

BOARD OF COUNTY COMMISSIONERS

INTER-OFFICE MEMORANDUM

To: Herbert W. A. Thiele, Esq.
County Attorney

From: Charles Wu, P.E.
Chief of Engineering Design, Engineering Services Division
Leon County Department of Public Works

Date: November 23, 2015

Subject: Public Purpose and Necessity of Property to be Acquired for Old Bainbridge at Pullen Road Intersection Improvement Project

I. INTRODUCTION

The following information is submitted for consideration by the Board of County Commissioners (“Board”) in approving the Resolution of public purpose and necessity for the acquisition of property interests associated with the construction of roadway improvements at the intersection of Old Bainbridge Road and Pullen Road (“Old Bainbridge at Pullen Road Intersection” or “Subject Intersection”). The Old Bainbridge at Pullen Road Intersection Improvement Project (the “Old Bainbridge at Pullen Project” or “Project”) will improve the Subject Intersection with the construction of a roundabout that will provide a safe connection of Old Bainbridge Road with Pullen Road and Willamette Road (Attachment #1).

In my capacity as Chief of Engineering Design, I have knowledge of the factors considered in recommending that the Board: (a) select the alternative for the proposed improvements as set forth in the current construction plans and map of survey for the Project; and (b) authorize eminent domain to acquire the property interests necessary for the public purpose of constructing the Project.

II. PROJECT PURPOSE AND CHRONOLOGY

The Project is located in northern Leon County on Old Bainbridge Road approximately one-quarter mile south of Interstate-10 at the intersection of Pullen Road and Willamette Road. The existing configuration of the Old Bainbridge at Pullen Road and Willamette Road is at an acute angle that impedes visibility and makes a difficult right turn for vehicles traveling north on Old Bainbridge Road. Westbound left turns are significantly impeded during peak travel times which results in long traffic queues on Pullen Road. In the past five years, 35 traffic crashes have occurred at this intersection.

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In 2003, as part of the budget approval process, the Board approved the construction of improvements to the Subject Intersection. In 2005, the County received its preliminary engineering report prepared by Kimley-Horn and Associates which studied the conditions at the Subject Intersection and developed three conceptual design alternatives for improvement. During the same time period, the City of Tallahassee initiated the Callaway/Pullen Road Neighborhood Enhancement Project (the "Enhancement Project"), which was to construct improvements along the adjacent Callaway/Pullen Road corridor. The County provided engineering data to the City regarding the Old Bainbridge at Pullen Road Intersection with an interest to include those improvements in the Enhancement Project. In 2006, the City released a preliminary engineering report for the Enhancement Project which included improvements to the Subject Intersection, and the County planned to pursue a Joint Project Agreement with the City to share in the costs of the intersection improvements but, due to budget priority shifts by the City, the Enhancement Project became a low priority following the preliminary engineering report.

In 2008, the County decided to continue on its own with further engineering design for the Old Bainbridge at Pullen Road Intersection improvements and, in 2010, it developed three additional design alternatives for a realigned and signalized intersection to reconnect Pullen Road and Old Bainbridge Road at a 90-degree angle. However, those alternatives presented problems due to the Project's location on a designated Canopy Road because the implementation of the minimum Florida Department of Transportation ("FDOT") standards at the intersection would require removal of a significant number of trees along the Canopy Road corridor on Old Bainbridge Road. Additional concerns were raised with the realignment and signalization alternatives because of the significant impact on adjoining properties. In 2011, the Canopy Roads Citizens Committee ("CRCC") recommended to pursue a roundabout design alternative because, in addition to minimizing impacts to the Canopy Road, it would best accommodate bicycle and pedestrian movement, protect and enhance tree rooting area, reduce vehicular traffic speeds, and create better sidewalk extensions.

