



Bennett's Village

a place for *ALL* to play

CONCEPT DESIGN 02-05-2020

MAHAN RYKIEL
ASSOCIATES INC

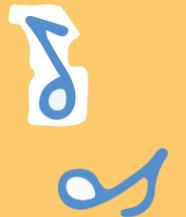
RECAP

**DESIGN
CONSIDERATIONS**

**CONCEPT
DESIGN**

**SITE
ANALYSIS**

**NEXT
STEPS**



RECAP

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Bennett's Story



*"Bennett loved rocks. ... Size, shape, color didn't matter. He saw them all for the individual potential and wonder. ... Bennett's love of rocks is a great way to talk with kids about **diversity and inclusion**. ... Bennett felt the same way about people as he felt about rocks. That he loved them all, no matter what they looked like or what they could do. ... He wanted to play with them all."*

"Bennett loved everybody. He loved us all, and through that love, taught us some of life's most important lessons."

"We are working to build a multi-generational, all abilities playground here in Charlottesville and advocating to change the way our community sees inclusion."

*"We would like to create a similar park in Charlottesville in which kids, parents, and people of all abilities can **gather, play, and laugh.**"*

**“GATHER,
PLAY,
LAUGH.”**

WHO DO WE DESIGN FOR ?

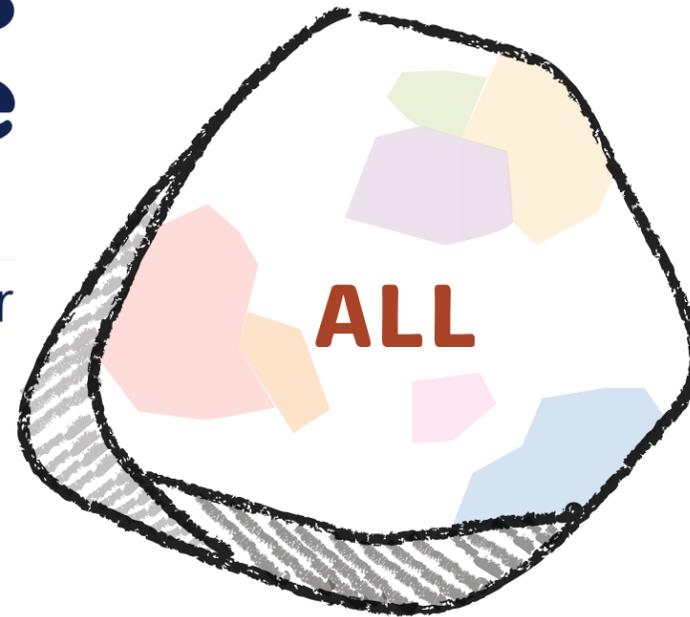


**Bennett's
Village**



Bennett's Village

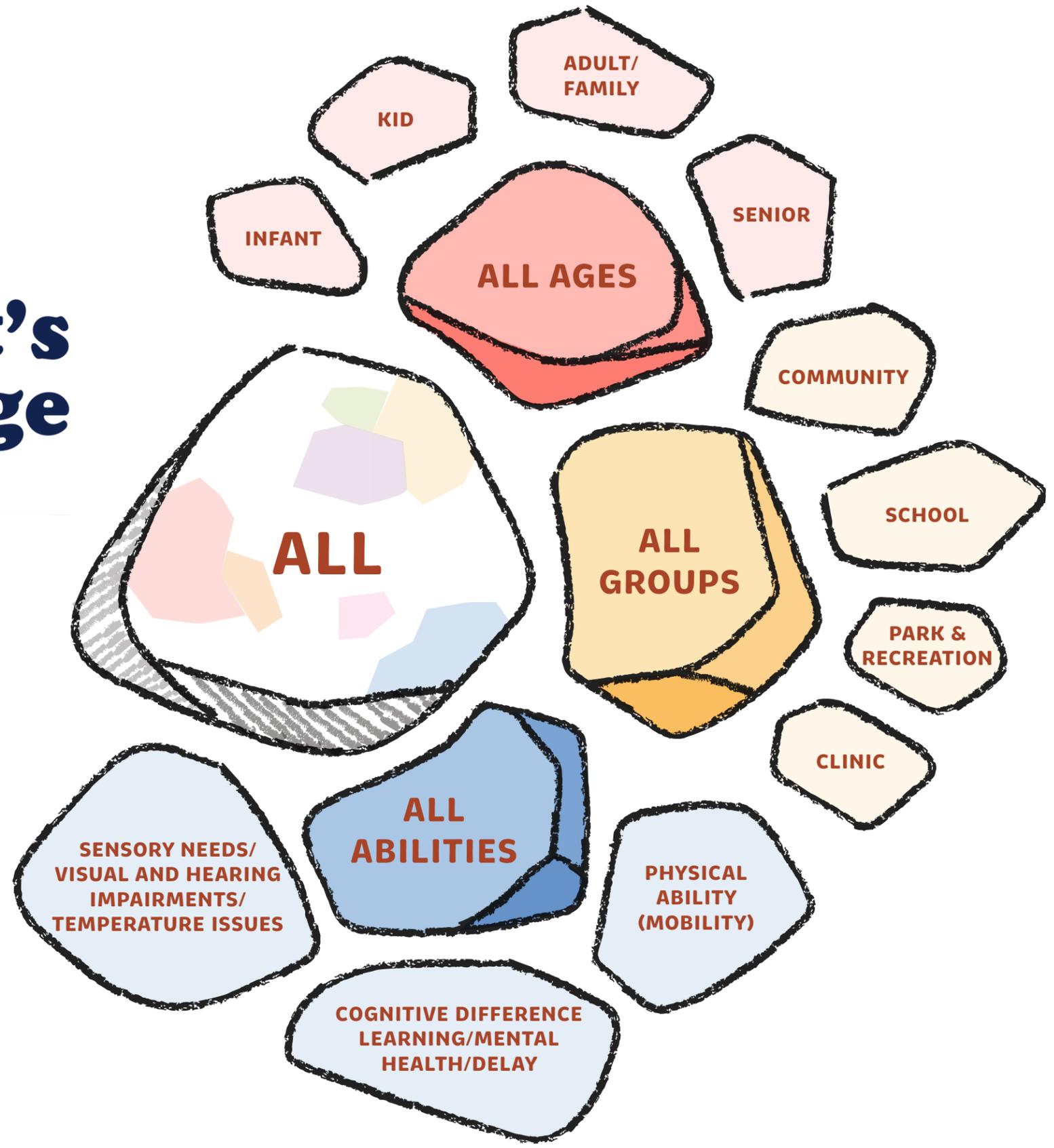
a place for



to play



Bennett's Village



**DESIGN
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**NEXT
STEPS**





VISION IMPAIRMENT

Audrey Dannenberg, M.A., M.Ed.
Certified Orientation & Mobility Specialist (COMS)
Certified Vision Rehabilitation Therapist (CVRT)



HEARING IMPAIRMENT

Dr. Christopher D. Lunsford
Worked at the Children's Hospital at UVA
Recreation and therapy for children with special needs
Low hearing abilities



SERVICE ANIMAL

Dr. Christine Appert
Teacher at UVA on adaptive technologies
Worked at children's rehabilitation center
Master gardener
Worked with the Virginia Institute of Autism
Has a service dog



AUTISM/DEVELOPMENTAL DELAY

Dr. Christine Appert
Teacher at UVA on adaptive technologies
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Master gardener
Worked with the Virginia Institute of Autism
Has a service dog



MOBILITY IMPAIRMENT

Bennett's Village
Kara McClurken
Brian Gibney
Julie Basic



SENIOR

Laurie Archbald-Pannone, M.D., MPH, AGSF
Division of General, Geriatrics, Palliative
Hospital Medicine for UVA Library



SPECIAL ED/OT/PT TEACHER

Paige Lindblom
Former Special Education teacher
Nature Play

Gail Fehlner
Former Adaptive PE teacher



CLINIC

Alan Donaldson
OT

Emily Berry
PT
UVA Children's Hospital

**Laura Richardson/
Diane Talarico-Cavanaugh**

Behavioral Therapists



BENNETT'S VILLAGE

Bennett's Village
Kara McClurken
Brian Gibney
Julie Basic



VISION IMPAIRMENT



HEARING IMPAIRMENT



SERVICE ANIMAL



AUTISM/DEVELOPMENTAL DELAY



MOBILITY IMPAIRMENT



SENIOR



SPECIAL ED/OT/PT TEACHER

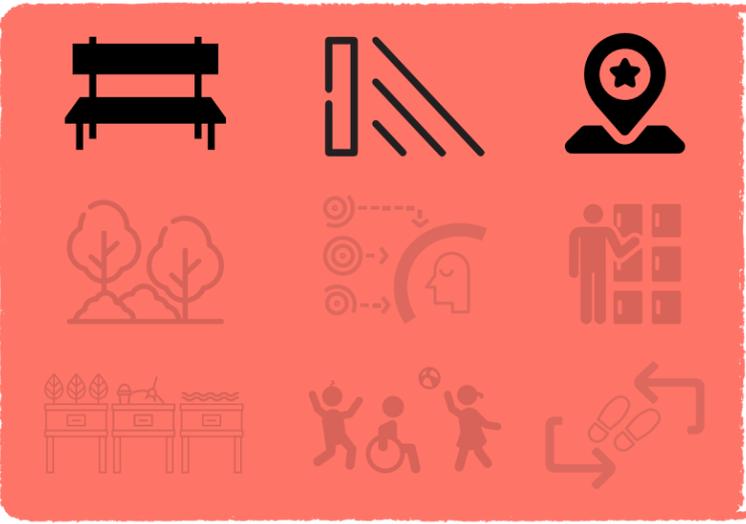


CLINIC



BENNETT'S VILLAGE

LAYOUT/DESIGN



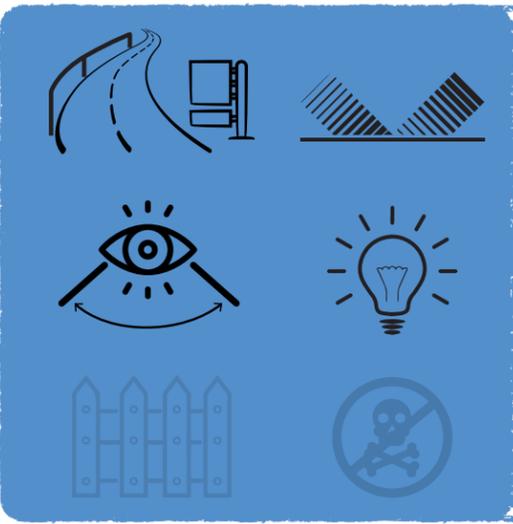
- PLENTY OF SEATING
- SHADED AREA (NATURAL/STRUCTURE)
- LANDMARK

PROGRAMMING

- SENSORY GARDEN/ACTIVITIES
- AUDITORY ASSISTANCE/ INTERACTIVE MUSICAL ELEMENTS
- SMELL/ GUSTATORY INPUT



SAFETY/SECURITY



- SOLID/WIDE/CLEAR/SMOOTH/CONSISTENT PATHWAY (NO LOOSE MATERIALS)
- GENTLE SLOPE, RAMP/ TEXTURE CHANGE OR BUMPS AT EDGE
- CLEAR SIGNAGE/ MATERIAL WITHOUT GLARE/SHINY SURFACE
- CLEAR SIGHT LINES
- BALANCE OF LIGHT & SHADE
- OBJECT AT THE RIGHT HEIGHT
- SPACE WITH RAILING, GATE



VISION IMPAIRMENT



HEARING IMPAIRMENT



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AUTISM/DEVELOPMENTAL DELAY



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SPECIAL ED/OT/PT TEACHER



CLINIC



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LAYOUT/DESIGN



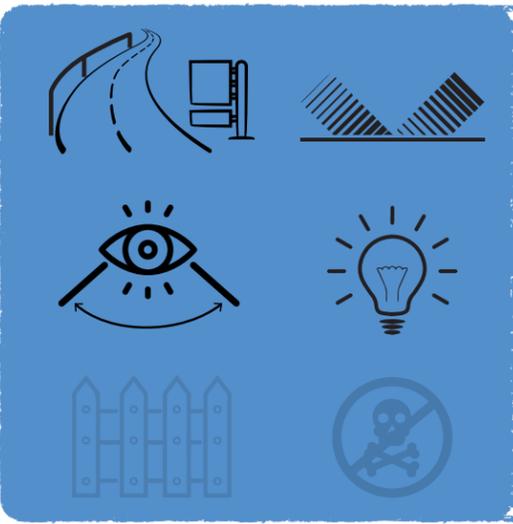
- CROSSING/CIRCULAR ARRANGEMENT SEATING
- MOVABLE FURNITURE
- REPETITIVE VISUAL ELEMENTS

PROGRAMMING

- INTERACTIVE SOUND TOKEN
- SOUND GARDEN
- BLOCK NOISE (WATER FEATURE/MEADOW/PLANTING)



SAFETY/SECURITY



- WIDE & SHALLOW STAIRS
- WIDE & SMOOTH PATHWAY
- AUTOMATICALLY OPEN DOOR
- ANTI-ESD MATERIALS
- COLOR WITH LESS REFLECTION
- CLEAR SIGHT LINES
- NATURAL LIGHT/BALANCE OF LIGHT & SHADE



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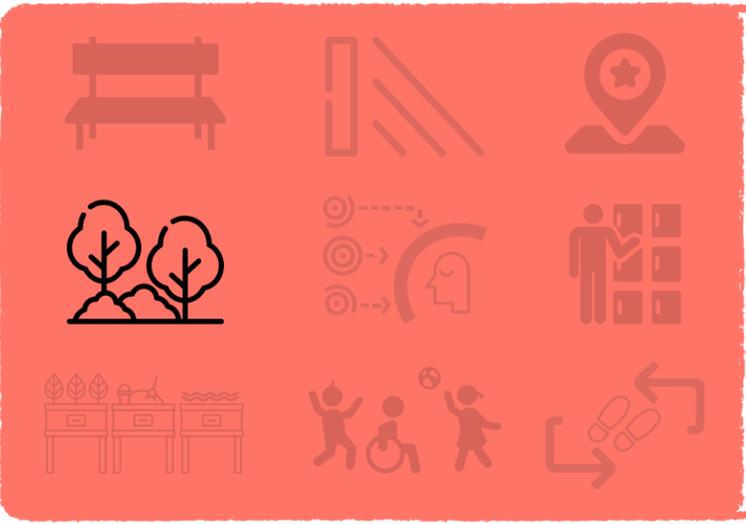


