

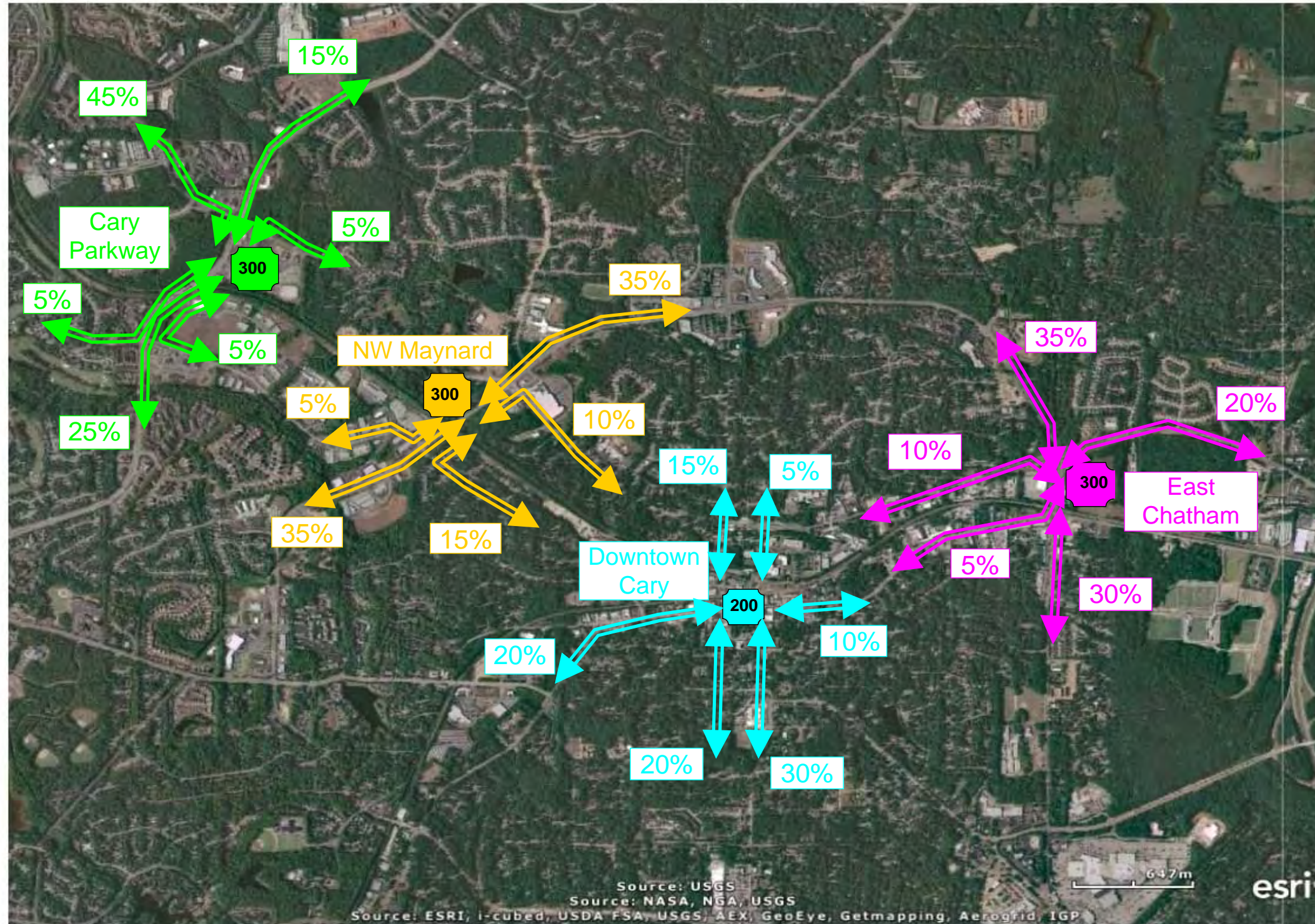


Appendix D – Build Forecast Development

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Overall Trip Distribution

Cary Area Stations

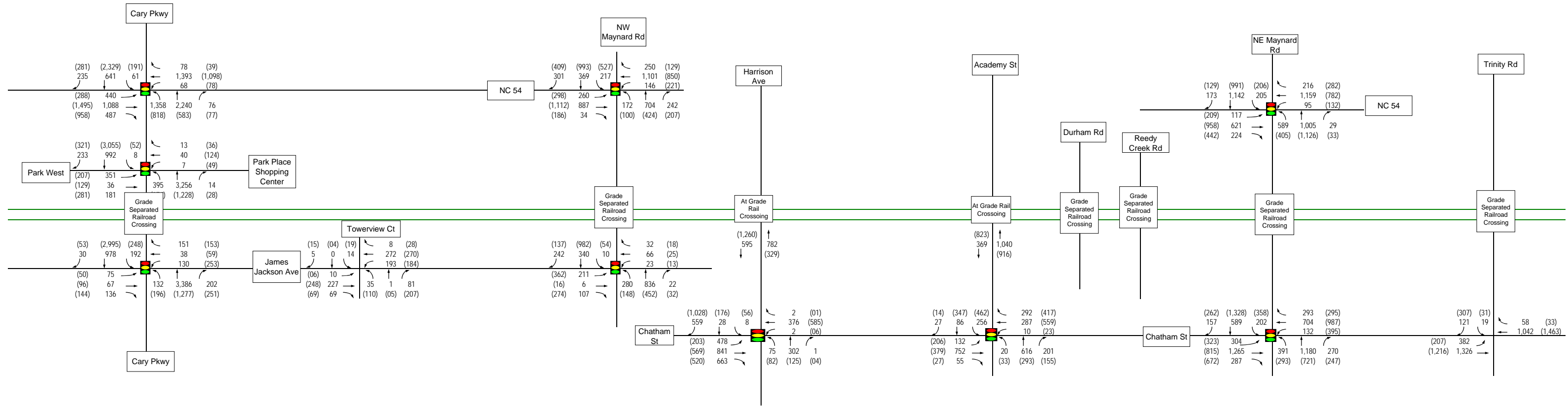


NOTES

It was assumed 45% of the Cary Parkway Station traffic would be from NC 54 west of the station, 15% from Cary Pkwy north of the station, 5% from Rainbrook Drive, 25% from Cary Pkwy south of the station, 5% from James Jackson Avenue, and 5% from NC 54 east of the station. It was assumed that 70% of the NW Cary Station would be from Maynard Rd (split evenly between the north and south), 5% from James Jackson Avenue, 15% from Carrousel Lane, and 10% from NC 54 east of the station. It was assumed that 20% of the Downtown Cary Station traffic would come from W. Chatham Street, 20% from S. Harrison Avenue, 30% from S. Academy Street, 10% from E. Chatham Street, 5% from N. Academy Street, and 15% from N. Harrison Avenue. It was assumed that 35% of the East Chatham Station traffic would come from NE Maynard, 10% from NC 54 west of the station, 5% from E. Chatham Street, 30% from SE Maynard, and 20% from NC 54 east of the station.

Trip Generation Summary

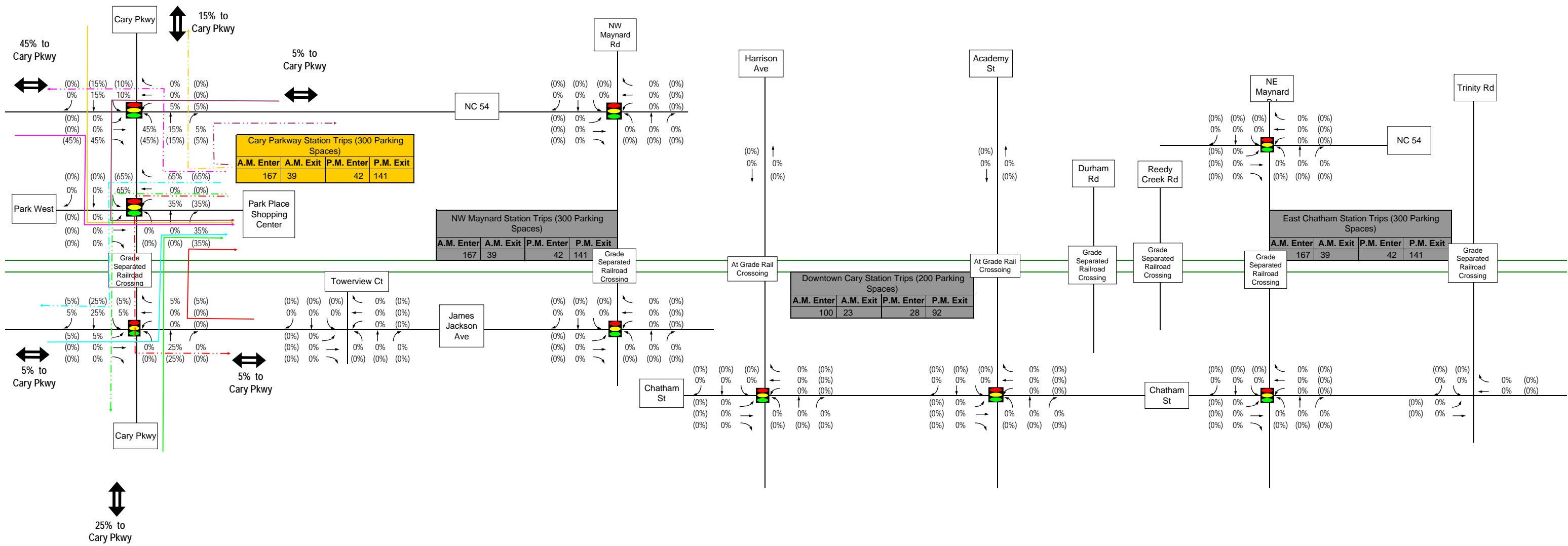
	ITE Land Use Code 90	
AM Peak Equation	Trips = (0.83 * Parking Spaces) - 43.4	
PM Peak Equation	Trips = (0.63 * Parking Spaces) - 5.94	
	AM Peak	PM Peak
Percent Entering	81%	23%
Percent Exiting	19%	77%
Cary Parkway		
Parking Spaces	300	
	AM Peak	PM Peak
Total Trips	206	183
Entering	167	42
Exiting	39	141
NW Cary		
Parking Spaces	300	
	AM Peak	PM Peak
Total Trips	206	183
Entering	167	42
Exiting	39	141
Downtown Cary		
Parking Spaces	200	
	AM Peak	PM Peak
Total Trips	123	120
Entering	100	28
Exiting	23	92
East Chatham		
Parking Spaces	300	
	AM Peak	PM Peak
Total Trips	206	183
Entering	167	42
Exiting	39	141



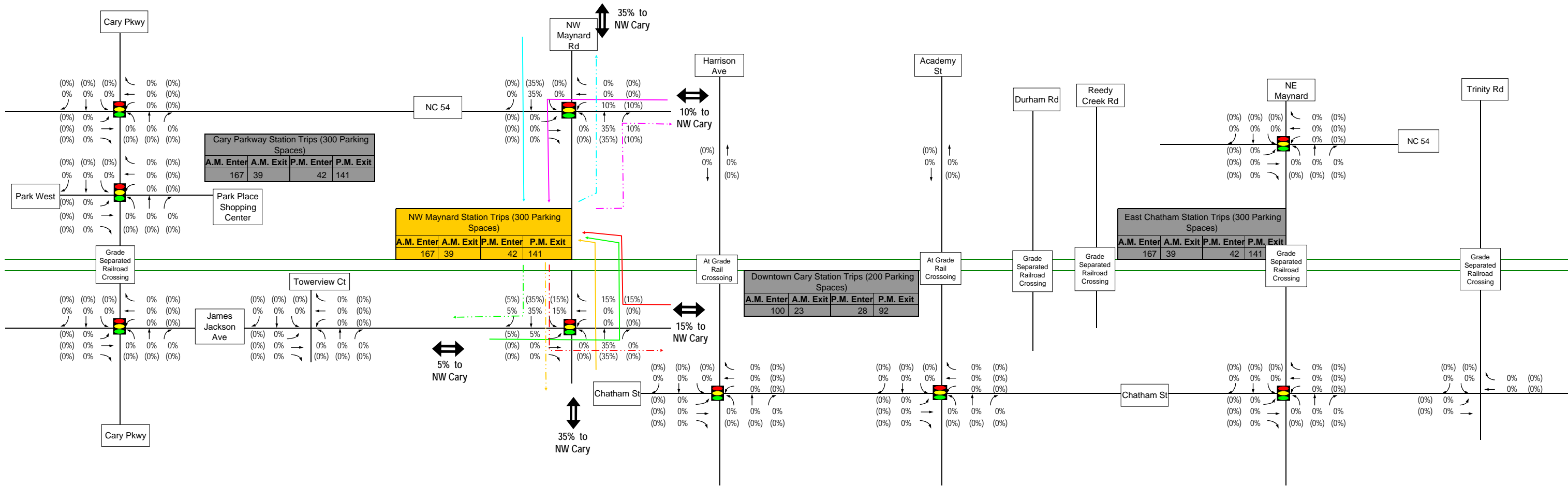
LEGEND	
—	Existing Roadway
—	Light Rail
↔	Turning Movement
■	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume



Triangle Transit - 2035 No-Build Volumes - Wake Corridor - Cary

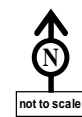


Triangle Transit - NW Cary Trip Distribution - Wake Corridor - Cary

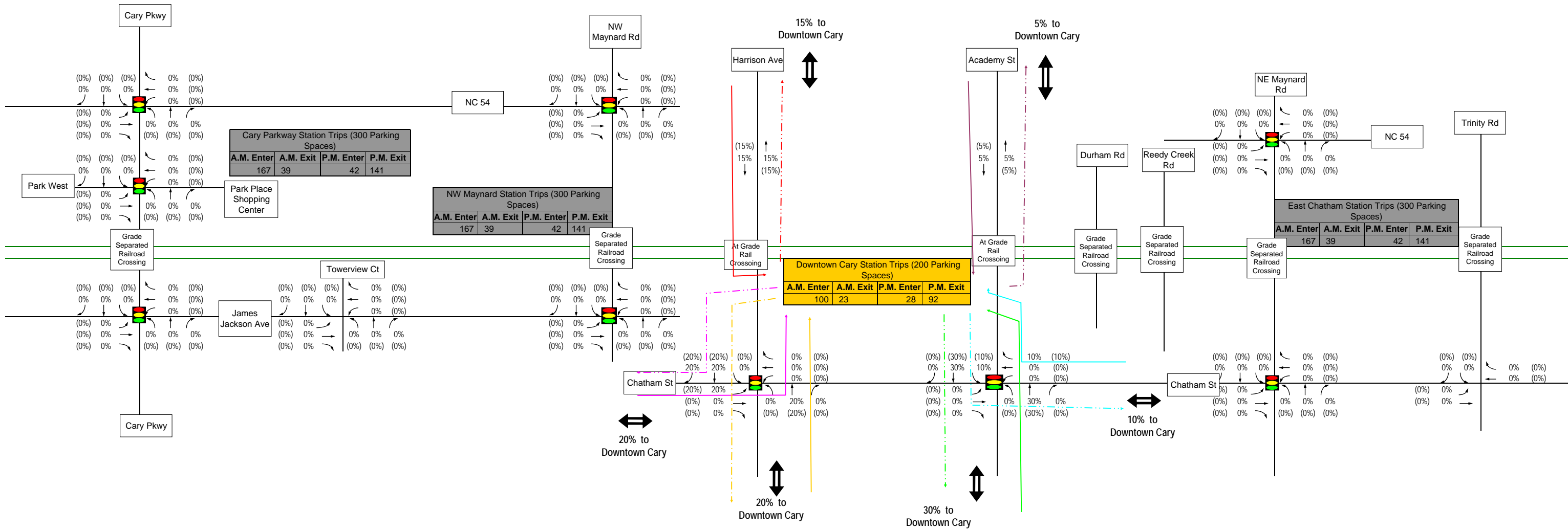


LEGEND

	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume



Triangle Transit - NW Cary Trip Distribution - Wake Corridor - Cary



Cary Parkway Station Trips (300 Parking Spaces)

A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
167	39	42	141

NW Maynard Station Trips (300 Parking Spaces)

A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
167	39	42	141

Downtown Cary Station Trips (200 Parking Spaces)

A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
100	23	28	92

East Chatham Station Trips (300 Parking Spaces)

