

ABSTRACT

Project Name: CRWD Office

Location: St. Paul, MN

Entry Category: General Design

Project Description:

The new headquarters of the Capitol Region Watershed District (CRWD) is located on a former industrial brownfield site at the junction of Saint Paul's historic University Avenue industrial district and the diverse Hamline-Midway neighborhood. This urban revitalization project expresses the mission and vision of the CRWD through exterior spaces and high-performance landscapes that rehabilitate the local ecosystem, while enhancing equity and inclusion in the community. The crown jewel of the project is a public pocket park featuring an interactive exhibit, fed by collected roof runoff, which nourishes a micro-watershed and raises awareness about water resource protection.

NARRATIVE

The new office for the Capitol Region Watershed District (CRWD) is located on a former industrial site in Saint Paul's diverse Hamline-Midway residential neighborhood. The landscape architects led the site design, guiding a team of civil and stormwater engineers, for the revitalization of a former brownfield site. The goal of the design team was to express the mission and vision of the CRWD through exterior spaces and high-performance landscapes, while enhancing the local ecosystem and providing opportunities for equity and inclusion within the neighborhood.

Restoring ecological function

Previously a diesel maintenance facility, the lot was nearly impervious with significant soil pollution. Integrating with the project architects who were transforming the existing building and its systems, the landscape architects reimagined every element of the exterior space to remediate previous environmental impacts and to create sustainable, educational outdoor gathering areas for CRWD staff and community use. The resulting project expands the definition of integrated, sustainable site design and placemaking within the context of urban renewal.

The CRWD's mission is to protect, manage, and improve the water resources of its district (an urban area whose water resources drain directly to the Mississippi River). The CRWD also has a clear focus on diversity, equity and inclusion as outlined in their 2018 Diversity Plan, which includes goals to increase outreach to diverse communities and to strengthen relationships with their neighbors and constituents. The team took inspiration from their mission and the goals of their diversity plan when designing the integrated site that would define CRWD's new office.

Connecting with the community

A 2,500 square foot pocket park, located near the building's main entry, provides a welcoming feature that anchors the landscape in environmental education and community outreach. Designed as a public space, it provides a small oasis in the neighborhood for families to gather and play. The park's centerpiece is a 12-foot-tall educational water feature integrated with an interior cistern that collects roof runoff – the first system of its kind in Minnesota that provides safe human contact with reclaimed stormwater. Envisioned

by the landscape architects and built by a local museum design shop, this exterior interactive exhibit produces raindrops from a stylized metal cloud when a button is pushed, which the user then directs with the turn of a wheel – either to a storm pipe where it is eliminated from view and treated as a waste product, or to a landscape where it waters native plants and joins a stream flowing underfoot. The exhibit-created stream winds its way through patio pavers into a simulated wetland pond, surrounded by lush native plantings that are abuzz with pollinators throughout the growing season.

Additional exterior gathering spaces include an enclosed employee patio that can be accessed from the interior lunchroom and an outdoor classroom. The outdoor classroom, available to local school groups, consists of rough-cut granite boulders for seating and is surrounded by a bioretention rain garden. Located in a sheltered area adjacent to the workshop, the classroom rain garden captures runoff from the workshop's roof and funnels it through a series of decorative spouts and runnels beneath the sidewalk, partially revealed through decorative grates. Throughout the site, grates are decorated with a raindrop motif, and the perimeter sidewalks contain stamped wildlife outlines that highlight the site's connection to stormwater management and wildlife habitat.

To align with the mission of the CRWD, the design team took a focused approach to managing stormwater. The governing idea was to mimic natural processes and revert the site to its pre-development runoff condition. This was the major project challenge, especially given that the site's surface area was more than 90 percent impervious and the original building footprint would remain. Emphasizing sustainability, the landscape architects built upon the site's close proximity to Saint Paul's light-rail transit line, and also incorporated alternative transportation features like bicycle parking, electric charging stations, and the use of permeable pavers for a small visitor parking area. These planning approaches allowed the design team to reduce the overall size of the site's parking areas, providing critical space and opportunities for stormwater management features such as rain gardens, tree trenches, permeable pavers, and an underground infiltration system.

