The following objectives have been identified for the Institutional Master Plan:

• Address the growing need to provide lower-cost health care services for patients with non-emergent or non-acute conditions.

• Decrease parking impact on neighborhood streets, to preserve parking for local residents.

• Modernize the mechanical and electrical utility equipment. Energy efficiency and noise reduction are primary goals.

• Create a more clearly defined, open, welcoming “front door” to the site.

• Meet modern standards in operational efficiency.
Organizational Profile - Current

West Penn Hospital Currently Has Approximately:
350 Licensed Beds
1,000 Physicians
2,000 Staff Members

Patient Profile (on an annual basis):
13,300 Admissions
73,000 Outpatient Visits
23,000 Emergency Department Registrations
12,000 Surgical Procedures
Next 10-Year Period:
600 Licensed Inpatient Beds
5% Increase in Number of Physicians
12% Increase in Number of Staff Members

Outpatient Growth:
Increase in same day procedures
Increased volume of primary services:
• Obstetrics & Gynecology
• Primary Care
• Oncology
• Neurosurgery
• Esophageal/Lung
• Auto-Immunity
• Diabetes.
IMP Boundary

Zoning Legend:
- Educational/Medical Institution
- Local Neighborhood
- Commercial
- Single-Family Residential
- Multi-Unit Residential
- Property Not Owned by WPH & Excluded from the IMP
- IMP Boundary Area

Source: Pittsburgh Zoning GIS
Existing Property & Uses

1. West Penn Hospital - 4800 Friendship Avenue
2. Hospital Parking Structure - 4901 Liberty Avenue
3. Service Building - 341 S. Millvale Street
4. Employee Surface Parking Lot - 317-325 S. Millvale Street
5. School of Nursing - 4900 Friendship Avenue
6. Vacant Lots - 316-336 Gross Street
7. Vacant Lot - 342 Gross Street
8. Vacant Lot - 348 Gross Street
9. Vacant Lot & Employee Surface Lot - 366 Gross Street
10. Office/Commercial - 4816-4818 Liberty Avenue
11. Vacant Lot - 4920 Liberty Avenue
12. Surface Parking Lot - 5000 Liberty Avenue
13. Parking Structure - 5120 Liberty Avenue
14. Offices - 4747 Liberty Avenue
15. Clinic/Offices - 4727 Friendship Avenue
16. Clinic/Offices - 5124 Liberty Avenue
17. Clinic/Offices - 5140 Liberty Avenue
18. Clinic/Offices - 5145 Liberty Avenue
19. Vacant Research Building - 720 Gross Street

Legend:
- **BLUE** = WPH Owned Property
- **GREEN** = WPH Leased Property
Ten Year Proposed Development Envelope

Legend:
- Medical Office/Clinic
- Expanded Utility Plant
- Parking Structure
- Hospital - Inpatient Care

Phase 1

Phase 2

Phase 3
Ten Year Proposed Development Envelope

**Site Location**
Gross Street, North of Liberty Avenue; vacate Corday Way to connect to existing garage

**Use**
Parking Structure

**Maximum GSF**
200,000 gross square feet

**Max. # of Parking Spaces**
700

**Setbacks**
- Gross Street: 35 feet
- North sideyard: 15 feet
- Corday Way: 0 Feet

**Maximum Height**
120 feet

**Stepback**
- Gross Street @ 45 feet above street level; min. stepback is 10 feet
- North sideyard @ 45 feet above street level, min. stepback is 5 feet

**Legend:**
- Medical Office/Clinic
- Expanded Utility Plant
- Parking Structure
- Hospital - Inpatient Care
Ten Year Proposed Development Envelope

Medical Office / Clinic
Outpatient Care

<table>
<thead>
<tr>
<th>Site Location</th>
<th>Mend Way; Gross Street to S. Millvale Avenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use</td>
<td>Medical Office/Clinic</td>
</tr>
<tr>
<td>Maximum GSF</td>
<td>350,000 gross square feet</td>
</tr>
<tr>
<td>Max. # of Parking Spaces</td>
<td>0</td>
</tr>
<tr>
<td>Setbacks</td>
<td>Gross Street: 35 feet</td>
</tr>
<tr>
<td></td>
<td>South sideyard (running from Gross Street to Corday Way): 10 feet</td>
</tr>
<tr>
<td></td>
<td>Corday Way: 0 feet</td>
</tr>
<tr>
<td></td>
<td>Mend Way: 0 feet</td>
</tr>
<tr>
<td></td>
<td>Millvale Avenue: 0 feet</td>
</tr>
<tr>
<td>Maximum Height</td>
<td>130 Feet</td>
</tr>
<tr>
<td>Stepback</td>
<td>Gross Street @ 45 feet above street level; min. stepback is 12 feet</td>
</tr>
<tr>
<td></td>
<td>S. Millvale @ 60 feet above street level; min. stepback is 12 feet</td>
</tr>
<tr>
<td></td>
<td>South sideyard along Gross @ 45 feet above street level; min. stepback is 5 feet</td>
</tr>
</tbody>
</table>