With regard to the Willamette Road connection on the westerly side of Old Bainbridge Road, the County's preliminary engineering report considered the alternative of permanently closing the connection. The City, however, rejected the closure alternative and suggested a larger roundabout design that would accommodate larger vehicles and allow for a connection to Willamette Road when the roundabout is moved further north. Based on the City's comments and CRCC's recommendation, a revised roundabout design was presented to the CRCC in 2013 and was approved in concept. The final roundabout design was approved by the CRCC in 2014 with details on an enhanced stormwater management facility, improved pedestrian features, a more harmonious design to the existing terrain, and landscaping and irrigation to mitigate the Canopy Road impacts. The final roundabout design for the Project will improve all traffic movements through the Old Bainbridge at Pullen Road Intersection and will enhance the safety for vehicles and pedestrians by calming the traffic through the intersection and reducing congestion during peak traffic hours.

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As a part of Project scope, it will be necessary to acquire various fee simple and easement property interests from the two abutting property owners on each side of Pullen Road adjacent to the roundabout. The acquisition of these property interests will allow for the County to design and construct the Project preferred roundabout design. The Old Bainbridge at Pullen Project has been a long recognized need for replacement of the acutely angled intersection that impedes visibility and makes a difficult right turn for vehicles traveling north on Old Bainbridge Road, and for the reduction of traffic crashes at this intersection. The Project is designed to improve all traffic movements through the Old Bainbridge at Pullen Road intersection and will help to enhance the safety for vehicles and pedestrians by calming the traffic and reducing congestion during peak traffic hours. As such, the Old Bainbridge at Pullen Project clearly represents a County public purpose.

III. FIVE (5) NECESSITY FACTOR CONSIDERATIONS FOR OLD BAINBRIDGE AT PULLEN ROAD PROJECT

A. ALTERNATE ALIGNMENTS

The purpose of the Project is to improve all traffic movements through the Old Bainbridge at Pullen Road intersection, enhance the safety for vehicles and pedestrians, and reduce the number of traffic crashes at the intersection. Several design alternatives were considered for the Project (Attachment #2), all of which included signalization except for the roundabout alternative. The design alternatives were as follows:

Alternative 1: No Realignment; Lane Additions; Willamette Open

Alternative 1 would provide the addition of a southbound left turn lane, a northbound right turn lane, and a westbound left turn lane. With these improvements, signalization would be added. The level of service (LOS) would be improved to meet local service criteria and the Willamette Road intersection would continue to be maintained. However, safety deficiencies related to the acute angle of the intersection would not be improved and stormwater treatment would be required. In addition, additional right-of-way would be required and the loss of 30 trees would need to be mitigated.

Alternative 2: Slight Realignment; Lane Additions; Willamette Closed

Alternative 2 would provide the same lane additions as in Alternative 1, with an improvement to the skew angle of the intersection by introducing a tight curve at the intersection on Pullen Road. This slight realignment would create a more normal intersection angle without impacting any adjacent structures. The LOS would be improved to meet local service criteria and the safety deficiencies related to the acute angle of the intersection would be improved. However, because the intersection point of Old Bainbridge at Pullen Road would be shifted to the south, the Willamette Road leg of the intersection would need to be closed to traffic. In addition, the

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amount of stormwater treatment and right-of-way acquisition required in Alternative 1 would be increased and the loss of 35 trees would need to be mitigated.

Alternative 3a: Realignment to 90 Degrees; Lane Additions; Willamette Closed

Alternative 3a would provide the same lane additions as in Alternative 1, with an improvement to the skew angle of the intersection by introducing a right angle intersection between Pullen Road and Old Bainbridge Road. This right-angle realignment would significantly improve the safety deficiencies related to the existing skewed-angle intersection, but would require the whole acquisition of one abutting residential property and the additional acquisition of right-of-way in the southeast corner of the intersection. The LOS would be improved to meet local service criteria. As with Alternative 2, because the intersection point of Old Bainbridge at Pullen Road would be shifted to the south, the Willamette Road leg of the intersection would need to be closed to traffic. Although the amount of stormwater treatment and right-of-way acquisition required in Alternative 2 would be increased, the right-angle alignment would create the opportunity a stormwater treatment area in the northwest corner of the intersection. In addition, the number of lost trees in Alternative 2 needed to be mitigated would increase from 35 to 55.

