3,691,131.0	686,921.1	21.00			Average
			point437	437	3,691,211.0	686,955.7	21.00			Average
			point438	438	3,691,434.5	687,032.9	21.00			Average
			point439	439	3,691,590.5	687,090.2	21.00			Average
			point440	440	3,691,724.5	687,139.1	21.00			Average
			point441	441	3,691,900.2	687,198.5	21.00			Average
			point442	442	3,692,003.0	687,234.6	21.00			Average
			point443	443	3,692,098.8	687,270.1	21.00			Average
			point444	444	3,692,177.8	687,310.9	21.00			Average
			point445	445	3,692,247.0	687,357.0	21.00			Average
			point446	446	3,692,294.0	687,383.6	21.00			
LA 1088 WB 3 Area 2 2 Lane-2	32.0		point832	832	3,691,126.2	686,949.0	21.00			Average
			point485	485	3,691,099.0	686,949.4	21.00			Average
			point486	486	3,691,046.0	686,963.1	21.00			Average
			point487	487	3,691,013.8	686,973.0	21.00			Average
			point488	488	3,690,994.8	686,974.4	21.00			Average

INPUT: ROADWAYS

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			point489	489	3,690,972.0	686,967.1	21.00			Average
			point490	490	3,690,947.5	686,959.9	21.00			
LA 1088 WB 2 Area 2 1 Lane-2	20.0		point833	833	3,690,893.0	686,912.2	21.00			Average
			point493	493	3,690,864.5	686,891.4	21.00			Average
			point494	494	3,690,829.5	686,870.1	21.00			Average
			point495	495	3,690,770.2	686,836.5	21.00			Average
			point496	496	3,690,690.2	686,800.6	21.00			Average
			point497	497	3,690,571.2	686,758.0	21.00			Average
			point498	498	3,690,449.2	686,714.1	21.00			Average
			point499	499	3,690,321.5	686,666.4	21.00			
LA 1088 WB 1 Area 3 1 Lane-2	20.0		point834	834	3,692,493.8	687,445.2	21.00			Average
			point464	464	3,692,450.2	687,466.9	21.00			Average
			point465	465	3,692,437.0	687,483.3	21.00			Average
			point466	466	3,692,413.8	687,496.0	21.00			Average
			point467	467	3,692,381.8	687,498.2	21.00			
LA 1088 WB 4 Area 2 1 Lane-2	20.0		point835	835	3,692,279.8	687,413.9	21.00			Average
			point473	473	3,692,236.0	687,378.6	21.00			Average
			point474	474	3,692,165.2	687,330.9	21.00			Average
			point475	475	3,692,091.2	687,292.3	21.00			Average
			point476	476	3,691,995.8	687,254.7	21.00			Average
			point477	477	3,691,893.5	687,218.9	21.00			Average
			point478	478	3,691,715.8	687,158.1	21.00			Average
			point479	479	3,691,581.8	687,112.2	21.00			Average
			point480	480	3,691,500.0	687,085.9	21.00			Average
			point481	481	3,691,408.0	687,047.9	21.00			
LA 1088 EB 2 Area 2 1 Lane-2-2	20.0		point836	836	3,692,294.0	687,383.6	21.00			Average
			point447	447	3,692,358.0	687,379.2	21.00			Average
			point448	448	3,692,378.2	687,368.6	21.00			Average
			point449	449	3,692,409.5	687,367.6	21.00			
LA 1088 EB 1 Area 3 1 Lane-2	20.0		point837	837	3,692,484.8	687,399.9	21.00			Average
			point454	454	3,692,571.0	687,432.4	21.00			Average
			point455	455	3,692,683.5	687,471.9	21.00			Average
			point456	456	3,692,795.0	687,510.4	21.00			Average
			point457	457	3,692,841.0	687,526.3	21.00			
LA 1088 EB 3 Area 3 2 Lane-2	32.0		point838	838	3,695,215.5	688,370.3	21.00			Average
			point616	616	3,695,276.0	688,360.9	21.00			Average
			point617	617	3,695,314.8	688,350.9	21.00			Average
			point618	618	3,695,351.8	688,352.4	21.00			Average

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			point619	619	3,695,369.2	688,360.9	21.00			Average
			point620	620	3,695,389.0	688,378.8	21.00			Average
			point621	621	3,695,440.2	688,424.7	21.00			
LA 1088 EB 3 Area 3 2 Lane-2-2	32.0		point839	839	3,695,440.2	688,424.7	21.00			Average
			point622	622	3,695,519.8	688,487.3	21.00			Average
			point623	623	3,695,596.2	688,532.5	21.00			Average
			point624	624	3,695,874.2	688,660.1	21.00			Average
			point625	625	3,696,175.2	688,797.5	21.00			Average
			point626	626	3,696,413.0	688,906.7	21.00			Average
			point627	627	3,696,627.5	689,004.0	21.00			Average
			point628	628	3,696,904.8	689,130.8	21.00			Average
			point629	629	3,697,127.5	689,232.5	21.00			Average
			point630	630	3,697,338.8	689,329.9	21.00			Average
			point631	631	3,697,522.8	689,416.8	21.00			Average
			point632	632	3,697,808.2	689,552.8	21.00			Average
			point633	633	3,698,093.2	689,690.5	21.00			Average
			point634	634	3,698,234.0	689,758.9	21.00			Average
			point635	635	3,698,508.8	689,888.9	21.00			Average
			point636	636	3,698,800.8	690,023.9	21.00			Average
			point637	637	3,699,077.0	690,151.6	21.00			Average
			point638	638	3,699,163.8	690,196.8	21.00			Average
			point639	639	3,699,196.0	690,208.7	22.00			
LA 1088 WB 3 Area 3 2 Lane-2	32.0		point840	840	3,695,404.2	688,495.2	21.00			Average
			point669	669	3,695,353.0	688,491.1	21.00			Average
			point670	670	3,695,303.2	688,482.2	21.00			
LA 1088 WB 2 Area 3 1 Lane-2	20.0		point841	841	3,695,188.0	688,403.7	21.00			Average
			point675	675	3,695,095.8	688,347.1	21.00			Average
			point676	676	3,694,944.0	688,283.8	21.00			Average
			point677	677	3,694,696.2	688,195.2	21.00			Average
			point678	678	3,694,450.5	688,110.6	21.00			Average
			point679	679	3,694,173.8	688,014.5	21.00			Average
			point680	680	3,693,937.8	687,931.9	21.00			Average
			point681	681	3,693,686.0	687,844.0	21.00			Average
			point682	682	3,693,623.0	687,822.8	21.00			
LA 1088 WB 3 Area 3 2 Lane-2	32.0		point842	842	3,699,395.8	690,351.1	25.00			Average
			point646	646	3,699,326.8	690,348.4	24.00			Average
			point647	647	3,699,274.2	690,347.1	24.00			Average
			point648	648	3,699,248.2	690,335.4	23.00			Average

INPUT: ROADWAYS

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LA 1088 WB 3 Area 3 2 Lane-2-2	32.0	point649	649	3,699,179.2	690,278.1	22.00			
		point843	843	3,699,179.2	690,278.1	22.00			Average
		point650	650	3,699,134.5	690,245.8	21.00			Average
		point651	651	3,699,050.5	690,200.1	21.00			Average
		point652	652	3,698,780.2	690,073.8	21.00			Average
		point653	653	3,698,491.0	689,939.4	21.00			Average
		point654	654	3,698,210.8	689,803.8	21.00			Average
		point655	655	3,698,073.0	689,734.9	21.00			Average
		point656	656	3,697,790.0	689,594.7	21.00			Average
		point657	657	3,697,509.0	689,456.9	21.00			Average
		point658	658	3,697,324.0	689,368.2	21.00			Average
		point659	659	3,697,109.2	689,269.4	21.00			Average
		point660	660	3,696,888.2	689,167.0	21.00			Average
		point661	661	3,696,613.5	689,040.2	21.00			Average
		point662	662	3,696,396.2	688,941.9	21.00			Average
		point663	663	3,696,153.0	688,831.5	21.00			Average
		point664	664	3,695,857.5	688,695.7	21.00			Average
		point665	665	3,695,589.0	688,573.7	21.00			Average
		point666	666	3,695,500.8	688,524.5	21.00			Average
		point667	667	3,695,450.0	688,500.6	21.00			Average
		point668	668	3,695,404.2	688,495.2	21.00			
LA 1088 EB 3 Area 3 2 Lane-2-2-2	32.0	point844	844	3,699,196.0	690,208.7	22.00			Average
		point640	640	3,699,282.8	690,209.7	22.00			Average
		point641	641	3,699,310.0	690,212.9	24.00			Average
		point642	642	3,699,413.0	690,289.9	25.00			
LA 1088 EB 3 Area 3 2 Lane-2-2-2-2	32.0	point845	845	3,699,413.0	690,289.9	25.00			Average
		point643	643	3,699,487.8	690,339.4	30.00			
LA 57 NB S of LA 1088 2 2 Lane-2	24.0	point846	846	3,684,047.8	683,690.2	21.00			Average
		point266	266	3,684,127.0	683,774.9	21.00			Average
		point267	267	3,684,152.5	683,800.9	21.00			
LA 57 NB N of LA 1088 1 1 Lane-2	12.0	point847	847	3,684,121.8	683,980.6	21.00			Average
		point273	273	3,684,118.8	684,062.8	21.00			Average
		point274	274	3,684,125.0	684,128.2	21.00			Average
		point275	275	3,684,139.2	684,204.8	21.00			Average
		point276	276	3,684,142.8	684,260.9	21.00			
LA 57 SB N of LA 1088 1 2 Lane-2	24.0	point848	848	3,684,092.5	683,966.2	21.00			Average
		point283	283	3,684,052.0	683,898.4	21.00			Average
		point284	284	3,684,024.5	683,848.6	21.00			Average

INPUT: ROADWAYS

LA 1088

LA 57 SB S of LA 1088 1 2 Lane-2	24.0	point285	285	3,684,022.0	683,819.9	21.00			
		point849	849	3,684,010.2	683,696.6	21.00			Average
		point288	288	3,683,993.2	683,623.1	21.00			Average
		point289	289	3,683,969.8	683,551.4	21.00			Average
		point290	290	3,683,928.5	683,458.6	21.00			Average
		point291	291	3,683,808.8	683,247.5	21.00			Average
		point292	292	3,683,708.2	683,067.5	21.00			Average
		point293	293	3,683,624.8	682,918.1	21.00			Average
		point294	294	3,683,597.2	682,835.0	21.00			Average
LA 1088 EB 1 Area 1 1 Lane	20.0	point295	295	3,684,152.5	683,800.9	21.00			Average
		point296	296	3,684,205.2	683,843.9	21.00			Average
		point297	297	3,684,355.8	683,922.2	21.00			Average
		point298	298	3,684,576.2	684,021.2	21.00			Average
		point770	774	3,684,607.2	684,035.9	21.00			Average
		point771	775	3,684,949.0	684,194.5	21.00			Average
		point772	776	3,685,222.5	684,316.9	21.00			Average
		point773	777	3,685,495.0	684,443.8	21.00			Average
		point774	778	3,685,653.2	684,518.2	21.00			Average
LA 1088 WB 1 Area 1 2 Lane	20.0	point775	779	3,685,854.8	684,611.0	21.00			Average
		point776	780	3,686,132.5	684,739.4	21.00			Average
		point777	781	3,686,346.0	684,837.8	21.00			Average
		point778	782	3,686,335.0	684,857.9	21.00			Average
		point779	783	3,686,121.2	684,758.9	21.00			Average
		point780	784	3,685,845.5	684,631.1	21.00			Average
		point781	785	3,685,640.2	684,536.6	21.00			Average
		point782	786	3,685,483.2	684,466.4	21.00			Average
		point783	787	3,685,207.5	684,340.1	21.00			Average
Roadway146	32.0	point784	788	3,684,939.2	684,214.1	21.00			Average
		point300	300	3,684,594.8	684,053.9	21.00			Average
		point301	301	3,684,562.2	684,039.1	21.00			Average
		point302	302	3,684,344.2	683,946.5	21.00			Average
		point303	303	3,684,227.8	683,889.8	21.00			Average
		point304	304	3,684,175.5	683,885.3	21.00			Average
		point305	305	3,684,134.2	683,902.1	21.00			Average
		point382	850	3,688,865.8	686,025.3	21.00			Average
		point383	851	3,688,817.2	686,006.5	21.00			Average
		point384	852	3,688,745.0	685,976.1	21.00			Average
		point385	853	3,688,611.8	685,914.4	21.00			Average

INPUT: ROADWAYS

LA 1088

		point386	854	3,688,519.8	685,872.4	21.00			Average
		point387	855	3,688,445.2	685,823.1	21.00			Average
		point388	856	3,688,389.2	685,800.6	21.00			

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT:
RUN:

LA 1088
Build Alt 2 PM Peak 2033

Roadway	Name	No.	Segment									
			Autos		MTucks		HTucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Garon Dr Comb 1 2 Lane	point100	100	104	25	6	25	0	0	28	25	1	25
	point101	101										
Jackson St Comb 2 Lane	point106	106	32	25	4	25	0	0	16	25	0	0
	point107	107										
I-12 EB OnRamp 1 Lane	point162	162	282	35	5	35	2	35	55	35	1	35
	point163	163	282	35	5	35	2	35	55	35	1	35
	point164	164	282	35	5	35	2	35	55	35	1	35
	point165	165	282	35	5	35	2	35	55	35	1	35
	point166	166	282	35	5	35	2	35	55	35	1	35
	point167	167	282	35	5	35	2	35	55	35	1	35
	point168	168	282	35	5	35	2	35	55	35	1	35
	point169	169	282	35	5	35	2	35	55	35	1	35
	point170	170	282	35	5	35	2	35	55	35	1	35
	point171	171	282	35	5	35	2	35	55	35	1	35
	point172	172	282	35	5	35	2	35	55	35	1	35
	point173	173	282	35	5	35	2	35	55	35	1	35
	point174	174	282	35	5	35	2	35	55	35	1	35
	point175	175	282	35	5	35	2	35	55	35	1	35
	point176	176	282	35	5	35	2	35	55	35	1	35
	point177	177	282	35	5	35	2	35	55	35	1	35
	point178	178	282	35	5	35	2	35	55	35	1	35
	point179	179	282	35	5	35	2	35	55	35	1	35

C:\Noise Projects\LA 1088 Noise\Runs\Build\Build Alt 2 PM T

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point180	180	282	35	5	35	2	35	55	35	1	35
	point181	181	282	35	5	35	2	35	55	35	1	35
	point182	182	282	35	5	35	2	35	55	35	1	35
	point183	183	282	35	5	35	2	35	55	35	1	35
	point184	184	282	35	5	35	2	35	55	35	1	35
	point185	185	282	35	5	35	2	35	55	35	1	35
	point186	186	282	35	5	35	2	35	55	35	1	35
	point187	187	282	35	5	35	2	35	55	35	1	35
	point188	188	282	35	5	35	2	35	55	35	1	35
	point189	189										
LA 57 S of LA 1088 1	point218	218	1697	45	90	45	21	45	309	45	28	45
	point219	219	1697	45	90	45	21	45	309	45	28	45
	point220	220	1697	45	90	45	21	45	309	45	28	45
	point221	221	1697	45	90	45	21	45	309	45	28	45
	point222	222	1697	45	90	45	21	45	309	45	28	45
	point223	223	1697	45	90	45	21	45	309	45	28	45
LA 57 N of LA 1088 1	point224	224										
	point255	255	1087	45	94	45	87	45	397	45	12	45
	point235	235	1087	45	94	45	87	45	397	45	12	45
	point236	236	1087	45	94	45	87	45	397	45	12	45
	point237	237	1087	45	94	45	87	45	397	45	12	45
	point238	238	1087	45	94	45	87	45	397	45	12	45
	point239	239	1087	45	94	45	87	45	397	45	12	45
	point240	240	1087	45	94	45	87	45	397	45	12	45
	point241	241	1087	45	94	45	87	45	397	45	12	45
	point242	242										
LA 57 NB S of LA 1088 1 1 Lane	point257	257	772	45	41	45	10	45	141	45	13	45
	point258	258	772	45	41	45	10	45	141	45	13	45
	point259	259	772	45	41	45	10	45	141	45	13	45
	point260	260										
LA 57 NB S of LA 1088 2 2 Lane	point261	261	772	45	41	45	10	45	141	45	13	45
	point262	262	772	45	41	45	10	45	141	45	13	45
	point263	263	772	45	41	45	10	45	141	45	13	45
	point264	264	772	45	41	45	10	45	141	45	13	45

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	point349	349	15	25	2	25	0	0	7	25	0	0
	point350	350	15	25	2	25	0	0	7	25	0	0
	point351	351										
Garon Dr NB 1 Lane	point352	352	47	25	3	25	0	0	13	25	0	0
	point353	353	47	25	3	25	0	0	13	25	0	0
	point354	354	47	25	3	25	0	0	13	25	0	0
	point355	355	47	25	3	25	0	0	13	25	0	0
	point356	356	47	25	3	25	0	0	13	25	0	0
	point357	357										
Garon Dr SB 1 Lane	point358	358	57	25	3	25	0	0	15	25	0	0
	point359	359	57	25	3	25	0	0	15	25	0	0
	point360	360	57	25	3	25	0	0	15	25	0	0
	point361	361	57	25	3	25	0	0	15	25	0	0
	point362	362	57	25	3	25	0	0	15	25	0	0
	point363	363										
LA 1088 EB 3 Area 1 1 Lane	point365	365	308	45	29	45	3	45	180	45	4	45
	point366	366	308	45	29	45	3	45	180	45	4	45
	point367	367	308	45	29	45	3	45	180	45	4	45
	point368	368										
LA 1088 EB 1 Area 2 1 Lane	point373	373	296	15	10	15	5	15	124	15	7	15
	point374	374	296	15	10	15	5	15	124	15	7	15
	point375	375										
LA 1088 WB 3 Area 2 1 Lane	point391	391	369	15	34	15	3	15	215	15	5	15
	point392	392	369	15	34	15	3	15	215	15	5	15
	point393	393	369	15	34	15	3	15	215	15	5	15
	point394	394	369	15	34	15	3	15	215	15	5	15
	point395	395										
Spring Blvd NB 1 Lane	point399	399	72	20	4	20	0	0	29	20	1	20
	point400	400	72	20	4	20	0	0	29	20	1	20
	point401	401	72	20	4	20	0	0	29	20	1	20
	point402	402										
Spring Blvd SB 1 Lane	point403	403	93	20	6	20	0	0	37	20	1	20
	point404	404	93	20	6	20	0	0	37	20	1	20
	point405	405	93	20	6	20	0	0	37	20	1	20

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	point471	471	414	15	15	15	7	15	173	15	10	15
	point472	472										
LA 1088 WB 3 Area 2 2 Lane	point482	482	414	45	15	45	7	45	173	45	10	45
	point483	483	414	45	15	45	7	45	173	45	10	45
	point484	484										
	point491	491	414	15	15	15	7	15	173	15	10	15
	point492	492										
Soult St Comb 2 Lane	point500	500	517	25	48	25	5	25	210	25	4	25
	point501	501										
Soult St NB 2 Lane	point502	502	198	25	18	25	2	25	81	25	2	25
	point503	503	198	25	18	25	2	25	81	25	2	25
	point504	504	198	25	18	25	2	25	81	25	2	25
	point505	505	198	25	18	25	2	25	81	25	2	25
	point506	506	198	25	18	25	2	25	81	25	2	25
	point507	507	198	25	18	25	2	25	81	25	2	25
	point508	508	198	25	18	25	2	25	81	25	2	25
	point509	509										
Soult St SB 1 Lane	point510	510	277	25	26	25	3	25	113	25	2	25
	point511	511	277	25	26	25	3	25	113	25	2	25
	point512	512	277	25	26	25	3	25	113	25	2	25
	point513	513	277	25	26	25	3	25	113	25	2	25
	point514	514	277	25	26	25	3	25	113	25	2	25
	point515	515	277	25	26	25	3	25	113	25	2	25
	point516	516										
Viola St NB 1 Lane	point517	517	49	25	1	25	0	0	75	25	0	0
	point518	518	49	25	1	25	0	0	75	25	0	0
	point519	519	49	25	1	25	0	0	75	25	0	0
	point520	520										
Viola St Comb 2 Lane	point521	521	91	25	2	25	0	0	140	25	0	0
	point522	522	91	25	2	25	0	0	140	25	0	0
	point523	523	91	25	2	25	0	0	140	25	0	0
	point524	524	91	25	2	25	0	0	140	25	0	0
	point525	525	91	25	2	25	0	0	140	25	0	0
	point526	526										

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Viola St SB 1 Lane	point527	527	35	25	1	25	0	0	54	25	0	0
	point528	528	35	25	1	25	0	0	54	25	0	0
	point529	529	35	25	1	25	0	0	54	25	0	0
	point530	530	35	25	1	25	0	0	54	25	0	0
	point531	531	35	25	1	25	0	0	54	25	0	0
	point532	532										
Tinity Dr NB 2 Lane	point533	533	75	20	1	20	0	0	12	20	4	20
	point534	534	75	20	1	20	0	0	12	20	4	20
	point535	535	75	20	1	20	0	0	12	20	4	20
	point536	536	75	20	1	20	0	0	12	20	4	20
	point537	537										
Trinity Dr SB 1 Lane	point538	538	123	20	2	20	0	0	19	20	7	20
	point539	539	123	20	2	20	0	0	19	20	7	20
	point540	540	123	20	2	20	0	0	19	20	7	20
	point541	541										
LA 1088 WB 3 BT Bridges 2 Lane	point273	552	377	55	21	55	4	55	128	55	4	55
	point272	553	377	55	21	55	4	55	128	55	4	55
	point271	554	377	55	21	55	4	55	128	55	4	55
	point270	555	377	55	21	55	4	55	128	55	4	55
	point269	556	377	55	21	55	4	55	128	55	4	55
	point268	557	377	55	21	55	4	55	128	55	4	55
	point267	558	377	55	21	55	4	55	128	55	4	55
	point266	559	377	55	21	55	4	55	128	55	4	55
	point265	560	377	55	21	55	4	55	128	55	4	55
	point264	561	377	55	21	55	4	55	128	55	4	55
	point263	562	377	55	21	55	4	55	128	55	4	55
	point262	563										
LA 1088 EB 1 BT Bridges 2 Lane	point65	583	231	55	13	55	3	55	79	55	2	55
	point66	584	231	55	13	55	3	55	79	55	2	55
	point770	770	231	55	13	55	3	55	79	55	2	55
	point67	585	231	55	13	55	3	55	79	55	2	55
	point68	586	231	55	13	55	3	55	79	55	2	55
	point771	771	231	55	13	55	3	55	79	55	2	55
	point69	587	231	55	13	55	3	55	79	55	2	55

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I-12 EB OffRamp 1 1 Lane	point698	698	325	35	5	35	2	35	63	35	2	35
	point699	699	325	35	5	35	2	35	63	35	2	35
	point700	700	325	35	5	35	2	35	63	35	2	35
	point701	701	325	35	5	35	2	35	63	35	2	35
	point702	702	325	35	5	35	2	35	63	35	2	35
	point703	703	325	35	5	35	2	35	63	35	2	35
	point704	704	325	35	5	35	2	35	63	35	2	35
	point705	705	325	35	5	35	2	35	63	35	2	35
	point706	706	325	35	5	35	2	35	63	35	2	35
	point707	707	325	35	5	35	2	35	63	35	2	35
	point708	708	325	35	5	35	2	35	63	35	2	35
	point709	709	325	35	5	35	2	35	63	35	2	35
	point710	710	325	35	5	35	2	35	63	35	2	35
	point711	711										
I-12 EB OffRamp 2 2 Lane	point712	712	325	35	5	35	2	35	63	35	2	35
	point713	713	325	35	5	35	2	35	63	35	2	35
	point714	714										
I-12 EB OffRamp 4 1 Lane	point715	715	174	35	3	35	1	35	34	35	1	35
	point716	716	174	35	3	35	1	35	34	35	1	35
	point717	717	174	35	3	35	1	35	34	35	1	35
	point718	718	174	35	3	35	1	35	34	35	1	35
	point719	719										
I-12 EB OffRamp 3 1 Lane	point720	720	125	35	2	35	1	35	24	35	1	35
	point721	721	125	35	2	35	1	35	24	35	1	35
	point722	722										
I-12 WB OffRamp 1 Lane	point723	723	177	35	54	35	3	35	31	35	1	35
	point724	724	177	35	54	35	3	35	31	35	1	35
	point725	725	177	35	54	35	3	35	31	35	1	35
	point726	726	177	35	54	35	3	35	31	35	1	35
	point727	727	177	35	54	35	3	35	31	35	1	35
	point728	728	177	35	54	35	3	35	31	35	1	35
	point729	729	177	35	54	35	3	35	31	35	1	35
	point730	730	177	35	54	35	3	35	31	35	1	35
	point731	731	177	35	54	35	3	35	31	35	1	35

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	point732	732	177	35	54	35	3	35	31	35	1	35
	point733	733	177	35	54	35	3	35	31	35	1	35
	point734	734	177	35	54	35	3	35	31	35	1	35
	point735	735	177	35	54	35	3	35	31	35	1	35
	point736	736	177	35	54	35	3	35	31	35	1	35
	point737	737	177	35	54	35	3	35	31	35	1	35
	point738	738										
LA 1088 EB 2 Lane Past I-12 OffRamp	point740	740	231	55	13	55	3	55	79	55	2	55
	point73	591	231	55	13	55	3	55	79	55	2	55
	point74	592	231	55	13	55	3	55	79	55	2	55
	point75	593	231	55	13	55	3	55	79	55	2	55
	point76	594	231	55	13	55	3	55	79	55	2	55
	point77	595	231	55	13	55	3	55	79	55	2	55
	point78	596	231	55	13	55	3	55	79	55	2	55
	point79	597	231	55	13	55	3	55	79	55	2	55
	point80	598	231	55	13	55	3	55	79	55	2	55
	point81	599	231	55	13	55	3	55	79	55	2	55
	point82	600	231	55	13	55	3	55	79	55	2	55
	point83	601										
LA 1088 WB 1 BT Bridges 2 Lane	point741	741	377	55	21	55	4	55	128	55	4	55
	point259	566	377	55	21	55	4	55	128	55	4	55
	point772	772	377	55	21	55	4	55	128	55	4	55
	point258	567	377	55	21	55	4	55	128	55	4	55
	point257	568	377	55	21	55	4	55	128	55	4	55
	point773	773	377	55	21	55	4	55	128	55	4	55
	point256	569	377	55	21	55	4	55	128	55	4	55
	point255	570										
LA 1088 EB 2 BT Bridges 2 Lane	point748	748	231	15	13	15	3	15	79	15	2	15
	point749	749	231	15	13	15	3	15	79	15	2	15
	point750	750	231	15	13	15	3	15	79	15	2	15
	point751	751	231	15	13	15	3	15	79	15	2	15
	point752	752	231	15	13	15	3	15	79	15	2	15
	point753	753	231	15	13	15	3	15	79	15	2	15
	point754	754	231	15	13	15	3	15	79	15	2	15

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	point755	755	231	15	13	15	3	15	79	15	2	15
	point756	756	231	15	13	15	3	15	79	15	2	15
	point757	757										
LA 1088 WB 2 BT Bridges 2 Lane	point758	758	377	15	21	15	4	15	128	15	4	15
	point759	759	377	15	21	15	4	15	128	15	4	15
	point760	760	377	15	21	15	4	15	128	15	4	15
	point761	761	377	15	21	15	4	15	128	15	4	15
	point762	762	377	15	21	15	4	15	128	15	4	15
	point763	763	377	15	21	15	4	15	128	15	4	15
	point764	764	377	15	21	15	4	15	128	15	4	15
	point765	765	377	15	21	15	4	15	128	15	4	15
	point766	766	377	15	21	15	4	15	128	15	4	15
	point767	767										
School Comb 2 Lane	point768	768	48	25	2	25	0	0	16	25	0	0
	point364	364	48	25	2	25	0	0	16	25	0	0
	point135	135										
	point786	790	308	45	29	45	3	45	180	45	4	45
Roadway110	point787	791	308	45	29	45	3	45	180	45	4	45
	point788	792										
Roadway111	point789	793	369	45	34	45	3	45	215	45	5	45
	point790	794	369	45	34	45	3	45	215	45	5	45
	point791	795										
	point794	796	296	45	10	45	5	45	124	45	7	45
	point795	797	296	45	10	45	5	45	124	45	7	45
	point796	798	296	45	10	45	5	45	124	45	7	45
	point797	799	296	45	10	45	5	45	124	45	7	45
	point798	800	296	45	10	45	5	45	124	45	7	45
	point799	801	296	45	10	45	5	45	124	45	7	45
	point800	802	296	45	10	45	5	45	124	45	7	45
	point801	803										
Roadway113	point802	804	414	45	15	45	7	45	173	45	10	45
	point803	805	414	45	15	45	7	45	173	45	10	45
	point804	806	414	45	15	45	7	45	173	45	10	45
	point805	807	414	45	15	45	7	45	173	45	10	45

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	point806	808	414	45	15	45	7	45	173	45	10	45
	point807	809	414	45	15	45	7	45	173	45	10	45
	point808	810	414	45	15	45	7	45	173	45	10	45
	point809	811										
Roadway114	point813	812	347	45	25	45	5	45	118	45	2	45
	point814	813	347	45	25	45	5	45	118	45	2	45
	point815	814	347	45	25	45	5	45	118	45	2	45
	point816	815	347	45	25	45	5	45	118	45	2	45
	point817	816										
Roadway115	point818	817	566	45	41	45	7	45	193	45	2	45
	point819	818	566	45	41	45	7	45	193	45	2	45
	point820	819	566	45	41	45	7	45	193	45	2	45
	point821	820	566	45	41	45	7	45	193	45	2	45
	point822	821										
LA 1088 EB 2 Area 1 1 Lane-2	point822	822	308	15	29	15	3	15	180	15	4	15
	point312	312	308	15	29	15	3	15	180	15	4	15
	point314	314	308	15	29	15	3	15	180	15	4	15
	point315	315	308	15	29	15	3	15	180	15	4	15
	point316	316										
LA 1088 EB 2 Area 1 1 Lane-2-2	point823	823	308	45	29	45	3	45	180	45	4	45
	point317	317	308	45	29	45	3	45	180	45	4	45
	point318	318	308	45	29	45	3	45	180	45	4	45
	point319	319	308	45	29	45	3	45	180	45	4	45
	point320	320	308	45	29	45	3	45	180	45	4	45
	point321	321	308	45	29	45	3	45	180	45	4	45
	point322	322										
LA 1088 WB 2 Area 1 1 Lane-2	point824	824	369	45	34	45	3	45	215	45	5	45
	point338	338	369	45	34	45	3	45	215	45	5	45
	point339	339	369	45	34	45	3	45	215	45	5	45
	point340	340	369	45	34	45	3	45	215	45	5	45
	point341	341	369	45	34	45	3	45	215	45	5	45
	point342	342										
LA 1088 WB 2 Area 1 1 Lane-2	point825	825	369	15	34	15	3	15	215	15	5	15
	point331	331	369	15	34	15	3	15	215	15	5	15

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	point332	332	369	15	34	15	3	15	215	15	5	15
	point333	333	369	15	34	15	3	15	215	15	5	15
	point334	334	369	15	34	15	3	15	215	15	5	15
	point335	335	369	15	34	15	3	15	215	15	5	15
	point336	336	369	15	34	15	3	15	215	15	5	15
	point337	337										
LA 1088 EB 3 Area 1 1 Lane-2	point826	826	308	15	29	15	3	15	180	15	4	15
	point369	369	308	15	29	15	3	15	180	15	4	15
	point370	370	308	15	29	15	3	15	180	15	4	15
	point371	371	308	15	29	15	3	15	180	15	4	15
	point372	372										
LA 1088 EB 1 Area 2 1 Lane-2	point827	827	296	45	10	45	5	45	124	45	7	45
	point376	376	296	45	10	45	5	45	124	45	7	45
	point377	377	296	45	10	45	5	45	124	45	7	45
	point378	378	296	45	10	45	5	45	124	45	7	45
	point379	379	296	45	10	45	5	45	124	45	7	45
	point380	380	296	45	10	45	5	45	124	45	7	45
	point381	381										
LA 1088 WB 3 Area 2 1 Lane-2	point828	828	369	45	34	45	3	45	215	45	5	45
	point396	396	369	45	34	45	3	45	215	45	5	45
	point397	397	369	45	34	45	3	45	215	45	5	45
	point398	398										
LA 1088 WB 1 Area 2 2 Lane-2	point829	829	414	15	15	15	7	15	173	15	10	15
	point389	389	414	15	15	15	7	15	173	15	10	15
	point390	390										
LA 1088 EB 2 Area 2 1 Lane-2	point830	830	296	15	10	15	5	15	124	15	7	15
	point432	432	296	15	10	15	5	15	124	15	7	15
	point433	433	296	15	10	15	5	15	124	15	7	15
	point434	434	296	15	10	15	5	15	124	15	7	15
	point435	435	296	15	10	15	5	15	124	15	7	15
	point436	436										
LA 1088 EB 2 Area 2 1 Lane-2-2	point831	831	296	45	10	45	5	45	124	45	7	45
	point437	437	296	45	10	45	5	45	124	45	7	45
	point438	438	296	45	10	45	5	45	124	45	7	45

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	point439	439	296	45	10	45	5	45	124	45	7	45
	point440	440	296	45	10	45	5	45	124	45	7	45
	point441	441	296	45	10	45	5	45	124	45	7	45
	point442	442	296	45	10	45	5	45	124	45	7	45
	point443	443	296	45	10	45	5	45	124	45	7	45
	point444	444	296	45	10	45	5	45	124	45	7	45
	point445	445	296	45	10	45	5	45	124	45	7	45
	point446	446										
LA 1088 WB 3 Area 2 2 Lane-2	point832	832	414	15	15	15	7	15	173	15	10	15
	point485	485	414	15	15	15	7	15	173	15	10	15
	point486	486	414	15	15	15	7	15	173	15	10	15
	point487	487	414	15	15	15	7	15	173	15	10	15
	point488	488	414	15	15	15	7	15	173	15	10	15
	point489	489	414	15	15	15	7	15	173	15	10	15
	point490	490										
	point833	833	414	45	15	45	7	45	173	45	10	45
LA 1088 WB 2 Area 2 1 Lane-2	point493	493	414	45	15	45	7	45	173	45	10	45
	point494	494	414	45	15	45	7	45	173	45	10	45
	point495	495	414	45	15	45	7	45	173	45	10	45
	point496	496	414	45	15	45	7	45	173	45	10	45
	point497	497	414	45	15	45	7	45	173	45	10	45
	point498	498	414	45	15	45	7	45	173	45	10	45
	point499	499										
	point834	834	566	15	41	15	7	15	193	15	2	15
LA 1088 WB 1 Area 3 1 Lane-2	point464	464	566	15	41	15	7	15	193	15	2	15
	point465	465	566	15	41	15	7	15	193	15	2	15
	point466	466	566	15	41	15	7	15	193	15	2	15
	point467	467										
	point835	835	414	45	15	45	7	45	173	45	10	45
	point473	473	414	45	15	45	7	45	173	45	10	45
	point474	474	414	45	15	45	7	45	173	45	10	45
	point475	475	414	45	15	45	7	45	173	45	10	45
LA 1088 WB 4 Area 2 1 Lane-2	point476	476	414	45	15	45	7	45	173	45	10	45
	point477	477	414	45	15	45	7	45	173	45	10	45

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point478	478	414	45	15	45	7	45	173	45	10	45
	point479	479	414	45	15	45	7	45	173	45	10	45
	point480	480	414	45	15	45	7	45	173	45	10	45
	point481	481										
LA 1088 EB 2 Area 2 1 Lane-2-2-2	point836	836	296	15	10	15	5	15	124	15	7	15
	point447	447	296	15	10	15	5	15	124	15	7	15
	point448	448	296	15	10	15	5	15	124	15	7	15
	point449	449										
	point837	837	347	45	25	45	5	45	118	45	2	45
LA 1088 EB 1 Area 3 1 Lane-2	point454	454	347	45	25	45	5	45	118	45	2	45
	point455	455	347	45	25	45	5	45	118	45	2	45
	point456	456	347	45	25	45	5	45	118	45	2	45
	point457	457										
	point838	838	347	15	25	15	5	15	118	15	2	15
LA 1088 EB 3 Area 3 2 Lane-2	point616	616	347	15	25	15	5	15	118	15	2	15
	point617	617	347	15	25	15	5	15	118	15	2	15
	point618	618	347	15	25	15	5	15	118	15	2	15
	point619	619	347	15	25	15	5	15	118	15	2	15
	point620	620	347	15	25	15	5	15	118	15	2	15
	point621	621										
LA 1088 EB 3 Area 3 2 Lane-2-2	point839	839	347	55	25	55	5	55	118	55	2	55
	point622	622	347	55	25	55	5	55	118	55	2	55
	point623	623	347	55	25	55	5	55	118	55	2	55
	point624	624	347	55	25	55	5	55	118	55	2	55
	point625	625	347	55	25	55	5	55	118	55	2	55
	point626	626	347	55	25	55	5	55	118	55	2	55
	point627	627	347	55	25	55	5	55	118	55	2	55
	point628	628	347	55	25	55	5	55	118	55	2	55
	point629	629	347	55	25	55	5	55	118	55	2	55
	point630	630	347	55	25	55	5	55	118	55	2	55
	point631	631	347	55	25	55	5	55	118	55	2	55
	point632	632	347	55	25	55	5	55	118	55	2	55
	point633	633	347	55	25	55	5	55	118	55	2	55
	point634	634	347	55	25	55	5	55	118	55	2	55

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point635	635	347	55	25	55	5	55	118	55	2	55
	point636	636	347	55	25	55	5	55	118	55	2	55
	point637	637	347	55	25	55	5	55	118	55	2	55
	point638	638	347	55	25	55	5	55	118	55	2	55
	point639	639										
LA 1088 WB 3 Area 3 2 Lane-2	point840	840	566	15	41	15	7	15	193	15	2	15
	point669	669	566	15	41	15	7	15	193	15	2	15
	point670	670										
LA 1088 WB 2 Area 3 1 Lane-2	point841	841	566	45	41	45	7	45	193	45	2	45
	point675	675	566	45	41	45	7	45	193	45	2	45
	point676	676	566	45	41	45	7	45	193	45	2	45
	point677	677	566	45	41	45	7	45	193	45	2	45
	point678	678	566	45	41	45	7	45	193	45	2	45
	point679	679	566	45	41	45	7	45	193	45	2	45
	point680	680	566	45	41	45	7	45	193	45	2	45
	point681	681	566	45	41	45	7	45	193	45	2	45
	point682	682										
LA 1088 WB 3 Area 3 2 Lane-2	point842	842	566	15	41	15	7	15	193	15	2	15
	point646	646	566	15	41	15	7	15	193	15	2	15
	point647	647	566	15	41	15	7	15	193	15	2	15
	point648	648	566	15	41	15	7	15	193	15	2	15
	point649	649										
LA 1088 WB 3 Area 3 2 Lane-2-2	point843	843	566	55	41	55	7	55	193	55	2	55
	point650	650	566	55	41	55	7	55	193	55	2	55
	point651	651	566	55	41	55	7	55	193	55	2	55
	point652	652	566	55	41	55	7	55	193	55	2	55
	point653	653	566	55	41	55	7	55	193	55	2	55
	point654	654	566	55	41	55	7	55	193	55	2	55
	point655	655	566	55	41	55	7	55	193	55	2	55
	point656	656	566	55	41	55	7	55	193	55	2	55
	point657	657	566	55	41	55	7	55	193	55	2	55
	point658	658	566	55	41	55	7	55	193	55	2	55
	point659	659	566	55	41	55	7	55	193	55	2	55
	point660	660	566	55	41	55	7	55	193	55	2	55

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088

	point661	661	566	55	41	55	7	55	193	55	2	55
	point662	662	566	55	41	55	7	55	193	55	2	55
	point663	663	566	55	41	55	7	55	193	55	2	55
	point664	664	566	55	41	55	7	55	193	55	2	55
	point665	665	566	55	41	55	7	55	193	55	2	55
	point666	666	566	55	41	55	7	55	193	55	2	55
	point667	667	566	55	41	55	7	55	193	55	2	55
	point668	668										
LA 1088 EB 3 Area 3 2 Lane-2-2-2	point844	844	347	15	25	15	5	15	118	15	2	15
	point640	640	347	15	25	15	5	15	118	15	2	15
	point641	641	347	15	25	15	5	15	118	15	2	15
	point642	642										
LA 1088 EB 3 Area 3 2 Lane-2-2-2-2	point845	845	231	55	13	55	3	55	79	55	2	55
	point643	643										
LA 57 NB S of LA 1088 2 2 Lane-2	point846	846	772	15	41	15	10	15	141	15	13	15
	point266	266	772	15	41	15	10	15	141	15	13	15
	point267	267										
LA 57 NB N of LA 1088 1 1 Lane-2	point847	847	592	45	51	45	48	45	217	45	6	45
	point273	273	592	45	51	45	48	45	217	45	6	45
	point274	274	592	45	51	45	48	45	217	45	6	45
	point275	275	592	45	51	45	48	45	217	45	6	45
	point276	276										
LA 57 SB N of LA 1088 1 2 Lane-2	point848	848	494	15	43	15	40	15	181	15	5	15
	point283	283	494	15	43	15	40	15	181	15	5	15
	point284	284	494	15	43	15	40	15	181	15	5	15
	point285	285										
LA 57 SB S of LA 1088 1 2 Lane-2	point849	849	925	45	49	45	12	45	168	45	15	45
	point288	288	925	45	49	45	12	45	168	45	15	45
	point289	289	925	45	49	45	12	45	168	45	15	45
	point290	290	925	45	49	45	12	45	168	45	15	45
	point291	291	925	45	49	45	12	45	168	45	15	45
	point292	292	925	45	49	45	12	45	168	45	15	45
	point293	293	925	45	49	45	12	45	168	45	15	45
	point294	294										

INPUT: TRAFFIC FOR LAeq1h Volumes

LA 1088											
LA 1088 EB 1 Area 1 1 Lane	point295	295	308	45	29	45	3	45	180	45	4
	point296	296	308	45	29	45	3	45	180	45	4
	point297	297	308	45	29	45	3	45	180	45	4
	point298	298	308	45	29	45	3	45	180	45	4
	point770	774	308	45	29	45	3	45	180	45	4
	point771	775	308	45	29	45	3	45	180	45	4
	point772	776	308	45	29	45	3	45	180	45	4
	point773	777	308	45	29	45	3	45	180	45	4
	point774	778	308	45	29	45	3	45	180	45	4
	point775	779	308	45	29	45	3	45	180	45	4
	point776	780	308	45	29	45	3	45	180	45	4
	point777	781									
LA 1088 WB 1 Area 1 2 Lane	point778	782	369	45	34	45	3	45	215	45	5
	point779	783	369	45	34	45	3	45	215	45	5
	point780	784	369	45	34	45	3	45	215	45	5
	point781	785	369	45	34	45	3	45	215	45	5
	point782	786	369	45	34	45	3	45	215	45	5
	point783	787	369	45	34	45	3	45	215	45	5
	point784	788	369	45	34	45	3	45	215	45	5
	point300	300	369	45	34	45	3	45	215	45	5
	point301	301	369	45	34	45	3	45	215	45	5
	point302	302	369	45	34	45	3	45	215	45	5
	point303	303	369	45	34	45	3	45	215	45	5
	point304	304	369	45	34	45	3	45	215	45	5
	point305	305									
	point382	850	414	45	15	45	7	45	173	45	10
	point383	851	414	45	15	45	7	45	173	45	10
	point384	852	414	45	15	45	7	45	173	45	10
	point385	853	414	45	15	45	7	45	173	45	10
	point386	854	414	45	15	45	7	45	173	45	10
	point387	855	414	45	15	45	7	45	173	45	10
	point388	856									
Roadway146											

INPUT: RECEIVERS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: RECEIVERS

PROJECT/CONTRACT:

LA 1088

RUN: Build Alt 2 PM Peak 2033

Receiver

Name	No.	#DUs	Coordinates (ground)			Z	Height above Ground	Input Sound Levels and Criteria				Active in Calc.
			X	Y	ft			Existing LAeq1h	Impact Criteria		NR Goal	
									ft	dBA		
Res 12	127	1	3,683,288.2	682,418.7	21.00	4.92	70.60	66	10.0	8.0		
Res 13	128	1	3,683,406.5	682,602.1	21.00	4.92	71.60	66	10.0	8.0		
Res 14	129	1	3,683,402.2	682,710.6	21.00	4.92	67.60	66	10.0	8.0		
Res 15	130	1	3,683,509.5	682,820.1	21.00	4.92	70.00	66	10.0	8.0		
Res 16	131	1	3,683,554.0	682,985.1	21.00	4.92	67.40	66	10.0	8.0		
Res 17	132	3	3,683,444.5	683,048.0	21.00	4.92	60.10	66	10.0	8.0		
Res 18	133	3	3,683,363.0	683,119.6	21.00	4.92	55.90	66	10.0	8.0		
Res 19	134	3	3,683,236.2	683,143.5	21.00	4.92	52.80	66	10.0	8.0		
Office 20	135	1	3,683,642.8	683,119.1	21.00	4.92	68.00	71	10.0	8.0		
Office 21	136	1	3,683,747.2	683,269.4	21.00	4.92	69.00	71	10.0	8.0		
Restaurant 22	137	1	3,683,907.8	683,708.8	21.00	4.92	68.10	71	10.0	8.0		
Bank 23	138	1	3,683,936.0	683,881.4	21.00	4.92	67.90	71	10.0	8.0		
Office 24	139	1	3,683,651.5	683,869.9	21.00	4.92	55.80	71	10.0	8.0		
Res 40	140	1	3,684,553.8	684,402.5	21.00	4.92	58.50	66	10.0	8.0		
Res 41	141	1	3,684,706.2	684,268.4	21.00	4.92	61.70	66	10.0	8.0		
Res 42	142	1	3,685,596.8	684,776.2	21.00	4.92	56.70	66	10.0	8.0		
School 43	143	1	3,685,935.8	684,777.2	21.00	4.92	64.40	66	10.0	8.0	Y	
Res 44	144	3	3,685,809.0	684,957.2	21.00	4.92	51.70	66	10.0	8.0		
Res 45	145	4	3,685,833.8	685,027.5	21.00	4.92	50.80	66	10.0	8.0		
Res 46	146	2	3,685,854.5	685,070.4	21.00	4.92	50.40	66	10.0	8.0		
Res 47	147	4	3,685,815.5	685,131.5	21.00	4.92	49.50	66	10.0	8.0		
Res 48	148	1	3,686,061.5	684,994.9	21.00	4.92	54.60	66	10.0	8.0		

INPUT: RECEIVERS

LA 1088

Apartments 49 (1st Floor)	149	2	3,686,246.5	684,897.2	21.00	4.92	67.10	66	10.0	8.0
Apartments 50 (1st Floor)	150	2	3,686,365.0	684,962.4	21.00	4.92	63.30	66	10.0	8.0
Apartments 51 (1st Floor)	151	2	3,686,252.2	684,942.4	21.00	4.92	62.60	66	10.0	8.0
Apartments 52 (1st Floor)	152	2	3,686,376.0	685,008.9	21.00	4.92	54.80	66	10.0	8.0
Apartments 53 (1st Floor)	153	2	3,686,241.2	685,047.0	21.00	4.92	54.30	66	10.0	8.0
Apartments 54 (1st Floor)	154	2	3,686,249.8	685,086.9	21.00	4.92	53.10	66	10.0	8.0
Apartments 55 (1st Floor)	155	2	3,686,185.8	685,214.4	21.00	4.92	50.10	66	10.0	8.0
Apartments 56 (1st Floor)	156	2	3,686,231.5	685,226.4	21.00	4.92	50.60	66	10.0	8.0
Res 57	157	3	3,686,431.5	685,246.2	21.00	4.92	53.20	66	10.0	8.0
Res 58	158	2	3,686,536.8	685,239.8	21.00	4.92	55.10	66	10.0	8.0
Res 59	159	3	3,686,534.8	685,403.9	21.00	4.92	50.30	66	10.0	8.0
Res 60	160	2	3,686,661.8	685,404.9	21.00	4.92	51.90	66	10.0	8.0
Res 61	161	3	3,686,723.0	685,250.1	21.00	4.92	58.50	66	10.0	8.0
Res 62	162	1	3,686,781.8	685,140.8	21.00	4.92	67.70	66	10.0	8.0
Res 63	163	1	3,686,783.0	685,228.0	21.00	4.92	61.60	66	10.0	8.0
Res 64	164	1	3,686,776.8	685,401.7	21.00	4.92	55.60	66	10.0	8.0
Res 65	165	2	3,686,771.2	685,547.1	21.00	4.92	53.70	66	10.0	8.0
Res 66	166	1	3,686,905.2	685,225.4	21.00	4.92	65.90	66	10.0	8.0
Res 67	167	4	3,686,906.8	685,306.1	21.00	4.92	60.60	66	10.0	8.0
Res 68	168	1	3,686,897.5	685,398.6	21.00	4.92	57.70	66	10.0	8.0
Res 69	169	1	3,686,910.5	685,558.8	21.00	4.92	54.40	66	10.0	8.0
Res 70	170	2	3,687,061.5	685,409.0	21.00	4.92	58.50	66	10.0	8.0
Res 71	171	3	3,687,030.2	685,560.0	21.00	4.92	53.40	66	10.0	8.0
Res 72	172	1	3,686,999.0	685,642.1	21.00	4.92	51.20	66	10.0	8.0
Res 73	173	1	3,687,776.2	685,589.8	21.00	4.92	68.00	66	10.0	8.0
Res 74	174	1	3,687,824.0	685,606.1	21.00	4.92	68.30	66	10.0	8.0
Res 75	175	1	3,687,941.8	685,689.6	21.00	4.92	66.60	66	10.0	8.0
Res 76	176	1	3,687,900.2	685,741.3	21.00	4.92	61.30	66	10.0	8.0
Res 77	177	3	3,687,830.5	685,767.1	21.00	4.92	58.20	66	10.0	8.0
Res 78	178	1	3,687,638.2	685,972.4	21.00	4.92	50.00	66	10.0	8.0
School 79	179	1	3,688,194.5	686,063.9	21.00	4.92	54.00	66	10.0	8.0
Res 120	180	1	3,688,481.0	685,920.7	21.00	4.92	66.90	66	10.0	8.0
Res 121	181	2	3,688,478.2	685,968.9	21.00	4.92	62.60	66	10.0	8.0
Res 122	182	2	3,688,477.0	686,023.6	21.00	4.92	58.80	66	10.0	8.0
Res 123	183	2	3,688,477.0	686,090.0	21.00	4.92	55.50	66	10.0	8.0

INPUT: RECEIVERS

LA 1088

Res 124	184	2	3,688,477.0	686,147.2	21.00	4.92	53.40	66	10.0	8.0
Res 125	185	2	3,688,478.2	686,203.2	21.00	4.92	51.80	66	10.0	8.0
Res 126	186	2	3,688,479.5	686,256.6	21.00	4.92	50.80	66	10.0	8.0
Res 127	187	2	3,688,474.2	686,316.6	21.00	4.92	49.70	66	10.0	8.0
Res 128	188	1	3,688,488.0	686,373.9	21.00	4.92	48.90	66	10.0	8.0
Res 129	189	1	3,688,820.8	686,142.1	21.00	4.92	62.10	66	10.0	8.0
Res 130	190	1	3,688,910.5	686,148.6	21.00	4.92	65.10	66	10.0	8.0
Res 131	191	1	3,689,022.5	686,215.0	21.00	4.92	63.80	66	10.0	8.0
Res 132	192	1	3,689,180.0	686,261.9	21.00	4.92	66.00	66	10.0	8.0
Res 133	193	4	3,689,178.8	686,332.2	21.00	4.92	59.50	66	10.0	8.0
Res 134	194	1	3,689,336.2	686,315.2	21.00	4.92	66.90	66	10.0	8.0
Res 135	195	7	3,689,293.5	686,505.3	21.00	4.92	53.30	66	10.0	8.0
Res 136	196	8	3,689,204.5	686,647.2	21.00	4.92	49.80	66	10.0	8.0
Res 137	197	1	3,689,431.5	686,380.3	21.00	4.92	65.80	66	10.0	8.0
Res 138	198	1	3,689,520.0	686,418.1	21.00	4.92	66.00	66	10.0	8.0
Res 139	199	1	3,689,612.5	686,472.8	21.00	4.92	64.60	66	10.0	8.0
Res 140	200	1	3,689,816.8	686,626.4	21.00	4.92	59.50	66	10.0	8.0
Res 141	201	1	3,689,945.8	686,604.3	21.00	4.92	64.80	66	10.0	8.0
Res 142	202	1	3,690,122.8	686,659.0	21.00	4.92	66.20	66	10.0	8.0
Res 143	203	3	3,689,477.0	686,687.6	21.00	4.92	50.90	66	10.0	8.0
Church 144	204	2	3,690,439.2	686,789.2	21.00	4.92	66.10	66	10.0	8.0
Res 145	205	3	3,690,317.2	687,155.2	21.00	4.92	50.90	66	10.0	8.0
Res 146	206	1	3,690,531.8	687,113.4	21.00	4.92	53.90	66	10.0	8.0
Res 147	207	1	3,690,664.5	687,053.5	21.00	4.92	56.30	66	10.0	8.0
Res 148	208	3	3,690,883.2	687,333.5	21.00	4.92	62.50	66	10.0	8.0
Res 149	209	1	3,691,327.2	687,190.2	21.00	4.92	60.10	66	10.0	8.0
Res 150	210	1	3,691,435.2	687,129.1	21.00	4.92	67.00	66	10.0	8.0
Res 151	211	1	3,691,749.0	687,276.2	21.00	4.92	64.30	66	10.0	8.0
Res 152	212	1	3,692,014.8	687,336.1	21.00	4.92	66.80	66	10.0	8.0
Res 202	213	1	3,692,707.5	687,824.4	21.00	4.92	53.90	66	10.0	8.0
Res 203	214	2	3,692,690.5	687,700.6	21.00	4.92	58.40	66	10.0	8.0
Church 204	215	1	3,693,270.8	687,789.1	21.00	4.92	66.00	66	10.0	8.0
Church 205	216	1	3,694,260.8	688,238.4	21.00	4.92	58.90	66	10.0	8.0
Res 206	217	1	3,694,474.2	688,272.2	21.00	4.92	61.30	66	10.0	8.0
Res 207	218	1	3,694,684.0	688,423.3	21.00	4.92	57.20	66	10.0	8.0

INPUT: RECEIVERS

LA 1088

Res 208	219	1	3,695,691.8	688,807.4	21.00	4.92	60.50	66	10.0	8.0
Res 214	220	1	3,697,978.2	689,880.3	21.00	4.92	61.50	66	10.0	8.0
Res 215	221	1	3,698,171.0	689,958.5	21.00	4.92	62.40	66	10.0	8.0
Res 216	222	1	3,698,342.8	690,015.8	21.00	4.92	63.90	66	10.0	8.0
Res 217	223	8	3,698,169.8	690,175.9	21.00	4.92	54.70	66	10.0	8.0
Res 218	224	1	3,698,505.5	690,134.2	21.00	4.92	61.10	66	10.0	8.0
Res 219	225	2	3,698,512.2	690,217.6	21.00	4.92	57.50	66	10.0	8.0
Res 220	226	4	3,698,513.5	690,297.0	21.00	4.92	55.40	66	10.0	8.0
Res 221	227	1	3,698,820.8	690,298.3	21.00	4.92	60.20	66	10.0	8.0
Res 222	228	1	3,699,025.8	690,529.9	21.00	4.92	56.80	66	10.0	8.0
Res 223	229	1	3,699,028.2	690,601.5	21.00	4.92	55.80	66	10.0	8.0
Res 224	230	1	3,699,019.5	690,662.1	21.00	4.92	55.20	66	10.0	8.0
Apartments 49 (2nd Floor)	231	2	3,686,246.5	684,897.2	21.00	20.00	67.20	66	10.0	8.0
Apartments 50 (2nd Floor)	232	2	3,686,365.0	684,962.4	21.00	20.00	63.60	66	10.0	8.0
Apartments 51 (2nd Floor)	233	2	3,686,252.2	684,942.4	21.00	20.00	64.20	66	10.0	8.0
Apartments 52 (2nd Floor)	234	2	3,686,376.0	685,008.9	21.00	20.00	57.20	66	10.0	8.0
Apartments 53 (2nd Floor)	235	2	3,686,241.2	685,047.0	21.00	20.00	58.80	66	10.0	8.0
Apartments 54 (2nd Floor)	236	2	3,686,249.8	685,086.9	21.00	20.00	58.50	66	10.0	8.0
Apartments 55 (2nd Floor)	237	2	3,686,185.8	685,214.4	21.00	20.00	56.70	66	10.0	8.0
Apartments 56 (2nd Floor)	238	2	3,686,231.5	685,226.4	21.00	20.00	57.30	66	10.0	8.0

INPUT: BARRIERS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT:
RUN:

LA 1088
Build Alt 2 PM Peak 2033

Barrier Name	Type	Height		If Wall	If Berm	Add'l Length	Points			Coordinates (bottom)			Height at Point	Segment		Important Reflec-tions?
		Min	Max	\$ per Unit Area	\$ per Unit Vol.	Run: Rise	Top Width	\$/sq ft	\$/cu yd	ft	ft	ft	ft	Incre- ment	Perturbs #Up #Dn	On Struct?
Barrier2	W	0.00	99.99	0.00									21.00	20.00	0.00	0
													21.00	20.00	0.00	0
													21.00	20.00	0.00	0
													21.00	20.00	0.00	0
Barrier3	W	0.00	99.99	0.00									21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
Barrier5	W	0.00	99.99	0.00									21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
Barrier6	W	0.00	99.99	0.00									21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0
													21.00	30.00	0.00	0

INPUT: BUILDING ROWS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5

INPUT: BUILDING ROWS

PROJECT/CONTRACT:

RUN: LA 1088
Build Alt 2 PM Peak 2033

Building Row	Points			Coordinates (ground)		
	Name	Average Height ft	Building Percent %	No.	X ft	Y ft
Building11		20.00	70	61	3,686,135.0	685,272.3
				62	3,686,130.5	685,226.9
				63	3,686,454.2	685,264.9
				64	3,686,796.8	685,251.9
Building12				65	3,686,795.8	685,266.8
		20.00	70	66	3,688,397.0	686,418.2
				67	3,688,448.0	686,415.7
				68	3,688,459.8	685,904.3
Building13				69	3,688,403.8	685,904.3
		20.00	70	70	3,688,672.2	686,427.4
				71	3,688,607.0	686,419.1
				72	3,688,618.0	686,027.4
Building14				73	3,688,687.5	686,021.5
		20.00	70	74	3,688,776.0	686,219.0
				75	3,688,763.5	686,184.7
				76	3,688,798.8	686,166.3
Building15				77	3,688,912.5	686,164.6
				78	3,688,994.5	686,229.1
				79	3,689,158.5	686,270.1
				80	3,689,150.2	686,379.7
Building15				81	3,689,129.2	686,378.9
		20.00	70	82	3,689,278.2	686,373.1
				83	3,689,303.5	686,317.9

INPUT: BUILDING ROWS

LA 1088

				84	3,689,594.8	686,512.9	21.00
				85	3,689,630.8	686,622.6	21.00
				86	3,689,636.5	686,798.3	21.00
				87	3,689,583.8	686,811.7	21.00
Building16	20.00	70		88	3,698,941.8	690,988.4	21.00
				89	3,698,989.5	690,986.9	21.00
				90	3,699,006.0	690,501.6	21.00
				91	3,698,956.8	690,502.4	21.00

APPENDIX E
LA 1088 Corridor Study Noise
Report
TNM Outputs

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

RUN: Existing AM Peak 2013

BARRIER DESIGN:

INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver														
Name		No.	#DUs	Existing LAeq1h		No Barrier LAeq1h		Increase over existing		Type	With Barrier		Noise Reduction	
				dBA	dBA	dBA		Calculated	Crit'n		Calculated	Crit'n	Sub'l Inc	Impact
									</					

