







what is a "classroom"?

third space . . .

...it's what the students drew

third space

Provide opportunities for interactive learning : “Learning by Doing”

Provide opportunities for active, creative social interactions

Demonstrate core curriculum

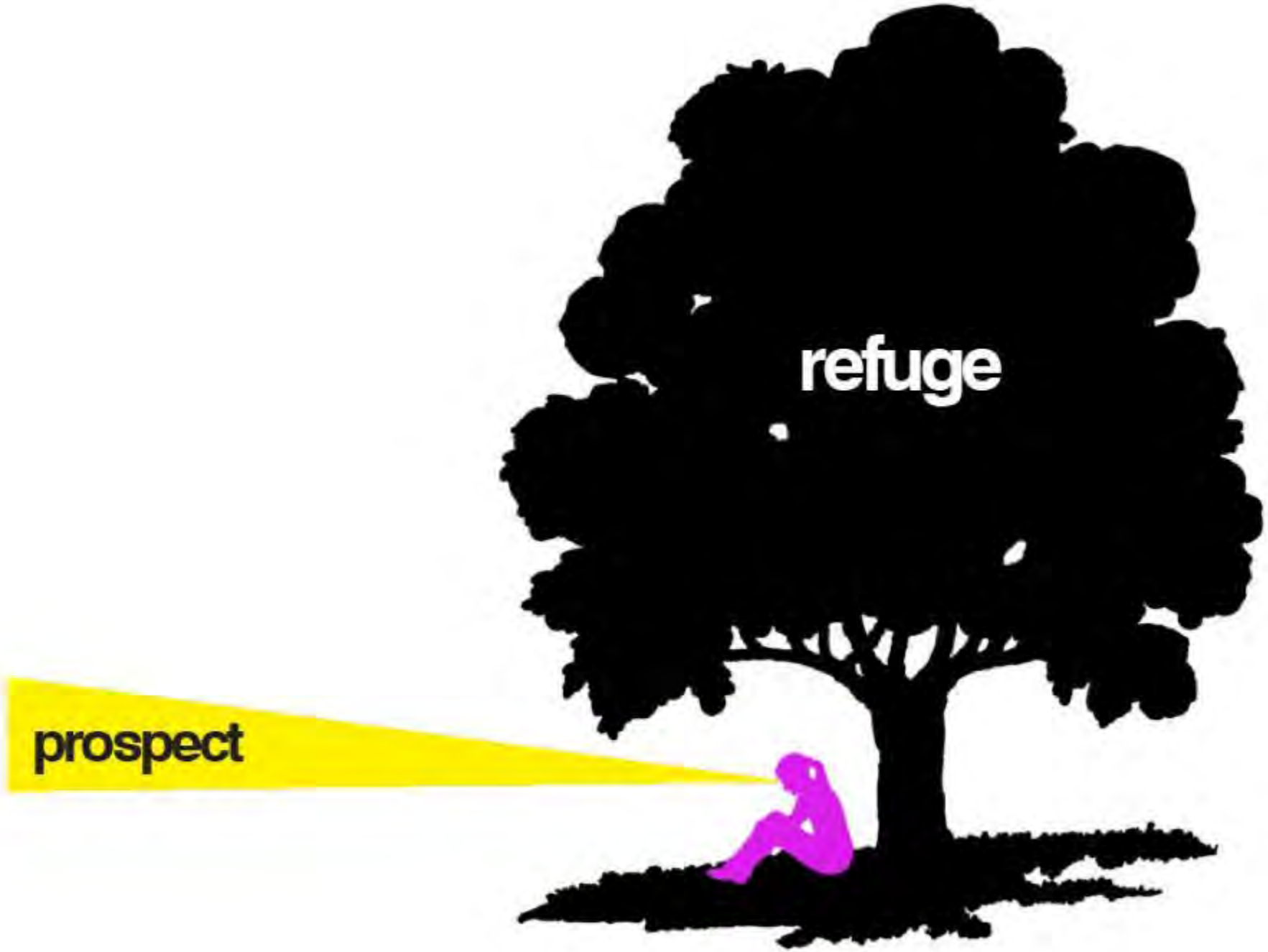
Inspire students to become curious, independent thinkers

Promote physical activity

Support both independent learning + collaborative activity

Promote excitement for students towards coming to school + learning

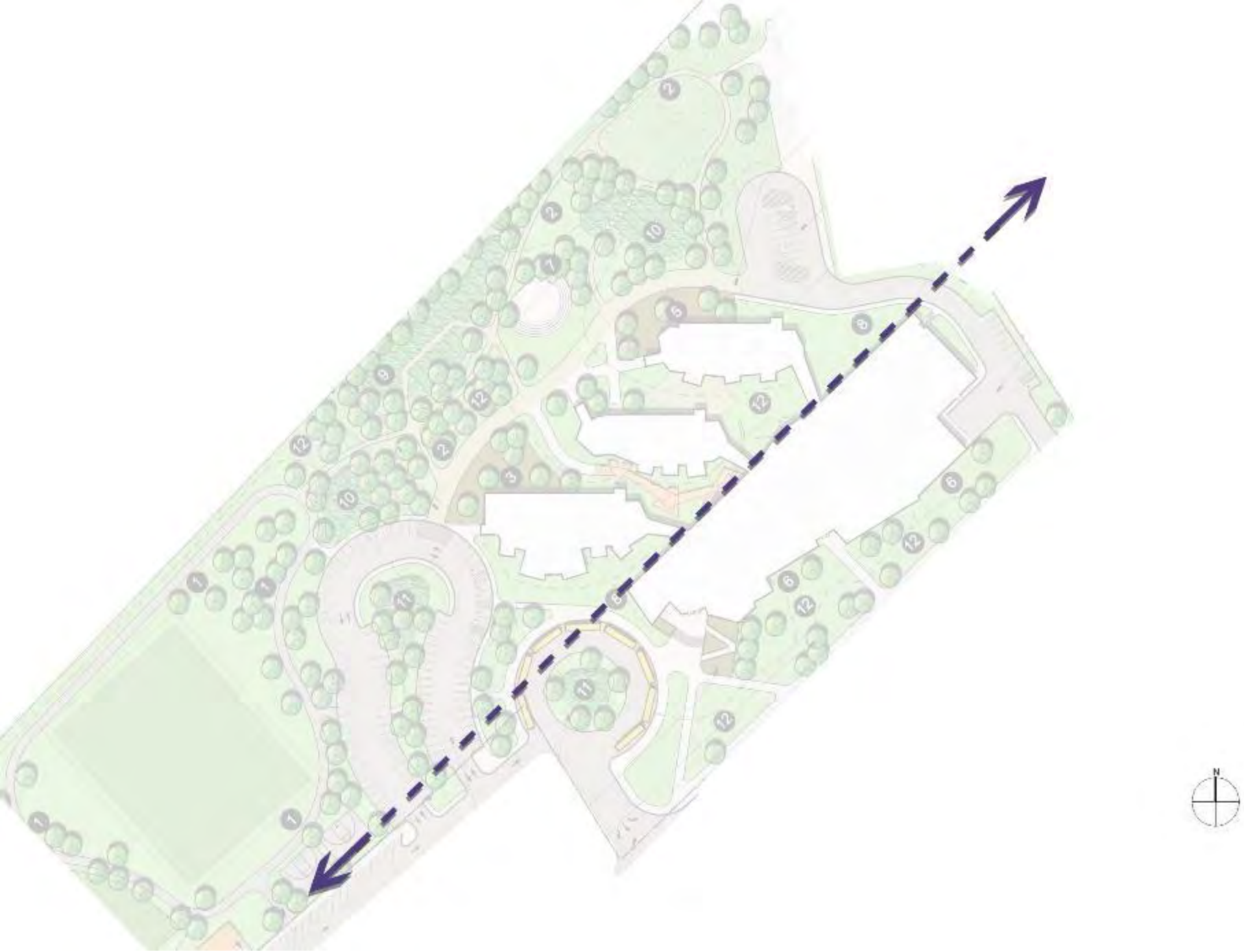
we will create a safe and welcoming place for students and the community

