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TECHNICAL MEMORANDUM

To
Mark Eatman, PE
NCDOT Corridor Development Unit

From
Matthew Quesenberry, PE
HNTB North Carolina, P.C.

Cc
NCDOT Feasibility Studies Unit
NCDOT Division 9

Subject
NCDOT SPOT ID H171399: Kannapolis – Landis Railroad Grade Separation
Rowan County, NCDOT Division 9
Traffic Estimate

Date
January 7, 2022

1. PROJECT BACKGROUND

The North Carolina Department of Transportation (NCDOT) is proposing to grade separate the future Airport Road (SR 1182) / Solution Works Drive extension from the active and existing Norfolk Southern railroad, between Main Street (SR 2739) and S Chapel Street (SR 1464).

HNTB has been tasked with developing a high-level traffic estimate for Base Year No-Build 2021 and Future Year Build 2045, looking at typical Annual Average Daily Traffic (AADT) estimates for impacted intersections within the study area. The following No-Build and Build scenarios are considered in this estimate:

- 2021 Base Year No-Build – Existing conditions
- 2045 Future Year Build – Includes all future developments included in the Metrolina Regional Travel Demand Model (MRM) and the future Airport Road (SR 1182) / Solution Works Drive extension from Main Street (SR 2739) to S Chapel Street (SR 1464)

2. SOURCES OF INFORMATION AND DATA

2.1. Related Forecasts

U-6062 (Main Street roadway upgrade) is the only traffic forecast completed in the general vicinity of the H171399 estimate study area, intersecting along Main Street (SR 2739) at W 5th Street and Airport Road (SR 1182)

2.2. Model Network Review

The MRM 19v1.0 was used as a tool in the development of this traffic estimate. The MRM input files include all multi-modal improvements within the 2045 Metropolitan Transportation Plan (MTP) for the Cabarrus-Rowan Metropolitan Planning Organization (MPO). The 2045 Future Year Build (FYB) model network was modified to include the subject project (which was not included in the default setup).

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2.3. Historic AADT Data

HNTB reviewed all available NCDOT Traffic Survey Unit AADT data from 1999 to 2020 (most recent published information). Linear growth trend line estimates were developed for relevant roadway segments in the study area using the NCDOT AADT historical data. **Table 1** details available 1999 to 2020 historic AADT data for relevant roadway segments within the study area. **Table 2** displays available AADT from 2009 to 2020, 10-year and 20-year linear annual growth rates based on historic AADT linear regression lines, and 2021 AADT that is estimated based on the 10-year and 20-year historic linear annual growth rates.

2.4. Local Contacts and Developments

Local officials and engineers were contacted during development of this traffic estimate to ensure that all relevant developments, local growth patterns, and transportation projects were incorporated into this estimate. Below are the local contacts who provided feedback:

- Matt Jones, PE, NCDOT Division 9, Project Development Engineer
- Phil Conrad, Cabarrus-Rowan MPO, Transportation Planner
- Roger Castillo Santamaria, NCDOT Transportation Planning Division, Transportation Engineer
- Fredrick Haith, NCDOT Division 9, Planning Engineer
- Eric Goldston, NCDOT Division 9 District 1, Assistant District Engineer
- Ed Muire, AICP, CFM, Rowan County Planning & Development, Planning Director
- Diane Seaford, Town of Landis, Town Manager
- Rick Flowe, AICP, N-Focus Planning
- Richard Smith, City of Kannapolis, Planning Director

3. 2021 BASE YEAR NO-BUILD (BYNB) TRAFFIC ESTIMATE

The 2021 BYNB scenario is an estimate of existing study area conditions. Selected 2021 AADT was determined by using a combination of recent historical AADT, historical trend line estimates, extrapolating historical AADT volumes to 2021 using 10-year historic growth rates (2009 – 2020) and 20-year historic growth rates (1999 – 2020), previous traffic forecasts completed, StreetLight Data ,and engineering judgement. StreetLight harnesses smartphones as sensors to measure vehicle trips on roadways, including intersection turning movements.

Table 3 provides the estimated AADT from the U-6062 forecast, StreetLight Data, projected 2021 AADT based on historical AADT, and the 2021 BYNB Selected AADT.

