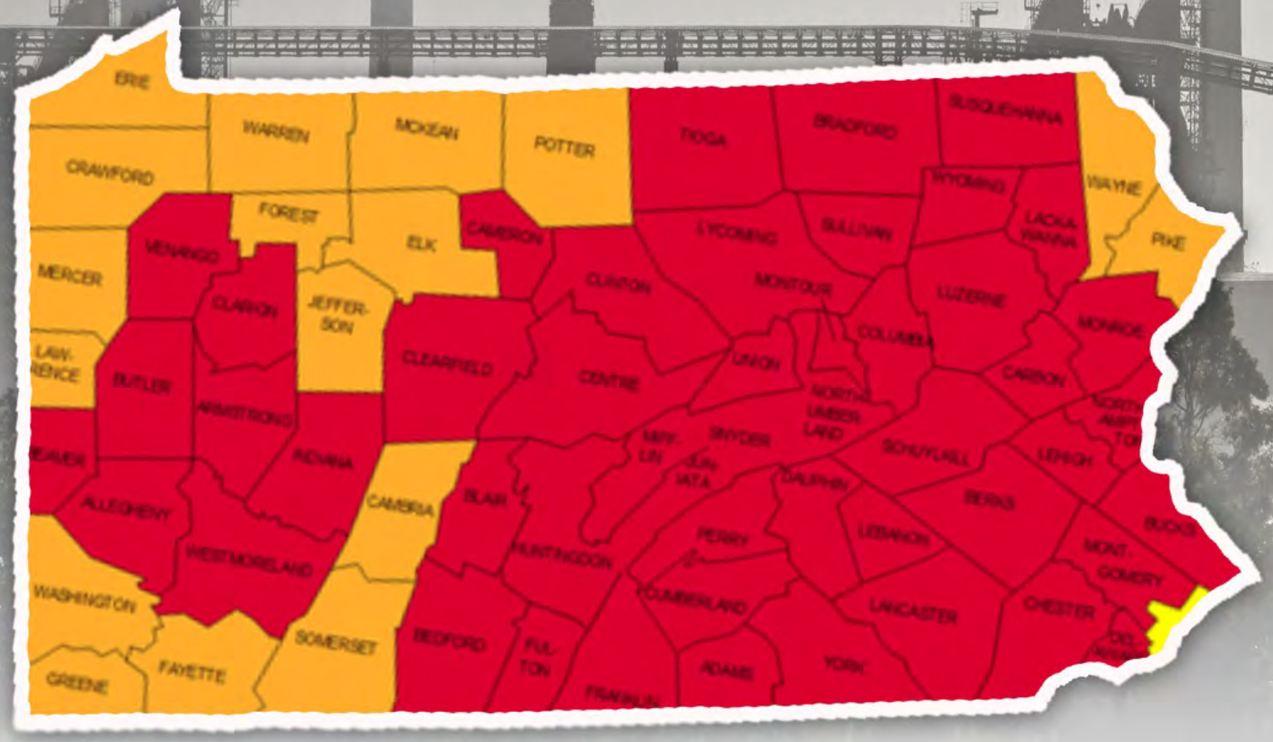
Indoor pollution control outdoor contaminants



thoughtful balance. nk ARCHITECTS

QLEAR

Craig

AUROS

Duquesne University, Rockwell Hall

Location Average

Pittsburgh

Last Updated 18 minutes ago
Average

CO_2

402

EXCELLENT INDOOR

PM 2.5	GOOD	1
TOTAL VOC	GOOD	0.06
PM 10	GOOD	0
TEMPERATURE		73
HUMIDITY		50.67

Location Readings PRO

GRAPH | AVERAGE DATA | CALENDAR (BETA) | REPORT (BETA)

