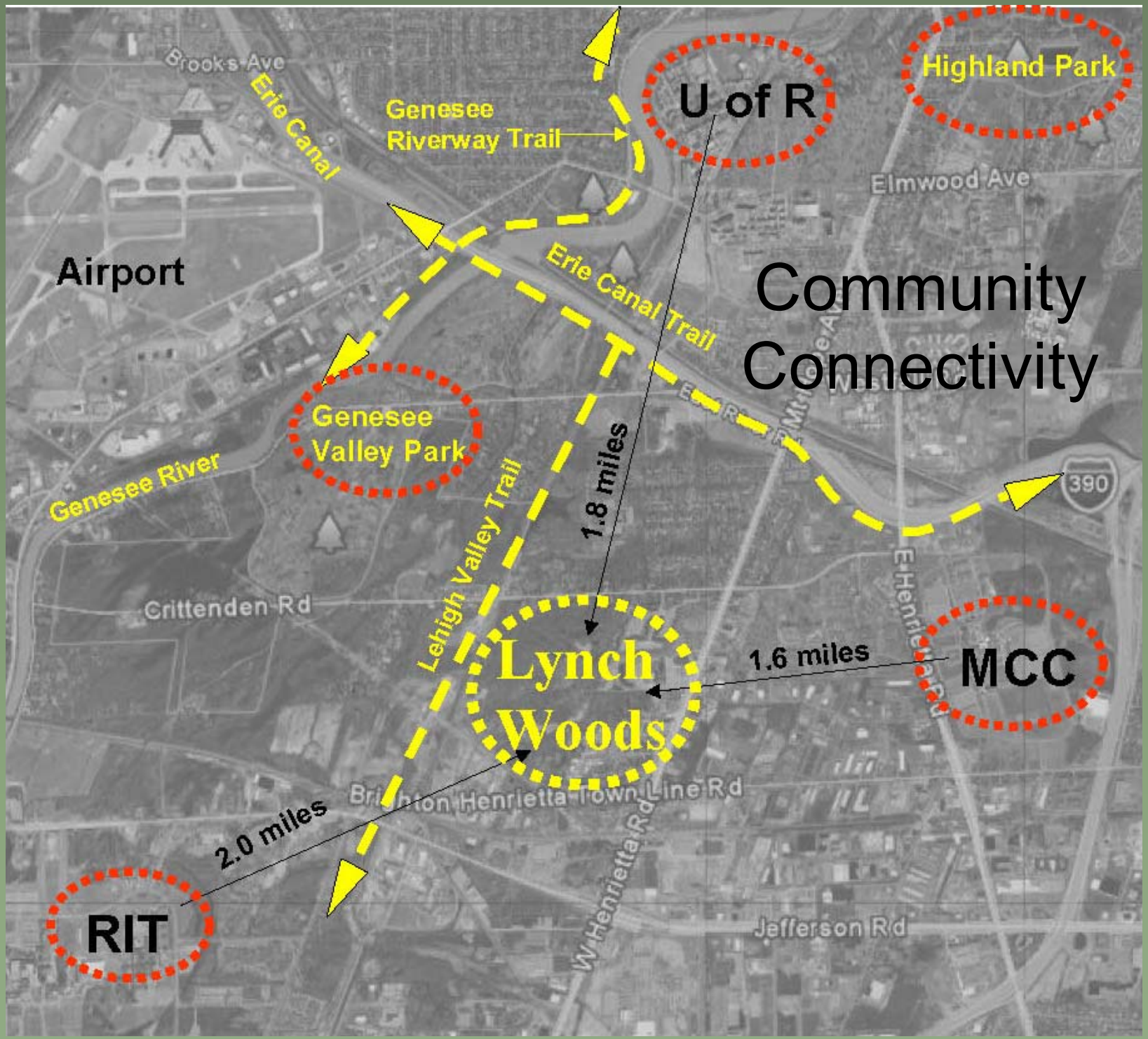
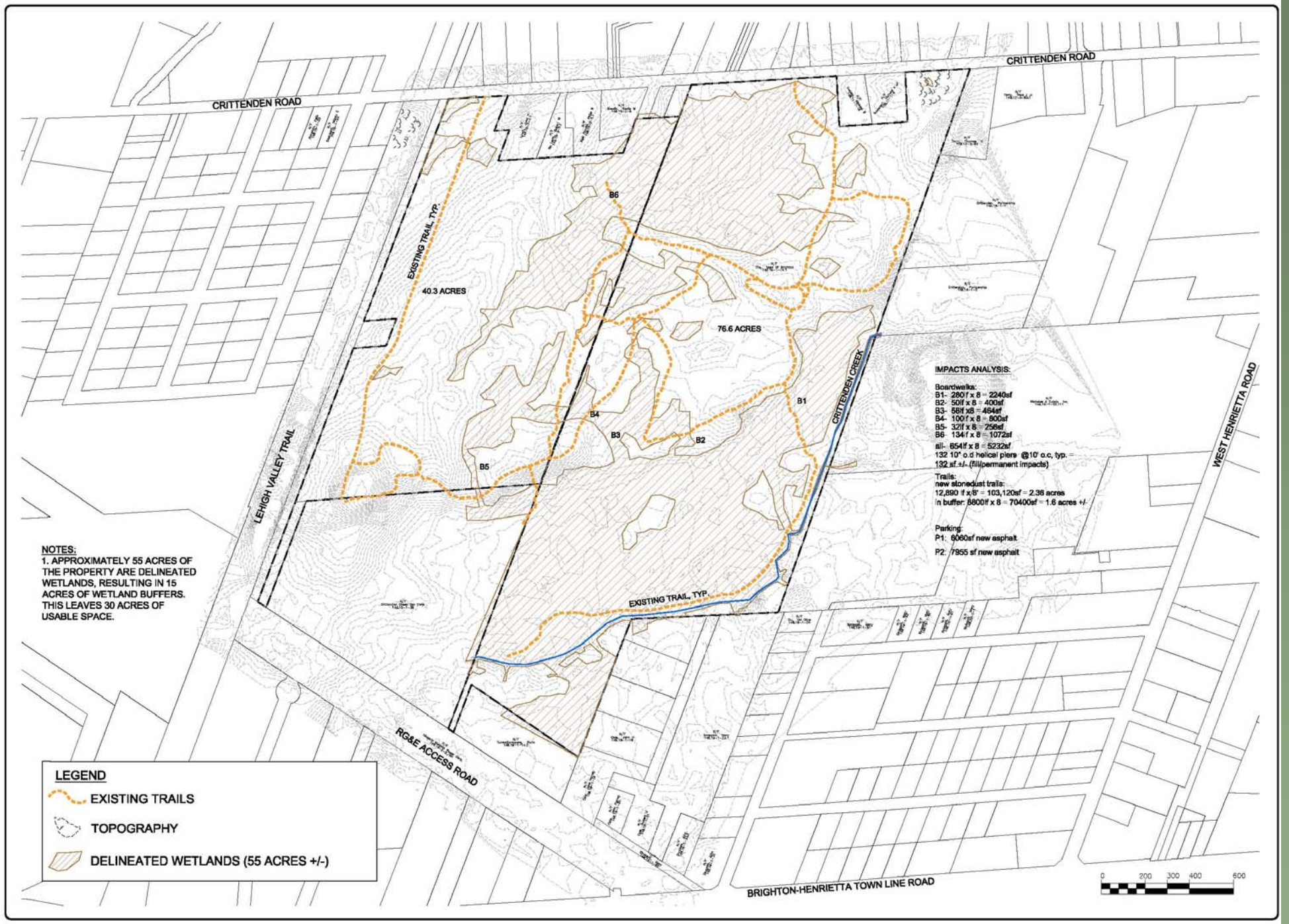
LYNCH WOODS

Site Analysis & Design Concept


Community Connectivity
Brooks Ave
Erie Canal
Genesee Riverway Trail
U of R
Highland Park
Elmwood Ave
Airport
Erie Canal Trail
Genesee Valley Park
Genesee River
Lehigh Valley Trail
1.8 miles
390
Crittenden Rd
Lynch Woods
1.6 miles
MCC
E Henrietta Rd
Brighton Henrietta Town Line Rd
2.0 miles
RIT
W Henrietta Rd
Jefferson Rd



