Norris Center Lighting Upgrade

- SEDAC did audit of lighting system in summer, 2008 and identified substantial energy savings potential
- Norris Center applied to Illinois Clean Energy Community Foundation for a lighting grant and was approved for a $53,614 grant to offset the cost of equipment and labor
- St. Charles SD, as owner of the property, installed the fixtures in summer and fall of 2009
Norris Center Lighting Upgrade

Raquetball Court Before Picture
Norris Center Lighting Upgrade

Raquetball Court Before Picture
Norris Center Lighting Upgrade

Raquetball Court Construction

07/31/2009
Norris Center Lighting Upgrade

Raquetball Court Construction
Norris Center Lighting Upgrade

Raquetball Court After Picture
Norris Center Lighting Upgrade

Raquetball Court After Picture
Norris Center Lighting Upgrade

• Raquetball Court- used 450 watts before with metal halide fixture

• After retrofit, the fixture uses 2 55 watt biax lamps with electronic ballasts for a total of 110 watts

• Per fixture savings is 340 watts for 48 fixtures for 16.32 kilowatts removed from the electrical system
Norris Center Lighting Upgrade

Tennis Court Before Picture
Norris Center Lighting Upgrade

Tennis Court Before Picture
Norris Center Lighting Upgrade

Tennis Court Before Picture

07/28/2009
Norris Center Lighting Upgrade

Tennis Court Before Picture

08/25/2008
Norris Center Lighting Upgrade

Tennis Court Before Picture
Norris Center Lighting Upgrade

Tennis Court Construction
Norris Center Lighting Upgrade

Tennis Court Construction
Norris Center Lighting Upgrade

Tennis Court Construction

07/31/2009
Norris Center Lighting Upgrade

Tennis Court Construction
Norris Center Lighting Upgrade

Tennis Court Construction

07/31/2009
Norris Center Lighting Upgrade

Tennis Court Construction

07/28/2009
Norris Center Lighting Upgrade

Tennis Court Construction
Norris Center Lighting Upgrade

Tennis Court After Picture
Norris Center Lighting Upgrade

Tennis Court After Picture

08/11/2009
Norris Center Lighting Upgrade

Tennis Court After Picture

08/11/2009
Norris Center Lighting Upgrade

Tennis Court After Picture
Norris Center Lighting Upgrade

Tennis Court After Picture
Norris Center Lighting Upgrade

Tennis Court After Picture
Norris Center Lighting Upgrade

Tennis Court After Picture

10/23/2009
Norris Center Lighting Upgrade

Tennis Court After Picture
Norris Center Lighting Upgrade

Tennis Court After Picture

10/23/2009
Norris Center Lighting Upgrade

Tennis Court After Picture
Norris Center Lighting Upgrade

• Tennis Courts- used 81 1,000 watt metal halide fixtures with up lighting before for a total of 89.10 kilowatts including magnetic ballasts

• After retrofit, the tennis courts use 27 court lighter fixtures with 16 T-5s and 18 court lighters with 8 T-5s with electronic ballasts for a total of 33.69 kilowatts with the same light levels

• System savings is 55.41 kilowatts removed from the electrical system
Norris Center Lighting Upgrade

Pool Before Picture
Norris Center Lighting Upgrade

Pool Before Picture
Norris Center Lighting Upgrade

Pool Construction Picture
Norris Center Lighting Upgrade

Pool After Picture
Norris Center Lighting Upgrade

Pool After Picture
Norris Center Lighting Upgrade

Pool After Picture
Norris Center Lighting Upgrade

Pool After Picture
Norris Center Lighting Upgrade

• Pool area- used 450 watt metal halide fixtures before for including magnetic ballasts
• After new fixture installation, the pool area used new 2x4 high bay fixtures with 6 T-8s with electronic ballasts with twice the light levels as before
• Fixture savings is 226 watts per fixture removed from the electrical system
Norris Center Lighting Upgrade

Compact Fluorescent Fixture
Norris Center Lighting Upgrade

Compact Fluorescent Fixture
Norris Center Lighting Upgrade

Compact Fluorescent Fixture
Norris Center Lighting Upgrade

Reflector Retrofit - Hallway
Norris Center Lighting Upgrade

New Indirect Fixture- Child Care
Norris Center Lighting Upgrade

New Indirect Fixture- Hallway
Norris Center Lighting Upgrade

New Indirect Fixture- Lobby
Norris Center Lighting Upgrade

New Fixture- Weight Room
Norris Center Lighting Upgrade

New Fixture- Weight Room
Norris Center Lighting Upgrade

• Total kilowatts used before lighting upgrade was 168 kilowatts for all fixture types including offices, locker rooms, weight rooms, etc.

• After lighting upgrade, the Norris Center uses 59.288 kilowatts to light facility with as good or better light levels

• System savings is 108.712 kilowatts removed from the electrical system for an estimated annual savings of $32,231 per year
Norris Center Lighting Upgrade

- Thanks go to St. Charles SD for their efficient and professional installation of the tennis and pool area fixtures
- Special thanks to Paul Novak of Norris Center for installation of raquet court retrofits and all other fixtures
- Total cost was $61,305 so the net cost to the Center was less than $7,000 for a 3 month payback- unbelievable!!!