

# Cordata Park Master Plan



**City of Bellingham, Washington**

**October 2008**

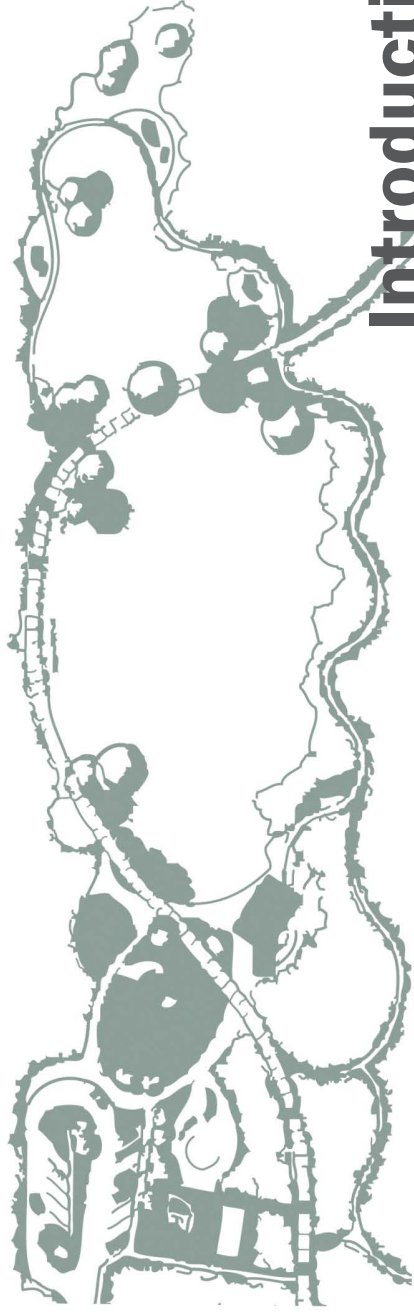
**Prepared by:**



**The Berger Partnership PS**  
Landscape Architecture

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# Introduction & Background

# Cordata Park Master Plan

## Introduction & Background

The process for creating Cordata Park began with a vision to purchase of a large tract of wooded land on the edge of the city limits with the goal of serving the needs of the Guide Meridian and Cordata Neighborhoods. Bellingham Parks acquired a 20-acre parcel, which together with the adjoining 7-acres of public land (including a stormwater pond) transferred from Whatcom County, presents an exciting opportunity to provide a desperately needed neighborhood park for this growing community.

The collaborative public planning process began in April 2008 and has yielded a host of great ideas and generated excitement about the park. The process included citizen input obtained through interactive community meetings, park board presentations and staff discussions to help determine the park components and direction.

The progression has involved working closely with stakeholders and designing for the long-term with an eye toward longevity, multiple uses and low maintenance. The undeveloped, diverse site also contains wetland complexes, streams, meadows and stands of mature trees. Therefore, a major challenge has been to provide increased recreational opportunities serving the neighborhood, while sensitively preserving natural areas and wildlife habitat from the pressures of development.

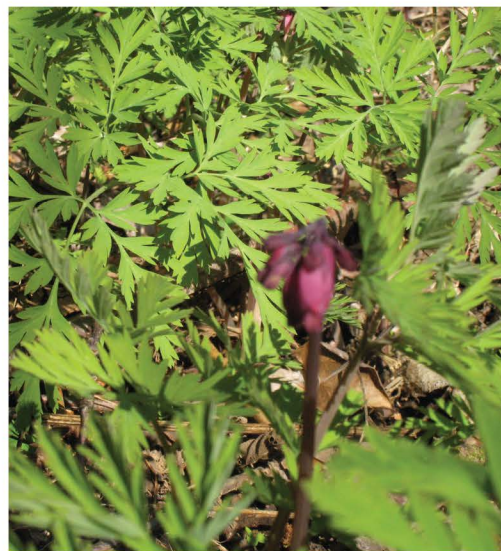
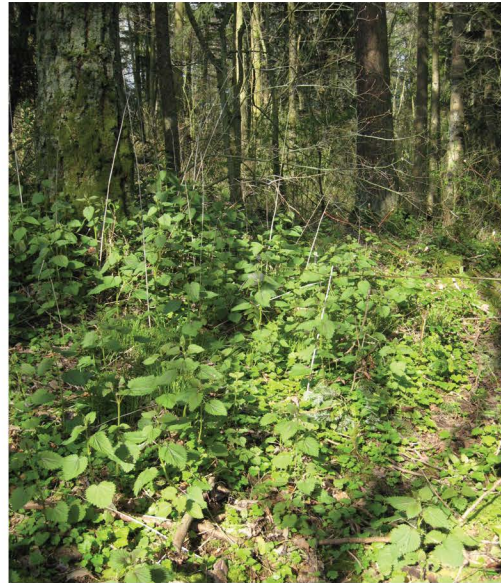
Because of its size and strategic location, the park will not only be a destination and community gathering spot, but also provide greatly improved connectivity between Horton and Aldrich Roads, Birchwood Presbyterian Church, the new elementary school site, Whatcom Community College, the North Bellingham trail network and the surrounding residential neighborhood.

This report is the culmination of the Cordata Park Master Planning process that occurred April through September 2008 and documents the public process, site analysis, design options and ultimately the preferred direction and vision for future development of Cordata Park.

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## Cordata Park Master Plan





# Cordata Park Master Plan





**Public Process to Date**

# Cordata Park Master Plan

## Planning Process

This Master Plan is the result of a multi-step process and was shaped by input from the Park Steering Committee, the City of Bellingham Parks and Recreation Department, the Parks Board, City Council and general public.

At the first public meeting in March 2008, the Park Steering Committee met with Parks staff and brainstormed ideas and activities the community might like to see in the park. All ideas were documented and presented to the design team. Those ideas generated at the first meeting, combined with the initial program developed by the Parks Department, were great insight into what the future of the park could be.

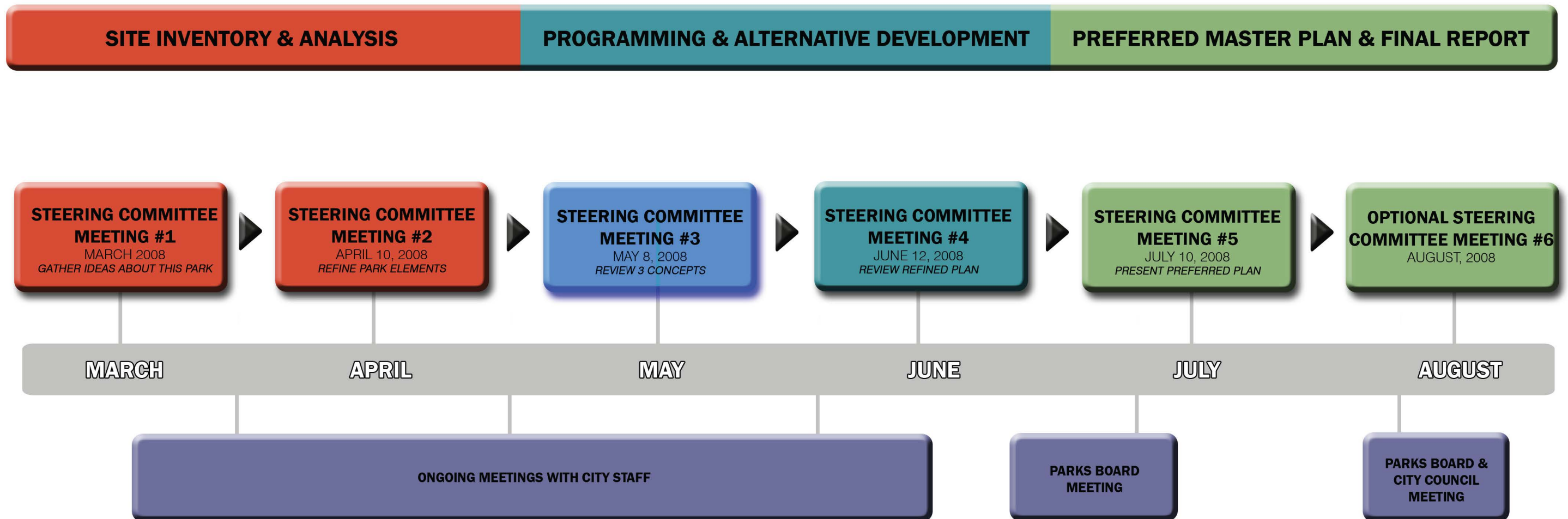
At the next public meeting, held in April 2008, members of the consultant design team were introduced and got a chance to meet members of the surrounding community. The discussion involved the overall schedule and outlined how the planning process would unfold between that night and the completion of the Master Plan in September 2008. Monthly steering committee meeting dates were identified, with the purpose being to report progress, get the community's feedback, and make sure everything was on track at each milestone.

The design team emphasized that the community would shape the vision for the park and that there were not any preconceived ideas or concept plans. Instead, the intent was for everyone to work together to help carve a beautiful park out of this wooded, undeveloped site.

At that same meeting, boards were presented to illustrate concept images and photos associated with the list generated at the first meeting. After brainstorming additional ideas and recording input, attendees were then asked to help prioritize some of the ideas and park elements that surfaced that evening. Each person was each given three dots to place on the board listing desired park program elements. This exercise clearly identified the highest priorities and was extremely helpful toward developing the design concepts.

In May, Site Analysis boards were presented. They included information about topography, soils, solar exposure, winds, existing site character, and plant communities. Information on the wetlands and streams found onsite, as well as their respective buffers, was also reported. This information, as it turned out, would have a huge impact on the design of the park.

