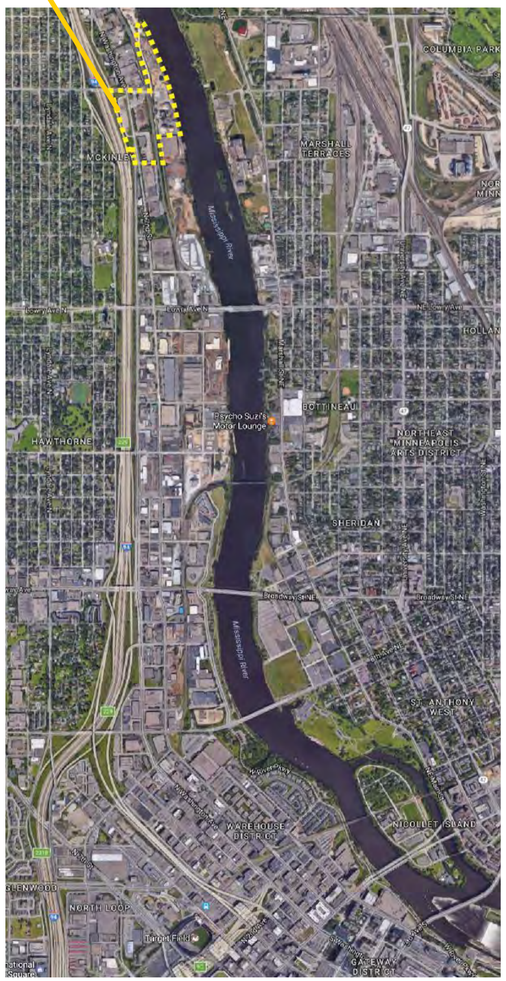
SITE



GOALS

SUSTAINABLE
-clean energy generation
-local ag (farmers' market)
-reduce imperm surfaces, increase natural vegetation
-stormwater collection/filtration
-soil remediation

INCLUSIVE
-accessible for residents and other users with limited mobility
-programmed to draw in public
-supportive of gatherings

RECOGNIZANT
-maintain and feature select industrial remnants
-material pallette carefully curated

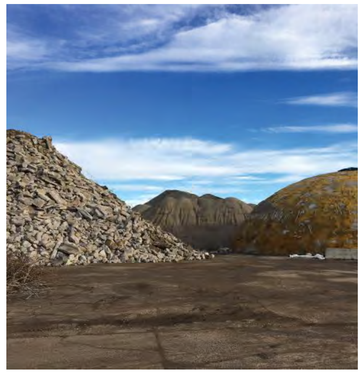
ACTIVE
-more people and more recreation
-bike/walk trails
-kayaking rental and docking

CONNECTIONS
-embrace riverfront
-guided views, incl to downtown

PROGRAM

-53-unit co-op housing with a mix of unit sizes and styles
-Retail, restaurant(s), day care
-Farmers' market & solar farm
-Restorative parkland along river with programmed public functions





2017 SEARCH FOR SHELTER DESIGN CHARRETTE
Creating Affordable Design Solutions to Meet Minnesota's Housing Needs Since 1987