Alternative 3b: Realignment to 90 Degrees; Lane Additions; Willamette Open

Alternative 3b would provide the same lane additions as in Alternative 1 with an improvement to the skew angle of the intersection by introducing a right angle intersection between Pullen Road and Old Bainbridge Road. As with Alternative 3a, the right-angle realignment would significantly improve the safety deficiencies related to the existing skewed-angle intersection and would improve the LOS to meet local service criteria, but would require additional right-of-way acquisition including the whole acquisition of one abutting residential property. However, this Alternative 3b proposes to keep Willamette Road open and reduces the project scope to lessen the impact to Canopy Road trees and negate the need for additional stormwater treatment, thereby providing a greater opportunity for reforestation within the project area. The number of trees lost to construction activity in Alternative 3b would be reduced to five, with an additional seven trees required to be removed because of disease and decay.

Alternative 4a: Roundabout Three-Leg Realignment; Willamette Open

Alternative 4a would provide a roundabout connecting Old Bainbridge Road and Pullen Road a short distance south of Willamette Road. As with Alternatives 3a and 3b, the roundabout realignment would significantly improve the safety deficiencies related to the existing skewed-angle intersection. Although it would improve the LOS to meet local service criteria, it would introduce additional traffic congestion when compared to Alternatives 3a and 3b. Alternative 4a would require

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additional right-of-way acquisition including the whole acquisition of one abutting residential property, but it proposes to keep Willamette Road open and reduces the project scope to lessen the impact to Canopy Road trees and negate the need for additional stormwater treatment, thereby providing a greater opportunity for reforestation within the project area. The number of trees lost to construction activity in Alternative 4a would be reduced to four, with an additional seven trees required to be removed because of disease and decay.

Alternative 4b: Roundabout Four-Leg Realignment; Willamette Open

Alternative 4b would provide a roundabout shifted slightly north of its location proposed in Alternative 4a, thereby providing a four-way connection between Old Bainbridge Road, Pullen Road, and Willamette Road. As with Alternative 4a, the four-leg roundabout realignment would significantly improve the safety deficiencies related to the existing skewed-angle intersection. It would improve the LOS to meet local service criteria and provide for better operations and a higher level of safety when compared to Alternative 4a. By shifting the Pullen Road alignment slightly northward, Alternative 4b avoids the whole acquisition of the abutting property as proposed in Alternative 4a. Additional stormwater treatment area would be provided within the existing Old Bainbridge right-of-way adjacent and to the north of the roundabout. When compared to Alternative 4a, the number of trees lost to construction activity in Alternative 4b would be increased to 13 trees within the Canopy Protection Zone, with additional tree removals proposed for outside of the Canopy Protection Zone. However, the increased number of tree removals would be mitigated with a substantial landscape plan as presented and approved by the Canopy Road Citizens Committee.

Alternative 5: No Build

The No Build Alternative would propose no constructed improvements. Continuing maintenance activities and occasional resurfacing activities would be undertaken to keep the roadway clear of obstructions and to prevent deterioration of the roadway surface. Under this alternative, the capacity deficiencies and safety concerns will not be addressed. The intersection will continue to operate with the indicated traffic concerns and will be exacerbated as traffic grows, however, there would be no traffic interruptions due to construction nor would there be any right-of-way acquisition or construction costs. While it would not result in any impact to the Canopy Road, the No Build Alternative would not improve the traffic movement through the intersection, enhance the safety for vehicles and pedestrians, nor reduce the number of traffic crashes at the intersection.

