TOWN OF RIDGWAY

GREEN STREET SUSTAINABILITY PARK

MASTER PLAN

September 2024

Hello!

Ridgway Town Council has been concerned about the growing effects of climate change for many years now. In just the last few years, it is apparent that it's become, more than anything, a public health issue. No matter the cause, it's clear that these effects: repeated heat waves well above 100º, smoke from raging wildfires creating extremely dangerous air quality, and long-running droughts, are making it imperative that we find ways to protect the health and safety of our communities. Out of that awareness, the idea for the Green Street Sustainability Park was born. After many months of public meetings and several online surveys, we present to you this final plan with its combination of a solar microgrid, along with a variety of trails, playgrounds and other park amenities, all surrounding the existing community garden and apiary.

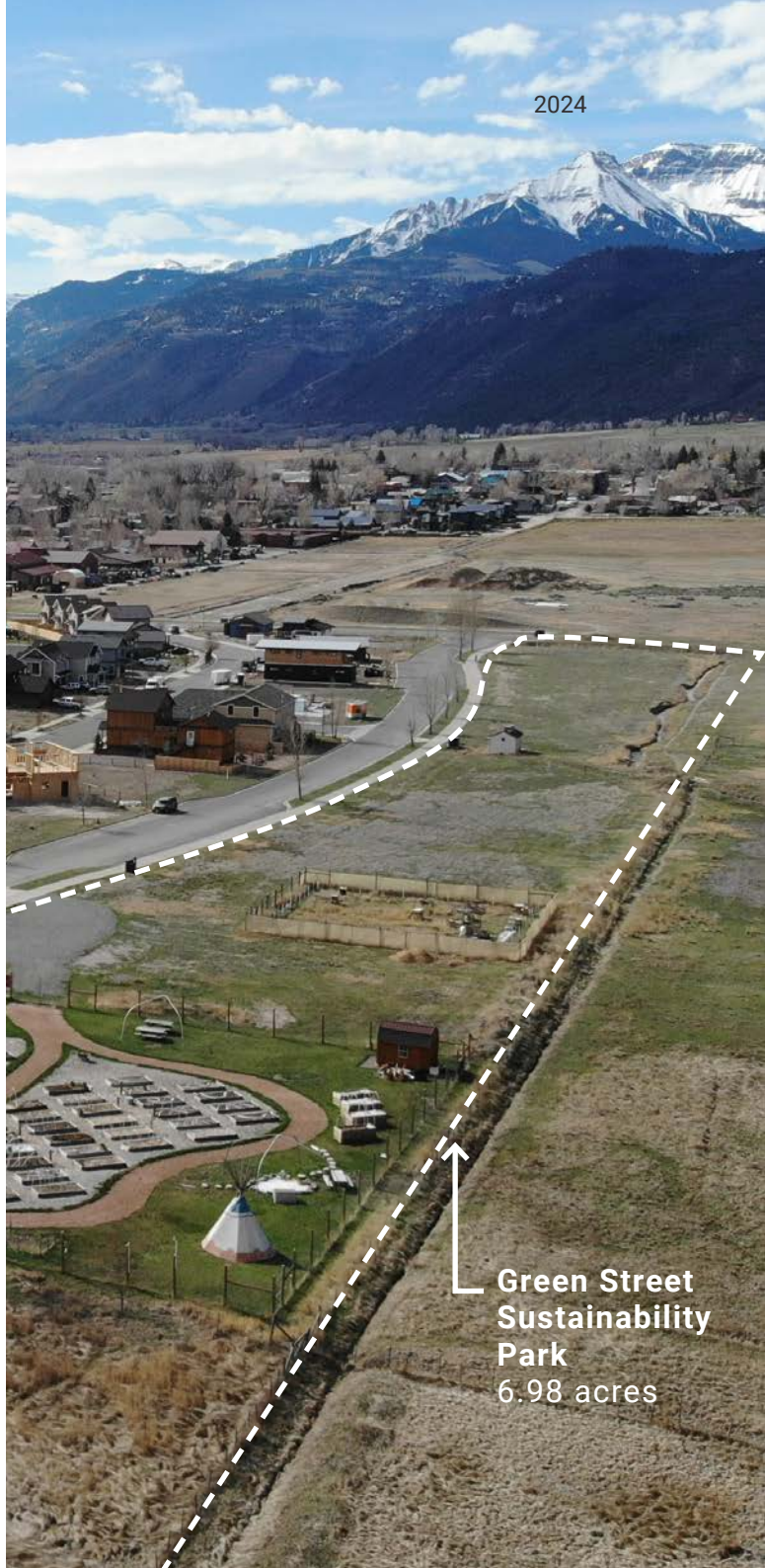
What exactly is a microgrid? Simply put, a microgrid is a local electrical grid with defined electrical boundaries, acting as a single and controllable entity. It is able to operate in both grid-connected and in island mode. Microgrids give communities like ours the flexibility to deal with instabilities in the larger grid, and enable us to have a more resilient electric supply.

Ridgway's master plan, strategic plan, and our regional Climate Action Plan all stress the importance of reducing carbon emissions, and our Sustainability Advisory Board was created in recent years to help guide these efforts; all of which point to the need for more alternative energy resources.

Beneficial electrification is being touted as one of the best ways to seriously reduce our reliance on fossil fuels. Solar power is now the cheapest alternative in most areas of the country. The Town, with support from the state Dept. of Local Affairs, has already landed grants to install a microgrid on the Space to Create building, and another array was first proposed as part of the Athletic Park master plan last year, but was shelved when it became apparent that the recreational components would easily fill all the available space. That led us to propose that the microgrid be configured as an anchor feature here in the Green Street Sustainability Park. As a result of all the input from both the public and Town Council, during which we scaled back the amount of solar from what was initially put forward, we're now proposing a total amount of 300 kW of solar on the site. This is comprised of a bulk concentrated array at the south end of the park, as well as smaller solar amenities that could become part of the community garden and apiary, as well as a potential covered outdoor classroom and parking, all to be developed in the future as funds become available. The balance of the park amenities (trails, playground, climbing boulder, water-wise landscaping, etc.) will be budgeted for and installed in phases over the coming years.

A crucial aspect of this proposal is that it would provide almost 100% of the Town of Ridgway's municipal account's annual electric use. Combined with the "resiliency hub" that will be built at Space to Create, we can have a set of sustainability tools that few towns our size have ever dreamed of.

Sincerely,
John I. Clark
Mayor
On behalf of the Ridgway Town Council



(right) Aerial photo of Green Street Sustainability Park in April 2024

Content

GREEN STREET

01

The Site & Context

The Context of Ridgway

Population, 1,213 (2022)