Graph Settings

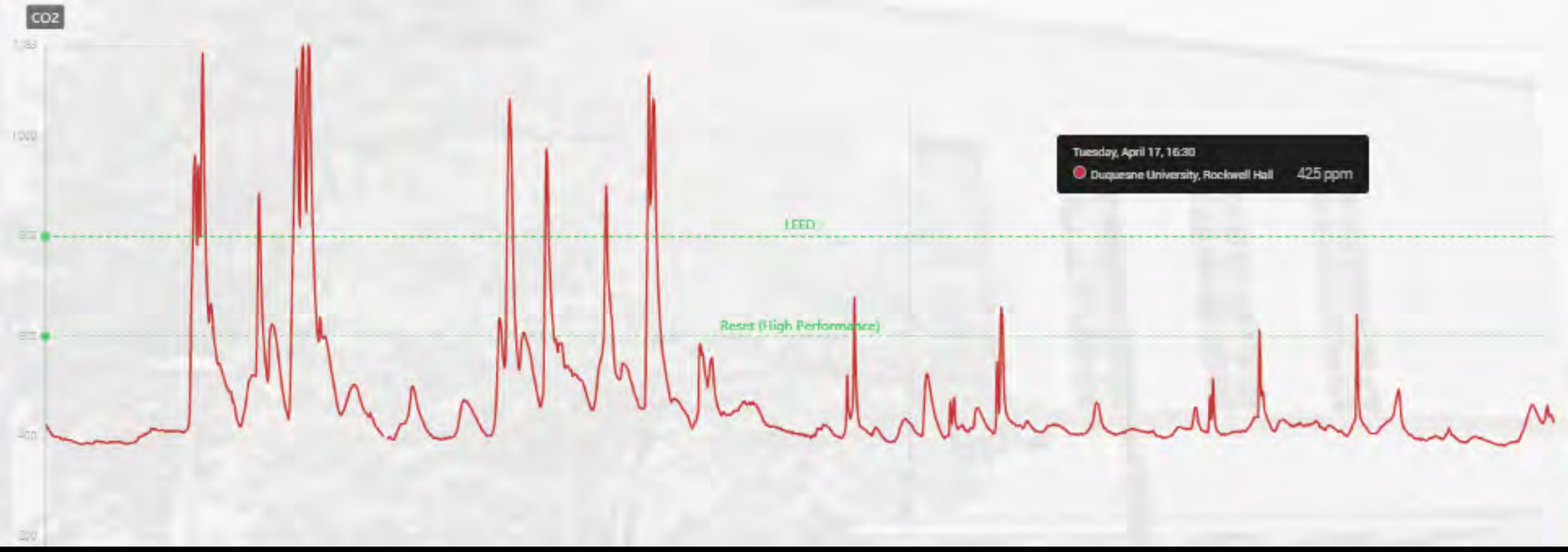
Show Activity — Indicator: CO_2 — Range: Start 18/04/01, End 18/04/30 — Hour: All Hours | Working Hours | Non-Working Hours

Reference — You can select up to 5 stations: Location Average, Outdoor

Standard Threshold(Select up to 2): Reset (High Performance), LEED

Duquesne University, Rockwell Hall 301 39th Street, Pittsburgh, PA

(GMT-04:00 America/New_York)



