

**Sustainable Placemaking:
Belmont and Woolen Mills
Final Report**

**Maria Arango Arias, Timothy Banach,
Suzanne Sharp, Thomas Trapnell, and
Ryan Van Sickle**

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Abstract:

We plan to address the sustainability issues in the Belmont and Woolen Mills area using a sustainability evaluation chart. The purpose of this analysis tool is to evaluate to what extent a neighborhood is sustainable based on certain criteria such as walk-ability, pedestrian density and certain resources, such as access to schools and community engagement centers. In the design of the evaluation tool, LEED for Neighborhood Development will act as a precedent; this precedent will form a basic framework that will be pruned and tailored to fit the factors that seem most prudent in the decision of whether or not a neighborhood or area is sustainable. This list of criteria will be created and a rating will be given to each in order of importance.

We have had our first site visit to Belmont and Woolen Mills on February 21st. This day we started documenting and evaluating the general notes of what is there. Everything from whether or not there were sidewalks, what side of the street they were on, the density of education, religious and governmental centers and their pedestrian accessibility as well as dwelling density was measured and noted. We have equally divided the report and documentation so everyone can work on the part they are really passionate about. We all took different notes on the various elements found at each site. Being that both places were of a considerable size, it was difficult to evaluate them as a whole and, thus, our group decided that it was more efficient to choose eight activity nodes and examine each of them more closely. The group will make a second site visit to evaluate those places on April 11, 2013. At this time, the group will go to each chosen node individually and re-examine the criteria points based on each site. Any questions presented during this visit will be discussed after the visit.

The main goal of our efforts will be a sustainability evaluation chart. This is an organized list of place characteristics that are linked to sustainability and can be objectively rated in a community or neighborhood. A LEED neighborhood sustainability chart will provide objective criteria by which to assess the sustainability of our neighborhoods. All other forms of documentation should tie back to, in some way, the criteria established by the sustainability evaluation chart.

Lastly, our final results will be presented to Kathy Galvin of the PLACE Design Task Force. The bulk of our results will be organized onto a poster containing the sustainability evaluation chart, photographs, maps, descriptions, and findings. The PLACE Design Task Force will then be free to use our findings to promote sustainability in Charlottesville. This poster will be presented on May 2, 2013 and will communicate the issue our group focused on as well as our findings on how to increase sustainability in these two areas.

Introduction:

Our project seeks to address sustainability issues of the natural and built environments in the City of Charlottesville in order to satisfy the needs of the local community in a more efficient way. Our community partner is the PLACE Design Task Force. They are a small group that offers guidance to the city of Charlottesville on matters of place-making and urban design. It is our mission to assist them with the Belmont and Woolen Mills areas by analyzing how we can increase the sustainability of those places. In turn, our investigation of the sustainability of these places will hopefully encourage sustainable actions in the larger community, both from a governmental perspective as well as through public engagement in the project. Once we inform the PLACE Design Taskforce of our findings on the sustainability of these areas and how to increase their efficiency, they may take that information to the City Council and the Planning Commission in an effort to realize a more sustainable city.

We must remember that the success of this vision depends on productive interaction between all of these groups, as one has just as much weight as another. The problem is getting everyone informed about Charlottesville's issues as the area's residents are likely to have many great ideas for the community, however they usually go unheard. This is a crucial element of our project as gathering their opinions and finding an interactive solution to the problem will greatly ameliorate their needs. Some obvious issues are walk-ability and the over-allocation of land to parking space. An important part of this project is to help erase the negative stigma that turns people off of the idea of density because living and working closer together does not have to mean being cramped. This lifestyle actually promotes stronger relationships with more people, whether living or working near each other, through more green spaces that encourage people to take alternative modes of transportation that are more sustainable for the environment, such as cycling or walking, because their sphere of travel is smaller due to greater density. We hope that one of the potential results of this project is to teach people that small communities, even individuals, can make a difference, because sustainability is a small-scale movement as much as it is a global one. Both global and local programs inform, direct, and inspire each other to build a world that is increasingly harmonized with nature, and we are charged with expressing the most expedient way to achieve this goal and how best to present it to the general public.

