

SYDNEY OPERA
HOUSE FRONT
OF HOUSE

Under the Steps

ARCHITECTURAL DRAWING SET	UNDER THE STEPS	REV
DA ISSUE	02 AUGUST 2016	A



Document Information

CLIENT

SYDNEY OPERA HOUSE TRUST

PROJECT

BUILDING RENEWAL - FRONT OF HOUSE

ARCHITECT

TONKIN ZULAIKHA GREER

CONSULTANT

AECOM

TEAM

STEENSEN VARMING

ARUP

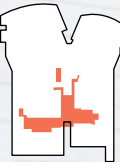
WARREN SMITH & PARTNERS

THE MACK GROUP

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Introduction

The Sydney Opera House Trust (SOHT) has engaged Tonkin Zulaikha Greer (TZG) Architects to undergo the Concept- and Schematic Design Development and Development Application for the Front Of House (FOH) Projects under the Renewal Framework Program, which was developed in 2014 to guide the transformation of the building over the next decade and includes a range of projects that cover all aspects of the Opera House including theatres, front of house, back of house and proposed new developments.

The Front Of House (FOH) Projects include 7 individual projects: Entry Foyer+ FOH Lift 36, Under the Steps, Function Centre, Theatre and Events Offices, Creative Learning Centre, Southern Foyers and the new Ballet Rehearsal Room.

The DA Drawing Issue includes the architectural drawings, finishes boards and perspectives.

The Designs have been developed in collaboration with the services and centralised consultant team and went through an intensive Stakeholder consultation process. Furthermore several reviews have been held by the Eminent Architects Panel, the SOH Conservation Council and the SOH Executive Team.

The Concept- and the Schematic Design Reports are available on request and show the detailed design process and include the services and centralised consultant reports and expert reviews.

The Front of House projects have been thought about as a suite of interrelated projects, however they have been individually documented and analysed for clarity.

The general process that has been conducted is as follows:

CONCEPT DESIGN / OPTIONS STUDY :

- As series of Briefs were prepared by the SOH in consultation with relevant stakeholders
- Discussion with and briefing by Stakeholders on a project by project basis
- Development of preferred options
- Testing of options with stakeholders which lead to three preferred options for each project
- Analysis of preferred options, including testing against the Sydney Opera House Conservation Management Plan and the Utzon Design Principles
- Recommendation

SCHEMATIC DESIGN :

- A preferred option was selected by the Executive Team
- Detailed stakeholder workshops were held for the individual stakeholder groups and the feedback has been incorporated into the current proposals
- Further site investigation and the progressing services designs informed the design development and caused some change to some concept design ideas

Whilst this study has very much been aimed at achieving a range of functional requirements that will be relevant for the SOH for the next generation, the architectural philosophy is very much seen as an exercise in interpretive design, whereby the SOH Utzon Design principles will be distilled to create relevant contemporary use and expression.

The new projects have been thought about in terms of an architectural continuum, whereby they are imbedded in the legendary icon, but reaching out to Sydney's future.

At a cultural level, we are thinking of the SOH as an Iconic container reflecting the time of it's invention, but with ever evolving contemporary contents that are relevant and reflective of our time.



Architectural Design Statement

The Renewal projects have been considered as elements taking their position in an architectural continuum, whereby they are imbedded in the fabric and history of the legendary icon, but reach out to Sydney's future.

Culturally, we view the Sydney Opera House as an iconic container that continues to reflect the era of its invention, but with ever evolving contemporary contents that give voice to the artistic activities and philosophical enquiries of our own time.

Whilst the Renewal projects design has been aimed at fulfilling a range of functional requirements that will be relevant for the SOH for the next generation, the architectural procedure is one of interpretive design, whereby the Utzon and Opera House principles are distilled to infuse this later contemporary use and aesthetic.

Under the Steps

Function

As the new sub-ground loading dock now enables the removal of vehicles from Under the Steps, the Sydney Opera House has gained a new space that is loaded with potential.

Concept

Employing Jorn Utzon's notion of 'learning from nature', the new ground plane will subtly turn up at the base of the underside of the steps. Here, two long seats will be 'carved' into the landform, allowing guests to sit back and look towards the Opera House and harbour.

Echoing the iconic partnering of the Concert Hall (Main Hall) and Joan Sutherland Theatre (Minor Hall) shells above the podium, all new elements Under the Steps will also be paired, such as the new art walls. The art walls will be complimented by soundscapes interpreting the site's aboriginal, geographic, urban and performance heritage.

Comment

Jan Utzon revealed in conversation (November 2015) that his father had contemplated two large murals by modernist masters to be painted beneath the steps, reflecting the dual nature of the Major and Minor Halls.





SYDNEY OPERA HOUSE | FRONT OF HOUSE RENEWAL

UNDER THE STEPS

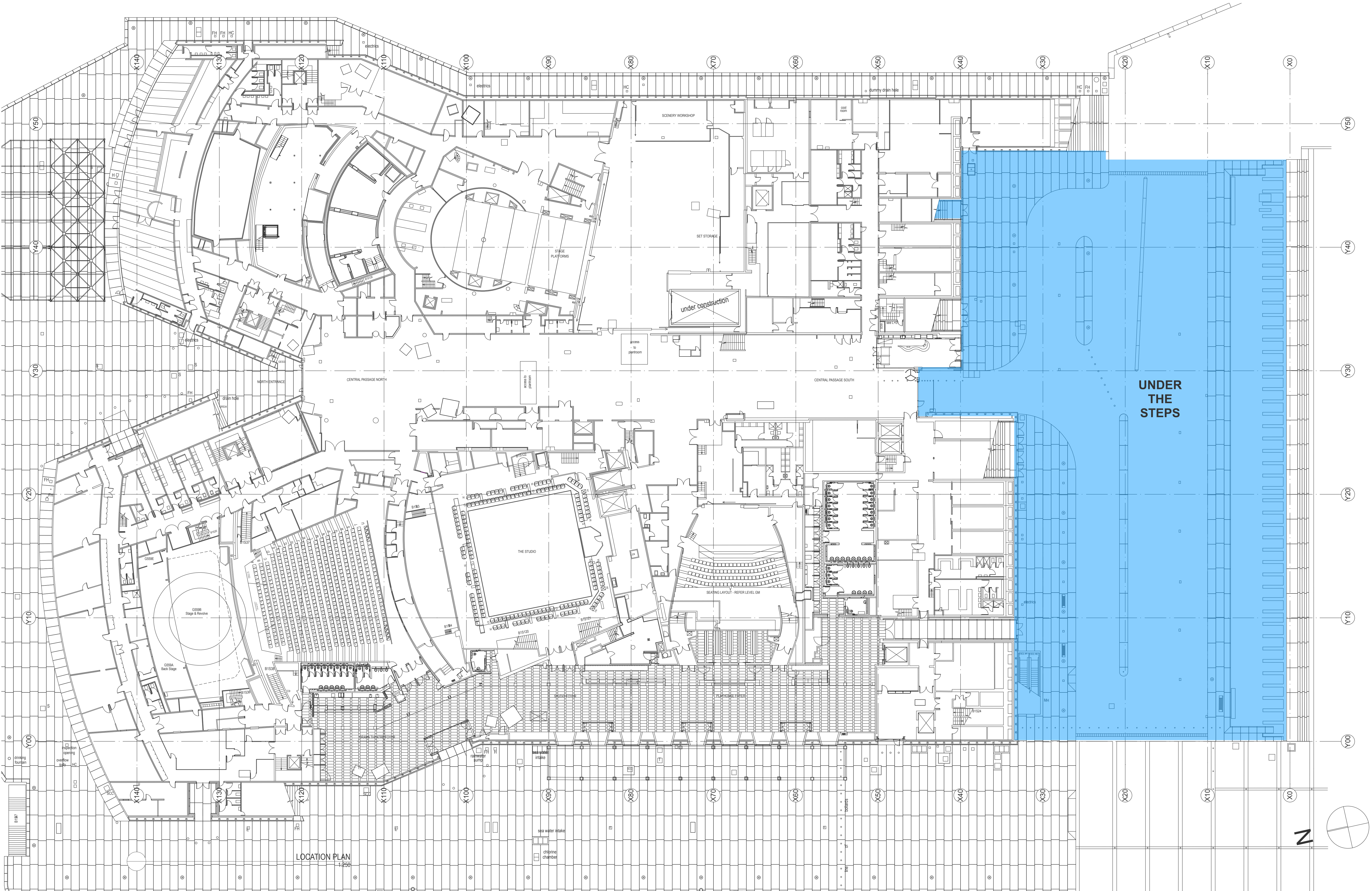
DRAWING LIST

UNDER THE STEPS DEVELOPMENT APPLICATION		
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A-9102	INTERNAL PERSPECTIVE	
A-9103	WEST PORTAL PERSPECTIVE	

