TEMPEL OF NOCTURNAL LIGHTS

ASHER BOURNE & LORNA LOVATT . URBAN SPATIAL EXPERIMENTATION . MANCHESTER SCHOOL OF ARCHITECTURE . PS1

DIGITAL CENSORSHIP AND MISINFORMATION IS THE LATEST PROPAGANDA TOOL USED TO MANIPULATE OUR MINDS.
IN A HAZE OF LIES AND HALF-TRUTHS IS IT POSSIBLE TO SHARPEN BLURRED EDGES AND CUT OUT THE NOISE, MAKING THE SCREEN AND REALITY ONE IN THE SAME THING.

PLEASE NOTE:

PAGES HIGHLIGHTED IN RED ARE INTERACTIVE PDF'S

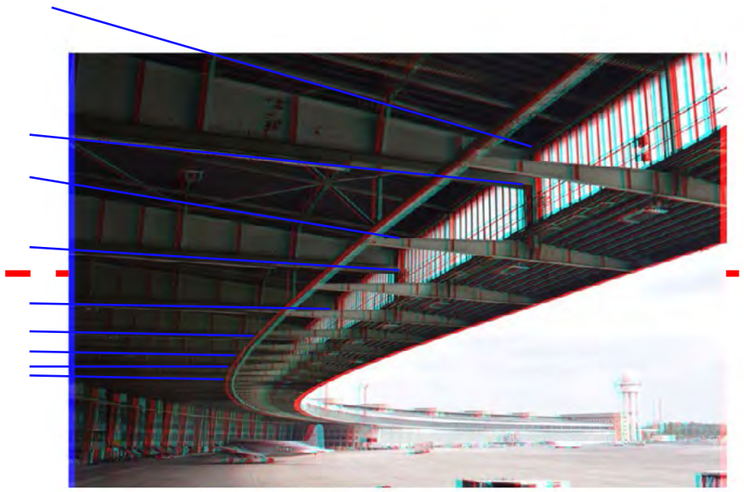
PAGES NOTED '3D DRAWINGS' REQUIRE THE 3D GLASSES PROVIDED TO BE WORN

CONTENTS

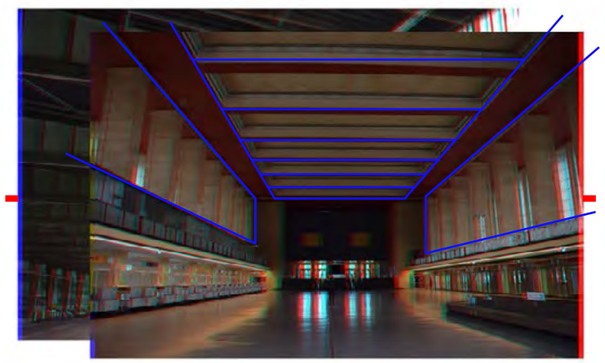
SITE VISIT

TEMPELHOF SITE TOUR, ALTHOUGH EACH ROOM HAS DIFFERING ARCHITECTURAL FEATURES, GRANDEUR AND A STRONG SENSE OF STRUCTURAL RHYTHM IS PRESENT THROUGH OUT, THIS IS SOMETHING WE COULD COMPLIMENT/JUXTAPOSE WITH OUR PROPOSAL

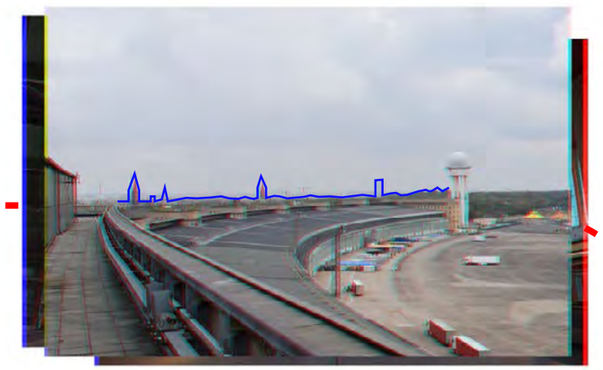
3D DRAWING



Structural rhythm to Tempelhof roof

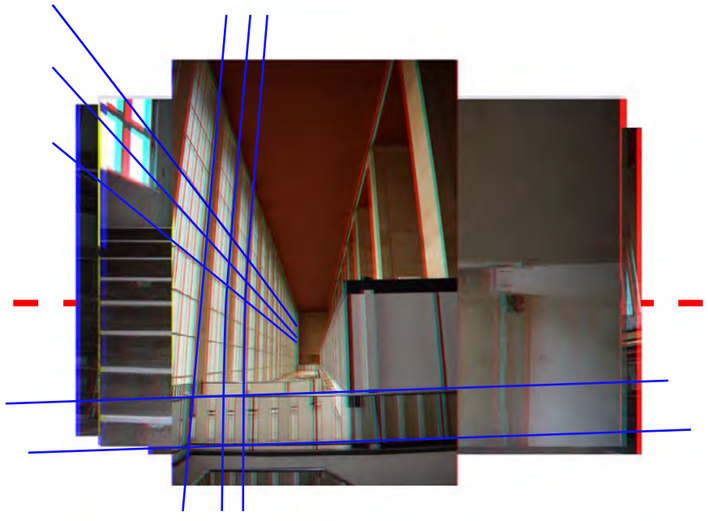


Grandeur and scale of disused airport arrivals

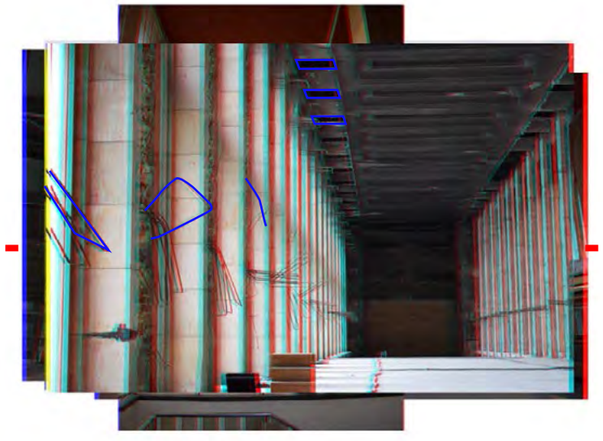


Panoramic view of Berlin from Tempelhof roof

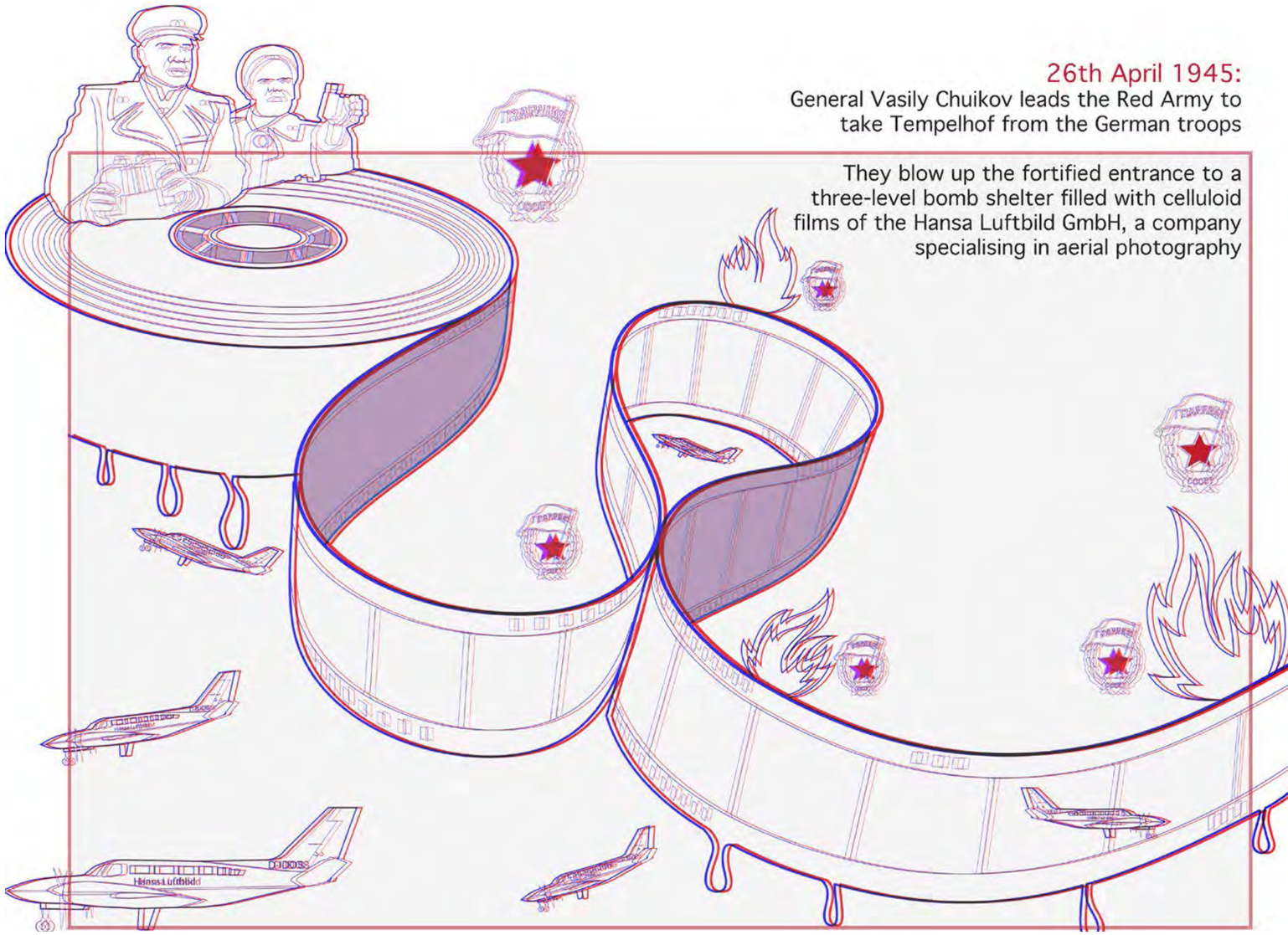
The staircores that will lead to our development are one of the areas in Tempelhof which were never finished



Strong ordered form throughout the airport



Fire damage never repaired



The Project responds to the Tempelhof Fire of 1945, when Soviet troops ignited a three-storey bunker filled with celluloid film, destroying specialist geoinformation photography, with an aim to destroy compromising information that may have been useful for other allied troop.

'Tempel of Nocturnal lights' aims to respond to this destruction of visual information, by providing a space for Met Film School Berlin to produce documentaries and films that magnify the voice of political activists and displaced people whilst also collaborating with local film production companies.

Tempelhof 1945

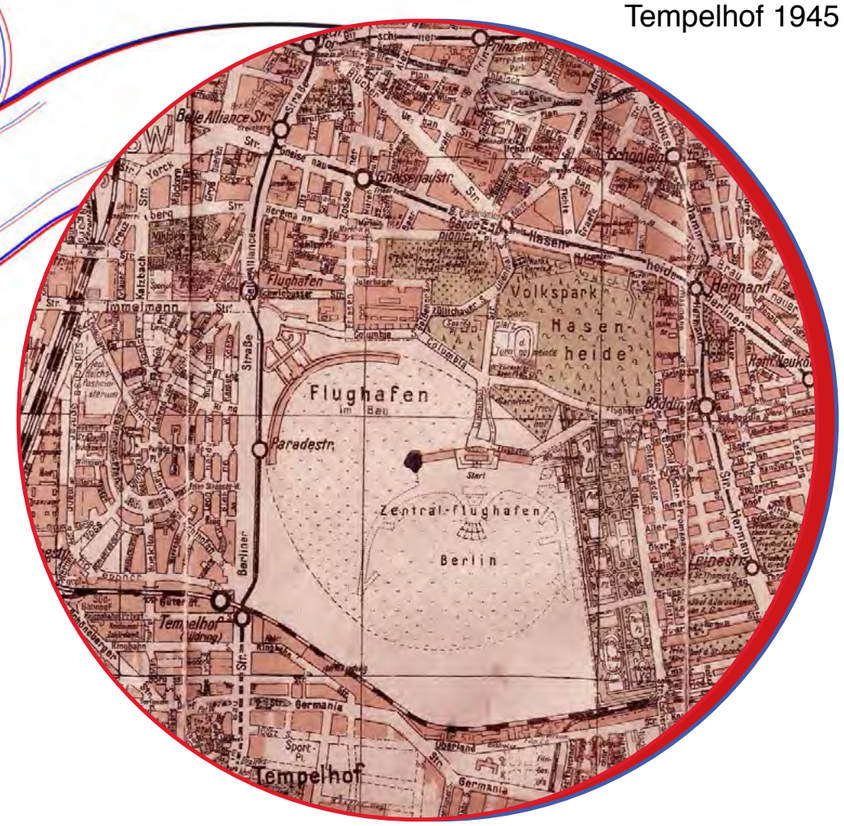
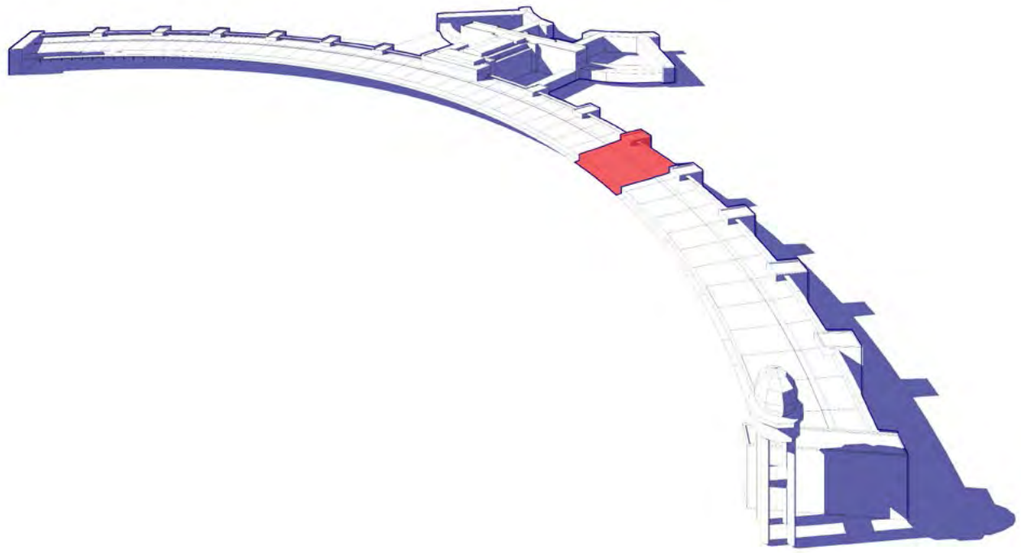


Figure 1: Tempelhof bunker fire damage

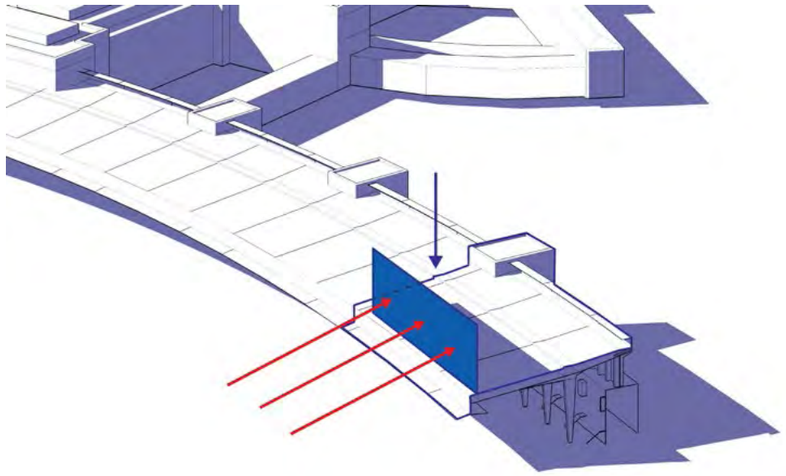
Figure 2: Tempelhof in 1945 following war damage

TRANSLATING BUILDING FORM TO SITE

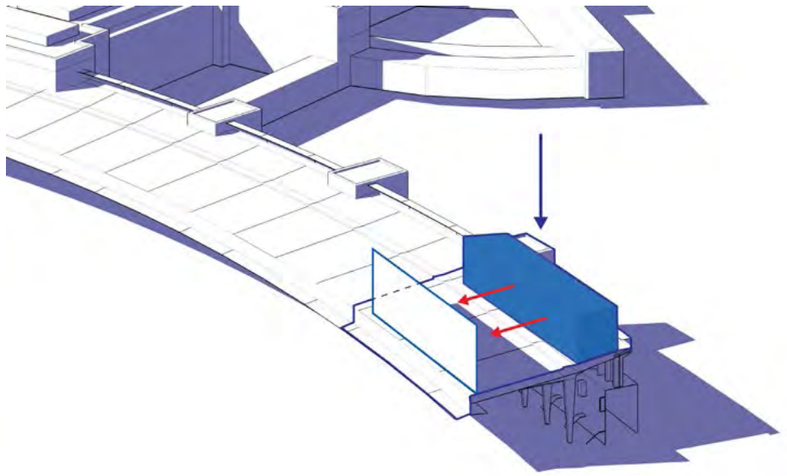
TO TRANSLATE THE CONCEPT OF A FILM SCHOOL ONTO SITE WE DECIDED TO PUT THE CORE ELEMENT OF FILM AT THE CENTRE BY CREATING A LARGE SCREEN WHICH WOULD BE VIEWED FROM THE FIELD AS WELL AS FROM THE HOUSING ON THE ROOF, THE HOUSING PROPOSED IN THIS DEVELOPMENT IS STUDENT ACCOMMODATION FOR THE FILM STUDENTS



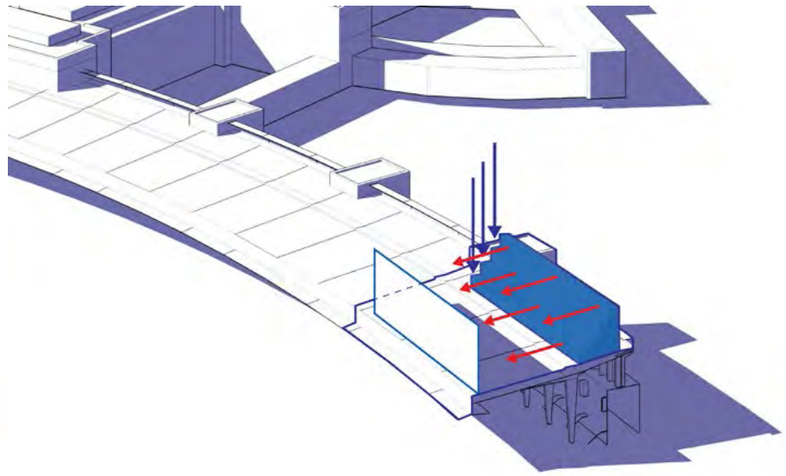
Our site located on Tempelhof roof



Large screen for viewing from Tempelhof field

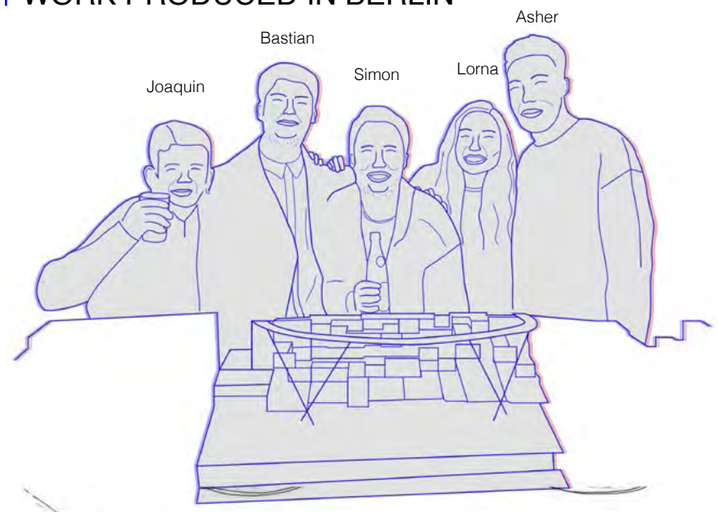


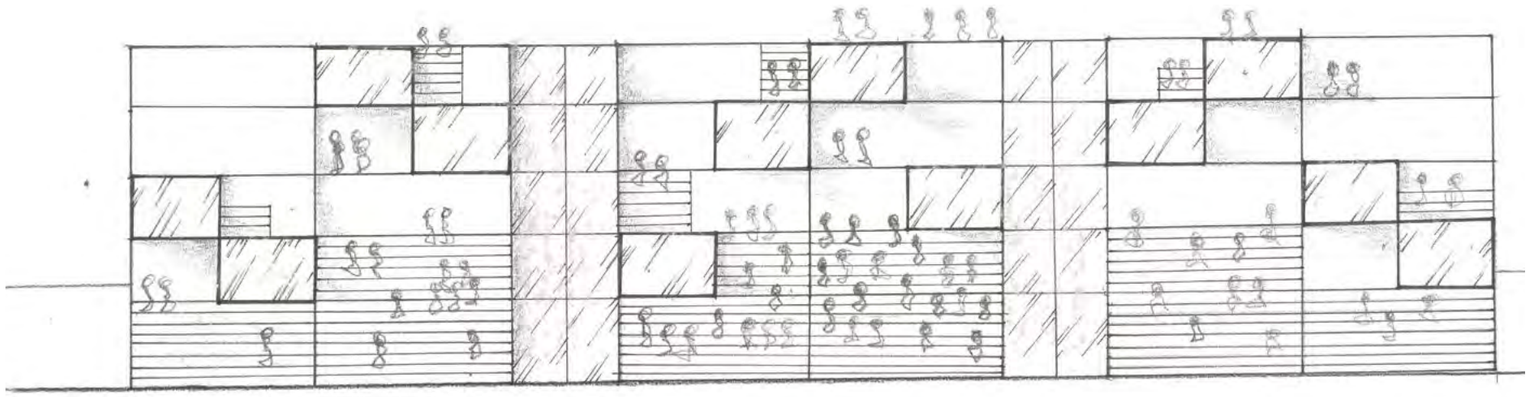
A double-sided screen would also allow viewing from student accommodation and film school

