San Francisco Water Power Sewer

Civic Design Review (Informational)

BAY CORRIDOR TRANSMISSION & DISTRIBUTION (BCTD)

ELECTRICAL SUBSTATION 398 QUINT STREET

August 19, 2019

AECOM
lead consultant

incommon
design consultant

BCTD project


Location plan
398 Quint St.
BF
DAVIDSON AVE.
QUINT ST.
1
2
3
CALTRAIN
SFWD
PHELPS ST.
JERROLD AVE.
3RD ST.
EVANS AVE.
BCTD Electrical Substation
BF Bruce Flynn Pump Station
SSIP Phase 1
1 Biosolids Digesters Facilities
2 Headworks
3 Electrical building
N
250
500
1,000

Project brief

Site

- Area approximately 13,000 sq ft.
- Industrial zoning PDR-2 (65’-J).

Equipment

- Outdoor electrical equipment only, no occupied spaces.
- 230kV transformers and gas insulated switchgear (GIS).

Project requirements

- Perimeter wall/ fire rated barrier.
- Vehicular and staff gates.
- Vehicular access ramp.
- 2 existing trees to be removed.

Sea level rise

Site raised approximately 3-ft, electrical equipment placed on concrete pads 6-in above raised site elevation.

Stormwater management

Accounting for allowed area exclusions, project will create and/or replace <5000 sq ft of impervious surface.

New concrete sidewalk

Allow for future equipment replacement with crane.

Gas Insulated Switchgear

Project goals

- Meet electrical operational & security requirements.
- Consider proximity to nearby warehouses and light-industrial facilities.
- Create a relationship with other SFPUC projects (SEP Campus & Headworks).
- Create an elegant, understated facility.

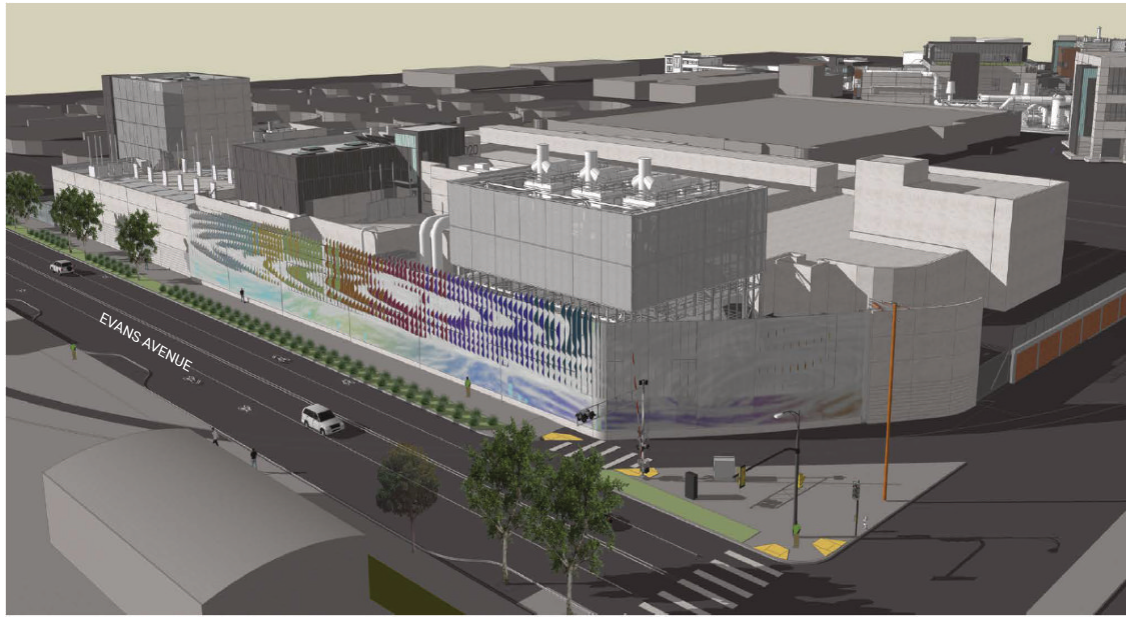
Facilities facing project site on Davidson Avenue