B. LONG-RANGE PLANNING

The Tallahassee-Leon County Comprehensive Plan, adopted in July 1990 and revised in July 2014 (the “Comp Plan”), contains the long range goals, objectives, and policies for the County through the year 2030. The goals, objectives, and policies regarding the adequacy of local arterial and collector roadways, bikeways, sidewalks and other such public facilities are contained within the Capital Improvements Element of the Comp Plan, with Goal 1 providing that sound fiscal policies be used to, “... provide adequate public facilities concurrent with, or prior to, development in order to achieve and maintain adopted standards for level of service, and to exceed the adopted standards, when possible.” In addition, the Mobility Element of the Comp Plan addresses the need for a safe transportation system that provides mobility for pedestrians and bicyclists, among others.

Goal 1 of the Capital Improvements Element (“[CI]”) addresses such public facilities needs with Objective 1.1 [CI] seeking to, “[d]efine types of public facilities, establish standards for levels of service for each type of public facility, and determine what capital improvements are needed in order to achieve and maintain the standards for existing and future populations, and to repair or replace existing public facilities.” In addition, Objective 1.3 [CI] seeks to, “[p]rovide needed capital improvements for repair or replacement of obsolete or worn out facilities, eliminating existing deficiencies, and meeting the needs of future development ...”

With regard to the levels of service (LOS) required for the County’s arterial and collector roadways such as Old Bainbridge Road and Pullen Road, Policy 1.1.3 [CI] establishes a standard of minimum levels of service for peak hour at LOS “D”. According to the 2004 Kimley-Horn report, the Old Bainbridge at Pullen Road Intersection at that time operated at substandard levels of service. With no improvements being made since then to the Subject Intersection, and the increased development that has occurred in the surrounding area, the resulting impact has been increased traffic congestion along with increased traffic crashes.

Goal 1 of the Mobility Element (“[M]”) seeks to, “[e]stablish a safe, energy efficient multi-modal transportation system that provides mobility for pedestrians, bicyclists, transit users, motorized vehicle users, users of rail and aviation facilities, supports public health through active living, and is sensitive to the cultural and environmental amenities of Tallahassee and Leon County.”

From a long-range planning perspective, Alternatives 3a, 3b, 4a, and 4b are all designed to toward accomplishing those goals, objectives, and policies contained in the Comp Plan with regard to the adequacy of local arterial and collector roadways and associated public facilities, while Alternatives 1 and 2 would also accomplish those goals but to a lesser degree. The no-build Alternative 5 would not accomplish those goals. Alternative 4b is the preferable alternative in that, while designed toward best

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accomplishing those Comp Plan goals, objectives, and policies, it avoids the impact of a whole acquisition of an abutting property, provides for stormwater treatment within adjacent right-of-way, and proposes a desirable landscape plan as approved by the Canopy Road Citizens Committee that offsets any environmental impact resulting from the loss of trees to construction.

C. SAFETY CONSIDERATIONS

Based on a signal warrant evaluation performed as part of the Kimley-Horn preliminary engineering report, the Subject Intersection met the necessary warranting criteria for a traffic control signal. Combined with the anticipated growth at this location, it appears that the justification for signalization has been demonstrated for present and future conditions to sufficiently control traffic at the Old Bainbridge Road at Pullen Road intersection. However, when compared to a signalized intersection, a roundabout is considered the safer alternative due to a reduction in crash severity. According to the Federal Highway Administration, roundabouts improve safety by reducing the number of crash fatalities by 90%, reducing the number of crash injuries by 76%, and reducing the number of all crashes by 35%. In addition, the slower traffic speeds attributable to a roundabout are safer for pedestrians.

With the exception of the no-build Alternative 5, all the Alternatives 2 through 4 were developed to address these safety concerns, while the roundabout Alternatives 4a and 4b are considered to provide the most safety. Alternative 4b is preferable to Alternative 4a in that it results in less impact to adjacent properties and provides for better stormwater treatment and mitigation of tree loss.

D. ENVIRONMENTAL IMPACTS

The primary environmental impacts resulting from the proposed Project involve the need for increased stormwater treatment and the loss of trees within the Canopy Protection Zone. With the exception of the no-build Alternative 5, all the proposed Alternatives result in these environmental impacts in varying degrees. However, Alternative 4b is the preferred Alternative because of its proposed mitigating landscape plan and stormwater treatment within existing adjacent right-of-way.