Legend:
- Medical Office/Clinic
- Expanded Utility Plant
- Parking Structure
- Hospital - Inpatient Care
Site Location: Liberty Avenue between S. Mathilda Street and S. Millvale Avenue

Use: Hospital

Maximum GSF: 450,000 gross square feet

Max. # of Parking Spaces: 0

Setbacks:
- Liberty Avenue: 0 feet
- S. Mathilda Street: 0 feet
- S. Millvale Street: 0 feet

Maximum Height: 160 feet

Stepback:
- Liberty Avenue @ 65 feet above Street Level; min. stepback is 10 feet
- S. Mathilda St. @ 65 feet above Street Level; min. stepback is 10 feet

Legend:
- Medical Office/Clinic
- Expanded Utility Plant
- Parking Structure
- Hospital - Inpatient Care
Ten Year Proposed Development Envelope

Site Location: Mid-block between S. Mathilda Street, Liberty Avenue, Friendship Avenue, S. Millvale Avenue

Use: Hospital

Maximum GSF: 100,000 gross square feet

Max. # of Parking Spaces: 0

Setbacks: Not Applicable

Maximum Height: Additional: 90 feet
Total: 160 feet

Stepback: Not Applicable

Legend:
- Medical Office/Clinic
- Expanded Utility Plant
- Parking Structure
- Hospital Infill - Inpatient Care
Ten Year Proposed Development Envelope

<table>
<thead>
<tr>
<th>Site Location</th>
<th>2 story addition to the existing power plant on S. Millvale Avenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use</td>
<td>Utility</td>
</tr>
<tr>
<td>Maximum GSF</td>
<td>6,000 gross square feet</td>
</tr>
<tr>
<td>Max. # of Parking Spaces</td>
<td>0</td>
</tr>
<tr>
<td>Setbacks</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Maximum Height</td>
<td>Additional: 25 feet</td>
</tr>
<tr>
<td></td>
<td>Total: 55 feet</td>
</tr>
<tr>
<td>Stepback</td>
<td>None</td>
</tr>
</tbody>
</table>

Legend:
- Medical Office/Clinic
- Expanded Utility Plant
- Parking Structure
- Hospital - Inpatient Care
Inpatient Care
- 4 additional stories
- 9 total stories
- Approx. 60,000 GSF added
- Height of Addition – 130’ max.

Education
- 4 additional stories
- 5 total stories
- Approx. 60,000 GSF added
- Approx. 165,000 GSF total
- Height of Addition – 75’ max.
Approval Process

Groups Engaged

- Bloomfield Business Network
- Bloomfield Citizens Council
- Bloomfield Development Corporation
- Bloomfield Garfield Corporation
- Bloomfield Livable Streets
- Bloomfield United
- The Center that Cares
- Friendship Community Group
- Garfield Jubilee Association
- Bloomfield’s Neighborhood Planner
- Councilwoman Deb Gross

2018

- **JUNE**
  - Bloomfield Development Corporation – Christine Howell
  - Bloomfield Garfield Corporation – Rick Swartz
  - Councilwoman Deb Gross

- **AUGUST**
  - Bloomfield Citizens Council – Janet Scullion Cercone
  - Garfield Jubilee Association, Inc. – Joann Monroe

- **SEPT**
  - Bloomfield Citizens Council – Group meeting at St. Maria Goretti
  - The Center that Cares
  - All Leaders Group Meeting

- **OCT**
  - WPH IMP Presentation to Community
  - WPH IMP Presentation to Community

- **NOV**
  - WPH Master Plan Community Open House

- **DEC**

2019

- **JANUARY**
  - Developing Draft Development Document

- **SEPT**
  - Submitted Draft Document to City Planning (DCP)

  - Received Initial Review Comments from DCP

  - Department of City Planning Hosts Final Community Meeting
Community Meeting Notes