I-280
BRUCE FLYNN PUMP STATION
NEW HEADWORKS
RAIL TRACK
CONSTRUCTION STAGING SFPUC
130 ft
SUBSTATION SITE
170 ft
DAVIDSON AVENUE
TO ISLAIS CREEK
CONSTRUCTION STAGING SFPUC
EVANS AVENUE
QUINT STREET
TO 3RD STREET
SEP CAMPUS
Google earth
Data LDEO-Columbia, NSF, NOAA
Image Landsat / Copernicus
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
40 ft

Consider visible intersections and sight lines.

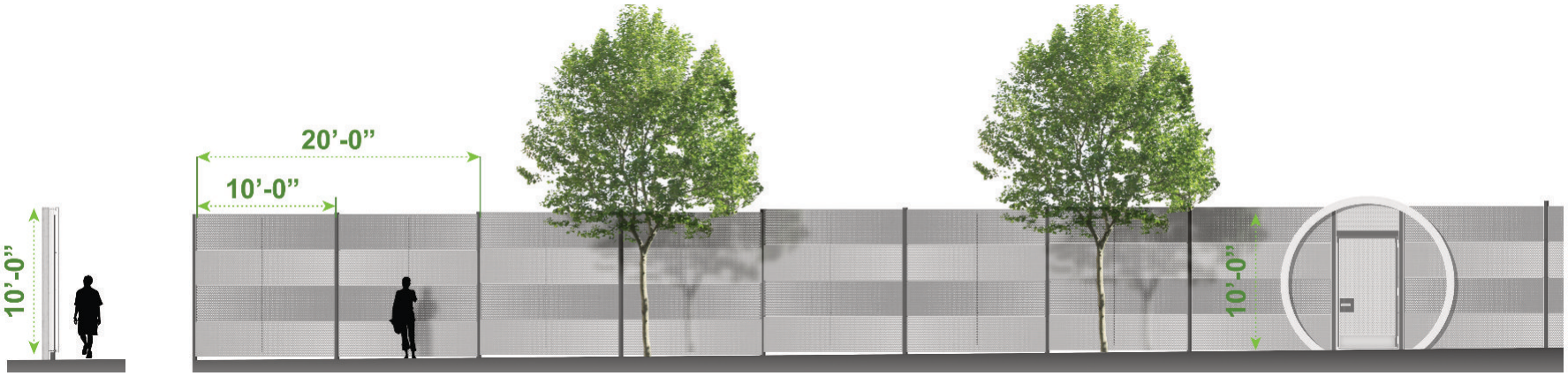

EXISTING TREES TO BE REMOVED (2)
NEW PERIMETER
NEW HEADWORKS ART WALL
SEP CAMPUS
BCTD SUBSTATION SITE
NEW SIDEWALK
DAVIDSON AVENUE
TO 3RD ST.
QUINT STREET
TO CARGO WAY & ISLAIS CREEK

