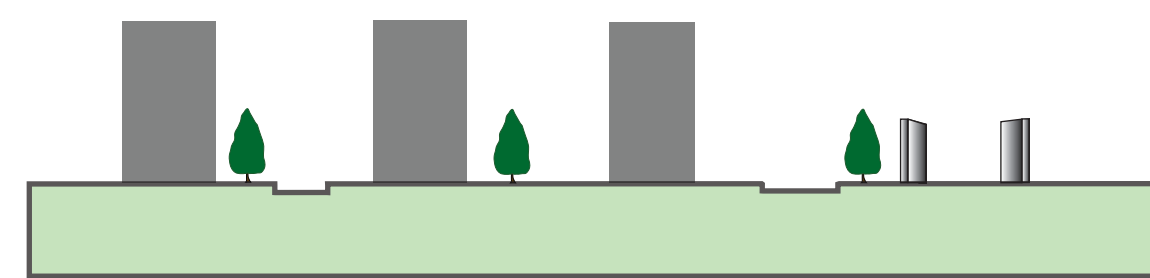
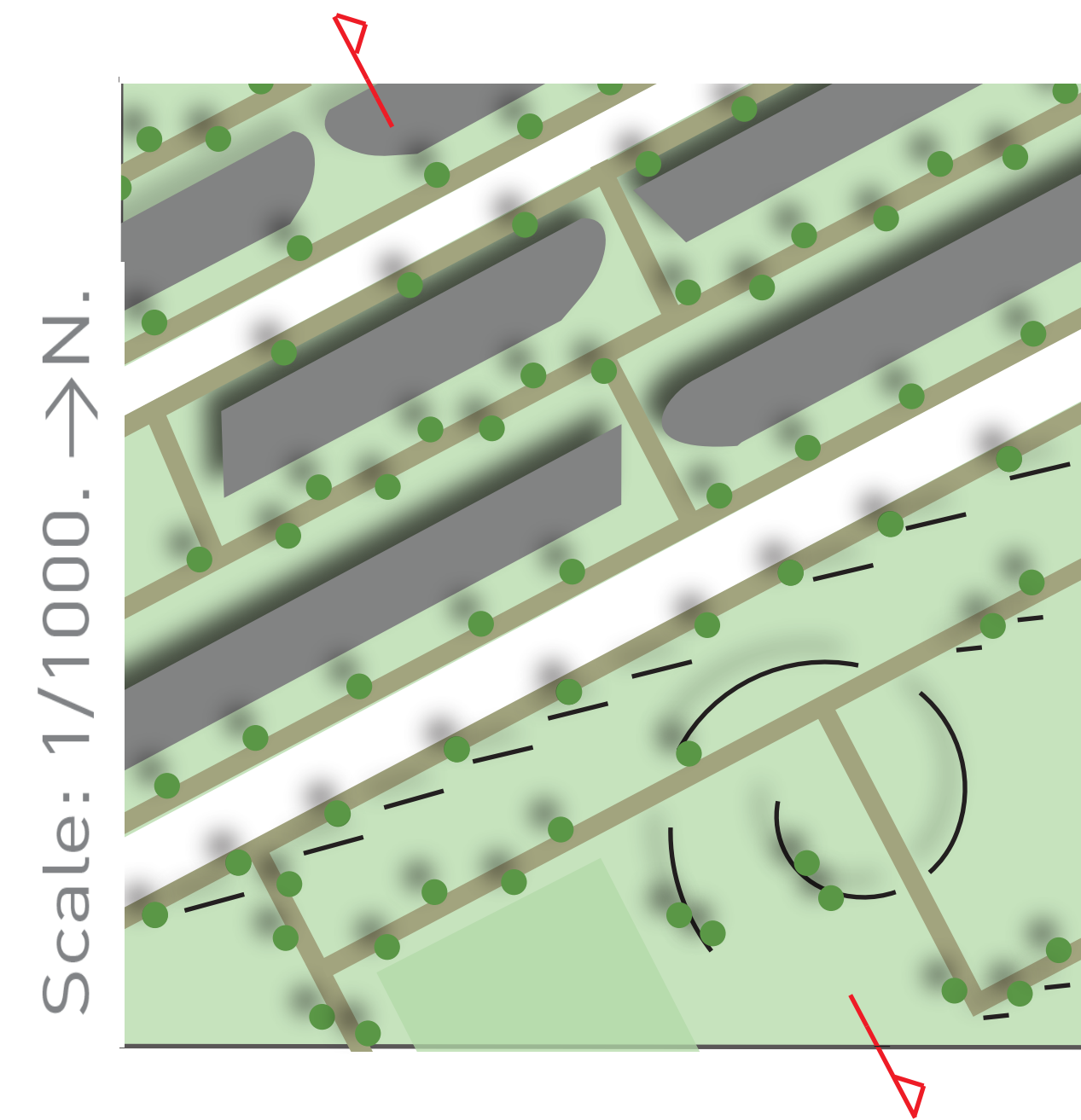


