

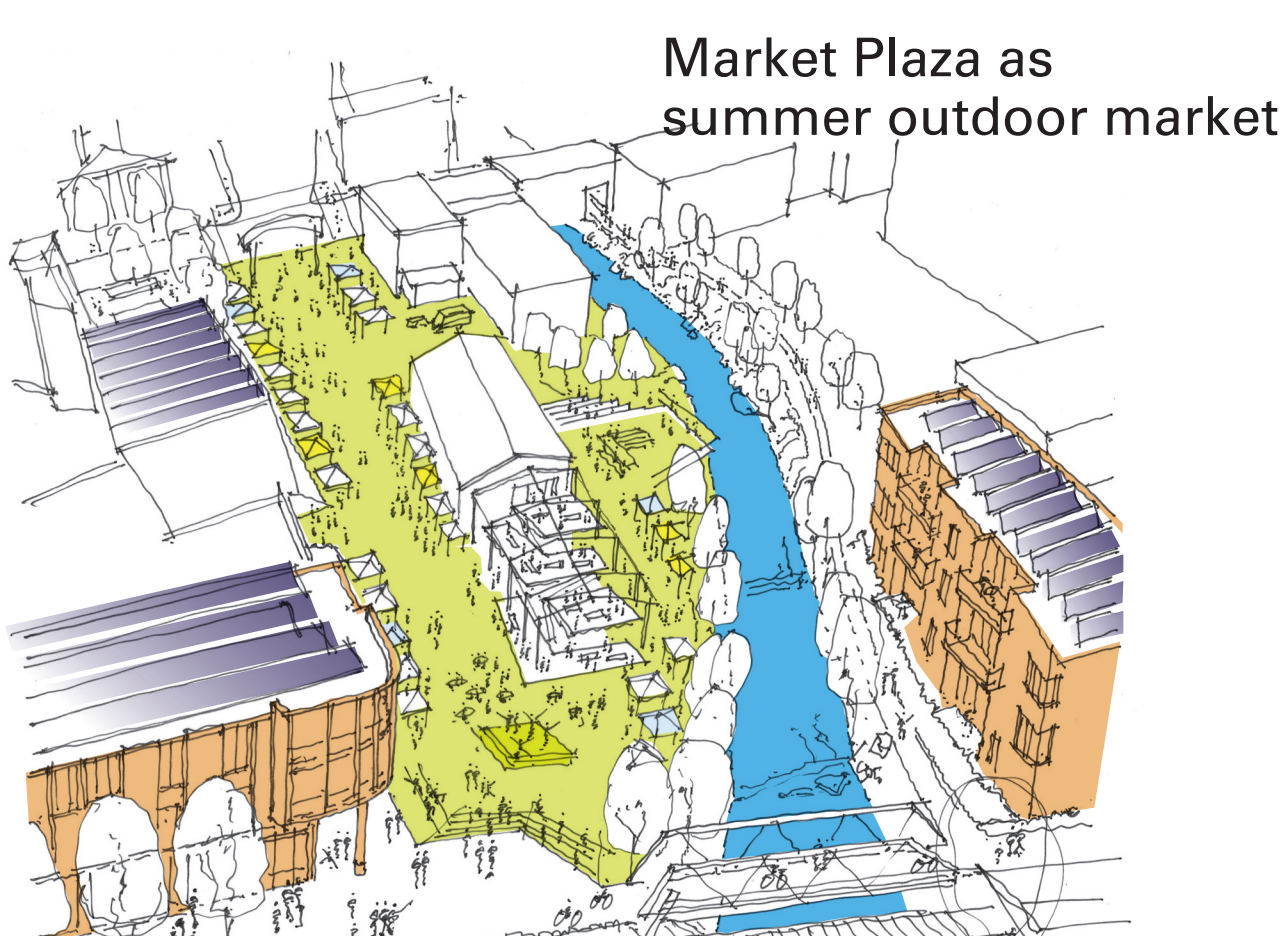
1,840,000 kWh/yr
generated by a new
ground mount PV array
(43% of load)

1,110,000 kWh/yr
generated by new rooftop
PV arrays
(26% of load)

