Hope in the Hollow

A Report on Opportunities for Planning and Redevelopment
in Albany's Sheridan Hollow Neighborhood

A collaboration between the University at Albany
and the Affordable Housing Partnership

January 2017

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Acknowledgements & Special Thanks

This project was a joint effort between two classes (Urban Community Development and Environmental Restoration & Brownfields Redevelopment) within the Department of Geography and Planning at the University at Albany. The research team was comprised of five groups focused on interdependent elements of community revitalization: 10 Economic Development; Housing; 3) Parks and Eco-Districts; 4) Stormwater Infrastructure; and 5) Energy. The authors would like to thank the many individuals and organizations that made this work possible.

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The residents and businesses that make up the Sheridan Hollow neighborhood

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Project Introduction

This project and report is the result of an exciting collaboration between the University at Albany, the Affordable Housing Partnership (AHP), and the Sheridan Hollow Neighborhood Association (SHNA). AHP recently partnered with the Albany Community Land Trust (ACLT) and the Community Loan Fund of the Capital Region (CLF) to pursue a New York State Brownfield Opportunity Area (BOA) grant and was awarded the first phase of this grant program and prepared a Pre-Nomination Study. This report represents a contribution to the Nomination Study of Sheridan Hollow, the second phase of the BOA grant program.

Our hope is that this research can be leveraged to not only receive a phase-three grant, but to help Sheridan Hollow achieve its stated vision:

"to strive to create: a vibrant, diverse, mixed use neighborhood whose unique history and culture are celebrated; the environment is protected; development is equitable and sustainable; citizens are involved; incomes are mixed; affordability is maintained; local ownership is increased; and quality of life for all residents increased" (Affordable Housing Partnership of the Capital Region, Inc., 2012, p. 4).

This report builds upon previous research and reports that have been conducted on Sheridan Hollow and the surrounding area of Arbor Hill. Previous research includes:

- 2003 Arbor Hill Neighborhood Plan
- 2010 Sheridan Hollow: Steps Forward - UAlbany's Master's in Regional and Urban Planning (MRP) Studio - a partnership with AHP to create their first online housing inventory
- Minding the Gap, by AHP in 2016 - a study assessing existing and needed resources for financing housing and redevelopment in Sheridan Hollow
- Sheridan Hollow Neighborhood Brownfield Opportunity Area Application Narrative (2012) and Pre-Nomination Study (2012)

This report – and the BOA grant – also builds off citywide planning efforts as well as a city-led effort to establish neighborhoods as designated brownfield areas.

Albany 2030 Comprehensive Plan

In 2012, the City of Albany joined together with stakeholders from across the City to improve quality of life and foster sustainability and adopted Albany 2030, a comprehensive plan to inform future development and planning goals. This plan includes strategies to promote reinvestment and redevelopment, inform future zoning for the city's residents and businesses, and to further expand upon the assets and resources that Albany has to offer. The comprehensive plan specifically promotes expanding resources in the city's low-income neighborhoods, including but not limited to development of new affordable housing, job opportunities, sustainable development, and efficient transportation.

Our study site is one of six neighborhoods designated by the City as a Pre-Nomination Study Area in the Albany 2030 Comprehensive Plan. For Sheridan Hollow, this new plan has given the neighborhood hope that the needs of this community will not be ignored.

This report is aligned with the goals of the Albany 2030 Comprehensive Plan because it describes and recommends ways in which Sheridan Hollow can revitalize its community through increasing and implementing community marketing, affordable and energy efficient housing, renewable energy, green infrastructure, open green spaces, and more.

About Sheridan Hollow

Sheridan Hollow is a residential and formerly industrial neighborhood located within a ravine between the Arbor Hill neighborhood and Washington Avenue in Albany. The Hollow is a relatively small neighborhood in downtown Albany (see figure 1).

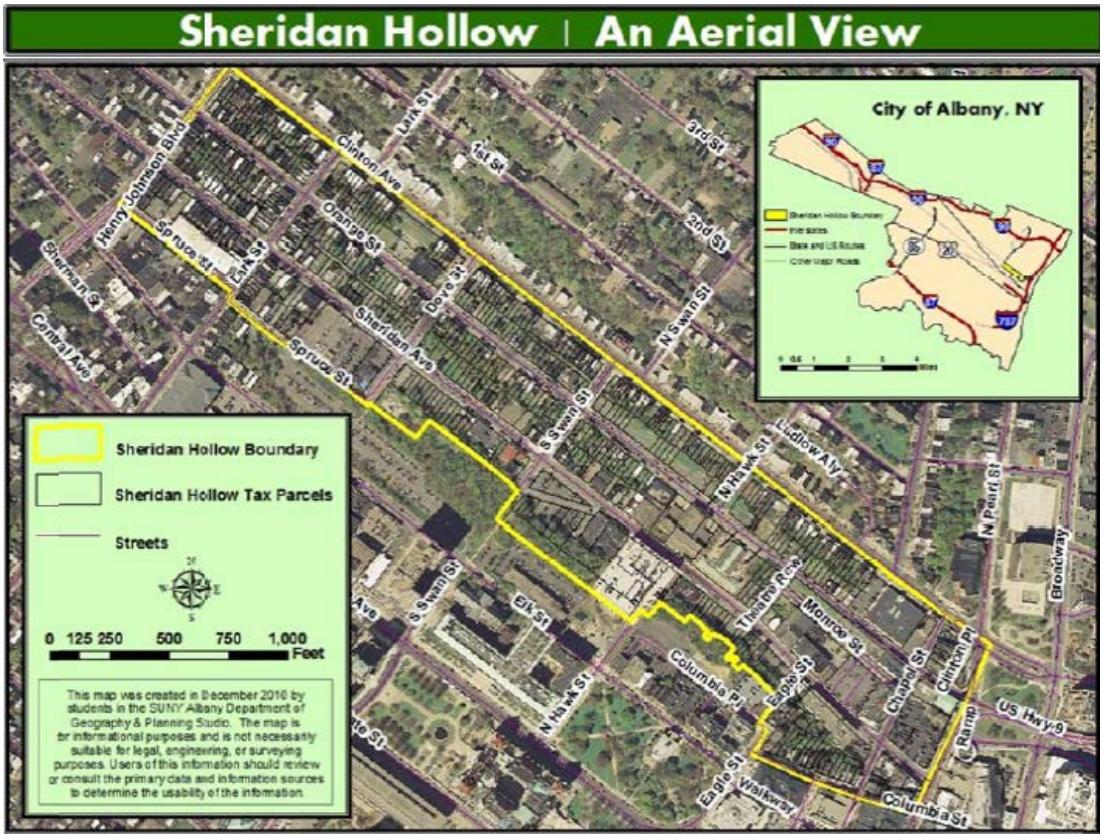


Figure 1: Sheridan Hollow (Source: Sheridan Hollow BOA Application Narrative)

Sheridan Hollow was settled by Irish immigrants in the 1700s, and has historically been home to the city's low-income and minority populations. Currently, Sheridan Hollow has many challenges that present opportunities for growth and improvement. The neighborhood has a high poverty and vacancy rate, which is reflected in its numerous abandoned buildings and lots. Former industrial legacies, including an incinerator, have contaminated much of the neighborhood. Sheridan Hollow also experiences frequent issues with flooding because of its location within a ravine and its inadequate

infrastructure. Despite these challenges, the community has a strong sense of identity and many assets. The community assets identified were confirmed by interviews with people knowledgeable of the neighborhood (see appendix A: Contacts) and at a public presentation of the report's findings at the Affordable Housing Partnership and Sheridan Hollow Neighborhood Association on December 16, 2017 (presentation slides are in Appendix H).

Sheridan Hollow is a dynamic, highly walkable neighborhood located close to many large cultural/recreational institutions and centers of employment. Concurrent vacancies and increasing urban growth in the region offer opportunities for reimaging and redeveloping Sheridan Hollow. Habitat for Humanity and private developers have built affordable rental, market-rate homeownership and mixed-use buildings in recent years, for example. And while steep ravines create infrastructure challenges, the Hollow's unique topographic features also help shape the neighborhood's historic character and offer an opportunity for further enhancing its identify as well as development of parks and open space.

While the neighborhood has experienced historic geographic, political, and social isolation, Sheridan Hollow is ripe for revitalization when studied in a citywide context. Indicators of a revival in the City of Albany include an increasing population, school enrollment, job opportunities, housing demand, and real estate market values, making Sheridan Hollow a strategic location for this new transformation. This also presents a risk of the gentrification of Sheridan Hollow as neighborhoods change, so current residents may not be able to afford living in the neighborhood in the future. Right now, it is important to work towards keeping and growing resources within the community for current and future residents. Community engagement is crucial for making sure any improvements and changes to Sheridan Hollow are beneficial to the current residents and community as a whole, and is a large component of this report's recommendations.

Each challenge Sheridan Hollow faces presents an opportunity and can be seen as an asset to the neighborhood. Sheridan Hollow has a unique identity that resonates with its residents, and they represent the neighborhood's strongest asset. The vacant and abandoned lots present opportunity for park space, growth, and connectivity. This is an example of the leadership opportunities for the residents of Sheridan Hollow to organize around to engage in improving their neighborhood. The strong presence of non-profit organizations working in the neighborhood, such as the AHP, Habitat for Humanity, and many more, gives the community the necessary aid and opportunities to get people in the community involved. These community-based organizations can ensure that future developments benefit and do not displace the neighborhood's residents.

The study site is approximately 100 acres within the Sheridan Hollow neighborhood. The two primary land uses are residential (pink) and commercial (red). There is also a significant amount of abandoned structures and vacant land (gray (see figure 2) (source: Albany 2030 Comprehensive Plan BOA Appendix).

Figure 2: Land Use in Sheridan Hollow

Strategy for Redevelopment

The BOA grant is being utilized as a tool for Sheridan Hollow to achieve its revitalization goals as set forth within the neighborhood's comprehensive plan as discussed in the introduction of this report.

This report provides a thorough analysis of existing conditions and opportunities for properties and residents located in the proposed Brownfield Opportunity Area. AHP and SHNA identified five redevelopment priorities for the neighborhood based on feedback from the community. A student-led research team was assigned to each area of focus and each team's white paper makes up the body of this report as shown below:

Team Research Objectives

Economic Development Team Objectives

1. Facilitate an Economic Development Discussion Panel with local, state, and regional community development experts
2. Provide additional research on economic trends and opportunities

Water & Infrastructure Team Objectives

1. Identify water infrastructure improvement strategies that bring the community together and help to stabilize local economic conditions
2. Promote low impact development strategies to mitigate storm water runoff and reduce flooding
3. Protect and improve the quality of the Hudson River for recreational use and to support wildlife habitats by reducing stormwater pollution
4. Improve the existing built environment and outline requirements for sustainable development suitable to the community's character

Parks & Eco-District Team Objectives

1. Find ways to repurpose vacant and abandoned lots to connect residents and increase social capital through building participation and trust
2. Promote the walkability of Sheridan Hollow with ideas for a community walkway and new common space
3. Produce a Sheridan Hollow Park Survey that will give residents an active role in the rehabilitation of the space

Energy Team Objectives

1. Explore Sheridan Hollow's options for community solar as a way to reduce energy costs for residents
2. Study partnering with NYS Office of General Services to host a solar farm
3. Research into ways to address the streetlight deficit in the neighborhood

Housing Team Objectives

1. Produce a brochure of a city-wide home ownership and property rehab services
2. Lay a foundation for a complete update to the 2010 Sheridan Hollow housing conditions survey
3. Provide recommendations for further analysis of the updated survey in concert with the previous survey and other data sources

Each team's white paper provides a description of the team's research objectives, goals, and key findings as follows in subsequent sections of this report.

Our report concludes with a summary of overall findings and recommendations for AHP and the Sheridan Hollow community to consider as the neighborhood advances redevelopment of strategic sites and seeks overall revitalization of the Hollow.

Economic Development Strategies & Recommendations

Introduction

The purpose of this report is to provide the Affordable Housing Partnership in Albany, NY with an overview of strategies and recommendations for economic development in Sheridan Hollow. This paper builds upon a recent economic development and resource gap analysis commissioned by the Community Loan Fund of the Capital Region, as well as a panel discussion of economic development specialists regarding development potential and opportunities in the Sheridan Hollow neighborhood. The report includes suggestions and considerations for future studies, a summary of the economic development panel discussion, and additional research findings on best practices.

Overview of Sheridan Hollow's Assets

One of Sheridan Hollow's greatest assets is its strategic location and its potential for future development and investment. This neighborhood is located adjacent to Downtown Albany, the State's Capitol buildings, Albany's entertainment district, the Clinton Avenue corridor, and Lark Street. The eastern edge of Sheridan Hollow is home to downtown Albany's arts and entertainment sector, which includes the Palace Theater, Capital Repertory Theater, and a variety of dining. The walkability of the neighborhood and close distance to the some of the city's largest employers are also major incentives for future residents to seek residency in the neighborhood.

Sheridan Hollow also has an attractive historic housing stock, many of which are currently vacant, which can be interpreted as a challenge for the community. However, this surplus of housing and land should be interpreted as a valuable resource of the neighborhood to promote future housing development. The large amount of vacant land can be used as space for new development and urban infill, reducing blight, and improving the aesthetics. Furthermore, this asset gives the community an advantage over other neighborhoods in the City of Albany because it creates opportunities for smart growth projects to encourage the redevelopment of downtown Albany. The development of mixed income housing, including homeownership opportunities and affordable rental housing units, is a viable way to develop the economic potential of the neighborhood. New housing developments such as Habitat for Humanity have already started to do work in the neighborhood, which are expanding the variety of quality housing opportunities for the city's residents. While the main target for the revitalization of Sheridan Hollow is to accommodate the needs and desires of the neighborhood's current residents, developing opportunities to attract new residents is also encouraged. Community branding and promoting the historical character of the neighborhood can increase the value of the neighborhood's housing stock and sense of place.

Planning and Development Trends

As part of our recommendation, we suggest that economic development studies acknowledge broader regional and urban planning and development trends that impact economic development activity in small urban neighborhoods like Sheridan Hollow. This

section includes an overview of these components, and offers suggestions to consider strengthening the report or future reports.

Economic Development in the 21st Century

Housing preferences, community expectations, available amenities, and the business environment are just some of the many factors that shape the relationship between land, labor and capital. Economic development in the 21st century requires a specific understanding of the marketplace. As similar small- and medium-sized cities across the country experiment with different development strategies to adapt to market realities, a set of common best practices have become guidelines for economic development. Public or private investment in Sheridan Hollow should be considered in relation to the following set of principles and trends.

Public/Private Partnerships (PPP)

A public/private partnership is the combination of public and private investment, with the balance between the two depending on the project scheme and context (Licciardi & Amirtahmasebi, 2012). Projects are implemented through a special purpose vehicle (SPV) responsible for all PPP activities, including the coordination of financing and service delivery (Licciardi & Amirtahmasebi, 2012). Having the right combination of organizations, institutions, developers, and non-profits is essential for the success of PPPs. By initiating a strategic plan with a PPP, the investment becomes more stable. The public burden for capital projects is balanced by private financing and private investors feel more secure in their investment knowing a public agency is backing the project with the goal for a long-term partnership. With the level of risk and uncertainty manageable, PPPs have become a common practice in cities across the world.

"Integrated conservation" Approach

Evidence shows that there is a correlation between projects aiming at regenerating historic city cores and underutilized land and a city's ability to attract talent and business investment (Licciardi & Amirtahmasebi, 2012). These enticing projects create a ripple effect, increasing local land values significantly. An investment in cultural capital is an investment in economic development. Conservation efforts can be integrated into a strategic plan in the following ways:

1. Investment for conserving landmarks and infrastructure.
2. Investment to transfer resources to the local community, in the form of grants or loans for residents to improve their historic housing and to support job creation and retention.
3. Institutional mechanisms to facilitate the adaptive reuse of buildings and land with heritage value.

(Licciardi & Amirtahmasebi, 2012)

By all measures, historically or culturally significant properties and those adjacent have significantly higher value in the real estate market. The initial investment is often the most difficult part to overcome due to the higher potential value of the property and the higher

costs for rehab and maintenance. Still, the most successful cities are investing time and money into filling the gap without sacrificing control over the community vision.

An “integrated conservation” approach is associated with several important policy terms. Urban neighborhoods like Sheridan Hollow with a significant percentage of historic building stock, are investing in projects involving all of the following:

- *Preservation*: ensuring the continued existence of the asset;
- *Conservation*: caring for the asset and maintaining it in proper condition according to accepted professional standards;
- *Renovation or restoration*: returning an asset that has deteriorated to its original condition;
- *Adaptive reuse*: ensuring continuity of use through minimal changes to the asset; and
- *Area conservation planning and historic environment initiatives*: these ensure the value of historic buildings and sites to the economic buoyancy of whole areas

(Licciardi & Amirtahmasebi (2012)

Knowledge-Driven

The 21st century economy is driven by a highly trained, highly talented, and highly skilled workforce. An increase in the affordability of mechanized systems and smart technology as well as the change in consumer preferences has shifted demand toward quality over quantity. It is in this environment that the businesses that attract and maintain the most talented workforce are the most profitable and sustainable.

High growth companies have said they value a talented employee base as the most important business-related resource that cities can offer (P.U.M.A., 2016). Cities with strong partnerships between community organizations, educational institutions, and businesses while offering employees an inviting place to live are raising revenues by attracting talented individuals highly valued by potential employers.

Value Sensitive

Workforce recruitment has shifted toward the laser recruitment strategy. In the past, there were plenty of employers practicing the “shotgun” recruitment strategy when attempting to fill factories and offices with low-level workers. In most cases, the expectation was that the employee would learn their role on the job. In the 21st century, employers target particular employees with a great depth of knowledge and experience in a particular specialization. In turn, their expertise drives a business into a niche market. Specialization in goods and services has become the norm. As a result, businesses often need to assert their high value position within a regional market. The most sustainable type of economic development is irreplaceable.

Place Driven

Saturated jobs markets and rising housing prices in the large major cities of the United States has led to the emergence of the new “opportunity cities” (P.U.M.A., 2016), small- and medium-sized cities with affordable living standards, historic character, and a city

engaged in the direction of their communities. The successful cities understand their comparative advantages in the regional marketplace and direct investment toward maintaining and enhancing their assets. Programs offering assistance to find jobs, housing, and services are an investment in the city's greatest asset, its people. Connecting investment with "city building" (P.U.M.A., 2016) activities demonstrates a clear public interest in the long-term success of the city and its people.

Place-based investment attempts to recognize the interaction between investment and the creation of place, quality of life issues, and economic growth (see figure 3). Place-based investment recognizes the role of providing public goods can have upon community and economic development. Directed investment in a neighborhood can offer residents and visitors an appealing, vibrant and active space. Growth will be more sustainable when significant development builds off existing assets and community strengths.

Building off of a community's character is vital for success. Heritage and culture are assets. Heritage and local practices are often the differentiator that attracts talent to cities. People are willing to travel greater distances and pay more for travel costs to visit historical and cultural sites. The cities that are the most successful at meeting the jobs and growth aspirations of their inhabitants, while alleviating poverty and working toward inclusion, will be those that direct all of their resources to do so.

The largest demographics driving the trend toward downtown living are Baby Boomers and Millennials. Community amenities that appeal to Boomers and Millennials include a variety of quality dining and entertainment options, and investments in promoting healthy lifestyles and social interaction from dog parks to public markets (P.U.M.A., 2016).

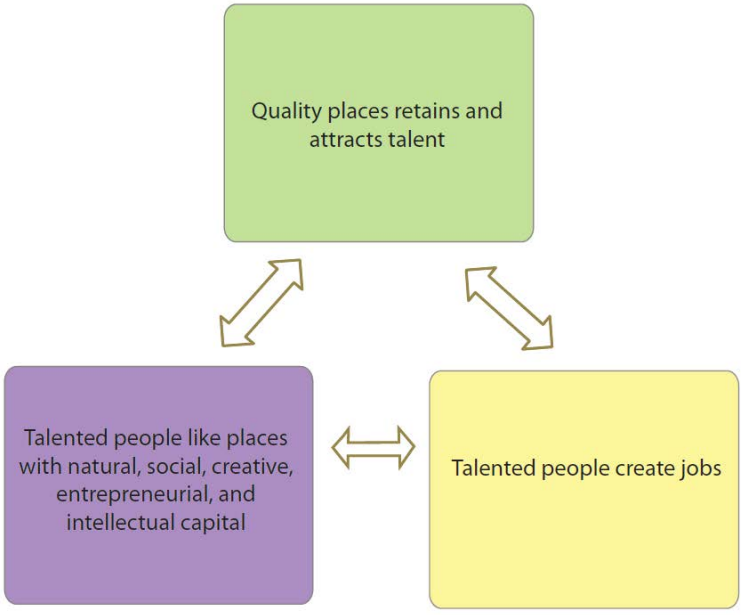


Figure 3. Model of Place-making and Place-based Investment
Source: Carlisle & Carlisle (2013)

Educational Infrastructure

The 21st century American economy depends on a competitive and skilled labor force. Cities such as Albany with a large number of educational institutions and a strong civic environment are prime investment opportunities. Fostering relationships between education and business creates a mutually beneficial connection between local skilled labor and local businesses.

Educational institutions are civic anchors, economic stabilizers and incubators of new creative businesses and jobs. Communities that take advantage of regional civic anchors can maximize on the relationship with opportunities for job training, technical assistance, research, capacity building, and post-graduate employees. Connecting local public school systems to colleges and technical schools, should be explored. The development of quality downtown K-12 schools is essential to attracting and retaining young talented individuals and their families.

Invest In, Not Out

Evidence of the benefits of urban development over sprawl include an increased tax base, more revenue to balance the increase in expenditures, and a greater population of in a smaller space to foster connections between talented individuals. Declining urban densities increase energy use as well as air and water pollution, which have both personal and public costs (Dincer, 2001; Tregoning, 2002; Portney and Kent, 2002; Newman and Kenworthy, 1989; Naess et al., 2001; van de Couvering and Schwanen, 2006). Reducing sprawl will reduce public expenditure to expand infrastructure, build new schools, and serve public health and safety.

Concentrated development patterns continue to demonstrate a reduction in public and private costs in cities across the country. Fiscal impact studies on the change of per unit public costs and development density show a decrease in public expenditure as the density of development increases and development becomes more compact (CDRPC et. al, 2015). Increases in lot sizes and frontages require the municipal authority to increase property taxes in or to meet the growing demand on public facilities and the growing distance between infrastructure connection points.

A 2007 study of the Capital District completed through a partnership between the Capital District Regional Planning Commission (CDRPC), the Capital District Transportation Committee (CDTC) and the University at Albany Department of Geography & Planning estimated the potential fiscal impact of alternative population growth rates and patterns. Through their research, the collaboration was able to measure approximately $72.5 million dollars of regional savings in capital costs over the next 25 years of development concentrated in existing centers. In the Capital District, single-family detached residents on lots 1 acre or larger required a public expenditure of $593 and those on lots less than 1 acre had costs amounting to $527, while attached residential units only consumed $329 in public costs. If the region adopts a more compact development form and the population grows at its historic rate (1% annually), the collective public sector may incur enough savings to provide necessary infrastructure relative to its current pattern of growth.

However, if growth accelerates (a goal of regional leaders), the savings would approach $1 billion dollars for public expenditures to support this growth.

Research has concluded that public policy has helped shape land markets making suburbanization more desirable relative to other urban forms (Hanson, 1992; Speir and Stephenson, 2002; Burchell et al., 2002), hence, there is no reason why it cannot do the opposite.

Smart Growth

The concept of smart growth can be best summarized by the following list of characteristics:

1. Mixture of land uses
2. Compact building design
3. Range of housing opportunities and choices
4. Walkable neighborhoods
5. Distinctive, attractive communities with a strong sense of place
6. Preserved open space, farmland, and critical environmental areas
7. Increased direct development towards existing communities
8. Variety of transportation choices
9. Community and stakeholder collaboration in development decisions

(CDRPC et. al, 2007)

The advantages of implementing smart growth principles are clear. Walkable streets provide a comfortable environment for pedestrians, increase dwell time, and promote a healthier lifestyle. No dedicated parking reduces the public burden on infrastructure, reduces the amount of automobile traffic in the area, encourages alternative modes of transportation, increases development opportunity since parking is of little consequence no matter the use, and allows for greater density and intensity of uses. The mixed-use buildings of traditional urban communities offer a more fiscally stable investment, provide much needed local retail, increase the amount of foot traffic, and enhance the experience of place in the neighborhood. Diversity of building age, building size and granularity are essential to urban vitality.

Lifestyle preferences favor walkable, bikeable and transit-rich communities. Cities look to maximize the use of existing infrastructure and promote sustainable development (P.U.M.A., 2016). Sheridan Hollow's compact mixed-use urban environment offers the economic model for a sustainable future.

Best Practices and Case Studies

Warehouse Rehab & Reuse

A strategy for increasing investment in Sheridan Hollow is by focusing efforts toward a single groundbreaking project. One site that has been considered for a substantial development project is the former Freihofer Plant. Whether the plan is to convert the space into offices, residential units, or commercial space, there are several examples of

successful adaptive reuses for the former factories and warehouses in cities across the country. Here are a few successful redevelopment case studies:

Boiler House Offices, Ambler, PA
Beginning in the early 2000s, the City of Ambler began implementing a Redevelopment Area Plan. Along the sites selected for new development was the abandoned Keasbey and Mattison Boiler House. It immediately became a target for reuse given its historic value, its location to existing projects and its poor condition hampering the character of the area. A managing group called Ambler BH Development Partners, LP was formed In order to guarantee the success of the project. Boiler House Offices has a LEED platinum certification and is the home to six companies.

Warehouse 71, Cohoes, NY
The $2.7 million project redeveloped a four-story, brick, mid-1800s textile warehouse into 22 market rate apartment units. Taking advantage of the adaptable warehouse space, 16 of the units vary in design, the first floor units are two story lofts, while the rest of the apartments are on a single floor. Units range from 700 square feet to 1,800 square feet with units available from $1,200 to $2,000.

Greentown Labs, Somerville, MA
Greentown Labs is the largest clean technology incubator in the Northeast. The site offers machine shop space, cheap software downloads, administrative assistance, and marketing sponsorships for entrepreneurs and regional small businesses. Around 50 organizations are currently members of Greentown Labs.

Krog Street Market, Atlanta, GA
Located at the site of a former potbelly stove and iron-pan factory, Krog Street Market is a nine-acre mixed-use development that includes the market and restaurant space along with 225 housing units. The site has embraced its unique industrial character and become a new gathering place for the neighborhood.

Druthers Brewing Co., Albany, NY
The Druthers Brewing Co. in Albany opened on May 26, 2015. It is the second location of the brewery in the Capital Region. Housed in an 18,000 square foot warehouse originally constructed in 1901, Druthers produces enough beer to sell to regional vendors. The brewery also includes a restaurant space with a wood-fired oven and several taps for visiting customers. About 50 people are employed by Druthers at the Albany location.

Urban Agriculture & Healthy Living

As part of the community vision, local organizations in Sheridan Hollow have selected urban agriculture as one of the major areas for investment. Along with the prospect for community-level agriculture is the opportunity for partnerships with regional stakeholders. Given the lack of local expertise on community gardens and a small existing stock of local professionals in the culinary industry, it may be essential to make a partnership with an organization to build capacity.

One potential partner is Capital Roots. Based in Troy, NY, Capital Roots owns and operates several community gardens, offers training programs, runs children's classes, manages a marketplace, and delivers food to neighborhoods in need. The following is a list of programs offered by Capital Roots, which could be applicable to Sheridan Hollow:

Capital Roots Produce Project provides students a small stipend and school credit to assist in operating farmland owned by Capital Roots. Year round training takes place in either of the two greenhouses on site. The program offers students the opportunity to gain useful skills, work collaboratively with their peers, and practice hands-on applications of math and science.

Capital Roots Taste Good Series serves children in pre-school through second grade. They can participate in a six-week educational program on practicing healthy lifestyles. Capital Roots hopes to instill healthy eating habits in children from a young age in order to improve the health of families, and in turn, the long-term health of the community.

Capital Roots Health Stores provides fresh produce at an affordable price to urban convenience stores across Albany, Rensselaer and Schenectady counties. Twice a week Capital Roots restocks stores with limited healthy food access and will assist in the installation of custom-designed refrigeration units for storage. With investments in community gardens, a local test kitchen and culinary incubator would have a sustainable urban agriculture to draw from.

Stock Pot Malden in Malden, MA is an example of a culinary incubator having a substantial impact on a community and a profitable return for investors. Membership at Stock Pot grants access to any of the classes offered including business development and planning, financing and bookkeeping, and marketing, In addition to the incubator space, a commercial kitchen is used by a variety of regional food trucks, caterers, and food retailers.

