



APPENDIX



photo by Matt Roth

COMMUNITY ENGAGEMENT SUMMARY

Throughout the process of creating the West North Avenue Streetscape Conceptual Master Plan, Neighborhood Design Center Volunteer Team and Core Stakeholders facilitated multiple opportunities to encourage community input on the design and vision of the conceptual streetscape master plan. The data collected from this outreach guided the process.

PUBLIC VISIONING WORKSHOPS

The first phase of the project was to understand the communities that are adjacent to the West North Avenue streetscape and the priorities within the community. During the spring of 2014, NDC volunteers had facilitated three public visioning workshops that were organized by the community organization stakeholders that are involved in the project. The three visioning workshops were split to the corresponding boundaries for the project: Near West, Middle West and Far West. A total of 109 people were in attendance during the visioning workshops. The workshop activities included: Where Do You? Map (geographic analysis), A Walk Down West North Avenue (future visioning), Importance Difficulty Matrix (prioritizing goals), Connections and Barriers and Memory Cards (Memory of West North Avenue). The outcome of the public visioning workshops was that better pedestrian safety and accessibility along the streetscape was the most



Importance / Difficulty Matrix at Visioning Workshop in April 2014, photo by Matt Roth

important priority within the community. The community's vision for West North Avenue was to create a streetscape for all ages, locals and tourist to explore.

SNO-BALL STAND SURVEYS

The NDC received a grant from the Baltimore Community Foundation to aid in the outreach on behalf of the West North Avenue project. For five days during the months of August and September in 2014, NDC representatives gave away free snowballs to passersby on West North Avenue. The snowball stand was located in different locations on each day to cover the entire West North Avenue study area.

Those who received a free snowball were asked if they would answer questions about the streetscape and their answers were recorded on a survey form. In some instances as a group of respondents, such as a family or small group of friends, would have their collective answers documented on a single survey. In total 382 surveys were completed representing the views of 451 people.



Sno-ball stand, September 2014, photo by Jennifer Goold

FLOWER BULB PLANTING

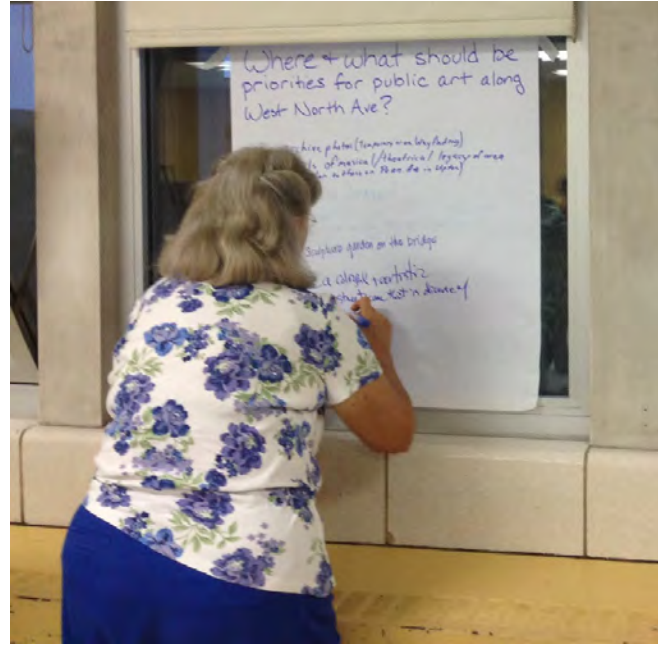
During a couple of days in November 2014, NDC staff and volunteers helped plant daffodil bulbs along West North Avenue with at least 20 community members and core stakeholders. The planting of daffodil bulbs along the streetscape was a way for NDC to raise awareness of the project in the community and a way to beautify the streetscape.



Flower bulb planting, photo by Laura Wheaton

PUBLIC DESIGN REVIEW

In September 2014, NDC volunteers facilitated three public design review meetings with community stakeholders and members. The purpose of the public design review meetings was to receive feedback and input to guide to plan into the second draft. The three meetings was divided to the corresponding boundaries for the project: Near West, Middle West and Far West. During the meeting attendees were assigned to one of six stations for the first break out session and rotated to two additional stations in the following breakout sessions. At the end of the meeting attendees were able to go to a station that they haven't seen. Each station represented a proposal for the plan: Public Art/ Branding, Historical Markers, Greening, Community Gathering, Jones-Fall Bridge, and Multi-Modal Corridor). A total of 110 community members, stakeholders, representatives and other organizations were in attendance. The review meetings gave the NDC volunteers a view of which proposals in the recommendations are supported by the community and to guide the volunteers to the second draft.



Near West public design review, photo by Songhyun Jung

COMMUNITY MEETINGS OUTREACH

In between visioning and public design meetings, NDC volunteers and Core Stakeholders attended community meetings to raise awareness of the plan and update the community on the plan timeline.

WEST NORTH AVENUE WEBSITE/ ONLINE SURVEYS

NDC staff and volunteers created a website explaining the West North Avenue project and updating the public on previous and future meetings. The website is <https://westnorthave.wordpress.com/>. The website was a strategy to reach out to community members and gain input on the second draft. A detailed survey was created to see which recommendations were supported by the community. Community members that didn't have internet access to take the survey were encouraged to fill out a hard copy of the survey and return their responses to their community associations. The results of the surveys were used to guide the NDC volunteers to the final draft of the plan. A total of 176 survey results were received on second draft.

DETAILED MEETING CALENDAR

December 30, 2013 - Meet & Greet for NDC Volunteer Team at NDC office.

January 29, 2014 - NDC Volunteer Team meeting at NDC office.

February 5, 2014 - Project Kickoff with NDC Volunteer Team and Core Stakeholders at Coppin State Campus.

February 20, 2014 - Far West meeting with NDC Far West Volunteer Team and Far West Core Stakeholders.

February 25, 2014 - Near West meeting with NDC Near West Volunteer Team and Near West Core Stakeholders

February 27, 2014 - NDC Volunteer Team Captain and Volunteer Floating Group meeting at NDC Office.

March 8, 2014 - Middle West meeting with NDC Middle West Volunteer Team and Middle West Core Stakeholders.

March 22, 2014 - Middle West walk with NDC Middle West Volunteer Team and Middle West Core Stakeholders.

March 27, 2014 - Near West Volunteer Team and Core Stakeholder meeting at John Eager Howard Rec Center.

April 5, 2014 - Far West walk with NDC Far West Volunteer Team and Far West Core Stakeholders.

April 9, 2014 - NDC Volunteer Team meeting.

April 26, 2014 - Middle West Visioning Workshop, held at Druid Heights CDC.

May 3, 2014 - Far West Visioning Workshop, held at The Church of the Holy Trinity.

May 7, 2014 - Near West Visioning Workshop, held at John Eager Howard Rec Center.

May 9, 2014 - Middle West Volunteer Team meeting.

June 9, 2014 - NDC Volunteer Team and Core Stakeholder meeting.

June 26, 2014 - NDC Volunteer Team and Core Stakeholder meeting.

July 20, 2014 - Far West 30% Review

August 4, 2014 - First draft released for comment.

August 8, 2014 - NDC Volunteer Team meeting.

August 28, 2014 - NDC Volunteer Team meeting.

August 29 - September 2, 2014 - Sno-ball stand on West North Avenue.

September 4, 2014 - Near West Public Design Review at John Eager Howard Rec Center.

September 11, 2014 - Middle West Public Design Review at Druid Heights Community Center.

September 16, 2014 - Far West Public Design Review at John Wesley United Methodist Church.

October 30, 2014 - Design Review with NDC Volunteer Team and Core Stakeholders at NDC office.

November 15, 2014 - Flower bulb planting day.

December 11, 2014 - Second draft released for comment.

January 22, 2015 - NDC Volunteer Team and Core Stakeholder meeting at NDC office.

February 11, 2015 - Far West Core Stakeholder meeting at Coppin Heights CDC.

February 12, 2015 - Near West Core Stakeholder meeting.

February 18, 2015 - Middle West Core Stakeholder meeting.

March, 2015 - Third Draft Outreach Survey available online and via core stakeholders.

March 19, 2015 - Near West community meeting.

March 31, 2015 - NDC Volunteer Team and Core Stakeholder meeting at NDC office.

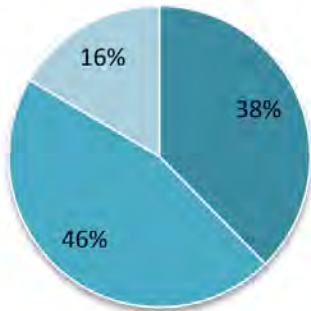
May 21, 2015 - NDC Volunteer Team and Core Stakeholder meeting at NDC office.

June 30, 2015 - Final draft pre-released.

VISIONING WORKSHOPS SUMMARY

109 PEOPLE REACHED

■ Near West ■ Middle West ■ Far West



WORKSHOP ACTIVITIES

Where Do You? Map
geographic analysis

A Walk Down West North Avenue
future visioning

Importance Difficulty Matrix
prioritizing goals

Connections & Barriers
how do we get there?

Memory Cards
remembering place

Importance Difficulty Matrix

community perceptions of self-identified goals

CATEGORY (LARGER SIZE = MORE TIMES MENTIONED)	AVG. IMPORTANCE	AVG. DIFFICULTY
Better Pedestrian Safety/Accessibility	4.3	2.8
More Commercial Development	4.1	3.8
Greening	3.9	2.3
More Trash/Recycling Points	4.3	2.1
More/Efficient Public Transit	3.4	2.3
Beautification	2.6	2.6
Public Development	3.7	2.8
More Lighting (Pedestrian)	4.5	1.4
More Signage/Identity	2.9	1.9
More Bike Lanes	3.7	2.7
Slower Traffic	4.5	3.3

SCALE OF 1 TO 5, 5 BEING MOST IMPORTANT OR DIFFICULT.

A Walk Down West North Avenue

future visioning

GET PEOPLE ON THE STREET!

All ages, alone or in a group, locals, tourists, and jealous suburbanites.

“Street bustling with people out walking and shopping”

MULTI-MODAL TRANSPORTATION

- Improved pedestrian access (landscaped sidewalks)
- Improved public transit (bus shelters with seats, streetcars, subways, circulator routes)

INCREASED DEVELOPMENT

-Shops, restaurants, Church, library, “University Village”, theater, dry cleaner, laundrymat

“I can do most of my shopping on this street”

RECREATIONAL VALUE

Dog friendly, landscaped sidewalk, trees, parks, music, art/murals, sidewalk cafes, water fountains.

SAFE AND CLEAN

Clean street and sidewalk, police presence, beautiful lighting.

WHAT IS YOUR FAVORITE THING ABOUT WEST NORTH AVENUE?

- It is a place where people come together (not a border vacuum)
- Public art

“looks and feels like Baltimore”

- Narrow streets
- The streetscape has been redeveloped and buildings have begun to change
- Lighting and atmosphere at night
- Cleanliness of the street
- Adequate public transportation
- Walkability and pedestrian friendly scale
- Well lit and safe places to walk
- People taking part in their city
- Beautiful landscaping and well maintained buildings
- The neighborhood and the diversity of people
- Great location – close to many things
- Swingset bus stops
- More homeowners
- The view down the corridor to downtown
- Diversity
- Places to eat
- Live music at a café
- Places to shop

Connections & Barriers

how do we get there?

Commercial Development

- | | |
|---|------------------------------|
| Accessible (bus, subway, light rail, car, walk) | Lack of variety in merchants |
| Vacant buildings home for future businesses | Vacant buildings in general |
| Historical character | No unified signage |
| | Not enough parking |
| | No market/investment/jobs |

Crime & Safety

- | | |
|----------------------------------|--------------------------|
| Strong neighborhood associations | Perception of crime |
| Better lighting | Not enough police patrol |
| Block Watchers | Unmaintained buildings |

Greening/Beautification

- | | |
|------------------------------|----------------------------------|
| Public Art | Lack of cleaning/caring for area |
| More trees | Cost of maintenance/funding |
| Better identified crosswalks | Lack of trash cans |
| Better signage | Lack of community participation |

Neighborhood Unification

- | | |
|----------------------------------|-----------------------------------|
| Knowing your neighbors event | Some communities blocked by gates |
| Community festivals | Lack of space for gatherings |
| Strong neighborhood associations | Lack of community participation |
| | Need for signage/identity |

Transit/Accessibility

- | | |
|--|--|
| North Ave is artery, close to institutions | Lack of pedestrian facilities along corridor |
| Lots of transportation options | Stigma of riding public transportation |
| Better signage | Gates/roads and barriers to access |

Identity

- | | |
|---------------------|-----------------------|
| Strong history | Vacant buildings |
| Major Institutions | Negative Reputation |
| Public art/ gateway | No historical markers |

CONNECTIONS

BARRIERS

VISIONING WORKSHOPS SUMMARY

APPENDIX

Memory Cards

remembering place

“One of my parents, aunts and uncles and cousins hanging out, having fun, and being free in their neighborhoods. In the process of development, I would hate to see a space where people like my parents and grandparents (who grew up here) to feel unwelcome to have fun and hang out outside!”

“When I moved to Baltimore I went first to Bolton Hill and was told North Ave was a boundary I shouldn’t cross. When I finally did cross it, I found a vibrant, friendly community. I came to see it as a gateway rather than a boundary, but it has been difficult to get others to see that.”

SNO-BALL STAND SUMMARY

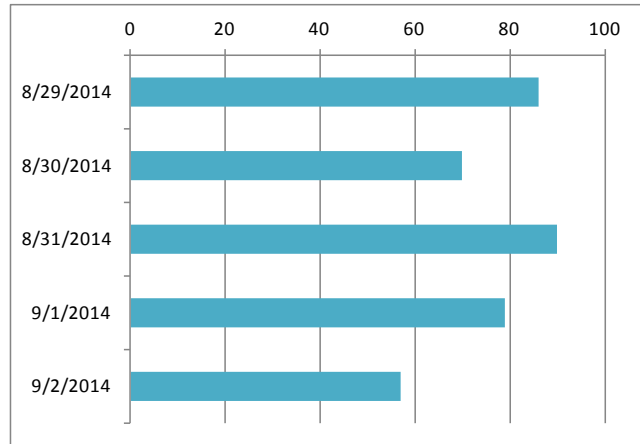
The Neighborhood Design Center received a generous grant from the Baltimore Community Foundation to aid in outreach on behalf of the West North Avenue Streetscape project. For five summer days, NDC representatives gave away free sno-balls to passers by on West North Avenue. The sno-ball stand was in a different location each day.

Those who received a free sno-ball were asked if they would answer questions about the streetscape, and their answers were recorded on a survey form. In some instances a group of respondents, such as a family or small group of friends, would have their collective answers documented on a single survey. In total 382 surveys were completed representing the views of 451 people.



photo by Jennifer Goad

Number of Surveys Collected by Day



Locations by Day

8/29/2014 - At end of Jones Falls Bridge by light rail entrance.

8/30/2014 - At Eutaw Street.

8/31/2014 - At Pennsylvania Avenue.

9/1/2014 - At Thomas Street

9/2/2014 - At Hilton Avenue.

SAMPLE SURVEY

How often are you on West North Avenue?

Rarely Sometimes Often Very Often Always

What parts of W. North Avenue do you use?

Near West Middle West Far West (write details below)

What activities do you do on W. North Avenue?

Do you live or work nearby? (neighborhood) _____

How do you get around?

car bike foot bus subway

What do you like about North Avenue?

What do you dislike or can be improved?

Do you feel safe on W. North Avenue? What ways can safety be improved?

Yes No Sometimes

Do you find crossing the street to be difficult at any particular intersections?

What additional amenities would you like to see in the streetscape (not buildings)?

Are you interested in participating in a bub planting along W. North Ave.?

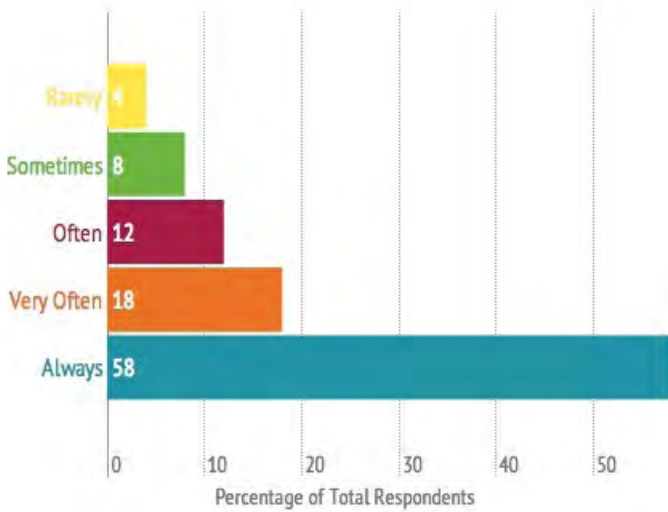
Yes No

Name and phone/email:



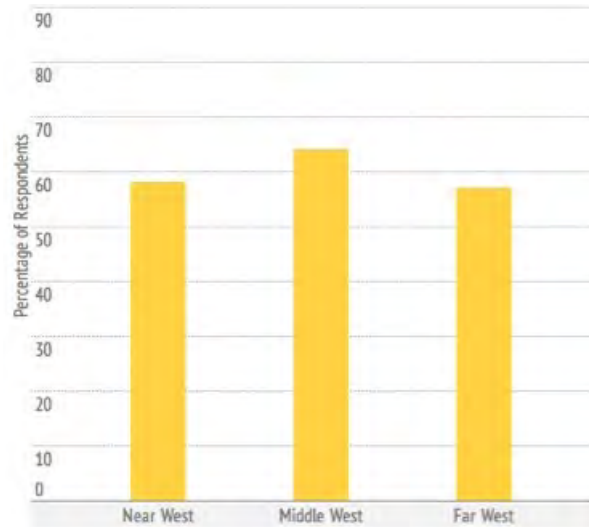
Eli Lopatin running the sno-ball stand and doing the Ice Bucket Challenge

How often are you on West North Avenue?



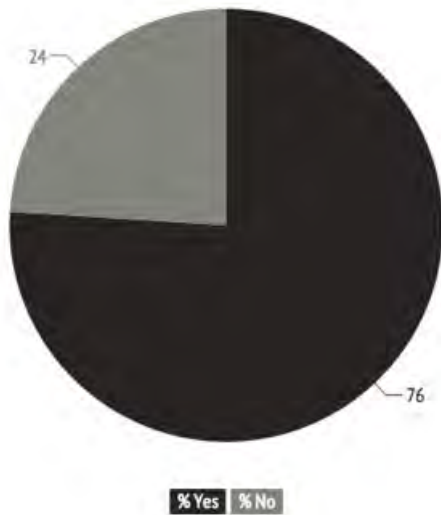
People who indicated they were on West North Avenue "every day" were documented as "always."

What parts of West North Avenue do you use?

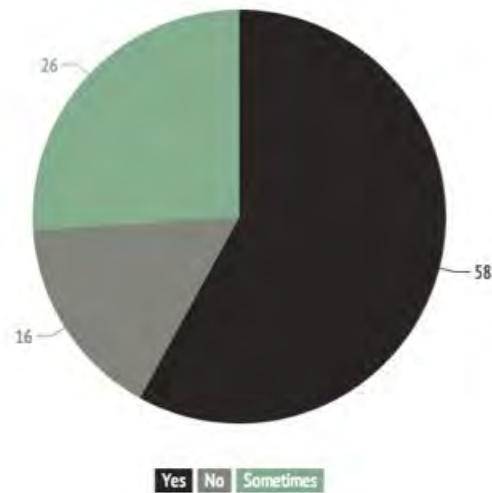


Question was asked open-ended, and answers were grouped by designations of corridor as used in this plan.

Do you live or work nearby?

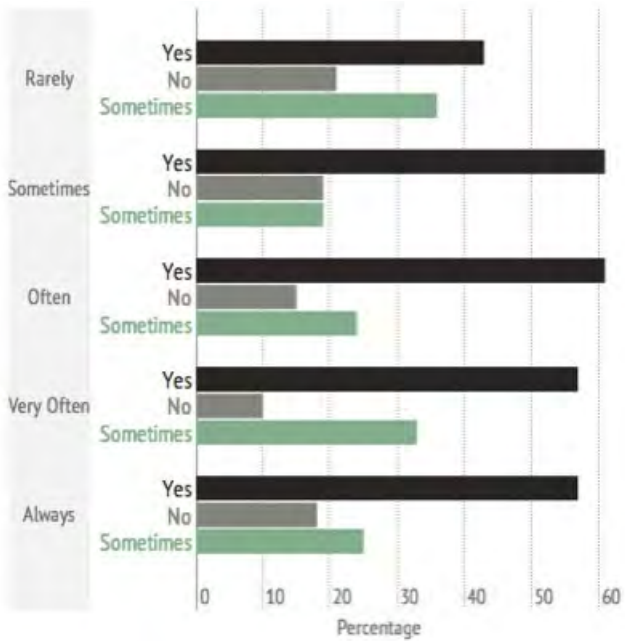


Do you feel safe on West North Avenue?