# Microclimate and Passive Climate Mitigation

## 5 Typologies and their relative benefits

**Goal:** To utilize site planning layouts which allow for the maximalization of local climate, and best possible outcomes with regard to solar and wind access to residences.



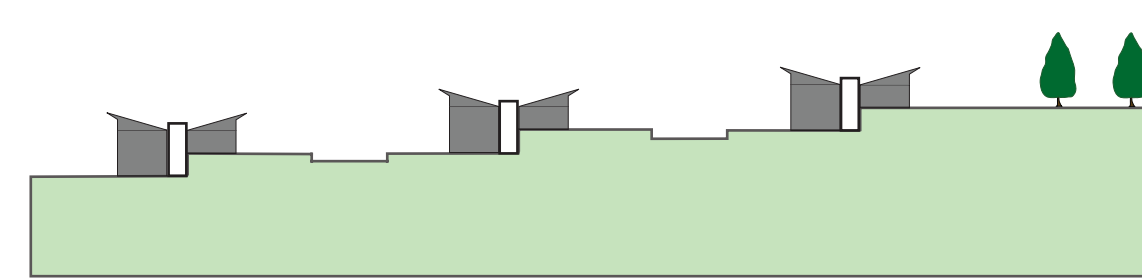
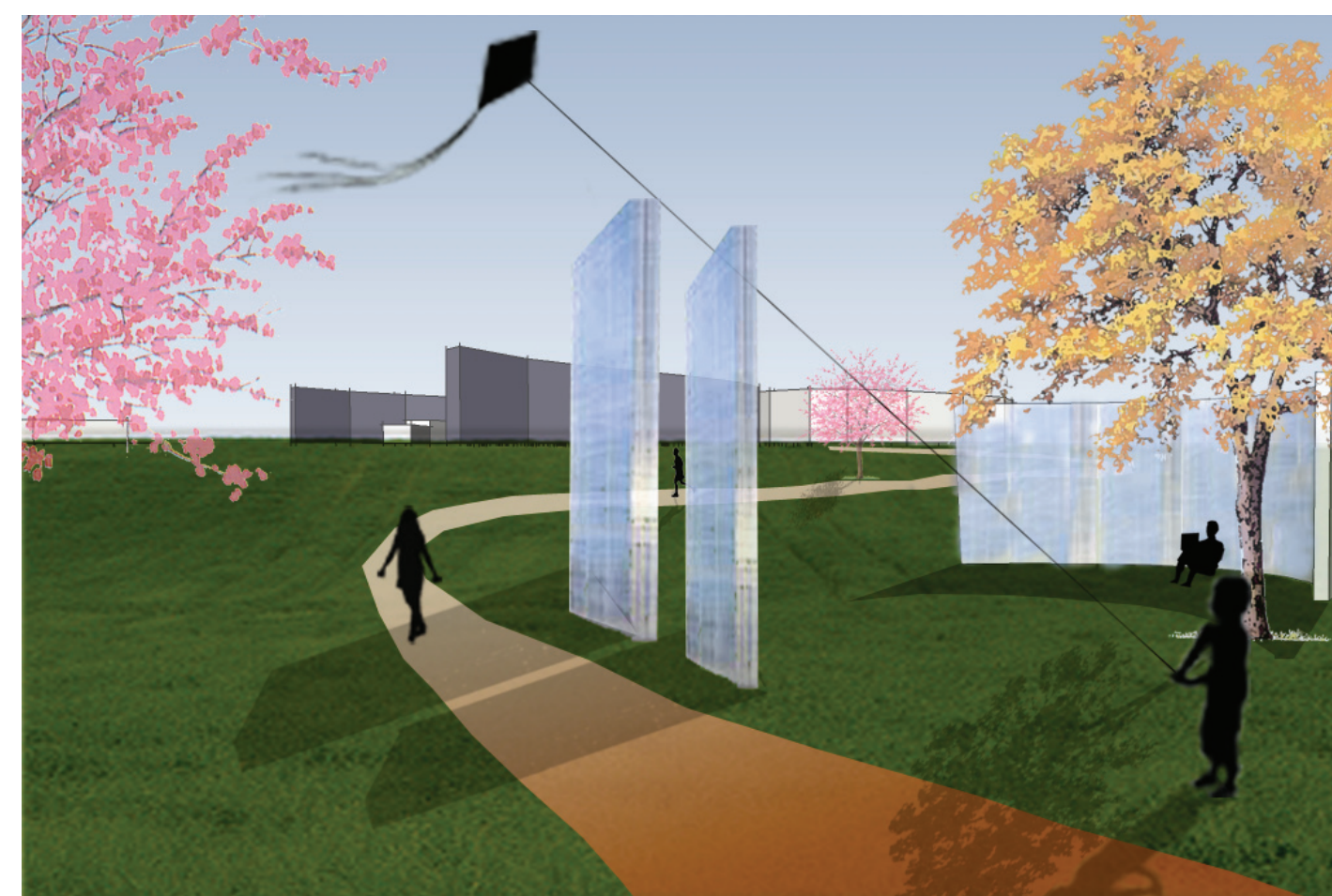
**Pros:**