**CORDATA PARK MASTER PLAN**  
PROJECT TIMELINE AND PUBLIC INPUT OPPORTUNITIES  
MARCH 2008 - AUGUST 2008





ENVIRONMENT

- INTERPRETIVE TRAILS AND SIGNAGE
- PRESERVE WILDLIFE HABITAT
- PRESERVE TREES
- BOARDWALKS & BRIDGES
- ENVIRONMENTAL EDUCATION



SHELTER/ARCHITECTURE

- COVERED PICNIC AREA
- RESTROOMS
- ENTERTAINMENT SPACE
- GREEN DESIGN (E.G. SOLAR, GREEN ROOFS)
- ELECTRICAL OUTLETS



SITE USES

CORDATA PARK  
BELLINGHAM, WA



The Berger Partnership PS  
Landscape Architecture



ACTIVE PLAY/USES

- PLAYGROUND (AGES 2-5 & 5-12) ●●
- SWINGS
- SKATEBOARD SPOT
- BASKETBALL COURT ●
- BALL WALL
- SAND VOLLEY BALL
- BOCCE BALL ●
- SPRAY PARK ●●●
- PICKLE BALL





PASSIVE PLAY USES

- OPEN SPACE (NON PROGRAMMED USE) ●●●●●
- FENCED SPACE FOR DOGS ●●
- TEEN GATHERING PLACE ●
- INFORMAL PARK LOOP TRAILS ●●●●
- REGIONAL TRAIL CONNECTIONS ●●●●●
- ART

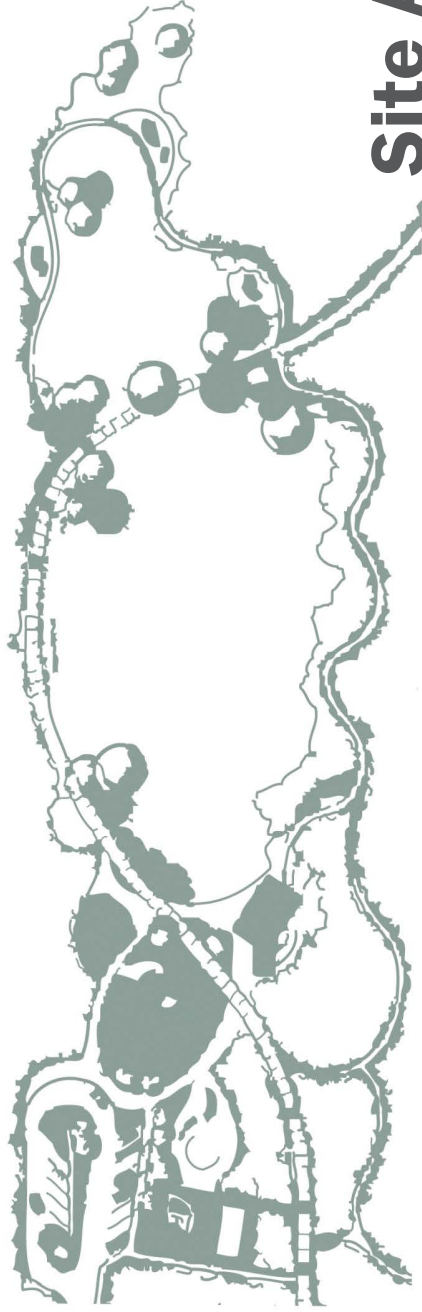


SITE USES

**CORDATA PARK**  
BELLINGHAM, WA







## Site Analysis Summary



# Cordata Park Master Plan

## Site Analysis Summary

Given the fact that the site is completely undeveloped, it was critical to begin the master planning process with an Inventory and Analysis phase about relevant natural and contextual aspects of the site. That process revealed some major challenges that needed to be taken into consideration once sensitive areas and their associated buffers were identified. This analysis identified many opportunities and constraints and laid a sound foundation of information before exploring design alternatives.

**Existing Site:** The 20-acre site is located in northwest Bellingham. The parcel is approximately 750 feet wide (east-west) by 1,100 feet long (north-south). An adjoining 7-acre parcel with a stormwater pond was added at the northeast corner of the park and together they form an L-shaped site. Adjacent property uses include a church, multifamily residential, single family residential, and undeveloped natural areas. Current public pedestrian access points are either from the parking lot of the Birchwood Presbyterian Church to the north or the Horton Road street end at the south. Future vehicular access will be possible once the Horton Road extension project is completed.

**Topography & Slopes:** There is approximately 30 feet of grade change across the site with generally smooth grade transitions. There is a slightly perceptible ridge running north-south on the western half of the site with the high point located in the western section of the site. On the eastern half of the site there are wetlands with some draining to the creek drainage that flows north and west away from the site.

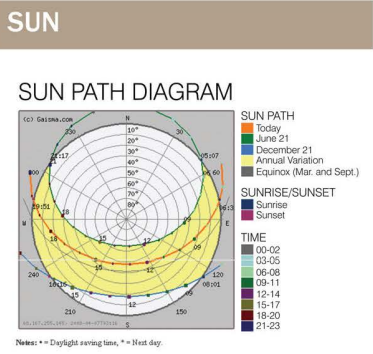
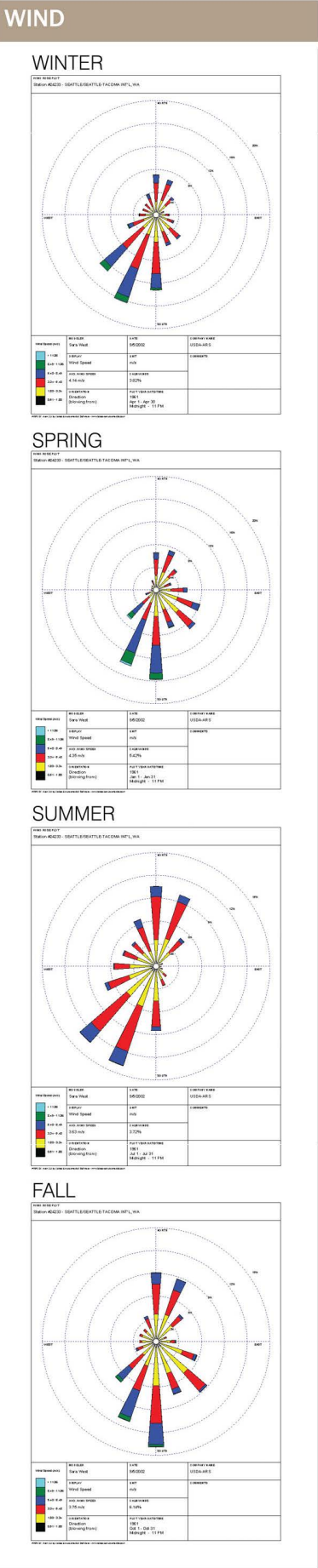
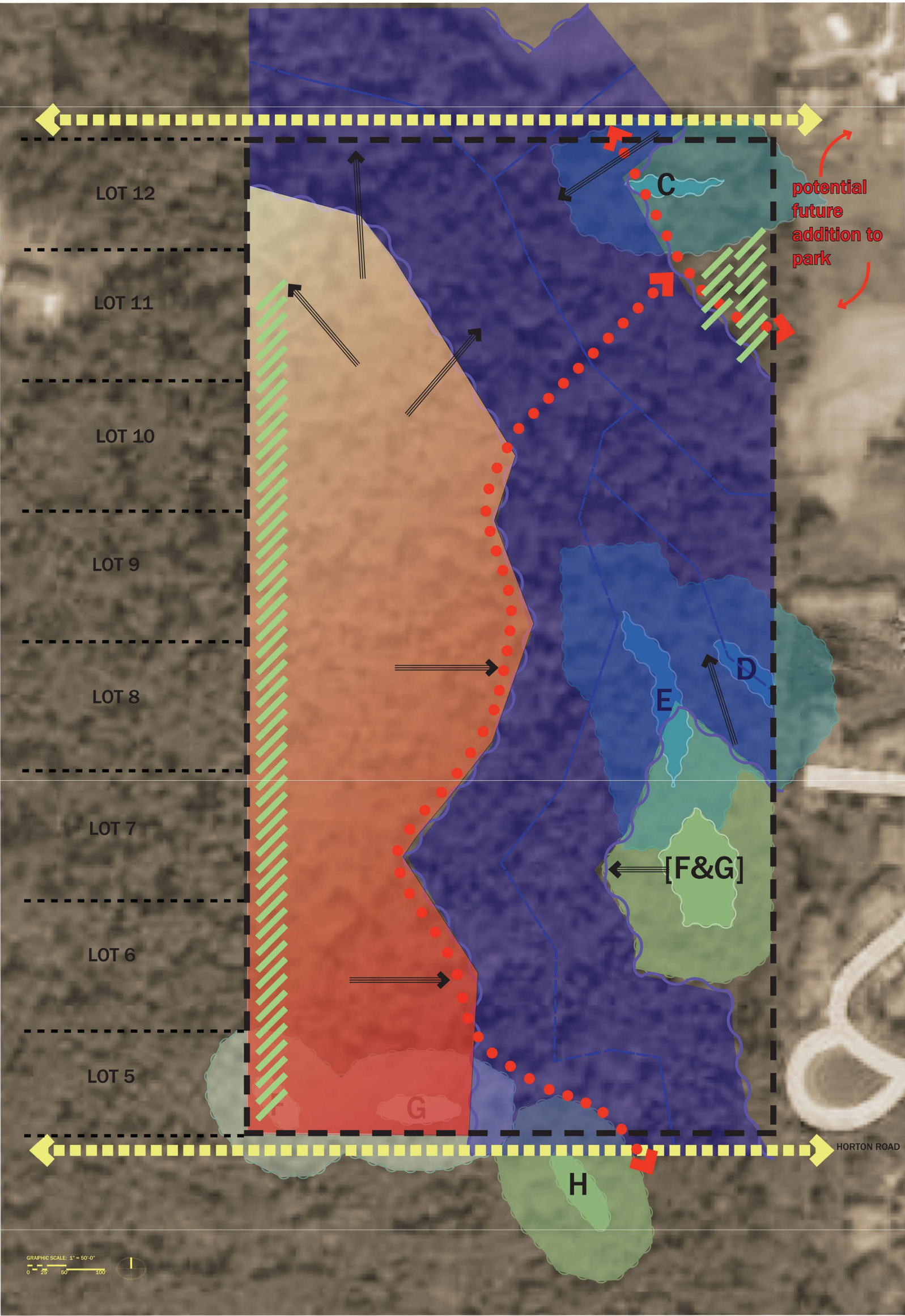
**Vegetation:** The site is completely forested and undeveloped. Dominant species include Red Alder, Vine Maple, Big Leaf Maple, Black Cottonwood, Douglas Fir and Western Red Cedar. The forested habitat appears to range from 20 to 35 years in age. Other species observed, but not limited to, are Douglas Spirea, Red Elderberry, Salmonberry, Sword Fern, Piggy Back Plant, and several species of Trillium.