February 19, 2017
bit.ly/aiamnsfs

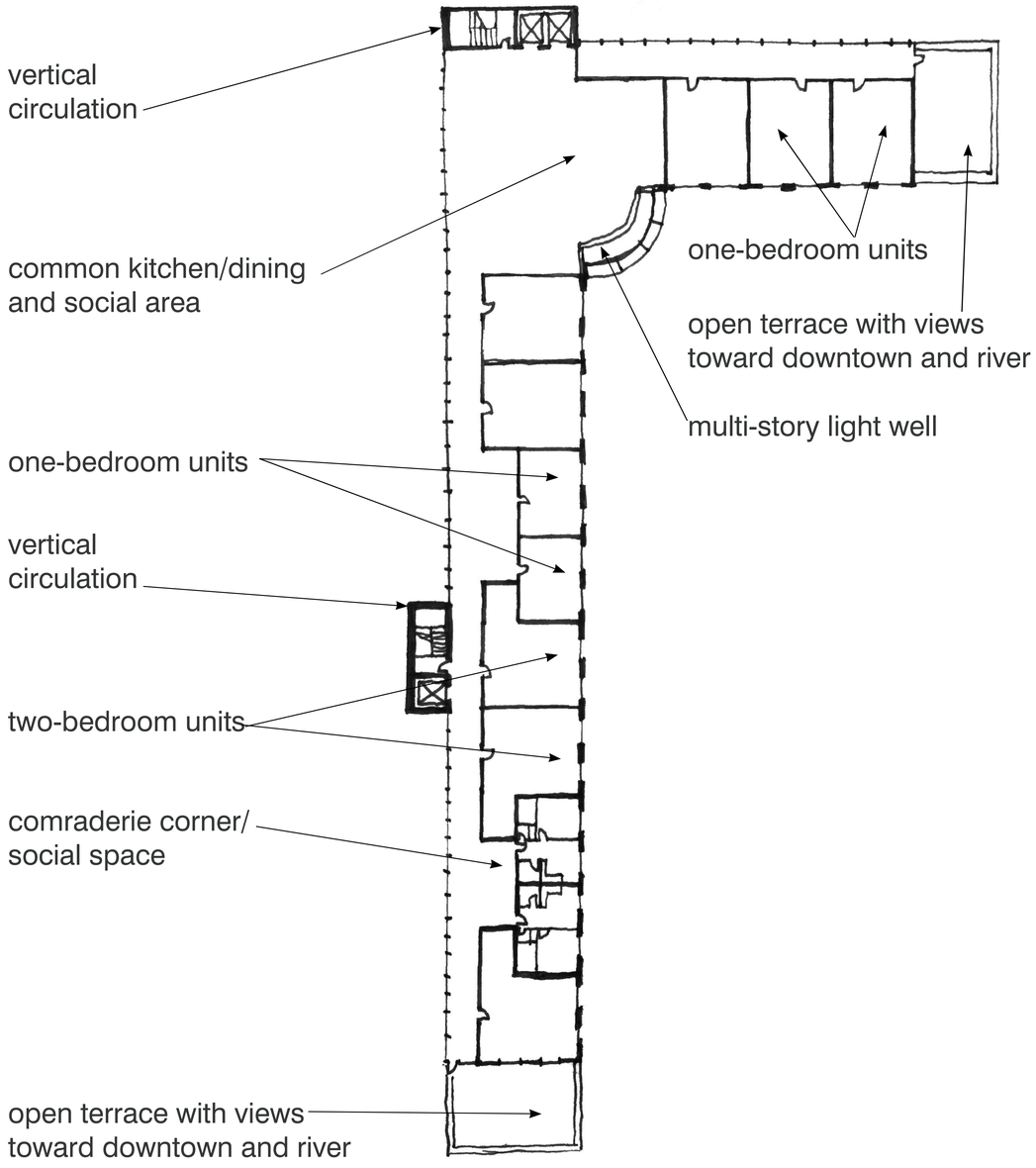
FRIENDS OF FARVIEW - North Minneapolis
Team Members: Garrett Burnham, Beth Evanson, Scotia Holmgren, Salim Makhoul, Liliana Ninaquispe, Kyle Palzer, Arseny Pekurovsky, Karla Schmitt, Rachel Williams

FRIENDS OF FARVIEW
AIA Minnesota

CONCEPTUAL PERSPECTIVE:
looking southwest from intersection of
Dowling & Washington Aves

SITE OVERVIEW
looking northwest

TYPICAL UPPER LEVEL FLOOR PLAN

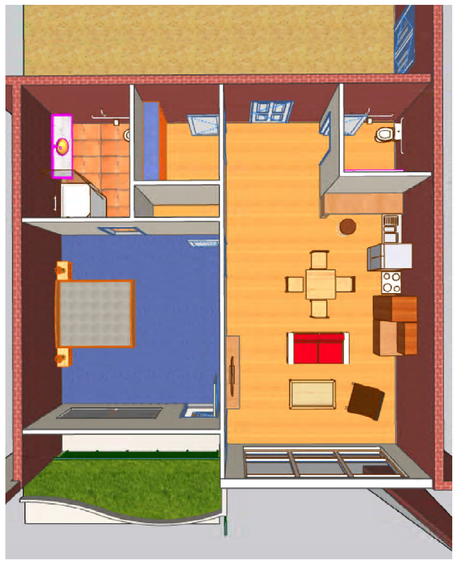


FRIENDS OF FARVIEW - North Minneapolis
Team Members: Garrett Burnham, Beth Evanson, Scotia Holmgren,
Salim Makhoul, Liliana Ninaquispe, Kyle Palzer, Arseny Pekurovsky,
Karla Schmitt, Rachel Williams