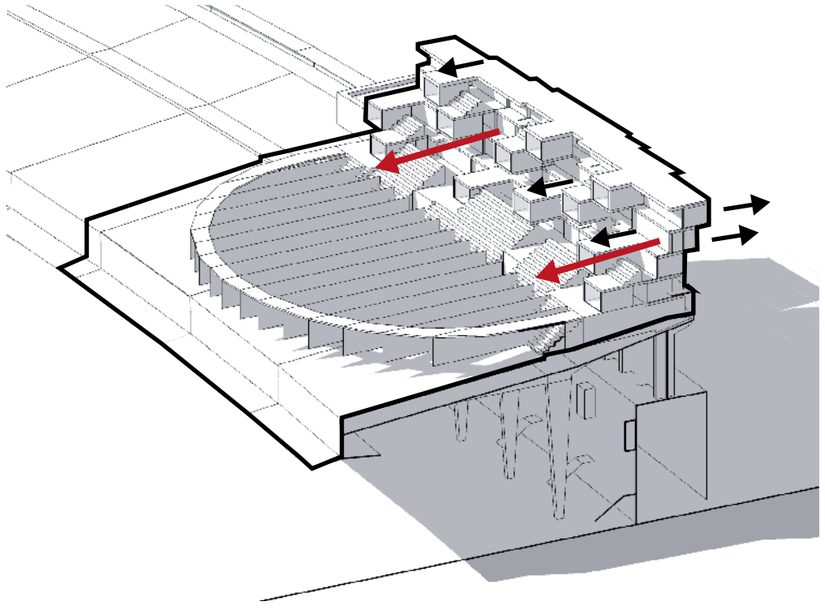


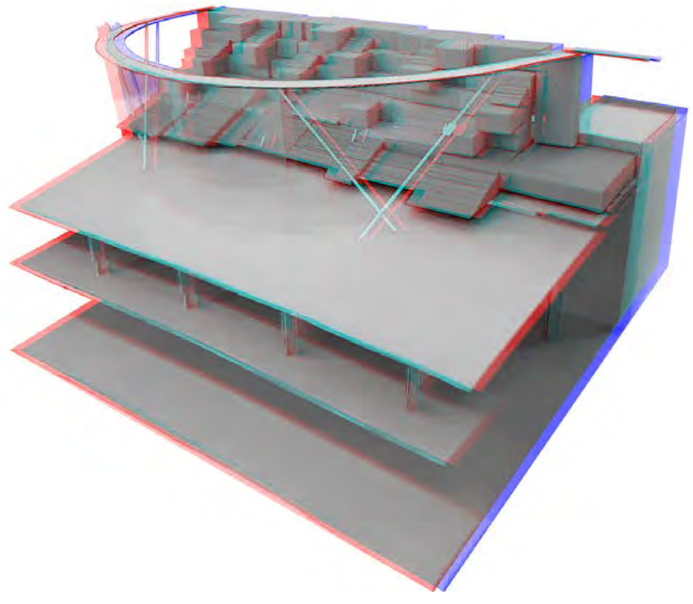
Stepping the proposal creates a form which will link to the original Nazi scheme for tiered seating on the roof as well as increasing places for the films to be viewed from

WORK PRODUCED IN BERLIN



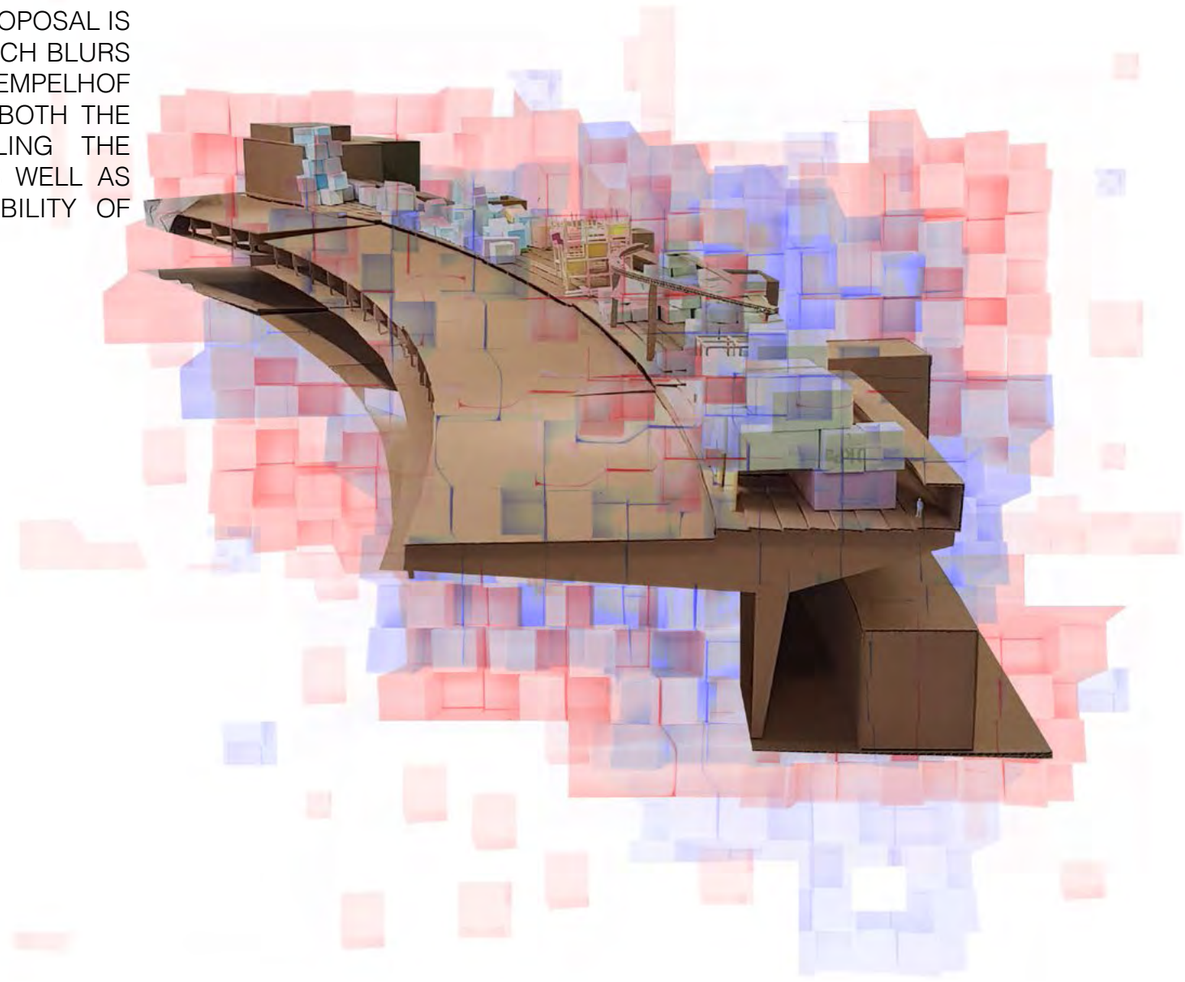


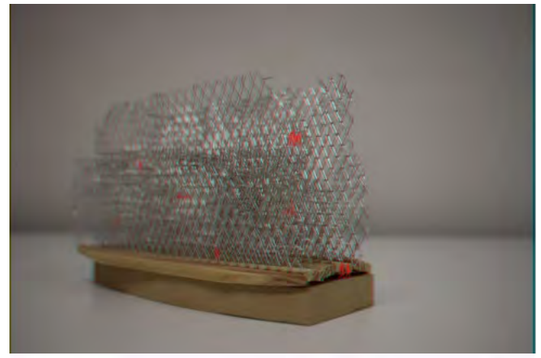


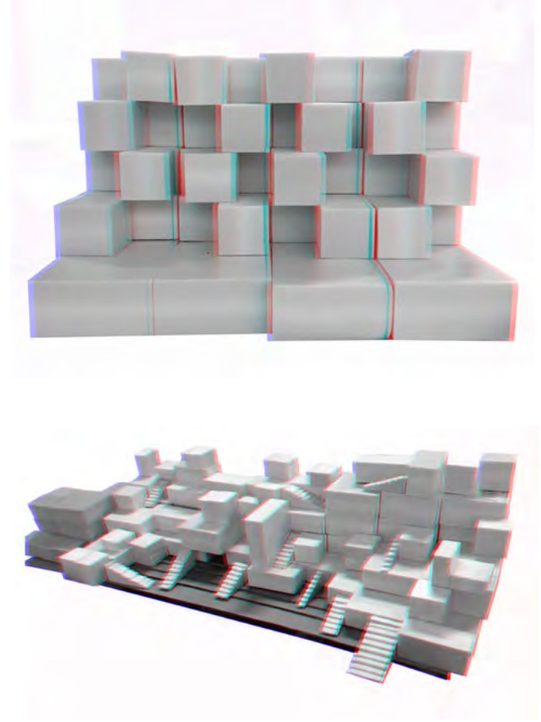


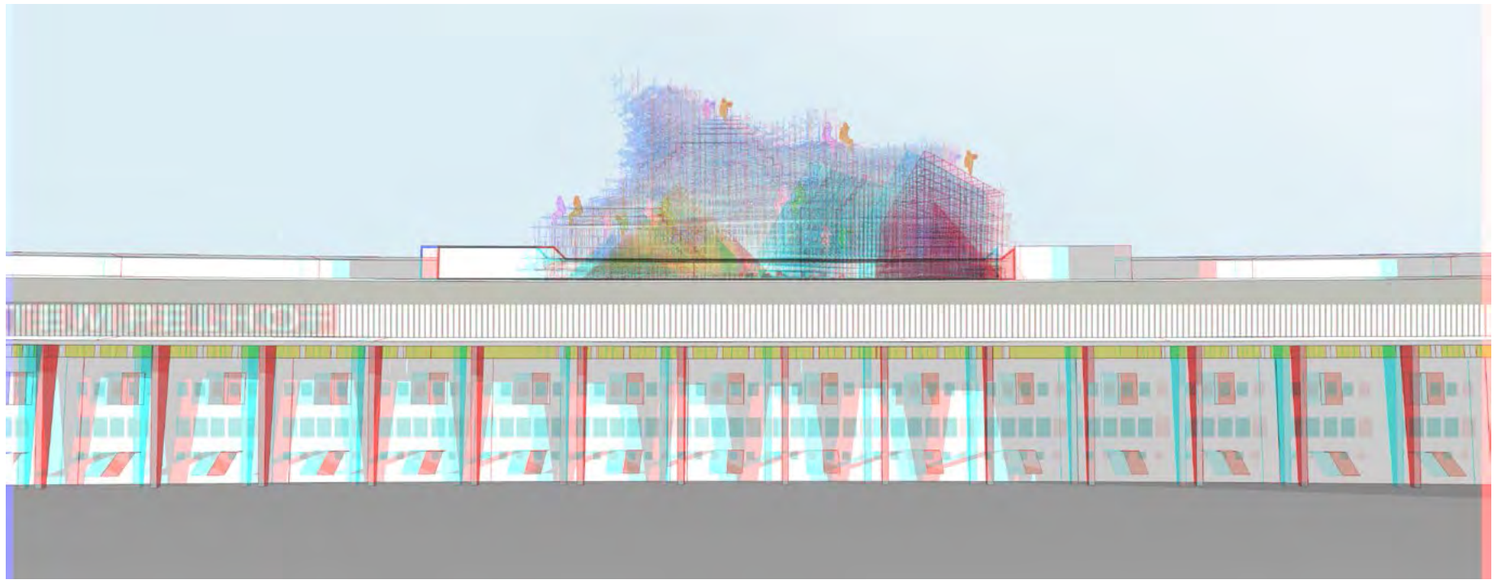
BLURRING BUILDING CONCEPT

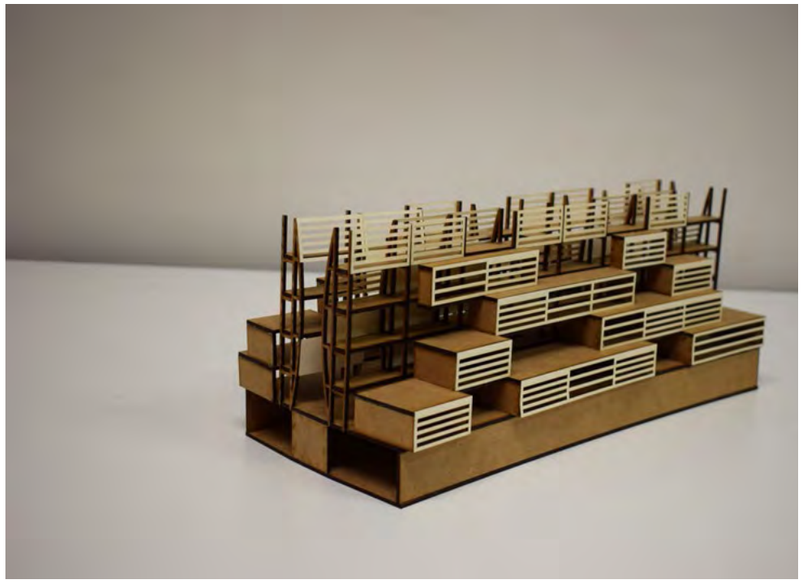
THE CONCEPT FOR THIS PROPOSAL IS TO CREATE A SCHEME WHICH BLURS BETWEEN THE ROOF OF TEMPELHOF AND THE SKY, EVOKING BOTH THE TRANSPARENCY OF TELLING THE TRUTH THROUGH FILM AS WELL AS THE SOLIDLY AND DENIABILITY OF FACTS.







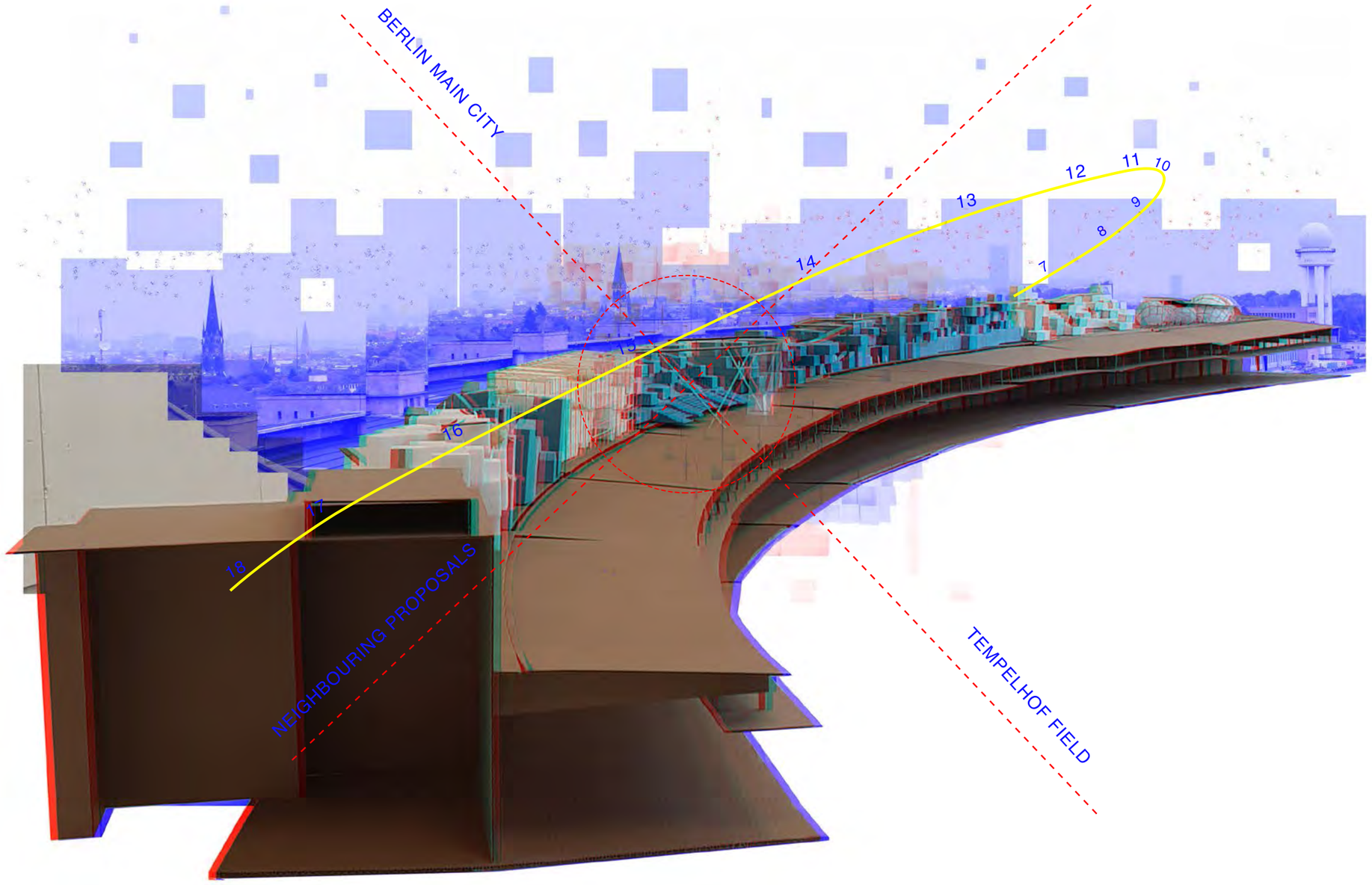




SITE ANALYSIS

BUILDING CONCEPT MODEL CREATED AS A GROUP IN BERLIN SITUATED IN THE SITE CONTEXT, HIGHLIGHTING THE VIEW NORTH OF THE SITE AND SUNPATH ON SITE