**Streams & Wetlands:** The presence of several streams and wetlands contribute to the beautiful character of the future park site. However, when required buffers are taken into account based on the DOE classifications, the result is that nearly the whole eastern portion of the site is within a critical area.

It should be noted that only a wetland reconnaissance confirmation has been performed at this time. A formal wetland and stream delineation would be required for submittal with any permit or land use applications associated with implementation. For more detailed information about streams, wetlands, soils and plant communities, as well as anticipated permitting requirements, see Section 7.0, Appendix for Wetland Reconnaissance Confirmation for the Aldrich Road Parcels, dated July 24, 2007 and prepared by Northwest Ecological Services, LLC.

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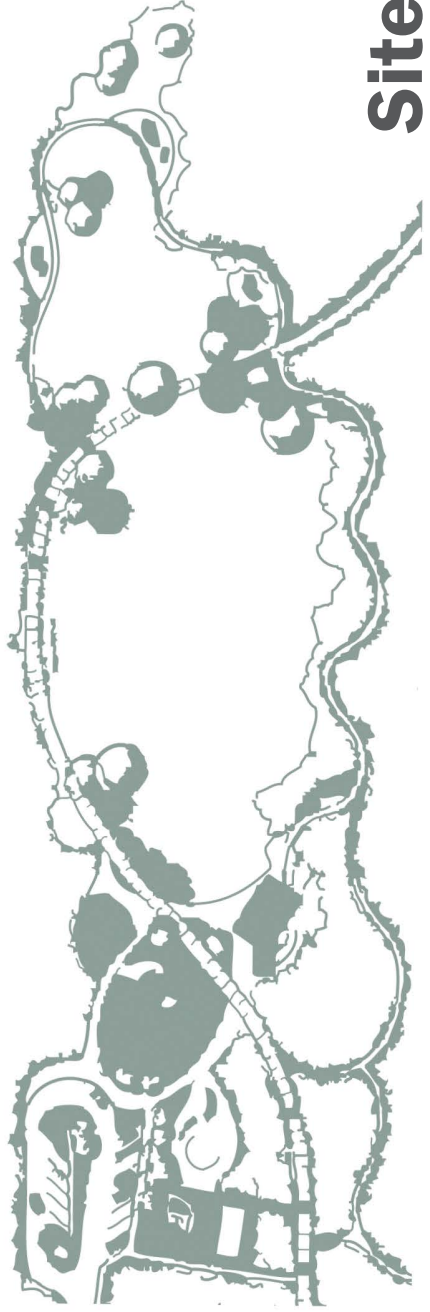


### LEGEND

WETLAND TO BE MITIGATED
 WETLAND TO REMAIN
 VEGETATIVE BUFFER
 FUTURE ROAD
 TOPOGRAPHY [GRADE]

PROPOSED WETLAND MITIGATION AREA
 STREAM & BUFFER
 SITE ACTIVITY (HIGH TO LOW)
 REGIONAL TRAIL CONNECTIONS
 SITE BOUNDARY





# Site Plan Alternatives

# Cordata Park Master Plan

## Site Plan Alternatives

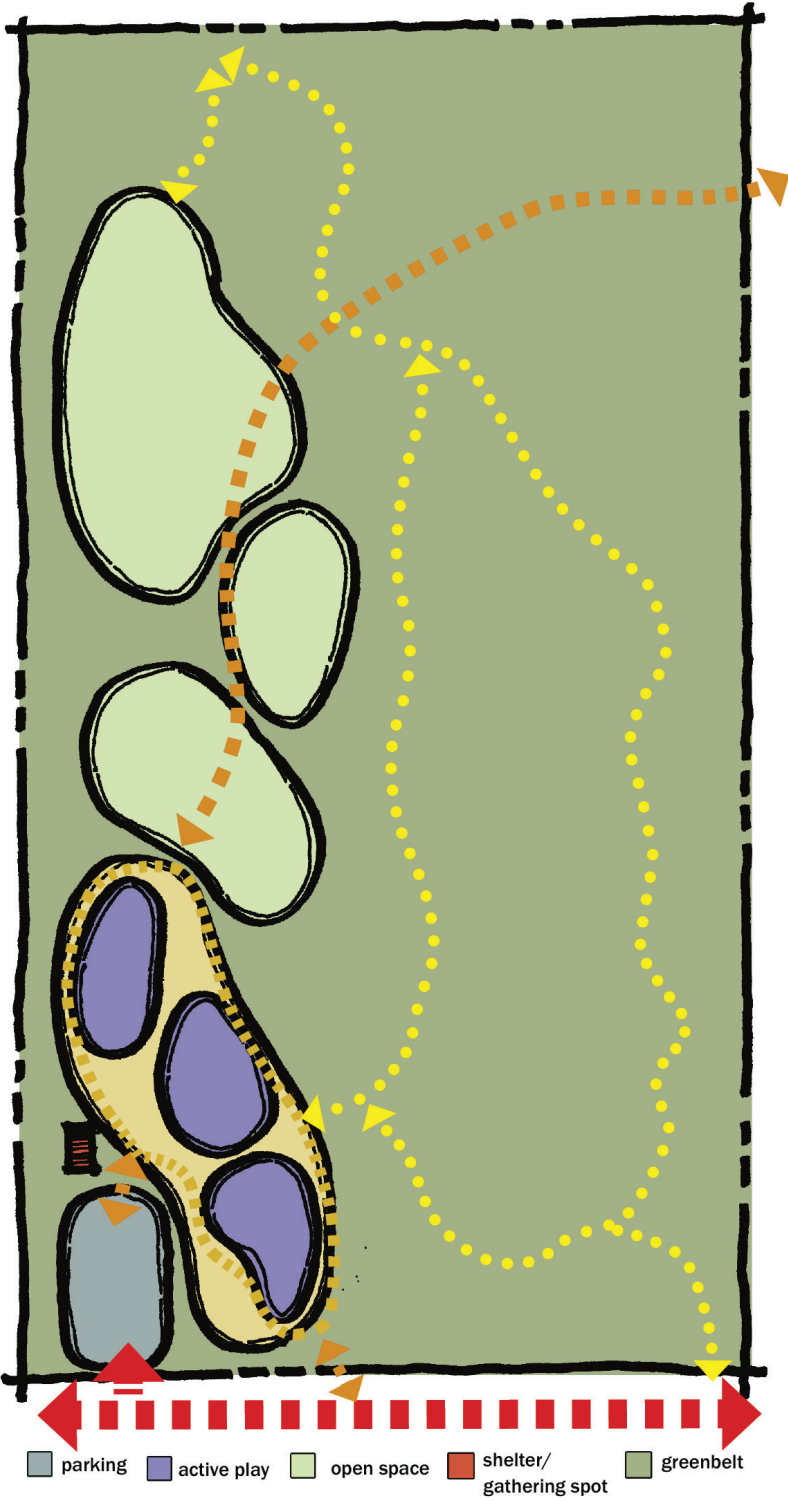
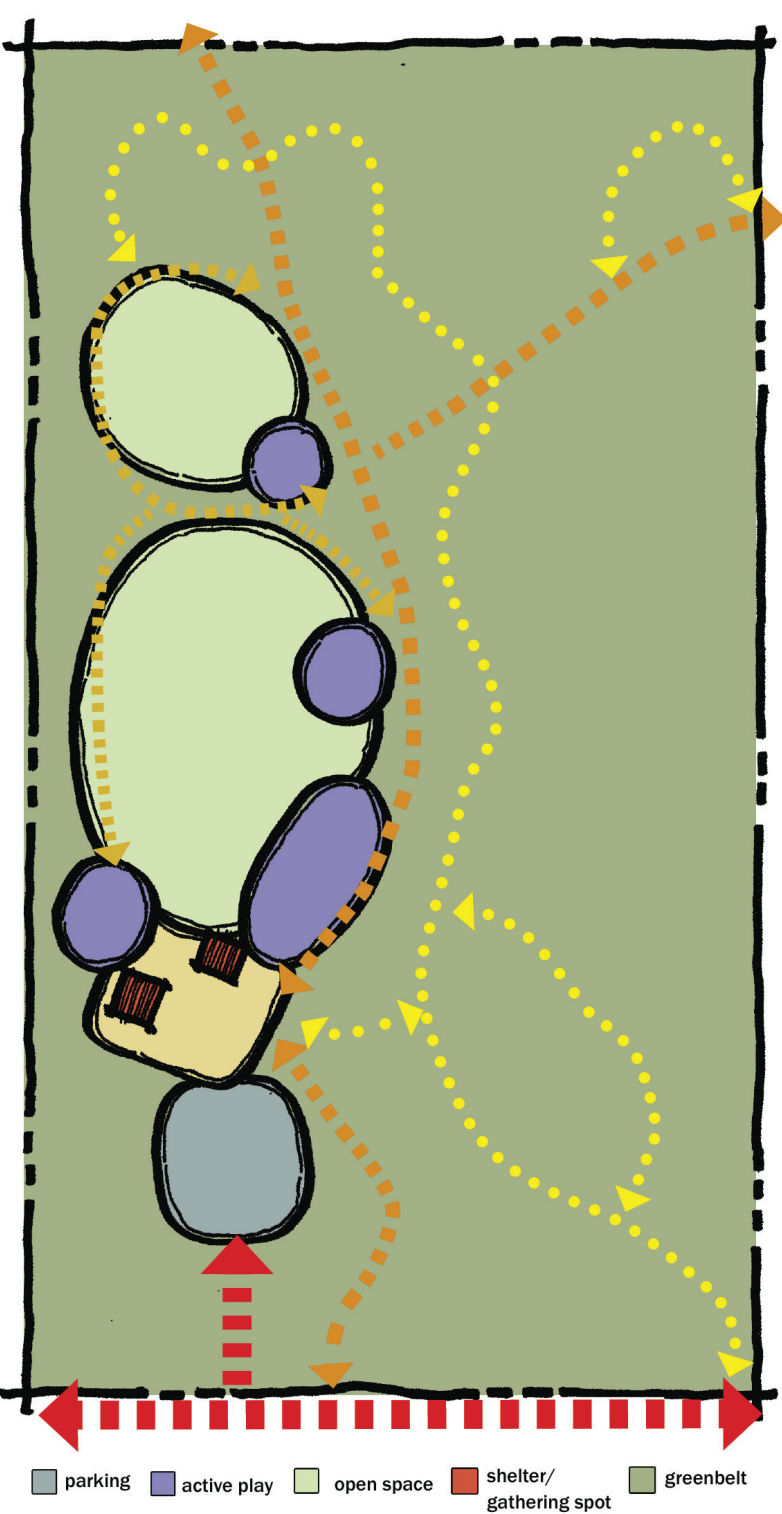
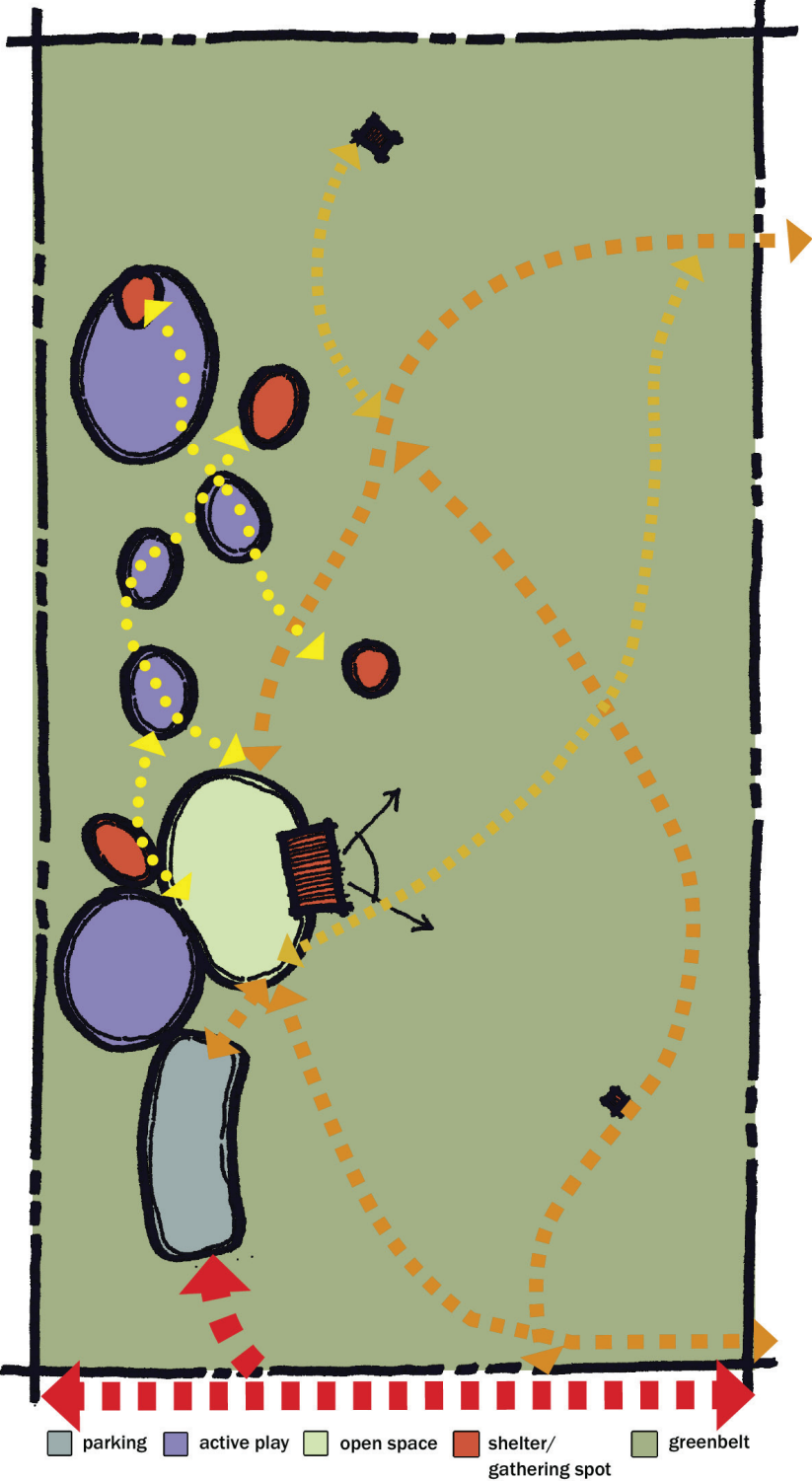
With a solid understanding about site opportunities, challenges, and a clear direction about the desired program, a range of graphic concepts were explored. Physical space was assigned to each program element in the form of concept diagrams.