E. COSTS

The no-build Alternative 5 is the least expensive alternative; however, it does nothing to reduce or otherwise address the capacity deficiencies and safety concerns in the Subject Intersection. The 90-degree signalized realignment designs in Alternatives 2, 3a, and 3b are less costly to construct than the roundabout designs in Alternative 4a and 4b, but the existence of traffic signal equipment make those Alternatives more costly to maintain in the long run. The roundabout design in Alternatives 4a and 4b are the

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preferred Alternatives, with Alternative 4b the most preferred because it requires less costly right-of-way acquisition.

IV. RECOMMENDATION

Alternative 4b, Roundabout Four-Leg Realignment; Willamette Open, is the recommended alternative because, of all the Alternatives, it best accomplishes the Project purpose of improving all traffic movements through the Old Bainbridge at Pullen Road intersection, enhancing the safety for vehicles and pedestrians, and reducing the number of traffic crashes at the Subject Intersection. It also results least amount of impact to adjacent properties and avoids the need for a whole acquisition of the abutting residential property. Alternative 4b will also result in a benefit to the natural Canopy Road environment with a mitigating landscape plan to offset the loss of trees and stormwater treatment within the existing right-of-way.

In order to proceed with Alternative 4b, it will be necessary to acquire various fee simple and easement property interests from the two abutting property owners on each side of Pullen Road adjacent to the roundabout. The acquisition of these property interests will allow for the County to design and construct the preferred roundabout design.

For these reasons, it is recommended that the Board approve the Resolution of public purpose and necessity authorizing the acquisition of the property interests needed for the public purpose of constructing the Old Bainbridge at Pullen Road Intersection Improvement Project as described above.

