THE HILL AT GARRARD STREET

ETNA, PENNSYLVANIA

TORI MACIORSKI - LARCH 414 PITTSBURGH STUDIO
PENN STATE LANDSCAPE ARCHITECTURE - SPRING 2021

CONTEXT + CONCEPT

This previously unused lot at the peak of Garrard Street provided an opportunity for a multi-use attraction for community members of Garrard and Ganster Streets in Etna, PA. Though the slope up to the top of the site was a challenge, organic terracing forms respond to natural elevation changes in the landscape. These terraces provided the opportunity to incorporate community gardening and native species planting designs. The top of the hill is serves to accentuate the beautiful view of Etna through a plaza with overlook nodules. The site also features renewable energy demonstrations including solar panels and small-scale wind turbines. Finally, the site includes ADA-compliant components including trail surface paving, accessible garden beds, and a ramp system for plaza and overlook access.

ANALYSIS FACTORS

SLOPE

The slope of the site required a creative solution to turn it into accessible and usable land.

VISTA

The site offers a beautiful view of Etna across Route 8, which the site design draws attention to.

PLATEAU

The slopes on either side of the site create a plateau at the highest area, making the spot perfect for a gathering space.

SITE PLAN

This site plan gives a closer look at the orientation of design components and programs. The site systems are each highlighted on the next page.

SITE SYSTEMS

The site design of Garrard Street is dependent upon several site systems which work together to create a welcoming and purposeful experience: renewable energy, native planting areas, plaza space, community gardens, and circulation, each highlighted in orange in the respective site plans.

PHASING

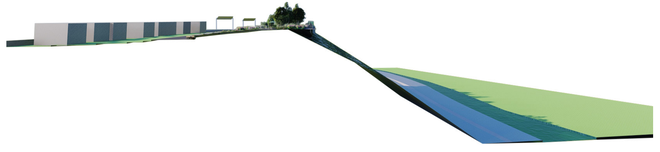
Some aspects of the project could be completed in phases. This diagram shows how the number of raised community garden beds could be increased in response to the demand for garden space by the community.

SITE SECTIONS

This elevation faces the site showing a view from Garrard Street.

This shorter elevation cuts through the site facing in the Southwest direction, showing the terracing and plaza

SCALE: 1"=20'
0' 10' 20' 40'



This longer elevation cuts through the site facing in the Southwest direction, showing the site as well as context of Greismere Street houses and the slope down to Route 8.

SCALE: 1"=80'
0' 40' 80' 160'

PLANTING PALETTE


A


B


C


D


G


J


E


H


K


F


I


L


M


N


O


P


Q

Planting Palette:

Graminoids:
- *A. Carex pensylvanica*, Pennsylvania Sedge
- *B. Schizachyrium scoparium*, Little Bluestem
- *C. Sorghastrum nutans*, Indian Grass

Perennial Forbs:
- *D. Asclepias incarnata*, Swamp Milkweed
- *E. Baptisia australis*, Blue Wild Indigo
- *F. Dicentra eximia*, Wild bleeding heart
- *G. Echinacea purpurea*, Purple Coneflower
- *H. Euthrochium dubium*, Coastal Plain Joe Pye
- *I. Geranium maculatum*, Wild Geranium
- *J. Heuchera*, Heuchera 'Berry Smoothie'
- *K. Rudbeckia hirta*, Black Eyed Susan
- *L. Solidago rigida*, Stiff Goldenrod
- *M. Symphyotrichum oblongifolium*, Fall Aster

Trees:
- *N. Acer rubrum*, Red Maple 'Sun Valley'
- *O. Betula papyrifera*, Paper Birch 'Renci'
- *P. Cercis canadensis*, Eastern Redbud
- *Q. Juniperus virginiana*, Eastern Red Cedar 'Emerald Sentinel'

The planting palette draws entirely from plants which are native to Pennsylvania, providing habitat for pollinators and needing as little maintenance as possible.

MATERIALS PALETTE

Material Palette:
1. Tempered Glass
2. Trail surface aggregate
3. ADA-compliant permeable paving
4. Stone: Gabion Baskets
5. Reclaimed oiled white oak
6. Galvanized steel

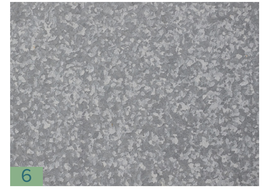

1


4


2


5


3


6

The materials palette draws inspiration from materials commonly used in the Pittsburgh region, while sourcing reclaimed materials where possible.