EXISTING CONDITIONS

February 25, 2010 LYNCH WOODS Town of Brighton

EDR

EXISTING CONDITIONS PHOTOS

Scrub/shrub wetland

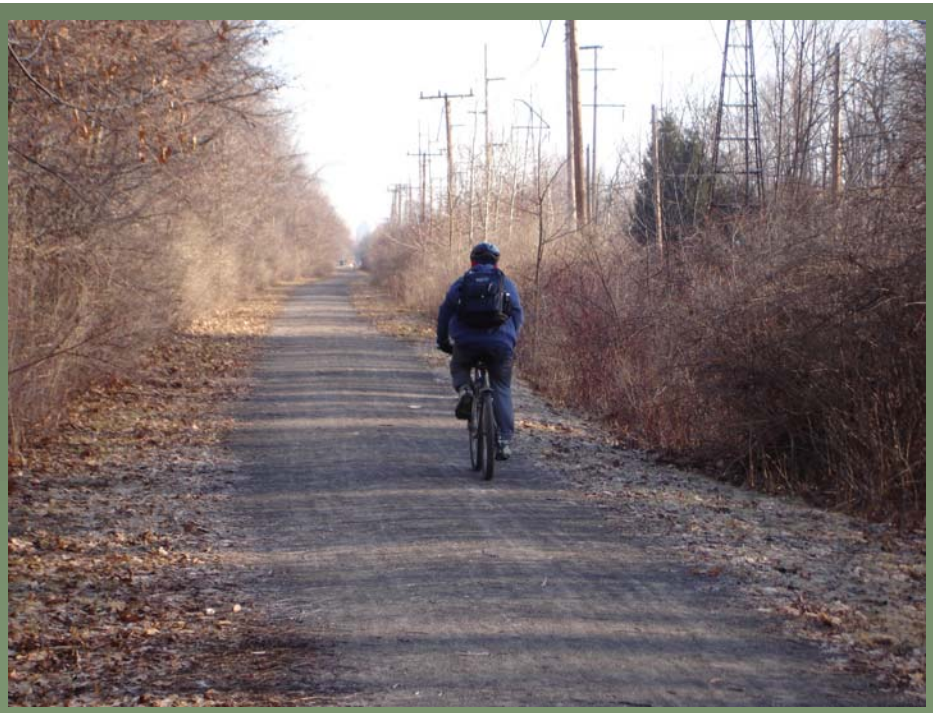
Open field

Upland ridge trail

Successional woodlot

EXISTING CONDITIONS PHOTOS

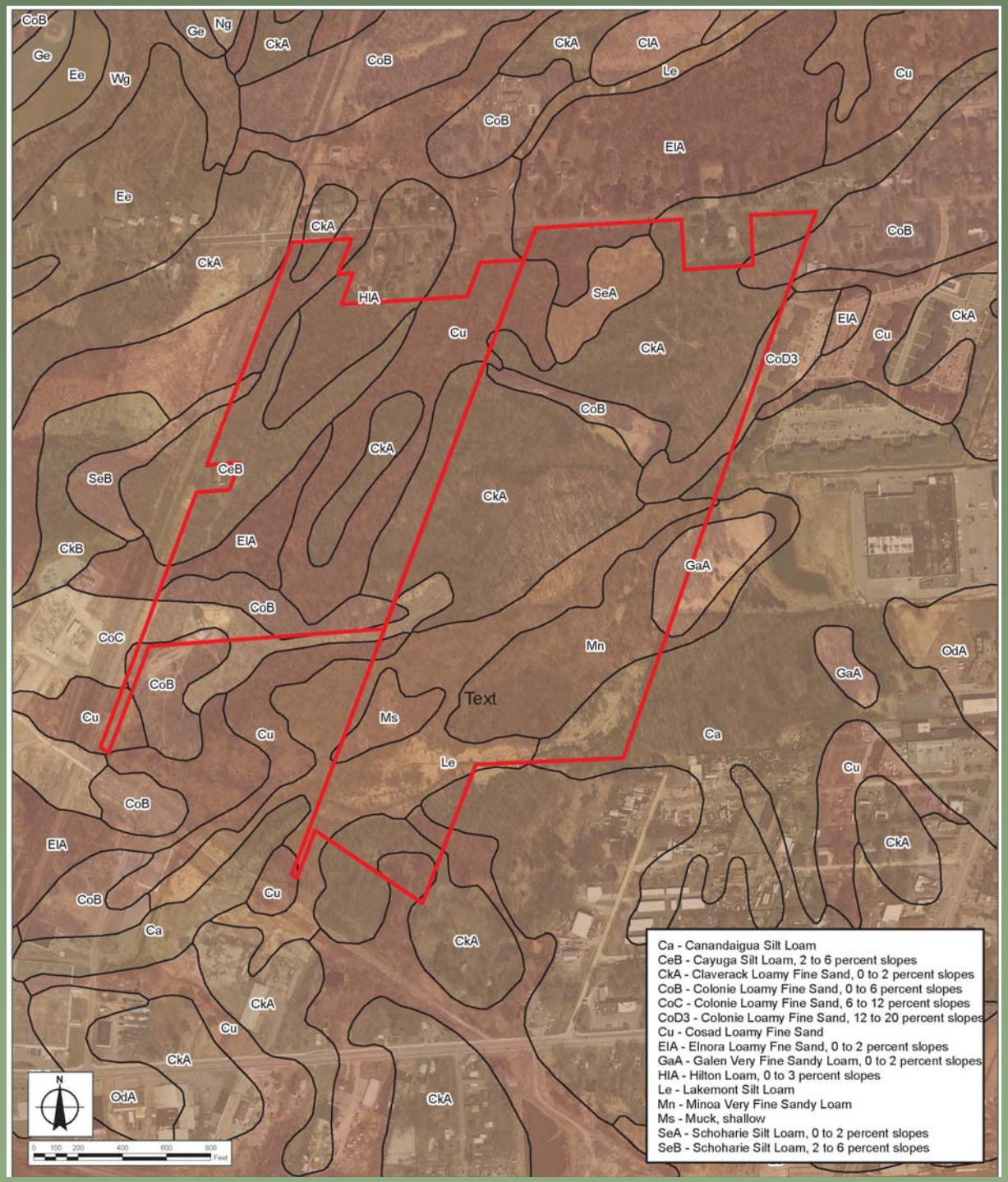
Crittenden Creek



Lehigh Valley Trail

emergent wetland

forested wetland



Site Analysis:

Soils

Topography

Hydrology

Vegetation

Wildlife

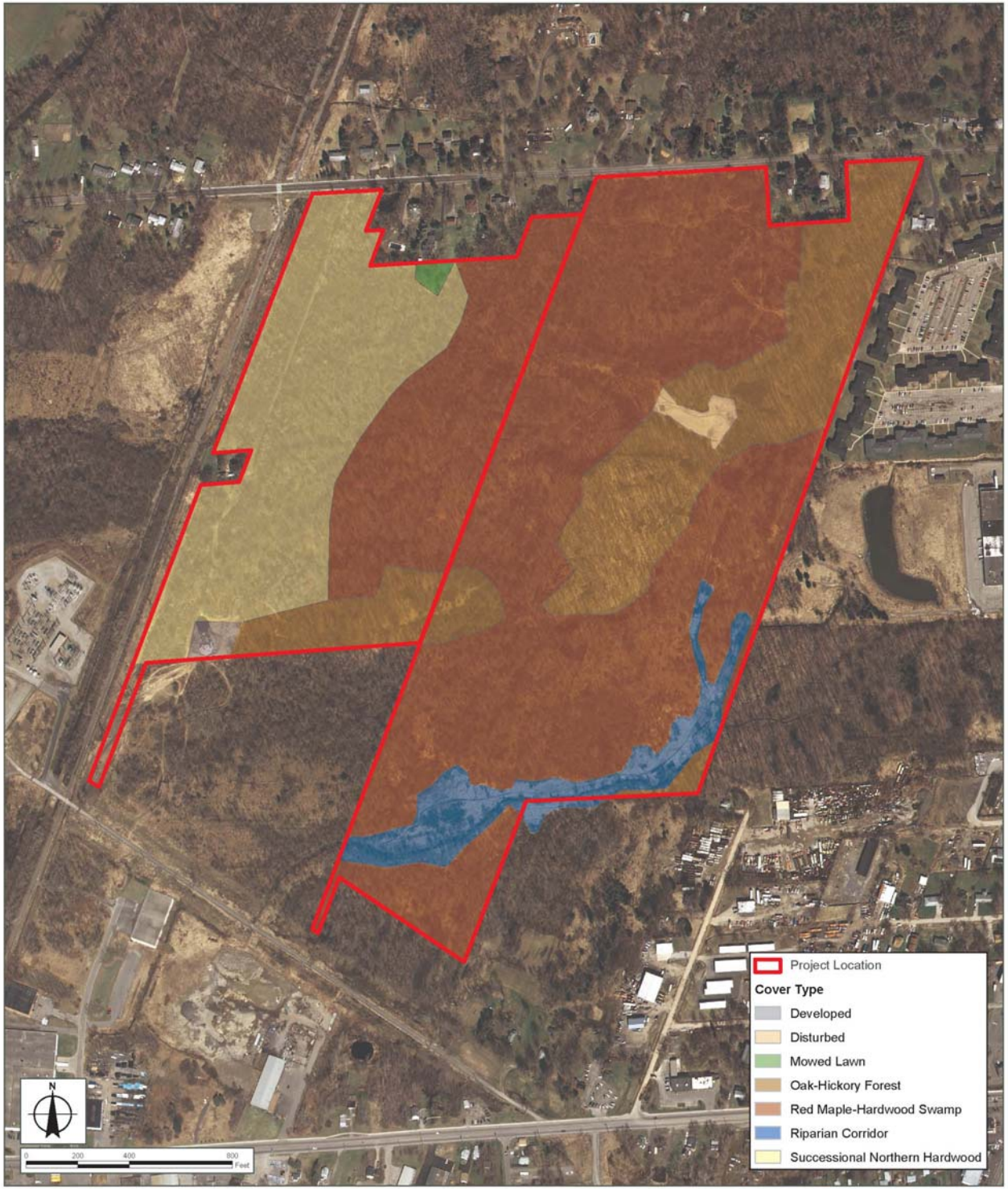
Land Use

Roads, Access, Parking

Buildings and Structures

Utilities

Historical & Cultural



COVER_TYPE	SUM_ACRES
Developed	0.60
Disturbed	0.80
Mowed Lawn	0.30
Oak-Hickory Forest	21.60
Red Maple-Hardwood S	65.50
Riparian Corridor	6.50
Successional Norther	21.60
Total	116.90

Habitat Assessment

Mature Forest and Forested Wetland Habitats: Results of the on-site survey indicate that forest within the Project Site provides habitat for wildlife species that require forest interior conditions, such as warblers (yellow-rumped and Prothontary seen on-Site), orioles, black-capped chickadee, and several woodpecker species such as the hairy, red breasted, flicker, and pileated woodpecker. The flooded forest at the southern end of the Site was created from a beaver dam on Crittenden Creek off-Site. The flooded forested wetland provides habitat for waterfowl, including Canada goose, great blue heron, and mallards. The beaver lodge is located within the Project Site. Common mammals that utilize forested habitat and likely occur on-Site besides beavers, include gray squirrel, red squirrel, eastern chipmunk, and whitetail deer.

