

Hartman Arena's Green and Sustainability Features

(as of 7/16/08)

OVERALL DESIGN

- * The overall design of the arena allowed for a balanced site with regard to earthwork activities. This means that dirt material did not have to be hauled in nor did it need to be hauled away. Fuel and emissions savings on this item can be significant.
- * The contract delivery method of this project being "Design-Build" has allowed designers and contractors to collaborate on large system design issues to minimize materials used. For example the collaborative atmosphere has:
 - * Reduced the amount of ductwork material within the building.
 - * Reduced the amount of electrical cabling within the building.
 - * Minimized the amount of utility piping required.
 - * Allowed better control of storm water runoff minimizing erosion concerns.

ASPHALT/CONCRETE

- * Asphalt paving is produced with 35% recycled asphalt content (RAP), the most allowed by local jurisdictions.
- * Paving sub-base has been stabilized with flyash which provides several green benefits:
 - * Stabilized sub-bases allow for thinner asphalt sections reducing the amount used.
 - * Flyash is a byproduct of coal fired power plants that otherwise would be discarded.
 - * Flyash stabilization vs. conventional stabilization which entails hauling in large amounts of imported fill saves a tremendous amount of fuel and emissions in trucking.
- * Flyash is also a component of our concrete mix design. It replaces 20% of the portland cement content that would otherwise be present in standard concrete mixes. Portland cement is energy intensive to produce and is mined from the ground and must traditionally be hauled long distances to reach this area.
- * All concrete waste is either being incorporated into the project as general fill aggregate or taken to local recyclers.

MATERIALS

- * The building's **steel** structural components are made partially from recycled steel material. We are working with our vendors and suppliers to determine the recycled content percentages.
- * The building's **insulation** is also partially manufactured from recycled materials.
- * With regard to the building's finishes, these items have green features:
 - * Low VOC paints
 - * Carpet manufacturer is committed to a sustainable future
 - * Vinyl composition tile (VCT) manufacturer is committed to a sustainable future.
- * See the attached links for examples.

CONSUMPTION

- * The project's lighting design incorporates as much energy efficient fluorescent lighting as possible to reduce energy consumption.
- * Energy efficient lamps and ballasts wherever possible.
- * Occupancy sensors in offices, misc rooms.

- * Master switch to turn off all emergency lighting when building is not occupied.
- * The arena will have a "Building Automation System" (BAS) to reduce space conditioning energy consumption during unoccupied times.
- * The public restrooms will have toilets and urinals fitted with water saving automatic flush valves.

MISCELLANEOUS

- * The project utilizes "Best Management Practices" as defined by the Kansas Department of Health and Environment to control storm water runoff during the construction phase.
- * Storm water runoff from the arena site is retained within the development, a preferred method when compared to draining storm water into municipal storm water systems which are costly and material intensive to build.
- * The project will be participating in all available recycling initiatives available in this area as they relate to construction waste.