

APPENDICIES

FOR SUBMISSION

TO ACCOMPANY ARCHITECTURAL DESIGN REPORT PREPARED BY

DKO Architecture

Telephone +61 2 8346 4500

info@dko.com.au

42 Davies Street, Surry Hills NSW 2010

REVISION	COMMENT	DATE	WRITTEN BY / REVIEWED BY
P01	Preliminary Draft For Review	17.01.2025	NT
P02	Updated Draft	21.02.2025	NT / SO
A	For Submission	26.02.2025	NT / SO
B	Updated For Submission	27.02.2025	NT/ SO

APPENDIX A

BETTER PLACED ASSESSMENT

BETTER PLACED - GOOD DESIGN OBJECTIVES

The following table provides a summary of how the proposed development, as illustrated by the Design Report and referenced documentation, achieves the good design outcomes (identified by the Design Objectives for NSW) of GANSW's 'Better Placed' policy. As the table shows, the elements of the proposed design have overlapping achievement of the objectives.

DESIGN OBJECTIVES FOR NSW		ARCHITECTURAL DESIGN REPORT SECTIONS					
		DESIGN APPROACH & PROCESS	CONTEXT & PLACE	BUILT FORM & URBAN DESIGN RESPONSE	GROUND PLANE & LANDSCAPE	ARCHITECTURAL CHARACTER	ESD & RESIDENTIAL AMENITY
	1. BETTER FIT Contextual, local and of its place		✓	✓	✓	✓	
	2. BETTER PERFORMANCE Sustainable, adaptable and durable				✓	✓	✓
	3. BETTER FOR COMMUNITY Inclusive, connected and diverse	✓	✓	✓	✓		
	4. BETTER FOR PEOPLE Safe, comfortable and liveable	✓	✓	✓	✓		✓
	5. BETTER WORKING Functional, efficient and fit for purpose			✓	✓	✓	✓
	6. BETTER VALUE Creating and adding value			✓	✓	✓	✓
	7. BETTER LOOK AND FEEL Engaging, inviting and attractive	✓		✓	✓	✓	

APPENDIX B

DESIGN REVIEW SUMMARY

DESIGN REVIEW PROCESS

LANDCOM DESIGN REVIEW
PANEL MEETING
12TH SEPTEMBER 2024

SUPPORTED ELEMENTS

- Strategy to construct efficient standardised insertions for bathrooms and kitchens
- Excellent proposed site cover of Cumberland Plain Woodland. These eucalyptus, especially along Soldiers Parade will create great, dappled western light and outlook for residents, and the proposed wide set back of deep soil will make it successful
- The series of communal spaces is welcome
- Intentions to engage an ESD advisor, providing simple shading and low maintenance finishes and materials with good passive design and high percentage of solar access and cross ventilation
- Making the most of this challenging but also very interesting wedge-shaped site

STATE DESIGN REVIEW
PANEL MEETING
16TH OCTOBER 2024

SUPPORTED ELEMENTS

- Engagement of WSP to guide Connecting with Country work
- General approach to site planning, and articulation and modulation of built form
- Ambition to achieve high standard of architectural design while addressing cost limitations through use expressing structure and selection of robust, low-maintenance materials
- Staggered form along Macdonald Road which averages the boundary setback controls and aligns with the proposed development to the east.
- Relocation of main entry from Soldiers Parade to Macdonald Road
- Legible articulation and modulation of eastern facade
- Secondary entry through southern landscape area
- Location of bicycle storage room at main entrance
- Sustainability initiatives
- Proposal for public art on the blank wall adjacent to the main lobby
- Proposal for windows in common corridors to be operable

LIVERPOOL COUNCIL
PRE SSDA MEETING
15TH NOVEMBER 2024

SUPPORTED ELEMENTS

- Appreciation and commendation of provided massing studies and diagrams, including provided comprehensive explanation of rationale behind the design and the establishment of the envelope with consideration of the surrounding context
- Recognition of the challenges of constrained site in size and shape, and in order to achieve an appropriate apartment design for the site while reducing impact to neighbouring buildings, a staggered approach has been adopted, resulting in several ADG building separation non-compliances. LCC is supportive of the approach for this particular site and context.
- Supportive of project’s aim to achieve 40% canopy coverage.
- Supportive of well-considered facade strategy, including incorporation of robust materials and the brick podium.
- General support of concept landscape plans.

SSDA SUBMISSION
MARCH 2025

LANDCOM DRP & GANSW SDRP ADVICE

The following table collates the comments provided by the Landcom Design Reviewi Panel (LDRP) and Government Architect NSW State Design Review Panel (SDRP), contained within the written advice letters.

LDRP MEETING	SDRP MEETING	PROVIDED RESPONSE AND DOCUMENTATION
CONNECTING WITH COUNTRY		
	An understanding of Country offers the potential to inform richer and more place-responsive design solutions. Where possible, Connecting with Country themes should be integral to the whole project.	-
	1. As the design develops, ensure that the response to Country is guided by local Aboriginal knowledge-holders.	The design has been developed in collaboration with WSP, whose team is lead by First Nations People. The process lead by WSP has also included multiple engagement sessions with local Darug knowledge holder Uncle Shane Smithers. The design team have incorporate information and ideas which have been share by Uncle Shane. Refer to Section 01, 04 and 05 of this design report for further information on how the engagement process has informed the design, as well as the Connecting to Country - Aboriginal Design Principles document prepared by WSP.
	2. Illustrate how the Connecting with Country narrative can inform the project holistically, for example, through sustainability approaches, materiality, landscape design, and specification of plant species.	A Connection with Country narrative has been deeply embedded into the proposal. From the outset, the team have sought to understand the site within the context of Country, with further understanding provided by the engagement with First Nations people. The proposed landscape, architecture and public art strategy together seek to provide a multi-layered design response to the developed understanding and a proposal which holistically connects to Country. Refer to Section 01, 04 and 05 of this design report for further information on how the engagement process has informed the design, as well as the Connecting to Country - Aboriginal Design Principles document prepared by WSP.
	3. Refer to the Connecting with Country Framework and case studies on the GANSW website for more information and guidance.	The project has been guided by WSP who have proposed principles which align with the GANSW Connecting with Country Framework. Refer to the Aboriginal Design Principles document prepared by WSP for further information about the consideration of the GANSW Connecting to Country Framework.
GROUND PLANE AND LANDSCAPE		
2. Make a better communal space beside the open space on the ground floor, this could possibly include a little potential social enterprise space and move apartments up top		The revised design presented at SDRP meeting incorporated the provided response. A generous communal gathering space has been provided adjacent to the relocated main entry off Macdonald Road. A social enterprise space was not incorporated as it was not aligned with the Project Brief. Bicycle parking and workshop space is proposed at this location to assist with it's activation.
3. Use prior experience of shared roof top spaces and challenge whether as many rooftop spaces are needed, especially if the ground level landscape are is successful		The revised design presented at SDRP meeting incorporated the provided response. Communal space is no longer proposed on rooftops – all communal space is provided on ground level.

LDRP MEETING	SDRP MEETING	PROVIDED RESPONSE AND DOCUMENTATION
4. Review landscape design: a. To be simpler and more direct after reconfiguration of building entry and levels to avoid needing a series of costly retaining walls. b. At the eastern edge has a very close interface, the current tiny narrow strip of landscape along this is not ideal		The revised design presented at SDRP meeting incorporated the provided response. Landscape design has been revised alongside the amendments to the building extent, entries, levels and location of communal open space. Use of retaining walls has been sought to be minimised, with perimeter landscaping proposed as a more natural, softened interface shrubs, trailing plans and ground covers to screen the remaining retaining walls. The dimension of the eastern deep soil landscaping zone is limited due to the limited options of vehicular entry combined with carrying down the structure from the main building. The proposed dimension, combined with it being deep soil, is viewed as being sufficient to achieve a high-quality landscape outcome.
7. Consider relocating the entry to future Macdonald Road to the north, for a better arrival lobby experience, since this is understood to be a quieter road that allows cars to pull over. Noting this effects levels, since the current design is stemming from achieving a level entry off Soldiers Parade.		The revised design presented at SDRP meeting incorporated the provided response. Location of main lobby has been relocated to be along Macdonald Road, with a secondary entry still provided off Soldiers Parade which assists in activating the communal open space.
	There is opportunity to strengthen the relationship between the building and the landscape through framed vistas and materiality:	-
	4. Consider how windows can frame views of the landscape. Design the landscape and position trees to provide a green outlook for the common areas and screen the neighbouring development.	Due to requirements for vegetation for bushfire management, the number and position of trees has been limited. Where possible trees have been positioned to create a lush backdrop and provide screening to the surrounding developments enhancing privacy to the open communal spaces as well as shade and a connection to nature.
	5. Extend the materiality of the masonry podium into the landscape and internal spaces, for example by using brick in the ground plane of the landscape and continuing these finishes into the lobbies.	The proposed brick materiality of the podium is carried through the planter walls of the landscape, and the paving at the building entries is extended into the lobby areas to achieve a strong connection between the building's exterior and interior.
	6. Explore the opportunity for internal communal space to be co-located with the secondary lobby and communal open space. Review the location of the proposed outdoor seating so that it has a relationship with the internal space.	Due to maximising the number of affordable dwellings within the proposal, internal communal space has not be incorporated. The area of outdoor communal space has been maximised in size, and designed to provide a variety of uses. The bike storage enclosure and bike workshop associated with both entries has to potential to be used by the residents in a multi-functional way.
	The BBQ area is disconnected from the landscaped outdoor space and there is potential for noise and smoke to affect the apartments. 7. Relocate the BBQ facility so that it has a connection with the landscaped open space and does not impact the amenity of residents.	The landscape design has been revised following the SDRP meeting, and the BBQ area is now well separated from the adjacent proposed apartments. The location of the BBQ area is also aligned with the communal open space separating the two neighbouring buildings, which also minimises the impact on the amenity of dwellings within these.
	8. Provide a wider landscaped buffer between the access route from Soldiers Parade and the southern apartment at ground level to address acoustic and visual privacy issues.	The planter separating the southern apartment from the access route has been significantly increased, which combined with proposed palisade fencing and the adjacent windows of the dwellings being high level addresses the acoustic and privacy issues.
	9. Review the design of the built form at the south-eastern corner to alleviate the pinch-point in the communal open space at ground level.	The pinch-point at the south-eastern corner has been opened up with the re-design of the adjacent planter position and geometry. The proposed pathway width of 1.3m is sufficient to ensure accessibility between the communal open space zones is not compromised.

LDRP MEETING	SDRP MEETING	PROVIDED RESPONSE AND DOCUMENTATION
	10. Specify robust, low-maintenance and drought-tolerant plants. Nominate a high density of planting (i.e., double the typical number) to ensure a high survival rate.	Predominantly endemic plants have been selected due to the drought-tolerance, robust and low maintenance characteristics. They have also been selected with the objective to reinstate the Cumberland plain landscape, typical of this area.
	11. Nominate an appropriate zone for a kitchen garden to enable residents to grow their own herbs and vegetables.	Incorporation of a productive garden zone was considered however not pursued due to maintenance concerns and an understanding of management requirements of Community Housing Providers.
	12. Provide shadow diagrams to illustrate the extent of sun and shade in the communal outdoor spaces throughout the year.	Refer to shadow diagrams for the proposed scenario during mid-winter, mid-summer, mid-autumn and mid-spring provided in Appendix E Solar Access Analysis.
BUILT FORM AND ARCHITECTURE		
1. Take a small step back to consider other configurations including: a. furhter study adjusting the levels b. 3D massing against the neighbouring sites and scale of adjacent future buildings to get a feel for the space in between c. locating a truly single-loaded corridor along the eastern edge of the site. This may avoid the need to set-back the upper floors thereby unlocking more apartment yield d. rework the south-east facing apartment to open up to the north more e. aspire to 100% cross ventiation to help with future running costs. There may need to be a wind analysis to check if the indents work f. rework the apartment on the eastern side which has a water-proofing issue, not great outlook of car park roof, better to look toward the future Macdonald Road. g. If possible, balconies need to be at grade or high at Soldiers Parade for amenity becuase from a social perspective, private open spaces below the footpath are a negative		The revised design presented at SDRP meeting incorporated the provided response. a. Levels have been adjusted to create relatively level entries from Macdonald Road and Soldiers Parade b. Massing of approved and proposed neighbouring buildings have been included and refined as illustrated by the included axonometric diagrams c. The revised plate is predominately single loaded, while maximising the northern interface along Macdonald Road d. Apartment has been removed, no apartments are solely south facing or face into the neighbouring development to the East e. Revised scheme achieves 84% cross ventilation (only a single apartment per plate is not cross ventilated) f. Apartment has been removed. All communal open space is now located on ground g. Majority of ground level courtyards are 1m or less above adjacent street level, with the exception of the most southern apartment and most northern apartments which are the worst case scenarios, being respectively ~200mm below and ~1.3mm above the adjacent street level. h. Feasibility Option 1 was not further explored as the preferred option
5. Review the car parking requirements with the aim of reducing the number of car parks by approx. 3-5 cars or more. This is expected to benefit: a. Driveway access b. A more efficient basement with better alignment of the structure, repitition and stacking c. Avoid the basement extending beyond the building d. Include a car-share option e. Group the accessible disable parking f. Provide bicycle parking		The revised design presented at SDRP meeting incorporated the provided response. Car parking has been reduced with the relocation of the main lobby and adjacent bike workshop. This reduction in car parking is justified by the high accessibility of the site by public and active transport options, with the proposal to provide on-street share cars adjacent to the site (supported by engagement with Go-Get) and the provision of 58 bicycle spaces to promote residents to utilise bicycle transport. Refer to the Traffic Report and Green Travel Plan completed by SCT for further information.

LDRP MEETING	SDRP MEETING	PROVIDED RESPONSE AND DOCUMENTATION
6. Consider providing: a. Open air fire escape providing a more pleasant experience that will encourage use, with social and health plusses and avoiding stair pressurisation; and b. Open air breeze walkways, which can be excluded from the Gross Floor Area cap. A walkway right against an eastern edge would allow living areas to the west and sleeping against walkway, noting noise issues to be managed. Open walkways will help reduce cost and increase cross-ventilation		a. Advice provided by Axis Certification is that an open fire stair does not meet the DTS requirements for buildings which have an effective height over 25m. Additionally, with the consolidation of the core to improve plate efficiency, the resulting position of the air conditioning plant on each level would eliminate the possibility of having an open stair. b. An open breezeway plan was explored however was not pursued further due to concerns over acoustic amenity of the bedrooms which would be required to be located along the corridor. This concern was increased as the proposed occupants will likely be shift workers
	It is noted that there are some reductions in ADG building separation distances in selected locations along the eastern boundary, however the staggering of the built form reduces the impact of this.	-
	13. Incorporate glazing in the eastern facade to increase natural light and improve cross-ventilation to the southern apartment. Review the apartment layout, and screen or position the glazing to optimise natural light and ventilation for the apartment and ensure visual privacy for the neighbouring development.	High level windows to the bathroom and multifunction storage/study area have been provided. These windows will increase the natural daylight and ventilation of the end apartment, as well as break up the length of the wall. As these windows are high level, are servicing to secondary/non-habitable spaces as well as being located on a wall with a skewed orientation to the boundary, they will impact the visual privacy of the adjacent neighbouring dwellings. Refer to Section 03, page 25-26 for diagrams illustrating the proposed setback and separation configurations.
	14. Address the conflicting requirements for natural ventilation and noise mitigation for the apartments facing busy Soldiers Parade. Consider how acoustic treatment to the balcony walls and/or soffits can be used to mitigate traffic noise.	To mitigate the potential future acoustic impact of Soldiers Parade on the adjacent apartments within the proposed development, a series of passive design measures have been incorporated into the design to ensure that these apartments can gain natural ventilation as per NCC requirements while simultaneously fulfilling NCC acoustic requirements. Refer to Section 06, Pages 56 & 57 of the design report and the acoustic report prepared by Renzo Tonin for further information on the proposed acoustic measures.
	15. Provide façade drawings and sun studies illustrating the solar control approach for the western facade.	Refer to page 56 of the report
	The proposed floor-to-floor height of 3.1m may be insufficient to meet the requirements of the NCC. 16. As the project is not limited by the maximum building height control, increase the floor-to-floor height and ensure it is sufficient to meet the minimum requirements of the NCC and avoid bulkheads in habitable rooms.	The typical floor to floor height has been increased to 3.15m (3.3m below upper level roof areas) which from project experience will allow sufficient tolerance to ensure required NCC and ADG ceiling heights are achieved and bulkheads in habitable rooms are minimised.
	The apartments that extend over the driveway and main entry require careful detailing. 17. Clarify the treatment of the underside of any internal spaces where the slab is exposed to the elements. Provide details demonstrating how noise and thermal loss will be mitigated. Illustrate the proposed soffit finishes and edge details.	The intended treatment of the underside of the slab overhanging the driveway will be an FC soffit lining, matching the colour of the adjacent frame of the building's northern facade. The intended treatment of the underside of the slab above the main entry will be for the metal finish of the awing to be ended as a soffit. The detailing of the soffit treatments will be developed during detailed design, including careful coordination of any required services and lighting.

LDRP MEETING	SDRP MEETING	PROVIDED RESPONSE AND DOCUMENTATION
	21. Include a series of cross-sections to illustrate level changes at the boundaries and the relationship of the proposed scheme to the approved future development to the east, including the treatment of the carpark façade and details of the proposed ventilation method.	Interface sections around the site are included in Section 04 Ground Plane and Landscape, and on architectural drawing DA309. The extent of car park exposed along Soldiers Parade and Macdonald Road will be clad with brick and integrated with low height planters on the slab above. Trailing plants from these planters, and ground covers and grasses in the adjacent deep soil rain-garden setback are intended to soften and screen the brick walls. The treatment of the car park facade along the eastern boundary is limited due to fire separation requirements (FRL 120/120/120). Vents to allow for the natural ventilation or fresh air provision for the service rooms and car park have been incorporated, however require a performance solution which is approved by Holmes Group due to the wall FRL. The deep soil landscape zone running along this wall will incorporate grasses and ground covers (trees cannot be incorporated due to bushfire restrictions) to screen the wall as and provide a desirable outlook for the adjacent neighbouring lower level dwellings. The car park exhaust will require mechanical ventilation. Passive ventilation of the car park was explore however not pursued due to the detrimental impacts and constraints the required clear space would have on both the communal open space and the Macdonald Road interface.
ENVIRONMENTAL SUSTAINABILITY & ACCESSIBILITY		
8. Catch up with the Landcom Sustainability Team to ensure that the Green Star certification is embedded in the design. This was not discussed at the meeting or in the presentation given but will be important		The project team including Hip v. Hype and Eco Engineering Group have collaborated with Landcom’s Sustainability team to ensure the proposed project aligns with Landcom’s objectives. The project is targeting a 4-Star Green Star Buildings v1 certification, demonstrating Australian Excellence. The 4-Star Green Star rating effectively integrates sustainability into the project to deliver occupant-focused spaces, reductions in carbon emissions associated with electricity, transportation and waste, improved resource efficiency, minimised impact and enhanced natural systems, and healthy indoor environments consistent with climate resilient principles.
9. Consider with a level entry and lifts there may be opportunity to exceed the current undertaking of 20% Silver Level Livable Design, which would be welcomed		The revised design presented at SDRP meeting incorporated the provided response. Project brief has been amended to target 100% silver level liable housing. This will be addressed during detail planning of apartments.
	A thoughtful approach to sustainability was presented. Landcom’s ability to own and operate the building over the long term provides a unique opportunity for a highly sustainable, low-carbon building that minimises energy use. As the design develops, demonstrate an ambitious sustainability strategy, that is embedded in the architecture and encompasses the operational aspects of the building. 18. Continue to develop and demonstrate the sustainability strategy to ensure that it is carried through to completion.	The project aims to achieve a high sustainable outcome while meeting and exceeding Council Planning, NCC building code and the Client operational requirements. Further, the Green Star Buildings 4-Star certification ensures that sustainability is embedded into the design, construction, and operation of the development. This includes submitting reviews to the GBCA during design and after construction completion to ensure that all the Green Star initiatives have been successfully implemented.
	19. Provide façade drawings illustrating how the proposed design for each façade responds to its solar orientation. Support the proposed approach with solar analysis studies.	Refer to page 56 of the report and Appendix E - Solar Analysis.

LDRP MEETING	SDRP MEETING	PROVIDED RESPONSE AND DOCUMENTATION
	20. Demonstrate how the project will contribute to NSW's Net Zero emissions goal by 2050. Refer to 'NSW, DPIE, Net Zero Plan, Stage 1: 2020-2030' for further information.	In response to the NSW net-zero emissions by 2050 target as set in the NSW Climate Change Policy Framework, the Net Zero Plan Stage 1: 2020–2030 sets out how the NSW Government will deliver on these objectives over the next decade. Targets for the development include: – Reduce emissions by 50% reduction by 2030 and 70% by 2035, compared to 2005 levels, and achieve net zero emissions by 2050Australia's Long-Term Emissions Reduction Plan – Australia's Long Term Emissions Reduction Plan presents the whole-of-economy plan to achieve Net Zero by 2050. The project will achieve a 4-Star Green Buildings rating, which includes preparation of a Zero Carbon Action Plan for the development. The development will be 100% electric and fossil fuel free from Day 1, with the only carbon emissions occurring from mandatory refrigerants used in the building services. The project will offset 100% of these refrigerants prior to building handover, using high-quality nature-based carbon offset credits. Operationally, high-performance glazing, facade, and services will require less energy to run the apartments, reducing the operational energy requirements for the lifetime of the building. The development will procure 100% renewable energy from on-site and off-site renewables during its operational life. Further, the project will achieve a 10% upfront carbon reduction against a reference building, through good design and material selection.

LIVERPOOL CITY COUNCIL PRE SSDA COMMENTS

The following table is an extract of the overall table included in the accompanying Engagement Outcomes Report, which provides a response to comments recieved from Liverpool City Council (LCC). The comments included in the below table are those most related to the proposal's design.

LCC COMMENTS	PROVIDED RESPONSE AND DOCUMENTATION
1. URBAN DESIGN	
1. Context	
1.1. The site is zoned mixed use – residential/commercial however it appears there is no commercial proposed. CDPD encourages the exploration of incorporating commercial/retail particularly at ground floor. The apartments at ground floor will experience very poor amenity due to the interface with Soldiers’ Parade, and retail could provide a more suitable use of this space.	1.1. Due to location, nature and orientation of the site it remains unfeasible to incorporate retail or commercial spaces without negatively impacting the commercial viability of the project resulting in a reduction of residential yield already hindered by a capped GFA. Local amenity is provided via the Ed Square development which is accessible via foot, car or cycle. Additionally, the significant level changes which occurs along the site's boundaries would create a further barrier for incorporating viable non-residential uses of the ground level.
2. Built Form + Scale	Noted
2.1. CDPD appreciates and commends the massing studies and diagrams provided, which comprehensively explain the rationale behind the design and how the envelopes were established with consideration of the surrounding context.	
2.2. CDPD recognises the challenges of the constrained site in size and shape, and in order to achieve an appropriate apartment design for the site while reducing impact to neighbouring buildings, a staggered approach has been adopted, resulting in several ADG building separation non-compliances. CDPD is supportive of the approach for this particular site and context.	
2.3. The SDRP supported the development’s approach to ADG setbacks and this has been considered in CDPD’s assessment.	
3. Density	Noted
As described above.	
4. Sustainability	
4.1. Liverpool City Council are promoting active transport in the Liverpool LGA and it is important that adequate bicycle parking is provided, which will contribute to reducing car reliance particularly in Edmondson Park, particularly for this development with such limited car parking proposed. CDPD seeks clarity on how bicycle parking numbers have been calculated and encourages provisions above the minimum requirements.	4.1. Refer to Traffic Impact Assessment - Section 3.3.2 Bicycle parking provisions The development proposal includes a reduction of car parking spaces, the introduction of car share spaces, cycle storage for each apartment and a future provision for cycle repair / workshop Bicycle parking spaces are also provided as lockers and racks, totalling 47 spaces. Vertical racks are provided on the ground and upper ground floor in a bike shed and outside adjacent to the southern access. The DCP states that developments typically require 1 space per 2 units and visitor spaces at 1 per 10 units, totalling 35 spaces. With 47 spaces, the development provides more than sufficient facilities to support and encourage sustainable modes of travel and reduce the future residents’ reliance on private car use.

LCC COMMENTS

PROVIDED RESPONSE AND DOCUMENTATION

5. Landscape 5.1. CDPD is supportive of the project’s aims to achieve 40% canopy. 5.2. CDPD requests public domain interface sections illustrating the relationship between the ground and level 1 apartments, the interface with the public domain at the site boundary, footpaths, road reserve and kerb. There are crash barriers, retaining walls and level changes along Soldier’s Parade that should be illustrated on future drawings. 5.3. CDPD recommends tree and plant species selected are native and endemic to the area. CDPD requests clarity on where the species selection is being informed by – the Connecting with Country consultation, MOD 5 and/or the Liverpool Growth Centre Precincts DCP recommended species. Liverpool City Council recently released the Draft Tree Management Strategy and Technical Guidelines that should be referred to for further information and tree species and planting details. Draft Tree Management Framework Liverpool Listens 5.4. CDPD notes street trees are shown on the drawings, and seeks confirmation that the Street Trees will be delivered, as part of this project. Further detail such as spacing, pot size, planting details should be provided, and how this relates to the broader street tree approach of the Edmondson Park Town Centre and MOD 5.	5.1. Due to the bushfire requirements, we have had to reduce the canopy cover to 15%. 5.2. Public domain sections have been provided. 5.3. Endemic species have been nominated. This was informed in consultation with the Connecting with Country consultants, and research into the Cumberland Plain species and the council recommended species. 5.4. Street trees have been documented and will be delivered as part of the project. In consultation with WSP it was recommended a native species be used instead of the Fraxinus originally approved.
6. Safety 6.1. Soldiers Parade is a high traffic road, and the Communal Space currently has play area proposed in the least desirable and most vulnerable place, in close proximity to the road create safety issues, privacy and acoustic concerns for children. CDPD encourages play areas to be moved to a more desirable location, and/or the future submission to demonstrate how safety and amenity concerns are being addressed in the design.	6.1. The play provision has been thoughtfully located away from the main traffic routes and included within the design are protective measures to ensure the safety of all residents. Due to the nature and typology of the site it is not possible to relocate this to another location without significantly impacting the built form.
7. Amenity 7.1. CDPD has concerns for the future adjacent properties where there are setback encroachments, as these will now be overlooking significant blank, ‘back of house’ facades. The applicant is to demonstrate how their amenity is being considered. In the future submission highly resolved facades should be provided noting this is a building highly visible from all sides. 7.2. CDPD typically discourages AC Condenser Units on balconies, as they occupy balcony space and radiate heat, impacting the amenity and usability of the balconies. In addition they create poor visual impact on the façade. CDPD is supportive of the AC Condensor units being located in a consolidated space not on private balconies, and requests the consolidated approach be retained as the design developments. This does raise concerns for the visual impact to the adjoining neighbours, particularly as these are within the ADG setbacks. The future submission should demonstrate how visual and acoustic impact is being addressed. 7.3. Further to the above, CDPD has concerns for the quality and useability of the Communal Open Space at ground, with irregular proportions, a pinch point and the interface with car park, blank walls and service plant. CDPD requests larger scale landscape drawings and interface sections or elevations are provided in the future submission to illustrate design resolution of the COS. 7.4. Soldier’s Parade is an increasingly high traffic road, and the apartments facing Soldiers Parade and the corner will experience poor amenity particularly at the lower levels. The future submission is to demonstrate measures that have been incorporated to improve amenity, acoustic and visual privacy for residents, as part of the façade design, and with strategies to ensure natural ventilation is not compromised.	7.1. The aesthetic appearance of all facades has been considered. The eastern facades have been developed to balance minimising presenting as a ‘back of house’ façade which the neighbouring development will look out on, with maintaining visual and acoustic privacy between developments. Refer to DA 300-303 Building elevations, and Section 5 - Architectural character of the Design Report. 7.2. AC Condensers are not proposed to be located on the balconies of units. The proposal incorporates a combined AC condenser plant on each level that is surrounded by a screen which integrates with the aesthetic language of the proposal, to maintain ventilation whilst reducing the visual and acoustic impacts. Refer to the Acoustic Report prepared by Renzo Tonin regarding the acoustic implications of the proposed condenser plant. 7.3. The size of the Communal Spaces has been maximised with the positioning and efficient floor plate size of the proposal; however, the geometry and levels of the subject site constrain the geometry of the communal space. Useability of the communal spaces has been maximised through making use of the larger contiguous southern area, combined with establishing a sequence of more intimate communal space zones along the eastern side of the building connected by paths. Refer to provided Landscape Documentation Package, Section 04 - Ground Plane and Landscape Design of the Design Report, and Architectural Drawing DA308 for interface sections. 7.4. The acoustic impacts of the potential future traffic levels along Soldiers Parade have been considered in the design of the proposal. A range of passive design features have been incorporated, including solid balustrades and fences, protected low-opening windows and acoustic linings to the courtyards/balconies. Refer to the Acoustic Report prepared by Renzo Tonin, and page 56 of the Design Report.

LCC COMMENTS

PROVIDED RESPONSE AND DOCUMENTATION

8. Housing Diversity + Social Inclusion

8.1. Edmondson Park is experiencing significant transformation to high density particularly around this development. CDPD highlights the importance of each building's identity and arrival, for ease of wayfinding and a sense of home in a high density environment. CDPD encourages this be considered as part of the design development.

8.1. The opportunity for the proposal to act as a gateway to the Edmondson Park Station Precinct and support the vision for the precinct to have a variety of architectural characters has been considered in the proposal's design. The design provides the proposal a clear identity which mediates between the inherent character of Country, and the future high density character of the precinct. The arrival experience has been carefully considered holistically through the architectural and landscape design to provide clear wayfinding and support the unique identity of the proposal. Refer to Section 04 - Ground Plane and Landscape, and Section 05 - Architectural Character of the Design Report.

9. Aesthetics

9.1. Council's Public Art Officer should be consulted as part of the Public Art strategy.

9.2. The Liverpool LGA and specifically Edmondson Park is experiencing significant increased density and as a result of larger developments streetscapes are becoming dominated by large scale services and plant. When these are not well-considered and early in the design process they create very poor impact to the street. CDPD recommends the substation, hydrant booster and other plant is integrated into the design early on, and strategies to minimise impact such as a non-obtrusive location, concealed within the building and high-quality screening.

9.3. CDPD is supportive of the well-considered façade strategy, including incorporation of robust materials and the brick podium. Façade details of 1:20 should be provided to ensure the design intent is captured and retained through to construction.

9.1. A Public Art Strategy has been developed for the proposal with guidance from WSP, which is provided on Page 40 - Public Art Strategy in the Design Report.

9.2. Services required for the proposal, including substation, booster assembly and meters, has been considered in the proposals design and site planning in order to integrate them and minimise their visual dominance on the streetscape, whilst still complying with associated required access and location requirements. Refer to Architectural Drawings DA300-303 Elevations and DA304-305 Street Elevations.

9.3. Landcom is committed to achieving a high quality for the site, with the simplicity and cost effectiveness of the proposed facade supporting the ability to achieve this. Facade details will be developed in later design stages, and in collaboration with the Contractor.

2. COMMUNITY PLANNING

Safety

The design principles should include the CPTED and scope of adequate active and passive surveillance to ensure safety and convenience in the entire neighbourhood. It is particularly significant for the communal spaces and access route to the public transport along the RE1 zoned land.

Refer to CPTED Report Prepared by Savills

3. DEVELOPMENT ASSESSMENT

The Applicant should consult with the neighbouring landowner (Bathla Group) to ensure appropriate setbacks and building separation as well as the design of the public domain between the buildings.

The connection should align with the Bathla site. Both parties should ensure this is the case.

The at-grade communal areas are below the road level. The treatment of these areas should be thought about with the inclusion of large vegetation and screening plants.

Attempts have been made to consult and co-ordinate the design of the proposal with the neighbouring landowner (Bathla Group), however responses have been limited. Refer to Engagement Report. Given the lack of further information, the proposal's design has been developed based on the latest approval Development Application for the neighbouring site

The treatment of the façade facing the Bathla site should include a mix of public art. Landscaping and material treatments to reduce any blank wall effect.

The treatment of the eastern facade facing the Bathla site has been developed to reduce any blank wall effects, whilst also maintaining visual and acoustic privacy. As this facade has limited to no visibility from the public domain and due to the project's cost sensitivity, incorporating public art in this location was not seen as appropriate. Instead, the facade incorporates a rhythmic patter of facade materials. Refer to Architectural Drawing DA302

It is recommended to consult with the Council's Public Art Officer, Dr Clare Cochran be contacted to assist with Public Art.

A Public Art Strategy has been developed for the proposal with guidance from WSP, which is provided on Page 40 - Public Art Strategy in the Design Report.

5. LANDSCAPING

Generally supportive of concept plans.

Final landscape plans to detail species with edemic species highly regarded

Noted.

