

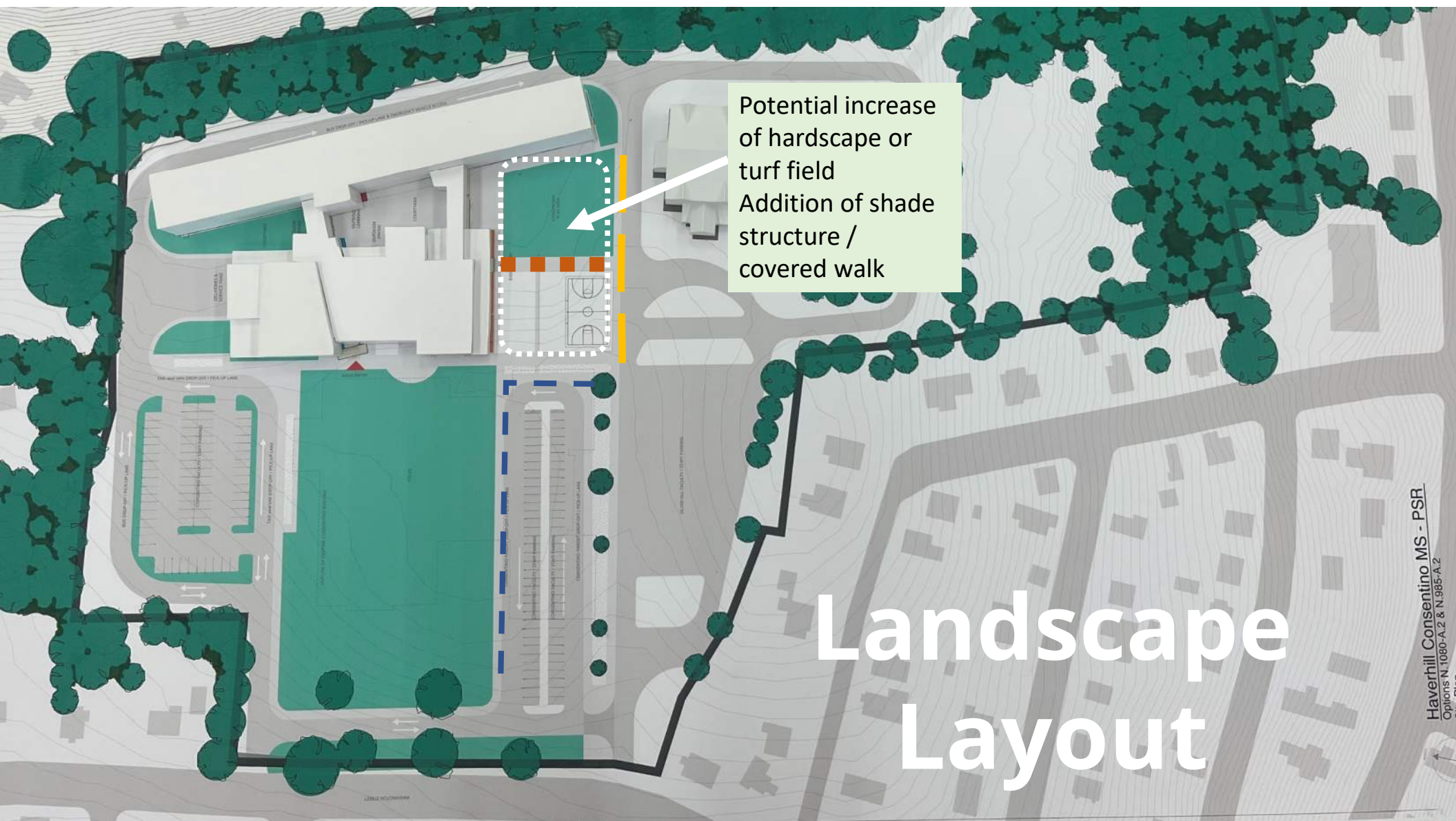


Haverhill Public Schools Consentino Middle School

School Building Committee