RESULTS: SOUND LEVELS

LA 1088

Res 37	289	1	0.0	55.3	66	55.3	10	---	55.3	0.0	8	-8.0
Res 38	290	1	0.0	54.9	66	54.9	10	---	54.9	0.0	8	-8.0
Res 39	291	1	0.0	53.3	66	53.3	10	---	53.3	0.0	8	-8.0
Res 80	332	1	0.0	66.6	66	66.6	10	Snd Lvl	66.6	0.0	8	-8.0
Res 81	333	1	0.0	58.4	66	58.4	10	---	58.4	0.0	8	-8.0
Res 82	334	1	0.0	56.6	66	56.6	10	---	56.6	0.0	8	-8.0
Res 83	335	1	0.0	55.5	66	55.5	10	---	55.5	0.0	8	-8.0
Res 84	336	1	0.0	54.5	66	54.5	10	---	54.5	0.0	8	-8.0
Res 85	337	1	0.0	55.0	66	55.0	10	---	55.0	0.0	8	-8.0
Res 86	338	1	0.0	50.7	66	50.7	10	---	50.7	0.0	8	-8.0
Res 87	339	9	0.0	57.5	66	57.5	10	---	57.5	0.0	8	-8.0
Res 88	340	5	0.0	50.7	66	50.7	10	---	50.7	0.0	8	-8.0
Res 89	341	1	0.0	65.8	66	65.8	10	---	65.8	0.0	8	-8.0
Res 90	342	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0
Res 91	343	2	0.0	53.4	66	53.4	10	---	53.4	0.0	8	-8.0
Res 92	344	2	0.0	51.1	66	51.1	10	---	51.1	0.0	8	-8.0
Res 93	345	1	0.0	56.3	66	56.3	10	---	56.3	0.0	8	-8.0
Res 94	346	1	0.0	64.1	66	64.1	10	---	64.1	0.0	8	-8.0
Res 95	347	1	0.0	65.4	66	65.4	10	---	65.4	0.0	8	-8.0
Res 96	348	1	0.0	64.1	66	64.1	10	---	64.1	0.0	8	-8.0
Recreation 97	349	1	0.0	50.9	66	50.9	10	---	50.9	0.0	8	-8.0
Res 98	350	1	0.0	62.7	66	62.7	10	---	62.7	0.0	8	-8.0
Res 99	351	1	0.0	62.1	66	62.1	10	---	62.1	0.0	8	-8.0
Res 100	352	4	0.0	52.6	66	52.6	10	---	52.6	0.0	8	-8.0
Res 101	353	1	0.0	61.6	66	61.6	10	---	61.6	0.0	8	-8.0
Res 102	354	1	0.0	59.7	66	59.7	10	---	59.7	0.0	8	-8.0
Res 103	355	1	0.0	56.5	66	56.5	10	---	56.5	0.0	8	-8.0
Res 104	356	1	0.0	55.4	66	55.4	10	---	55.4	0.0	8	-8.0
Res 105	357	1	0.0	54.1	66	54.1	10	---	54.1	0.0	8	-8.0
Res 106	358	2	0.0	51.0	66	51.0	10	---	51.0	0.0	8	-8.0
Res 107	359	2	0.0	50.3	66	50.3	10	---	50.3	0.0	8	-8.0
Res 108	360	2	0.0	49.8	66	49.8	10	---	49.8	0.0	8	-8.0
Res 109	361	2	0.0	49.4	66	49.4	10	---	49.4	0.0	8	-8.0
Res 110	362	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
Res 111	363	1	0.0	62.6	66	62.6	10	---	62.6	0.0	8	-8.0
Res 112	364	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0
Res 113	365	1	0.0	64.7	66	64.7	10	---	64.7	0.0	8	-8.0
Res 114	366	3	0.0	54.8	66	54.8	10	---	54.8	0.0	8	-8.0
Res 115	367	3	0.0	53.4	66	53.4	10	---	53.4	0.0	8	-8.0
Res 116	368	3	0.0	58.7	66	58.7	10	---	58.7	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Res 117	369	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0
Res 118	370	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0
Res 119	371	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
Res 153	405	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0
Res 154	406	1	0.0	63.3	66	63.3	10	----	63.3	0.0	8	-8.0
Res 155	407	1	0.0	62.7	66	62.7	10	----	62.7	0.0	8	-8.0
Res 156	408	1	0.0	60.9	66	60.9	10	----	60.9	0.0	8	-8.0
Res 157	409	1	0.0	61.7	66	61.7	10	----	61.7	0.0	8	-8.0
Res 158	410	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0
Res 159	411	1	0.0	65.7	66	65.7	10	----	65.7	0.0	8	-8.0
Res 160	412	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0
Res 161	413	4	0.0	52.9	66	52.9	10	----	52.9	0.0	8	-8.0
Res 162	414	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
Res 163	415	7	0.0	53.4	66	53.4	10	----	53.4	0.0	8	-8.0
Res 164	416	5	0.0	51.1	66	51.1	10	----	51.1	0.0	8	-8.0
Res 165	417	4	0.0	49.6	66	49.6	10	----	49.6	0.0	8	-8.0
Res 166	418	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0
Res 167	419	1	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0
Res 168	420	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0
Res 169	421	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
Res 170	422	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0
Res 171	423	2	0.0	55.5	66	55.5	10	----	55.5	0.0	8	-8.0
Res 172	424	3	0.0	51.6	66	51.6	10	----	51.6	0.0	8	-8.0
Res 173	425	1	0.0	62.7	66	62.7	10	----	62.7	0.0	8	-8.0
Res 174	426	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
Res 175	427	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0
Res 176	428	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
Res 177	429	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0
Res 178	430	3	0.0	53.6	66	53.6	10	----	53.6	0.0	8	-8.0
Res 179	431	3	0.0	51.8	66	51.8	10	----	51.8	0.0	8	-8.0
Res 180	432	4	0.0	50.0	66	50.0	10	----	50.0	0.0	8	-8.0
Res 181	433	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0
Res 182	434	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0
Res 183	435	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
Res 184	436	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
Res 185	437	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0
Res 186	438	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
Res 187	439	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
Office 188	440	1	0.0	67.4	71	67.4	10	----	67.4	0.0	8	-8.0
Res 189	441	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Res 190	442	7	0.0	53.3	66	53.3	10	----	53.3	0.0	8	-8.0
Res 191	443	3	0.0	51.6	66	51.6	10	----	51.6	0.0	8	-8.0
Res 192	444	3	0.0	50.4	66	50.4	10	----	50.4	0.0	8	-8.0
Office 193	445	1	0.0	67.2	71	67.2	10	----	67.2	0.0	8	-8.0
Recreation 194	446	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0
Vet Office 195	447	1	0.0	53.4	66	53.4	10	----	53.4	0.0	8	-8.0
Res 196	448	1	0.0	51.0	66	51.0	10	----	51.0	0.0	8	-8.0
Res 197	449	1	0.0	53.6	66	53.6	10	----	53.6	0.0	8	-8.0
Res 198	450	2	0.0	52.6	66	52.6	10	----	52.6	0.0	8	-8.0
Res 199	451	3	0.0	57.4	66	57.4	10	----	57.4	0.0	8	-8.0
Res 200	452	3	0.0	55.5	66	55.5	10	----	55.5	0.0	8	-8.0
Res 201	453	2	0.0	51.0	66	51.0	10	----	51.0	0.0	8	-8.0
Res 209	461	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
Res 210	462	3	0.0	60.5	66	60.5	10	----	60.5	0.0	8	-8.0
Res 211	463	1	0.0	55.8	66	55.8	10	----	55.8	0.0	8	-8.0
Res 212	464	3	0.0	52.4	66	52.4	10	----	52.4	0.0	8	-8.0
Res 213	465	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0
Res 225	477	1	0.0	53.6	66	53.6	10	----	53.6	0.0	8	-8.0
Res 226	478	1	0.0	57.1	66	57.1	10	----	57.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min dB	Avg dB	Max
				dB
All Selected	207	0.0	0.0	0.0
All Impacted	30	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT:

RUN: LA 1088
Existing PM Peak 2013

BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing			With Barrier		Noise Reduction		Calculated minus Goal	
			LAeq1h	Calculated	Crit'n	Calculated	Crit'n	Type	Calculated LAeq1h	Calculated	Goal	Calculated	Goal	
			dBA	dBA	dBA	dB	dB	Impact	dBA	dB	dB	dB	dB	
Res 12	15	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	8	70.6	8	
Res 13	16	1	0.0	71.6	66	71.6	10	Snd Lvl	71.6	0.0	8	71.6	8	
Res 14	17	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	67.6	8	
Res 15	18	1	0.0	70.0	66	70.0	10	Snd Lvl	70.0	0.0	8	70.0	8	
Res 16	19	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	67.4	8	
Res 17	20	3	0.0	60.1	66	60.1	10	----	60.1	0.0	8	60.1	8	
Res 18	21	3	0.0	55.9	66	55.9	10	----	55.9	0.0	8	55.9	8	
Res 19	22	3	0.0	52.8	66	52.8	10	----	52.8	0.0	8	52.8	8	
Office 20	23	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	68.0	8	
Office 21	24	1	0.0	69.0	71	69.0	10	----	69.0	0.0	8	69.0	8	
Restaurant 22	25	1	0.0	68.1	71	68.1	10	----	68.1	0.0	8	68.1	8	
Bank 23	26	1	0.0	67.9	71	67.9	10	----	67.9	0.0	8	67.9	8	
Office 24	27	1	0.0	55.8	71	55.8	10	----	55.8	0.0	8	55.8	8	
Res 40	43	1	0.0	58.5	66	58.5	10	----	58.5	0.0	8	58.5	8	
Res 41	44	1	0.0	61.7	66	61.7	10	----	61.7	0.0	8	61.7	8	
Res 42	45	1	0.0	56.7	66	56.7	10	----	56.7	0.0	8	56.7	8	
School 43	46	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	64.4	8	
Res 44	47	3	0.0	51.7	66	51.7	10	----	51.7	0.0	8	51.7	8	
Res 45	48	4	0.0	50.8	66	50.8	10	----	50.8	0.0	8	50.8	8	
Res 46	49	2	0.0	50.4	66	50.4	10	----	50.4	0.0	8	50.4	8	
Res 47	50	4	0.0	49.5	66	49.5	10	----	49.5	0.0	8	49.5	8	
Res 48	51	1	0.0	54.6	66	54.6	10	----	54.6	0.0	8	54.6	8	
Apartments 49 (1st Floor)	52	2	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	67.1	8	

RESULTS: SOUND LEVELS

LA 1088

Apartments 50 (1st Floor)	53	2	0.0	63.3	66	63.3	10	----	63.3	0.0	8	-8.0
Apartments 51 (1st Floor)	54	2	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
Apartments 52 (1st Floor)	55	2	0.0	54.8	66	54.8	10	----	54.8	0.0	8	-8.0
Apartments 53 (1st Floor)	56	2	0.0	54.3	66	54.3	10	----	54.3	0.0	8	-8.0
Apartments 54 (1st Floor)	57	2	0.0	53.1	66	53.1	10	----	53.1	0.0	8	-8.0
Apartments 55 (1st Floor)	58	2	0.0	50.1	66	50.1	10	----	50.1	0.0	8	-8.0
Apartments 56 (1st Floor)	59	2	0.0	50.6	66	50.6	10	----	50.6	0.0	8	-8.0
Res 57	60	3	0.0	53.2	66	53.2	10	----	53.2	0.0	8	-8.0
Res 58	61	2	0.0	55.1	66	55.1	10	----	55.1	0.0	8	-8.0
Res 59	62	3	0.0	50.3	66	50.3	10	----	50.3	0.0	8	-8.0
Res 60	63	2	0.0	51.9	66	51.9	10	----	51.9	0.0	8	-8.0
Res 61	64	3	0.0	58.5	66	58.5	10	----	58.5	0.0	8	-8.0
Res 62	65	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	8	-8.0
Res 63	66	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0
Res 64	67	1	0.0	55.6	66	55.6	10	----	55.6	0.0	8	-8.0
Res 65	68	2	0.0	53.7	66	53.7	10	----	53.7	0.0	8	-8.0
Res 66	69	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
Res 67	70	4	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0
Res 68	71	1	0.0	57.7	66	57.7	10	----	57.7	0.0	8	-8.0
Res 69	72	1	0.0	54.4	66	54.4	10	----	54.4	0.0	8	-8.0
Res 70	73	2	0.0	58.5	66	58.5	10	----	58.5	0.0	8	-8.0
Res 71	74	3	0.0	53.4	66	53.4	10	----	53.4	0.0	8	-8.0
Res 72	75	1	0.0	51.2	66	51.2	10	----	51.2	0.0	8	-8.0
Res 73	76	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0
Res 74	77	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0
Res 75	78	1	0.0	66.6	66	66.6	10	Snd Lvl	66.6	0.0	8	-8.0
Res 76	79	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0
Res 77	80	3	0.0	58.2	66	58.2	10	----	58.2	0.0	8	-8.0
Res 78	81	1	0.0	50.0	66	50.0	10	----	50.0	0.0	8	-8.0
School 79	82	1	0.0	54.0	66	54.0	10	----	54.0	0.0	8	-8.0
Res 120	123	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0
Res 121	124	2	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
Res 122	125	2	0.0	58.8	66	58.8	10	----	58.8	0.0	8	-8.0
Res 123	126	2	0.0	55.5	66	55.5	10	----	55.5	0.0	8	-8.0
Res 124	127	2	0.0	53.4	66	53.4	10	----	53.4	0.0	8	-8.0
Res 125	128	2	0.0	51.8	66	51.8	10	----	51.8	0.0	8	-8.0
Res 126	129	2	0.0	50.8	66	50.8	10	----	50.8	0.0	8	-8.0
Res 127	130	2	0.0	49.7	66	49.7	10	----	49.7	0.0	8	-8.0
Res 128	131	1	0.0	48.9	66	48.9	10	----	48.9	0.0	8	-8.0
Res 129	132	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Res 130	133	1	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0
Res 131	134	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0
Res 132	135	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0
Res 133	136	4	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0
Res 134	137	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0
Res 135	138	7	0.0	53.3	66	53.3	10	----	53.3	0.0	8	-8.0
Res 136	139	8	0.0	49.8	66	49.8	10	----	49.8	0.0	8	-8.0
Res 137	140	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
Res 138	141	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0
Res 139	142	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0
Res 140	143	1	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0
Res 141	144	1	0.0	64.8	66	64.8	10	----	64.8	0.0	8	-8.0
Res 142	145	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0
Res 143	146	3	0.0	50.9	66	50.9	10	----	50.9	0.0	8	-8.0
Church 144	147	2	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
Res 145	148	3	0.0	50.9	66	50.9	10	----	50.9	0.0	8	-8.0
Res 146	149	1	0.0	53.9	66	53.9	10	----	53.9	0.0	8	-8.0
Res 147	150	1	0.0	56.3	66	56.3	10	----	56.3	0.0	8	-8.0
Res 148	151	3	0.0	62.5	66	62.5	10	----	62.5	0.0	8	-8.0
Res 149	152	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8	-8.0
Res 150	153	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
Res 151	154	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
Res 152	155	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0
Res 202	205	1	0.0	53.9	66	53.9	10	----	53.9	0.0	8	-8.0
Res 203	206	2	0.0	58.4	66	58.4	10	----	58.4	0.0	8	-8.0
Church 204	207	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0
Church 205	208	1	0.0	58.9	66	58.9	10	----	58.9	0.0	8	-8.0
Res 206	209	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0
Res 207	210	1	0.0	57.2	66	57.2	10	----	57.2	0.0	8	-8.0
Res 208	211	1	0.0	60.5	66	60.5	10	----	60.5	0.0	8	-8.0
Res 214	217	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0
Res 215	218	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
Res 216	219	1	0.0	63.9	66	63.9	10	----	63.9	0.0	8	-8.0
Res 217	220	8	0.0	54.7	66	54.7	10	----	54.7	0.0	8	-8.0
Res 218	221	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0
Res 219	222	2	0.0	57.5	66	57.5	10	----	57.5	0.0	8	-8.0
Res 220	223	4	0.0	55.4	66	55.4	10	----	55.4	0.0	8	-8.0
Res 221	224	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0
Res 222	225	1	0.0	56.8	66	56.8	10	----	56.8	0.0	8	-8.0
Res 223	226	1	0.0	55.8	66	55.8	10	----	55.8	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Res 224	227	1	0.0	55.2	66	55.2	10	----	55.2	0.0	8	-8.0
Apartments 49 (2nd Floor)	230	2	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0
Apartments 50 (2nd Floor)	232	2	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
Apartments 51 (2nd Floor)	234	2	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
Apartments 52 (2nd Floor)	236	2	0.0	57.2	66	57.2	10	----	57.2	0.0	8	-8.0
Apartments 53 (2nd Floor)	238	2	0.0	58.8	66	58.8	10	----	58.8	0.0	8	-8.0
Apartments 54 (2nd Floor)	240	2	0.0	58.5	66	58.5	10	----	58.5	0.0	8	-8.0
Apartments 55 (2nd Floor)	242	2	0.0	56.7	66	56.7	10	----	56.7	0.0	8	-8.0
Apartments 56 (2nd Floor)	244	2	0.0	57.3	66	57.3	10	----	57.3	0.0	8	-8.0
Dwelling Units												
		# DUs	Noise Reduction									
			Min dB	Avg dB	Max dB							
All Selected		202	0.0	0.0	0.0							
All Impacted		24	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

RUN: No Build AM Peak 2033

BARRIER DESIGN:

INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing			Type Impact	With Barrier		Calculated minus Goal	
				Calculated	Crit'n	Calculated	Crit'n	Calculated		Goal			
											Calculated		Goal
			dBA	dBA	dBA	dB	dB	dB		dBA	dB	dB	dB
Res 1	253	1	67.7	69.4	66	1.7	10	Snd Lvl		69.4	0.0	8	-8.0
Res 2	254	1	69.1	70.8	66	1.7	10	Snd Lvl		70.8	0.0	8	-8.0
Res 3	255	1	69.0	70.8	66	1.8	10	Snd Lvl		70.8	0.0	8	-8.0
Res 4	256	1	66.9	68.6	66	1.7	10	Snd Lvl		68.6	0.0	8	-8.0
Res 5	257	6	61.7	63.4	66	1.7	10	----		63.4	0.0	8	-8.0
Res 6	258	6	57.3	59.0	66	1.7	10	----		59.0	0.0	8	-8.0
Res 7	259	3	53.6	55.3	66	1.7	10	----		55.3	0.0	8	-8.0
Res 8	260	1	64.7	66.5	66	1.8	10	Snd Lvl		66.5	0.0	8	-8.0
Res 9	261	1	70.6	72.3	66	1.7	10	Snd Lvl		72.3	0.0	8	-8.0
Res 10	262	1	66.6	68.3	66	1.7	10	Snd Lvl		68.3	0.0	8	-8.0
Res 11	263	1	69.0	70.7	66	1.7	10	Snd Lvl		70.7	0.0	8	-8.0
Res 25	277	1	69.5	71.2	66	1.7	10	Snd Lvl		71.2	0.0	8	-8.0
Res 26	278	1	59.1	60.8	66	1.7	10	----		60.8	0.0	8	-8.0
Res 27	279	1	56.5	58.2	66	1.7	10	----		58.2	0.0	8	-8.0
Res 28	280	1	53.4	55.1	66	1.7	10	----		55.1	0.0	8	-8.0
Res 29	281	1	51.6	53.3	66	1.7	10	----		53.3	0.0	8	-8.0
Res 30	282	1	58.2	59.9	66	1.7	10	----		59.9	0.0	8	-8.0
Res 31	283	1	67.0	68.7	66	1.7	10	Snd Lvl		68.7	0.0	8	-8.0
Res 32	284	1	51.4	53.1	66	1.7	10	----		53.1	0.0	8	-8.0
Res 33	285	1	61.4	63.1	66	1.7	10	----		63.1	0.0	8	-8.0
Res 34	286	1	56.5	58.2	66	1.7	10	----		58.2	0.0	8	-8.0
Res 35	287	1	66.0	67.7	66	1.7	10	Snd Lvl		67.7	0.0	8	-8.0
Res 36	288	1	58.5	60.2	66	1.7	10	----		60.2	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Res 37	289	1	55.3	57.0	66	1.7	10	----	57.0	0.0	8	-8.0
Res 38	290	1	54.9	56.6	66	1.7	10	----	56.6	0.0	8	-8.0
Res 39	291	1	53.3	55.0	66	1.7	10	----	55.0	0.0	8	-8.0
Res 80	332	1	66.6	68.4	66	1.8	10	Snd Lvl	68.4	0.0	8	-8.0
Res 81	333	1	58.4	60.1	66	1.7	10	----	60.1	0.0	8	-8.0
Res 82	334	1	56.6	58.3	66	1.7	10	----	58.3	0.0	8	-8.0
Res 83	335	1	55.5	57.2	66	1.7	10	----	57.2	0.0	8	-8.0
Res 84	336	1	54.5	56.2	66	1.7	10	----	56.2	0.0	8	-8.0
Res 85	337	1	55.0	56.7	66	1.7	10	----	56.7	0.0	8	-8.0
Res 86	338	1	50.7	52.4	66	1.7	10	----	52.4	0.0	8	-8.0
Res 87	339	9	57.5	59.2	66	1.7	10	----	59.2	0.0	8	-8.0
Res 88	340	5	50.7	52.4	66	1.7	10	----	52.4	0.0	8	-8.0
Res 89	341	1	65.8	67.6	66	1.8	10	Snd Lvl	67.6	0.0	8	-8.0
Res 90	342	1	66.2	67.9	66	1.7	10	Snd Lvl	67.9	0.0	8	-8.0
Res 91	343	2	53.4	55.1	66	1.7	10	----	55.1	0.0	8	-8.0
Res 92	344	2	51.1	52.8	66	1.7	10	----	52.8	0.0	8	-8.0
Res 93	345	1	56.3	58.0	66	1.7	10	----	58.0	0.0	8	-8.0
Res 94	346	1	64.1	65.8	66	1.7	10	----	65.8	0.0	8	-8.0
Res 95	347	1	65.4	67.1	66	1.7	10	Snd Lvl	67.1	0.0	8	-8.0
Res 96	348	1	64.1	65.8	66	1.7	10	----	65.8	0.0	8	-8.0
Recreation 97	349	1	50.9	52.6	66	1.7	10	----	52.6	0.0	8	-8.0
Res 98	350	1	62.7	64.4	66	1.7	10	----	64.4	0.0	8	-8.0
Res 99	351	1	62.1	63.9	66	1.8	10	----	63.9	0.0	8	-8.0
Res 100	352	4	52.6	54.3	66	1.7	10	----	54.3	0.0	8	-8.0
Res 101	353	1	61.6	63.3	66	1.7	10	----	63.3	0.0	8	-8.0
Res 102	354	1	59.7	61.4	66	1.7	10	----	61.4	0.0	8	-8.0
Res 103	355	1	56.5	58.2	66	1.7	10	----	58.2	0.0	8	-8.0
Res 104	356	1	55.4	57.1	66	1.7	10	----	57.1	0.0	8	-8.0
Res 105	357	1	54.1	55.9	66	1.8	10	----	55.9	0.0	8	-8.0
Res 106	358	2	51.0	52.7	66	1.7	10	----	52.7	0.0	8	-8.0
Res 107	359	2	50.3	52.0	66	1.7	10	----	52.0	0.0	8	-8.0
Res 108	360	2	49.8	51.5	66	1.7	10	----	51.5	0.0	8	-8.0
Res 109	361	2	49.4	51.1	66	1.7	10	----	51.1	0.0	8	-8.0
Res 110	362	1	67.1	68.9	66	1.8	10	Snd Lvl	68.9	0.0	8	-8.0
Res 111	363	1	62.6	64.3	66	1.7	10	----	64.3	0.0	8	-8.0
Res 112	364	1	68.0	69.7	66	1.7	10	Snd Lvl	69.7	0.0	8	-8.0
Res 113	365	1	64.7	66.4	66	1.7	10	Snd Lvl	66.4	0.0	8	-8.0
Res 114	366	3	54.8	56.5	66	1.7	10	----	56.5	0.0	8	-8.0
Res 115	367	3	53.4	55.1	66	1.7	10	----	55.1	0.0	8	-8.0
Res 116	368	3	58.7	60.4	66	1.7	10	----	60.4	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Res 117	369	1	64.6	66.3	66	1.7	10	Snd Lvl	66.3	0.0	8	-8.0
Res 118	370	1	63.4	65.1	66	1.7	10	---	65.1	0.0	8	-8.0
Res 119	371	1	64.5	66.2	66	1.7	10	Snd Lvl	66.2	0.0	8	-8.0
Res 153	405	1	66.0	67.7	66	1.7	10	Snd Lvl	67.7	0.0	8	-8.0
Res 154	406	1	63.3	65.0	66	1.7	10	---	65.0	0.0	8	-8.0
Res 155	407	1	62.7	64.5	66	1.8	10	---	64.5	0.0	8	-8.0
Res 156	408	1	60.9	62.6	66	1.7	10	---	62.6	0.0	8	-8.0
Res 157	409	1	61.7	63.4	66	1.7	10	---	63.4	0.0	8	-8.0
Res 158	410	1	63.4	65.1	66	1.7	10	---	65.1	0.0	8	-8.0
Res 159	411	1	65.7	67.4	66	1.7	10	Snd Lvl	67.4	0.0	8	-8.0
Res 160	412	1	66.5	68.2	66	1.7	10	Snd Lvl	68.2	0.0	8	-8.0
Res 161	413	4	52.9	54.6	66	1.7	10	---	54.6	0.0	8	-8.0
Res 162	414	1	66.1	67.9	66	1.8	10	Snd Lvl	67.9	0.0	8	-8.0
Res 163	415	7	53.4	55.1	66	1.7	10	---	55.1	0.0	8	-8.0
Res 164	416	5	51.1	52.8	66	1.7	10	---	52.8	0.0	8	-8.0
Res 165	417	4	49.6	51.3	66	1.7	10	---	51.3	0.0	8	-8.0
Res 166	418	1	66.0	67.7	66	1.7	10	Snd Lvl	67.7	0.0	8	-8.0
Res 167	419	1	65.6	67.3	66	1.7	10	Snd Lvl	67.3	0.0	8	-8.0
Res 168	420	1	65.0	66.7	66	1.7	10	Snd Lvl	66.7	0.0	8	-8.0
Res 169	421	1	64.2	66.0	66	1.8	10	Snd Lvl	66.0	0.0	8	-8.0
Res 170	422	1	61.1	62.8	66	1.7	10	---	62.8	0.0	8	-8.0
Res 171	423	2	55.5	57.3	66	1.8	10	---	57.3	0.0	8	-8.0
Res 172	424	3	51.6	53.3	66	1.7	10	---	53.3	0.0	8	-8.0
Res 173	425	1	62.7	64.4	66	1.7	10	---	64.4	0.0	8	-8.0
Res 174	426	1	67.0	68.7	66	1.7	10	Snd Lvl	68.7	0.0	8	-8.0
Res 175	427	1	66.5	68.2	66	1.7	10	Snd Lvl	68.2	0.0	8	-8.0
Res 176	428	1	66.3	68.0	66	1.7	10	Snd Lvl	68.0	0.0	8	-8.0
Res 177	429	1	66.2	67.9	66	1.7	10	Snd Lvl	67.9	0.0	8	-8.0
Res 178	430	3	53.6	55.3	66	1.7	10	---	55.3	0.0	8	-8.0
Res 179	431	3	51.8	53.5	66	1.7	10	---	53.5	0.0	8	-8.0
Res 180	432	4	50.0	51.7	66	1.7	10	---	51.7	0.0	8	-8.0
Res 181	433	1	66.7	68.5	66	1.8	10	Snd Lvl	68.5	0.0	8	-8.0
Res 182	434	1	66.9	68.6	66	1.7	10	Snd Lvl	68.6	0.0	8	-8.0
Res 183	435	1	67.5	69.2	66	1.7	10	Snd Lvl	69.2	0.0	8	-8.0
Res 184	436	1	67.1	68.8	66	1.7	10	Snd Lvl	68.8	0.0	8	-8.0
Res 185	437	1	67.2	69.0	66	1.8	10	Snd Lvl	69.0	0.0	8	-8.0
Res 186	438	1	67.5	69.2	66	1.7	10	Snd Lvl	69.2	0.0	8	-8.0
Res 187	439	1	67.3	69.0	66	1.7	10	Snd Lvl	69.0	0.0	8	-8.0
Office 188	440	1	67.4	69.1	71	1.7	10	---	69.1	0.0	8	-8.0
Res 189	441	1	64.2	65.9	66	1.7	10	---	65.9	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Res 190	442	7	53.3	55.1	66	1.8	10	----	55.1	0.0	8	-8.0
Res 191	443	3	51.6	53.3	66	1.7	10	----	53.3	0.0	8	-8.0
Res 192	444	3	50.4	52.1	66	1.7	10	----	52.1	0.0	8	-8.0
Office 193	445	1	67.2	68.9	71	1.7	10	----	68.9	0.0	8	-8.0
Recreation 194	446	1	61.1	62.8	66	1.7	10	----	62.8	0.0	8	-8.0
Vet Office 195	447	1	53.4	55.1	66	1.7	10	----	55.1	0.0	8	-8.0
Res 196	448	1	51.0	52.8	66	1.8	10	----	52.8	0.0	8	-8.0
Res 197	449	1	53.6	55.3	66	1.7	10	----	55.3	0.0	8	-8.0
Res 198	450	2	52.6	54.3	66	1.7	10	----	54.3	0.0	8	-8.0
Res 199	451	3	57.4	59.2	66	1.8	10	----	59.2	0.0	8	-8.0
Res 200	452	3	55.5	57.2	66	1.7	10	----	57.2	0.0	8	-8.0
Res 201	453	2	51.0	52.7	66	1.7	10	----	52.7	0.0	8	-8.0
Res 209	461	1	67.5	69.2	66	1.7	10	Snd Lvl	69.2	0.0	8	-8.0
Res 210	462	3	60.5	62.2	66	1.7	10	----	62.2	0.0	8	-8.0
Res 211	463	1	55.8	57.5	66	1.7	10	----	57.5	0.0	8	-8.0
Res 212	464	3	52.4	54.1	66	1.7	10	----	54.1	0.0	8	-8.0
Res 213	465	1	65.4	67.1	66	1.7	10	Snd Lvl	67.1	0.0	8	-8.0
Res 225	477	1	53.6	55.5	66	1.9	10	----	55.5	0.0	8	-8.0
Res 226	478	1	57.1	58.8	66	1.7	10	----	58.8	0.0	8	-8.0

Dwelling Units

	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	207	0.0	0.0	0.0
All Impacted	41	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088
No Build PM Peak 2033

RUN:

BARRIER DESIGN:

INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver															
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing			Type	With Barrier		Noise Reduction		Calculated minus Goal	
			dBA	LAeq1h Calculated	Crit'n	dBA	dB	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	dB	Calculated	Goal	dB
Res 12	15	1	70.6	72.4		66	1.8	1.8	10	Snd Lvl	72.4		0.0	8	-8.0
Res 13	16	1	71.6	73.4		66	1.8	1.8	10	Snd Lvl	73.4		0.0	8	-8.0
Res 14	17	1	67.6	69.3		66	1.7	1.7	10	Snd Lvl	69.3		0.0	8	-8.0
Res 15	18	1	70.0	71.7		66	1.7	1.7	10	Snd Lvl	71.7		0.0	8	-8.0
Res 16	19	1	67.4	69.1		66	1.7	1.7	10	Snd Lvl	69.1		0.0	8	-8.0
Res 17	20	3	60.1	61.8		66	1.7	1.7	10	----	61.8		0.0	8	-8.0
Res 18	21	3	55.9	57.7		66	1.8	1.8	10	----	57.7		0.0	8	-8.0
Res 19	22	3	52.8	54.5		66	1.7	1.7	10	----	54.5		0.0	8	-8.0
Office 20	23	1	68.0	69.7		66	1.7	1.7	10	Snd Lvl	69.7		0.0	8	-8.0
Office 21	24	1	69.0	70.8		71	1.8	1.8	10	----	70.8		0.0	8	-8.0
Restaurant 22	25	1	68.1	69.9		71	1.8	1.8	10	----	69.9		0.0	8	-8.0
Bank 23	26	1	67.9	69.6		71	1.7	1.7	10	----	69.6		0.0	8	-8.0
Office 24	27	1	55.8	57.5		71	1.7	1.7	10	----	57.5		0.0	8	-8.0
Res 40	43	1	58.5	60.2		66	1.7	1.7	10	----	60.2		0.0	8	-8.0
Res 41	44	1	61.7	63.5		66	1.8	1.8	10	----	63.5		0.0	8	-8.0
Res 42	45	1	56.7	58.4		66	1.7	1.7	10	----	58.4		0.0	8	-8.0
School 43	46	1	64.4	66.1		66	1.7	1.7	10	Snd Lvl	66.1		0.0	8	-8.0
Res 44	47	3	51.7	53.4		66	1.7	1.7	10	----	53.4		0.0	8	-8.0
Res 45	48	4	50.8	52.5		66	1.7	1.7	10	----	52.5		0.0	8	-8.0
Res 46	49	2	50.4	52.1		66	1.7	1.7	10	----	52.1		0.0	8	-8.0
Res 47	50	4	49.5	51.3		66	1.8	1.8	10	----	51.3		0.0	8	-8.0
Res 48	51	1	54.6	56.3		66	1.7	1.7	10	----	56.3		0.0	8	-8.0
Apartments 49 (1st Floor)	52	2	67.1	68.9		66	1.8	1.8	10	Snd Lvl	68.9		0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Apartments 50 (1st Floor)	53	2	63.3	65.0	66	1.7	10	----	65.0	0.0	8	-8.0
Apartments 51 (1st Floor)	54	2	62.6	64.4	66	1.8	10	----	64.4	0.0	8	-8.0
Apartments 52 (1st Floor)	55	2	54.8	56.5	66	1.7	10	----	56.5	0.0	8	-8.0
Apartments 53 (1st Floor)	56	2	54.3	56.0	66	1.7	10	----	56.0	0.0	8	-8.0
Apartments 54 (1st Floor)	57	2	53.1	54.9	66	1.8	10	----	54.9	0.0	8	-8.0
Apartments 55 (1st Floor)	58	2	50.1	51.8	66	1.7	10	----	51.8	0.0	8	-8.0
Apartments 56 (1st Floor)	59	2	50.6	52.3	66	1.7	10	----	52.3	0.0	8	-8.0
Res 57	60	3	53.2	54.9	66	1.7	10	----	54.9	0.0	8	-8.0
Res 58	61	2	55.1	56.8	66	1.7	10	----	56.8	0.0	8	-8.0
Res 59	62	3	50.3	52.0	66	1.7	10	----	52.0	0.0	8	-8.0
Res 60	63	2	51.9	53.6	66	1.7	10	----	53.6	0.0	8	-8.0
Res 61	64	3	58.5	60.2	66	1.7	10	----	60.2	0.0	8	-8.0
Res 62	65	1	67.7	69.4	66	1.7	10	Snd Lvl	69.4	0.0	8	-8.0
Res 63	66	1	61.6	63.3	66	1.7	10	----	63.3	0.0	8	-8.0
Res 64	67	1	55.6	57.3	66	1.7	10	----	57.3	0.0	8	-8.0
Res 65	68	2	53.7	55.3	66	1.6	10	----	55.3	0.0	8	-8.0
Res 66	69	1	65.9	67.6	66	1.7	10	Snd Lvl	67.6	0.0	8	-8.0
Res 67	70	4	60.6	62.3	66	1.7	10	----	62.3	0.0	8	-8.0
Res 68	71	1	57.7	59.4	66	1.7	10	----	59.4	0.0	8	-8.0
Res 69	72	1	54.4	56.0	66	1.6	10	----	56.0	0.0	8	-8.0
Res 70	73	2	58.5	60.2	66	1.7	10	----	60.2	0.0	8	-8.0
Res 71	74	3	53.4	55.1	66	1.7	10	----	55.1	0.0	8	-8.0
Res 72	75	1	51.2	52.9	66	1.7	10	----	52.9	0.0	8	-8.0
Res 73	76	1	68.0	69.7	66	1.7	10	Snd Lvl	69.7	0.0	8	-8.0
Res 74	77	1	68.3	70.0	66	1.7	10	Snd Lvl	70.0	0.0	8	-8.0
Res 75	78	1	66.6	68.3	66	1.7	10	Snd Lvl	68.3	0.0	8	-8.0
Res 76	79	1	61.3	63.0	66	1.7	10	----	63.0	0.0	8	-8.0
Res 77	80	3	58.2	59.9	66	1.7	10	----	59.9	0.0	8	-8.0
Res 78	81	1	50.0	51.7	66	1.7	10	----	51.7	0.0	8	-8.0
School 79	82	1	54.0	55.7	66	1.7	10	----	55.7	0.0	8	-8.0
Res 120	123	1	66.9	68.7	66	1.8	10	Snd Lvl	68.7	0.0	8	-8.0
Res 121	124	2	62.6	64.3	66	1.7	10	----	64.3	0.0	8	-8.0
Res 122	125	2	58.8	60.5	66	1.7	10	----	60.5	0.0	8	-8.0
Res 123	126	2	55.5	57.2	66	1.7	10	----	57.2	0.0	8	-8.0
Res 124	127	2	53.4	55.1	66	1.7	10	----	55.1	0.0	8	-8.0
Res 125	128	2	51.8	53.5	66	1.7	10	----	53.5	0.0	8	-8.0
Res 126	129	2	50.8	52.5	66	1.7	10	----	52.5	0.0	8	-8.0
Res 127	130	2	49.7	51.4	66	1.7	10	----	51.4	0.0	8	-8.0
Res 128	131	1	48.9	50.6	66	1.7	10	----	50.6	0.0	8	-8.0
Res 129	132	1	62.1	63.8	66	1.7	10	----	63.8	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Res 130	133	1	65.1	66.8	66	1.7	10	Snd Lvl	66.8	0.0	8	-8.0
Res 131	134	1	63.8	65.5	66	1.7	10	----	65.5	0.0	8	-8.0
Res 132	135	1	66.0	67.7	66	1.7	10	Snd Lvl	67.7	0.0	8	-8.0
Res 133	136	4	59.5	61.2	66	1.7	10	----	61.2	0.0	8	-8.0
Res 134	137	1	66.9	68.7	66	1.8	10	Snd Lvl	68.7	0.0	8	-8.0
Res 135	138	7	53.3	55.0	66	1.7	10	----	55.0	0.0	8	-8.0
Res 136	139	8	49.8	51.5	66	1.7	10	----	51.5	0.0	8	-8.0
Res 137	140	1	65.8	67.5	66	1.7	10	Snd Lvl	67.5	0.0	8	-8.0
Res 138	141	1	66.0	67.7	66	1.7	10	Snd Lvl	67.7	0.0	8	-8.0
Res 139	142	1	64.6	66.3	66	1.7	10	Snd Lvl	66.3	0.0	8	-8.0
Res 140	143	1	59.5	61.2	66	1.7	10	----	61.2	0.0	8	-8.0
Res 141	144	1	64.8	66.6	66	1.8	10	Snd Lvl	66.6	0.0	8	-8.0
Res 142	145	1	66.2	67.9	66	1.7	10	Snd Lvl	67.9	0.0	8	-8.0
Res 143	146	3	50.9	52.6	66	1.7	10	----	52.6	0.0	8	-8.0
Church 144	147	2	66.1	67.8	66	1.7	10	Snd Lvl	67.8	0.0	8	-8.0
Res 145	148	3	50.9	52.6	66	1.7	10	----	52.6	0.0	8	-8.0
Res 146	149	1	53.9	55.6	66	1.7	10	----	55.6	0.0	8	-8.0
Res 147	150	1	56.3	58.0	66	1.7	10	----	58.0	0.0	8	-8.0
Res 148	151	3	62.5	64.2	66	1.7	10	----	64.2	0.0	8	-8.0
Res 149	152	1	60.1	61.8	66	1.7	10	----	61.8	0.0	8	-8.0
Res 150	153	1	67.0	68.7	66	1.7	10	Snd Lvl	68.7	0.0	8	-8.0
Res 151	154	1	64.3	66.0	66	1.7	10	Snd Lvl	66.0	0.0	8	-8.0
Res 152	155	1	66.8	68.6	66	1.8	10	Snd Lvl	68.6	0.0	8	-8.0
Res 202	205	1	53.9	55.6	66	1.7	10	----	55.6	0.0	8	-8.0
Res 203	206	2	58.4	60.1	66	1.7	10	----	60.1	0.0	8	-8.0
Church 204	207	1	66.0	67.8	66	1.8	10	Snd Lvl	67.8	0.0	8	-8.0
Church 205	208	1	58.9	60.6	66	1.7	10	----	60.6	0.0	8	-8.0
Res 206	209	1	61.3	63.0	66	1.7	10	----	63.0	0.0	8	-8.0
Res 207	210	1	57.2	58.9	66	1.7	10	----	58.9	0.0	8	-8.0
Res 208	211	1	60.5	62.3	66	1.8	10	----	62.3	0.0	8	-8.0
Res 214	217	1	61.5	63.2	66	1.7	10	----	63.2	0.0	8	-8.0
Res 215	218	1	62.4	64.0	66	1.6	10	----	64.0	0.0	8	-8.0
Res 216	219	1	63.9	65.5	66	1.6	10	----	65.5	0.0	8	-8.0
Res 217	220	8	54.7	56.3	66	1.6	10	----	56.3	0.0	8	-8.0
Res 218	221	1	61.1	62.8	66	1.7	10	----	62.8	0.0	8	-8.0
Res 219	222	2	57.5	59.1	66	1.6	10	----	59.1	0.0	8	-8.0
Res 220	223	4	55.4	57.0	66	1.6	10	----	57.0	0.0	8	-8.0
Res 221	224	1	60.2	61.8	66	1.6	10	----	61.8	0.0	8	-8.0
Res 222	225	1	56.8	58.4	66	1.6	10	----	58.4	0.0	8	-8.0
Res 223	226	1	55.8	57.4	66	1.6	10	----	57.4	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Res 224	227	1	55.2	56.8	66	1.6	10	----	56.8	0.0	8	-8.0
Apartments 49 (2nd Floor)	230	2	67.2	69.0	66	1.8	10	Snd Lvl	69.0	0.0	8	-8.0
Apartments 50 (2nd Floor)	232	2	63.6	65.3	66	1.7	10	----	65.3	0.0	8	-8.0
Apartments 51 (2nd Floor)	234	2	64.2	65.9	66	1.7	10	----	65.9	0.0	8	-8.0
Apartments 52 (2nd Floor)	236	2	57.2	58.9	66	1.7	10	----	58.9	0.0	8	-8.0
Apartments 53 (2nd Floor)	238	2	58.8	60.6	66	1.8	10	----	60.6	0.0	8	-8.0
Apartments 54 (2nd Floor)	240	2	58.5	60.2	66	1.7	10	----	60.2	0.0	8	-8.0
Apartments 55 (2nd Floor)	242	2	56.7	58.4	66	1.7	10	----	58.4	0.0	8	-8.0
Apartments 56 (2nd Floor)	244	2	57.3	59.0	66	1.7	10	----	59.0	0.0	8	-8.0
Dwelling Units												
			# DUs			Noise Reduction						
						Min		Avg		Max		
						dB		dB		dB		
All Selected		202	0.0	0.0	0.0							
All Impacted		31	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

RUN: LA 1088
Build Alt 1 AM Peak 2033

BARRIER DESIGN:

INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing				Type		With Barrier		
			LAeq1h	Calculated	Crit'n	Calculated	Crit'n	Sub'l Inc	Impact	Calculated LAeq1h	Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB			dB	dB	dB	dB	
Res 1	4	1	67.7	69.4	66	1.7	10	Snd Lvl		69.4	0.0	8	-8.0	
Res 2	5	1	69.1	70.8	66	1.7	10	Snd Lvl		70.8	0.0	8	-8.0	
Res 3	6	1	69.0	70.8	66	1.8	10	Snd Lvl		70.8	0.0	8	-8.0	
Res 4	7	1	66.9	67.4	66	0.5	10	Snd Lvl		67.4	0.0	8	-8.0	
Res 5	8	6	61.7	62.4	66	0.7	10	----		62.4	0.0	8	-8.0	
Res 6	9	6	57.3	58.7	66	1.4	10	----		58.7	0.0	8	-8.0	
Res 7	10	3	53.6	55.6	66	2.0	10	----		55.6	0.0	8	-8.0	
Res 8	11	1	64.7	65.0	66	0.3	10	----		65.0	0.0	8	-8.0	
Res 9	12	1	70.6	73.3	66	2.7	10	Snd Lvl		73.3	0.0	8	-8.0	
Res 10	13	1	66.6	66.9	66	0.3	10	Snd Lvl		66.9	0.0	8	-8.0	
Res 11	14	1	69.0	71.2	66	2.2	10	Snd Lvl		71.2	0.0	8	-8.0	
Res 25	28	1	69.5	71.1	66	1.6	10	Snd Lvl		71.1	0.0	8	-8.0	
Res 26	29	1	59.1	61.6	66	2.5	10	----		61.6	0.0	8	-8.0	
Res 27	30	1	56.5	59.0	66	2.5	10	----		59.0	0.0	8	-8.0	
Res 28	31	1	53.4	55.7	66	2.3	10	----		55.7	0.0	8	-8.0	
Res 29	32	1	51.6	53.7	66	2.1	10	----		53.7	0.0	8	-8.0	
Res 30	33	1	58.2	60.8	66	2.6	10	----		60.8	0.0	8	-8.0	
Res 31	34	1	67.0	68.7	66	1.7	10	Snd Lvl		68.7	0.0	8	-8.0	
Res 32	35	1	51.4	53.6	66	2.2	10	----		53.6	0.0	8	-8.0	
Res 33	36	1	61.4	63.4	66	2.0	10	----		63.4	0.0	8	-8.0	
Res 34	37	1	56.5	58.9	66	2.4	10	----		58.9	0.0	8	-8.0	
Res 35	38	1	66.0	67.6	66	1.6	10	Snd Lvl		67.6	0.0	8	-8.0	
Res 36	39	1	58.5	60.5	66	2.0	10	----		60.5	0.0	8	-8.0	

RESULTS: SOUND LEVELS

LA 1088

Res 37	40	1	55.3	57.2	66	1.9	10	----	57.2	0.0	8	-8.0
Res 38	41	1	54.9	56.5	66	1.6	10	----	56.5	0.0	8	-8.0
Res 39	42	1	53.3	54.9	66	1.6	10	----	54.9	0.0	8	-8.0
Res 80	83	1	66.6	70.5	66	3.9	10	Snd Lvl	70.5	0.0	8	-8.0
Res 81	84	1	58.4	61.0	66	2.6	10	----	61.0	0.0	8	-8.0
Res 82	85	1	56.6	58.6	66	2.0	10	----	58.6	0.0	8	-8.0
Res 83	86	1	55.5	57.2	66	1.7	10	----	57.2	0.0	8	-8.0
Res 84	87	1	54.5	56.3	66	1.8	10	----	56.3	0.0	8	-8.0
Res 85	88	1	55.0	57.5	66	2.5	10	----	57.5	0.0	8	-8.0
Res 86	89	1	50.7	52.7	66	2.0	10	----	52.7	0.0	8	-8.0
Res 87	90	9	57.5	59.6	66	2.1	10	----	59.6	0.0	8	-8.0
Res 88	91	5	50.7	52.7	66	2.0	10	----	52.7	0.0	8	-8.0
Res 89	92	1	65.8	67.1	66	1.3	10	Snd Lvl	67.1	0.0	8	-8.0
Res 90	93	1	66.2	67.4	66	1.2	10	Snd Lvl	67.4	0.0	8	-8.0
Res 91	94	2	53.4	55.5	66	2.1	10	----	55.5	0.0	8	-8.0
Res 92	95	2	51.1	53.3	66	2.2	10	----	53.3	0.0	8	-8.0
Res 93	96	1	56.3	58.5	66	2.2	10	----	58.5	0.0	8	-8.0
Res 94	97	1	64.1	65.6	66	1.5	10	----	65.6	0.0	8	-8.0
Res 95	98	1	65.4	66.2	66	0.8	10	Snd Lvl	66.2	0.0	8	-8.0
Res 96	99	1	64.1	66.4	66	2.3	10	Snd Lvl	66.4	0.0	8	-8.0
Recreation 97	100	1	50.9	53.0	66	2.1	10	----	53.0	0.0	8	-8.0
Res 98	101	1	62.7	64.9	66	2.2	10	----	64.9	0.0	8	-8.0
Res 99	102	1	62.1	64.2	66	2.1	10	----	64.2	0.0	8	-8.0
Res 100	103	4	52.6	55.1	66	2.5	10	----	55.1	0.0	8	-8.0
Res 101	104	1	61.6	63.7	66	2.1	10	----	63.7	0.0	8	-8.0
Res 102	105	1	59.7	62.1	66	2.4	10	----	62.1	0.0	8	-8.0
Res 103	106	1	56.5	59.0	66	2.5	10	----	59.0	0.0	8	-8.0
Res 104	107	1	55.4	57.9	66	2.5	10	----	57.9	0.0	8	-8.0
Res 105	108	1	54.1	56.6	66	2.5	10	----	56.6	0.0	8	-8.0
Res 106	109	2	51.0	53.2	66	2.2	10	----	53.2	0.0	8	-8.0
Res 107	110	2	50.3	52.4	66	2.1	10	----	52.4	0.0	8	-8.0
Res 108	111	2	49.8	51.9	66	2.1	10	----	51.9	0.0	8	-8.0
Res 109	112	2	49.4	51.4	66	2.0	10	----	51.4	0.0	8	-8.0
Res 110	113	1	67.1	68.3	66	1.2	10	Snd Lvl	68.3	0.0	8	-8.0
Res 111	114	1	62.6	64.7	66	2.1	10	----	64.7	0.0	8	-8.0
Res 112	115	1	68.0	68.7	66	0.7	10	Snd Lvl	68.7	0.0	8	-8.0
Res 113	116	1	64.7	65.5	66	0.8	10	----	65.5	0.0	8	-8.0
Res 114	117	3	54.8	56.9	66	2.1	10	----	56.9	0.0	8	-8.0
Res 115	118	3	53.4	55.6	66	2.2	10	----	55.6	0.0	8	-8.0
Res 116	119	3	58.7	59.7	66	1.0	10	----	59.7	0.0	8	-8.0

RESULTS: SOUND LEVELS

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Res 117	120	1	64.6	65.4	66	0.8	10	----	65.4	0.0	8	-8.0
Res 118	121	1	63.4	64.0	66	0.6	10	----	64.0	0.0	8	-8.0
Res 119	122	1	64.5	65.6	66	1.1	10	----	65.6	0.0	8	-8.0
Res 153	156	1	66.0	67.0	66	1.0	10	Snd Lvl	67.0	0.0	8	-8.0
Res 154	157	1	63.3	64.1	66	0.8	10	----	64.1	0.0	8	-8.0
Res 155	158	1	62.7	64.3	66	1.6	10	----	64.3	0.0	8	-8.0
Res 156	159	1	60.9	62.7	66	1.8	10	----	62.7	0.0	8	-8.0
Res 157	160	1	61.7	63.3	66	1.6	10	----	63.3	0.0	8	-8.0
Res 158	161	1	63.4	65.1	66	1.7	10	----	65.1	0.0	8	-8.0
Res 159	162	1	65.7	67.1	66	1.4	10	Snd Lvl	67.1	0.0	8	-8.0
Res 160	163	1	66.5	68.3	66	1.8	10	Snd Lvl	68.3	0.0	8	-8.0
Res 161	164	4	52.9	55.2	66	2.3	10	----	55.2	0.0	8	-8.0
Res 162	165	1	66.1	67.9	66	1.8	10	Snd Lvl	67.9	0.0	8	-8.0
Res 163	166	7	53.4	56.1	66	2.7	10	----	56.1	0.0	8	-8.0
Res 164	167	5	51.1	53.4	66	2.3	10	----	53.4	0.0	8	-8.0
Res 165	168	4	49.6	51.8	66	2.2	10	----	51.8	0.0	8	-8.0
Res 166	169	1	66.0	67.6	66	1.6	10	Snd Lvl	67.6	0.0	8	-8.0
Res 167	170	1	65.6	66.9	66	1.3	10	Snd Lvl	66.9	0.0	8	-8.0
Res 168	171	1	65.0	66.4	66	1.4	10	Snd Lvl	66.4	0.0	8	-8.0
Res 169	172	1	64.2	65.9	66	1.7	10	----	65.9	0.0	8	-8.0
Res 170	173	1	61.1	63.5	66	2.4	10	----	63.5	0.0	8	-8.0
Res 171	174	2	55.5	59.0	66	3.5	10	----	59.0	0.0	8	-8.0
Res 172	175	3	51.6	54.6	66	3.0	10	----	54.6	0.0	8	-8.0
Res 173	176	1	62.7	64.8	66	2.1	10	----	64.8	0.0	8	-8.0
Res 174	177	1	67.0	68.7	66	1.7	10	Snd Lvl	68.7	0.0	8	-8.0
Res 175	178	1	66.5	67.8	66	1.3	10	Snd Lvl	67.8	0.0	8	-8.0
Res 176	179	1	66.3	66.6	66	0.3	10	Snd Lvl	66.6	0.0	8	-8.0
Res 177	180	1	66.2	65.1	66	-1.1	10	----	65.1	0.0	8	-8.0
Res 178	181	3	53.6	55.9	66	2.3	10	----	55.9	0.0	8	-8.0
Res 179	182	3	51.8	53.4	66	1.6	10	----	53.4	0.0	8	-8.0
Res 180	183	4	50.0	51.7	66	1.7	10	----	51.7	0.0	8	-8.0
Res 181	184	1	66.7	66.8	66	0.1	10	Snd Lvl	66.8	0.0	8	-8.0
Res 182	185	1	66.9	68.1	66	1.2	10	Snd Lvl	68.1	0.0	8	-8.0
Res 183	186	1	67.5	69.1	66	1.6	10	Snd Lvl	69.1	0.0	8	-8.0
Res 184	187	1	67.1	68.7	66	1.6	10	Snd Lvl	68.7	0.0	8	-8.0
Res 185	188	1	67.2	68.9	66	1.7	10	Snd Lvl	68.9	0.0	8	-8.0
Res 186	189	1	67.5	69.1	66	1.6	10	Snd Lvl	69.1	0.0	8	-8.0
Res 187	190	1	67.3	68.9	66	1.6	10	Snd Lvl	68.9	0.0	8	-8.0
Office 188	191	1	67.4	69.0	71	1.6	10	----	69.0	0.0	8	-8.0
Res 189	192	1	64.2	66.9	66	2.7	10	Snd Lvl	66.9	0.0	8	-8.0

RESULTS: SOUND LEVELS

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Res 190	193	7	53.3	55.6	66	2.3	10	----	55.6	0.0	8	-8.0
Res 191	194	3	51.6	53.7	66	2.1	10	----	53.7	0.0	8	-8.0
Res 192	195	3	50.4	52.5	66	2.1	10	----	52.5	0.0	8	-8.0
Office 193	196	1	67.2	68.9	71	1.7	10	----	68.9	0.0	8	-8.0
Recreation 194	197	1	61.1	63.2	66	2.1	10	----	63.2	0.0	8	-8.0
Vet Office 195	198	1	53.4	57.9	66	4.5	10	----	57.9	0.0	8	-8.0
Res 196	199	1	51.0	55.3	66	4.3	10	----	55.3	0.0	8	-8.0
Res 197	200	1	53.6	58.0	66	4.4	10	----	58.0	0.0	8	-8.0
Res 198	201	2	52.6	56.5	66	3.9	10	----	56.5	0.0	8	-8.0
Res 199	202	3	57.4	59.4	66	2.0	10	----	59.4	0.0	8	-8.0
Res 200	203	3	55.5	58.6	66	3.1	10	----	58.6	0.0	8	-8.0
Res 201	204	2	51.0	55.5	66	4.5	10	----	55.5	0.0	8	-8.0
Res 209	212	1	67.5	70.1	66	2.6	10	Snd Lvl	70.1	0.0	8	-8.0
Res 210	213	3	60.5	63.8	66	3.3	10	----	63.8	0.0	8	-8.0
Res 211	214	1	55.8	59.4	66	3.6	10	----	59.4	0.0	8	-8.0
Res 212	215	3	52.4	56.0	66	3.6	10	----	56.0	0.0	8	-8.0
Res 213	216	1	65.4	68.2	66	2.8	10	Snd Lvl	68.2	0.0	8	-8.0
Res 225	217	1	53.6	55.6	66	2.0	10	----	55.6	0.0	8	-8.0
Res 226	218	1	57.1	58.8	66	1.7	10	----	58.8	0.0	8	-8.0
Dwelling Units												
			# DUs		Noise Reduction							
								Min	Avg	Max		
								dB	dB	dB		
All Selected			207		0.0			0.0	0.0	0.0		
All Impacted			37		0.0			0.0	0.0	0.0		
All that meet NR Goal			0		0.0			0.0	0.0	0.0		

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

RUN: Build Alt 1 PM Peak 2033

BARRIER DESIGN: INPUT HEIGHTS

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier		With Barrier		Type Impact	Noise Reduction		Calculated minus Goal dB
				LAeq1h Calculated	Crit'n	LAeq1h Calculated	Crit'n		Calculated	Goal	
			dBA	dBA		dBA			dBA	dB	dB
Res 12	15	1	70.6	72.4	66	1.8	10	Snd Lvl	72.4	0.0	8
Res 13	16	1	71.6	73.3	66	1.7	10	Snd Lvl	73.3	0.0	8
Res 14	17	1	67.6	69.2	66	1.6	10	Snd Lvl	69.2	0.0	8
Res 15	18	1	70.0	71.3	66	1.3	10	Snd Lvl	71.3	0.0	8
Res 16	19	1	67.4	68.3	66	0.9	10	Snd Lvl	68.3	0.0	8
Res 17	20	3	60.1	61.4	66	1.3	10	----	61.4	0.0	8
Res 18	21	3	55.9	58.1	66	2.2	10	----	58.1	0.0	8
Res 19	22	3	52.8	54.8	66	2.0	10	----	54.8	0.0	8
Office 20	23	1	68.0	68.9	71	0.9	10	----	68.9	0.0	8
Office 21	24	1	69.0	70.4	71	1.4	10	----	70.4	0.0	8
Restaurant 22	25	1	68.1	66.8	71	-1.3	10	----	66.8	0.0	8
Bank 23	26	1	67.9	65.7	71	-2.2	10	----	65.7	0.0	8
Office 24	27	1	55.8	57.0	71	1.2	10	----	57.0	0.0	8
Res 40	43	1	58.5	60.2	66	1.7	10	----	60.2	0.0	8
Res 41	44	1	61.7	64.2	66	2.5	10	----	64.2	0.0	8
Res 42	45	1	56.7	59.1	66	2.4	10	----	59.1	0.0	8
School 43	46	1	64.4	67.2	66	2.8	10	Snd Lvl	67.2	0.0	8
Res 44	47	3	51.7	53.9	66	2.2	10	----	53.9	0.0	8
Res 45	48	4	50.8	53.0	66	2.2	10	----	53.0	0.0	8
Res 46	49	2	50.4	52.5	66	2.1	10	----	52.5	0.0	8
Res 47	50	4	49.5	51.5	66	2.0	10	----	51.5	0.0	8
Res 48	51	1	54.6	57.0	66	2.4	10	----	57.0	0.0	8
Apartments 49 (1st Floor)	52	2	67.1	68.7	66	1.6	10	Snd Lvl	68.7	0.0	8