Refer to Landscape Report plant selections - Cumberland Plain Species

LCC COMMENTS

PROVIDED RESPONSE AND DOCUMENTATION

9. PUBLIC ART	
The Government Architects, Connecting with Country Framework, identifies that Project teams need to ensure they are collaborating with people from the Aboriginal community with recognised links to the Country where they are working. Council recommends that in addition, and to facilitate identified design outcomes, collaborations are undertaken between Local First Nations artists and the various designs teams to develop public art. This will ensure that the Connecting with Country focus is integrated throughout the built and landscaped elements and ensures that the public art narrates endemic stories to connect the site to its past, current and future residents and greater communities. This local collaboration through the public art will support successful delivery of; - Connecting to country - Community involvement - Cost effective design - Low maintenance - Connectivity - Neighbourhood making (i.e. wayfinding, wellbeing, civic pride) - Communal spaces (i.e. intergenerational engagement) - Address items identified in the CPTED (ie increased passive security) - Promote activation of site - Fostering connection of community Council notes (SDRP) Feedback Summary includes a Proposal for public art on blank wall above main entry seating space, however notes that the above points can be met through a more rigorous investigation of integrated public art throughout the shared outdoor spaces and to link these. By limiting the public art to this single location, the public art will not support the principles of Connecting with Country. It is critical to many of the identified project principles, sustainability initiatives, Indigenous Design Statement, and Country Context that local collaborations would support the delivery of endemic narratives that would anchor the site to it's past, present, and future site and residents. Council recommends that collaborations are undertaken with Local Aboriginal artist/s as soon as possible and that they assist in developing a draft public art plan.	Providing a Connection to and Design for Country has holistically been considered in the proposal, incorporating the landscape and architectural design and the ESD strategy - refer to Section 4, Section 5 and Section 6 of the Design Report, and Connecting with Country document prepared by WSP. Additionally, a Public Art Strategy has been developed for the proposal, which is provided on Page 40 - Public Art Strategy in the Design Report. Part of the consultation process led by WSP with local First Nation Elders, a series of opportunities has been identified to integrate public art and cultural references into the development. These elements will enrich the connection to Country and celebrate the site's cultural significance. Opportunities have been highlighted where public art can seamlessly merge with the building fabric, enhancing the development's cultural depth. Subtle and meaningful incorporations, supported by appropriate signage, will help residents and visitors understand and appreciate these works

APPENDIX C

DESIGN VERIFICATION STATEMENT & HOUSING SEPP - CHAPTER 4 ASSESSMENT

DESIGN VERIFICATION STATEMENT

DKO

DKO ARCHITECTURE (NSW) PTY LTD

ABN 81956 706 590

42 Davies Street

Surry Hills NSW 2010 AUS

Telephone +612 8346 4500

info@dko.com.au

SUBJECT

Architect Statement - DA

ATTENTION

Sherron Agrawaal

Assistant Manager, Affordable Housing

Landcom

Level 14, 60 Station Street

Parramatta NSW, 2150

DATE

19.12.2024

Via email: sagrawaal@landcom.nsw.gov.au

Dear Sherron,

Re: Architectural Design Verification Statement

Lot 303 Croatia Avenue, Edmondson Park NSW, 2174

Pursuant to Clause 29 of the *Environmental Planning and Assessment Regulation 2021*;

I hereby declare that I am a qualified designer, which means a person registered as an architect in accordance with the *Architects Act 2003*. I directed the design of the residential development stated above and to the best of my information, knowledge and belief, the architectural documentation prepared for this Development Application achieves the aims of Housing SEPP 2021 *Chapter 4 Design of residential apartment development* and the objectives in Parts 3 and 4 of the *Apartment Design Guide*. Further detail on how the objectives are addressed is provided in the Design Report accompanying this Development Application.

In accordance with Clause 29 of the *Environmental Planning and Assessment Regulation 2021*, as the Development Application is accompanied by a BASIX Certificate for the building, this certificate does not address the design quality principles to the extent to which they aim—

(a) to reduce consumption of mains-supplied potable water or greenhouse gas emissions in the use of—

(i) the building, or

(ii) the land on which the building is located, or

(b) to improve the thermal performance of the building, or

(c) to quantify and report on the embodied emissions attributable to the development.

Yours sincerely,

DKO Architecture (NSW) Pty Ltd.

per:



Sonny Oh

Registration No 10026 (NSW ARB)

Senior Associate

DKO.COM.AU

1 / 1

 dko.com.au

REV B - SSD Application (SSD-77211717) - Design Report - Lot 303 Croatia Avenue, Edmondson Park

AP-16

Housing SEPP 2021 - Chapter 4 - Design Principles

HOUSING SEPP 2021 - CHAPTER 4: DESIGN OF RESIDENTIAL APARTMENT DEVELOPMENT

Superceeding the former SEPP 65 - Design Quality of Residential Apartment Development, the purpose of Chapter 4 of the Housing SEPP 2021 is to improve the design of residential development to ensure it contribution to a number of sustainability, social, contextual, housing provision and community factors.

DESIGN PRINCIPLES

Clause 147 identifies the requirement for development to be evaluated (and thus show demonstration of) the design principles for residential apartment development set out in Schedule 9. The following text identifies these principles as well as how the proposed development demonstrates them.

APARTMENT DESIGN GUIDE (ADG)

As identified in Clause 147, for development consent to be grated for a residential apartment building, consideration is required of the ADG. Clause 149 further states that the requirements, standards and controls set out within the ADG prevail over any within a development control plan.

The table on page AP-22 to page AP-26 provides a summary comparison of the proposed development against key ADG design objectives and criteria.

DESIGN PRINCIPLE 1: CONTEXT AND NEIGHBOURHOOD CHARACTER	RESPONSE
(1) Good design responds and contributes to its context, which is the key natural and built features of an area, their relationship and the character they create when combined and also includes social, economic, health and environmental conditions.	The proposal has been highly informed by both the existing and past contextual character, as well as the future contextual character as a high density, transit oriented town centre. The proposed built form presents an appropriate scale to the future context, responding to the building heights of surrounding developments and the site's position as a gateway to the emerging precinct. The architecture and landscape re-establish the colours, forms, textures and ecology of the Cumberland Plain Shale Woodlands. Together with the vertical and horizontal articulation of the architecture reflecting the lines of Father Sky and Mother Earth, the proposal seeks to establish a strong connection to Country.
(2) Responding to context involves identifying the desirable elements of an area's existing or future character.	
(3) Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood.	
(4) Consideration of local context is important for all sites, including sites in the following areas: a) established areas, b) areas undergoing change, c) areas identified for change	

DESIGN PRINCIPLE 2: BUILT FORM AND SCALE	RESPONSE
(1) Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.	As evidenced through the 3D illustrations (page 22 - 24), the proposal's massing has been shaped by responding to the site's complex levels and shape, the neighbouring development and emerging streetscapes. The proposed massing has elegant proportions which minimise the building's bulk and scale. As illustrated throughout the report, the proposal will provide a positive contribution to the public domain and streetscapes, with a design rooted in a high quality landscape. This landscape reflects the vision for the context being deeply connected to and inspired by nature, as well as providing climatic and visual amenity internally and externally.
(2) Good design also achieves an appropriate built form for a site and the building's purpose in terms of the following. a) building alignment and proportions, b) building type, c) building articulation, d) the manipulation of building elements	
(3) Appropriate built form: a) defines the public domain, and b) contributes to the character of streetscapes and parks, including their views and vistas, and c) provides internal amenity and outlook	



DESIGN PRINCIPLE 3: DENSITY	RESPONSE
(1) Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context. (2) Appropriate densities are consistent with the area's existing or projected population. (3) Appropriate densities are sustained by the following: a) existing or proposed infrastructure, b) public transport, c) access to jobs, d) community facilities, e) the environment	The proposal seeks to be an exemplar of transit orientated development, with a location highly suited to support the proposed density. It has excellent access to public transport, being 400m from the Edmondson Park Train Station which provides connections to the Metropolitan area; and in walking distance to bus stops with routes connecting to other localities in Western Sydney. The proposal will also have direct access to a shared cycle path running along Soldiers Parade. Utilisation of public and active transport by the residents will be encouraged by the limited car parking spaces and extensive bicycle parking spaces incorporated into the proposal. Additionally, Ed Park Shopping Centre and town centre adjacent to the train station will offer residents access to community and retail services. The site sits directly adjacent to the Maxwell's Creek Public Recreation corridor, which also will provide connection to Edmondson Region Park. Refer to Section 02 for contextual analysis including mapping of the site's position next to amenity and transportation.



DESIGN PRINCIPLE 4: SUSTAINABILITY	RESPONSE
(1) Good design combines positive environmental, social and economic outcomes. (2) Good sustainable design includes: a) use of natural cross ventilation and sunlight for the amenity and liveability of residents, and b) passive thermal design for ventilation, heating and cooling, which reduces reliance on technology and operation costs. (3) Good sustainable design also includes the following: a) recycling and reuse of materials and waste, b) use of sustainable materials, c) deep soil zones for groundwater recharge and vegetation.	Underpinned by Landcom's commitment to environmental and social sustainability, and the project's brief to deliver a development entirely comprising affordable housing, the design of the project has been focused on delivering a positive environmental, social and economic outcome. A comprehensive report on the proposal's ESD initiatives and targets has been completed by Hip v. Hype. The proposal delivers high amenity and livable dwellings, exceeding compliance with solar access and cross ventilation. The design incorporates passive measures to ensure the acoustic and thermal comfort of residents, with the later to also support minimised operational carbon and running costs. Refer to Section 06 for further detail on the ESD initiatives and Residential Amenity Interlinked with the operational requirements of affordable rental housing, the proposal materiality has been selected based on minimal maintenance and reduced embodied carbon. Refer to Section 05 for further detail of the proposed materiality. The proposal incorporates the ability for the separation of waste into 3 waste streams, encouraging residents to appropriately dispose of or recycle their waste. Deep soil zones are incorporated along the majority of the site's perimeter, allowing for extensive soft landscaping. The zones along the street also incorporate rain-gardens as a WSUD measure to facilitate the recharge of ground water, and improve the quality of run-off water. Refer to Section 04 for further detail on the Ground Plane and Landscape design.



DESIGN PRINCIPLE 5: LANDSCAPE	RESPONSE
(1) Good design recognises that landscape and buildings operate together as an integrated and sustainable system, resulting in development with good amenity. (2) A positive image and contextual fit of well designed development is achieved by contributing to the landscape character of the streetscape and neighbourhood. (3) Good landscape design enhances the development’s environmental performance by retaining positive natural features that contribute to the following: a) the local context, b) co-ordinating water and soil management, c) solar access, d) micro-climate, e) tree canopy, f) habitat values, g) preserving green networks. (4) Good landscape design optimises the following: a) usability, b) privacy and opportunities for social interaction, c) equitable access, d) respect for neighbours’ amenity. (5) Good landscape design provides for practical establishment and long term management.	Landscape has been a vital consideration from the project’s design from the outset. It is a fundamental component of the proposal’s strategies to Connect to and care for Country, support the established vision of the Edmondson Park Station Precinct, as well as provide amenity to the public domain, communal and private spaces. The landscape design has been directed by the vision to re-instate the Cumberland Plane character back onto the site, through the selection of endemic species. Additionally, the colour and textures of the landscape materiality are derived from the palette of Country. This vision will support Edmondson Park’s unique character. The landscape design has a variety of features to enhance the environmental performance of the site, including Water Sensitive Urban Design (rain gardens), extensive deep soil areas, maximised canopy coverage (within restrictions due to bushfire) and a variety of under-story and ground cover species to soften the built form and maximise the site’s biodiversity. The design of the communal space provides a range of zones with different uses, which residents can easily and equally access and uses everyday, and on the weekends. Refer to Section 04 Ground Plane and Landscape, and the Landscape report and drawings prepared by Inview Design for further information on the landscape vision, design and planting and material palettes.

DESIGN PRINCIPLE 6: AMENITY	RESPONSE
(1) Good design positively influences internal and external amenity for residents and neighbours. (2) Good amenity contributes to positive living environments and resident well-being. (3) Good amenity combines the following: a) appropriate room dimensions and shapes, b) access to sunlight, c) natural ventilation, d) outlook, e) visual and acoustic privacy, f) storage, g) indoor and outdoor space, h) efficient layouts and service areas, i) ease of access for all age groups and degrees of mobility.	Creating high amenity apartments has been a fundamental focus of the proposal. Rigorous testing of various plate configurations and massing articulation has resulted in a building which maximises regular-shaped, dual aspect apartments which have greater access to sunlight, natural ventilation with highly functional and efficient plans. Within these dwellings, internal layouts have been worked through to ensure that usable space is maximised and can have flexible use. Provision of generous storage within the apartments adds further functionality. Refer to Section 06 Ecologically Sustainable Development (ESD) & Residential Amenity for further information. The amenity of internal spaces is complimented by high amenity private and communal spaces, which have been designed with consideration of environmental comfort, usability and visual and acoustic privacy. Through the development of the propose massing and the landscape design, the amenity of the public domain and neighbouring has been carefully considered, with the proposal seeking to maximise improvements of amenity and minimising any impacts to amenity. This includes urban heat island effect/passive shading, outlook and visual and acoustic privacy. Refer to Sections 03, 04 and 05 of the report for further information.



DESIGN PRINCIPLE 7: SAFETY

- (1) Good design optimises safety and security within the development and the public domain.
- (2) Good design provides for quality public and private spaces that are clearly defined and fit for the intended purpose.
- (3) Opportunities to maximise passive surveillance of public and communal areas promote safety.
- (4) A positive relationship between public and private spaces is achieved through clearly defined secure access points and well lit and visible areas that are easily maintained and appropriate to the location and purpose.

RESPONSE

Throughout the proposal’s design there has been consideration of mental and physical safety and security. The main entry has been designed to maximise clear lines of sight and passive surveillance from the street, with generous, direct access paths and the adjacent planters which frame the access kept low to remove hiding places. A high number of windows and balconies are located adjacent to the main entry and Macdonald Road (and thus also the Maxwell’s creek corridor) which will aid to maximise passive surveillance of these spaces.

The secondary entry is also highly visible, with the secure access point close to the boundary, with the surrounding fence having a high percentage of transparent area to enable viability through. An arbor is incorporate to further define this entry. The communal open space will receive passive surveillance from apartments both within the proposal and the adjacent neighbouring buildings. The bike storage enclosure is positioned away from the street to

Both the main and secondary entry will be well lit, and the secondary access path through the communal open space will incorporate sensor lighting and surveillance cameras to further increase security and promote the residents feeling safe.

Refer to Section 04 of this design report and the CPTED report prepared by Savills for further information.



DESIGN PRINCIPLE 8: HOUSING DIVERSITY AND SOCIAL INTERACTION

- (1) Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.
- (2) Well designed residential apartment development responds to social context by providing housing and facilities to suit the existing and future social mix.
- (3) Good design involves practical and flexible features, including:
 - a) different types of communal spaces for a broad range of people, and
 - b) opportunities for social interaction among residents.

RESPONSE

The proposal contains a mix of apartment sizes and types, and maximises accessibility with all apartments meeting Silver Level Livable Housing standards.

Importantly, all dwellings within the proposal will be Affordable housing for key workers, delivering critical social infrastructure to the area, in a highly accessible location.

The proposal seeks to create engagement internally between residents with the generous communal spaces, as well as engagement between residents and the external community through the design of the street interfaces which are intended to provide amenity and activation to the street and create spaces for information interactions.

DESIGN PRINCIPLE 9: AESTHETICS	RESPONSE
(1) Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure.	As illustrated and discussed in Section 03 and 05 of this design report, the built form has been carefully designed to achieve a high quality outcome for the site, despite challenges related to the site’s geometry and economic considerations. The proposal supports the vision for the future character Edmondson Park precinct being inspired by nature and having a diversity of architectural form and expression. The elegant proportions of the proposal are interlinked with providing high amenity internal spaces, as well as expressing the simplified and efficient structure of the building. The material palette of the proposal seeks to reflect and connect to the inherent natural palette of the site and Country, with the variety of materials kept minimal in order to give the design a refined and subtle appearance, allowing the landscape to be the focal point.
(2) Good design uses a variety of materials, colours and textures.	
(3) The visual appearance of well designed residential apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.	

APARTMENT DESIGN GUIDE (ADG) KEY DESIGN CRITERIA

OVERALL COMPLIANCE SUMMARY

The following table summarises how the proposal addresses the key design criteria set out in the Apartment Design Guide including justification where criteria is not met. The table provided on pages AP-27 & 28 summarises the provisions for each dwelling against noted criteria.

ADG OBJECTIVE		DESIGN CRITERIA	COMPLIANCE		
			YES	NO	COMMENT/COMMENT
3D	COMMUNAL AND PUBLIC OPEN SPACE				
3D-1	An adequate area of communal open space is provided to enhance residential	1. Communal open space has a minimum area equal to 25% of the site	✓		511m² required, 633m² (30.9% of site area) proposed . Refer to DA403 Landscape diagrams.
		2. Developments achieve a minimum of 50% direct sunlight to the principle part of the communal open space for a minimum of 2 hours between 9am and 3pm on 21 June (mid winter)	✓		60% of the Principal parts of the Upper level communal open space receives 2 hours solar access: – 20% receives 2 hours solar access between 9am-10am. – 40% receives 2 hours solar access between 1pm-3pm. 70% of the Lower Ground Level receives 2hrs or more solar access. Refer to DA403 Landscape diagrams and DA405 Shadow diagrams.
3E	DEEP SOIL ZONES				
3E-1	Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality	1. Deep soil zones are to meet the following minimum requirements:			✓ 143m² required with a minimum dimension of 6m - the proposal provides 215m² (10.5% of site area). Additionally, Housing SEPP 2021 non-discretionary controls stipulate a deep soil requirement of 306m² (15% of site area) with a minimum dimension of 3m - the proposal provides 348m² (17% of site area). The proposal also provides additional 304m² of deep soil zones that have a dimension of less than 3m Refer to DA403 for diagrams illustrating area.
		Site Area	Minimum Dimension	Deep Soil zone (% of site area)	
		< 650m²	-	7%	
		650m² - 1,500m²	3m		
		1,500m² >	6m		
		Greater than 1,500m² with significant existing tree cover	6m		

ADG OBJECTIVE		DESIGN CRITERIA	COMPLIANCE														
			YES	NO	COMMENT/COMMENT												
3F	VISUAL PRIVACY																
3F-1	Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy	2. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows: <table><tr><th>Building Height</th><th>Habitable Rooms & Balconies</th><th>Non-Habitable Rooms & Balconies</th></tr><tr><td>up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr><tr><td>up to 25m (5-8 storeys)</td><td>9m</td><td>4.5m</td></tr><tr><td>over 25m (9+ storeys)</td><td>12m</td><td>6m</td></tr></table> Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room (see figure 3F.2) Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties	Building Height	Habitable Rooms & Balconies	Non-Habitable Rooms & Balconies	up to 12m (4 storeys)	6m	3m	up to 25m (5-8 storeys)	9m	4.5m	over 25m (9+ storeys)	12m	6m	✓	X	The proposal provides a staggered setback to the eastern boundary, which results in some portions of the building having separation distances to the boundary less than ADG design criteria, and other portions of the building with separation distances more than the design criteria. This results in the following range of setbacks: - Upper Ground - Level 03: 4.1m - 12.3m - Level 04 - Level 07: 4.1m - 12.3m - Level 08: 5.7m - 12.3 In response to comments received from the SDRP panel, windows have been intergrated into the portion of facade situated beyond the habitable setback to improve the amenity of associated dwellings, as well as to articulate the facade to address council’s concern about this presenting as a blank wall. However, external and internal privacy is protected through these windows being limited high level windows, and the primary windows to habitable rooms and balconies being orientated away from the boundary. Other portions of the building which sit beyond the habitable setback line are part of the the building core. Refer to Page 25-26 for further information and diagrams illustrating proposed setbacks.
Building Height	Habitable Rooms & Balconies	Non-Habitable Rooms & Balconies															
up to 12m (4 storeys)	6m	3m															
up to 25m (5-8 storeys)	9m	4.5m															
over 25m (9+ storeys)	12m	6m															
3J	BICYCLE AND CAR PARKING																
3J-1	Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas	1. For development in the following locations: – on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or – on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre the minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less The car parking needs for a development must be provided off street		X	The proposal is located within 400m of Edmondson Park, along a bus route and adjacent to a shared bicycle path. Due to the high accessibility of the site, the proposal incorporates 17 car spaces, 1 motor cycle space and 58 bicycle spaces, which reflects a strategy to promote utilisation of public and active transport. Additionally, the proposal includes the incorporation of 2 car share spaces.												

ADG OBJECTIVE		DESIGN CRITERIA	COMPLIANCE														
			YES	NO	COMMENT/COMMENT												
4A	SOLAR AND DAYLIGHT ACCESS																
4A-1	To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space	1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	✓	49/58 (85%) of apartments receive 2 hours or more solar access. Refer to DA400 or Page 58 for diagrams illustrating compliance. Refer to pages AP-27 & 28 for a table noting the solar access for each apartment.													
		2. In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid winter		N/A													
		3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter	✓	All apartments receive solar access. Refer to DA400 or Page 58 for diagrams illustrating compliance.													
4B	NATURAL VENTILATION																
4B-3	The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents	1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed	✓	49/58 (85%) of apartments are naturally cross ventilated, with only 1 apartment per plate not cross ventilated. Refer to DA400 or Page 57 for diagrams illustrating compliance. Refer to pages AP-27 & 28 for a table noting the cross ventilation achieved for each apartment.													
		2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	✓	Proposed building is predominately single loaded, 14.8m at the deepest point.													
4C	CEILING HEIGHTS																
4C-1	Ceiling height achieves sufficient natural ventilation and daylight access	1. Measured from finished floor level to finished ceiling level, minimum ceiling heights are: <table><tr><td colspan="2">Minimum ceiling heights for apartment and mixed use buildings</td></tr><tr><td>Habitable rooms</td><td>2.7m</td></tr><tr><td>Non-habitable rooms</td><td>2.4m</td></tr><tr><td>For 2 storey apartments</td><td>2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area</td></tr><tr><td>Attic spaces</td><td>1.8m at edge of room with a 30 degree minimum ceiling slope</td></tr><tr><td>If located in mixed use areas</td><td>3.3m for ground and first floor to promote future flexibility of use</td></tr></table> These minimums do not preclude higher ceilings if desired	Minimum ceiling heights for apartment and mixed use buildings		Habitable rooms	2.7m	Non-habitable rooms	2.4m	For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area	Attic spaces	1.8m at edge of room with a 30 degree minimum ceiling slope	If located in mixed use areas	3.3m for ground and first floor to promote future flexibility of use	✓	Proposal incorporates a typical floor-to-floor height of 3.15m which has demonstrated ability to achieve compliance with habitable and non-habitable ceiling heights. Whilst the proposal is on land zoned as Mixed-Use, typical residential floor-to-floor heights have been incorporated as due to the site’s constraints, incorporation of non-residential uses was not deemed suitable.	
Minimum ceiling heights for apartment and mixed use buildings																	
Habitable rooms	2.7m																
Non-habitable rooms	2.4m																
For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area																
Attic spaces	1.8m at edge of room with a 30 degree minimum ceiling slope																
If located in mixed use areas	3.3m for ground and first floor to promote future flexibility of use																

ADG OBJECTIVE		DESIGN CRITERIA	COMPLIANCE												
			YES	NO	COMMENT/COMMENT										
4D	APARTMENT SIZE AND LAYOUT														
4D-1	The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity	1. Apartments are required to have the following minimum internal areas:	✓		All dwellings are compliance with minimum internal areas. Refer to pages AP-27 & 28 for a table noting the internal area for each apartment.										
		<table><tr><th>Apartment Type</th><th>Minimum Internal Area</th></tr><tr><td>Studio</td><td>35m²</td></tr><tr><td>1 bedroom</td><td>50m²</td></tr><tr><td>2 bedroom</td><td>70m²</td></tr><tr><td>3 bedroom</td><td>90m²</td></tr></table>				Apartment Type	Minimum Internal Area	Studio	35m²	1 bedroom	50m²	2 bedroom	70m²	3 bedroom	90m²
		Apartment Type				Minimum Internal Area									
Studio	35m²														
1 bedroom	50m²														
2 bedroom	70m²														
3 bedroom	90m²														
The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m² each A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m² each															
		2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms	✓	X	All habitable rooms are provided with a window sufficiently sized to achieve an area of 10% of the floor area. In some instances, borrowing of ventilation between rooms is proposed due to inability to have an acoustically protected opening. Openings needing to provide fresh air for multiple rooms have been sized to meet the NCC requirement for the total floor area.										
4D-2	Environmental performance of the apartment is maximised	1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height	✓		All bedrooms are less than 6.75m in depth. All open plan living-dining-kitchen rooms comply with below control										
		In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	✓		Maximum depth from a window throughout apartments is the 3 bedroom, which has a depth of 7.1m, measured from the edge of the full-height glazing to the balcony, to the rear of the kitchen.										
4D-3	Apartment layouts are designed to accommodate a variety of household activities and needs	1. Master bedrooms have a minimum area of 10m² and other bedrooms 9m2 (excluding wardrobe space)	✓	X	All bedrooms achieve a minimum area of 9m². All master bedrooms or bedrooms of 1 Bedroom units achieve 10m2 or more, with the exception of Unit 02 (Upper Ground - Level 08) - 9.8m2 - this is acceptable as this is a 1 bedroom unit with an over-compliant sized living space Unit 03 (Upper Ground - Level 08)- 9.6m2 - this is acceptable as this is a 1 bedroom unit with an over-compliant sized living space.										
		2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	✓		All bedrooms comply										
		3. Living rooms or combined living/dining rooms have a minimum width of: – 3.6m for studio and 1 bedroom apartments – 4m for 2 and 3 bedroom apartments	✓		All living rooms achieve or exceed minimum width requirements.										
		4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts			N/A										

ADG OBJECTIVE		DESIGN CRITERIA	COMPLIANCE																	
			YES	NO	COMMENT/COMMENT															
4E	PRIVATE OPEN SPACE AND BALCONIES																			
4E-1	Apartments provide appropriately sized private open space and balconies to enhance residential amenity	1. All apartments are required to have primary balconies as follows: <table><tr><th>Dwelling Type</th><th>Minimum Area</th><th>Minimum depth</th></tr><tr><td>Studio</td><td>4m²</td><td>-</td></tr><tr><td>1 Bedroom</td><td>8m²</td><td>2m</td></tr><tr><td>2 Bedroom</td><td>10m²</td><td>2m</td></tr><tr><td>3 Bedroom</td><td>12m²</td><td>2.4m</td></tr></table> The minimum balcony depth to be counted as contributing to the balcony area is 1m	Dwelling Type	Minimum Area	Minimum depth	Studio	4m ²	-	1 Bedroom	8m ²	2m	2 Bedroom	10m ²	2m	3 Bedroom	12m ²	2.4m	✓		All balconies achieve or exceed minimum area requirements. All balconies achieve or exceed minimum depth requirements, with the shallowest point of any balcony being 2.6m, and the narrowest point on any balcony being 2.2m. Refer to pages AP-27 & 28 for a table noting the size of private open space provided for each apartment.
Dwelling Type	Minimum Area	Minimum depth																		
Studio	4m ²	-																		
1 Bedroom	8m ²	2m																		
2 Bedroom	10m ²	2m																		
3 Bedroom	12m ²	2.4m																		
		2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m² and a minimum depth of 3m		X	Unit 00.01 and 00.05 comply. Units 00.02, 00.03 and 00.04 do not comply, as a perimeter planter has been provided to provide increased wind, visual privacy and acoustic protection to these private open spaces from Soldiers Parade.															
4F	COMMON CIRCULATION AND SPACES																			
4F-1	Common circulation spaces achieve good amenity and properly service the number of apartment	1. The maximum number of apartments off a circulation core on a single level is twelve	✓		Upper Ground Level - Level 03 - 7 apartments per core Level 04 - Level 08 - 6 apartments per core. Additionally, two sources of light and fresh air have been provided to the corridors of every level.															
		2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40			N/A															
4G	STORAGE																			
4G-1	Adequate, well designed storage is provided in each apartment	1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: <table><tr><th>Apartment Type</th><th>Minimum Internal Area</th></tr><tr><td>Studio</td><td>4m³</td></tr><tr><td>1 bedroom</td><td>6m³</td></tr><tr><td>2 bedroom</td><td>8m³</td></tr><tr><td>3 bedroom</td><td>10m³</td></tr></table> At least 50% of the required storage is to be located within the apartment	Apartment Type	Minimum Internal Area	Studio	4m ³	1 bedroom	6m ³	2 bedroom	8m ³	3 bedroom	10m ³	✓		All apartments meet or exceed the total required storage volume, and the requirement for at least 50% of the storage to be located within the apartment. All apartments contain 100% of the storage requirement within the apartment, with the exception of Unit 00.01 (which contains 62%). Refer to architectural drawing DA001 or pages AP-27 & 28 for a table noting the storage provision for each apartment.					
Apartment Type	Minimum Internal Area																			
Studio	4m ³																			
1 bedroom	6m ³																			
2 bedroom	8m ³																			
3 bedroom	10m ³																			

APARTMENT DESIGN GUIDE (ADG) KEY DESIGN CRITERIA

DWELLING COMPLIANCE

LEVEL	Unit Number	Adaptable	Liveable	Unit Type	Internal Area	Balcony Area	Internal Storage	Solar Access	Cross Ventilation
UPPER GROUND LEVEL	00.01	YES	YES	2 B	79	36	4.2	Less than 2hrs	YES
UPPER GROUND LEVEL	00.02	NO	YES	2 B	71	13	8.6	2hrs or more	YES
UPPER GROUND LEVEL	00.03	NO	YES	1 B	53	8	6.0	2hrs or more	NO
UPPER GROUND LEVEL	00.04	NO	YES	2 B	71	13	9.0	2hrs or more	YES
UPPER GROUND LEVEL	00.05	NO	YES	1 B	55	23	6.5	2hrs or more	YES
UPPER GROUND LEVEL	00.06	NO	YES	1 B	59	8	6.5	2hrs or more	YES
UPPER GROUND LEVEL	00.07	NO	YES	1 B	58	11	8.6	2hrs or more	YES
LEVEL 01	01.01	YES	YES	3 B	99	12	10.5	Less than 2hrs	YES
LEVEL 01	01.02	NO	YES	2 B	71	13	8.6	2hrs or more	YES
LEVEL 01	01.03	NO	YES	1 B	53	8	6.0	2hrs or more	NO
LEVEL 01	01.04	NO	YES	2 B	71	14	9.0	2hrs or more	YES
LEVEL 01	01.05	NO	YES	1 B	55	9	6.5	2hrs or more	YES
LEVEL 01	01.06	NO	YES	1 B	59	8	6.5	2hrs or more	YES
LEVEL 01	01.07	NO	YES	1 B	58	11	8.6	2hrs or more	YES
LEVEL 02	02.01	YES	YES	3 B	99	12	10.5	Less than 2hrs	YES
LEVEL 02	02.02	NO	YES	2 B	71	13	8.6	2hrs or more	YES
LEVEL 02	02.03	NO	YES	1 B	53	8	6.0	2hrs or more	NO
LEVEL 02	02.04	NO	YES	2 B	71	14	9.0	2hrs or more	YES
LEVEL 02	02.05	NO	YES	1 B	55	9	6.5	2hrs or more	YES
LEVEL 02	02.06	NO	YES	1 B	59	8	6.5	2hrs or more	YES
LEVEL 02	02.07	NO	YES	1 B	58	11	8.6	2hrs or more	YES
LEVEL 03	03.01	YES	YES	3 B	99	12	10.5	Less than 2hrs	YES
LEVEL 03	03.02	NO	YES	2 B	71	13	8.6	2hrs or more	YES
LEVEL 03	03.03	NO	YES	1 B	53	8	6.0	2hrs or more	NO
LEVEL 03	03.04	NO	YES	2 B	71	13	9.0	2hrs or more	YES
LEVEL 03	03.05	NO	YES	1 B	55	9	6.5	2hrs or more	YES
LEVEL 03	03.06	NO	YES	1 B	59	8	6.5	2hrs or more	YES

LEVEL	Unit Number	Adaptable	Liveable	Unit Type	Internal Area	Balcony Area	Internal Storage	Solar Access	Cross Ventilation
LEVEL 03	03.07	NO	YES	1 B	58	11	8.6	2hrs or more	YES
LEVEL 04	04.01	YES	YES	3 B	99	12	10.5	Less than 2hrs	YES
LEVEL 04	04.02	NO	YES	2 B	71	14	8.6	2hrs or more	YES
LEVEL 04	04.03	NO	YES	1 B	53	8	6.0	2hrs or more	NO
LEVEL 04	04.04	NO	YES	2 B	71	14	9.0	2hrs or more	YES
LEVEL 04	04.05	NO	YES	1 B	55	9	6.5	2hrs or more	YES
LEVEL 04	05.06	NO	YES	2 B	71	11	8.2	2hrs or more	YES
LEVEL 05	05.01	NO	YES	3 B	99	12	9.9	Less than 2hrs	YES
LEVEL 05	05.02	NO	YES	2 B	71	14	8.6	2hrs or more	YES
LEVEL 05	05.03	NO	YES	1 B	53	8	6.0	2hrs or more	NO
LEVEL 05	05.04	NO	YES	2 B	71	14	9.0	2hrs or more	YES
LEVEL 05	05.05	NO	YES	1 B	55	9	6.5	2hrs or more	YES
LEVEL 05	05.06	NO	YES	2 B	71	11	8.2	2hrs or more	YES
LEVEL 06	06.01	NO	YES	3 B	99	12	9.9	Less than 2hrs	YES
LEVEL 06	06.02	NO	YES	2 B	71	14	8.6	2hrs or more	YES
LEVEL 06	06.03	NO	YES	1 B	53	8	6.0	2hrs or more	NO
LEVEL 06	06.04	NO	YES	2 B	71	14	9.0	2hrs or more	YES
LEVEL 06	06.05	NO	YES	1 B	55	9	6.5	2hrs or more	YES
LEVEL 06	06.06	NO	YES	2 B	71	10	8.2	2hrs or more	YES
LEVEL 07	07.01	NO	YES	3 B	99	12	9.9	Less than 2hrs	YES
LEVEL 07	07.02	NO	YES	2 B	71	14	8.6	2hrs or more	YES
LEVEL 07	07.03	NO	YES	1 B	53	8	6.0	2hrs or more	NO
LEVEL 07	07.04	NO	YES	2 B	71	14	9.0	2hrs or more	YES
LEVEL 07	07.05	NO	YES	1 B	55	9	6.5	2hrs or more	YES
LEVEL 07	07.06	NO	YES	2 B	71	11	8.2	2hrs or more	YES
LEVEL 08	08.01	YES	YES	1 B	62	11	9.2	Less than 2hrs	YES
LEVEL 08	08.02	NO	YES	2 B	71	14	8.6	2hrs or more	YES
LEVEL 08	08.03	NO	YES	1 B	53	8	6.0	2hrs or more	NO
LEVEL 08	08.04	NO	YES	2 B	71	14	9.0	2hrs or more	YES
LEVEL 08	08.05	NO	YES	1 B	55	9	6.5	2hrs or more	YES
LEVEL 08	08.06	NO	YES	2 B	71	11	16.4	2hrs or more	YES

APPENDIX D

VISUAL ANALYSIS

KEY VIEWPOINTS

IDENTIFICATION OF KEY VIEWS

The following viewpoints have been prepared to compare the existing and proposed conditions with future development:

- Key View 1 - Soldiers Parade/Bernera Road, looking south.
- Key View 2 - Future Macdonald Road, looking east along Maxwells Creek.
- Key View 3 - North Edmondson Park Train Station Entry, looking north.