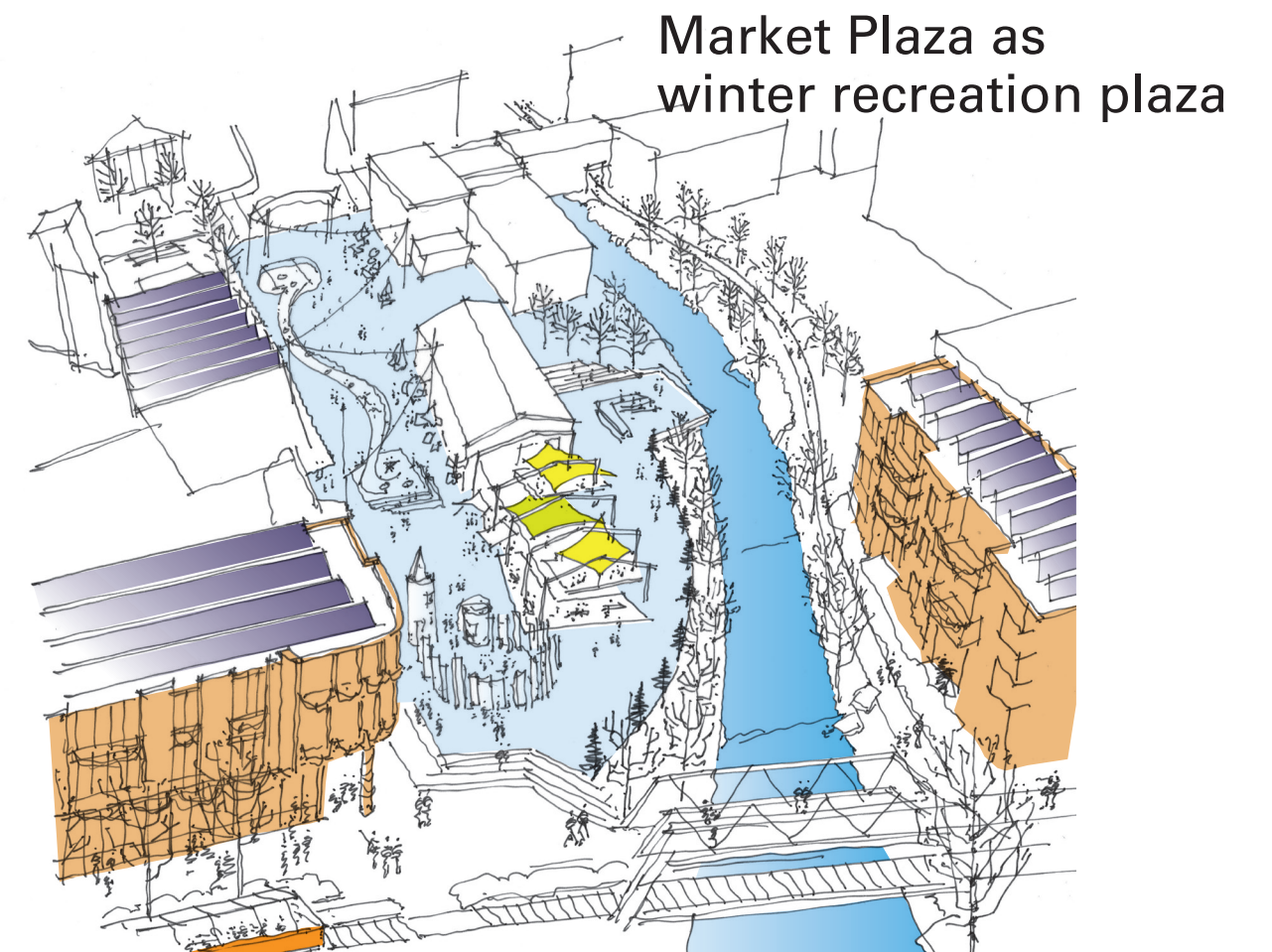
1,350,000 kWh/yr
generated by converting
the existing District
Energy plant to
cogeneration
(31% of load)

How to generate enough new energy

Solution: Our design includes appropriately designed PV on both new and existing buildings. The remaining PV would be ground mounted: our data indicates that to achieve net zero (including the energy required for the proposed people mover) an additional 1,600 kWp of PV is required. This will require 9 acres of land. The City stump Dump has a perfect site available accommodating 8.3 acres. An additional .7 acres will be needed and we feel can easily be found within the City limits.

