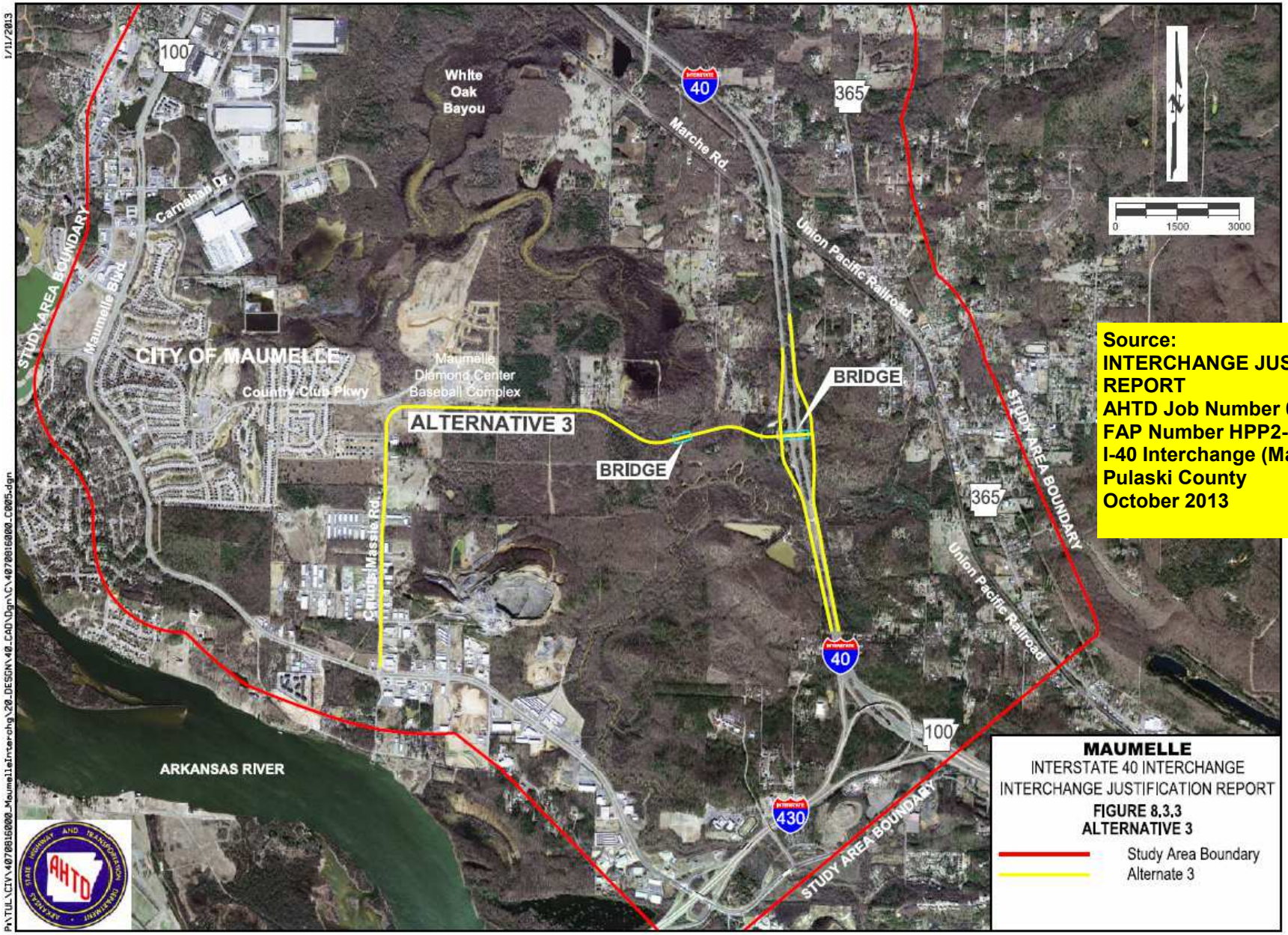
City of Maumelle, Arkansas

Counts Massie Road -
Country Club Parkway Connection

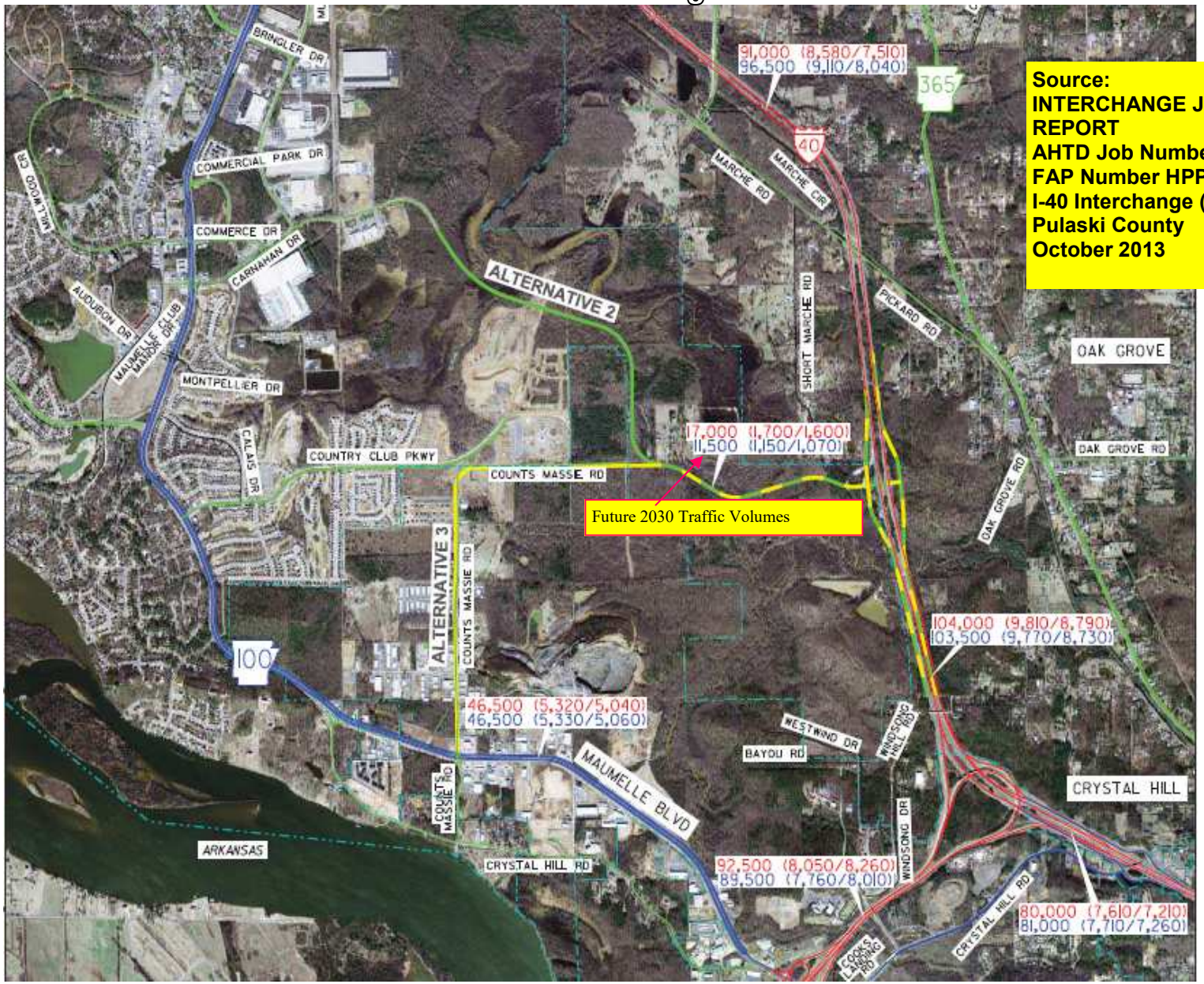

Country Club Pkwy
Diamond Park Ln
Counts Massie Rd
Counts Massie Rd

Vicinity



Source:
INTERCHANGE JUSTIFICATION REPORT
AHTD Job Number 061190
FAP Number HPP2-3745(1)
I-40 Interchange (Maumelle) (F)
Pulaski County
October 2013

Future Traffic Volumes
Maumelle I-40 Interchange



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I-40 Interchange (Maumelle) (F)
Pulaski County
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CAPACITY and LEVEL OF SERVICE

Generally, the "capacity" of a street is a measure of its ability to accommodate a certain magnitude of moving vehicles. It is a rate as opposed to a quantity, measured in terms of vehicles per hour. More specifically, street capacity refers to the maximum number of vehicles that a street element (e.g. an intersection) can be expected to accommodate in a given time period under the prevailing roadway and traffic conditions.