RESULTS: SOUND LEVELS

LA 1088

Apartments 50 (1st Floor)	53	2	63.3	64.8	66	1.5	10	----	64.8	0.0	8	-8.0
Apartments 51 (1st Floor)	54	2	62.6	64.7	66	2.1	10	----	64.7	0.0	8	-8.0
Apartments 52 (1st Floor)	55	2	54.8	57.7	66	2.9	10	----	57.7	0.0	8	-8.0
Apartments 53 (1st Floor)	56	2	54.3	56.2	66	1.9	10	----	56.2	0.0	8	-8.0
Apartments 54 (1st Floor)	57	2	53.1	55.5	66	2.4	10	----	55.5	0.0	8	-8.0
Apartments 55 (1st Floor)	58	2	50.1	52.4	66	2.3	10	----	52.4	0.0	8	-8.0
Apartments 56 (1st Floor)	59	2	50.6	52.9	66	2.3	10	----	52.9	0.0	8	-8.0
Res 57	60	3	53.2	55.3	66	2.1	10	----	55.3	0.0	8	-8.0
Res 58	61	2	55.1	57.1	66	2.0	10	----	57.1	0.0	8	-8.0
Res 59	62	3	50.3	52.2	66	1.9	10	----	52.2	0.0	8	-8.0
Res 60	63	2	51.9	53.8	66	1.9	10	----	53.8	0.0	8	-8.0
Res 61	64	3	58.5	59.9	66	1.4	10	----	59.9	0.0	8	-8.0
Res 62	65	1	67.7	67.3	66	-0.4	10	Snd Lvl	67.3	0.0	8	-8.0
Res 63	66	1	61.6	62.3	66	0.7	10	----	62.3	0.0	8	-8.0
Res 64	67	1	55.6	57.2	66	1.6	10	----	57.2	0.0	8	-8.0
Res 65	68	2	53.7	55.4	66	1.7	10	----	55.4	0.0	8	-8.0
Res 66	69	1	65.9	65.7	66	-0.2	10	----	65.7	0.0	8	-8.0
Res 67	70	4	60.6	61.7	66	1.1	10	----	61.7	0.0	8	-8.0
Res 68	71	1	57.7	59.1	66	1.4	10	----	59.1	0.0	8	-8.0
Res 69	72	1	54.4	55.9	66	1.5	10	----	55.9	0.0	8	-8.0
Res 70	73	2	58.5	60.1	66	1.6	10	----	60.1	0.0	8	-8.0
Res 71	74	3	53.4	55.0	66	1.6	10	----	55.0	0.0	8	-8.0
Res 72	75	1	51.2	53.2	66	2.0	10	----	53.2	0.0	8	-8.0
Res 73	76	1	68.0	69.8	66	1.8	10	Snd Lvl	69.8	0.0	8	-8.0
Res 74	77	1	68.3	70.2	66	1.9	10	Snd Lvl	70.2	0.0	8	-8.0
Res 75	78	1	66.6	68.0	66	1.4	10	Snd Lvl	68.0	0.0	8	-8.0
Res 76	79	1	61.3	63.4	66	2.1	10	----	63.4	0.0	8	-8.0
Res 77	80	3	58.2	60.7	66	2.5	10	----	60.7	0.0	8	-8.0
Res 78	81	1	50.0	52.4	66	2.4	10	----	52.4	0.0	8	-8.0
School 79	82	1	54.0	56.7	66	2.7	10	----	56.7	0.0	8	-8.0
Res 120	123	1	66.9	68.5	66	1.6	10	Snd Lvl	68.5	0.0	8	-8.0
Res 121	124	2	62.6	65.4	66	2.8	10	----	65.4	0.0	8	-8.0
Res 122	125	2	58.8	62.3	66	3.5	10	----	62.3	0.0	8	-8.0
Res 123	126	2	55.5	59.0	66	3.5	10	----	59.0	0.0	8	-8.0
Res 124	127	2	53.4	57.0	66	3.6	10	----	57.0	0.0	8	-8.0
Res 125	128	2	51.8	55.1	66	3.3	10	----	55.1	0.0	8	-8.0
Res 126	129	2	50.8	53.8	66	3.0	10	----	53.8	0.0	8	-8.0
Res 127	130	2	49.7	52.5	66	2.8	10	----	52.5	0.0	8	-8.0
Res 128	131	1	48.9	51.5	66	2.6	10	----	51.5	0.0	8	-8.0
Res 129	132	1	62.1	64.9	66	2.8	10	----	64.9	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Res 130	133	1	65.1	67.1	66	2.0	10	Snd Lvl	67.1	0.0	8	-8.0
Res 131	134	1	63.8	66.5	66	2.7	10	Snd Lvl	66.5	0.0	8	-8.0
Res 132	135	1	66.0	67.7	66	1.7	10	Snd Lvl	67.7	0.0	8	-8.0
Res 133	136	4	59.5	62.2	66	2.7	10	----	62.2	0.0	8	-8.0
Res 134	137	1	66.9	68.7	66	1.8	10	Snd Lvl	68.7	0.0	8	-8.0
Res 135	138	7	53.3	55.7	66	2.4	10	----	55.7	0.0	8	-8.0
Res 136	139	8	49.8	52.0	66	2.2	10	----	52.0	0.0	8	-8.0
Res 137	140	1	65.8	67.6	66	1.8	10	Snd Lvl	67.6	0.0	8	-8.0
Res 138	141	1	66.0	67.7	66	1.7	10	Snd Lvl	67.7	0.0	8	-8.0
Res 139	142	1	64.6	67.1	66	2.5	10	Snd Lvl	67.1	0.0	8	-8.0
Res 140	143	1	59.5	62.9	66	3.4	10	----	62.9	0.0	8	-8.0
Res 141	144	1	64.8	67.7	66	2.9	10	Snd Lvl	67.7	0.0	8	-8.0
Res 142	145	1	66.2	68.7	66	2.5	10	Snd Lvl	68.7	0.0	8	-8.0
Res 143	146	3	50.9	53.1	66	2.2	10	----	53.1	0.0	8	-8.0
Church 144	147	2	66.1	68.1	66	2.0	10	Snd Lvl	68.1	0.0	8	-8.0
Res 145	148	3	50.9	53.2	66	2.3	10	----	53.2	0.0	8	-8.0
Res 146	149	1	53.9	56.3	66	2.4	10	----	56.3	0.0	8	-8.0
Res 147	150	1	56.3	59.3	66	3.0	10	----	59.3	0.0	8	-8.0
Res 148	151	3	62.5	64.3	66	1.8	10	----	64.3	0.0	8	-8.0
Res 149	152	1	60.1	62.5	66	2.4	10	----	62.5	0.0	8	-8.0
Res 150	153	1	67.0	68.7	66	1.7	10	Snd Lvl	68.7	0.0	8	-8.0
Res 151	154	1	64.3	65.9	66	1.6	10	----	65.9	0.0	8	-8.0
Res 152	155	1	66.8	68.5	66	1.7	10	Snd Lvl	68.5	0.0	8	-8.0
Res 202	205	1	53.9	56.4	66	2.5	10	----	56.4	0.0	8	-8.0
Res 203	206	2	58.4	60.8	66	2.4	10	----	60.8	0.0	8	-8.0
Church 204	207	1	66.0	67.9	66	1.9	10	Snd Lvl	67.9	0.0	8	-8.0
Church 205	208	1	58.9	61.3	66	2.4	10	----	61.3	0.0	8	-8.0
Res 206	209	1	61.3	62.9	66	1.6	10	----	62.9	0.0	8	-8.0
Res 207	210	1	57.2	60.0	66	2.8	10	----	60.0	0.0	8	-8.0
Res 208	211	1	60.5	64.4	66	3.9	10	----	64.4	0.0	8	-8.0
Apartment 49 (2nd Floor)	219	2	67.2	68.9	66	1.7	10	Snd Lvl	68.9	0.0	8	-8.0
Apartment 50 (2nd Floor)	220	2	63.6	65.3	66	1.7	10	----	65.3	0.0	8	-8.0
Apartment 51 (2nd Floor)	221	2	64.2	65.9	66	1.7	10	----	65.9	0.0	8	-8.0
Apartment 52 (2nd Floor)	222	2	57.2	58.9	66	1.7	10	----	58.9	0.0	8	-8.0
Apartment 53 (2nd Floor)	223	2	58.8	60.4	66	1.6	10	----	60.4	0.0	8	-8.0
Apartment 54 (2nd Floor)	224	2	58.5	60.1	66	1.6	10	----	60.1	0.0	8	-8.0
Apartment 55 (2nd Floor)	225	2	56.7	58.1	66	1.4	10	----	58.1	0.0	8	-8.0
Apartment 56 (2nd Floor)	226	2	57.3	58.6	66	1.3	10	----	58.6	0.0	8	-8.0
Res 214	227	1	61.5	64.1	66	2.6	10	----	64.1	0.0	8	-8.0
Res 215	228	1	62.4	65.1	66	2.7	10	----	65.1	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Res 216	229	1	63.9	66.9	66	3.0	10	Snd Lvl	66.9	0.0	8	-8.0
Res 217	230	8	54.7	57.5	66	2.8	10	----	57.5	0.0	8	-8.0
Res 218	231	1	61.1	64.1	66	3.0	10	----	64.1	0.0	8	-8.0
Res 219	232	2	57.5	60.3	66	2.8	10	----	60.3	0.0	8	-8.0
Res 220	233	4	55.4	58.2	66	2.8	10	----	58.2	0.0	8	-8.0
Res 221	234	1	60.2	63.1	66	2.9	10	----	63.1	0.0	8	-8.0
Res 222	235	1	56.8	59.5	66	2.7	10	----	59.5	0.0	8	-8.0
Res 223	236	1	55.8	58.5	66	2.7	10	----	58.5	0.0	8	-8.0
Res 224	237	1	55.2	57.8	66	2.6	10	----	57.8	0.0	8	-8.0
Dwelling Units												
			# DUs			Noise Reduction						
						Min		Avg		Max		
						dB		dB		dB		
All Selected		202	0.0	0.0	0.0							
All Impacted		30	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

RUN: Build Alt 2 AM Peak 2033

BARRIER DESIGN:

INPUT HEIGHTS

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier		With Barrier				Noise Reduction		Calculated minus Goal		
				LAeq1h Calculated	Crit'n	Increase over existing		Type Impact	Calculated LAeq1h	Calculated	Goal			
			dBA	dBA	dBA	dB	dB	Crit'n Sub'l Inc	dBA	dB	dB	dB		
Res 1	4	1	67.7	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 2	5	1	69.1	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 3	6	1	69.0	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 4	7	1	66.9	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 5	8	6	61.7	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 6	9	6	57.3	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 7	10	3	53.6	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 8	11	1	64.7	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 9	12	1	70.6	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 10	13	1	66.6	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 11	14	1	69.0	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 25	15	1	69.5	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 26	16	1	59.1	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 27	17	1	56.5	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 28	18	1	53.4	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 29	19	1	51.6	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 30	20	1	58.2	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 31	21	1	67.0	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 32	22	1	51.4	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 33	23	1	61.4	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 34	24	1	56.5	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 35	25	1	66.0	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		
Res 36	26	1	58.5	0.0	66	0.0	0.0	10	inactive	0.0	0.0	8		

RESULTS: SOUND LEVELS

LA 1088

Res 37	27	1	55.3	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 38	28	1	54.9	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 39	29	1	53.3	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 80	30	1	66.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 81	31	1	58.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 82	32	1	56.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 83	33	1	55.5	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 84	34	1	54.5	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 85	35	1	55.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 86	36	1	50.7	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 87	37	9	57.5	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 88	38	5	50.7	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 89	39	1	65.8	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 90	40	1	66.2	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 91	41	2	53.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 92	42	2	51.1	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 93	43	1	56.3	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 94	44	1	64.1	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 95	45	1	65.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 96	46	1	64.1	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Recreation 97	47	1	50.9	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 98	48	1	62.7	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 99	49	1	62.1	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 100	50	4	52.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 101	51	1	61.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 102	52	1	59.7	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 103	53	1	56.5	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 104	54	1	55.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 105	55	1	54.1	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 106	56	2	51.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 107	57	2	50.3	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 108	58	2	49.8	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 109	59	2	49.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 110	60	1	67.1	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 111	61	1	62.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 112	62	1	68.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 113	63	1	64.7	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 114	64	3	54.8	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 115	65	3	53.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 116	66	3	58.7	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0

RESULTS: SOUND LEVELS

LA 1088

Res 117	67	1	64.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 118	68	1	63.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 119	69	1	64.5	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 153	70	1	66.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 154	71	1	63.3	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 155	72	1	62.7	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 156	73	1	60.9	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 157	74	1	61.7	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 158	75	1	63.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 159	76	1	65.7	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 160	77	1	66.5	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 161	78	4	52.9	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 162	79	1	66.1	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 163	80	7	53.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 164	81	5	51.1	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 165	82	4	49.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 166	83	1	66.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 167	84	1	65.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 168	85	1	65.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 169	86	1	64.2	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 170	87	1	61.1	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 171	88	2	55.5	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 172	89	3	51.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 173	90	1	62.7	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 174	91	1	67.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 175	92	1	66.5	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 176	93	1	66.3	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 177	94	1	66.2	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 178	95	3	53.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 179	96	3	51.8	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 180	97	4	50.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 181	98	1	66.7	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 182	99	1	66.9	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 183	100	1	67.5	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 184	101	1	67.1	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 185	102	1	67.2	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 186	103	1	67.5	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 187	104	1	67.3	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Office 188	105	1	67.4	0.0	71	0.0	10	inactive	0.0	0.0	8	0.0
Res 189	106	1	64.2	67.0	66	2.8	10	Snd Lvl	67.0	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Dwelling Units	# DUs	Noise Reduction					
		Min dB	Avg dB	Max			
				dB			
All Selected	207	0.0	0.0	0.0	0.0	0.0	
All Impacted	1	0.0	0.0	0.0	0.0	0.0	
All that meet NR Goal	0	0.0	0.0	0.0	0.0	0.0	

Res 190	107	7	53.3	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 191	108	3	51.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 192	109	3	50.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Office 193	110	1	67.2	0.0	71	0.0	10	inactive	0.0	0.0	8	0.0
Recreation 194	111	1	61.1	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Vet Office 195	112	1	53.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 196	113	1	51.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 197	114	1	53.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 198	115	2	52.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 199	116	3	57.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 200	117	3	55.5	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 201	118	2	51.0	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 209	119	1	67.5	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 210	120	3	60.5	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 211	121	1	55.8	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 212	122	3	52.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 213	123	1	65.4	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 225	124	1	53.6	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0
Res 226	125	1	57.1	0.0	66	0.0	10	inactive	0.0	0.0	8	0.0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088
Build Alt 2 PM Peak 2033

RUN:

BARRIER DESIGN:

INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver															
Name	No.	#DUs	Existing LAeq1h	No Barrier		With Barrier		Type Impact	Increase over existing		dB	Noise Reduction		Calculated minus Goal	dB
				LAeq1h Calculated	Crit'n	LAeq1h Calculated	Crit'n		Calculated	Crit'n		Calculated	Goal		
				dB	dB	dB	dB		dB	dB		dB	dB		dB
Res 12	127	1	70.6	72.4	66	72.4	66	10	1.8	10	72.4	0.0	8	8	-8.0
Res 13	128	1	71.6	73.3	66	73.3	66	10	1.7	10	73.3	0.0	8	8	-8.0
Res 14	129	1	67.6	69.2	66	69.2	66	10	1.6	10	69.2	0.0	8	8	-8.0
Res 15	130	1	70.0	71.3	66	71.3	66	10	1.3	10	71.3	0.0	8	8	-8.0
Res 16	131	1	67.4	68.4	66	68.4	66	10	1.0	10	68.4	0.0	8	8	-8.0
Res 17	132	3	60.1	61.5	66	61.5	66	10	1.4	10	61.5	0.0	8	8	-8.0
Res 18	133	3	55.9	58.2	66	58.2	66	10	2.3	10	58.2	0.0	8	8	-8.0
Res 19	134	3	52.8	55.0	66	55.0	66	10	2.2	10	55.0	0.0	8	8	-8.0
Office 20	135	1	68.0	69.0	71	69.0	71	10	1.0	10	69.0	0.0	8	8	-8.0
Office 21	136	1	69.0	70.4	71	70.4	71	10	1.4	10	70.4	0.0	8	8	-8.0
Restaurant 22	137	1	68.1	66.8	71	66.8	71	10	-1.3	10	66.8	0.0	8	8	-8.0
Bank 23	138	1	67.9	65.7	71	65.7	71	10	-2.2	10	65.7	0.0	8	8	-8.0
Office 24	139	1	55.8	57.3	71	57.3	71	10	1.5	10	57.3	0.0	8	8	-8.0
Res 40	140	1	58.5	60.7	66	60.7	66	10	2.2	10	60.7	0.0	8	8	-8.0
Res 41	141	1	61.7	64.2	66	64.2	66	10	2.5	10	64.2	0.0	8	8	-8.0
Res 42	142	1	56.7	60.4	66	60.4	66	10	3.7	10	60.4	0.0	8	8	-8.0
School 43	143	1	64.4	67.1	66	67.1	66	10	2.7	10	67.1	0.0	8	8	-8.0
Res 44	144	3	51.7	55.0	66	55.0	66	10	3.3	10	55.0	0.0	8	8	-8.0
Res 45	145	4	50.8	53.9	66	53.9	66	10	3.1	10	53.9	0.0	8	8	-8.0
Res 46	146	2	50.4	53.3	66	53.3	66	10	2.9	10	53.3	0.0	8	8	-8.0
Res 47	147	4	49.5	52.2	66	52.2	66	10	2.7	10	52.2	0.0	8	8	-8.0
Res 48	148	1	54.6	58.4	66	58.4	66	10	3.8	10	58.4	0.0	8	8	-8.0
Apartments 49 (1st Floor)	149	2	67.1	68.6	66	68.6	66	10	1.5	10	68.6	0.0	8	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Apartments 50 (1st Floor)	150	2	63.3	64.6	66	1.3	10	----	64.6	0.0	8	-8.0
Apartments 51 (1st Floor)	151	2	62.6	64.3	66	1.7	10	----	64.3	0.0	8	-8.0
Apartments 52 (1st Floor)	152	2	54.8	56.7	66	1.9	10	----	56.7	0.0	8	-8.0
Apartments 53 (1st Floor)	153	2	54.3	57.6	66	3.3	10	----	57.6	0.0	8	-8.0
Apartments 54 (1st Floor)	154	2	53.1	56.8	66	3.7	10	----	56.8	0.0	8	-8.0
Apartments 55 (1st Floor)	155	2	50.1	52.9	66	2.8	10	----	52.9	0.0	8	-8.0
Apartments 56 (1st Floor)	156	2	50.6	53.5	66	2.9	10	----	53.5	0.0	8	-8.0
Res 57	157	3	53.2	55.7	66	2.5	10	----	55.7	0.0	8	-8.0
Res 58	158	2	55.1	57.4	66	2.3	10	----	57.4	0.0	8	-8.0
Res 59	159	3	50.3	52.6	66	2.3	10	----	52.6	0.0	8	-8.0
Res 60	160	2	51.9	54.2	66	2.3	10	----	54.2	0.0	8	-8.0
Res 61	161	3	58.5	60.1	66	1.6	10	----	60.1	0.0	8	-8.0
Res 62	162	1	67.7	67.3	66	-0.4	10	Snd Lvl	67.3	0.0	8	-8.0
Res 63	163	1	61.6	62.4	66	0.8	10	----	62.4	0.0	8	-8.0
Res 64	164	1	55.6	57.6	66	2.0	10	----	57.6	0.0	8	-8.0
Res 65	165	2	53.7	55.6	66	1.9	10	----	55.6	0.0	8	-8.0
Res 66	166	1	65.9	65.6	66	-0.3	10	----	65.6	0.0	8	-8.0
Res 67	167	4	60.6	61.9	66	1.3	10	----	61.9	0.0	8	-8.0
Res 68	168	1	57.7	59.5	66	1.8	10	----	59.5	0.0	8	-8.0
Res 69	169	1	54.4	56.3	66	1.9	10	----	56.3	0.0	8	-8.0
Res 70	170	2	58.5	61.1	66	2.6	10	----	61.1	0.0	8	-8.0
Res 71	171	3	53.4	55.7	66	2.3	10	----	55.7	0.0	8	-8.0
Res 72	172	1	51.2	53.8	66	2.6	10	----	53.8	0.0	8	-8.0
Res 73	173	1	68.0	69.9	66	1.9	10	Snd Lvl	69.9	0.0	8	-8.0
Res 74	174	1	68.3	70.4	66	2.1	10	Snd Lvl	70.4	0.0	8	-8.0
Res 75	175	1	66.6	68.1	66	1.5	10	Snd Lvl	68.1	0.0	8	-8.0
Res 76	176	1	61.3	63.8	66	2.5	10	----	63.8	0.0	8	-8.0
Res 77	177	3	58.2	61.6	66	3.4	10	----	61.6	0.0	8	-8.0
Res 78	178	1	50.0	53.0	66	3.0	10	----	53.0	0.0	8	-8.0
School 79	179	1	54.0	56.9	66	2.9	10	----	56.9	0.0	8	-8.0
Res 120	180	1	66.9	68.5	66	1.6	10	Snd Lvl	68.5	0.0	8	-8.0
Res 121	181	2	62.6	65.4	66	2.8	10	----	65.4	0.0	8	-8.0
Res 122	182	2	58.8	62.4	66	3.6	10	----	62.4	0.0	8	-8.0
Res 123	183	2	55.5	59.2	66	3.7	10	----	59.2	0.0	8	-8.0
Res 124	184	2	53.4	57.1	66	3.7	10	----	57.1	0.0	8	-8.0
Res 125	185	2	51.8	55.5	66	3.7	10	----	55.5	0.0	8	-8.0
Res 126	186	2	50.8	54.0	66	3.2	10	----	54.0	0.0	8	-8.0
Res 127	187	2	49.7	52.6	66	2.9	10	----	52.6	0.0	8	-8.0
Res 128	188	1	48.9	51.6	66	2.7	10	----	51.6	0.0	8	-8.0
Res 129	189	1	62.1	64.8	66	2.7	10	----	64.8	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Res 130	190	1	65.1	67.1	66	2.0	10	Snd Lvl	67.1	0.0	8	-8.0
Res 131	191	1	63.8	66.3	66	2.5	10	Snd Lvl	66.3	0.0	8	-8.0
Res 132	192	1	66.0	68.0	66	2.0	10	Snd Lvl	68.0	0.0	8	-8.0
Res 133	193	4	59.5	61.8	66	2.3	10	----	61.8	0.0	8	-8.0
Res 134	194	1	66.9	69.2	66	2.3	10	Snd Lvl	69.2	0.0	8	-8.0
Res 135	195	7	53.3	55.5	66	2.2	10	----	55.5	0.0	8	-8.0
Res 136	196	8	49.8	52.1	66	2.3	10	----	52.1	0.0	8	-8.0
Res 137	197	1	65.8	67.9	66	2.1	10	Snd Lvl	67.9	0.0	8	-8.0
Res 138	198	1	66.0	68.1	66	2.1	10	Snd Lvl	68.1	0.0	8	-8.0
Res 139	199	1	64.6	67.2	66	2.6	10	Snd Lvl	67.2	0.0	8	-8.0
Res 140	200	1	59.5	62.6	66	3.1	10	----	62.6	0.0	8	-8.0
Res 141	201	1	64.8	68.1	66	3.3	10	Snd Lvl	68.1	0.0	8	-8.0
Res 142	202	1	66.2	69.1	66	2.9	10	Snd Lvl	69.1	0.0	8	-8.0
Res 143	203	3	50.9	53.2	66	2.3	10	----	53.2	0.0	8	-8.0
Church 144	204	2	66.1	68.1	66	2.0	10	Snd Lvl	68.1	0.0	8	-8.0
Res 145	205	3	50.9	53.3	66	2.4	10	----	53.3	0.0	8	-8.0
Res 146	206	1	53.9	56.5	66	2.6	10	----	56.5	0.0	8	-8.0
Res 147	207	1	56.3	59.4	66	3.1	10	----	59.4	0.0	8	-8.0
Res 148	208	3	62.5	64.3	66	1.8	10	----	64.3	0.0	8	-8.0
Res 149	209	1	60.1	62.4	66	2.3	10	----	62.4	0.0	8	-8.0
Res 150	210	1	67.0	68.7	66	1.7	10	Snd Lvl	68.7	0.0	8	-8.0
Res 151	211	1	64.3	65.9	66	1.6	10	----	65.9	0.0	8	-8.0
Res 152	212	1	66.8	68.5	66	1.7	10	Snd Lvl	68.5	0.0	8	-8.0
Res 202	213	1	53.9	57.4	66	3.5	10	----	57.4	0.0	8	-8.0
Res 203	214	2	58.4	61.5	66	3.1	10	----	61.5	0.0	8	-8.0
Church 204	215	1	66.0	68.0	66	2.0	10	Snd Lvl	68.0	0.0	8	-8.0
Church 205	216	1	58.9	61.7	66	2.8	10	----	61.7	0.0	8	-8.0
Res 206	217	1	61.3	63.6	66	2.3	10	----	63.6	0.0	8	-8.0
Res 207	218	1	57.2	60.7	66	3.5	10	----	60.7	0.0	8	-8.0
Res 208	219	1	60.5	64.4	66	3.9	10	----	64.4	0.0	8	-8.0
Res 214	220	1	61.5	64.1	66	2.6	10	----	64.1	0.0	8	-8.0
Res 215	221	1	62.4	65.1	66	2.7	10	----	65.1	0.0	8	-8.0
Res 216	222	1	63.9	66.9	66	3.0	10	Snd Lvl	66.9	0.0	8	-8.0
Res 217	223	8	54.7	57.5	66	2.8	10	----	57.5	0.0	8	-8.0
Res 218	224	1	61.1	64.1	66	3.0	10	----	64.1	0.0	8	-8.0
Res 219	225	2	57.5	60.3	66	2.8	10	----	60.3	0.0	8	-8.0
Res 220	226	4	55.4	58.2	66	2.8	10	----	58.2	0.0	8	-8.0
Res 221	227	1	60.2	63.0	66	2.8	10	----	63.0	0.0	8	-8.0
Res 222	228	1	56.8	59.4	66	2.6	10	----	59.4	0.0	8	-8.0
Res 223	229	1	55.8	58.5	66	2.7	10	----	58.5	0.0	8	-8.0

RESULTS: SOUND LEVELS

LA 1088

Dwelling Units	# DUs	Noise Reduction				66	2.5	10	Snd Lvl	57.7	0.0	8	-8.0	
		Min		Avg										Max
		dB	dB	dB	dB									
All Selected		202		0.0	0.0									
All Impacted		32		0.0	0.0									
All that meet NR Goal		0		0.0	0.0									

APPENDIX F
LA 1088 Corridor Study Noise
Report
TNM Model Validation Results

AUT-0001

Reading 1 of 3 at this receptor location.

Project:
Receptor Location (or #):

DOTD Project No. H.010116 / Volkert Project No. 534101.12

Site 1

Landuse Characteristics:

Law Firm / chiropractor office

Equipment:
Calibration:
Response:

Meter: Rion NL-32
Start Cal: (dB) 67.8
Fast: NA
A-Weighting? YES

Calibrator: Norsonic 1251
Finish Cal: (dB) 114.1
Slow: YES
Battery Check?: YES

Weather Data:

Date: 7/16/15
Wind: calm
Weather: Sunny

Time: 8:39 AM
Temperature: 85°F

Start Time: 8:39 AM End Time: 8:54 AM

Traffic Count Data

Road:	Primary Noise Source	Other (Intersecting Street)	Other (Intersecting Street)
Automobiles:	<u>316</u>		
Medium Trucks:	<u>9</u>		
Heavy Trucks:	<u>0</u>		
Buses	<u>0</u>		
Motorcycles	<u>01</u>		

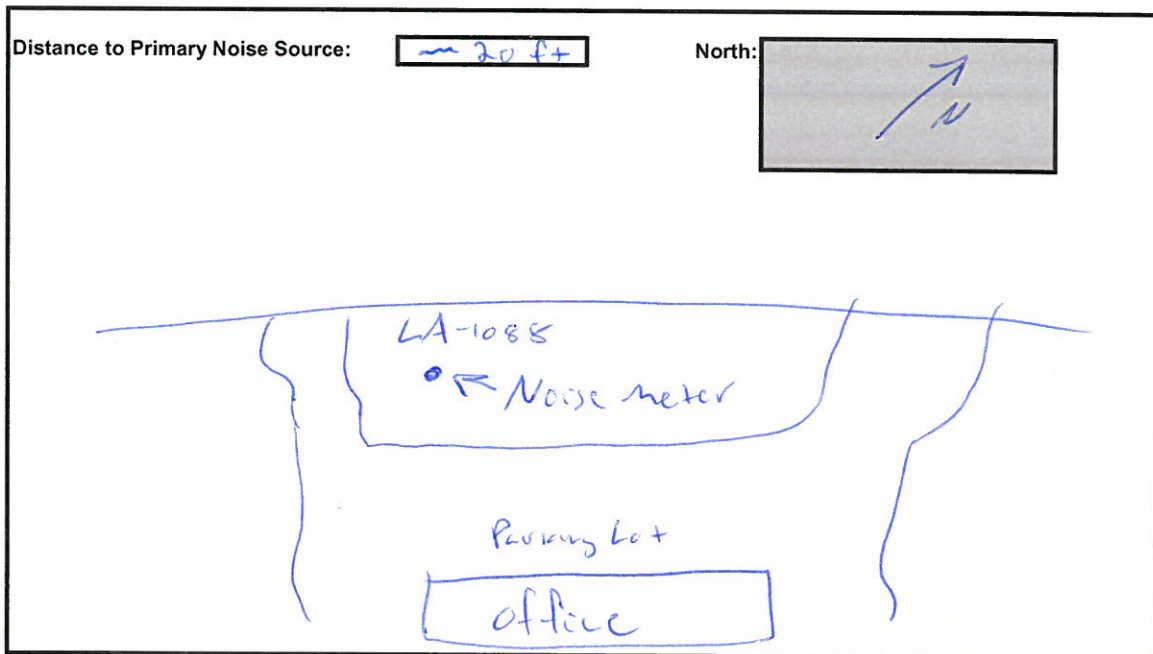
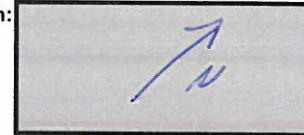
Noise Meter Reading

69.6 dBA

Distance to Primary Noise Source:

~ 20 ft

North:



Background Noise: Insects

Major Sources: LA-59

Unusual Events:

Other Notes:

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

RUN: Validation Site 1

BARRIER DESIGN:

INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver											
Name	No.	#DUs	Existing LAeq1h	No Barrier		With Barrier		Type Impact	Noise Reduction		Calculated minus Goal dB
				LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Calculated Goal	
				dBA		dBA			dBA		
Site 1	487	1	69.6	69.4	66	-0.2	10	Snd Lvl	69.4	0.0	8
Dwelling Units											
# DUs			Noise Reduction								
			Min dB	Avg dB	Max dB						
All Selected		1	0.0	0.0	0.0						
All Impacted		1	0.0	0.0	0.0						
All that meet NR Goal		0	0.0	0.0	0.0						

AJ10004

Reading 1 of 3 at this receptor location.

Project: DOTD Project No. H.010116 / Volkert Project No. 534101.12
Receptor Location (or #): Site 2

Landuse Characteristics: Residential

Equipment: Meter: Rion NL-32 Calibrator: Norsonic 1251
Calibration: Start Cal: (dB) 68.4 Finish Cal: (dB) 114.0
Response: Fast: NA Slow: YES
A-Weighting? YES Battery Check?: YES

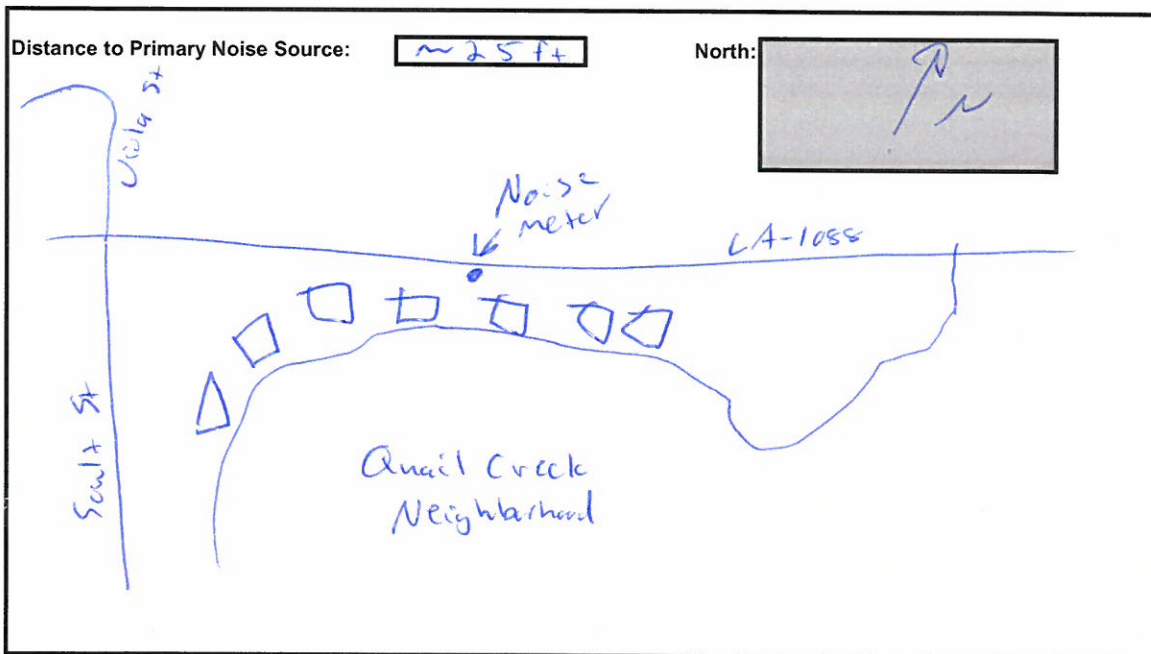
Weather Data: Date: 7/16/15 Time: 9:43 AM
Wind: Calm Temperature: 87°F
Weather: Sunny

Start Time: 9:43 AM End Time: 9:58 AM

Traffic Count Data

Road:	Primary Noise Source	Other (Intersecting Street)	Other (Intersecting Street)
Automobiles:	<u>125</u>		
Medium Trucks:	<u>82</u>		
Heavy Trucks:	<u>41</u>		
Buses:	<u>0</u>		
Motorcycles:	<u>0</u>		

Noise Meter Reading
61.7 dBA



Background Noise: Dogs
Major Sources: LA-1088
Unusual Events: None 9:50 AM
Other Notes: _____

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

LA 1088
Validation Site 2
INPUT HEIGHTS

68 deg F, 50% RH

ATMOSPHERICS:

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier		With Barrier				Noise Reduction		Calculated minus Goal dB
				LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	Calculated LAeq1h	Calculated	Goal	
			dBA	dBA	dBA	dB	dB	----	64.2	0.0	8	-8.0
Site 2	487	1	61.7	64.2	66	2.5	10					
Dwelling Units		# DUs	Noise Reduction									
			Min		Avg		Max					
			dB		dB		dB					
All Selected		1	0.0	0.0	0.0							
All Impacted		0	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

AVI-0209

Reading 3 of 3 at this receptor location.

Project: DOTD Project No. H.010116 / Volkert Project No. 534101.12
Receptor Location (or #): Site 3

Landuse Characteristics: Church

Equipment: Meter: Rion NL-32
Calibration: Start Cal: (dB) 65.4
Response: Fast: NA
A-Weighting? YES

Calibrator: Nelsonic 1251
Finish Cal: (dB) 114.2
Slow: YES
Battery Check?: YES

Weather Data: Date: 7/16/15
Wind: Calm
Weather: Sunny
Time: 11:15 AM
Temperature: 90°F

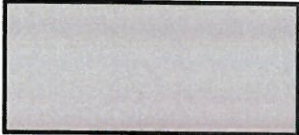
Start Time: 11:15 AM End Time: 11:30 AM

Traffic Count Data

Road:	Primary Noise Source	Other (Intersecting Street)	Other (Intersecting Street)
Automobiles:	<u>108</u>		
Medium Trucks:	<u>4</u>		
Heavy Trucks:	<u>3</u>		
Buses	<u>1</u>		
Motorcycles	<u>0</u>		

Noise Meter Reading
60.3 dBA

Distance to Primary Noise Source:

North: 

Background Noise: Bug 5
Major Sources: LA-1038
Unusual Events: Garbage Truck 11:27 AM - End
Other Notes:

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

30 July 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

LA 1088

Validation Site 3

INPUT HEIGHTS

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier		With Barrier		Type Impact	Noise Reduction		Calculated minus Goal dB
				LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc		Calculated	Goal	
				dBA	dBA	dB	dB		dBA	dB	dB
Site 3	246	1	60.3	63.2	66	2.9	10	----	63.2	0.0	8
											-8.0

Dwelling Units

	# DUs	Noise Reduction		
		Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

APPENDIX G
LA 1088 Corridor Study Noise
Report
Noise Barrier Feasibility and
Reasonableness Worksheets

Build Alternative 1 (1A and 1B)

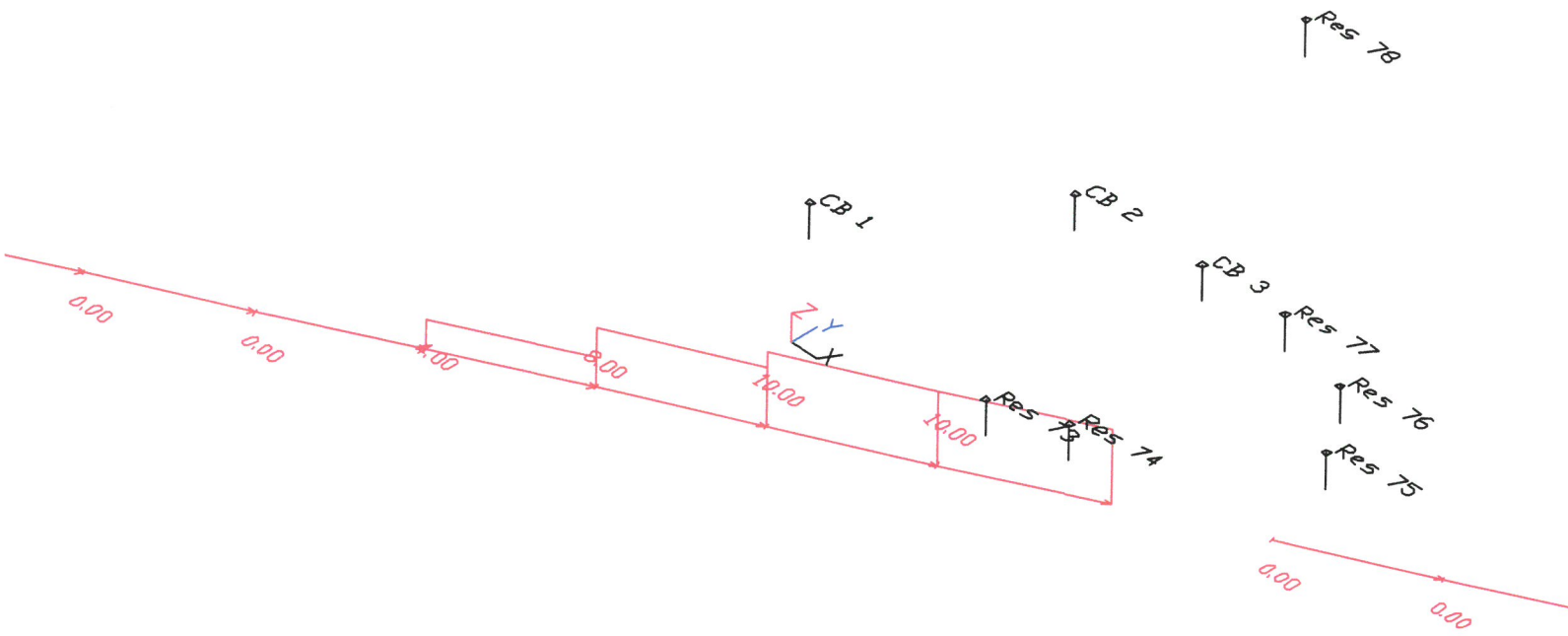
Build Alternative 1 (1A and 1B) - West Casa Bella Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		ALT 1	
Barrier	Location	Length (feet)	Height (feet)
	West Casa Bella	399	10
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
2	2		100
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle <u>Yes</u> or No		
	Explain: This barrier achieves a 25 dBA reduction at 75% or more of the impacted first row receptors		

Reasonableness Worksheet <u>DURING NEPA</u>				
Project	ID number	Route	Parish/City	
		ALT 1	St. Tammany	
Barrier	Length	Height	Location	
	399 ft	10 ft	West Casa Bella	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
3,003	\$27	\$81,081	2	\$40,541
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: Yes or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing Likely barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 (yes or <u>no</u>)	Criterion 2 (<u>yes</u> or no)	Criterion 3 (yes or no)	Date



Casa Bella Barrier Analysis Alt 1		Sheet 1 of 1	19 Jun 2018
Barrier View-Feasibility and Reasonableness-		Volkert	
Run name: Casa Bella Barrier Alt 1		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	→	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	→	Contour Zone:	polygon
Building Row:	— — —	Parallel Barrier:	— — —
Terrain Line:	— — —	Skew Section:	→

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

LA 1088

Casa Bella Barrier Analysis Alt 1

Feasibility and Reasonableness- West

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm	Top			Run:Rise	Cost
		Min	Avg	Max		Area	Volume		Width	ft	ft		
		ft	ft	ft	ft	sq ft	cu yd		ft		ft:ft		\$
East Casa Bella Barrier	W	0.00	0.00	0.00	0	0	0						0
West Casa Bella Barrier	W	4.00	8.02	10.00	399	3202							0
												Total Cost:	0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

Casa Bella Barrier Analysis Alt 1

Feasibility and Reasonableness- West

RUN:

BARRIER DESIGN:

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing			Type Impact	With Barrier			Calculated minus Goal dB
				Calculated	Crit'n	Calculated	Crit'n	Sub'l Inc		Calculated LAeq1h	Calculated	Goal	
			dBA	dBA	dBA	dB	dB	dBA	dB	dB	dB	dB	
Res 73	76	1	68.0	69.8	66	1.8	10	10	Snd Lvl	61.8	8.0	8	0.0
Res 74	77	1	68.3	70.2	66	1.9	10	10	Snd Lvl	64.2	6.0	8	-2.0
Res 75	78	1	66.6	68.1	66	1.5	10	10	Snd Lvl	67.6	0.5	8	-7.5
Res 76	79	1	61.3	63.5	66	2.2	10	10	-----	62.4	1.1	8	-6.9
Res 77	80	1	58.2	60.7	66	2.5	10	10	-----	59.2	1.5	8	-6.5
Res 78	81	1	50.0	52.5	66	2.5	10	10	-----	51.6	0.9	8	-7.1
School 79	82	1	54.0	57.1	66	3.1	10	10	-----	57.0	0.1	8	-7.9
CB 1	242	1	0.0	60.5	66	60.5	10	10	-----	57.5	3.0	8	-5.0
CB 2	245	1	0.0	57.9	66	57.9	10	10	-----	55.7	2.2	8	-5.8
CB 3	247	1	0.0	59.6	66	59.6	10	10	-----	57.7	1.9	8	-6.1
Dwelling Units			# DUs		Noise Reduction								
			Min	Avg	Max								
			dB	dB	dB								
All Selected		10	0.1	2.5	8.0								
All Impacted		3	0.5	4.8	8.0								
All that meet NR Goal		1	8.0	8.0	8.0								

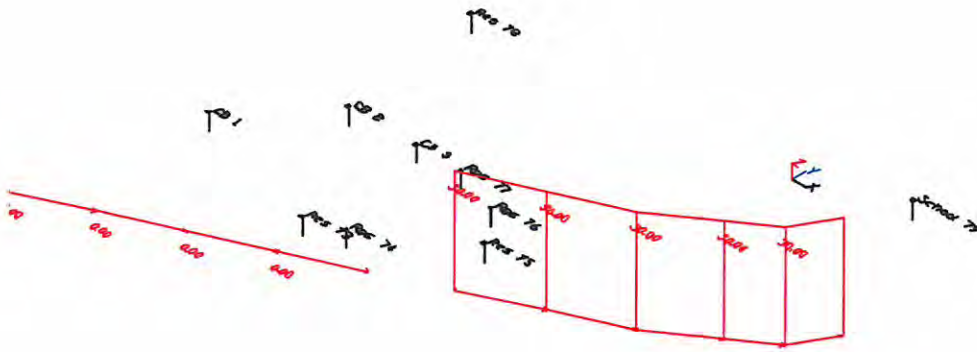
Build Alternative 1 (1A and 1B) - East Casa Bella

Noise Barrier Analysis

- Feasibility Analysis
 - LADTOD Feasibility Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
	Alt 1	East Casa Bella	
Barrier	Location	Length (feet)	Height (feet)
	East Casa Bella	418	30
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
01	0		0%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle Yes or No <u>No</u>		
	Explain: This barrier does not achieve at least a ≥ 5 dBA reduction at the impacted first row receptors		



Casa Bella Barrier Analysis Alt 1		Sheet 1 of 1	15 Jun 2015
Barrier View-Feasibility - East		Volkert	
Run name: Casa Bella Barrier Alt 1 30 ft		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	→	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	→	Contour Zone:	polygon
Building Row:	— —	Parallel Barrier:	— —
Terrain Line:	— —	Skew Section:	— →

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

15 June 2015
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

LA 1088

RUN:

Casa Bella Barrier Analysis Alt 1

BARRIER DESIGN:

Feasibility - East

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm	Cost		
		Min	Avg	Max		Area	Volume		Top Width	Run:Rise	
		ft	ft	ft	ft	sq ft	cu yd		ft	ft:ft	\$
East Casa Bella Barrier	W	30.00	30.00	30.00	418	12551					0
West Casa Bella Barrier	W	0.00	0.00	0.00	0	0	0				0
										Total Cost:	0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

15 June 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

LA 1088

Casa Bella Barrier Analysis Alt 1

Feasibility - East

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier			With Barrier						
				LAeq1h		Type Impact	Increase over existing		Calculated LAeq1h	Noise Reduction		Calculated minus Goal	
				Calculated	Crit'n		Calculated	Crit'n Sub'l Inc		Calculated	Goal		
													dBA
			dBA	dBA	dBA	dB	dB	dB	dBA	dB	dB	dB	dB
	Res 73	76	1	68.0	69.8	66	1.8	10	69.8	0.0	8	-8.0	
	Res 74	77	1	68.3	70.2	66	1.9	10	70.1	0.1	8	-7.9	
	Res 75	78	1	66.6	68.1	66	1.5	10	64.7	3.4	8	-4.6	
	Res 76	79	1	61.3	63.5	66	2.2	10	60.8	2.7	8	-5.3	
	Res 77	80	1	58.2	60.7	66	2.5	10	58.8	1.9	8	-6.1	
	Res 78	81	1	50.0	52.5	66	2.5	10	51.1	1.4	8	-6.6	
	School 79	82	1	54.0	57.1	66	3.1	10	55.4	1.7	8	-6.3	
	CB 1	242	1	0.0	60.5	66	60.5	10	60.1	0.4	8	-7.6	
	CB 2	245	1	0.0	57.9	66	57.9	10	57.0	0.9	8	-7.1	
	CB 3	247	1	0.0	59.6	66	59.6	10	58.1	1.5	8	-6.5	
Dwelling Units													
		# DUs	Noise Reduction										
			Min dB	Avg dB	Max dB								
All Selected		10	0.0	1.4	3.4								
All Impacted		3	0.0	1.2	3.4								
All that meet NR Goal		0	0.0	0.0	0.0								

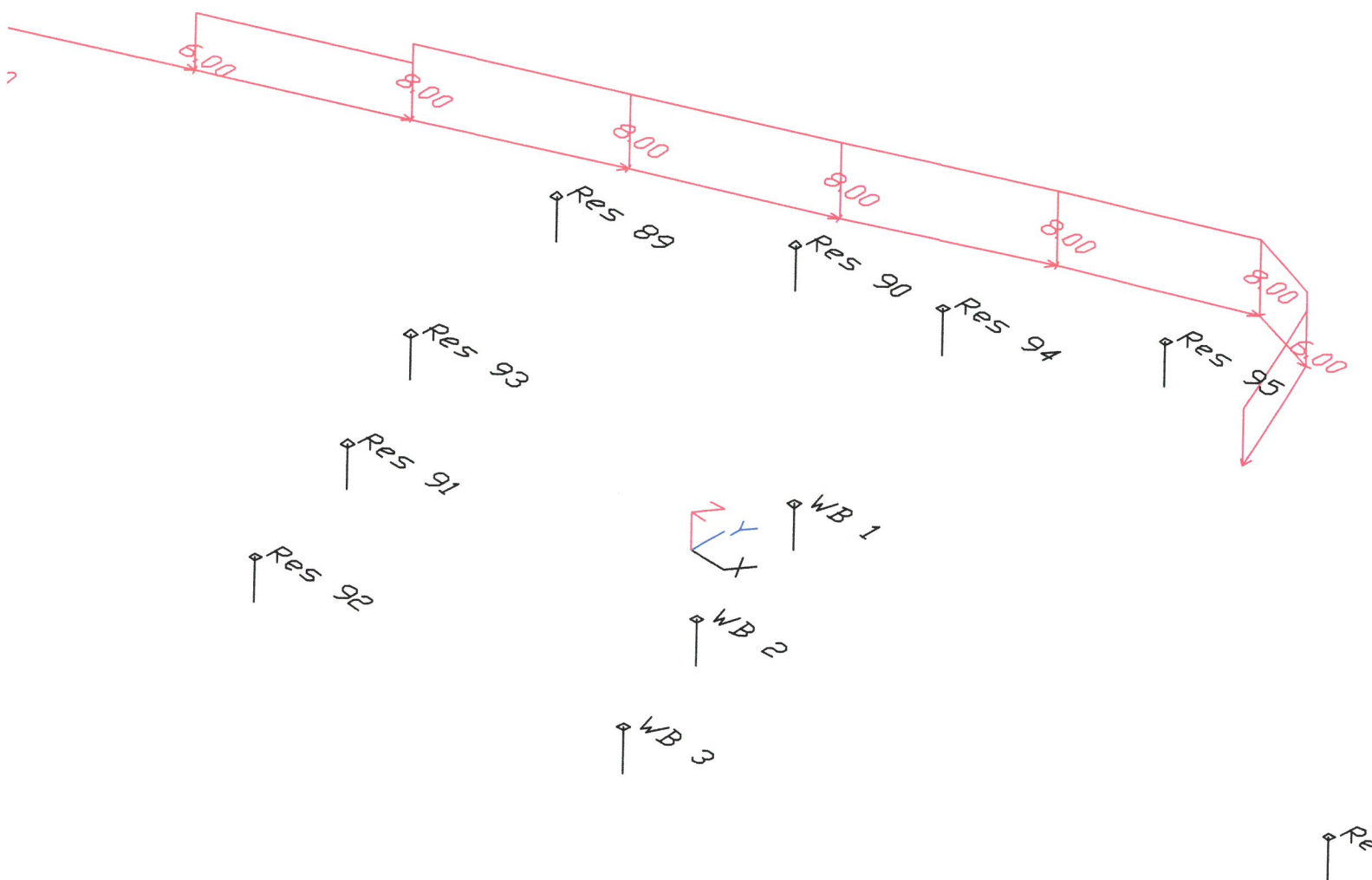
Build Alternative 1 (1A and 1B) - West Woodlands Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		ALT 1	
Barrier	Location	Length (feet)	Height (feet)
	West Woodlands	620	8
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
3	3		100
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle <u>Yes</u> or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% of the impacted first row receptors.		

Reasonableness Worksheet <u>DURING NEPA</u>				
Project	ID number	Route	Parish/City	
		ALT 1	St. Tammany	
Barrier	Length	Height	Location	
	620 ft	8 ft	West Woodlands	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
4,594	\$27	\$124,038	4	\$31,010
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: <u>Yes</u> or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing Likely barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 <u>yes</u> or no)	Criterion 2 <u>yes</u> or no)	Criterion 3 (yes or no)	Date



The Woodlands Barrier Alt 1A 2033		Sheet 1 of 1	19 Jun 2018
Barrier View-Feasibility and Reasonableness		Volkert	
Run name: The Woodlands Barriers Alt 1		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	—————>	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	—————>	Contour Zone:	polygon
Building Row:	—————	Parallel Barrier:	—————
Terrain Line:	—————	Skew Section:	—————>

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

RUN: LA 1088
The Woodlands Barrier Alt 1A 2033

BARRIER DESIGN:

Feasibility and Reasonableness - Wes

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm	Cost	
		Min	Avg	Max		Area	Volume		Top Width	Run:Rise
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	\$
Barrier3	W	0.00	0.00	0.00	0	0				0
West Woodlands Barrier	W	6.00	7.42	8.00	620	4594				0
									Total Cost:	0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

20 June 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

The Woodlands Barrier Alt 1A 2033

Feasibility and Reasonableness - West

RUN:

BARRIER DESIGN:

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing		No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB
			LAeq1h	dBA	LAeq1h	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Noise Reduction Calculated Goal	
			dBA	dBA	dBA	dBA	dB	dB		dBA	dB	dB
Res 89	92	1	65.8	67.1	66	1.3	10	Snd Lvl	60.1	7.0	8	-1.0
Res 90	93	1	66.2	67.5	66	1.3	10	Snd Lvl	59.5	8.0	8	0.0
Res 91	94	1	53.4	55.4	66	2.0	10	-----	53.3	2.1	8	-5.9
Res 92	95	1	51.1	53.1	66	2.0	10	-----	51.5	1.6	8	-6.4
Res 93	96	1	56.3	58.4	66	2.1	10	-----	55.5	2.9	8	-5.1
Res 94	97	1	64.1	65.6	66	1.5	10	-----	58.8	6.8	8	-1.2
Res 95	98	1	65.4	66.3	66	0.9	10	Snd Lvl	59.6	6.7	8	-1.3
Res 96	99	1	64.1	66.5	66	2.4	10	Snd Lvl	66.2	0.3	8	-7.7
Recreation 97	100	1	50.9	52.8	66	1.9	10	-----	52.1	0.7	8	-7.3
Res 98	101	1	62.7	64.9	66	2.2	10	-----	64.6	0.3	8	-7.7
Res 99	102	1	62.1	64.2	66	2.1	10	-----	64.0	0.2	8	-7.8
Res 100	103	1	52.6	54.9	66	2.3	10	-----	54.5	0.4	8	-7.6
Res 101	104	1	61.6	63.7	66	2.1	10	-----	63.6	0.1	8	-7.9
Res 102	105	1	59.7	62.1	66	2.4	10	-----	62.0	0.1	8	-7.9
Res 103	106	1	56.5	59.0	66	2.5	10	-----	59.0	0.0	8	-8.0
Res 104	107	1	55.4	57.8	66	2.4	10	-----	57.8	0.0	8	-8.0
Res 105	108	1	54.1	56.5	66	2.4	10	-----	56.5	0.0	8	-8.0
Res 106	109	1	51.0	53.0	66	2.0	10	-----	52.9	0.1	8	-7.9
Res 107	110	1	50.3	52.2	66	1.9	10	-----	52.1	0.1	8	-7.9
Res 108	111	1	49.8	51.6	66	1.8	10	-----	51.5	0.1	8	-7.9
Res 109	112	1	49.4	51.2	66	1.8	10	-----	51.0	0.2	8	-7.8
WB 1	227	1	0.0	55.9	66	55.9	10	-----	53.7	2.2	8	-5.8
WB 2	228	1	0.0	53.5	66	53.5	10	-----	52.0	1.5	8	-6.5

LA 1088

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Build Alternative 1 (1A and 1B) - East Woodlands

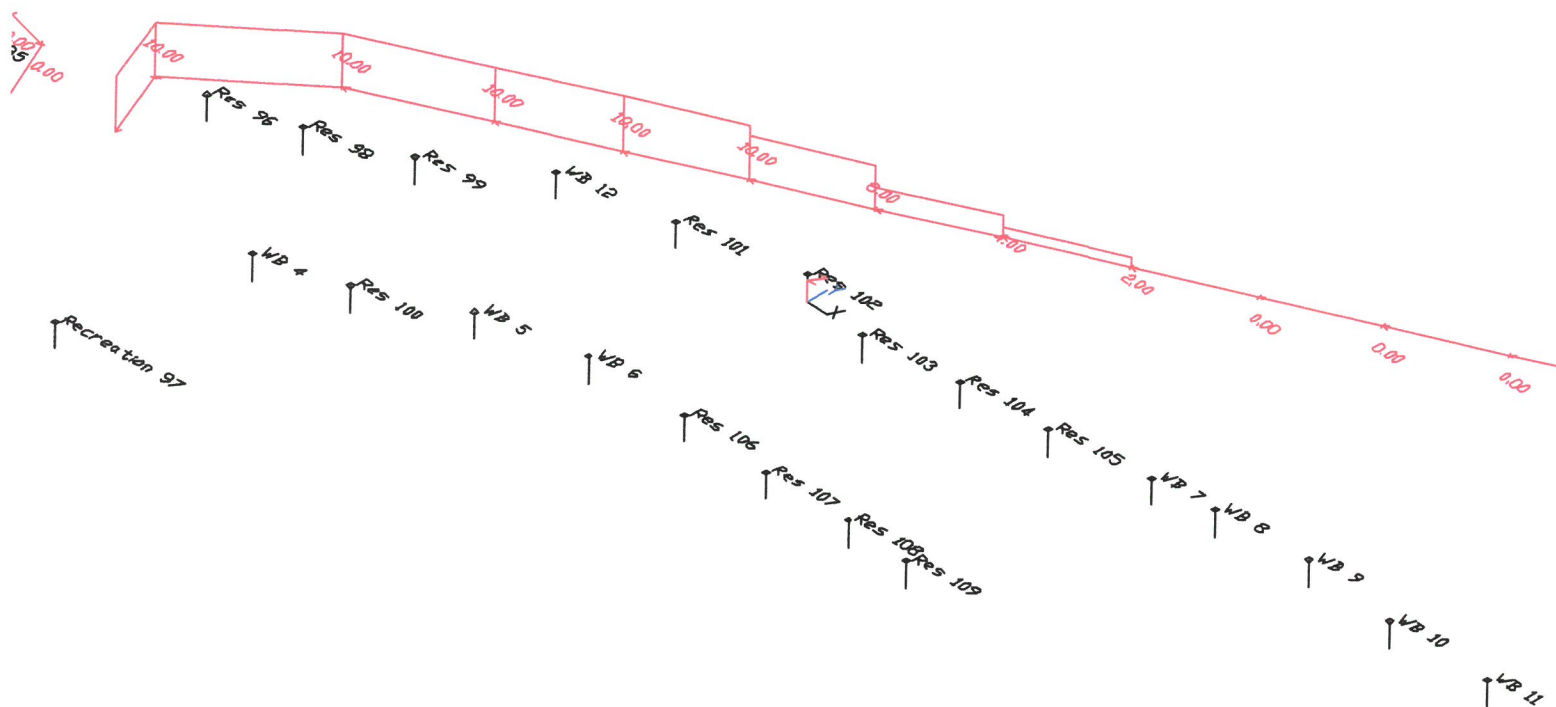
Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		ALT 1	
Barrier	Location	Length (feet)	Height (feet)
	East Woodlands	832	10
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
1	1		100%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle Yes or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% or more of the impacted first row receptors.		