Body:

By analyzing specific activity centers within a neighborhood, the sustainability of that neighborhood as a whole can be more efficiently assessed. In an article entitled theory of the urban web, architectural theorist Nikos Salingaros writes “any urban setting can be decomposed into human activity nodes and their interconnections (Salingaros, 1998).” Activity nodes are places where people are likely to converge. These places often fall on the intersections of transportation routes, at places of gathering (restaurants, markets, open squares), or by natural features (a nature park, or an outdoor recreation site). Even more often they fall on some combination of these. The following visual highlights the general pattern distinguishing activity nodes:



The plain background of this map represents less active space, the rectangles could represent publicly utilized structures, the black lines transportation routes, and the blue and green natural features like a park and a river. Activity centers, highlighted in red, are located where transportation routes, publicly used buildings, natural features, or some combination of these conjoin to foster human interaction.

By first assessing the sustainability of activity centers within each neighborhood studied, and subsequently analyzing their interconnections, a better understanding of the sustainability of the entire community may be understood. This approach to the problem takes the large task of evaluating a sizable place and reduces it to an achievable subset without compromise.

Google maps was used, in addition to insight from the initial site visit, to select four different activity nodes within both Belmont and Woolen Mills, totaling eight. Of these locations, at least five will be used in the final assessment of the sustainability of these neighborhoods. More

nodes are featured than absolutely necessary in case one or more of the locations chosen does not prove valuable in achieving a fair assessment of the sustainability of its greater neighborhood. The areas chosen for each neighborhood are as follows:

Belmont

1. School: George Rogers Clark Elementary School → 1000 Belmont Ave.
2. Park: Rives Park → Rives St. & Linden Ave.
3. Restaurant: Belmont BBQ, The Local → La Taza à Monticello Rd.
4. Health Care Center → 310 Avon St. No. 9

Woolen Mills

1. Park: Riverview Park → Riverside Ave
2. Cemetery: Riverview Cemetery → 1701 Chesapeake St
3. Residential: Meade Park → Chesapeake St & Meade Ave.
4. Residential: Riverside Ave



These activity centers were purposely chosen to be diverse - featuring a school, parks, a restaurant, a health care center, a cemetery, and residential zones. Because these centers are diverse, an assessment of the sustainability at each of these locations will cover most, if not all, of the types of places within each neighborhood. Furthermore, the interconnections between these diverse types of places offer insight into key criteria for sustainability, such as the need for mixed-use neighborhoods.

With these activity nodes determined, an objective way to assess the sustainability at each of these locations must be identified. It was determined that the most objective, effective, and efficient way to achieve this is to model LEED's evaluation chart for sustainable development. Using LEED's evaluation criteria as an example, a new chart tailored to objectively assess the sustainability of each of the various activity nodes identified was created. From these specific evaluations at each node, an objective assessment of the sustainability of the entire neighborhood can be made. This chart is listed below.

Team's Sustainability Evaluation Chart

Criteria	Maximum amount of Point Awarded: 50 Total
Walkable Streets	7 maximum points
Mixed-use Neighborhood	4 maximum points
Mixed-Income	6 maximum points
Density	5 maximum points
Reduction of Parking Footprint	2 maximum points
Public Transportation	8 maximum points
Access to Civic and Public Spaces	3 maximum points
Local Food	1 maximum point
Community Programs	2 maximum points
Tree-Lined Streets	4 maximum points
Molding of nature w/society	2 maximum points
Access to Schools	3 maximum points
Appropriate Speed Limits	1 maximum point
Overall Neighborhood Safety	1 maximum point
Renewable Energy (How much is a factor)	1 maximum point

At each activity center, points will be awarded for each of the criteria above based on certain justifications for each criteria (these justifications are listed below). The number of points allotted to each of the criteria in the chart reflects its relative importance to the overall sustainability of the neighborhood. For example, walkable streets is allotted more points than

local food, because it has been decided, as a team, that walkable streets are more important to the sustainability of a neighborhood than is local food. The amount of points awarded for each criteria is based on to what extent does an area meet the criteria justifications. Areas will acquire more points if they meet more of the justifications. Areas will acquire fewer points if they meet fewer justifications. Once points have been allotted to each of the criteria above, they may be added to produce a total score out of 50 possible points. The scores at each of the activity nodes within each neighborhood can then be compared to make a fair assessment of the sustainability of the entire neighborhood.

To recap, the following method has been chosen to best evaluate the sustainability of Belmont and Woolen Mills:

- 1) Focus in on the activity centers, or activity nodes, of each neighborhood
- 2) Rate these activity nodes using the sustainability evaluation chart above
- 3) Compare the ratings at each of the individual activity nodes to make a fair assessment of the sustainability of the neighborhood as a whole.

