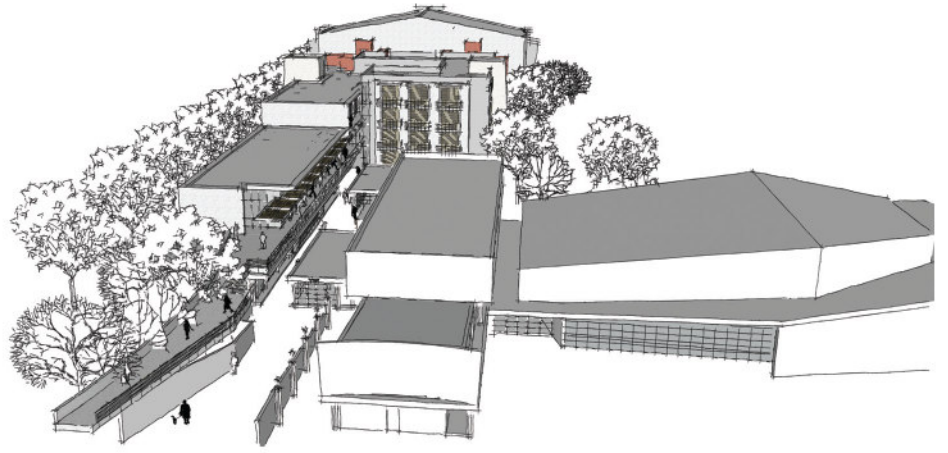


chapter 8

the drawings





8.1 site plan
8.2 plans
8.3 elevations
8.4 sections
8.5 presentation

fig. 8.1 : 3D drawings of the proposed intervention.



HEAVY MACHINERY
LABORATORIES

CEFIM

ring road

existing parking area

green buffer

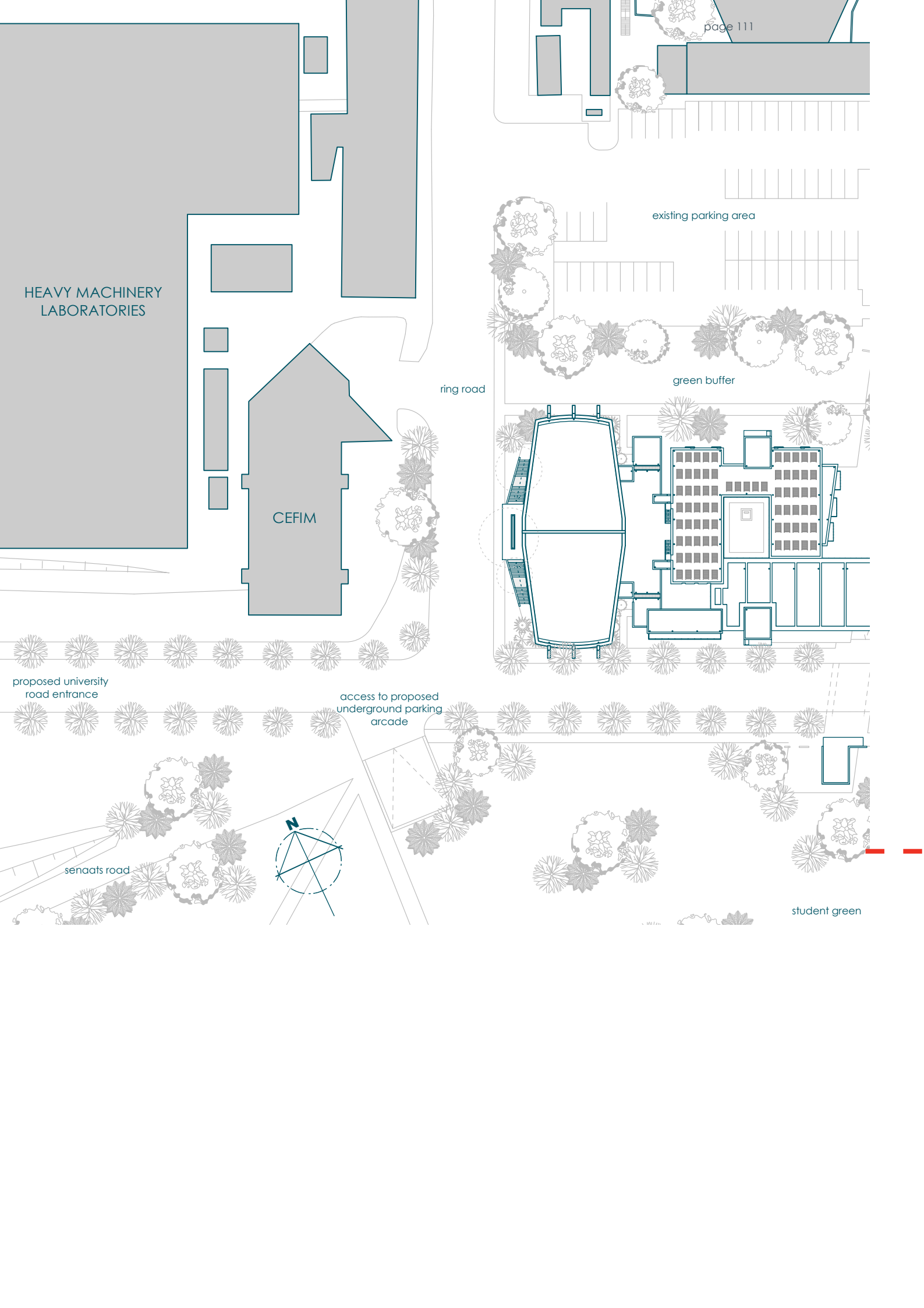
proposed university
road entrance

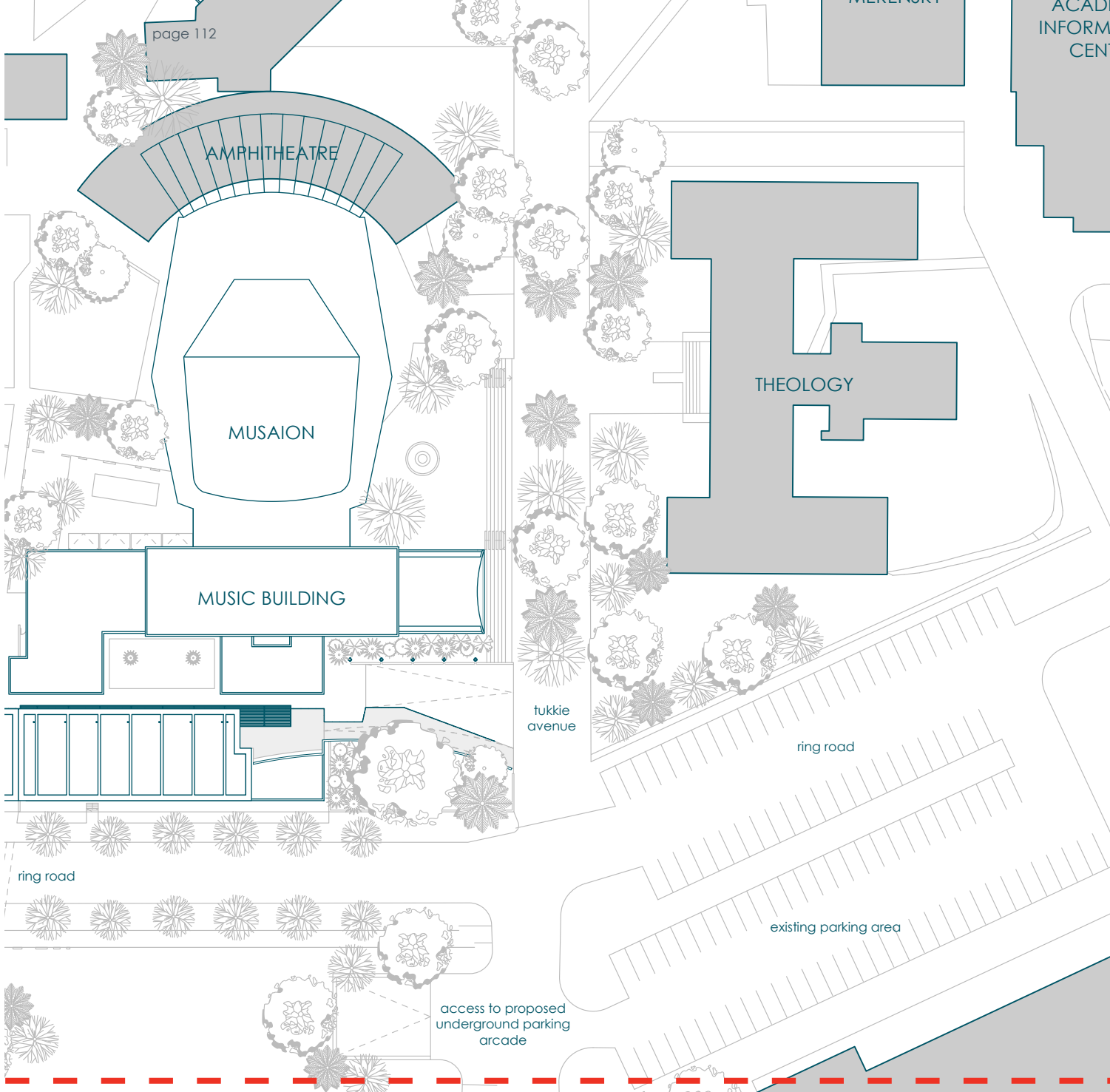
access to proposed
underground parking
arcade

