TRAFFIC FORECAST FOR

TIP PROJECTS R-3229 & R-2559 MONROE CONNECTOR/BYPASS

UNION AND MECKLENBURG COUNTIES
NORTH CAROLINA

Prepared for

NORTH CAROLINA Turnpike Authority

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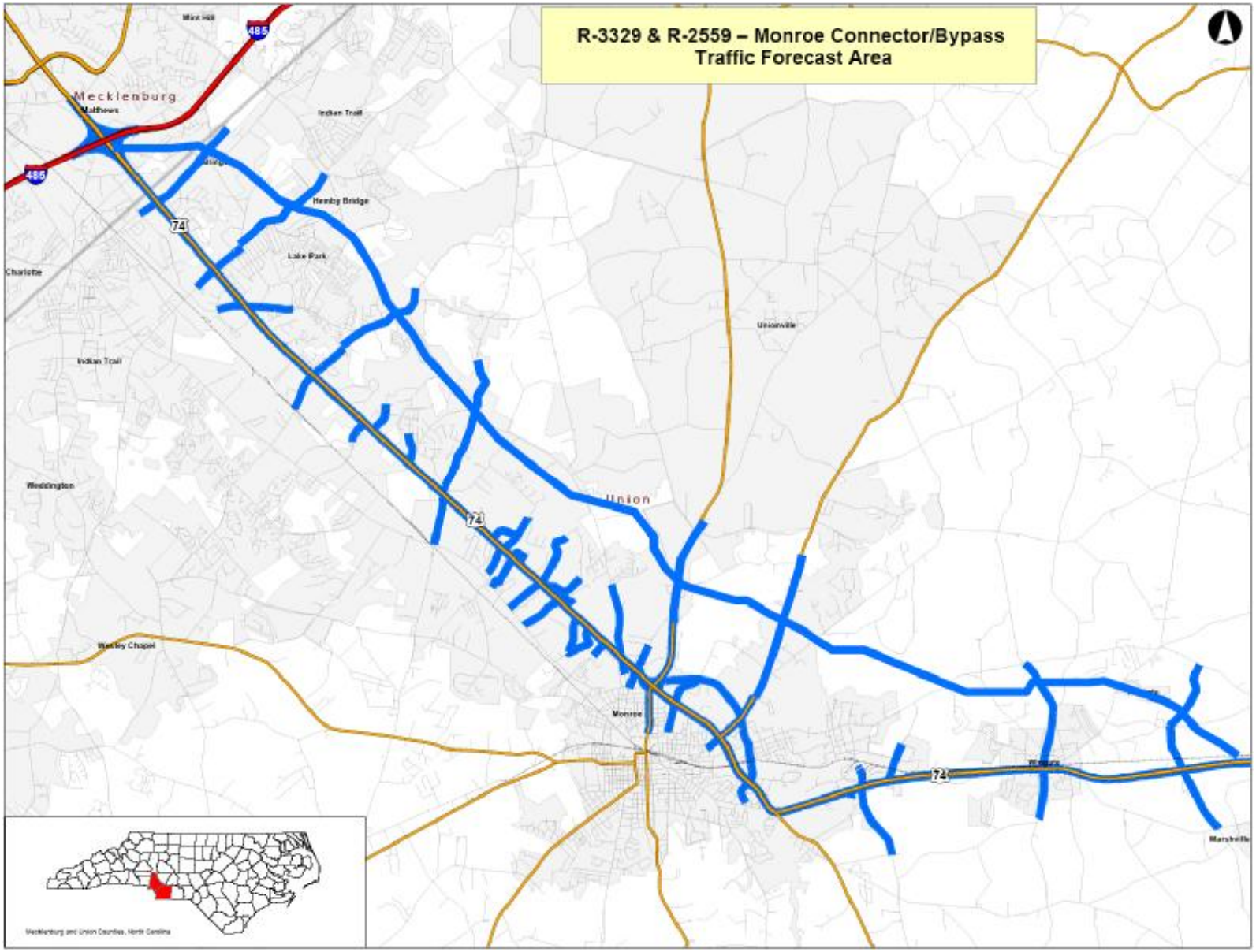
MONROE CONNECTOR / BYPASS STUDY AREA



INTRODUCTION

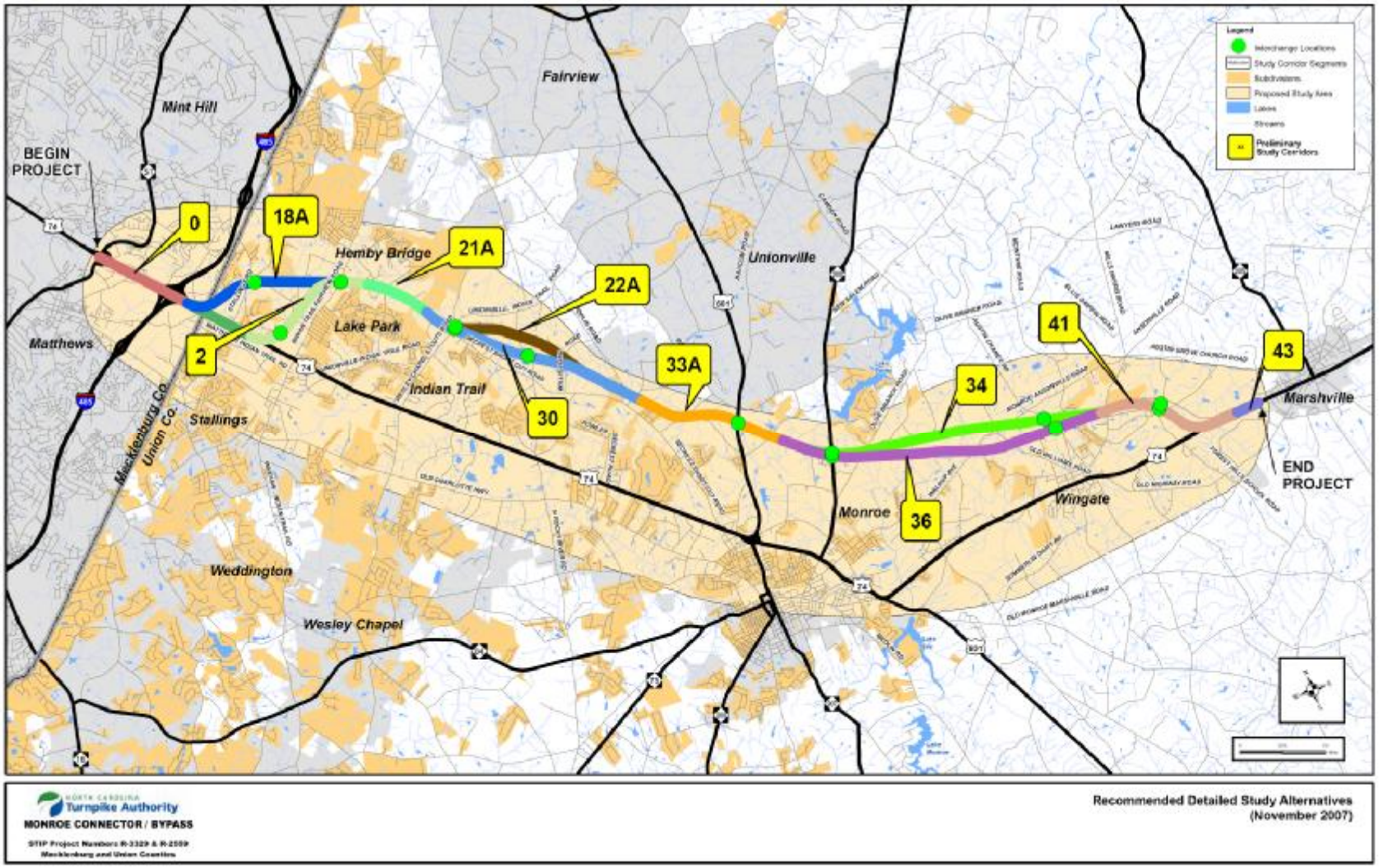
PROJECT DESCRIPTION

Wilbur Smith Associates (WSA) has been contracted by the North Carolina Turnpike Authority (NCTA) to develop traffic forecasts for the Monroe Connector/Bypass, a candidate Toll project in Union and Mecklenburg Counties. The projects are also known as North Carolina Department of Transportation (NCDOT) State Transportation Improvement Program (TIP) Projects R-3329 and R-2559.

The R-3329/R-2559 Project is proposed to provide a vital east-west freeway facility relieving congestion on a key transportation facility and strategic highway (US 74) between Marshville and east Charlotte. As its name suggests, the Monroe Connector/Bypass is a combination of two projects previously studied by NCDOT; the Monroe Bypass and the Monroe Connector. The Monroe Bypass was originally proposed to provide a freeway bypassing the City of Monroe and US 74 between US 601 north of Monroe to just east of the Town of Marshville. The Monroe Connector was originally proposed to "connect" the Monroe Bypass at US 601 to I-485 just east of the Town of Matthews. The Monroe Connector/Bypass will provide a facility that serves high-speed regional travel while maintaining access to properties along existing US 74. The project, currently in the project development stage, is scheduled to be open to traffic in 2013. A Draft Environmental Impact Statement will be completed in 2008. Several alternatives are currently under consideration for the Monroe Connector/Bypass. A map depicting these alternative areas and the entire project corridor is shown below as Exhibit 1.

Data recently released by the US Census Bureau indicates that Union County had the fastest growth in population in North Carolina over the period 2000-2007, with a population change of 49.2%, compared to the entire statewide population growth average of 12.6% over the same time period. Much of the growth in Union County occurred in the City of Monroe, where the population currently nears 30,000 residents. Based on these figures, travel demand is expected to increase at an aggressive rate. The Monroe Connector/Bypass project is proposed to relieve pressure and improve flow along US 74 between east Charlotte and the Marshville/Wingate area.

EXHIBIT 1 – MONROE CONNECTOR ALIGNMENT ALTERNATIVES



FORECAST OBJECTIVES

This document provides a forecast or estimate of Average Annual Daily Traffic (AADT) along sections of the proposed Monroe Connector/Bypass, existing US 74, and major roads that intersect one or both facilities in the study area. The estimates include design hourly volumes (K-factors), directional distribution percentages (D-factors), and heavy vehicle percentages (single-unit trucks and tractor-trailer-semi-trailers) for the study corridors, and describe the methodology and data inputs used in the forecasting process. These forecasts will be used to supplement information contained in the National Environmental Policy Act (NEPA) document for this project, as well as a reference for roadway design purposes.

The forecasts included in this document were derived primarily from review of previous forecasts in the general vicinity, as well as data extracted from outputs from the *Metrolina Regional Travel Demand Model* (MRTDM) updated December 15, 2005, the same version used for the *Preliminary Traffic and Revenue Study* prepared by Wilbur Smith Associates and dated October 11, 2006. Adjustments to reflect local conditions and input from local officials, as well as engineering judgment were both used to derive the final forecasts.

No-Build Scenarios

The *No-Build Scenarios* are described as the:

- 2008 Base Year No-Build (Existing Roadway Network – Non-Toll)
- 2035 Future Year No-Build, Non-Toll

The two No-Build scenarios forecasted in this document are updates of previously prepared forecasts for this project (2007 and 2030).

Build Scenarios

This document includes forecasts for four (4) major scenarios:

- 2008 Build – Toll
- 2008 Build – Non-Toll
- 2035 Build – Toll
- 2035 Build – Non-Toll

Within each of the four (4) Build scenarios, twelve (12) alternatives were analyzed, each differing in locations of proposed interchanges and eastern and western project termini tie-in configurations. Each *Build Scenario* above includes interchange facilities along the proposed Monroe Connector / Bypass at the following locations:

- SR1520 (Indian Trail-Fairview Road)
- SR1367 (Unionville Indian Trail Road)
- NC 200
- SR1758 (Austin Chaney Road)
- SR1754 (Forest Hills School Road)

Four (4) of the alternatives in each of the four (4) Build scenarios include a partial interchange with SR1365 (Stallings Road). In addition to the interchange locations listed, other alternatives within each Build scenario include interchanges at SR1514 (North Rocky River Road) and US 601 while not including others. A complete description of each of the twelve (12) alternatives for each Build scenario is included in Exhibit 2.

A final Build Scenario, described as the US 74 upgrade with parallel service roads, is not included in this document. This scenario includes both Toll and Non-Toll alternatives for the upgrade. A separate technical memorandum discussing impacts to US 74 and adjacent land uses has been prepared for this scenario. This technical memorandum, entitled "Technical Memorandum for TIP Projects R-2559 and R-3329 US 74 Upgrade Scenario" and dated April 4, 2008, was also prepared by Wilbur Smith Associates.

Exhibit 2: Forecast Alternatives and Interchange Locations	
Alt.	***Interchange Locations***
1A	I-485/US74, Stallings Road (partial), Indian Trail Fairview Road, Unionville Indian Trail Road
	Rocky River Road, US601, NC200, Austin Chaney Road, Forest Hills School Road (partial), US74
1B	I-485/US74, Stallings Road (partial), Indian Trail Fairview Road, Unionville Indian Trail Road
	Rocky River Road, NC200, Austin Chaney Road, Forest Hills School Road (partial), US74
1C	I-485/US74, Stallings Road (partial), Indian Trail Fairview Road, Unionville Indian Trail Road, US601
	NC200, Austin Chaney Road, Forest Hills School Road (partial), US74
1D	I-485/US74, Stallings Road (partial), Indian Trail Fairview Road, Unionville Indian Trail Road,
	NC200, Austin Chaney Road, Forest Hills School Road (partial), US74
2A	I-485, US74, Indian Trail Fairview Road, Unionville Indian Trail Road, Rocky River Road
	US601, NC200, Austin Chaney Road, Forest Hills School Road (partial), US74
2B	I-485, US74, Indian Trail Fairview Road, Unionville Indian Trail Road, Rocky River Road
	NC200, Austin Chaney Road, Forest Hills School Road (partial), US74
2C	I-485, US74, Indian Trail Fairview Road, Unionville Indian Trail Road, US601
	NC200, Austin Chaney Road, Forest Hills School Road (partial), US74
2D	I-485, US74, Indian Trail Fairview Road, Unionville Indian Trail Road
	NC200, Austin Chaney Road, Forest Hills School Road (partial), US74
3A	US74, Indian Trail Fairview Road, Unionville Indian Trail Road
	Rocky River Road, US601, NC200, Austin Chaney Road, Forest Hills School Road (partial), US74
3B	US74, Indian Trail Fairview Road, Unionville Indian Trail Road
	Rocky River Road, NC200, Austin Chaney Road, Forest Hills School Road (partial), US74
3C	US74, Indian Trail Fairview Road, Unionville Indian Trail Road
	US601, NC200, Austin Chaney Road, Forest Hills School Road (partial), US74
3D	US74, Indian Trail Fairview Road, Unionville Indian Trail Road
	NC200, Austin Chaney Road, Forest Hills School Road (partial), US74

SOURCES OF INFORMATION AND DATA

EXHIBIT 3 – HISTORICAL NCDOT AADT COUNT SUMMARY

ID	Route	Location	Year																			
			1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
1	I-485	North of US74	-	-	-	-	-	-	-	-	-	-	-	-	-	13000	21000	-	23000	49000	54000	56000
2	I-485	South of US74	-	-	-	-	-	-	-	-	-	-	25300	-	33000	37000	42000	39000	45000	63000	68000	68000
3	US74	West of I-485	-	32000	-	31700	-	34000	-	39900	-	-	-	-	53000	53000	-	55000	-	53000	-	-
4	US74	East of I-485	-	32000	-	31700	-	34000	-	39900	-	-	-	-	50000	52000	-	52000	-	54000	-	-
5	US74	West of Stallings Rd	28000	28700	33000	32300	32300	34000	36300	37200	-	42800	46000	50000	-	-	-	57000	56000	54000	58000	58000
6	Stallings Rd	North of US74	2200	-	2500	-	3100	-	3400	-	3000	-	5500	-	5400	-	3800	-	4300	-	4500	-
7	Stallings Rd	South of US74	6700	-	7000	-	8000	-	9200	-	8600	-	10600	-	10000	-	8700	9500	-	8900	-	10000
8	US74	East of Stallings Rd	25000	27800	28400	28000	28600	33100	35200	36600		37200	42000	45000	-	-	-	53000	52000	54000	52000	53000
9	Indian Trail Fairview Rd	North of US74	-	-	-	-	-	-	-	-	-	-	-	-	6200	-	-	5900	-	5500	-	-
10	Indian Trail Fairview Rd	South of US74	4800	-	5500	-	6900	-	8300	-	8300	-	9800	-	10000	-	9000	9800	-	13000	-	12000
11	US74	East of Indian Trail Fairview Rd	23400	24800	-	27000	28400	31200	32800	35000	-	38200	42000	45000	-	-	-	50000	48000	46000	49000	51000
12	Unionville Indian Trail Rd	North of US74	1800	-	-	-	2500	-	2800	-	6100	-	8100	-	9900	-	1000	12000	4800	11000	-	6800
13	Unionville Indian Trail Rd	South of US74	1500	-	1200	-	1600	-	1700	-	-	-	8600	-	-	-	-	-	4800	-	5500	-
14	US74	East of Unionville Indian Trail Rd	21100	23300	25200	25700	27100	28600	32300	30900	-	35300	38000	40000	-	-	-	48000	47000	45000	47000	42000
15	US74	East of Wesley Chapel Stouts Rd	22200	22200	23500	22700	25500	25800	28900	30300	-	33500	37000	41000	-	-	-	44000	41000	44000	-	-
16	Wesley Chapel Stouts Rd	South of US74	1700	-	2000	-	2400	-	3100	-	-	-	5400	-	-	-	-	-	8500	-	11000	-
17	Chambers Dr	North of US74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3200	-	3600	-
18	US74	East of Chambers Dr	20300	20100	-	22600	23700	26000	28000	29000	-	31700	33700	35000	-	-	-	41000	37000	36000	37000	38000
19	N Rocky River Rd	North of US74	2800	-	3100	-	-	-	-	-	-	-	3500	-	4300	-	4700	5000	6400	4700	8300	5800
20	N Rocky River Rd	South of US74	-	-	-	-	5700	-	6200	-	7600	-	8800	-	9800	-	9100	11000	-	8700	-	9800
21	US74	East of N Rocky River Rd	18600	19700	23500	23600	24500	26900	26900	28100	-	30300	-	36000	-	-	-	38000	36000	35000	36000	36000
22	US74	East of Rolling Hills Dr	-	-	-	-	-	26900	28800	29700	-	32000	-	40000	-	-	-	40000	37000	35000	46000	-
23	Dickerson Blvd	South of US74	-	-	-	-	-	-	-	-	-	-	-	-	13000	-	15000	17000	-	14000	-	16000
24	US74	East of Dickerson Blvd	-	-	30700	-	30700	31300	32900	33100	-	38700	37300	41000	-	-	-	51000	46000	45000	48000	-
25	Secrest Shortcut Rd	North of US74	4900	-	4000	-	4900	-	6100	-	7500	-	6900	-	6900	-	7500	-	8400	-	8900	-
26	US74	East of Concord Ave	29900	-	30500	35700	35100	37700	44000	41400	-	46800	-	49000	-	-	-	60000	56000	57000	56000	-
27	US601	North of US74	7500	8500	9700	9100	9100	9300	10200	10600	11400	12000	12800	13000	14000	14000	14000	13000	13000	12000	13000	13000
28	NC200	South of US74	8300	9500	9900	10800	11000	11800	12000	11900	-	13000	14500	14000	-	-	-	14000	13000	-	15000	14000
29	Stafford St	North of US74	1400	-	1600	-	1300	-	1500	-	2000	-	2400	-	2900	-	3000	3100	-	3800	-	3800
30	US74	West of Morgan Mill Rd	32000	29400		32900	36300	37000	39000	39100		44300	46000	50000				55000	51000	52000	54000	55000
31	Morgan Mill Rd	North of US74	5500	6000	10300	7100	7500	8300	8200	8700	8500	8700	8900	10000	9100	9700	9500	9700	9300	9800	11000	9700
32	Morgan Mill Rd	South of US74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11000	-	10000	-	10000
33	US74	East of Morgan Mill Rd	28300	28000	28000	31000	31600	34900	36600	36800	-	41800	40600	45000	-	-	-	51000	46000	47000	51000	48000
34	Walkup Ave	North of US74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11000	-	11000	-
35	US601	South of US74	10800	11000	11000	10200	10000	10900	11500	-	12900	13100	13400	15000	18000	18000	17000	17000	16000	17000	19000	18000
36	US74	East of US601	20700	22100	22100	19700	21300	21300	23100	23400	-	27300	27100	28000	-	-	-	29000	30000	26000	29000	27000
37	US74	East of Old Pageland Monroe Rd	17000	19600	19600	20800	20800	22500	23000	22000	-	26000	24000	25000	-	-	-	27000	27000	25000	27000	25000
38	Old Pageland Monroe Rd	South of US74	1100	-	1400	-	1300	-	1500	-	1600	-	2300	-	1900	-	1800	1700	-	1500	-	1500
39	South Bivens Rd	North of US74	1700	-	2000	-	1400	-	1700	-	1900	-	1900	-	2200	-	2000	-	1900	-	1900	-
40	US74	East of South Bivens Rd	15000	18600	18600	20600	20900	19800	22800	22700	-	24400	24000	25000	-	-	-	28000	26000	24000	27000	24000
41	Bivens St	North of US74	1100	-	1200	-	1200	-	1700	-	1500	-	1500	-	1400	-	1800	1800	-	1300	-	1400
42	US74	East of Bivens St	-	23300	23400	19300	23000	23900	25700	25100	-	26600	25900	25000	-	-	-	29000	26000	24000	28000	24000
43	South Main St	North of US74	4200	-	4800	-	4800	-	5100	-	5200	-	6300	-	5000	-	5000	6500	-	4200	-	4200
44	South Main St	South of US74	1400	-	1900	-	2100	-	2300	-	-	-	2600	-	-	-	-	-	2700	-	2900	-
45	US74	East of South Main St	14200	14700	14700	14600	16400	16700	19100	18000	-	19500	20000	20000	-	-	-	22000	21000	19000	21000	19000

HISTORICAL AADT COUNT REVIEW

Historical AADT data was reviewed. Historical AADT's from 1987 to 2006 were gathered from the *NCDOT Traffic Survey Unit*. These data are summarized in Exhibit 3 above.

PREVIOUS TRAFFIC FORECASTS

Traffic forecasts for four (4) Transportation Improvement Program (TIP) projects within the study area were obtained from NCDOT and evaluated and included in this report. The traffic forecast for R-2559 (US 74 Monroe Bypass) prepared by NCDOT and dated November 2004 provided valuable data for this project. The traffic forecast for R-3329 (US 74 from Matthews Mint Hill Road to Rocky River Road) prepared by NCDOT in 1997 and updated in September 2005 is also referenced in this study. The forecasts for U-3825 (Stallings Road from Old Monroe Road to US 74) prepared by NCDOT in March 2005 and R-2616 (US 601 from the South Carolina State Line to US 74) prepared by NCDOT in October 2004 were both consulted and utilized for reference.

DISCUSSIONS WITH MUNICIPAL OFFICIALS

Telephone interviews were conducted with Ms. Katie Reeves, Town of Indian Trail Planning Department and Mr. Wayne Herron, City of Monroe Planning Director to ascertain information about planned or approved development sites in the Monroe Connector/Bypass corridor, possible land uses for large undeveloped tracts of land, and any road improvement projects planned to be implemented by the jurisdiction. Ms. Reeves provided a listing of approved subdivisions within the Town and just outside the Town in Union County. She stated that the majority of planned development in and around the proposed corridor is low density residential. Mr. Herron echoed Ms. Reeves' statements in indicating that the majority of vacant land in Monroe in and around the proposed corridor is currently zoned low density residential (one house per acre) with no immediate plans or requests to rezone. Neither official stated that their municipalities would be undertaking any road improvement or construction projects in the foreseeable future.

SUPPLEMENTAL TRAFFIC DATA

Turning movement counts, as well as tube classification counts for specific intersections and sections of US 74 were collected in March and April 2007 for the previous No-Build Traffic Forecasts (prepared by others). The count data was used as reference data to provide the basis for establishing quadrant and turning movement flows for the study area intersections for these forecasts,

along with establishing design data such as directional splits and design hourly volumes. Manual 16-hour turning movement counts were taken on average weekdays between the hours of 6:00 A.M. and 10:00 P.M. at selected locations, while A.M. and P.M. Peak Hour count data was collected at other intersections. Vehicle classification data was collected in 48-hour increments at various spots along US 74.

Exhibit 4 illustrates the locations supplemental traffic data was collected.

Exhibit 4: Supplemental Traffic Count Locations

Location of Count	Type of Count	Count Date
US74 at Stallings Road	Manual 16-Hour Count	March 15, 2007
US 74 at Indian Trail Fairview Road	Manual 16-Hour Count	March 21, 2007
US 74 at Unionville-Indian Trail Road	Manual 16-Hour Count	March 28, 2007
US 74 at Faith Church Road/Harris Teeter	Peak Hour Counts	March 14, 2007
US 74 at Sardis Church/Wesley Chapel Stout	Peak Hour Counts	March 21, 2007
US 74 at Chambers Drive	Peak Hour Counts	March 26, 2007
US 74 at North Rocky River Road	Manual 16-Hour Count	March 13, 2007
US 74 at Fowler Secrest/John Moore Road	Peak Hour Counts	March 29, 2007
US 74 at Carroll Street/Rolling Hills Drive	Peak Hour Counts	April 2, 2007
US 74 at Roland Drive/Round Table Road	Peak Hour Counts	April 25, 2007
US 74 at Williams Road	Peak Hour Counts	April 18, 2007
US 74 at Wal-Mart/Hanover entrances	Peak Hour Counts	April 24, 2007
US 74 at K-Mart/Dickerson Boulevard	Peak Hour Counts	April 20, 2007
US 74 at Secrest Shortcut/Mall Entrance	Manual 16-Hour Count	March 28, 2007
US 74 at Concord Avenue	Peak Hour Counts (both ramps)	April 17, 2007
US 74 at Skyway Drive (US 601-NC 200)	Peak Hour Counts (3 ramps)	April 26 and April 20, 2007
US 74 at Stafford Street/Stafford Street Extension	Manual 16-Hour Count	April 18, 2007
US 74 at Boyte Street/Retail Entrance	Peak Hour Counts	April 18, 2007
US 74 at Morgan Mill Road	Manual 16-Hour Count	April 17, 2007
US 74 at Walkup Avenue	Manual 16-Hour Count	April 5, 2007
US 74 at South Southerland Avenue	Peak Hour Counts	March 14, 2007
US 74 at Venus Street/Dove Street	Peak Hour Counts	March 19, 2007
US 74 at East Franklin Street/Retail Entrance	Manual 16-Hour Count	April 3, 2007
US 74 at Metro Medical Center/Pageland Highway	Manual 16-Hour Count	April 3, 2007
US 74 at South Secrest Avenue/Old Pageland-Monroe Road	Peak Hour Counts	March 21 ,2007
US 74 at South Bivens Road	Peak Hour Counts	April 2, 2007
US 74 at Bivens Street/Food Lion Entrance	Peak Hour Counts	April 4, 2007
US 74 at North Main Street/South Main Street	Peak Hour Counts	April 3, 2007
US 74 at Forest Hills School Road	Manual 16-Hour Count	March 27, 2007

METHODOLOGY AND FORECAST DEVELOPMENT

The methodology for developing forecasts for the Monroe Connector/Bypass candidate Toll facility project consisted of several techniques including interpretation of model outputs, regression analysis of historical AADT data, and review of previous traffic forecasts.

AADT volumes forecasted in this study for the proposed Monroe Connector/Bypass for each scenario were primarily derived from outputs from the refined model. For existing US 74, AADT's were derived through a comparison of model outputs with historical AADT data with linear regression techniques applied to assign an appropriate growth factor to arrive at the forecast year's estimated volume. Finally, AADT data estimated for the "Y-lines" intersecting US 74 and the proposed Connector/Bypass were primarily derived from a comparison of model outputs with regression analysis of historical data.

The modeling process is discussed below.

Traffic Model Development and Refinement

The Charlotte Department of Transportation maintains the Metrolina Regional Travel Demand Model (MRTDM) that was used for the preliminary traffic and revenue analysis and the NEPA-level traffic forecasts. The Metropolitan Planning Organization (MPO) used this model to develop the region's 2030 Transportation Improvement Program (TIP) which contains the highway projects identified for construction. Certain refinements and adjustments were made to the original MRTDM in order to conduct this analysis. The model and underlying socioeconomic data used by the model were provided by the Charlotte Department of Transportation in February 2006. This section describes the model refinement process.

Data obtained for the MRTDM included highway networks and trip tables for 2000, 2006, 2008, 2015, 2020, and 2030 as well as socioeconomic forecasts for each year by traffic analysis zone. The base-year model was calibrated in the immediate project area to achieve the best traffic volume assignments compared to observed traffic counts and observed speeds from speed-delay runs conducted for the traffic and revenue analysis. The model also was updated to reflect the proposed Monroe Connector/Bypass as well as the other committed highway improvements. Variations of the Monroe Connector/Bypass alignment were also modeled by adding and deleting links to represent the alignment under consideration.

Highways proposed for future improvement in the model were compared with proposed roadway improvements in the TIP and Long Range Transportation Plan (LRTP) developed by the MPO. Special attention was given to proposed roadway improvements within the study area for the Monroe Connector/Bypass. Detailed

coding was added to represent the interchanges and Toll plaza locations for all alignments of the Connector/Bypass.

The base year 2008 model was run using inputs supplied by the MPO. A series of traffic assignments were compared with ground counts supplied by the NCDOT and those collected specifically for the traffic and revenue study. Adjustments were made to input network speeds and trip tables in the study area in order to improve the calibration of the model in comparison with ground counts for the specific corridor area.

After calibration was obtained, a series of traffic assignments to the highway network were made for years of 2008, 2010, 2015, 2020, and 2030 under No-Build, Toll-free, and Tolled conditions.

Traffic assignments to the proposed Toll facility were made using a diversion assignment technique added to the MRTDM. This process involved a comparison of travel time and distance for trips that might use the Monroe Connector/Bypass with the best Toll-free alternative routes. The estimated share of total traffic that would be expected to use the facilities was a function of travel time and distance savings, a monetary value placed on these savings, and the Toll charges being tested in any given assignment. In general, as the total costs to use the proposed Monroe Connector/Bypass increased, in comparison to the best alternative free routes, the share of traffic on the Monroe Connector/Bypass would decrease. At lower Toll rates, a higher share would be estimated. Assignments under Toll-free conditions on the Monroe Connector/Bypass were made using standard highway assignment techniques without the special Toll diversion component of the model.

The MRTDM also recognized capacity constraints on roadways in the study area. Speeds were adjusted in future conditions to reflect increasing congestion on the Toll facility and competing roads. The proposed Monroe Connector/Bypass was assumed to be four lanes at all locations for purposes of this analysis.

BASIC ASSUMPTIONS

The preliminary traffic and revenue estimates for the Monroe Connector/Bypass were predicated on the following basic assumptions, which were considered reasonable for purposes of this analysis:

1. Roadway improvements included in the TIP current at the time of the preliminary traffic and revenue study were assumed to be implemented including the programmed widenings of competing routes.

2. Toll plaza locations would be as shown in this report.

3. No other competing facilities or additional capacity would be constructed during the project period, other than those in the Transportation Improvement Plan in effect at the time of the preliminary traffic and revenue study.

4. For purposes of this preliminary analysis, cash and electronic Toll collection options would be available at all Toll plaza locations, although it is assumed that at least 75% of users would use electronic Toll collection.

5. Economic growth in the project study area and associated travel demand will occur as represented in the Metrolina Regional Travel Demand Model used in this analysis.

6. For purposes of this study, it was assumed that inflation will average 2.5% per year.

7. The Toll road alternatives will be signed and promoted effectively to encourage maximum usage.

8. Motor fuel will remain in adequate supply and no national or regional emergency would arise that would abnormally restrict the use of motor vehicles.

Any significant departure from these basic assumptions could materially affect traffic and revenue potential on the proposed Monroe Connector/Bypass.

ROADWAY IMPROVEMENTS

Motorist's travel behavior and number of vehicles that would use the proposed Monroe Connector/Bypass in the future would be heavily influenced by the operating conditions of other area roadways. The process of transportation project development and funding makes it impossible to know with certainty which proposed transportation improvements will be implemented and when. However, it is important that reasonable assumptions are made regarding future improvements, since such improvements could have a considerable effect on the number of vehicles using the Monroe Connector/Bypass.

The MRTDM contains all future highway improvements listed in the MPO's fiscally constrained 2030 transportation improvement program in effect at the time of the preliminary study. A list of the planned road improvements that could affect traffic volumes on the Monroe Connector/Bypass is provided in Exhibit 5. The

improvements that would have the most impact on the operations of the Monroe Connector/Bypass and the year that they are programmed in the MRTDM include:

- **Model Year 2013**
  - Monroe Connector/Bypass;
  - Widening of US 601 north and south of US 74;
- **Model Year 2020**
  - Widening of US 74 from I-485 towards Charlotte, I-485 from US 74 to Albemarle Road;
- **Model Year 2030**
  - New Road – Monroe Northern Loop from Dickerson Road to US 601, Eastern Circumferential from Lawyers Road to NC 24/27; and
  - Widening of US 601 north of Monroe, I-485 from I-77 to NC 16.

Several of these highway improvements would either compete directly with or complement the proposed Monroe Connector/Bypass. For example, the construction of the Monroe Bypass from US 74 to west of US 601 either as a free road or a Toll road is critical for the Monroe Connector. The widening of US 74 inside I-485 will make US 74 more attractive and could entice drivers to stay on US 74 through Monroe rather than using the Toll road. The widening of I-485 and US 601 will provide improved access to the Toll road.

Exhibit 5: Major Highway Improvements Contained in Metrolina Regional Travel Demand Model

Name and Location	Project Description	Model Year
Monroe Connector/Bypass	US 74 in Marshville to I-485, New Freeway (4)	2014
US 601 (Pageland Highway)	US 74 (Roosevelt Boulevard) to South Carolina Line, Widening (4)	2014
Martin Luther King Jr. Boulevard	NC 200 (Lancaster Highway) to Charlotte Avenue, New Road (2)	2014
Starlings Road	Old Monroe Road to US 74	2014
NC 51 (Rock Hill Pineville Road)	Downs Circle To South Carolina State Line, Widening (4)	2014
US 601	US 74 (Roosevelt Boulevard) to Monroe Bypass, Widening (4), Median	2014
US 74 Expressway (Independence Boulevard)	Sharon Amity Road to I-485 (6 Lanes plus HOV or Busway)	2020
NC 51 (Matthews-Mint Hill Road)	Matthews township Parkway to Lawyers Road, Widening (4), Median, Bike Lanes	2020

Name and Location	Project Description	Model Year
Independence Point Pkwy	Matthews-Mint Hill Road To Campus Ridge Road, New Road (2), Median, Bike Lanes	2020
Idlewild Road	Mecklenburg/Union County line to Stevens Mill Road, Widening (4), Median, Bike Lanes	2020
John Street/Old Monroe Road	I-485 to Indian Trail Road, Widening (4), Median, Bike Lanes	2020
Old Monroe Road	Indian Trail Road to Wesley Chapel-Stouts Road, Widening (4), Median, Bike Lanes	2020
Independence Point Parkway	Windsor Square Drive to NC 51, New Road (2)	2020
Chestnut Lane/US 74 Connector	Old Monroe Road to US 74, New Road (4), Median	2020
Indian Trail Road	Old Monroe Road to US 74 (Independence Boulevard), Widening (3), Bike Lanes	2020
I-485	US 74 to Albemarle Road, Widening (6)	2020
Monroe Northern Loop	Dickerson Boulevard to US 601 N, New Road (4)	2030
Eastern Circumferential	Idlewild Road to US 74, Widening (4)/New (4), Median, Bike Lanes	2030
NC 84	NC 84 Relocation to Waxhaw-Indian Trail Road, Widening (4), Median, Bike Lanes	2030
Wesley Chapel-Stouts Road/Potter Road	Old Charlotte Hwy. to NC 84, Widening (4), Median, Bike Lanes	2030
Wesley Chapel-Stouts Road	US 74 to Old Charlotte Highway, Widening (4), Median, Bike Lanes	2030
US 601 (Concord Highway)	Ridge Road to Lawyers Road, Widening (4), Median, Bike Lanes	2030
Monroe Connector/Bypass	US 74 in Marshville to I-485, New Freeway (4)	2030
NC 218 (Fairview Road)	Brief Road to US 601, Widening (4), Median, Bike Lanes	2030
Chestnut Lane	Matthews-Weddington Road to Old Monroe Road, New Road (4), Widening (4), Bike Lanes	2030
I-485	NC 16 (Providence Road) to US 74, Widening (6)	2030
Bryant Farms Road	Johnson Road to Community House Road, New Road (4), Median, Bike Lanes	2030
Secrest Avenue Extension	Secrest Avenue to Olive Branch Road, New Road (5), Median, Bike Lanes	2030
Eastern Circumferential	Lawyers Road to NC 24/27 New Road (4), Median, Bike Lanes	2030
US 601 (Concord Highway)	Lawyers Road to Cabarrus County Line, Widening (4), Median, Bike Lanes	2030
Rocky River Road (Monroe)	Old Charlotte Highway to US 74, Widening (4), Median	2030
Rocky River Road (Monroe)	US 74 to Monroe Connector/Bypass, Widening (4), Median	2030

Name and Location	Project Description	Model Year
McKee Road	NC 16 to Tilley Morris Road, Widening (4), Median, Bike Lanes	2030
Charlotte Avenue	Dickerson Boulevard to Rocky River Road, Widening, Median, Bike Lanes	2030
NC 84 Relocation	NC 16 to NC 84, New Road (2) on 4 Lane ROW, Wide Outside Lanes	2030
Lawyers Road	NC 51 to I-485, Widening (4), Median, Bike Lanes	2030
Lawyers Road	McAlpine Creek to NC 51, Widening (4), Median, Bike Lanes	2030
McKee Road	Tilley Morris Road to Pleasant Plain Road, Widening (4), Median, Bike Lanes	2030
Faith Church Road Extension	US 74 to Monroe Road, New Road (2)	2030
Ardrey Kell Road Extension	NC 16 (Providence Road) to Tilley Morris Road, New Road (2), Median, Bike Lanes	2030
I-485	I-77 to NC 16 (Providence Road), Widening (6/8)	2030
Source: 2030 Long Range Transportation Plan Amendment, September, 2005		

The development of forecasted Average Annual Daily Traffic (AADT) volumes for existing US 74 and the "Y-lines" that intersect US 74 and the proposed Monroe Connector/Bypass relied primarily on linear regression applied to historical AADT data provided by NCDOT and collected from 1987-2006 (see Exhibit 3 above).

The trend analysis projects AADT volumes based on historical data along a linear trend (also known as the least squares method). Linear regression techniques provided data that was compared to model outputs to arrive at selected AADT volumes for sections of US 74 and all roads and streets that intersect US 74 and the proposed Monroe Connector/Bypass. Outputs from the applicable trend analyses are shown in the Appendices.

DESIGN DATA

The methodology used for estimating truck, DHV and directional percentages relied on data collected, compared to previous traffic forecast values. These values are shown in Exhibit 6.

DESIGN HOURLY VOLUME FACTORS

The design hourly volume factors (K-factors) shown in Exhibit 6 were derived primarily from turning movement count data collected in the spring of 2007. These factors were calculated from data collected at the major intersections in the study area. K-factors were also taken from the previous traffic forecasts mentioned above. Upon comparing the factors from all data sources available, final K-factors were selected.

The DHV on US 74 was estimated to be in the 8% range, while the DHV on the proposed Connector/Bypass was estimated to be slightly higher, in the 10% range. The traffic stream estimated to use the Connector/Bypass is assumed to consist primarily of commuting traffic, possibly traveling between Monroe and points east and Charlotte and points west daily on weekdays. DHV for the facilities that intersect US 74 and/or the Connector/Bypass vary in the 8% to 11% range.

DIRECTIONAL DISTRIBUTION FACTORS

Directional distribution factors (D-factors), also shown in Exhibit 6, were derived primarily from turning movement count data collected in the spring of 2007. Directional splits along existing US 74 were estimated in the range of 55% in the direction of peak flow, while estimates showed a slightly higher percentage, 60%, in the peak direction of flow on the Connector/Bypass. D-factors for the facilities that intersect US 74 and/or the Connector/Bypass vary in the 55% to 60% range.

HEAVY VEHICLE PERCENTAGES

The R-2559 traffic forecast prepared by NCDOT in November 2004 indicated that "...current truck percentages on *existing* US 74 range from...11 to 15 percent in the .... forecast area." "Truck percentages on the *proposed* ...US 74 *bypass* are assumed to be slightly higher than on existing US 74 since the proposed section is anticipated to predominately carry long distance traffic including the trucks currently travelling on US 74." This forecast provides clear justification to act as a strong reference for the current "Build" forecasts. "No-Build" forecasts for this project follow from the same data source. AADT's vary between the proposed Connector/Bypass and existing US 74 between "Toll" and "Non-Toll" alternatives. It follows that truck percentages are expected to increase on the Connector/Bypass in "Toll" scenarios as the total volumes decreases. Truck percentages along the intersecting streets and roads varied, with higher percentages estimated along major roads such as US 601 and NC 200.

EXHIBIT 6 – DIRECTIONAL DISTRIBUTION (D), DESIGN HOURLY VOLUME (K), and HEAVY VEHICLE PERCENTAGES (Dual and TTST) FACTORS (Build Scenarios)

Location	D - Directional Distribution							K- Design Hour Factor							Truck Percentages - Duals/TTST					
	A Past Forecast (R-2559)	*B Past Forecast (R-3329)*	*C Vehicle Class Counts*	*D Past Forecast (U-3825)*	*NCDOT Trend Historic*	*E 2007 TMC*	*Selected Value*	*A Past Forecast (R-2559)*	*B Past Forecast (R-3329)*	*C Vehicle Class Counts*	*D Past Forecast (U-3825)*	*NCDOT Trend Historic*	*E 2007 TMC*	*Selected Value*	*A Past Forecast (R-2559)*	*B Past Forecast (R-3329)*	*C Vehicle Class Counts*	*D Past Forecast (U-3825)*	*E 2007 TMC[1]*	*Selected Value*
Monroe Bypass west of Rocky River Rd	60%						60%	11%						10%	7% / 13%					8% / 15%
Monroe Bypass west of US 601	60%						60%	11%						10%	7% / 13%					8% / 15%
Monroe Bypass east of US 601	60%						60%	11%						10%	7% / 13%					8% / 15%
Monroe Bypass west of NC 200	60%						60%	11%						10%	7% / 13%					8% / 15%
Monroe Bypass east of NC 200	60%						60%	12%						10%	7% / 14%					8% / 16%
Monroe Bypass west of Austin Chaney Rd	60%						60%	12%						10%	7% / 14%					8% / 16%
Monroe Bypass east of Austin Chaney Rd	60%						60%	12%						10%	7% / 14%					8% / 16%
Monroe Bypass west of Forest Hills Rd	60%						60%	12%						10%	7% / 14%					8% / 16%
Monroe Bypass east of Forest Hills Rd	60%						60%	12%						10%	7% / 14%					8% / 16%
US 74 west of I-485		55%					55%		10%					8%		4% / 6%				4% / 6%
US 74 east of I-485		55%					55%		10%					8%		4% / 6%				4% / 6%
US 74 west of Stallings Rd		55%		55%		52%	55%		10%		10%			8%		4% / 6%		5% / 6%	7%	4% / 6%
US 74 east of Stallings Rd		55%		55%		52%	55%		10%		10%			8%		4% / 6%		5% / 6%	7%	4% / 6%
US 74 west of Indian Trail Rd North		55%				54%	55%		10%					8%		4% / 6%			8%	4% / 6%
US 74 east of Indian Trail Rd North		55%				55%	55%		10%					8%		4% / 6%			8%	4% / 6%
US 74 west of Unionville Indian Trail Rd		55%				55%	55%		10%					8%		4% / 6%			7%	4% / 6%
US 74 east of Unionville Indian Trail Rd		55%				56%	55%		10%					8%		4% / 6%			7%	4% / 6%
US 74 west of Faith Church Rd		55%				58%	55%		10%					8%		4% / 6%				4% / 6%
US 74 east of Faith Church Rd		55%				58%	55%		10%					8%		4% / 6%				4% / 6%
US 74 west of Wesley Chapel Stouts Rd		55%				56%	55%		10%					8%		4% / 6%				4% / 6%
US 74 east of Wesley Chapel Stouts Rd		55%				54%	55%		10%					8%		4% / 6%				4% / 6%
US 74 west of Chambers Dr		55%				52%	55%		10%					8%		4% / 6%				4% / 6%
US 74 east of Chambers Dr		55%				56%	55%		10%					8%		4% / 6%				4% / 6%
US 74 west of North Rocky River Rd	55%	55%				59%	55%	9%	10%					8%	5% / 8%	4% / 6%			9%	4% / 6%
US 74 east of North Rocky River Rd	55%	55%				53%	55%	9%	10%					8%	3% / 4%	4% / 6%			9%	4% / 6%
US 74 west of John Moore Rd						53%	55%							8%						4% / 6%
US 74 east of John Moore Rd						53%	55%							8%						4% / 6%
US 74 west of Carroll St						58%	55%							8%						4% / 6%
US 74 east of Carroll St						57%	55%							8%						4% / 6%

Location	D - Directional Distribution							K- Design Hour Factor							Truck Percentages - Duals/TTST					
	A Past Forecast (R-2559)	*B Past Forecast (R-3329)*	*C Vehicle Class Counts*	*D Past Forecast (U-3825)*	*NCDOT Trend Historic*	*E 2007 TMC*	*Selected Value*	*A Past Forecast (R-2559)*	*B Past Forecast (R-3329)*	*C Vehicle Class Counts*	*D Past Forecast (U-3825)*	*NCDOT Trend Historic*	*E 2007 TMC*	*Selected Value*	*A Past Forecast (R-2559)*	*B Past Forecast (R-3329)*	*C Vehicle Class Counts*	*D Past Forecast (U-3825)*	*E 2007 TMC[1]*	*Selected Value*
US 74 east of Roland Dr						52%	55%							8%						4% / 6%
US 74 west of Williams Rd Ext						64%	55%							8%						4% / 6%
US 74 east of Williams Rd Ext						65%	55%							8%						4% / 6%
US 74 west of Hanover Dr						56%	55%							8%						4% / 6%
US 74 east of Hanover Dr						56%	55%							8%						4% / 6%
US 74 west of Dickerson Blvd						55%	55%							8%						4% / 6%
US 74 east of Dickerson Blvd						58%	55%							8%						4% / 6%
US 74 west of Secrest Shortcut Rd/Mall Entrance						56%	55%							8%					6%	4% / 6%
US 74 east of Secrest Shortcut Rd/Mall Entrance						54%	55%							8%					6%	4% / 6%
US 74 west of Secrest Shortcut Rd							55%							8%						4% / 6%
US 74 east of Secrest Shortcut Rd							55%							8%						4% / 6%
US 74 west of Concord Ave							55%							8%						4% / 6%
US 74 east of Concord Ave							55%							8%						4% / 6%
US 74 west of US 601	55%						55%	9%						8%	3% / 4%					4% / 6%
US 74 east of US 601	60%						55%	9%						8%	2% / 3%					3% / 4%
US 74 west of Stafford St Ext						51%	55%							8%					8%	3% / 4%
US 74 east of Stafford St Ext						50%	55%							8%					8%	3% / 4%
US 74 west of Boyte St						51%	55%							8%						3% / 4%
US 74 east of Boyte St						52%	55%							8%						3% / 4%
US 74 west of Morgan Mill Rd	60%						55%	9%						8%	2% / 3%				9%	3% / 4%
US 74 east of Morgan Mill Rd	60%						55%	9%						8%	3% / 4%				9%	3% / 4%
US 74 west of Walkup Ave						51%	55%							8%					9%	3% / 4%
US 74 east of Walkup Ave						51%	55%							8%					9%	3% / 4%
US 74 west of South Sutherland Ave						51%	55%							8%						3% / 4%
US 74 east of South Sutherland Ave						52%	55%							8%						3% / 4%
US 74 west of Dove St							55%							8%						3% / 4%
US 74 east of Dove St							55%							8%						3% / 4%
US 74 west of East Franklin St						54%	55%							8%					9%	3% / 4%
US 74 east of East Franklin St						52%	55%							8%					9%	3% / 4%
US 74 west of US 601/Metro Medical Center Campus	60%					59%	55%	9%						8%	3% / 4%				9%	3% / 4%
US 74 east of US 601/Metro Medical Center Campus	55%					55%	55%	10%						8%	2% / 4%				9%	3% / 4%

Location	D - Directional Distribution							K- Design Hour Factor							Truck Percentages - Duals/TTST					
	A Past Forecast (R-2559)	*B Past Forecast (R-3329)*	*C Vehicle Class Counts*	*D Past Forecast (U-3825)*	*NCDOT Trend Historic*	*E 2007 TMC*	*Selected Value*	*A Past Forecast (R-2559)*	*B Past Forecast (R-3329)*	*C Vehicle Class Counts*	*D Past Forecast (U-3825)*	*NCDOT Trend Historic*	*E 2007 TMC*	*Selected Value*	*A Past Forecast (R-2559)*	*B Past Forecast (R-3329)*	*C Vehicle Class Counts*	*D Past Forecast (U-3825)*	*E 2007 TMC[1]*	*Selected Value*
US 74 east of Old Pageland Monroe Rd						53%	55%							8%						3% / 4%
US 74 west of South Bivens Rd						56%	55%							8%						3% / 4%
US 74 east of South Bivens Rd						58%	55%							8%						3% / 4%
US 74 west of Bivens St						54%	55%							8%						3% / 4%
US 74 east of Bivens St						55%	55%							8%						3% / 4%
US 74 west of South Main St						54%	55%							8%						3% / 4%
US 74 east of South Main St						56%	55%							8%						3% / 4%
US 74 west of Forest Hill School Rd	55%					51%	55%	10%						8%	2% / 4%				10%	3% / 4%
US 74 east of Forest Hills School Rd	60%					55%	55%	10%						8%	3% / 5%				10%	3% / 4%
I-485 north of US 74			58%				55%			10%				10%			7% / 3%			7% / 3%
I-485 south of US 74			59%				55%			8%				10%			8% / 3%			10%/5%
Stallings Rd north of US 74			61%	60%		58%	60%			10%	10%			11%			12%/ 1%	3% / 3%	1%	3% / 1%
Stallings Rd south of US 74				60%		52%	55%				10%			9%				3% / 3%	5%	3% / 1%
Indian Trail Rd North north of US 74						53%	65%							9%					2%	8% / 1%
Indian Trail Rd North south of US 74						51%	55%							8%					2%	8% / 1%
Unionville Indian Trail Rd north of US 74						55%	65%							8%					2%	5% / 1%
Unionville Indian Trail Rd south of US 74						64%	65%							8%					2%	5% / 1%
Faith Church Rd north of US 74						58%	60%			10%				10%						3% / 1%
Harris Teeter Distribution Center south of US 74			59%			74%	60%			8%				8%			16%/ 0%			16%/1%
Wesley Chapel Stouts Rd north of US 74						58%	60%							9%						3% / 1%
Wesley Chapel Stouts Rd south of US 74						54%	55%							9%						3% / 1%
Chambers Dr north of US 74						77%	75%							9%						3% / 1%
North Rocky River Rd north of US 74	60%					60%	60%	11%						9%	2% / 1%				4%	3% / 1%
North Rocky River Rd south of US 74	55%					66%	65%	11%						9%	2% / 1%				6%	3% / 1%
Fowler Secrest Rd north of US 74						58%	60%			9%				9%						3% / 1%
John Moore Rd South of US 74						63%	60%							9%						3% / 1%
Rolling Hills Dr north of US 74						61%	60%			9%				8%						3% / 1%
Carroll St south of US 74						52%	55%							8%						3% / 1%
Round Table Rd north of US 74						51%	55%			11%				11%						3% / 1%
Roland Rd south of US 74						53%	55%							9%						2% / 1%
Walmart/Lowes western entrance north of US 74						58%	60%							9%						2% / 1%

Location	D - Directional Distribution							K- Design Hour Factor							Truck Percentages - Duals/TTST					
	A Past Forecast (R-2559)	*B Past Forecast (R-3329)*	*C Vehicle Class Counts*	*D Past Forecast (U-3825)*	*NCDOT Trend Historic*	*E 2007 TMC*	*Selected Value*	*A Past Forecast (R-2559)*	*B Past Forecast (R-3329)*	*C Vehicle Class Counts*	*D Past Forecast (U-3825)*	*NCDOT Trend Historic*	*E 2007 TMC*	*Selected Value*	*A Past Forecast (R-2559)*	*B Past Forecast (R-3329)*	*C Vehicle Class Counts*	*D Past Forecast (U-3825)*	*E 2007 TMC[1]*	*Selecte Value*
Walmart/Lowes eastern entrance north of US 74						52%	55%							10%						4% / 1%
Hanover Dr south of US 74			52%			52%	55%			9%				9%			4% / 0%			4% / 1%
Kmart Entrance north of US 74						54%	55%							10%						3% / 1%
Dickerson Blvd south of US 74			64%			61%	60%			8%				8%			8% / 2%			8% / 2%
Secrest Shortcut Rd north of US 74						52%	55%							8%					2%	3% / 1%
Mall Entrance south of US 74						54%	55%							10%					1%	3% / 1%
Secrest Shortcut Rd south of US 74			61%				60%			9%				9%			7% / 1%			7% / 1%
Concord Ave north of US 74							55%							8%						6% / 1%
Concord Ave south of US 74							55%							8%						6% / 1%
US 601 north of US 74	55%						55%	10%						8%	6% / 8%					8% / 7%
NC 200 south of US 74	65%						55%	10%						8%	3% / 3%					8% / 7%
Stafford St north of US 74						53%	55%							9%					2%	2% / 1%
Stafford St Ext south of US 74						60%	60%							9%					1%	2% / 1%
Shopping Center Access north of US 74						68%	70%							14%						2% / 1%
Boyte St south of US 74						59%	60%							14%						2% / 1%
NC 200 north of US 74	60%						60%	11%						8%	6% / 2%				5%	10% / 3%
Morgan Mill Rd south of US 74	55%		58%				55%	9%		8%				8%	3% / 1%		10%/ 3%		1%	10% / 3%
Walkup Ave north of US 74						57%	55%							8%					3%	3% / 1%
Walkup Ave south of US 74						52%	55%							8%					2%	3% / 1%
South Sutherland Ave north of US 74						51%	55%							10%						5% / 1%
South Sutherland Ave south of US 74						54%	55%							10%						5% / 1%
Venus St north of US 74							55%			9%				8%						3% / 1%
Dove St south of US 74							65%							7%						3% / 1%
Shopping Center Access north of US 74						57%	55%							10%					0%	4% / 1%
East Franklin St south of US 74			55%			51%	55%			8%				9%			4% / 1%		1%	4% / 1%
Metro Medical Center Campus north of US 74						100%	65%							8%					0%	3% / 1%
US 601 south of US 74	65%					66%	65%	10%						8%	2% / 4%				13%	14%/13%
South Secrest Ave north of US 74						71%	70%							10%						2% / 1%
Old Pageland Monroe Rd south of US 74						67%	65%							10%						2% / 1%
South Bivens Rd north of US 74						57%	55%							9%						2% / 1%
Bivens St north of US 74						60%	60%			9%				9%						2% / 1%
Food Lion Access south of US 74						60%	60%							9%						3% / 1%
South Main St north of US 74						55%	55%							9%						3% / 1%
South Main St south of US 74						52%	55%							9%						3% / 1%
Forest Hills School Rd north of US 74	75%					63%	55%	25%						9%	2% / 1%				0%	3% / 1%
Forest Hills School Rd south of US 74	75%					73%	50%	17%						6%	1% / 1%				0%	12% / 1%

A - Data taken from NCDOT Forecast previously prepared for this project dated November 2004

B - Data taken from NCDOT Forecast for R-3329 dated September 2005

C - Data taken from Vehicle Classification Counts dated April 2007

D - Data taken from NCDOT Forecast for U-3825 dated March 2005

E - Data derived from turning movement count field data taken for project in March/April 2007

1 - TTST and Duals were not counted separately

- *June 2, 2008 Revision to the Western Terminus tie-in and the partial interchange at Union West Boulevard.*

During the design process, a revised configuration consisting of elimination of direct access from Union West Boulevard to the proposed Monroe Connector / Bypass was submitted and added to this forecast report. With a new Matthews Auto Center, consisting of ten (10) auto dealerships and office space, proposed at the intersection of McKee Road and US 74, access from McKee Road to US 74 became a priority. The revised design includes eastbound and westbound frontage roads parallel to US 74 to provide access to McKee Road and Stallings Road and will intersect the Monroe Connector / Bypass near its western terminus at US 74. This section summarizes the methodology and forecast development for this scenario.

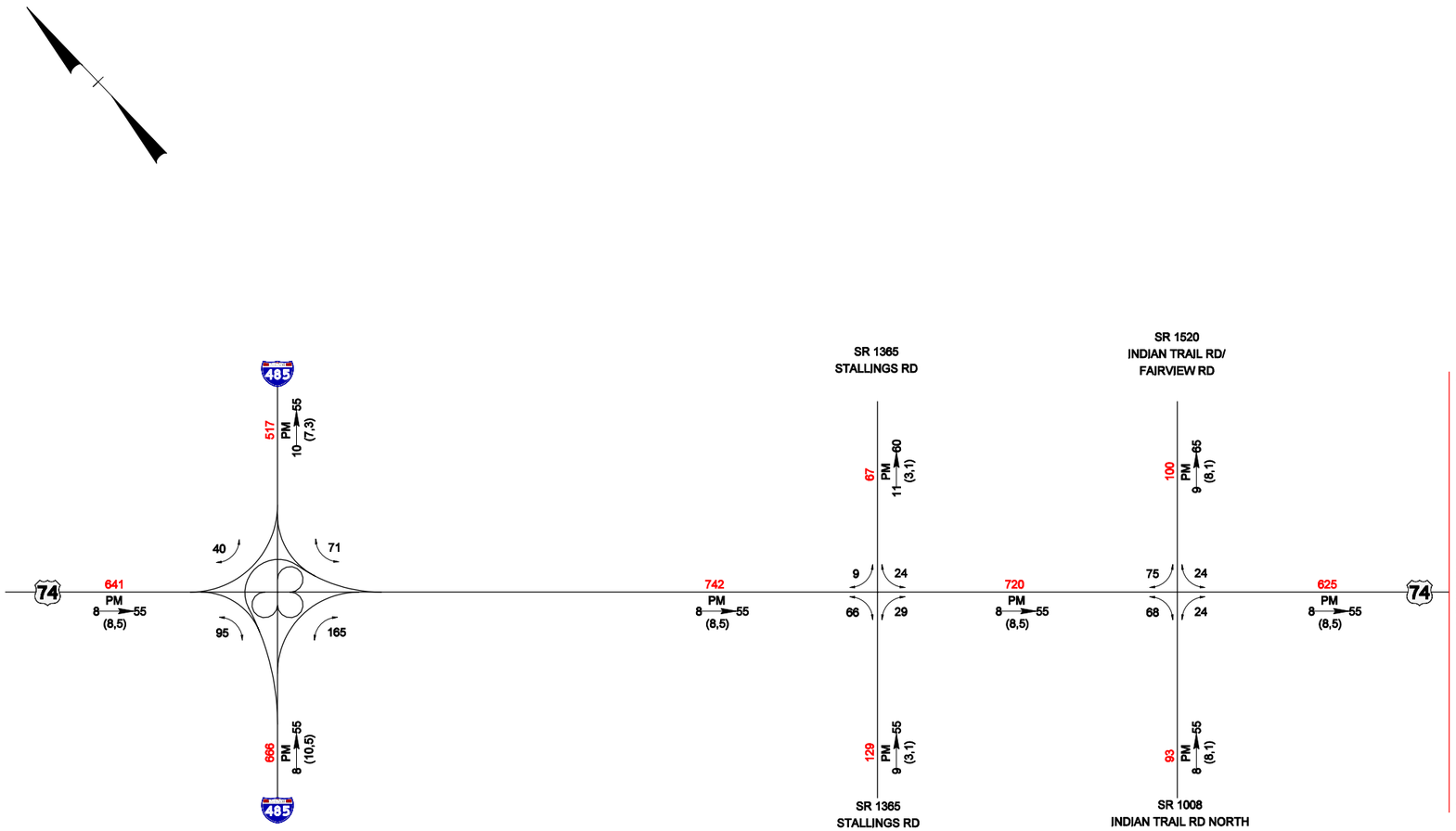
ITE Trip Generation methodology was used to determine that ten (10) 50,000 square foot auto dealerships will generate approximately 16,000 daily trips (ADT) on McKee Road. It was assumed that these volumes would not vary by seasons, therefore 16,000 was assumed as an AADT. The MRTDM predicted a "background" volume of 1,600 in 2035 on McKee Road. It was assumed that ten (10) percent of this volume would travel to and from the south; therefore ninety (90) percent of these trips was selected and shown as the AADT on McKee Road for 2035 in each alternative. Similarly, AADT's diverting from US 74 to each frontage road were predicted using previous quadrant turning movements at Stallings Road, coupled with trip generation from the Auto Center and land uses to the north along McKee Road. Volume previously forecasted for Union West Boulevard was added to AADT on Stallings Road and distributed accordingly.

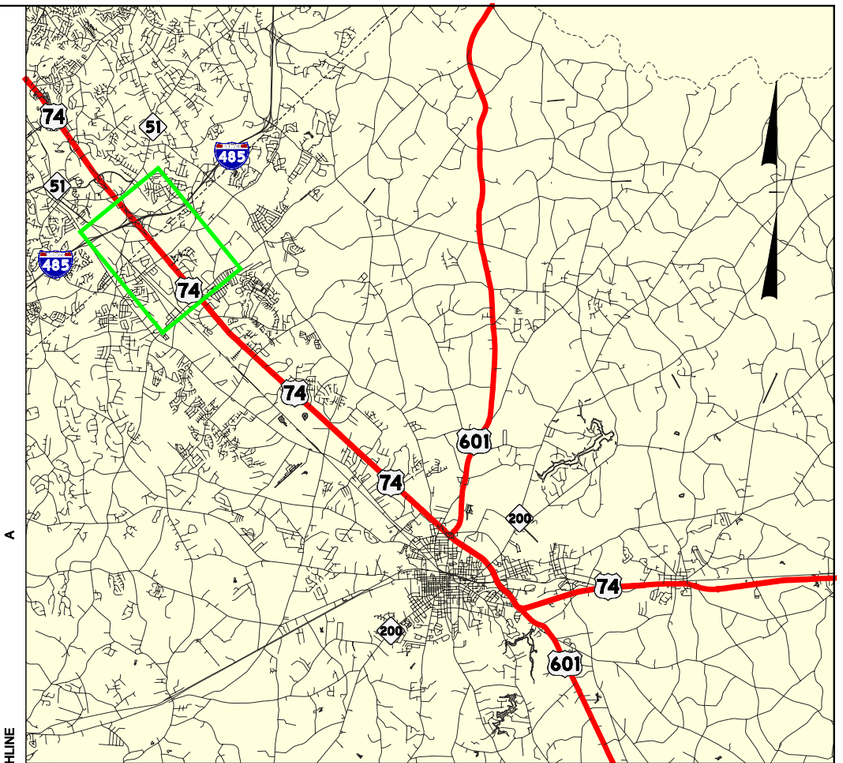
Land uses along US 74 and McKee Road were reviewed to predict approximate heavy vehicles percentages for McKee Road and the frontage roads. The new Auto Center will generate TTST units delivering new cars to the center. An existing warehouse and trailer storage facility exists along the north side of US 74. An estimate of TTST and Dual Trucks for these facilities yielded values of 2% Duals and 4% TTST for both frontage roads, while the predicted values of 2% Duals and 4% TTST on the south leg of McKee Road and 3% Duals and 1% TTST on the north leg of McKee Road were determined.

EXHIBITS 7-12 - TRAFFIC FLOW MAPS

The quadrant movements, AADT volumes and design data for all scenarios are shown concurrently in Exhibits 7-12.

