

Dry Creek Trail Town of Chapel Hill

Erwin Road Crossing
November 14, 2007

See attached sketch for the recommended crossing layout of Dry Creek Trail and Erwin Road .

Roadway Widening

Erwin Road is recommended to be widened so that a refuge island at the trail crossing and, if desired, a left turn lane into the trail parking lot can be constructed. The roadway shall be widened according to "Recommended Treatment for Turn Lanes", Figure 4A, Chapter 9-1 of the *North Carolina Department of Transportation's Roadway Design Manual*. The attached sketch assumes symmetrical widening. It is recommended that the roadway be widened from two to three 12' lanes. This would provide a 12' wide refuge island and allow for construction of the left turn lane.

A median with a raised island is recommended because it would provide a refuge for the elderly and children to cross Erwin Road. The island also helps in traffic calming by increasing the awareness of the crossing by the vehicular traffic and providing a location for signing. However, having an island would increase the overall time required to cross Erwin Road.

Refuge Island

The recommended refuge island is a 5' monolithic concrete island according to the North Carolina Department of Transportation (NCDOT), Standard Drawing 852.01. The monolithic island is recommended because of less maintenance requirements and it is easier to see at night.

An alternative to the 5' monolithic concrete island would be a raised landscaped island with a 1'-6" curb and gutter according to the NCDOT, Standard Drawing 846.01. The 12 foot median should allow adequate room to provide maintenance. Discussions would need to be held with NCDOT to determine if they would maintain the island or if an agreement could be reached that the Town would be responsible for the maintenance.

A raised planter is not recommended because of the introduction of a hazard to the vehicular traffic. Impact attenuators would be needed at both ends of the planter.

Signing and Pavement Marking

The signing and pavement markings for the Erwin Road/Dry Creek Trail crossing shall be according to the latest edition of the *Manual on Uniform Traffic Control Devices* and *North Carolina Bicycle Facilities Planning and Design Guidelines*.

Pedestrian Signal

For a pedestrian signal to be considered by NCDOT, they normally would require that the warrants from MUTCD, Section 4C.05 be met. The warrant is as follows:

“The need for a traffic control signal at an intersection or midblock crossing shall be considered if an engineering study finds that both of the following criteria are met:

A. The pedestrian volume crossing the major street at an intersection or midblock location during an average day is 100 or more for each of any 4 hours or 190 or more during any 1 hour; and

B. There are fewer than 60 gaps per hour in the traffic stream of adequate length to allow pedestrians to cross during the same period when the pedestrian volume criterion is satisfied. Where there is a divided street having a median of sufficient width for pedestrians to wait, the requirement applies separately to each direction of vehicular traffic.”

In lieu of the pedestrian signal or until the warrant is met, it is recommended to provide advance warning signs with warning flashers on Erwin Road that can be manually or automatic sensor activated.

Posted Speed Limit

Request that NCDOT move the posted speed limit transition from 45 mph to 35 mph that is occurring just south of the bridge over I-40 be moved so that it occurs entirely north of I-40. The speed of the traffic should be monitored and enforcement measures should be used if needed.

Additional Measures to be considered

1. Consider the use of in-roadway lighting in conjunction with the advance warning signs with warning flashers at the trail crossing.
2. Discuss with NCDOT about the possibility of striping Erwin Road for 11' lane widths as a traffic calming measure.
3. Other traffic calming devices such as a speed hump with crosswalk, woonerf configuration, etc. are not recommended because of the classification and amount of traffic on Erwin Road. Rumble strips are not recommended because of there not being a fixed condition that you are trying to warn motorists.