Project Rendering Aerial View



SHEET TITLE ROADWAY PLAN VIEW PROJECT NAME OLD BAINBRIDGE / PULLEN RD IMPROVEMENTS	SCALE PREPARED FOR LEON COUNTY PUBLIC WORKS	GENESIS <small>FL CA 00009660 FL LB 000016 FL LC 20000202</small>		<small>GEN, LLC dba GENESIS GROUP 2307 CALLAWAY ROAD, SUITE 100 TALLAHASSEE, FLORIDA 32303 (850) 228-4400 (850) 451-3000 FAX</small>											
		<small>James P. Sullivan, P.E. License Number 30261</small>		<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>REVISIONS</th> </tr> </thead> <tbody> <tr> <td>DESIGNED BY:</td> <td>P.W.N.</td> <td>CHECKED BY:</td> <td>J.P.S.</td> </tr> <tr> <td>DRAWN BY:</td> <td>J.P.L.</td> <td>SCALE:</td> <td>DATE: 08/25/14</td> </tr> </tbody> </table>		NO.	DATE	DESCRIPTION	REVISIONS	DESIGNED BY:	P.W.N.	CHECKED BY:	J.P.S.	DRAWN BY:	J.P.L.
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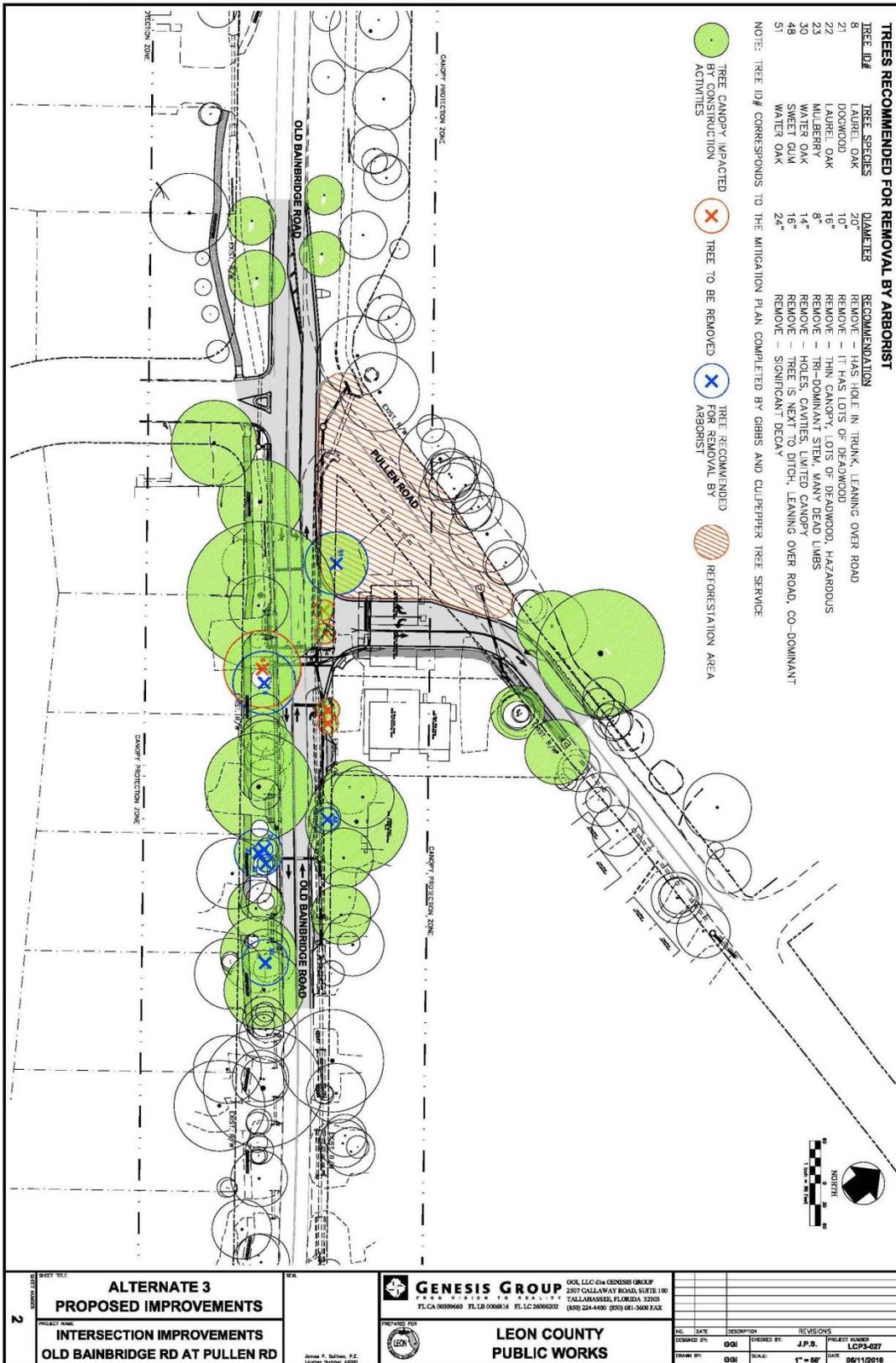
Alternative 1: No Realignment; Lane Additions; Signalization



Alternative 3a: Realignment to 90 Degrees; Lane Additions; Willamette Closed



Alternative 3b: Realignment to 90 Degrees; Lane Additions; Willamette Open



SHEET 122
**ALTERNATE 3
 PROPOSED IMPROVEMENTS**
 PROJECT NAME
**INTERSECTION IMPROVEMENTS
 OLD BAINBRIDGE RD AT PULLEN RD**

DESIGNED BY
 J.P.S.
 CHECKED BY
 J.P.S.
 DATE
 08/11/2010

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PREPARED FOR
**LEON COUNTY
 PUBLIC WORKS**

NO. DATE DESCRIPTION REVISIONS
 DESIGNED BY: GGI CHECKED BY: J.P.S. PROJECT NUMBER: LCP3-027
 DRAWN BY: GGI SCALE: 1" = 50' DATE: 08/11/2010

Alternative 4a: Roundabout Three-Leg Realignment; Willamette Open