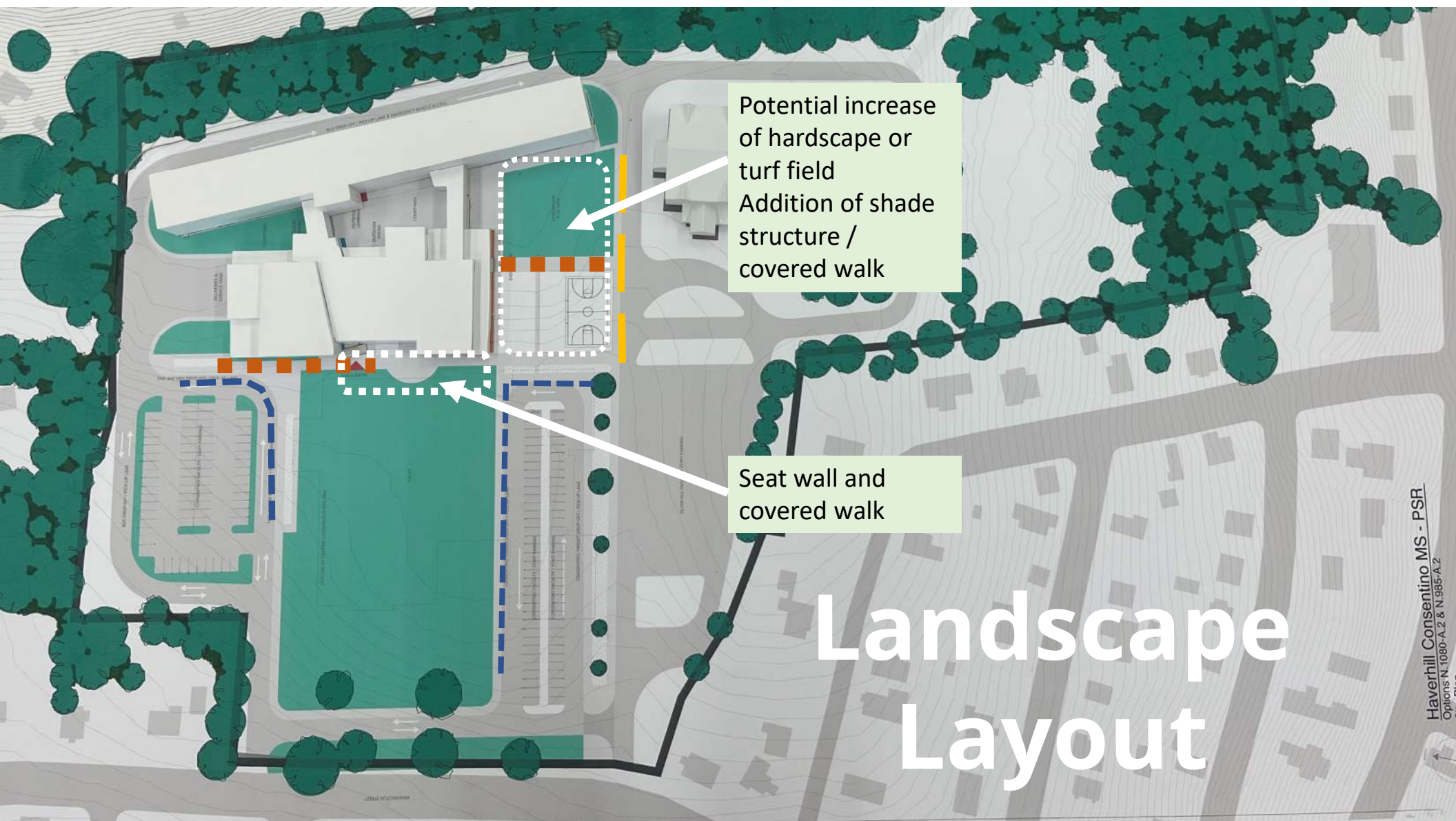
06/15/2022





Potential increase
of hardscape or
turf field
Addition of shade
structure /
covered walk