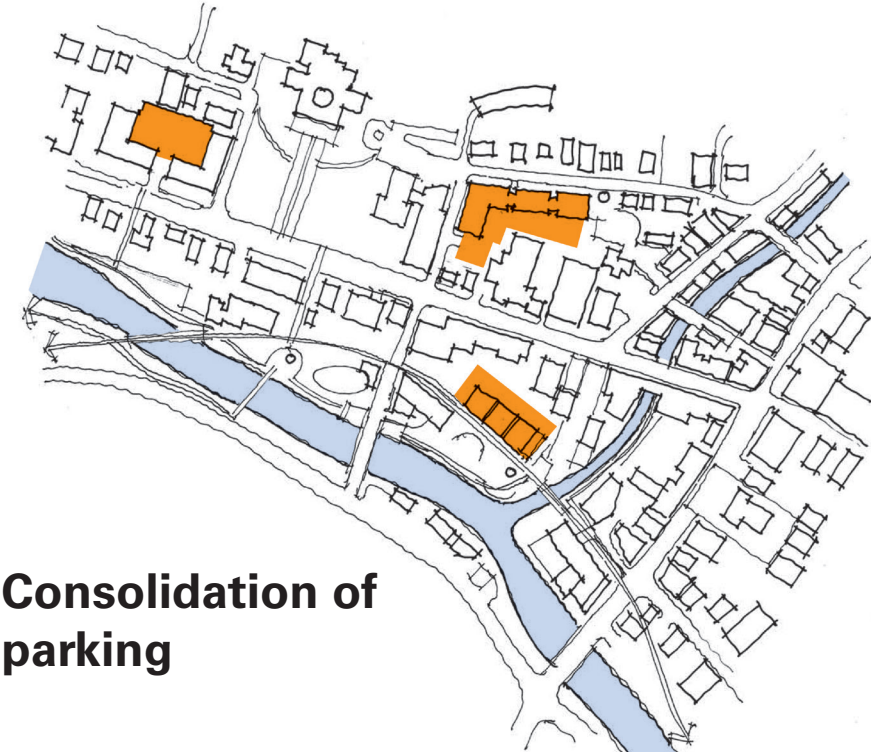
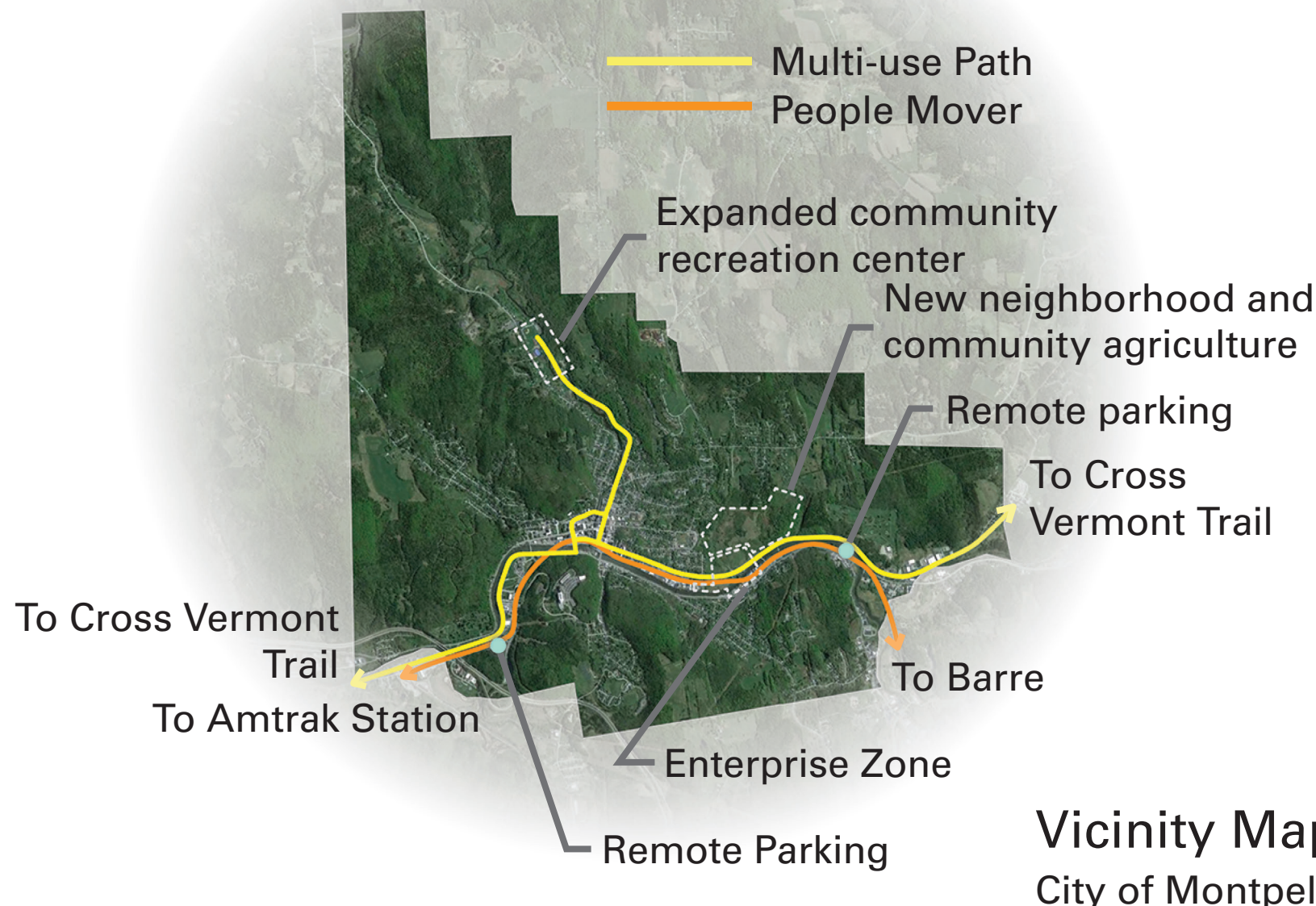