senats road

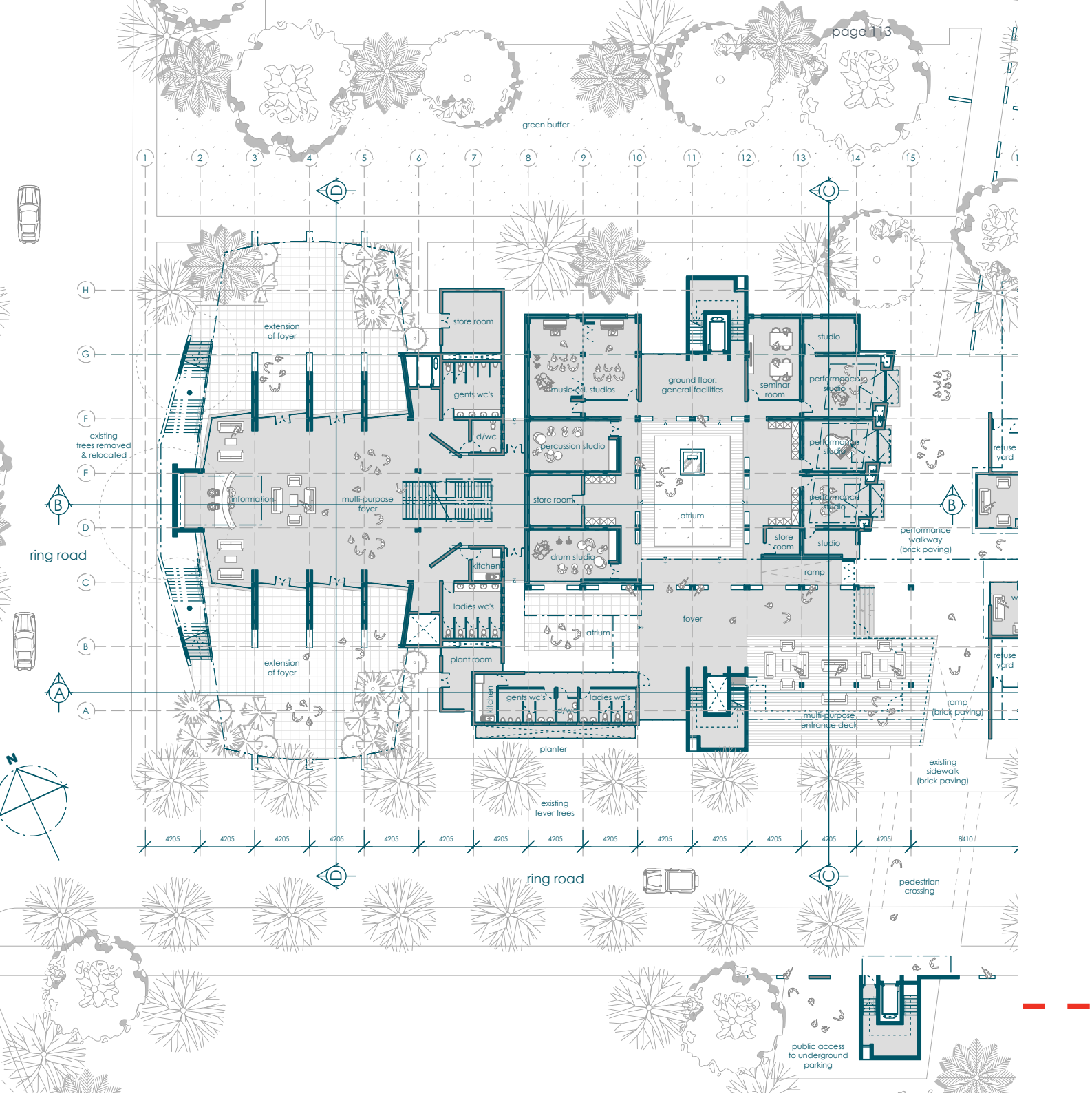


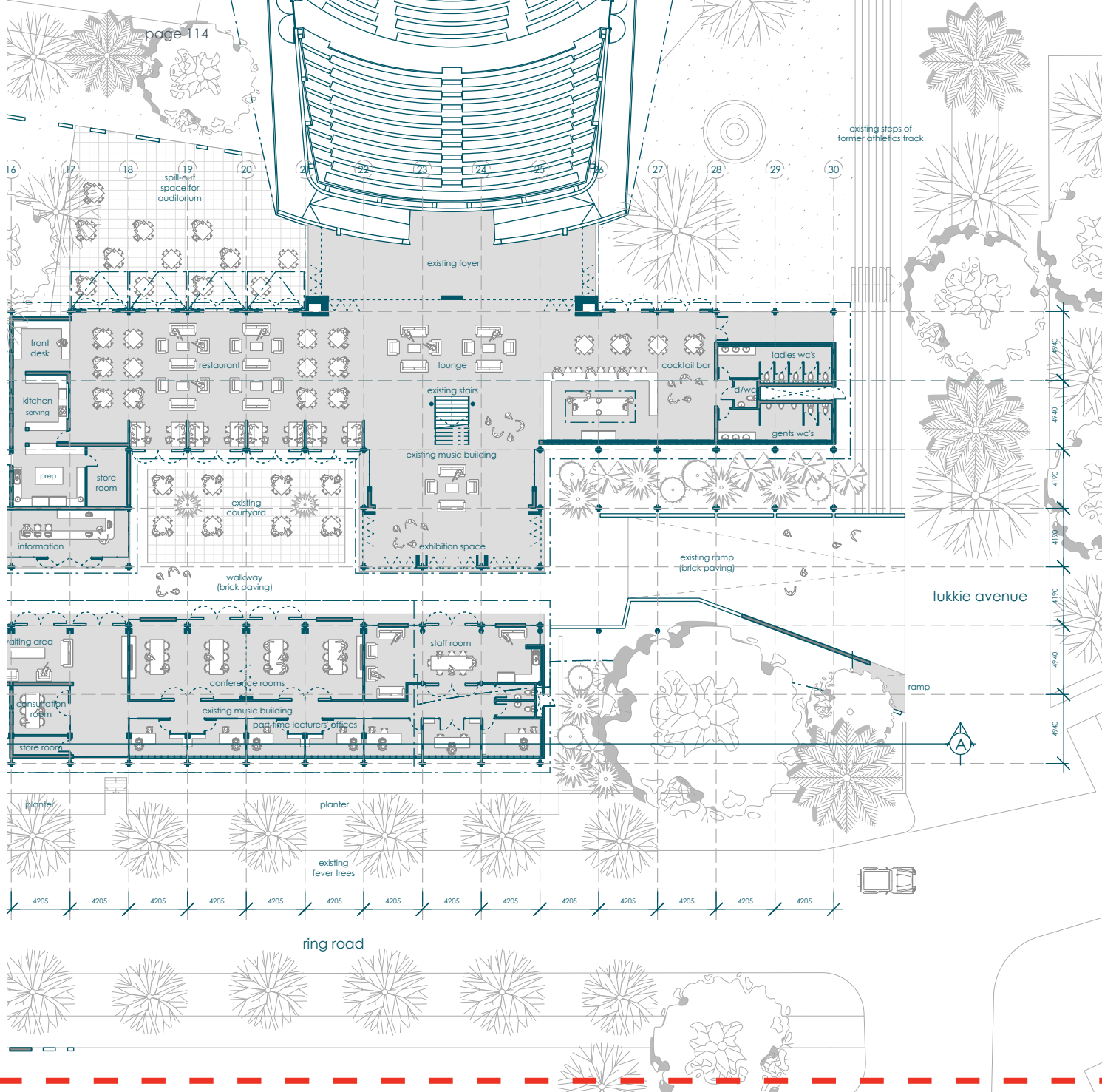
student green



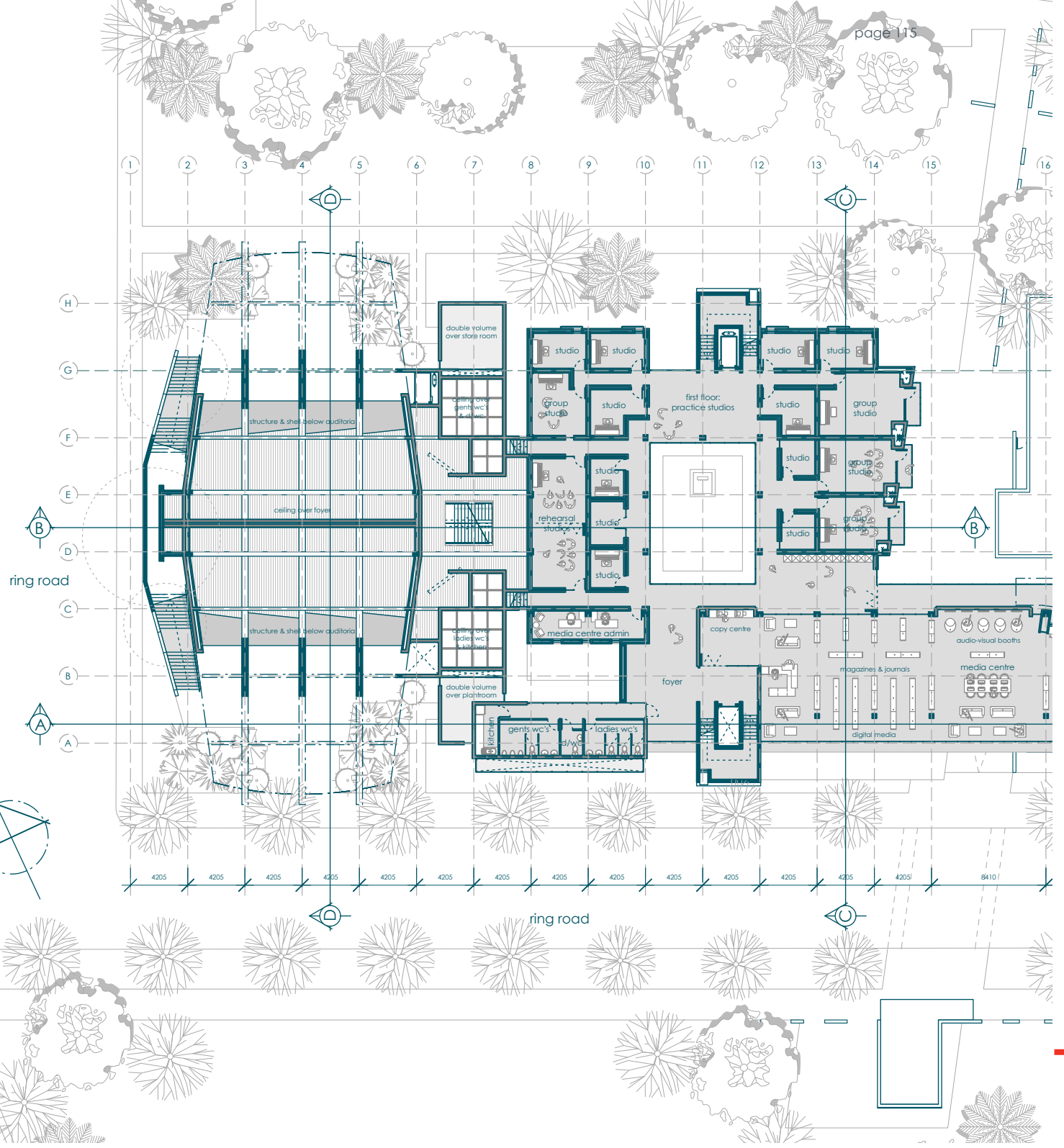


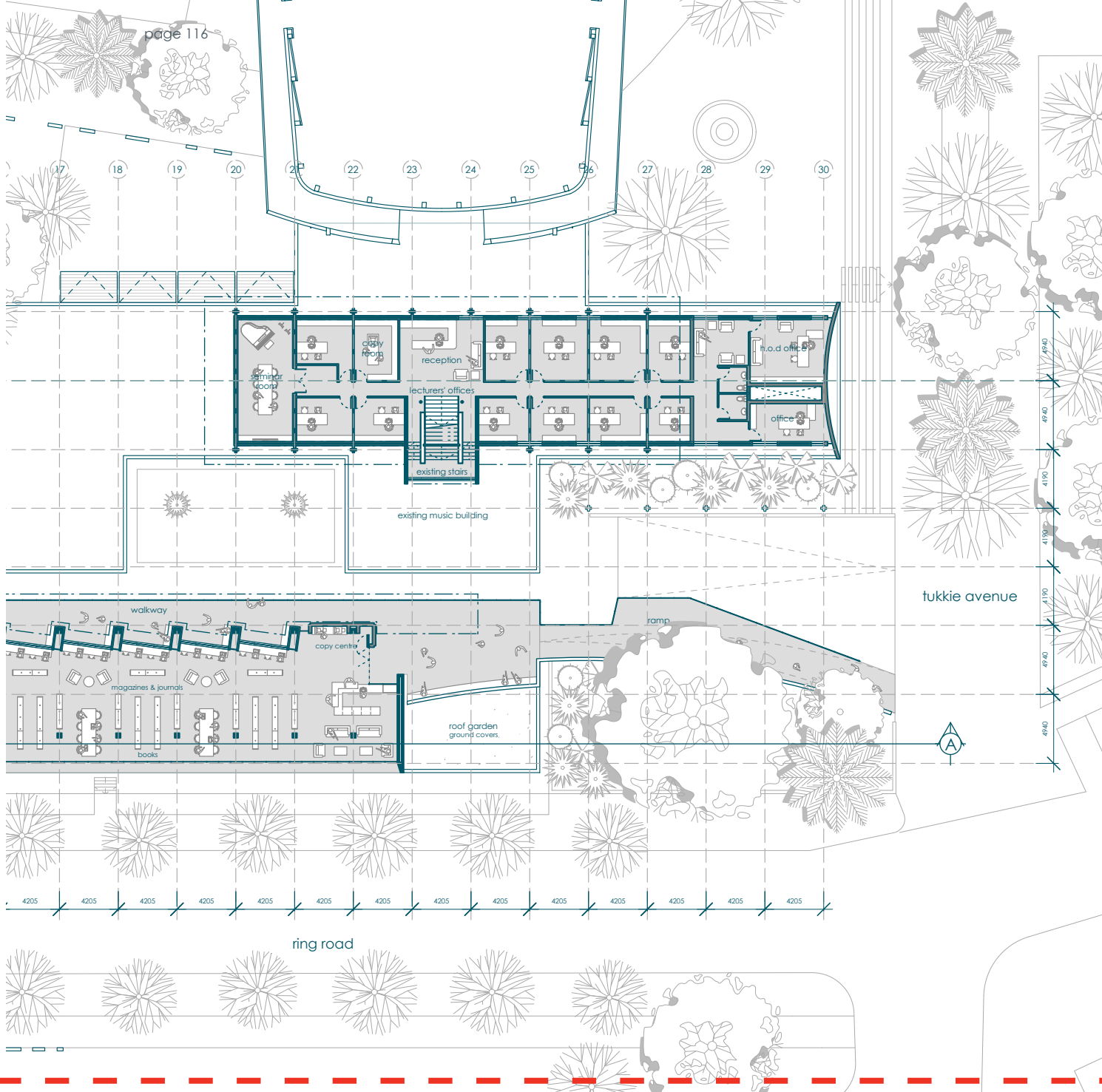
1 : 750 site plan



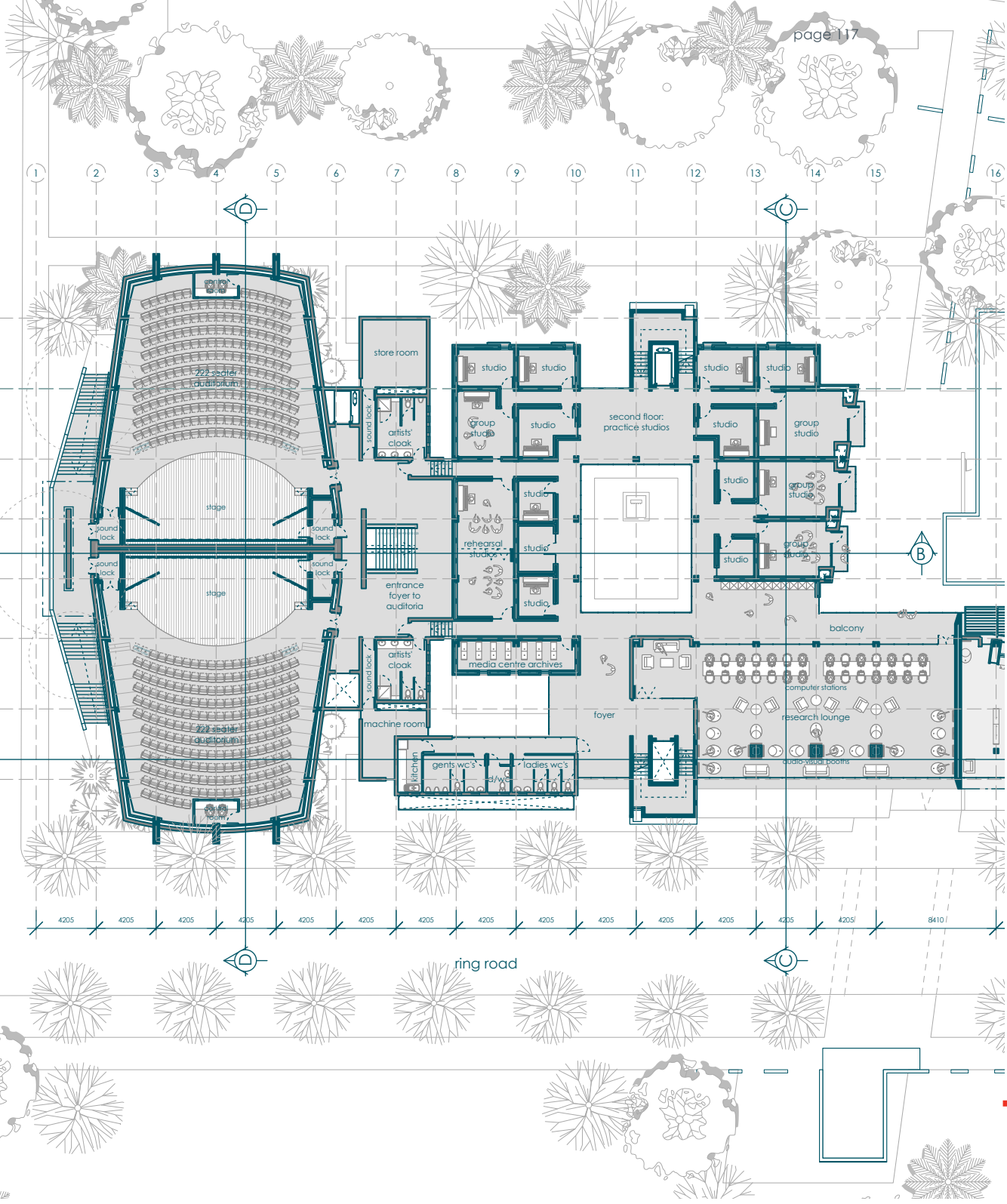


