

# GREENING AMERICA'S COMMUNITIES

ADVANCING SUSTAINABLE
DESIGN STRATEGIES

BIRMINGHAM, ALABAMA

Collegevile neighborhood served as head

Greening America's Communities is an EPA program to help cities and towns develop an implementable vision of environmentally friendly neighborhoods that incorporate innovative green infrastructure and other sustainable design strategies. EPA provides design and technical assistance to help support sustainable communities that protect the environment, economy, and public health and to inspire local and state leaders to expand this work elsewhere.

Greening America's Communities will help communities consider ways to incorporate sustainable design strategies into their planning and development to create and enhance interesting, distinctive neighborhoods that have multiple social, economic, and environmental benefits.

Birmingham, Alabama, was chosen in 2019 as one of four communities to receive this assistance along with Fort Hall, Idaho; Pittsburgh, Pennsylvania; and Bernalillo County, New Mexico.

More information is available at: https://www.epa.gov/smartgrowth/greening-americas-communities



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# INTRODUCTION

The City of Birmingham requested assistance from the U.S. Environmental Protection Agency's (EPA's) Greening America's Communities program to assist in developing a concept master plan for a neighborhood park and community green space that incorporates solutions for green infrastructure and heat island mitigation.

The project site is centrally located in the Collegeville Neighborhood of North Birmingham in Jefferson County on City of Birmingham (City) owned properties acquired through a voluntary buyout program for properties located within a flood hazard zone. The project area consists of three-blocks, totaling 15-acres, situated between the heavily used, City-owned Maclin Park and current and historic Bethel Baptist Churches.

Collegeville has a rich civil rights history; the historic Bethel Baptist Church served as the home church of Reverend Fred Shuttlesworth and the headquarters of the Birmingham civil rights movement from 1956 to 1961.

Originally developed as company-built housing for factory workers, Collegeville is a residential neighborhood surrounded by heavy industrial areas. It is bounded by an active rail network that creates both a perception of isolation and actual physical separation in spite of its close proximity to other North Birmingham neighborhoods and Downtown Birmingham.

The entire Collegeville Neighborhood is located within the study area of the 35th Avenue Superfund Site where EPA efforts are ongoing to remove soil contaminated with lead, arsenic, and benzo(a)pyrene contaminated soil and replace with clean soil.

In applying for a Greening America's Communities grant, the City recognized the need to build upon past efforts to transform this underutilized open space into a community asset, and to do it in a way that engaged

with community members and local stakeholders to develop a conceptual master plan that reflects their input and feedback.

The concept master plan will be a building block for the City to provide an open space amenity that expands accessible outdoor recreation amenities, celebrates the civil rights heritage and community identity, addresses environmental challenges with innovative design solutions, and reverses the trend of disinvestment in the Collegeville Neighborhood.

The design team's approach to the concept design was guided by the following goals.

#### Project Goals:

- Incorporating green infrastructure
- Mitigating urban heat island effect

# North Birmingham Framework Plan Community Renewal Goals:

- Eliminate blight and strengthen vulnerable areas to create a community that is stable and attractive for development and current residents.
- Transform hazardous areas into environmentally safe and productive uses that enhance the community's quality of life.
- Establish the North Birmingham Community as a destination for mixed-income housing and highquality neighborhood amenities.

## WORKSHOP DESCRIPTION

The City of Birmingham hosted a three-day design charrette, February 25 - 27, 2020.

The event was held at the Bethel Baptist Church in the Collegeville Neighborhood.

#### The purpose of the design charrette was to:

- Present initial concept design options created by the design team for the project focus areas in preparation for the charrette,
- Engage with community members and local stakeholders to understand better the site challenges and opportunities, community needs and vision, and to gather feedback and reactions to the initial concept design options,
- Refine the concept design into a final design option.

Core stakeholders were assembled for a kick off meeting on day one and a wrap up on day three of the charrette.

A series of four small group meetings were held the first and second day of the charrette to facilitate discussion among participants on specific influential topics related to the concept design.

Participants included representatives from city departments, non-profit organizations, community organizations, faith leaders, local artists, and EPA representatives involved in the 35th Avenue Superfund Site.

Topics for these meetings included water quality and soil contamination; air quality and urban heat island mitigation; placemaking; and design implementation, maintenance, and funding sources.

The public was invited to two separate public



Figure 1: Community member observing concept designs at public meeting.

workshops on the evenings of the first and third days of the charrette. These public open house meetings were intended for interested members of the community.

The first public workshop included a presentation by the design team to introduce themselves, describe their understanding of the site, and review the components of the two initial concept design options. The presentation was followed by a series of activity stations for the public to rotate through; the activities were designed to gauge community members' preferences for desired amenities in a future park and to facilitate discussion regarding the two initial concept design options.

During the second public workshop the design team summarized the feedback and input gathered at previous meetings and presented a final concept design. The design team reviewed how the concept master plan was modified to respond to and incorporate ideas and preferences for a new park. An interim concept plan for near term interventions in advance of the overall park implementation was presented, providing a strategy for park improvements to act as building blocks for implementation of the full concept plan.

# **EXISTING CONDITIONS**

#### Site Context:

- North Birmingham Community -Collegeville Neighborhood
- Proximity of residential areas to heavy industrial land uses on large parcel tracts
- Located within the EPA study area of the 35th Avenue Superfund Site
- Located north of Birmingham's Downtown

#### Who Lives Here:

- About 2,500 residents
- Majority African-American 92%
- Trending to an increasingly older population

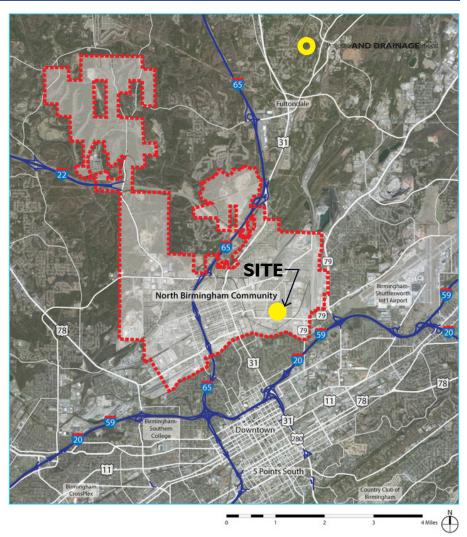


Figure 2: North Birmingham Regional Context Map Photo Credit: Regional Planning Commission of Greater Birmingham

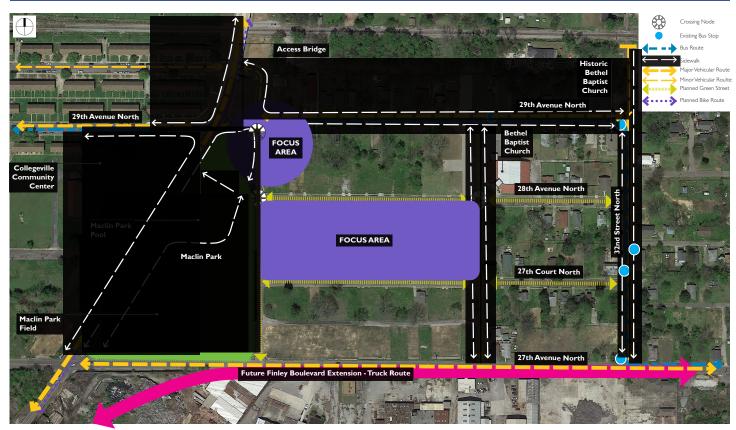


Figure 3: Site Analysis - Circulation Network

Street types (highway, collector, local, etc.) and circulation networks for vehicles, bus routes, and pedestrians were mapped to understand movement patterns and to inform locations for primary access points to the project site, identified by the two focus areas on the site analysis maps.