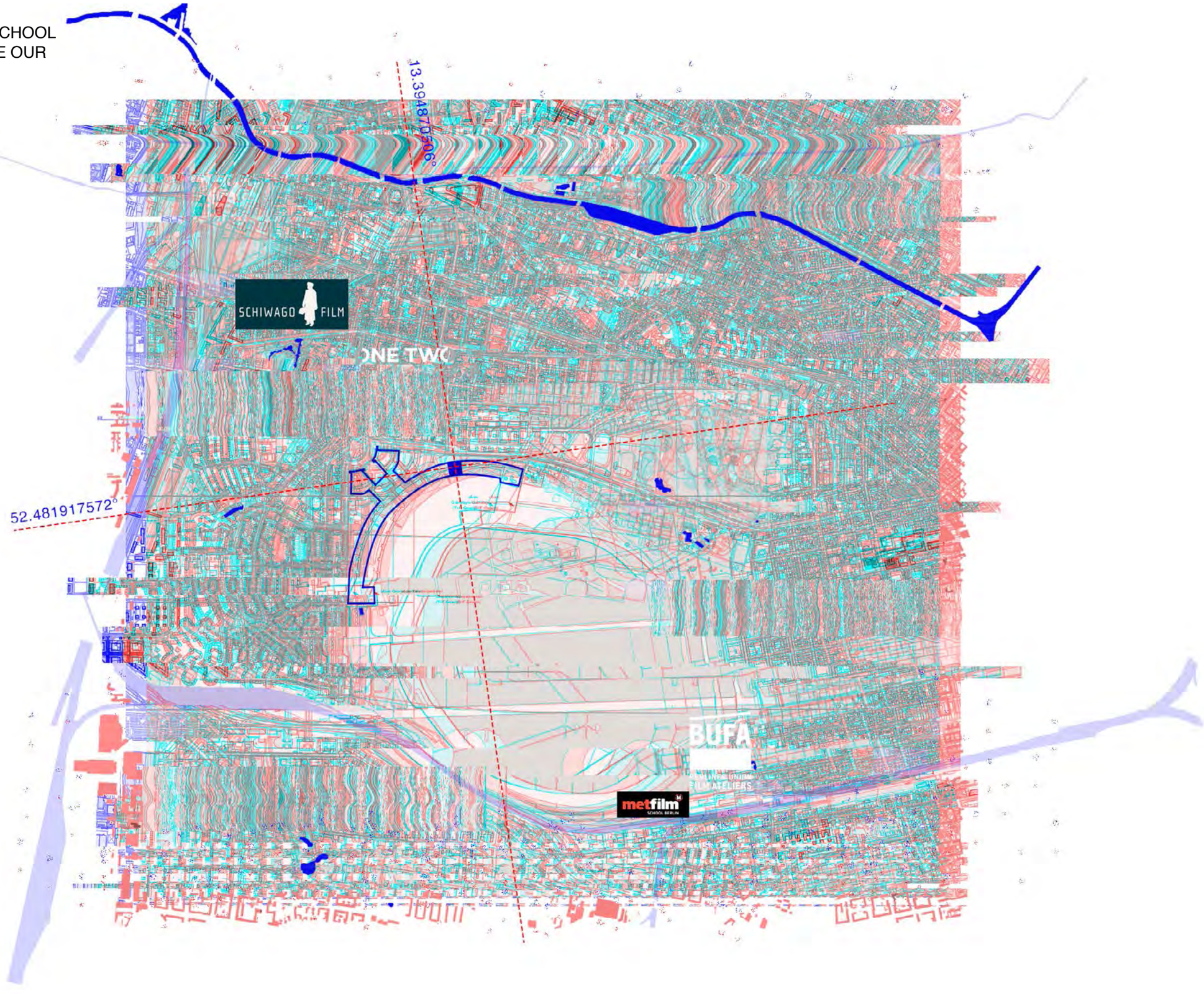
3D DRAWING



SITE ANALYSIS

MAP HIGHLIGHTING LOCAL FILM SCHOOL AND STUDIOS WHICH WILL UTILISE OUR PROPOSAL

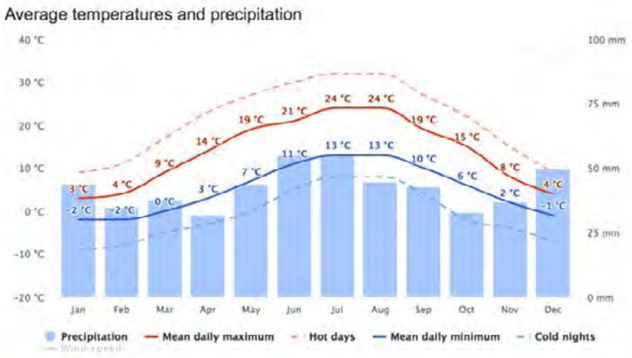
3D DRAWING

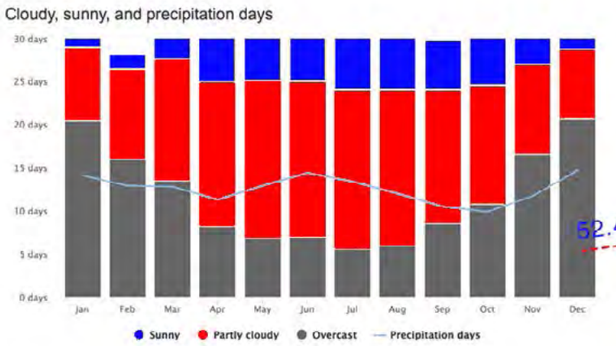


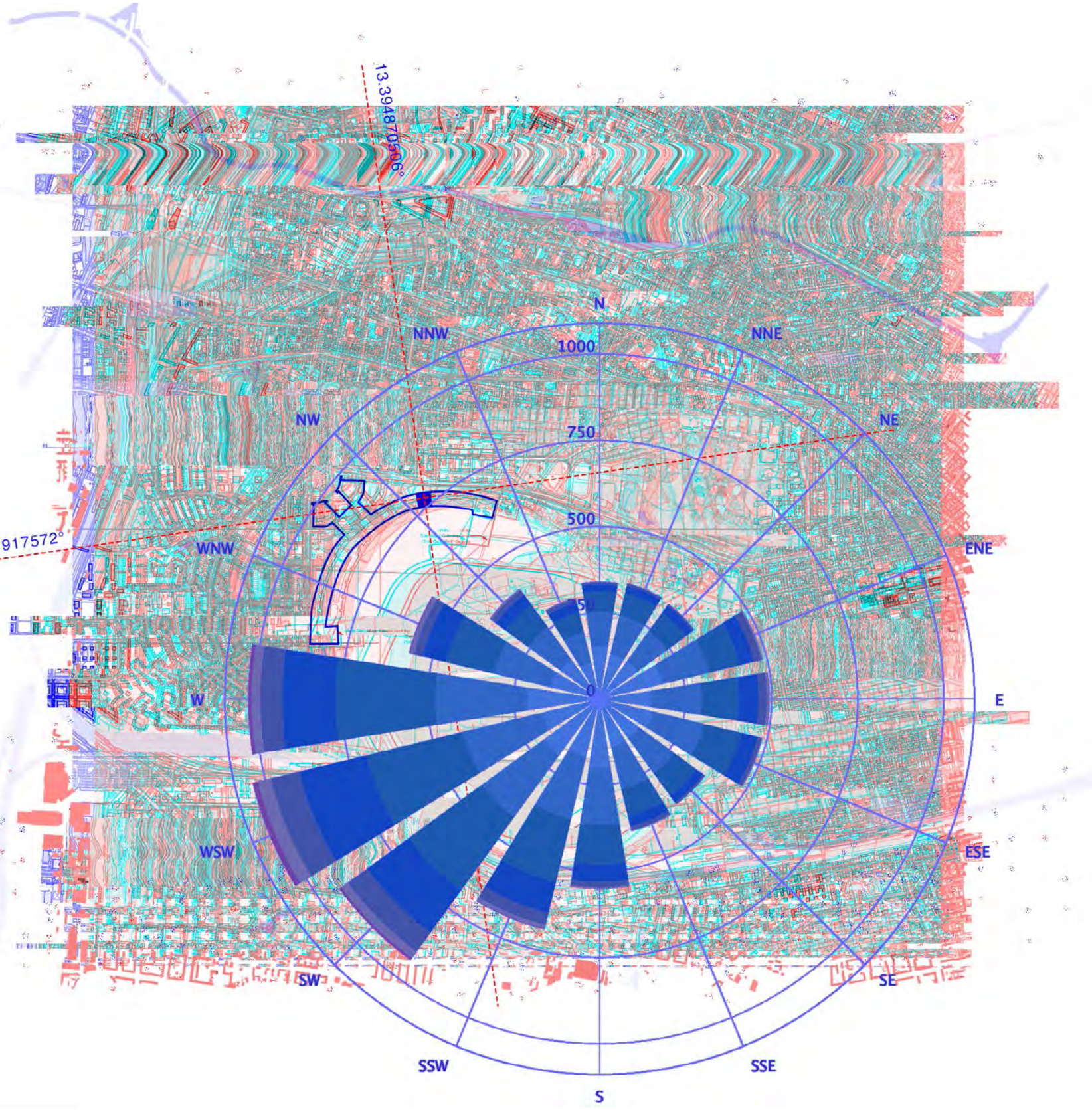
SITE ANALYSIS

PLOTTING CLIMATE AND WIND SPEEDS ONTO SITE, THIS IS IMPORTANT DUE TO OUR SITE BEING OPEN AND UNPROTECTED

3D DRAWING





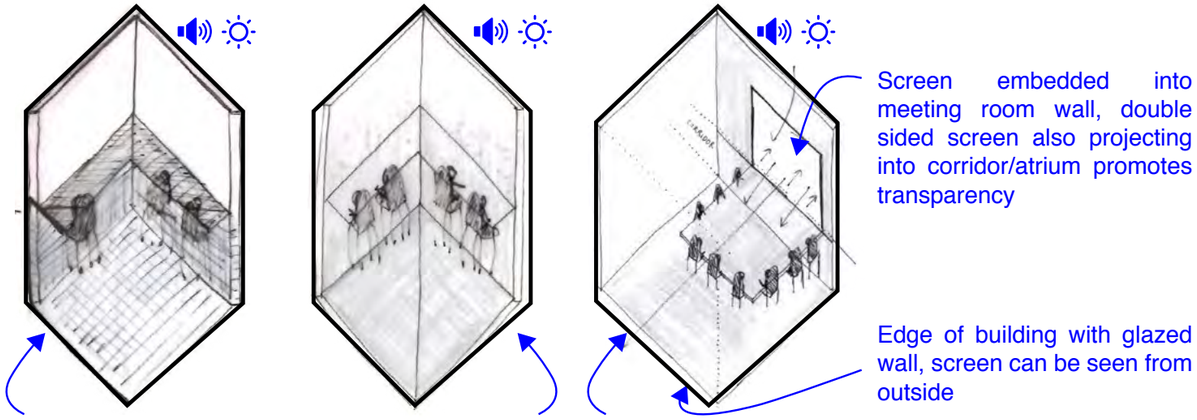


Flow of production

Amount of noise control required

Amount of natural light required

Pre-Production



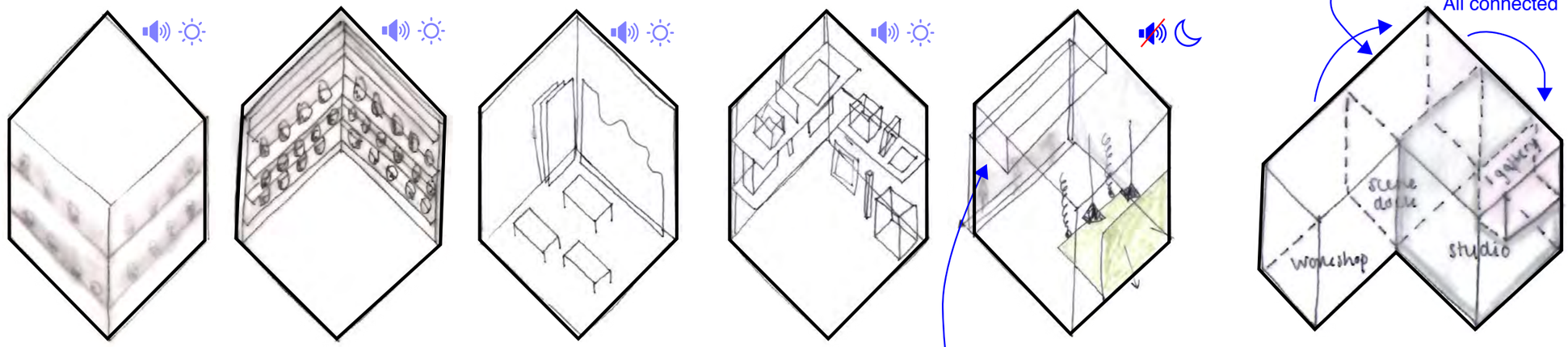
Small spaces for individual and small group work

Screen embedded into meeting room wall, double sided screen also projecting into corridor/atrium promotes transparency

Edge of building with glazed wall, screen can be seen from outside

Larger spaces for group work/tutors to set briefs/seminar spaces

Production



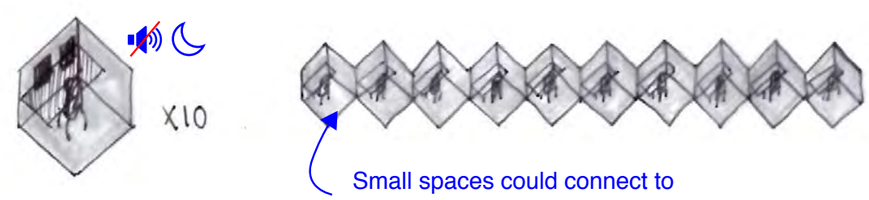
Large kit room for cameras
Translucent panelled walls with cameras against, movement will be created when equipment is taken to be used

Scene Dock
Storage for large pieces of set should be easily accessed by film studio and externally for deliveries of set

Workshop
Space for designing and creating sets, should be enclosed

Studio
Must be opaque for filming
Gallery room so producers/sound can co-ordinate with what's happening on the studio floor

Post-Production



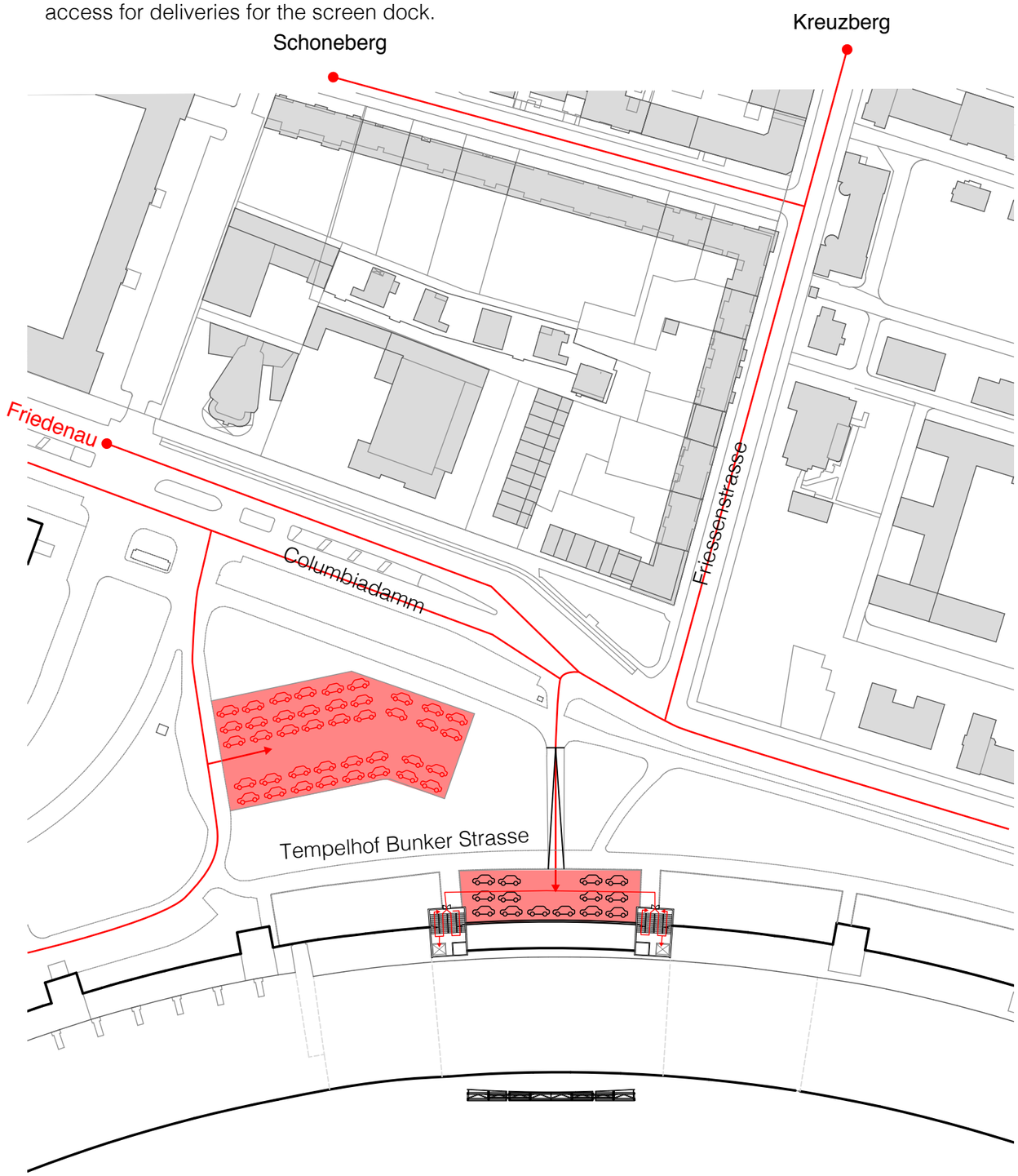
Small spaces could connect to create larger suite

Offline Editing Suites
Small editing suite with desk for editing film together

Online Editing Suites
Large suite for special effects, used after the online suite (only 1 required)

BUILDING ACCESS

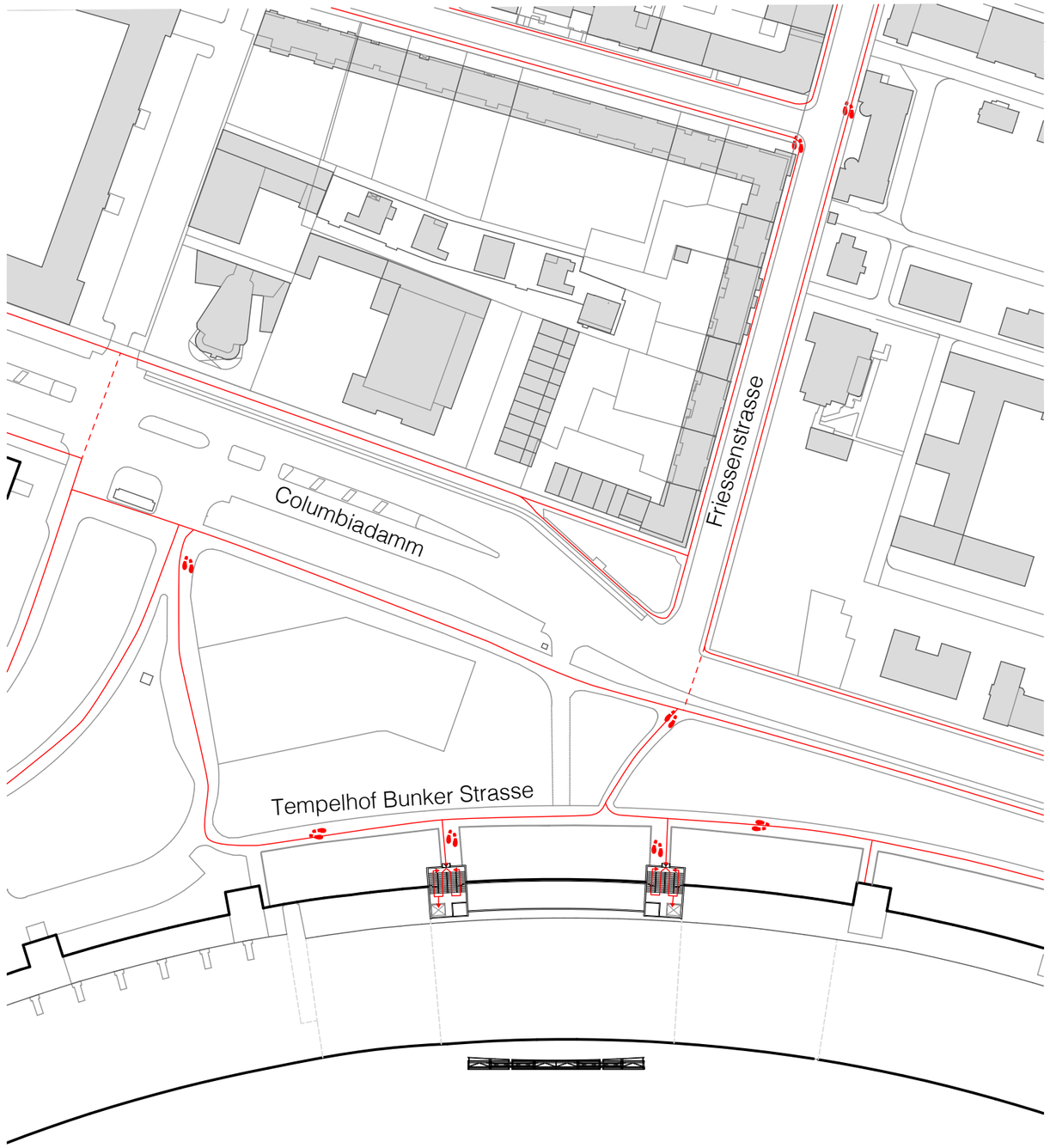
Tempelhof vehicular site access: lower ground floor
Our site is located with direct access to the lower ground vehicular access ramp, this allows close access for deliveries for the screen dock.



Main carpark for all Tempelhof users, to be used on film showing evenings by our building users when the carpark is largely disused by other building users

Residential carpark which can also be used for large deliveries required by the film school, the large lift will transport these items to our proposal