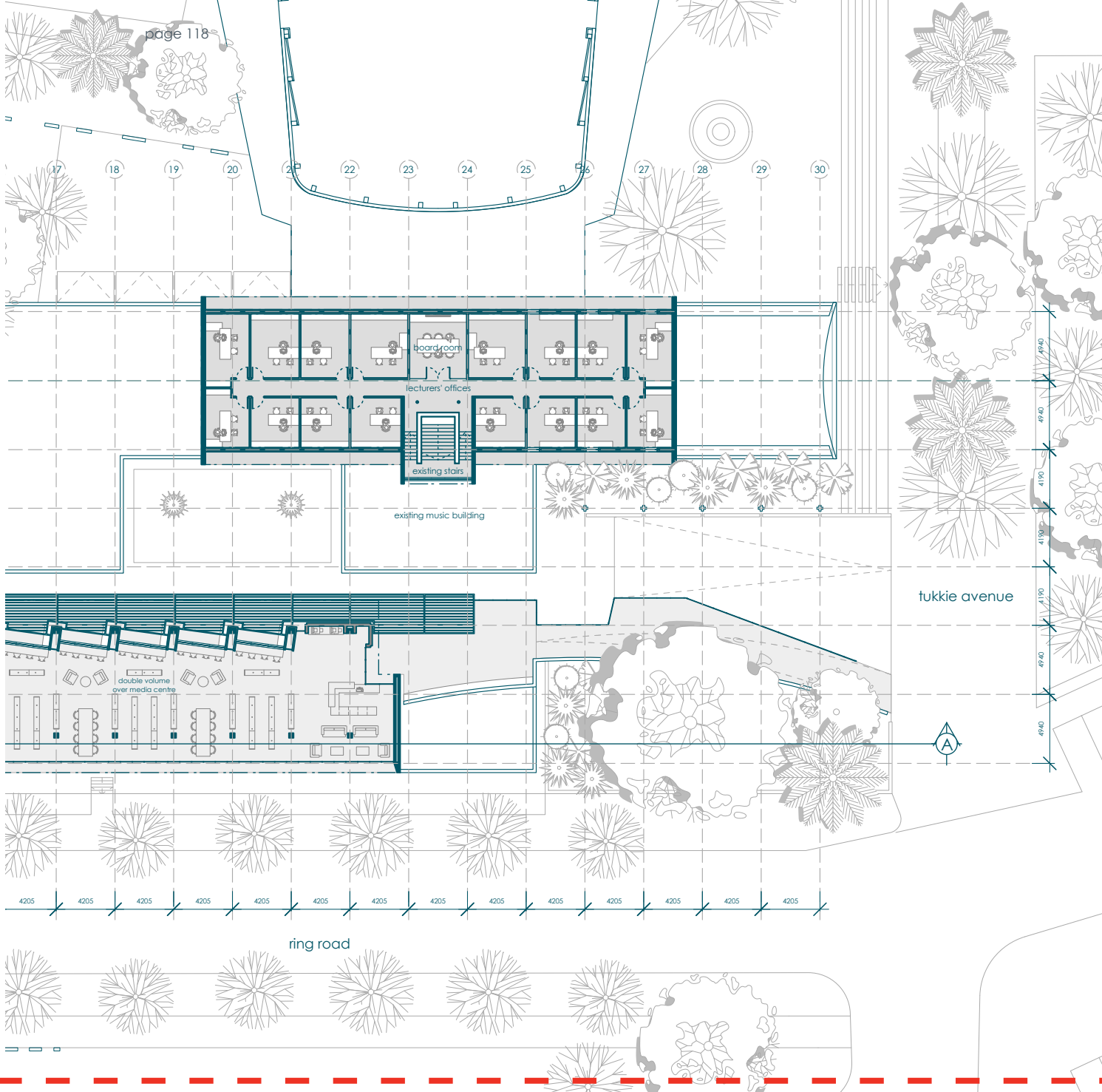
1 : 400 ground floor plan



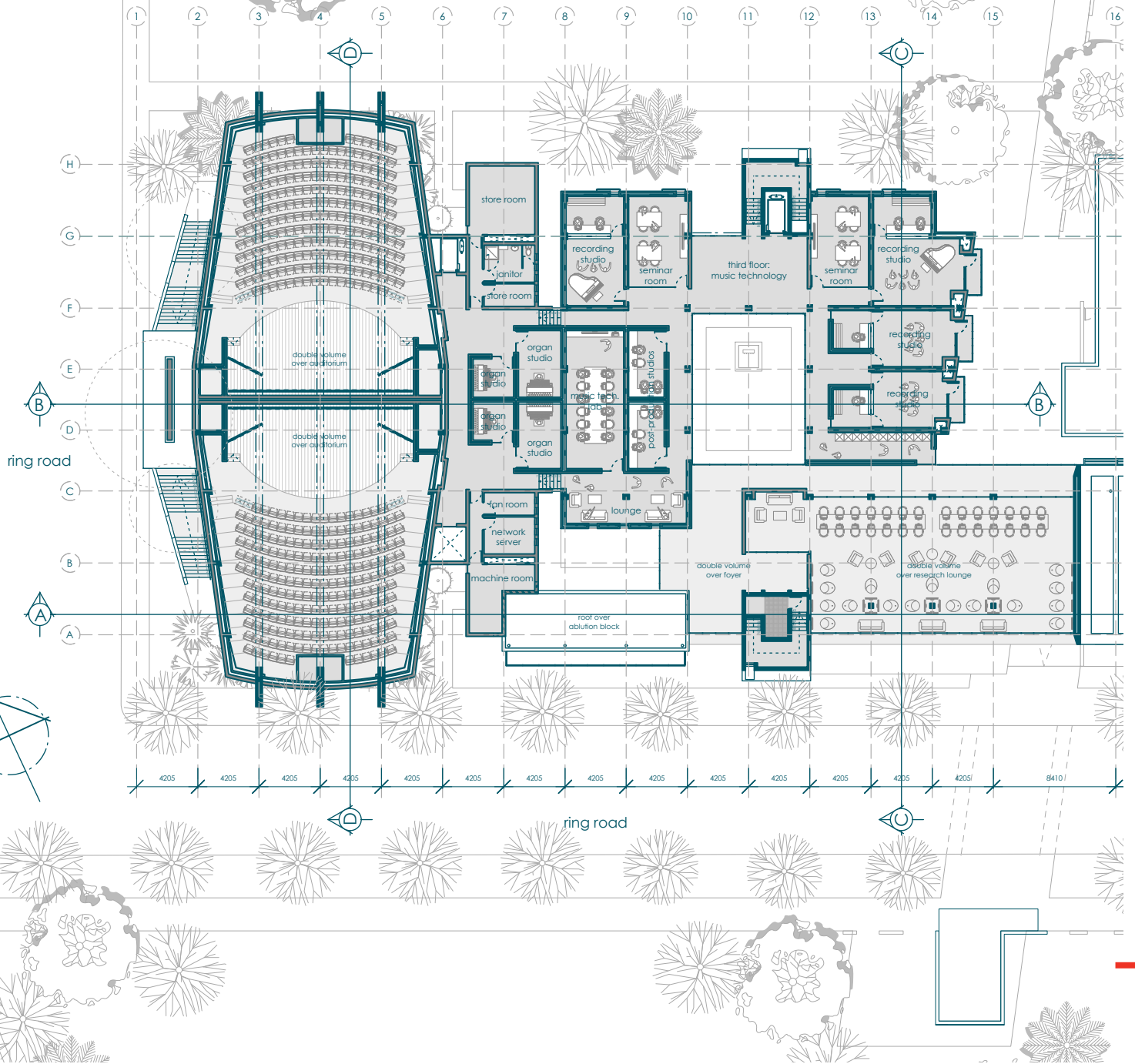


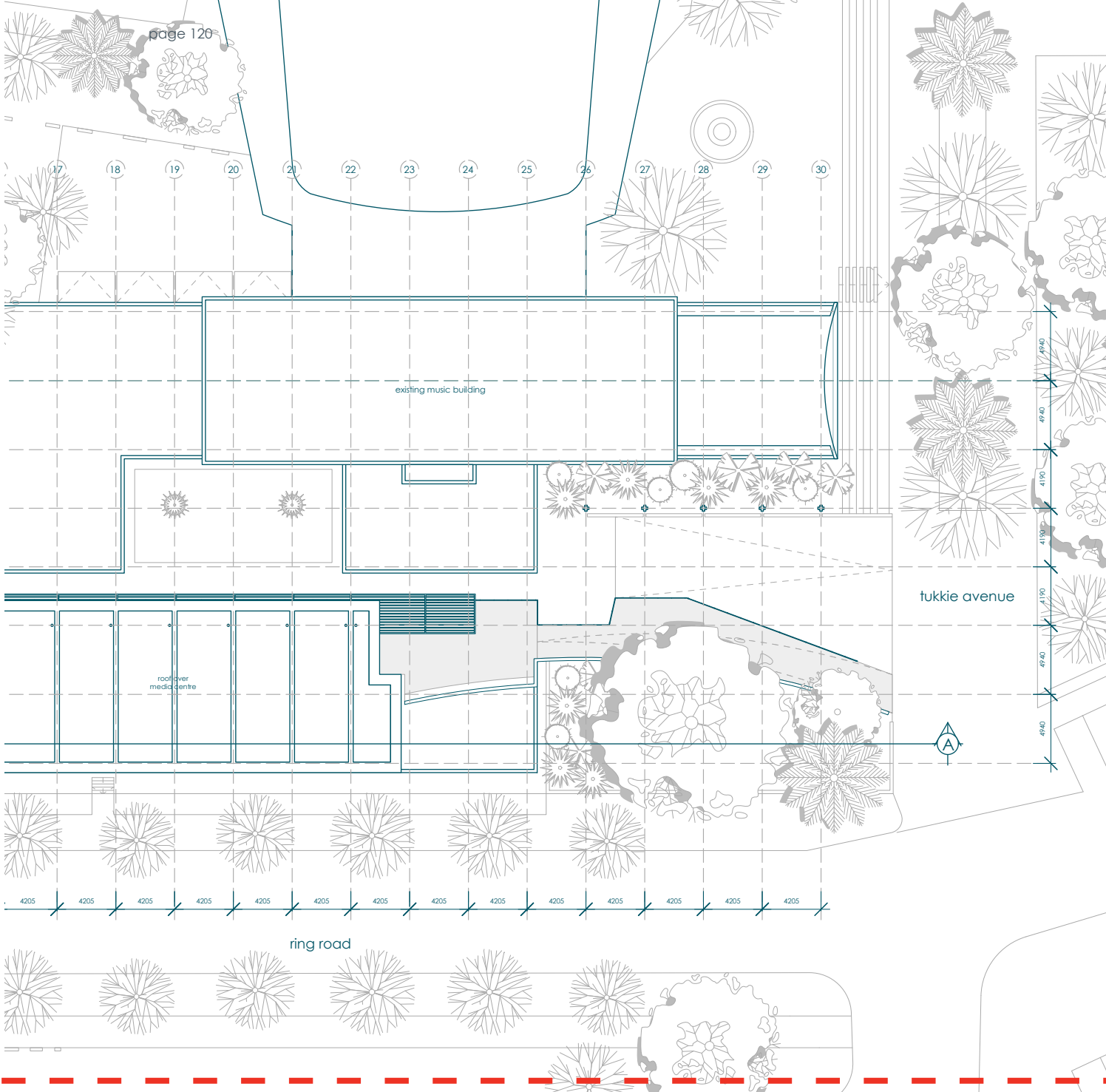
1 : 400 first floor plan





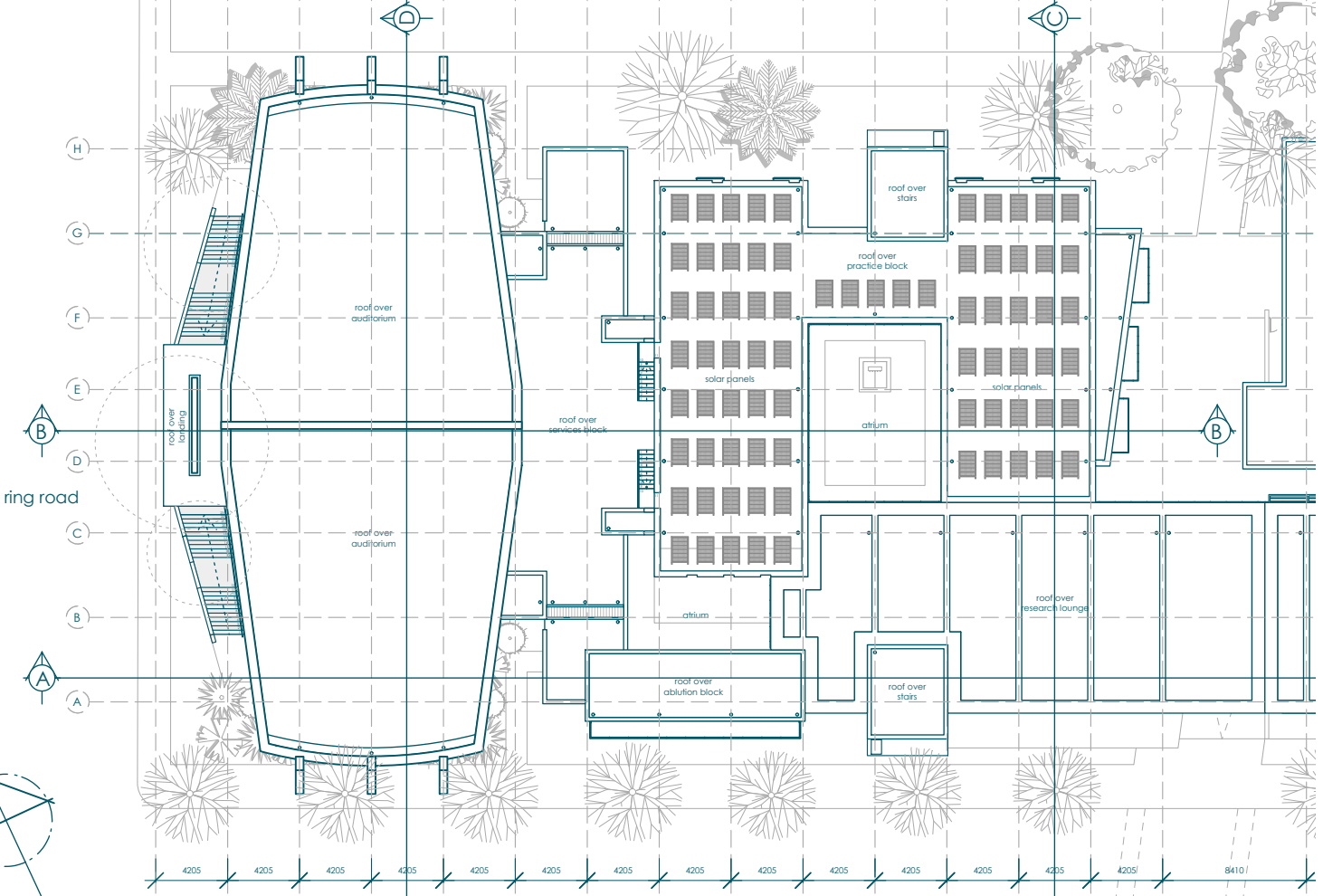
1 : 400 second floor plan





