

Dubuque, IA  
Sustainable Neighborhood Assessment

July 14 - 16, 2014



## Sustainable Neighborhood Assessment

Through the Sustainable Neighborhood Assessment Tool developed by Global Green USA, public officials and local government staff are using the LEED for Neighborhood Development (LEED-ND) rating system to determine ways for future development in their communities to achieve high levels of environmental, economic, and social sustainability. LEED-ND integrates the principles of smart growth, walkable urbanism and green building into the first national rating system for neighborhood design. In Dubuque, Global Green used the tool as a means to evaluate existing conditions and plans for the Washington neighborhood, in order to identify opportunities to augment current revitalization efforts and develop recommendations to increase the neighborhood's overall level of sustainability.

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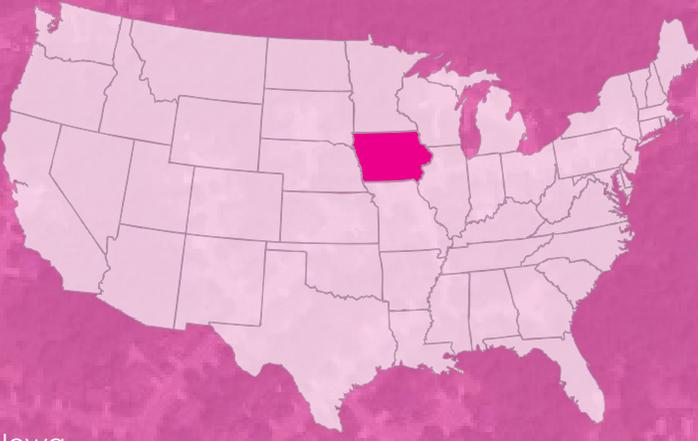
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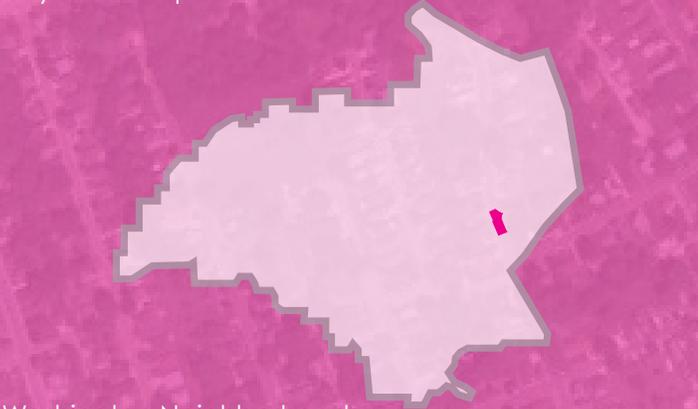
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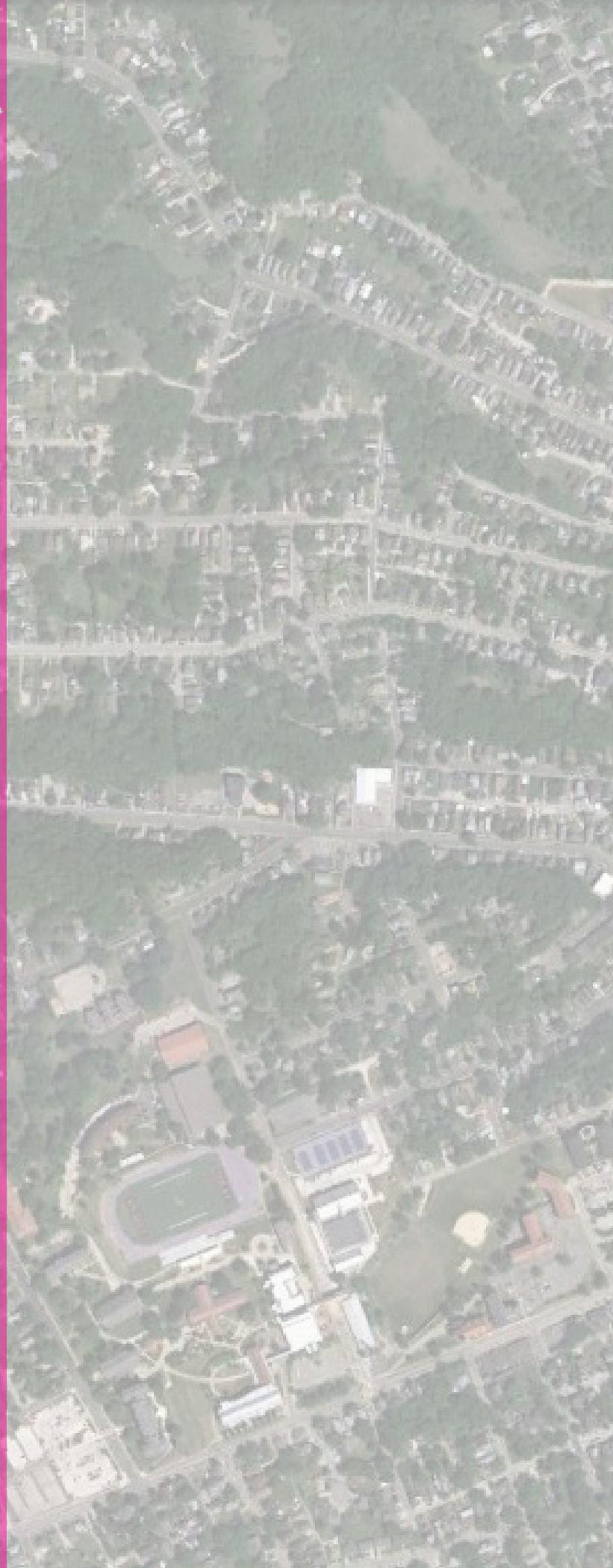
Dubuque County



City of Dubuque



Washington Neighborhood



# Washington Neighborhood



Central Ave.

16th St.

Washington St.



# Sustainable Neighborhood Assessment Process

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The goal of the Sustainable Neighborhood Assessment process is to identify topical and physical focus areas where policy or planning changes will promote sustainable urban development over the short and long term. To define these focus areas, Global Green USA and its team members utilize the Sustainable Neighborhood Assessment Tool, which is based on the LEED for Neighborhood Development (ND) criteria and checklist.

Prior to visiting the Washington Neighborhood, the team conducted a thorough baseline review of existing planning documents, code requirements, flood maps, and stakeholder priorities. An initial assessment was then completed, with the credits in each of the three LEED-ND categories (Smart Location & Linkages, Neighborhood Pattern & Design, and Green Infrastructure & Building) marked as “achieved,” “not achieved,” “unknown,” or “not applicable.” Each credit is further ranked for the degree that it correlates to regional or local policy priorities, regulatory support, technical feasibility, market support, and stakeholder input.

This initial assessment serves as the point of departure for the Global Green team's three-day site visit and evaluation. During the visit, the team walks each block of the Washington Neighborhood, photographs examples of positive qualities and areas for improvement, and conducts a series of meetings with targeted stakeholders, city staff, and representatives of relevant public agencies. Throughout the process, the preliminary checklist is edited and refined to incorporate the team's visual observations and contextual issues raised by stakeholders. The initial findings of the evaluation are grouped into broad categories noted on the next page. The final augmented checklist for the Washington Neighborhood can be found on pages: [17-20](#).