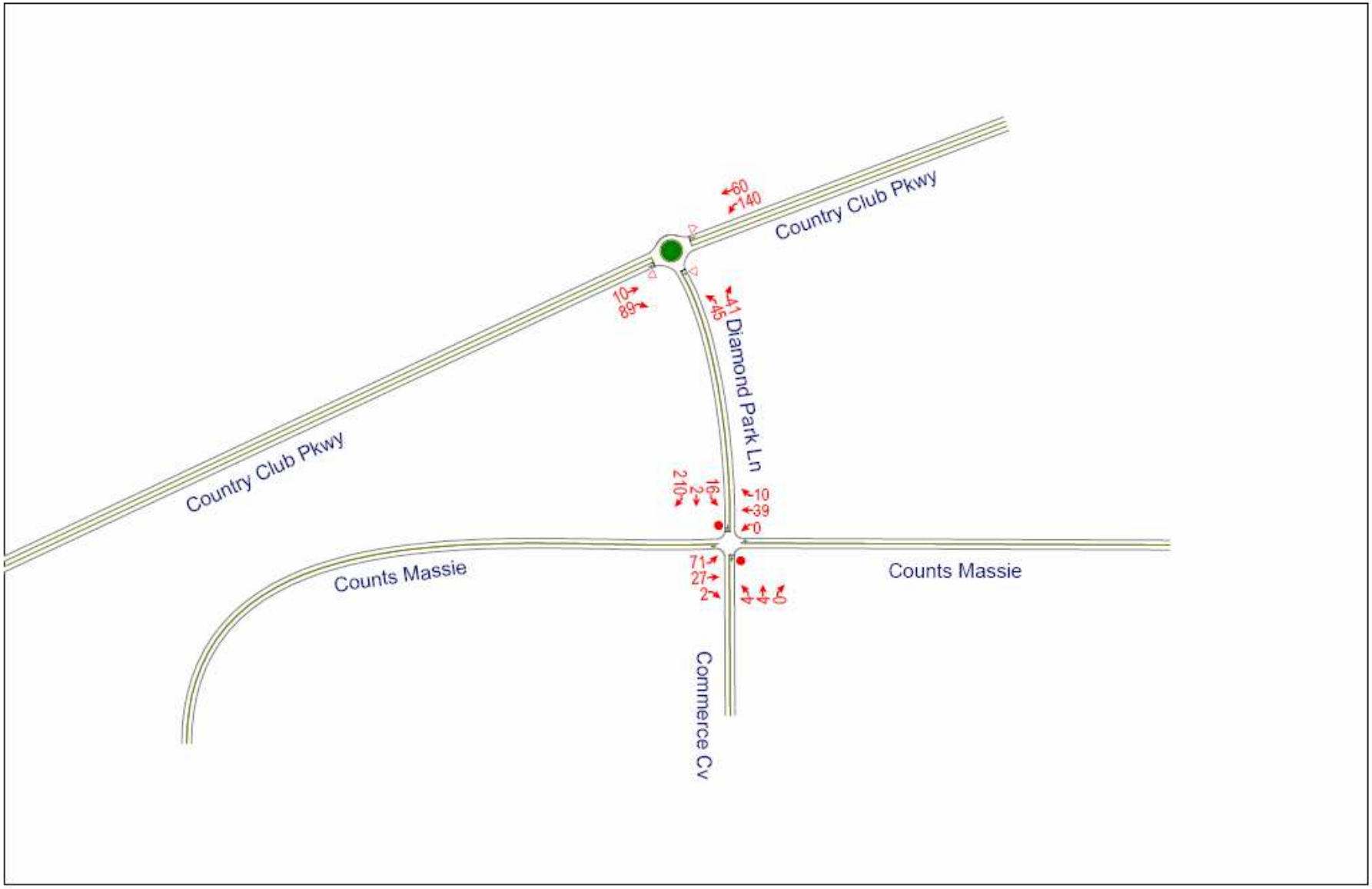
Traffic operational analysis for the study intersections were evaluated based on the methodologies outlined in the Highway Capacity Manual, 2010 Edition, published by the Transportation Research Board. The operating conditions at an intersection are graded by the "level of service" experienced by drivers. Level of service (LOS) describes the quality of traffic operating conditions and is rated from "A" to "F". LOS "A" represents the most desirable condition with free-flow movement of traffic with minimal delays. LOS "F" generally indicates severely congested conditions with excessive delays to motorists. Intermediate grades of B, C, D, and E reflect incremental increases in the average delay per stopped vehicle. Delay is measured in seconds per vehicle. The table below shows the upper limit of delay associated with each level of service for signalized and un-signalized intersections.