1 : 400 third floor plan

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

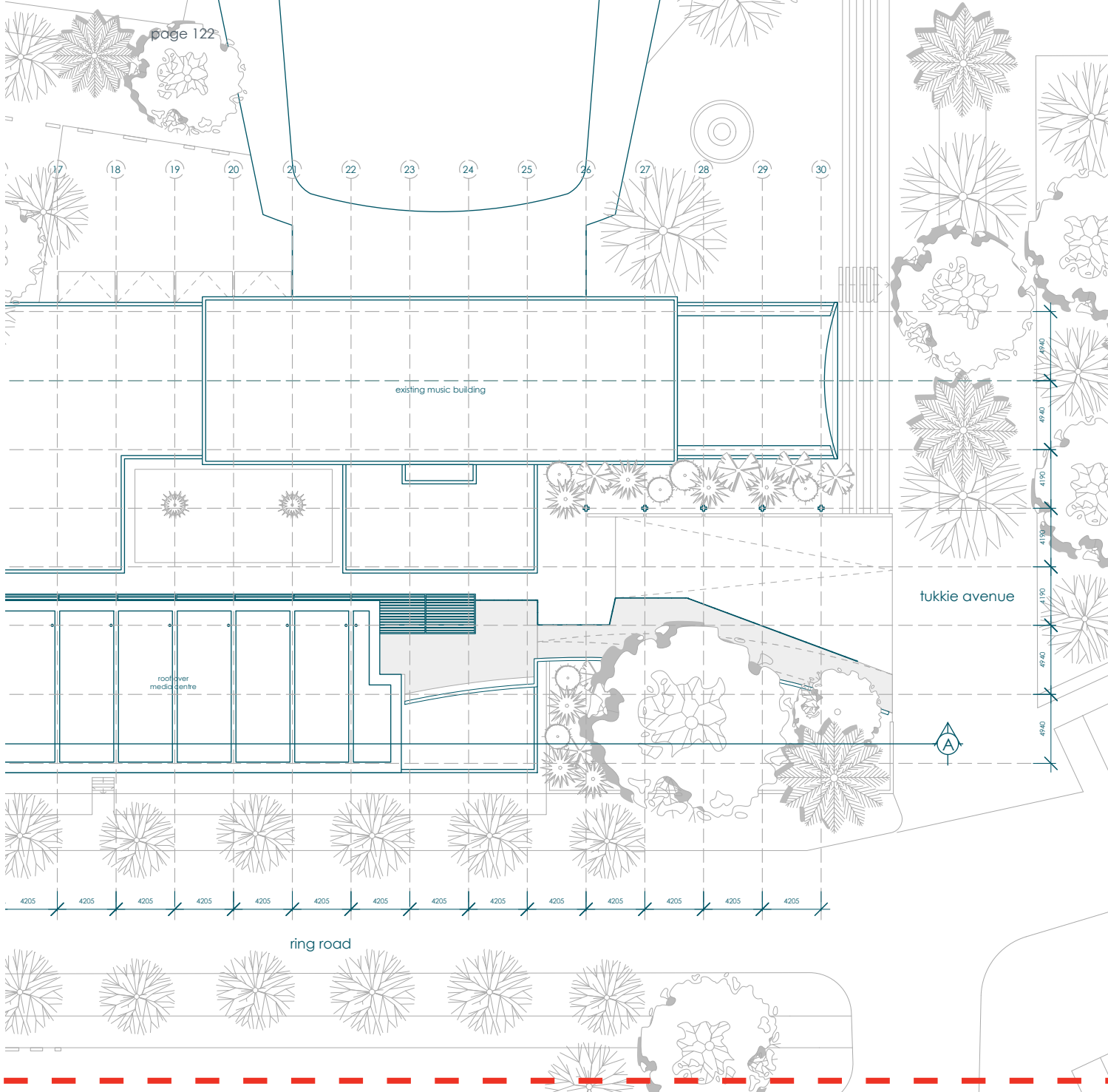


ring road

ring road

roof over public access to underground parking





1 : 400 roof plan



perspective





