

existing confused traffic pattern around Exit 33 into a double-roundabout interchange that provided a short-term solution to the burgeoning issue of east–west movement across the freeway to expanding residential areas around the adjacent Lake Norman to the west. We believed that the ultimate remedy for this interchange must be a complete redesign into an ‘urban diamond;’ this would be especially appropriate with increased traffic after the completion of the new corporate headquarters.

Of particular importance from the earlier traffic study was the proposal to construct a new bridge over the interstate on the line of an extended Fairview Road, the main east–west street which we upgraded to a boulevard in our plan. East–west movements were already very difficult in this area, and we endorsed a simple bridge crossing (without access ramps to the freeway) that would extend the Hospital District over the interstate and open up another premium office site immediately to the west of the freeway with access to the hospital and Exit 33 immediately the north. This was the site we had originally envisaged for a corporate headquarters. It falls within a stringent environmental protection zone, but a water detention system that was properly disguised as a lake would add an attractive landscape feature, just like the one constructed as part of the Lowes master plan.

The area around the west side of the freeway exit featured a mixture of low-intensity uses, and we laid this segment out for small offices or light manufacturing on an improved grid of streets, with a small additional amount of retail to complement an existing grocery store in that location. This did not change in our master plan revision.

### **The North Neighborhood** (see Plate 37)

We designed the area to the north of the hospital and transit village as a series of interconnected traditional neighborhoods with a range of housing types, small scale commercial uses and a series of formal and informal open spaces. Because much of the land had been cleared for farming, there were few significant stands of trees to be preserved. To make up for this, we proposed a program of disciplined tree planting along streets and in the new neighborhood parks to revive significant vegetation in areas that had not seen large trees in over a hundred years.

The farmland north of the stream ‘fingers’ that branch off the main creek is mainly flat, without major topographic features, and so we designed the layout in this area as a tight street grid with a variety of lot sizes,

and we laid out the open spaces as formal parks. Smaller house lots were sited around or near these neighborhood parks as the communal open space compensates for smaller private gardens. The flat topography of this northern section also made it an ideal place for a small elementary school and associated playing fields to be integrated into the neighborhood.

As part of this new street pattern we organized east–west streets to provide connections between the two existing north–south streets leading to and from Mooresville town center, and we concentrated commercial and higher density residential development along the westernmost of this pair, Highway 21, leading north into town from Exit 33. This created the template for a new neighborhood mixed-use center at the junction of this highway and the main east–west cross street to serve the population as it grows in future years.

As a contrast to the formality and tight grid of the northernmost section of the residential layout, in the areas bordering the streams we used the irregular geometries of the stream beds to create more ‘organic’ parks fronted by public streets and single-family homes. In other locations we laid out greenways on an informal pattern. By protecting and enhancing these stream corridors, we were able to create an important alternative transportation network that connected the northern neighborhoods to the Village Center. Where possible, we lined these greenways with public streets on at least one side to ensure their safety and encourage their use.

In addition to these four geographic areas, we highlighted three special topics in the master plan that deserved of their own particular policies. As noted earlier, these were: open space design and environmental protection; housing; and a new development code.

### **Open Space Design and Environmental Protection**

The benefits of usable open spaces have long been touted by environmental groups such as the Sierra Club and the Natural Resources Defense Council, and even by developers’ organizations from the late 1990s onward (Santos, 2003). In all towns, and even at the neighborhood scale if possible, we believe there should always be a balance between natural open space that is preserved, and ‘improved’ open spaces like parks that are celebrated and utilized.

Accordingly, we recommended to the town of Mooresville that it consider greenways as an important part of the overall transportation network, with

walking and biking paths extending along their length, and connecting residential neighborhoods without recourse to cars. In addition to this greenway network, we strongly recommended the preservation of as much of the existing tree canopy as possible. The majority of this area was cleared for farming in the late nineteenth century which left clumps of trees rather than large wooded areas. It's especially important therefore that all existing tree stands be preserved and new trees planted in both the public realm (streets and squares) and in private spaces (yards and parking lots). The 1913 example of John Nolen in Myers Park, Charlotte, illustrated in Figure 5.6, shows how disciplined planting links the public and private realms can turn a former cotton field into an urban forest.

Along with the establishment of a greenway system to bind the neighborhoods to the Village Centre and the Hospital District, it is important that both passive and active recreation opportunities be provided within neighborhoods to serve as focal points for the community. We therefore recommended the implementation of rules requiring parks and playgrounds for all new neighborhoods. The current ordinances of the town only required that certain open space be improved, but fell short of making them usable with any design criteria. Our new zoning regulations (see New Development Code below) required all homes to be within 1/8-mile (660 feet/201 meters) of a park, playground, greenway or playing field.

The open space in this master plan serves as a 'green' network for the Mount Mourne area. Under the new zoning, as property is developed according to this master plan, developers would be required to provide open space designed for the needs of the nearby residents. Though the ratio of open space drawn in Plate 32 is approximately 15 percent, we believe that the long-term provision of all types of usable open space should eventually exceed 25 percent of land area.

Because a majority of the plan area is within a protected watershed basin, the impervious surface areas of individual projects are limited to a maximum of 50 percent in areas dubbed 'Critical,' or 74 percent of the site in the higher risk 'Protected' areas. These ratios apply if engineered, stormwater detention devices are used in the site layout. Without the use of ponds, sand filters or other such devices, development (impervious area) would be limited to 24 percent of the total project area. These criteria give the design of open space an important ecological dimension as well as social and aesthetic ones. In

combination with the protection of water supplies, it is also important to protect the habitats and ecosystems of the creeks and wetlands in this area. We therefore strongly recommended that the town of Mooresville adopt strong Stream Buffer Policies to protect the natural environments of plants and aquatic life.

## Housing

As should be clear by now, we believe all neighborhoods should be diverse and provide a variety of housing opportunities. Accordingly, new neighborhoods should be encouraged, if not required, to provide a variety of housing to avoid cookie-cutter subdivisions with a limited range of price points. We have found that a ratio of 70 single-family homes to 30 multi-family homes, with the latter in the form of duplexes/semi-detached, townhomes, condominiums, and apartments, is a mix that works in most markets. In this specific case, we recommended that the pressure by developers to build large apartment complexes should be resisted except within 1/4-mile of the proposed transit station, or in relation to the potential mixed-use center in the North Neighborhood area. Higher density housing in close proximity to commercial development provides a market for retailers and ensures a more sustainable environment for residents and merchants alike. From the municipal viewpoint, only in these areas can this type of development be efficiently supported with services and their traffic impacts mitigated.

Requiring a range of housing types in all large developments is an efficient way of providing affordable housing in the appropriate ratio with market-rate dwellings. Affordable housing does not have to mean lower quality, but it usually requires intervention by a governmental or non-profit agency to ensure its affordability over the long term. When developers provide decent quality affordable housing in a good location, the market tends to drive up the price beyond what is affordable. To deal with this issue, we recommended the formation of a non-profit housing agency to work with the town and developers to ensure an adequate supply of affordable housing as was the case in the neighboring town of Davidson (see Figure 6.35). This is discussed further in Chapter 10.

## New Development Code

Our primary recommendation for implementing the plan was a new development code of design-based regulations keyed directly to the plan's design