Listed below are the requirements and justifications for the criteria in the sustainability chart above.

1) Walkable streets

For a street to be considered walkable, there must be sidewalks on both sides of the street each 3' wide. Obstructions to the sidewalk should be minimized to create a open and clear walking path. An addition that would be beneficial are streetlamps. One lamp per 100' with a medium level of light intensity would be adequate for pedestrians to have visible surroundings.

2) Mixed-Use Neighborhood

There needs to be a balance between residential, commercial, industrial, cultural, and institutional uses for a neighborhood to be considered mixed-use. Primarily these uses can take the form of buildings. Schools and churches are an example of an institutional use; while houses and apartments are an example of a residential use.

3) Mixed-Income

An indicator of a mixed-income neighborhood is the variance of house size. This will be used as a basis to determine the income distribution of a neighborhood. Using this method is not exact because house size is not always an indication of being rich or poor; but generally speaking it is a sufficient way to establish a sense of the variance in a neighborhood. Mixed-income data can be acquired through city archives and could be interpolated through real estate information.

4) Density

Measuring density will be one of the more complicated criteria to judge due to lack of information regarding population distribution. However, a figure ground map will act as a density gauge. Denser areas on the map will be observed by noting the short distances buildings have with one another. While less dense areas can be observed by the longer distances between

buildings.

5) Reduction of parking footprints (varying levels for parking/parking density)

To create a reduced parking footprint an area should have available street parking instead of favoring high areas devoted to parking lots. Spaces for driveways should also be minimized to a reasonable degree. Parking garages act as an efficient way to reduce the parking footprint because they are primarily built in the vertical direction, have a greater number of parking spaces versus a parking lot, and the ratio between lateral and vertical directions is small. A way to measure this is how many parking lots are in an area and how much land is devoted to these spots. Land devotion could be based on a per square mile basis.

6) Public Transportation

Public transportation can take the form of public bus systems, subway systems, and bicycle accommodations. A public bus system should take into account the number of stops a bus must make, the number of buses that are a part of the system, and the number of different bus companies that make up the bus system. The subway system should include how much of an area the system interacts with, how many trains are part of the system, and routes are available. Charlottesville does not have a subway system but it should be noted that this is a form of transportation; which would prove to be beneficial in acquiring the maximum amount of points in this category. Bicycle accommodations include the number of routes for cyclists to use and if there is bicycle storage available in the neighborhood.

7) Access to civic and public spaces

Distance is the most important factor in establishing access to civic and public spaces. Does it take an individual five minutes to walk to school or thirty? Is the nearest grocery store 3 miles away versus 15 miles? These are examples of questions that will be considered when evaluating this criteria. Availability to public transportation is a significant influence because time it takes to travel from one place to the next will be less if there is available public transportation.

8) Local food

Local food is not as important a criteria but it is a way to measure how much a community relies on its own productivity. Menus from local restaurants can be used to see which restaurants cater to local foods and which do not. Grocery stores are also a good source to determine local food availability. A primary source of local food are farmer's market. They provide a way for farmers and non-farmers to distribute their produce to the public.

9) Community programs

The Charlottesville website provides links that describe the differing programs available in each community/neighborhood. A wide range of programs are necessary for a community to reach full points in this category. Recreational centers also provide a good indication of what programs exist in the community.

10) Tree-Lined Streets

The distance between each tree on a street will provide a way to measure which streets are more tree-lined in comparison to others. One tree per 100' will be used as a starting gauge, and will increase or decrease if deemed prudent. Trees act an aesthetic appeal to a neighborhood, they provide shading, and are an attraction to insects and animals.

11) Molding of Nature with Society

Nature is an integral part of a community. It is more than an aesthetic appeal, it can reduce stress levels, provide a source of physical activity, and help reduce the environmental impacts of a community. Molding nature with society can be seen if there are parks, woods, trees, flowers, and other plant life in an area. Green roofs and other methods that use nature as an addition to the physical environment provide another way to determine the extent of molding the two together

12) Access to Schools

This criteria is similar to access to civic and public spaces but gets its own category because education is a primary way in which sustainable practices can be promoted. Distance again will act as gauge. As common sense predicts a shorter distance from a residence to a school is more favorable than a longer distance. An acceptable distance to school is approximately fifteen minutes via vehicle.