4. 2045 FUTURE YEAR BUILD (FYB) TRAFFIC ESTIMATE

The 2045 FYB estimate is the projection of the most likely future traffic volumes in the year 2045 with all fiscally-constrained projects in the Cabarrus-Rowan MPO 2045 MTP assumed to be complete. Additionally, the FYB scenario assumes that the Airport Road (SR 1182) / Solution Works Drive extension has been constructed from Main Street (SR 2739) to S Chapel Street (SR 1464) and that the Norfolk Southern railroad is grade separated. It also assumes that the Baker's Creek and Irish Creek residential developments will be fully built out and will increase trips through the study area.

Table 4 provides the model traffic volumes and growth rates, applied growth rates, and the estimated 2045 FYB Selected AADT.

5. Design Factors

Appropriate design characteristics (DHV, D, and heavy truck percentages) were determined for the traffic estimate study area by reviewing NCDOT historical AADT count station data and StreetLight data. The 2021 BYNB design data information is shown in **Table 5** (PM peak hour and daily heavy truck percentages) and **Table 6** (AM peak hour). **Table 7** shows any FYB design characteristics that deviate from the BYNB.

Peak Hour Directional Split (D) factors for the BYNB traffic estimate were determined by comparing AM and PM peak hour approach/departure volumes to daily approach departure volumes for a roadway segment or corridor. The estimate attempted to provide consistent D factors along corridor segments uninterrupted by major Y-line roadways. The D factors were rounded to the nearest 2.5% increment.

Design Peak Hour Factors (K) were determined by comparing approach and departure highest AM and PM peak hour traffic volumes for a segment to the estimated AADT to approximate K_{30}. The estimate attempted to provide consistent K-factors along corridor segments uninterrupted by major Y-line roadways. The K factors were rounded to the nearest 0.5% increment.

Truck Percentage (Duals/TTST) estimates were determined by examining 13-hour intersection turning movement counts and the NCDOT Traffic Survey Group's 2019 AADT heavy truck percentages. The estimate attempted to provide consistent truck percentages along all major corridors as appropriate.

Table 1 – Historic AADT Traffic Volumes

Roadway	2020 [1]	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
SR 1182 (Airport Rd) from W A St / W 5th St to SR 2739 (Main St)	-	-	-	-	280	-	330	-	310	-	320	-	390	-	370	-	410	-	480	-	500	460
W A St South of SR 1182 (Airport Rd)	-	-	2,000	-	2,100	-	1,900	-	1,800	-	2,200	-	2,300	-	2,300	-	2,500	-	2,800	-	3,100	3,100
W 5th St from SR 1182 (Airport Rd) to SR 2739 (S Main St)	-	-	1,800	-	1,900	-	1,800	-	1,600	-	2,000	-	2,000	-	2,000	-	2,300	-	2,500	-	2,800	2,800
SR 2739 (S Main St) North of W 5th St	6,500	-	7,300	-	7,800	-	7,600	-	7,300	-	7,800	-	8,200	-	8,000	-	8,700	-	8,900	-	9,000	9,400
SR 2739 (S Main St) from W 5th St to SR 1182 (Airport Rd)	-	-	6,500	-	7,000	-	6,800	-	6,700	-	7,100	-	7,300	-	7,000	-	7,600	-	7,200	-	7,900	8,000
SR 2739 (S Main St) South of SR 1182 (Airport Rd)	-	-	6,200	-	7,000	-	7,100	-	7,100	-	7,500	-	7,600	-	7,200	-	7,300	-	8,000	-	7,900	8,300
SR 1464 (S Chapel St) North of Solution Works Dr	-	-	3,400	-	3,800	-	3,100	-	3,000	-	3,000	-	3,000	-	3,200	-	3,700	-	4,900	-	4,800	4,600
SR 1464 (S Chapel St) from Solution Works Dr to US 29 (N Cannon Blvd) [2]	-	-	3,800	-	4,400	-	*4,700*	-	4,200	-	4,300	-	4,200	-	4,500	-	4,400	-	4,600	-	*6,300*	4,500
US 29 (N Cannon Blvd) North of Solution Works Dr	-	-	20,000	-	15,000	-	12,000	-	11,000	-	12,000	-	11,000	-	11,000	-	11,000	-	13,000	-	13,000	12,000
US 29 (N Cannon Blvd) from Solution Works Dr to SR 1464 (S Chapel St) / E 28th St	-	-	20,000	-	14,000	-	12,000	-	11,000	-	11,000	-	11,000	-	11,000	-	11,000	-	13,000	-	13,000	14,000
US 29 (N Cannon Blvd) South of SR 1464 (S Chapel St) / E 28th St	-	-	25,000	-	20,000	-	17,000	-	15,000	-	16,000	-	16,000	-	16,000	-	15,000	-	18,000	-	19,000	17,000

Source of Historic AADT Traffic Volumes: NCDOT Traffic Survey Unit

[1] 2020 AADTs are displayed in the table, but were not used when calculating growth rates, due to data only being collected at one station location and the reduction in annual trips because of the COVID-19 pandemic.

