

Building Features

- IDOT roadway with pervious pavers, three experimental types of pavers never before attempted by IDOT, bioswales used to divert storm water (instead of curb and gutter), LED lighting, extension of the MCT Bike Trail onto the property
- River Pump with Barge Protection Piers, VFD motors capable of 1.8M gallons a day, fill mesocosms (large concrete channels containing flowing water and plankton pumped directly from the river to be used as artificial environments for experiments)
- Dragonfly Educational Pond, a teaching area for field trips
- Landscaping with numerous types of native species and educational zones explaining types of plants and benefits
- EPDM roofing system is a green living roof with insulation, 12 inches of growing media (special dirt) and 3 feet of native prairie grass, an observation deck (educational area) and ADA accessible ramp
- Water efficiency systems:
 - River water system to feed wet-labs and the educational pond
 - Storm water system to feed exterior hose bids and garage washdown
 - Grey water system to feed toilets and urinals for flushing
 - Domestic water system to feed hand sinks and water fountains
 - On site sewage treatment system with tertiary and secondary wetlands, U/V-Micron filter-chemical treatments and a 5,000 gallon Grey water storage tank
 - Storm water collection system to capture 100 percent of roof water, storm water diverters to remove large debris and a 10,000 gallon storm water tank for storage
 - Solar hot water system - All hot water will be heated by solar panels then stored for use
- Electrical items:
 - On site generation of electricity will include a wind turbine and an experimental hydrokinetic turbine facility
 - Excess power could be sold back to Ameren
- Heating, ventilating and air conditioning:
 - Cold water cooling system supplemented by river water connection and ice storage tanks for off peak Ameren hours
 - Heating system to use separate electric heat at every office and classroom for efficiency and the fact that the station will be generating its own electricity
 - Heat wheel to be located in Make Up Air Unit to capture tempered portion of exhausted air and make reuse of it on supply side
- Recycled material used on project includes:
 - Concrete- Use of highest possible amount of Fly Ash
 - Rebar in concrete- Made from 95 percent reclaimed steel
 - Metal studs- Made from 99 percent recycled metal
 - Insulation- Made from newspaper and recycled paper
 - Rubber floor tiles- 100 percent recycled material
 - Countertops- Made from recycled glass
 - Bathroom floor and wall tiles- made from 100 percent recycled glass
 - Carpet- Contains percentage of recycled material
- 90 percent of construction related waste will be recycled
- Educational aspects
 - 1) Dragonfly Pond and Educational Area
 - 2) IDOT Roadway Pavers
 - 3) Landscaping Interpretational Zones
 - 4) Roof Observation Deck
- Interior lobby area
 - 1) Designed to feel like the exterior
 - 2) Classroom that opens to the lobby area
 - 3) Numerous educational kiosks and wall features
 - 4) Green Touch Screen System
 - Four 32" Plasma type touch screens, user friendly and aimed at public, one lowered for children
 - Quantified through graphs- Water efficiency items, electrical generation items, interior and exterior temperatures, material use items, comparisons to similarly sized normal building, interactive floor plans, employee directory
- Lobby will be opened year round
- Roof observation area will be accessible by a request process, as will tours of the interior laboratory space