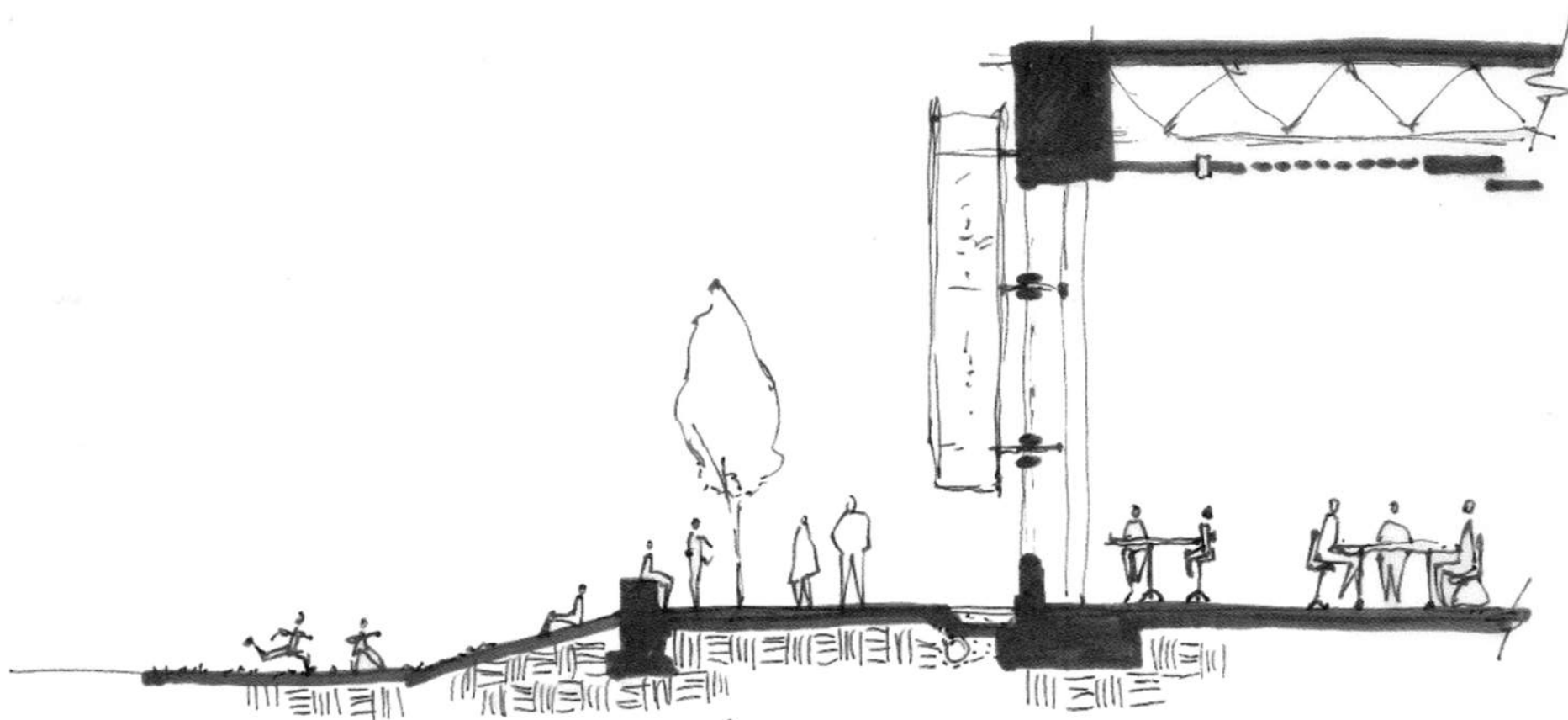
Landscape Layout



Potential increase
of hardscape or
turf field
Addition of shade
structure /
covered walk