[2] *Blue and italicized* historic AADT values are outliers that were removed for the purposes of calculating historic AADT linear regression lines in **Table 2**. Outliers were determined by first identifying statistical outliers (traffic volumes that are outside of two standard deviations of a historic AADT station's linear regression line) and then determining if the statistical outlier (or other unusual volumes identified) should be removed as a final outlier based on a qualitative review of AADT data collected for other years and an assessment of any recent developments that could have influenced traffic volumes.

Table 2 – Historic AADT Traffic Volumes and Growth Rates

Roadway	NCDOT Historic Traffic Count Data					Annual Growth Rate		2021 10-Year AADT Estimate [2]	2021 20-Year AADT Estimate [2]
	2010	2012	2014	2016	2018	10-Year [1]	20-Year [1]		
SR 1182 (Airport Rd) from W A St / W 5th St to SR 2739 (Main St)	320	310	330	280	-	- 3.19%	- 3.25%	200	200
W A St South of SR 1182 (Airport Rd)	2,200	1,800	1,900	2,100	2,000	- 1.18%	- 2.72%	1,900	1,600
W 5th St from SR 1182 (Airport Rd) to SR 2739 (S Main St)	2,000	1,600	1,800	1,900	1,800	- 0.85%	- 2.67%	1,700	1,400
SR 2739 (S Main St) North of W 5th St	7,800	7,300	7,600	7,800	7,300	- 0.78%	- 1.26%	7,200	6,900
SR 2739 (S Main St) from W 5th St to SR 1182 (Airport Rd)	7,100	6,700	6,800	7,000	6,500	- 0.87%	- 0.90%	6,400	6,400
SR 2739 (S Main St) South of SR 1182 (Airport Rd)	7,500	7,100	7,100	7,000	6,200	- 1.70%	- 1.06%	6,100	6,400
SR 1464 (S Chapel St) North of Solution Works Dr	3,000	3,000	3,100	3,800	3,400	2.03%	- 2.16%	3,700	2,300
SR 1464 (S Chapel St) from Solution Works Dr to US 29 (N Cannon Blvd) [3]	4,300	4,200	*4,700*	4,400	3,800	- 0.60%	- 0.65%	4,000	4,000
US 29 (N Cannon Blvd) North of Solution Works Dr	12,000	11,000	12,000	15,000	20,000	6.18%	1.71%	19,800	15,600
US 29 (N Cannon Blvd) from Solution Works Dr to SR 1464 (S Chapel St) / E 28th St	11,000	11,000	12,000	14,000	20,000	6.35%	1.18%	19,500	14,800
US 29 (N Cannon Blvd) South of SR 1464 (S Chapel St) / E 28th St	16,000	15,000	17,000	20,000	25,000	4.84%	1.10%	24,900	20,100

Historic AADT Source: NCDOT Traffic Survey Unit

[1] 10- and 20-year annual growth rates derived from linear regression projections of all available historic AADT from 2008 – 2018 and 1999 – 2018, respectively.

[2] AADT estimates are projected using historic AADT linear regression lines. Values are rounded to the nearest 100.

[3] Outliers displayed in **Table 1** are removed to calculate annual growth rates.

