RETROFITTING SOUTHPORT PROPER

A CREATIVE PROJECT

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ABSTRACT

CREATIVE PROJECT: Retrofitting Southport Proper

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This creative project is being submitted as partial fulfillment of the requirement for the Masters in Landscape Architecture at Ball State University. It is a study of a site in Southport, Indiana that is currently partially vacant and possesses a great deal of potential for an infill
development. This study examines the problem of abandoned malls and strip malls in America, and how this particular site could be designed to become active and successful.

After discussing the issue of abandoned retail centers, the study reviews the properties and development strategies of transit oriented development and mixed-use development, and reviews some case studies of implementation of these qualities. A master plan that incorporates the study is proposed that implements these development strategies. The outcome of the performance of the master plan output and process is then rated using the SITES criteria to evaluate expected outcomes.
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Introduction

DEMISE OF THE SUBURBAN MALL

As the United States continues to grow and change at exponential rates, so do many of our problems, including economic, social, financial and environmental issues. As a production powerhouse, many of these problems are related to changes in American purchasing habits and production trends, for example: the loss of the textile industry to overseas markets, and the degradation of the environment by the production of steel and other environmentally aggressive technologies and behaviors.

A very recent American trend has been movement of the shopping/retail sector away from the multitude of suburban malls and strip malls that were constructed to accommodate the burgeoning populations living outside the urban centers of the country in the post-world-war-II era. This trend is discussed in detail in the book Sprawl and Public Space: Redressing the Mall. The book is an effort by the National Endowment for the Arts to examine the trend of failing retail malls, as well as to provide
viable solutions for the sites on which they exist. As the book points out, first-ring suburbs, or those initiated after 1945, are experiencing demographic changes, and the corresponding suburban malls are falling victim. The abandoned malls then perpetuate the detachment of public interest, creating a cycle of citizen withdrawal, building abandonment, and consequent sprawl into green space (Fishman 9).

This recurring phenomenon is the genesis of this project. The project begins with a question... “Why are abandoned shopping areas so prevalent, and what can be done with such sites?” After examining the details of the problem that generated this question, several development trends are explored for potential application in this design. Then, case studies that are part of these development trends are reviewed. Finally, the study site is selected. This site is a partially abandoned strip mall that is vastly under-utilized. It is analyzed, and the knowledge gained from the research and case study review are then used to inform the proposed redevelopment of the study site. An evaluation of the proposed redevelopment of the site using SITES guidelines is completed, followed by a conclusion of the study.

**Historical Details**

To best understand the current plight of the American mall, one must first examine the historical background. Initially, shopping centers were
privately developed, beginning in the 1920s and 1930s. Built in the suburbs, they were intended to replace traditional urban centers, and housed retail space, as well as offices, all designed in a similar fashion. In the 1930s and 1940s, planners focused on decentralization in accordance with the Regional Plan Association of America (RPAA), making the shopping center the core of their communities.

After World War II, however, the development of shopping centers truly exploded in a reactive effort to provide services for the rapidly expanding suburbs. These were often “dumbbell-shaped” with department store anchors at the ends, and an outdoor pedestrian corridor connecting. They provided a consolidated location for activities such as art exhibits, dances, and fashion shows, and “provided an important centrality and focus for dispersed suburban settlements” (Crawford 24).

An architect named Victor Gruen was one of the primary proponents of transforming the urban core into a suburban mall. He felt that the mall could become the new town center, and in 1956 built the first enclosed mall in Southdale, Minnesota. This form of shopping would prove to become the center of suburbs across the United States, providing not just retail services, but “new forms of public and civic life” (Crawford 25). This building trend would continue through the 1970s and 1980s.
The shopping mall continued to evolve and develop to include specialty malls and “festival marketplaces”, first presented by developer James Rouse (Crawford 26). Rouse attempted to promote urban revitalization with malls like Faneuil Hall Marketplace in Boston (see figure 0.1). Faneuil Hall is an historic site that combines tourism, retail, food services and souvenir shops with an urban setting and adjacent destinations such as museums (Crawford 26).

![Faneuil Hall image courtesy of boston.com](image)

Figure 0.1

**The Problem**

In addition to the existing problem of suburban transformation, malls and strip malls now additionally face the compounded issue of a relentless recession. This has been the death blow for many struggling mall locations. In a 2009 Wall Street Journal article, the author points out that according to
Green Street, a real estate and real estate investment trust research firm, there were 40 failing malls in 2006 (failing defined as generating sales of $250 per square foot or less). That number was approaching 100 properties in 2009 during the recession (Hudson).

Factors that lead to the decline of malls include infrastructure and accessibility changes that render older urban and suburban malls less convenient to shoppers. Also detrimental have been the variations in urban economics, moving population and capital into more remote suburbs, and demographic changes in the areas surrounding malls and shopping centers. Property problems have included the reluctance of tenants to commit to long-term leases, insufficient revenue to properly maintain facilities, and anchor tenant bankruptcies (CNU 2).

In the book *Creating Great Town Centers and Urban Villages*, the authors list additional factors that have contributed to the closure of malls and strip malls. They list the following issues: “(a) department store consolidation, (b) a trend toward overretailing that renders as uncompetitive those centers with obsolete features and substandard tenant lineups, (c) the rise of online shopping, and (d) higher gasoline and energy prices that have strapped many consumers (Gupta 19). The authors also point out that these
sites offer many advantages as potential retrofits because of their infill locations (Gupta 19).

As one of the authors of *Redressing the Mall* states, “a substantial percentage of shopping centers have become architecturally, economically, and socially obsolete” (Smiley 14). These properties then become a liability to the community on a number of levels. Not only are the shopping centers no longer profitable, they are actually financially problematic. If considered in the context of a greyfield, the sites are losing tax revenue, they are losing job opportunities, and they are occupying land that is potentially very valuable (CNU 1). This, combined with the visual drawbacks of abandoned property, is ample reason to consider the possible reuse potential of the many similar sites across the country.

**The Solution**

This thesis project attempts to provide a viable site design solution to an underutilized shopping area in Southport, Indiana. The site selection began with two premises: 1) the site must include failed mall or strip mall property; 2) the site must be “In My Backyard”. I opted to design for an area in my region of Indiana (south-central Indiana) because I have seen the issue of abandoned strip malls become so predominant here. After narrowing the possibilities down to two different sites, I selected Southport based on the
site’s capacity to fulfill several other parameters: it can become walkable, and increase the walkability and connectivity of the area around it; it is intended to be a stop on the future light-rail system, allowing for transit-oriented-development, and it has the potential to support heavy mixed-used infill. The importance of these factors is examined in the following chapters.

The ultimate goal of the design is to integrate specific qualities to make a sustainable project. This project will attempt to retrofit a site that has had numerous retail and service functions, including a vacant strip shopping center, into a transit-oriented, mixed-use setting that has features designed in accordance with the Sustainable Sites Initiative (SITES) guidelines. Design in accordance with SITES is seen herein as the metric which establishes the proposed transit-oriented mixed-use setting as a sustainable project.

The Sustainability Factor

Given the state of the environment, it would be negligent to produce anything less than a sustainable site design. In *Fundamentals of Integrated Design for Sustainable Building*, the following is given as definition of a sustainable community: “a city, town, or neighborhood that is built in such a way (and uses its resources so) that it meets the needs of the present without compromising the ability of future generations to meet their own needs”
The data supporting the need for sustainable development is overwhelming.

For example, estimates generated by the Global Footprint Network indicate that humans are currently consuming the “resource equivalent of about 1.2 planets” in terms of consumption and waste production. In 2007 the Intergovernmental Panel on Climate Change (IPCC) presented a report titled *Climate Change 2007*. In this report they provided evidence linking global warming with consequences such as species extinction and increased human maladies including malnutrition and cardiorespiratory and infectious diseases (Burke 187). The report recommended using sustainable land-use and transportation development to help control the environmental impacts that are contributing to global warming (Burke 188).

An increasingly common framework for sustainable practices is the triple bottom line (TBL). This formula was developed by John Elkington as a way to measure sustainability in corporate America. (See figure 0.2) It suggests that companies look at profit in respect to three interrelated entities: the environment, the economy, and society. Economic variables would be those things that impact monetary stability, such as personal income, and job growth. Environmental measures look at natural resources and include elements like air and water quality. Social measures would look
at community and regional dimensions such as “education, equity and access to social resources” (Slaper 2011, 1).