This analysis suggested opportunities to consider transitioning streets of lower hierarchy to green streets or pedestrian only spaces.

Existing conditions analysis included mapping locations of existing trees to preserve and site topography using GIS data available from the City. Although elevation change is minimal across the project site, analyzing microtopography and hydrology patterns identified optimum locations for incorporating green stormwater infrastructure into concept design options.



Figure 4: Site Analysis - Environmental Features

The design team reviewed past planning and design efforts including the North Birmingham Framework Plan, the Collegeville Neighborhood Plan, and previously developed concept plans. In addition, understanding the neighborhood history from civil rights and environmental justice perspectives was paramount to developing a baseline understanding of the context for this project. In developing an understanding of the site, environmental, cultural, and social influences were identified.

#### Cultural Influences

Civil Rights Narrative: This site is a landmark on the City's Civil Rights Cultural Heritage Trail. The City is working to advance support and promotion of this landmark by working with the National Park Service to leverage President Obama's 2017 proclamation establishing the Birmingham Civil Rights National Monument and the potential designation of the historic Bethel Baptist Church as a UNESCO Heritage Site.

Iron and Steel Industry: Birmingham is known as the industrial center of the South, with North Birmingham serving as the base for many of these industries during the late 1800's and through mid-1900's.

Sense of Place / Neighborhood Identity: Existing Maclin Park and Bethel Baptist Church are important gathering spaces within the heart of the Collegeville neighborhood and can serve as anchors for a new park.

#### Social Influences

Faith Community: There are many congregations within a quarter-mile radius to the project site, including the Bethel Baptist Church, located adjacent to the site. The church provides a multitude of services and resources for the local community.

Recreation Activities: Maclin Park, sharing a border with the project site, is a hub for organized recreation with amenities, including an outdoor pool, baseball and football fields. The park includes a picnic shelter and asphalt walking path.

Gathering Spaces: The Collegeville Neighborhood lacks outdoor spaces for gathering that are flexible in their use, to accommodate a variety of groups, organizations, and events. These types of spaces activate and give vibrancy to the neighborhood by engaging residents.

#### **Environmental Influences**

Land Use Patterns: Disinvestment has led to the prevalence of blighted properties that raise safety concerns, strain on City resources, diminished property values, and are an eyesore. Both abandoned and operating industrial sites contribute to blight, reduced air quality, and increased heat island effect.

**Air Pollution:** Heavy industrial activity continues today in North Birmingham and fuels concerns about exposure to and effects of air quality for residents.

**Soil Contamination:** Collegeville is located within the boundaries of the 35th Avenue Superfund Site. EPA began assessment of residential properties in 2012 and started cleanup in February 2014 to remove contaminated soil. EPA has completed initial phases of cleanup, prioritizing the most polluted properties first and is currently on phase four of the cleanup of legacy soil contamination on residential properties.

Heat Island Effect: Lack of tree canopy and heavily industrialized land use patterns, with little green space in the area surrounding the residential neighborhood in Collegeville cause elevated air temperatures. Impervious surfaces absorb warmth during the day and radiate it back into the air at night.

**EnviroAtlas** is an interactive tool that provides geospatial data to analyze impact and benefits of existing environmental conditions. https://www.epa.gov/enviroatlas

Using this tool our team compared the Collegeville Neighborhood to the nearby Norwood Neighborhood to better understand the potential benefits of increased tree canopy in a new park. Norwood was mentioned by community members as a neighborhood known for having a great amount of trees.

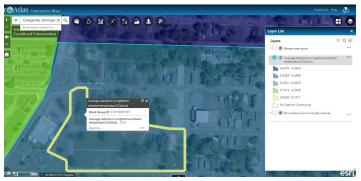


Figure 5: EnviroAtlas Heat Island Screening Level Analysis - Average Reduction in Ambient Temperature - Nighttime for the project site area

Norwood has a larger percentage of tree canopy and green space resulting in a reduced daytime ambient temperature and an increased particulate matter removal, improving air quality and reducing acute respiratory symptoms. Refer to Appendix A for the screening level analysis comparing Norwood and Collegeville neighborhoods.

This is an important tool the City can use to help explain anticipated benefits that support sustainable and healthy communities and to gain support for this project.

Flood Risk: The Collegeville Neighborhood is located in the Village Creek Watershed. A high concentration of impervious surfaces has severely impacted the watershed; in addition, damaged and aging storm drain infrastructure perpetuates flooding in the area. The project site is designated as a flood hazard area with substantial flood events from Village Creek that disrupt and damage properties. The project site encompasses properties that were included in the City's Village Creek Acquisition Program that used grant funding from FEMA and USACE to purchase properties and end the costly damage-rebuild cycle.

# CONCEPT DESIGN - PRELIMINARY

The design team developed two concept design options in preparation for the charrette, as a tool to demonstrate possibilities for a new park to transform this centrally-located open space within the Collegeville Neighborhood. Design ideas for the two focus areas were developed into combined, connected concept design options.

#### Design Aspirations:

- Support a sense of place and neighborhood identity
- Increase public green space and recreation opportunities; create gathering and event space
- Celebrate and leverage Civil Rights historic significance to attract visitors
- Transform problem or hazardous areas into productive and usable spaces
- Incorporate design solutions for flood mitigation, green infrastructure, air pollution mitigation and heat island effect reduction

#### Common Design Themes:

- Gateway to the Collegeville Neighborhood
- Extension of Maclin Park
- Event and community gathering space
- Active and passive recreation amenities
- Outdoor extension of Bethel Baptist Church
- Pedestrian promenade linking Bethel Baptist Church and Maclin Park



Figure 6: Concept Design Option I - Arrival



Figure 7: Concept Design Option 2 - Collegeville Green

#### Community Feedback

The participants responded positively to the initial concept design options. Overwhelmingly, there is a strong desire for investment in a park with a desire for the City to take immediate steps to begin implementation. Past design efforts and resulting concept plan for a park at this project area were never progressed or implemented. Having not been involved in past design efforts, this left the community confused about the process. Residents expressed a need for assistance to improve homes in the neighborhood and would like to explore how to leverage investment in a new park to improve surrounding residences. Potential non-profit partners expressed the importance of a concept master plan that is based on community driven design with sustained community involvement throughout the design and implementation process.

#### Community Preferences:

- Expanded recreation amenities, including a children's playground
- Walking and fitness stations for adults
- Raised gardening beds
- Gathering spaces for social engagement and pop-up events
- Showcase history and culture
- Murals or art by local artists
- Improve pedestrian connections and safety
- Park as outdoor classroom with integrated education
- Pilot projects for green infrastructure

# **CONCEPT DESIGN - FINAL**

The Concept Master Plan, Shuttlesworth Civil Rights Park, incorporates five design themes that draw upon the existing cultural, social, and environmental influences referenced in the existing conditions section; and respects the community preferences voiced during the workshop.