Growth Management

A Planned Growth Strategy (PGS) was implemented by the City of Albuquerque to manage growth by concentrating capital investments into the redevelopment of older neighborhoods and the downtown, update public infrastructure and facilities, and invest in the overall quality of life. The City agreed to direct investment to strategic areas called Urban Service Areas (USA). Development in these areas was selected to meet the particular needs of the USA. The PGS in the City of Albuquerque has been successful by implementing following four essential guidelines:

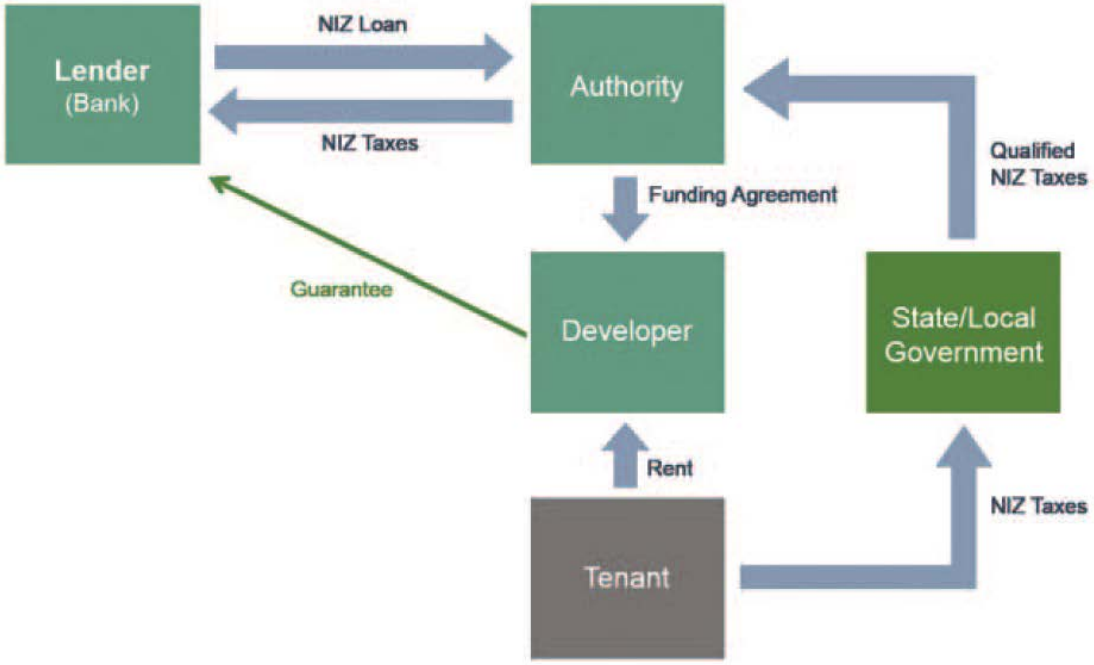
1. Capital improvement programs and plans should support the emergence of cores and corridors
2. Develop impact fees consistent with the actual cost to deliver the service
3. Time road and utility construction to ensure orderly growth
4. Encourage higher densities with mixed-use cores and corridors

(Bratt & Gould, 2016)

Pragmatic public and private sector leaders working together to prioritize economic development by investing in infrastructure to improve a region's quality of life, and provide opportunities to train a versatile workforce is another path to success. The Neighborhood Improvement Zone (NIZ) in Allentown, PA serves as an example (McAvey et. al, 2016).

NIZ legislation was designed to use state resources to focus development and investment in Allentown. The Allentown Neighborhood Improvement Zone Development Authority (ANIZDA), a temporary local authority, was given special powers to be a conduit for financing capital improvements and directing investment (see figure 4). A form of Tax Increment Financing (TIF) was used to direct increases in property values as well as taxes on the various holdings and transactions within the Zone to the authority (McAvey et. al, 2016).

Figure 4. ANIZDA Funds Flow Chart



Source: ANIZDA

Although the scale of initial disinvestment in Allentown and therefore its current success is much greater than that of the City of Albany, the strategy of directed growth targeting key neighborhood goals using a combination of public capital improvements and beautification projects along with private investments is applicable. A similar strategy could be implemented in Sheridan Hollow if not the entire Arbor Hill neighborhood.

“Hope in The Hollow” Panel on Economic Development

As part of an initiative to bring together regional stakeholders to discuss future economic development strategies in Sheridan Hollow, a panel discussion was convened on Friday, December 9, 2016 at the AHP Homeownership Center in Sheridan Hollow from 12:00pm to 1:30pm. The presentation, entitled, “Hope in the Hollow,” laid out a brief overview of the neighborhood, introduced Michaelle Mugisha (the author of the *Economic Development Gap and Resources Analysis for Sheridan Hollow*, who delivered brief remarks on her methods and finding), and concluded with a set of broad economic development recommendations based largely on current trends in the urban planning field. The objective was to bring together a diverse group of local economic development professionals and to facilitate a conversation on the topic of potential efforts to revitalize the neighborhood. Attendees included Capitalize Albany’s Sarah Reginelli, Empire State Development’s Mike Yevoli, and Sean McGuire from the Capital District Regional Planning District. Susan Cotner and Louise McNeilly from the Affordable Housing Partnership were also in attendance, along with the Community Loan Fund’s Linda McFarlane, and Roy Conrad, a resident of the neighborhood and community leader.

The agenda for the panel discussion kicked off with a round of introductions by the panelists, professors, students, and other attendees before segueing into a brief overview of Sheridan Hollow and its trends. The panelists were then asked to brainstorm practical ideas for economic development in Sheridan Hollow before taking a short break. The discussion touched on Sheridan Hollow’s obvious geographic challenges, preserving affordability and avoiding gentrification, and leveraging Albany’s nearby institutional anchors. Other topics included the potential for conducting a commercial kitchen feasibility study, various supply-chain issues, and workforce development more broadly. Michaelle Mugisha’s “Economic Development Gap and Resources Analysis Report” was then introduced, and Mugisha delivered brief remarks on her methods and findings. Our team concluded by laying out a set of broad economic recommendations based largely on current trends in the urban planning field – and looking at case studies relevant to the difficulties in Sheridan Hollow.

Opening up the floor to feedback, the panel offered our team critical commentary. While our team’s recommendations offered a hopeful vision for the neighborhood, Empire State Development’s Mike Yevoli observed that planning professionals look toward developing Albany as a whole rather than focusing on one micro neighborhood with low name recognition. The negative perception of Sheridan Hollow among workers on Capitol Hill, who use the neighborhood’s parking lots during weekdays, is a critical barrier. Yevoli pointed out that the street memorials along Henry Johnson Boulevard are likely to dissuade outsiders from visiting its shops and stores, regardless of rebranding efforts. He also added that Sheridan Hollow should hone its eye on organic branding efforts, rather than pouring money into an organized campaign. He pointed to Lark Street, which branded itself as Albany’s alternative, bohemian neighborhood slowly over time, and suggested economic development efforts in Sheridan Hollow focus on leveraging its authentic identity and characteristics.

The panel achieved near consensus around other topics, such as agreement on advising the neighborhood to take a place-based approach focusing on strategic sites that are underutilized by offering opportunities as future real estate investments. Encouraging the neighborhood to strengthen connections to other neighborhoods and commercial districts/corridors in particular such as downtown Albany, Lark Street, Arbor Hill, and Henry Johnson Boulevard, was another common theme that arose from the panel. These strategies emphasized the neighborhood's assets, such as its walkability and accessibility to other city amenities, as well as unique characteristics such as the Hollow's several staircases. Another strategy that came out of the panel was an emphasis on identifying and building key anchor institutions to drive investment. The panel again reiterated the strength of the Hollow's access to adjacent commercial districts as an opportunity to drive investment in the neighborhood.

Additional opportunities for accessing economic development funding were also discussed. Sean Maguire shared that CDRPC manages the region's plan for US Economic Development Administration (EDA) grants, which have not been available locally for many years, but will be pursued next year. Maguire urged the community to advocate for itself by getting Sheridan Hollow projects on the EDA list. The EDA plan for funding requests is due in September 2017.

The reality is, as the panelists pointed out, that the City of Albany's population is currently less than 100,000 people, and its small scale must be taken into consideration when developing economic development strategies. Sheridan Hollow, like the city's other disadvantaged micro neighborhoods, suffers from an extensive lack of recognition and faces an uphill battle in terms of remaking its perception. Much was also said about Sheridan Hollow as a "bedroom community" because of its relatively cheap housing prices and closeness to Capitol Hill. One point of hope was the potential for leveraging Sheridan Hollow's proximity to nearby upscale restaurants was urban agriculture and the building of Albany's first commercial test kitchen. Several local models were discussed that could offer potential best practices but consensus was also reached on the need for a feasibility study to assess latent interest as a next step. The panel also explored the topic of local hiring through city or state contracts, but Sarah Reginelli cautioned that this is more difficult than it may seem and encouraged the neighborhood to first identify and establish strong partnerships with local businesses that have the potential to scale up, as a first step.

Recommendations

As a result of our research on economic development best practices and case studies, as well as take-aways from the panel discussion, we conclude with a summary of our recommendations for next steps in Sheridan Hollow.

Financial Strategies

The costs of living compared to the value of property in Sheridan Hollow are not aligned. Market rents are too low to cover operating costs and the return on the debt and equity capital used to rehab buildings. At the same time, the costs for the rehabilitation of the historic building stock exceed property values substantially.

Without considerable investment of capital, the private housing market will remain weak. Due to the size of the neighborhood, there are few opportunities to develop at scale. Given all of these site constraints, an economic development plan for Sheridan Hollow must take advantage of available financing options. Here is a list of local, state and federal programs applicable to Sheridan Hollow:

Low-Interest Bonds
A designated regional authority, bank or financial institution, or municipal body is often able to issue low-interest bonds to assist in the financing of community projects and strategic developments. Leveraged by assistance from the state or federal government, these bonds are often a valuable resource for capital improvement projects by organizations and their development partners. Before utilizing this resource, it is important for an organization to guarantee enough revenue to pay off the note in a timely manner in order to claim full ownership of the project and decrease uncertainty in the organization's ability to pay back future loans. Organizations should consider the implementation of other grants and/or a designated fund to meet repayment standards.

Community Development Block Grant Small Cities Program
The U.S Department of Housing and Urban Development (HUD) provides financial assistance to accepted small- and medium-sized cities for services to disadvantaged persons and affordable housing.

Community Services Block Grant (CSBG)
The Department of State administers funding to a designated local community action agency (CAA) or other community organization for efforts to reduce poverty, revitalize low-income communities and provide assistance to low-income families and individuals in an effort to move them toward becoming fully self-sufficient.

Capital Access Planning (CAP)
The U.S. Treasury provides funding to the State Small Business Credit Initiative (SSBCI) to fill the gap in loan losses by financial institutions as a result of small business lending. CAP is applicable to lines of credit or term loans as long as they are financing capital needs, technology or facility upgrades, business startups, or business expansions. Interested small business owners should discuss CAP with a local participating lender.

Community Development Financial Institution (CDFI) Assistance Program
New York State designed this program to build the capacity of designated CDFIs, which provide lending and financial services to underserved populations. These community organizations must be working toward a community vision by assisting small businesses, particularly those in low- to moderate-income communities.

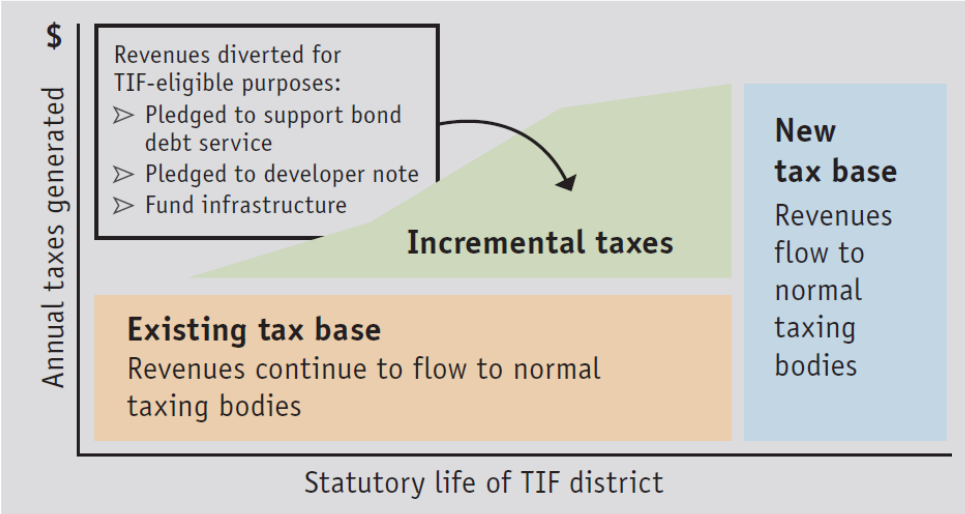
Job Development Authority (JDA)
As a public benefit corporation for New York State, JDA is tasked with building small business capacity by providing fixed-rate asset financing. The applicant must

demonstrate their inability to retain enough capital to complete important projects toward building a sustainable enterprise.

Linked Deposit Program
New York State subsidized low interest bank loans for existing businesses to develop a product, update equipment, expand operations, transition ownership, and retain employees. Interest rate reductions are set based on the number of program goals a potential investment will attain. Applicants are eligible to receive a maximum of $2 million over four years.

Tax Increment Financing (TIF)
A designated authority returns the growth in property tax and/or sales tax resulting from new development and increasing property values to be directed toward community assets. Tax increment finance mechanisms operate in two ways: through fiscal incentives such as tax relief or through tax disincentives to encourage urban development (see figure 5).

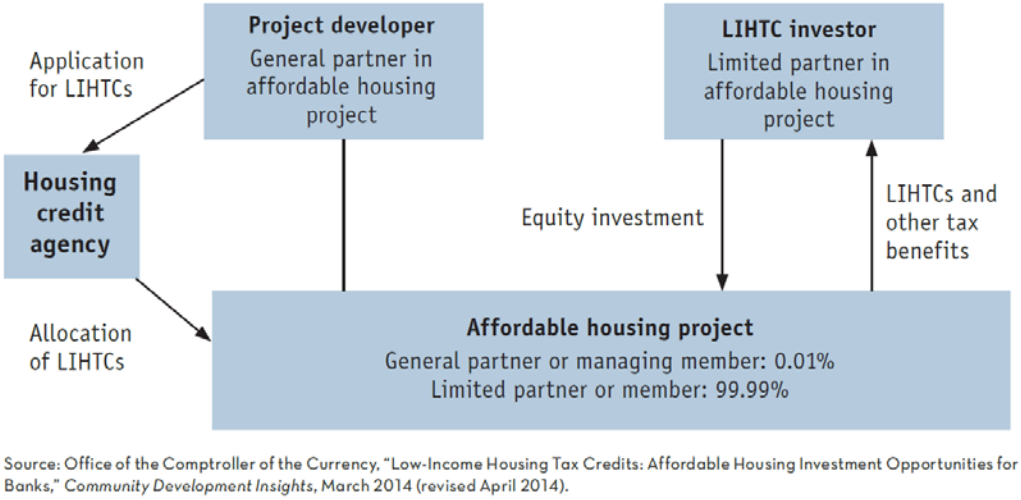
Figure 5. Basic TIF Model



Source: Peterson 2014

Low Income Housing Tax Credits (LIHTC)
Successful investors will receive a credit equal to either 30 percent or 70 percent of the eligible project costs of low-income rental housing, depending on the type of credit offered (see figure 6). To be eligible under the LIHTC Program, developers are required to satisfy either the 40/60 test, where at least 40 percent of the units are set aside for renters earning no more than 60 percent of the area median income, or the 20/50 test, where at least 20 percent of units are set aside for renters earning 50 percent or less of the area median income. Investors receive the tax credits, and developers receive the invested dollars. (McAvey et. al, 2016)

Figure 6. Typical Legal Structure for Direct Investment in LIHTC-Financed Project



Source: Office of the Comptroller of the Currency, "Low-Income Housing Tax Credits: Affordable Housing Investment Opportunities for Banks," *Community Development Insights*, March 2014 (revised April 2014).

Source: Office of the Comptroller of the Currency (2014)

NYS Historic Rehabilitation Tax Credit

The Federal government rewards credit against federal taxes which would be owed as the result of a historic rehabilitation project. Up to 20% of the expenditure is credited to improve rent affordability. If the project is toward the rehabilitation of a nonresidential property built before 1936 and is not a certified historic structure, only a 10% credit is provided. Properties must meet the following to qualify for the tax credit:

1. Have a business or another income-producing purpose
2. Substantial historic building rehabilitation project
3. National Park Service historic certification
4. Rehabilitation project process meets National Park Service standards

New York State issues an additional historic tax credit. Owners of historic homes listed on the National Registers of Historic Places located in one of the state-designated census tracts, can receive a credit for up to 20% of the repair costs

U.S. Department of Housing and Urban Development (HUD) Section 108 Financing

Federal program offering insurance on bank loans for either large-scale housing rehabilitation or public facilities development projects. In order to receive funding, applicants must meet one of the program's objectives:

1. Primarily benefit low- to middle-income people
2. Reduce slum and blight
3. Match the community's immediate needs

Residential-Commercial Urban Exemption

In New York State, any municipality may enact a Residential-Commercial Urban Exemption into local law as a method for enacting an exemption from taxation of nonresidential real property upon its conversion to mixed-use property. For at most twelve

years, a diminishing percentage of assessed value is not taxed until it is perceived that the property is able to support itself. The program can be a vital tool for traditionally disinvested communities with a traditional urban design struggling with stable investment in community rehabilitation and revitalization efforts.

421f Residential Improvements Exemption
In New York State, $5,000 - $80,000 in residential property reconstruction, alterations or improvements may qualify for property tax exemption. Each year a diminishing percentage of the increase in market values is exempt until it is perceived that the property is able to support itself. To quality, the property must be a one or two family residence, the majority of the property must be at least five years old, and improvements must total greater than $3,000.

New Markets Tax Credit Program
This federal government program, through a contract with a Community Development Financial Institution (CDFI), allocates a certain amount of tax credits with flexible terms toward projects which are difficult if not impossible to finance by conventional methods. A community that applies for the program must have a poverty rate of 20% or higher, or a median income lower than 80% statewide or metropolitan area median income. (McAvey et. al, 2016)

Community Loan Fund (CLF) Small Business Borrowing & Loans
The Community Loan Fund offers loans to low-income (80% AMI), minorities and women to aid in real property acquisition or improvements, everyday activities, and transition to more energy-efficient and green technology. Start-up businesses are eligible to receive a maximum of $25,000 while existing or expanding businesses are eligible for up to $50,000.

Applications

The large number of different funding streams available for economic development in Sheridan Hollow can be difficult to navigate. In order to assist Sheridan Hollow community organizations and potential investors, the following list provides possible strategies for the effective application of these programs:

1. **Payment In-Lieu of Taxes (PILOT)** and other incentives toward the generation of a project-specific fund or long-term capital improvements fund to be managed by a local authority designated by the municipal government.
2. Balance **Tax Increment Financing (TIF)** with state and federal grants as well as private and nonprofit or community organization financing to improve the ability for a community partner or organization to meet its financial obligations, or solvency. In addition to increasing the success rate of investments, this strategy ensures local control over the direction and magnitude of development.
3. A **Strategic Planning and/or Housing Trust Fund** can be used for assisting in the financing of large capital improvements projects and private developments. The benefits of a trust fund can include insurance for projects with uncertainty,

refinancing loans, and ultimately directing investment in the community toward the needs of the community.

4. Use the Albany County Land Bank to **bundle multiple vacant properties and deteriorating buildings** for rehab and new development at a profitable scale. Support the new development through a public-private partnership, historic tax credits, bank loans, Low Income Housing Tax Credits, the federal HOME Investment Partnerships Program, Section 8 project-based vouchers, and nonprofit financing. Local control can be maintained as private development and investment in Sheridan Hollow increases.
5. Tax-credits, additional incentives, and a charitable contribution deduction can entice private entities to **invest in local non-profits and community assets**. This strategy could be specifically applied to the Albany County Land Bank which owns a large percentage of strategic properties in Sheridan Hollow (Bratt & Gould, 2016).
6. Incentives should be offered for **private bundling** of a significant number of properties for redevelopment in target areas. One example at the state level comes from Missouri. The Missouri Land Assemblage Tax Credit Program helps developers put together a critical mass of properties (totaling about 50 acres) in distressed areas. State tax credits are provided to the redeveloper based on 50% of the acquisition costs and 100% of the interest costs incurred for a period of five years after the acquisition of an eligible parcel. Maintenance costs may also be included as acquisition costs. (Bratt & Gould, 2016).
7. Develop an impact fee program using **land value financing (LVF)** consistent with the actual cost to deliver a service and improve infrastructure as development increases. Consider **exactions** toward community goals with or without incentives for the developer. A few options for incentives include a contract with local businesses at a discount, a partnership with local jobs training facilities, fee waivers, tax credits, density and height bonuses, and a reduced parking requirement. The exactions could also be in lieu of an increase in property taxes as real estate values increase.
8. Seek financial incentives for property owners to rehabilitate their properties. A combination of **NYS Historic Rehabilitation Tax Credits** as well as municipal programs such as the **Residential-Commercial Urban exemption** and **421f Residential Improvements exemption** program should be implemented (Affordable Housing Partnership of the Capital Region, Inc. et. al, 2012).

A combination of several of the above proposals should be considered as a means for financing economic development in Sheridan Hollow. The effectiveness of the community's strategic plan will depend upon the ability for the community to leverage assets to guarantee solvency at the financing stage of development. As successful projects continue to be implemented in Sheridan Hollow, private sector interest will increase as the neighborhood's reputation improves.

While the program applications provided have been solutions in other cities across the country, Sheridan Hollow has its own unique set of characteristics and circumstances.

Any organization, corporation, nonprofit, or local authority must apply an economic development strategy for Sheridan Hollow in a manner appropriate to the local context.

Sheridan Hollow Merchant Association

Sheridan Hollow has a weak tax base due to the lack of a strong commercial presence. This is in part due to past and present land uses that market the neighborhood as an inopportune place for development. The neighborhood bears an unfair proportion of New York State government's undesirable land uses, such as large parking lots for state employees (non-residents) and a gas-fired co-generation facility to heat and provide electricity to state buildings (but does not provide any utilities for the benefit of Sheridan Hollow). A longer view also reveals that the current gas-fired co-generator facility was originally a solid waste to energy incinerator that resulted significant negative impacts in the neighborhood, ranging from pollution, declining property values, and adverse health risks. The facility created a considerable incentive for people and businesses to leave Sheridan Hollow, catalyzing public and private disinvestment. Furthermore, New York State's Office of General Services owns a considerable amount of the land in Sheridan Hollow, which restricts development options and contributes to several notable issues in the Hollow. For example, the large parking garage and impermeable surface parking lots for state employees that sit above the ravine at the southern end of Sheridan Hollow are major contributors to the storm water management issues that plague the neighborhood. The notable frequent flooding issue coupled with accelerated erosion and infrastructure deterioration resulting from excessive storm water runoff drive down property values and contribute to the negative perception of Sheridan Hollow.

As a result, the burden of public financing has fallen on the limited amount of resources spared by the neighborhood's predominantly low- and moderate-income residents, as well as from the diminishing returns on property values. The enhancement and promotion of business opportunities in Sheridan Hollow is essential to the long-term success of the neighborhood. Given the lack of substantial private investment, a partnership between existing business owners and community organizations could fill the gap. The creation of a Sheridan Hollow Merchant Association or related entity would tie community needs with local business needs for a more sustainable community, and could also help advocate for NYS to ameliorate some of its negative impacts. For example, the State could use its parking facility as demonstration project for green storm water management infrastructure and install solar farms on the lots. Another option might be using the co-generation facility to provide utilities to the neighborhood or cover the cost additional street lighting that the community has determined is a significant need.

Most new jobs in the United States have been in small and medium sized businesses. A Merchant Association could explore ways to support small businesses and startups through direct technical assistance, co-working and other flex spaces, creative incentives, designated innovation zones and other options (P.U.M.A., 2016). Sheridan Hollow through the Merchant Association could capitalize on national preferences for brick and mortar stores that offer one-of-a-kind products and personalized customer service.

Shared retail and “pop-ups” are examples of solutions to fill vacant storefronts and test new concepts in the neighborhood (P.U.M.A., 2016).

The Albany Center for Economic Success (ACES) would be the ideal leader in this initiative. The organization offers several programs assisting local businesses in Sheridan Hollow and across Arbor Hill. Investment in and promotion of the Merchant Association could be a part of ACES mission statement. By connecting business capacity and financial services to membership in and assistance from the Merchant Association, those who rely on ACES for its services could see the value in participating with other businesses in the community.

There are a considerable number of private, public and nonprofit funding opportunities for organizations that promote women and minority small business entrepreneurship and ownership. The InnovateHER Challenge, run by ACES, is one example of the effort to encourage more women and minority small businesses in Sheridan Hollow. Since 2015, 10 finalists from a local pitch competition have been selected to compete for a monetary prize and long-term support from ACES. The business plans must involve goods or services impacting women and families, present a sellable product or service, and explain how the good or service fills an underserved market demand. The Merchant Association should use the competition as an opportunity to increase local business sustainability while increasing organizational capacity.

Art and Culture

The positive response as a result of recent investments in the Albany Barn project, the Palace Theater revitalization effort, and the 255 Orange Street mosaic mural, demonstrate a willingness for the neighborhood and the city government to work together to tap into and build on the growing arts community in Sheridan Hollow and across Arbor Hill. Therefore, it would be a missed opportunity if the strategic plan for economic development did not include a plan for the arts community.

While many see blight and vacancies as negative assets, artists and the creative class often sees them as an opportunity to create a new space or a unique place to visit. One example already implemented in Sheridan Hollow was the Breathing Lights project, whereby filling empty buildings with simple light displays helped the neighborhood become more inviting. The 255 Orange Street mosaic mural is an example of how empty wall space can become a community centerpiece that transforms an entire block.

Sheridan Hollow’s proximity to the Palace Theater and the Capital Repertory Theatre is a major asset. A 2011 report by the New York State Regional Economic Development Council for Capitalize Albany selected the Palace Theater as an art, culture, recreation and tourism investment opportunity for the City of Albany. The Palace Theater was identified as a “local landmark” and a “gateway to Arbor Hill”. With Sheridan Hollow situated adjacent to the Palace Theater, it would be valuable for Sheridan Hollow to maximize the opportunity.

A strategic plan for the community must involve a partnership with these institutions as a means to attract visitors and residents to Sheridan Hollow.
Housing options for artists, classes for all ages, collaboration and studio spaces, recording studios, mural and sculpture projects, and outdoor community events are a few methods by which a long-term partnership could be fostered in Sheridan Hollow.

Community Garden and Urban Agriculture

Community agricultural space has the potential to add significant value to Sheridan Hollow. Strategic planning along with a feasibility study would determine the potential for a community garden and urban agriculture plan for Sheridan Hollow. A study of the potential for a test kitchen/culinary incubator with and without an urban agriculture presence should be completed as well.

For more information on possible implementation plans and organizational partnerships, refer to the Parks and Eco-District report on Sheridan Hollow.

Brownfield Remediation

Reviewing the economic benefits of brownfield remediation is central to the Affordable Housing Partnership (AHP) and Community Loan Fund's (CLF) New York State Brownfield Opportunity Area (BOA) project. . In the case of Sheridan Hollow, given that the potential BOA sites are located near the urban core, any new development will increase traffic in the neighborhood, injecting new life into the community. As clustered brownfields are redeveloped and formerly blighted areas gradually change to revitalized neighborhoods, there is an increased likelihood that developers will be attracted to sites in these areas and engage in even more development (Amezudzi et. al, 2003).

In Minnesota, a study of commercial properties and sales data at sites within Minneapolis and St. Paul has shown evidence of a complete rebound. Sales data was collected on over 8,000 commercial properties and over 150,000 residential single-family homes to determine whether property values only partially rebound after a site was remediated. Before the remediation process, homes near contaminated commercial sites were significantly lower in value compared to homes near clean commercial sites. At the time of the study, sales prices were found to have rebounded for homes around remediated sites so that their value was nearly indistinguishable to others in the market (Taylor, 2016).

A similar study over a five-year period in Youngstown, OH measured changes in property values in the vicinity of brownfield sites. Completed by the Western Reserve Port Authority, the study compared property values adjacent to contaminated sites and remediated sites. Without clean-up, property values were two-thirds lower than similar properties one mile away. Those properties near remediated sites increased in value by 18% (Nicholson, 2016).

One of the major arguments against brownfield remediation is the potential of remaining contamination from unsatisfactory remediation procedures. Considerable evidence leans heavily toward this situation being a manageable risk for lending institutions, and in turn, the development community (Simons et. al, 2003).

Conclusion

Sheridan Hollow has great potential to become a strategic site for revitalization in the City of Albany. Please consider the recommendations, tools, and strategies in this report as a starting place for future economic development conversations and planning initiatives. As detailed throughout this report, there are a number of possibilities and directions that the neighborhood could seek to revitalize the community. Regardless of the strategies that the neighborhood chooses to pursue, the Sheridan Hollow community should seek to establish partnerships with local and regional institutions, organizations, and establishments to foster local business opportunities that collectively work toward the community vision. Future development plans should be proactive and should focus on building upon the neighborhood's strengths, as well as work to strategically and creatively tackle its challenges.

Stormwater Management in The Hollow

Introduction

This report outlines a multi-pronged approach to reducing stormwater run-off in Sheridan Hollow that causes localized flooding, damages road and sidewalk surfaces and pollutes the Hudson River. The water infrastructure improvements outlined in this report will have great return on investment and long-term stabilization that invites new sustainable development projects. The historic neighborhood of Sheridan Hollow is prone to problematic flooding and excess stormwater runoff. Aside from the neighborhood's impervious urban surfaces, there is clay-like soil content beneath that severely limits natural rainwater infiltration in the ground. These problems are compounded by a steep ravine slope that formed along the Fox Creek; which currently runs underground through culverts beneath Sheridan Avenue.

Albany's annual rainfall is estimated to be 42 inches, with 35 inches of rainfall in 2015, and most sections of the neighborhood are unable to absorb it all. In urban settings like Sheridan Hollow, only 10-30% of stormwater is able to properly absorb into the ground due to impervious surfaces (Randolph, 2012). For context within the natural water cycle balance: forests produce the least amount of runoff, suburban development produces moderate runoff volume, and urban areas produce the highest runoff volume. Urban Development patterns that cover land with impervious surfaces increase peak surface water flow from any given storm event by reducing the amount of water that infiltrates the ground and increasing the rate and velocity at which runoff accumulates (Randolph, 2012). Most of the City's wastewater and stormwater combines in one connection called a Combined Sewer System (CSS) and is conveyed underground to a waste water treatment facility. The City's current combined-sewer overflow system discharges untreated wastewater into the Hudson River during wet weather events.