13) Appropriate Speed Limits in Residential Neighborhoods

Interactions between vehicular traffic and pedestrians must be taken into account when determining if a street is "safe". Speed limits acts a method to increase the safety among vehicles and pedestrians. 25 mph is a safe and established speed for residential neighborhoods. Signs that feature flashing lights to indicate lower speeds at different times of the day are a useful method to regulate speed as well. Signs featuring "Careful Children at Play" are another way to increase safety.

14) Overall Neighborhood Safety

Besides vehicle safety overall neighborhood safety needs to be maximized. Population and density can be increased by the residential happiness, which both attribute to overall sustainability. Areas with higher happiness will attract more people than areas that are regarded as less happy. "Careful Children at Play", "Neighborhood Watch", and "Drug Free Zone" are all ways to increase the overall safety of a neighborhood. These signs can act as a deterrent to crime and can increase safety awareness. However, "Neighborhood Watch" signs do not necessarily mean an area is safe, it just means citizens are concerned about the neighborhood safety. To achieve a better understanding of safety police reports are a valuable source of information. Though the content of the reports and not the number of reports would act as the best indicator.

15) Renewable energy

Localized renewable energy encourages local sustainability and awareness. Each neighborhood should be evaluated for efforts to incorporate renewable energy practices into the

framework of the community. This does not necessarily mean that a community must have large sources of renewable energy. Even a few solar panels or other smaller efforts may raise awareness for the greater need to feature sustainability, especially for young people growing up in these neighborhoods. The presence of energy considerate architecture (such as EcoMod) should also be considered when evaluating renewable energy. This criteria will be the hardest to physically measure because not all sources are visible by pedestrians. Only through the inspection of houses, buildings, and city plans could a real evaluation of this criteria be made.

It should be noted that not all of these criteria can be measured accurately. Subjective rather than objective evaluations will have to be made accordingly for certain criteria. Challenges will arise when data cannot be gathered by visible observation; when this occurs assumptions will have to be made so an evaluation can be determined.

Evaluation of Belmont and Woolen Mills:

Below are the sustainability evaluation charts for Belmont and Woolen Mills, followed by a brief description of the area and an explanation for the overall rating of the site.

Belmont:

Criteria	Maximum Points Awarded: Totaling 33.5/50 Available
Walkable Streets	4.5/7
Mixed-use Neighborhood	3/4
Mixed-Income	3/6
Density	3/5
Reduction of Parking Footprint	2/2
Public Transportation	4/8
Access to Civic and Public Spaces	3/3
Local Food	1/1
Community Programs	1/2
Tree-Lined Streets	3/4
Molding of nature w/society	1/2
Access to Schools	2/3

Appropriate Speed Limits	1/1
Overall Neighborhood Safety	1/1
Renewable Energy (How much is a factor)	1/1

Belmont comprises a 403 acre neighborhood in the southeast region of Charlottesville. It was founded in the late 19th century; it has boundaries made by the CSX Railway on the north and Moore's Creek on the south. Primarily, it is a residential area with commercial and industrial additions.

As stated above Belmont is primarily a residential area, however it features many facilities that label it a mixed-use environment. The restaurant scene is found on Hinton Avenue, it features such places as The Local and Belmont BBQ. Some of these restaurants have advertisements for local food. Hinton Ave has more than restaurants to offer the residents of the Belmont community; commercial and industrial centers can be found there as well. A repair shop and a convenient store are located near the end of Hinton Ave, at this junction it branches off into the residential area.



Located at the entrance to the residential area are signs that denote the speed limit and caution vehicles for children and blind pedestrians. This creates a safe environment for the community, by allocating these types of signs it brings awareness to outsiders and inhabitants of the neighborhood. There are three notable things to mention in respect with the residential area of Belmont. Firstly, by walking through the neighborhoods it can be observed that there is not a well mix of mixed-income. Many of the houses look the same and other indicators promote that there is some diversity but not enough to make it a very diverse area. Other indicators include what type of car is parked in driveways, clothing of residents, and upkeep of houses. It should be noted that these indicators are very subjective, a better method would be to pull city data about income distribution. Secondly, there is a variance in street walkability between primary residential areas and primary commercial areas. Areas that are primarily residential have on average

sidewalks on one side of the street that are 2 feet wide. Trees and plants frequently are obstacles to walking. On the other side, areas that are primarily commercial have sidewalks on both sides of the street that approach or exceed 3 feet wide. Rarely are there obstacles to walking. Thirdly, residential areas are never just residential, usually there is an added component that diversifies the area.