Successional Forest Habitats: Successional community types provide nesting and escape cover for a variety of wildlife species. Various songbirds, such as gray catbird, American goldfinch, northern cardinal, and yellow warbler, require low brushy vegetation for nesting and escape cover. Common mammals typically found in these types of brushy successional habitat include whitetail deer and eastern cottontail. Raccoon and striped skunk are especially expected in this type of successional forest due to its proximity to wetland/riparian areas. In addition, some of the shrub species found in these areas produce berries, which provide a good wildlife food source.

Rare, Threatened, and Endangered Species: No observations of any rare, threatened, or endangered species were made during the site visit.

WETLAND DELINEATION

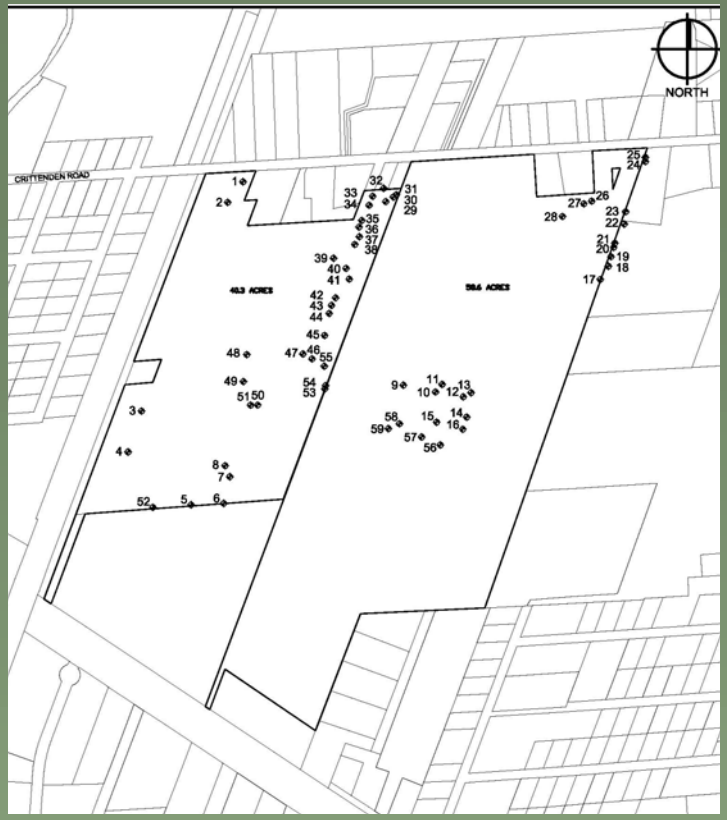
EDR delineated nine wetlands on-Site. These included approximately 27.5 acres of forested wetlands (B, I, J, and K), 22 acres of forested/scrub-shrub wetlands (portions of D and H), 2 acres of vernal pool wetlands (A and F, and portions of D and H), and 3.5 acres of emergent wetlands (C and H), as well as approximately 2,755 linear feet of perennial stream channel (Crittenden Creek).

The delineated areas primarily exhibited a forested cover type of green ash, red maple, and silver maple, a scrub-shrub cover type of silky dogwood, willow, and multiflora rose, and an herbaceous layer of sensitive fern, sphagnum moss, and sedges.

The primary functions provided by the on-Site wetlands and stream appear to include surface/storm water retention, water quality improvement, and wildlife habitat.

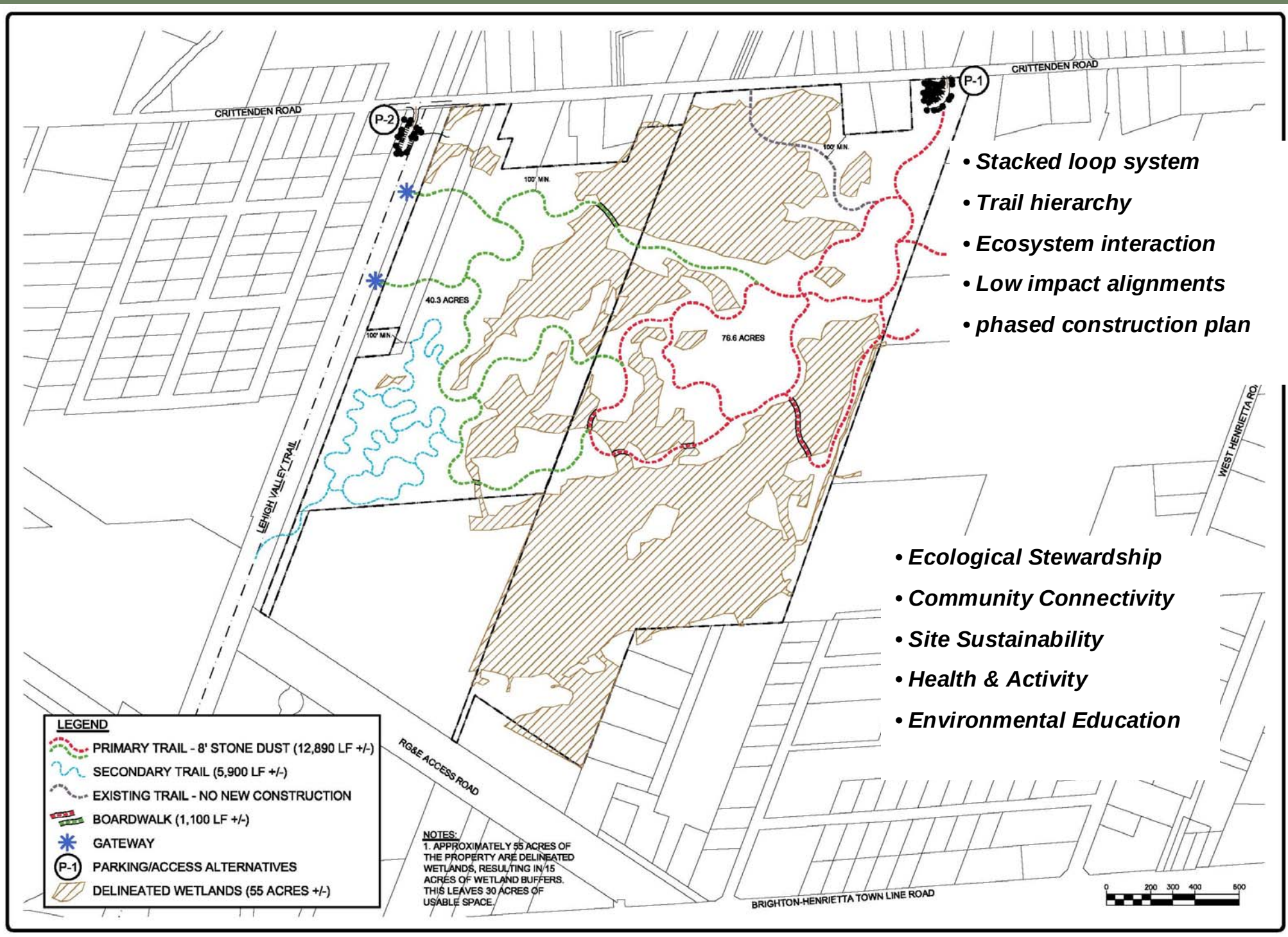
APPROXIMATELY 55 ACRES OF THE PROPERTY ARE DELINEATED WETLANDS, RESULTING IN 15 ACRES OF WETLAND BUFFERS. THIS LEAVES 30 ACRES OF USABLE SPACE.