Table 1. Precipitation Characteristics for Albany, NY (2015)

Weather Condition	'15 #/Days	Climate Characteristic	Albany
THUNDERSTORM	20	Rainfall (in.) 2015	35.6
HEAVY RAIN	25	Snowfall (in.) 2015	40.2
RAIN	43	Precipitation Days 2015 (#)	126
LIGHT RAIN	137	Winter Average Precipitation (in.)	7.72
FREEZING RAIN	7	Spring Average Precipitation (in.)	9.99
HAIL	1	Summer Average Precipitation (in.)	11.37
HEAVY SNOW	4	Fall Average Precipitation (in.)	10.27
SNOW	12	UV Index	3.5
LIGHT SNOW	60	Elevation ft.	190
SLEET	7	Average Annual Rainfall	42.54
FOG	156	Record Daily Rainfall	6.9

The University at Albany's 2010 Planning Studio's Report found that 10% of the tax parcels in the Sheridan Hollow neighborhood are devoted to surface parking and 26% are vacant lots. Surface parking, roughly 10 acres of lot space, is a large contributor to stormwater runoff in the neighborhood and offers many opportunities to implement green infrastructure practices. Twenty-five acres of underutilized vacant lots scattered throughout the neighborhood also present an opportunity to incorporate runoff reduction design standards into new development projects. As indicated by climate characteristics in table 1, wet weather conditions occurred on more than 50% of days in calendar year 2015 (Climate data below was obtained from www.usclimatedata.com).

To compound the problem of stormwater runoff in the urban setting, Sheridan Hollow has poor soil quality and limited ability to absorb water. The data table below displays a snapshot of Sheridan Hollow's soil properties. Soil is a very important consideration in areas where soils are used as sites stormwater collection. As noted in Table 2, Sheridan Hollow doesn't possess ideal soil properties that favor stormwater retention. The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. The "very limited saturation" rating means that the soil and surface cover are not efficiently absorbing stormwater as it precipitates in the neighborhood. There are many factors that affect the performance rating, but urban areas typically have poor stormwater permeability, other ratings factors include depth to a water table, ponding, flooding, depth to bedrock, slope, stones, and cobbles affect the risk of pollution and the design and construction of the system.

Table 2. Web Soil Survey Results for Sheridan Hollow Neighborhood via USDA
Source: http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx
Summary by Map Unit — Albany County, New York (NY001)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	% of AOI
Ug	Udorthents, loamy	Very limited saturation	Udorthents, loamy (90%)	Depth to saturated zone (1.00)	0.1	0.1%
				Slow water movement (0.72)		
Uh	Udorthents, clayey-Urban land complex	Very limited saturation	Udorthents, clayey (40%)	Slow water movement (1.00)	0.0	0.0%
				Depth to saturated zone (1.00)		
				Slope (0.00)		
			Urban land (30%)	Slow water movement (1.00)		
Ur	Urban land	Very limited saturation	Urban land (85%)	Slow water movement (1.00)	11.0	9.9%
Ut	Urban land-Udorthents complex, 0 to 8 percent slopes	Very limited saturation	Urban land (50%)	Slow water movement (1.00)	100.2	90.0%
			Udorthents (30%)	Depth to saturated zone (1.00)		
				Slow water movement (0.72)		
				Slope (0.00)		
Totals for Area of Interest (Sheridan Hollow Neighborhood)					**111.2**	**100.0%**

The ratings in Table 2, both verbal and numerical, indicate the extent to which soil features can limit the soil capabilities. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be

expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00, greatest negative impact on the use is represented by 1.00. The neighborhood's percent composition of each component in a map unit is presented to help the user better understand the percentage of land coverage in the neighborhood. The ratings for all components in the table can also be viewed on a map by generating the equivalent report from the Soil Reports tab in the online Web Soil Survey. There also needs to be an onsite investigation to validate these interpretations and to confirm the identity of the soil, at a given site.

Based on the needs of the neighborhood in preparing for Phase II of the BOA Program, the Water Infrastructure Team compiled recommendations and strategies for future implementation. To support the guidelines of this report, we performed on-site visits throughout the neighborhood to identify specific locations in need of appropriate "green" infrastructure strategies and stormwater management tools. Research and review of several maps helped to produce a new map that marks key sites, corridors, and intersections. The recommendations outlined in this report are also supported by similar local and regional projects, with estimates for cost of design, construction and ongoing maintenance.

Methodology

The Water Infrastructure team combined many different sources of information in order produce the written plan recommendations and guidelines for the neighborhood. Input and information was compiled from the following organizations: City of Albany Water Department, Capital District Regional Planning Commission, Affordable Housing Partnership, 3T Architects, U.S. Environmental Protection Agency, NYS Department of Environmental Conservation, University at Albany Department of Geography & Planning, and Sheridan Hollow Neighborhood Association.

The focus areas of this report cover components of streetscape, housing, parks, and parking lots. Each component identifies locations in the neighborhood and the appropriate strategies that can potentially be implemented. The sites and locations determined to be of priority were selected based on a comprehensive data analysis, the neighborhood's hydrography and topography, input from stakeholders and a neighborhood tour led by AHP.

After determining where and how stormwater travels and collects in the neighborhood, the characteristics of each site were matched with appropriate Green Infrastructure solutions including but not limited to Permeable Pavements, Bioretention, Street Trees, Wetland Restoration, and Downspout Disconnect. Green infrastructure, or "GI", is a cost-effective approach that meets the goals of community revitalization, runoff reduction and beautification. GI promotes the natural cycle of water, instead of allowing rainwater to flow into streets and down storm drains. Most forms of GI have the added benefits of streetscape and landscape beautification, which can also increase property values.

The unique characteristics of this neighborhood required a combination of solutions and strategies for stormwater mitigation. There is no one-size-fits-all approach that works for all sites within the neighborhood. Each site will require different tools and strategies to have the best impact. The topography, surface type and building structures were main determinants of each applicable improvement strategy.

Strategies

The strategies outlined in this report include short and long-term solutions to be used by both private and public sector entities as well as individual homeowners. The report produced by the Water Infrastructure Team aims to achieve the following goals:

- **Community Revitalization -** Find water infrastructure improvement strategies that bring the community together and help to stabilize local economic conditions.
- **Flood Hazard Mitigation Risk Reduction -** Promote low impact development strategies to mitigate storm water runoff and reduce flooding.
- **Landscapes and Streetscapes Beautification –** Improve the existing built environment and recommend sustainable development options suitable to the community's character.
- **Hudson River Water Quality -** Protect and improve the quality of the Hudson River for recreational use and to support wildlife habitats by reducing stormwater pollution.

Each of those four goals are interrelated and support the overarching goal of preparing the neighborhood for Phase III of the BOA Program and ultimately improve the quality of life for the community. The goals also answer many action item priorities detailed in "Sheridan Hollow Research Project Wish List" compiled by stakeholders in June 2012 and published in meeting minutes on the AHP website (www.ahphome.org). The water infrastructure guidelines are aligned with many local and regional plans and initiatives, but more importantly align with "Wish list" criteria and deliverables. The wish list items relevant to water infrastructure recommendations include "enhanced environment such as pedestrian friendly streetscapes, improved sewer and storm water systems, enhanced recreation facilities," "increased quality of life," "urban agriculture," and "public space improvements."

The recommended strategies revolve around the need to sustainably manage stormwater runoff in the neighborhood's unique urban environment. Stormwater is rainwater or snowmelt that runs off surface cover when the volume exceeds absorption rates. When stormwater is properly absorbed into the soil, the water is naturally filtered and ultimately replenishes aquifers or flows into streams and rivers. Urban settings can disrupt the natural water cycle impervious surfaces such as pavement and roofs prevent precipitation from soaking into the ground. Instead, water runs rapidly into storm drains, sewer systems and drainage ditches. The increased flow of water can cause problems for everyone, like downstream flooding, stream bank erosion, increased turbidity (muddiness created by stirred up sediment) from erosion, habitat destruction, combined sewer overflows, infrastructure damage, as well as contaminated waterways.

Stormwater runoff is a main cause of degraded water quality; which negatively impacts health of aquatic animals, recreational use of water, with economic costs to private industry and high costs of wastewater treatment. The following list details common stormwater pollutants & sources that can be found in Sheridan Hollow:

- Sediment - Construction sites, disturbed areas & streambanks.
- Nutrients - Fertilized lawns, roadsides, leaky sewers & septic tanks
- Bacteria - Leaky sewers & septic tanks, pet wastes
- Trace Metals - Automobile wear and tear, exhaust industrial areas
- Road Salt - Chemical applications to snow and ice
- Toxic & Synthetic Chemicals - Pesticides, automobiles, transport spill, illegal dumping
- Thermal Impacts - Urban landscape/impervious areas, tree removal, shallow ponds

Source: www.Riverlink.org

While some of the contributors listed above are more prevalent than others, the neighborhood's ongoing construction activity is prone to runoff pollution. There are precautionary measures that can help new development and existing structures reduce environmental impacts. Proper erosion and sediment control measures should receive extra attention and enforcement in light of the recent increase in construction projects in the neighborhood. In addition to site control standards, new development projects should be required and/or incentivized to incorporate green infrastructure (GI) measures into the design. This report recommends green infrastructure as the key solution offered to mitigate stormwater runoff.

Green Infrastructure

There are several retention and diversion strategies to mitigate stormwater run-off, flooding and sewer overflow in the Sheridan Hollow neighborhood and Downtown Albany. The main solution offered to mitigate stormwater runoff is a range of green infrastructure strategies and tools that can be implemented on different scales in the neighborhood. According to the New York State Stormwater Design Manual Green infrastructure planning includes measures to preserve or restore natural features of a project site and reduce impervious surfaces. The city of Albany is already familiar and supportive of green infrastructure in its parks, streets, and parking areas. The following guidelines present feasible and cost-effective solutions.

New York State Government and local municipalities have shown support for green infrastructure through policy, plans, codes, ordinances, design manual and other initiatives. The City of Syracuse, in 2009, became the first community in the US to be legally required to reduce combined sewage overflows using green infrastructure. During that 2009 state mandate over Syracuse, Onondaga County's Save the Rain program assisted the city with project implementation. Syracuse deployed a strategy of two-thirds green infrastructure and one-third grey infrastructure to meet its CSO requirements. Onondaga County is a national model for the implementation of a balanced

approach to stormwater management, with over 180 distinct green infrastructure projects listed on the website (www.savetherain.us). More communities are anticipated to explore green infrastructure as these practices become industry standard to address CSOs. Model sustainable stormwater management ordinances are also available in several publications including the NYS DEC's Stormwater Management Design Manual. Sheridan Hollow would benefit greatly from local policies that require, encourage, incentivize or subsidize green infrastructure strategies.

The green infrastructure development strategies outlined below can be implemented in a range of sites throughout the neighborhood, including parks, streetscapes, buildings, and parking lots. The following is a list of potential GI practices that can be incorporated in Sheridan Hollow:

Bioretention Basins

Bioretention basins are landscaped depressions or shallow basins used to slow and treat on-site stormwater runoff. Stormwater is directed to the basin and infiltrates the soil where it is naturally treated and filtered by a number of physical, chemical and biological processes.

These systems can include the following elements, each serving different functions:

- Grass buffer strip - reduces runoff velocity and removes suspended solids.
- Vegetation - Helps remove water through process of evapotranspiration and remove excess nutrients through nutrient cycling.
- Shallow ponding area - provides storage of excess stormwater flows and its subsequent evaporation, also aids in the additional settlement of particulate matter.
- Mulch - an organic layer that encourages micro biological degradation of petroleum-based pollutants, aids in pollutant filtration and reduces soil erosion.
- Engineered soils - supportsvegetation growth along with nutrient uptake and provision for water storage. Soils should include some clay to adsorb pollutants such as hydrocarbons, heavy metals and nutrients.
- Sand bed - provides drainage and aeration of planting soil as well as an aid in flushing pollutants.
- Underdrain system - removes excess treated water to storm drain system or receiving waters (Lake Superior Duluth Streams, 2016).

Curb Extension (see figure 7)

A vegetated curb extension, also referred to as a “bump-out,” protrudes into the street either mid-block or at an intersection. This GI technique alters curb depths depending on street widths, curb-side parking and pedestrian crossings. This multi-layer approach is composed of a sub-surface layer of stone beneath engineered soil mixtures and strategic vegetation. An inlet or curb-cut directs runoff into the bump-out structure where it can be stored, infiltrated, and taken up by the plants through the process of evapotranspiration. Excess runoff is permitted to leave the system and flow through an outlet. The vegetation height of the bump-out will be short enough to allow for open sight lines of traffic. Aside from managing stormwater, bump-outs also help with traffic-calming, and when located at crosswalks, they provide a pedestrian safety benefit by reducing the street crossing distance (Philadelphia Water Department, 2016).

Figure 7. Philadelphia Water Dept. - Curb Extension

Stormwater Planter (see figure 8)

Stormwater planters are usually rectangular concrete structures installed in a sidewalk, lined with permeable fabric, and filled with gravel, soil, small plants, shrubs and sometimes trees. The level of the soil in one of these planters is placed lower than the level of the sidewalk with curb cutouts to allow water to flow into the box from street level. For heavier rainstorms, an overflow pipe is installed to allow excess water to flow back into the stormwater system. These planters manage stormwater by providing storage, infiltration, and evapotranspiration of runoff (Philadelphia Water Department, 2016).

Figure 8. Curbside Stormwater Planter
Source: Philadelphia Water Department

Rain Garden (see figure 9)

This structure is designed to collect stormwater allowing for infiltration and retention of runoff which reduces the amount of water entering the sewer system. These gardens can also provide aesthetic improvements to the neighborhood. Unlike traditional raised-bed gardens, rain gardens are depressed to allow water to collect and slowly permeate into the ground. Most rain gardens begin with a base layer of stone followed by permeable soil and vegetation. Rain gardens can be used to build social capital through community

engagement. This technique provides an alternative to traditional community vegetable gardens that may not be suitable for certain areas of the neighborhood depending on soil contaminants. Below is a list of rain garden demonstration projects throughout Albany County as showcased by the Albany County Stormwater Coalition:

- Town of Bethlehem, Elm Avenue Park
- City of Cohoes, Veterans Park
- Cornell Cooperative Extension, 24 Martin Rd
- Albany County Shaker Heritage Museum
- Town of Colonie, Public Operations Building, 347 Old Niskayuna Road
- Village of Colonie, Cook Park
- SUNY Albany, Uptown Campus, Alumni House
- Town of Guilderland, Parks and Recreation Building.

Figure 9. Rain Garden at the Ulster County Office of the Environment in Kingston. Photo: DEC

For more information about rain gardens visit the Albany County Stormwater Coalition's Green Infrastructure page: http://www.stormwateralbanycounty.org/green-infrastructure/

Bioswale (see figures 10 & 11)

A bioswale is an engineered, often grassy or vegetative depression that collects stormwater runoff. Bioswales are commonly found along the perimeter parking lots and office buildings. This relatively simple grassy depression is used to treat small drainage areas and require minimal maintenance compare to a complex flower garden with diverse species. This technique is ideal for Sheridan Hollow due to the large percentage of surface parking. Bioswales are generally the most cost effective form of GI and require the least amount of maintenance. Depicted below is a complex form of bioswale in figure 10, contrasted with a simpler, low-maintenance form of bioswale in figure 11:

Figure 10. Vegetative Bioswale along sidewalk Photo Source: Lake Superior Streams Organization

Figure 11. Grassy Depression Bioswale with Rocks Photo Source: Lake Superior Streams Organization

Permeable Pavement

Permeable pavement is an infrastructure improvement tool that is incorporated into sidewalks, parking areas and sometimes roadways. Permeable pavement is a specially designed and structurally engineered pavement materials that allows water to pass through it and infiltrate into the soil below. Different types of permeable pavement include porous concrete, porous asphalt and concrete pavers. This technique can have impactful runoff reduction based on estimations that one square meter of concrete sidewalk can produce 30 liters of run-off during a one-inch rain event (Brown, 2015). Traditional asphalt and concrete pavement is completely impervious and directs all stormwater runoff directly into the sewer/stormwater system. Impervious surfaces such as pavement leads to the many problems discussed in this report, such as flooding, erosion, pollution and property damage.

From a development standpoint, using permeable pavement can be beneficial because it can count toward the amount of pervious surface required in development and construction projects. Many cities, including Albany, are mandated to set aside land for stormwater runoff reduction purposes. Using permeable pavement can count toward that mandatory set-aside, leaving more space available for development purposes (Lake Superior Duluth Streams, 2016). This can be used as an incentive for developers looking to build in Sheridan Hollow.

Figure 12. Pervious Pavement Test by Pouring Water
Source: Philadelphia Water Dept.

The climate in the Northeast presents a challenge for permeable pavement in that snow plows and winter sanding can dislodge and clog the pavement. This requires some maintenance such as resetting of pavers and industrial vacuuming and steaming of the pavement every 3-5 years. Another challenge in Sheridan Hollow is the clay soil that lies beneath it. Permeable pavement requires permeable soil beneath it, so wherever this is applied in the Neighborhood, would have to go through some kind of soil amendment to condition the soil. In terms of cost this may not be feasible on large scale parking lot projects, but for smaller sidewalk projects, porous pavement could be a possibility.

The cost of laying porous pavement is generally higher than that of traditional pavement. Porous asphalt is about 10-15% more than traditional asphalt, and porous concrete is about 25% more than traditional concrete. Pavers can be as much as four times the expense of regular concrete or asphalt (University of Maryland Extension). This increased cost though is often offset by the elimination of the need for curbs, gutters, storm drains and large retention ponds that traditional paving often require. There are also grant opportunities offered to communities looking to implement this technology; some grant information has been provided in Appendix B.

The cost of permeable pavement will vary depending on location and company, but pricing identified by various online sources estimate **concrete pavers** to be $4-6 per square foot, **Porous Concrete** for $2-$6.50 per square foot, and **Porous Asphalt** at $.50-$1.00 per square foot (University of Maryland Extension: Permeable Pavement Fact Sheet for Howard County).

Roof Drainage Systems

Green Roof

A green roof is a roof that is partially or completely covered in vegetation. A green roof can reduce stormwater runoff, conserve energy and provide additional functional green space in urban settings. Additional benefits include increasing the life of the roof and decreasing roof maintenance costs, energy savings of 15%-30%, noise insulation and reducing the urban "heat island" effect (Altor, Anne, PhD., 2010). Materials and installation of a typical green roof in the United States cost between $15.00 and $20.00 per square foot; costs estimated from basic online search on www.google.com.

Blue Roof

A Blue roof stores or otherwise slows the flow of stormwater run-off. Blue-roofs are similar to green roofs except they do not use vegetation to retain water. Various methods to accomplish this goal can be employed including storage tanks. Stormwater is retained on the roof and discharged at a reduced rate or after peak run-off flow from a storm event. A blue roof is suitable for flat roofs in urban areas with limited availability of ground level detention and good sun exposure. Some designs provide storage "gutters" along the roof perimeter to concentrate the water roof load where it can be structurally supported. Blue roofs can achieve stormwater reduction at considerably less cost compared to the green roof technique. A standard blue roof is estimated to cost in the range of $1.00 to $4.00 per square foot; costs estimated from basic online search on www.google.com.

Downspout Disconnect (see figure 13)

Many structures in urban settings have a roof drainage system to collect runoff directly down a downspout that connects to the combined sewer system. Downspout disconnect is a method that diverts stormwater from the sewer

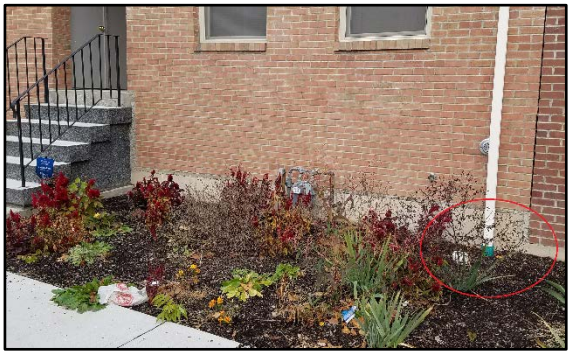


Figure 13. Habitat Housing along Sheridan Avenue Photo by T.J. Kennedy

Figure 14. Rain Barrel at Albany Pine Bush Preserve. Photo by Andrew Gillcrist

system and directs water flows toward natural surface infiltration. This method is easier to incorporate into new construction design builds but can also be retro-fitted to existing structures. In examining some of the newly constructed homes on Sheridan Avenue between Dove Street and Swan Street, there is potential for disconnecting downspouts. Properties with grade sloped toward the building foundation are not suitable for this GI strategy. There is opportunity to include green infrastructure in the Albany Rezone, by amending or modifying the current City of Albany Building Code, Article IV § 299-21, reference to downspouts.

Rain Barrels (see figure 14)
A rain barrel is a type of cistern that collects stormwater from building roofs. A roof of approximately 1,200 square feet will produce about 220 gallons of runoff during a rainfall of 0.3 inches (Lake Superior Duluth Streams, 2016). Using rain barrels can help to reduce the amount of runoff entering the sewer/stormwater system and have a significant impact on runoff reduction values. The water stored can be used for home and community gardens, washing cars and for watering lawns in the summer time.

Street Trees
Sheridan Hollow presents great opportunity to line the streets with trees, lining the sidewalks. Through conservation of existing trees and planting of new trees, the neighborhood "can reduce stormwater runoff, promote evapotranspiration, increase nutrient uptake, provide shading and thermal reductions, and encourage wildlife habitat" (DEC Stormwater Design Manual, 2015). Street trees also improve the streetscape appearance with the added value of beautification.

A program that the Sheridan Hollow Neighborhood can take advantage of is the City of Albany's Tree Planting Program. Through this program, the City will underwrite half of the cost of purchasing and planting a tree. The bi-annual deadlines for orders for spring planting is March 31st and fall planting September 15th. To participate in the program, trees must be planted along the street right-of-way and if there is no lawn or lawn strip, the City will open an area in the sidewalk to provide a tree well planting space. The following link provides detailed program information including an order form and a list of available trees that are suitable for urban areas: http://www.albanyny.gov/Libraries/Forms_-_General_Service/Tree_Planting_Program.sflb.ashx

Tree Box Filters (see figure 15)
These are an adaptation of street trees that includes an in-ground container that encases structural soil filtration as well as a catch basin to slow the flow of water. This helps to reduce peak flows after wet weather events. Tree box filters can either be installed as individual tree pits or as a continuous trench. When installed as a trench, the trees still look like individual tree pits at the surface, but interconnected sub-surface via an underground system (see figure 10).

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Figure 15. Tree Box Installation. Photo Source: www.storm-tree.com

Retention Tanks (see figure 16)

Underground retention or detention tanks direct runoff from parking lots, streets or sidewalks and collects it in underground storage tanks. This method slows the flow of runoff entering the combined sewer system, further reducing combined sewer overflows. Outlet pipes at the top of the tanks allow the water to flow back into the system at a slower rate. This strategy is best suited to dense urban areas such as Sheridan Hollow. While this method does not greatly improve water quality, it slows peak flow of stormwater which gives the system time to accommodate for increased runoff volume (Lake Superior Duluth Streams, 2016).

The City recently undertook a project on the outskirts of Pine Hills neighborhood to address overflow issues of the Beaver Creek combined sewer system. The project involved wetland restoration capable of holding back 500,000 gallons of rainfall during wet weather events. Underground runoff detention tanks were also installed under Woodlawn Little League baseball field with capacity to retain 750,000 gallons of rainfall.

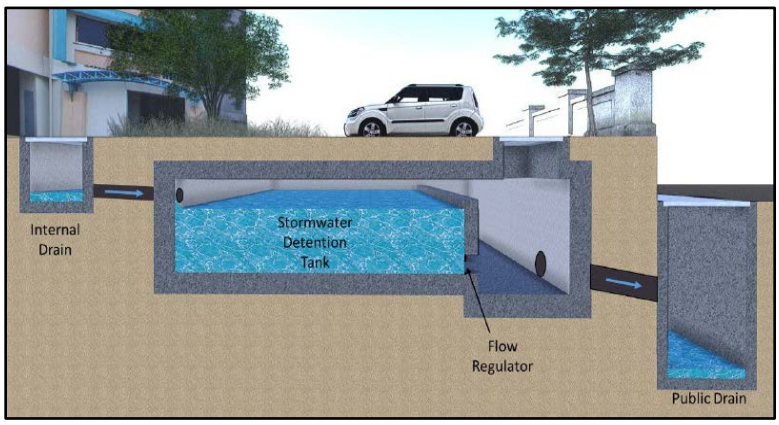

Figure 16. Schematic diagram of underground detention tank (On-site stormwater detention tank systems) Source: www.pub.gov.sg/Documents/detentionTank.pdf

Site-Specific Recommendations

The following locations have been identified for potential GI strategies. The slope and grade of the neighborhood influences the areas of focus where high volumes of water will collect and flow during rain storms.

Figure17. Sheridan Hollow Potential GI Site Map – Base map provided by AHP and Editing by TJ Kennedy

Streetscape Improvement Strategies in Sheridan Hollow Potential locations

The areas of focus for streetscape improvements include intersections on Sheridan Ave where it crosses Dove Street, South Swan Street, and North Hawk Street, as well as the corner of Spruce Street and Swan Street. Because of the dramatic slope, the green infrastructure will be installed on the east and south sides of the intersections. Additionally, Lark Street would be an ideal corridor to replicate the city's recent green infrastructure project on Quail Street (see figure 17).

Figure 18a. & 18b. Intersection of Sheridan Ave. and South Swan St. – Location identified in Figure 17 site map as #4. Photos by T.J. Kennedy

Potential GI Strategies

Street Trees, Tree Box Filters, Curb Extensions, Rain Gardens, Stormwater Planters, Pervious Pavement, and Bioretention Basins.

Residential & Commercial Building Strategies in Sheridan Hollow

Potential locations:

Sheridan Hollow Village (new construction), 274-278 Orange Street, Habitat Humanity construction in progress, 309 Orange Street, Row Houses on Clinton Ave, and any new potential housing development projects.

Potential GI Strategies
Downspout Disconnect, Porous Pavement, Rain Barrels, Rain Gardens, blue roof, green roof

Parks and Greenspace
The multiple parks throughout Sheridan Hollow are ideal for rain gardens and bioswales. The dramatic slope adjacent to Sheridan Park creates excess runoff and causes noticeable damage to the landscape, partially displayed in Figure 12.

Figure 19. Sheridan Park Pavilion-Stormwater Runoff Photo by TJ Kennedy

Potential locations
There are existing parks and future potential greenspaces that can include GI strategies: Sheridan Park, Bayhill Park, Capital Roots Community Garden, and 321 Orange Street Park (See figure 19).

Potential GI Strategies
Porous Pavement, Rain Barrels, Rain Gardens, Bioswales

Parking Lot Areas
The final application document for BOA Program Step 2 should include a detailed surface parking inventory with stormwater runoff volume calculated for each site. There are online technical tools to assist with runoff calculations based on site-specific characteristics such as acreage, slope, etc. Technical tools and resources regarding runoff calculations can be found in Appendix D.

Potential Locations
NYS OGS Parking Lots, Commercial Parking Lot, and Residential Parking Lots (see figure 20).

Figure 20. OGS Parking Lot on Sheridan Ave below South Swan Street – Location identified on Figure 17 site map as Site # 5. Photo by T.J. Kennedy

Potential GI Strategies
Underground Detention Tanks, Porous

pavement, Rain Gardens, Bioswales

Vacant Lot Parcels

One outcome of the residential mortgage foreclosure crisis in the United States has been a large number of residential demolitions in postindustrial cities, leading to the oversupply and a subsequent decline in the value of vacant land parcels. Many of these downsizing cities are attempting to capitalize on shrinkage by viewing vacant land as an opportunity for urban redevelopment. The amount of urban runoff volume entering combined sewer systems can be decreased by detaining that runoff volume in vacant lot soils. Vacant lots can be redeveloped as green infrastructure, (e.g., a rain garden or bioretention) or an engineered landscape that captures rainfall or runoff (see figure 21). Sheridan Hollow had many vacant parcels identified in the 2010 Ualbany Planning studio, some of which have since been redeveloped.

Figure 21. Vacant Lot with gravel surface located at the corner of Sheridan Ave and Spruce Street. Potential Green Space - Photo by T.J .Kennedy

Similar Local Projects for Comparison

There are many local and regional GI projects that can replicated or similarly applied within the Sheridan Hollow Neighborhood. Albany has implemented GI in other neighborhoods, including the following projects recently completed as part of the Albany Pool Communities CSO Long Term Control Plan, discussed later in this report:

North Swan Street Park Revitalization, Albany, NY

This nearby project in Arbor Hill reduced the park's impervious surfaces by approximately 25%, and incorporated the follow GI techniques: dry swales, tree plantings, stormwater planter(s), soil restoration/de-compaction and permeable pavers/pavement treatments (see figure 22.

Figure 22. North Swan Street Park - GI Project. Photo Source: Times Union

Monument Square Green Infrastructure Project, Troy NY
The project is located in Monument Square of Downtown Troy. Approximately 11,543 square-feet of sidewalk and 22,476 square-feet of roadway are currently being replaced with porous pavement or pavers, which would intercept stormwater runoff and reduce flow to the combined sewer system. This project was completed in December 2016.

Quail Street Green Infrastructure Project, Albany, NY
Implemented along Quail Street from Madison Avenue to Central Avenue, approximately 3,850 linear feet, and includes a $1.8M "Green Component" to increase infiltration and water quality. The project entails storm water collected from the sidewalk passing through a porous surface where it will be stored in the system's structural soil and stone reservoir (see figure 23). Additionally, runoff from Quail Street will be collected into catch basins and then pre-treated to remove floatables and heavy sediment before entering the green infrastructure system. This process will significantly reduce the impacts on the city's CSS, especially during heavy rainfall.

Figure 23. GI Project located at Intersection of Quail Street and Elberon Place.