Exhibit 7
2008 No-Build Traffic Forecast Figures





2008 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 1

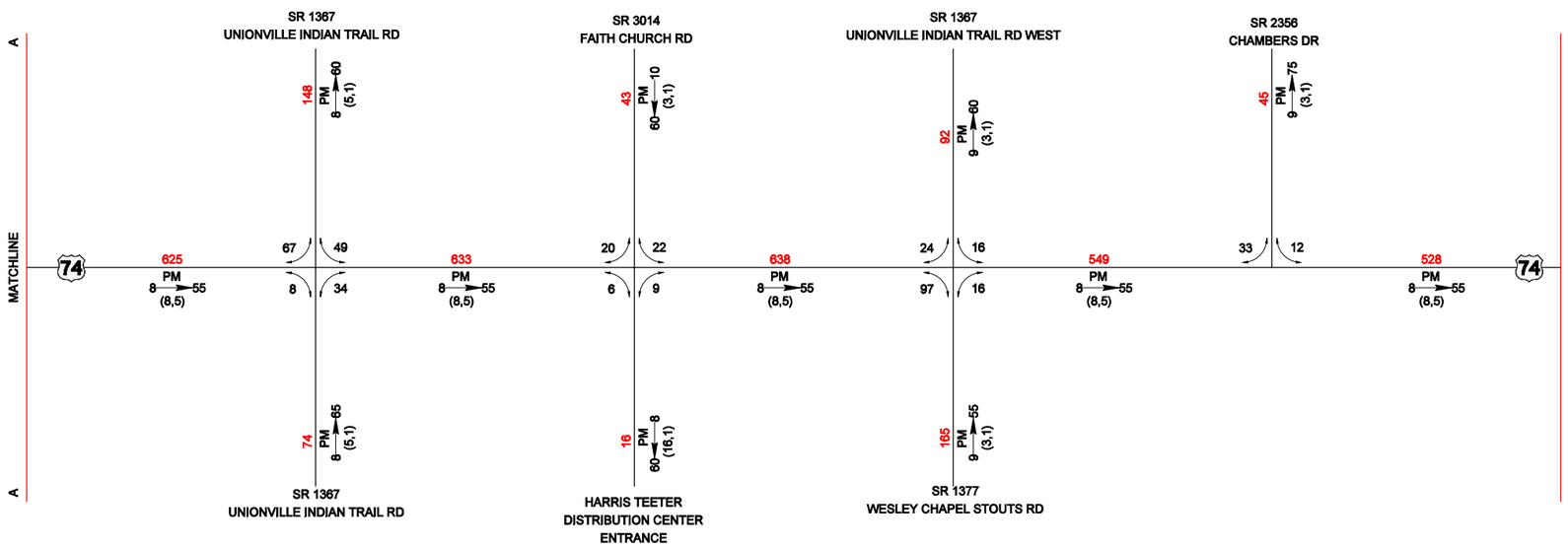
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

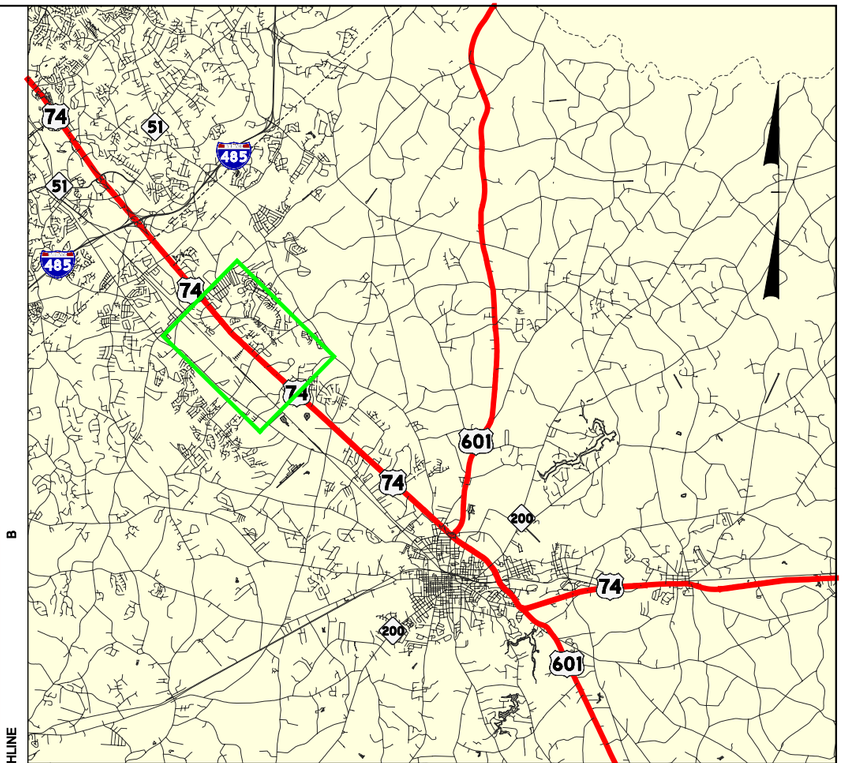
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 2

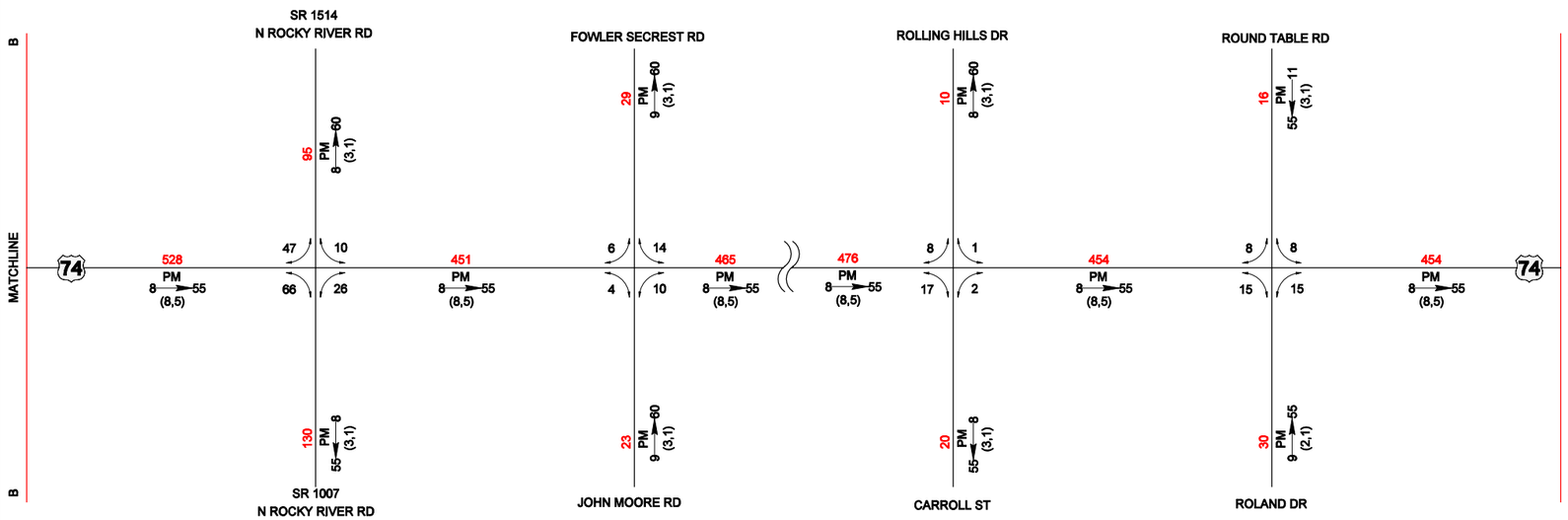
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

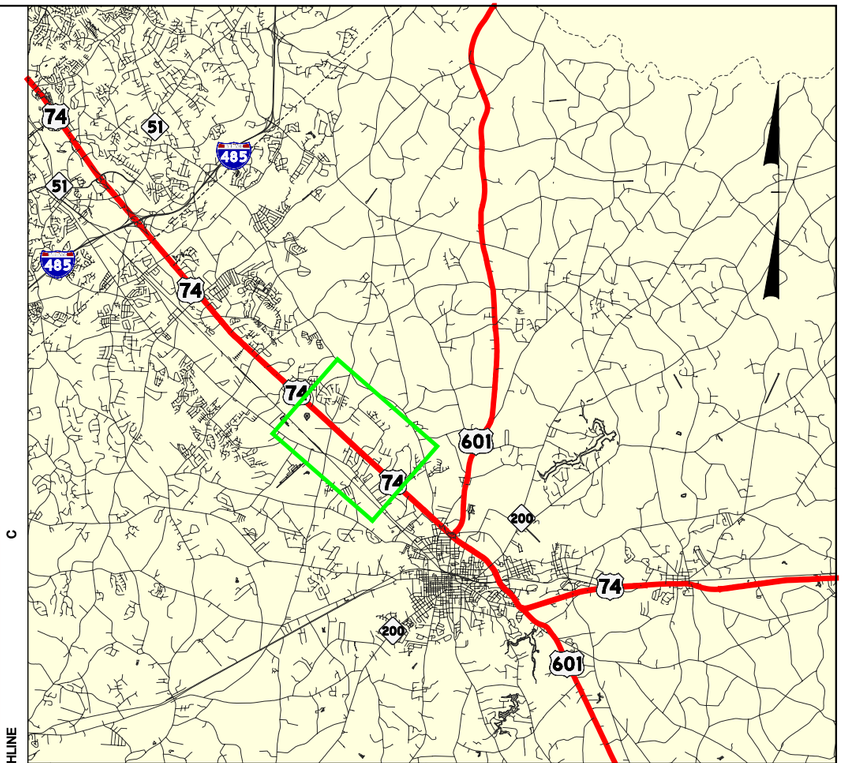
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 3

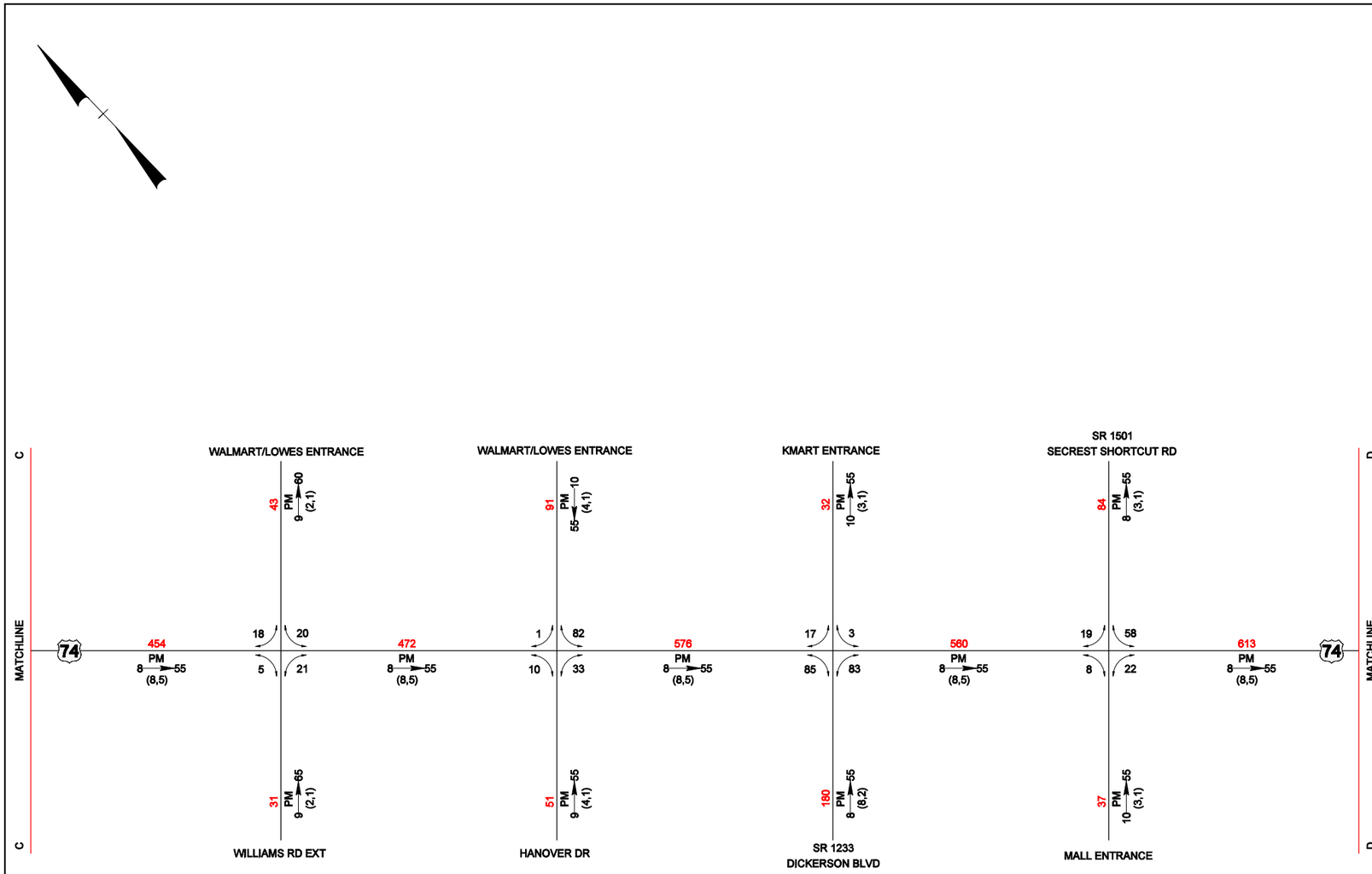
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

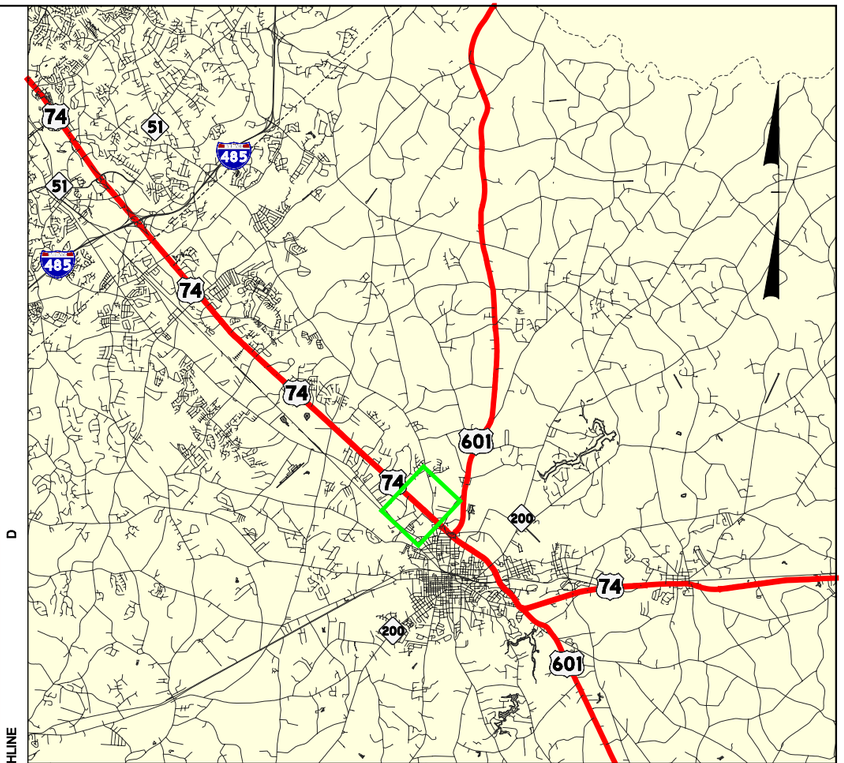
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 4

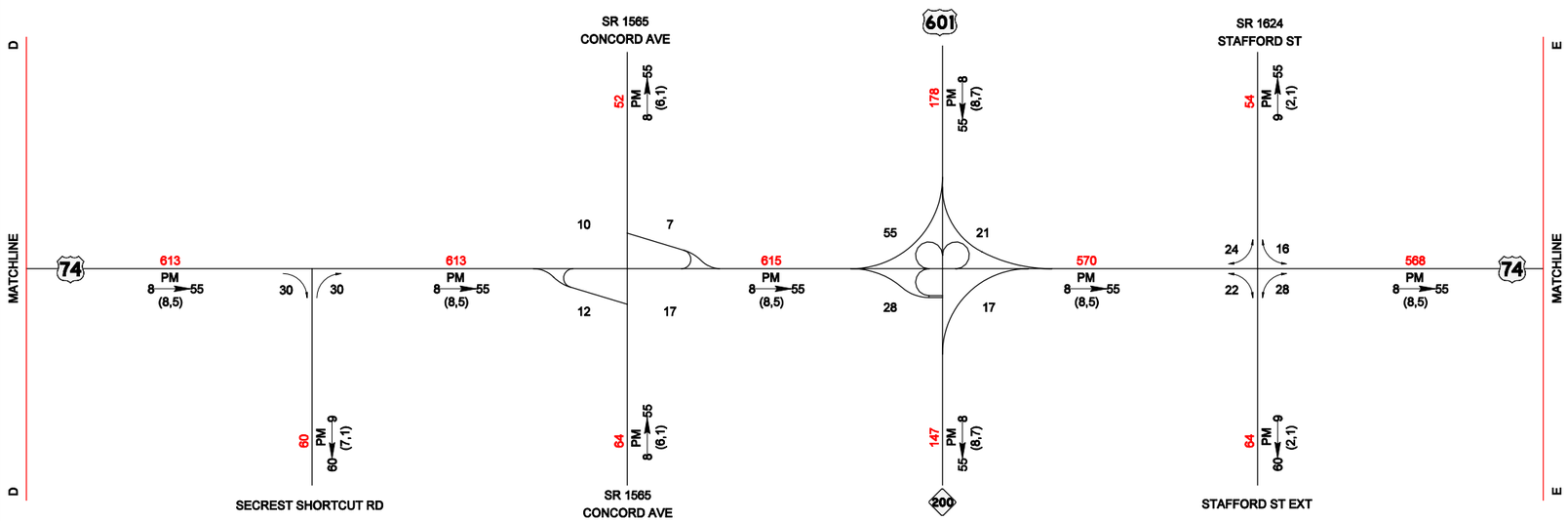
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

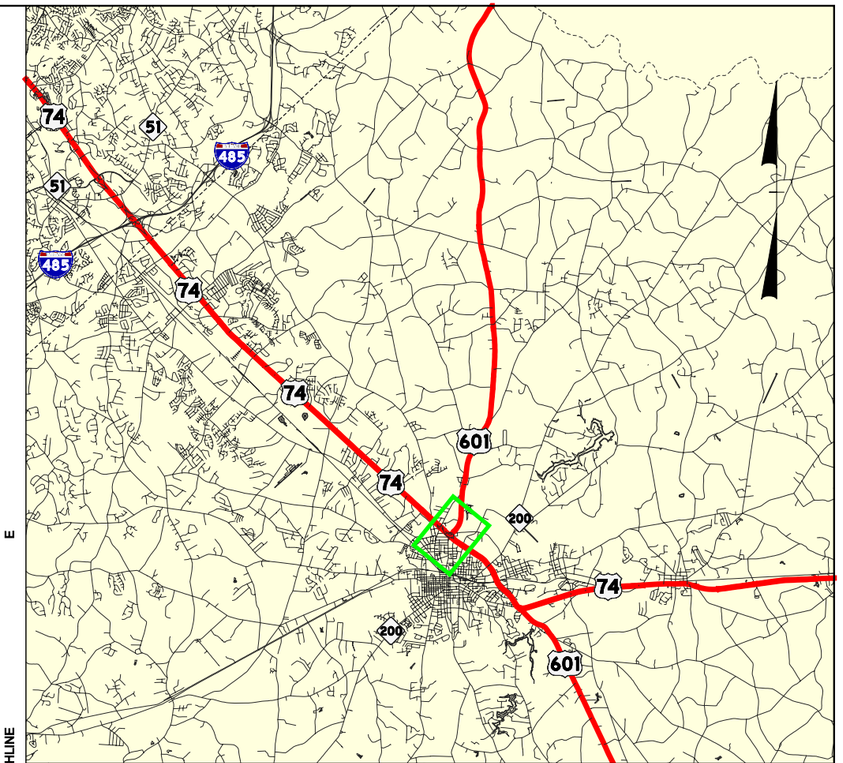
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 5

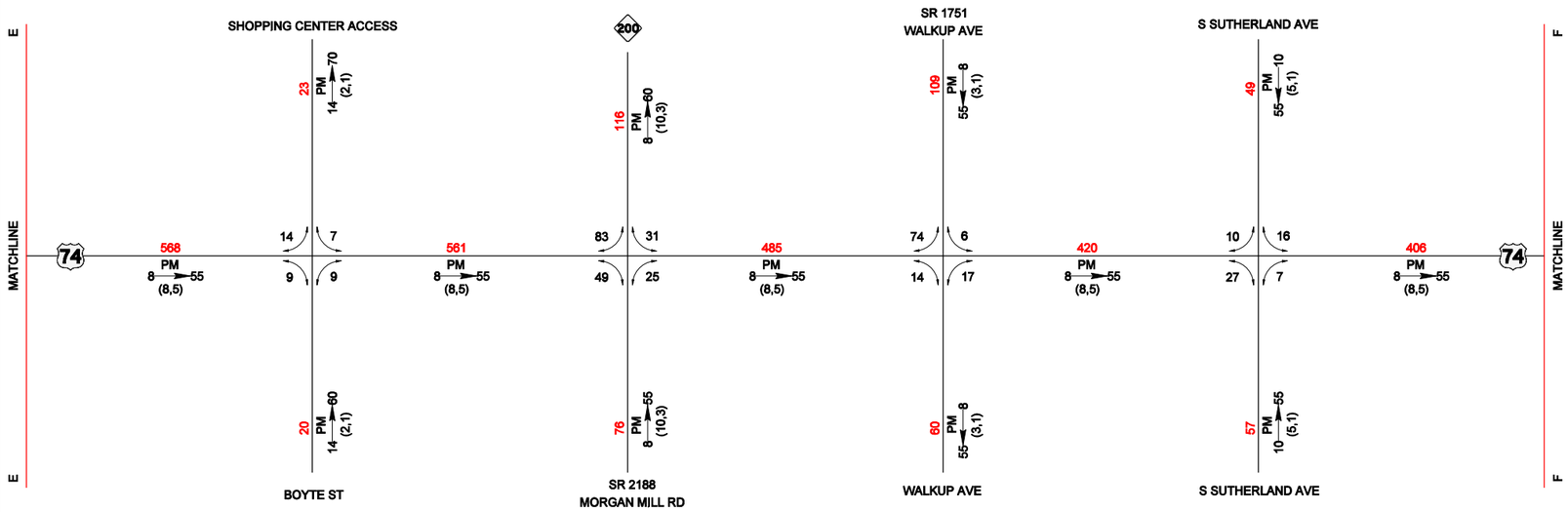
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

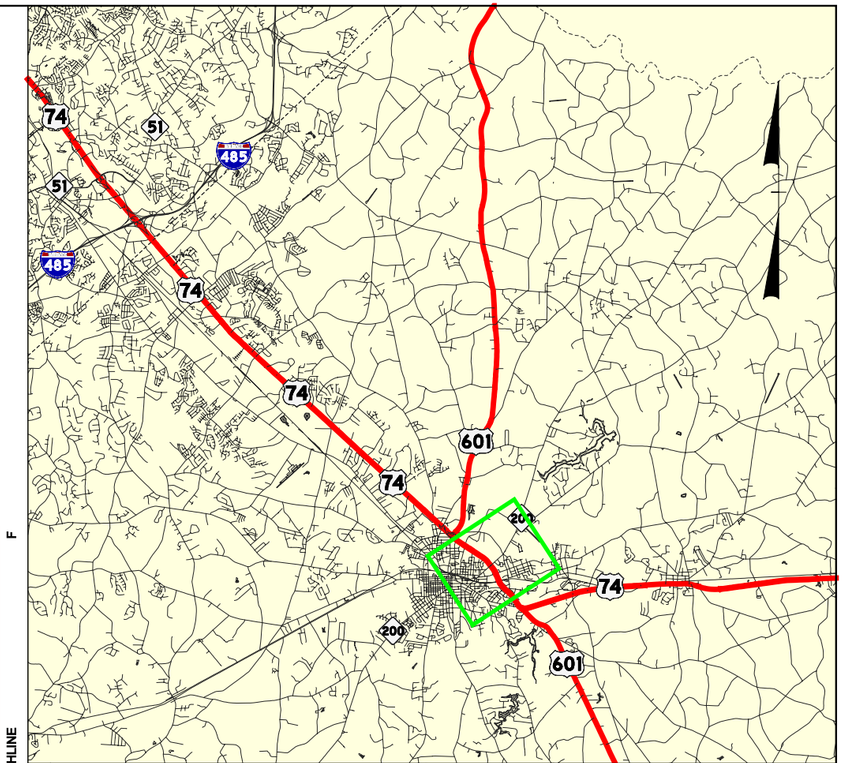
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 6

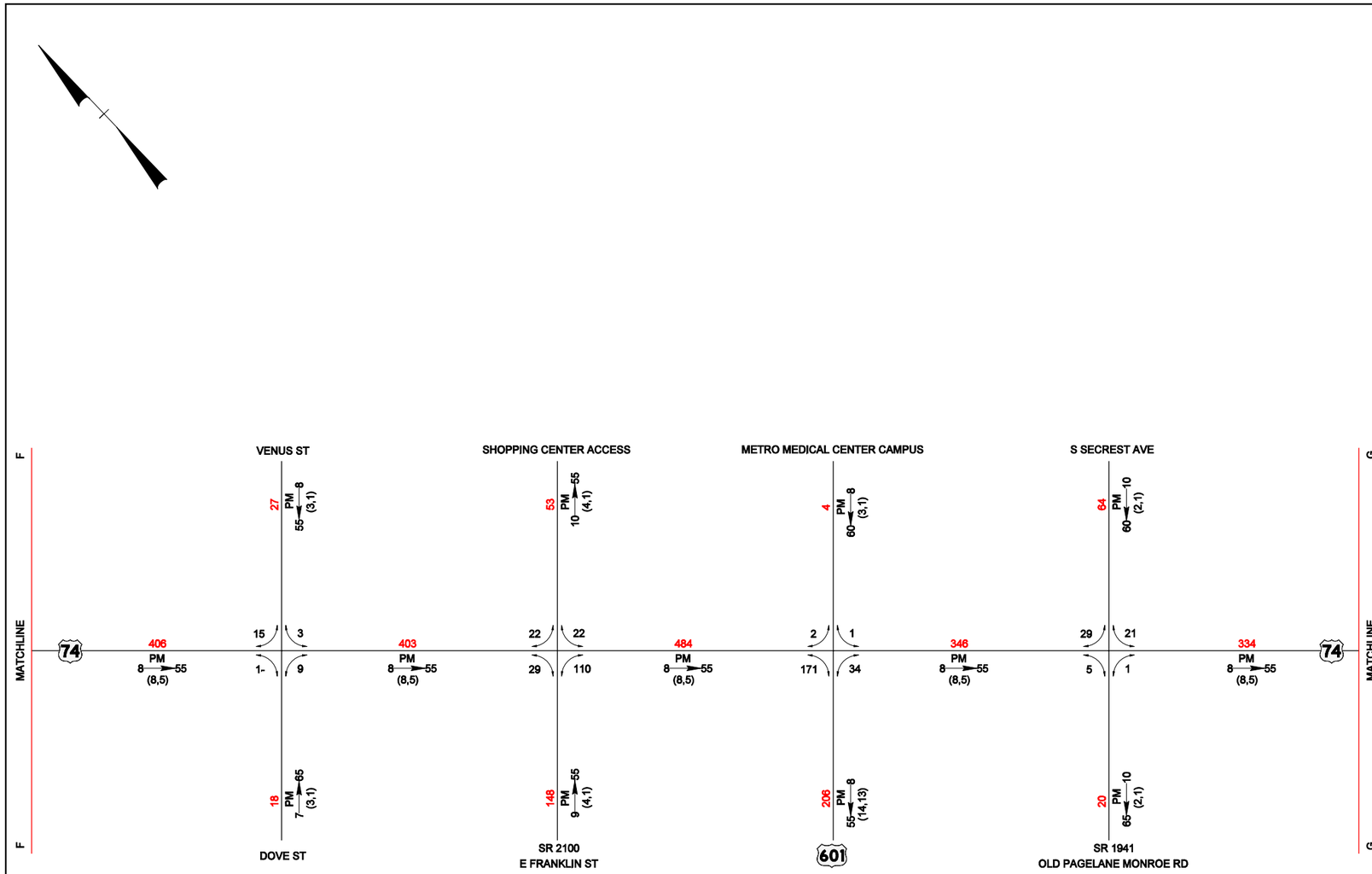
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

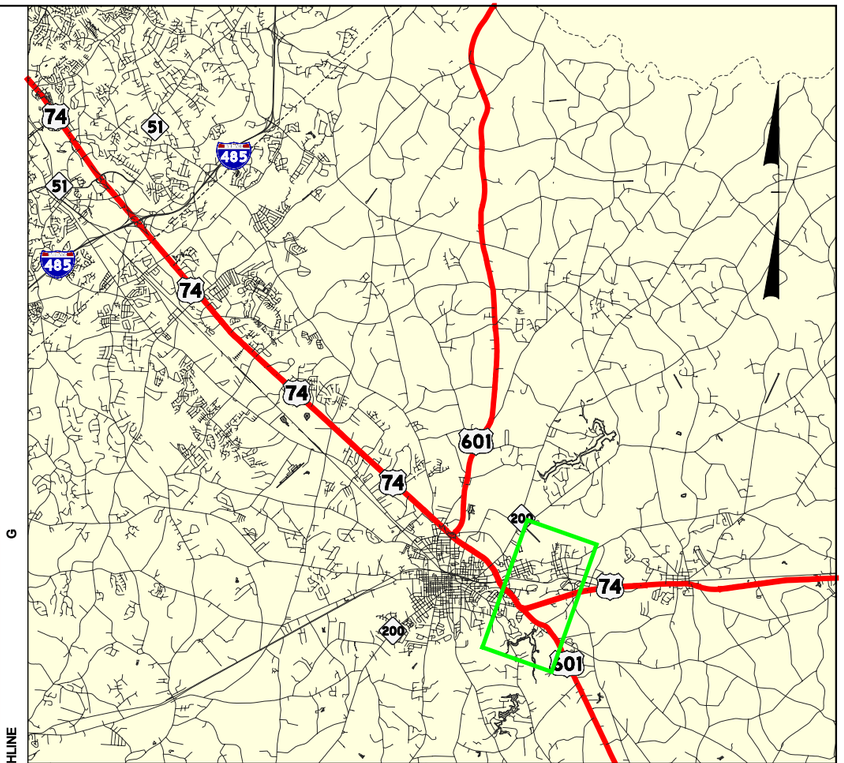
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 7

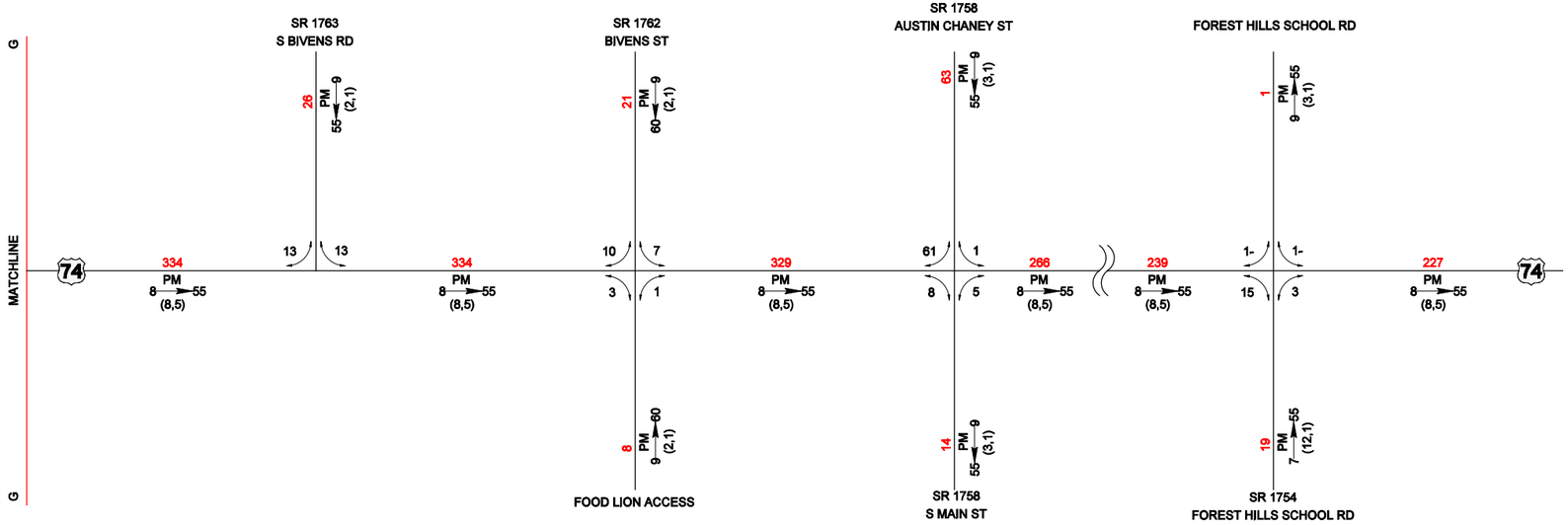
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

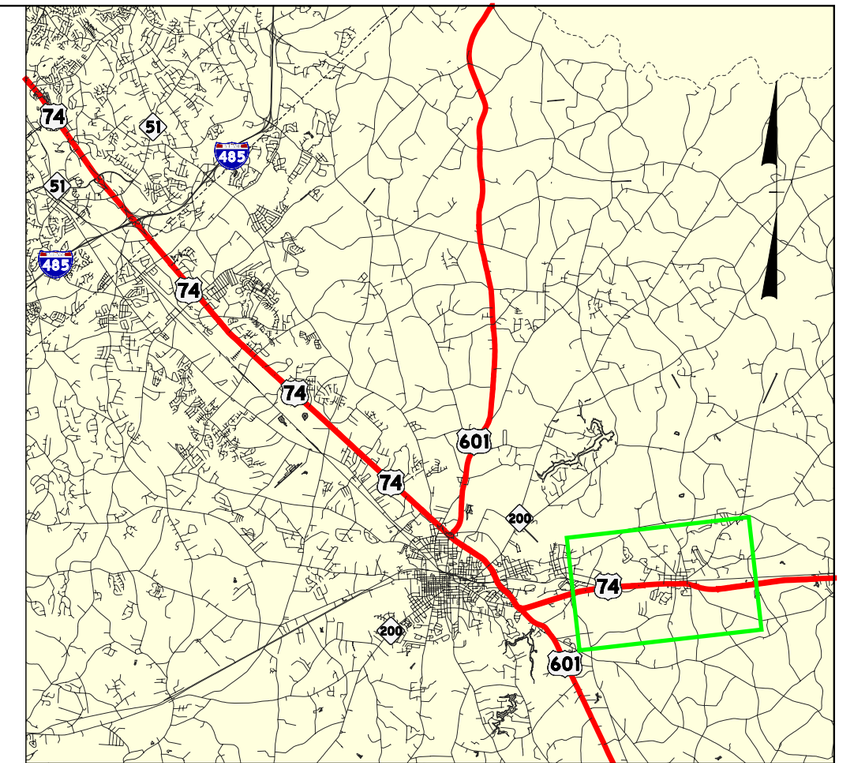
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

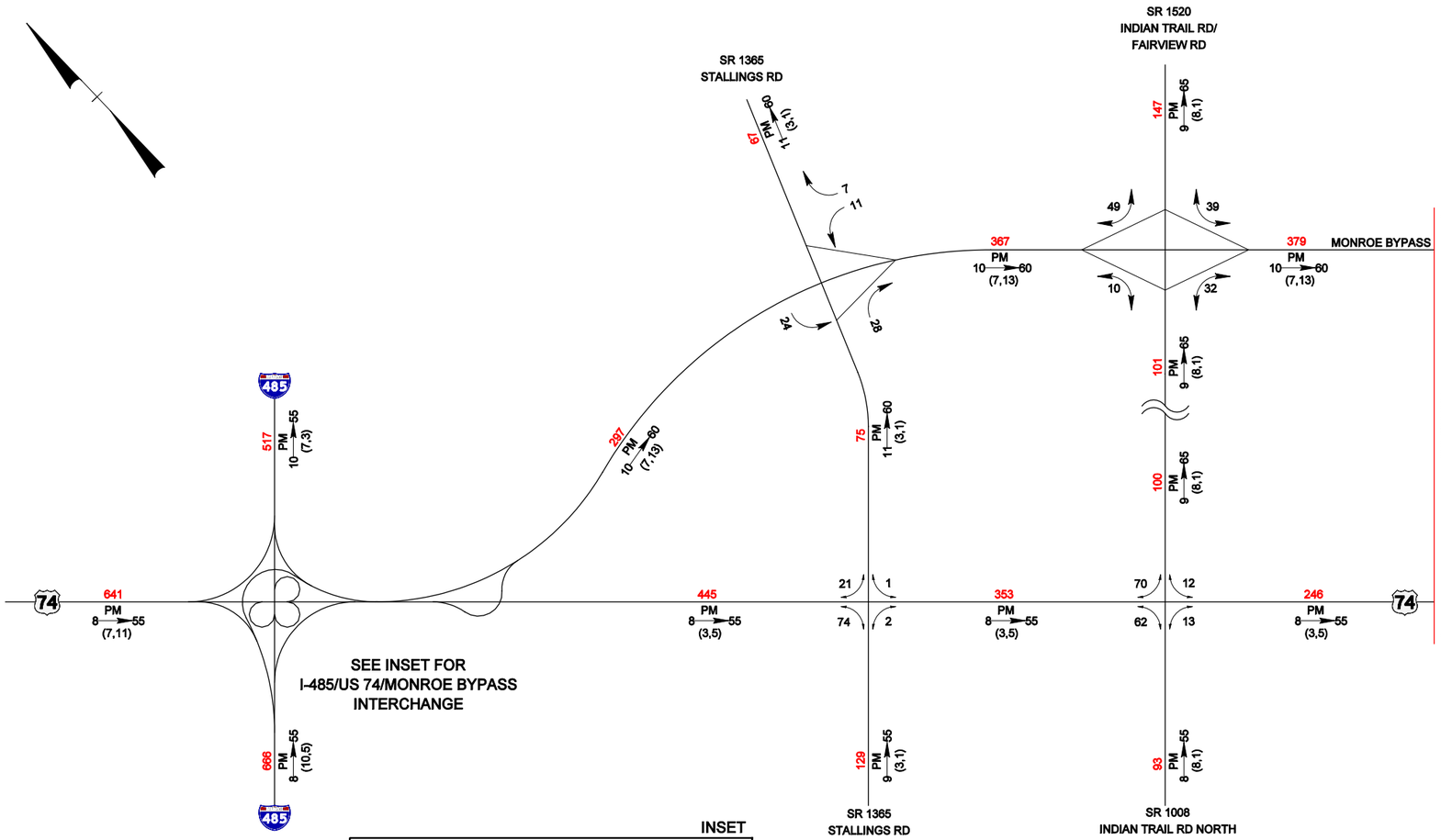
TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 8
DIVISION: 10 / DATE: April 2008	PREPARED BY: Wilbur Smith Associates

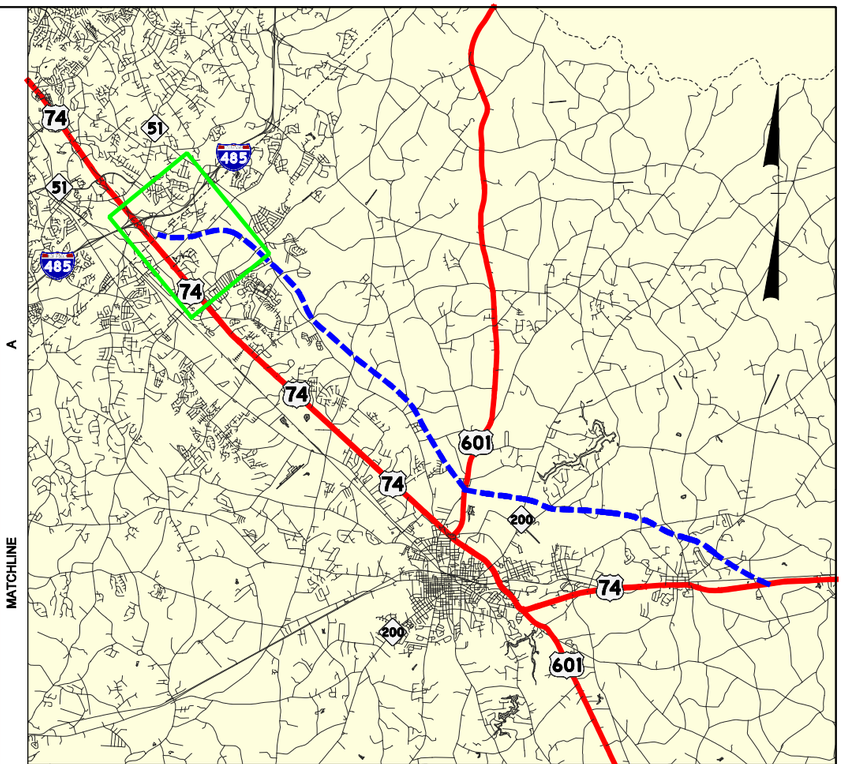
LEGEND

DHV $\xrightarrow[\text{(d, t)}]{\text{PM}}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)
###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)

Exhibit 8
2008 Build Non-Toll Traffic Forecast Figures





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

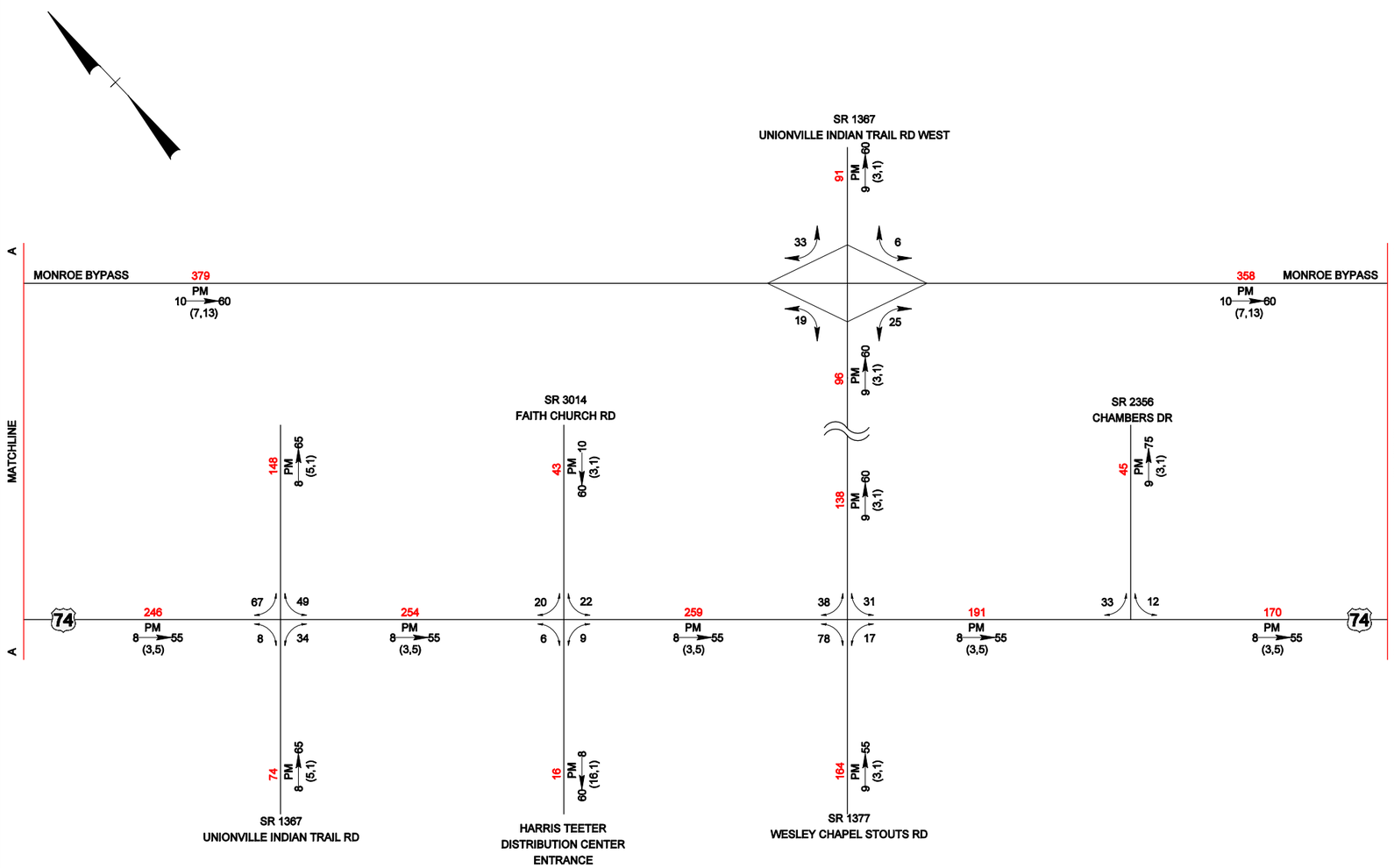
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 1
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

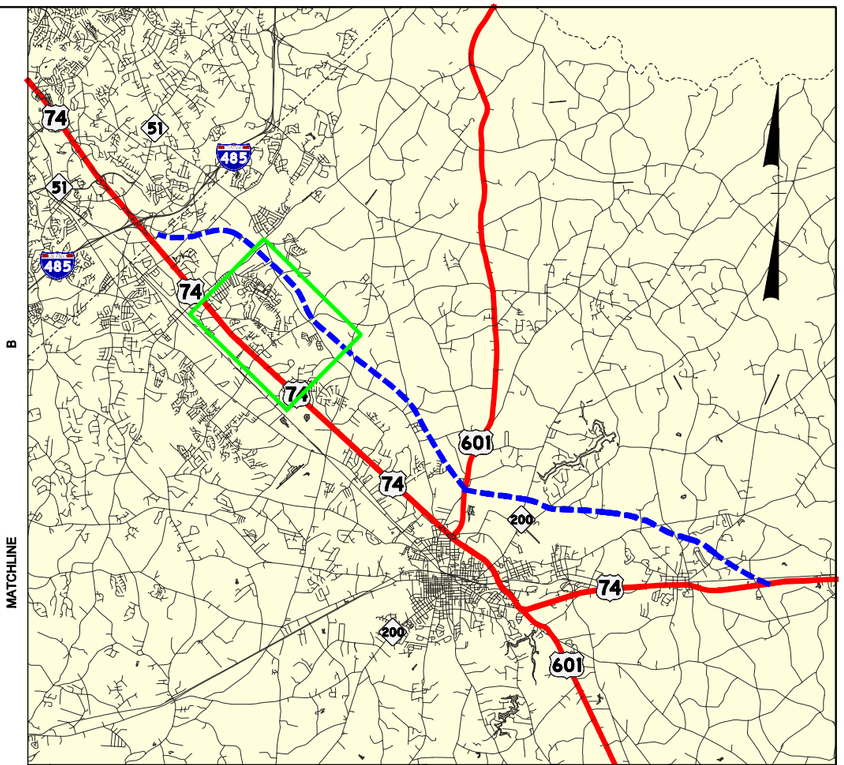
LEGEND

DHV PM → D (d, t)

DHV Design Hourly Volume (%) = K_{30}
PM Peak Period
D Peak Hour Directional Split (%)
→ Indicates Direction of D
(d, t) Duals, TTST (%)

No. of Vehicles Per Day (VPD) in 100s
1- Less than 50 VPD
Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

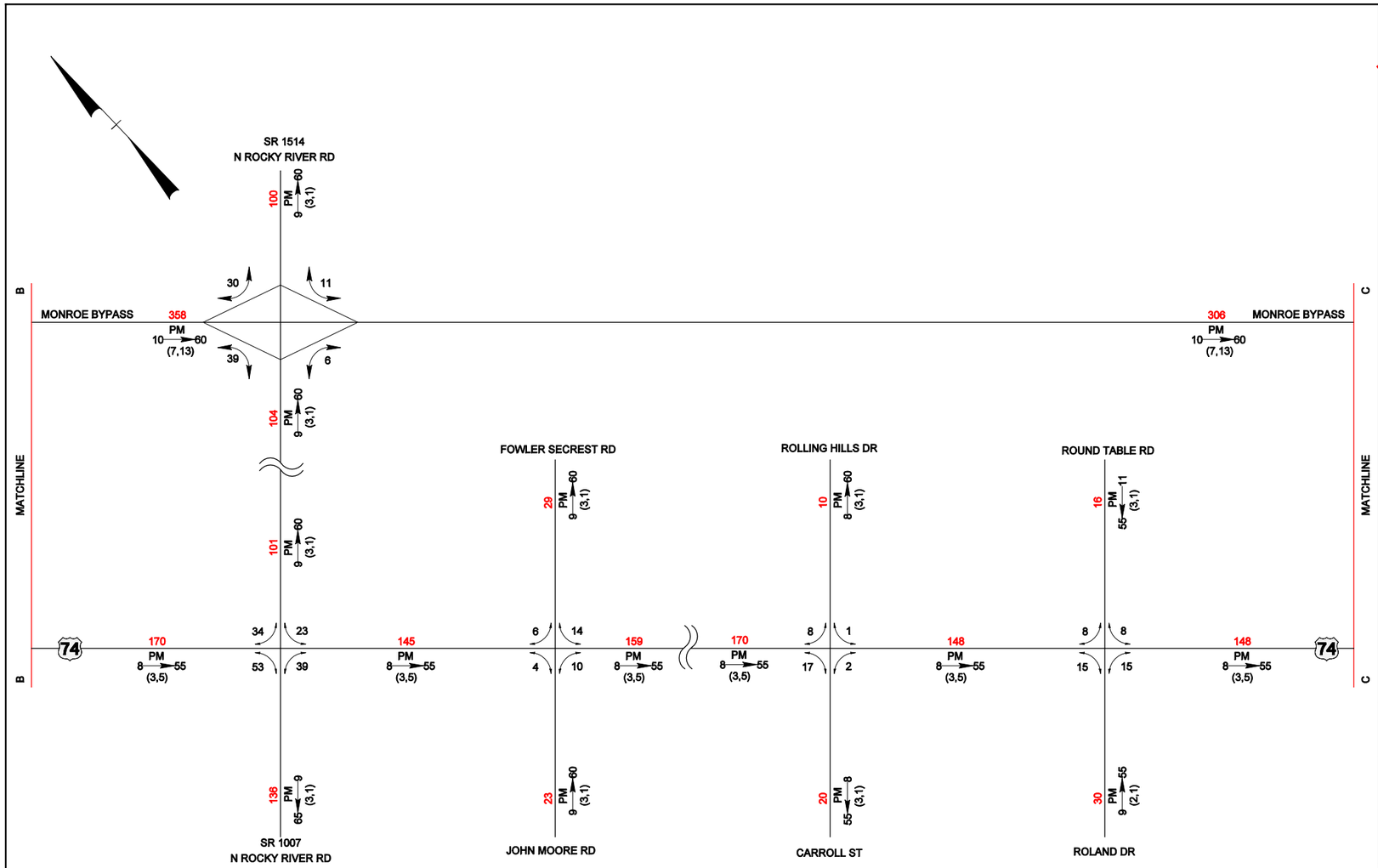
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 2
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

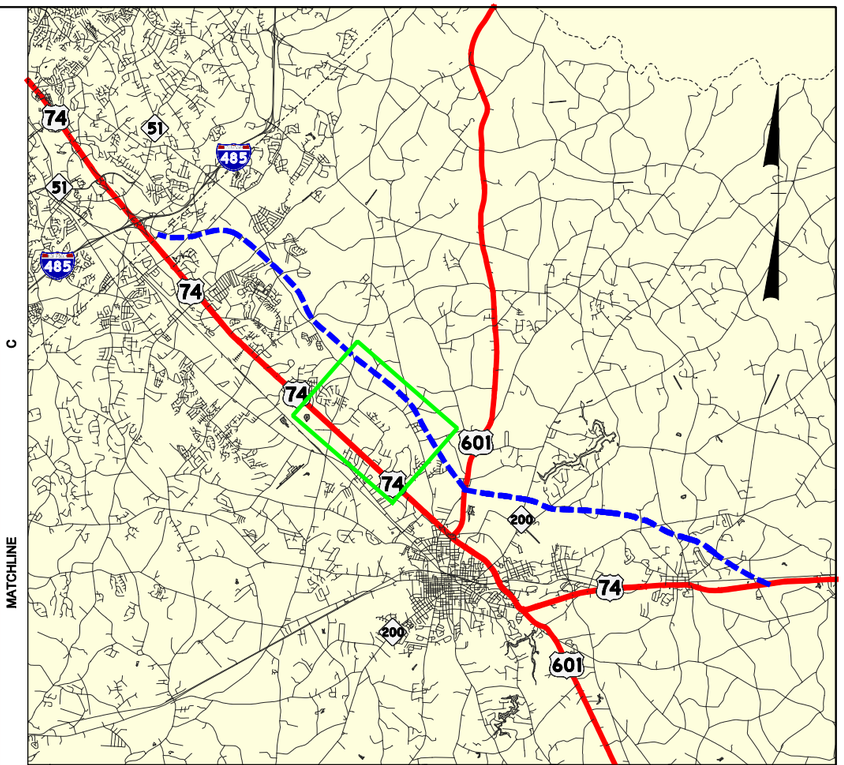
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

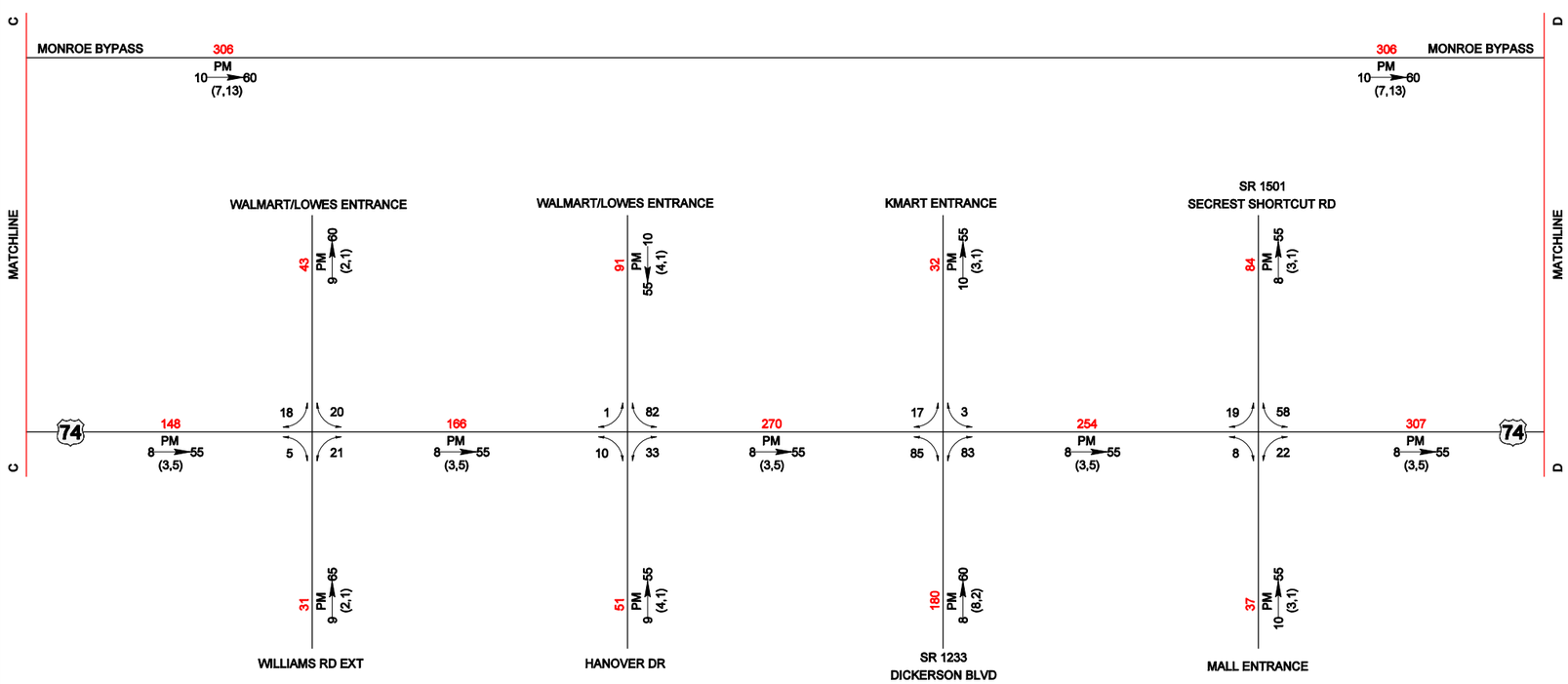
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 3
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

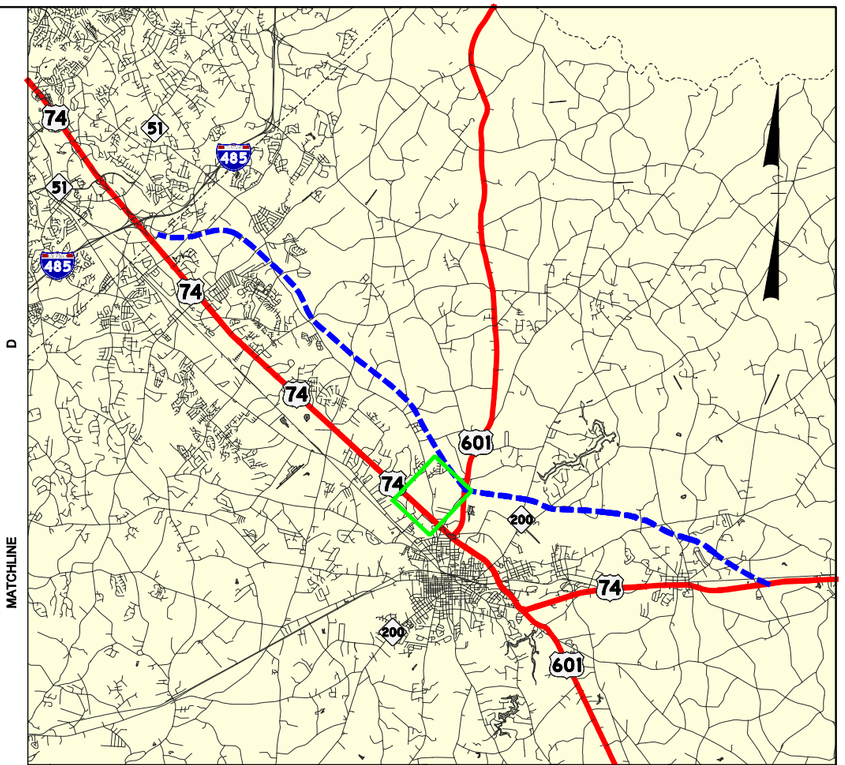
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

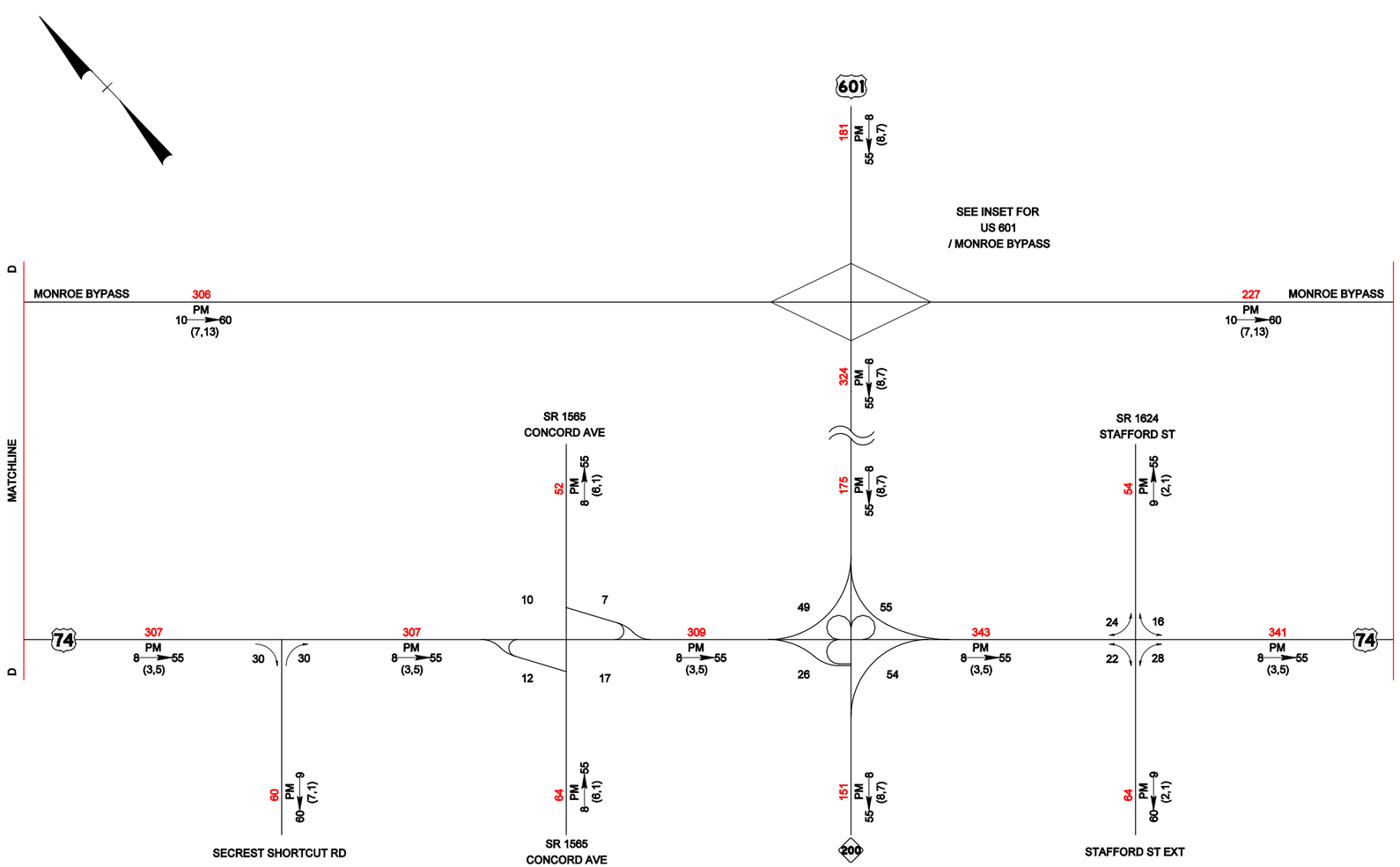
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 4
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

LEGEND

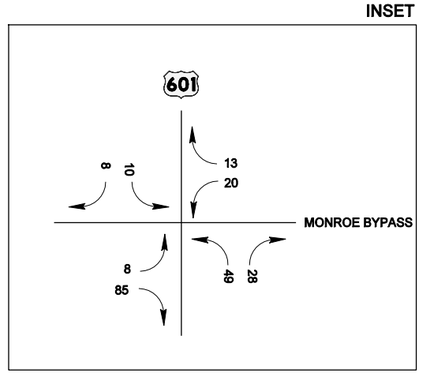
DHV $\xrightarrow[(d,\ t)]{PM}$ D

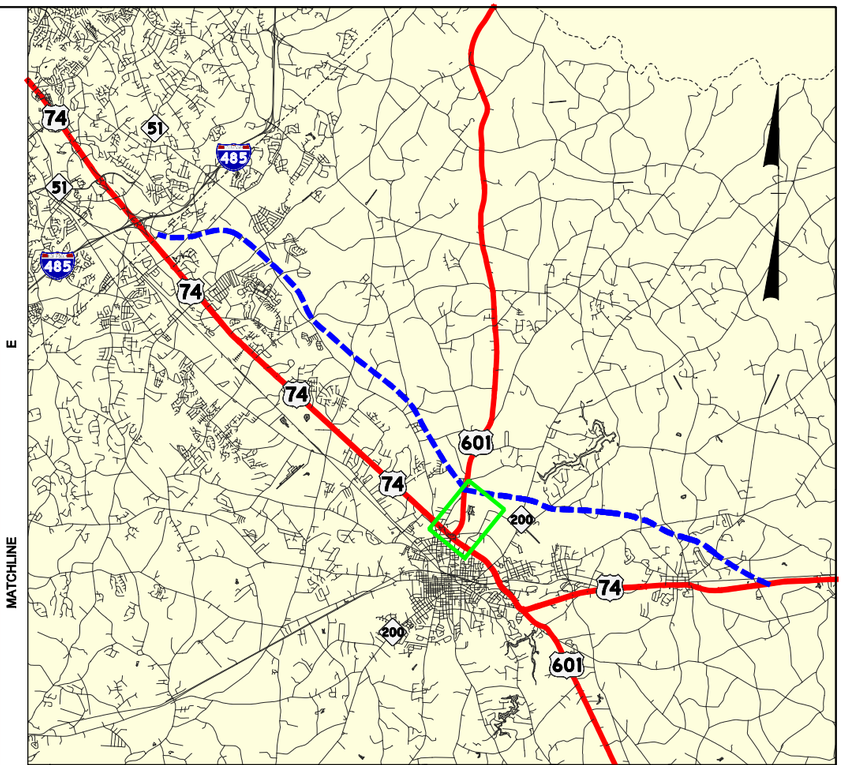
DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)



INSET





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

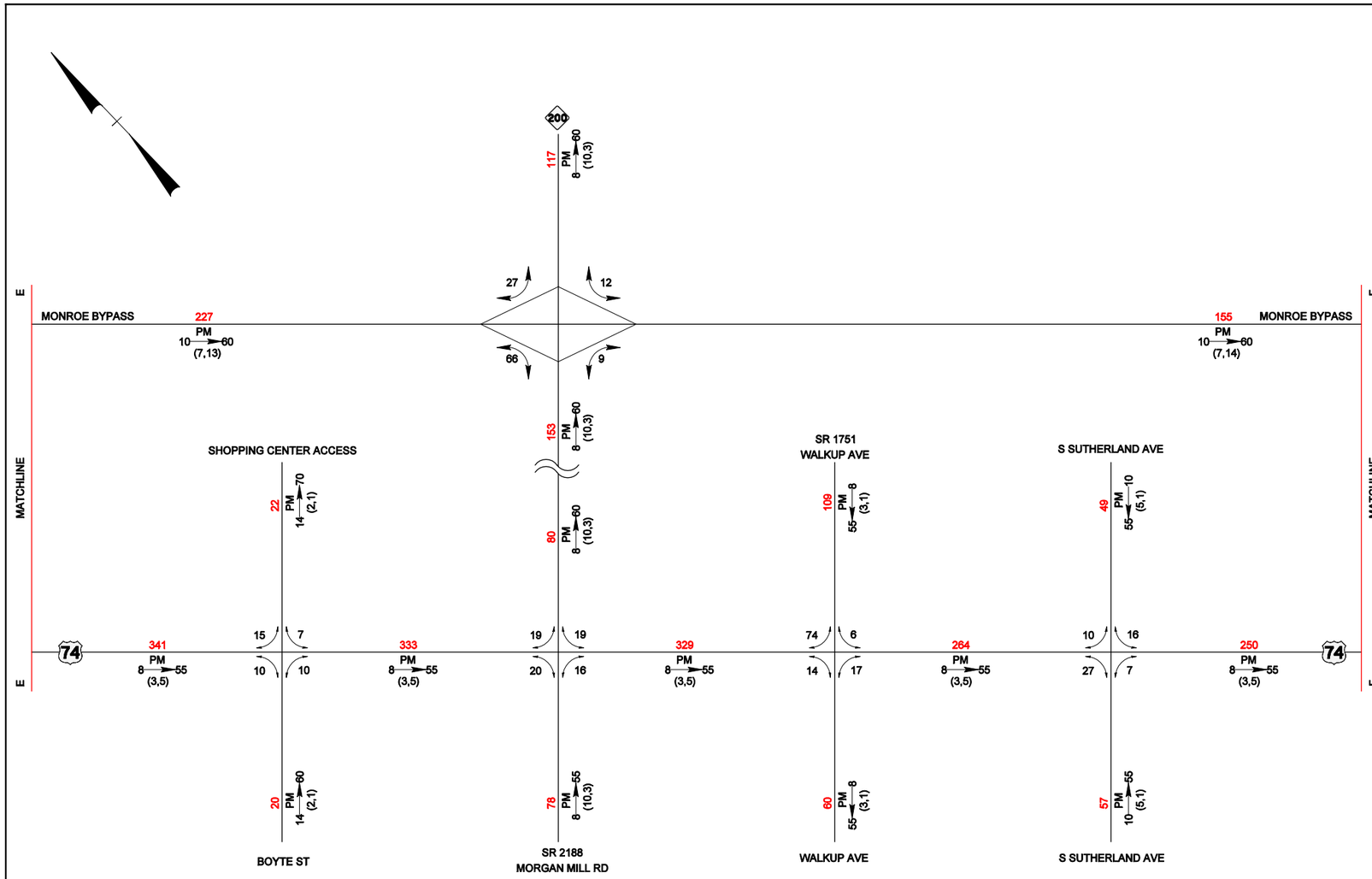
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 5
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

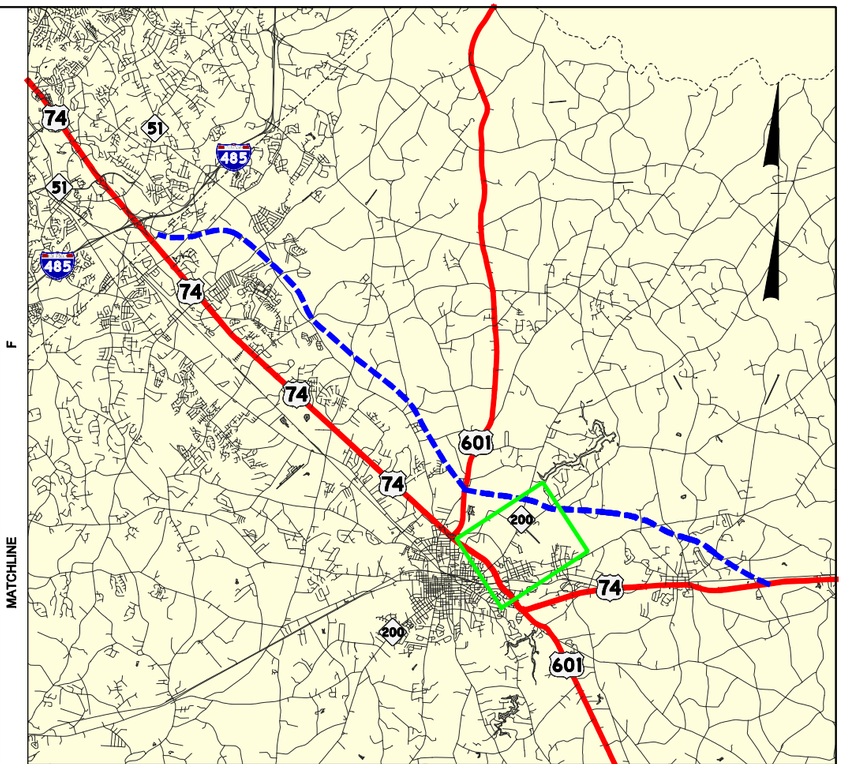
LEGEND

DHV PM → D
(d, t)

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

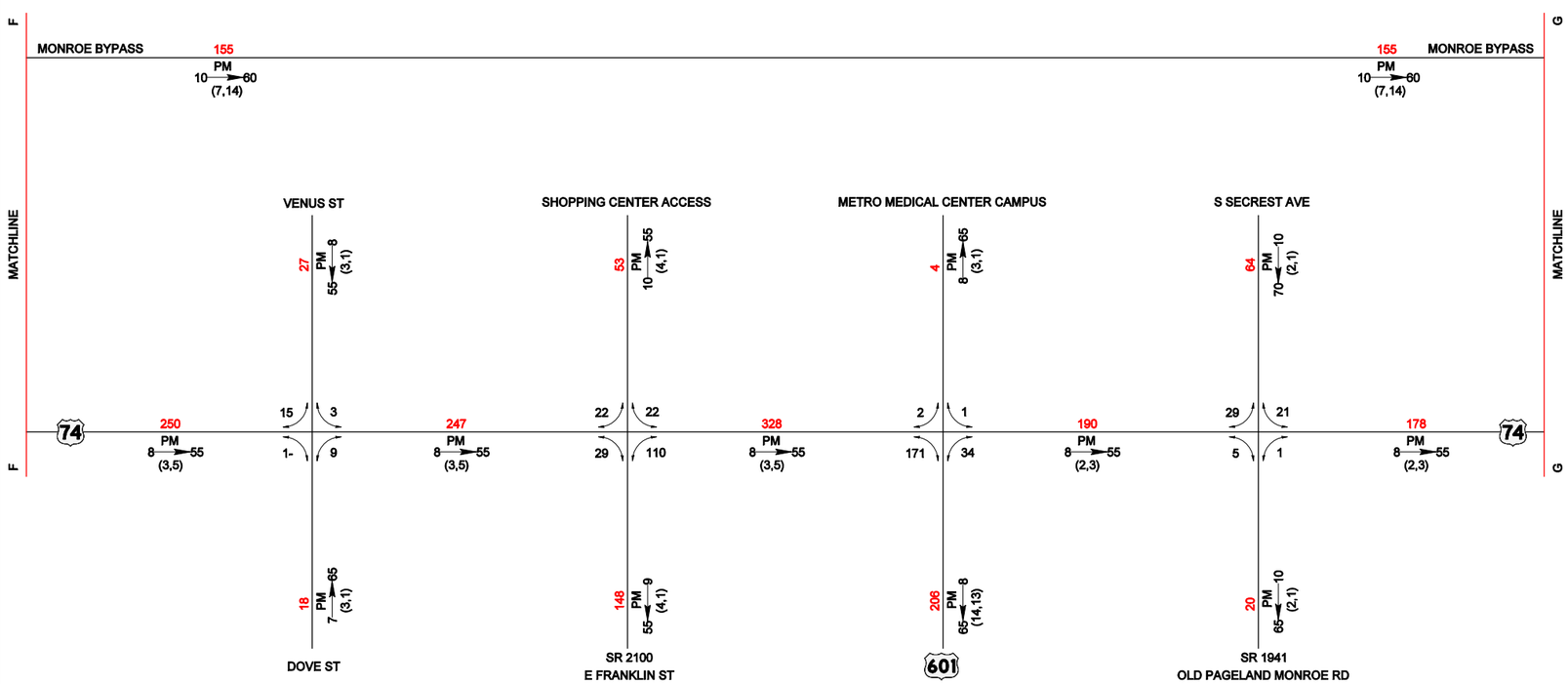
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 6
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

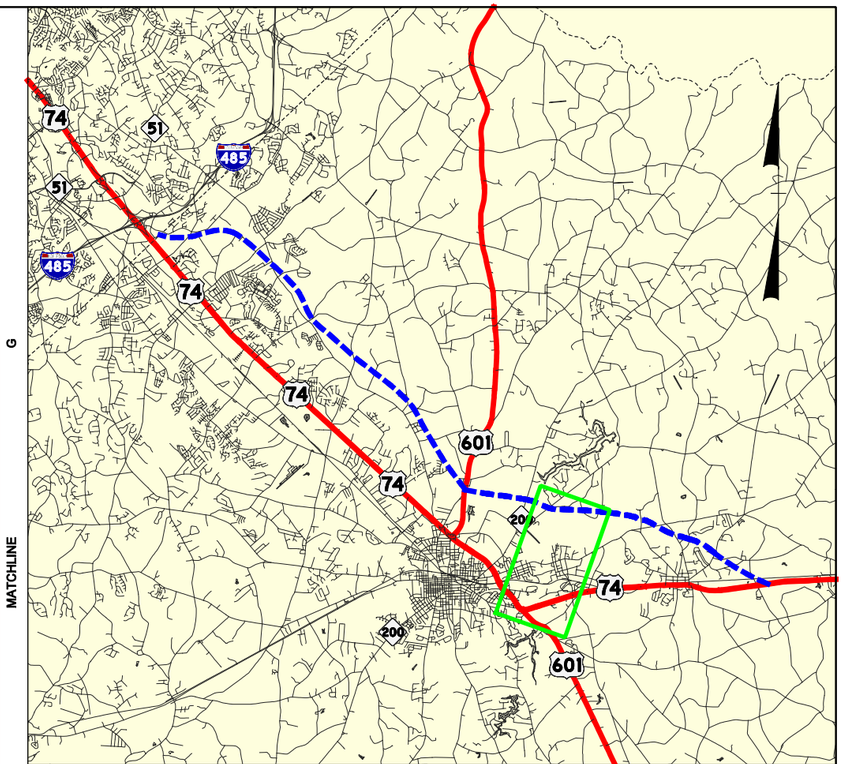
LEGEND

DHV PM → D
(d, t)