LEGEND

Code	Description	Code	Description	Code	Description
AC	Air-Conditioning	GLBF1	bronze-framed Glass Door, hinge	UR	Urinal
ACC	Accessible	GLBF2	bronze-framed Glass Door, sliding	VJ	Vertical Joints
ACR	Acrylic Solid Surface Material	GLBF3	bronze-framed Glass Door, pivot	WB1	Wash Basin Type 1(normal)
ADJ	Adjustable Shelf	GLMF1	steel-framed Glass Door, sliding (Wind-break)	WB2	Wash Basin Type 2 accessible
AF	Access Floor	GLMF2	steel-framed Glass Wall, fixed (Wind-break)	WB3	Wash Basin Type 3 (Trough Handwashing Kids)
AFFL	Above Finished Floor Level	GR1	Grab Rail 1 - Accessible shower rail	WC1	Water Closet (normal)
AFS	AFS concrete paint finish	GR2	Grab Rail 2 - Accessible WC	WC2	Water Closet accessible
AH	Flush Access Panel	GR3	Grab Rail 3 - Ambulant WC	WC3	Water Closet Ambulant
AP1	Acoustic Panel No Finish	H	Hydraulic riser	WF	Water Drinking Fountain
AP2	Acoustic Panel, ceiling, perf. Metal Finish	HD	Hand Dryer	WP1	Repurposed existing Wobbly Panel, operable
AP3	Acoustic Panel, ceiling, perf. Metal Finish	HJ	Horizontal Joints	WP2	Repurposed existing Wobbly Panel, operable and adjustable
AP4	Acoustic Panel No Finish	HK	Hook - Coats	WP3	Repurposed existing Wobbly Panel, fixed
AP5	Acoustic Panel, Felt Finish	HR	Hanging Rail	WP4	Repurposed existing Wobbly Panel, integrated
AU	Acoustic Underlay	HRM	Handrail Metal	WP5	Repurposed existing Wobbly Panel, ceiling
AV	Audio Visual	HRT	Handrail Timber	X	Existing
BCT	Baby Change Table	HWU	Hot Water Unit	XAC	Existing AC
BG	Glass balustrade	JP	Joinery Pull	XAP	Existing Acoustic Ceiling Panel
BIK	Bike Racks	KP	Kick Plate	XB	Existing Architectural Bronze
BIN	Under sink garbage bin	LAM	Laminate Finish	XBOL	Existing Bollard
BIT	Bitumin	M	Mechanical Riser	XBR	Existing Bronze Element
BL	Fair Faced Blockwork	MA1	Marblo	XBS	Existing Bench Seat
BLD	Roller Blinds	MB1	Metal Balustrade Type 1	XC	Existing Concrete
BLD1	Roller Blinds (Sunscreen)	MCP	Metal Column, painted	XCA	Existing Concrete with acoustic treatment
BLD2	Roller Blinds (Block Out Blinds)	MF	Metal Flashing	XCP	Existing Concrete Painted (or Sealed)
BLD3	Roller Blinds (Green Screen)	MIR	Mirror	XCP5	Existing Concrete Paint Finish, stripped
BLP	Blockwork, paint finish	MLF	Metal Louvre- Fixed	XCPT	Existing Carpet
BLR	Blockwork, reinforced	MLO	Metal Operable Louvre	XCTF	Existing Ceramic Tiles
BOL	Bollard	MM	Metal Mesh (stretched)	XD	Existing Door to remain
BR1	Brass counterfronts, EF	MPBP	Moisture Resistant Plasterboard Ceiling, paint finish	XDB	Existing Distribution Board
BR2	Brass counterfronts, SF	MPG	Metal Pipe Rigging	XDP	Existing Downpipes
BR3	Brass seat, UTS	MS	Stair Metal	XEP	Event Pit
BR4	Bronze joinery, EF	MW	Metal Windows, bronze-framed	XFB	Floor Box, electrical+data
BR5	Bronze handrail, UTS	OV	Oven	XFH	Existing Fire Hydrant
BR6	Bronze handrail, CLC and FC	PBF2	2 hour Fire Rated Plasterboard	XGL	Existing Glazing, brown tint
BRRP	Brickwork, Rendered and Painted	PBP	13mm plasterboard Paint Finish	XGL1	Existing Glazing, clear
BT1	Bentchtop, Marblo	PC1	Precast Granite, Paver	XGL2	Existing Glazing, frosted
BT2	Bentchtop, Glass	PC2	Precast Granite, Wall Panel	XGLBF	Existing bronze-framed Glass Door, hinge
C	Concrete	PC3	Precast Granite, Ceiling Panel	XGLBF2	Existing bronze-framed Glass Door, sliding
CFC	Compressed Fibre cement	PF	Paint Finish	XHRM	Existing Handrail Metal
CFS	Concrete steel trowel finish	PP	2 pack Polyurethane Paint	XMB	Existing Metal Balustrade
CM	Suspended Ceiling, Metal	PP1	Polyurethane Paint - High reflective black	XMB	Existing Metal Balustrade
CO2	Class 2C Off form Concrete	PTD	Paper Towel Dispenser	XMG	Existing Metal Gate
CO2P	Class 2 Off form Concrete Paint Finish	RF	Resilient Finish Type CLC	XMS	Existing Metal Stair
COMMS	Communications Cupboard	RF1	Resilient Finish Type EF	XP	Existing Painted
COS	Check On Site	RFS	Resilient Flooring - Slip Resistant	XP	Existing Painted
CPT1	Carpet, Entry Foyer Seating	RH	Rangehood	XPBP	Existing Plasterboard Painted
CPT2	Carpet, Entry Foyer Ticketing	RL	Reduced Level	XPC1	Existing Precast Granite, Paver
CPT3	Carpet, Theatre & Events Offices	RP	Rigging Points	XPC2	Existing Precast Granite, Wall Panel
CT	Cooktop	RSK	Resilient Cove Skirting	XPC3	Existing Precast Granite, Ceiling Panel
CTF	Ceramic Floor Tiles	SAP	Suspended acoustic panels	XPF	Existing External Painted Render
CTS	Ceramic Skirting	SC1	Services Carriage (light, sound, sprinkler)	XPW	Existing Potable Water
CTW	Ceramic Wall Tiles	SC2	Services Carriage (light, sound, acoustic, rigging)	XRP	Existing Rendered and Painted
CUR	Curtains	SCDB	SCI Door Distribution Board	XSC	Existing Services Carriage (light, sound, sprinkler)
CUR 1	Felt Dividing Panel Curtain	SCI	Solid core door internal	XTB	Existing Timber Balustrade
DB	Colour backed glass	SCV	Sprinkler Control Valve	XTCW	Existing Heritage Ceramic Tiles
DP	Down Pipe	SD1	Soap Dispenser	XTF	Existing Timber Floor
DS1	Door stop - Floor mounted door stop	SHS1	wall shelf	XTF	Existing Timber Floor
DS2	Door stop - wall mounted door stop	SKY	Skylight	XTPC	Existing GRC Precast Floor Tile, honed
DW	Dishwasher	SMC	Stretched Membrane Ceiling (Barrisol)	XTS	Existing Terrazzo Stone Flooring
EF	Extraction Fan Ceiling Mounted	SNK	Sink - kitchen	XTS	Existing Timber Stair
F	Fridge	SNKC	Sink - Cleaner	XTSK	Existing Skirting
F1	60 FRL	SNKL	Sink - Laundry	XTV1	Existing Timber Veneer
F1.5	90 FRL	SS	Stainless Steel	XWF	Existing Water Fountain
F2	120 FRL	TAP1	Tapware, Washbasin Mixer, regular	XWP	Existing Wobbly Panel
FB1	Floor Box, electrical+data	TAP2	Tapware, Washbasin Mixer, accessible	YG	Yard Gully
FC	Set Fibre Cement 6mm painted	TAP3	Tapware, Kitchen Sink Mixer		
FE	Fire extinguisher	TF	Timber flooring		
FFL	Finished Floor Level	TF2	Timber Sprung flooring		
FG	Façade Glazing	THR	Threshold Ramp max. 1 in 8		
FH	Fire Hydrant	TI	Tactile Indicators		
FHR	Fire Hose Reel	TIK	Ticketing/Information Kiosks		
FM	Floor Mat	TME	To Match Existing		
FRL	Fire Resistant Level	TOW	Top of wall		
FSL	Finshed Structural level	TP	Toilet partitions		
FW	Floor Waste	TP1	Timber Panel, Slatted, Brush Box		
FWC	Textured Felt-Brass Wall	TPC	GRC Precast Floor Tile, honed CLC		
FWC1	Felt Wall Covering, Entry Foyer	TPC1	GRC Precast Floor Tile, honed EF		
FWC2	Felt Wall Covering, Function Centre	TPD	Toilet partition doors		
FWC3	Felt Wall Covering, Creative Learning Centre	TPH	Toilet Paper Holder		
GCB	Colour backed glass	TR	Towel rail		
GF	Frameless Glazing	TS1	Terrazzo Stone Flooring		
GL	Glazing, brown tint	TS2	Stone Tile		
GL1	Glazing, clear	TSN1	Stair Nosing Type 1		
GL2	Glazing, frosted	TV1	Timber Veneer, Entry Foyer		
GL3	Glazing, TerraGlaz	TV2	Timber Veneer, Creative Learning Centre		
GLBF	Bronze-framed Glass Door, Hinge	UIO	Unless Indicated Otherwise		