Table 3 – 2021 BYNB Selected AADT

Roadway	U-6062 (2019) [1]	NCDOT Historic AADT					2021 10-Year (2008 – 2018) AADT Estimate [2]	2021 20-Year (1999 – 2018) AADT Estimate [2]	StreetLight	2021 BYNB Selected AADT
		2010	2012	2014	2016	2018				
Irish Creek Dr – West of W 5th St / W A St	-	-	-	-	-	-	-	-	100	**100**
Airport Rd (SR 1182) – W 5th St / W A St to S / N Main St (SR 2739)	800	320	310	330	280	-	200	200	400 – 500	**800**
Solution Works Dr – S Chapel St (SR 1464) to US 29 (N Cannon Blvd)	-	-	-	-	-	-	-	-	800 – 900	**900**
W A St – South of Irish Creek Dr / Airport Rd (SR 1182)	-	2,200	1,800	1,900	2,100	2,000	1,900	1,600	3,300	**2,200**
W 5th St – Irish Creek Dr / Airport Rd (SR 1182) to S Main St (SR 2739)	1,500	2,000	1,600	1,800	1,900	1,800	1,700	1,400	1,800 – 3,000	**1,500**
S Main St (SR 2739) – North of W 5th St	8,200	7,800	7,300	7,600	7,800	7,300	7,200	6,900	9,500	**8,200**
S Main St (SR 2739) – W 5th St to Airport Rd (SR 1182)	7,300	7,100	6,700	6,800	7,000	6,500	6,400	6,400	8,000 – 8,400	**7,300**
N Main St (SR 2739) – South of Airport Rd (SR 1182)	7,500	7,500	7,100	7,100	7,000	6,200	6,100	6,400	8,300	**7,500**
S Chapel St (SR 1464) – North of Solution Works Dr	-	3,000	3,000	3,100	3,800	3,400	3,700	2,700	4,600	**3,700**
S Chapel St (SR 1464) – Solution Works Dr to US 29 (N Cannon Blvd)	-	4,300	4,200	*4,700*	4,400	3,800	4,000	4,000	4,000 – 4,200	**4,200**
E 28th St (SR 1327) – East of US 29 (N Cannon Blvd)	-	-	-	-	-	-	-	-	1,300	**1,300**
US 29 (N Cannon Blvd) – North of Solution Works Dr	-	12,000	11,000	12,000	15,000	20,000	19,800	15,600	17,300	**18,400**
US 29 (N Cannon Blvd) – Solution Works Dr to S Chapel St (SR 1464) / E 28th St (SR 1327)	-	11,000	11,000	12,000	14,000	20,000	19,500	14,800	16,700 – 17,000	**17,900**
US 29 (N Cannon Blvd) – South of S Chapel St (SR 1464) / E 28th St (SR 1327)	-	16,000	15,000	17,000	20,000	25,000	24,900	20,100	20,700	**21,600**

[1] **Previous Forecast Source:** U-6062 2019 No-Build AADT (HNTB, 2019)

[2] AADT estimates are projected using historic AADT linear regression lines (volumes rounded to the nearest 100).

Table 4 – 2045 FYB Selected AADT

Roadway	U-6062 (2045) [1]	Model Daily Traffic Volumes			Applied Growth Rate	2021 BYNB Selected AADT	2045 FYB Selected AADT
		2021 BYNB	2045 FYB	Model Growth Rate			
Irish Creek Dr – West of W 5th St / W A St [2]	-	-	-	-	**11.6%**	100	**1,400**
Airport Rd (SR 1182) – W 5th St / W A St to S / N Main St (SR 2739)	900	5	518	16.49%	**7.2%**	800	**4,200**
		1,049	2,252	2.58%			
New Airport to Solution Works Extension [3]	-	-	2,160	-	**-**	-	**2,900**
Solution Works Dr – S Chapel St (SR 1464) to US 29 (N Cannon Blvd)	-	-	3,518	-	**6.1%**	900	**3,700**
W A St – South of Irish Creek Dr / Airport Rd (SR 1182) [2]	-	702	1,452	2.45%	**4.4%**	2,200	**6,200**
W 5th St – Irish Creek Dr / Airport Rd (SR 1182) to S Main St (SR 2739) [2]	1,700	697	934	0.98%	**1.2%**	1,500	**2,000**
		1,474	1,790	0.65%			
S Main St (SR 2739) – North of W 5th St [4]	9,800	8,221	8,939	0.28%	**0.5%**	8,200	**9,300**
S Main St (SR 2739) – W 5th St to Airport Rd (SR 1182) [4]	8,700	7,574	8,592	0.42%	**0.6%**	7,300	**8,500**
N Main St (SR 2739) – South of Airport Rd (SR 1182) [4]	9,000	6,683	7,620	0.44%	**0.6%**	7,500	**8,600**
S Chapel St (SR 1464) – North of Solution Works Dr	-	1,602	1,588	- 0.03%	**1.1%**	3,700	**4,800**
			2,694	1.75%			
S Chapel St (SR 1464) – Solution Works Dr to US 29 (N Cannon Blvd) [5]	-	3,775	2,612	- 1.22%	**- 1.4%**	4,200	**3,000**
E 28th St (SR 1327) – East of US 29 (N Cannon Blvd)	-	950	894	- 0.20%	**- 0.3%**	1,300	**1,200**
US 29 (N Cannon Blvd) – North of Solution Works Dr [4]	-	14,545	15,652	0.24%	**0.6%**	18,400	**21,000**
US 29 (N Cannon Blvd) – Solution Works Dr to S Chapel St (SR 1464) / E 28th St (SR 1327) [4]	-		12,937	- 0.39%	**0.0%**	17,900	**17,700**
US 29 (N Cannon Blvd) – South of S Chapel St (SR 1464) / E 28th St (SR 1327) [4]	-	15,414	14,655	- 0.17%	**0.0%**	21,600	**21,500**

