

Green Classroom

- Sustainable Learning Environment

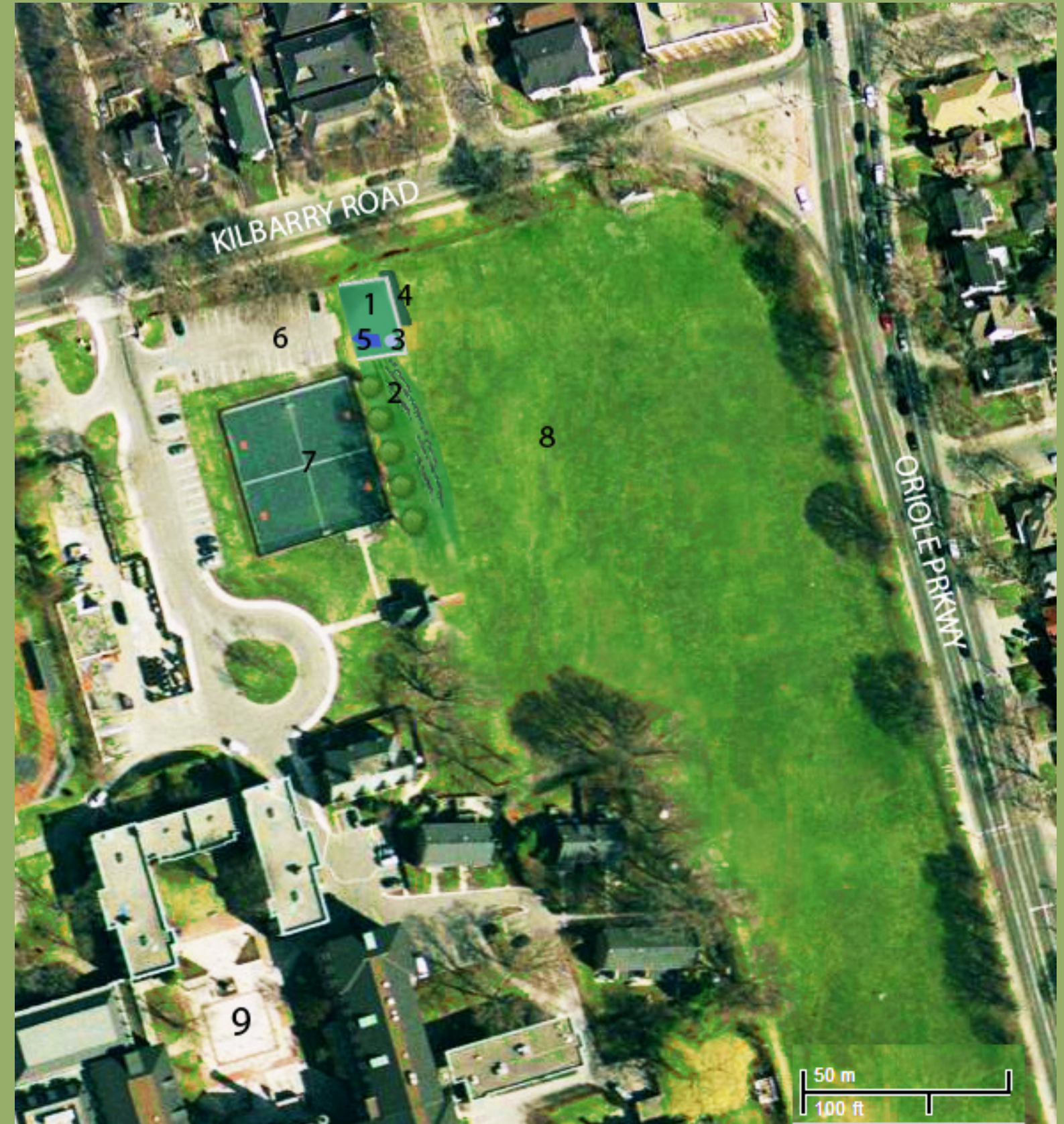


Green School for the 21st Century

The Upper Canada College “UCC” has long been committed to becoming a “Green School for the 21st Century.” By inspiring students through a “Learning it by Living it” approach to sustainable development. To achieve this goal, UCC organized Green School activities, constructed their Prep Learning Garden, and formed the Centre for Environment and Sustainability.

