# MONTGOMERY GARAGE:
# GREEN BY DESIGN

## MATERIALS AND RESOURCES


### Recycled and Regional Materials

Montgomery Garage designed with the intent to reduce the amount of virgin materials used in construction by using materials with a high level of recycled content, such as the steel structure.  The use of materials from local and regional manufacturers helps decrease the environmental impacts associated with material transportation.

## ENERGY & ATMOSPHERE


### Optimized Energy Performance

Building lighting systems are optimized to reduce the environmental and economic impacts associated with excessive energy use.

### Enhanced Refrigerate Management

Montgomery Garage building systems minimize the emissions of compounds that contribute to ozone depletion.

# INDOOR ENVIRONMENTAL QUALITY

## Low Emitting Materials

This project used low-emitting materials in construction, including low-emitting adhesives, sealants, paints, coatings, and floor systems. These materials reduce the concentration of volatile organic compounds inside the building to provide a healthier indoor. environment.


## Environmental Tobacco Smoke (ETS) Control

The project minimizes exposure to ETS-containing air by prohibiting smoking on-site.

# SUSTAINABLE SITES

## Stormwater Design

Prior to the development of this project, the existing site imperviousness was greater than 50%. A storm water management plan was implemented as part of the project such that the post-development site runoff quantity has been reduced by more than 80%.


## Public Transportation

Located within ½ mile of bus, subway and regional rail services, the garage is well connected to the regional transit system.

## Cool Roof

Montgomery Garage has a highly reflective roof to reduce cooling costs and the heat island effect.  This “cool roof” reflects and emits the sun’s heat back to the sky instead of transferring it to the building below.


## Preferred Parking

The garage provides preferred parking spaces for low-emitting and fuel-efficient vehicles for 5% of total parking capacity.

# WATER EFFICIENCY


## Low Flow Fixtures

This building features low flow fixtures, which help to conserve water.

Temple University

# LEED 2009 for New Construction and Major Renovations

Project Checklist

Montgomery Avenue Mixed-Use Garage
LEED Silver Certified on 22 June 2015

## Sustainable Sites — Possible Points: 26

| Y | ? | N | d/c | | | | Notes: |
|---|---|---|---|---|---|---|---|
| Y | | | c | Prereq 1 | Construction Activity Pollution Prevention | | |
| 1 | | | d | Credit 1 | Site Selection | 1 | |
| 5 | | | d | Credit 2 | Development Density and Community Connectivity | 5 | |
| | | | d | Credit 3 | Brownfield Redevelopment | 1 | |
| 6 | | | d | Credit 4.1 | Alternative Transportation–Public Transportation Access | 6 | |
| 2 | | | d | Credit 4.2 | Alternative Transportation–Bicycle Storage and Changing Rooms | 1 | |
| 3 | | | d | Credit 4.3 | Alternative Transportation–Low-Emitting and Fuel-Efficient Vehicles | 3 | |
| | | | d | Credit 4.4 | Alternative Transportation–Parking Capacity | 2 | |
| | | | c | Credit 5.1 | Site Development–Protect or Restore Habitat | 1 | |
| | | | d | Credit 5.2 | Site Development–Maximize Open Space | 1 | |
| 1 | | | d | Credit 6.1 | Stormwater Design–Quantity Control | 1 | 83% decrease in volume of stormwater runoff |
| 1 | | | d | Credit 6.2 | Stormwater Design–Quality Control | 1 | |
| 1 | | | c | Credit 7.1 | Heat Island Effect–Non-roof | 1 | |
| 1 | | | d | Credit 7.2 | Heat Island Effect–Roof | 1 | |
| | | | d | Credit 8 | Light Pollution Reduction | 1 | |

## Water Efficiency — Possible Points: 10

| Y | ? | N | | | | Notes: |
|---|---|---|---|---|---|---|
| Y | | | d | Prereq 1 | Water Use Reduction–20% Reduction | |
| 4 | | | d | Credit 1 | Water Efficient Landscaping | 2 to 4 |
| | | | | | Reduce by 50% | 2 |
| | | | | X | No Potable Water Use or Irrigation | 4 |
| 2 | | | d | Credit 2 | Innovative Wastewater Technologies | 2 | 86% reduction of potable water use for sewage conveyance |
| 3 | | | d | Credit 3 | Water Use Reduction | 2 to 4 |
| | | | | | Reduce by 30% | 2 |
| | | | | X | Reduce by 35% | 3 | 37% reduction |
| | | | | | Reduce by 40% | 4 | |