Intersection Level of Service Delay Thresholds

Level of Service (LOS)	Signalized	Un-Signalized
A	< 10 Seconds	< 10 Seconds
B	< 20 Seconds	< 15 Seconds
C	< 35 Seconds	< 25 Seconds
D	< 55 Seconds	< 35 Seconds
E	< 80 Seconds	< 50 Seconds
F	≥ 80 Seconds	≥ 50 Seconds

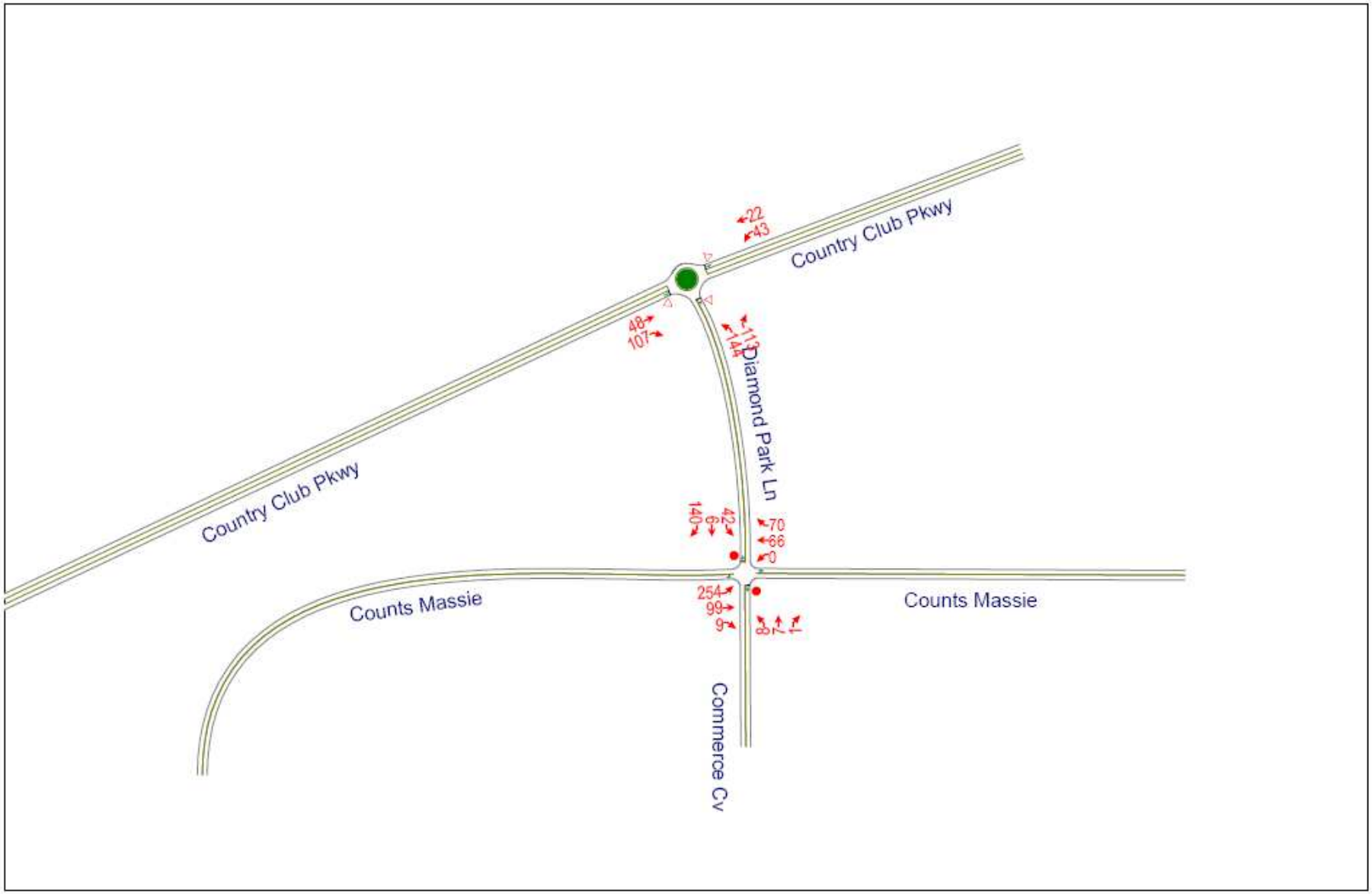
Existing AM Peak Hour Traffic Volumes

Existing AM **3/19/2019**



Existing PM Peak Hour Traffic Volumes

Existing PM **3/19/2019**



2024 AM Peak Hour Traffic Volumes

Interim Projected AM
with connection via Diamond Pk

3/21/2019
50 % of 2030 volumes

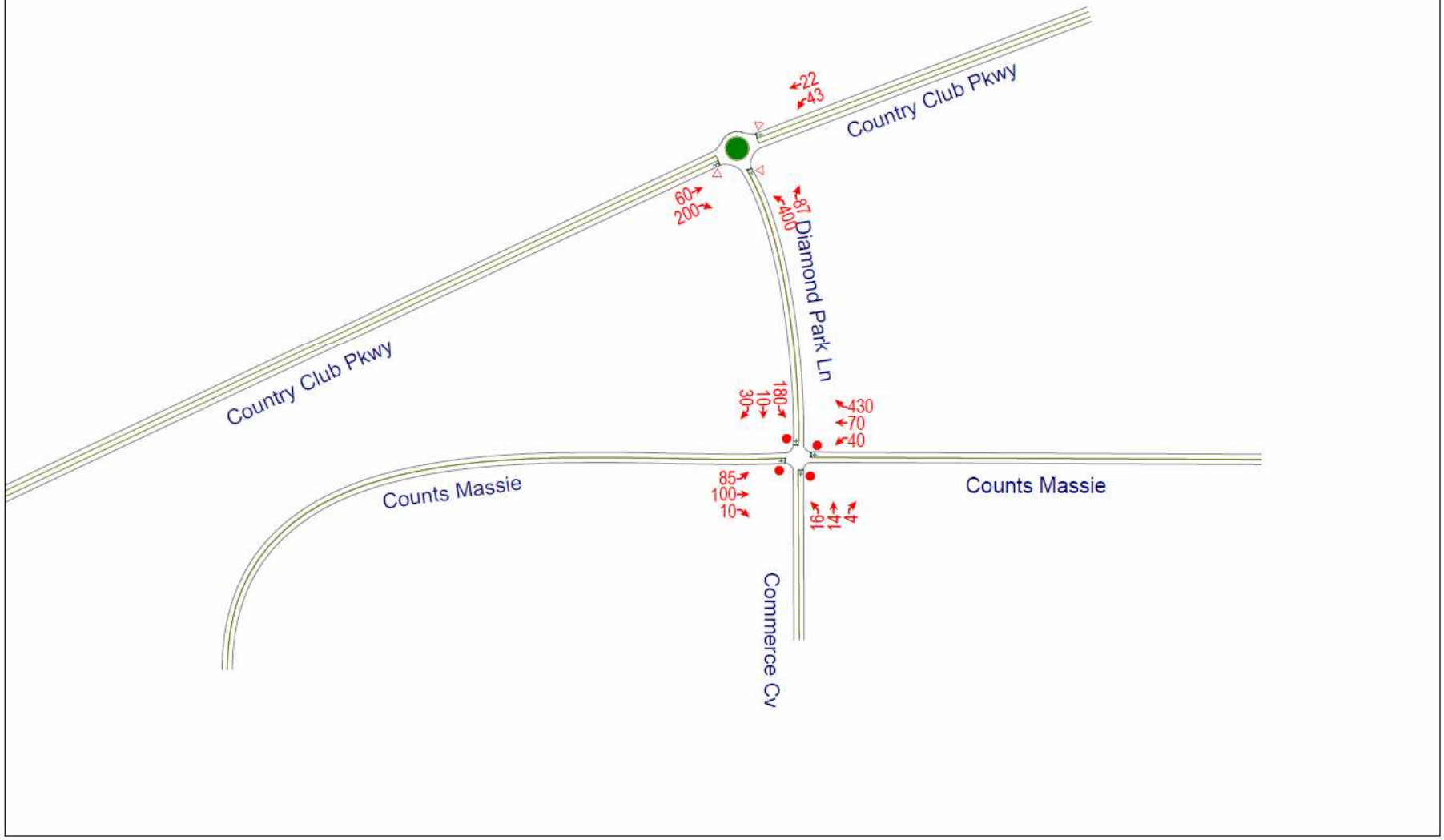
Interim Connection to Country Club Parkway