The illustrated existing condition includes completed development as well as approved adjacent development.

The illustrated proposed future condition includes the indicative building envelopes taken from the current master plan for the adjacent sites.

The comparative views provide a high level analysis of the visual impact of the proposal's built form. It should be noted that the provided visualisations do not include existing vegetation. The adjacent photos taken from Google Street view illustrate that existing vegetation.



KEY VIEW 01



KEY VIEW 02



KEY VIEW 03



KEY VIEWPOINT 1

EXISTING

As illustrated by the adjacent views, the Proposal is aligned with a key view corridor forming through Edmondson Park along Bernera Road and Soldiers Parade.

The proposal will reduce the width of the existing corridor, however this is inevitable given the geometry of the Site and Soldier's Parade. The proposal however, has reduced the impact on the visual corridor width with providing more generous setbacks to Soldiers Parade than what is required by the Modification 5 controls.



KEY PLAN



PROPOSED

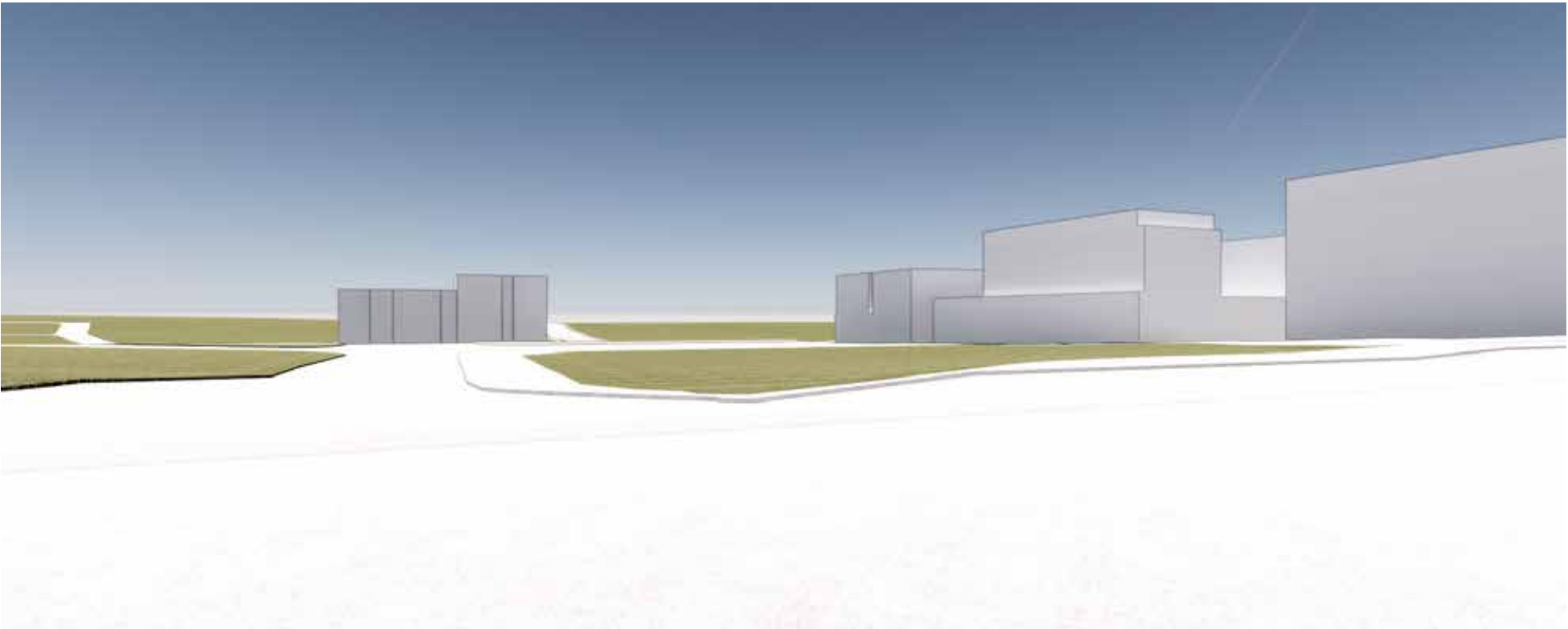


KEY VIEWPOINT 2

EXISTING

While the site will in the short term reduce the visibility of Maxwells Creek from Edmondson Park Station, the development of the lots immediately adjacent to the station will result in far greater blocking of views.

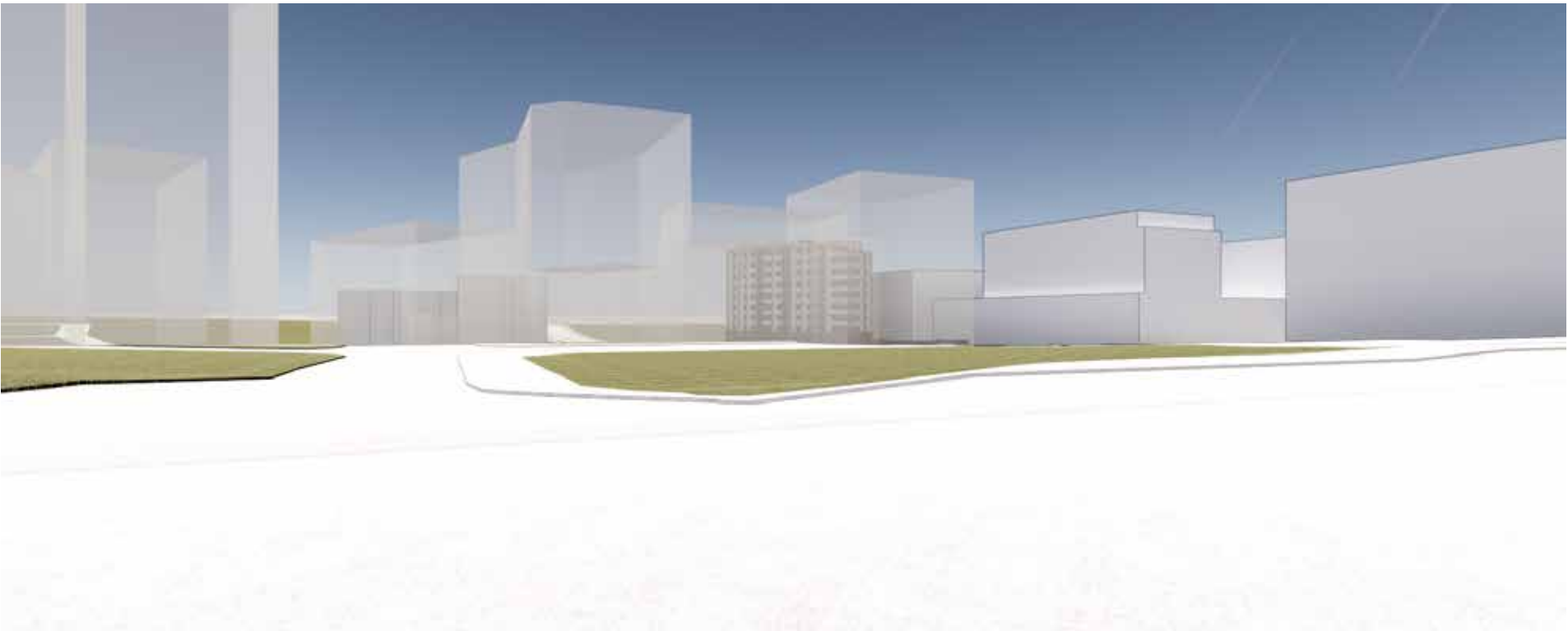
Once the precinct is completely developed, based on the current master plan building footprints and heights, the proposal will not be visible from the station.



KEY PLAN



PROPOSED

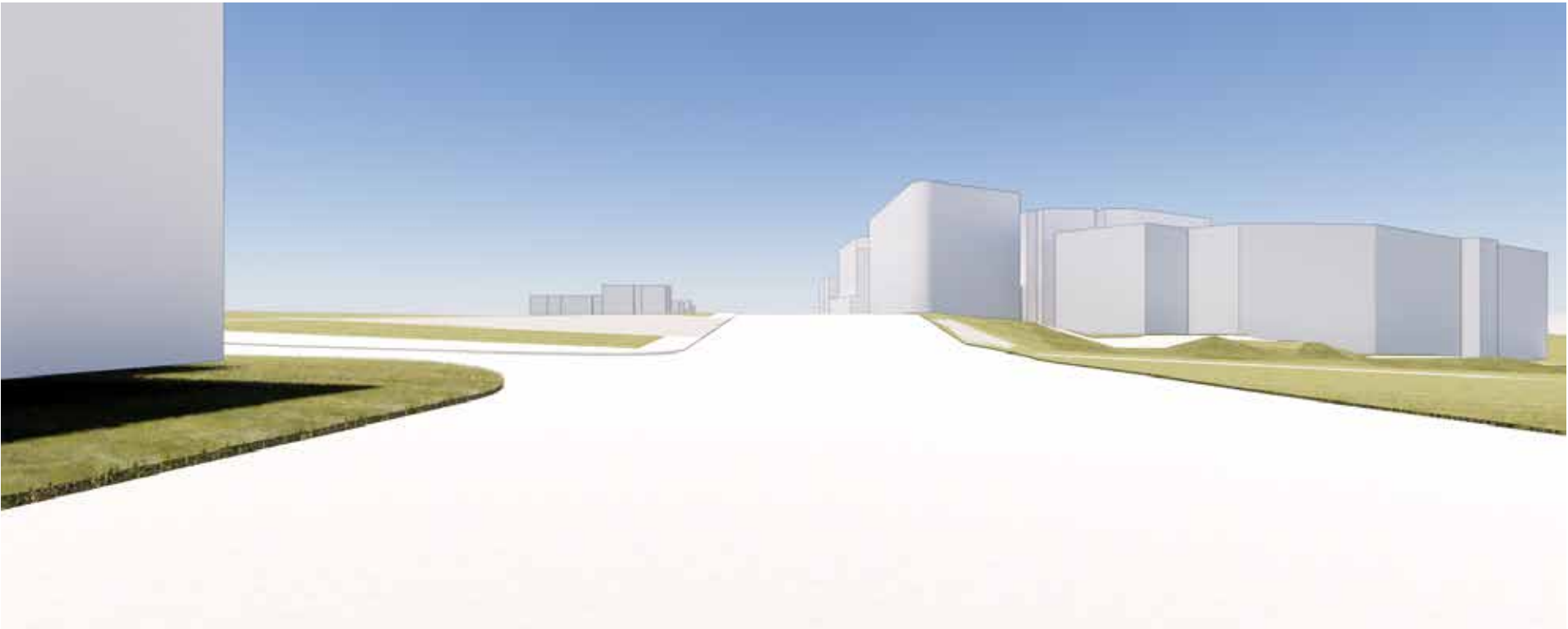


KEY VIEWPOINT 3

EXISTING

Similar to Key Viewpoint 1, the site will be highly visible looking north along Soldiers Parade due to the geometry of the Site and Soldier’s Parade.

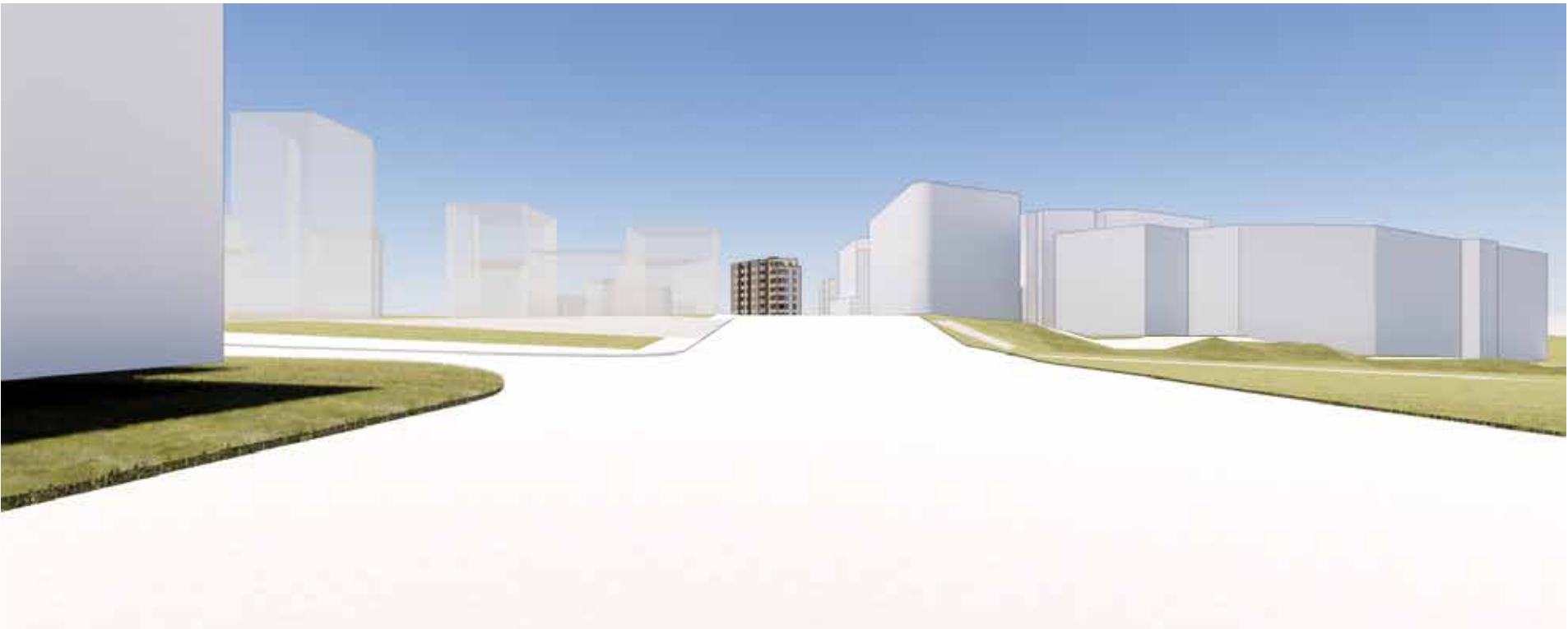
Any development on the site would impact this corridor.



KEY PLAN



PROPOSED



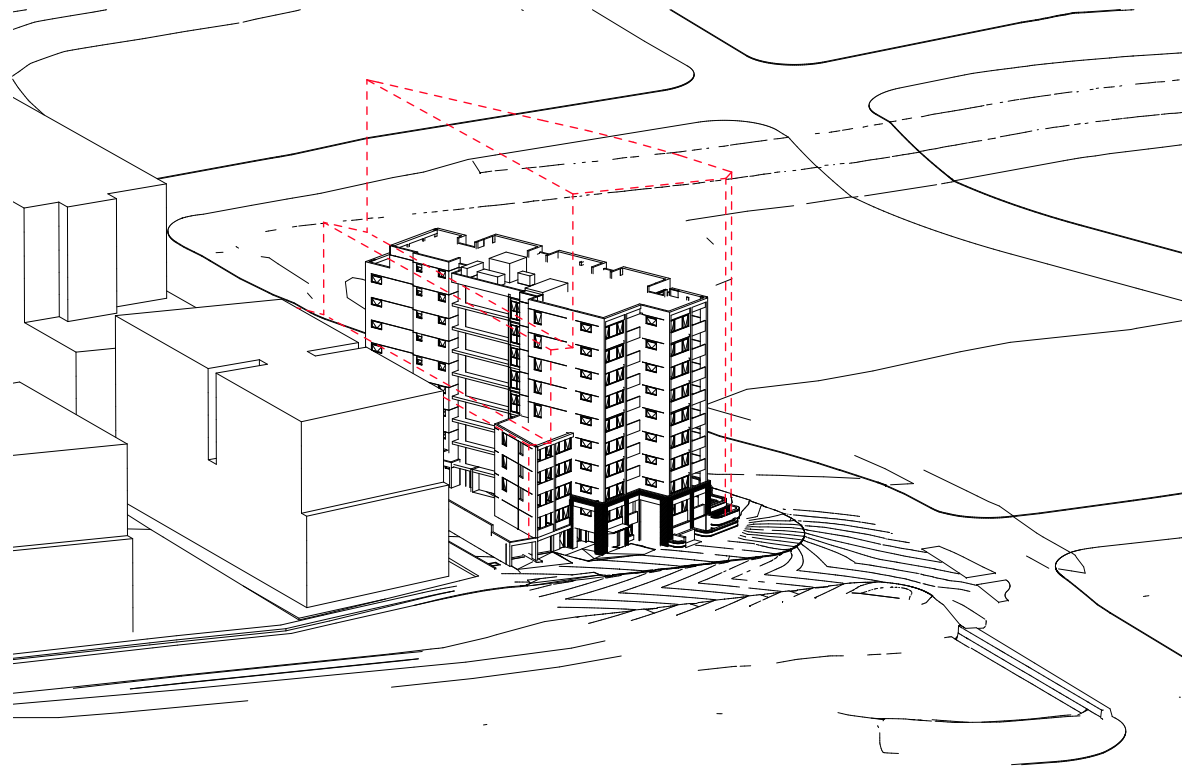
APPENDIX E

SOLAR ACCESS ANALYSIS

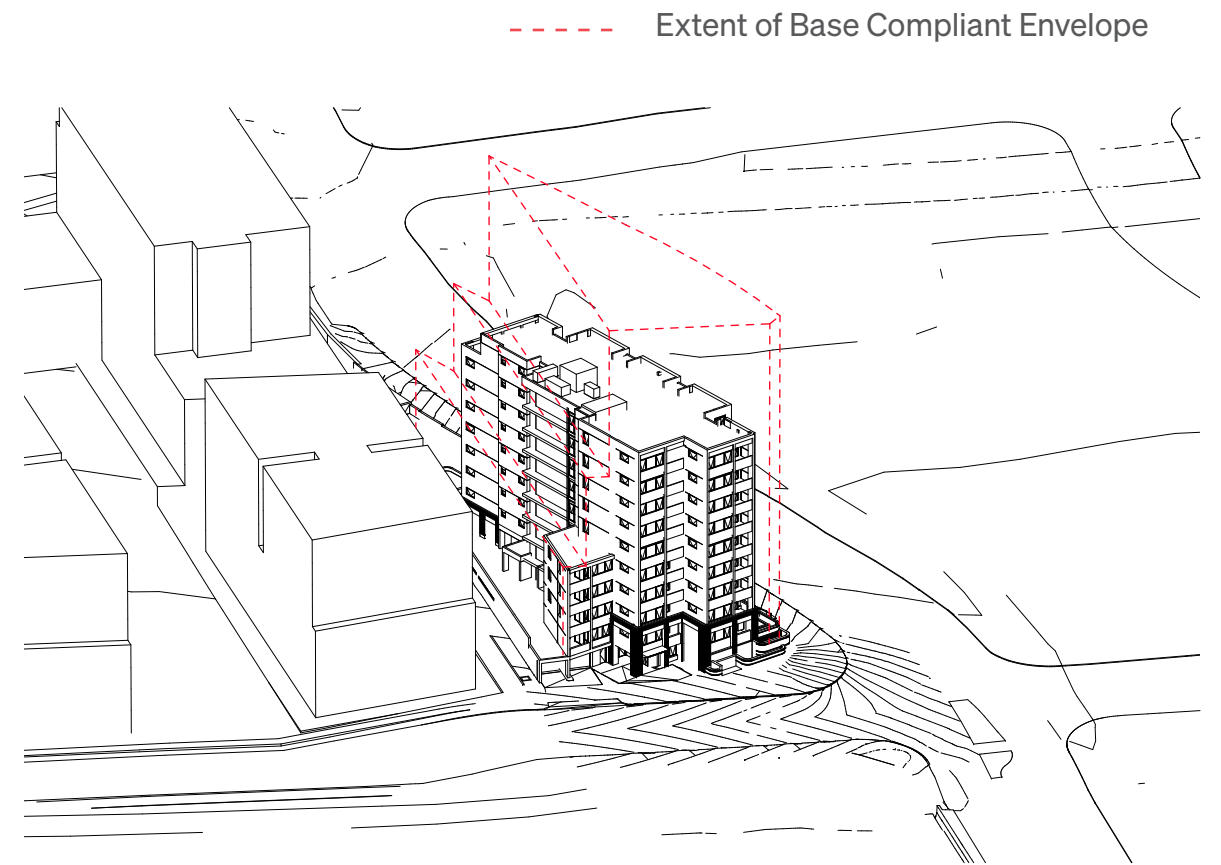
WINTER SOLSTICE EYE OF THE SUN

JUNE 21ST - PROPOSED

09:00



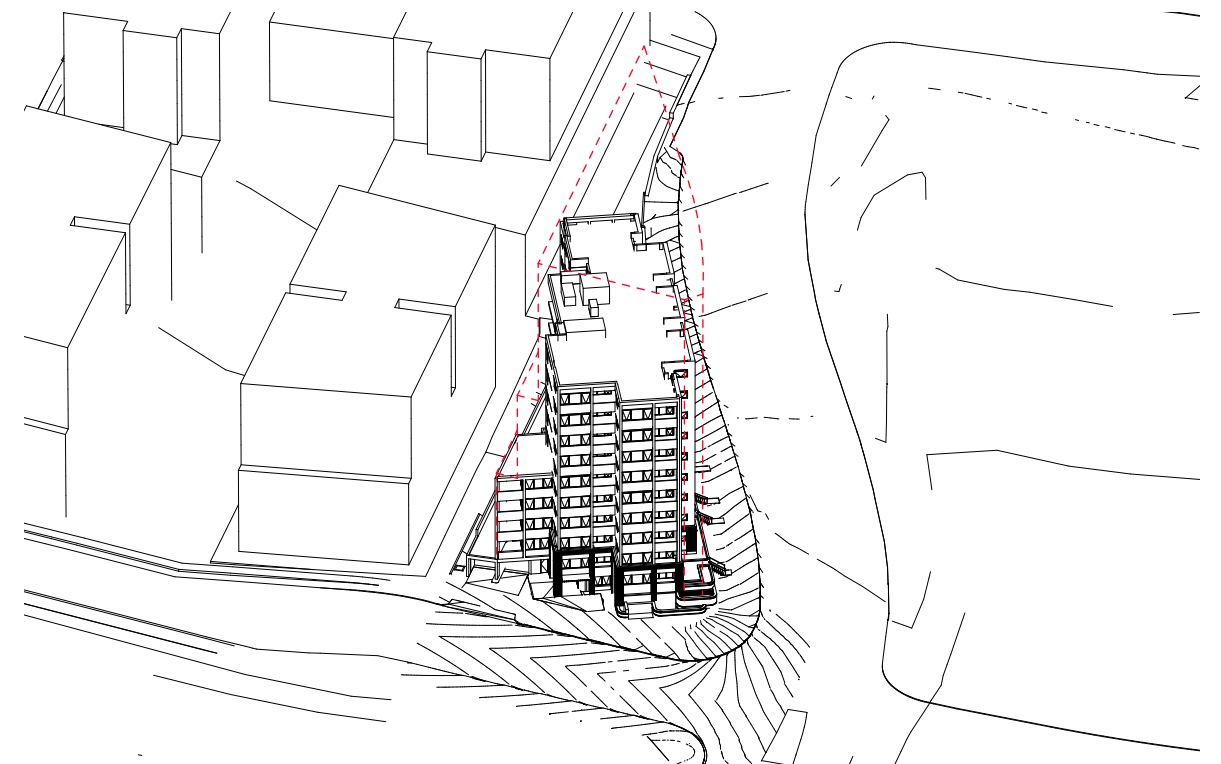
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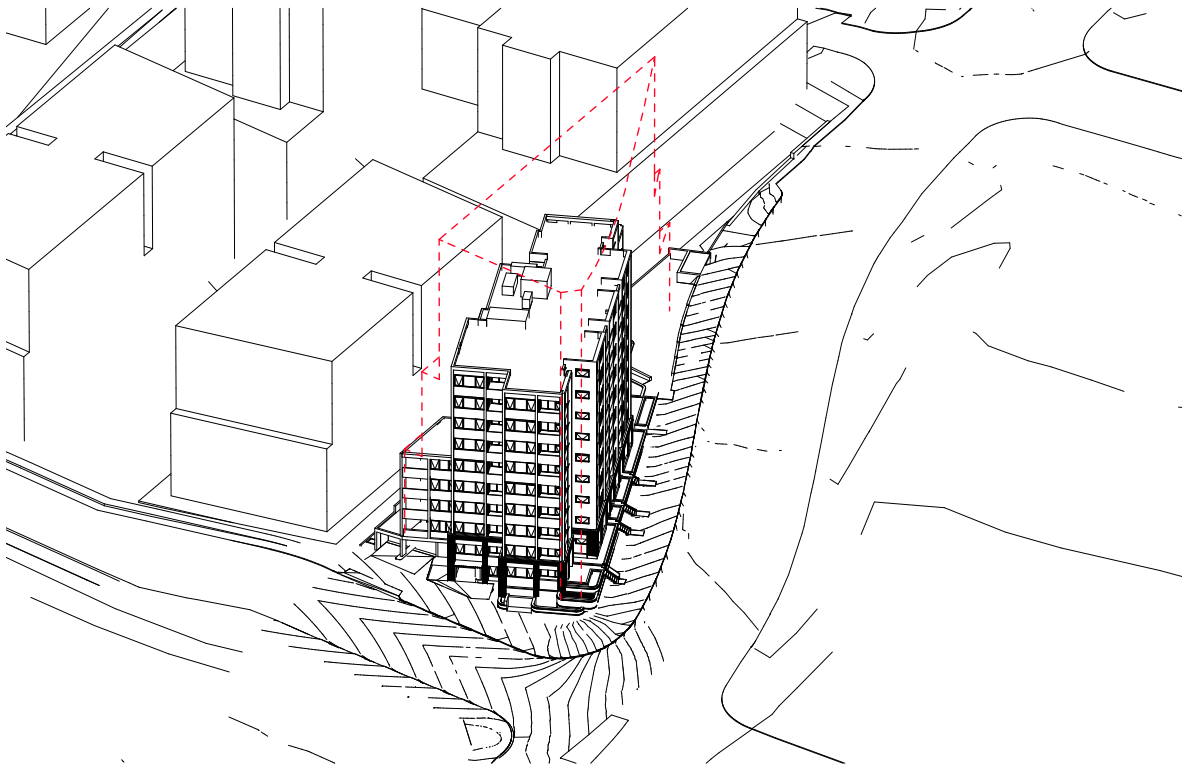
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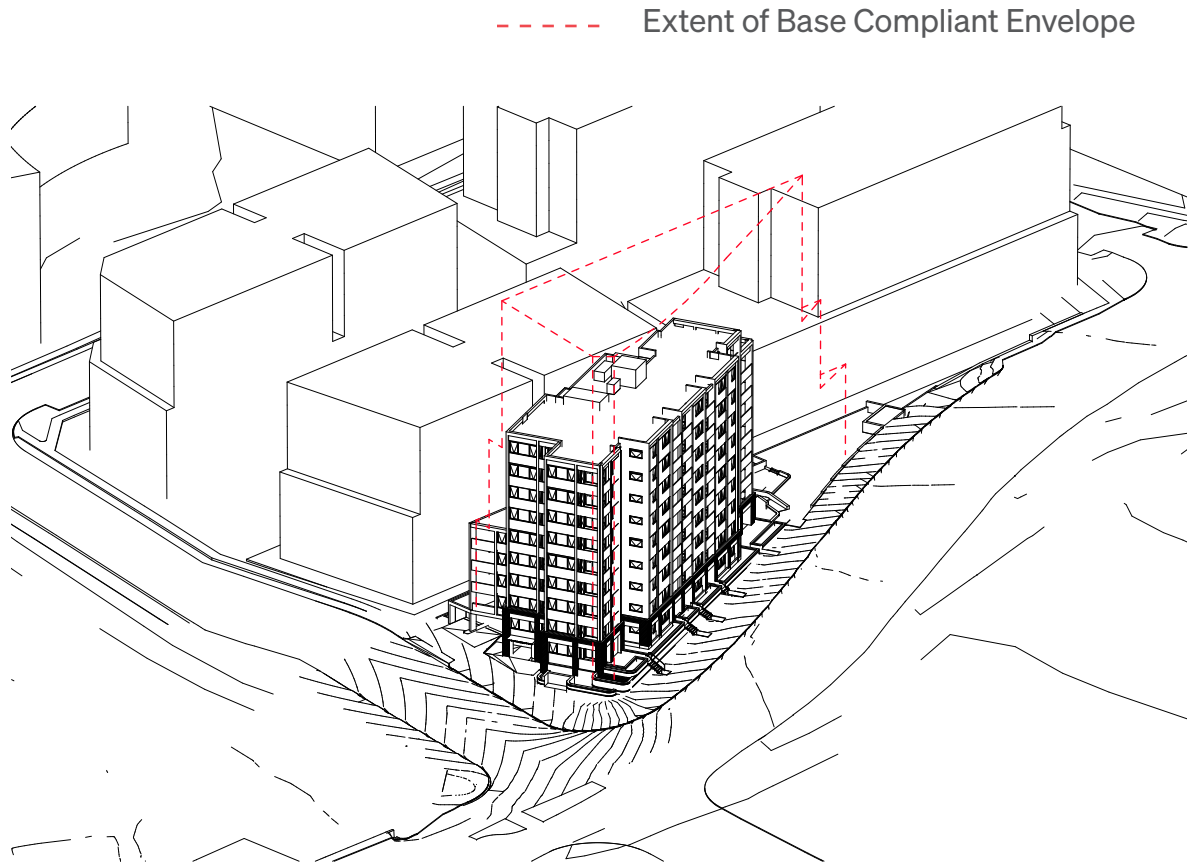
WINTER SOLSTICE EYE OF THE SUN