CLINIC



BENNETT'S VILLAGE

LAYOUT/DESIGN



- NO DOG PARK TO DISTURB SERVICE DOGS
- SPACE SEPARATED FROM PLAY AREA

PROGRAMMING



SAFETY/SECURITY



- DRINKING FOUNTAIN/WASTE STATIONS



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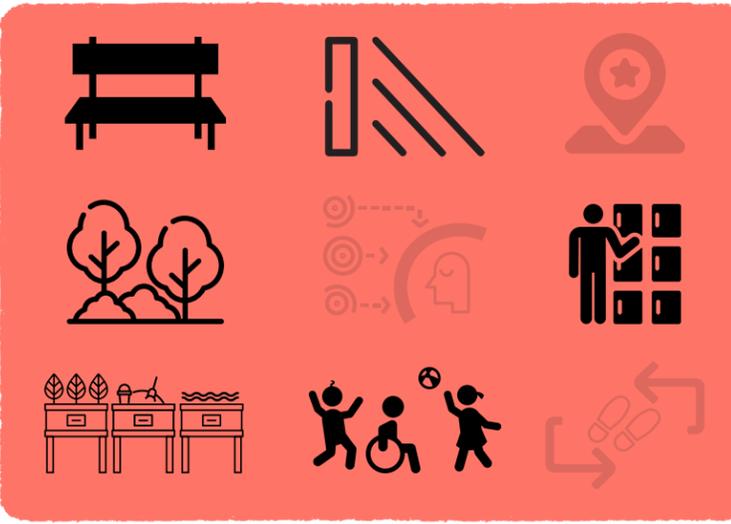


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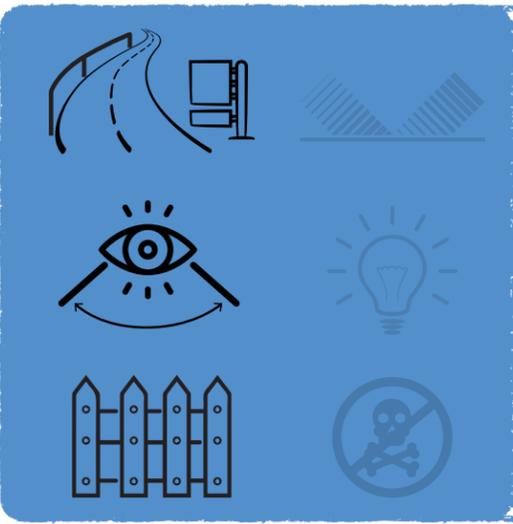
- SPACE TO RUN & WHEEL
- RESTING/SEATING AREA
- SHADE/SHELTER AREA
- PLACE FOR BEING OUT OF THE WHEELCHAIR
- HIGHER SHELF FOR STORAGE
- TABLE/RAISED BED ("U" SHAPE)

PROGRAMMING

- THINGS MAKING KIDS FEEL BIG AND TALL
- NATURE PLAY/ GARDEN
- PARALLEL PLAY



SAFETY/SECURITY



- ACCESSIBLE ROUTE
- LEVEL AND SMOOTH SURFACES
- ALTERNATIVES TO LOOSE MATERIALS
- ACCESSIBLE ROUTE & CONGREGATING AREA AROUND DROP-OFF AREA
- CLEAR SIGHT LINES
- APPROPRIATE FENCE/GATE



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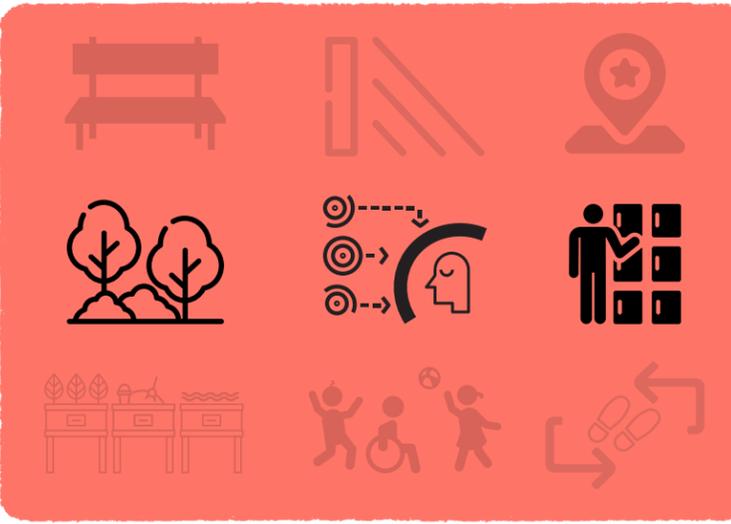


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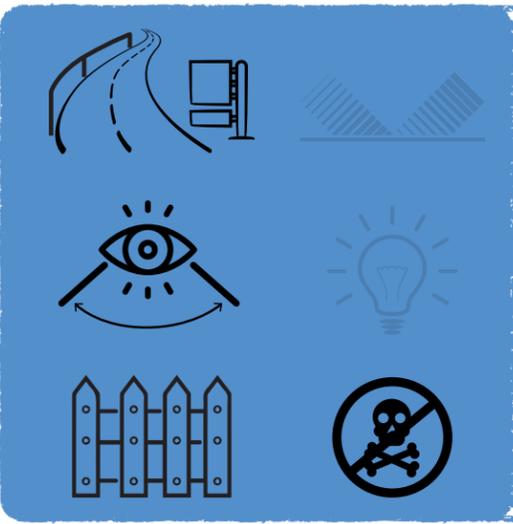
- OVER/UNDER STIMULATE: OPEN AREA SEPARATED FROM PLAY EQUIPMENT
- MANAGING BEHAVIOR /TIME OUT OPPORTUNITIES
- STORAGE PLACE

PROGRAMMING

- SPIN/JUMP/BEING UPSIDE DOWN/BEING SQUEEZED
- SENSE OF SECURITY
- ENCOURAGING SOCIAL INTERACTION
- PARALLEL PLAY
- HELP/COOPERATION/COMPETITION OPPORTUNITIES
- IMAGINATIVE/ROLE PLAY
- MEMORIES/SOCIAL STORIES
- "DRAMA" SPACE
- PLAY EQUIPMENT THAT AVOIDS DIRECT EYE CONTACTS



SAFETY/SECURITY



- AVOIDING LOOSE MATERIALS
- SIGNS WITH SYMBOLS AND PICTORIAL IMAGES
- VISUAL ACCESSIBILITY
- BOUNDARIES/FENCE/GATE
- NON-TOXIC PLANTS/MATERIALS



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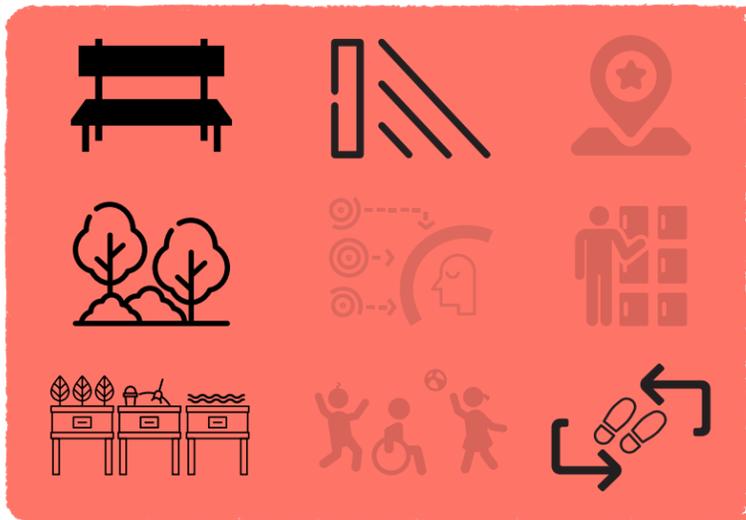


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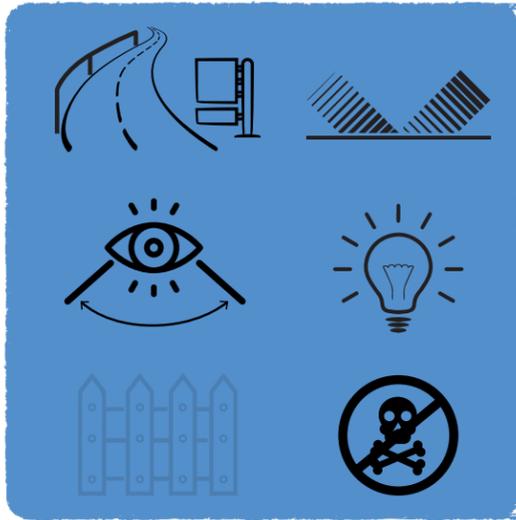
- SEATING EVERY 20'
- LIGHT WEIGHT/STABLE/BACKED/STURDY ARM SEATING
- VIEWING/OVERLOOK SPACE
- SHADED SEATING (NATURE/STRUCTURE)
- HIGH RATIO OF GREENERY
- RAISED PLANTER/FISH POND
- ONE ENTRY/SIMPLE LOOPED/FIGURE-EIGHT PATH

PROGRAMMING

- VARIETY OF PLANTING APPEALING TO ALL THE SENSES
- PLANTING WITH SEASONAL/DAY/NIGHT INTERESTS
- CREATIVE/EXPLORATORY/ SENSORY ACTIVITIES
- WATER FEATURES/BIRDS/SOOTHING SOUNDS
- PRIVATE MEDITATION/PUBLIC ACTIVITIES & SPACES



SAFETY/SECURITY



- PATHS & FLEXIBLE OPEN AREAS FOR MILD EXERCISE
- SIMPLE & CLEAR SIGNAGE
- DISTANCE FROM PARKING LOT
- WIDE/SMOOTH/FLAT PATHWAY
- MATERIALS WITHOUT GLARE
- VISUAL & PHYSICAL ACCESSIBILITY
- SUFFICIENT LIGHT FOR PATH & ACTIVITY SPACE
- NON-TOXIC AND MILD AROMATIC PLANTS



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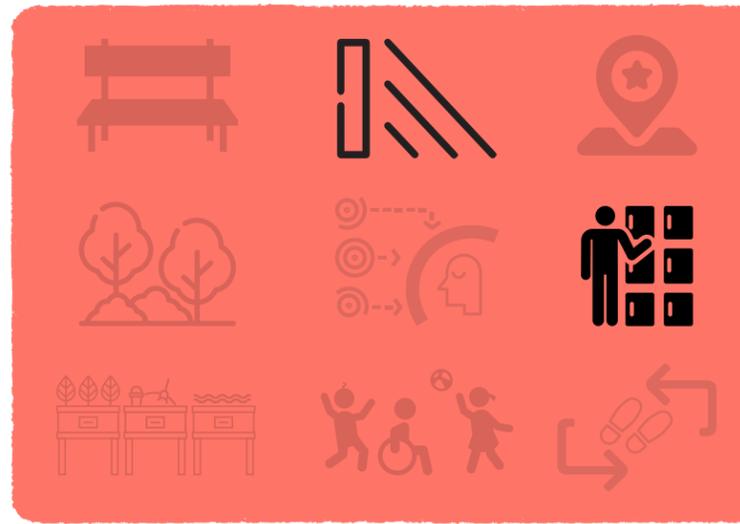


CLINIC



BENNETT'S VILLAGE

LAYOUT/DESIGN



PAIGE (SPECIAL ED)

- SHADE
- STORAGE
- TABLES WHEELCHAIR CAN ROLL UNDER

LAURA/ DIANE (BEHAVIORAL THERAPISTS)

- RELIEF SPACE (3-SIDE ENCLOSED)

PROGRAMMING

PAIGE (SPECIAL ED)

- NATURE PLAY
- OBSTACLES & CHALLENGES
- GRADED ACTIVITY
- DIFFERENT HEAD POSITIONS
- WIND CHIMES
- YOGA BALLS FOR PRESSURE
- MOTOR PLANNING
- SMALL/LIGHTWEIGHT/MOVABLE OBJECTS
- HAND GAME

EMILY/ALAN (OT/PT)

GAIL (PE)

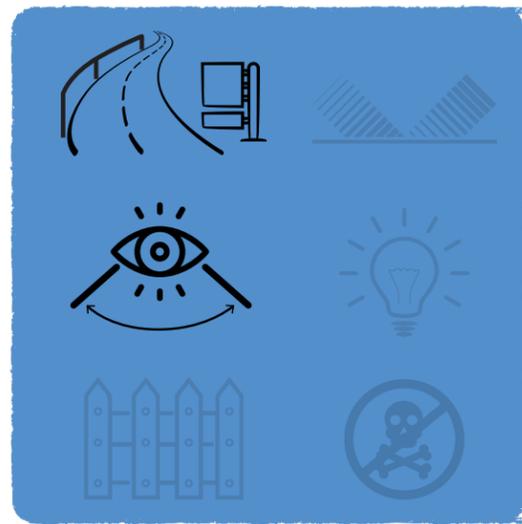
- PARTICIPATE & ENGAGE/INTERACT
- UNPREDICTABLE
- CYLINDER-TUBE TO ROLL & SHOOT THE BALL
- BALLOONS/ BUBBLES WITH A FAN
- DOUBLE/TRIPLE OCCUPANCY PLAY EQUIPMENT (SWING)
- HIDE AND SEEK GAME
- HANDS ON PLAY
- FREE MOVEMENT ZONE

LAURA/ DIANE (BEHAVIORAL THERAPISTS)

- INTERACTION & COMMUNICATION
- EQUIPMENT CAN INCLUDE USERS W/ & W/O WHEELCHAIR
- SENSORY OPPORTUNITY



SAFETY/SECURITY



PAIGE (SPECIAL ED)

- HARD TO GET KIDS FROM BUS TO PLAYGROUND

LAURA/ DIANE (BEHAVIORAL THERAPISTS)

- CLEAR SIGHT LINE
- VOCABULARY BOARD/PICTORIAL SIGNAGE



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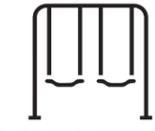
FEATURE/ELEMENT



EVENT SPACE (BIRTHDAY PARTY)



PICNIC AREA



DONUT SWING



CABLEWAY



WATER PLAY



HIDE & SEEK SPACE



TREEHOUSE



RESTROOM/
BUILDING WITH A.C./
SHADE/FOOD STAND

LAYOUT/DESIGN



PROGRAMMING



SAFETY/SECURITY



LAYOUT/DESIGN

-  ONE ENTRY & SIMPLE LOOP
-  SUFFICIENT & COMFORTABLE SEATING
-  STORAGE/LOCKER/SHELF
-  NATURE/GARDEN/GREEN/WATER
-  SHADE FROM NATURE & STRUCTURE
-  RELIEF SPACE
-  RAISED BED/TABLE
-  ENOUGH ACTIVITY SPACE FOR ALL ABILITY USERS
-  LANDMARK/SOUND SOURCE/ELEMENTS FOR ORIENTATION

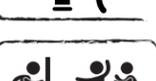
PROGRAMMING

-  TEXTURE/SENSORY PLAY
-  AUDITORY INPUT
-  VARIETY OF EXPERIENCE
-  SOCIAL PLAY OPPORTUNITIES

SAFETY/SECURITY

-  WIDE/ACCESSIBLE/CONSISTENT/SAFE PATH & CLEAR SIGNAGE
-  MATERIALS/COLORS WITHOUT GLARE
-  FENCE/GATE(NATURE & STRUCTURE)
-  VISUAL ACCESSIBILITY (GUARDIANS & USERS)
-  RIGHT AMOUNT OF LIGHT
-  NON-TOXIC MATERIALS/PLANT

FEATURE/ELEMENT

-  EVENT SPACE (BIRTHDAY PARTY)
-  PICNIC AREA
-  DONUT SWING
-  CABLEWAY
-  TREEHOUSE
-  WATER PLAY
-  HIDE & SEEK SPACE
-  RESTROOM/AIR-CONDITIONED BUILDING/SHADE/FOOD STAND