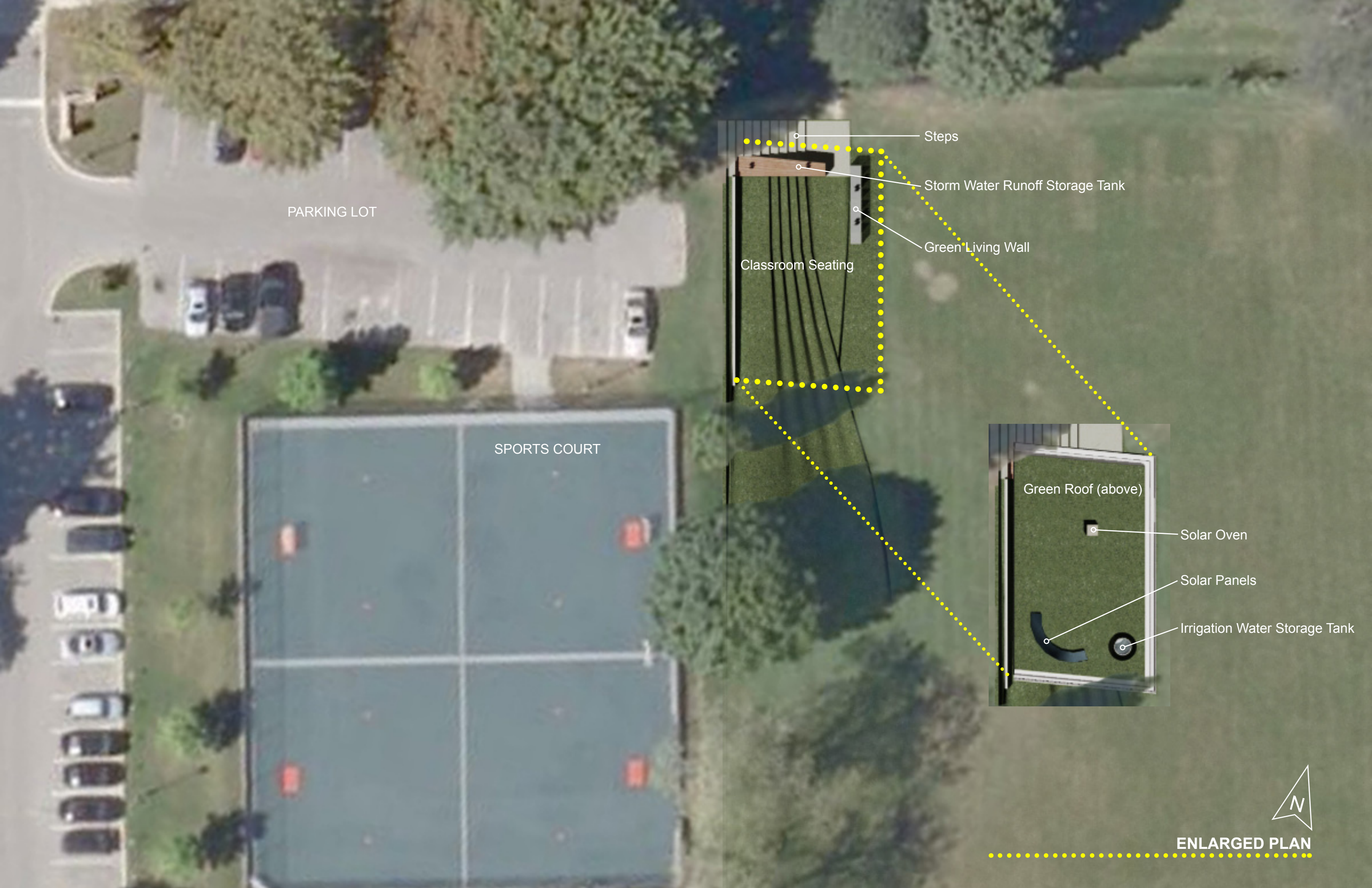


The outdoor classroom is designed as a space not only for lessons, but also a learning environment for sustainable living. The classroom has employed many sustainable design strategies, such as vegetated roof, living wall, collecting rainwater from the adjacent parking and tennis court for irrigation use, use of recycled tires for construction materials and generation of renewable energy.



SITE PLAN

1. Green Roof (Classroom below)
2. Seating Area (for outdoor performance)
3. Rainwater tank (collect runoff from parking and sport courts)
4. Living wall
5. Photovoltaics (Solar panels)
6. Parking
7. Tennis court
8. Playfield
9. Upper Canada College



PARKING LOT

SPORTS COURT

Steps

Storm Water Runoff Storage Tank

Green Living Wall

Classroom Seating

Green Roof (above)