- Physical Health
- Cultural Identity
- Education (History & Environment)
- Social Engagement
- Environmental Health & Renewal

#### **DESIGN ELEMENTS:**

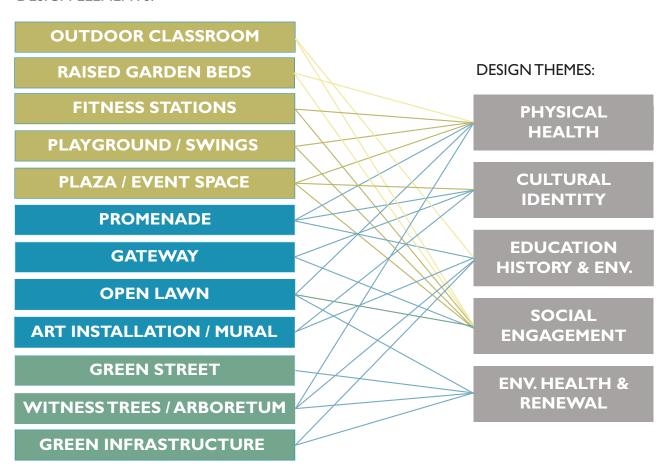


Figure 8: Use / Theme Matrix



Art Installation Curb Bump-outs

Building Facade Mural











Shared Street Pavement Mural



Seating Area and Barbeque

Figure 9: NearTerm Concept Plan

#### **NEAR TERM CONCEPT PLAN**

In response to the expressed interest by community members to "see something happen now" the design team developed a near term concept design that identifies low-cost, temporary changes to the project site intended to create momentum for implementation of the Concept Master Plan.

#### Functional Goals: for Near Term Interventions:

- Linking funding sources with a variety of organizational goals
- Establishing a precedent of success at this location and encouraging further investment
- Improving the experience of the park and surrounding roadways while larger design projects are underway
- Changing perceptions of the project site by inviting users into the space

Community Garden

#### SHUTTLESWORTH CIVIL RIGHTS PARK CONCEPT MASTER PLAN



Figure 10: Shuttlesworth Civil Rights Park Concept Master Plan



Figure 11: Section A - A

- Gateway Pavilion. A new gateway feature is an orienting and welcoming landmark for the Collegeville Neighborhood and functions as the front porch to the park. A trellis structure provides shade making a comfortable space for park users and an ideal location for seating or bench swings.
- **Event Plaza.** Located adjacent to Maclin Park and active recreation uses, a large plaza flanked by new tree plantings provides a venue for festivals and pop-up events or farmers' markets. The plaza is ideal for a signature art installation. Bioretention cells or pervious paving are design elements for consideration within the plaza.
- Community Gardens. Raised garden beds are an opportunity for social engagement and to demonstrate it is safe to grow and eat your own vegetables.
- Fitness Stations and Play Equipment. New fitness equipment and children's play equipment promotes a healthy lifestyle and encourages fun. Active recreation in the new park is positioned to be a natural extension of Maclin Park. Consideration should be given to incorporate rubber play surfacing for these amenities.
- Green Infrastructure and Education.
  Bioretention facilities provide pollutant removal and slow stormwater discharge, reducing erosion of natural stream channels and flooding. These facilities present an opportunity to educate park users about meadow ecologies and ecological systems that help reduce flooding, clean stormwater, and create habitat.
- Outdoor Classroom / Stage. Centrally located within the park, an elliptical plaza creates a space for programmed events including outdoor learning or performances.

- Witness Trees and Memorial Grove. Healthy mature trees are preserved, respecting their endurance and witness to the neighborhood history. Understanding that many of the existing trees are nearing the end of their life, new annual tree plantings will expand the tree grove and become new witnesses of the park and neighborhood moving forward. The Memorial Grove creates a contemplative area, for a shaded stroll or picnic, creating refuge on a warm day. Increased tree canopy reduces heat island effect, improves air quality, and intercepts stormwater.
- 8 Open Lawn. A large open lawn creates space for unscripted open play and viewing outdoor movies.
- Pheritage Walk. 28th Avenue North is converted into a pedestrian promenade and becomes an extension of the Civil Rights Trail providing a strong connection between Bethel Baptist Church and the festival space. Signage will continue the length of the promenade and lighting incorporated to provide a greater sense of safety in the park. Signature paving patterns or engraved pavers are ways to celebrate the civil rights history. Removing vehicles from the interior of the park improves air quality and improves pedestrian safety, while pervious pavers reduce the effects of heat island.
- Heritage Plaza. A plaza with festive shade structures located opposite the church is a gathering space inviting the congregation into the park. New paving materials will overlap the street as a traffic calming measure.
- Green Street. 32nd Street North is retrofitted to implement a green street with a reduced width for vehicle travel lanes, a vegetated buffer with bioretention cells, canopy trees, and a widened sidewalk that creates a direct connection and extends the Civil Rights Trail between the park and historic Bethel Baptist Church.

#### **ACTIVITY USE DIAGRAM**



Figure 12: Activity Use Diagram

#### **Active Uses**

- Walking
- Community Gardens
- Fitness Stations
- Children's Play Equipment
- Outdoor Classroom
- Concerts / Performances
- Pop-up Events / Farmers' Market / Exercise Classes

#### Passive Uses

- Open Lawn / Free Play
- Outdoor Cinema
- Picnics
- Shaded Seating & Swing
- Art Installations
- Historic & Educational Signage

#### **Environmental Uses**

- Memorial Tree Grove
- Bioretention Facilities
- Meadow Habitat

#### **POP-UP EVENTS**



Birminham Farmer's Market Photo credit: Beth Cunningham



Cinema in the Park Photo credit: Tom Leader Studio



Concerts & Performances
Photo credit: Halvorson Design Partnership

#### PARK ACTIVITIES



Fitness Stations



Children's Play Equipment



Exercise Classes Photo credit: Ameera Steward, The Birmingham Times



Shaded Seating & Swing Photo credit: Rose Fitzgerald Kennedy Conservancy



Well Lit Safe Spaces Photo credit: Tom Leader Studio



Community Gardens
Photo credit: Highland Park Community Garden
Figure 13: Active Use Precedent Images



Figure 14: Before - Existing condition 28th Street North looking west toward Maclin Park pool building.



Figure 15: After - The Heritage Walk transforms an existing roadway into a pedestrian promenade becoming an extension of the Civil Rights Trail and creating a strong east-west connection between Maclin Park and Bethel Baptist Church.



Figure 16: Before - Existing conditions show remnant mature trees with Bethel Baptist Church in the background, anchoring the east side of the new park.



Figure 17: After - The Memorial Grove preserves mature trees that have borne witness to history, new tree plantings will expand the grove creating an opportunity for tree identification and education on ecosystem benefits of trees. The Heritage Plaza is in the

# KELLY INGRAM PARK - BIRMINGHAM, AL

Kelly Ingram Park, located in Birmingham's Civil Rights District, is a local example of a park that commemorates civil rights history and celebrates significant civil rights landmarks and leaders of the Civil Rights Movement. Kelly Ingram Park served as a central staging ground for large-scale demonstrations during the Civil Rights Movement of the 1960s, and is located adjacent to the 16th Street Baptist Church.

Kelly Ingram Park incorporates signage, commemorative statues, signature paving patterns, and several sculptures throughout the park.

Similarly, the future Shuttlesworth Civil Rights
Park is located one block from the historic Bethel
Baptist Church, the home church of Reverend Fred
Shuttlesworth and the scene of three separate
bombings. The Concept Master Plan contemplates
the celebration of civil rights history and presents
opportunities for integration throughout the proposed
amenities.