Three diagrams were presented to the steering committee as well as illustrative site design alternatives. Since analysis of the site yielded a large amount of useful information about the parameters of site, there was a conscious effort not to develop wildly different options that were of questionable feasibility. Instead, since the site had inherent constraints (e.g., wetlands, access issues), realistic concepts were explored where subtle refinements distinguished one plan from another. Primary differences between the concepts highlighted levels of activity, intensity, and the degree to which the site was impacted. Each of the alternatives identifies a common set of proposed elements, such as primary and secondary pedestrian circulation, parking and non-motorized trails, unprogrammed open space, and site structures. Comparison between the options is very straightforward and intuitive. The goal was not to select one plan over another, but instead to find positive parts of each plan that reflected the collective community desire.

A great discussion ensued and through a collaborative review process, patterns began to emerge about the placement of certain site features as well as aspects of each plan that resonated with the community. The challenge was to take that input and synthesize it into a refined plan.

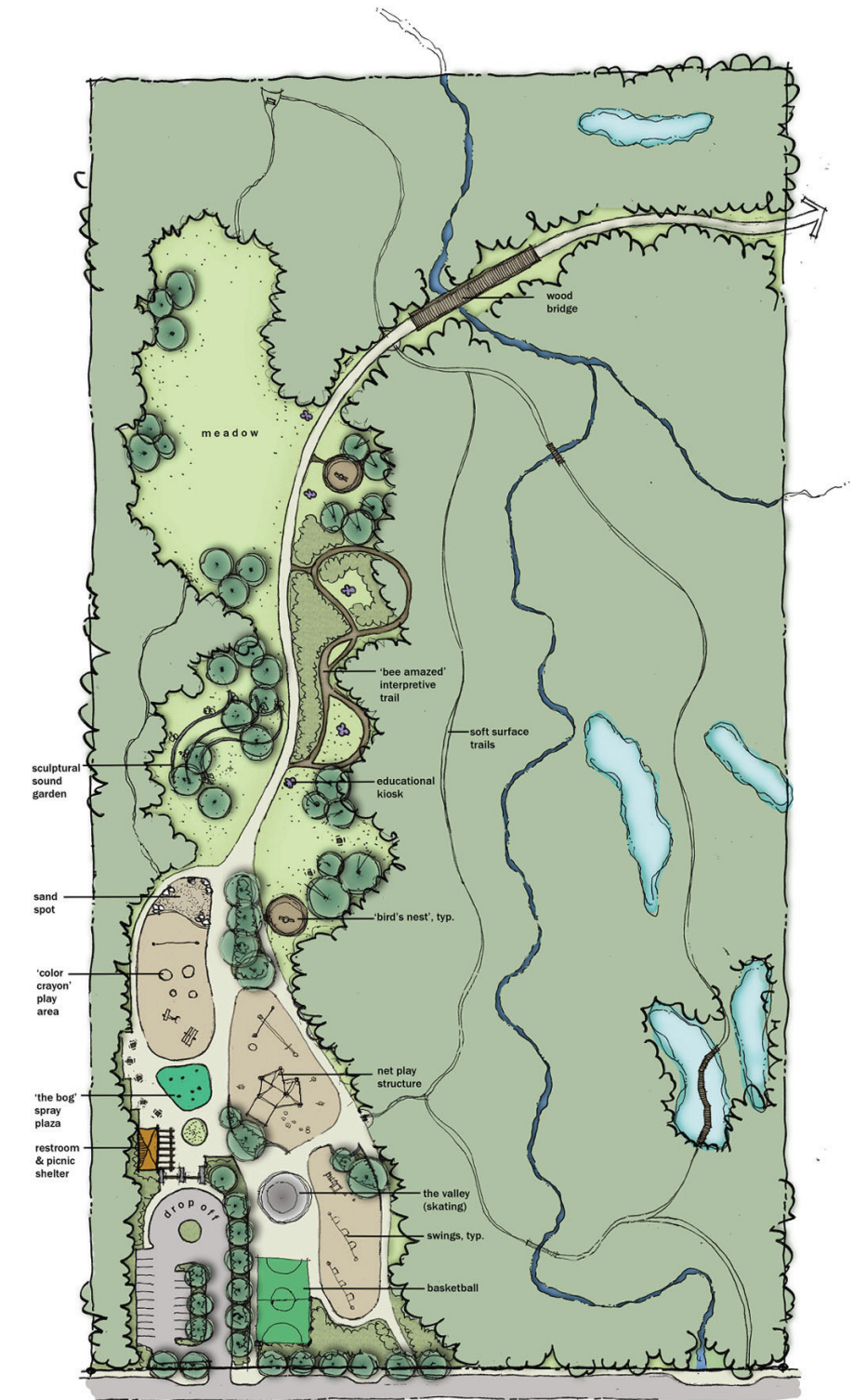
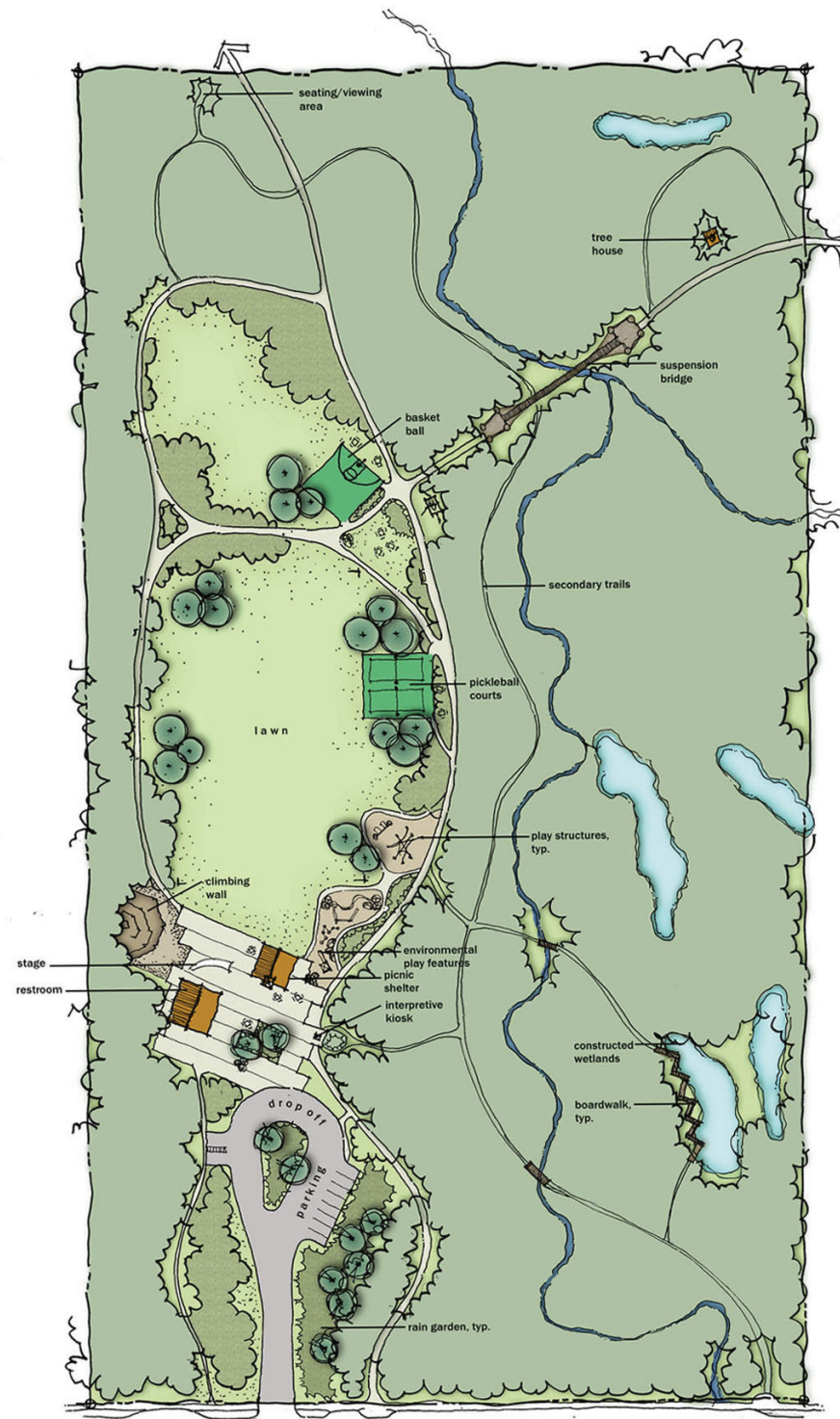
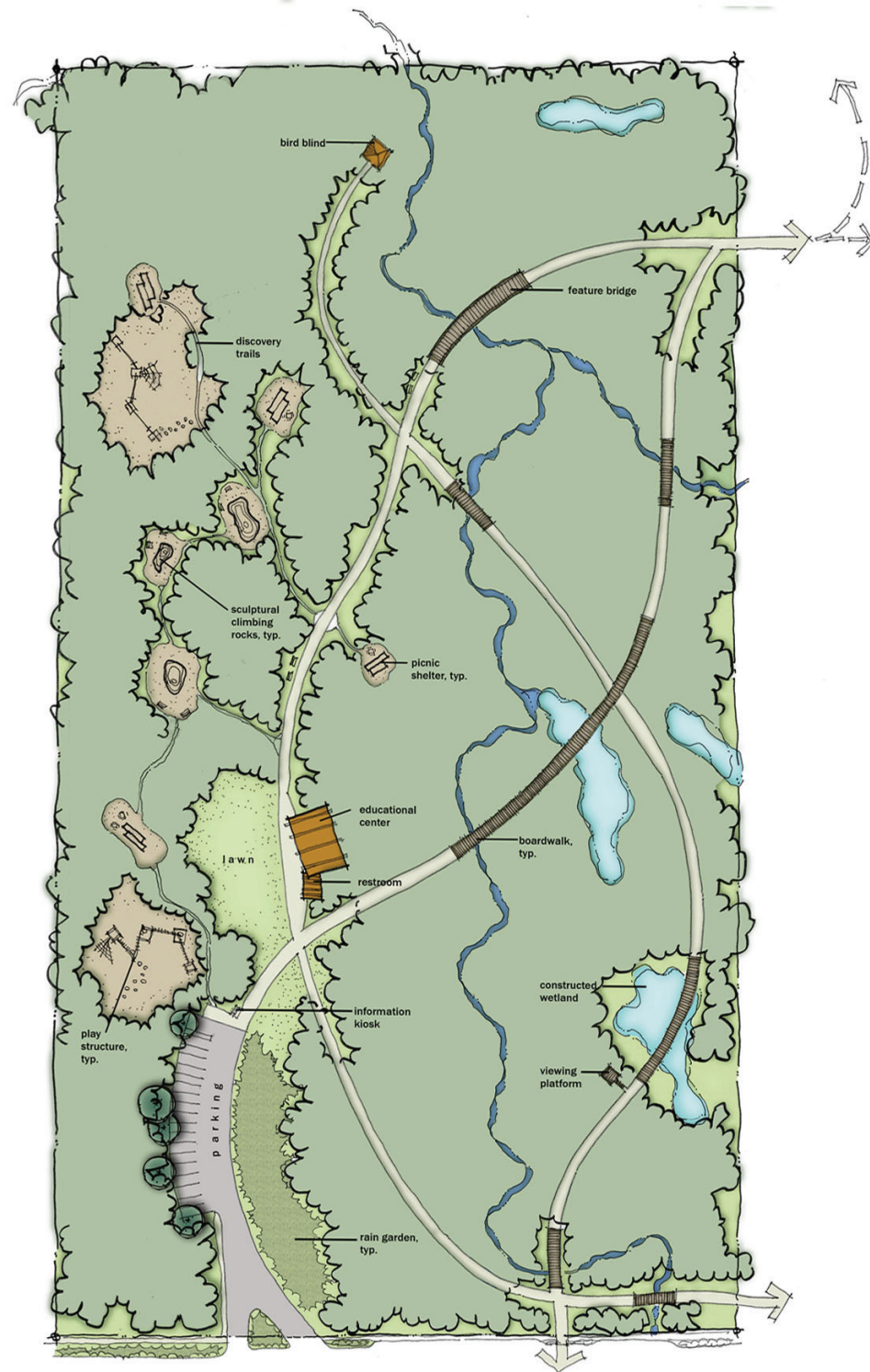
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# Options ABC Concept Diagrams