2024 PM Peak Hour Traffic Volumes

Interim Projected PM
with connection via Diamond Pk

3/21/2019
50% of 2030 volumes

Interim Connection to Country Club Parkway

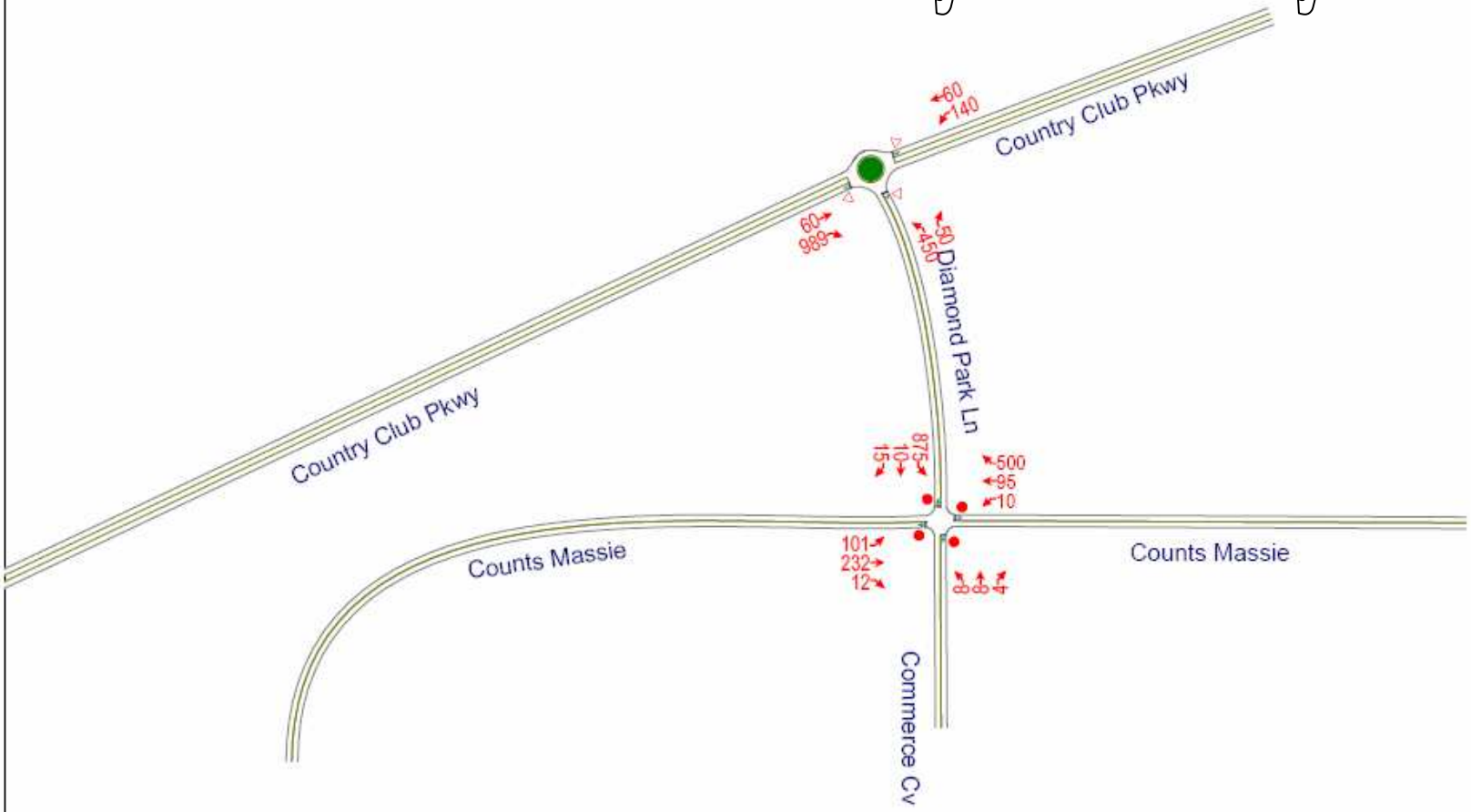


2030 AM Peak Hour Traffic Volumes

Interim Projected AM
with connection via Diamond Pk

3/19/2019

Interim Connection to Country Club Parkway



2030 PM Peak Hour Traffic Volumes

Interim Projected PM
with connection via Diamond Pk

3/19/2019

Interim Connection to Country Club Parkway


Concept Layout
Counts Massie Rd Connection
to Country Club Pkwy
COUNTRY CLUB PKWY
COUNTRY CLUB PKWY
COUNTS MASSIE RD
COUNTS MASSIE RD