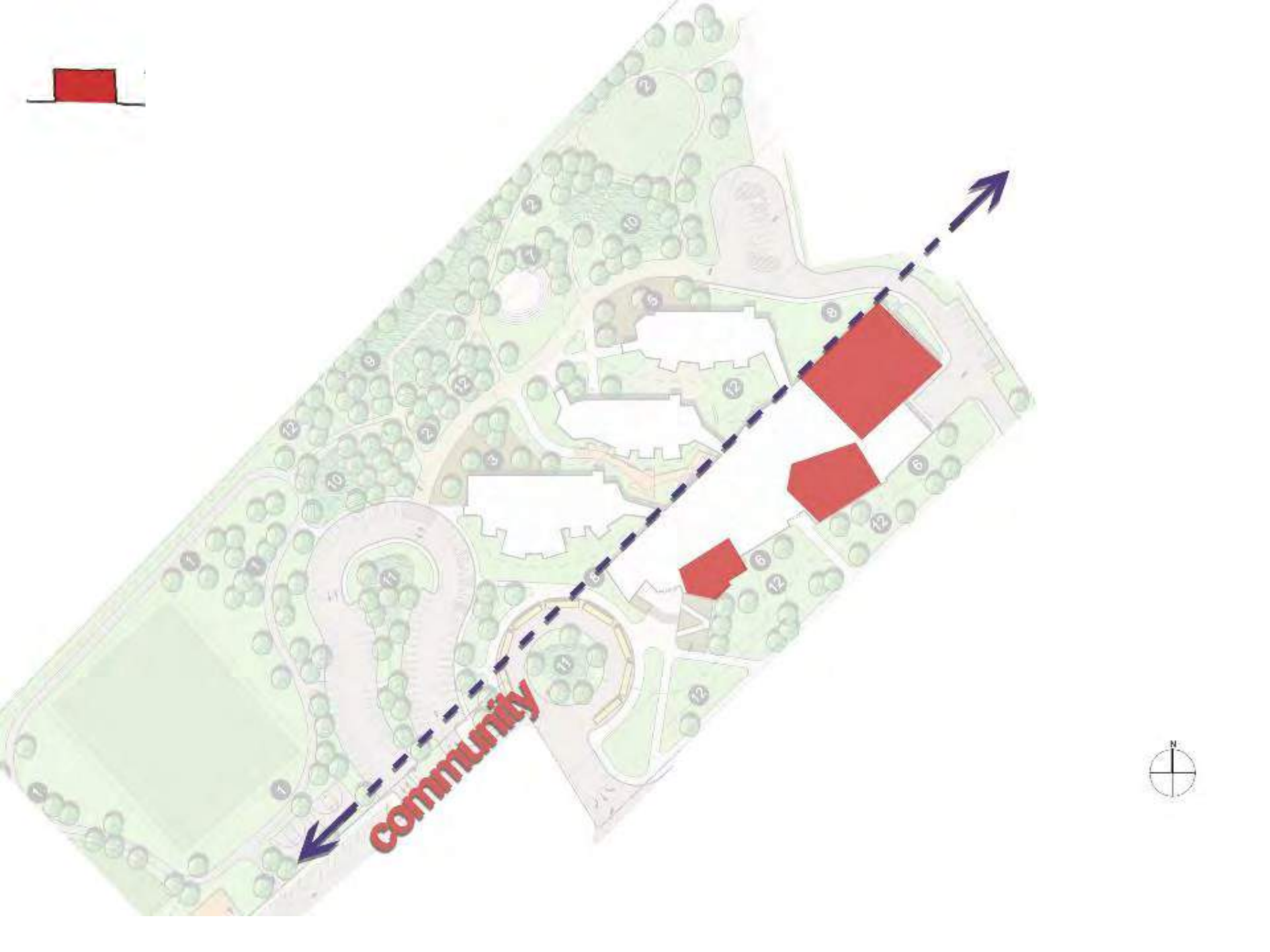

refuge
prospect

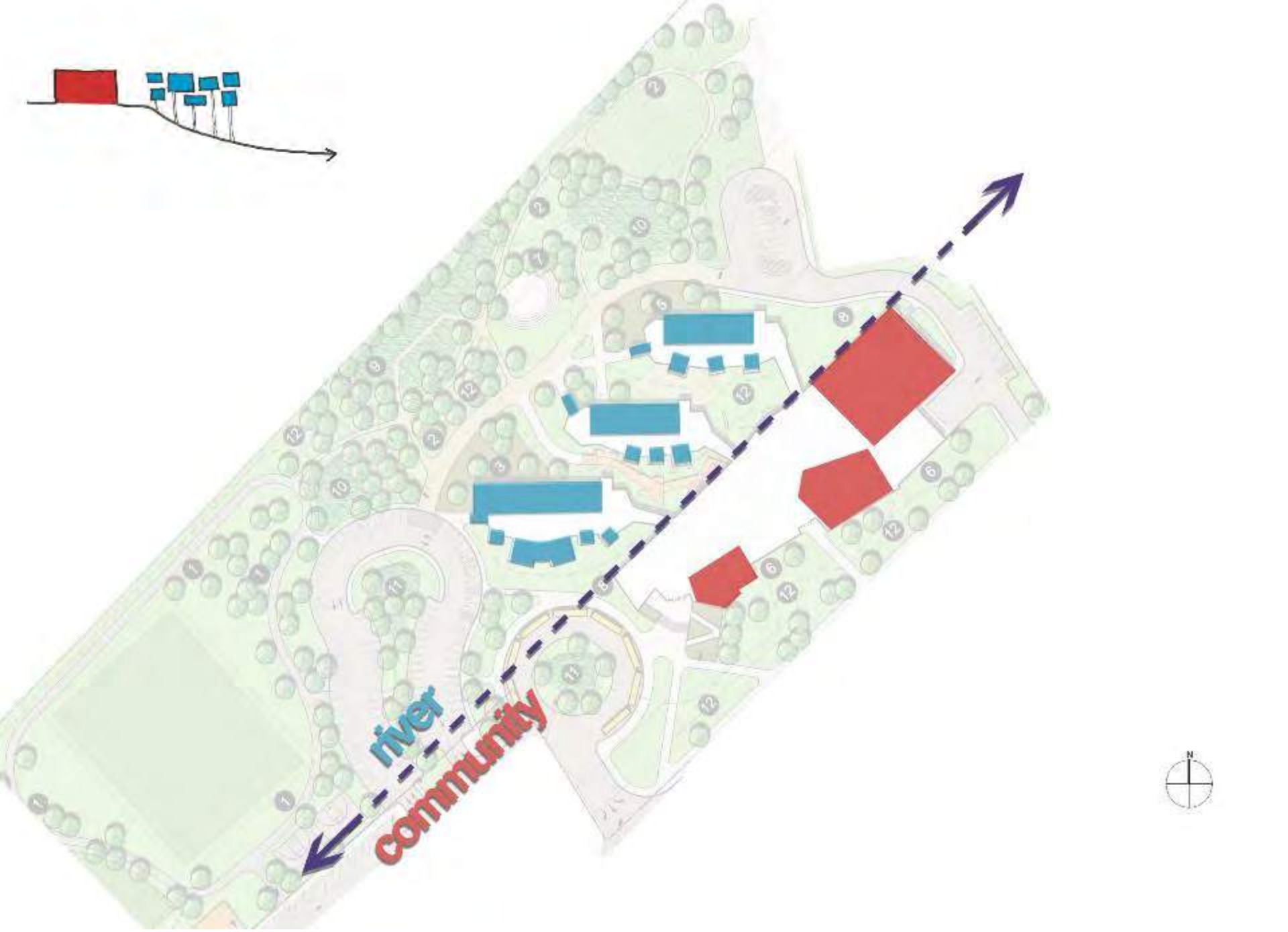
design

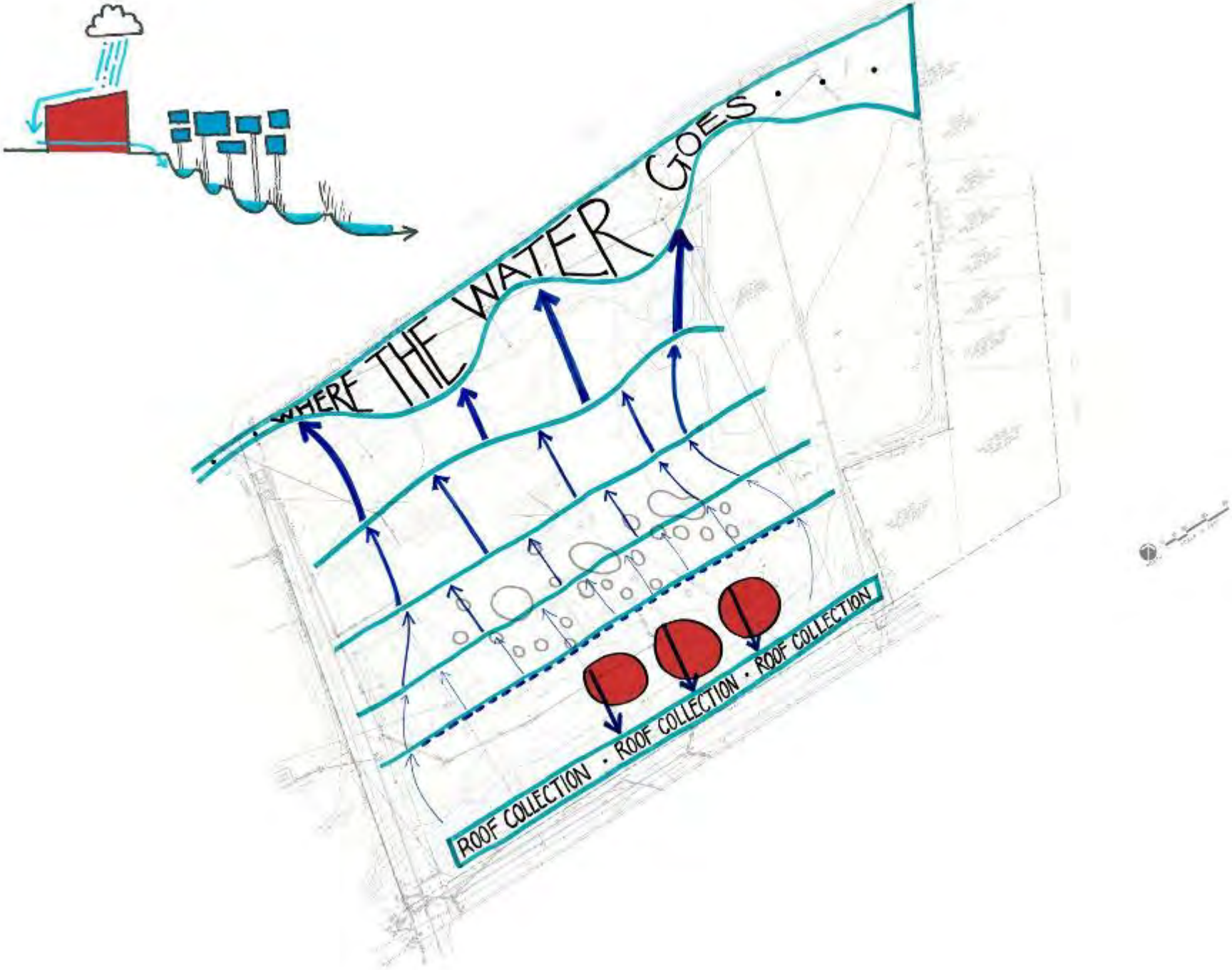
the stack :