The assessment process then enables the team to identify a series of recommendations based on LEED-ND credits that are applicable to the unique assets and challenges of the Washington neighborhood. Recommendations also cover policy, planning, and development changes which aim to realize a more sustainable future for Dubuque. Some recommendations can be implemented fairly quickly, while others will require long-term collaboration among public agencies, local institutions, and private sector partners, as well as multiple sources of funding.

# Neighborhood Assets



1. Engine House #1 has been renovated and repurposed as a Headstart academy and Community Center. 2. Many people already utilize side streets to bicycle, especially to and from the bike path near Bee Branch. 3. Traffic circles established years ago make Washington St. an attractive route for cyclists and pedestrians. 4. Green Alleys are continually being installed throughout the Washington neighborhood and in addition to significantly improving the aesthetic value of the Alleys, also allow for water to percolate into the ground rather than accumulate and flood nearby homes. 5. Renovated townhouses for purchase.

# Neighborhood Background

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Dubuque's Washington Neighborhood is defined by Central Ave. to the west, E 22nd St. to the north, E 11th St to the south, and Elm St., the daylighted Bee Branch Creek, and the Mississippi River to the east. The neighborhood encompasses 55 square blocks and is home to 1,900 residents. A majority of the properties within the neighborhood were built prior to 1939; many of the buildings date to the 1880s and 1890s. Part of the oldest city in Iowa, the Washington Neighborhood has a character unmatched in other Midwestern cities. The historic street grid provides short blocks and a walkable layout. The Bee Branch Creek daylighting project has resurrected a neighborhood amenity and made it publicly accessible. Other neighborhood amenities include a robust network of community-serving institutions, two primary schools within walking distance, mature trees, and a demand for housing. The Washington neighborhood is a historically working class community with a still functioning (though at a lower scale than in the past) industrial district situated between the neighborhood and the Mississippi River.

Historic buildings function as both an asset and a challenge for the Washington Neighborhood. Those that are well maintained or have been renovated have become neighborhood icons, such as Engine House #1, or the Historic Row Houses and Washington Court at Washington and 18th St. Others, however, are in a state of disrepair, and are prone to flooding. For over a decade, businesses and homes have suffered losses from water damage and disinvestment. The Bee Branch Watershed Flood Mitigation Project, in combination with the Green Alley Project should provide much relief to the Washington Neighborhood in regard to this frequent flooding.

Compared to the rest of Dubuque, the Washington Neighborhood houses a greater proportion of renters in a low income bracket and a higher percentage of its residents utilize public transit. Single family houses are the predominant type of housing, many of which are used as rental properties or converted into multiple rental units.

A strong foundation of organizations have helped to revitalize and provide services for the Washington Neighborhood, including the Washington Neighborhood Development Corporation, the Washington Neighborhood Tool Library, the Washington Neighborhood Association, the Crescent Community Health Center, Project Concern, the Maria House, and the religious community.

The City of Dubuque has made a focused effort to brand itself as a sustainable place. Its actions in the Washington Neighborhood, from the Bee Branch project, to the Urban Revitalization District, to the Workforce and Senior Citizen Housing Program, to Brownfield redevelopment are examples of this effort at work on the ground.

# Neighborhood Challenges



1. The '5 Points' area of the Washington Neighborhood clashes with the historic character of the rest of the neighborhood due to deep building setbacks and a car-oriented streetscape. 2. Though "The Jule" bus system has been expanded recently to accommodate its users better, it still does not run on Sundays or nights. 3. Many vacant storefronts make up the main commercial corridor of Central Ave. 4. Central Ave. is actually a one-way U.S. Highway (Route 52) / State Highway (3). Plans for the State to re-route traffic promise less tractor-trailer and general traffic, and open options for the City to more effectively determine the fate of Central Ave. 5. Though many buildings are falling into disrepair, a facade improvement program has made strides toward a more visually appealing streetscape.

# Recommendation Approach and Strategy

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The recommendations presented over the following pages were developed through careful study of regional and local planning documents, city staff and stakeholder interviews, a thorough on-the-ground analysis of community characteristics, and a community workshop. Each of the resulting recommendations have been informed by best practices as identified through LEED-ND.

Four key overarching themes guide the specific recommendations: **1** Pedestrian and Bicycle-Friendly Streets, **2** Diverse Housing, **3** Robust Commercial Uses, and **4** Healthy, Energy Efficient Buildings.

**Pedestrian and Bicycle-Friendly Streets** seeks to leverage the completion of the Bee Branch Creek Daylighting Project as an opportunity to complement neighborhood connections. Enhancing and integrating walking, cycling, and bus service throughout the community, and creating connections to surrounding neighborhoods will increase bus ridership, relieve residents of transportation-related costs of owning a car, and benefit public health.

**Diverse Housing** highlights opportunities to increase housing choices for all incomes, ages, and abilities.

**Robust Commercial Uses** identifies potential program and policy interventions, as well as dynamic points of interest the City of Dubuque could utilize to revitalize the Central Ave. Corridor, in particular.

**Healthy, Energy Efficient Buildings** expands upon local efforts to decrease health hazards in residential buildings, increase energy and water efficiency in the built environment, and encourage infrastructure efficiency.

In addition to the overarching themes, we have expanded on two topics: Tree-Lined Streets, and the Bend on Central Ave.

**Tree-lined Streets** expands on the Pedestrian and Bicycle Friendly Streets section by recommending the treatment of Ash trees rather than their removal and disposal in the face of the Emerald Ash Borer in order to maintain existing canopy cover and species diversity of the urban forest.

**Rethinking the Curve on Central Ave.** expands on the Robust Commercial Uses section and suggests a re-configuring of the bend at Central Ave. and 18th St. to make it less dangerous for pedestrians as well as to make it a dynamic location where a plaza could be constructed and/or civic events could take place.

## Recommendations

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1 Pedestrian & Bicycle- Friendly Streets	2 Diverse Housing
3 Robust Commercial Uses	4 Healthy, Energy Efficient Buildings
5 Tree-Lined Streets	6 Rethinking the Curve on Central Ave.

## Pedestrian & Bicycle - Friendly Streets

The Historic street grid of the Washington Neighborhood is compact and provides connections (many intersections) throughout the neighborhood for people to walk or ride their bike. Compact development and a connected and open community promote livability, walkability, transportation efficiency, and can improve public health by encouraging daily physical activity.

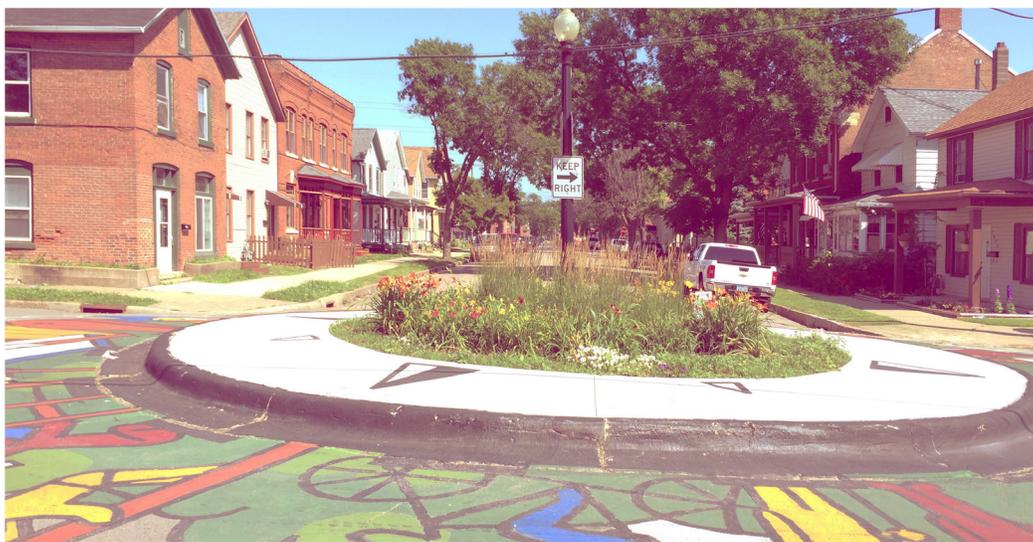
The position of the Washington Neighborhood's historic buildings within individual parcels and height also contribute to a positive pedestrian experience. LEED-ND recommends building facades that face the street, and building heights of at least 1 ft for every 1.5 ft they are set back from the street centerline. New developments should only be approved if they maintain or reproduce these patterns that are present in the historic neighborhood layout in order to maintain and expand a positive pedestrian environment.