1 : 400

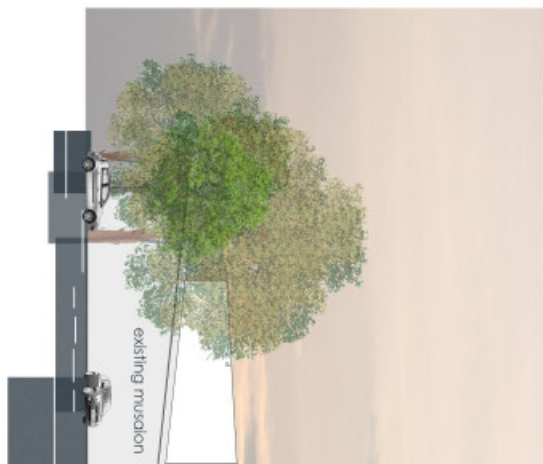
south elevation

& perspective

1 : 400

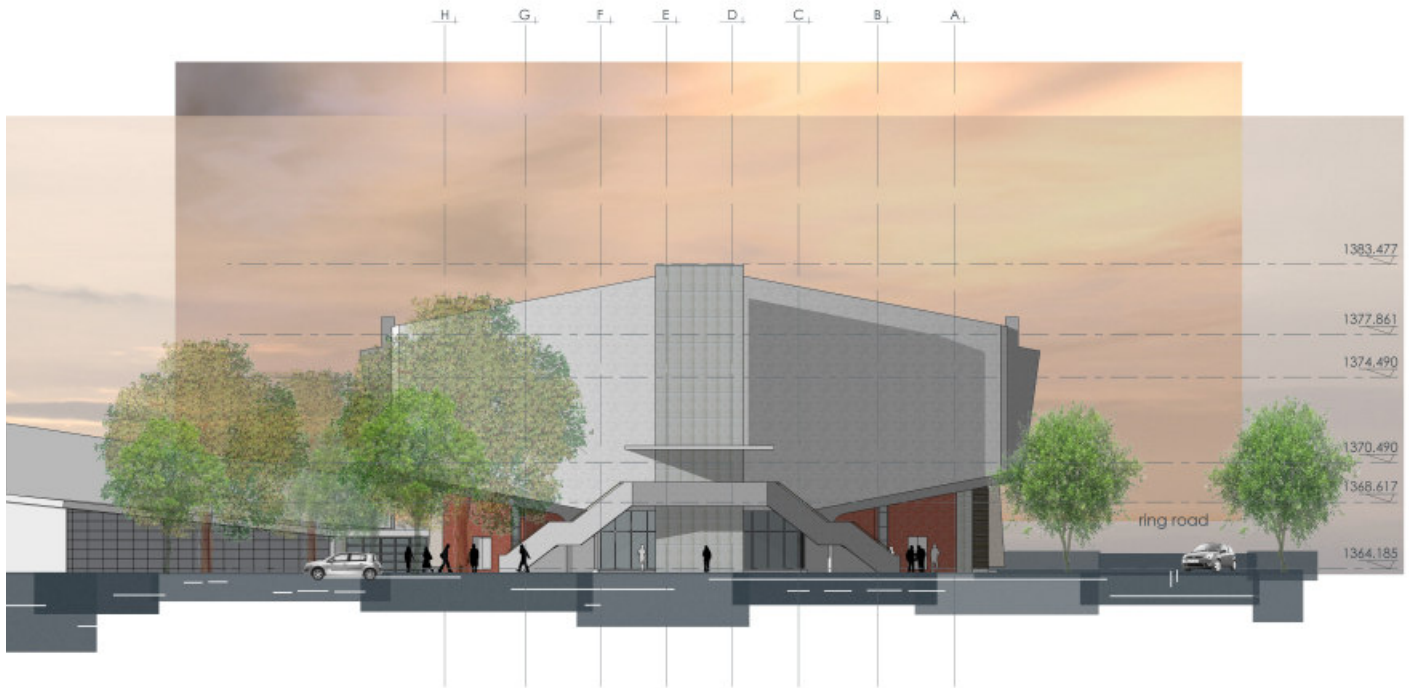
west elevation

& perspective





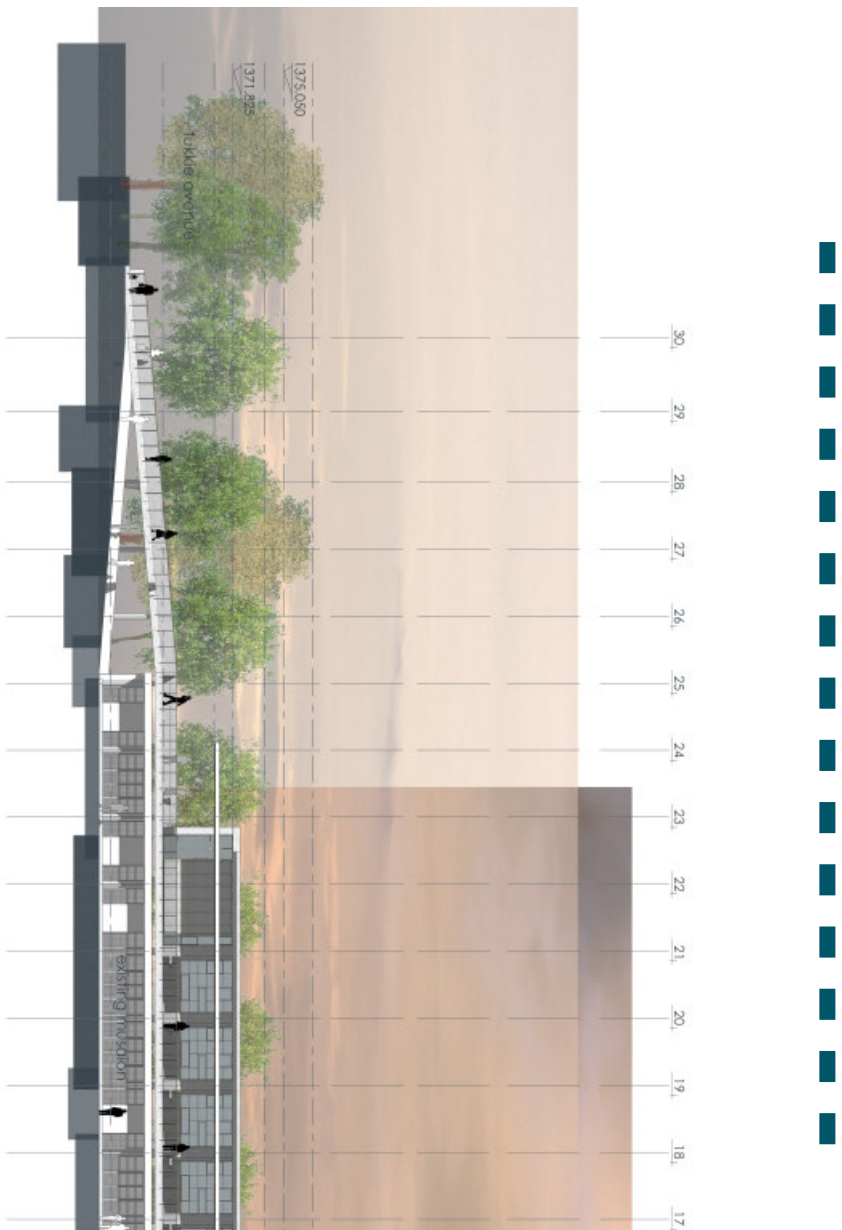
perspective



1 : 400

north elevation