Initial Presentation(s) to Community
- Two dates: October 11 and October 16, 2018
- 34 community stakeholders in attendance
- WPH Slide Presentation followed by open discussion

Open House
- November 27, 2018
- 1 PM to 7 PM
- Multiple presentations of the proposed plan
- Engagement stations for architectural, transportation, and hospital outreach
- Feedback forum: verbal and written opportunities

Final Presentation to Community
- September 4, 2019
- Hosted by Department of City Planning
- Coordinated with Registered Community Organizations
- 30+ community stakeholders in attendance
Community Meeting Notes
Development Concerns Raised During Meeting and Addressed in IMP

- Pedestrian safety along Liberty Avenue
- Street lighting for safety, but no light pollution
- Improved pedestrian circulation through the site
- Noise levels from the power plant
- Controlling traffic flow out of new garage along Gross Street
- Transportation demand management strategies
- Landscaping at street level, vegetation on roofs
- Decrease employees parking on streets
- Increased interaction of ground floor space along Liberty Avenue
- Consideration of the helipad relocation
Urban Design Guidelines

Goals for New Development

• Architecturally complement the character of the surrounding neighborhood.

• Advance sustainable design by building healthy, high performing buildings.

• Use high quality materials compatible with the style and color in the neighborhood. Consider the environmental impact of material selection.

• Engage the public realm at street level.

• Enhance the public realm by incorporating principles of Universal Design.

• Connect the public realm to historic elements of the hospital and surrounding neighborhood.
Liberty Avenue Enhancement

Street Level & Streetscape Character

- The building must **connect** users **inside** the building with the bustling street life **outside**.
- Increased Number of Street Trees
- **Retail type development** with community presence
- **Welcoming** and obvious entrances
- Transparency to improve human engagement
- Contextually appropriate lighting
- Bus stop enhancement
- Opportunities to encourage human interactions: landscaping, benches, canopies, awnings **creating places to pause**
Liberty Avenue Development
New Front Face of the Campus

Design Goals
- Signature Entrance
- Technologically advanced and human-centered
- Retail development along Liberty
- Multi-scalar facades utilizing light and shadow, pattern, and texture
- Service entry and utilities to the buildings on Millvale or Matilda, not Liberty

Building Materials
- Durable, long lasting materials
- Easily-cleanable
- Primary materials: Brick, Architectural concrete, Glass, Terra Cotta
- Secondary materials: Aluminum, Copper, Stone, Wood, Ceramics
- Avoid: Stucco, Vinyl, Fiber Cement boards, High-reflection
Gross Street Enhancement

Streetscape Character

- **35-foot landscaping buffer** between sidewalk and building face for native/adaptive plant species
- Plant row of **street trees** (Gross St. has very few currently)
- Contextually appropriate lighting that provides safe passage but **does not cause light pollution on residences across the street**
- Screening of the garage to relate to **residential building scale** across street
- Gross St. garage access **closed overnight** to prevent car lights from intruding on neighbors
- Ensuring that the street level face of the outpatient building **does not look like the rear of a building**
- **Bring the character** of the School of Nursing (on Millvale side) to the Gross St. side
Building Design Goals

- Architectural character influenced by its surroundings after intense study of context
- Mitigated impact to surrounding site through intentional design of light, sound, and aesthetics
- Façade of the garage shall be broken up along Gross Street to reflect the smaller scale of the homes
- Visually block cars from public view with screening

Building Materials

- Durable, long lasting materials
- Easily-cleanable
- Primary materials: Brick, Architectural concrete, Glass, Terra Cotta
- Secondary materials: Perforated, Metal Panels, Glass, Stone, Wood, CMU
- Avoid: Oversized Panels, Stucco, Vinyl, Fiber Cement boards, High-reflection
- Opportunity to incorporate vegetation in architecture
Gross Street Development – Outpatient Care

Building Design Goals

- **Negotiating scale changes** between hospital to west, nursing school to north, and houses to south and east
- **Sensitivity to shadowing** on houses across street
- Services and utilities **concentrated on the alleys**
- Vehicular **drop off kept to Millvale** Avenue
- Light pollution and noise **pollution contained** within the campus to minimize negative effects on the residential neighbors

Building Materials

- Durable, long lasting materials
- Easily-cleanable
- Primary materials: Brick, Architectural concrete, Glass, Terra Cotta
- Secondary materials: Perforated, Metal Panels, Glass, Stone, Wood, CMU
- Avoid: Oversized Panels, Stucco, Vinyl, Fiber Cement boards, High-reflection
- Incorporate vegetation in architecture
Maximum Development Envelope

Individual building design will be submitted for review as part of the PDP approval process.