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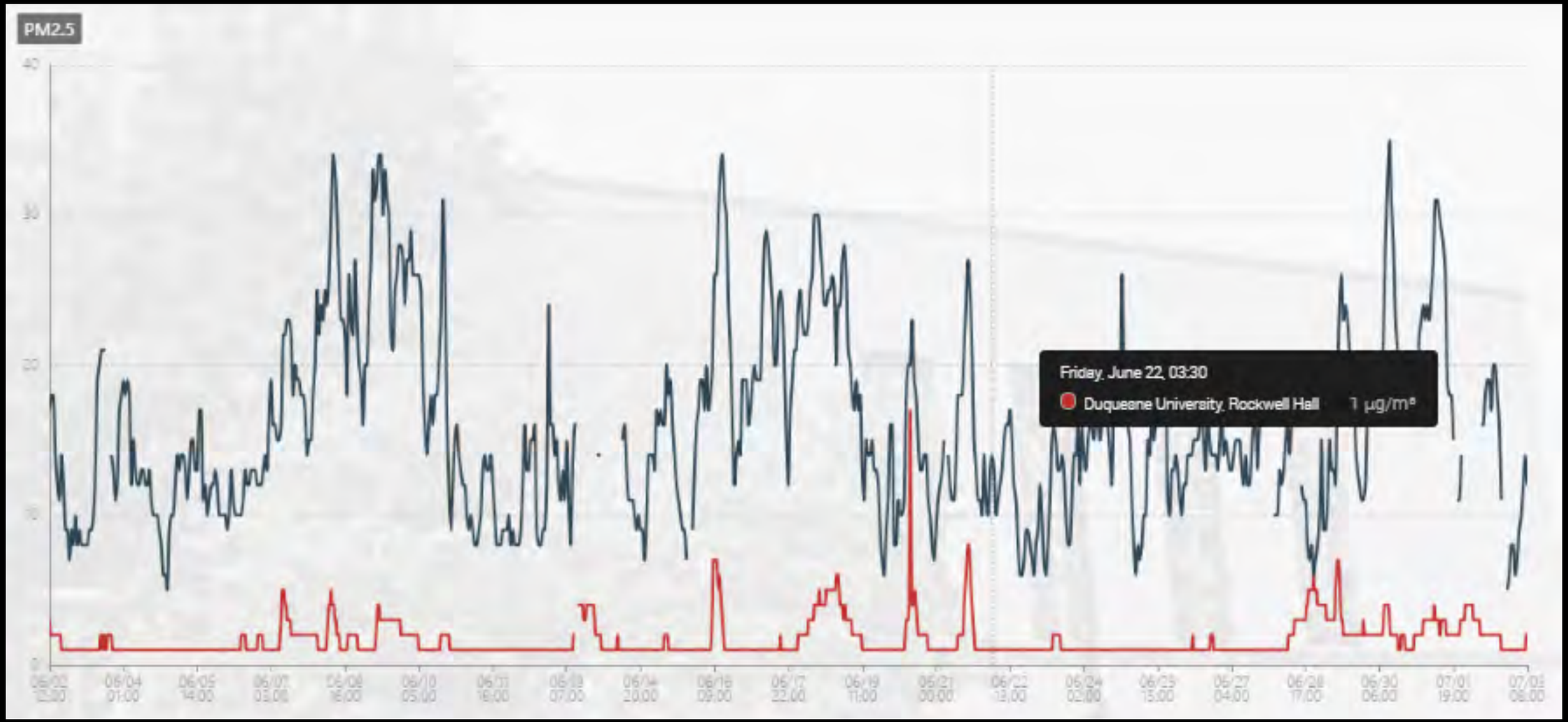