The TBL is discussed in the SITES guidelines as well. The theory that economic, social and environmental issues are all interrelated will be addressed to the greatest extent possible in this project. The hypothesis herein is that following the SITES guidelines will help ensure that the final product of this creative project is as sustainable as possible. In testing this hypothesis, there will be constraints in being able to assess the degree to which the project meets SITES criteria related to the fact that this project is not actually being implemented. For example, there is not an “integrated team” working on the project, but many of the SITES criteria will be
applicable and can help guide production toward the most sustainable result possible.

One of the components of the TBL is the economy, as mentioned above. The economy commands further discussion because the site is in a geographic area of pending potential economic revolution. The current economy is based on material availability and the exploitation of the natural environment, a practice that is having devastating consequences globally and locally. The depletion of fossil fuel is probably the most obvious global example. In this strategy, the need for fossil fuel drives the economy, the use of fossil fuel pollutes the environment, and this fuel is also a finite resource. Burning this resource jeopardizes the very economies that are so dependent on it.

A new economic model is cognizant of the interconnectedness of a healthy economy and the earth’s ecology and people. It therefore seeks to integrate the three in a mutually beneficial relationship. This eco-economy or ecology-based economy—“requires that the principles of ecology establish the framework for the formulation of economic policy and that economists and ecologists work together to fashion the new economy” (Brown 2009, 1). Lester Brown, world-famous economist and author, founded this concept and proposes that the new economy will place great value on natural resources. He sees this economy as a machine to protect and restore ecological balance.
In an article on this subject, author Rowan Williams states “To seek to have economy without ecology is to try to manage an environment with no knowledge or concern about how it works in itself – to try to formulate human laws in abstraction from or ignorance of the laws of nature” (Williams 2012, 1).

The premises of TBL are inherent to the content of SITES, and will be represented in various components of this project. The other issues pertinent to this project are transit-oriented and mixed-use development. These subjects will be discussed in the following chapters. Case studies that exemplify the desired qualities of sustainability will then be examined. Finally, a program and master plan of the project study site are presented with a description of how SITES is used to inform this creative project. This creative project then closes with conclusive comments.
Chapter One

BACKGROUND:

TRANSIT-ORIENTED DEVELOPMENT

The United States High Speed Rail Association defines transit-oriented development as “the creation of compact, walkable communities centered around high quality train systems” (USHSRA). According to the U.S. HSRA, transit oriented development, or TOD, improves the quality of life and decreases American dependency on the automobile. As previously mentioned, after WW II, America began spreading out to suburban areas, relying less on public transport and more and more on their own private vehicles for transportation. The burden now is two-fold: to reconfigure American infrastructure, partly with transit-oriented development, to decrease this dependency; and then to retrofit cities to become walkable, densified communities that can transition from their current automobile dependency to mostly public transit use.
In the book *The New Transit Town: Best Practices in Transit-Oriented Development*, transit-oriented development (TOD) is described simply as “a mix of uses, at various densities, within a half-mile radius around each transit stop” (Dittmar 2004, 21). The authors go on to explain that they feel this description is inadequate, and that the lack of clarity in the definition of transit-oriented development has caused many such developments to have less than optimal results.

In the book, a new TOD typology is proposed with the hope that clarification of the definition and changing the approach to such development will facilitate TOD that reaches its full potential. They propose that the term “transit-oriented development” should only be applied to projects that meet the five following goals:

- Location Efficiency
- Rich Mix of Choices
- Value Capture
- Place Making
- Resolution of the Tension Between Node and Place

(Dittmar 2004, 21).

Location efficiency refers simply to locating homes within walking distance of transit systems. This makes better housing affordable to persons
who may not be able to afford a vehicle. According to the authors, location efficiency must possess density – there must be enough people able to walk or bike to the transit stop for it to be efficient; transit accessibility – the stops must be convenient and pedestrian-friendly – the street network should be conducive to travel on foot (Dittmar 2004, 24). This idea is supported in the Smart Growth Program developed by the Environmental Protection Agency (EPA) as well. Smart growth recommends the creation of “walkable neighborhoods”, in which residents can easily and safely reach various destinations on foot (Burke 2009, 191).

Having a rich mix of choices refers to community residents having access to numerous options for activities, housing, shopping, dining, etc. (Dittmar 2004). This concept is supported in the Smart Growth Program as well. Smart Growth is a set of guidelines developed by the U.S. Environmental Protection Agency (EPA) that originated in response to the problem of suburban sprawl. Smart Growth specifically demands that quality housing for different income levels be available (Burke 2009). The need for a variety of functions is discussed more in the mixed-use section of this thesis.

The third component in Dittmar’s TOD typology is value capture. This is an economic concept that involves quantifying and capturing the financial increases of a development, potentially to be reinvested in the
According to Dittmar, value capture requires the four following properties to be successful:

- Frequent, high-quality transit service
- Good connections between transit and the community
- Community amenities and a dedication to place making
- Scorekeeping and attention to financial returns (Dittmar 26).

There is a great deal more involved in understanding and implementing value capture. However, as this greater complexity will not be integrated into this creative project, it will not be discussed further here.

The fourth component of Dittmar’s TOD typology is place making. This refers to the necessity for creating desirable destinations that will attract and retain residents. Dittmar asserts that if “transit is inserted into a healthy pedestrian environment, then pedestrians can easily become transit riders” (Dittmar 2004, 30). This concept is reiterated in Smart Growth, which recommends that TOD facilitates unique communities that have vision and have a “strong sense of place” (Burke 2009, 191).

Finally, a successful transit-oriented development should resolve the tension between transportation node and place. This element deals with the need to balance a TOD as a stop on a larger regional transportation network, or a node, and a TOD as an individual location with a specific identity.
Obviously, this is a challenge because the transit choices draw people to the site via different forms of transportation, but Dittmar argues that the pedestrian must be given priority, and that care must be taken to maintain the appeal of the site for residents (Dittmar 2004). This issue will be dealt with in this thesis in the sense that the design will attempt to create an active transit node that is also a place with a specific identity and that is incorporated into a community that is vibrant and successful in its own right.

The study site lends itself well to transit-oriented development because of its location. Most significantly, it is immediately adjacent to an existing rail line that is being considered for light rail transit (see Figure 1.1). Implementing this light rail transit change would be ideal for residents on and near the site who commute north to Indianapolis, as well as those who commute south to Greenwood and Franklin. In addition, there is the potential for a very active train depot on the site next to the rail, which again, would serve both pedestrians locally and people driving to the site who would rather the catch the train.

There is also existing bus service on the arterial that bisects the site, Madison Avenue. This bus service could easily be routed into the site and could have stops at the site. Again, this would provide access to both the
Figure 1.1

Image Courtesy of Indianapolis Metropolitan Planning Organization
capital city and the adjacent suburbs. Indianapolis is currently trying to increase bus ridership with changes to the metro bus system so this proposed change might well be accommodated by them. In addition, there is already heavy vehicle traffic at the site. Although this is not the ideal scenario, and one of the goals of TOD is to decrease VMT - it is unrealistic to neglect the continued existence of the vehicle as an integral part of the proposed solution.

As will be seen in the analysis section, two arterials bisect the project site (see Figure 1.2), so vehicle traffic from these sources will be accommodated in the proposed redevelopment of the site. This will hopefully be advantageous in that people will be able to travel by vehicle to the site, not only to access retail and other activity nodes on the site, but also to access the bus and rail services.

The city of Indianapolis published a Long Range Transportation Plan (LRTP) that proposes infrastructure changes through the year 2035. These changes include increased investment in public transit for several reasons. The most pressing reason is the growing issue of traffic congestion and the related increasing emissions levels. The LRTP states that in 2009 “60% of commuting time was spent in congested levels of traffic” in Indianapolis (LRTP Vol. 3 p. 6). According to the plan the extended drive times have a negative impact on quality of life as well as employment, and failure to
improve public transit options would be economically detrimental to the state (LRTP 2012, 6).

This project takes place in Southport, which is a suburb of Indianapolis. Although Southport is incorporated and technically excluded from Unigov, the unified government of the City of Indianapolis, the changes called for in the LRTP, and made to Indianapolis and its surrounding infrastructure, will ultimately and positively impact the city of Southport. First of all, Indygo services, the existing bus service that already extends to Southport, will be increased. Next, there are plans to eventually reactiv
the railroad route that is adjacent to the site for passenger travel, as it is currently used for freight only. Finally, the LRTP has plans that will extend bike and pedestrian paths which could potentially be connected to the project site.