Reasonableness Worksheet <u>DURING NEPA</u>				
Project	ID number	Route	Parish/City	
		ALT 1	St. Tammany	
Barrier	Length	Height	Location	
	832 ft	10 ft	East Woodlands	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
6,721	\$27	\$181,467	5	\$36,293
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: <u>Yes</u> or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing <i>Likely</i> barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 (yes or <u>no</u>)	Criterion 2 (<u>yes</u> or no)	Criterion 3 (yes or no)	Date



The Woodlands Barrier Alt 1A 2033		Sheet 1 of 1	19 Jun 2018
Barrier View-Feasibility and Reasonableness		Volkert	
Run name: The Woodlands Barriers Alt 1		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	→	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	→	Contour Zone:	polygon
Building Row:	— —	Parallel Barrier:	— —
Terrain Line:	— —	Skew Section:	→

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

LA 1088

RUN:

The Woodlands Barrier Alt 1A 2033

BARRIER DESIGN:

Feasibility and Reasonableness - East

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm	Cost	
		Min	Avg	Max		Area	Volume		Top Width	Run:Rise
		ft	ft	ft	ft	sq ft	cu yd	ft	ft	\$
Barrier3	W	2.00	8.07	10.00	832	6721				
West Woodlands Barrier	W	0.00	0.00	0.00	0	0	0			
									Total Cost:	

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

The Woodlands Barrier Alt 1A 2033

RUN:

BARRIER DESIGN:
Feasibility and Reasonableness - East

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier			With Barrier					
				LAeq1h		Type Impact	Calculated LAeq1h	Noise Reduction				
				Calculated	Crit'n			Calculated	Goal			
			dBA	dBA	dB	Crit'n Sub'l Inc	dBA	dB	dB	Calculated minus Goal	dB	
Res 89	92	1	65.8	67.1	66	1.3	10	Snd Lvl	67.1	0.0	8	-8.0
Res 90	93	1	66.2	67.5	66	1.3	10	Snd Lvl	67.4	0.1	8	-7.9
Res 91	94	1	53.4	55.4	66	2.0	10	-----	55.1	0.3	8	-7.7
Res 92	95	1	51.1	53.1	66	2.0	10	-----	52.6	0.5	8	-7.5
Res 93	96	1	56.3	58.4	66	2.1	10	-----	58.2	0.2	8	-7.8
Res 94	97	1	64.1	65.6	66	1.5	10	-----	65.5	0.1	8	-7.9
Res 95	98	1	65.4	66.3	66	0.9	10	Snd Lvl	66.1	0.2	8	-7.8
Res 96	99	1	64.1	66.5	66	2.4	10	Snd Lvl	58.7	7.8	8	-0.2
Recreation 97	100	1	50.9	52.8	66	1.9	10	-----	51.6	1.2	8	-6.8
	101	1	62.7	64.9	66	2.2	10	-----	57.6	7.3	8	-0.7
Res 98	102	1	62.1	64.2	66	2.1	10	-----	57.1	7.1	8	-0.9
Res 100	103	1	52.6	54.9	66	2.3	10	-----	52.2	2.7	8	-5.3
Res 101	104	1	61.6	63.7	66	2.1	10	-----	57.7	6.0	8	-2.0
Res 102	105	1	59.7	62.1	66	2.4	10	-----	58.3	3.8	8	-4.2
Res 103	106	1	56.5	59.0	66	2.5	10	-----	56.7	2.3	8	-5.7
Res 104	107	1	55.4	57.8	66	2.4	10	-----	56.3	1.5	8	-6.5
Res 105	108	1	54.1	56.5	66	2.4	10	-----	55.5	1.0	8	-7.0
Res 106	109	1	51.0	53.0	66	2.0	10	-----	51.3	1.7	8	-6.3
Res 107	110	1	50.3	52.2	66	1.9	10	-----	50.8	1.4	8	-6.6
Res 108	111	1	49.8	51.6	66	1.8	10	-----	50.4	1.2	8	-6.8
Res 109	112	1	49.4	51.2	66	1.8	10	-----	50.1	1.1	8	-6.9
WB 1	227	1	0.0	55.9	66	55.9	10	-----	55.1	0.8	8	-7.2
WB 2	228	1	0.0	53.5	66	53.5	10	-----	52.7	0.8	8	-7.2

LA 1088

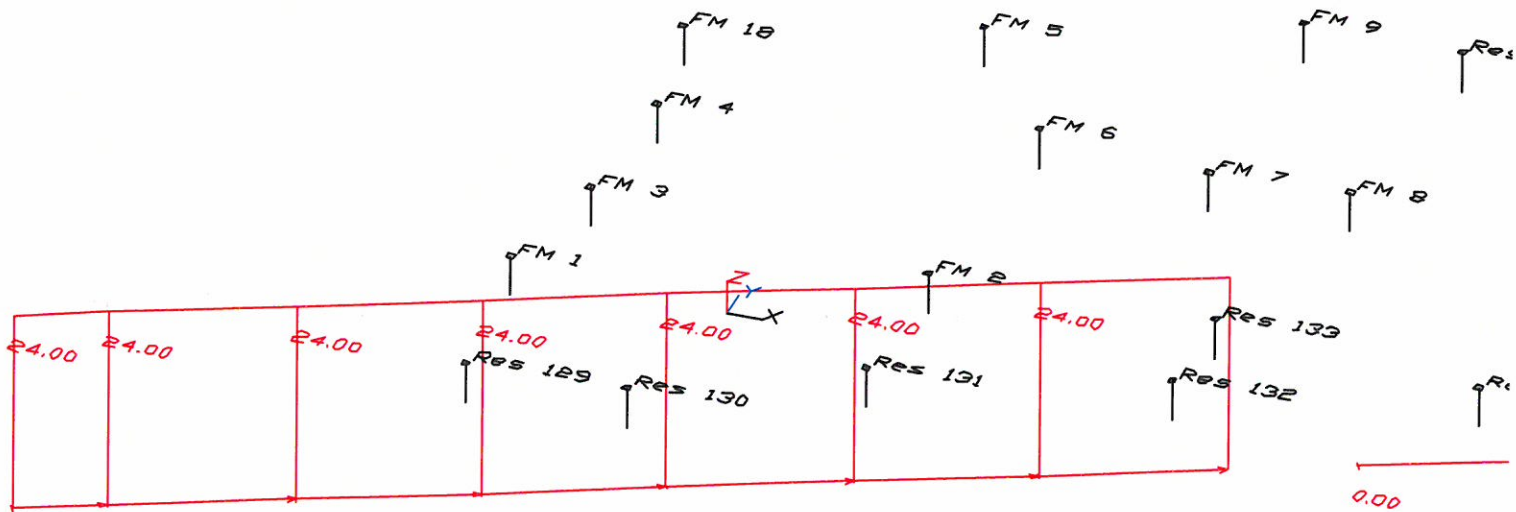
C:\NOISE PROJECTS\LA 1088 NOISE\JUNE 2018\RUNS\Barriers\The Woodlands Barriers Alt 1

Build Alternative 1 (1A and 1B) - West Frenchmen Noise Barrier Analysis

- Feasibility Analysis
 - LADOTD Feasibility Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		A1+1	
Barrier	Location	Length (feet)	Height (feet)
	West Frenchmen	654	24
Number of first row receptors (receptors adjacent to barrier):	Number of <i>first</i> row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
3	2		67%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle Yes or <u>No</u>		
	Explain: This barrier does not meet the 75% 5dBA reduction at 75% of the first row impacted receptors.		



Frenchmen Barrier Analysis Alt 1		Sheet 1 of 1	21 Sep 2015
Barrier View-Feasibility - West		Volkert	
Run name: Frenchmen Barrer Alt 1		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	→	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	→	Contour Zone:	polygon
Building Row:	— —	Parallel Barrier:	— —
Terrain Line:	— —	Skew Section:	— →

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

8 June 2015
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

LA 1088

Frenchmen Barrier Analysis Alt 1

Feasibility - West

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm		Cost	
		Min	Avg	Max		Area	Volume	Top Width	Run:Rise		
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	\$	
East Frenchmen Barrier	W	0.00	0.00	0.00	0.00	0	0			0	
West Frenchmen Barrier	W	24.00	24.00	24.00	654	15690				0	
									Total Cost:	0	

LA 1088

8 June 2015
TNM 2.5
Calculated w

LA 1088

Frenchmen Barrier Analysis Alt 1

Feasibility - West

68 deg F. 50% RH

68 deg F. 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier			With Barrier			Noise Reduction		
				LAeq1h		Type Impact	Calculated LAeq1h	Calculated		Calculated Goal	Calculated minus Goal	
				Calculated	Crit'n			Calculated	Goal			
			dBa	dBa	dB	dB	dB	dB	dB	dB	dB	dB
Res 129	132	1	62.1	64.9	66	2.8	10	----	54.8	10.1	8	2.1
Res 130	133	1	65.1	67.1	66	2.0	10	Snd Lvl	55.8	11.3	8	3.3
Res 131	134	1	63.8	66.5	66	2.7	10	Snd Lvl	57.1	9.4	8	1.4
Res 132	135	1	66.0	67.7	66	1.7	10	Snd Lvl	63.2	4.5	8	-3.5
Res 133	136	1	59.5	62.2	66	2.7	10	----	59.9	2.3	8	-5.7
Res 134	137	1	66.9	68.7	66	1.8	10	Snd Lvl	68.5	0.2	8	-7.8
Res 135	138	1	53.3	55.6	66	2.3	10	----	54.5	1.1	8	-6.9
Res 136	139	1	49.8	51.8	66	2.0	10	----	50.6	1.2	8	-6.8
Res 137	140	1	65.8	67.6	66	1.8	10	Snd Lvl	67.5	0.1	8	-7.9
Res 138	141	1	66.0	67.8	66	1.8	10	Snd Lvl	67.7	0.1	8	-7.9
Res 139	142	1	64.6	67.1	66	2.5	10	Snd Lvl	67.1	0.0	8	-8.0
Res 143	146	1	50.9	53.0	66	2.1	10	----	52.5	0.5	8	-7.5
FM 1	239	1	0.0	55.7	66	55.7	10	----	51.3	4.4	8	-3.6
FM 2	240	1	0.0	56.6	66	56.6	10	----	52.2	4.4	8	-3.6
FM 3	241	1	0.0	54.2	66	54.2	10	----	50.7	3.5	8	-4.5
FM 4	242	1	0.0	52.4	66	52.4	10	----	49.7	2.7	8	-5.3
FM 5	243	1	0.0	51.1	66	51.1	10	----	49.1	2.0	8	-6.0
FM 6	244	1	0.0	53.1	66	53.1	10	----	50.6	2.5	8	-5.5
FM 7	245	1	0.0	54.7	66	54.7	10	----	52.8	1.9	8	-6.1
FM 8	246	1	0.0	55.5	66	55.5	10	----	54.1	1.4	8	-6.6
FM 9	247	1	0.0	51.3	66	51.3	10	----	49.8	1.5	8	-6.5
FM 10	248	1	0.0	52.1	66	52.1	10	----	51.1	1.0	8	-7.0
FM 11	249	1	0.0	55.4	66	55.4	10	----	54.7	0.7	8	-7.3

RESULTS: SOUND LEVELS

LA 1088

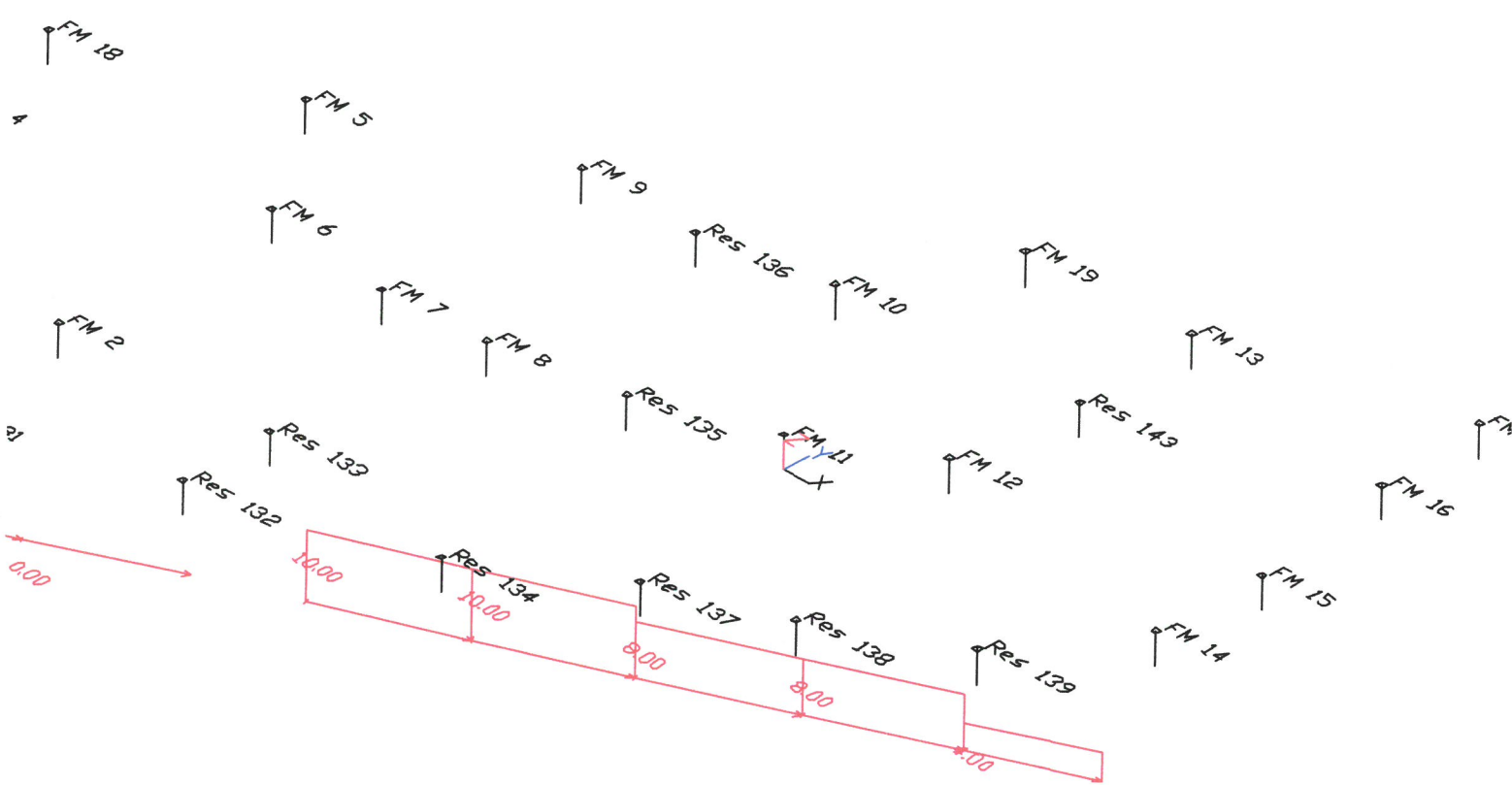
Dwelling Units		# DUs	Noise Reduction			66	54.9	10	-----	54.4	0.5	8	-7.5
			Min	Avg	Max								
			dB	dB	dB								
All Selected		31	0.0	2.3	11.3								
All Impacted		7	0.0	3.7	11.3								
All that meet NR Goal		3	9.4	10.3	11.3								

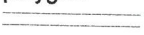
Build Alternative 1 (1A and 1B) - East Frenchmen Noise Barrier Analysis

- Feasibility and Reasonable Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet			
Project	ID number	Route Location	
		ALT 1	
Barrier	Location	Length (feet)	Height (feet)
	East Frenchmen	485	10
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
4	4		100
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle Yes or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% or more of the first row impacted receptors.		

Reasonableness Worksheet <u>DURING</u> NEPA				
Project	ID number	Route	Parish/City	
		ALT 1	St. Tammany	
Barrier	Length	Height	Location	
	485 ft	10	East Frenchmen	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
3,951	\$27	\$166,677	4	\$26,669
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: Yes or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing Likely barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 (yes or no)	Criterion 2 (yes or no)	Criterion 3 (yes or no)	Date



Frenchmen Barrier Analysis Alt 1		Sheet 1 of 1	19 Jun 2018
Barrier View-Feasibility and Reasonableness		Volkert	
Run name: Frenchmen Barrer Alt 1		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

LA 1088

RUN:

Frenchmen Barrier Analysis Alt 1

BARRIER DESIGN:

Feasibility and Reasonableness - East

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm		Top		Run:Rise	Cost
		Min	Avg	Max		Area	Volume	Width	ft	ft	ft		
		ft	ft	ft	ft	sq ft	cu yd	ft			ft.ft	\$	
East Frenchmen Barrier	W	4.00	8.14	10.00	485	3951							0
West Frenchmen Barrier	W	0.00	0.00	0.00	0	0							0
											Total Cost:		0

LA 1088

19 June 2018
TNM 2.5
Calculated with

LA 1088

Feasibility and Reasonableness - East

68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

C:\Noise Projects\LA 1088 Noise\June 2018\Runs\Barriers\Frenchman Drive - A14 4

RESULTS: SOUND LEVELS

LA 1088												
FM 12	250	1	0.0	54.9	66	54.9	10	53.2	1.7	8	-6.3	
FM 13	251	1	0.0	51.4	66	51.4	10	50.6	0.8	8	-7.2	
FM 14	252	1	0.0	63.1	66	63.1	10	61.1	2.0	8	-6.0	
FM 15	253	1	0.0	58.5	66	58.5	10	57.3	1.2	8	-6.8	
FM 16	254	1	0.0	54.0	66	54.0	10	53.4	0.6	8	-7.4	
FM 17	255	1	0.0	51.9	66	51.9	10	51.4	0.5	8	-7.5	
FM 18	256	1	0.0	51.0	66	51.0	10	50.6	0.4	8	-7.6	
FM 19	257	1	0.0	50.9	66	50.9	10	50.1	0.8	8	-7.2	
Dwelling Units												
		# DUs	Noise Reduction									
			Min dB	Avg dB	Max dB							
All Selected	31	0.0	1.6	8.0								
All Impacted	7	0.1	4.1	8.0								
All that meet NR Goal	1	8.0	8.0	8.0								

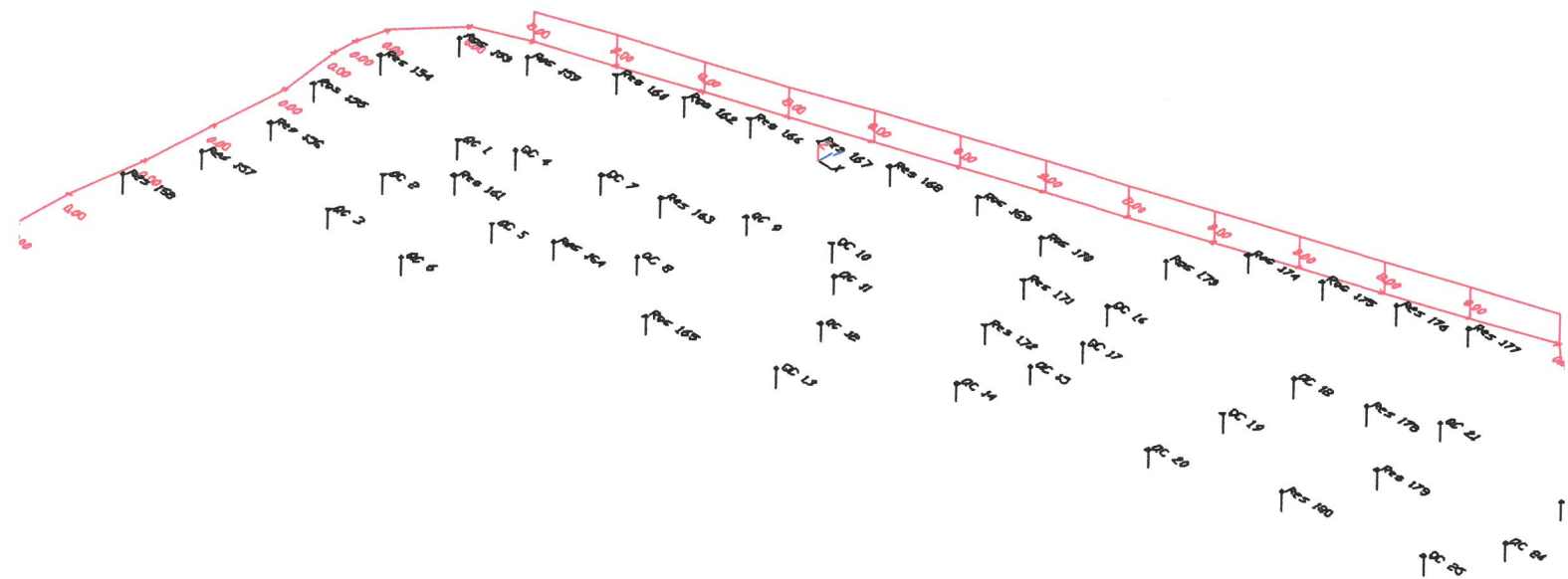
Build Alternative 1 (1A and 1B) - West Quail Creek Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		ALT 1	
Barrier	Location	Length (feet)	Height (feet)
	West Quail Creek	1,207	8
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
10	8		80%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle <u>Yes</u> or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% or more of the first row impacted receptors.		

Reasonableness Worksheet <u>DURING NEPA</u>				
Project	ID number	Route	Parish/City	
		A1+1	St. Tammany	
Barrier	Length	Height	Location	
	1,207	8 ft	West Quail Creek	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
9,659	\$27	\$260,793	12	\$21,733
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: <u>Yes</u> or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing Likely barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 (<u>yes</u> or no)	Criterion 2 (<u>yes</u> or no)	Criterion 3 (yes or no)	Date



Quail Creek Barrier Analysis Alt 1		Sheet 1 of 1	19 Jun 2018
Barrier View-Feasibility and Reasonableness		Volkert	
Run name: Quail Creek Barriers Alt 1		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	→	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	→	Contour Zone:	polygon
Building Row:	— —	Parallel Barrier:	— —
Terrain Line:	— —	Skew Section:	— — →

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

LA 1088

RUN:

Quail Creek Barrier Analysis Alt 1

BARRIER DESIGN:

Feasibility and Reasonableness - Wes

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm	Cost		
		Min	Avg	Max		Area	Volume		Top Width	Run:Rise	
		ft	ft	ft	ft	sq ft	cu yd		ft	ft	\$
West Quail Creek Barrier	W	8.00	8.00	8.00	1207	9659					0
East Quail Creek Barrier	W	0.00	0.00	0.00	0	0	0				0
										Total Cost:	0

RESULTS: SOUND LEVELS

LA 1088

Volkert

Thomas Lee

19 June 2018

TNM 2.5

Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

Quail Creek Barrier Analysis Alt 1

RUN:

BARRIER DESIGN: Feasibility and Reasonableness - West

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver

Name	No.	#DUs	Existing		No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB
			LAeq1h dBA	Crit'n	LAeq1h Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h dBA	Noise Reduction Calculated Goal dB	
Res 153	156	1	66.0	67.1	66	66	1.1	10	Snd Lvl	66.1	1.0	8
Res 154	157	1	63.3	64.2	66	66	0.9	10	---	63.9	0.3	8
Res 155	158	1	62.7	64.3	66	66	1.6	10	---	64.2	0.1	8
Res 156	159	1	60.9	62.8	66	66	1.9	10	---	62.7	0.1	8
Res 157	160	1	61.7	63.3	66	66	1.6	10	---	63.3	0.0	8
Res 158	161	1	63.4	65.1	66	66	1.7	10	---	65.1	0.0	8
Res 159	162	1	65.7	67.2	66	66	1.5	10	Snd Lvl	63.2	4.0	8
Res 160	163	1	66.5	68.3	66	66	1.8	10	Snd Lvl	60.2	8.1	8
Res 161	164	1	52.9	55.1	66	66	2.2	10	---	53.7	1.4	8
Res 162	165	1	66.1	67.9	66	66	1.8	10	Snd Lvl	59.4	8.5	8
Res 163	166	1	53.4	56.1	66	66	2.7	10	---	52.9	3.2	8
Res 164	167	1	51.1	53.3	66	66	2.2	10	---	51.5	1.8	8
Res 165	168	1	49.6	51.6	66	66	2.0	10	---	49.7	1.9	8
Res 166	169	1	66.0	67.6	66	66	1.6	10	Snd Lvl	59.1	8.5	8
Res 167	170	1	65.6	66.9	66	66	1.3	10	Snd Lvl	58.8	8.1	8
Res 168	171	1	65.0	66.4	66	66	1.4	10	Snd Lvl	58.4	8.0	8
Res 169	172	1	64.2	65.9	66	66	1.7	10	---	58.1	7.8	8
Res 170	173	1	61.1	63.5	66	66	2.4	10	---	56.5	7.0	8
Res 171	174	1	55.5	59.0	66	66	3.5	10	---	52.8	6.2	8
Res 172	175	1	51.6	54.6	66	66	3.0	10	---	50.0	4.6	8
Res 173	176	1	62.7	64.8	66	66	2.1	10	---	57.2	7.6	8
Res 174	177	1	67.0	68.8	66	66	1.8	10	Snd Lvl	60.0	8.8	8
Res 175	178	1	66.5	67.9	66	66	1.4	10	Snd Lvl	59.8	8.1	8
												0.1

RESULTS: SOUND LEVELS

LA 1088												
Res 176	179	1	66.3	66.6	66	0.3	10	Snd Lvl	59.8	6.8	8	-1.2
Res 177	180	1	66.2	65.1	66	-1.1	10		60.4	4.7	8	-3.3
Res 178	181	1	53.6	55.8	66	2.2	10		53.5	2.3	8	-5.7
Res 179	182	1	51.8	53.3	66	1.5	10		51.7	1.6	8	-6.4
Res 180	183	1	50.0	51.6	66	1.6	10		49.9	1.7	8	-6.3
Res 181	184	1	66.7	66.8	66	0.1	10	Snd Lvl	66.6	0.2	8	-7.8
Res 182	185	1	66.9	68.3	66	1.4	10	Snd Lvl	68.2	0.1	8	-7.9
Res 183	186	1	67.5	69.2	66	1.7	10	Snd Lvl	69.2	0.0	8	-8.0
Res 184	187	1	67.1	68.8	66	1.7	10	Snd Lvl	68.7	0.1	8	-7.9
Res 185	188	1	67.2	69.0	66	1.8	10	Snd Lvl	69.0	0.0	8	-8.0
Res 186	189	1	67.5	69.2	66	1.7	10	Snd Lvl	69.2	0.0	8	-8.0
Res 187	190	1	67.3	69.0	66	1.7	10	Snd Lvl	69.0	0.0	8	-8.0
Office 188	191	1	67.4	69.1	71	1.7	10		69.1	0.0	8	-8.0
Res 189	192	1	64.2	66.9	66	2.7	10	Snd Lvl	66.9	0.0	8	-8.0
Res 190	193	1	53.3	55.5	66	2.2	10		55.0	0.5	8	-7.5
Res 191	194	1	51.6	53.6	66	2.0	10		53.4	0.2	8	-7.8
Res 192	195	1	50.4	52.4	66	2.0	10		52.1	0.3	8	-7.7
QC 1	227	1	0.0	56.4	66	56.4	10		54.8	1.6	8	-6.4
QC 2	228	1	0.0	55.0	66	55.0	10		54.0	1.0	8	-7.0
QC 3	229	1	0.0	53.9	66	53.9	10		53.2	0.7	8	-7.3
QC 4	230	1	0.0	56.5	66	56.5	10		54.4	2.1	8	-5.9
QC 5	231	1	0.0	53.6	66	53.6	10		52.1	1.5	8	-6.5
QC 6	232	1	0.0	52.4	66	52.4	10		51.5	0.9	8	-7.1
QC 7	233	1	0.0	56.3	66	56.3	10		53.5	2.8	8	-5.2
QC 8	234	1	0.0	53.4	66	53.4	10		51.1	2.3	8	-5.7
QC 9	235	1	0.0	56.3	66	56.3	10		52.5	3.8	8	-4.2
QC 10	236	1	0.0	56.1	66	56.1	10		52.2	3.9	8	-4.1
QC 11	237	1	0.0	54.6	66	54.6	10		51.2	3.4	8	-4.6
QC 12	238	1	0.0	52.6	66	52.6	10		50.0	2.6	8	-5.4
QC 13	239	1	0.0	50.9	66	50.9	10		48.8	2.1	8	-5.9
QC 14	240	1	0.0	51.5	66	51.5	10		48.6	2.9	8	-5.1
QC 15	241	1	0.0	53.1	66	53.1	10		49.1	4.0	8	-4.0
QC 16	242	1	0.0	59.0	66	59.0	10		52.8	6.2	8	-1.8
QC 17	243	1	0.0	55.2	66	55.2	10		50.4	4.8	8	-3.2
QC 18	244	1	0.0	55.9	66	55.9	10		52.9	3.0	8	-5.0
QC 19	245	1	0.0	53.5	66	53.5	10		51.1	2.4	8	-5.6
QC 20	246	1	0.0	51.7	66	51.7	10		49.6	2.1	8	-5.9
QC 21	247	1	0.0	56.3	66	56.3	10		54.7	1.6	8	-6.4
QC 22	248	1	0.0	57.2	66	57.2	10		56.3	0.9	8	-7.1
QC 23	249	1	0.0	54.4	66	54.4	10		53.6	0.8	8	-7.2
QC 24	250	1	0.0	52.2	66	52.2	10		51.3	0.9	8	-7.1
C:\Noise Projects\LA 1088 Noise\June 2018\Runs\Barriers\Quail Creek Barriers Alt 1												

RESULTS: SOUND LEVELS

LA 1088									
QC	25	251	1	0.0	51.1	66	51.1	10	
QC 26		252	1	0.0	55.9	66	55.9	10	
QC 27		253	1	0.0	55.8	66	55.8	10	
QC 28		254	1	0.0	55.9	66	55.9	10	
QC 29		255	1	0.0	51.3	66	51.3	10	
QC 30		256	1	0.0	55.9	66	55.9	10	
QC 31		257	1	0.0	60.0	66	60.0	10	
QC 32		258	1	0.0	55.1	66	55.1	10	
QC 33		259	1	0.0	53.2	66	53.2	10	
QC 34		260	1	0.0	51.6	66	51.6	10	
Dwelling Units									
		# DUs	Noise Reduction						
			Min	Avg	Max				
			dB	dB	dB				
All Selected		74	0.0	2.5	8.8				
All Impacted		18	0.0	3.9	8.8				
All that meet NR Goal		7	8.0	8.3	8.8				

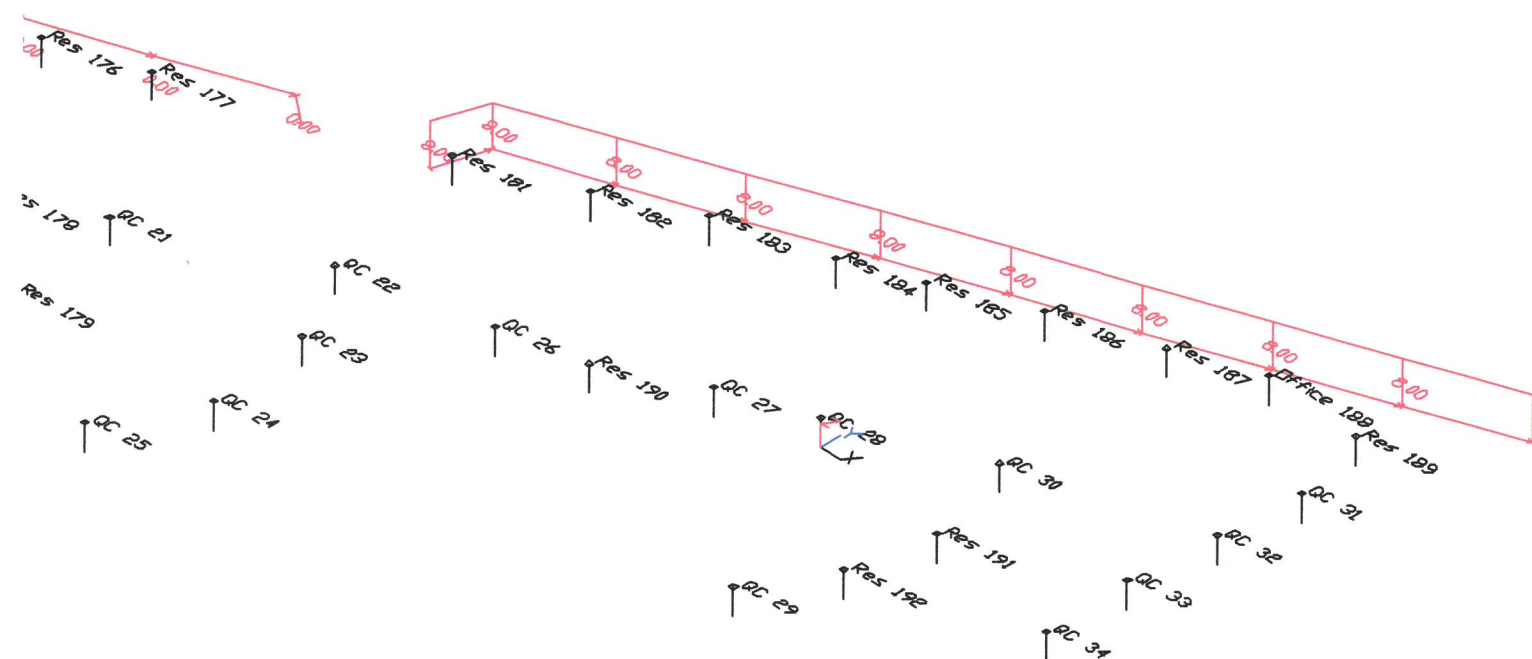
Build Alternative 1 (1A and 1B) - East Quail Creek Noise Barrier Analysis

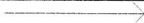
- Feasibility and Reasonableness Analyses
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 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		ALT 1	
Barrier	Location	Length (feet)	Height (feet)
	East Quail Creek	842	8
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
8	8		100%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle Yes or No		
	Explain: This barrier achieves a ≥ 5dBA reduction at 75% or more of the first row impacted receptors.		

Reasonableness Worksheet <u>DURING NEPA</u>				
Project	ID number	Route	Parish/City	
		A1+1	St. Tammany	
Barrier	Length	Height	Location	
	842 ft	8 ft	East Quail Creek	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
6,733	\$27	\$181,791	8	\$22,724
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: <u>Yes</u> or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing Likely barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 (<u>yes</u> or no)	Criterion 2 (<u>yes</u> or no)	Criterion 3 (yes or no)	Date



Quail Creek Barrier Analysis Alt 1		Sheet 1 of 1	19 Jun 2018
Barrier View-Feasibility and Reasonableness		Volkert	
Run name: Quail Creek Barriers Alt 1		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

LA 1088

Quail Creek Barrier Analysis Alt 1

Feasibility and Reasonableness - East

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm	Cost	
		Min	Avg	Max		Area	Volume		Top Width	Run:Rise
								ft		
West Quail Creek Barrier	W	0.00	0.00	0.00	0	0	0			0
East Quail Creek Barrier	W	8.00	8.00	8.00	842	6733	0			0
										Total Cost: 0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: LA 1088

RUN: Quail Creek Barrier Analysis Alt 1

BARRIER DESIGN: Feasibility and Reasonableness - East

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing	Type Impact	With Barrier		Calculated minus Goal
				Calculated	Crit'n			Calculated LAeq1h	Noise Reduction Calculated Goal	
			dBA	dBA	dBA	Calculated	Crit'n Sub'l Inc	dBA	dB	dB
Res 153	156	1	66.0	67.1	66	1.1	10	67.1	0.0	8
Res 154	157	1	63.3	64.2	66	0.9	10	64.1	0.1	8
Res 155	158	1	62.7	64.3	66	1.6	10	64.3	0.0	8
Res 156	159	1	60.9	62.8	66	1.9	10	62.8	0.0	8
Res 157	160	1	61.7	63.3	66	1.6	10	63.3	0.0	8
Res 158	161	1	63.4	65.1	66	1.7	10	65.1	0.0	8
Res 159	162	1	65.7	67.2	66	1.5	10	67.2	0.0	8
Res 160	163	1	66.5	68.3	66	1.8	10	68.3	0.0	8
Res 161	164	1	52.9	55.1	66	2.2	10	55.1	0.0	8
Res 162	165	1	66.1	67.9	66	1.8	10	67.9	0.0	8
Res 163	166	1	53.4	56.1	66	2.7	10	56.1	0.0	8
Res 164	167	1	51.1	53.3	66	2.2	10	53.3	0.0	8
Res 165	168	1	49.6	51.6	66	2.0	10	51.6	0.0	8
Res 166	169	1	66.0	67.6	66	1.6	10	67.6	0.0	8
Res 167	170	1	65.6	66.9	66	1.3	10	66.9	0.0	8
Res 168	171	1	65.0	66.4	66	1.4	10	66.4	0.0	8
Res 169	172	1	64.2	65.9	66	1.7	10	65.9	0.0	8
Res 170	173	1	61.1	63.5	66	2.4	10	63.5	0.0	8
Res 171	174	1	55.5	59.0	66	3.5	10	59.0	0.0	8
Res 172	175	1	51.6	54.6	66	3.0	10	54.5	0.1	8
Res 173	176	1	62.7	64.8	66	2.1	10	64.8	0.0	8
Res 174	177	1	67.0	68.8	66	1.8	10	68.8	0.0	8
Res 175	178	1	66.5	67.9	66	1.4	10	67.8	0.1	8

C:\Noise Projects\LA 1088 Noise\June 2018\Runs\Barriers\Quail Creek Barriers Alt 1

RESULTS: SOUND LEVELS

LA 1088

Res 176	179	1	66.3	66.6	66	0.3	10	Snd Lvl	66.5	0.1	8	-7.9
Res 177	180	1	66.2	65.1	66	-1.1	10	-----	64.8	0.3	8	-7.7
Res 178	181	1	53.6	55.8	66	2.2	10	-----	55.1	0.7	8	-7.3
Res 179	182	1	51.8	53.3	66	1.5	10	-----	52.6	0.7	8	-7.3
Res 180	183	1	50.0	51.6	66	1.6	10	-----	51.0	0.6	8	-7.4
Res 181	184	1	66.7	66.8	66	0.1	10	Snd Lvl	60.2	6.6	8	-1.4
Res 182	185	1	66.9	68.3	66	1.4	10	Snd Lvl	59.8	8.5	8	0.5
Res 183	186	1	67.5	69.2	66	1.7	10	Snd Lvl	60.3	8.9	8	0.9
Res 184	187	1	67.1	68.8	66	1.7	10	Snd Lvl	60.0	8.8	8	0.8
Res 185	188	1	67.2	69.0	66	1.8	10	Snd Lvl	60.1	8.9	8	0.9
Res 186	189	1	67.5	69.2	66	1.7	10	Snd Lvl	60.4	8.8	8	0.8
Res 187	190	1	67.3	69.0	66	1.7	10	Snd Lvl	60.5	8.5	8	0.5
Office 188	191	1	67.4	69.1	71	1.7	10	-----	60.9	8.2	8	0.2
Res 189	192	1	64.2	66.9	66	2.7	10	Snd Lvl	61.1	5.8	8	-2.2
Res 190	193	1	53.3	55.5	66	2.2	10	-----	53.0	2.5	8	-5.5
Res 191	194	1	51.6	53.6	66	2.0	10	-----	51.6	2.0	8	-6.0
Res 192	195	1	50.4	52.4	66	2.0	10	-----	50.7	1.7	8	-6.3
QC 1	227	1	0.0	56.4	66	56.4	10	-----	56.4	0.0	8	-8.0
QC 2	228	1	0.0	55.0	66	55.0	10	-----	55.0	0.0	8	-8.0
QC 3	229	1	0.0	53.9	66	53.9	10	-----	53.9	0.0	8	-8.0
QC 4	230	1	0.0	56.5	66	56.5	10	-----	56.5	0.0	8	-8.0
QC 5	231	1	0.0	53.6	66	53.6	10	-----	53.5	0.1	8	-7.9
QC 6	232	1	0.0	52.4	66	52.4	10	-----	52.4	0.0	8	-8.0
QC 7	233	1	0.0	56.3	66	56.3	10	-----	56.3	0.0	8	-8.0
QC 8	234	1	0.0	53.4	66	53.4	10	-----	53.4	0.0	8	-8.0
QC 9	235	1	0.0	56.3	66	56.3	10	-----	56.2	0.1	8	-7.9
QC 10	236	1	0.0	56.1	66	56.1	10	-----	56.1	0.0	8	-8.0
QC 11	237	1	0.0	54.6	66	54.6	10	-----	54.5	0.1	8	-7.9
QC 12	238	1	0.0	52.6	66	52.6	10	-----	52.5	0.1	8	-7.9
QC 13	239	1	0.0	50.9	66	50.9	10	-----	50.8	0.1	8	-7.9
QC 14	240	1	0.0	51.5	66	51.5	10	-----	51.3	0.2	8	-7.8
QC 15	241	1	0.0	53.1	66	53.1	10	-----	53.1	0.0	8	-8.0
QC 16	242	1	0.0	59.0	66	59.0	10	-----	58.9	0.1	8	-7.9
QC 17	243	1	0.0	55.2	66	55.2	10	-----	55.2	0.0	8	-8.0
QC 18	244	1	0.0	55.9	66	55.9	10	-----	55.5	0.4	8	-7.6
QC 19	245	1	0.0	53.5	66	53.5	10	-----	53.1	0.4	8	-7.6
QC 20	246	1	0.0	51.7	66	51.7	10	-----	51.2	0.5	8	-7.5
QC 21	247	1	0.0	56.3	66	56.3	10	-----	55.5	0.8	8	-7.2
QC 22	248	1	0.0	57.2	66	57.2	10	-----	56.0	1.2	8	-6.8
QC 23	249	1	0.0	54.4	66	54.4	10	-----	53.2	1.2	8	-6.8
QC 24	250	1	0.0	52.2	66	52.2	10	-----	51.2	1.0	8	-7.0

C:\Noise Projects\LA 1088 Noise\June 2018\Runs\Barriers\Quail Creek Barriers Alt 1

RESULTS: SOUND LEVELS

LA 1088									
QC 25	251	1	0.0	51.1	66	51.1	10	---	50.3
QC 26	252	1	0.0	55.9	66	55.9	10	---	53.6
QC 27	253	1	0.0	55.8	66	55.8	10	---	53.0
QC 28	254	1	0.0	55.9	66	55.9	10	---	49.7
QC 29	255	1	0.0	51.3	66	51.3	10	---	53.2
QC 30	256	1	0.0	55.9	66	55.9	10	---	57.0
QC 31	257	1	0.0	60.0	66	60.0	10	---	52.5
QC 32	258	1	0.0	55.1	66	55.1	10	---	51.0
QC 33	259	1	0.0	53.2	66	53.2	10	---	49.7
QC 34	260	1	0.0	51.6	66	51.6	10	---	1.9
Dwelling Units		# DUs	Noise Reduction						
			Min	Avg	Max				
			dB	dB	dB				
All Selected		74	0.0	1.5	8.9				
All Impacted		18	0.0	3.6	8.9				
All that meet NR Goal		7	8.2	8.7	8.9				

Build Alternative 2

Build Alternative 2 - West Casa Bella Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		ALT 2	
Barrier	Location	Length (feet)	Height (feet)
	Wpst Casa Bella	299	10
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
2	2		100
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle <u>Yes</u> or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% or more of the first row impacted receptors.		

Reasonableness Worksheet <u>DURING</u> NEPA				
Project	ID number	Route	Parish/City	
		ALT 2	St. Tammany	
Barrier	Length	Height	Location	
	299 ft	10 ft	West Casa Bella	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
2,395	\$27	\$64,665	2	\$32,333
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: <u>Yes</u> or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing <i>Likely</i> barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 (<u>yes</u>) or no)	Criterion 2 (<u>yes</u>) or no)	Criterion 3 (yes or no)	Date

Res 78

CB 1

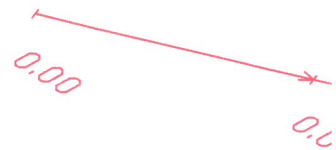
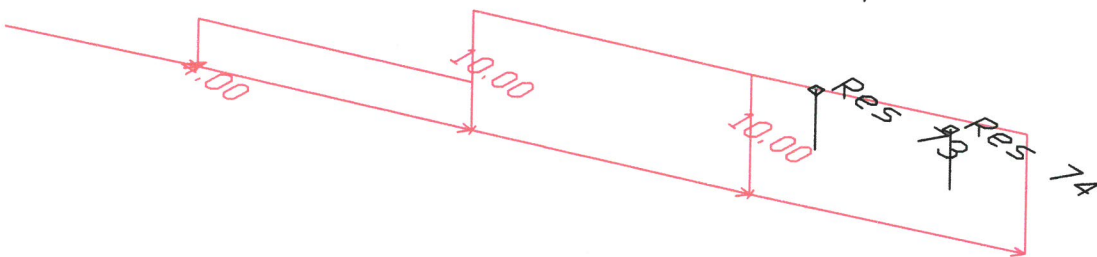
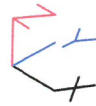
CB 2

CB 3

Res 77

Res 76

Res 75



Casa Bella Barrier Alt 2		Sheet 1 of 1	19 Jun 2018
Barrier View-Feasibility and Reasonableness		Volkert	
Run name: Casa Bella Barrier Alt 2		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

LA 1088

RUN:

Casa Bella Barrier Alt 2

BARRIER DESIGN:

Feasibility and Reasonableness - Wes

Barriers

Name	Type	Heights along Barrier			Length	If Wall Area	If Berm Volume	Top Width	Run:Rise	Cost
		Min	Avg	Max						
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	\$
East Casa Bella Barrier	W	0.00	0.00	0.00	0	0	0			0
West Casa Bella Barrier	W	4.00	8.01	10.00	299	2395				0
Total Cost:										0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

19 June 2018

TNM 2.5

Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

Casa Bella Barrier Alt 2

Feasibility and Reasonableness - West

RUN:

BARRIER DESIGN:

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver

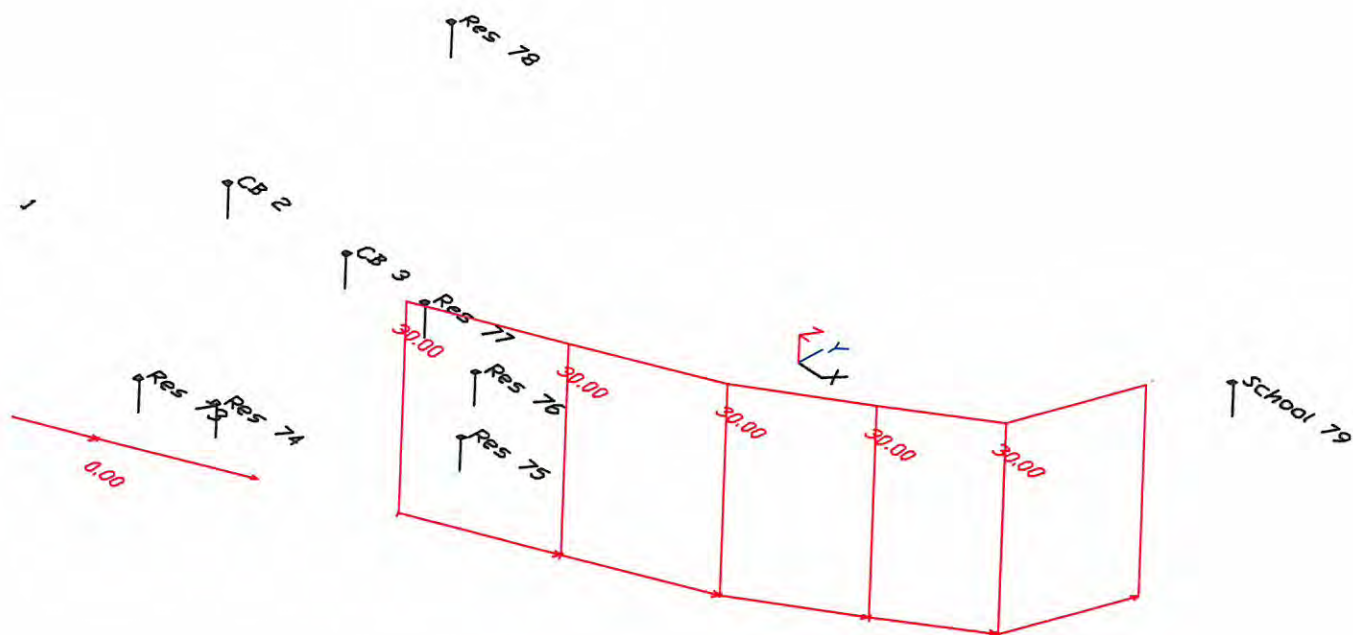
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing			Type Impact	With Barrier			Calculated minus Goal
				LAeq1h Calculated	Crit'n	Calculated	Crit'n Sub'l Inc	Calculated LAeq1h		Noise Reduction Calculated	Goal		
			dBA	dBA	dBA	dB	dB			dBA	dB	dB	
Res 73	173	1	68.0	70.0	66	2.0	10	Snd Lvl	62.0	8.0	8	0.0	
Res 74	174	1	68.3	70.5	66	2.2	10	Snd Lvl	64.0	6.5	8	-1.5	
Res 75	175	1	66.6	68.2	66	1.6	10	Snd Lvl	67.8	0.4	8	-7.6	
Res 76	176	1	61.3	63.8	66	2.5	10		62.9	0.9	8	-7.1	
Res 77	177	1	58.2	61.6	66	3.4	10		60.1	1.5	8	-6.5	
Res 78	178	1	50.0	53.0	66	3.0	10		52.2	0.8	8	-7.2	
School 79	179	1	54.0	57.4	66	3.4	10		57.2	0.2	8	-7.8	
CB 1	242	1	0.0	61.5	66	61.5	10		59.5	2.0	8	-6.0	
CB 2	245	1	0.0	59.2	66	59.2	10		57.1	2.1	8	-5.9	
CB 3	247	1	0.0	60.7	66	60.7	10		58.8	1.9	8	-6.1	
Dwelling Units													
		# DUs	Noise Reduction										
			Min dB	Avg dB	Max dB								
All Selected		10	0.2	2.4	8.0								
All Impacted		3	0.4	5.0	8.0								
All that meet NR Goal		1	8.0	8.0	8.0								

Build Alternative 2 - East Casa Bella Noise Barrier Analysis

- Feasibility Analysis
 - LADOTD Feasibility Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		A1+2	
Barrier	Location	Length (feet)	Height (feet)
	East cush bella	454	30
Number of first row receptors (receptors adjacent to barrier):	Number of <i>first</i> row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
1	0		0%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle Yes or No		
	Explain: This barrier fails to achieve a 5dBA reduction at 75% of the impacted first row receptors.		



Casa Bella Barrier Alt 2		Sheet 1 of 1	15 Jun 2015
Barrier View-Feasibility - East		Volkert	
Run name: Casa Bella Barrier Alt 2		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	→	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	→	Contour Zone:	polygon
Building Row:	— —	Parallel Barrier:	— —
Terrain Line:	— —	Skew Section:	→

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

15 June 2015
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

LA 1088

RUN:

Casa Bella Barrier Alt 2

BARRIER DESIGN:

Feasibility - East

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm		Cost	
		Min	Avg	Max		Area	Volume	Top Width	Run:Rise		
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	\$	
East Casa Bella Barrier	W	30.00	30.00	30.00	454	13633					0
West Casa Bella Barrier	W	0.00	0.00	0.00	0	0	0				0
									Total Cost:		0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

15 June 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

RUN:

Casa Bella Barrier Alt 2

BARRIER DESIGN:

Feasibility - East

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

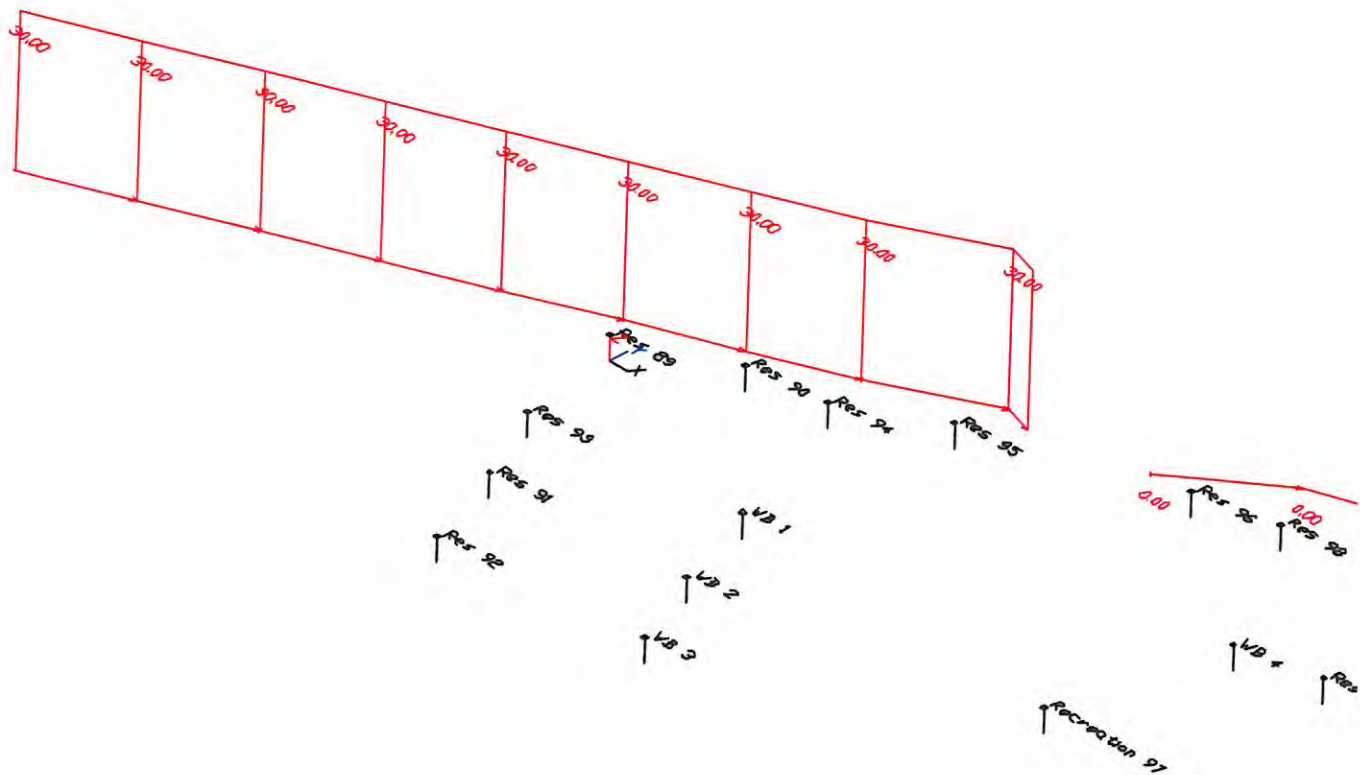
Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier		With Barrier				Noise Reduction		Calculated minus Goal	
				LAeq1h	Calculated	Crit'n	Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
							Calculated	Crit'n			Calculated		Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB		
Res 73	173	1	68.0	70.0	66	2.0	10	Snd Lvl	70.0	0.0	8	-8.0	
Res 74	174	1	68.3	70.5	66	2.2	10	Snd Lvl	70.4	0.1	8	-7.9	
Res 75	175	1	66.6	68.2	66	1.6	10	Snd Lvl	64.3	3.9	8	-4.1	
Res 76	176	1	61.3	63.8	66	2.5	10		61.0	2.8	8	-5.2	
Res 77	177	1	58.2	61.6	66	3.4	10		59.9	1.7	8	-6.3	
Res 78	178	1	50.0	53.0	66	3.0	10		51.9	1.1	8	-6.9	
School 79	179	1	54.0	57.4	66	3.4	10		55.7	1.7	8	-6.3	
CB 1	242	1	0.0	61.5	66	61.5	10		61.2	0.3	8	-7.7	
CB 2	245	1	0.0	59.2	66	59.2	10		58.4	0.8	8	-7.2	
CB 3	247	1	0.0	60.7	66	60.7	10		59.6	1.1	8	-6.9	
Dwelling Units													
# DUs		Noise Reduction											
		Min	Avg	Max									
		dB	dB	dB									
All Selected		10	0.0	1.3	3.9								
All Impacted		3	0.0	1.3	3.9								
All that meet NR Goal		0	0.0	0.0	0.0								

Build Alternative 2 - West Woodlands Noise Barrier Analysis

- Feasibility Analysis
 - LADOTD Feasibility Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet			
Project	ID number	Route Location	
		Alt 2	
Barrier	Location	Length (feet)	Height (feet)
	West Woodlands	844	30
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
23	2		67%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle Yes or No		
	Explain: This barrier does not achieve at least a ≥ 5 dBA reduction at the impacted first row receptors.		



The Woodlands Barrier Analysis Alt 2		Sheet 1 of 1	12 Jun 2015
Barrier View-Feasibility - West		Volkert	
Run name: The Woodlands Alt 2 30 ft		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	→	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	→	Contour Zone:	polygon
Building Row:	— —	Parallel Barrier:	— —
Terrain Line:	— —	Skew Section:	→

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

12 June 2015
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

LA 1088

The Woodlands Barrier Analysis Alt 2
Feasibility - West

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm		Cost		
		Min	Avg	Max		Area	Volume	Top Width	Run:Rise			
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	\$		
East Woodlands Barrier	W	0.00	0.00	0.00	0.00	0	0					
West Woodlands Barrier	W	30.00	30.00	30.00	844	25329						
										Total Cost:		
										0		

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

12 June 2015

TNM 2.5

Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

Feasibility - West

ATMOSPHERICS:

68 deg F, 50% RH

LA 1088

The Woodlands Barrier Analysis Alt 2

Feasibility - West

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing	Type Impact	With Barrier		Calculated minus Goal
				LAeq1h Calculated	Crit'n	Calculated		Calculated LAeq1h	Noise Reduction Calculated	Goal
			dBA	dBA	dBA	dB		dBA	dB	dB
Res 89	39	1	65.8	67.3	66	1.5	10	53.1	14.2	8
Res 90	40	1	66.2	67.5	66	1.3	10	55.5	12.0	8
Res 91	41	2	53.4	56.5	66	3.1	10	50.5	6.0	8
Res 92	42	2	51.1	53.8	66	2.7	10	49.2	4.6	8
Res 93	43	1	56.3	59.6	66	3.3	10	51.7	7.9	8
Res 94	44	1	64.1	65.5	66	1.4	10	57.0	8.5	8
Res 95	45	1	65.4	66.2	66	0.8	10	61.3	4.9	8
Res 96	46	1	64.1	66.4	66	2.3	10	66.1	0.3	8
Recreation 97	47	1	50.9	53.1	66	2.2	10	51.6	1.5	8
Res 98	48	1	62.7	64.8	66	2.1	10	64.6	0.2	8
Res 99	49	1	62.1	64.1	66	2.0	10	63.9	0.2	8
Res 100	50	4	52.6	55.4	66	2.8	10	54.5	0.9	8
Res 101	51	1	61.6	63.7	66	2.1	10	63.6	0.1	8
Res 102	52	1	59.7	62.1	66	2.4	10	62.0	0.1	8
Res 103	53	1	56.5	59.5	66	3.0	10	59.5	0.0	8
Res 104	54	1	55.4	58.6	66	3.2	10	58.6	0.0	8
Res 105	55	1	54.1	57.3	66	3.2	10	57.2	0.1	8
Res 106	56	2	51.0	53.4	66	2.4	10	53.0	0.4	8
Res 107	57	2	50.3	52.6	66	2.3	10	52.2	0.4	8
Res 108	58	2	49.8	52.0	66	2.2	10	51.7	0.3	8
Res 109	59	2	49.4	51.5	66	2.1	10	51.2	0.3	8
WB 1	127	1	0.0	56.5	66	56.5	10	52.6	3.9	8
WB 2	128	1	0.0	54.1	66	54.1	10	50.9	3.2	8

C:\Thomas F Drive\LA 1088 Noise\Runs\Barriers\The Woodlands Alt 2 30 ft

LA 1088

2

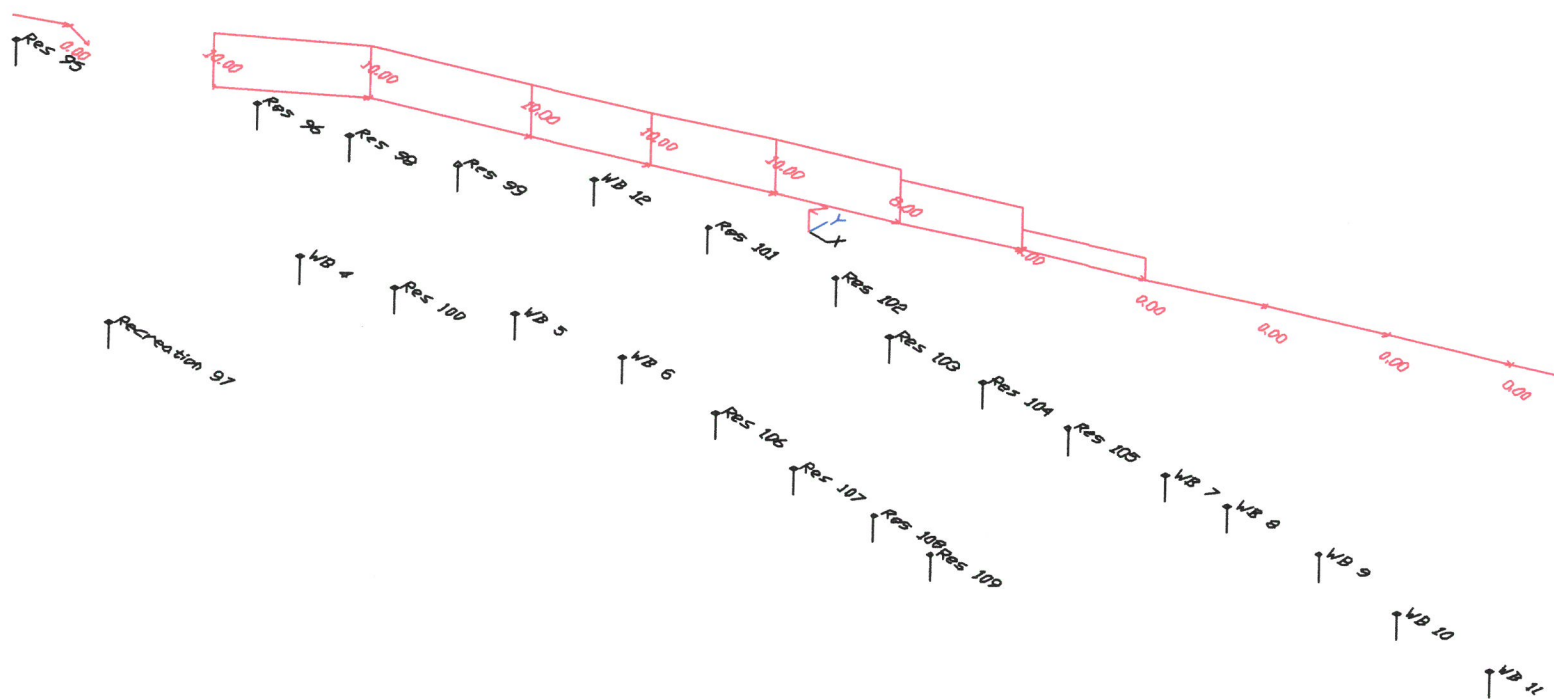
Build Alternative 2 - East Woodlands Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		ALT 2	
Barrier	Location	Length (feet)	Height (feet)
	East Woodlands	751	10
Number of first row receptors (receptors adjacent to barrier):	Number of <i>first row</i> receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
1	1		100%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle <u>Yes</u> or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% or more of the first row imputed receptors.		