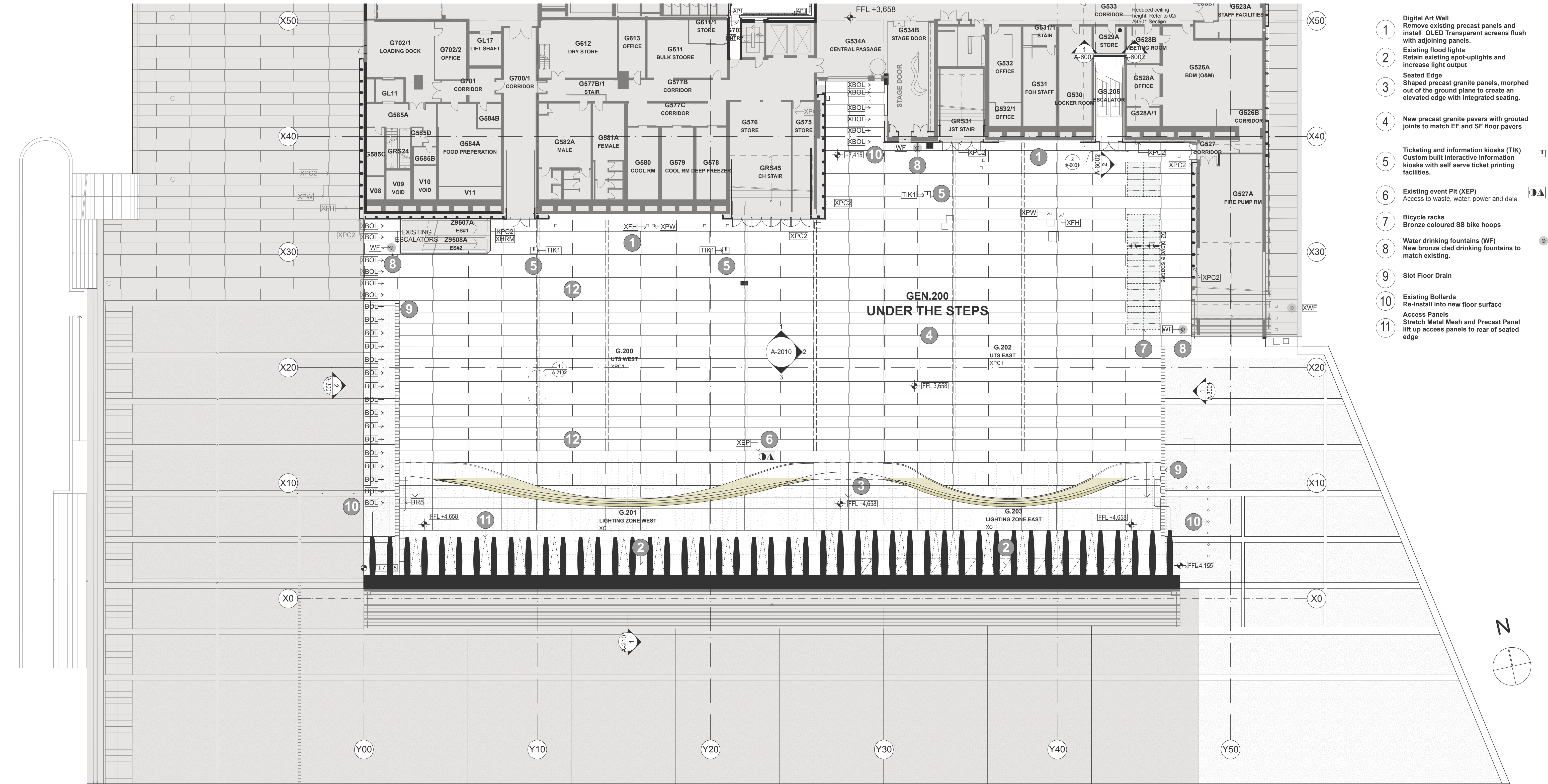
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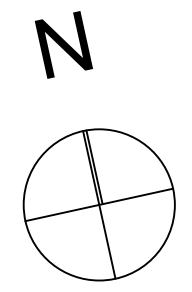
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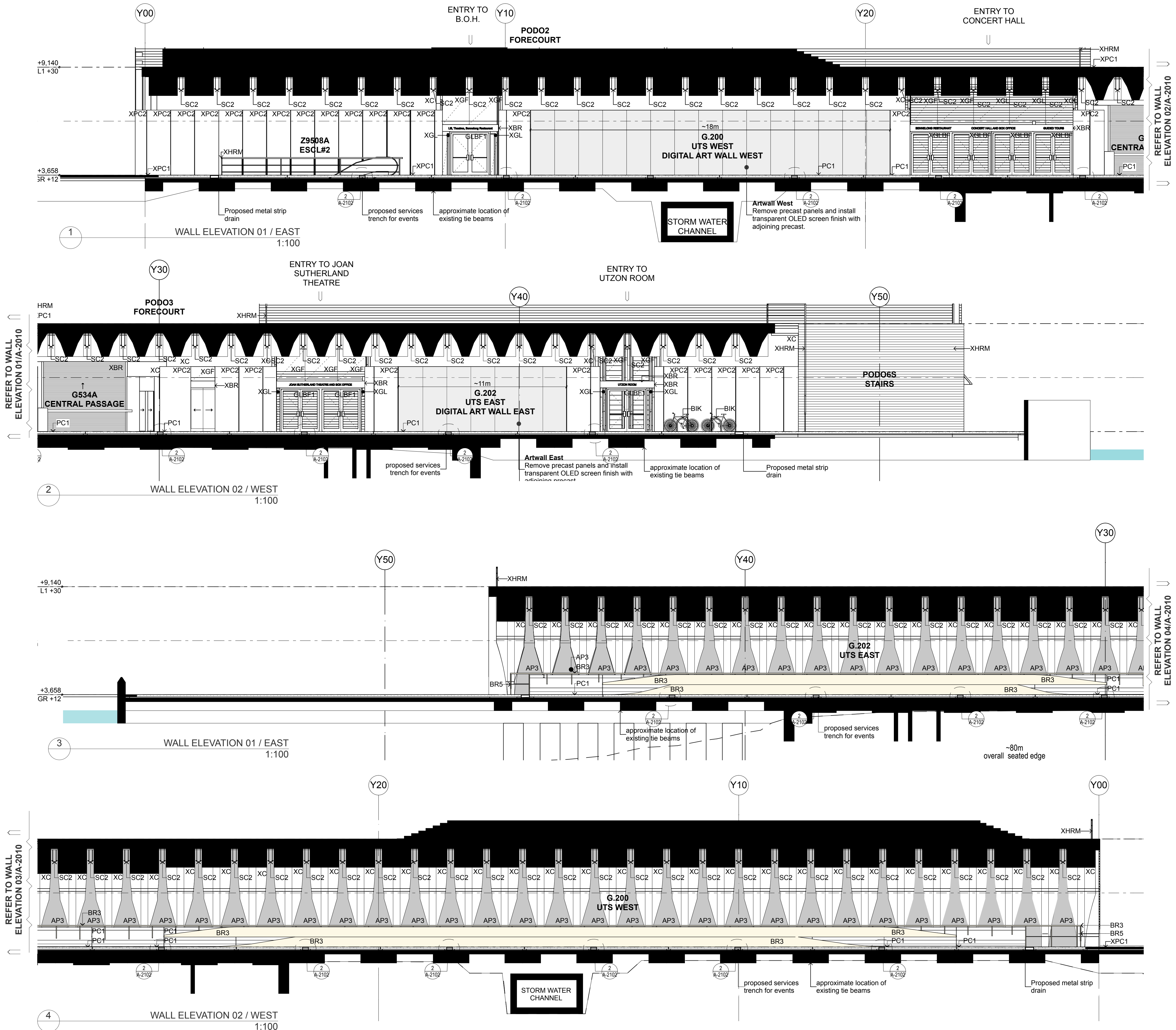


1 PROPOSED GROUND FLOOR PLAN (+12)
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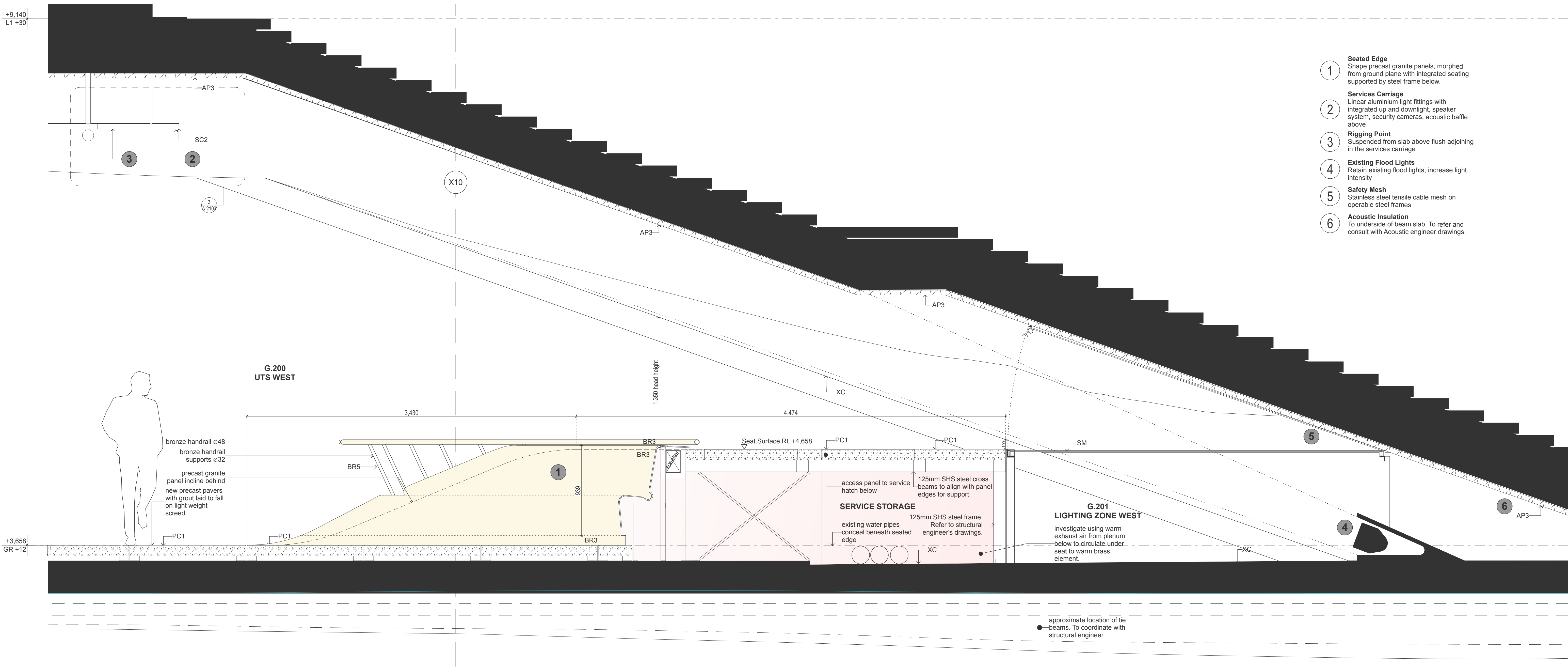
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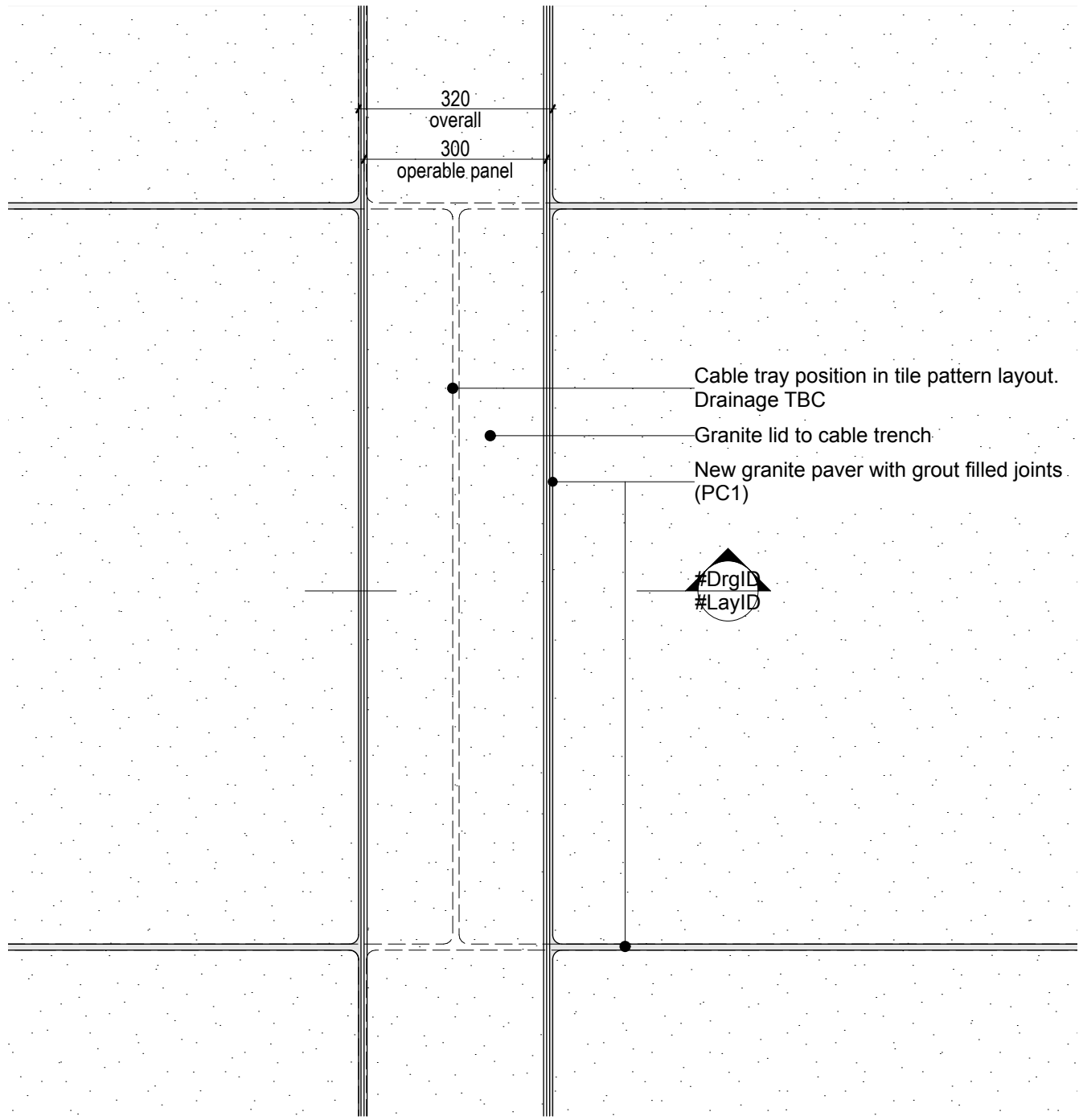
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										PROJECT NO : 15031		PHASE	DRAWING NO	REV
												DA	A-2002	A