**DESIGN
CONSIDERATIONS**

RECAP

**CONCEPT
DESIGN**

**SITE
ANALYSIS**

**NEXT
STEPS**







BASEBALL
FIELD

WOODS WITH
STREAM BED

GOLF COURSE

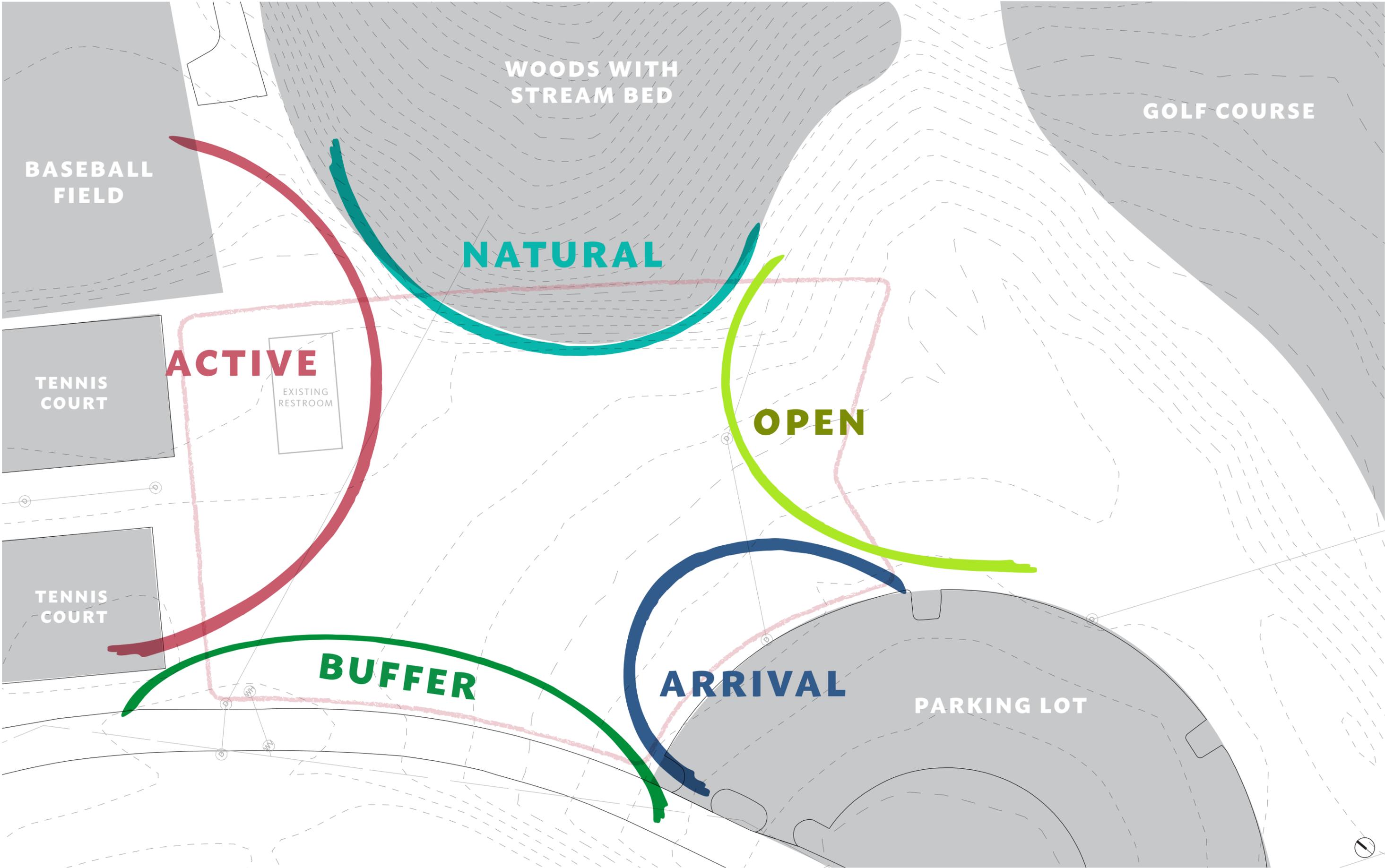
TENNIS
COURT

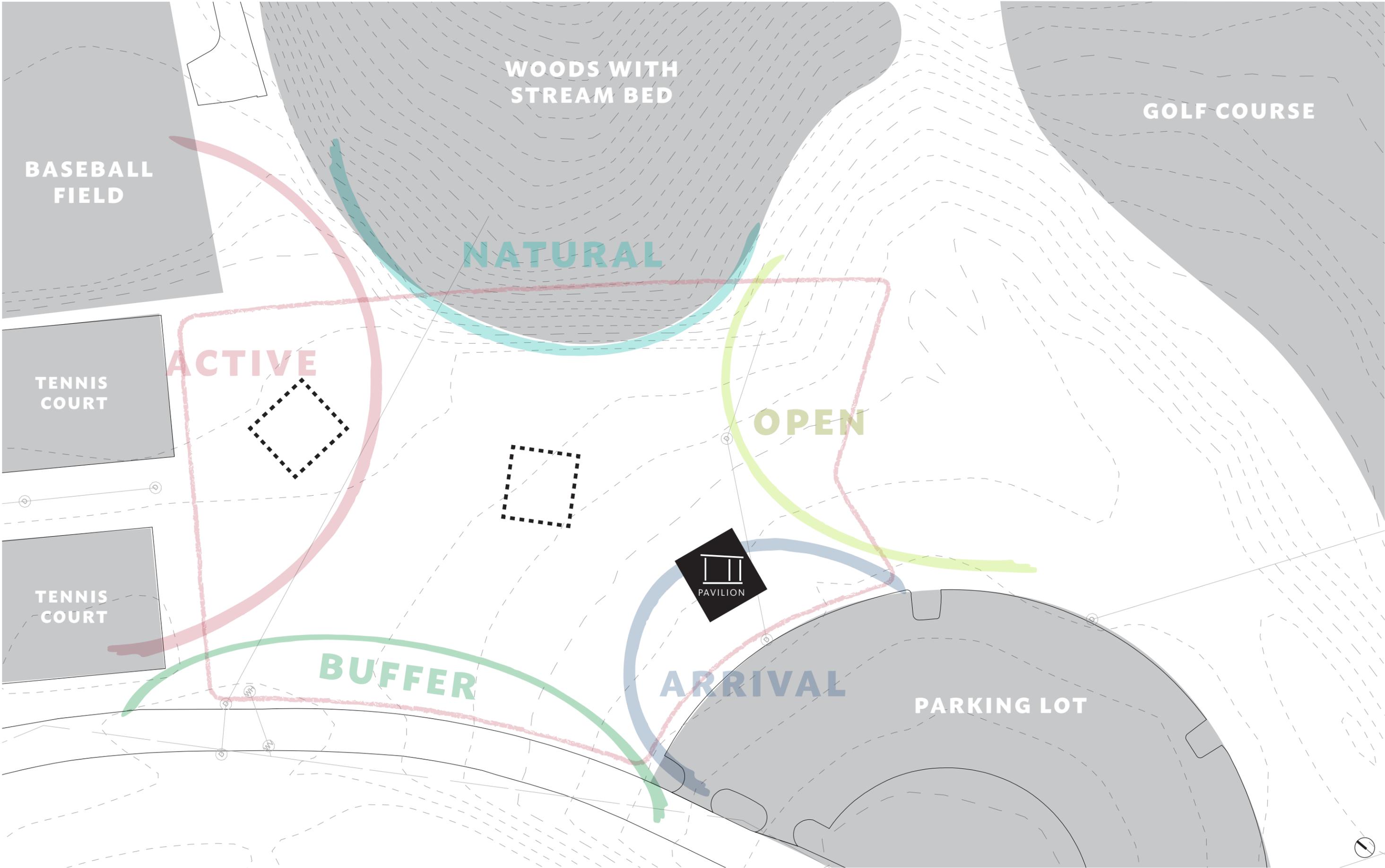
EXISTING
RESTROOM

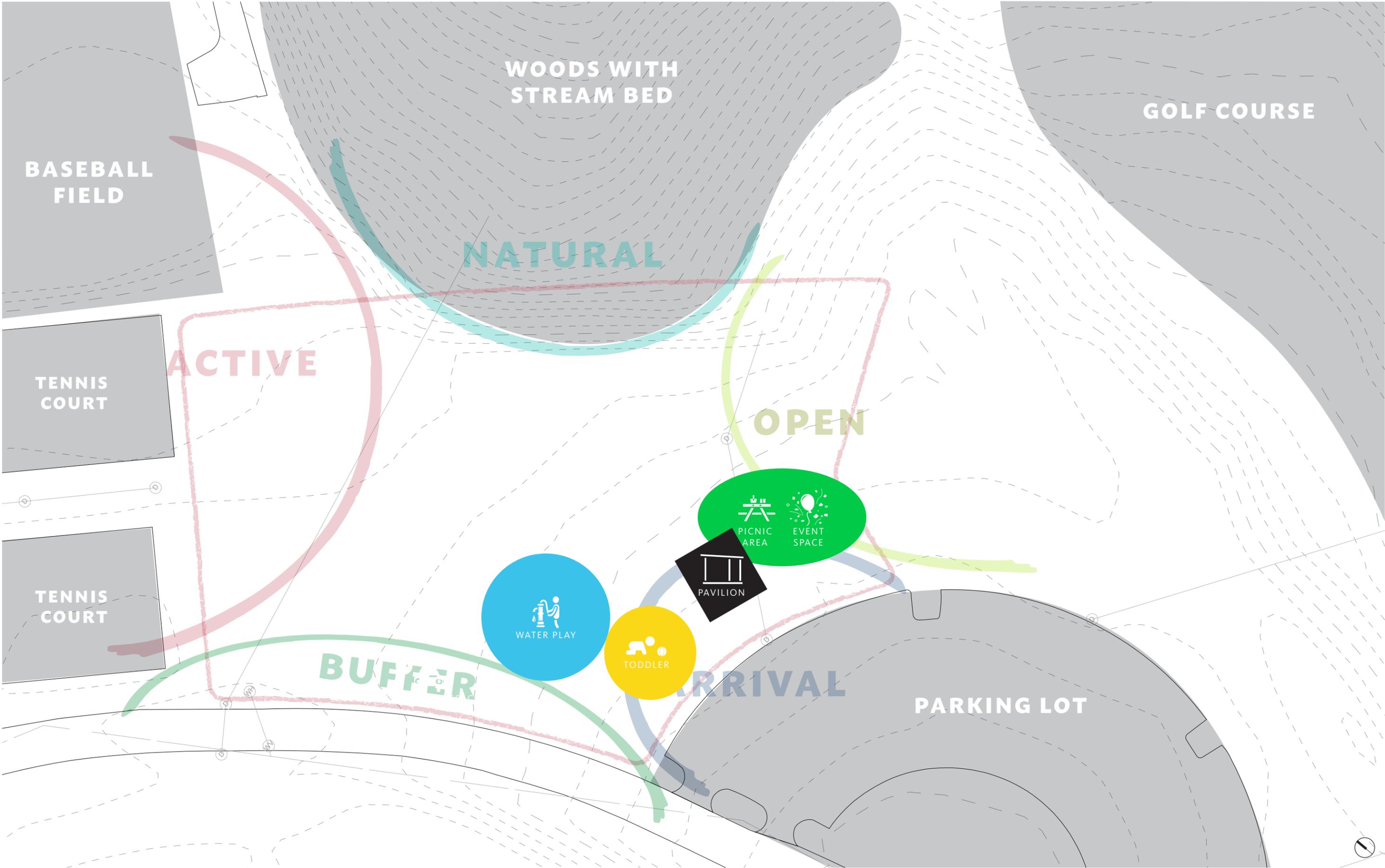
SITE

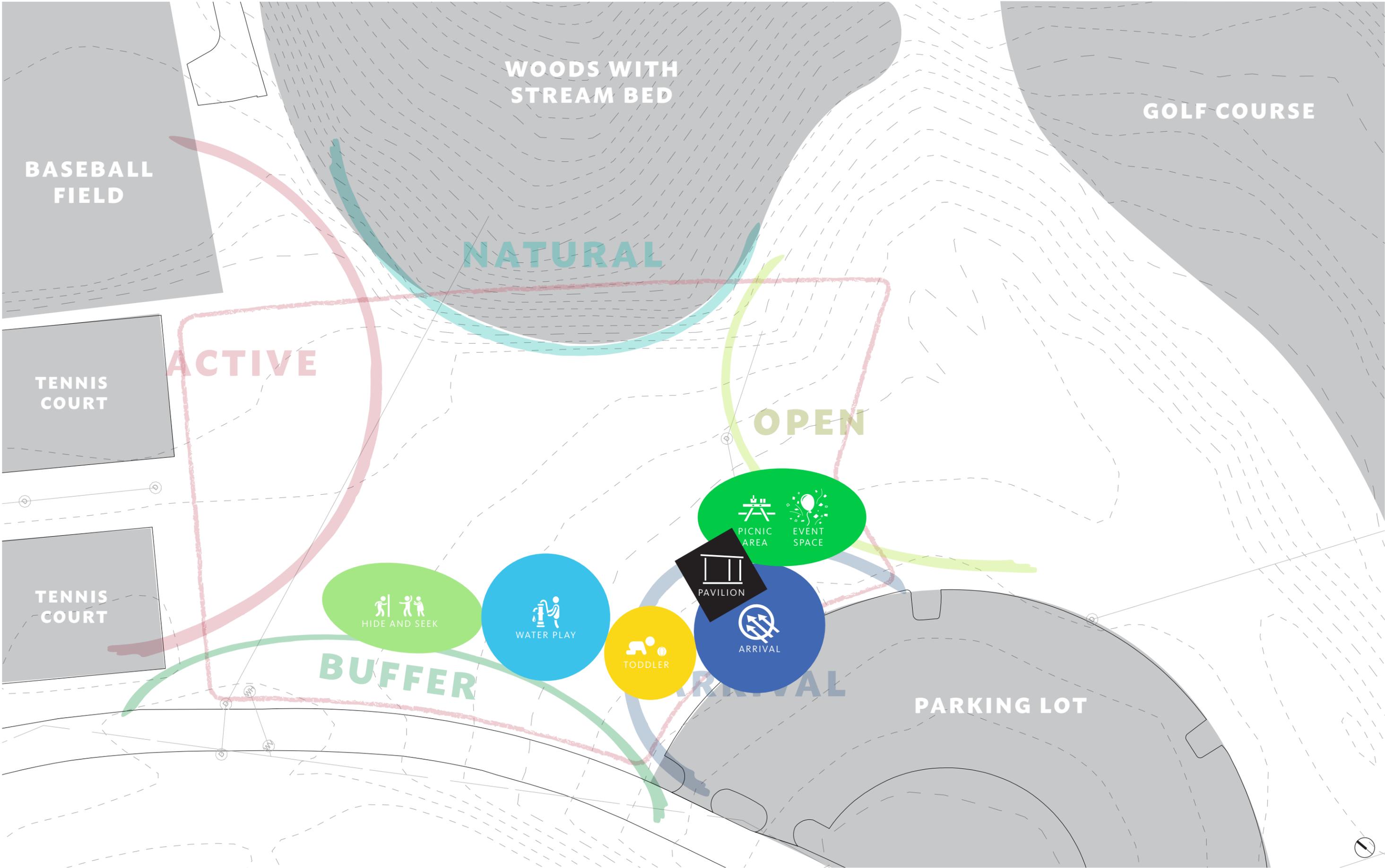
TENNIS
COURT

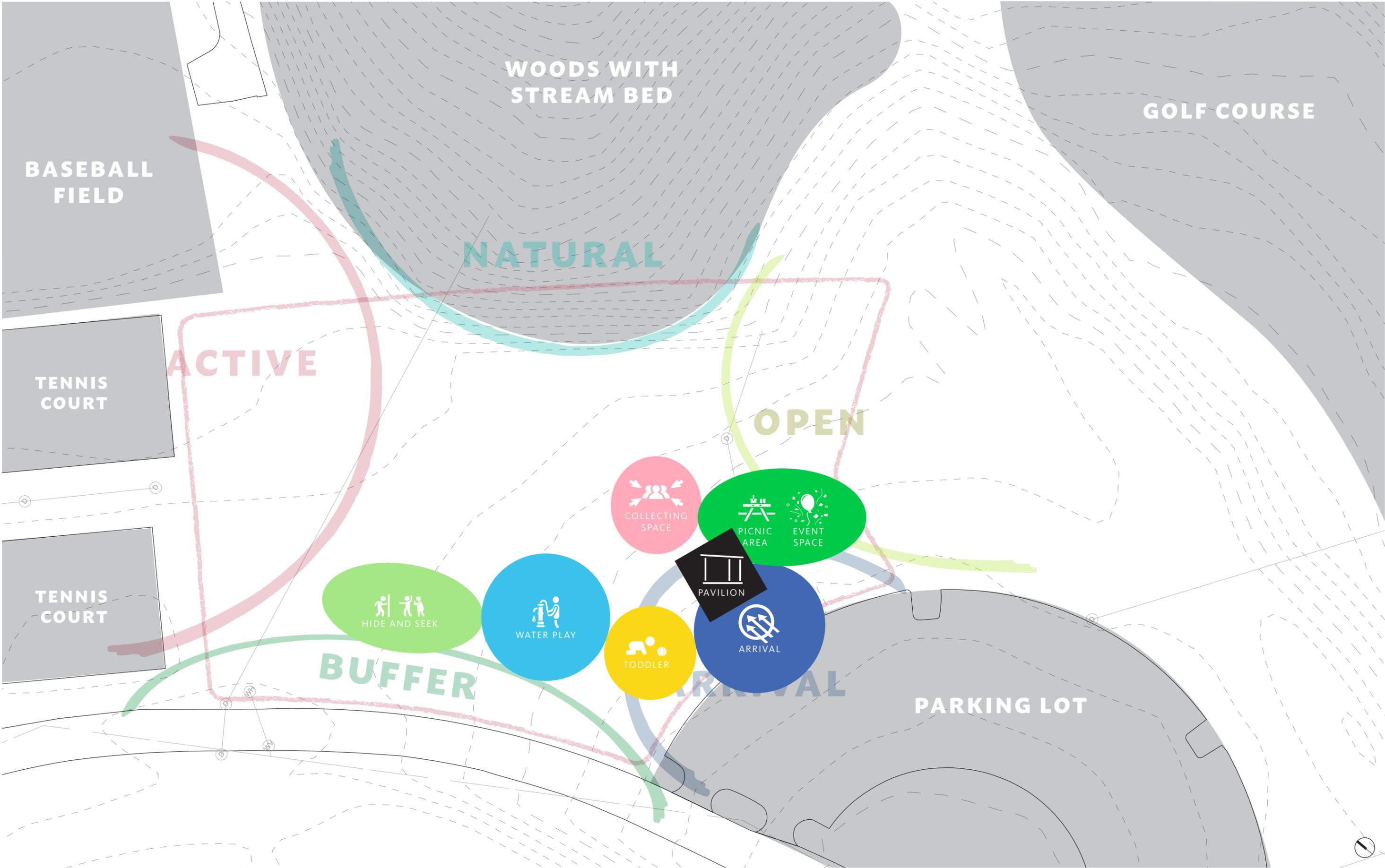
PARKING LOT

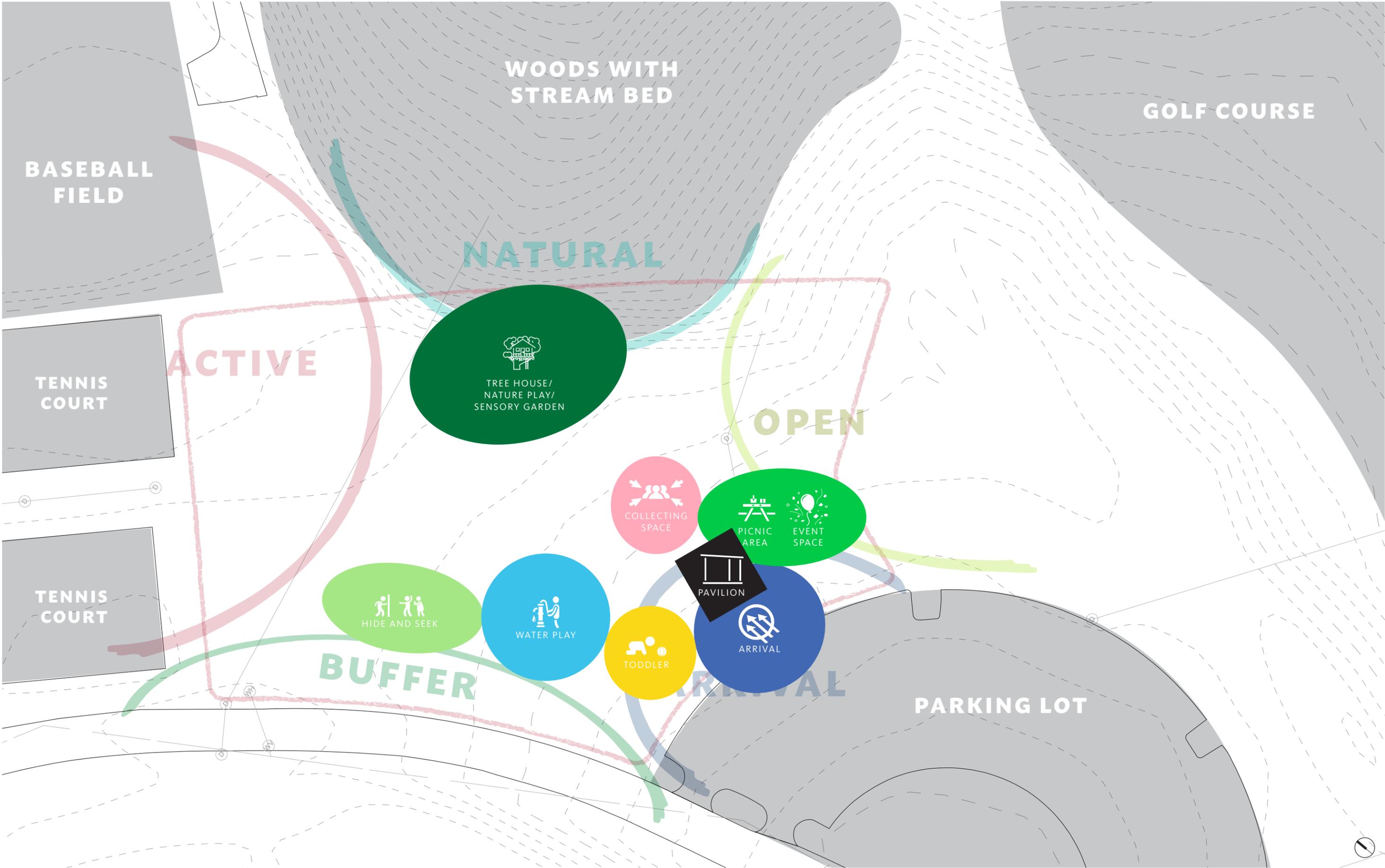












WOODS WITH
STREAM BED

GOLF COURSE

BASEBALL
FIELD

NATURAL

TENNIS
COURT

ACTIVE

SENSORY PLAY

TREE HOUSE/
NATURE PLAY/
SENSORY GARDEN

OPEN

SENSORY PLAY

TEXTURE PLAY

COLLECTING
SPACE

PICNIC
AREA

EVENT
SPACE

TENNIS
COURT

HIDE AND SEEK

WATER PLAY

TODDLER

PAVILION

ARRIVAL

BUFFER

ARRIVAL

PARKING LOT



WOODS WITH
STREAM BED

GOLF COURSE

BASEBALL
FIELD

NATURAL

ACTIVE

TENNIS
COURT

SENSORY PLAY

TREE HOUSE/
NATURE PLAY/
SENSORY GARDEN

CABLEWAY

SENSORY PLAY

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PAVILION

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ARRIVAL

PARKING LOT



WOODS WITH
STREAM BED

GOLF COURSE

BASEBALL
FIELD

NATURAL

TENNIS
COURT

ACTIVE

SENSORY PLAY

TREE HOUSE/
NATURE PLAY/
SENSORY GARDEN

DONUT
SWING

CABLEWAY

SENSORY PLAY

TEXTURE PLAY

COLLECTING
SPACE

PICNIC
AREA

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COURT

HIDE AND SEEK

WATER PLAY

TODDLER

PAVILION

ARRIVAL

BUFFER

ARRIVAL

PARKING LOT



WOODS WITH
STREAM BED

GOLF COURSE

BASEBALL
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NATURAL

ACTIVE

TENNIS
COURT

SENSORY PLAY

TREE HOUSE/
NATURE PLAY/
SENSORY GARDEN

DONUT
SWING

CABLEWAY

SENSORY PLAY

TEXTURE PLAY

COLLECTING
SPACE

PICNIC
AREA
EVENT
SPACE

TENNIS
COURT

HIDE AND SEEK

WATER PLAY

PAVILION

ARRIVAL

TODDLER

FUTURE PARKING SPACE

ARRIVAL

PARKING LOT



WOODS WITH
STREAM BED

GOLF COURSE

BASEBALL
FIELD

NATURAL

ACTIVE

TENNIS
COURT

SENSORY PLAY

TREE HOUSE/
NATURE PLAY/
SENSORY GARDEN

DONUT
SWING

CABLEWAY

SENSORY PLAY

TEXTURE PLAY

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COURT

HILL PLAY

HIDE AND SEEK

WATER PLAY

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TENNIS
COURT

ACT

TENNIS
COURT



SWM



SENSORY PLAY



TREE HOUSE/
NATURE PLAY/
SENSORY GARDEN



DONUT
SWING



CABLEWAY



TEXTURE PLAY



COLLECTIVE
SPACE



PICNIC
AREA