Elevation, 6,962 ft

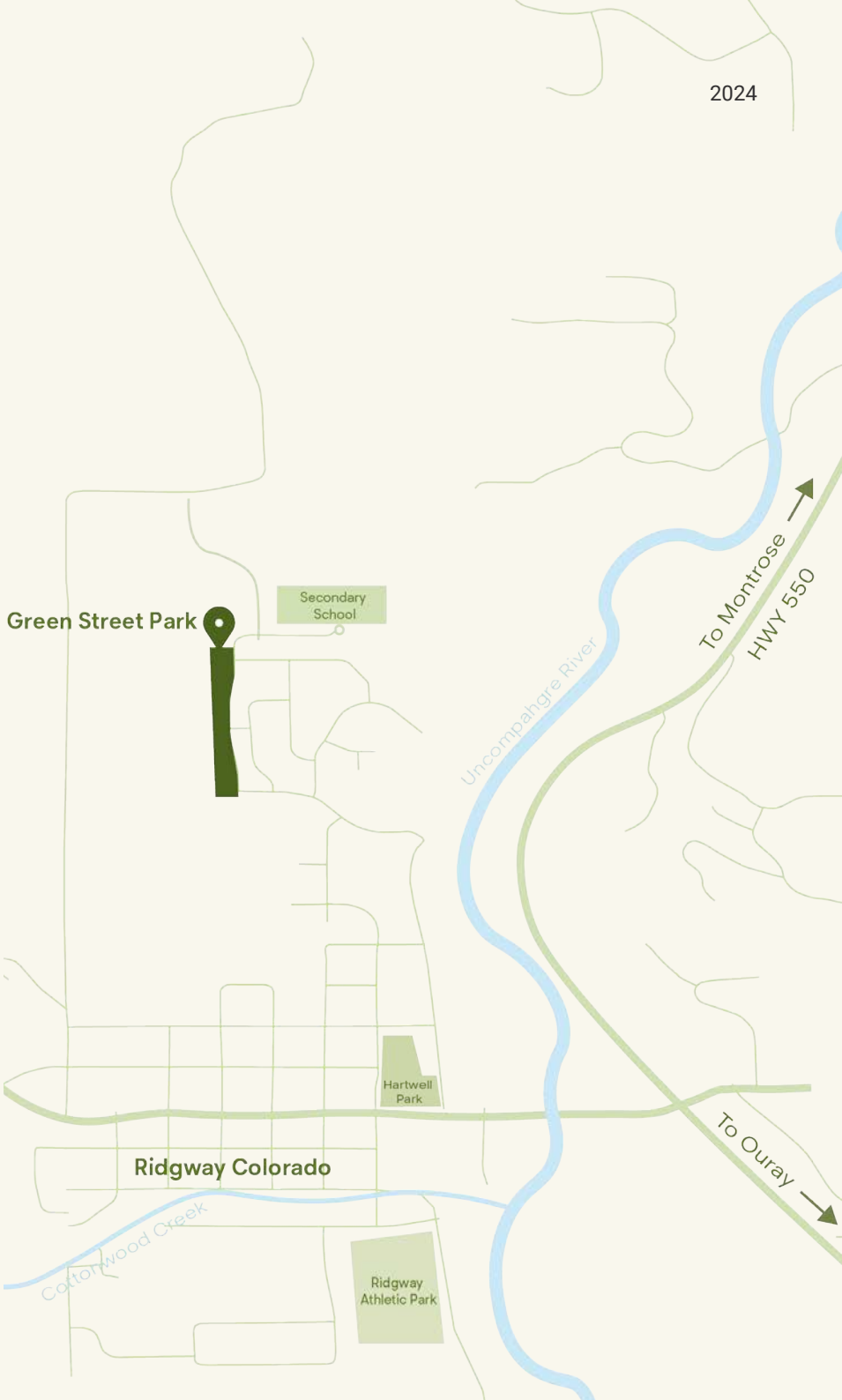
Year Founded, 1891

The Town of Ridgway, Colorado

Green Street Sustainability Park aims to become an exceptional outdoor amenity and educational feature in the growing town of Ridgway. By showcasing climate-friendly and sustainable design principles within a gorgeous public park and garden setting, we are excited to bring the community's vision to life. We see the next step is to develop a comprehensive master plan that integrates these sustainability focused concepts with proven park best practices.

Through this approach, Green Street Sustainability Park can play a significant role in helping Ridgway achieve its carbon-neutrality goal by reducing greenhouse gas emissions through clean energy initiatives and implementing water-saving measures. Simultaneously, we aim to enhance habitat and biodiversity, creating a tranquil and inviting outdoor space for everyone to enjoy. We are committed to increasing social and ecological well being through the artful design of Ridgway's newest park.

With its location within a growing neighborhood close to the Ridgway Secondary School, we imagine an innovative future for Green Street Sustainability Park that is resilient with multi-generational appeal.



(right) Green Street Sustainability Park Aerial Map
(left) Green Street Sustainability Park State of Colorado Context Map

Project Sustainability Goals

In 2024, the Ridgway Town Council engaged Superbloom to lead the master planning process, to evaluate innovative ideas, suggestions, and concepts for additional uses of Green Street Park the Town Council and Town staff are considering. Rather than look at these innovative ideas individually or piecemeal, the Town decided to have community conversations and design concepts developed through a community engagement process. The primary goals of the master plan include:

- Develop an overall evaluation of Green Street Park for park and sustainability-driven amenities and site opportunities and constraints.
- The plan should address how each park amenity functions in relation to the others with program elements based on the big picture.
- Provide a priority list of elements, uses and facilities for Green Street Park to meet current and future desires of the community.
- Conceptually design the new park elements in accordance with federal, state and local standards, ADA accessibility standards and specifications.

Sustainability Features & Amenities:

- Community Solar Garden & Microgrid
- Pollinator Plants
- Evergreen Tree : Visual and Sound Buffer
- Outdoor Sustainabilty Educaiton Center
- Landscaping that Promotes Water Conservation
- Interpretive Perimeter Trail
- Exercise Circuit Trail
- Covered Picnic Pavillion
- Electric Vehicle Chargers
- Nature Play Features
- Information Kiosks

Primary Themes

People

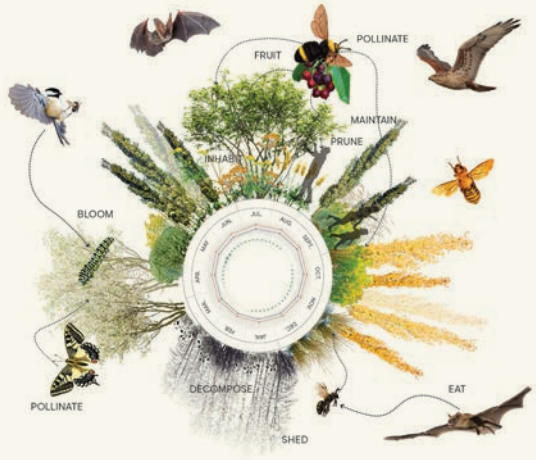
We will work with you to create a park that prioritizes **HEALTH & WELLNESS**. It can be difficult to find shady outdoor spaces at this high altitude, and the new park design will offer cool and shaded space under solar canopies and evergreen trees. We will also go beyond ADA for universal access and ensure the design provides both exercise and recreational opportunities for people of all ages. We imagine celebrating Ridgway's inspiring history of ranching and agriculture in the design, while merging the past with the future of agriculture. This and other ecological elements can be incorporated into educational signage and interpretive moments that offer learning opportunities for the neighborhood and nearby school.

Power

The new master plan aims to incorporate a microgrid and **SOLAR ENERGY GARDEN,** which can provide back up clean power for the Town. There are also incredible benefits to agrovoltaics - combining solar panels and planting which create microclimates for plants and people under the shade of the panels. This can be combined with **REGENERATIVE AGRICULTURE** where productive and biodiverse plantings enrich the soil while supporting community food security goals. Agrovoltaics can also be managed more efficiently, with higher output and reduced water for crops. We imagine studying both traditional and alternative configurations for the solar panels to make this a beautiful space for people and supportive environment for plant life.

Plants

For Green Street, we will design for optimal **WATER EFFICIENCY** with drought-tolerant native plantings that minimize turf grass and supplement with naturally fertilizing compost for an easy to maintain landscape. We will also create gorgeous pollinator planting gardens that enhance **HABITAT & BIODIVERSITY** while capturing stormwater through rain gardens. The design should incorporate the nearby drainage channel and look for other ways to hold water in the ground and recharge the water table. We can also reduce lifecycle costs by using local materials as much as possible in the design.