As will be seen in the analysis section, the Indianapolis Metropolitan Planning Organization (IMPO) plan includes creating a pedestrian district in Southport, as well as a major pedestrian corridor that passes through the study site. IMPO defines a pedestrian district as “an area characterized by a density of mixed uses and clustered pedestrian destinations within a five-minute walk, supporting central or multiple transit nodes, and a pedestrian corridor as “a street segment characterized by a linear distribution of dense mixed uses supported by adjacent residential land use and served by co-linear transit routes” (IMPO Regional Pedestrian Plan 2012, 318, 320). Development of the study site is consistent with the IMPO 20 year regional plan.

The analysis section will also demonstrate how the site can be developed into a destination, resolving the node vs. place issue. Several areas will be designed to stand independently as places to be. Therefore, it becomes a transportation node, but maintains identity singular to Southport.
Chapter Two

BACKGROUND: MIXED-USE DEVELOPMENT

This thesis project incorporates mixed-use development as a primary design factor for a number of reasons, described in the following discussion. Mixed-use refers to the incorporation of a variety of residential and commercial functions within a development. In the book *Mixed-Use Development Handbook*, the following characteristics are listed as primary elements of mixed-use developments: three or greater uses that generate revenue and are capable of supporting each other; well-orchestrated planning of project elements that promotes pedestrian connections; and conformation to a thorough development plan (Schwanke 2003).

As Schwanke points out, the concept of mixed-use is hardly new, with examples existing as far back as ancient Greece and China, and even in cities in North and South America that were developed before the automobile became dominant. The mixed-use patterns fell out of fashion, however, with
several trends being to blame. The automobile became the main source of transportation, leading to “more horizontal, low-density, and dispersed patterns of land use and development” (Schwanke 2003, 3). The horizontal land use was further encouraged by the increasing wealth in North America and Europe, allowing more households to afford larger homes on larger lots. Finally, the United States began to implement land use regulation and zoning laws that basically made it illegal to mix uses in new developments (Schwanke 2003).

Advantages to mixed-use development include decreased commuter time and increased health benefits related to increased amounts of walking and biking. In their book, *Retrofitting Suburbia: Urban Design Solutions for Redesigning Suburbs,* Dunham-Jones and Williamson site “increased social diversity, safety, and a sense of community” as additional benefits to mixed-use development (Dunham-Jones and Williamson 2009, 109).

Mixed-use makes financial sense for several reasons as well. In the book mentioned above, the authors claim that mixed-use development results in stability because of the variety of businesses. This is an advantage for municipalities as well as developers (Dunham-Jones and Williamson 2009). The mix must be planned in such a way that it will be synergistic and self-supporting. For example, “residential attracts retail, retail supports office,
office supplies restaurants”, and restaurants attract residential use (Dunham-Jones 109).

The importance of selecting the right mix is described in *Mixed-Use Development Handbook* as well. The discussion of Valencia Town Center Drive in Valencia, California (see figure 2.1) points out that the developer, the Newhall Land and Farming Company, was careful to select “uses and tenants that would complement and support each other” (Schwanke 2003, 362). For example, the office tenants provide business for the retail shops, which in turn supply products and services that are appealing to employees, which attracts employers (Schwanke 2003).

The argument that mixed-use design is appropriate for the Southport study site has already been made: it is simply the most desirable form of
development at this time. What type of mix to incorporate is much more complicated, requiring market studies and surveys that are beyond the scope of this project. Consequently, the choice of which retail, civic and residential functions are represented in the site is based, as accurately as possible, on the author’s informed understanding of the existing site and surrounding conditions, similar successful precedents, and information obtained from interviews with the Mayor of Southport and other persons involved with the revitalization plans for the city of Southport. The formula for the mix of uses would ultimately flavor the sense of place and help create the identity of Southport Proper.
Chapter Three

CASE STUDIES

Belmar, Lakewood, Colorado

Villa Italia mall was a thriving, indoor retail setting from 1966 until the early 1990’s. It was located in the suburb of Lakewood, Colorado, a community of 13 subdivisions that incorporated into a city in 1969 to avoid annexation into Denver. The area encompasses approximately 42.9 square miles and has a population of 144,000. The mall was originally 1.2 million square feet of retail space and housed social events like proms and festivals (Dunham-Jones 156).

The mall entered a period of decline, and eventually closed completely. It was then re-worked into a mixed-use development by Elkus Manfredi Architects, Ltd., Civitas, and developers Continuum Partners, LLC, McStain Neighborhoods, Trammell Crow, Sunburst Design, LLC, and Harvard
Communities (Dunham-Jones and Williamson 2009, 156). Renovation on the 104-acre site began in 2001, with some design aspects extending into 2012.

When the project is complete it will include 3.3 million square feet of new construction, half of which will be residential use. There are currently 1300 apartments (see figure 3.1), condos, townhouses and zero-lot-line homes. The remaining half consists of 55% retail and 45% office space. There are also nine acres of open space, including a 2.2 acre park and a 1.2 acre public plaza (Dunham-Jones and Williamson 2009, 157).
There are several elements of the Belmar development that are worthy of replication. One key aspect is the commitment to local business. Although large chains are important and generate higher revenue, the Belmar development team remained constant in their belief that small local businesses are important to the flavor of mixed-use. They formulated specialized leases to entice such business owners into the development (Dunham-Jones and Williamson 2009, 166).

Another commendable accomplishment at Belmar is the successful creation of a new public realm. The site is unified by unique features, and Dunham-Jones and Williamson state that a “high level of care (was) given to the design of the public realm at Belmar” (2009, 168). The public space is also heavily programmed with events such as a weekly farmer’s market and an annual Italian Festival. All of these characteristics can potentially be represented at Southport.

**Mockingbird Station**

Mockingbird Station is a mixed-use development located approximately four miles north of downtown Dallas, Texas. It is the product of developer Ken Hughes and RTKL Associates, an architectural and planning firm. The site mix includes “211 loft-style apartments (see Figure 3.2), 150,000 square feet of office space, an eight-screen independent film
theater, and 183,000 square feet of retail” (Dittmar 2004, 160). There are several restaurants, a bank, dry cleaner and a full-service grocery store, as well as ninety more shops, all located within five minutes walking. The site boasts 1,440 parking spaces which are largely underground (Dittmar 2004, 160).

Mockingbird Station sits on 10 acres and a light-rail line was already in use adjoining the property (see Figure 3.3) prior to redevelopment. The light-rail transportation system has service every ten to twenty minutes, and according to the RTKL website, has a ridership of more than 97 million trips per year. Gloria Ohland describes Mockingbird Station as “the place to see and be seen” (Dittmar 2004, 161) and credits the developer with making well-
informed and insightful choices in creating chemistry with the mix of services. Many of the tenants -- such as Urban Outfitters, Gap and Starbucks -- are geared toward a younger consumer. The site attracts students from Southern Methodist University as well older consumers from Park Cities, both populations that are close to Mockingbird Station (Dittmar 2004, 161).

The Mockingbird Station project is noteworthy for two specific sustainable features. The first of these features -- proximity to rail transit -- is key because it helps decrease vehicle miles traveled and increase use of public transit. The architects also chose to use and renovate the existing buildings on the site rather than demolish and rebuild. The only new structures are the Angelika Film Center, a restaurant pavilion, and a fountain (Dittmar 2004). Rehabilitating existing buildings versus new construction is advocated by most sustainability guidelines, including SITES, LEED and BREAM.

One drawback to this site is the lack of pedestrian accessibility to surrounding neighborhoods. This is being addressed, however, with improvements like wide sidewalks, landscape development, and traffic calming that in combination unite Mockingbird Station with communities that are currently separated from it by the Central Expressway. There is
also a proposal to extend a hike-and-bike trail along the rail line (Dittmar 2004), another amendment that would improve connectivity.

Mockingbird Station Light Rail Image courtesy of myspace.com

Figure 3.3

Pearl Brewery

Recognized as a case study on the SITES website, Pearl Brewery is a project in San Antonio Texas that incorporated many of the elements that will be used in this “Retrofitting Southport Proper” creative project. The Pearl Brewery is a 125-year-old brewery that sits on approximately 27 acres
of land on the banks of the San Antonio River. According to SITES, Pearl Brewery is being “renovated and redeveloped to create a vibrant downtown urban village” (SITES 2012). It is scheduled to be completed in 2013 and will include residential, retail, educational, office, entertainment and recreational facilities.