ID	Tree Species		Diameter at Breast Height (DBH)	Vigor	Notes	Coordinates	
	Scientific Name	Common Name				Latitude	Longitude
1	*Populus deltoides*	eastern cottonwood	34.5	Good		43.1035639	-77.64265544
2	*Populus deltoides*	eastern cottonwood	34.4	Good		43.10326462	-77.64296728
3	*Acer rubrum*	red maple	35.2	Good		43.10021296	-77.64473994
4	*Acer rubrum*	red maple	44.8	Fair	Double trunks just above DBH	43.09961393	-77.64501804
5	*Prunus serotina*	black cherry	36.4	Poor		43.09882759	-77.64376764
6	*Acer rubrum*	red maple	38.1	Fair	Multiple trunks just above DBH	43.09884379	-77.64311265
7	*Acer rubrum*	red maple	32.5	Good		43.09923375	-77.64298541
8	*Acer saccarinum*	silver maple	42	Fair	Multiple trunks just above DBH	43.09939683	-77.64307667
9	*Quercus rubra*	northern red oak	32.7	Fair		43.10054979	-77.63948905
10	*Fagus grandifolia*	American beech	32	Good		43.10044414	-77.6388463
11	Standing Dead		35.1		Standing dead American beech	43.10055602	-77.63871235
12	*Fagus grandifolia*	American beech	32	Fair		43.10036834	-77.63829238
13	*Quercus rubra*	northern red oak	39.1	Good		43.10042836	-77.63813498
14	Standing Dead		33.6		Standing dead American beech	43.10007167	-77.63822753
15	Standing Dead		32		Standing dead American beech (one living branch remaining)	43.10000161	-77.6388303
16	*Liriodendron tulipifera*	tulip poplar	36.6	Good		43.09989263	-77.63830875
17	*Prunus serotina*	black cherry	34.6	Good		43.10207051	-77.63552061
18	*Quercus alba*	white oak	39.3	Excellent		43.10226398	-77.63535597
19	*Liriodendron tulipifera*	tulip poplar	39.5	Good		43.1024031	-77.63529997
20	*Prunus serotina*	black cherry	36.2	Poor		43.10253874	-77.63524537
21	*Quercus rubra*	northern red oak	35.9	Good		43.1026004	-77.63522082
22	*Quercus rubra*	northern red oak	41.6	Poor		43.10288004	-77.63502741
23	*Quercus rubra*	northern red oak	42.4	Good		43.10306005	-77.63499806
24	*Robinia pseudoacacia*	black locust	51.7	Fair		43.10379408	-77.63459083
25	*Acer rubrum*	red maple	42	Good		43.10385529	-77.63458976
26	*Acer rubrum*	red maple	37.3	Good		43.1032224	-77.63567531
27	*Acer rubrum*	red maple	43.8	Poor	Double trunk one dead	43.10318466	-77.63583253
28	*Acer saccarinum*	silver maple	43.2	Excellent		43.10300216	-77.63626368
29	*Acer saccarinum*	silver maple	37.7	Fair		43.10324921	-77.63979926
30	*Acer saccarinum*	silver maple	51.3	Fair		43.10331591	-77.6396469
31	*Acer saccarinum*	silver maple	35.4	Poor		43.10334757	-77.63958496
32	*Acer rubrum*	red maple	39.2	Good		43.10344483	-77.63983899
33	*Acer saccarinum*	silver maple	70.9	Good		43.10332982	-77.64006019
34	*Acer rubrum*	red maple	32.6	Good		43.10319836	-77.6401338
35	*Acer saccarinum*	silver maple	42.6	Good		43.10297633	-77.6402856
36	*Acer saccarinum*	silver maple	38.7	Fair		43.10287963	-77.64034229
37	*Acer saccarinum*	silver maple	39.9	Fair		43.10273771	-77.64033591
38	*Acer rubrum*	red maple	32	Good		43.1026254	-77.64043016
39	*Populus deltoides*	eastern cottonwood	46.2	Good		43.10242655	-77.64085839
40	*Acer saccarinum*	silver maple	57	Good		43.10227521	-77.64060964
41	*Quercus rubra*	northern red oak	45.6	Excellent		43.10211721	-77.64054908
42	*Acer saccarinum*	silver maple	46.5	Fair		43.10184403	-77.64082642
43	*Acer saccarinum*	silver maple	34.3	Good		43.10173426	-77.64090964
44	*Acer rubrum*	red maple	47.5	Good		43.10161624	-77.64095848
45	*Acer rubrum*	red maple	36	Excellent		43.10129375	-77.64105559
46	*Acer rubrum*	red maple	32	Fair		43.10095054	-77.64131225
47	*Acer rubrum*	red maple	33.9	Good		43.10102552	-77.64149449
48	*Acer rubrum*	red maple	41.3	Excellent		43.10102551	-77.64261743
49	*Acer rubrum*	red maple	47.3	Fair		43.10062966	-77.64269284
50	*Acer saccarinum*	silver maple	66.7	Excellent		43.10028262	-77.64241147
51	*Acer saccarinum*	silver maple	32.5	Good		43.10028209	-77.64255333
52	*Prunus serotina*	black cherry	36.1	Fair		43.0987963	-77.6445336
53	*Quercus rubra*	northern red oak	35.9	Good		43.10050864	-77.64106346
54	*Quercus rubra*	northern red oak	42.5	Good		43.10055667	-77.64104629
55	*Acer saccarinum*	silver maple	61	Excellent		43.10084238	-77.64106889
56	*Fagus grandifolia*	American beech	32	Good		43.0996656	-77.63876246
57	*Fagus grandifolia*	American beech	32	Good		43.09978544	-77.63913524
58	*Quercus rubra*	northern red oak	48.5	Fair		43.09998349	-77.63957638
59	*Quercus rubra*	northern red oak	38.8	Good		43.09991442	-77.63979995



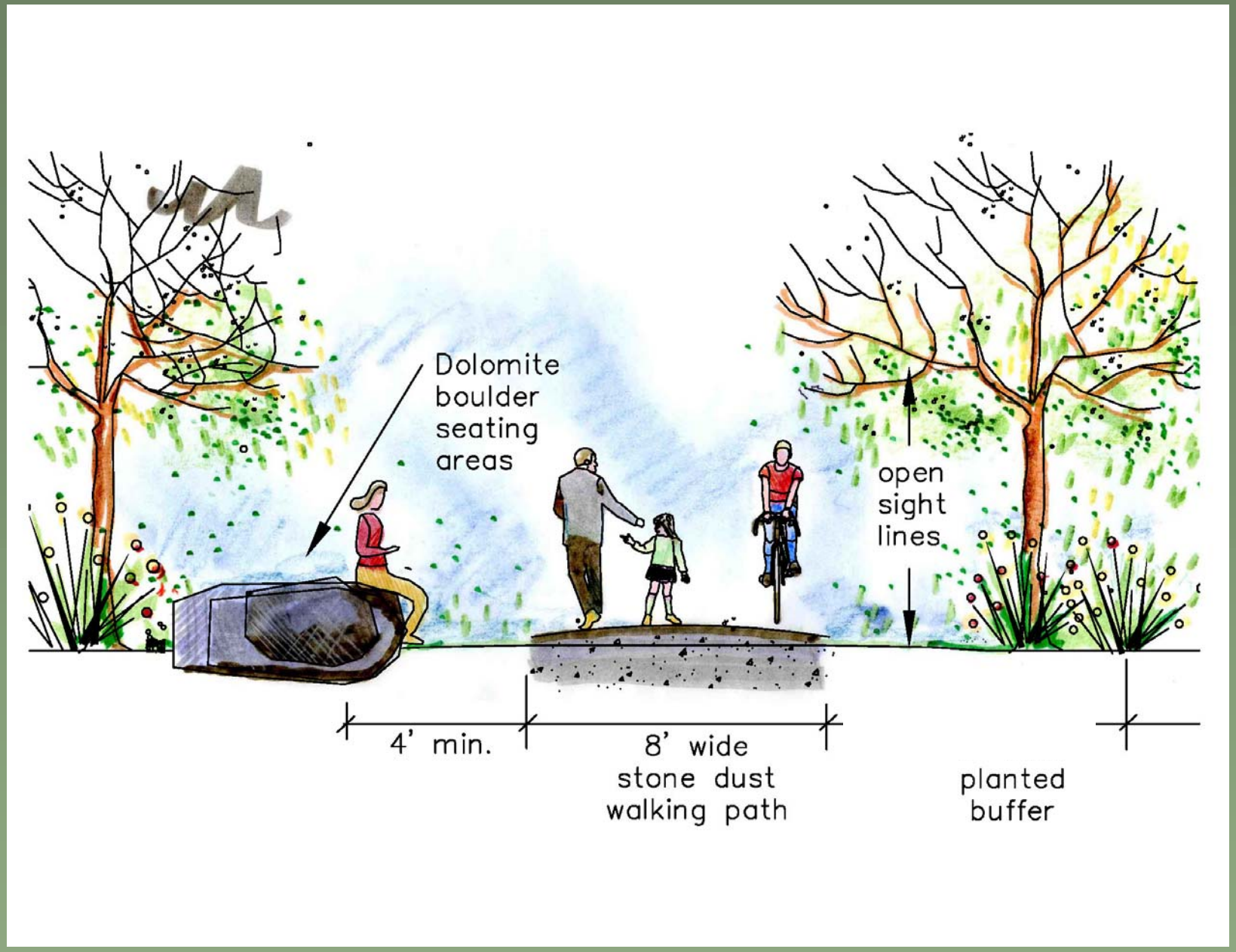
SPECIMEN TREE SURVEY:

- **32” DBH**
- **(59) Specimen trees located**
- **GPS data points & geo-tagged photos**
- **(9) species: silver maple, red maple, eastern cottonwood, black cherry, northern red oak, white oak, tulip poplar, American beech, black locust.**
- **70” DBH silver maple**