Figure 18: Select Photos Kelly Ingram Park, Birmingham, Alabama - An example of historical context integrated within a park using sculpture, paving patterns and signage.

# COOK PARK - ATLANTA, GA

During the charrette, a representative from the Trust for Public Land provided helpful information for how they were involved and oversaw the design and implementation of Cook Park.

Cook Park is 16 acres in size and located within Vine City a neighborhood that has seen dwindling populations and is one of Atlanta's most distressed neighborhoods. Cook Park incorporates a large retention pond and additional green infrastructure features to prevent future flooding by storing up to 10 million gallons of stormwater runoff onsite. It is an example of a successful transformation of a flood prone

site into a community asset, creating multi-functional spaces for people to gather and play with integrated capacity to mitigate flood events, reduce urban heat island effect, and provide ecosystem benefits within the urban fabric of the city.

When compared, existing conditions that define Cook Park are quite similar to the Collegeville neighborhood and the project site for the future Shuttlesworth Civil Rights Park. Cook Park offers a template for how to plan and implement a world class park that engages the community in the process.



Photo Credit: HDR, Inc.

Figure 19: Cook Park, Atlanta, Georgia

## **NEXT STEPS - IMPLEMENTATION STRATEGIES**

The Concept Master Plan integrates several design components recommended in City planning documents which to date have been used sparingly throughout the City of Birmingham. This project is an opportunity for piloting of innovative solutions tailored and refined for projects with similar environmental conditions and challenges within Birmingham, Alabama.

In developing the near term concept design in conjunction with the Concept Master Plan, the design team created a road map for the City to use to sustain momentum for the development of the Shuttlesworth Civil Rights Park in the Collegeville Neighborhood. The following tasks outline next steps for implementation of the near term concept design, while progressing engineering and securing funding for implementation of the Concept Master Plan. The suggested near term implementation timeline begins within 6 months and is completed no later than a 2 year duration, primarily due to timing and cycles for grant applications.

#### NEAR TERM (2020 – 2022)

- I. Share and promote the Shuttlesworth Civil Rights Park Concept Master Plan at community events, neighborhood association meetings, and City events such as the Building Blocks Equitable Development Workshop.
- 2. Create a project page on the City's website including a link to Concept Master Plan, timeline, and update regularly when new information as it becomes available; include a link for community members to submit their email address for future notifications and updates; maintain an email distribution list.
- 3. Designate City representative(s) to provide regularly scheduled updates and check-ins at neighborhood association meetings to report progress.
- 4. Vacate the right-of-way for portions of 31st Street North and 28th Street North.
- 5. In coordnation with FEMA, accelerate the buyout of hold-out properties within the project area.
- 6. Draft and obtain approval of a dedication ordinance to transition properties to park land use.

- 7. Apply for grants and secure funding to implement the near term interventions.
- 8. Install mural to improve the pool building façade at Maclin Park and implement placemaking.
- 9. Install demonstration raised garden beds.
  - Engage Jefferson County Master Gardeners
- 10. Implement the transition of 28th Street North to a shared street, open to vehicle, pedestrian, and cyclist use. Promote as a strategy for creating temporary park space to allow for social distancing.
  - Change physical appearance of the street to indicate use as a shared street using curb bump-outs and pavement murals.
  - Engage the City Department of Transportation to outline the process, effort, and responsible individuals.
  - Launch as a demonstration project to understand how the project is received by the community and how it can be replicated in other neighborhoods.
  - Identify and engage organizations that can curate and participate in temporary art installations.



Figure 20: 32nd Street North - Green Street Cross Section

- 11. Install green stormwater infrastructure as a pilot demonstration project.
  - Engage the City Department of Public Works to develop a pilot project to understand maintenance needs, optimum plant species selection, current maintenance capabilities, frequencies, costs, and deficiencies.
  - Start a training program for a green stormwater infrastructure maintenance "Green Team".
- 12. Establish a non-profit or local organization to support the implementation of the park, such as a Friends of Shuttlesworth Civil Rights Park.
  - Map out organizations that would be interested in joining or supporting this new organization and develop an outreach strategy.
  - Find a community champion, advertise to neighborhood association leadership first.
  - Members may include a City liaison, and representatives from local schools, libraries, tourism organizations, University of Alabama

- at Birmingham community extension services, faith community members, local artists, and Birmingham Civil Rights Institute, etc.
- Create an information sheet for outreach to potential members.
- Task the organization with creating continuity to move the pieces of the design forward; identify funding sources and apply for funding to implement the concept master plan.
- 13. Apply for grants and secure funding in the capital budget for implementation of the concept master plan, through preparation of construction documents, permitting, and installation.

#### **NEXT STEPS - IMPLEMENTATION STRATEGIES**

#### LONG TERM (2021-2024)

- Engage landscape architect-led design team to prepare construction documents, specifications, and secure permitting.
- 2. Engage artist for sculpture or art installation.
- 3. Engage general contractor to construct park.
- 4. Develop an education program for the park.
  - Identify institutions, schools, organizations and opportunities for collaborations.
  - Engage partners to incorporate air quality monitoring within the park to track changes and educate the public (Greater-Birmingham Alliance to Stop Pollution, Inc.; Auburn University Forestry & Wildlife Sciences; University of Alabama School of Public Health).
  - Incorporate environmental educational signage (green stormwater infrastructure, tree identification, heat island effect).
  - Provide free wifi for interactive education with digital activities.

- 5. Develop a programming schedule for the park.
  - Identify institutions, schools, organizations and opportunities for collaborations.
  - Identify temporary installations, pop-up events, and fitness meet-ups.
  - Identify annual events and celebrations.
  - Implement an artist in residency program with rotating art exhibits in the park and hands-on workshops led by the artist.
  - Promote the historic Bethel Baptist Church and future Shuttlesworth Civil Rights Park through partnerships with current tourism initiatives in the city of Birmingham, Birmingham Civil Rights Institute, and the National Park Service (NPS) downtown civil rights sites.

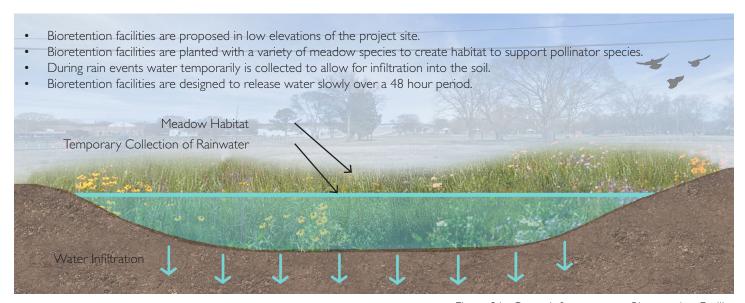


Figure 21: Green Infrastructure - Bioretention Facility

#### OPPORTUNITIES FOR COLLABORATION AND PARTNERSHIPS

This project has great potential to link together a variety of organizations with shared mission and goals to build a park for the Collegeville Neighborhood while expanding and strengthening civil rights tourism and knowledge of Birmingham's impact as the center of the movement. The following is a list of organizations and ideas for collaboration.

# National Park Service /Birmingham Civil Rights Institute<sup>1</sup>

- Assist with outreach for the future Shuttlesworth Civil Rights Park at the downtown park and monument location(s).
- Include mention in a NPS brochure about non-NPS Civil Rights sites /parks in the City.
- Scheduled van tour to civil rights sites.