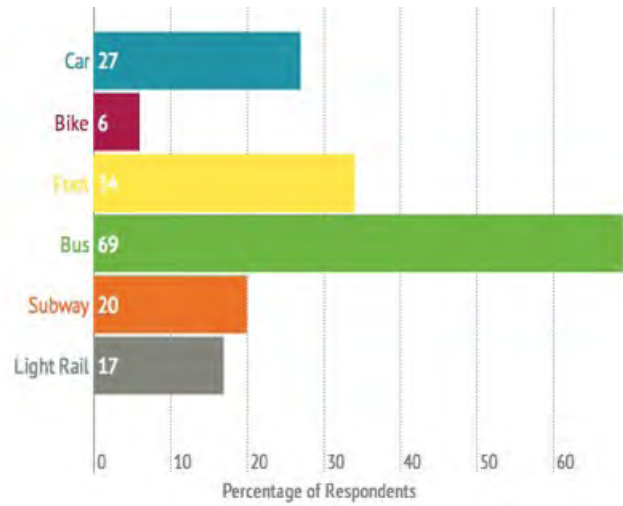


Participants who indicated they feel safe during the day but not at night were documented as "sometimes."

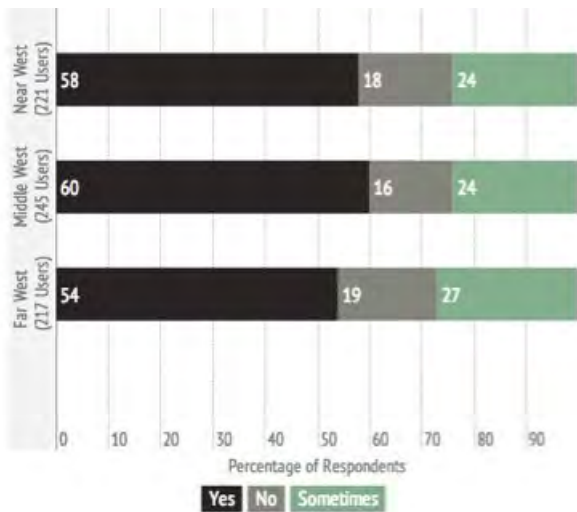
Perceived Safety of West North Avenue by Frequency of Use



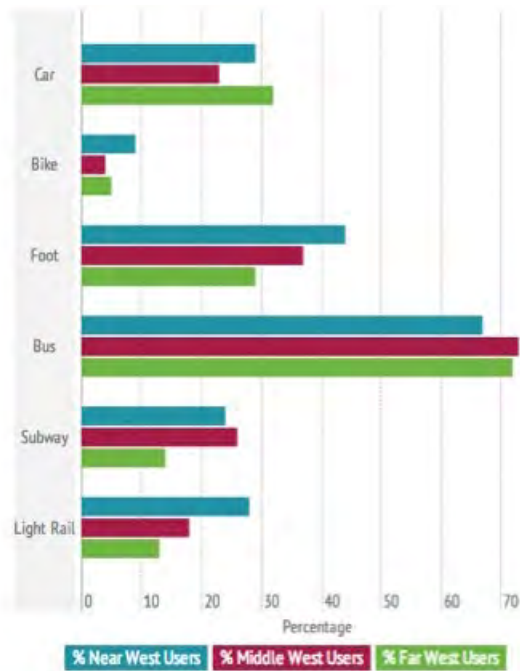
How do you get around?



Perceived Safety of West North Avenue Users by Section



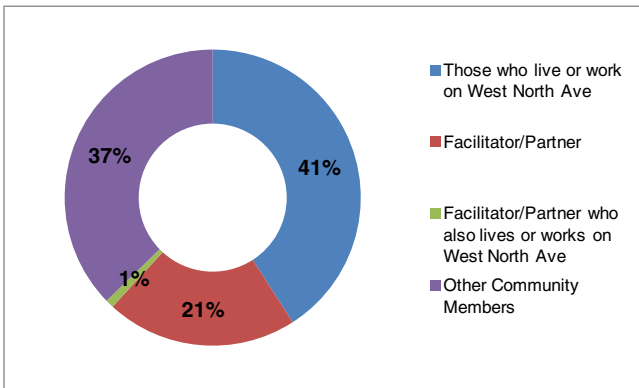
Preferred Means of Transportation for West North Avenue Users by Section



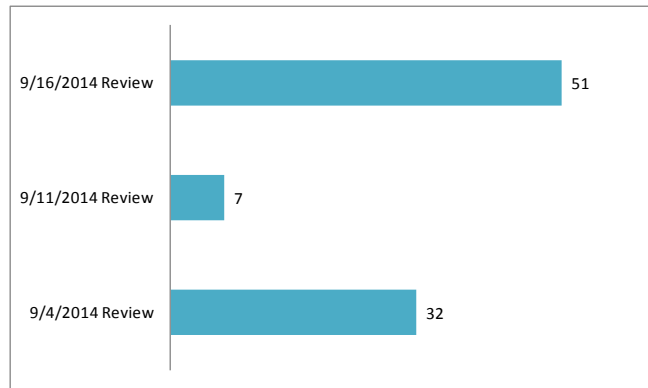
PUBLIC DESIGN REVIEW SUMMARY

The total number of individuals who attended at least one public design review was 110. This includes community members, core stakeholders, representatives from other partner organizations, and Neighborhood Design Center Volunteers. Many of these individuals attended more than one review.

Attendee backgrounds



Attendance per session, minus facilitators and partners



Attendance at the second review, located in the “Middle West” section of the corridor, was low. The NDC volunteer team and Core Stakeholders for Middle West are working on ways to gather additional input from this section prior to finalizing the second draft.



9/4/2014 review



9/11/2014 review

The agenda for each review session was the same.

A brief (re)introduction to the project was given by Laura Wheaton, program manager at NDC, outlining the progress to date and role these sessions play in the larger process. Attendees were assigned to one of six “stations” for the first break out session, and rotated to two additional stations in following break out sessions. During the break out sessions, a facilitator at each station gave a brief presentation of the concepts in the current draft of the conceptual streetscape plan, and then guided the discussion with target questions and helped take notes. Following the last break out session, facilitators remained at their stations to allow attendees time to visit stations they hadn’t seen yet and allow them the opportunity to record their input outside the facilitated discussions.



All 9/16/2014 review

The input documented here was transcribed directly from the large discussion sheets used at the public design reviews. Input is grouped by question and by review session. These transcriptions contain the contributions of many viewpoints, and may not be cohesive on all issues.

What are your thoughts on street trees?

The visioning workshops established that the street tree canopy should be considered in the plan. This question tried to start discussion on specific requests, thoughts, and concerns regarding the implementation of street trees along West North Avenue.

1st Design Review

Species recommendation

- No fruit trees
- Hearty herbs for the sidewalk (German thyme, Rosemary)
- Trees that smell good
- Linden, Pin oak, sweet gum, Ornamental cherry/pear

Arrangement

- Maintenance required
- Diverse array of trees
- Make sure tree shade does not block lighting
- trees should fill the spaces left over
- Set aside for maintenance

Effect

- Green reduces blight
- Trees are a key way to enhance the desirability of a place
- Help direct pedestrian traffic
- Definitely needs more shade
- Can calm traffic
- Planted median could be strong identifier(Santa Monica Blvd)
- I love a shaded Blvd(Minneapolis)
- Median & Sidewalk trees to create a tunneled corridor

2nd Design Review

- Busiest blocks have least trees
- Health Dept to library is the only block with trees

- 1700 Block is few to none (Originally were trees, removed with 80s)

3rd Design Review

- Training/Maintenance/Education
- trash/Street cleaning
- Plan community cleaning
- Unique to place
- Branding/Plans-Coppin beech tree
- High canopy
- Tie in to parks
- Impervious walks
- Tree health
- Facilitate Connections
- Fundraisers for tree
- Dedicated trees
- Urban botany
- Evergreen(sky pencil)

Planted bump outs can be beautiful, but require community upkeep. Where are these a good/bad idea?

Our feedback from the Department of Public Works is that successful planted bump outs, whether for stormwater or basic greening, require significant community investment. This question leads to discussions of what locations could be good sites for planted bump outs.

1st Design Review

Place recommendation

- Eutaw, Mt Royal are good places for planted bump out
- Definitely at Pennsylvania Ave at North Ave
- Bump outs should not be near bus stops (trash issue)
- Add bump outs to more narrow sections Definitely not at the main intersections

Recommended Conditions

- Storm water retention infrastructure
- Special bump outs for bicycles
- Sell the idea as neighborhood gate way

Good or Bad?

- Depends on what kind of development happens(might be too much of a hassle)
- Depends on intersection/conflicts with traffic engineering, but if it works, all for it.
- I love bump outs
- Shortening times and more space for pedestrians or shoppers
- as long as they can be maintained & don't become trash dumps

2nd Design Review

- Look at Drainage for bump outs
- North at Pennsylvania Ave
- Water access for planning maintenance_Right types of plants
- Neighbors used to be involved in maintenance but few do it now
- How much space do we hAve to move curbs-could 1' on either side make room for protected lanes
- Get traffic counts for area from city
- North Ave used to hAve trees up and down, many were removed for lack of maintenance
- Parking Day Idea/ Temporary Parks

3rd Design Review

- Good but clean
- Stone/Sow mat
- Marble/Cobble
- Coppin state tie in program
- Elementary/Middle school planting programs
- Bilal-outreach to students on design process
- Block competition
- Shirt sleeve to shirt sleeve

Which intersections would benefit from larger curb bump outs, even if it takes an extra parking space?

Larger (longer) curb bump outs provide extra sidewalk space for amenities like greening, cafe tables, bus stops, and bike racks in addition to shortening the street crossing distance for pedestrians. Sometimes that extra space comes at the expense of 1-2 street parking spaces.

1st Design Review

- Most of them, especially the Mt Royal to Madison corridor if commercial redevelopment is coming
- North Ave at Penn Ave definitely
- North Ave at Eutaw
- Around Park in advance of redevelopment of Apartments
- Perhaps look at mid block x ing opportunities
- Anywhere it might facilitate pedestrian crossings

2nd Design Review

- Problems of each intersections
- Mt Royal int. confusing as pedestrians , when is it your turn? Don't hAve enough time, difficult to know when to cross, push button, but no count-down
- Eutaw right turn down North Ave, Drivers make quick right turn, don't stop for pedestrians
- Under 2 islands
- Penn/North . Countdown recently added, very difficult to cross(drivers don't always stop for pedestrians)
- A lot of red light running+Stop sign marking
- A lot of jaywalking
- Parking on side streets available for businesses
- Solutions
- On-street parking is tough, parking on side

- streets (be careful of street sweeping signs)
- countdown timers more would help
- Audible signals help
- curb cuts/ramps help all (not just ADA)
- Curb cuts need snow shoveling
- Get rid of Left turns /respect pedestrians!
- Slow down cars
- Fulton SB/ turn on red and left turn signal from North

3rd Design Review

- North at Bentalou- buses
- North Ave at (Pennsylvania Ave and Monroe St and Fulton Ave)
- Hilton and Bloomingdale (Library, Fire department)
- Ellamont
- Coppin site distances

How can signal lights be improved at main intersections?

Pedestrian safety and accessibility was a common theme in the visioning workshops. This question specifically looks for input on signalling as we refine proposals on intersections.

1st Design Review

- How can signal lights be improved at main intersections?
- Countdown timers for pedestrians are badly needed
- Time major traffic flow better
- Left turn signals
- On a lane traffic, longer pedestrian walk times

2nd Design Review

Pennsylvania Ave at North

- buses run red lights too
- cars cut right turn on red ver. quickly (Bump outs might help or "no right on red" signs)
- Countdown signals can be helpful
- Sometimes I go under the subway to cross the

- street at Penn-North
- Drug problem - Penn Ave

Others

- Fulton St is challenging (island for crossing/ Liquor stores at intersections)
- Alcohol problem - Fulton and Eutaw
- Bentalou st has 2 elementary schools, buses, but no crossing guards
- North/Mt Royal confusing traffic pattern/lanes
- Coordinate signalization
- Slow down cars with signal adjustment
- Cameras at intersections to deter running reds ("California stop")
- Howard/North run res
- Kids/People in street collecting money, selling flowers - dangerous to due in the street
- Barn dance at Penn-North (All cross) - used to have more of these in Baltimore

3rd Design Review

- "Fulton at North repair street"
- Alleys around university build up of trash from residents
- Charles to Howard is good example of lighting
- Trash cans and recycling at Harbor East are good example
- Need shelter for rain at major intersections
- Row of vacants worst, target West of coppin blocks
- Board Vacants Paint front East Baltimore Aisquith at North

Trees

- Crepe Myrtle- Medium size trees and High canopy
- Hickory/ Elm
- Blooming (Cherry) trees that is opp clean issues
- Park Ave at North Ave More trees at intersection

Bus stop

- More benches at bus stops for seniors
- No loitering at bus stops
- Park East of Hilton on North Ave Bus by over High crime area
- "MICA Continuous side walks"
- "North at Warwick Remove curb/tripping hazard"
- Pedestrian refuge at corners

Additional input from at the Clearer Crossings Station

Key intersections for focus

- Pennsylvania Ave (wide, lots of foot traffic), Monroe (speed), Fulton (speed), Pressman (speed), Bloomingdale/Ellamont (wide, lots of foot traffic), Hilton (wide, left turns not streamlined), Coppin area, Metro area, Library and Fire Department destinations for peds

Crosswalks

- Crosswalk timers (countdowns) desired
- Flashing lights at crosswalks would help
- Walk signal only desired (no traffic allowed through while walk signals are up)
- Lights are currently timed for cars – all greens simultaneously means cars never slow
- Bump-outs increase pedestrian visibility
- Enforce law to stop for peds in crosswalks
- Crack down on jaywalking
- Break up distance across North Ave
- Use bump-outs for greening, trees, less road maintenance, shorter, safer crossings
- Keep kids from pulling on tree limbs
- Coppin's expansion means some medians have been removed
- Fulton, Monroe, Penn need ped countdowns
- Speed is a huge issue – North Ave designed as a highway in the 60s
- Bus stop shelters were removed for water line work and should be put back

Bus Stops

- Bus stop signage is not visible/distinct enough/recognizable (DC better example)

traffic calming

- Right turns on red are problematic for peds
- Left turns from north onto North Ave are difficult
- Educate at the school/home level the jaywalking/stop for peds laws
- Some intersections require turns that are greater than 90 degrees

Accessibility

- Need HC ramps and countdown timers to allow them enough time to cross (near Ellamont)
- Need countdown at Library and Fire Dep't
- Seniors live in apartment complexes (near Rose-dale), many churches in the area mean many

- seniors trying to cross the street

Turns:

- Left turns from North Ave onto Hilton difficult
- Roundabouts possible where many streets come together?
- Ensure 2 lanes of traffic each way remain open (don't want more bottlenecks)
- More signs at Coppin and North Ave needed because of existing blind spot coming from Science & Tech building
- Avoid creating blind spots for turns (Gwynns Falls Pkwy near Shoppers/Douglas with curved median & overhead canopy example of no sight distance/visibility)
- Desired agreement with MTA to provide more buses at peak hours to carry students to/from schools (13, 91 routes)
- Limited left turns are a good idea

Security

- Lighting at pedestrian level needed, alternate placement with trees

Students Crossing

Douglas and Carver are close by, as well as Robert Coleman – many students crossing street unsafely Bentalou intersection - bus stops are where many students pick up the bus to/from school Many students heading to Mondawmin – need safe crossings

Parking

- Move parking spaces to back of businesses & residences? 2400 block had garage space that is now green space – could be parking again
- Tax incentives for property owners who provide off-street parking
- Possible Smallwood to Payson
- Angled parking potential to slow traffic?
- Current parking space numbers are adequate

Vacants > Pocket Parks

- Use vacant lots for pocket parks with benches
- Ability to take a break without trespassing on others' properties
- Envision vacant buildings to be torn down in future utilizing that space for community green space
- Green spaces could be maintained by residents or by city – MOU/partnership would be required
- Create safe public spaces with adequate lighting

How can bus transit along W North Ave be improved?

Bus service was mentioned at the visioning workshops but we didn't get a lot of specific input on how to improve it. This question attempted to get more detailed feedback on bus service and how it is incorporated into the corridor.

1st Design Review

The location of Bike lane

- Bike lane in median
- concentrate bike lanes on denser areas(West)
- 2-way bike lane at curbside instead?

Lane arrangement

- Lane reduction would slow traffic too much
- interest in connecting from east to west on bike
- Center turn lane makes sense
- Avoid reducing number of lanes, like center turn
- I want to walk, bike on North Ave even if it means removing lane

Other

- not much congestion
- Photo displays at stops to show major along each route ahead
- Equity concerns with bike/bus stuff on eastern part
- planters in median to calm traffic
- Traffic lights need to be programmed to prioritize consistent movement on North Ave
- Increase the number of buses traveling on North Avenue

2nd Design Review

- One woman said that she uses the Penn north subway to cross North Ave
- Redo graphics with actual lane widths
- Get list of addresses & names on North Ave
- Do canvassing different options
- Primary goal is to increase distance between cars

and pedestrian, more predictable behavior and slow down traffic

- Left turn variation & Pennsylvania Ave is especially dangerous
- There is traffic counts data for North Ave in FHWA

Decision baseline for alternates in regards to multi-modal corridors

- get traffic counts to feasibility of road diet
- Get address list
- choose sample areas+present info+get votes
- coordinate with bulb planting outreach
- Goal provide clear community options on design choices

3rd Design Review

Road

- Curb bump out for buses
- Widened lanes
- Lane division to keep the traffic flowing

Bus stop

- Well lit bus stops
- Heating stations
- more seating on bus stops
- Designated bus stop or buses for school students

Other

- Braille post
- Buses equipped to carry bikes
- Space out scheduling
- Security along the route
- Synched traffic lights

Left turns on North Ave

- Designated turn lane
- Designated turn signal
- No designated turn lane - need lane for travel
- Not every street - Do selection traffic study
- Keep truck traffic to certain times of day
- Buses will hold up one lane traffic

Road Diet

- Need 2 lanes with lift cut in
- Can't have just 2 lane b/c of trucks
- Priority in 2 lanes
- Not parking during commuting hours(traffic study)

How should identity/branding be consistent, or how should it differ along the corridor?

A strong desire in the visioning workshops was to promote the identity of West North Avenue. However, we don't want to assume that identity would be consistent throughout the corridor. We want to see if community members would prefer a single North Avenue "brand" or smaller branded areas.

1st Design Review

- Overall sign design similar but could uniquely call out different neighborhoods along North Ave
- Emphasize distinct identity of neighborhoods with area/ along North Avenue
- Qualify statues/Artwork symbolizing the history of W North Ave
- Busking/Food carts on NE corner of North Ave at Penn Ave
- See natural park signage themes(unifying style, unique idling marks)
- Color markers to different "trails" leading from North Ave
- Historical tours by pedicab (eq.MICA students)
- Additional historical sites to consider are the Arch Social Club, the Metropolitan (MET) Theater, the Chesapeake Bank at North and Bloomingdale, the Wallbrook Movie Theater, and the Arundel Ice Cream Company Store
- Baltimore has a great history in civil rights, could this be a theme for the corridor?

2nd Design Review

- More unique bus stops (work with MTA, focus on major roads)
- Community gateway sign
- community gardens on vacant lots
- Utilizing artist

- Asset maps (bus stops/way finding station/Light rail/Libraries/MICA/Coppin)
 - Art on Vacants (Paint shelters/love letter to Bmore)
 - Fun crosswalks on Wallbrook/Brookfield/Penn
 - consistent style of way finding signs (North Ave as a connection to communities)
 - Mixing the history of communities and North Ave
 - North Ave Brand : City boundary, road that connects community, gateway to the city, mix of old and new
 - Marquee on signs highlighting community events
- Make Diagram
- Diagram of historical markers
 - Diagram of way finding signs
 - DC has plaque on the ground noting significance
 - Same style and font, with different colors on street signs, wayfinding markers

3rd Design Review

- Historic markers at lamp post
- Art from local schools/students (important for longevity; Respect)
- Logos
- Paint vacant buildings with consistent theme
- Lamp post with banners; Banners change with neighborhood;
- Colors change with neighborhood(colors of trash cans, vacant buildings, etc)
- Consistent streetscape elements to unify design but different colors to differentiate neighborhood

Where or what should be priorities for public art along West North Ave?

1st Design Review

Where?

- Jones Falls Bridge!
- On bridge and planted medians
- Storefronts/homes (MICA) come together to incorporated design

What?