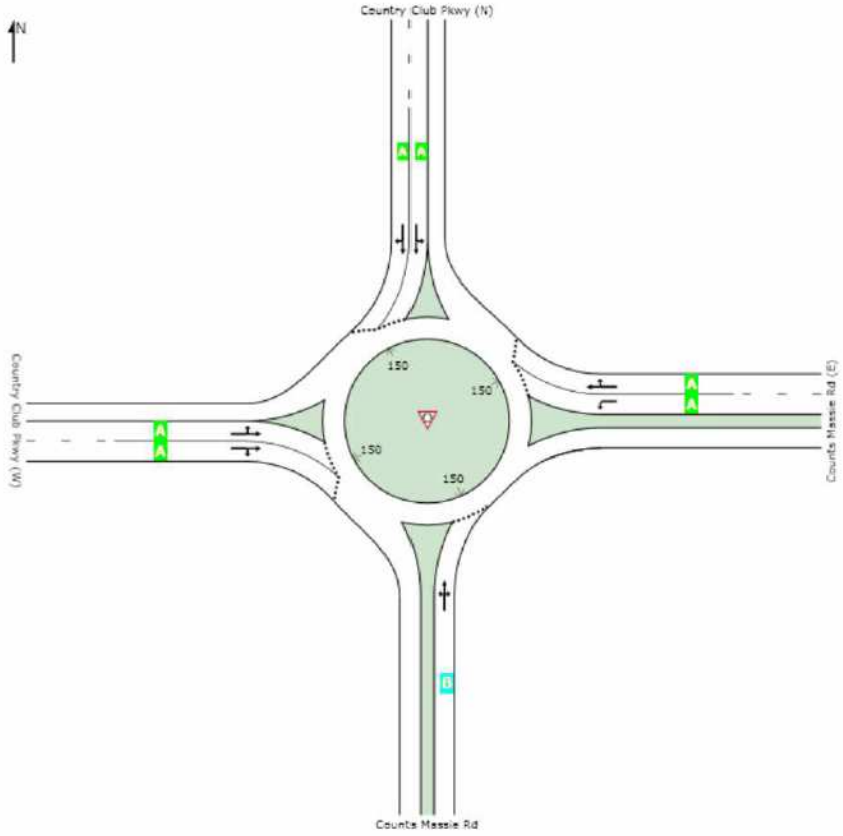
LEVEL OF SERVICE

Site: P1968 CC and Counts Massie Projected AM Two Lane

P1968 Country Club and Counts Massie Projected AM
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	B	A	A	A	A



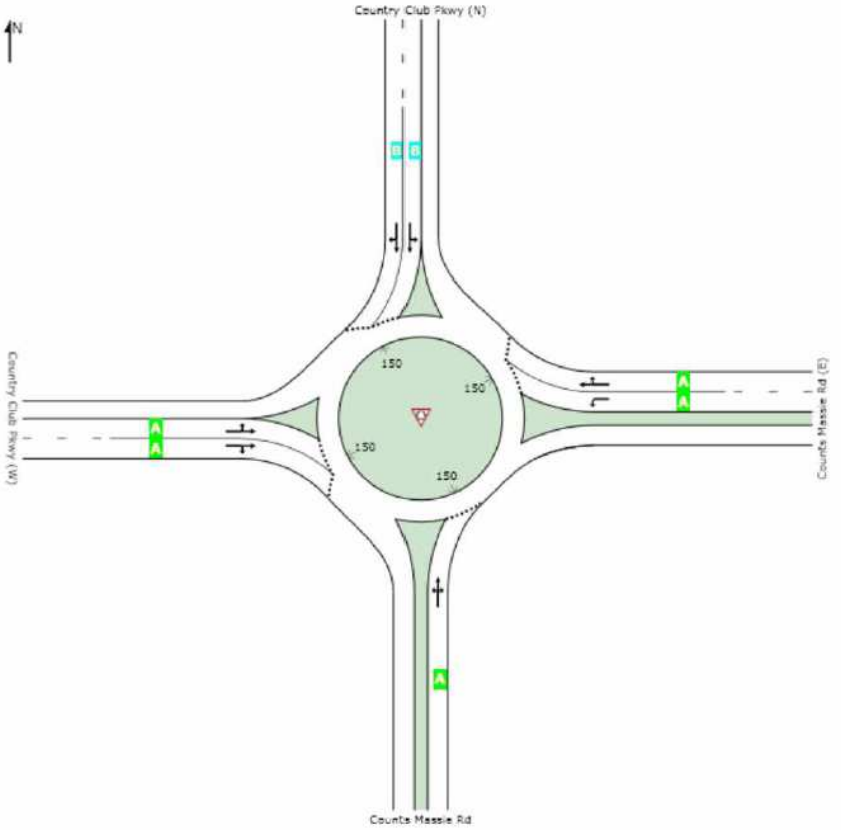
LEVEL OF SERVICE

Site: P1968 CC and Counts Massie Projected PM Two Lane

P1968 Country Club and Counts Massie Projected PM
Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	A	A	B	A	A