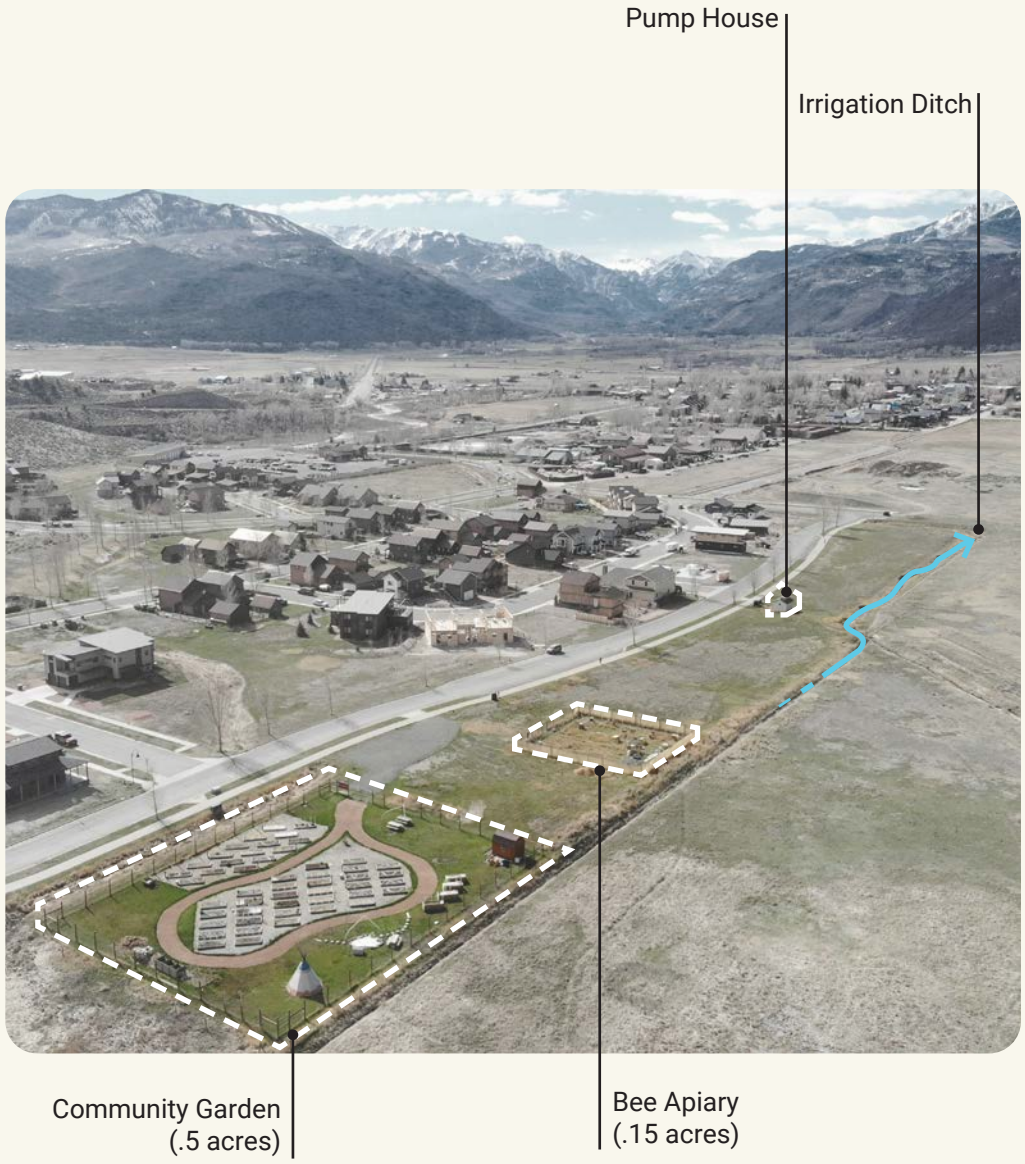


Existing Site Features

While the majority of the park area is currently vacant, existing uses include:
- Community Garden
- Bee Apiary
- Irrigation Pump House

Other general site conditions include:

- The soil is very alkaline and compacted clay, creating a challenging environment for tree growth;
- There is an active irrigation ditch along the western aspect of the park and a larger drainage along the southern aspect, and a smaller irrigation drainage along the northeastern aspect;
- Significant Canadian Thistle is present along the western ditch and there are some noxious weeds present in other areas of the park;
- Sidewalk and trees are present along the eastern aspect of the park, along Green Street;
- Excellent view corridors exist to the south and east;
- The park is directly adjacent to the Ridgway Secondary School and abuts a large residential neighborhood;
- The park site is long and narrow with a small adjoining open space and drainage area across Green Street to the east.



(right) Existing Site Features Diagram

Site History & 2015 Master Plan

In 2014-2015, the Town undertook a master planning process to develop the “Green Street Park Plan.” It was developed to understand and identify the overall purpose and function of the park focused on community inputs and desires. Since that time, the priorities and vision of the Town have changed, which has necessitated an updated guiding document for Green Street Park.

Since that time, the Town has been working with San Miguel Power Association over the last year to evaluate the construction and implementation of a community solar garden and microgrid at Green Street Park to serve as an emergency power system to provide electrical resilience to the Ridgway community. The Ridgway Town Council has expressed strong interest in a community solar garden and microgrid being the prominent and noteworthy feature of Green Street Park.

(right) Previous Master Plan for Green Street Park, adopted January 2015

Sustainability Advisory Board Site Visit
April, 2024

Apiary Site Visit
April, 2024

Community Garden Site Visit
April, 2024

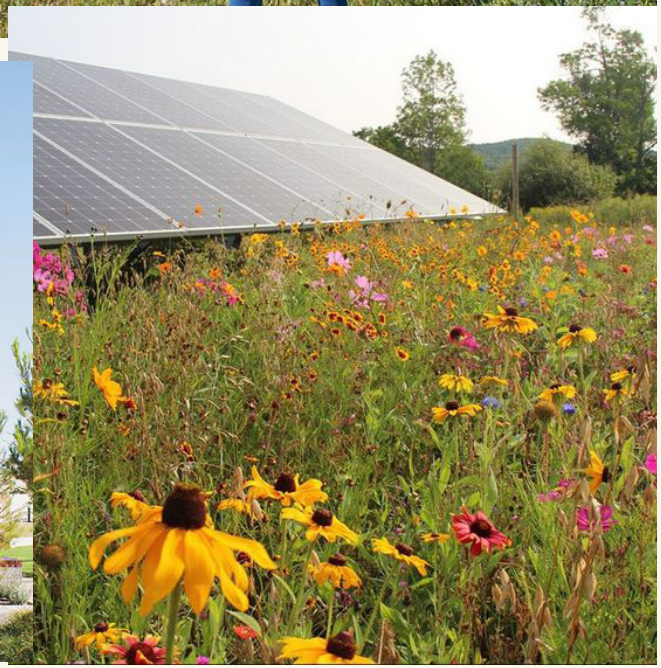
Community Garden Site Visit
April, 2024

Why is a solar micro-grid important to Ridgway?

A 425 kW solar array would be enough to provide 100% of the Town of Ridgway's municipal accounts electrical use, plus enough annual solar energy to offset another 15 homes.

In the event of a power-outage or other grid disruption, a battery-formed micro-grid powered by community solar arrays would provide the whole Town with an additional 4 hours of power.

Green Street Park can utilize solar arrays in a variety of different ways to showcase sustainable practices. Elevated arrays create shade that can be used to create more comfortable gathering, educational, and play spaces alike. Both elevated and low arrays provide cooling shade that allows for more bio-diverse plant communities, which in turn can provide greater pollinator and wildlife habitat.



