

Appendix C

Traffic Forecast Development Notes

Step 1 – Convert Approach Volumes to 2010 Base Year

Intersections 1 and 2 - West approach volumes on Hillandale-Hillsborough Connector at Intersection 1 were adjusted to match north approach volumes on Hillandale-Hillsborough Connector at Intersection 2.

Intersections 2 and 3 - East approach volumes on Hillsborough Road at Intersection 2 were adjusted to match west approach volumes on Hillsborough Road at Intersection 3.

Intersections 6 and 7 - South approach volumes on Swift Avenue at Intersection 6 were adjusted to match north approach volumes on Swift Avenue at Intersection 7.

Intersections 13 and 14 - North approach volumes on Corcoran Street at Intersection 14 were adjusted to match south approach volumes on Corcoran Street at Intersection 13.

Intersections 14 and 15 - North approach volumes on Corcoran Street at Intersection 15 were adjusted to match south approach volumes on Corcoran Street at Intersection 14.

Intersections 15 and 16 - East approach volumes on West Pettigrew Street at Intersection 15 and west approach volumes on West Pettigrew Street at Intersection 16 were adjusted to match each other.

Intersections 24 and 25 - South approach volumes on Driver Street at Intersection 24 were adjusted to match north approach volumes on Driver Street at Intersection 25.

Intersections 30 and 31 - West approach volumes on McCrimmon Parkway at Intersection 30 were adjusted to match east approach volumes on McCrimmon Parkway at Intersection 31.

Intersections 34 and 35 - The east approach volumes for the PM peak for the intersection of Chatham Street at Harrison Avenue (Intersection 34) were adjusted to match volumes at the west approach of the intersection of Chatham Street at Academy Street (Intersection 35). As a result, the remaining approaches at Intersection 31 were adjusted so the turning movement volumes could converge when using the TURNSW32 program.

Intersections 38 and 39 - East approach volumes on Chapel Hill Street at Intersection 38 were adjusted to match west approach volumes on Chapel Hill Street at Intersection 39.

Intersections 39 and 40 - East approach volumes on Chapel Hill Street at Intersection 39 were adjusted to match west approach volumes on Chapel Hill Street at Intersection 40.

Intersections 40 and 41 - East approach volumes on Chapel Hill Street at Intersection 40 were adjusted to match west approach volumes on Chapel Hill Street at Intersection 41.

Intersections 51-53 - South approach volumes on Garner Road at Intersection 51 were adjusted to match west approach volumes on Garner Road at Intersection 53. West approach volumes on Yeargan Road at Intersection 51 were adjusted to match east approach volumes on Corcoran Street at Intersection 52.

Intersections 54 and 55 - East approach volumes on Garner Road at Intersection 54 were adjusted to match west approach volumes on Garner Road at Intersection 55.

Intersections 58 and 59 - South approach volumes on Auburn Knightdale Road at Intersection 58 were adjusted to match north approach volumes on Corcoran Street at Intersection 59.

Intersection 59 and 60 - South approach volumes on Auburn Knightdale Road at Intersection 59 were adjusted to match north approach volumes on Corcoran Street at Intersection 60.

Step 2 – Apply Growth Rates Derived from TRM to 2010 Base Year Peak Hour Volumes

Intersection 1: Hillandale Road at Hillandale-Hillsborough Connector. A two percent annual growth rate was applied to all approaches.

Intersection 2: Hillsborough Road at Hillandale-Hillsborough Connector. A two percent annual growth rate was applied to the north approach.

Intersection 13: Corcoran Street at Main Street. A three percent annual growth rate was applied for the north approach on Corcoran Street.

Intersection 22: Grant Street at East Pettigrew Street. A three percent annual growth rate was applied to all approaches.

Intersection 23: Pettigrew Street at Plum Street. A three percent annual growth rate was applied.

Intersection 24: Peabody Street at Driver Street. A three percent annual growth rate was applied.

Intersection 25: Pettigrew Street at Driver Street A three percent annual growth rate was applied.

Intersection 28: Ellis Road at Research Triangle Academy Driveway. A one percent annual growth rate was applied to all approaches.

Intersection 29: Miami Boulevard at Cornwallis Road. A two percent annual growth rate was applied to the north, east, and south approaches.

Intersection 41: Nowell Road at Chapel Hill Road. A three percent annual growth rate was applied to the north, east and south approaches.

Intersection 47: Cabarrus Street at Dawson Street. A two percent annual growth rate was applied.

Intersection 48: Cabarrus Street at West Street. A two percent annual growth rate was applied.

Intersection 49: Person Street at Hoke Street. A two percent annual growth rate was applied.

Intersection 51: Garner Road at Yeargan Road. A two percent annual growth rate was applied.

Intersection 52: Yeargan Road at Mechanical Road. A two percent annual growth rate was applied to the north approach on Mechanical Road.

Intersection 54: West Garner Road at Benson Road. A two percent annual growth rate was applied to the north approach.

Intersection 55: West Garner Road at St. Mary's Street. A two percent annual growth rate was applied to the north and south approaches.

Intersection 58: Garner Road at Auburn Knightdale Road. A two percent annual growth rate was applied to all approaches.

Intersection 59: Auburn Knightdale Road at Auburn Road. A two percent annual growth rate was applied to all approaches except the west approach on Auburn Road, where a four percent annual growth rate was applied.

Intersection 60: US 70 at Auburn Knightdale Road. A two percent annual growth rate was applied to all approaches.