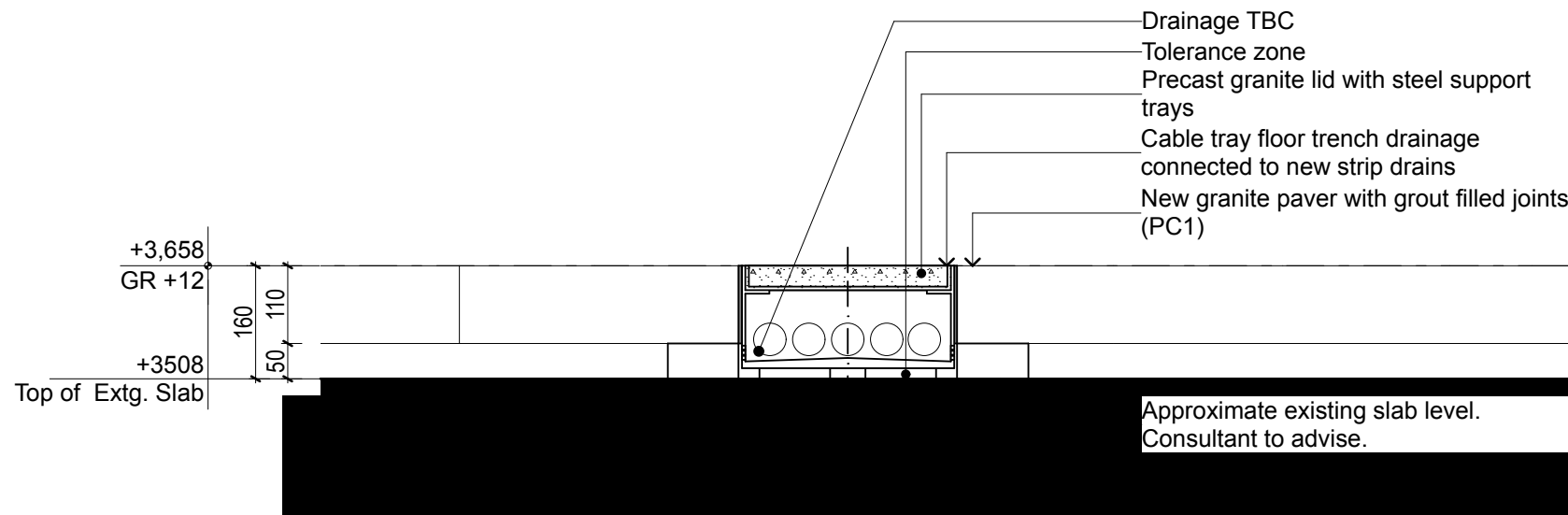
- Seated Edge**
Shape precast granite panels, morphed from ground plane with integrated seating supported by steel frame below.
- Services Carriage**
Linear aluminium light fittings with integrated up and downlight, speaker system, security cameras, acoustic baffle above
- Rigging Point**
Suspended from slab above flush adjoining in the services carriage
- Existing Flood Lights**
Retain existing flood lights, increase light intensity
- Safety Mesh**
Stainless steel tensile cable mesh on operable steel frames
- Acoustic Insulation**
To underside of beam slab. To refer and consult with Acoustic engineer drawings.

1 SEATED EDGE SECTION
1:20

DATE	REV	DESCRIPTION	NOTES:	VERTICAL TRANSPORT CONSULTANT	ACOUSTIC ENGINEER	AV CONSULTANT	SECURITY CONSULTANT	ELECTRICAL ENGINEER	BCA/PCA CONSULTANT	CLIENT:	PROJECT :	ARCHITECT	DRAWING TITLE	DRAWN BY
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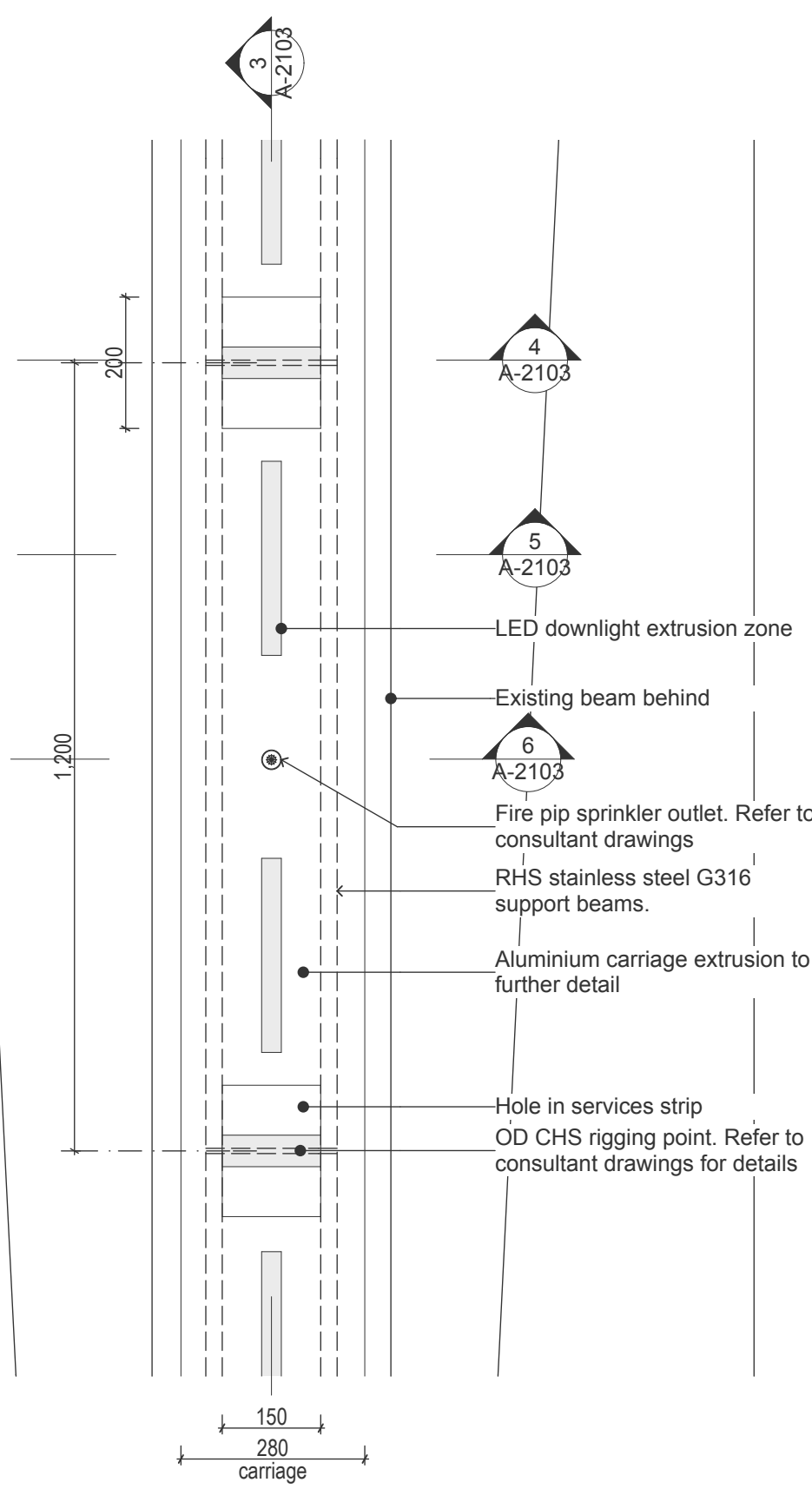