Albany Avenue Green Street Project, Green Island, NY
This project involved the reconstruction of approximately 1,300 linear-feet of Albany Street. The Village has redesigned the roadway, incorporating low impact development principles, to achieve a 10% reduction of impervious surfaces. This project was completed in December of 2014.

Alignment with Local Plans & Initiatives

The recommendations and guidelines provided in this report are in alignment with other plans and projects that were either supported by or carried out by local, state and federal government as well as other regional entities. The City of Albany and Albany County have both successfully implemented similar stormwater management strategies applicable to the Sheridan Hollow; many of which are included in the following plans:

Arbor Hill Neighborhood Plan

This 2003 plan emphasizes "Quality of Life Improvement Goals" that support GI: physical improvements to enhance public safety, efforts to clean and beautify the neighborhood, improve existing and develop new green spaces, calm traffic and make streets more pedestrian friendly (see figure 24).

Figure 24. Sheridan Hollow Street Tree Rendering Photo source: Arbor Hill Neighbor

The plan also prioritized Infrastructure and Public Improvement goals such as: Streetscape Improvements/Maintenance, Maintenance of Vacant and Underutilized, and Water/Sewer Utility Lines upgrades. The plan also calls for expanded opportunities for residents to connect to the waterfront as an overall goal of the city, but Hudson River water quality must first be improved. The northeastern corner of Sheridan Hollow is identified as a major entrance gateway into Albany where beautification efforts are needed, as well as protection from ongoing floods.

Sheridan Hollow Village Plan

Housing Visions and 3T Architects teamed up with Habitat for Humanity and Touhey Home Ownership Foundation to redevelop part of Sheridan Avenue. The Sheridan Ave. corridor is the deepest topographic ravine of the neighborhood where most of the stormwater flows and the Fox Creek flows below the surface. This plan incorporated green building practices into 57 units of quality affordable rental housing through the construction of 17 buildings. The building plans have stormwater management practices built in that can be synchronized with future development. The plan is available online via http://housingvisions.org/?page_id=2643.

Albany 2030 Comprehensive Plan

One of the Plan's recommendations is to *develop and implement a Complete Streets policy*, which includes a "green streets" plan for implementing porous pavement, street trees, rain gardens, bioswales, and other techniques. The report can be incorporated into a future Green Infrastructure plan for the City. Another strategy outlined in 2030 is to control sources of negative environmental impact that make the City's waterways too polluted for swimming. The 2030 plan also recommends the utilization of green infrastructure to reduce runoff, improve water quality and reduce other negative environmental impacts.

Albany Pool Communities CSO Long Term Control Plan (LTCP)
The GI proposed in this report is directly aligned with the goals of the LTCP and will help the City of Albany comply with National Water Quality Standards. Announced early in 2014, this project aims to regulate annual CSOs that total more than 1.2 billion gallons and is expected to cost $136 million over a 15-year period.

In 2007, under an order on consent by the NYSDEC, the Cities of Albany, Cohoes, Rensselaer, Troy, Watervliet and the Village of Green Island, joined in an inter-municipal agreement led by the Capital District Regional Planning Commission. The unprecedented partnership was established to improve the water quality of the Hudson River by reducing or eliminating Combined Sewer Overflow discharges. Collectively this is known as the Albany Pool Communities Long Term Control Plan. Due to stricter Clean Water Act Regulations, many cities throughout the United States are implementing similar Long Term Control Plans (LTCP, 2011).

Many older cities in the United States have combined sewer and stormwater systems, a form of waste water management whereby stormwater runoff and sanitary sewage from homes and businesses enter the same underground sewerage system to be treated at the local wastewater treatment facility. Under normal dry weather conditions, the Albany County Sewer District properly treats wastewater at one of two riverfront facilities and discharged properly into the Hudson River. During wet weather events the amount of water being conveyed to the facility overpowers the system's capacity. Excess untreated wastewater and raw sewage overflows into the river (see figure 25)

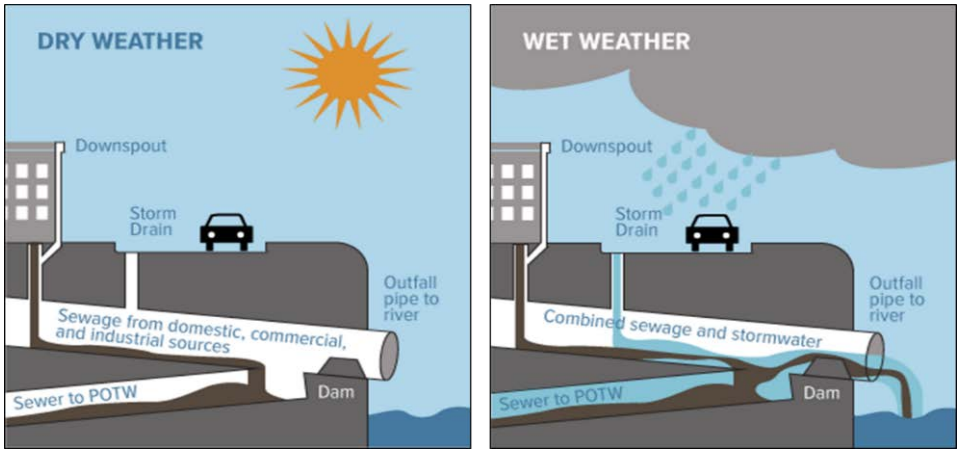

Figure 25. Dry and Wet Weather Conditions comparison of typical urban CSO
Source: Jersey Water Works - http://www.jerseywaterworks.org

NYS BOA Program Step 1 Pre-Nomination Study
The neighborhood's dramatic land features affect the structural stability of housing in Sheridan Hollow, and must be stabilized through sound development practices and landscape architecture engineering. Brick homes along Clinton Avenue and Lark Street were built to last hundreds of years, but have been "subject to flooding and natural soil movements. Given the topography, many homes have been built on a hill, causing structural stresses over time. Fox Creek flows under parts of the neighborhood and under Sheridan Avenue." "The Fox Creek ran through the ravine and was prone to flooding, as

well as the unpleasant downhill draining of dumped horse manure [from the adjacent neighborhoods of Arbor Hill, Capitol Hill, and West Hill.] “A large percentage of Sheridan Hollow soil is clay, which only compounds the inability for the neighborhood to drain itself properly.”

The “shared vision” and goals agreed upon by community stakeholders support the strategies outlined in this report, mainly to enhance the environment and quality of life. Improving the existing streets and sidewalk systems has been identified as a priority for redevelopment. Private investments are less likely to be leveraged in areas where there is an apparent lack of attention from local governments. Sheridan Hollow’s streetscapes need a substantial investment, which would require a successful partnership from local government. The City of Albany is a strong partner and co-applicant. Sheridan Hollow also has an antiquated storm water and sewer system that floods whenever there is a substantial rainfall. Flooding at the base of the neighborhood creates a challenge for development and a significant update to the system is necessary for future flood mitigation.

NYS BOA Program Step 2 Nomination Application Narrative
In partnership with the Community Loan Fund of the Capital Region, Albany Community Land Trust and The City of Albany, AHP produced the Application Narrative in September 2012 after successful completion of Step 1 Pre-nomination study. Some of the relevant infrastructure environmental goals and priorities identified include: Reuse of vacant and underused buildings; Enhanced stairways, entrances; Model green buildings – improve energy efficiency’ New pedestrian friendly streetscapes – sidewalks and streets. Increase Walkability; Improved sewer and storm water systems, new water main; Enhance existing recreation facilities…”

Quality of life goals that will be improved by green infrastructure, particularly community gardening that can bring together multi-generational diverse backgrounds and build community capital, while engaging and educating residents. Step 2 aims to develop scope of work and identify funding for BOA Step 3 implementation. This includes the process of planning for a safe and walkable neighborhood through street scape design and vacant lot reuse by evaluating strategic sites and conducting feasibility analyses.

Minding the Gap and Finding the Resources - Neighborhood Study
Rachel G. Bratt and Laurie Gould assembled a report on redevelopment opportunities and challenges in Sheridan Hollow for AHP in June, 2016. The report pointed out that stormwater management compliance and complexity in the permitting process create barriers and extra costs throughout the development process. In stakeholder interviews, both non-profit and for-profit developers described soil as difficult to build on. This indicates that there is economic benefits to streamlining the permit process, as well as standardizing and incentivizing infill soil replacement. The City currently enforces “interim” building regulations and more changes should improve after transition period.

NYS DEC State of the Hudson River 2015
Public perception of river health exceeds reality, as many use the Hudson River for recreation beyond recommendations of the DEC. DEC monitoring showed that water quality failed to meet swimming standards during the summer of 2015. Swimming in the Hudson was not foreseen when the Capital Region's sewage plants were originally constructed, prior to treatment requirements disinfect wastewater discharges. The tide is changing as Riverfront communities near Sheridan Hollow began disinfection in recent years; with Albany plants beginning in 2014.

The City of Albany Department of Water and Water Supply
The recommended GI strategies will support part of the City of Albany Department of Water and Water Supply's mission to "collect and safely convey wastewater to treatment facilities" and comply with regulatory requirements. The Water Department lists goals on their website that align with this report including the following:

- "We will maintain our system and plan future improvements to our system to keep 100% of the sanitary sewage "in the pipes"
- We will invest as stewards to protect and preserve the long-term functionality of our infrastructure, including creating a detailed inventory of fixed assets to be updated annually to account for new and rehabilitated assets
- We will invest and incorporate technology to increase operational efficiency
- We will administer the City of Albany MS4 program (Municipal Separated Storm Sewer Systems) to protect natural watercourses from pollution.
- We will respond to flooding problems, including assisting the City of Albany with the maintenance and repair of drainage systems, review of new projects regarding grading and runoff, and review of flood risks and mitigation.
- We will undertake planning for future water, sewer and storm water infrastructure needs for new development in the City of Albany." (http://www.albanyny.gov/Government/Departments/WaterAndWaterSupply.aspx).

The Water Department is supportive of green infrastructure approaches and has implemented stormwater reduction strategies in other neighborhoods that are feasible options in Sheridan Hollow. The City's Water Department also confirmed all the private developers in Sheridan Hollow are required to provide storm water detention that meets the Interim Regulations, specifically: "*All actions covered by these regulations must provide for the detention of storm water in such a manner that the peak flow discharge of storm water from the improved area is limited to the peak flow discharge from this area in its predevelopment state*." Previously approved detention methods include ground water recharge, detention basins, rooftop storage, parking lot storage and subsurface detention.

Conclusion

Sheridan Hollow has all the charm and spunk that comes with being one of the oldest neighborhoods in the United States. That title also carries a long history of stormwater runoff pollution that is likely embedded deep in ground. Overtime some soil can repair its self, but some must be replaced and restored through human intervention and engineered

design. The same engineering design must be applied to stormwater management tactics as a top priority in the neighborhood. There are many challenges that can be utilized as assets, such as the different property slopes throughout the neighborhood. The slopes allow curbside encatchment of stormwater that wouldn't be as successful in a neighborhood with flat topography. In order to make best use the neighborhoods physical features, there must be more technical studies and analysis performed beyond this preliminary report. Additional resource and tools available online can be found in Appendix D and a literature review on green infrastructure in Appendix C.

For future implementation and Step 3 of the BOA Program, Sheridan Hollow's anchor institutions must further develop and prioritize a list of potential feasible projects. The Neighborhood Association should establish a stakeholder steering committee that will coordinate with the Albany Water Board, City Department of Water, and City Planning Department. Those three municipal entities are charged with carrying out and maintaining most water infrastructure improvement plans within city limits, and can advise the steering committee on citywide priorities. After the stakeholder steering committee collectively agrees on top priorities, solicit feedback from the community, including organizations and municipal entities. The committee must also identify budgetary restraints and funding sources to meeting project scope and timelines. Initial steps of implementation process involve determining contract methods and establishing lists of potential contractors and soliciting a request for proposals. The steering committee should also have an evaluation plan in place for the review of contractors' proposals.

This report is meant to support AHP and the Sheridan Hollow Neighborhood pursue the Brownfield Opportunity Area Grant Program with the intent of obtaining funds to implement comprehensive solutions for community revitalization. With implementation of green infrastructure strategies to reduce runoff, the neighborhood can reclaim public space and have a great impact on health of both environment and residents, which improves overall quality of life.

Building an Eco-District for Parks in The Hollow

Introduction

Although Sheridan Hollow is a neighborhood with numerous small empty lots, it can also be seen as a neighborhood with numerous small opportunities as it offers the residents of Sheridan Hollow spaces that promote creativity, educational programming, and neighborhood engagement. Community groups such as AHP and the Sheridan Hollow Neighborhood Association have already garnered participation in the neighborhood by things as small as letting children choose their own playground equipment to applying to numerous grants, including the Brownfield Opportunities Area Grant (BOA).

An eco-district within the Sheridan Hollow neighborhood can not only increase support within the neighborhood, but can also connect existing neighborhood assets to each other. In the case of parks and green spaces, there is a high potential to create an eco-district that would connect a playground, a park, and other community assets through a community walkway.

Until now, Sheridan Hollow has been a victim of disinvestment that has been largely out of their control. Sheridan Hollow was shaped by State decisions to bypass the neighborhood through raised viaducts, and to operate a local incinerator which was used to power state buildings that resulted in neighborhood pollution. This plant is still active but instead uses natural gas. Viaducts and hazardous waste incinerators are regarded as locally unwanted land uses (LULU's). The pollution from these LULU's have left the neighborhood contaminated and led to continued disinvestment in the community.

New development within the City of Albany and Sheridan Hollow should be in line with goals set out by The Albany 2030 Comprehensive Plan. The Albany 2030 Comprehensive Plan also provides guidelines for the development of parks and green spaces within the city. The plan outlines goals around parks and green spaces, and concrete strategies to accomplish them. Site specific strategies for each of the proposed sites that we have identified accomplish social, health and safety, environmental, and community form goals outlined within the Albany 2030 Comprehensive Plan.

The end goal is to provide the neighborhood with green space not only to fight blight and improve public health, but also to bridge the social capital between new and long-standing residents of Sheridan Hollow.

Best Practices and Redevelopment Strategies

In their research into interactions between diverse communities, Hannah Lansborough and Joost Beunderman attest to the crucial role that public spaces can play in providing a focus for practical solutions that increase our sense of society and mutuality. However, as neighborhood mobility increases, the search for spaces of comfort in relatively homogeneous micro-communities is becoming increasingly popular (Offe 1999). Lansborough and Beunderman (2007) express that the methods used to strengthen a locality can lead to communication and innovation. However, if the steps taken create a

perceived threat, be it displacement or crime, they can also lead to a retreat from the shared realms of the community. Retreat is a community killer, which creates anxiety and tension between groups that threatens collective efficacy. Lansborough and Beunderman (2007)define collective efficacy as the ability of a neighbourhood to collectively respond to change in a positive way. Political theorist Claus Offe speaks to the fabrication of a sense of common geographical belonging while emphasizing two factors, trust and solidarity. Trust requires citizens to comply with rules, while solidarity requires that citizens must still recognize the value of contributing to the common good even when they don't directly benefit as a result (Landsorough and Beunderman 2007).

There are elements of design that are commonly recognized as imperative to socially successful space. Lansborough and Beunderman (2007) outline this success with the following elements:

- Multi-use, embedded with different activities
- Accessible and navigable for anyone who desires to use it
- Legible with clear and recognizable routes; defined edges should offer clarity of the boundaries between public and private
- Local relevance, additions to public space should offer local character
- Adaptability, avoid overly prescriptive design and leaving room for self-organization and a degree of appropriation
- Open-endedness, space should be non-exclusive
- Safety, welcoming the idea of comfort offering a degree of control

Our proposed redevelopment strategy incorporates these elements of design and also focuses on parks, recreation, and creating bonding capital in the community.

There are several strategic sites between Lark Street and Dove Street west to east, and Sheridan Avenue and Orange Street south to north. The block between Sheridan and Orange is bisected by a community walkway, which is currently owned by the City of Albany. It provides access to community services such as the Revelation Church of God, a park, and the Affordable Housing Partnership at 255 Orange Street. Next to the church is open space that has been made accessible by the Reverend who owns it for use by local children. An old tile factory sits a few parcels away facing Sheridan Avenue, which is immediately next to a playground in the neighborhood.

Another community asset that could be improved are the two large sets of stairs, one at Spruce Street and the other at South Swan Street. The Spruce Street stairs connect directly to Dove Street, at the foot of this corridor. Because the stairs are used to access parking, the neighborhoods stigmatized reputation and unsightly streetscape do not offer non-residents a reason to participate in the community and contribute to the local economy. These stairs should be seen as an opportunity to create a sense of connectedness between downtown and other assets of Sheridan Hollow.

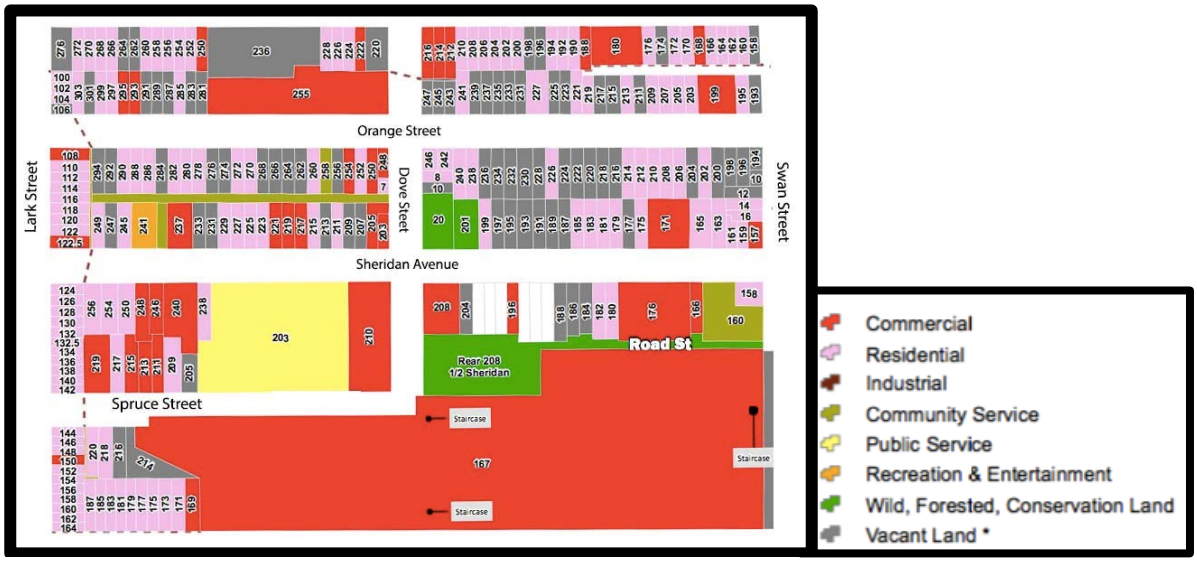

Figure 26. Sheridan Hollow Parcels

According to the parcel map provided in the Albany 2030 plan, sixteen parcels on this one block are vacant (see figure 26). More recently, Habitat for Humanity has acquired 274 and 276 Orange Street as well as 209 Sheridan Avenue and has used the land to build mixed income housing. In 2014, Albany County established a land bank to take title to tax foreclosed properties to encourage redevelopment and to emphasize the importance of keeping the properties within the existing community's control. By working with local organizations to make improvements to this corridor, a visible connection can be made between its diverse resources that improve the neighborhood's accessibility, legibility, and safety. It is necessary to emphasize to the community that these are valuable resources and that they should not remain underutilized and dissolve from the community's collective conscience overtime.

Within the two blocks of the Spruce and S. Swan Street Stairs there are 3 parks owned by the City of Albany that would benefit from better lighting and maintenance. Outsiders perceive that the neighborhood has a high crime rate, although police statistics indicate otherwise. Unfortunately, this perception alone can discourage participation in a community. Creating community gardens and improving green spaces in neighborhoods is a strategy to prevent crime through environmental design. This is a strategy that has worked successfully before. For example, in Youngstown, Ohio, even as crime has increased, vacant lots either stabilized through small improvements or lots fully rehabilitated for community uses such as community gardens show a much slowed increase in crime. Burglaries in particular actually decreased near treated sites. Further analysis showed community lots actually used for community-reuse was better at slowing the increase in crime than sites that simply stabilized the vacant land through small beautification projects (Kondo et al. 2016).

Sheridan Hollow's newly constructed Habitat for Humanity and Housing Visions mixed use projects are improving streetscapes and bringing new investment to the neighborhood. The goal of the Sheridan Hollow redevelopment plan is to promote housing and neighborhood improvements that benefit existing residents. If long-standing residents participate in the changes that are happening in the community, the greater the collective efficacy of the neighborhood and further, the smaller perceived threat of displacement should be. We hope to increase bonding capital by providing space that is attractive and accessible to both new and existing residents. To this end, we also developed a community survey for residents to give additional feedback on how the community walkway and other potential eco-district sites are currently used and how they should be used as funding becomes available for revitalization projects. The complete survey can be found in Appendix E.

Strategic Sites

The paved walkway that runs behind the houses and vacant parcels on Orange Street and Sheridan Avenue has no lighting fixtures and is littered with trash. Making simple improvements to this block can offer the community a sense of pride in what is now an underutilized eyesore. The parcels of this corridor and their land uses as indicated in Appendix A, Study Area B, Map 4B in the Albany 2030 Plan are shown in Figures 26 and 27.

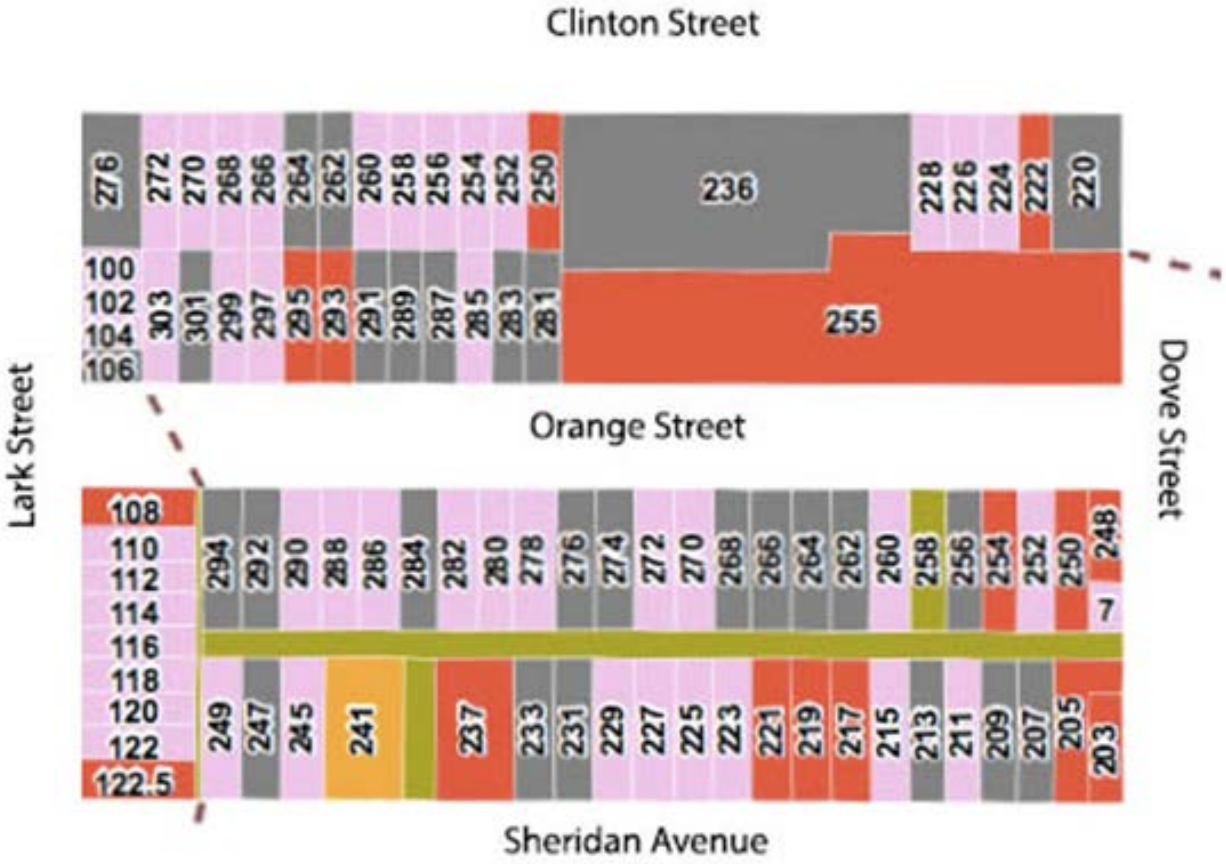

Figure 27. Eco-District Parcels

The bright green path shown above is the existing walkway. This path has excellent potential to be used as a connection between existing and potential recreation and green spaces on that block. At all three points of entry to this path, there is either an existing park or a vacant parcel and is currently underutilized. There are three specific parcels on or across from this block that we are proposing be strategically developed. Implementing low cost and low maintenance solutions is a sustainable method of redevelopment that can help improve community form, public safety, and social capital in accordance with goals and land use strategies specifically outlined in the Albany 2030 Comprehensive Plan. The street addresses of the proposed parcels are two of the access points to this walkway, 288-294 Orange Street, 241 Sheridan Avenue, and the open space area behind 255 Orange Street across the street.

The Community Walkway

Figure 28. Current State of the Community Walkway

The walkway is shown in green in Figure 2. This space has unlimited potential to welcome residents and non-residents alike to enjoy the accessibility to downtown Albany that Sheridan Hollow has to offer, and vice versa. Turning this walkway into a greenway not only improves accessibility, it is a major opportunity to beautify this corridor. While the path is already physically there, it is currently littered with trash and offers retreat from the streetscape that can encourage illegal activities. There are also some crucial infrastructural aspects missing such as lighting and garbage cans. Simply placing appropriate scaled lighting on this path can help with crime prevention by increasing visibility and legibility. However, something like benches may be discouraged because the path should be used as a walkway rather than a destination.

Because the path has not been well maintained, replacing the existing pavement with a low cost and low maintenance solution such as crusher run stone dust allows residents to see investment in their neighborhood and to also benefit from it. Crusher run stone dust is not only cheap but it is permeable and can help absorb rainwater in a neighborhood where flooding is a major issue. While the City of Albany has expressed a lack of resources to provide the Sheridan Hollow neighborhood with lighting, there are funding opportunities that can be explored which will reduce the direct cost of providing lighting for the City. Designing a walkway that anyone can use but doesn't require much maintenance can lead to more opportunities to implement community development strategies in this neighborhood, which needs to see continued reinvestment.

241 Sheridan Avenue

241 Sheridan Avenue is home to a small pocket park, pictured in Figure 2, with considerably outdated and poorly maintained playground equipment. There is no seating, no lighting, and only one trash can outside the fence of the park. In addition, the deteriorating condition of the fence magnifies the negative aspect of this park and demonstrates the public disinvestment in the park. While the space is neglected, the mosaic murals on the old ceramic tile factory at 237 Sheridan Avenue, pictured in Figure 29, provide the space with character. Between the playground and the mosaic murals is an entrance to the walkway that is being proposed for a greenway. By equipping this space with something as simple as a picnic table, the space's utility would increase and the community could begin to use this park again. Rather than creating an opportunity to bring residents together, the park's equipment and unkempt grass are blighting influences in the neighborhood.

Figure 29. Tile factory at 237 Sheridan Ave. An example of existing character within Sheridan Hollow

Investing in this park would open doors to make improvements that tie directly into Albany 2030 goals. The social comprehensive plan system seeks to "improve and maintain public safety in all parts of the city, including crime prevention and pedestrian mobility" through land use strategies which seeks to remove blighting influences and promote walkable neighborhoods and complete streets to protect pedestrians (City of Albany 2012). With appropriate grants, the possibility to create another great play space in the neighborhood that also connects to other assets on the block is increased dramatically. Figures 30 and 31 show a possible before and after for that site. This plan focuses on integrating the playground, murals, and community walkway entrance into one fully functioning site. Simple infrastructure like trash cans and benches are added but the playground

equipment is also more encompassing of all play types including movable equipment. It also becomes a more welcoming space to those that are using the community walkway.

Figure 30. Current Conditions of the Park at 241 Sheridan Ave

Figure 31. Potential Development of the Park at 241 Sheridan Ave

288-294 Orange Street

Figure 32 – Two of the 288-294 Orange Street Sites (Albany County Land Bank).

This pocket of vacant land sits directly behind the park at 241 Sheridan Avenue and is the second point of entry to the aforementioned walkway. 288 Orange Street is a vacant lot owned by Albany County, 290 and 292 Orange Street are vacant lots owned by the Albany County Land Bank, and 294 Orange Street is a vacant lot owned by a local landlord. These parcels are pictured in Figure 32. The most appropriate use for this space is a community garden, as the existing community garden in the neighborhood on Hawk Street is currently full. This site has the potential to become a new asset to the community by creating a new connection to the community walkway as well as creating civic pride in young community members and creating social capital between old and new community members.

Community gardens also offer residents a sense of pride in their community and can create “eyes on the street”. By providing the community with raised gardening beds that line the perimeter of the land, gardens will be healthier, as they will not be at risk of potential contaminants from the soil. Gardens are also beneficial because they are excellent for catching storm water. By partnering with local schools and organizations, gardens can be inexpensive to implement and maintain. Partnerships with schools create opportunities for students to be engaged in educational programming in regards to farming and agriculture. While exhibiting investment in the neighborhood’s mental and physical health, this proposal also fits in to Albany 2030’s goal to “improve community health through increased access to recreation opportunities, healthy, fresh food, and healthcare” (City of Albany 2012, p70).

One potential partner for a community garden is The Radix Center in Albany. The Radix Center is an educational non-profit, teaching students and community members practical skills surrounding sustainability, bio-remediation, and equal access to food systems (The Radix Center). Many grants for creating community gardens support education, food accessibility, or youth engagement. The Radix Center's goals and values are in line with these, making its assistance in the community helpful when applying for community gardening grants.