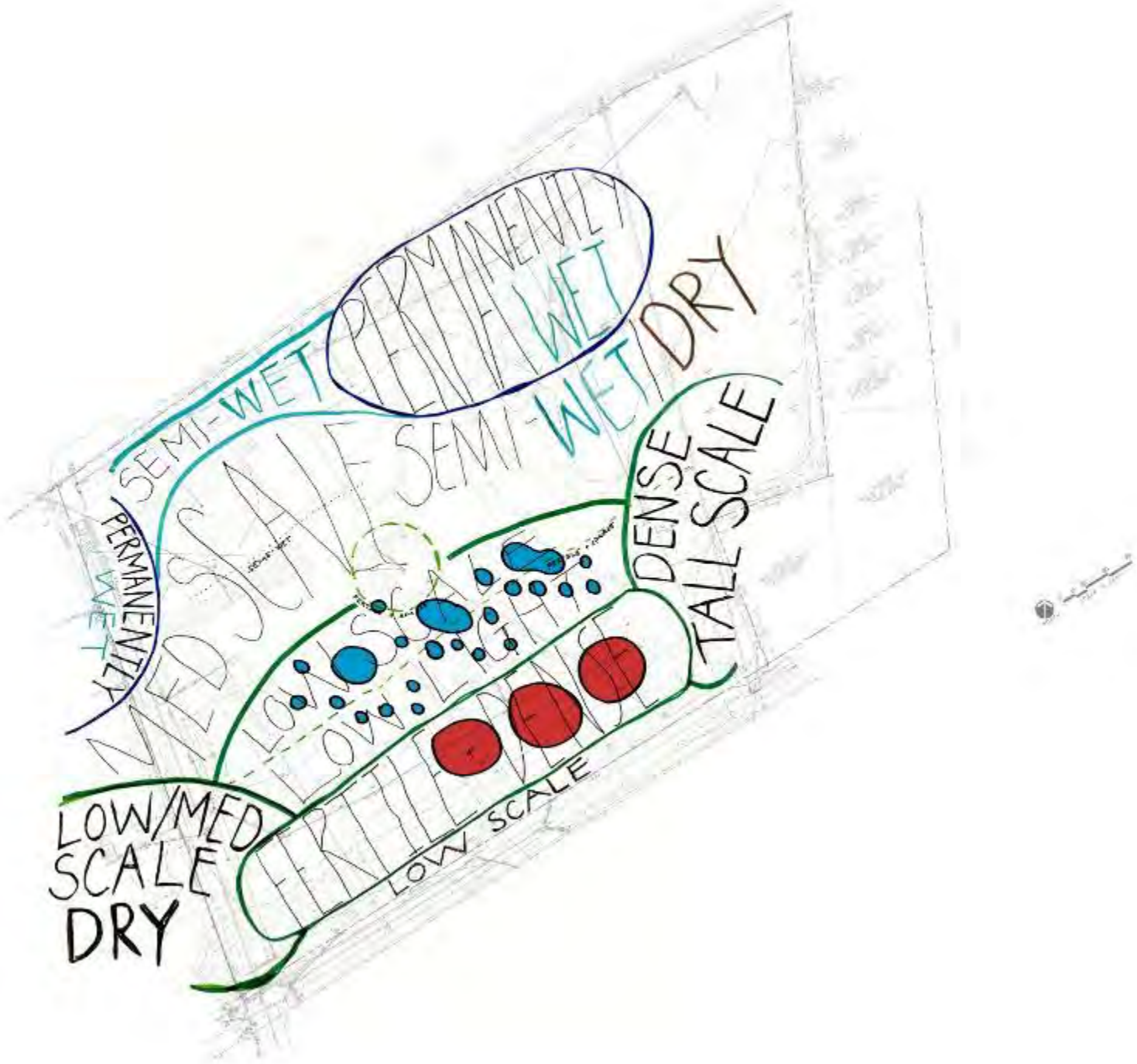
building + site as markers of system flows