JUNE 21ST - PROPOSED

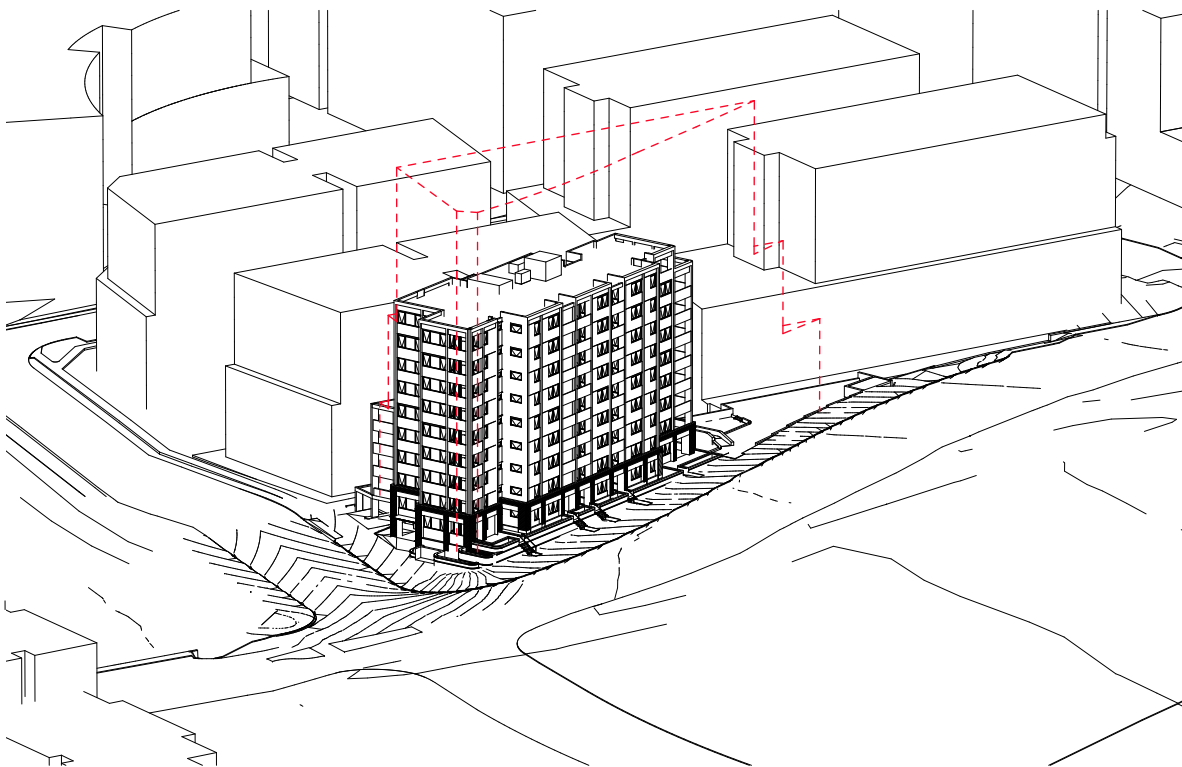
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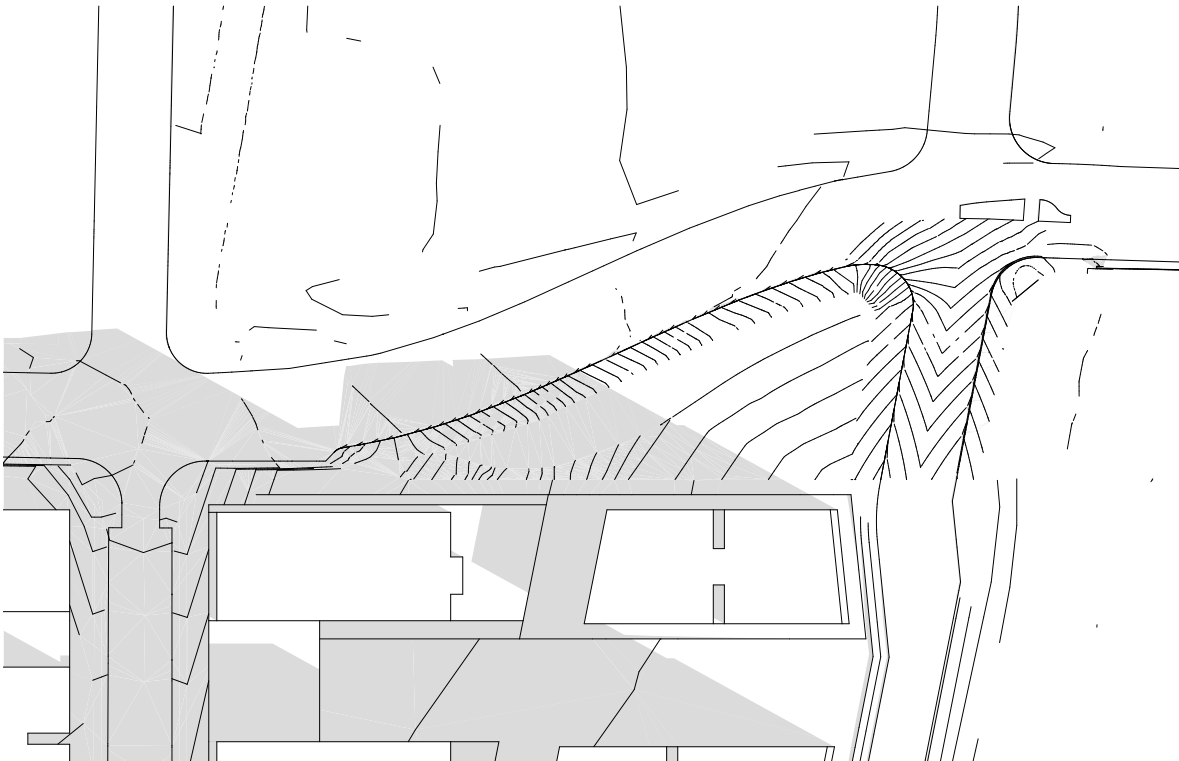


WINTER SOLSTICE SHADOW DIAGRAMS

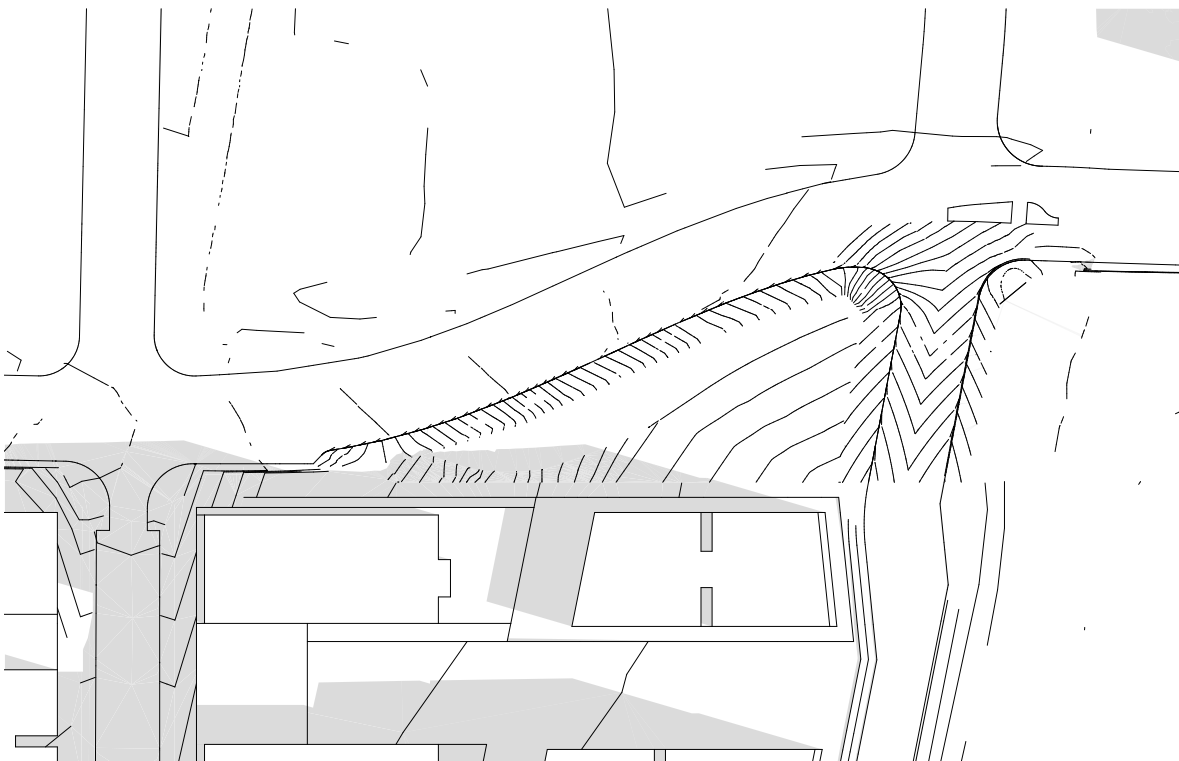
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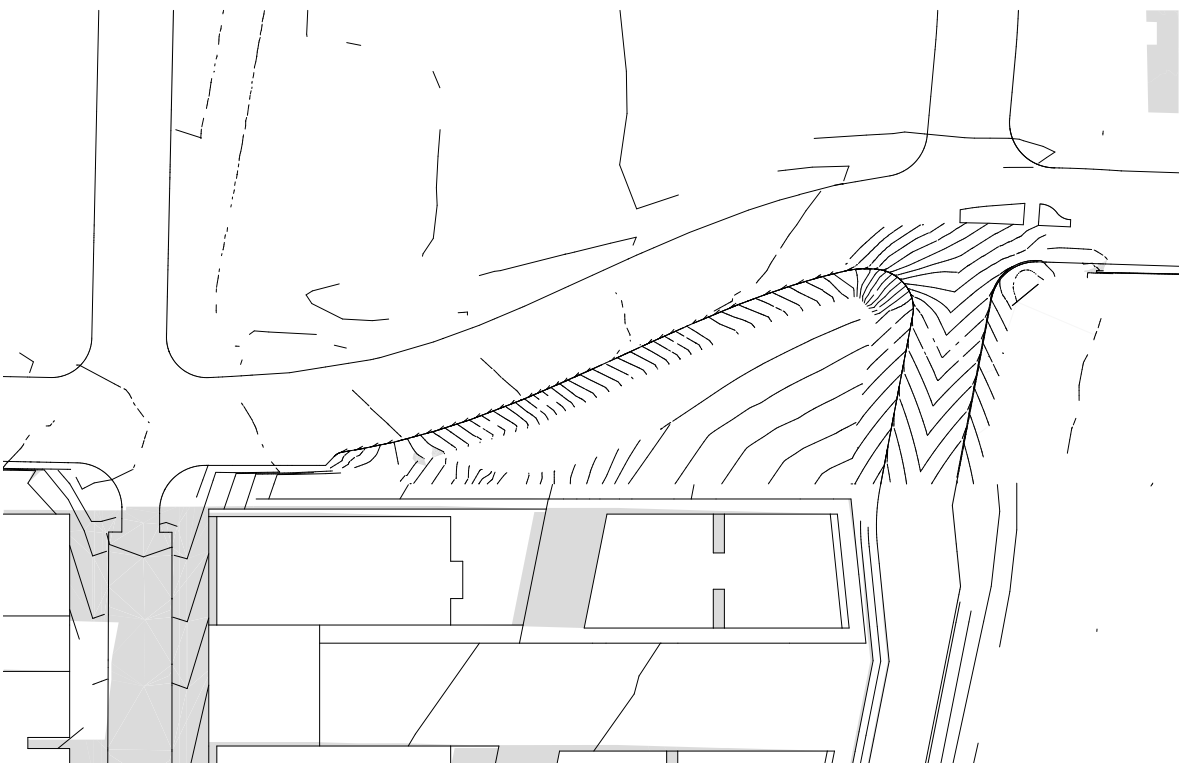
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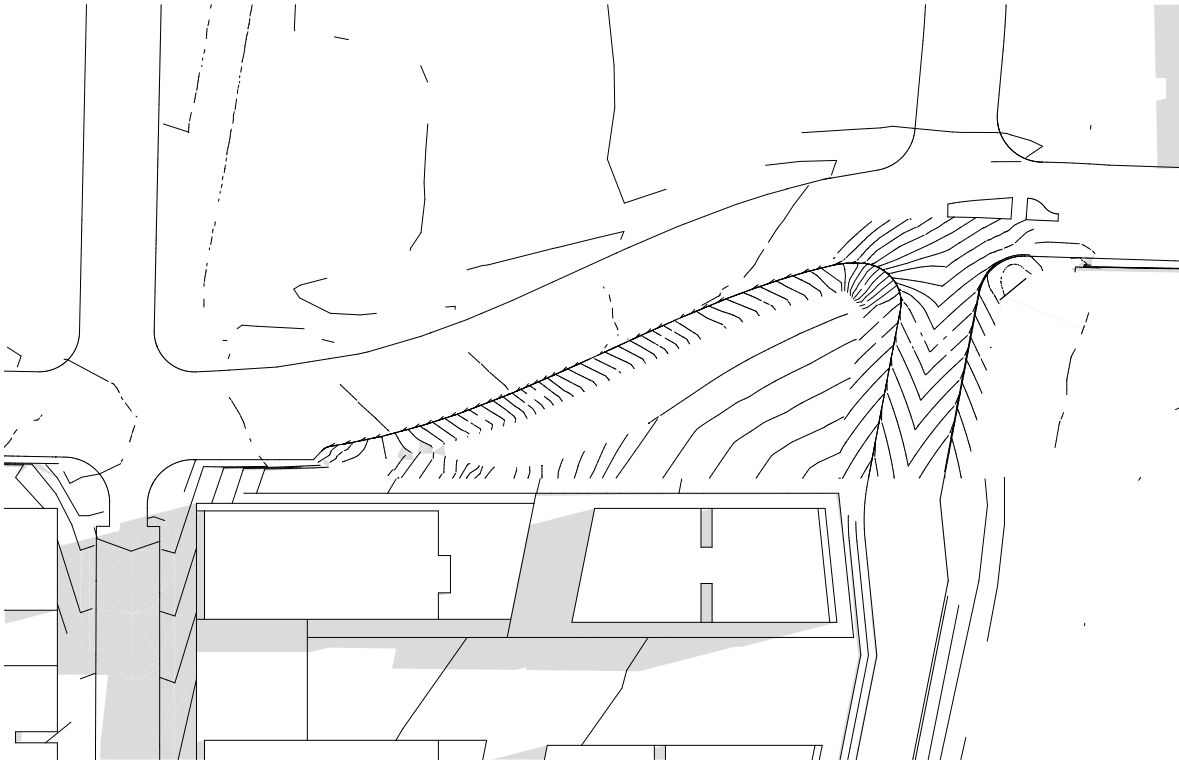
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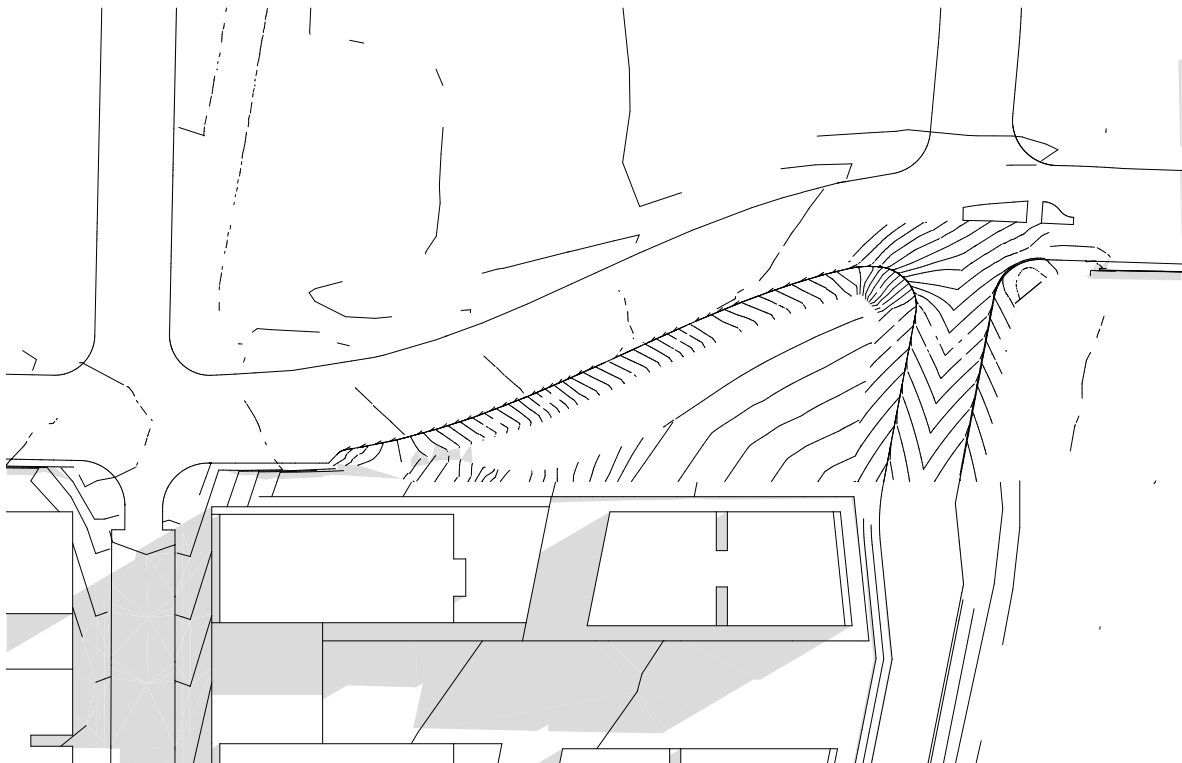


WINTER SOLSTICE SHADOW DIAGRAMS

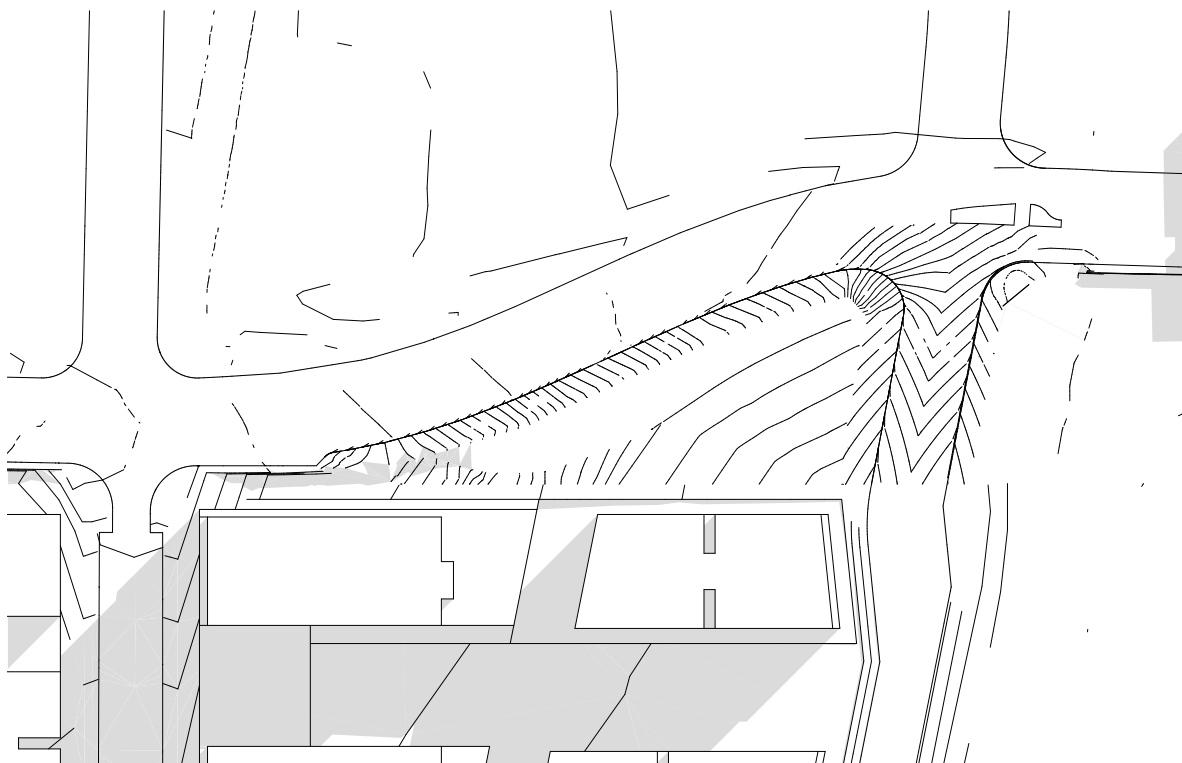
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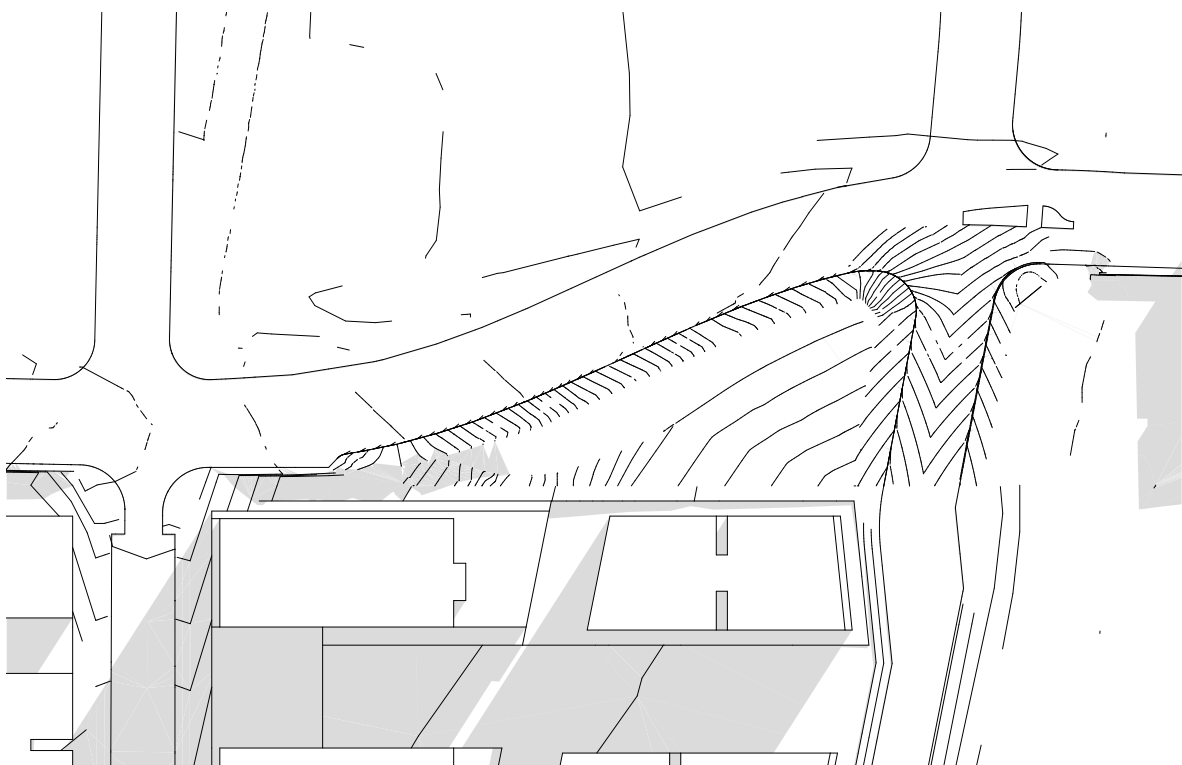
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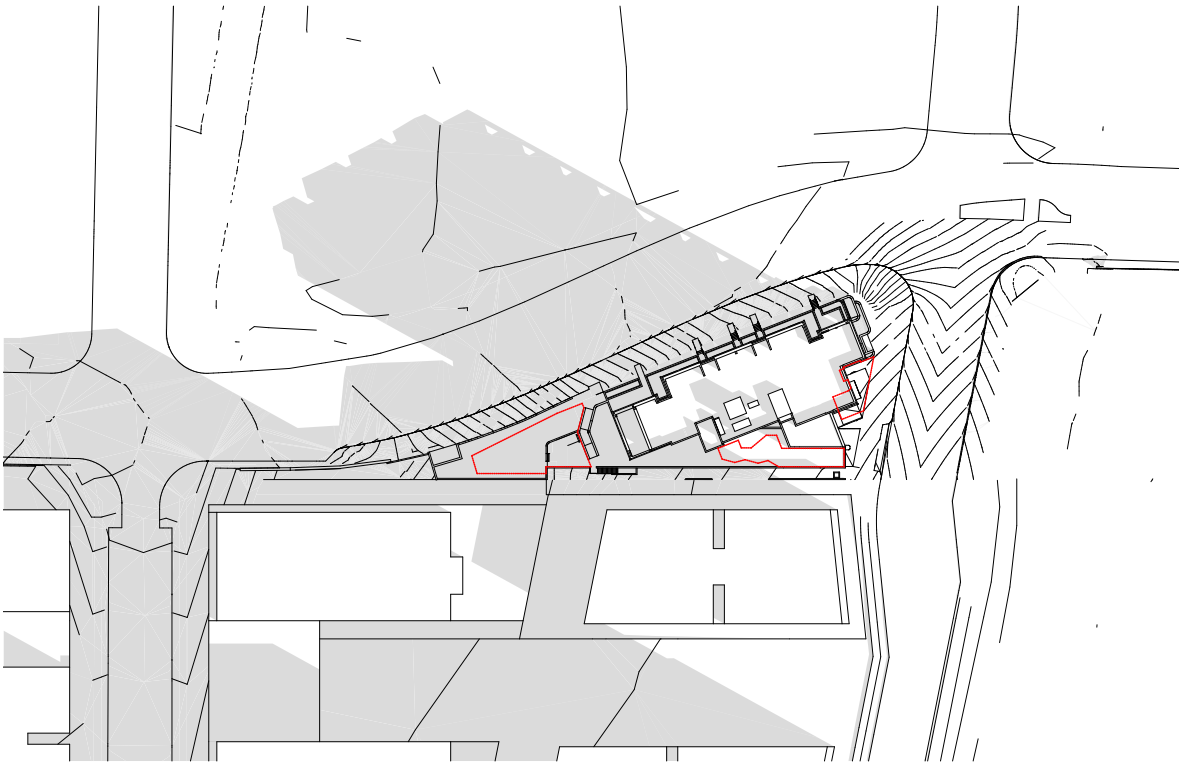
WINTER SOLSTICE SHADOW DIAGRAMS