EVENT
SPACE

FLEXIBLE
OPEN SPACE

FREE MOVEMENT PLAY



SENSORY
PLAY



HILL PLAY



HIDE AND SEEK



WATER PLAY



TODDLER



FUTURE PARKING SPACE



VIVILION



ARRIVAL

BUFFER

ARRIVAL

PARKING LOT



WOODS WITH
STREAM BED

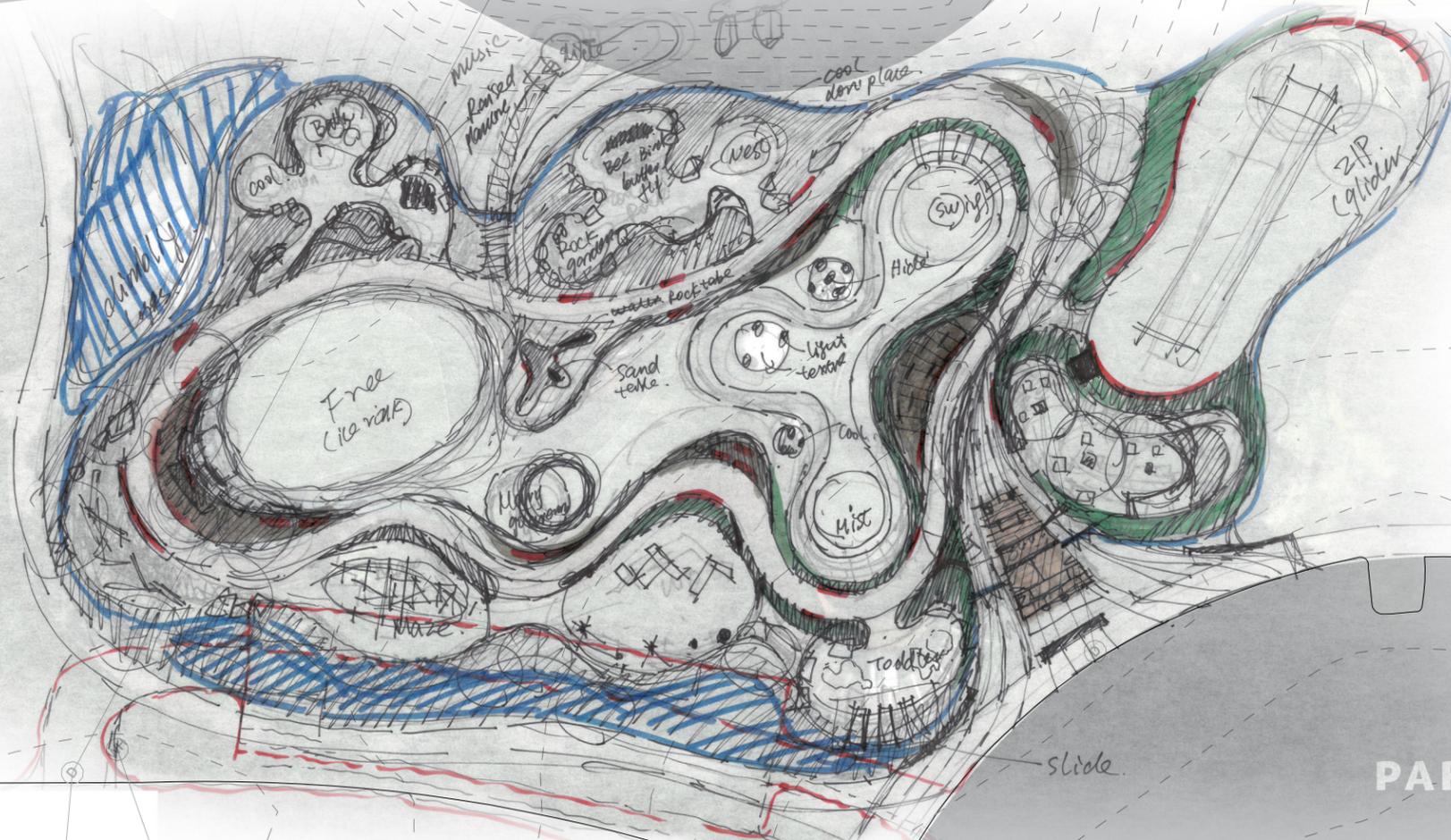
GOLF COURSE

BASEBALL
FIELD

TENNIS
COURT

TENNIS
COURT

PARKING LOT



**DESIGN
CONSIDERATIONS**

RECAP

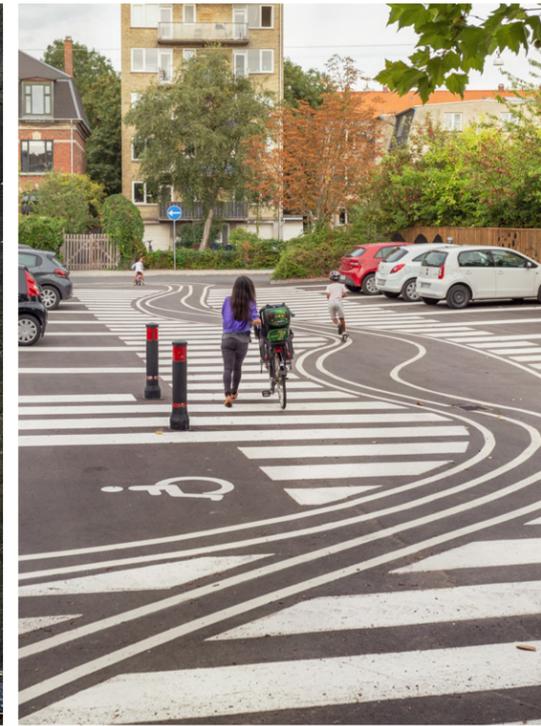
**CONCEPT
DESIGN**

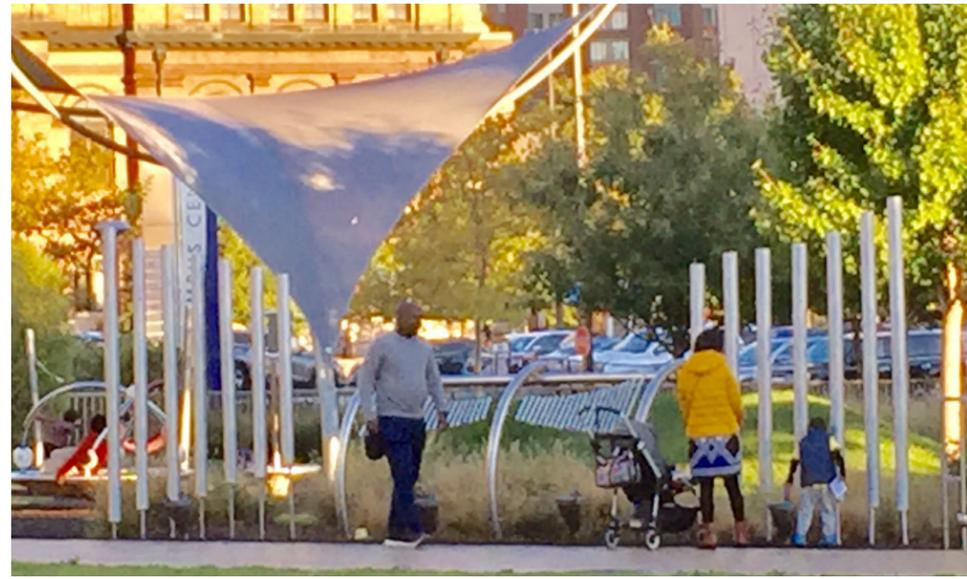
**SITE
ANALYSIS**

**NEXT
STEPS**















CABLE WAY DESIGN CONSIDERATIONS

Two CCA poles at 25' with dual anchors (anchors possibly in concrete dependent on soil)

Poles spaced at 150' apart to provide adequate ride

12'x12' staging platform at 6 to 8' high

Ramp to access platform (may have to be 72' to meet ADA)
This will be dependent on height of platform

Dismount platform in center of zip line

Hydraulic zip lowering system to provide access for folks with disabilities

Training (1 -2 days dependent on staff)

Program Equipment (probably 2-3 special harnesses, helmets, waist harnesses 2-3, zip trolleys, zip tethers, rescue system)

Cost - \$80,000 and \$100,000

MEMO

To: Peng Gu, Elaine Ku, Mahan Rykiel
From: Julia Rousakis, APE Studio
Subject: Considerations for special trolley (cableway) for Bennett's Village
Date: 30 January 2020

Bennett's Village Playground is being planned as a public playground in Charlottesville, Virginia, serving users of diverse abilities and multiple generations. The sponsor of Bennett's Village intends to include a trolley (also known as a cableway, track ride or zipline) that can accommodate users who require full body support. APE Studio conducted preliminary research into the feasibility of such a cableway for Bennett's Village.

Findings:

1.) Such trolleys have been created specifically for camps serving children with special needs. Also, at least one example exists as a modification for a zipline for adult users that is part of an adventure park. (See Resources below.) In these cases, the following conditions apply:

- The trolley is operated by trained staff, and use of the trolley is supervised at all times by trained staff.
- The users are provided with safety equipment, including helmets, harnesses, tethers, and rescue system.
- Access to the trolley is restricted.