Nearby facilities



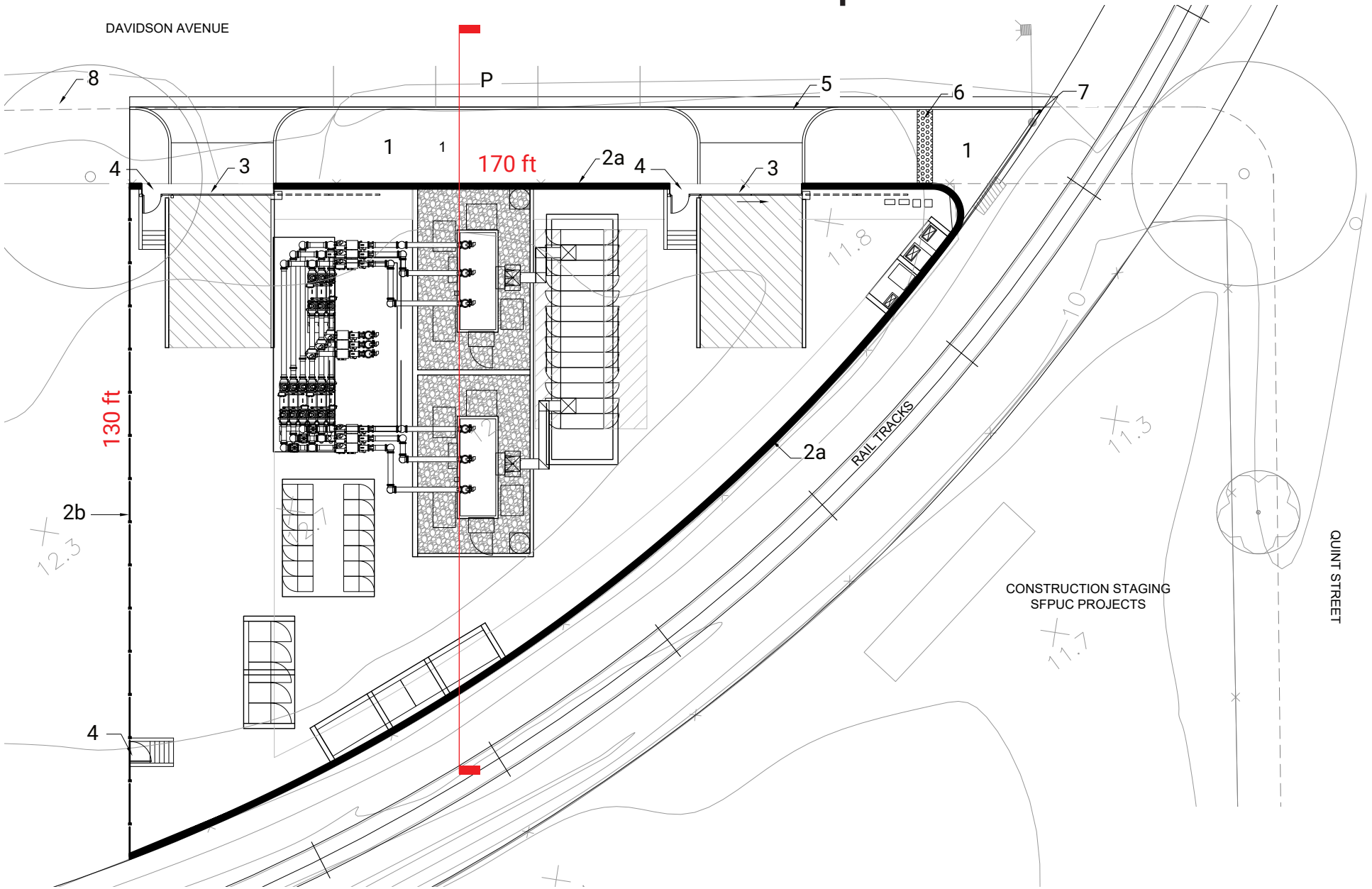
Headworks perimeter

Bruce Flynn Pump Station



SEP Campus fencing

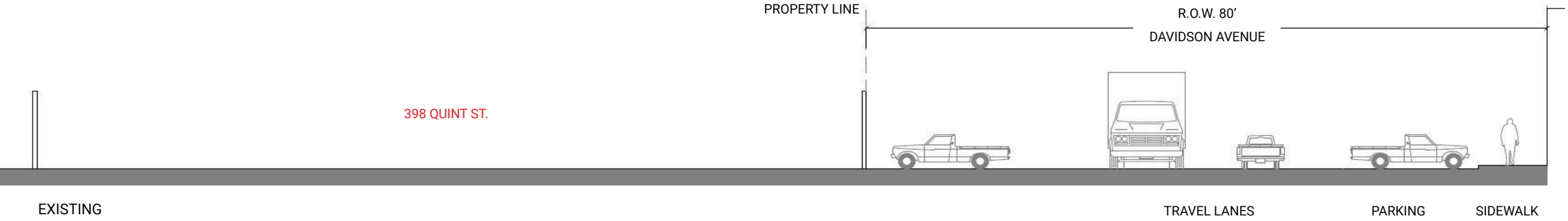
Site plan