[1] **Previous Forecast Source:** U-6062 2045 No-Build / Build AADT (HNTB, 2019)

[2] Increased growth by using the Irish Creek residential development TIA

[3] New location AADT determined by using the model daily traffic volume and adjusting based on a proportional adjustment relative to adjacent roadway facilities and the traffic flow patterns and balancing of nearby intersections.

[4] Increased growth rate factors in the Baker's Creek residential Development TIA

[5] Negative growth rate on S Chapel St (SR 1464) takes into account in trip diversions to the new roadway facility.

Table 5 – 2021 BYNB PM Peak Design Factors and Daily Heavy Truck Percentages

Roadway	D – Directional Distribution % (PM Peak) [1]			K – PM Peak Hour Factor % [1]			Daily Heavy Truck % (Dual, TTST) [1]				
	U-6062 (2019)	StreetLight	Selected 2021 Value	U-6062 (2019)	StreetLight	Selected 2021 Value	U-6062 (2019)	2019 AADT Shape File [2]	StreetLight	MRM MTK,HTK	Selected 2021 Value
Irish Creek Dr – West of W 5th St / W A St	-	60 WB	**60 WB**	-	20.3	**9.0**	-	-	-	-	**4,1**
Airport Rd (SR 1182) – W 5th St / W A St to S / N Main St (SR 2739)	60 WB	53 WB – 64 WB	**60 WB**	9.0	9.4 – 9.8	**9.0**	4,1	-	-	2,1	**4,1**
Solution Works Dr – S Chapel St (SR 1464) to US 29 (N Cannon Blvd)	-	60 EB – 55 EB	**57.5 EB**	-	12.2 – 11.4	**9.0**	-	-	-	4,2	**4,1**
W A St – South of Irish Creek Dr / Airport Rd (SR 1182)	-	58 SB	**57.5 SB**	-	9.3	**9.0**	-	-	-	4,1	**4,1**
W 5th St – Irish Creek Dr / Airport Rd (SR 1182) to S Main St (SR 2739)	65 EB	59 WB – 51 EB	**55 WB**	9.0	9.9 – 11.4	**9.0**	2,1	-	-	4,1	**2,1**
S Main St (SR 2739) – North of W 5th St	55 NB	53 NB	**55 NB**	9.0	9.9	**9.0**	3,1	-	-	3,1	**3,1**
S Main St (SR 2739) – W 5th St to Airport Rd (SR 1182)	55 NB	53 NB	**55 NB**	9.0	9.9 – 10.0	**9.0**	3,1	-	-	4,2	**3,1**
N Main St (SR 2739) – South of Airport Rd (SR 1182)	55 NB	54 NB	**55 NB**	9.0	10.1	**9.0**	4,1	-	-	4,2	**4,1**
S Chapel St (SR 1464) – North of Solution Works Dr	-	53 NB	**55 NB**	-	10.0	**9.0**	-	-	-	4,3	**4,2**
S Chapel St (SR 1464) – Solution Works Dr to US 29 (N Cannon Blvd)	-	57 NB – 60 NB	**55 NB**	-	9.6 – 10.1	**9.0**	-	-	-	4,2	**4,2**
E 28th St (SR 1327) – East of US 29 (N Cannon Blvd)	-	62 EB	**60 EB**	-	7.8	**8.0**	-	-	-	6,3	**6,3**
US 29 (N Cannon Blvd) – North of Solution Works Dr	-	55 NB	**55 NB**	-	9.9	**9.0**	-	3,1	-	3,1	**4,2**
US 29 (N Cannon Blvd) – Solution Works Dr to S Chapel St (SR 1464) / E 28th St (SR 1327)	-	55 NB – 53 NB	**55 NB**	-	9.9 – 10.0	**9.0**	-		-	4,2	**4,2**
US 29 (N Cannon Blvd) – South of S Chapel St (SR 1464) / E 28th St (SR 1327)	-	55 NB	**55 NB**	-	10.1	**9.0**	-	3,1	-	4,2	**4,2**

[1] Multiple design factors or heavy truck percentage values displayed for a roadway segment are the result of neighboring intersection turning movement counts that provide two different design factor values.