Although the Washington Neighborhood is very walkable due to its size, density, and connectedness, walking isn't always a safe experience. Most intersections lack crosswalks and stop signs. Central Ave. is especially lacking in pedestrian amenities such as a safe speed, crosswalks, benches, street trees, pedestrian-scale lighting, etc. Providing safe, appealing, and comfortable street environments that help prevent pedestrian injury will high levels of internal connectivity and development within existing communities

Expand on existing cycling conditions.

LEED-ND encourages bicycle networks and storage to improve public health by encouraging utilitarian and recreational physical activity, and promote transportation efficiency.

The Jule, Dubuque's public transit system, serves the Washington Neighborhood with stops and times that were calibrated through a study by IBM to serve the most people the most efficiently. These efforts on the part of the City have not gone unnoticed, however, LEED-ND encourages a minimum daily transit service where service is provided every day (including Sunday), with a minimum of 40 weekend trips.

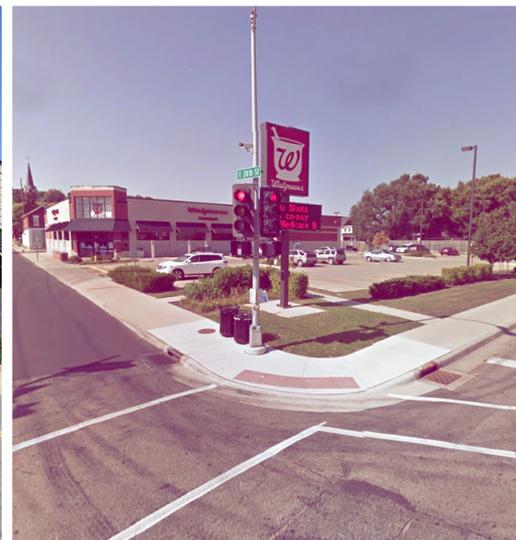


Existing traffic circles on Washington St. act to calm traffic and make the street a natural choice for bicyclists and pedestrians alike.

## Action Items

1. **Pedestrian Amenities:** To make streets safe and comfortable for pedestrians, aim for a target speed of 25 mph on 75% of residential streets. Central Ave. in particular is in need of traffic calming. Some best practices for traffic calming include street trees on both sides of the street, more narrow lanes, and corner curb extensions or bulb-outs. Install crosswalks throughout the Washington Neighborhood. Simple stripes or elegant, textured pavement are examples of successful delineation for crossings at each intersection.
2. **Walkable Streets:** New development should reflect the historic street layout, where buildings have shallow setbacks and engage the pedestrian-scale sidewalk. The 5-Points area consists of large parcels that have been developed in a big-box or strip mall fashion and represents a lapse in continuity of the historic street pattern (See photos below). Parking should occur at the rear of lots and functional entries should occur at sidewalks and face the right-of way. Sidewalk intrusions such as driveways should be kept to a minimum, no more than 10% of the length of the sidewalk.
3. **Bike Networks and Storage:** Bicycle infrastructure on residential streets makes the difference between an occasional cyclist and a commuter cyclist. Connections across town and to downtown could be better achieved with bike lanes. The Bee Branch trail has already become a popular recreation amenity, and creating official connections through bike lanes will make this amenity seem closer to those who live half a mile or more away. The City should install bike racks on curbs in locations where people need to ride their bikes, such as the Central Ave. business district.
4. **Transit Facilities and Weekend Trips:** The Jule is on its way to becoming a great public transit amenity. It already runs most days of the week and the stop locations have been calibrated to meet the needs of those who ride the bus the most. Covered shelters that are at least partially enclosed to buffer wind and rain, with seating, illumination, and signage displaying transit schedules and route information are a key component of great transit. These measures are best practices and are recommended in LEED-ND to encourage transit use by making it safe, convenient, and comfortable. The Jule also needs service on Sundays, and, as recommended by LEED-ND a minimum of 60 weekday trips and 40 weekend trips.

The Walgreens development was a missed opportunity to continue the historic street pattern. The building height to street width ratio is not conducive to a walkable street. Positioning parking in the rear and bringing the building facade up to the corner achieves a more pleasant pedestrian environment.



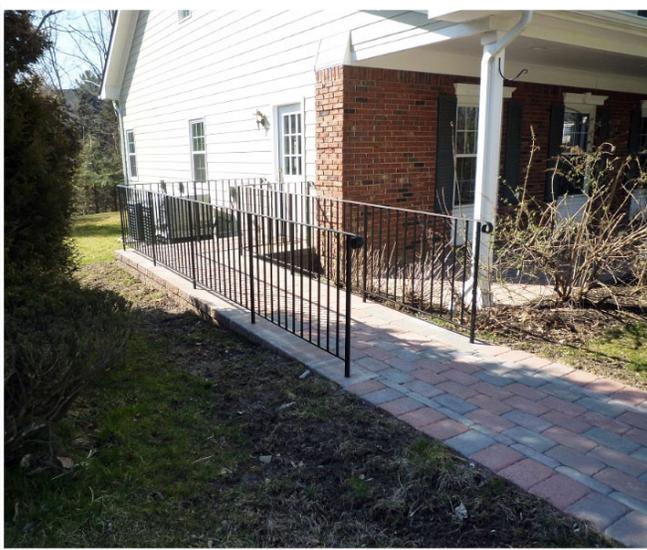
## Diverse Housing

In the Neighborhood Pattern and Design category, LEED-ND spells out methods for improving the sustainability of a neighborhood through credits relating to Diversity of Housing Types, Affordable Housing, and Universal Design. These credits encourage actions that promote socially equitable and engaging neighborhoods by enabling residents from a wide range of economic levels, household sizes, age groups, and abilities to live in a community.

LEED-ND utilizes the Simpson Diversity Index to measure diversity. Based on this measure, the Washington neighborhood's housing stock is not very diverse and consists primarily of large detached residential (single family houses) some with subdivided units within, and townhouses. Multi-unit buildings with no elevators also exist along the commercial corridor. A greater diversity of housing types would accommodate a broader range of residents in their various stages of life.

Many of the units available in the Washington neighborhood are affordable by default. Often, landlords don't adequately maintain their properties, yet still have a steady demand from tenants seeking affordable units. The City of Dubuque has made great strides in improving the quality of the housing stock through incentivized home repair and rehabilitation loan programs. Additionally, non-profit developers have expanded the stock of quality single family and townhouses. Much of the flooding that once threatened the northern end of the neighborhood has been mitigated through the Bee Branch Creek daylighting project. However, high quality affordable apartments are the exception rather than the rule in the Washington Neighborhood.