With great partners and appropriate grants, the revitalization of this site can be instrumental to the success of the community. It will create a completely public access point to the community walkway, which is not available now because it is fenced in. Figures 33 and 34 show the large potential of that site and another potential before and after for this site. Raised garden beds protect anything grown from potential contamination increasing the diversity of what is available to grow. Trees are trimmed to create better vision of the pathway.

Figure 33. Current Conditions of 288-292 Orange Street The building pictured to the left has since been demolished

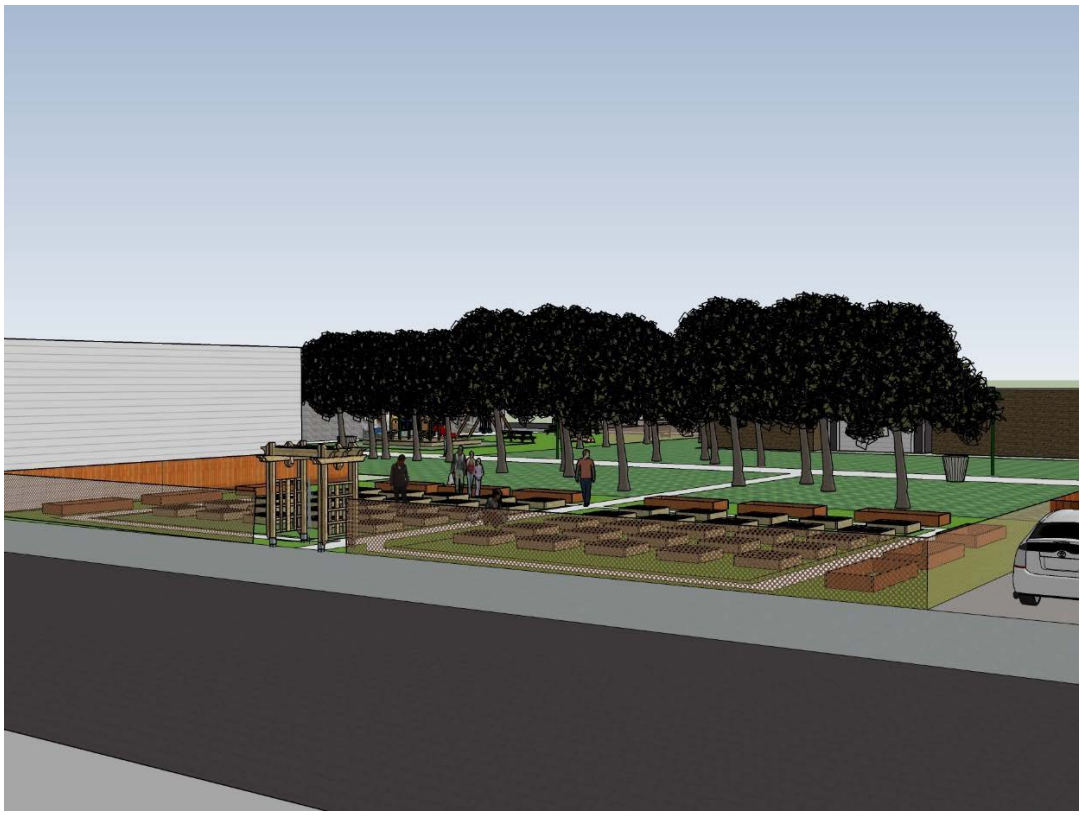

Figure 34. Potential Development of 288-292 Orange Street

255 Orange Street

This plot of vacant land is the across from the Orange Street point of entry to the proposed green way (see figure 35). It is currently owned by the Albany Center for Economic Success and is not serving any specific use. This site is strategic because there are numerous solutions that are feasible and relatively inexpensive that could encourage passive recreation. This versatile space could be used for community event space with features including a small stage that can be used for concerts, open mic nights, ceremonies, etc. as well as a rentable community pavilion. The pavilion has potential to be used for anything from a block party, to summer camps, to a small farmers market, which could sell goods produced in local gardens. Looking forward, a site so well connected to the downtown area could easily combine the products of our proposed uses for our other sites.

Figure 35. Vacant space next to 255 Orange Street

All of the proposed land uses fit in with the Albany 2030 Community Form Comprehensive Plan System's goal that aims to "promote development of a balanced future land use pattern that supports realization of the Albany 2030 Vision Statement" (City of Albany 2012: p35). By creating bonding capital between current residents and new residents, as well as state employees who currently use the neighborhood, the stage is set to welcome both passive and active recreational spaces that will improve Sheridan Hollow's sense of community and safety.

Grants

Community Walkway

Community Development Block Grant Program (CDBG)
https://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs

The Community Development Block Grant (CDBG) program is a flexible program that provides communities with resources to address a wide range of unique community development needs. Beginning in 1974, the CDBG program is one of the longest continuously run programs at HUD. The CDBG program provides annual grants on a formula basis to 1209 general units of local government and States.

A grantee must develop and follow a detailed plan that provides for and encourages citizen participation. This integral process emphasizes participation by persons of low or moderate income, particularly residents of predominantly low- and moderate-income neighborhoods, slum or blighted areas, and areas in which the grantee proposes to use CDBG funds. The plan must provide citizens with the following: reasonable and timely access to local meetings; an opportunity to review proposed activities and program performance; provide for timely written answers to written complaints and grievances; and identify how the needs of non-English speaking residents will be met in the case of public hearings where a significant number of non-English speaking residents can be reasonably expected to participate.

Entitlement Communities
The CDBG entitlement program allocates annual grants to larger cities and urban counties to develop viable communities by providing decent housing, a suitable living environment, and opportunities to expand economic opportunities, principally for low- and moderate-income persons.

Eligible grantees are as follows:
- Principal cities of Metropolitan Statistical Areas (MSAs)
- Other metropolitan cities with populations of at least 50,000
- Qualified urban counties with populations of at least 200,000 (excluding the population of entitled cities)

CDBG funds may be used for activities, which include, but are not limited to:
- Acquisition of real property
- Relocation and demolition
- Rehabilitation of residential and non-residential structures
- Construction of public facilities and improvements, such as water and sewer facilities, streets, neighborhood centers, and the conversion of school buildings for eligible purposes
- Public services, within certain limits
- Activities relating to energy conservation and renewable energy resources

- Provision of assistance to profit-motivated businesses to carry out economic development and job creation/retention activities

241 Sheridan Ave:

Kaboom! Grants

https://kaboom.org/grants/build_it_yourself

https://kaboom.org/grants/build_it_with_kaboom

DIY Grants are given in three cycles throughout the year. The DIY grant is a grant of $15,000 for new equipment and technical assistance for creative approaches to play. However, this grant requires that the applicant spend $24,000 to $40,000 on playground equipment, not including freight and surfacing costs. A structure is to be built within a year of the grant being awarded.

The Build it with KaBOOM! Grant provides the facilitation and support of an experienced Project Manager as community members embark on a 5–12 week planning process. After selection, all partners will join together for a community Design Day, inviting play experts (the kids, of course) to design their dream playspace. The required weekly planning will result in a six-hour community day, where the community space is transformed to include a permanent play structure (equipment to be ordered from Playworld Systems, Inc.) as well site enhancements.

288-294 Orange Street:

Farm to School Grant Program

http://www.fns.usda.gov/farmtoschool/farm-school-grant-program

The purpose of the USDA Farm to School Grant Program is to assist eligible entities in implementing farm to school programs that improve access to local foods in eligible schools. On an annual basis, USDA awards up to $5 million in competitive grants for training, supporting operations, planning, purchasing equipment, developing school gardens, developing partnerships, and implementing farm to school programs.

Implementation grants are intended to help schools or school districts scale or further develop existing farm to school initiatives.

Planning grants are for schools or school districts just getting started on farm to school activities and are intended to help these entities organize and structure their efforts for maximum impact by embedding known best practices into early design considerations.

Training grants are intended for state and local agencies, Indian tribal organizations, agricultural producers or groups of agricultural producers, and non-profit entities to support trainings that strengthen farm to school supply chains, or trainings that provide technical assistance in the area of local procurement, food safety, culinary education, and/or integration of agriculture-based curriculum.

Planning awards range from $20,000 - $45,000; implementation and support service awards range from $65,000 - $100,000; training awards range from $15,000 - $50,000. Matching funds of 25% are required for all four grant types.

Youth Gardening Grant
https://www.kidsgardening.org/2017-youth-garden-grant/

Kidsgardening.org awards 20 awards packages per year (five worth $750, and 15 worth $500), and is "designed to support school and youth educational garden projects that enhance the quality of life for students and their communities".[1] The only requirement to apply is that the non-profit or school applying needs to have 15 garden plots dedicated to children between 3 and 18 years old.

IOBY (In Our Back Yards)
https://www.ioby.org/about/howwework

IOBY (In Our BackYards) is a crowdsourcing platform for projects that also gives technical training on how to crowdsource. With IOBY, a non-profit in charge of a project can create a crowdsourcing plan before the project goes live. [2] IOBY not only includes crowdsourcing funds, but also allows for the crowdsourcing of volunteers and can act as a way to bring together all assets, funds, and people that are required to make a project implementable. It also focuses on local support for projects and micro-funding as "most ioby micro-donors give on average $35, live within 2 miles of the project site they're supporting and regularly volunteer with the project.

255 Orange Street:

Levitt Amp [Your City]
https://grant.levittamp.org/about/

The Levitt AMP [Your City] Grant Awards is a matching grant program made possible by the Mortimer & Mimi Levitt Foundation, a national private foundation dedicated to strengthening the social fabric of America through the power of free, live music. With Levitt AMP, free, live music is bringing communities together in small and mid-sized towns and cities across the country.
While Levitt's creative place-making program of permanent outdoor music venues, each presenting 50+ free concerts annually, is tailored to large metro areas with populations of over 400,000 (due to financial sustainability and audience development considerations), the Levitt AMP [Your City] Grant Awards are specifically designed to meet the needs and capacity of small to mid-sized towns and cities.

- Grants are awarded to up to 15 U.S.-based nonprofit organizations serving towns and cities with populations of up to 400,000.

[1] 2017 Youth Garden Grant. Retrieved from: https://www.kidsgardening.org/2017-youth-garden-grant/.
[2] IOBY. *How We Work* . Retrieved from: https://www.ioby.org/about/howwework.

- Each grantee will receive $25K in matching funds to present the Levitt AMP [Your City] Music Series, a minimum of 10 free outdoor concerts presented over 10 to 12 consecutive weeks during 2017.
- Each Levitt AMP Music Series will feature a musically diverse lineup of high caliber entertainment, in keeping with the permanent Levitt venue program.
- To ensure each grantee is positioned for success, grantees will receive a Levitt AMP Toolkit containing valuable resources, such as: sample artist contract; sample press release; hosted page on the Levitt AMP website; eblast and social media templates; list of talent managers and music agents from across the country; and consultation with national staff at the Levitt Foundation.
- The characteristics of the public space where the free concert series is to be presented—preference will be given to spaces that are easily accessible to a range of socioeconomic groups.
- A programming philosophy that is inclusive, family-friendly and represents a wide range of music genres, in keeping with the permanent Levitt venue program.
- A proven track record of presenting professional quality concerts or community events, or partnering with an individual or organization that has done so.

Farmers Market Promotion Program (FMPP)
https://www.ams.usda.gov/services/grants/fmpp

The purpose of the Farmers Market Promotion Program (FMPP) is to increase domestic consumption of, and access to, locally and regionally produced agricultural products, and to develop new market opportunities for farm and ranch operations serving local markets by developing, improving, expanding, and providing outreach, training, and technical assistance to, or assisting in the development, improvement, and expansion of, domestic farmers markets, roadside stands, community-supported agriculture programs, agritourism activities, and other direct producer-to-consumer market opportunities.

Local recipients:

New York

Recipient: Cornell Cooperative Extension of Rensselaer County
Troy, NY

Award Amount: $318,209.51

Project Type: Community Development, Training, and Technical Assistance

Harvest Connection: Creating Links to Local Ag Products - connecting farmers to consumers utilizing web-based mechanisms with the goal of increasing the consumption/sales of local agriculture products

A local survey conducted in 2015 indicated marketing agricultural products was an obstacle for farmers, ranking 5th as a topic requested by producers for Cornell Cooperative Extension program offerings. Additionally, in a survey distributed to area specialty crop producers, 72 percent of respondents indicated that they were using social media for direct marketing, but did not feel they were using it effectively. Producers have not fully explored digital marketing paths. This is a marketing avenue that requires slow expense input compared to conventional print marketing, with great potential to increase consumer engagement and sales.

Harvest Connection aims to expand on what has been developed through the Capital Region Specialty Crops Block Grant (SCBG) project that included the development of a web-based promotional platform and searchable directory of available specialty crops. With this as a foundation, we will offer technical trainings to producers and consumers to break down technology barriers, teach social media marketing strategies to increase producer-to-consumer linkages, and continue to promote area producers through the Harvest Connection website. Our outcome aspires to result in a 5 percent increase in local agriculture product sales and a 5 percent increase in the number of local consumers purchasing local agricultural products.

Alternative Energy Options for The Hollow

Introduction

The purpose of this white paper is to explore the energy options of Sheridan Hollow to help revitalize the neighborhood. This includes recommendations to the community, the Sheridan Hollow Neighborhood Association (SHNA), and the Affordable Housing Partnership (AHP) on how community solar can help to reduce residents' utility costs, the potential to collaborate with NYS Office of General Services, options to improve the streetlighting in the neighborhood, and the potential to create a workforce development program around solar energy and efficiency projects, all to the benefit of the Sheridan Hollow community.

This white paper is aligned with the goals of the Albany 2030 comprehensive plan as well as the neighborhood's vision articulated in the Sheridan Hollow Neighborhood Plan (Affordable Housing Partnership of the Capital Region, Inc., 2012) because it focuses on strategies to revitalize the low-income neighborhood of Sheridan Hollow through renewable energy, energy efficiency, workforce development, and the fostering of regional partnerships.

Overview of Strategy

The Energy Team, with guidance from AHP and the SHNA, researched ways the community could lower its energy costs and address the streetlighting deficit in the neighborhood. The structure of this white paper reflects that research.

The background on solar energy in New York section relies on information gathered from interviews with experts in the field and two books, *Power from the People* by Greg Pahl and *The Green-Collar Economy* by Van Jones. That section will explain how the solar energy landscape in New York is changing at such a rapid pace, but is supportive of a low-income community developing their own solar farm. The glossary included at the end of this paper will help to clarify the specific language used in the solar energy field. Energy efficiency and solar energy projects offer the opportunity for a workforce development program, and that section explains how Sheridan Hollow could benefit from pursuing models and partnerships to that end. To provide Sheridan Hollow with some insight and ideas, the Energy Team analyzed case studies from other communities that have implemented successful community solar, streetlighting, and workforce development and that have similarities with Sheridan Hollow or are located in the same area.

This white paper describes how Sheridan Hollow has the assets to achieve their community vision.

Background on Solar Energy in New York:

The Changing Landscape, Advantages, and Roadblocks

The current energy market is heavily dependent on finite sources of high polluting fossil fuels that make energy prices volatile. This reality is quickly shifting as renewable energy alternatives are becoming price competitive, while also providing additional spillover

benefits of a cleaner environment, improved public health, reduced volatility in energy supply, and decreased risk to national security.

Yet, significant roadblocks remain in the form of energy oligopolies that shape the markets and have entrenched policies that dampen the prospects of fair competition from new market entrants. Entrenched energy interests benefit from the current regulatory regime(s), be that the lack of federal leadership, the lack of incentive to modernize the grid to be compatible with distributed energy production, or the myriad of state regulatory differences that make it more difficult to navigate as a new smaller firm with less resources and experience.

There is a lack of a national comprehensive and effective energy policy, especially for renewable energy, which means that regulations are different for each state. However, communities across the country are using a grassroots strategy to rebuild their local economy and infrastructure by using renewable energy to benefit their neighborhoods. The sun provides unlimited solar energy providing the ability to generate clean electricity that is free from wild price swings.

Local ownership and generation is the key ingredient that transforms renewable energy projects into the focus for local economic development and community resilience. Community energy aims to provide a more resilient and stable energy source to the community that will supply lower and more stable energy prices and more local jobs. Transitioning towards a community energy model means looking at present energy use, reducing energy use by increasing efficiency and conservation, and then switching over to as many local renewable energy sources as possible. Community participation and engagement is critical because transitioning to community energy requires a lot of collaboration and hard work, and the benefit is strengthened relationships and an increase in social capital. A theme among community energy initiatives is that they used what worked for them, so it really comes down to what financing and legal or structural options will work best for the situation (Pahl, 2012).

Many utility companies may resist the growth of renewable energy because that means less profit for them. However, some have recently realized that small scale distributed generation can save them money by supplying them with power instead of having to buy expensive power on the spot to cover peak demand periods (see definition for “Community Distributed Generation (CDG)” in the report glossary). Utilities tend to support large scale renewable energy projects when they are far from the consumers because they still earn a large profit from transmission fees (Pahl 2012, pp.89). The utility companies are having a difficult time maintaining and updating the national electric grid, which is why there is an interconnection queue, a waiting list for community renewable energy projects to connect to the grid. The interconnection queue is very long because the grid is not ready for that much of an increase supply of large electricity suppliers (Solar Expert, 2016).

In New York, Governor Cuomo has been pushing for more renewable energy and energy efficiency. The 2015 New York State Energy Plan strives to create a fundamental change in the national electric grid so that consumers will have the option of purchasing local and renewable energy from distributed generation (DG) (REV 2014). One way to slowly

transition the grid towards renewable energy is through promoting community distributed generation that can be utilized by a group or whole community.

In April 2016, there was a shift in the solar landscape when six utilities and three solar companies came together in a Solar Progress Partnership to come up with a proposal for the Public Service Commission (PSC) on a net metering policy (see definition for Community Net Metering in report glossary). They proposed that community solar customers will receive full retail rates on net metered credits, or rather the excess power they produce and sell back to the utility company, but the solar developers would have to pay part of that. Then in 2020, with possible exceptions, the rates for net metered credits would go down for new solar customers until they equal their value determined in the Reforming the Energy Vision, the Governor's strategy for a clean, resilient, and more affordable energy system (REV 2014). This means that the net metered rates can be guaranteed until 2020, after which they would be vulnerable to changes in the energy market and the current political climate. Until then, this will help to ensure there is not a shift in the cost burden from solar to non-solar customers and will help encourage the use of renewable energy (Shallenberger, 2016). While policies continue to shift, this shows how New York is currently in the position of supporting local and community renewable energy projects.

With the rise of local renewable energy projects comes a boom in the local “green-collar” economy. A green-collar job is just a blue-collar job that goes a step further to better respect the environment and is a family-supporting, career-track, vocational, or trade-level employment in environmentally-friendly fields. This includes employment in renewable energy, energy efficiency, energy auditing, and more. This growing sector of the economy can be used as a “pathway out of poverty” because green-collar jobs require some training after high school, but less than a 4-year education, and are impossible to outsource. These jobs represent a reinvestment not only in infrastructure, but in the communities and people as well (Jones, 2008).

Benefits of Solar Energy

Solar energy is a clean, reliable, and resilient power source that helps revitalize the local economy in several ways. The more affordable and stable electricity prices would help residents save on energy costs, allowing residents a more affordable cost of living and the potential to spend that money in the local economy. Installing and maintaining solar panels provides local green-collar jobs that cannot be outsourced (Jones, 2008).

Rooftop solar is an option available to homeowners to either lease or pay to own solar panels on the roof of their home. Advantages to rooftop solar are that there are federal and state tax incentives to help a homeowner. The benefit is that the solar panels immediately increase the property’s value.

However, Sheridan Hollow has a low-income population that would not have the tax appetite to be able to take advantage of tax incentives, and renters do not typically have the ability to use rooftop solar. That is why a community solar farm is a good option for the Sheridan Hollow community, and also means there is a good chance to get grant funding. Community solar uses the aggregate demand of subscribers in the community to negotiate with utility companies for lower electricity rates. The more subscribers

interested in community solar generally means an easier time negotiating with solar developers on a contract that benefits the community. This option does take a lot of collaboration and hard work from within the community, but once the community solar farm is set up it is easier for subscribers in the community to sign up for and is virtually hassle-free (NYSERDA, 2015).

It is important to keep in mind that the energy market is volatile and influences the feasibility for solar projects because of large price fluctuations. Monolith, a local solar developer, may say that they will guarantee that they will offer a 20% reduced energy price rate lower than what National Grid offers, and sign you into a contract at that rate for the next 20 years. However, there is no real way for them to be able to guarantee that, because energy prices change with energy supply and demand, like how the recent natural gas boom lowered energy prices (Solar Expert, 2016).

Sheridan Hollow: Energy Profile

The process for signing a contract for solar energy requires information on the subscribers' energy usage, which led the Energy Team to try to compile an energy profile of the neighborhood. Before buying into solar it's always a good idea to be energy efficient first, because it's the low-hanging fruit to reduce energy costs and energy that is wasted.

Moving to a solar powered system would benefit the neighborhood by providing Sheridan Hollow subscribers with cheaper electricity rates. Paying for energy can be a financial burden; there are two terms that should be considered when looking towards the neighborhoods energy needs. Energy burdened means paying over 4% of annual income on utility bills, and energy impoverished means paying over 10% of annual income on utility bills (Grid Alternatives, 2015; see figure 36). One goal of community solar can be to reduce the number of households that fall under those categories. The median household income in Sheridan Hollow was approximately $18,583 in 2015, which means that the goal should be to get annual energy costs under $742 for most residents (note, the median household income uses Census Tract 8 as a proxy for the neighborhood and the data is from the 2015 American Community Survey 3 year average).

Figure 36. Financial Burden of Energy Formula (Grid Alternatives, 2015)

$$\text{Formula (\%)} = \frac{\text{(Total Cost of Utility Bills in 12 months)}}{\text{(Income for the Whole Year)}}$$

The Sheridan Hollow neighborhood has a common interest in pursuing a collective solar energy plan. Working together the entire neighborhood needs to find out their collective electricity consumption to figure out how much solar energy is needed to provide all the electricity needs of the neighborhood. Working with the Affordable Housing Partnership would be a good way to collect the energy data for the neighborhood, and will be needed to sign up for solar energy. Another benefit of collecting data on energy usage and cost of the neighborhood is that it might be a way to leverage additional grant funding.

There are various types of data that can be used to help gain insight into the amount of energy used and how to conserve energy. Sheridan Hollow has 2,111 total residents. These residents are spread out in 856 occupied units. Knowing how much energy is consumed per resident can help specify how much energy is being used and how to become more energy efficient. Also, collecting energy usage data from energy efficient sources can help as a comparison to become more energy efficient. Some of the numerous variables that impact energy usage are square footage and number of residents per house. In order to control for usage data these numbers must be known. Another important factor in energy is electricity versus natural gas usage. Electricity usage is used for various things such as lighting and refrigerator, also how buildings are being heated and cooled. Natural gas is the main source of heating in New York (U.S. EIA 2016). Having a programmable thermostat is an example of a factor that affects natural gas usage. Knowing what Sheridan Hollow is paying per Kilo Watt Hour (KWH) can help them when signing up for solar. The average residential electricity rate in Albany is 11.74 cents per KWH (Electricity Local 2016). Finding out Sheridan Hollow's current rate and making sure it is lower when using solar will help the neighborhood save money.

AHP has some information on energy data, however this information is not usable for the current purpose of becoming more energy efficient and moving towards solar energy. Some information that must be known includes: the time frame in which the data was collected; the housing type (single family, multifamily, mixed use) of the location in which the data is from; the occupancy and the square footage of each location data are collected from; and the company which is being used and how much they charge to provide the energy.

NYS Office of General Services, Solar Panels, & Streetlighting

The Sheridan Avenue Parking Facility is a 319-space parking garage located at 100 Sheridan Avenue that has an entrance along Sheridan Avenue and along Elk Street. The facility in turn, allows for entering and exiting at both the bottom and top of the Hollow. The facility was constructed in 2013 to serve the growing demand for parking among state employees who work in the Empire State Plaza and New York State Capitol. The facility is owned by the State of New York and is operated by the New York State Office of General Services (NYS OGS). It can be reasonably asserted that parking facilities have one inherent use, which is to park motor vehicles. Outside of that use, a parking garage brings little to no real value to the neighborhood it is constructed in. State-owned facilities, such as parking garages, generally do not produce property tax or revenue, which is the case with this garage to the City of Albany. Parking garages are often large brutalist structures, devoid of any human scale adaptation. With that being said, questions have arisen as to what neighborhood benefit, if any, could the Sheridan Hollow Parking Facility possibly bring to the Sheridan Hollow neighborhood

Over the last several years, the Sheridan Hollow neighborhood has seen a tremendous revival. Long abandoned structures are being rehabilitated and empty lots that dotted the landscape are now giving rise to new homes. In other words, the neighborhood is becoming reborn, but with the new rebirth and vitality comes more street activity including pedestrian and motor vehicle activity. Therefore, the need for additional street lighting has become readily apparent for those living in the neighborhood. Upon visual inspection at

night, many blocks in the neighborhood are poorly lit with some having little to no light at all. This creates an unsafe situation for pedestrians and motorists alike as more street activity is taking place in the neighborhood. Requests for additional lighting to the city of Albany from AHP has been made; however, the City, facing budgetary concerns, is not in a position to provide additional lighting at this time due to the increase in street lighting costs that would bring to the city budget.

However, an idea that has surfaced as a possible remedy to this situation is placing solar panels atop the NYS OGS parking facility in order to create a community solar network to power additional street lighting within the Sheridan Hollow Neighborhood. The garage would essentially serve as the host site for a community solar garden. In order for this to happen NYS OGS would need to be in agreement to install the solar garden. Ideally, the state would be supportive of this concept for several reasons. First, the state could power its garage with the electricity produced by the solar garden; this would save the State money over the long term and would help the State reach its renewable energy targets. Second, the concept would be in line with Executive Order #88 which is a commitment to lowering energy use. Third, the initiative would serve as good politics as it would bring together several stakeholder governments to produce a greater community good.

Unfortunately, Sheridan Hollow is not located within a distributed generation interconnection zone according to National Grid's map shown below (see figure 37). This means that the electric grid in the neighborhood is currently not in a condition to be able to handle a connection and input from a large electricity supplier, like a solar farm.

Figure 37. National Grid Map of Community Distributed Generation Opportunity Zone (http://ngrid.maps.arcgis.com/apps/InformationLookup/index.html?appid=4cabe13e88064021b0e2acad318c450c) The pink lines represent the areas of the electric grid that are ready to have an electricity supplier connect to.

However, a community solar farm is another alternative approach, and does not need to be located within the same community, only within the same loading zone as its subscribers. Sheridan Hollow is located within Loading Zone F, which means that a potential Sheridan Hollow Community Solar Farm only has to be located within the counties included in Loading Zone F..

If the grid is updated so it becomes possible for a solar farm within Sheridan Hollow to connect to the grid, then persuading NYS OGS to install solar panels on the Sheridan Hollow Parking Facility would require a collaborative effort on the part of the various stakeholder agencies and local elected officials. We would advise AHP to enter into discussions with the local and state representatives that represent Sheridan Hollow. Having all of the political representation on board will create a stronger political presence in order to make it clear to NYS OGS that the neighborhood is serious and that they have the political support. Meetings should be established with Mayor Kathy Sheehan, City Councilman Ronald Bailey, Albany County Legislator Merton Simpson, New York State Assemblyman John McDonald, and New York State Senator Neil Breslin. Creating a unified approach to persuading NYS OGS is critical to the likelihood of this project taking shape. Furthermore, local media should be utilized to create awareness to the proposed project and the benefits it could have for the neighborhood.

In the meantime, while the Sheridan Hollow Parking Facility cannot act as a host site for a community solar farm for Sheridan Hollow, NYS OGS could still serve as an asset to the community given the scale of its footprint (see figure 38). If Sheridan Hollow pursues and establishes a community solar farm located elsewhere, NYS OGS could participate in the community solar farm as an anchor subscriber since they do have such a large presence in the community. This would provide the solar developer with security in the guarantee of a steady and large subscriber in the solar farm contract, which could increase the negotiating power of Sheridan Hollow residents before entering such a contract.

Figure 38. NYS Office of General Services Properties Located in Sheridan Hollow

1: Sheridan Ave Parking Garage, 2: Steam Generating Facility, 3: Elk Street Parking Lot, 4: Road St Parking Lot (https://parking.ogs.ny.gov/sites/default/files/DowntownAlbanyParkingLocations-0714.pdf and Google Maps)

If and when the State installed a solar garden on the garage, the next component to this plan is to power the additional street lighting in the Sheridan Hollow Neighborhood. We should note that additional street lighting would be installed on existing poles by National Grid. However, any additional lighting not placed on current National Grid poles would have to come at an additional cost born by the City or another entity. In order for NYS OGS to pay for the electricity to power the streetlights, they would need to enter into an agreement with National Grid and the City of Albany that any and all additional power created by the solar garden would be credited to the City of Albany in order for the city to

fund the cost of additional lighting in Sheridan Hollow. Sheridan Hollow and the City of Albany would need to work closely with National Grid in order to create a plan on how best to increase the lighting in the neighborhood. While additional lighting units would most likely need to be installed, installing brighter bulbs on existing units could also be considered. Sheridan Hollow and the City of Albany would need to outline where the additional lighting is needed and work with National Grid to make sure it is properly installed.