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

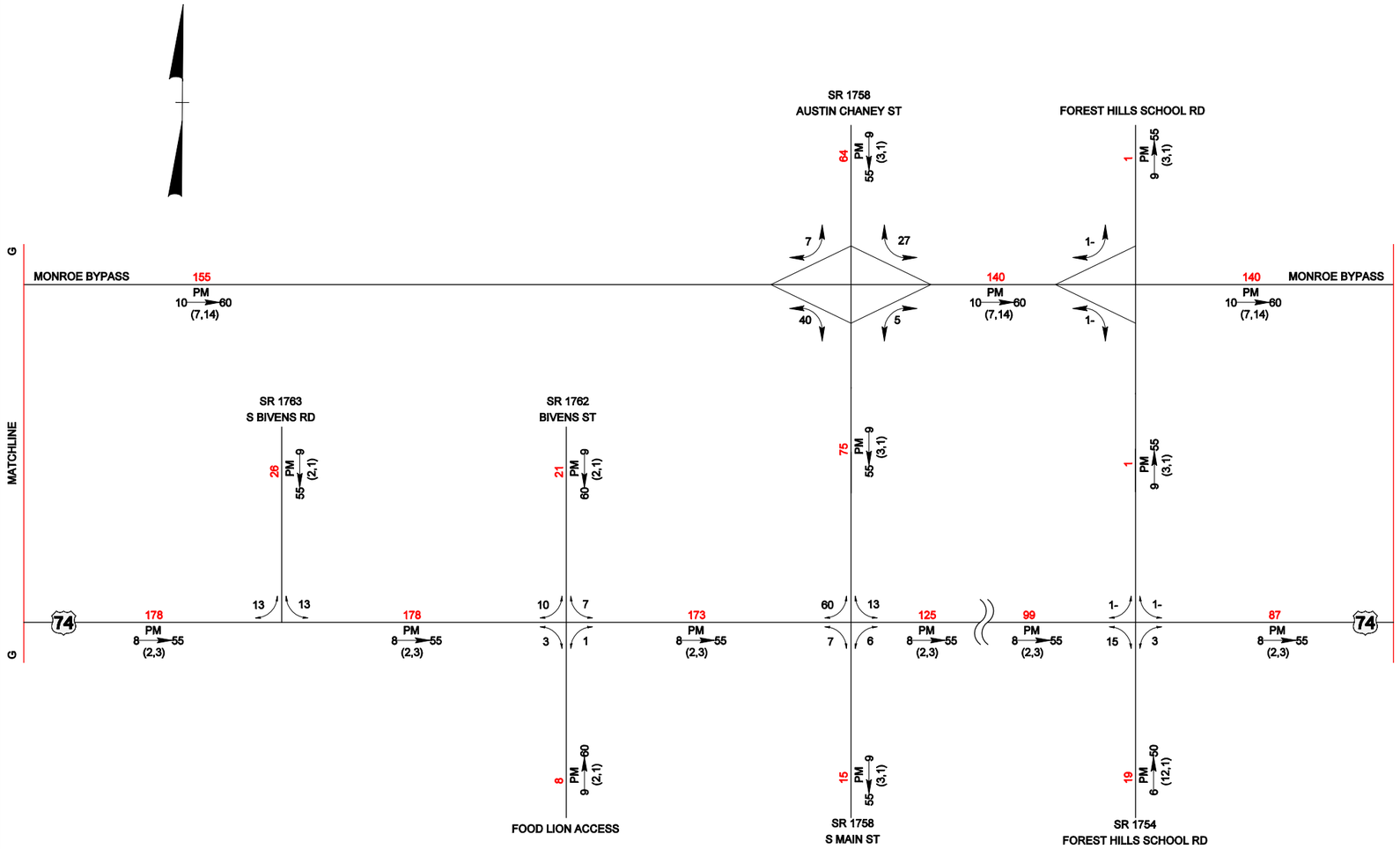
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 7
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

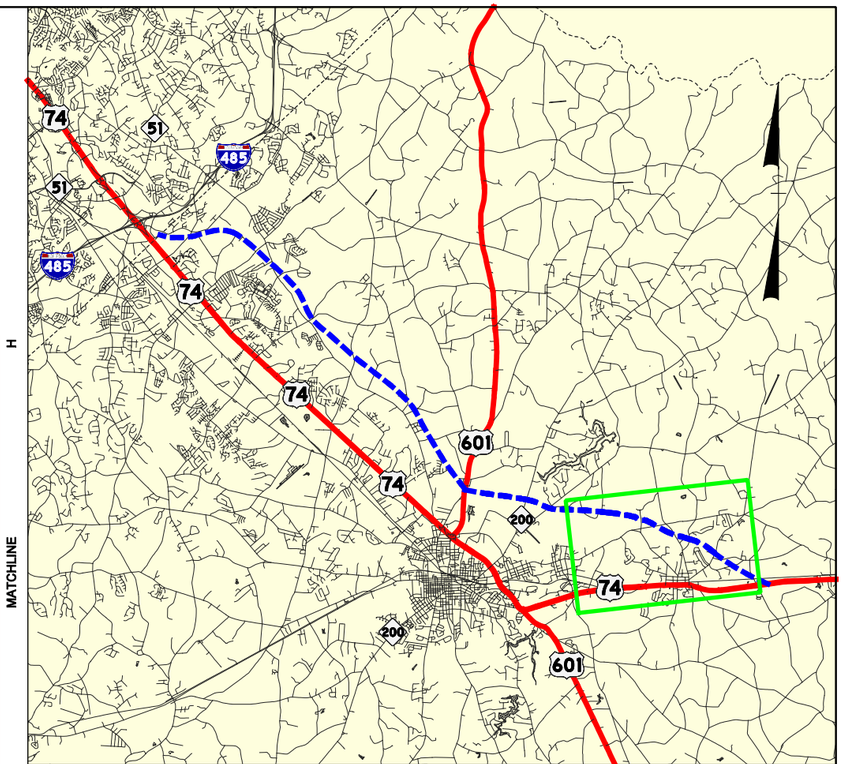
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

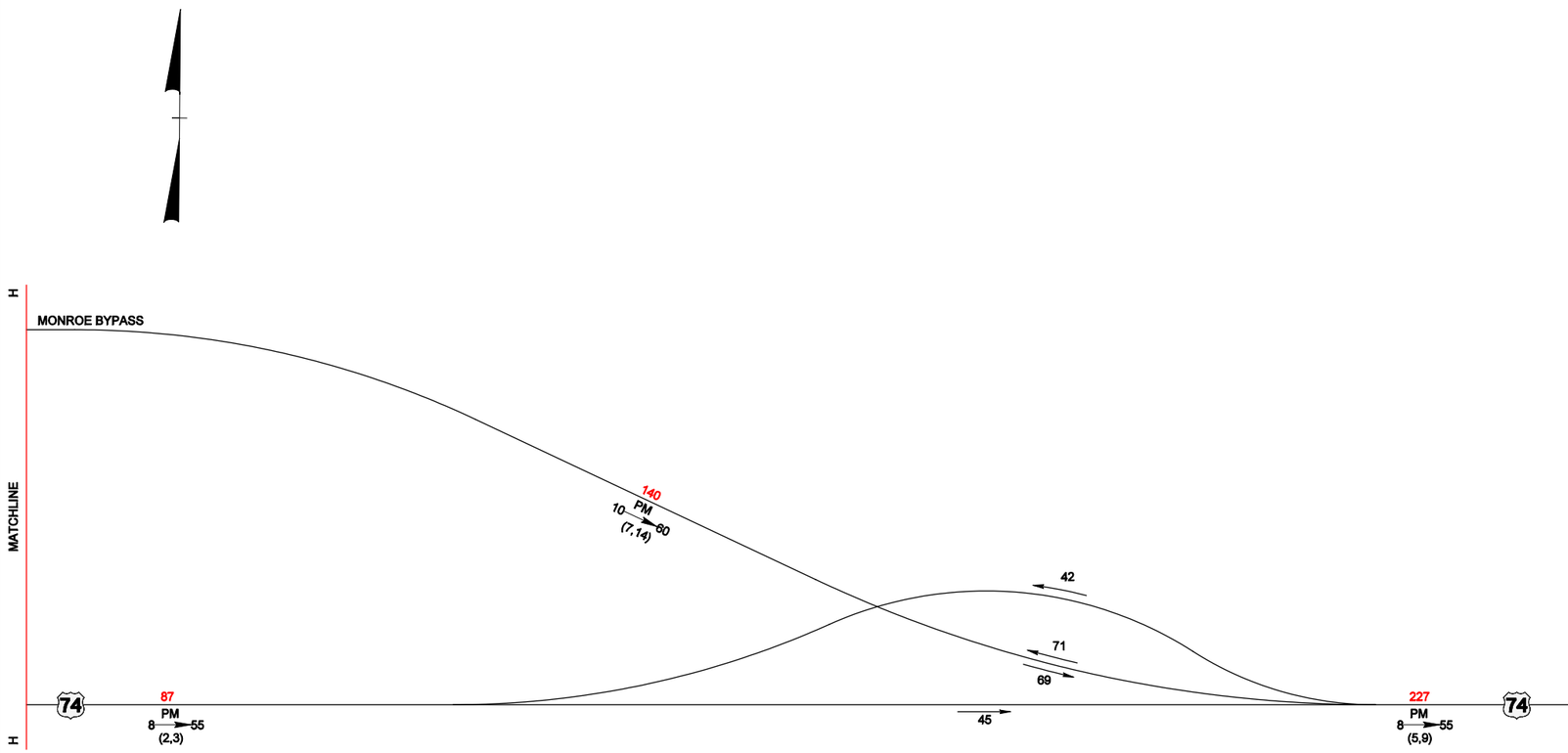
AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

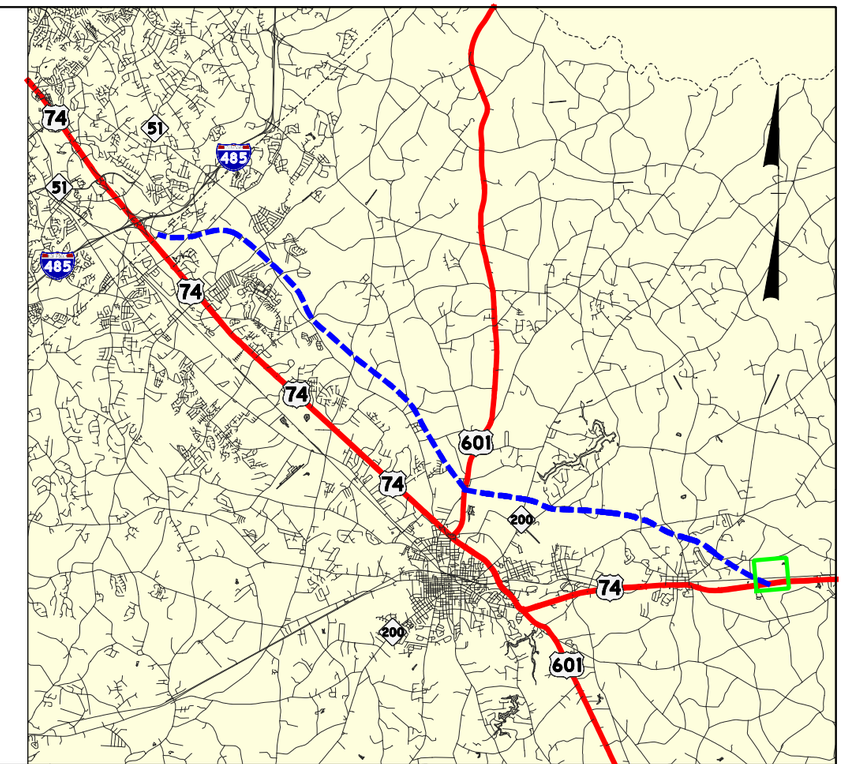
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 8
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

LEGEND

DHV PM → D
(d, t)

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)
###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

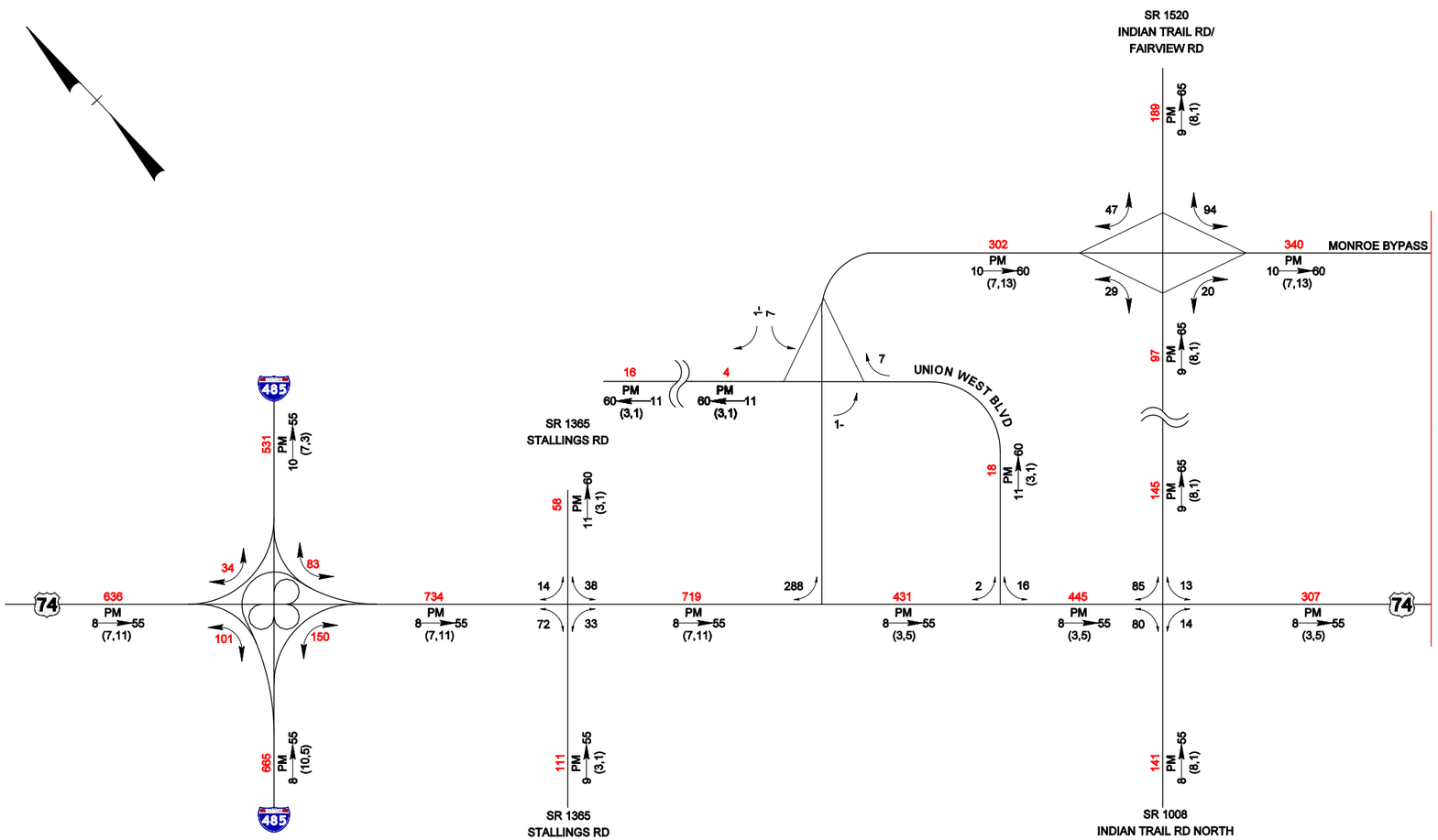
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 9
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

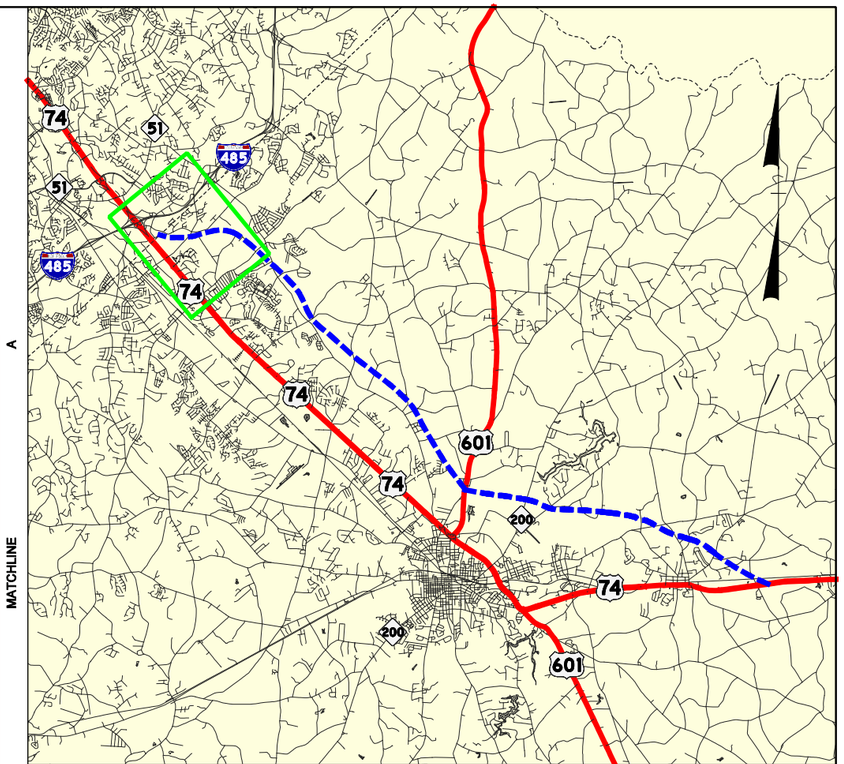
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

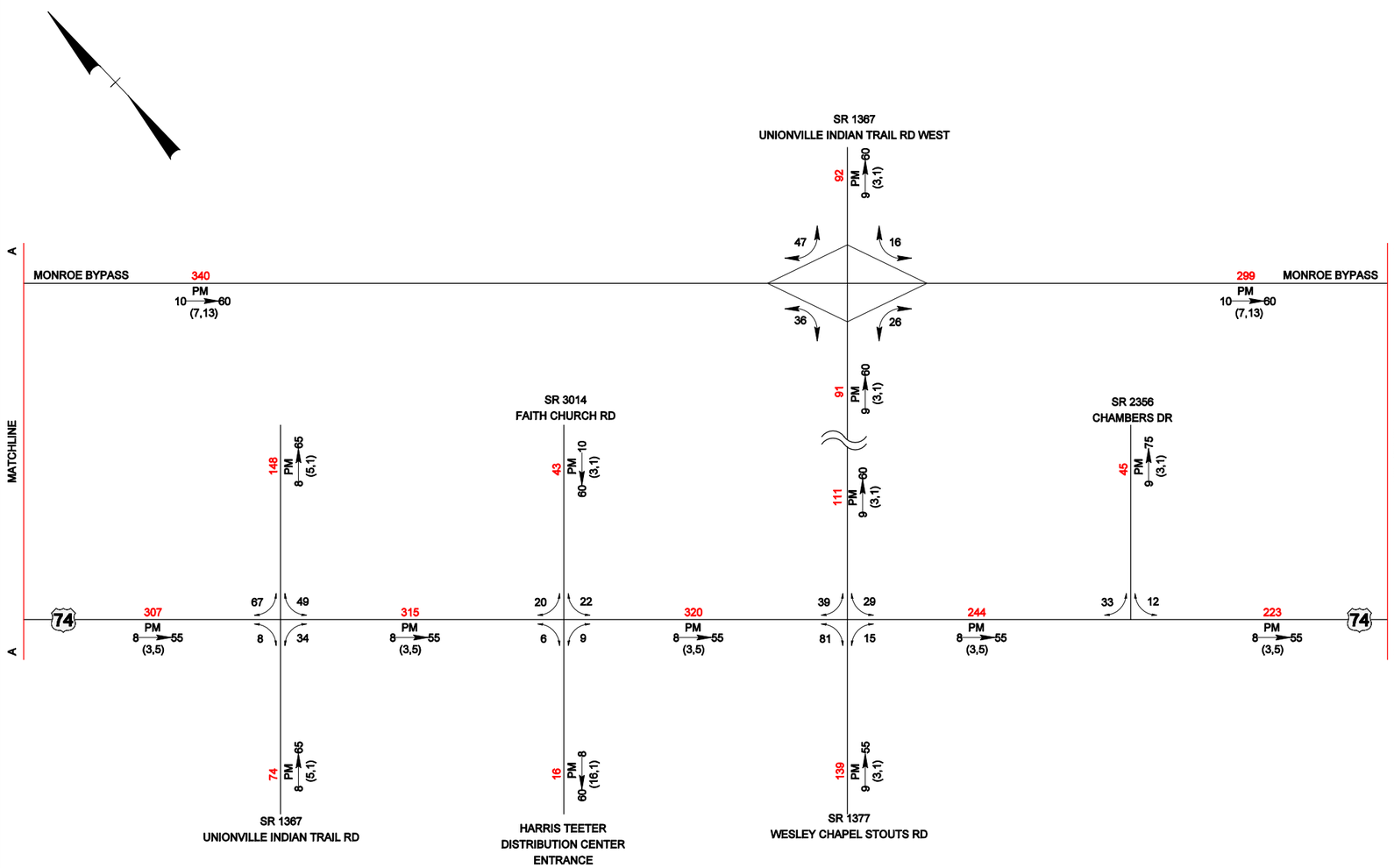
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 1
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

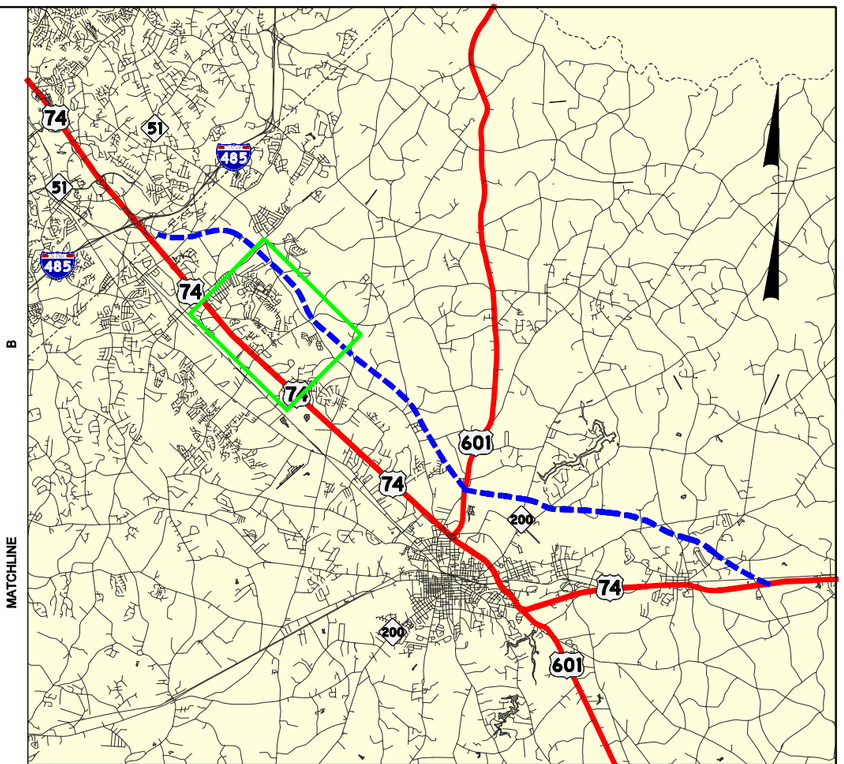
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

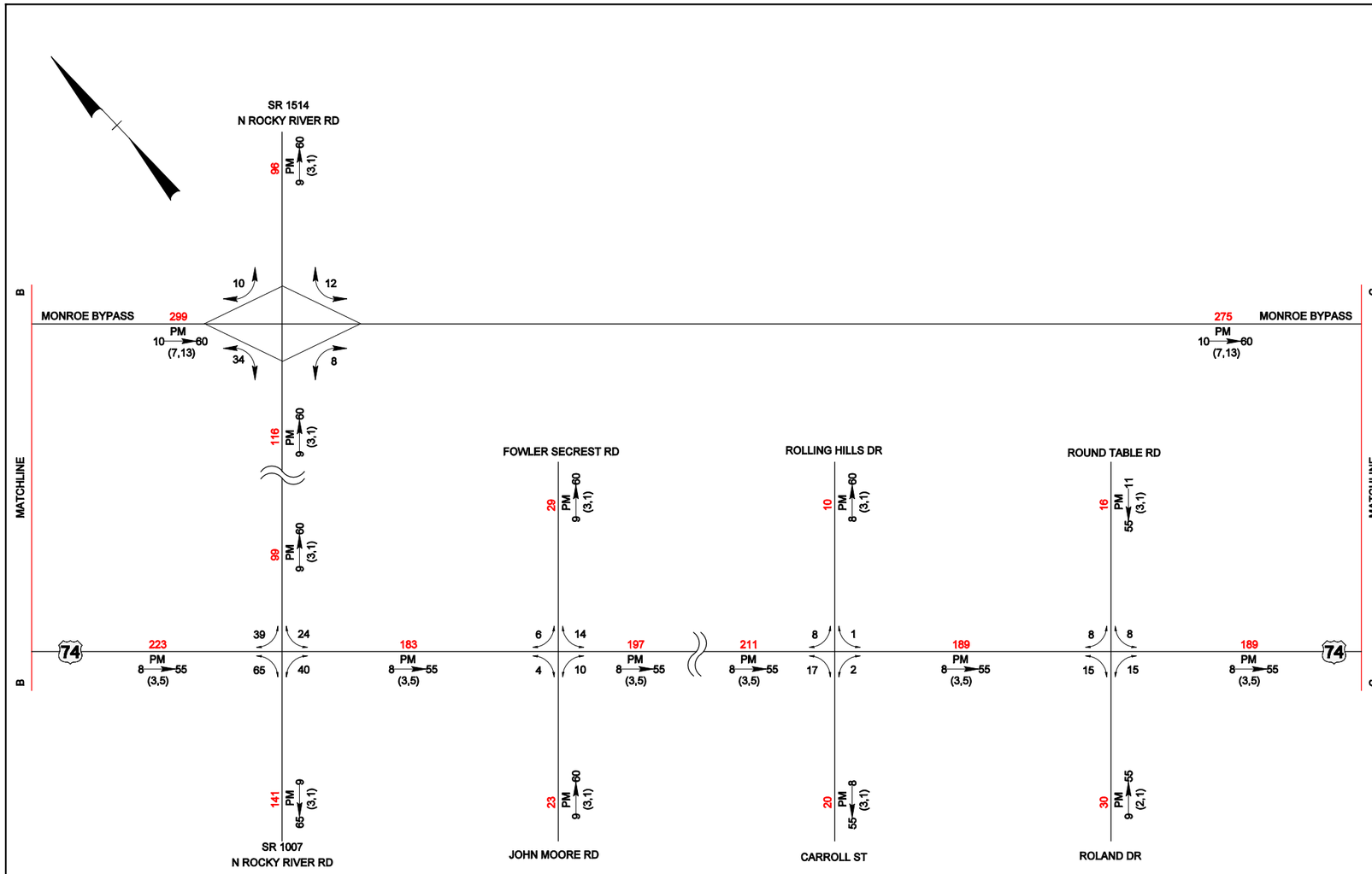
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 2
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

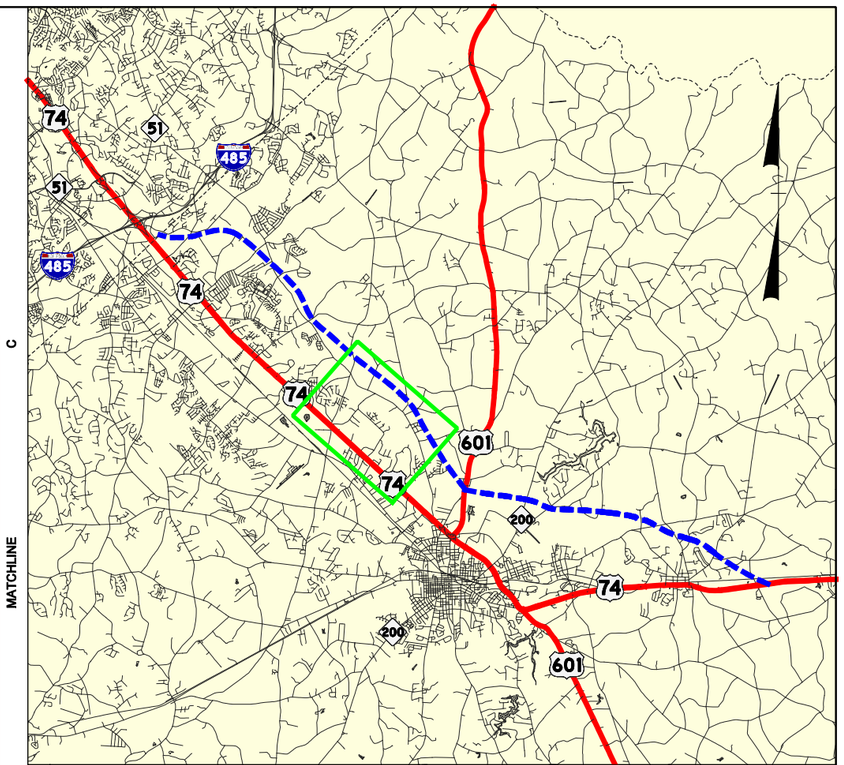
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

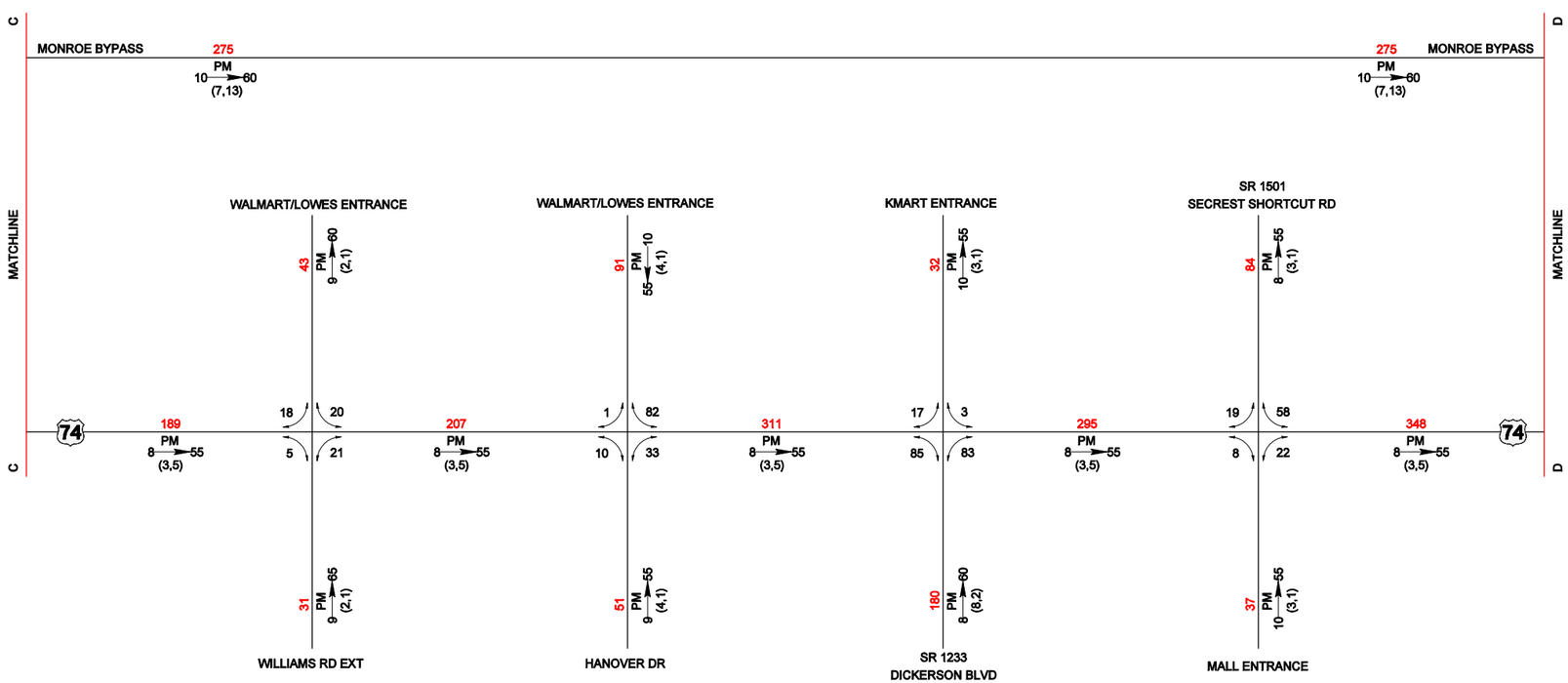
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 3
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

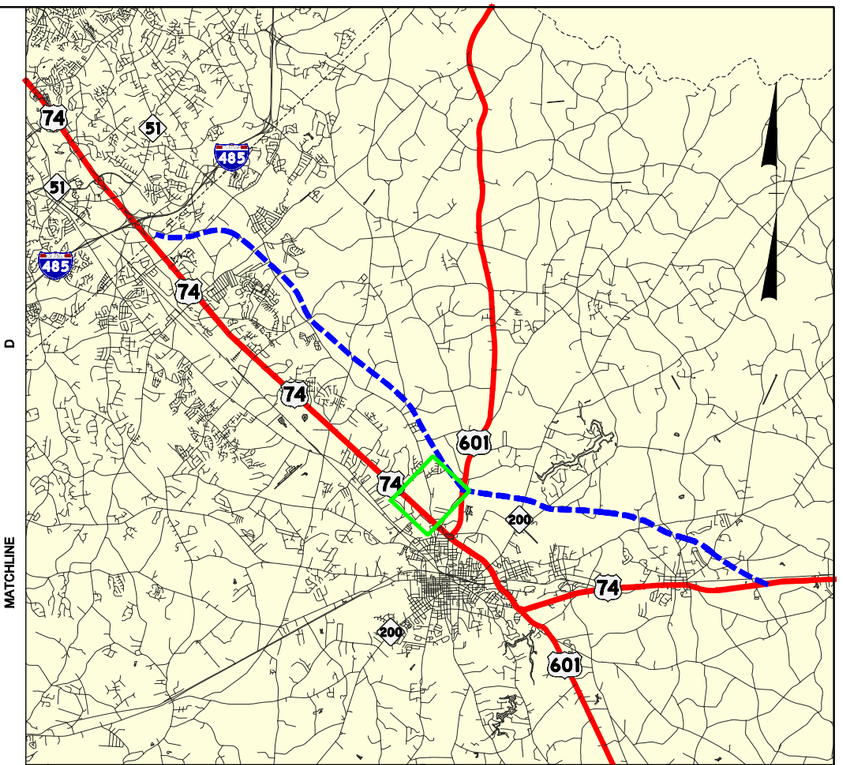
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

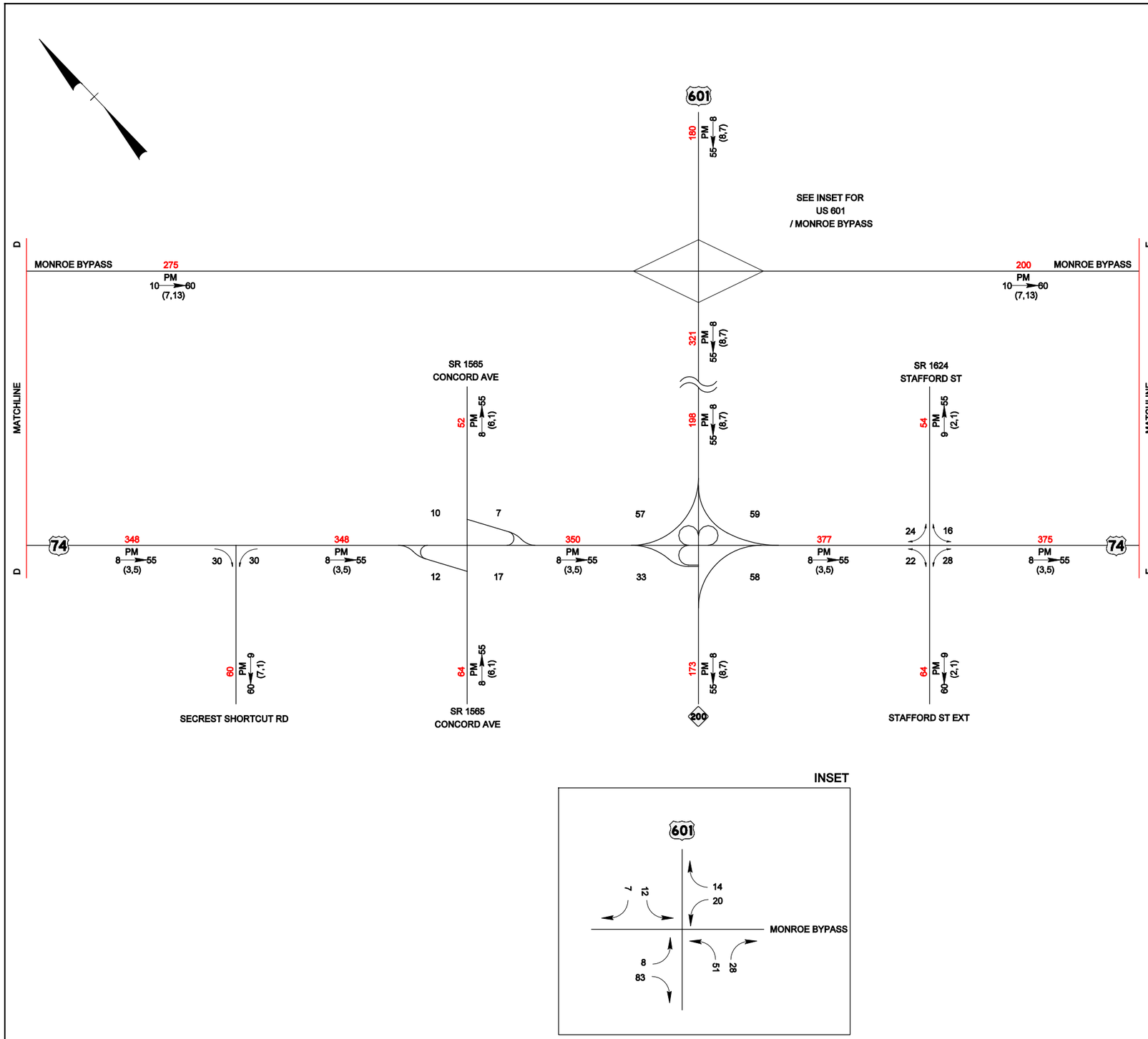
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 4
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

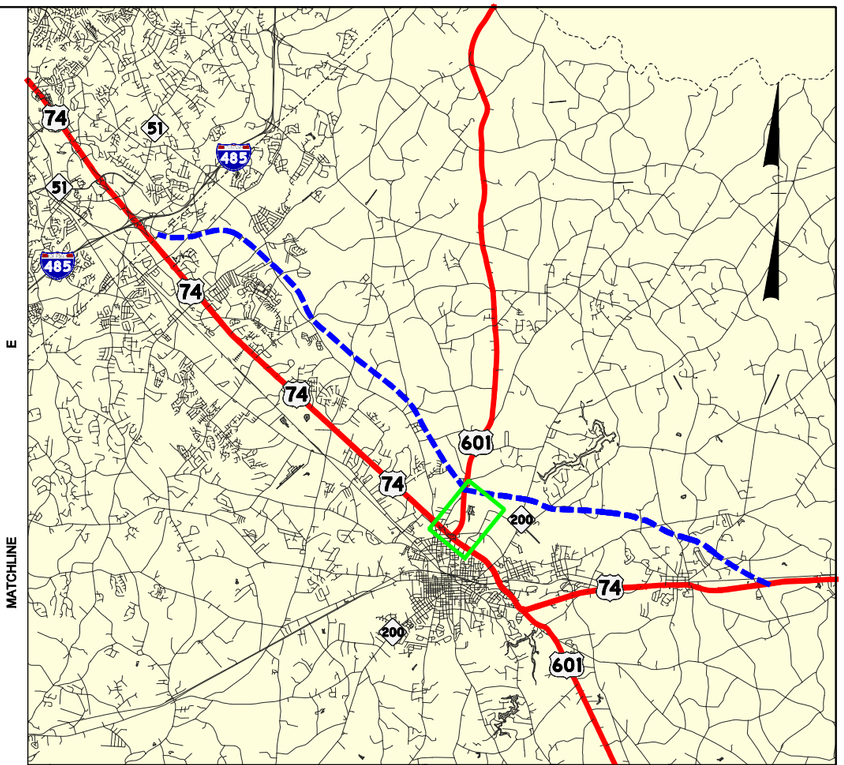
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

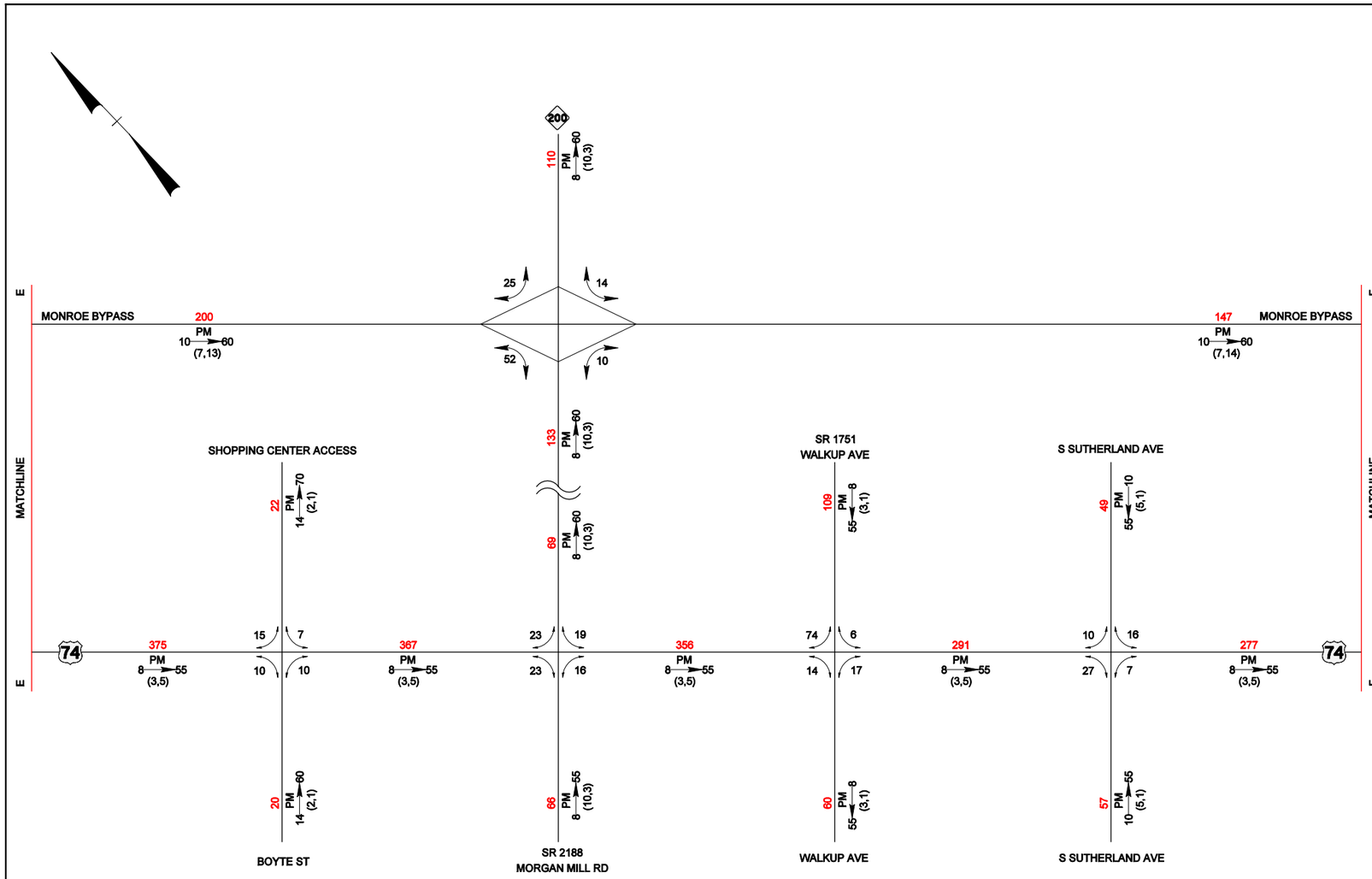
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 5
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

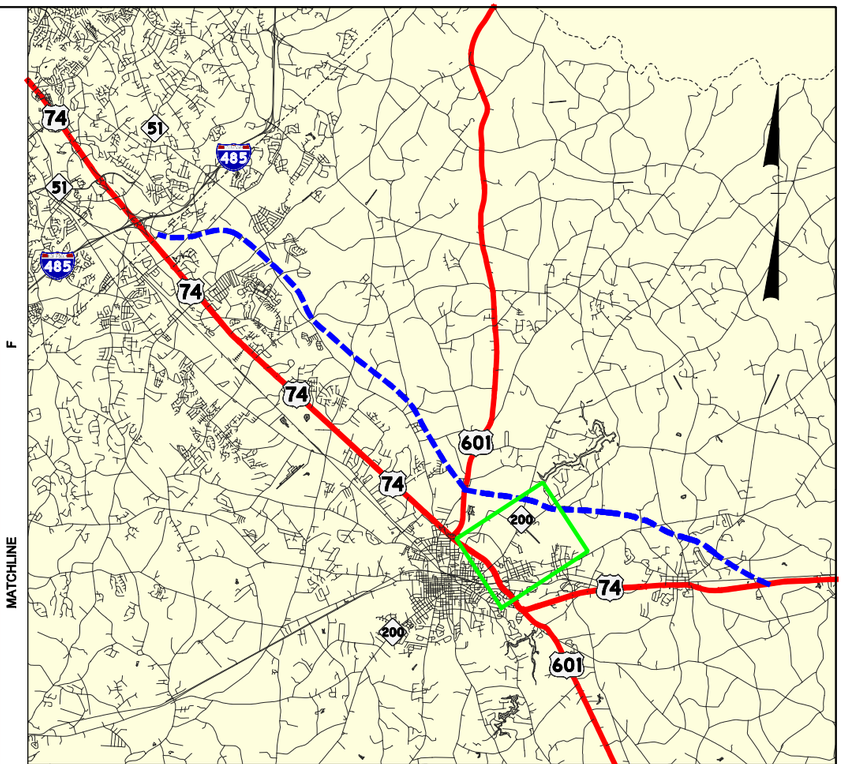
LEGEND

DHV PM → D
(d, t)

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

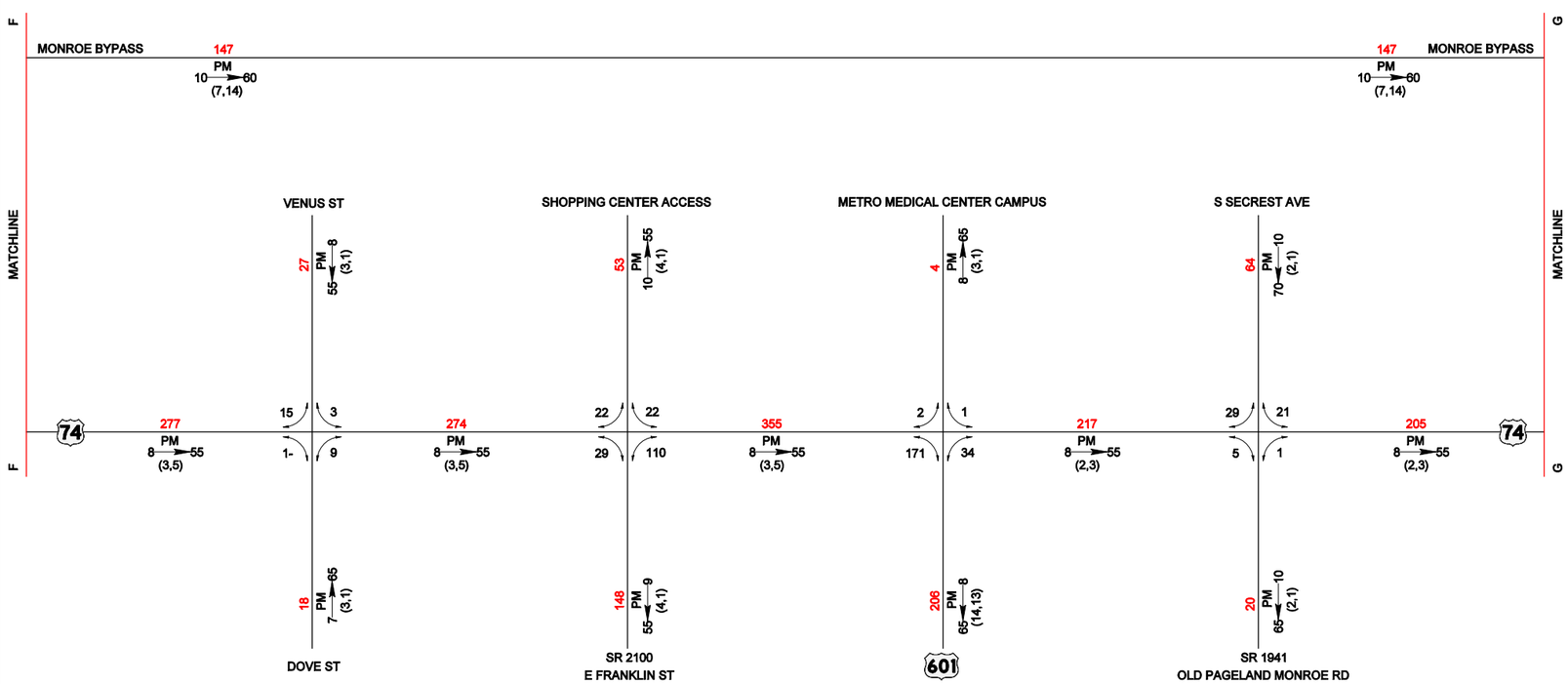
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 6
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

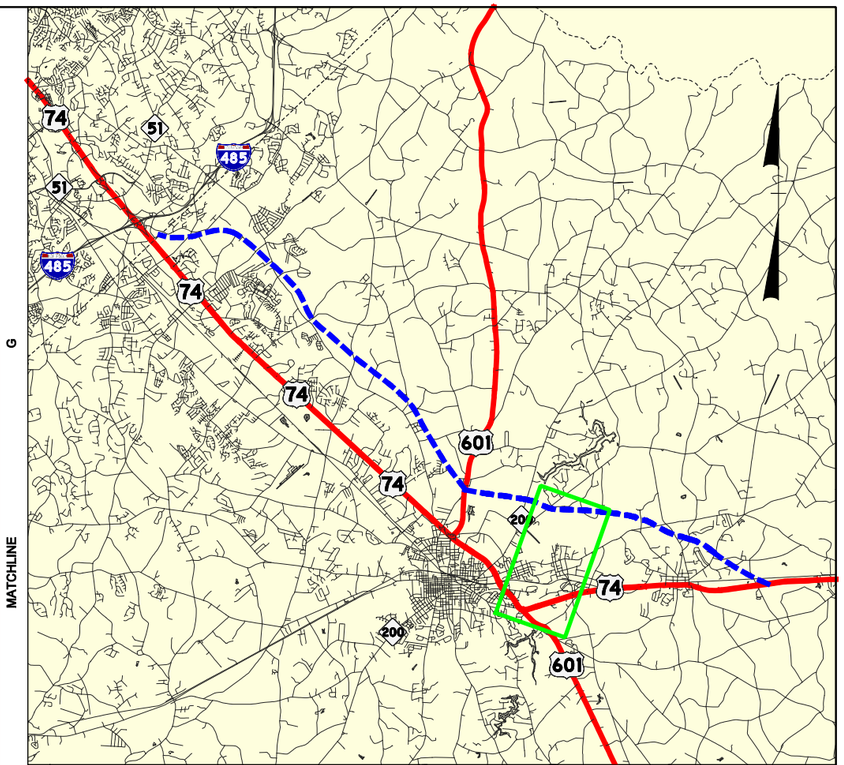
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

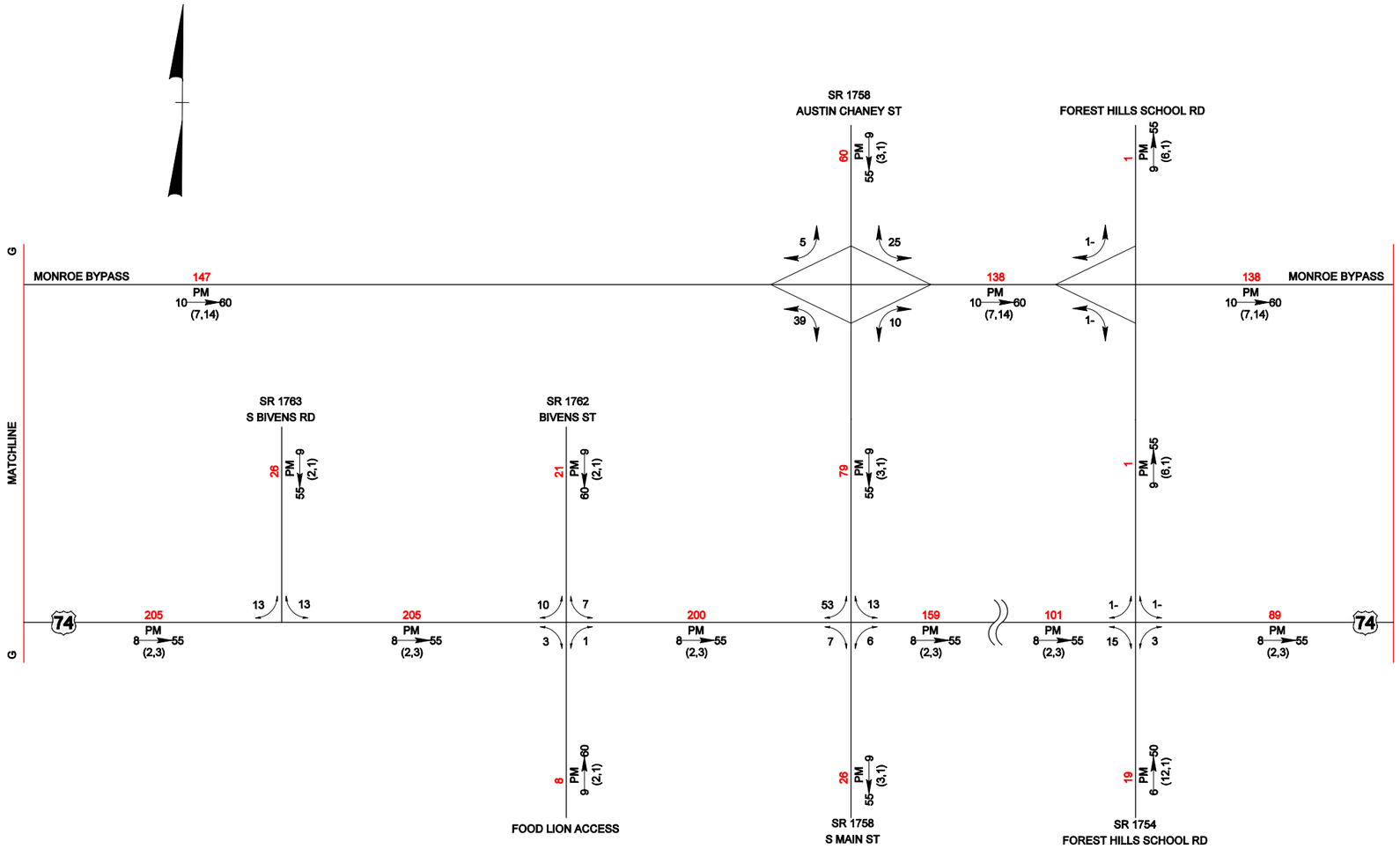
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 7
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

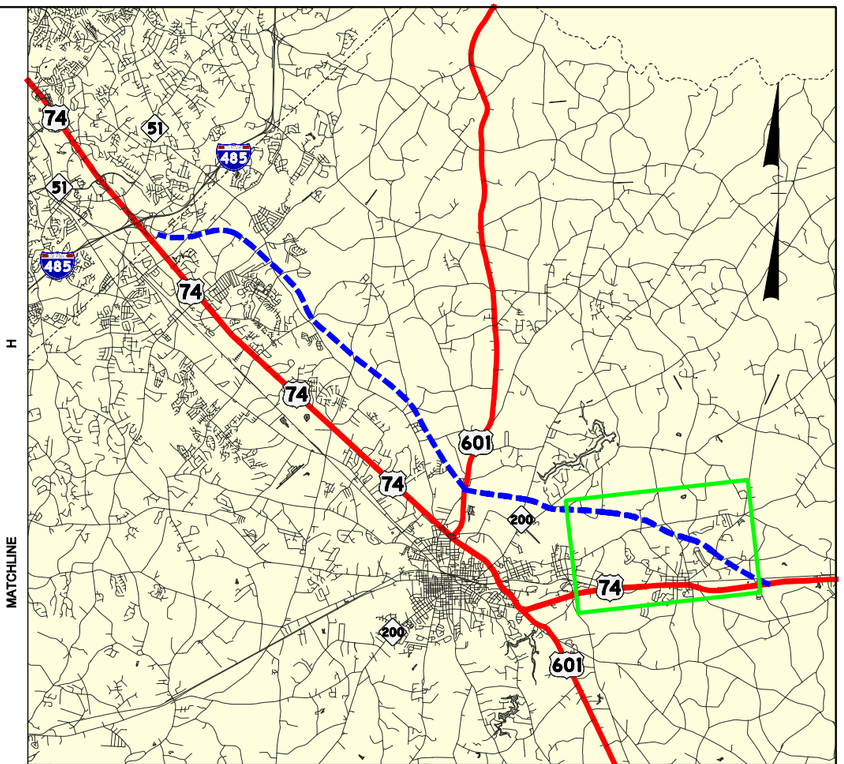
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

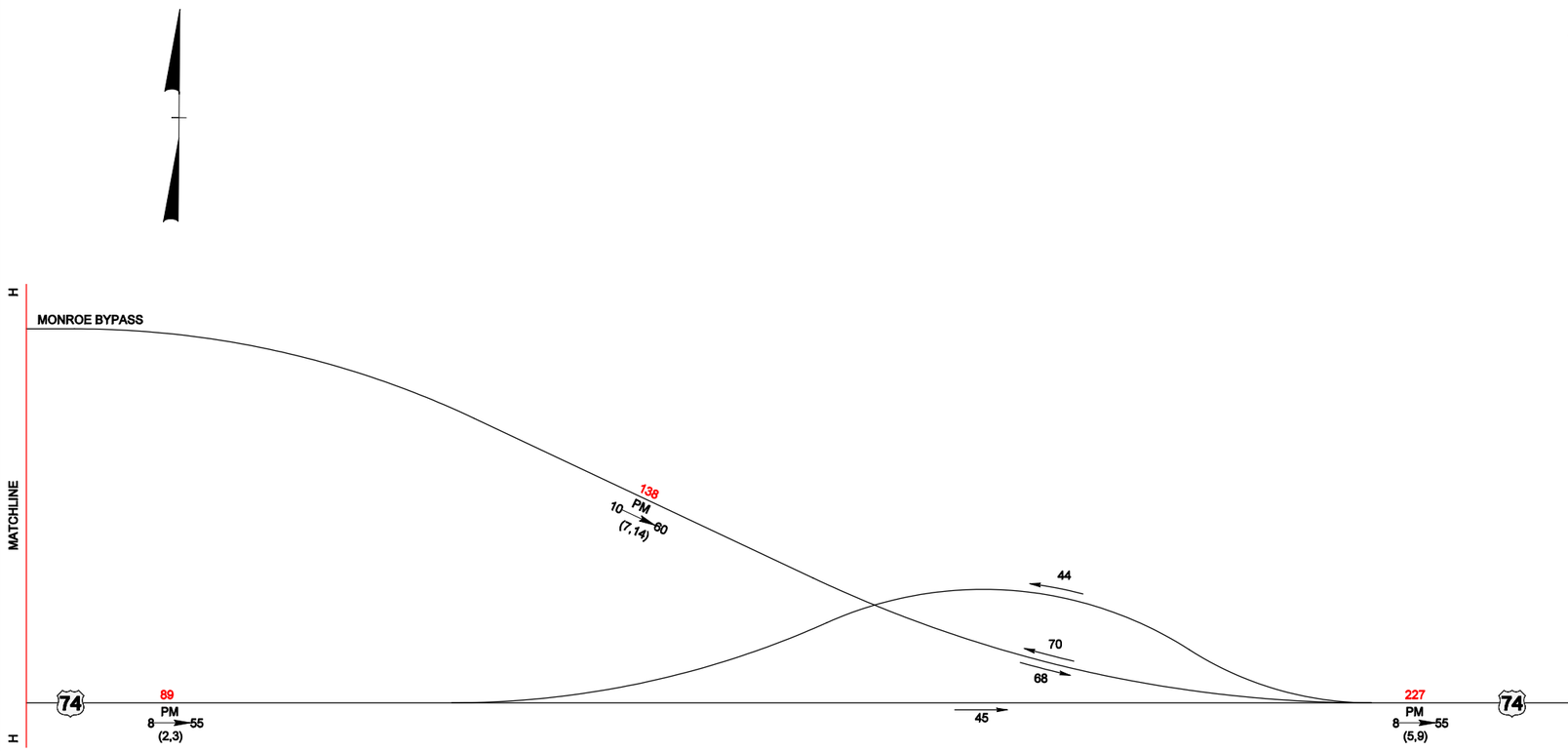
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 8
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

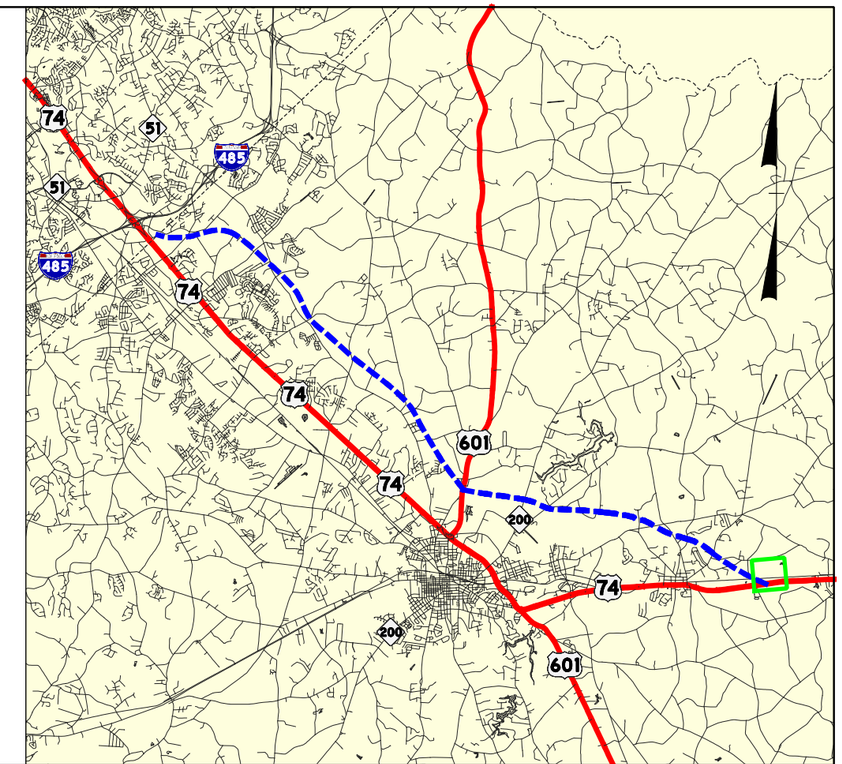
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 9
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

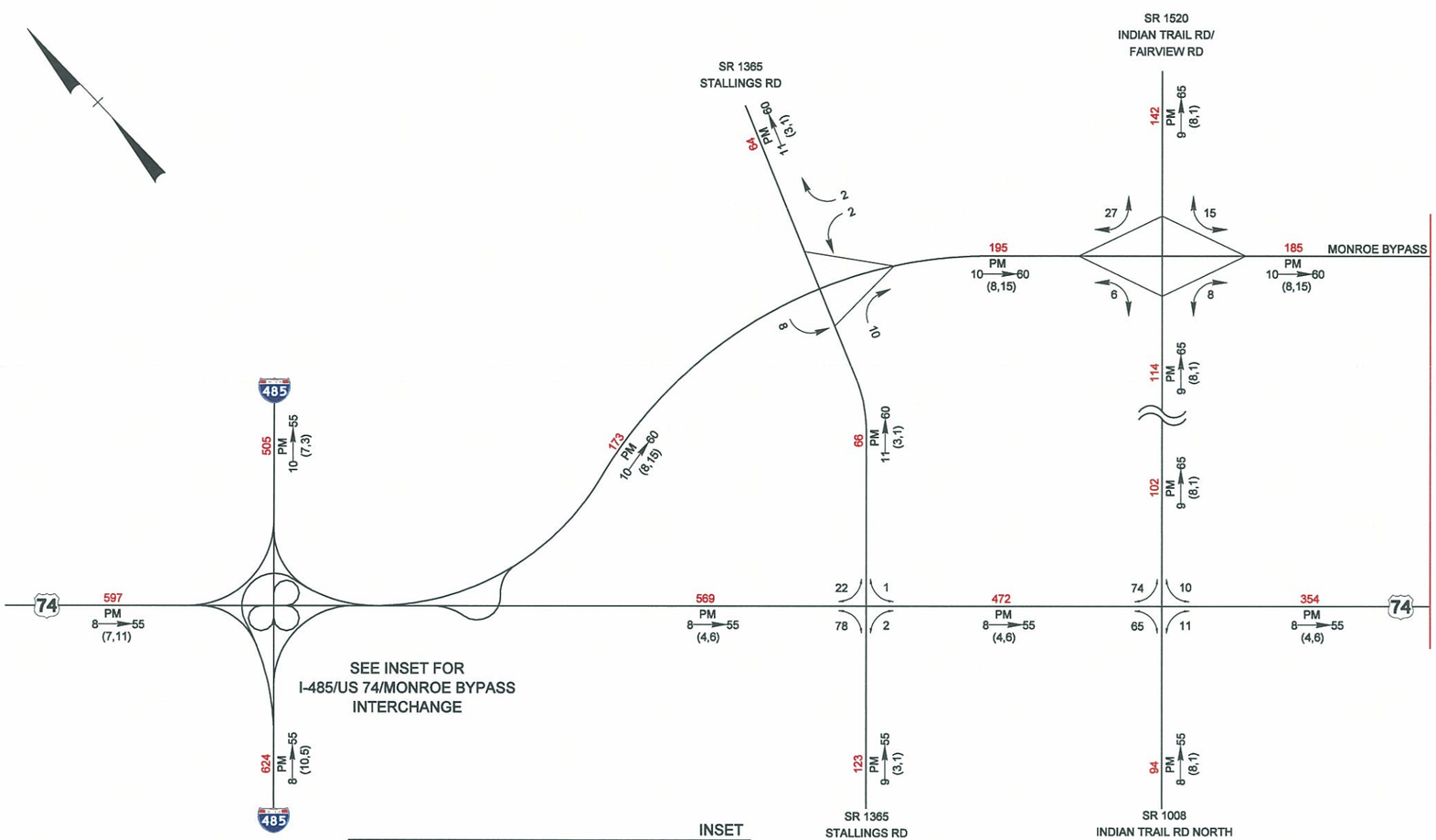
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

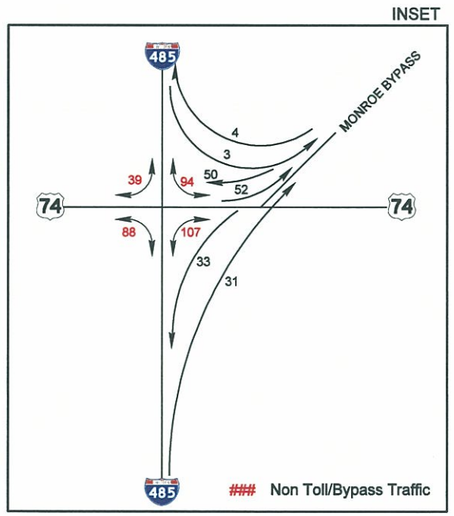
DHV Design Hourly Volume (%) = K_{30}
PM Peak Period
D Peak Hour Directional Split (%)
→ Indicates Direction of D
(d, t) Duals, TTST (%)

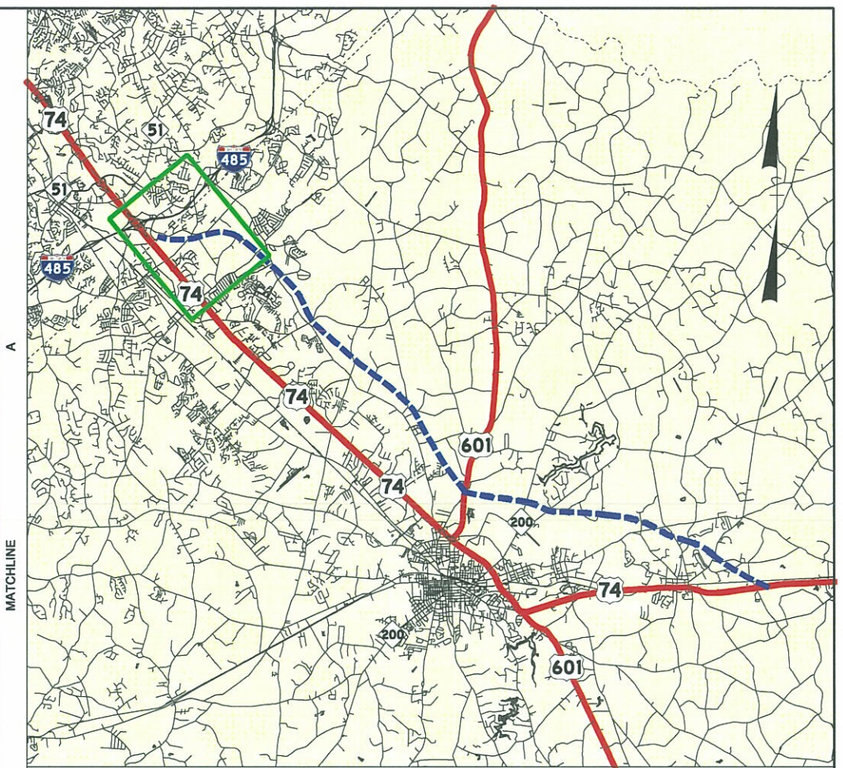
No. of Vehicles Per Day (VPD) in 100s
1- Less than 50 VPD
Turning volume (VPD)