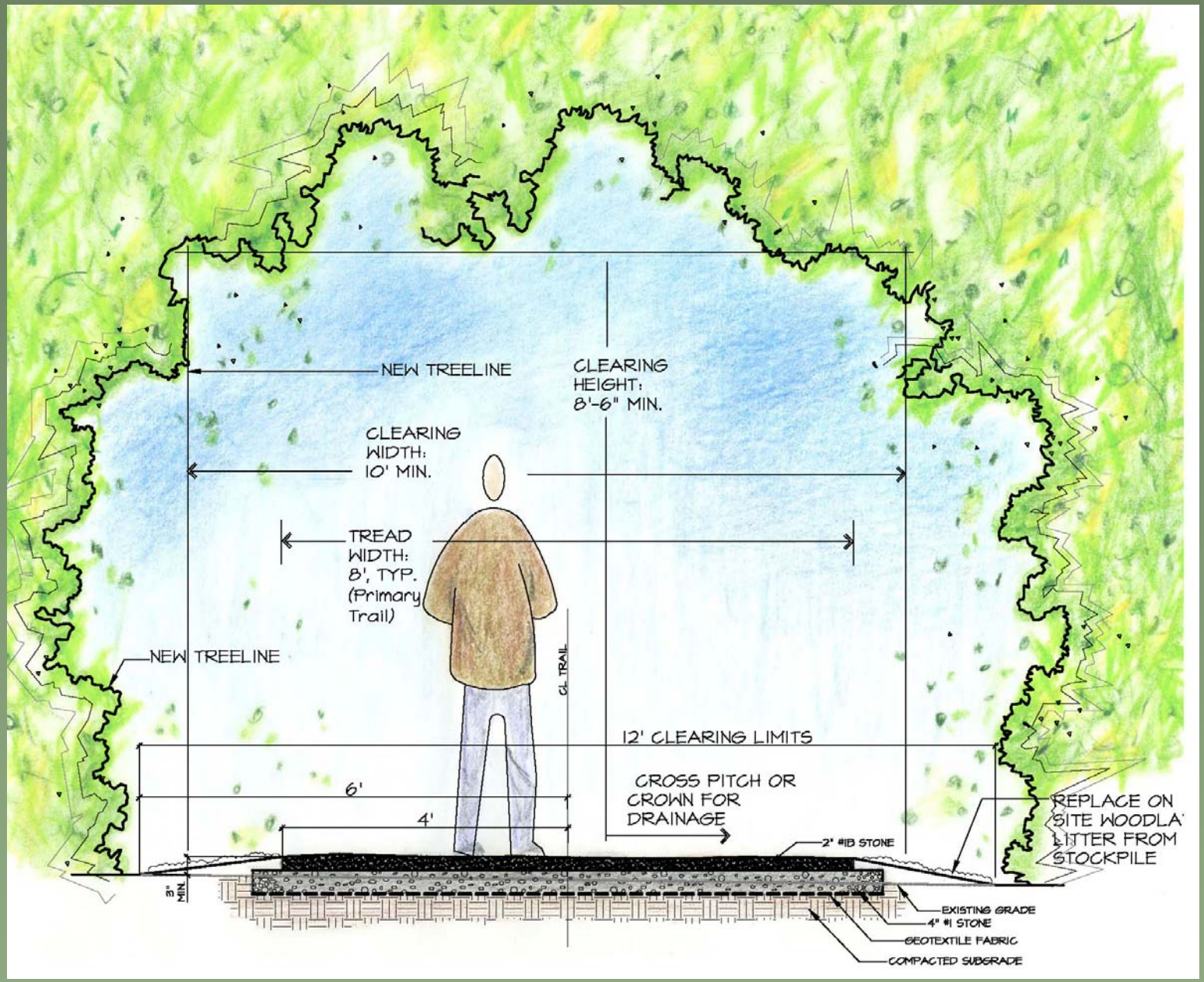


- *Stacked loop system*
- *Trail hierarchy*
- *Ecosystem interaction*
- *Low impact alignments*
- *phased construction plan*

- *Ecological Stewardship*
- *Community Connectivity*
- *Site Sustainability*
- *Health & Activity*
- *Environmental Education*

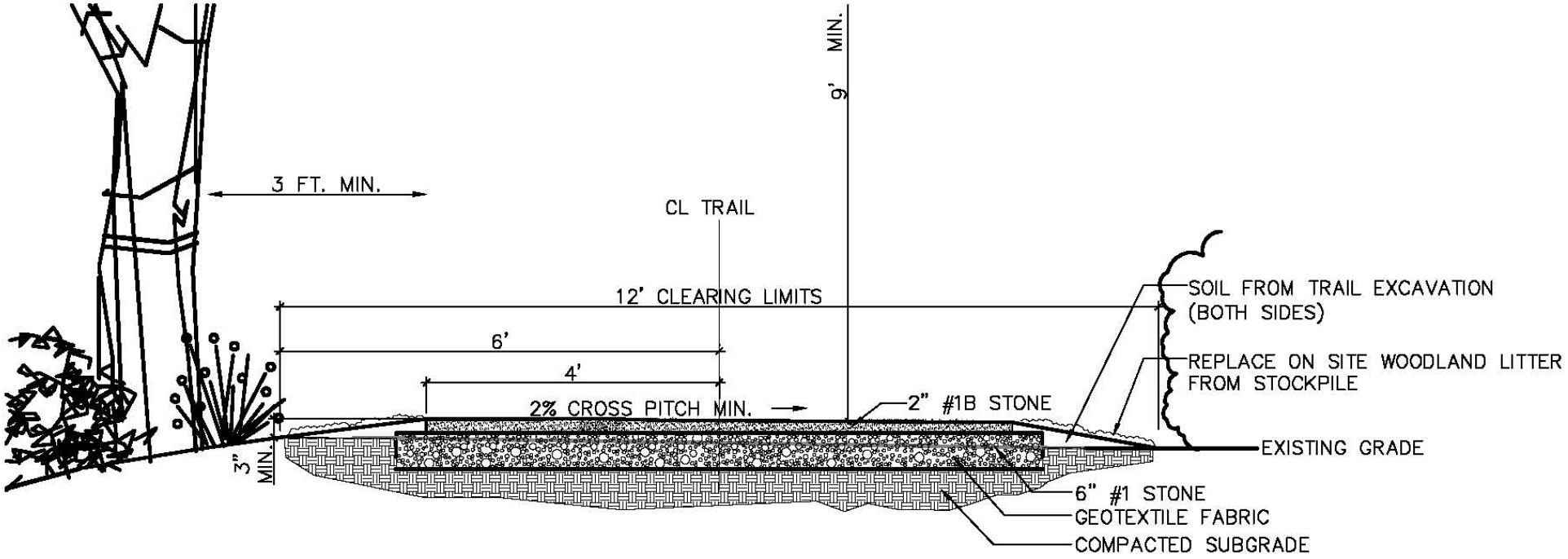


SHARED-USE TRAIL: SINGLE SURFACE



TRAIL DETAILS

TRAIL CONSTRUCTION



8' wide Primary Trail

Primary Trail: 8' wide, stonedust surface

TRAIL CLASSIFICATIONS:

Single Use (‘exclusive’)

Shared Use (‘inclusive’)

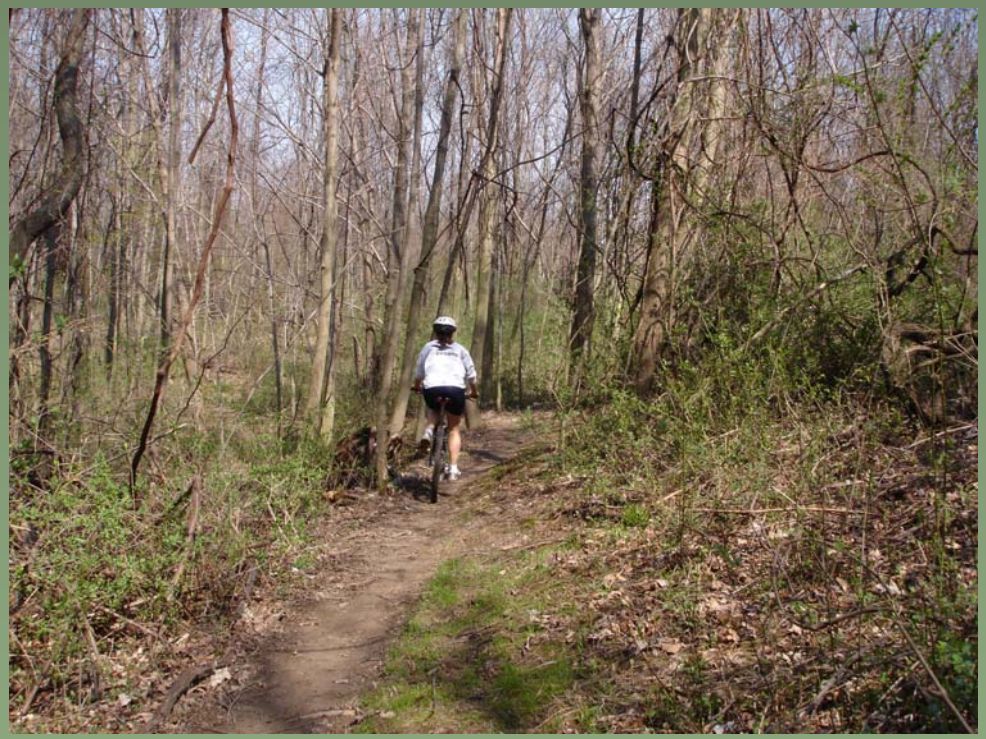
Shared Use Trail Construction Standards:

AASHTO (Guide for Development of Bicycle Facilities 1999)

ADA (Americans with Disabilities Act of 1990)

Federal Access Board: Architectural Barriers Act

(Accessibility Guidelines for Outdoor Developed Areas 2007)