Reasonableness Worksheet <u>DURING NEPA</u>				
Project	ID number	Route	Parish/City	
		A1 + 2	St. Tammany	
Barrier	Length	Height	Location	
	751 ft	10 ft	East Woodlands	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
6,706	\$27	\$181,062	6	\$30,177
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: <u>Yes</u> or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing <i>Likely</i> barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 (<u>yes</u> or no)	Criterion 2 (<u>yes</u> or no)	Criterion 3 (yes or no)	Date



The Woodlands Barrier Analysis Alt 2		Sheet 1 of 1	19 Jun 2018
Barrier View-Feasibility and Reasonableness		Volkert	
Run name: The Woodlands Barrier Alt 2		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	→	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	→	Contour Zone:	polygon
Building Row:	— — —	Parallel Barrier:	— — —
Terrain Line:	— — —	Skew Section:	→

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert

Thomas Lee

19 June 2018

TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

LA 1088

The Woodlands Barrier Analysis Alt 2
Feasibility and Reasonableness - East

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm		Top		Run: Rise	Cost
		Min	Avg	Max		Area	Volume	Width		ft	ft		
		ft	ft	ft	ft	sq ft	cu yd	ft		ft	ft		\$
East Woodlands Barrier	W	4.00	8.93	10.00	751	6706							
West Woodlands Barrier	W	0.00	0.00	0.00	0	0	0						0
												Total Cost:	0

RESULTS: SOUND LEVELS

LA 1088

Volkert

Thomas Lee

19 June 2018

TNM 2.5

Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

RUN:

The Woodlands Barrier Analysis Alt 2

BARRIER DESIGN:

Feasibility and Reasonableness - East

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing		No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB
			L Aeq1h dBA	Crit'n dBA	L Aeq1h Calculated	Crit'n dBA	Calculated	Crit'n Sub'l Inc dB		Calculated L Aeq1h dBA	Noise Reduction Calculated dB	Goal dB
Res 89	39	1	65.8	67.3	66	66	1.5	10	Snd Lvl	67.2	0.1	8
Res 90	40	1	66.2	67.5	66	66	1.3	10	Snd Lvl	67.5	0.0	8
Res 91	41	2	53.4	56.5	66	66	3.1	10	-----	56.3	0.2	8
Res 92	42	2	51.1	53.8	66	66	2.7	10	-----	53.5	0.3	8
Res 93	43	1	56.3	59.6	66	66	3.3	10	-----	59.5	0.1	8
Res 94	44	1	64.1	65.5	66	66	1.4	10	-----	65.5	0.0	8
Res 95	45	1	65.4	66.2	66	66	0.8	10	Snd Lvl	66.1	0.1	8
Res 96	46	1	64.1	66.4	66	66	2.3	10	Snd Lvl	61.0	5.4	8
Recreation 97	47	1	50.9	53.1	66	66	2.2	10	-----	51.9	1.2	8
Res 98	48	1	62.7	64.8	66	66	2.1	10	-----	58.1	6.7	8
Res 99	49	1	62.1	64.1	66	66	2.0	10	-----	56.7	7.4	8
Res 100	50	4	52.6	55.4	66	66	2.8	10	-----	53.1	2.3	8
Res 101	51	1	61.6	63.7	66	66	2.1	10	-----	56.6	7.1	8
Res 102	52	1	59.7	62.1	66	66	2.4	10	-----	57.1	5.0	8
Res 103	53	1	56.5	59.5	66	66	3.0	10	-----	56.3	3.2	8
Res 104	54	1	55.4	58.6	66	66	3.2	10	-----	56.7	1.9	8
Res 105	55	1	54.1	57.3	66	66	3.2	10	-----	56.0	1.3	8
Res 106	56	2	51.0	53.4	66	66	2.4	10	-----	51.7	1.7	8
Res 107	57	2	50.3	52.6	66	66	2.3	10	-----	51.1	1.5	8
Res 108	58	2	49.8	52.0	66	66	2.2	10	-----	50.8	1.2	8
Res 109	59	2	49.4	51.5	66	66	2.1	10	-----	50.4	1.1	8
WB 1	127	1	0.0	56.5	66	66	56.5	10	-----	55.8	0.7	8
WB 2	128	1	0.0	54.1	66	66	54.1	10	-----	53.3	0.8	8
												-7.2

RESULTS: SOUND LEVELS

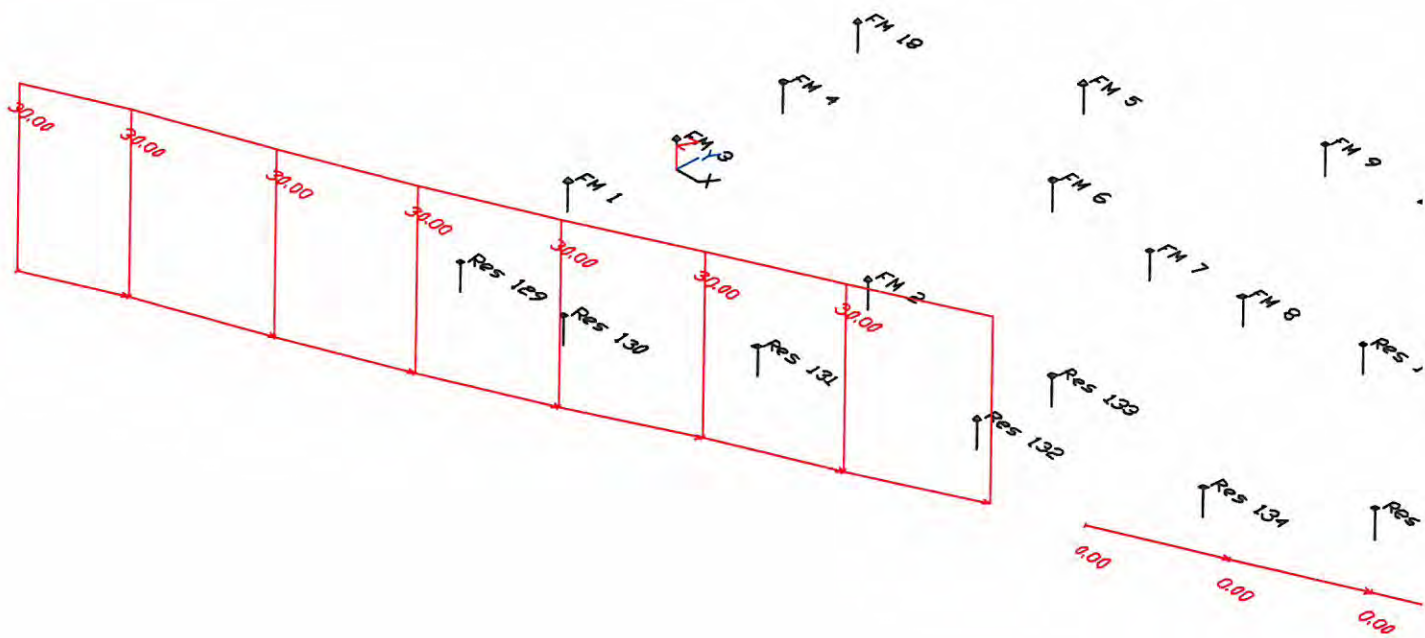
LA 1088													
Dwelling Units	# DUs	Noise Reduction			Min	Avg	Max	dB	# DUs	Min	Avg	Max	dB
		dB	dB	dB									
All Selected	42	0.0	2.0	8.5									
All Impacted	4	0.0	1.4	5.4									
All that meet NR Goal	1	8.5	8.5	8.5									
WB 3	129	1	0.0	52.2	66	52.2	51.5	0.7	8	52.2	51.5	0.7	-7.3
WB 4	130	1	0.0	55.9	66	55.9	53.9	2.0	8	55.9	53.9	2.0	-6.0
WB 5	131	1	0.0	55.2	66	55.2	52.8	2.4	8	55.2	52.8	2.4	-5.6
WB 6	132	1	0.0	54.5	66	54.5	52.3	2.2	8	54.5	52.3	2.2	-5.8
WB 7	133	1	0.0	56.2	66	56.2	55.4	0.8	8	56.2	55.4	0.8	-7.2
WB 8	134	1	0.0	55.5	66	55.5	54.9	0.6	8	55.5	54.9	0.6	-7.4
WB 9	135	1	0.0	54.4	66	54.4	54.0	0.4	8	54.4	54.0	0.4	-7.6
WB 10	136	1	0.0	53.1	66	53.1	52.7	0.4	8	53.1	52.7	0.4	-7.6
WB 11	137	1	0.0	52.1	66	52.1	51.9	0.2	8	52.1	51.9	0.2	-7.8
WB 12	138	1	0.0	65.6	66	65.6	57.1	8.5	8	65.6	57.1	8.5	0.5

Build Alternative 2 - West Frenchmen Noise Barrier Analysis

- Feasibility Analysis
 - LADOTD Feasibility Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		A1+2	
Barrier	Location	Length (feet)	Height (feet)
	West Frenchman	685	30
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
3	2		67%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle Yes or No		
	Explain: This barrier achieves a 5 dBA reduction at 75% of the impacted first row receptors.		



Frenchmen Barrier Alt 2		Sheet 1 of 1	12 Jun 2015
Barrier View-Feasibility - West		Volkert	
Run name: Frenchmen Barrier Alt 2 30 ft		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	→	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	→	Contour Zone:	polygon
Building Row:	— —	Parallel Barrier:	— —
Terrain Line:	— —	Skew Section:	— →

RESULTS: BARRIER DESCRIPTIONS

Volkert
Thomas Lee

LA 1088

12 June 2015
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

RUN: LA 1088

BARRIER DESIGN: Frenchmen Barrier Alt 2

Barriers Feasibility - West

Name	Type	Heights along Barrier			Length	If Wall		If Berm		Top		Run: Rise	Cost
		Min	Avg	Max		Area	Volume	Volume	Width	Width	ft:ft		
		ft	ft	ft	ft	sq ft	cu yd	cu yd	ft	ft	ft:ft	\$	
East Frenchmen Barrier	W	0.00	0.00	0.00	0	0	0	0					0
West Frenchmen Barrier	W	30.00	30.00	30.00	685	20540							0
												Total Cost:	0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

12 June 2015
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT:

RUN:

LA 1088

BARRIER DESIGN: Frenchmen Barrier Alt 2
Feasibility - West

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing		No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal
			LAeq1h	dBA	LAeq1h	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Noise Reduction Calculated Goal	
				dBA		dBA	dB			dBA	dB	dB
Res 129	189	1	62.1	64.8	66	2.7	10	----		52.7	12.1	8
Res 130	190	1	65.1	67.2	66	2.1	10	Snd Lvl		54.8	12.4	8
Res 131	191	1	63.8	66.3	66	2.5	10	Snd Lvl		56.5	9.8	8
Res 132	192	1	66.0	68.1	66	2.1	10	Snd Lvl		63.3	4.8	8
Res 133	193	1	59.5	61.8	66	2.3	10	----		59.3	2.5	8
Res 134	194	1	66.9	69.3	66	2.4	10	Snd Lvl		69.0	0.3	8
Res 135	195	1	53.3	55.5	66	2.2	10	----		54.1	1.4	8
Res 136	196	1	49.8	51.9	66	2.1	10	----		50.4	1.5	8
Res 137	197	1	65.8	67.9	66	2.1	10	Snd Lvl		67.8	0.1	8
Res 138	198	1	66.0	68.1	66	2.1	10	Snd Lvl		68.0	0.1	8
Res 139	199	1	64.6	67.3	66	2.7	10	Snd Lvl		67.2	0.1	8
Res 143	203	1	50.9	53.0	66	2.1	10	----		52.3	0.7	8
FM 1	239	1	0.0	55.8	66	55.8	10	----		51.0	4.8	8
FM 2	240	1	0.0	56.5	66	56.5	10	----		51.3	5.2	8
FM 3	241	1	0.0	54.4	66	54.4	10	----		50.4	4.0	8
FM 4	242	1	0.0	52.6	66	52.6	10	----		49.8	2.8	8
FM 5	243	1	0.0	51.1	66	51.1	10	----		49.0	2.1	8
FM 6	244	1	0.0	53.1	66	53.1	10	----		50.4	2.7	8
FM 7	245	1	0.0	54.7	66	54.7	10	----		52.6	2.1	8
FM 8	246	1	0.0	55.4	66	55.4	10	----		53.7	1.7	8
FM 9	247	1	0.0	51.3	66	51.3	10	----		49.6	1.7	8
FM 10	248	1	0.0	52.1	66	52.1	10	----		51.0	1.1	8
FM 11	249	1	0.0	55.2	66	55.2	10	----		54.4	0.8	8

RESULTS: SOUND LEVELS

LA 1088									
FM 12	250	1	0.0	54.8	66	54.8	10		
FM 13	251	1	0.0	51.5	66	51.5	10		-7.4
FM 14	252	1	0.0	62.7	66	62.7	10		-7.3
FM 15	253	1	0.0	58.2	66	58.2	10		-7.9
FM 16	254	1	0.0	53.9	66	53.9	10		-7.9
FM 17	255	1	0.0	51.9	66	51.9	10		-7.9
FM 18	256	1	0.0	51.1	66	51.1	10		-7.8
FM 19	257	1	0.0	51.0	66	51.0	10		-5.4
Dwelling Units									-7.1
Noise Reduction									
	# DUs	Noise Reduction							
		Min	Avg	Max					
All Selected									
All Impacted									
All that meet NR Goal									
	31	0.1	2.6	12.4					
	7	0.1	3.9	12.4					
	3	9.8	11.4	12.4					

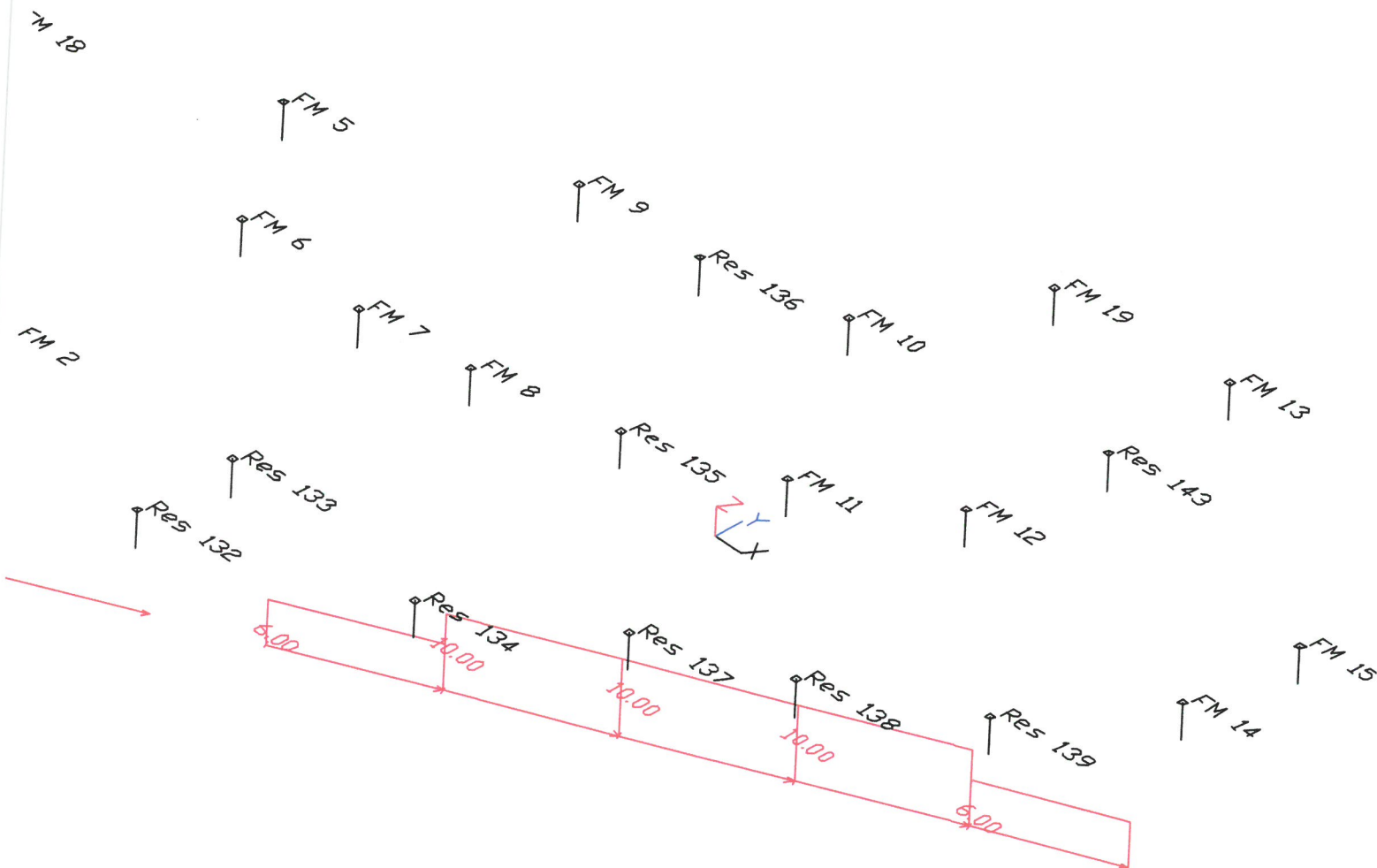
Build Alternative 2 - East Frenchmen Noise Barrier Analysis

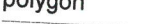
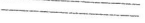
- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		ALT 2	
Barrier	Location	Length (feet)	Height (feet)
	East Frenchmen	491	10
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
4	4		100
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle Yes or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% or more of the first row impacted receptors.		

Reasonableness Worksheet <u>DURING NEPA</u>				
Project	ID number	Route	Parish/City	
		ALT 2	St. Tammany	
Barrier	Length	Height	Location	
	491 ft	10 ft	East Franchmen	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
4,142	\$27	\$111,834	4	\$27,959
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: <u>Yes</u> or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing <i>Likely</i> barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 <u>(yes)</u> or no	Criterion 2 <u>(yes)</u> or no	Criterion 3 (yes or no)	Date



Frenchmen Barrier Alt 2		Sheet 1 of 1	19 Jun 2018
Barrier View-Feasibility and Reasonableness		Volkert	
Run name: Frenchmen Barrier Alt 2		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	

LA 1088

Thomas Lee

TNM 2.5

PROJECT/CONTRACT:

BARRIER DESIGN:

Frenchmen Barrier Alt 2

Feasibility and Reasonableness - East

Total Cost:

RESULTS: SOUND LEVELS

Volkert
Thomas Lee

LA 1088

19 June 2018
TNM 2.5

Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT:

RUN:

LA 1088

BARRIER DESIGN:
Frenchmen Barrier Alt 2

Feasibility and Reasonableness - East

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver

Name

No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier		Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	LAeq1h				Calculated LAeq1h	dBA			
Res 129	189	1	62.1	64.8	66	2.7	10	64.8	64.8	0.0	8	-8.0
Res 130	190	1	65.1	67.2	66	2.1	10	67.1	67.1	0.1	8	-7.9
Res 131	191	1	63.8	66.3	66	2.5	10	66.1	66.1	0.2	8	-7.8
Res 132	192	1	66.0	68.1	66	2.1	10	67.6	67.6	0.5	8	-7.5
Res 133	193	1	59.5	61.8	66	2.3	10	60.8	60.8	1.0	8	-7.0
Res 134	194	1	66.9	69.3	66	2.4	10	63.1	63.1	6.2	8	-1.8
Res 135	195	1	53.3	55.5	66	2.2	10	54.0	54.0	1.5	8	-6.5
Res 136	196	1	49.8	51.9	66	2.1	10	51.0	51.0	0.9	8	-7.1
Res 137	197	1	65.8	67.9	66	2.1	10	59.9	59.9	8.0	8	0.0
Res 138	198	1	66.0	68.1	66	2.1	10	59.6	59.6	8.5	8	0.5
Res 139	199	1	64.6	67.3	66	2.7	10	61.1	61.1	6.2	8	-1.8
Res 143	203	1	50.9	53.0	66	2.1	10	51.7	51.7	1.3	8	-6.7
FM 1	239	1	0.0	55.8	66	55.8	10	55.6	55.6	0.2	8	-7.8
FM 2	240	1	0.0	56.5	66	56.5	10	56.2	56.2	0.3	8	-7.7
FM 3	241	1	0.0	54.4	66	54.4	10	54.2	54.2	0.2	8	-7.8
FM 4	242	1	0.0	52.6	66	52.6	10	52.3	52.3	0.3	8	-7.7
FM 5	243	1	0.0	51.1	66	51.1	10	50.7	50.7	0.4	8	-7.6
FM 6	244	1	0.0	53.1	66	53.1	10	52.5	52.5	0.6	8	-7.4
FM 7	245	1	0.0	54.7	66	54.7	10	53.9	53.9	0.8	8	-7.2
FM 8	246	1	0.0	55.4	66	55.4	10	54.4	54.4	1.0	8	-7.0
FM 9	247	1	0.0	51.3	66	51.3	10	50.6	50.6	0.7	8	-7.3
FM 10	248	1	0.0	52.1	66	52.1	10	51.1	51.1	1.0	8	-7.0
FM 11	249	1	0.0	55.2	66	55.2	10	53.4	53.4	1.8	8	-6.2

RESULTS: SOUND LEVELS

		LA 1088									
Dwelling Units	# DUs	Noise Reduction									
		Min	Avg	Max							
		dB	dB	dB							
All Selected											
All Impacted											
All that meet NR Goal											
FM 12	250	1	0.0	54.8	66	54.8	10	53.0	1.8	8	-6.2
FM 13	251	1	0.0	51.5	66	51.5	10	50.6	0.9	8	-7.1
FM 14	252	1	0.0	62.7	66	62.7	10	60.3	2.4	8	-5.6
FM 15	253	1	0.0	58.2	66	58.2	10	56.8	1.4	8	-6.6
FM 16	254	1	0.0	53.9	66	53.9	10	53.1	0.8	8	-7.2
FM 17	255	1	0.0	51.9	66	51.9	10	51.3	0.6	8	-7.4
FM 18	256	1	0.0	51.1	66	51.1	10	50.8	0.3	8	-7.7
FM 19	257	1	0.0	51.0	66	51.0	10	50.2	0.8	8	-7.2
All Selected											
All Impacted											
All that meet NR Goal											

Build Alternative 2 - West Quail Creek Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet			
Project	ID number	Route Location	
		ALT 2	
Barrier	Location	Length (feet)	Height (feet)
	West Quail Creek	1,197	8
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
10	9		90%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle <u>Yes</u> or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% or more of the first row impacted receptors.		

Reasonableness Worksheet <u>DURING</u> NEPA				
Project	ID number	Route	Parish/City	
		A1+2	St. Tammany	
Barrier	Length	Height	Location	
	1,197 ft	8 ft	West Quail Creek	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
9,576	\$27	\$258,552	13	\$19,889
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: Yes or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing Likely barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 (yes or no)	Criterion 2 (yes or no)	Criterion 3 (yes or no)	Date

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

LA 1088

RUN:

Quail Creek Barrier Alt 2

BARRIER DESIGN:

Feasibility and Reasonableness - Wes

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm	Cost		
		Min	Avg	Max		Area	Volume		Top Width	Run:Rise	
		ft	ft	ft	ft	sq ft	cu yd		ft	ft	\$
East Quail Creek Barrier	W	0.00	0.00	0.00	0	0	0				0
West Quail Creek Barrier	W	8.00	8.00	8.00	1197	9576					0
										Total Cost:	0

RESULTS: SOUND LEVELS

LA 1088

Volkert

Thomas Lee

19 June 2018

TNM 2.5

Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

LA 1088

Quail Creek Barrier Alt 2

Feasibility and Reasonableness - West

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing		No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB
			LAeq1h	dBA	LAeq1h	dBA	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Noise Reduction Calculated Goal	
				dBA		dBA						
Res 153	70	1	66.0	67.1	66	1.1	10	Snd Lvl	63.0	4.1	8	-3.9
Res 154	71	1	63.3	64.2	66	0.9	10	-----	63.5	0.7	8	-7.3
Res 155	72	1	62.7	64.3	66	1.6	10	-----	64.1	0.2	8	-7.8
Res 156	73	1	60.9	62.8	66	1.9	10	-----	62.7	0.1	8	-7.9
Res 157	74	1	61.7	63.3	66	1.6	10	-----	63.3	0.0	8	-8.0
Res 158	75	1	63.4	65.1	66	1.7	10	-----	65.1	0.0	8	-8.0
Res 159	76	1	65.7	67.2	66	1.5	10	Snd Lvl	60.4	6.8	8	-1.2
Res 160	77	1	66.5	68.3	66	1.8	10	Snd Lvl	59.9	8.4	8	0.4
Res 161	78	4	52.9	55.2	66	2.3	10	-----	53.6	1.6	8	-6.4
Res 162	79	1	66.1	67.9	66	1.8	10	Snd Lvl	59.5	8.4	8	0.4
Res 163	80	7	53.4	56.2	66	2.8	10	-----	52.9	3.3	8	-4.7
Res 164	81	5	51.1	53.4	66	2.3	10	-----	51.4	2.0	8	-6.0
Res 165	82	4	49.6	51.7	66	2.1	10	-----	49.6	2.1	8	-5.9
Res 166	83	1	66.0	67.6	66	1.6	10	Snd Lvl	59.2	8.4	8	0.4
Res 167	84	1	65.6	66.9	66	1.3	10	Snd Lvl	58.9	8.0	8	0.0
Res 168	85	1	65.0	66.4	66	1.4	10	Snd Lvl	58.7	7.7	8	-0.3
Res 169	86	1	64.2	65.9	66	1.7	10	-----	58.4	7.5	8	-0.5
Res 170	87	1	61.1	63.5	66	2.4	10	-----	56.7	6.8	8	-1.2
Res 171	88	2	55.5	59.1	66	3.6	10	-----	53.1	6.0	8	-2.0
Res 172	89	3	51.6	54.6	66	3.0	10	-----	50.4	4.2	8	-3.8
Res 173	90	1	62.7	64.8	66	2.1	10	-----	57.4	7.4	8	-0.6
Res 174	91	1	67.0	68.8	66	1.8	10	Snd Lvl	59.9	8.9	8	0.9
Res 175	92	1	66.5	67.9	66	1.4	10	Snd Lvl	60.0	7.9	8	-0.1

RESULTS: SOUND LEVELS

LA 1088												
Res 176	93	1	66.3	66.6	66	0.3	10	Snd Lvl	59.9	6.7	8	-1.3
Res 177	94	1	66.2	65.1	66	-1.1	10	-----	62.3	2.8	8	-5.2
Res 178	95	3	53.6	56.0	66	2.4	10	-----	54.2	1.8	8	-6.2
Res 179	96	3	51.8	53.5	66	1.7	10	-----	52.3	1.2	8	-6.8
Res 180	97	4	50.0	51.8	66	1.8	10	-----	50.4	1.4	8	-6.6
Res 181	98	1	66.7	66.8	66	0.1	10	Snd Lvl	66.7	0.1	8	-7.9
Res 182	99	1	66.9	68.3	66	1.4	10	Snd Lvl	68.2	0.1	8	-7.9
Res 183	100	1	67.5	69.3	66	1.8	10	Snd Lvl	69.3	0.0	8	-8.0
Res 184	101	1	67.1	68.8	66	1.7	10	Snd Lvl	68.8	0.0	8	-8.0
Res 185	102	1	67.2	69.0	66	1.8	10	Snd Lvl	69.0	0.0	8	-8.0
Res 186	103	1	67.5	69.4	66	1.9	10	Snd Lvl	69.4	0.0	8	-8.0
Res 187	104	1	67.3	69.2	66	1.9	10	Snd Lvl	69.2	0.0	8	-8.0
Office 188	105	1	67.4	69.2	71	1.8	10	-----	69.2	0.0	8	-8.0
Res 189	106	1	64.2	65.9	66	1.7	10	-----	65.9	0.0	8	-8.0
Res 190	107	7	53.3	56.1	66	2.8	10	-----	55.8	0.3	8	-7.7
Res 191	108	3	51.6	54.3	66	2.7	10	-----	54.1	0.2	8	-7.8
Res 192	109	3	50.4	52.8	66	2.4	10	-----	52.5	0.3	8	-7.7
QC 1	128	1	0.0	56.5	66	56.5	10	-----	54.6	1.9	8	-6.1
QC 2	129	1	0.0	55.1	66	55.1	10	-----	53.9	1.2	8	-6.8
QC 3	130	1	0.0	54.0	66	54.0	10	-----	53.2	0.8	8	-7.2
QC 4	131	1	0.0	56.6	66	56.6	10	-----	54.1	2.5	8	-5.5
QC 5	132	1	0.0	53.6	66	53.6	10	-----	51.9	1.7	8	-6.3
QC 6	133	1	0.0	52.5	66	52.5	10	-----	51.4	1.1	8	-6.9
QC 7	134	1	0.0	56.4	66	56.4	10	-----	53.4	3.0	8	-5.0
QC 8	135	1	0.0	53.5	66	53.5	10	-----	51.1	2.4	8	-5.6
QC 9	136	1	0.0	56.4	66	56.4	10	-----	52.7	3.7	8	-4.3
QC 10	137	1	0.0	56.2	66	56.2	10	-----	52.4	3.8	8	-4.2
QC 11	138	1	0.0	54.7	66	54.7	10	-----	51.4	3.3	8	-4.7
QC 12	139	1	0.0	52.7	66	52.7	10	-----	50.1	2.6	8	-5.4
QC 13	140	1	0.0	51.0	66	51.0	10	-----	48.9	2.1	8	-5.9
QC 14	141	1	0.0	51.6	66	51.6	10	-----	48.9	2.7	8	-5.3
QC 15	142	1	0.0	53.2	66	53.2	10	-----	49.4	3.8	8	-4.2
QC 16	143	1	0.0	59.0	66	59.0	10	-----	53.1	5.9	8	-2.1
QC 17	144	1	0.0	55.3	66	55.3	10	-----	50.7	4.6	8	-3.4
QC 18	145	1	0.0	56.2	66	56.2	10	-----	53.5	2.7	8	-5.3
QC 19	146	1	0.0	53.7	66	53.7	10	-----	51.6	2.1	8	-5.9
QC 20	147	1	0.0	51.8	66	51.8	10	-----	50.0	1.8	8	-6.2
QC 21	148	1	0.0	56.6	66	56.6	10	-----	55.4	1.2	8	-6.8
QC 22	149	1	0.0	57.6	66	57.6	10	-----	57.0	0.6	8	-7.4
QC 23	150	1	0.0	54.7	66	54.7	10	-----	54.1	0.6	8	-7.4
QC 24	151	1	0.0	52.5	66	52.5	10	-----	51.8	0.7	8	-7.3

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RESULTS: SOUND LEVELS

LA 1088

		152	1	0.0	51.3	66	51.3	10	0.7	8	-7.3
QC 25		152	1	0.0	51.3	66	51.3	10	0.7	8	-7.3
QC 26		153	1	0.0	56.4	66	56.4	10	0.4	8	-7.6
QC 27		154	1	0.0	56.6	66	56.6	10	0.2	8	-7.8
QC 28		155	1	0.0	56.6	66	56.6	10	0.2	8	-7.8
QC 29		156	1	0.0	51.6	66	51.6	10	0.2	8	-7.8
QC 30		157	1	0.0	56.8	66	56.8	10	0.1	8	-7.9
QC 31		158	1	0.0	60.4	66	60.4	10	0.0	8	-8.0
QC 32		159	1	0.0	55.9	66	55.9	10	0.1	8	-7.9
QC 33		160	1	0.0	53.8	66	53.8	10	0.2	8	-7.8
QC 34		161	1	0.0	52.0	66	52.0	10	0.2	8	-7.8
Dwelling Units		# DUs	Noise Reduction								
			Min	Avg	Max						
			dB	dB	dB						
All Selected		110	0.0	2.5	8.9						
All Impacted		17	0.0	4.4	8.9						
All that meet NR Goal		5	8.0	8.4	8.9						

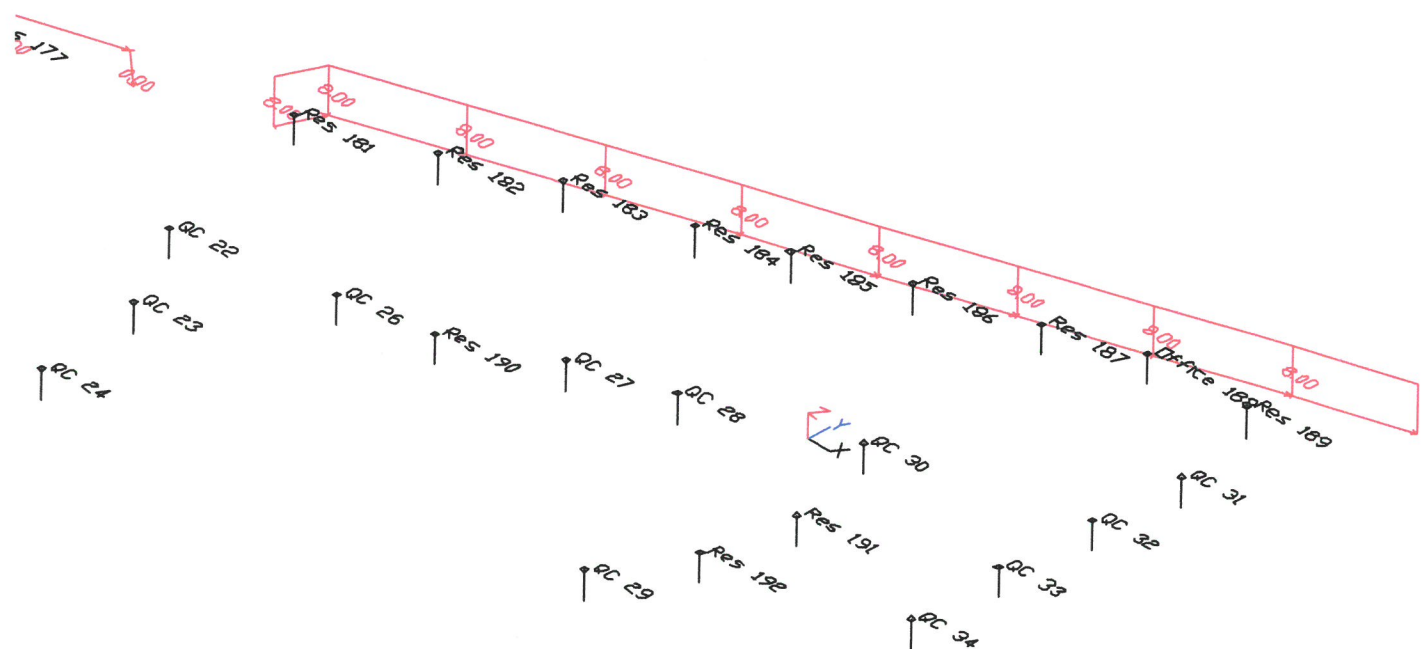
Build Alternative 2 - East Quail Creek Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		ALT 2	
Barrier	Location	Length (feet)	Height (feet)
	East Quail Creek	832	8
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
8	8		100%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle <u>Yes</u> or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% or more of the first row impacted receptors.		

Reasonableness Worksheet <u>DURING NEPA</u>				
Project	ID number	Route	Parish/City	
		ALT 2	St. Tammany	
Barrier	Length	Height	Location	
	832 ft	8 ft	East Quail Creek	
<i>Criterion 1: Cost</i>				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
6,660	\$27	\$179,820	9	\$19,980
<i>Criterion 2: Design Goal</i>				
At least an 8dBA reduction at 1 Receptor?	Circle: <u>Yes</u> or No			
	Notes:			
<i>Criterion 3: Desires of Benefited Receptors</i>				
Public Involvement events showing Likely barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 <u>(yes or no)</u>	Criterion 2 <u>(yes or no)</u>	Criterion 3 (yes or no)	Date



Quail Creek Barrier Alt 2		Sheet 1 of 1	20 Jun 2018
Barrier View-Feasibility and Reasonableness		Volkert	
Run name: Quail Creek Barrier Alt 2		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

20 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

LA 1088

Quail Creek Barrier Alt 2

RUN:

BARRIER DESIGN: Feasibility and Reasonableness - East

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm	Top		Run:Rise	Cost
		Min	Avg	Max		Area	Volume		Width			
		ft	ft	ft	ft	sq ft	cu yd		ft	ft	ft:ft	\$
East Quail Creek Barrier	W	8.00	8.00	8.00	832	6660						0
West Quail Creek Barrier	W	0.00	0.00	0.00	0	0	0					0
											Total Cost:	0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

20 June 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: LA 1088

RUN: Quail Creek Barrier Alt 2

BARRIER DESIGN: Feasibility and Reasonableness - East

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB
				Calculated	Crit'n	Calculated	Crit'n		Calculated LAeq1h	Noise Reduction Calculated Goal	
			dBA	dBA	dBA	dB	Sub'l Inc		dBA	dB	dB
Res 153	70	1	66.0	67.1	66	1.1	10	Snd Lvl	67.1	0.0	8
Res 154	71	1	63.3	64.2	66	0.9	10	----	64.2	0.0	8
Res 155	72	1	62.7	64.3	66	1.6	10	----	64.3	0.0	8
Res 156	73	1	60.9	62.8	66	1.9	10	----	62.8	0.0	8
Res 157	74	1	61.7	63.3	66	1.6	10	----	63.3	0.0	8
Res 158	75	1	63.4	65.1	66	1.7	10	----	65.1	0.0	8
Res 159	76	1	65.7	67.2	66	1.5	10	Snd Lvl	67.2	0.0	8
Res 160	77	1	66.5	68.3	66	1.8	10	Snd Lvl	68.3	0.0	8
Res 161	78	4	52.9	55.2	66	2.3	10	----	55.2	0.0	8
Res 162	79	1	66.1	67.9	66	1.8	10	Snd Lvl	67.9	0.0	8
Res 163	80	7	53.4	56.2	66	2.8	10	----	56.1	0.1	8
Res 164	81	5	51.1	53.4	66	2.3	10	----	53.4	0.0	8
Res 165	82	4	49.6	51.7	66	2.1	10	----	51.7	0.0	8
Res 166	83	1	66.0	67.6	66	1.6	10	Snd Lvl	67.6	0.0	8
Res 167	84	1	65.6	66.9	66	1.3	10	Snd Lvl	66.9	0.0	8
Res 168	85	1	65.0	66.4	66	1.4	10	Snd Lvl	66.4	0.0	8
Res 169	86	1	64.2	65.9	66	1.7	10	----	65.9	0.0	8
Res 170	87	1	61.1	63.5	66	2.4	10	----	63.5	0.0	8
Res 171	88	2	55.5	59.1	66	3.6	10	----	59.0	0.1	8
Res 172	89	3	51.6	54.6	66	3.0	10	----	54.5	0.1	8
Res 173	90	1	62.7	64.8	66	2.1	10	----	64.8	0.0	8
Res 174	91	1	67.0	68.8	66	1.8	10	Snd Lvl	68.8	0.0	8
Res 175	92	1	66.5	67.9	66	1.4	10	Snd Lvl	67.8	0.1	8

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RESULTS: SOUND LEVELS

LA 1088

Res 176	93	1	66.3	66.6	66	0.3	10	Snd Lvl	66.5	0.1	8	-7.9
Res 177	94	1	66.2	65.1	66	-1.1	10	-----	64.9	0.2	8	-7.8
Res 178	95	3	53.6	56.0	66	2.4	10	-----	55.2	0.8	8	-7.2
Res 179	96	3	51.8	53.5	66	1.7	10	-----	52.6	0.9	8	-7.1
Res 180	97	4	50.0	51.8	66	1.8	10	-----	51.1	0.7	8	-7.3
Res 181	98	1	66.7	66.8	66	0.1	10	Snd Lvl	60.5	6.3	8	-1.7
Res 182	99	1	66.9	68.3	66	1.4	10	Snd Lvl	59.9	8.4	8	0.4
Res 183	100	1	67.5	69.3	66	1.8	10	Snd Lvl	60.1	9.2	8	1.2
Res 184	101	1	67.1	68.8	66	1.7	10	Snd Lvl	60.0	8.8	8	0.8
Res 185	102	1	67.2	69.0	66	1.8	10	Snd Lvl	60.1	8.9	8	0.9
Res 186	103	1	67.5	69.4	66	1.9	10	Snd Lvl	60.3	9.1	8	1.1
Res 187	104	1	67.3	69.2	66	1.9	10	Snd Lvl	60.4	8.8	8	0.8
Office 188	105	1	67.4	69.2	71	1.8	10	-----	60.7	8.5	8	0.5
Res 189	106	1	64.2	67.0	66	2.8	10	Snd Lvl	60.9	6.1	8	-1.9
Res 190	107	7	53.3	56.1	66	2.8	10	-----	53.3	2.8	8	-5.2
Res 191	108	3	51.6	54.3	66	2.7	10	-----	52.0	2.3	8	-5.7
Res 192	109	3	50.4	52.8	66	2.4	10	-----	50.9	1.9	8	-6.1
QC 1	128	1	0.0	56.5	66	56.5	10	-----	56.5	0.0	8	-8.0
QC 2	129	1	0.0	55.1	66	55.1	10	-----	55.0	0.1	8	-7.9
QC 3	130	1	0.0	54.0	66	54.0	10	-----	54.0	0.0	8	-8.0
QC 4	131	1	0.0	56.6	66	56.6	10	-----	56.5	0.1	8	-7.9
QC 5	132	1	0.0	53.6	66	53.6	10	-----	53.6	0.0	8	-8.0
QC 6	133	1	0.0	52.5	66	52.5	10	-----	52.5	0.0	8	-8.0
QC 7	134	1	0.0	56.4	66	56.4	10	-----	56.4	0.0	8	-8.0
QC 8	135	1	0.0	53.5	66	53.5	10	-----	53.5	0.0	8	-8.0
QC 9	136	1	0.0	56.4	66	56.4	10	-----	56.3	0.1	8	-7.9
QC 10	137	1	0.0	56.2	66	56.2	10	-----	56.1	0.1	8	-7.9
QC 11	138	1	0.0	54.7	66	54.7	10	-----	54.6	0.1	8	-7.9
QC 12	139	1	0.0	52.7	66	52.7	10	-----	52.6	0.1	8	-7.9
QC 13	140	1	0.0	51.0	66	51.0	10	-----	50.9	0.1	8	-7.9
QC 14	141	1	0.0	51.6	66	51.6	10	-----	51.3	0.3	8	-7.7
QC 15	142	1	0.0	53.2	66	53.2	10	-----	53.1	0.1	8	-7.9
QC 16	143	1	0.0	59.0	66	59.0	10	-----	59.0	0.0	8	-8.0
QC 17	144	1	0.0	55.3	66	55.3	10	-----	55.2	0.1	8	-7.9
QC 18	145	1	0.0	56.2	66	56.2	10	-----	55.6	0.6	8	-7.4
QC 19	146	1	0.0	53.7	66	53.7	10	-----	53.2	0.5	8	-7.5
QC 20	147	1	0.0	51.8	66	51.8	10	-----	51.3	0.5	8	-7.5
QC 21	148	1	0.0	56.6	66	56.6	10	-----	55.6	1.0	8	-7.0
QC 22	149	1	0.0	57.6	66	57.6	10	-----	56.0	1.6	8	-6.4
QC 23	150	1	0.0	54.7	66	54.7	10	-----	53.3	1.4	8	-6.6
QC 24	151	1	0.0	52.5	66	52.5	10	-----	51.3	1.2	8	-6.8

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RESULTS: SOUND LEVELS

LA 1088

QC 25	152	1	0.0	51.3	66	51.3	10	-----	50.4	0.9	8	-7.1
QC 26	153	1	0.0	56.4	66	56.4	10	-----	53.8	2.6	8	-5.4
QC 27	154	1	0.0	56.6	66	56.6	10	-----	53.3	3.3	8	-4.7
QC 28	155	1	0.0	56.6	66	56.6	10	-----	53.3	3.3	8	-4.7
QC 29	156	1	0.0	51.6	66	51.6	10	-----	50.0	1.6	8	-6.4
QC 30	157	1	0.0	56.8	66	56.8	10	-----	53.6	3.2	8	-4.8
QC 31	158	1	0.0	60.4	66	60.4	10	-----	57.4	3.0	8	-5.0
QC 32	159	1	0.0	55.9	66	55.9	10	-----	52.9	3.0	8	-5.0
QC 33	160	1	0.0	53.8	66	53.8	10	-----	51.3	2.5	8	-5.5
QC 34	161	1	0.0	52.0	66	52.0	10	-----	49.9	2.1	8	-5.9
Dwelling Units												
	# DUs	Noise Reduction										
		Min	Avg	Max								
		dB	dB	dB								
All Selected		110	0.0	1.6	9.2							
All Impacted		18	0.0	3.7	9.2							
All that meet NR Goal		7	8.4	8.8	9.2							

Build Alternative 2A

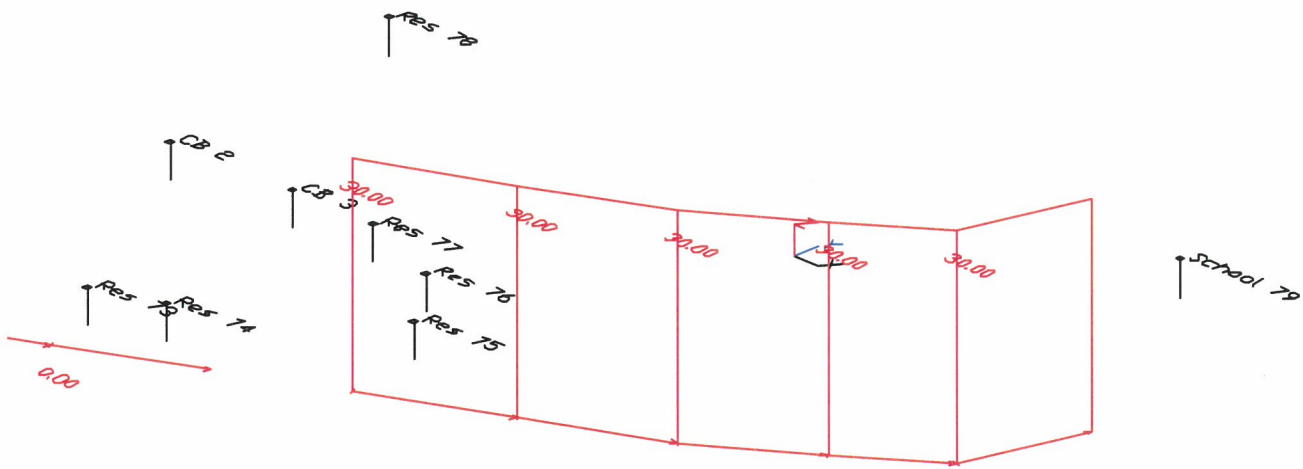
Build Alternative 2A - East Casa Bella Noise Barrier Analysis

-Feasibility Analysis

- LADOTD Feasibility Worksheet
- TNM Barrier View
- TNM Barrier Descriptions
- TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		Alt 2A	
Barrier	Location	Length (feet)	Height (feet)
	East Casa Bella	454	30
Number of first row receptors (receptors adjacent to barrier):	Number of <i>first row</i> receptors that achieve at least a 5dBA reduction in noise with barrier:	% that achieve ≥ 5 dBA reduction:	
1	0	0%	
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle Yes or <u>No</u>		
	Explain: This barrier fails to achieve a 5dBA reduction at 75% of the impacted first row receptors.		



Casa Bella Barrier Alt 2A		Sheet 1 of 1	15 Mar 2018
Barrier View-Feasibility - East		Volkert	
Run name: Casa Bella Barrier Alt2A		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	—————>	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	—————>	Contour Zone:	polygon
Building Row:	—————	Parallel Barrier:	—————
Terrain Line:	—————	Skew Section:	—————>

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

15 March 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088
Casa Bella Barrier Alt 2A

RUN:

Feasibility - East

BARRIER DESIGN:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing	Type Impact	With Barrier		Calculated LAeq1h	Noise Reduction		Calculated minus Goal
				LAeq1h Calculated	Crit'n			Calculated	dBA		Calculated	Goal	
				dBA		dB		dB		dBA	dB		dB
Res 73	173	1	68.0	69.9	66	1.9	10	69.9		69.9	0.0	8	-8.0
Res 74	174	1	68.3	70.4	66	2.1	10	70.3		70.3	0.1	8	-7.9
Res 75	175	1	66.6	67.8	66	1.2	10	63.9		63.9	3.9	8	-4.1
Res 76	176	1	61.3	63.6	66	2.3	10	60.8		60.8	2.8	8	-5.2
Res 77	177	1	58.2	61.4	66	3.2	10	59.7		59.7	1.7	8	-6.3
Res 78	178	1	50.0	53.0	66	3.0	10	51.8		51.8	1.2	8	-6.8
School 79	179	1	54.0	57.4	66	3.4	10	55.8		55.8	1.6	8	-6.4
CB 1	242	1	0.0	61.3	66	61.3	10	61.1		61.1	0.2	8	-7.8
CB 2	245	1	0.0	59.0	66	59.0	10	58.2		58.2	0.8	8	-7.2
CB 3	247	1	0.0	60.6	66	60.6	10	59.4		59.4	1.2	8	-6.8
Dwelling Units													
	# DUs	Noise Reduction			Min	Avg	Max						
		dB	dB	dB									
All Selected	10	0.0	1.4	3.9									
All Impacted	3	0.0	1.3	3.9									
All that meet NR Goal	0	0.0	0.0	0.0									

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

15 March 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

LA 1088

RUN:

Casa Bella Barrier Alt 2A

BARRIER DESIGN:

Feasibility - East

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm	Cost		
		Min	Avg	Max		Area	Volume		Top Width	Run:Rise	
		ft	ft	ft	ft	sq ft	cu yd		ft	ft:ft	\$
East Casa Bella Barrier	W	30.00	30.00	30.00	454	13633					0
West Casa Bella Barrier	W	0.00	0.00	0.00	0	0	0				0
										Total Cost:	0

Build Alternative 2A - West Casa Bella Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet			
Project	ID number	Route Location	
		ALT 2A	
Barrier	Location	Length (feet)	Height (feet)
	West Casa Bella	299	10
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
2	2		100
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle <u>Yes</u> or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% or more of the first row impacted receptors.		

Reasonableness Worksheet <u>DURING NEPA</u>				
Project	ID number	Route	Parish/City	
		ALT 2A	St. Tammany	
Barrier	Length	Height	Location	
	299 ft	10 ft	West Casa Bella	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
2,395	\$27	\$64,665	2	\$32,333
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: <u>Yes</u> or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing <i>Likely</i> barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 <u>Yes</u> or no)	Criterion 2 <u>Yes</u> or no)	Criterion 3 (yes or no)	Date

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

LA 1088

Casa Bella Barrier Alt 2A

Feasibility and Reasonableness - Wes

Barriers

Name	Type	Heights along Barrier			Length	If Wall Area	If Berm Volume	Top Width	Run:Rise	Cost
		Min	Avg	Max						
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	\$
East Casa Bella Barrier	W	0.00	0.00	0.00	0	0	0			0
West Casa Bella Barrier	W	4.00	8.01	10.00	299	2395				0
									Total Cost:	0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

Casa Bella Barrier Alt 2A

RUN:

BARRIER DESIGN: Feasibility and Reasonableness - West

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing			Type Impact	With Barrier		Calculated minus Goal dB
				LAeq1h Calculated	Crit'n	Calculated	Crit'n Sub'l Inc	Calculated LAeq1h		Noise Reduction Calculated	Goal	
Res 73	173	1	68.0	69.9	66	1.9	10	Snd Lvl	61.9	8.0	8	0.0
Res 74	174	1	68.3	70.4	66	2.1	10	Snd Lvl	64.0	6.4	8	-1.6
Res 75	175	1	66.6	67.8	66	1.2	10	Snd Lvl	67.5	0.3	8	-7.7
Res 76	176	1	61.3	63.6	66	2.3	10	-----	62.7	0.9	8	-7.1
Res 77	177	1	58.2	61.4	66	3.2	10	-----	60.0	1.4	8	-6.6
Res 78	178	1	50.0	53.0	66	3.0	10	-----	52.1	0.9	8	-7.1
School 79	179	1	54.0	57.4	66	3.4	10	-----	57.2	0.2	8	-7.8
CB 1	242	1	0.0	61.3	66	61.3	10	-----	59.4	1.9	8	-6.1
CB 2	245	1	0.0	59.0	66	59.0	10	-----	57.0	2.0	8	-6.0
CB 3	247	1	0.0	60.6	66	60.6	10	-----	58.7	1.9	8	-6.1
Dwelling Units												
		# DUs	Noise Reduction									
			Min dB	Avg dB	Max dB							
All Selected		10	0.2	2.4	8.0							
All Impacted		3	0.3	4.9	8.0							
All that meet NR Goal		1	8.0	8.0	8.0							

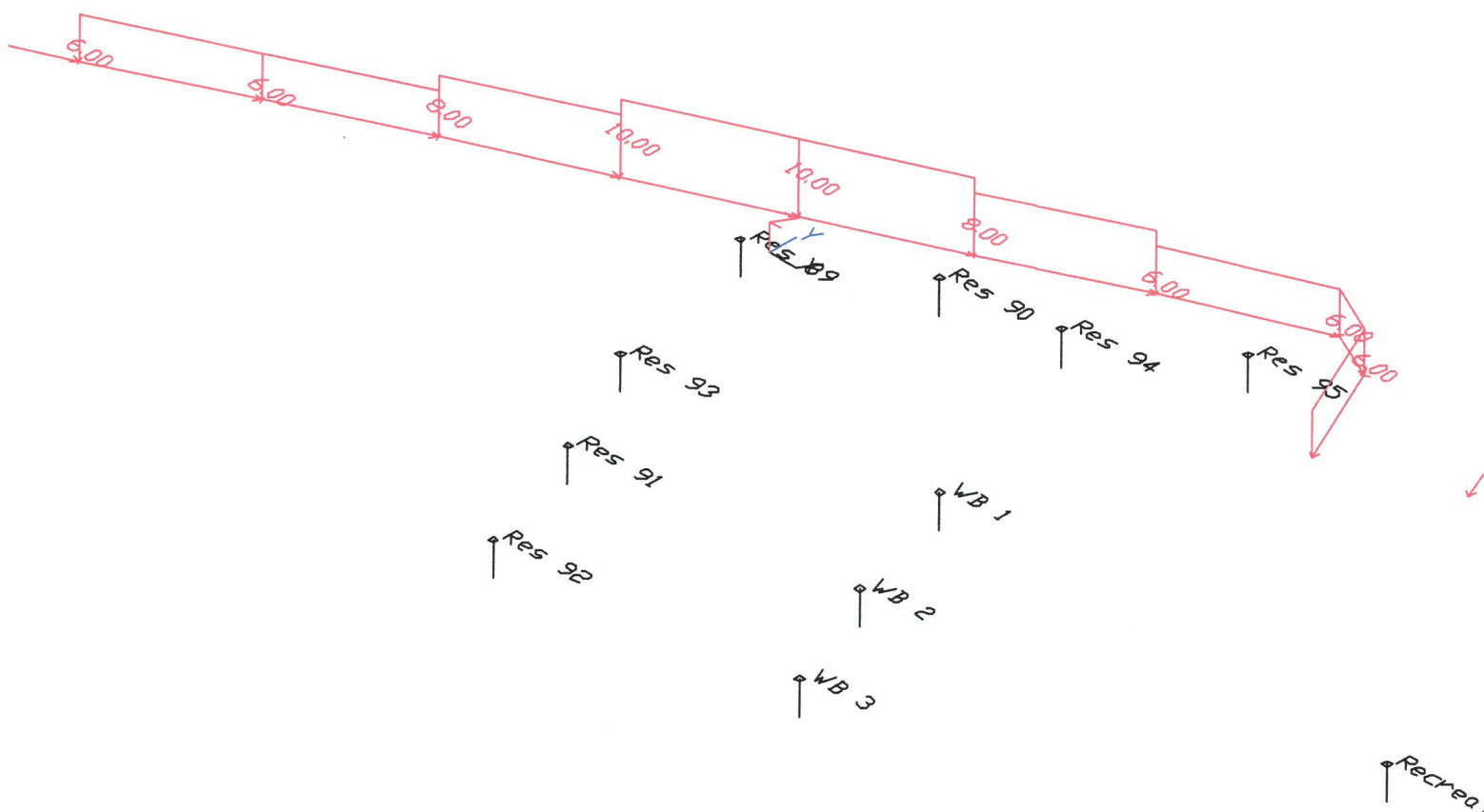
Build Alternative 2A - West Woodlands Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		ALT 2A	
Barrier	Location	Length (feet)	Height (feet)
	West Woodlands	820	10
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:	% that achieve ≥ 5 dBA reduction:	
3	3	100%	
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle Yes or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% or more of the first row impacted receptors.		