Exhibit 9
2008 Build Toll Traffic Figures



INSET





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

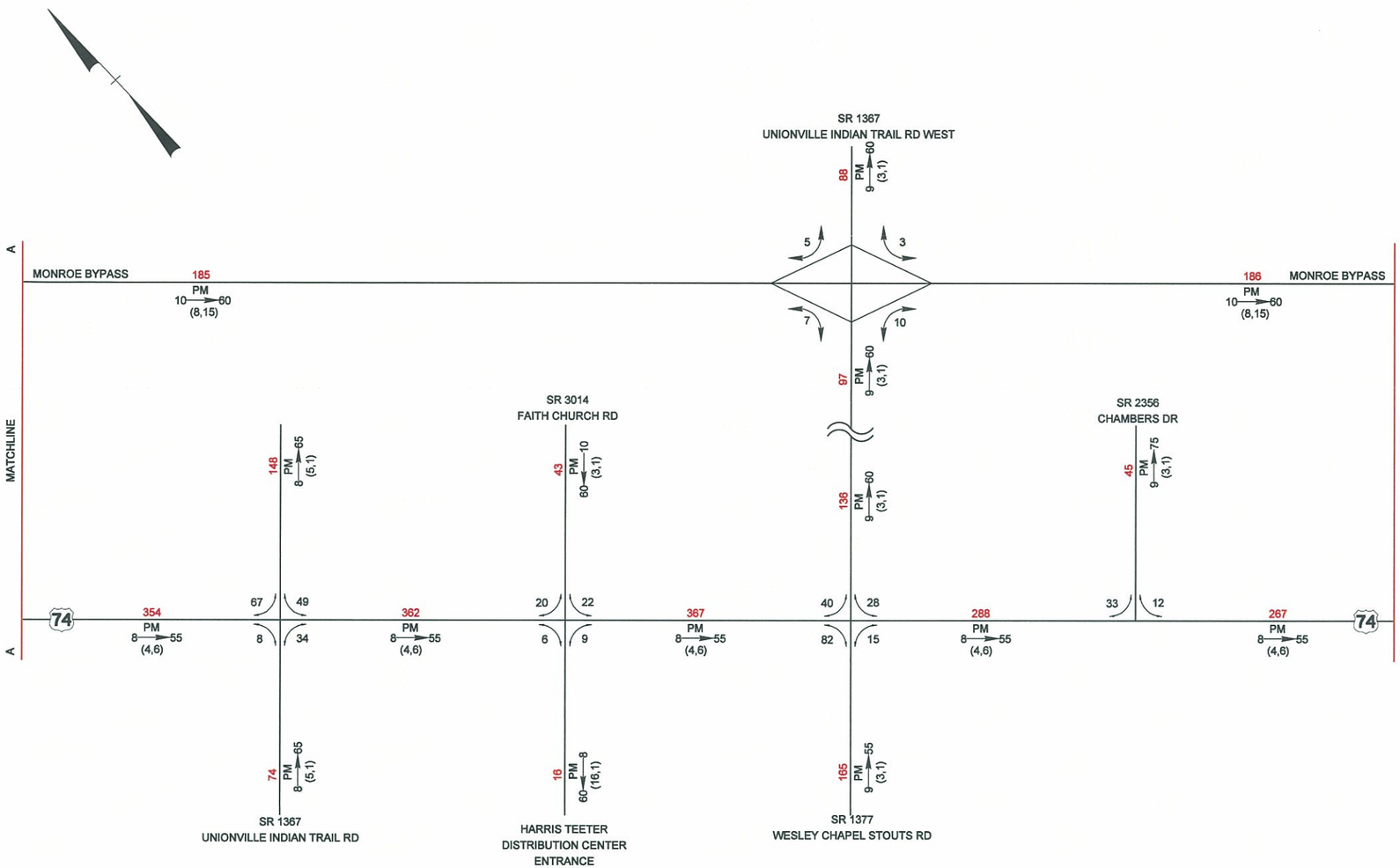
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 1
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

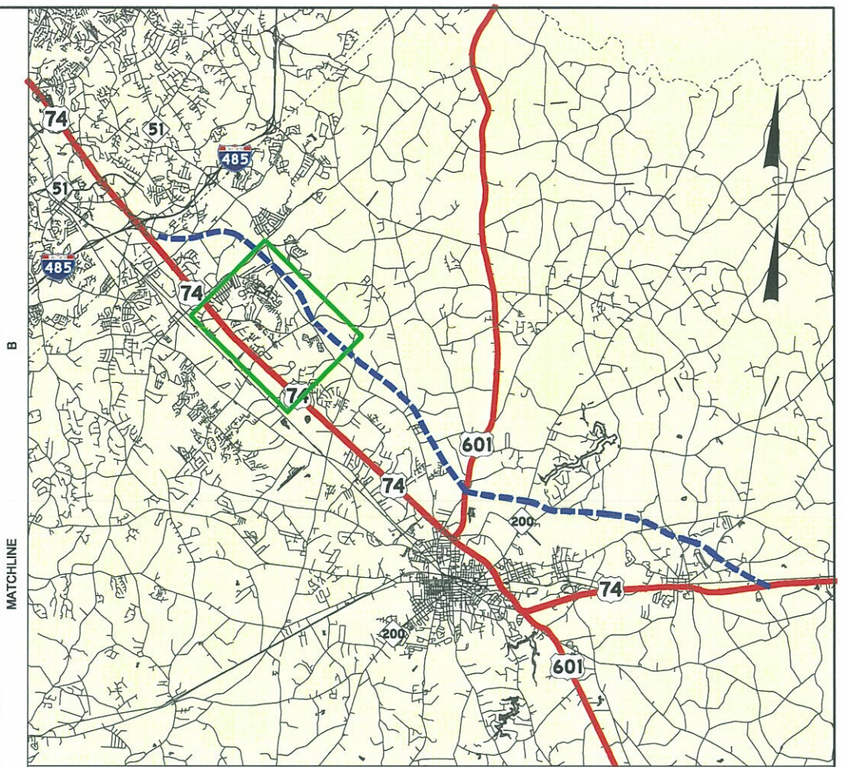
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

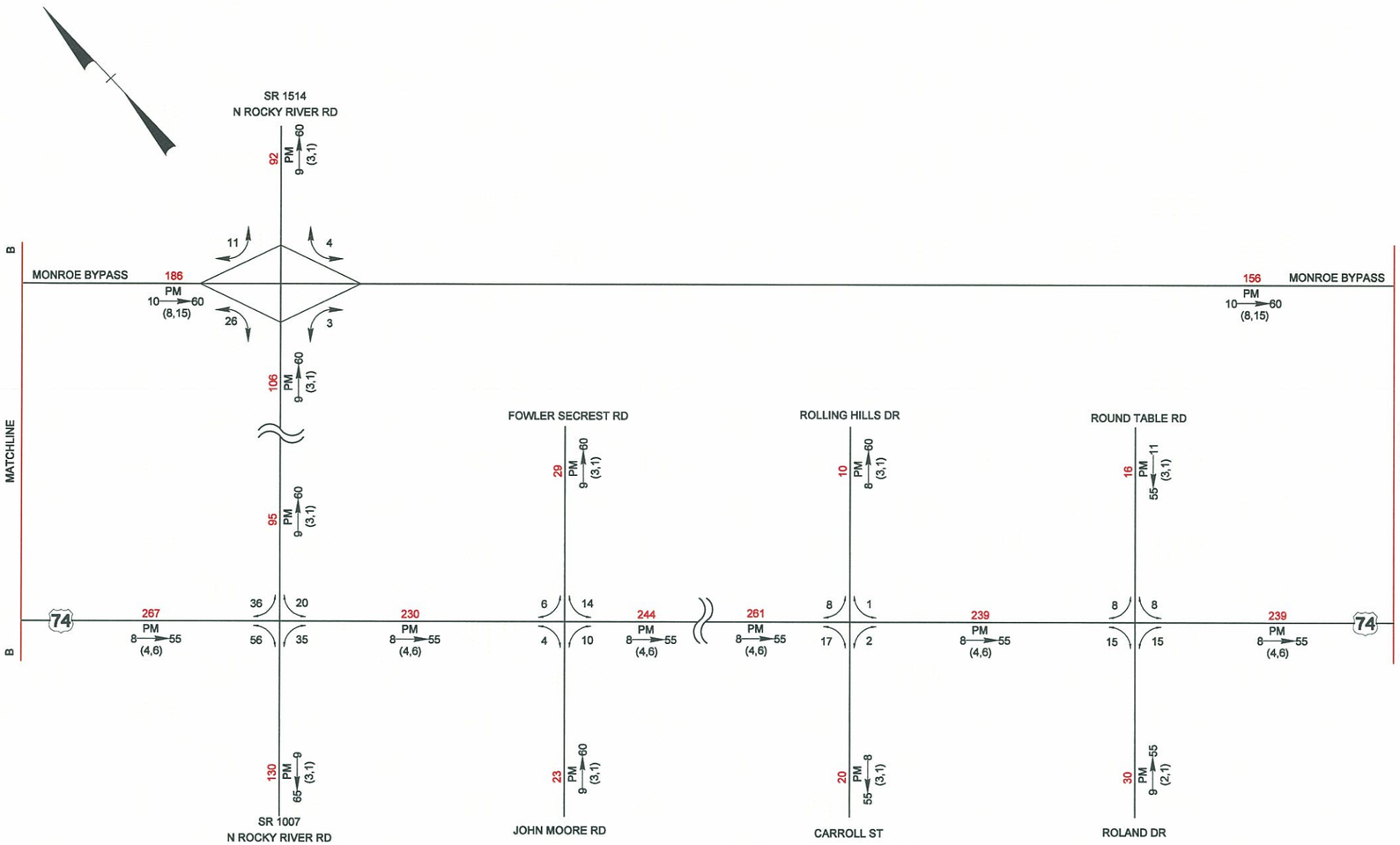
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 2
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

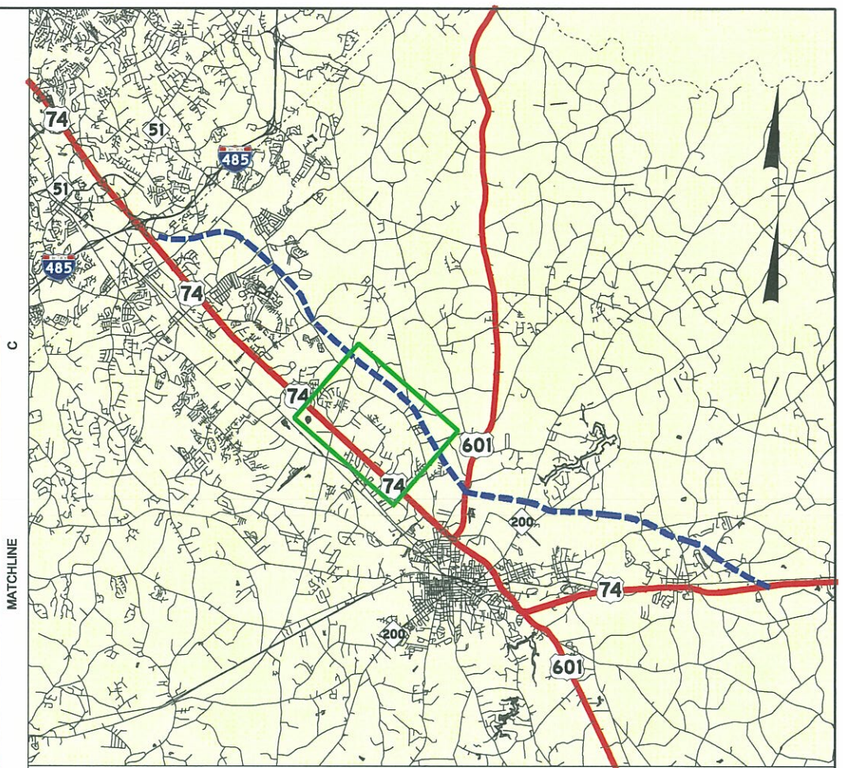
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

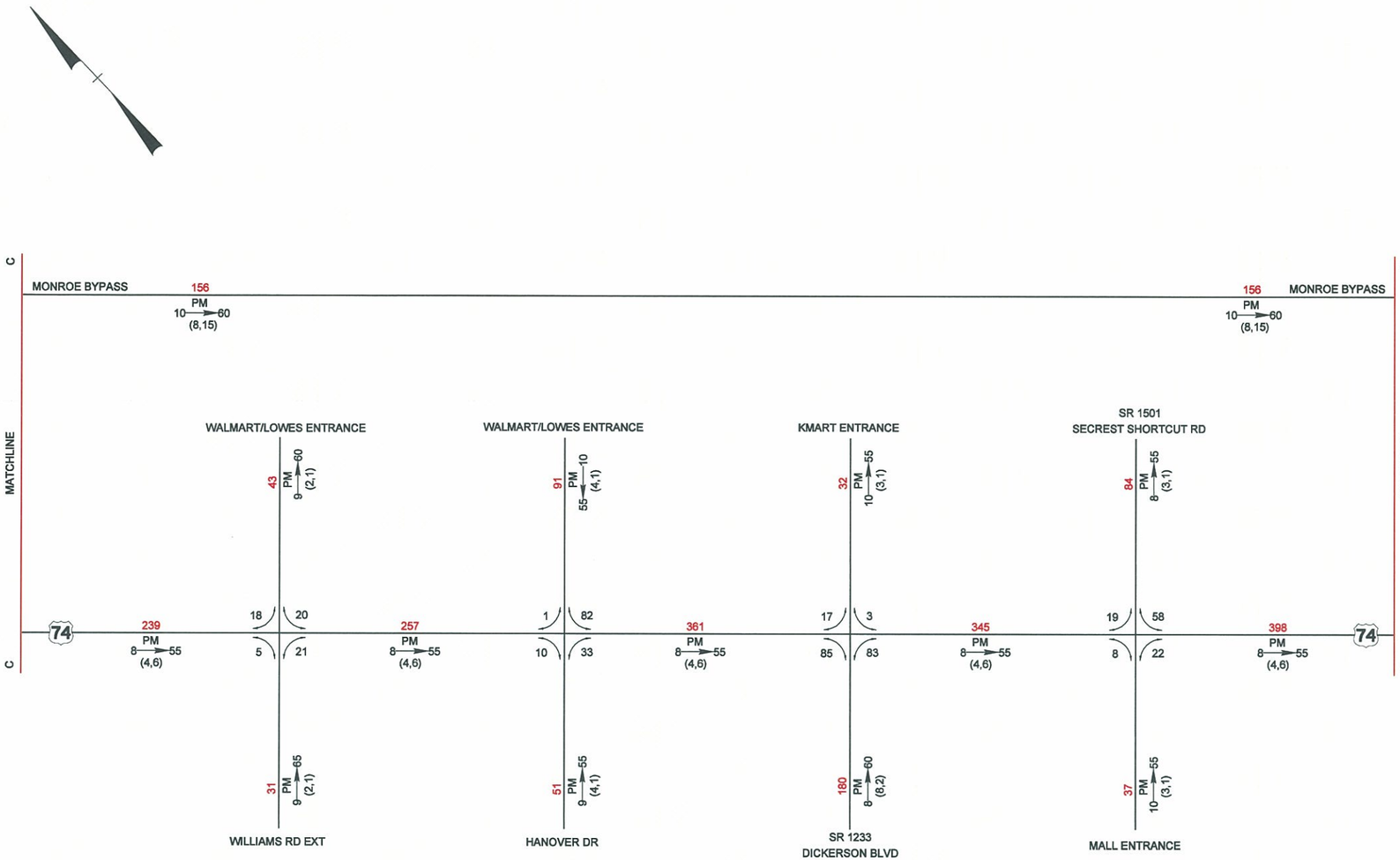
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 3
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

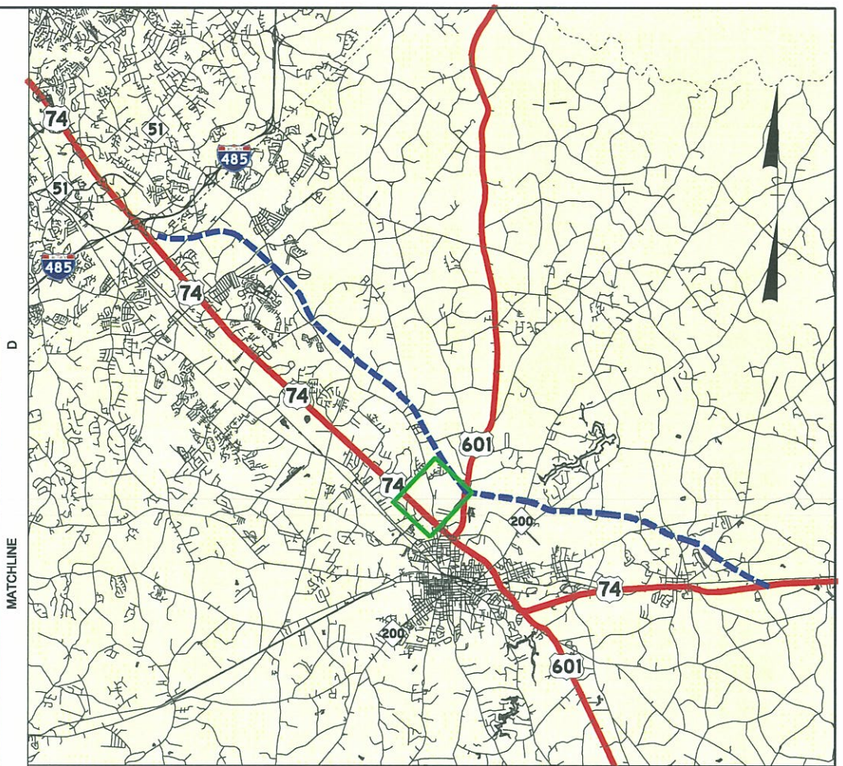
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

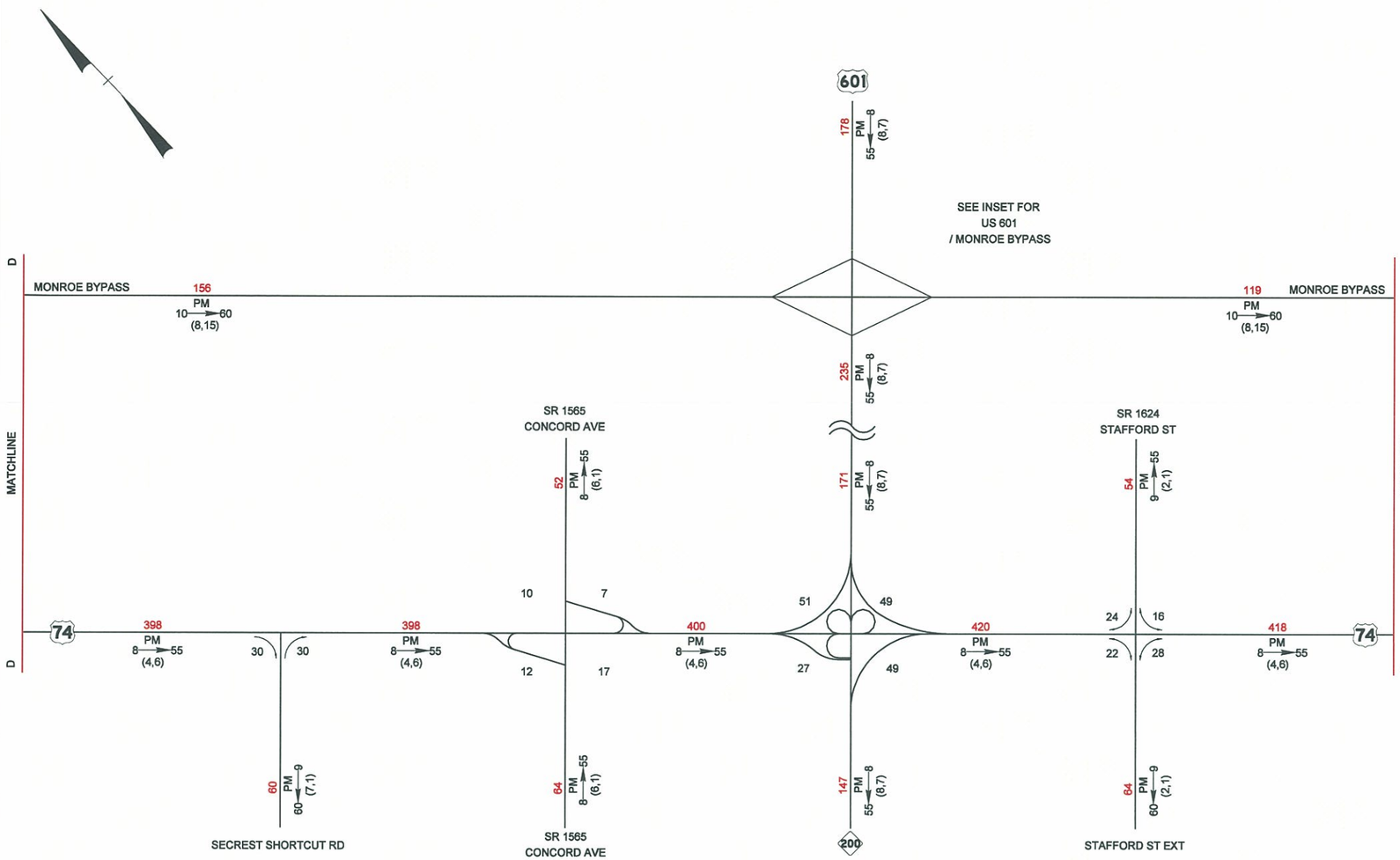
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 4
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

LEGEND

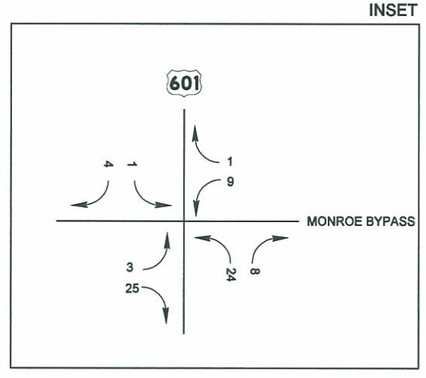
DHV $\xrightarrow[\text{(d, t)}]{\text{PM}}$ D

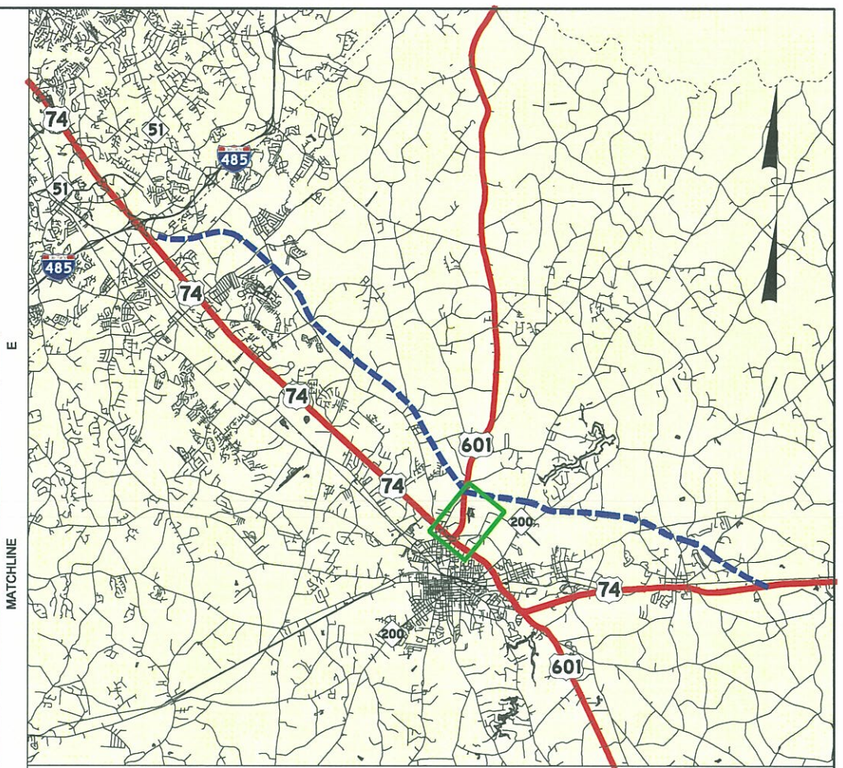
- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)



INSET





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

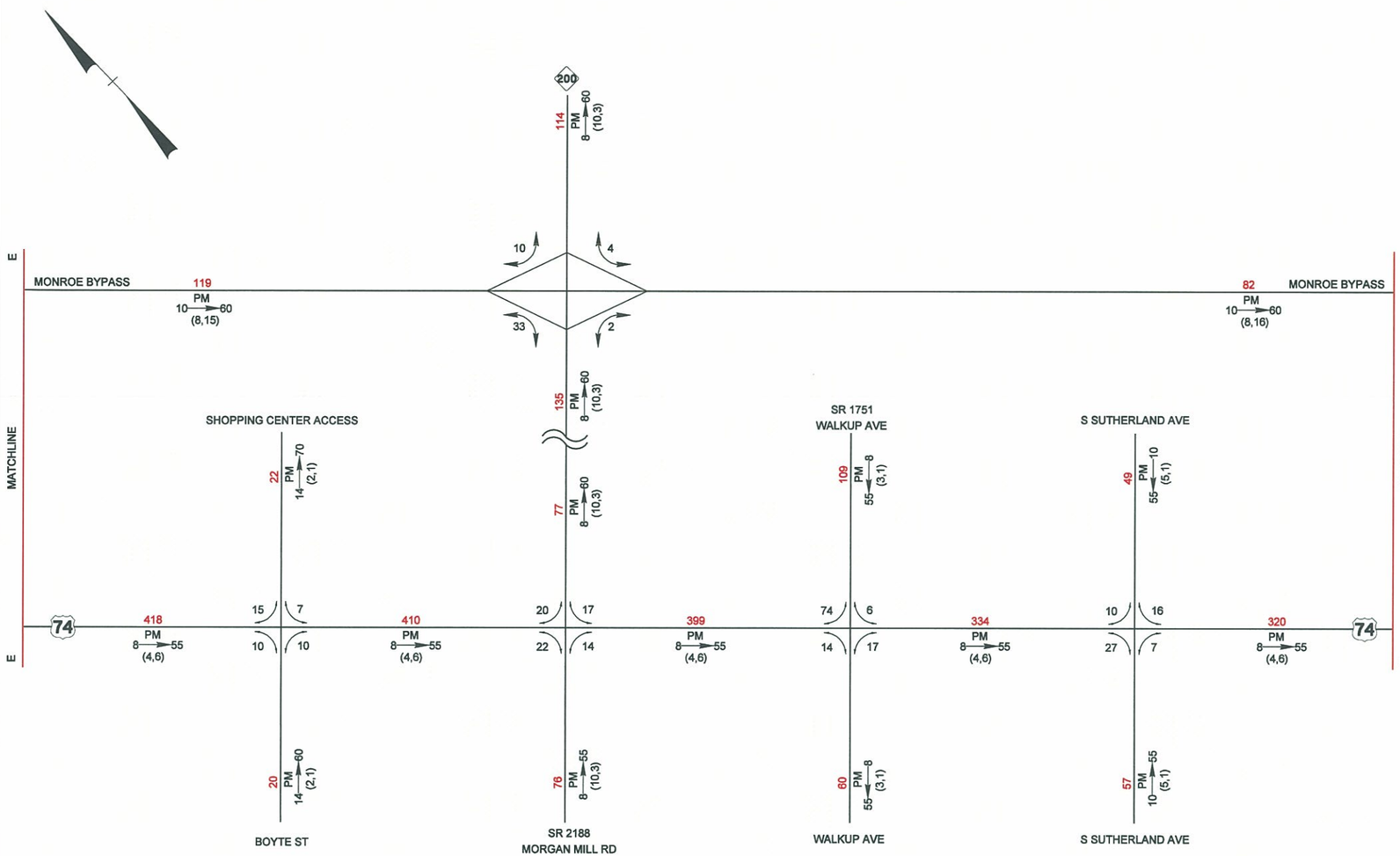
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 5
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

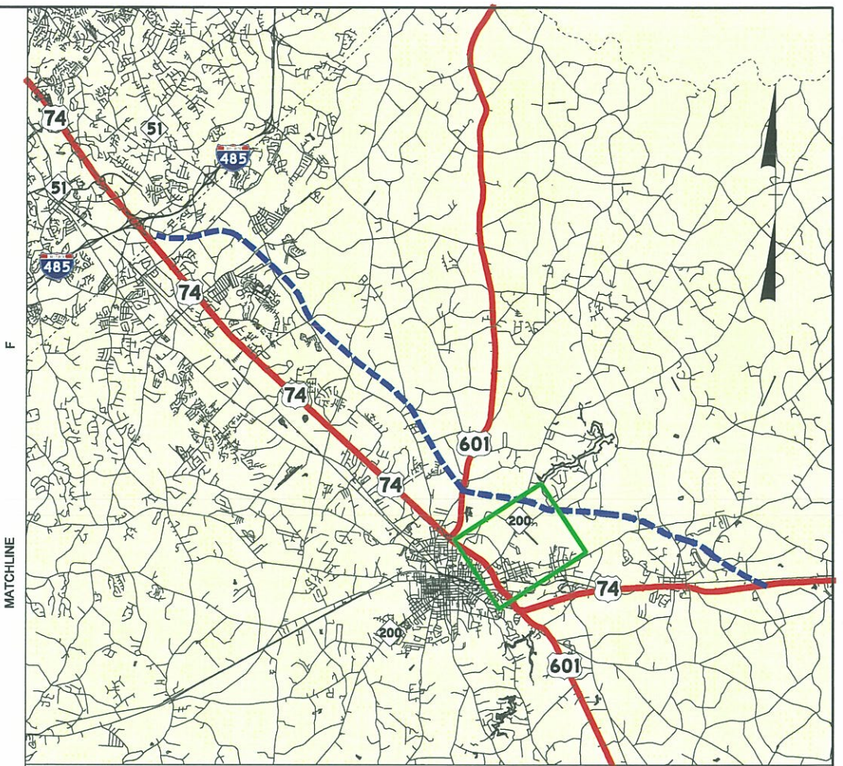
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

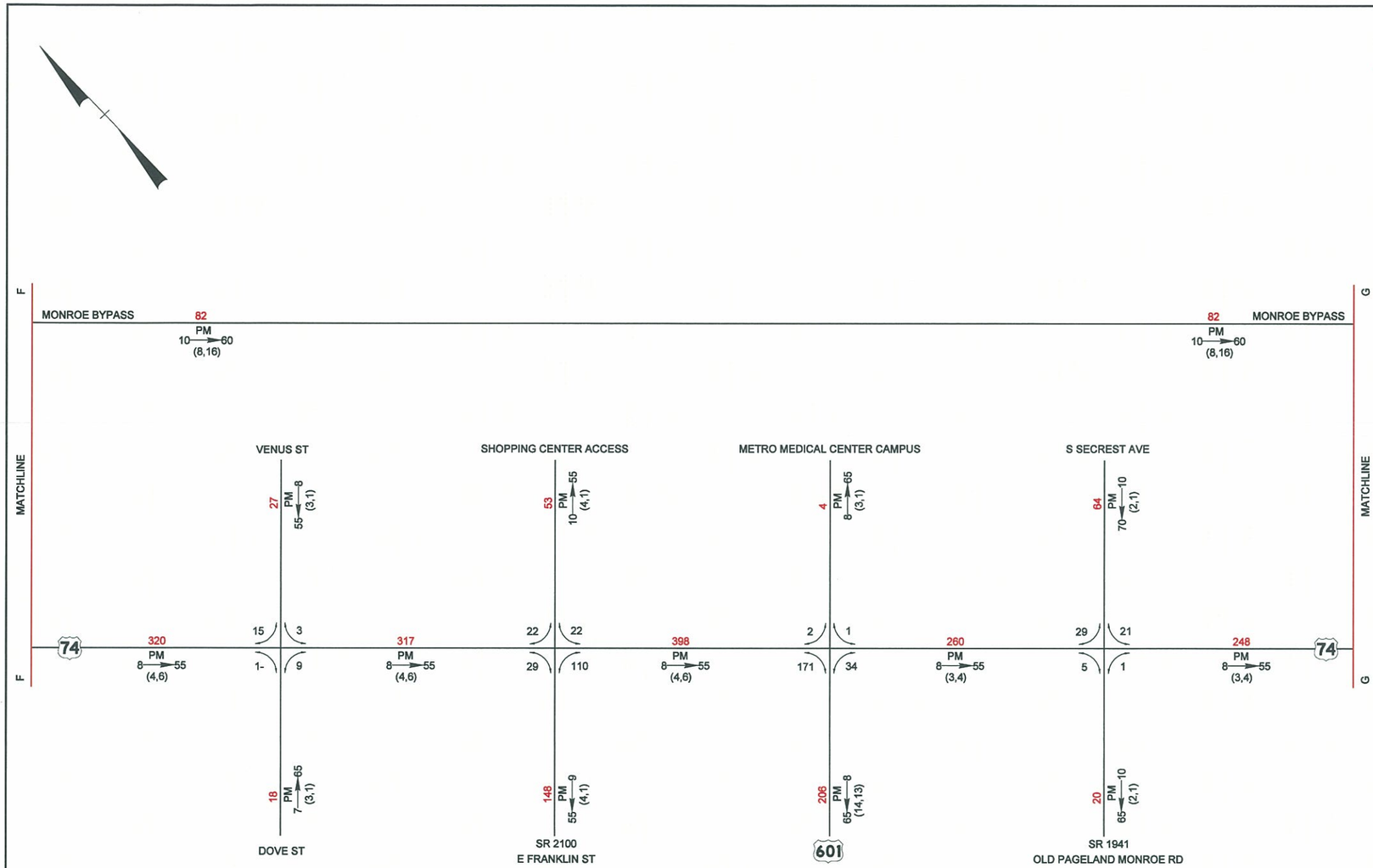
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 6
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

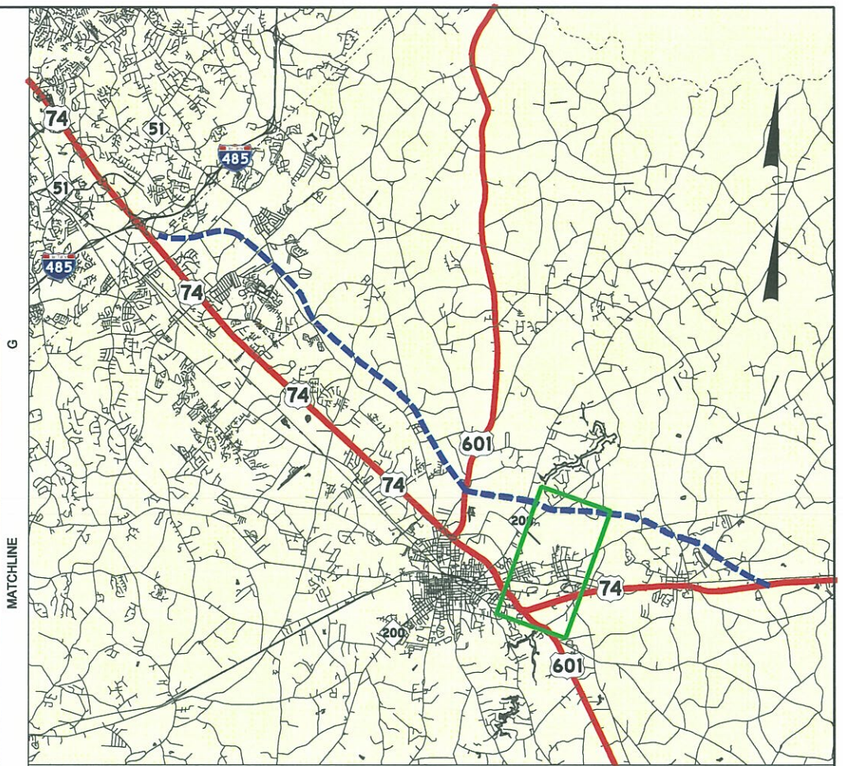
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

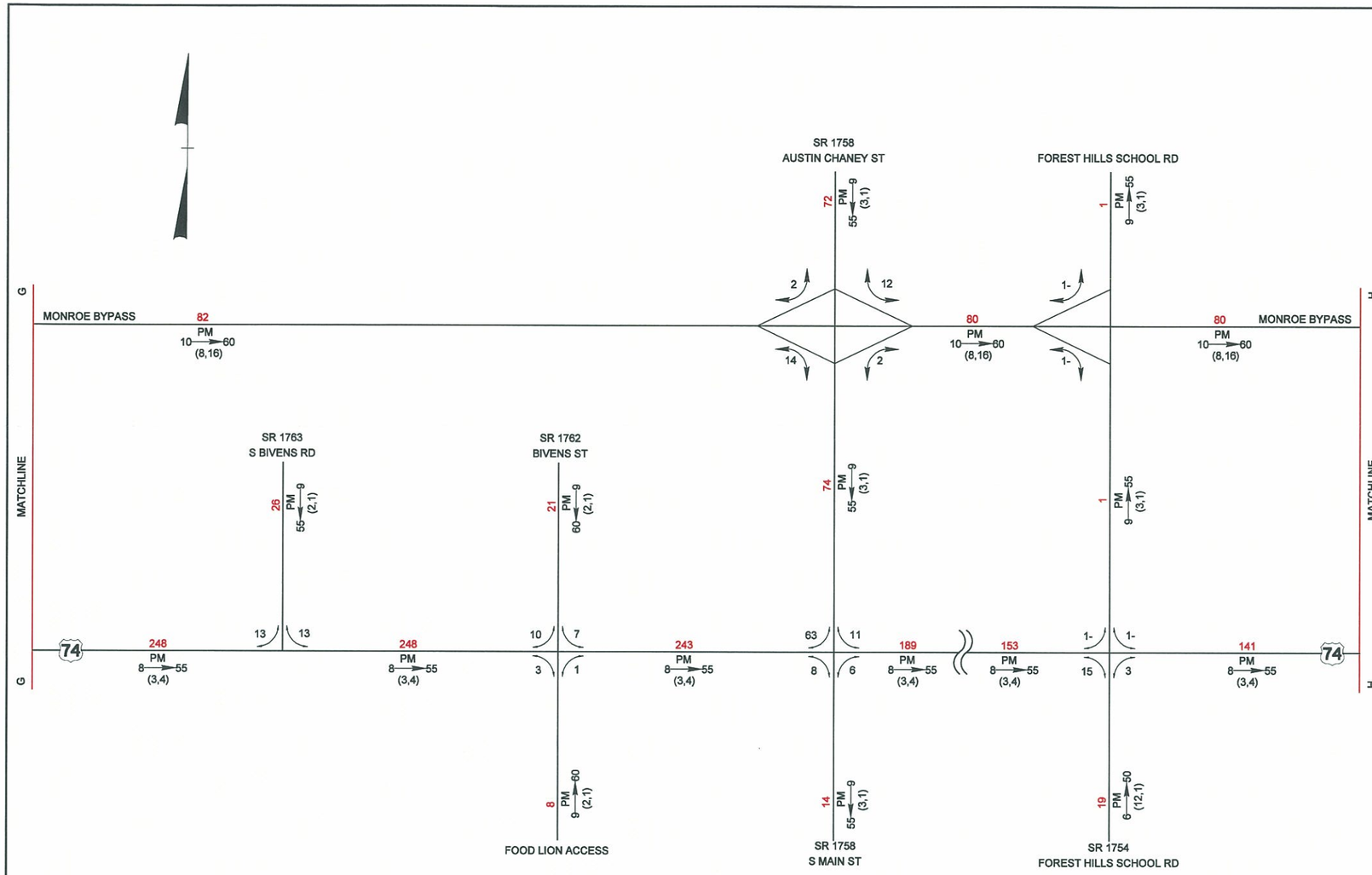
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 7
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

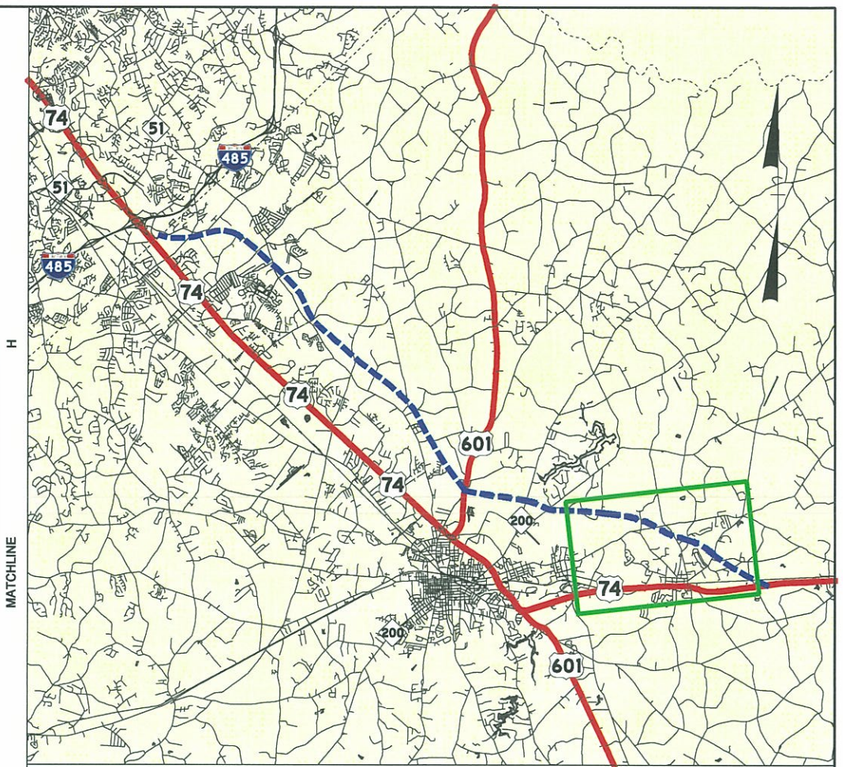
LEGEND

DHV PM → D (d, t)

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

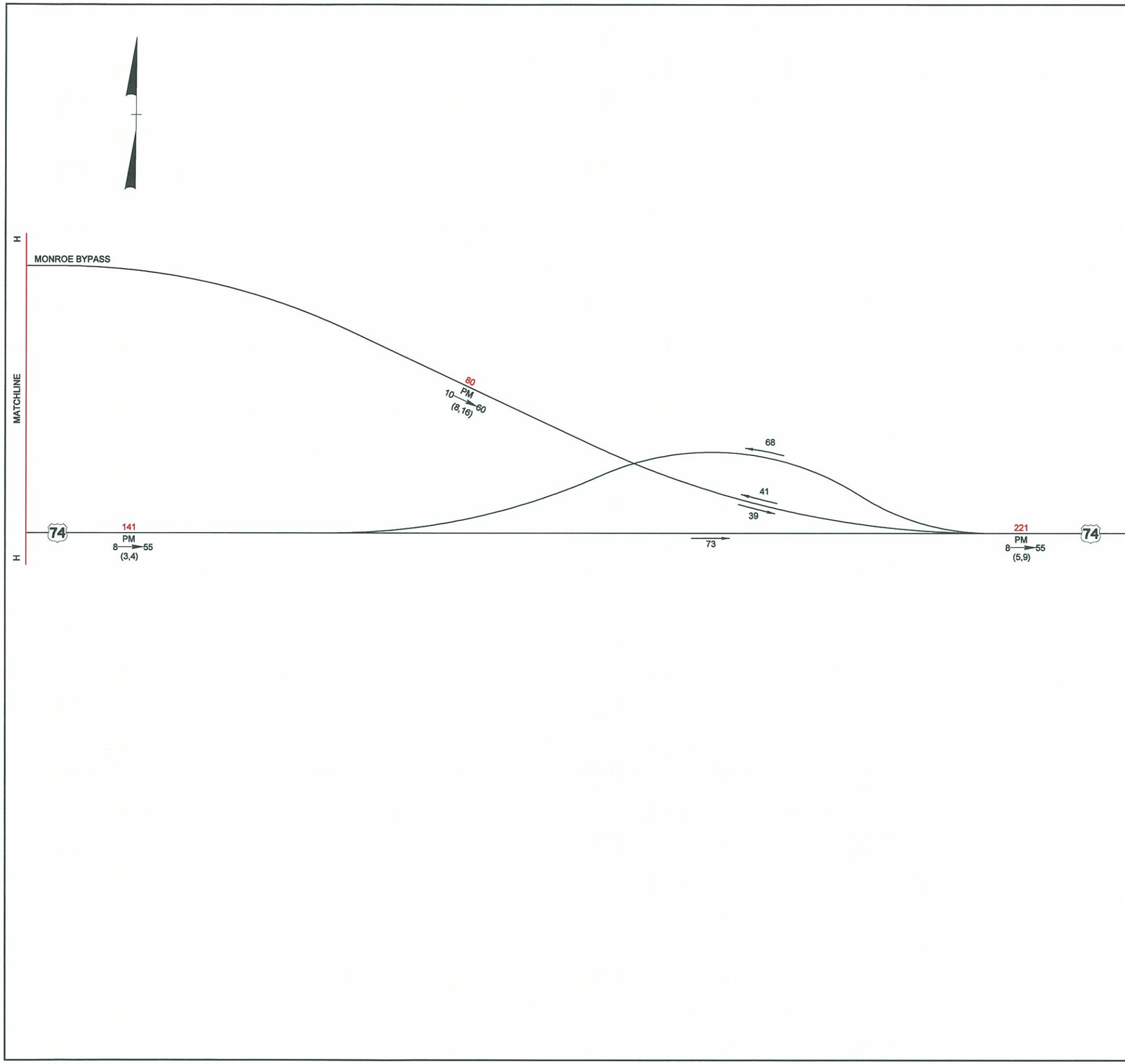
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 8
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

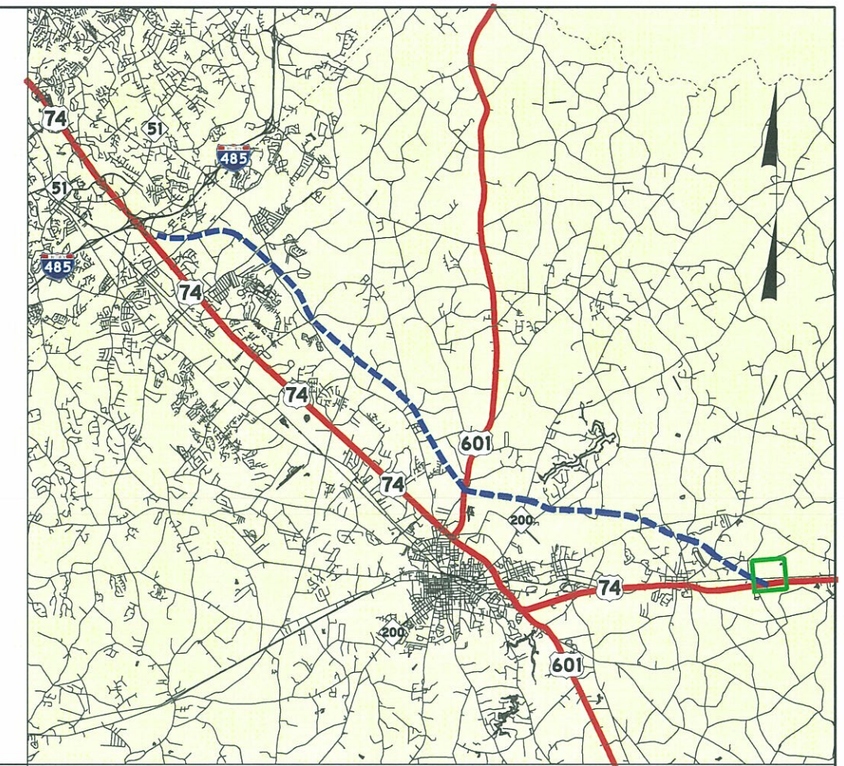
LEGEND

DHV $\xrightarrow{\text{PM}}$ D
(d, t)

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

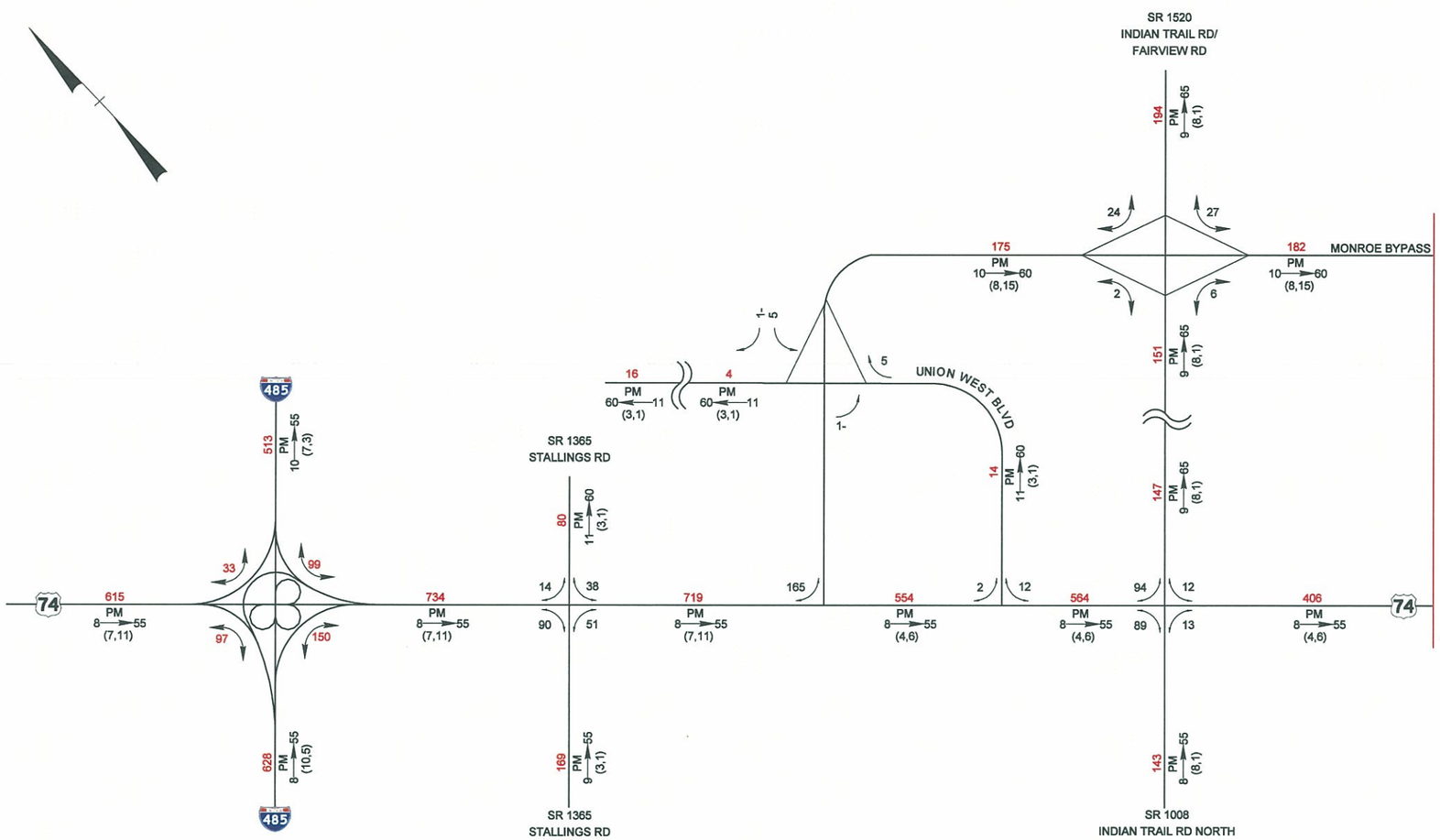
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 9
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

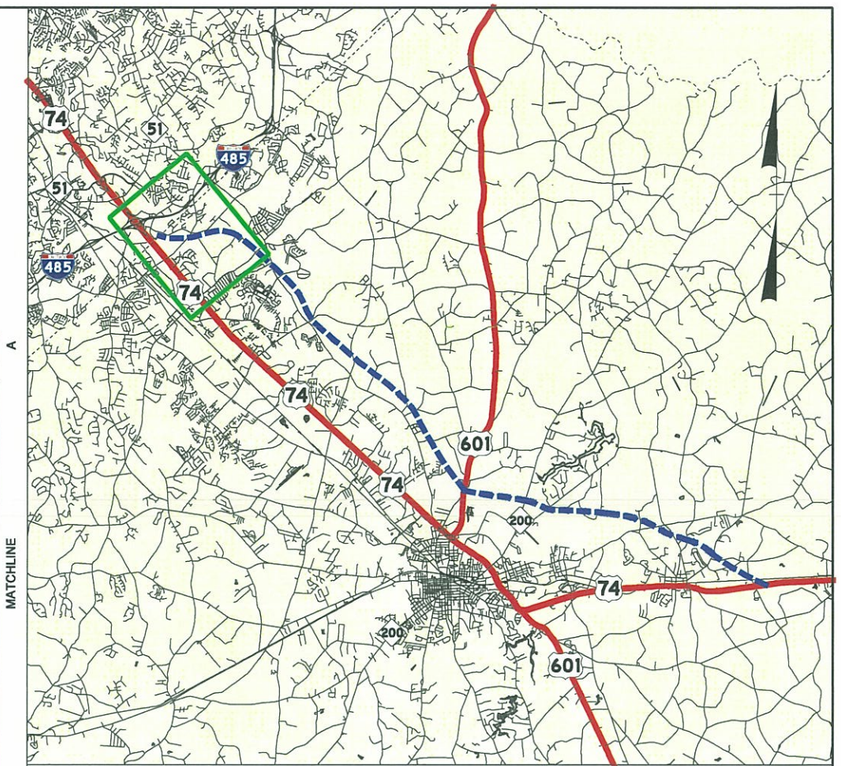
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV Design Hourly Volume (%) = K_{30}
PM Peak Period
D Peak Hour Directional Split (%)
$\longrightarrow$ Indicates Direction of D
(d, t) Duals, TTST (%)

No. of Vehicles Per Day (VPD) in 100s
1- Less than 50 VPD
Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

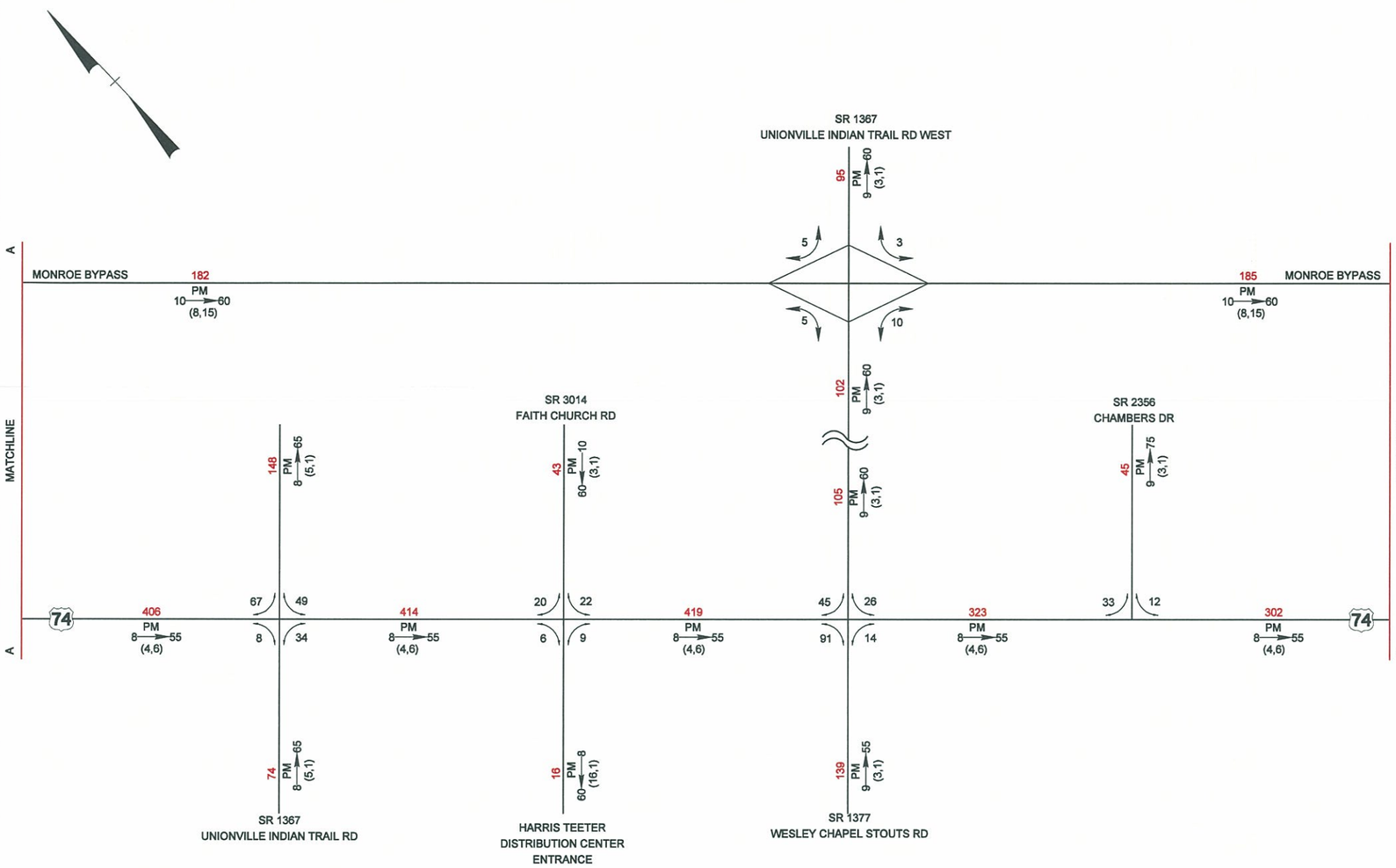
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 1
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

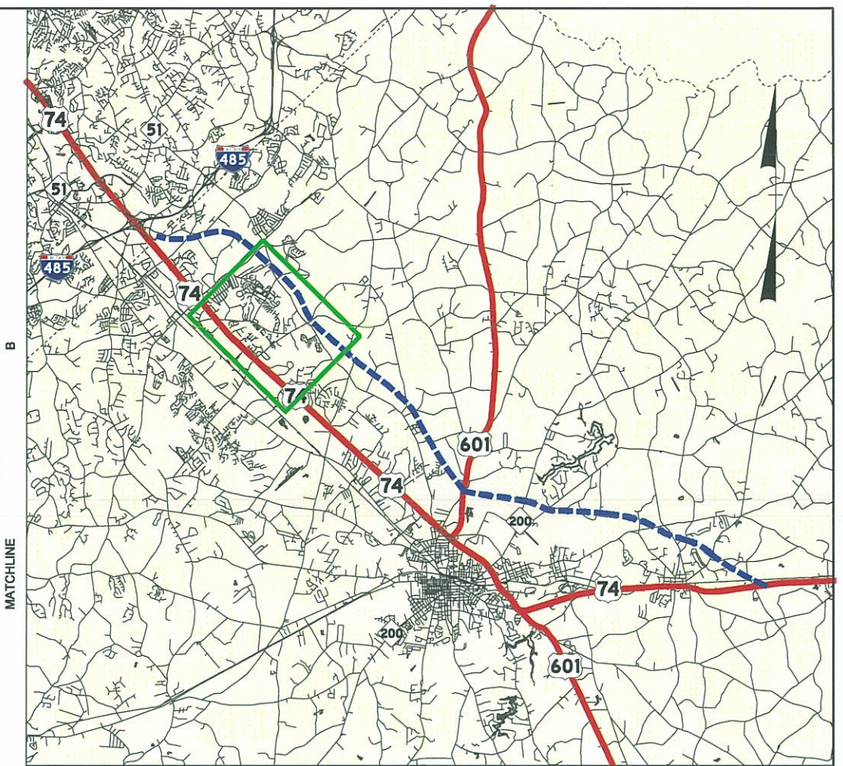
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

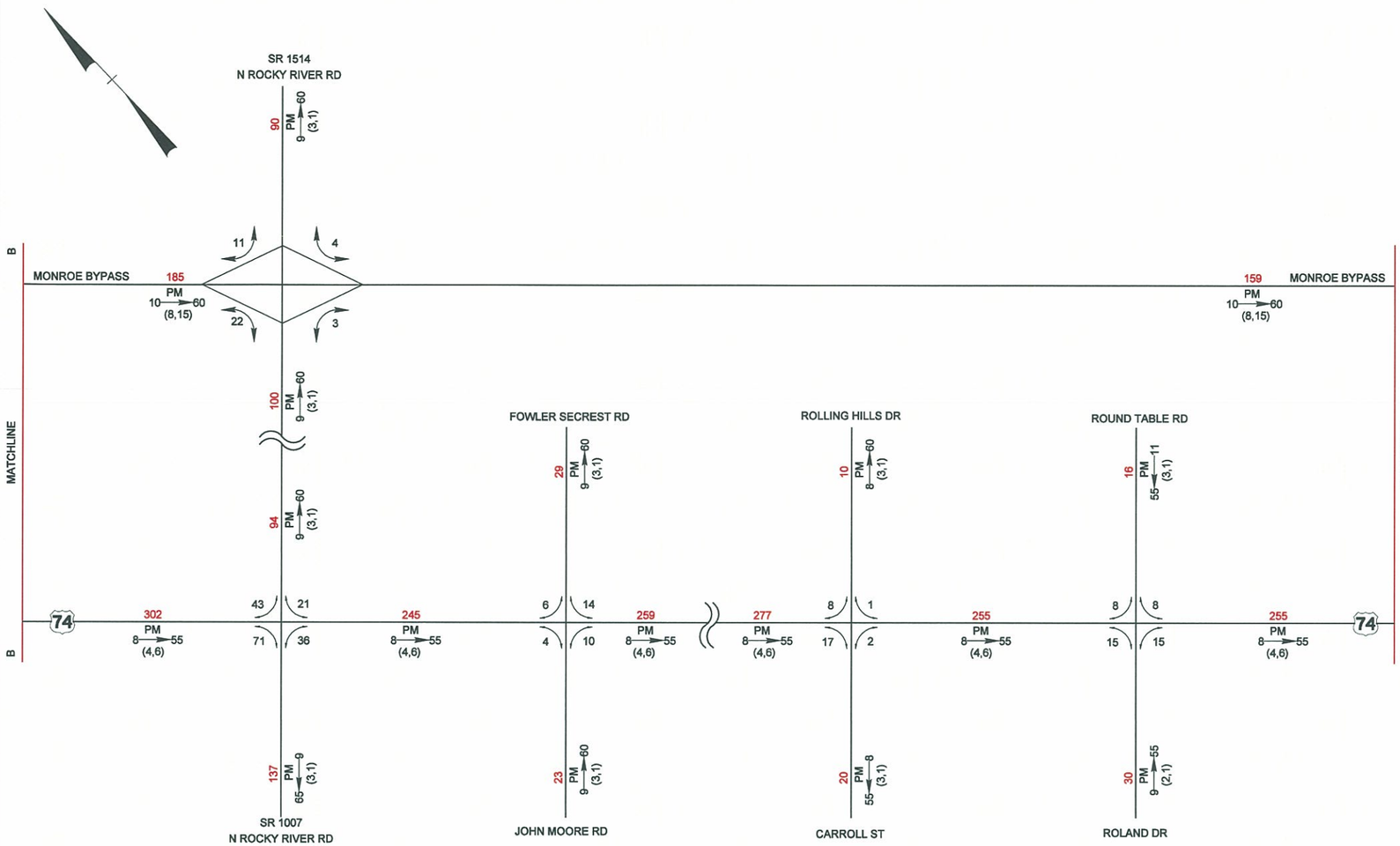
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 2
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

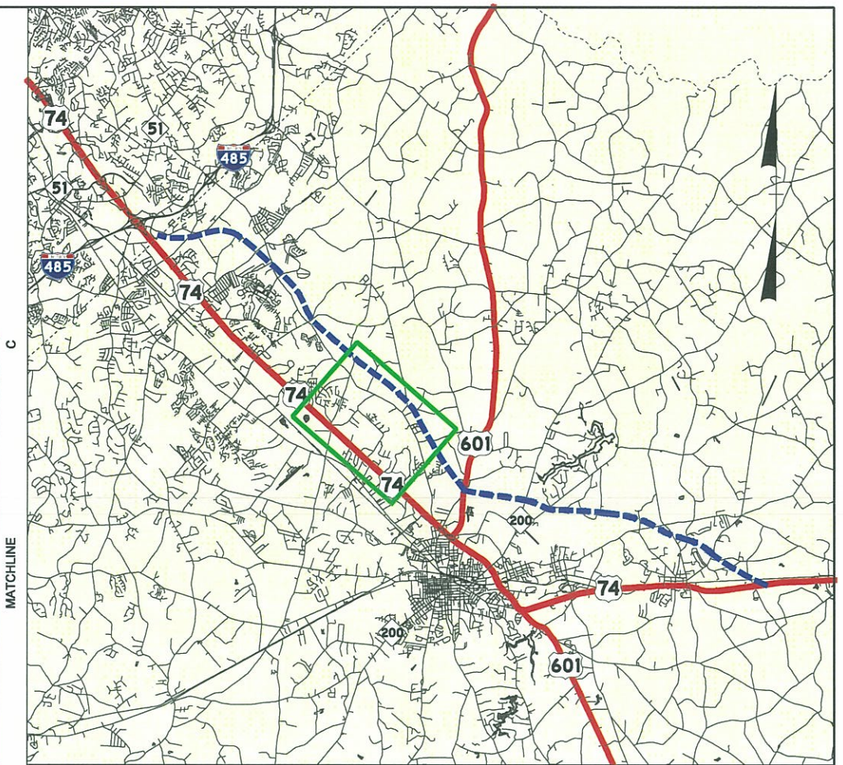
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

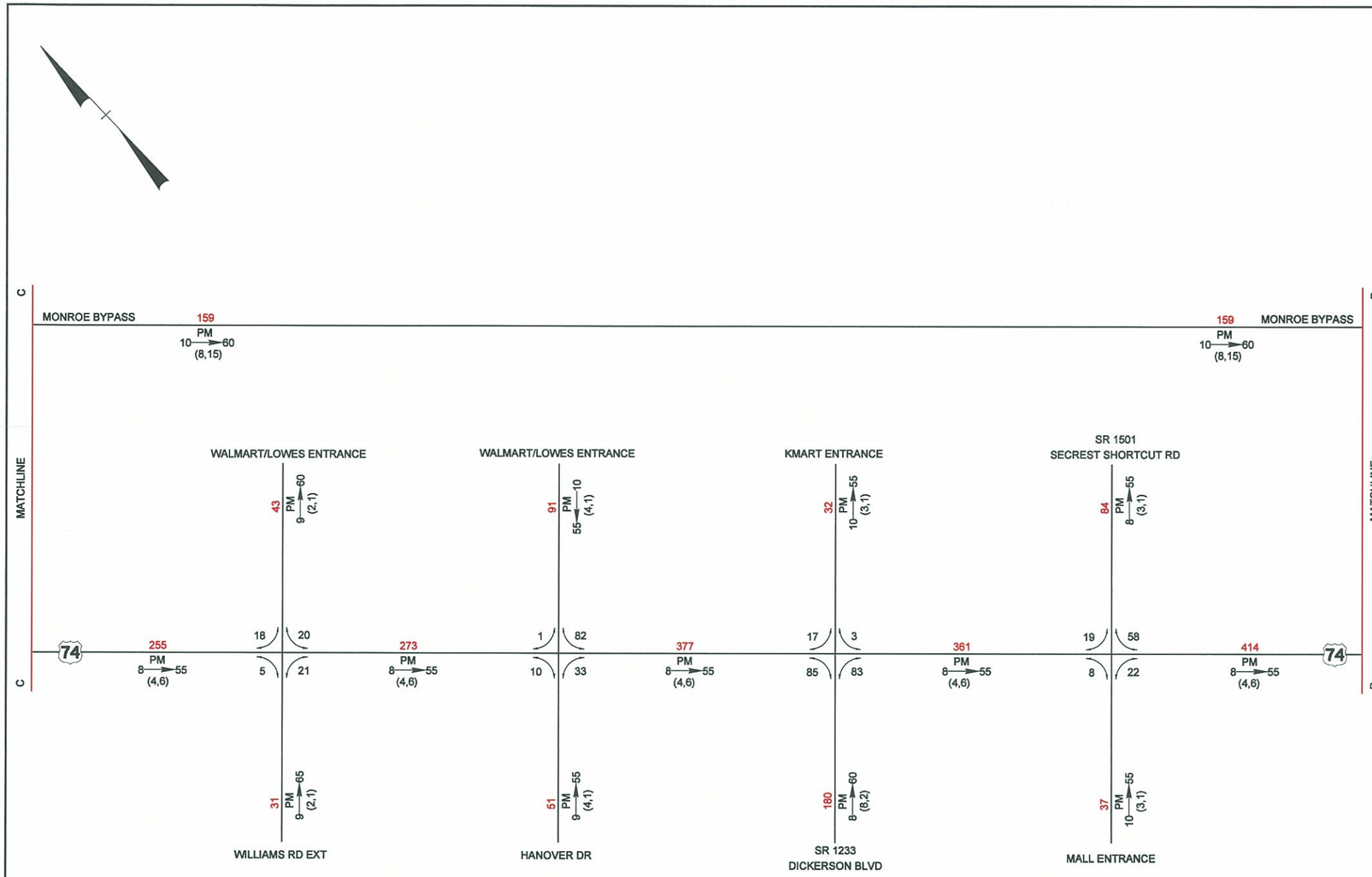
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 3
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

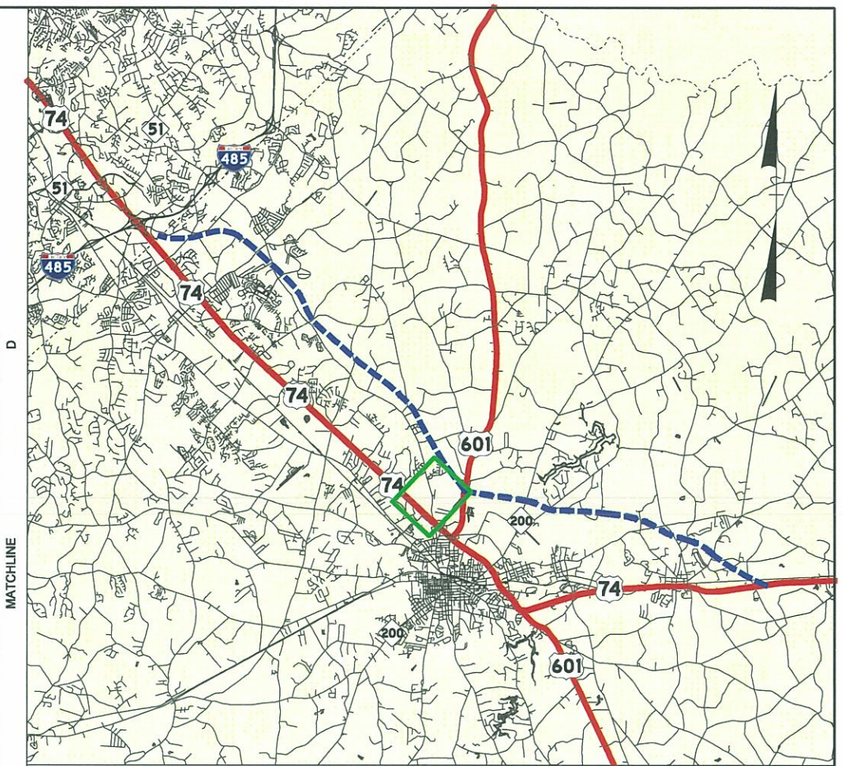
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