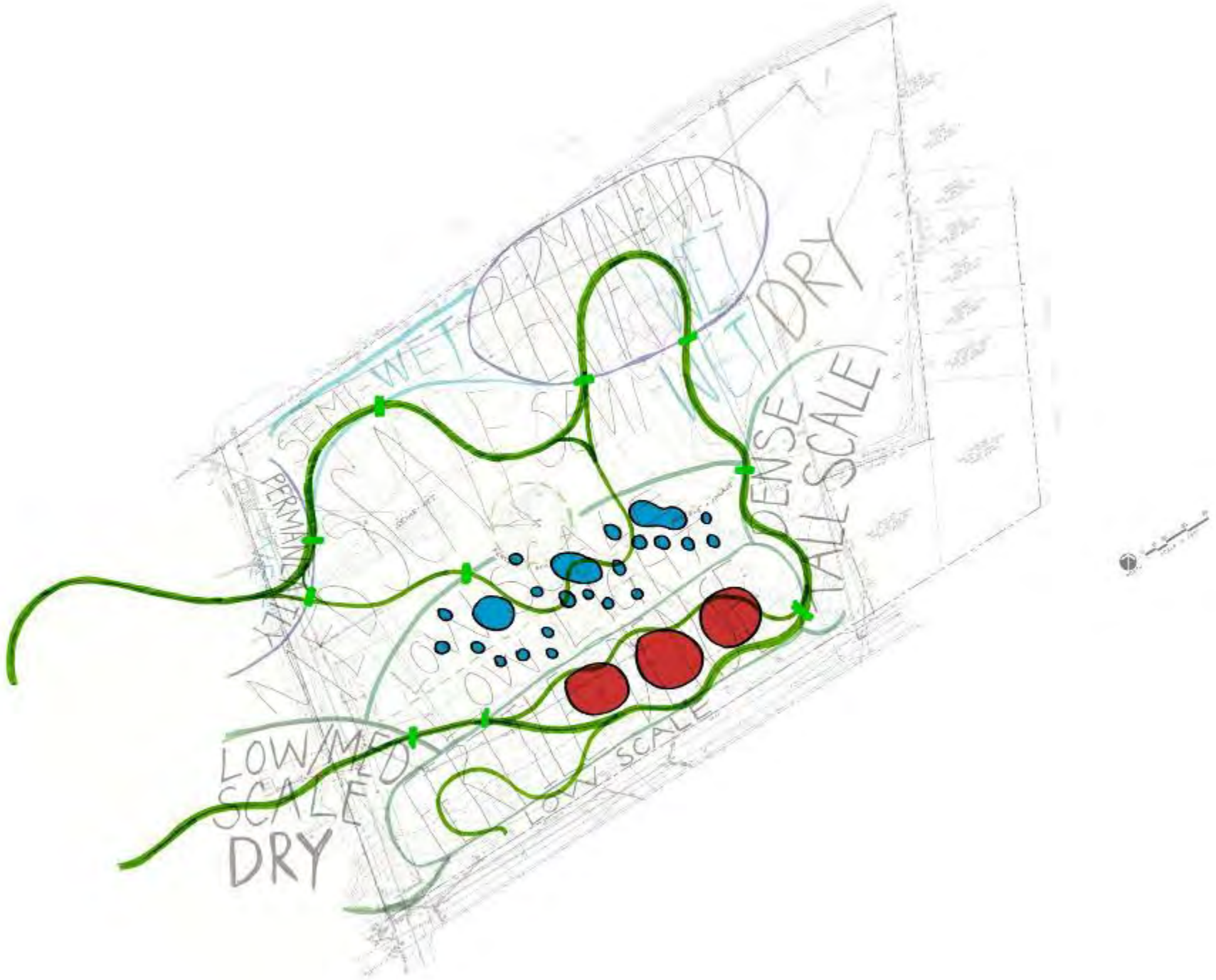



community
N


river
community
N


WHERE THE WATER GOES . . .
ROOF COLLECTION • ROOF COLLECTION • ROOF COLLECTION


SEMI-WET