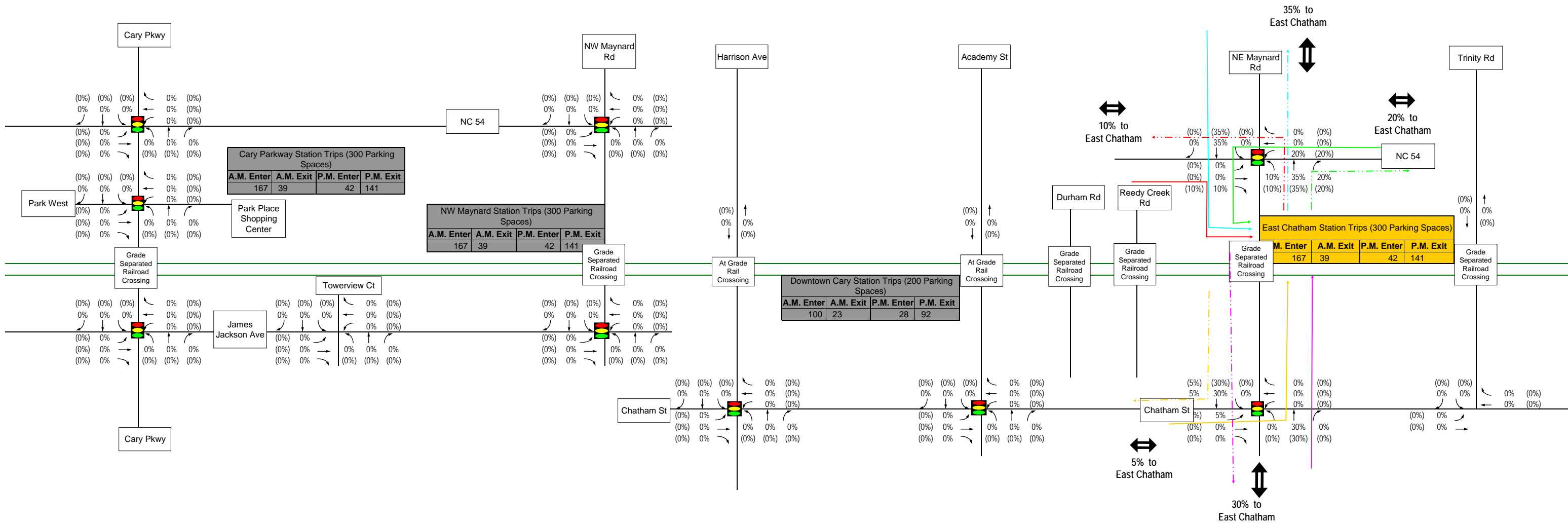
A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
167	39	42	141

LEGEND

- Existing Roadway
- Light Rail
- Turning Movement
- Signal Controlled Intersection
- XX AM Peak Hour Volume
- (XX) PM Peak Hour Volume

not to scale

Triangle Transit - Downtown Cary Trip Distribution - Wake Corridor - Cary



Cary Parkway Station Trips (300 Parking Spaces)

A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
167	39	42	141

NW Maynard Station Trips (300 Parking Spaces)

A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
167	39	42	141

Downtown Cary Station Trips (200 Parking Spaces)

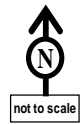
A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
100	23	28	92

East Chatham Station Trips (300 Parking Spaces)

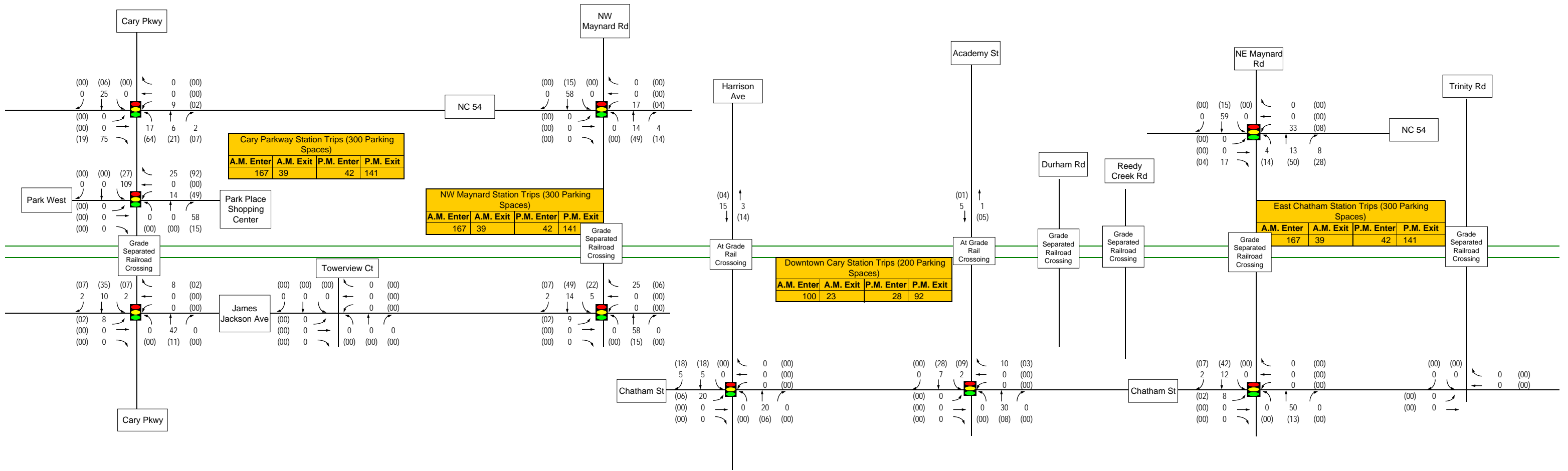
A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
167	39	42	141

LEGEND

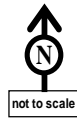
	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume



Triangle Transit - Downtown Cary Trip Distribution - Wake Corridor - Cary

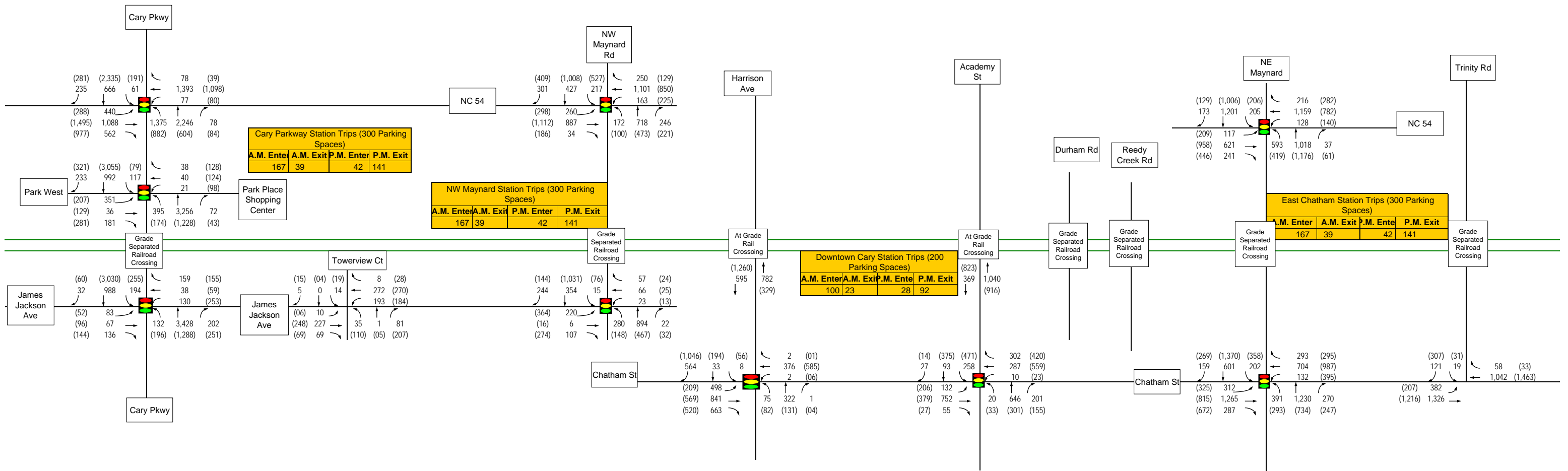


LEGEND	
	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume



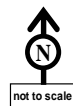
Triangle Transit - Trips - Wake Corridor - Cary

Note: Some volumes may be modified slightly to allow the individual volumes to sum to the total trips generated



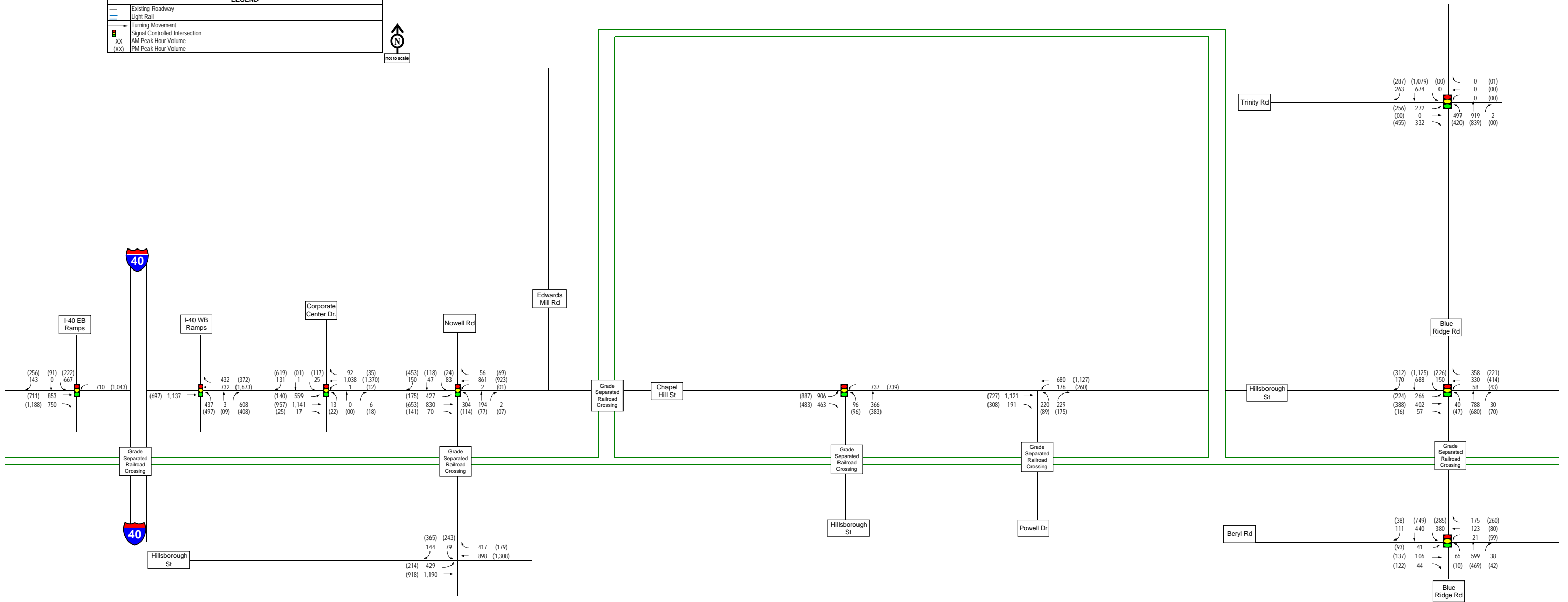
LEGEND

	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume



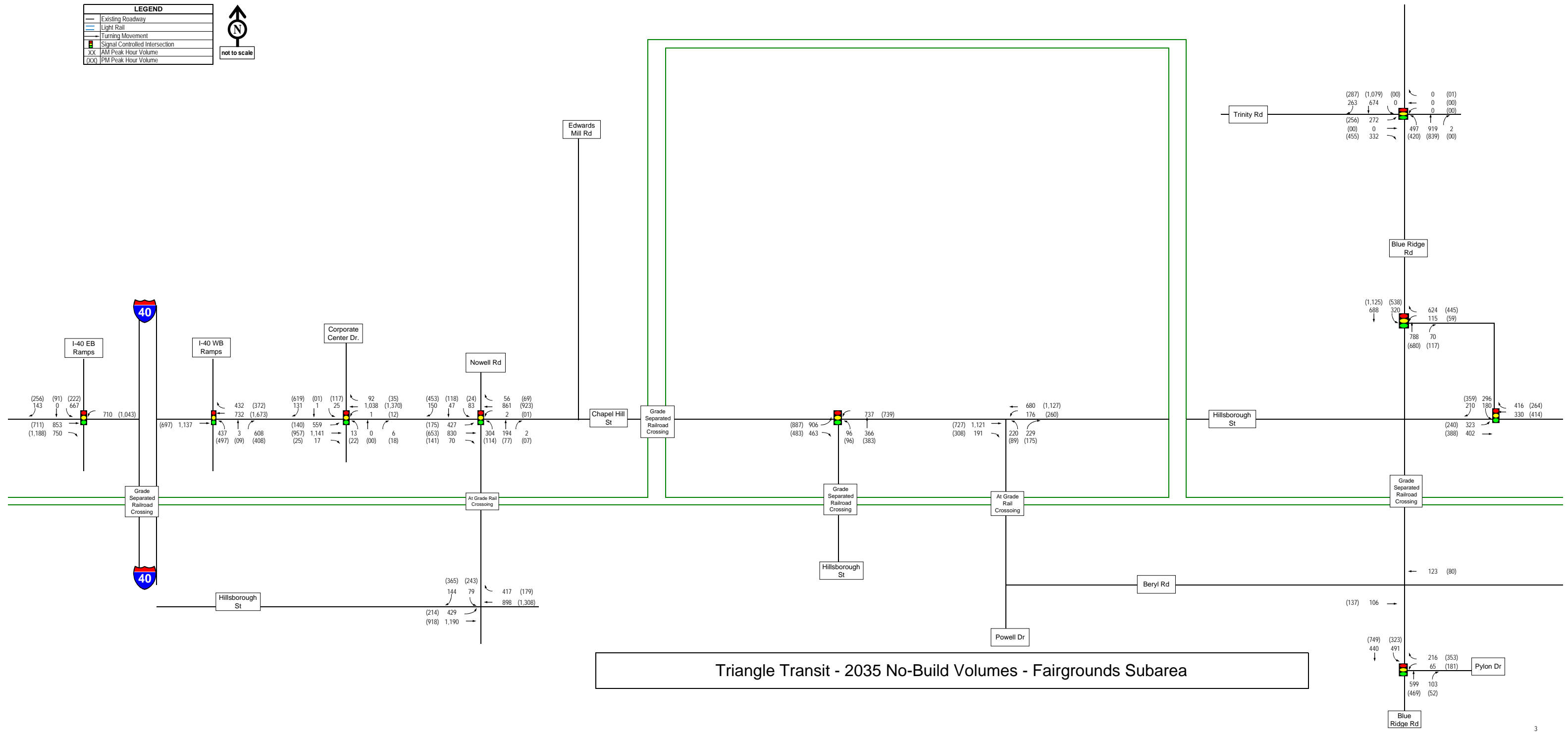
Triangle Transit - 2035 Build Volumes - Wake Corridor - Cary