120’ maximum height

Gross Street

15’ minimum property line setback

10’ minimum property line setback
Places for Respite - Opportunities

- Inpatient Infill Roof
- New Inpatient Roof @ Stepback along Matilda
- Outpatient Clinic Roofs Accessible via Skywalk from Hospital
- New Inpatient Roof @ Stepback along Millvale
Accessible Campus

Skywalk System
Extended skywalk system will connect new development to existing throughout the second floor.

Legend:
- Existing Pedestrian Circulation (Asterisk = vertical circulation)
- New Pedestrian Circulation (Asterisk = vertical circulation)
- On-Site Parking
- 10 Year Plan Addition - Outpatient
- 10 Year Plan Addition – Inpatient
- Parking Addition
Legend
- Site Location
- Signalized Study Intersection
- Unsignalized Study Intersection
- Parking Duration Counts
- ATR Counts

Site Location and Data Collection Locations
City of Pittsburgh, Allegheny County, Pennsylvania
WPH 2019 Master Plan Transportation Study
Small Firm Client Experience, Big Firm Capabilities

**Legend:**
- PAAC Bus Stop Location
- PAAC Bus Route 54
- PAAC Bus Route 64
- PAAC Bus Route 86
- PAAC Bus Route 87

**Project:**
WPH 2019 Master Plan Transportation Study
City of Pittsburgh, Allegheny County, Pennsylvania

**Title:**
Existing PAAC Bus Routes
Pedestrian Walking Paths

Legend:
- PAAC Bus Stop Location
- Pedestrian Walking Path

Trans Associates
Small Firm Client Experience, Big Firm Capabilities
4955 Steubenville Pike, Twin Towers Suite 400
Pittsburgh, Pennsylvania 15205, 412-490-0630

SCALE: N.T.S.

PROJECT NO. A03101 - 16128
PROJECT: WPH 2019 Master Plan Transportation Study
TITLE: Pedestrian Walking Paths

City of Pittsburgh, Allegheny County, Pennsylvania

FIGURE 6-3

D.B. AMK
C.B. CAJ
REV _______
# Existing Parking Inventory

## West Penn Hospital Parking Facility

<table>
<thead>
<tr>
<th>Number</th>
<th>Facility</th>
<th>Patient/Visitor</th>
<th>Employee</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Liberty/Aspen Street Garage</td>
<td>0</td>
<td>384</td>
<td>384</td>
</tr>
<tr>
<td>2</td>
<td>McKean Lot</td>
<td>0</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>3</td>
<td>West Penn Millvale Garage</td>
<td>595</td>
<td>182</td>
<td>777</td>
</tr>
<tr>
<td>4</td>
<td>Leaseholder Lot (Daly)</td>
<td>0</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>5</td>
<td>Ambulance Entrance</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>S. Millvale Leaseholder Lot (Gravel)</td>
<td>0</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td>7</td>
<td>Ambulance Transfer Lot</td>
<td>0</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>Short Term Physician Lot</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>MRI/Radiation/Oncology Lot</td>
<td>0</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>Lawrenceville Lot (Off-Site)</td>
<td>0</td>
<td>444</td>
<td>444</td>
</tr>
<tr>
<td><strong>TOTAL WEST PENN HOSPITAL PARKING</strong></td>
<td>595</td>
<td>1,254</td>
<td>1,849</td>
<td></td>
</tr>
</tbody>
</table>

### Notes:
- Liberty/Aspen Street Garage
- McKean Lot
- West Penn Millvale Garage
- Leaseholder Lot (Daly)
- Ambulance Entrance
- S. Millvale Leaseholder Lot (Gravel)
- Ambulance Transfer Lot
- Short Term Physician Lot
- MRI/Radiation/Oncology Lot
- Lawrenceville Lot (Off-Site)
### West Penn Hospital Parking Facility