- Archive photos (Temporary of on way finding)
- Murals of musical/theatrical/legacy of area (similar

- to those on Penn Ave in uptown)
- Bus stops could have different decorative themes based on the nearest neighborhoods to them
- MICA Sculpture garden on the bridge
- Create a colorful /artistic street scape that is diversely block specific input
- Make vacant buildings attractive (paint, mural)
- Storefront challenge for façade improvement
- Lights
- Make a focal point to get people together

How?

- Make people responsible for their actions
- Programs with youth getting them out of trouble
- Donating a square to decorate (express way on North Ave)
- engaging the school kids or youth to work on activities such as murals, planting
- Music events
- Must fix uncurling issues before promoting identity

2nd Design Review

- Getting MICA/Coppin/Community school on art projects
- Research grant opportunities

3rd Design Review

- Partner with Great Blacks in Wax
- North Ave known for politics & music
- Statues at parks
- Plaques at transit stations and historic site
- Stories with images of prominent community figures
- Focus art in new areas of interest, historic busines may be lost
- Walbrook Theater is prominent location
- Illuminate street signs better
- Difficult to brand entire corridor; focus on specific notes (MICA- art, Penn - music, Coppin - education)
- Incorporate posters with history
- Incorporate educational art like at Pierce's Park
- Transform vacant lots into play areas

Important

- Less talking; more action
- Engaging the younger generation is critical to longevity and preservation of art
- Community led art can boost morale and reduce crime

Locations for implementation

- Penn at North/Social club
- Coppin state Bridge
- Radio Station, north of 3100 block



What can we add to the plan to improve unaddressed safety/crime concerns?

Safety and crime were issues raised during the visioning workshops, and this question seeks to determine other ways of addressing those issues other than those already proposed in the draft plan.

1st Design Review

- More green businesses
- more tree cover
- Foot Patrols
- Better lighting

2nd Design Review

- Slow traffic
- Café's
- City maintenance
- Trash removal
- Coordination between MTAPD and BPD
- No Boundaries Coalition has street light report

3rd Design Review

- Emergency alarm at lights
- No lighting under coppin bridge is problem
- Right heading East before bridge no visibility
- Old lights at MICA
- Marble curbs
- Dimmer of brighter depending on commercial area

Where are different types of bus stops needed?

This question requests specific direction with regards to recommending locations for sheltered bus stops or other bus stop amenities.

1st Design Review

- What about parklet bus stops
- Creative bus stops (MICA or Morgan project)
- Go from Penn Ave to West
- Park at North Ave
- Add circulators to connect with bus stops
- Add a street car or trolley
- Shelters at Pennsylvania, Bentaou, and Bloomingdale

2nd Design Review

- South west Penn North
- Other than Penn North
- There is No transfer points
- No need

3rd Design Review

- Need shuttle buses
- Shelters(Safety concern)
- Want covered stops but safety is important
- Bike lanes(Lower priorities vs. travel lanes)
- Designed bus stops for school students
- - Need a parking lane?
- Perhaps remove 1 lane of traffic for people to drop off
- Do not sacrifice parking b/c residents need it - other folks can walk
- include handicap parking

How can the Jones Falls Bridge be improved? (physically)

The bridge under the JFX and over the Jones Falls is the connection between the west and central portions of North Avenue. This question targets how that connection can be improved.

1st Design Review

Plant & Art

- Paint bridge in a way to highlight Architectural details
- Performing and artist on bridge
- Sculpture&Public Art
- Planting boxes(All the way cross)
- Trees for greening

Additional street furniture

- Better lighting under overpass(like the colored lights on presentation board)
- Street lamps and decorative railings
- Barrier between pedestrians and traffic
- Major MICA art initiative
- Take Advantage of two levels crossing
- Lighting(Period lighting)
- Seating benches

Lane arrangement

- Transform stream from a current drainage ditch
- Do not narrow car lane, same number of car lane. but add bike lane.
- Current elevated side walk to walk space(Like stairs)
- Bike lanes
- Widen sidewalks(maybe make big concrete slab on South side pedestrian accessible)
- Where sidewalks wide, reduce size and repurpose to trees&plants or Artistic display
- Make bridge a destination

I-off ramp from 83

- Change confused signals
- to wide to cross
- wider on-ramp to 83 S
- Catwalk over 83S off ramp
- Dedicated signal for traffic to 83s from Mt Royal
- Plants/Trees/Shade

How can the Pennsylvania Avenue intersection be improved? (physically)

Pennsylvania Avenue and North Avenue is a major intersection for cars, a focus point for commerce in the corridor, and the site of the only subway station on the entire corridor.

2nd Design Review

- Shelters(MTA) Highest density section
- Widen SW Corner to enable more pedestrian to catch buses
- More time for pedestrians to cross street
- Bring back the barn-dance
- Better synchronized lights
- Improve buses MTA Line
- Historical Art for Penn Ave "With explanation, markers"
- Street Performing n Plazas
- Attractive landscaping
- Coordinating lights + Cross walks
- Trees, Seating, Fountain
- Comfort Station, Water
- Improved Pedestrian scale lighting
- Signage "to connect length of North Avenue of way finding signs
- Circulators, street cars
- Coppin's foot bridge of rail bridge Art
- Enhance Plaza with Fountain, trees, flowers and public art
- Bike Racks
- Connect college shuttle "All"
- Artful crosswalks at major intersections(i.e.-Penn)
- Lighting on bridge(or under bridge)
- Greening/other aesthetic improvements to bridges(Jones falls or coppin)

How can the Coppin State area be improved? (physically)

Coppin State University is a major presence in the far western portion of North Avenue, and the streetscape transitions from residential to university to commercial very rapidly. The team wanted guidance on how to address those transitions in the conceptual master plan.

3rd Design Review

- Lighting under the CSX bridge
- gateway sign (Main street)
- Resurface streets
- Stations (Kiosks) to promote education(at bus stops)
- (Vacants are an issue)
- Bring college friendly stores
- Permits for resident parking so students can't utilize parking spaces
- Share/offer access to fitness center
- promote identity of neighborhoods (signage)
- Safe senior center/area for seniors to meet safely
- Street art
- Fountain
- Lighting (Pedestrian scale)
- Bicycle lanes

Greening

- mowers/landscaping/trees
- Arches
- more trees(take out bad trees)

CSU

- Welcome center (map of area)
- signs/pictures of successful graduate from CSU to promote CSU
- Historic Places/markers promoting coppin's history anyone who has helped the community
- Flags/Banners (school colors)

FLOWER BULB PLANTING

With funding from the Baltimore Community Foundation, the Neighborhood Design Center coordinated a flower bulb planting day along West North Avenue with Volunteer Team members, Core Stakeholders, and community residents. Groups in Near West, Middle West, and Far West kicked off at staggered intervals over the morning of November 15th, 2014, planting daffodil bulbs in medians, vacant lots, and front yards (with permission). The flowers should return each spring.



Near West planting, all photos by Laura Wheaton

APPENDIX | FLOWER PLANTING



Middle West planting, photo by Laura Wheaton



Middle West planting, photo by Laura Wheaton



Far West planting, photo by Laura Wheaton



Blooming in spring 2015, photo by Eli Lopatin

Greening

Greening can benefit West North Avenue in many ways. It creates a more attractive streetscape that increases potential for commercial activity and private development, reduces the urban heat island, absorbs stormwater, creates definition between public and private or pedestrian and vehicular zones, and provides visual continuity.

7. The plan proposes that consistent street trees be added to every block (both sidewalks) along West North Avenue.

- Support
 Do Not Support

7a. If you checked “Do Not Support,” please tell us why.

Check all that apply.

- I want more trees, but this plan proposes too many.
 I want more trees, but this plan proposes too few.
 I want trees, but this plan proposes too large of tree pits.
 I don't want street trees at all on West North Avenue.

Other: _____

8. At focal areas along the West North Avenue corridor, this plan proposes that pits with low ornamental shrubs or grasses be added to the curb extensions. Plantings would need to be maintained by the community.

Gateway planting pits could be implemented by BCDOT when curb extensions are created. Or planters can be added to current corners by community groups.

- Support
 Do Not Support

8a. If you checked “Do Not Support,” please tell us why.

Check all that apply.

- More intersections should have planted curb extensions, not just focal points.
 There should be no additional planting at intersections.
 I worry that planting areas won't be maintained. I only support the proposal if there is a community organization or institution who agrees to maintain each planting area.

Other: _____

9. This plan proposes adding additional trees, shrubs, and ornamental plants to the existing medians along West North Avenue. *

Existing medians occur roughly between Madison and Mount Royal.

- Support
 Do Not Support

10. This plan proposes that community organizations along West North Avenue implement community planting programs for front yard/step beautification. *

An example of a community planting program is the Bloom Your Block program in Union Square

- Support
 Do Not Support

Branding

West North Avenue can be celebrated through integration of elements into the proposed streetscape that reinforce the identities of the neighborhoods it serves. These identities derive from the history and culture of those neighborhoods. Through “branded” elements the identity of both the general streetscape and specific neighborhoods can be reinforced.

12. This plan proposes that a coordinated historical marker series (approx. 12 signs) be added to West North Avenue. *

To implement, community organizations would need to coordinate and seek funding.

Support
 Do not support

13. This plan proposes that streetscape elements such as benches, bike racks, signage, lights, bus shelters, etc, be branded so as to reinforce the West North Avenue brand and identity.*

Support
 Do not support

14. This plan proposes that when implementing elements of the streetscape plan, organizations follow a three-part branding strategy. Some design elements are coordinated throughout the corridor, but reinforce branding of “ART” in the Near West area focused on the MICA campus, branding of “MUSIC” in the Middle West area focused on the Pennsylvania Avenue intersection, and branding of “EDUCATION” in the Far West area, focused on the Coppin State campus. *

Support
 Do not support

14a. If you checked “Do Not Support,” please tell us why.

Check all that apply.

- I support a coordinated branding strategy in three parts, but I don’t agree with the themes selected.
- I support a coordinated branding strategy, but it should be zoned by neighborhood rather than into three larger parts.
- I think all of West North Avenue should have one coordinated branding strategy, it shouldn’t vary along the corridor.
- I don’t support a coordinated branding strategy for West North Avenue.

Other: _____

Multi-Modal Corridor

Making West North Avenue more equitable to all modes of transportation will increase pedestrian safety and pedestrian accessibility, facilitate smoother and more reliable bus transit, and improve access to West North Avenue, thereby increasing its potential development value. This plan proposes multiple, coordinated tactics to achieve this goal.

15. This plan proposes a maximum travel lane width of 11 feet, and that travel lanes currently wider than 11 feet be narrowed. *

Narrower lanes help naturally slow traffic and reduce speeding. 11 feet is the minimum recommended lane width by BCDOT for buses and in a truck route

Support
 Do not support

16. This plan proposes that the Baltimore City Department of Transportation (BCDOT) complete a traffic study of West North Avenue to examine coordinating traffic signals and restricting left turns at intersections without left turn lanes, as well as to evaluate other proposals in this plan. *

Support
 Do not support

17. This plan proposes that protected bike lanes be added between Howard Street and Madison Avenue. Protected bike lanes are bike lanes that are blocked from moving traffic by a row of street parking, a curb, or a series of bollards. *

Support
 Do not support

18. This plan proposes reducing travel lanes between Howard Street and Madison Avenue to no more than two lanes in each direction. Extra space will be used to add protected bike lanes. *

Support
 Do not support

19. This plan proposes that curb extensions be installed at all intersections in both directions wherever feasible. *

Curb extensions are bump outs of the sidewalk that help pedestrians step out into the parking lane before they cross the roadway.

Support
 Do not support

19a. If you checked "Do Not Support," please tell us why.

Check all that apply.

- I support curb extensions only across West North Avenue, but not across intersecting streets.
- I support curb extensions across intersecting streets, but not across West North Avenue.
- I support curb extensions only at major intersections.
- I support curb extensions only at bus stops.
- I do not support any curb extensions.

Other: _____

Priorities for Roadway Striping West of Madison

Between Hilton and Madison, West North Avenue averages approximately 60 feet in width, which is currently enough space for 2 travel lanes in each direction and street parking on both sides (8+11+11+11+11+8=60). There is not room to add additional left turn lanes or bike lanes unless existing elements are reduced.

Reducing travel lanes to one in each direction has been shown to slow traffic and reduce speeding, resulting in a more "main street" environment. However, based on community input so far, this plan proposes leaving things as they are and not removing parking or travel lanes in order to add bike or left turn lanes. (this excludes the Coppin State University campus which is not covered by this part of the plan). If travel speeds drop to 30mph or lower, the current right travel lane could be a shared bike/car lane, or sharrow.

20. Please rank the following elements in order of importance to you for the portion of West North Avenue between Hilton and Monroe. *

Mark only one per row.

	Top Priority	Second Priority	Third Priority	Lowest Priority
Keeping parking on both sides	_____	_____	_____	_____
Keeping two travel lanes in each direction	_____	_____	_____	_____
Adding left turn lanes	_____	_____	_____	_____
Adding bike lanes	_____	_____	_____	_____

21. Please rank the following elements in order of importance to you for the portion of West North Avenue between Monroe and Madison. *

Mark only one per row.

	Top Priority	Second Priority	Third Priority	Lowest Priority
Keeping parking on both sides	_____	_____	_____	_____
Keeping two travel lanes in each direction	_____	_____	_____	_____
Adding left turn lanes	_____	_____	_____	_____
Adding bike lanes	_____	_____	_____	_____

Public Art

22. What type of public art would you most prefer to see along West North Avenue? *

Check all that apply.

- Murals
- Median art
- Infrastructure (bike rack, bus shelter) as art
- Specially painted crosswalks
- Art on the bridge over the Jones Falls
- Additional art under the JFX bridge
- None of these

Street Furnishings and Community Gathering Spaces

Street furnishings include objects in the streetscape like benches, bus shelters, lighting, signage bike racks, rtrash cans, etc. Integration of these elements into a cohesive whole is important. Consistency with some types of amenities can extend across all of West North Avenue to unify the many diverse communities.

23. This plan proposes adding pedestrian scale lighting throughout West North Avenue, with a historic acorn style that is currently used along Central North Avenue. *

- Support
- Do not support

24. This plan proposes installing at least one U-style bike rack per block along West North Avenue, and larger bike racks at commercial areas, transit stations, and libraries. *

- Support
- Do not support

25. This plan proposes installing a waste can at every bus stop and regularly along the corridor, especially at commercial areas. This plan also advocates a waste collection schedule that prevents overflowing. *

- Support
- Do not support

26. This plan proposes that all but the smallest bus stops should have a bench at minimum. All major transfer bus stops should have a bus shelter with rain protection. The plan also encourages communities to work with MTA on ways to facilitate art through bus benches and shelters. *

- Support
- Do not support

27. This plan proposes that local community organizations adopt vacant lots where possible and develop them as community gathering spaces. This plan also encourages property owners along West North Avenue to incorporate community gathering spaces (plazas, parklets, and/or sidewalk cafes) into their properties. *

- Support
- Do not support

28. Are there any additional comments you would like to share?

29. Are there any additional organizations or partnerships we should consider as we develop the final plan?

Thank you for your feedback! Please return this survey to a project representative or member of Coppin Heights CDC, Druid Heights CDC, or RHIC.

Demographic Info

176 Responses

Are you a current resident of one of the neighborhoods immediately bordering West North Avenue?	Yes 143 81%	No 33 19%				
Do you live or work in a building with a W North Ave address?	Live 31 18%	Work 22 13%	Neither 122 70%			
How often do you travel on West North Avenue?	Always / Daily 71 40%	Very Often 47 27%	Often 31 18%	Sometimes 25 14%	Rarely 2 1%	
How do you get around on West North Avenue?	Car 160 91%	Bike 28 16%	Foot 75 43%	Subway 19 11%	Bus 33 19%	Light Rail 23 13%
Which part of West North Avenue do you frequently visit most?	Near West 115	Middle West 41	Far West 50	Don't Frequent 8		
Have you previously participated in the West North Avenue Streetscape design process?	Yes 44 25%	No 132 75%				

Level of Support

The plan proposes that consistent street trees be added to every block (both sidewalks) along West North Avenue.	Support 160 91%	Do Not Support 16 9%
At focal areas along the West North Avenue corridor, this plan proposes that pits with low ornamental shrubs or grasses be added to the curb extensions. Plantings would need to be maintained by the community.	Support 149 85%	Do Not Support 27 15%
This plan proposes adding additional trees, shrubs, and ornamental plants to the existing medians along West North Avenue.	Support 163 93%	Do Not Support 13 7%
This plan proposes that community organizations along West North Avenue implement community planting programs for front yard/step beautification.	Support 161 91%	Do Not Support 15 9%
This plan proposes that a coordinated historical marker series (approx. 12 signs) be added to West North Avenue.	Support 156 89%	Do Not Support 20 11%
This plan proposes that streetscape elements such as benches, bike racks, signage, lights, bus shelters, etc, be branded so as to reinforce the West North Avenue brand and identity.	Support 155 88%	Do Not Support 21 12%
This plan proposes that when implementing elements of the streetscape plan, organizations follow a three-part branding strategy. Some design elements are coordinated throughout the corridor, but reinforce branding of "ART" in the Near West area focused on the MICA campus, branding of "MUSIC" in the Middle West area focused on the Pennsylvania Avenue intersection, and branding of "EDUCATION" in the Far West area, focused on the Coppin	Support 150 85%	Do Not Support 26 15%
This plan proposes a maximum travel lane width of 11 feet, and that travel lanes currently wider than 11 feet be narrowed.	Support 135 77%	Do Not Support 41 23%
This plan proposes that the Baltimore City Department of Transportation (BCDOT) complete a traffic study of West North Avenue to examine coordinating traffic signals and restricting left turns at intersections without left turn lanes, as	Support 152 86%	Do Not Support 24 14%

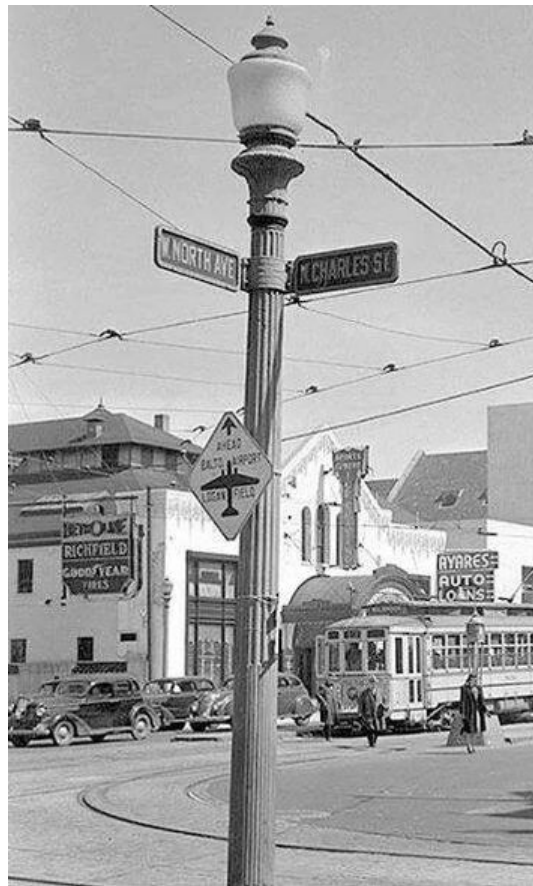
This plan proposes that protected bike lanes be added between Howard Street and Madison Avenue. Protected bike lanes are bike lanes that are blocked from moving traffic by a row of street parking, a curb, or a series of bollards.	Support 154 88%	Do Not Support 22 13%
This plan proposes reducing travel lanes between Howard Street and Madison Avenue to no more than two lanes in each direction. Extra space will be used to add protected bike lanes.	Support 139 79%	Do Not Support 37 21%
This plan proposes that curb extensions be installed at all intersections in both directions wherever feasible.	Support 151 86%	Do Not Support 25 14%
This plan proposes adding pedestrian scale lighting throughout West North Avenue, with a historic acorn style that is currently used along Central North Avenue.	Support 166 94%	Do Not Support 10 6%
This plan proposes installing at least one U-style bike rack per block along West North Avenue, and larger bike racks at commercial areas, transit stations, and libraries.	Support 151 86%	Do Not Support 25 14%
This plan proposes installing a waste can at every bus stop and regularly along the corridor, especially at commercial areas. This plan also advocates a waste collection plan...	Support 168 95%	Do Not Support 8 5%
This plan proposes that all but the smallest bus stops should have a bench at minimum. All major transfer bus stops should have a bus shelter with rain protection. The plan...	Support 166 94%	Do Not Support 10 6%
This plan proposes that local community organizations adopt vacant lots where possible and develop them as community gathering spaces. This plan also encourages property owners along West North Avenue to incorporate community gathering spaces (plazas, parklets, and/or sidewalk cafes) into their properties.	Support 154 88%	Do Not Support 22 13%

Selected Detail Questions

	Top Priority	Second Priority	Third Priority	Lowest Priority	
Far West - Keeping parking on both sides	60 34%	38 22%	36 20%	42 24%	
Far West - Keeping two travel lanes	80 45%	40 23%	34 19%	22 13%	
Far West - Adding left turn lanes	51 29%	63 36%	42 24%	20 11%	
Far West - Adding bike lanes	59 34%	32 18%	32 18%	53 30%	
Middle West - Keeping parking on both sides	61 35%	42 24%	29 16%	44 25%	
Middle West - Keeping two travel lanes	80 45%	35 20%	34 19%	27 15%	
Middle West - Adding left turn lanes	80 45%	35 20%	34 19%	27 15%	
Middle West - Adding bike lanes	59 34%	56 32%	45 26%	16 9%	
What type of public art would you most prefer to see along West North Avenue?	Murals 118 67%	Median Art 90 51%	Infrastructure 121 69%	Crosswalks 75 43%	Over Bridge 114 65%
					Under Bridge 65 37%

West North Avenue Streetscape Conceptual Master Plan

Health Impact Assessment



Baltimore City Health Department

2014-2015



Acknowledgments

Baltimore City Health Department

Johns Hopkins Bloomberg School of Public Health

Neighborhood Design Center

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EXECUTIVE SUMMARY

The current study is a Health Impact Assessment (HIA) of the West North Avenue Streetscape Plan, an urban redevelopment project for a major east-west corridor in Baltimore City. The objective of this HIA is to assess the likely impacts of alternative streetscape features on the health of residents in the area, to identify design priorities that will be most conducive to a healthy built environment, and to generate recommendations to promote a healthier neighborhood through the West North Avenue Streetscape Plan. This HIA considers alternative design elements and identifies priority features for redevelopment, with the aim of influencing the final design plan to be most beneficial for health.