LEGEND	
	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume



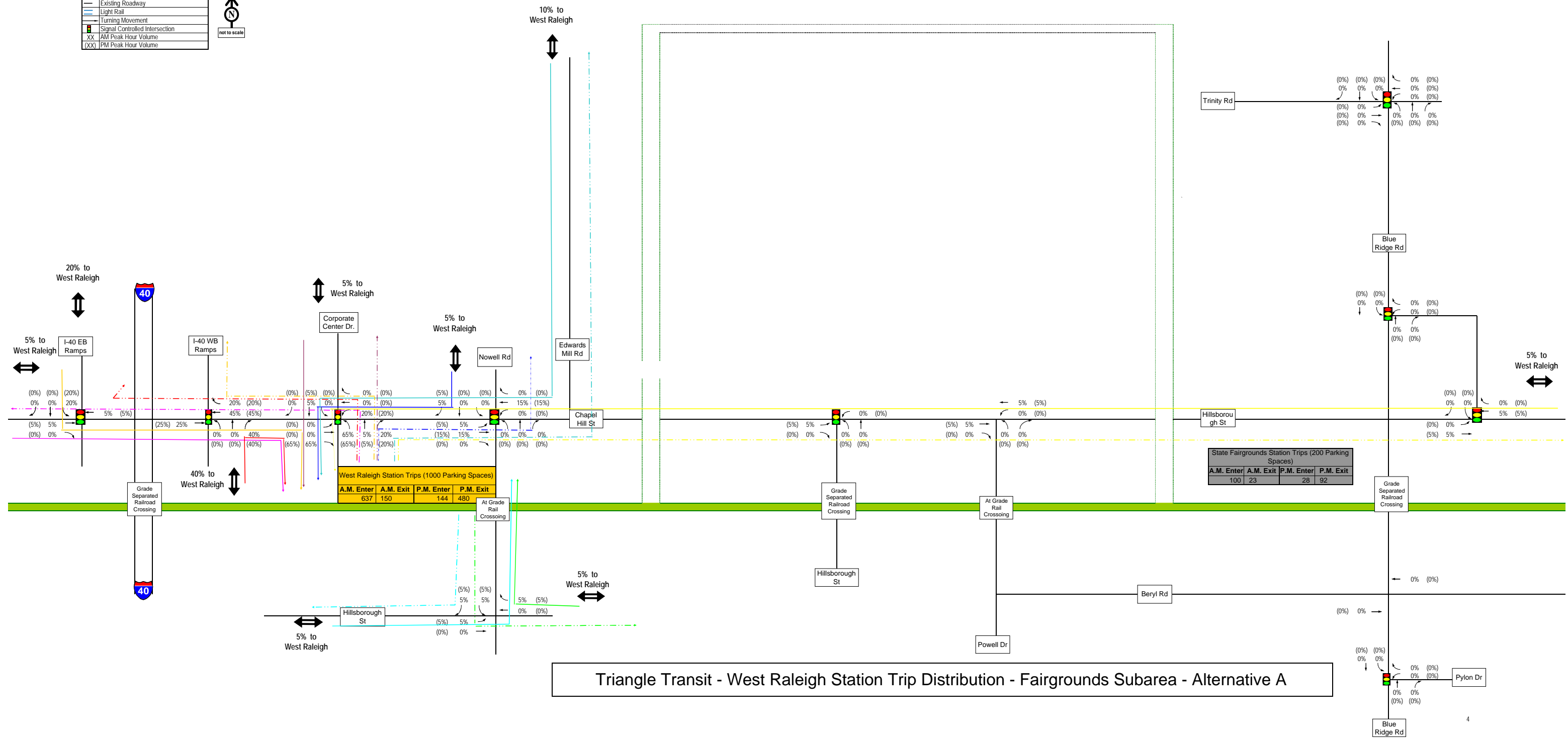
Triangle Transit - 2035 No-Build Volumes - Fairgrounds Subarea

LEGEND	
	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume



Triangle Transit - 2035 No-Build Volumes - Fairgrounds Subarea

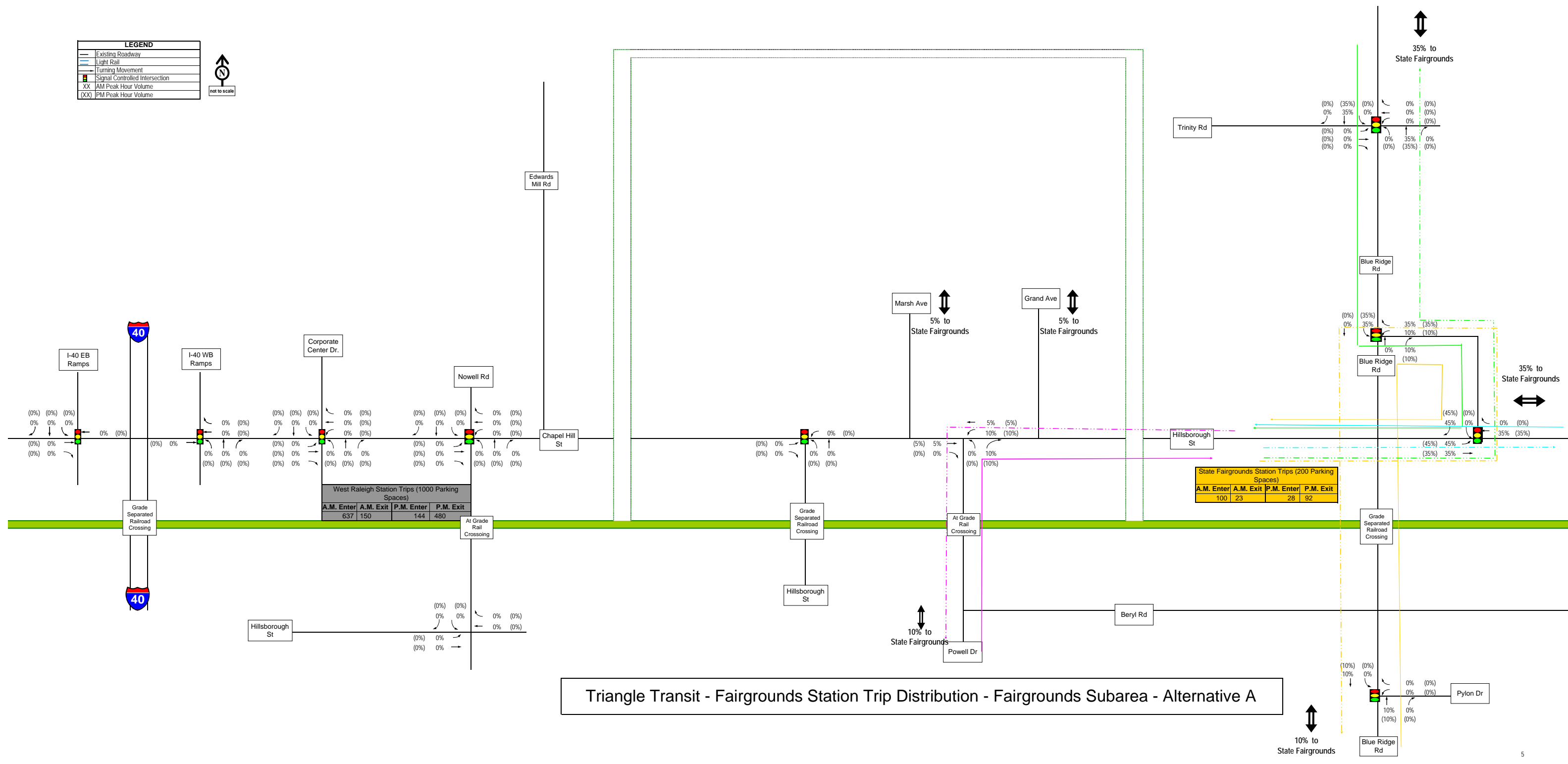
LEGEND	
	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume



Triangle Transit - West Raleigh Station Trip Distribution - Fairgrounds Subarea - Alternative A

LEGEND

	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume

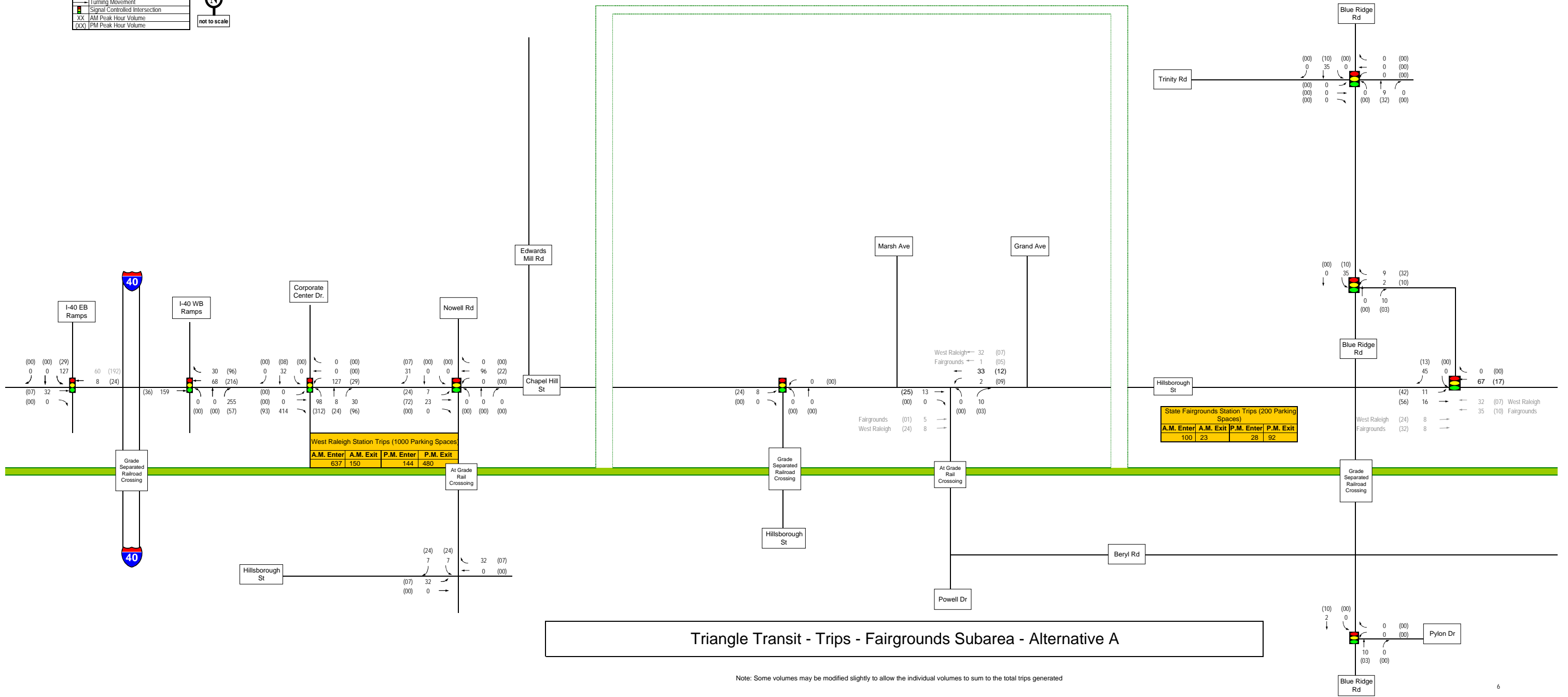


Triangle Transit - Fairgrounds Station Trip Distribution - Fairgrounds Subarea - Alternative A

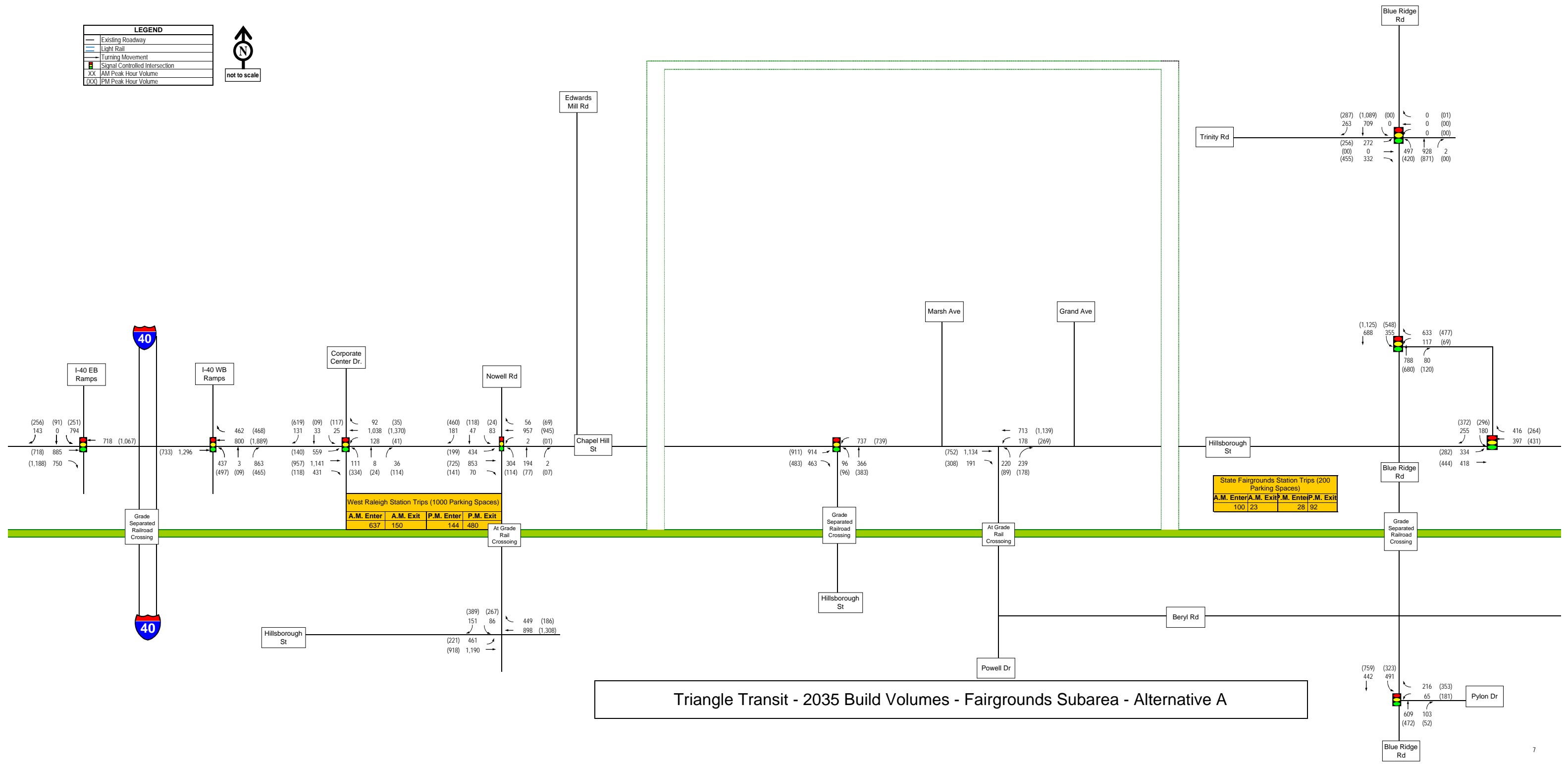
LEGEND

- Existing Roadway
- Light Rail
- Turning Movement
- Signal Controlled Intersection
- XX AM Peak Hour Volume
- XX PM Peak Hour Volume

↑ N
not to scale



LEGEND	
	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume

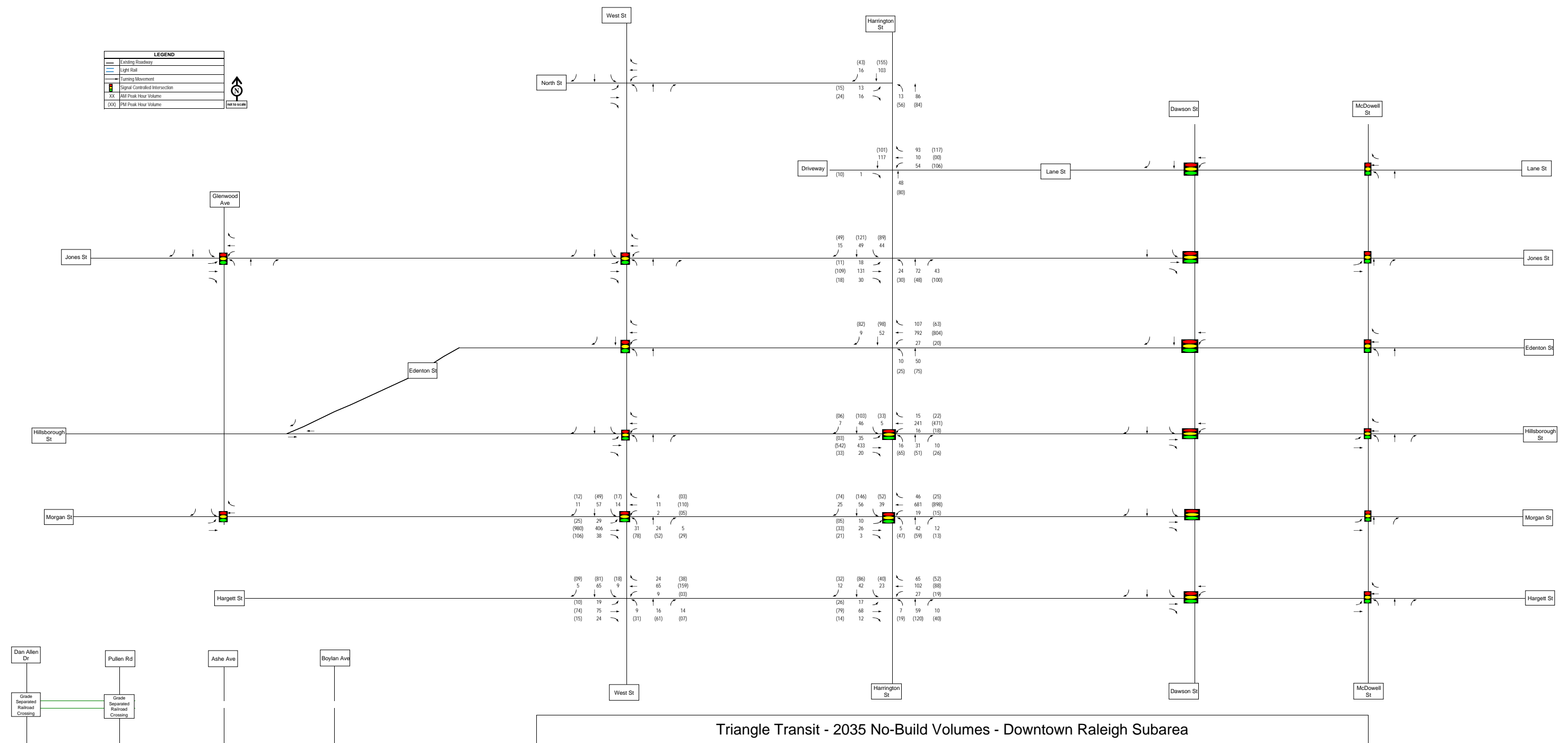


West Raleigh Station Trips (1000 Parking Spaces)			
A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
637	150	144	480