SITES credited this project for a number of its sustainable features. For example, in relation to the SITES category “Encourage social interaction and restorative setting”, Pearl has numerous outdoor plazas, etc. that allow for “social interaction and restoration” (SITES 2012). The entry plaza, which also serves as an outdoor gathering place, is enhanced with a water feature that provides sound and a relocated oak tree that shades the space.

The Pearl project also addresses the SITES categories “Materials reuse, Stormwater management, and Rainwater

Pearl Brewery image courtesy of Rialto Studio

Figure 3.4
collection and irrigation”. There were 2 brewing tanks left from the original brewery that were converted to rainwater collection tanks (see Figure 3.4), and a bioswale was installed to filter and infiltrate water runoff from the largest parking lot.

Also, rainwater is collected from building roofs and stored, and then used to irrigate approximately 28% of the landscape.

Another SITES category that Pearl addresses is “Connectivity”. The site is accessible by the very active San Antonio Riverwalk pedestrian system. The Pearl Brewery redevelopment will be the northern node on the Riverwalk, and is also less than a ten minute walk to four bus lines. It has a designated bike lane that runs north-south along the site and is connected by bike lanes from several directions. The north-south bike lane connects the Pearl Brewery development to Brackenridge Park to the north and downtown San Antonio on the south (SITES 2012).
Pearl Brewery Stable image courtesy of Bend The Light Photography

Figure 3.5
Chapter Four

The Site: “Southport Proper”

The site chosen for this project is in Southport, Indiana. Southport is a Marion County suburb approximately fifteen minutes south of downtown Indianapolis. (See Figure 4.1) The town was settled in 1832 and became incorporated in 1853. In 1969, the City of Southport separated itself from Uni-Gov, the consolidation of Indianapolis and Marion County governments, and chose to remain independent.

Southport, as mentioned, is proximate to downtown, Indianapolis. It is also proximate to I-65, a north-south interstate, to U.S. 31, a major Indiana arterial, to the University of Indianapolis, and to Greenwood, a larger suburban area to the south. Southport Park is adjacent to the site on the east side. The school district is Perry Township which includes 11 elementary schools, two sixth-grade academies, two middle schools, and two high schools. There is also a special education and alternative school, and five private school programs (see figure 4.2).
Figure 4.1

Image Created Using GIS and Bing Maps

35 Figure 4.1
The study site consists of 36.19 acres, the majority of which is paved with asphalt (see Figure 4.3). Buck Creek flows from east to west through the middle of the study site, comprising approximately 3.6 acres of streambed corridor. Some of the corridor has moderate tree cover. Much of this tree
cover is scrub and invasive plants. The stream is crossed in two places on the site, with one bridge approximately 9 feet above the stream bed and the other built only high enough above the stream bed to allow water to flow through culvert pipes built into the bottom of the bridge.

SITE INVENTORY

![Site Inventory Map]

*Image Courtesy of GIS and BING maps*

Figure 4.3
In 2007, 25% of Southport residents were employed in blue-collar positions, and 75% were white-collar, with a median household income of $63,244 (Pingleton 2012). The population of Southport actually decreased 3.9% from 2000 to 2009, at which time it was 1779. In 2009 the median house or condo value was $117,218, and median gross rent was $864 (Southport 2012).

The city of Southport has recently had three separate development studies completed and intends to proceed with redevelopment plans beginning in the summer of 2012. Information from certain sections of these plans was incorporated into this “Retrofitting Southport Proper” creative project, such as market analysis and business surveys. One of the goals established during these earlier studies was to create a town center. The city of Southport does not currently have a focal point or distinguishing identity, and members of the city planning organization would like to rectify that with new development. This could be patterned after the development of Belmar, in Colorado, which created a new town center in a suburban area on the site of an abandoned retail facility as well.

Creating a town center is a common theme in suburban retrofits, because suburban settings often lack official downtowns. Consequently, most suburban areas do not have public spaces for social interaction. In the book *Creating Town Centers and Urban Villages*, the authors define a town center
as “an enduring, walkable, and integrated open-air, mixed-use development that is organized around a clearly identifiable and energized public realm” (Gupta 2008, 2).

The authors point out that town centers are popular development options for both retail and residential sites, and they are being constructed prolifically across the United States. This includes sites in the Midwest, such as Crocker Park in Westlake, Ohio (see Figure 4.4) and Legacy Village in Lyndhurst, Ohio. The centers may include civic buildings like libraries and civic halls, and may incorporate services that are needed on a daily basis, such as groceries (Gupta 2008, 8).

Creating Great Town Centers and Urban Villages also presents 10 Principles for Developing Successful Town Centers and Urban Villages that were devised by the Urban Land Institute. These are listed below, and are pursued to the greatest extent possible in this project:
1. Create an Enduring and Memorable Public Realm.
2. Respect Market Realities.
3. Share the Risk; Share the Reward.
5. Integrate Multiple Uses.
7. Capture the Benefits that Density Offers.
8. Connect to the Community.
Site Analysis

The following pages contain analytical maps and diagrams relating to the study site. This information was used to inform the final design. The first map is a radius from the site indicating the numbers of people living within a 10 minute drive and a 20 minute drive to the site. There are several maps examining the potentials for connectivity in the study site. There are also analytical diagrams that extrude potential design formatting information.

In addition to the analytical information, most of the images have a shaded box with SITES information. If the map or diagram pertains to a SITES category, it is listed in these boxes.
Examining the demographics of the study site is important to determine that there are sufficient numbers of people within proximity of the site to make it feasible for development (see figure 4.5). Use of GIS determined that there are 170,955 people within a 10 minute drive of the site, and 569,325 people within a 20 minute drive.
The existing infrastructure already provides numerous opportunities for connections by car (Figure 4.6). Southport Road is a large arterial that connects to Interstate 65, 1.76 miles to the east, and connects to US 31, .93 miles to the west of the study site. The state capitol, Indianapolis, is 7.25 miles to the north of the site via Madison Ave. There are large suburban areas to the south of the site, including Greenwood, 2.12 miles, Whiteland, 8.22 miles, and Franklin, 13.20 miles via Madison Ave. The rail line is discussed on the next page.
The CSX rail line on the east side of the study site is currently used for freight only, but is anticipated to transition to passenger transit in the future (Figure 4.7). Passengers could travel easily from the site to Indianapolis to the north, as well as the towns of Franklin, and Columbus to the south. This would be a significant cultural connection, as Indianapolis and Columbus are both cultural centers in Indiana.
Although there are sidewalks existing on the site, they are not heavily utilized. The site has the potential for enormous pedestrian activity (see Figure 4.8), assuming certain infrastructure elements are developed. One such amenity is a riverwalk along Little Buck Creek. Another is a greenway along the Little Buck Creek corridor, and another is the pending pedestrian corridor along Madison Ave (see page 50).
There are several schools within a ½ mile radius of the site, allowing students to reach the site by walking. Travel is mostly on existing sidewalks, although some type of path needs to be constructed behind Homecroft Elementary School. Several crosswalks must be designed as well, including a safe crossing site over the train track.
The University of Indianapolis is north of the study site on Hanna Ave. The two could be connected via Madison Ave. for pedestrians and bikers, and via the railroad once it is activated for passenger transport.
As previously mentioned, the City of Southport falls under the umbrella of the Indianapolis Metropolitan Planning Organization and its development directives. Through IMPO, a large part of Southport has been designated a pedestrian district, and a major pedestrian corridor will pass through the study site, according to IMPO’s Long Range Transportation Plan (figure 4.11) (see page 19 for pedestrian district/corridor definitions). Development of the study site as proposed in this project is consistent with the IMPO plan because the site becomes more walkable.
The study site is .28 miles from Southport Park (see figure 4.12), and could easily be connected via the stream corridor by extending the riverwalk through the DPW easement along the corridor. The park is 3.78 acres and is classified as a neighborhood park. It is currently separated from the stream by a chain-link fence, which could be removed once the streambed corridor is developed into an amenity, allowing people access to the stream.
GREEN CORRIDOR:
LITTLE BUCK CREEK