In consultation with community members, changes occurring through five pathways were identified as most critical for their effects on health in the area: **crime, social cohesion, commercial development, walkability, and housing prices**. For each of these major pathways, this study assessed the baseline conditions in the area, investigated the expected impacts on health, and developed recommendations to maximize positive health effects and minimize any health risks posed by the streetscape plan.

This study compiled data and information from a variety of sources. Stakeholder engagement is a critical component of HIAs; this was elicited through a workshop intended to understand community members' health-related concerns about the area and particularly as they relate to the redevelopment initiative. To understand baseline conditions along the study corridor, a variety of secondary data sources were utilized, including the Census and American Community Survey, as well as data compiled by the Baltimore Neighborhood Indicators Alliance, Baltimore City Health Department, and other city agencies. Primary data collection was conducted by the Neighborhood Design Center, who assessed existing pedestrian and traffic-control infrastructure along the corridor and conducted surveys with pedestrians in the area. Information to inform expected impacts of the streetscape plan primarily came from literature reviews on each of the major redesign components and pathways leading to health outcomes.

The assessment of baseline conditions along West North Avenue revealed important existing health-related challenges. Crime rates, particularly for drug-related offenses, are much higher along the corridor than for the city as a whole. Many residents reported feeling unsafe, which may limit outdoor physical activity and community engagement. Low levels of social cohesion are also affected by and contribute to disengagement, particularly regarding the physical appearance of the area. High densities of vacant lots and buildings, as well as infrequent garbage pick-up, all contribute to the dilapidated conditions. Community members expressed a strong desire for more commercial development along West North Avenue, particularly to improve access to healthier food and provide employment opportunities. In its current condition, the corridor is not very walkable, deterring both pedestrians and other forms of active transportation. Area residents expressed a desire for improved biking infrastructure and better access to public transportation. Housing prices vary substantially along the West North Avenue corridor, with prices in Near West above the city median and prices in Middle and Far West well below the city median. Throughout the corridor, a significant proportion of households

spend too much of their incomes on housing, leaving insufficient funds to purchase other goods and services critical for health.

The impact assessment found that many of the proposed features of the streetscape plan have the potential to bring health improvements to the population living and working along West North Avenue. To reduce crime, adding additional street lighting and renovating vacant lots and buildings may be the most critical components. Improving the physical environment through public art and unified signage also has the potential to increase social cohesion, by improving community identity and engagement. Commercial development can bring a range of health improvements through access to employment, raising incomes and increasing access to health insurance, as well as through access to healthier food outlets and health services. The addition of bike lanes and new green infrastructure, as well as various traffic calming measures, should greatly improve the walkability of the corridor. Collectively, the improvements catalyzed by the streetscape plan are likely to raise housing prices in the area, which may cause displacement of current residents. If displacement occurs, it will likely worsen existing health and economic inequities by race; this should be avoided through anti-displacement policies.

Through this HIA process, recommendations were developed to improve public health through the streetscape plan. Considering the pathways that relate changes in the physical features of the corridor to health outcomes, the baseline conditions in the study area, and the expected impacts of different streetscape elements, these recommendations indicate priorities for redesign components, identifying those most critical for improving health.

For each focal pathway, the following table lists recommendations and identifies priority locations within the study area where each recommendation should be implemented most urgently. These recommendations are intended to maximize positive impacts on health and minimize health risks through the implementation of the West North Avenue Streetscape Plan. The Baltimore City Health Department worked closely with the Neighborhood Design Center during the development of the plan, and many of these recommendations are reflected in the final plan submitted to the Department of Transportation. Other recommendations are outside the scope of the current streetscape plan, but address closely related challenges to be considered by the city and community groups. This report is intended to facilitate further positive community changes, by building on the initial success of the streetscape plan.

Table 1. Recommendations.

<u>PATHWAY</u>	<u>RECOMMENDATION</u>	<u>PRIORITY LOCATIONS</u>
Crime	<p>Install pedestrian-scale street lighting to reduce the incidence of crime and increase pedestrians’ perceptions of safety</p> <ul style="list-style-type: none"> ○ Existing lighting between Charles and Howard can be used as a model for the rest of corridor to create continuity 	<ul style="list-style-type: none"> ○ Under Coppin State University bridge
	<p>Ensure existing and new bus stops are well-lit and not located near abandoned lots or buildings, to ensure the safety of transit users while waiting</p>	<ul style="list-style-type: none"> ○ Bus shelters recently removed for water line work ○ Major bus stops at Pennsylvania Ave., Bentalou St., and Bloomingdale St
	<p>Convert vacant buildings and lots to new uses and seek tenants and businesses as occupants, to reduce their use for criminal activities</p>	<ul style="list-style-type: none"> ○ Immediately west of Coppin State University
	<p>Explore ways to leverage the streetscape plan’s physical environment changes to discourage drug sales in the area (e.g. converting lots or blocks known as drug markets to new uses)</p>	<ul style="list-style-type: none"> ○ Pennsylvania Avenue intersection ○ Between N. Ellamont St. and N. Rosedale St.
	<p>Improve response times for emergency services</p>	
Social Cohesion	<p>Install additional public trash cans and increase the frequency of municipal garbage service, to reduce the perception of neighborhood disrepair</p> <ul style="list-style-type: none"> ○ Trash and recycling cans in Harbor East can be used as models ○ Send workers and supervise clean up as part of community service sentencing for minor offenders 	<ul style="list-style-type: none"> ○ Alleys near Coppin State University
	<p>Convert vacant lots to community gardens, playgrounds, and green spaces, to encourage social engagement and communal recreation</p>	
	<p>Convert vacant buildings to livable homes and businesses, to improve local housing and employment options</p> <ul style="list-style-type: none"> ○ Link to the city’s Vacants to Value program 	
	<p>Install green infrastructure along sidewalks and medians and engage community groups in their upkeep, as a mechanism for community involvement</p>	

	Commission art projects, selected by community members, to fill large public areas, including crosswalks and as temporary uses of vacant space	<ul style="list-style-type: none"> ○ Pennsylvania Avenue crosswalk ○ Walkbrook crosswalk ○ Brookfield crosswalk ○ Jones Falls bridge ○ Coppin State University bridge
	Develop community programming for public spaces (e.g. outdoor movies) <ul style="list-style-type: none"> ○ Reinstate barn dances ○ Street performances in plazas 	
	Create unified signage along the corridor to develop a neighborhood identity and highlight points of historical interest	<ul style="list-style-type: none"> ○ Arch Social Club ○ Metropolitan Theater ○ Chesapeake Bank ○ Walbrook Movie Theater ○ Arundel Ice Cream Company Store
	Elicit community preferences for phasing in of streetscape elements to address community priorities most urgently	
	Use HIA findings to advocate for other aspects of West North Avenue revitalization, using changes in the physical environment to catalyze broader community changes	
Commercial Development	Provide incentives to businesses to encourage new commercial outlets, in order to increase access to goods, services, and employment for local residents <ul style="list-style-type: none"> ○ Involve existing business owners, particularly those in the retail-heavy 3100 block 	
	Seek health services as priority new businesses to improve residents' access to medical and dental care	
	Seek healthy food retailers, particularly major grocery stores, as priority new businesses to increase the availability of nutritious food options	
	Encourage hiring of local residents to reduce unemployment and increase incomes	
	Invest in commercial development as a tool to reduce illegal commercial activity, particularly drug sales	
	Increase operating hours for community centers, e.g. YMCA, to improve the availability of community spaces for meeting and recreation	
	Utilize various redesign components to attract tourists and residents from other parts of the city (i.e. link transit and signage to other parts of city)	<ul style="list-style-type: none"> ○ Wayfinding signs to and from downtown ○ Improved public transit to downtown

	<p>Evaluate the current parking capacity to determine the necessary balance of spots needed to support local businesses</p> <ul style="list-style-type: none"> ○ Use tax incentives to encourage the development of off-street parking (e.g. lots behind storefronts) 	<ul style="list-style-type: none"> ○ Former parking lot behind the 2400 block, which could be revitalized
Walkability	<p>Install a bike lane to create a safe, bikeable route connected to other existing and planned bike infrastructure in the city</p>	<ul style="list-style-type: none"> ○ Extend from Charles St. to Hilton Pkwy.
	<p>Improve public transit, including the frequency of bus service and connections to the light rail, Metro, or Circulator, to reduce car dependency and encourage active transportation</p>	
	<p>Install speed bumps and reduce speed limits near schools, playgrounds, and nursing homes, to reduce the occurrence and severity of vehicle collisions among vulnerable populations</p>	<ul style="list-style-type: none"> ○ Bentalou St. – two elementary schools ○ Rosedale St. – senior apartment complex ○ Frequently used crosswalks by students heading to Douglas, Carver, Mondawmin, and Coleman schools
	<p>Repair and improve sidewalks to facilitate walking for transportation and recreation</p>	
	<p>Preserve and create green space to encourage physical activity</p> <ul style="list-style-type: none"> ○ Engage community groups in maintaining green space 	<ul style="list-style-type: none"> ○ 1700 block has no trees
	<p>Install bike racks, particularly near commercial outlets and public facilities, to promote bicycling as a form of transportation</p>	<ul style="list-style-type: none"> ○ Library ○ YMCA ○ Coppin State University ○ Pennsylvania Ave. Metro station ○ Maryland Institute College of Art (MICA) ○ Great Blacks in Wax Museum
	<p>Create a raised median along the entire corridor or install pedestrian islands at major intersections, to improve pedestrian safety</p>	<ul style="list-style-type: none"> ○ Pennsylvania Ave. ○ Fulton St. ○ Monroe St. ○ Pressman St. ○ Bloomingdale/Ellamont St. ○ Hilton St.

	Repaint crosswalks, including adding stripes where needed	<ul style="list-style-type: none"> ○ Ashburton St. ○ Rosedale St. ○ Whitmore St.
	Reconstruct curb ramps to be ADA compliant	<ul style="list-style-type: none"> ○ Fulton St. ○ Morris St. ○ Jordan St. ○ Maryland St. ○ Howard St. ○ Charles St.
	Install additional pedestrian-scale street lighting to promote physical activity and reduce vehicle collisions	
	Target intersections near alcohol outlets for additional traffic calming and pedestrian safety features to reduce the incidence of vehicle-pedestrian collisions	<ul style="list-style-type: none"> ○ Fulton St. ○ Eutaw St.
Housing Prices	<p>Enact anti-displacement policies to preserve affordable housing for current residents</p> <ul style="list-style-type: none"> ○ Grant tax credits to existing residents ○ Create new low-income housing units ○ Provide free assistance with financial planning for home ownership 	
	<p>Continue to involve community development corporations and residents in the streetscape plan</p> <ul style="list-style-type: none"> ○ Place a community representative on the decision-making board 	
	Establish community-led monitoring of streetscape plan implementation, to continue community leadership and preserve residents' interests	
	Coordinate the streetscape plan with other city housing initiatives, such as Vacants to Value	

INTRODUCTION

West North Avenue Streetscape Plan

History of North Avenue

North Avenue was formerly the northern boundary of Baltimore City, separating the city from Baltimore County. In the early 1900's, the Baltimore streetcar system ran along this stretch of North Avenue. Today, it is a major east-west corridor through the center of the city (a major portion doubles as U.S. Highway 1), with Charles Street splitting the street into East North Avenue and West North Avenue (Figure 1). During the middle of the 20th century, West North Avenue had manufacturing businesses, beautiful theaters, and historic churches (Figure 2). However, beginning in the 1970's, manufacturing industries declined in the city, resulting in closed businesses and cutting investments and jobs in the area. During the latter part of the 20th century, West North Avenue became characterized by high unemployment, high vacancy rates, prevalent drug use and drug traffic, and frequent crime. Today,

historic buildings are in disrepair (Figure 3) and a large portion of both commercial and residential units sit vacant. A revitalization project for East North Avenue has been in progress over the past few years, but to date, the west side has not been targeted with a comprehensive redevelopment plan.

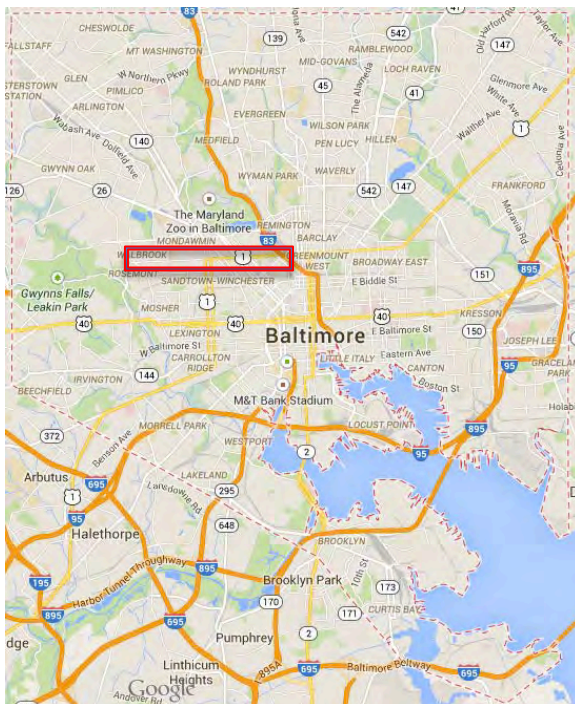


Figure 1. Baltimore City, with West North Avenue study area indicated in red.

Source: Google Maps.



Figure 2. Corner of West North Avenue and Pennsylvania Avenue (center of study area), circa 1922-1947.

Source: Maryland Historical Society.
<http://www.mdhs.org/digitalimage/street-scene-corner-pennsylvania-avenue-and-north-avenue-baltimore>

Figure 3. Parkway Theater, (eastern boundary of study area), in 1915 (left) and in 2012 (right).

Source: Baltimore Heritage. http://explore.baltimoreheritage.org/items/show/16#.U6haQfldX_M



Evolution of the Streetscape Plan

Community development corporations representing one or more of the neighborhoods bordering West North Avenue have periodically developed Master Plans for revitalization of portions of the corridor and surrounding blocks, but a lack of funding or city government backing for these initiatives has led to inaction. In 2013, community groups from three neighborhoods along the corridor joined with a City Councilman from the district to develop a new plan for redeveloping the entire length of West North Avenue. The Neighborhood Design Center, a non-profit organization specializing in urban design, committed their technical support and the Department of Transportation joined the project, solidifying the city's involvement. Together, these groups are drafting the redevelopment plan throughout 2014 and 2015, aiming to complete the design by the end of the summer in 2015. The scope of the streetscape plan is the space between the building facades on both sides of West North Avenue, including sidewalks, crosswalks, vehicle lanes, and all their components.

A critical aspect of the West North Avenue Streetscape Plan is community input. A series of workshops over the course of the plan's development seek to elicit community members' ideas for the

redesign. In addition, door-to-door outreach is used to understand community demands and prioritize components for redevelopment. Initial outreach revealed better pedestrian safety/accessibility, more commercial development, greening, and more trash/recycling points as features in high demand. Community members' comments reflect a desire for a clean, safe street that is attractive to pedestrians and shoppers, and provides a sense of community.

Rationale for Study

The current study is a Health Impact Assessment of the West North Avenue Streetscape Plan, an urban redevelopment project for a major east-west corridor in Baltimore City. The streetscape plan was in the design stage at the time of this study; final plans are expected by late 2015 and will then be handed off to BCDOT for funding consideration and implementation. This HIA considers alternative design elements and identifies priority features for the redevelopment, with the aim of influencing the final design plan. The objective of this HIA is to assess the likely impacts of alternative features on the health of residents in the area, to identify design priorities that will be most conducive to a healthy built environment, and to generate recommendations to promote health through the West North Avenue Streetscape Plan. Some issues identified in this study are likely to be outside the scope of the streetscape plan – which only addresses the area between the building facades on either side of West North Avenue – but many tangential issues are critical to improving health along the corridor. This report can be used as a tool for advocates working to build upon the streetscape plan, to facilitate other complementary positive changes in the area.

This HIA is being conducted simultaneously with the development of the streetscape plan and as a result, the exact design components to be included were not finalized at the time this report was written. Furthermore, the Baltimore City Department of Transportation has expressed that the final plan will likely be implemented in phases, due to the funding available for the project. By assessing the likely health effects of the streetscape plan's objectives, this report aims to also aid in establishing priorities for the various redesign components, by identifying those most critical for improving health.

Study Area

West North Avenue is three miles long, bounded by Charles Street on the east side and North Hilton Street on the west. Many amenities exist along West North Avenue, which provide potential for a successful revitalization of the currently dilapidated area. Two of the largest parks in Baltimore border this corridor; on the east side, Druid Hill Park lies a few blocks to the north and Gwynns Falls Park is at the western end. A metro station at Pennsylvania Avenue, near the center, connects the area to the rest of the city. There are two universities: the Maryland Institute College of Art, on the far eastern side, and Coppin State University in the middle. Interesting and historic architecture, including the Howard Street bridge and old churches (Figures 4 and 5), characterize the corridor; there is also a library and the Great Blacks in Wax Museum. However, the area suffers major challenges to be addressed with redevelopment: large volumes of high-speed vehicle traffic, infrequent garbage pick-up, drug traffic, vacant buildings, and the absence of sit-down restaurants and grocery stores.



Figure 4. Howard Street bridge (near eastern boundary of study area).

Source: http://explore.baltimoreheritage.org/items/show/14#.U6hZEfldX_M

Figure 5. Church at the corner of West North Avenue and Hilton Parkway (western boundary of study area).