Tempelhof pedestrian site access: ground floor



Pedestrian access is provided by the existing walkways and staircores

GA PLANS

Click drawing title for drawing

Ground Floor

First Floor

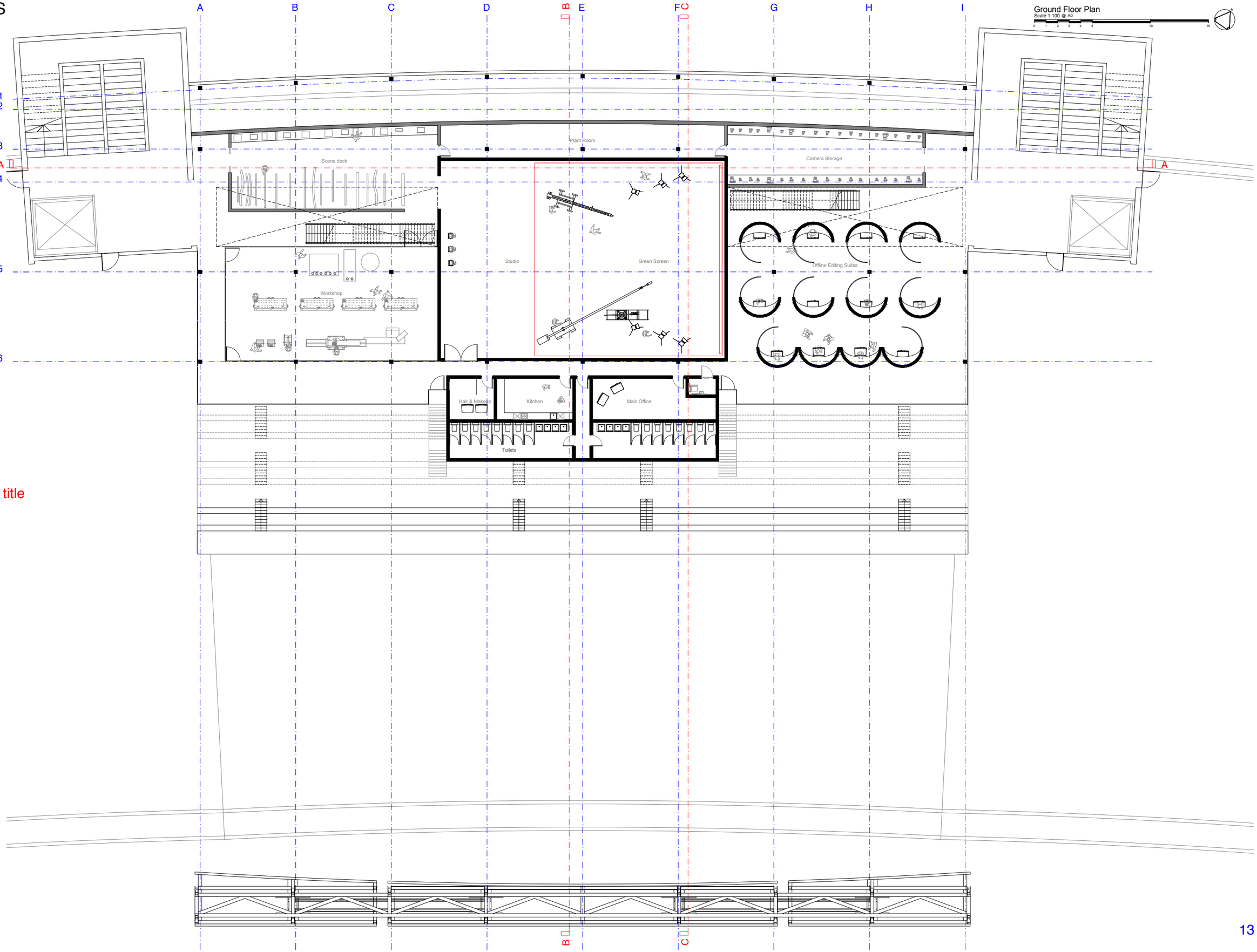
Second Floor

Third Floor

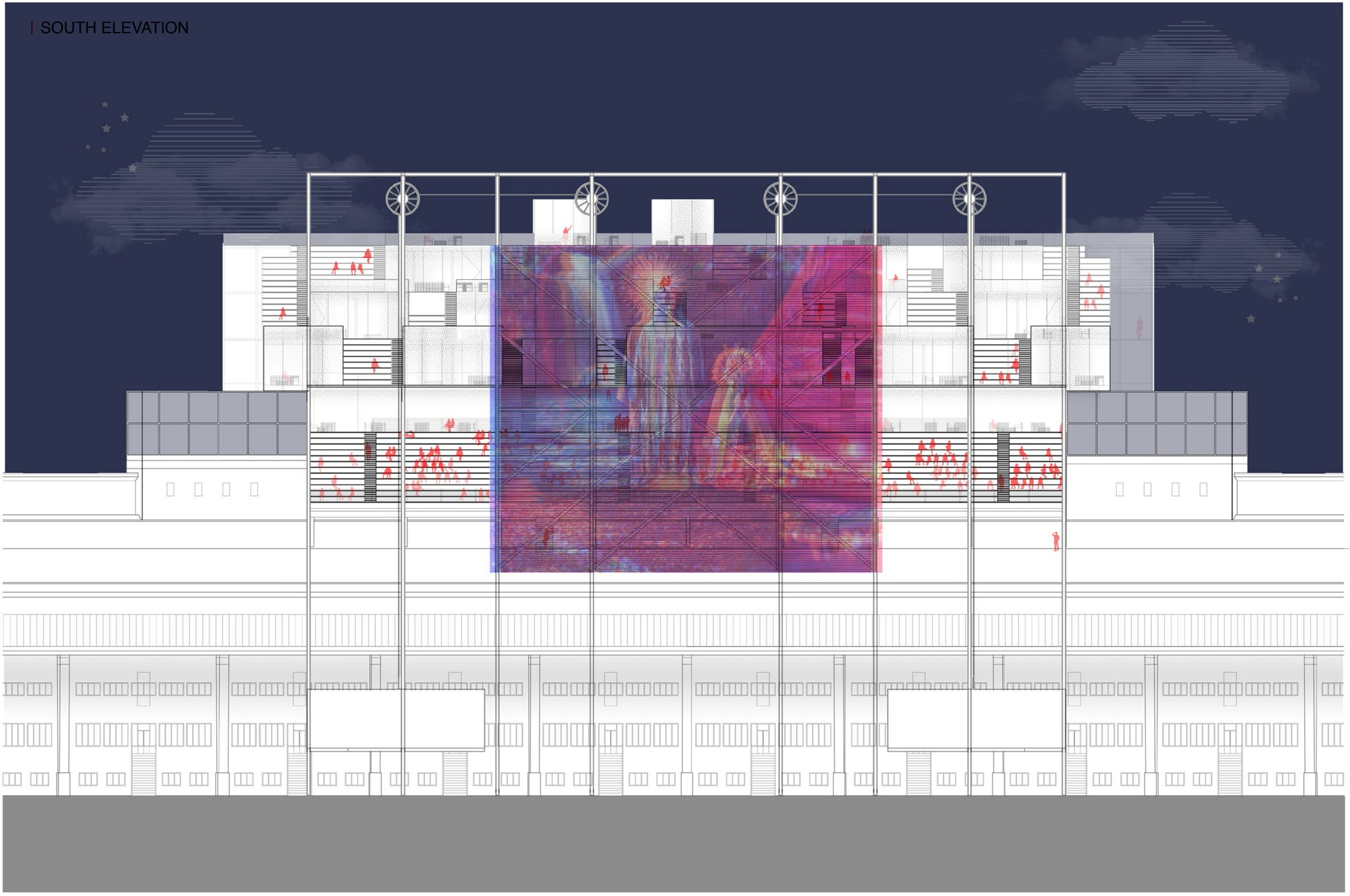
Fourth Floor

Fifth Floor

Roof Plan

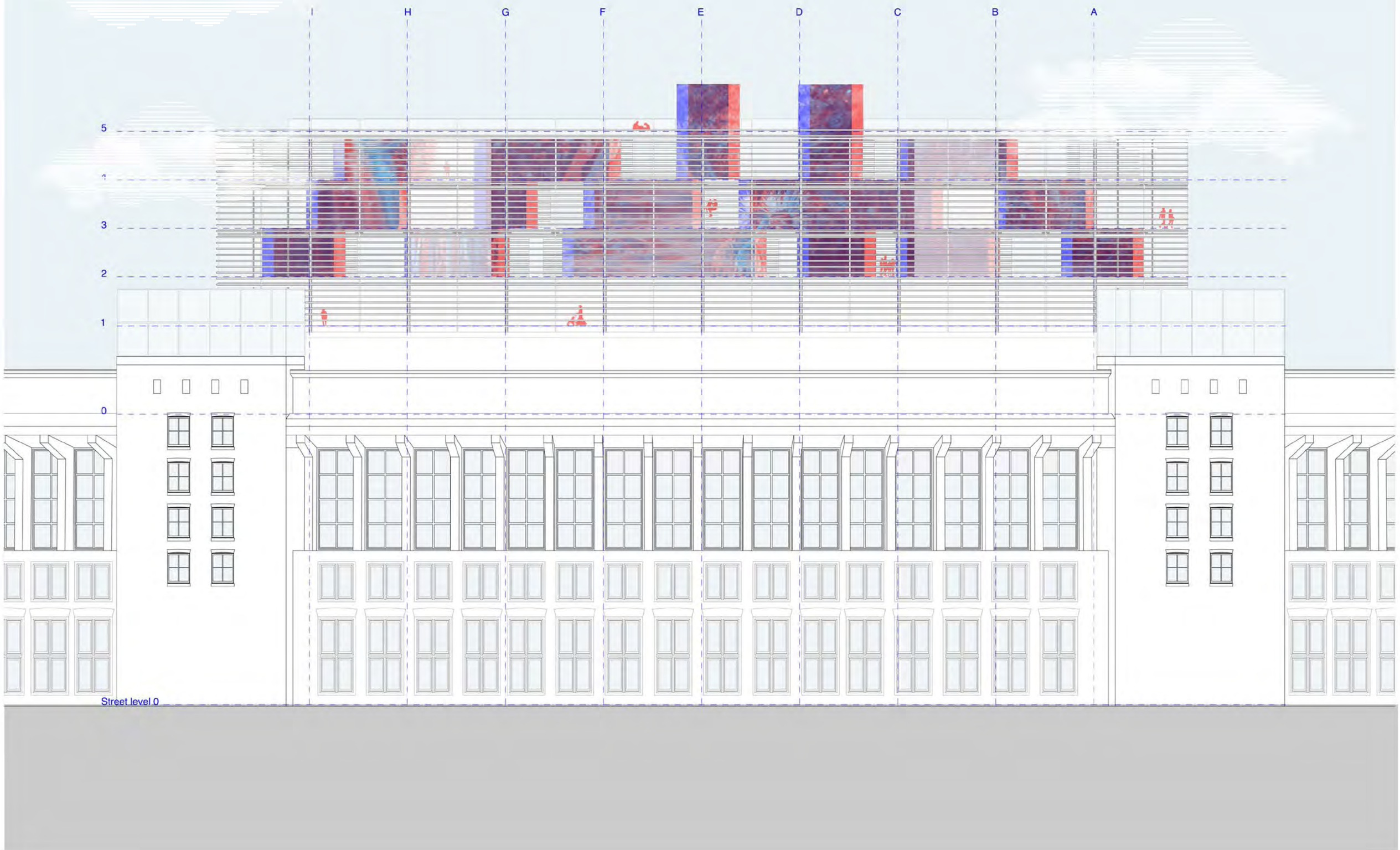


| SOUTH ELEVATION

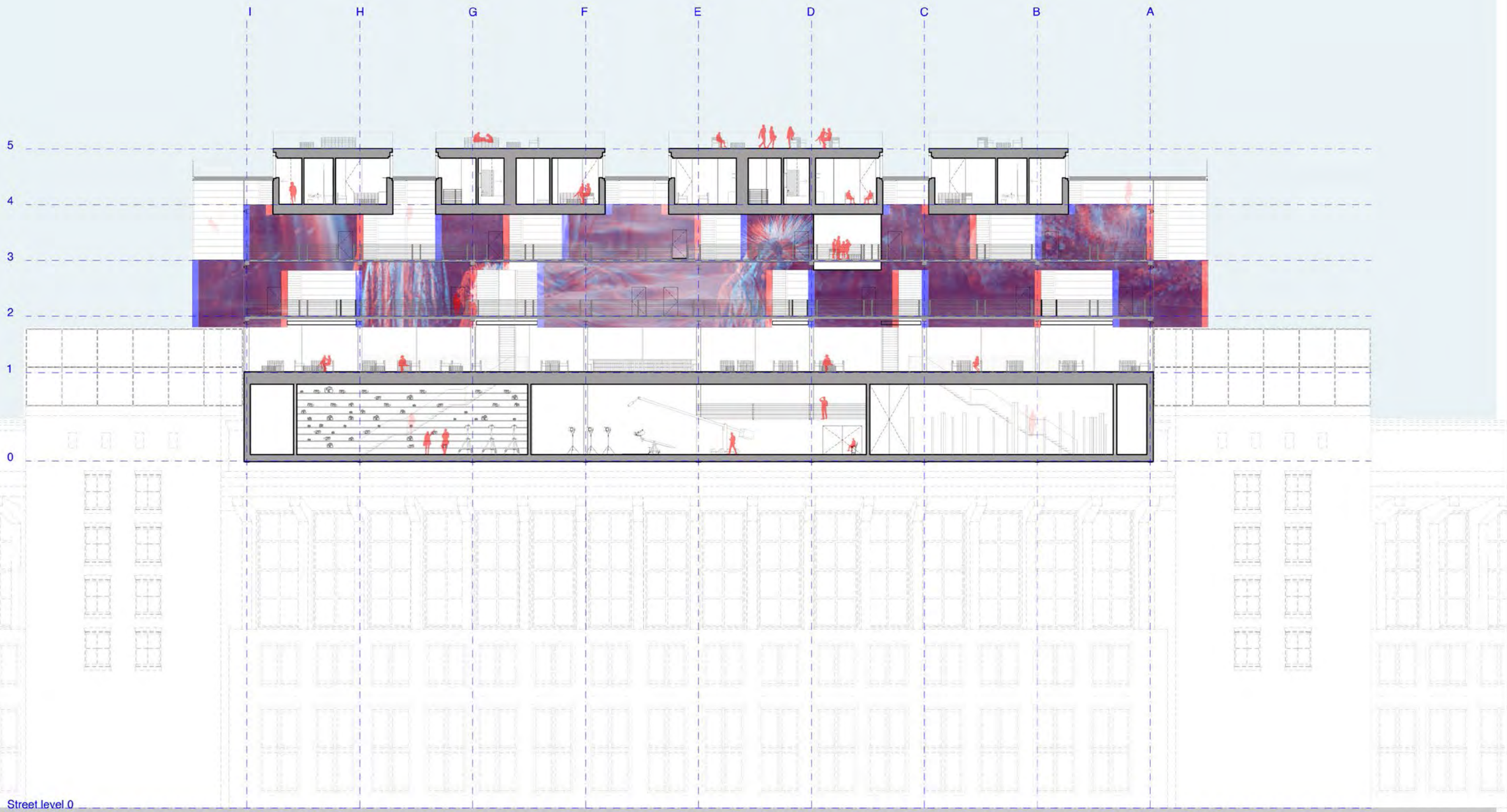


Click drawing title for drawing Day time elevation Night time elevation

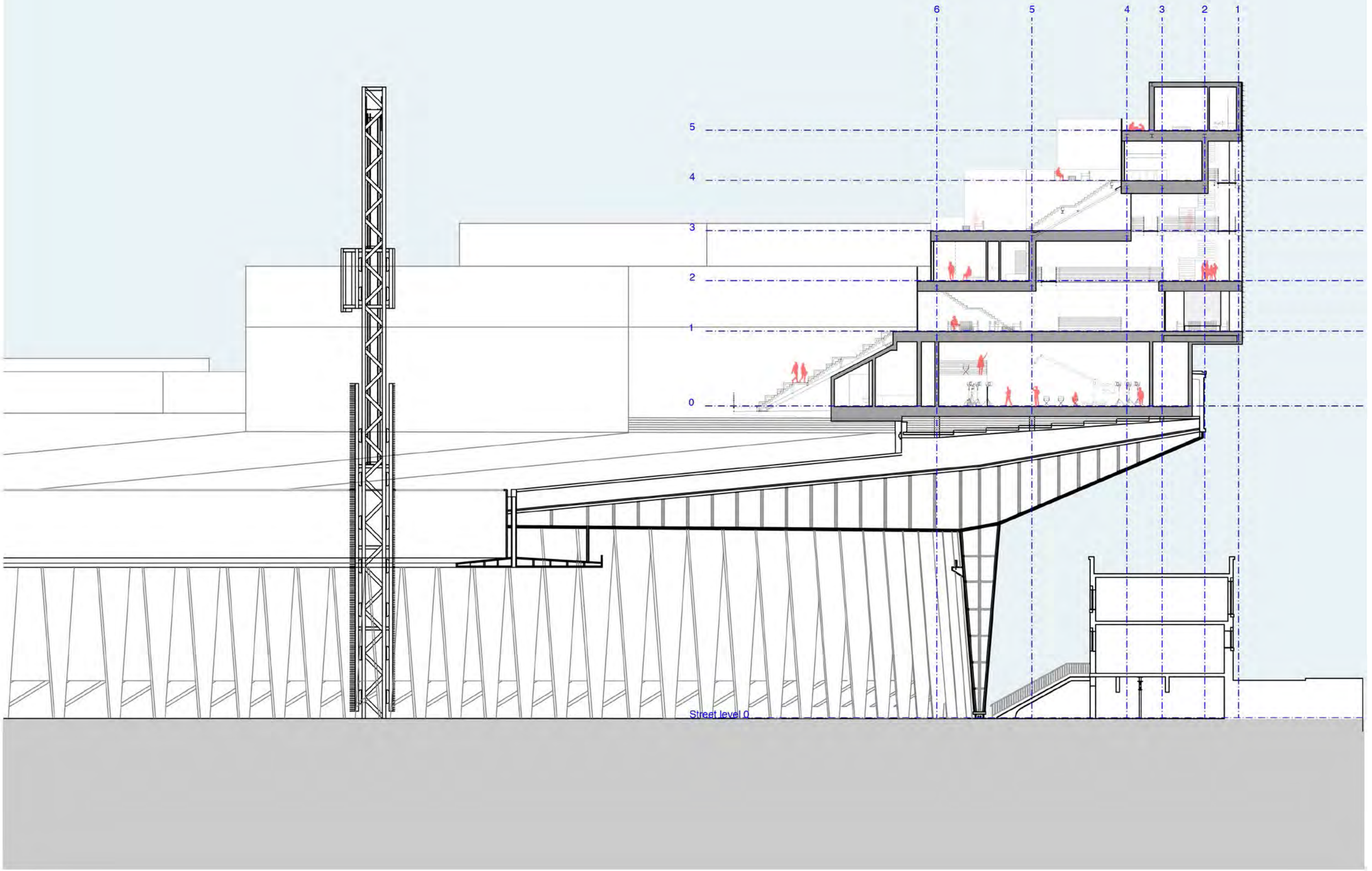
NORTH ELEVATION



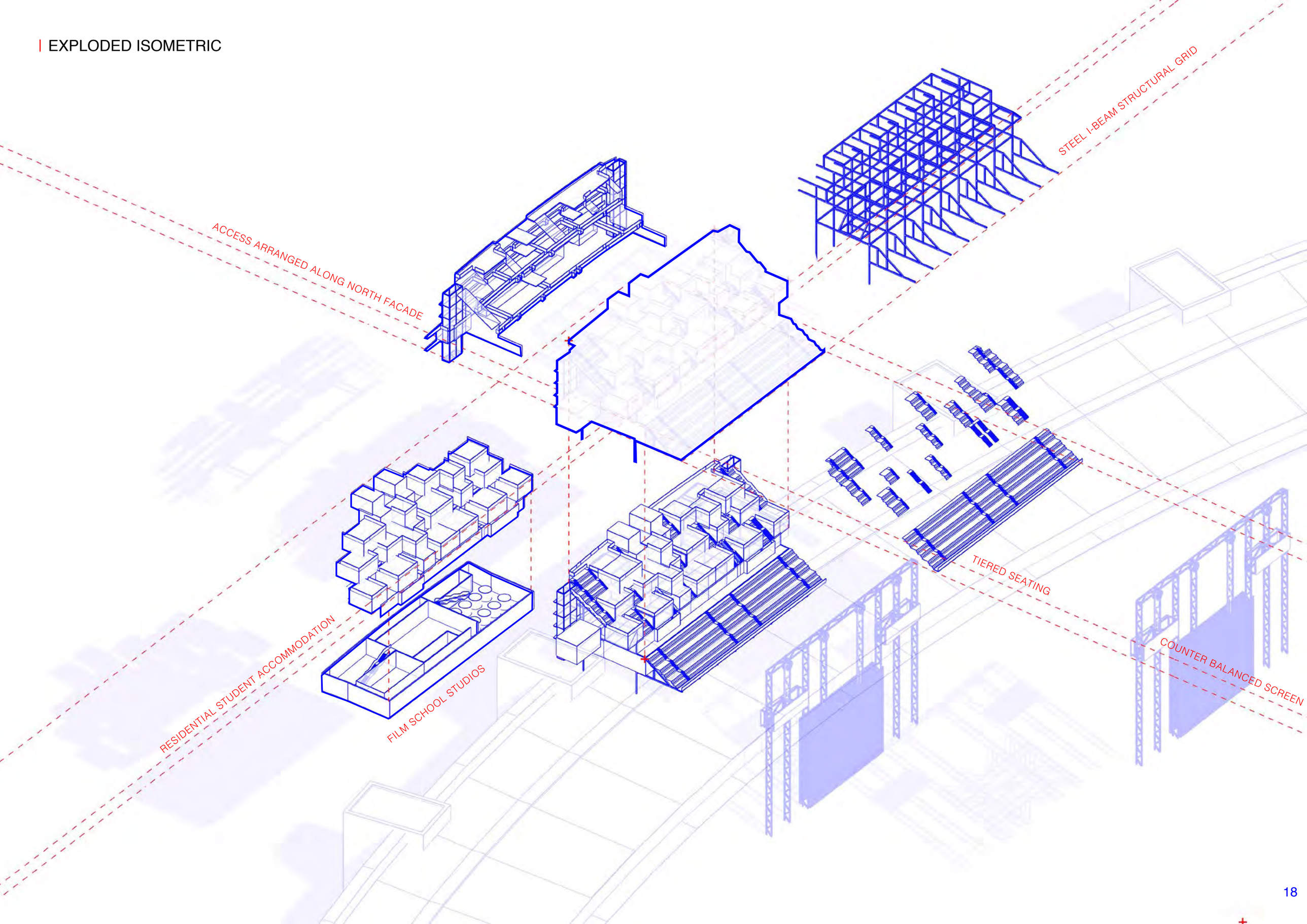
SECTION A



CROSS SECTION

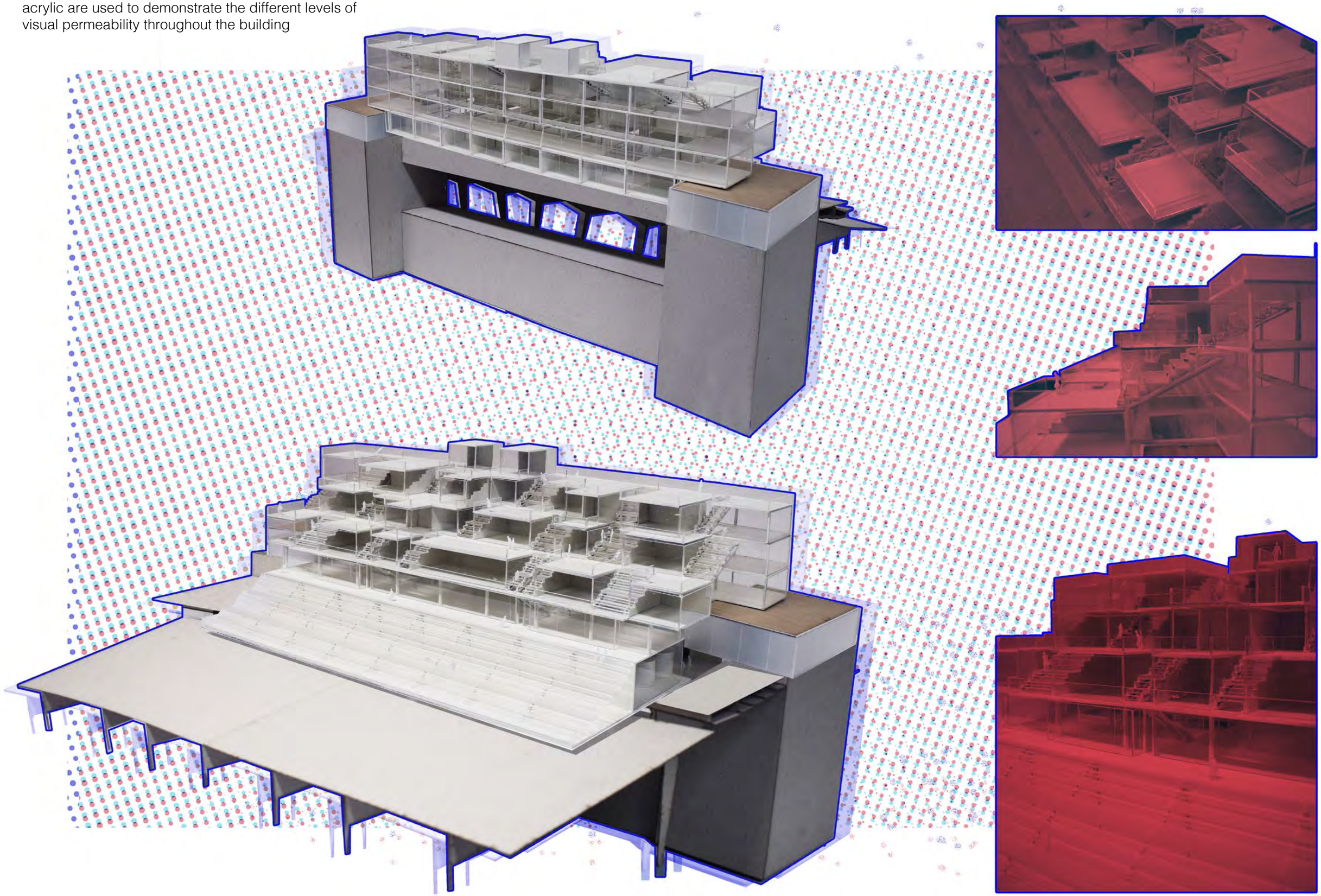


EXPLODED ISOMETRIC



1:100 SITE MODEL

white board, translucent acrylic and transparent acrylic are used to demonstrate the different levels of visual permeability throughout the building