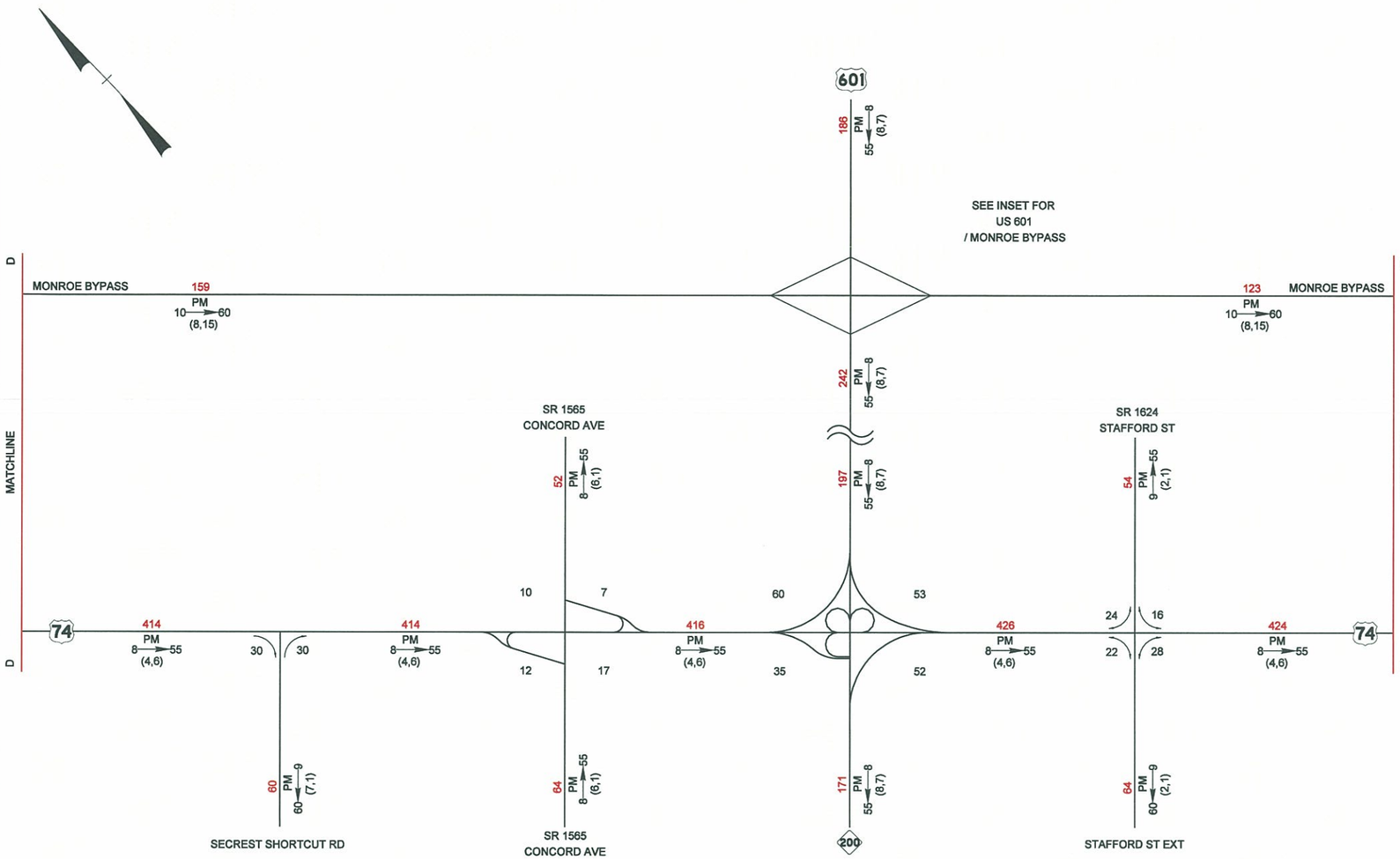
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 4
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

LEGEND

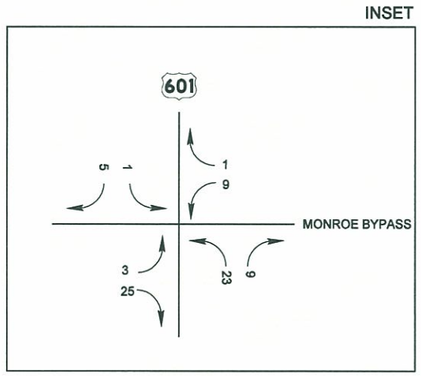
DHV $\xrightarrow[(d,\ t)]{PM}$ D

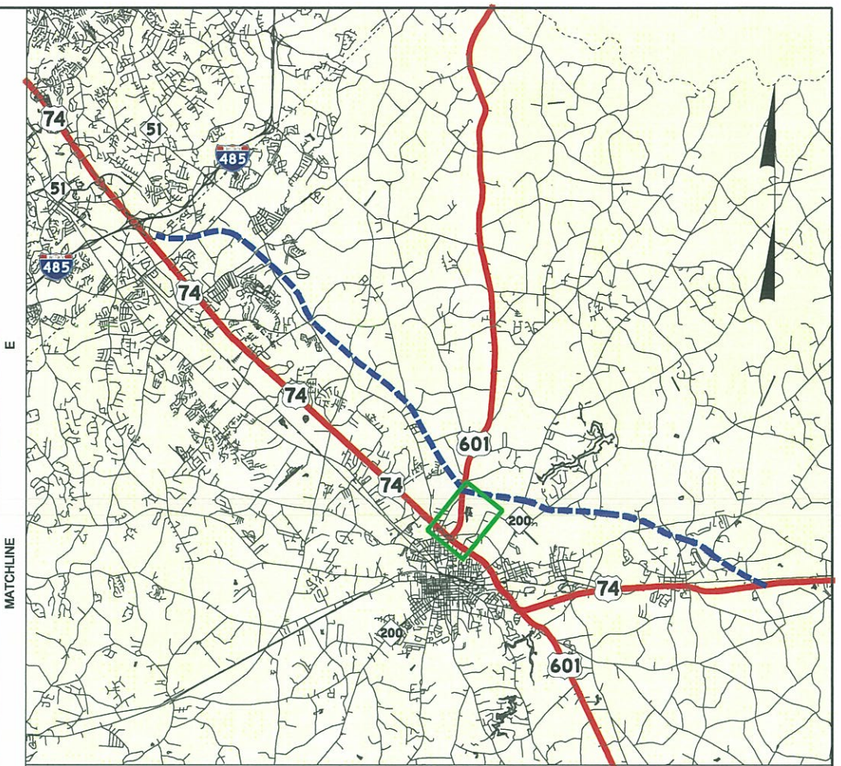
- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)



INSET





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

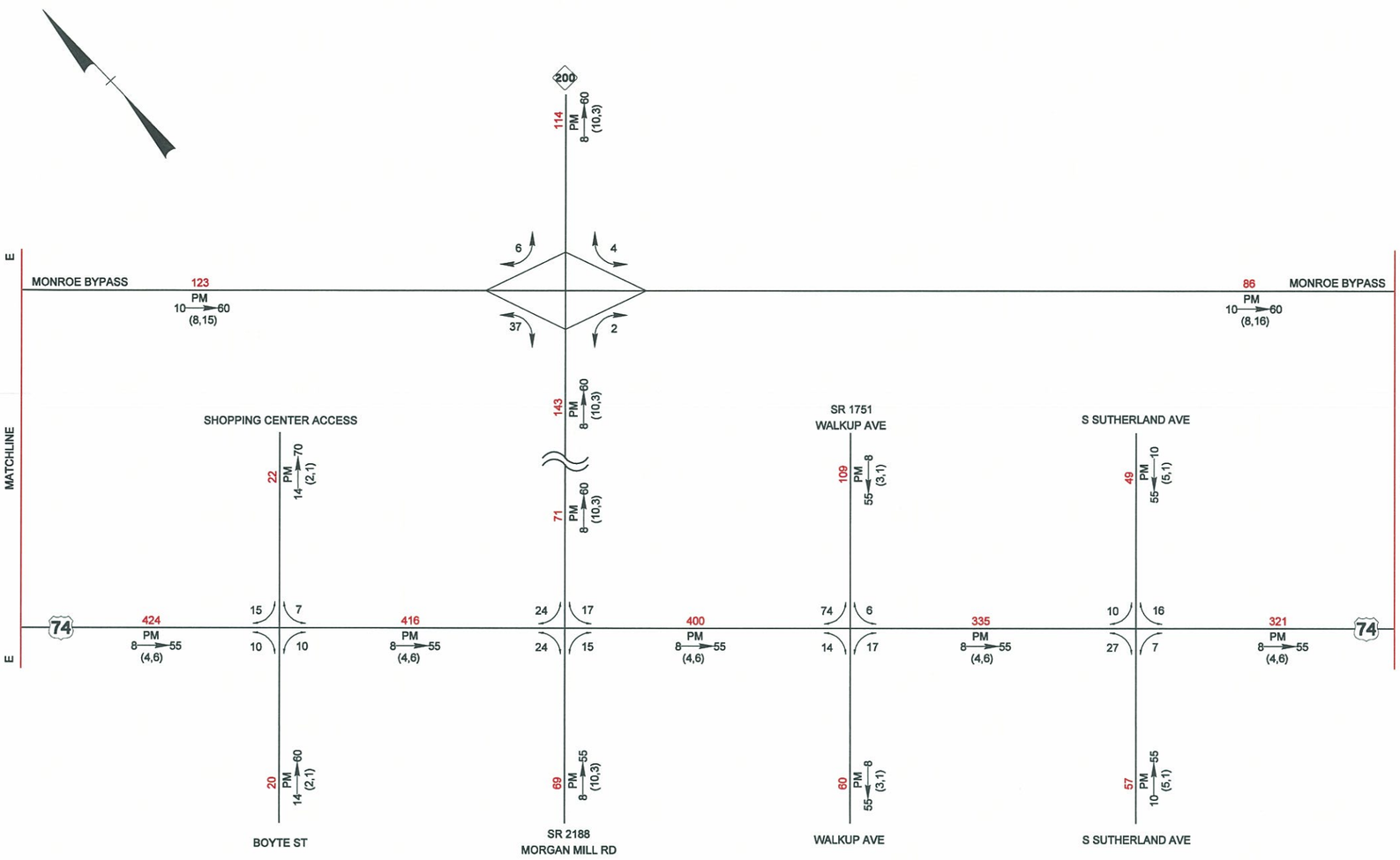
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 5
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

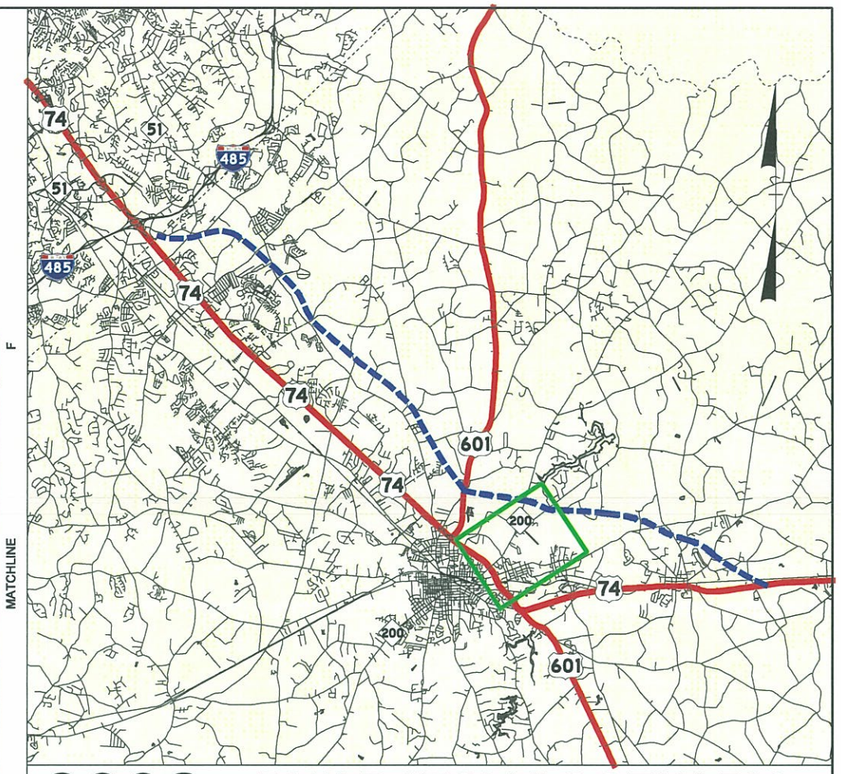
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

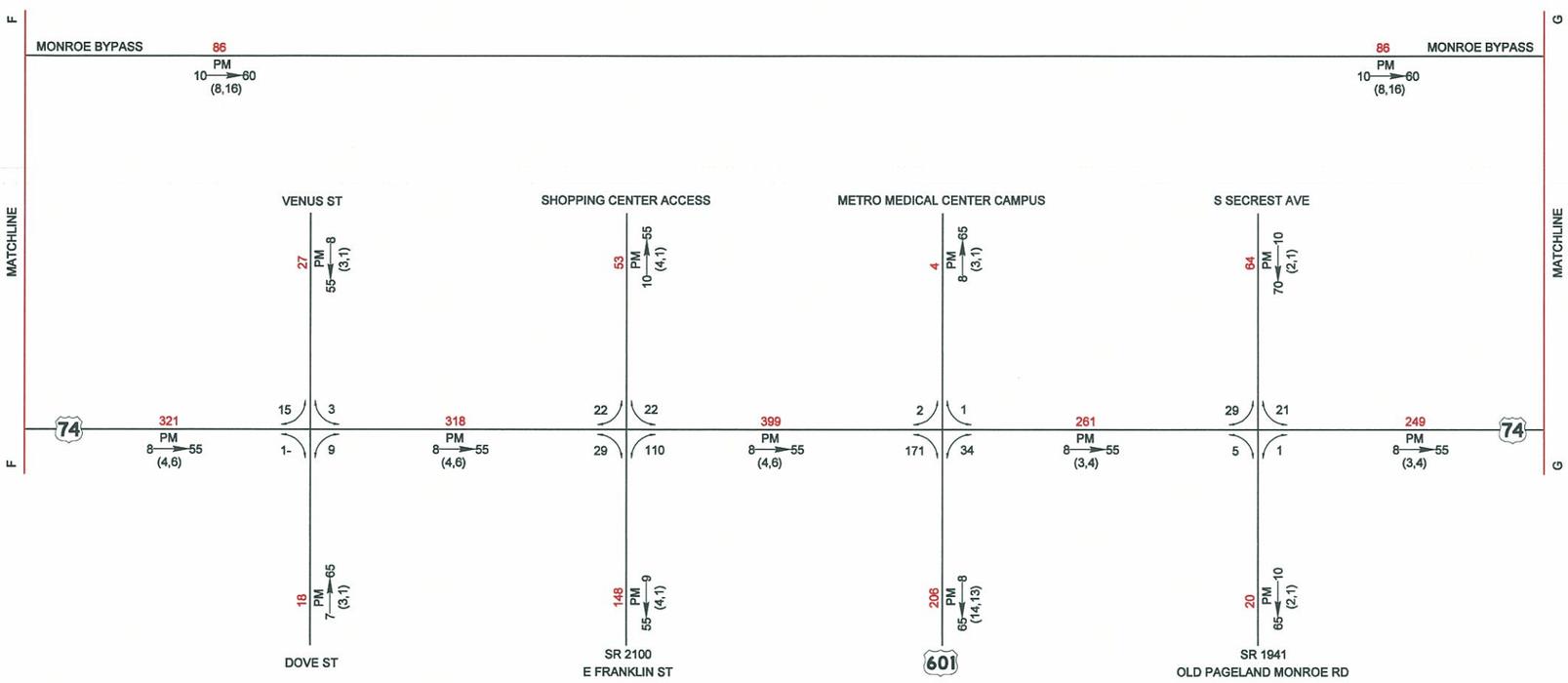
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 6
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

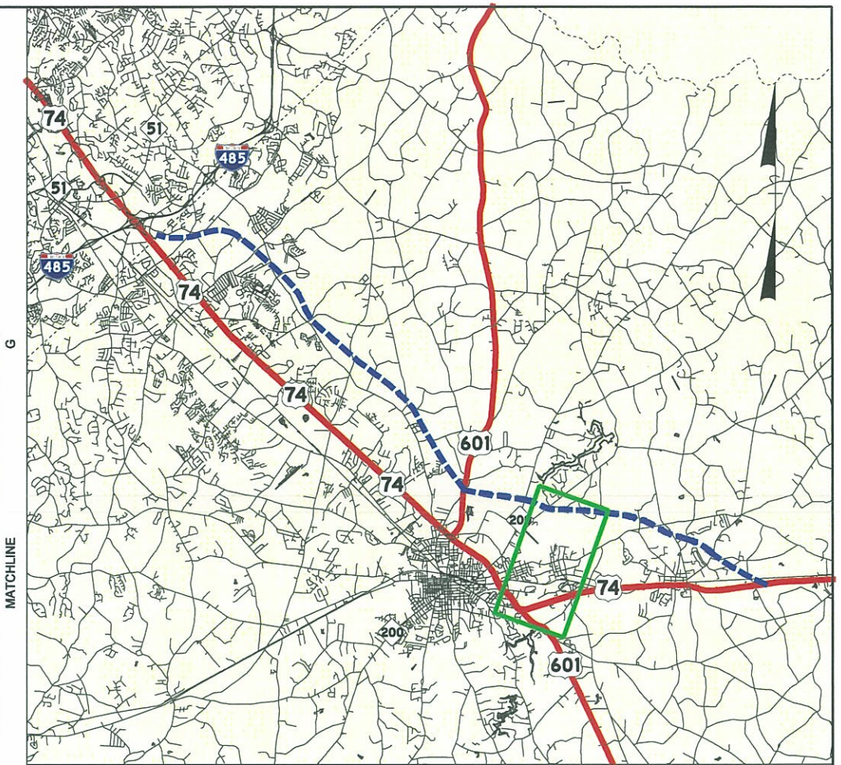
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

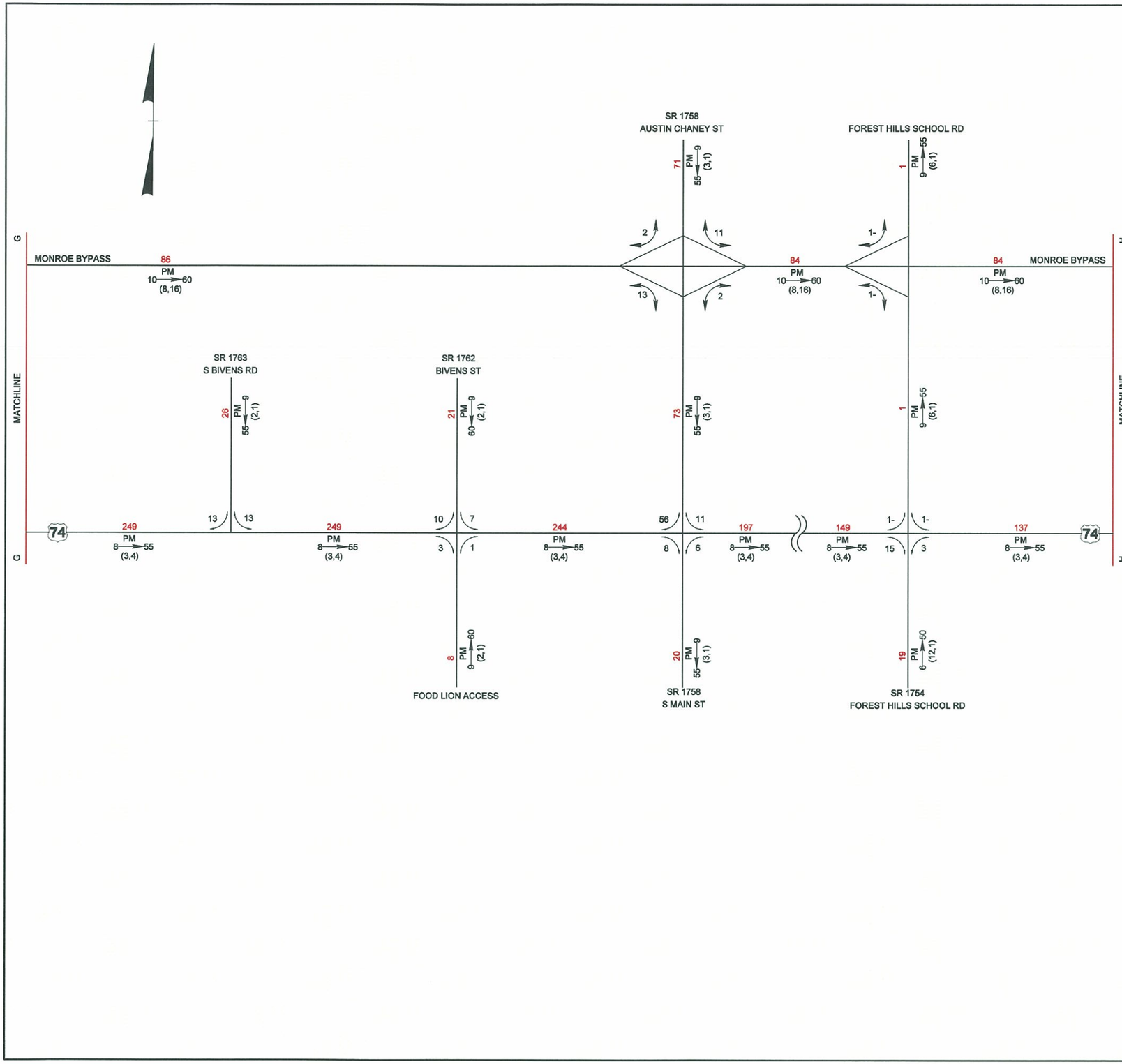
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 7
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

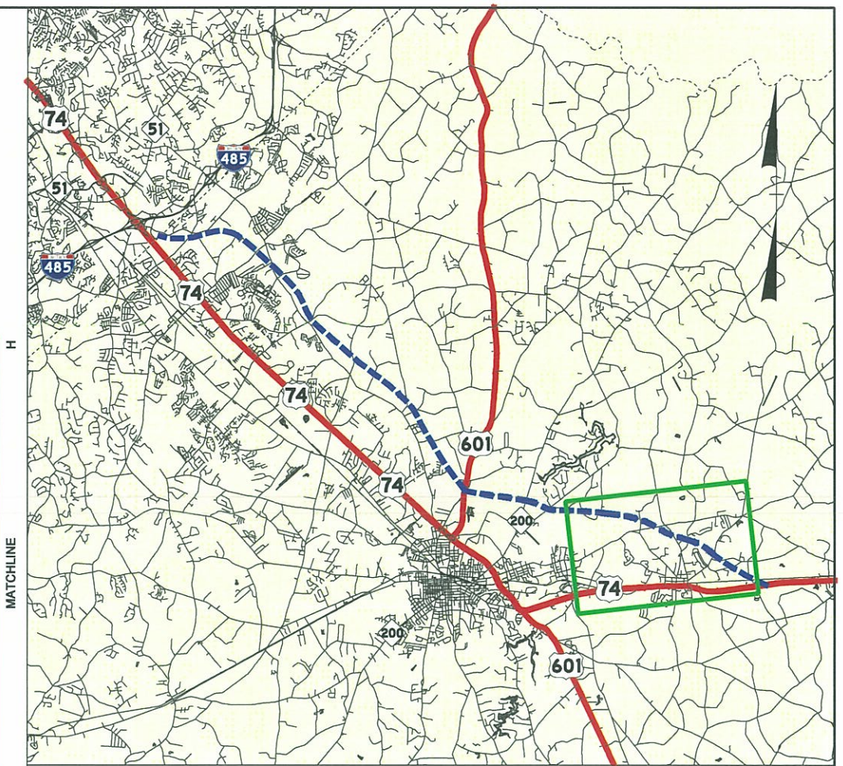
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

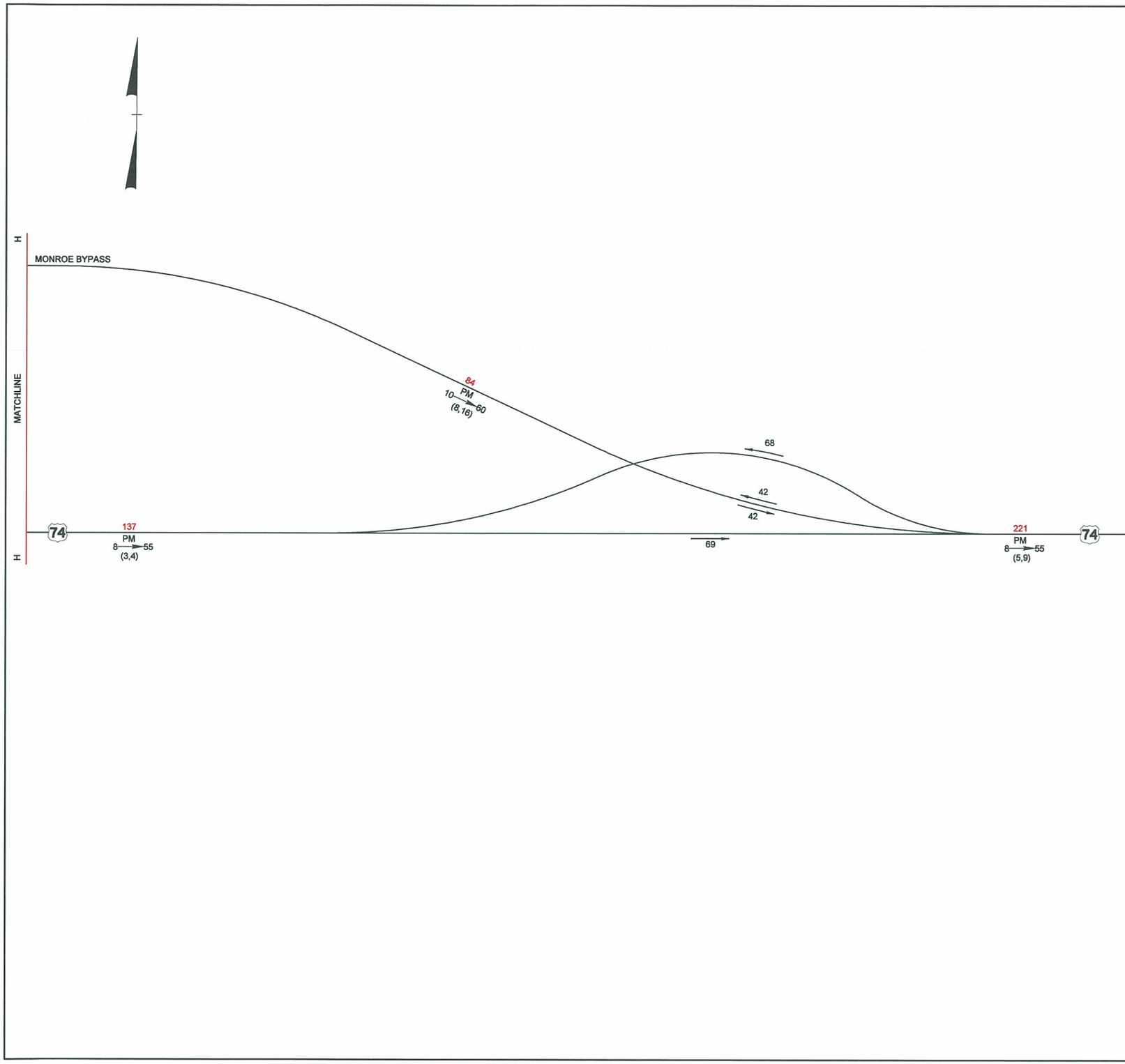
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 8
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

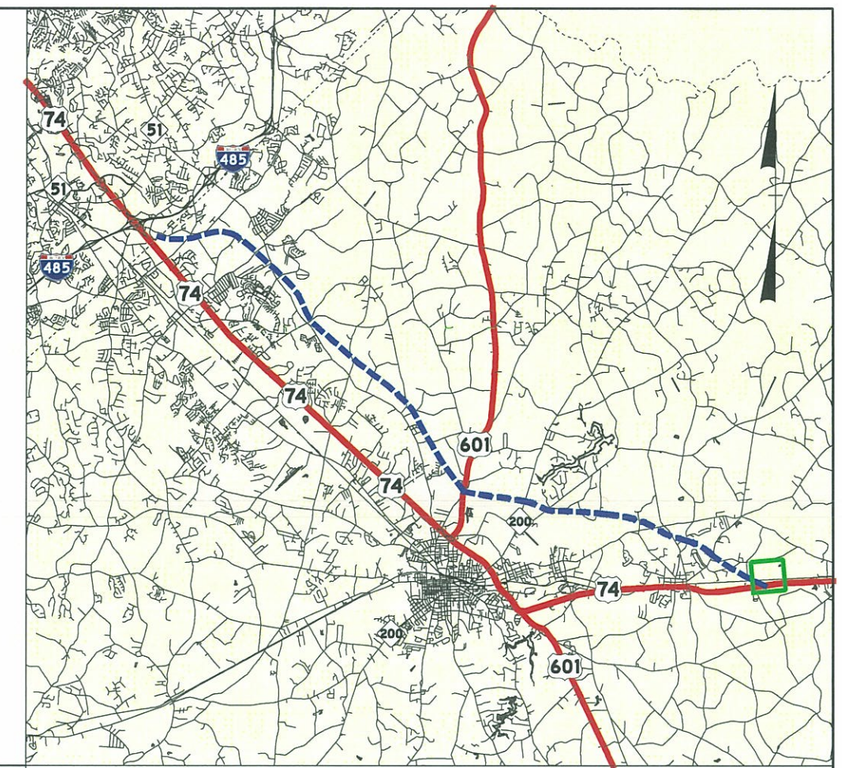
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2008 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 9
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

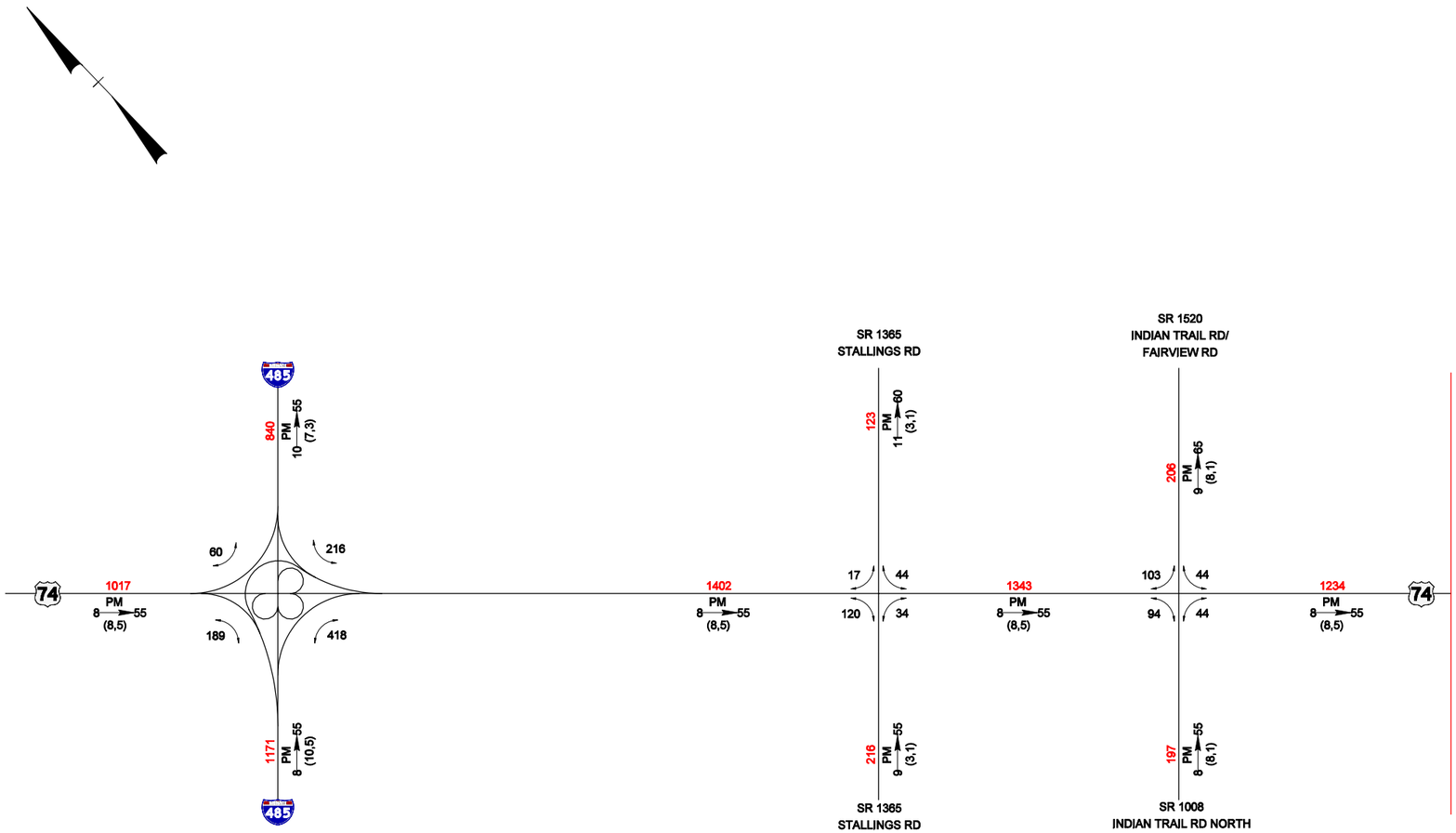
LEGEND

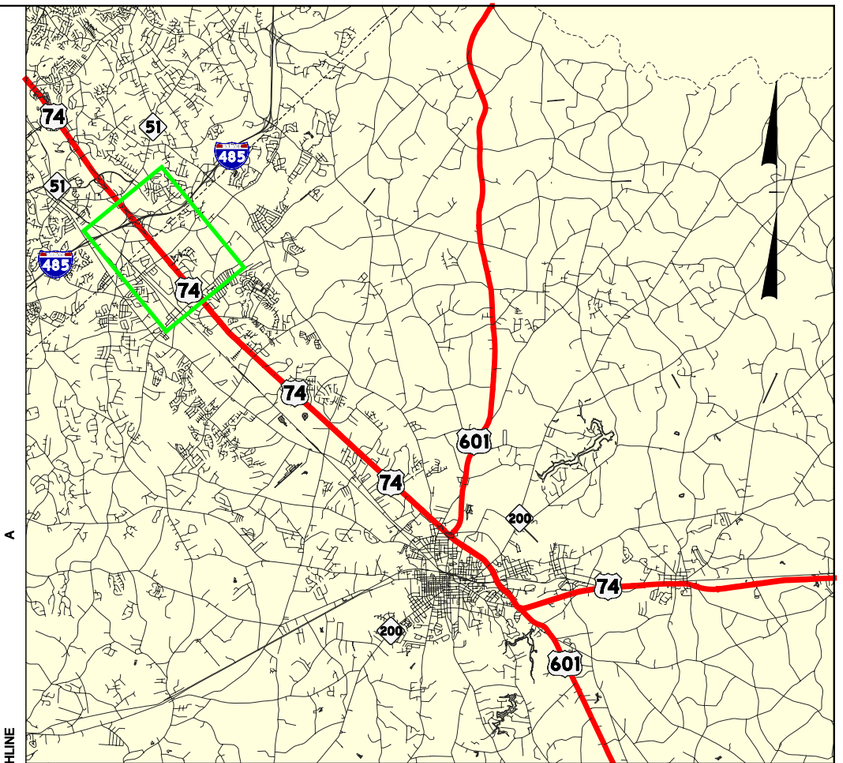
DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)

Exhibit 10
2035 No-Build Traffic Forecast Figures





2035 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 1

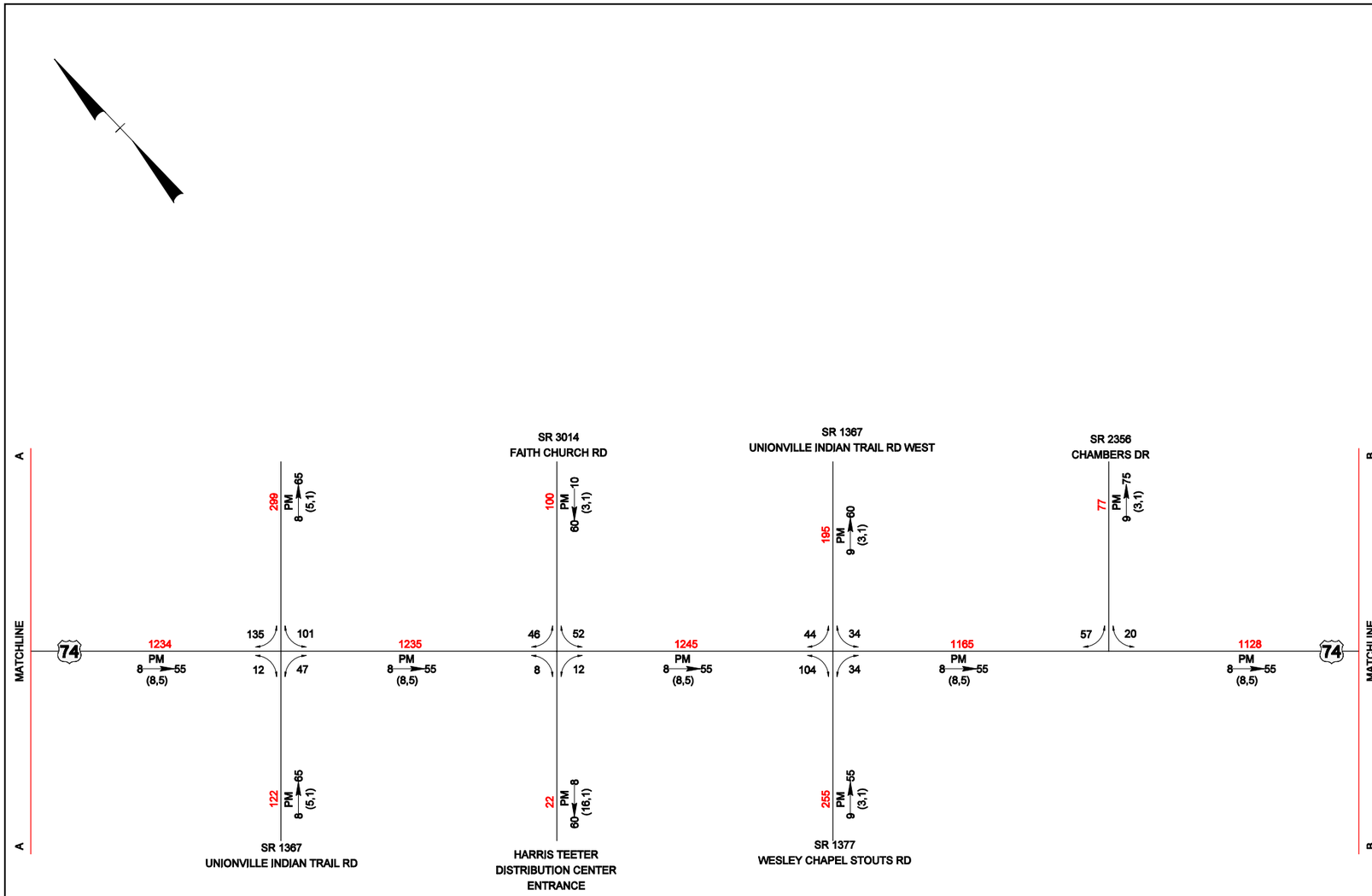
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

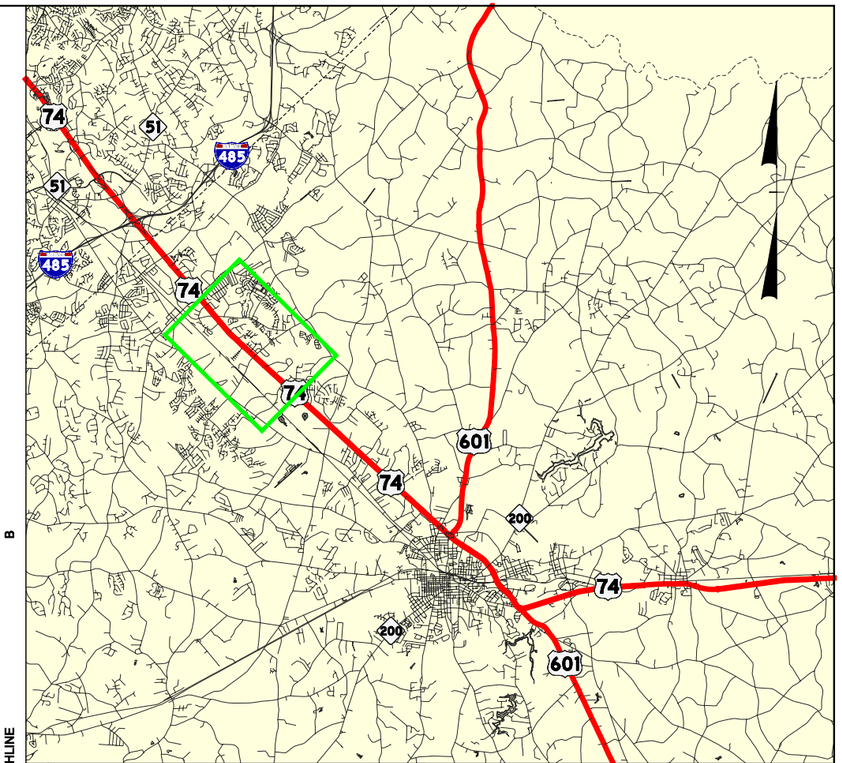
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 2

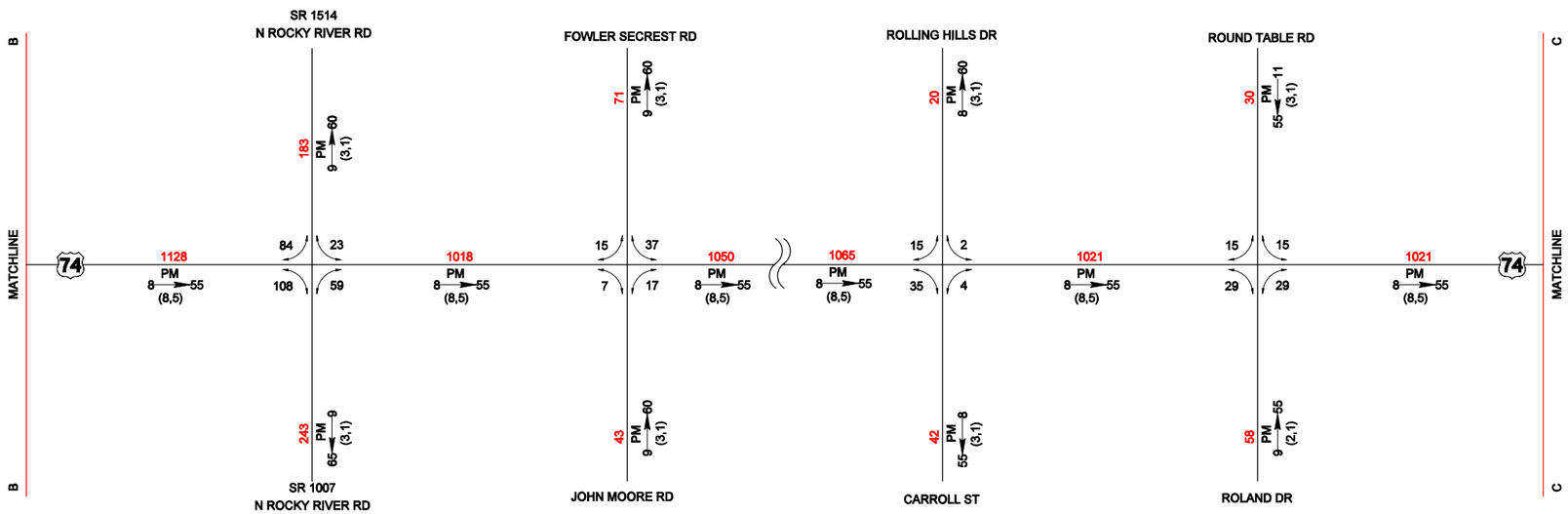
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

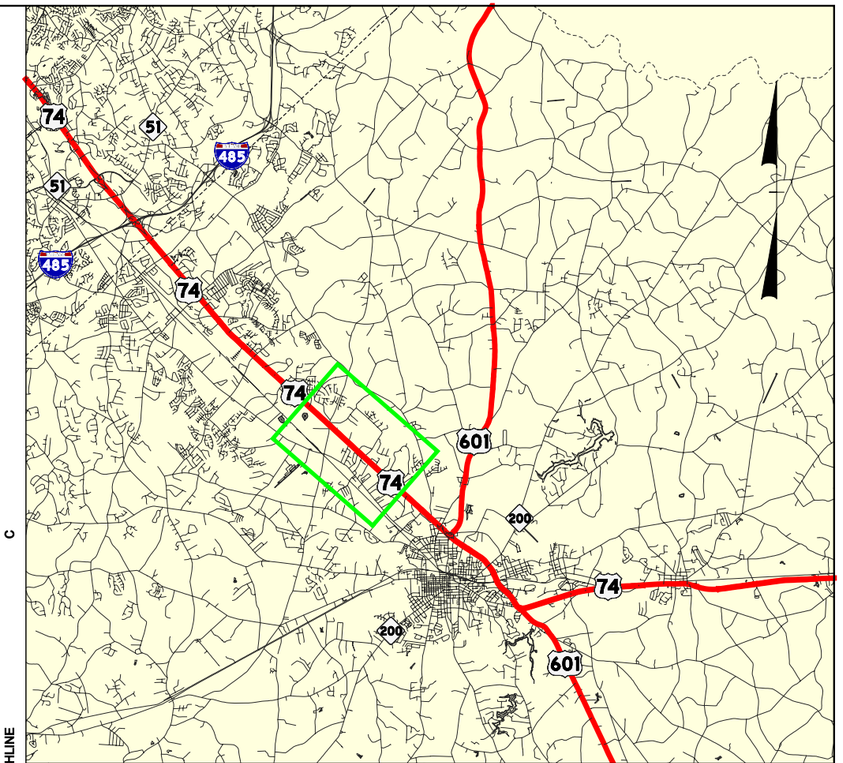
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 3

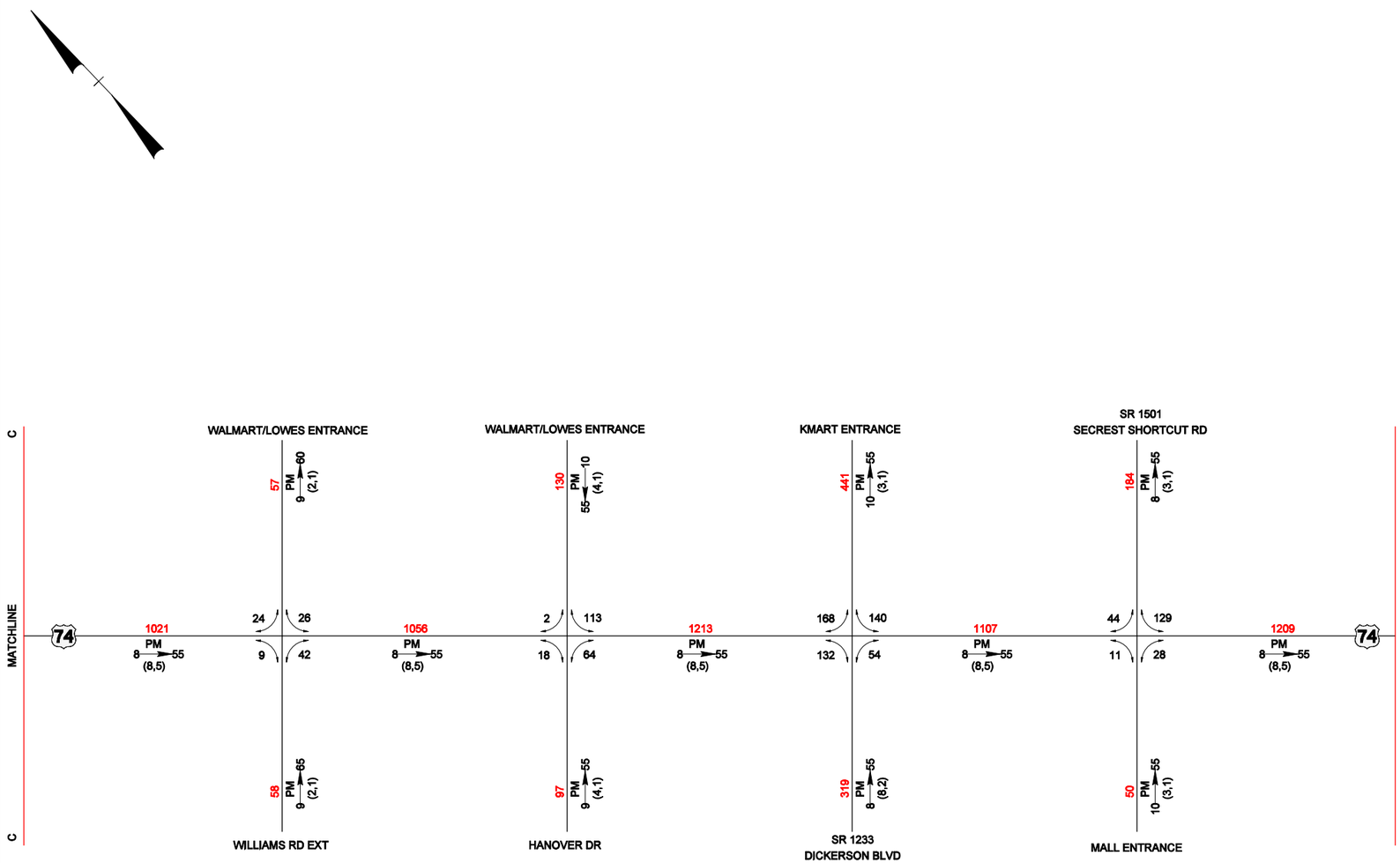
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

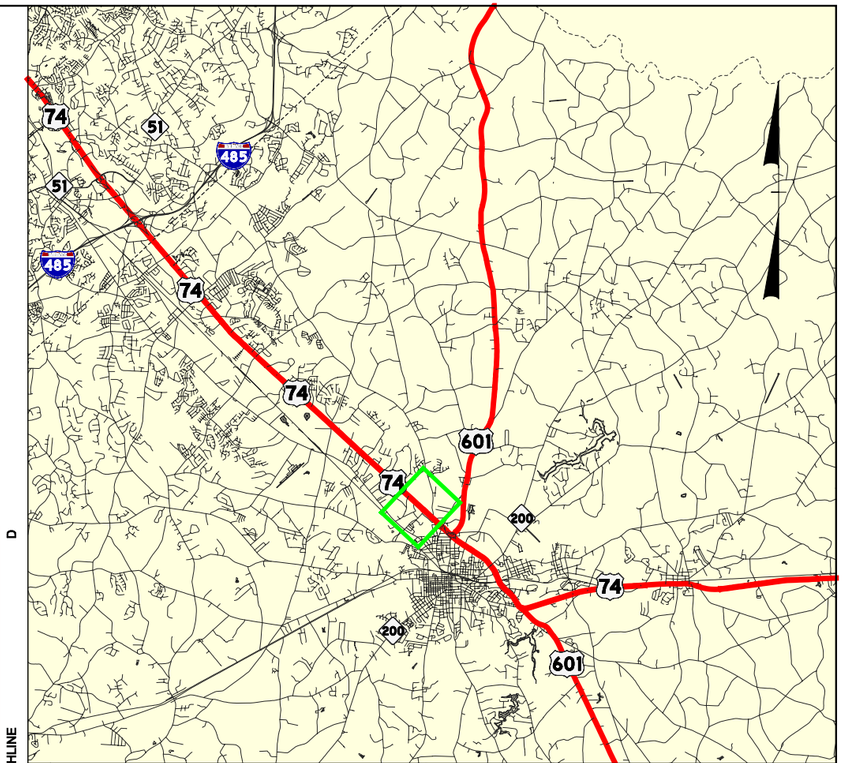
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 4

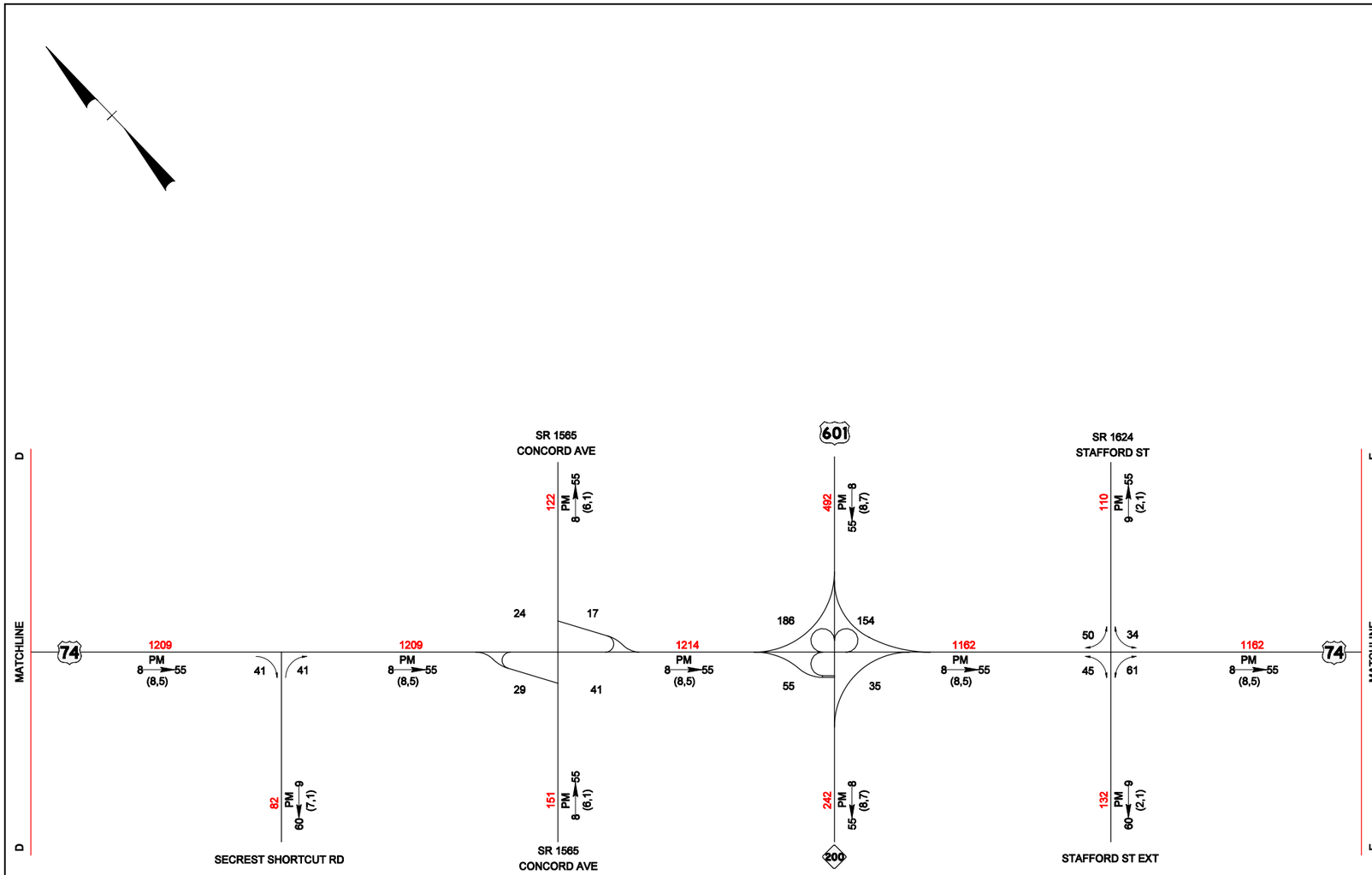
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

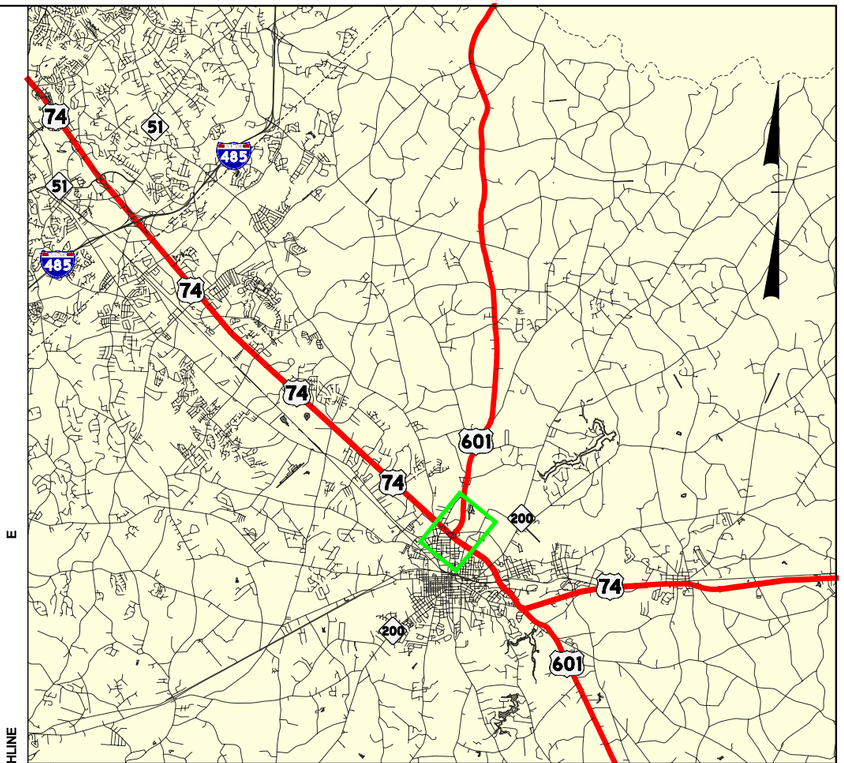
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 5

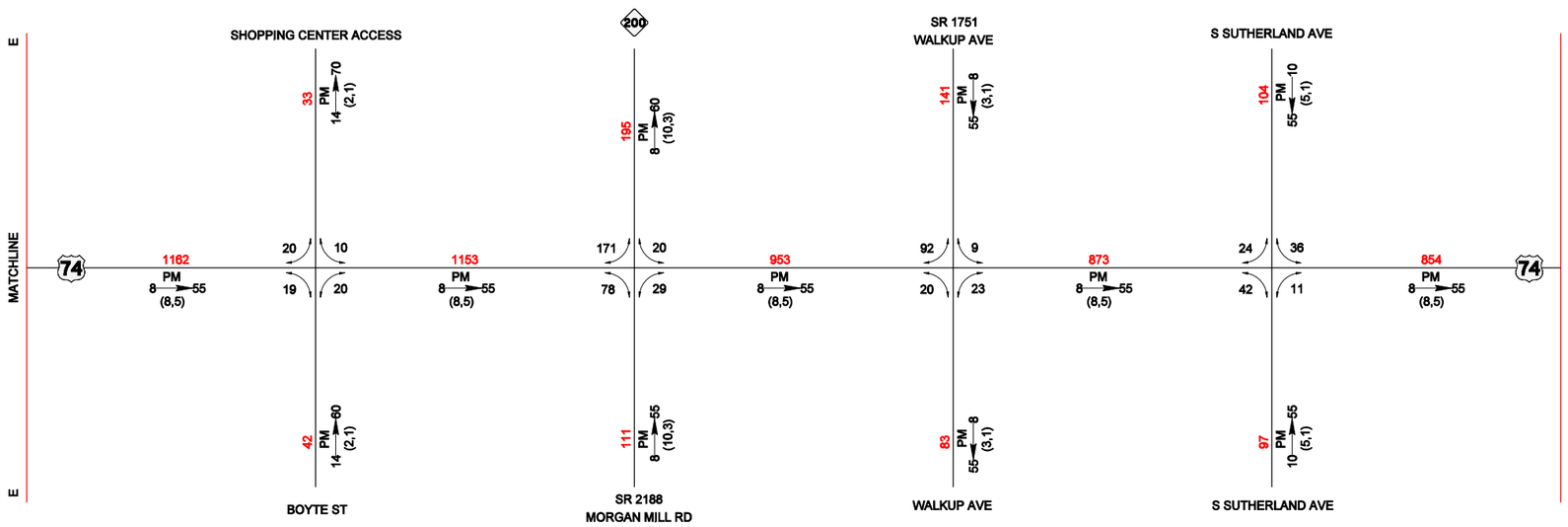
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

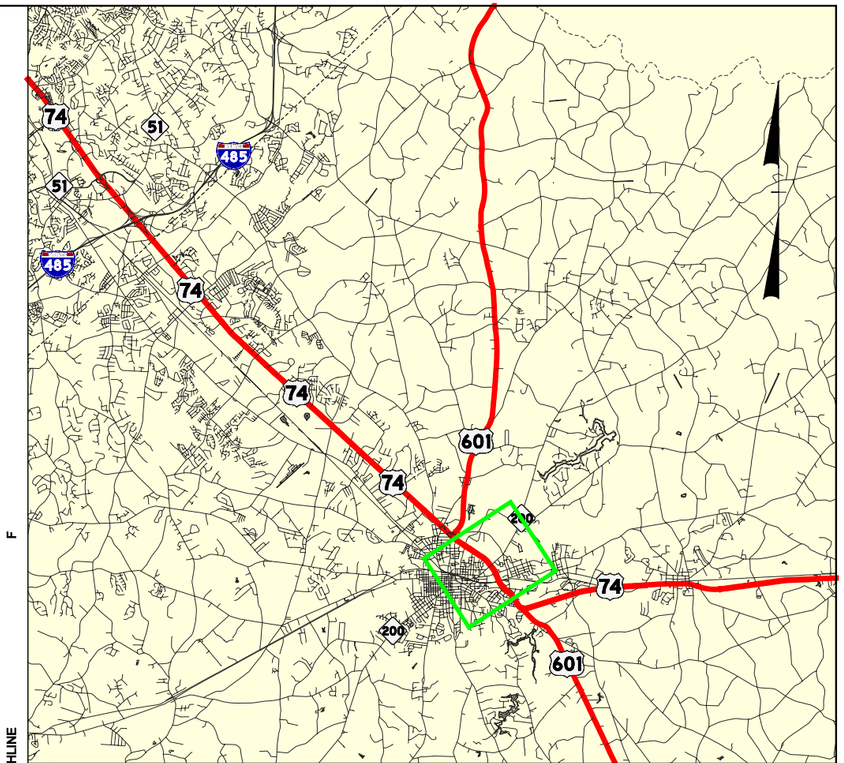
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 6

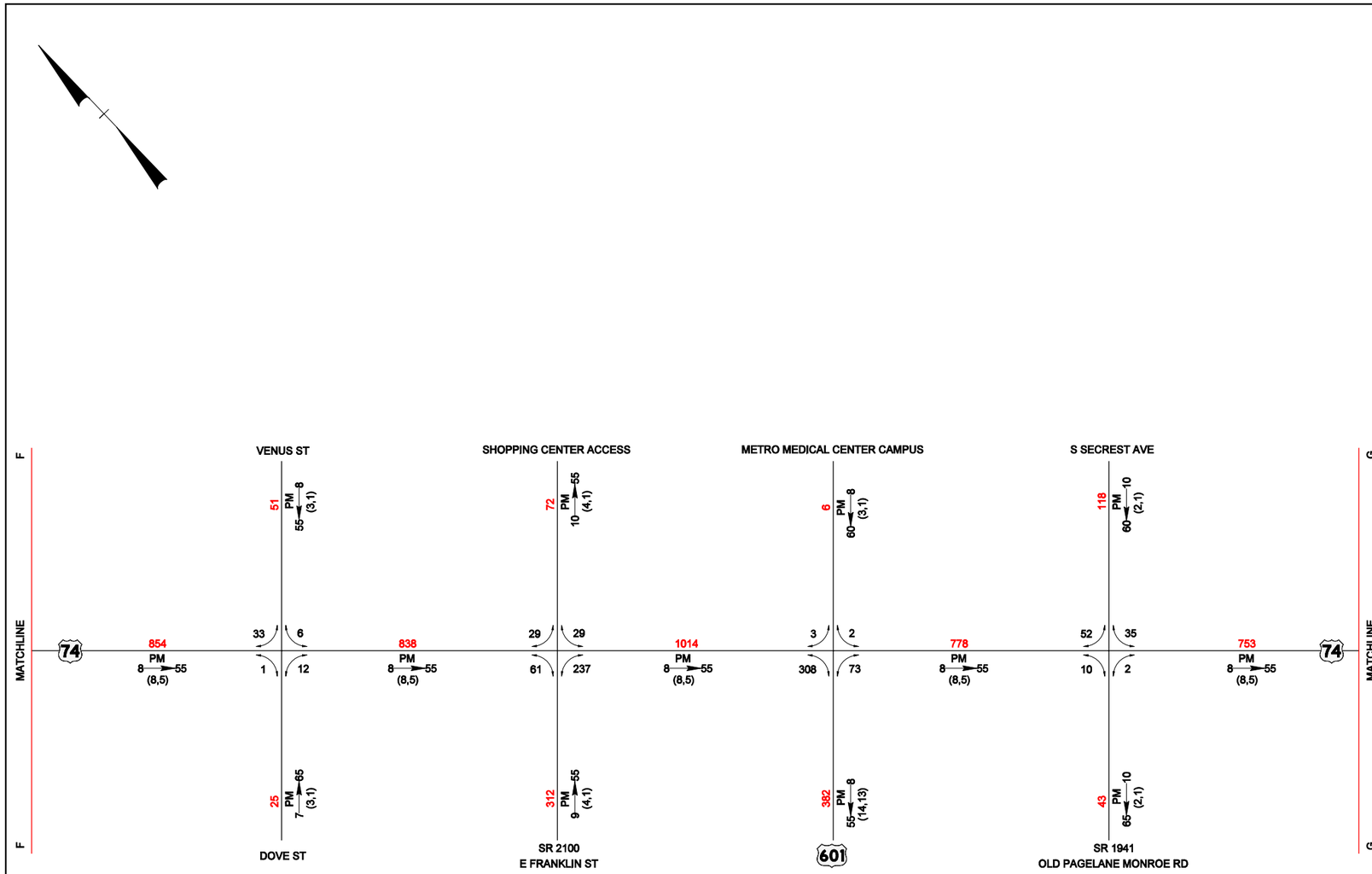
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

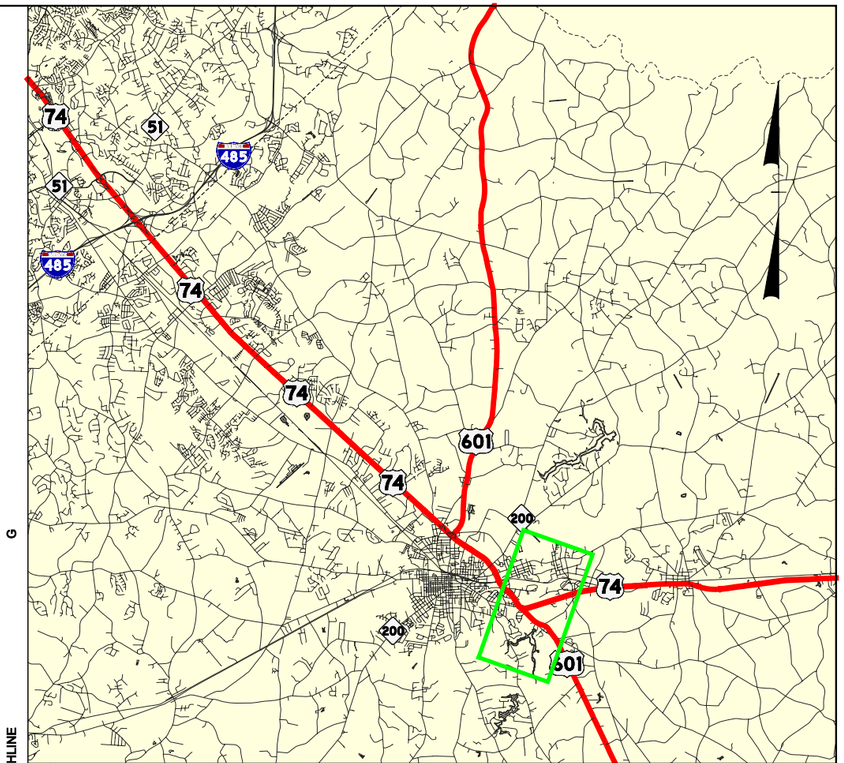
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 7

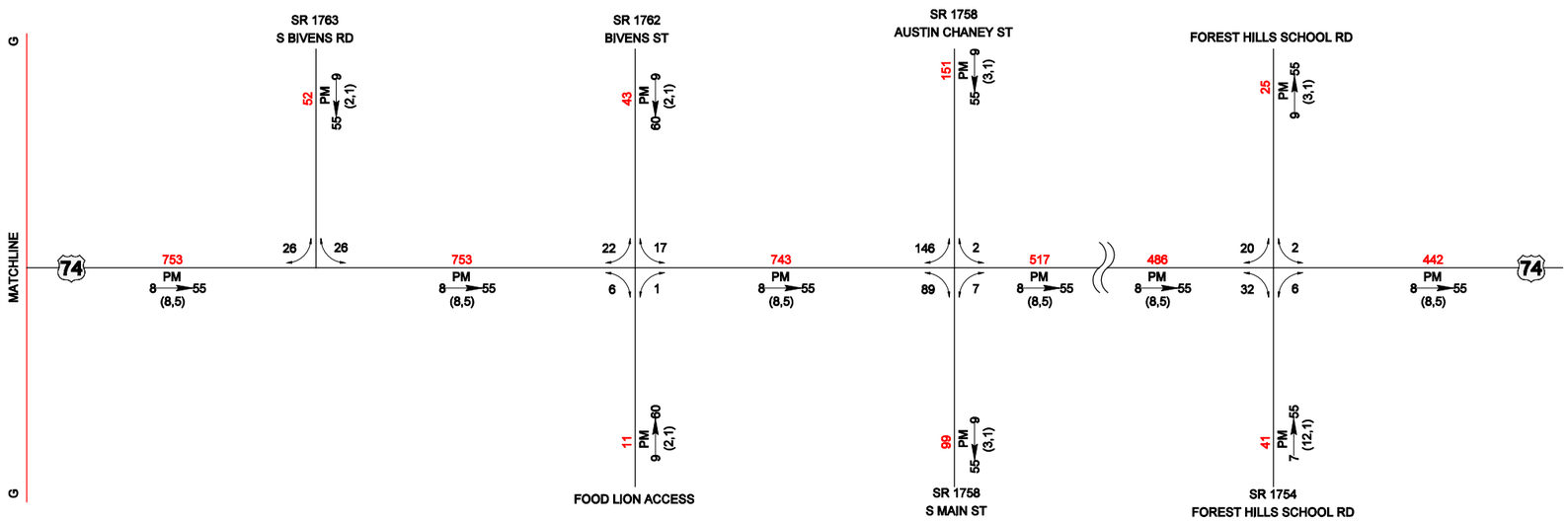
DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

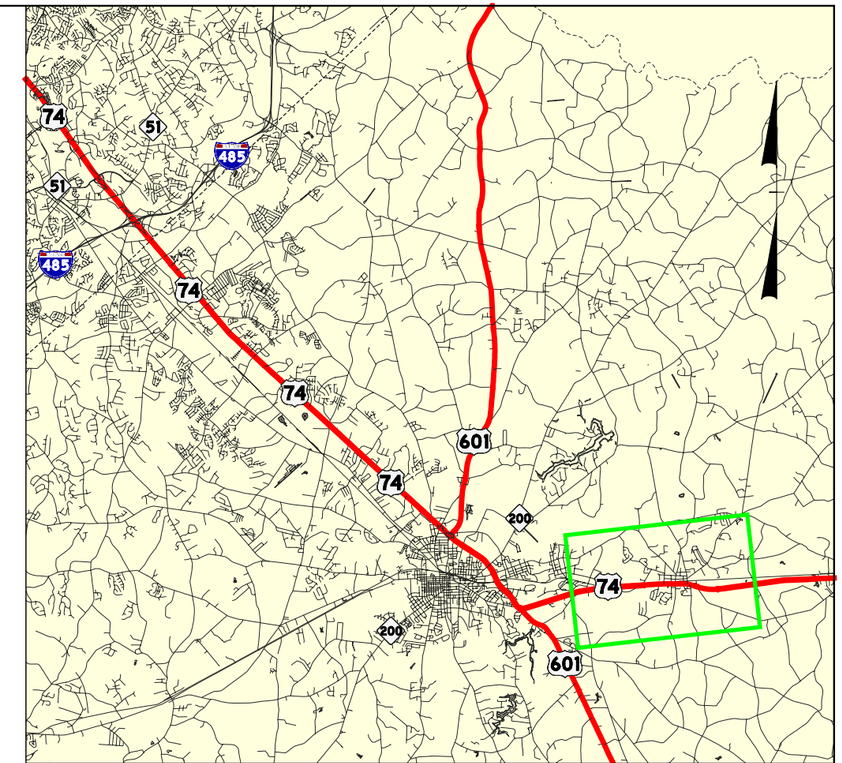
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 NO BUILD SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass	SHEET NUMBER: 8