<table>
<thead>
<tr>
<th>Parking Facility</th>
<th>Number of Parking Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient/Visitor</td>
<td>Employee</td>
</tr>
<tr>
<td>Liberty/Aspen Street Garage</td>
<td>384</td>
</tr>
<tr>
<td>McKean Lot</td>
<td>163</td>
</tr>
<tr>
<td>West Penn Millvale Garage</td>
<td>595</td>
</tr>
<tr>
<td>Ambulance Entrance</td>
<td>3</td>
</tr>
<tr>
<td>Ambulance Transfer Lot</td>
<td>7</td>
</tr>
<tr>
<td>Short Term Physician Lot</td>
<td>3</td>
</tr>
<tr>
<td>MRI/Radiation/Oncology Lot</td>
<td>5</td>
</tr>
<tr>
<td>New Gross Street Garage</td>
<td>325</td>
</tr>
<tr>
<td><strong>TOTAL WEST PENN HOSPITAL PARKING</strong></td>
<td><strong>1,072</strong></td>
</tr>
</tbody>
</table>

---

**Future 2029 Parking Inventory**

**Project:** WPH 2019 Master Plan Transportation Study

**Location:** City of Pittsburgh, Allegheny County, Pennsylvania

**Scale:** N.T.S.

**Trans Associates**

Small Firm Client Experience, Big Firm Capabilities

4955 Steubenville Pike, Twin Towers Suite 400
Pittsburgh, Pennsylvania 15205, 412-490-0630
10 Year Bicycle Circulation

Bicycle Parking Locations
- Gross Street Garage: 83 spaces, Covered & Secured
- Millvale Garage: 7 spaces, Covered
- Liberty Avenue Entrance: 40 spaces, Exterior, Short-term
- Friendship Avenue Entrance: 10 spaces, Exterior, Short-term
- Millvale Entrance: 10 spaces

Total Bike Park in EMI: 150 spaces

Legend:
- ▲ Bicycle Circulation
- ◇ Bicycle Storage
- ◈ Healthy Ride Station
- ▒ Bus Stop

Allegheny Health Network

West Penn Hospital

Proposed Bicycle Facilities and Bicycle Paths
### EMPLOYEE TRAVEL SURVEY SUMMARY

#### EMPLOYEE STATUS

<table>
<thead>
<tr>
<th>Employee Status</th>
<th>Number of Employees</th>
<th>Percentage of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Employees Responding</td>
<td>374</td>
<td>--</td>
</tr>
</tbody>
</table>

#### TRANSPORTATION MODE

<table>
<thead>
<tr>
<th>Transportation Mode</th>
<th>Number of Employees</th>
<th>Percentage of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Vehicle</td>
<td>323</td>
<td>86.4%</td>
</tr>
<tr>
<td>Transit (bus or light rail)</td>
<td>12</td>
<td>3.2%</td>
</tr>
<tr>
<td>Walk</td>
<td>25</td>
<td>6.7%</td>
</tr>
<tr>
<td>Biked</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>3.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>374</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

**PRIVATE VEHICLE AUTO OCCUPANCY**

<table>
<thead>
<tr>
<th>Adult Passengers in Cars (Including Driver)</th>
<th>Number of Employees</th>
<th>Percentage of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 person</td>
<td>312</td>
<td>92.6%</td>
</tr>
<tr>
<td>2 people</td>
<td>22</td>
<td>6.5%</td>
</tr>
<tr>
<td>3 people</td>
<td>3</td>
<td>0.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>337</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Average Auto Occupancy = 1.1 persons per vehicle
Legend
- Overall Intersection LOS A, B, C, or D
- Overall Intersection LOS E
- Overall Intersection LOS F
- AM Peak Hour | PM Peak Hour

PROJECT
WPH 2019 Master Plan Transportation Study
City of Pittsburgh, Allegheny County, PA

FIGURE
6-8
2029 Build
Peak Hour Levels of Service
Recommended Improvements

Install new traffic signal.

Compare Gross Street to two-way operation between Liberty Avenue and the proposed garage driveway.

Convert Gross Street to two-way operation between Liberty Avenue and the proposed garage driveway.

Close Millvale Garage driveway on Gross Street.

Close Millvale Garage driveway on Gross Street.

Install new traffic signal.

Vacate southern portion of Corday Way and build hammerhead.

See Figure S-5 for Gross Street improvements.

Continue the driveway function of the existing Millvale Garage driveway on S. Millvale Avenue.

Construct new garage driveway with left-in, left-out, right-out operation. Close this driveway from 8pm to 6am on weekdays.