1 POWER + DATA FLOOR TRENCH FLOOR DETAIL
1:10

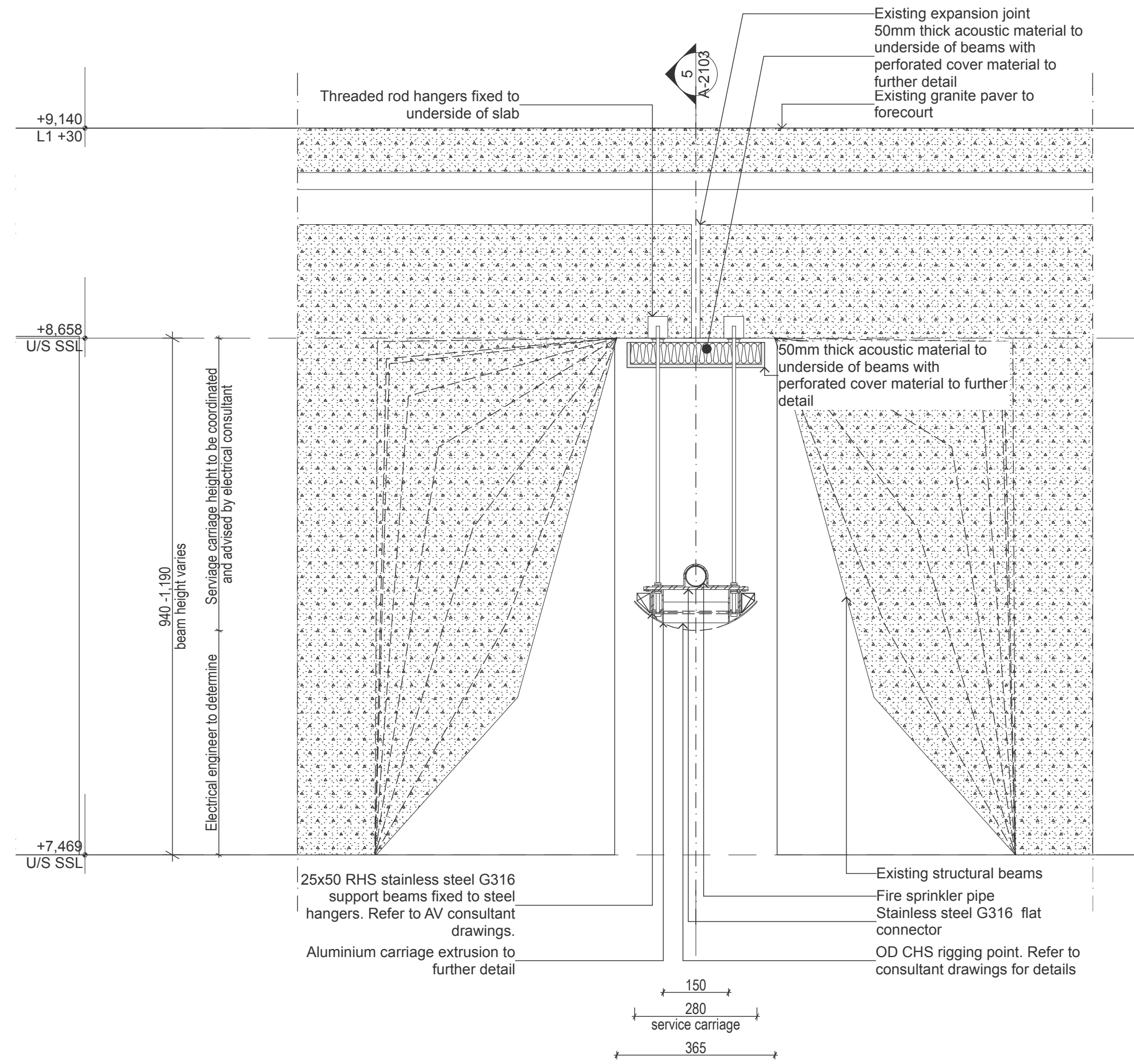


2 POWER + DATA FLOOR TRENCH DETAIL
1:10

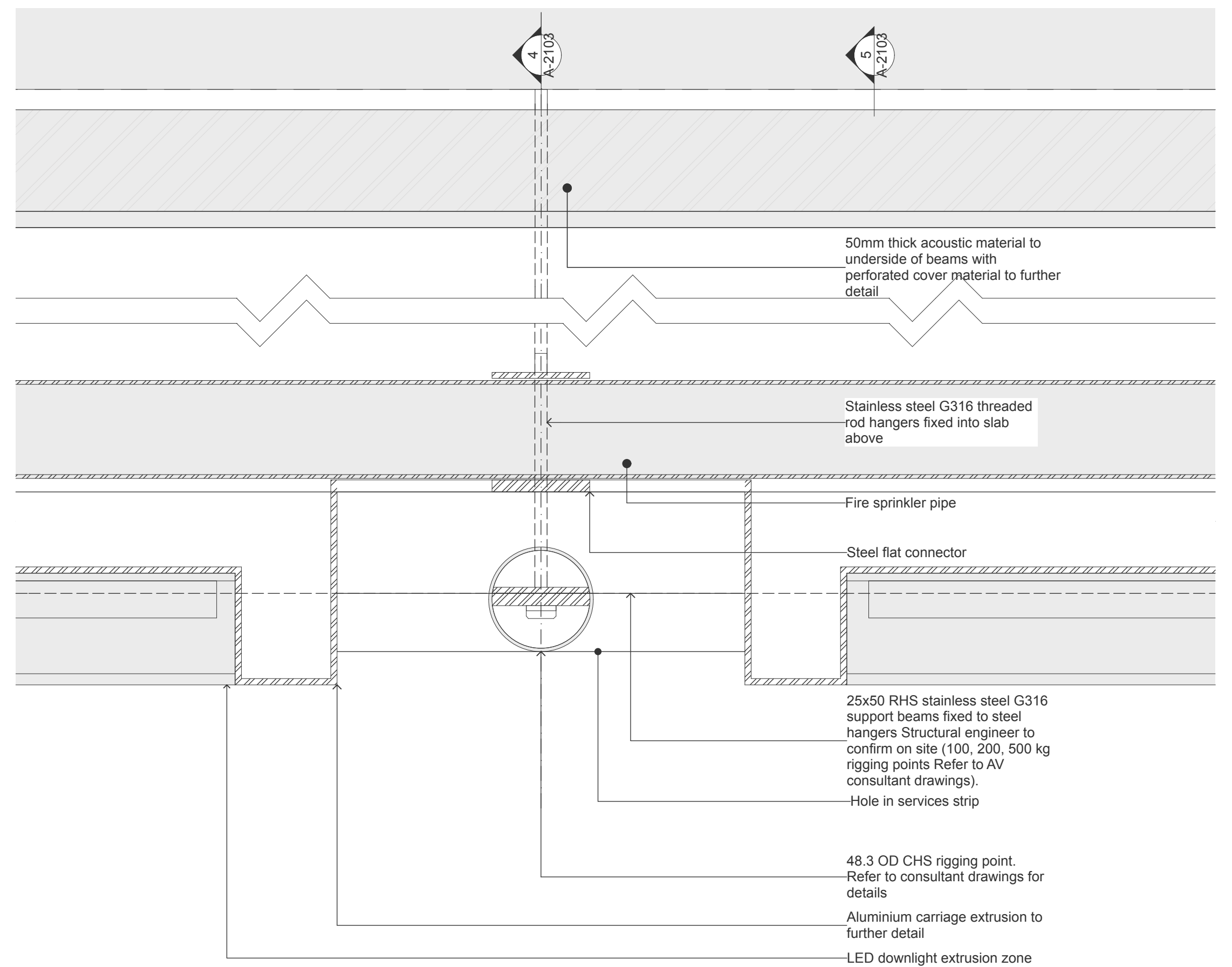
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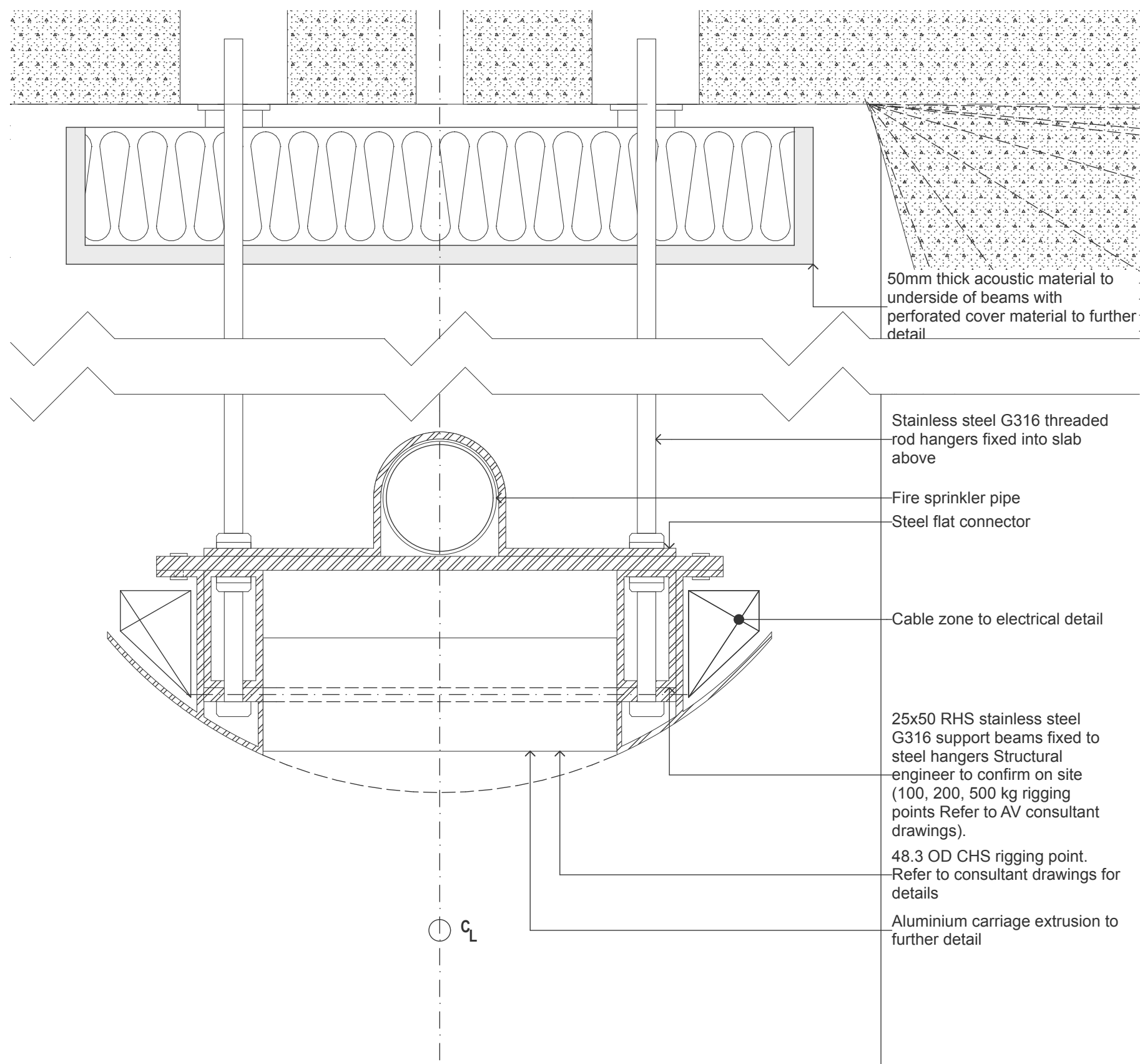
1 SERVICE CARRIAGE DETAIL PLAN 1:10