[2] 2019 Traffic Data Segment Shapefile provided by the NCDOT Traffic Survey Group

Table 6 – 2021 BYNB AM Peak Design Factors

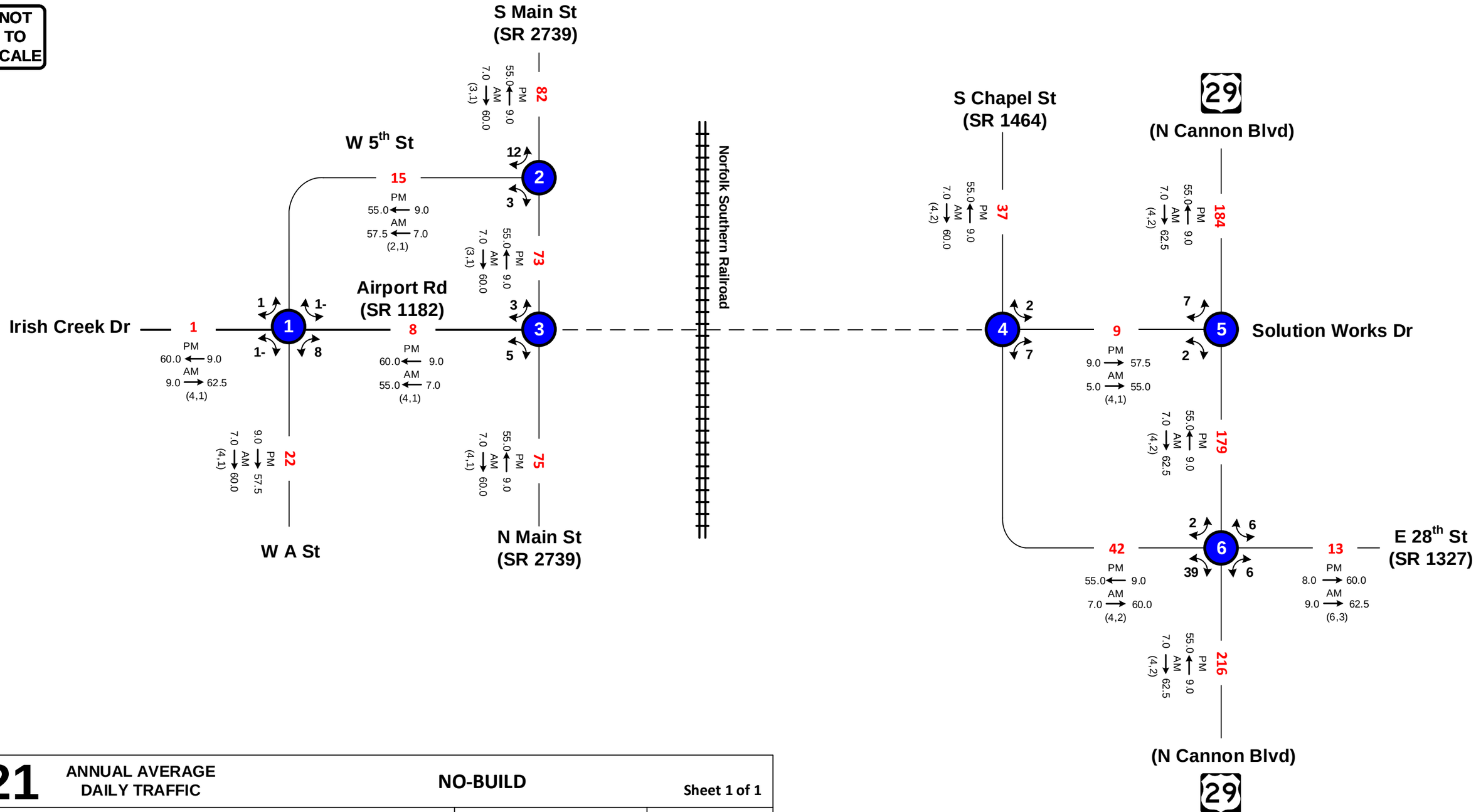
Roadway	D – Directional Distribution % (AM Peak) [1]			K – AM Peak Hour Factor % [1]		
	U-6062 (2019)	StreetLight	Selected 2021 Value	U-6062 (2019)	StreetLight	Selected 2021 Value
Irish Creek Dr – West of W 5th St / W A St	-	100 EB	**62.5 EB**	-	10.8	**9.0**
Airport Rd (SR 1182) – W 5th St / W A St to S / N Main St (SR 2739)	60 EB	73 WB – 65 EB	**55 WB**	7.0	6.1 – 4.1	**7.0**
Solution Works Dr – S Chapel St (SR 1464) to US 29 (N Cannon Blvd)	-	81 EB – 54 WB	**55 EB**	-	3.8 – 3.0	**5.0**
W A St – South of Irish Creek Dr / Airport Rd (SR 1182)	-	63 SB	**60 SB**	-	9.5	**7.0**
W 5th St – Irish Creek Dr / Airport Rd (SR 1182) to S Main St (SR 2739)	55 EB	60 WB – 54 EB	**57.5 WB**	7.0	10.0 – 8.9	**7.0**