[ SITE ANALYSIS / SITE POTENTIAL ]
Little Buck Creek runs the entire length of the study site (see Figure 4.13). The east section is lined on both sides by moderate tree coverage, with undergrowth that is presumed to be largely invasive. The west section is a mix of weeds and tree/scrub cover. The banks average 16 feet wide on the east side of Madison Avenue and 30 feet wide on the west side, with an average stream width of 26.5 feet. There are several areas that exhibit bank erosion and require remediation. The corridor can be expanded on the study site as shown in Figure 4.13. With adequate improvements, the corridor can become an active and ecologically healthy green space.
The closest greenway is part of the Little Buck Creek corridor (see Figure 4.14), and is 4.5 miles to the west of the study site along this corridor. The Indiana greenways system consists of bicycle and pedestrian paths across the state, the most successful of which is likely the Monon Trail. The Monon Trail connects downtown Indianapolis with Carmel, a large city on the north side of I-465. The following page demonstrates two connections that would allow this study site to integrate into the greenways system.
The study site can be connected to the Pleasant Run Greenway along Madison Avenue. This would not be a greenway in the traditional sense, but rather a connecting piece between greenways. The Little Buck Creek corridor could connect the site to, and become an extension of, Little Buck Creek Greenway.
This image demonstrates the extents of the floodplain near the study site. Because stream and river corridors are usually not developed, this provides great opportunity for greenways passing through and connecting to the study site along these corridors. This could lead to an extensive network of hiking and biking paths, and connections to existing greenways.
The study site property slopes down to the streambed on both sides of the stream. The water is channeled into two concrete drainage ditches on the northeast section and flows directly into the stream on the northwest and southwest sections. There is a vegetated swale on the southeast section that has some tree cover, and a swale running along the railroad track. Also noteworthy is the ridge created by the track elevation, forcing water onto the northeast section, and the ridge along the northeast boundary, between the site and a small neighborhood, also sending rainwater onto the site.
This diagram demonstrates how grading changes facilitate rainwater retention and cleansing on the site (see Figure 4.19). Placing bioswales in strategic places on the site and manipulating topography to send rainwater into the bioswales, then down to the creek, results in the water being filtered through plant media prior to returning to the stream system. The existing swale on the south side of the site is left intact because it is already vegetated and capable of bioswale properties.
The main opportunities for nice views on the study site revolve around the streambed (see Figure 4.20). At some points, views up and down Little Buck Creek are desirable as well. Consequently, development is oriented toward the corridor to the greatest extent possible. Attention should also be given to protecting the privacy of the surrounding residences. The houses to the north on the northeast side sit at a higher elevation, and so are fairly well separated from the site. The east side is separated by the elevated train rail, and the entire south side is bounded by Southport Road.
The City of Southport has plans to develop the south side of Southport Road in the near future in addition to the area included in the study site (see Figure 4.21). The south side of the street will be the location of various civic buildings, so it is important to design for future connections between the study site and the south side of the street. One opportunity for this is to maintain the current location of 2nd Street, to allow for a connection across Southport road, as it exists currently. 2nd Street connects to more neighborhoods to the south, as well.
There is an area on the east side of the site that seems well-suited for a possible focal point or gathering area (see Figure 4.22). The bridge that crosses Buck Creek here is actually down on the water. It contributes to flooding in the area, and is scheduled to be removed in the near future. This would make feasible the concept of a pedestrian bridge, further limiting vehicle access on the site. This area is ideal for outdoor seating for restaurants situated on the south bank of the stream.
Chapter Five

THE SITE PROGRAM

The program for Southport Proper must incorporate features that will activate and enliven the site while providing services that are appropriate to current and potential residents, as well as persons visiting the site for various services. Programming should also improve the site environmentally, making the site sustainable and enduring, with elements that are flexible and amenable to change. Finally, it should create a town center, or a downtown for Southport that is a destination of strong character and placeness, as well as a transportation node.

Goal One: Create an inviting outdoor space that will be an amenity for the town of Southport. *The streambed corridor and 100 year floodplain provide opportunities to create outdoor settings that will both improve the environmental quality of the site itself, as well as the surrounding area, and act as a draw to the site. The spaces could become significant attractions in the area if properly programmed.*
Objective A: All sidewalks will have adjacent vegetated bioswales. *These bioswales will vary according to location on the site, but will usually act as a safety zone between pedestrian traffic and vehicle traffic. When possible, they will act as rainwater detention areas to decrease stormwater runoff from the site.*

Objective B: Widen the green corridor along Buck Creek. *The streambed corridor is expanded on both sides of Buck Creek and combined walking/biking trails are installed on both sides.*

Objective C: Remove all invasive plants from the site. *The streambed is lined with undergrowth that is likely composed of large amounts of invasive plants such as honeysuckle. These plants need to be removed in order for native plants to succeed once planted.*

Objective D: Use native plants to naturalize the site. *Native plants and trees are planted along the Buck Creek corridor and throughout the site to provide pollination for native insects, habitat for native birds and animals, and to restore the conditions of the site to an ecologically enhanced setting.*
Objective E: Provide space designated for outdoor recreation and public meetings. *An area equivalent to approximately one acre is designated open space on the northeast side of the site for art fairs, festivals, etc.*

Objective F: Create a large park area with multiple bicycle/pedestrian paths in the 100yr. floodplain on the northeast section. *This area includes a large pergola-covered pavilion, a water fountain, an amphitheater and large amounts of native trees and plants. This encourages outdoor activity and familiarity with native plantings and their ability to repair ecologically damaged sites.*

Objective G: Create an outdoor sitting/recreation area on the southeast section of the site. *This area includes a pavilion for outdoor dining, a splash-pad that converts to an ice rink in the winter, such as the one pictured below in Bentonville, Arkansas (see Figure 5.1) and planting beds surrounding the pavilion.*

*Images courtesy of www.bentonvillear.com*

Figure 5.1
Objective F: Provide space and shelter for a farmer’s market.

This is an amenity the City of Southport would like to see incorporated into the site. A convertible building is designed similar to the LEED-Gold Certified Santa Fe Farmer’s Market Pavilion (see Figure 5.2 and 5.3). The building can be open-air during warm weather and enclosed during the winter months, allowing for year-round use. Adequate parking and space are provided for pick-up, drop-off purposes.

Goal Two: Incorporate a mix of uses that is appropriate for Southport Proper. As previously stated, choosing the appropriate mix of tenants is tantamount to a successful project, and requires extensive market analysis that is not available for this study. Therefore, the mix for this
The project is based on successful precedents, particularly Belmar in Colorado. The study site will consist of 50% residential and 50% mixed used, and the mixed use will be 45% office and 55% retail, the selections that have proven to be effective at Belmar (Dunham-Jones 157).

Objective A: Provide residential development for a variety of incomes. Making the space appealing and obtainable for different socioeconomic levels is mandated by the triple-bottom-line principle, and encourages richness of diversity.

Objective B: Provide space designated for office use. Office space is often the impetus for mixed-use development, and offices have different requirements in regards to space, access, etc (Schwanke 47). For the purposes of this study, all office space design will be hypothetical.

Objective C: Provide space designated for retail use. The city of Southport has specific retail it would like to incorporate into new development, including a grocery store, coffee shops, and restaurants with outdoor seating.

Goal Three: Design the site to encourage use of public transportation. Designing Southport to become a transportation node

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will bring large volumes of people through the site, as well as making the site more appealing to potential residents.

Objective A: Design a depot for future light rail transit. The train depot is a major component of this design, and should be attractive, functional, and easy to access.

Objective B: Design convenient bus stop sites to encourage use of IndyGo bus transit. Bus transit will also serve to activate the site with commuters from surrounding areas in addition to residents using the bus to travel to work, etc.

Objective C: Provide adequate parking for “park and ride” option. It may safely be assumed that there will continue to be large numbers of people traveling by private vehicle, so they should be accommodated with adequate parking to encourage them to use the space. The majority of parking on the site will be in multi-story parking structures in order to maximize property use.

Objective D: Provide facilities for persons arriving by bicycle, including bicycle storage, lockers, and public restrooms. With the potential to connect the site to other greenways, there will hopefully be large numbers of people accessing the site by bike.
Goal Four: Design the site to increase connectivity both within the site and with the surrounding neighborhoods.

Objective A: All paths and sidewalks must meet ADA criteria. *The entire site is designed to be accessible via wheelchair.*

Objective B: Provide pedestrian paths throughout the site. *It is important to make all areas of the site accessible by foot to encourage walking and encourage foot traffic to the different venues and vendors.*

Objective C: Provide pedestrian paths that connect to existing sidewalks adjacent to the site. *There are neighborhoods and apartment buildings on all sides of the site, providing large numbers of potential visitors and commuters. Making the site as accessible as possible to these people is a priority.*

Objective D: Indicate potential connections to future expansions of existing walking and biking paths in Marion County.