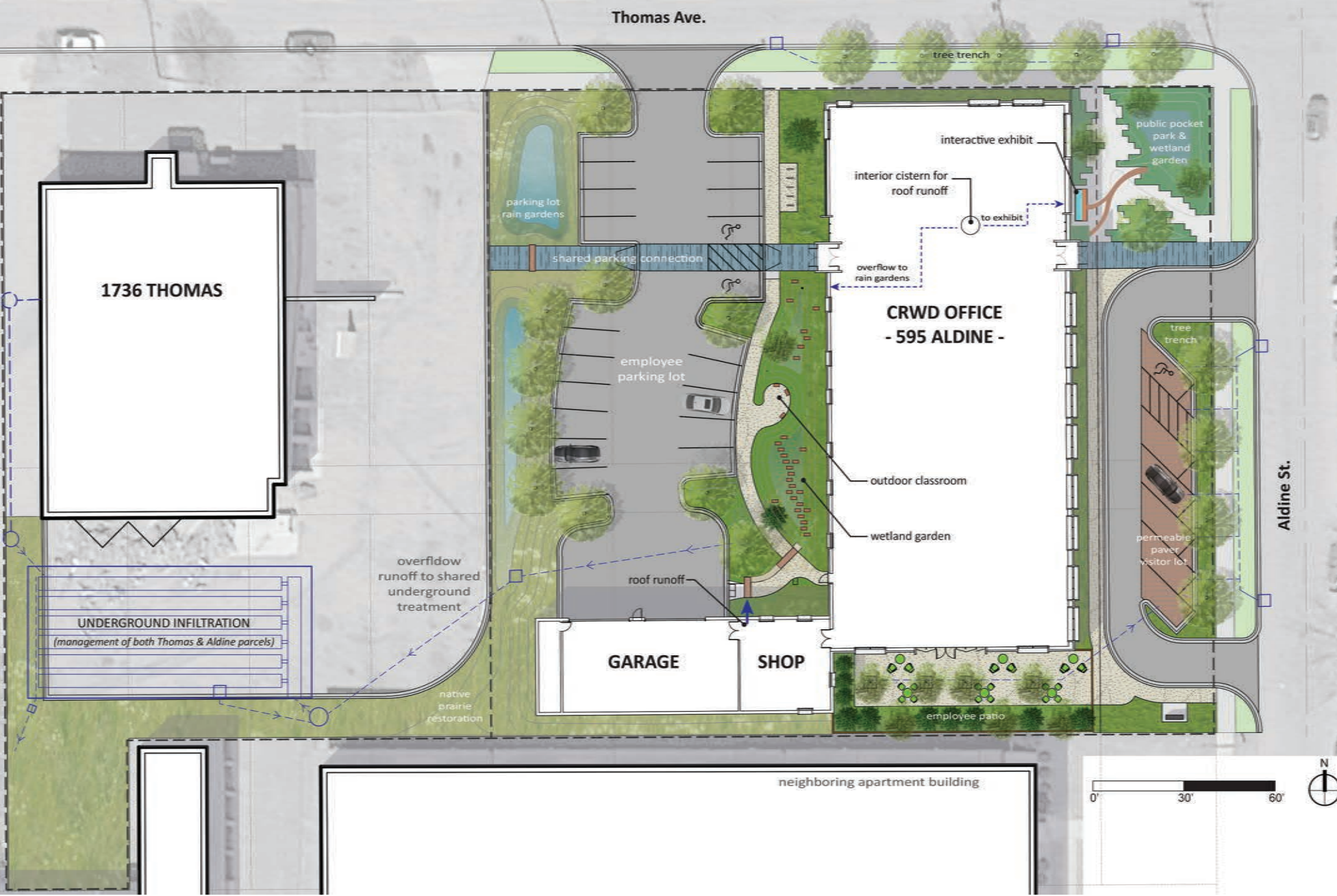
Summary

This urban renewal project overcame the dual challenges of existing site pollution and a directive to return stormwater runoff to pre-settlement conditions while engaging the local community in watershed conservation. The holistic approach undertaken by the landscape architecture team enabled Capitol Region Watershed District to provide a welcoming neighborhood oasis that supports its mission and positions the project for LEED Gold certification.



