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#### **Connector Streets**























#### **Stormwater Management Design**

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This proposal is based on two primary strategies. First is to focus on stormwater management as the primary design framework, recognizing that normally stormwater management is a substantial infrastructure cost with few visual, social or environmental benefits to a new development. Second is to create a design framework that enables change to occur over time, in terms of land uses, density, building type, etc. In addition, the design framework is situated to connect to Rivertown Road and the South Fulton Parkway to enable retail development. And, it is situated to protect existing hardwood forests, streams, floodplains and wetlands.

The primary stormwater effort is focused on the east of Rivertown Road. The primary action is to create a traditional lot, block, street subdivision framework organized as small drainage basins (hydrologic units). Thus, each block becomes a mini-watershed, with streets on either side on "ridges" and a rear property line easement being a "valley". The aim is to have all stormwater managed within each block by placing a small checkdam at each rear property line. A stormwater analyisis (using the Rational Method) demonstrated that these checkdams would need to be only one foot high to detain a 20 year storm. The streets on either side of the block are designed to manage their own stormwater by using swales on either side, again with checkdams, to manage all stormwater within the street right of way. These checkdams would be incorperated with driveway culverts, a common feature in rural landscapes.

To the west of Rivertown Road, stormwater management is simple, with stormwater draining on street and parking surfaces—cleansed as possible with surface vegetation—and flowing to the required buffer along the South Fulton Parkway and utilizing an existing drainage pipe under the Parkway to an retention area to the South. This area west of the Parkway is the proper location for major retail, medical facilities and other uses that require large surface parking lots. Rivertown Road and the attached town green is the center of retail development.

The design of the town center then becomes a process of sequencing and placing future development at the most advantageous location within the subdivision plan. In the first part of the sequence, a series of owner occupied businesses on small parcels would go into the block directly across from the town green, probably including a small convenience store. Also at this time, the town green could be planted in a grid structured peach orchard, as a nod to the history of the area. The second action becomes the development of a large supermarket and its corresponding parking on an adjacent block. With that in place, the next development to occur would be the areas binding the rest of the town green, all of which would be developed on small parcels with owner occupied businesses that could slowly develop over time. With these pieces in place, a school could then be incorporated next, adjacent to the outdoor classroom/theater on the northern edge of Rivertown Road. Finally, to complete the town center, the rest of the blocks along Rivertown Road could be developed as necessary, including any junior anchors. The village center then would be a combination of the small shops around the town green and the larger commercial establishments along Rivertown Road, anchored by a supermarket on the south and the proposed charter school to the north. Residential development would begin on the adjacent blocks.



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## Site Conditions



## Subdivision





#### Subdivision



Subdivision





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## Subdivision



## Stormwater Management







#### Stormwater Management





#### Stormwater Management



CREATION OF DRAINAGE BASIN SCALE: 1"=100'-0"



#### Stormwater Management





#### Stormwater Management



## Stormwater Management



WATER QUANTITIES SCALE: 1"=100'-0"

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#### **Rivertown Road**



**Rivertown Road** 







#### **Transfer Street**







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## **Meandering Street**





### **Meandering Street**





#### Rain Garden Street





# Bridge Street





## **Residential Street**









## Blocks



## Blocks







#### Blocks













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## Covered Bike Bridge





## **Outdoor Theatre**





## Peach Orchard



#### Conclusions

This studio project began with the goal of envisioning a development for the Friendship Village site that would be sustainable in the long term, in its environmental, economic, and social impacts. Minerva envisions a site that will provide an attractive place to live, work, play and go to school for newcomers to the Chattahoochee Hill Country and south Fulton County. A well-planned Friendship Village will benefit not only Minerva and the residents, employees, and visitors of the development, but the surrounding area, by providing long-term retail support and encouraging relatively compact, and environmentally sensitive development. It can serve as a model for other development in the Hill country, in Georgia and the rest of the country.