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TWO BUILDINGS IN ONE

Glassport Retirement Residence

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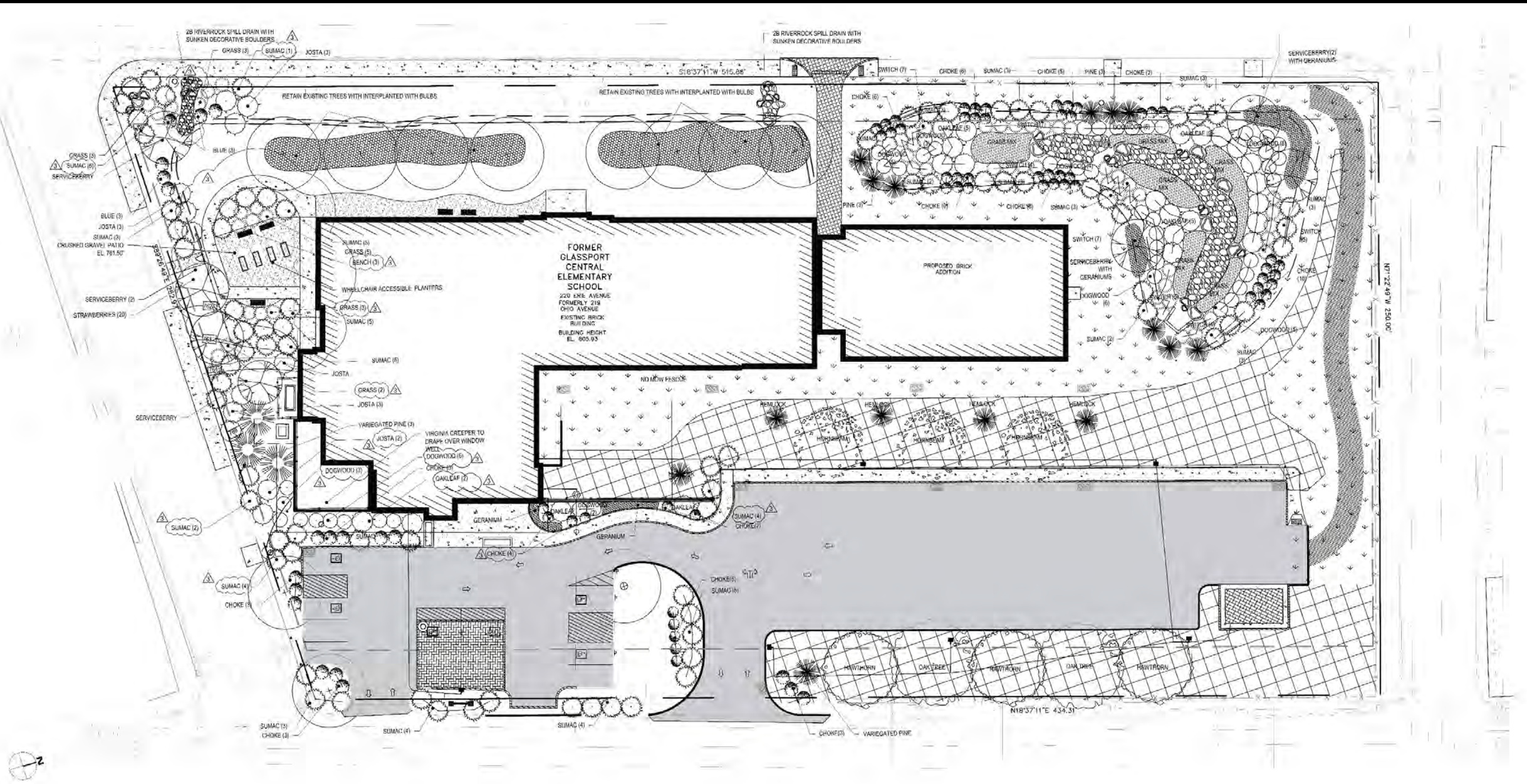

2B RIVERROCK SPILL DRAIN WITH SUNKEN DECORATIVE BOULDERS
GRASS (3)
SUMAC (1)
JOSTA (3)
RETAIN EXISTING TREES WITH INTERPLANTED WITH BULBS
S18°37'11"W 515.86'
SWITCH (7)
CHOKE (6)
SUMAC (3)
CHOKE (5)
PINE (3)
CHOKE (2)
SERVICEBERRY(2) WITH GERANIUMS
GRASS (3)
SUMAC (6)
SERVICEBERRY
BLUE (3)
JOSTA (3)
SUMAC (3) (CRUSHED GRAVE) PATIO EL 761.50'
S89°26'43"E 262.97'
SERVICEBERRY (2)
STRAWBERRIES (20)
SUMAC (5)
GRASS (5)
BENCH (3)
WHEELCHAIR ACCESSIBLE PLANTERS
GRASS (3)
SUMAC (5)
FORMER GLASSPORT CENTRAL ELEMENTARY SCHOOL
220 ERIE AVENUE
FORMERLY 219 OHIO AVENUE
EXISTING BRICK BUILDING
BUILDING HEIGHT EL. 805.93
PROPOSED BRICK ADDITION
SERVICEBERRY WITH GERANIUMS
DOGWOOD (6)
SUMAC (2)
DOGWOOD (5)
SUMAC (3)
N11°22'49"W 250.00'
SUMAC (6)
JOSTA
GRASS (2)
JOSTA (3)
NO MOW FESCUE
HEMLOCK
HORNBEAM
SERVICEBERRY
VARIEGATED PINE (3)
JOSTA (2)
VIRGINIA CREEPER TO DRAPE OVER WINDOW WELL
DOGWOOD (6)
CHOKE (5)
OAKLEAF (2)
DOGWOOD (3)
SUMAC (2)
GERANIUM
OAKLEAF
DOGWOOD (2)
SUMAC (4)
CHOKE (7)
CHOKE (4)
SUMAC (4)
CHOKE (5)
CHOKE (6)
SUMAC (4)
HAWTHORN
OAK TREE
N18°37'11"E 434.31'
SUMAC (3)
CHOKE (3)
SUMAC (4)
SUMAC (4)
CHOKE (3)
VARIEGATED PINE