Reasonableness Worksheet <u>DURING NEPA</u>				
Project	ID number	Route	Parish/City	
		ALT 2A	St. Tammany	
Barrier	Length	Height	Location	
	820 ft	10 ft	West Woodlands	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
6,118	\$27	\$165,186	5	\$33,037
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: <u>Yes</u> or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing <i>Likely</i> barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 <u>Yes</u> or no)	Criterion 2 <u>Yes</u> or no)	Criterion 3 (yes or no)	Date



The Woodlands Barrier Analysis Alt 2A		Sheet 1 of 1	19 Jun 2018
Barrier View-Feasibility and Reasonableness		Volkert	
Run name: The Woodlands Alt2A		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	→	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	→	Contour Zone:	polygon
Building Row:	— — —	Parallel Barrier:	— — —
Terrain Line:	— — —	Skew Section:	— — — →

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

LA 1088

The Woodlands Barrier Analysis Alt 2A
Feasibility and Reasonableness - Wes

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm	Cost		
		Min	Avg	Max		Area	Volume		Run:Rise		
		ft	ft	ft	ft	sq ft	cu yd		ft:ft	\$	
East Woodlands Barrier	W	0.00	0.00	0.00	0	0	0			0	
West Woodlands Barrier	W	6.00	7.46	10.00	820	6118				0	
Total Cost:										0	

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

The Woodlands Barrier Analysis Alt 2A

RUN:

BARRIER DESIGN:

Feasibility and Reasonableness - West

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal
				LAeq1h Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Noise Reduction Calculated	Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB
Res 89	39	1	65.8	67.0	66	1.2	10	Snd Lvl	58.1	8.9	8
Res 90	40	1	66.2	67.2	66	1.0	10	Snd Lvl	58.6	8.6	8
Res 91	41	2	53.4	56.3	66	2.9	10	----	52.7	3.6	8
Res 92	42	2	51.1	53.7	66	2.6	10	----	51.1	2.6	8
Res 93	43	1	56.3	59.4	66	3.1	10	----	54.4	5.0	8
Res 94	44	1	64.1	65.3	66	1.2	10	----	58.4	6.9	8
Res 95	45	1	65.4	66.0	66	0.6	10	Snd Lvl	60.0	6.0	8
Res 96	46	1	64.1	66.2	66	2.1	10	Snd Lvl	66.0	0.2	8
Recreation 97	47	1	50.9	53.0	66	2.1	10	----	52.1	0.9	8
Res 98	48	1	62.7	64.6	66	1.9	10	----	64.4	0.2	8
Res 99	49	1	62.1	63.9	66	1.8	10	----	63.8	0.1	8
Res 100	50	4	52.6	55.3	66	2.7	10	----	54.7	0.6	8
Res 101	51	1	61.6	63.5	66	1.9	10	----	63.4	0.1	8
Res 102	52	1	59.7	62.0	66	2.3	10	----	61.9	0.1	8
Res 103	53	1	56.5	59.5	66	3.0	10	----	59.5	0.0	8
Res 104	54	1	55.4	58.5	66	3.1	10	----	58.5	0.0	8
Res 105	55	1	54.1	57.2	66	3.1	10	----	57.2	0.0	8
Res 106	56	2	51.0	53.4	66	2.4	10	----	53.1	0.3	8
Res 107	57	2	50.3	52.5	66	2.2	10	----	52.3	0.2	8
Res 108	58	2	49.8	52.0	66	2.2	10	----	51.8	0.2	8
Res 109	59	2	49.4	51.4	66	2.0	10	----	51.2	0.2	8
WB 1	127	1	0.0	56.4	66	56.4	10	----	53.7	2.7	8
WB 2	128	1	0.0	54.0	66	54.0	10	----	52.0	2.0	8

RESULTS: SOUND LEVELS

LA 1088

Dwelling Units		# DUs	Noise Reduction			52.1	66	52.1	66	52.1	10	---	50.5	1.6	8	-6.4	
			Min		Avg												Max
			dB	dB													
All Selected		42	0.0		1.6	8.9											
All Impacted		4	0.2		5.9	8.9											
All that meet NR Goal		2	8.6		8.8	8.9											
WB 3	129	1	0.0		52.1	66	52.1	66	52.1	10	---	50.5	1.6	8	-6.4		
WB 4	130	1	0.0		55.9	66	55.9	66	55.9	10	---	55.1	0.8	8	-7.2		
WB 5	131	1	0.0		55.1	66	55.1	66	55.1	10	---	54.7	0.4	8	-7.6		
WB 6	132	1	0.0		54.4	66	54.4	66	54.4	10	---	54.0	0.4	8	-7.6		
WB 7	133	1	0.0		56.2	66	56.2	66	56.2	10	---	56.1	0.1	8	-7.9		
WB 8	134	1	0.0		55.5	66	55.5	66	55.5	10	---	55.4	0.1	8	-7.9		
WB 9	135	1	0.0		54.5	66	54.5	66	54.5	10	---	54.5	0.0	8	-8.0		
WB 10	136	1	0.0		53.2	66	53.2	66	53.2	10	---	53.1	0.1	8	-7.9		
WB 11	137	1	0.0		52.2	66	52.2	66	52.2	10	---	52.1	0.1	8	-7.9		
WB 12	138	1	0.0		65.5	66	65.5	66	65.5	10	---	65.4	0.1	8	-7.9		

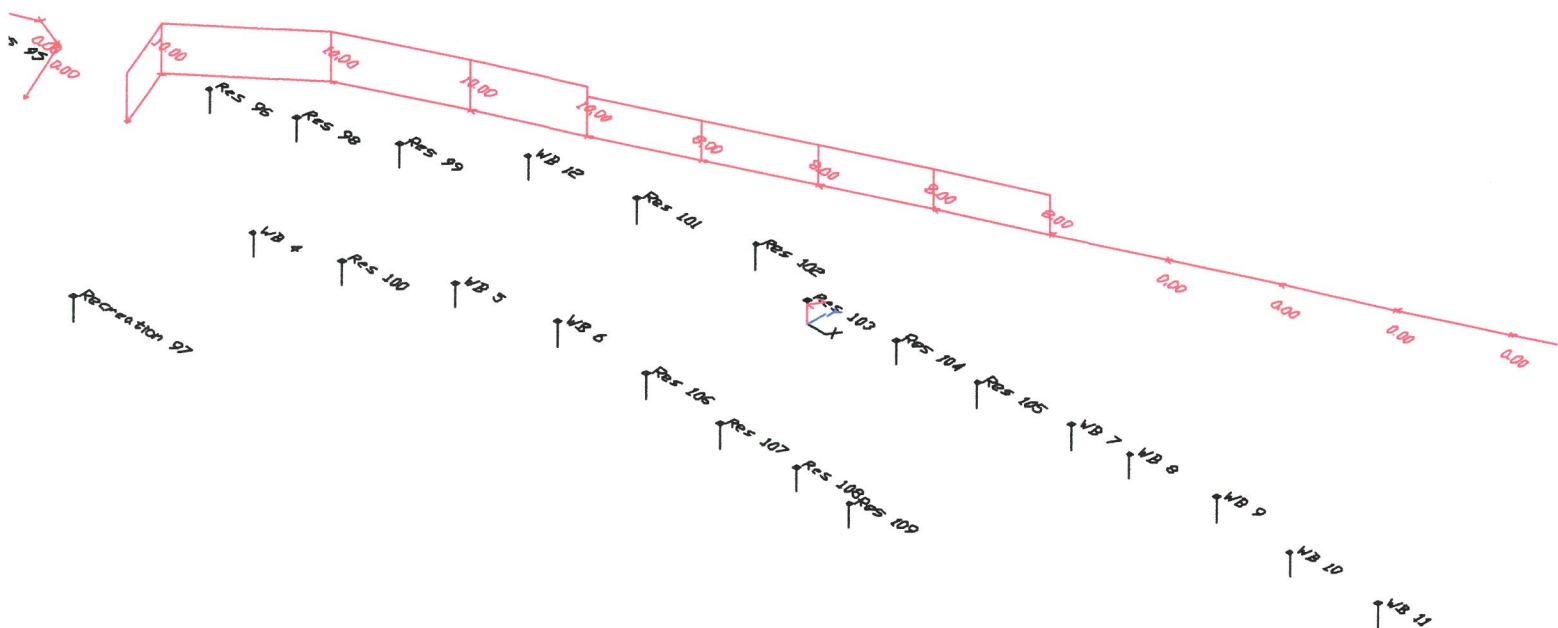
Build Alternative 2A - East Woodlands Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		ALT 2A	
Barrier	Location	Length (feet)	Height (feet)
	East Woodlands	832	10
Number of first row receptors (receptors adjacent to barrier):	Number of <i>first</i> row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
1	1		100%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle <u>Yes</u> or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% or more of the first row impacted receptors.		

Reasonableness Worksheet <u>DURING</u> NEPA				
Project	ID number	Route	Parish/City	
		A1+2A	St. Tammany	
Barrier	Length	Height	Location	
	832 ft	10 ft	East Woodlands	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
7,525	\$27	\$203,175	6	\$33,863
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: <u>Yes</u> or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing <i>Likely</i> barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 (<u>yes</u> or no)	Criterion 2 (<u>yes</u> or no)	Criterion 3 (yes or no)	Date



The Woodlands Barrier Analysis Alt 2A		Sheet 1 of 1	19 Jun 2018
Barrier View-Feasibility and Reasonableness -		Volkert	
Run name: The Woodlands Alt2A		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	→	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	→	Contour Zone:	polygon
Building Row:	—	Parallel Barrier:	—
Terrain Line:	—	Skew Section:	→

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

LA 1088

The Woodlands Barrier Analysis Alt 2A

RUN:

BARRIER DESIGN:

Feasibility and Reasonableness - East

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm	Cost		
		Min	Avg	Max		Area	Volume		Top Width	Run:Rise	
		ft	ft	ft	ft	sq ft	cu yd		ft	ft:ft	\$
East Woodlands Barrier	W	8.00	9.04	10.00	832	7525					0
West Woodlands Barrier	W	0.00	0.00	0.00	0	0	0				0
										Total Cost:	0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

The Woodlands Barrier Analysis Alt 2A

RUN:

BARRIER DESIGN: Feasibility and Reasonableness - East

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing		No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal
			LAeq1h	dBA	LAeq1h	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Noise Reduction Calculated	Goal
				dBA		dBA	dB	dB		dBA	dB	dB
Res 89	39	1	65.8	67.0	66	66	1.2	10	Snd Lvl	66.9	0.1	8
Res 90	40	1	66.2	67.2	66	66	1.0	10	Snd Lvl	67.1	0.1	8
Res 91	41	2	53.4	56.3	66	66	2.9	10	---	56.0	0.3	8
Res 92	42	2	51.1	53.7	66	66	2.6	10	---	53.3	0.4	8
Res 93	43	1	56.3	59.4	66	66	3.1	10	---	59.3	0.1	8
Res 94	44	1	64.1	65.3	66	66	1.2	10	---	65.2	0.1	8
Res 95	45	1	65.4	66.0	66	66	0.6	10	Snd Lvl	65.9	0.1	8
Res 96	46	1	64.1	66.2	66	66	2.1	10	Snd Lvl	58.4	7.8	8
Recreation 97	47	1	50.9	53.0	66	66	2.1	10	---	51.8	1.2	8
Res 98	48	1	62.7	64.6	66	66	1.9	10	---	57.4	7.2	8
Res 99	49	1	62.1	63.9	66	66	1.8	10	---	56.8	7.1	8
Res 100	50	4	52.6	55.3	66	66	2.7	10	---	52.6	2.7	8
Res 101	51	1	61.6	63.5	66	66	1.9	10	---	57.1	6.4	8
Res 102	52	1	59.7	62.0	66	66	2.3	10	---	57.0	5.0	8
Res 103	53	1	56.5	59.5	66	66	3.0	10	---	56.0	3.5	8
Res 104	54	1	55.4	58.5	66	66	3.1	10	---	56.1	2.4	8
Res 105	55	1	54.1	57.2	66	66	3.1	10	---	55.7	1.5	8
Res 106	56	2	51.0	53.4	66	66	2.4	10	---	51.2	2.2	8
Res 107	57	2	50.3	52.5	66	66	2.2	10	---	50.7	1.8	8
Res 108	58	2	49.8	52.0	66	66	2.2	10	---	50.4	1.6	8
Res 109	59	2	49.4	51.4	66	66	2.0	10	---	50.1	1.3	8
WB 1	127	1	0.0	56.4	66	66	56.4	10	---	55.6	0.8	8
WB 2	128	1	0.0	54.0	66	66	54.0	10	---	53.1	0.9	8

RESULTS: SOUND LEVELS

LA 1088

Dwelling Units	# DUs	Noise Reduction																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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Build Alternative 2A - West Frenchmen Noise Barrier Analysis

- Feasibility Analysis
 - LADOTD Feasibility Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		A1+2A	
Barrier	Location	Length (feet)	Height (feet)
	West Frenchmen	685	30
Number of first row receptors (receptors adjacent to barrier):	Number of <i>first row</i> receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
2	1		50
Are there any additional feasibility issues to consider?	<i>Explain:</i> The barrier fails to achieve a 5dBA reduction at 75% of the impacted first row receptors.		
Based on the above, is the barrier feasible?	Circle Yes or <u>No</u>		
	<i>Explain:</i>		

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

15 March 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

LA 1088

RUN:

Frenchmen Barrier Alt 2A

BARRIER DESIGN:

Feasibility - West

Barriers

Name	Type	Heights along Barrier			Length	If Wall		If Berm	Cost		
		Min	Avg	Max		Area	Volume		Top Width	Run:Rise	
		ft	ft	ft	ft	sq ft	cu yd		ft	ft:ft	\$
East Frenchmen Barrier	W	0.00	0.00	0.00	0	0	0				0
West Frenchmen Barrier	W	30.00	30.00	30.00	685	20540					0
										Total Cost:	0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

15 March 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT:

LA 1088

Frenchmen Barrier Alt 2A
Feasibility - West

BARRIER DESIGN:

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing	Type Impact	With Barrier		Noise Reduction	Calculated minus Goal
				LAeq1h Calculated	Crit'n	Calculated		Calculated LAeq1h	Calculated	Goal	
			dBA	dBA	dBA	dB		dBA	dB	dB	dB
Res 129	189	1	62.1	64.7	66	2.6	10	52.4	12.3	8	4.3
Res 130	190	1	65.1	66.6	66	1.5	10	54.3	12.3	8	4.3
Res 131	191	1	63.8	65.6	66	1.8	10	55.7	9.9	8	1.9
Res 132	192	1	66.0	67.6	66	1.6	10	62.8	4.8	8	-3.2
Res 133	193	1	59.5	62.0	66	2.5	10	59.5	2.5	8	-5.5
Res 134	194	1	66.9	69.1	66	2.2	10	68.9	0.2	8	-7.8
Res 135	195	1	53.3	56.6	66	3.3	10	55.2	1.4	8	-6.6
Res 136	196	1	49.8	52.4	66	2.6	10	51.0	1.4	8	-6.6
Res 137	197	1	65.8	67.4	66	1.6	10	67.3	0.1	8	-7.9
Res 138	198	1	66.0	67.7	66	1.7	10	67.6	0.1	8	-7.9
Res 139	199	1	64.6	66.6	66	2.0	10	66.5	0.1	8	-7.9
Res 143	203	1	50.9	53.6	66	2.7	10	53.0	0.6	8	-7.4
FM 1	239	1	0.0	56.4	66	56.4	10	51.5	4.9	8	-3.1
FM 2	240	1	0.0	57.2	66	57.2	10	51.9	5.3	8	-2.7
FM 3	241	1	0.0	54.9	66	54.9	10	50.8	4.1	8	-3.9
FM 4	242	1	0.0	52.9	66	52.9	10	50.1	2.8	8	-5.2
FM 5	243	1	0.0	51.5	66	51.5	10	49.3	2.2	8	-5.8
FM 6	244	1	0.0	53.7	66	53.7	10	51.1	2.6	8	-5.4
FM 7	245	1	0.0	55.6	66	55.6	10	53.5	2.1	8	-5.9
FM 8	246	1	0.0	56.5	66	56.5	10	54.8	1.7	8	-6.3
FM 9	247	1	0.0	51.8	66	51.8	10	50.1	1.7	8	-6.3
FM 10	248	1	0.0	52.7	66	52.7	10	51.5	1.2	8	-6.8
FM 11	249	1	0.0	56.3	66	56.3	10	55.4	0.9	8	-7.1

RESULTS: SOUND LEVELS

LA 1088

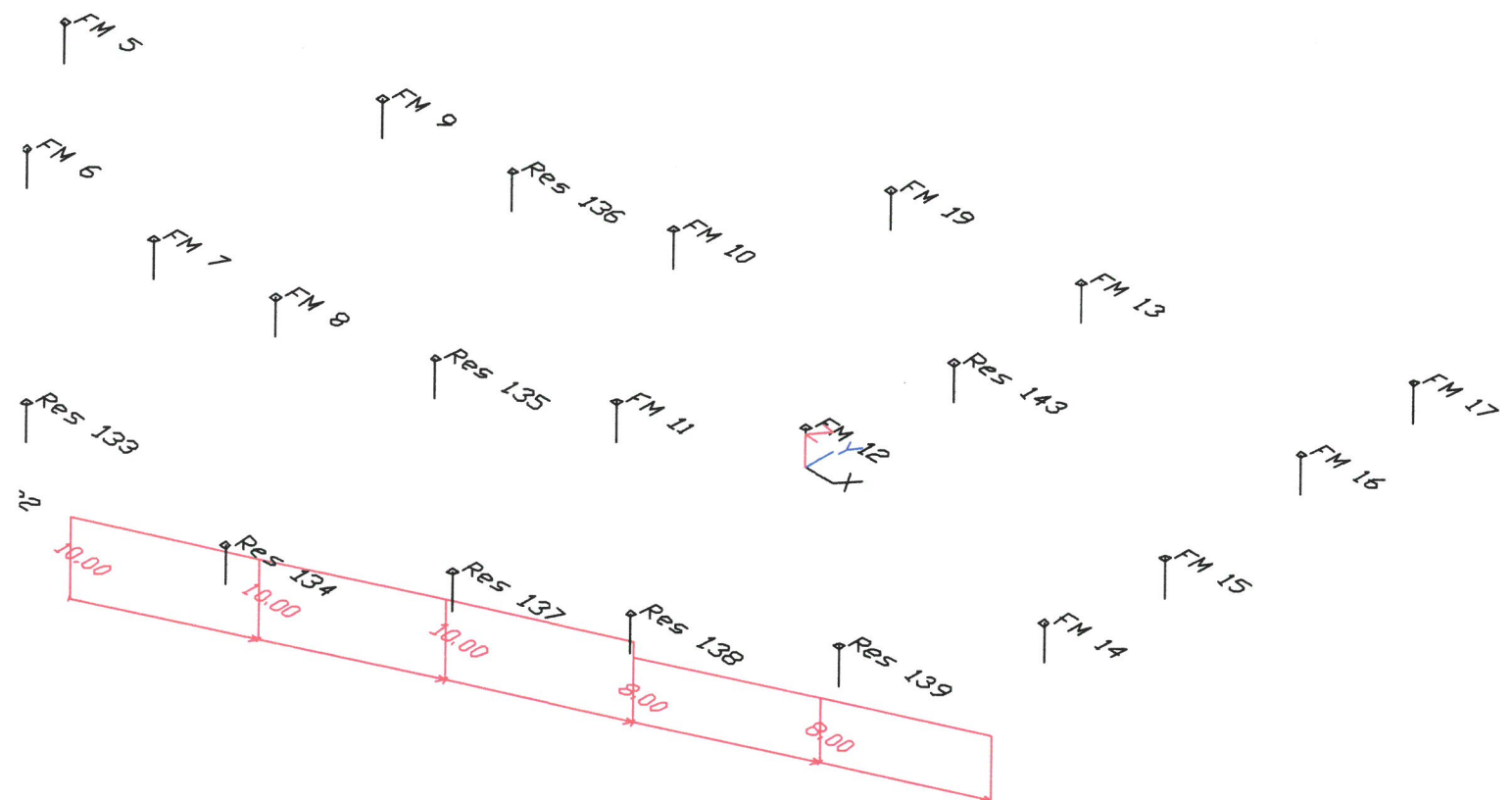
FM 12	250	1	0.0	55.8	66	55.8	10	---	55.1	0.7	8	-7.3
FM 13	251	1	0.0	51.9	66	51.9	10	---	51.2	0.7	8	-7.3
FM 14	252	1	0.0	62.9	66	62.9	10	---	62.8	0.1	8	-7.9
FM 15	253	1	0.0	59.6	66	59.6	10	---	59.6	0.0	8	-8.0
FM 16	254	1	0.0	54.9	66	54.9	10	---	54.8	0.1	8	-7.9
FM 17	255	1	0.0	52.6	66	52.6	10	---	52.4	0.2	8	-7.8
FM 18	256	1	0.0	51.4	66	51.4	10	---	48.7	2.7	8	-5.3
FM 19	257	1	0.0	51.4	66	51.4	10	---	50.5	0.9	8	-7.1
Dwelling Units												
		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected		31	0.0	2.6	12.3							
All Impacted		6	0.1	2.9	12.3							
All that meet NR Goal		3	9.9	11.5	12.3							

Build Alternative 2A - East Frenchmen Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet			
Project	ID number	Route Location	
		ALT 2A	
Barrier	Location	Length (feet)	Height (feet)
	East Frenchman	491	10
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
4	4		100%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle <u>Yes</u> or No		
	Explain: This barrier achieves a 5 dBA reduction at 75% or more of the first row impacted receptors.		

Reasonableness Worksheet <u>DURING NEPA</u>				
Project	ID number	Route	Parish/City	
		AH 2A	St. Tammany	
Barrier	Length	Height	Location	
	491 ft	10 ft	East Frenchmen	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
4,527	\$27	\$122,229	4	\$30,557
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: <u>Yes</u> or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing <i>Likely</i> barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 (<u>yes</u> or no)	Criterion 2 (<u>yes</u> or no)	Criterion 3 (yes or no)	Date



Frenchmen Barrier Alt 2A		Sheet 1 of 1	19 Jun 2018
		Volkert	
Barrier View-Feasibility and Reasonableness - Project/Contract No. LA 1088		TNM Version 2.5, Feb 2004	
Run name: Frenchmen Barrier Alt2A		Analysis By: Thomas Lee	
Scale: <DNA - due to perspective>			
Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

LA 1088

Frenchmen Barrier Alt 2A

Feasibility and Reasonableness - East

Barriers

Name	Type	Heights along Barrier			Length	If Wall Area	If Berm Volume	Top Width	Run:Rise	Cost
		Min	Avg	Max						
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	\$
East Frenchmen Barrier	W	8.00	9.22	10.00	491	4527				0
West Frenchmen Barrier	W	0.00	0.00	0.00	0	0				0
Total Cost:										0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

Frenchmen Barrier Alt 2A

RUN:
BARRIER DESIGN:
Feasibility and Reasonableness - East

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

68 deg F, 50% RH

ATMOSPHERICS:

Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB
				LAeq1h Calculated	Crit'n dBA	Calculated	Crit'n Sub'l Inc dB		Calculated LAeq1h dBA	Noise Reduction Calculated dB	Goal dB
Res 129	189	1	62.1	64.7	66	2.6	10	---	64.6	0.1	8
Res 130	190	1	65.1	66.6	66	1.5	10	Snd Lvl	66.5	0.1	8
Res 131	191	1	63.8	65.6	66	1.8	10	---	65.4	0.2	8
Res 132	192	1	66.0	67.6	66	1.6	10	Snd Lvl	67.1	0.5	8
Res 133	193	1	59.5	62.0	66	2.5	10	---	60.9	1.1	8
Res 134	194	1	66.9	69.1	66	2.2	10	Snd Lvl	61.9	7.2	8
Res 135	195	1	53.3	56.6	66	3.3	10	---	54.9	1.7	8
Res 136	196	1	49.8	52.4	66	2.6	10	---	51.4	1.0	8
Res 137	197	1	65.8	67.4	66	1.6	10	Snd Lvl	59.5	7.9	8
Res 138	198	1	66.0	67.7	66	1.7	10	Snd Lvl	59.7	8.0	8
Res 139	199	1	64.6	66.6	66	2.0	10	Snd Lvl	60.7	5.9	8
Res 143	203	1	50.9	53.6	66	2.7	10	---	52.1	1.5	8
FM 1	239	1	0.0	56.4	66	56.4	10	---	56.1	0.3	8
FM 2	240	1	0.0	57.2	66	57.2	10	---	56.8	0.4	8
FM 3	241	1	0.0	54.9	66	54.9	10	---	54.6	0.3	8
FM 4	242	1	0.0	52.9	66	52.9	10	---	52.5	0.4	8
FM 5	243	1	0.0	51.5	66	51.5	10	---	50.9	0.6	8
FM 6	244	1	0.0	53.7	66	53.7	10	---	52.9	0.8	8
FM 7	245	1	0.0	55.6	66	55.6	10	---	54.5	1.1	8
FM 8	246	1	0.0	56.5	66	56.5	10	---	55.1	1.4	8
FM 9	247	1	0.0	51.8	66	51.8	10	---	50.9	0.9	8
FM 10	248	1	0.0	52.7	66	52.7	10	---	51.5	1.2	8
FM 11	249	1	0.0	56.3	66	56.3	10	---	54.1	2.2	8

RESULTS: SOUND LEVELS

LA 1088													
FM 12	250	1	0.0	55.8	66	55.8	10	---	53.6	2.2	8	-5.8	
FM 13	251	1	0.0	51.9	66	51.9	10	---	50.8	1.1	8	-6.9	
FM 14	252	1	0.0	62.9	66	62.9	10	---	60.3	2.6	8	-5.4	
FM 15	253	1	0.0	59.6	66	59.6	10	---	57.9	1.7	8	-6.3	
FM 16	254	1	0.0	54.9	66	54.9	10	---	53.9	1.0	8	-7.0	
FM 17	255	1	0.0	52.6	66	52.6	10	---	51.8	0.8	8	-7.2	
FM 18	256	1	0.0	51.4	66	51.4	10	---	50.9	0.5	8	-7.5	
FM 19	257	1	0.0	51.4	66	51.4	10	---	50.4	1.0	8	-7.0	
Dwelling Units													
	# DUs	Noise Reduction											
		Min	Avg	Max									
		dB	dB	dB									
All Selected	31	0.1	1.8	8.0									
All Impacted	6	0.1	4.9	8.0									
All that meet NR Goal	0	0.0	0.0	0.0									

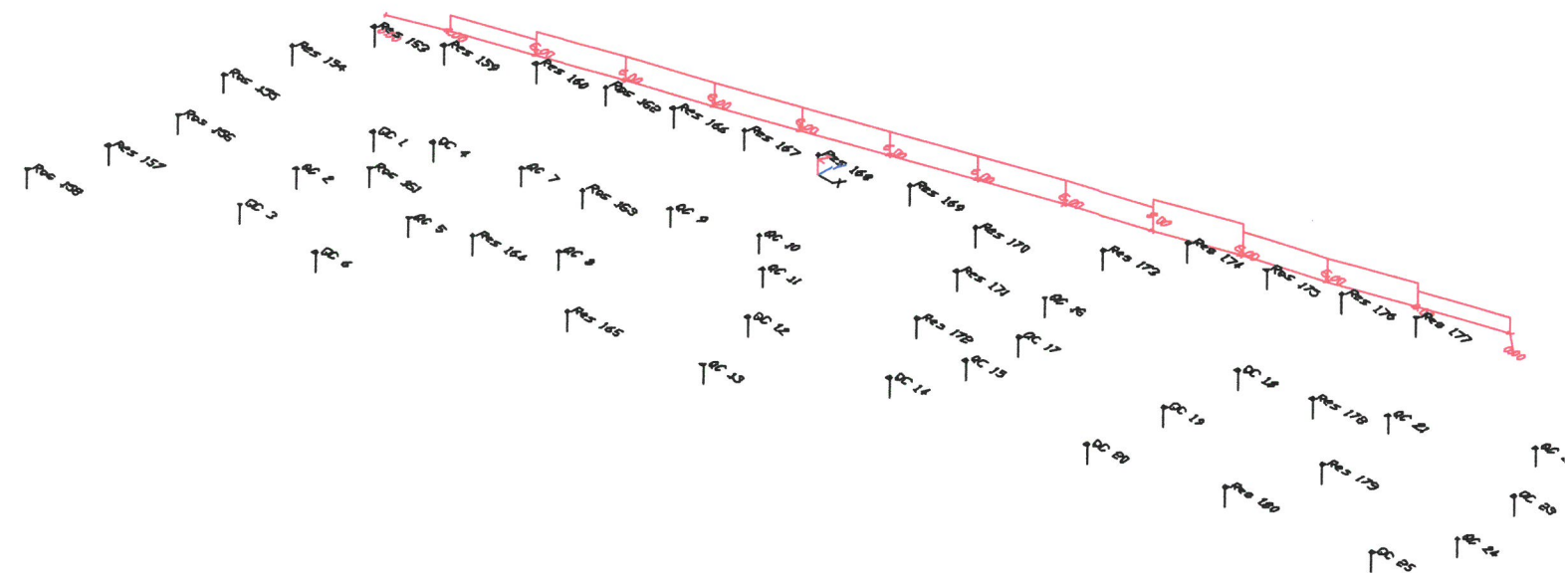
Build Alternative 2A - West Quail Creek Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		ALT 2A	
Barrier	Location	Length (feet)	Height (feet)
	West Quail Creek	1,207	8
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
10	8		80%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle <u>Yes</u> or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% or more of the first row impacted receptors.		

Reasonableness Worksheet <u>DURING</u> NEPA				
Project	ID number	Route	Parish/City	
		Alt 2A	St. Tammany	
Barrier	Length	Height	Location	
	1,207 ft	8 ft	West Quail Creek	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
7,033	\$27	\$189,891	12	\$15,824
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle Yes or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing Likely barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 (yes or no)	Criterion 2 (yes or no)	Criterion 3 (yes or no)	Date



Quail Creek Barrier Alt 2A		Sheet 1 of 1	19 Jun 2018
Barrier View-Feasibility and Reasonableness		Volkert	
Run name: Quail Creek Barrier Alt 2A		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	—————>	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	—————>	Contour Zone:	polygon
Building Row:	—————	Parallel Barrier:	—————
Terrain Line:	—————	Skew Section:	—————>

RESULTS: BARRIER DESCRIPTIONS

LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS

PROJECT/CONTRACT:

LA 1088

RUN:

Quail Creek Barrier Alt 2A

BARRIER DESIGN:

Feasibility and Reasonableness - Wes

Barriers

Name	Type	Heights along Barrier			Length	If Wall Area	If Berm			Cost
		Min	Avg	Max			Volume	Top Width	Run:Rise	
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	\$
West Quail Creek Barrier-2	W	4.00	5.83	8.00	1207	7033				0
East Quail Creek Barrier	W	0.00	0.00	0.00	0	0				0
									Total Cost:	0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee

19 June 2018

TNM 2.5

Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

RUN:

Quail Creek Barrier Alt 2A

BARRIER DESIGN:

Feasibility and Reasonableness - West

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Res 153	70	1	66.0	66.9	66	0.9	10	Snd Lvl	66.2	0.7	8	-7.3
Res 154	71	1	63.3	64.1	66	0.8	10	----	63.9	0.2	8	-7.8
Res 155	72	1	62.7	64.2	66	1.5	10	----	64.2	0.0	8	-8.0
Res 156	73	1	60.9	62.7	66	1.8	10	----	62.7	0.0	8	-8.0
Res 157	74	1	61.7	63.3	66	1.6	10	----	63.3	0.0	8	-8.0
Res 158	75	1	63.4	65.1	66	1.7	10	----	65.1	0.0	8	-8.0
Res 159	76	1	65.7	67.0	66	1.3	10	Snd Lvl	64.3	2.7	8	-5.3
Res 160	77	1	66.5	68.3	66	1.8	10	Snd Lvl	62.3	6.0	8	-2.0
Res 161	78	4	52.9	55.1	66	2.2	10	----	54.1	1.0	8	-7.0
Res 162	79	1	66.1	67.8	66	1.7	10	Snd Lvl	60.8	7.0	8	-1.0
Res 163	80	7	53.4	56.1	66	2.7	10	----	53.5	2.6	8	-5.4
Res 164	81	5	51.1	53.3	66	2.2	10	----	51.9	1.4	8	-6.6
Res 165	82	4	49.6	51.7	66	2.1	10	----	50.1	1.6	8	-6.4
Res 166	83	1	66.0	67.4	66	1.4	10	Snd Lvl	60.4	7.0	8	-1.0
Res 167	84	1	65.6	66.7	66	1.1	10	Snd Lvl	60.0	6.7	8	-1.3
Res 168	85	1	65.0	66.1	66	1.1	10	Snd Lvl	59.7	6.4	8	-1.6
Res 169	86	1	64.2	65.6	66	1.4	10	----	59.3	6.3	8	-1.7
Res 170	87	1	61.1	63.3	66	2.2	10	----	57.5	5.8	8	-2.2
Res 171	88	2	55.5	58.9	66	3.4	10	----	53.6	5.3	8	-2.7
Res 172	89	3	51.6	54.4	66	2.8	10	----	50.7	3.7	8	-4.3
Res 173	90	1	62.7	64.6	66	1.9	10	----	58.1	6.5	8	-1.5
Res 174	91	1	67.0	68.7	66	1.7	10	Snd Lvl	60.5	8.2	8	0.2
Res 175	92	1	66.5	67.8	66	1.3	10	Snd Lvl	60.9	6.9	8	-1.1

RESULTS: SOUND LEVELS

LA 1088

Res 176	93	1	66.3	66.3	66	0.0	10	Snd Lvl	60.9	5.4	8	-2.6
Res 177	94	1	66.2	64.8	66	-1.4	10	----	61.9	2.9	8	-5.1
Res 178	95	3	53.6	55.9	66	2.3	10	----	54.1	1.8	8	-6.2
Res 179	96	3	51.8	53.4	66	1.6	10	----	52.2	1.2	8	-6.8
Res 180	97	4	50.0	51.7	66	1.7	10	----	50.4	1.3	8	-6.7
Res 181	98	1	66.7	66.7	66	0.0	10	Snd Lvl	66.6	0.1	8	-7.9
Res 182	99	1	66.9	68.2	66	1.3	10	Snd Lvl	68.2	0.0	8	-8.0
Res 183	100	1	67.5	69.3	66	1.8	10	Snd Lvl	69.2	0.1	8	-7.9
Res 184	101	1	67.1	68.8	66	1.7	10	Snd Lvl	68.8	0.0	8	-8.0
Res 185	102	1	67.2	69.0	66	1.8	10	Snd Lvl	68.9	0.1	8	-7.9
Res 186	103	1	67.5	69.3	66	1.8	10	Snd Lvl	69.3	0.0	8	-8.0
Res 187	104	1	67.3	69.1	66	1.8	10	Snd Lvl	69.1	0.0	8	-8.0
Office 188	105	1	67.4	69.2	71	1.8	10	----	69.2	0.0	8	-8.0
Res 189	106	1	64.2	66.7	66	2.5	10	Snd Lvl	66.7	0.0	8	-8.0
Res 190	107	7	53.3	56.0	66	2.7	10	----	55.6	0.4	8	-7.6
Res 191	108	3	51.6	54.1	66	2.5	10	----	54.0	0.1	8	-7.9
Res 192	109	3	50.4	52.7	66	2.3	10	----	52.5	0.2	8	-7.8
QC 1	128	1	0.0	56.4	66	56.4	10	----	55.3	1.1	8	-6.9
QC 2	129	1	0.0	55.0	66	55.0	10	----	54.3	0.7	8	-7.3
QC 3	130	1	0.0	54.0	66	54.0	10	----	53.5	0.5	8	-7.5
QC 4	131	1	0.0	56.5	66	56.5	10	----	55.0	1.5	8	-6.5
QC 5	132	1	0.0	53.6	66	53.6	10	----	52.5	1.1	8	-6.9
QC 6	133	1	0.0	52.5	66	52.5	10	----	51.8	0.7	8	-7.3
QC 7	134	1	0.0	56.3	66	56.3	10	----	54.1	2.2	8	-5.8
QC 8	135	1	0.0	53.4	66	53.4	10	----	51.6	1.8	8	-6.2
QC 9	136	1	0.0	56.2	66	56.2	10	----	53.1	3.1	8	-4.9
QC 10	137	1	0.0	56.0	66	56.0	10	----	52.7	3.3	8	-4.7
QC 11	138	1	0.0	54.6	66	54.6	10	----	51.8	2.8	8	-5.2
QC 12	139	1	0.0	52.6	66	52.6	10	----	50.4	2.2	8	-5.8
QC 13	140	1	0.0	51.0	66	51.0	10	----	49.2	1.8	8	-6.2
QC 14	141	1	0.0	51.5	66	51.5	10	----	49.1	2.4	8	-5.6
QC 15	142	1	0.0	53.0	66	53.0	10	----	49.7	3.3	8	-4.7
QC 16	143	1	0.0	58.8	66	58.8	10	----	53.5	5.3	8	-2.7
QC 17	144	1	0.0	55.1	66	55.1	10	----	51.1	4.0	8	-4.0
QC 18	145	1	0.0	56.0	66	56.0	10	----	53.6	2.4	8	-5.6
QC 19	146	1	0.0	53.6	66	53.6	10	----	51.7	1.9	8	-6.1
QC 20	147	1	0.0	51.7	66	51.7	10	----	50.1	1.6	8	-6.4
QC 21	148	1	0.0	56.4	66	56.4	10	----	55.2	1.2	8	-6.8
QC 22	149	1	0.0	57.5	66	57.5	10	----	56.8	0.7	8	-7.3
QC 23	150	1	0.0	54.6	66	54.6	10	----	54.0	0.6	8	-7.4
QC 24	151	1	0.0	52.4	66	52.4	10	----	51.7	0.7	8	-7.3

RESULTS: SOUND LEVELS
LA 1088

QC 25	152	1	0.0	51.3	66	51.3	10	----	50.5	0.8	8	-7.2
QC 26	153	1	0.0	56.3	66	56.3	10	----	55.8	0.5	8	-7.5
QC 27	154	1	0.0	56.5	66	56.5	10	----	56.2	0.3	8	-7.7
QC 28	155	1	0.0	56.5	66	56.5	10	----	56.3	0.2	8	-7.8
QC 29	156	1	0.0	51.6	66	51.6	10	----	51.3	0.3	8	-7.7
QC 30	157	1	0.0	56.7	66	56.7	10	----	56.5	0.2	8	-7.8
QC 31	158	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0
QC 32	159	1	0.0	55.7	66	55.7	10	----	55.6	0.1	8	-7.9
QC 33	160	1	0.0	53.7	66	53.7	10	----	53.5	0.2	8	-7.8
QC 34	161	1	0.0	51.9	66	51.9	10	----	51.7	0.2	8	-7.8
Dwelling Units			# DUs	Noise Reduction								
				Min	Avg	Max						
				dB	dB	dB						
All Selected	110			0.0	2.0	8.2						
All Impacted	18			0.0	3.2	8.2						
All that meet NR Goal	1			8.2	8.2	8.2						

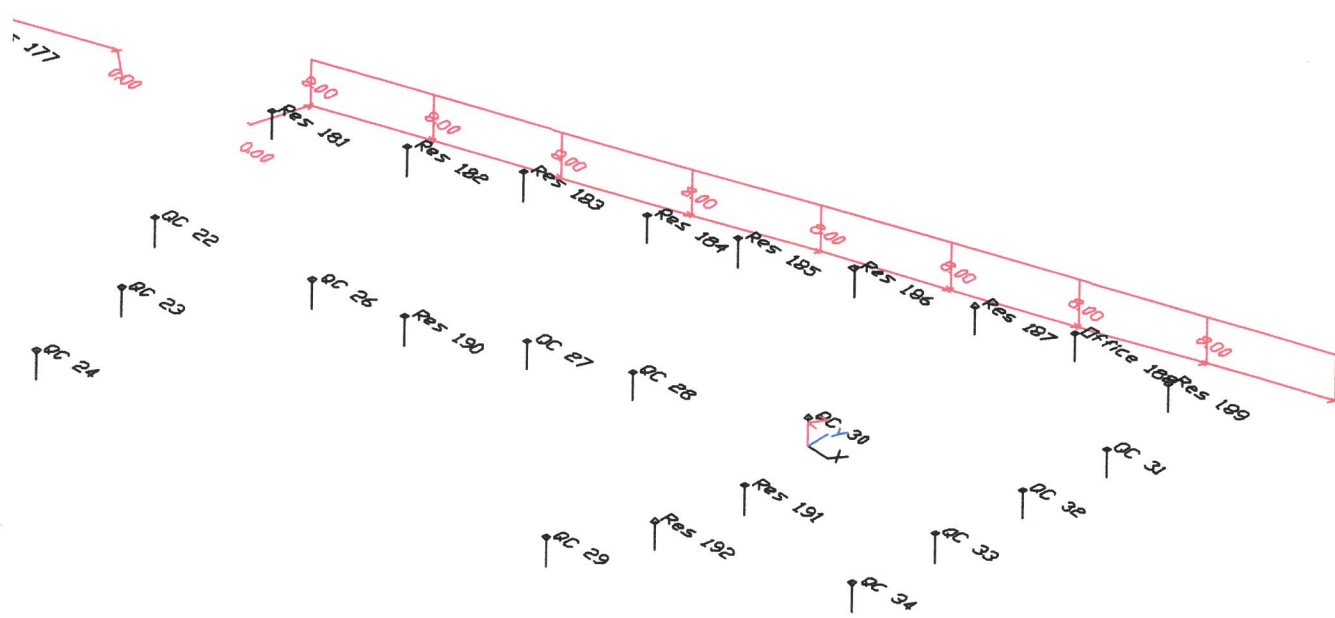
Build Alternative 2A - East Quail Creek Noise Barrier Analysis

- Feasibility and Reasonableness Analyses
 - LADOTD Feasibility Worksheet
 - LADOTD Reasonableness Worksheet
 - TNM Barrier View
 - TNM Barrier Descriptions
 - TNM Sound Levels

Feasibility Worksheet

Project	ID number	Route Location	
		ALT 2A	
Barrier	Location	Length (feet)	Height (feet)
	East Quail Creek	794	8
Number of first row receptors (receptors adjacent to barrier):	Number of first row receptors that achieve at least a 5dBA reduction in noise with barrier:		% that achieve ≥ 5 dBA reduction:
8	8		100%
Are there any additional feasibility issues to consider?	Explain:		
Based on the above, is the barrier feasible?	Circle <u>Yes</u> or No		
	Explain: This barrier achieves a ≥ 5 dBA reduction at 75% or more of the first row impacted receptors.		

Reasonableness Worksheet <u>DURING</u> NEPA				
Project	ID number	Route	Parish/City	
		A1+2A	St. Tammany	
Barrier	Length	Height	Location	
	794 ft	8 ft	East Quail Creek	
Criterion 1: Cost				
Total Square Feet	Cost per Square Foot	Total Cost	Number of Benefited Receptors	Cost per Benefited Receptor
6,349	\$27	\$171,423	8	\$21,428
Criterion 2: Design Goal				
At least an 8dBA reduction at 1 Receptor?	Circle: Yes or No			
	Notes:			
Criterion 3: Desires of Benefited Receptors				
Public Involvement events showing Likely barrier	Event(s) and date(s):			
	Notes:			
Benefitted Receptors' viewpoint of barrier	Circle: Positive or Negative			
	Notes:			
Separate Query of Benefitted Receptors	Circle: Yes or No			
	If Yes, note type and results (% of responses for barrier):			
Reasonableness criteria met?	Criterion 1 (yes or no)	Criterion 2 (yes or no)	Criterion 3 (yes or no)	Date



Quail Creek Barrier Alt 2A		Sheet 1 of 1	19 Jun 2018
Barrier View-Feasibility and Reasonableness		Volkert	
Run name: Quail Creek Barrier Alt 2A		Project/Contract No. LA 1088	
Scale: <DNA - due to perspective>		TNM Version 2.5, Feb 2004	
		Analysis By: Thomas Lee	
Roadway:	—————>	Ground Zone:	polygon
Receiver:	□	Tree Zone:	dashed polygon
Barrier:	—————>	Contour Zone:	polygon
Building Row:	—————	Parallel Barrier:	—————
Terrain Line:	—————	Skew Section:	—————>

RESULTS: BARRIER DESCRIPTIONS
LA 1088

Volkert
Thomas Lee

19 June 2018
TNM 2.5

RESULTS: BARRIER DESCRIPTIONS
PROJECT/CONTRACT:
LA 1088
RUN:
Quail Creek Barrier Alt 2A
BARRIER DESIGN:
Feasibility and Reasonableness - East
Barriers

Name	Type	Heights along Barrier			Length	If Wall Area	If Berm			Cost
		Min	Avg	Max			Volume	Top Width	Run:Rise	
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	\$
West Quail Creek Barrier-2	W	0.00	0.00	0.00	0	0				0
East Quail Creek Barrier	W	8.00	8.00	8.00	794	6349				0
									Total Cost:	0

RESULTS: SOUND LEVELS

LA 1088

Volkert
Thomas Lee19 June 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

LA 1088

RUN:

Quail Creek Barrier Alt 2A

BARRIER DESIGN:

Feasibility and Reasonableness - East

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Res 153	70	1	66.0	66.9	66	0.9	10	Snd Lvl	66.9	0.0	8	-8.0
Res 154	71	1	63.3	64.1	66	0.8	10	----	64.1	0.0	8	-8.0
Res 155	72	1	62.7	64.2	66	1.5	10	----	64.2	0.0	8	-8.0
Res 156	73	1	60.9	62.7	66	1.8	10	----	62.7	0.0	8	-8.0
Res 157	74	1	61.7	63.3	66	1.6	10	----	63.3	0.0	8	-8.0
Res 158	75	1	63.4	65.1	66	1.7	10	----	65.1	0.0	8	-8.0
Res 159	76	1	65.7	67.0	66	1.3	10	Snd Lvl	67.0	0.0	8	-8.0
Res 160	77	1	66.5	68.3	66	1.8	10	Snd Lvl	68.3	0.0	8	-8.0
Res 161	78	4	52.9	55.1	66	2.2	10	----	55.1	0.0	8	-8.0
Res 162	79	1	66.1	67.8	66	1.7	10	Snd Lvl	67.8	0.0	8	-8.0
Res 163	80	7	53.4	56.1	66	2.7	10	----	56.0	0.1	8	-7.9
Res 164	81	5	51.1	53.3	66	2.2	10	----	53.3	0.0	8	-8.0
Res 165	82	4	49.6	51.7	66	2.1	10	----	51.6	0.1	8	-7.9
Res 166	83	1	66.0	67.4	66	1.4	10	Snd Lvl	67.4	0.0	8	-8.0
Res 167	84	1	65.6	66.7	66	1.1	10	Snd Lvl	66.7	0.0	8	-8.0
Res 168	85	1	65.0	66.1	66	1.1	10	Snd Lvl	66.1	0.0	8	-8.0
Res 169	86	1	64.2	65.6	66	1.4	10	----	65.6	0.0	8	-8.0
Res 170	87	1	61.1	63.3	66	2.2	10	----	63.3	0.0	8	-8.0
Res 171	88	2	55.5	58.9	66	3.4	10	----	58.8	0.1	8	-7.9
Res 172	89	3	51.6	54.4	66	2.8	10	----	54.3	0.1	8	-7.9
Res 173	90	1	62.7	64.6	66	1.9	10	----	64.5	0.1	8	-7.9
Res 174	91	1	67.0	68.7	66	1.7	10	Snd Lvl	68.7	0.0	8	-8.0
Res 175	92	1	66.5	67.8	66	1.3	10	Snd Lvl	67.7	0.1	8	-7.9

RESULTS: SOUND LEVELS
LA 1088

Res 176	93	1	66.3	66.3	66	0.0	10	Snd Lvl	66.2	0.1	8	-7.9
Res 177	94	1	66.2	64.8	66	-1.4	10	----	64.6	0.2	8	-7.8
Res 178	95	3	53.6	55.9	66	2.3	10	----	55.1	0.8	8	-7.2
Res 179	96	3	51.8	53.4	66	1.6	10	----	52.6	0.8	8	-7.2
Res 180	97	4	50.0	51.7	66	1.7	10	----	51.0	0.7	8	-7.3
Res 181	98	1	66.7	66.7	66	0.0	10	Snd Lvl	63.2	3.5	8	-4.5
Res 182	99	1	66.9	68.2	66	1.3	10	Snd Lvl	60.5	7.7	8	-0.3
Res 183	100	1	67.5	69.3	66	1.8	10	Snd Lvl	60.4	8.9	8	0.9
Res 184	101	1	67.1	68.8	66	1.7	10	Snd Lvl	60.0	8.8	8	0.8
Res 185	102	1	67.2	69.0	66	1.8	10	Snd Lvl	60.2	8.8	8	0.8
Res 186	103	1	67.5	69.3	66	1.8	10	Snd Lvl	60.4	8.9	8	0.9
Res 187	104	1	67.3	69.1	66	1.8	10	Snd Lvl	60.5	8.6	8	0.6
Office 188	105	1	67.4	69.2	71	1.8	10	----	60.9	8.3	8	0.3
Res 189	106	1	64.2	66.7	66	2.5	10	Snd Lvl	60.9	5.8	8	-2.2
Res 190	107	7	53.3	56.0	66	2.7	10	----	53.3	2.7	8	-5.3
Res 191	108	3	51.6	54.1	66	2.5	10	----	52.1	2.0	8	-6.0
Res 192	109	3	50.4	52.7	66	2.3	10	----	50.9	1.8	8	-6.2
QC 1	128	1	0.0	56.4	66	56.4	10	----	56.4	0.0	8	-8.0
QC 2	129	1	0.0	55.0	66	55.0	10	----	55.0	0.0	8	-8.0
QC 3	130	1	0.0	54.0	66	54.0	10	----	54.0	0.0	8	-8.0
QC 4	131	1	0.0	56.5	66	56.5	10	----	56.5	0.0	8	-8.0
QC 5	132	1	0.0	53.6	66	53.6	10	----	53.6	0.0	8	-8.0
QC 6	133	1	0.0	52.5	66	52.5	10	----	52.5	0.0	8	-8.0
QC 7	134	1	0.0	56.3	66	56.3	10	----	56.3	0.0	8	-8.0
QC 8	135	1	0.0	53.4	66	53.4	10	----	53.4	0.0	8	-8.0
QC 9	136	1	0.0	56.2	66	56.2	10	----	56.2	0.0	8	-8.0
QC 10	137	1	0.0	56.0	66	56.0	10	----	56.0	0.0	8	-8.0
QC 11	138	1	0.0	54.6	66	54.6	10	----	54.5	0.1	8	-7.9
QC 12	139	1	0.0	52.6	66	52.6	10	----	52.5	0.1	8	-7.9
QC 13	140	1	0.0	51.0	66	51.0	10	----	50.8	0.2	8	-7.8
QC 14	141	1	0.0	51.5	66	51.5	10	----	51.2	0.3	8	-7.7
QC 15	142	1	0.0	53.0	66	53.0	10	----	52.9	0.1	8	-7.9
QC 16	143	1	0.0	58.8	66	58.8	10	----	58.8	0.0	8	-8.0
QC 17	144	1	0.0	55.1	66	55.1	10	----	55.0	0.1	8	-7.9
QC 18	145	1	0.0	56.0	66	56.0	10	----	55.4	0.6	8	-7.4
QC 19	146	1	0.0	53.6	66	53.6	10	----	53.0	0.6	8	-7.4
QC 20	147	1	0.0	51.7	66	51.7	10	----	51.2	0.5	8	-7.5
QC 21	148	1	0.0	56.4	66	56.4	10	----	55.5	0.9	8	-7.1
QC 22	149	1	0.0	57.5	66	57.5	10	----	56.0	1.5	8	-6.5
QC 23	150	1	0.0	54.6	66	54.6	10	----	53.3	1.3	8	-6.7
QC 24	151	1	0.0	52.4	66	52.4	10	----	51.3	1.1	8	-6.9

RESULTS: SOUND LEVELS
LA 1088

QC 25	152	1	0.0	51.3	66	51.3	10	----	50.3	1.0	8	-7.0
QC 26	153	1	0.0	56.3	66	56.3	10	----	53.8	2.5	8	-5.5
QC 27	154	1	0.0	56.5	66	56.5	10	----	53.4	3.1	8	-4.9
QC 28	155	1	0.0	56.5	66	56.5	10	----	53.4	3.1	8	-4.9
QC 29	156	1	0.0	51.6	66	51.6	10	----	50.0	1.6	8	-6.4
QC 30	157	1	0.0	56.7	66	56.7	10	----	53.6	3.1	8	-4.9
QC 31	158	1	0.0	60.2	66	60.2	10	----	57.2	3.0	8	-5.0
QC 32	159	1	0.0	55.7	66	55.7	10	----	52.8	2.9	8	-5.1
QC 33	160	1	0.0	53.7	66	53.7	10	----	51.4	2.3	8	-5.7
QC 34	161	1	0.0	51.9	66	51.9	10	----	50.0	1.9	8	-6.1
Dwelling Units		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected	110		0.0	1.5	8.9							
All Impacted	18		0.0	3.4	8.9							
All that meet NR Goal	6		8.3	8.7	8.9							

APPENDIX G

Wetlands Report

WETLAND FINDINGS REPORT LA-1088 CORRIDOR STUDY ST. TAMMANY PARISH, LOUISIANA

**The Louisiana Department of Transportation
and Development**

State Project No. H.010116

Federal Aid Project No. H.010116

Prepared for:



**State of Louisiana
Department of Transportation and Development
1201 Capitol Access Road
Baton Rouge, Louisiana 70802**

July 9, 2015

Prepared By:

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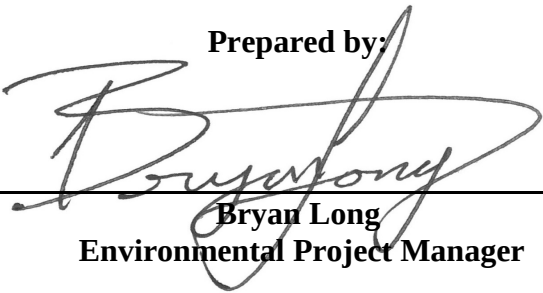
WETLAND FINDINGS REPORT LA-1088 CORRIDOR STUDY ST. TAMMANY PARISH, LOUISIANA

**The Louisiana Department of Transportation
and Development**

State Project No. H.010116

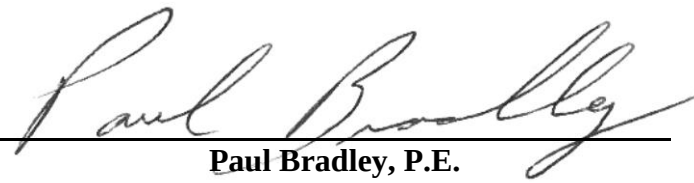
Volkert Contract No. 534100

Prepared by:



Bryan Long
Environmental Project Manager

Reviewed by:



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1.0 Introduction

On behalf of the Louisiana Department of Transportation and Development (DOTD), Volkert, Inc. conducted a wetland study for proposed roadway improvements to LA-1088 from LA-59 to the I-12 interchange in St. Tammany Parish, Louisiana (**Figure 1**). The DOTD in cooperation with the Federal Highway Administration (FHWA) is studying proposed improvements to the accessibility, safety, and mobility of vehicle, pedestrian and bicycle traffic through the LA-1088 corridor. Proposed improvements include constructing roundabouts, highway widening, and the possibility of sidewalks and bike paths. The total length of the proposed project is approximately 3.5 miles.

The proposed project is located near the City of Mandeville, St. Tammany Parish, Louisiana. Project study area limits were established to encompass the maximum possible extent of construction. The project study area limits begin approximately 0.5 mile (~2,600 feet) north of I-12 at Latitude 30.394994°N and Longitude -89.995446°W and encompasses LA-1088. LA-1088 continues south west to the intersection of LA-59 (Girod Street) at Latitude 30.374109°N and Longitude -90.054623°W. From the intersection of LA-1088 and LA-59, the project study area limits extend north-north east along LA-59 for approximately 670 linear feet ending at Latitude 30.376075°N and Longitude -90.054003°W. The proposed project study area limits also extend south-south west from the intersection of LA-1088 and LA-59 for approximately 1,140 linear feet along LA-59 ending at Latitude 30.371283°N and Longitude -90.056268°W.

Adjacent properties/land uses are zoned for suburban/single-family residential, highway commercial, retail and service, and primary education (schools) (**Figure 2**). The percentage of the project study area limits occupied by each of the zoned areas is as follows: Suburban/single-family residential (54 percent, 49.6 acres), retail and service (23 percent, 21.7 acres), highway commercial (21 percent, 20.2 acres), and primary education (2 percent, 0.8 acres). Various underground and above ground utilities that are located near the highway within the study area limits include electricity, potable water, sanitary sewer, and gas.

2.0 Methodology

Preparation of the Wetlands Findings Report was conducted in two parts. Part one included a desk top review of aerial photography (**Figure 1**), St. Tammany Parish Zoning Map (**Figure 2**), U.S. Geological Survey (USGS) topographic quadrangle maps (**Figure 3**), U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) GIS data (**Figure 4**), and Natural Resources Conservation Service (NRCS) GIS data (**Figure 5**) and Hydric Soils List (2014).

The following summarizes the findings from the desk top review:

- 1) One (1) un-named tributary to Bayou Castine was identified on the USGS topographical quadrangle map.
- 2) Four (4) types of wetland systems were identified using the USFWS NWI maps.

The wetland system descriptions are as follows:

- a. **R1UBV** - Riverine (**R**) system that is tidally influenced (**1**) with an unconsolidated bottom (**UB**) and is flooded by fresh water tides throughout the year (**V**).
- b. **PUBHx** - Palustrine system (**P**) that includes all non-tidal wetlands dominated by trees, shrubs, emergent vegetation, and mosses or lichens. This wetland system has an unconsolidated bottom (**UB**) and is permanently flooded (**H**) throughout the entire year. This type of wetland has also been excavated (**x**).
- c. **PFO4A** - Palustrine system (**P**) that includes all non-tidal wetlands dominated by trees, shrubs, emergent vegetation, and mosses or lichens. These wetlands are forested (**FO**) and characterized by woody vegetation that is six meters (~20 ft.) tall or taller. This system has been classified as being a needle-leaved evergreen (**4**) forest that is temporarily flooded during the growing season (**A**).

- d. **PEM1C** - Palustrine system (**P**) that includes all non-tidal wetlands dominated by trees, shrubs, emergent vegetation, and mosses or lichens. This is an emergent (**EM**) wetland characterized by erect, rooted, herbaceous hydrophytes that are present for most of the growing season. This type of emergent system is persistent (**1**) where most of the vegetation will remain standing at least until the beginning of the next growing season. Lastly, this system is seasonally flooded (**C**) where surface water is present for extended periods of the year, especially early in the growing season, but can be absent by the end of the growing season in most years.

3) Five (5) soil series categorized as hydric were found within the project study area limits. Hydric soil series are listed alphabetically and described as follows:

- a. **Abita Silt Loam**, 0-2% slopes (Aa) - Parent materials consist of silty marine deposits, landform is described as flats, coverage of ~18.2% (24.0 acres) of the project area study area limits.
- b. **Guyton Silt Loam**, 0-1% slopes (Gt) - Parent materials consist of loamy alluvium of the Holocene age, landform described as terraces, coverage of ~28.4% (37.4 acres) of the project study area limits.
- c. **Myatt Fine Sandy Loam**, Frequently Flooded, 0-1% slopes (My) - Parent materials consist of Pleistocene fluviomarine deposits, landform described as stream terraces, coverage of ~6.7% (8.8 acres) of the project study area limits.
- d. **Prentiss Fine Sandy Loam**, 0-1% slopes (Pr) - Parent materials consist of Pleistocene fluviomarine deposits, landform described as interfluvies, coverage of ~13.5% (17.8 acres) of the project study area limits.
- e. **Stough Fine Sandy Loam**, 0-1% slopes (St) - Parent material consist of loamy alluvium derived from sedimentary rock, landform described as

flatwoods and terraces, coverage of ~33.1% (43.6 acres) of the project study area limits.

Part two included conducting on foot field surveys during the weeks of May 11th – 15th, 2015 and May 18th – 22nd, 2015. Volkert, Inc. personnel surveyed the project study area limits for the presence of wetlands, waters of the U.S., other waters of the U.S., and uplands. During the surveys, locations of wetlands, waters of the U.S., or other waters of the U.S. were recorded using a sub-meter accurate GPS instrument (Trimble® Geo XH). Recorded features were mapped using ArcMap 10.2.1 GIS software systems. Aerial photographs were used to display the wetlands, waters of the U.S., and other waters of the U.S. (**Figure 6**). Any areas not identified as a wetland, water of the U.S., or other water of the U.S. in **Figure 6** was identified as uplands.