BUILDING SECTION
through common social area
and multi-story lightwell

EXTERIOR VIEW
of common social area
and multi-story lightwell

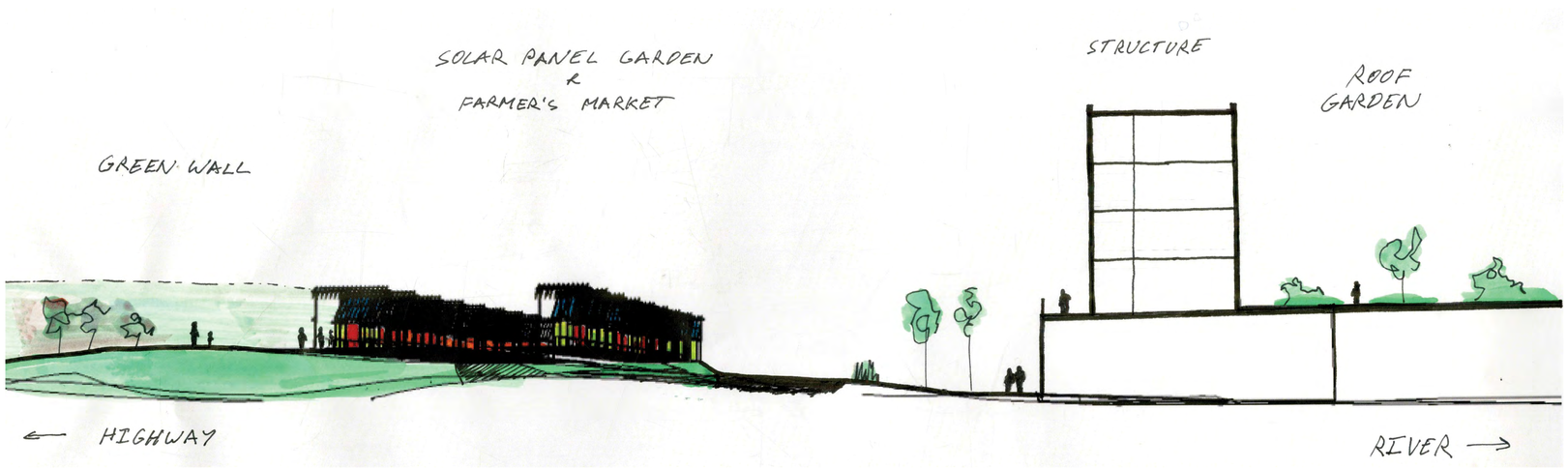
UNIT DESIGN:
typical one-bedroom
configurations