& perspective





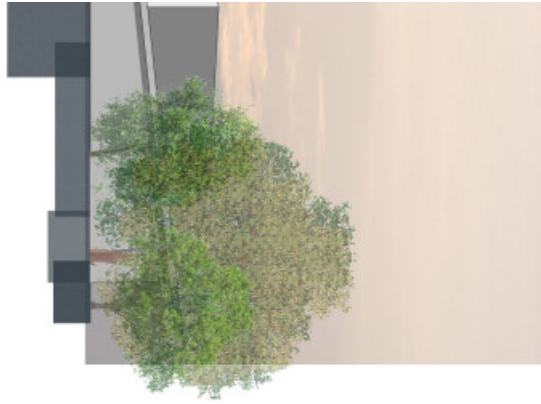
perspective





perspective

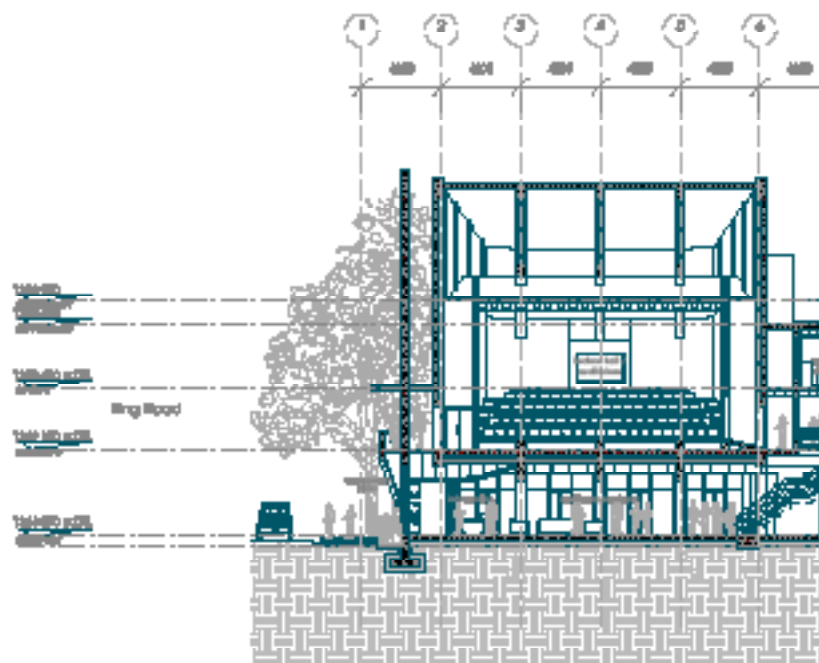
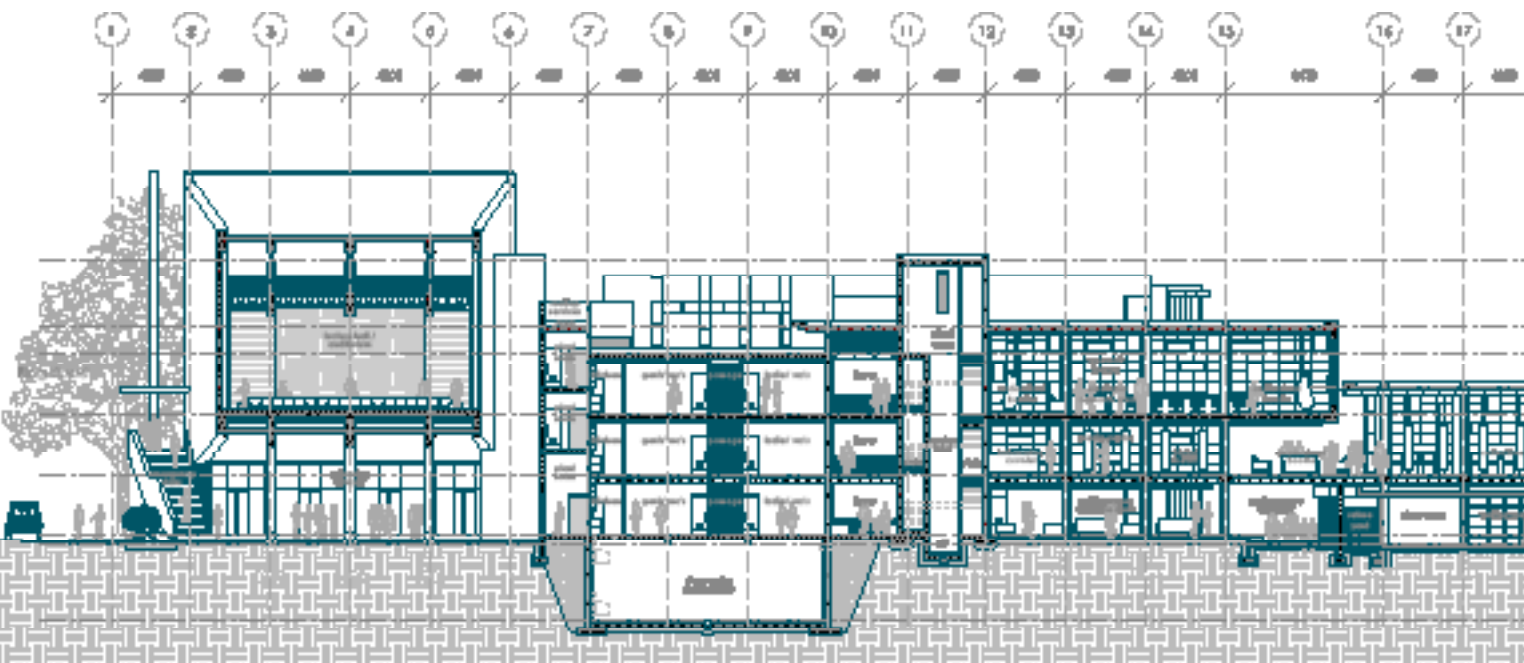


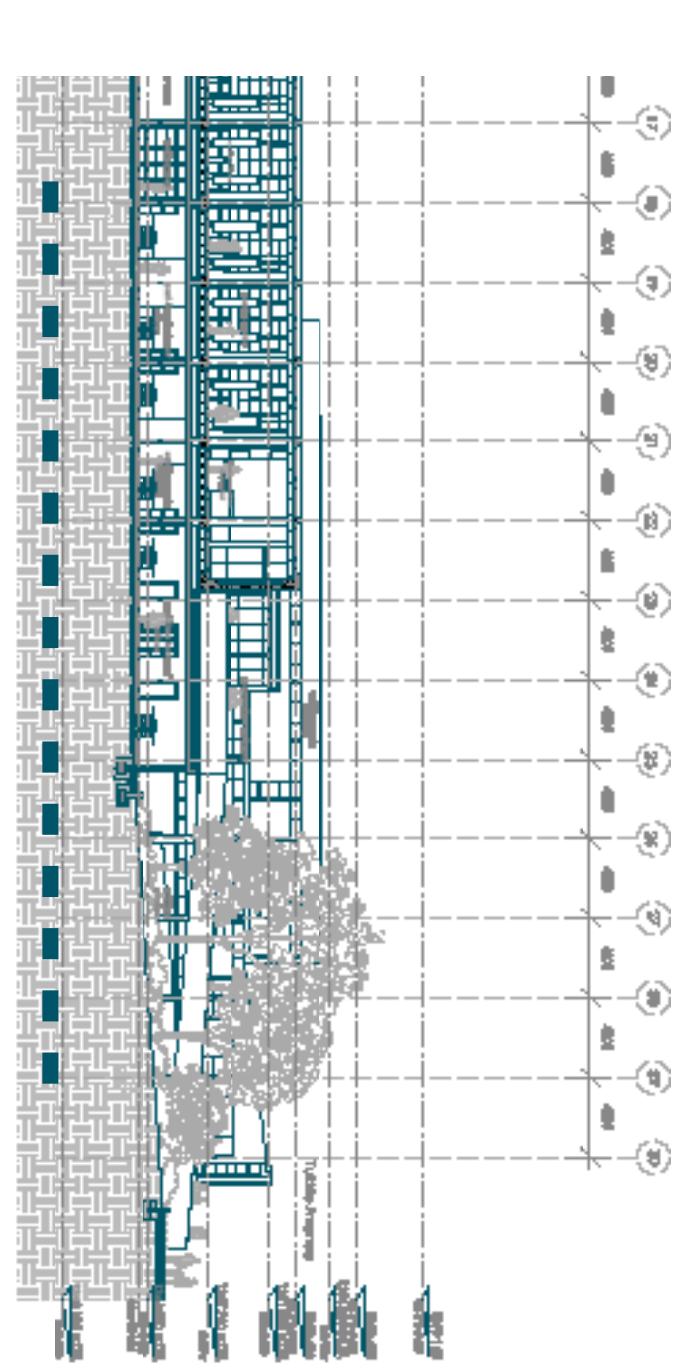
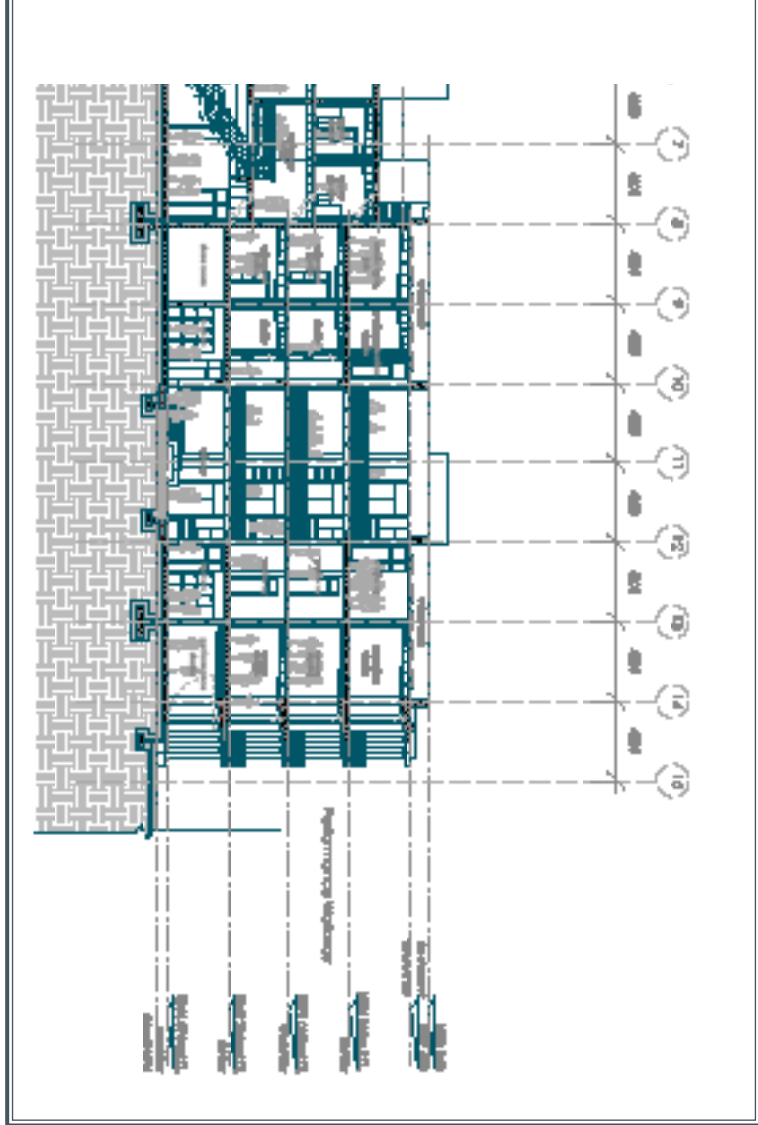