Goal Five: Increase density on the site to the greatest extent possible. *Increasing density in suburban areas, especially greyfields like the Southport site, is sustainable in that land is being re-purposed to be used at a much higher level of functionality.*
Objective A: Build “upward”: design multistory buildings rather than single story. *Building upward economizes land use and creates a more interactive site* (Rubin 2012).

Objective B: Be sensitive to the surrounding area, so that new development is similar in height to nearby buildings. (Three- to four-story buildings on Southport Road, two- to three-story buildings on northwest section of site).

Objective C: Accommodate vehicle travel with parking garages to allow the maximum amount of development on the property.

**Goal Six:** Create a town center for Southport. *The city of Southport is currently lacking a defined nucleus or features that would give the city identity and individuality.*

Objective A: Create signage and a design language that will be unique and specific to the site. *This can be accomplished with street lighting, street furniture, signs, paving patterns, and material choices.*

Objective B: Identify qualities in the city of Southport and its history that can be represented in the design of the site.
Chapter Six

THE SITE DESIGN

The following pages support the program and present the site design. There are two land-use diagrams. The second was selected for further development of the site design. Because maximizing pedestrian traffic and minimizing vehicle traffic were essential to the success of the design goals, there are two diagrams to demonstrate the planned traffic movement patterns of the design. These are followed by the master plan and a grading plan of the park area. Finally, there are three perspectives to depict the potential character of the site.
In the first land use plan, the train depot is placed on Southport Road for maximum visibility and accessibility. The north east section of the site is dedicated to becoming a large outdoor amenity. The farmer’s market is placed next to the park area. The grocery is placed opposite the farmer’s market on Madison Avenue. The majority of the remaining space is dedicated to residential and retail functions. The image on the following page has a similar layout, with changes that ultimately informed the master plan for the site.
In the second land use plan, the grocery is moved to the north edge of the west section of the site. The other significant change is that the train depot is moved into the core of the retail area on the southeast side. This change was made to draw people into the site and encourage more internal traffic. The green space on the north side of the east section remains exclusive to pedestrian and bike traffic. It is connected to the south side with a pedestrian bridge. This general land use plan was the final pattern used to inform the master plan for this project.
PEDESTRIAN TRAFFIC
VEHICLE TRAFFIC

Surface Parking

Garage Parking

Garage Parking
MASTER PLAN
GRADING PLAN
The section at the top of the page is a section across the entire site, indicated on the grading plan on the previous page. The first segment of this section is illustrated above. The retail/residential area opens up into the park, leading down to the river. There are numerous shops and restaurants, as well as places to sit outside to eat. This is the south entrance into the park area, so people will be biking and walking through this area for exercise. There will also be people using the site to access the mass transit—-the train depot and bus stops.
The Riverwalk becomes an active area with pedestrians and bicyclists. The streambed corridor is rehabilitated with native plantings. An outdoor amphitheater surrounded by evergreens provides a setting for performances, meetings, possible classroom functions and other social activities.
An apple orchard in the park recalls the agricultural potential the site once held, in addition to bringing another level of function to the site. The apples may be eaten by visitors, or utilized in some of the restaurants on the site. The apple trees will add to the botanical appeal, especially when in bloom. An herb could be grown as a cover crop for harvesting under the apple trees, increasing the use of space.
The park area in the northeast corner of the site has .7 miles / 1,112 meters of hiking/biking trails. The trellis is covered with flowering vines and surrounds the fountain, providing a shady place to sit and relax on hot days. The bridge connects north to south, and the amphitheater provides an outdoor stage for performances and meetings. There is also a large open area for tents, booths and tables for art fairs and festivals. The entire area is planted with native trees and plants, including the bioswales.
The southeast section of the site becomes densely developed, with many shops and restaurants and residential apartments. There are greenroof areas on top of the apartments for residential use. The shops on the north side are all open to the park area, with outside dining space for the restaurants. The streets are tree-lined with bioswales to filter stormwater runoff. Parking is in garages available from both entrances on Southport Road.
This is a typical section of the north side of the shopping area where it is open to the park area. There are paved sections for outdoor dining immediately adjacent to the recreational park area. Shoppers and diners can enjoy a walk after their meal and purchases, and walkers and bikers can grab a bite to eat after their workout.
This is a depiction of the north side of the development on Southport Road, next to the park, the same area illustrated on the previous page. The mixed use area opens up to the park area, allowing for easy transition from one setting to the other. The shops could be open to the outdoors during nice weather. The image below is a potential view looking out from inside one of the restaurants.
The boardwalk connects the retail area and train depot with the park and the north side of the site. The boardwalk has the potential to become an amenity itself with benches and food vendors. Visitors can enjoy the view of the Buck Creek corridor from the bridge, or sit and watch passersby.
The trellis is situated on the north side of the east section of the study site. It becomes a visual focal point for persons looking from the south side northward, and serves as an anchor destination for the large pedestrian bridge. The trellis structure is planted with flowering vines that provide shade on hot days. There is seating on the foundation of the fountain as well as benches throughout the area. This is simultaneously a point of transition and respite.
This image portrays the potential of the intersection of Southport Road and Second Street. This area becomes a busy, vibrant, mixed-use center that is served by mass transit options. There is various retail on the ground floor, potential office space on the second floor, and residential space on the third and fourth floors. The building height tapers toward the center of the site, so that the buildings adjacent to the park are only two stories tall, creating a more intimate setting.
Chapter Seven

SITES

The Sustainable Sites Initiative is a comprehensive effort to categorize and prioritize measures of design that can potentially be considered sustainable. The SITES Initiative is a collaborative project implemented by the American Society of Landscape Architects, the Lady Bird Johnson Wildflower Center, and the United States Botanic Garden. The vision of SITES is to provide guidelines that will facilitate sustainable design, construction, operations, and maintenance of landscape sites.

In 2001, a study called the Millennium Ecosystem Assessment (MA) was begun and continued through 2005. This analysis examined the condition of various types of ecosystems, as well as the services they provide to society. For example, forests remove carbon dioxide from the atmosphere and store carbon, a process that is considered a service. SITES is largely founded on this concept, that “healthy ecosystems provide goods and services of benefit to humans and other organisms” (MEA). There are twelve
ecosystems recognized by SITES, including “Global climate regulation,” Air and water cleansing,” and “Water supply and regulation” (SITES Guidelines 6).

Through extensive examination of the earth’s ecosystems, the SITES Initiative developed a set of benchmarks that guide development, whether it is new construction or renovation of an existing site. The SITES Guidelines and Performance Benchmarks provide benchmarks that are required and must be met, as well as optional credits. If the intention is that a project achieve recognition as a Sustainable Site, a certain number of the optional credits must be acquired.

There are a total of 51 possible credits, and they are assigned a point value, many with a range of points possible. This allows a project to accumulate some points even though it may not meet the criteria needed to achieve all of the points. The project receives a rating based on how many points it achieves. The rating system is as follows:

2009 Rating System: 250 Points Total

One Star: 100 points (40% of total points)

Two Star: 125 points (50% of total points)

Three Stars: 150 points (60% of total points)
Four Stars: 200 points (80% of total points) (SITES Guidelines 9)

SITES conducted a Pilot program, from June 2010 to June 2012. Pilot Projects demonstrated application of *The Sustainable Sites Initiative: Guidelines and Performance Benchmarks 2009*. After evaluating the Pilot Projects, adjustments may be made to the final rating system. The results of the Pilot Program are intended to be released in 2013 (SITES Pilot Program).

For the purpose of this project, the existing Benchmarks are utilized. The prerequisites and credits are divided into nine sections as follows:

1. Site Selection
2. Pre-Design Assessment and Planning
3. Site Design—Water
4. Site Design—Soil and Vegetation
5. Site Design—Materials Selection
6. Site Design—Human Health and Well-Being
7. Construction
8. Operations and Maintenance
9. Monitoring and Innovation (SITES Guidelines 10)
The design for this study site has qualities that meet several SITES Performance Benchmarks. The following sections discuss the individual categories and the manner in which the study design meets the requirements. The possible number of points that this study could receive if implemented, will be in the title box of each credit section.

SITE SELECTION

Prerequisite 1.1: Limit development of soils designated as prime farmland, unique farmland, and farmland of statewide importance.