Local St. Cloud granite was used throughout the site for seat blocks, stepping stones, and signage.

1. Main Entry Signage: located at buildings public entry and pocket park



2. Design Development Phase Site Plan



Previously a diesel maintenance facility the site was nearly 100% impervious.



Post-construction, 30% of the site returned to green space; stormwater runoff was reduced to pre-settlement condition.

3. Before & After: previous site (upper), west side of building after project featuring enhanced greenspace with stormwater management & gathering areas (lower)

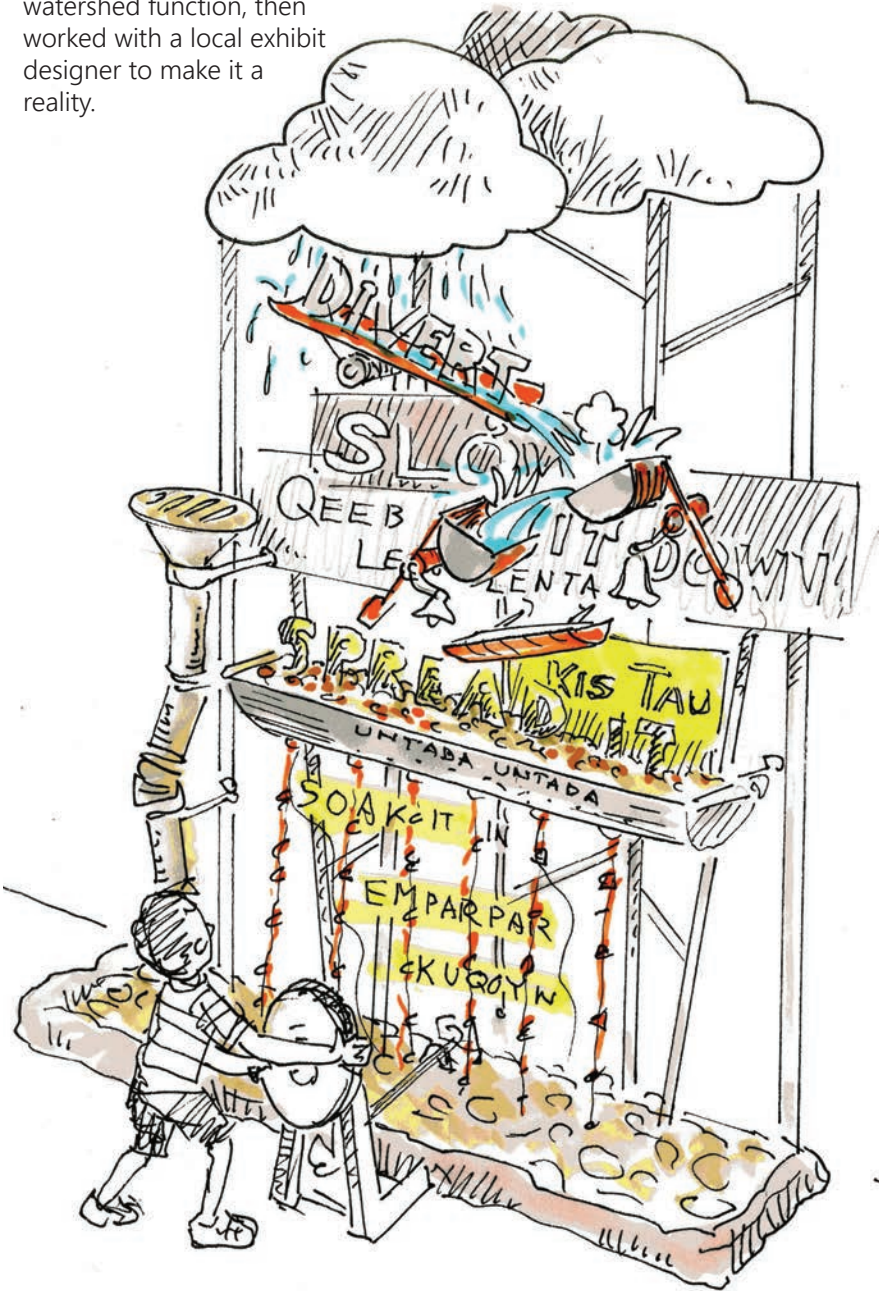


The 3,000 gallon interior cistern collects roof runoff to feed the rain cloud in the exterior exhibit, as well as provide grey water for indoor uses.



4. Interactive Exhibit: roofwater harvesting system with mechanicals exposed for education (left) is the water source for the pocket park exhibit (right)

Landscape Architects conceptualized an interactive feature to anchor the pocket park and illustrate watershed function, then worked with a local exhibit designer to make it a reality.

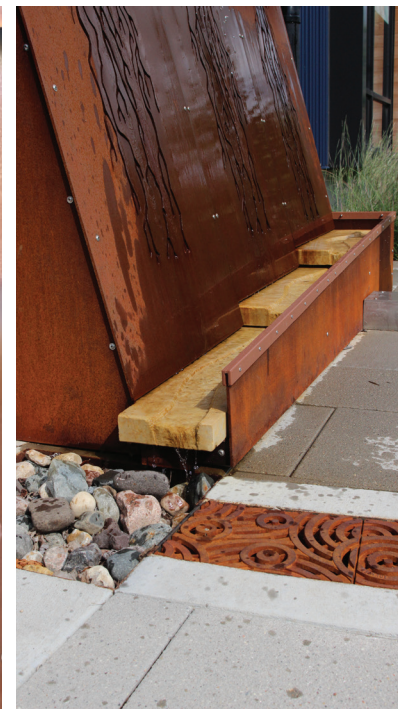


5. Pocket Park & Exhibit Design Process: concept sketch of interactive exhibit and exhibit with wheel in action



Sketches and visual renderings were used throughout the design process to develop the concept and the program for the pocket park.

6. Pocket Park: Process rendering of outward facing public amenity at prominent street intersection, looking SW



7. Watershed Exhibit: Interactive watershed exhibit (left); exhibit details (upper right images); main entry with exhibit display, wetland garden in foreground (lower right)



Educational and interactive elements were incorporated throughout the site to encourage exploration and discovery.