This brings into the discussion the high cost of energy that the City of Albany is faced with when it comes to streetlighting. The City of Albany currently spent $4,579,000 on streetlighting for fiscal year 2016 (Albany City Budget 2016). This high cost is due to the amount of lighting fixtures throughout the city and the fact that the overwhelming majority of lighting fixtures are comprised of high pressure sodium bulbs which are very inefficient and have a relatively short life span. Certainly by now, the benefits of LED style lighting fixtures are widely known. These fixtures are extremely efficient and can last up to 10 years as opposed to the typical year and a half for high pressure sodium bulbs (NYSERDA Streetlighting 2015). LED bulbs are also much brighter and direct the light to the ground with little light being lost above. Currently, the City of Albany is looking into taking ownership of its streetlights. For the majority of municipalities, ownership of streetlights is maintained by the utility and the utility is responsible for maintenance. Although historically, maintenance of street lights has been inadequate with bulb replacement taking months in some cases. Recent legislation passed by the New York State Legislature and signed by Governor Cuomo allows municipalities to take ownership of their lights in order to engage in LED conversion and other cost saving measures. This conversion would be a tremendous benefit to the entire city and of course, to the Sheridan Hollow Neighborhood. There are even some fixtures that can be entirely powered by solar panels installed directly on the fixture. Further into this report is a case study of Soulardarity, an example of how a neighborhood in Michigan organized themselves and planned how to bring streetlighting, more specifically solar streetlighting, to their neighborhood.

The issue of inadequate street lighting in the Sheridan Hollow Neighborhood is one which is a high priority to AHP and to the residents of the Hollow. Remedying the situation will take a collaborative effort on the part of all stakeholders and will require them to think outside the box. That being said, addressing the lighting problem could be used as a way to promote the collaborative efforts within the neighborhood and the ability of the neighborhood to respond to situations in unique and innovative way. Bringing together all layers of government for the betterment of a community that has historically been underserved, would send a powerful message to the entire city and the entire Capital Region. The key to resolving the issue at hand is the collaborative approach that must be spearheaded by AHP and the neighborhood itself to achieve their desired outcomes.

Case Studies

City of Edina Community Solar Garden

In 2007 the city of Edina, Minnesota set goals to reduce emissions of greenhouse gases by 15% in 2015, 25% in 2025, and 80% by 2050 from 2007 amounts. The city decided to

lead by hosting the site for a community solar garden (CSG), a large solar array located within the community that residents can buy their power from at a cheaper rate than the utility company without adding a ton of pollution to environment. The City Council approved to send out request for proposals to solar developers to lease the roof of their public works building and build a solar array. In this case the solar developer would not only be responsible for the solar project itself, but also for signing up subscribers and working with their local utility to charge and credit subscribers accordingly.

The city chose Cooperative Energy Futures (CEF), a local member-owned energy cooperative (like a food coop), as their solar developer. CEF, part of the Just Community Solar Coalition, works to "ensure that community solar gardens are accessible to low-income households, create local sustainable jobs, and protect the environment." So the city leased their roof to CEF to build a solar array, and in turn CEF offers residents the ability to purchase their electricity from that solar array to "reduce their monthly energy costs and lock in stable, long term electricity rates." Subscribers are credited a slightly higher rate than what the utility charges, so in the end it means that subscribers pay less for a portion or all of their electricity. The subscription is monthly pay-as-you-go, has a 25-year contract term, and includes a transfer or termination fee if you are moving out of the loading zone and can no longer continue the contract at a new home (Community Solar Gardens 2016). The Edina CSG is already fully subscribed to and has a waiting list while they look at schools, churches, parking lots, and large commercial properties for potential host sites in the future.

While the Edina CSG is still in the development process, this is still a useful model to look at for many reasons. The host/site of the CSG is the roof of a government building located within the community, instead of a solar farm located outside the community. The solar developer they chose, CEF, is much like Grid Alternatives in that they strive to make solar power accessible and beneficial to low-income residents. However, if we were to consider this subscription structure for Sheridan Hollow, there are some disadvantages. The 25-year contract term would be too long because a lot of residents may not know how long they'll continue to live in the area. If the contract term cannot be shortened, then the transfer or termination fee should be taken out or be waived for low-income residents. With completed projects CEF on average has saved pay-as-you-go subscribers 8% or more on energy costs (Cooperative Energy Futures 2016). These are things to consider when negotiating a contract with a solar developer to make sure the project remains beneficial to low-income residents.

The city of Edina's website contains many links to documents giving you all the information you need to know to get started and to ask the right questions. To make it easier for future reference, here is a list of some of the websites and their use, but while using these resources, keep in mind that MN is a different state and may have different regulations than NY.

- Subscriber Questions
  http://www.cleanenergyresourceteams.org/sites/default/files/CommunitySolarGarden_SubscriberQuestions_06-07-16.pdf
- Subscriber Financial Decision Tool
  http://www.cleanenergyresourceteams.org/solargardens/csg-calc

- Local Government Community Solar Toolkit http://www.cleanenergyresourceteams.org/solargardens/toolkit#1

Helderberg Community Energy – Upstate New York

The Helderberg Community Energy (HCE) project was incorporated in New York State in September of 2008 (Tulloch 2016). Following a NYSERDA grant study of potential resources for community owned wind energy in the Helderberg Hilltowns, residents in the town of Knox took interest in the idea of community owned energy projects and founded HCE to address climate change and energy shortage problems with local solutions that would benefit the local community.

Objectives of HCE include:

- Playing an active role in addressing challenges of climate change
- Developing contacts and exchanging experiences with industry professionals
- Educating elected officials and the public about energy issues and resources for local communities
- Identifying and communicating ways in which energy projects can benefit the local community
- Participate in the local development of energy solutions that benefit the local economy

The organization's focus has largely moved from wind power to solar after the state Public Service Commission made a decision to allow community net metering in 2015. Also referred to as shared renewable energy, community net metering allows any energy user to share in power created by a large renewable energy source (Tulloch 2016). Through a partnership with Monolith Solar, HCE is constructing a two-megawatt solar farm west of the Capital District to produce solar energy which can be purchased by local consumers that are unable to install their own solar panels. Solar power created by this farm can be purchased by homes and businesses anywhere in National Grid's Load Zone F – which extends from southern Albany County north to Ticonderoga, and from Gloversville east to Troy (see Figure 39) (HCE 2016). The solar farm itself is owned by Monolith, but consumers can request to participate in the community net metering program through any of the farm's partners: HCE, Solarize Albany, or Monolith.

Figure 39. New York Control Area Load Zone F

(www.nyiso.com/public/webdocs/markets...data/zone_maps.../nyca_zonemaps.pdf)

The benefits of a solar farm that provides renewable energy for the community from a remote location are wide ranging according to HCE. The organization says that this setup makes solar power a viable option for the first time to many consumers – including apartment buildings, homes with roofs on which solar panels cannot be installed, and properties which cannot be altered due to local preservation ordinances. Accessing power from the remote facility requires no meter change either. Shared solar also allows households with low-to-moderate incomes to use renewable energy without the large initial investment of installing solar panels, while also saving money on their electricity bill.

According to HCE, Monolith will sell the shared solar power with a guaranteed 20% reduction in monthly electrical bills. Consumers who buy into the shared solar deal will still receive a monthly customer fee of $17 from National Grid, and a second bill from Monolith for 20% less than the user's average monthly National Grid charge prior to signing up for shared solar (HCE 2016). The organization also says individuals or entities will have the option of making a Power Purchase Agreement, which allows them to become owners of specific panels in the solar farm. Loans and federal tax credits may be used to these purchases. This type of agreement allows individuals to save up to 40% on their own energy bills, while also allowing them to qualify for an end-of-year payment if surplus energy is produced by their panel and returned to the grid. HCE does not have any financial stake in the shared solar program with Monolith, nor does it receive any monetary benefit from the partnership.

Community Choice Aggregation – Sustainable Westchester, Inc.

Community choice aggregation (CCA) is the term used to describe how municipalities are able group their local residents' energy needs together and put the electricity production out to bid, effectively giving local governments and their residents more control over the source of their energy. The local utility company would still perform functions including transmission, distribution, repair, and customer service such as billing. The benefits of CCA are lower competitive electricity rates, a transition to a cleaner and more efficient energy supply, consumer protection, local control, local job creation and economic development, and a shift in power, literally and figuratively, from large corporations to the local communities (PSC 15020/14-M-0564). CCAs have been successful in Illinois, Massachusetts, California, and Pennsylvania, and a pilot program has recently gone underway in Westchester, New York called Sustainable Westchester, Inc. The idea is to use the aggregate demand of all the residents to achieve local objectives to reflect the communities' needs.

In NYS the PSC has mandated that the only projects that can go forward are those with pricing rates that allow future savings for residents ("Community Choice Aggregation"

2016). Local governments can avoid a messy referendum process if municipalities pass local legislation, using home rule, to have the right to use a CCA (Giambusso 2015). The Local Energy Aggregation Network (LEAN USA) is a non-profit membership organization that helps communities across the country develop CCAs. Though a CCA is not an option for Albany at this time, because Sheridan Hollow and other low-income communities stand to benefit the most from CCAs, we recommend that, given the opportunity, AHP and SHNA should advocate for Albany becoming part of a CCA in the future.

Solar Street Lighting Case Study: Soulardarity – Highland Park, Michigan

Highland Park is located in Wayne County Michigan within the Detroit metro region. The city was home to a number of automotive plants in the early 20th century that provided economic growth and stability. Over the years manufacturing jobs left the city, and like much of the Detroit metro region Highland Park fell into decline. In 2011 the local energy supplier, DTE Energy, repossessed over 1,000 streetlights from Highland Park after the city could not afford to pay its $4 million electric bill ("The Soulardarity Story" 2016). The city advised residents at this time to leave their porch lights on in order to deter crime (Binelli 2012). After the removal of the streetlights in Highland Park, vacancies and foreclosures continued to rise. In a city where more than 50% of residents live below the poverty line, asking residents to cover the bill for their street lighting is not a realistic option. It's estimated that Highland Park residents spend $16 million a year on energy these costs are a major contributor to the continued economic hardship in the region ("Weatherization" 2016).

In response to the debt-imposed blackout, residents formed the community based organization of Soulardarity. Created in 2012, the organization's solution to the darkness in their neighborhoods is to install solar-powered LED streetlights. The group initially installed lights one at a time and set a goal of installing 200 new solar-powered lights by 2017 to replace the 1,000 that were removed. That goal has since grown to replacing all 1,000 lights in a single installation period (Sands 2014, 2016). The group plans to do this by partnering with the Southeast Michigan Regional Energy Office to help pay for the initial installation of the lights with the backing of Federal bonds and having the city make lease payments on the lights that would be calculated similar to a mortgage payment. This plan allows the city to build equity in the asset and ultimately attain sole ownership of the lights (Soulardarity 2016). While the organization has yet to move forward with this plan, they have installed a number of standalone lights and have done extensive analysis on the costs and benefits of municipal owned solar-powered lighting versus leasing lights from an energy supplier - as well as the benefits of LED lights in general.

The lighting system researched by Soulardarity would use photovoltaic solar panels, lithium ion batteries, and 35-watt LED bulbs (Soulardarity 2016). These lights would be free from the electrical grid with an estimated lifespan of 15-20 years. These types of LED light fixtures also offer the potential of providing advanced services for the community such as community WiFi and intranet, flashing lights to alert first responders, and gunshot triangulation systems (Sands 2016). Because the lights operate off of solar powered batteries, they also remain functional during blackouts and other emergencies. Solar-powered LED lights do not produce CO2, resulting in the reduction of emissions by an estimated 1,024 metric tons per 1,000 lights compared to conventional modern street

lighting (Sands 2016). The LED lights themselves also offer a number of benefits, including a longer life expectancy, minimization of light pollution by aiming fixtures, decreases in energy use and emissions, and more consistent lighting quality (Soulardarity 2016).

The cost of the project appears to be the largest barrier to its completion. Solar-powered LED lights are still a relatively new technology and are therefore quite expensive to purchase and install in comparison to traditional street lighting. This cost is the driving factor behind Soulardarity's goal to install all of its lights in a single project – the cost for purchasing and installing all the lights at once would cost about $4,000/light as opposed to $9,000/light if purchased and installed individually. A project like this is not very cost effective unless done at a large scale all at once (Sands 2016). Furthermore, even with bulk purchase and installation prices, Soulardarity found that installing 1,000 community-owned solar-powered LED lights would cost the city about $100,000 more than having DTE Energy re-install comparable grid powered LED lights. These costs, the organization argues, would be negated by lowered ongoing costs and other community benefits. Soulardarity estimates that over 15 years the solar-powered LED streetlights would eventually save the city $3 million (see Figure 40) while simultaneously creating jobs for installation and maintenance, providing an opportunity for workforce training, as well as returning some of the $16 million spent by residents on energy back into the local economy (Soulardarity 2016).

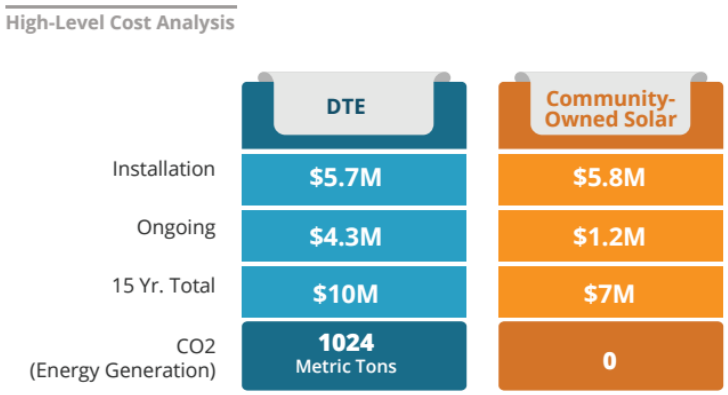

Figure 40. High Cost Analysis of Community Owned Solar Streetlights (Soulardarity 2016)

A project like the one proposed by Soulardarity does seem feasible given the right conditions:

1.The project should be large enough in scale to make purchase and installation affordable

2.A variety of stakeholders must be willing to cooperate to secure funding and provide ownership options

3.The local municipality must be willing and able to pay the higher upfront cost in order to invest in long-term sustainability.

Workforce Development

The energy team wanted to present opportunities for AHP to engage in workforce development around energy efficiency and the renewable energy field to increase employment opportunities for residents in Sheridan Hollow. The solar industry is preparing to accelerate in 2017 and market indicators suggest that there will be a boom, similar to the high-tech boom taking place in the Capital District. Similarly, not everyone will be included, especially inner city residents in neighborhoods with similar census tracts as Sheridan Hollow in Albany, Troy and Schenectady.

Solar PV Industry Growth and Workforce Opportunities

The number of solar panel installers is forecasted to increase from 2014 to 2024 by 24.3% percent according to the most recent data published by the U.S. Bureau of Labor occupational employment statistics (U.S. Bureau of Labor Statistics 2016). In NYS, the DOL estimates entry-level photo voltaic (PV) installers earn $32,300 and the average is $36,480 (New York State Department of Labor 2015).

Case Study 1: Hudson Valley's Workforce Development Institute

In mid-2000's, the New York State Energy Research and Development Authority (NYSERDA) partnered with Hudson Valley Community College (HVCC) to develop a program in anticipation of a high demand for qualified PV technicians as installations of PV systems accelerate in the coming years (Sarubbi 2007). Hudson Valley has two programs that may be of interest to Sheridan Hollow:

1. Workforce Development Institute (WDI) Photovoltaics – Solar energy can provide training to qualify for the PV-Entry Level, PV-Advanced and NABCEP Entry-Level exam. Prerequisites for PV-Entry Level training require a 10th grade-level reading and math ability and proof of prior electrical training or experience. Prerequisites for PV-Advanced training require a 10th grade-level reading and math ability and completion of PV-Entry Level photovoltaics (Solar power).

    a. NABCEP Entry Level Exam - Successfully passing this industry-sponsored exam will enhance employment opportunities in the solar field. The Workforce Development Institute of HVCC is a registered provider of NABCEP (Hudson Valley Workforce Development Institute (2106)

    b. HVCC Photovoltaic Installation Certificate Program Prerequisites: Completion of the AAS Degree in Electrical Construction and Electrical Maintenance (Hudson Valley Community College (2016)

Employment Opportunities that provide Human and Social Capital

AHP's BOA Application Narrative and Pre-Nomination Study described the desire of residents for advance job training, economic develop opportunities and access to reliable financial strategies for successful entrepreneurship. Workforce development in the renewable energy field may offer this opportunity.

There is a tremendous amount of underutilized social, human, and cultural capital in Albany. Yet there are also opportunities to foster relationships with community-based organizations. There are numerous of faith-based groups, for example, and the Albany Housing Coalition provides veterans in the area a strong sense of place and support through its veterans housing services programs.[3] 100 Black Men helps men with no jobs, lost jobs, long term displaced workers and formerly incarcerated with mentorship and support groups.[4]

Necessary Partners

- Other Community Based Organizations, 100 Black Men and Albany Housing Coalition
- Grid Operator: National Grid, HVCC and National Grid have a working relationship.
- Training Institution: (HVCC) is the established and recognized anchor provider.
- A New York State Unified PV permitting and inspection professional
- A 2015 New York State Energy Code professional
- Note: All PV installation and maintenance companies will be required to verify workmanship.

Case Study 2: People United for Sustainable Housing (PUSH) Buffalo

PUSH is a neighborhood based organization involved with several workforce development activities. They actively recruit and refer area residents to workforce development providers and local contractors. PUSH Buffalo does not have a photovoltaic PV or solar heating system (SHS) workforce development training program. Nevertheless, AHP can become a referral group in a coalition type partnership with other area community based organizations (PUSH Buffalo).

How it Might Work

PUSH becomes a referral partner with several general contractors in the area by strengthening the relationships with PUSH Buffalo. AHP can join other CBOs in the area as referral agencies for Hudson Valley Community College. The network agency can help residents get in touch with NABCEP PV approved training programs that can help them get into the solar installation field. PUSH is not a provider for training but can make referrals.

NYSERDA and the Renewable Industry set the standards and training requirement for installers in New York State. NABCEP has set the qualifying requirements for certifying PV contractors and solar technicians to meet the high skilled needs for the solar industry in the North-East region of the United States.

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[3] The Albany Housing Coalition offers a variety of veterans housing services: http://www.ahcvets.org/

[4] 100 Black Men of America improves the life of communities served with mentoring a core service delivery. The organization has an Albany Chapter: http://100blackmen.org/chapters and the Capital District Chapter has a Facebook page: https://www.facebook.com/pages/One-Hundred-Black-Men-of-The-Capital-District/149979458378782

The energy team recommends that AHP consider the PUSH Buffalo approach as a model for building partnerships and encourages AHP to focus on its core strengths by utilizing the organization's qualified in-house staff and leveraging whatever credentials they collectively represent.

Conclusion & Recommendations for Alternative Energy in The Hollow

Sheridan Hollow residents should start discussing and organizing around community solar at SHNA meetings, to eventually negotiate for affordable solar prices and lower electricity rates. AHP should work with residents to collect and gather data on energy usage and utility costs, to compile an energy profile, to rely on when developing plans for a community solar farm, and that information may be a way to leverage future funds. As a way to start the discussion, Sheridan Hollow residents could survey the neighborhood to see how many residents are interested in being potential subscribers to a community solar farm.

For more advice and guidance on how to organize around solar energy, interested residents should reach out to Solarize Albany, and to any energy provider willing to work with the neighborhood to develop a community solar farm and/or negotiate with Sheridan Hollow neighborhood to participate in an existing community solar farm with terms that address the particular needs of the population and provide significant cost savings. .

Before pursuing renewable energy, AHP should work to increase the participation and completion of energy audits and upgrades to maximize energy efficiency efforts. Even the Habitat homes could benefit from energy audits, so Sheridan Hollow should require any new homes be built up to high energy efficiency standards in the first place.

The Energy Team also recommends that Sheridan Hollow develop a partnership between the workforce development program affiliated with the Social Enterprise and Training Center (SEAT) in Schenectady, Hudson Valley Community College (HVCC) in Troy, Grid Alternatives, and community members to create a workforce development program around any future efficiency and solar energy projects.

To start addressing issues with streetlighting in Sheridan Hollow, residents should compile a survey on the lighting deficit they would like to improve. Residents could then bring that information to their local representatives to build political influence for their community. Any streetlights that are out should be reported to National Grid. To address the lack of streetlights themselves, Sheridan Hollow could look into a self-advocacy model involving solar-powered streetlights, like the case study of Soulardarity.

Housing & Brownfield Redevelopment in The Hollow

Background

The Affordable Housing Partnership (AHP) and the Sheridan Hollow Neighborhood Association (SHNA) are located in the dynamic Sheridan Hollow neighborhood in Albany, NY. These community not-for-profits have an extensive history of working within Sheridan Hollow and collaborating with other community groups around affordable housing, environmental justice, community development, and historical preservation. Most recently, AHP and SHNA partnered with the Albany Community Land Trust (ACLT) and the Community Loan Fund of the Capital Region (CLF) to apply for the second phase of a New York State Brownfield Opportunities Area Grant (BOA).

The BOA grant is sectioned into three phases; the second of which SHNA and AHP are currently in. The first phase is a pre-nomination study, which was granted to AHP in 2012 and involves preliminary analysis of the area affected by brownfield sites. The second phase of the grant is a nomination study and provides an in-depth description and analysis, including an economic and market trends analysis of existing conditions, opportunities, and reuse potential for properties located in the proposed Brownfield Opportunity Area with an emphasis on strategic sites that are catalysts for revitalization. The nomination phase concludes with a description of key findings and recommendations to advance redevelopment of strategic sites and to revitalize the area. The third phase is called implementation strategy. The implementation strategy provides a description of the full range of techniques and actions that are necessary to implement the area-wide plan and to ensure that proposed uses and improvements materialize. These strategies range from projects that can be undertaken immediately to those which have a longer time frame.

The BOA application process is contextualized within a history of community engagement that includes:

- University at Albany's Fall 2010 Planning Studio. AHP collaborated with the studio class to create their first online housing inventory. The report titled *"Sheridan Hollow: Steps Forward (Making Redevelopment Work)* worked in alignment with Albany's 2030 Comprehensive Plan.
- SHNA's 2012 Comprehensive Plan
- In 2016, AHP published *Minding the Gap*, a study assessing existing and needed resources for financing housing and redevelopment in Sheridan Hollow. The study concluded that there should be an emphasis on programs aimed at strengthening the private housing market; a path of a mix of homeownership and rental initiatives to be implemented; and there should be an evolution of a comprehensive neighbourhood planning process with collaboration with the city and state public stakeholders (Bratt, 2016).

For the nomination phase of the BOA Grant, SHNA and AHP decided to build upon the existing relationship they have with the University at Albany's Master's in Regional Planning Program by teaming up with the Brownfield and Community Development

classes whose graduate students provided research and analysis to supplement grant deliverables. Housing was one of the five topics tasked to the graduate student groups.

Housing Team Overview & Deliverables

With its next stage of community development underway, AHP is looking to continue to focus on housing development and rehabilitation.

On November 4th 2016, members of the housing team met with Susan Cotner and Zach Romano from AHP to further discuss their partnership goals. From this meeting the above goals were determined to be a priority for this project. A pilot data collection effort to test the updated 2010 Housing Survey was also held on November 19th, 2016.

Housing group goals were to provide:

1) A brochure of citywide services for home ownership and housing rehabilitation services:

a. Develop a comprehensive brochure that includes all housing and development related incentives, funding sources, loan products, etc. AHP has a great deal of this information compiled already throughout various reports but needs a complete inventory of every possible outlet for somebody interested in buying property or improving their own. AHP is interested in using the information to make it easier for residents in Sheridan Hollow to improve or buy housing as well as generate outside investment in the neighborhood.

A copy of the Brochure is attached as Appendix G of this report.

2) Design a plan to complete and update the 2010 Housing Condition Survey administered by the UAlbany Studio class

a. AHP needs to assess the neighborhood and verify its internal data on vacancy, vacant land, and the condition of properties throughout each block.

3. Provide recommendations for further analysis of the updated survey in concert with the previous survey and other data sources.

a. Compare new data to the previous survey and see how the neighborhood has progressed through a time series analysis. Also, contrast new attempts at data collection to ongoing city and county efforts to avoid unnecessary overlap and identify gaps.

Housing & Brownfield Redevelopment Goals

The BOA is utilized as one tool for Sheridan Hollow to achieve its revitalization goals to:

“strive to create: a vibrant, diverse, mixed use neighborhood whose unique history and culture are celebrated; the environment is protected; development is equitable and sustainable; citizens are involved; Incomes are mixed; Affordability is maintained; Local ownership is increased; And quality of life for all residents

> *increased.* (Affordable Housing Partnership of the Capital Region, Inc. , 2012, p. 4)

Improvement of housing quality, decreasing vacancy, increasing ownership and maintaining affordability are some of self-identified main underpinning mechanisms for the neighborhood to revitalize itself.

The nomination study goals include support for rehabilitation of existing housing, survey tools for housing finance in weak markets, evaluate historical significance of neighborhood, evaluate rehab feasibility versus demolition of buildings and produce environmental assessments for strategic sites.

Current Housing Conditions & Trends

Sheridan Hollow is experiencing positive developmental trends. Habitat for Humanity is currently developing 24 new affordable, mixed-income, single- and two-family homes in the Hollow and there is market rate housing being newly developed in the east end of the neighborhood. A collaboration by Housing Visions, NYS Homes & Community Renewal, Habitat for Humanity Capital District, and the Touhey Home Ownership Foundation resulted in Sheridan Hollow Village, a development of 57 affordable housing apartments connected to amenities that include a community café.

Sheridan Hollow is in the heart of Albany, NY, walkable to big employers, and primed to take advantage of wider positive trends in Albany such as increased enrollment in Albany Public Schools, a continuous effort to update zoning and implement the City's first comprehensive plan.

Yet the challenges facing home ownership and housing conditions in the Hollow are still heightened compared to other more affluent neighborhoods in the city. The Hollow is an inheritor of a legacy of disenfranchisement with the neighborhood itself once red-lined by the Home Owners' Loan Corporation or HOLC (Nelson & Ayers, 2017). According to a 2012 study, roughly 26% of the Hollow properties were abandoned or vacant (Carleo-Evangelist, 2012). This concentration of vacancy creates obstacles for home ownership as it makes the estimated value of an abandoned property, or one close to it, less then what it would cost to rehabilitate it (Griswol & Norris, 2007).

The new construction development only makes it more pertinent that AHP and SHNA receive an update on housing conditions and rate of vacancies in the community. The Hollow is on the precipice of multiple opportunities for community members to more sustainably develop their community. However, with improved housing conditions comes heightened risk of gentrification. Balancing revitalization of a community with policies that reduce the risk of widespread displacement of low-income residents is a common challenge to most urban cores with traditionally disenfranchised communities (Levy, Comey, & Padilla, 2007, p. 238)

The recent replacement of blighted and abandoned properties with affordable and mixed income housing sets a strong precedent in the Hollow of equitable housing. AHP and SHNA can further capitalize on this momentum by encouraging the implementation of inclusionary and incentive zoning.

Inclusionary zoning is a zoning regulation that accommodates multiple income levels by allowing for multiple housing types. Incentive zoning works concurrently with other zoning types to encourage community development goals via incentives in exchange for a developer providing a public benefit. The incentives typically include “some combination of direct subsidies, tax abatements, density bonuses, and reduced parking requirements.” (Urban Land Insititue, 2016, p. 5) Incentives do not automatically promote inclusionary practices, but can if they promote affordable housing.

In 2015, Albany initiated *ReZone Albany*: an update to Albany’s zoning ordinance. This was inspired by and in accordance with, the recently finished citywide comprehensive plan, *Albany 2030.* The effort is mostly funded by the New York State Energy and Research Development Authority’s (NYSERDA) Cleaner, Greener Communities Program. In August of 2016 ReZone Albany’s draft *Unified Sustainable Development Ordinance* (USDO) and the draft Albany Zoning Map was published. Sheridan Hollow constitutes several zones: R-T Residential-Townhouse, R-2 Residential-Two-Family, MU-CI Mixed-Use- Campus / Institutions, MU-NC Mixed-Use- Neighborhood Center, MU-CU Mixed-Use- Community Urban, and I-2 General Industrial.

The new zoning provides plenty of opportunities for developers to construct affordable and market rate housing at various densities within Sheridan Hollow. One zoning incentive for affordable housing is already proposed in the USDO:

(c) AFFORDABLE HOUSING 419

New residential or mixed-use development or redevelopment of a site in which at least 20 percent of all new dwelling units are rent or deed restricted so that they are affordable to households earning no more than 80 percent of the area median income (AMI) for the Albany metropolitan area shall receive the following benefits:

(i) The minimum number of off-street parking required by Section 375-4(E) shall be reduced by 20 percent.

(ii) The project may increase the maximum height of any primary building (or part of a primary building) located more than 100 feet from a Residential zoning district by one story or 13 feet, whichever is less. (Clarion Associates , 2016, p. 128)

Therefore, Sheridan Hollow is already on its way towards a zoning format that is inclusionary and has incentives for affordable housing. The Housing team therefore recommends that groups like AHP and SHNA become knowledgeable with the new updated code and make sure developers and residents in the Hollow know about the incentive. All of the currently proposed affordable housing incentives exchange a density/area or parking restriction in exchange for affordable housing types. Preventing gentrification in economically sustainable neighborhoods requires protecting affordable housing in neighborhoods where market rate housing also exists (Urban Land Insititue, 2016, p. 19). With this in mind, AHP and SHNA should explore and advocate for an incentive that involves a cash payment in a general affordable housing fund in exchange for a benefit. This way, if the Hollow feels that the concentration of affordable housing is appropriate in the moment, then can collect a fee to be used at a future date when the need for housing is more appropriate.

Ultimately, preventing displacement entails empowered and informed residents. SHNA and AHP are positioned to introduce the new zoning code to the neighborhood, organize for needed edits in the draft, as well as inform residents of past historical housing and neighborhood patterns in Albany.

Deliverable One: The Housing Condition Survey

AHP wants to assess the neighborhood and verify its internal data on vacancy, vacant land, and the condition of properties throughout each block. The Housing Team and AHP decided the best way to do this was update the previous 2010 housing condition survey.