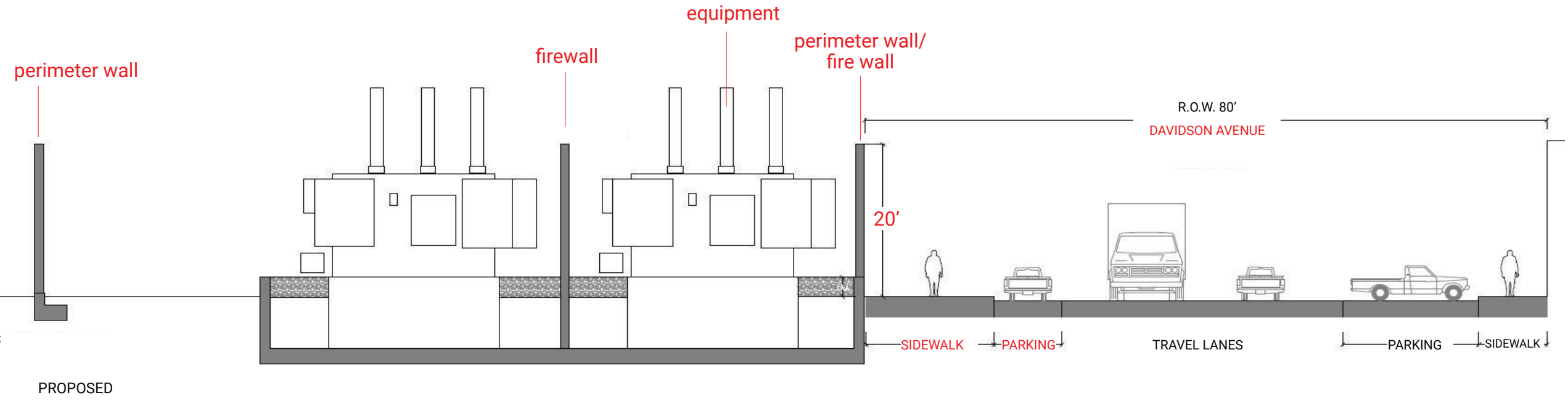


LEGEND

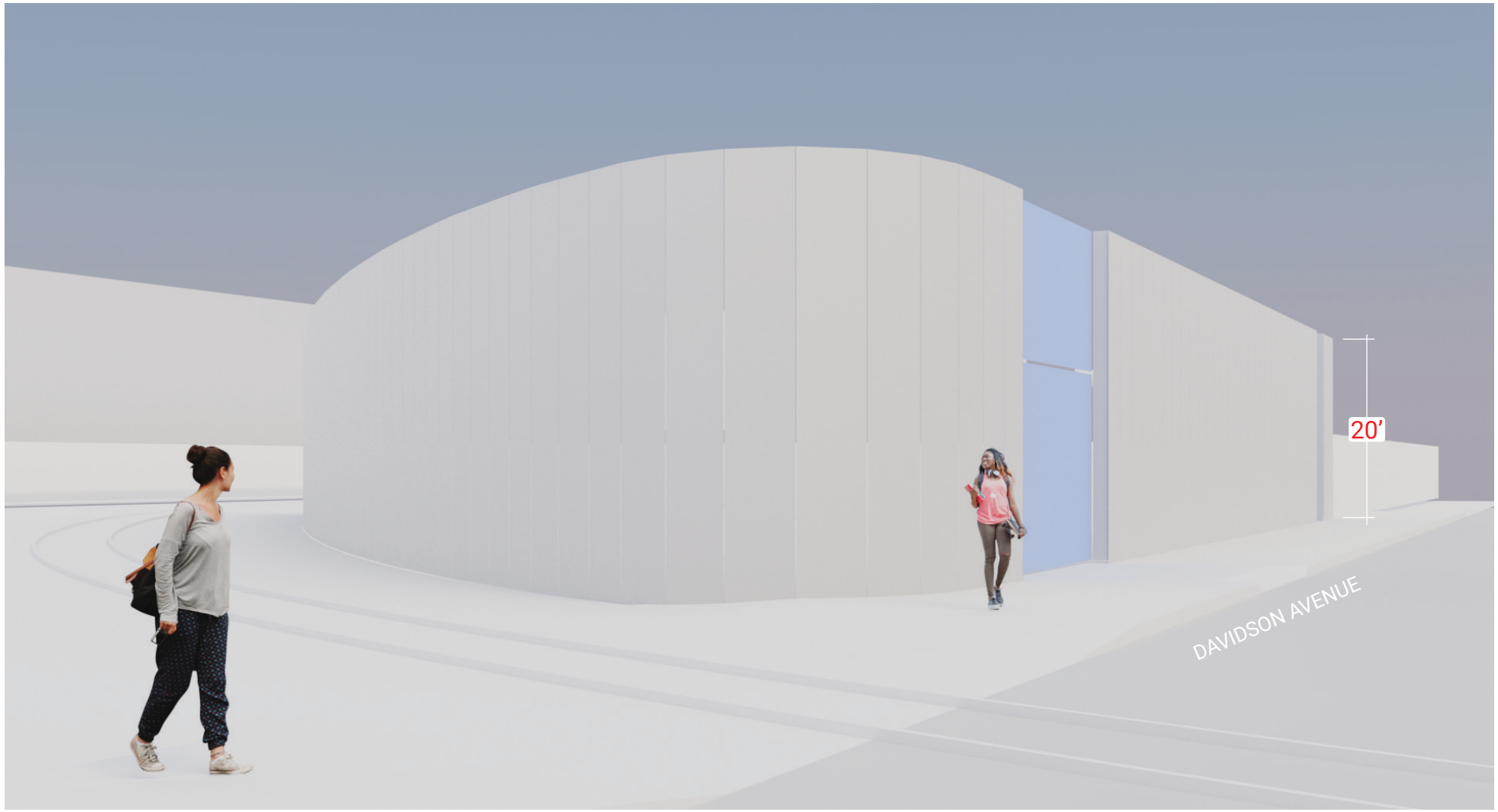
- **1** NEW CONCRETE SIDEWALK.
- **2a** CONCRETE PERIMETER WALL.
- **2b** METAL FENCE AND GATE.
- **3** VEHICULAR GATE.
- **4** STAFF GATE.
- **5** VEHICULAR DRIVEWAY.
- **6** CONCRETE TACTILE PAVERS.
- **7** SIDEWALK SLOPES TO MATCH RAIL GRADE.
- **8** FUTURE SIDEWALK EXTENSION (BY OTHERS).
- **P** STREET PARKING.