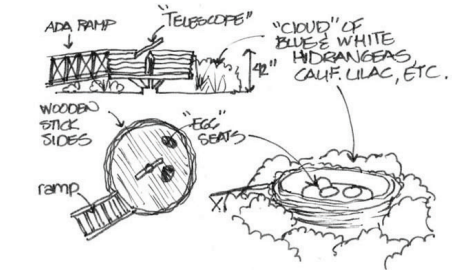
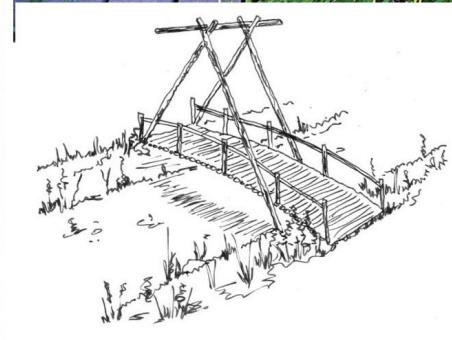
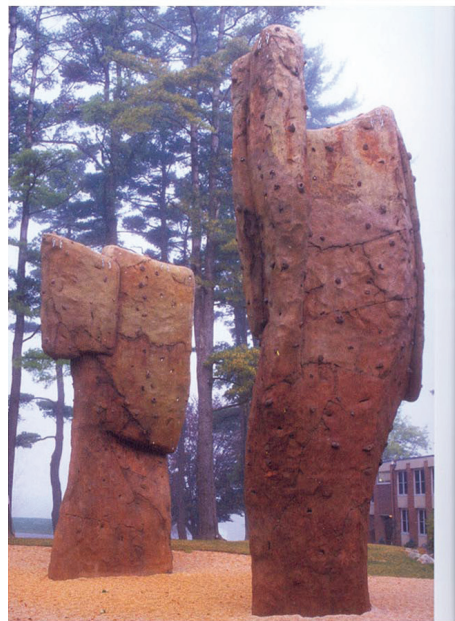
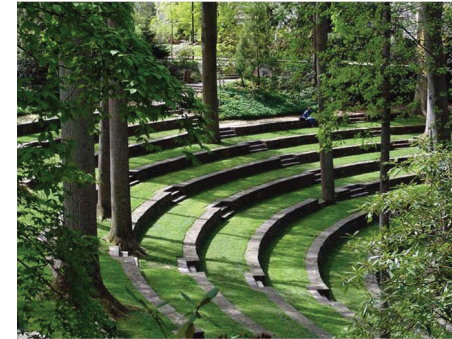
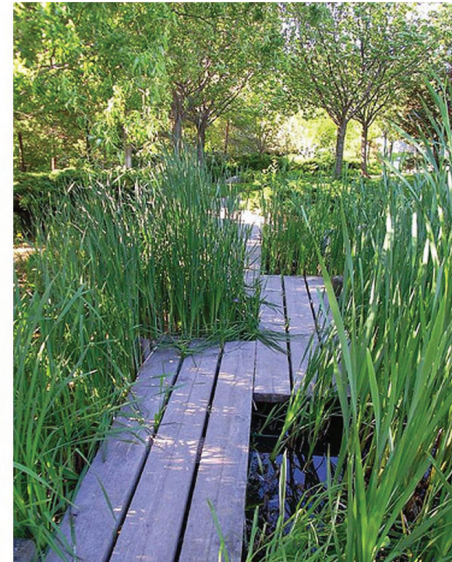