This prerequisite is not applicable to the site design because nearly the entire site is developed, or “disturbed”. Once soil has been altered by development, it cannot regain its former quality. As demonstrated in the following image, the entire study site was quality farm land, prior to development. That does not mean it all could have been farmed. Steep slopes and flooding would have prevented much of the site from being used for farming.

The orchard in the design is meant to represent the natural state of the floodplain area by reinstalling an agricultural element on the site.
Soil Classification/ Farmland Rating

**Ge:** The gray area indicates Genesee silt loam, considered prime farmland if protected from flooding.

**CrA:** The maroon area indicates Crosby silt loam, prime farmland.

**MmB2:** The green area indicates Miami silt farmland if drained.

*Image created using websoilsurvey.nrcs.usda.gov*  
Figure 7.1
Prerequisite 1.2: Protect floodplain functions

The site design would meet the requirements for this category because the 100 year floodplain is restored to mostly vegetation. This enhances flood mitigation by decreasing stormwater runoff. Removing development from the floodplain is becoming more common due to problems with flooding in many urban areas.

For example, there are currently plans to remove 128 houses and convert the land they occupy to a flood retention zone in West Louisville, California. The houses were built in the 100 year floodplain, and are increasingly subjected to floodwater inundation. Although there are only a few buildings to remove from the floodplain on the study site, there is a large amount of paved surface area that can be restored to a vegetated surface that will detain as well as cleanse rainwater.

Prerequisite 1.3: Preserve wetlands.

This prerequisite is not applicable to the study site as there are no wetlands on the property.

Prerequisite 1.4: Preserve threatened or endangered species and their habitats.

This prerequisite is not applicable because there are no threatened or endangered species on the site.
Credit 1.5: Select brownfields or greyfields for redevelopment. POSSIBLE POINTS: 5

The study site design would receive 5 points in this benchmark because the site is a greyfield. Appropriate documentation of this is included in the site analysis section, i.e. aerial photographs, and maps.

Credit 1.6: Select sites within existing communities. POSSIBLE POINTS: 6

The study site design would receive 6 points in this category because it is an infill site, with infrastructure such as roads and sewers already in existence.

Credit 1.7: Select sites that encourage non-motorized transportation and use of public transit. POSSIBLE POINTS: 5

The study site design would receive 5 points for this benchmark because the design project entrance is within .25 miles of both bus stops and a light rail stop.

**PRE-DESIGN ASSESSMENT AND PLANNING**

Prerequisite 2.1/2.2: Conduct a pre-design site assessment and explore opportunities for site sustainability. Use an integrated site development process.

Most of the assessment material has been collected for these prerequisites, but because there is no “integrated team” involved, this study design technically cannot achieve this goal.
Prerequisite 2.3: Engage users and other stakeholders in site design.

With the exception of discussions with the mayor of Southport, no attempt was made to engage users or stakeholders for the purpose of this project.

WATER

Prerequisite 3.1: Reduce potable water use for landscape irrigation by 50 percent from established baselines.

This prerequisite could not be evaluated in this project because there is no current measurement of potable water used for landscape irrigation. However, the intention of the site design is to minimize the use of potable water for irrigation by using native plantings and harvesting rain water.

Credit 3.2 Reduce potable water use for landscape irrigation by 75 percent or more from established baseline. POSSIBLE POINTS: 5

This prerequisite could conceivably be achieved as well, but no parameters were created for this credit for the intent of this project.

Credit 3.3 Protect and restore riparian, wetland and shoreline buffers. POSSIBLE POINTS: 8
This project does address this credit, by rehabilitating Buck Creek and its shorelines. The streambank could be restored using erosion-control native plantings like willow cuttings, and planting of native streambank trees such as silver maple and river birch. The site design is intentionally outside the 100-year floodplain, and the existing streambed is buffered at varying widths that would qualify the project for more points.

**Credit 3.4 Rehabilitate lost streams, wetlands, and shorelines**  
POSSIBLE POINTS: 5

This credit could be met by removing the concrete slabs on the banks of the creek that currently exist where the boardwalk is designed to cross the creek. Again, the banks could be stabilized using native plantings. This improvement should be worth 2 points.

**Credit 3.5 Manage stormwater on site**  
POSSIBLE POINTS: 10

This credit could be met under the greyfield requirements. It would require that a TR-55 analysis be conducted for the site, which was not included in this study. The overreaching goal when using TR-55, however, is to reduce stormwater runoff, and the site has been designed to do that with improvements such as bioswales, greenroofs, and native plantings.

**Credit 3.6 Protect and enhance on-site water resources and receiving water quality**

POSSIBLE POINTS: 5
This credit could be met with the methods mentioned above. The bioswales are designed to hold water, allowing pollutants to filter out of the water, and to slow water runoff from the site. Bioswales along the sidewalks and parking lots would decrease vehicular pollutant runoff as well.

**Credit 3.7 Design rainwater/stormwater features to provide a landscape amenity**

POSSIBLE POINTS: 3

This credit should be achievable at the highest point value because all of the stormwater features on the site are designed to be landscape amenities. The bioswales are all designed to be attractive native plantings, the greenroofs are outdoor amenities, even the fountains are intended to be fed with captured stormwater.

**Credit 3.8 Maintain water features to conserve water and other resources**

POSSIBLE POINTS: 3

This credit should be achievable as well because the water features for the site would all be created, there are no features existing at this time. No maintenance plans were included in this project, but the understanding that monitoring and sustainable practices would be ongoing is inherent to the design.
SOIL AND VEGETATION

**Prerequisite 4.1 Control and manage known invasive plants found on site**

This credit is addressed in the site program. There are invasive plants along the streambank that would require removal. Again, no maintenance procedures were included in this project, but that would be a necessary addition to achieve this credit.

**Prerequisite 4.2 Use appropriate, non-invasive plants**

This prerequisite has been addressed in this project program in the discussion of native plantings, and should be met with the intended improvements.

**Prerequisite 4.3 Create a soil management plan**

This prerequisite has not been addressed in this project. This would require extensive knowledge of the construction requirements for the areas to be developed, which is beyond the scope of this project.

**Credit 4.4 Minimize soil disturbance in design and construction**

POSSIBLE POINTS: 6
This credit is addressed to some extent. The areas that are not currently disturbed were designed around and left vegetated, in order to maintain their integrity. Again, knowledge of the construction process would be required for a greater understanding of where to designate *vegetation and soil protection zones*, as required in this SITES credit.

**Credit 4.5 Preserve all vegetation designated as special status**

POSSIBLE POINTS: 0

Although there are currently no plants on the site that would meet the “special status” requirements, a stand of existing trees are protected in this design because they are large, mature trees.

**Credit 4.6 Preserve or restore appropriate plant biomass on site**

POSSIBLE POINTS: 8

This credit requires calculations to determine the biomass density index of the site, both existing and planned. These calculations were not performed for this project, but could be, and given that the vegetative cover is greatly increased on the site per the site design, it seems credible that the credit could be achieved.

**Credit 4.7 Use native plants**

POSSIBLE POINTS: 3

This credit would be achieved with the proposed site design, and the use of native plants is discussed in the site program.
Credit 4.8 Preserve plant communities native to the ecoregion  POSSIBLE POINTS: 10

This credit could apply if there are sufficient numbers of native trees. A more thorough investigation would be required to determine how many of the existing trees are indeed native to the area. The estimated point value is based on preserving 75% of existing native plant communities.

Credit 4.9 Restore plant communities native to the ecoregion  POSSIBLE POINTS: 4

This credit would be achieved due to the large restoration area on the north side of the site. The design calls for native plantings in this area, and although it would not have to be exclusively native plantings, the most credit is achieved when “native plant communities comprise at least 75 percent of the site vegetated area” (SITES Guidelines, 114). This goal is easily obtainable with the project design.

Credit 4.10 Use vegetation to minimize building heating requirements  POSSIBLE POINTS: 10

The requirements for this credit were not considered in this design. It would be difficult to incorporate a windbreak into the design because of the heavy programming of the area.