A sustainable community accommodates community members from the time they are born through old age. In addition to diversity of unit type and price points, a key factor in accommodating the greatest range of community members' ages and abilities is visitability and universal design. This can be achieved by ensuring that designs for new construction have universal design features throughout the home, and by retrofitting existing public rights-of-way to be in compliance with the Americans with Disabilities Act guidelines.



Planned design interventions at the neighborhood level for accessibility, such as interior spaces that are wheelchair accessible, and rights of way that are easily accessible for wheelchairs, walkers, strollers, toddlers, and vision impaired create a place where all people can live out their entire life cycle.

## Action Items

- 1. Types:** During the process of calculating the diversity index for the Washington Neighborhood, as well as during our site visit, a particular housing element was noticeably missing: quality apartments. Many single family houses have been subdivided to allow for a higher density. While these are not problematic, a greater diversity of options could accommodate more ages, incomes, and family sizes thinking of moving to the neighborhood.
- 2. Affordability:** Those who are gainfully employed are often not understood to be the target of affordable housing programs. While many programs in the area have made housing accessible to those in the lowest income bracket, those in the workforce who make just under the area median income have limited choices in the housing stock. This affordable-by-default housing is often in disrepair, yet still in high demand. The City of Dubuque could harness this demand and incentivize housing developers who step-up quality and affordability through adaptive reuse projects. Tax credits to curb the cost of construction for those developers providing affordable units, as well as prioritizing projects that collaborate with non-profits and existing neighborhood organizations are other ways to secure quality affordable apartments within the Washington Neighborhood.
- 3. Visitability:** In order to accommodate various age groups and abilities in the Washington neighborhood, new residential construction and extensive adaptive reuse projects should design a minimum of 20% of the new dwelling units to be “visitable” in accordance with ICC A117.1. General characteristics of visitable units include entrances directly off of circulation paths, bathrooms and habitable space on the ground floor, walking spaces with a slope of 1:20 or less, and appliances, lighting controls, etc., placed at a height that is neither too high or too low to be reached by someone in a wheelchair. When projects with no new dwelling units are constructed, 90% of the rights-of-way and travel routes should be retrofitted in accordance with the ADA-ABA accessibility guidelines.

A high percentage of units in the Washington neighborhood are single family houses or townhouses. A more diverse housing stock will contribute to the sustainability of the neighborhood by providing housing choices to people in all stages of life.



## Robust Commercial Uses

The LEED-ND rating system prioritizes the clustering of diverse land uses in order to create neighborhood centers that are accessible to residents on foot, by bike, and by transit. By providing a variety of proximate amenities within a neighborhood, vehicle miles traveled and automobile dependence can be reduced, making the neighborhood more sustainable and healthy, as well as lessening the financial burden that comes with car ownership.

The Washington Neighborhood commercial corridor on Central Ave. isn't known for its diversity of uses. A plethora of drinking establishments, many vacant storefronts and storefronts whose tenants have a high turnover rate, are what dominate the streetscape. Absentee or unconcerned landlords were identified as perpetuating this issue, often letting their properties degrade and then renting to the first business willing to take over that type of space.

Amenities identified through our assessment, as well as by residents and stakeholders needed in the area were often simple as a 'great breakfast place' or a hair salon. Central True Value Hardware store was identified as a successful example of a use that recently did not exist, where the demand was met by a local family.

In a community with high entrepreneurial spirit, there is much opportunity resting in the Central Ave. corridor to be harnessed and transformed into a more thriving business district with a more diverse set of uses. Lack of individual capital and business know-how is a roadblock for this to happen. A microenterprise training program exists in the Mill District, south of the Washington Neighborhood, that could aid small business start-ups, but its representative as well as representatives from local banks agree that the lack of start-up capital among those in the community is a great barrier.



The Central Ave. business corridor is comprised largely of historic buildings, many of which are 3 stories with first floor commercial uses. These first floors range from vacant, dilapidated storefronts, to uses such as bars and gun shops, to antique shops.

## Action Items

1. **Infill Development:** Central Ave., particularly where the road bends at 18th St., is a dynamic location with a lot of potential for adaptive reuse developments. The Engine House is a good example of a successful adaptive reuse.
2. **Pop-Up Uses:** Programming for pop-up / temporary uses / events will help to change the historic perception of the Washington neighborhood.
3. **Short-Term Leases:** The City should develop standards for Short-term lease agreements to allow restaurateurs to occupy spaces with less start-up investment.
4. **Flexible Codes:** The City should allow for code flexibility to accommodate short-term leases. Considerations would include flexible standards for noise, parking, bathrooms, in the context of accommodating a 2-month use like a summer culinary camp.
5. **Incubators:** Seek-out an incubator non-profit, ex: La Cocina in San Francisco, to guide start-up food entrepreneurs as they formalize and grow their businesses by providing affordable commercial kitchen space, industry-specific technical assistance, and access to market opportunities.

La Cocina, a food incubator in San Francisco, rents affordable professional kitchen space to start-up entrepreneurs.

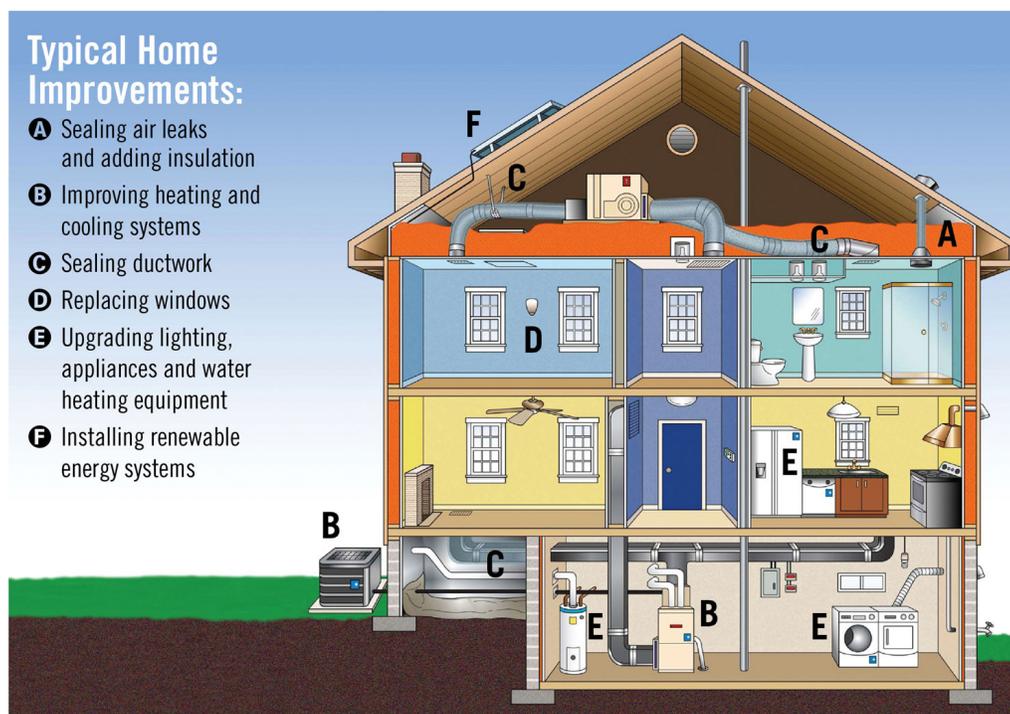


## Healthy, Energy Efficient Buildings

Buildings and infrastructure in urbanized areas account for over 40% of energy consumption and represent significant investments in materials and their associated embodied energy. Urban development also changes hydrological patterns and causes higher ambient temperatures through the urban heat island effect. LEED-ND addresses these issues primarily in the Green Infrastructure and Building category, through credits related to green building, energy and water efficiency, landscape water use reduction, stormwater management, heat island reduction, infrastructure energy and materials efficiency, and solid waste and recycling.