# Options ABC Schematic Site Plans

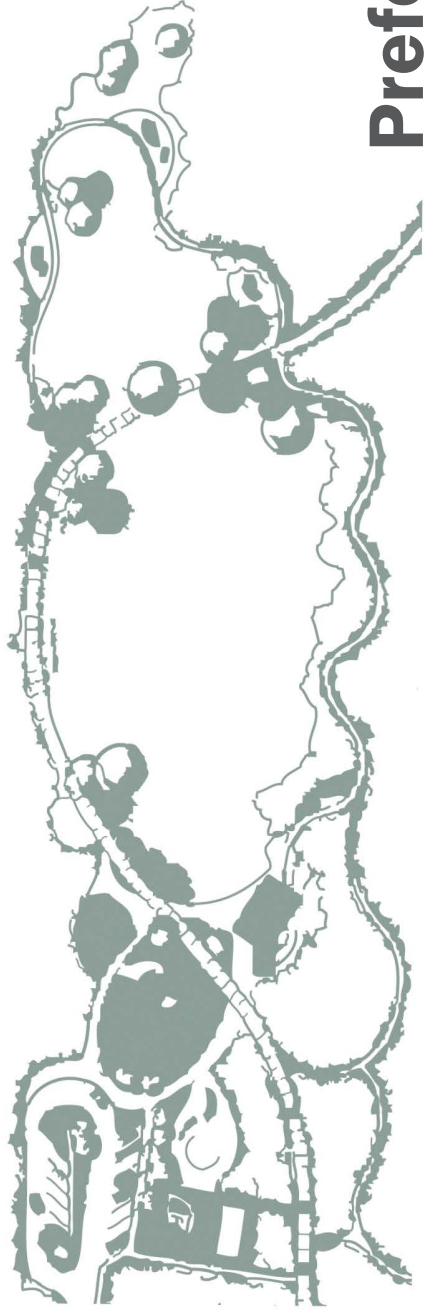




# Options ABC Character Images



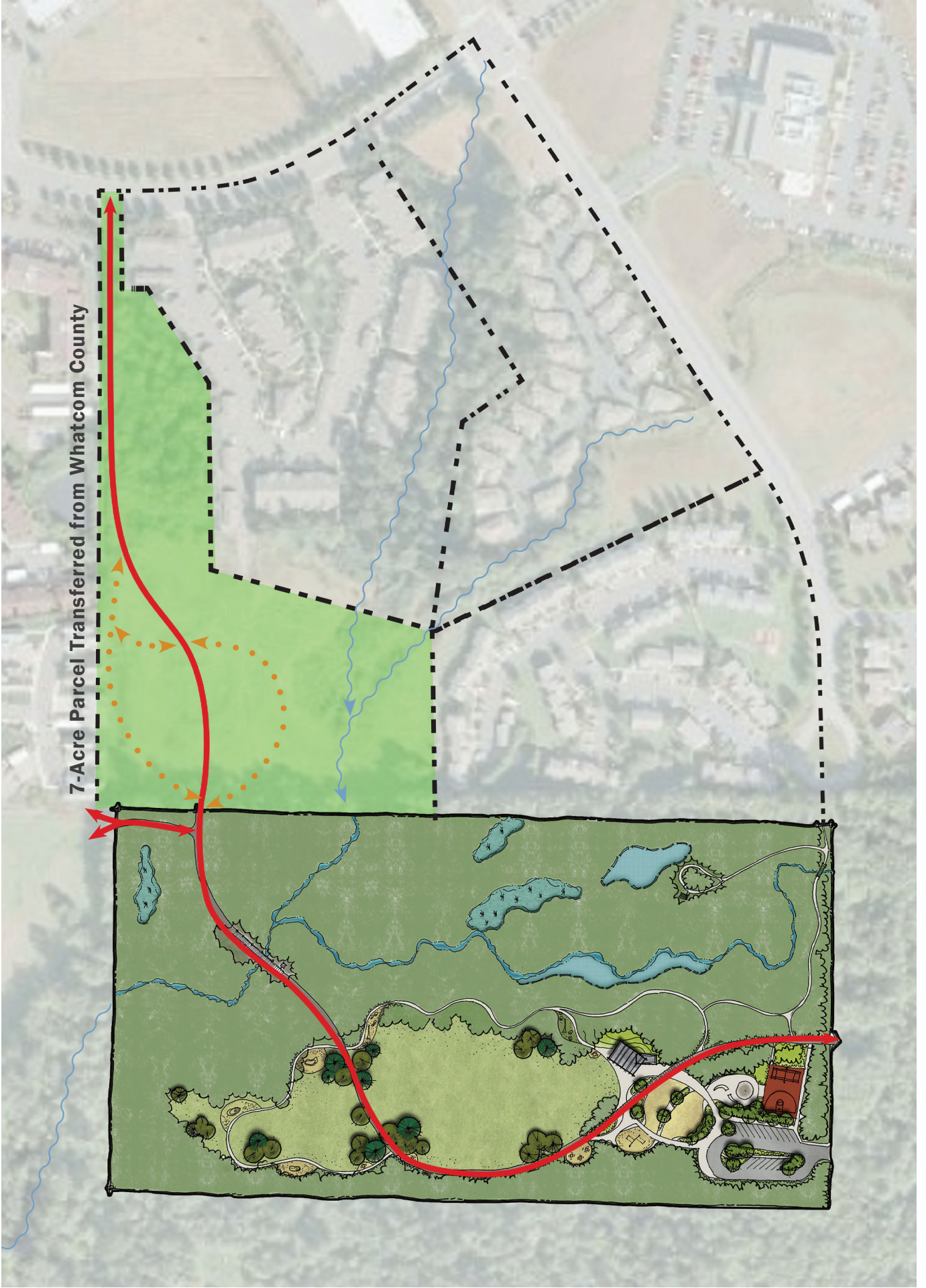




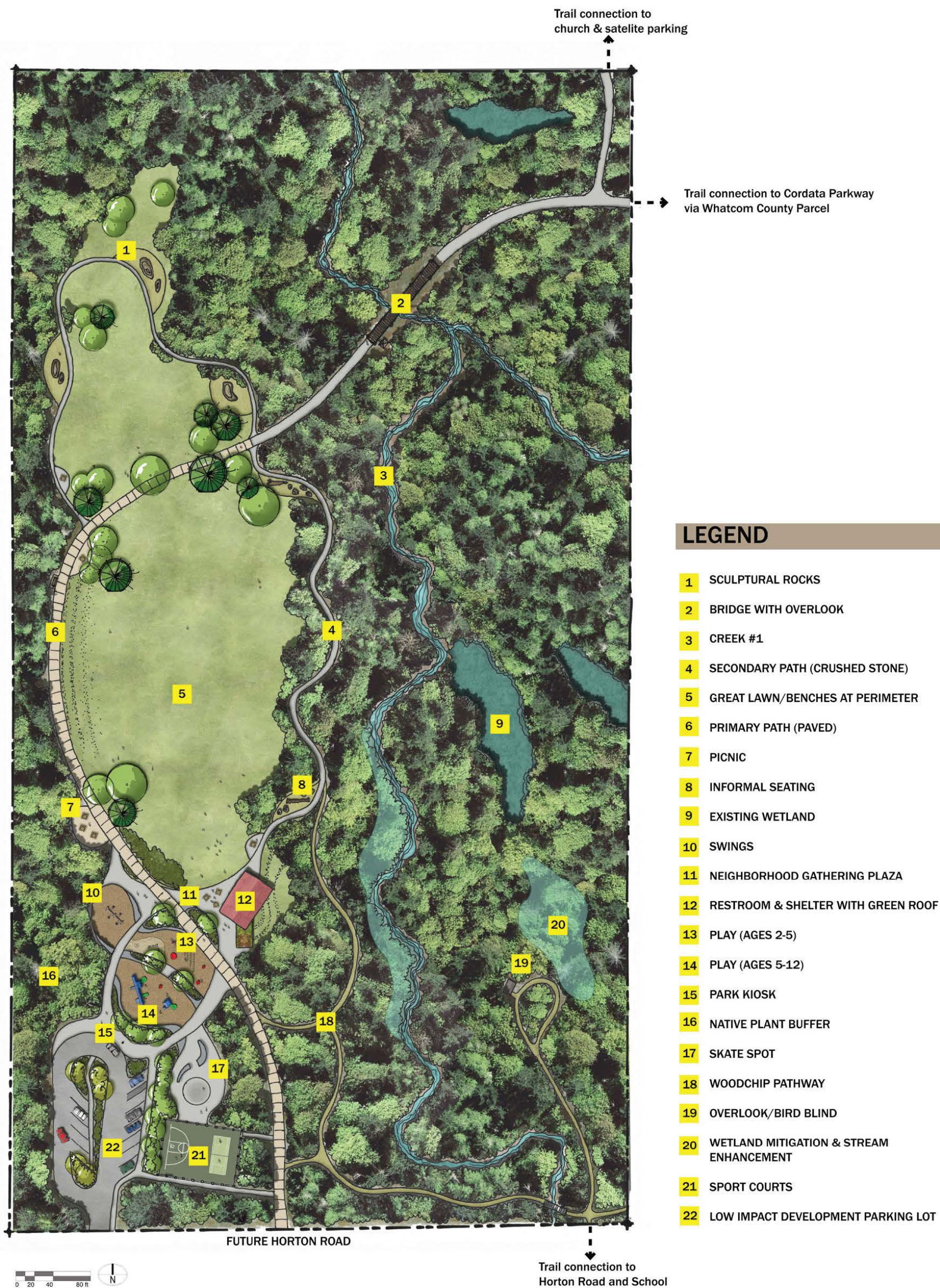
# Preferred Master Plan



7-Acre Parcel Transferred from Whatcom County







# CORDATA PARK MASTER PLAN





## Master Plan

At the meeting in June, the process to date was recapped and the design alternatives were summarized. The meeting then transitioned to describing the refined plan. The presenters used bubble diagrams to identify where the major site program elements were located and then reviewed the illustrative site plan. The plan was a hybrid composite of the previous alternatives so there was familiarity with many elements, yet all arranged differently so as to create a truly unique scheme.

While working through each of the elements of the plan, clarification questions were asked along the way. Many of the ideas contained within the refined plan were well-received. The result was that with some slight fine tuning, the refined plan could be finalized and become the preferred Cordata Site Master Plan.

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## Site Elements

The following are the major site elements and design principles identified in the Cordata Park Master Plan:

**Preserve environmentally sensitive areas:** Wet indicator species and an ephemeral stream are present in the forest that defines the eastern half of the park. Preservation of these areas is important in maintaining the character of the park. Proposed improvements to these areas include strategically located trails, boardwalks and interpretive signage. Opportunities for environmental learning could be partnered with local schools or the nearby college.

**Improve Access & Connectivity:** Non-motorized access from surrounding communities will consist of a combination of ADA pedestrian pathways and trails, regional bicycle trail connections, and low-impact raised boardwalks located in sensitive areas.

**Neighborhood Gathering Plaza:** Centrally located next to the Great Lawn, the Restroom and the Children's play area, the gathering plaza is at the heart of the park. The goal was to create a strong sense of place and identity that is unique to the park and reflects the surrounding community.

**Children's Play Areas:** A host of play opportunities are proposed throughout the park for a variety of ages. Closest to the community gathering plaza are formal play areas arranged to accommodate ages 2-5 and 5-12. Nearby is the skate spot. This is not a destination skateboard park, but instead a hardscape area with a few raised features that are designed to withstand the punishment that comes with heavy use and skateboards. Just beyond the skate spot, and adjacent to the parking lot, are the sport courts. Half-court basketball and other activities can be accommodated here. In addition to those distinctly identifiable play spaces, there are a number of sculptural rocks, logs and features throughout the site that can be seating opportunities or environmental play places for kids and adults alike.