Credit 4.11 Use vegetation to minimize building cooling requirements  POSSIBLE POINTS: 5
This credit may be achievable due to the intent to install green roofs on all of the new construction. Again, construction considerations were beyond the scope of this project, but it seems feasible to project that green walls and vegetative screens could be installed to reduce building cooling needs.

| Credit 4.12 Reduce urban heat island effects | POSSIBLE POINTS: 5 |

This credit should be achieved through the project due to the large amount of trees being added to the site. Other improvements would apply as well, such as vegetated roofs and low albedo surfaces, or surfaces that don’t absorb heat.

| Credit 4.13 Reduce the risk of catastrophic wildfire | POSSIBLE POINTS: 3 |

Some aspects of this credit could be met with this project design. For example, the design limits plantings next to buildings. Other aspects would require more specific building details and maintenance plans.

**MATERIALS SELECTION**

| Prerequisite 5.1 Eliminate the use of wood from threatened tree species |

Some aspects of this credit could be achieved in careful selection of the landscape structure materials. It would largely address construction details, which, again, have not been covered here.
Credit 5.2 Maintain on-site structures, hardscape, and landscape amenities

POSSIBLE POINTS: 0

Again, no maintenance issues were addressed in this project, so this credit could not apply to the project itself.

Credit 5.3 Design for deconstruction and disassembly

POSSIBLE POINTS: 0

This credit was not addressed in this project.

Credit 5.4 Reuse salvaged materials and plants

POSSIBLE POINTS: 0

This credit was not addressed in this project.

Credit 5.5 Use recycled content materials

POSSIBLE POINTS: 2

This credit may be obtainable with this project by recycling the asphalt that would be removed from the north side of the site. It could be used to pave the hiking/biking paths throughout the site.

Credit 5.6 Use certified wood

POSSIBLE POINTS: 3

This credit is applicable mostly to construction concerns, but structures in the landscape could be built using certified wood as well, such as the boardwalk and the trellis.

Credit 5.7 Use regional materials

POSSIBLE POINTS: 6
This credit is not addressed in the project parameters, but could be achieved with careful planning. Estimated credit value is based on acquiring 60% of materials within the distances specified by SITES.

**Credit 5.8 Use adhesives, sealants, paints, and coatings with reduced VOC emissions**  
POSSIBLE POINTS: 0

This credit is not addressed in the project.

**Credit 5.9 Support sustainable practices in plant production**  
POSSIBLE POINTS: 0

Conceivably, this credit would be easy to obtain. In the given region, however, there are not very many nurseries that employ many, if any of the plant production practices described in the SITES guidelines. It would probably be difficult to fill the plant needs for the given design under these parameters.

**Credit 5.10 Support sustainable practices in materials manufacturing**  
POSSIBLE POINTS: 0

This credit is not addressed in this project, but presumably would be achievable, again with careful planning.

**HUMAN HEALTH AND WELL-BEING**

**Credit 6.1 Promote equitable site development**  
POSSIBLE POINTS: 0
This issue pertains mostly to the construction aspects of the development of the site. It has not been addressed here.

**Credit 6.2 Promote equitable site use**  
POSSIBLE POINTS: 0

This credit was not addressed in this project to the extent required in the SITES guidelines. Consideration was given to making the site accessible to all persons at all income levels, and to provide housing that is affordable to different income levels. This credit requires a great deal of community involvement, which is not an option for this project.

**Credit 6.3 Promote sustainability awareness and education**  
POSSIBLE POINTS: 4

This project was designed with the intention to provide educational elements that would fulfill the requirements for this credit. The park entry building could house classes and informational sessions on topics such as sustainability and native plantings. Instructional signage could be placed throughout the site that describes features such as the bioswales, the native plants, the stormwater management, etc.

**Credit 6.4 Protect and maintain unique cultural and historical places**  
POSSIBLE POINTS: 0
There are no historically significant structures on this site, per the national historical registry. There are no culturally significant features, either, per conversations with the Mayor of Southport.

**Credit 6.5 Provide for optimum site accessibility, safety, and wayfinding**  
POSSIBLE POINTS: 3

Although not addressed here, this credit should be attainable in this project. Achievement would require a design that gives special consideration to providing access for the physically disabled, as well as making the site easy to navigate and safe for all visitors.

**Credit 6.6 Provide opportunities for outdoor physical activity**  
POSSIBLE POINTS: 5

This credit was one of the main design influences for this project. The creation of new trails, the increased green space, and the splash pad/ice rink are all amenities that encourage outdoor activity. There are also bike storage facilities and bike racks in two different areas on the site to facilitate bicycling.

**Credit 6.7 Provide views of vegetation and quiet outdoor spaces for mental restoration**  
POSSIBLE POINTS: 4
This credit would be met with the proposed site design. There are several outdoor seating areas for residents and people passing through the site. These areas are within 200 feet of the buildings in the design and the outdoor space is isolated from the street, so noise will be minimal. Large amounts of vegetation have been designed into the site to assist with obtaining this credit.

**Credit 6.8 Provide outdoor spaces for social interaction**

This credit would also be met with the proposed site design. There are spaces provided for large groups of people, they are easily accessible from the buildings on the site, and the site is well-vegetated.

**Credit 6.9 Reduce light pollution**

This project did not approach construction details such as exterior lighting, so this credit was not addressed here.

**CONSTRUCTION**

This project did not endeavor to reach the construction stage of development. Therefore, this section of the SITES guidelines will not be discussed here.
OPERATIONS AND MAINTENANCE

Again, this project did not approach the operations or maintenance stage of planning, so this section will not be discussed either.
CONCLUSION

This creative project demonstrates the potential Southport has to become a mixed-use, transit-oriented development. With careful planning, the site could be responsibly transformed into a vibrant retail and recreational area for both visitors and on-site residents. This project provides evidence that there are sufficient numbers of people within walking and driving distance of the site to make it a successful development.

The site design meets the TOD typology requirements defined by Dittmar, with the exception of value capture (which is beyond the scope of this project). The design provides “Location Efficiency” by placing train and bus availability within walking and biking distance of many residents. There is more than adequate space for a “Rich Mix of Choices”, including designated space for merchandise retail, restaurants, medical offices, grocery, and specialty boutiques.

Another feature required by Dittmar is “Place Making”. This is accomplished in the design by bringing in transit options to draw people to the site, and by creating spaces that are appealing and have strong identity.
Finally, Dittmar dictates that TOD provide a “Resolution of the Tension Between Node and Place”. The site succeeds here by being a stop on a regional transportation system that maintains its own individuality as a destination.

Although the project does not reach the level of specifying exactly what percentage of each tenant is represented, the intention is that several different functions would be included. Ultimately, the businesses present would be determined by a myriad of factors, such as market demand, current economy stability and cost per square foot to lease. To the greatest extent possible, the mix of tenants would be chosen so that they could thrive off of one another, and create an inter-dependent existence that would perpetuate itself and successfully attract both residents of, and visitors to the site.

In accordance with the principles of the Triple Bottom Line, the design attempts to provide equitable opportunities for employment and housing with a variety of new businesses and housing options on the site. Access to mass transport is facilitated with the train depot and bus stops, making better jobs accessible to those who may not be able to afford personal transportation. Access to green spaces and the outdoors is encouraged along the riverwalk and in the new park design.
The site design is intended to upgrade the site environmentally as well. With the increase in green space and vegetation, the addition of native plantings, the removal of invasive plant species, and the conservation of potable water, this goal is accomplished. The site would qualify for many of the SITES credits as designed, and with a much more intensive evaluation, could qualify for most of the credits.

Southport is provided with the town center that it currently lacks. Transit options and shopping and dining draw people into the core of the site. There are open-air venues throughout the site, such as the Farmer’s Market, the trellis, and outdoor seating at restaurants.

Several of Gupta’s 10 Principles for Developing Successful Town Centers and Urban Villages are addressed in the site design and program. An “enduring and memorable public realm” is created, with retail and recreation areas on the site. Multiple uses are included on the site. The site is designed to increase density with multi-story buildings and maximized use of land. The many paths and sidewalks added to the site are intended to invite the community in and make the site accessible to surrounding neighborhoods. Also, the site is designed to be as sustainable as possible.

This design succeeds as an example of a sustainable retrofit of a failed shopping center. The site is upgraded for pedestrian and vehicular use to
become a transit oriented development. It becomes densely developed, with multiple businesses working together to enliven and energize the site as an active mixed-use development. The design results in a more responsible use of the already environmentally compromised site. The site is transformed from an environmental liability to an asset, with outdoor trails, native plantings and bioswales that purify and infiltrate stormwater runoff.

Understanding that the design is not actually implemented, and that consequently many of the SITES guidelines cannot be completely fulfilled, the design goals are accomplished to the greatest extent possible.
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