PERMANENTLY WET
DRY
MED SCALE
SEMI-WET
PERMANENTLY WET
LOW SCALE
LOW LIGHT
DENSE
TALL SCALE
LOW/MED
SCALE
DRY
LOW SCALE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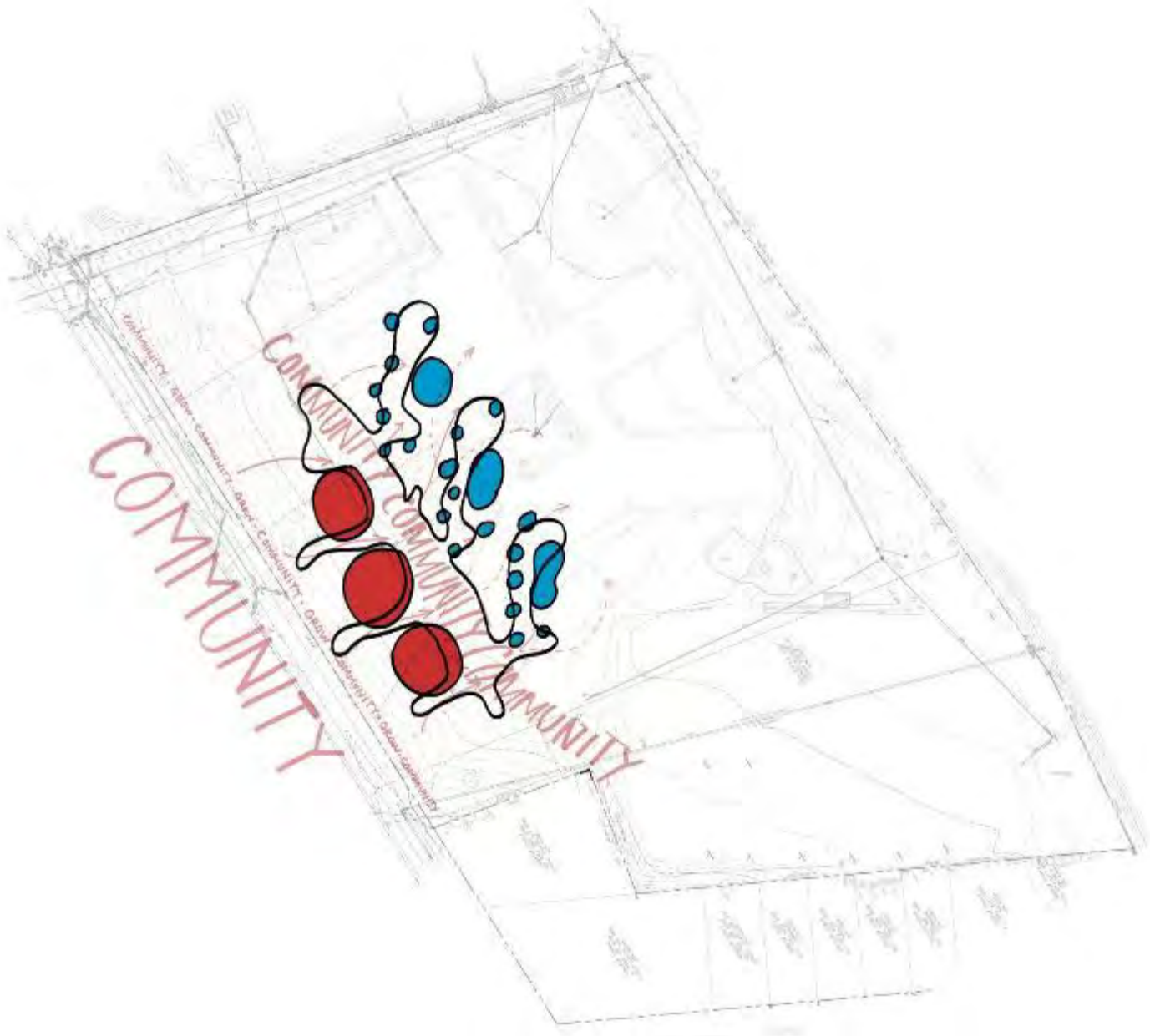
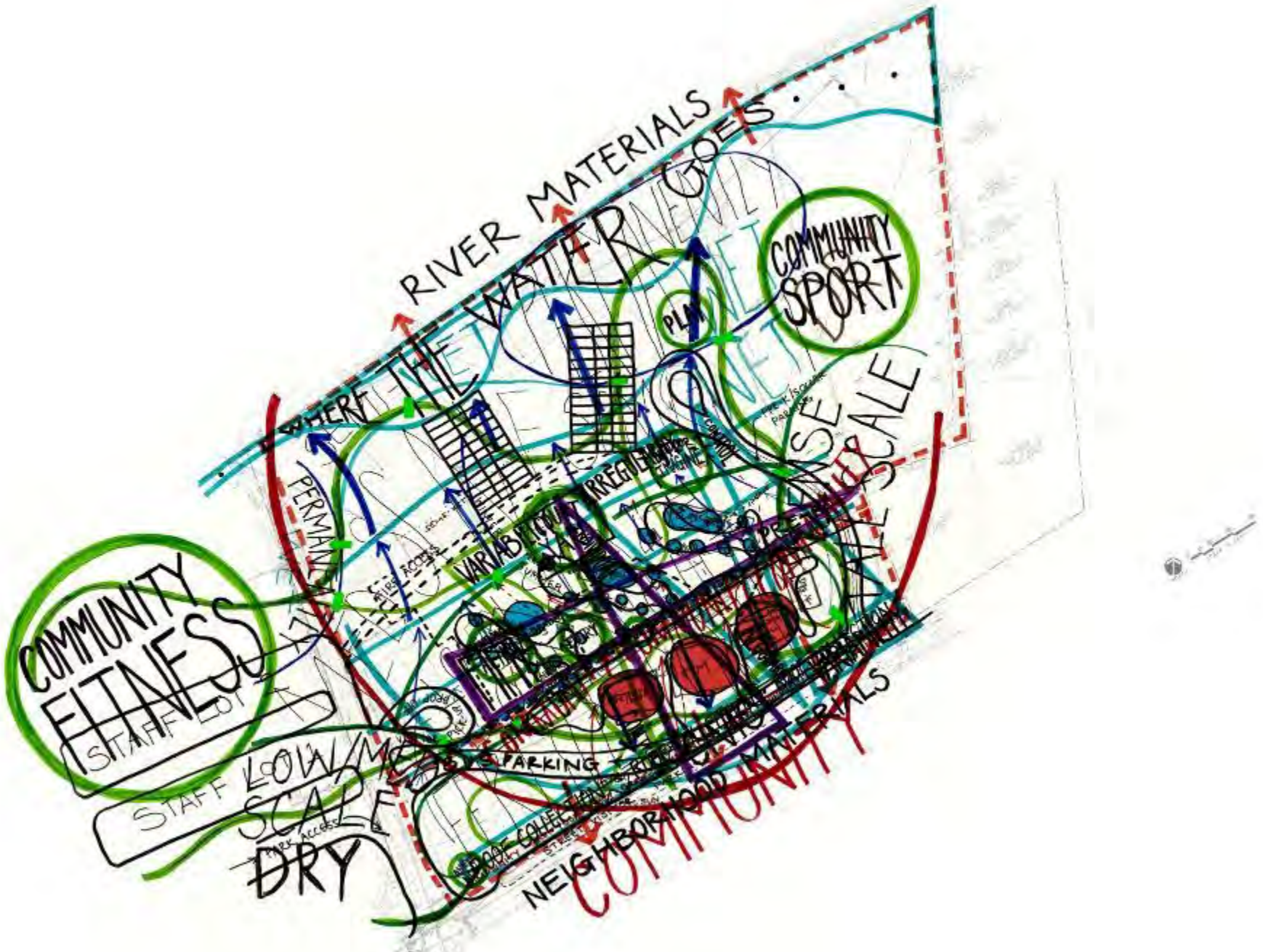
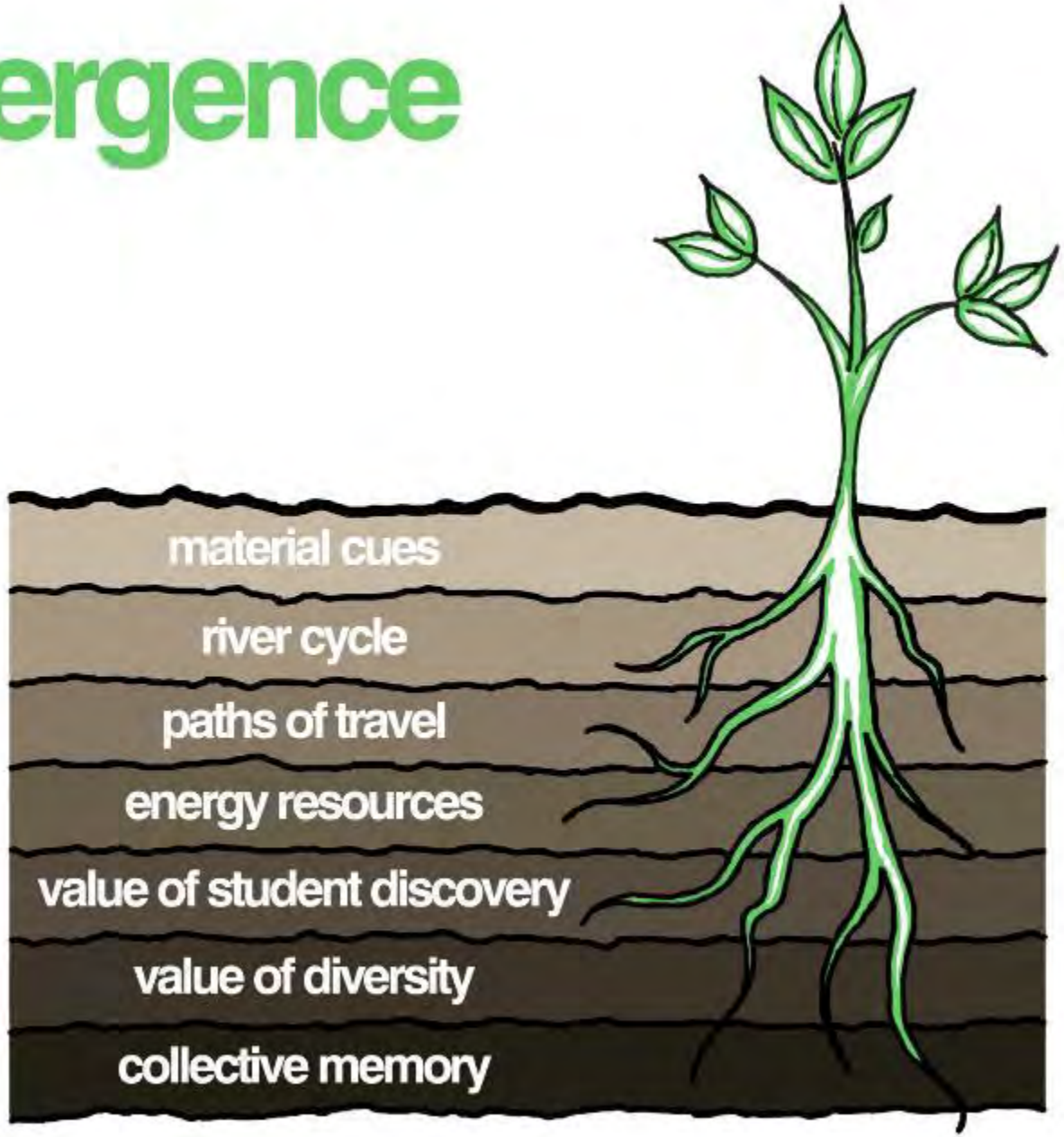
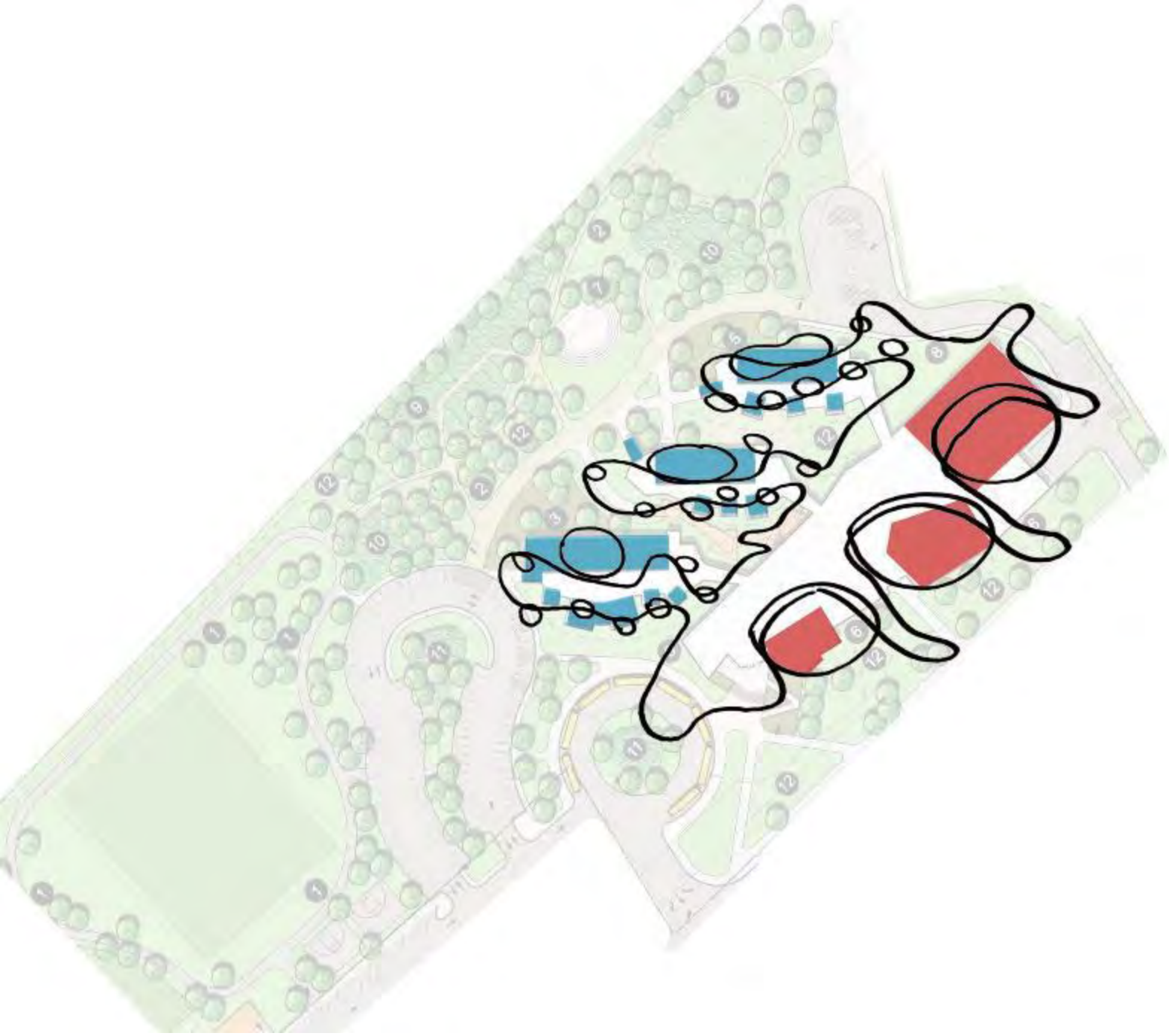

