sustainable design

engineering

architecture

landscape architecture

planning

urban design

water and natural resources
TRANSPORTATION

Alternative transportation options contribute to cleaner air, energy efficiency, and healthier communities. Roadways, highways, and transit corridors must be designed and built with sensitivity to the surrounding environment. The best solutions balance the needs of all travelers (motorists, passengers, freight carriers, bicyclists, pedestrians, and people with physical challenges,) transcend socio-economic boundaries, and respect natural ecosystems. Otak’s planners, urban designers, architects, landscape architects, and engineers assist a variety of clients nationwide with design of safe, functional, and context-sensitive transportation and transit facilities.

The new Tempe Transportation Center in Arizona seeking LEED-Platinum Certification based in part on innovative strategies to mitigate heat islands at this urban, desert location. The project includes a Light Rail Events Station, a 15-bay bus transit center with unique shelters, two acres of urban plaza, and a three-story 32,000-square-foot state-of-the-art transportation office complex with a variety of uses. The building houses the City’s Transportation Department and Transportation Management Center, a bicycle center, retail space, and a new community meeting place.

WATER RESOURCES

Otak’s in-house water and natural resources scientists and engineers are experts in the study and restoration of our watersheds. Master plans assist jurisdictions in managing natural resources through stream restoration projects, which replenish severely diminished fish spawning habitat.

Otak’s civil engineering and landscape design services are being utilized for the 16-block central piece of the South Waterfront District Development in Portland, OR. This project will ultimately feature several LEED projects and include innovative stormwater treatment and control, as well as a new “green streets” concept within the urban area. Otak has also provided riverbank restoration, surveying, master planning, preliminary and final engineering, and preliminary infrastructure design, along with conceptual and preliminary design support and infrastructure planning for the entire district.

LANDSCAPE ARCHITECTURE

A lush native planting is not only aesthetically pleasing, it also helps manage stormwater, provides significant habitat for wildlife in developed areas, mitigates “heat island” effect, and converts carbon dioxide into oxygen.

Improvements to Swamp Creek near Kenmore, WA, helped restore natural stream functions to this creek that drains a 25 square mile urban area. Upstream development had increased flows to the City and worsened flooding conditions for residents. Otak provided design and construction management services including bridge replacement, new pathways for pedestrians and bicyclists, and a levee to protect homes and a school access road from the 100-year flood event. Otak also recycled existing concrete into new roadbeds on-site, and reused trees and stumps for stream habitat and snags.
Each project has opportunities to promote stewardship of the land, the water, and the air. At Otak, we also believe that great design and planning provides long-term benefits and value to everyone. We help communities design comfortable living, working, and shopping spaces; develop vibrant and walkable neighborhoods; preserve environmentally sensitive areas and historically significant structures; make roadways safer; and create non-toxic environments. With the introduction of rating programs for sustainable buildings and businesses such as Built Green™, LEED™, Green Globes™, EarthAdvantage™, and The Natural Step™, we also help sustainable projects become certified as “green.”

Otak architects design and build green buildings, including buildings that meet LEED Certification criteria.

The Broadway Housing facility in Portland, OR, is a LEED-Silver Certified project. Otak provided design services for Gerding-Edlen Development and Portland State University on this 212,095-sf, ten-story, mixed-use building. It provides 384 studio apartment units, 15,230-sf of street-level retail space, and 17,910-sf of classroom space. Sustainable features include a 16,000-sf green roof, high-efficiency fixtures, and local, sustainably harvested materials throughout.

The McCormack-Matthews Head Start building, also in Portland, is a cornerstone of the historic Rosemont Commons redevelopment project. The Center is approximately 14,000-sf and incorporates daylighting using clerestory windows in the classrooms, natural ventilation, acoustic quality, doors that completely open the spaces to the outdoor play area, stormwater planters, low-voc paint, and wheatboard paneling.

Otak planners solicit, facilitate, and promote collaboration among engineers, architects, scientists, and governing bodies for effective planning by using compact layout of thoroughfares and structures, alternative transportation options, solar orientation, and efficient use of resources, we help create livable neighborhoods.

In the Pleasant Valley Concept Plan for Pleasant Valley, OR, a 25-member Steering Committee was established that included residents, property owners, interest groups, service providers, and city and county representatives. This new 1,532-acre community east of Portland and south of Gresham follows a 1998 decision to bring the area inside the regional Urban Growth Boundary. The plan provides for a town center, a variety of housing, neighborhoods as the organizing structure for land uses, extensive natural resource protection areas, parks, schools, a hierarchy of streets that use “green street” designs, and a regional trail network.
1 McCormack Matthews Head Start; Portland, OR
2 Padden Parkway, Clark County, WA
3 North Creek Channel & Wetland Relocation; Bothell, WA