GREEN STREET IN CAMP WASHINGTON TECH VILLAGE

Camp Washington
Xijia Wang
Michaele Pride

Vision Statement
Create an interconnected, environmentally friendly, and aesthetically attractive complete street network that will serve new development in the proposed Camp Washington Tech Village and light rail station.

Goal
The individual project is focusing on transportation improvement and streetscape design in Camp Washington Tech Village, north industrial area of the neighborhood. By implementing the project, accomplish the following targets:

Economic Development
- Identify transferable brownfields
- Identify sites with public transit access

Camp Washington has been losing its economic and industrial strength for decades despite the great advantage as the prime location and accessibility to highways and railroad. The Tech Village proposal tends to utilize the vacant or abandoned constructions into redevelopment. Because the large structure of previous industrial use has great potential to be renovated into research center or studio space. And the redevelopment also provides Camp Washington opportunity to accommodate the institutional influence from University of Cincinnati and Cincinnati State.

To implement the Tech Village, first thing to do is identify the leftover brownfields to rehabilitate and place adjacent to new public transit access for denser development. Furthermore, better transportation connectivity would maintain the dynamic of the neighborhood.

Neighborhood Redevelopment
- Accommodate new residents and users
- Improve transit access
A lot of new comers to Tech Village would be faculties or students using the research facilities, visitors for proposed Cincinnati Sign Museum, and other potential pedestrians coming out from the proposed light rail station. Under this circumstance, the walkability, safety and diversity of the neighborhood will need to be improved. These would all contribute to the local businesses. Adapted the concept of “complete street”, the place can become more environmental friendly for any mode of travelling.

Environment Improvements
- Identify applicable bio-remediation methods
- Encourage pedestrian transit

To create a sustainable environment, especially in an industrial neighborhood like Camp Washington, appropriate bio-retention is necessary. With minimum cost and effort, choosing the treatment could be easily implemented in streetscape scale could fulfill the green neighborhood at the first step.

Transportation and other infrastructure
- Improve vehicle connectivity
- Improve sidewalks and initiate bike lanes

Right now Camp Washington has been a passageway for commuters to neighboring communities for the direct west-east connection. However, the internal connectivity is undermined by separation of interstates and rail yards. A ramp adaption from UDA’s proposal at Hopple Street and Spring Grove Ave could at least increase freight traffic connectivity. In addition, the extension of Colerain Avenue proposed by other project will be another bridge over the I-75, connecting Cincinnati States and Tech Village.

**Project Description**

To begin with the project, identify the current transportation circulation system and focusing on Tech Village site. Categorize the most deprived demand to improve and important factors to keep.

Moreover, based on various condition of different street, determine particular strategy for individual street, including travel lanes, vegetation strips, on-street parking, and etc.

Additionally, identify the bio-remediation methods could be implemented to each street.
As a typical industrial neighborhood, freight traffic takes a large portion of daily traffic, especially along on the Spring Grove Ave and Hopple Street. High capacity contributes to the economic activities throughout Camp Washington. Regarding the neighborhood characteristic, the traffic cannot be undermined by any other concern.
On the other hand, the mobility of automobile could be prompted by new interconnections between the major road such as the new ramp connecting Hopple Street and Spring Grove Ave.

For cyclist, Camp Washington has the minimal chance to plan a trip. Though, it did offer the direct corridor to every destination. And cyclist will pass the neighbor while heading downtown or uptown. It is still a dangerous roadway to ride a bike without the designated bikelane along with all the freight flow.

This picture shows a sign with “Share the road. It’s the LAW!” on it. However it is hard to recognize while driving.

Even for pedestrian, Tech Village now is not an ideal place to walk. First of all, the whole neighborhood was built out on auto oriented basis. Moreover, the large vacant parcels make the place even less attractive.

2. Existing Street Condition and Design Strategy
(1) Spring Grove Ave

As the major arterial in Camp Washington and Tech Village, Spring Grove Ave carries most freight traffic. So in this aspect, the travel lane should not reduce in order to keep the capacity.

The current sidewalk is incomplete and underutilized. Parts are occupied by unload into the building or cover by grass. Pedestrian could not enjoy a safe while aesthetically pleasant place to walk.
And for the consideration of cyclist’s safety, it’s better not to place on-street parking in order to avoid unpredictable conflict. Furthermore, the parking will be concentrated into lots in the blocks for centralized bio-treatment.

Strategy:
1. Bikelane with pavement marking and edge line to emphasize the space
2. No On-street parking to use more space for travelling
3. Wide Sidewalk with stormwater plant strip
4. Median to mediate the environment

(2) Arlington Street

Arlington Street right now is a local road with two lanes, two-side on-street parking, and no more than 20% coverage of sidewalk. However, after the construction of new light rail station, Arlington Street will be important to lead people into the neighborhood.
Considering the inter-mode transferring and renovated building for research use, the new streetscape includes

1. Completed Sidewalk
2. On-street Parking with bio-remediation plant strip
3. Shared Bikelane

(3) Monmouth Street

Monmouth Street has been an important connection to the east communities for its access to Central Parkway. But current condition didn’t present its significance as a major connection. Similar situation as Arlington Street, on-street parking will serious reduce the traffic capacity in such short width.
So the specific strategies for Monmouth Street are:
1. Separated Bikelane
2. No On-street Parking
3. Completed Sidewalk