On November 19 2016, the Housing Team collaborated with AHP and SHNA to conduct a housing conditions survey. Instead of using the paper survey tool used in the 2010 housing conditions survey, AHP converted survey questions to an electronic format using Geographic Information Systems (GIS) ArcGIS software. Each volunteer utilized the ArcGIS Collector App by ESRI on a smartphone. The app automatically updates AHP's GIS maps/csv files. This saves time spent on data entry and makes for a more seamless and continuous data collection process.

The 2016 housing conditions survey included categories that were on the 2010 survey (observed land use, occupancy, building condition, garage, landscape conditions, litter, and vegetation control) as well as several new categories that helped other UAlbany research teams collect data on their topics. These included categories about water drainage, water damage, the existence and connectivity of gutters and downspouts. Going forward, the survey data should try to balance continuity to enable longitudinal research, with gathering timely data that addresses the community's most pertinent needs. In this most recent survey this involved keeping all 2010 categories while adding more data points that reflected the recent increase in the community's desire to manage soil erosion, flooding, and create better water infrastructure going forward.

Many categories were Boolean in nature. For example whether or not a garage existed was a simple yes/no format. Others were formatted to be multiple-choice (i.e. # of stories). Alternatively conditions often need to be assessed on a scale and therefore the housing conditions were scaled from 0 to 3 where:

- 0 is critical defect
- 1 is major defect
- 2 is minor defect
- 3 is no defect

The five scaled housing condition categories were:

- Roof, gutters, & Chimney
- Porches, Stairs, & fence,
- Doors & Windows
- Exterior Surfaces
- Foundation

The overall condition was a sum of all of those ratings. Therefore if 3 was the highest number a housing condition could get, and there were five categories of conditions, the highest (best) overall rating a condition of a house was 15.

The pilot update surveyed roughly 14% of the neighborhood. On a scale from 0-15, average overall housing condition was 10, 20% were unoccupied, and 11% of the properties were commercial. Because the survey only covered 14% of the neighborhood's properties, none of these findings are statistically significant before further completion, but this exemplifies what information a completed survey could reveal. It is the Housing Team's recommendation that the survey be completed using the ArcGIS app and volunteer residents from the community along with MRP students. Revitalization of the community, preventing gentrification, and creating a sustainable and economically robust neighborhood depends on growing the leadership capacity of existing residents. The survey is a perfect opportunity to capture community expertise and collective memory as well as for trust building between residents and SHNA and AHP.

Surveying each house's condition is time consuming. The housing team also recommends better integration with the City of Albany's real property data to compliment and/or enhance the AHP's housing conditions survey. One way to do this is to verify the housing conditions column in the real property data against the AHP 2010 survey results to check if the City's assessment meets AHP's standards. Another potential time mitigator is to make sure that the housing condition survey does not include any data retrievable from the City real property data or its GIS tax maps.

Finally, once the survey is complete, a longitudinal data analysis between the 2010 and current housing condition survey should be completed.

Several MRP students are interested in continuing their partnership with AHP and SHNA in order to help finish the survey. The Housing Team recommends AHP, SHNA, community residents, the Capital District Planners Association, and University at Albany graduate students complete the survey in 2017.

Deliverable Two: Housing Opportunity & Rehab Brochure

In an effort to provide information to the Sheridan Hollow community regarding homeownership and home rehabilitation, the Housing team researched various resources available to community members and stakeholders. With this information, the team compiled a brochure providing information for the specific needs of individuals. This brochure can be used in conjunction with the housing conditions survey to raise community involvement and capacity.

The outside of the tri-fold brochure notes the purpose as "Housing Opportunity & Rehabilitation." The outside of the brochure also details the plethora of services provided by AHP, with special consideration to services for Homebuyers, Homeowners, and Energy Efficiency services. With their convenient location at 255 Orange St in Albany, NY, this is a lead organization specific to the Sheridan Hollow neighborhood.

The inside of the brochure includes a list of fourteen organizations that have programs that are designed to address ongoing housing problems throughout the city of Albany. The information provided for each of the listed organizations is concise and

comprehensive for community members. Along with the descriptions, the website, address, and phone number for each organization is also listed.

For the purposes of this report, the Housing team has decided to include a more in-depth list of organizations that serve Albany, so that AHP may share this information with community members or other organizations as needed. A list of these organizations and the brochure are attached as Appendix G.

Deliverable Three: Recommendations for Further Analysis

1. Complete update of the 2010 housing condition survey
    a. Use ArcGIS App
    b. Recruit and train local residents to complete the survey
    c. Integrate Albany real property data and GIS tax map information where applicable. Reduce overlap
    d. Conduct longitudinal analysis between previous and current survey
    e. Continue partnership with University at Albany graduate students to assist in completion of the survey.
2. Post brochure online and in hard copy (see appendix G).
3. Build community member leadership capacity
    a. Communicate ReZone Albany's draft goals, especially as they pertain to inclusionary and incentive zoning.
    b. Advocate for an incentive zoning measure that allows for a fund for affordable housing to be built in the future.
    c. Use the survey and brochure in conjunction to gather entrenched community knowledge and include it in the community's assessment of itself while building leadership capacity.

Housing Ownership and Rehabilitation Service Providers

1. Arbor Hill Development Corp. (AHDC)- Albany
    - Provides professional services for Arbor Hill, North Albany, Sheridan Hollow, West Hill, and West End neighbourhoods. Their mission is to:
        - Promote innovative and sustainable efforts in revitalization
        - Address quality of life concerns
        - Improve access to affordable home ownership and apartment rentals
        - Rehabilitate and restore housing and commercial building stock
        - Encourage economic development and job creation
    - New Home Buyers may be eligible for financial assistance through the NYS Division of Housing and Community Renewal for the purchase of a new or existing home, with the help of AHDC.
    - Businesses will be able to gain assistance through AHDC to secure banking partners, access financial incentives, and tap local colleges and universities. Start-up and Expanding Businesses may also work with AHDC to facilitate transformational development projects and benefit from possible financial incentives, development services, and tax benefits.
    - Contact Information"
        - http://www.arborhilldc.org

- 518-463-9993
- 241 Clinton Ave
  Albany, NY 12210

2. Albany Community Land Trust (ACLT)
   - ACLT is a community-based nonprofit organization committed to rebuilding neighbourhood-housing stock and creating high quality permanently affordable housing in the city of Albany.
   - Mission is to provide affordable housing opportunities for low-income people, preserve housing affordability for future generations, combat community deterioration by promoting economic opportunities in low-income neighbourhoods, and educates the public about ongoing and innovative methods of community development.
   - Homeownership through the ACLT includes the following:
     - Has mortgage with a bank/credit union
     - Accumulates equity
     - Enjoys the tax benefits of homeownership
     - Pays property taxes
     - Can make repairs, alterations, and improvements to home and yard
     - Can stay in home as long as you live and pass it along to children or others
   - Homeownership through ACLT is different because the purchase price is lower than regular market prices, and the homeowner resells at an affordable price while enjoying a fair return on investment.
   - Contact Information:
     - http://www.albanyclt.com
     - 518-426-1296
     - 255 Orange St
       Albany, NY 12210

3. Albany Housing Authority
   - Five-year mission is to provide high quality, affordable, and sustainable housing opportunities while continuing to promote economic independence and stability for residents.
   - Other than just housing, The Albany Housing Authority offers families a foundation from which to build successful lives, inspiring investment in self and community through quality rental, homeownership, employment, and small business opportunities.
   - Housing locations are available throughout the city of Albany; the Albany Housing Authority accepts applications for housing online.
   - Contact Information:
     - http://www.albanyhousing.org
     - 518-641-7500
     - 200 S Pearl St
       Albany, NY 12202

4. Albany Community Action Partnership (ACAP)
    - Mission is to work in partnership with families and communities to empower people to achieve economic self-sufficiency and an improved quality of life.
    - ACAP provides several programs to enable residents to live safely and comfortably in their homes. Need-based, ACAP offers emergency funds for heating costs, home improvements for energy efficiency, and home adaptations to accommodate disabilities:
        - "Access to Home" program provides assistance for individuals with disabilities and the elderly, so that they may continue living in their homes.
        - "Weatherization Assistance" program assists families with energy efficient efforts for home comfort and saved energy costs.
    - Contact Information:
        - http://www.albanycap.org
        - 518-463-3175
        - 333 Sheridan Ave
          Albany, NY 12206

5. Albany Housing Coalition
    - Albany Housing Coalition aims to eliminate homelessness among veterans within the Capital District.
    - Offers coordinated case management and peer support, in conjunction with transitional and permanent supportive housing and access to Section 8 subsidies for veterans. Albany Housing Coalition also assists with income, employment, and other benefits to assist in maintaining housing and quality of life.
    - Contact Information:
        - http://www.ahcvets.org
        - 518-465-5251
        - 278 Clinton Ave
          Albany, NY 12210

6. Historic Albany Foundation (HAF)
    - Private non-profit organization whose mission is to preserve and protect buildings that have architectural, historic or civic value, by providing technical assistance, education, and advocacy.
    - HAF is a source of:
        - Preservation Advocacy through using "best practices" in preserving historical structures and of protecting endangered buildings within our community.
        - Education through HAF's Preservation Workshops, which focus on techniques and architectural history.

- Technical Assistance for property owners interested in restoring or rehabilitating residential or commercial buildings in an effort to avoid demolition.

- Contact Information
  - http://www.historic-albany.org
  - 518-465-0876
  - 89 Lexington Ave
    Albany, NY 12206

7. Capitalize Albany
   - Facilitates transformational development projects, serves as the "City of Albany's economic development arm." The mission is to facilitate economic development projects within the City of Albany.
   - Real Estate Loan Program provides financing to qualifying real estate development projects and supports the revitalization of property, preferred projects include properties that are vacant or underutilized and, with rehabilitation and construction, may have a positive effect on revitalizing the community as a whole.
   - Contact Information:
     - http://capitalizealbany.com/
     - 518-434-2532
     - 21 Lodge St
       Albany, NY 12207

8. Catholic Charities Housing (Albany)
   - Mission is to provide a continuum of housing and support services for homeless and needy members of the Albany community.
   - Provides affordable and permanent housing, along with support services, which are designed to help those in need to help them.
   - Contact Information:
     - http://www.cchoalbany.org/
     - 518-459-0183
     - 41 N Main Ave
       Albany, NY 12203

9. Community Loan Fund of the Capital Region
   - Has residential mortgage financing available in Albany, with priority given to low-income borrowers and homes within targeted census tracts. Urban neighbourhoods receive particular focus.
     - For home purchases, a thirty-year fixed-rate mortgage is available to households earning less than 80% of the area median income with loans to buyers with difficulty qualifying for conventional financing.
   - Builds on the efforts of the HomeSave program for home repairs. Provides grant referrals, and fair/affordable loans.
   - Contact Information:
     - http://mycommunityloanfund.org/

- 518-436-8586
- 255 Orange St, Suite 103
  Albany, NY 12210

10. Habitat for Humanity (Capital District)
    - Mission is to build strength, stability, and self-reliance through affordable home ownership.
    - Construction for the "Sheridan Hollow Redevelopment Project" has begun in an effort to redevelop the neighbourhood into a mixed-income, mixed-use, sustainable community. Twenty new homes are planned for the first phase.
    - "ReHabitat" program is an initiative to fight blight and stabilize neighbourhoods through home repair and rehabilitation.
    - Contact Information:
      - http://www.habitatcd.org/
      - 518-462-2993
      - 325 Washington Ave Ext
        Albany, NY 12205

11. City of Albany
    - Department of General Services provides many quality of life services to its residents and visitors: The Department's mission is to ensure that the City's streetscape, park infrastructure, public facilities and public open spaces are maintained to be functional, safe, clean, attractive and convenient for residents and visitors.
    - The City works collectively with its residents and partners to strategically plan for development and revitalization efforts. City's Comprehensive Plan, Albany 2030 promotes: sustainable living, multi-modal connections, home ownership and economic opportunities within its neighbourhoods.
    - New Home Buyers may be eligible for financial assistance through Albany Community Development Agency (ACDA), which secures and manages millions of dollars in U.S. Department of Housing and Urban Development.
    - Contact Information:
      - City Hall, 24 Eagle Street, Albany, NY 12207
      - Equal Employment opportunity/Fair Housing
      - Charmel McCormick, EEO/AA/ Human Rights Coordinator
        - 518-434-5135
        - www.albanyny.org/Government/AlbanyNewYorkCityDirectory.aspx
        - http://www.albany2030.org/

12. Albany Community Development Agency
    - (ACDA) revitalizes our neighbourhoods by increasing homeownership, providing resources for home and community improvements,

- HUD funds are allocated to subrecipients through strategic grants, or to the community through housing programs, and Citywide neighbourhood development or public improvement projects.
- ACDA has several Home & Improvement Programs, including Homeowner Assistance Program (HOAP), Home Acquisition Program (HAP), Senior Rehabilitation Program (SRP), Rehabilitation Assistance Program (RAP), Tenant Assistance Rehabilitation Program (TARP)
- Contact Information:
  - **Albany Community Development Agency**
    Faye Andrews, Director

    200 Henry Johnson Blvd
    Second Floor | Suite #1
    Albany, NY 12210
    Phone: (518) 434-5265
    http://www.albanyny.gov/Government/Departments/ACDA.aspx

13. Affordable Housing Partnership (AHP) -Homeownership

- Is a Not-for-profit Organization that offers programs to promote affordable homeownership in Albany
- Mission is to strengthen neighborhoods and the financial independence of its residents through financial resources, community organizing and collaborations. They provide resources and connections to over 1000 households a year, these resources include down payment assistance, energy efficiency programs and good loan products
- AHP is partnered with: Community Realty, United Tenants of Albany, Albany Community Land Trust, the Community Loan Fund of the Capital Region, and is an organizing member of HomeSave, a foreclosure prevention coalition. AHP is a NYSERDA outreach partner and connects first time buyers to transit incentives from the Capital District Transportation Authority
- Contact Information
  - 255 Orange Street, Albany, NY
  - (518)-434-1730
    http://ahphome.org/about.html

14. Albany County Land Bank

- Mission is to facilitate the process of acquiring, improving & redistributing vacant properties
  - Eliminate the harms & liabilities caused by such properties
  - Return properties to productive use
  - Remain consistent with the municipality's redevelopment and comprehensive plans
- The Land Bank is committed to improving neighbourhoods which also has a responsibility to improve Land Bank properties for future use
- Contact Information: Albany County Land Bank Corporation
  - 255 Orange Street, Suite 104
    Albany, New York 12210

(518)-407-0309
http://albanycountylandbank.org/

Project Conclusion

Final Thoughts

For the purpose of this report, the UAlbany project consisted of five key focus areas researched separately by teams with individual findings, but the reality is that many of the findings overlap. These areas of overlap can be worked on simultaneously in such a way to leverage limited resources to make a bigger impact. For example, any project that focuses on improving housing conditions also focuses on increasing the energy efficiency of those homes, which is usually a prerequisite to implementing renewable energy and improving storm water management to reduce the intensity and frequency of flooding in the Hollow. Economic development overlaps with all of the groups' research efforts because anything that will improve upon the neighborhood will help to improve its economy, by attracting mixed income residents and more. In fact, the economic development team found that Sheridan Hollow residents should package different ideas to work toward a shared community vision and to celebrate the neighborhood's identity.

Along with the need to foster partnerships with local and regional institutions, another main theme among the findings is that community engagement is critical to move forward with improvements to Sheridan Hollow that will benefit the community. Many of the recommendations are or rely on a self-advocacy model for improving the neighborhood, and provide the community with opportunities to participate and become engaged. Sheridan Hollow residents already have access to community organizations, such as the Sheridan Hollow Neighborhood Association, that are the perfect places to start organizing around these projects, realize their vision as a community, and build upon their neighborhood identity.

The 2010 MRP Studio emphasized the need to build community engagement and capacity; our 2016 report builds off of this theme and presents opportunities to grow relationships and social capital within the community in order to continue improving the neighborhood. By engaging in these types of community activities, Sheridan Hollow can strengthen its sense of neighborhood identity, and this could become an even greater asset for the revitalization of the Hollow.

Team Recommendations

Economic Development Team Recommendations:

Sheridan Hollow should seek to establish partnerships with local and regional institutions, organizations, and establishments to foster local business opportunities that collectively work toward the community vision. Future development plans should be proactive and should focus on building upon the neighborhood's strengths and tackling its challenges strategically and creatively.

To strengthen the private housing market, Sheridan Hollow should: increase its stable housing stock and capital project investments; consider the wide range of funding options provided in the team report to finance economic development; enhance and promote business opportunities in Sheridan Hollow through a partnership between current business owners and community organizations like a Sheridan Hollow Merchant Association to tie local business needs with the community's needs; partner with institutions to promote a strategic plan for the arts community within Sheridan Hollow to attract visitors and residents; and, if residents express interest in developing a community garden, then a feasibility study should be conducted to determine potential for urban agriculture and culinary incubator.

To move forward towards these recommendations, it is important for Sheridan Hollow to seize the opportunity the BOA presents for new development that will inject new life into the community.

Parks & Eco-District Team Recommendations:

Sheridan Hollow should focus on developing strategic sites that the team identified, and consider an overall parks district rather than just focusing on individual sites in isolation. The team proposed ways to repurpose vacant and abandoned lots to connect residents, increase social capital through building participation and trust, and increase the overall walkability of the neighborhood. The Sheridan Hollow Park Survey should be handed out or be made available through SHNA meetings and online in order to give residents an active role in the rehabilitation of the space.

Water & Infrastructure Team Recommendations:

Sheridan Hollow's anchor institutions must further develop and prioritize a list of potential feasible projects using the information the Water & Infrastructure Team reviewed. AHP and SHNA should establish a stakeholder steering committee that will facilitate coordination between local municipalities and the community to develop and implement water infrastructure improvement projects. The steering committee would also have to focus on plans for budgeting and carrying out such projects.

"See, Click, Fix"[5] is an app and online tool available in the City of Albany that allows to community members to report quality of life issues including problems relating to flooding (sewers, drainage, sinkholes, etc.). Sheridan Hollow residents can use this tool to report

[5] http://en.seeclickfix.com/albany

on and advocate for the improvement and maintenance of the Hollow's infrastructure, especially after a storm with the excess water runoff.

With implementation of green infrastructure strategies to reduce runoff, the neighborhood can reclaim public space, have a positive impact on the health of both the environment and residents, and repurpose that space for the revitalization of Sheridan Hollow.

Energy Team Recommendations:

Sheridan Hollow residents should start discussing and organizing around community solar at SHNA meetings, to eventually negotiate for affordable solar prices and lower electricity rates. AHP should work with residents to collect and gather data on energy usage and utility costs to rely on when developing plans for a community solar farm, and that information may be a way to leverage future funds.

For advice and guidance on how to organize around solar energy, interested residents should reach out to Solarize Albany, and to gain information on what is possible, Sheridan Hollow and AHP should continue to reach out to any energy provider willing to work with the neighborhood to develop a community solar farm and/or negotiate with Sheridan Hollow neighborhood to participate in an existing community solar farm with terms that address the particular needs of the population and provide significant cost savings.

Before pursuing renewable energy goals, AHP should work to increase the participation and completion of energy audits and upgrades to maximize energy efficiency efforts. The Hollow's recently built Habitat homes have benefited from energy audits, so Sheridan Hollow should require any new homes be built up to high energy efficiency standards in the first place.

The Energy Team also recommends that Sheridan Hollow develop partnerships with the workforce development program affiliated with the Social Enterprise and Training Center (SEAT) in Schenectady, Hudson Valley Community College (HVCC) in Troy, Grid Alternatives, and community members to create a workforce development program around any future efficiency and solar energy projects.

To start addressing issues with streetlighting in Sheridan Hollow, residents should compile a survey on the lighting deficit they would like to improve. Any streetlights that are out should be reported to National Grid. To address the lack of streetlights themselves, Sheridan Hollow could look into a self-advocacy model involving solar-powered streetlights, like the case study of Soulardarity.

Housing Team Recommendations:

The Housing Team recommends completing the 2010 Sheridan Hollow housing conditions survey completed using the ArcGIS app and volunteer residents from the community along with MRP students. Revitalization of the community, mitigating the economics forces that create gentrification, and creating a sustainable and economically robust neighborhood depends upon growing the leadership capacity of existing residents. The survey is a perfect opportunity to capture community expertise and collective

memory, and would also build trust and strengthen the social capital between residents and SHNA and AHP. Once the survey is complete, a longitudinal data analysis between the 2010 and the current housing condition survey should be completed. The Housing Team also produced a brochure of homeownership and home rehabilitation resources available to community members and stakeholders. Use the survey and brochure in conjunction to gather entrenched community knowledge and include it in the community's assessment of itself while building leadership capacity.

To further improve development in Sheridan Hollow, residents should review and comment on the City of Albany's draft Unified Sustainable Development Ordinance developed through the Rezone Albany initiative, especially as they pertain to inclusionary and incentive zoning. Sheridan Hollow should also consider advocating for including incentive zoning in the Rezone effort, a tool that can encourage affordable housing to be built in the future.

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Appendices

Appendix A – Contacts

Team	Name	Organizational Affiliation	Position
All	Susan Cotner	Affordable Housing Partnership	Executive Director
All	Louise McNeilly	Affordable Housing Partnership	Director of Special Projects and Community Development Alliance
Housing	Zach Romano	Affordable Housing Partnership	Project Manager
All	David Lewis	University at Albany	Faculty Advisor
All	Hilary Papineau	University at Albany	Faculty Advisor
Econ Dev	Mike Yevoli	NYS Empire State Development	Capital District Regional Office Director
Econ Dev	Sarah Reginelli	Capitalize Albany	President
Econ Dev	Sean Maguire	Capital District Regional Planning Commission (CDRPC)	Director of Economic Development
Energy	Jen Amerling	Monolith	Sales
Energy	Amy & Russ Pokorny	Helderberg Community Energy	
Energy	Hon. Ronald Bailey	Albany Common Council	Councilman & 3rd Ward Leader
Energy	David Hochfelder	Solarize Albany	Organizer & a Subscriber
Energy	Laura Hutchins	Roofless Solar	Sales Operations Manager
Energy	Joanne Coons	Hudson Valley Community College (HVCC), NY Solar Energy Society (NYSES)	Professor at HVCC, member of NYSES
Energy	Jodi Smits-Anderson	NYS Dormitory Authority (DASNY), USGBC, LEED	
Energy	John McDonald	NYS Assembly	NYS Assemblyman for District 108
Energy	Kathy Sheehan	City of Albany	Mayor
Energy	Merton Simpson	Albany County Legislature	District 2 Legislature
Energy	Michelle Rogat	UAlbany	Student
Energy	Neil Breslin	NYS Senate	Senator
Energy	Pete Stein	Clean Energy Collective	Solar Specialist
Energy	Robyn Reynolds	Capital District Regional Planning Commission (CDRPC)	Senior Planner
Parks	Cathe Bullwinkle	NYS Department of Health	Project Coordinator, Outreach & Education Group
Water	Aaron Mair	Arbor Hill Environmental Justice Corporation	Co-founder
Water	Martin Daley	Capital District Regional Planning Commission (CDRPC)	Environmental Planner
Water	William D. Simcoe, PE	City of Albany Water Department	Deputy Commissioner

Appendix B – Grant References

Water Infrastructure Grants

Funding Opportunity	**Funding Source**	**Potential Use (project) for Sheridan Hollow**	**Amount**	**Deadline**	**Website/ Contact**	**Notes - *Eligible Activities/ Applicants***
DEC/EFC Wastewater Infrastructure Engineering Planning Grant	NYS Consolidated Funding Application	Intended to help pay for the initial planning of eligible Clean Water State Revolving Fund (CWSRF) water quality projects.	$100,000	Next round - 2017	https://apps.cio.ny.gov/apps/cfa/	1. Engineering report preparation & planning activities to determine scope of water quality issues, evaluate alternatives, and propose capital improvements. 2. Costs to conduct an environmental review for the recommended alternative in the report.
NYS Dept of Environmental Conservation – Water Quality Improvement Project Program	NYS Consolidated Funding Application	Projects that directly address documented water quality impairments including municipal separate storm sewer system projects.	$2,500,000	Next round - 2017	https://apps.cio.ny.gov/apps/cfa/	1. Municipal separate storm sewer system projects. 2. Wastewater treatment Improvement.

Environmental Facilities Corp. - Green Innovation Grant	NYS Consolidated Funding Application	The Green Innovation Grant Program (GIGP) provides grants to projects that improve water quality & demonstrate green stormwater infrastructure.	N/A	Next round - 2017	https://apps.cio.ny.gov/apps/cfa/	Eligible project costs limited to items directly attributable to improvement or protection of water quality & integral to the success of the following green infrastructure practices: Bioretention, downspout disconnection, green roofs & walls, permeable pavement, stormwater harvesting/reuse, stormwater street trees & daylighting of streams.
Brownfields Assessment Grants	US Environmental Protection Agency	Provides funds to inventory, characterize, assess, and conduct planning (including cleanup planning) and community involvement.	$200,000 to $600,000	December 2017	https://www.epa.gov/brownfields	In addition to direct costs associated with inventory, assessment, and cleanup planning (including petroleum) , funds also may be used for direct costs associated with programmatic management of the grant and environmental insurance.

Brownfields Revolving Loan Fund	US Environmental Protection Agency	Provides funds to capitalize a revolving fund and to make loans and provide subgrants to conduct cleanup activities at brownfield sites.	$1,000,000	December 2017	https://www.epa.gov/brownfields	In addition to direct costs associated with inventory, assessment, and cleanup planning , funds also may be used for direct costs associated with programmatic management of the grant and environmental insurance.
Brownfields Cleanup	US Environmental Protection Agency	Provides funds to conduct cleanup activities at a specific brownfield site owned by the applicant.	$200,000 per site	December 2017	https://www.epa.gov/brownfields	In addition to direct costs associated with inventory, assessment, and cleanup planning , funds also may be used for direct costs associated with programmatic management of the grant and environmental insurance.
Environmental Justice Community Impact Grant Program	NYS Department of Environmental Conservation	Funding for projects that address exposure of communities to multiple environmental harms and risks	$2,500 to $50,000	January 2017	Lisa.King-DeJesus@dec.ny.gov	Eligible applicants are community-based organizations having Not-For-Profit Corporation's (NFP) 501(c)(3) status, or a community-based organization may partner with a NFP that will serve as their fiscal sponsor.

Clean Water Act Nonpoint Source Grant (Section 319 Grants)	US Environmental Protection Agency	Technical and financial assistance, education and training, technology transfer, demonstration projects, and monitoring to assess the success of projects implemented under the grant.	N/A	TBD	https://www.epa.gov/nps/forms/contact-us-about-nonpoint-source-pollution	funds may be used for non-regulatory or regulatory programs for enforcement, technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and eligible NPS monitoring.
Office of Energy Efficiency & Renewable Energy	Weatherization Assistance Program	Grant funds to improve the energy efficiency of the homes of low-income families.	N/A	Rolling	http://energy.gov/eere/wipo/where-apply-weatherization-assistance	Under DOE guidelines, one is eligible to receive weatherization assistance if you receive Supplemental Security Income or Aid to Families with Dependent Children. In other cases, states give preference to: People over 60 years old, Families with one or more members with a disability, Families with children.

US Economic Development Association	Public Works Program	Funds help distressed communities revitalize, expand, and upgrade their physical infrastructure	N/A	N/A	https://www.eda.gov/programs/eda-programs/	The project must demonstrate alignment with at least one of EDA's current investment priorities; the project's potential to increase the capacity of the community or region to promote job creation and private investment in the regional economy; likelihood project will achieve projected outcomes; ability of applicant to successfully implement the project, including the applicant's financial & management capacity and capacity to secure the support of key public/private sector stakeholders.

Parks Grants

2017 Youth Garden Grant. Retrieved from: https://www.kidsgardening.org/2017-youth-garden-grant/.

Farmers Market Promotion Program Retrieved from: https://www.ams.usda.gov/services/grants/fmpp

Farms to School Retrieved from: http://www.fns.usda.gov/farmtoschool/farm-school-grant-program

HUD Community Planning Retrieved from: https://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs

IOBY. How We Work . Retrieved from: https://www.ioby.org/about/howwework.

Kaboom. Retrieved from: https://kaboom.org/grants/build_it_yourself

Kaboom. Retrieved from: https://kaboom.org/grants/build_it_with_kaboom

Appendix C – Literature on Green Infrastructure

A basic search of urban green infrastructure in the University at Albany Library Catalog presents thousands of options across different mediums including journal articles, case studies and reports. Most academic material supports the effectiveness of GI as a stormwater management technique, and no reports were found discrediting GI. Most of the information compiled to support the water infrastructure report was drawn from other governments rather than academic or other professional sources. The stormwater management plans of other municipalities can be used to replicate or adopt best practices, for example the city governments of Chicago, Philadelphia, Syracuse, and New York City were referenced within the report. The State Department of Environmental Conservation, DEC, provides many resources both online and through consultation. There are how-to instructions, manuals, and model codes available to help municipalities like Albany adopt and implement green infrastructure policies. Some of the government tools, such as stormwater calculator, can be found in Appendix D of this report.

The literature reviews below also use existing green infrastructure initiatives to determine the impacts and cost-benefit analyses at different localities. There may be some tools and strategies that were unsuccessful in certain localities based on external circumstance, but GI is a tried and true method of stormwater management. The annotated citations below provide examples of comprehensive literature reviews conducted to analyze the impact of green infrastructure on urban areas. The listing below provides in-depth information supporting the many benefits of green infrastructure, as well as cost benefit analyses of different strategies.

Please note: some of the resources referenced below may require a fee or special access granted through the University at Albany library system. To obtain access to academic databases that provide resources such as the journal articles listed below, it is recommended that the Affordable Housing Partnership or other community group join the New York State Library membership system.