- The trolleys are designated as challenge course equipment or fitness equipment and not playground equipment.

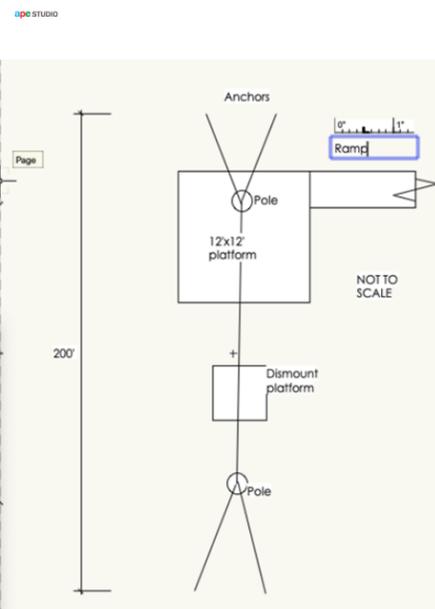
2) Playground equipment manufacturers operating in the United States offer trolleys with pendulum seats as well as trolleys with molded bucket seats with harnesses, also called an ADA seats. (See Resources below.) These trolley systems can be constructed with additional bays so that children of diverse abilities can play side by side. These trolleys are standard products that meet the design standards for public playground safety.

Conclusion:

A custom trolley can be designed and built for Bennett's Village according to the client's intention and landscape specifications. For safety and liability purposes, the client would need approval from Charlottesville Parks and Recreation and the owner/operator. Furthermore, the trolley should conform to the industry standards for challenge-course equipment, and the owner/operator should seek third-party certification of compliance (for example, from the Association of Challenge Course Technology or other authoritative body). Conditions of use should include but not be limited to the following:

- Access to the trolley is restricted.
- The trolley is operated by trained staff, and use of the trolley is supervised at all times by trained staff.
- The users are provided with safety equipment, including helmets, harnesses, tethers, and rescue system.

Neither APE Studio nor Richter Spielgeräte can advise on the design or produce a custom trolley or



advise on the safety compliance of such a system. Please see Resources (below) for alternate sources.

Resources:

Custom Zipline Sources / Designers

Tom Zartman, Engineer
Phoenix Experiential Designs, Sugar Grove, NC
(t) 828-260-7864
(e) tom@phoenixexperiential.com

Melanie Wills, Director of Outdoor Education & Professional Services, Bradford Woods
Indiana University's Outdoor Center
(t) 765-349-5113
(e) mjwills@indiana.edu

Custom Zipline Sources / Operators

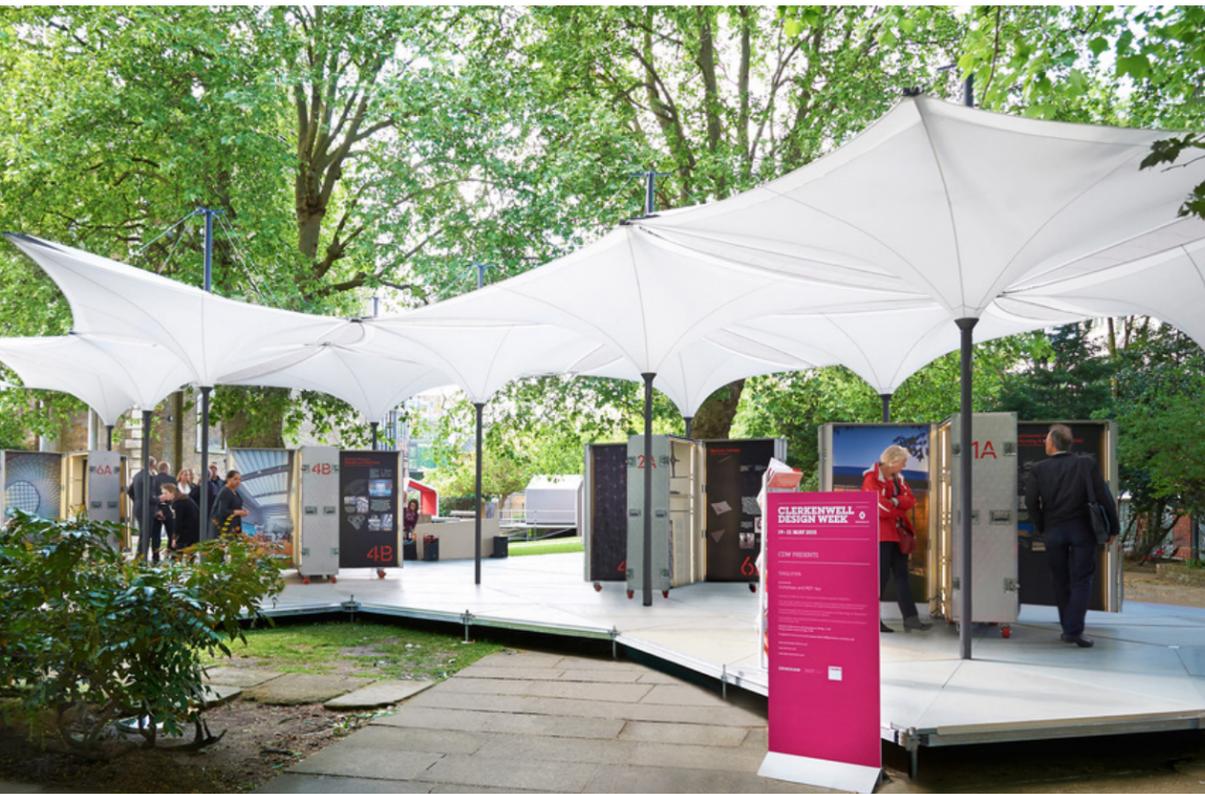
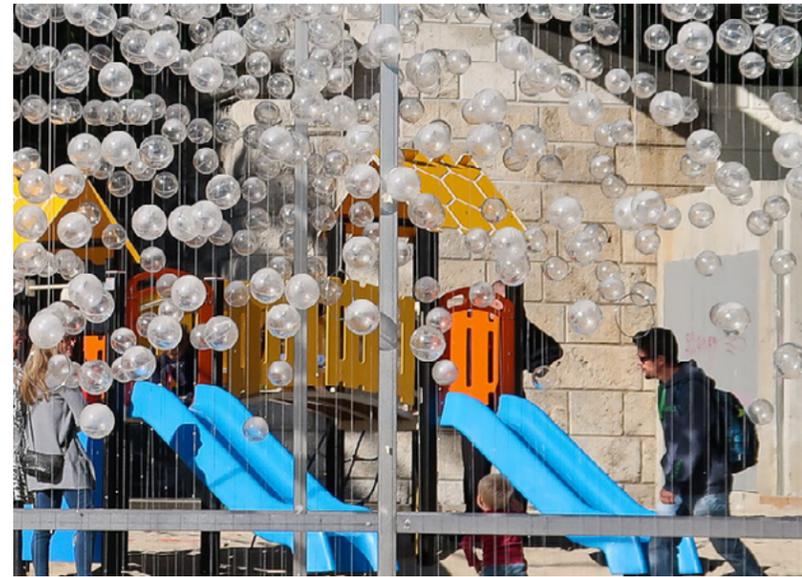
Tom Fleming, Facilities Manager
The Woodlands, Wexford, PA
(t) 724-935-5470
(e) tmfleming@woodlandsfoundation.org

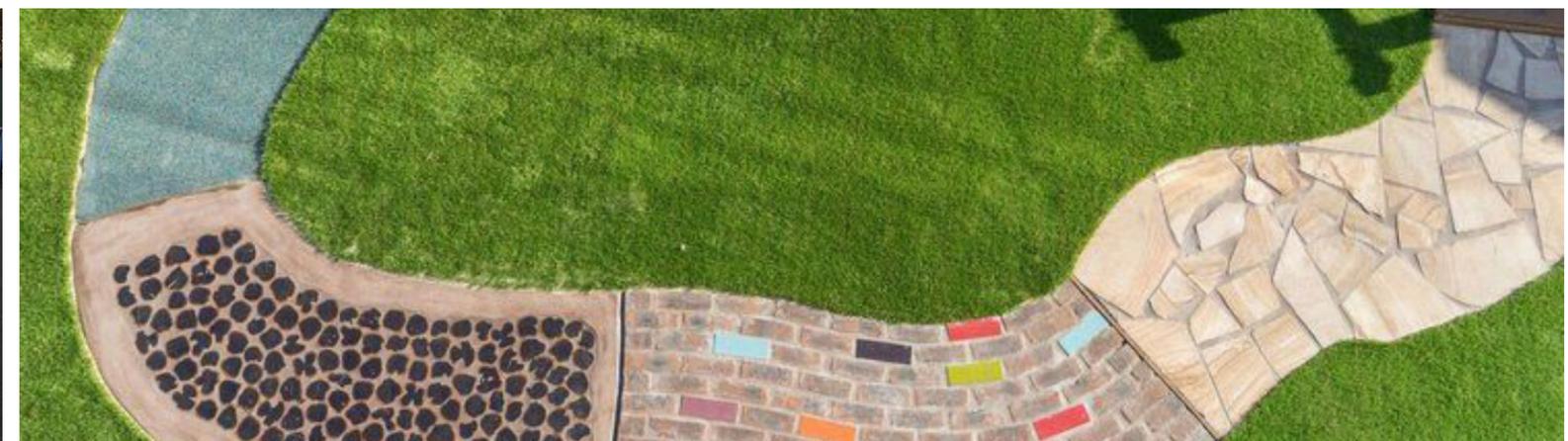
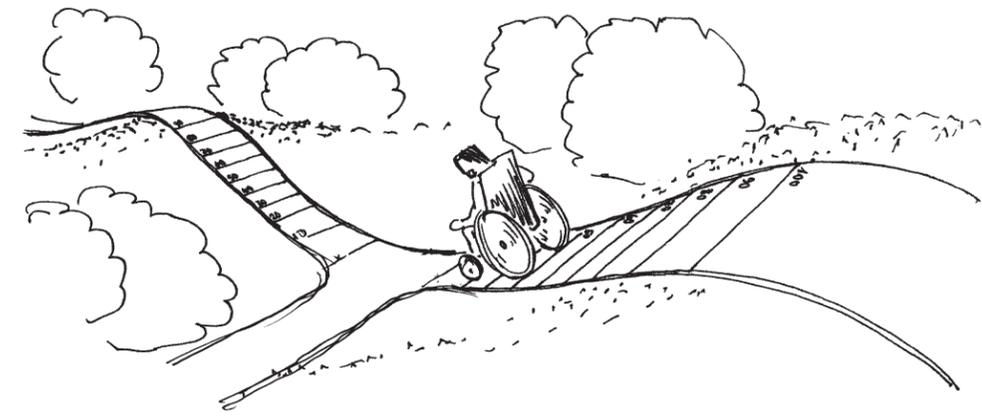
Alysia Caldwell, Executive Director
Champ Camp, Greenwood, IN
(t) 317-679-1860
(e) alysia@champcamp.org

