



E-110 The Mission Operations Control Center is a LEED Silver sustainable building. Sustainable buildings can obtain LEED certification by earning credits in up to 9 categories: Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, Indoor Environmental Quality, Locations & Linkages, Awareness & Education, Innovation & Design, and Regional Priorities. Certification levels are based on credits earned: Basic: 40-49, Silver: 50-59, Gold: 60-79, Platinum: 80+. NASA strives for Silver.

"LEED stands for "Leadership in Energy and Environmental Design," and focuses on encouraging a more sustainable approach to the way buildings are designed, constructed and operated."

-Sean Grimsby

Sustainable Sites

This category aims to curtail pollution and soil erosion that can result from construction. It also addresses the building's direct environmental impact on the immediate area including air pollution and how building design moves rainwater or minimizes light or heat pollution.

E-110 earned **10/26** points for pollution prevention, alternate transportation (bicycle storage, changing rooms, preferred parking and parking capacity), site development (maximize open space), storm water design (quality control), heat island effect (reflective roof) & light pollution reduction.

Water Efficiency

LEED promotes water conservation through the use of water metering, efficient bathroom and plumbing designs, drainage gardens and self-sufficient irrigation systems.

E-110 earned **8/10** points for water use reduction and water efficient landscaping.

Energy and Atmosphere

This category addresses building commissioning and energy performance of systems such as HVAC and lighting. Commissioning a building is the test and balancing of the main systems to assure optimum performance. The building must use 10 percent less energy than the USGBC baseline, and refrigeration systems cannot use chlorofluorocarbon (CFC) refrigerants. Extra points can be earned for renewable energy use.



E-110 earned **13/35** points for optimizing energy performance, enhanced commissioning, refrigerant management, measurement and verification.

Materials and Resources

Buildings designed to minimize material use, or use biodegradable or locally harvested renewable resources in

their construction, and minimize landfill waste and promote recycling in their operation.

E-110 earned **5/14** points for storage and collection of recyclables, construction waste management, use of materials with recycled content, certified woods and regional materials.

Indoor Environmental Quality

Indoor air quality includes ventilation, off-gassing of materials and thermal comfort. It also requires efficient lighting systems that are adequate for all necessary tasks.

E-110 earned **12/15** points for increased ventilation, IAQ management plan (during construction and before occupancy), use of low-emitting materials (adhesives, sealants, paints, coatings, flooring systems, and composite woods), controllability and verification (lighting/ thermal comfort), and air monitoring.

Design Innovation & Regional Priority

Considers innovative sustainable solutions and region-specific environmental concerns.



E-110 earned **7/10** points and for innovation in design (maximize open space, green cleaning, integrated pest management) using a LEED accredited professional, alternative transportation (parking), storm water design (quality), and water use reduction.

Total Points earned by **E-110** were **55** of **110**.