S Main St (SR 2739) – North N of W 5th St	60 SB	68 SB	**60 SB**	7.0	7.5	**7.0**
S Main St (SR 2739) – W 5th St to Airport Rd (SR 1182)	60 SB	74 SB – 73 SB	**60 SB**	7.0	6.9 – 6.8	**7.0**
N Main St (SR 2739) – South of Airport Rd (SR 1182)	60 SB	74 SB	**60 SB**	7.0	6.8	**7.0**
S Chapel St (SR 1464) – North of Solution Works Dr	-	63 SB	**60 SB**	-	6.0	**7.0**
S Chapel St (SR 1464) – Solution Works Dr to US 29 (N Cannon Blvd)	-	60 SB	**60 SB**	-	6.6 – 5.8	**7.0**
E 28th St (SR 1327) – East of US 29 (N Cannon Blvd)	-	92 WB	**62.5 WB**	-	9.9	**9.0**
US 29 (N Cannon Blvd) – North of Solution Works Dr	-	63 SB	**62.5 SB**	-	6.2	**7.0**
US 29 (N Cannon Blvd) – Solution Works Dr to S Chapel St (SR 1464) / E 28th St (SR 1327)	-	64 SB – 63 SB	**62.5 SB**	-	6.3 – 6.5	**7.0**
US 29 (N Cannon Blvd) – South of S Chapel St (SR 1464) / E 28th St (SR 1327)	-	68 SB	**62.5 SB**	-	6.0	**7.0**