MATERIAL CHOICES LINKING TO CONCEPT AND ENVIRONMENTAL STRATEGIES

Herzog de Meuron Elbphilharmonie Hamburg

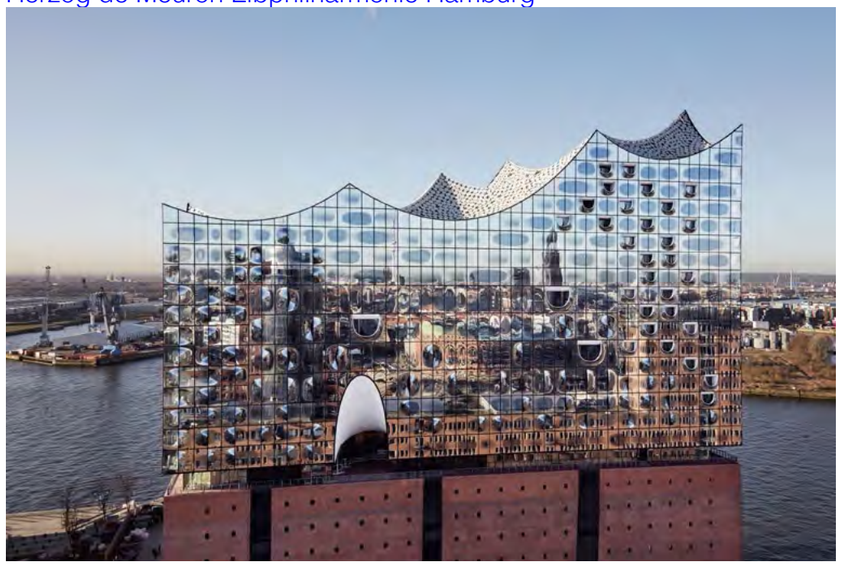


Figure 3: Elbphilharmonie glazing

Figure 4: Internal view through matrix printed glazing

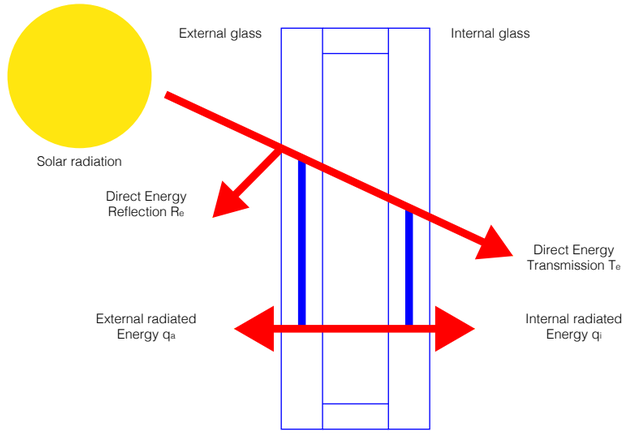
The Elbphilharmonie by Herzog de Meuron was used as a key source of inspiration for our project due to the unique treatment of glass.

- The dot matrix print on the facade is used as sun protection
- The glass used is low iron which makes it especially transparent.
- The reflective chrome dots vary in diameter and degree of print density depending on the intended room useage.
- The print frames the view and creates a mesh network over the entire facade
- In addition to solar and low-E coating the g-values of the glazing were optimised by 25% through the grey dot print and the dot matrix chrome mirror coating

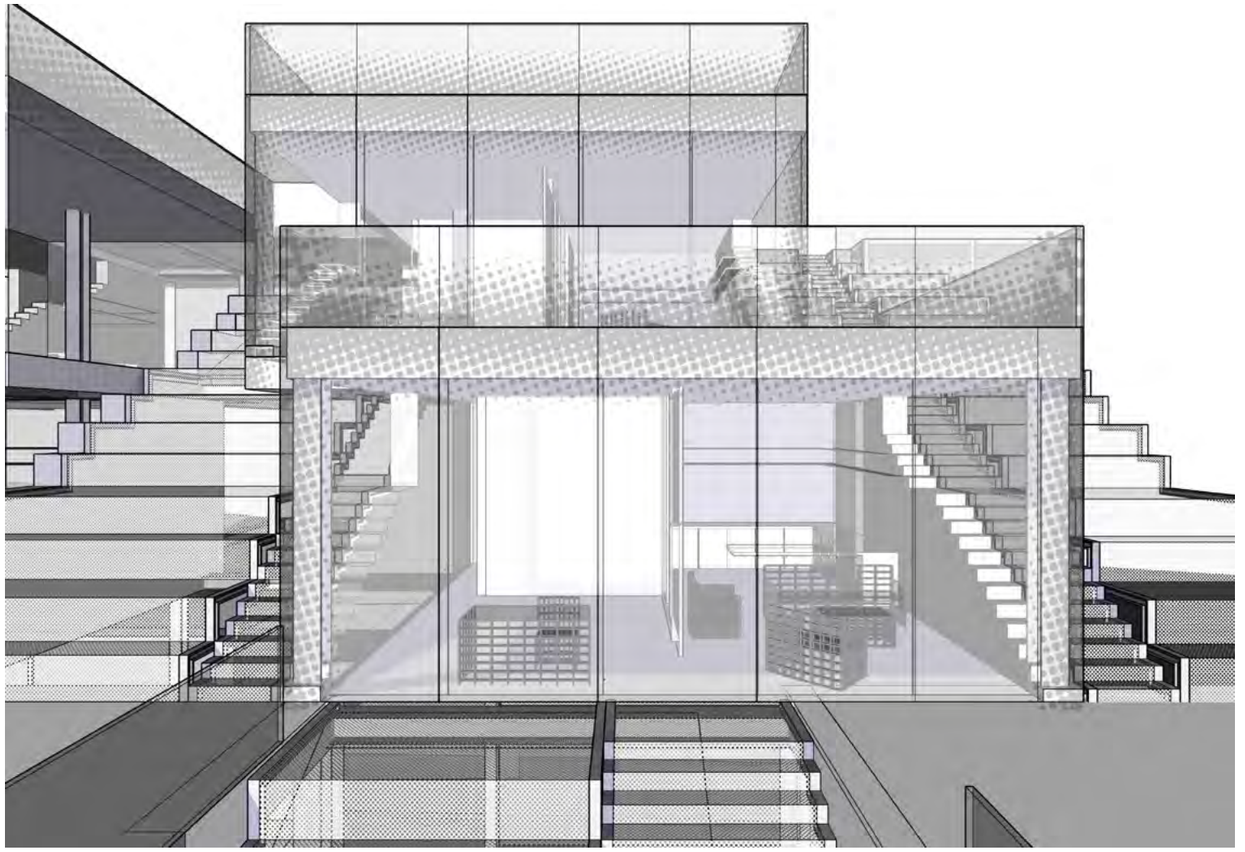
Solar gain

The dot matrix chrome mirror coating optimises the g-value of the glazing by 25%, this principle can also be applied to our proposal.

g-value is used as a coefficient for solar energy transmittance of windows, having a lower g-value means the building is less likely to over heat as the solar gain is reduced.



Materials applied to the proposal



The dot matrix has a greater print density at building junctions, and structural entities, creating a clean, blurring facade.

MATERIAL CHOICES LINKING TO CONCEPT AND ENVIRONMENTAL STRATEGIES

Figure 5: Imperial War Museum North, internal view of airshard

Daniel Libeskind's Imperial War Museum North includes the 'airshard' an indoor/outdoor space clad in extruded box-section planks and finished with a perforated metal flooring. The building is intended to disorientate the visitor.

Our choice of perforated metal walkways and stairs are inspired by this project. The perforations will break down defined edges and promote transparency, as well as allowing 'blurred' views of the building through them.

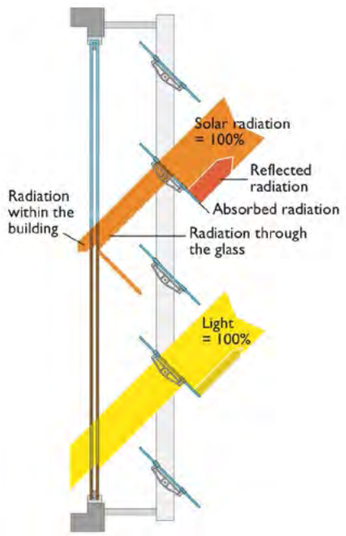


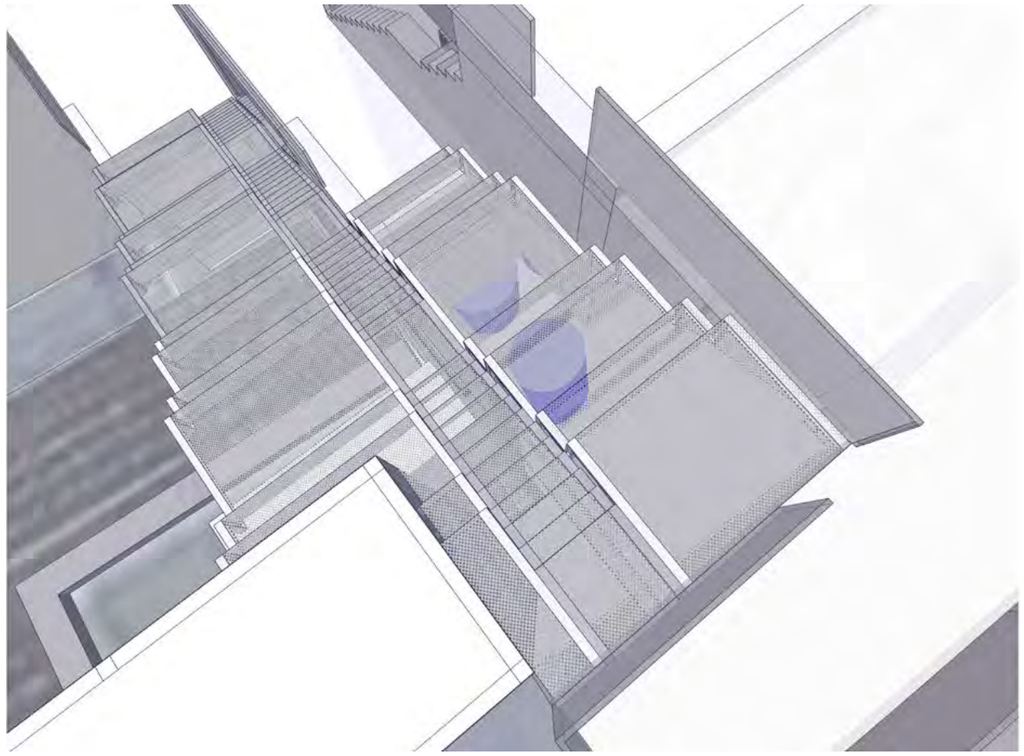
Figure 6: Solar Radiation and Louvres

Solar Shading

The perforated metal staircases are located across the building on angled glazing panels, this will act as external solar shading. This is one of the most effective ways to control the internal conditions of our building.

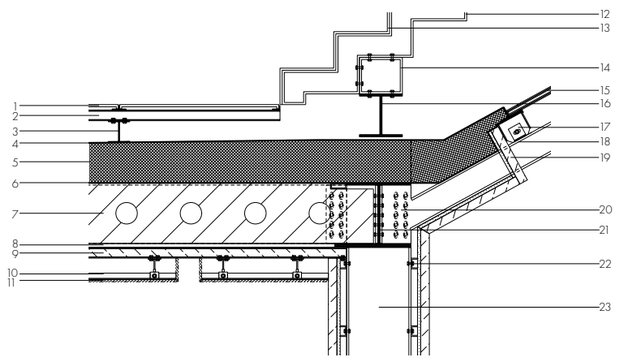
Radiation from the sun is largely transmitted, absorbed and reflected by the louvres, minimising transmission.

As a result solar heat gain is prevented from passing into the building, minimising ventilation requirements and reducing cooling loads.

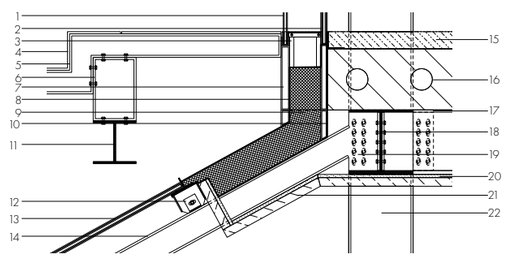


Birds eye view of the building: Editing Suites on the ground floor are visible from the roof, blurred by the perforated metal stairs

Perforated metal stair details, 1:10 @ A0



1. 10mm Perforated anodised aluminium sheet
2. 50mm Steel beam decking support system
3. 100mm Steel support
4. damp proof membrane
5. Hytherm ADH tapered/flat board insulation
6. vapor barrier
7. Pre-cast concrete Plank 282mm depth
8. 300mm HEB steel beam
9. 40mm acoustic panel, white, within 50mm steel frame
10. 30mm Steel frame support for suspended ceiling
11. 13mm aluminium foam suspended ceiling
12. 100mm Steel frame support for stairs
13. 10mm Perforated anodised aluminium sheet
14. 200mm Steel frame support for stairs
15. 2x6mm transparent laminated safety glass
    +16mm cavity
    + 2x6mm laminated safety glass
16. 200mm HEB steel beam
17. 10mm Steel tie attaching glazing unit to secondary steel frame
18. 200mm secondary steel frame
19. 40mm acoustic panel, white
20. 200mm secondary steel frame bolted to primary structure
21. Slim floor beam steel section 300mm Hight 410mm width
22. steel bracket support internal wall
23. 300mm HEB steel column



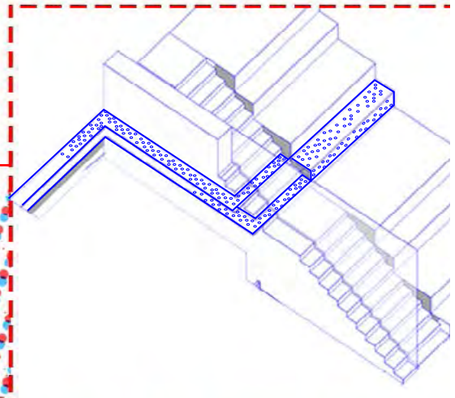
1. Patterned glass rainscreen:
   6 mm laminated safety glass
   +16mm cavity
   +6mm laminated safety glass
2. 2x6mm transparent laminated safety glass
   +16mm cavity
   + 2x6mm laminated safety glass
3. Aluminium grate
4. 10mm Perforated anodised aluminium sheet
5. 100mm Steel frame support for stairs
6. 200mm Steel frame support for stairs
7. insulated steel curtain wall frame
8. damp proof membrane
9. Hytherm ADH tapered/flat board insulation
10. vapor barrier
11. 200mm HEB steel beam
12. 10mm Steel tie attaching glazing unit to secondary steel frame
13. 2x6mm transparent laminated safety glass
    +16mm cavity
    + 2x6mm laminated safety glass
14. 200mm secondary steel frame
15. 80mm self-levelling screed
    + underfloor heating pipes
    +5mm steel edge
16. Pre-cast concrete Plank 285mm depth
17. 300mm HEB steel beam
18. Slim floor beam steel section 300mm Hight 410mm width
19. 15mm plasterboard
20. 200mm secondary steel frame bolted to primary structure
21. 40mm acoustic panel, white
22. 300mm HEB steel column

TRANSLATING BUILDING CONCEPT INTO FORMS

EXAMPLE STUDENT APARTMENT

3D DRAWING

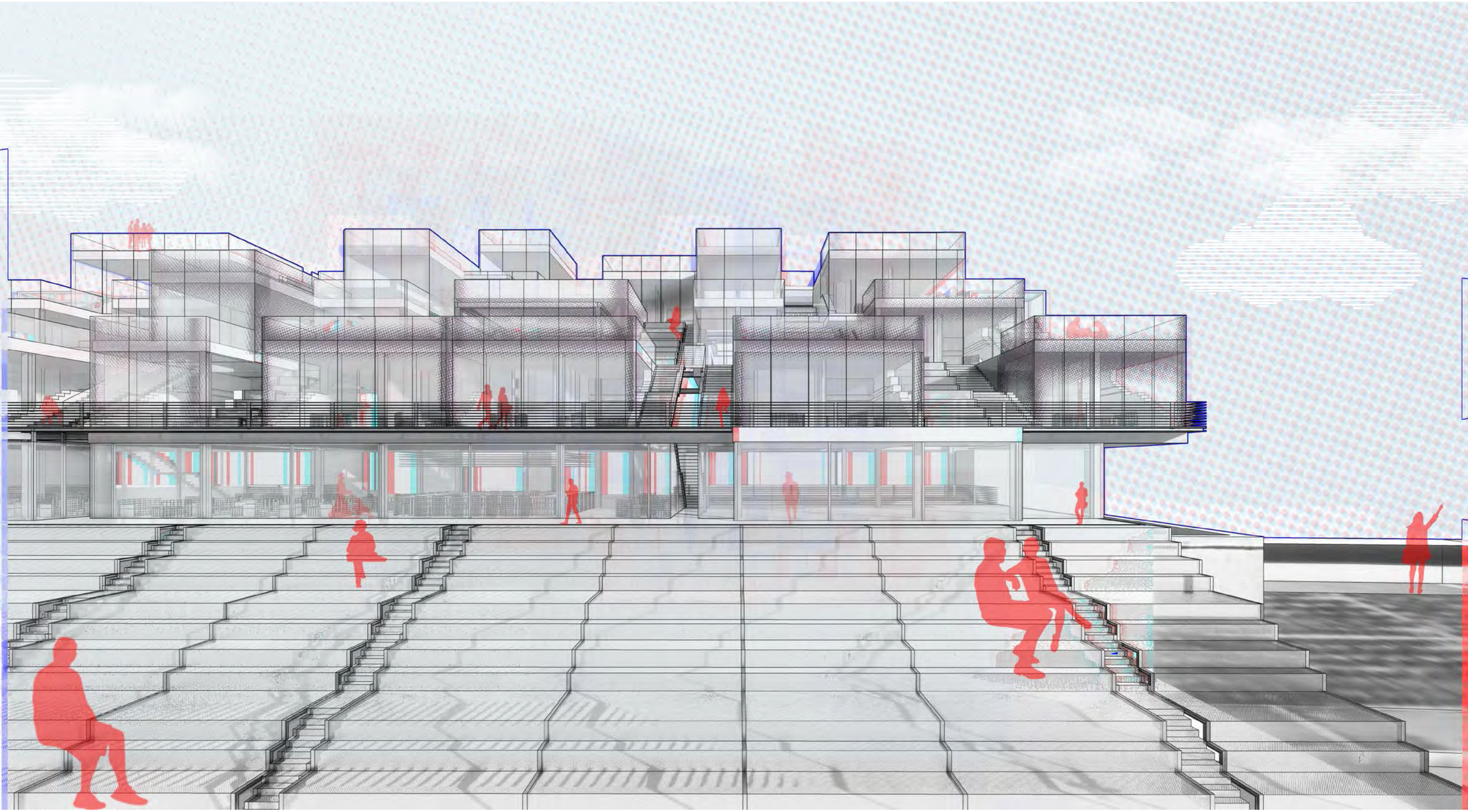
GLAZING ON THE SIDES OF THE APARTMENTS STEPS IN LINE WITH THE ATTACHED SEATING, TOP SHELVES IN THE KITCHEN ARE MADE OF PERFORATED METAL AND APPEAR TO BE A CONTINUATION OF THE STAIRS