Solar Oven

Solar Panels

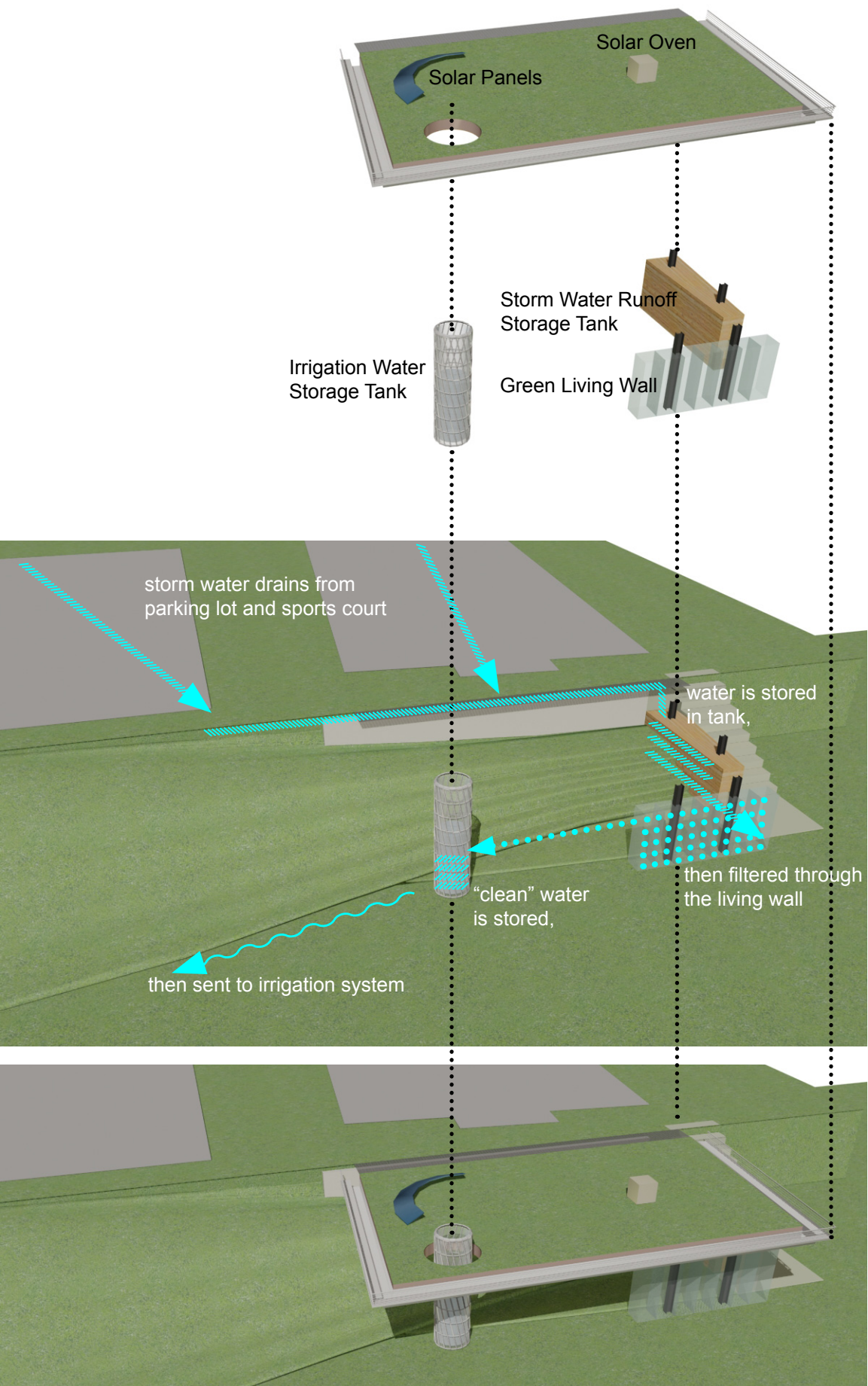
Irrigation Water Storage Tank



ENLARGED PLAN



Storm Water Retention/Purification System



Green Roof

- Outdoor classroom
- Collection of rainwater and transfer to living wall and water tank.
- Reduction of Urban Heat Island Effect
- Moderate classroom temperature

Living Wall

- A vertical garden. Plants are rooted in fibrous material anchored to a wall.
- Rainwater runoff collected from the adjacent carpark and sports court would be filtered and purified by this living wall.
- Storm water management (absorbs 45-75 % of rainfall)
- Improvement of air quality
- Reduction of Urban Heat Island Effect
- Moderate classroom temperatures

Solar Oven

- Fun activity for outside use
- Solar energy converted to heat energy to cook food

Photovoltaics (Solar Panels)

- Convert sun-light into electricity for irrigation pumping and some local lighting if needed.

Storm Water Runoff Tank

- Store rainwater runoff for irrigation uses
- Offsets water consumption use to irrigate adjacent playing fields
- Rainwater would be purified by the living wall and filtration system before it is stored in the rainwater tank.

Green Materials

- Recycled tires for seatings
- Salvaged materials such as roof beam
- Local materials such as rock floor taken from nearby riverbed.