Legend:
- Parking Garage
- Parking Lot

Legend:
- Optimize Signal Timings

PROJECT NO.  AHNET00 - 16128
PROJECT: WPH 2019 Master Plan Transportation Study
PROJECT: City of Pittsburgh, Allegheny County, Pennsylvania
TITLE: Recommended Improvements

Small Firm Client Experience, Big Firm Capabilities
4955 Steubenville Pike, Twin Towers Suite 400
Pittsburgh, Pennsylvania 15205, 412-490-0630

SCALE: N.T.S.
Eliminate existing Millvale Garage driveway.

Install 6' wide, 25' long bump-outs

Remove on-street parking on the western side of Gross Street up to the proposed Garage Driveway. Parking loss = approximately 4 spaces.

Install a new traffic signal with stop bars, Thermoplastic high-visibility piano key pedestrian crosswalks, pedestrian push buttons, countdowns, and audible equipment.

Parking loss = approximately the proposed Garage Driveway.
Install a mid-block crossing with Rectangular Rapid Flashing Beacon, Thermoplastic high visibility piano key pedestrian crosswalk, and in-pavement lighting.

Restripe roadway with Thermoplastic high visibility piano key pedestrian crosswalks at all crossings.

Signal replacement to be done by the City of Pittsburgh.

Additional pedestrian improvements on Liberty Avenue are shown in Attachment B.

Install a new traffic signal with Thermoplastic high visibility stop bars and piano key pedestrian crosswalks, pedestrian push buttons, countdown, and audible equipment.

Restripe roadway with Thermoplastic high visibility piano key pedestrian crosswalks at all crossings.

Recommended Pedestrian Improvements
Recommended Pedestrian Improvements

Liberty Avenue

LEGEND

= PROPOSED CONCRETE CURB
= PROPOSED CONCRETE SIDEWALK
= PROPOSED CONCRETE ADA RAMP

SCALE: N.T.S.

Small Firm Client Experience, Big Firm Capabilities
4955 Steubenville Pike, Twin Towers Suite 400
Pittsburgh, Pennsylvania 15205, 412-490-0630
Potential TDM Initiatives for WPH Staff

- Appoint a TDM Coordinator
- Reduce the percentage of employees that drive alone from 86.4% to 65-70%
- Engaging with the Port Authority of Allegheny County (PAAC) to explore programs
- ‘Guaranteed Ride Home’ program
- Increased use of Healthy Ride bike sharing program
- Promotion of bicycle storage and shower facilities
- Promote Zipcar usage
- Priority carpool/vanpool parking and use SPC Commuter Connects program
- Flexible work hours/telecommute program
- Alternatives to staff usage of private automobiles for transportation between AHN campuses (Uber/Lyft, ridesharing, Zoom meetings)

TDM Strategies for Patients, Visitors and General Public

- Bicycle storage facilities
- Establish easily accessible Uber/Lyft pick-up/drop-off locations
- Include information on public transit, bicycling, pedestrian paths, and car share stations on the WPH website, and provide this information and links to WPH physician offices for use by their patients.
- Deployment of real-time transit and rideshare information screens in the main lobby of WPH to allow both patients/visitors and employees to see their options before they leave the facility.
Environment & Sustainability Goals

- ENERGY EFFICIENCY
- WATER CONSERVATION
- EMISSIONS CONTROL
- WASTE MANAGEMENT
- LANDSCAPE & ECOLOGY
- TRANSPORTATION & MOBILITY
- PROCUREMENT
Environment & Sustainability Goals

- **ENERGY EFFICIENCY**
  - 50% Energy Use Reduction by 2030

- **WATER CONSERVATION**
  - 50% Water Use Reduction by 2030

- **EMISSIONS CONTROL**
  - 50% Emissions Reduction by 2030

- **WASTE MANAGEMENT**
  - 25% Emissions Reduction by 2030

- **LANDSCAPE & ECOLOGY**

- **TRANSPORTATION & MOBILITY**

- **PROCUREMENT**
Environment & Sustainability Goals

Objectives

ENERGY EFFICIENCY
- Achieve energy use intensity (EUI) targets
- Identify and recalibrate underperforming systems
- System upgrades shall reduce energy requirements, noise, and emissions
- Produce or procure renewable sources

WATER CONSERVATION
- Reduce water consumption
- Reduce impervious surfaces
- Divert storm water from impervious surfaces using BMP structures

EMISSIONS CONTROL
- Reduce greenhouse gas (GHG) emissions
- Reduce fleet emissions with the expansion of alternative fuel vehicles