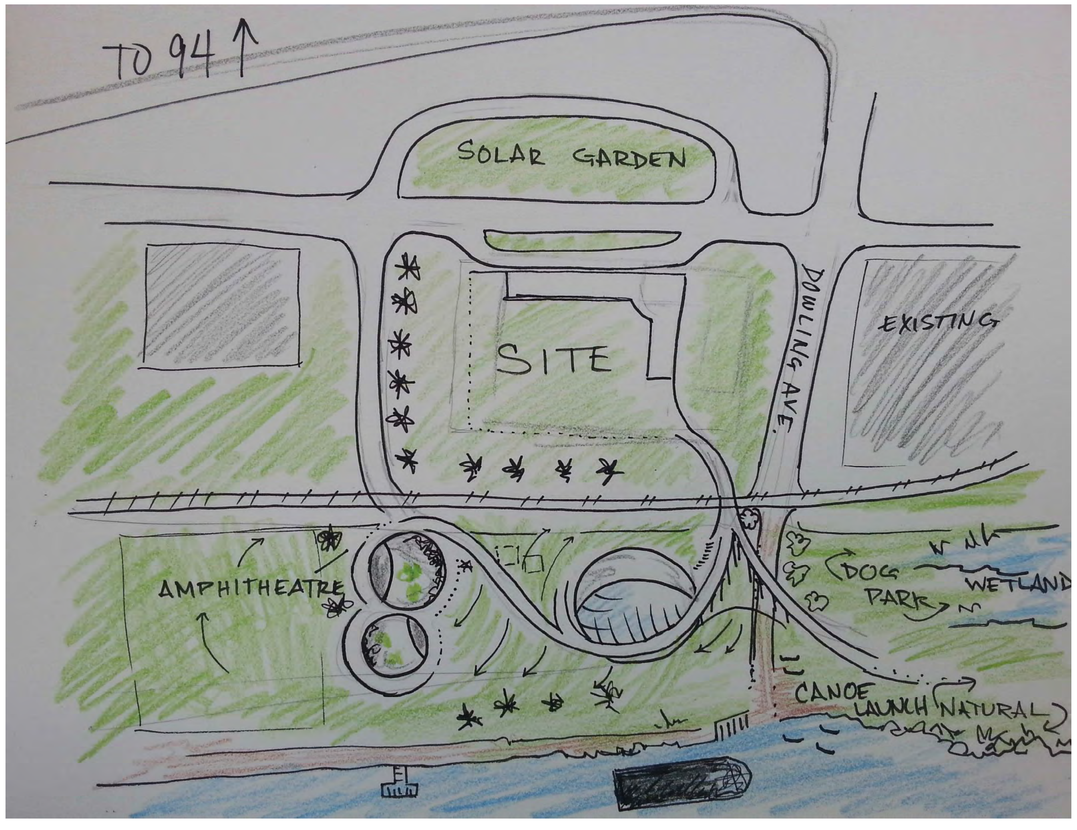


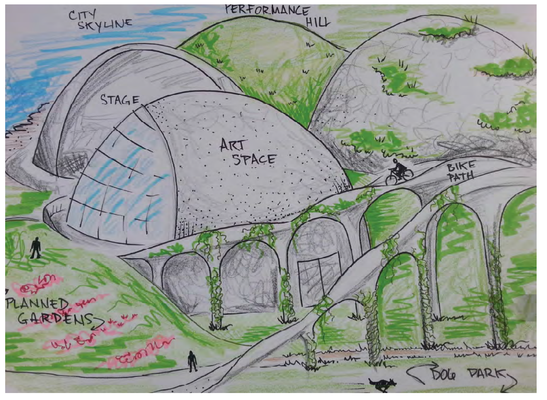
COMRADERIE CORNERS:
social nooks for small groups

CONCEPTUAL PERSPECTIVE:
looking toward concrete shell
repurposed into amphitheater

CONCEPTUAL PERSPECTIVE:
looking south along
river bike/walkway







2017 SEARCH FOR SHELTER DESIGN CHARRETTE
Creating Affordable Design Solutions to Meet Minnesota's Housing Needs Since 1987

February 19, 2017
bit.ly/aiamnsfs

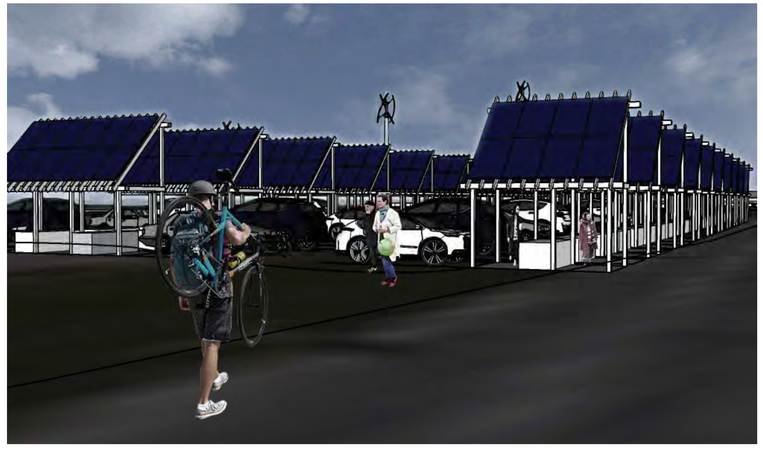
FRIENDS OF FARVIEW - North Minneapolis
Team Members: Garrett Burnham, Beth Evanson, Scotia Holmgren,
Salim Makhoul, Liliana Ninaquispe, Kyle Palzer, Arseny Pekurovsky,
Karla Schmitt, Rachel Williams

FRIENDS OF FARVIEW

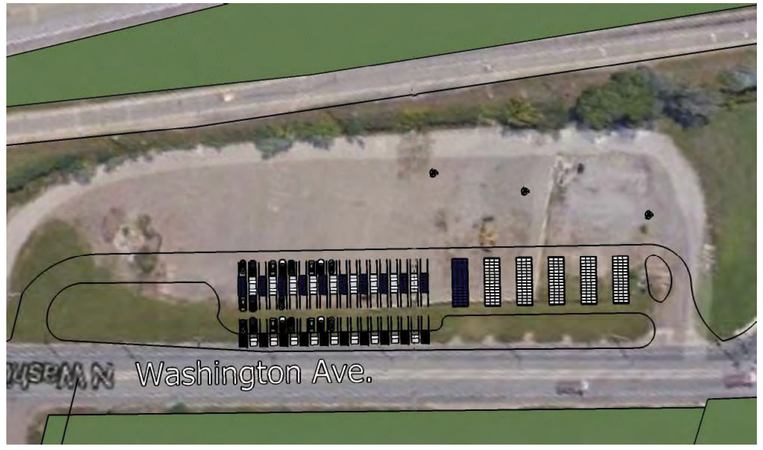
AIA Minnesota

PROPOSAL | SUSTAINABILITY

STRATEGY COMPARISONS & ALTERNATIVE ENERGY



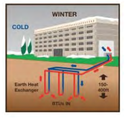
PERSPECTIVE VIEW
of farmers' market and solar garden adjacent to housing