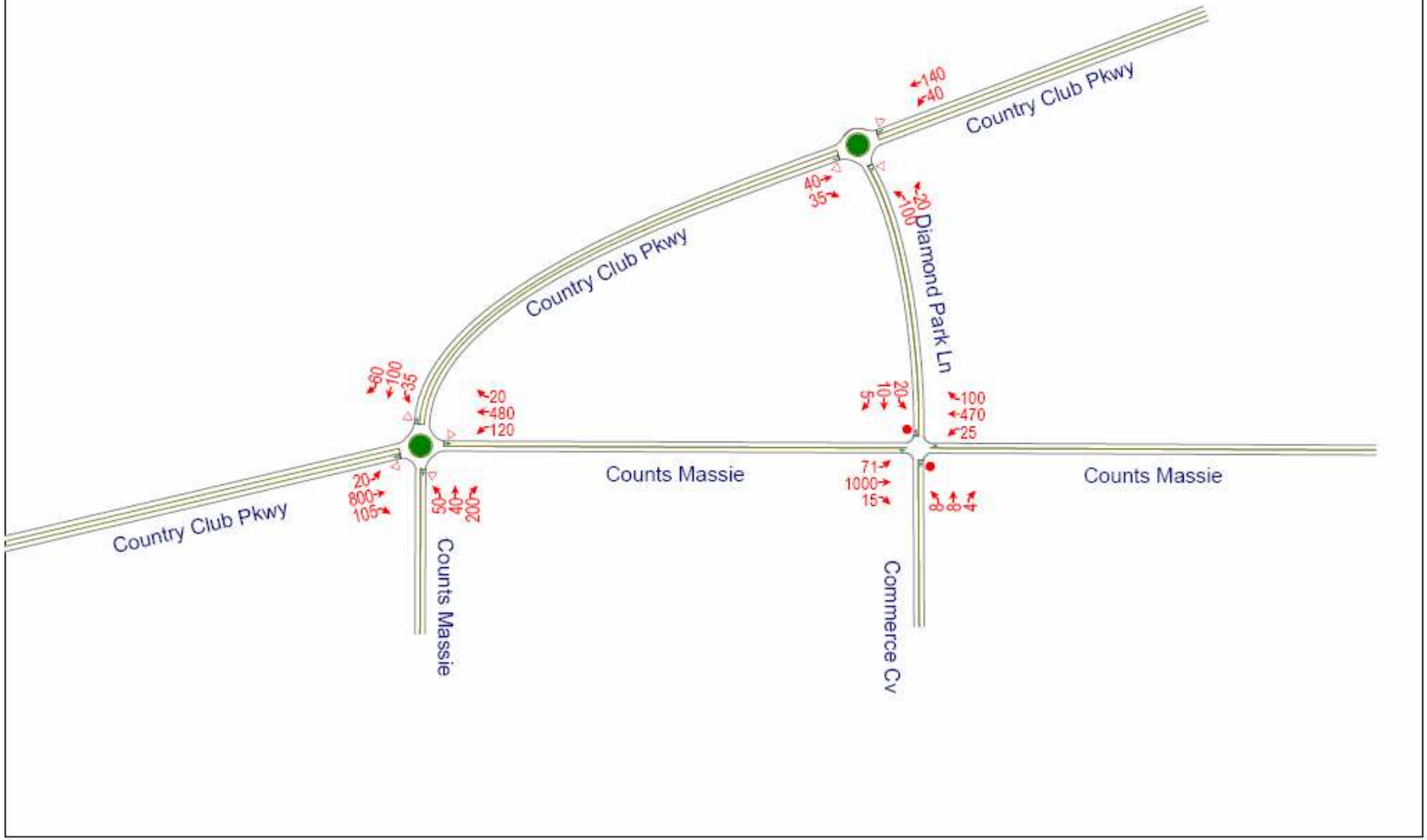
Roundabout
Level of Service
AM and PM

2030 AM Peak Hour Traffic Volumes

Projected AM

3/19/2019

Future Connection to Country Club Parkway

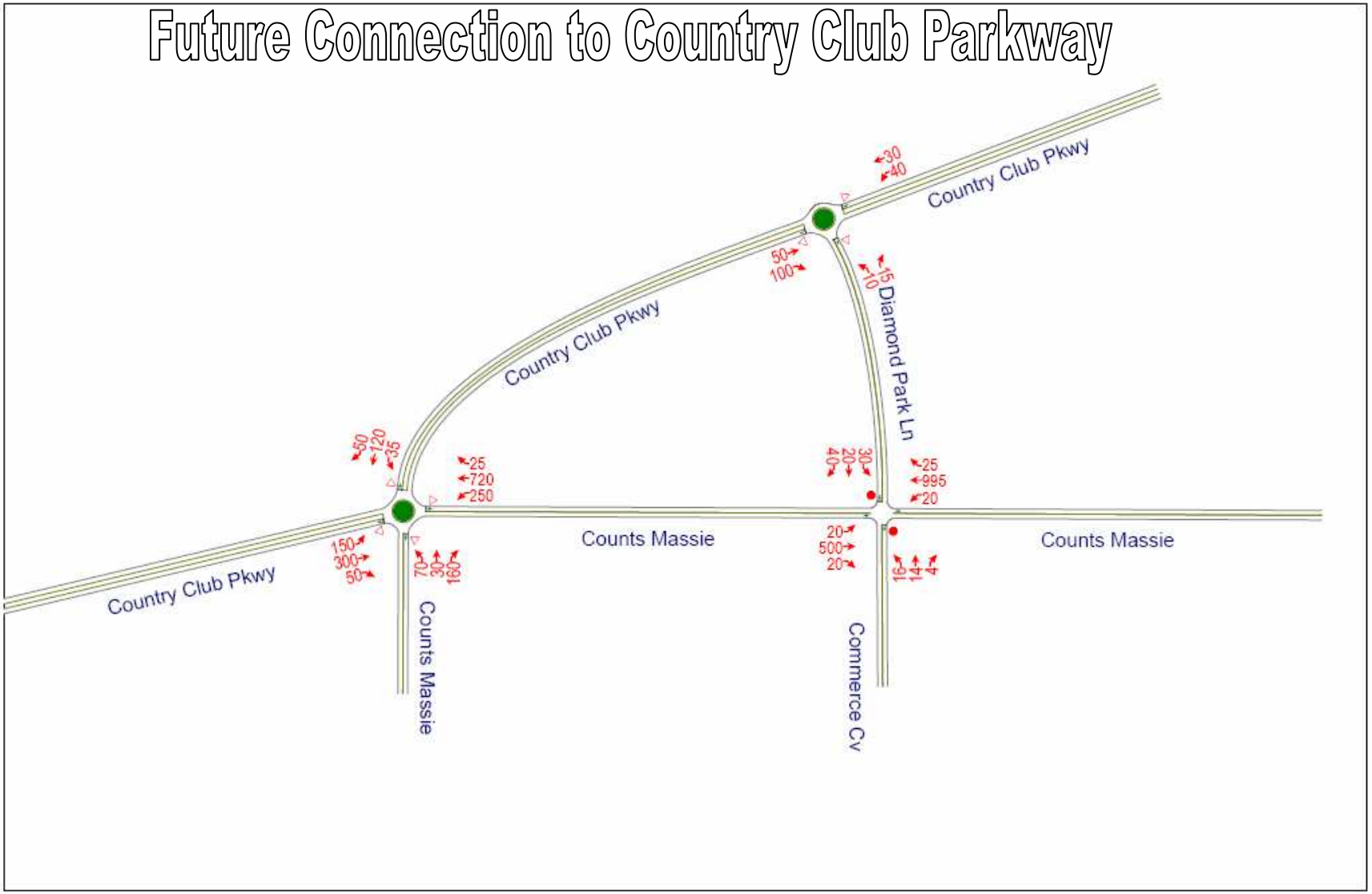


2030 PM Peak Hour Traffic Volumes

Projected PM

3/19/2019

Future Connection to Country Club Parkway



Capacity & Level of Service Analysis Results

Traffic Study

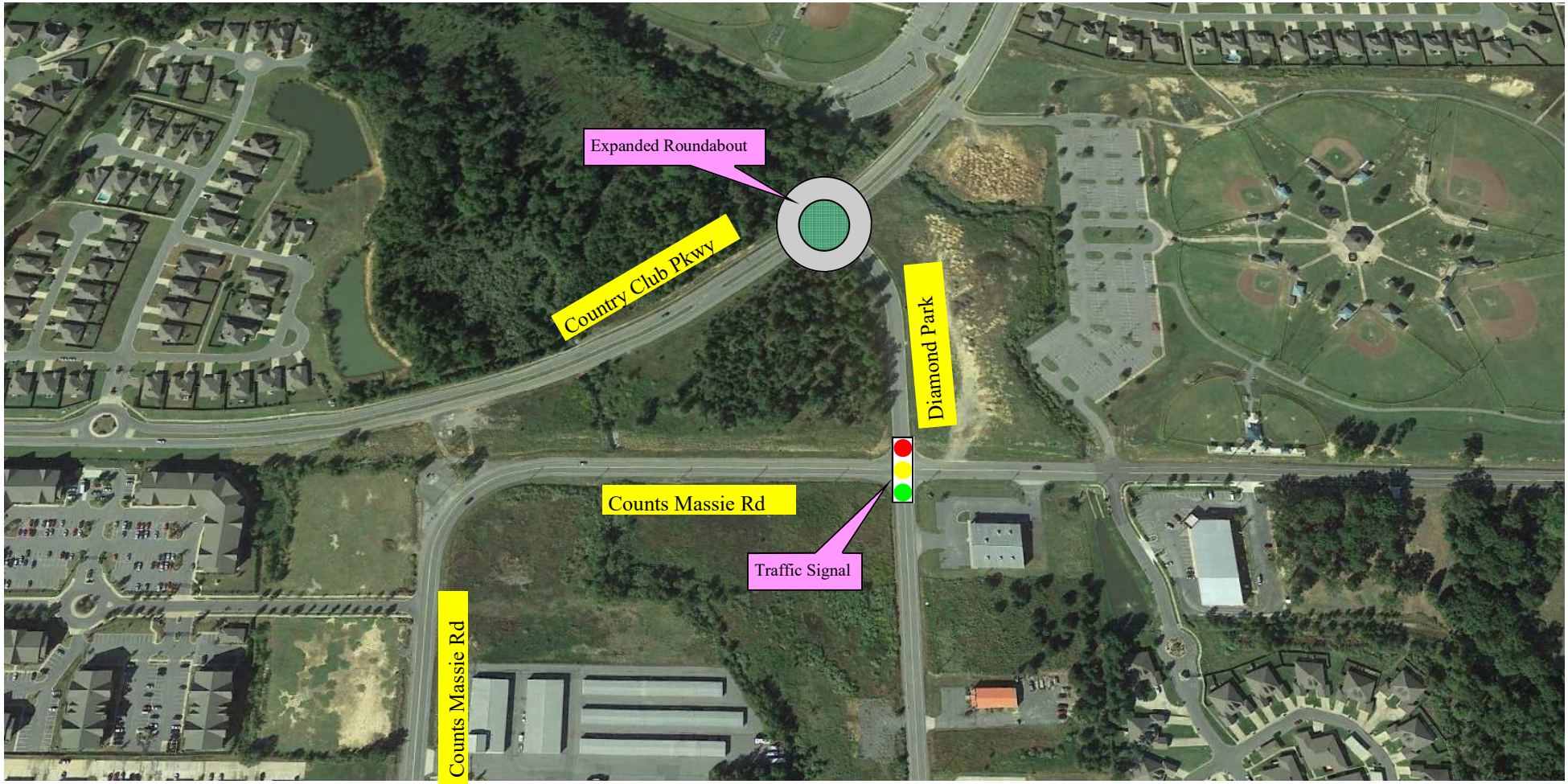
EXISTING TRAFFIC CONDITIONS		Traffic Control	Eastbound Left-Turn	Eastbound Thru	Eastbound Right-Turn	Westbound Left-Turn	Westbound Thru	Westbound Right-Turn	Northbound Left-Turn	Northbound Thru	Northbound Right-Turn	Southbound Left-Turn	Southbound Thru	Southbound Right-Turn	Overall Intersection
INTERSECTION	PEAK HR		PEAK HOUR - LEVEL OF SERVICE												
Counts Massie Road and Diamond Park Lane / Commerce Cove	AM	TWO-WAY "STOP" SIGN	A			A			B			A			n/a
	PM		A			A			C			C			n/a
Country Club Parkway and Diamond Park Lane	AM	ROUNDABOUT		A		A			A		A				A
	PM			A		A			A		A				A

INTERIM PROJECTED TRAFFIC CONDITIONS with 50 Percent of 2030 Future Volumes with Connection via Diamond Park Lane		Traffic Control	Eastbound Left-Turn	Eastbound Thru	Eastbound Right-Turn	Westbound Left-Turn	Westbound Thru	Westbound Right-Turn	Northbound Left-Turn	Northbound Thru	Northbound Right-Turn	Southbound Left-Turn	Southbound Thru	Southbound Right-Turn	Overall Intersection