Annotated Citations

Symons, J., Jones, R.N., Young, C.K. and Rasmussen, B. (2015). "Assessing the Economic Value of Green Infrastructure: Literature Review." Climate Change Working Paper No 23. Victoria Institute of Strategic Economic Studies, Victoria University, Melbourne.

This paper presented an economic framework to value the benefits of green infrastructure by developing a strong business case for Green infrastructure (GI) strategies. The GI approach builds resilience to drought, extreme heat, and flood, improves health and livability, and provides ecosystem services (Roaf et al., 2010, Brugmann, 2012). The research explores the multiple benefits of green infrastructure to fully understand potential returns on investment by adapting urban environments at the local government scale. The goal of the research is to equally prioritize the investment in green infrastructure as with grey infrastructure at the local government level. The lack of complete cost benefits analysis and understanding of green infrastructure approaches is a primary barrier to the

green infrastructure approach. For example, most municipalities have existing annual capital works budgets allocated for traditional infrastructure maintenance, using the traditional cost benefit analysis and return on investment calculations to prioritize projects. The cost-benefit perspective must be expanded to include the many intangible benefits that aren't typically justifiable for economic returns on investment. Until now, development of stormwater harvesting projects have been justified only through water price savings rather than by a fuller understanding of the benefits they can provide; for example, maintaining the longevity and health of the green infrastructure in the urban landscape, the associated cooling benefit for the local microclimate or support for biodiversity (Elmqvist et al., 2013).

Available via: https://www.vu.edu.au/sites/default/files/cses/pdfs/green-infrastructure-lit-review-visesccwp23.pdf

Scott, Mark; et al. (October 2013). Eco Plan: Delivering Green Infrastructure. "Literature Review: Delivering ecosystems services via spatial planning – reviewing the possibilities and implications of a green infrastructure approach." University College Dublin, Ireland.

This paper explores the potential for delivering ecosystem services, which includes green infrastructure, through spatial planning. This review paper seeks to examine potential avenues for planning to deliver ecologically sound outcomes through examining the intersection between ecosystem approaches and spatial planning frameworks. The authors examine the emerging literature surrounding the 'green infrastructure' (GI) approach. This approach seeks to 'understand, leverage, and value the different ecological, social, and economic functions provided by natural systems to guide more efficient and sustainable land use and development patterns as well as protect ecosystems'. The challenge of creating ecologically sustainable urban areas, to reconcile urban development impacts is weighed down by complex tasks of determining how and where to focus attention. The ecosystems approach has been promoted to tackle both climate change mitigation and adaptation by implementing green infrastructure in urban areas. The ecosystem approach is now seen as a major theoretical approach underpinning planning for complex systems, providing a framework for looking at whole ecosystems in decision-making, and for valuing the ecosystem services they provide (DEFRA, 2005).

Available via: http://www.greeninfranet.org/uploads/documents/ECO-Plan_Literature%20Review_Delivering%20Ecosystems%20Services%20via%20GI.pdf

Molla, Mikias Biazen. (2015). The Value of Urban Green Infrastructure and Its Environmental Response in Urban Ecosystem: A Literature Review. International Journal of Environmental Sciences Vol. 4 No. 2. Pp. 89-101. Hawassa University, Wondo Genet College of Forestry and Natural Resources, Department of Natural Resource and Environmental Studies, Shashemene, Ethiopia.

This review aims to explore and demonstrate the best socio-economic and environmental benefit of green infrastructure technology from various literature documents. This research should spur redevelopment or reestablishment of Green Infrastructure (GI) activity, which can reduce environmental impacts of population growth and the high-density cities. This study assesses different GI experiences found in developed countries for the sake of sharing information to developing countries, Africa in this case. The study has also discovered how developed nations benefit both socially and economically from GI, and assesses the response of GI to urban environments. Many studies confirmed that GI has a multi-functional social, economic, cultural and environmental benefit which provide for urban and pre-urban dwellers. Therefore, this review document mainly focused on the multifunctional benefit of GI which has contributed to the urban ecosystem. The benefits include social aspects (health and wellbeing's, recreational and educational value); economic aspects (economic value, energy saving, and green job opportunities) and the environmental aspects of GI (includes biodiversity/ecological response, carbon reduction and sequestration, improving air quality and climate change adaptation).

Available via: http://www.water.ca.gov/wateruseefficiency/landscapeordinance/pubcomments/Melanie%20Stanton/Turfgrass%20Benefits%20Literature%20Review%20for%20Developing%20Nations.pdf

Svendsen, Erika S.; Northridge, Mary E.; and Metcalf, Sara S. (2012) "Integrating Grey and Green Infrastructure to Improve the Health and Well-being of Urban Populations," Cities and the Environment (CATE): Vol. 5: Iss. 1, Article 3.

One of the enduring lessons of cities is the essential relationship between grey infrastructure (e.g., streets and buildings) and green infrastructure (e.g., parks and open spaces). This article presents a systems science framework that delineates critical relationships between grey and green elements of cities and human health and well-being by modeling the complex, dynamic problem of asthma in socioeconomically disadvantaged city neighborhoods. By understanding the underlying structure of urban spaces and the importance of social interactions, urban planners, public health officials, and community members may capitalize on opportunities to leverage resources to improve the health and well-being of urban populations and promote social justice and health equity. Unfortunately, grey infrastructure (e.g., streets and sewers) has too often been positioned as being at odds with green infrastructure (e.g., parks and open spaces), instead of the two being conceived of as mutually beneficial (Svendsen 2011). The purpose of this paper is to use system dynamics to visualize and explore the complex and dynamic relationships between grey and green infrastructure, and the benefits of their integration on the health and well-being of urban populations.

Available via: http://digitalcommons.lmu.edu/cate/vol5/iss1/3

Timmermans, Harry; Kemperman, Astrid; and van den Berg, Pauline. (August 2015). Green Infrastructure, Ecosystem Services, and Human Health. International Journal of Environmental Research and Public Health 12(8):9768-98 · August 2015.

Contemporary ecological models of health prominently feature the natural environment as fundamental to the ecosystem services that support human life, health, and well-being. The natural environment encompasses and permeates all other spheres of influence on health. Reviews of the natural environment and health literature have tended, at times intentionally, to focus on a limited subset of ecosystem services as well as health benefits stemming from the presence, and access and exposure to, green infrastructure. The sweeping influence of green infrastructure on the myriad ecosystem services essential to health has therefore often been underrepresented. This survey of the literature aims to provide a more comprehensive picture of the many simultaneously acting health co-benefits of green infrastructure. There are numerous other fundamental ways that the landscape and green infrastructure (GI) support health (e.g., infectious disease modulation, food, climate regulation). The purpose of this paper is to present a more complete survey of the array of empirically-supported human health co-benefits of GI.

Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4555311/

Tzoulasa, Konstantinos; et al. (June 2007). "Promoting ecosystem and human health in urban areas using Green Infrastructure: A literature review." Landscape and Urban Planning. Volume 81, Issue 3, 20 June 2007, Pages 167–178.

This paper focuses on the highly-urbanized areas of Europe and its relationship with green infrastructure. Ecosystems and human health and wellbeing are inherently connected, and both negatively impacted by the loss and degradation of urban green space. The authors aim to formulate a conceptual framework of associations between urban green space, and ecosystem and human health, which can be improved through green infrastructure. The possible contributions of urban and peri-urban green space systems, or Green Infrastructure, on both ecosystem and human health are critically reviewed. Finally, based on a synthesis of the literature a conceptual framework is presented. The proposed conceptual framework of green infrastructure, urban green space highlights many dynamic factors, and their complex interactions, affecting ecosystem health and human health in urban areas. This framework forms the basis for a new interdisciplinary research agenda that supports the implementation of green infrastructure projects throughout urban areas.

Available via: http://www.sciencedirect.com/science/article/pii/S0169204607000503

Appendix D – Water Infrastructure Technical Tools and Resources

Albany County Interactive Mapping Tool

The data provided on this site is for informational and planning purposes only. The property ownership information and parcel boundaries are updated through March 1, 2016. http://gismap.albanycounty.com/gisviewer/

National & Oceanic Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI) Climate Data Online Data Tools

The following tools allow alternative methods of accessing data. Some are for visualization only, while others allow different options such as downloads.

- Find a Station - Locate weather observance stations
- Select a Location - Order data by weather observing stations or by geographic locations using a simplified drill-down interface with data from U.S. and other countries
- 1981-2010 Normals - View temperature and precipitation Climate Normals for over 9,800 stations across the United States and a selection of other territories
- Daily Weather Records - Access summaries of recent global and U.S. daily weather records with options to view monthly, annual, all-time or selected records
- Local Climatological Data (LCD) - View and order hourly, daily, and monthly data from nearly 2400 locations within the U.S., surrounding territories, and other selected areas
- Marine Data - View and order historical marine data which is comprised of ship, buoy, and platform observations from 1662 to present.
- Storm Events - View data, reports, and photos related to the Storm Events Database
- Severe Weather - Access data inventory based on location and timeline graphs
- Analysis and Forecast Chart - Search archives of the Service Records Retention System
- Climate Models - Get online access to the inventories of the NOMADS project

NOAA Climate.gov provides scientific information to people help make decisions on how to manage climate-related risks and opportunities. NOAA Climate.gov is a source of timely and authoritative scientific data and information about climate. Three sections: News & Features section; Maps & Data section; &Teaching Climate section

New York State Data Tools & Resources

Hudson River Almanac - A weekly record of observations along the river including plants, animals, weather and other natural phenomena.

Hudson Valley Natural Resource Mapper - This map depicts information about the Hudson River estuary, its tributary streams, wetlands, forests and biodiversity.

NYS Department of Environmental Conservation Environmental Resource Mapper - View the locations, names and classifications of waterways in the vicinity, including locations of wetlands, high quality habitat areas and records of rare or listed species.

NYS Department of Environmental Conservation Stormwater Interactive Map - Same mapping platform as the Environmental Resource Mapper, but with data layers showing areas regulated under the Municipal Separate Storm Sewer System (MS4) program as well as the locations of combined sewer overflow (CSO) outfalls and stormwater permits.

NYS Department of Environmental Conservation Google Earth and Maps Data - A list of map-based information that can be used in Google Earth, or viewed in Google Maps. The available information includes locations of combined sewer overflow (CSO) outfalls, communities subject to regulation under Municipal Separate Storm Sewer System (MS4) regulations and impaired and priority waterways. There are also map layers that show the locations of recreational access points, significant habitat areas and remediation sites.

NYS GIS Clearinghouse - Search GIS inventories by data. (Use of data requires GIS software.)

U.S. Environmental Protection Agency (EPA) Data Tools & Resources

EPA National Pollutant Discharge Elimination System (NPDES)

- NPDES General Permit Inventory - This search tool allows users to search for NPDES general permits by permit number, permit name, state, EPA region, date issued, date expired, or permit category.
- Enforcement and Compliance History Online (ECHO) - Users can search the database by municipality, watershed or facility name and results are displayed on a map based on data stored in EPA's compliance and enforcement data systems, including ICIS-NPDES for facilities regulated under the CWA NPDES program. ECHO allows users to find and download information on permit data, inspections, violations, enforcement actions, and penalties.
- Envirofacts - This website provides access to several EPA databases that provide information about environmental activities, including those that affect water. Under "System Data Searches" a user can retrieve facility data from ICIS-NPDES by using any combination of facility name, permit number, location, industrial classification, and chemicals.
- Clean Water Act DMR Pollutant Loading Tool - This tool helps users determine who is discharging, what pollutants they are discharging and how much, and where they are discharging. Provides and calculates water discharge information from the EPA system for water enforcement and compliance data and from the Toxics Release Inventory (2007-2011).
- My WATERS Mapper - Displays snapshots of EPA Office of Water program data and creating custom maps at national and local scales. The "Other EPA Water Data" section allows the user to display all NPDES facilities on a map, along with several other features, such as impaired waters and waters with TMDLs.

- The Assessment TMDL Tracking & Implementation System (ATTAINS) - Provides information reported by the states to EPA about the conditions in their surface waters and allows users to view tables and charts summarizing state-reported data for the nation as a whole, individual states, individual waters and the 10 EPA regions. The full story of assessed waters that are impaired, are currently being restored, or have been restored is provided.

EPA Stormwater Discharge Calculator

EPA's National Stormwater Calculator (SWC) is a desktop application that estimates the annual amount of rainwater and frequency of runoff from a specific site anywhere in the United States (including Puerto Rico). Estimates are based on local soil conditions, land cover, and historic rainfall records. The Calculator accesses several national databases that provide soil, topography, rainfall, and evaporation information for the chosen site. The user supplies information about site land cover and selects the types of low impact development (LID) controls and green infrastructure techniques.

Other Helpful Resources

- Stormwater Management: provides information and guidance on stormwater management practices.
- Low Impact Development: provides information and guidance on the use of low impact development (LID) practices.
- Green Infrastructure: provides basic information, useful tools, as well as research, case studies and a publication library.
- Climate Change: provides information and resources on climate change and its effects in the U.S. and globally

EPA Watershed Assessment, Tracking and Environmental Results System (WATERS)

- How's My Waterway? - The How's My Waterway? interface is a user-friendly tool for searching water quality information by zip code or by current location. The tool reports water quality status, and provides links to technical documents.
- My WATERS Mapper - Map application to display locations of State Pollution Discharge Elimination System (SPDES) permit holders and sampling locations used by state and federal agencies. Users can see basic information about water permits or link to more detailed reports, and can download water quality sampling data for a station or an area.
- Clip N Ship Application - Download files of the locations of State Pollution Discharge Elimination System (SPDES) permit holders, federal and state water quality sampling sites and other base information about watersheds and waterways. Users can choose from a variety of file formats, including those compatible with Google Earth and ArcGIS.
- Geospatial Data Downloads - WATERS data layers are available here for download in formats compatible with ArcGIS and Google Earth.
- Water Quality Assessment and Total Maximum Daily Loads Information - NYSDEC is required to assess waterways and reports results to the EPA, along with the list of impaired waterways, every two years. This database allows users to quickly

obtain a summary of assessment results of impairments and their causes. The site also provides information about Total Maximum Daily Loads (TMDLs) where available.

Other Online Resources

AirNow Air Quality Forecast - Visit this website to check the current and projected Air Quality Index—which describes how clean or polluted the air is—in your area.

Hudson River Environmental Conditions Observing System (HRECOS) - Continuous data on river conditions from seven monitoring stations and two vessels.

Hudson River National Estuarine Research Reserve - Continuous data from two monitoring stations.

Lamont-Doherty Earth Observatory - Hudson River Tide and Current Prediction.

National Water Quality Monitoring Council Water Quality Portal **-** Download water quality sampling data collected by the EPA (including information reported by states) and USGS. Users can search by municipality, latitude and longitude or watershed. The dataset includes information that NYSDEC collects through the Rotating Integrated Basin Studies (RIBS) program and uses to determine waterbody impairments.

U.S. Geological Survey: New York Water Science Center (USGS) - Water Resources of New York: Home of multiple water quality projects.

USGS: Hudson River Sediment Flux Project - Sediment study with useful list of links.

U.S. Water Monitor - A Portal To Federal Water Information that displays streamflow conditions, reservoir storage and capacity, groundwater levels and climate response, water supply forecasts, snow and precipitation maps.

Riverkeeper Hudson River Estuary Water Quality Program
Riverkeeper monitors water quality on the Hudson River Estuary in collaboration with Columbia University's Lamont-Doherty Earth Observatory and CUNY Queens College. Riverkeeper patrol boat we test for fecal-indicating bacteria, oxygen, turbidity, temperature, salinity and chlorophyll.

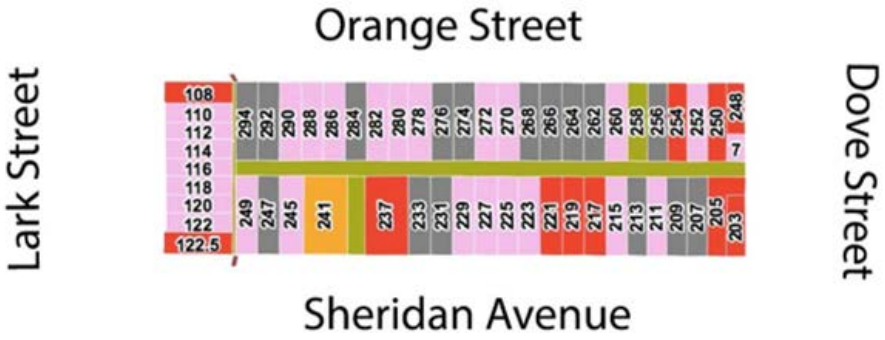
Albany County Sites: Albany Rowing Dock & Dunn Memorial Bridge- Albany

U.S. Climate Resilience Toolkit
An innovative website designed to help people find and use tools, information, and subject matter expertise to build climate resilience. The Toolkit offers information from across the U.S. federal government in one location, improve people's ability to understand and manage their climate-related risks and opportunities, and to help them make their communities and businesses more resilient to extreme events.

This framework can guide you through the process of planning and implementing resilience-building projects:

Appendix E – Sheridan Hollow Park Opinion Survey

The purpose of this survey is to help make Sheridan Hollow's park space more safe, useful, and overall welcoming to those who reside in and visit the neighborhood. By your participation in this survey, you play an active role in the possible future rehabilitation of underutilized park space in the neighborhood (see map below). This survey is administered by the Affordable Housing Partnership and Sheridan Hollow Neighborhood Association as part of a neighborhood planning process. Please drop off completed surveys to 255 Orange Street.



1) Do you live in the neighborhood of Sheridan Hollow?
□ Yes (If yes, skip to question #3) □ No (If no, move on to question #2)

2) If you answered "no" to question #1; how often do you visit the neighborhood of Sheridan Hollow?
□ Daily, for work □ Daily, for personal reasons □ Weekly □ Monthly □ Occasionally (less than monthly)
☐ Other (please specify):_____

3) How many people live in your household and what are the ages of each person (yourself included)? Write the number for each age group below.
0-5_____ 6-10_____ 11-18_____ 19-30_____ 31-54_____ 55-64_____ Over 64_____

5) Do you use the path/walkway/vacant adjacent lots that exist and run between Dove and Lark/Orange and Sheridan?
□ Yes (If yes, skip to question #7) □ No (If no, move on to question #6)

6) If you answered "no" to questions #5; why do you not use the path and adjacent lots? (please select all that apply)
□ I do not feel it is safe □ I do not believe it has anything to offer me □ I am unaware of the location □ I am too busy □ Other (please specify):_____

7) If you answered "yes" to question 5; for what purposes do you use the path and adjacent lots? (please select all that apply)
□ For taking walks/to get some fresh air □ For playing sports □ For spending time with my family or friends □ For general travel around the neighborhood □ Other (please specify):_____

8) What would you like to see happen with the proposed corridor/space area? (e.g., what types of changes would you like to see happen on the path and vacant spaces to encourage positive use?) (please select all that apply)
□ Planting vegetable gardens □ Planting flower gardens □ Picnics and community events □ Spiritual congregation events □ Sports purposes □ Family events □ Other (please specify):_____

9) Do you feel safe using the path/walkway/vacant properties?
□Yes □ No □ Other (please specify):_____

10) What measures can be taken to make you and your family feel more comfortable using the mentioned path/walkway/adjacent vacant properties? (please select all that apply)
□ I feel safe now using the path/walkway □ Increased lighting □ Increased police presence
□ Curfew times for the path's use would be helpful □ Other (please specify):_____

11) On a scale from 1-10 (1 being negative/bad, 3 being neutral, and 5 being positive/good), how would you rate the current conditions of the community parks/open spaces in Sheridan Hollow? (please circle a choice below)

1 2 3 4 5

12) If positive changes (including some that you may have personally expressed in this survey) were made to the community parks/open spaces/vacant lots or properties in Sheridan Hollow, do you believe positive usage would increase?
□ Yes □ No □ Other (please specify):_____

13) Are there other ideas or comments you have for enhancing the condition, use, and/or safety of the parks and community pathway between Orange and Sheridan Avenues in Sheridan Hollow?

Thank you!

For additional information please contact Louise McNeilly at (518)434-1730 x405 or by email at lmcneilly@ahphome.org

Appendix F – Glossary of Energy Terms

The field of community solar and renewable energy is filled with jargon and is easily confusing. This tentative glossary is to help with any confusion, but the good news is that you aren't the only one, people in the field using the same term in different ways. Our advice is to simply ask for a definition in situations that are unclear because this is a fast-evolving field with everyone using and creating what works for them.

Active Solar vs Passive Solar – Active solar is system that uses mechanical or other devices to harvest and use solar energy to produce heat or electricity, whereas passive solar are various strategies and techniques to regulate a building's indoor air and/or water temperature (Pahl, 2012).

Baseload – The minimum amount of electricity that a utility company must constantly provide to the grid to make available to its customers (Pahl, 2012).

Community Choice Aggregation (CCA) – This is not really at the "community" level, but is the whole municipality or local government grouping their residents together as a way to get a large enough load demand to negotiate with utility companies or any energy supplier for lower energy prices. Every resident would automatically be included unless they decide/choose to opt out of it, making it can be risky for local government if they do not do a lot of public outreach and let their constituents know what is going on. Otherwise, local governments can be met with resistance and backlash from the public for changing where their energy is sourced from. (Solar Expert, 2016)

Community Distributed Generation (CDG) – (aka: community energy/solar or shared solar) The New York Public Service Commission's July 2015 Order Establishing a Community Distributed Generation Program (Case 15-E- 0082) extended New York's net energy metering policy guidelines. Community Distributed Generation is hosted by a sponsor on a roof or available land, they or the solar developer maintains the solar panels depending on the contract agreement, and residents of the community "subscribe" to buying their electricity needs there. Community DG projects are eligible for NY-Sun non-residential incentives and are subject to all program rules except as noted in the Program Manual. For the purpose of the incentive Program rules, a Community DG project sponsor will be considered the project customer. However, before making a CDG or community solar farm, check with the utility company about the process and whether or not an electric supplier of that size can connect to the grid in that location. (Clean Energy States Alliance 2016)

Community Energy – Initiatives that work to provide their local economies with some protection from market disruptions cause by energy supply restrictions and price volatility. They are fundamentally different from utility companies because they are not profit oriented, but use whatever limited resources they have to offer public services. There are four core principles that guides community energy: 1) Community ownership and benefit – to improve local economy and environment, and reinforce accountability of their decision makers 2) Renewable, local, and distributed energy production 3) Adaptive

resilience – to be less vulnerable to external shocks and changing conditions and 4) Conservation first – reduce the overall amount of energy consumed. (Pahl, 2012, pp.73)

Community Net Metering – (aka: group net metering) Net metering alone allows owners of a solar panel to receive credit on their bill for any excess electricity they produced that fed back into the grid. Group net metering allows a group of energy consumers, all using the same utility, to be grouped together in using the energy produced by a large solar project. This allows for the "roofless" solar option, as long as the solar energy production is within the same loading zone as those consumers/subscribers. (Also known as meter aggregation or virtual net metering.) (Pahl 2012, pp.85)

Community Solar Garden (CSG) - This is the same as community solar, except some people in the field have used the term to mean a "garden" still located within the same community that is consuming the power instead of a larger solar farm located outside of the community. This is an example of smart growth because it practices infill development, where it is located on previously developed and currently unused space, like the roof of a school or above a parking lot. Others use the term in line with how a community garden works (Solar Expert, 2016).

Electricity Feed-In Law – "A law or tariff that requires utility companies to make a connection with a renewable energy producer and to pay a specific long-term fixed price for the power produced (Pahl, 2012)."

Escalation Clause - (aka: price escalation, escalator, etc.) This is a pricing technique that allows the solar developers over time to adjust how much they charge for energy produced to account for inflation and projected increases in electricity rates. It exists in many solar leases and PPAs, can be compounding, and is very important to pay attention to when negotiating a contract. Some solar companies use a price escalator while others off an electricity rate that is in relation to the local utility's rate, such as an offer to stay at a 20% reduced rate of what the utility company offers (Clean Energy States Alliance, 2016). A more thorough explanation and tool to see how an escalation rate affects energy cost savings can be found here: http://www.cleanenergyresourceteams.org/solargardens/csg-calc

Feed-In Tariff – A policy mechanism designed to encourage investment in renewable energy technologies that generate electricity by guaranteeing grid access and offering long-term contracts to renewable energy producers (Pahl, 2012)

Hosting Service Provider - A company or entity that works with communities to give them the tools they need to start and manage a community solar initiative. They manage the project, bring in subscribers, handle subscriptions, communicate with the utility, etc. (Pahl 2012, pp.102)

Power Purchase Agreement (PPA) – "A contract that defines the selling prices for power and energy as well as the amount of power and energy sold, and includes provisions to ensure that performance does not fall below a certain standard (Pahl, 2012)." This is an

agreement set up between the energy consumer and renewable energy producer. For solar power it is usually how the consumer leases the solar panels from the solar developer, and the solar developer is leasing the consumer's roof, with an understanding of maintenance and installation, etc. (Sustainability Expert, 2016)

"Roofless" Solar - Solar that is located elsewhere, but within the same loading zone, that allows consumers access to solar energy even though they don't have the solar on their own roof, and often not on their property. (Solar Expert, 2016)

Smart Gird – An electricity transmission system, or grid, that uses digital technology to improve reliability, resiliency, flexibility, and efficiency (Pahl, 2012).

Tax Appetite - To be able to take advantage of the state and federal tax incentives the person or business would have to first owe enough in taxes to be able to benefit from the rebates. This essentially creates an income requirement for an individual to be able to put solar power on their roof (Clean Energy States Alliance, 2016

Appendix G – Housing Brochure

Affordable Housing Partnership (AHP)

Services for Homebuyers:
- In-person and online education program to assist individuals in the home-buying process.
- Down-payment assistance through "First Home Club" and "Buyer's Choice Program"

Services for Homeowners:
- Energy efficiency navigation assistance
- Home repair assistance
- Landlord training
- "HomeSave Foreclosure Prevention" initiative
- Free budget and financial literacy classes
- Referrals to local resources

Energy Efficiency:
- Comprehensive home energy assessments
- Assistance with saving energy

For additional information, visit:
http://ahphome.org/index.html

AHP Homeownership Center
255 Orange St
Albany, NY 12210

518-434-1730

affordable housing PARTNERSHIP of the capital region, inc.
HOMEOWNERSHIP CENTER

HOUSING OPPORTUNITY & REHABILITATION

1. Arbor Hill Development Corp. (AHDC)- Albany

- Improve access to affordable home ownership and apartment rentals. Rehabilitate and restore housing and commercial building stock.

Contact Information
http://www.arborhilldc.org
* 518-463-9993
* 241 Clinton Ave
Albany, NY 12210

2. Albany Community Land Trust (ACLT)

- To provide affordable housing opportunities for low-income people, preserve housing affordability for future generations.

Contact Information :
http://www.albanyclt.com
518-426-1296
255 Orange St
Albany, NY 12210

3. Albany Housing Authority

- Five-year mission is to provide high quality, affordable, and sustainable housing opportunities while continuing to promote economic independence and stability for residents.

Contact Information:
http://www.albanyhousing.org
518-641-7500
200 S Pearl St
Albany, NY 12202

4. Albany Community Action Partnership (ACAP)

- Mission is to work in partnership with families and communities to empower people to achieve economic self-sufficiency and an improved quality of life.

Contact Information:
http://www.albanycap.org
518-463-3175
333 Sheridan Ave
Albany, NY 12206

5. TAP Inc.

- Provides design, architectural, planning, and geographic assistance to low and moderate income individuals and provides rehabilitation advice to applicants in historic districts.

Contact Information:
http://www.tapinc.org/page/overview
518-274-3050
210 River St
Troy, NY 12180

6. Albany Housing Coalition

- Albany Housing Coalition aims to eliminate homelessness among veterans within the Capital District.

Contact Information:
http://www.ahcvets.org
518-465-5251278
Clinton Ave
Albany, NY 12210

7. Historic Albany Foundation (HAF)

- Private non-profit organization whose mission is to preserve and protect buildings that have architectural, historic or civic value, by providing technical assistance, education, and advocacy.

Contact Information:
http://www.historic-albany.org
518-465-087689
Lexington Ave
Albany, NY 12206

8. Capitalize Albany

- The mission is to facilitate economic development projects within the City of Albany.

Contact Information:
http://capitalizealbany.com/
518-434-2532
21 Lodge St
Albany, NY 12207

9. Catholic Charities Housing (Albany)

- Mission is to provide a continuum of housing and support services for homeless and needy members of the Albany community.

Contact Information:
http://www.cchoalbany.org/
518-459-0183
41 N Main Ave
Albany, NY 12203

10. Community Loan Fund of the Capital Region

- Provides housing counseling, grant referrals, and fair/affordable loans.

Contact Information:
http://mycommunityloanfund.org/
518-436-8586
255 Orange St, Suite 103
Albany, NY 12210

11. Habitat for Humanity (Capital District)

- Mission is to build strength, stability, and self-reliance through affordable home ownership.

Contact Information:
http://www.habitatcd.org/
518-462-2993
325 Washington Ave Ext
Albany, NY 12205

12. City of Albany

- City works collectively with its residents and partners to strategically plan for development and revitalization efforts.

Contact Information:
www.albanyny.org/Government/AlbanyNewYorkCityDirectory
City Hall, 24 Eagle Street,
Albany, NY 12207
518-434-5135

13. Albany Community Development Agency

- Revitalizes neighborhoods by increasing homeownership, providing resources for home and community improvements.

Contact Information:
http://www.albanyny.gov/Government/Departments/ACDA.aspx
200 Henry Johnson Blvd Second Floor | Suite #1
Albany, NY 12210
(518) 434-5265

14. Affordable Housing Partnership-Homeownership

- Offers Programs to promote affordable homeownership in Albany. Mission is to strengthen neighborhoods and the financial independence of residents through advisement, financial resources, community organizing, and collaboration.

Contact Information:
http://ahphome.org/about.html
Orange Street, Albany, NY
(518)-434-1730

Appendix H – Student Presentation (December 12, 2016)

See attached