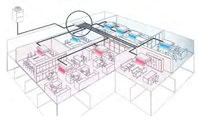
AERIAL VIEW
of farmers' market and solar garden adjacent to housing

Bundles of strategies

Standard strategies	· 5% improved efficiency beyond code · VFD pump and fan control · Programmable thermostats · Carbon monoxide control in the garage · Direct fired furnace in garage · 95% efficient service water heating · Energy star appliances · Low flow fixtures · R-30 roof · Clear low-e double glazed	Saves 8.4-9.7 kbtu/sf/yr beyond code	
Improved lighting	· LED lighting · Occupancy sensors · Daylighting control	Saves 5.3-6.8 kBtu/sf/yr	~ 4 year payback
Improved HVAC	· 30% improved efficiency heat pumps · 95% efficient boiler and furnace · ECM motors · Total heat recovery · Occupancy sensor control of temperature and ventilation	Saves 16.5-17.6 kBtu/sf/yr	~10 year payback
Improved envelope	· R-24 walls · R-60 roof · Triple glazed	Saves 3.0-4.5 kBtu/sf/yr	~ 50 year payback
On-site generation	· Solar PV · Wind · Solar water	Generates 5.3 kBtu/sf/yr	

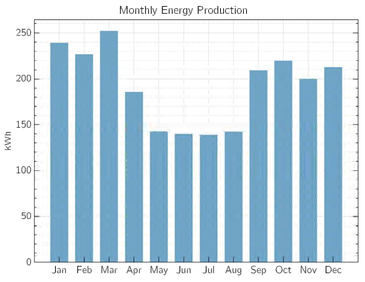


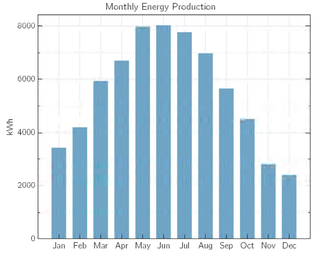
Ground loop heat pump
+most efficient options
-higher first cost
-river may be used for heat sink



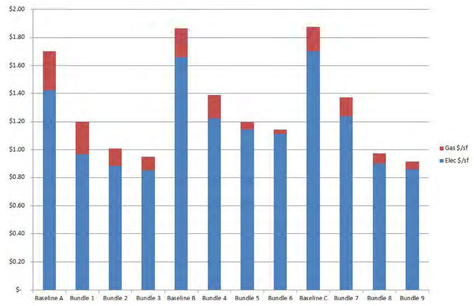
Variable refrigerant flow
+lower carbon emissions
-refrigerant loops, newer technology
-higher cost (electric heat)

Water loop heat pump
+conventional system
-least efficient
-lower cost (gas heat)

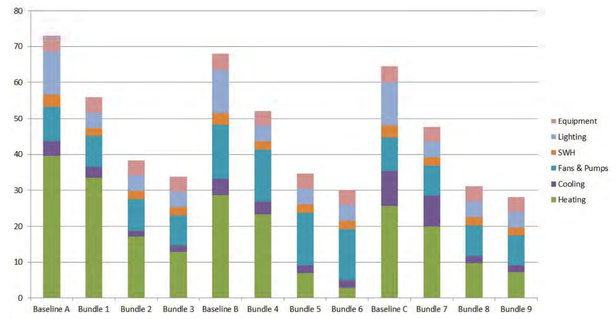




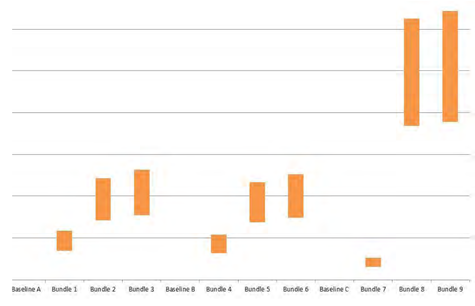
ENERGY COST



ENERGY USE



POTENTIAL UTILITY INCENTIVE



2017 SEARCH FOR SHELTER DESIGN CHARRETTE

Creating Affordable Design Solutions to Meet Minnesota's Housing Needs Since 1987

February 19, 2017
bit.ly/aiamnsfs

FRIENDS OF FARVIEW - North Minneapolis

Team Members: Garrett Burnham, Beth Evanson, Scotia Holmgren, Salim Makhoul, Liliana Ninaquispe, Kyle Palzer, Arseny Pekurovsky, Karla Schmitt, Rachel Williams

FRIENDS OF FARVIEW

AIA Minnesota