INTERSECTION	PEAK HR		PEAK HOUR - LEVEL OF SERVICE												
Counts Massie Road and Diamond Park Lane / Commerce Cove	AM	EX. 2-WAY "STOP" SIGN	A			A			B			F			n/a
	PM		A			A			C			E			n/a
Counts Massie Road and Diamond Park Lane / Commerce Cove	AM	4-WAY "STOP" SIGN	A			B			B			D			n/a
	PM		A			B			C			B			n/a
Country Club Parkway and Diamond Park Lane	AM	ROUNDABOUT		A		A			A		A				A
	PM			A		A			A		A				A

2030 FUTURE PROJECTED TRAFFIC CONDITIONS with New Roundabout at Counts Massie Rd & Country Club Pkwy		Traffic Control	Eastbound Left-Turn	Eastbound Thru	Eastbound Right-Turn	Westbound Left-Turn	Westbound Thru	Westbound Right-Turn	Northbound Left-Turn	Northbound Thru	Northbound Right-Turn	Southbound Left-Turn	Southbound Thru	Southbound Right-Turn	Overall Intersection
INTERSECTION	PEAK HR		PEAK HOUR - LEVEL OF SERVICE												
Counts Massie Road and Diamond Park Lane / Commerce Cove	AM	TWO-WAY "STOP" SIGN	A			A			F			F			n/a
	PM		A			A			F			F			n/a
Country Club Parkway and Diamond Park Lane	AM	ROUNDABOUT		A		A			A		A				A
	PM			A		A			A		A				A
Counts Massie Road and Country Club Parkway	AM	ROUNDABOUT	A			A			B			A			A
	PM		A			A			A			B			A