1 : 400

east elevation

& perspective

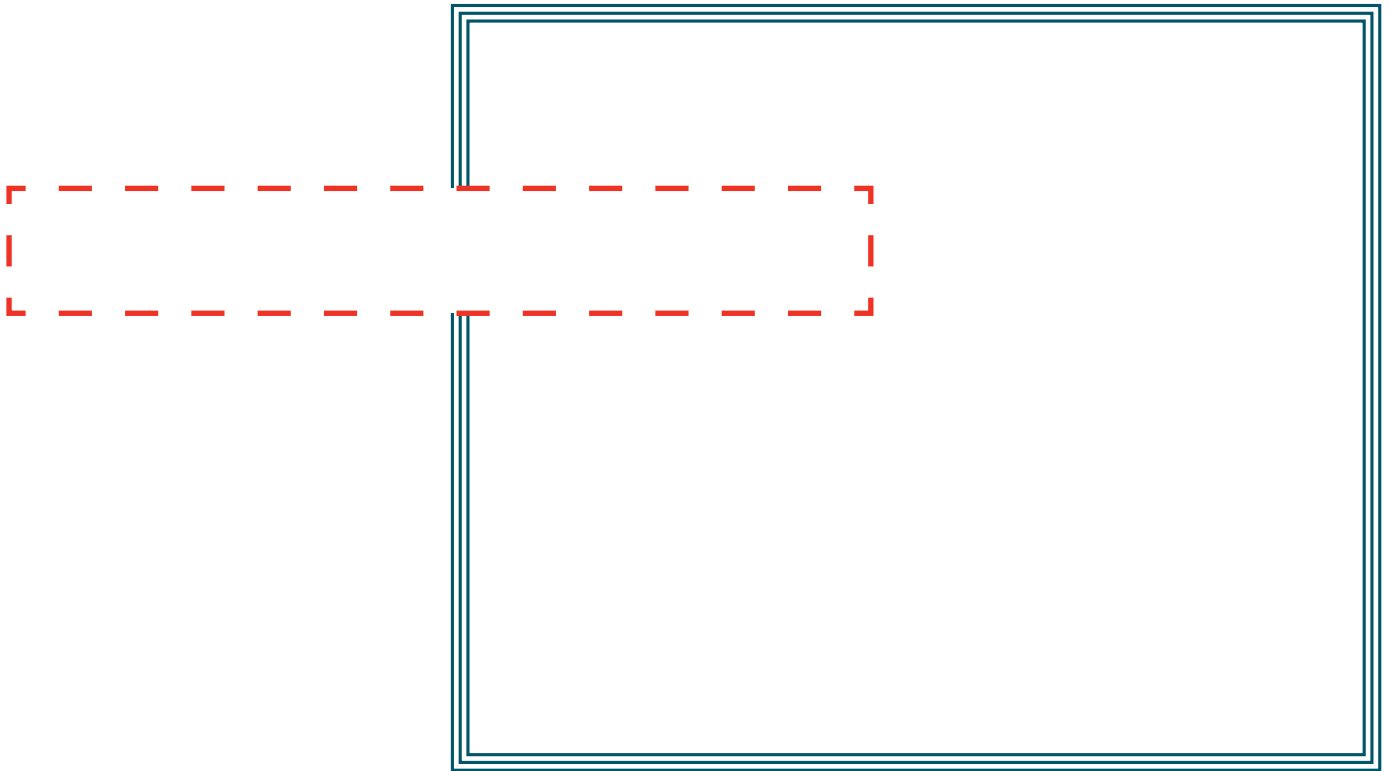




1 : 400 section A-A & B-B



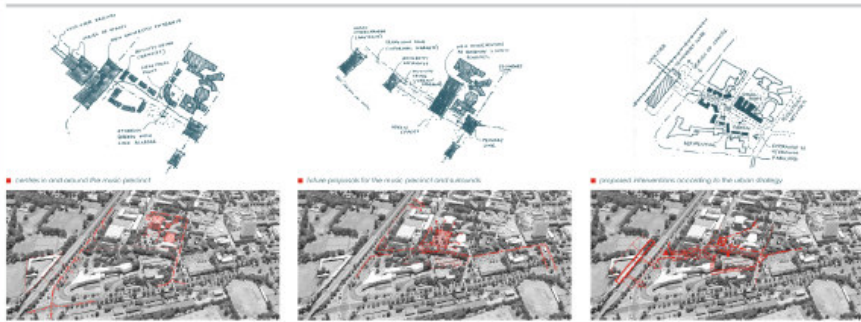
FINAL presentation





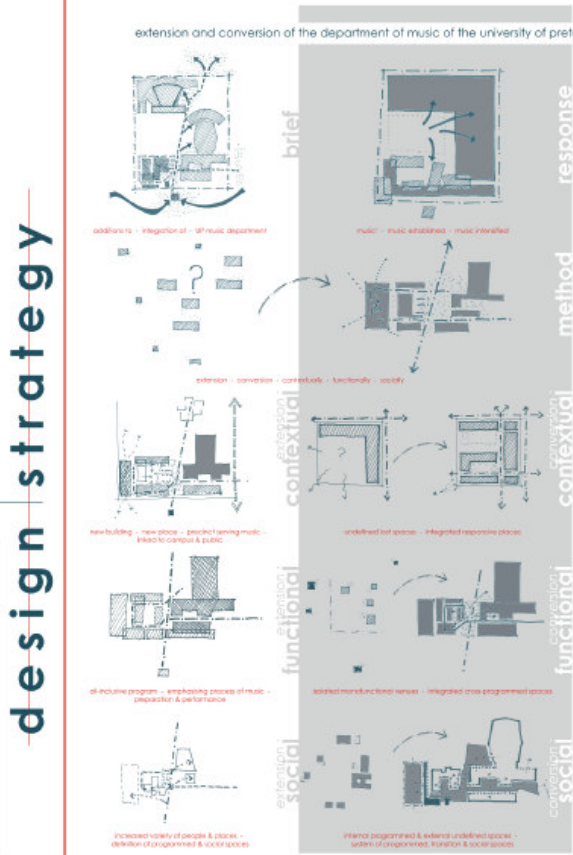
Locality Plan Music Precinct on Main Campus, University of Pretoria

urban strategy



MUSIC²

place of music
experience of music



design strategy



THE PRECINCT 1960's



KEY ISSUES

- The Auld Green is the former heart of Campus
- The site is the former soccer/football Hub of Campus - the sports fields
- The precinct buildings' architectural language announced the arrival of New Brutalism on Campus
- The precinct, especially the Auld, was designed with a public function
- The precinct established UP as a "centre of excellence in the arts"
- The precinct buildings are known as the "aesthetically fit" on Campus

SWOT ANALYSIS

Strengths

1. The existing building is a substantial project with an already established footprint, this allows for a more cost-effective solution to the 'aesthetically fit' on campus.
2. The existing building is a substantial project with an already established footprint, this allows for a more cost-effective solution to the 'aesthetically fit' on campus.
3. The existing building is a substantial project with an already established footprint, this allows for a more cost-effective solution to the 'aesthetically fit' on campus.
4. The existing building is a substantial project with an already established footprint, this allows for a more cost-effective solution to the 'aesthetically fit' on campus.

Weaknesses

1. The existing building is a substantial project with an already established footprint, this allows for a more cost-effective solution to the 'aesthetically fit' on campus.
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4. The existing building is a substantial project with an already established footprint, this allows for a more cost-effective solution to the 'aesthetically fit' on campus.

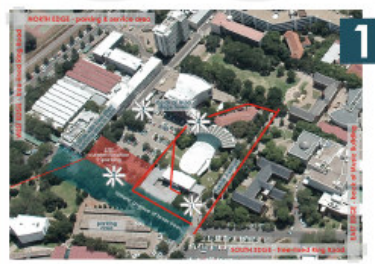
Opportunities

1. The existing building is a substantial project with an already established footprint, this allows for a more cost-effective solution to the 'aesthetically fit' on campus.
2. The existing building is a substantial project with an already established footprint, this allows for a more cost-effective solution to the 'aesthetically fit' on campus.
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4. The existing building is a substantial project with an already established footprint, this allows for a more cost-effective solution to the 'aesthetically fit' on campus.

Threats

1. The existing building is a substantial project with an already established footprint, this allows for a more cost-effective solution to the 'aesthetically fit' on campus.
2. The existing building is a substantial project with an already established footprint, this allows for a more cost-effective solution to the 'aesthetically fit' on campus.
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4. The existing building is a substantial project with an already established footprint, this allows for a more cost-effective solution to the 'aesthetically fit' on campus.

CONTEXT analysis



1

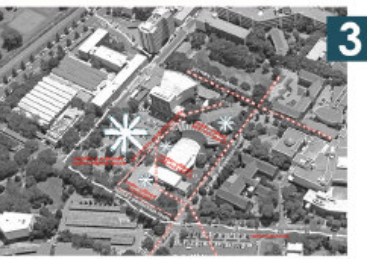


THE SITE - A PHOTO MONTAGE 2009

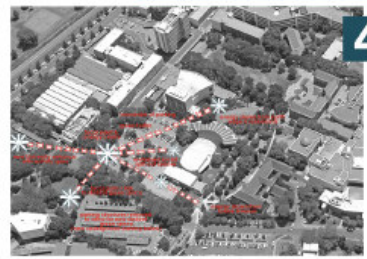
- location
- edges
- entrance points
- circulation routes
- functional zones
- energy hubs & flow
- orientations
- boundaries
- open spaces
- pedestrian routes
- vehicular routes
- site significance
- future possibilities
- contextual links
- precinct revitalisation
- parking solutions



2



3



4

GEOGRAPHY OF THE SITE

diagrammatic view of the site from the south-east

diagrammatic view of the site from the south

diagrammatic view of the site from the west

brazilian-influenced
pretoria regionalism

a new monumentalism
monumentalism

a human modernism
brutalism



law building

Main Campus, University of Pretoria
Krugerskaps Architects, 2006

double-volume walkway / interaction space to courtyard
floating screen to define human scale
glazed south facade - relationship to "fever" tree-lined avenue
entrance extends into Tukkile Avenue
facades express internal functional spaces
formal grouping of similar functions
central atria connect separate functions
circulation expressed as sculptural lowers
auditoria as "free-standing" formal organic entity
building defines south edge of precinct
library - public - light - clarity of information
contrast to
acoustic spaces - private - solid
continuity of flow of ground floor
network of circulation & interaction spaces



centenary building

Main Campus, University of Pretoria
EarthWorld Architects & Interiors (Braam de Villiers), 2008

conversion of the modern language
sensitivity & respect towards existing fabric
continuing of existing grids / edge lines
ramp - transitional layer - internal spaces
circulation route as interactive / seating space
extended external walkways
foyer as place of choice
uncelebrated physical entrances
concrete fins / pilots on a grid
continuity of ground floor
articulation & formal expression of spaces
similar material palette as existing / surrounding buildings
iconic corner - human scale towards entrances



precedents

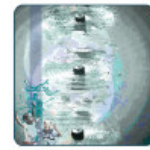
carpenter centre

Harvard University, Massachusetts, USA
Le Corbusier & Guillermo Juan de la Fuente, 1963

building axes along existing pedestrian routes
ramp to link building with Tukkile Avenue
ramp extends as circulation through building
functional spaces branch off central spine
structural support - columns on grid
continuity of urban space underneath building
functional blocks as intersecting rectangles
flat concrete roofs at different levels
brise soleil / setbacks to north & west facades
internal spatial expression on facades
uncelebrated physical entrances
iconic corner - human scale towards entrances
articulation & formal expression of spaces
ramp - transitional layer - internal spaces