JUNE 21ST - PROPOSED

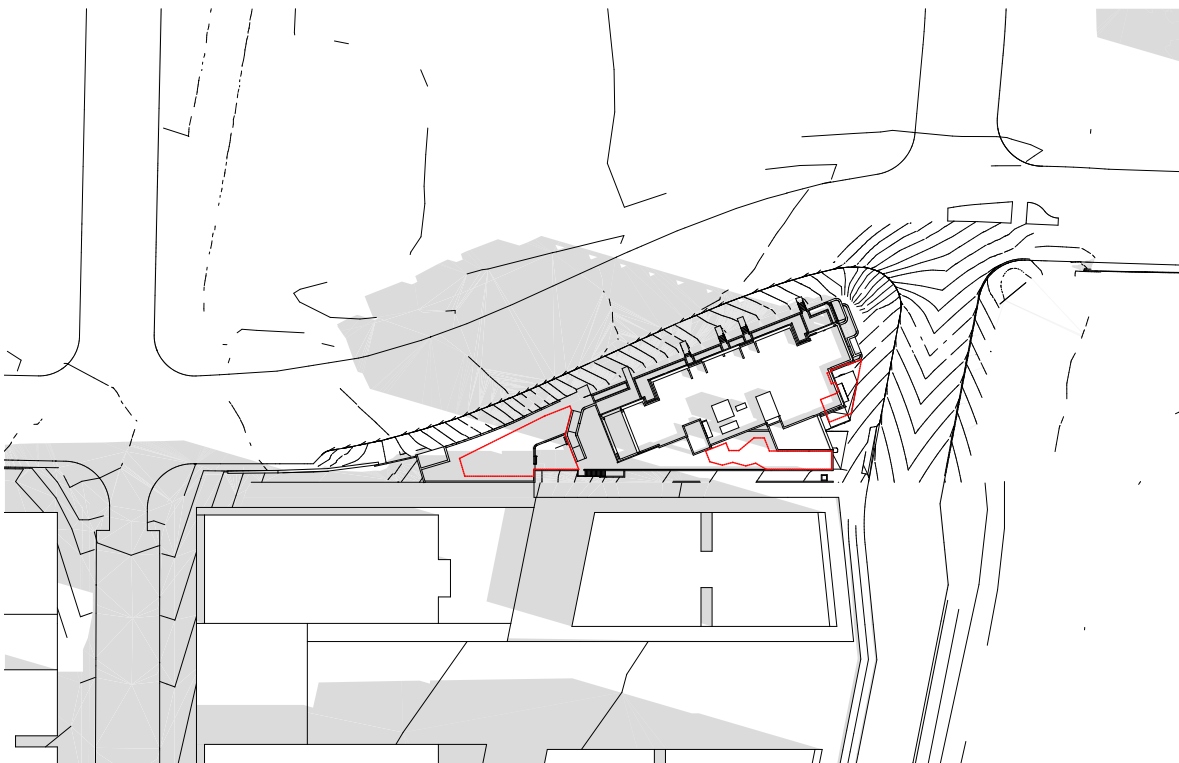


----- Principle Communal Space Zones

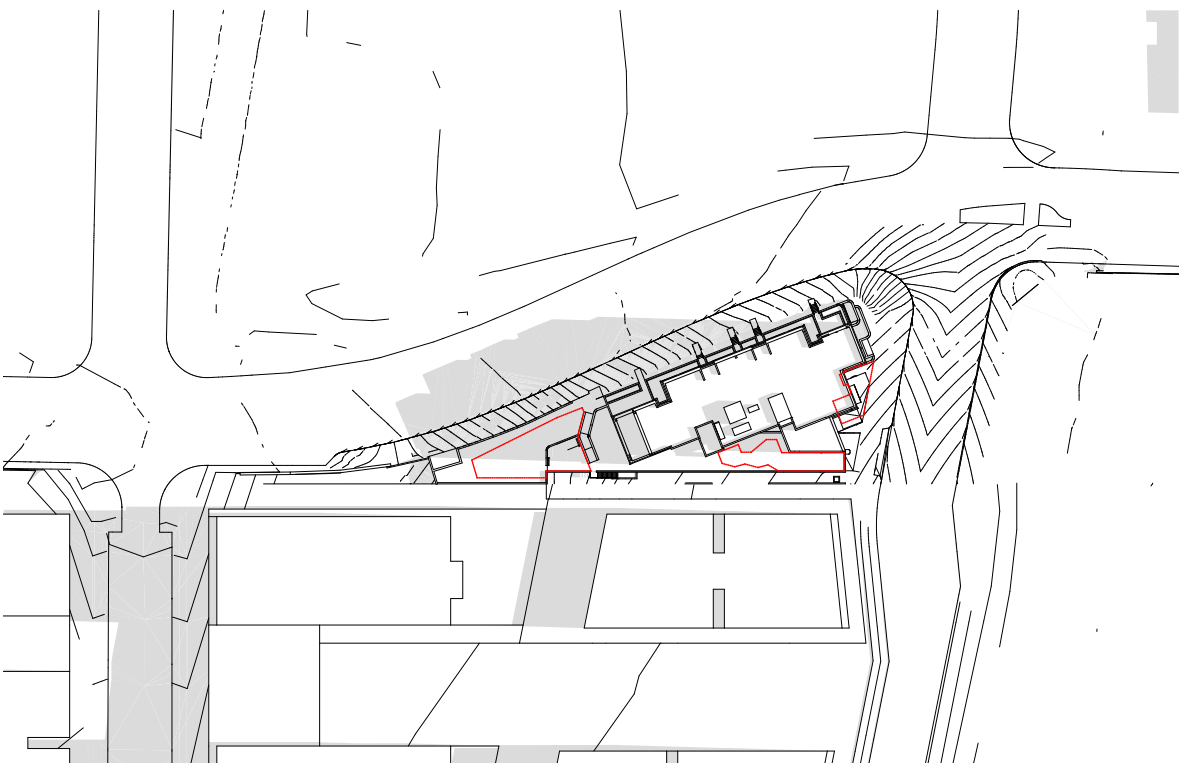
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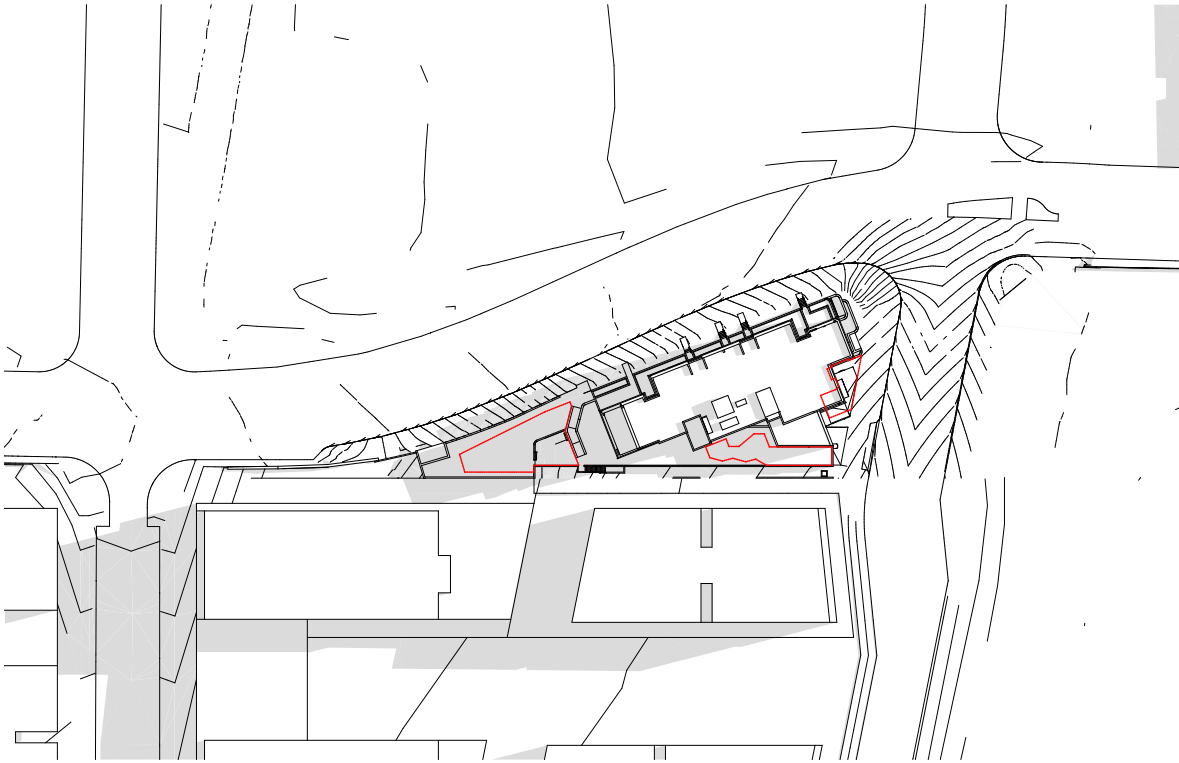
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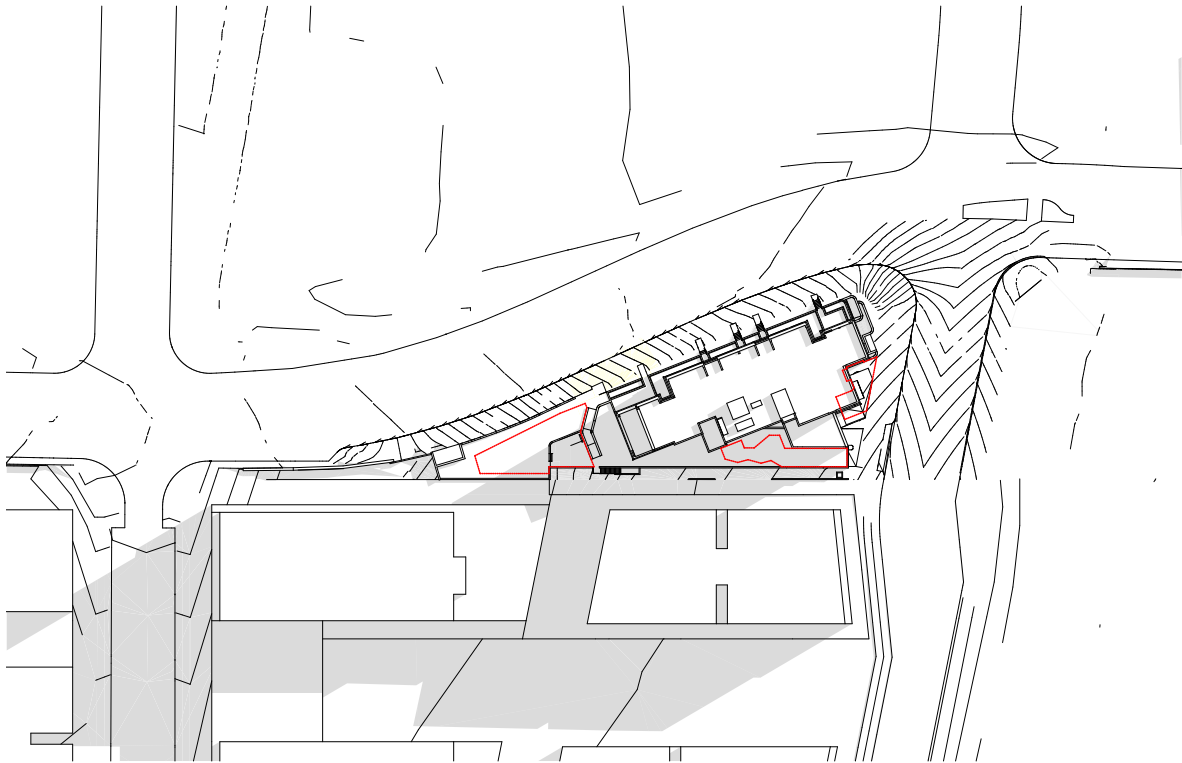
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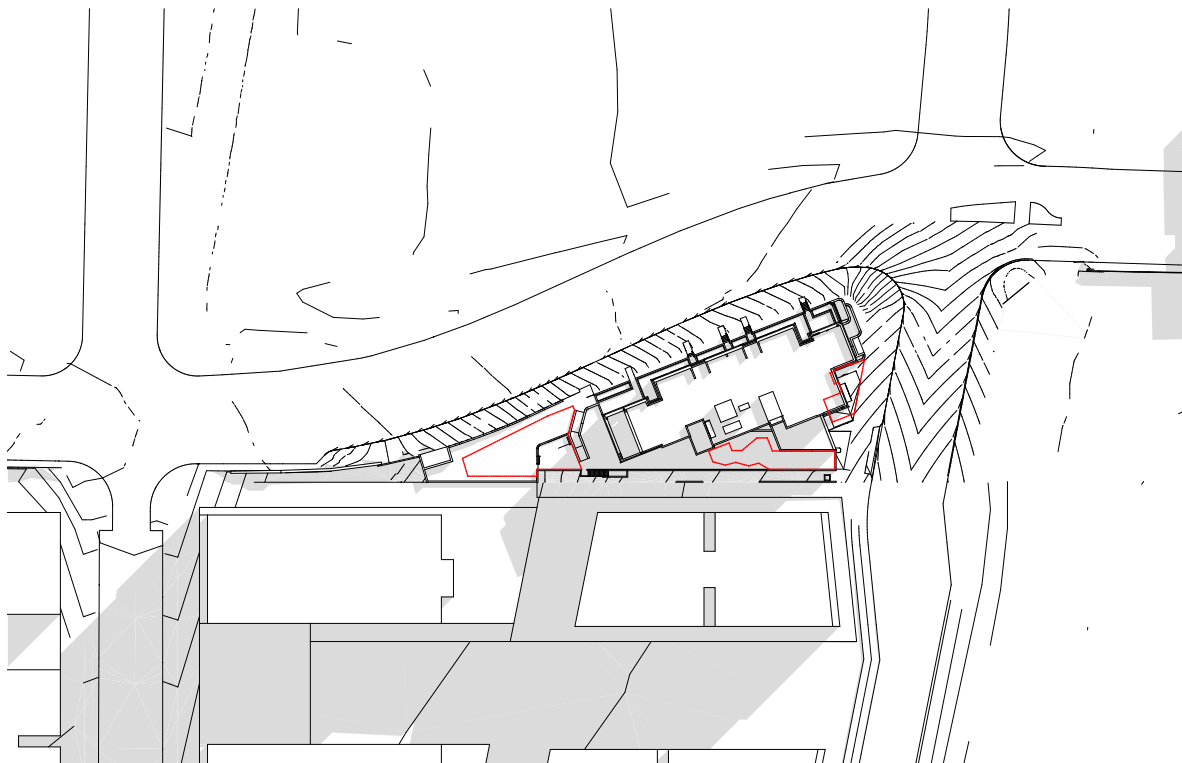
WINTER SOLSTICE SHADOW DIAGRAMS

JUNE 21ST - PROPOSED

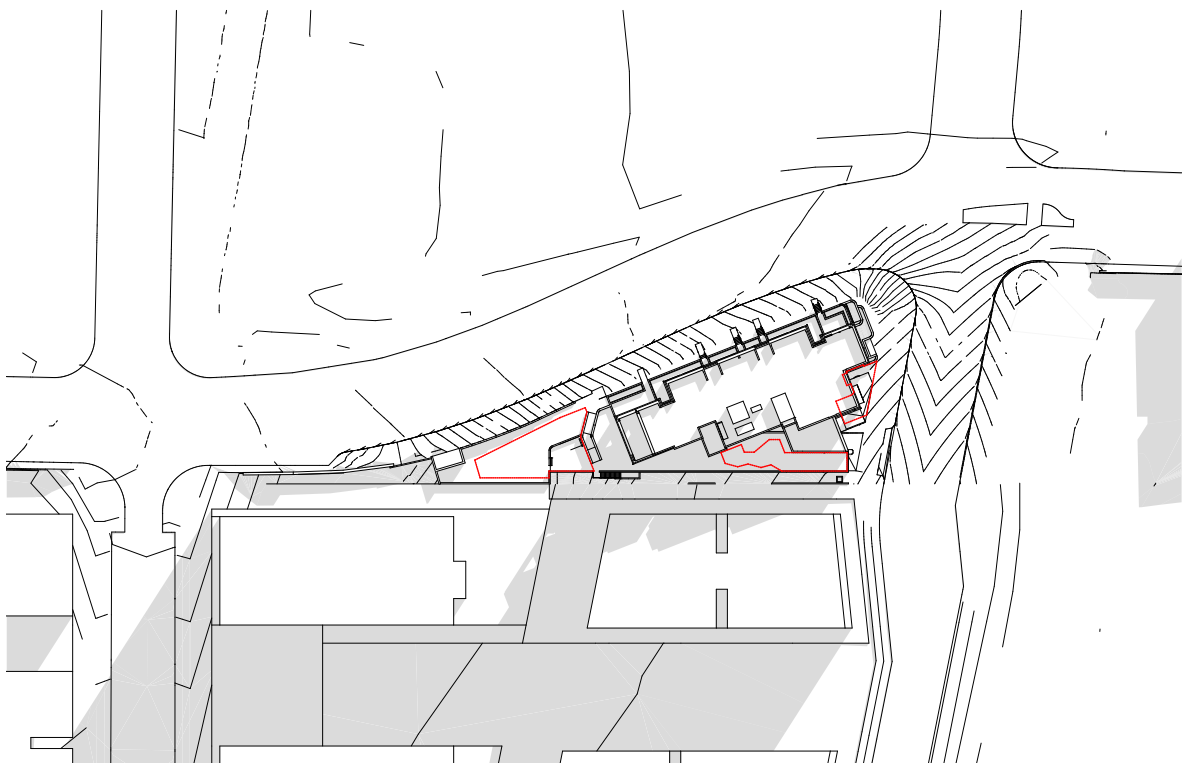
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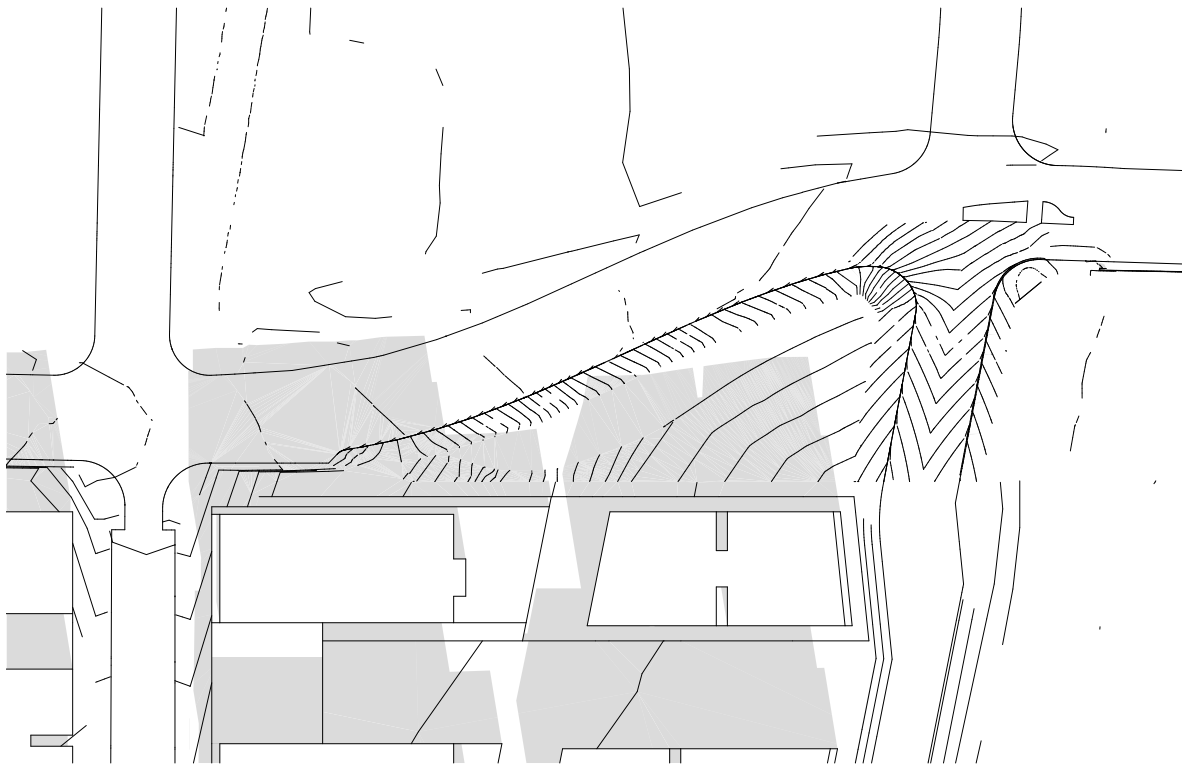
----- Principle Communal Space Zones

SUMMER SOLSTICE SHADOW DIAGRAMS

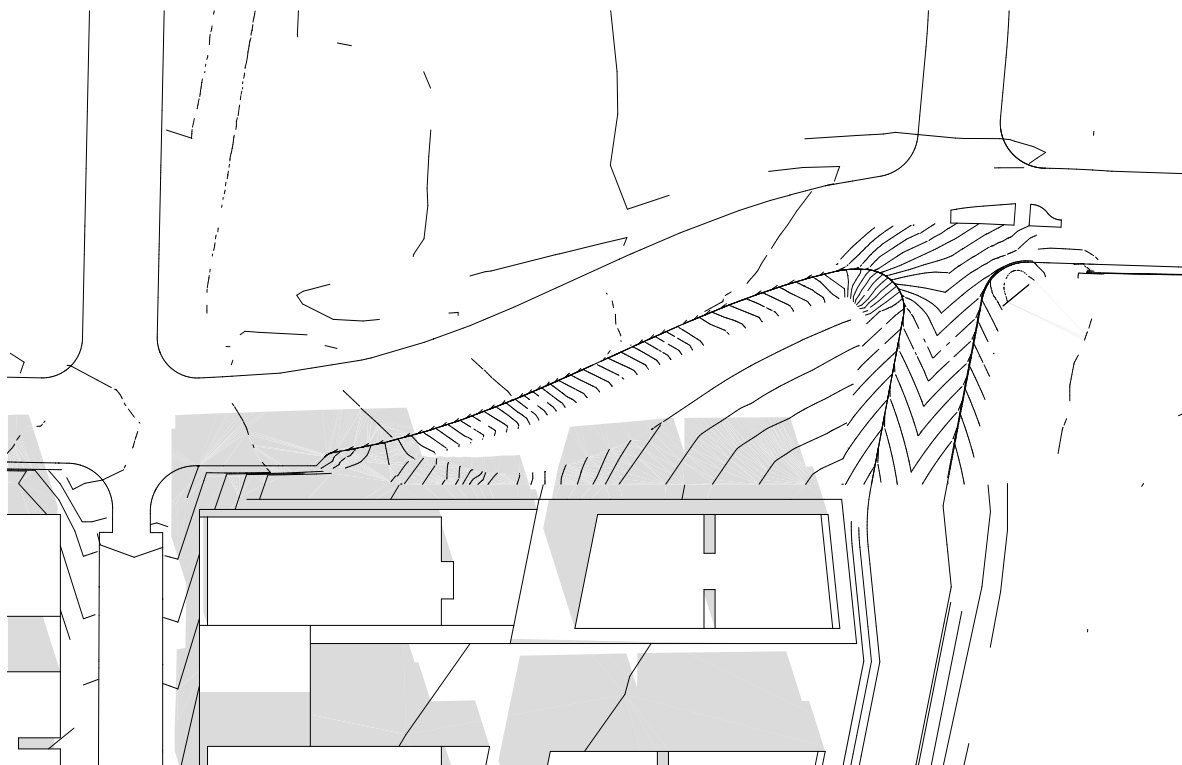
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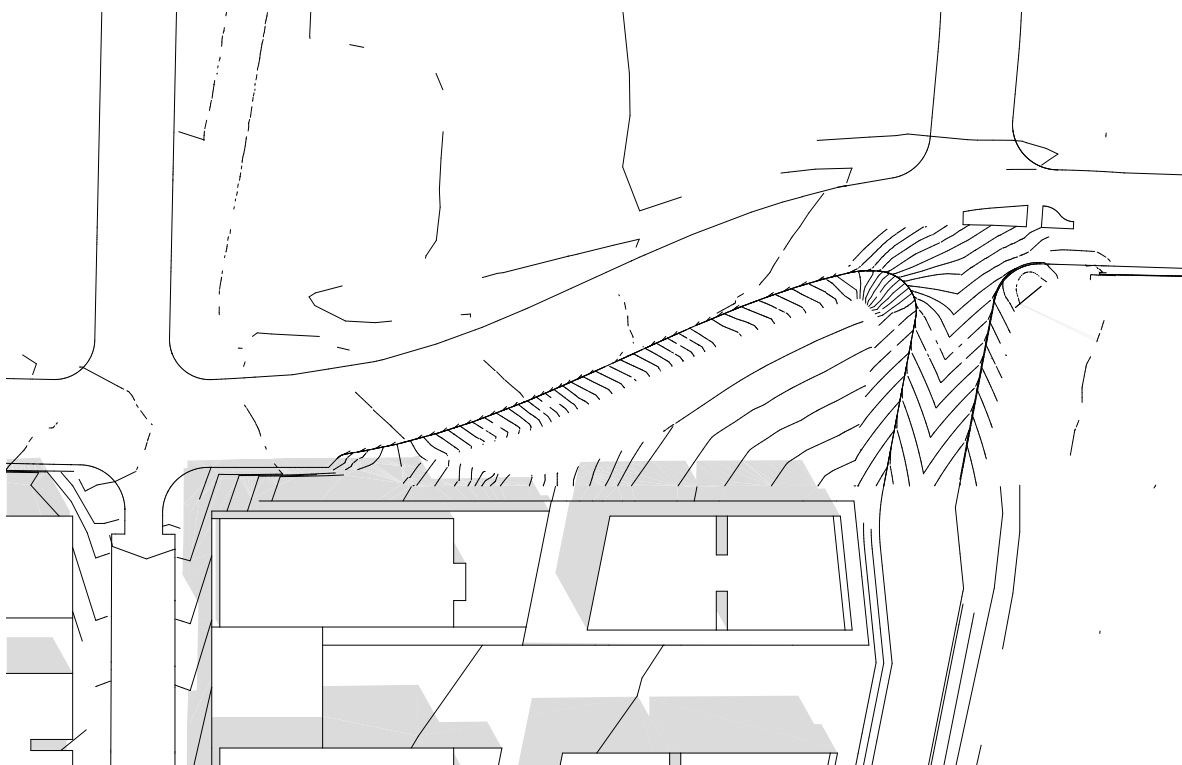
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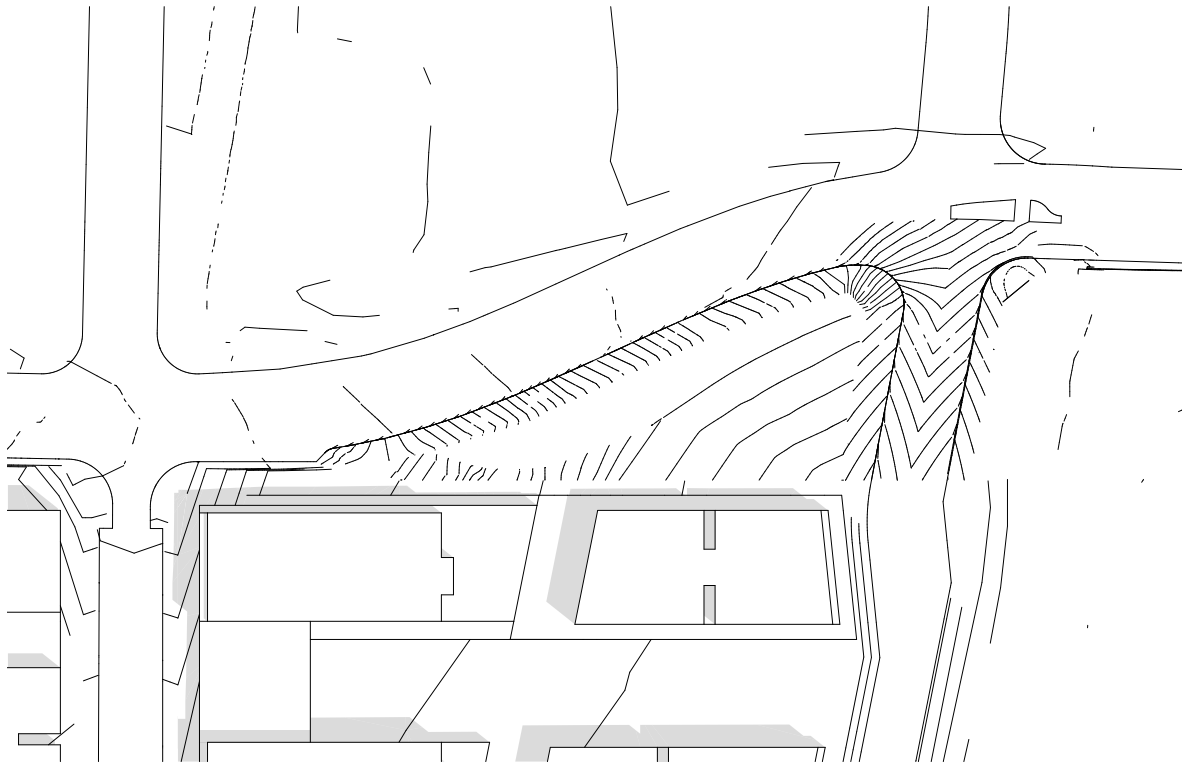
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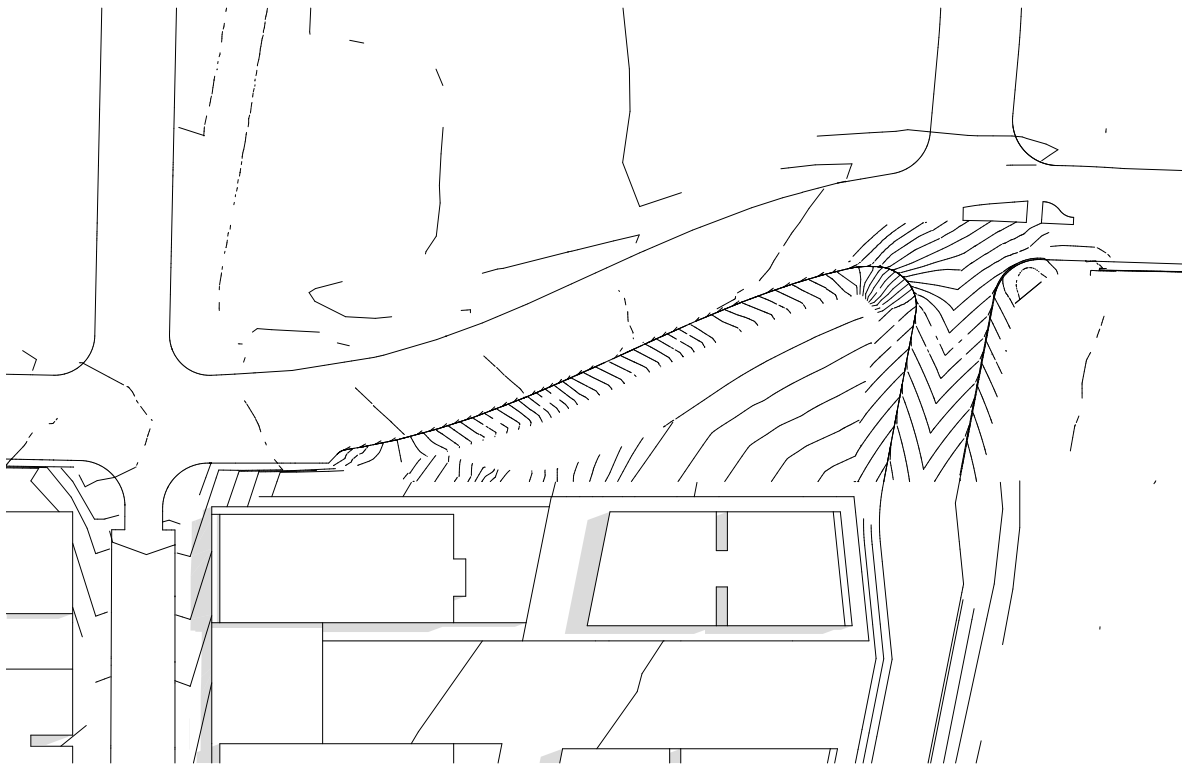


SUMMER SOLSTICE SHADOW DIAGRAMS

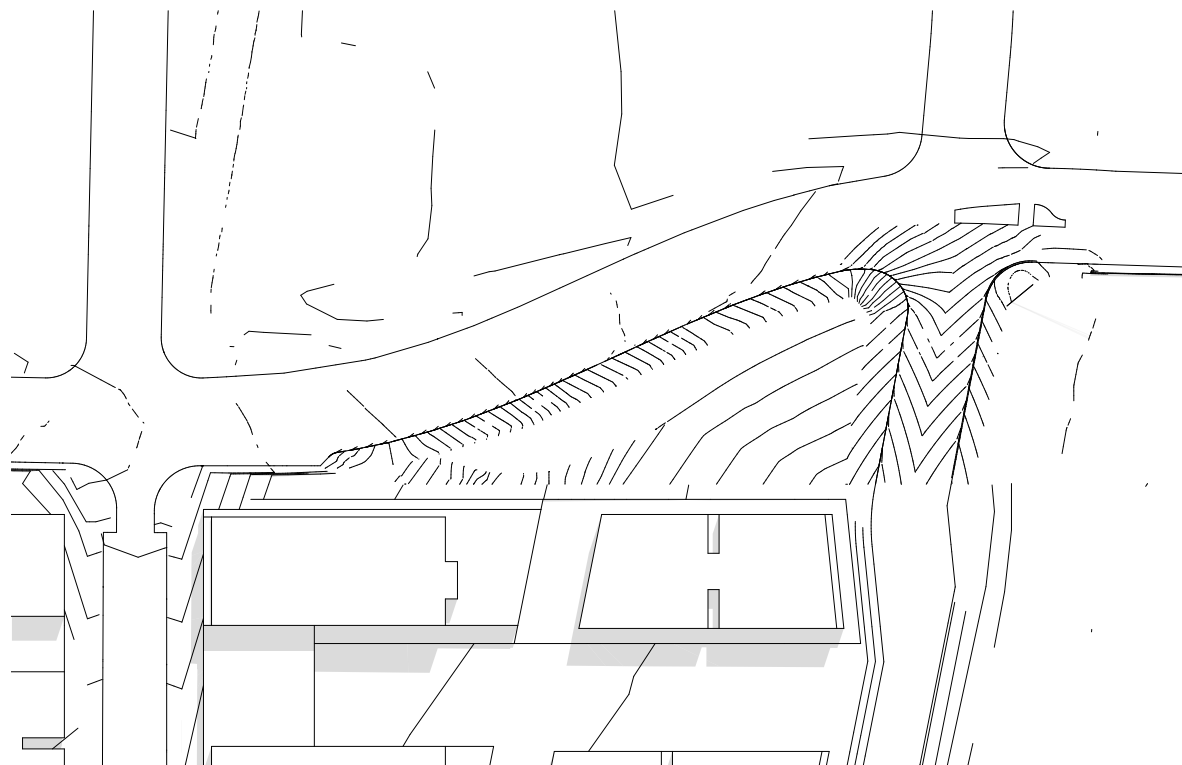
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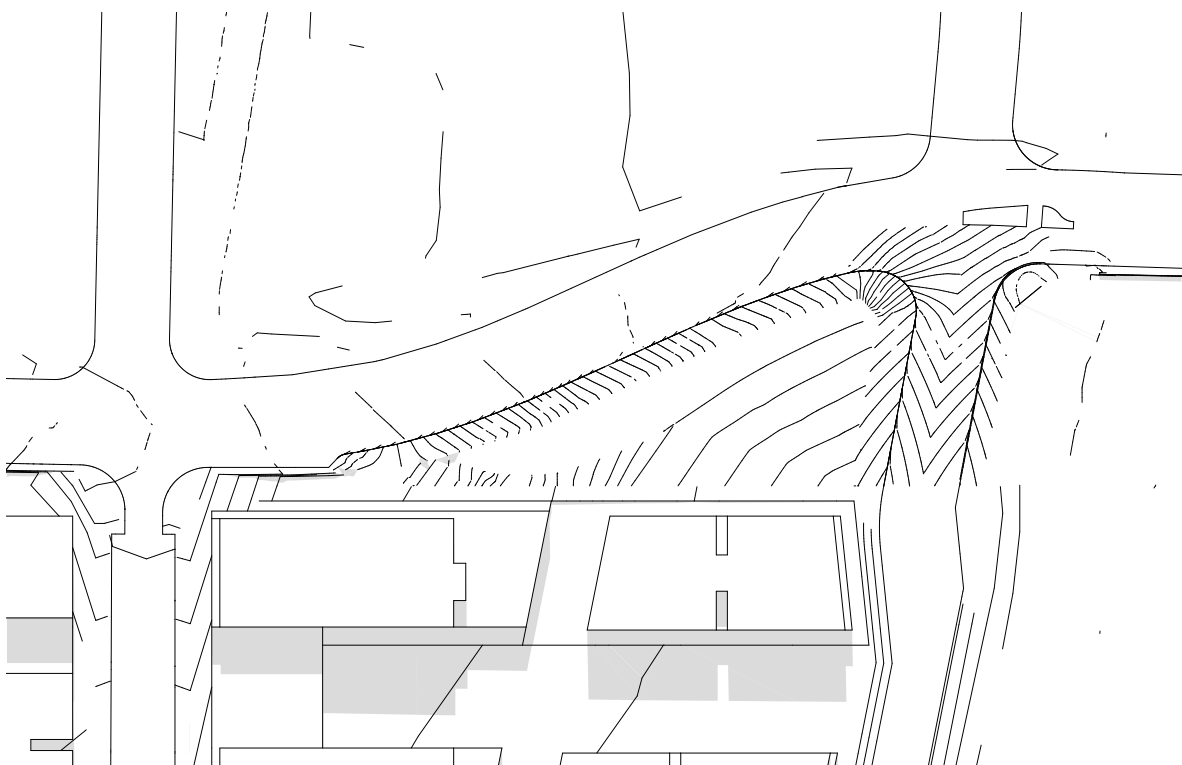
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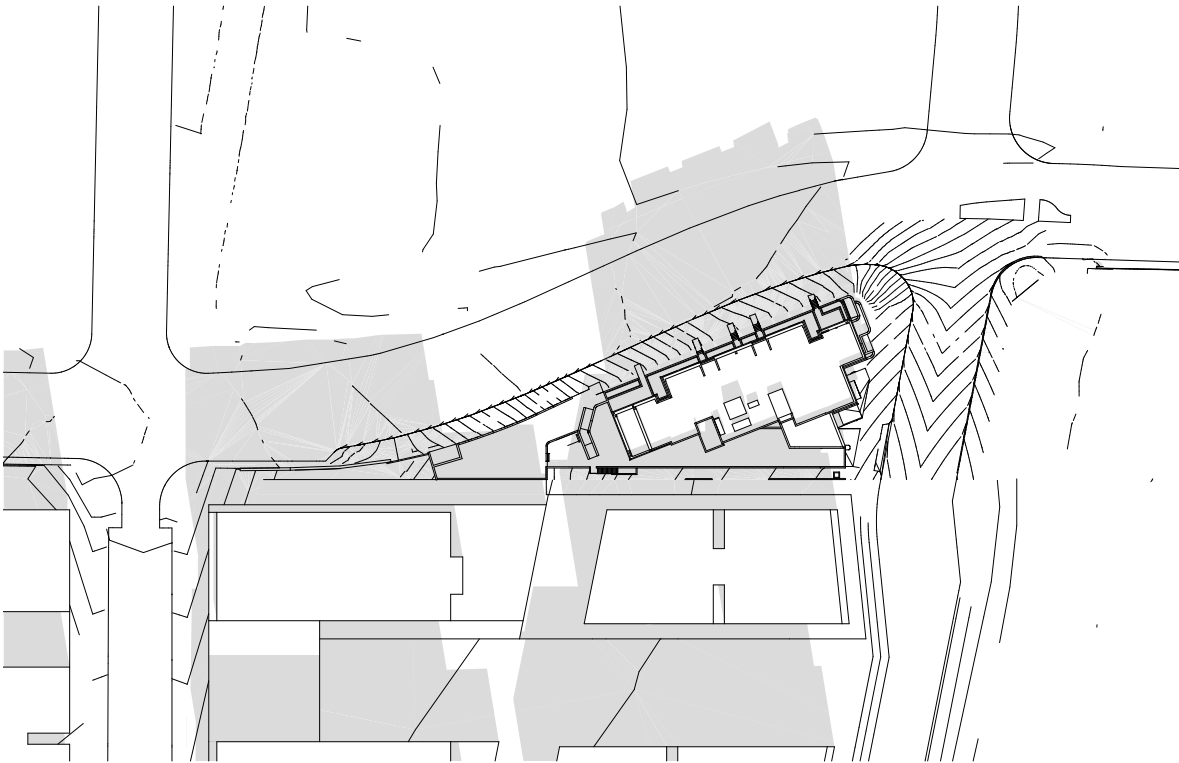
SUMMER SOLSTICE SHADOW DIAGRAMS