Seat wall and
covered walk

Landscape Layout



Play Fields

Gathering Plaza

Student Dining

Building Systems

LEED = v4 for Schools

Heating = High efficiency natural gas

Central Cooling = High efficiency variable speed air cooled chiller

Building Systems

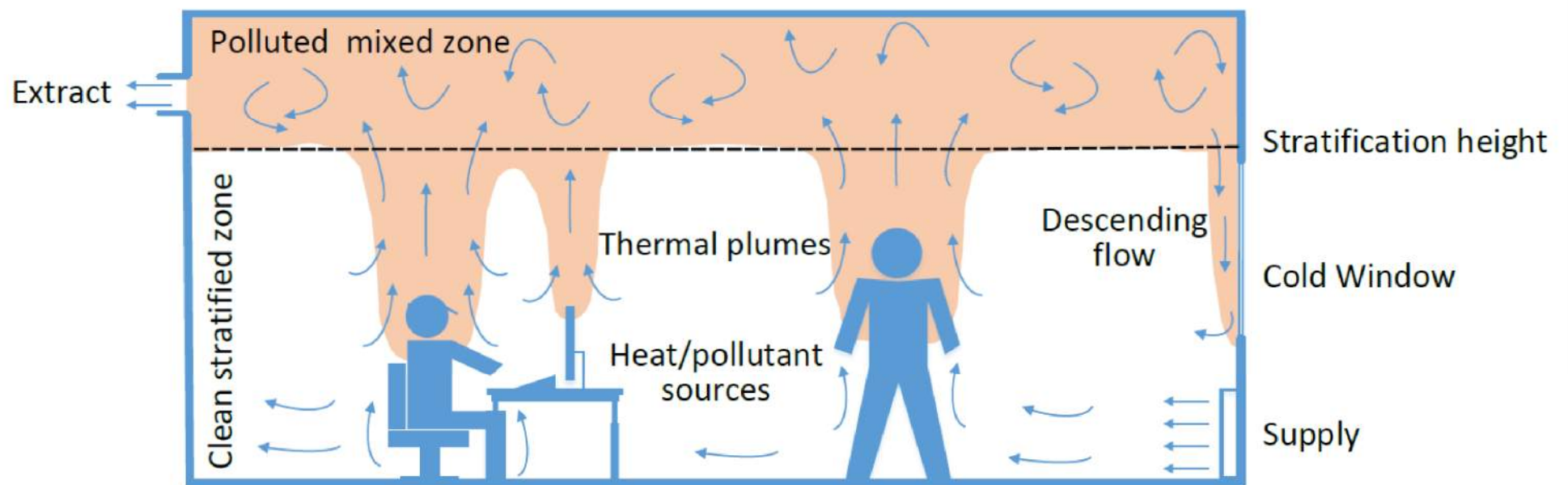
Classrooms, Administration, & Offices

- Heating
- Air-conditioning,
- Ventilation

Full air conditioning dehumidification displacement ventilation system with radiant ceiling heating and cooling panels

Gym & Cafeteria

Full air conditioning dehumidification and ventilation system fed via roof top units (RTU)



LIFE CYCLE COST ANALYSIS

Displacement Air – Gas Fuel

Description	Option 1 Partial AC	Option 2 Full AC	Option 3 All Electric	Option 4 All Electric Partial AC
Discount Rate (i)	2.5%	2.5%	2.5%	2.5%
Expected Service Life (n)	20	20	20	20
Annual Maintenance Costs (\$)	\$ 19,944	24,931	34,155	22,501
Annual Maintenance Costs (\$/SF)	\$0.22	\$0.28	\$0.38	\$0.25
Initial Cost (\$)	\$ 6,013,721	\$ 6,214,375	\$ 6,421,996	\$ 6,045,596
Potential Additional Utility Incentive ¹	\$ 37,663	\$ 16,268	\$ 21,474	\$ -
Net Installed Cost	\$ 5,976,059	\$ 6,198,108	\$ 6,400,522	\$ 6,045,596
Energy Cost (\$)	\$ 93,077	\$ 105,221	\$ 99,528	\$ 122,725
Annual Operating Cost (\$)	\$ 113,022	\$ 130,151.22	\$ 133,682	\$ 145,225
TEAC	\$ 113,022	\$ 130,151	\$ 133,682	\$ 145,225
	0.064	0.064	0.064	0.064
	\$ 383,347	\$ 397,591	\$ 410,575	\$ 387,808
	\$ 496,369	\$ 527,742	\$ 544,257	\$ 533,033
TEAC (Cost/SF)	\$ 5.52	\$ 5.86	\$ 6.05	\$ 5.92
NOTES: 1) Utility incentive contribution is an estimate only. Projects must engage utilities as early in the design process as possible to maximize available incentives.				