**Precedent Studies (if applicable)**

1. Complete Street Design Elements:

<table>
<thead>
<tr>
<th>Users</th>
<th>Concern</th>
<th>Elements</th>
<th>Pedestrians</th>
<th>Cyclist</th>
<th>Motorist</th>
<th>Transit</th>
<th>Neighbors</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Designate Space</td>
<td>Bike Lane</td>
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<td></td>
<td>Particularly needed on higher-volume, higher-speed streets, 4’-5’</td>
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<td></td>
<td></td>
<td>Edge Line</td>
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<td></td>
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<td></td>
<td>Better define bike space</td>
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<td></td>
<td></td>
<td>Pavement Markings</td>
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<td>Useful with wosl’s</td>
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<td>Cyclist</td>
<td>Safe Ride</td>
<td>Street Lighting</td>
<td></td>
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<td></td>
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<td>Visibility to drivers</td>
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<td></td>
<td></td>
<td>No on-street parking</td>
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<td>Avoid the potential hazard of opening doors</td>
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<td>Safe Crossing</td>
<td></td>
<td>Short Blocks</td>
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<td></td>
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<td>Smaller intersections</td>
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<td></td>
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<td>Pedestrian Refuges</td>
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<td></td>
<td></td>
<td></td>
<td>Enhance safety, 6-8’ minimum</td>
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<td>Increase Capacity</td>
<td></td>
<td>More Lanes</td>
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<td>Reduce delays and process more traffic at intersection</td>
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<td>Motorist</td>
<td>Speed</td>
<td>Wider Lanes</td>
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<td>Make drivers feel more comfortable driving at higher speeds</td>
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<td></td>
<td></td>
<td>Clear zone</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Removing objects for some distance</td>
</tr>
<tr>
<td>Minimize Conflicts</td>
<td></td>
<td>Bike Lane</td>
<td></td>
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<td></td>
<td></td>
<td>Enhance safety for cyclist</td>
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<td></td>
<td></td>
<td>Sidewalks</td>
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<td>Provide a separate space for pedestrians</td>
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<td></td>
<td></td>
<td>Access Controls</td>
<td></td>
<td></td>
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<td>Limit direct access to land use</td>
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</table>
Notes taken from: http://charmec.org/NR/rdonlyres/enexiwexinlf6uen3sl2ygh6tmtmjw22mylp5whmx6oqc5atlbz7moriwogwvum5qosrusdfqvyyupzokxqixqexc/RevUSDGChapter2KH023.pdf

- Pedestrian Buffer
  - Wider Sidewalk
  - Bike Lane
- Safe Walkways
  - Adequate Sidewalk Width
  - Few Driveways
  - Vertical Curbs
- Aesthetic Design
  - Trees and Landscaping

<table>
<thead>
<tr>
<th>Pedestrian Buffer</th>
<th>Wider Sidewalk</th>
<th>Bike Lane</th>
<th>Combine with bike land or on-street parking, 6' min</th>
<th>Extra buffering</th>
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</thead>
<tbody>
<tr>
<td>Safe Walkways</td>
<td>Adequate Sidewalk Width</td>
<td>5' minimal</td>
<td>Reduce Potential conflicts between pedestrians and turning vehicles</td>
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</tr>
<tr>
<td>Safe Walkways</td>
<td>Few Driveways</td>
<td>Separated the vehicle zone from pedestrian zone</td>
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<tr>
<td>Aesthetic Design</td>
<td>Trees and Landscaping</td>
<td>Provide a more attractive walking environment</td>
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</tbody>
</table>

- Positive Impact - Negative Impact - Mixed Impact or Use With Caution - Neutral

2. Green Streetscape in Oakman Boulevard, Detroit

<table>
<thead>
<tr>
<th>Street Elements</th>
<th>Porous Paving</th>
<th>Light colored Paving</th>
<th>Landscaping</th>
<th>Planters</th>
<th>Bicycle Rack</th>
<th>Stormwater Planters</th>
<th>Bio-Swale</th>
<th>Constructed Filters</th>
<th>Rain Gardens</th>
<th>Recycling Bins</th>
<th>Street Trees</th>
<th>Continuous Planting Strips</th>
<th>Cut-off Lighting</th>
<th>Narrow Lanes</th>
<th>Bicycle Lanes</th>
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<tbody>
<tr>
<td>Improve Air Quality</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Reduce Heat Island Effects</td>
<td>✓</td>
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<tr>
<td>Improve Water Quality/ Efficiency</td>
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<tr>
<td>Enhance the Urban Forest &amp; Wildlife Habitat</td>
<td>✓</td>
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<td>Reduce Light Pollution</td>
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<tr>
<td>Mitigate/ Rehabilitate Brownfield Conditions</td>
<td>✓</td>
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Source: Green Streetscapes Study, Oakman Boulevard, Detroit Michigan (A Focus: HOPE Community Development Area)
Implementation Unit of Flow-Through Stormwater Planter:

![Flow-Through Stormwater Planter diagram]

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**Bibliography**

Urban Street Design Guidelines:
[http://charmec.org/Departments/Transportation/UUrban+Street+Design+Guidelines.htm](http://charmec.org/Departments/Transportation/UUrban+Street+Design+Guidelines.htm)

Designing Streets for Multiple Users:
[http://charmec.org/NR/ronlyres/enexiwexinlf6uen3sl2ygh6tmtmjlw22mylp5whmx6oq c5atlbd7moriwogvwvum5qosrldflqvyvupzokxqixxec/RevUSDGChapter2KH023.pdf](http://charmec.org/NR/ronlyres/enexiwexinlf6uen3sl2ygh6tmtmjlw22mylp5whmx6oq c5atlbd7moriwogvwvum5qosrldflqvyvupzokxqixxec/RevUSDGChapter2KH023.pdf)

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