Wetlands were identified within the project study area limits in accordance with the *1987 United States Army Corps of Engineers (USACE) Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (U.S. Army Corps of Engineers, Wetland Regulatory Assistance Program 2010). The USACE and the U.S. Environmental Protection Agency (USEPA) jointly define wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands have the following characteristics: (1) vegetation consisting of macrophytes that are typically adapted to soil conditions found in wetland environments; (2) soils that have been classified as hydric or possess characteristics that are associated with reducing soil conditions; and (3) hydrology, meaning that the area is inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation. The project study area limits were surveyed and field data was collected on the three diagnostic wetland parameters. Pictures and USACE Wetland Determination Data Forms were completed at eight locations within the project study

area limits (**Exhibit A** and **Exhibit B**). Four (4) types of wetland systems were identified using the USFWS NWI maps and verified during field surveys. Overall, wetland systems were found at thirty-two (32) sites within the project study area limits covering approximately 24.48 acres. **Figure 6** illustrates the wetlands within the required right-of-way for each of the proposed project Build Alternatives.

By definition, a “Water of the U.S.” is any and all waters which are used in interstate or foreign commerce, including interstate wetlands, interstate lakes, rivers, streams, mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce. Tributaries of waters identified prior in the paragraph also fall under the Clean Water Act (40 CFR 122.2). One (1) potential water of the U.S. was identified during the desktop review and verified during field surveys. This water was described as an un-named tributary to Bayou Castine on the USGS topographic quadrangle map. This un-named tributary had a soft bottom, silt laden water, slow flow, defined vegetated bank, water depths averaging 1.5 feet, and connected to roadside ditches (**Figure 6**). The un-named tributary has a very straight, non-meandering course which is typical of waters of the U.S. that have been altered by mechanical means for the purposes of conveying storm water. Overall, approximately 76.2 linear feet (~0.028 acre) of the un-named tributary was found within the project study area limits. Using aerial photography and ArcMap GIS 10.2.1 software, an impoundment to this un-named tributary was found approximately 1,200 feet downstream from the eastern-most extent of the project study area limits (Latitude 30.384278°N, Longitude -90.014578°W). This impoundment was a neighborhood roadway (Oscar Street) with a culvert structure to help with water conveyance.

“Other waters of the U.S.”, for the purpose of this report, will be defined as swale ditches that parallel the highway and were constructed to capture and convey storm water drainage. The other waters of the U.S. found throughout the project study area limits contained all three criteria (hydrology, hydrophytic vegetation, and hydric soils) associated with a wetland system. Vegetation associations included facultative,

facultative wet, and/or obligate emergent plant species such as rushes (*Juncus spp.*), cat-tails (*Typha domingensis*), alligator weeds (*Alternanthera spp.*), and sedges (*Cyperus spp.*). This wetland system lacked large tree species, primarily due to regular maintenance activities that include removal of problematic sedimentation and vegetation. During the survey period, the majority of these systems contained above-ground water, either flowing slowly or stagnant. Soils found in these systems contained hydric indicators associated with wetlands. Overall, these systems cover approximately 6.43 acres (115 locations) of the total project study area limits. **Figure 6** illustrates the other waters of the U.S. within the required right-of-way for each of the proposed project Build Alternatives.

Lastly, “Uplands” describes any area that did not have one or more of the three criteria needed for a wetland (hydrology, hydric soils, and hydrophytic vegetation) and was not a water or other water of the U.S. These areas were comprised of facultative, facultative upland, and/or upland plant species and exhibited no hydrological indicators typical of extended periods of inundation. This habitat type also included roadways and impervious, man-made surfaces found throughout the project study area limits. In total, approximately 100.6 acres of uplands were observed throughout the entire project study area limits.

3.0 Results

Potential impacts to wetlands, waters of the U.S. and other waters of the U.S. were determined by calculating the acreages within the required right-of-way for each of the three (3) proposed Build Alternatives. Below is a chart that summarizes the potential impact for each alternative.

Table 1: Potential Impacts for Each Alternative

	Wetland (Acres)	Waters of the US (Acres)	Other Waters of the US (Acres)
Alternative 1A	12.0	0.02	6.1
Alternative 1B	12.0	0.02	6.1
Alternative 2	12.4	0.02	6.1

Formal determinations for waters of the U.S. and jurisdictional determinations for wetlands will be made by the USACE during the permitting process.

4.0 Conclusions

Volkert, Inc. conducted a wetland study for proposed roadway improvements to LA-1088 from LA-59 to the I-12 interchange in St. Tammany Parish, Louisiana. Areas of wetlands, waters of the U.S. and other waters of the U.S. were identified within the project study area limits. All three build alternatives have potential impacts to these resources. As the proposed project progresses, potential impacts to wetlands, waters of the U.S. and other waters of the U.S. will be further evaluated through the permitting process, including the USACE jurisdictional determinations.

Figures



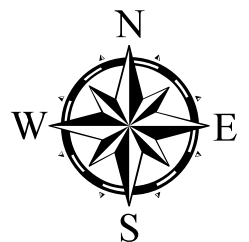
Legend

 Project Study Area

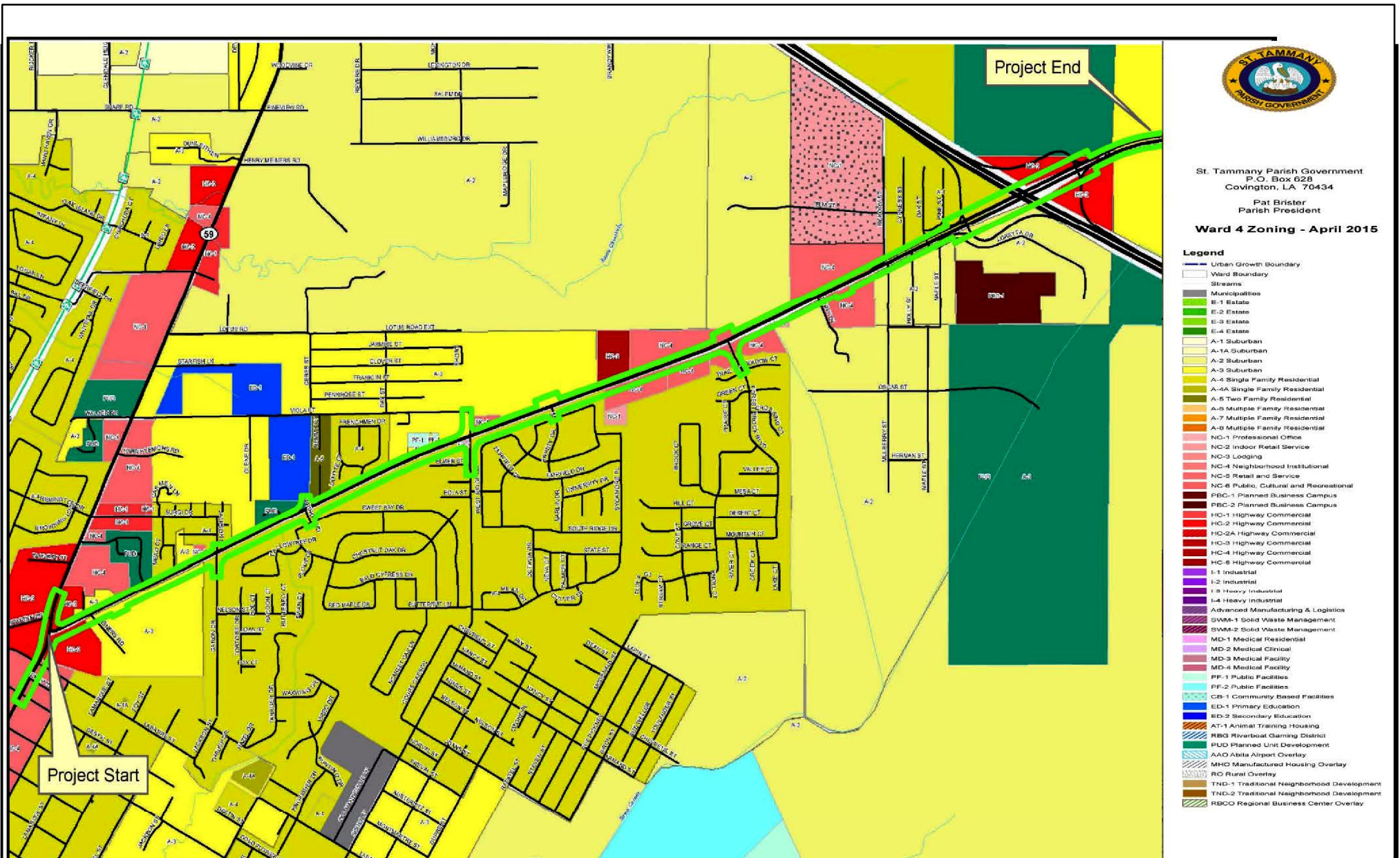
Figure 1: Site Location/ Project Limits Map

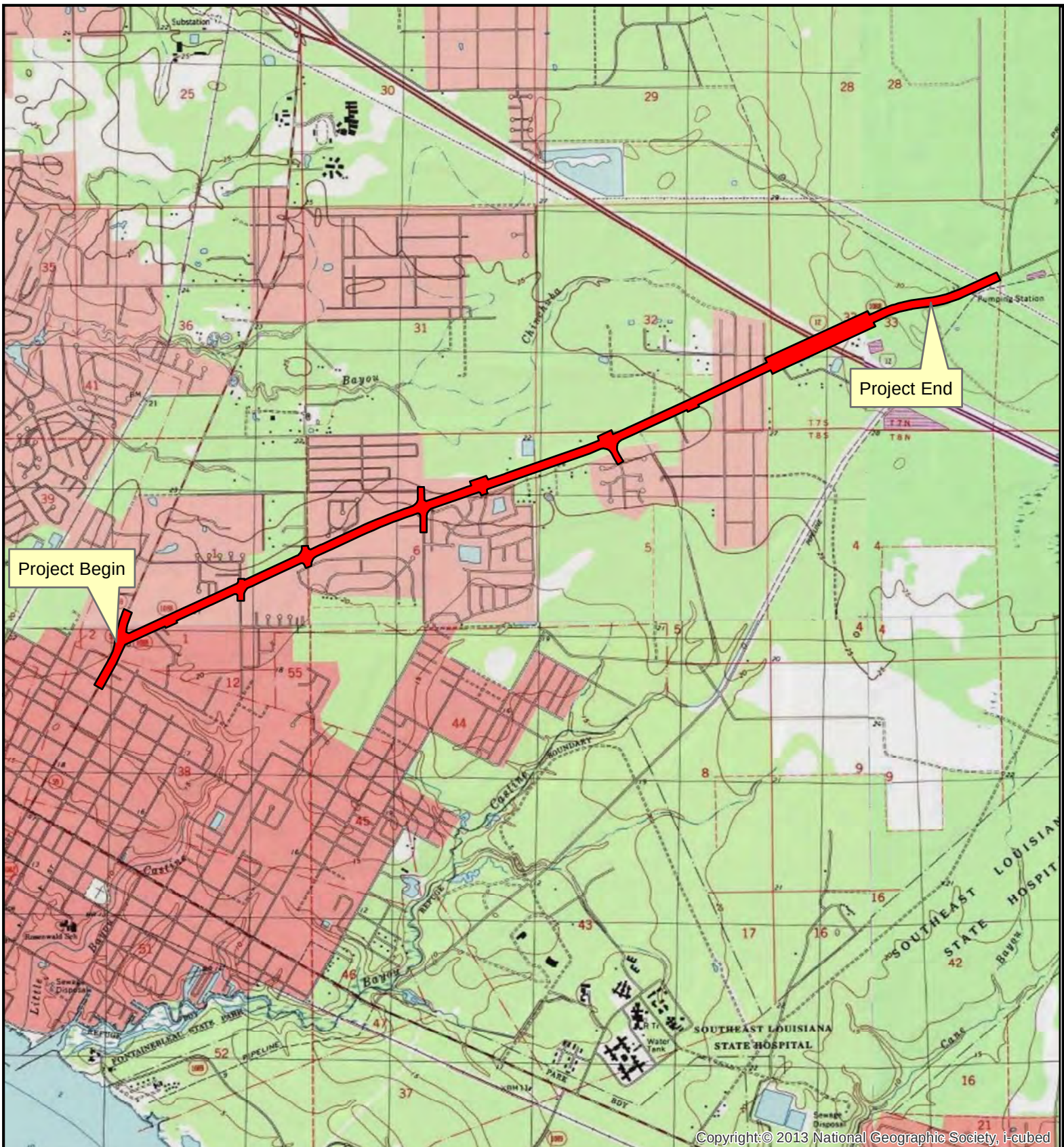
LA-1088 Corridor Study
St. Tammany Parish
Louisiana

0 1,500 3,000 6,000 9,000 12,000
Feet



1 inch = 3,000 feet





Legend

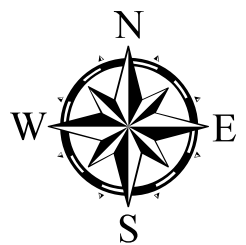
 Project Study Area

Figure 3: U.S.G.S. Topographical Map

LA-1088 Corridor Study
St. Tammany Parish
Louisiana

0 1,500 3,000 6,000 9,000 12,000

Feet



1 inch = 3,000 feet



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Legend

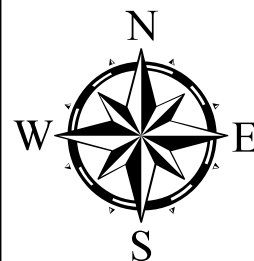
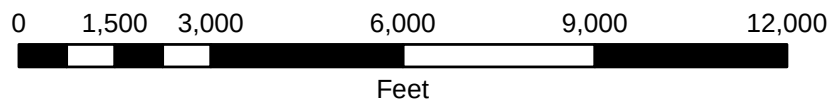
MUSYM

- Aa
- Gt
- My
- Pr
- St

Aa= Abita Silt Loam, 0-2% Slope
 Gt= Guyton Silt Loam
 My= Myatt Fine Sandy Loam
 Pr= Prentiss Fine Sandy Loam
 St= Stough Fine Sandy Loam
 All categorized as hydric according to
 NRCS Hydric Soils List (2014)*

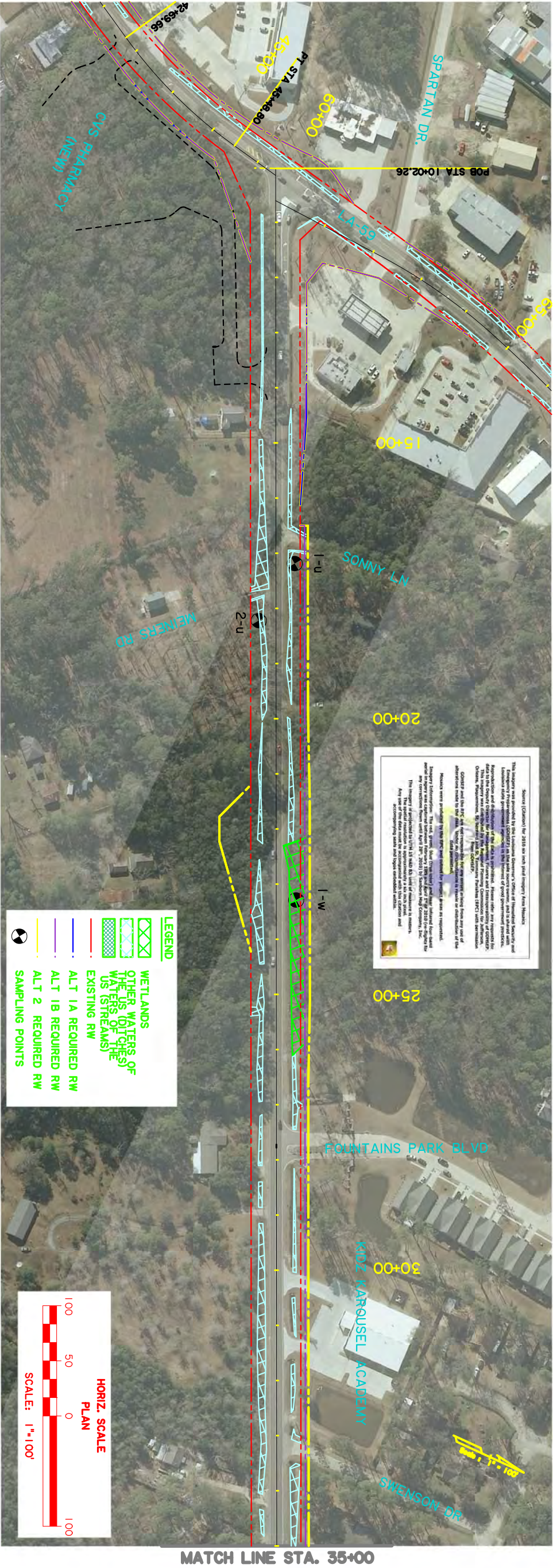
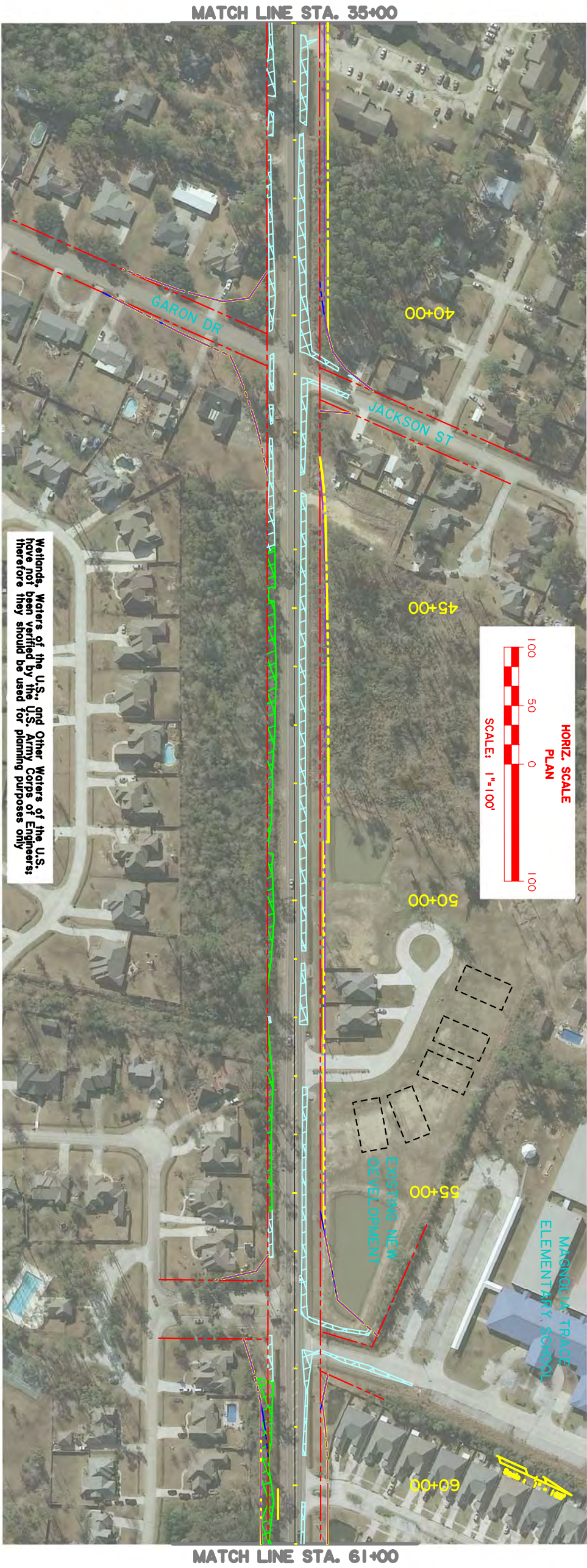
Figure 5: NRCS Soils Map

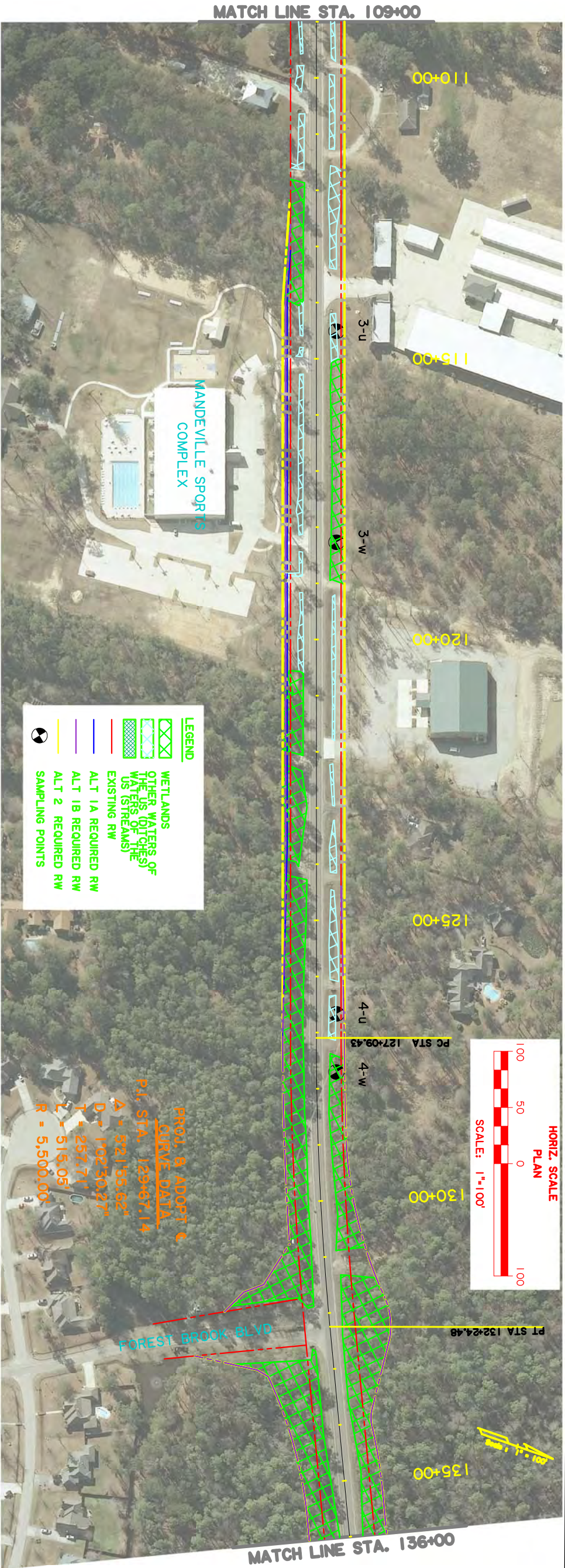
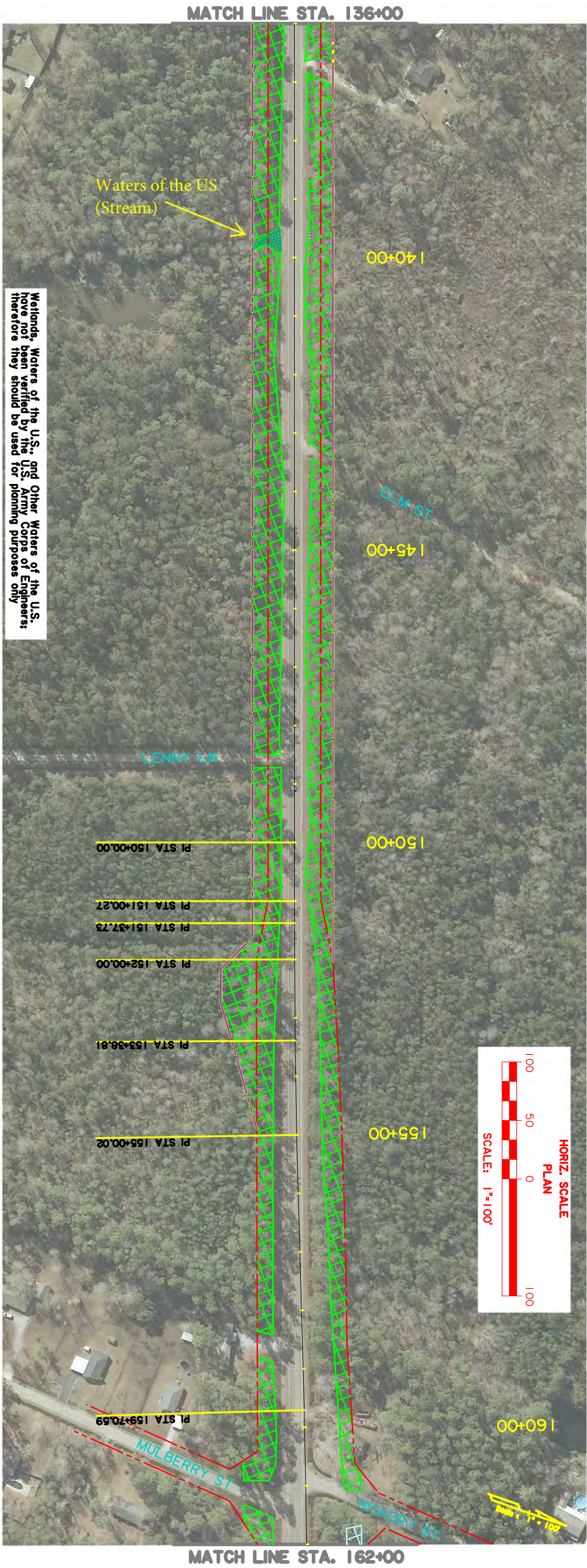
LA-1088 Study Corridor
 St. Tammany Parish
 Louisiana

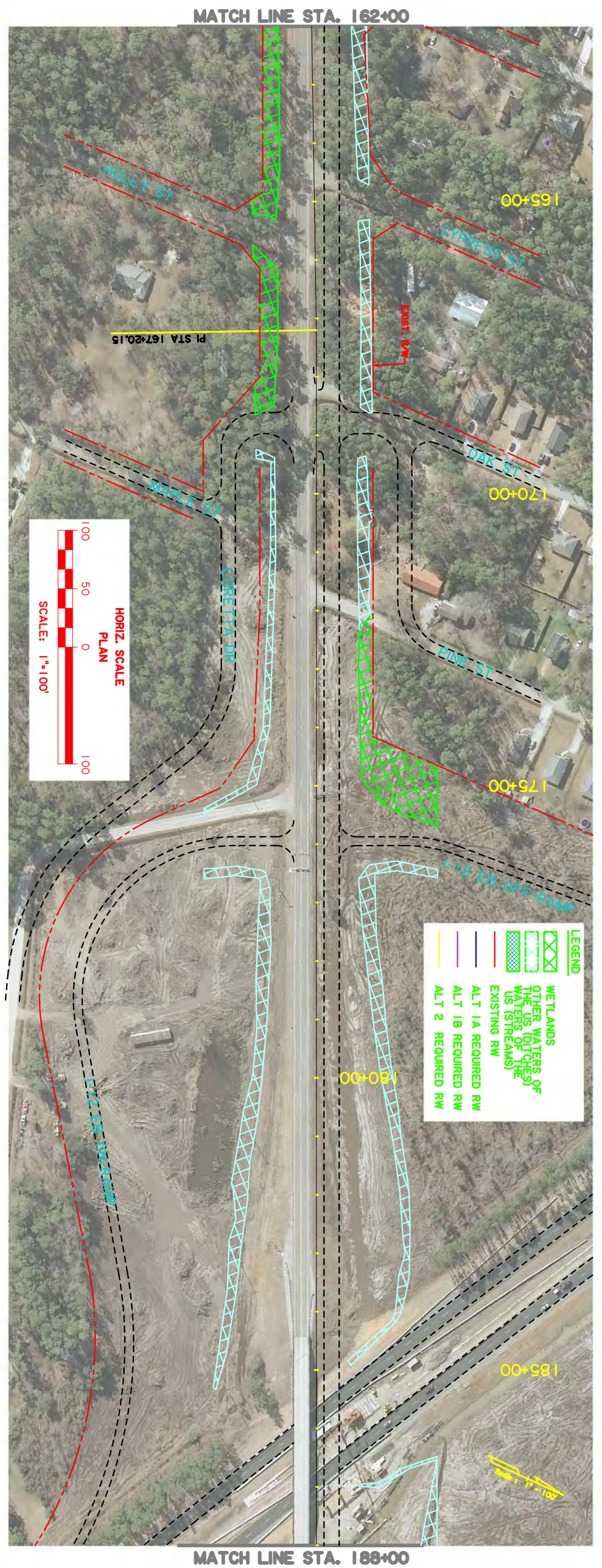


1 inch = 3,000 feet

Figure 6: Project Alternatives Map







Exhibits

Exhibit A: Site Photographs



Photo 1: LA 1088 Sign near interchange of I-12.



Photo 2: Typical vegetation of road-side ditches found throughout the project area. Photo was taken looking north.



Photo 3: Utility work and soils found near intersection of I-12 and LA-1088. Photo was taken looking west.



Photo 4: Typical road-side ditch vegetation. Looking south along LA-1088.



Photo 5: Wetland Determination Data Form 1-Uplands soil sample with Munsell 10 YR card.



Photo 6: Wetland Determination Data Form 1-Uplands vegetation. Looking south towards Sonny Lane.



Photo 7: Wetland Determination Data Form 1-Uplands vegetation. Looking eastward towards LA-1088.

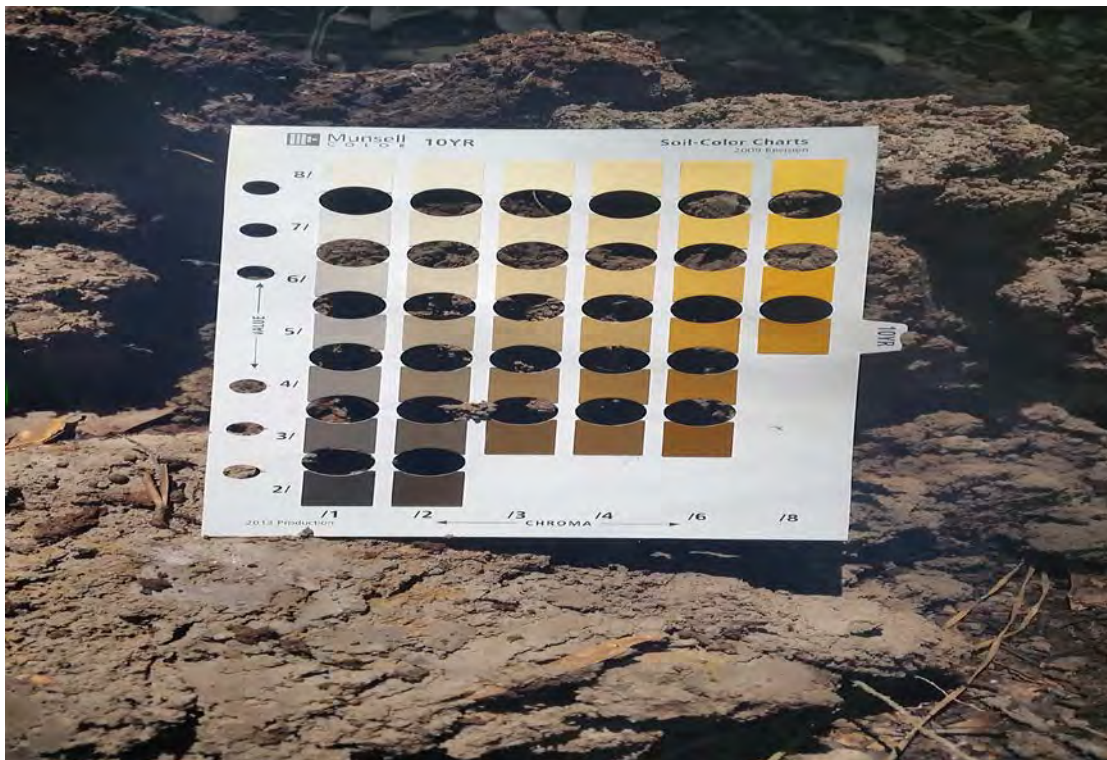


Photo 8: Wetland Determination Data Form 1-Wetlands. Soils with Munsell 10 YR card.



Photo 9: Wetland Determination Data Form 1-Wetlands, typical vegetation. Photo was taken looking to the north.



Photo 10: Wetland Determination Data Form 1-Wetlands, typical vegetation. Looking westward away from LA-1088.



Photo 11: Wetland Determination Data Form 1-Wetlands, typical vegetation. This photo was taken looking to the south.



Photo 12: Wetland Determination Data Form 2-Uplands; soil sample with Munsell 10 YR card.



Photo 13: Wetland Determination Data Form 2-Uplands soil sample with Munsell 10YR card.



Photo 14: Wetland Determination Data Form 2-Uplands, typical vegetation. Photo was taken looking to the east.



Photo 15: Wetland Determination Data Form 2-Uplands typical vegetation. Photo is looking to the north.



Photo 16: Wetland Determination Data Form 2-Uplands with typical vegetation. Photo is looking to the south.



Photo 17: Wetland Determination Data Form 2-Wetlands with typical vegetation. Photo is looking to the north.



Photo 18: Wetland Determination Data Form 2-Wetlands with typical vegetation. Photo is looking to the west.



Photo 19: Wetland Determination Data Form 2-Wetlands with typical vegetation. Photo is looking to the west.



Photo 20: Wetland Determination Data Form 2-Wetlands soil sample with Munsell 10YR card.



Photo 21: Wetland Determination Data Form 2-Wetlands; showing high water table.

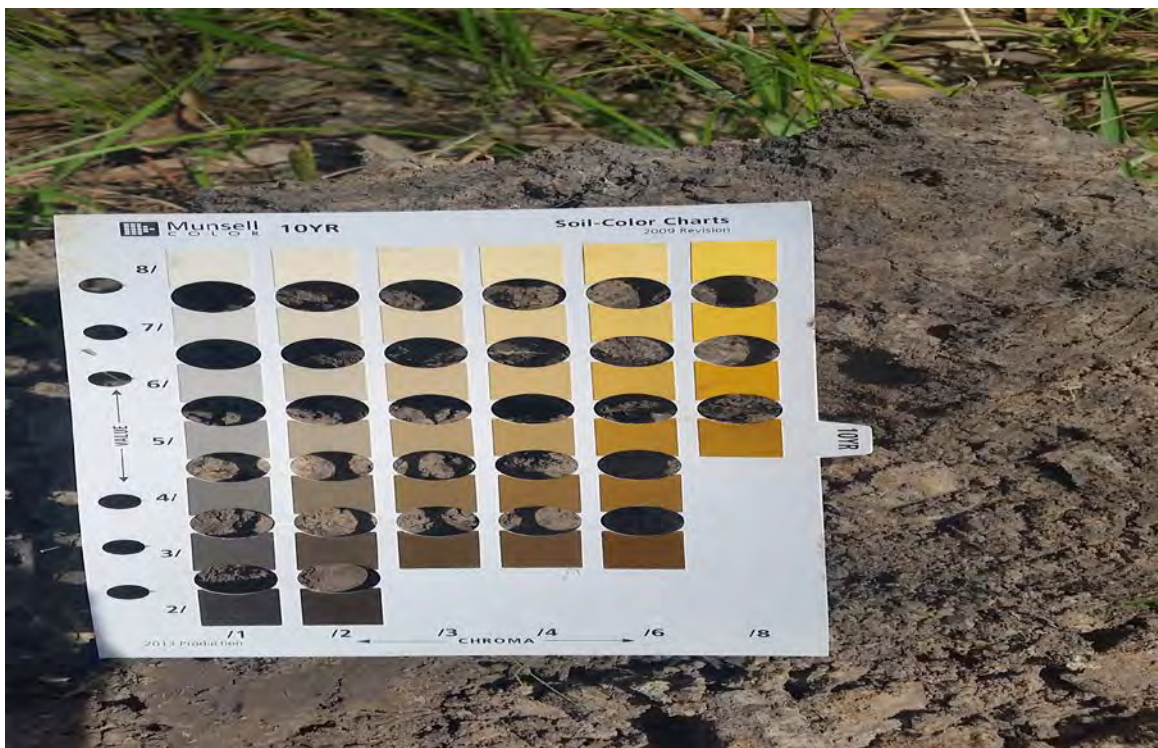


Photo 22: Wetland Determination Data Form 3-Wetlands soil sample with Munsell 10YR card.



Photo 23: Wetland Determination Data Form 3-Wetlands soil sample with Munsell 10YR card.



Photo 24: Wetland Determination Data Form 3-Wetlands typical vegetation. Photo was taken looking to the west.



Photo 25: Wetland Determination Data Form 3-Wetlands, typical vegetation. Photo is looking towards the south.



Photo 26: Wetland Determination Data Form 3-Wetlands, typical vegetation. Photo is looking to the north along LA-1088.



Photo 27: Wetland Determination Data Form 3-Uplands soil sample with Munsell 10YR card.



Photo 28: Wetland Determination Data 3-Uplands, typical vegetation. LA-1088 is pictured on the right. Photo was taken looking to the north.



Photo 29: Wetland Determination Data 3-Uplands, typical vegetation. Photo is looking to the east towards LA-1088.



Photo 30: Wetland Determination Data Form 4-Wetlands soil sample and Munsell 10YR card.



Photo 31: Wetland Determination Data Form 4-Wetlands soil sample with Munsell 10YR card.



Photo 32: Wetland Determination Data Form 4-Wetlands, typical vegetation. Photo was taken looking to the west.



Photo 33: Wetland Determination Data Form 4-Uplands soil sample with Munsell 10YR card.



Photo 34: Wetland Determination Data Form 4-Uplands, typical vegetation. Photo was taken looking to the south along LA-1088.



Photo 35: Wetland Determination Data Form 4-Uplands with typical vegetation. Photo is looking towards the west.



Photo 36: Wetland Determination Data Form 4-Uplands with typical vegetation. Photo is looking to the west.

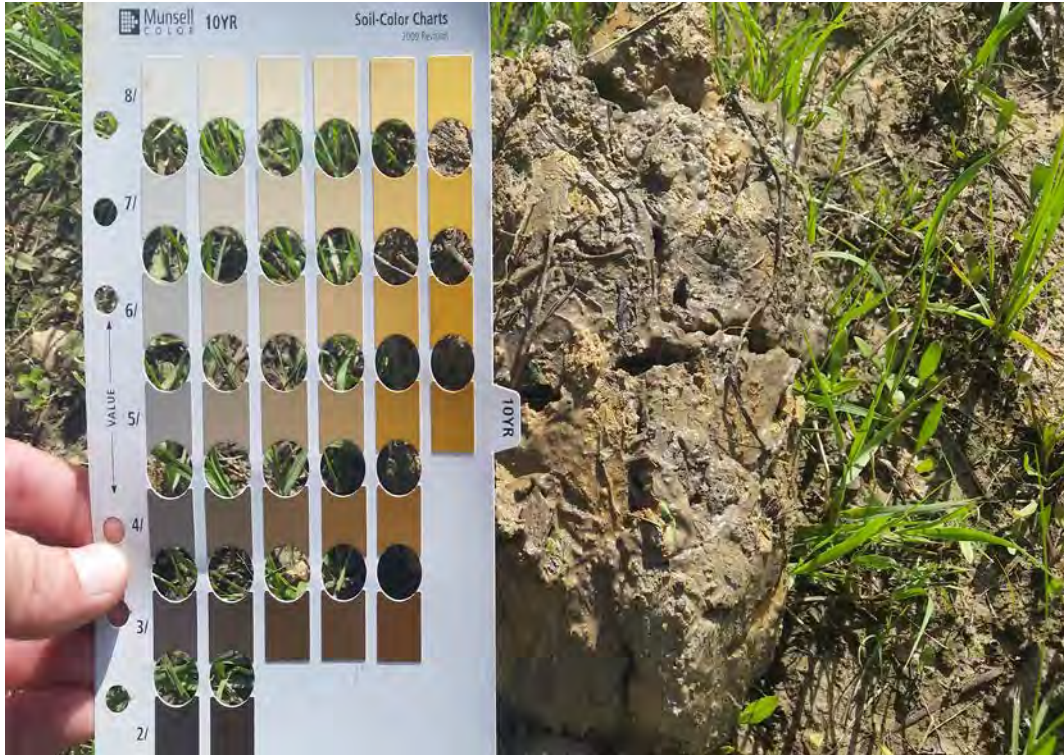


Photo 37: Typical soils of roadside ditches with Munsell 10YR card.



Photo 38: Typical vegetation of road-side ditches. This photo is looking toward the north.



Photo 39: View along LA-59 looking towards the intersection of LA-1088. Photo is looking towards the west.



Photo 40: View along LA-1088 looking south towards the intersection of LA-59.



Photo 41: View at intersection of LA-59 and LA-1088 looking north east.



Photo 42: View looking south along LA-1088 at the intersection of Sault Street.



Photo 43: View looking north east along LA-1088. Note the utility installation and disturbance.



Photo 44: Gas facility on eastern side of LA-1088, north of I-12 interchange. Photo is looking towards the east.



Photo 45: Electrical facility on eastern side of LA-1088 north of I-12 interchange.



Photo 46: Typical vegetation found around utility sites seen in Photo 46 and 47. This photo was taken looking to the south along LA-1088.

Exhibit B: Wetland Determination Forms

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LA-1088 South of I-12 to LA-59 City/County: Mandeville/ St. Tammany Sampling Date: 5-20-2015
 Applicant/Owner: Louisiana department of Transportation and Development State: LA Sampling Point: 1-Uplands
 Investigator(s): Paige Felts, Bryan Long Section, Township, Range: Section 01, Township 08 South, Range 11 East
 Landform (hillslope, terrace, etc.): Terraces Local relief (concave, convex, none): Linear Slope (%): 0-1
 Subregion (LRR or MLRA): LRR-P Lat: 30.374843 Long: -90.051659 Datum: NAD 1983
 Soil Map Unit Name: (Gt) Guyton silt loam NWI classification: Riverine (USFWS NWI Mapper)
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
☐ Surface Water (A1)	☐ Aquatic Fauna (B13)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Marl Deposits (B15) (LRR U)	☐ Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Water Marks (B1)	☐ Oxidized Rhizospheres along Living Roots (C3)	☒ Moss Trim Lines (B16)
☐ Sediment Deposits (B2)	☐ Presence of Reduced Iron (C4)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Crayfish Burrows (C8)
☐ Algal Mat or Crust (B4)	☐ Thin Muck Surface (C7)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Iron Deposits (B5)	☐ Other (Explain in Remarks)	☐ Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery (B7)		☐ Shallow Aquitard (D3)
☐ Water-Stained Leaves (B9)		☐ FAC-Neutral Test (D5)
		☐ Sphagnum moss (D8) (LRR T, U)
Field Observations:		Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u>	Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u>	
Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Aerial Photos from ArcMap GIS software, field visit, and soil plug.		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: 1-Uplands

Tree Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Quercus virginiana</u>	<u>30</u>	<u>X</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>04</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66%</u> (A/B)
2. <u>Pinus taeda</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	
3. <u>Magnolia grandiflora</u>	<u>05</u>		<u>FAC</u>	
4. <u>Quercus alba</u>	<u>02</u>		<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
<u>47</u> = Total Cover 50% of total cover: <u>23.5</u> 20% of total cover: <u>9.4</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: 30 Feet)				
1. <u>Pinus taeda</u>	<u>05</u>	<u>X</u>	<u>FAC</u>	
2. <u>Magnolia grandiflora</u>	<u>05</u>	<u>X</u>	<u>FAC</u>	
3. <u>Ilex opaca</u>	<u>02</u>		<u>FAC</u>	
4. _____				
5. _____				
6. _____				
<u>12</u> = Total Cover 50% of total cover: <u>6</u> 20% of total cover: <u>2.4</u>				
Herb Stratum (Plot size: 30 Feet)				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Rubus argutus</u>	<u>03</u>	<u>X</u>	<u>FACU</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
Woody Vine Stratum (Plot size: 30 Feet)				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
1. <u>Vitis rotundifolia</u>	<u>02</u>	<u>X</u>	<u>FAC</u>	
2. _____				
3. _____				
4. _____				
5. _____				
<u>02</u> = Total Cover 50% of total cover: <u>1</u> 20% of total cover: <u>0.4</u>				
Remarks: (If observed, list morphological adaptations below).				

SOIL Sampling Point: 1-Uplands

Sampling Point: 1-Uplands

[illegible]

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LA-1088 South of I-12 to LA-59 City/County: Mandeville/ St. Tammany Parish Sampling Date: 5-20-2015
 Applicant/Owner: Louisiana Department of Transportation and Development State: LA Sampling Point: 1-Wetlands
 Investigator(s): Paige Felts, Bryan Long Section, Township, Range: Section 01, Township 08 South, Range 11 East
 Landform (hillslope, terrace, etc.): Terraces Local relief (concave, convex, none): Linear Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-P Lat: 30.375686 Long: -90.051086 Datum: NAD 1983
 Soil Map Unit Name: (Gt) Guyton Silt Loam NWI classification: Riverine (USFWS NWI Mapper)
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> Aquatic Fauna (B13) <u> </u> High Water Table (A2) <u> </u> Marl Deposits (B15) (LRR U) <u> </u> Saturation (A3) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Water Marks (B1) <u> </u> Oxidized Rhizospheres along Living Roots (C3) <u> </u> Sediment Deposits (B2) <u> </u> Presence of Reduced Iron (C4) <u> </u> Drift Deposits (B3) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Algal Mat or Crust (B4) <u> </u> Thin Muck Surface (C7) <u>X</u> Iron Deposits (B5) <u> </u> Other (Explain in Remarks) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Sparsely Vegetated Concave Surface (B8) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> FAC-Neutral Test (D5) <u> </u> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Pre-field analysis using ArcMap GIS software, aerial imagery, soil plug, in the field visit.		
Remarks: 		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: 1-Wetlands

Tree Stratum (Plot size: <u>30 Feet</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Quercus phellos</u>	<u>60</u>	<u>X</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. <u>Pinus taeda</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	
3. <u>Magnolia grandiflora</u>	<u>05</u>		<u>FAC</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>85</u> = Total Cover 50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = FACW species _____ x 2 = FAC species _____ x 3 = FACU species _____ x 4 = UPL species _____ x 5 = Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>30 Feet</u>)				
1. <u>Quercus phellos</u>	<u>05</u>	<u>X</u>	<u>FACW</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
<u>05</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>				
Herb Stratum (Plot size: <u>30 Feet</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Toxicodendron radicans</u>	<u>50</u>	<u>X</u>	<u>FAC</u>	
2. <u>Nekemias arborea</u>	<u>10</u>		<u>FAC</u>	
3. <u>Smilax rotundifolia</u>	<u>05</u>		<u>FAC</u>	
4. _____				
5. _____				
6. _____				
7. _____				
<u>65</u> = Total Cover 50% of total cover: <u>32.5</u> 20% of total cover: <u>13</u>				
Woody Vine Stratum (Plot size: <u>30 Feet</u>)				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
1. <u>Vitis rotundifolia</u>	<u>03</u>	<u>X</u>	<u>FAC</u>	
2. _____				
3. _____				
4. _____				
5. _____				
<u>03</u> = Total Cover 50% of total cover: <u>1.5</u> 20% of total cover: <u>06</u>				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				
Remarks: (If observed, list morphological adaptations below).				

SOIL Sampling Point: 1-Wetlands

Sampling Point: 1-Wetlands

[illegible]

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LA-1088 South of I-12 to LA-59 City/County: Mandeville/ St. Tammany Sampling Date: 5/20/2015
 Applicant/Owner: Louisiana Department of Transportation and Development State: LA Sampling Point: 2-Uplands
 Investigator(s): Paige Felts, Bryan Long Section, Township, Range: Section 01, Township 08 South, Range 11 East
 Landform (hillslope, terrace, etc.): Terraces Local relief (concave, convex, none): Linear Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-P Lat: 30.374850 Long: -90.052150 Datum: NAD 1983
 Soil Map Unit Name: (Gt) Guyton Silt Loam NWI classification: Riverine (USFWS NWI Mapper)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes <u> </u> No <u> </u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u> </u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u> </u> Depth (inches): <u> </u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Aerial imagery, USFWS NWI Mapper, soil sample, in field visit			
Remarks:			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 2-Uplands

Tree Stratum (Plot size: 30 Feet)				Dominance Test worksheet:	
	Absolute % Cover	Dominant Species?	Indicator Status		
1. <i>Quercus alba</i>	40	X	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	
2. <i>Quercus nigra</i>	10		FAC	Total Number of Dominant Species Across All Strata: 4 (B)	
3. <i>Quercus virginiana</i>	05		FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)	
4. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
5. _____					
6. _____					
7. _____					
8. _____					
55 = Total Cover					
50% of total cover: 27.5 20% of total cover: 11					
Sapling/Shrub Stratum (Plot size: 30 Feet)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain)	
1. <i>Pinus taeda</i>	40	X	FAC		
2. <i>Quercus nigra</i>	15	X	FAC		
3. <i>Magnolia grandiflora</i>	02		FAC		
4. <i>Vaccinium arboreum</i>	02		FACU		
5. _____					
6. _____					
7. _____					
8. _____					
59 = Total Cover					
50% of total cover: 29.5 20% of total cover: 11.8					
Herb Stratum (Plot size: 30 Feet)				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.	
1. <i>Nekemias arborea</i>	10	X	FAC		
2. <i>Vitis rotundifolia</i>	02		FAC		
3. <i>Smilax rotundifolia</i>	02		FAC		
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
14 = Total Cover					
50% of total cover: 07 20% of total cover: 2.8					
Woody Vine Stratum (Plot size: 30 Feet)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
0 = Total Cover					
50% of total cover: _____ 20% of total cover: _____					
Remarks: (If observed, list morphological adaptations below).					

SOIL

Sampling Point: 2-Uplands

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	5/2 Munsell 10YR	100					Loamy	
6-12+	5/2 Munsell 10YR	100					Loamy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1) (LRR O)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LA-1088 South of I-12 to LA-59 City/County: Mandeville/ St. Tammany Sampling Date: 05/20/2015
 Applicant/Owner: Louisiana Department of Transportation and Development State: LA Sampling Point: 2-Wetlands
 Investigator(s): Paige Felts, Bryan Long Section, Township, Range: Section 06, Township 08 South, Range 12 East
 Landform (hillslope, terrace, etc.): Terraces Local relief (concave, convex, none): Linear Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-P Lat: 30.382603 Long: -90.032752 Datum: NAD 1983
 Soil Map Unit Name: (Gt) Guyton Silt Loam NWI classification: Riverine (USFWS NWI Mapper)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks:		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☒ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☒ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>12"</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>Surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Aerial imagery analysis, ArcMap GIS analysis (soils, NWI, Topo, etc.), field visit, soil sample		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: 2-Wetlands

Tree Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Magnolia virginiana</i>	35	X	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>04</u> (A) Total Number of Dominant Species Across All Strata: <u>04</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. <i>Pinus taeda</i>	15	X	FAC	
3. <i>Liquidambar styraciflua</i>	10		FAC	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
60 = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
50% of total cover: <u>30</u> 20% of total cover: <u>12</u>				
Sapling/Shrub Stratum (Plot size: 30 Feet)				
1. <i>Cyrilla racemiflora</i>	30	X	FACW	
2. <i>Magnolia virginiana</i>	05		FACW	
3. <i>Ilex vomitoria</i>	02		FAC	
4. _____				
5. _____				
37 = Total Cover				
50% of total cover: <u>18.5</u> 20% of total cover: <u>7.4</u>				
Herb Stratum (Plot size: 30 Feet)				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <i>Osmunda cinnamomea</i>	60	X	FACW	
2. <i>Toxicodendron radicans</i>	05		FAC	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
65 = Total Cover				
50% of total cover: <u>32.5</u> 20% of total cover: <u>13</u>				
Woody Vine Stratum (Plot size: 30 Feet)				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <u>X</u> No _____

SOIL

Sampling Point: 2-Wetlands

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12+	3/1 Munsell 10YR	100					Loamy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☒ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☒ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
 (MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LA-1088 South of I-12 to LA-59 City/County: Mandeville/ St. Tammany Sampling Date: 05/20/2015
 Applicant/Owner: Louisiana Department of Transportation and Development State: LA Sampling Point: 3-Uplands
 Investigator(s): Paige Felts, Bryan Long Section, Township, Range: Section 06, Township 08 South, Range 12 East
 Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): Linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR-P Lat: 30.385099 Long: -90.024102 Datum: NAD 1983
 Soil Map Unit Name: (Aa) Abita silt loam NWI classification: Riverine (USFWS NWI Mapper)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks:		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: 3-Uplands

Tree Stratum (Plot size: <u>30 Feet</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Quercus virginiana</u>	<u>20</u>	<u>X</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>04</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>2</u></td> <td>(A) <u>8</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>2</u>	(A) <u>8</u> (B)	Prevalence Index = B/A = <u>4</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>2</u>	x 4 = <u>8</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>2</u>	(A) <u>8</u> (B)																			
Prevalence Index = B/A = <u>4</u>																				
<u>_____</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____																				
Sapling/Shrub Stratum (Plot size: <u>30 Feet</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>_____</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____																				
Herb Stratum (Plot size: <u>30 Feet</u>)																				
1. <u>Paspalum notatum</u>	<u>100</u>	<u>X</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>100</u> = Total Cover 50% of total cover: <u>50</u> 20% of total cover: <u>20</u>																				
Woody Vine Stratum (Plot size: <u>30 Feet</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
<u>_____</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____																				
50% of total cover: _____ 20% of total cover: _____																				
Remarks: (If observed, list morphological adaptations below).																				

SOIL

Sampling Point: 3-Uplands

[illegible]

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LA-1088 South of I-12 to LA-59 City/County: Mandeville/ St. Tammany Sampling Date: 05/20/2015
 Applicant/Owner: Louisiana Department of Transportation and Development State: LA Sampling Point: 3-Wetlands
 Investigator(s): Paige Felts, Bryan Long Section, Township, Range: Section 05, Township 08 South, Range 12 East
 Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): Linear Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-P Lat: 30.385469 Long: -90.022867 Datum: NAD 1983
 Soil Map Unit Name: (Aa) Abita Silt Loam NWI classification: Riverine (USFWS NWI Mapper)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☒ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Aerial imagery analysis, ArcMap GIS (soils, NWI, topo, etc.), soil plug, field visit		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: **3-Wet Lands**

Tree Stratum (Plot size: 30 Feet)	Absolute % Cover	Dominant Species?	Indicator Status	
1. Pinus taeda	20	X	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. Quercus nigra	20	X	FAC	
3. Acer rubrum	05		FAC	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
45 = Total Cover				
50% of total cover: 22.5 20% of total cover: 9				
Sapling/Shrub Stratum (Plot size: 30 Feet)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☐ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
12. _____	_____	_____	_____	
95 = Total Cover				
50% of total cover: 47.5 20% of total cover: 19				
Woody Vine Stratum (Plot size: 30 Feet)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				

SOIL

Sampling Point: 3-Wetlands

[illegible]

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LA-1088 south of I-12 to LA-59 City/County: Mandeville/ St. Tammany Sampling Date: 05/20/2015
 Applicant/Owner: Louisiana Department of Transportation and Development State: LA Sampling Point: 4-Uplands
 Investigator(s): Paige Felts, Bryan Long Section, Township, Range: Section 05, Township 08 South, Range 12 East
 Landform (hillslope, terrace, etc.): Stream terraces Local relief (concave, convex, none): Linear Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-P Lat: 30.386106 Long: -90.020376 Datum: NAD 1983
 Soil Map Unit Name: (My) Myatt Fine Sandy Loam NWI classification: Riverine (USFWS NWI Mapper)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks:		

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: 4-Uplands

Tree Stratum (Plot size: <u>30 Feet</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Quercus virginiana</u>	<u>15</u>	<u>X</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>03</u> (A)
2. <u>Pinus taeda</u>	<u>05</u>	<u>X</u>	<u>FAC</u>	
3. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>05</u> (B)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
8. _____	_____	_____	_____	
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>04</u>				OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)
Sapling/Shrub Stratum (Plot size: <u>30 Feet</u>)				Prevalence Index = B/A = _____
1. <u>Ilex vomitoria</u>	<u>15</u>	<u>X</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Rhododendron canescens</u>	<u>05</u>	<u>X</u>	<u>FACW</u>	
3. <u>Camellia japonica</u>	<u>02</u>	_____	<u>NI</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
8. _____	_____	_____	_____	
<u>22</u> = Total Cover 50% of total cover: <u>11</u> 20% of total cover: <u>4.4</u>				
Herb Stratum (Plot size: <u>30 Feet</u>)				
1. <u>Cynodon dactylon</u>	<u>70</u>	<u>X</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>70</u> = Total Cover 50% of total cover: <u>35</u> 20% of total cover: <u>14</u>				
Woody Vine Stratum (Plot size: <u>30 Feet</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				

SOIL

Sampling Point: 4-Uplands

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	3/2 Munsell 10YR	100					Fine Sandy Loam	
4-8	4/2 Munsell 10YR	100					Fine Sandy Loam	
8-12	6/1 Munsell 10YR	100					Loamy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
 (MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: LA-1088 South of I-12 to LA-59 City/County: Mandeville/ St. Tammany Sampling Date: 5/20/2015
 Applicant/Owner: Louisiana Department of Transportation and Development State: LA Sampling Point: 4-Wetlands
 Investigator(s): Paige Felts, Bryan Long Section, Township, Range: Section 05, Township 08 South, Range 12 East
 Landform (hillslope, terrace, etc.): Terraces Local relief (concave, convex, none): Linear Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR-P Lat: 30.386324 Long: -90.020013 Datum: NAD 1983
 Soil Map Unit Name: (St) Stough Fine Sandy Loam NWI classification: Riverine (USFWS NWI Mapper)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☒ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☒ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☒ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Aerial imagery analysis, ArcMap GIS (soils, NWI, topo, etc.), field visit, soil sample.		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: 4-Wetlands

Tree Stratum (Plot size: <u>30 Feet</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer rubrum</u>	<u>30</u>	<u>X</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)
2. <u>Pinus taeda</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	
3. <u>Sapum sebiferum</u>	<u>10</u>		<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>7</u> (B)
4. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>~87%</u> (A/B)
5. _____				
6. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
7. _____				
8. _____				
60 = Total Cover				
50% of total cover: <u>30</u> 20% of total cover: <u>12</u>				
Sapling/Shrub Stratum (Plot size: <u>30 Feet</u>)				
1. <u>Acer rubrum</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	
2. <u>Sapum sebiferum</u>	<u>05</u>	<u>X</u>	<u>FAC</u>	
3. <u>Myrica cerifera</u>	<u>05</u>	<u>X</u>	<u>FAC</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
20 = Total Cover				
50% of total cover: <u>10</u> 20% of total cover: <u>04</u>				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum (Plot size: <u>30 Feet</u>)				
1. <u>Eupatorium capillifolium</u>	<u>05</u>	<u>X</u>	<u>FACU</u>	
2. <u>Juncus effusus</u>	<u>02</u>		<u>FACW</u>	
3. <u>Rubus hispidus</u>	<u>02</u>		<u>FACW</u>	
4. <u>Aristida beyrichiana</u>	<u>02</u>		<u>FAC</u>	
5. <u>Osmunda cinnamomea</u>	<u>01</u>		<u>FACW</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
11. _____				
12. _____				
12 = Total Cover				
50% of total cover: <u>06</u> 20% of total cover: <u>2.4</u>				
Woody Vine Stratum (Plot size: <u>30 Feet</u>)				
1. <u>Vitis rotundifolia</u>	<u>05</u>	<u>X</u>	<u>FAC</u>	
2. _____				
3. _____				
4. _____				
5. _____				
05 = Total Cover				
50% of total cover: <u>2.5</u> 20% of total cover: <u>01</u>				
Remarks: (If observed, list morphological adaptations below).				

SOIL

Sampling Point: 4-Wetlands

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	3/1 Munsell 10YR	90	5/6 Munsell 10YR	10			Fine Sandy Loam	
2-8	4/1 Munsell 10YR	100					Fine Sandy Loam	
8-12+	5/1 Munsell 10YR	100					Fine Sandy Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☒ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
 (MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

APPENDIX H

Public Involvement Comments

Public Meeting Comments

PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: Richard Zitzmann

Address (Street, Apt. #, City, State, Zip): 2110 Ridge Ct
Mandeville LA 70448

Telephone Number: 985-626-3182 E-mail: ztigers@bellsouth.net

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant ☒

Local Business Owner ☐

Public Official ☐

Other ☐

Are you in favor of the project?