SLIDING FULL HEIGHT TRANSPARENT DOORS, BREAK DOWN THE BOUNDARIES AND BLURS THE EDGE BETWEEN EACH ROOM IN THE APARTMENT

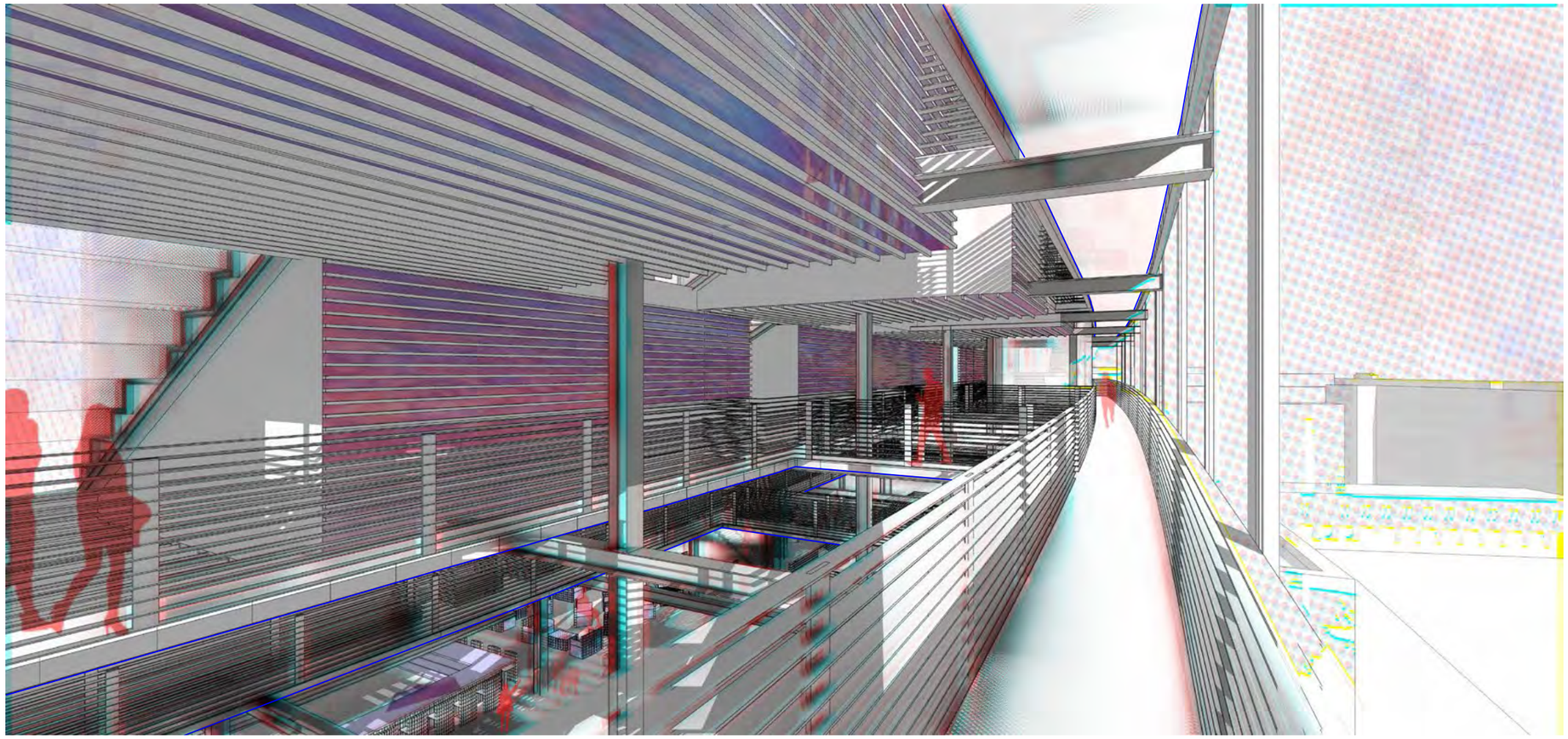
DOT MATRIX PRINT ON FACADE BLURS THE VIEW INTO THE APARTMENTS

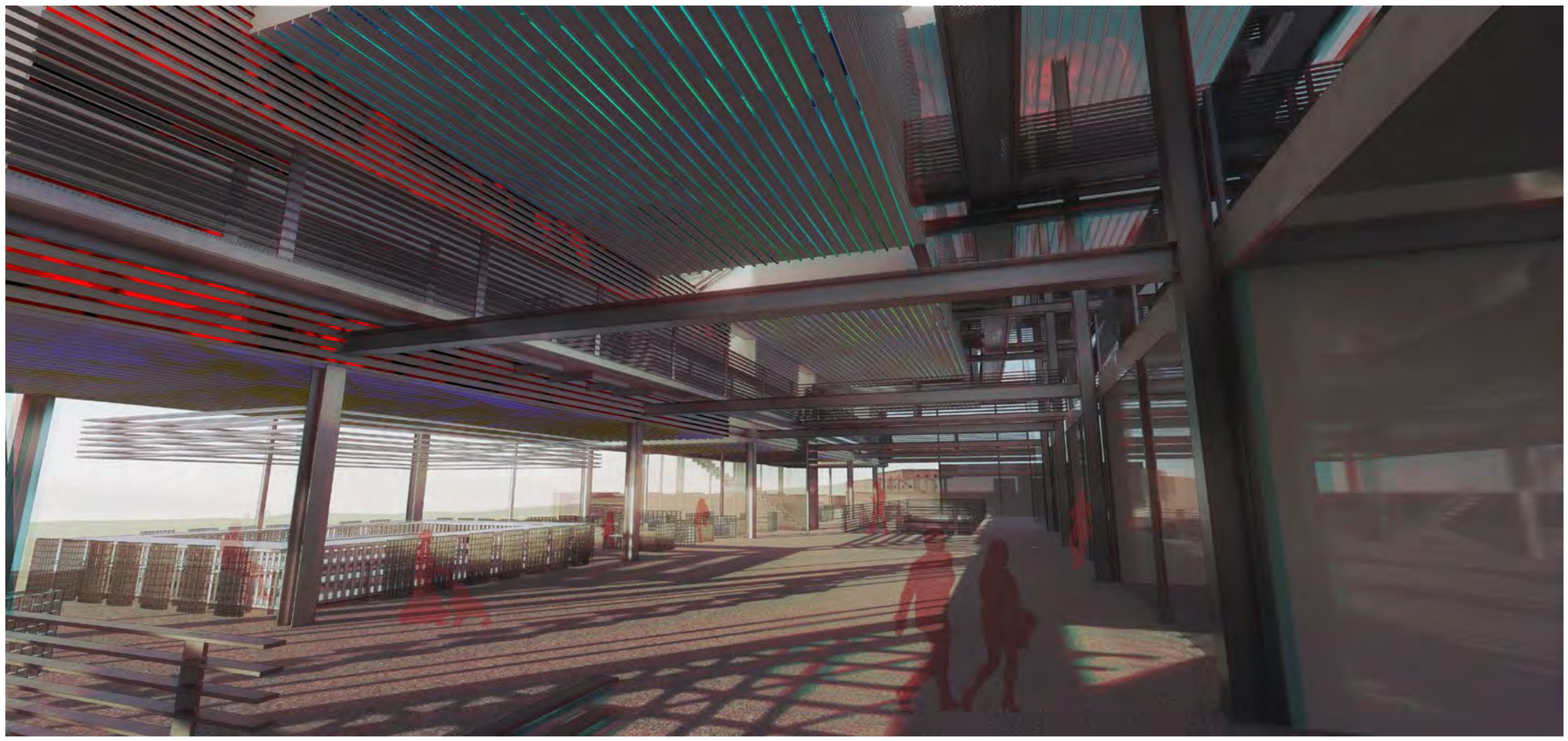
SOUTH PERSPECTIVE VIEW



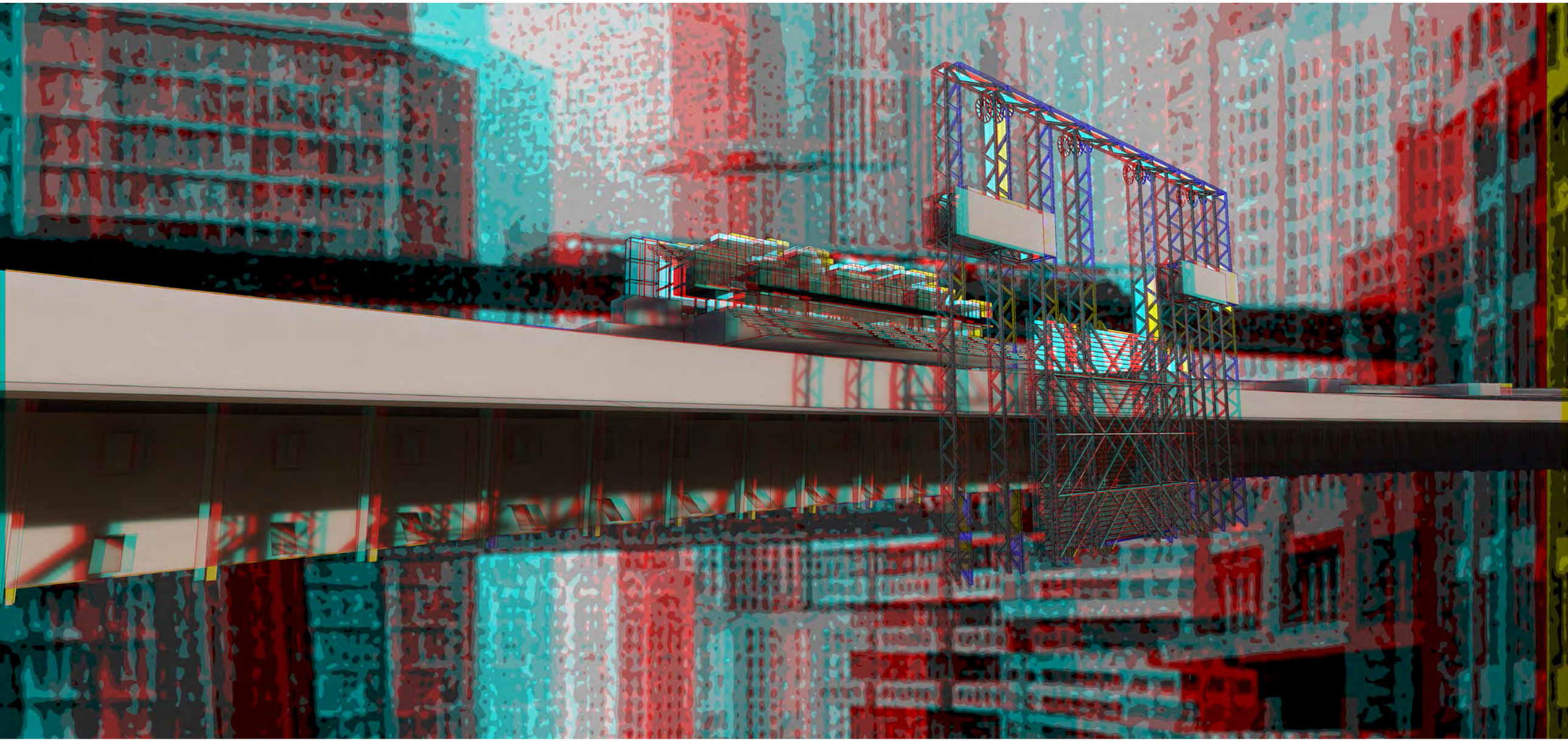
SECOND FLOOR BRIDGE VIEW

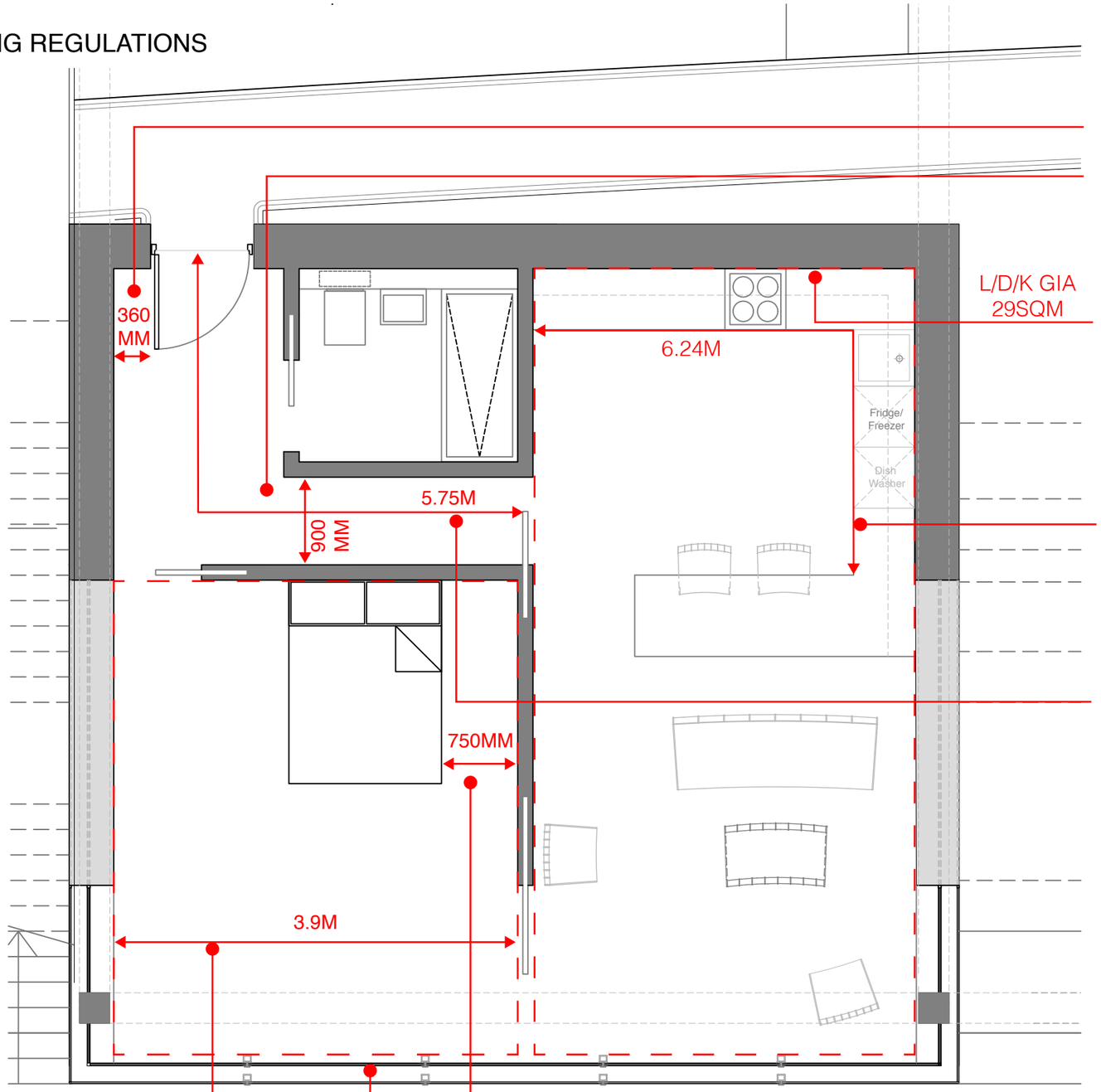
FIRST FLOOR EVENING VIEW





VIEW FROM TEMPELHOF FIELD
3D DRAWING





Approved Document M Volume 1, 2015 edition

Circulation areas and internal doorways
Door and hall widths (2.22).
d. A minimum 300mm nib is provided to the leading edge of every door within the entrance storey.
a. The minimum clear width of every hall or landing is 900mm

Habitable rooms Living areas (3.31).
Minimum combined floor area for living, dining, and kitchen space
2 bed spaces minimum floor area 25SQM

Kitchen and Eating Areas (3.33b)
Minimum length of kitchen worktop, including fittings and appliances, to be fitted at completion for a wheelchair adaptable dwelling
2 bed spaces minimum worktop length 4330MM

Approved Document B Volume 2 - Buildings other than Dwellinghouses

Provisions for flats with a floor more than 4.5m above ground level
a. to provide a protected entrance hall which serves all habitable rooms, planned so that the travel distance from the entrance door to the door to any habitable room is 9m or less

Approved Document M Volume 1, 2015 edition

Bedrooms (2.25 b). At least one double bedroom (the principal bedroom) can provide a clear access zone a minimum 750mm wide to both sides and the foot of the bed.

**Technical housing standards –
Nationally Described Space Standard**

Technical Requirements (10)
D. In order to provide two bedspaces, a double (or twin bedroom) has a floor area of at least 11.5m2
E. One double (or twin bedroom) is at least 2.75m wide and every other double (or twin) bedroom is at least 2.55m wide

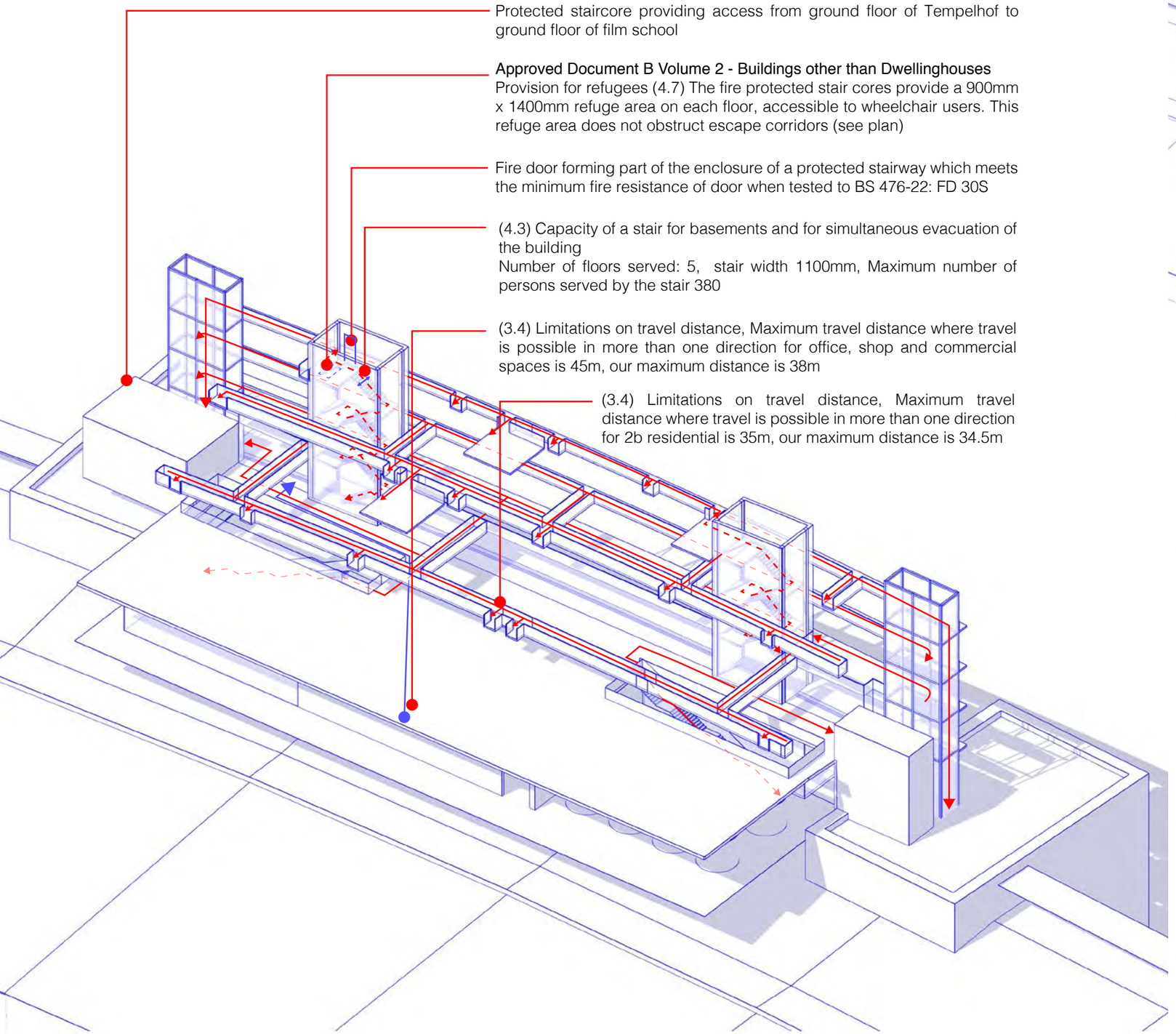
**Technical housing standards –
Nationally Described Space Standard**

Technical Requirements (10)
B. A dwelling with two or more bedspaces has at least one double (or twin) bedroom
All two-bedroom dwellings include one double and one single bedroom

London Plan Housing Standards

Table 3.3, Minimum Space Standards for all new dwellings,
1 bed, 2 person, 1 storey dwelling should be a mimimum 50SQM
GIA of Dwelling 61SQM

BUILDING REGULATIONS



Protected staircore providing access from ground floor of Tempelhof to ground floor of film school

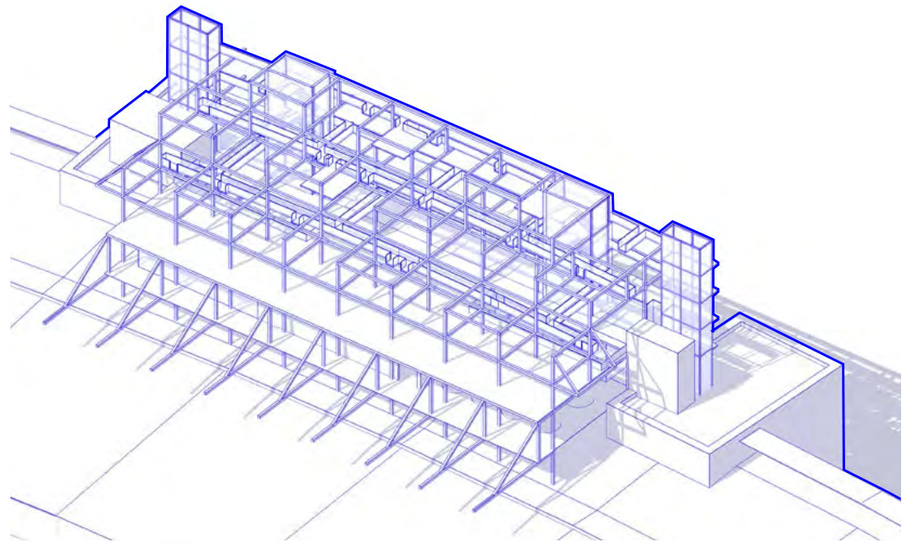
Approved Document B Volume 2 - Buildings other than Dwellinghouses
Provision for refugees (4.7) The fire protected stair cores provide a 900mm x 1400mm refuge area on each floor, accessible to wheelchair users. This refuge area does not obstruct escape corridors (see plan)

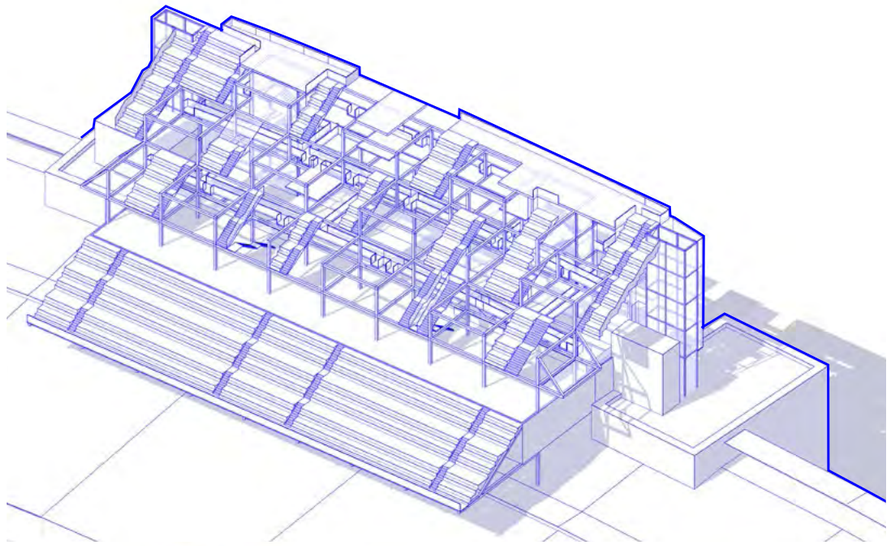
Fire door forming part of the enclosure of a protected stairway which meets the minimum fire resistance of door when tested to BS 476-22: FD 30S