SITE EXPERIENCE

An ADA-compliant ramp series made from galvanized steel and trail surface aggregate works with the gabion terracing providing an accessible path to the top plaza.

Accessible community garden planting benches are wheelchair accessible, movable stools are also present to give the option of sitting while working for those who do not use wheelchairs.

This view shows the native planting in the plaza, as well as one of the overlook nodules which features the view of Etna Borough.

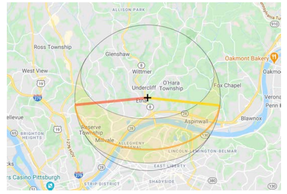
Accessible community garden planting benches are wheelchair accessible, movable stools are also present to give the option of sitting while working for those who do not use wheelchairs.

Stair access is also available for those who wish to use them to move up and down from street level to the top plaza.

A QR code will be present on site, when scanned it will link to a web page which loads live data reporting energy production from the solar panels and small scale wind turbines of the renewable energy demonstration.

SUN ANALYSIS

The positioning of solar panels and community garden beds are done so that maximum sun angles can be obtained, with little to no shadow coverage, as seen through the timed series of images to the right and sun angle diagram below.



MORNING

AFTERNOON

EVENING

ACKNOWLEDGEMENTS

A special thank you goes out to key partners: Mary Ellen Ramage and Talia O’Brien from Etna Borough, Tom Bartnik and David Himes of Penn State Center Pittsburgh. Additional thanks to Ken Tamminga, professor of LARCH 414 Pittsburgh Studio.

REFERENCES

Shed Model: Modern-Shed (SketchUp)
https://tampasteel.com/what-is-galvanized-metal/
https://www.dirtandgravel.psu.edu/center/trails/centers-trail-projects
https://environment.arlingtonva.us/stormwater-watersheds/stormwater-at-home/pervious-surface-options/
https://www.alibaba.com/product-detail/gabion-baskets-size-for-sale-in_60699615923.html
https://www.bricoflor.co.uk/berryalloc-original-62001359-white-oiled-oak.html
https://customglassandmirrornyc.com/type-of-glass/tempered-glass
https://www.naturehills.com/grass-the-blues-little-bluestem
https://www.fandm.edu/center-for-the-sustainable-environment/native-pollinators/a-guide-to-native-pollinators/native-pollinator-garden-guide/pennsylvania-sedge-carex-pensylvanica
https://www.outsidepride.com/seed/native-grass-seed/indian-native-grass-seed.html
https://www.highcountrygardens.com/perennial-plants/asclepias/asclepias-incarnata
https://www.gardeningknowhow.com/ornamental/flowers/baptisia/growing-baptisia-plants.htm
https://www.gardenia.net/plant/dicentra-eximia
https://www.gardengatemagazine.com/articles/flowers-plants/plant-guide/coneflower-growing-guide/
https://www.gardenia.net/plant/eutrochium-fistulosum
https://illinoisbotanizer.com/plants/geranium-maculatum/
https://www.bluestoneperennials.com/HBESM.html
https://www.usperennials.com/rudbeckia-fulgida-var-deamii-deams-black-eyed-susan-clumps-not-spreading-very-drought-tolerant/
https://www.gardenia.net/plant/oligoneuron-rigidum
https://communityenvironment.unl.edu/fall-asters-are-worth-wait
https://www.greenthumbsgarden.com/products/sun-valley-maple-tree
https://www.fallerlandscape.com/Plant-Name/Betula-papyrifera-Renci-Reflection-Paper-Birch
https://www.gardeningknowhow.com/ornamental/trees/redbud/caring-for-redbud-trees.htm
https://www.ruppertnurseries.com/inventories/juniperus-virginiana-emerald-sentinel/
https://www.ubreakifix.com/iphone-repair/iphone-7-repair/iphone-7-screen-repair
https://shkspr.mobi/blog/2020/04/comparing-solar-panel-generation/
https://etap.com/product/wind-turbine-generator-software