Gatorland
see <https://www.curbfreewithcorylee.com/2019/03/16/adaptive-zip-line-gatorland/>
Mark McHugh, President and CEO
(t) 407-855-5496

Standard Trolley Source (example)

Landscape Structures (LSI)
Sparks @ Play
Owings Mills, MD
(t) 410-356-4151
Model # 194663
<https://www.playlsi.com/en/commercial-playground-equipment/playground-components/zipkrooz/>

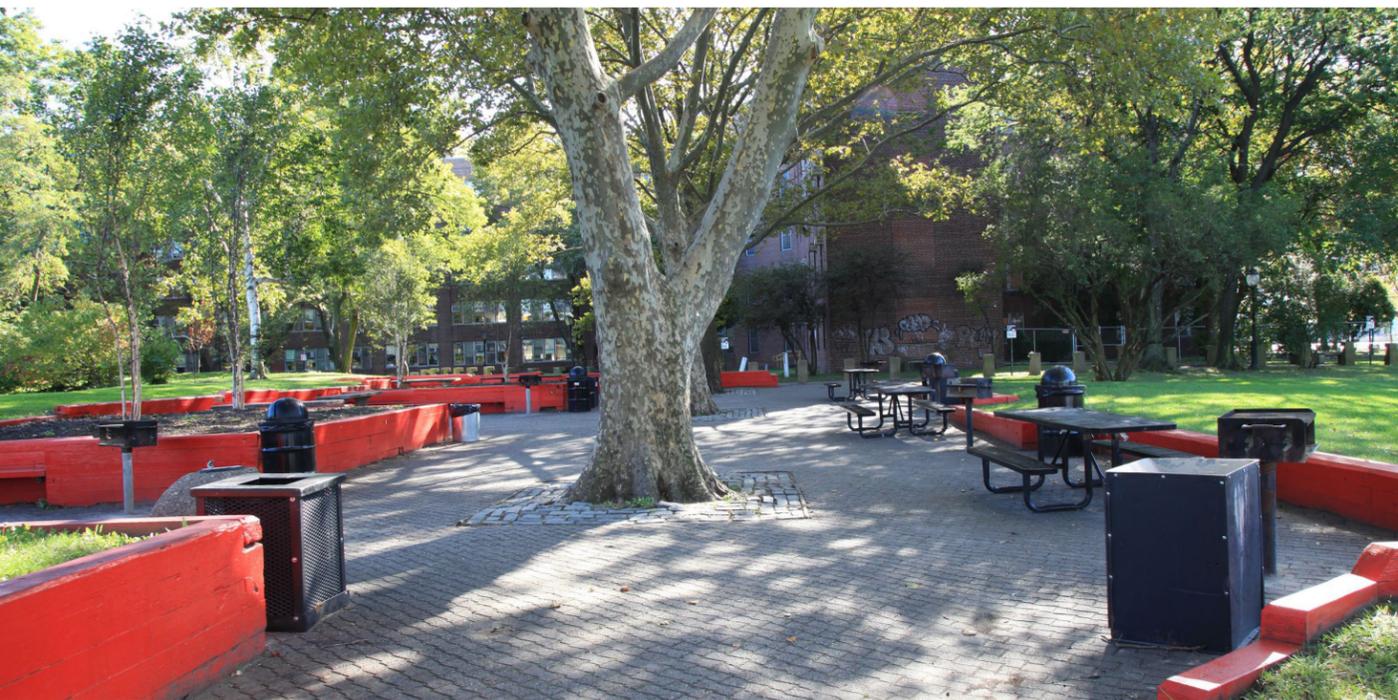




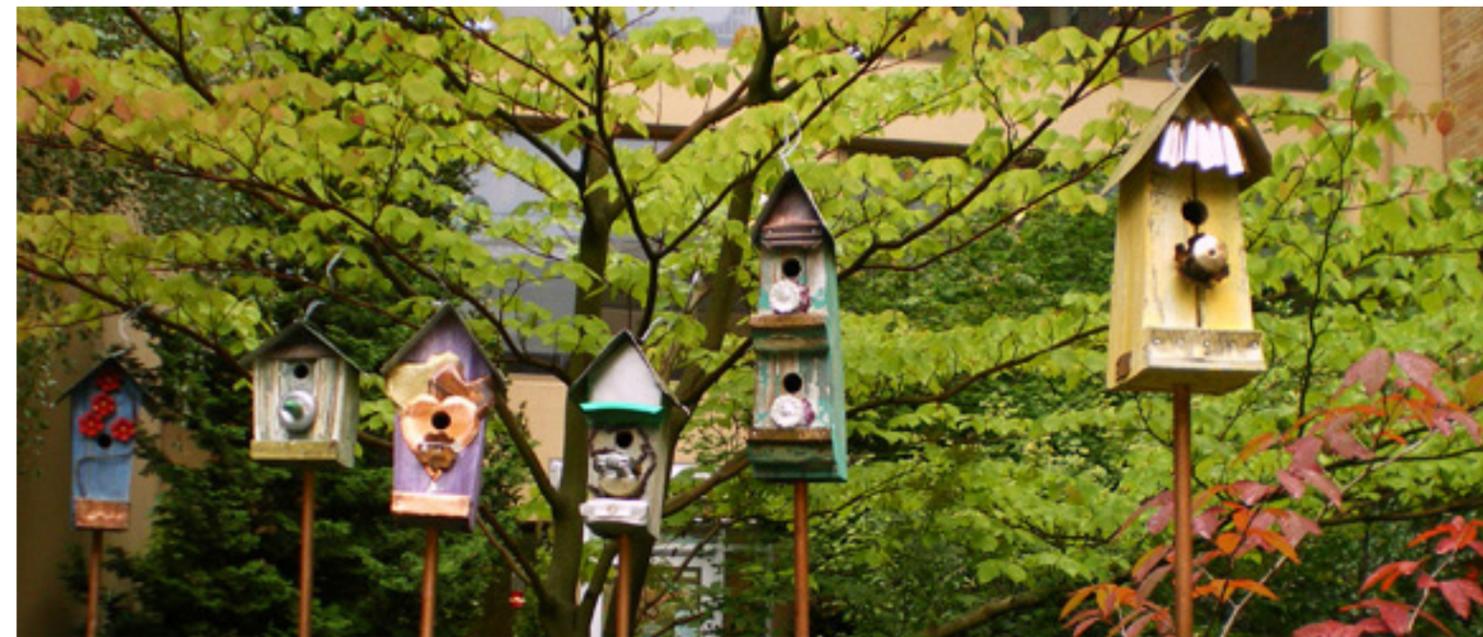






















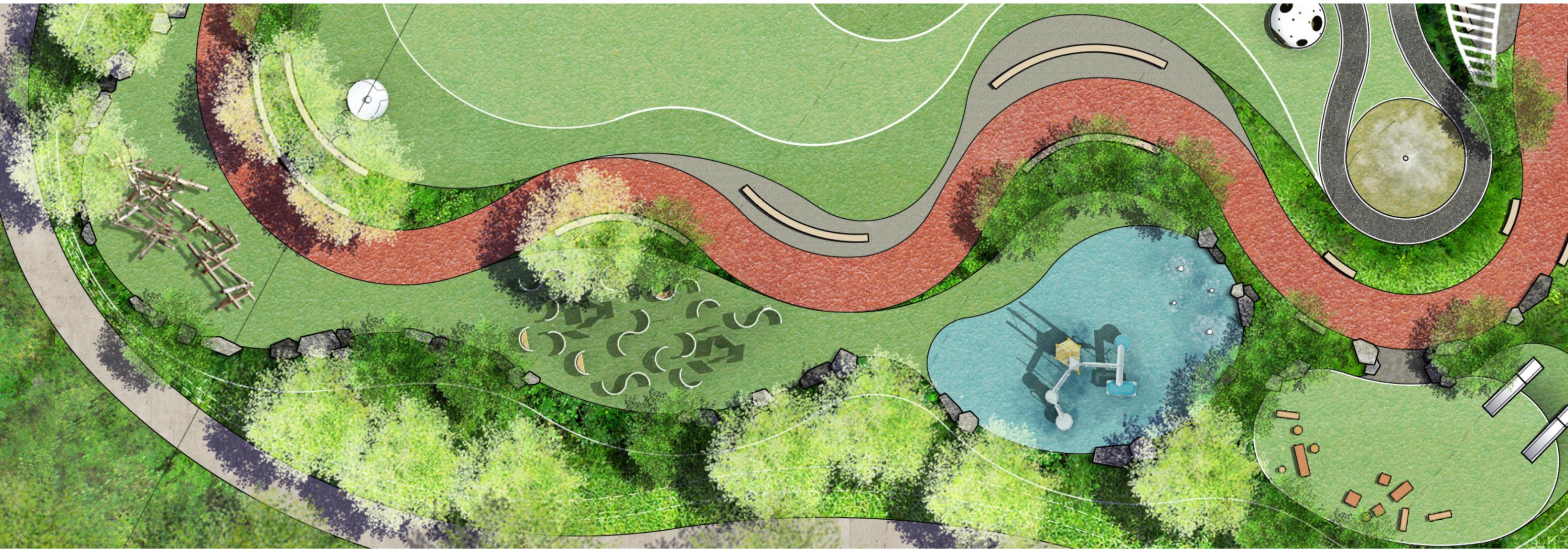
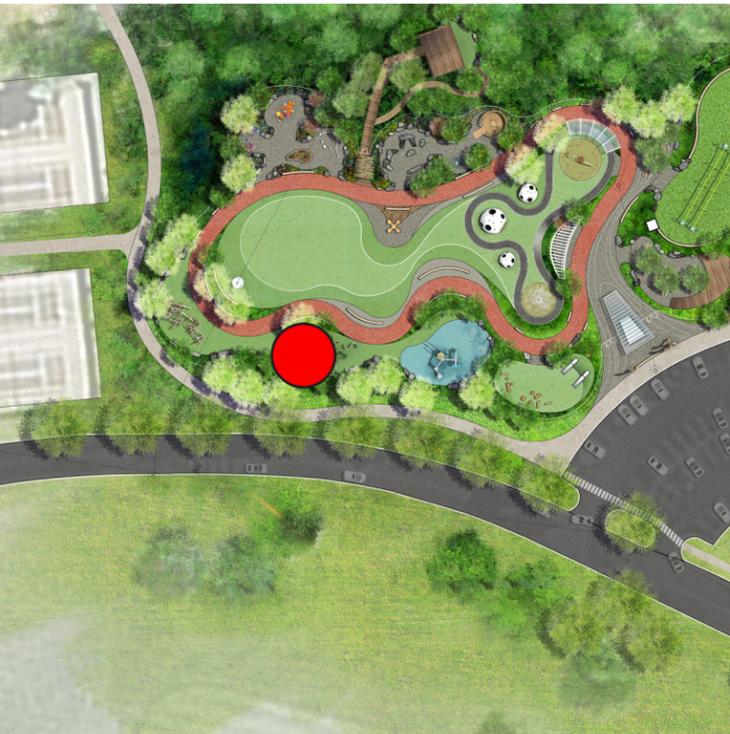


WILLOW TUNNEL

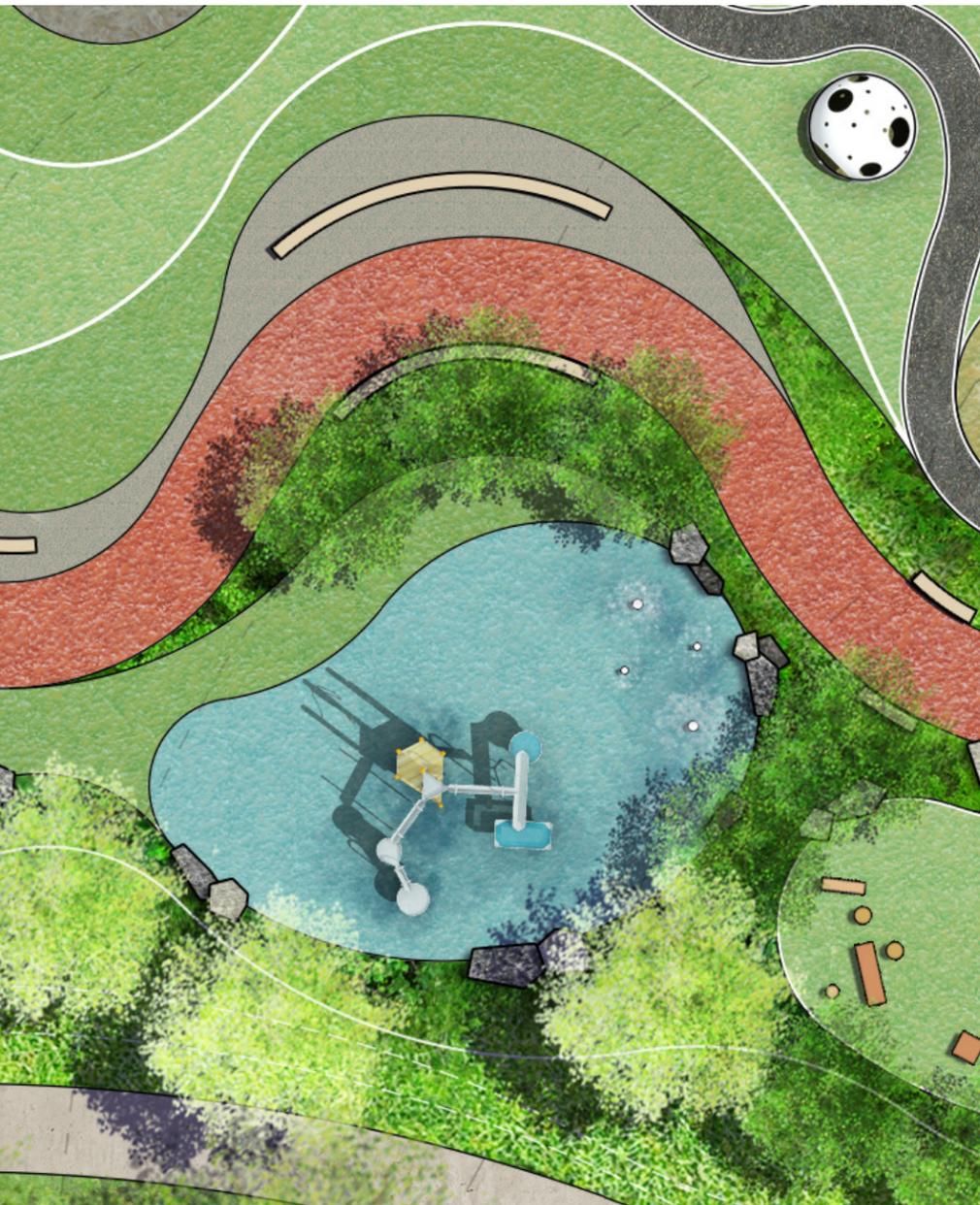
TREE HOUSE







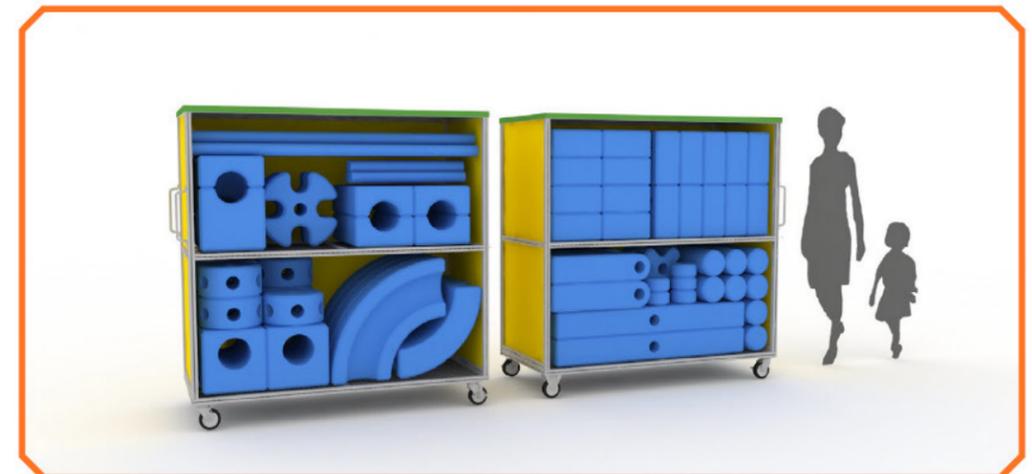














SIGHT - VISUAL SYSTEM

Color, patterns, uniqueness, scale. Goal is to incorporate a combination contrasting plants: architectural vs. delicate, stimulating vs. calming.