COMMUNITY
COMMUNITY
COMMUNITY

RIVER MATERIALS
COMMUNITY SPORT
PLAY
OUTDOOR IMAGINE
COURT YARD
COMMUNITY FITNESS
ENTRY
NEIGHBORHOOD MATERIALS


RIVER MATERIALS
WHERE THE WATER GOES
COMMUNITY SPORT
PLAY
PERMANENT
VARIABLE
COMMUNITY FITNESS
STAFF LOT
STAFF
LOW MAINTENANCE
SCAPE
DRY
PARKING
NEIGHBORHOOD
COMMUNITY
MATERIALS

emergence


material cues
river cycle
paths of travel
energy resources
value of student discovery
value of diversity
collective memory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design update

PLAN UPDATES

first floor

storm water design

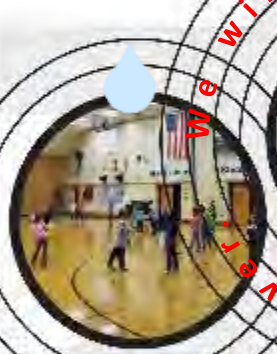
September 07-08, 2011

STORM WATER RETENTION

memory

experience

We will heal out relationship with river.

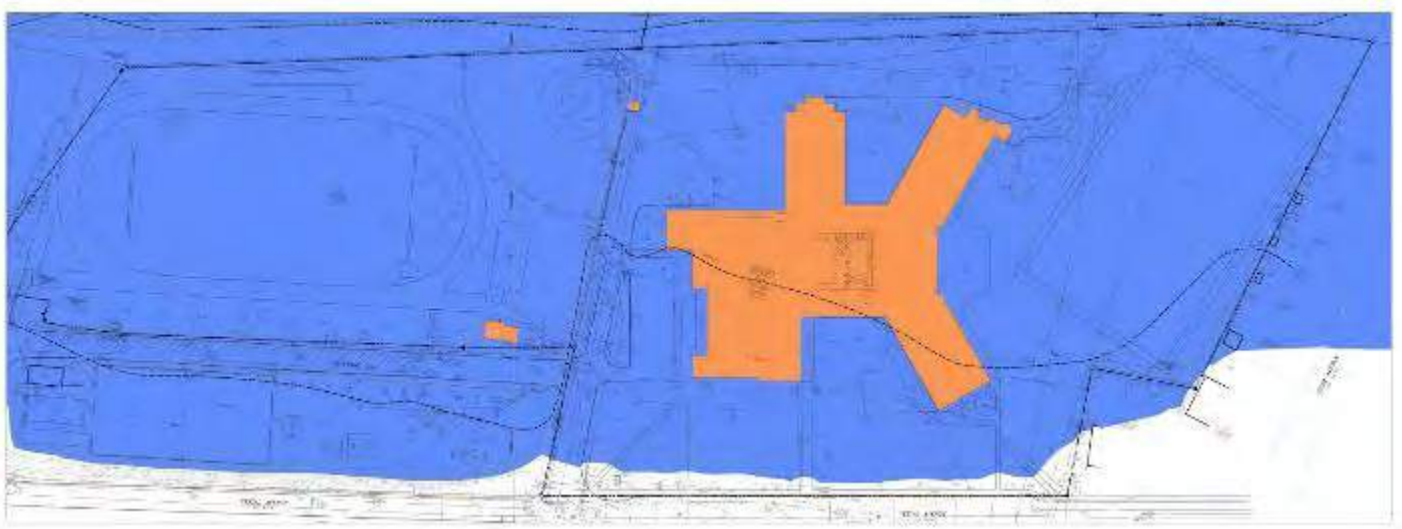


We will teach.

contextual

MacArthur Elementary Flood Displacement:

- Existing displacement - approx. 20,514 cy (appox. 4,143,828 gallons)



- Proposed displacement - approx. 20,485 cy (appox. 4,137,970 gallons)

MacArthur Elementary Stormwater Design Areas:

LEGEND

- PAVEMENT
- ROOF
- RESIDENTIAL
- LAWN
- DESIGN AREA BOUNDARY
- TIME OF CONCENTRATION (A)