For the Washington neighborhood, the environmental performance of existing buildings is a key component to neighborhood scale sustainability. Through weatherization, upgrades to heating and cooling systems, and plumbing fixture replacement, the embodied energy within the existing building stock can remain as a viable housing option with improved building performance.

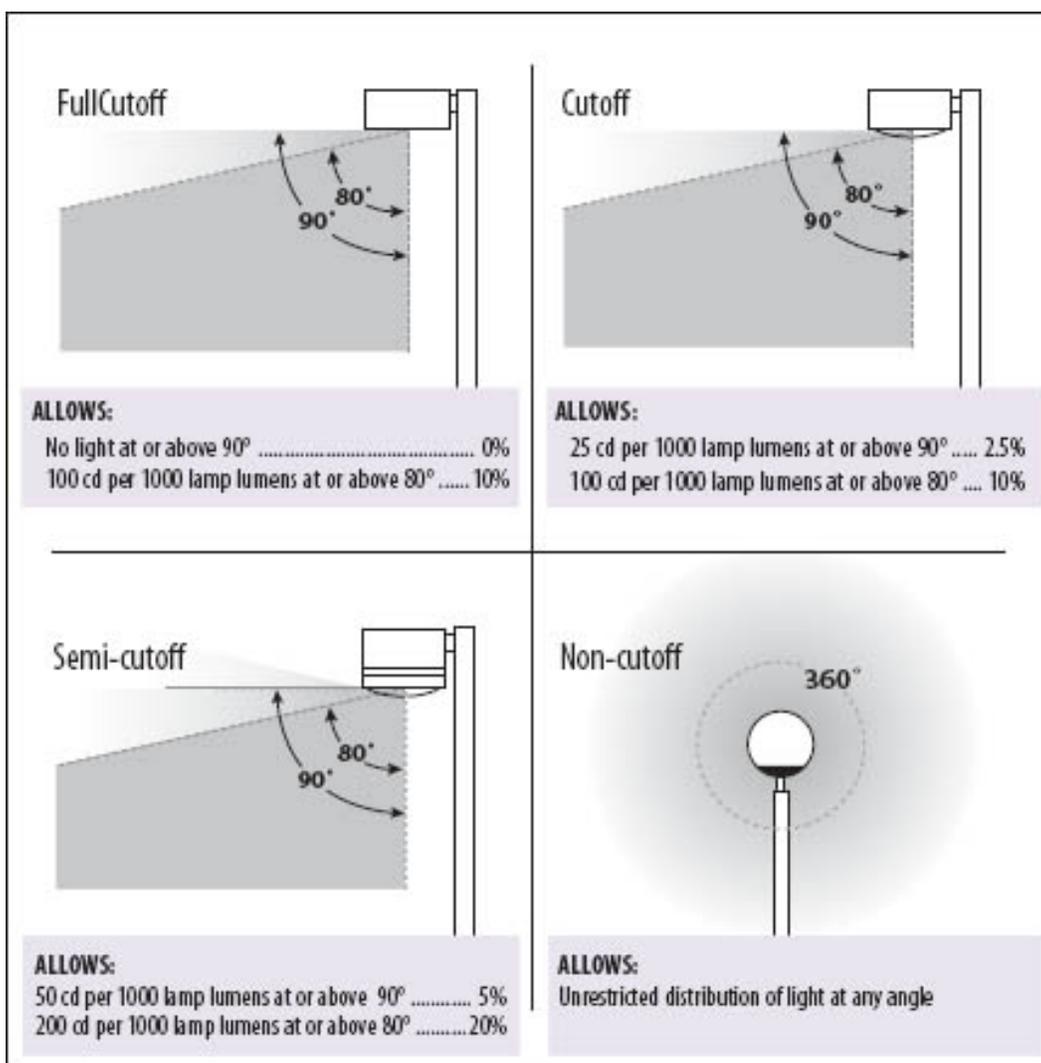
New buildings should be constructed to achieve energy and green building rating systems such as LEED certification. Basic energy efficiency or green building standards should also be established for the repair and replacement of public infrastructure such as sidewalks, streets, streetlights, and traffic signals. Building and infrastructure measures can reduce energy and water use and lower costs to residents, businesses, and the City.



An example of the building envelope and retrofitting energy-saving techniques into the existing structure.

## Action Items

- 1. Energy Efficiency:** Encourage use of the Energy Program for the retrofit of existing buildings in the Washington neighborhood. "Getting to Yes" with energy upgrades could require a partnership between the City and the Energy Program. Upgrades can lead to a significant reduction in energy for residents and businesses.
- 2. Water Efficiency:** Establish local building code standards for efficient indoor water use. This includes high-efficiency toilets (1.28 gallons/flush), faucets (1.0 gallons/minute), showerheads (1.75 gallons/minute), and urinals (.125 gallons/flush). In heavy rain periods the reduced water flow from indoor fixtures to the sewer system can reduce the magnitude of sewer surcharge and neighborhood flooding.
- 3. Infrastructure:** Establish a citywide standard for street lighting efficiency that applies when new street infrastructure is installed.
- 4. Low Impact Development:** Require that new construction and major renovation include low-impact development features such as rain barrels, drywells, rain gardens, swales, and permeable paving when soil conditions allow.



Green infrastructure can include anything from recycled paving materials to Dark-Sky friendly street lighting. The ability to watch shooting stars in a small city allows residents to have the best of both worlds.

# Tree-Lined Streets

The Washington neighborhood has various degrees of tree cover throughout. Many of the side streets likely meet the LEED-ND standard of trees at intervals of no more than 50 feet on 60% of the total block length. However, main streets such as Central Ave., White St., 20th St., the Five-Points Area, and 11th St. are noticeably lacking in street trees.

Street trees encourage walking and bicycling, discourage speeding, improve air quality, and increase evapotranspiration (important especially in a low-lying river town like Dubuque). In the retail environment, street trees improve the presentation or image of shops and business districts. Trees help create a positive environment that attracts and welcomes consumers. Consumers prefer to patronize commercial establishments whose structures and parking lots are beautified with trees and other landscaping.

The City's Tree Preservation Policy as well as recommendations and goals resulting from the Urban Forest Evaluation of 2011 are generally supportive of the LEED-ND standards, and, with time will populate the parking lawns to LEED-ND specifications, however, a threat to the Washington neighborhood's existing street trees, as well as Dubuque's as a whole, is the Emerald Ash Borer (EAB), which attacks Ash Trees. Dubuque is fortunate to have not been infested yet, however, all Ash Trees will ultimately be attacked, and those that are not treated will die. Ash Tree death will significantly affect the existing urban forest environment in the Washington neighborhood, leaving a very sudden and large void in the street tree population.

The Dubuque Urban Forest Evaluation of 2011 showed that two species, Maple and Ash, account for over 70% of the total population of street trees. This threatens the loss of an entire genus to disease or pests; the impending approach of EAB is particularly threatening for the Ash population. A major threat such as this could leave a very sudden and large void in the street tree population. Not unique to Dubuque, this is a common threat being addressed by many communities.