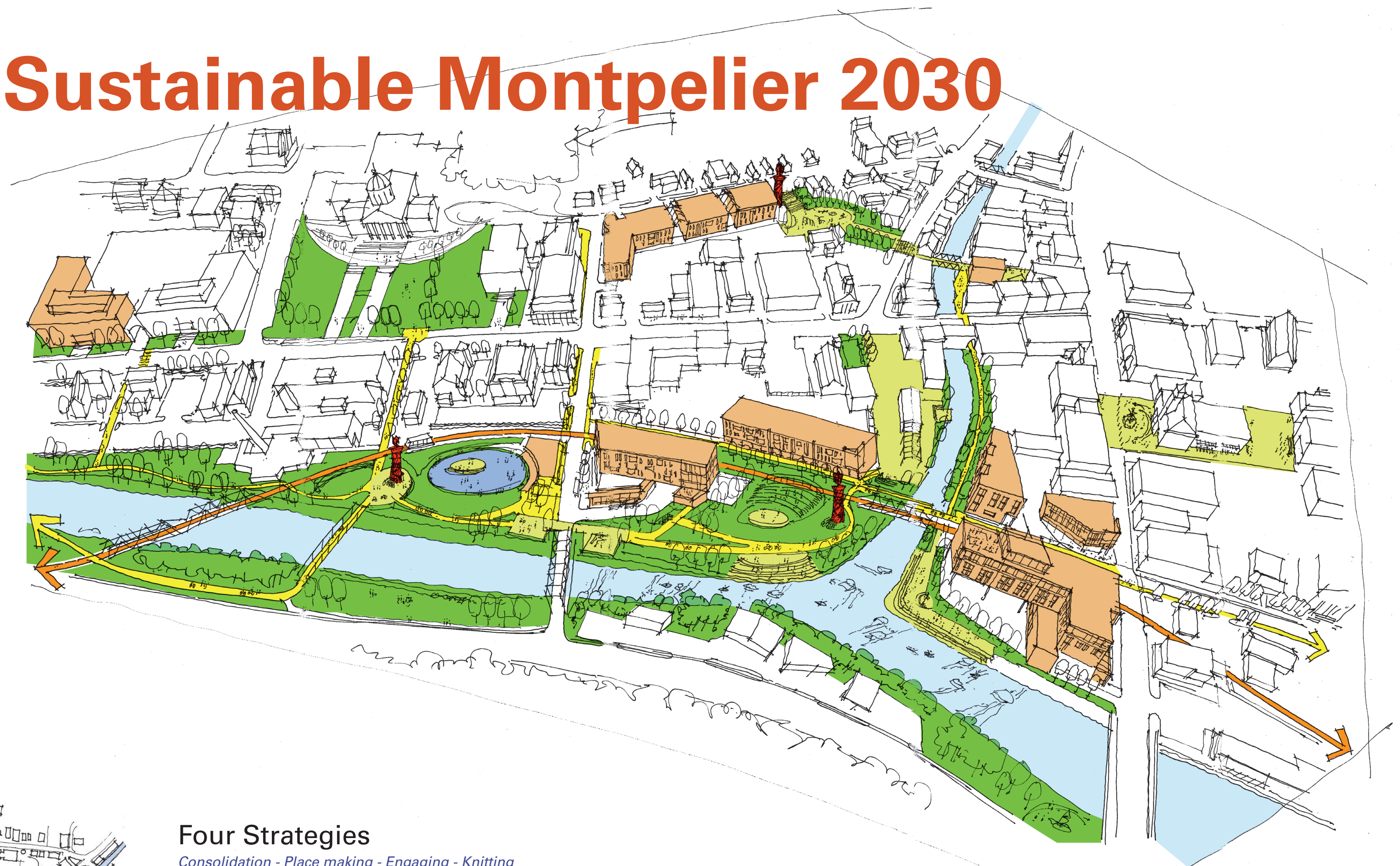