DESIGN AREA 1

SURFACE = 4.99 ac	ACRES	CN
PAVEMENT = 27,227 sf	.63	98
ROOF = 1,468 sf	.03	98
LAWN (D soils) = 186,705 sf	4.33	80
COMPOSITE CN:		82

DESIGN AREA 2

SURFACE = 1.04 ac	ACRES	CN
PAVEMENT = 22,229 sf	.51	98
LAWN (D soils) = 23,198 sf	.53	80
COMPOSITE CN:		89

DESIGN AREA 3

SURFACE = .93 ac	ACRES	CN
PAVEMENT = 23,503 sf	.54	98
LAWN (D soils) = 17,217 sf	.39	80
COMPOSITE CN:		90

DESIGN AREA 4

SURFACE = 1.31 ac	ACRES	CN
PAVEMENT = 32,940 sf	.75	98
ROOF = 1,700 sf	.04	98
LAWN (D soils) = 22,603 sf	.52	80
COMPOSITE CN:		91

DESIGN AREA 5

SURFACE = .28 ac	ACRES	CN
PAVEMENT = 344 sf	.01	98
ROOF = 226 sf	.01	98
LAWN (D soils) = 11,437 sf	.26	80
COMPOSITE CN:		81

DESIGN AREA 6

SURFACE = 2.32 ac	ACRES	CN
PAVEMENT = 11,043 sf	.25	98
ROOF = 37,106 sf	.85	98
LAWN (D soils) = 52,829 sf	1.21	80
COMPOSITE CN:		89

DESIGN AREA 7

SURFACE = .82 ac	ACRES	CN
PAVEMENT = 4,230 sf	.10	98
ROOF = 14,730 sf	.34	98
LAWN (D soils) = 16,730 sf	.38	80
COMPOSITE CN:		90

DESIGN AREA 8

SURFACE = 3.68 ac	ACRES	CN
PAVEMENT = 7,610 sf	.18	98
ROOF = 36,068 sf	.83	98
LAWN (D soils) = 73,814 sf	1.69	80
COMPOSITE CN:		90

DESIGN AREA 9

SURFACE = 4.41 ac	ACRES	CN
PAVEMENT = 3,199 sf	.07	98
RESIDENTIAL = 41,480 sf	.95	87
LAWN (D soils) = 147,543 sf	3.39	80
COMPOSITE CN:		82

PROPOSED TIME OF CONCENTRATION

DESIGN AREA 1 TOC = .59 hours

POINT A TO POINT B	100 ft lawn sheet flow at 5%
POINT B TO POINT C	433 ft lawn shallow conc. flow at .25%

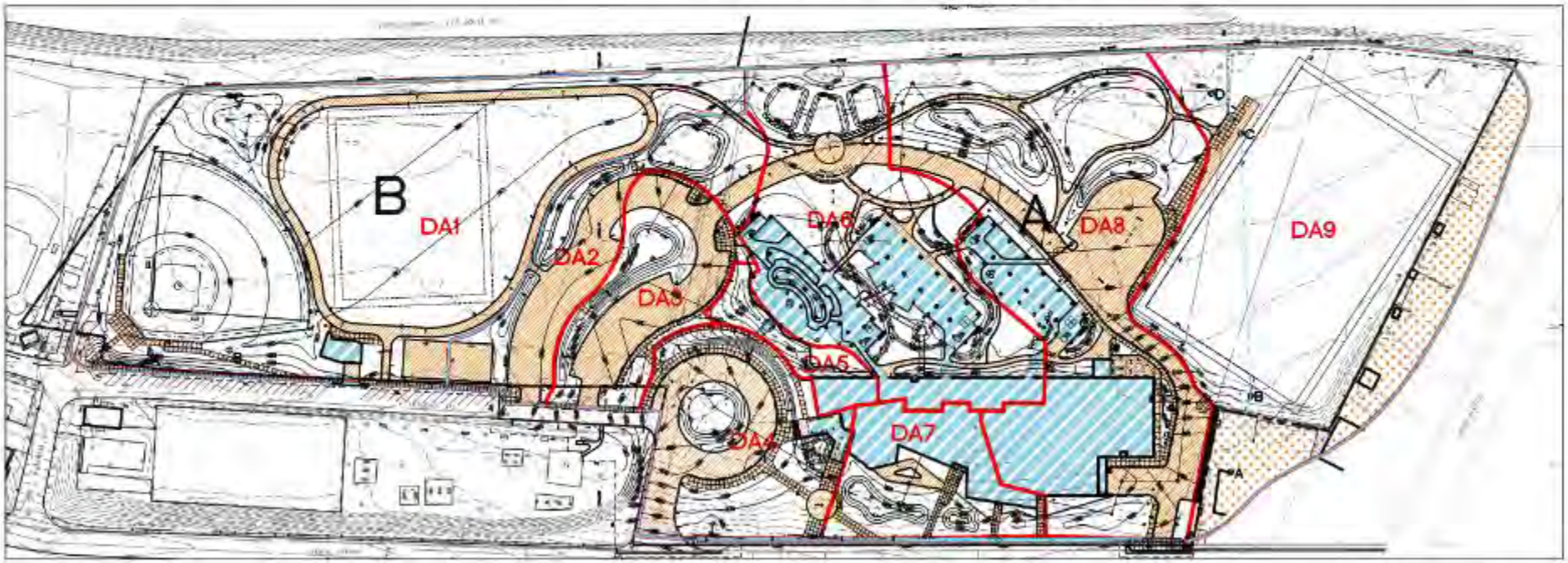
DESIGN AREA 2 - 8 TOC = .1 hours (MINIMUM ALLOWABLE TOC)

DESIGN AREA 9 TOC = .23 hours

POINT A TO POINT B	100 ft lawn sheet flow at 6%
POINT B TO POINT C	332 ft lawn shallow conc. flow at 1%
POINT C TO POINT D	63 ft asphalt shallow conc. flow at 2%

STORM DATA

1 YEAR	2.4
2 YEAR	2.8
10 YEAR	4.2
100 YEAR	6.2



BINGHAMTON CSD - MACARTHUR ELEMENTARY

DESIGN AREAS

FEBRUARY 2014

NORTH

0 60 120

SCALE IN FEET

Stormwater Design - Quantity Control

- less run off post design
- one year, 24hr design storm 27.24cfs->26.49cfs = 83,787cf/storm->80,975cf/storm
- two year, 24hr design storm34.81cfs->34.03 = 107,183cf/storm->104,035cf/storm

WATERSHED LAND USE SQUARE FOOTAGE

MacArthur Property:	18.89+/ acres
Disturbed Area within Project Area:	15.38 +/- acres
Existing Impervious Area within Disturbed:	6.40 +/- acres
Proposed Impervious Area within Disturbed:	6.09 +/- acres
Proposed Porous Pavement:	.60 +/- acres


TOUGH
STEEL