## Energy and Atmosphere — Possible Points: 35

| Y | ? | N | | | | | Notes: |
|---|---|---|---|---|---|---|---|
| Y | | | c | Prereq 1 | Fundamental Commissioning of Building Energy Systems | | |
| Y | | | d | Prereq 2 | Minimum Energy Performance | | |
| Y | | | d | Prereq 3 | Fundamental Refrigerant Management | | |
| 7 | | | d | Credit 1 | Optimize Energy Performance | 1 to 19 | Improved by 24.54% above baseline |
| | | | d | Credit 2 | On Site Renewable Energy | 1 to 7 | |
| | | | c | Credit 3 | Enhanced Commissioning | 2 | |
| 2 | | | d | Credit 4 | Enhanced Refrigerant Management | 2 | |
| | | | c | Credit 5 | Measurement and Verification | 3 | |
| | | | c | Credit 6 | Green Power | 2 | |

## Materials and Resources — Possible Points: 14

| Y | ? | N | | | | | Notes: |
|---|---|---|---|---|---|---|---|
| Y | | | d | Prereq 1 | Storage and Collection of Recyclables | | |
| | | | c | Credit 1.1 | Building Reuse–Maintain Existing Walls, Floors, and Roof | 1 to 3 | |
| | | | c | Credit 1.2 | Building Reuse–Maintain 50% of Interior Non-Structural Elements | 1 | |
| | | | c | Credit 2 | Construction Waste Management | 1 to 2 | |
| | | | | | 50% Recycled or Salvaged | 1 | |
| | | | | X | 75% Recycled or Salvaged | 2 | 77% w/o LEED approved documentation |
| | | | c | Credit 3 | Materials Reuse | 1 to 2 | |
| 2 | | | c | Credit 4 | Recycled Content | 1 to 2 | |
| | | | | | 10% of Content | 1 | |
| | | | | X | 20% of Content | 2 | |
| 2 | | | c | Credit 5 | Regional Materials | 1 to 2 | |
| | | | | | 10% of Materials | 1 | |
| | | | | X | 20% of Materials | 2 | |
| | | | c | Credit 6 | Rapidly Renewable Materials | 1 | |
| | | | c | Credit 7 | Certified Wood | 1 | |

## Indoor Environmental Quality — Possible Points: 15

| Y | ? | N | | | | Notes: |
|---|---|---|---|---|---|---|
| Y | | | d | Prereq 1 | Minimum Indoor Air Quality Performance | |
| Y | | | d | Prereq 2 | Environmental Tobacco Smoke (ETS) Control | |
| | | | d | Credit 1 | Outdoor Air Delivery Monitoring | 1 |
| | | | d | Credit 2 | Increased Ventilation | 1 |
| 1 | | | c | Credit 3.1 | Construction IAQ Management Plan–During Construction | 1 |
| 1 | | | c | Credit 3.2 | Construction IAQ Management Plan–Before Occupancy | 1 |
| 1 | | | c | Credit 4.1 | Low-Emitting Materials–Adhesives and Sealants | 1 |
| 1 | | | c | Credit 4.2 | Low-Emitting Materials–Paints and Coatings | 1 |
| 1 | | | c | Credit 4.3 | Low-Emitting Materials–Flooring Systems | 1 |
| 1 | | | c | Credit 4.4 | Low-Emitting Materials–Composite Wood and Agrifiber Products | 1 |
| | | | c | Credit 5 | Indoor Chemical and Pollutant Source Control | 1 |
| | | | d | Credit 6.1 | Controllability of Systems–Lighting | 1 |
| | | | d | Credit 6.2 | Controllability of Systems–Thermal Comfort | 1 |
| 1 | | | d | Credit 7.1 | Thermal Comfort–Design | 1 |
| | | | d | Credit 7.2 | Thermal Comfort–Verification | 1 |
| | | | d | Credit 8.1 | Daylight and Views–Daylight | 1 |
| | | | d | Credit 8.2 | Daylight and Views–Views | 1 |

## Innovation and Design Process — Possible Points: 6

| Y | ? | N | | | | Notes: |
|---|---|---|---|---|---|---|
| | | | id | Credit 1.1 | Innovation in Design: Specific Title | 1 |
| | | | id | Credit 1.2 | Innovation in Design: Specific Title | 1 |
| | | | id | Credit 1.3 | Innovation in Design: Specific Title | 1 |
| | | | id | Credit 1.4 | Innovation in Design: Specific Title | 1 |
| | | | id | Credit 1.5 | Innovation in Design: Specific Title | 1 |
| 1 | | | id | Credit 2 | LEED Accredited Professional | 1 |

## Regional Priority Credits — Possible Points: 4

| Y | ? | N | | | | Notes: |
|---|---|---|---|---|---|---|
| | | | rp | Credit 1.1 | Regional Priority: Specific Credit | 1 |
| | | | rp | Credit 1.2 | Regional Priority: Specific Credit | 1 |
| | | | rp | Credit 1.3 | Regional Priority: Specific Credit | 1 |
| | | | rp | Credit 1.4 | Regional Priority: Specific Credit | 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 51 | 0 | 0 | **Total** | | **Possible Points:** | **110** |

Certified 40 to 49 points  Silver 50 to 59 points  Gold 60 to 79 points  Platinum 80 to 110