(right) Example Solar Mirco-Grid Imagery

GREEN STREET

02

Community Engagement

Community Engagement & Design Process

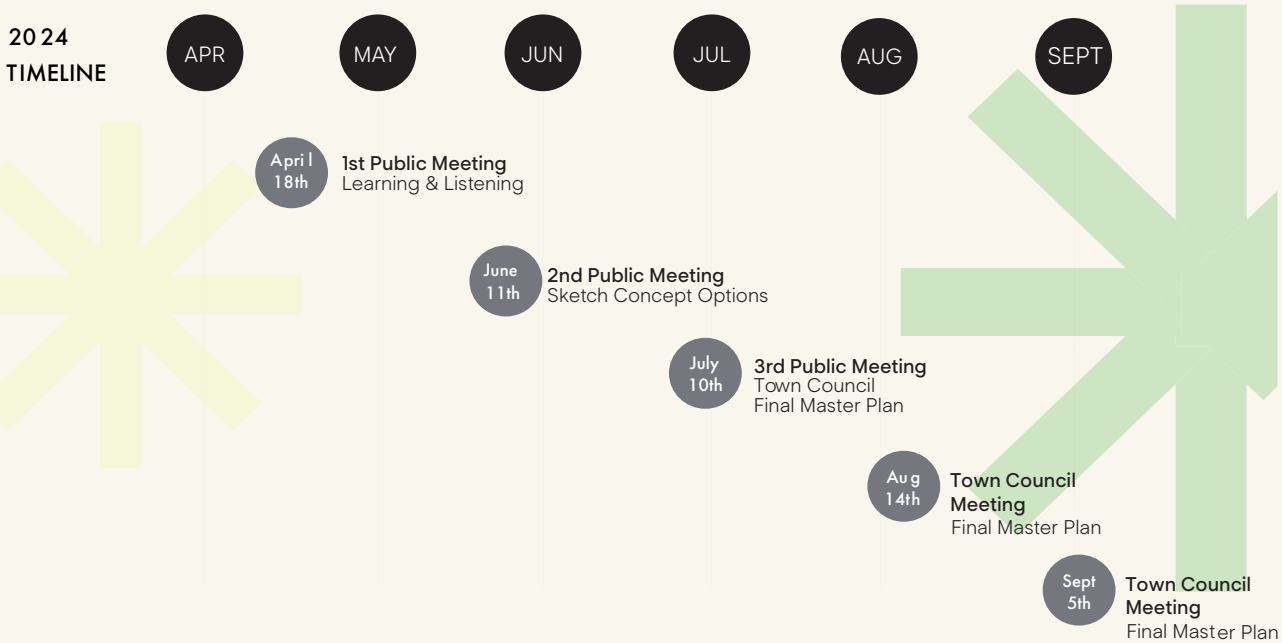
Building on the great work already completed in the first master plan for Green Street Sustainability Park, this first phase included a project kick off, initial site visit, site analysis, and a community meeting to review the desired program for the park.

Superbloom reviewed the input from the community on program site analysis and information gathered from the site, and we will developed two concepts for the community to review. These concept sketches included ideas about program, educational elements, circulation, outdoor gathering spaces, planting, levels of maintenance, solar panels, hydrology, and ecological elements.

(left) First Community Meeting for Green Street Sustainability Park - April 2024

Public Engagement Events & Meetings

Public Meeting #1: Learning & Listening	04/18/24
Public Meeting #2: Concept Review	06/11/24
Town Council Meeting #1	07/10/24
Town Council Meeting #2	08/14/24
Town Council Meeting #3	09/11/24




STELLAR FIREWORKS
DON'T JUST WISH FOR IT
YOU ARE Capable
Think BIG
MILLER

Project Kick Off & Site Visit

April 2024

Building on the great work already completed in the first master plan for Green Street Sustainability Park, this first phase included a project kick off, initial site visit, site analysis, and community meeting to review the desired program for the park. A first step was a virtual kick off meeting with our team and Town staff. In this meeting we created a more detailed schedule and set all key meeting dates and milestones for the project. We reviewed the history of the project with you and discussed key stakeholders that should be included such as the Town's Sustainability Advisory Board (SAB) and the Town's Parks, Trails and Open Space Committee and Town Council.

Stakeholder Meetings

Community Garden & Apiary Members	4/18/24
Sustainability Committee	4/18/24
Ridgway Secondary School	4/18/24

(left) High School Visit & Interviews - April 2024

(right) Parks, Trails & Open Space Committee Visit - April 2024

(right) Apriary Site Visit - April 2024

Community Design Meeting #1: Learning & Listening

April 18, 2024

At the first public meeting we developed the key themes, major high level concepts for the park and priority program and activity elements. We asked the community about their priorities and what they would like to see and do at the new park using interactive engagement tools.

(above) First Community Meeting for Green Street Sustainability Park April 2024

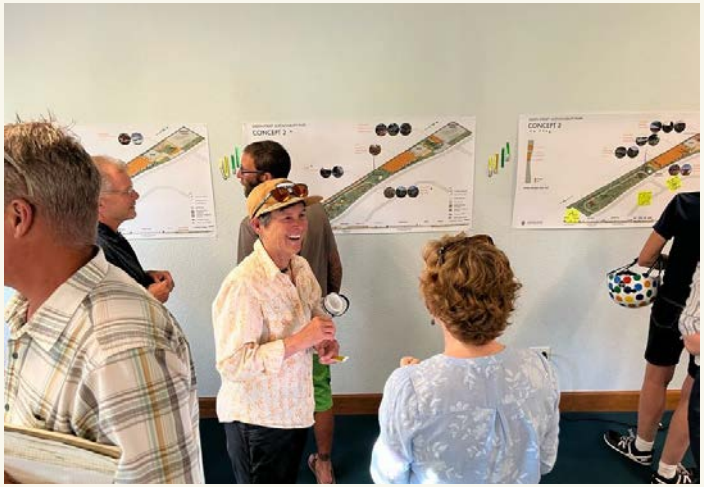
Community Design Meeting #2: Design Options

June 11, 2024

Superbloom reviewed the input from the community on program, and site analysis and information gathered from the site, and developed two concepts. These concept sketches included ideas about program, educational elements, circulation, outdoor gathering spaces, planting, levels of maintenance, solar panels, hydrology, and ecological elements, and were presented to the community to provide input.

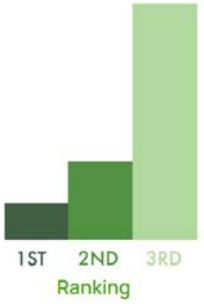
ATTENDEES
23

RESPONSES
109



(above) Second Community Meeting for Green Street Sustainability Park - April 2024

Concept #1
Please rank the options



"This concept has too much solar and not enough park"

"Too much solar. Like the solar parking shelter."

Survey Question #1

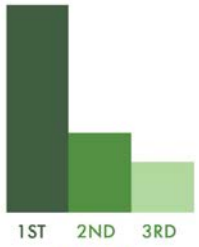
Concept #2
Please rank the options

"I like the park aspects of this design. I don't like the large solar array in the center or the structure between the RCG & apiary that would block the views of the mountains."

"Better but don't like the obstruction of view with the Low Vertical Bifacial. Looks too packed still."

Survey Question #2

Concept #3
Please rank the options



"The best option, keeps the play/rec. area open and separate from solar panels."

"More geared towards community, education, and play. Like the elevated area for share by the picnic/play spot"

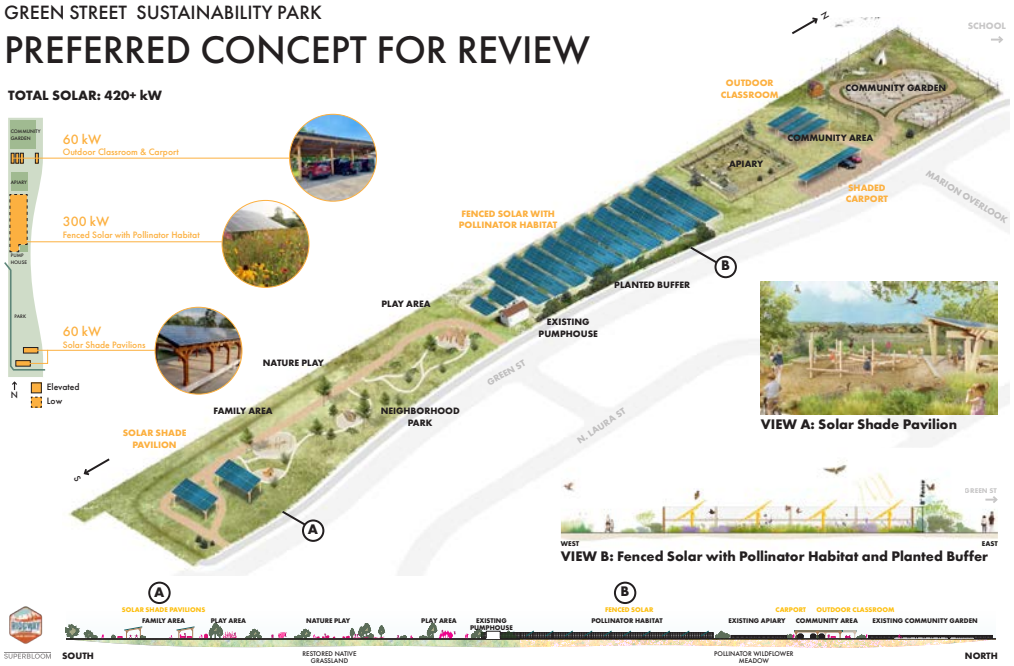
Survey Question #3

Town Council #1

July 10, 2024

The Council provided feedback and requested several adjustments including:

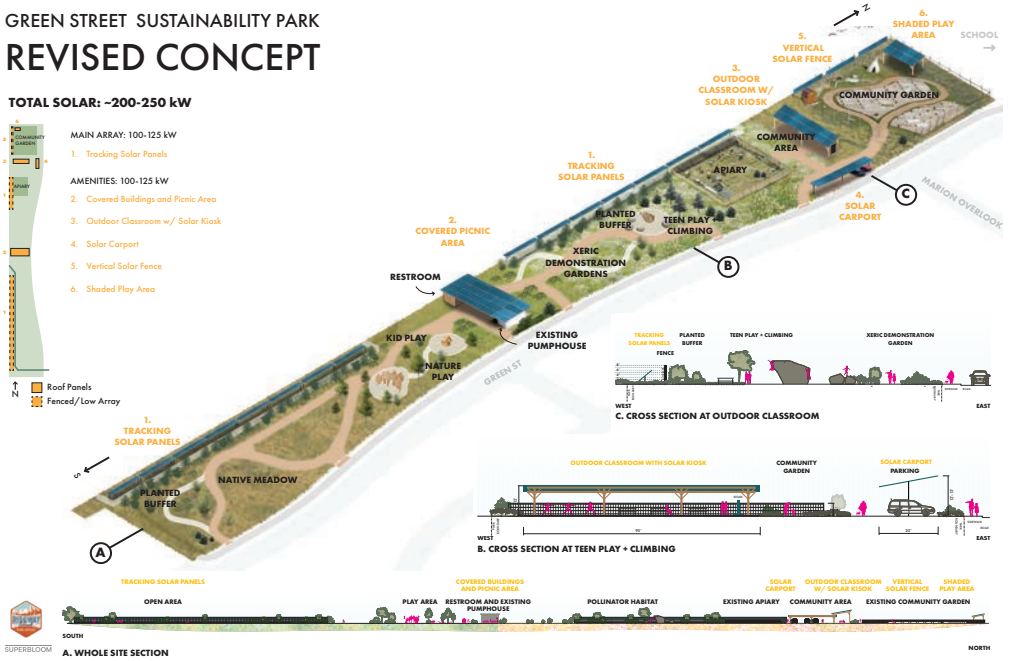
- Reduce total amount of proposed solar
- Leave more usable green space open
- Still contribute to town-wide solar effort
- Maximize solar roof panels on built structures
- Use solar as fencing where reasonable
- Community garden
- Western border of park
- Prioritize community gathering/educational space



Town Council #2

August 14, 2024

The concept was revised and re-presented to Town Council on August 14. Members of the public also attended to review and comment on the design. Town Council requested additional changes including: adding solar to amount to 300 kW total, with a majority of the panels concentrated on the south end of the site.

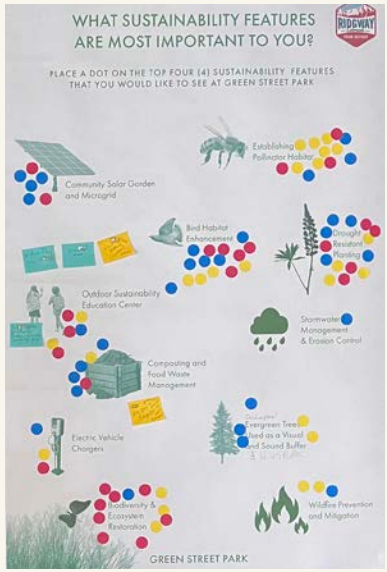


Outreach & Communications

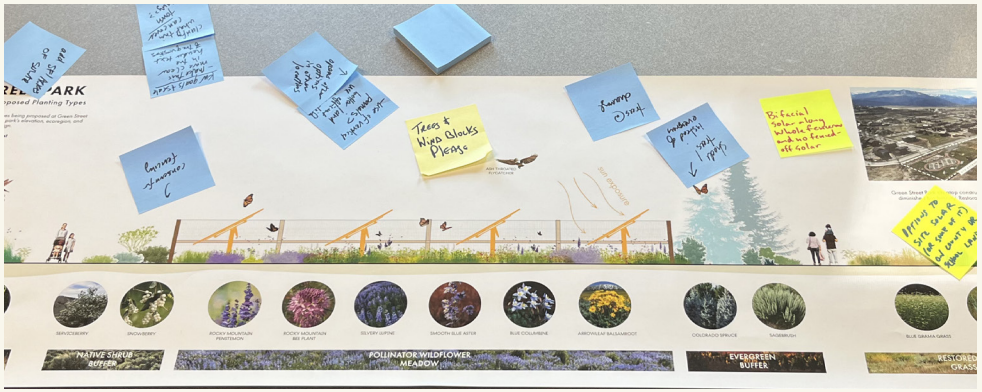
Throughout the design process, the Town and Design Team used a website and print posters and yard signs to advertise community events and share updates on the project.

The website also hosted two virtual surveys.