**Restroom & Covered Shelter:** A small-scale structure is proposed to adequately support the various uses throughout the park. Described in the community meetings as a small structure with a big roof, this is strategically located to be the heart of the park. To the degree feasible, any park structures should be designed utilizing sustainable building techniques with the goal of translating into life-cycle costs savings and minimizing their impact on the natural environment. Measures to consider include ensuring that new structures make use of local building materials, increase the efficiency of water use, minimize waste, and make efficient use of energy. A few other small structures may include information kiosks at trailheads, simple picnic shelters, an overlook and a bird blind.

**Great Lawn:** A high priority for the community was to create a large open space in the center of the park. While no formalized sports are proposed, the space is generally flat and is approximately the same size as a standard soccer field. This lawn area can be used for picnicking, Frisbee, bocce, informal gathering and other activities. A variety of seating opportunities exist along its edges so that the life of the park can be observed.

# Cordata Park Master Plan

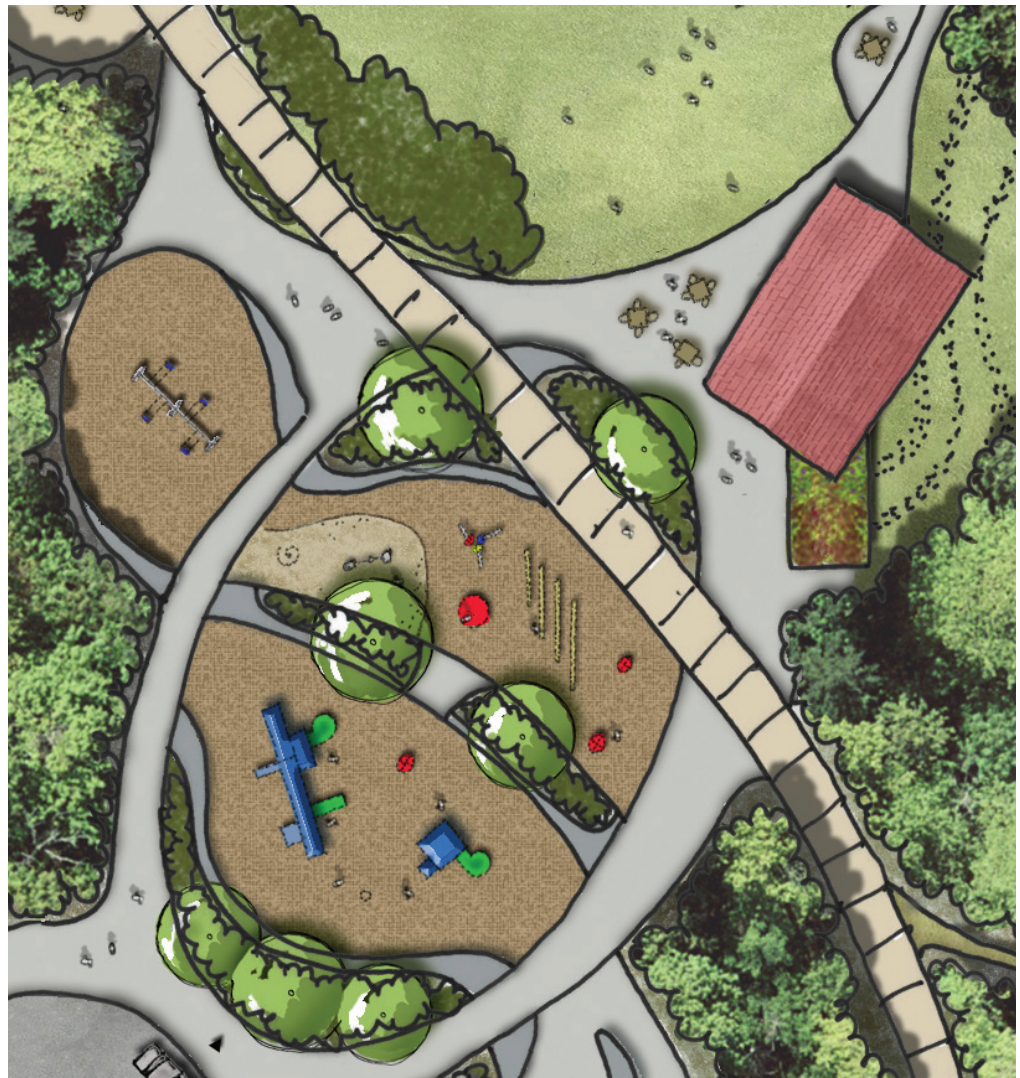
## Site Elements

**Outdoor Rooms:** While there is a need in the park for areas that have specific uses and get programmed accordingly, there is also a need to provide spaces that suit a variety of less formal uses. The “outdoor rooms” identified on the master plan are clearings in the forest that are linked via the trail system. These “rooms” can be used for picnics, small gatherings, casual bird watching or just experiencing nature. They not only provide a diversity of experiences along the trail system, but also provide a more diverse habitat for plants and wildlife.

**LID Parking Lot:** Once Cordata Park becomes a reality, new amenities will draw visitors to the park from the surrounding community. Many visitors will arrive by foot or bicycle, and others will arrive by car. Rather than having one large parking lot, the design proposes two small lots for visitors arriving by car. This approach decentralizes the impervious surface of the parking lots and provides better access from both the north and south end of the park. See Civil Design Narrative for additional information about low-impact development techniques.

**Vegetation Management:** Preservation of the maturing second-growth forest along the perimeters is important to maintain the buffer between park and the surrounding neighborhood. A management plan should be considered to identify how to handle blow down and emphasize the importance of keeping the biomass within the forest to complete healthy nutrient cycles. Incompatible uses have been kept out of this area so as not to damage the ecological functions of the park.

Now that the major elements of the park have been identified, attention turned toward determining appropriate phasing and estimating associated cost information.





Section at Bridge





Section at Great Lawn



Section at Play Area Plaza





**Model – Birdseye Looking North**





Model – Parking, Courts, Play Area, Open Space





Model – Looking North from Play Area to Great Lawn















# Phased Implementation & Estimated Costs

# Cordata Park Master Plan

## Phased Implementation

**Phasing:** The Cordata Park Master Plan lays out a vision for these newly acquired and undeveloped properties. Due to budget and construction realities most park projects lend themselves to phasing. Implementing the proposed improvements at Cordata Park will likely occur in more than one phase.