State Fairgrounds Station Trips (200 Parking Spaces)			
A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
100	23	28	92

Triangle Transit - 2035 Build Volumes - Fairgrounds Subarea - Alternative A

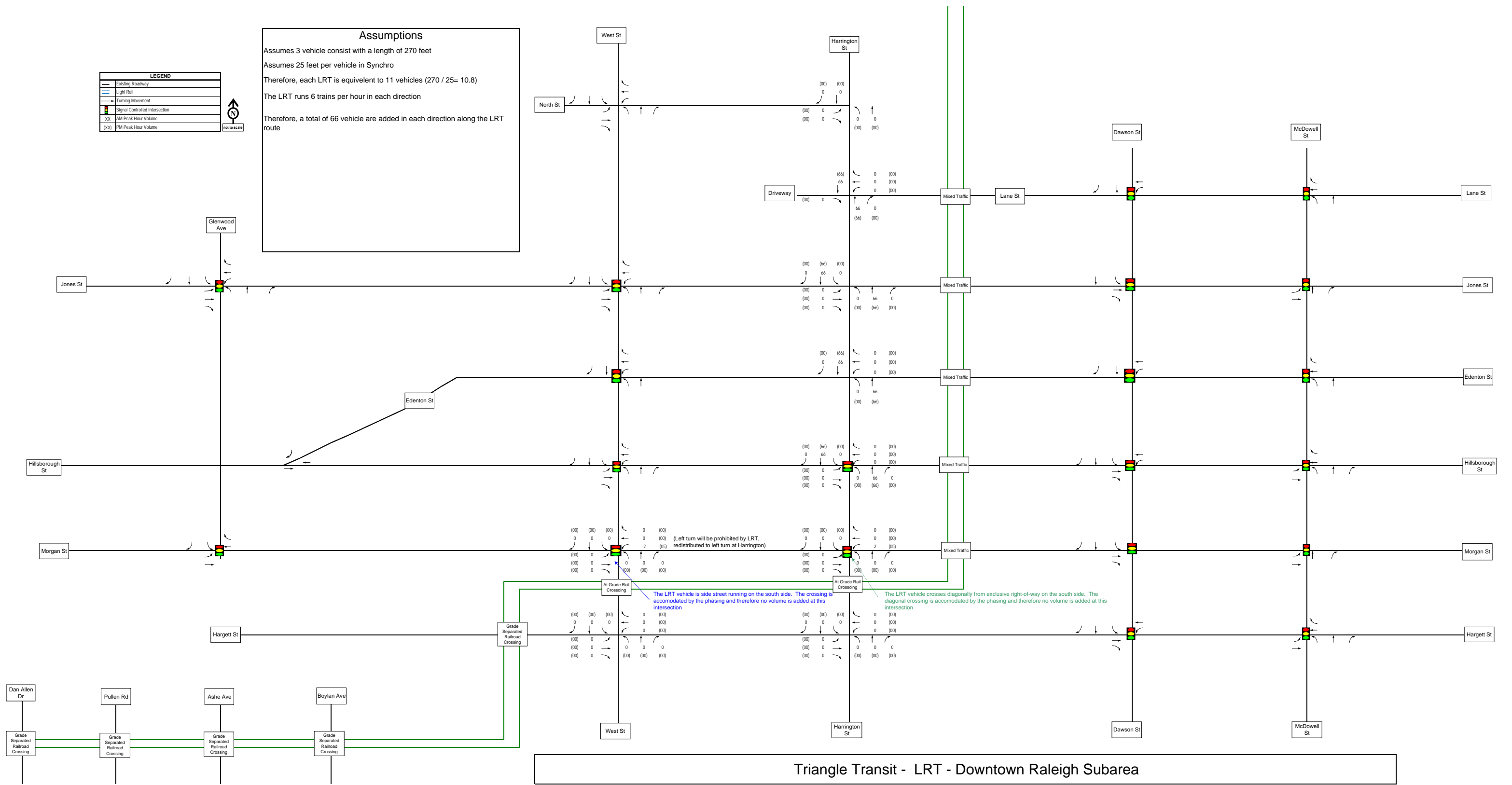
LEGEND	
	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
	AM Peak Hour Volume
	PM Peak Hour Volume



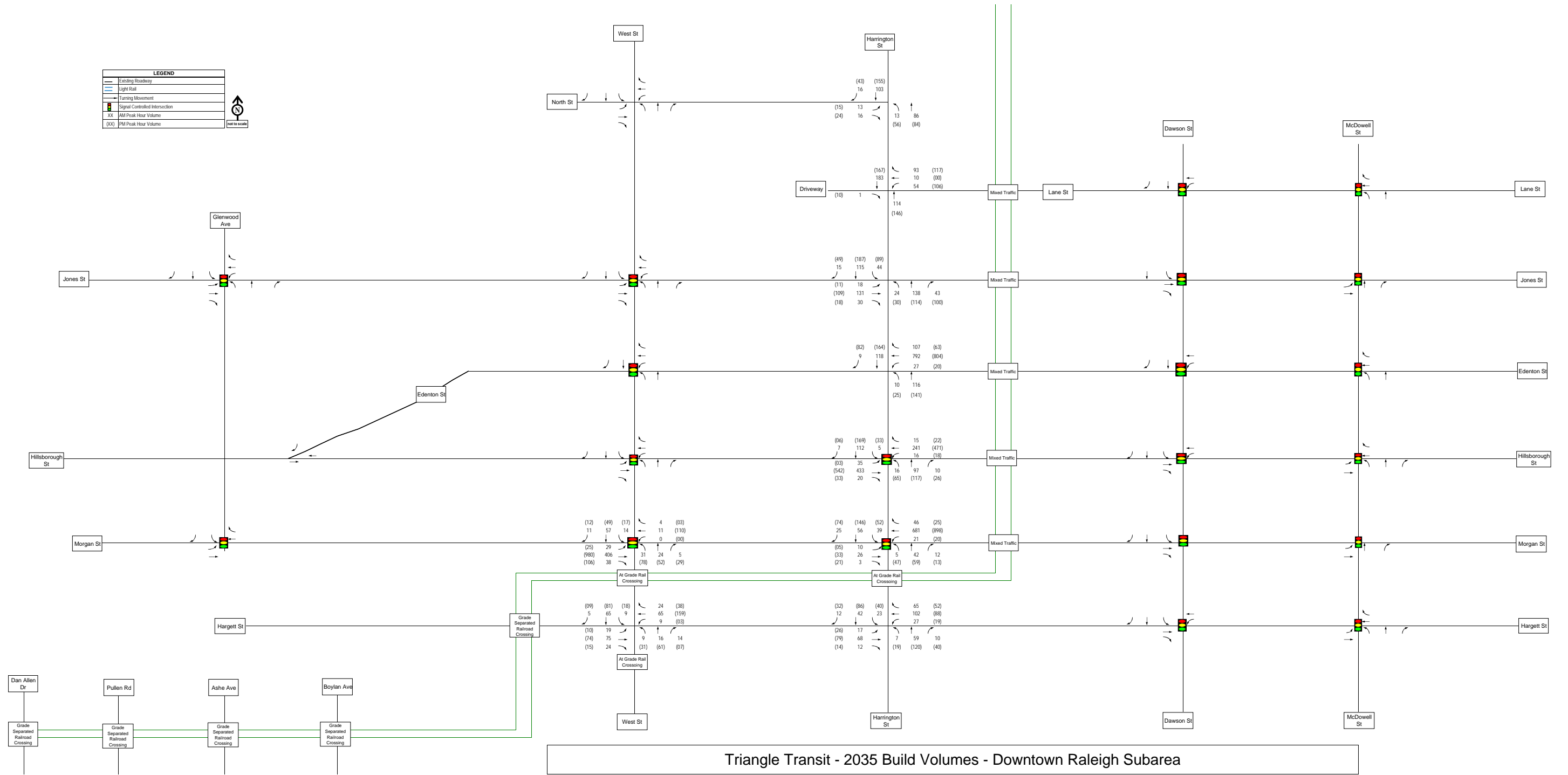
LEGEND	
	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume

Assumptions

Assumes 3 vehicle consist with a length of 270 feet
 Assumes 25 feet per vehicle in Synchro
 Therefore, each LRT is equivalent to 11 vehicles (270 / 25= 10.8)
 The LRT runs 6 trains per hour in each direction
 Therefore, a total of 66 vehicle are added in each direction along the LRT route



LEGEND	
	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
	AM Peak Hour Volume
	PM Peak Hour Volume



Overall Trip Distribution

Six Forks/Whitaker Mill Stations



NOTES

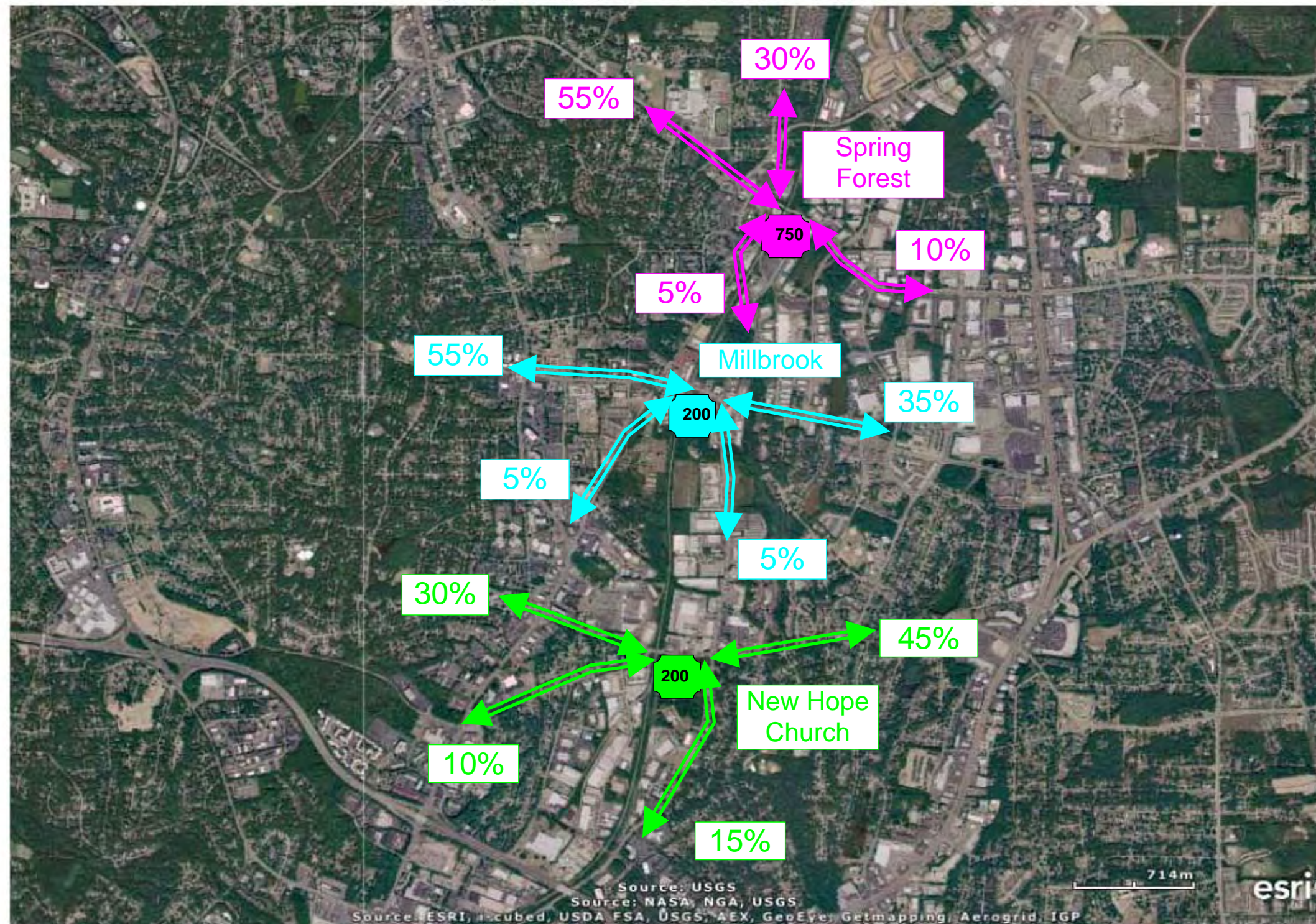
It was assumed that 60% of the Whitaker Mill Station would be from the area west of the station on Whitaker Mill Road, 35% from Atlantic Avenue south of the station, and 5% from Wake Forest Road north of Whitaker Mill Road. It was assumed that 75% of Six Forks Station traffic would be from the area west of the station on six Forks Road and from I-440, 5% from Industrial Drive, 10% from six Forks Road east of the station, and 10% from Atlantic Avenue north of I-440.