Survey Access Link: https://readymag.website/4705864



Posters



Easy to Access Public Surveys

Yard Signs

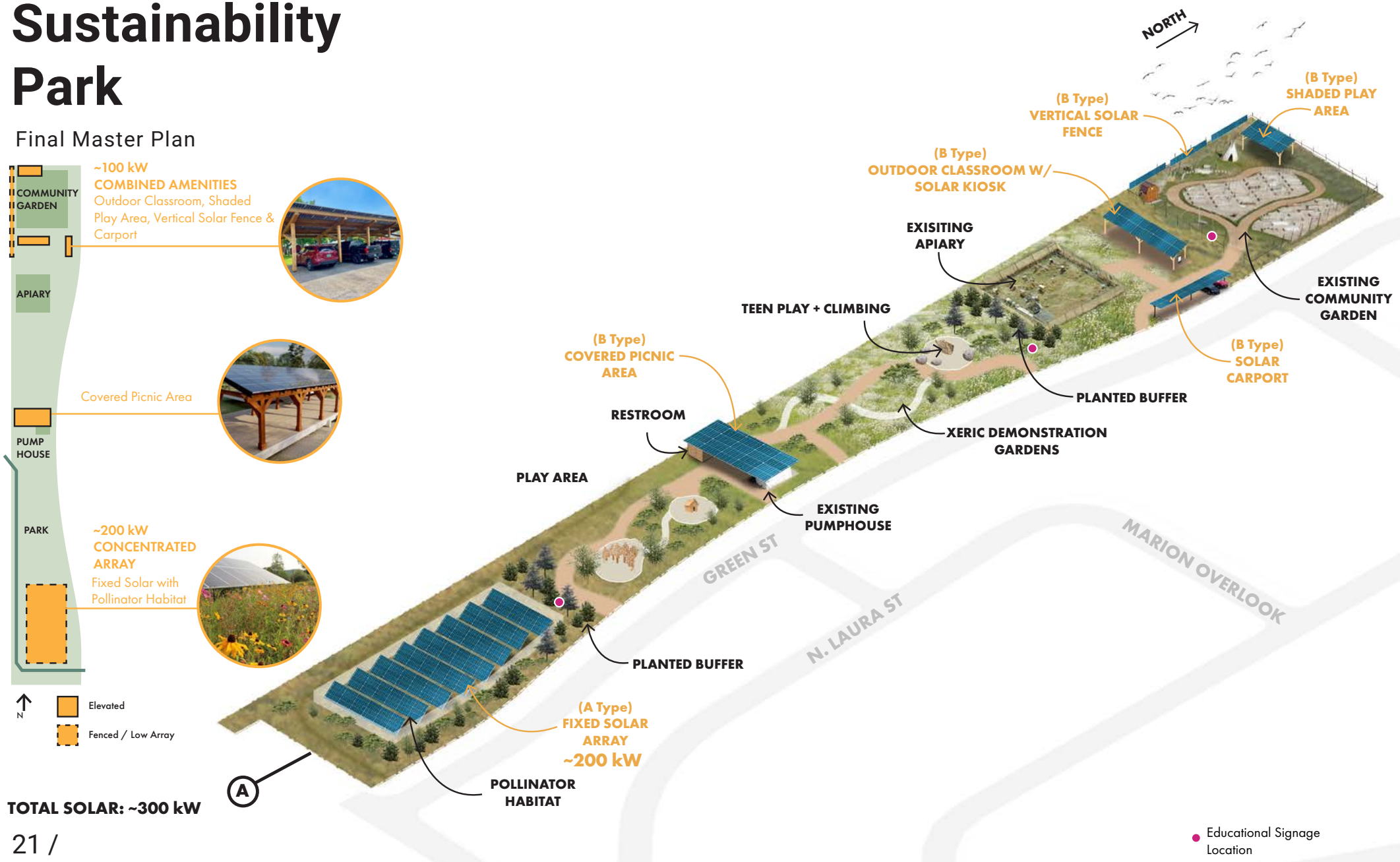
GREEN STREET

03

The Design

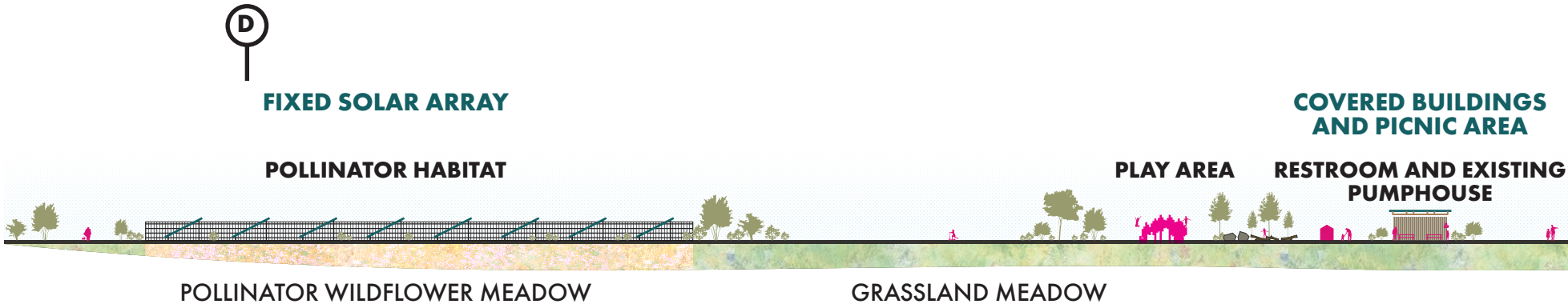
Green Street Sustainability Park

Final Master Plan

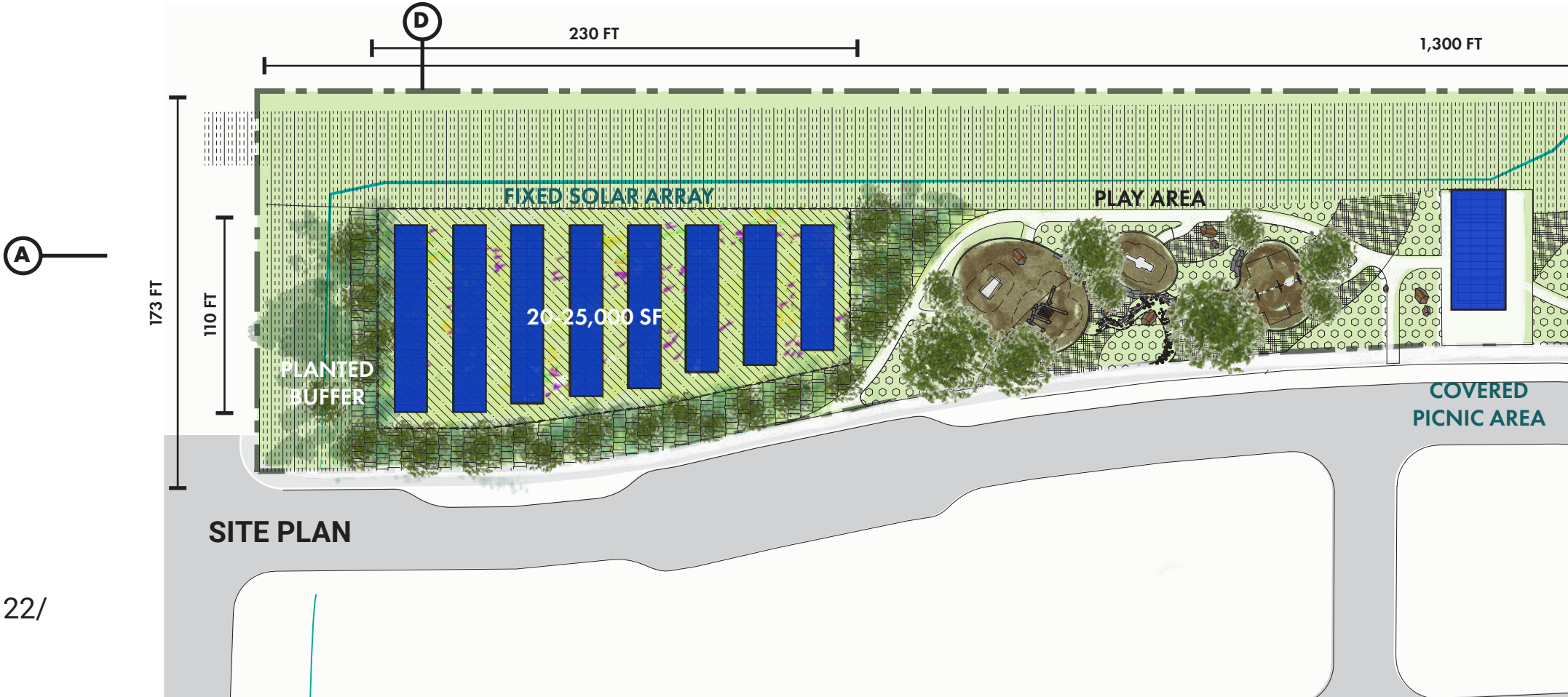


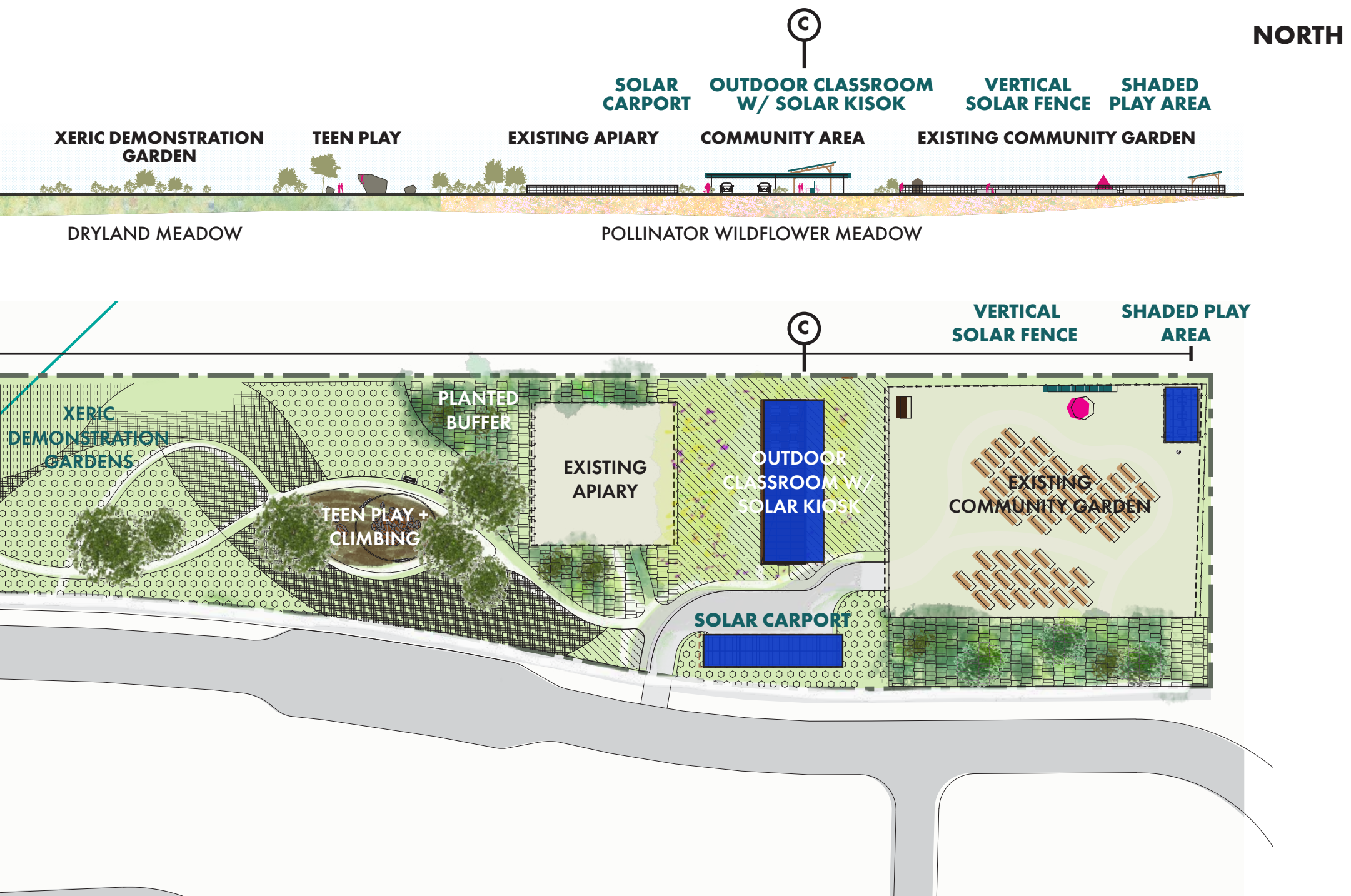
TOTAL SOLAR: ~300 kW

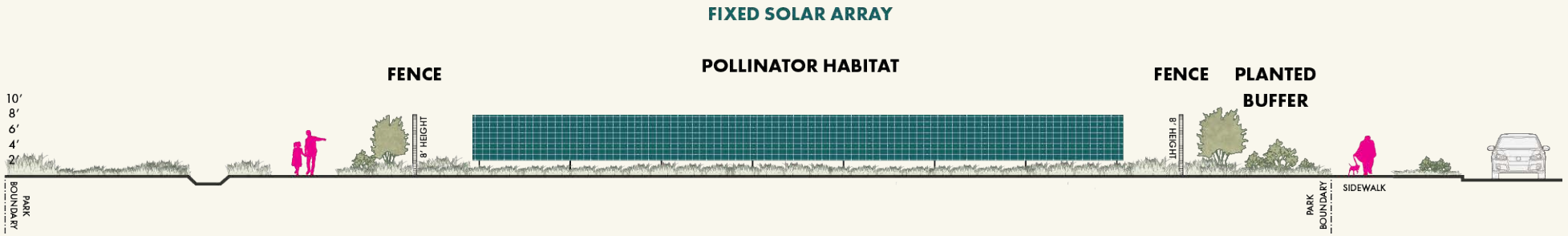
SOUTH



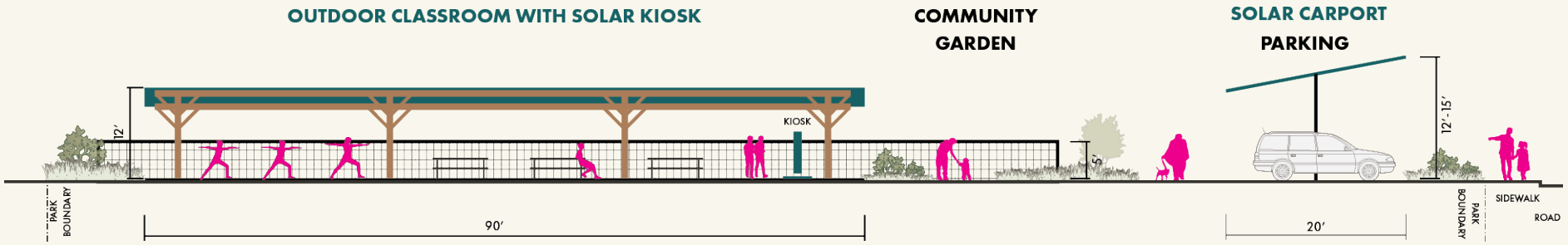
A. SITE SECTION




NORTH
SOLAR CARPORT
OUTDOOR CLASSROOM W/ SOLAR KISOK
VERTICAL SOLAR FENCE
SHADED PLAY AREA
XERIC DEMONSTRATION GARDEN
TEEN PLAY
EXISTING APIARY
COMMUNITY AREA
EXISTING COMMUNITY GARDEN
DRYLAND MEADOW
POLLINATOR WILDFLOWER MEADOW
VERTICAL SOLAR FENCE
SHADED PLAY AREA
XERIC DEMONSTRATION GARDENS
PLANTED BUFFER
EXISTING APIARY
OUTDOOR CLASSROOM W/ SOLAR KIOSK
EXISTING COMMUNITY GARDEN
TEEN PLAY + CLIMBING
SOLAR CARPORT



B. CROSS SECTION AT FENCED SOLAR ARRAY



C. CROSS SECTION AT OUTDOOR CLASSROOM

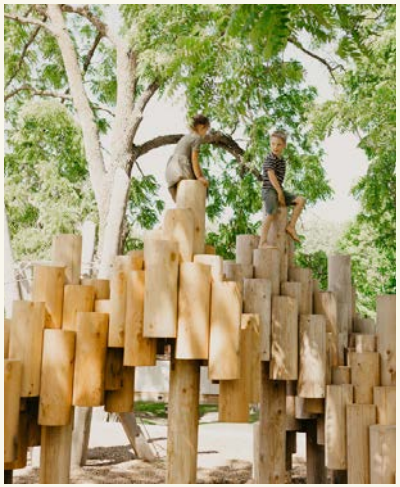
Playscape

There was general agreement that the play areas in the park should be made of natural materials in keeping with the sustainability goals and natural setting.