DECEMBER 22ND - PROPOSED

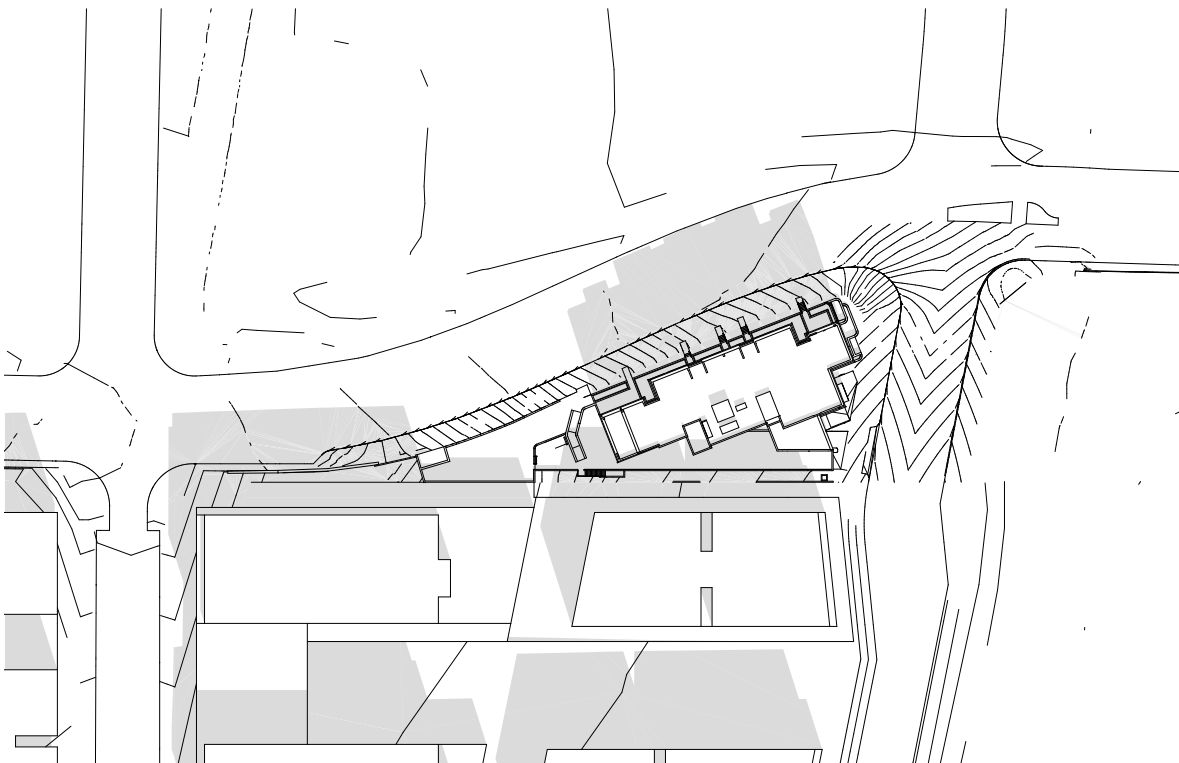


----- Principle Communal Space Zones

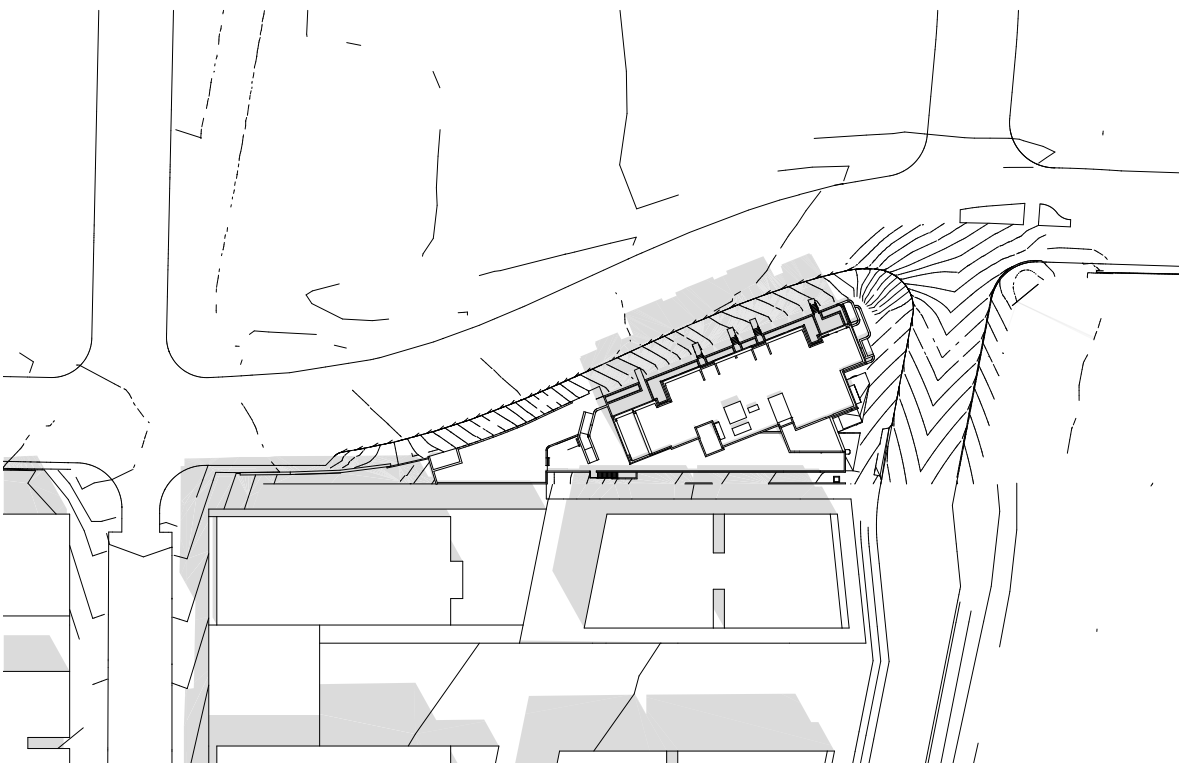
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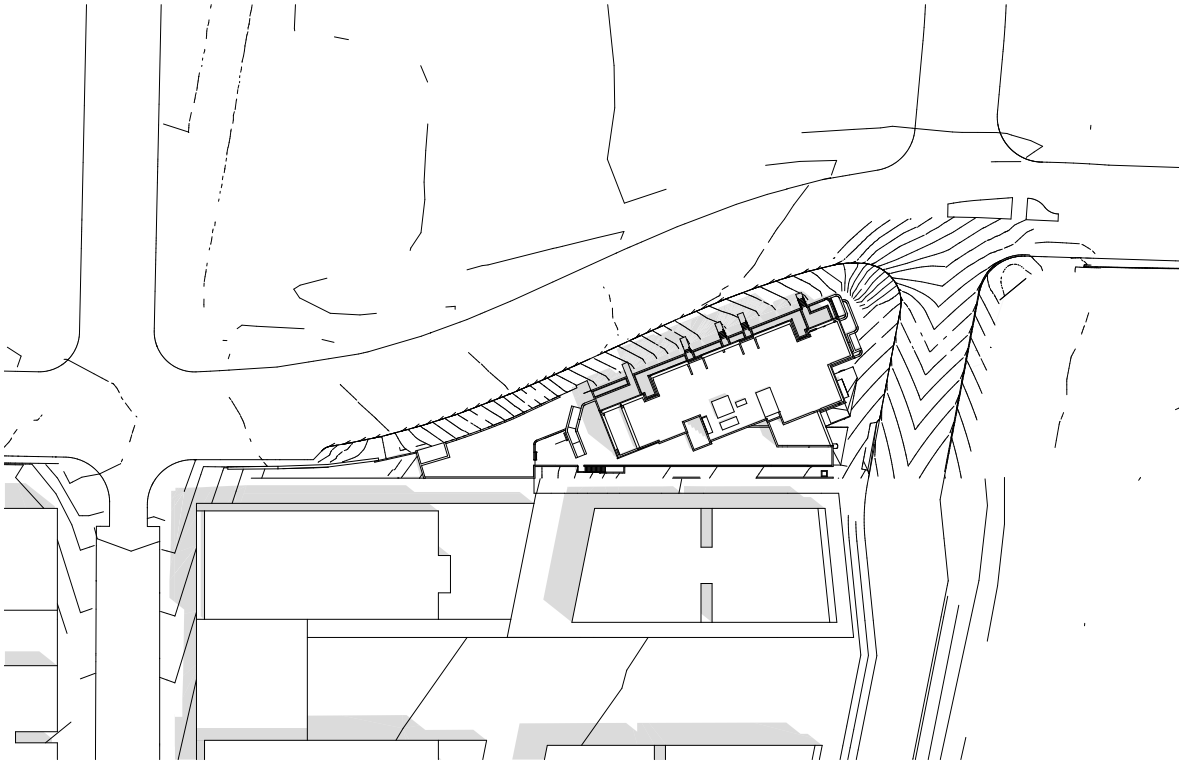
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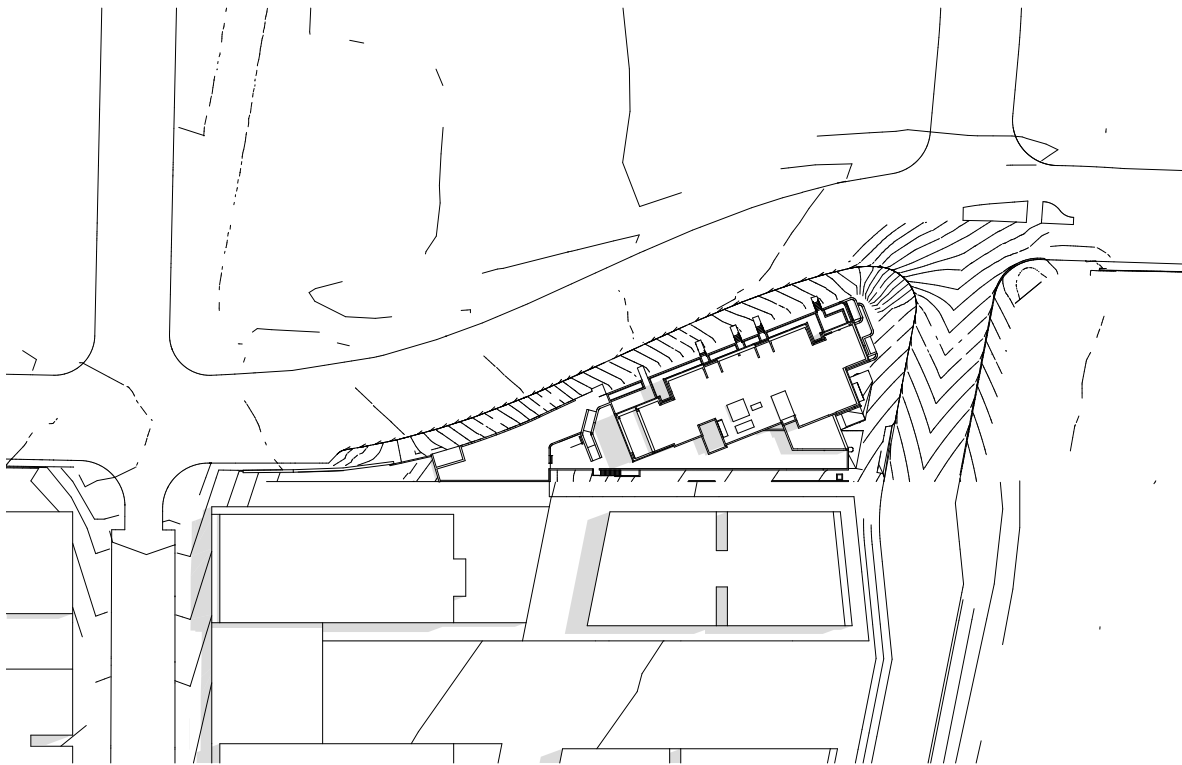
SUMMER SOLSTICE SHADOW DIAGRAMS

DECEMBER 22ND - PROPOSED

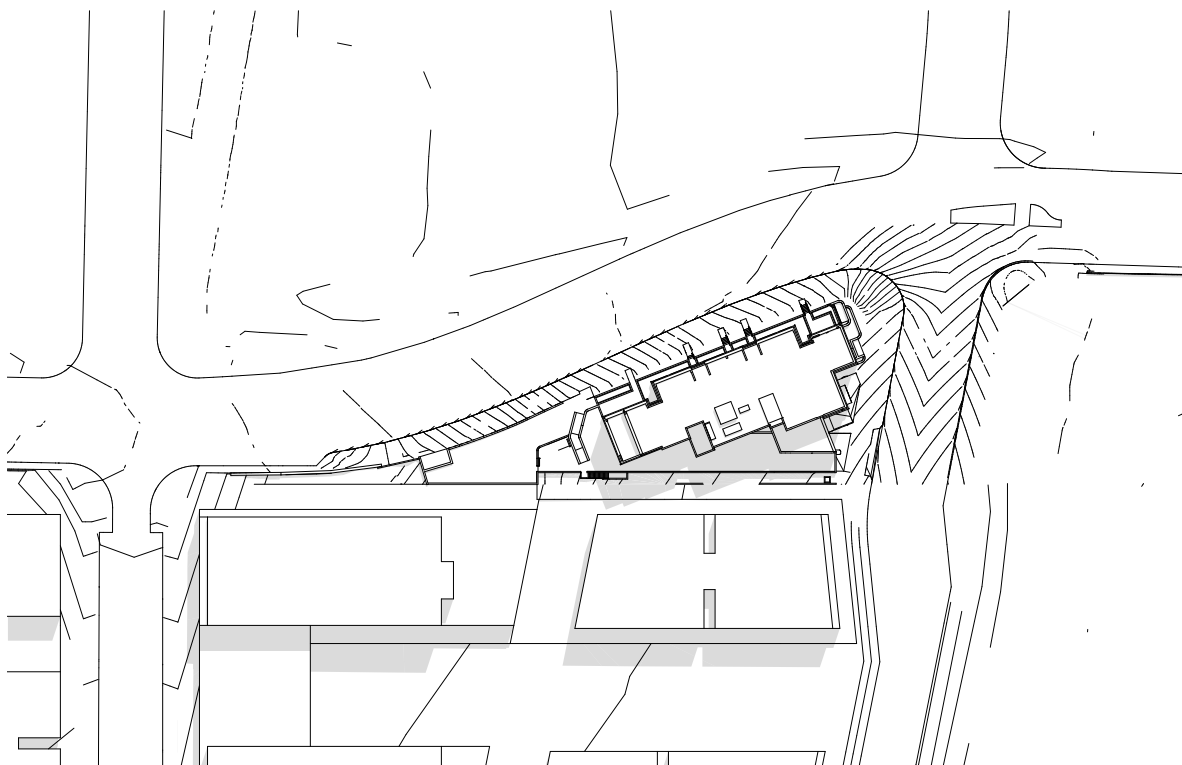


----- Principle Communal Space Zones

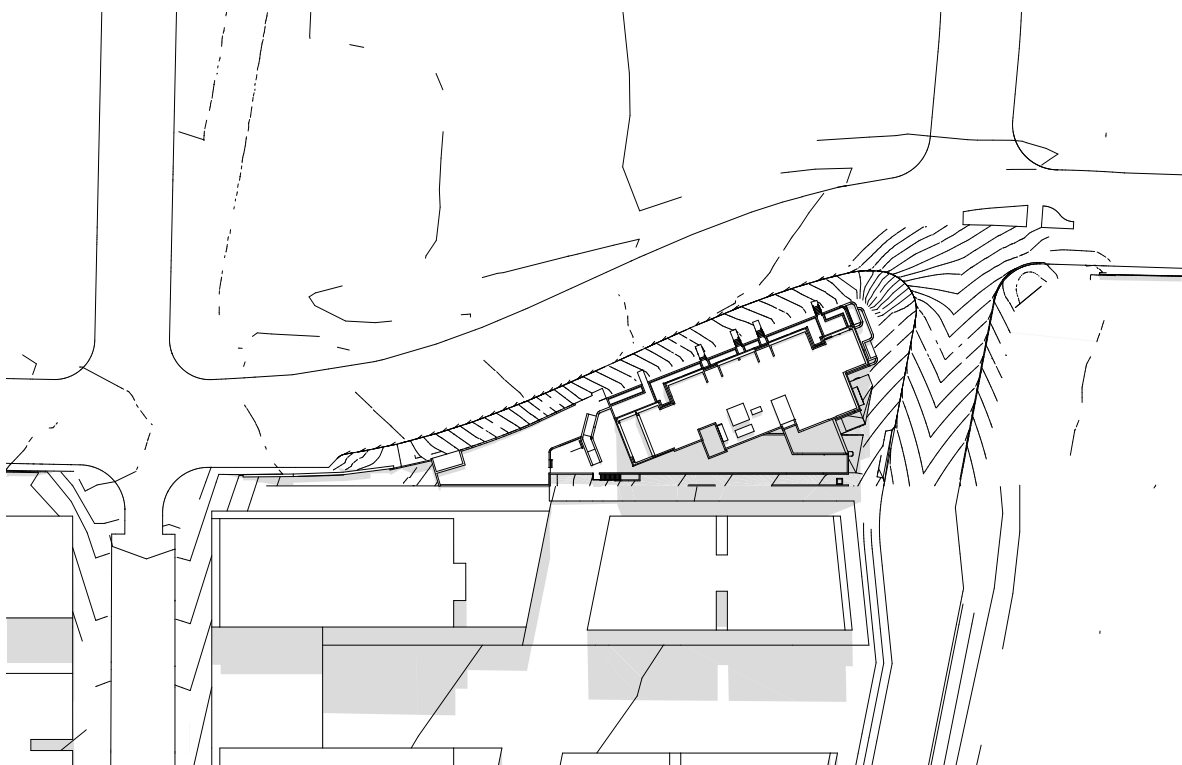
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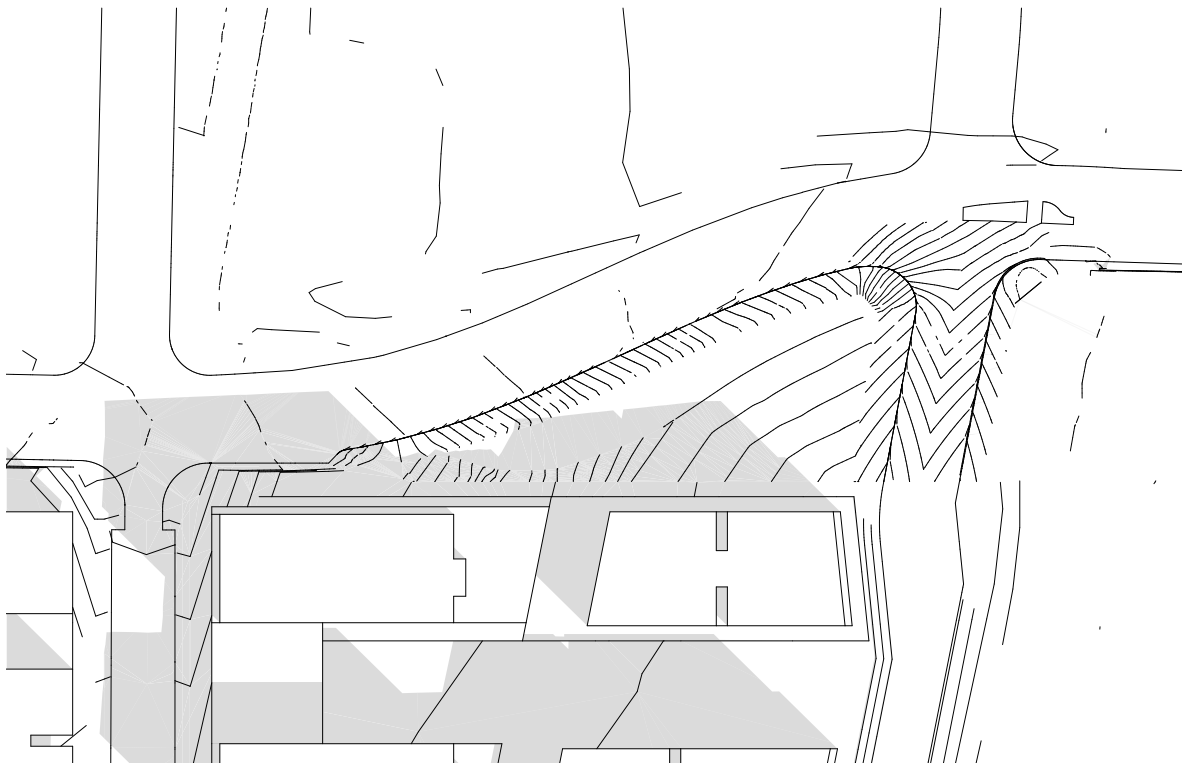


SPRING EQUINOX SHADOW DIAGRAMS

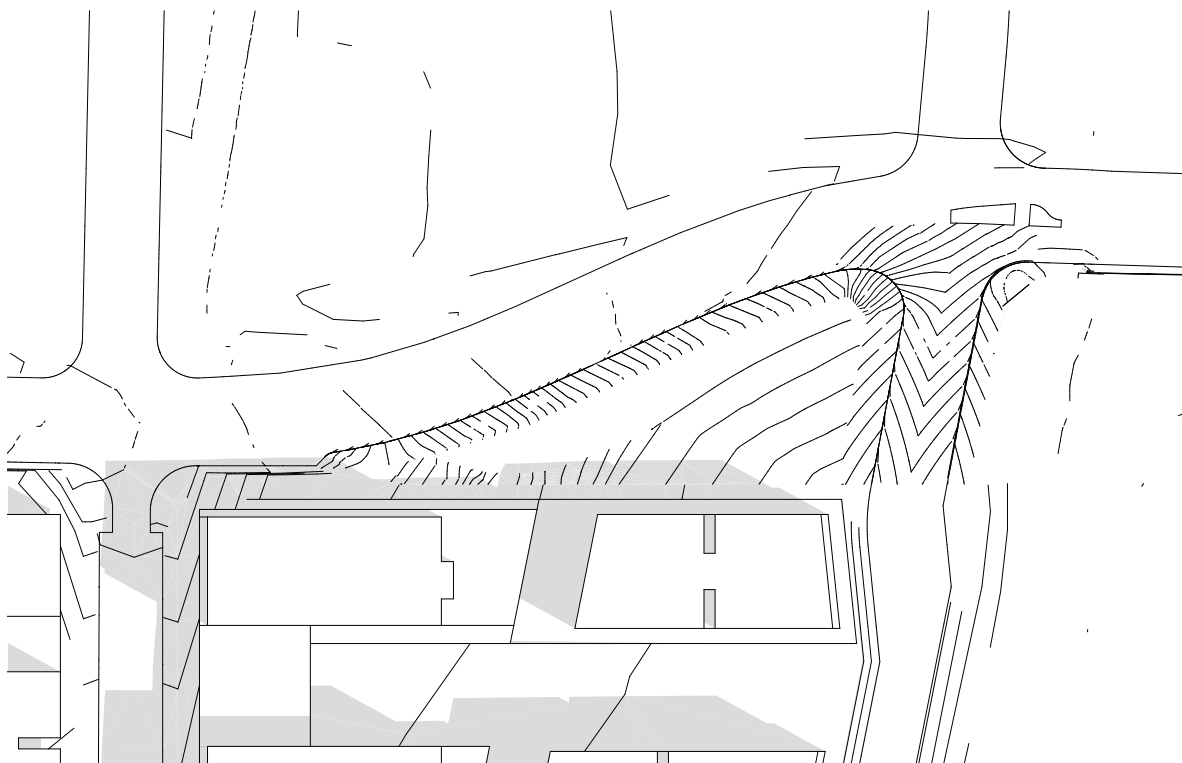
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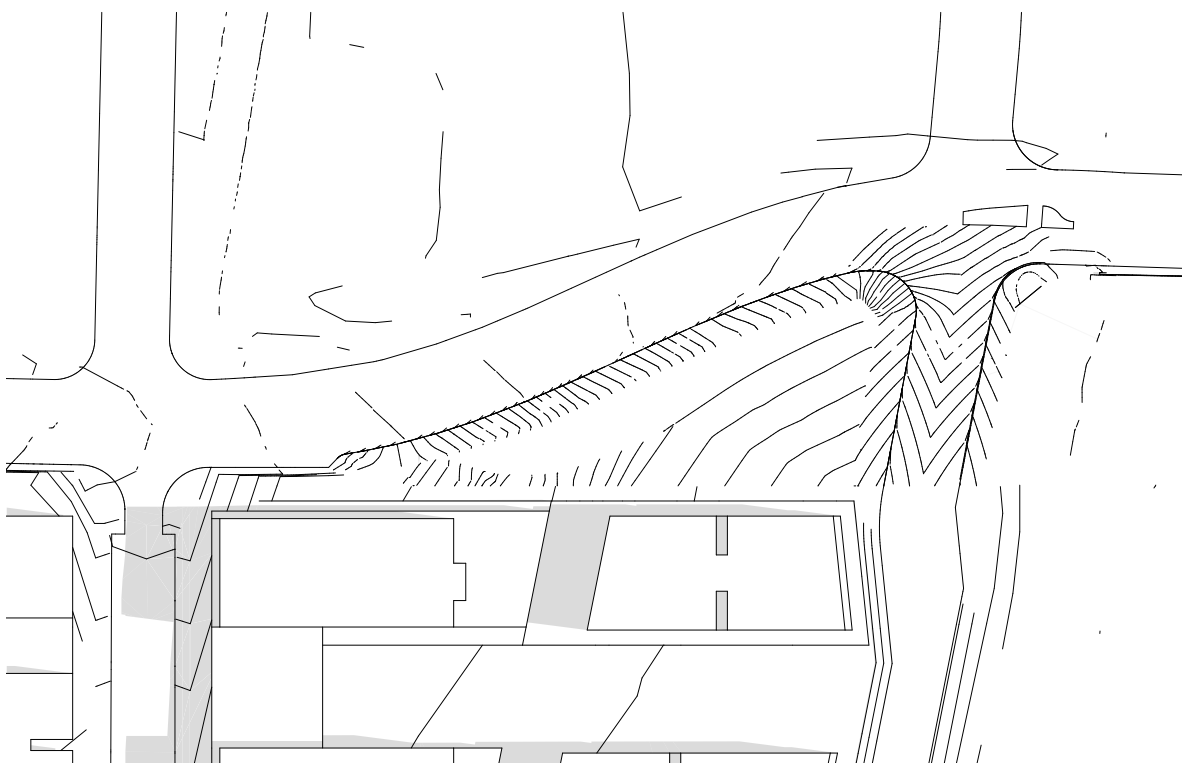
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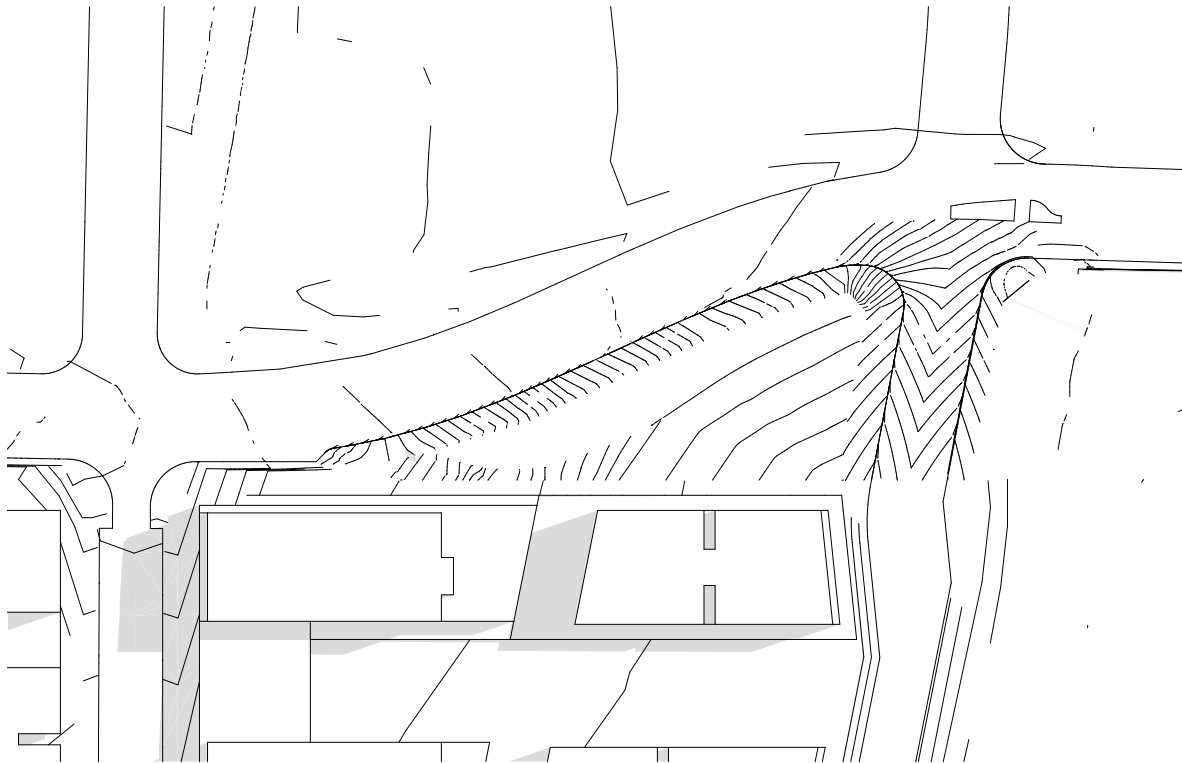
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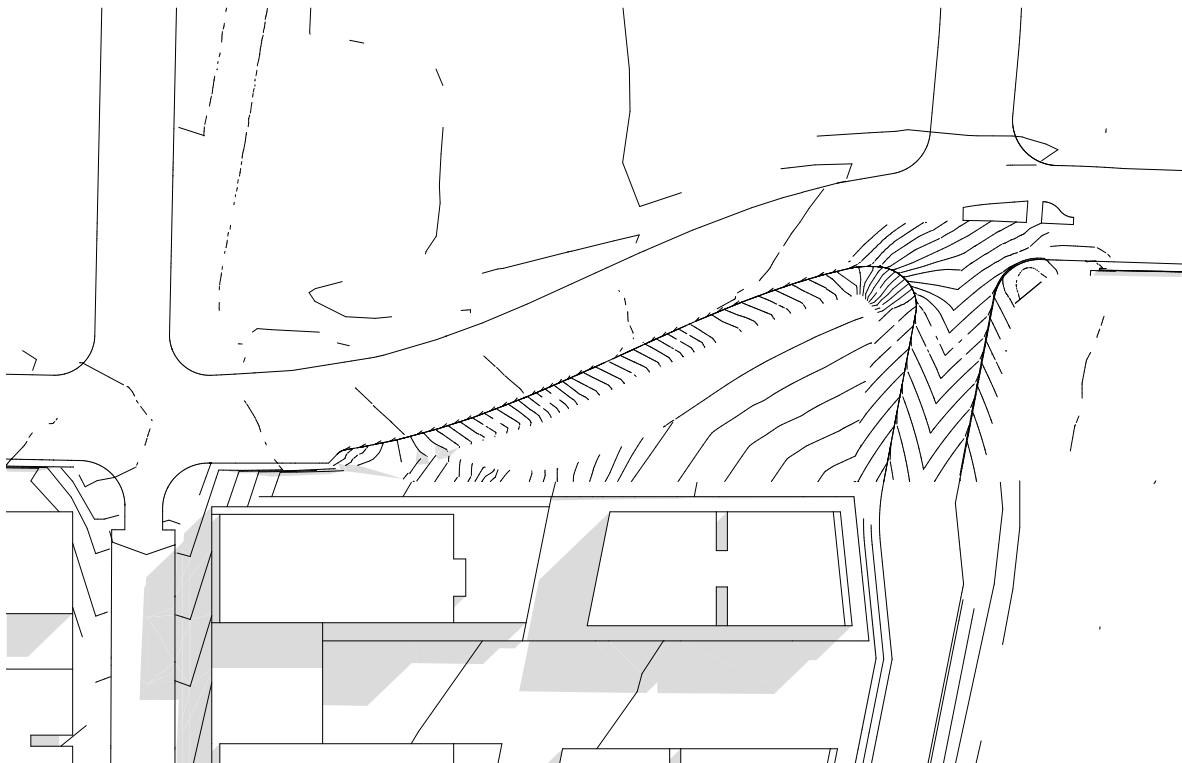


