

Your Guide to Low Impact Developments in Greater Grand Rapids

East Grand Rapids Community Center

750 Lakeside Drive, S.E., East Grand Rapids, Michigan



History

The original East Grand Rapids Municipal Complex, along the shores of Reeds Lake, was a cluster of three 2-story buildings built in the mid-1960s. The new East Grand Rapids Community Center incorporates the original City Hall and Library buildings and an existing abandoned water reservoir. The existing buildings, comprising of 32,526 square feet, were retained and remodeled. New construction (15,500 square feet on two levels) infills the separate buildings into one cohesive building. The top of the reservoir matches the upper floor levels of the buildings and has been transformed into a green roof with a combination of vegetative and recycled rubber paver pedestrian areas. The new construction expanded the Library so that public reading spaces abut the existing green roof and opens broad views to the lake beyond the green roof.

LID Features

- ◆ The storm water runoff from the roof drains, driveway, and parking lot is directed through a swirl chamber and phosphate filter, removing contaminants before discharge into Reeds Lake.
- ◆ Water from Reeds Lake is used for site irrigation. Less water is drawn from the lake than is discharged into the lake from the storm water system.
- ◆ The soil on the green roof retains 2,500 to 3,900 gallons of water per storm event before any water is discharged into the roof drains.
- ◆ The Collins Park boat ramp provides a porous drivable surface.

Other Green Features

- ◆ Building design, orientation, fin walls, and sun shades are used to control solar heat gain and glare.
- ◆ Lighting design and fixture selection direct light to the desired areas.
- ◆ Low flow plumbing fixtures and waterless urinals resulted in a 37% reduction in water use.
- ◆ Higher efficiency HVAC systems, building control systems, and lighting design and fixture selection resulted in an 18% reduction in energy usage.

East Grand Rapids Community Center

East Grand Rapids,
Michigan
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LID Features

Swirl chamber and
phosphate filter

Storm water used
for irrigation

Storm water retained on
Wege Plaza by the
green roof

Collins Park boat ramp
porous drivable surface

Regional plant materials

Awards

Anticipating LEED®-NC
Gold Certification

Design, Construction

Cox Medendorp Olson
Architects, Inc.

Comprehensive
Engineering

OMM Engineering, Inc.

Landscaping

M.C. Smith Associates &
Architectural Group



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Other Green Features (cont.)

- ◆ Exterior glazing is insulating, with exterior coatings to control heat gain.
- ◆ When carbon dioxide is detected, fresh air is automatically introduced into the HVAC system; thereby improving air quality.
- ◆ 93% of construction waste was separated, recycled, and kept out of the waste stream.
- ◆ 53% of materials were manufactured within 500 miles of the site to promote local economies and reduce dependence on fossil fuels.



- ◆ Exclusive use of low volatile organic compound adhesives, carpets, and paints minimizes harmful off-gassing to protect building occupants and material installers.
- ◆ Doors, plywoods, and sheet underlayments are manufactured without urea-formaldehyde.
- ◆ Plant species selected are native to the region and require minimal watering and fertilizer.

Social and Economic Benefits

The Community Center and green roof have become a focus of community activities and offer the community access to view and use Reeds Lake in all seasons. The LID features are exemplary of environmentally sensitive solutions for buildings. The electrical and mechanical building system designs have reduced utility costs for the complex.

LID Lessons Learned

Wege Plaza had easy access to install the green roof with bulk materials. Less accessible roof areas would benefit from a modular green roof system with more mature and dense plantings that would infill quicker, and have better containment of the growing medium.

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