People also expressed that there were few places for teens, and given its close location to the high school it would be great to have bouldering or other features geared towards teens and young adults.

The final design separates these uses on site to create distinct play areas.

Bouldering Features for Teens



Natural nature play features for all ages

Features for toddlers and younger children

PLAY FOR ALL AGES!

Sustainability Amenities

Several amenities and shade features were requested by the community to create comfortable spaces on site. A series of solar shade structures are proposed, including an outdoor classroom with multi-use space, covered picnic areas, a restroom and carport. Also proposed is an interactive kiosk that would provide an educational center to tie in the many sustainable and solar features onsite.

Interactive Sustainability Kiosk

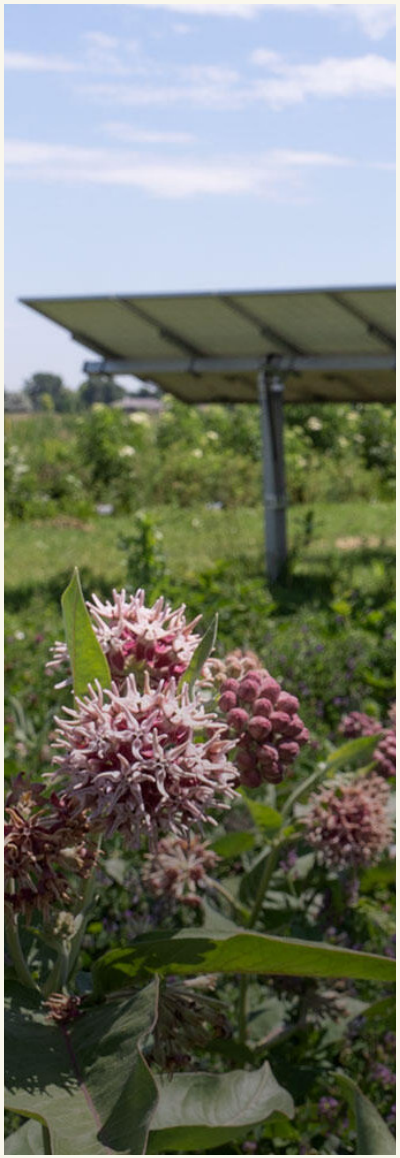
Outdoor Multi-use Classroom

Restroom

Planting

The community expressed agreement about restoring native low water use planting to the site, enhancing the existing grassland and adding pollinator gardens.