Ash trees make up a significant proportion of the Washington neighborhood street tree population, or urban forest. Left is one of many Ash trees along Washington St.

## Action Items

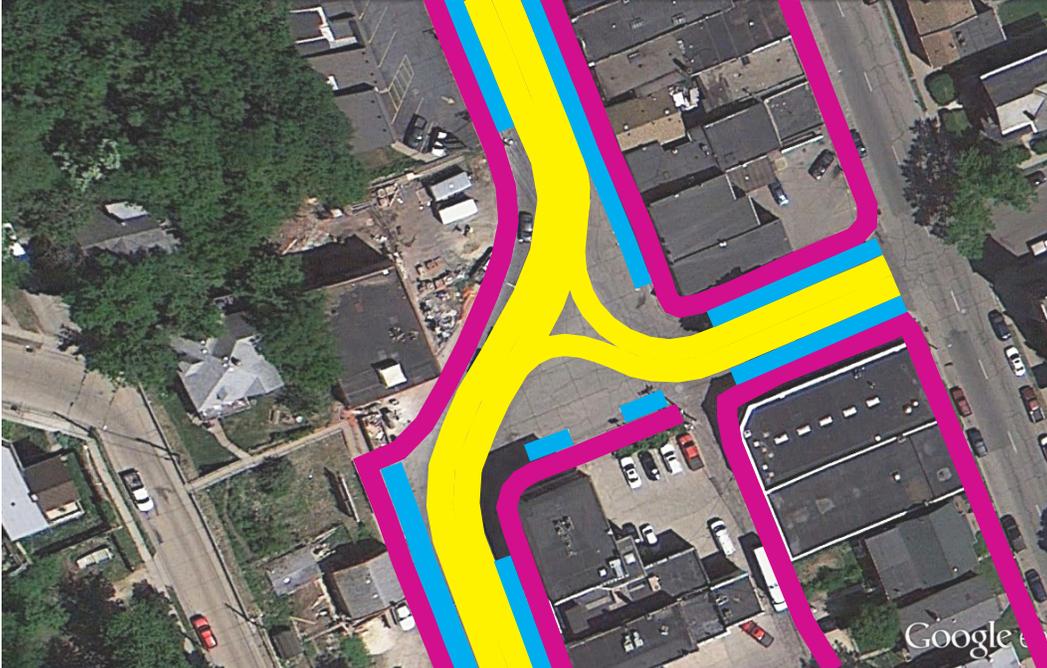
1. **Dubuque's Urban Forest Goals:** Implement a planting program by 2012 that replaces trees at 110% the rate of removal.
2. **Ash Tree Treatment / Management:** As EAB spreads across the midwest, every ash tree in its path must be treated or removed. There are several treatment options for Emerald Ash Borer that include spraying, soil drenching and trunk injection. Trunk injection is the most effective method. University research indicates that trunk injection is up to 99% effective. And, other treatment options have to be repeated each year while trunk injection is an every two or three year treatment regimen. EAB has been detected in Iowa, and in the case of an infestation in Dubuque, the Iowa Emerald Ash Borer Readiness Plan recommends the removal and disposal of public and private ash trees as feasible. Removal, disposal, and replacement of all the Ash trees in the Washington neighborhood alone is a costly reality. Pre-emptively treating Ash trees when EAB is detected nearby.



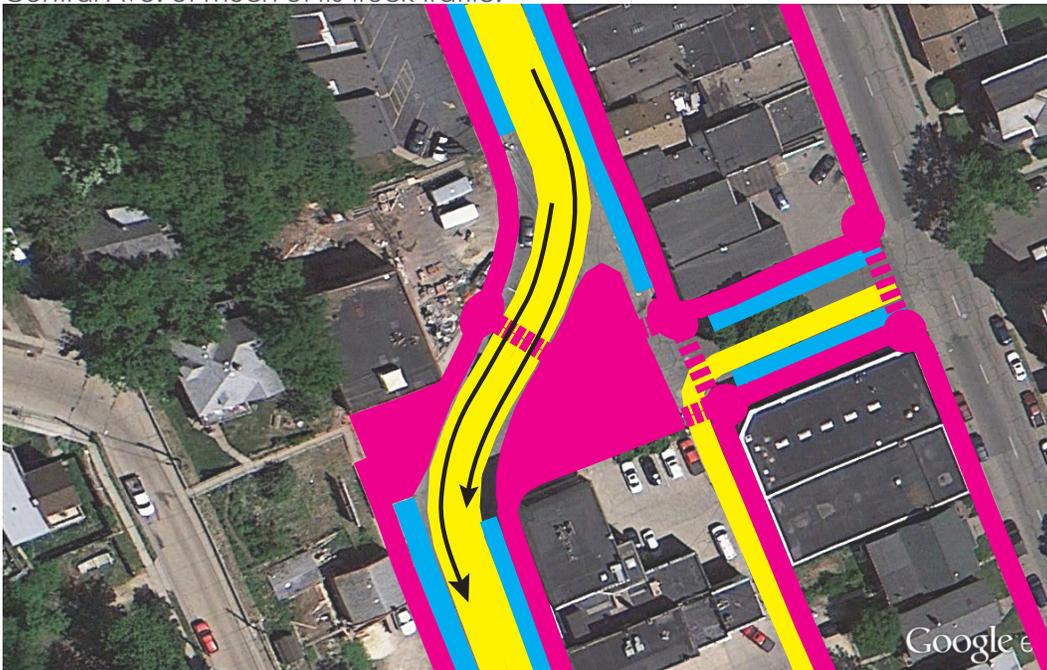
Mature Ash trees in parkways throughout the Washington neighborhood.

# Re-thinking the Curve on Central

Central Ave. is currently a one-way street and a State Route (3) that carries a large volume of truck traffic.