DIVISION: 10	DATE: April 2008	PREPARED BY: Wilbur Smith Associates

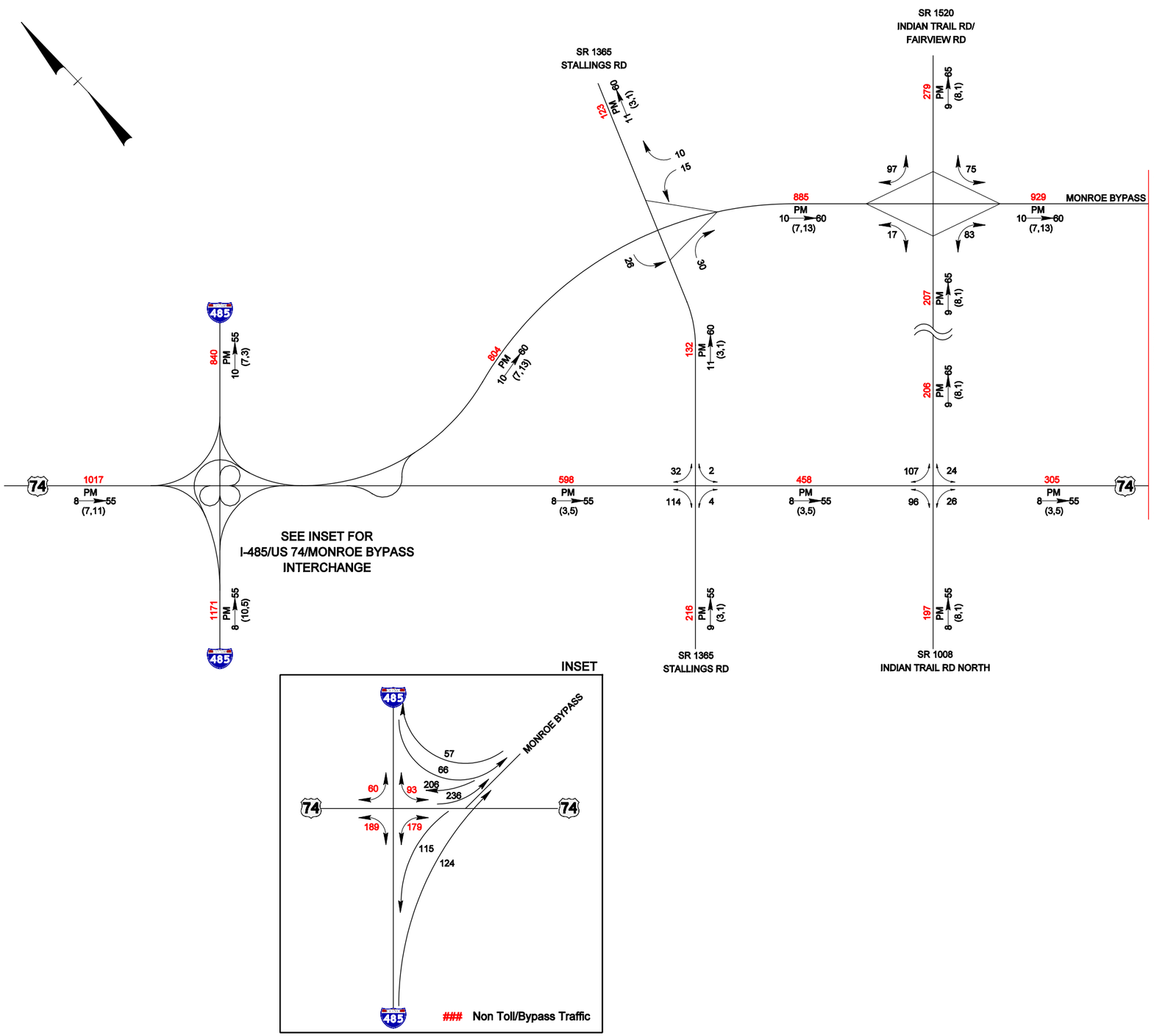
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

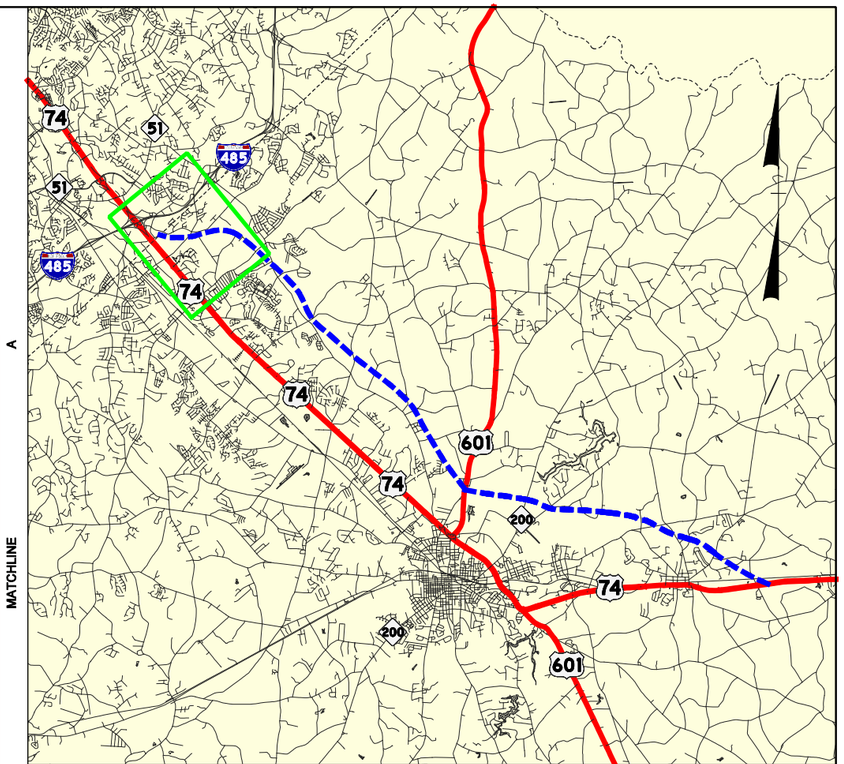
DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)

Exhibit 11
2035 Build Non-Toll Traffic Forecast Figures



INSET



2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

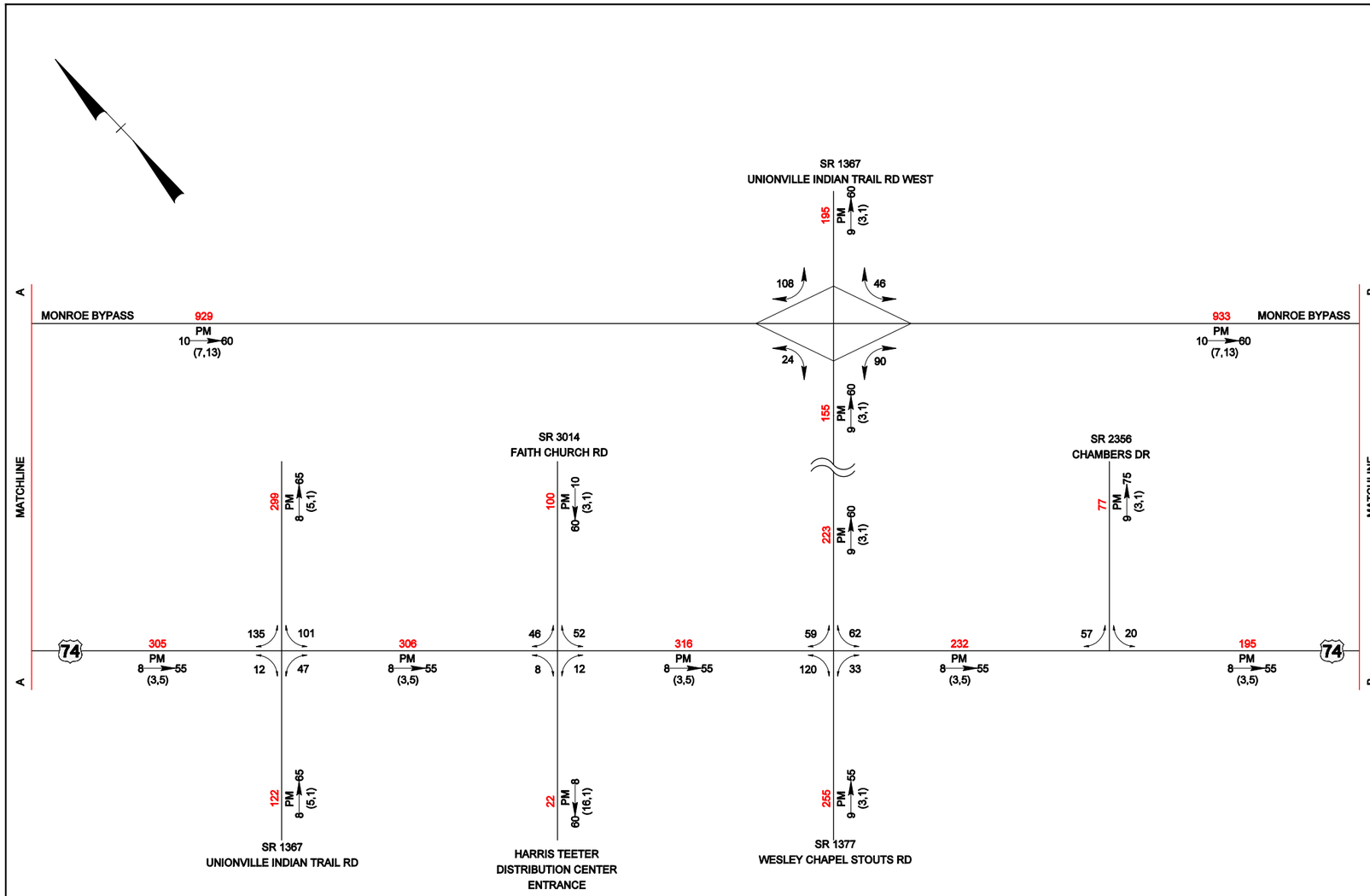
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 1
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

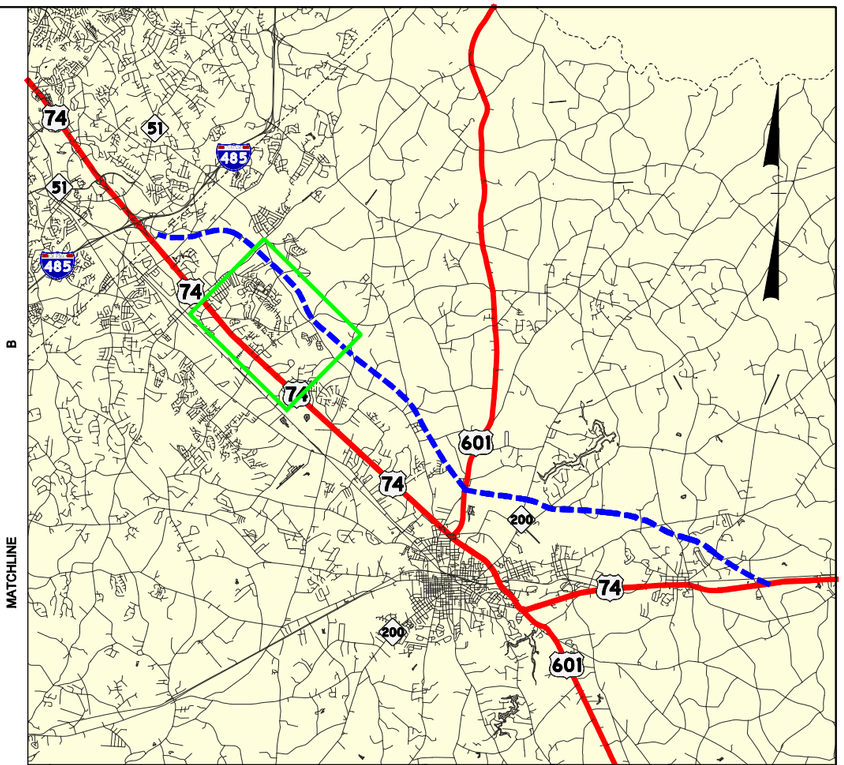
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV Design Hourly Volume (%) = K_{30}
PM Peak Period
D Peak Hour Directional Split (%)
→ Indicates Direction of D
(d, t) Duals, TTST (%)

No. of Vehicles Per Day (VPD) in 100s
1- Less than 50 VPD
Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

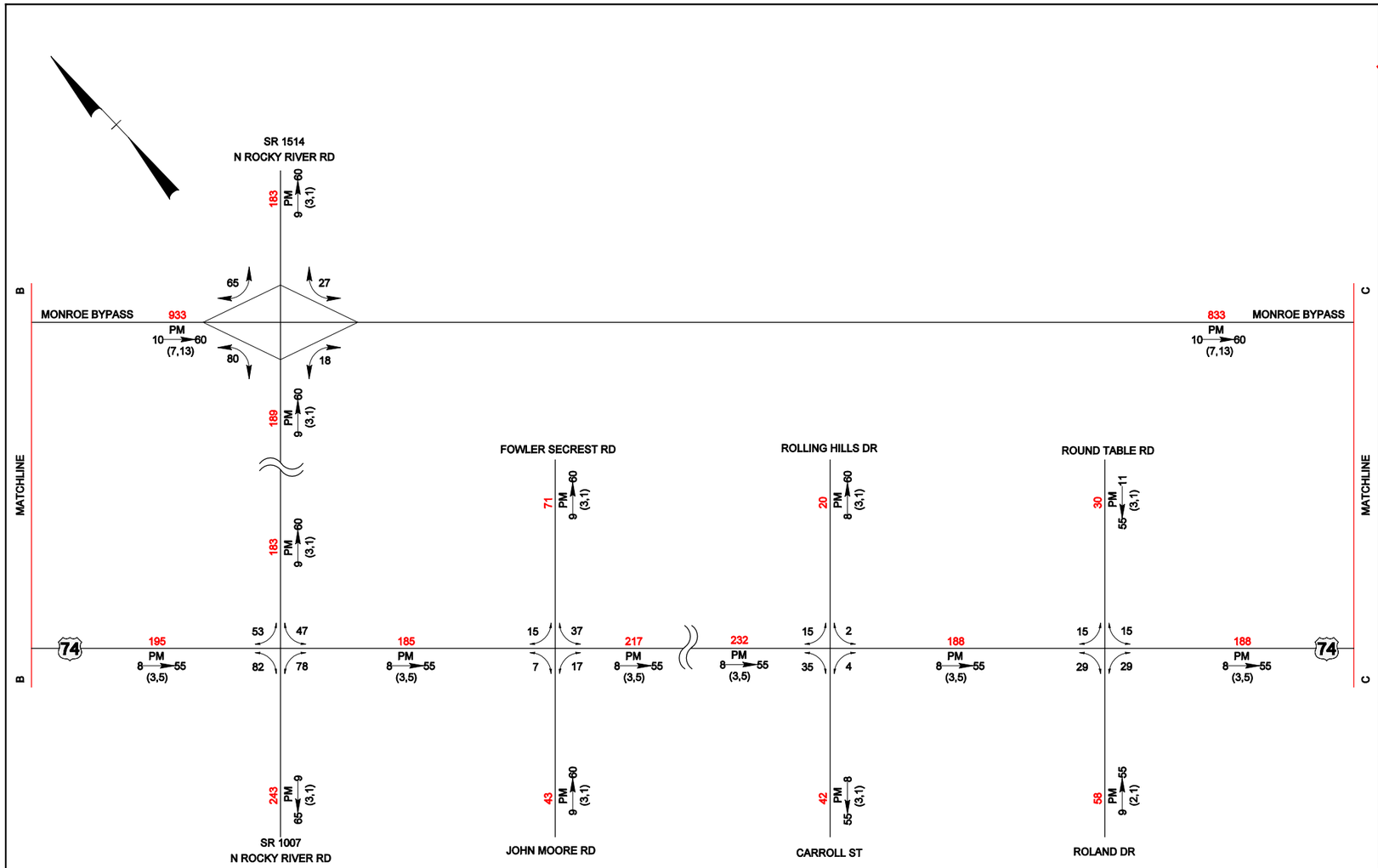
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 2
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

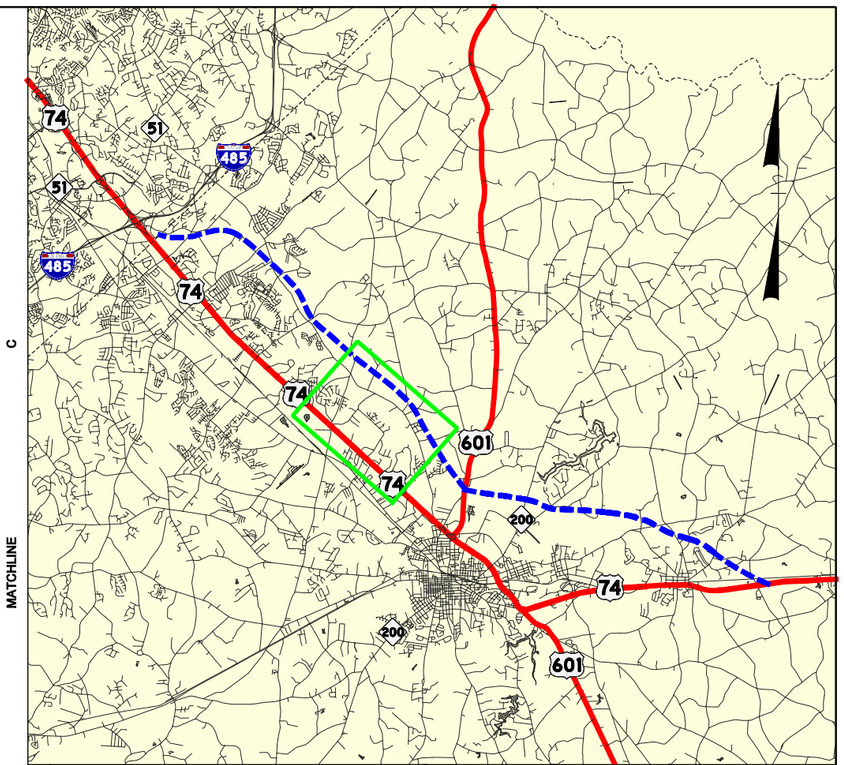
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

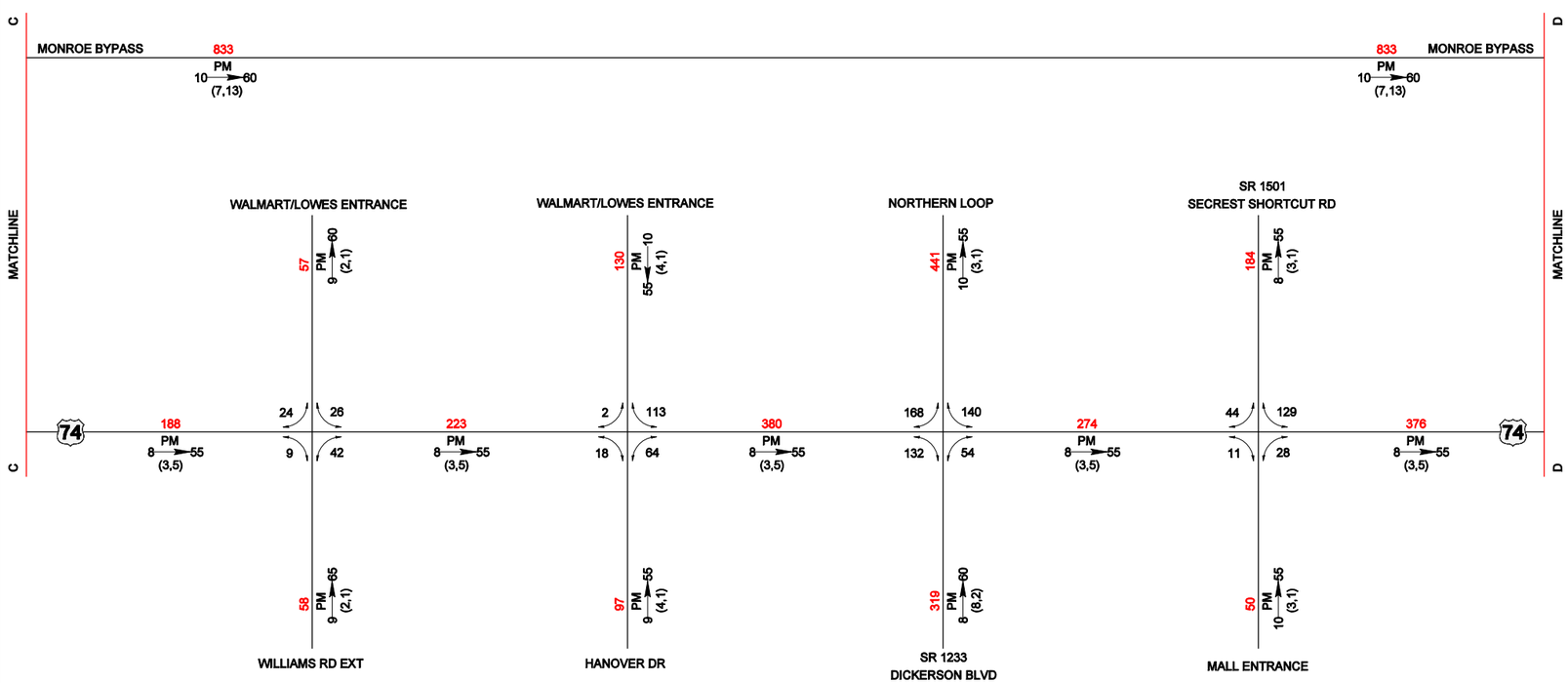
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 3
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

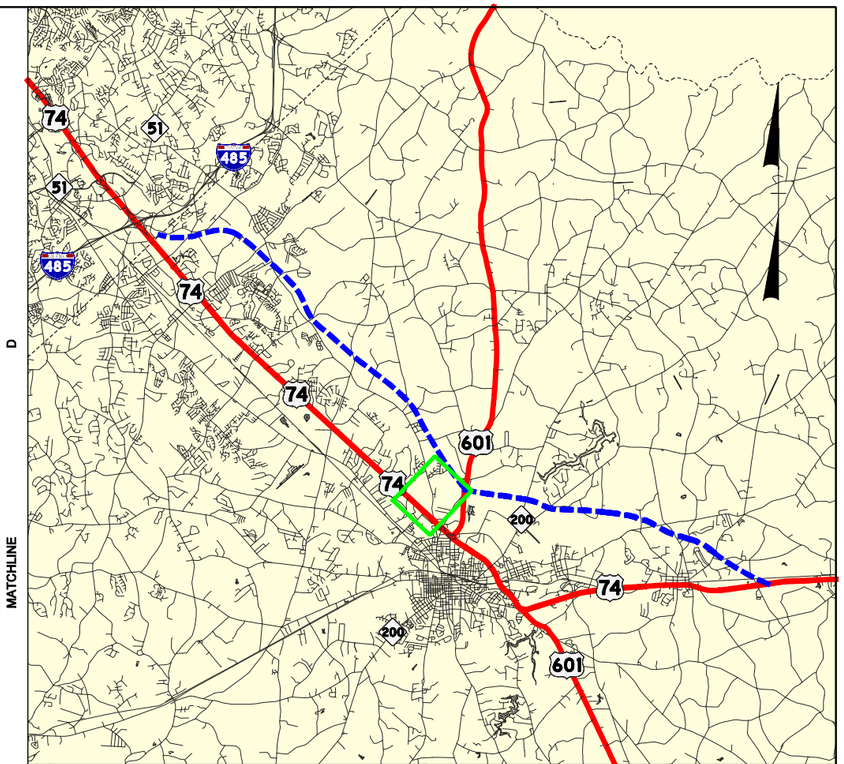
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

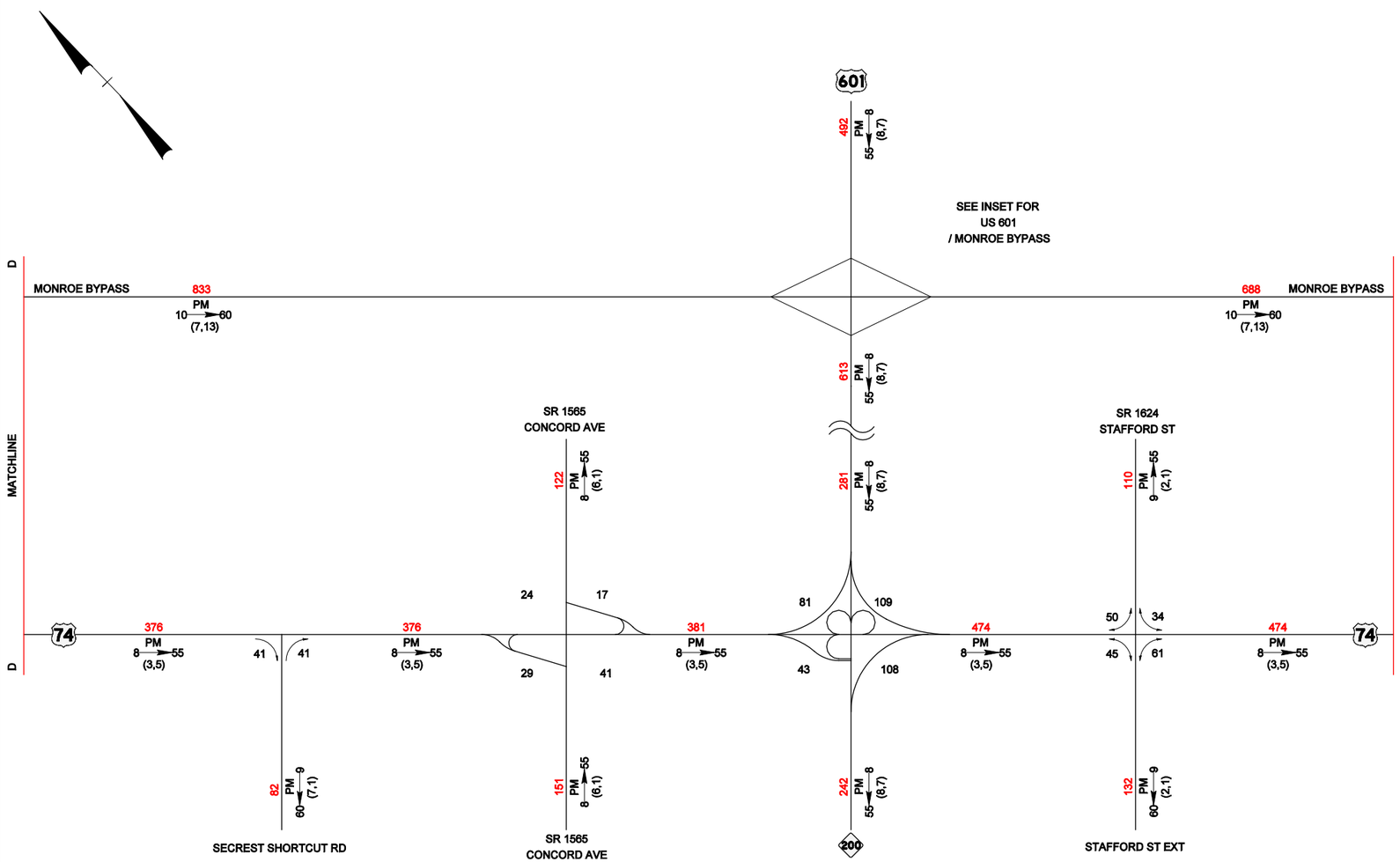
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 4
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

LEGEND

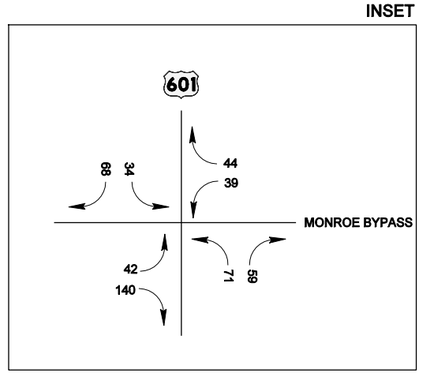
DHV $\xrightarrow[(d,\ t)]{PM}$ D

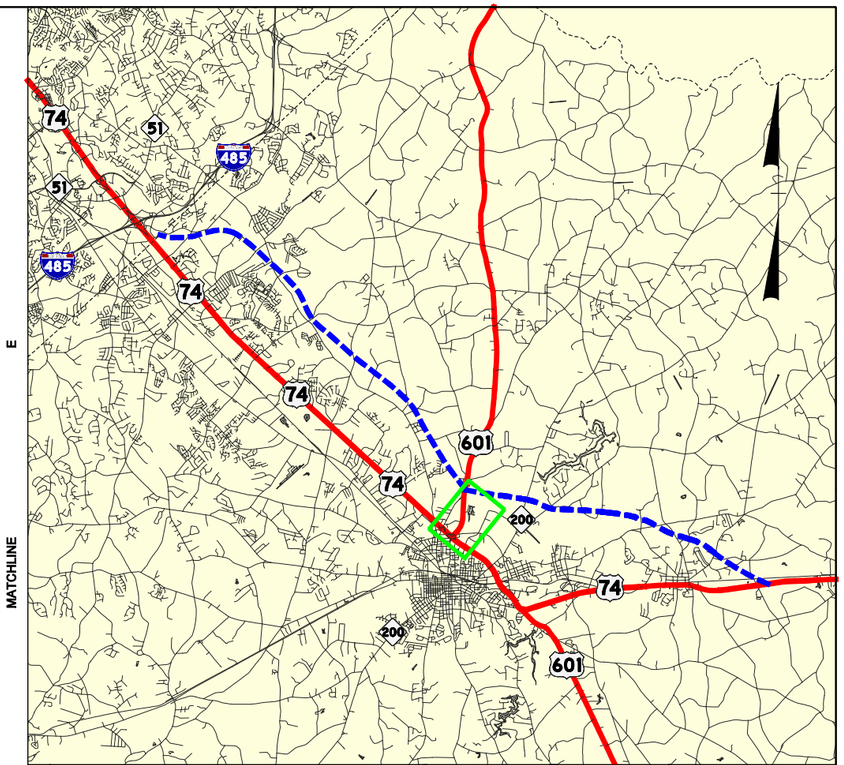
- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)



INSET





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

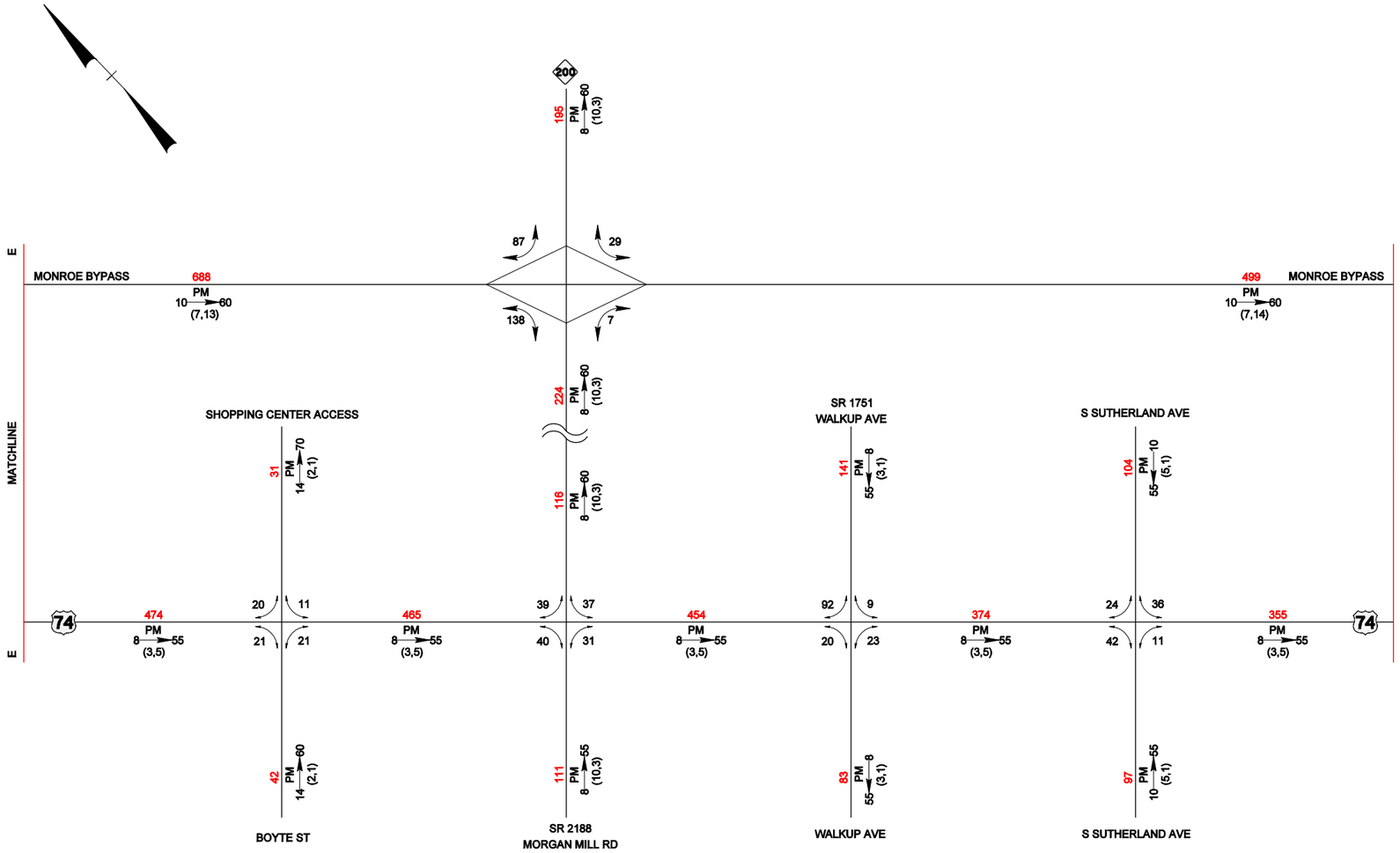
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 5
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

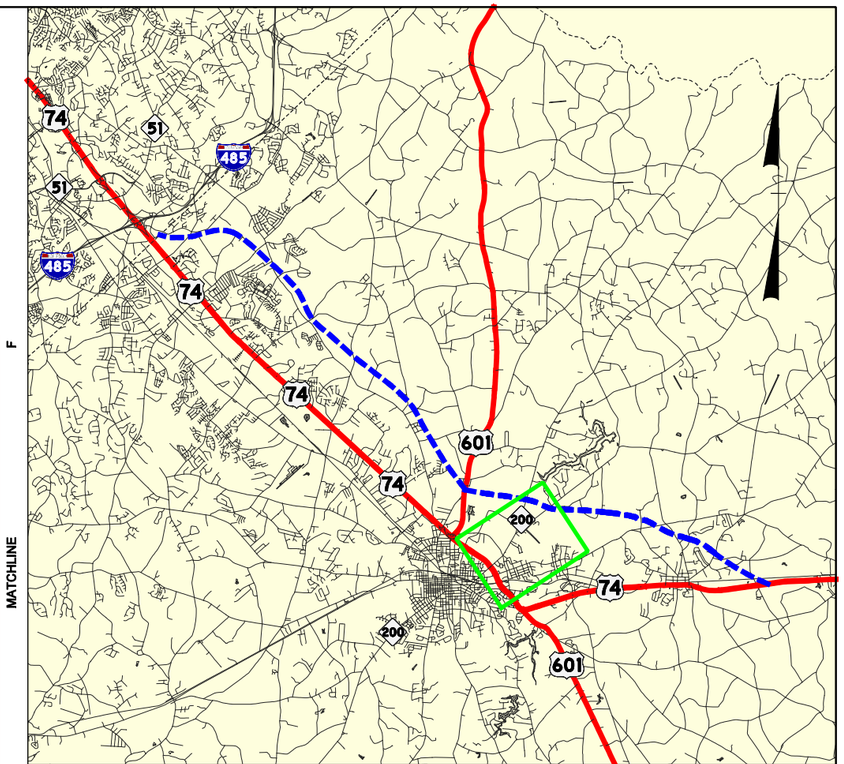
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

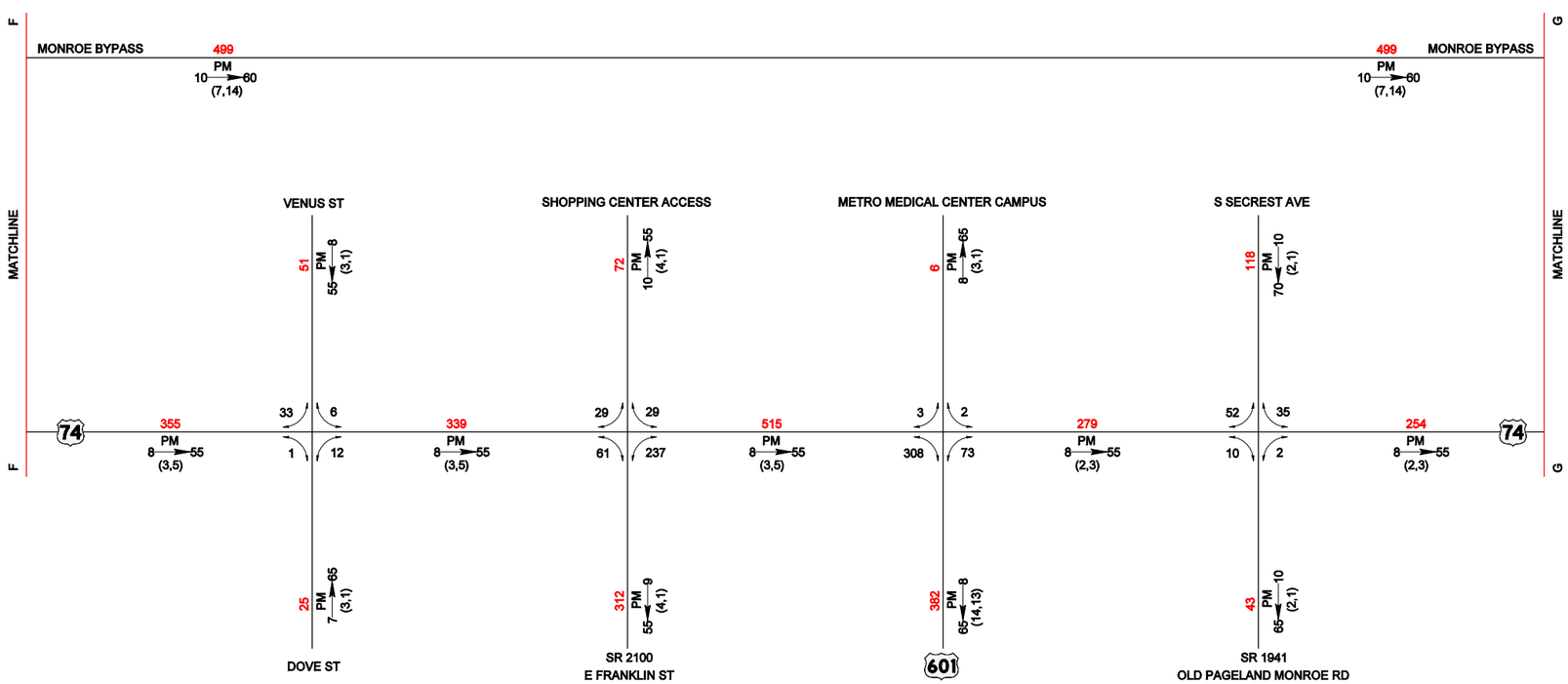
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 6
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

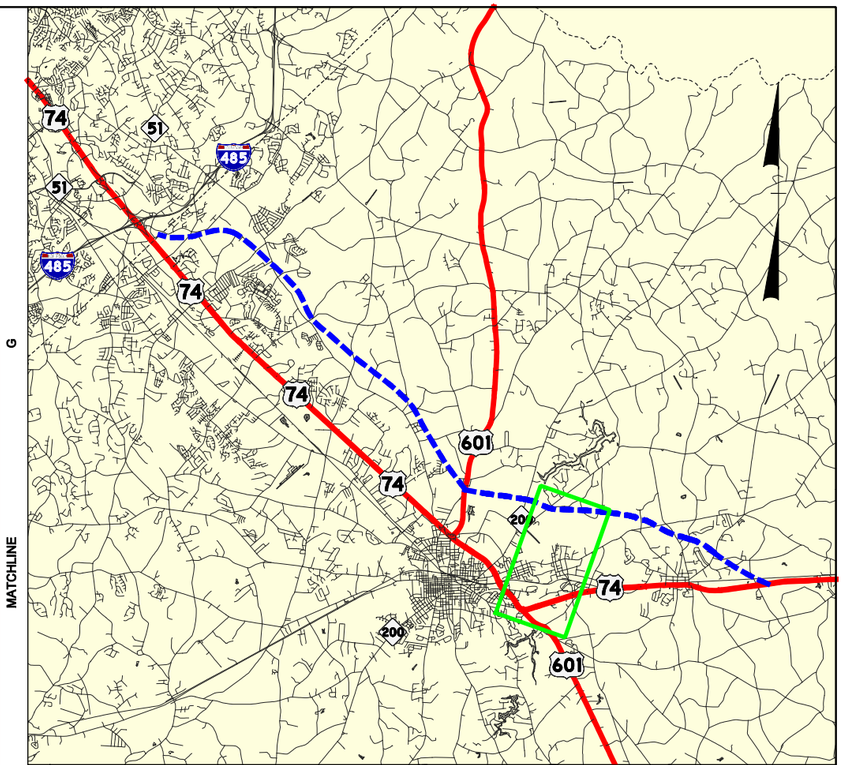
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

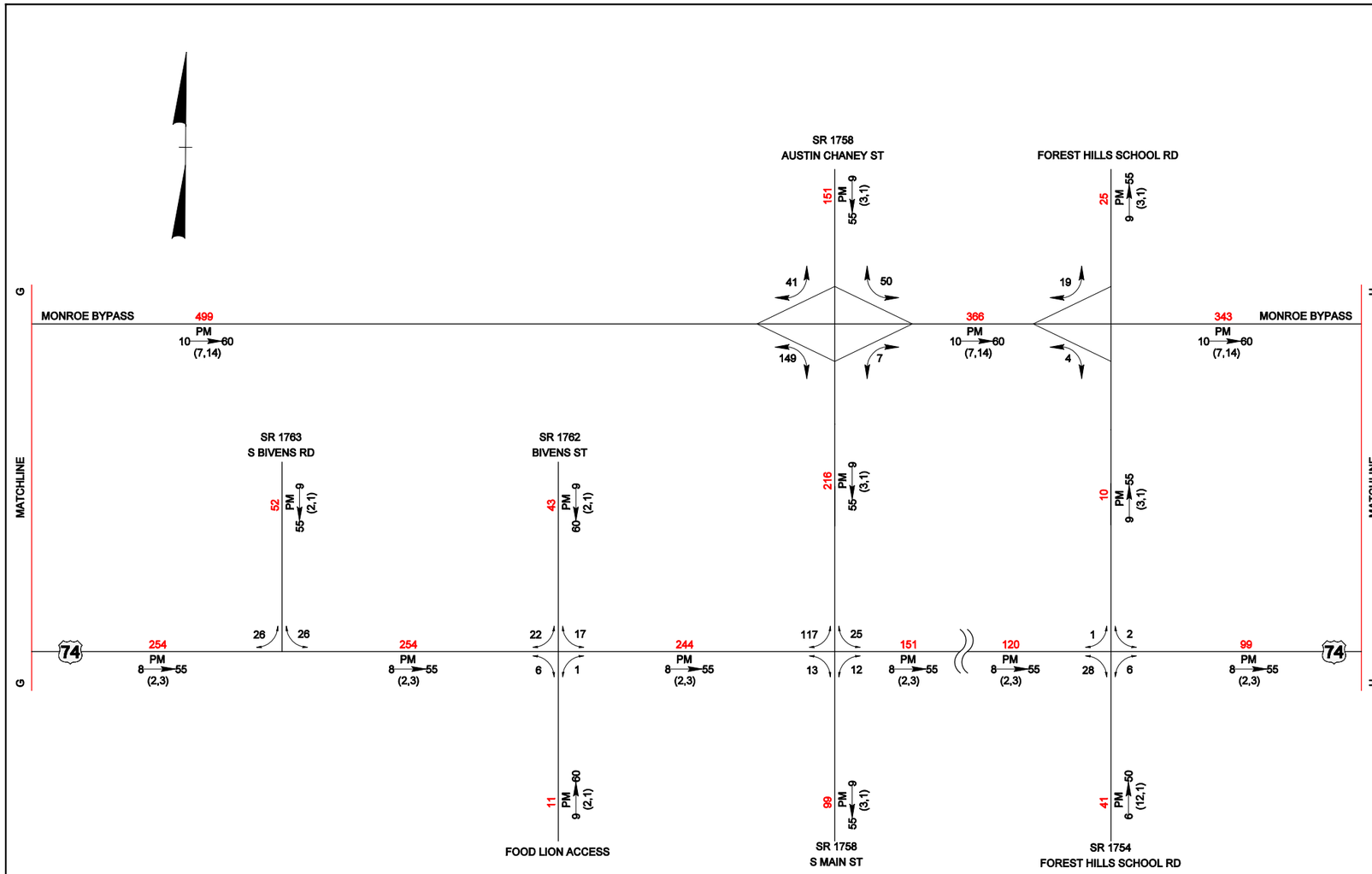
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 7
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

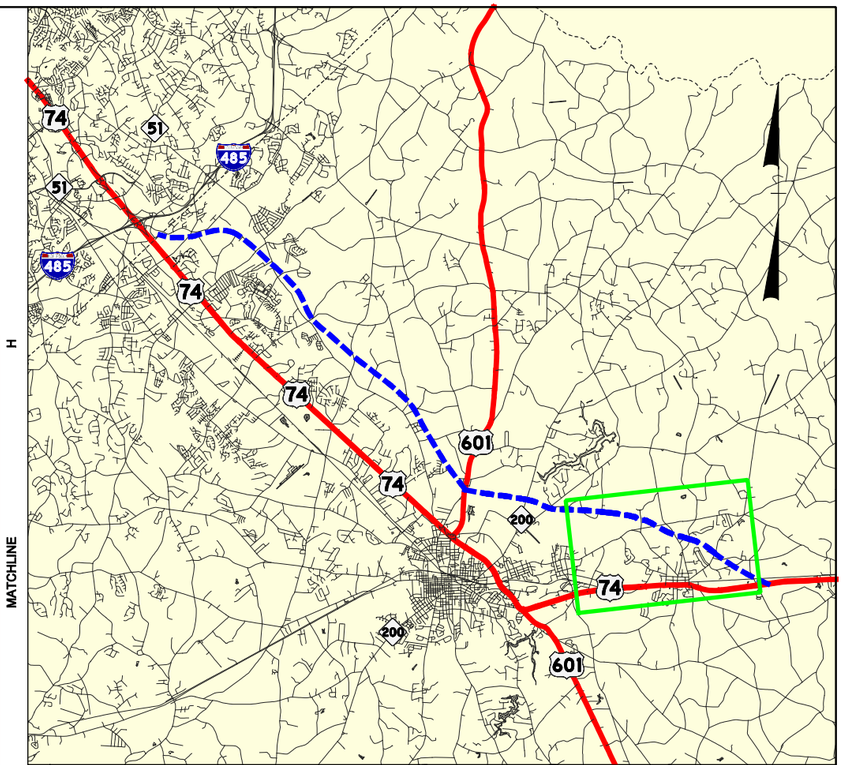
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

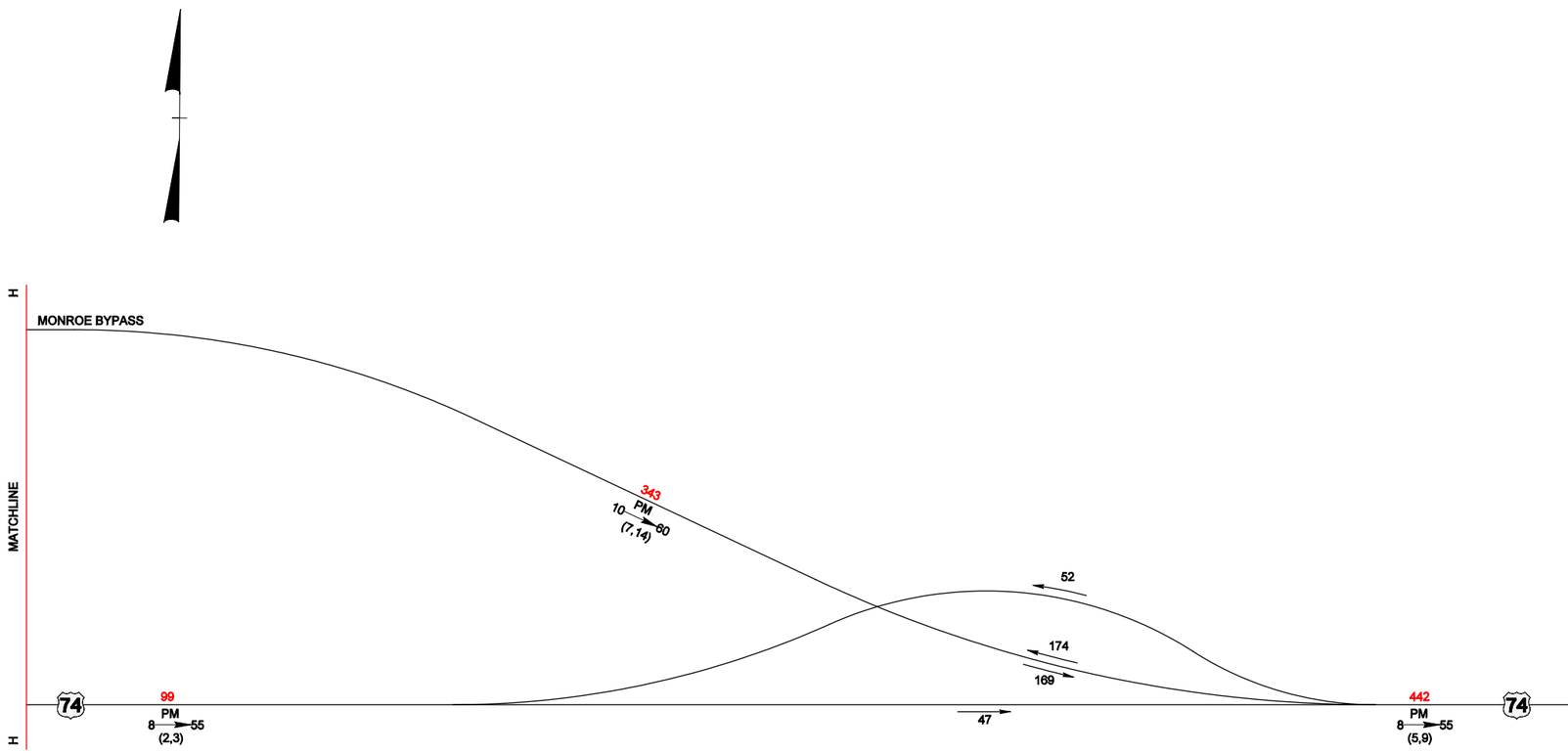
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 8
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

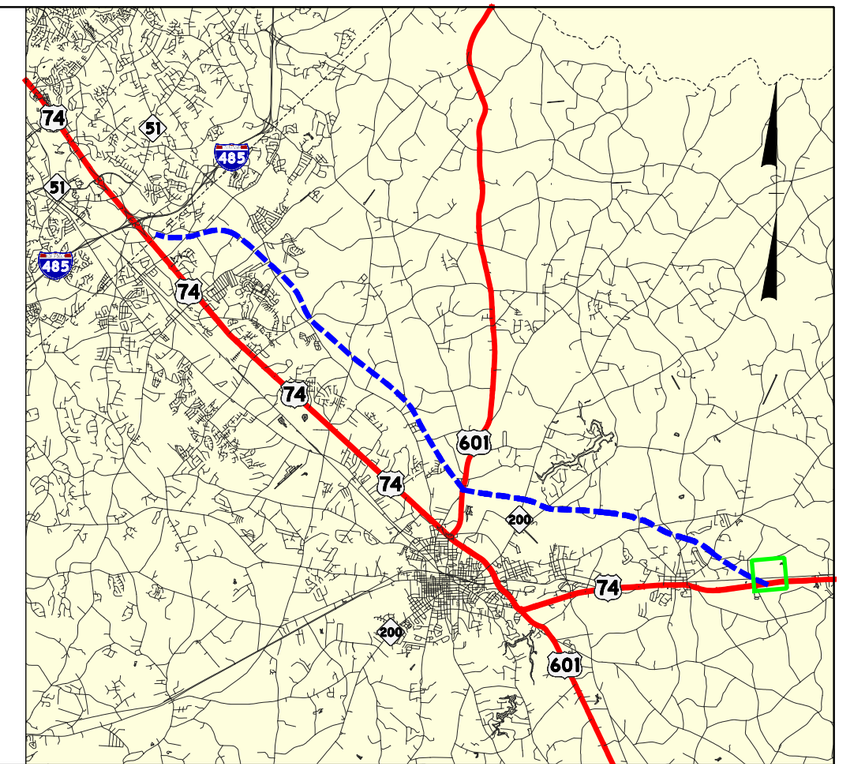
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

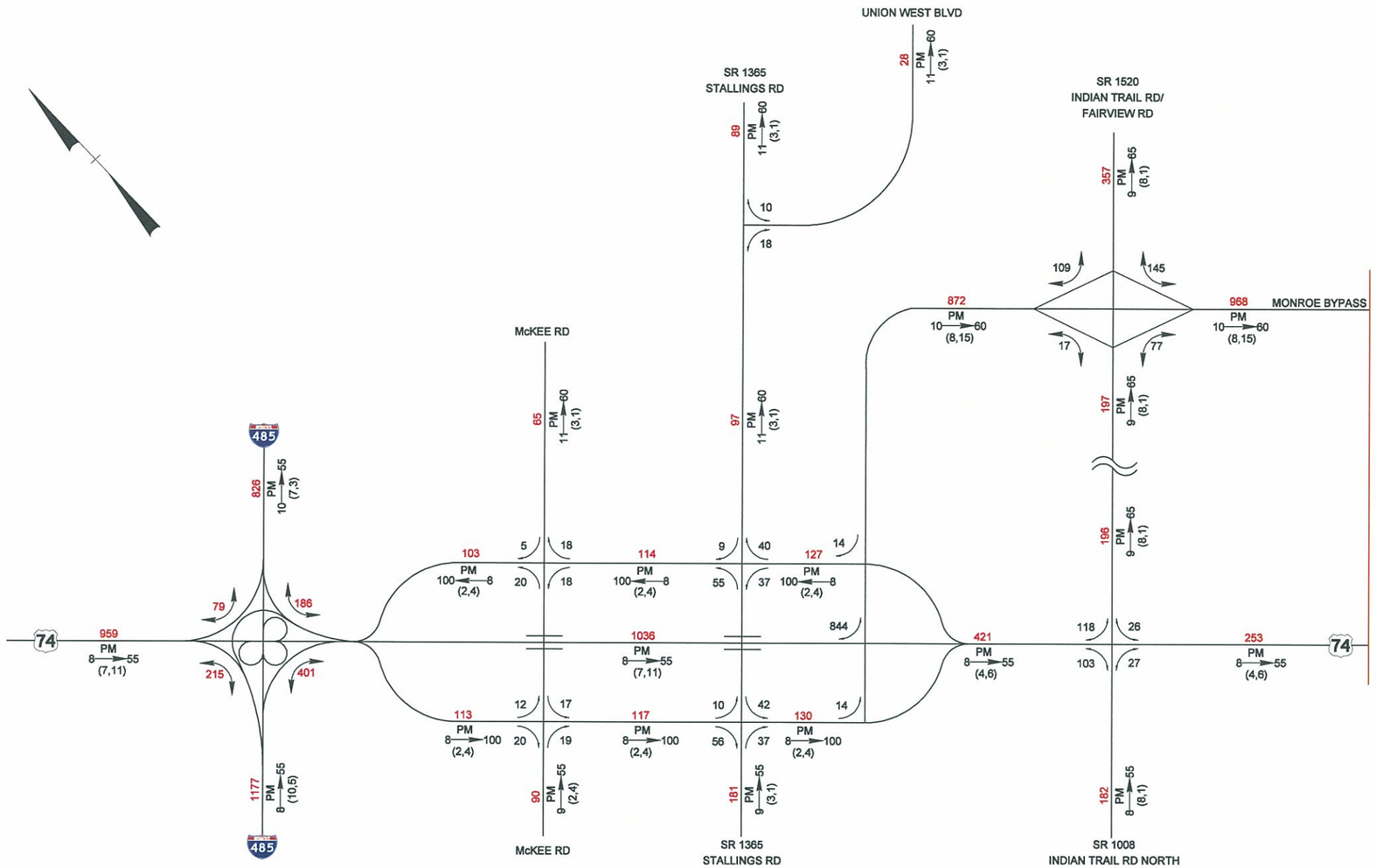
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 9
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

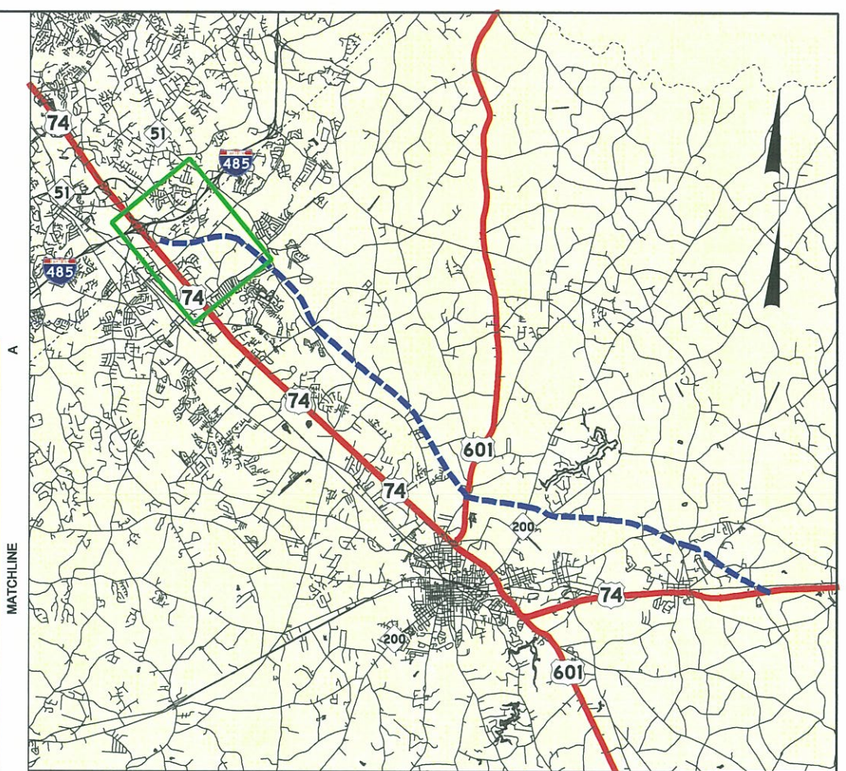
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV Design Hourly Volume (%) = K_{30}
PM Peak Period
D Peak Hour Directional Split (%)
→ Indicates Direction of D
(d, t) Duals, TTST (%)

No. of Vehicles Per Day (VPD) in 100s
1- Less than 50 VPD
Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

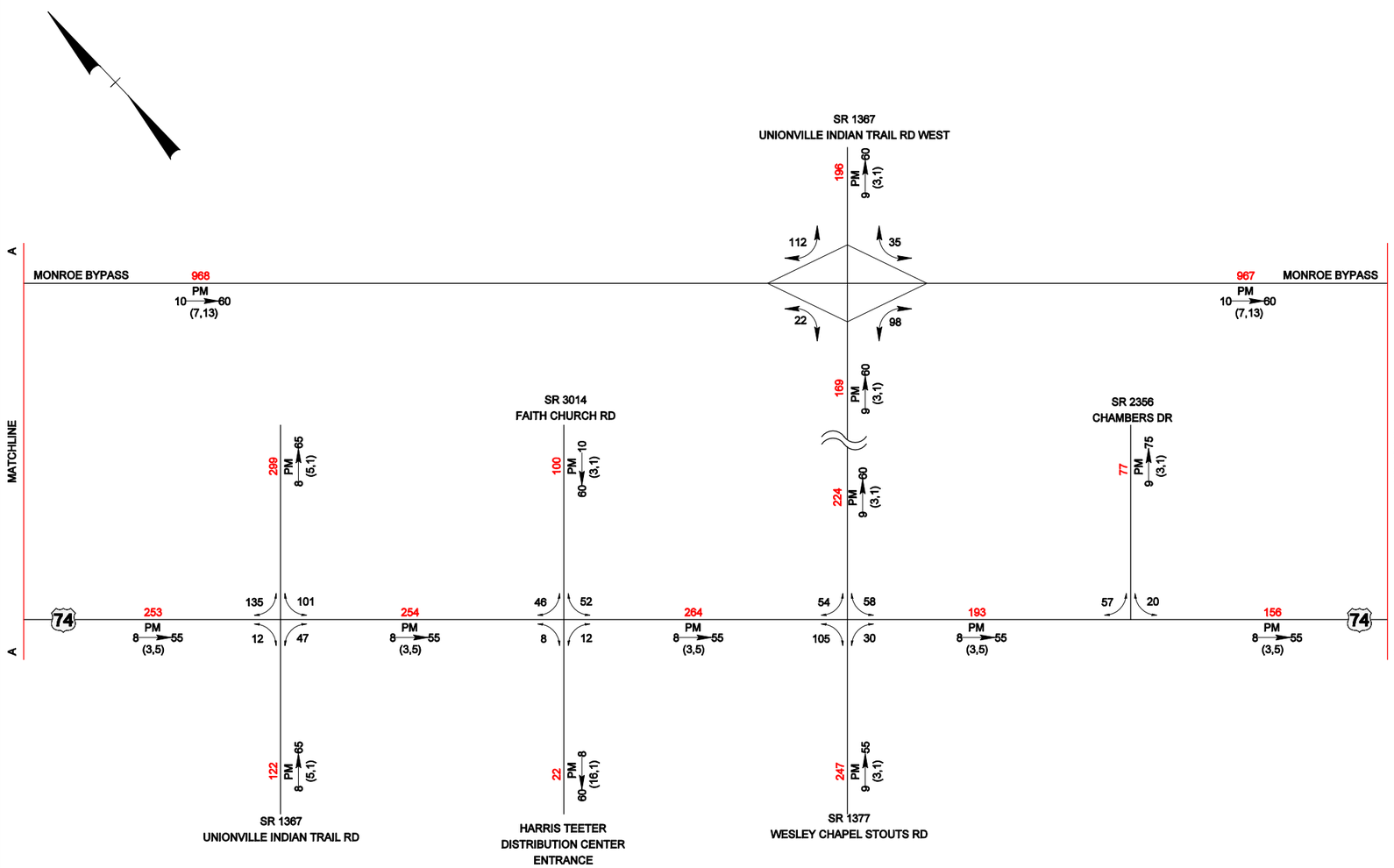
TIP: R-3329/R-2559	REVISED ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 1
DIVISION: 10	DATE: June 2008	PREPARED BY: Wilbur Smith Associates

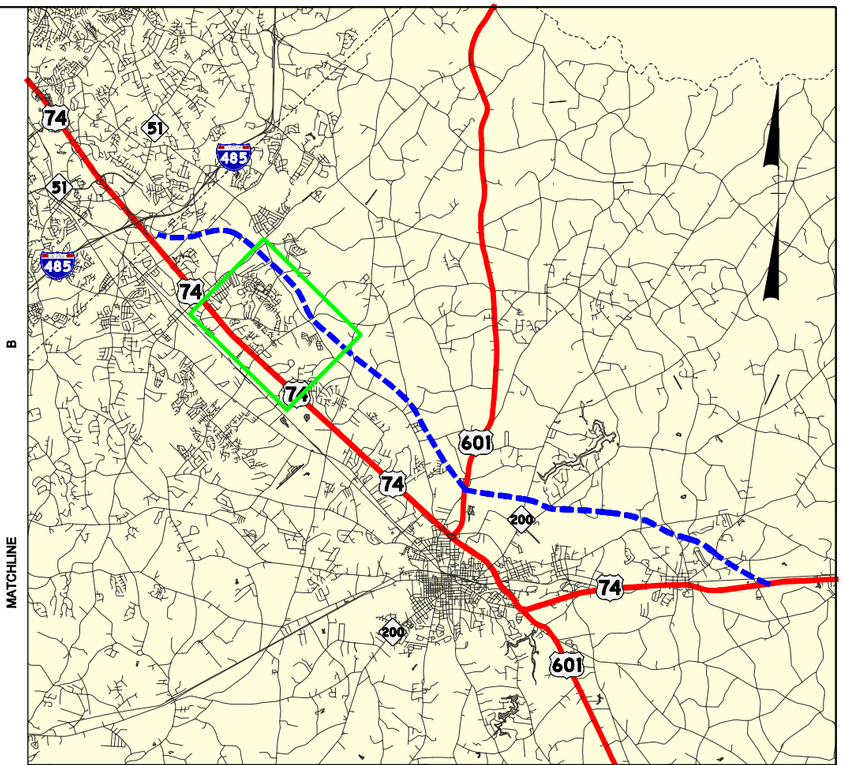
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

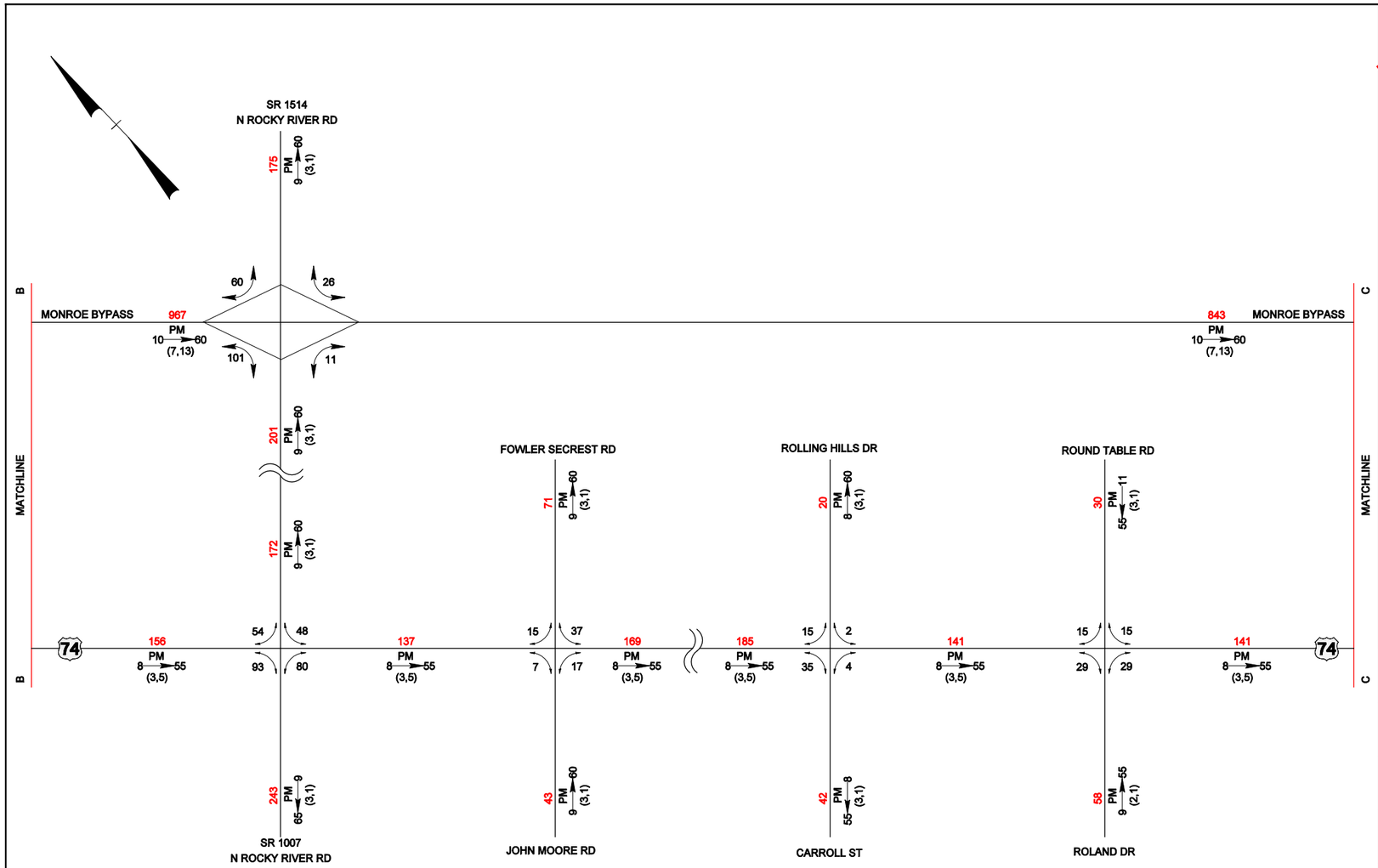
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 2
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

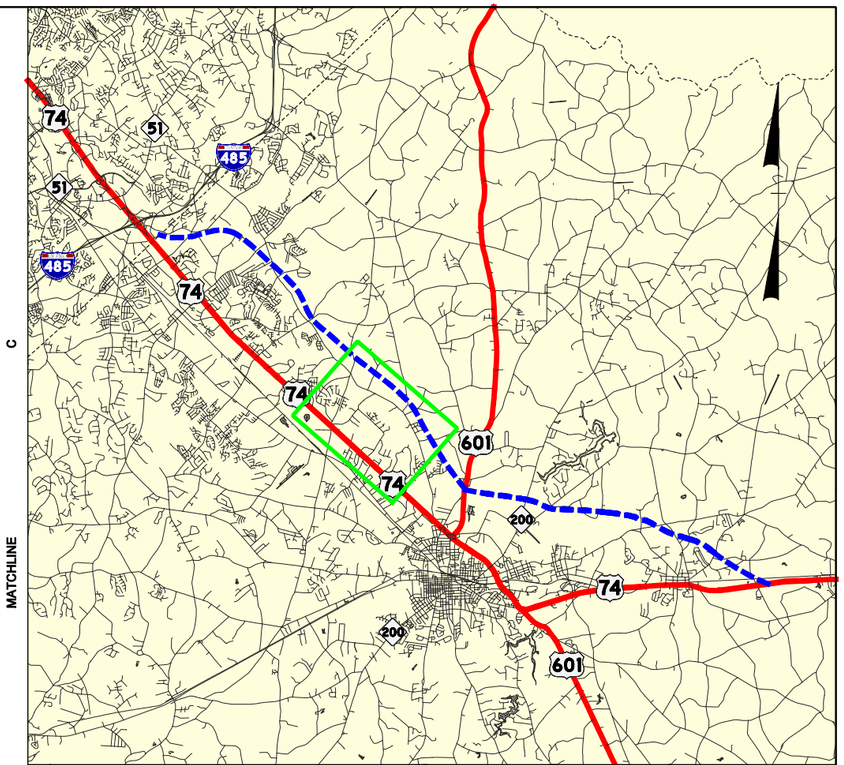
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