EXTERIOR BUILDING IMAGE & MATERIAL





View from Washington St.



View from Van Drop-Off Drive



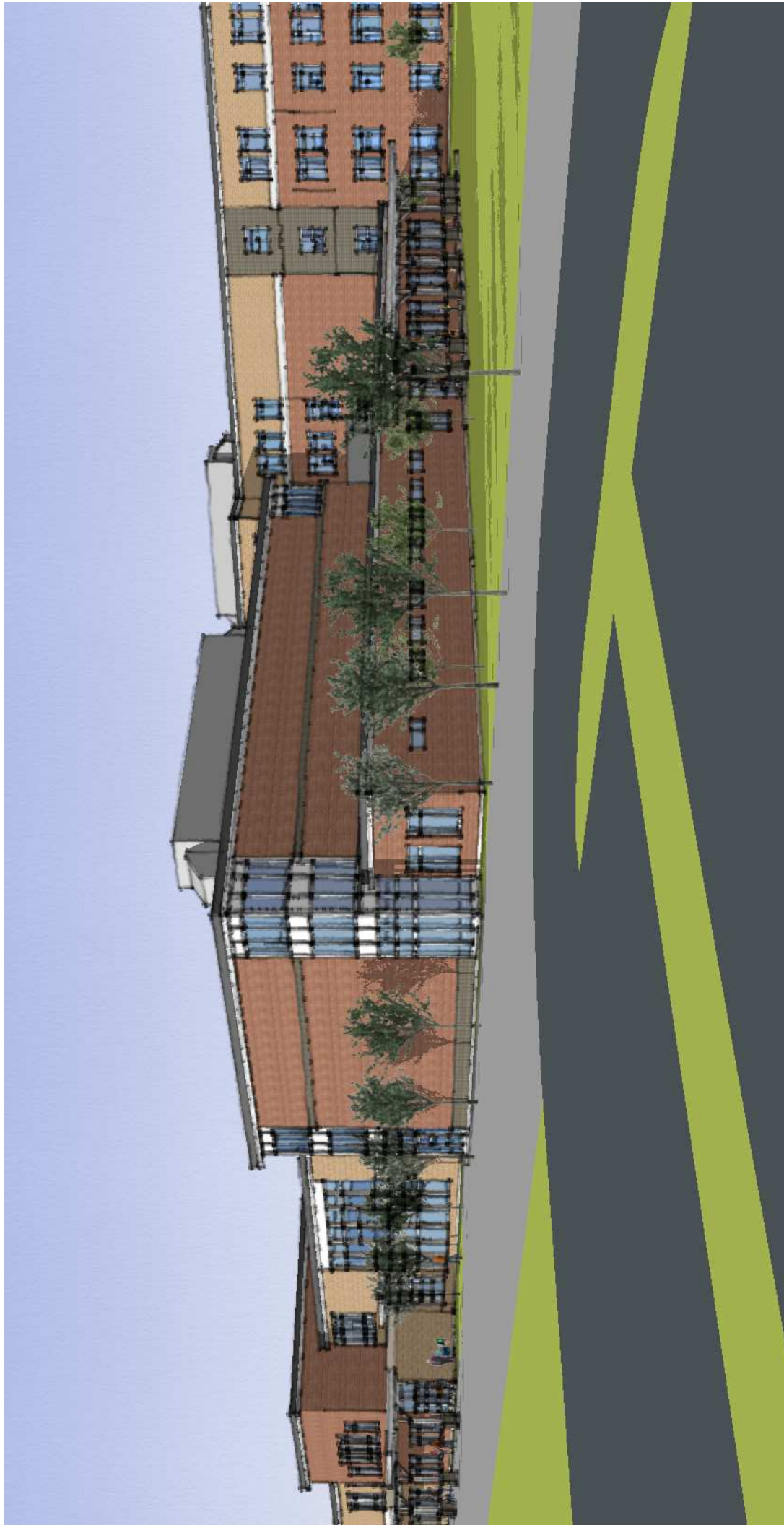
View from Van Drop-Off Zone



Approach to Entrance



View from Field