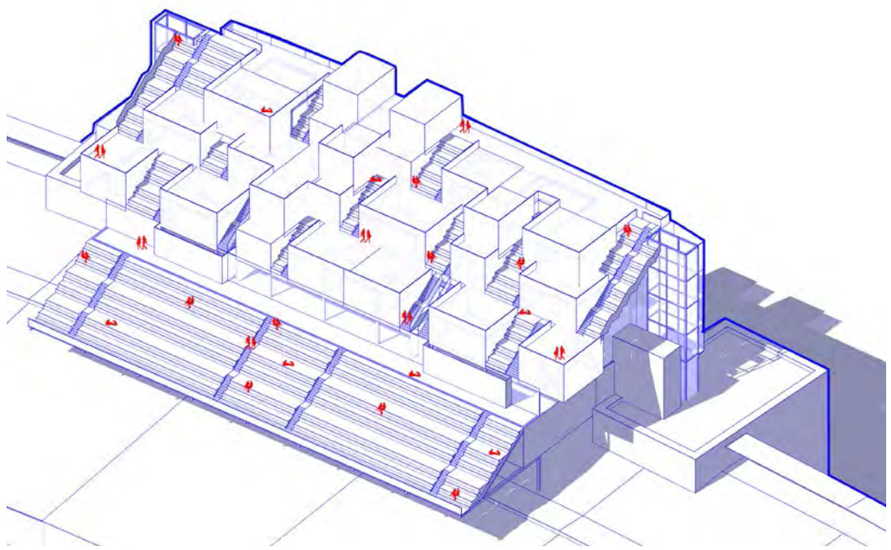
(4.3) Capacity of a stair for basements and for simultaneous evacuation of the building
Number of floors served: 5, stair width 1100mm, Maximum number of persons served by the stair 380

(3.4) Limitations on travel distance, Maximum travel distance where travel is possible in more than one direction for office, shop and commercial spaces is 45m, our maximum distance is 38m

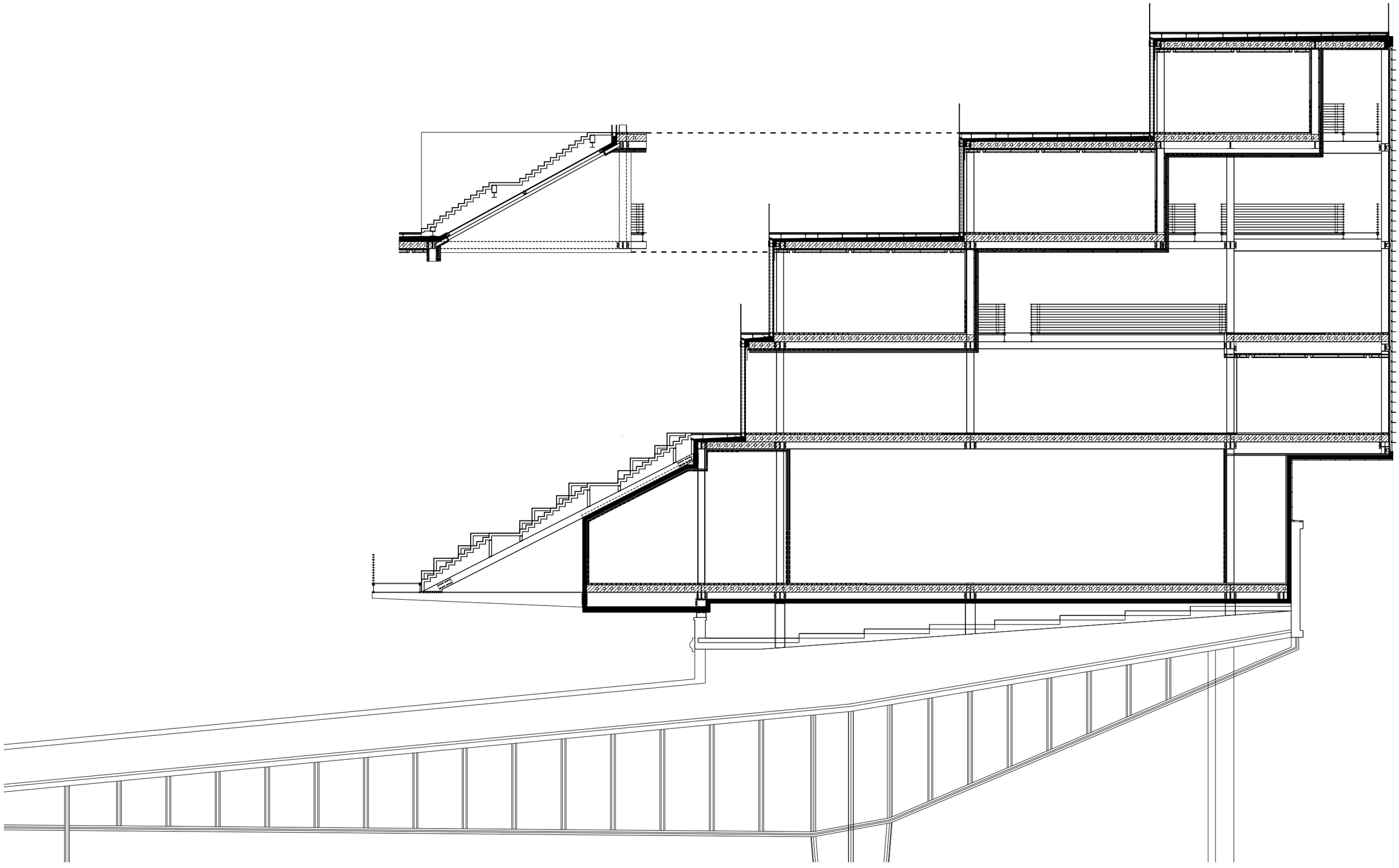
(3.4) Limitations on travel distance, Maximum travel distance where travel is possible in more than one direction for 2b residential is 35m, our maximum distance is 34.5m



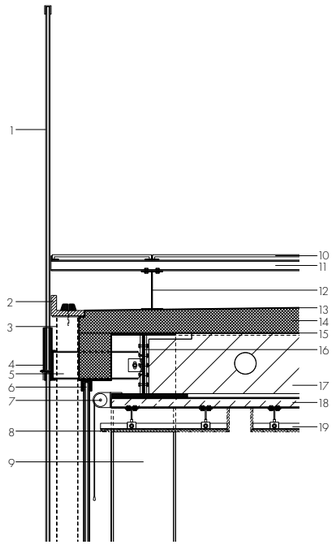




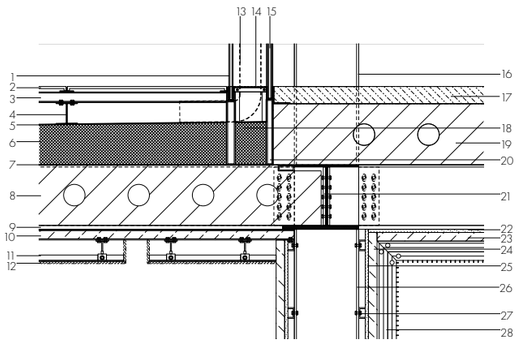
1:20 @ A0 DETAILED SECTION



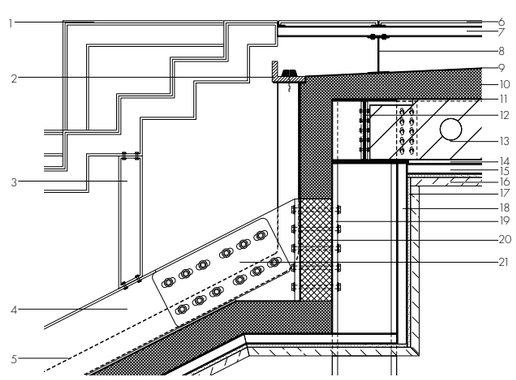
BUILDING DETAILS



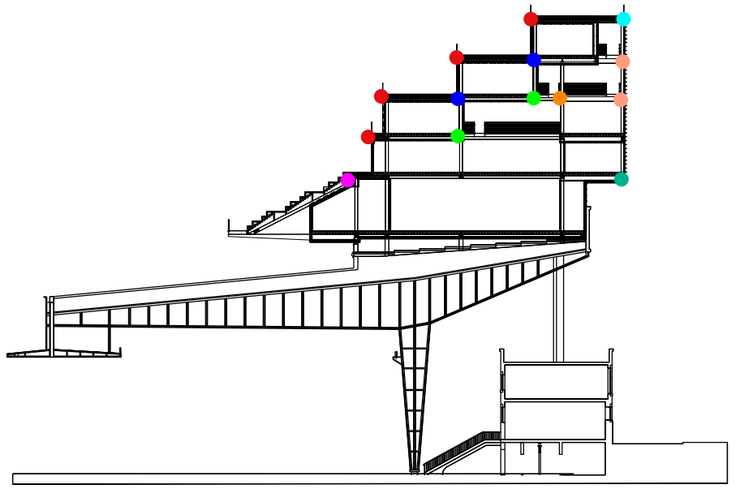
Detail 1
1. Glass Balustrade:
   6 mm laminated safety glass
   +16mm cavity
   +6mm laminated safety glass
2. PVC Gutter
3. PVC Drain pipe 110mm
4. 200mm Steel tie attaching balustrade to primary steel frame
5. 10mm Steel tie attaching glazing unit to primary steel frame
6. Thermal glazing:
   2x6mm transparent laminated safety glass
   +16mm cavity
   + 2x6mm laminated safety glass
7. Sunblind, white
8. 13mm aluminium foam suspended ceiling
9. 300mm HEB steel beam
10. 10mm Perforated anodised aluminium sheet decking
11. 50mm Steel beam decking support system
12. 100mm steel support
13. damp proof membrane
14. Hytherm ADH tapered/flat board insulation
15. vapor barrier
16. Slim floor beam steel section 300mm Hight 355mm width
17. Pre-cast concrete Plank 282mm depth
18. 40mm acoustic panel, white, within 50mm steel frame
19. 30mm Steel frame support for suspended ceiling

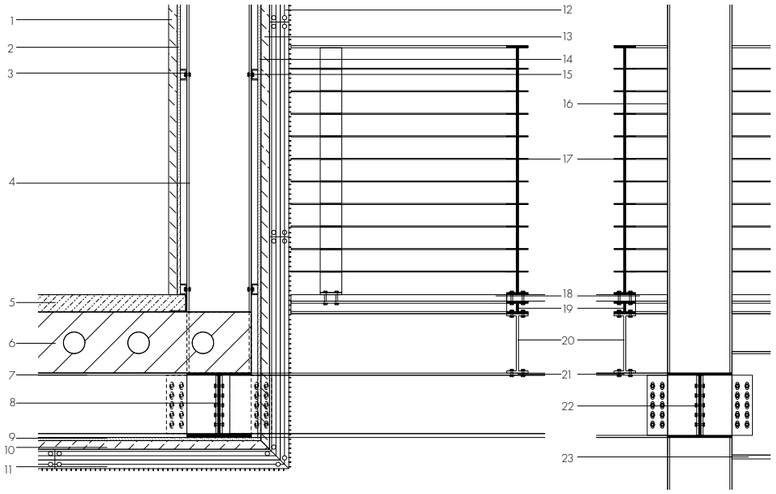


Detail 2
1. Patterned glass rainscreen:
   6 mm laminated safety glass
   +16mm cavity
   +6mm laminated safety glass
2. 10mm Perforated anodised aluminium sheet decking
3. 50mm Steel beam decking support system
4. 100mm Steel support
5. damp proof membrane
6. Hytherm ADH tapered/flat board insulation
7. vapor barrier
8. Pre-cast concrete Plank 282mm depth
9. 300mm HEB steel beam
10. 40mm acoustic panel, white, within 50mm steel frame
11. 30mm Steel frame support for suspended ceiling
12. 13mm aluminium foam suspended ceiling
13. PVC Drain pipe 110mm
14. Aluminium grate
15. Thermal glazing:
    2x6mm transparent laminated safety glass
    +16mm cavity
    + 2x6mm laminated safety glass
16. 300mm HEB steel beam
17. 80mm self-levelling screed
    + underfloor heating pipes
    +5mm steel edge
18. 200mm rigid insulation
19. Pre-cast concrete Plank 285mm depth
20. insulated steel curtain wall frame fixed to pre-cast concrete planks
21. Slim floor beam steel section 300mm Hight 410mm width
22. 15mm plasterboard
23. 40mm acoustic panel, white
24. 40mm acoustic panel, white
25. 15mm plaster board
26. 300mm HEB steel beam
27. steel bracket support internal wall
28. transparent LED screen

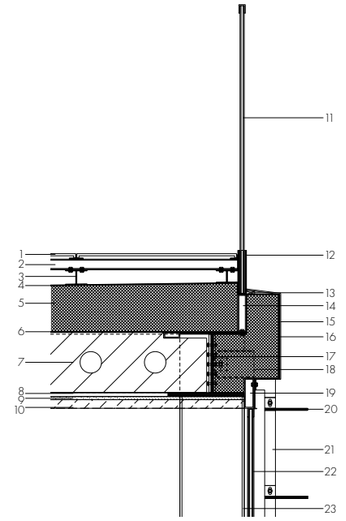


Detail 3
1. 10mm Perforated anodised aluminium sheet
2. PVC gutter
3. 100mm Steel frame support for stairs
4. 300mm HEB steel beam
5. PVC drain pipe 110mm
6. 10mm Perforated anodised aluminium sheet decking
7. 50mm Steel beam decking support system
8. 100mm Steel support
9. damp proof membrane
10. Hytherm ADH tapered/flat board insulation
11. vapor barrier
12. Slim floor beam steel section 300mm Hight 410mm width
13. Pre-cast concrete Plank 282mm depth
14. 300mm HEB steel beam
15. 150mm polystyrene insulation STS connector
16. 40mm acoustic panel, white
17. 15mm plasterboard
18. 50mm steel frame
19. 300mm HEB steel column
20. insulated steel curtain wall frame fixed to pre-cast concrete planks
21. 300mm HEB steel column

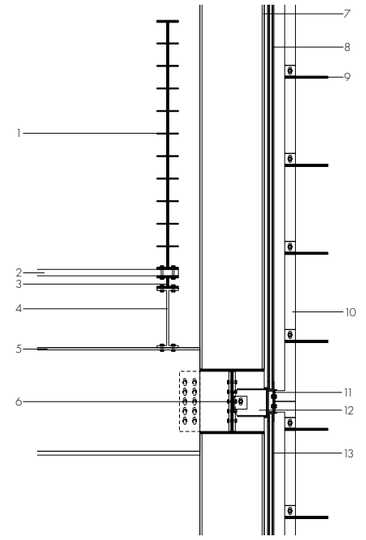




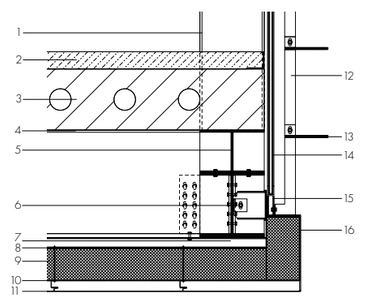
Detail 4/5
1. 40mm acoustic panel, white
2. 15mm plasterboard
3. steel bracket support internal wall
4. 300mm HEB steel beam
5. 80mm self-levelling screed
   + underfloor heating pipes
   +5mm steel edge
6. Pre-cast concrete Plank 285mm depth
7. 300mm HEB steel beam
8. 300mm HEB steel beam
9. 15mm plasterboard
10. 40mm acoustic panel, white
11. transparent LED screen
12. transparent LED screen
13. 40mm acoustic panel, white
14. 15mm plasterboard
15. steel bracket support internal wall
16. 300mm HEB steel column
17. 1350mm high balustrade, 10mm welded steel sheet components
18. 30mm steel grid
19. 60mm steel I section walkway support
20. 280mm steel I section connecting walkway to primary steel frame
21. 300mm HEB steel beam
22. 300mm HEB steel beam
23. 500mm HEB steel beam



Detail 6
1. 10mm Perforated anodised aluminium sheet decking
2. 50mm Steel beam decking support system
3. 100mm Steel support
4. damp proof membrane
5. Hytherm ADH tapered/flat board insulation
6. vapor barrier
7. Pre-cast concrete Plank 282mm depth
8. 300mm HEB steel beam
9. 15mm plasterboard
10. 40mm acoustic panel, white
11. Glass Balustrade:
    6 mm laminated safety glass
    +16mm cavity
    +6mm laminated safety glass
12. 200mm Steel tie attaching balustrade to primary steel frame
13. timber fixed to steel tie
14. insulated steel curtain wall frame fixed to I beam
15. aluminium capping fixed to timber and lapped over insulation
16. Slim floor beam steel section 300mm Hight 355mm width
17. damp proof membrane
    + vapor barrier
18. 10mm Steel tie attaching glazing unit to primary steel frame
19. insulated steel curtain wall frame fixed to I beam
20. 200mm steel plate solar shading
21. 50mm steel frame holding solar shading
22. Thermal glazing:
    2x6mm transparent laminated safety glass
    +16mm cavity
    + 2x6mm laminated safety glass
23. 300mm HEB steel beam



Detail 7
1. 1350mm high balustrade, 10mm welded steel sheet components
2. 30mm steel grid
3. 60mm steel I section walkway support
4. 280mm steel I section connecting walkway to primary steel frame
5. 500mm HEB steel beam
6. 300mm HEB steel beam
7. 300mm HEB steel column
8. Thermal glazing:
   2x6mm transparent laminated safety glass
   +16mm cavity
   + 2x6mm laminated safety glass
9. 200mm steel plate solar shading
10. 50mm steel frame holding solar shading
11. insulated steel curtain wall frame fixed to I beam
12. 10mm Steel tie attaching window frame to primary steel frame
13. Thermal glazing:
    2x6mm transparent laminated safety glass
    +16mm cavity
    + 2x6mm laminated safety glass

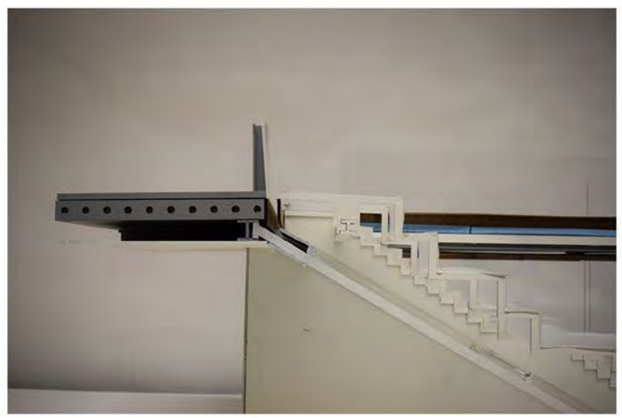


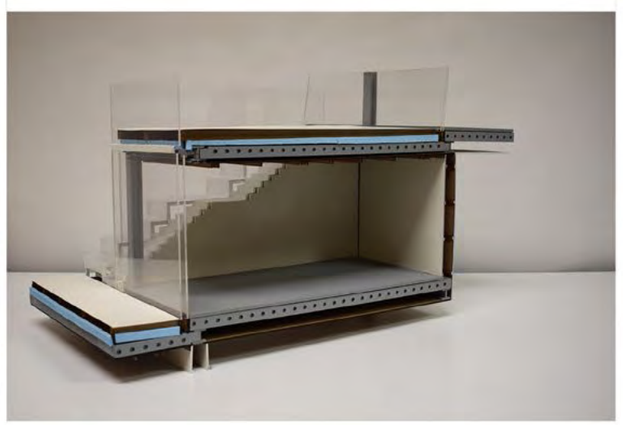
Detail 8
1. 300mm HEB steel beam
2. 80mm self-levelling screed
   + underfloor heating pipes
   +5mm steel edge
3. Pre-cast concrete Plank 285mm depth
4. 500mm HEB steel beam
5. steel I section 200mm Hight 300mm width
6. 300mm HEB steel beam
7. 50mm steel frame supporting metal cladding
8. damp proof membrane
9. 150mm rigid insulation
10. vapor barrier
11. Anodized aluminium sheet cladding
12. 50mm steel frame holding solar shading
13. 200mm steel plate solar shading
14. Thermal glazing:
    2x6mm transparent laminated safety glass
    +16mm cavity
    + 2x6mm laminated safety glass
15. insulated steel curtain wall frame fixed to I beam
16. aluminium capping lapped over insulation

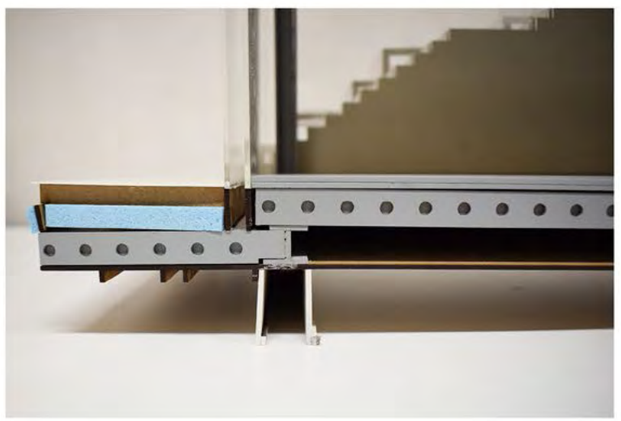
1:20 DETAIL SECTION MODEL

The 1:20 detailed model shows the wall, floor and ceiling build up of one of the apartments aswellas the tirered seating connection between two floors.