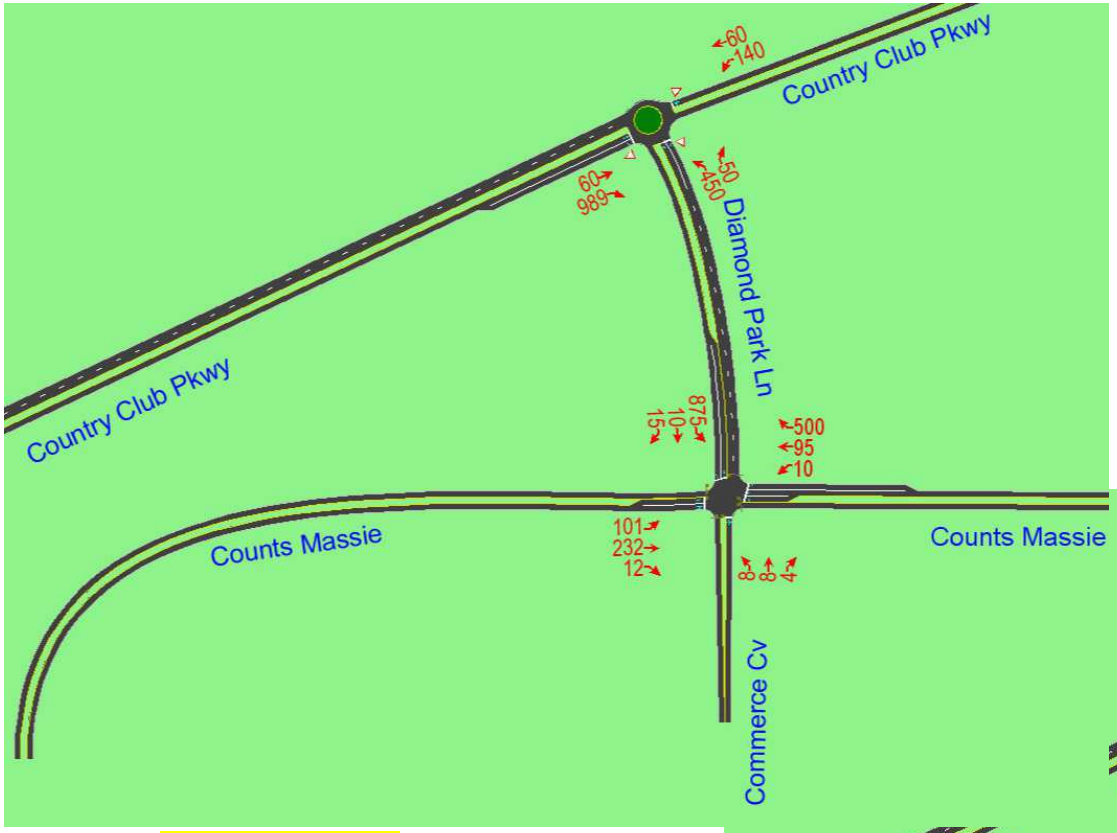
Alternate Connection

Counts Massie Road to Country Club Parkway



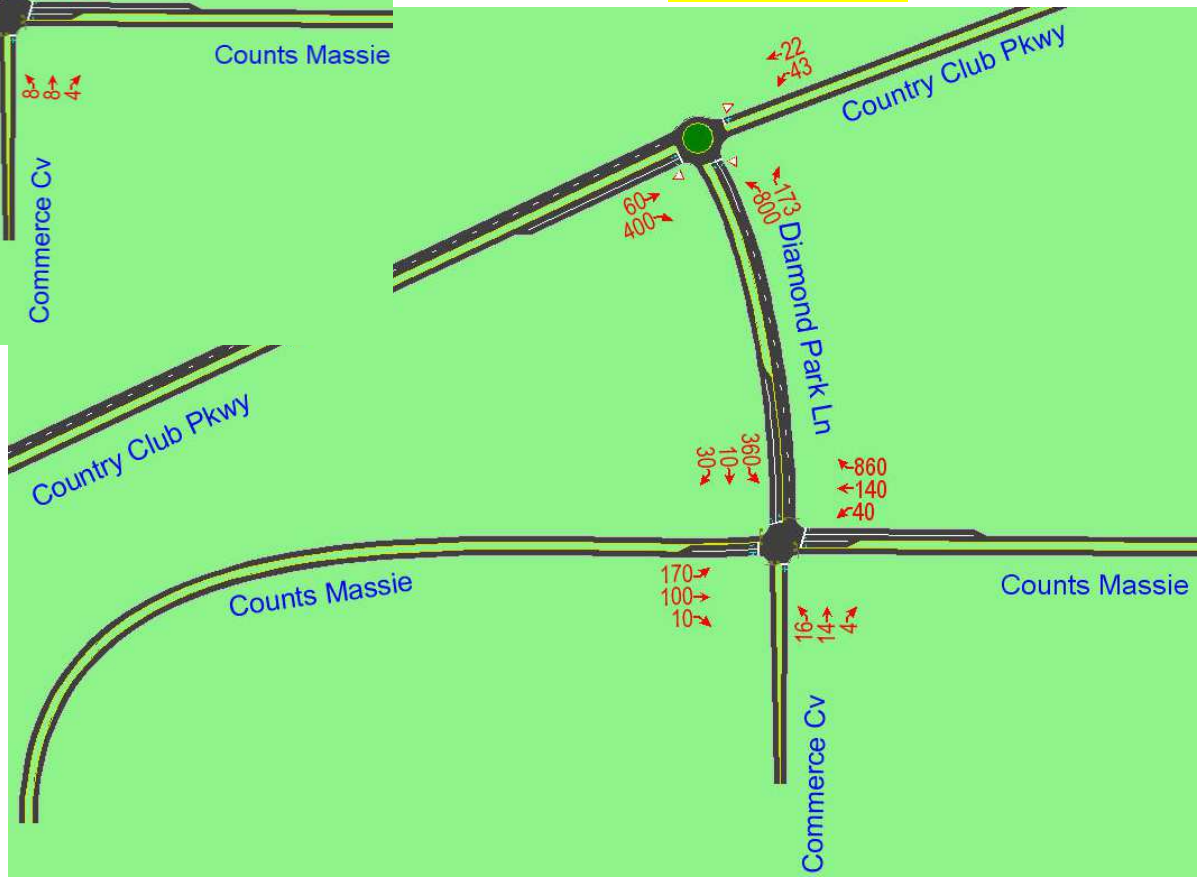
Alternate Connection

Counts Massie Road to Country Club Parkway



2030 Volumes AM

2030 Volumes PM



Alternate Connection
Capacity & Level of Service
Analysis Results

2030 FUTURE PROJECTED TRAFFIC CONDITIONS with Traffic Signal at Counts Massie Rd & Diamond Park Ln and Expanded Roundabout at Country Club Pkwy & Diamond Park Ln		Traffic Control	Eastbound Left-Turn	Eastbound Thru	Eastbound Right-Turn	Westbound Left-Turn	Westbound Thru	Westbound Right-Turn	Northbound Left-Turn	Northbound Thru	Northbound Right-Turn	Southbound Left-Turn	Southbound Thru	Southbound Right-Turn	Overall Intersection
INTERSECTION	PEAK HR		PEAK HOUR - LEVEL OF SERVICE												
Counts Massie Road and Diamond Park Lane / Commerce Cove	AM	TRAFFIC SIGNAL	D	E		D	D	B	D			C	A		**D**
	PM		B	B		B	C	B	C			C	A		**B**
Country Club Parkway and Diamond Park Lane	AM	ROUNDABOUT	A		F	A			A		A				**E**
	PM		A		A	B			C		A				**A**