Yes ☒

No ☐

What Alternative do you prefer?

Alternative 1A ☐ Alternative 1B ☐

Alternative 2 ☒ No Build Alternative ☐

Please provide your comments/views on the Alternatives.

I would strongly suggest Alternative 1A not
be considered. Hwy 1088 is frequently
used by cyclists. They often ride in groups
of 10-15 in a single line on Highway 1088. This
is extremely dangerous for the cyclists and
motorists, because there is no bike lane and
no shoulder. They often ride in late
afternoon ~~was~~ which increases the danger
because of heavy vehicular traffic.
Passing these bikes by driving in the oncoming
lane is not safe.

Please return this form to the registration desk or mail to the following address by August 3, 2015:

Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119

PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: William Matthews

Address (Street, Apt. #, City, State, Zip):

386 Red Maple Dr. Mandeville, LA 70448

Telephone Number: 985-727-9880

E-mail: WBMJR1@GMail.com

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant ☒

Local Business Owner ☐

Public Official ☐

Other ☐

Are you in favor of the project?

Yes ☒

No ☐

What Alternative do you prefer?

Alternative 1A ☒ Alternative 1B ☐

Alternative 2 ☐ No Build Alternative ☐

Please provide your comments/views on the Alternatives.

There are entirely too many roundabouts proposed! The real need is for roundabouts at Hwy 59 and Sault St. A possible need could be for one at Forest Brook. However their concerns may change with the construction of the "Mandeville Bypass Road" which will provide the subdivision with a second exit not on Hwy 1088.

I see there is no consideration given to the "Bypass Road" to be constructed with an intersection at Hwy 1088. This intersection will require a Roundabout.

The sidewalks are a complete waste of tax money. There is little, if any foot traffic on Hwy 1088. I can see no future use for foot traffic. There is, nor will there be in the future, no place for any one to walk to in this area. Bike lane will have some, if limited, use.

Please return this form to the registration desk or mail to the following address by August 3, 2015:

Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119

PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name:

AL Derbes

Address (Street, Apt. #, City, State, Zip):

140 Chestnut Oak Drive
Mandeville LA 70478

Telephone Number:

E-mail:

ajd@derbeslaw.com

Personal Information will not be released.

Interest in Project:

☒ Property Owner/Tenant

in the Woodlands

☐ Local Business Owner

☐ Public Official

☐ Other

Are you in favor of the project?

Yes ☒

No ☐

What Alternative do you prefer?

Alternative 1A ☐

Alternative 1B ☐

Alternative 2 ☒

No Build Alternative ☐

Please provide your comments/views on the Alternatives.

- ① Combined bike path/sidewalk, even if only on one side, will be safer
- ② currently, the area between the Woodlands + Hwy 59 is not safe: many pedestrians walk on ~~the~~ Hwy 1088 thru Apt complex + Hwy 59
- ③ the turn into the Woodlands coming from I-12 is unsafe; the roundabout will improve safety
- ④ bike paths on ~~the~~ Hwy 1088 (as opposed to set back) will be unsafe
- ⑤ the divider for Alternative 2 will be better for traffic than alt 1A or 1B
- ⑥ need to pay for the moving of the Woodlands gate

Please return this form to the registration desk or mail to the following address by August 3, 2015:

Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119

Name:

Telephone Number:

E-mail:

Personal Information will not be released.

Other

Yes [✓]

No []

Alternative 1A []

Alternative 1B []

Alternative 2 []

No Build Alternative []

Please provide your comments/views on the Alternatives.

**3801 Canal Street, Suite 210
New Orleans, Louisiana 70119**

**PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name:

Colleen Toye

Address (Street, Apt. #, City, State, Zip):

1105 Torrance Dr.

Mandeville, LA 70448

Telephone Number:

985-630-1558

E-mail:

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant

☒

Local Business Owner

Public Official

Other

Are you in favor of the project?

Yes ☒

No ☐

What Alternative do you prefer?

Alternative 1A ☐

Alternative 1B ☐

Alternative 2 ☒

No Build Alternative ☐

Please provide your comments/views on the Alternatives.

Please have DODT put some reflective paint on the median ~~South~~ ^{South} Boudry by the ramp coming from ~~1088~~ ¹⁰⁸⁸. Slide on going south at 1088.

Please return this form to the registration desk or mail to the following address by August 3, 2015:

**Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119**

Tracy V. Roberts

PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: Paul Boatright
Address (Street, Apt. #, City, State, Zip): 2061 West Ridge Dr
Mandeville LA 70448
Telephone Number: 985.502.7390 E-mail: Theboatright@bellsouth.net
Personal Information will not be released.

Interest in Project:

Property Owner/Tenant ☒
Local Business Owner ☐
Public Official ☐
Other ☐

Are you in favor of the project?

Yes ☒ No ☐

What Alternative do you prefer?

Alternative 1A ☒ Alternative 1B ☐
Alternative 2 ☐ No Build Alternative ☐

Please provide your comments/views on the Alternatives.

Roundabouts look like the most cost-effective
and least disruptive option. If the bypass is
built it should relieve traffic enough so that new
lanes on 1088 should not be necessary.

Please return this form to the registration desk or mail to the following address by August 3, 2015:

Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119

**PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name: Bruce D. Cox
Address (Street, Apt. #, City, State, Zip): 143 REMINGTON DR
MANDERVILLE LA 70448
Telephone Number: 985 237-0401 E-mail: impeccableproperties@yahoo.com
Personal Information will not be released.

Interest in Project:

Property Owner/Tenant ☒
Local Business Owner ☐
Public Official ☐
Other ☐

Are you in favor of the project?

Yes ☒ No ☐

What Alternative do you prefer?

Alternative 1A ☐ Alternative 1B ☐
Alternative 2 ☒ No Build Alternative ☐

Please provide your comments/views on the Alternatives.

Please look into the design of the roundabout at
Forest Brook The street on the north side of the
roundabout needs to be added.

Please return this form to the registration desk or mail to the following address by August 3, 2015:

**Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119**

Name: Brian Schneider
Address (Street, Apt. #, City, State, Zip): 26545 Mildred dr
Lacombe, LA 70445
Telephone Number: 985-882-3752 E-mail: _____

District 7, Parish Council

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

1

Name:

Address (Street, Apt. #, City, State, Zip):

Telephone Number:

E-mail:

gmail.com

Other

1

**PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name: DAVID FRANKS

Address (Street, Apt. #, City, State, Zip): 3501 SIRCAM CT

MANDERLILLE, LA 70448

Telephone Number: 985-231-7072

E-mail: dfrankson@yahoo.com

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant ☒

Local Business Owner ☐

Public Official ☐

Other ☐

Are you in favor of the project?

Yes ☒

No ☐

What Alternative do you prefer?

Alternative 1A ☐

Alternative 1B ☐

Alternative 2 ☒

No Build Alternative ☐

Please provide your comments/views on the Alternatives.

I believe in the big picture. This area has the potential to spur large corporate development, and with the right infrastructure in place, big businesses can come here. We need a large business park in this area, and it starts with roads, lighting, etc. Housing will eventually come. I am in favor in spending the money now and doing the right thing. This is your chance to do it right. Do what is right for the ~~entire~~ parish as a whole + improve our economy. Do not oppress the few citizens who live in this area. I want big development in my neighborhood.

Please return this form to the registration desk or mail to the following address by August 3, 2015:

**Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119**

Name: Eric Dietrich
Address (Street, Apt. #, City, State, Zip): 1016 Trail Court
Madenville, LA 70448
Telephone Number: (504) 638-5335 E-mail: etac931@gmail.com

Property Owner/Tenant ☒

Local Business Owner ☐

Public Official ☐

Other ☐

Yes [☒]

No []

Alternative 1A [] Alternative 1B []
Alternative 2 [x] No Build Alternative []

[illegible]

1

PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: Scott Gerace

Address (Street, Apt. #, City, State, Zip): 3043 Hill Ct

Mandeville, LA 70448

Telephone Number: 985-788-3583

E-mail: sgerace9@gmail.com

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant ☒

Local Business Owner ☐

Public Official ☐

Other ☐

Are you in favor of the project?

Yes ☒

No ☐

What Alternative do you prefer?

Alternative 1A ☐ Alternative 1B ☐

Alternative 2 ☒ No Build Alternative ☐

Please provide your comments/views on the Alternatives.

Anthony, Thanks again for explaining the possible 1088 changes at the meeting the other night. I read through the different alternatives, and I'm very much behind Alternative 2. I think it is inevitable for 1088 to face further growing pains and would like to advance as far as possible to prevent further necessary expansion later.

I do not think the shared bike lanes next to traffic lanes would be a good idea. In this day and age of distracted drivers, and the amount of teenagers who travel 1088, I think shared bike lanes would be very unsafe. I would love to have sidewalks wide enough for bicycles as well. As we talked about, I'd like a way to reach the Tammamy Trace once the sidewalks reach Highway 59. I'm not sure if the parish would be responsible, but a way to get from Hwy 59 to Labarre would be fantastic. The Trace is accessible from

Please return this form to the registration desk or mail to the following address by August 3, 2015:

Destin St, but Labarre connects
and is one block closer to
proposed Hwy 59 roundabout.

Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119

PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: Joni S Butler

Address (Street, Apt. #, City, State, Zip): 2033 W Ridge Dr.

Mandeville, LA 70448

Telephone Number: 504-250-6456

E-mail: JSbutler0180 AOL.com

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant ☒

Local Business Owner ☐

Public Official ☐

Other ☐

Are you in favor of the project?

Yes ☒

No ☐

IF the noted modifications
Are done at the Hwy 1088
+ Scott St. Intersection

What Alternative do you prefer?

Alternative 1A ☐ Alternative 1B ☒

Alternative 2 ☐ No Build Alternative ☐

Please provide your comments/views on the Alternatives.

My home is on the corner of Hwy 1088 + Scott St in the
Quail Creek subdivision. Taking a portion of my property
is not acceptable when there is open land on the other 3
corners of this intersection (with no homes on the land).

I propose the following:

(1) shift the roundabout north + west at this intersection
to eliminate the need to take any property with an
existing home. This is doable without any impact to
any homeowner.

(2) Bringing traffic closer to my home increases the noise
level and reduces our quality of life. A noise
barrier needs to be installed between my property
and the street.

Please return this form to the registration desk or mail to the following address by August 3, 2015:

Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119

**PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name: David M. Butler
Address (Street, Apt. #, City, State, Zip): 2033 W. Ridge Dr
Mandeville, LA 70448
Telephone Number: 504-913-0349 E-mail: DBUTLER0349@charter.net

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant X
Local Business Owner _____
Public Official _____
Other _____

Are you in favor of the project?

Yes ☒ [X]

No ☐ []

(Assuming the modifications
Noted below are implemented
@ 1088 + South St.)

What Alternative do you prefer?

Alternative 1A ☐ [] Alternative 1B ☒ [✓]
Alternative 2 ☐ [] No Build Alternative ☐ []

Please provide your comments/views on the Alternatives.

My home is on the corner of Hwy 1088 + South St. in the
Quail Creek subdivision. This project in its current design
presents taking a portion of my property. This is unacceptable,
particularly when there is open land on the other 3 corners
of this intersection. I would ask that you strongly consider
shifting the Roundabout North + West at this intersection
to eliminate the need to take my property with an existing
home on the land. Secondly, bringing traffic closer to
my home will greatly increase the noise level and reduce
the quality of life at my home. I would ask that you
consider installing a noise barrier between my property
and the street in this area to reduce the anticipated
noise increase in noise.

Please return this form to the registration desk or mail to the following address by August 3, 2015:

**Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119**

PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: KENNETH L. BLACK

Address (Street, Apt. #, City, State, Zip): 247 CHESTNUT OAK DRIVE
MANDEVILLE, LA 70448

Telephone Number: (985) 727-2346

E-mail: kblack1016@aol.com

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant ☒

Local Business Owner ☐

Public Official ☐

Other ☐

Are you in favor of the project?

Yes ☒

No ☐

What Alternative do you prefer?

Alternative 1A ☐ Alternative 1B ☒

Alternative 2 ☐ No Build Alternative ☐

Please provide your comments/views on the Alternatives.

I AM CONCERNED ABOUT TRAFFIC STOPPING AT THE
ENTRANCE GATE AT WOODLANDS SUBDIVISION (SPRING BLVD.)
CAUSING A BLOCKAGE AT THE ROUNDABOUT.
OCCASIONALLY, CARS STOP AT THE CLOSED GATE AND DON'T
HAVE THE CODE TO OPEN IT AND OTHER CARS STACK UP
BEHIND THE FIRST CAR. ALSO, AT TIMES THE GATE HAS
MALEFUNCTIONED AND NO ONE COULD OPEN IT EVEN WITH
THE CODE. THESE SITUATIONS COULD BECOME
HAZARDOUS IF THESE CARS BLOCK HIGHWAY 1088.

Please return this form to the registration desk or mail to the following address by August 3, 2015:

Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119

PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: CAROL & DAVID RODRIGUEZ

Address (Street, Apt. #, City, State, Zip):

1204 SYCAMORE PL. MANDEVILLE, LA 70448

Telephone Number: 985-624-9984

E-mail: davidprod@hotmail.com

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant ☒

Local Business Owner ☐

Public Official ☐

Other ☐

Are you in favor of the project?

Yes ☒

No ☐

What Alternative do you prefer?

Alternative 1A ☐ Alternative 1B ☐

Alternative 2 ☒ No Build Alternative ☐

Please provide your comments/views on the Alternatives.

Alternative 2 seems to provide the safest option all around.
I urge all involved to begin as soon as possible. This
project is needed to slow cars down & provide ^{safe} access
on those in subdivisions that are off of 1088.

No one observes the stop signs at Sault/Viola - I have
~~for~~ personally removed people from cars involved in accidents
at this site twice! For safety reasons, Sault/Viola needs
a roundabout ASAP

Please return this form to the registration desk or mail to the following address by August 3, 2015:

Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119

**PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name: VICKIE KELLEY
Address (Street, Apt. #, City, State, Zip): 23329 OSCAR ST
MANDEVILLE LA 70445
Telephone Number: 985-727-1658 E-mail: CelebratewithVickie@gmail.com

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant ☒
Local Business Owner ☐
Public Official ☐
Other ☐

Are you in favor of the project?

Yes ☒ No ☐

What Alternative do you prefer?

Alternative 1A ☐ Alternative 1B ☐
Alternative 2 ☒ No Build Alternative ☐

Please provide your comments/views on the Alternatives.

My biggest concern is with all the roundabouts. It is entirely too many for such a short link of Hwy. Plus the addition of one more when the connecting 1088 to 190 Rd is added. I can't see how in peak traffic time it will help the traffic flow if at some point there is not a halt in traffic from a traffic light at some point to allow cars to enter the circle.

Maybe put sidewalk only on one side to start with. The side with all the subdivisions are on. From Soulé to I-12.

Please return this form to the registration desk or mail to the following address by August 3, 2015:

**Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119**

**PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name:

CARLO HERNANDEZ

Address (Street, Apt. #, City, State, Zip):

2818 MESA COURT

MANDÉVILLE, LA 70448

Telephone Number: 985 626-7578

E-mail: CHCARLOHERNANDEZ@GMAIL.COM

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant

☒

Local Business Owner

Public Official

Other

Are you in favor of the project?

Yes ☒

No ☐

What Alternative do you prefer?

Alternative 1A ☐ Alternative 1B ☐

Alternative 2 ☒ No Build Alternative ☐

Please provide your comments/views on the Alternatives.

THE BOARD OF DIRECTORS OF THE FOREST BROOK
HOMEOWNERS ASSOCIATION STRONGLY SUPPORTS
THIS PROJECT. THE BOARD REPRESENTS 433 HOME
SITES IN THE SUBDIVISION.

THE BOARD SUPPORTS ALTERNATIVE 2 AS THE
BEST SOLUTION FOR THE AREA RESIDENTS.

THE BOARD RECOMMENDS CONSTRUCTION PRIORITY
BE GIVEN TO THE ROUNDABOUTS AT FOREST
BROOK BLVD, AND AT SOULT/VIOLA STREETS.

Please return this form to the registration desk or mail to the following address by August 3, 2015:

Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119

PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: LINDA MEINERS

Address (Street, Apt. #, City, State, Zip): 1700 HWY 1088 MANDEVILLE, LA 70448

Telephone Number: (985) 630-1017

E-mail: ROWLADY@BELLSOUTH.NET

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant



Local Business Owner

Public Official

Other

Are you in favor of the project?

Yes ☒

No ☐

What Alternative do you prefer?

Alternative 1A ☒

Alternative 1B ☐

Alternative 2 ☐

No Build Alternative ☐

Please provide your comments/views on the Alternatives.

A ROUNDABOUT IS NECESSARY @ SOULT ST. + FOREST BROOK
THE TOTAL NUMBER PROPOSED IS A WASTE OF TAXPAYER MONEY

Please return this form to the registration desk or mail to the following address by August 3, 2015:

Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119

**PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name: KAREN HAYDEL

Address (Street, Apt. #, City, State, Zip): 1910 Hwy 1088 MANDEVILLE, LA. 70448

Telephone Number: (985) 237-5215

E-mail: _____

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant ☒ _____
Local Business Owner _____
Public Official _____
Other _____

Are you in favor of the project?

Yes ☒

No ☐

What Alternative do you prefer?

Alternative 1A ☐ Alternative 1B ☐

Alternative 2 ☐ No Build Alternative ☐

Please provide your comments/views on the Alternatives.

AT SOULT STREET

Please return this form to the registration desk or mail to the following address by August 3, 2015:

**Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119**

PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: JOSEPH C. MEINERS
Address (Street, Apt. #, City, State, Zip): 1850 HWY 1088 MANDEVILLE, LA. 70448

Telephone Number: (985) 630-0198

E-mail: _____

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant



Local Business Owner

Public Official

Other

Are you in favor of the project?

Yes []

No ☒

What Alternative do you prefer?

Alternative 1A ☒

Alternative 1B []

Alternative 2 []

No Build Alternative []

Please provide your comments/views on the Alternatives.

ONE AT SOULT ST. - O.K. , MAYBE ONE AT FOREST BROOK
SO MANY IN SUCH A SHORT DISTANCE IS FOOLISH.
A WASTE OF MONEY

Please return this form to the registration desk or mail to the following address by August 3, 2015:

Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119

PUBLIC MEETING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: NORMAN J. MEINERS

Address (Street, Apt. #, City, State, Zip): 1700 Hwy 1088 MANDEVILLE, LA 70448

Telephone Number: (985) 626-8041

E-mail: ROWLADY @ BELLSOUTH.NET

Personal Information will not be released.

Interest in Project:

Property Owner/Tenant ☒

Local Business Owner ☐

Public Official ☐

Other ☐

Are you in favor of the project?

Yes ☐

No ☒

What Alternative do you prefer?

Alternative 1A ☒ Alternative 1B ☐

Alternative 2 ☐ No Build Alternative ☐

Please provide your comments/views on the Alternatives.

SOULT ST. + HWY 1088 NEEDS A ROUNDABOUT.

MAYBE ONE AT FOREST BROOK.

THERE ARE TOO MANY WITHIN 3 MILES BEING PROPOSED.

TAKE SOME OF THE MONEY + WIDEN HWY 59 INSTEAD

Please return this form to the registration desk or mail to the following address by August 3, 2015:

Mr. Anthony Evett, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
New Orleans, Louisiana 70119

Public Hearing Comments

**PUBLIC HEARING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name: Andrew Dalton
Address (Street, Apt. #, City, State, Zip): 315 Vireo Dr Mandeville 70448
Telephone Number: 985-373-8023 E-mail: asdalton96
asdalton96@gmail.com

Interest in Project:

☒ Property Owner/Tenant

☐ Local Business Owner

☐ Public Official

☐ Other

Are you in favor of the project?

Yes ☒

No ☐

Please provide your comments/views on the proposed project/Environmental Assessment.

Extremely impressed with the effectiveness
of traffic circles at Hammond & I-12. I'm
convinced the proposed circles would benefit
1088 from a safety & traffic flow standpoint.

If you need an advocate - please let me know!

Cory Dalton

Please return this form to the registration desk or mail to the following address by October 21, 2018:

**Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809**

**PUBLIC HEARING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name:

Lori Chopin

Address (Street, Apt. #, City, State, Zip):

MAILING: 242 DeVal DR.

Landowner: 22475 Hwy 1088 Mand. LA

Telephone Number: 985-685-0196

E-mail: NOTARY LADY 2018@gmail.com 70471

Interest in Project:

Property Owner/Tenant



Local Business Owner

Public Official

Other

Are you in favor of the project?

Yes

☒ w/ changes

No

☐

Please provide your comments/views on the proposed project/Environmental Assessment.

4 LANE from I-12 to Hwy 59
NO MEDIAN

Please return this form to the registration desk or mail to the following address by October 21, 2018:

**Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809**

PUBLIC HEARING
STATE PROJECT NO.: H.010116

LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: Linda Lewis

Address (Street, Apt. #, City, State, Zip):

66096 Cypress St Mandeville LA 70448

Telephone Number: 504-621-8304

E-mail: linda.lewis@gmail.com

Interest in Project:

☒ Property Owner/Tenant

☐ Local Business Owner

☐ Public Official

☐ Other

Are you in favor of the project?

Yes ☐

No ☒

Please provide your comments/views on the proposed project/Environmental Assessment.

The reason I'm not in favor is because I enjoy travelling 1088 right now much more than 59 or 190 both of which I travel. Both are so congested with constant accidents blocking travel. I cannot understand why 1088 instead of 59 or 190 or even I-12 would be considered. I believe it is targeted for some reason I am unfamiliar with and would welcome enlightenment on that.

Please leave what little peace is left undisturbed.
Thank you. I am in favor of roundabout at 50th.

Please return this form to the registration desk or mail to the following address by October 21, 2018:

Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809



The Woodlands

Property Owners Association

www.woodlandspoa.com

October 19, 2018

VIA CERTIFIED MAIL,
RETURN RECEIPT REQUESTED

Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809

VIA CERTIFIED MAIL,
RETURN RECEIPT REQUESTED

VIA E-MAIL

Mr. Robert L. Lott
Assistant Environmental Engineer
Louisiana Department of Transportation and
Development
P.O. Box 94245
Baton Rouge, LA 70804-9245
robert.lott@la.gov

VIA CERTIFIED MAIL,
RETURN RECEIPT REQUESTED

VIA E-MAIL

Ms. Jena N. Milliner
Noise/Air & Site Assessments
Louisiana Department of Transportation and
Development
P.O. Box 94245
Baton Rouge, LA 70804-9245
jena.milliner@la.gov

VIA CERTIFIED MAIL,
RETURN RECEIPT REQUESTED

VIA E-MAIL

Ms. Melissa W. Stephens
Right of Way Agent 4
Louisiana Department of Transportation and
Development
685 N. Morrison Blvd.
Hammond, LA 70401
melissa.stephens@la.gov

VIA CERTIFIED MAIL,
RETURN RECEIPT REQUESTED

VIA E-MAIL

Ms. Cristine G. Gowland, P.E.
District Traffic Operations Engineer
Louisiana Department of Transportation and
Development
685 N. Morrison Blvd.
Hammond, LA 70433
cristine.gowland@la.gov

Re: July 2018 Draft Environmental Assessment regarding the LA 1088 Corridor
Study, St. Tammany Parish, Louisiana
State Project No. H.010116
Federal Aid Project No. H010116

Dear Sir/Madam:

We are writing as officers and directors of, and on behalf of, The Woodlands Property Owners Association, Inc. ("WPOA") to follow up on our recent discussions advising of concerns about the July 2018 Draft Environmental Assessment for the LA 1088 Corridor Study (the "Draft Assessment") prepared by Volkert, Inc. ("Volkert") for the Louisiana Department of

Transportation and Development (“LADOT”) and the U.S. Department of Transportation Federal Highway Administration. By way of background, WPOA is the governing body for the Woodlands subdivision located along Highway 1088 in Mandeville, Louisiana. The Woodlands is a private, gated community. WPOA’s members include over 700 owners of 374 residences located within the subdivision. WPOA also owns the common property located within the Woodlands, including, among other things, the streets, green spaces, recreational areas and ditches within the subdivision. Assuming an average value of \$425,000 for each residence and further considering the value of WPOA’s property, the Woodlands subdivision has a collective value well in excess of \$160,000,000.

With the foregoing in mind, we ask that you consider the following comments regarding the Draft Assessment:

1. The Draft Assessment Does Not Consider the Fact that the Woodlands is a Private, Gated Subdivision.

It is critical to the members of WPOA that the subdivision remain a private, gated subdivision with an entrance that is aesthetically appropriate. However, the Draft Assessment, respectfully, does not appear to have accounted for this. In this regard, we note the following:

- a. The proposed roundabout at the intersection of Highway 1088 and Spring Boulevard (the “Spring Boulevard Roundabout”) does not take into account the need for gates, a u-turn, and traffic staging prior to the gates. Indeed, in the Draft Assessment’s conceptual proposals involving the Spring Boulevard Roundabout, these features of the Woodlands have been omitted entirely and without analysis or other discussion about the effect on our community. In that regard, Section 3.4.4.2 of the Draft Assessment incorrectly states that the “build alternatives will not require the relocation of any existing community facilities.”
- b. The Draft Assessment does not take into account the fact that the Spring Boulevard Roundabout would be located at the main entrance to the Woodlands. As the main entrance for members, invitees and prospective buyers, it is important that the entrance appear welcoming and be aesthetically appropriate to preserve the \$160,000,000-plus collective value of the subdivision. In this regard, significant landscape architecture fees as well as the cost of new signage, gates, landscaping and potentially street and other modifications and improvements will be necessary. However, the Draft Assessment does not appear to factor the costs of these features, let alone the necessity and location of these features.
- c. The Draft Assessment does not analyze whether the Spring Boulevard Roundabout can be shifted to the North into green space located between Highway 1088 and Magnolia Trace Elementary School. While some portion of a pond may need to be acquired, this would be more appropriate than dramatically altering the Woodlands entrance and taking property from the residences located adjacent to the proposed Spring Boulevard Roundabout and generally reducing setbacks between those homes and traffic features.

- d. The Woodlands owns Spring Boulevard. This does not appear to have been considered in the Draft Assessment. At the October 11, 2018 public meeting at the St. Tammany Parish Council Chambers (the “Public Meeting”), representatives of the LADOT and Volkert were unable to answer questions about this, including whether the 9.9 acres of required right-of-way included any portion of Spring Boulevard.
- e. The Draft Assessment lacks sufficient details regarding the proposed sound barrier between the Woodlands and Highway 1088. At the Public Meeting, representatives of LADOT and Volkert suggested it could be an 8’ to 12’ concrete wall that wraps into the entrance of The Woodlands and down Spring Boulevard. Such a sound barrier obviously would dramatically and negatively affect the aesthetics of the Woodlands. We request that sound barriers along Highway 1088 be through adequate green space and plantings—not massive concrete walls more befitting an industrial complex.
- f. Assuming just a 10% drop in property value, WPOA and its members could suffer damages in excess of \$16,000,000 if the Spring Boulevard Roundabout and related changes, including the proposed sound wall, are implemented as proposed.
- g. The Draft Assessment does not adequately analyze whether less intrusive or less costly alternatives to the Spring Boulevard Roundabout will have less impact on the environmental criteria discussed in the Draft Assessment.

2. The Draft Assessment Does Not Adequately Factor the Predominantly Residential Nature of the Highway 1088 Corridor.

- a. We feel strongly that the proposed Highway 1088 median and roundabout centers in the vicinity of the Woodlands should be green space—not concrete or other pavement. The Highway 1088 Corridor is largely a residential area with some light, restricted commercial uses at the intersections of Highway 59 and potentially Interstate 12. This could not be any more true particularly near the Woodlands, where the following residential areas overwhelmingly predominate Highway 1088:
 - Airfield
 - Casa Bella
 - Cliff Apartments
 - Emerald Pines
 - The Fountains
 - Forest Brook
 - Grand Terre
 - Quail Creek
 - The Woodlands; and
 - Numerous private residences along Jackson Street, Meiners Street, Soult Street, Viola Street, Sonny Lane and Swenson Street.

Indeed, there are essentially no commercial facilities located in the vicinity of the Woodlands with the exception of a small daycare and a gymnastics facility used by area residents. The other main features in the vicinity of the Woodlands are two schools (Magnolia Trace Elementary School and Lake Harbor Middle School) and three churches (Mandeville Christian Fellowship, Redeemer Lutheran Church, and Cornerstone Christian Church). Figure 4 in the Draft Assessment illustrates that the area is overwhelmingly residential. Section 3.4.2 of the Draft Assessment also acknowledges that the “LA 1088 corridor is **primarily a suburban area** near the City of Mandeville. The area from LA 59 to the I-12 interchange is the **most highly developed with residences including subdivisions and apartment complexes.**” (emphasis added).

Notwithstanding the foregoing, at the Public Meeting, we were told that the proposed conceptual designs are similar to recent construction along Highway 21 in Covington, Louisiana, which includes concrete medians. Highway 21 is bounded by significant commercial development—not residences, a local daycare, churches and elementary and middle schools. Thus, the Draft Assessment’s conceptual proposals are out of character and will unnecessarily detract from the aesthetics of the Highway 1088 residential corridor, as well as the quality of life of the many thousands of residents that access their subdivisions and homes directly from Highway 1088. Indeed, many residential properties are located directly along Highway 1088.

Traffic safety concerns can still be addressed *while* taking into account the residential nature of the area. We note that other divided roads in and around Mandeville residential areas (some with more commercial development than the residential Highway 1088 corridor) contain green space in the medians. For example, Highway 190 near Cherry Creek subdivision and Wisteria subdivision (as well as a church and Liberty Self Storage) contains a grassed median:



Similarly, Highway 22 (west of Highway 190) contains grassed medians (in an area with residences but more commercial development along the highway):



East Causeway Approach also contains grassed medians. The following photograph was taken in front of Golden Shores subdivision and the Rouse's shopping center:



West Causeway Approach similarly contains green space in the medians. The following photograph was taken near a middle school and Fontainebleau subdivision:



In sum, there are numerous medians (many narrower than 6') with grass located throughout the Mandeville area. Indeed, there are no divided roads that we located in the Mandeville area with any significant paved medians. There is no reason to treat the Highway 1088 residential corridor differently than the other roadways in and around Mandeville.

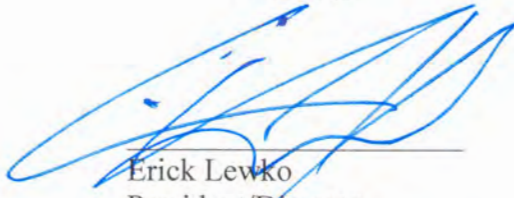
- b. For the same reasons, massive concrete sound barriers are not appropriate for the residential environment for which they have been proposed. Again, any sound mitigation along Highway 1088 should be accomplished through adequate green space and plantings—not massive concrete walls more befitting an industrial complex. Further, with no change in the capacity for Highway 1088 near the Woodlands, with no change in the speed limit, and with the addition of roundabouts which will presumably slow some traffic, it is unclear why sound mitigation beyond green space with natural plantings would be necessary. Indeed, we have not located any similar concrete sound mitigation walls in residential (or commercial) areas in and around Mandeville.
- c. As demonstrated by the foregoing, the Draft Assessment's cursory analysis in Section 3.18.2 that "no short-term or long-term adverse visual impacts are anticipated as a result of the project's construction" is in our opinion, respectfully, not premised on a thorough consideration of the residential nature of the area and a robust analysis of the impact of the proposed build alternatives on the Woodlands and the many other residential areas bordering Highway 1088.

October 19, 2018

Page 7

We thank you for your time at the Public Meeting and for your consideration of the foregoing. We are available to discuss the above at your convenience, and hope that you will continue a dialogue with us regarding the Highway 1088 residential corridor proposed modifications. Indeed, we request an opportunity to review and discuss with you further revisions to the Draft Assessment in an effort to reach a proposal that meets traffic safety concerns and factors and preserves the aesthetics and functionality of the main entrance to the Woodlands and the overwhelmingly residential nature of the areas affected by the proposed work. We may be contacted at the below e-mail addresses and look forward to hearing from you.

Sincerely,



Erick Lewko
President/Director
ericklewko@gmail.com

/s/ Kyle Hagan
Kyle Hagan
Treasurer/Director
khagan@lopa.org



Jimmy Ulfers
Director
julfers@yahoo.com



Desiree Forsyth
Director
dbennettforsyth@gmail.com
[m](#)



David Molitor
Director
molitod@yahoo.com



Adam B. Zuckerman
Secretary/Director
woodlands.abz@gmail.com
[m](#)

cc: Daniel Camp, Pelican Management Group (Daniel@pelicanmanagement.org)
Grant LaGrange, Pelican Management Group (Grant@pelicanmanagement.org)

PUBLIC HEARING
STATE PROJECT NO.: H.010116

LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name:

Eric Lewko

Address (Street, Apt. #, City, State, Zip):

985 Bald Cypress Dr, Mandeville, LA 70448

Telephone Number:

985-373-6113

E-mail:

ericlewko@gmail.com

Interest in Project:

Property Owner/Tenant



Local Business Owner

☐

Public Official

☐

Other

☐

Are you in favor of the project?

Yes ☐

No ☐

partial ☒

Please provide your comments/views on the proposed project/Environmental Assessment.

As a resident of The Woodlands, the proposed roundabout that encompasses our neighborhood and Magnolia Trace Elementary does not have provisions for the neighborhood to retain its private/gated status. The effect of that issue will have a dramatic negative effect on the aesthetic, appeal, and most importantly property value of this 374 home neighborhood. The current proposed plan of expropriating our entire entrance road and gates needs to be revised considerably. Additionally, the concept of a wall for sound reduction would be not only an eyesore, it would also reduce the visual appeal of our neighborhood.

Please return this form to the registration desk or mail to the following address by October 21, 2018:

Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809

**PUBLIC HEARING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name: Alexander Tepper

Address (Street, Apt. #, City, State, Zip): 1408 Nelson Ct., Mandeville, LA, 70448

Telephone Number: 985-789-3579

E-mail: xander.tepper@gmail.com

Interest in Project:

Property Owner/Tenant _____

Local Business Owner _____

Public Official _____

Other ✓ ✓

Are you in favor of the project?

Yes [✓]

No []

Please provide your comments/views on the proposed project/Environmental Assessment.

Wouldn't it better to, along with the expansion, make
another entrance to pelican park. The ~~entrance~~ roundabout at Quail
Creek seems rather useless because it already has 3 entrances. A roundabout
to a back entrance to pelican park seems more useful. Also wouldn't it be
more useful to put the ~~4~~ 4 lane road where there is more houses.

Please return this form to the registration desk or mail to the following address by October 21, 2018:

**Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809**

PUBLIC HEARING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: Gregg Tepper

Address (Street, Apt. #, City, State, Zip): 1408 Nelson Ct. Mandeville, LA 70448

Telephone Number: 985-789-8717

E-mail: teppergreg@gmail.com

Interest in Project:

Property Owner/Tenant ☒

Local Business Owner ☐

Public Official ☐

Other ☐

Are you in favor of the project? ~~YES~~ MAYBE, BUT ONLY ON A LIMITED SCALE
Yes [] No [] (2-3 ROUNDABOUTS)

Please provide your comments/views on the proposed project/Environmental Assessment.

TWO MANY ROUNDABOUTS. ROUNDABOUT FOR TRINITY DR SEEMS
EXTRANEUS ONCE SOLUT IT IS PUT IN, TRAFFIC WILL
FLOW BETTER & WILL FREE UP THE 3 ENTRANCES/EXIT
TO QUAIL CREEK.

WHY 4 LANES TO 2? THERE WILL NOT BE ANY SIGNIFICANT
AMOUNT OF TRAFFIC EXITING HWY 1088 ~~TO THE~~ TO THE
RESIDENTIAL STREETS IN THE 4 LANE ZONE. EITHER MAKE
IT ALL 2 LANE OR ALL 4 LANE.
(MY CHOICE)

FOCUS ON THE MORE IMPORTANT PROJECTS FOR WST - 190/I-12
INTERCHANGE HWY 190 @ BOGUE FALAYA BRIDGE/CLAYBURN HILL.

Please return this form to the registration desk or mail to the following address by October 21, 2018:

Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809

ALSO BACK ENTRANCE TO PELICAN PARK IS NOT ACCOUNTED
FOR. THAT CAN BE 100'S TO 1000'S OF CARS A DAY DEPENDING
ON DAY OF WEEK.

**PUBLIC HEARING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name:

KAREN HELMER

Address (Street, Apt. #, City, State, Zip):

66068 OAK ST MANDEVILLE LA 70448

Telephone Number:

NO CALL PLEASE

E-mail:

I HAVE NO COMPUTER

Interest in Project:

☒ Property Owner/Tenant

☐ Local Business Owner

☐ Public Official

☐ Other

Are you in favor of the project?

Yes [☐]

No [☒]

Please provide your comments/views on the proposed project/Environmental Assessment.

ELDERLY & YOUTH DO NOT EITHER COMPREHEND OR
USE TURNING SIGNALS CORRECTLY. MERGING & YIELDING
ARE NOT RESPECTFUL. EVERYONE SEEMS TO BE ADDICTED
TO CELL PHONES & TEXTING.

FOREST BROOK WILL STILL HAVE HARD TIME GOING INTO TOWN
@ 5 PM ±

Please return this form to the registration desk or mail to the following address by October 21, 2018:

**Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809**

**PUBLIC HEARING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name: J C JONES

Address (Street, Apt. #, City, State, Zip): 66085 CYPRESS
MANDERVILLE 70448

Telephone Number:

E-mail:

Interest in Project:

Property Owner/Tenant



Local Business Owner

Public Official

Other

Are you in favor of the project?

Yes []

No [X]

Please provide your comments/views on the proposed project/Environmental Assessment.

1. NOT NECESSARY

2. HURTS HOMES ALL ALONG 1088 NEAR I-12.

3. NEED WIDER BRIDGES ON 190N FIRST

4. NEED CENTER STRIPE DOWN PARRILEAUX RD.
TREACHEROUS AT NIGHT

5. NEED INFRASTRUCTURE IN WEST PARISH FAR
MORE THAN THIS PROPOSAL.

Please return this form to the registration desk or mail to the following address by October 21, 2018:

**Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809**

A Bicyclist Assessment of the LA DOTD 1088 Corridor Study

Submitted: October 10, 2018 at Public Comment Session, St Tammany Parish Council Chambers



CC: St Tammany Trace

Author: Chuck Kirby
605 Tanager Dr
Mandeville, LA 70448
kirby.da.ce@gmail.com

Comments: LADOTD Study of Alternatives for the 1088 Corridor Improvement

This response deals with the bicycle related scope and design proposals in the LADOTD 1088 Corridor Study.

Top Line Recommendations: "Alternative 3" (discussed below)

1. Add one multi purpose bike/walk path separated from the 1088 roadway
2. Integrate this into the St Tammany Trace system
3. Correct bicycling safety issues with I-12 overpass
4. Extend the multipurpose path to Lake Shore HS
5. 1088 roadway improvements as needed and approved

Background:

Highway 1088 is a bicycle corridor for serious recreational bicyclists in the Mandeville area riding from the St Tammany Trace and Highway 59 towards Lake Shore High School, Fish Hatchery Road, and to the "T" at Highway 36, a total length of about 10 miles. From 59 eastward on 1088 to about I-12 (about 6 miles) the roadway has a 1-2 foot shoulder separated by a line for bicyclists to navigate (see Figure 1). This is generally insufficient for most bicyclists to maintain control and results in some riding on the 1088 roadway. There is no signage alerting motorists to potential bicyclist traffic. Motorist speed limits are 45-55 mph in this area.

For bicyclists heading eastward from Mandeville on 1088 the 1-12 interchange and overpass is about 6 miles from Highway 59. The overpass was completed in 1974, most likely without considering bicycling usage. It is, for reasons detailed below, seriously problematic for bicyclists, not the least of which is a danger of being struck by a motorist and falling from the overpass onto I-12 below.

1088 from the I-12 overpass to Lake Shore HS is about 2.5 miles. This portion of 1088 all the way to Highway 36 has no appreciable shoulder and requires bicyclists to ride in the roadway.

The St Tammany Trace is an approximately 30 mile long, about 10 foot wide, heavily used multiuse recreational path in St Tammany Parish from Slidell to Covington, part of the National Rails to Trails system. The Trace is an important part of the Parish's commitment to the high quality of life. This is the heaviest single bicycle/multiuse facility in St Tammany and is maintained and patrolled by dedicated staff. A spur was constructed about 2015 to connect Pelican Park on US 190 east of Mandeville to the Trace. This provides ready (about 3 miles) and safe bicycle access to Pelican Park for Mandeville bicyclists. Figure 2 shows the Trace at the Mandeville Trailhead.

Discussion:

The following will address the bicycling issues with the various proposed Alternatives:

There are no designated bicycling paths for Alternatives 1A, 1C, and 2A. Any option that perpetuates the current 1088 design principle of requiring bicyclists to ride on the shoulder adjacent to traffic is not a principle improvement in bicycling safety vs. current. I will note that characterizing (as in 1B) an adjacent 7 foot (in effect) shoulder a “bike lane” may meet technical requirements for such designation but at the end of the day a bicyclist is not that incrementally further away from being hit by a distracted motorist wondering off the road whether the adjacent shoulder be 4 feet or 7 feet wide.

Where alternatives exist, embracing the adjacent to the roadway bikeway design is not very forward looking; certainly there are Current Best Approach (CBA) alternatives to this design. While it may be the easiest and least costly construction alternative for road engineers to incorporate, it is not the safest. Therefore I do not support these Alternatives.

Alternatives 1B and 2 have both 5 foot wide sidewalks and bike paths on east and westbound: this is overdesign. I will note that pedestrian traffic on 1088 is currently almost non-existent along this stretch of road so a 5 foot sidewalk on both sides of the roadway would seem to be, while somewhat admirable, overdesign, costly, and unnecessary. Even if the thinking is “build it and they will come” how many Forest Brook or Quail Creek residents are going to walk the 4-5 miles round trip for a treat at the Donut King on 59? Not many I would submit.

Alternative 1B also includes a section with both a 5 foot sidewalk and an adjacent 5 foot bikepath, both separated from the roadway. Assuming that pedestrians, rollerbladers, strollers, etc. and bicyclists will follow the rules and refrain from using the non appropriate path is wishful thinking. And a 5 foot bike path is insufficient for a bicyclist to safely pass a mom and stroller. A much more realistic approach is to combine usages and provide sufficient space. See Alternative 3 below.

I would suggest that a better use of space for reasons further developed below and a better model to accomplish the design objectives would be the existing St Tammany Trace, at about 10 feet wide. It is a single, heavily used, bidirectional, bike/multiuse path. On any given day it is frequented by runners, walkers, rollerbladers, moms with strollers and tricycles, and serious adult bicyclists. The design seems to work satisfactorily, both in St Tammany and in other Rails to Trails projects. The St Tammany Parish government regularly touts the Trace as a key component supporting St Tammany’s quality of life.

Why wouldn’t the 1088 Corridor Alternative shamelessly copy the Trace design?

All the Alternatives fail to provide for complete bicycle travel from 59 to the 1088 Corridor North Study Limit. As noted in background, 1088 is a bicycle corridor for

Mandeville bicyclists to Lake Shore HS, Fish Hatchery Road and Highway 36. While some of the designs would provide ready bicycle access for residents westward to businesses on 59, for bicyclist heading eastward towards Lake Shore HS and beyond, ending bike path construction at Oak/Loretha is only slightly better and slightly less problematic than using current 1088. Note that even though the Northern Study Limits of this project extend to the west side of the I-12 overpass, all the proposed designs seem to imply that, for bicyclist heading eastward on 1088 the bicycle world ends abruptly at Oak/Loretha, creating a "path to nowhere". Extending the path to the study limits, the north side I-12 means having to deal with the I-12 overpass.

None of the alternatives deal with the 1-12 overpass bicycle safety Issues. A list of the significant safety issues associated with bicycling over the I-12 overpass, starting from Loretha and heading East/North:

1. The shoulder at Loretha is about 7 feet wide and continues until the east on ramp for I-12 where the protected shoulder abruptly ends and a bicyclist has to then cross the on ramp and deal with turning motorists entering the ramp from a roadway speed of 55mph. This is shown in Figure 3.
2. Then a bicyclist must navigate a short protected triangle section filled with accumulated roadway and auto detritus: glass, trash, etc..
3. Past the trash the shoulder widens to about 7 feet until the actual overpass at which point the shoulder completely disappears, forcing the bicyclist onto the 55 mph roadway. This shown in Figure 4.
4. Because of elevation differences, for motorists heading eastwards on 1088 at 55 mph past the eastbound I-12 on ramp I will note that there is no clear line of sight enabling motorists to see a bicyclist on the overpass roadway. For the right lane motorist cresting the overpass any bicyclist in the right lane is unexpected....especially if they are the least bit "distracted". This is shown in Figure 5.
5. A bicyclist riding over the 2 lane I-12 overpass should use the right side of the right lane. On the overpass this means the bicyclist will be next to the about 36-38" high retaining wall. The saddle height for a 6 foot high adult bicyclist will be about 40", with their center of gravity about 6" higher, as shown in Figure 6. Thus while riding the I-12 overpass roadway a bicyclist could easily pass over the existing retaining wall onto I-12 below under certain conditions such as:
 - a. Both lanes occupied by 55 mph motorists while passing the bicyclist. This will force the bicyclist towards the retaining wall. Any miscalculation by either motorist will create a serious problem for the bicyclist

- b. A single distracted 55 mph motorist surprised by the appearance of a bicyclist in the right lane due to a prior limited line of sight
 - c. A bicycle striking a roadway object (lumber, empty beer cans, rocks, shredded and even roadkill) and losing control and swerving and striking the retaining wall.
 - d. A distracted bicyclist (yes unfortunately these do exist) using the overpass as a chance to answer their latest text message or make that urgent phone call. Swerving right and striking the retaining wall could be fatal.
6. The over the retaining wall safety risk can be mitigated by riding in the middle of the roadway but this then increases the risk of a motorist striking the bicyclist riding mid lane.

[A savvy Mandeville bicyclist will confine whenever possible their 1088 eastbound ride to Lakeshore HS and beyond to low traffic times so as to minimize risk. However, low traffic does not mean no risk. For example, the line of sight issue applies also to bicyclists looking west for approaching traffic. It is not possible to see all approaching traffic because of the “blind spot” due to elevation/slope configuration. A bicyclist on the overpass may not see a motorist as they check behind but they may nonetheless be approaching. Indeed, every time I ride on the 1088 I-12 overpass, no matter the traffic, no matter the extra focus on bicycle handling, road position, road condition, alertness, etc. I think about the risk of being hit by a surprise auto, flying over that seeming low retaining wall, and hitting the I-12 roadway below.]

7. Eastbound, on the north side of the I-12 overpass, the relative safety of a 7 foot shoulder resumes. The I-12 westbound exit ramp must be crossed but this is relatively safe because of the ramp stop signs and the clear line of sight for the motorists to the descending bicyclist.

8. East of the exit ramps the 7 foot shoulder disappears, the 4 lane ends, and a bicyclist must share the roadway with 55 mph motorists all the way to Highway 36. I will note that while this section of 1088 has noticeably less traffic compared to further west, there is a higher concentration of younger, less experienced drivers heading to and from Lake Shore HS.

Recommended: Alternative 3 Integrating all of the above bicycle safety considerations plus other relevant “Social Connection” St Tammany Parish issues , the following alternative, call it Alternative 3, is proposed:

1. Add one multi purpose, bi-directional bike/walk path, similar to the St Tammany Trace, separated from the 1088 roadway. Add safe crossovers for pedestrians and bicyclists as possible. Similar to the Trace include rest kiosks, benches, trash receptacles, as well as usage rules and regulations.
2. Integrate this into the St Tammany Trace system so that the facility does not become an organizational orphan with no agency responsible for regular maintenance, cleaning, safety

patrolling, emergency assistance. The current Trace staff have all the skills, experience, equipment and, importantly, aptitude to accomplish this with a high quality outcome.

Connect this to the St Tammany Trace so that it becomes a Trace Spur. A 1088 spur connected to the Trace would maximize the community utility of any 1088bike/multiuse path for anyone using either the Trace or the 1088 Spur. Consider also that businesses on 59 at 1088 would see increased traffic from bicyclists, not unlike the Old Mandeville area.

While there is currently no St Tammany Bicycle Master Plan the author is aware of, this connected design would certainly be preferred. There are challenges to create this connection but I'm certain motivated, smart people can find a viable way to make this happen. If we can put a man on the moon, surely....

3. Extend the multipurpose path to Lake Shore HS. I recognize this is beyond the scope of the Northern Study Limit, but, again this should be part of any St Tammany Bicycle Master Plan and is a "build it and they will come" forward thinking item. It would provide a logical terminus for the path (vs. the "path to nowhere"), increase utility to the 1088 Spur, and allow, for example, teacher and students from Forest Brook, Quail Creek, and other 1088 adjacent subdivisions and Mandeville to ride bicycles to Lake Shore HS. This is certainly consistent with enhancing "community cohesion", a impact evaluation for this project (see: Table ES-6-1, "LA 1088 Summary of Improvement Impacts" in the 10/11/2018 Public Meeting Notice)
4. Correct I-12 overpass bicycle safety issues: Undeniably this is a heavy lift. But there are models across the country to examine. For example, on the high end there are separate multiuse path bridges (i.e. Longleaf in Hattiesburg, MS) over interstates. There are separated extensions cantilevered off the main roadway (I-279 Pittsburg). There are adjacent to the roadway paths separated by concrete "jersey barriers(I-494 Wakota Bridge, Minneapolis).

Less safe but lower on the cost scale, creatively relining the 2 lanes of the 1088 I-12 overpass could provide an adjacent rideable shoulder. The design principle of reducing the lane widths to 10 feet and allocating space to create a right shoulder is discussed in the 2009 "Louisiana Statewide Bicycling and Pedestrian Master Plan", page A-6. I would add that this option (and any bikepath adjacent to roadway option) should have sufficient motorist signage and "rumble strips" to help provide some sort of "distracted driver" warning (both to the driver and for the bicyclist).

Regardless of the Alternative selected for I-12 overpass, the current retaining walls need to be updated: the current 36-38" retaining walls are insufficiently small for safe bicycle usage. Higher, 60" barriers would be better. Chain link fencing is commonly used for pedestrian walkways and that would suffice as well. More elegantly, decorative iron is sometimes used

to both provide a retaining function as well as broadcast a community's location and demonstrate a pride of place. "Mandeville", "Abita Springs", or " St Tammany Parish" would seem to be possible for this approach.

5. As this is a bicycling assessment, the 1088 roadway improvements for Alternative 3 should be as needed and agreed upon. I would request that considerations be given to the design at the intersection of 1088 and 59 such that connecting the bikepath to the Trace be kept in mind.

Other Considerations:

- Signage for any alternative needs to be sufficient to meet CBA
- Paint selection for bicycle path designation needs to be serviceable in wet weather to avoid bicycle crash risk.
- Any pedestrian path needs shade, resting points, and trash cans.
- Consider using the roundabouts for community space in addition to functional. Make them distinct, much like river communities (i.e. Cincinnati) color their bridges for visual appeal.
- How about designating the 1088 path part of a park (albeit narrow), connect it to the Trace, and sell the naming rights? Call it the CVS Spur ?
- Speed limit: Currently the 1088 speed limit is 45 mph transitioning to 55 west of Loretha/Oak. From a bicyclist safety perspective maintaining the 45 mph until east of the I-12 overpass would be better.

Email if questions.

Chuck Kirby

10/11/2018

About the Author: Retired engineer and avid St Tammany bicyclist

Figure 1: 1088 Roadway at Quail Creek



Figure 2: St Tammany Trace at the Mandeville Trail Head



Figure 3: Approaching the I-12 eastbound on-ramp



Figure 4: Overpass Shoulder Disappears



Figure 5: Line of Sight



Figure 6: 1088 I-12 Overpass Retaining Wall



From: [Gulino, Adam](#)
To: [Bradley, Paul](#)
Cc: [Evans, Jan](#)
Subject: FW: 1088 Corridor Comment Report
Date: Friday, October 19, 2018 2:54:57 PM
Attachments: [image001.jpg](#)
[image002.jpg](#)
[image003.jpg](#)
[image004.jpg](#)
[image005.jpg](#)
[1088 Alternatives Comments.pdf](#)

Paul

Please add theses to the list of questions for 1088.

Thanks,
Adam Gulino, P.E.
Volkert, Inc.
3801 Canal Street, Suite 210
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From: Kirby <kirby.da.ce@gmail.com>
Sent: Friday, October 19, 2018 6:07 AM
To: Gulino, Adam <adam.gulino@volkert.com>
Cc: lisa maddox <lmaddox@stpgov.org>
Subject: Fwd: 1088 Corridor Comment Report

Adam:

Just wanted to make sure you got this. Please confirm receipt.

Also, some questions about process:

1. How does Volkert now converge on one 1088 option? What is that process like?
2. How do outside agencies (i.e. St Tammany Trace) participate in that process to influence the final design?
3. What is the projected timing for the freezing of the design?

Thanks,

Chuck :)

----- Forwarded message -----

From: Kirby <kirby.da.ce@gmail.com>

Date: Fri, Oct 12, 2018 at 6:23 AM

Subject: 1088 Corridor Comment Report

To: <adam.gulino@volkert.com>

Adam:

Good to talk with you last night.

Attached below is a pdf of the hard copy report I gave you last night.

Lemme know if questions.

Thanks,

Chuck :)

**PUBLIC HEARING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name: SCOTT D. OWENS
Address (Street, Apt. #, City, State, Zip): 1796 GARON DR, MANDEVILLE, LA 70448
Telephone Number: 985 778-0015 E-mail: scott.doug.las.owens@gmail.com

Interest in Project:

Property Owner/Tenant ☒
Local Business Owner ☐
Public Official ☐
Other ☐

Are you in favor of the project?

Yes ☒

No ☐

Please provide your comments/views on the proposed project/Environmental Assessment.

WHILE A "LONG TERM" COMPLETE PROJECT PLAN IS REQUIRED, THE IMMEDIATE NEEDS OF THIS ROADWAY SHOULD BE IDENTIFIED TOO WITH A TIMELINE. SEVERAL EASY FIXES HAVE BEEN COMPLETED ON 1088 WITH SIGNIFICANT IMPROVEMENTS. THE LIGHT AT FOREST BROOK AND THE RIGHT TURN LANE OFF 59 ONTO 1088 NORTHBOUND HAVE GREATLY HELPED. MORE IMPROVEMENTS CAN BE ACCOMPLISHED WITH THE ROUNDABOUT AT 1088 SOULT. GET THAT PROJECT SCHEDULED NOW. MY PREFERENCE WOULD BE FOR LESS ROUNDABOUTS AND NO MEDIAN. GARON/JACKSON INTERSECTION ONLY HAS 70 HOMES SOUTH OF 1088 AND ABOUT THAT NUMBER OF HOMES ON THE NORTHSIDE. I WOULD ALSO ELIMINATE ANY CONSIDERATION FOR BIKE PATHS OR SIDEWALKS.

Please return this form to the registration desk or mail to the following address by October 21, 2018:

**Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809**

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VOLKERT, INC.

**PUBLIC HEARING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA**

Name: CARLO HERNANDEZ
Address (Street, Apt. #, City, State, Zip): 2818 MESA COURT
MANDEVILLE, LA 70448
Telephone Number: 985 626-7578 E-mail: CHCARLOHERNANDEZ@GMAIL.COM

Interest in Project:

Property Owner/Tenant X
Local Business Owner _____
Public Official _____
Other _____

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VOLKERT, INC.

Are you in favor of the project?

Yes [X]

No []

Please provide your comments/views on the proposed project/Environmental Assessment.

I SUPPORT THE PREFERRED ALTERNATIVE 2A.
I RECOMMEND CONSTRUCTION PRIORITY TO THE
ROUNDAABOUT AT SOULT/VIOLEA STREETS.

Please return this form to the registration desk or mail to the following address by October 21, 2018:

**Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809**

PUBLIC HEARING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: LYNN F. GURTNER

Address (Street, Apt. #, City, State, Zip):

328 FOUNTAINS PARK BLVD MANDEVILLE, LA 70448
Telephone Number: 985-787-9773 E-mail: LYNNGURTNER@Bellsouth.NET

Interest in Project:

Property Owner/Tenant OWNER
Local Business Owner _____
Public Official _____
Other _____

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Are you in favor of the project?

Yes []

No [X]

VOLKERT, INC.

Please provide your comments/views on the proposed project/Environmental Assessment.

LA 1088 CORRIDOR STUDY - STATE PROJECT H.010116
ST. TAMMANY PARISH - CONTROL 852-11

PLEASE RECONSIDER A TURN-IN LANE FOR THE "FOUNTAINS
SUBDIVISION" WHICH HAS 56 HOMES. WITHOUT A TURN-IN
LANE DIRECTLY AT THE ENTRANCE ON HWY 1088, ALL
EMS AND FIRE RESCUE PERSONAL WILL HAVE TO DRIVE
ADDITIONAL MILE TO ROUNDABOUT TO ENTER THE SUBDIVISION.
THIS WILL PLACE THE RESIDENTS AND PROPERTY AT A
DISADVANTAGE FOR 911 CALL FOR HELP. I STRONGLY
"DISAGREE" WITH PLACING A MEDIAN ON HWY 1088
IN FRONT OF THE FOUNTAINS SUBDIVISION AND NO
TURN-IN LANE FOR RESIDENTS AND EMS AND FIRE RESCUE.

Please return this form to the registration desk or mail to the following address by October 21, 2018:

Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809

PUBLIC HEARING
STATE PROJECT NO.: H.010116
LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: DR. BARRY POTTER

Address (Street, Apt. #, City, State, Zip): 2044 TRINITY DRIVE, MANDEVILLE LA 70448

Telephone Number: 985-674-4225

E-mail: bpottella@bellsouth.net

Interest in Project:

Property Owner/Tenant ☒

Local Business Owner ☐

Public Official ☐

Other ☐

Are you in favor of the project?

Yes ☐

No ☒

Please provide your comments/views on the proposed project/Environmental Assessment.

1. This project will increase through traffic in a primarily residential area. It would be more appropriate to widen LA 59, which has a far lower density of homes.
2. Having lived in the U.K. for many years I know that American Drivers are not accustomed to the use of traffic circles & I anticipate an increase in accidents as a result. Furthermore, roundabouts are only effective in low-medium traffic patterns & this project will result in an increase in traffic flow beyond this point.
3. Having on Trinity Drive in the Quail Creek subdivision, we already see an increase in traffic avoiding the 504/1088 crossroad & I foresee an increase in this unwanted traffic.

Please return this form to the registration desk or mail to the following address by October 21, 2018:

Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809

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VOLKERT, INC.

PUBLIC HEARING
STATE PROJECT NO.: H.010116

LA 1088 CORRIDOR STUDY
ST. TAMMANY PARISH, LOUISIANA

Name: MARIAN BICKENBACH

Address (Street, Apt. #, City, State, Zip):

23390 OSCAR ST., MANDEVILLE, LA 70448

Telephone Number: 504-939-2099

E-mail: ANOVELIDEA.WICKEN1@gmail.com

Interest in Project:

Property Owner/Tenant ☒

Local Business Owner ☐

Public Official ☐

Other ☐

Are you in favor of the project?

Yes ☐

No ☒

Please provide your comments/views on the proposed project/Environmental Assessment.

The changes proposed for 1088 ARE OVERKILL. WHAT we need, AND HAVE NEEDED FOR YEARS, is a stop light AT South Rd. There is NOT enough traffic to WARRANT the EXPANSIONS proposed. We bought property in this AREA for its "country feel." The exit to I-12 WAS convenient, but TOOK AWAY A lot of green space AND BARRIERS AGAINST TRAFFIC NOISE. You allowed more clearing along 1088 for possible development, which has, THANKSULLY, never materialize, but which has allowed more traffic noise to reach us farther off of 1088. Your changes will only bring more traffic to BUR AREA, AND traffic circles only serve to CONFUSE DRIVERS AND SLOW TRAFFIC. We don't need them.

Please return this form to the registration desk or mail to the following address by October 21, 2018:

Ms. Jan Evans
Volkert, Inc.
7967 Office Park Blvd.
Baton Rouge, LA 70809

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