#### UNESCO World Heritage Site<sup>2</sup>

- Collaboration for expansion of the Civil Rights Trail and education in the future park.

#### Parks RX<sup>3</sup>

- Coordinate with Jefferson County Department of Public Health to add the future park to list of promoted parks in this program.

#### Trust For Public Land<sup>4</sup>

- 10 minute walk campaign.

#### World Games 2021<sup>5</sup>

- Commemorative tree planting.
- Coordination for reuse of construction materials.

#### Jefferson County Master Gardeners Association<sup>6</sup>

- Host community gardening educational events.

#### Birmingham Botanical Garden<sup>7</sup>

- Partnership for programs including a summer education camp.

#### GASP<sup>8</sup>

- Implement air quality monitoring and education program using the Smart City Sensor Program.

#### I AM Birmingham<sup>9</sup>

- Collaboration for fitness programs in the future park.

- 1. https://www.nps.gov/bicr/index.htm; https://www.bcri.org/
- 2. https://www.birminghamal.gov/2016/07/04/civilrights-landmarks-proposed-for-world-heritage-status/
- 3. http://www.reachforbetterhealth.com/parksrx/
- 4. https://www.tpl.org/10minutewalk
- 5. https://theworldgames2021.com/
- 6. https://jeffcomg.org/
- 7. https://www.bbgardens.org/#
- 8. https://gaspgroup.org/
- 9. https://www.facebook.com/IAmBHAMFitness/

## **FUNDING SOURCES**

Potential funding sources have been identified for specific project components to guide the City of Birmingham in their approach to implementation. The following table organizes project components into two categories: near term implementation and concept master plan implementation, and is a direct correlation to the plan graphics described in the Concept Plan - Final section of this document. The table includes a recommended timeline for implementation of each project component that considers application deadlines as well as a logical approach to fast track small interventions and to build momentum and foundation for the implementation of the complete Shuttlesworth Civil Rights Park Concept Master Plan.

NEAR TERM IMPLEMENTATION					
NO.	PROJECT COMPONENT	TASK DESCRIPTION	RECOMMENDED TIMELINE FOR IMPLEMENTATION		
1	Marketing and Branding     Establish a Friends of Shuttlesworth Civil Rights Park Organization or Foundation	Hire a consultant to develop marketing and branding campaign     Facilitate community outreach to assemble steering committee /board members for a Friends of Shuttlesworth Civil Rights Park Organization or Foundation	Apply for Grant: Nov. 2020 - Jan. 2021     Marketing & Branding Development / Formulate Park Foundation: Sept. 2021		
2	Temporary Art Installations:  • Pavement Mural - 28th Avenue North  • Art Installations - Up to 6 art installations/sculptures  • Area Lighting	Issue RFQ temporary art installation (Template: Americans for the Arts template for public solicitations)     Award contract to local artist.     Award contract for site work associated with installation.	Issue RFQ: 3 months July - Sept. 2020     Commission/Installation: 6 months Oct March 2021		
3	Building Façade Mural:  • Existing Maclin Park Pool Buildings  • Historical Theme - Iron & Steel Industry, Civil Rights Narrative	Issue RFQ permanent art installation (Template: Americans for the Arts template for public solicitations)     Award contract to local artist.	Submit LOI Application: Jan. 2021     Award Announcement: April 2021     Issue RFQ/Award: Feb April 2021     Commission/Installation: May - Oct. 2021		
4	Community Gardening	<ul> <li>Installation of 10 raised garden beds and associated site work.</li> <li>Contract with non-profit organization to facilitate management for one growing season.</li> </ul>	Submit Application: July 2020     Installation: Feb. 2021     Management: Feb. 2021 - Nov. 2021		
5	Pop-up Events	Temporary one day events (Ex. Health & Wellness Event)     Regularly scheduled series of events (Ex. monthly farmer's market)	• March 2021 - March 2022		
6	Green Stormwater Infrastructure Demonstration Project	Construction for site work to install stormwater facility, new walkway and seating area     Establish a "Green Team" to provide maintenance and management of the facility for two years     Develop curriculum for schools or install educational signage	Submit Application: Dec. 2020     Installation: Sept Dec. 2021     Maintenance: Jan. 2021 - Jan. 2023		

The funding opportunities presented are a range of sources including grants from local, state, and federal agencies, non-profit organizations, both as funding sources or partners, and city of Birmingham utility fees. This table will be provided to the City of Birmingham as an editable Excel spreadsheet intended to be a living document for the City to track and adapt as funding sources are secured.

Websites for potential funding sources and potential partners have been included in the spreadsheet.

NEAR TERM IMPLEMENTATION						
NO.	POTENTIAL PARTNERS	FUNDING PROGRAM	FUNDING AGENCY	APPLICATION DEADLINE	POTENTIAL AWARD	FUNDING SOURCE WEBSITE
1	The Nature Conservancy Urban Conservation Program https://www.nature.org/en- us/what-we-do/our- priorities/build-healthy- cities/cities-stories/north- america-cities-network/	Environmental Justice Collaborative Problem- Solving Cooperative Agreement Grant	Environmental Protection Agency	Application Deadline: Feb. Award Announcement: Sept.	\$120K	https://www.epa.gov/environ mental-justice/environmental- justice-collaborative-problem- solving-cooperative-agreemen 0#tab-2
2		Community Challenge Grant	American Association of Retired Persons (AARP)	Application Deadline: May 2020 Award Announcement: Aug. 2020	\$25K	www.aarp.org/communitychal enge
3		Art, Culture & Community Assets Grant	Daniels Foundation of Alabama	Letter of Intent (LOI) Application Deadline: Jan. Award: April	Unspecified	http://danielfoundationofalabama.com/
4	Lotus Family Development Center https://www.lotusfdc.org/	Jefferson County Master Gardener Grant Program	Jefferson County Master Gardeners	Application Deadline: July Non-profit partner required	Raised Bed Kits or \$2K for a gardening project	https://jeffcomg.org/contact- 2/community-gardens- grants/index.html
5	Lotus Family Development Center https://www.lotusfdc.org/	Health Grant	Daniels Foundation of Alabama	LOI Application Deadline: April Award: June	Unspecified	http://danielfoundationofalaba ma.com/
6		Five Star Urban Waters Restoration Grant	National Fish and Wildlife Foundation	Application Deadline: Dec. Award: Aug.	\$50K Equal matching funds required	https://www.nfwf.org/progra ms/five-star-and-urban-waters restoration-grant-program/five star-and-urban-waters
		COB Stormwater Utility Fee	City of Birmingham	N/A	Unspecified	https://www.bhamgov.org/gov ernment/departments/treasur y/storm water utility ordinan ce.php

# **FUNDING SOURCES**

			RECOMMENDED TIMELINE FOR	
NO.	PROJECT COMPONENT	TASK DESCRIPTION	IMPLEMENTATION	
RK AM	ENITIES			
7	Park Design & Site Construction	Park amenities and infrastructure	• 2021 - 2024	
8	32nd Street Green Street Construction	Streetscape Reconstruction  Reduced vehicle travel lanes; 10' width each direction  Landscape buffer / bioretention; 10' width  Sidewalk with specialty paving pattern/material; 10' width  Traffic calming via specialty paving at 28th Avenue North/32nd Street North	• 2021 - 2024	
9	Green Stormwater Infrastructure	Facility Construction     Maintenance	• 2021 - 2024	
10	Permanent Art Installation	Issue RFQ permanent art installation (Template: Americans for the Arts template for public solicitations)     Award contract to local artist	• 2021 - 2024	
11	Play Equipment		• 2021 - 2024	
12	WIFI Service		• 2021 - 2024	
ROGRAN	/MING			
13	Outdoor Classroom	School Field Trips     School Curriculum	• 2023 - 2024	
14	Artist In Residency	Rotating Art Installation     Community Art Workshops	• 2023 - Continue	
15	Tree Planting	Annual tree planting events	• 2023 - Continue	