Source: <http://www.kilduffs.com/Churches.html>

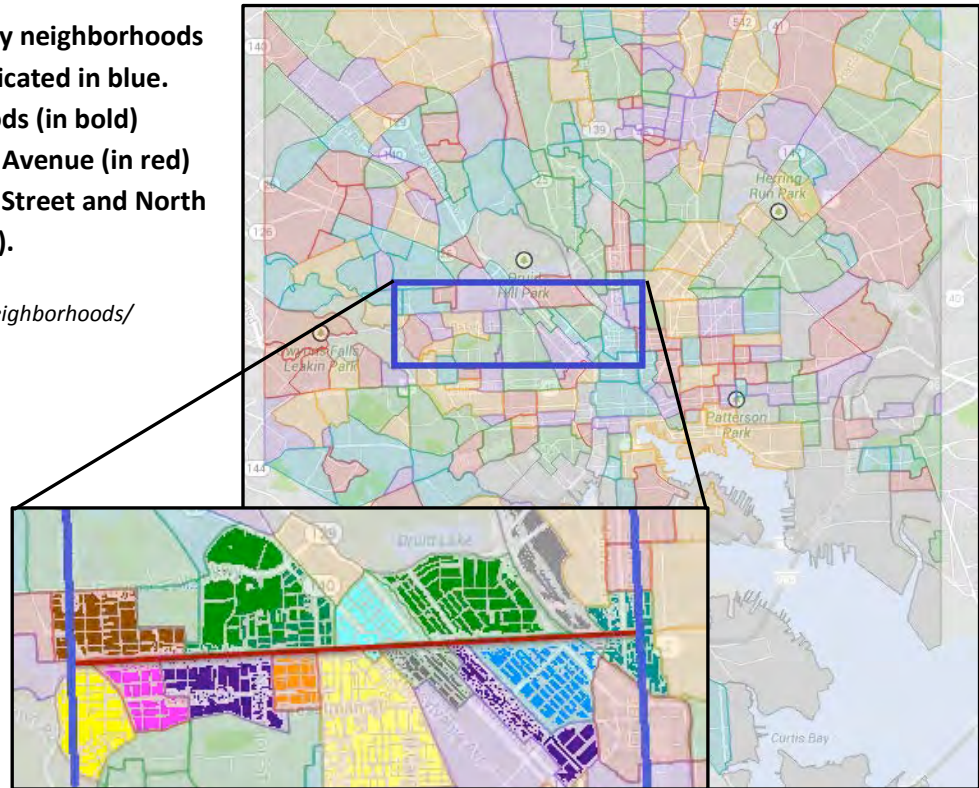


Baltimore is frequently described as a “city of neighborhoods”, each with its own community and identity. West North Avenue forms the boundary of many neighborhoods directly to the north and south of the corridor. Using the *Live Baltimore* neighborhood boundaries, fourteen distinct neighborhoods border West North Avenue between Charles Street and Hilton Street (Figure 6). From east to west, these are: Charles North, Jones Falls Area, Bolton Hill, Reservoir Hill, Madison Park, Druid Heights, Penn North, Sandtown-Winchester, Mondawmin, Easterwood, Coppin Heights/Ash-Co-East, Walbrook, Northwest Community Action, and Rosemont. For the purpose of developing the streetscape plan, this corridor is subdivided into three sections: Near West, Middle West, and Far West. McCullough Street forms the boundary between Near West and Middle West and Fulton Street demarcates Middle West and Far West. The eastern neighborhoods generally have higher median household incomes and housing prices, whereas the central and western neighborhoods are some of the poorest and have among the highest vacancy rates in Baltimore.

Figure 6. Baltimore City neighborhoods with area of detail indicated in blue. Fourteen neighborhoods (in bold) bordering West North Avenue (in red) between North Hilton Street and North Charles Street (in blue).

Adapted from:

<http://livebaltimore.com/neighborhoods/>



Spring 2015 Protests

Near the completion of this study, a tragic event occurred that deeply affected the communities along West North Avenue. On April 19, 2015, Freddie Gray, a resident of the Sandtown-Winchester neighborhood bordering West North Avenue, died due to injuries sustained while in police custody. In the wake of his death, a number of protests erupted in Baltimore City, garnering national media attention and the Mayor's declaration of a state of emergency in the city.

The intersection of West North Avenue and Pennsylvania Avenue, in particular, was an epicenter of protest activity, some of which became violent and damaged buildings along the corridor. The anger expressed in these protests reflected outrage over the behavior of police towards these communities and Freddie Gray, in particular, as well as deep frustrations over persistent racial injustices reflected in law enforcement policies.

The West North Avenue community played a critical role in encouraging peaceful protest activity and bringing the violence to a quick resolution. Community members voluntarily cleaned up damaged buildings and trash from the streets, local churches held trainings on peaceful means of protesting, community groups distributed food, and parents and other leaders urged youth to refrain from violence. These actions reflect the engaged leadership and sense of community that exist along West North Avenue – qualities that also created the initiative to develop the Streetscape Plan and that will sustain positive redevelopment in the area.

Health Impact Assessment

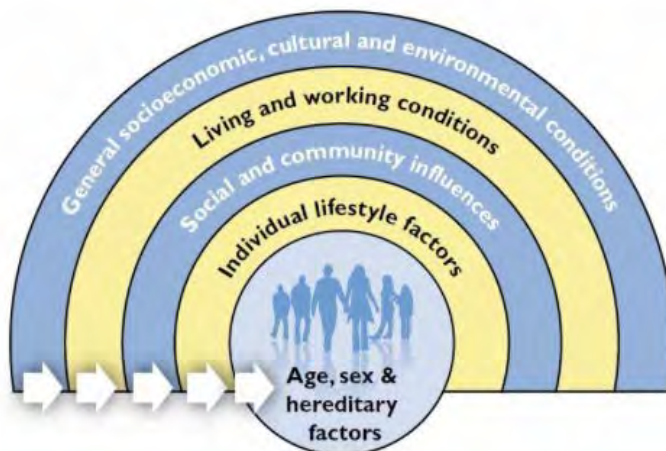
What is Health Impact Assessment?

The National Academy of Sciences defines health impact assessment (HIA) as “a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population.” (1) Intended for application to policies outside the health sector, HIAs add a health perspective to the decision-making process to facilitate consideration of likely public health effects when planning new policies or programs. Use of HIAs continues to steadily increase in the U.S.; as of early 2014, nearly 400 HIAs have been completed or are in progress (2) HIAs are conducted on a range of policies from various sectors, including transportation, urban planning, and housing, and at all levels of government, from local to federal.

Timing is a critical element of the HIA process. These studies must be prospective, estimating expected positive and negative effects on health, and should occur while a proposed policy, program, or project is in the negotiation or planning phase, so that decisions are amenable to HIA study findings. Another key feature of HIAs is stakeholder engagement. In the HIA process, consultations with members of affected communities and decision makers are critical, so that findings and recommendations reflect the needs and priorities of communities and are reasonable given the political context of policy decisions.

Policies for Health

Improving health is often thought of primarily in relation to health services, but these mostly provide curative care and play a relatively minor role in preventing the development of health conditions. The major determinants of health include individual characteristics, such as biology and genetics; community attributes including safety and sanitation; and components of the natural and



man-made environments that provide exposure to or protection from various risks, among many other important factors. This perspective is referred to as the *social determinants of health framework*, which emphasizes the multiple levels of health determinants and the interdependence of determinants at each level (Figure 7). (3)

Figure 7. Social determinants of health framework. Source: http://www.health-inequalities.eu/HEALTHY/EN/about_hi/health_inequalities/

In recognition of the range of factors affecting health, Health in All Policies (HiAP) emerged as an approach to policymaking that emphasizes the health effects of decisions made in all government sectors. It is formally defined as “a change in the systems that determine how policy decisions are made and implemented by local, state, and federal government to ensure that policy decisions have beneficial or neutral impacts on the determinants of health.” (4) This approach is endorsed by the National Association of County and City Health Officials. HIAs are an important tool for HiAP, by providing information on potential health impacts and helping to inform policies made in other sectors.

Healthy Baltimore 2015

In Baltimore City, health priorities are encompassed in the Healthy Baltimore 2015 objectives (Figure 8). (5) The Baltimore City Health Department identified these ten target areas to focus efforts for improving the health of city residents, which should be accomplished through policies and programs in the health sector, as well as in other sectors, that are conducive to health. The present study is one of several HIAs conducted by the Baltimore City Health Department and its collaborators, all of which seek to contribute to the goal of making healthy policies in Baltimore City and progressing towards the Healthy Baltimore 2015 objectives. (6)

Figure 8. Healthy Baltimore 2015 objectives.

<u>Healthy Baltimore 2015 Priority Areas</u>	
1 Promote quality health care access for all	6 Recognize / treat mental health care needs
2 Be tobacco free	7 Reduce drug use and alcohol abuse
3 Redesign communities to prevent obesity	8 Encourage early detection of cancer
4 Promote heart health	9 Promote healthy children and adolescents
5 Stop the spread of HIV and other STDs	10 Create health promoting neighborhoods

Health Inequalities

Significant health disparities exist among Baltimore City residents, in terms of the prevalence of diseases, including diabetes and HIV/AIDS, the occurrence of injuries, and overall mortality. (13)Table X displays inequities by race, education, and income, in self-rated health among Baltimore City residents. Variations by these three categories, as well as by geography, are particularly acute and highly interrelated. A striking example is the more than twenty-year difference in life expectancy between city neighborhoods: this ranges from 62.9 years in Upton/Druid Heights to 83.1 years in Greater Roland Park/Poplar. (14)Such health disparities are concerning because they indicate unequal access to the resources needed to lead a healthy life, and because they indicate preventable illness and premature death.

Fair or Poor Health Status			
	2012 Percent	2012 Ratio	2012 Grade
Baltimore City	22.96%	1.46	C
Maryland	15.76%		
Black	26.54%	1.81	D
White	14.66%		
Men	23.28%	1.02	A
Women	22.72%		
<HS	44.65%	4.56	F
HS Grad or Equiv	26.92%		
College Graduate	9.80%		
Income <\$15,000	40.05%	6.14	F
\$15,000-24,999	39.39%		
\$25,000-49,999	26.88%		
\$50,000-74,999	10.38%		
>=\$75,000	6.52%		

**Source: BCHD Analysis of data from the Maryland Behavior Risk Factor Surveillance System
Question: "How is your health in general?"*

Health inequalities can be reduced through effectively designed and implemented public health programs, health policies, and other public policies. This HIA considers ways to maximize health gains, with a particular emphasis on reducing inequities and prioritizing the least-healthy groups of city residents. Improving the health of Baltimore City as a whole requires narrowing health disparities through a focus on key subpopulations, including racial and ethnic minorities, older adults, and those with less education and low incomes.

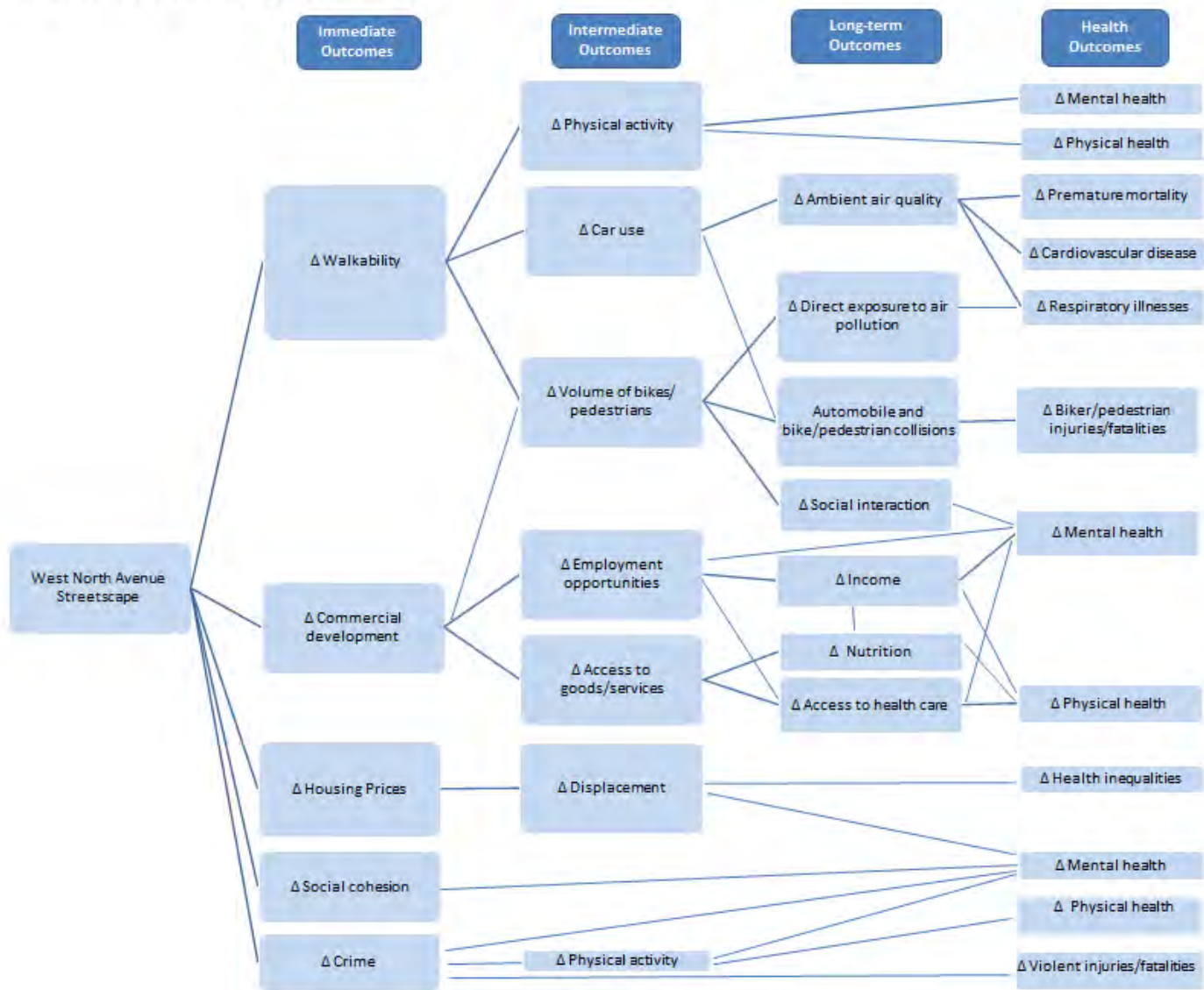
Table 2. Percent of Baltimore City residents reporting their overall health as "fair" or "poor", by race, education, and income. Taken from: Baltimore City Health Disparities Report Card 2013.

Health Impact Assessment of the West North Avenue Streetscape Plan

To guide this study, we developed a pathway diagram, in collaboration with community stakeholders, to illustrate the most important ways the West North Avenue Streetscape Plan relates to health outcomes (Figure 9). The left side of the diagram lists “immediate outcomes” – direct changes to the physical and social environment along West North Avenue that are expected to result from the streetscape plan. Moving across the diagram, to the right, resulting intermediate and long-term outcomes are listed, which are anticipated to evolve over time. The far right side lists health outcomes that are likely to be affected by these preceding changes. These key relationships provide the focus for this study.

Figure 9. Pathway Diagram

West North Avenue Streetscape Health Impact Pathways



Research Questions

As illustrated in the pathway diagram, five primary research questions guided this study:

1. How will the streetscape plan impact health in Baltimore City through changes in **crime** rates along West North Avenue?
2. How will the streetscape plan impact health in Baltimore City through changes in **social cohesion** along West North Avenue?
3. How will the streetscape plan impact health in Baltimore City through changes in **commercial development** along West North Avenue?
4. How will the streetscape plan impact health in Baltimore City through changes in **walkability** along West North Avenue?
5. How will the streetscape plan impact health in Baltimore City through changes in **housing prices** along West North Avenue?

STUDY METHODOLOGY

HIA Practice Standards

The Society of Practitioners of Health Impact Assessment (SOPHIA) endorses a set of practice standards to guide the conduct of HIAs, which stipulate that an HIA should include seven steps: (7)

1. **Screening** – Assess the value an HIA would add to the decision making process for a proposed policy or program, based on the policy’s potential to affect health, likelihood of having inequitable impacts, timing to influence decisions with HIA results, and the availability of necessary data.
2. **Scoping** – Identify, in close consultation with stakeholders, the most important likely health impacts and their links to the policy; establish geographic boundaries and define the population of interest; define research questions; and develop a data compilation and analysis plan.
3. **Assessment** – Describe the baseline health conditions and important health inequalities in the population; synthesize the best available evidence to project estimated impacts on health; and acknowledge methodological assumptions and strengths and weaknesses of the data.
4. **Recommendations** – Using the evidence compiled in the assessment, provide specific recommendations to adapt the policy to maximize health benefits and minimize harms to health as a result of the policy.
5. **Reporting** – Provide a clear documentation of the study methods, findings, and recommendations that is publicly available and useful for decision-makers to inform the development or implementation of the policy or program.
6. **Monitoring** – Develop a short-term and long-term plan for monitoring decision outcomes and health impacts.
7. **Evaluation** – Analyze the HIA study process and its impacts on policy decisions and health outcomes.

West North Avenue HIA

Scoping Workshops

A community workshop was held on July 1, 2014 at the Druid Heights Community Center, the headquarters of one of the community development corporations leading the redevelopment initiative and centrally located along the corridor. Citizens Planning and Housing Association, a Baltimore community engagement organization, led recruitment efforts to notify area residents about the workshop, which was open to anyone. Approximately fifteen community members attended, representing four of the five zip codes along the corridor, along with representatives from each of the organizations involved in the design process and HIA study.

additional articles were reviewed. If there was not established consensus, additional articles were reviewed, with a particular focus on research produced in the last five years, to identify the most recent findings. In each section of the report, the expected direction of impacts and the degree of consensus are discussed for all conclusions drawn from literature review.

Secondary Data Sources

Baseline data on population demographics and health outcomes were compiled from a variety of sources, including city government agencies, the Baltimore Neighborhood Indicators Alliance, and the American Community Survey. Data were selected for the most local level available to describe the West North Avenue area, however, the units of analysis differ across data sources. Neighborhoods form the basis of communities, but are not typically used for statistical purposes. Most information is presented for community statistical areas (CSAs), which comprise an average of three to four census tracts; some data are available at the census tract level. Eight CSAs and twelve census tracts have some portion of West North Avenue within their boundaries; population-weighted averages for these areas were used to generate statistics for the West North Avenue study area. Table 3 displays basic demographic indicators for the West North Avenue population, as defined by either CSAs or census tracts. It is clear from this table that key characteristics for the study population are similar, regardless of which of these boundaries are used. The biggest discrepancies are for Near West; when using CSAs versus census tracts, this encompasses a larger population that is substantially different in terms of sociodemographic characteristics.

Table 3. Comparison of demographic indicators for West North Avenue, using Community Statistical Areas or census tracts to define the population. (Statistics based on census tracts refer to only nine census tracts immediately surrounding West North Avenue.) *Source: BCHD analysis of BNIA data; NDC analysis of 2008-12 American Community Survey.*

	<u>Community Statistical Areas</u>			<u>Census tracts</u>		
	Near West	Mid West	Far West	Near West	Mid West	Far West
Total population	48,799	34,906	28,581	8,685	7,812	11,099
% African-American	25.7%	93.6%	96.5%	52.9%	95.9%	95.5%
% White	58.4%	3.2%	0.8%	35.1%	2.4%	1.8%
Median income	\$40,972	\$22,581	\$30,813	\$34,831	\$22,952	\$28,947
% College education	50.2%	10.9%	9.9%	47.2%	10.2%	11.3%
% Unemployed (age 16-64)	5.5%	14.6%	14%	5.4%	11.1%	11.9%

To assess inequalities within the study area, some data are presented by subsection of West North Avenue. Near West is comprised of three CSAs: Greater Charles Village/Barclay, Medfield/Hampden/Woodberry/Remington, and Midtown; Middle West is three CSAs: Penn North/Reservoir Hill, Sandtown-Winchester/Harlem Park, and Upton/Druid Heights; and Far West is two CSAs: Greater Mondawmin and Greater Rosemont.

Primary Data Collection

The Neighborhood Design Center (NDC) conducted primary data collection along the study corridor to assess the existing infrastructure at all intersections, including the types of crosswalks and pedestrian signals. In addition to the input community members shared during the various community meetings, NDC also conducted an informal survey along West North Avenue during one week in late August. Passersby were asked to volunteer to answer a few questions about their uses and impressions of West North Avenue, including things they would like to change. 382 surveys were conducted; these responses are incorporated throughout the report.

FINDINGS

BASELINE CONDITIONS

CRIME



Baltimore City has struggled with a high crime rate for decades, although this has steadily improved in recent years.(8) In 2012, the property crime rate in Baltimore City was 63% higher than the national average and the violent crime rate was more than triple the U.S. average.(9,10) A recent survey of mothers in Baltimore City about experiences with neighborhood violence showed a high proportion of mothers were exposed to violence and other criminal activity in the past year.(11) 51% had witnessed a beating or stabbing, 27% had seen someone get shot, and 41% reported seeing a drug deal “many times.” While not representative of Baltimore City as a whole, these strikingly high proportions of mothers witnessing serious violence or frequent criminal activity are troubling.

The property crime rate along West North Avenue is slightly higher than the city average and the violent crime rate is substantially elevated in the Far West and Middle West sections of the corridor. The city average violent crime rate is 14.7 incidents per 1,000 population; these rates for Far West and Middle West are 20.4 and 24.0, respectively. (12) The juvenile arrest rate is particularly high along West North Avenue – more than double the city average. (12) This is in large part driven by the high number of juvenile drug-related arrests in Middle West: the rate in this section of the corridor is almost triple that in the other portions of West North Avenue and more than four times the average rate for the rest of Baltimore City. (12) The rate of narcotics calls for service in Middle West is nearly quadruple the citywide average. (12) Community members at the Scoping workshop raised drug sales as a major issue in the area, particularly on the portion of West North Avenue between N. Ellamont St. and N. Rosedale St., in the Far West section. Residents referred to this as “an open-air drug market for over forty years.”

Certain physical environment features have a strong link to crime. Adequate street lighting is an established crime deterrent. Adding more lighting along the corridor was mentioned by residents participating in the Scoping workshop and ranked as an item of high importance at the community design workshops.