Plants in **bold** are native to Piedmont Virginia per the Albemarle County Native Plant Database.



habitat supporting plant



pollinator supporting plant



Helenium autumnale, Common Sneezeweed



Monarda punctata, Spotted beebalm



Asclepias tuberosa, Butterfly Milkweed



Cephalanthus occidentalis, Buttonbush



HEARING - AUDITORY SYSTEM

Incorporating sounds that occur naturally–Northern Sea Oats rustling in the wind and birds singing–and sounds that must be activated, such as sound sculptures and chimes.

Plants in **bold** are native to Piedmont Virginia per the Albemarle County Native Plant Database.

 **habitat supporting plant**

 **pollinator supporting plant**



Chasmanthium latifolium, Northern Sea Oats



Muhlenbergia capillaris, Muhly Grass



Panicum virgatum 'Shenandoah', Switchgrass



Schizachyrium scoparium, Little Bluestem



Plants in **bold** are native to Piedmont Virginia per the Albemarle County Native Plant Database.



habitat supporting plant



pollinator supporting plant

TASTE - GUSTATORY SYSTEM

All plants should be non-toxic and consumption of plants in general should be discouraged due to allergies but some plants may be of special interest to ingest. Herb annuals and low maintenance fruiting shrubs are suitable.



Vaccinium corymbosum., Highbush Blueberry



Allium schoenoprasum, Chives



Prunus americana, American Wild Plum



Anethum graveolens, Dill



SMELL - OLFACTORY SYSTEM

Smell should be considered as a layered experience, incorporating smells that contrast one another (floral-spicy-citrusy-savory), subtle smells that require activation through crushing (intimate engagement), and atmospheric smells.



Pycnanthemum muticum, Mountain Mint



Morella pensylvanica, Bayberry

Plants in **bold** are native to Piedmont Virginia per the Albemarle County Native Plant Database.



habitat supporting plant



pollinator supporting plant



Eutrochium fistulosum, Hollow Joe-pye Weed



Lindera benzoin, Spicebush



TOUCH - TACTILE SYSTEM

Incorporate a diverse palette of texturally significant plants: smooth, furry, rough, soft, and bouncy. Avoid plants with commonly irritating oils. Non-plant materials such as water elements and rocks and pebbles are also important for a sensory experience.



Amsonia hubrichtii, Bluestar



Eryngium yuccifolium, Rattlesnake Master

Plants in **bold** are native to Piedmont Virginia per the Albemarle County Native Plant Database.



habitat supporting plant



pollinator supporting plant



Itea virginica, Virginia Sweetspire



Deschampsia cespitosa 'Goldtau', Tufted Hairgrass

NATIVE PLANTING FOR SENSORY EXPERIENCES, POLLINATOR/ HABITAT SUPPORT, AND YEAR-ROUND INTEREST



Shade Trees

Liquidambar styraciflua 'Rotundiloba', Sweetgum
Liquidambar styraciflua 'Ward', Sweetgum
Nyssa sylvatica, Black gum
Ostrya virginiana, Eastern hop hornbeam
Liriodendron tulipifera, Tulip tree
Cladrastis kentukea, Kentucky yellowwood

Small Ornamental Trees

Amelanchier canadensis, Canada serviceberry
Cercis canadensis, Redbud
Chionanthus virginicus, Fringetree

Large Shrubs

Cephalanthus occidentalis, Buttonbush
Hamamelis virginiana, Witch hazel
Morella pensylvanica, Northern bayberry
Lindera benzoin, Spicebush

Small Shrubs

Ilex glabra, Inkberry
Fothergilla gardenia, Dwarf fothergilla
Hypericum prolificum, Shrubby St. John's Wort
Itea virginica 'Henry's Garnet', Virginia sweetspire
Cornus sericea 'Kelsey', Red twig dogwood
Vaccinium corybosum, Highbush blueberry
Rhus aromatica 'Gro-Low', Fragrant sumac

Grasses

Panicum virgatum 'Shenandoah', Switchgrass
Muhlenbergia capillaris, Pink muhly grass
Chasmanthium latifolium, River oats
Schizachyrium scoparium 'Jazz', Little bluestem
Deschampia caespitosa 'Goldtau', Tufted hair grass

Herbaceous perennials

Actaea racemosa, Black snakeroot
Amsonia hubrichtii, Blue star
Amsonia tabaernaemontana, Eastern blue star
Aquilegia canadensis, Wild columbine
Asclepias tuberosa, Butterfly weed
Chelone glabra, White turtlehead
Coreopsis verticillata, Threadleaf coreopsis
Helenium autumnale, Sneezeweed
Helenium 'Kanaria', Sneezeweed
Eutrochium fistulosum, Hollow Joe-pye weed
Eryngium yuccifolium, Rattlesnake master
Lobelia cardinalis, Cardinal flower
Lobelia siphilitica, Great blue lobelia
Monarda fistulosa 'Claire Grace', Wild bergamot
Monarda punctata, Spotted beebalm
Oenothera fruticosa, Sundrops
Pycnanthemum muticum, Mountain mint
Solidago rugosa, Rough goldenrod

FALL INTEREST

Shade Trees

Liquidambar styraciflua 'Rotundiloba', Sweetgum
Liquidambar styraciflua 'Ward', Sweetgum
Nyssa sylvatica, Black gum
Ostrya virginiana, Eastern hop hornbeam
Liriodendron tulipifera, Tulip tree
Cladrastis kentukea, Kentucky yellowwood

Small Ornamental Trees

Amelanchier canadensis, Canada serviceberry
Cercis canadensis, Redbud
Chionanthus virginicus, Fringetree

Large Shrubs

Hamamelis virginiana, Witch hazel
Morella pensylvanica, Northern bayberry
Lindera benzoin, Spicebush

Small Shrubs

Fothergilla gardenii, Dwarf fothergilla
Itea virginica 'Henry's Garnet', Virginia sweetspire
Itea virginica 'Little Henry', Virginia sweetspire
Vaccinium corybosum, Highbush blueberry
Rhus aromatica 'Gro-Low', Fragrant sumac

Grasses

Panicum virgatum 'Shenandoah', Switchgrass
Muhlenbergia capillaris, Pink muhly grass
Chasmanthium latifolium, River oats
Schizachyrium scoparium 'Jazz', Little bluestem
Deschampia caespitosa 'Goldtau', Tufted hair grass

Herbaceous perennials

Amsonia hubrichtii, Blue star
Amsonia tabernaemontana, Eastern blue star
Chelone glabra, White turtlehead



Nyssa sylvatica



Amsonia hubrichtii



Chelone glabra



Itea virginica



Panicum virgatum 'Shenandoah'