Trip Generation Summary

ITE Land Use Code 90		
AM Peak Equation	Trips = (0.83 * Parking Spaces) - 43.4	
PM Peak Equation	Trips = (0.63 * Parking Spaces) - 5.94	
	AM Peak	PM Peak
Percent Entering	81%	23%
Percent Exiting	19%	77%
Whitaker Mill		
Parking Spaces	200	
	AM Peak	PM Peak
Total Trips	123	120
Entering	100	28
Exiting	23	92
Six Forks		
Parking Spaces	300	
	AM Peak	PM Peak
Total Trips	206	183
Entering	167	42
Exiting	39	141

Overall Trip Distribution

Spring Forest/Millbrook/New Hope Church Stations



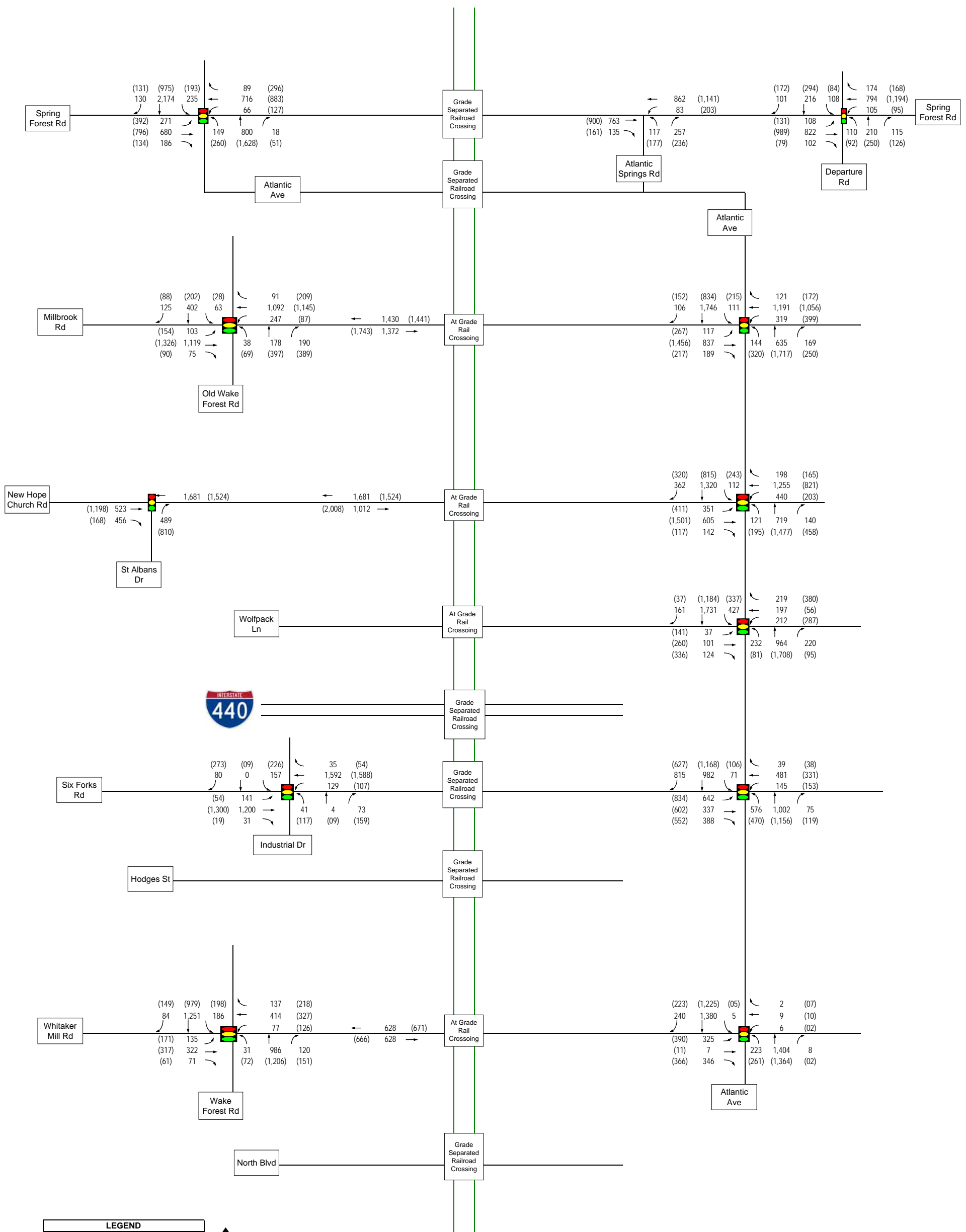
NOTES

It was assumed 30% of New Hope Church Station traffic would be from New Hope Church Road west of the station, 10% from St. Albans Drive, 15% from Atlantic Avenue south of New Hope Church Road, and 45% from the area east of the station on New Hope Church Road.

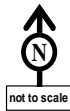
It was assumed that 55% of the Millbrook Station traffic would be from Millbrook Road west of the station, from 10% from the area south of the station (5% from Old Wake Forest Road and 5% from Atlantic Avenue), and 35% from Millbrook Road east of the station. It was assumed that 55% of the Spring Forest Station traffic would be from the area west of the station on Spring Forest Road, 5% from Atlantic Avenue south of Spring Forest, 30% from Atlantic Avenue north of the station, and 10% from Spring Forest Road east of the station.

Trip Generation Summary

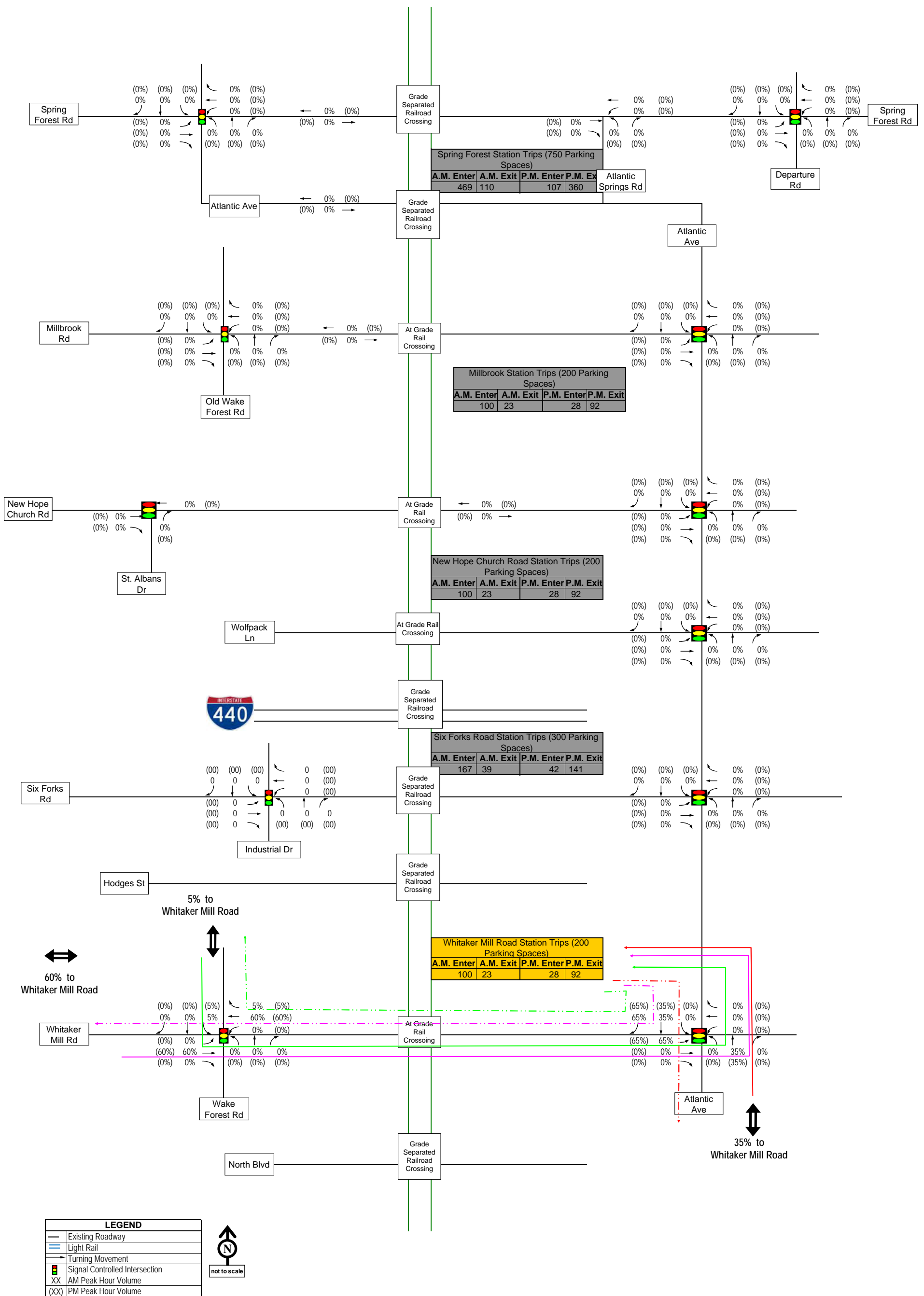
ITE Land Use Code 90		
AM Peak Equation	Trips = (0.83 * Parking Spaces) - 43.4	
PM Peak Equation	Trips = (0.63 * Parking Spaces) - 5.94	
	AM Peak	PM Peak
Percent Entering	81%	23%
Percent Exiting	19%	77%
New Hope Church		
Parking Spaces	200	
	AM Peak	PM Peak
Total Trips	123	120
Entering	100	28
Exiting	23	92
Millbrook		
Parking Spaces	200	
	AM Peak	PM Peak
Total Trips	123	120
Entering	100	28
Exiting	23	92
Spring Forest		
Parking Spaces	750	
	AM Peak	PM Peak
Total Trips	579	467
Entering	469	107
Exiting	110	360



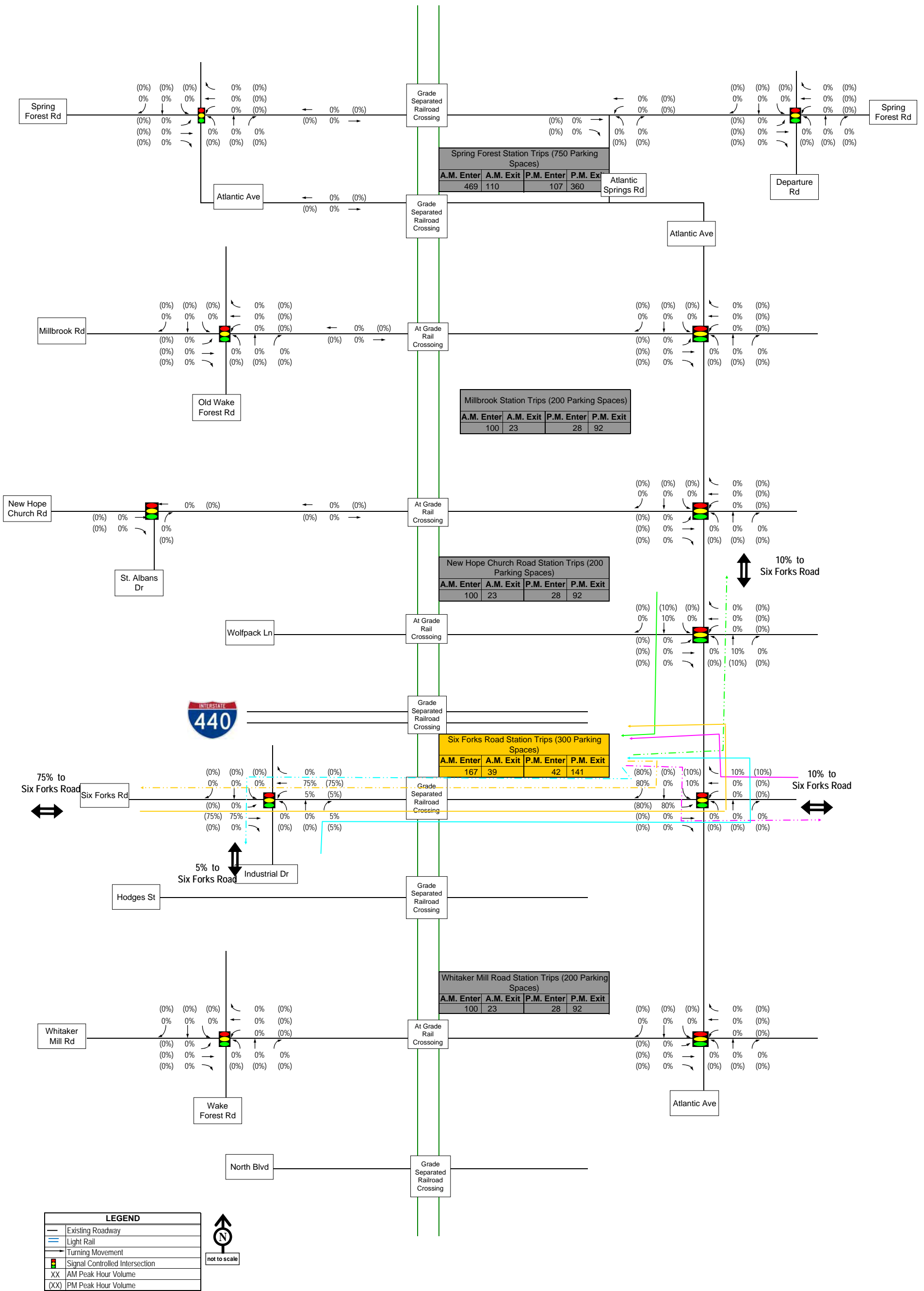
LEGEND	
	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume



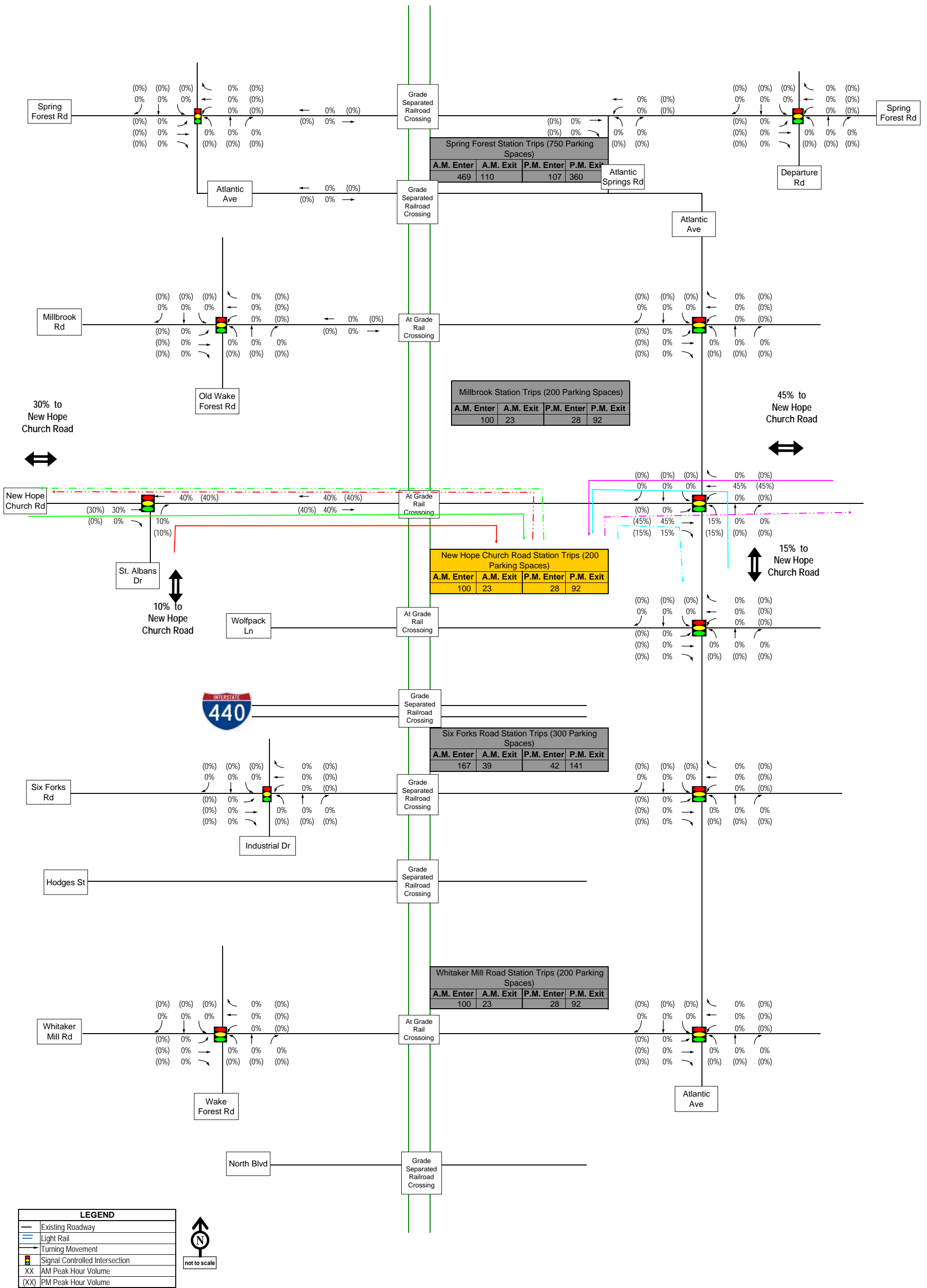
Triangle Transit - 2035 No-Build Volumes - Wake Corridor - North Raleigh