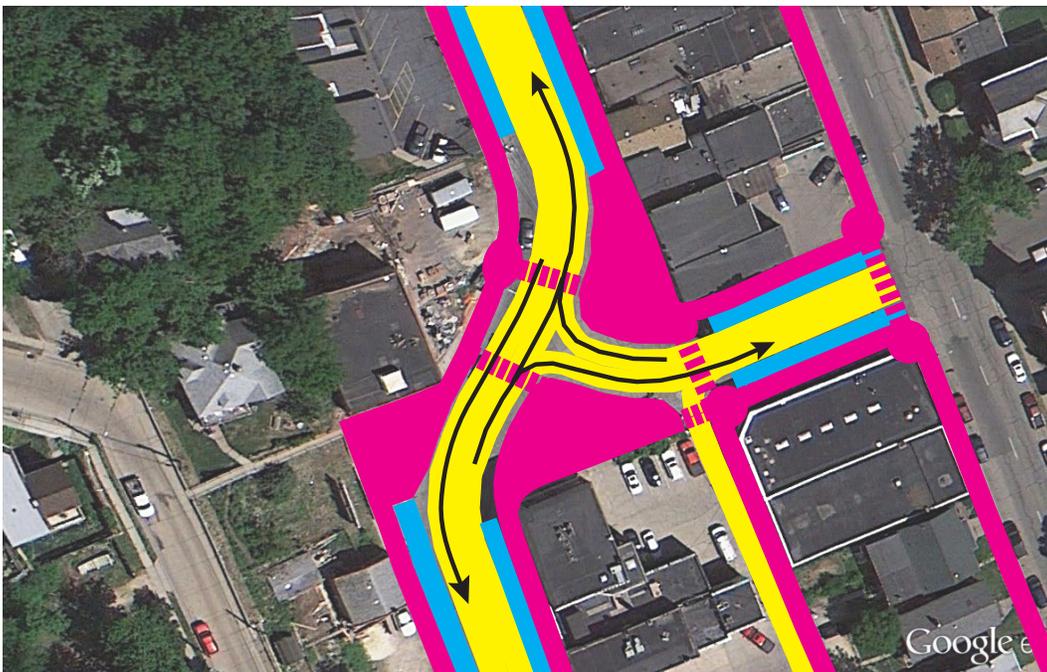
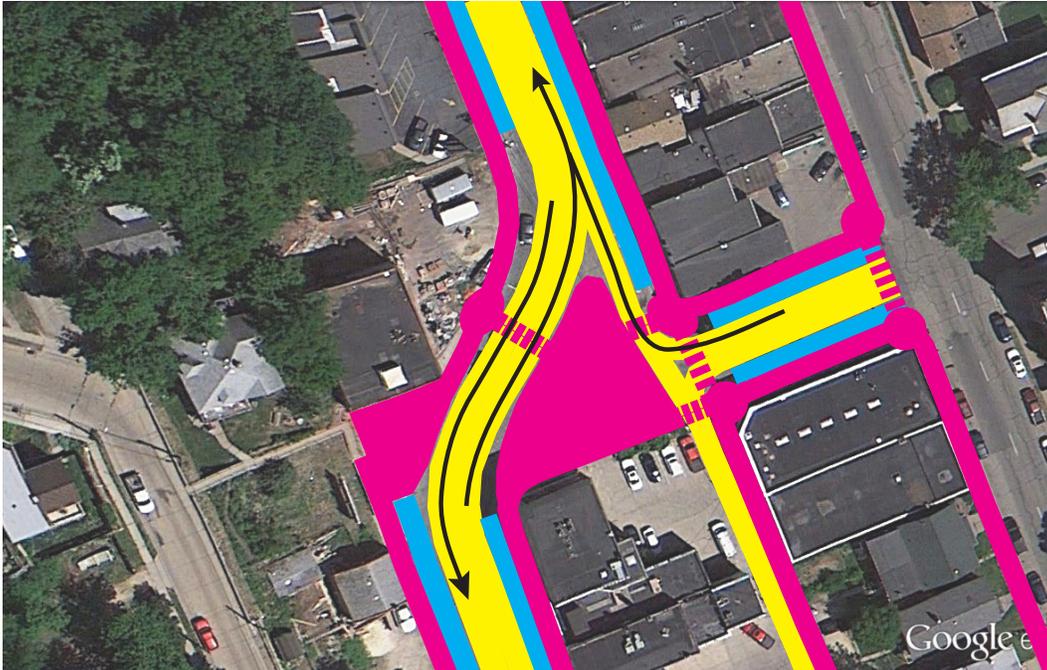


Another truck route, however, will be constructed in the near future and will relieve Central Ave. of much of its truck traffic.



This opens an opportunity for the City of Dubuque to consider streetscape improvements for a more pedestrian friendly environment. Global Green has identified the bend at 18th St. as a dynamic location where streetscape improvements could be most effective. Above is a diagram where a plaza and pedestrian crossings are incorporated into the existing one-way traffic pattern.

## Rethinking the Curve on Central



Above, two diagrams demonstrate possible streetscape improvements in the context of a two-way street environment. The City of Dubuque could use tactical urbanism and try-out temporary scenarios to see which best fit the streetscape. For example, the plazas could be painted-on the existing street and bollards could temporarily close the area to car traffic. This approach could also help draw community buy-in if a particular scenario works well.

# Sustainability Assessment

The Sustainable Neighborhood Assessment tool includes an annotated LEED-ND checklist created by Global Green. It is a key component of the process used to document and compare the assessment area against the LEED-ND prerequisites and credits. Each credit within the three credit categories (Smart Location & Linkage, Neighborhood Pattern & Design, and Green Infrastructure & Building) is marked as “achieved,” “not achieved,” “unknown,” or “not applicable” under baseline conditions. Additional analysis has been done based on local planning policy, regulatory support, technical feasibility, market support and stakeholder input. The preliminary checklist analysis was edited after site visits, stakeholder meetings, and conversations with city staff. This information was then translated into an overall assessment of sustainable neighborhood performance.

Based on the in-field assessment, planning document review, various stakeholder meetings, the Global Green team estimated which LEED-ND credits were “Likely,” “Possible with Effort,” “Unlikely” to be achieved, or “Not Applicable,” considering existing conditions, technical feasibility, policy readiness, financial burden, and applicability to neighborhood conditions. The bar graph summary identifies the overall level of sustainable neighborhood performance for the West End. Many credits fall into the “Likely” category, and of the remaining credits, a significant percentage fall within the “Possible with Effort” category, which shows the large potential for improving the sustainability of the neighborhood, specifically by pursuing the high-priority recommendations described in this report.

The summary table below shows the numeric values extrapolated from the percentage of credits identified as “Likely” below. The recommendations listed in the previous pages are largely a response to LEED-ND criteria which achieving was identified as “Possible with Effort” by the assessment team. While these values do not correlate exactly to specific LEED-ND points, they provide an estimate of the neighborhood’s potential level of future achievement. It should be noted that this is a rough measure of performance and not an exact representation of the neighborhood’s level of possible certification. It should also be noted that all the prerequisites need to be achieved if certification will be pursued. While recognizing these constraints, the categories generated through the assessment serve as a useful metric for estimating formal LEED-ND certification. Given the presumption that all those designated as “Achievable” would be achieved, providing a baseline point tally of 40, and those listed as “Possible with Effort”, are aggressively pursued and achieved, affording an additional 34 points, the analysis shows that the Washington Neighborhood would likely earn a rating of GOLD from the USGBC.

	Total	Achievable	Possible
Smart Location And Linkage	27	12	5
Neighborhood Pattern and Design	44	18	19
Green Building and Infrastructure	29	10	10
<b>LEED-ND Certification Thresholds</b>	<b>100</b>	<b>40</b>	<b>34</b>
Certified: 40-49		Gold: 60-79	
Silver: 50-59		Platinum: 80+	

# Sustainability Assessment

Baseline Conditions
Local/Regional Planning Priority
Regulatory Support
Technical feasibility
Market Support
Neighborhood Need/ Stakeholder Input

## Washington Neighborhood, Dubuque, Iowa

Legend	
✓	Achieved
?	Unkown
X	Not Achieved
-	Does not exist/ NA
■ (Teal)	Explicit support/ no technical issues
■ (Light Green)	Lack of explicit support/ minor technical issues
■ (Pink)	Opposition/ significant technical issues
■ (Grey)	Not Applicable