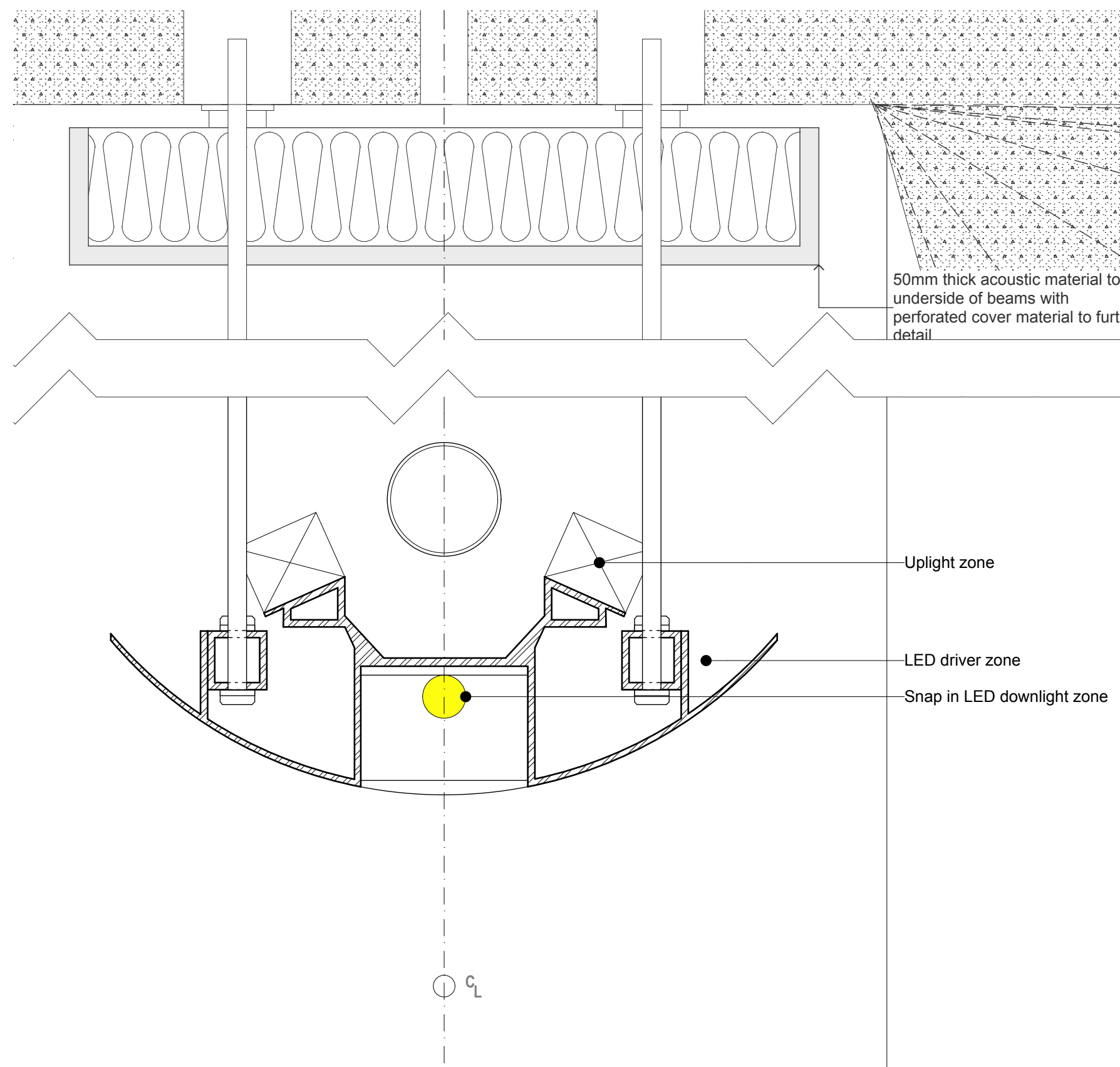
2 SERVICE CARRIAGE RIGGING POINT SECTION DETAIL 1:10



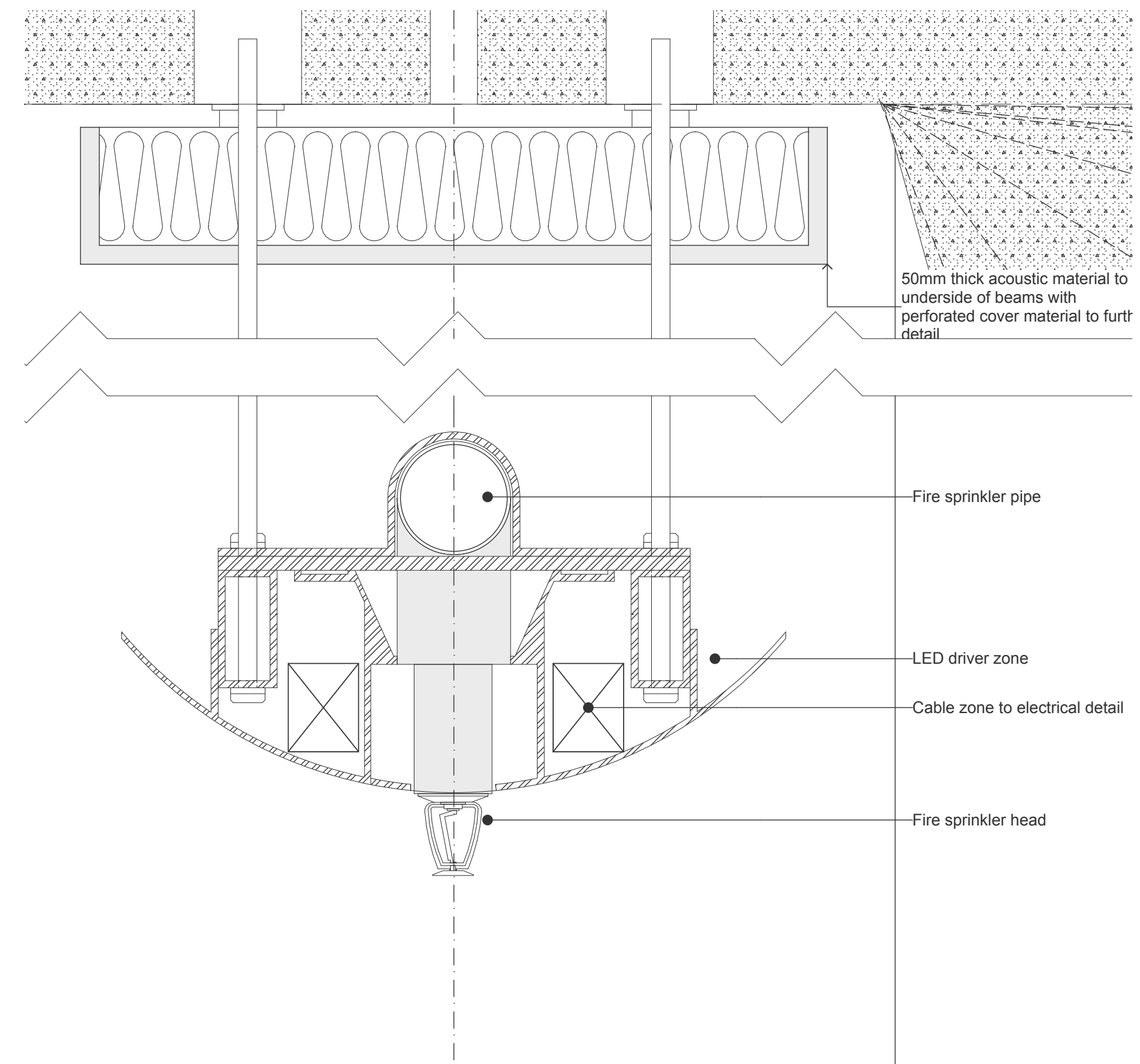
3 SERVICE CARRIAGE LIGHTING POINT SECTION DETAIL 1:2



4 SERVICE CARRIAGE LIGHTING POINT SECTION DETAIL 1:2



5 SERVICE CARRIAGE LIGHTING POINT SECTION DETAIL 1:2



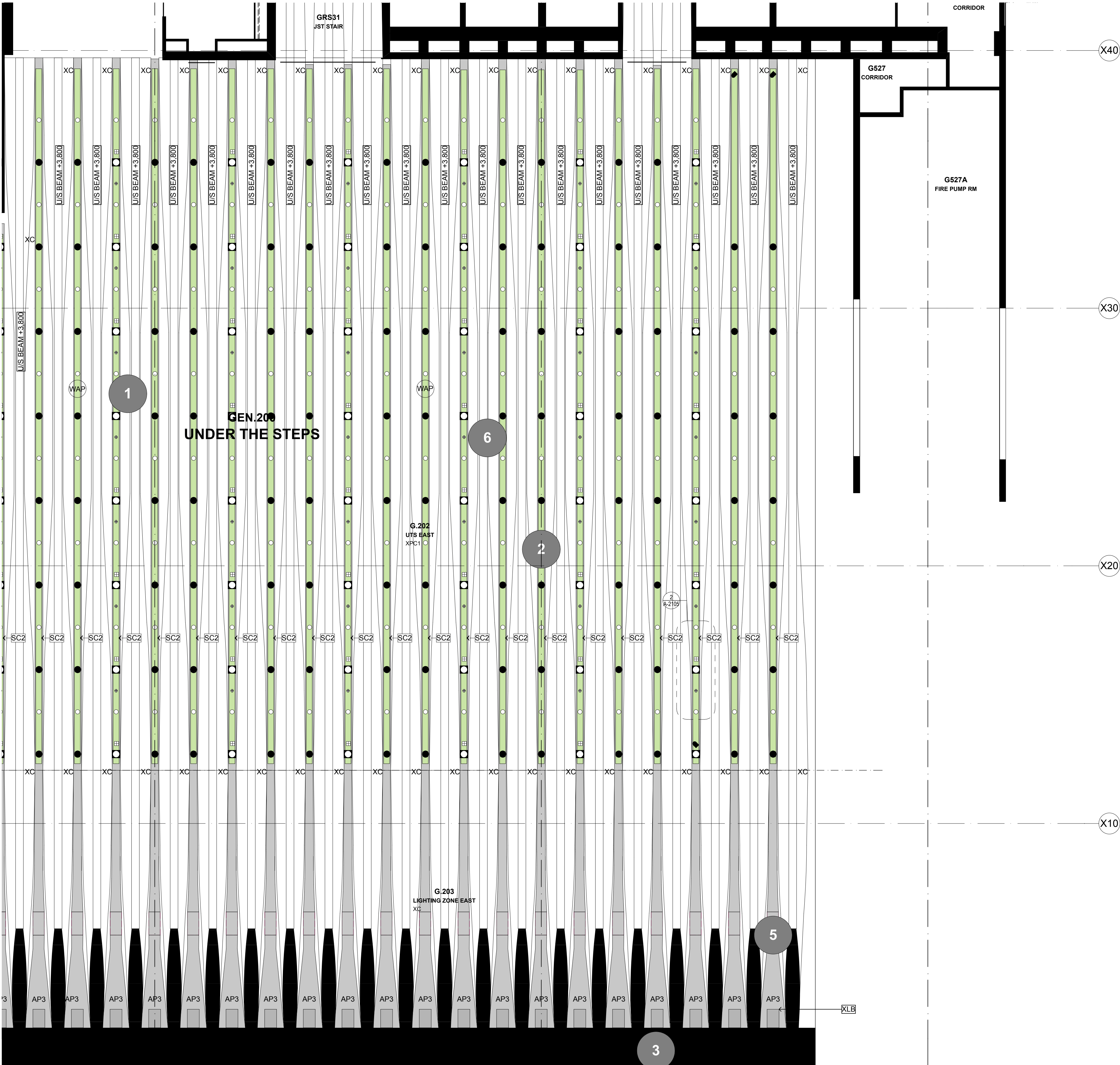
6 SERVICE CARRIAGE LIGHTING POINT SECTION DETAIL 1:2