The residential area that stems from Hinton Ave which is within the Monticello Road and Belmont Road quadrant contains an elementary school and a facility for the blind. By placing the elementary school within the residential area an ease of access to this activity node is created. Inside and outside of the residential area bus stops are located. For an outsider this is beneficial because it provides a sustainable way to commute to the area. The Belmont area utilizes a high degree of street parking. Individual houses do have driveways and there is the occasional parking lot, but much of the available parking spaces are in the form of street parking. Many of the restaurants do not have their own parking lots but instead have parking on the street outside their establishments.

Applying the metrics for the sustainability chart the Belmont area achieves an overall score of 33.5. It yielded high scores in walkable streets, mixed-use neighborhood, and access to civic and public spaces. Low scores were found in density and public transportation. The above scores are reasonable seeing that Belmont has a well mix of commercial, residential, and industrial uses for a small less urbanized environment. Belmont scored slightly more than two thirds of the maximum total points, which is impressive given the setbacks of its location.

Charlottesville is located in a rural area and therefore faces challenges that would not exist if it were located in an urban area. Benefits of an urban area are high densities, advanced public transportation systems, mixed-use neighborhoods, and mixed-income neighborhoods. Given all these setbacks, Belmont proved to overcome many of these obstacles to the best of its ability.

The relatively high score of 33.5 demonstrates that Belmont is successful in certain

areas in regard to being a sustainable place. However, there are areas that could be improved to raise its sustainability score. Using this particular evaluation tool (the sustainability chart) these areas can be explicitly pointed out. Increasing the income diversity of Belmont would perhaps act as a necessary catalyst to promote change in its weaker areas. By bringing in a distribution of classes this would increase the level of density and promote cheap public transportation.

Woolen Mills:

Criteria	Maximum Points Awarded: Totaling 27.25/50 Available
Walkable Streets	5/7
Mixed-use Neighborhood	1/4
Mixed-Income	5/6
Density	2/5
Reduction of Parking Footprint	0.5/2
Public Transportation	5/8
Access to Civic and Public Spaces	2/3
Local Food	0/1
Community Programs	1/2
Tree-Lined Streets	1.5/4
Molding of nature w/society	2/2
Access to Schools	0/3
Appropriate Speed Limits	1/1
Overall Neighborhood Safety	0.5/1
Renewable Energy (How much is a factor)	0.75/1

Woolen Mills is one of the older neighborhoods in Charlottesville, dating back to the mid-to-late 1800's when milling operations began there. By the 1960's the mill permanently closed there, leaving the neighborhood that was founded around the industry. Tucked between a

railroad line to its south and the Rivanna River to its north and east, this neighborhood features both dated structures and modern architecture, a riverside park, and a historic cemetery. These unique circumstances and characteristics make the neighborhood a unique subject from a sustainability perspective.

The analysis above awarded Woolen Mills only 27.25 points out of a possible 50 for its sustainability. This suggests that Woolen Mills exhibits only some of the elements necessary to make a sustainable neighborhood, and is significantly lacking in others. Notable deductions include only a $\frac{1}{4}$ in the mixed use category, a $\frac{2}{5}$ for density, a 0.5/2 for the reduction of parking footprints, and a 0/3 for access to schools.

In general, Woolen Mills is a largely residential use neighborhood (granted with a significant portion of its land area being dedicated to a cemetery) without much diversity in terms of land use. This is largely due to the neighborhood's historical function as a residential area in close proximity to the mill which once provided employment opportunity to its residences. However, this legacy has left the neighborhood somewhat isolated from other commercial enterprises. Furthermore, most of what activity does exist in the neighborhood seems to occur on its fringes; most, if not all, significant commercial activity occurs on East Market Street, which lies to the south of most of the residential households in the neighborhood, and is out of walking distance from these. The neighborhood also lacks a school, whereas Belmont had a school located fairly centrally.

In addition, the neighborhood was not very dense, and thus only scored a $\frac{2}{5}$ in the density category. The following photograph shows how sprawled some of the unwooded areas between homes were:



The large amount of space between the home on the far right of the frame and the home to the rear center of the frame is evident. This amount of space was common between homes on East Market Street and Chesapeake Street. Furthermore, most homes, duplexes, or other types of residential buildings had off-street parking, encouraging automobile use over the bus route that wraps through a decent portion of the neighborhood. As seen in the following photograph, most automobiles were parked off of the street, even though there is space for on-street parking. Also notable is the lack of trees lining the street:



With all of this being said, Woolen Mills did receive more than half of the points allowed for its sustainability. Highlights include walkable streets (indeed, a family happened to be walking by when the above photograph was taken, which was not an uncommon sight), in addition to mixed-income, public transportation, and renewable energy. A bus route did run within the neighborhood, within reasonable walking distance from many residences. And, given that most streets have sidewalks on both sides at least 3' wide, public transportation seems to be a reasonable option for this neighborhood's residents. While the use of public transportation is likely to be less due to the prevalence of off street parking, it is still a viable option.