Smart Location & Linkage					Total Points
✓	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	P 1 <b>Smart Location</b> Required
✓	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	P 2 <b>Imperiled Species and Ecological Communities Conservation</b> Required
✓	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	P 3 <b>Wetland and Water Body Conservation</b> Required
✓	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	P 4 <b>Agricultural Land Conservation</b> Required
✓	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	P 5 <b>Floodplain Avoidance</b> Required
✓	■ (Teal)	■ (Teal)	■ (Teal)	■ (Teal)	C 1 <b>Preferred Locations</b>
✓	■ (Teal)	■ (Teal)	■ (Teal)	■ (Light Green)	C 2 <b>Brownfield Remediation</b>
X	■ (Pink)	■ (Pink)	■ (Teal)	■ (Light Green)	C 3 <b>Access to Quality Transit</b>
X	■ (Light Green)	■ (Light Green)	■ (Light Green)	■ (Teal)	C 4 <b>Bicycle Storage</b>
X	■ (Light Green)	■ (Pink)	■ (Light Green)	■ (Teal)	C 4 <b>Bicycle Network</b>
✓	■ (Light Green)	■ (Light Green)	■ (Teal)	■ (Teal)	C 5 <b>Housing and Jobs Proximity</b>
-	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	C 6 <b>Steep Slope Protection</b>
-	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	C 7 <b>Site Design for Habitat or Wetland and Water Body Conservation</b>
✓	■ (Teal)	■ (Teal)	■ (Teal)	■ (Teal)	C 8 <b>Restoration of Habitat or Wetlands and Water Bodies</b>
-	■ (Grey)	■ (Grey)	■ (Grey)	■ (Grey)	C 9 <b>Long-Term Conservation Management of Habitat or Wetlands and Water Bodies</b>



Based on the in-field assessment, planning document review, various stakeholder meetings, the Global Green team estimated which LEED-ND credits were “Likely,” “Possible with Effort,” “Unlikely” to be achieved, or “Not Applicable,” considering existing conditions, technical feasibility, policy readiness, financial burden, and applicability to neighborhood conditions. The bar graph summary identifies the overall level of sustainable neighborhood performance for the Washington Neighborhood. Many credits fall into the “Likely” category, and of the remaining credits, a significant percentage fall within the “Possible with Effort” category, which shows the large potential for improving the sustainability of the neighborhood, specifically by pursuing the high-priority recommendations described in this report.

# Sustainability Assessment

Baseline Conditions
Local/Regional Planning Priority
Regulatory Support
Technical feasibility
Market Support
Neighborhood Need/ Stakeholder Input

Legend	
✓	Achieved
?	Unknown
✗	Not Achieved
-	Does not exist/ NA
■ (Teal)	Explicit support/ no technical issues
■ (Light Green)	Lack of explicit support/ minor technical issues
■ (Pink)	Opposition/ significant technical issues
■ (Grey)	Not Applicable

Neighborhood Pattern & Design								
✓	■	■	■	■	■	P 1	Walkable Streets- Functional Entries	Required
✓	■	■	■	■	■	P 1	Walkable Streets- Building Height to Street Centerline Ratio	Required
✓	■	■	■	■	■	P 1	Walkable Streets-Continuous Sidewalks or All-Weather Routes	Required
✓	■	■	■	■	■	P 1	Walkable Streets-Garage and Service Bay Openings	Required
✓	■	■	■	■	■	P 2	Compact Development	Required
✓	■	■	■	■	■	P 3	Connected and Open Community	Required
✓	■	■	■	■	■	C 1a	Walkable Streets : Facades and Entries	
✓	■	■	■	■	■	C 1b	Walkable Streets: Ground-Level Use and Parking	
✗	■	■	■	■	■	C 1c	Walkable Streets: Design Speed for Safe Pedestrian and Bicycle Travel	
✓	■	■	■	■	■	C 1d	Walkable Streets: Sidewalk Intrusions	
✓	■	■	■	■	■	C 2	Compact Development	
✓	■	■	■	■	■	C 3	Mixed-Use Neighborhoods	
✓	■	■	■	■	■	C 4	Diversity of Housing Types	
✓	■	■	■	■	■	C 4	Affordable Housing	
✓	■	■	■	■	■	C 5	Reduced Parking Footprint	
✓	■	■	■	■	■	C 6	Connected and Open Community	
✗	■	■	■	■	■	C 7	Transit Facilities	
-	■	■	■	■	■	C 8	Transportation Demand Management	
✓	■	■	■	■	■	C 9	Access to Civic and Public Space	
✗	■	■	■	■	■	C 10	Access to Recreation Facilities	
✓	■	■	■	■	■	C 11	Visitability and Universal Design	
✓	■	■	■	■	■	C 12	Community Outreach and Involvement	
✗	■	■	■	■	■	C 13	Local Food Production	
✓	■	■	■	■	■	C 14	Tree-Lined and Shaded Streetscapes	
✓	■	■	■	■	■	C 15	Neighborhood Schools	



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# Sustainability Assessment

Baseline Conditions
Local/Regional Planning Priority
Regulatory Support
Technical feasibility
Market Support
Neighborhood Need/ Stakeholder Input

Legend	
✓	Achieved
?	Unkown
✗	Not Achieved
-	Does not exist/ NA
■ (Teal)	Explicit support/ no technical issues
■ (Yellow)	Lack of explicit support/ minor technical issues
■ (Pink)	Opposition/ significant technical issues
■ (Grey)	Not Applicable

Green Infrastructure & Buildings	
✗	P1 Certified Green Building <span style="float:right">Required</span>
✗	P2 Minimum Building Energy Performance <span style="float:right">Required</span>
✗	P3 Indoor Water Use Reduction <span style="float:right">Required</span>
✓	P4 Construction Activity Pollution Prevention <span style="float:right">Required</span>
✗	C1 Certified Green Buildings
✓	C2 Optimize Building Energy Performance
✗	C3 Indoor Water Use Reduction
✗	C4 Outdoor Water Use Reduction
✓	C5 Building Reuse
✓	C6 Historic Resource Preservation and Adaptive Use
-	C7 Minimized Site Disturbance
✓	C8 Rainwater Management
✓	C9 Heat Island Reduction
-	C10 Solar Orientation
✗	C11 Renewable Energy Production
-	C12 District Heating and Cooling
✓	C13 Infrastructure Energy Efficiency
-	C14 Wastewater Management
✗	C15 Recycled and Reused Infrastructure
✓	C16 Solid Waste Management
✗	C17 Light Pollution Reduction



Based on the in-field assessment, planning document review, various stakeholder meetings, the Global Green team estimated which LEED-ND credits were “Likely,” “Possible with Effort,” “Unlikely” to be achieved, or “Not Applicable,” considering existing conditions, technical feasibility, policy readiness, financial burden, and applicability to neighborhood conditions. The bar graph summary identifies the overall level of sustainable neighborhood performance for the Washington Neighborhood. Many credits fall into the “Likely” category, and of the remaining credits, a similar percentage fall within the “Possible with Effort” category, which shows the large potential for improving the sustainability of the neighborhood, specifically by pursuing the high-priority recommendations described in this report.

# Appendix

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## **A. LEED for Neighborhood Development Credit Categories**

### Smart Location and Linkage [SLL]:

SLL focuses on preserving the environmental characteristics inherent to the site such as water body and steep slope protection and influencing development patterns to reduce sprawl and automobile dependence. Credits in this category encourage locating new developments near city centers with robust public transportation options and sites that have been previously developed or are immediately adjacent to existing development.

### Neighborhood Pattern and Design [NPD]:

NPD influences the physical layout and design of the community in question through minimum thresholds for density, internal and external connectivity, and characteristics of a walkable community such as continuous sidewalks or building frontages that face public streets. Credits in this category reward projects that have nearby civic, educational and recreational facilities, limited surface parking and have transportation facilities complete with maps and bicycle racks.

### Green Infrastructure and Buildings [GIB]:

GIB emphasizes the importance of the optimized performance of structural systems and city infrastructure through minimum building energy and water efficiency, water-efficient landscaping and on-site renewable energy production. Credits in this category promote the adaptive reuse of existing buildings, on-site stormwater management, recycled content in infrastructure such as roadbeds and energy efficient traffic lights, street lights and water pumps .

For more information, please visit [www.usgbc.org](http://www.usgbc.org)



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