RETIREMENT RESIDENCE OF
GLASSPORT


NO SMOKING
FRANJO TAKEUCHI
TL10


DELTA VENT SA

GLASSPORT GYM AREA WALL

Need for New Wall

1. Contractor wanted plumb surface for insulation attachment.
2. Contractor concerned about air sealing uneven wall surface.
3. Existing wall contained holes and protrusions.
4. Two plaster walls not in same plane.

thoughtful balance. nk ARCHITECTS

GLASSPORT GYM AREA WALL

Demolition

thoughtful balance. nk ARCHITECTS

GLASSPORT GYM AREA WALL

Demolition

thoughtful balance. nk ARCHITECTS

GLASSPORT GYM AREA WALL

Demolition

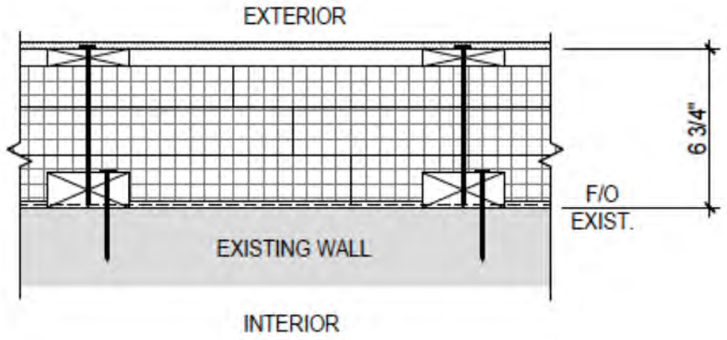
thoughtful balance. nk ARCHITECTS

GLASSPORT GYM AREA WALL

Evolution: Original Concept

E6

EXTERIOR WALL
CLADDING OVER
EXISTING WALL W/ INSUL



- CLADDING PER ELEVATIONS
- 1x4 TREATED WOOD FURRING (FASTEN THRU TO NAILER)
  AT EXPOSED FASTENER CLADDING, PROVIDE SECOND
  (PERPENDICULAR) LAYER OF FURRING
- 6" TYPE II EXPANDED POLYSTYRENE RIGID INSULATION (EPS)
  R-4.2 PER INCH (R-25.5 MIN.) / INSTALLED IN OVERLAPPING LAYERS
- 2x4 TREATED WOOD NAILER ATTACHED TO EXISTING WALL
- SELF-ADHERED WATER-RESISTIVE BARRIER (AIR-BARRIER,VAPOR-PERMEABLE)
- EXISTING CONSTRUCTION

Assembly no.	Building assembly description					Interior insulation?
01ud	E6 (Existing Wall w/ 6" Ext. Insulation)					

Heat transmission resistance [hr.ft².F/BTU]