WASTE MANAGEMENT
- Reduce landfill waste
- Improve food compost programs
- Reduce regulated medical waste generation
Environment & Sustainability Goals

**Objectives**

**LANDSCAPE & ECOLOGY**
- Prioritize preservation of existing street trees and encourage tree canopy growth within landscaped setbacks
- Provide sustainable landscapes with native and adapted plants

**TRANSPORTATION & MOBILITY**
- Secure bicycle parking in structured parking and provide space for short-term bicycle parking on campus (150 total spaces)
- Provide electric vehicle charging stations in structured parking
- Promote ridesharing programs to WPH staff

**PROCUREMENT**
- Advance sustainable purchasing objectives
- Utilize lean stocking and inventory methods
Environmental & Sustainability Goals

Best Management Practices (BMP) of Stormwater Management

**Vegetated Roofs on New Development**
The new outpatient clinic, as part of the ten-year plan, is a candidate for this BMP structure.

**Porous Pavement/Pavers for detention and filtration**
The proposed sidewalk along Mend Way is a candidate for this BMP structure. Future improvements to existing sidewalks may also benefit from this practice.

**Planters/Tree Pits**
Future building entries and the proposed sidewalk are candidates for this BMP structure. Future improvements to existing sidewalks may also benefit from this practice.

**Rain Gardens**
Proposed landscaped setbacks along Gross Street are candidates for this BMP structure.
Environmental & Sustainability Goals

<table>
<thead>
<tr>
<th>IMPROVED STORMWATER IMPACT</th>
<th>TOTAL VOLUME</th>
<th>TOTAL VOLUME</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMPERVIOUS AREA POST PLANED DEVELOPMENT (SF)</td>
<td>125,000</td>
<td>± 10,375</td>
</tr>
<tr>
<td>RAINFALL (PT)</td>
<td>0.083</td>
<td>± 10,375</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BMP STORMWATER VOLUME</th>
<th>POTENTIAL AREA (SF/EA/GAL)</th>
<th>POTENTIAL STORMWATER STORAGE CAPTURED (CF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetated Roof</td>
<td>±65,000 sf</td>
<td>219,500</td>
</tr>
<tr>
<td>Porous Pavement/Pavers</td>
<td>5,000 sf</td>
<td>±2,500</td>
</tr>
<tr>
<td>Rain Garden</td>
<td>±3,000 sf</td>
<td>±2,500</td>
</tr>
<tr>
<td>Cistern</td>
<td>±25,000 gal</td>
<td>±25,000</td>
</tr>
<tr>
<td>Total</td>
<td>±29,800</td>
<td>±29,800</td>
</tr>
</tbody>
</table>

**CITY OF PITTSBURGH STORMWATER MANAGEMENT FEE**

**POTENTIAL REDUCTION**

- **EXISTING TOTAL IMPERVIOUS/PERVIOUS (SF)**
- **PROPOSED TOTAL IMPERVIOUS/ PERVIOUS (SF)**
  - 125,000 (IMPERVIOUS) - 65,000 VEGETATED ROOF
  - 5,000 POROUS PAVEMENT/Pavers
  - 3,000 RAIN GARDEN
  - 10,000 REMAINING GREENSPACE
  - 83,000 IMPERVIOUS/PERVIOUS

**NET IMPERVIOUS REDUCTION**

- 80,600 - 42,000 = 38,600 SF

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**Legend**
- Property Line
- Study Area
- BMP Projects
- Vegetated Roof
- Rain Garden
- Porous Pavement/Pavers
- Cistern
Urban Stewardship

• Neighborhood Friendly
• Green Spaces
  • In Public Realm
  • On Rooftops
• Improved Acoustics
  • Updated equipment
  • Buffering Sound
• Enhanced Lighting
  • At Sidewalk
  • On buildings
  • Reducing glare
• Accessibility
  • Universal Site Design
  • Continuous Path through Campus
Urban Stewardship

- **High-Performance Water Control**
  - On-site Stormwater Capture
  - Reduced Water Consumption

- **Alternative Transportation Approaches**
  - Transportation Demand Management Plan
  - Employee Incentives
  - Alternative modes, i.e. Healthy Ride

- **Electric Vehicle (EV) Charging**
  - Multiple Charging Stations in Garage
  - Considering Future EV Expansion

- **Bicycle Parking**
  - Secured and public

- **Vehicle Parking**
  - Sufficient Quantity
  - Adaptive Construction
Thank You