Market Plaza as summer outdoor market



Market Plaza as winter recreation plaza

Sustainable Montpelier 2030



Consolidation of parking



Engaging with the rivers



Place making



Knitting places together

Four Strategies

Consolidation - Place making - Engaging - Knitting

Consolidation of parking
Court Street (State of Vermont & private)
Potential Parking = 340 spaces
Potential Building, 3 levels = 46,500 sf
133 State Street (State of Vermont)
Potential Parking = 160 spaces
Potential Building, 5 levels = 120,000 sf
Capital Plaza site (private)
Potential Parking = 90 spaces
Potential Building = 63,000 sf

Place making
Space within the city is enhanced and recaptured for public use, performance, market space, and play.

Engaging with the rivers
By recapturing land for public use community activities can engage the river edges.

Knitting places together
New paths, primarily for pedestrians, bicycles, and the People Mover provide easier connections between functions in the city core.

How to add more housing

Increasing population without disrupting the urban fabric

Desire: Create 1,000 additional housing units downtown.

Reality: If we desire to maintain our existing City character, large-block housing structures will not work. Large housing developments are also dependent on significant private development in an economically difficult environment.

Solution: We propose a nuanced and diverse approach to housing creation. Our design includes appropriately scaled new construction downtown including small-scale downtown infill development, one and two family infill development in our beautiful neighborhoods and a program of accessory dwelling units (ADU's) in existing larger-than-needed homes. This approach allows for development at many scales for larger and small development firms as well as individual property owners. Introducing the income from ADU's will also help with maintaining affordability for private homeowners.

Housing in proposed buildings = 350 new units
Shaw's site = 4 x 19,000 sf 140 units
North Branch site = 4 x 6,400 sf 28 units
Capital Plaza site = 3 x 21,000 sf 120 units
One Taylor Street site = 3 x 13,000 sf 45 units
Langdon Street site = 3 x 4,000 sf 17 units

Other downtown sites = 220 new units

Accessory Dwelling Units (ADU's) = 100 new units
There are 480 existing large (≥ 2500 square feet) homes within a 15 minute walk of downtown. If 20% of these added Accessory Dwelling Units that would provide 100 new housing with minimal impact on the existing infrastructure or energy use profile of the City. And, this provides an additional income stream for homeowners.

Infill sites = 115 new units

Within a 15 minute walk of downtown there are infill development sites enough to accommodate 115 units of housing while keeping the existing neighborhood scale and character.

Barre Street Enterprise Zone = 200 new units

A neighborhood in Sabin's Pasture = 140 new units

A new neighborhood can be developed in Sabine Pasture, as multi-unit dwellings, to accommodate 140 new units of housing while still preserving a significant portion of the landscape for public use, tillable land for food production and green houses.

1,125 new homes developable within a 15 minute walk of downtown

A Four Season City

We live in a diverse climate and embrace the four seasons. Unfortunately many Cities do not take advantage of the seasons, especially winter. All of our public spaces and energy modeling take into account seasonal changes in a manner that brings out the best in each. The proposed public spaces are located in areas that take advantage of views, sun orientation, prevailing wind patterns and seasonal attributes. Our Market Place and Riverfront Park especially are designed to embrace winter and encourage out of doors interaction, recreational activities for all ages as well as providing business opportunities. The Market Place plaza transitions from a full scale outdoor market in the spring, summer and fall to a winter recreation plaza including a sloped sledding run, ice sculpture gallery, snow structure and canopied ice bar/café. The indoor portion of the market will function year round.

Surface parking removed

behind state buildings along State Street -125 spaces
Large river front state lot -170 spaces
Heney lot -70 spaces
French Block/Jacobs lot -50 spaces
City Hall lot -24 spaces
Post Office lot -32 spaces
County Court lot -22 spaces

493 spaces removed

Parking spaces added

Court Street garage +340 new spaces
133 State Street garage +160 new spaces
Capital Plaza garage +90 new spaces

590 spaces created

Net effect: 6.6 acres less paving

290,000 sf of paving removed = 6.6 acres less

97 new parking spaces added to downtown

360 new parking spaces downtown protected from snowfall in the winter and heat during the summer