Site section



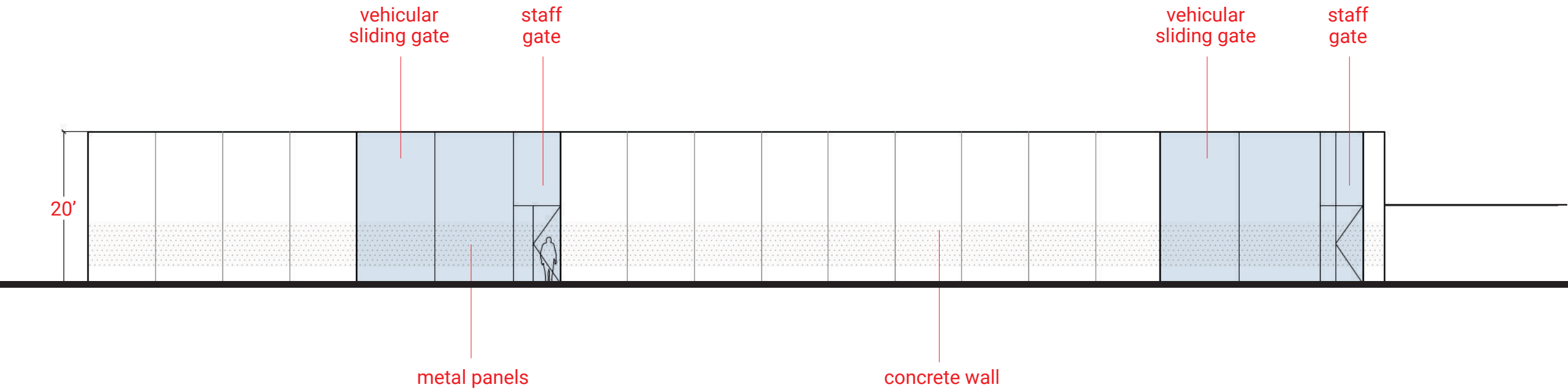


Massing study



Elevation

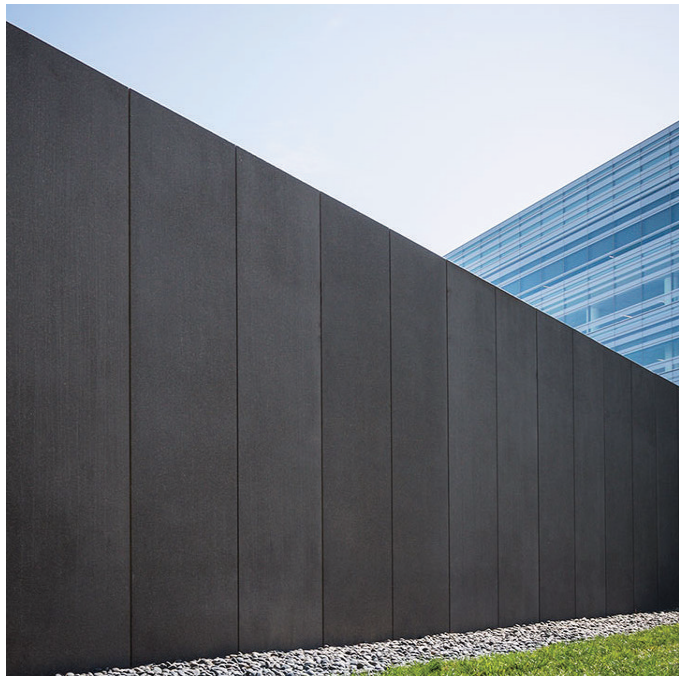
Davidson Avenue



Concrete wall options

cast-in-place

precast



precast + graphic concrete