Vacant lots and buildings, which are associated with higher levels of prostitution and drug use and sales, (13)are disproportionately concentrated in certain areas of Baltimore City, particularly along

the Middle West and Far West regions of West North Avenue. Figure 11 shows a) vacant lots and b) vacant buildings in Baltimore City, with the study area marked in yellow. The densities of both vacant lots and vacant buildings in the Near West portion of the corridor are lower than for the rest of the city; this problem is most significant in Middle West, where the vacant lot density is approximately double, and the vacant building density is more than triple, the averages for the rest of the city. (14)

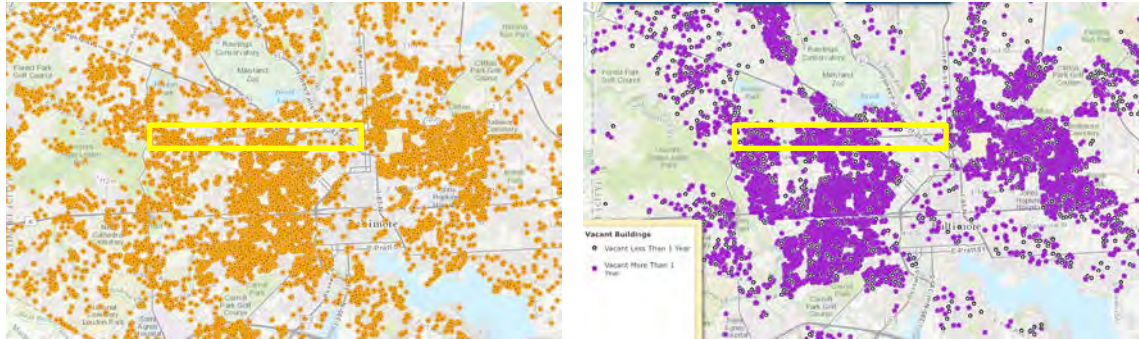


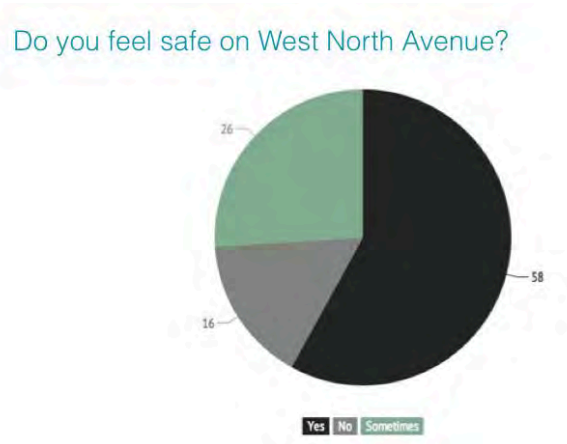
Figure 11. Vacant Lots (Left) and Vacant Buildings (Right) in Baltimore City

Source: Baltimore CityView

Higher rates of crime are consistently found to be associated with greater poverty and other indicators of concentrated disadvantage, (15) particularly signs of neighborhood decay, (16) which the streetscape plan seeks to reverse. Crime has direct effects on the health of individuals who are victimized because many crimes result in physical and emotional injuries, and in some cases, fatalities. While violent crimes can leave victims with substantial physical injuries; a significant proportion of victims of all types of crimes, violent and non-violent, suffer mental health consequences. (17)

The level of crime in a neighborhood affects residents’ perceptions of safety; in unsafe areas, chronic fear can result in substantial stress and anxiety, adversely affecting mental health. (18,19) Personal characteristics influence individuals’ perceptions of safety; fear of crime is consistently found to be greater among women than men (19) and higher among previous victims of crime. (16) A survey of approximately 400 pedestrians along West North Avenue found over 40% do not feel safe along the corridor at least some of the time (Figure 12). In community meetings, unsafe conditions were specifically mentioned as a deterrent to exercise in the area.

Figure 12. Perceived safety among survey respondents along West North Avenue, August 2014. Source: Neighborhood Design Center, Summary Input of Sno-ball Surveys, 2014.



Research supports the conclusion that people living in areas they perceive as unsafe engage in less physical activity, (20) which has further negative consequences for physical and mental health. Among an elderly population, variation in physical activity was explained more by neighborhood crime than by individual health status. (21) In a national study, the level of crime in an area was significantly associated with individual differences in amount of walking, even after accounting for many individual characteristics. (22) This relationship was stronger among people living in one location throughout their life, suggesting the effect may accumulate over time. The relationship between crime and physical activity may partially explain the observed association between higher neighborhood crime and poorer individual health. (18)

SOCIAL COHESION



Social cohesion and community identity featured prominently in discussions at the Scoping workshop. Participants mentioned the lack of community pride and the need for residents to take greater care of their neighborhoods. A memorable example was of an area business sweeping trash from the front of its building to the area in front of a neighboring building, rather than removing it or attempting to clean a broader section of the street. Various physical environment features are tied to



neighborhood social cohesion. Trash and vacant buildings, and green space and public art, are linked to weaker and stronger social cohesion, respectively. Each of these issues was raised as a major priority in community meetings.

Garbage is a noted problem along West North Avenue and community members explicitly mentioned a desire for cleaner streets. In Baltimore City, the average rate of dirty street and alley reports is 70.5 per 1,000 residents. This rate is more than double in Middle West – 145.8 – and also high in Far West – 115.1; Near West is lower than the city average. (12)

Residents also raised a concern for equity in redeveloping the streetscape, noting the differences among the various sections of the corridor. One participant stated, “We already have two

Baltimores; we don't need three North Avenues." The importance of prioritizing the most needed areas among the corridor and integrating efforts across the subsections was discussed.

Area residents cited strong neighborhood associations as one strength of the corridor; as of 2010, there were 177 neighborhood associations and block groups in the 8 CSAs bordering West North Avenue. (23) One frequently used indicator of civic engagement is voter participation. Voting rates in each of these neighborhoods are between 35% and 49%, which are similar to, but on the low end, of voting rates in the rest of Baltimore City. (23) Better and unified signage along West North Avenue was raised as an addition that could further contribute to a sense of community identity.

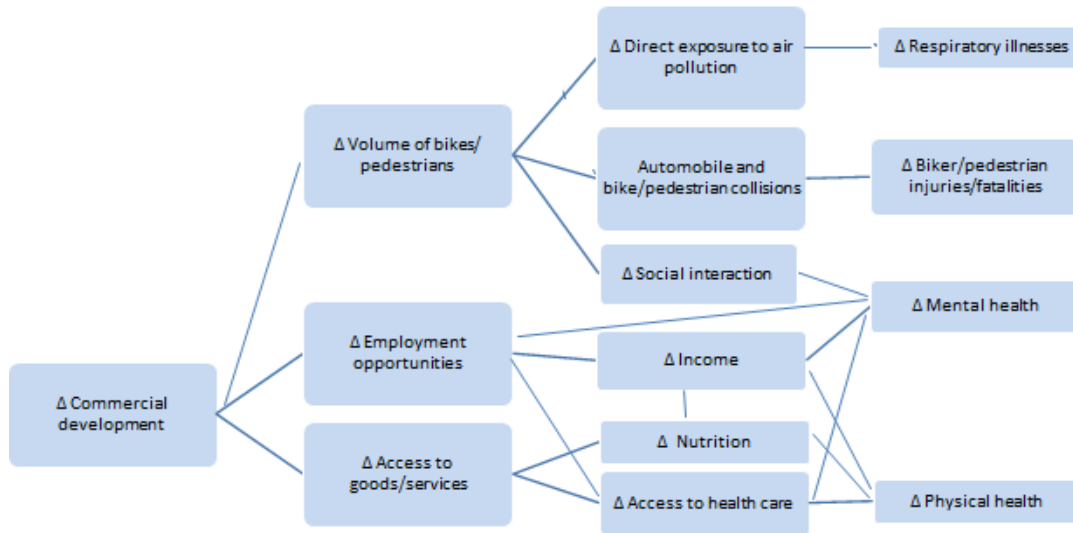
In a 2011 survey of Baltimore City residents, 20.9% reported that their mental health was "not good" during more than 7 of the past 30 days; this rate was much higher among respondents with less than a bachelor's degree than among those with at least a college degree. (24) A 2009 Baltimore City community survey found 7% of city residents feel socially isolated, but this rate was 12 times higher among in those in the lowest versus highest income brackets. (25)

According to the city inventory of public art, which contains nearly 700 items, only four are located along West North Avenue. (26) Research suggests there is a relationship between the urban built environment and social cohesion, but the directionality of this relationship is not well understood and it has not been definitively proven as causal. (27) Most studies explain low social cohesion as an outcome of physical disorder and decay in a neighborhood; (28) but these effects are likely cyclical, with low social cohesion also contributing to disinvestment in neighborhood appearance and infrastructure.

Social cohesion is often measured as the amount of trust residents report feeling in their neighbors, their sense of support from their community, or perceived informal social control over negative behaviors. (29) In the literature, "social cohesion" is defined inconsistently and often used interchangeably with social support, collective efficacy, and social capital. From this literature, using the broad sense of social cohesion as community-level support, involvement, and trust, there are many important effects on health, particularly for psychological well-being and general mental health. (30) Positive social ties also aid in recovery from illness and are linked to better adherence to medical treatment and other healthy behaviors; in contrast, social isolation can negatively affect both physical and mental health. (31)

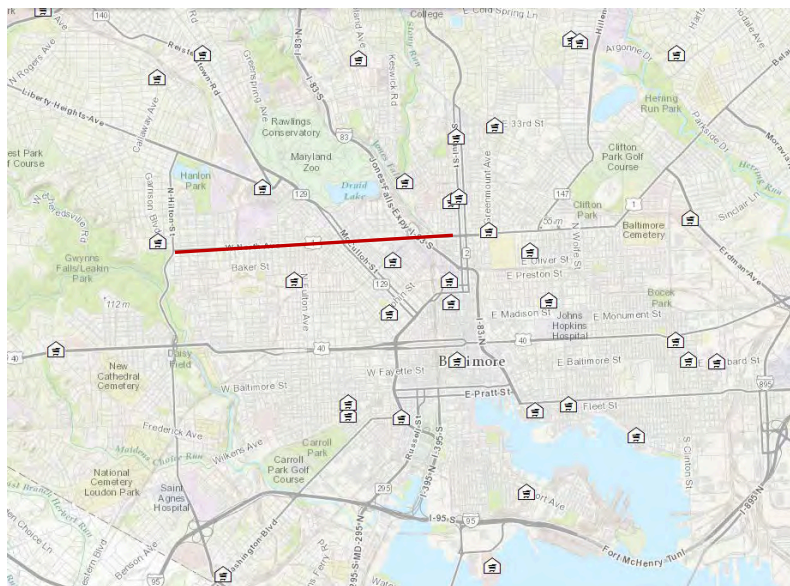
Social cohesion also interacts with other health determinants discussed in this report, which may help explain the observed relationship between urban redevelopment and social cohesion. Social cohesion is increased by social interactions resulting from greater volumes of pedestrians and bicyclists expected to be out in a more walkable environment. (28) Increased commercial development also contributes to a more vibrant community, building the sense of identity and pride among area residents. Greater social cohesion may modify the link between crime and physical activity, by improving perceived safety (32) and mediating violence. (29) Finally, social support has also been found to aid in adjustment to unemployment. (33)

COMMERCIAL DEVELOPMENT



In the first community design meeting, commercial development was the second most mentioned goal for the streetscape plan. At the Scoping Workshop, community members expressed interest in an assessment of the number of outlets selling basic goods, such as grocery stores and drug stores, in relation to the number needed to support the corridor’s population. They also raised specific concerns about the availability of fresh food items and the quality of food that is sold in many locations. As suggested, access to these outlets is insufficient. Figure 13 displays grocery stores in Baltimore City, with West North Avenue marked in red. There are no grocery stores located along this corridor or on the immediately surrounding blocks.

Figure 13. Grocery stores in Baltimore City. (West North Avenue marked in red.)



Source: Baltimore CityView

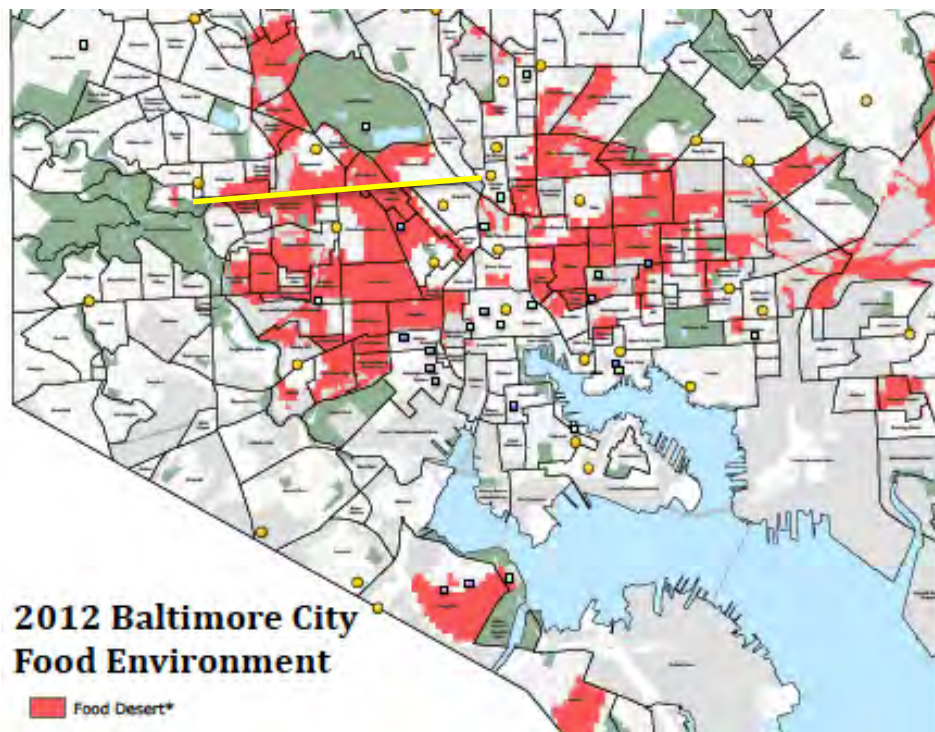
In contrast, there are a large number of stores selling more items that harm, rather than promote, health. Along West North Avenue, the densities of liquor stores, tobacco retail outlets, and corner stores are all significantly greater than in the rest of Baltimore City. (14) The number of corner stores is particularly high in Far West and Middle West; this density in Near West is similar to the city average. (14) Compared to an average in other Baltimore City neighborhoods of about 4 liquor stores per 10,000 population; all three sections of West North Avenue have liquor store densities of 6 to 7 per 10,000 population. (14) Community members questioned whether some of these locations should be closed.

Many of the neighborhoods along West North Avenue have higher unemployment and lower median incomes than Baltimore City as a whole, indicating a need for new employment opportunities for residents of this area. This is particularly acute in Middle West, where 53.4% of households earn less than \$25,000 annually. (12) In Baltimore City, 18.8% of households are living below the poverty line; along West North Avenue, this percentage ranges from 11% in Near West to 38% in Middle West to 22% in Far West. (12) Household incomes in Near West are higher than along the rest of West North Avenue – the medians in these neighborhoods are approximately equivalent to the citywide median. (12) Between 2008 and 2012, Baltimore City had a mean unemployment rate of 13.9%; this rate was lower in Near West, but much higher in Middle West and Far West: 24.4% and 21.6%, respectively.

While the proportion of people with health insurance has increased since the 2010 Affordable Care Act, (34) a significant percentage of Baltimore City residents is uninsured: 16.6% had no health insurance as of 2012. (35) As in most cities, the proportion of people having unmet healthcare needs is greater among those with less education and lower incomes. 18% of the city's population reported not having seen a dentist for two or more years. (35) Residents at the Scoping workshop cited an absence of health services along the corridor and long response times for emergency services, reporting 911 respondents could take 40 minutes to arrive.

By revitalizing West North Avenue, the streetscape plan hopes to attract investments to establish new and revive existing commercial outlets along the corridor. Commercial development in turn increases access to goods, services, and employment for area residents, which are all important health determinants. In particular, convenient access to a variety of nutritious food options is vital, as nutrition is critical to physical health. (36) Proximity to grocery outlets has been linked not only to dietary quality but also directly to health outcomes. In a national study, greater density of supermarkets was associated with lower overweight prevalence and, in contrast, greater density of convenience stores was associated with higher overweight prevalence. (37) Furthermore, food availability is a significant concern in terms of health disparities. A variety of studies have identified substantial differences in dining-out options by neighborhood socioeconomic status and racial/ethnic profile. (38) Areas with substantially limited access to nutritious and fresh food are deemed “food deserts”; most of West North Avenue meets this classification, as displayed in Figure 14.

Figure 14. Food deserts in Baltimore City. (West North Avenue marked in yellow.)



Source: Baltimore City Department of Planning

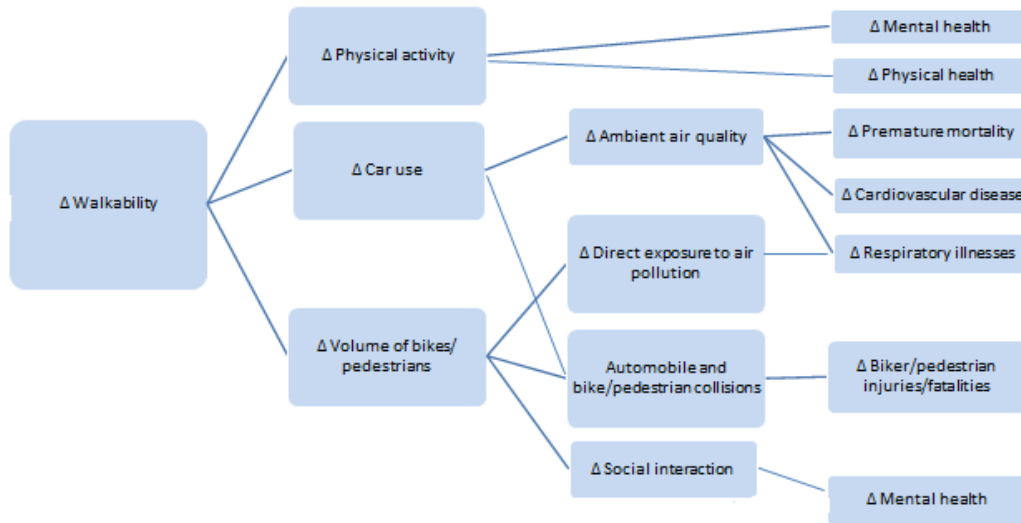
Increased access to employment can directly affect mental health. Higher levels of psychological stress have been found among people with temporary versus permanent employment (39) and workers anticipating job loss have reported lower self-rated health than workers whose jobs were not perceived to be in jeopardy. (40) A review of the strength of research on unemployment and health identified conclusive evidence of psychological effects; and while typically small in magnitude, some studies have linked job loss to heart disease. (41) In addition to these direct effects, employment generates income, which enables people to purchase the goods and services needed to maintain and restore health; for this reason, income is correlated with nearly all health outcomes. (42) In particular, income is a key determinant of the nutritional quality of household food choices; with a very limited income, families do not prioritize nutrition as highly, but instead focus on cost. (43)

Services of particular importance for health are medical and dental care, which are critical for maintaining and restoring both physical and mental health. Regular medical and dental visits are recommended for all Americans, in order to undergo preventive interventions to limit the development of adverse health conditions and to receive curative treatments when needed. (44) People are more likely to access health services if they have insurance coverage, (45) which most people in the U.S. receive from an employer; (46) as a result, new employment opportunities can also facilitate access to health care.

Finally, commercial development is also likely to increase the volume of pedestrians and bicyclists along the corridor, who come to shop, dine, and socialize. This is supported by a substantial

number of studies finding the degree of land use mix, meaning the combination of residential and commercial properties, is likely a key determinant of active transportation in an area. (47) As discussed in regards to improved walkability, this may lead to both increased and decreased risks of vehicle-pedestrian collisions and resultant injuries and fatalities.