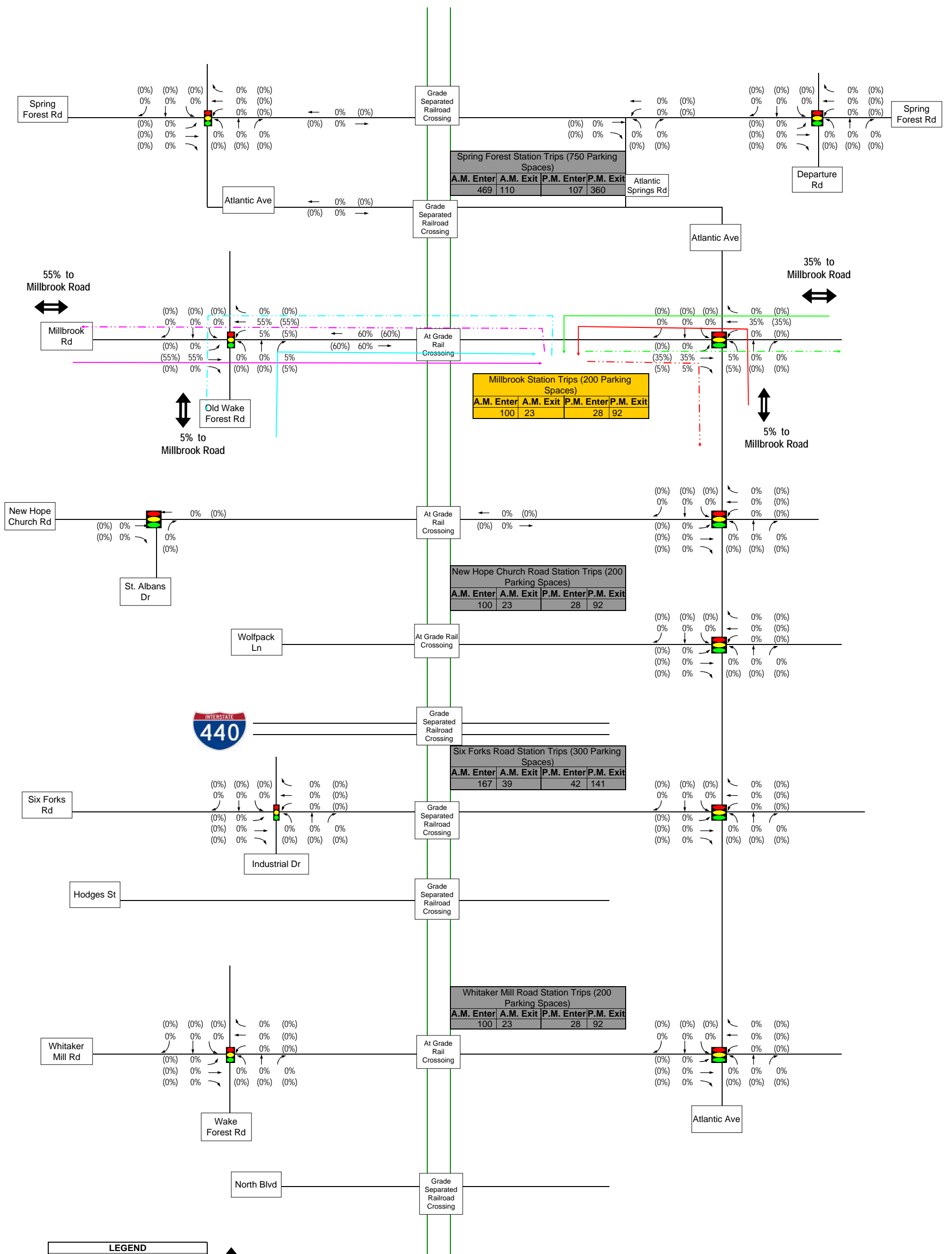
Triangle Transit - Whitaker Mill Trip Distributions - Wake Corridor - North Raleigh



Triangle Transit - Six Forks Trip Distributions - Wake Corridor - North Raleigh



Triangle Transit - New Hope Church Trip Distributions - Wake Corridor - North Raleigh

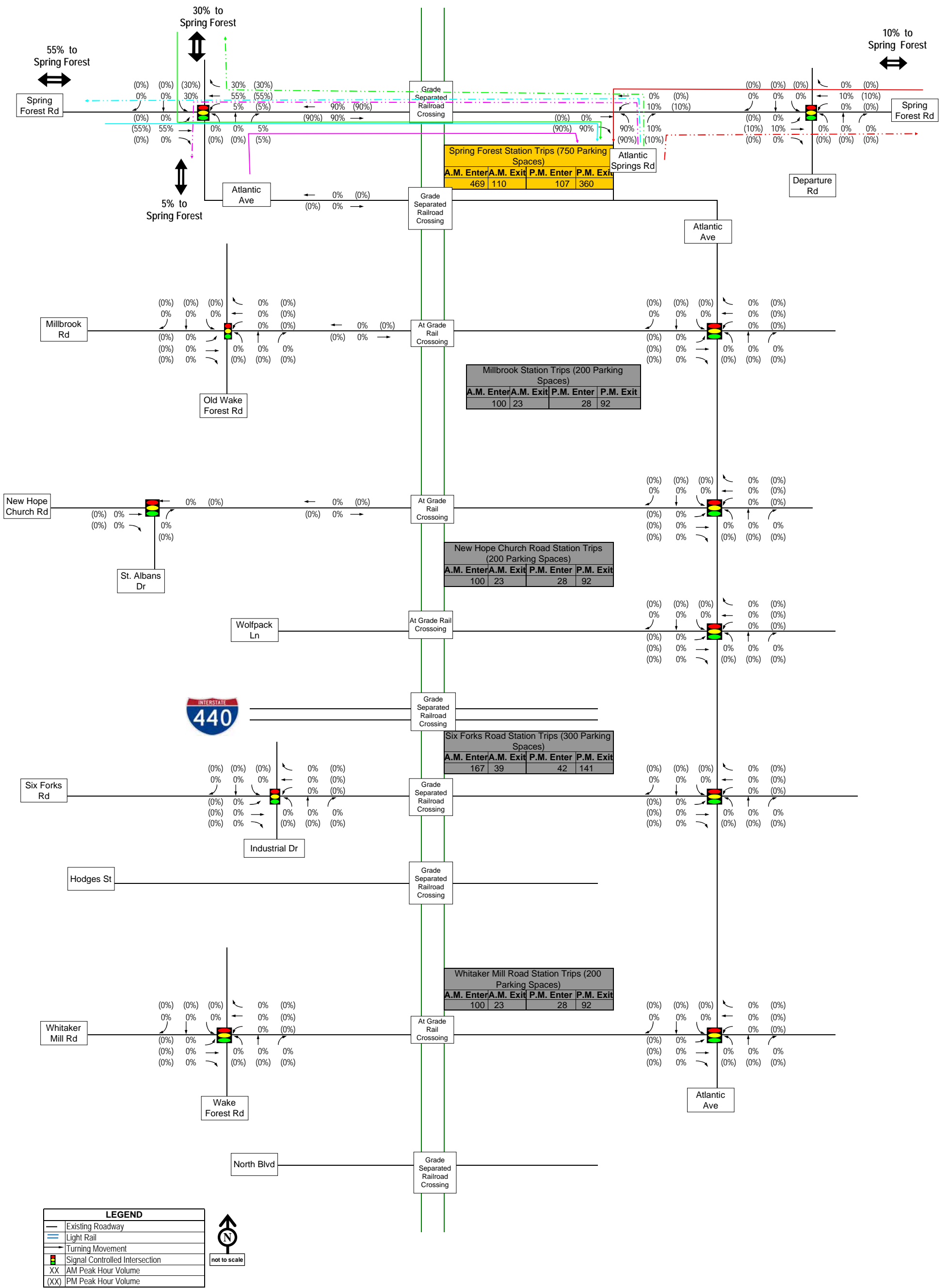


LEGEND

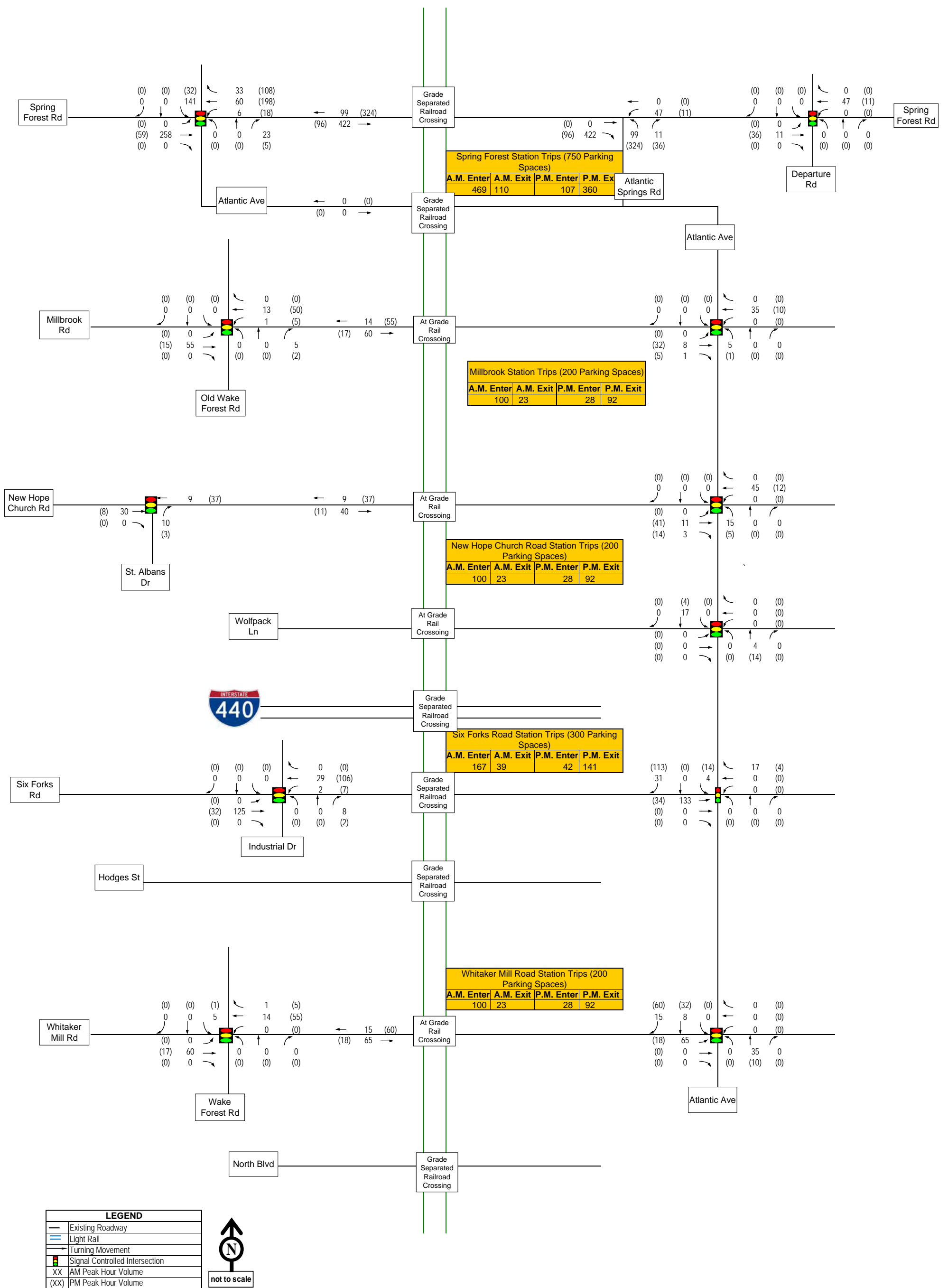
	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume



Triangle Transit - Millbrook Trip Distributions - Wake Corridor - North Raleigh

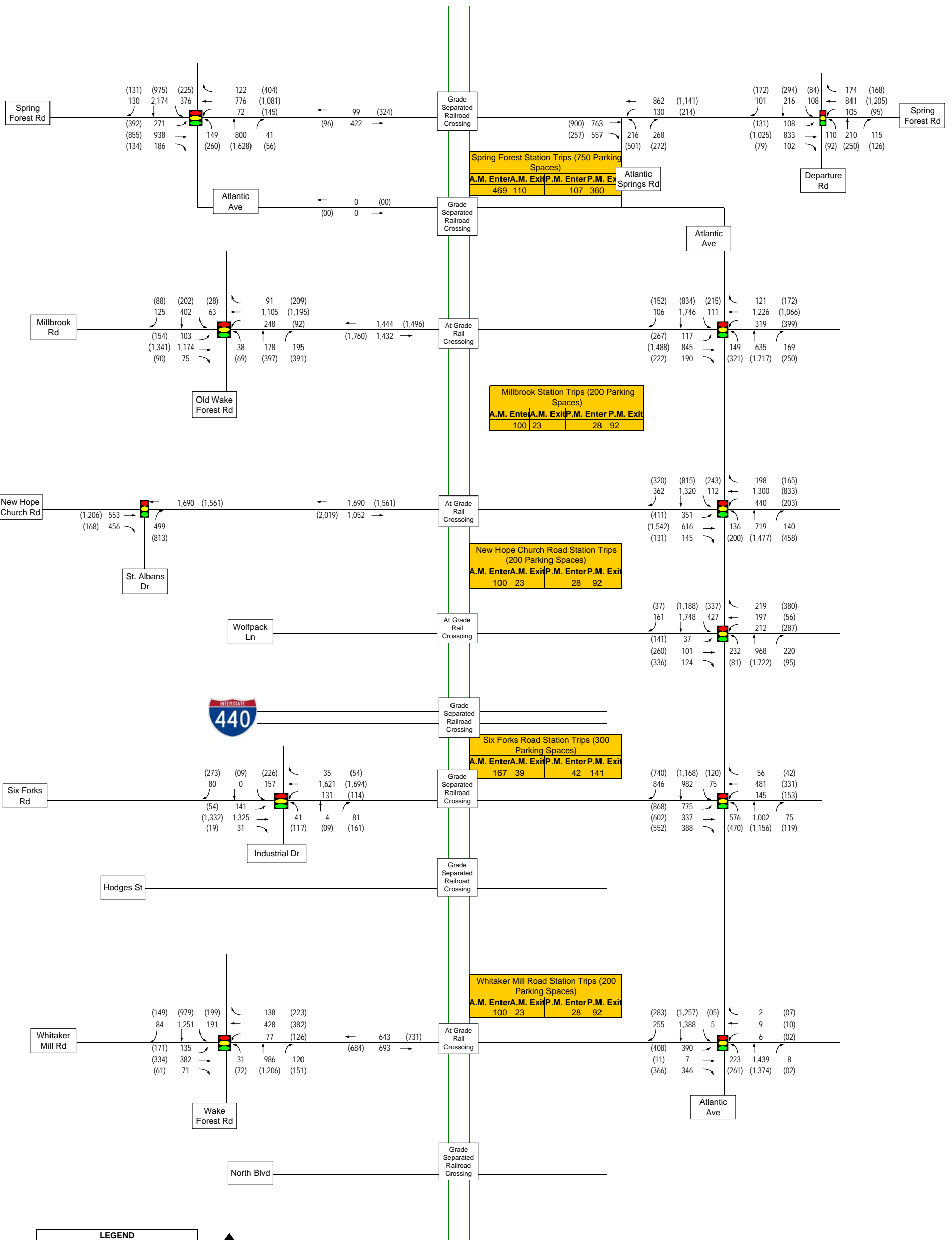


Triangle Transit - Spring Forest Trip Distributions - Wake Corridor - North Raleigh



Triangle Transit - Trips - Wake Corridor - North Raleigh

Note: Some volumes may be modified slightly to allow the individual volumes to sum to the total trips generated



Spring Forest Station Trips (750 Parking Spaces)

A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
469	110	107	360

Millbrook Station Trips (200 Parking Spaces)

A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
100	23	28	92

New Hope Church Road Station Trips (200 Parking Spaces)

A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
100	23	28	92

Six Forks Road Station Trips (300 Parking Spaces)

A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
167	39	42	141

Whitaker Mill Road Station Trips (200 Parking Spaces)