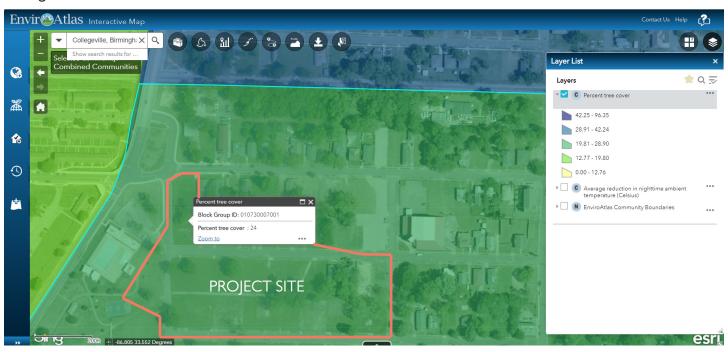
	CONCEPT MASTER PLAN IMPLEMENTATION					
NO.	POTENTIAL PARTNERS	FUNDING PROGRAM	FUNDING AGENCY	APPLICATION DEADLINE	POTENTIAL AWARD	FUNDING SOURCE WEBSITE
ARK AM	ENITIES					
7	Trust for Public Land https://www.tpl.org/	Outdoor Recreation Legacy Partnership Program	Land and Water Conservation Fund	Application Deadline: July	\$1 million Equal matching funds required	https://www.grants.gov/web/ rants/search- grants.html?keywords=outdoo r%20recreation%20
		Aftican American Civil Rights History Grant	National Park Service	Application Deadline: December	\$50K	https://www.nps.gov/preservation-grants/civil-rights/
8		COB Stormwater Utility Fee	City of Birmingham	N/A	Unspecified	https://www.bhamgov.org/go ernment/departments/treasur y/storm water utility ordinar ce.php
9		Five Star Urban Waters Restoration Grant	National Fish and Wildlife Foundation	Application Deadline: Dec. Award: August	\$50K Equal matching funds required	https://www.nfwf.org/progra ms/five-star-and-urban-waters restoration-grant-program/five star-and-urban-waters
10	City and non-profit partnership required	Our Town Grants	National Endowment for the Arts	Application Deadline: August Award: April Performance Period Begins: July	\$25K - \$200K Equal matching funds required	https://www.arts.gov/grants- organizations/our-town/grant- program-description
11		Let's Play Community Construction Grant	Kaboom!	LOI Application Deadline: July Award: Sept.	\$15K Matching funds required	https://kaboom.org/grants/let s-play-community-construction
12		Free WIFI Service, installed and maintained	American Park Network	N/A	N/A	http://apnmedia.com/ohranger-wi-fi/
PROGRAN	/MING					
13		Five Star Urban Waters Restoration Grant	National Fish and Wildlife Foundation	Application Deadline: Dec. Award: August	\$50K Equal matching funds required	https://www.nfwf.org/progra ms/five-star-and-urban-waters restoration-grant-program/five star-and-urban-waters
		Education minigrant	Alabama Audubon Society	Application Deadline: July	\$1K	https://alaudubon.org/minigrants/
14		Community Arts Consolidated Projects Grant	Alabama State Council on the Arts	Application Deadline: June	\$20K Equal matching funds required	http://www.arts.state.al.us/gr ants/grant organization.aspx
15		Good Roots Grant	Alabama Power	Application Deadline: May - August	\$1K	https://powerofgood.com/gra nt/good-roots-grants/

## APPENDIX A ENVIROATLAS DATA COMPARISON

Appendix A includes a comparison of the Collegeville Neighborhood to the Norwood Neighborhood to better understand the potential environmental and public health benefits of increased tree canopy and vegetative cover. Norwood is a nearby neighborhood mentioned during the charrette as being known for having abundant tree canopy cover. A screening level analysis of data sets communicates potential air quality and urban heat island mitigation benefits of a future park in the Collegeville Neighborhood.

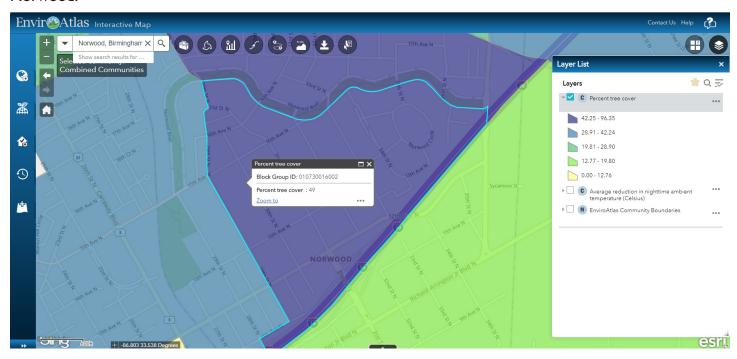
**Percent Tree Canopy Cover** - This map illustrates the percent of total land area within each census block group that is covered by trees. In EnviroAtlas, tree coverage takes many forms including street trees, parks, urban forests, and single trees on various properties.

#### Collegeville:



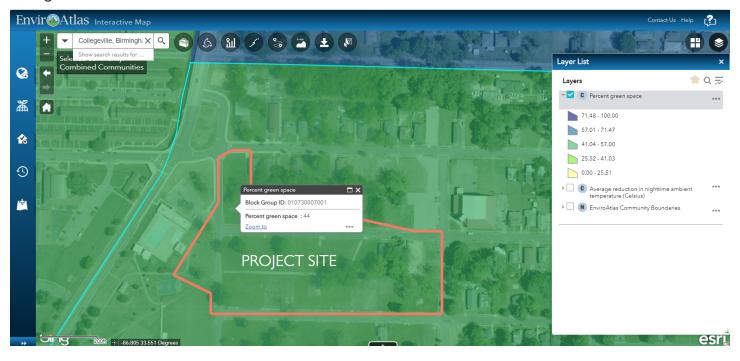
## Percent Tree Canopy Cover

#### Norwood:



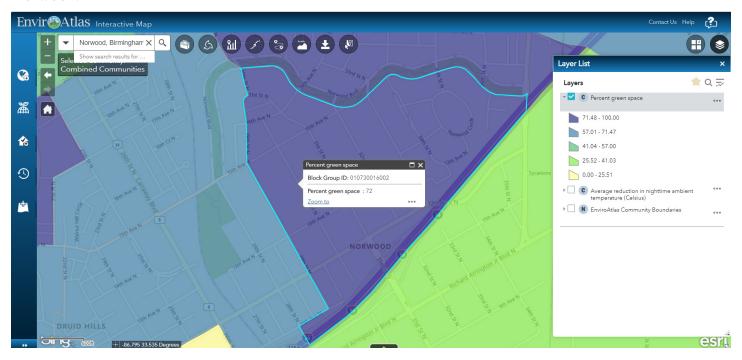
**Percent Green Space** - This map illustrates the percent of total land within each census block group that is covered by vegetation, or "green space." Green space may include trees, lawns and gardens, crop land, and forested wetlands.