[1] Multiple design factors or heavy truck percentage values displayed for a roadway segment are the result of neighboring intersection turning movement counts that provide two different design factor values.

Table 7 – 2045 FYB Peak Design Factors and Heavy Vehicle Percentages, Locations with Changes from BYNB

Roadway	D - Directional Distribution % (PM Peak Hour)		K - Peak Hour Factor % (PM Peak Hour)		D - Directional Distribution % (AM Peak Hour)		K - Peak Hour Factor % (AM Peak Hour)		Heavy Vehicle % (Dual, TTST)	
	Selected 2045 BYNB Value	Selected 2045 FYB Value	Selected 2045 BYNB Value	Selected 2045 FYB Value	Selected 2045 BYNB Value	Selected 2045 FYB Value	Selected 2045 BYNB Value	Selected 2045 FYB Value	Selected 2045 BYNB Value	Selected 2045 FYB Value
Solution Works Dr – S Chapel St (SR 1464) to US 29 (N Cannon Blvd)	57.5 EB	**57.5 WB**	9.0	**9.0**	55 EB	**55 EB**	5.0	**5.0**	4,1	**4,1**
New Airport to Solution Works Extension	-	**60 WB**	-	**9.0**	-	**55 WB**	-	**7.0**	-	**4,1**

NOT TO SCALE



2021 ANNUAL AVERAGE DAILY TRAFFIC

NO-BUILD

Sheet 1 of 1

LEGEND

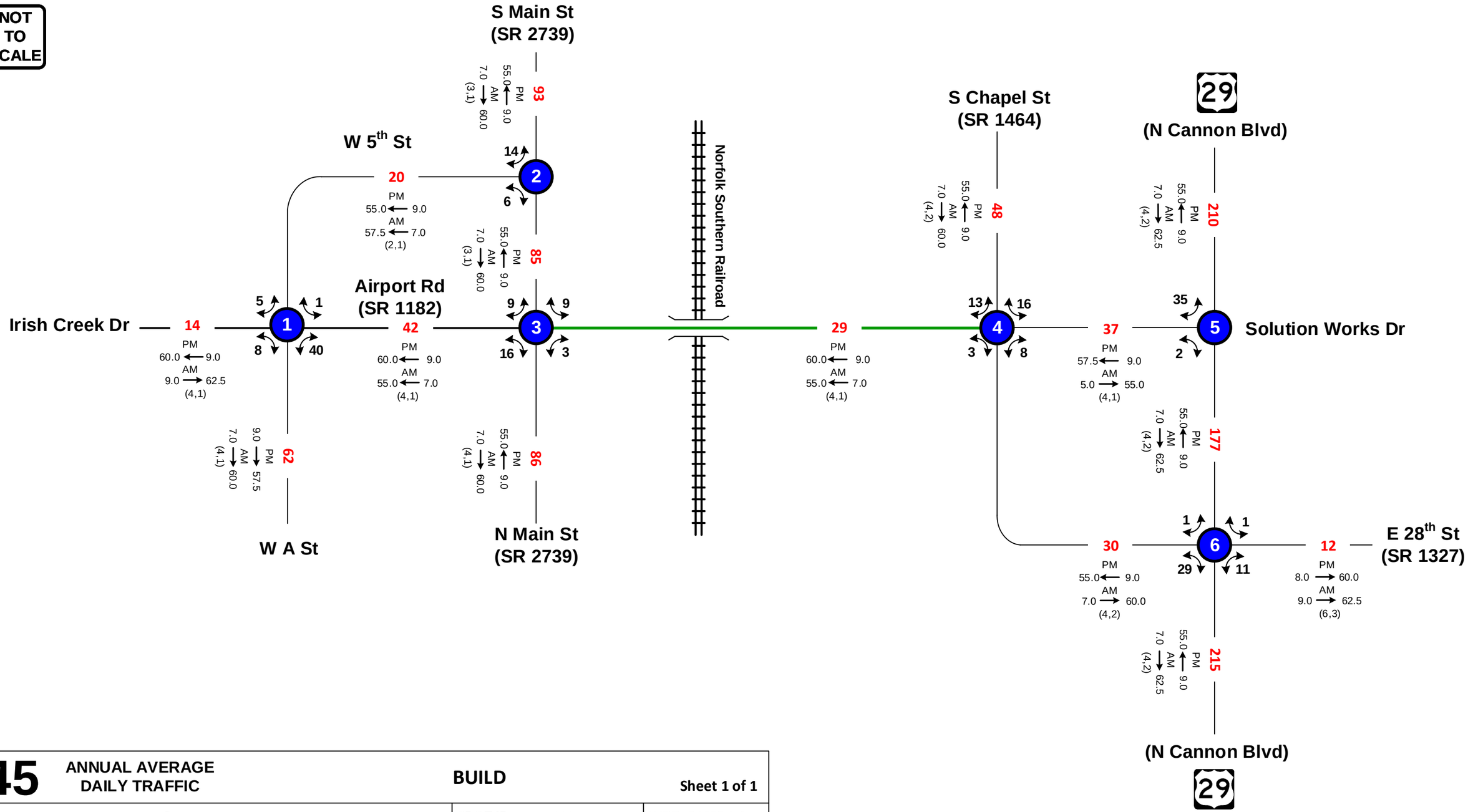
#	Study Area Intersection ID
###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
— — —	Future Roadway

K PM → D
D ← AM K
(d,t)

K	Design Hour Factor (%)
PM	PM Peak Hour
AM	AM Peak Hour
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d,t)	Duals, TT-STs (%)

SPOT ID: H171399	**WBS:** 34263.1.1
COUNTY: Rowan	**DIVISION: 9**
PREPARED BY: HNTB North Carolina, PC	
PROJECT: Kannapolis-Landis RR Grade Separation Traffic Estimate	
DATE: January 2022	

NOT TO SCALE



2045 ANNUAL AVERAGE DAILY TRAFFIC

BUILD

LEGEND

- **#** — Study Area Intersection ID
- **###** — No. of Vehicles Per Day (VPD) in 100s
- **1-** — Less than 50 VPD
- New Roadway

K PM → D
D ← AM K
(d,t)

- **K** — Design Hour Factor (%)
- **PM** — PM Peak Hour
- **AM** — AM Peak Hour
- **D** — Peak Hour Directional Split (%)
- → — Indicates Direction of D
- **(d,t)** — Duals, TT-STs (%)

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