Low Water Use Montane Meadow



Pollinator Garden

Shrub Buffer

Shade Trees

Cost Estimate

To aid in town budget allocations and grant funding research , the Design Team has prepared a high-level, order-of-magnitude cost estimate, resulting in a projected budget range of $2.6 - $3.9 million, excluding solar energy components. Please note, this estimate is based on the conceptual plan provided and is intended solely for budgeting purposes. It should not be interpreted as a final construction budget, as actual costs may vary.

GREEN STREET SUSTAINABILITY PARK

MASTER PLAN BUDGET

PRELIMINARY COST ESTIMATE

**Please note this is a high-level, order-of-magnitude opinion of probable cost for budgeting purposes only. Based solely upon the conceptual plan shown herein, it is not to be construed as a final construction budget. Actual pricing may vary.*

Date: 09/05/24

Park Size:	195,200 SF	4.48 Acres

PART 1 - NON-CONSTRUCTION (SOFT) COSTS

Soft Costs					
	Design & Engineering Fees (10% of Construction Costs)	1	ALLOW	$321,724.90	$321,725
	Survey	1	ALLOW	$15,000.00	$15,000
				Subtotal, Soft Costs	**$336,725**

PART 2 - CONSTRUCTION (HARD) COSTS

Category	Item	Measure	Unit	Cost/Unit	Item Subtotal
Mobilization					
	General Conditions & Mobilization (15%)	1	Allowance	$405,000.00	$405,000
				Subtotal, Mobilization	**$405,000**
Demo/Removal					
	Construction Fencing	3,100	LF	$10.00	$31,000
	Strip & Stockpile Topsoil (CY)	1,084	CY	$7.50	$8,133
				Subtotal, Demo & Removal	**$39,133**
Site Prep					
	Clearing/Grubbing	97,500	SF	$1.00	$97,500
	Grading/Earthwork	1	ALLOW	$100,000.00	$100,000
				Subtotal, Site Prep	**$197,500**
Utilities					
	Civil	1	ALLOW	$100,000.00	$100,000
	Electrical	1	ALLOW	$25,000.00	$25,000
				Subtotal, Utilities	**$125,000**
Pavement, Curbs & Edging					
	Vehicular Asphalt	4,500	SF	$11.00	$49,500
	Concrete Curb & Gutter (6")	380	LF	$30.00	$11,400
	Accessible Curb Ramps	3	EA	$2,400.00	$7,200
	Standard Grey Concrete	3,000	SF	$12.00	$36,000
	Crusher Fines Pavement (w/Fabric, natural edge)	13,800	SF	$9.00	$124,200
	Play EWF Surface (12"depth, incl. geotextile)	6,400	SF	$6.00	$38,400
	8" Concrete Edging (Playground)	585	LF	$100.00	$58,500
				Subtotal, Prep & Paving	**$325,200**
Structures & Fencing					
	8ft Fencing at Solar Array	640	LF	$250.00	$160,000
	8 ft Fencing at Perennial Planting Areas	500	LF	$250.00	$125,000
	Shade Structure atTeen Area (Excl. Solar)	1	ALLOW	$200,000.00	$200,000
	Shade Structure at Community Garden (Excl. Solar)	1	ALLOW	$100,000.00	$100,000
				Subtotal, Structures & Fencing	**$585,000**
Planting Soils					
	Imported Topsoil	400	CY	$55.00	$22,000
	Soil Amendments	1,950	CY	$46.00	$89,700
				Subtotal, Planting Soils	**$89,700**
Planting					
	Trees, Evergreen, 8' ht.	10	EA	$850.00	$8,500
	Trees, Deciduous, 2.5" Cal.	4	EA	$860.00	$3,440
	MIX S1 (sf) - SHRUB/SEED MIX				***14,225***
	Shrubs, 3 Gal.	445	EA	$50.00	$22,250
	Seeds	7,113	SF	$0.20	$1,423
	MIX P1 (sf) - PERENNIALS				***11,210***
	Perennials, 1 Gal.	1,540	EA	$30.00	$46,200
	Perennials, Plugs	4,640	EA	$10.00	$46,400
	MIX N1 (sf) - SEED				***21,850***
	Native Seed, with forbs	21,850	SF	$0.25	$5,463
	MIX N2 (sf) - SEED				***21,365***
	Native Seed, grasses only	21,365	SF	$0.20	$4,273
					$0
	Mulch (3" depth)	18,323	SF	$3.00	$54,968
				Subtotal, Planting	**$192,916**
Furnishings					
	Benches	6	EA	$2,000.00	$12,000.00
	Trash/Recycling (Bear Proof)	3	EA	$4,000.00	$12,000.00
	Dog Waste	2	EA	$1,500.00	$3,000.00
	BBQ	2	EA	$1,000.00	$2,000.00
	Picnic Tables	10	EA	$2,000.00	$20,000.00
	Bottle Filling Station	1	EA	$6,000.00	$6,000.00
	Install Cost (@75%)	1		**$41,250.00**	
				Subtotal, Furnishing	**$96,250**
Play					
	Play Structures, Miscellaneous (Natural/Wood Style)	1	Allowance	$400,000.00	$400,000
	Boulders, misc. sizing, (incl. teen hang-out ramble)	40	EA	$1,200.00	$48,000.00
	Boulder Seats	20	EA	$2,000.00	$40,000.00
	Log Plank Steppers	6	EA	$600.00	$3,600.00
	Log Round Steppers	75	EA	$200.00	$15,000.00
	ADA Play Ramps	8	EA	$4,000.00	$39,322
	Drainage (4" HDPE and Area Drain)	1	Allowance	$10,000.00	$10,000
				Subtotal, Play	**$555,922**
Signage					
	Parking Lot Signage	1	Allowance	$2,000.00	$2,000
	Educational Signage (Physical Signs)	1	Allowance	$10,000.00	$10,000
	Interpretive Kiosk (Digital)	1	Allowance	$20,000.00	$20,000
				Subtotal, Signage	**$32,000**
Lighting					
	[Excluded, none anticipated]			$0.00	$0
				Subtotal, Lighitng	**$0**
Water & Irrigation					
	Irrigation for Plant Beds	18,323		$1.85	$33,897
	Irrigation for Pollinator Gardens, Temp for Native Seed	50,328	SF	$1.65	$83,040
	Irrigation for Individual Trees	14	EA	$75.00	$1,050
	New Irrigation Controller	2	EA	$18,000.00	$36,000
				Subtotal, Water & Irrigation	**$153,987**
SUBTOTAL					**$2,797,608**
Construction Contingency Costs (15%)					**$419,641**
	Construction Costs, Estimated				**$3,217,249**
				Cost/SF	*$16.48*

PART 3 - OTHER COSTS (SOLAR)

TBD, by others

General Notes:

-This is intended to be a general and rough estimation, and may not include all elements or site features

- Solar panels, electrical connections, permitting and related construction elements are not included in this estimate.

2024

Contact Us :

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DESIGN TEAM:

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PLANTERRA

SPECIAL THANKS TO:

Ridgway Town Council

Ridgway Sustainability Advisory Board

Ridgway Parks, Trails and Open Space Committee

Ridgway Secondary School

Ridgway Community Apiary

Ridgway Community Garden