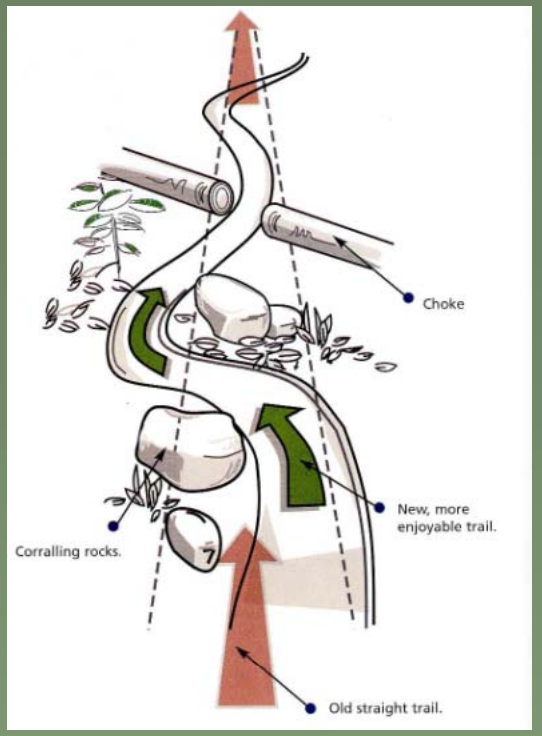


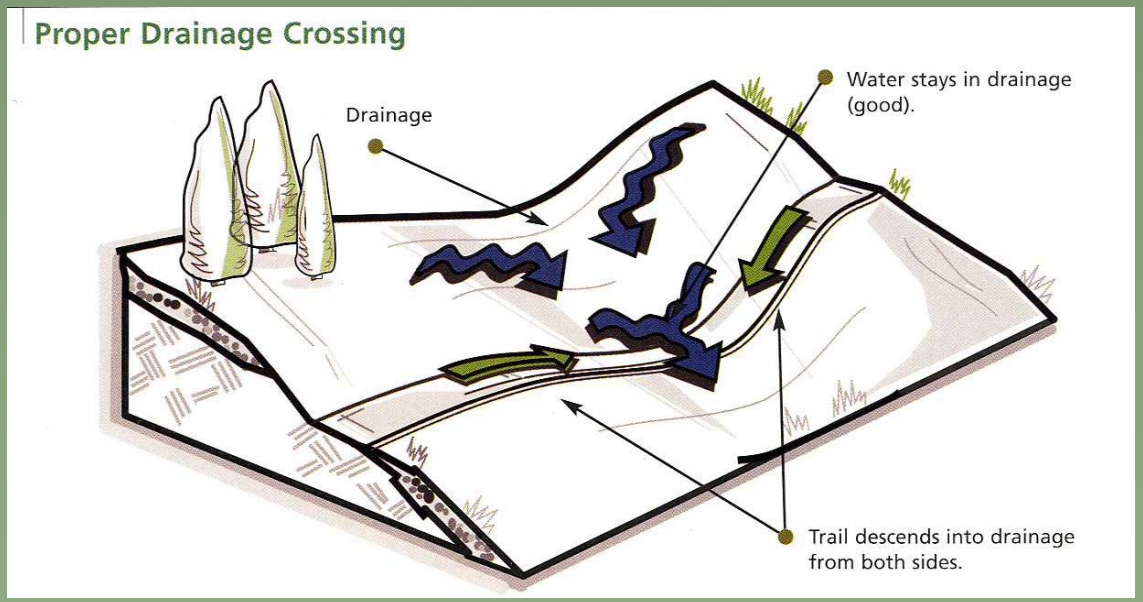
Secondary Trails: 2-3' wide, natural surface

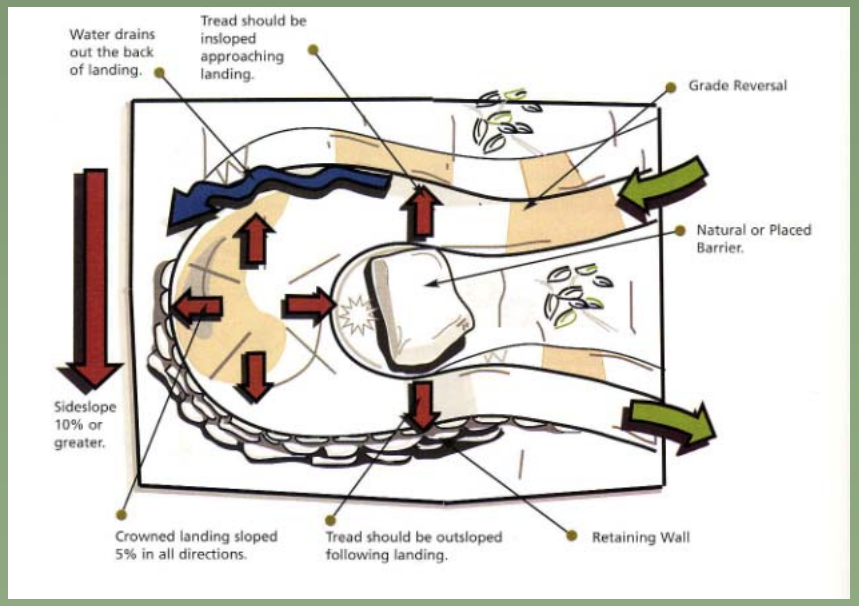
Sustainable Trail Guidelines

The US Forest Service defines sustainable trails as trails which:
- Have a tread that will not be easily eroded by water and use
- Will not affect water quality or the natural ecosystem
- Meet the needs of the intended users
- Provide a safe and positive user experience
- Do not harm to the natural environment

- Sustainable Trail Guidelines should be followed in the construction of new trails and restoration of existing trails in Lynch Woods.
- Shared use trails can be sustainable if they are located appropriately, built correctly, and used responsibly.