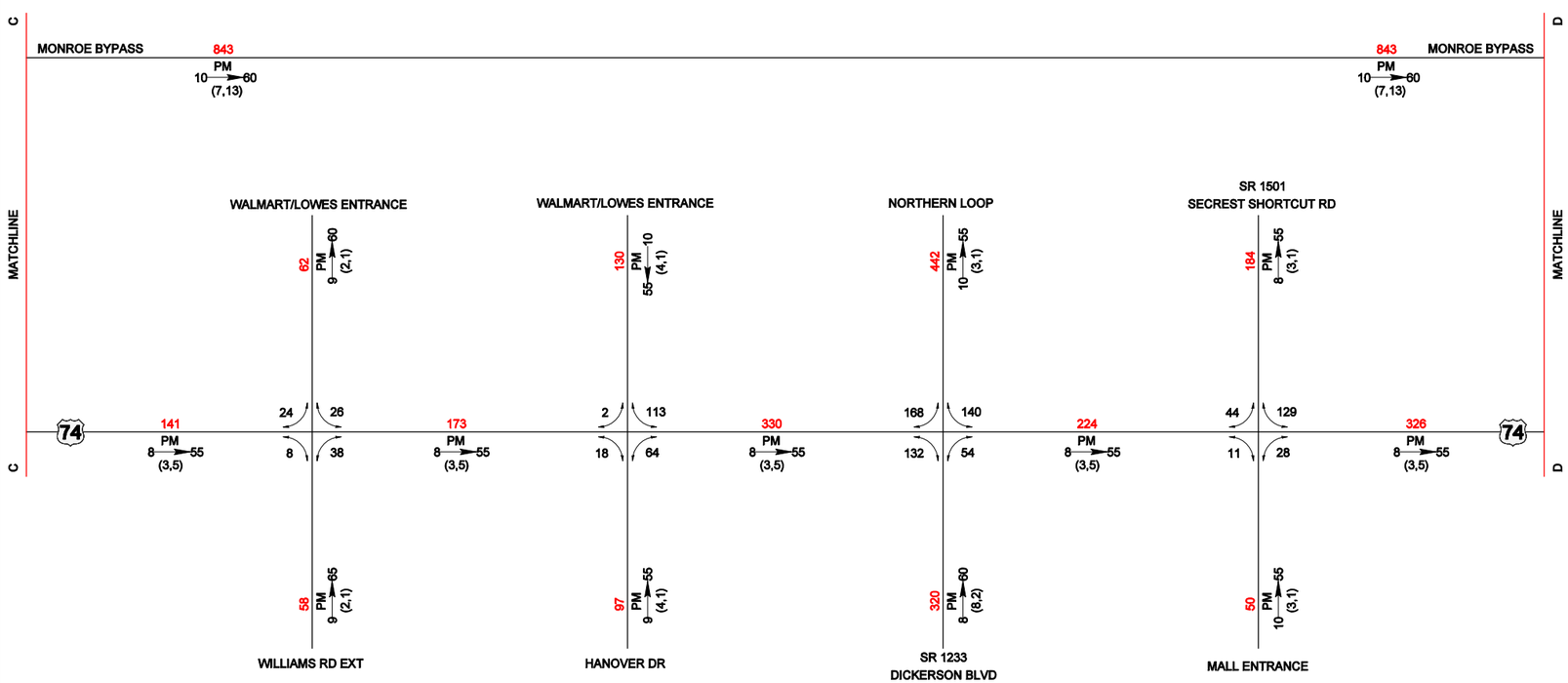
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 3
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

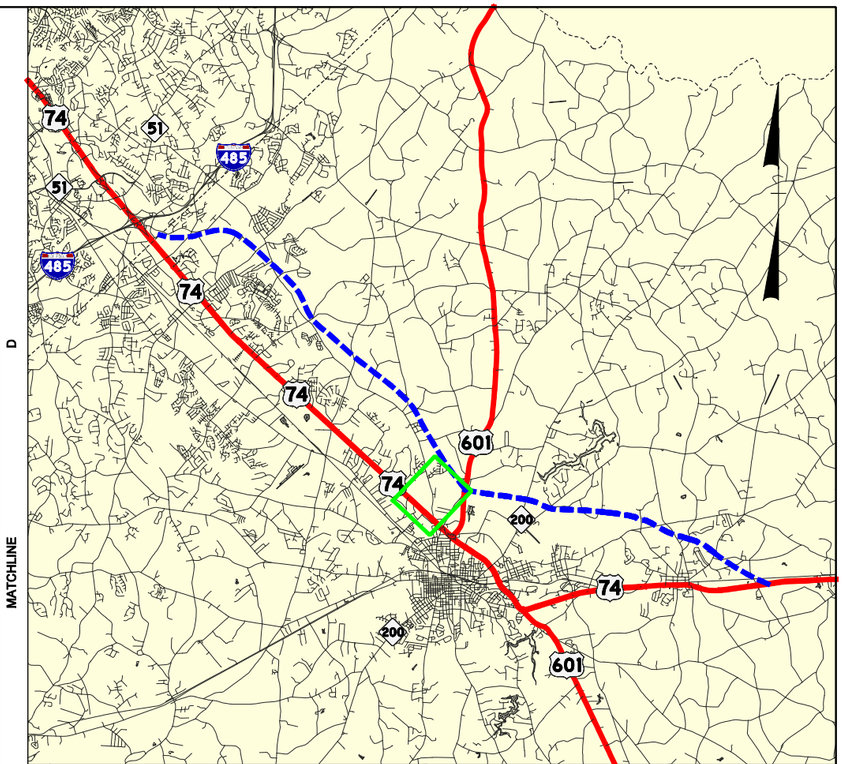
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

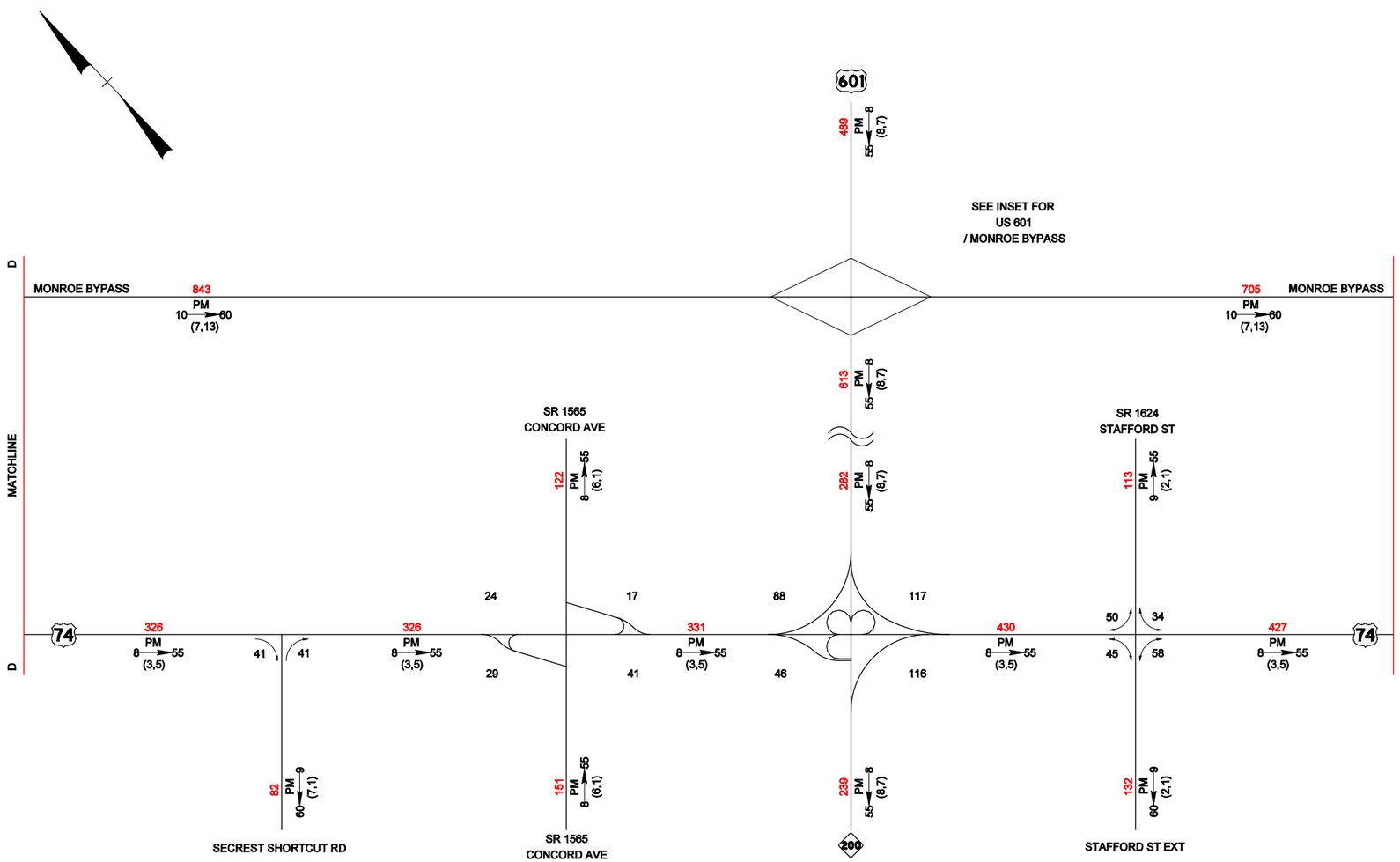
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 4
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

LEGEND

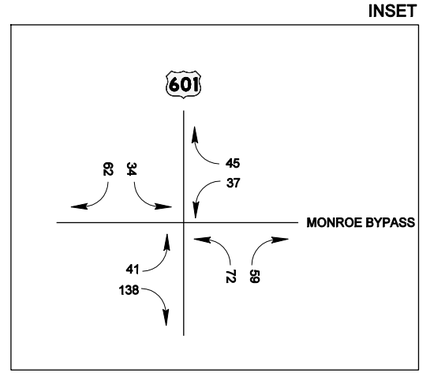
DHV $\xrightarrow[(d,\ t)]{PM}$ D

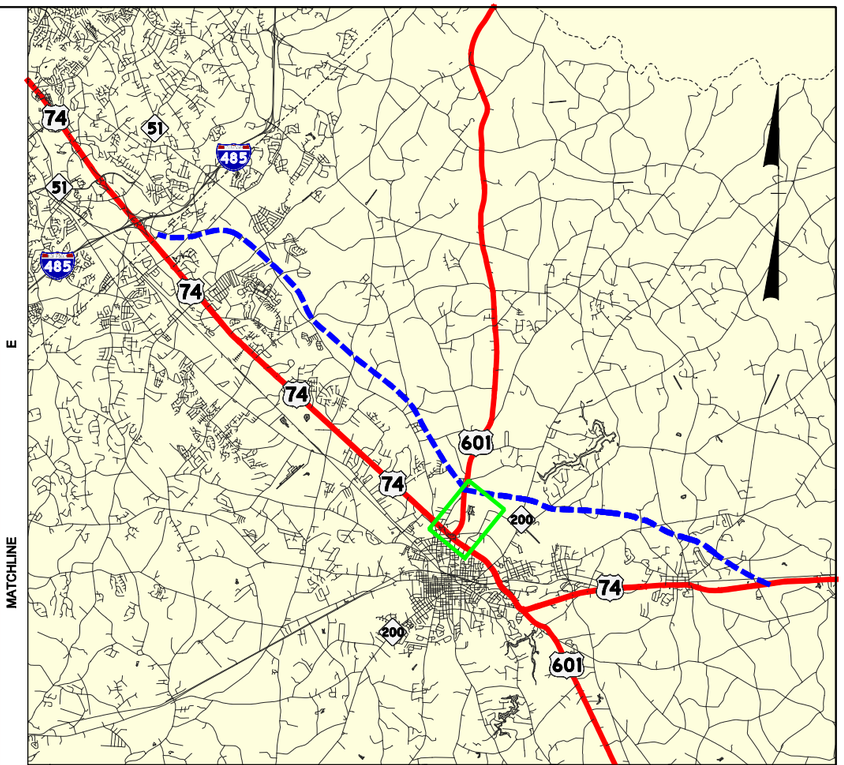
DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)



INSET





2035 BUILD "NON-TOLL" SCENARIO

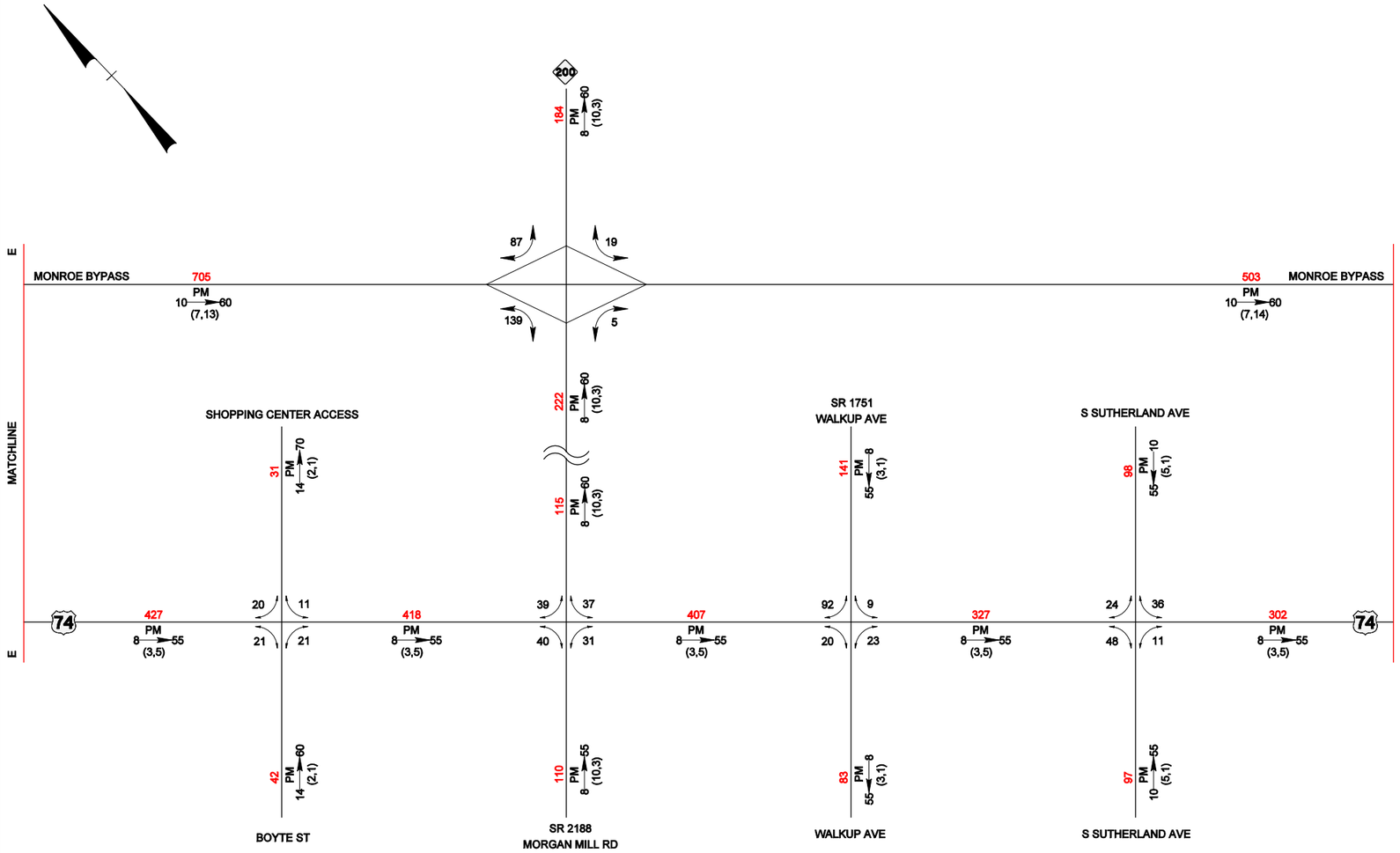
AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

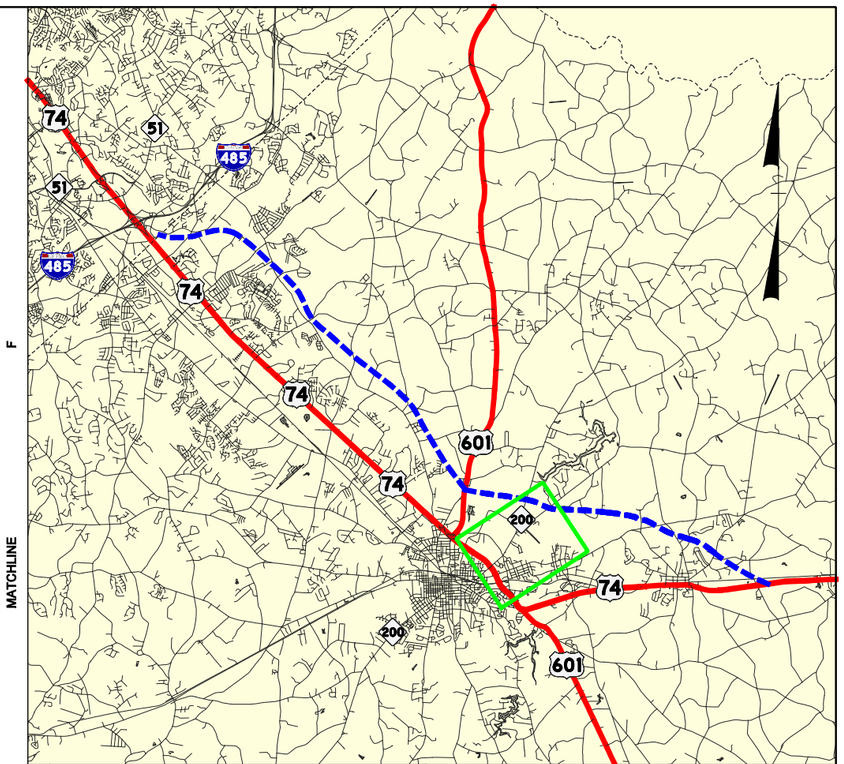
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 5
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

LEGEND

DHV PM → D
(d, t)

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)
###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

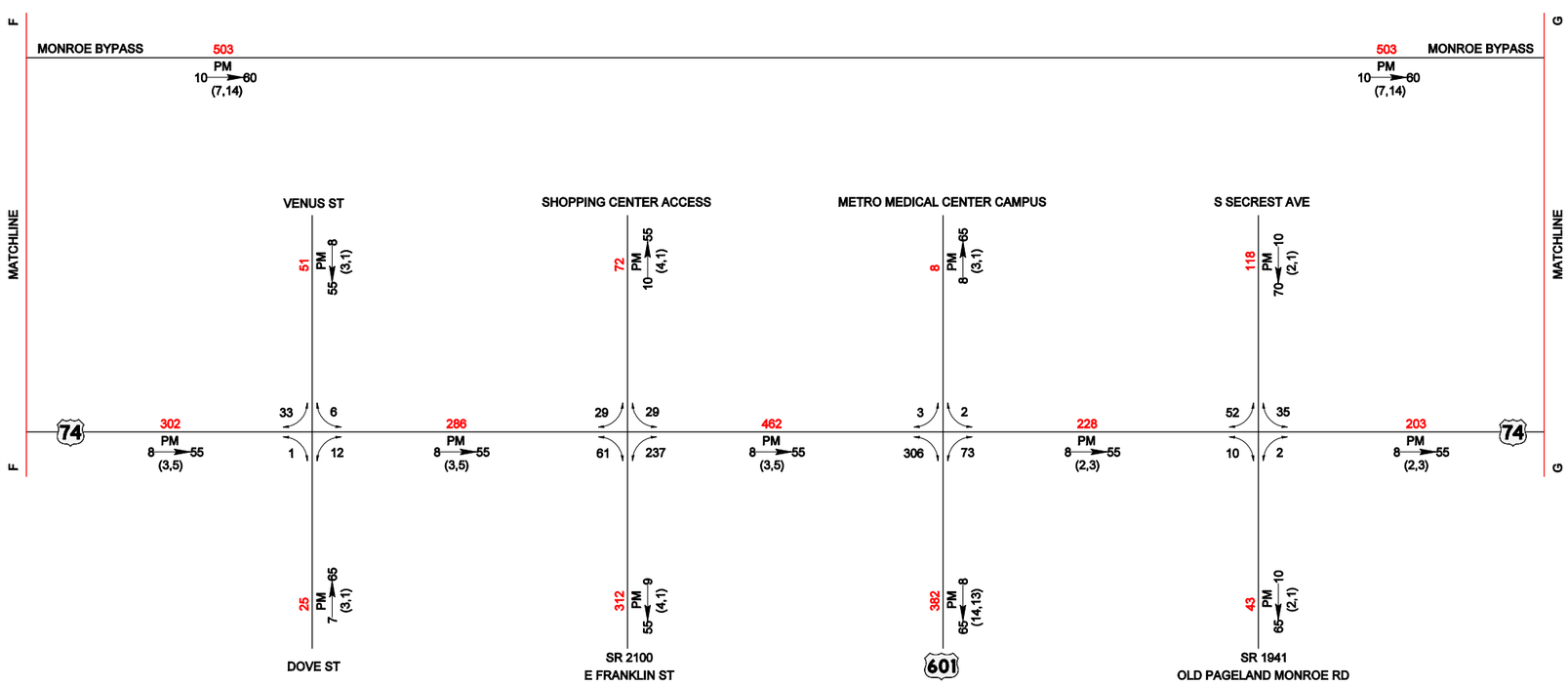
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 6
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

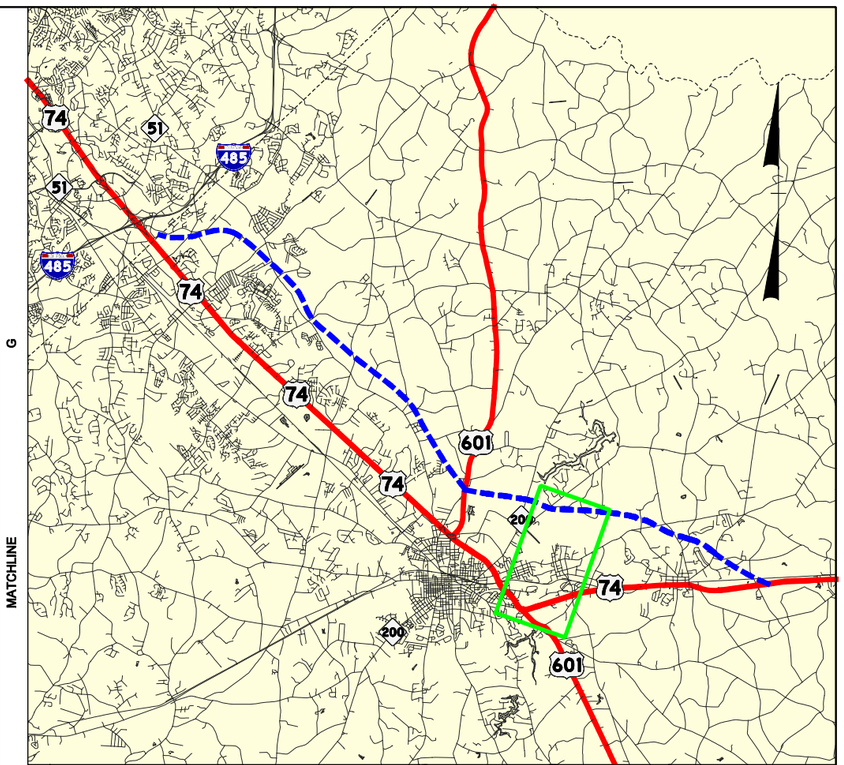
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

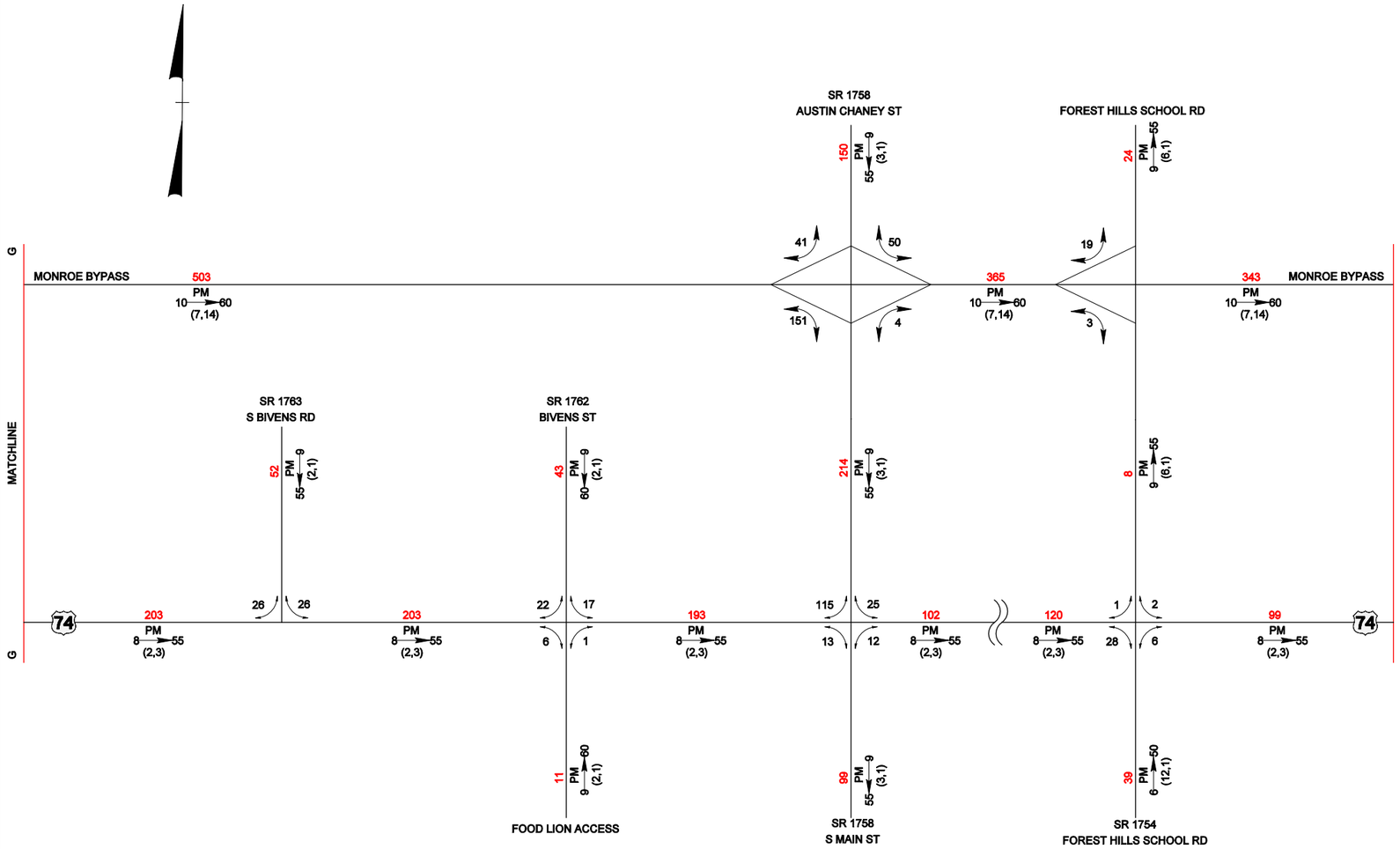
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 7
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

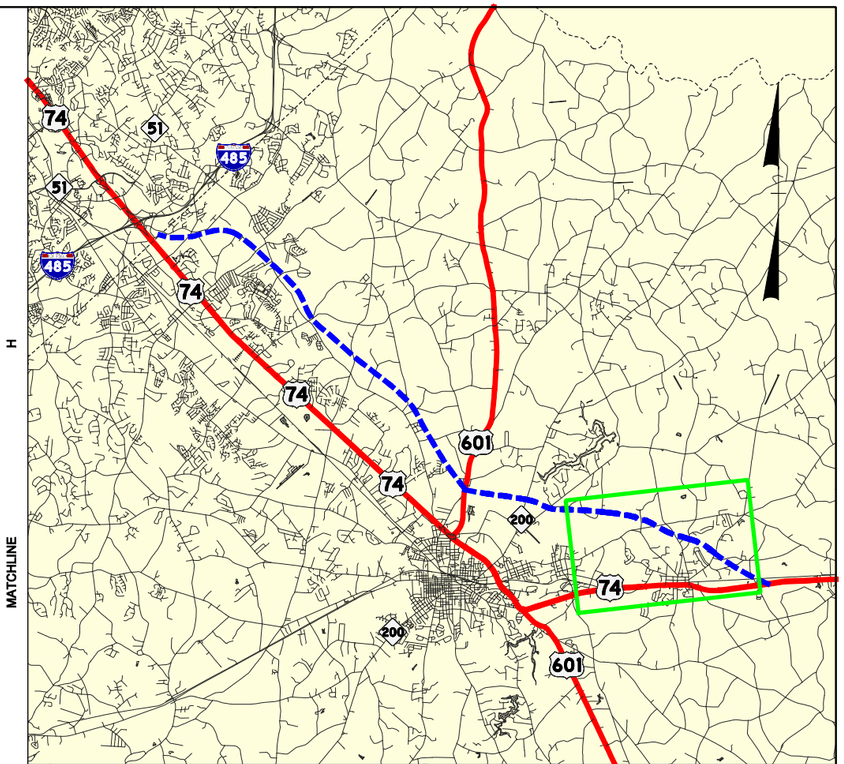
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

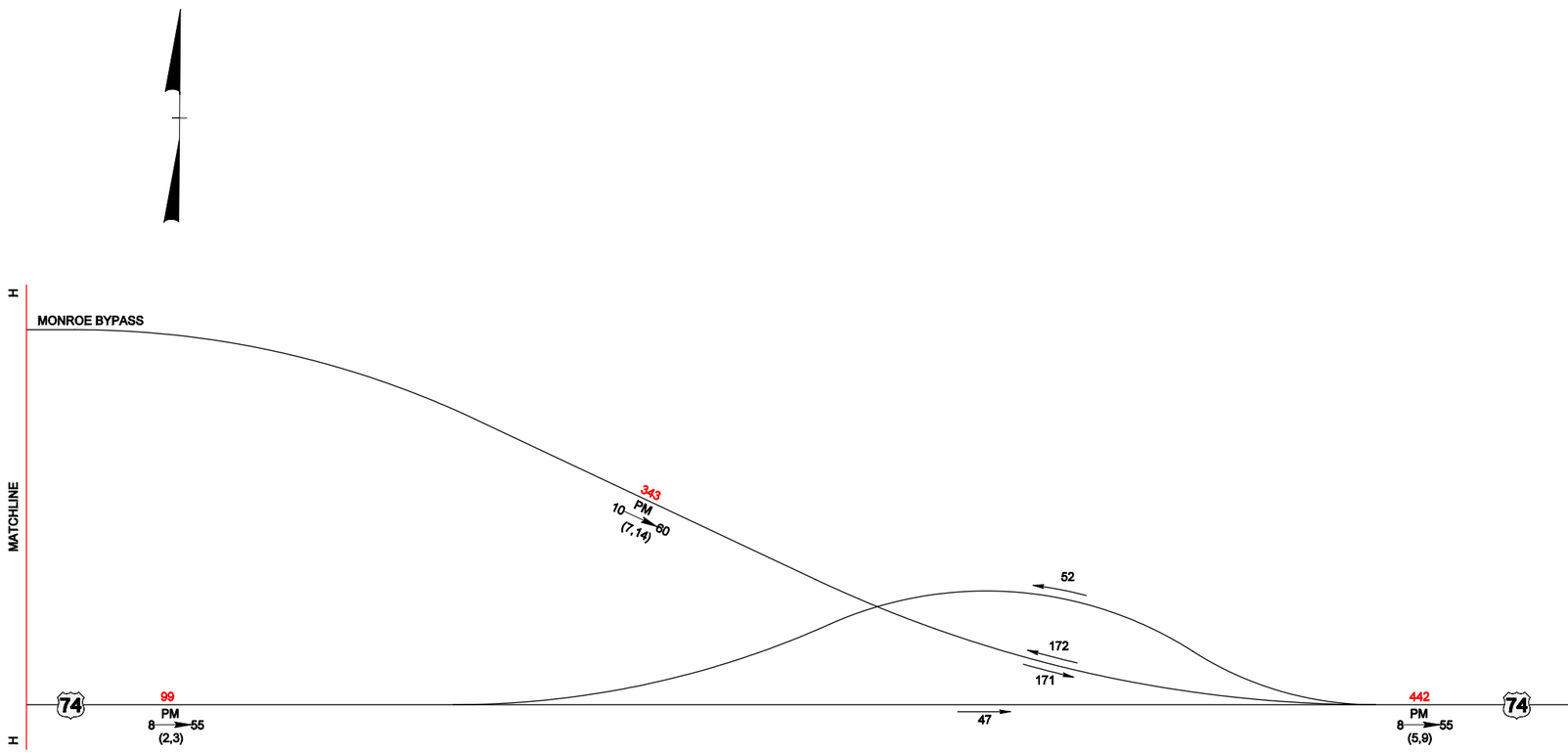
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 8
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

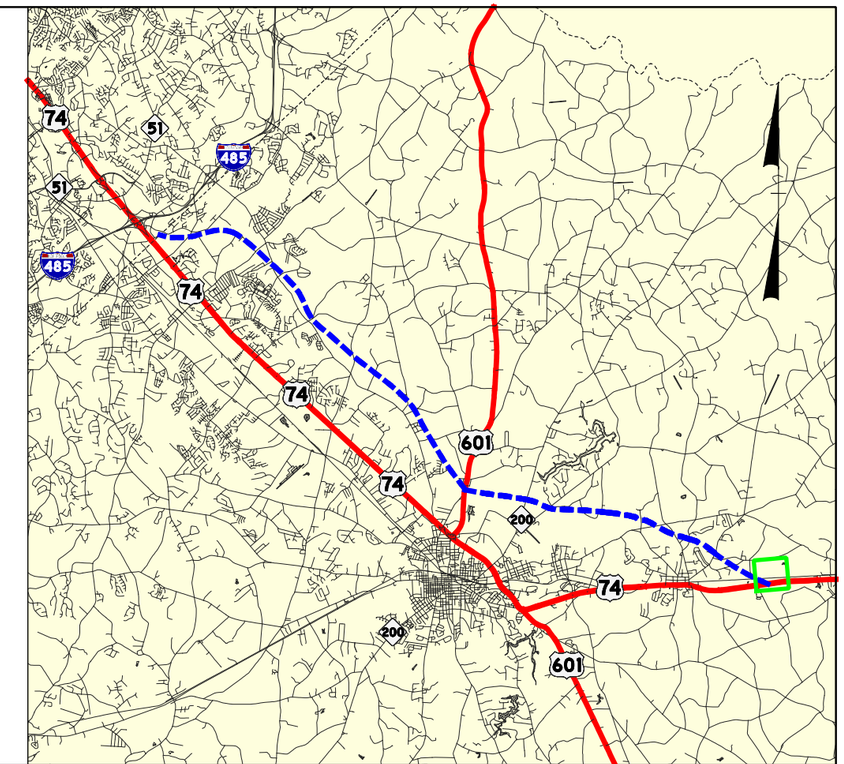
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "NON-TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 9
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

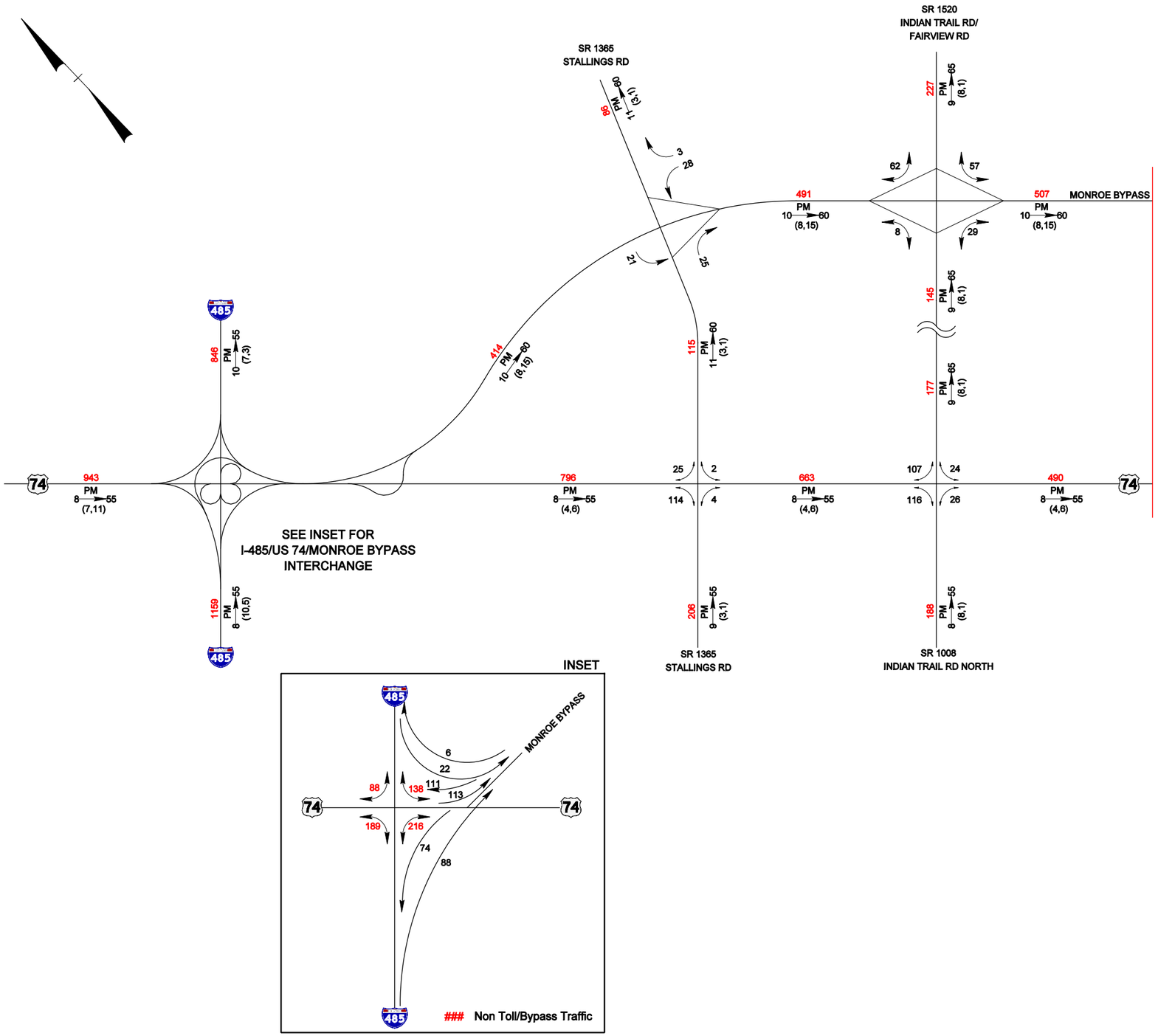
LEGEND

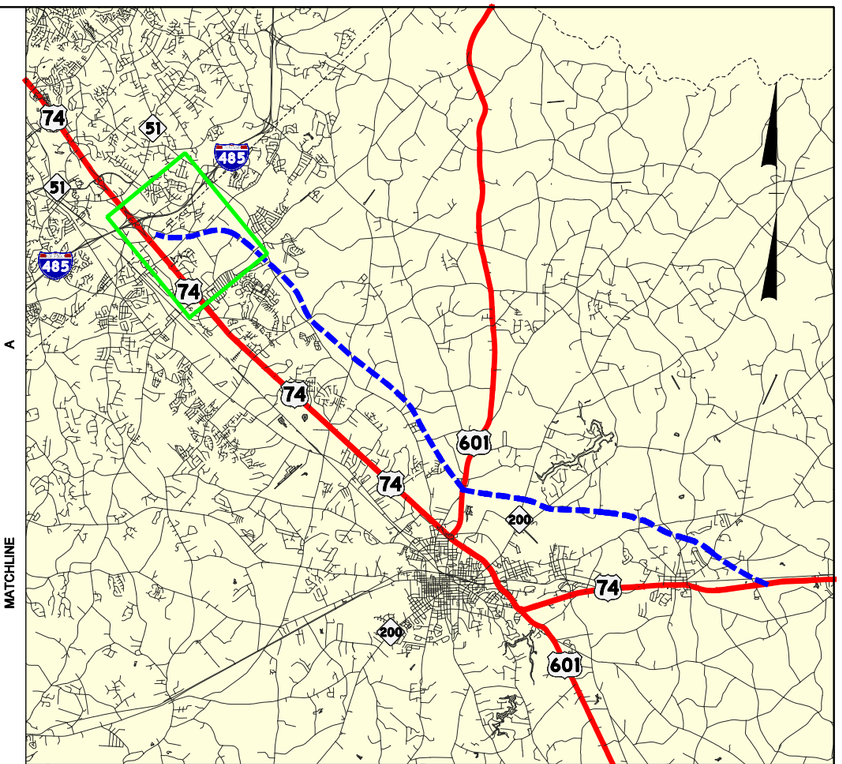
DHV $\xrightarrow[\text{(d, t)}]{\text{PM}}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)

Exhibit 12
2035 Build Toll Traffic Forecast Figures





2035 BUILD "TOLL" SCENARIO

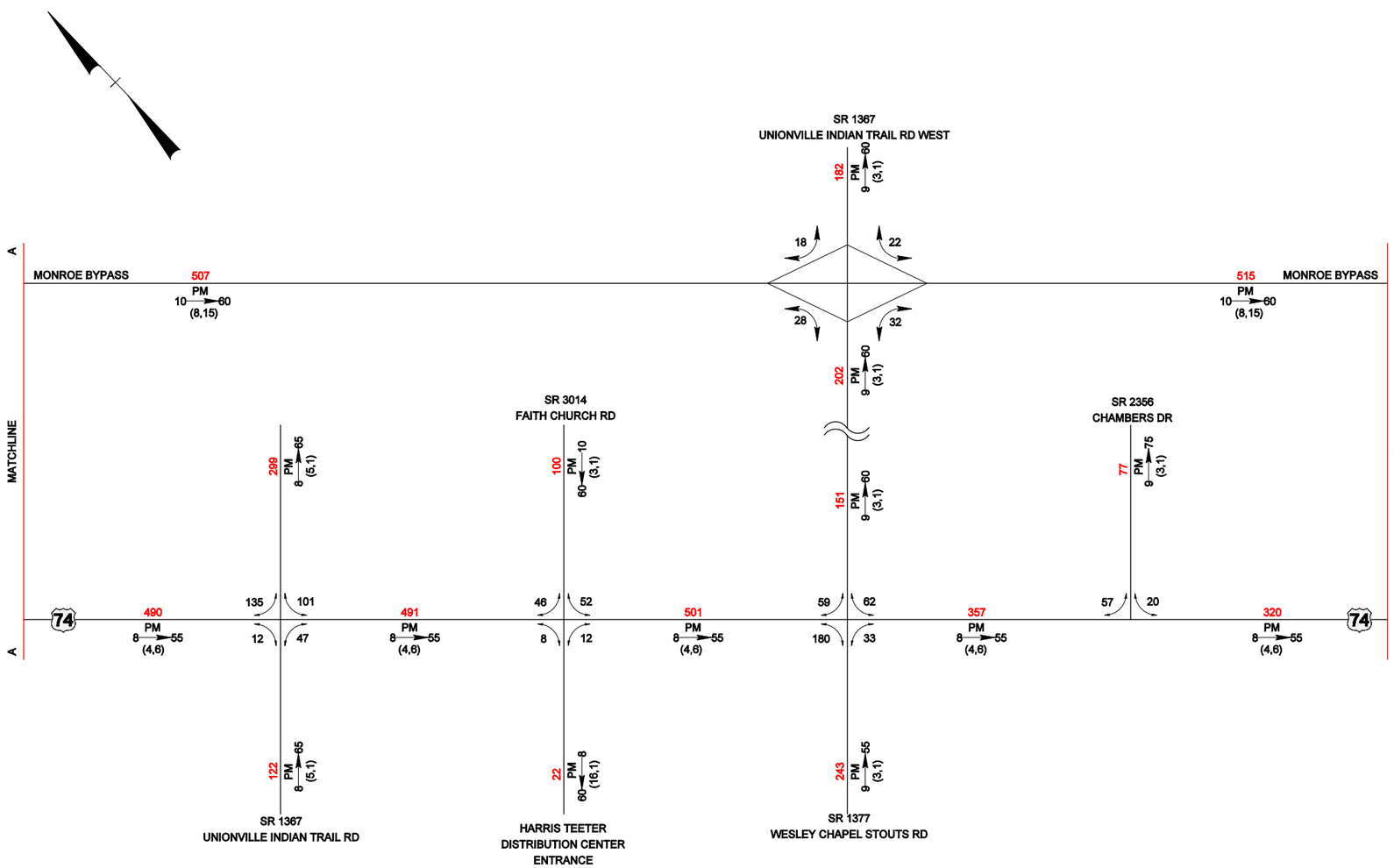
AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

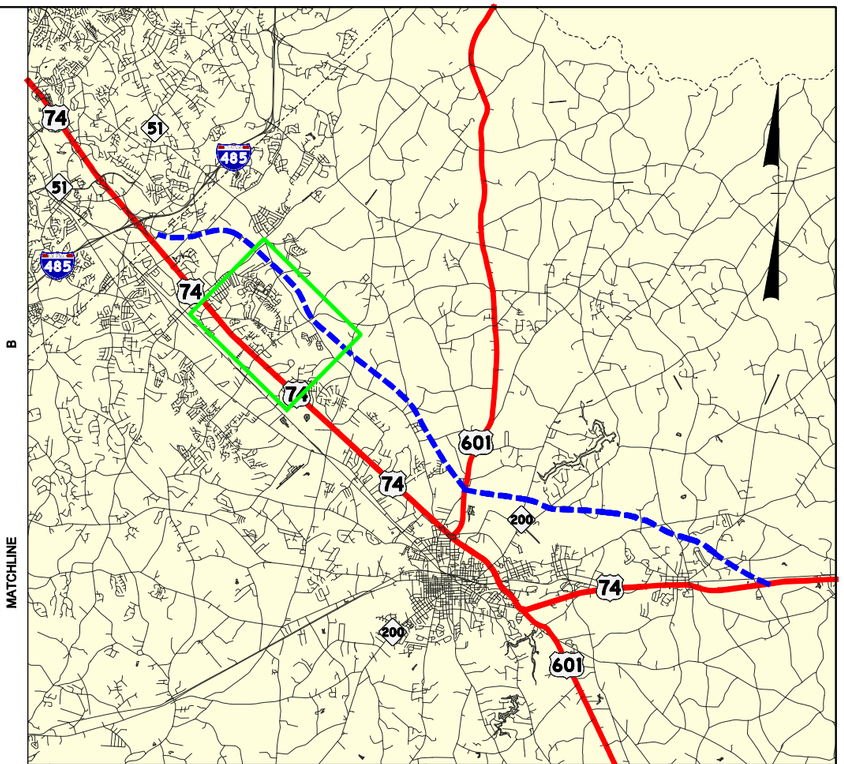
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 1
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)
###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

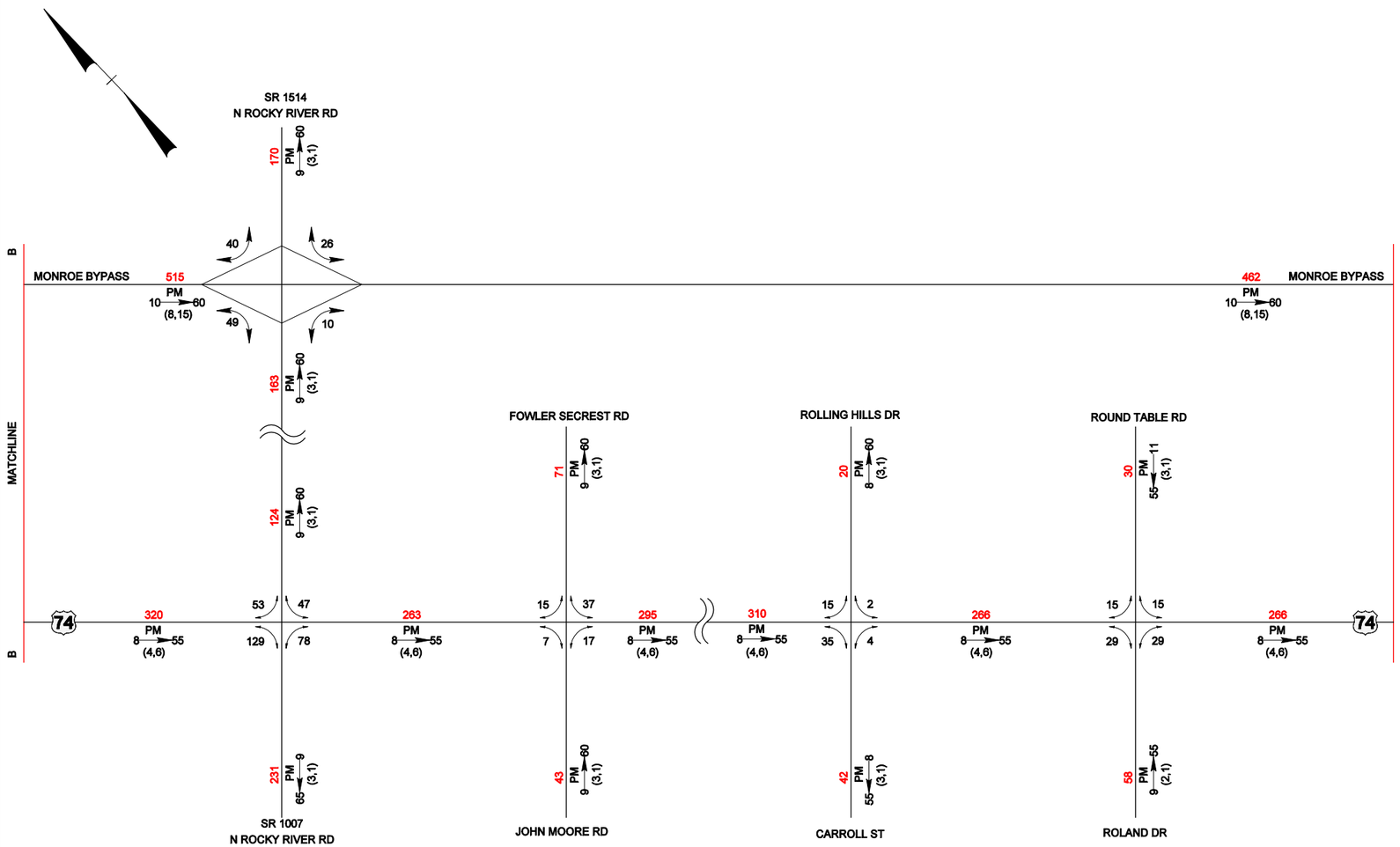
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 2
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

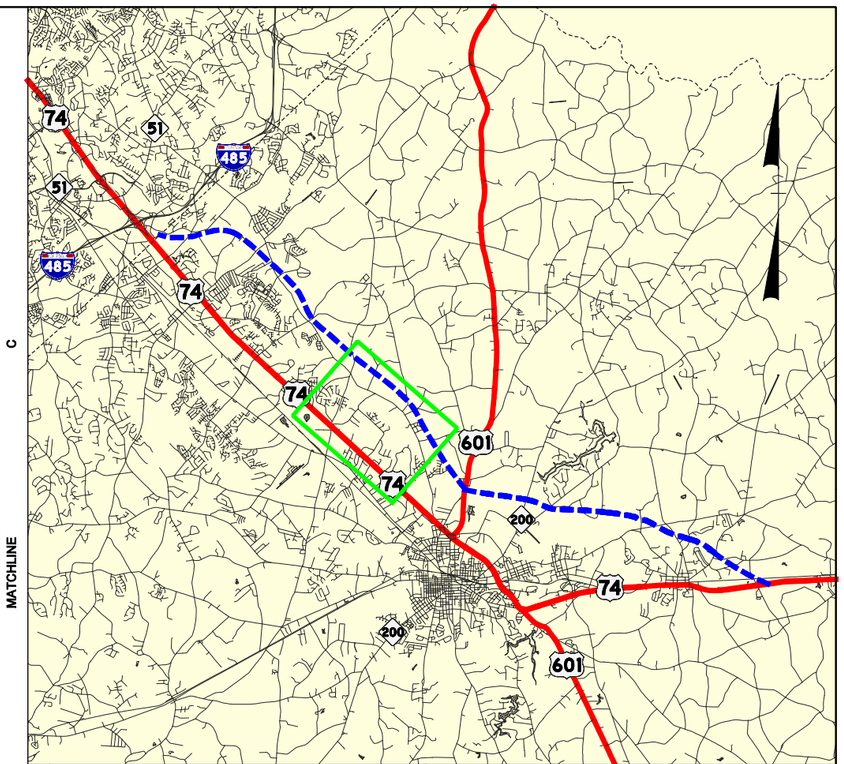
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

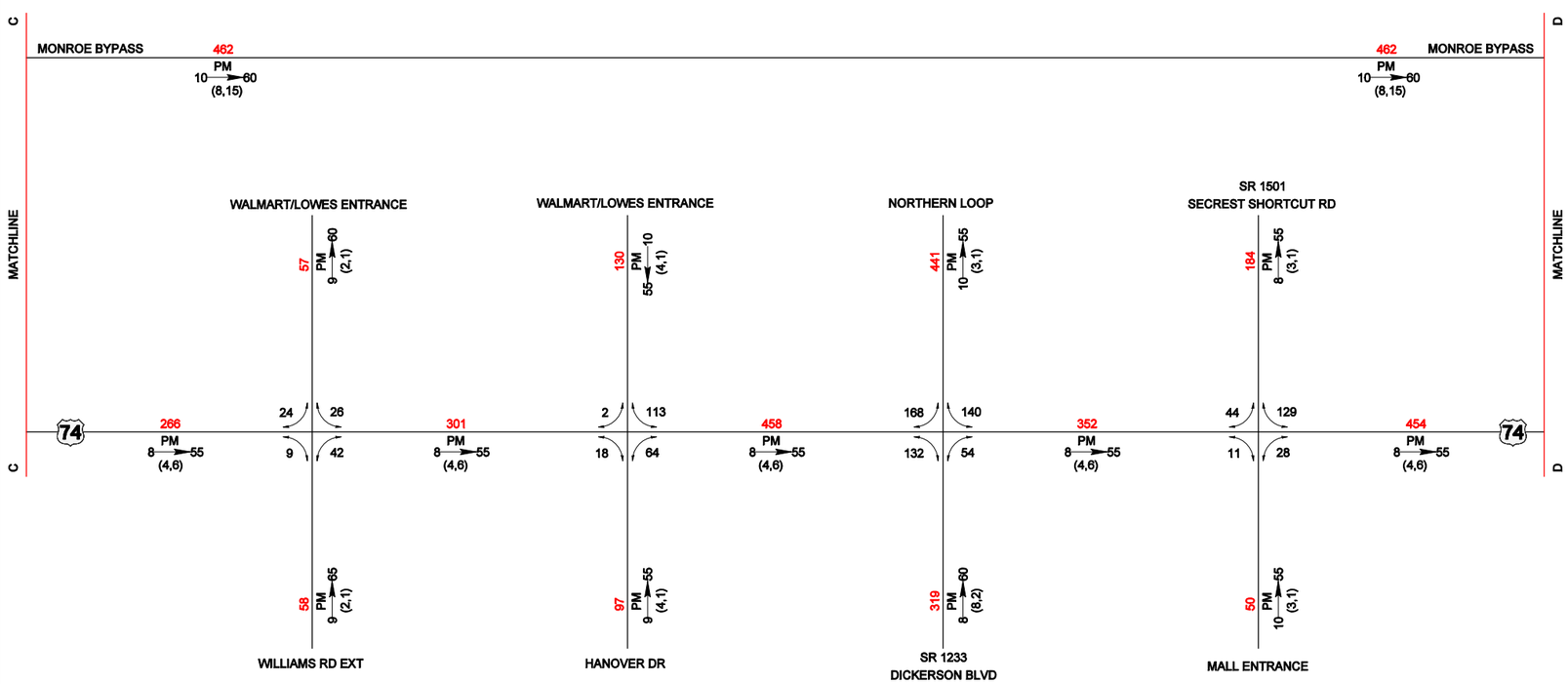
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 3
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

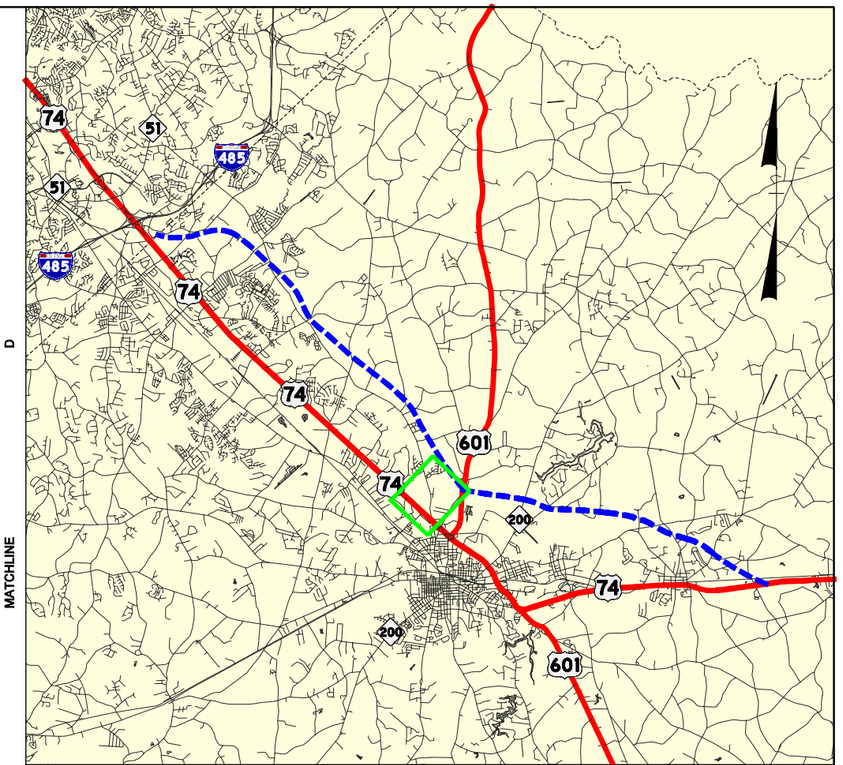
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

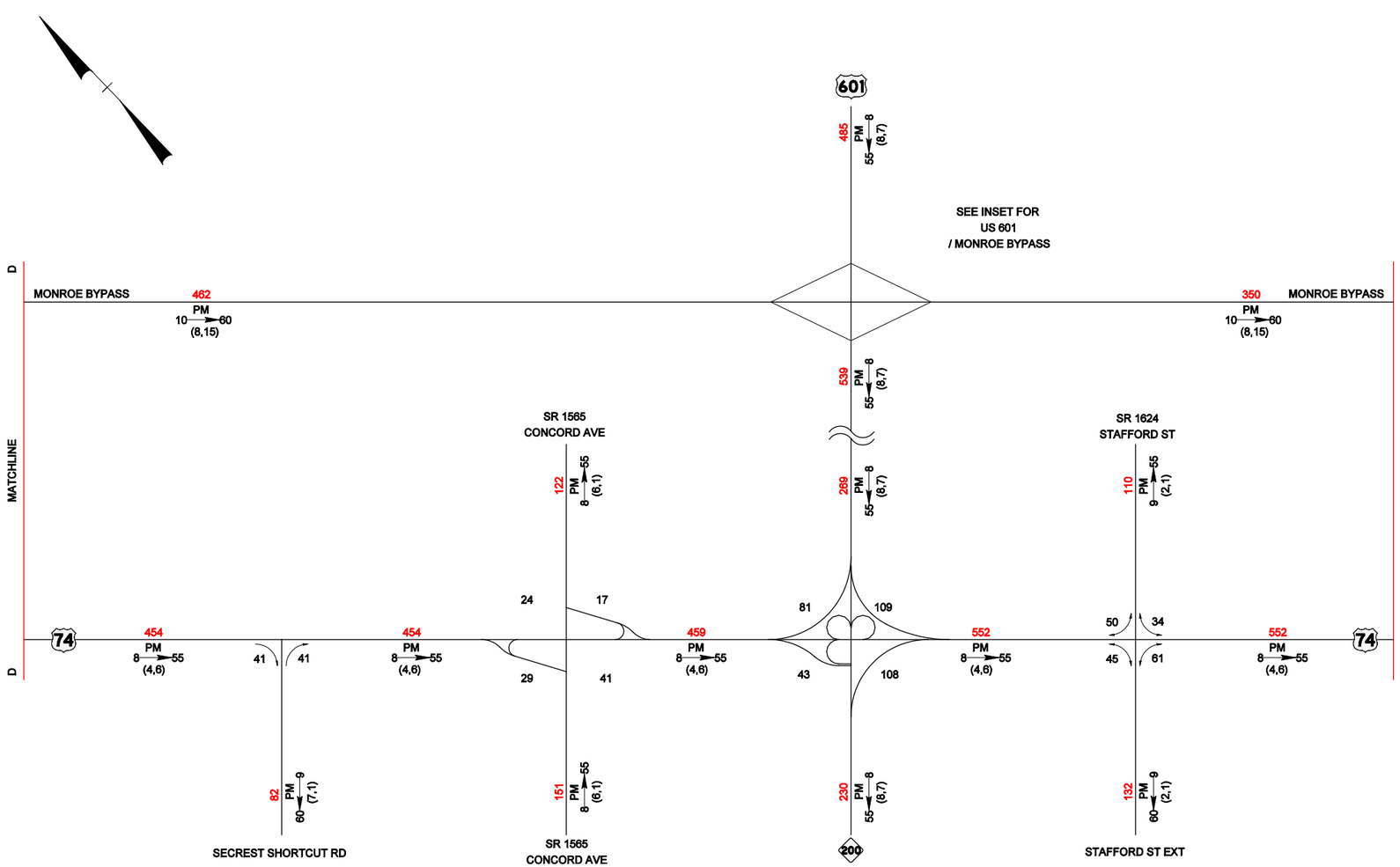
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 4
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

LEGEND

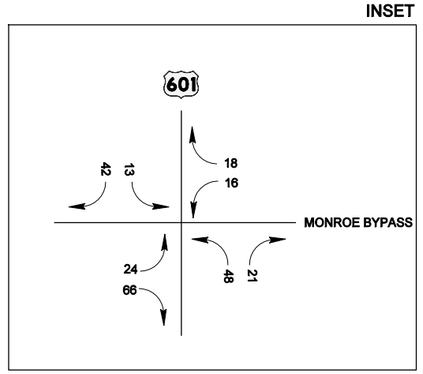
DHV $\xrightarrow[(d,\ t)]{PM}$ D

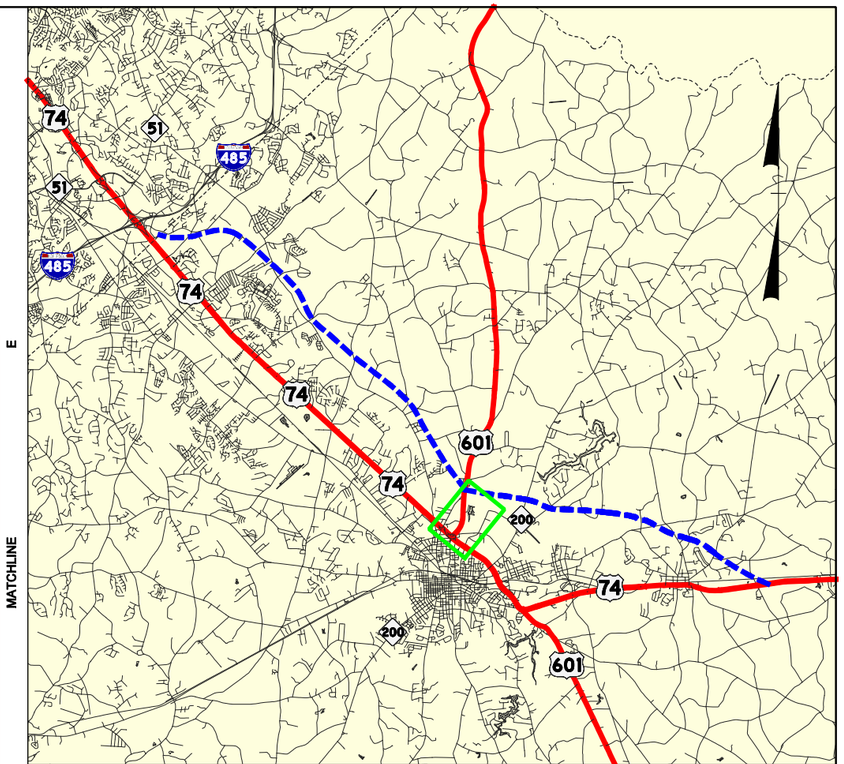
DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)



INSET





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

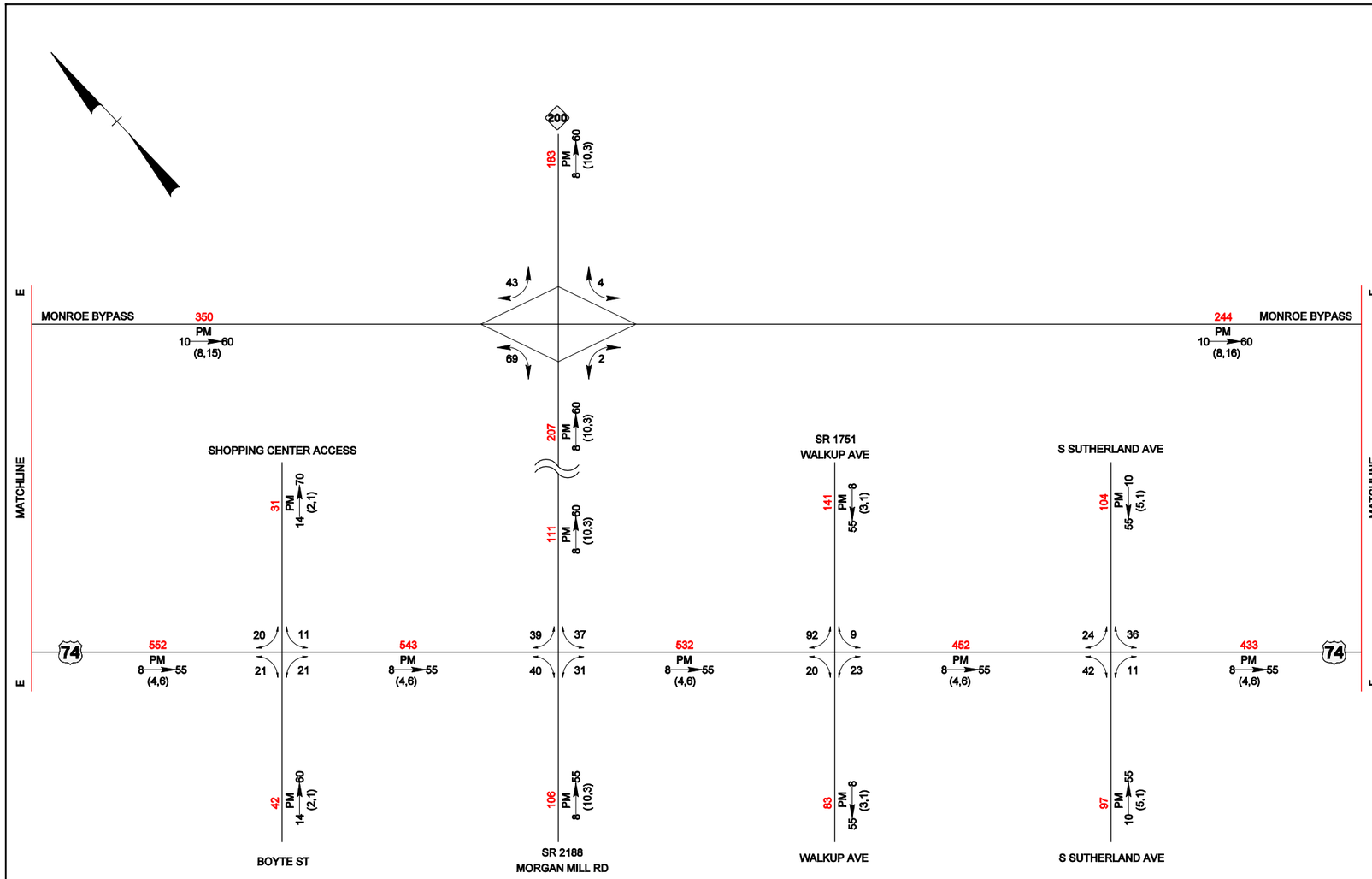
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 5
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

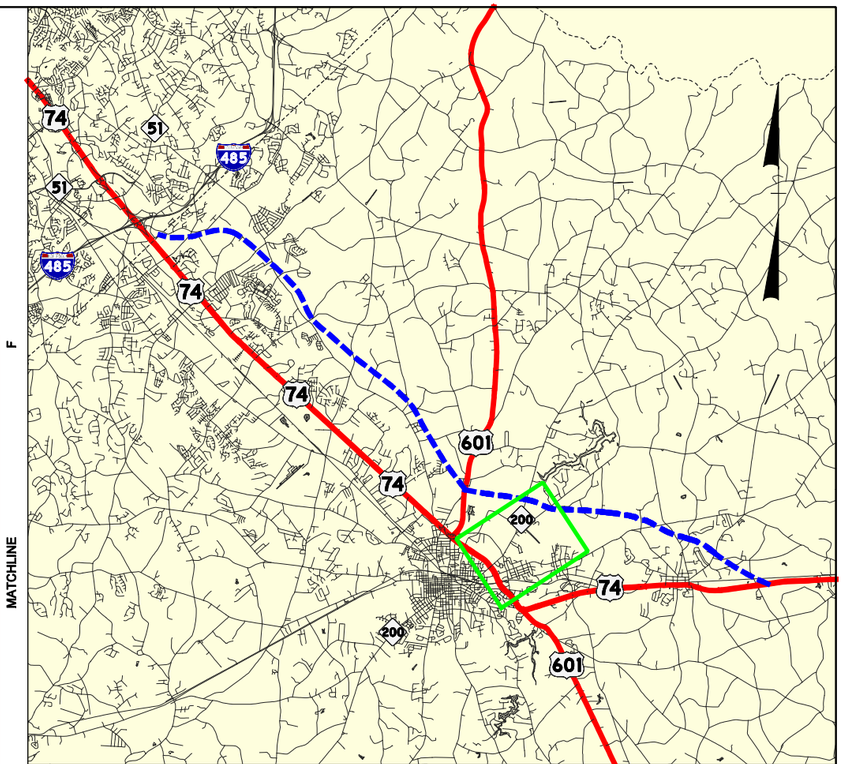
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