However, it is important to recognize these priorities may change over time, based on project realities. Therefore, based on the needs identified in the master planning process, we offer the following priorities for Phase 1 implementation.

### Phase 1 Implementation:

1. Trailhead at Horton Road street end.
2. Trailhead at Meadowbrook Court.
3. Central pedestrian trail spine.
4. Stream crossings (small bridges and/or elevated boardwalks).

### Optional Items to Include in Phase 1:

- Establish the beginnings of the great lawn open space area.
- Partial Horton Road extension to parking lot entrance. The road extension would require mitigation of affected wetlands.

### Phase 2 Implementation:

1. All remaining park elements not included in Phase 1 and identified in the Cordata Park Master Plan.

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## Estimated Costs

**Estimated Costs:** The following Probable Costs of Construction (PCC) represent budgeting figures, and do not reflect guaranteed construction costs, as the elements are not yet fully designed to provide that level of accuracy.

This master plan is intended to serve as a decision-making guide for the City. It documents physical improvements that can be undertaken in the park to better meet the program needs of park users and the City. Decision-making frequently implies spending money and as a result, this plan includes preliminary cost ranges for major items in the park. It is important to note that these costs are intended to be used as budgeting figures and do not reflect a guaranteed construction cost, as the elements are not yet fully designed to ensure that level of accuracy.

Extension of Horton Road is not included in this cost estimate.

This Probable Cost of Construction (PCC) has been broken down into geographic sections within which specific construction items and tasks have been itemized. The cost estimate is intended to provide enough detail to allow cost information to be extracted in order to define the project scope and set budgets for possible future phases.

This estimate has been prepared on the assumption that a general contractor will complete the work.

**Assumptions:** A list of assumptions related to the estimate has been included. Given that the project is at an early level of development, much of the cost work must be based on assumptions of construction type, project scope, and allowances used to estimate quantities. Additionally, area square footages used to calculate some of the costs are based on the site aerial photo, leading to a reasonable but not exact level of accuracy. An awareness of these assumptions is critical in using this cost estimate as an effective tool. Assumptions include: This PCC is based on master plan level design. Fees such as permits, inspections, and utility connections are not included in this PCC. No maintenance costs are included in this PCC.

**Cost Ranges:** Some elements included in the PCC are included as a range in order to identify range of scope/complexity of the respective park element and to allow the city further leeway in establishing a budget. In instances where a range has been listed, a mid range figure has been included in the cost estimate total. Therefore, total park cost may rise or fall dependant on the precise cost identified.

## Estimated Costs

**Mark-up Definitions:** There are numerous mark-ups that are generally applied to the direct construction costs, and the range of these mark-ups can vary greatly. For this reason, with the exception of a design contingency, we have not included mark-ups on the direct construction cost, but are including these possible mark-ups for your consideration in later budgeting.

Mark-ups are generally required to allocate prime contractor costs beyond those that can be quantified under Direct Costs. Additional post-bid mark-ups may also be included to reflect additional costs to the project beyond those of the general contractor including sales tax, design fees and administrative costs. A typical percentage assigned to each of these mark-ups is noted below and is typical for similar projects but may vary based upon a variety of factors.

### Construction Contract Mark-ups:

- **Direct Construction Costs:** The sum of line item costs in the estimate. These are the direct costs to the prime contractor.
- **Design Contingency:** Design contingency is a reflection of the level of design on which the PCC is based. This contingency is an allowance to reflect unforeseen or non-quantifiable elements of the project that will be incorporated during subsequent design development work. This contingency is higher in the early phases of design and gets lower as the design approaches completion. This is not a bid contingency or an owner construction contingency. For this project, we would recommend a design contingency of 20%.
- **General Conditions:** Direct field costs to the general contractor which cannot be charged to any particular item of work. These items include, but are not limited to: mobilization, job shack, phone and fax, storage shed, temporary work, demobilization, etc. General conditions are generally assumed to be 5%.
- **Contractor Overhead:** Home office costs to the general contractor including, but not limited to: accounting, billing, estimating, project management, etc. Contractor overhead is generally assumed to be 5%.
- **Contractor Profit:** This fee is a percentage of gross project costs. Contractor profit is generally assumed to be 6%.
- **Escalation:** Escalation is a provision for inflation increasing the cost of labor, material and equipment over time. Escalation is typically applied from the date of the estimate projecting to the midpoint of future construction. For the purposes of this cost estimate, given no firm timeline, no escalation has been included in this cost estimate. While a rate of escalation is highly dependent on existing economic conditions, the rate is historically in the "ballpark" of around 3% annually. However, currently and for the last 2-3 years, escalation has been greatly accelerated and construction costs have increased at a very high rate of 12-15% a year or more.

### Post-Bid Costs (Soft Costs):

- **Sales Tax:** This PCC assumes no sales tax. However, the local sales tax rate will ultimately be applied to the costs.
- **Estimated Design Fees:** Design costs to the consultant team to develop the design, apply for permits, and produce Construction Documents to put the project out to bid. Design fees are generally assumed to be 10-13% of the total cost of construction.
- **Administrative Costs:** Administrative costs are generally assumed to be 10%, and include budgeting of city department staff time in realizing a project. For this PCC, no such costs are included.

### Probable Cost of Construction Qualifications:

This Probable Cost of Construction is prepared as a guide only. The Berger Partnership makes no warranty that actual costs will not vary from the amounts indicated and assumes no liability for such variance.

# Cordata Park Master Plan

## Probable Cost of Construction

Project: Cordata Park Master Plan

Date: Oct-08  
Total

### PHASE 1

Assumes Horton Road has not been built. Primary work includes site preparation and selective demolition required for building a trail connection through the property. Includes a path surfacing bridges and phasing of wetland mitigation work in anticipation of future phases.

<b>Phase 1 Cost Range</b>	\$600-750,000
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### PHASE 2a

Assumes Horton Road has been constructed with water and sewer available on site. Primary work includes all infrastructure for the park (utility connections, pathways, parking, walls, planting, irrigation, some site furnishings and lighting)

<b>Phase 2a Cost Range</b>	\$1.1 - \$1.4 million
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### PHASE 2b

Assumes all infrastructure is in place. Phase includes constructing restroom/multi-use pavillion and bird blind, installing all play equipment and other furnishings.

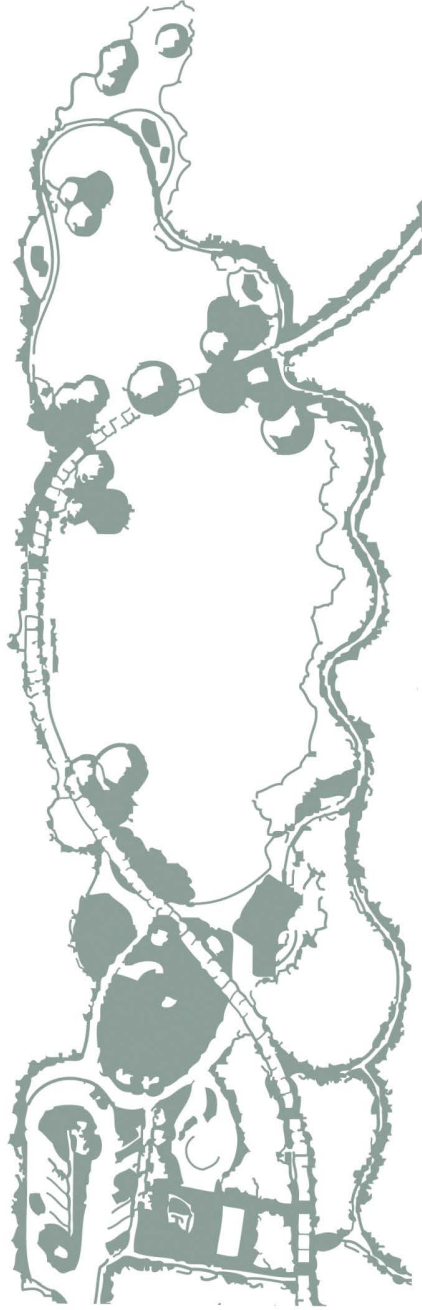
<b>Phase 2b Cost Range</b>	\$1.0 - \$1.2 million
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### TOTAL PROJECT

<b>Project Subtotal Cost Ranges</b>	\$2,700,000.00	\$3,350,000.00
<b>General Conditions (5%)</b>	\$135,000.00	\$167,500.00
<b>Subtotal</b>	\$2,835,000.00	\$3,517,500.00
<b>Contractor Overhead (5%)</b>	\$141,750.00	\$175,875.00
<b>Subtotal</b>	\$2,976,750.00	\$3,693,375.00
<b>Contractor Profit (6%)</b>	\$178,605.00	\$221,602.50
<b>TOTAL Construction Contract Cost Ranges</b>	\$3,155,355.00	\$3,914,977.50
<b>Escalation (undetermined %)</b>	\$0.00	\$0.00

Not including W.S.S.T., design fees, permits, taxes





# Appendix

# Cordata Park Master Plan

## Project Team

### City of Bellingham

Parks Design & Development Division  
Leslie Bryson, Design & Development Manager  
Gina Gobo, PE, MASCE, Project Engineer

### The Berger Partnership PS

Prime Consultant / Landscape Architecture  
Jonathan Morley, Principal  
Andy Mitton, Associate  
Jan Satterthwaite, Project Manager  
Matt Martenson, Landscape Architectural Staff  
Ann DeOtte, Marketing & Graphics Coordinator

### Mayfly Engineers

Civil Engineering  
Robin McKennon-Thayler, Principal

### RMC Architects

Architectural Consulting  
Brad Cornwall, Principal

### NW Ecological Services

Wetland & Environmental Consulting  
Vikki Jackson, Principal