SPRING EQUINOX SHADOW DIAGRAMS

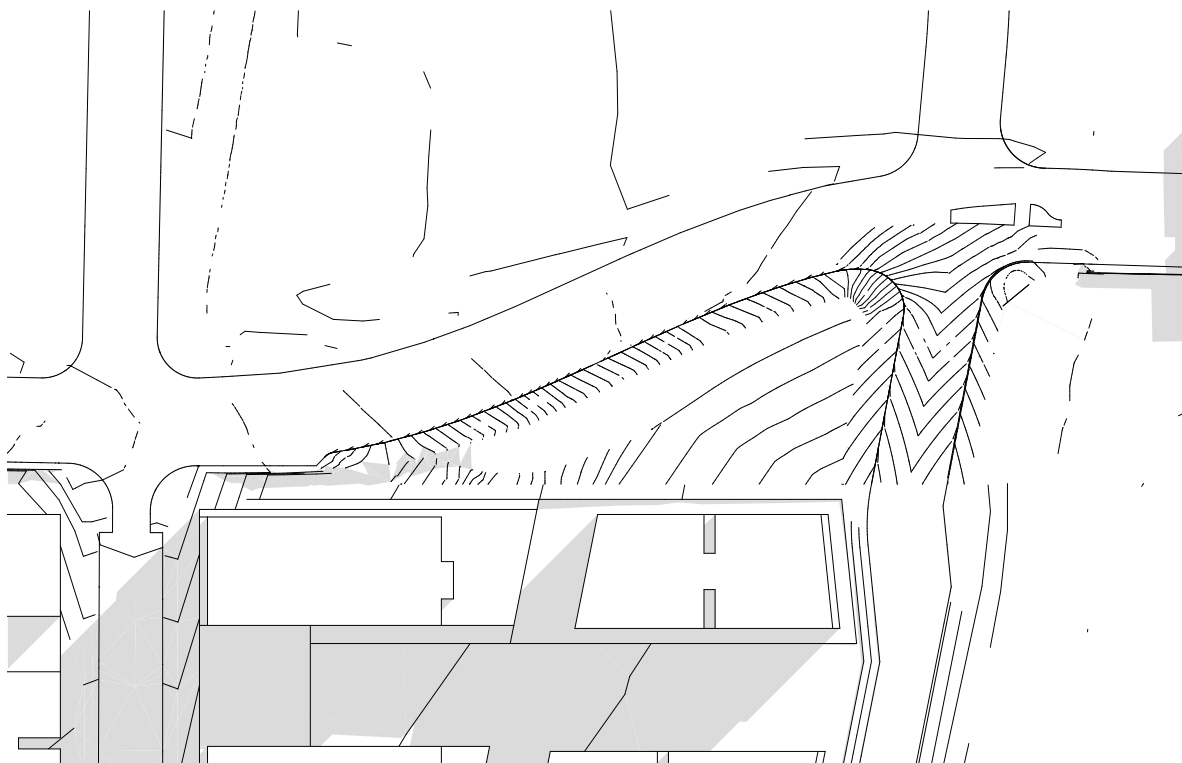
SEPTEMBER 23RD - EXISTING



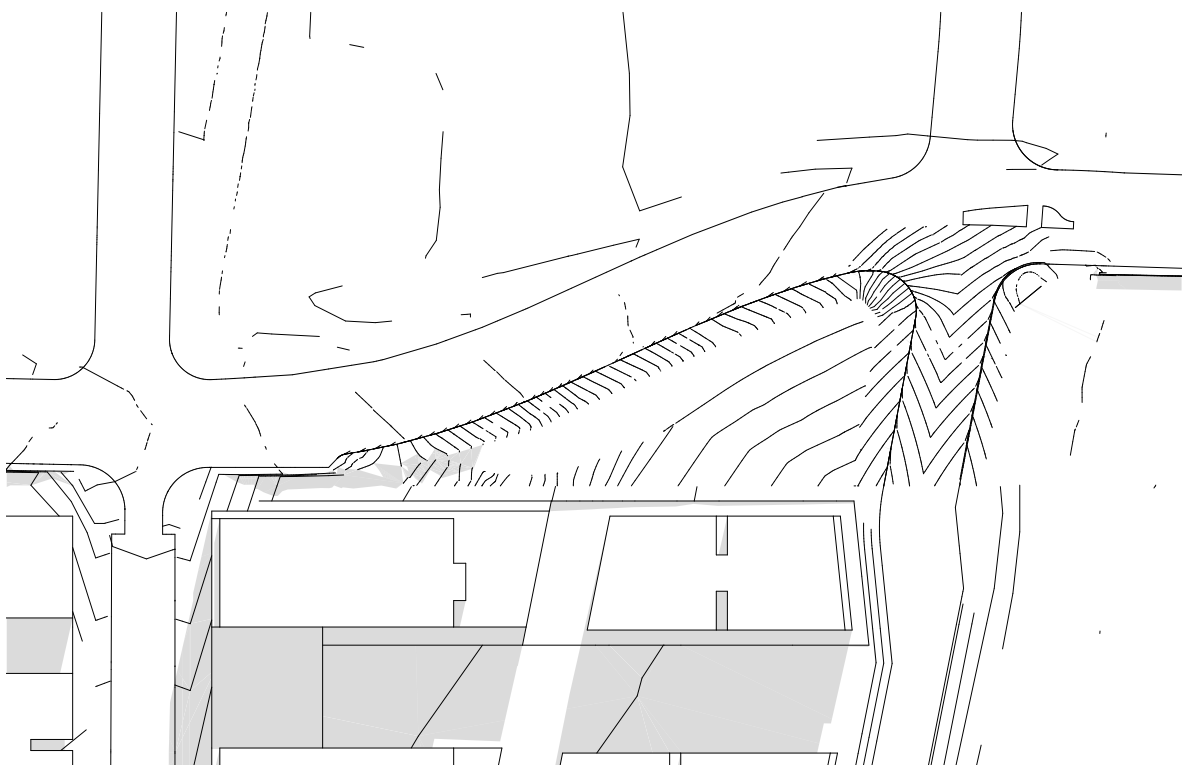
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14:00



15:00



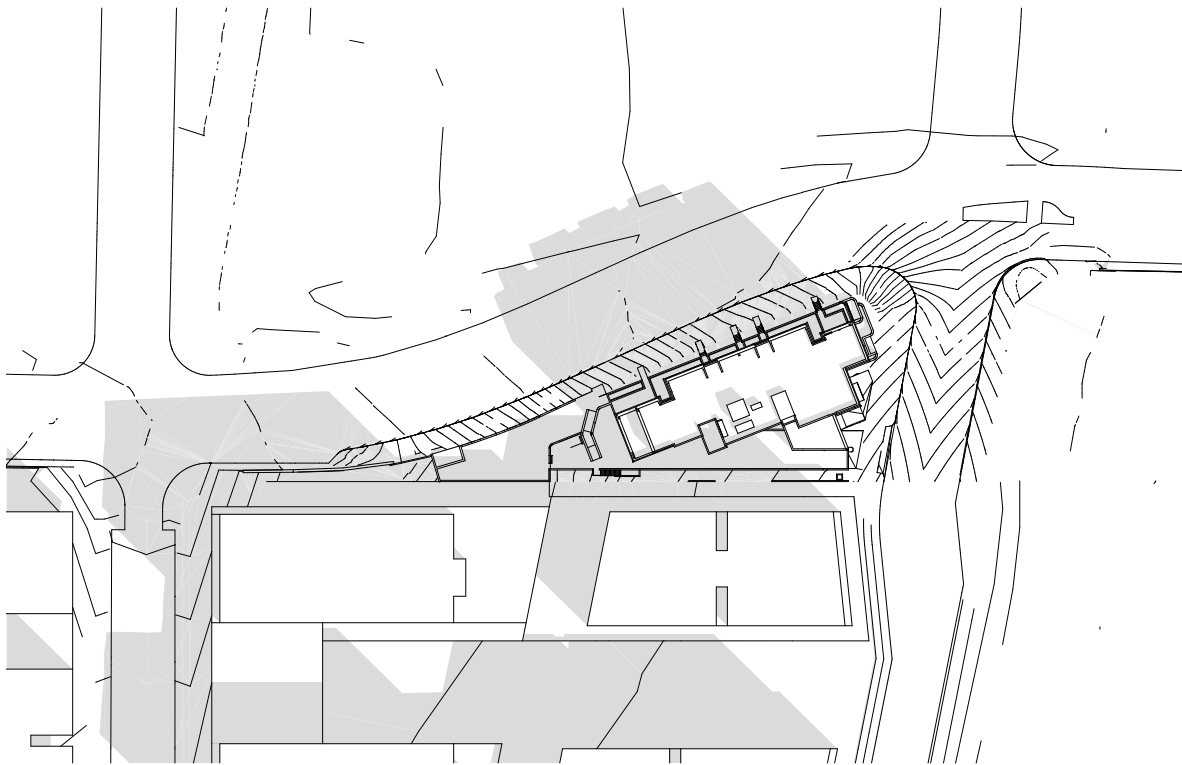
SPRING EQUINOX SHADOW DIAGRAMS

SEPTEMBER 23RD - PROPOSED

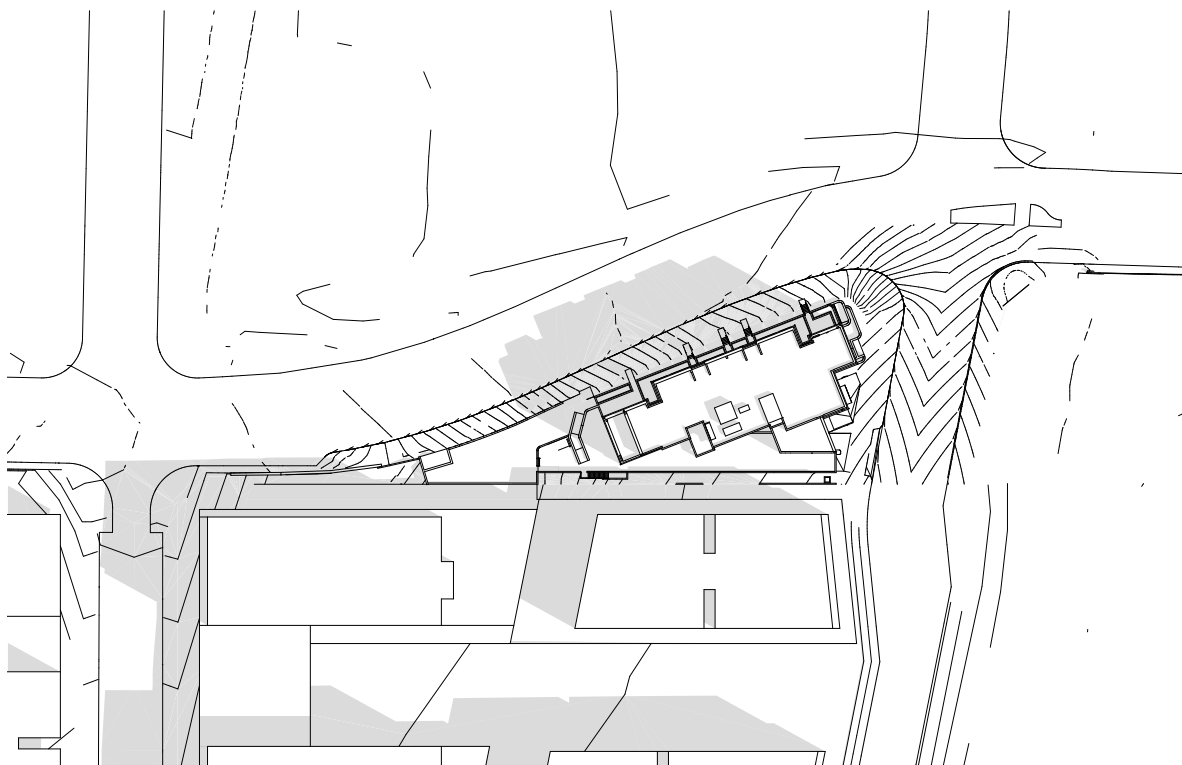


----- Principle Communal Space Zones

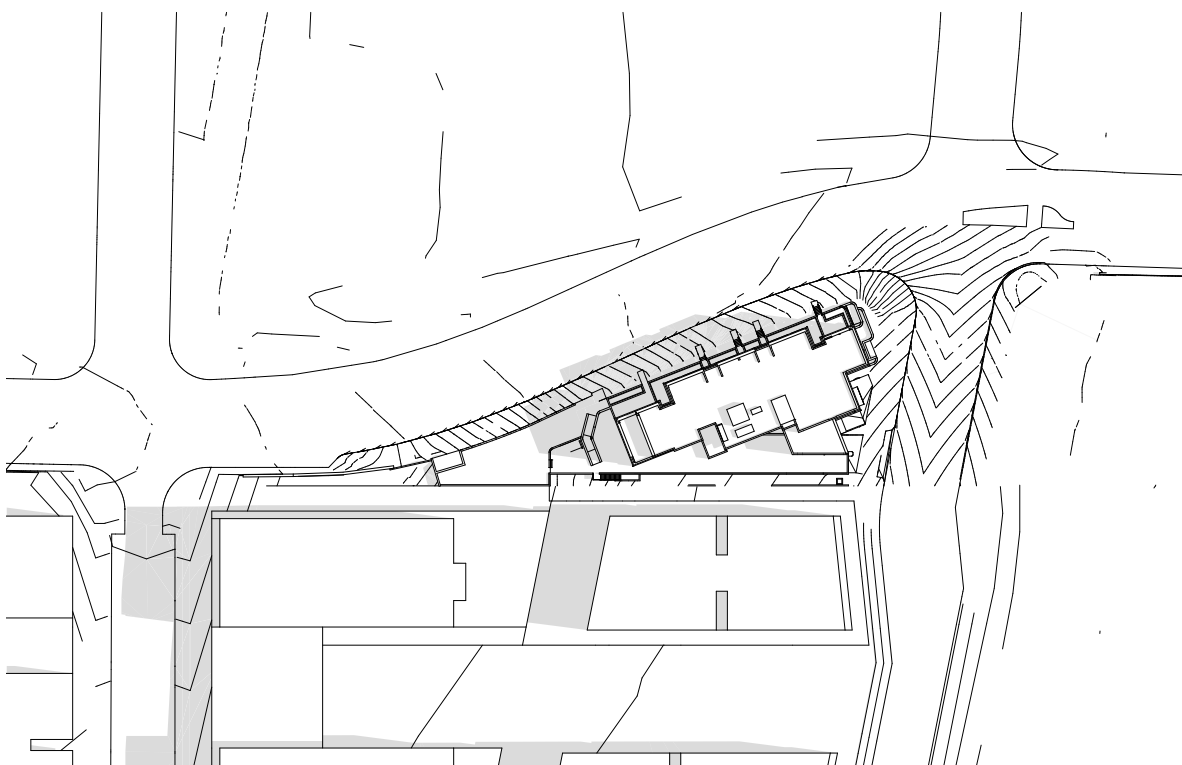
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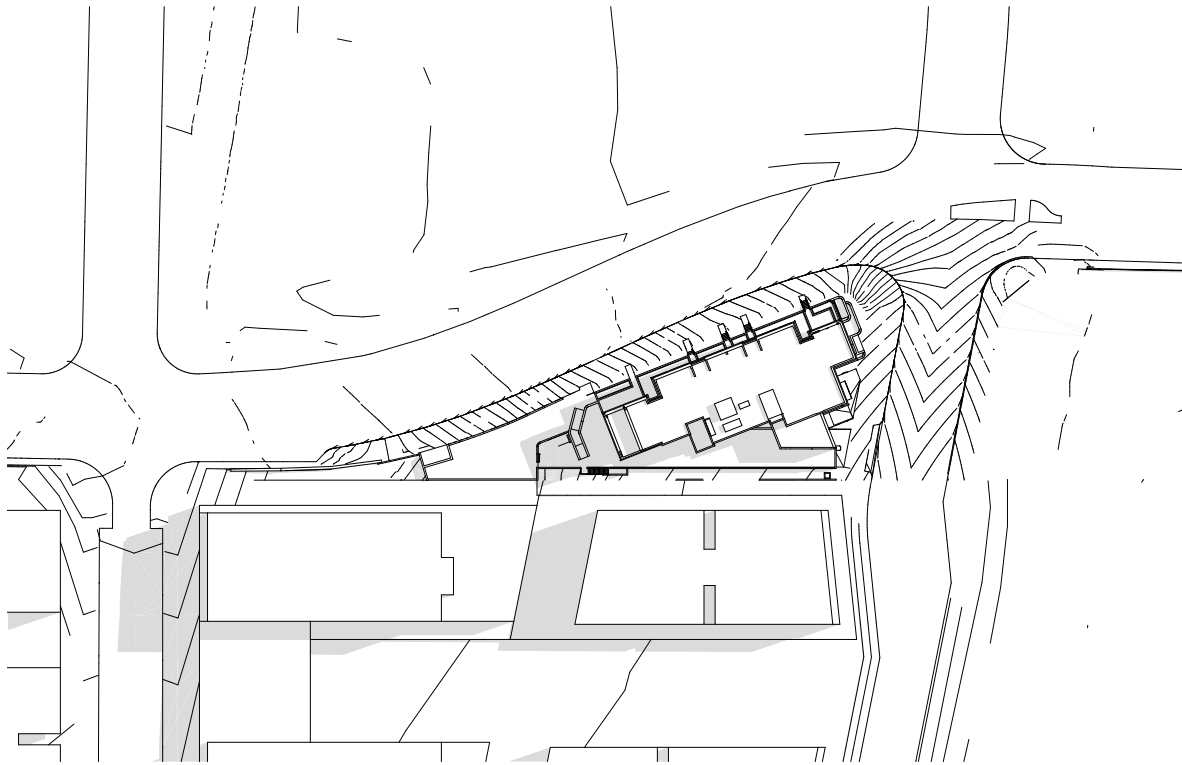
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11:00



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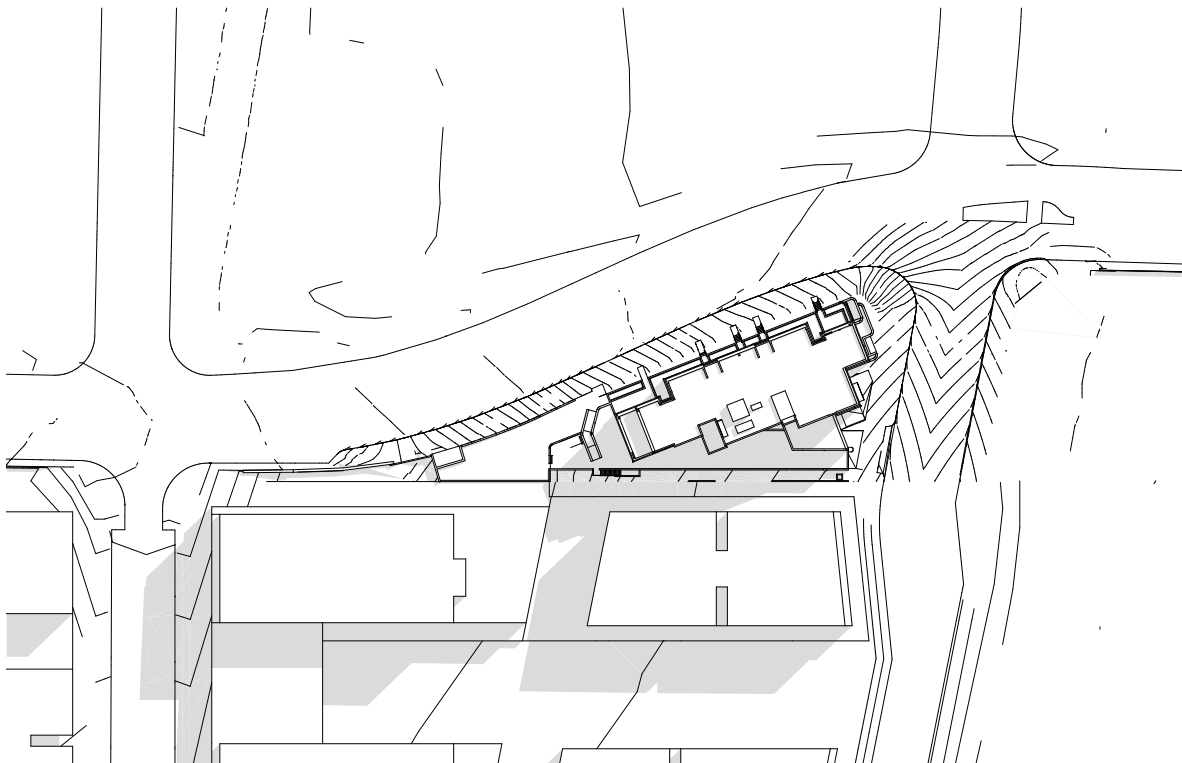
SPRING EQUINOX SHADOW DIAGRAMS

SEPTEMBER 23RD - PROPOSED

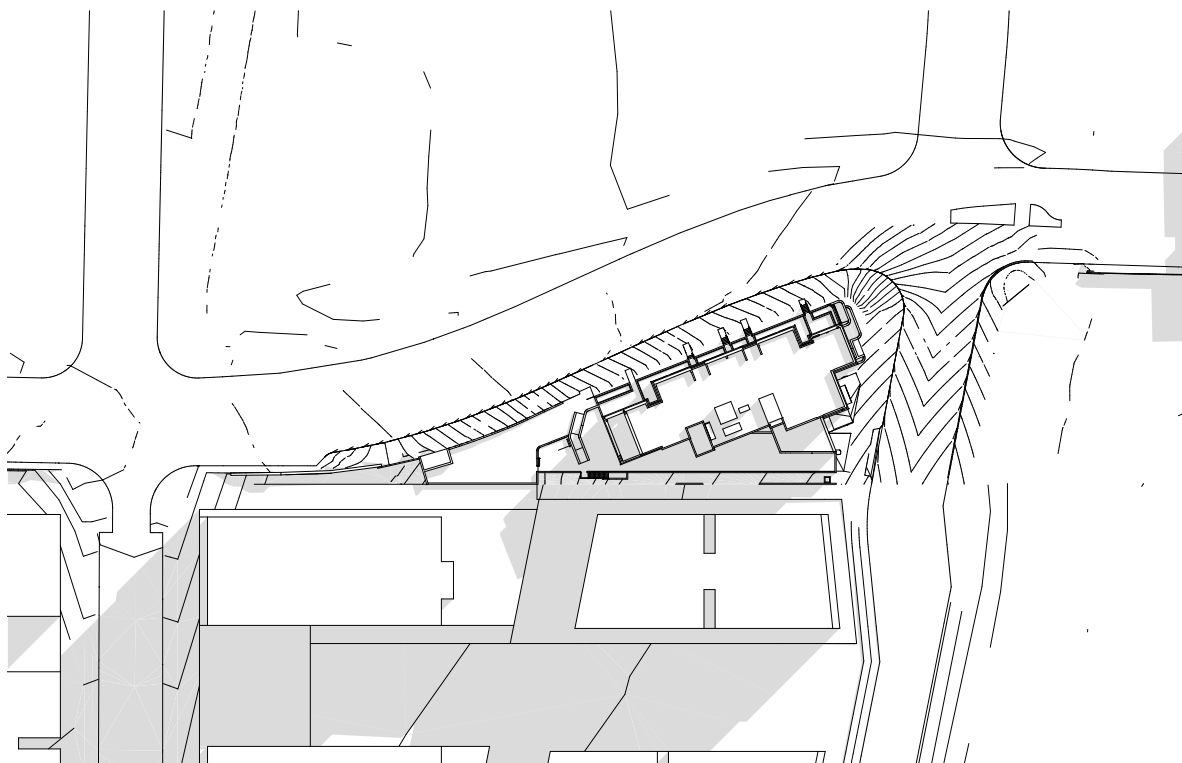


----- Principle Communal Space Zones

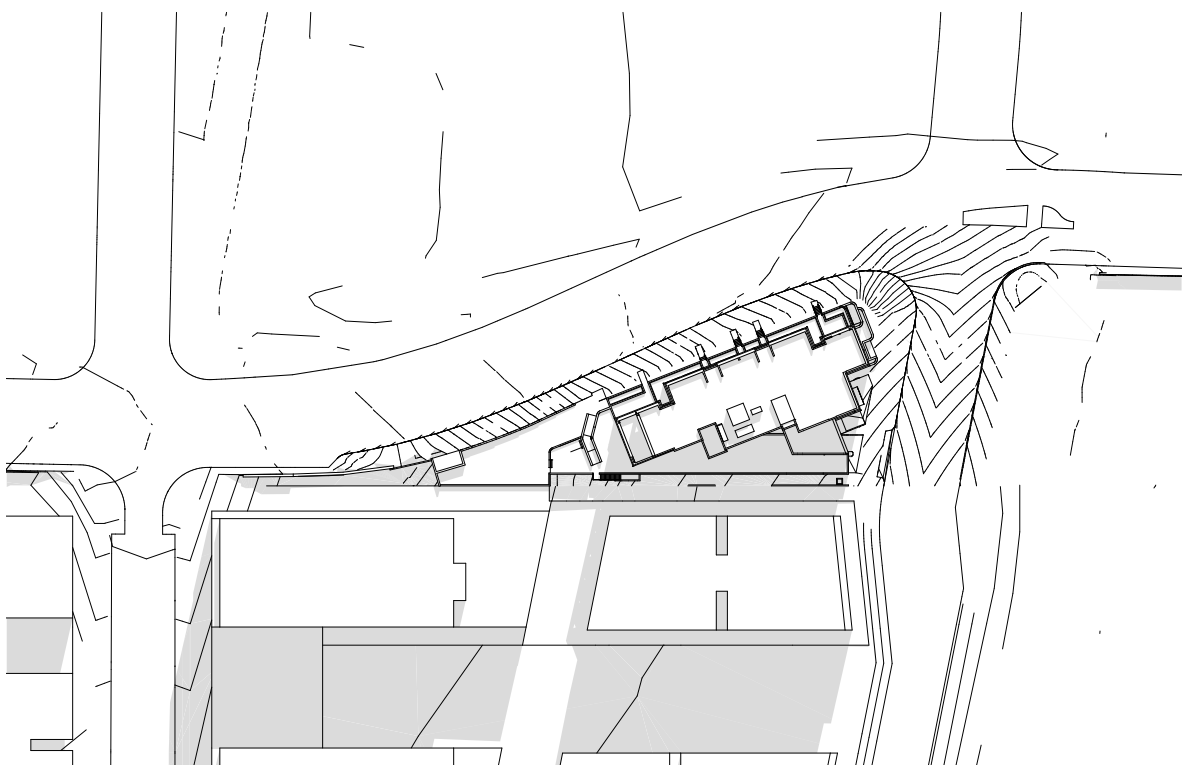
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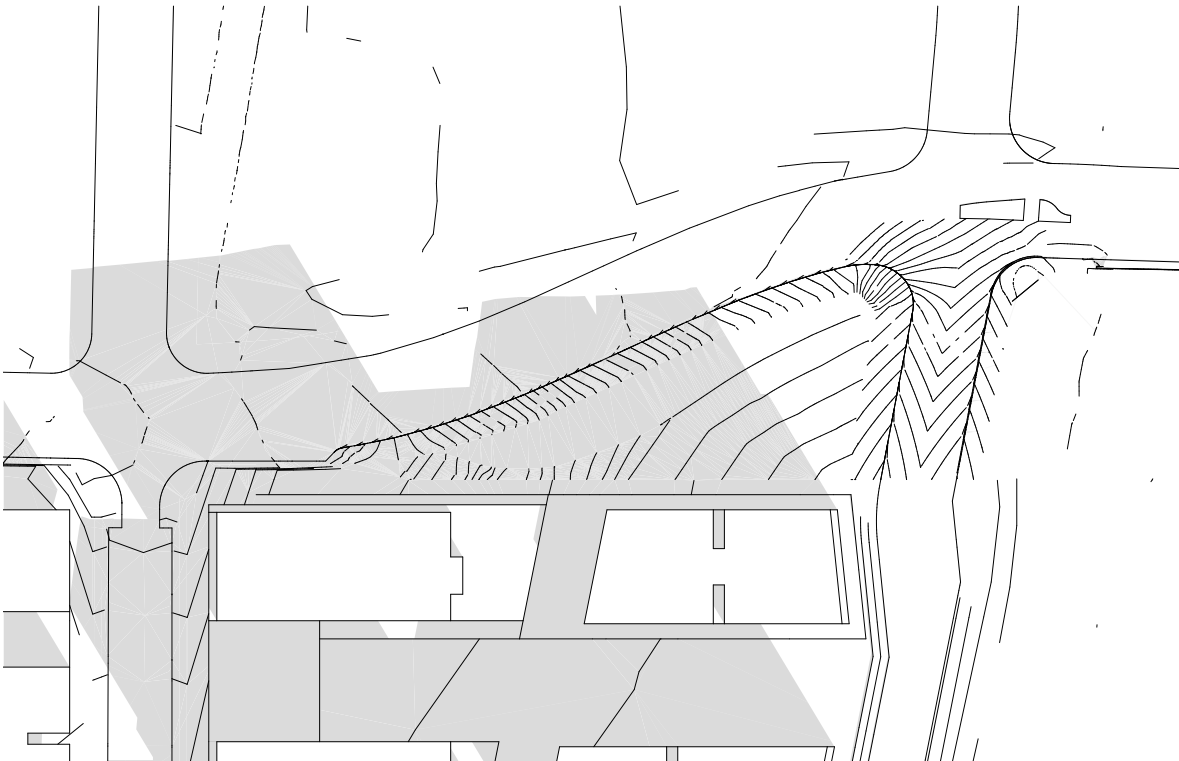