Orientation of building element: 2-Wall — interior R_{si}: 0.74

Adjacent to: 1-Outdoor air — exterior R_{se}: 0.23

Area section 1	R per inch	Area section 2 (optional)	R per inch	Area section 3 (optional)	R per inch	Thickness [in]
EPS Type II	4.20					4.50
EPS Type II	4.20	2x4 Nailer 16" o.c.	1.28			1.50
Existing Masonry	0.21					16.00

Percentage of sec. 1	Percentage of sec. 2	Percentage of sec. 3	Total
78%	22.0%		22.00 in

U-value supplement: BTU/hr.ft².°F

R-value: 27.9 hr.ft².°F/BTU

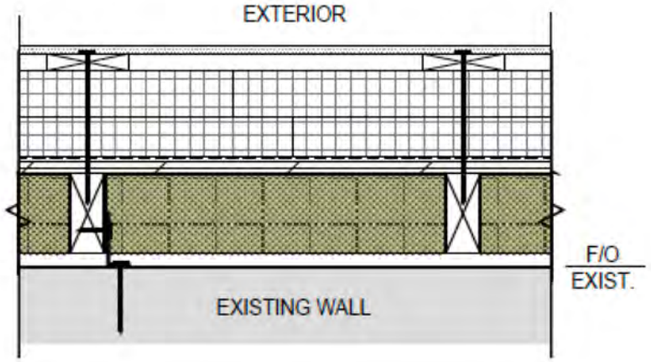
thoughtful balance. nk ARCHITECTS

GLASSPORT GYM AREA WALL

Evolution: New Concept

E6*

EXTERIOR WALL
CLADDING OVER
EXISTING WALL W/ INSUL



16.8"

- CLADDING PER ELEVATIONS
- 1x4 TREATED WOOD FURRING (FASTEN THRU TO NAILER)
  AT EXPOSED FASTENER CLADDING, PROVIDE SECOND
  (PERPENDICULAR) LAYER OF FURRING
- 4" TYPE II EXPANDED POLYSTYRENE RIGID INSULATION (EPS)
  R-4.2 PER INCH (R-~~25~~ MIN.) / INSTALLED IN OVERLAPPING LAYERS
- SELF-ADHERED WATER-RESISTIVE BARRIER (AIR-BARRIER,VAPOR-PERMEABLE)
- 1/2" EXTERIOR SHEATHING
- 2x4 WOOD STUDS @ 16" O.C. (BRACE TO EXISTING WALL @ 48" VERT./HORIIZ.)
- 3-1/2" MINERAL WOOL BATT INSULATION
  R-4.2 PER INCH (R-15 MIN.)
- AIR GAP FROM EXISTING WALL CONSTRUCTION AS NECESSARY TO ALLOW VERTICAL/PLUMB WALL

Assembly no.	Building assembly description	Interior insulation?
02ud	E6-REVISED (Existing Wall w/ Cavity Framing/Insulation & 4" Ext. Insulation)	

Heat transmission resistance [hr.ft².F/BTU]

Orientation of building element: 2-Wall — interior R_{si}: 0.74

Adjacent to: 1-Outdoor air — exterior R_{se}: 0.23

Area section 1	R per inch	Area section 2 (optional)	R per inch	Area section 3 (optional)	R per inch	Thickness [in]
EPS Type II	4.20					4.00
Plywood	4.20					0.50
Mineral Wool Batt	4.00	2x4 stud 16" o.c.	1.28			3.50
Existing Masonry	0.21					16.00

Percentage of sec. 1	Percentage of sec. 2	Percentage of sec. 3	Total
78%	22.0%		24.00 in

U-value supplement: BTU/hr.ft².°F

R-value: 33.7 hr.ft².°F/BTU

thoughtful balance. nk ARCHITECTS

GLASSPORT GYM AREA WALL

New Wall

thoughtful balance. nk ARCHITECTS

GLASSPORT GYM AREA WALL

New Wall

thoughtful balance. nk ARCHITECTS

GLASSPORT GYM AREA WALL

New Wall

thoughtful balance. nk ARCHITECTS