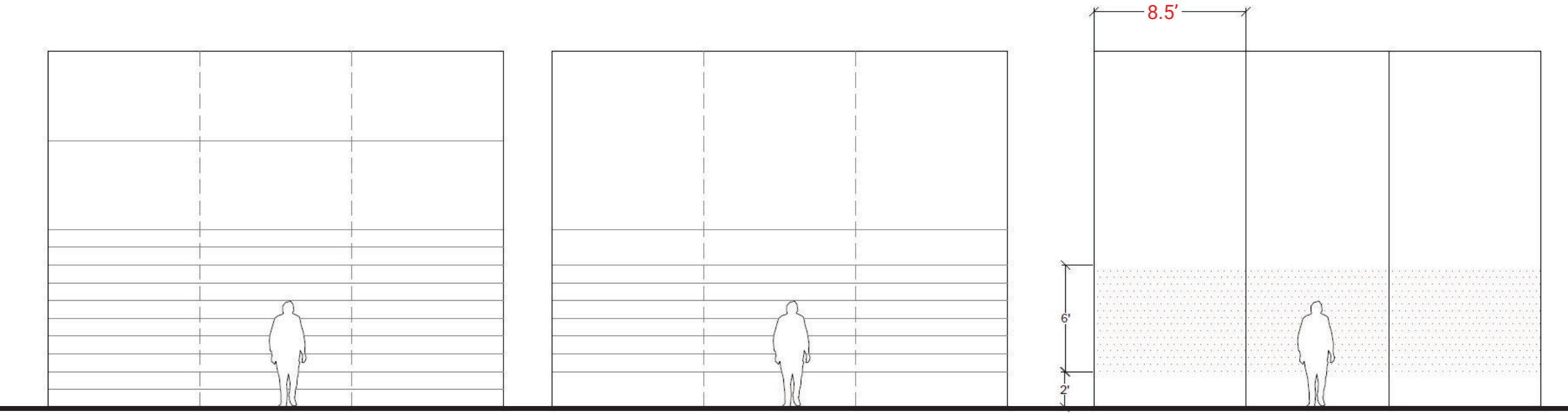
Elevation

Davidson Avenue

cast-in-place

cast-in-place

precast + pattern



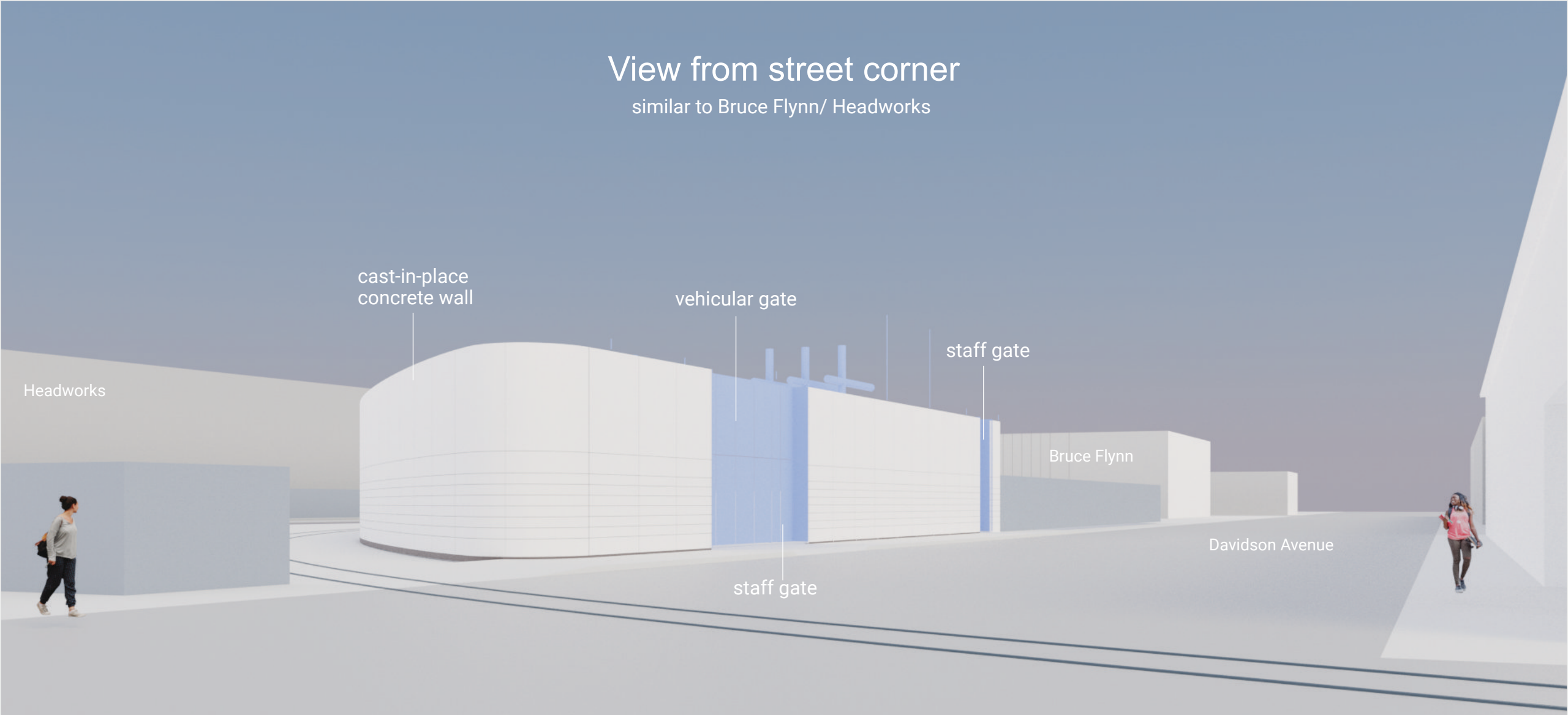
similar to Headworks

similar to Bruce Flynn

SEP Campus pattern

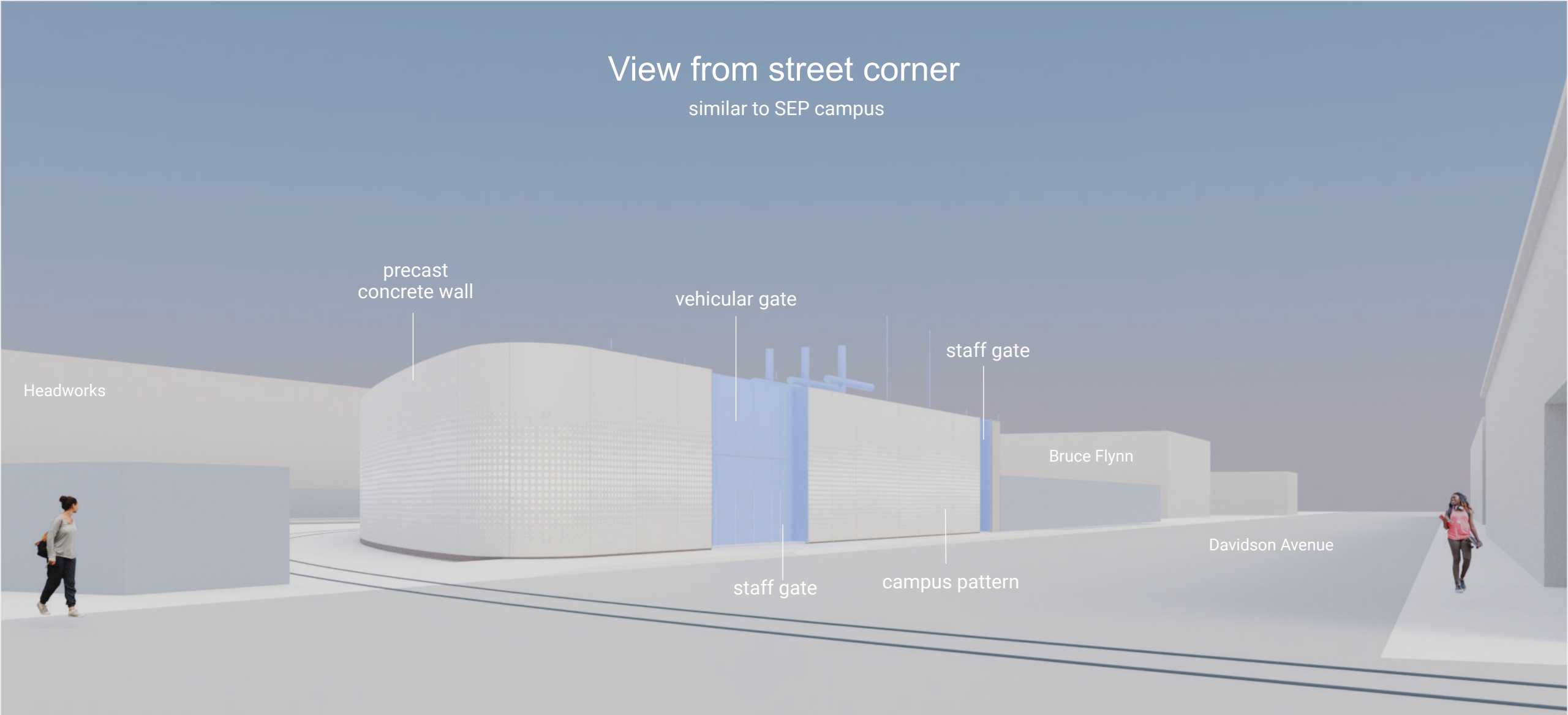
View from street corner

similar to Bruce Flynn/ Headworks



View from street corner

similar to SEP campus



Next steps

- Cast-in-place vs pre-cast concrete.
- Develop pattern approach.
- Develop design for metal gates.