8. Elements of Play: clockwise from upper left - pocket park, interactive exhibit, pocket park/wetland edge, and pavement wildlife stamp

Native plant materials compliment building architecture while providing a variety of colors and textures across a landscape that does not require irrigation.



9. Main Entry: visitor parking with permeable pavers and tree trench (left), Little Bluestem compliments boxed windows at eastern facade (right)

Framed by kitchen and workshop, the native Kentucky Coffee Tree (*Gymnocladus dioica*) plantings are part of a 'tree trench' which captures and treats runoff from the patio.



10. Employee Patio: a place of respite on the south side of the building for staff and guests



Cycling and electric vehicles are prioritized, while shared parking is encouraged through a wide pedestrian connection to the neighboring parcel.



11. Sustainable Transportation: capitalizing on proximity to the light rail transit line parking is reduced across the site in favor of enhanced green spaces



The proximity of the outdoor classroom to working rain gardens allow for watershed education with real time rain events.

12. West Entry & Outdoor Classroom: outdoor classroom and west staff entry (left); biorention rain garden on building west side (right)



Decorative runnels visibly express the path of roof water from the workshop to the bioretention rain gardens, while slowing and dispersing runoff water.



13. Secondary Entry Runoff Conveyance: from workshop roof to bioretention rain gardens at outdoor classroom

Neighborhood organizations and the local community embraced the project and celebrated the shared space created in the pocket park.



14. CRWD Ribbon Cutting: in pocket park with members of neighborhood organization and local community celebrating the project and new partnerships