WALKABILITY



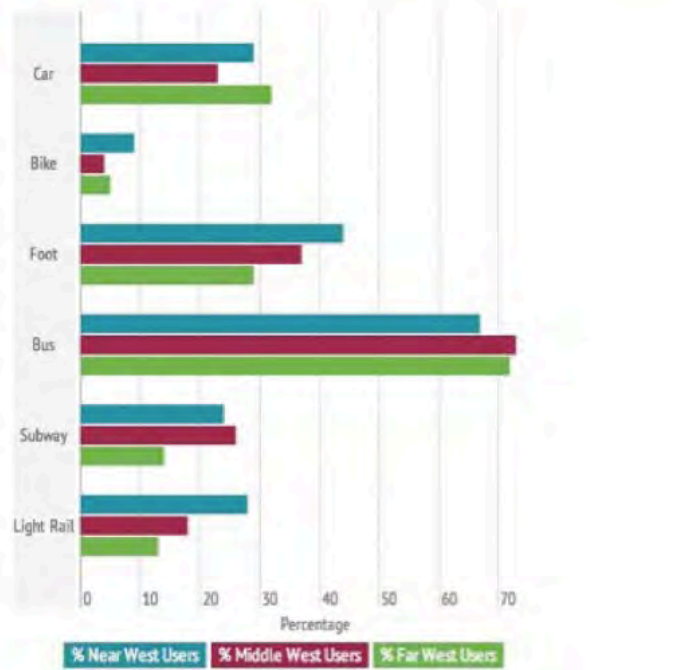
In the first community design workshop, issues related to walkability featured prominently. Improved pedestrian safety and accessibility were the most frequently cited concerns and this issue, as well as slower traffic, were ranked among the most important. Scoping workshop participants also cited traffic safety as an important concern for pedestrians and bicyclists along the corridor, particularly for children. At this meeting, community members discussed their beliefs that the small number of bicyclists along the corridor contributed to poor bicyclist safety and expressed an interest in seeing more people bike on the corridor, with the expectation that this would improve safety.

A neighborhood’s “walk score” is an objective measure of its walkability, comprised of the walking distance to various amenities, population and intersection density, and block lengths. (48) As a whole, the West North Avenue corridor fares moderately well in terms of its walk score, although the Far West portion of the corridor is rated as substantially less walkable than the other two sections. (12) Scoping workshop participants specifically expressed a desire for green infrastructure that provides shade, so that walking is more enjoyable on hot days.

City data on vehicle and pedestrian/bicyclist collisions show that West North Avenue has a high occurrence of such crashes, compared to the city average. West North Avenue is a designated truck route, which contributes to the volume and speed of traffic along the corridor. Residents described the traffic as heavy and fast, and claimed many vehicles run red lights, especially near the expressway.

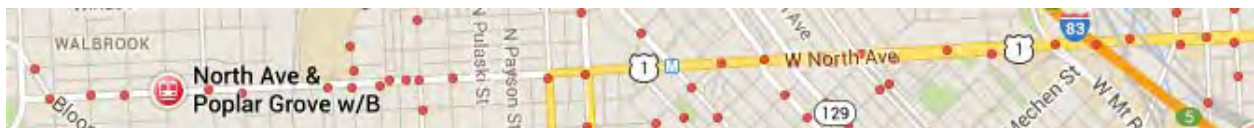
Figure 16. Primary transportation modes used by survey respondents along West North Avenue, August 2014. Source: Neighborhood Design Center, Summary Input of Sno-ball Surveys, 2014.

Preferred Means of Transportation for West North Avenue Users by Section



Among people living along the corridor, 26.7% use some form of public transit to get to work, which is higher than the rest of Baltimore City: 19.5%. (12) Public transit is especially critical to residents in the Mid West section of the corridor, where 38.3% of people commute to work by public transportation. Figure 17 displays the location of bus stops (in red) along West North Avenue, which are frequent. One metro stop is located along the corridor, at Pennsylvania Avenue, but the light rail and Circulator do not run in this area of the city.

Figure 17. Bus stops along West North Avenue (indicated in red).



Source: Google Maps

The West North Avenue Streetscape Plan aims to improve the walkability of the corridor. Walkability is a multi-faceted concept, intended to describe the ease and functionality of walking in an area; it has been quantified using residential density, street connectivity, land use mix, and retail space. (49)However, walkability and bikeability – which is closely related – also depend on other factors such as

green space; pedestrian and bicycle infrastructure, such as sidewalks and bike lanes; and traffic safety. (50) These features are linked to greater use of active transportation and reduced automobile dependence, although more research is needed to definitively confirm whether all of these relationships are causal. (49) Active transportation is preferable from a health perspective because of the many health benefits of physical activity and because of the negative health effects of vehicle emissions. In a national study, neighborhood walkability was found to be associated not only with more frequent walking, but also lower body mass index (BMI) among area residents. (22) Physical activity, for transportation or recreation, can help to maintain a healthy body weight and prevent the development of cardiovascular disease, diabetes, cancer, hypertension, depression, and obesity, among other outcomes. (51) Greater amounts of physical activity provide additional health benefits, known as a dose-response relationship. (52)

Increasing the use of biking or walking for transportation means declining automobile use, which leads to improvements in ambient air quality. Motorized vehicle emissions are a major source of particulate matter, (53) which has been linked to higher death rates from all causes, and particularly to deaths from cardiovascular and respiratory causes, across large U.S. cities. (54) Long-term exposure to air pollution is also associated with chronic respiratory illness and certain cancers. (55) Proximity to traffic-related pollution has been associated with higher odds of asthma (56) and bronchitis, particularly in children. (57)

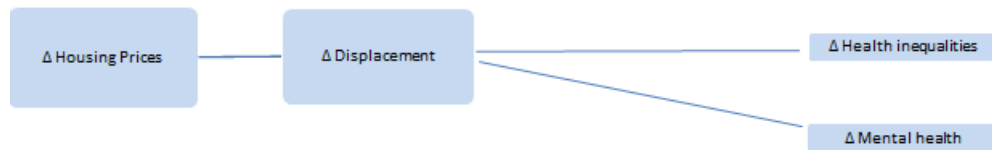
Increasing the volume of pedestrians and bicyclists has both benefits and risks from a health perspective. While air quality is expected to improve overall, there is a concern that walkers and bikers in close proximity to vehicle traffic have increased direct exposure to vehicle emissions. Short-term exposure to air pollution is associated with bronchitis, asthma, and acute cardiovascular disease. (55) Studies investigating the pollution exposure levels of different types of commuters have found drivers are typically exposed to two to three times greater concentrations of key pollutants as are cyclists. (58,59) However, because of the increased ventilation required while bicycling, cyclists have been found to *inhale* more pollution than other types of commuters. (58)

A clear benefit of more walkers and bikers along the corridor is the facilitation of social interaction, which leads to social relationships, social influences, and social support, all of which can affect health in important ways. (60,61) A number of studies have concluded that social ties lead to improved mental health (30) and a review of nearly 150 studies concluded that stronger social relationships are associated with at least a 50% decreased probability of mortality. (62) The causality of links between social influences and health outcomes is difficult to firmly establish and the biological mechanisms underlying these associations are not yet well understood, (31) leading to a variety of competing hypotheses to explain these relationships. (63) However, there are clear individual-level associations identified by many studies and researchers have even questioned whether this effect operates at a group level, by exploring contextual-level social trust and individual health outcomes. (64)

A reduction in automobile use and an increase in the numbers of people walking and biking interact in complex ways in terms of their effects on the risk of vehicle and biker/pedestrian collisions, which can lead to serious injuries and fatalities. “Safety in numbers” is widely used to explain observed

reductions in these collisions as biker and pedestrian volumes increase; (65,66) but while the risk per person declines, the number of people at risk increases. (67) A decrease in the number of vehicles on the road should reduce the likelihood of a vehicle-pedestrian/biker accident, but this may not be straightforward. A study on pedestrian cautiousness found that with less vehicle traffic, cars may move faster, possibly increasing the likelihood of a more serious accident, but also increasing pedestrian cautiousness in response to high speeds. (68) This same study found pedestrians were less cautious with greater numbers of other pedestrians present, despite the frequently observed “safety in numbers” relationship.

HOUSING PRICES



The neighborhoods surrounding West North Avenue have approximately 32,000 residential properties – about 15% of the total number in Baltimore City. (12) Across the city, the median price for homes sold in 2012 was \$135,000; median prices for homes sold in Near West neighborhoods were higher than for the city as whole, while median prices in Middle West and Far West were substantially below the city median. (12) Figure 18 displays median sale prices for each of the eight West North Avenue CSAs.

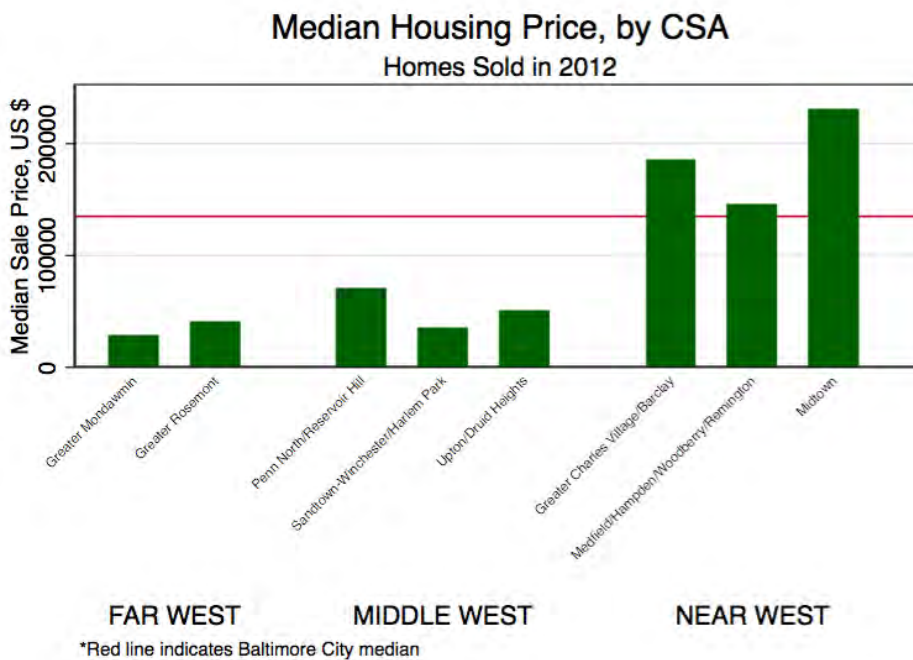


Figure 18. Median price of homes sold in 2012, by CSA and section of West North Avenue.

Near West has a strong housing market, with relatively high prices. However, even at prices well below the city average, residents in Middle West and Far West have financial difficulties in securing and maintaining housing. Two indicators of economic distress in these areas include the proportion of residential sales in foreclosure and the proportion sold for cash. In 2012, over 30% of Far West home sales and over 20% of Middle West home sales were in foreclosure. (12) Cash sales are particularly prevalent in three neighborhoods: well over 80% of homes in Greater Mondawmin, Greater Rosemont, and Sandtown-Winchester/Harlem Park sold in 2012 were for cash. (12)

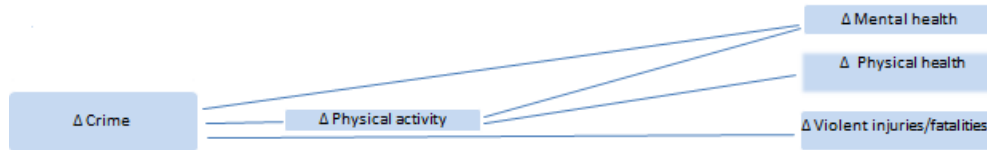
A widely used threshold for “affordable” housing is that it does not cost more than 30% of a household’s income. (69) This is particularly problematic for renters, whose payments do not increase household wealth, as opposed to owners, who build an asset. Data from the American Community Survey show that among renters living along West North Avenue, 63% of households in Far West, 56% in Middle West, and 49% in Near West pay more than this threshold. Unaffordable housing means families do not have sufficient remaining income to cover other goods and services critical for health, such as health care and nutritious food. Research demonstrates that as housing costs consume larger portions of household budgets, families are likely to be forced to make poorer dietary choices in order to save money. (70)

As a result of the revitalization of West North Avenue, property values in the area are likely to increase. The processes described in this report, resulting from improved walkability, reduced crime, increased commercial development, and enhanced social cohesion, will like cause property values to steadily increase further. This poses a risk for current residents along the corridor; as housing prices rise, tenants may be unable to afford rent or more likely to foreclose and could be at risk of displacement. (71) This has occurred as a result of other urban redevelopment projects, often with misguided support from the public health community. (72)

Being forced to move causes disruptions in social networks, which can have serious mental health consequences, and erodes the sources of social support that are critical to recovering from illness. (73) Furthermore, the loss of one’s home and the moving process itself incur substantial stress. (74) Displacement may exacerbate health inequalities because families that are forced to move will likely relocate to neighborhoods and housing conditions that pose more detrimental health risks, where prices are lower. In a longitudinal study of families displaced from low-income housing, the proportion of people reporting poor self-rated health continued to increase over time, beyond the increase expected due to aging. (75) For families that do not move out of the neighborhood or before deciding to do so, health may be indirectly affected by reduced household budgets for other purchases, particularly food. As households spend more of their incomes on rent, less money becomes available for other household needs, and poorer nutrition has negative consequences for physical health.

EXPECTED IMPACTS

CRIME



Crime is expected to decline after the streetscape revitalization, partly as a result of increasing the walkability of the corridor, which can reduce crime because of the additional “eyes on the street”, generating natural surveillance. (76) Other changes in the physical environment can be chosen to further increase safety. Research suggests that light and the presence of open spaces may be the most important characteristics dictating how safe residents perceive an area to be. (77) Studies have found both fear of crime and the actual incidence of crime in an area can be expected to decline with the installation of better street lighting. (76) A review of studies on street lighting and crime found a 21% reduced rate of crime in areas with new lighting added, as compared to control areas. (78) This research suggests that better lighting along the West North Avenue corridor can help to reduce crime in this area. Community members also expressed interest in improved lighting, especially by installing lights that are pedestrian level (approximately 10 ft. high), as opposed to 30-ft. street lights, which leave large shadows.

An investigation of crime at bus stops identified attributes of stops where more crimes occurred; common features were desolate areas, such as parking lots and vacant buildings, nearby intersections or alleys, hypothesized to provide escape routes for criminals, and poor visibility or lighting. (79) These findings clarify the types of open spaces that may improve safety – those that provide good visibility to pedestrians and limit potential hiding places or escape routes for criminals, but that are not so empty to be perceived as desolate. Stops for public transportation should be located in areas that are well-lit and are not next to vacant buildings or lots, to reduce the risk of crime while people wait. Furthermore, reducing the number of vacant buildings throughout the corridor can help to deter criminal activity.

SOCIAL COHESION



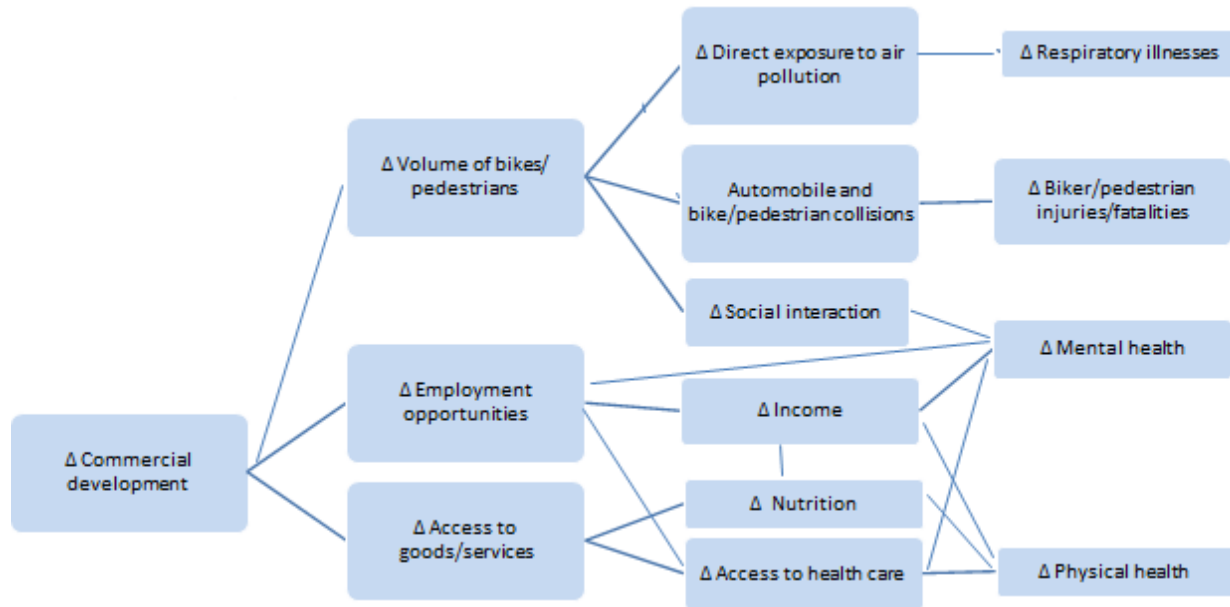
In studies of physical environments, community aesthetics appear to play an important role in perceived neighborhood disorder. This includes signs of physical disorder, such as garbage, litter, graffiti, and vacant buildings; (80) as well as social disorder, signified by drug use, loitering, crime, and other forms of conflict. (81) Social cohesion among the communities of West North Avenue can be expected to improve as obvious signs of neighborhood disinvestment are removed and replaced with various features that enhance the physical environment.

Public art projects have been explored as ways to generate social inclusion, particularly if there is community involvement in designing or choosing the art. (82) In a survey conducted after the addition of a new outdoor art project in a Portland, Oregon, neighborhood residents reported high satisfaction with their neighborhood and described the art as a “reminder of community connectedness.” (83) A mural project was implemented in Philadelphia to promote community support and create new relationships. (84) Community members at the Scoping workshop suggested large murals as temporary uses for vacant lots and buildings, thereby transforming signs of neighborhood disrepair into symbols of community pride. Specific ideas included murals that reflect the history of each section of the corridor. In addition, residents also discussed adding historical plaques to mark sites of interesting events or describe pieces of local history. The Jones Falls Bridge was specifically mentioned as an interesting feature of the corridor which could be beautified and turned into more of an attraction.

Vacant lots can be converted to community gardens, playgrounds, or other types of green spaces for recreation. Green infrastructure not only fosters community pride, but also helps with wastewater management and the filtering of air pollutants. (85) The presence of green space in neighborhoods has been directly linked to greater social cohesion. (86) Urban farms can improve health by increasing the availability of fresh fruits and vegetables, as well as by creating a shared community resource. (87)

To improve overall physical cohesion, the idea of neighborhood signage, to give a “brand” to the corridor, was well received by community members. Fells Point, near Baltimore’s Inner Harbor, was cited as a good example of a neighborhood with a unique style that integrated the area. Residents also discussed having a unified theme along the corridor, but with added detail specific to each subsection, for example, highlighting education near Coppin State University or entertainment near historic theaters.

COMMERCIAL DEVELOPMENT



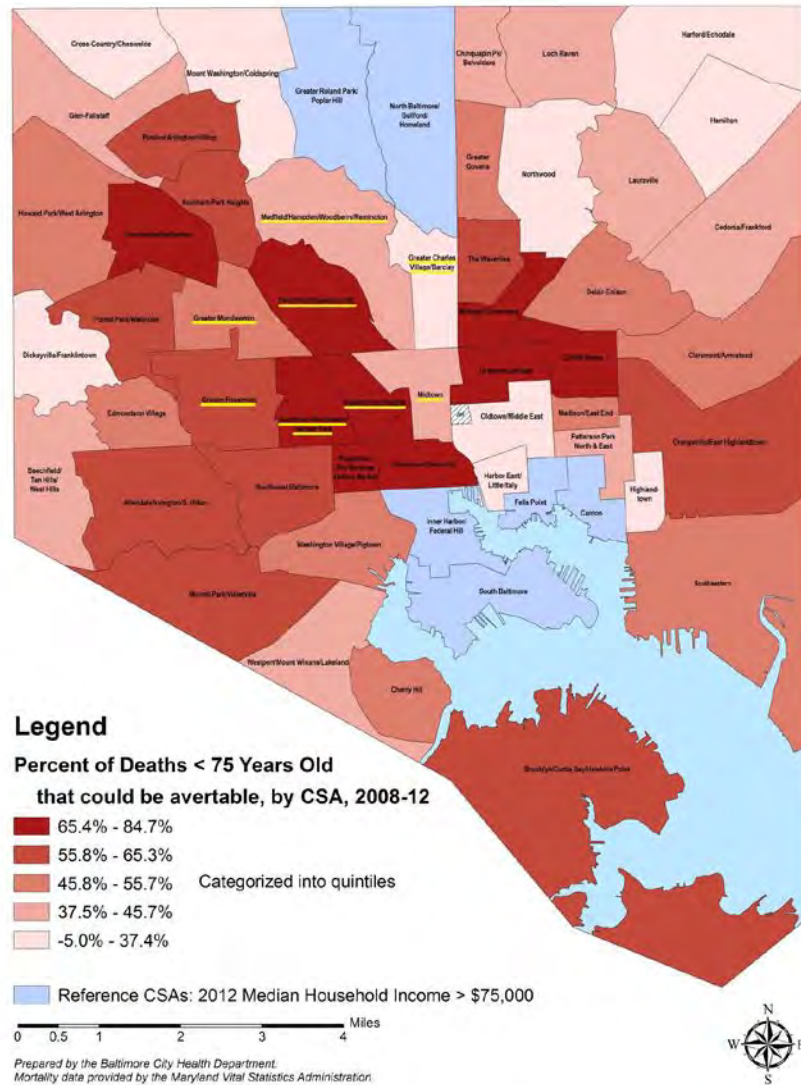
Several studies validate the importance of proximity to food choices in determining the nutritional quality of households’ diets (88) and cite the challenge of transporting groceries long distances as a barrier to shopping at more distant locations. (43) If the streetscape plan results in the addition of one or more supermarkets to the West North Avenue corridor, this could provide an important resource to area residents and improve their health.