Buildings: South Facing, with Blocks perforated to allow air circulation. Overall orientation minimizes afternoon sun exposure, well promoting active breeze.

Landscape: Utilizes dividers made of climate sensitive/living skin material to maximize micro-climate in open space/along main street.

**Cons:**

Dense buildings will result in decreased winter sun exposure. Flat Landscape negates natural solar/wind exposure advantages of siting on slope.



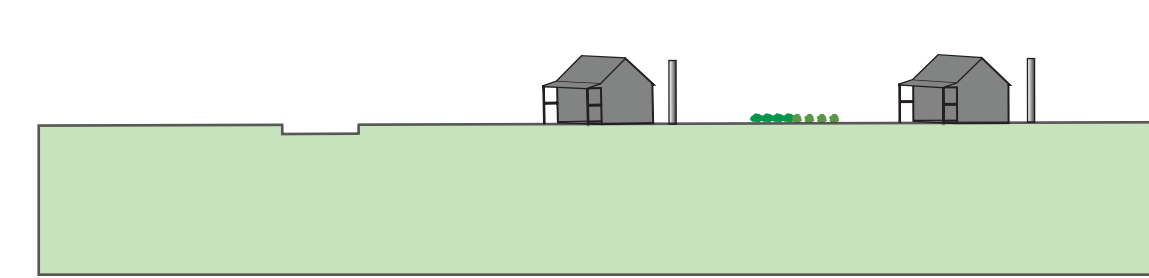