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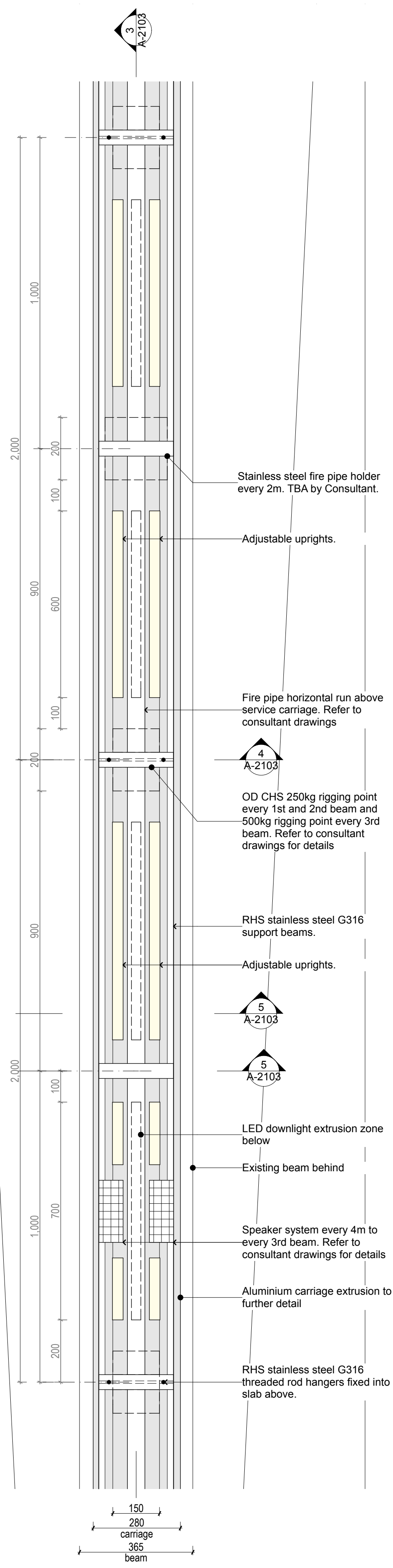
1 REFLECTED CEILING PLAN SERVICES CARIAGE COORDINATION PLAN (EAST) 1:100

2 SERVICE CARRIAGE UPWARD DETAIL PLAN 1:10

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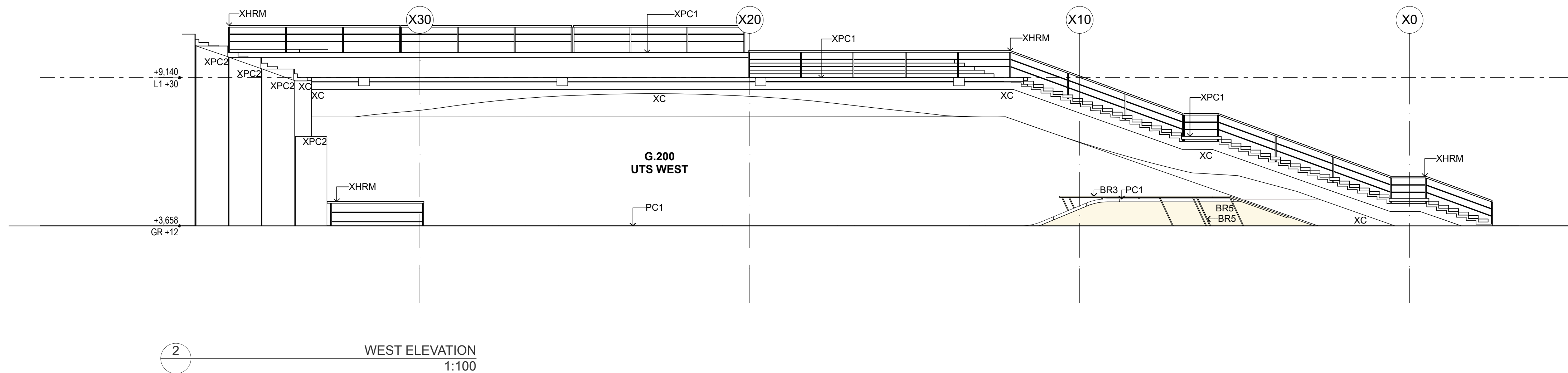
1 REFLECTED CEILING PLAN SERVICES CARIAGE COORDINATION PLAN (EAST)
1:100



2 SERVICE CARIAGE DOWNWARD DETAIL PLAN
1:10

LEGEND	
1	Services Carriage Linear light fittings with down and uprights, speakers, security cameras and rigging points. Suspended between ceiling beams with acoustic blades concealed above. Refer to AV, lighting and electrical drawings
2	Downlights Clip in LED lights TBC with lighting consultants.
3	Rigging Points Grid of rigging points suspended and integrated with new light fittings. 100kg point load 250kg point load 500kg point load Refer and coordinate with AV consultant drawings.
4	Existing Flood Lights Light boxes on ground floor slab. Increased illumination to be coordinated by lighting consultant.
5	EWIS Speakers Integrated speakers into service carriage. TBC with AV consultant.
6	Acoustic Panels Concealed above service carriage under beam slab. Location TBC with consultant.
7	Sprinkler heads Location TBC with consultant.
8	Wireless Access Panel Location TBC with consultant.
9	Security Cameras Location TBC with consultant.

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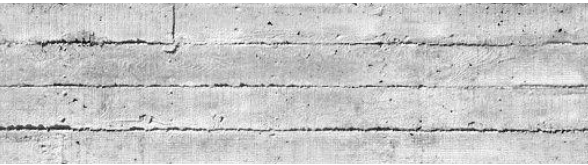
DATE	REV	DESCRIPTION	NOTES:	VERTICAL TRANSPORT CONSULTANT	ACOUSTIC ENGINEER	AV CONSULTANT	SECURITY CONSULTANT	ELECTRICAL ENGINEER	CLIENT:	PROJECT :	ARCHITECT	DRAWING TITLE	DRAWN BY	
02.08.2016	A	ISSUED FOR DA	Do not scale off drawings. Use figured dimensions only. Report any discrepancies to the architect. These designs, plans, specifications and the copyright therein are the property of Tonkin Zulaikha Greer Architects Pty Ltd, and must not be reproduced or copied wholly or in part without written permission of Tonkin Zulaikha Greer Architects Pty Ltd.	Aecom / Adam Magee Phone: +616 356 830 Email: Adam.Magee@aeom.com	Arup / Christopher Sims Phone: +61 2 9320 3462 Email: Chris.Sims@arup.com	Arup / Shane Norton Phone: +61 421 572 480 Email: shane.norton@arup.com	Steenen Varming / Ivan Mira Phone: 9967 2200 Email: ivan.mira@steensenvarming.com	BCA/PCA CONSULTANT Group DLA / Shane Berry Phone: 0448 566606 Email: shane.berry@groupdla.com.au	SOH Sust Phone: 0498 390 101 (Matthew Lorrimer) Email: mlorrimer@sydneyoperahouse.com	Sydney Opera House - Front of House Renewal	TONKIN ZULAIKHA GREER ARCHITECTS 117 Reservoir Street ABN: 4600272349 P: (02) 9215 4900 F: (02) 9215 4901 EMAIL: tm@tzg.com.au WEB www.tzg.com.au	WALL ELEVATION (EAST + WEST)	MB, RM	
				FIRE ENGINEERING Warren Smith Partners / David Bolt Phone: 0425 256 922 Email: david@warrensmith.com.au	HYDRAULIC ARCHITECT Warren Smith Partners / Campbell Hazellon Phone: +61 2 8234 8655 Email: campbell@warrensmith.com.au	LIGHTING ARCHITECT Steenen Varming / Ashleigh Bretherton Phone: 9967 2200 Email: Ashleigh.Bretherton@steensenvarming.com	MECHANICAL ENGINEER AECOM / Jonathan Onslow Phone: 0434 253 327 Email: jonathan.onslow@aecom.com	STRUCTURAL ENGINEER ESD CONSULTANT Cundall / David Clark Phone: 0424 750840 Email: d.clark@cundall.com		UNDER THE STEPS		CHECKED	RM, TG	
				KITCHEN CONSULTANT Mack Group / Nisha Gnanavel Phone: 02 9550 0566 Email: hq@mackgroup.com	COST PLANNING CONSULTANT Atlas Group / Jason Finn Phone: 0413 753469 Email: alex.buchan@designr5.com	HERITAGE CONSULTANT Design 5 / Alan Croker Phone: 0416 227892 Email: alancroker@designr5.com.au	FIRE CONSULTANT Alarist / Morrison Phone: 0408 627008 Email: r.seidman@accessconsultants.com	ACCESSIBILITY CONSULTANT iAccess / Richard Seidman Phone: 0408 627008 Email: r.seidman@accessconsultants.com		PROJECT NO : 15031		1:200 @ A3 1:100 @ A1	DATE	August 2016
												PHASE	DRAWING NO	REV
												DA	A-3001	A

FLOOR | WALL | CEILING FINISHES



CEILING

XC - Existing precast concrete beams. Cleaned and lightened. (Existing suspended lights removed)



WALLS

XC- Existing Boarded Precast Concrete Strutural Walls



WALLS

XPC2 - Existing precast granite wall Panels (Cleaned and lightened)



FLOORS

PC1 - Precast granite pavers with grout infill on padding with lightweight screed.

Resilient slip resistant compliant for external use.

Grout infill to match EF floor, compliant with accessible floor standards.