The studio pursued two different approaches to the central problem of developing for sustainability. One track researched older developments throughout American history and potential ways of combining different aspects of sustainability, such as encouraging green business or finding ways to emphasize environmental learning at a local school. The other, taking general principles of good design and sustainability into account, created three different potential designs for Friendship Village, one based on a traditional "town center," one emphasizing local natural resources, and one concentrating on innovatively solving the problem of stormwater management. While different studio members emphasized different approaches to sustainability, at the close of this process they were able to agree on several important principles that should influence the future development of Friendship Village, regardless of the eventual details of the design or retail or housing mix.

The first of these principles is **flexibility**. Long before the first bit of concrete is poured, Friendship Village should be envisioned as a place where buildings can have multiple uses over time. Recall that many stores can be expected to have a "shelf life" of five years or less, and that a development can be devastated if a major anchor tenant leaves and nothing can be done with the empty shell left behind. Anticipating changes in building use will help ensure minimal waste, inefficiency, and difficulties in attracting new tenants over time. Evaluators of potential designs and plans for Friendship Village might be well served to ask themselves the following questions:

- Does the urban design structure enable or facilitate changing uses?
- Does the urban design structure facilitate changes in the buildings themselves over time?
- Do the buildings facilitate changing uses?
- Do buildings allow for changes in urban design structure?
- Can buildings be retrofitted?
- Does the urban design structure accommodate changes in the mode of transportation?
- Does the urban design structure allow for the mixing of uses?

A second principle is **walkability**. There are multiple benefits to emphasizing walking over car use: encouraging public health; reducing local air pollution and CO2 emissions; allowing for people without cars to participate in the community. Walking trails, unlike parking lots, can also be designed to accommodate other modes of transport: bicycles, small scooters, golf carts. This is not to say that Friendship Village should have *no* parking lots; adequate parking will be necessary for the health of local retail. But an emphasis on walkability may lead to more creative parking solutions.

A third principle is **investment in the local environment**. The rural landscape and the biodiversity of Chattahoochee Hill Country can be a tremendous amenity for Friendship Village—if developers, residents, and consumers alike treat it as such. Investing in the local environment goes beyond simply conforming to energy-efficient building standards or marking out borders for greenspace. It would include incorporating an understanding of the local environment into the civic sphere, whether through education, daily practices (such as encouraging composting), or the creation and maintenance of public spaces. It would also include evaluating new uses, such as a school, a church, a new shop, or a hospital, through an

environmental lens as well as economic and social lenses. Environmental stewardship in Friendship Village will be most successful if it can be incorporated into, and reinforce, a sense of community.

A fourth principle is **diversity of commercial uses**. For a cozy community such as the potential Friendship Village, it can be tempting to imagine the "small town" approach to retail, with every store unique and locally owned. Serenbe has adopted such an approach, as has Vickery Village north of Atlanta. However, collected evidence suggests that such an approach, while charming in the short term, is not economically viable in the long term for a local economy the size of Friendship Village. It will be wiser to plan for a mix of entrepreneurial opportunities and recognizable chains, of large, medium-sized, and small stores, of all-purpose and specialty shops. Again, flexibility in planning and design will be key: a "big box" will not be nearly as risky if it can be designed such that it can later be broken down into several smaller uses.

The fifth, and most overarching, principle is that of **holistic evaluation of new development**. As Friendship Village progresses from idea to thriving community, at each step along the way all three types of sustainability—environmental, economic, and social—need to be considered. Thus a single-family house should be evaluated not only in terms of the existing and future real-estate market but in terms of the potential carbon footprint and waste of its users, and its contribution to the greater social fabric. (To put it more prosaically, a single-family house with an accessory dwelling unit may attract a greater variety of potential buyers than one without.) Greenspace should be evaluated not just as an environmental necessity but as an economic and social amenity. Potential commercial tenants should be evaluated in terms of their environmental footprint and their place in the general social fabric as well as their economic viability. Such three-cornered consideration—the "triple bottom line" in action—is not easy; companies often have a hard enough time with one bottom line, let alone three. Yet the research presented here suggests strongly that this initial investment in time, energy, and thoughtfulness will pay off handsomely, ensuring that Friendship Village will not only sell units but function as a healthy, sustainable, enviable community that demonstrates how to build a sustainable future.

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