Furthermore, there was evidence of income diversity in the neighborhood. Homes ranged from mid- to large modern dwellings, to modest duplexes. Some of these homes were also eco-mod projects, expressing a drive to reduce energy dependency and raise awareness for energy conscious architecture. For these reasons, Woolen Mills scored reasonably well in the areas of walkable streets, mixed-income, public transportation, and renewable energy.

Woolen Mills is a neighborhood of notable historical background, fostering common ground healthy for community formation. However, Woolen Mill's background as a residential community for mill workers is a unique challenge to its current sustainability, given the closing of the mill in the 1960's. With this once key industry removed, there is space for new commerce in the neighborhood that has not yet been completely filled. This phenomenon contributed the neighborhood's low rating in the mixed-use category, given that it is largely residential, but also opens the doors for new and sustainable industries to enter the area in the near future. There seems to be a large number of modern homes and affordable duplexes being built alongside the traditional single family dwellings of the mill-era, suggesting greater income diversity and a push for energy conscious architecture. In conclusion, Woolen Mills has some sustainability hurdles to overcome, yet is promising as a resilient community with a rich history capable of addressing some of the challenges of the 21st century.

Conclusion:

In conclusion, with our first site visit our group had the opportunity to evaluate Belmont

and Woolen Mills in a broad perspective. Each member of the group took notes on the distinctive elements found in each site. Since both places were of a considerable size, it was difficult to evaluate them as a whole. Therefore, our group decided that it was simpler to choose eight activity nodes, and examine each of them carefully. With our second site visit, we went to the eight chosen nodes and selected five of them. We took pictures and wrote notes about what we had seen. Later as a group we evaluated each node one more time. Based on what we saw, we awarded specific points to each **criterion** and draw our conclusions about each node. The different sites were documented through GIS mapping and the evaluation chart. The group still has some questions about the site. Some of these questions are: to what degree does the fact that the site is primarily residential has an effect on the sustainability of Belmont and Woolen Mills? Outside factors play a significant role in such residential areas, to what degree does having the University of Virginia close affect these sites? Having a mix of residential areas close to commercial areas create a relationship between the two of them. Each relationship is different to one another because it depends on where the site is located and how close they are to the other nodes. Having a more compact development create a sense of community and reduces the distances between houses, workplaces, businesses, and other services. Having the accessibility to transit or having a **walkable** neighborhood close to commercial areas also bring numerous advantages and benefits to a community.

Future Plans:

The five group members have the same rights to make decisions about the project. On April 11, 2013 the group will go for a second time to Belmont and Woolen Mills. The following week the group will not only evaluate the nodes using the criteria chart, but will also add more details to the maps. The group will meet one more time on April 20 to do the poster project. Members of the group might have to meet again to finish the poster before April 24. The following week and a half the group will focus on the final project. In between the week, more group meetings will be scheduled depending on the preferences of the teammates. Final project is due on May 4, 2013.

Lessons Learned:

The largest barrier in creating our project design was trying to avoid subjective analysis. By creating concrete criteria to evaluate both neighborhoods on the same playing field, the group was able to quantify similarities and differences and their advantages or disadvantages in the

neighborhoods. This way the group was not idealizing what a community should be, but rather addressing the specific neighborhoods' qualities. The group felt that for the majority we reached our goals through this project. However, one way to perhaps enhance the PLACE Design Task force is to possibly analyze one area instead of comparing the sustainability of one neighborhood to another. The group feels that this would result in a more in depth analysis and, therefore, a better understanding of what makes a neighborhood sustainable. Lastly, the group learned that creating change is more difficult than initially thought. While the group can brainstorm ideas to improve the sustainability of either neighborhood, to implement them would require resources beyond the scope of the project.

Works Cited:

Nikos A. Salingaros (1998): Theory of the urban web, *Journal of Urban Design*, 3:1, 53-71

LEED (Leadership in Energy + Environmental Design) for Neighborhoods

City of Charlottesville Webpage, www.charlottesville.org