Considering only income as a determinant of premature mortality, an analysis for the 2013 *Baltimore City Health Disparities Report Card* estimated the proportion of deaths under the age of 75 that could be averted in each city neighborhood. The resulting map on the following page (Figure 19) displays the percent of premature deaths that would be averted if each neighborhood had the same mortality rate as the wealthiest Baltimore City neighborhoods. In the West North Avenue neighborhoods, marked in yellow, a high proportion of premature deaths are preventable based on income-based disparities. This varies substantially throughout the study corridor, with the highest proportions of avertable deaths in the Middle West neighborhoods. This analysis suggests that commercial development along the corridor that brings new employment opportunities, thereby raising incomes, could substantially reduce premature mortality in the study area. For these benefits to impact this community, it is important that local residents are hired, which was raised as a concern by Scoping workshop participants. They expressed the importance of new stores enriching the community and not only extracting resources.

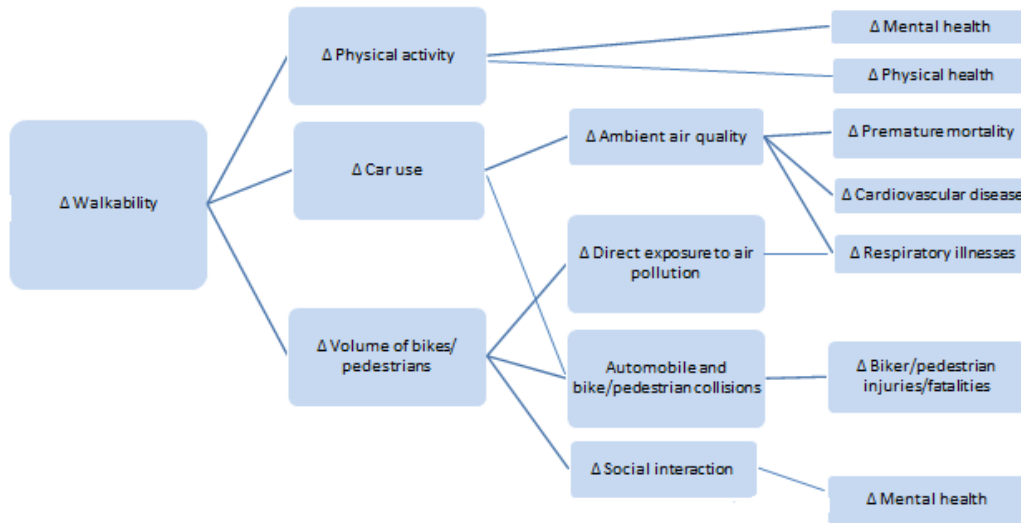
Commercial development can facilitate access to health services both directly and indirectly. Medical or dental offices may be among the new businesses drawn to the area after its revitalization. This is expected to be positively received by residents as the recent opening of a free health clinic along the corridor was enthusiastically mentioned at the Scoping workshop. In an indirect manner, new

employment opportunities along the corridor can improve access to health care through increasing health insurance coverage in the area.

One aspect of the streetscape plan with the potential to have mixed effects on health is the amount of space preserved for parking. Improving sidewalks and adding a bike lane can improve walkability, but may come at the expense of available parking, which can be critical for the success of commercial outlets. Community members expressed concerns about removing too many parking spaces and suggested having part-time parking on both sides of the street, unavailable during peak traffic times in either direction. The appropriate balance of parking to sustain commercial activity should be carefully assessed.



WALKABILITY



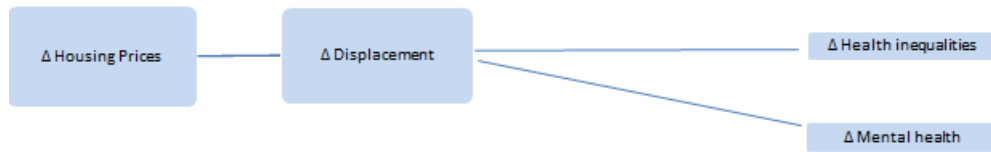
Of the various physical environment features that comprise the multi-faceted ideas of walkability and bikeability, there is not yet firm consensus on the relative effectiveness of individual attributes in encouraging physical activity. (89) This body of research is relatively new, but growing, and most studies to date explore associations as opposed to causation. Nevertheless, from the research currently available, certain features have more conclusive evidence to support their influence on transportation- and recreation-related physical activity. To encourage biking in particular, the installation of bike lanes appears to have a large impact: bikers preferentially choose routes with bike lanes (90) and the volume of biking has been found to increase substantially after the installation of dedicated lanes. (91) Findings regarding the ability of sidewalks to encourage more walking have not been consistent. (92) Similarly, access to green space is hypothesized to influence physical activity, but results vary across studies. (93,94) The influence of green space may vary by individual characteristics and its effect on physical activity may be indirect. (95) Better street lighting may be minimally effective, as it has been found to have only a slight association with increased physical activity. (96)

To promote pedestrian and bicyclist safety, reduced vehicle speeds and volume are critical. (97) Traffic speed can affect not only the likelihood of a collision but also the severity, with higher vehicle speeds more likely to result in more serious pedestrian injuries (98) and fatalities. (99) Common options to reduce speeds include lower speed limits, speed bumps, and speed cameras; a comparative evaluation found speed bumps may be the most effective. (100) Measures that divert traffic from West North Avenue to alternate routes could reduce collisions by limiting the volume of vehicles on the road, (101,102) however, it should be considered whether this would only displace problems to other areas. One possible technique is to reduce the number of traffic lanes, called a “road diet”, which may contribute to reducing collisions. (103) However, given the importance of bus transit along this corridor, residents mentioned that changes to the road should not reduce travel space for buses, which is already tight in many places. Community members were in favor of adding dedicated turn lanes at busy intersections as a strategy to preserve traffic flow while reducing the number of lanes.

Road space formerly devoted to vehicle lanes can be converted to new infrastructure to improve driver awareness of and separation from bikers and pedestrians. Measures that create physical space between vehicles and other road users, including overpasses, underpasses, and raised medians, have been found to be highly effective. (104) A review of studies found bicyclists' safety significantly improved when clearly marked bike-specific facilities, both on-road and off-road, were available. (105) Crosswalks alone have not been found to effectively improve pedestrian safety; (106,107) but when combined with flashing lights, these are likely to have a greater impact. (108) Repainting crosswalks and adding additional striping may help to increase their visibility; this is particularly important in three intersections where no crosswalks currently exist: Ashburton, Rosedale, and Whitmore. Community members suggested adding signs encouraging drivers to slow down and stop for pedestrians. The effect of street lighting is unclear – a review of studies on street lighting and road traffic injuries concluded there may be a reduction in crashes, injuries, and fatalities, but the findings were uncertain. (109)

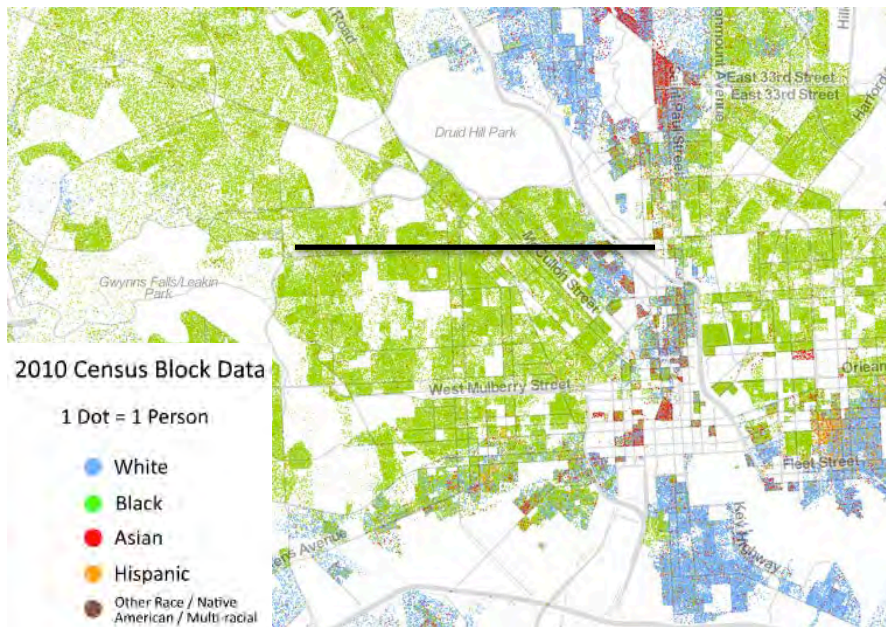
The locations of new features should be chosen to maximize safety. Pedestrian injuries are most common among children aged 5-9 and pedestrian fatality rates are highest among adults over the age of 80. (104) Therefore, concentrating traffic-calming features near schools, playgrounds, and nursing homes can help to protect these most vulnerable populations. In particular, speed reductions via lower speed limits and speed bumps appear to be most important for children's safety. (104) Areas in close proximity to a high density of alcohol outlets have been identified as having greater incidences of pedestrian injuries, (110) suggesting another set of priority areas for new safety features.

HOUSING PRICES



If displacement occurs as a result of the redevelopment of West North Avenue, it will likely worsen health inequities by race. After a previous redevelopment initiative in Baltimore, 100% of displaced families were African-American (72) and the population of West North Avenue is predominately African-American (Figure 20). Inequalities by race are already substantial for many health outcomes in Baltimore City. (35)

Figure 20. Racial dot map of Baltimore City, with the study corridor indicated by the black line.



Source: Cooper Center

Lessons from the negative history of low-income neighborhood revitalization should be remembered to avoid repeating mistakes and to rebuild in a community-led manner. (13) The involvement of area community development corporations and the inclusion of public opinion in the streetscape design process are positive steps. Linking the streetscape plan to existing constructive community programs, such as Vacants to Value, may also create positive synergies. At the Scoping workshop, residents complained that the City has delayed purchases of vacant buildings along West North Avenue, and urged that this process not be held up.

In order to specifically alleviate the difficulties of rising housing prices, policies that ensure the availability of affordable housing for current residents along the corridor should be pursued. The Urban Institute reviewed strategies employed in various U.S. cities and classifies possible approaches in three broad categories: “housing production, housing retention, and asset building.” (111) These strategies encompass a variety of policy tools including tax credits for residents, the creation of new low-income housing units, and assistance with financial planning for home ownership. Ensuring that local residents benefit from commercial development through employment opportunities is also critical to preventing displacement.

RECOMMENDATIONS

Considering the existing conditions along West North Avenue and the predicted impacts of the streetscape plan, the following actions are recommended to generate the largest and most equitable health improvements along the corridor. These recommendations apply to West North Avenue as a whole, but in some instances specific locations along the corridor are highlighted as most critical to address. Residents, who are familiar with particularly problematic areas along the corridor, suggested most priority locations, as well as other specific details listed with below. Recommendations are listed by the pathway through which they impact health; some recommendations relate to more than one pathway and are repeated.

CRIME

- Install pedestrian-scale street lighting to reduce the incidence of crime and increase pedestrians' perceptions of safety
 - Existing lighting between Charles and Howard can be used as a model for the rest of corridor to create continuity
 - Lighting particularly needed under the Coppin State University bridge
- Ensure existing and new bus stops are well-lit and not located near abandoned lots or buildings, to ensure the safety of transit users while waiting
 - Replace bus stop shelters recently removed for water line work
 - Major bus stops at Pennsylvania Ave., Bentalou St., and Bloomingdale St.
- Convert vacant buildings and lots to new uses and seek tenants and businesses as occupants, to reduce their use for criminal activities
 - Vacant areas immediately west of Coppin State University
- Explore ways to leverage the streetscape plan's physical environment changes to discourage drug sales in the area (e.g. converting lots or blocks known as drug markets to new uses)
 - Pennsylvania Avenue intersection
 - Between N. Ellamont St. and N. Rosedale St.
- Improve response times for emergency services

SOCIAL COHESION

- Install additional public trash cans and increase the frequency of municipal garbage service, to reduce the perception of neighborhood disrepair
 - Alleys near Coppin State University
 - Trash and recycling cans in Harbor East can be used as a model
 - Send workers and supervise clean up as part of community service sentencing for minor offenders

- Convert vacant lots to community gardens, playgrounds, and green spaces, to encourage social engagement and communal recreation
- Convert vacant buildings to livable homes and businesses, to improve local housing and employment options
 - Link to the city's Vacants to Value program
- Install green infrastructure along sidewalks and medians and engage community groups in their upkeep, as a mechanism for community involvement
- Commission art projects, selected by community members, to fill large public areas, including crosswalks and as temporary uses of vacant space
 - Pennsylvania Avenue crosswalk
 - Walkbrook crosswalk
 - Brookfield crosswalk
 - Jones Falls bridge
 - Coppin State University bridge
- Develop community programming for public spaces (e.g. outdoor movies)
 - Reinstate barn dances
 - Street performances in plazas
- Create unified signage along the corridor to develop a neighborhood identity and highlight points of historical interest
 - Arch Social Club
 - Metropolitan Theater
 - Chesapeake Bank
 - Walbrook Movie Theater
 - Arundel Ice Cream Company Store
- Elicit community preferences for phasing in of streetscape elements to address community priorities most urgently
- Use HIA findings to advocate for other aspects of West North Avenue revitalization, using changes in the physical environment to catalyze broader community changes

COMMERCIAL DEVELOPMENT

- Provide incentives to businesses to encourage new commercial outlets, in order to increase access to goods, services, and employment for local residents
 - Involve existing business owners, particularly those in the retail-heavy 3100 block
- Seek health services as priority new businesses to improve residents' access to medical and dental care
- Seek healthy food retailers, particularly major grocery stores, as priority new businesses to increase the availability of nutritious food options
- Encourage hiring of local residents to reduce unemployment and increase incomes
- Invest in commercial development as a tool to reduce illegal commercial activity, particularly drug sales

- Increase operating hours for community centers, e.g. YMCA, to improve the availability of community spaces for meeting and recreation
- Utilize various redesign components to attract tourists and residents from other parts of the city (i.e. link transit and signage to other parts of city)
 - Wayfinding signs to and from downtown
 - Improved public transit to downtown
- Evaluate the current parking capacity to determine the necessary balance of spots needed to support local businesses
 - Use tax incentives to encourage the development of off-street parking (e.g. lots behind storefronts)
 - Former parking lot behind the 2400 block, which could be revitalized

WALKABILITY

- Install a bike lane to create a safe, bikeable route connected to other existing and planned bike infrastructure in the city
 - Extend from Charles St. to Hilton Pkwy.
- Improve public transit, including the frequency of bus service and connections to the light rail, Metro, or Circulator, to reduce car dependency and encourage active transportation
- Install speed bumps and reduce speed limits near schools, playgrounds, and nursing homes, to reduce the occurrence and severity of vehicle collisions among vulnerable populations
 - Bentalou St. – two elementary schools
 - Rosedale St. – senior apartment complex
 - Frequently used crosswalks by students heading to Douglas, Carver, Mondawmin, and Coleman schools
- Repair and improve sidewalks to facilitate walking for transportation and recreation
- Preserve and create green space to encourage physical activity
 - 1700 block has no trees
 - Engage community groups in maintaining green space
- Install bike racks, particularly near commercial outlets and public facilities, to promote bicycling as a form of transportation
 - Library
 - YMCA
 - Coppin State University
 - Pennsylvania Ave. Metro station
 - Maryland Institute College of Art (MICA)
 - Great Blacks in Wax Museum
- Create a raised median along the entire corridor or install pedestrian islands at major intersections, to improve pedestrian safety
 - Pennsylvania Ave.
 - Fulton St.

- Monroe St.
- Pressman St.
- Bloomingdale/Ellamont St.
- Hilton St.
- Repaint crosswalks, including adding stripes where needed
 - Ashburton St.
 - Rosedale St.
 - Whitmore St.
- Reconstruct curb ramps to be ADA compliant
 - Fulton St.
 - Morris St.
 - Jordan St.
 - Maryland St.
 - Howard St.
 - Charles St.
- Install additional pedestrian-scale street lighting to promote physical activity and reduce vehicle collisions
- Target intersections near alcohol outlets for additional traffic calming and pedestrian safety features to reduce the incidence of vehicle-pedestrian collisions
 - Fulton St.
 - Eutaw St.

HOUSING PRICES

- Enact anti-displacement policies to preserve affordable housing for current residents
 - Grant tax credits to existing residents
 - Create new low-income housing units
 - Provide free assistance with financial planning for home ownership
- Continue to involve community development corporations and residents in the streetscape plan
 - Place a community representative on the decision-making board
- Establish community-led monitoring of streetscape plan implementation, to continue community leadership and preserve residents' interests
- Coordinate the streetscape plan with other city initiatives, such as Vacants to Value

MONITORING & EVALUATION

Ongoing monitoring and evaluation can help to create accountability for the recommendations included in this HIA and help to ensure health is prioritized in the continued development and implementation of the West North Avenue Streetscape Plan. In the short-term, the focus of monitoring should be those activities directly related to the HIA, including consideration and incorporation of HIA recommendations by relevant agencies and groups. In the longer term, related health outcomes should be tracked among the West North Avenue community and Baltimore City population, to evaluate changes in relevant health conditions.

The following table presents short-term and long-term indicators to assess the impact of this HIA on the West North Avenue Streetscape Plan and health in Baltimore City.

Table 4. Indicators for monitoring and evaluation.

TOPIC	INDICATOR	DATA SOURCE
SHORT-TERM AND ONGOING		
Physical environment	Vacant lot density	DOP
	Vacant building density	DOP
	Number of public trash cans	DPW
	Number of pedestrian-scale street lamps	DOP
	Number of new trees planted	DOP
	Number of public art installations	DOP
	Progress in establishing unified signage along corridor	DOP
Community involvement	Presence of community member on decision-making board	DOT
	Activities undertaken to elicit community priorities for phase-in of streetscape elements	NDC
	Number of community events held	Community development organizations
Commercial development	Number of new businesses	BDC
	Number of healthy food retail outlets	BCHD
	Number of new jobs created for local residents	BDC
Walkability	Miles of bike lane	DOT
	Number and frequency of public transit stops	DOT
	Number of traffic calming features	DOT
	Number of bicycle racks	DOT

	Total feet of raised median	DOT
LONG-TERM		
Traffic safety	Number of vehicle collisions	DOT
	Number of pedestrian or biker injuries and fatalities	DOT
Crime	Drug-related offense arrest rate	BPD
	Homicide rate	BPD
Health outcomes	Proportion of city residents meeting national physical activity guidelines	BCHD
	Number of violent injuries and fatalities	BPD/BCHD
Economic development	Median income, by CSA	BNIA
	Unemployment rate, by CSA	BNIA
Housing prices	Proportion of households spending more than 30% of income on rent/mortgage payments	BNIA
	Median housing price, by CSA	BNIA

DOP = Department of Planning; DPW = Department of Public Works; DOT = Department of Transportation; NDC = Neighborhood Design Center; BCHD = Baltimore City Health Department; BDC = Baltimore Development Corporation; BPD = Baltimore Police Department; BNIA = Baltimore Neighborhood Indicators Alliance. (All departments refer to Baltimore City government agencies.)

CONCLUSION

The HIA of the West North Avenue Streetscape Plan involved substantial collaboration between the Baltimore City Health Department, the Baltimore City Department of Transportation, and the Neighborhood Design Center. Representatives from each organization were involved throughout the study process and facilitated the inclusion of the study recommendations into the final streetscape master plan. As the streetscape plan progresses into implementation, the additional recommendations included in this report should be considered alongside the master plan.

The hundreds of community members who participated in the various workshops, meetings, and surveys were critical to the success of this study and ultimately, their views form the basis of this report. This document is intended to include a record of the community's concerns and priorities, so that their interests are best served through the implementation of the plan.

The redevelopment of West North Avenue will occur gradually over many years and the findings of this study should help decision makers and community members to consider the likely effects of different projects and assist in setting priorities. As many different projects, under the purview of several organizations and agencies, begin to revitalize the West North Avenue area, all decisions should be made with a concern for the health and wellbeing of the local community. If health is made a priority, the West North Avenue Streetscape Plan can bring many benefits to the community, reducing health inequalities and helping to create safer, healthier neighborhoods.

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