View from Parent Drop-Off Zone



View from Gathering / Recess Area



Aerial View from South West



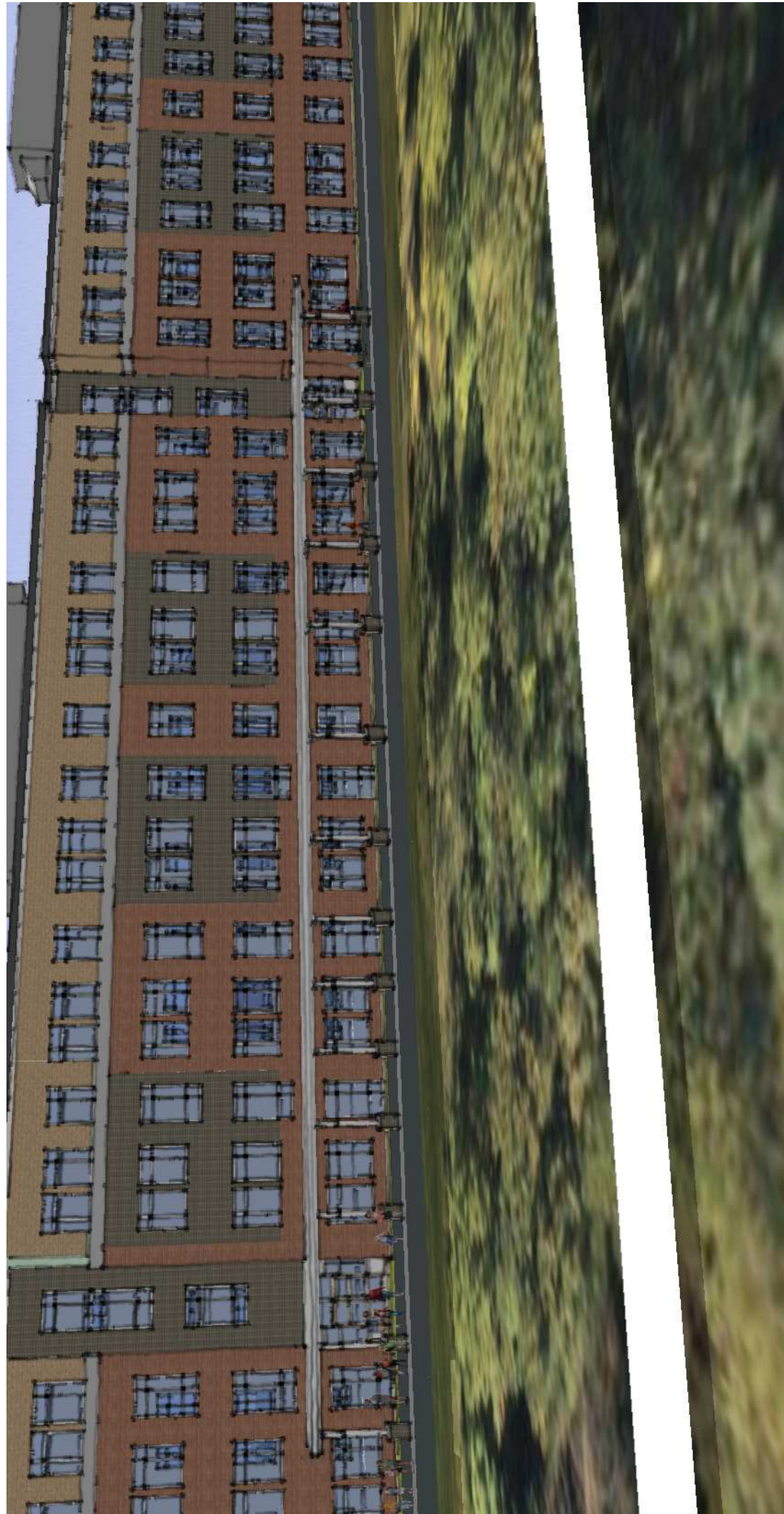
View from Bus Drop-Off on South



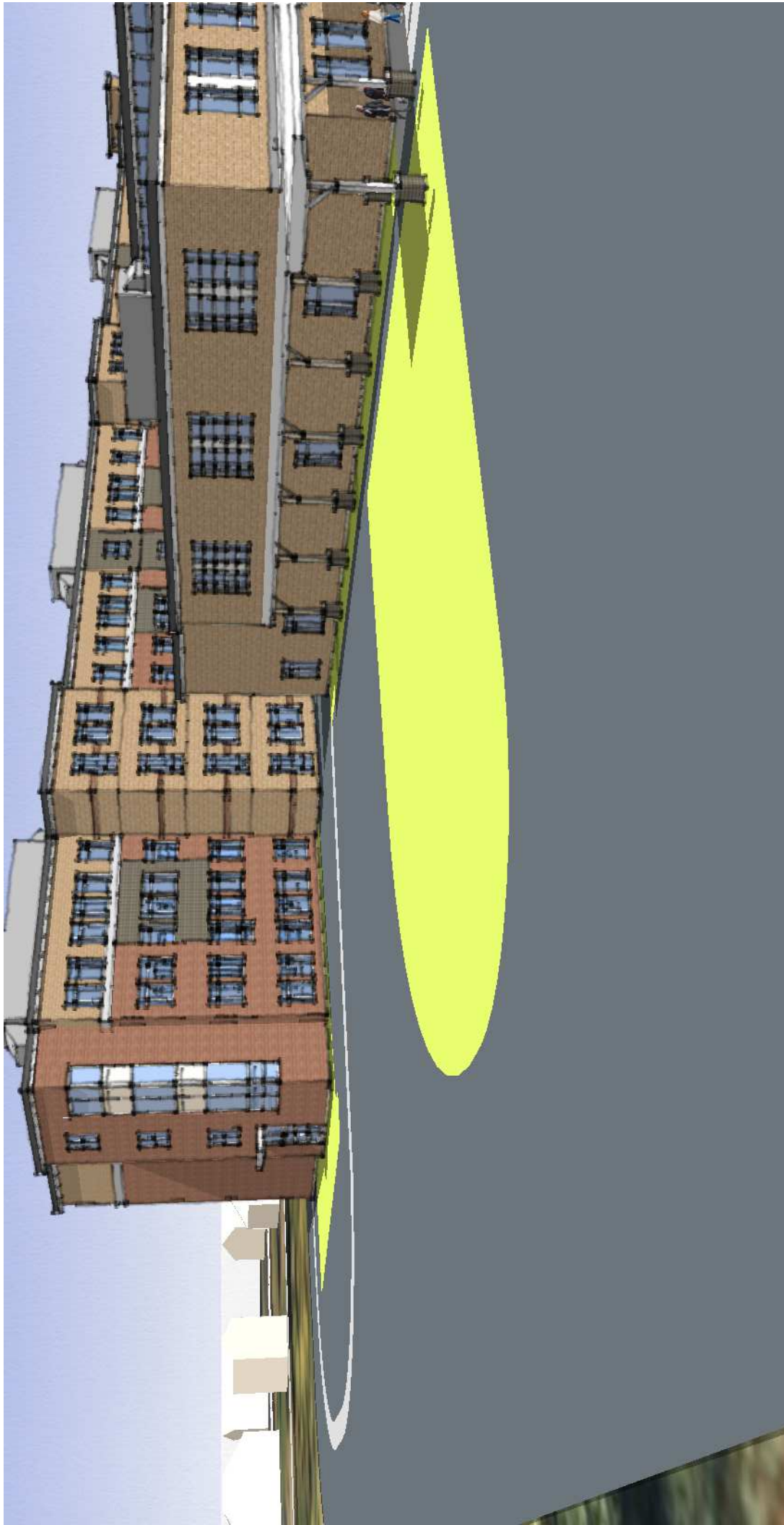
View from Bus Pick-Up on East Drive



View from Bus Pick- Up Zone



View of East Elevation



View of North Elevation Bus and Delivery Access



Ariel View from West



View from North West



View of West Elevation