#### Collegeville:



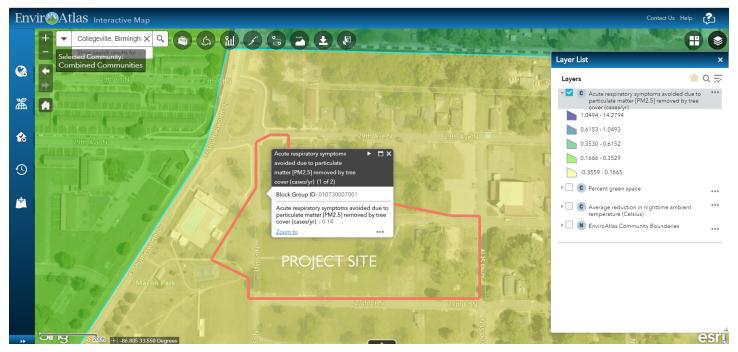
### Percent Green Space

#### Norwood:



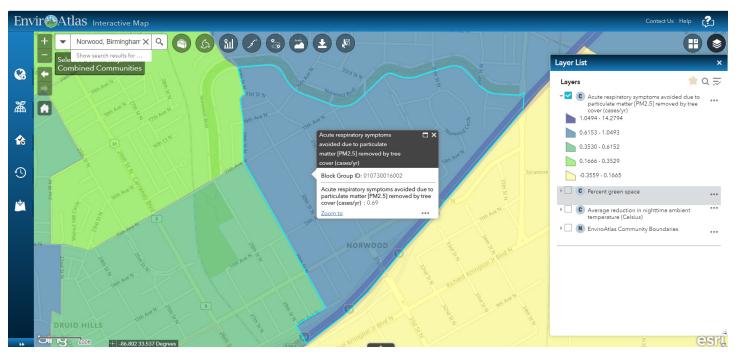
Acute respiratory symptoms avoided due to particulate matter (PM2.5) removed by tree cover (cases/yr.) - This map estimates the annual number of acute respiratory symptom cases that may be avoided due to total PM2.5 removed by trees in each census block group.

#### Collegeville:



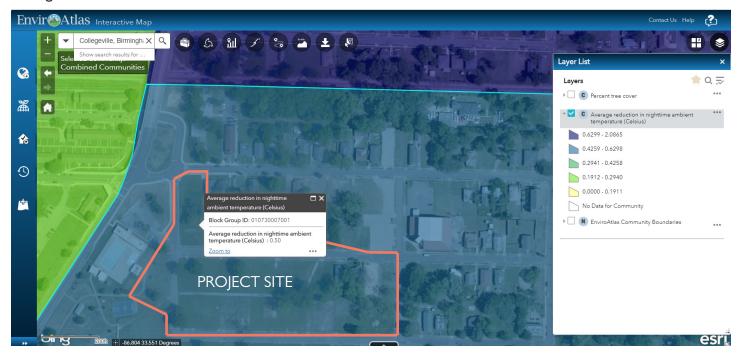
## Acute Respiratory Symptoms Avoided

#### Norwood:



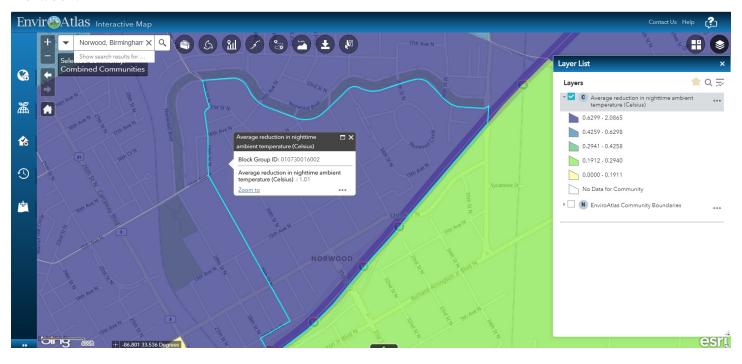
Average Reduction in Nighttime Ambient Temperature (Celsius) - This map estimates the average reduction in the ambient temperature at night following a hot summer day due to the cooling properties of tree cover in each census block group

#### Collegeville:



## Average Reduction in Nightime Ambient Temperature

#### Norwood:



## APPENDIX B EPA MEMO - ASSESSMENT OF VEGETABLE SAMPLING

This memo was presented at the charrette by U.S. EPA Region 4 Superfund staff as a response to community concerns about the safety of vegetables from community and personal gardens in the Collegeville Neighborhood.

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



#### **REGION 4**

61 Forsyth Street, S.W. Atlanta, Georgia 30303

#### **MEMORANDUM**

November 26, 2013

SUBJECT:

35th Avenue Site Removal Assessment Consult

Vegetable Samples and Surface Wipe Data

Birmingham, Alabama

FROM:

Kevin Koporec, Toxicologist

Technical Support Section Superfund Support Branch

THROUGH: Glenn Adams, Chief

Technical Support Section Superfund Support Branch

TO:

Greg Harper, OSC

Richard Jardine, OSC

Superfund Emergency Response & Removal Branch

Per your request, I have reviewed the data from vegetable samples and from exterior surface wipe samples for the investigation of the 35th Avenue, Birmingham, Alabama **Removal** Site. I will provide an electronic copy of this memo.

My review/assessment of these data consists of 1) use of the EPA IEUBK Lead model for assessment of the vegetable Lead concentrations; and 2) screening comparison of the exterior surface wipe data to EPA/HUD standards for interior surfaces.

#### ASSESSMENT OF THE VEGETABLE LEAD CONCENTRATION DATA

To screen the health risk for the vegetable lead data, the highest measured concentration is used in the EPA Integrated Exposure Uptake Biokinetic (IEUBK) model. The IEUBK is used by EPA to predict blood lead levels in children assumed to be exposed to the contaminated media on a chronic daily basis. The predicted blood lead levels are then compared to the target levels established by the EPA Superfund Program.

The maximum reported garden vegetable lead concentration was in sample CV0453-VGW (washed) with a lead concentration = 0.57 mg/kg. Even though this was one of the samples for which the soil was washed off, it still had the highest lead level of all the samples (including those that were left unwashed).

Assuming the model "default" <u>soil-lead concentration of 200 ppm</u>, the default lead concentrations for water and air, and assuming 100% of the child's vegetable diet is from this homegrown vegetable source, the probability of exceeding the target blood lead level of 10 ug/dL is < 1% (and thus, well below our 5% cutoff).

If the "default" <u>soil-lead concentration is maintained at 200 ppm</u>, but one changes the <u>target blood-lead to 5 ug/dL</u> (new CDC Reference Level [97.5% of children nationwide less than this <u>level</u>]), even assuming NONE of the vegetable diet is from this homegrown vegetable source, the probability of exceeding 5 ug/dL is >5% (this lower blood lead target is considered here for comparison, but it should be noted EPA-OSWER has NOT yet established this as policy). Assuming a <u>lower soil-lead concentration of 100 ppm</u>, and <u>target blood-Pb of 5 ug/dL</u> (new CDC Reference Level [97.5% of child pop less than]), even assuming 100% of the vegetable diet is from this homegrown vegetable source, the probability of exceeding 5 ug/dL is <5%.