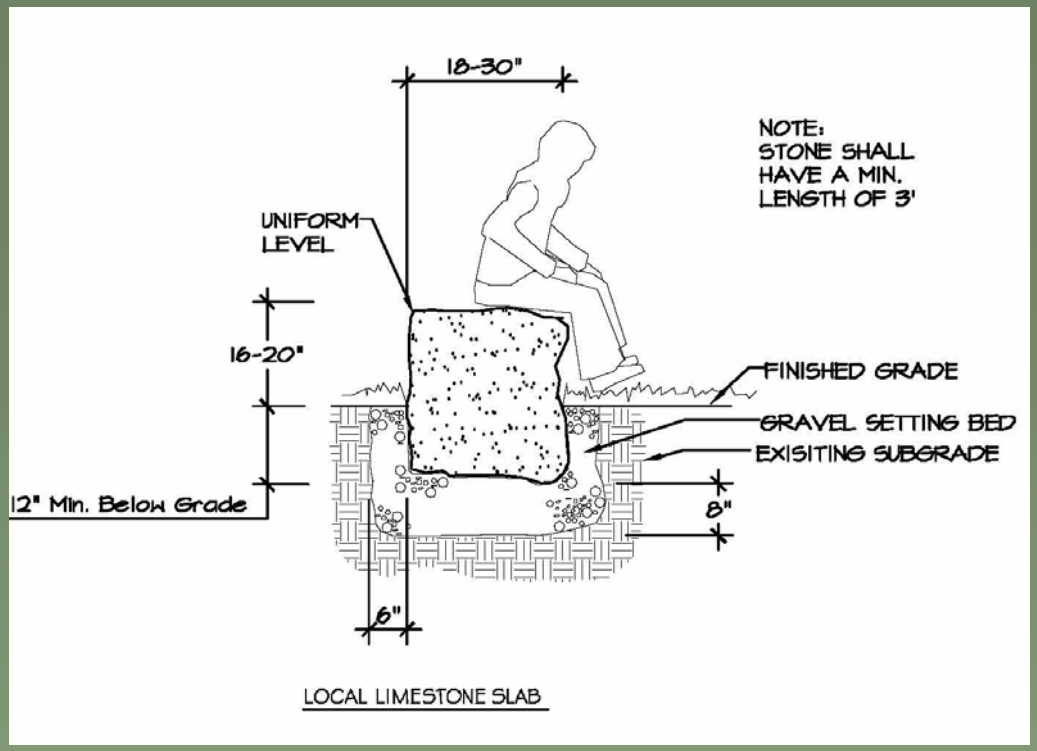




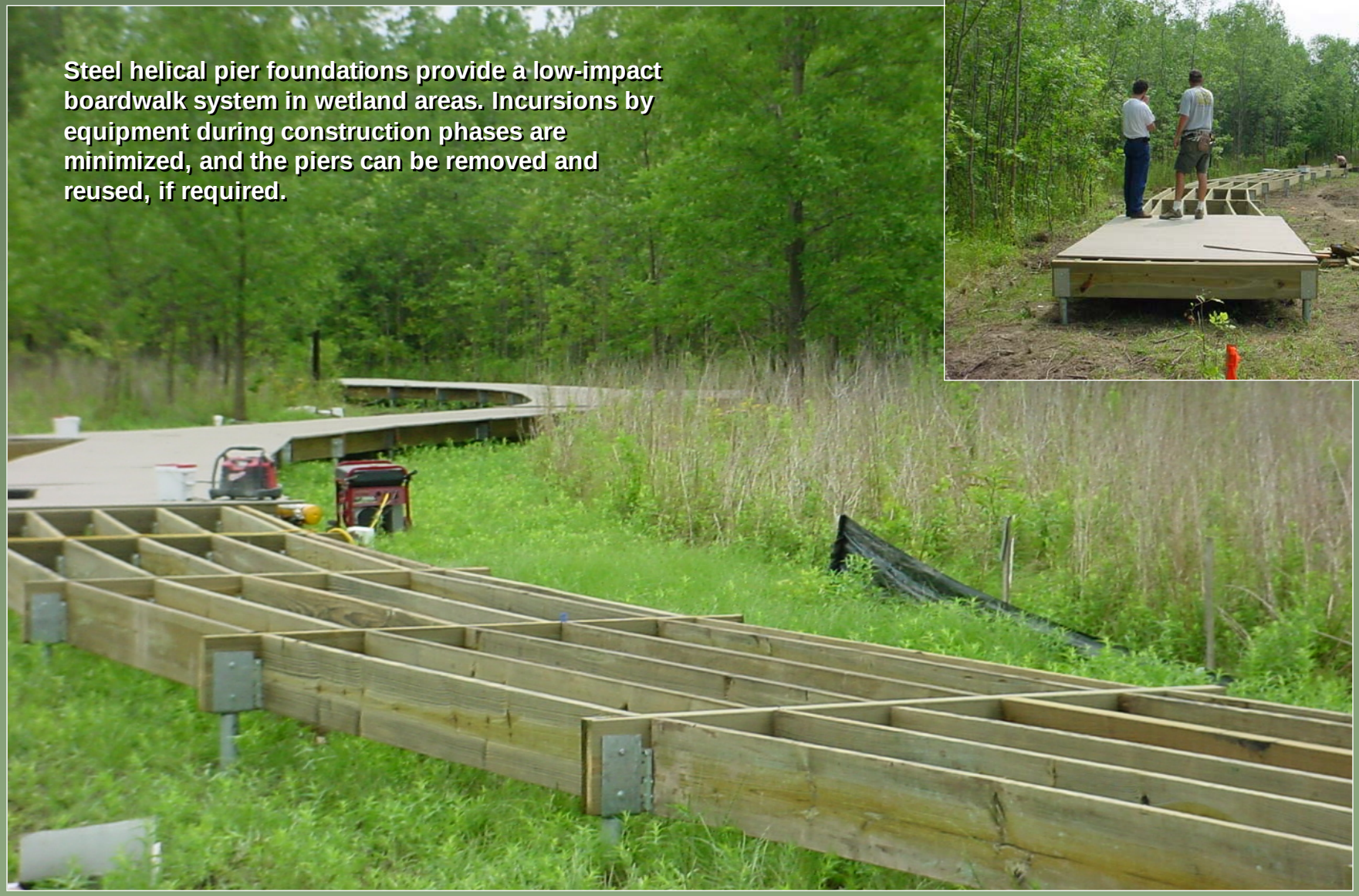


Images from IMBA

Resting Intervals



BOARDWALKS:



Steel helical pier foundations provide a low-impact boardwalk system in wetland areas. Incursions by equipment during construction phases are minimized, and the piers can be removed and reused, if required.

Lynch Woods Concept Plan:

(8) Wetland crossings, requiring low-impact boardwalks.

620 lineal feet (total) of boardwalks proposed.

BOARDWALKS

Corbett's Glen boardwalk: 212' length x 8' width

Ecological Impacts of Helical Pier Boardwalks

●No placement of fill is required for foundation systems.

●Surface and sub-surface hydrology is unimpeded by the boardwalk structure.

●Construction impacts are minimized; "leap-frog" construction is possible by continuously staging equipment on built boardwalk sections.

●Boardwalk is above grade, and will not create a physical obstacle for movement of small animals underneath the boardwalk platform.

●Post-construction monitoring of completed boardwalks indicates that vegetation continues to prosper beneath the completed boardwalk; shade tolerant plant species will dominate.

●The boardwalk creates a micro-climate that can add diversity to the overall site conditions:

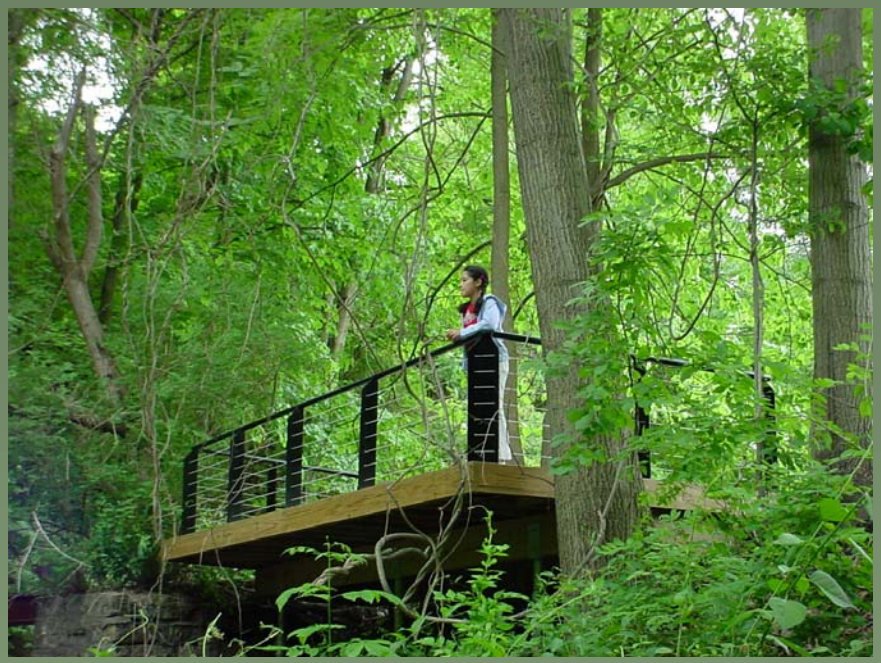
● The shaded area beneath the boardwalk will retain soil moisture and a lower air temperature during the summer months.

● Depending on exposure, the ground beneath the boardwalk may be slower to thaw in the spring.

● Depending on decking material and color selection, surface of the boardwalk may provide solar thermal mass attractive to some invertebrate species.

Meridian Park boardwalk:

548’ length x 8’ width



Site Character

Trail Gateways

- 8' wide Primary Trail
- Steel rail gateway- materials salvaged from Lehigh Valley Trail
- Pier Caps: local stone, recycled steel, or salvaged railroad tie plates
- Metal strapping
- Piers constructed from recycled railroad ties

Habitat Architecture: Brush Stacks

* Cut wood is best recycled where it grew

* Don't burn fossil fuels hauling cut wood to a disposal site when the sustainable alternative is to position it at source where it can enhance wildlife habitat.

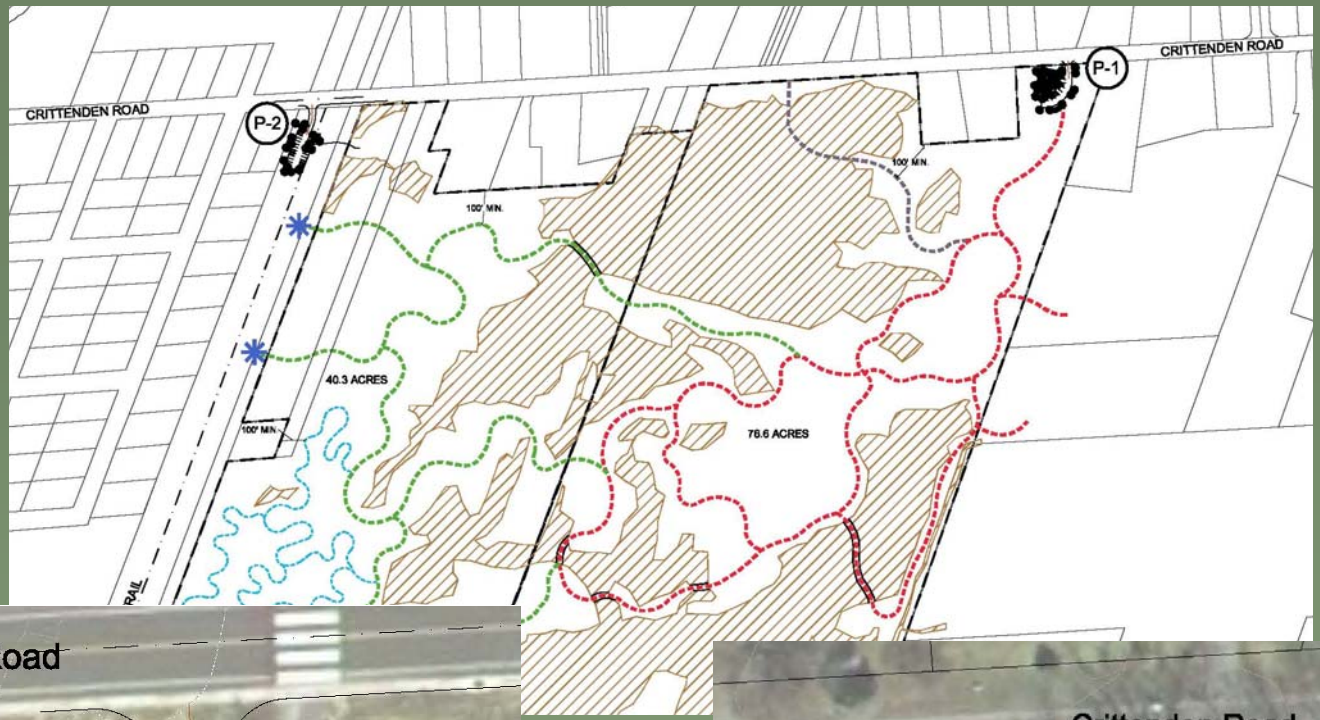
*Creative use of brush stacks to establish trail identity, provide visual character, wayfinding, and habitat value.