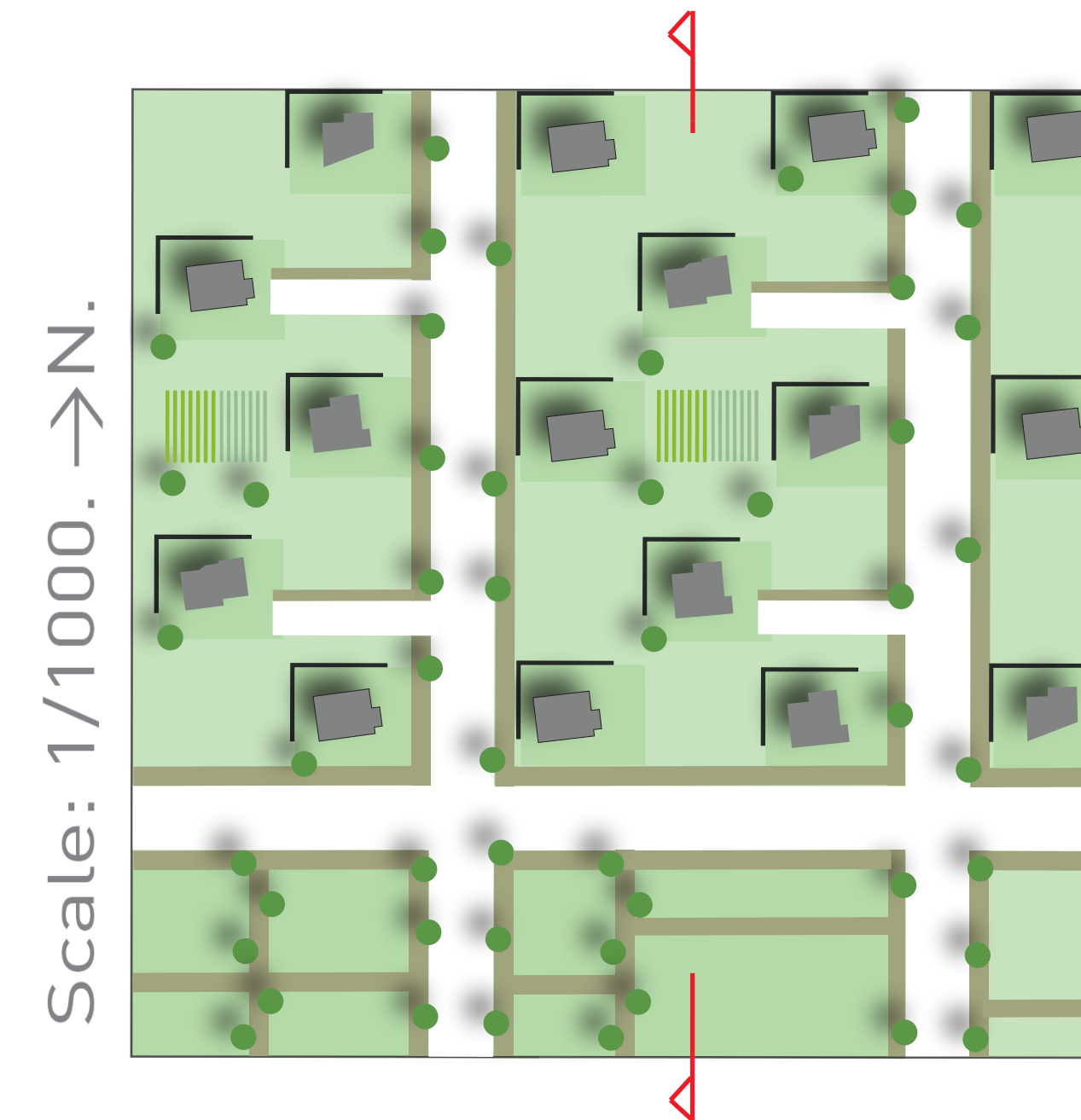
**Pros:**

Buildings: Partially South Facing, with Blocks perforated to allow air circulation. Overall orientation minimizes afternoon sun exposure, well promoting active breeze.

Landscape: Utilizes Stepping Slope to insure upward breeze and sun exposure to all south facing facades. Evergreen Trees to North minimize winter winds

**Cons:**

Following Natural Contours results in loss of optimal orientation for each building footprint.