AUTUMN EQUINOX SHADOW DIAGRAMS

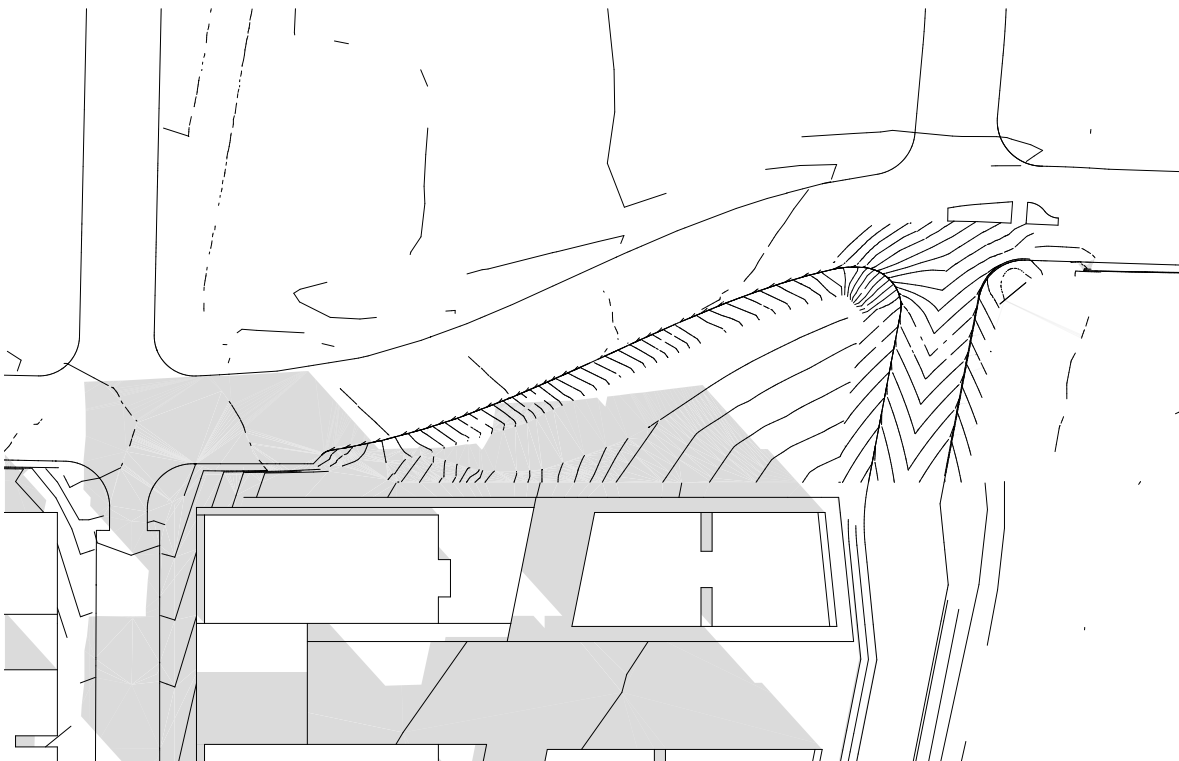
MARCH 20TH - EXISTING



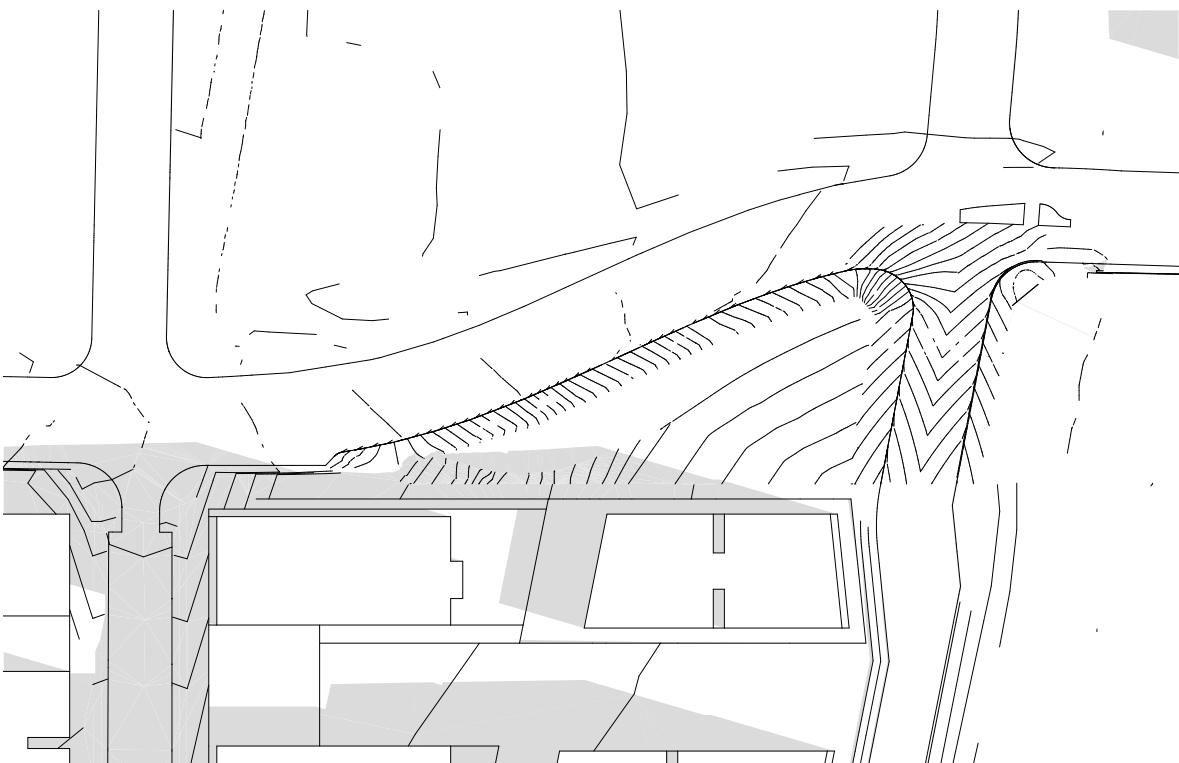
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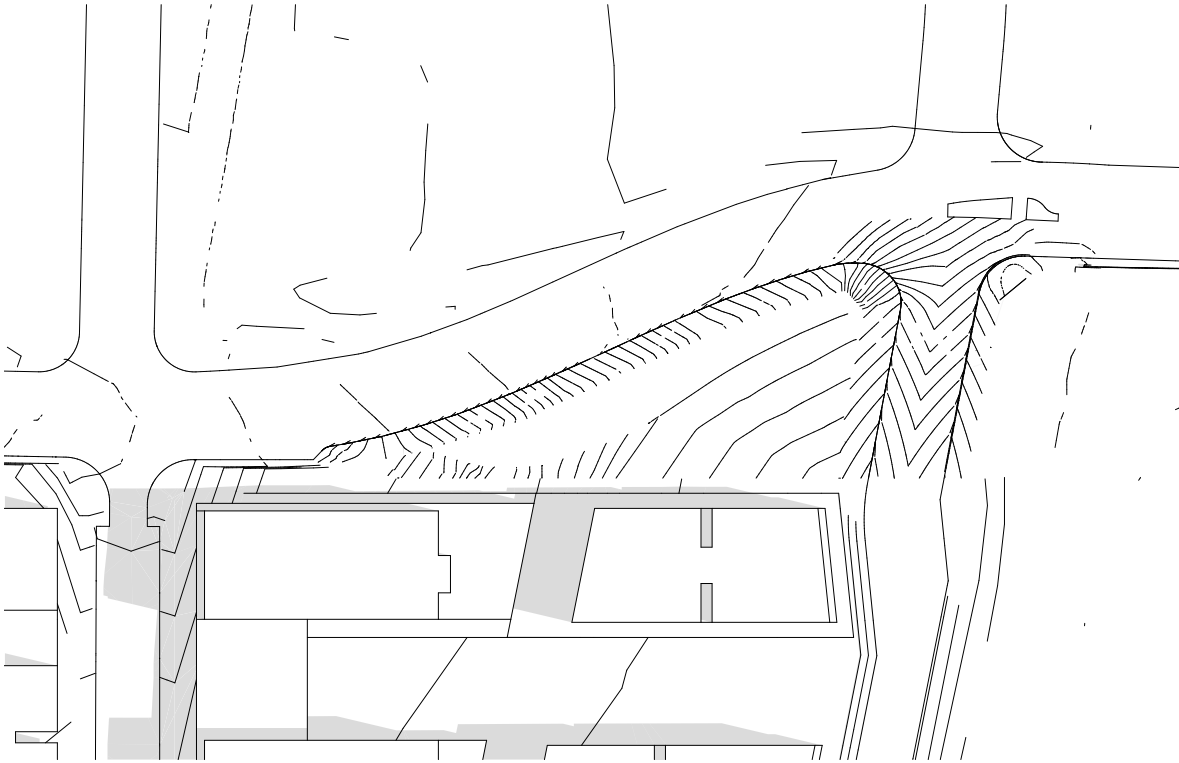
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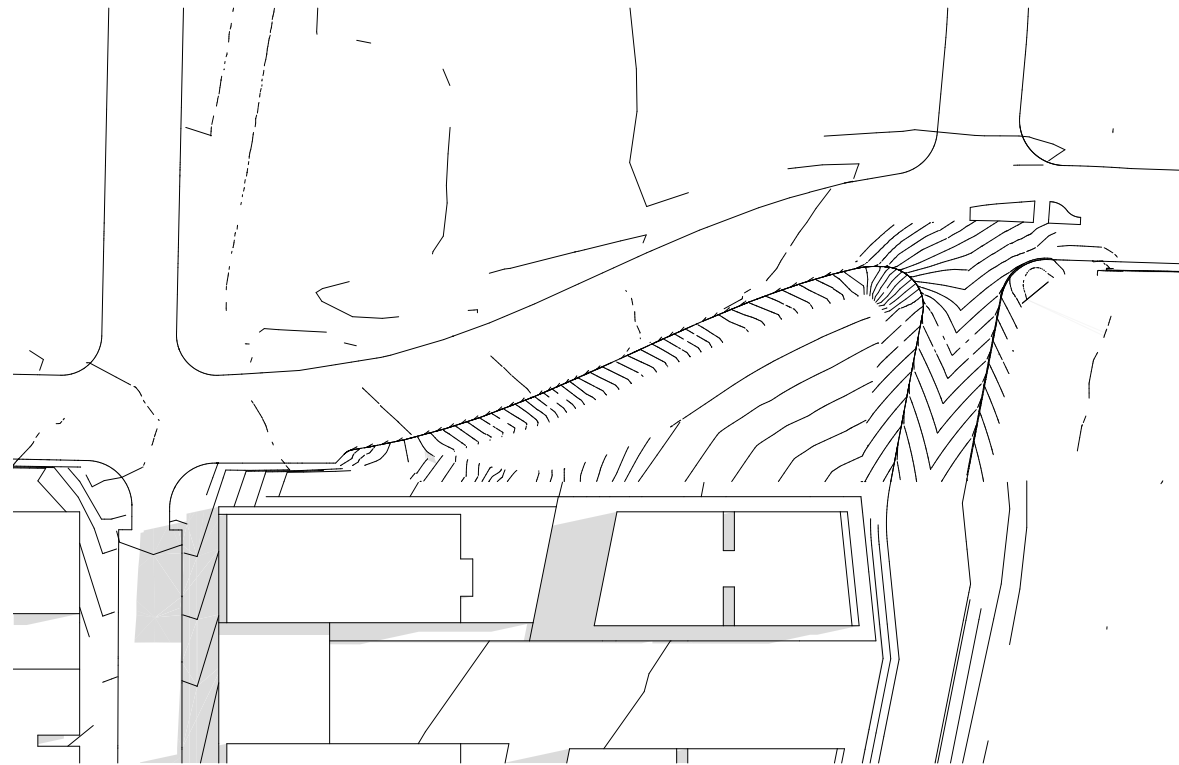


AUTUMN EQUINOX SHADOW DIAGRAMS

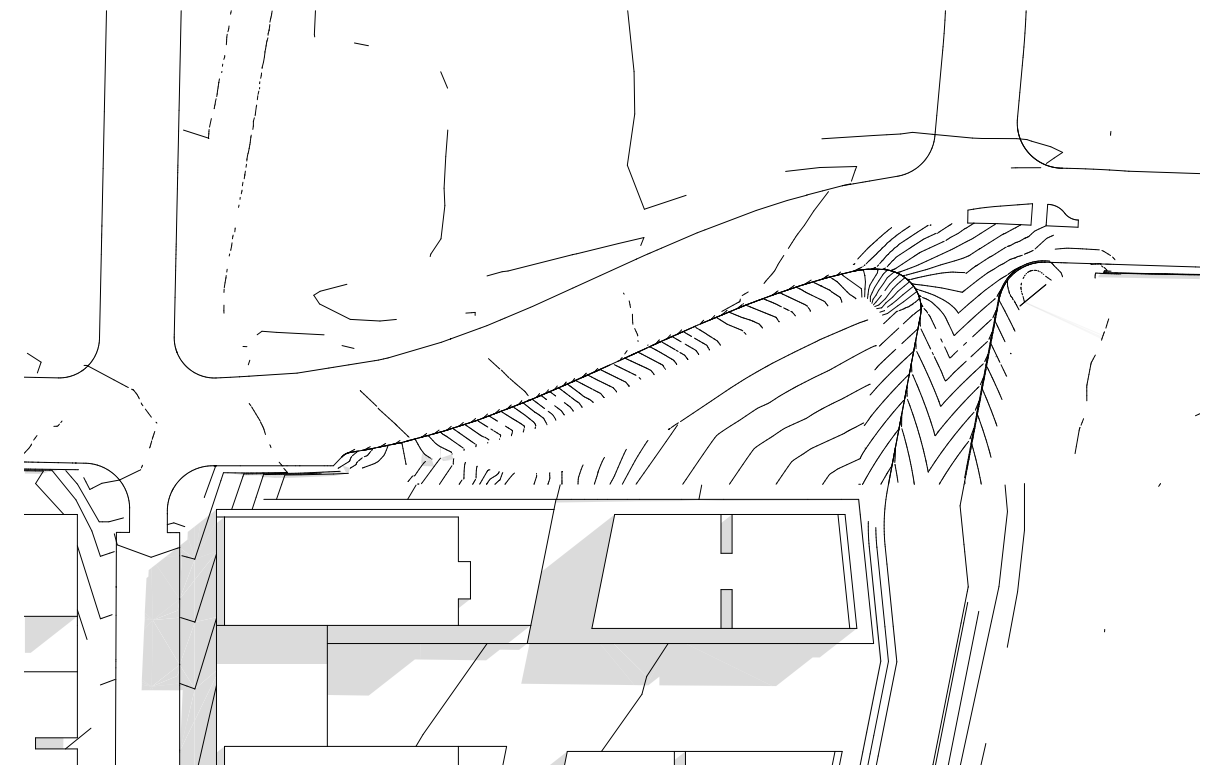
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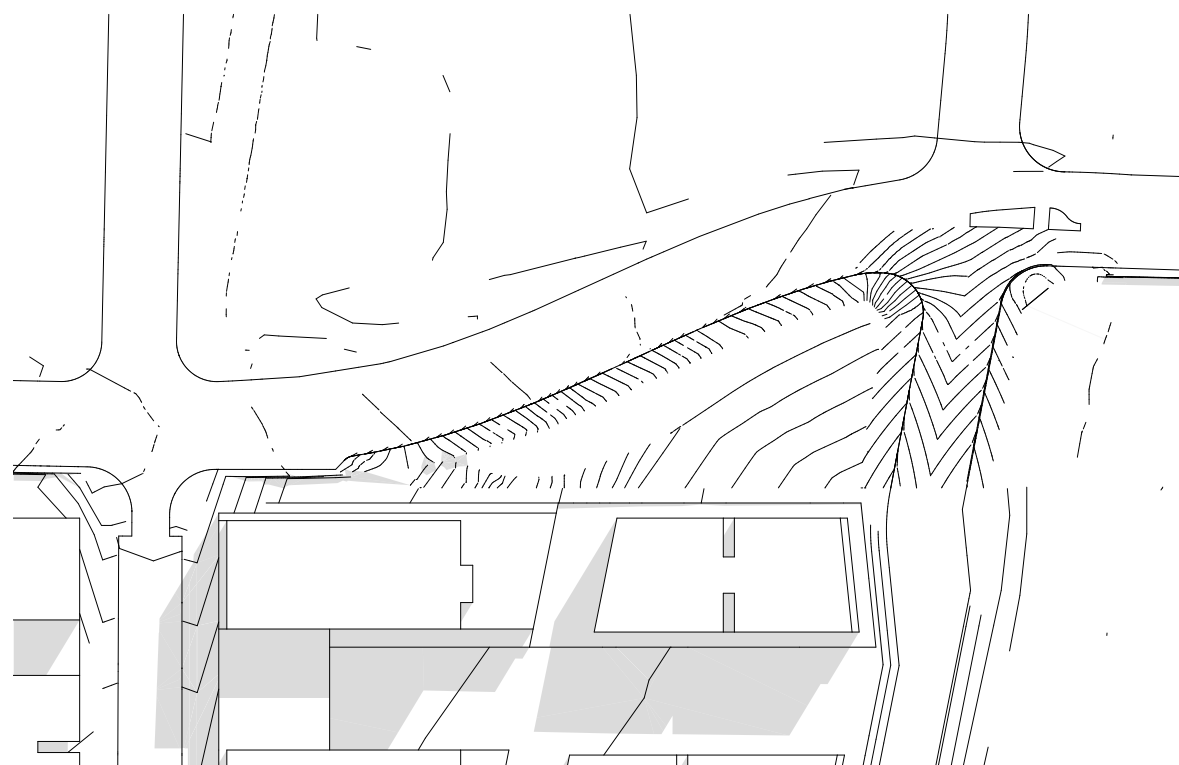
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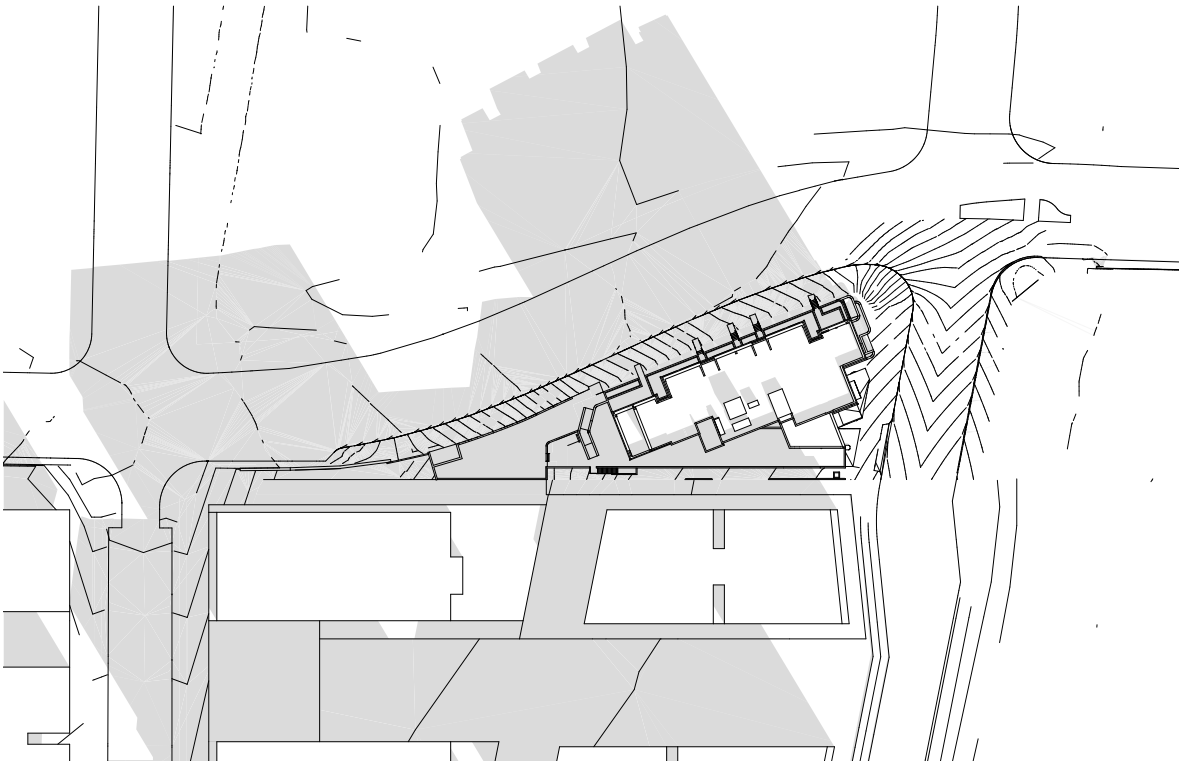
AUTUMN EQUINOX SHADOW DIAGRAMS

MARCH 20TH - PROPOSED

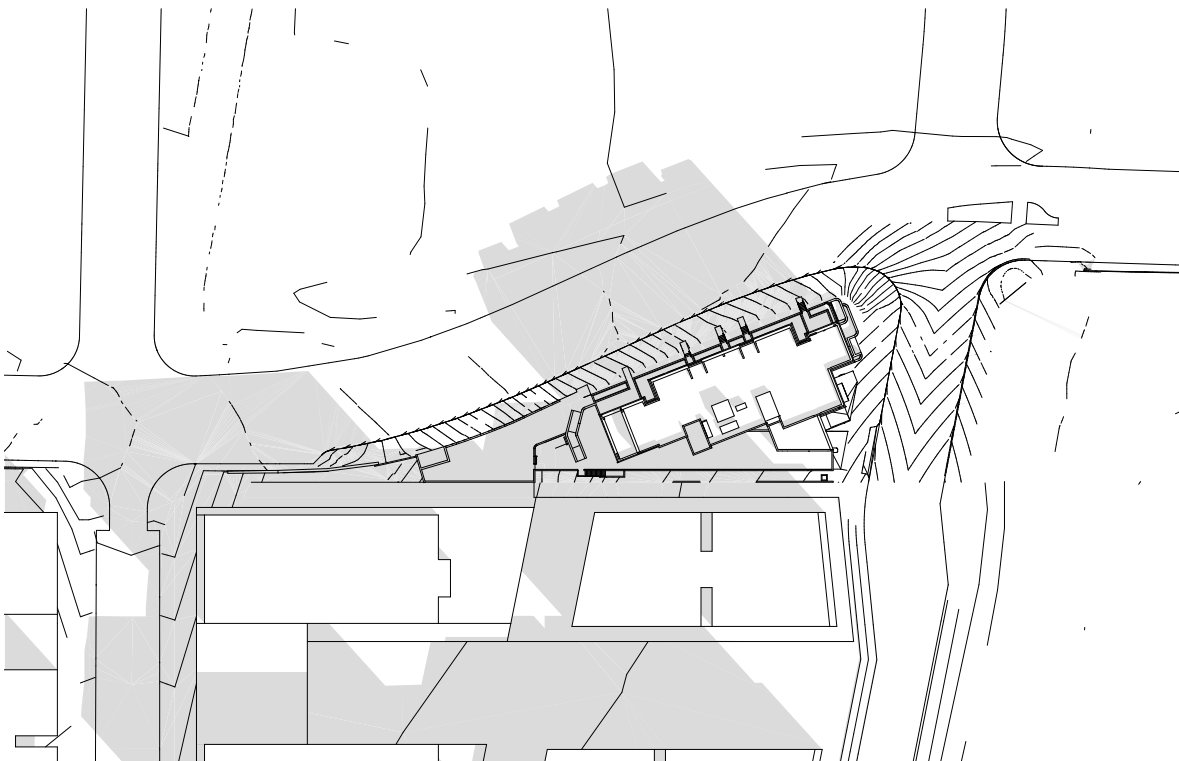


----- Principle Communal Space Zones

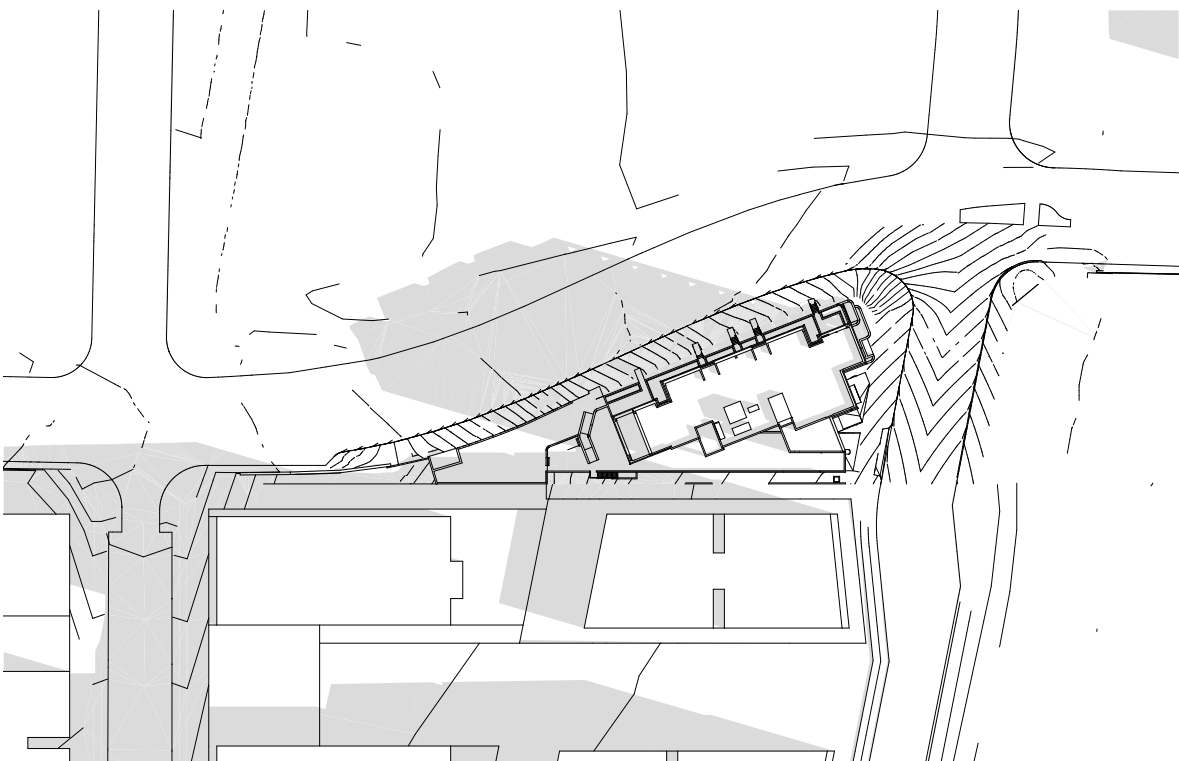
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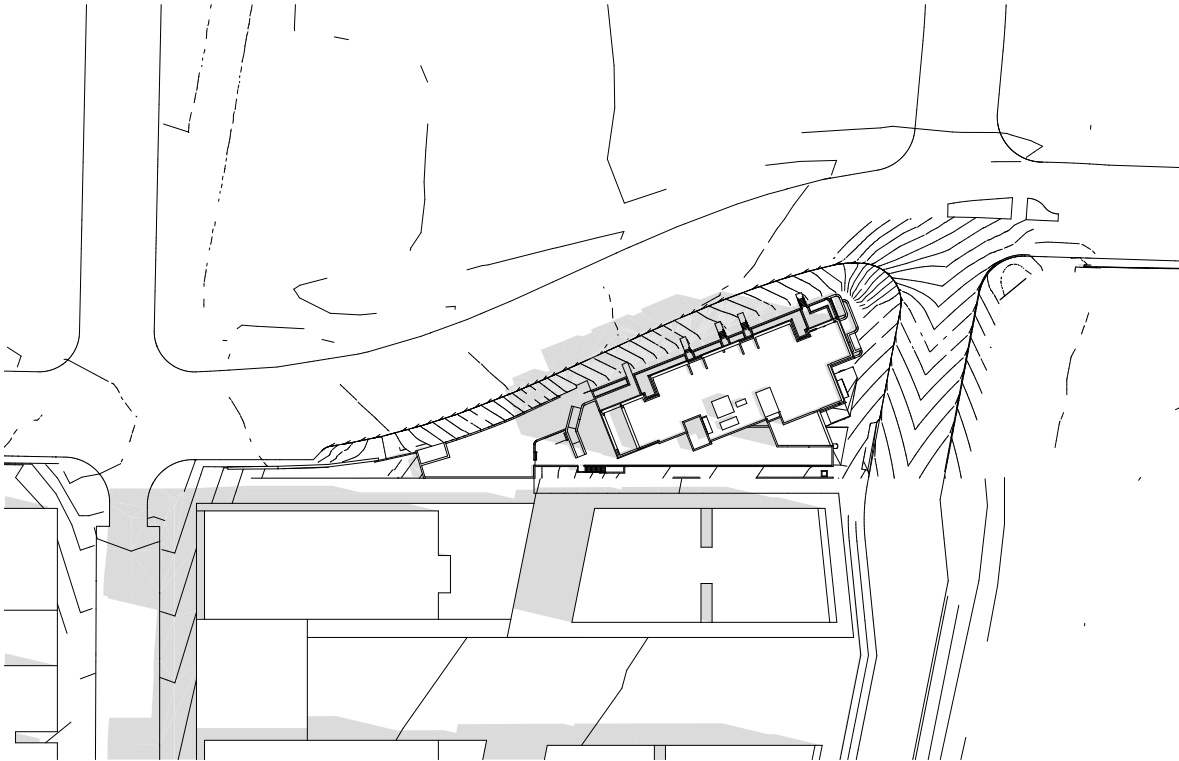
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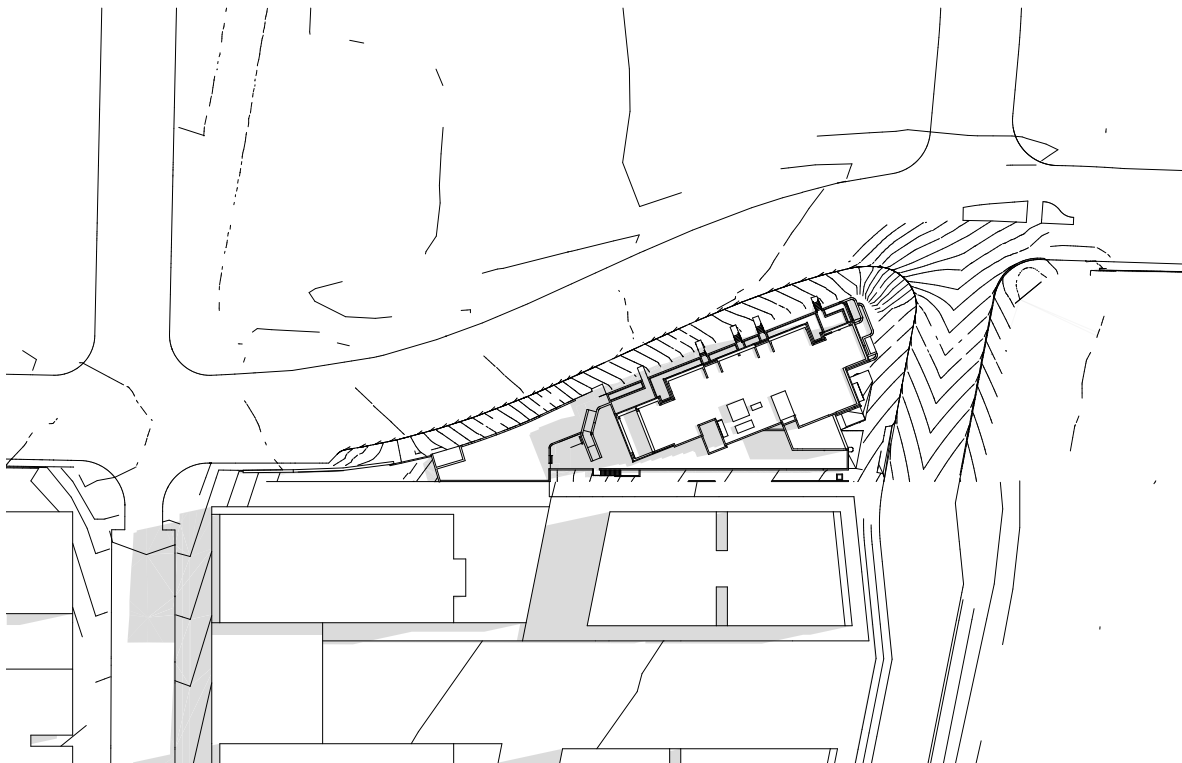
AUTUMN EQUINOX SHADOW DIAGRAMS

MARCH 20TH - PROPOSED

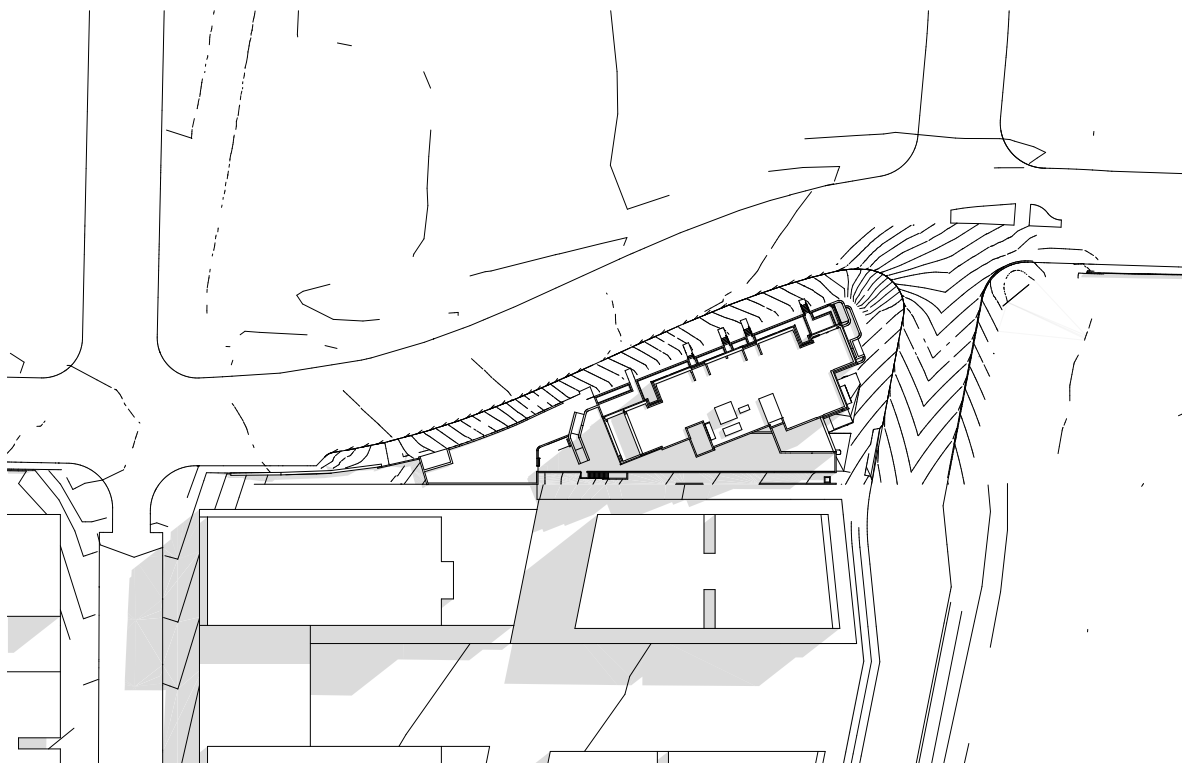


----- Principle Communal Space Zones

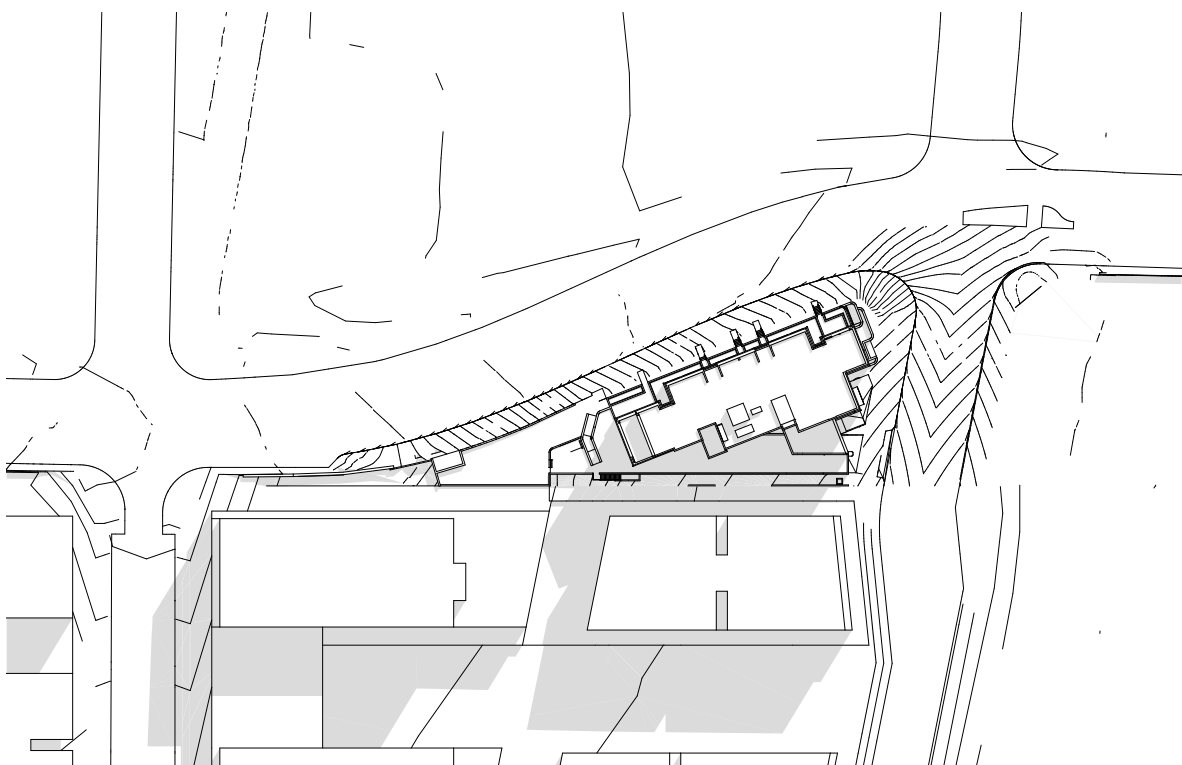
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