A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
100	23	28	92

LEGEND

- Existing Roadway
- Light Rail
- Turning Movement
- Signal Controlled Intersection
- XX AM Peak Hour Volume
- (XX) PM Peak Hour Volume



not to scale

Triangle Transit - 2035 Build Volumes - Wake Corridor - North Raleigh

Overall Trip Distribution

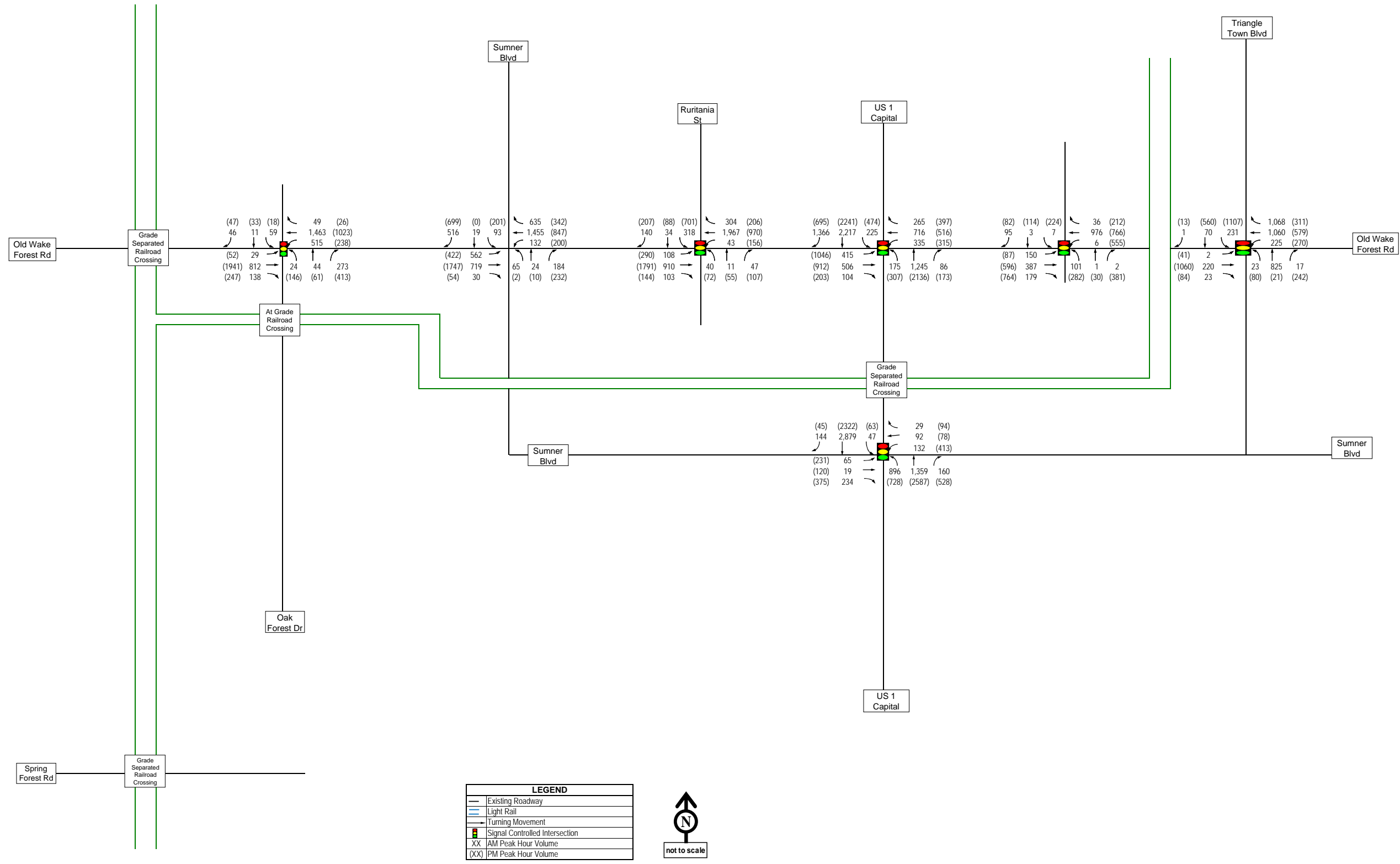


NOTES

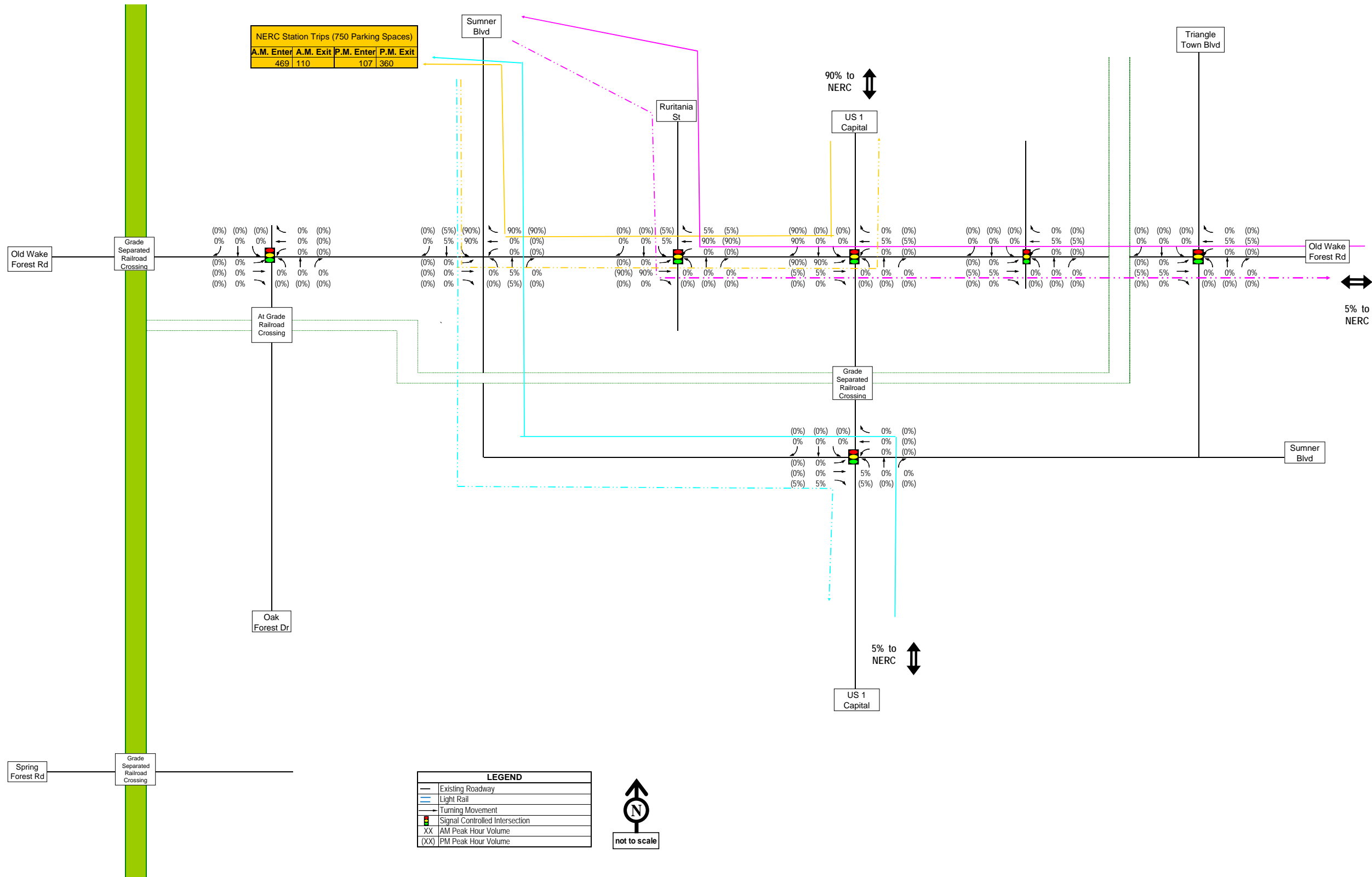
It was assumed 40% of NERC traffic would be from I-540 via US 1 (Capital Blvd.), 50% from southbound US 1 (Capital Blvd.), 5% from the residential area east of the station via Old Wake Forest Road, and 5% from northbound US 1 (Capital Blvd.) via Sumner Blvd.

Trip Generation Summary

	ITE Land Use Code 90	
AM Peak Equation	Trips = (0.83 * Parking Spaces) - 43.4	
PM Peak Equation	Trips = (0.63 * Parking Spaces) - 5.94	
	AM Peak	PM Peak
Percent Entering	81%	23%
Percent Exiting	19%	77%
NERC		
Parking Spaces	750	
	AM Peak	PM Peak
Total Trips	579	467
Entering	469	107
Exiting	110	360

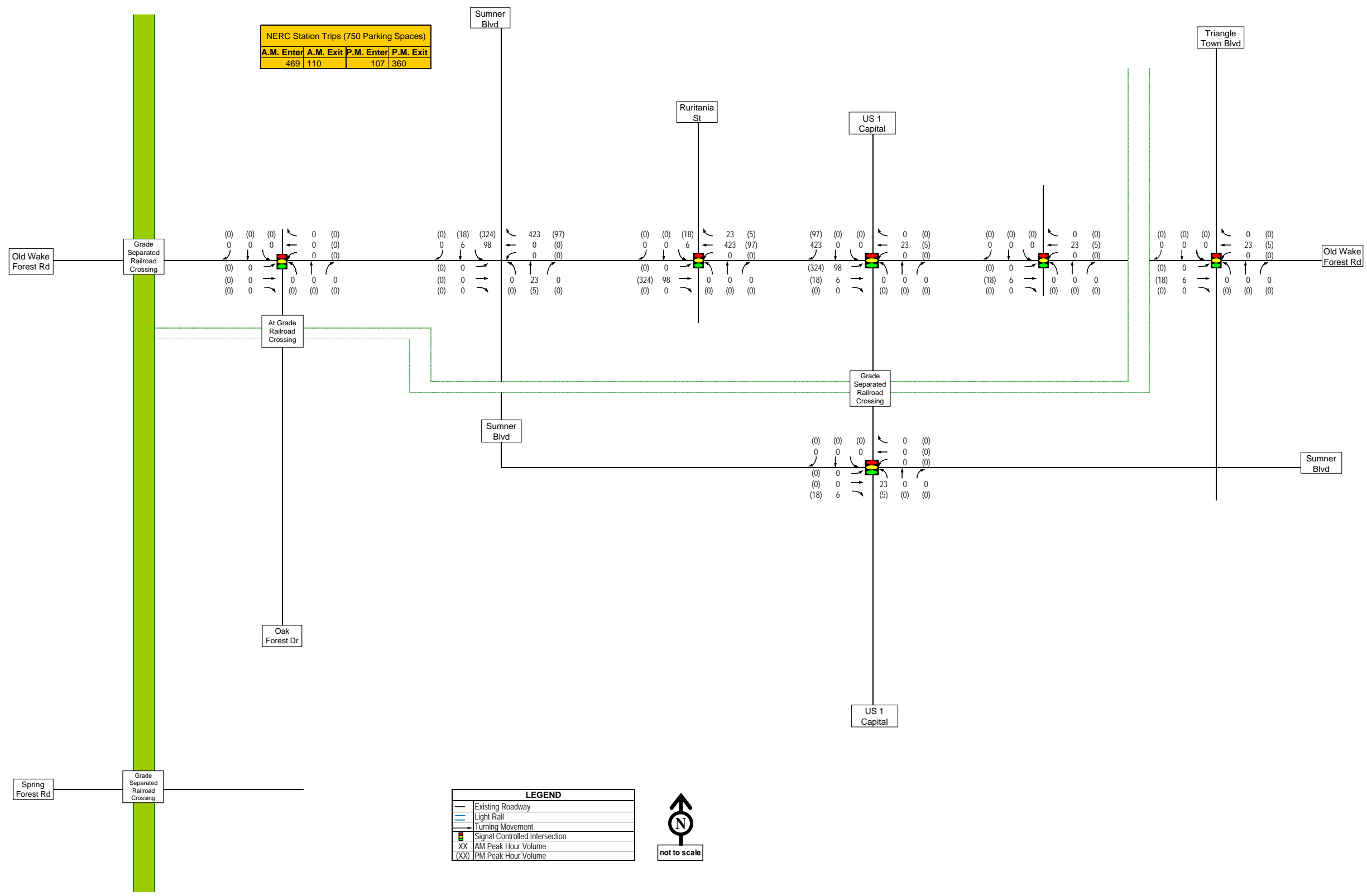


Triangle Transit - 2035 No-Build Volumes - NERC Subarea

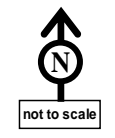


Triangle Transit - NERC Trip Distribution - NERC Subarea - Alternative D1

NERC Station Trips (750 Parking Spaces)			
A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
469	110	107	360

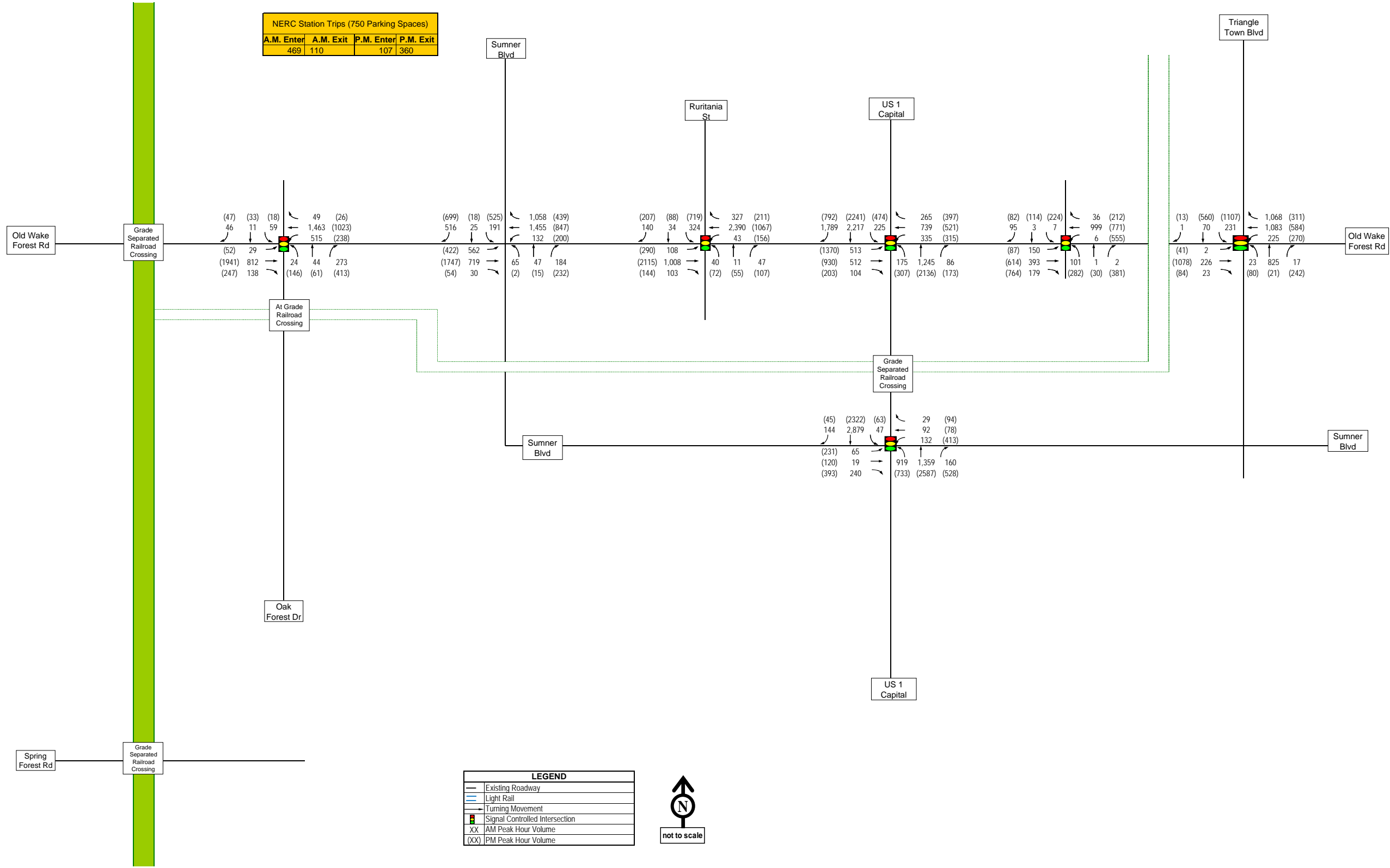


LEGEND	
—	Existing Roadway
—	Light Rail
→	Turning Movement
⬢	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume

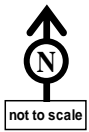


Triangle Transit - Trips - NERC Subarea - Alternative D1

NERC Station Trips (750 Parking Spaces)			
A.M. Enter	A.M. Exit	P.M. Enter	P.M. Exit
469	110	107	360



LEGEND	
—	Existing Roadway
—	Light Rail
→	Turning Movement
🚦	Signal Controlled Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume



Triangle Transit - 2035 Build Volumes - NERC Subarea - Alternative D1

Overall Trip Distribution

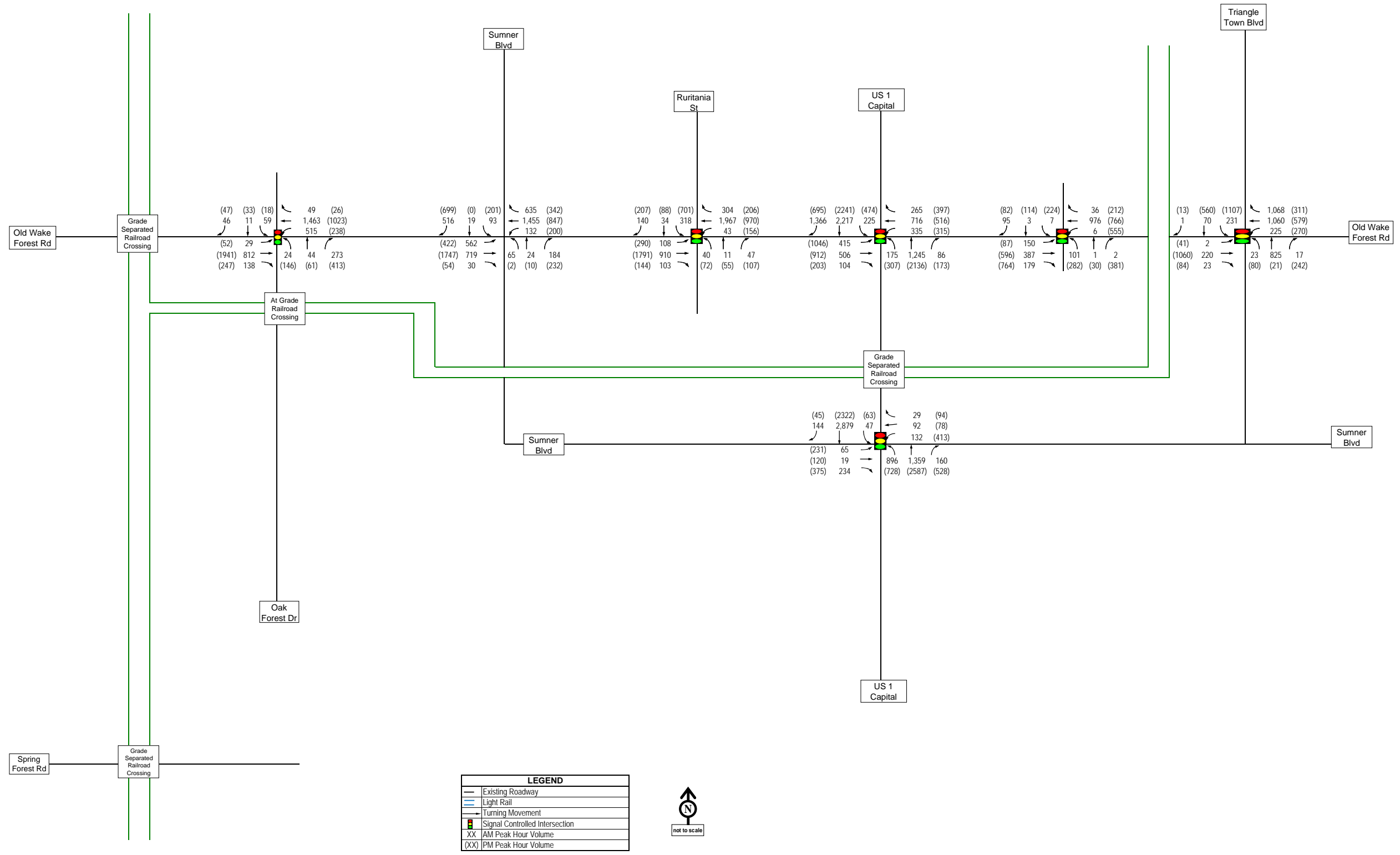


NOTES

It was assumed no additional parking spaces would be provided at the Triangle Town Station. It was assumed 40% of NERC traffic would be from I-540 via Triangle Town Blvd, 50% from southbound US 1 (Capital Blvd.), 5% from northbound US 1 (Capital Blvd.), and 5% from the residential area east of the station via Old Wake Forest Road.

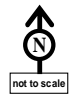
Trip Generation Summary

ITE Land Use Code 90		
AM Peak Equation	Trips = (0.83 * Parking Spaces) - 43.4	
PM Peak Equation	Trips = (0.63 * Parking Spaces) - 5.94	
	AM Peak	PM Peak
Percent Entering	81%	23%
Percent Exiting	19%	77%
NERC		
Parking Spaces	750	
	AM Peak	PM Peak
Total Trips	579	467
Entering	469	107
Exiting	110	360

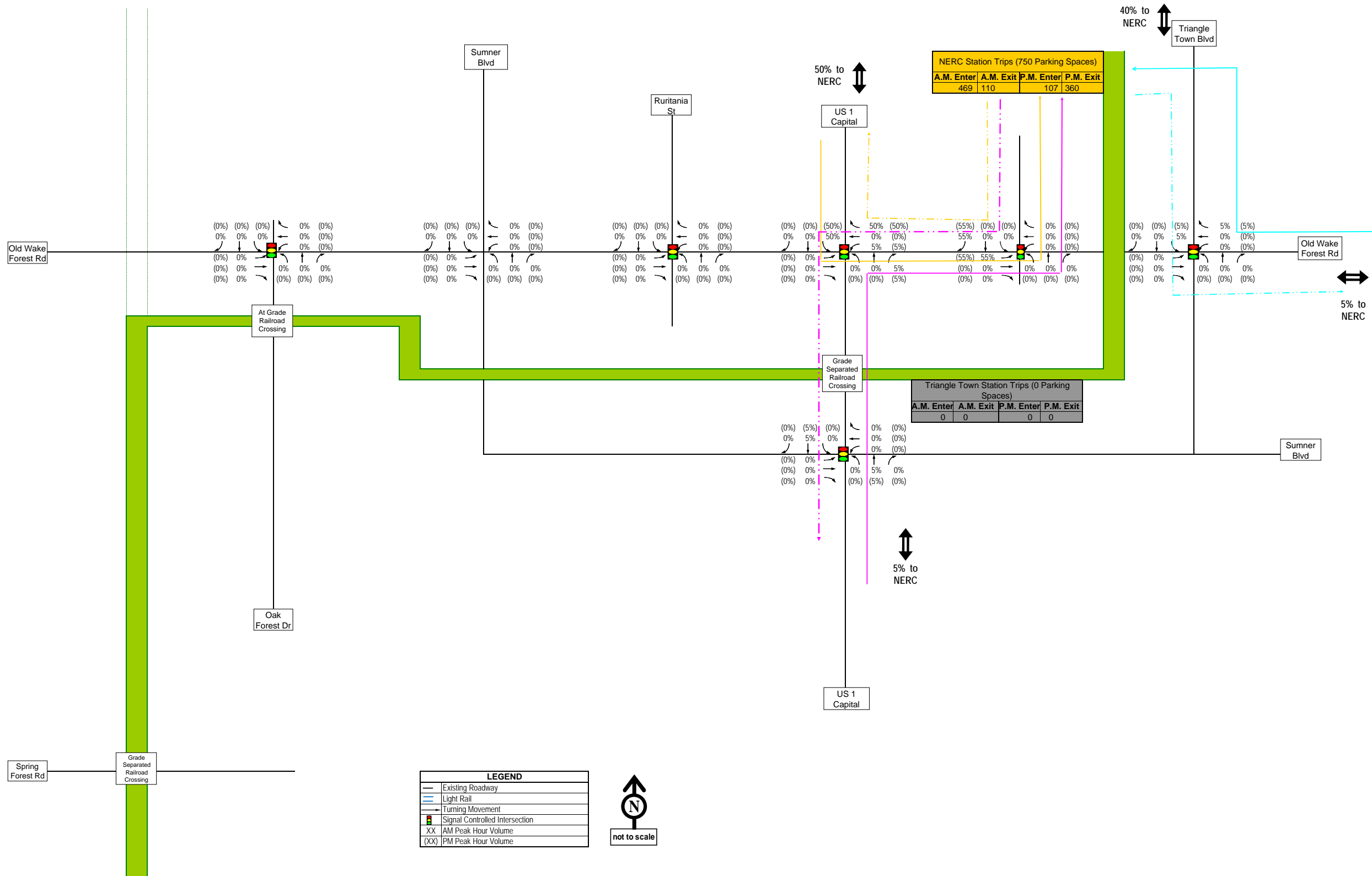


LEGEND

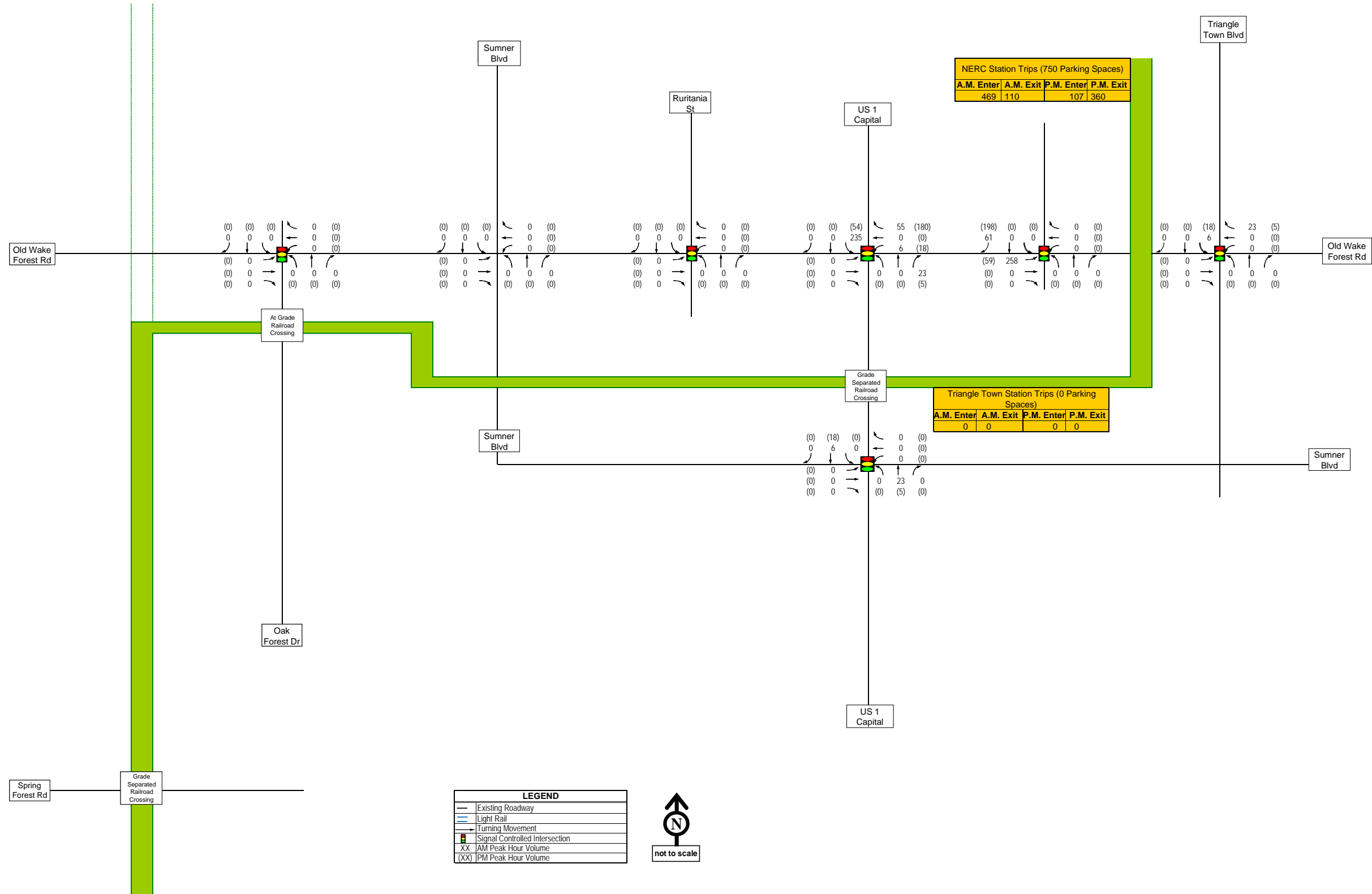
	Existing Roadway
	Light Rail
	Turning Movement
	Signal Controlled Intersection
(XX)	AM Peak Hour Volume
[XX]	PM Peak Hour Volume



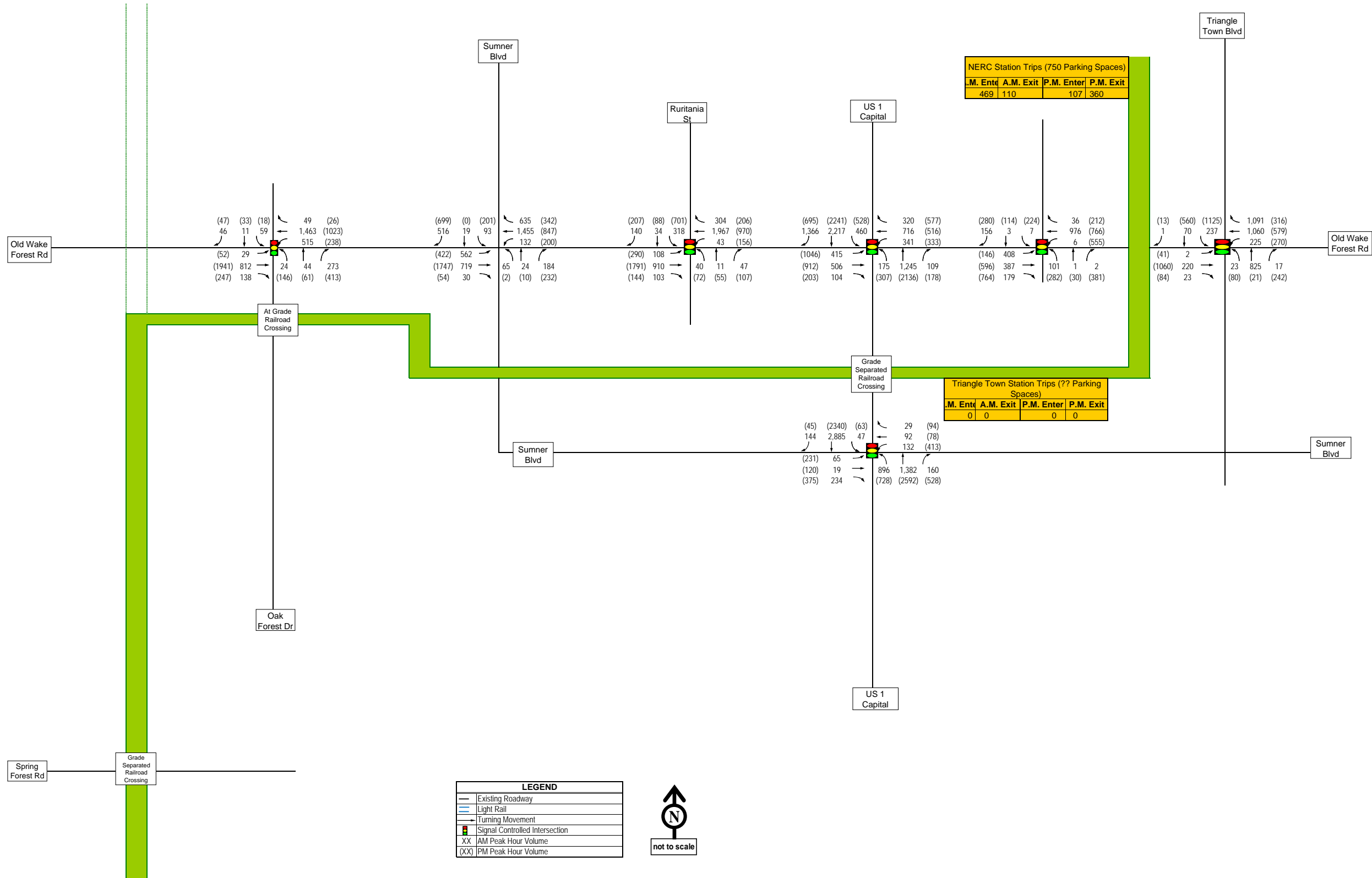
Triangle Transit - 2035 No-Build Volumes - NERC Subarea



Triangle Transit - NERC Trip Distribution - NERC Subarea - Alternative D2



Triangle Transit - Trips - NERC Subarea - Alternative D2



Triangle Transit - 2035 Build Volumes - NERC Subarea - Alternative D2