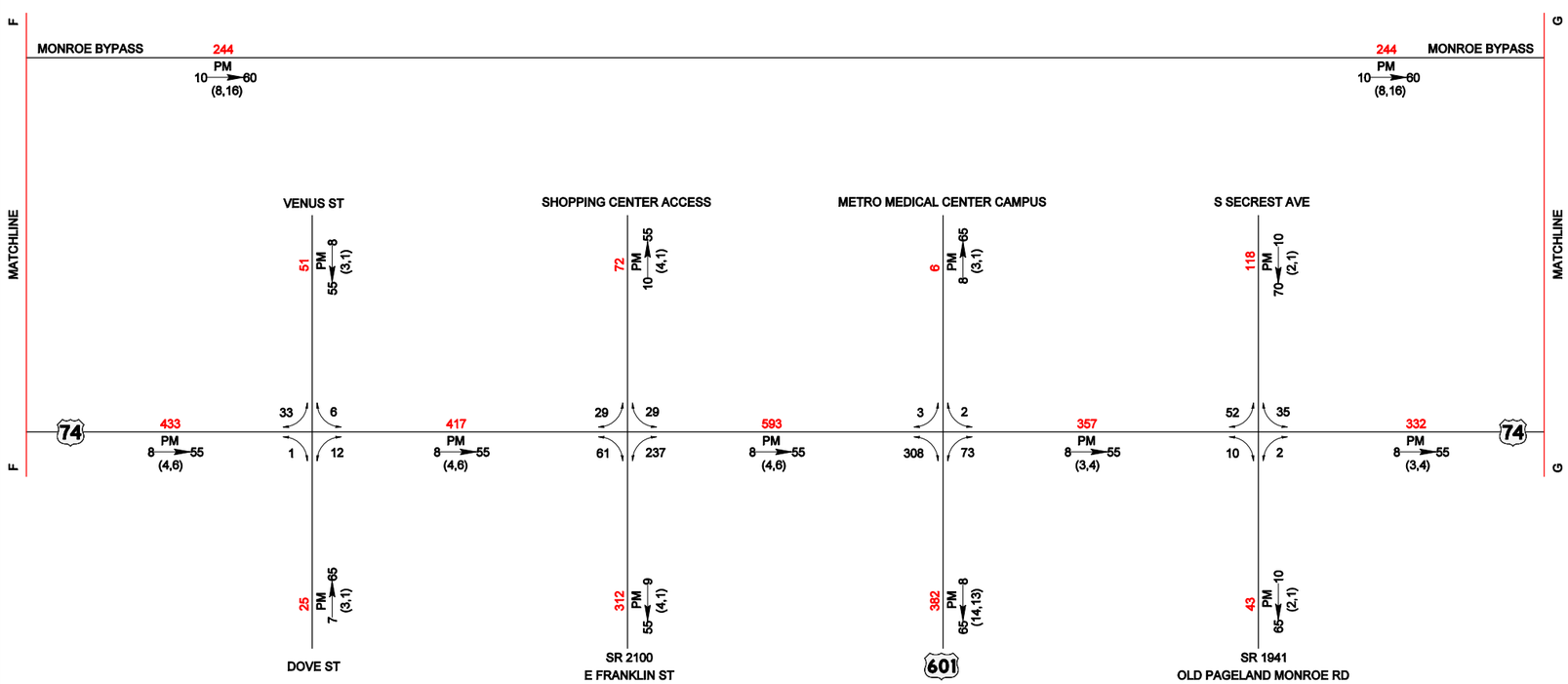
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 6
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

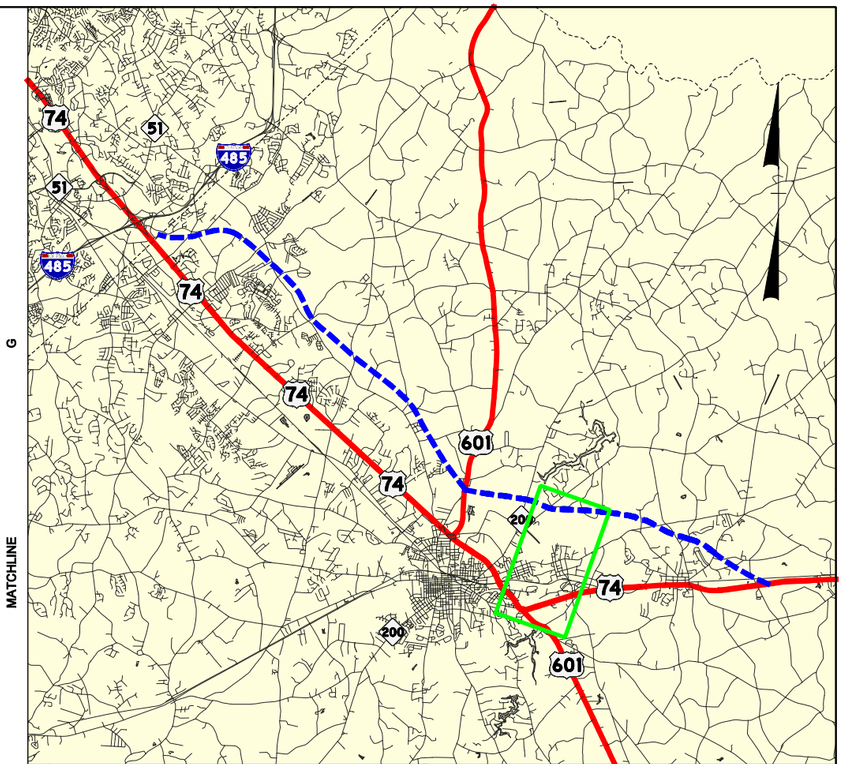
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

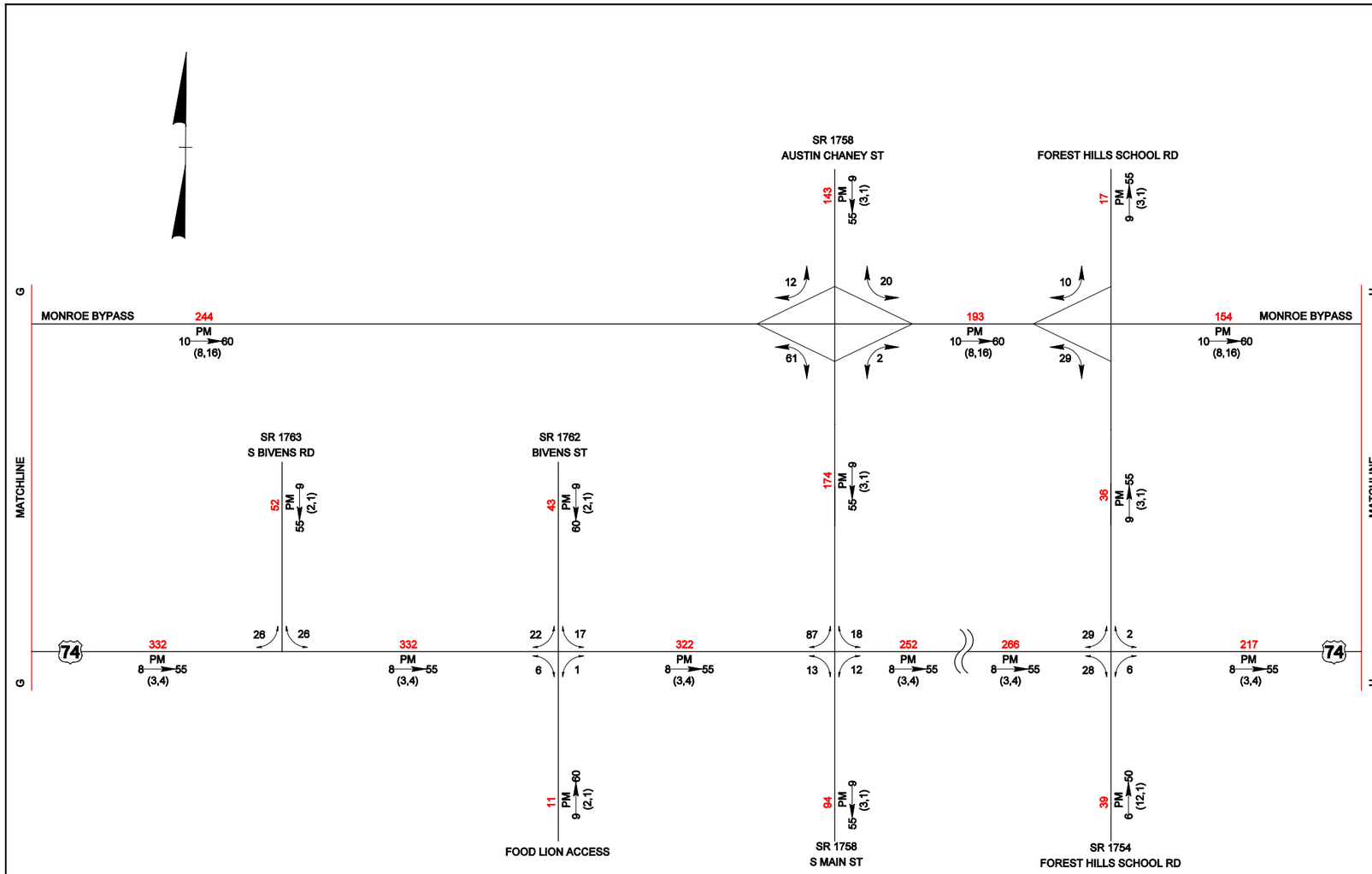
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 7
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

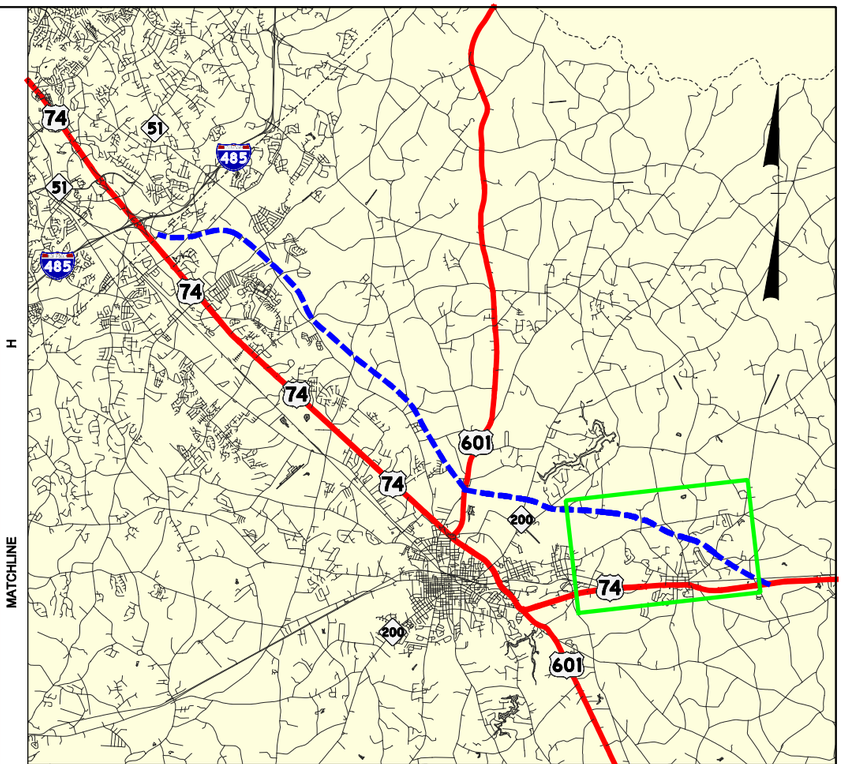
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

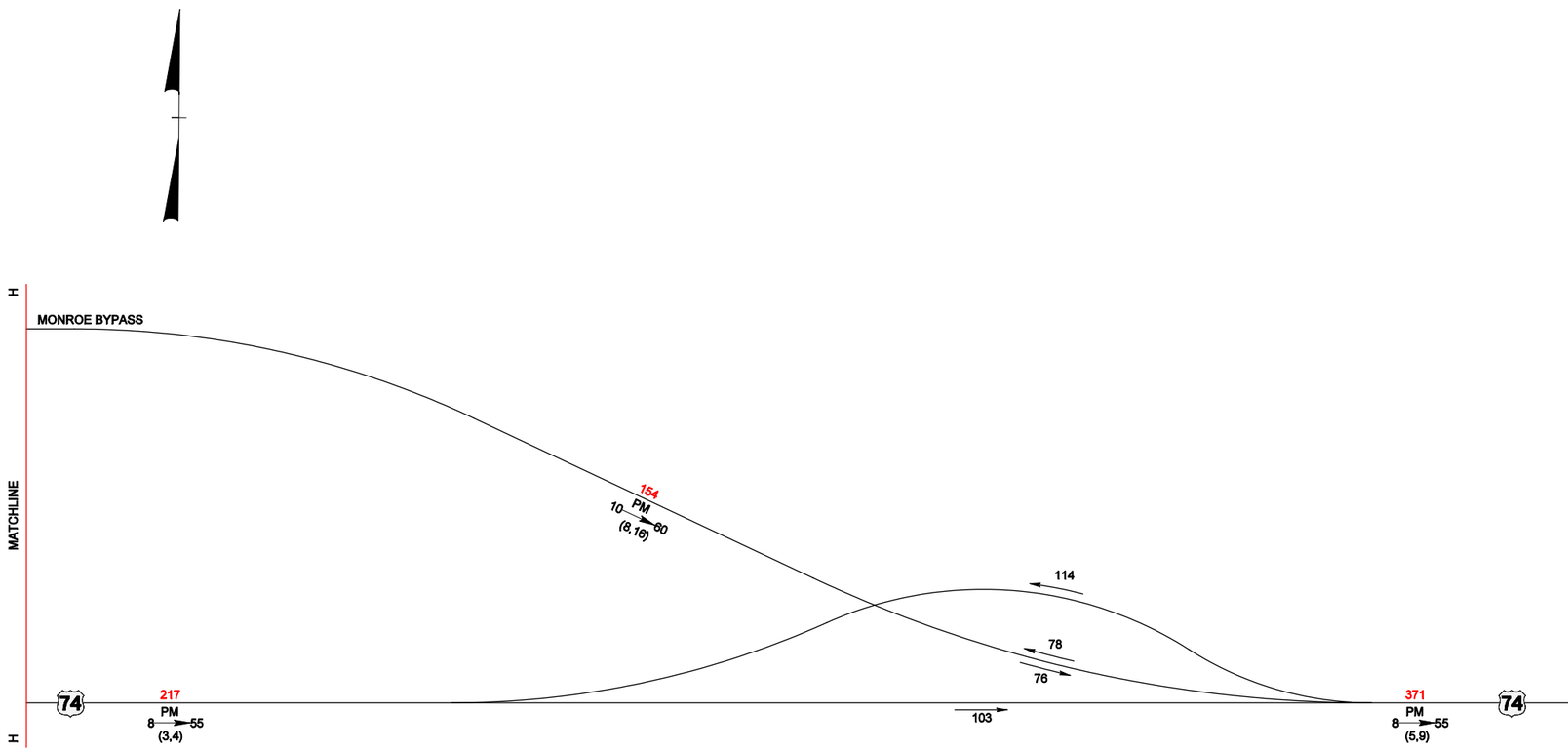
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 8
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

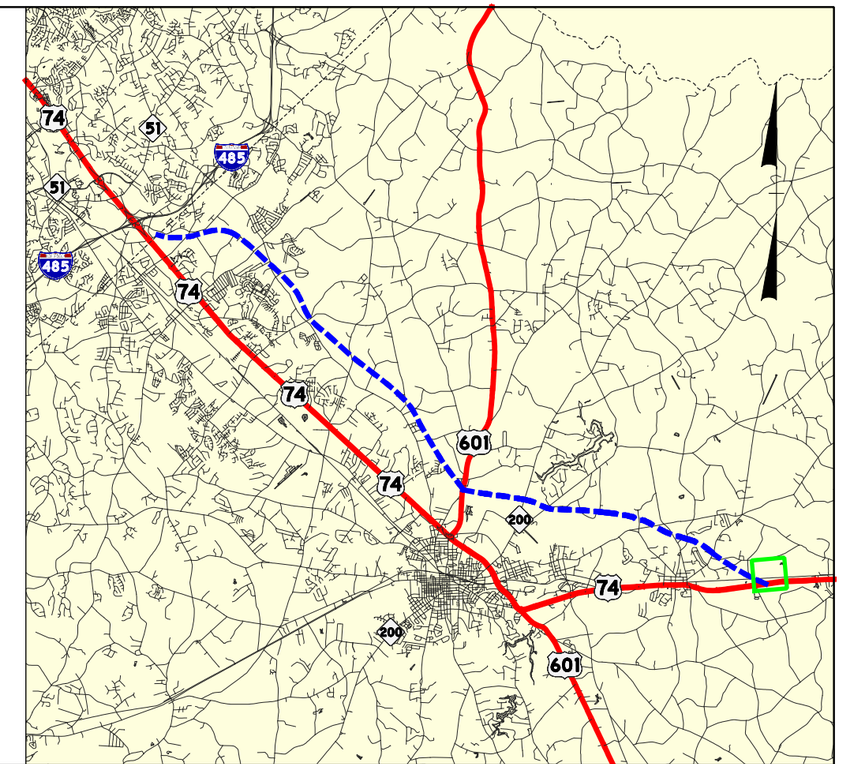
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

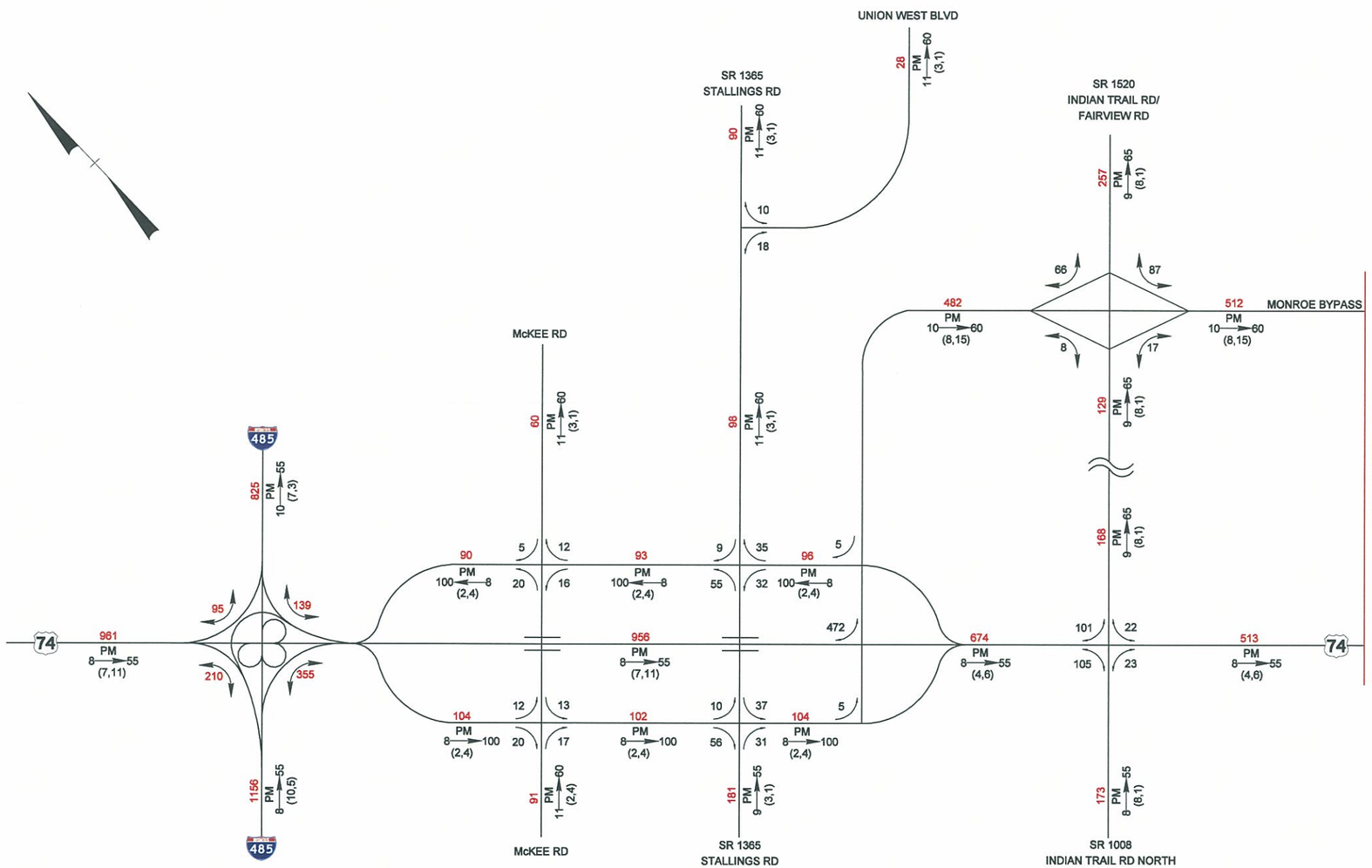
TIP: R-3329/R-2559	ALTERNATE: 1A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 9
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

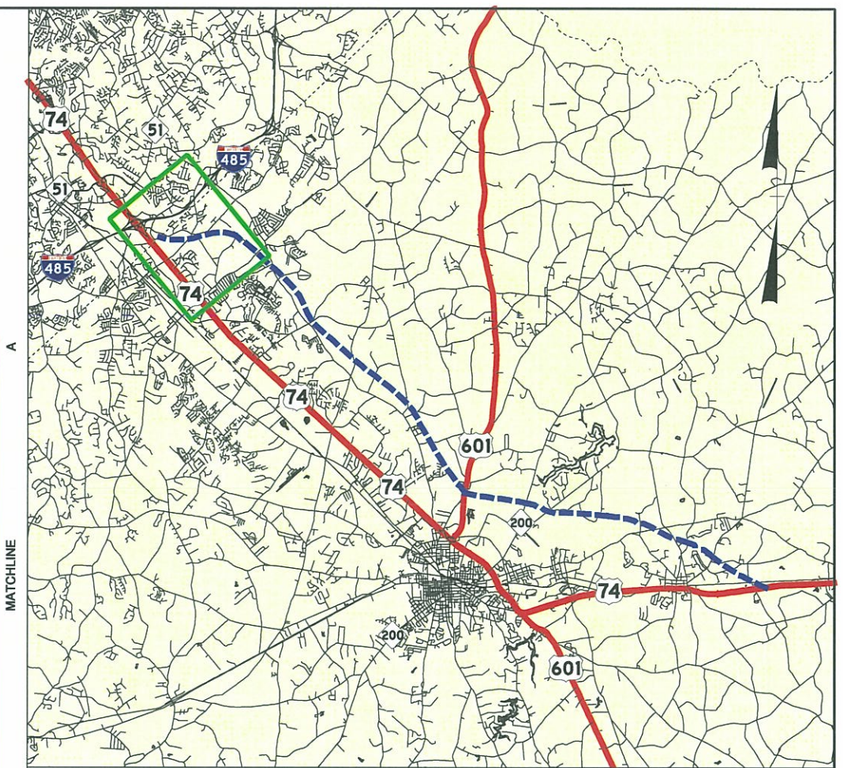
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

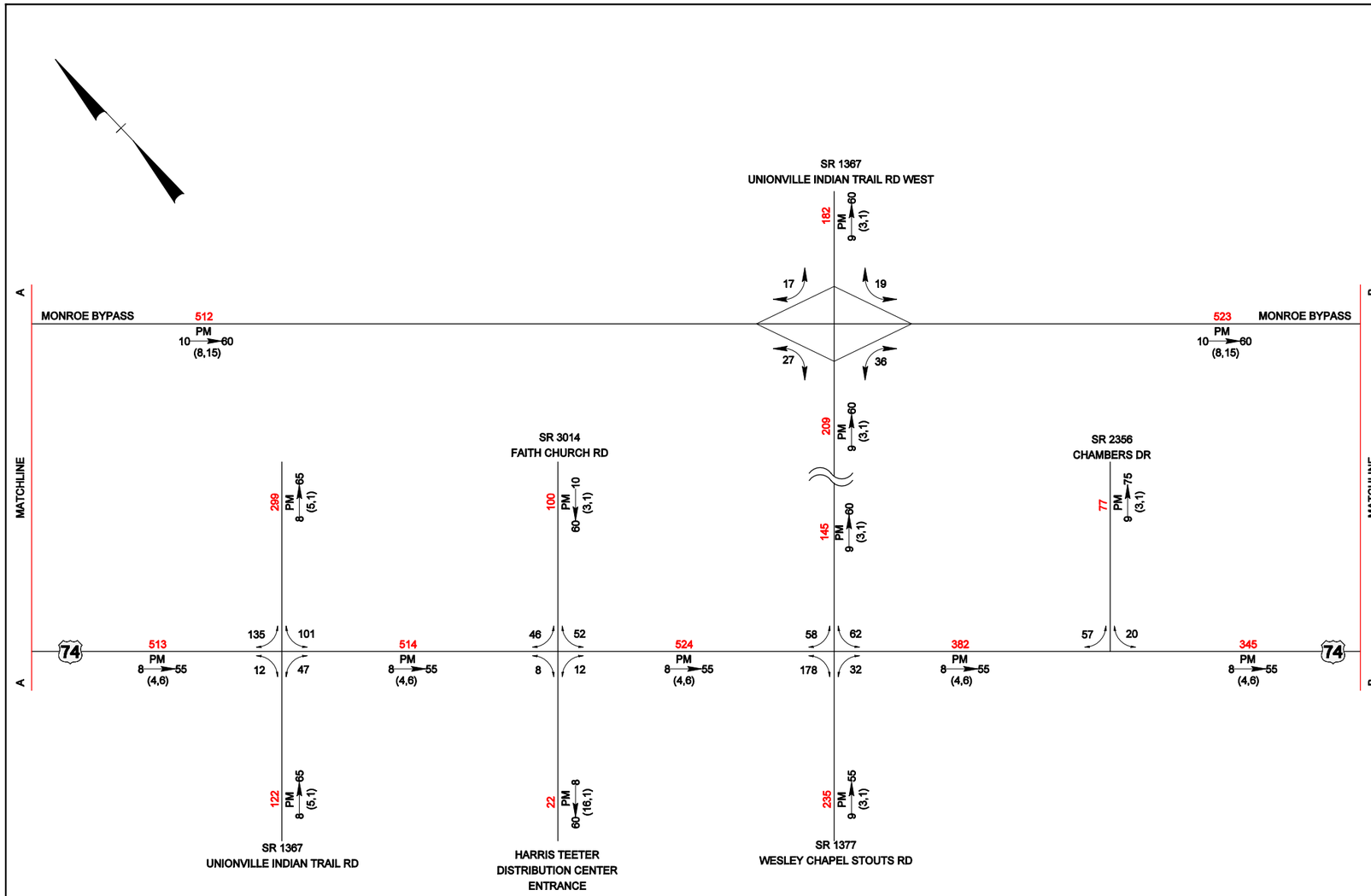
TIP: R-3329/R-2559	REVISED ALTERNATE: 3A	LOCATION:	US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER:	1
DIVISION: 10	DATE: June 2008	PREPARED BY:	Wilbur Smith Associates

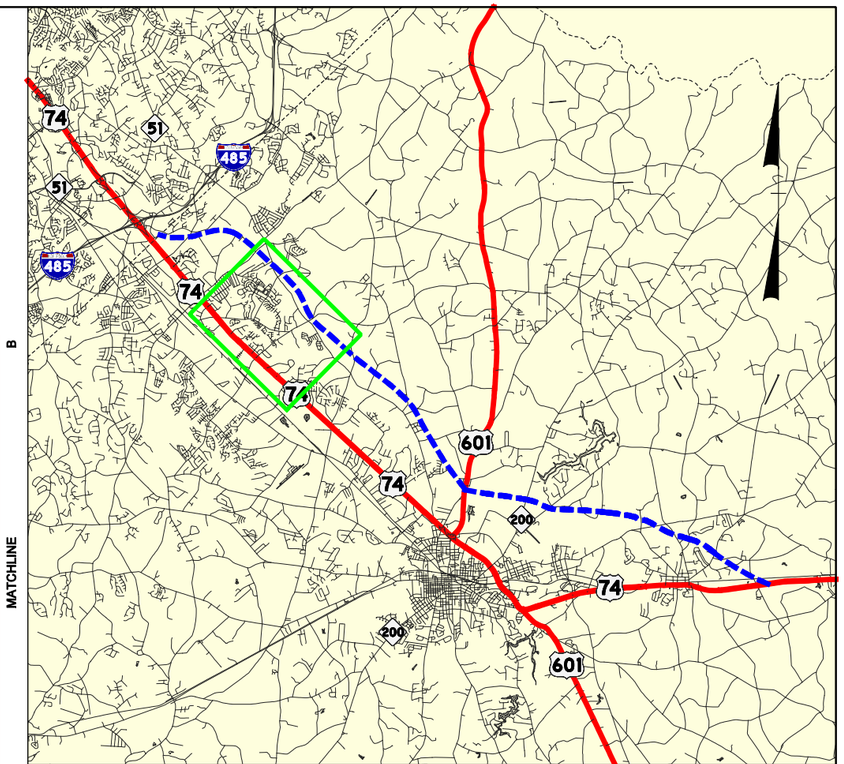
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

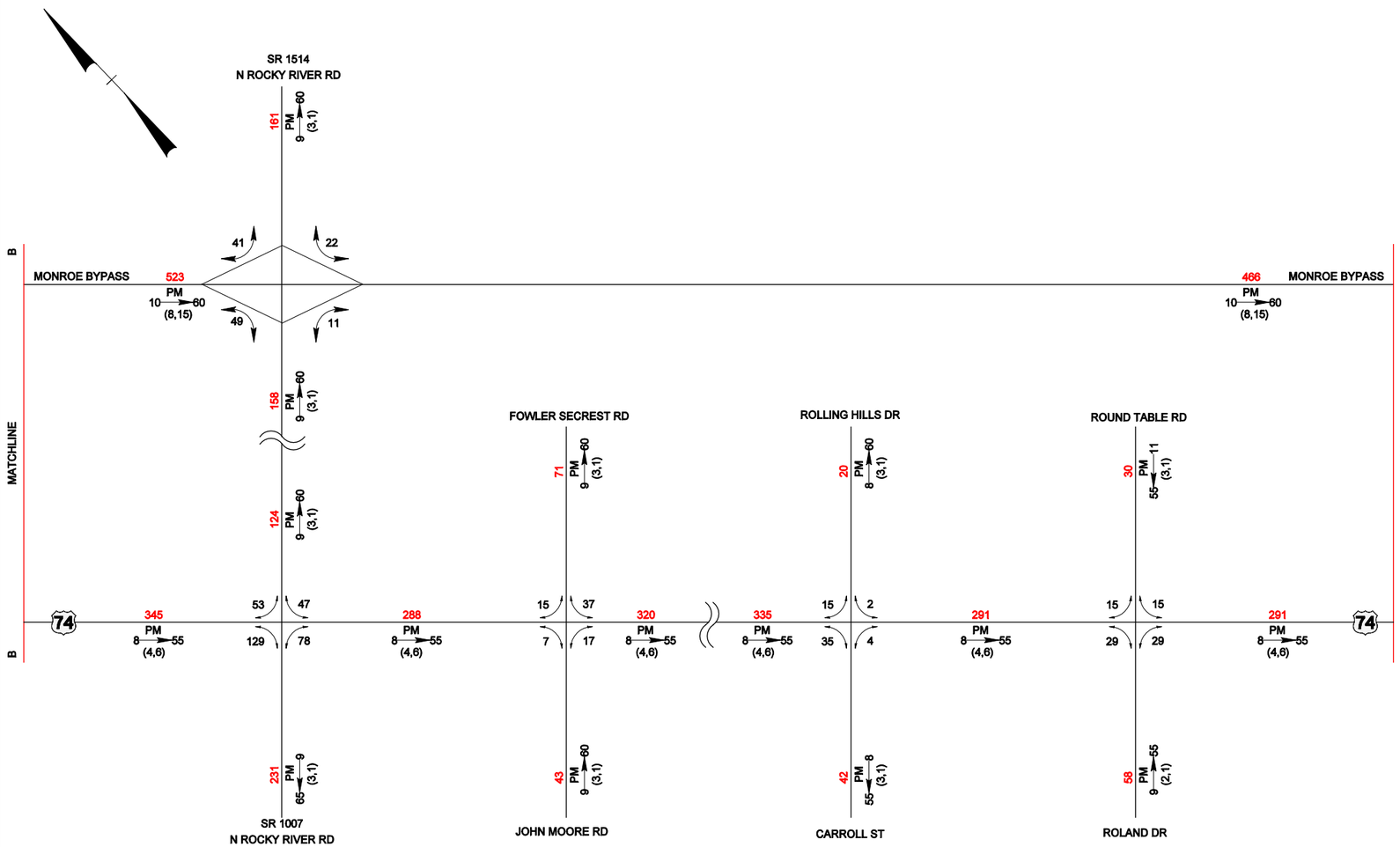
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 2
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

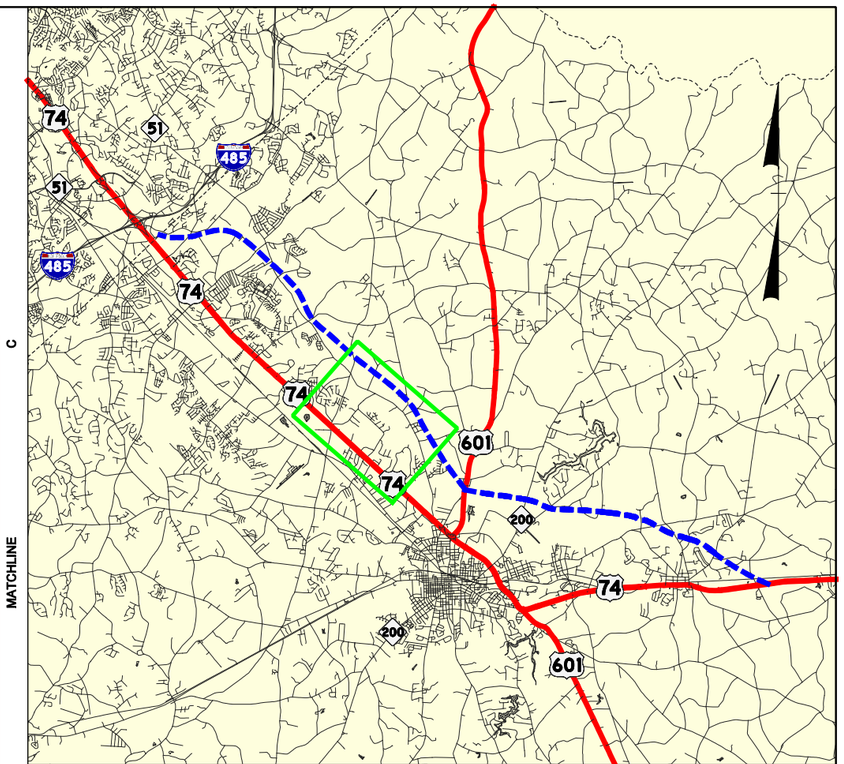
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

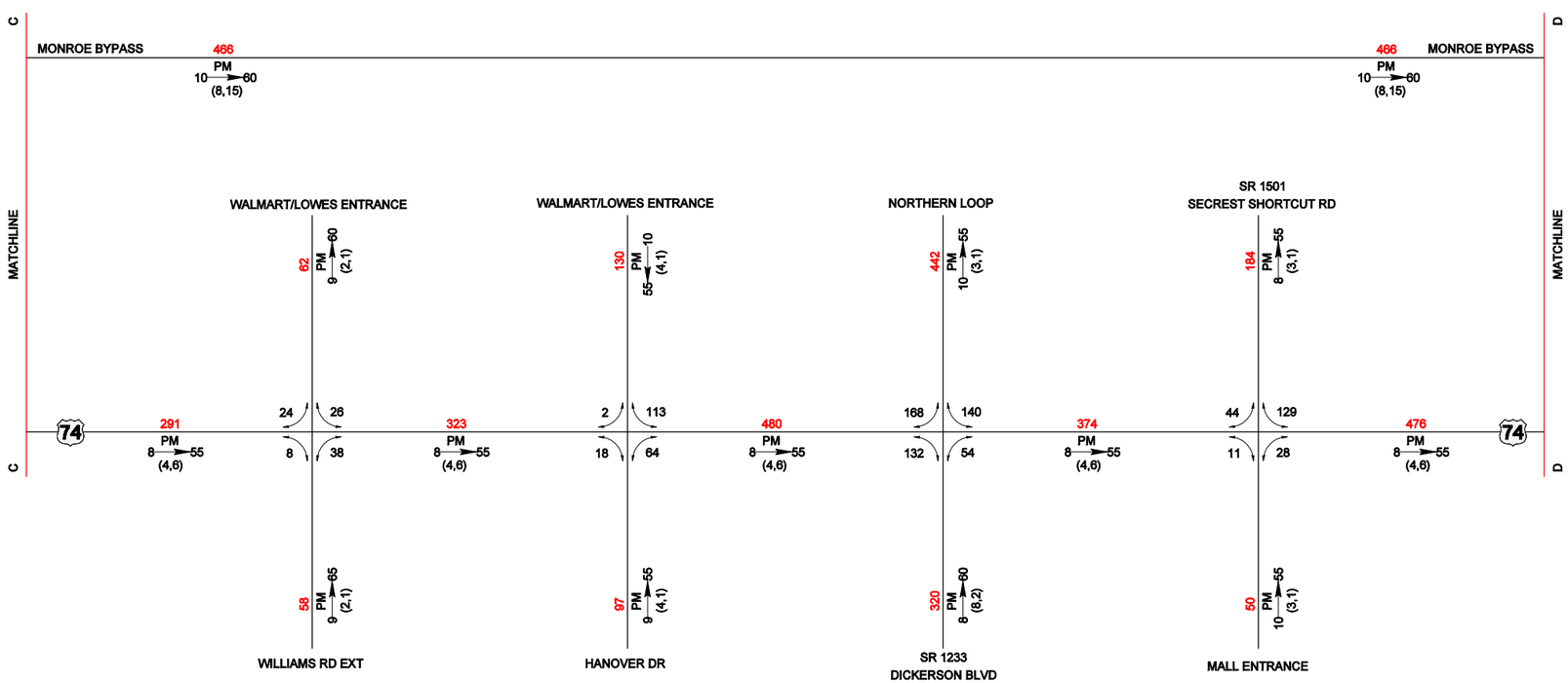
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 3
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

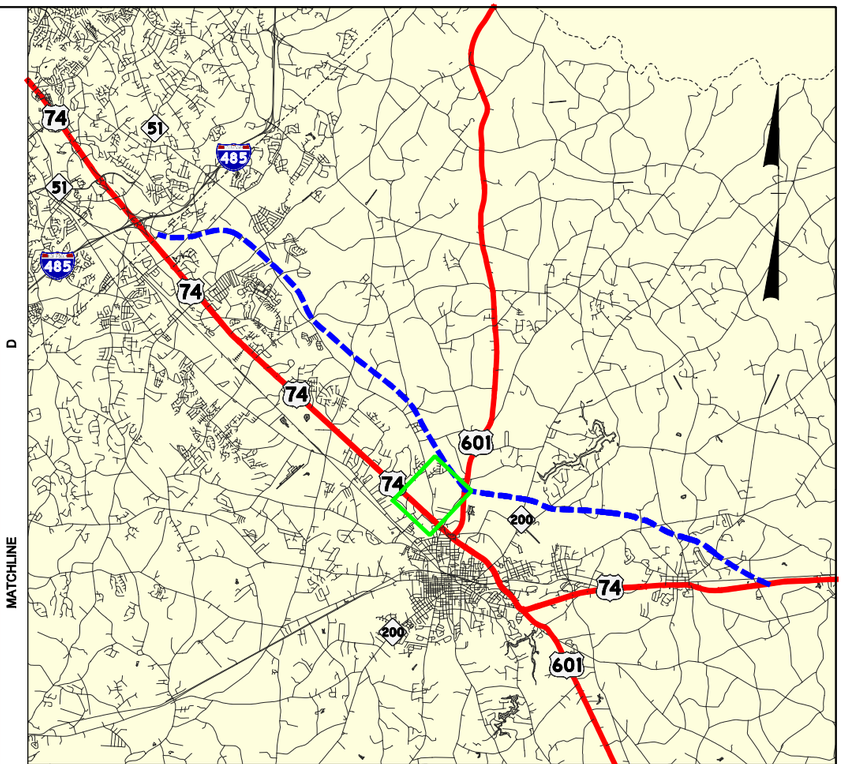
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

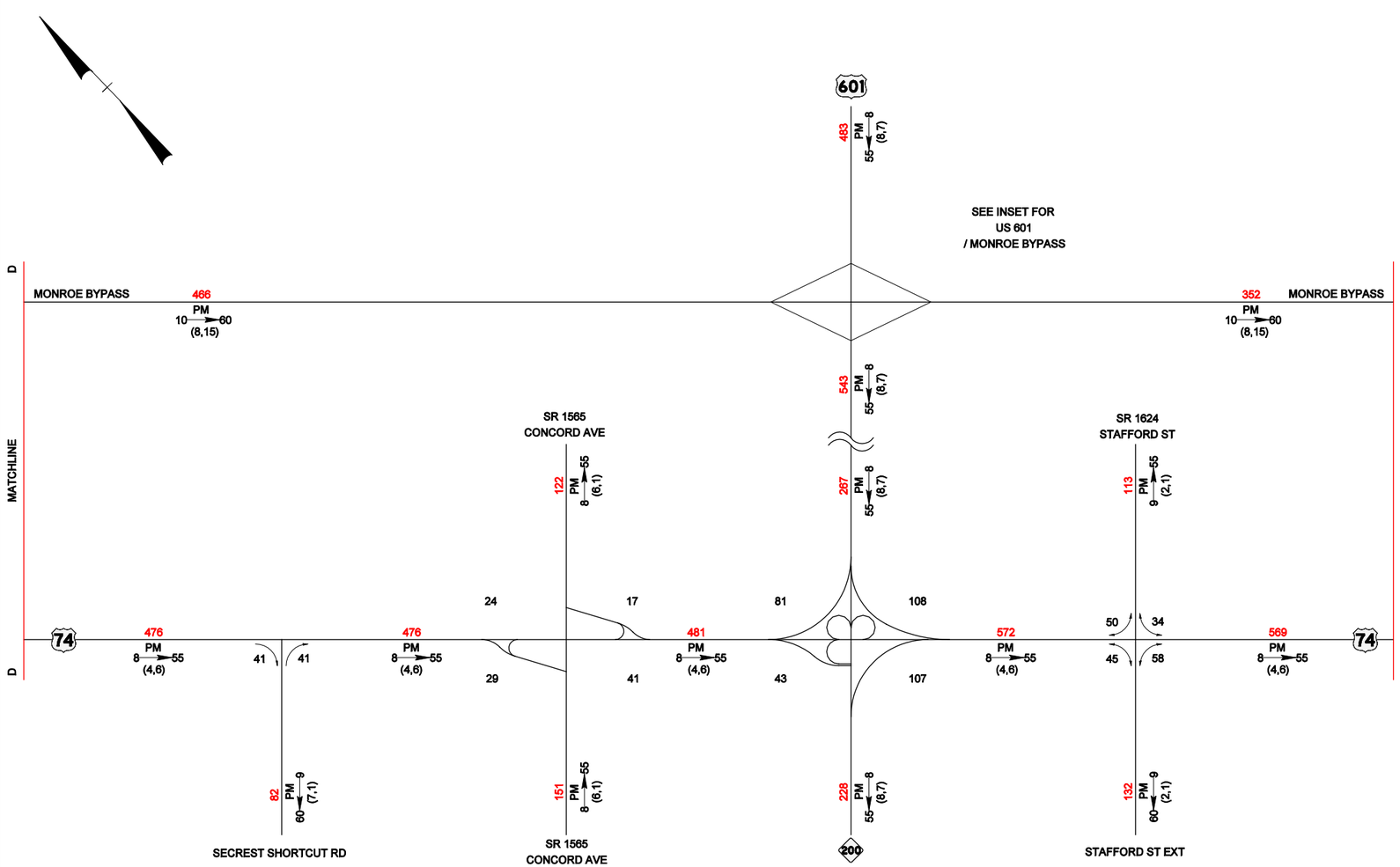
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 4
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

LEGEND

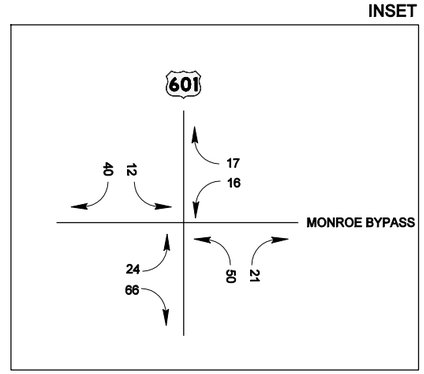
DHV $\xrightarrow[(d,\ t)]{PM}$ D

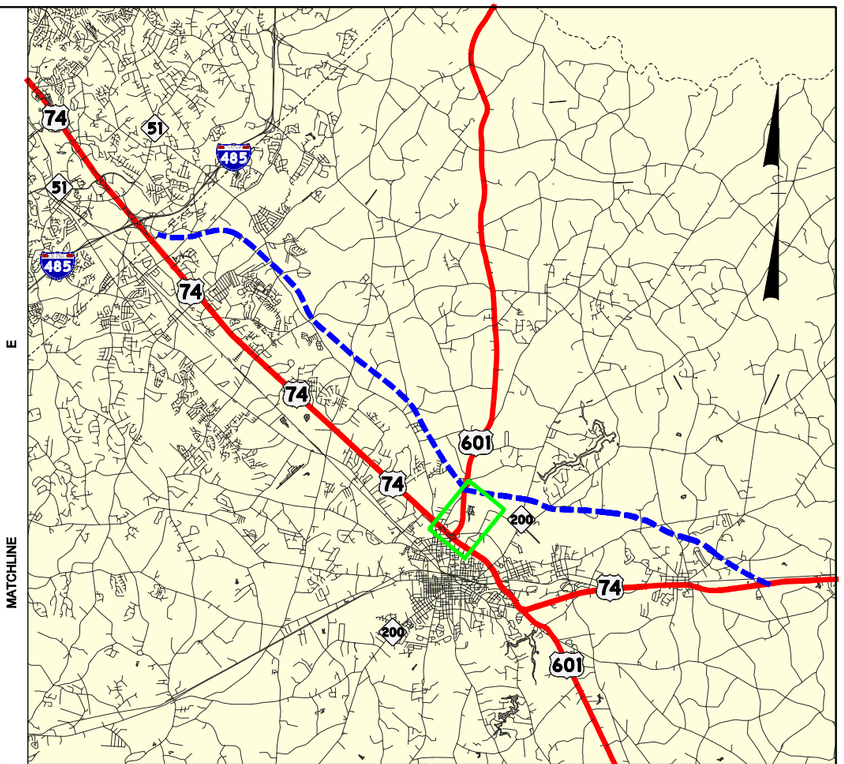
- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)



INSET





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

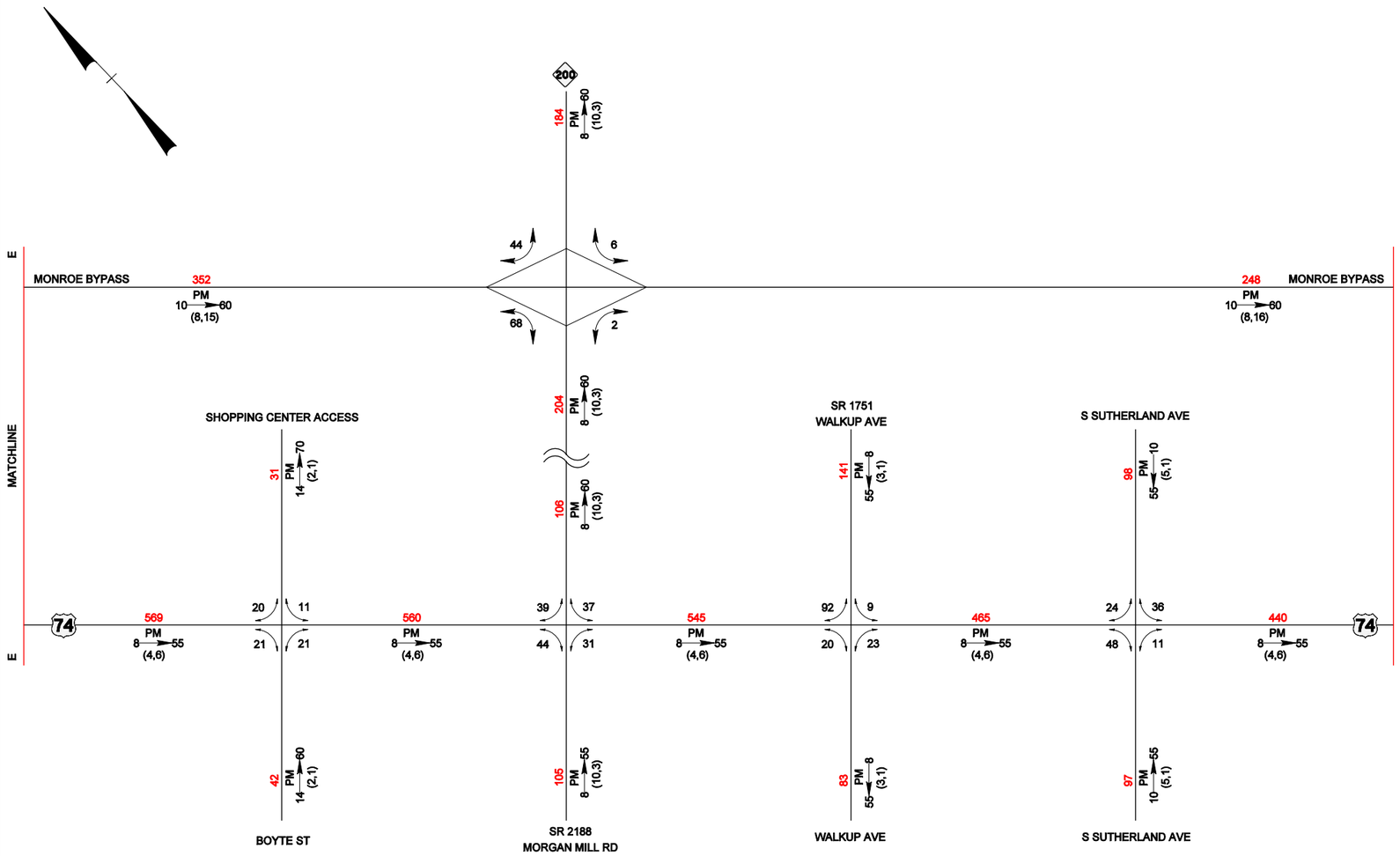
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 5
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

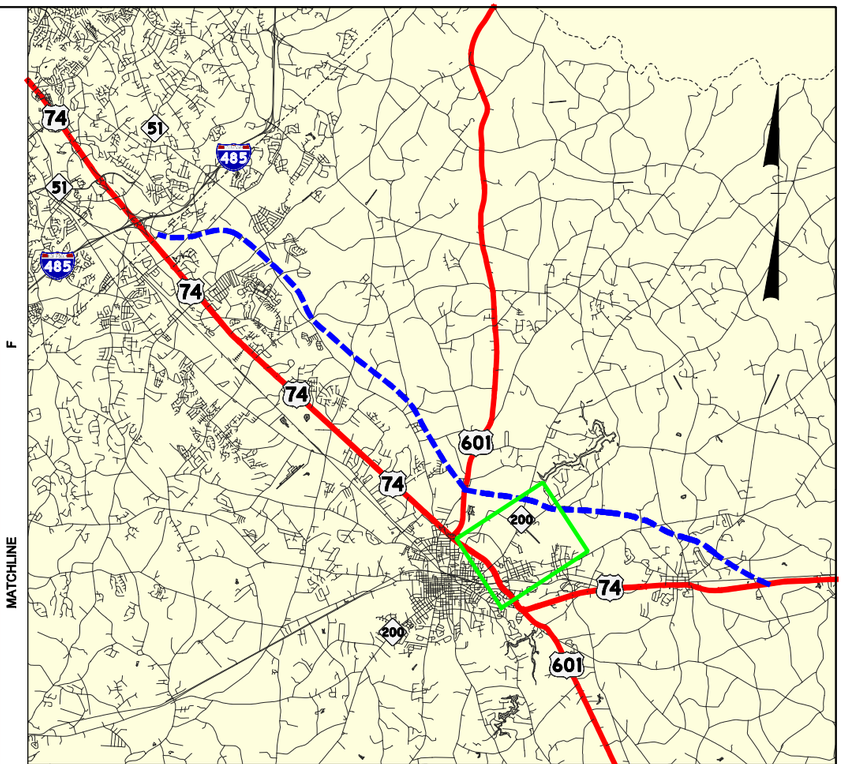
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

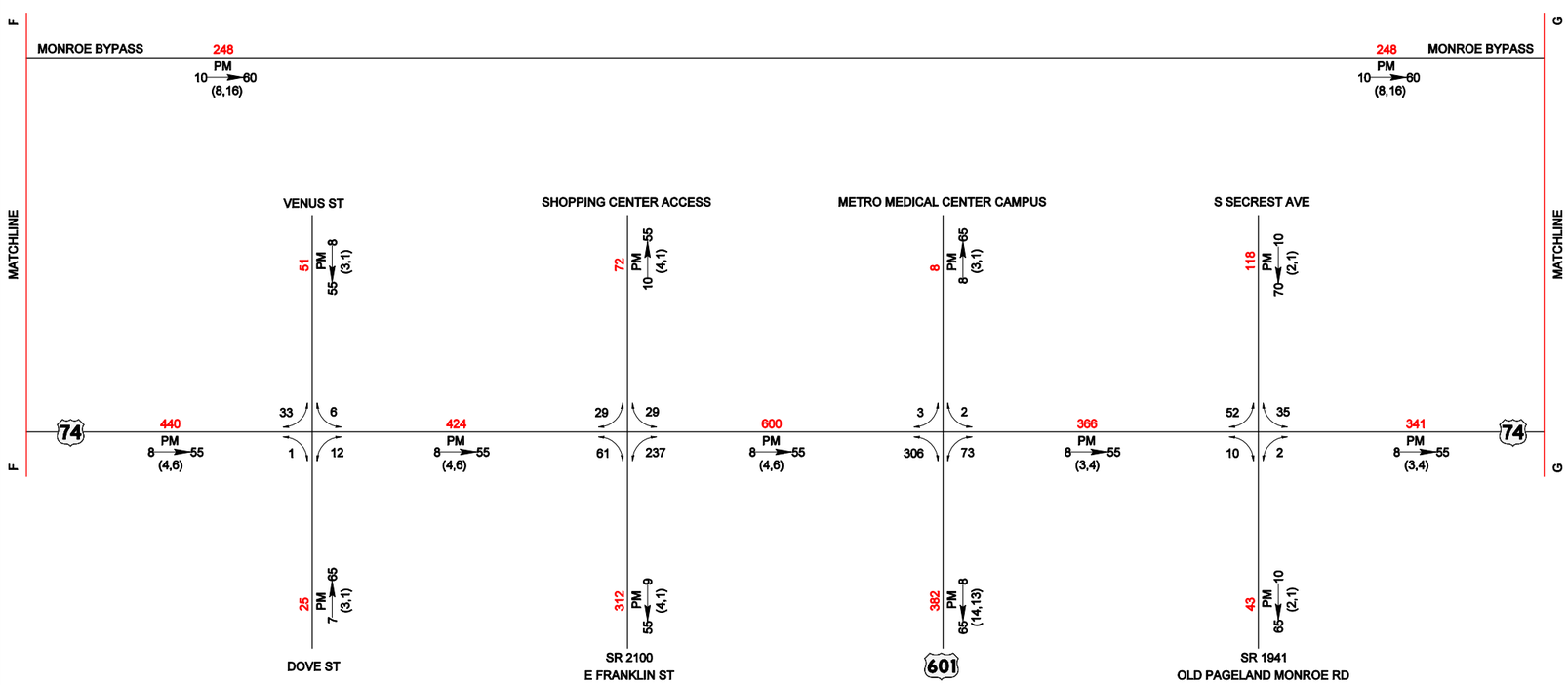
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 6
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

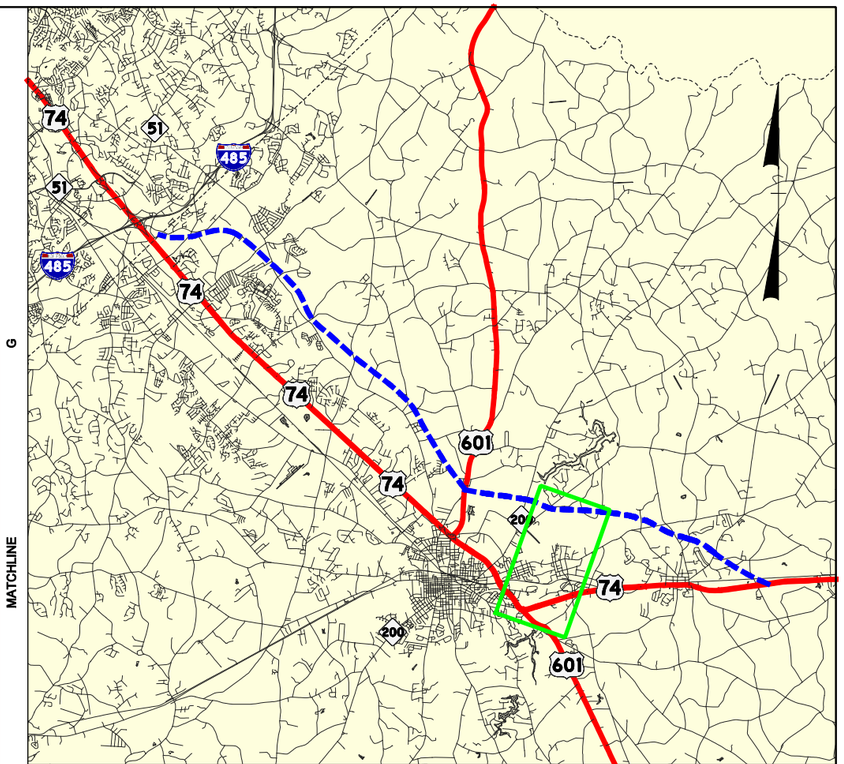
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

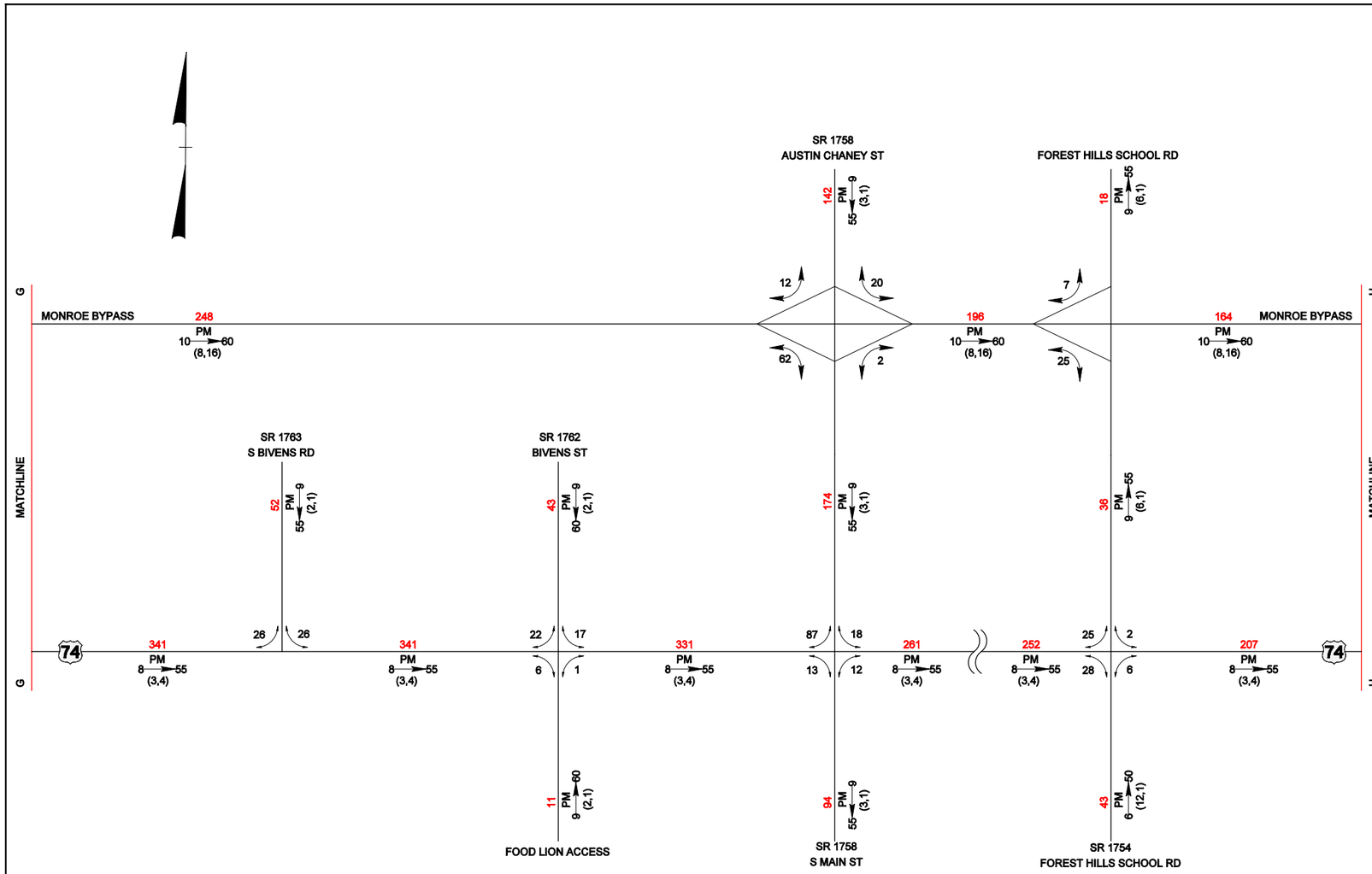
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 7
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

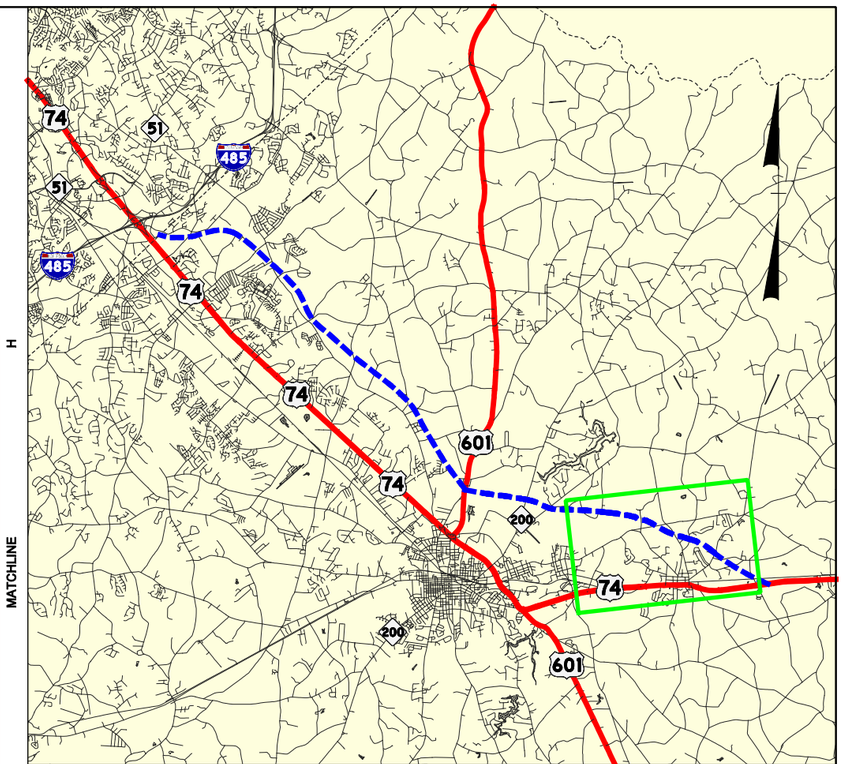
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

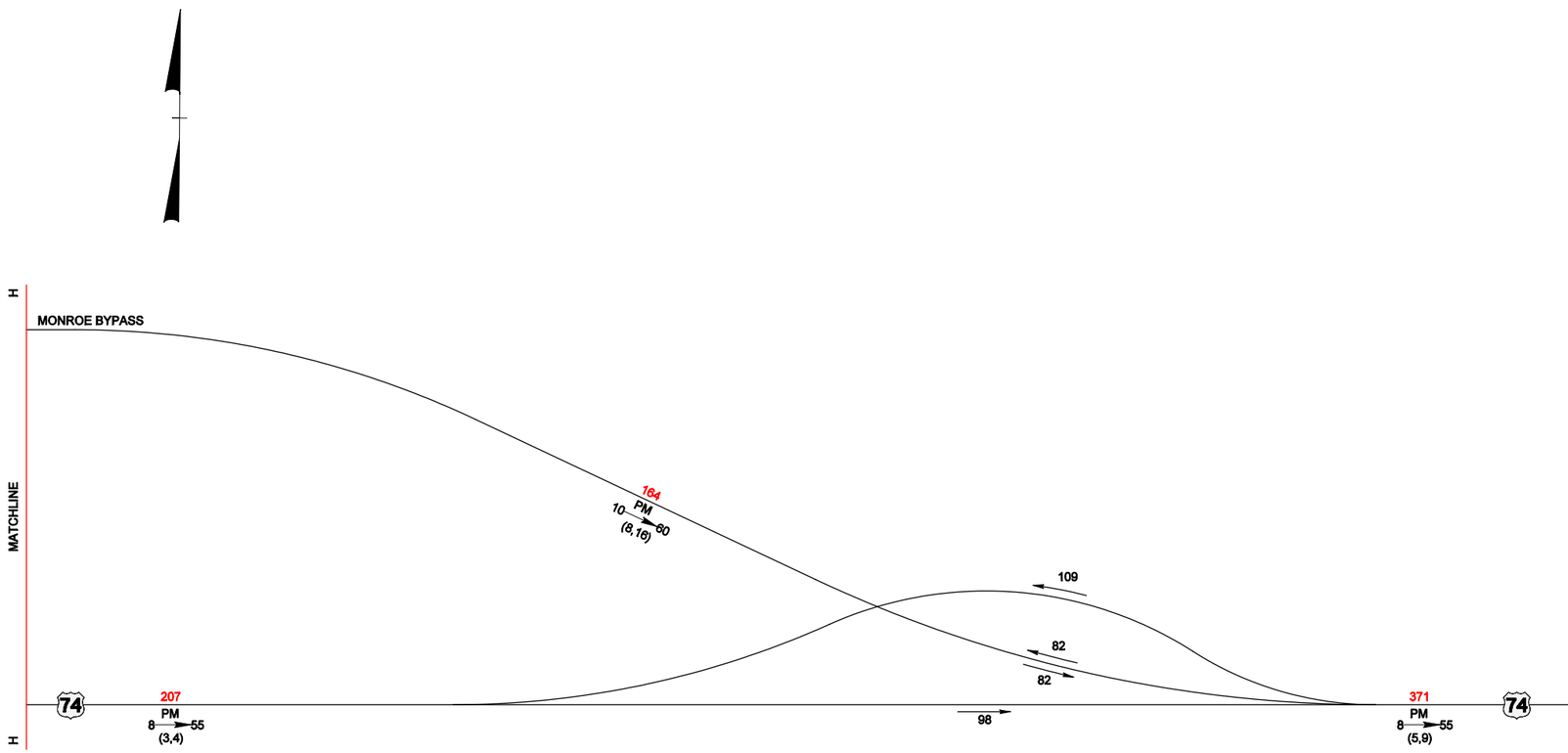
TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 8
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

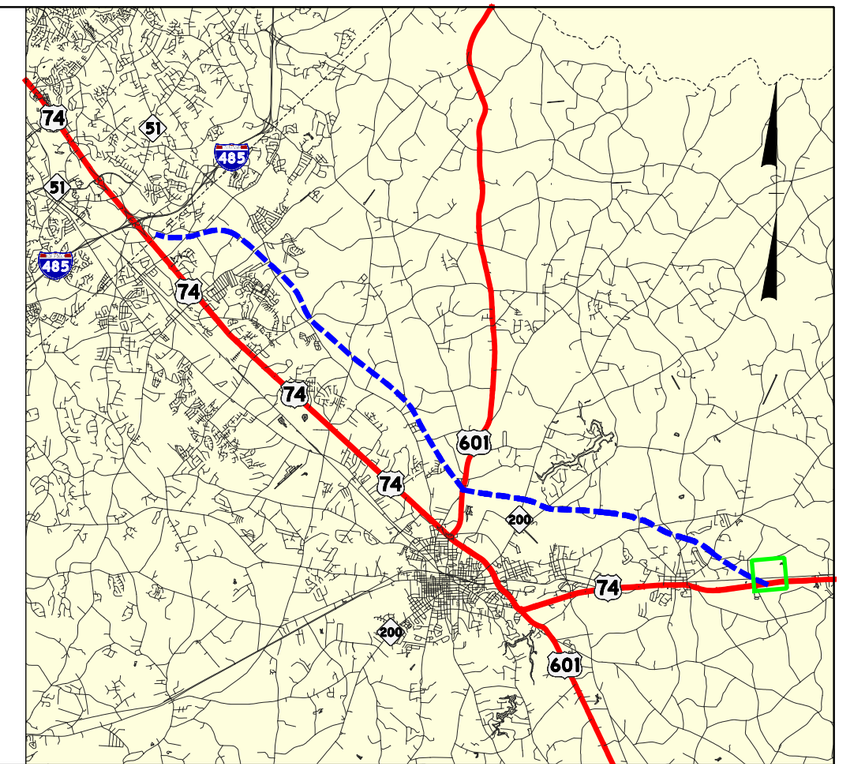
LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

- DHV Design Hourly Volume (%) = K_{30}
- PM Peak Period
- D Peak Hour Directional Split (%)
- → Indicates Direction of D
- (d, t) Duals, TTST (%)

- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- ### Turning volume (VPD)





2035 BUILD "TOLL" SCENARIO

AVERAGE ANNUAL DAILY TRAFFIC
WITH TRUCK, DHV AND DIRECTIONAL FACTORS

TIP: R-3329/R-2559	ALTERNATE: 3A	LOCATION: US 74 in Mecklenburg and Union Counties
PROJECT: Monroe Connector/Bypass		SHEET NUMBER: 9
DIVISION: 10	DATE: May 2008	PREPARED BY: Wilbur Smith Associates

LEGEND

DHV $\xrightarrow[(d,\ t)]{PM}$ D

DHV	Design Hourly Volume (%) = K_{30}
PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d, t)	Duals, TTST (%)

###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
###	Turning volume (VPD)