#### ASSESSMENT OF ARSENIC IN VEGETABLE SAMPLES

There was only one reported detection of arsenic in vegetable tissue samples- 0.069 mg/kg [CV0827A-VGUW-CS03, an <u>unwashed</u> sample]. It was not detected in the washed vegetable sample from this garden [CV0827A-VGW-CS03, 0.083U]. While there are no readily available EPA health risk based screening values against which to compare this one detection, the low frequency of detection (1/29) and the low level detected (less than to the Reporting Limit for the non-detect result from the washed sample from the same garden) suggest no significant risk from the vegetable arsenic levels.

#### ASSESSMENT OF PAH IN VEGETABLE SAMPLES

There were no reported detections of any PAH compounds in the analytical report.

Overall conclusion for garden vegetable data: Assuming exposure to the maximum reported lead concentration from the garden vegetables sampled does not have a significant effect on the predicted blood lead level; the soil lead concentration alone determines the predicted blood lead level (EPA IEUBK Pb model). The reported arsenic and PAH concentrations are not expected to pose any unacceptable health risks. Therefore based on the available garden vegetable concentration data, no restrictions on consumption of garden vegetables are recommended.

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#### ASSESSMENT OF THE SURFACE WIPE SAMPLE DATA

The surface wipe samples are said to be each based on wiping a 100 cm<sup>2</sup> surface area on the exterior of the house.

Since the data from these wipe samples are in units of mass per area, rather than mass per mass (e.g., mg/kg), the tools usually used for assessing health risks at Superfund/RCRA sites cannot be used.

LEAD. For lead, the data are reported in units of mg of lead per wipe. 46 locations were reportedly sampled with two composite samples reported for each location (total of 92 sample results). Lead was not detected in 22 of these samples (the Reporting Limit was 0.001 mg/wipe for all of the non-detect results). For the samples with detected lead, the reported data ranged from 0.001 to 0.054 mg/wipe.

To screen the health risk from exposure to the material deposited on these exterior surfaces, the surface wipe lead data is compared to the EPA/HUD Interior Dust Lead Standards. Below are the interior dust lead standards with appropriate conversions for this screening comparison.

EPA/HUD Interior Dust Pb Standards (from *The Residential Lead-Based Paint Hazard Reduction Act- Title X* [EPA 2001])

**Dust Pb standard for interior windowsills**: 250 micrograms per square foot (ug/ft<sup>2</sup>) Conversion for mg/100 cm<sup>2</sup> wipe samples— 250 ug/ft<sup>2</sup> x 0.0011 ft<sup>2</sup>/cm<sup>2</sup> x 100 cm<sup>2</sup>/wipe x mg/1000 ug = 0.0275 mg/wipe

**Dust Pb standard for interior floors**: 40 ug/ft<sup>2</sup> Conversion for mg/100 cm<sup>2</sup> wipe samples— 40 ug/ft<sup>2</sup> x 0.0011 ft<sup>2</sup>/cm<sup>2</sup> x 100 cm<sup>2</sup>/wipe x mg/1000 ug = 0.004 mg/wipe

#### Screening/assessment of surface wipe LEAD data.

The converted standard for interior floors was exceeded in 29 of the data points from the exterior wipe sample results. The converted standard for interior windowsills, however, was exceeded in only one of the 92 data points from the exterior wipe sample results. Both of these converted standards for interior surface are very conservative (i.e., health protective) when comparing to data from the exterior surface of the house. The exterior surface would be

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expected to be contacted much less frequently, especially by young children, than an interior floor or even an interior windowsill. The maximum reported lead level from the exterior wipe samples (0.054 mg/wipe) is two times the converted standard for interior windowsills (0.0275 mg/wipe). Thus if significant contact by the young child receptor with the exterior surface of concern occurs no more than half as frequent as his/her contact with an interior windowsill, the contribution of this lead level to the child's intake would not be expected to be significant.

#### Screening/assessment of surface wipe PAH data.

The PAH data from the surface wipes were compared to the health risk based value derived in the *World Trade Center Indoor Environment Assessment* Report for PAHs in settled dust (WTC Indoor Air Task Force, 2003). The screening value of 150 ug/m² for PAHs for interior settled dust is based on the carcinogenic potential of Benzo[a]pyrene. Thus it is appropriate to screen the total PAH level, and then for any exceedances of this initial screen, evaluate the level of carcinogenic PAHs.

Since the area component of the units differed between the wipe data and the screening value, a conversion was needed (as was done for lead).

Screening value for PAHs in interior settled dust: 150 ug/m<sup>2</sup> Conversion for mg/100 cm<sup>2</sup> wipe samples—
150 ug/m<sup>2</sup> x m<sup>2</sup>/10,000 cm<sup>2</sup> x 100 cm<sup>2</sup>/wipe = 1.5 mg/wipe

This converted screening value for interior surfaces was exceeded for total detected PAHs in only 2 of the data points from the exterior wipe sample results [CV0045B-WP: 2.7 ug/wipe; HP0049B-WP: 1.7 ug/wipe]. When the level of Benzo[a]pyrene-equivalent is calculated for the detected PAH data at these two locations, however, the resultant levels [0.4/wipe; 0.1/wipe] are both lower than the risk based value of 1.5 mg/wipe.

As for lead, the converted PAH screening value for interior surfaces is very conservative (i.e., health protective) when comparing to data from the exterior surface of the house. The exterior surface would be expected to be contacted much less frequently than an interior surface.

#### Screening/assessment of surface wipe Arsenic data.

Review of the arsenic data from the surface wipes show only two detections: 0.002, 0.0034 mg/wipe [CV0045B-WP, CV0315B-WP]. While there are no available health risk based values against which to compare, the low frequency of detection (2/92) and the low levels detected

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(equal to and close to the Reporting Limit for non-detects of 0.002 mg/wipe) suggest no significant risk from the surface wipe arsenic levels.

Conclusion/recommendation for surface wipe data: The lead levels reported from the exterior wipe samples are not expected to contribute significantly to health risk, especially relative to the elevated soil lead levels reported for some residences in this area (lead in soil exceeding 400 mg/kg, with some exceeding 1200 mg/kg). The reported levels in the wipe samples of arsenic and PAHs do not pose any unacceptable health risks. Furthermore, if the soils with the highest concentrations of COCs are remediated, this will help to reduce the COC levels on these surfaces.

#### References:

EPA 1994a. OSWER Directive: Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, OSWER Dir #9355.4-12. August 1994.

EPA 2001. "Lead Dust Hazard Standards" in Fact Sheet: *Identifying Lead Hazards in Residential Properties*, EPA 747-F-01-002, [http://www.epa.gov/lead] Office of Prevention, Pesticides and Toxic Substances, April 2001.

EPA 2010. *Integrated Exposure Uptake Biokinetic Model for Lead in Children*, Windows® version (IEUBKwin v1.1 build 11, February 2010). [http://www.epa.gov/superfund/programs/lead/products.htm#software]

WTC Indoor Air Task Force, 2003. World Trade Center Indoor Environment Assessment: Selecting Contaminants of Potential Concern and Setting Health-Based Benchmarks, prepared by the World Trade Center Indoor Air Task Force Working Group (includes representatives from USEPA, ATSDR, NYSDOH, OSHA, NYCDHMH), May.

Feel free to contact me if you need further assistance on risk assessment issues.

35Ave TSS assess gardyeg surfwipe Nov2013.doc

# APPENDIX C

An editable Excel spreadsheet (living document) of potential funding sources is included as Appendix C.