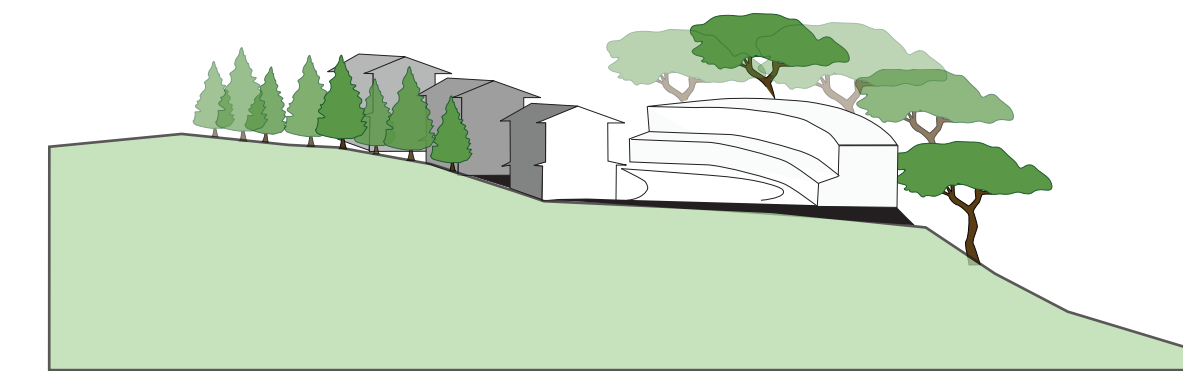
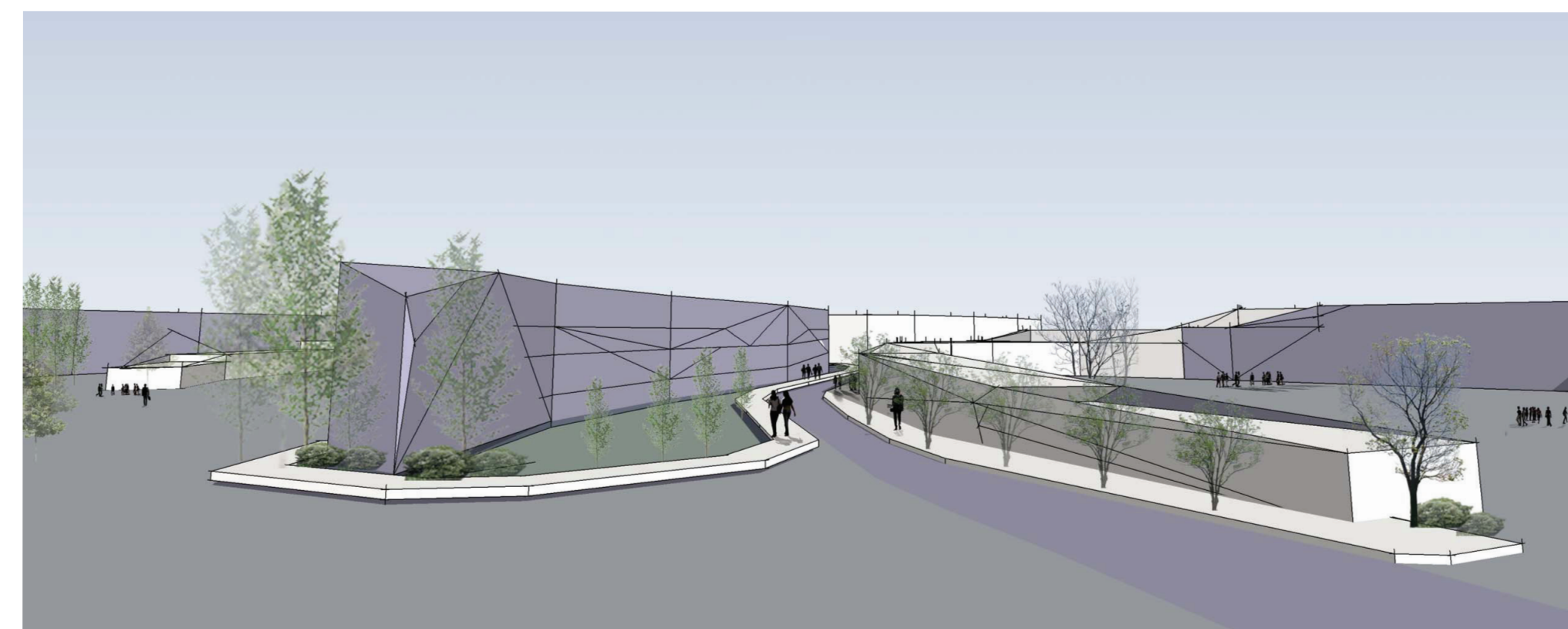
**Pros:**

Buildings: All utilize optimal 5 degrees South-East orientation. Micro-Climate around each individual building is enhanced by two sided climate sensitive/living skin fencing. Off-Set spacing allows for necessary distance between buildings to insure active wind movement.

Landscape: Open space at South of housing block allows wind to reach full "open field" speeds. Off-set spacing insures wind and solar exposure for each building.

**Cons:**

Need to off-set housing results in low density development.



**Pros:**

Buildings: Oriented along East West axis have better solar and wind exposures. All streets are oriented in a diagonal relation with the summer wind which comes from the south. The built form acts as a funnel that captures the wind and helps to move it in favorable directions along the street.

Landscape: Evergreen trees in the north of the buildings protect from the cold north wind. The deciduous trees in the summer offers shade in summer, but also permits the sun in the winter.

**Cons:**

Double loaded streets result in lack of solar gain sometimes. Need to provide sufficient space between to streets for sun and wind resulting in low density.