design theory



space
a perspective
based on
science



nature
a perspective
based on
beauty & grace



human
a perspective
based on
intuition

DESIGN
influences

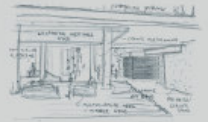
THE NATURE OF ORDER

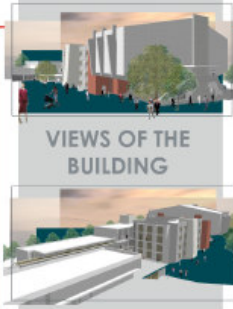
Christopher Alexander

centres
order
wholeness

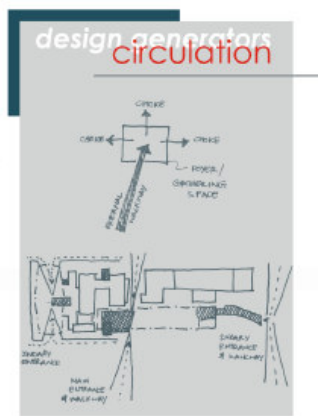
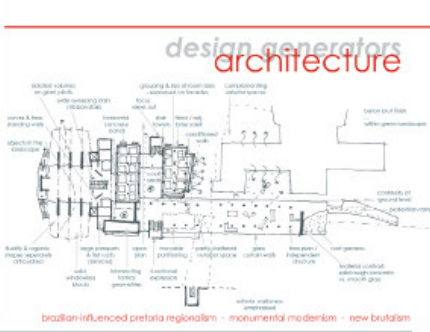
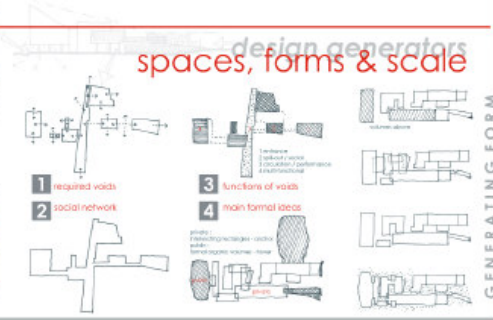
perspectives

matrices



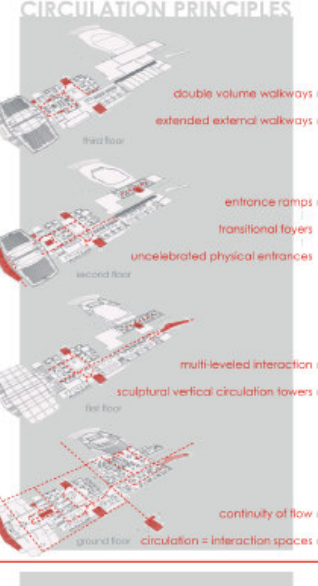
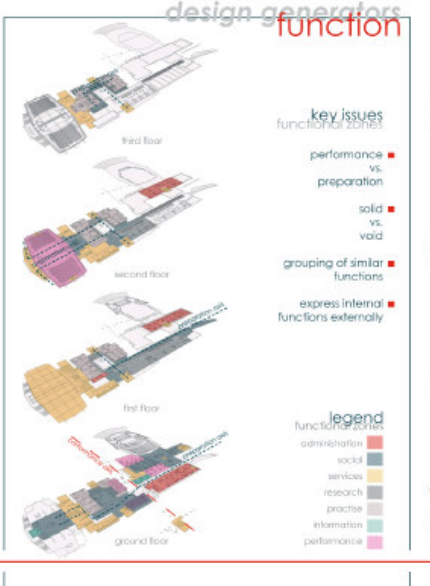
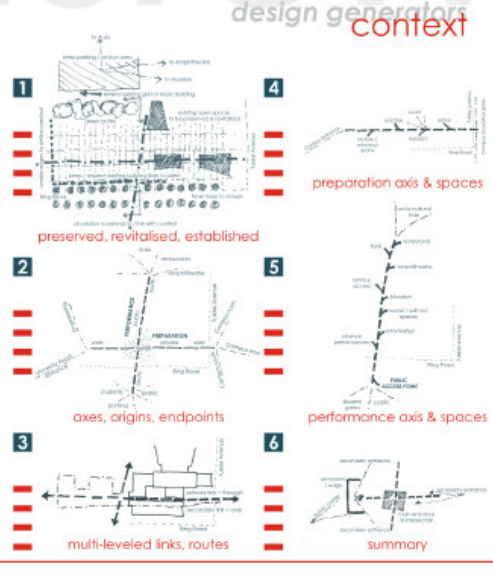
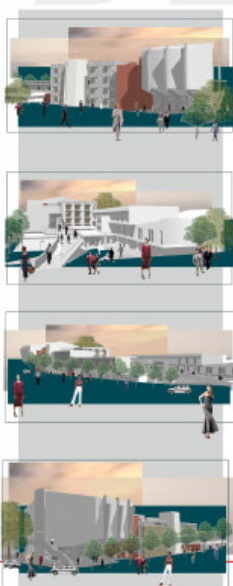


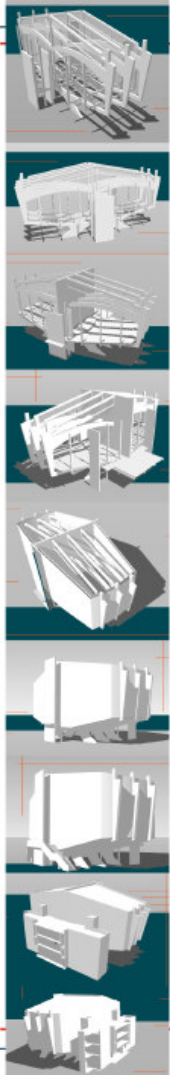
VIEWES OF THE BUILDING



DESIGN development

DESIGN





lecture halls auditoria

- shell construction
- cast in situ reinforced concrete
- Main Support**
 - 3x 400mm thick rc slab, 5165mm wide, @ 4005mm c/c
 - internal span between supports = 12,350mm
 - cantilever = 11,000mm
 - depth of beams = 850 - 1025mm
 - width of columns = 1165-1750mm
 - depth of overhead crched beam = 1000 - 2000mm
- Roof Support**
 - overhead crched beam (part of concrete slab)
 - steel girder truss depth = 2050mm
- Roof Slab**
 - rc 1-way slab, 255mm thick
 - integrated downward beam depth = 460mm
- Floor to Auditoria**
 - cast in situ rc stepped slab, 255mm thick
 - slage = 185mm thick rc slabs with 340mm upstand beams
- Secondary Support**
 - 230x500 rc columns and beams @ max. 4940mm c/c

- External Skin**
 - tripple layer, 350mm thick, consisting of:
 - 115mm external brick skin
 - 100mm sound insulation cavity
 - 115mm internal brick skin
 - additional sound insulation
 - 50mm mineral wool blanket
 - 8mm perforated commercial plywood panels

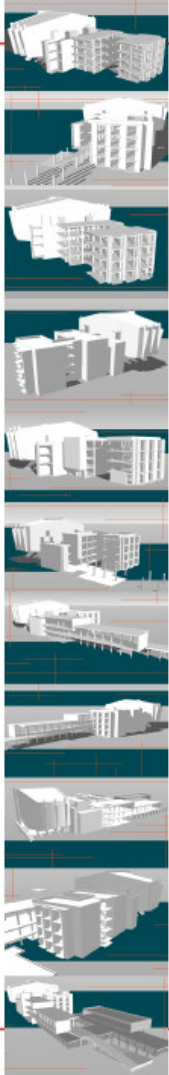
- Free-standing Walls**
 - 330mm thick rc walls lead as free-standing plates, act as support to main structure & define entrances & spaces

service block stage tower

- Main Support**
 - solid load-bearing brick structure
 - 230mm thick brick walls
 - external brick skin to be red face brick
- Floor Slabs**
 - cast in situ rc slabs, 255mm thick
- Roof**
 - cast in situ rc slab, 255mm thick
 - 460mm downward beam on perimeter
 - 230mm thick brick parapet, 1315mm high

circulation stairs & ramps

- Main Support**
 - 230mm thick UltraCon load-bearing blocks
- Floor Slabs / Landings**
 - cast in situ rc slabs, 170mm thick
- Roof**
 - cast in situ rc slab, 255mm thick
 - 230mm upstand beam on perimeter



practise block studio spaces

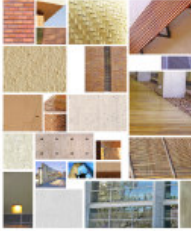
- Main Support**
 - rc columns on a grid of 4205mm x 4740mm max, 340 x 340mm columns or 340 x 440mm columns (with rwp included)
- Floor Slabs**
 - cast in situ 1-way rc slabs, 255mm thick
 - integrated downward beams, 255mm deep
- Roof**
 - cast in situ rc slab, 255mm thick
 - 900mm upstand beam on perimeter to create deep parapet
- External Skin**
 - tripple layer, 350mm thick, consisting of:
 - 115mm external brick skin
 - 100mm sound insulation cavity
 - 115mm internal brick skin
 - additional sound insulation
 - 50mm mineral wool blanket
 - 8mm perforated commercial plywood panels

ablation block core facilities

- Main Support**
 - solid load-bearing brick structure
 - 230mm thick brick walls
- Floor Slabs**
 - cast in situ rc slabs, 255mm thick, 1-way span
- Roof**
 - cast in situ rc slab, 255mm thick
 - 460mm upstand beam on perimeter & of openings

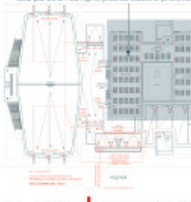
media centre & research lounge

- Main Support**
 - rc columns on a grid of 4205mm x 2640mm
 - 340 x 340mm columns or 340 x 440mm columns (with rwp included)
- Floor Slabs**
 - cast in situ rc slabs, 255mm thick, 1-way span
 - 255mm downward beams (1010mm total slab thickness)
 - chamfered edges, 700mm wide
 - cantilever (north) = 2300mm
 - cantilever (south) = 2000mm
- Roofs**
 - cast in situ rc slabs, 255mm thick, 1-way span
 - 255mm upstand beams (1010mm total slab thickness)
 - chamfered edges, 700mm wide
- Wall**
 - glass & aluminium curtain wall / windows
 - brickwork



materiality

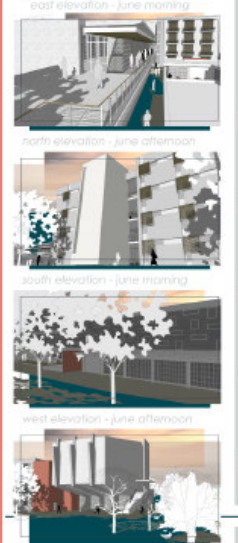
- Roof steel:** 250200H
- Auditorium:** 250200H
- Service block:** 16000
- Abatement block:** 4000
- Practise block:** 20000
- Circulation tower:** 4000
- Research lounge:** 20000
- Media centre:** 31000
- Facilities block:** 16000
- Block size:** 200200H
- Block storage capacity:** 250 220
- Capacity design capability:** 250 220
- Block size:** 200200H
- Block storage capacity:** 250 220
- Capacity design capability:** 250 220



natural systems



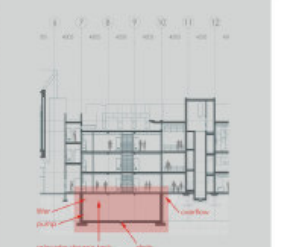
sun study



TECH

resolution

ENVIRONMENTAL SYSTEMS



hybrid system photovoltaic photosynthesis