Hamamelis virginiana

WINTER INTEREST

Small Shrubs

Ilex glabra, Inkberry

Cornus sericea 'Kelsey', Red twig dogwood

Grasses

Panicum virgatum 'Shenandoah', Switchgrass

Muhlenbergia capillaris, Pink muhly grass

Chasmanthium latifolium, River oats

Schizachyrium scoparium 'Jazz', Little bluestem

Deschampia caespitosa 'Goldtau', Tufted hair grass

Herbaceous perennials

Asclepias tuberosa, Butterfly weed

Eutrochium fistulosum, Hollow Joe-pye weed

Eryngium yuccifolium, Rattlesnake master

Monarda fistulosa 'Claire Grace', Wild bergamot

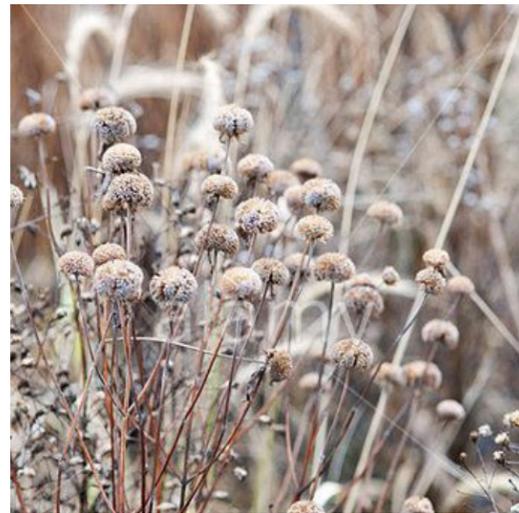
Solidago rugosa, Rough goldenrod



Cornus sericea



Eryngium yuccifolium



Monarda fistulosa



Schizachyrium scoparium

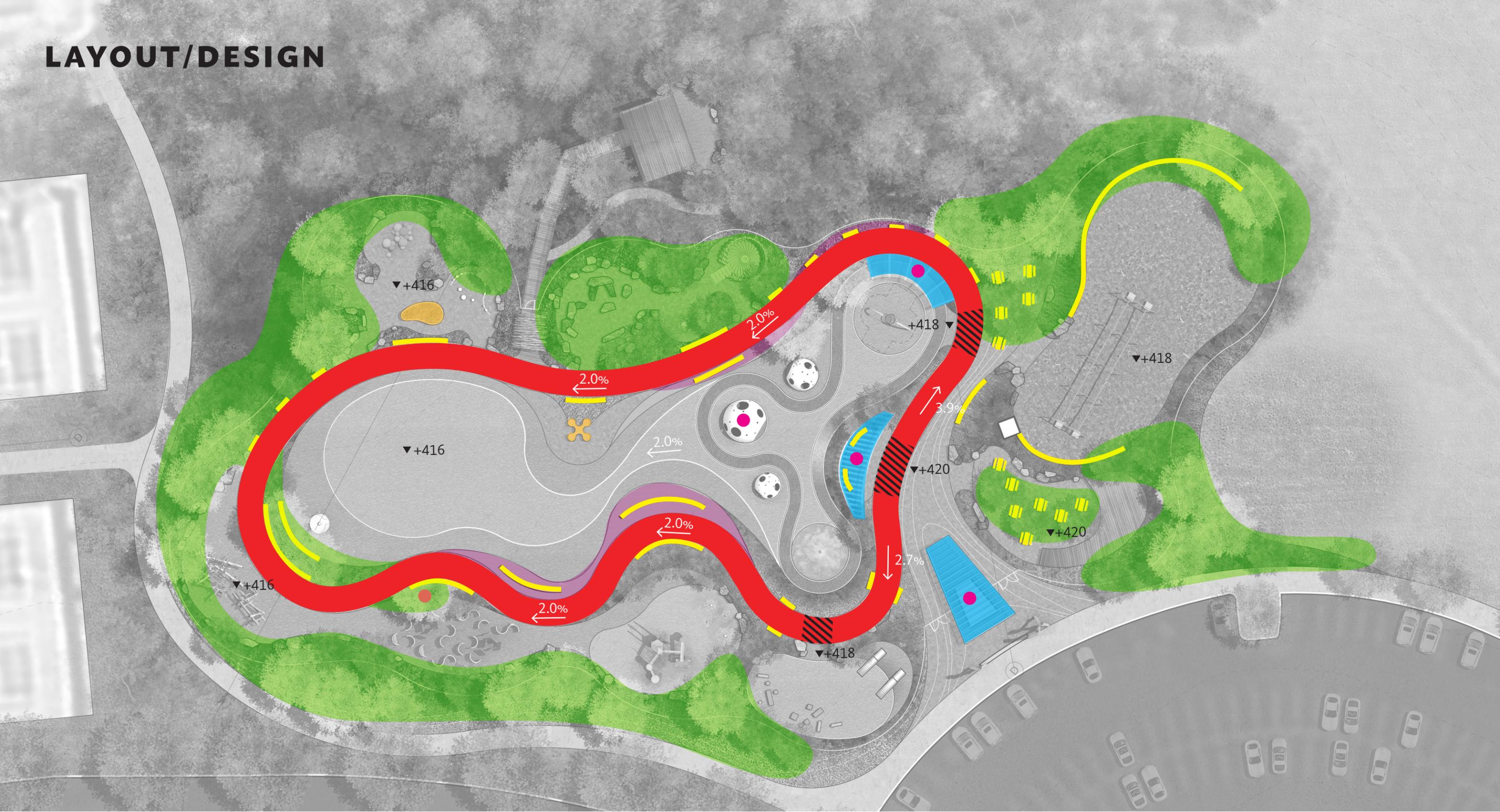


Asclepias tuberosa



Muhlenbergia capillaris

LAYOUT/DESIGN



ONE ENTRY & SIMPLE LOOP



STORAGE/LOCKER/SHELF



SHADE FROM STRUCTURE



RAISED BED/TABLE



FLAT LANDING ZONE



SUFFICIENT SEATING



SHADE FROM NATURE



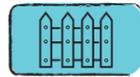
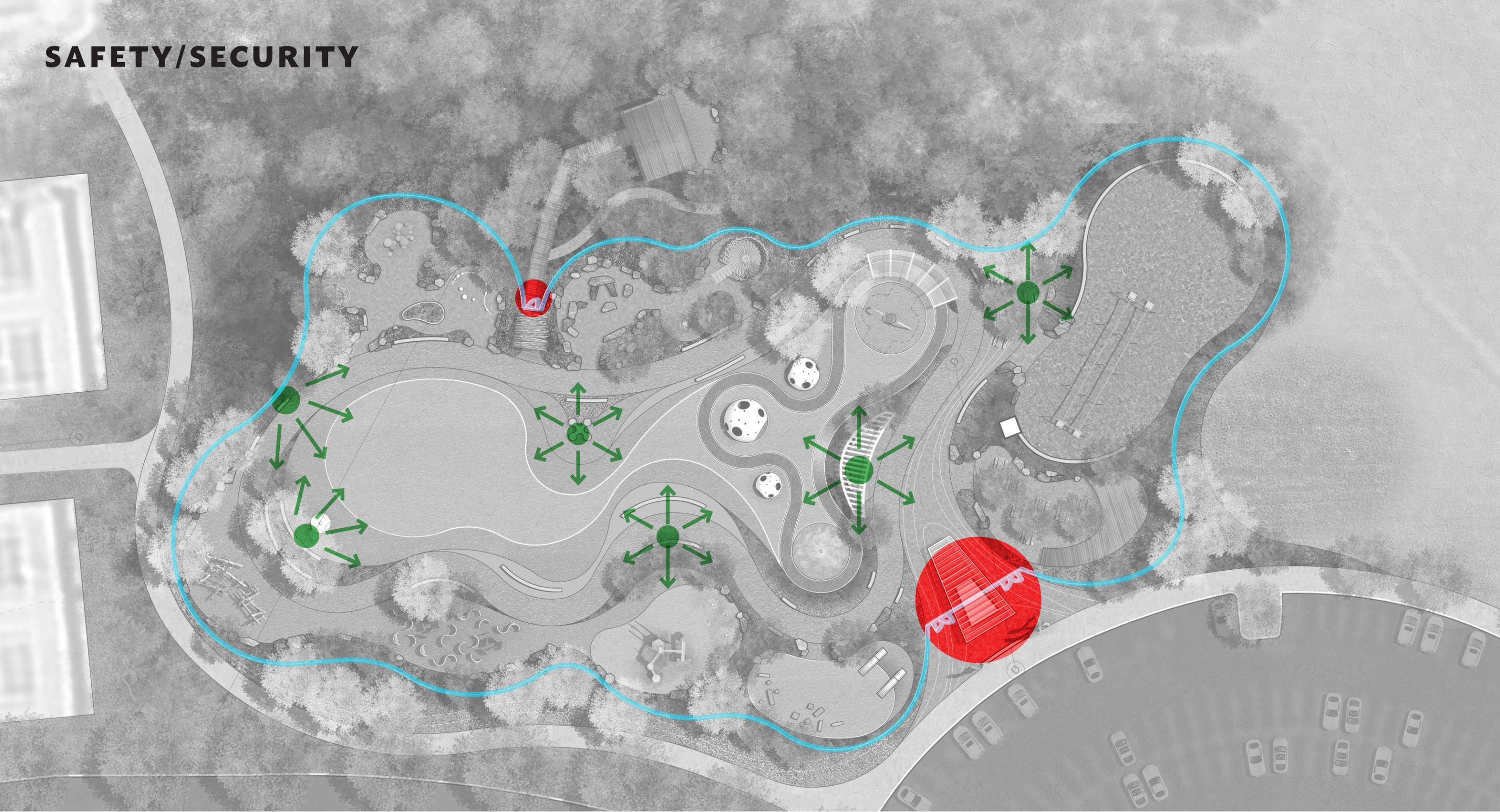
RELIEF SPACE



LANDMARK/SOUND SOURCE/ELEMENTS FOR ORIENTATION



SAFETY/SECURITY



FENCE/GATE(NATURE & STRUCTURE)



GATE/ENTRANCE



FENCE/GATE(NATURE & STRUCTURE)

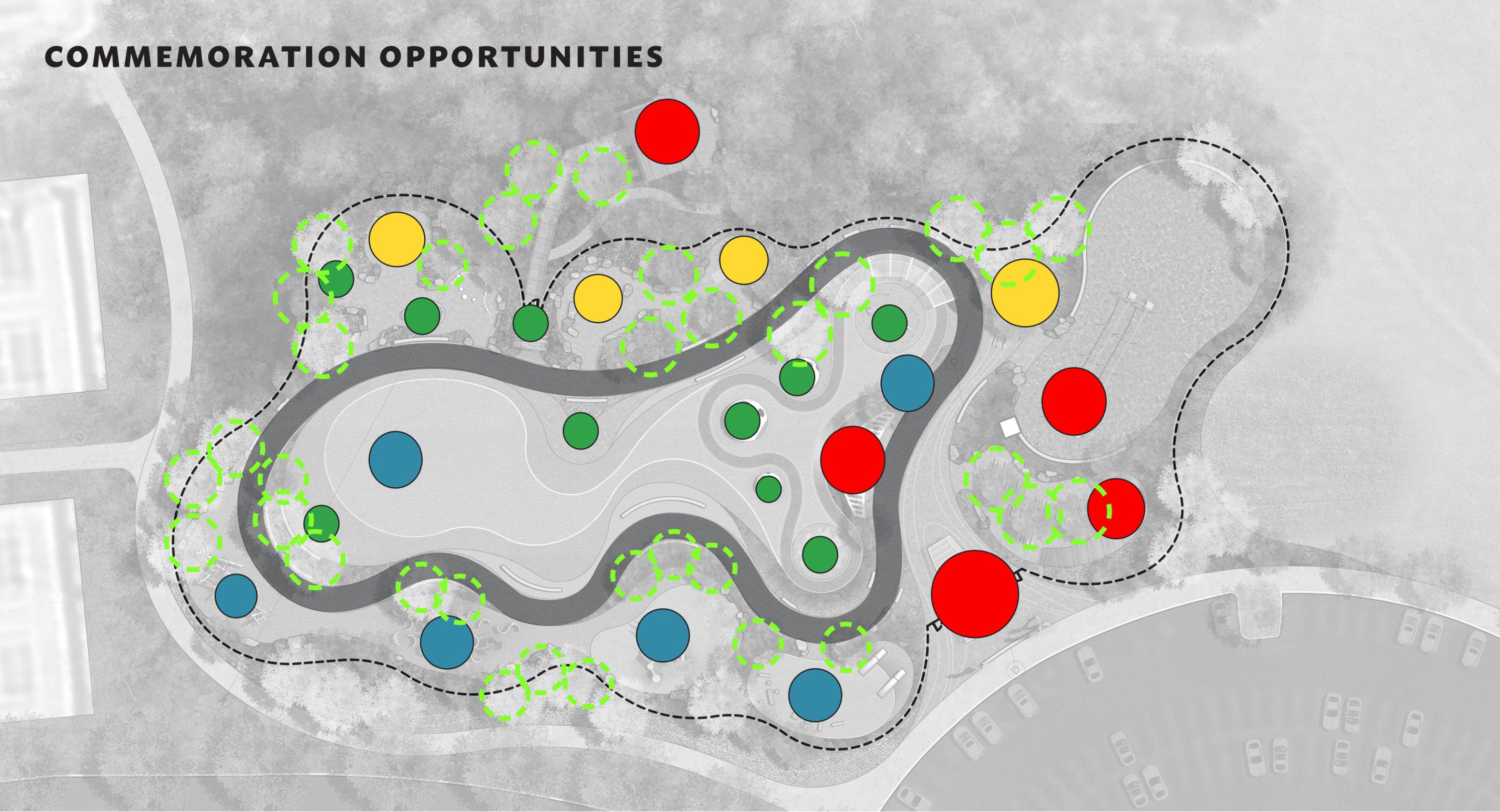
LIGHTING/SIGNAGE/SWM



- PRIMARY SIGNAGE
- SECONDARY SIGNAGE
- EDUCATIONAL SIGNAGE
- PROGRAM SIGNAGE

- SWM
- LIGHT

COMMEMORATION OPPORTUNITIES



PRIMARY (PAVILION)

TERTIARY (PLAZA)

QUINARY (TREE)

MAIN ROUTE

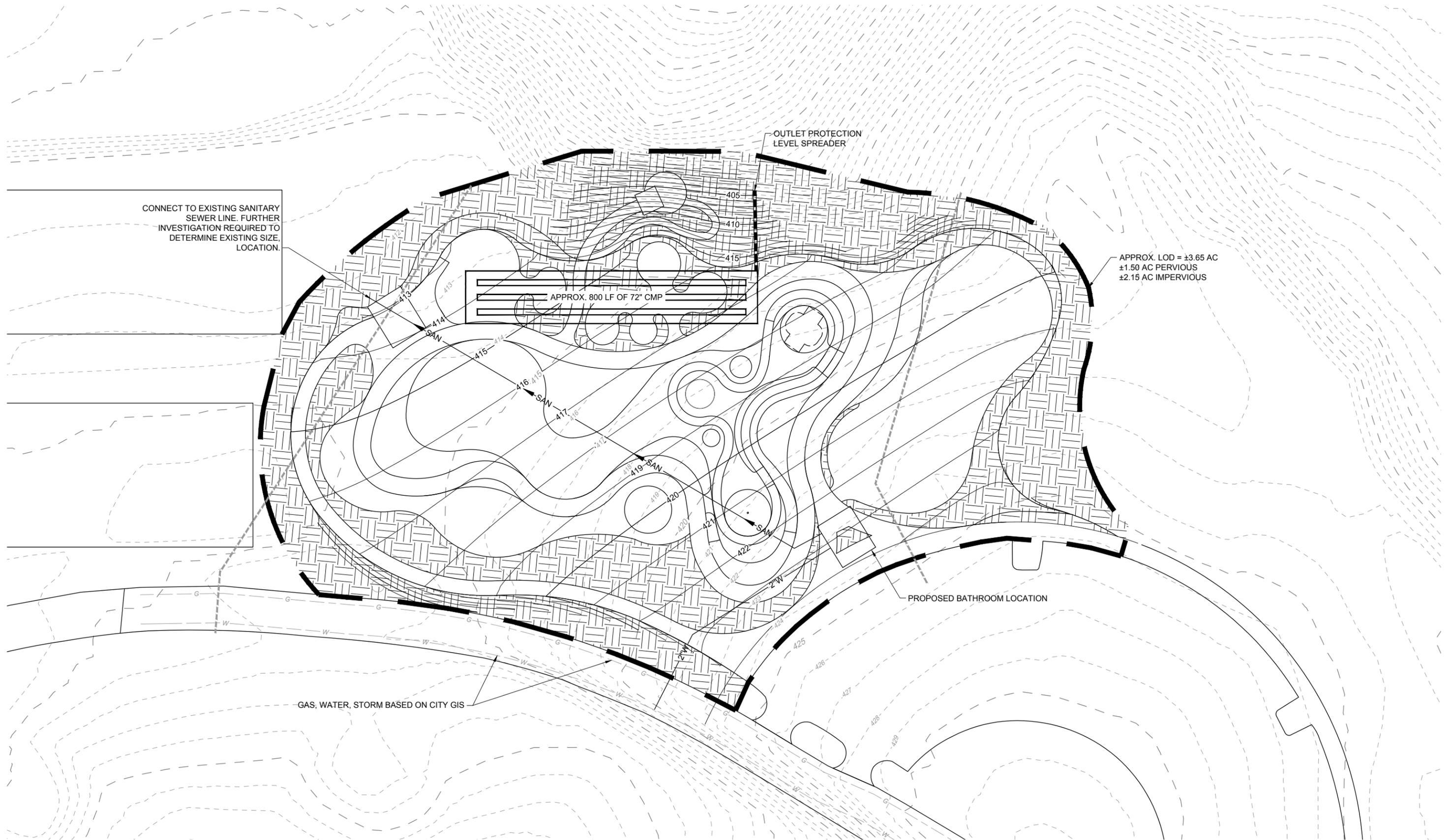
SECONDARY (FEATURE)

QUATERNARY (ELEMENT)

FENCE



PRELIMINARY UTILITY LAYOUT



CONNECT TO EXISTING SANITARY SEWER LINE. FURTHER INVESTIGATION REQUIRED TO DETERMINE EXISTING SIZE, LOCATION.

APPROX. 800 LF OF 72" CMP

OUTLET PROTECTION LEVEL SPREADER

APPROX. LOD = ±3.65 AC
±1.50 AC PERVIOUS
±2.15 AC IMPERVIOUS

PROPOSED BATHROOM LOCATION

GAS, WATER, STORM BASED ON CITY GIS

PRELIMINARY COST ESTIMATE

PLAY EQUIPMENT



1. CRADLE NET

5,160



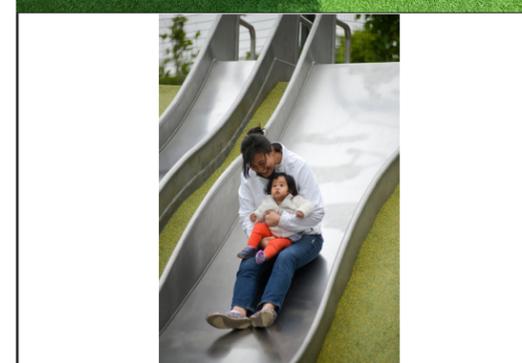
2. CABLE WAY

100,000



3. MIST

11,000



4. EMBANKMENT SLIDES
H=1.00M, W=1.00 M
H=1.50M, W=1.00 M
(WHEELCHAIR COMPLIANCE)

19,920
21,480



5. WATER PLAY COMBINATION

22,680

PLAY EQUIPMENT



	<p>6. FOREST FOUNTAIN</p>	<p>69,240</p>
	<p>7. MERRY GO ROUND</p>	<p>67,440</p>
	<p>8. MAZE (CONCRETE CURVE COMBINATION)</p>	<p>115,200</p>
	<p>9. LOG CLIMB</p>	<p>54,120</p>
	<p>10. SENSORY TABLE (CUSTOM DESIGN)</p>	<p>14,880</p>

PLAY EQUIPMENT



	<p>11. SHADOW PLAY</p>	<p>31,144</p>
	<p>12. SOUND PLAY</p>	<p>56,000</p>
	<p>13. SQUEEZING BALLS</p>	<p>TBD</p>
	<p>14. TREE HOUSE (CUSTOM DESIGN)</p>	<p>319,200</p>
	<p>15. NEST</p>	<p>TBD</p>

PLAY EQUIPMENT



	<p>16. DOMES (HIDE AND SEEK)</p>	<p>25,500</p>
	<p>17. PARCOURS PATHWAY</p>	<p>TBD</p>
	<p>18. SHIPPING & INSTALLATION (50% TOTAL FEE)</p>	<p>466,482</p>
		<p>1,399,446</p>

LANDSCAPE & CIVIL

LANDSCAPE		
	19. PAVILIONS (ONE MAIN STRUCTURE & ONE SHADER STRUCTURE)	2,000,000
	20. FENCE (1412.3')	353,075
	21. PLAY SURFACE (4,000 sf)	1,000,000
	22. PAVING (24,441 sf)	611,025
	23. BOULDER	214,080
	24. LIGHTING	30,000
	25. SITE FURNITURE (BENCH, LITTER RECEPTACLE)	62,000
	26. PLANTING TREES (60) SHRUB/GROUNDCOVER (2,370 sf)	48,000 16,590
	27. 20% CONTINGENCY	866,954
		5,201,724
CIVIL		
	28. OTHER PAVING (ASPHALT, CURB & GUTTER, CON- CRETE WALKS)	57,700
	29. UTILITIES (STORM SEWER, WATERLINE, SAN- ITARY SEWER)	368,000
	30. EARTHWORKS	42,000
	31. DEMOLITION	10,000
	32. E&SC AND SWM	73,000
	33. OTHER CIVIL COST (MOBILIZATION, CONSTRUCTION SURVEY, MATERIALS TESTING)	43,642
	34. 20% CONTINGENCY	110,140
		704,482
TOTAL (PLAY EQUIPMENT + LANDSCAPE + CIVIL)		7,333,192

**DESIGN
CONSIDERATIONS**

RECAP

**CONCEPT
DESIGN**

**SITE
ANALYSIS**

**NEXT
STEPS**



- **REFINE LAYOUT/PROGRAMMING/PLAY ELEMENTS PER CLIENT COMMENTS**
- **FUNDRAISING MATERIALS (PERSPECTIVES, MOVIE)**
- **IN-PERSON MEETING FOR FINAL PRESENTATION**

Thank
You