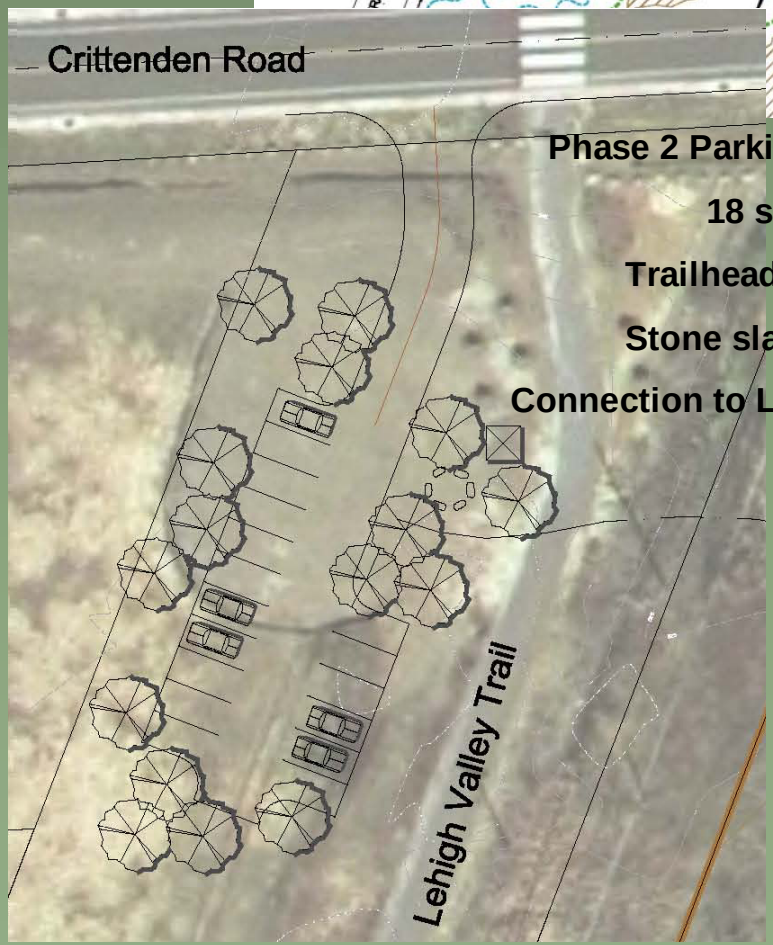
*Pyramids, “log cabin boxes”, domes, other forms.

*Ground-nesting birds, reptiles and amphibians, chipmunks, rabbits, and other small mammals need shelter from weather and concealment from predators.

* A brush stack will also set up a means for seed germination and plant growth in the spring.

* Construction of brush stacks by community labor will provide environmental education, healthy outdoor activity, and foster stewardship for Town open space.





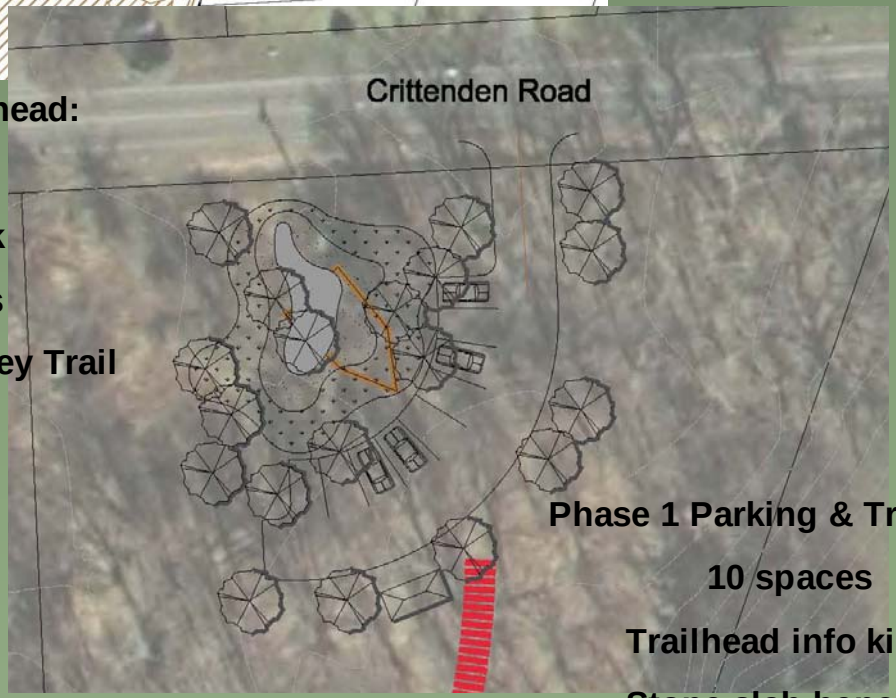
Phase 2 Parking & Trailhead:

18 spaces

Trailhead info kiosk

Stone slab benches

Connection to Lehigh Valley Trail



Phase 1 Parking & Trailhead:

10 spaces

Trailhead info kiosk

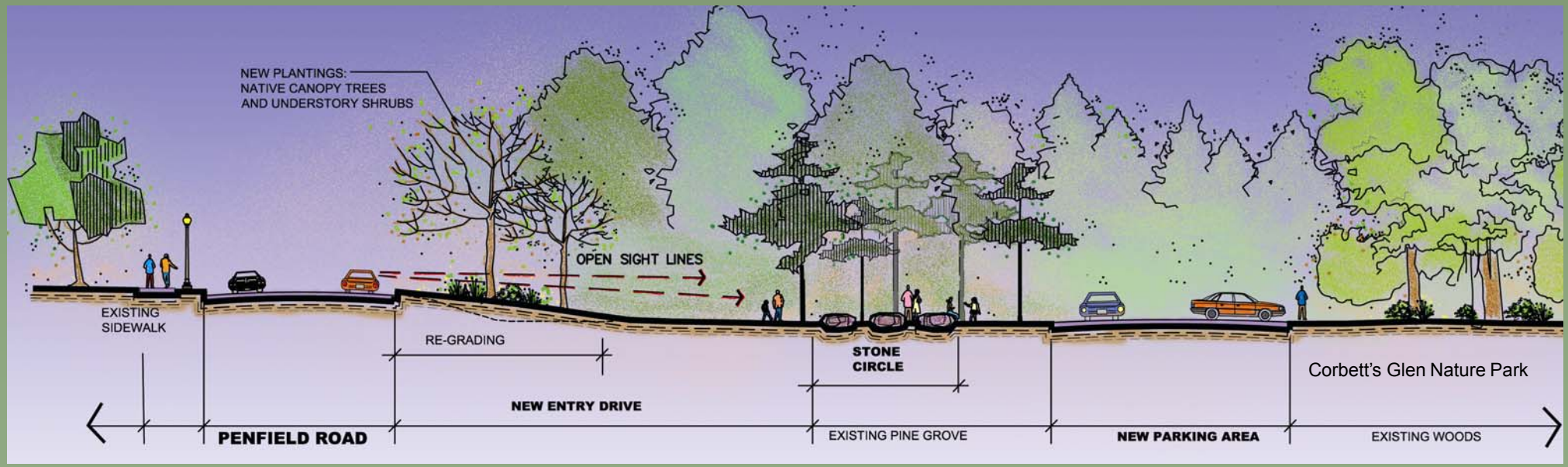
Stone slab benches

Wetland basin

PARK SAFETY: actual & perceived

Crime Prevention Through Environmental Design (CPTED)

- Natural Surveillance
- Natural Access Control
- Territoriality
- Maintenance
- Activity Support

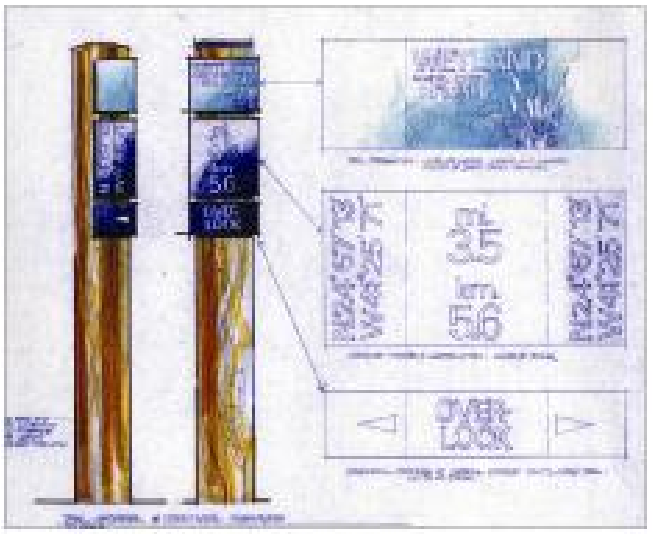


TRAIL SIGNAGE: Safety * Education * Identity

Way finding

Regulatory

Interpretive



Four Season Use

Open Space

As

Activity Infrastructure

The Lynch Woods concept plan invites and encourages year-round use. Winter hiking, cross country skiing and wildlife observation offer opportunities to interact with the unique ecology and aesthetics of the northern climate.

SCHEDULE

Preliminary Project Schedule:

Project Phase	Time Frame
Project Initiation	April 2009
Data Collection & Site Analysis	May-June 2009
Wetland Delineation, Tree Inventory, Ecological Report*	July 2009
Conceptual Design	July- September 2009
Design Development	September-December 2009
Construction Documents	January-March **2010**
Bidding	**tbd**
Construction period	**tbd**