DOOR FINISHES



DOORS

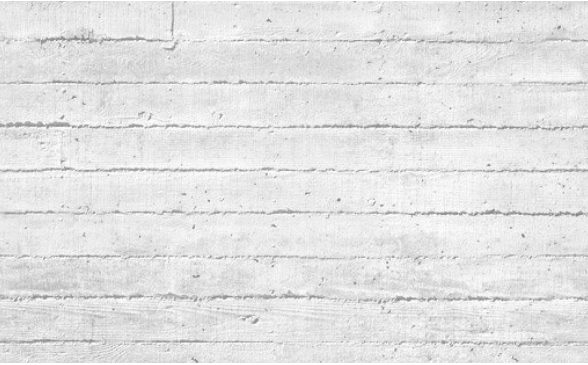
XGLBF - North Wall Bronze framed double door, hinged entry door



XBR - Existing bronze door base and central passage roller door

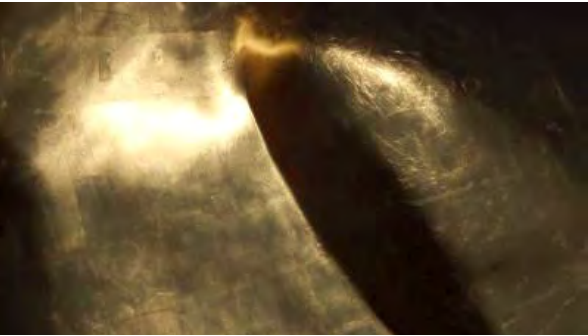
FURNITURE

DIGITAL ART WALLS



GLA - New transparent glass digital art screens infant of north XC walls

BRASS FURNITURE SCULPTURE



BR3 - Non directional polish, micro wax coated 6mm brass plate by Active Metals to brass folded seat for external use. BCA and access compliant



BR5 - High polished brass handrail for external use. BCA and access compliant

PRODUCT INFORMATION



BIKE HOOPS

BIK - Bronze cladded bicycle holder hoops. Street Furniture Australia bronze U-Shape semi-hoop bicycle stand <http://streetfurniture.com/au/product/semi-hoop/>



SERVICE CARRIAGES

SC2 - New suspended aluminium service carriage to UTS beams, similar to entry foyer. Emergency fire, sprinkler, speakers, security cameras, rigging points and lighting elements incorporated. Refer to A-3012 DETAIL SECTION 03



BOLLARDS

BOL - Existing bronze fixed and retractable bollards. Lifted and inserted into new PC1 floor paving



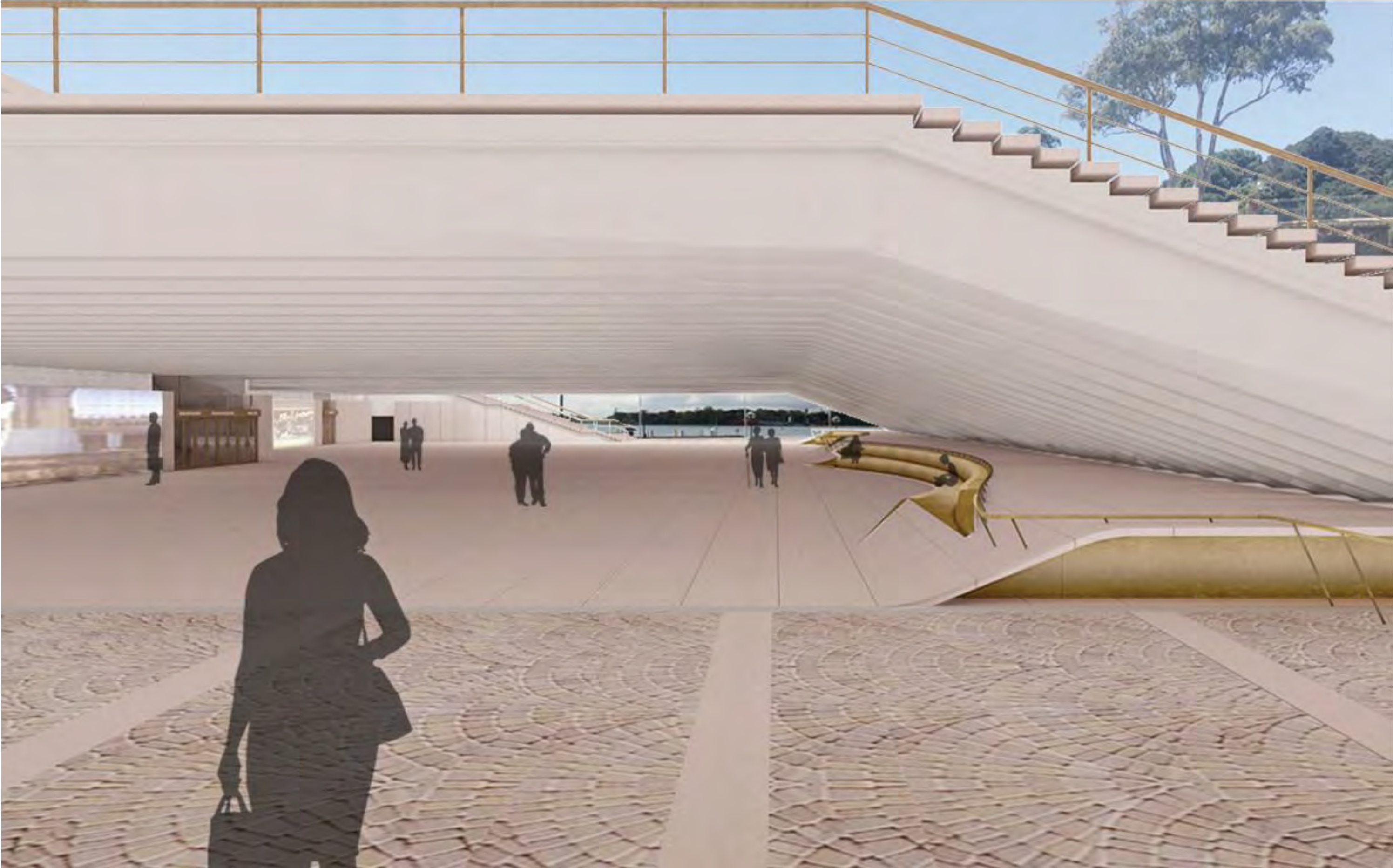
DIGITAL ART GLASS

New digital art transparent glass wall to north XC walls by PLANAR Systems. Product still in prototyping phase to meet size standards required.

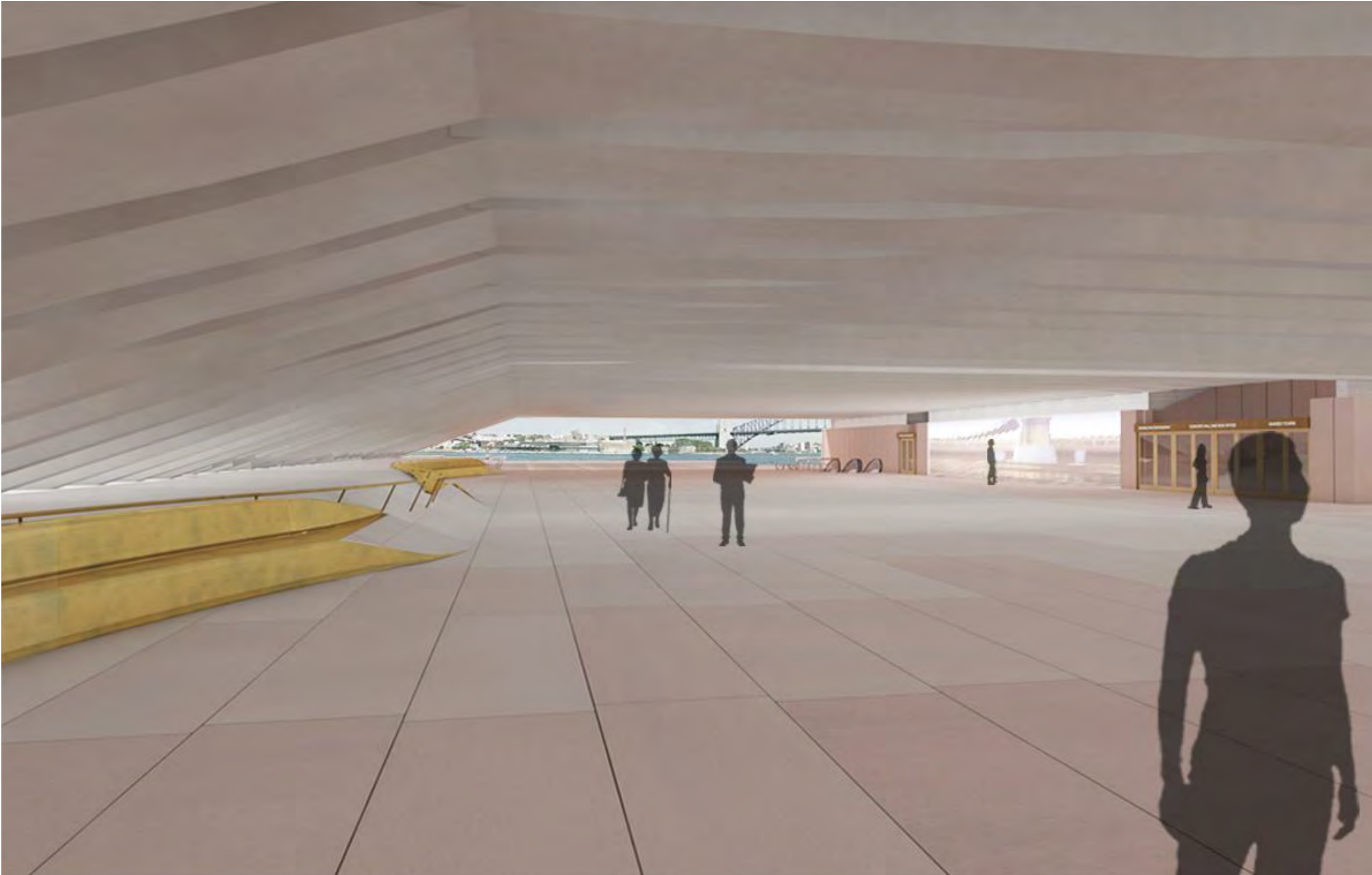
DATE	REV	DESCRIPTION	NOTES:	PROJECT :	ARCHITECT	DRAWING TITLE	DRAWN BY
02.08.2016	A	ISSUED FOR DA	Do not scale off drawings. Use figured dimensions only. Report any discrepancies to the architect. These designs, plans, specifications and the copyright therein are the property of Tonkin Zulaikha Greer Architects Pty Ltd, and must not be reproduced or copied wholly or in part without written permission of Tonkin Zulaikha Greer Architects Pty Ltd.	Sydney Opera House - Front of House Renewal	TONKIN ZULAIKHA GREER ARCHITECTS 117 Reservoir Street ABN: 4600272349 P: (02) 9215 4900 F: (02) 9215 4901 EMAIL tim@tzg.com.au WEB www.tzg.com.au	FINISHES + PRODUCT INFORMATION	MB, TS, RM
				PROJECT NO : 15031		SCALES @ A3	CHECKED RM, TG
						PHASE DA	DATE August 2016
						DRAWING NO A-9001	REV A



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				UNDER THE STEPS		SCALES @ A3	CHECKED RM, TG
				PROJECT NO : 15031		PHASE DA	DATE August 2016
						DRAWING NO A-9101	REV A



DATE	REV	DESCRIPTION	NOTES:	PROJECT :	ARCHITECT	DRAWING TITLE	DRAWN BY
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			Do not scale off drawings. Use figured dimensions only. Report any discrepancies to the architect. These designs, plans, specifications and the copyright therein are the property of Tonkin Zulaikha Greer Architects Pty Ltd, and must not be reproduced or copied wholly or in part without written permission of Tonkin Zulaikha Greer Architects Pty Ltd.	UNDER THE STEPS		SCALES	CHECKED
				PROJECT NO : 15031		@ A3	DATE
						PHASE	REV
						DA	A
						DRAWING NO	
						A-9103	



DATE	REV	DESCRIPTION	NOTES:	PROJECT :	ARCHITECT	DRAWING TITLE	DRAWN BY
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						SCALES	CHECKED
						@ A3	DATE
						PHASE	REV
						DA	A
						DRAWING NO	
						A-9102	