Referencing details on page 21 and
Detail 1, 2 and 4 on page 28





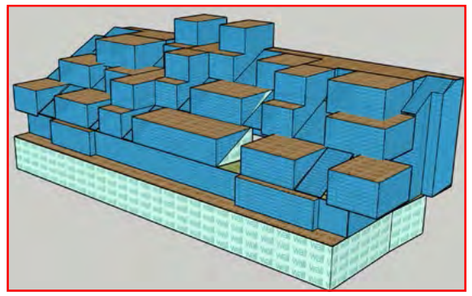


DESIGN ITERATIONS THROUGH ENVIRONMENTAL ANALYSIS

Testing glazed north and south facades

Through initial calculations we found the large amount of glazing used throughout the building caused the spaces to be ‘mostly overlit’

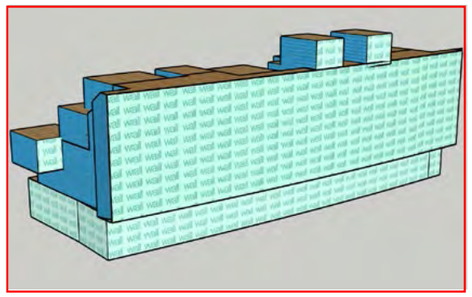
The ground floor of the film school will be classified as underlit, this is acceptable do to the dark spaces required for the film studio and editing suites



Testing solid north facade and glazed south facade

There is still a large amount of overlit spaces, meaning design alterations will be required on the glazed south facade

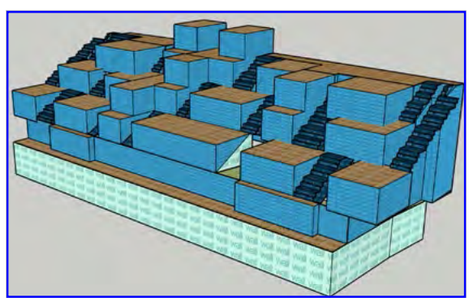
The amount of underlit spaces has more than doubled meaning a glazed north facade is required to allow natural light into the atrium of the building and prevent a large amount of underlit spaces



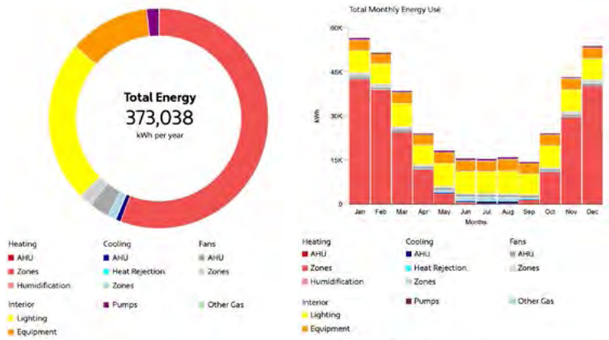
Testing horizontal solar shading on the north facade, fritted glass on the south facade of apartments and perforated stairs as a solar shading device on the angled glass used on the south facade

There amount of overlit spaces is reduced, meaning the building won’t experience excessive solar gain

The amount of underlit spaces has reduced, the building is well throughout



Energy use and running costs

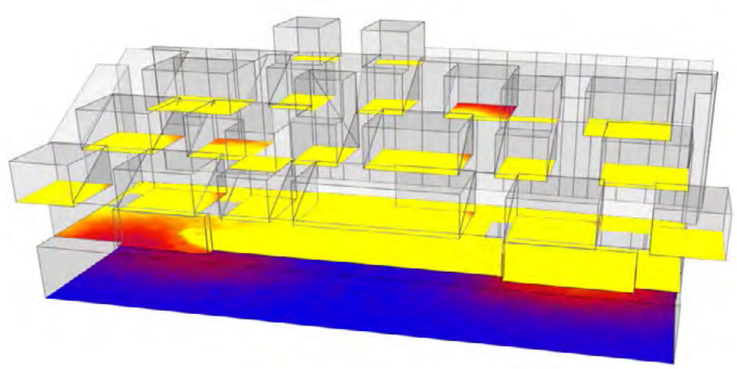


Unsurprisingly the largest energy use will be to heat the building, this was to be expected due to the large open glazed atrium as well as the large surface area of the building created through the stepping south facade

Surprisingly the largest energy cost will be in lighting the building, this could be due to the dark ground floor which is required for the film studios to only be lit by artificial lighting

Daylighting Visualisation

Analysis created with Sefaira energy modelling software which shows the foot candles level of illumination on March 21st (Equinox).
From this analysis we can clearly see that the building is well lit from the first to fifth (top) floors, providing adequate daylighting into all apartments.
The ground floor (film studio) is underlit, however this is a deliberate design consideration due to the requirements for film studios and editing suites to control illumination level through artificial lighting.



Footcandle levels on March 21 at 9AM measured at 2.79 feet above the floor plate. Time does not take into account daylight savings time.

0 | 19 | 37 | 56 | 74+

RIBA

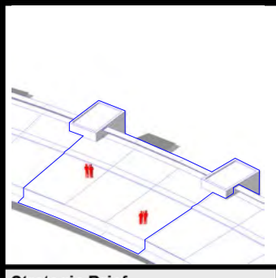
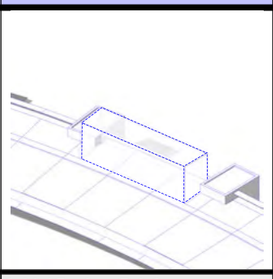
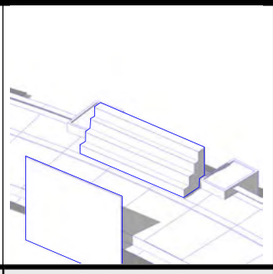
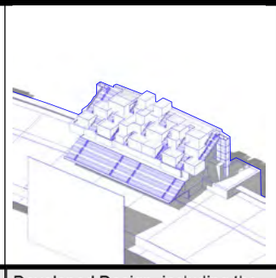
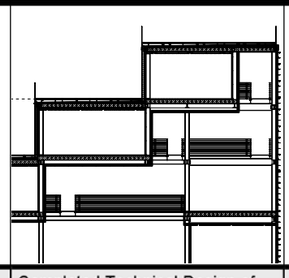
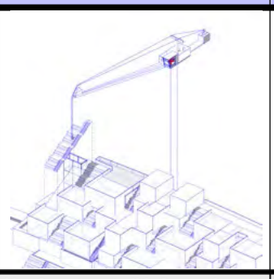
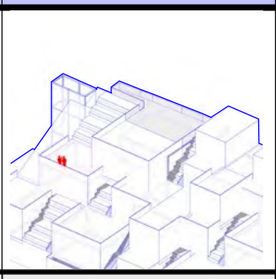
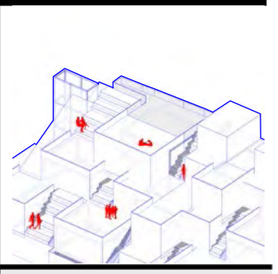
This **Project** version of the RIBA Plan of Work 2013 has been prepared by **Asher Bourne & Lorna Lovatt** for use on its project **Tempel of Nocturnal Lights**. It has been prepared on the basis of a **Traditional Contract** procurement route.The RIBA Plan of Work 2013 organises the process of briefing, designing, constructing, maintaining, operating and using building projects into a number of key stages. The content of stages may vary or overlap to suit specific project requirements. The RIBA Plan of Work 2013 should be used solely as guidance for the preparation of detailed professional services contracts and building contracts.

www.ribaplanofwork.com

RIBA Plan of Work 2013

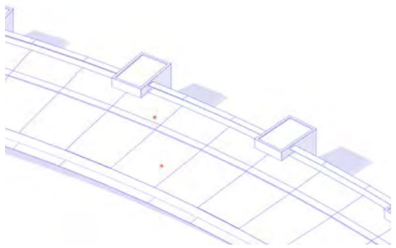
Work Stages ⬇

Tasks ⬇

	0 Strategic Definition	1 Preparation and Brief	2 Concept Design	3 Developed Design	4 Technical Design	5 Construction	6 Handover and Close Out	7 In Use
Core Objectives	Identify client's **Business Case** and **Strategic Brief** and other core project requirements.	Develop **Project Objectives**, including **Quality Objectives** and **Project Outcomes**, **Sustainability Aspirations**, **Project Budget**, other parameters or constraints and develop **Initial Project Brief**. Undertake **Feasibility Studies** and review of **Site Information**.	Prepare Concept Design, including outline proposals for structural design, building services systems, outline specifications and preliminary **Cost Information** along with relevant **Project Strategies** in accordance with **Design Programme**. Agree alterations to brief and issue **Final Project Brief**.	Prepare Developed Design, including coordinated and updated proposals for structural design, building services systems, outline specifications, **Cost Information** and **Project Strategies** in accordance with **Design Programme**.	Prepare Technical Design in accordance with **Design Responsibility Matrix** and **Project Strategies** to include all architectural, structural and building services information, specialist subcontractor design and specifications, in accordance with **Design Programme**.	Offsite manufacturing and onsite **Construction** in accordance with **Construction Programme** and resolution of **Design Queries** from site as they arise.	Handover of building and conclusion of **Building Contract**.	Undertake In Use services in accordance with **Schedule of Services**.
Procurement *Variable Task Bar	Initial considerations for assembling the project team.	Prepare **Project Roles Table** and **Contractual Tree** and continue assembling the project team.			Design Team Stage 4 output issued for tender. Tenders assessed and **Building Contract** awarded. Specialist contractor Stage 4 information reviewed post award.	Administration of **Building Contract**, including regular site inspections and review of progress.	Conclude administration of **Building Contract**.	
Programme *Variable Task Bar	Establish **Project Programme**.	Review **Project Programme**.	Review **Project Programme**.	Review **Project Programme**.	Specialist subcontractor design work undertaken in parallel with Stage 5 in accordance with **Design** and **Construction Programmes**.			
(Town) Planning *Variable Task Bar	Pre-application discussions.	Pre-application discussions.	Pre-application discussions.	Planning application made at end of stage using Stage 3 output.	Planning conditions reviewed following granting of consent and, where possible, concluded prior to starting on site.			
Key	Establish the project team and assess core programme requirements. Identify a business strategy through discussions with the client.	Review site information (See page 5 for details) Undertake feasibility study and develop the initial brief.	Prepare concept design alongside the relevant structural design and building services outlined proposals. Agree and issue the final project brief.	Coordinated developed design including updated structural and building services proposals. Provision of cost information and project strategies.	Technical design package providing detailed construction information. Including architectural, structural and services information alongside subcontractor specifications.	Realisation of building construction on site in line with the agreed construction programme.	Completion of building contract following inspection and handover of the building to the client.	Review of project performance including post-occupancy evaluation.
								
Information Exchanges (at stage completion)	**Strategic Brief**.	**Initial Project Brief**.	Concept Design including outline structural and building services design, associated **Project Strategies**, preliminary **Cost Information** and **Final Project**	Developed Design, including the coordinated architectural, structural and building services design and updated **Cost Information**.	Completed Technical Design of the project.	**'As Constructed' Information**.	Updated **'As Constructed' Information**.	**'As Constructed' Information** updated in response to ongoing client Feedback and maintenance or operational developments.
UK Government Information Exchanges	Not required.	Required.	Required.	Required.	Not required.	Not required.	Required.	As required.
Programme Duration	2 Weeks	6 Weeks	8 Weeks	10 Weeks	10 Weeks	40 Weeks	2 Weeks	

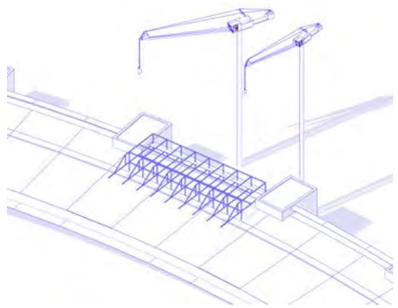
BUILDING CONSTRUCTION SEQUENCE

0



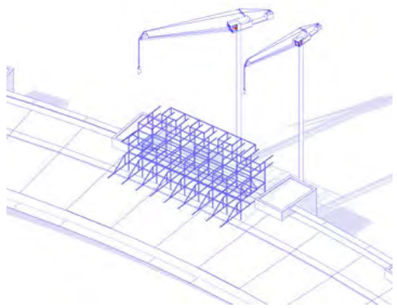
It is important to carry out site investigations to determine the ground type and the existing structure and calculate whether the existing foundations and structure of the building are strong enough to carry the additional weight of our construction. If not the existing structure foundations would need underpinning. (We can assume this isn't required for our project).

1



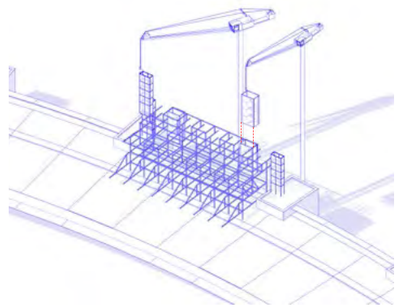
A steel waffle slab is used to spread the load of the new build evenly across the roof of the existing building, thus avoiding any point loading.

2



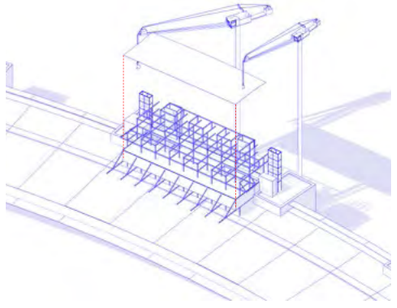
The main steel structure is assembled.

3



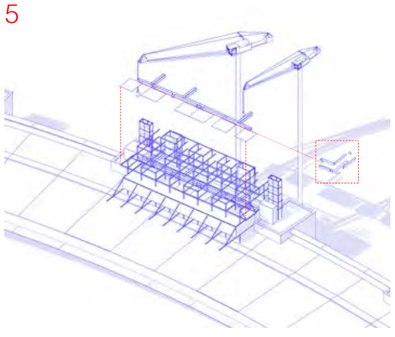
Build up the lift and stair cores to give lateral stability to the steel framework. These will also allow construction workers easy access throughout the building.

4



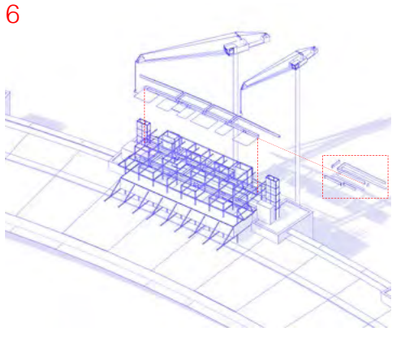
Install all of the pre-cast concrete elements and metal walkways across all floors, repeated across all floors from the ground floor to the top including the roof.

5



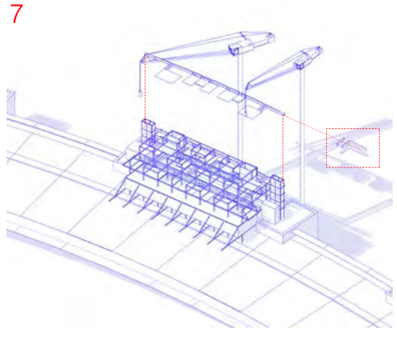
Repeat step 4 for the first floor.

6



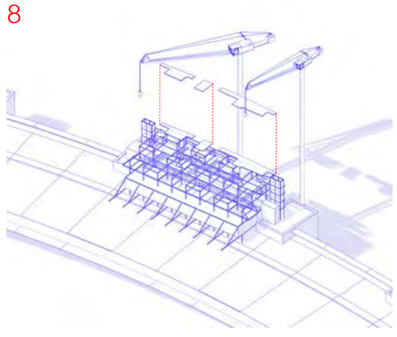
Repeat step 4 for the second floor.

7



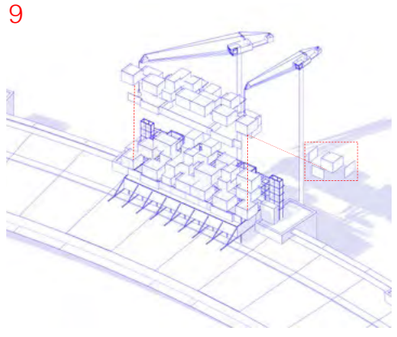
Repeat step 4 for the third floor.

8



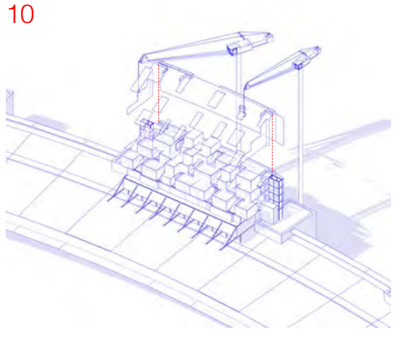
Repeat step 4 for the roof.

9



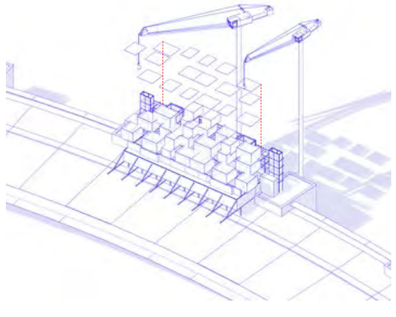
The apartment glazing which is secondary to the main structure is installed across all floors in one process.

10



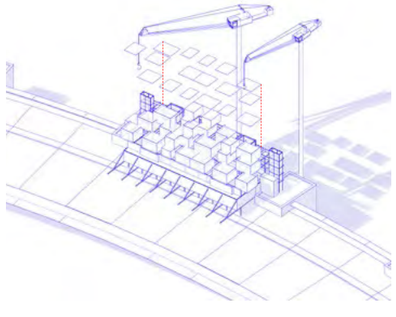
The curtain walling system and angled glazing is installed, thus making the building water tight.

11



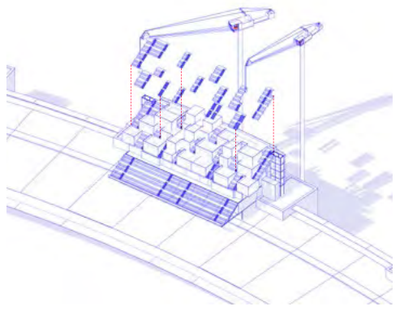
Screed finished flooring poured into apartments once they are water-tight.

12



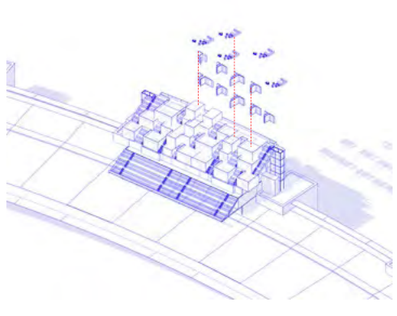
Internal walls are assembled on site for each apartment after the external envelope is sealed.

14



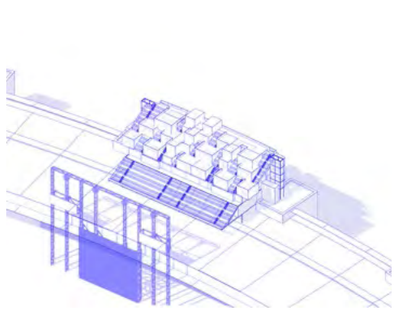
Perforated metal tiered seating is attached to main steel structure.

13



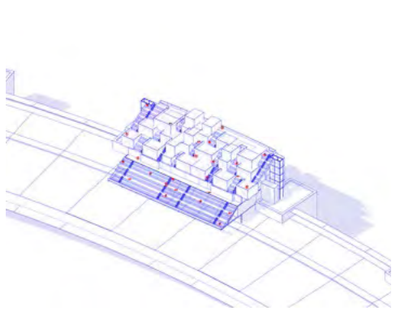
Joinery and internal finishes/fixings completed on site.

15



Cinema screen is constructed as a secondary structure, separate to the main building.

16



Completed building ready for use.

List of Illustrations

Figure 1: Schofmann. F, Tempelhof bunker fire damage, [date accessed 10.10.18] Available at: https://www.agefotostock.com/previewimage/medibigoff/d7f9fabe38c37d8b7dd5c2a8645d5a54/ibr-1695008.jpg?fbclid=IwAR1aKPQoR57OGD2Gu8Gi-oha1HLHEr_art3Ki3TcnkJlYzNMXsaliHAsBps

Figure 2: Tempelhof in 1945 following war damage

Figure 3: Schulz. M, Elbphilharmonie Glazing [date accessed 30.10.18] Available at: https://www.archdaily.com/802093/elbphilharmonie-hamburg-herzog-and-de-meuron

Figure 4: Baan. I, Internal view through matrix printed glazing [date accessed 30.10.18] Available at: https://www.archdaily.com/802093/elbphilharmonie-hamburg-herzog-and-de-meuron

Figure 5: Imperial War Museum North, internal view of airshard [date accessed 04.11.18] Available at: https://libeskind.com/work/imperial-war-museum-north/

Figure 6: Solar Radiation and Louvres [date accessed 10.11.18] Available at: https://www.coltinfo.co.uk/files/pdf/UK/Shadoglass%20and%20Shadovoltaic%20solar%20shading%20systems.pdf

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Individual Reflection

Lorna: Upon reflection of our PS1 proposal I believe that we have responded to USE's design ethos of forming an individual concept based on a personal narrative that is born out of the site's history and potential. This is the core of our scheme which generates a unique building proposal, (film school and student accommodation) within the brief of House and Home, pushing the boundaries of a typical home by linking the living accommodation directly to the cinema screen.

It was an interesting challenge to combine the conceptual, experimental nature of USE as well as our personal ambitions for the project with the technical requirements of this module. Asher was particularly good at developing this aspect of the proposal through the detailed model, where we were able to experiment with transparency and realise our concept as every scale.

Asher: Looking back at the semester just gone I can see that Lorna and I employed the studio manifesto of unique concepts generated from the analysis of the site, it's current and historical context.

Our project is rooted in the history of temprlhof Airport as it's function is inspired by a significant event from the 20th century.

USE promotion of team work allowed Lorna and I to combine our strengths to create a stronger body of work. Lorna's bold graphical presentation increased my appreciation of using colour and layout to present a story. My detailing and model making helped us realise a strong concept imaged by both of us into a closer state of realisation.