Contact
Daniel Martens

Our Ref
P2309926JC05V01

Pages
4 + Attachments

20 December 2024

Sell & Parker
Attn: Neil Sher
By email

Dear Neil,

Certification of Noise Wall Design: Resource Recovery Facility at 23-43 and 45 Tattersall Road, Kings Park NSW

I have been endorsed by the NSW Planning Secretary to provide this certification under Condition C1 (a)(i) of development consent SSD-10396 (the **Consent**) in respect of the proposed noise walls approved to be constructed at the resource recovery facility at 23-43 and 45 Tattersall Road, Kings Park. A copy of this endorsement is provided in Attachment 1.

Preliminary flood engineering advice was previously prepared by Martens & Associates Pty Ltd (reference P2309926JC02V01) in respect of conditions C1(a) (ii) – (iii) of the Consent where it was recommended that four culverts, each with 2 m wide x 1 m high openings, were required. A copy of this advice is provided at Attachment 2.

I certify that the design of the noise walls as detailed in the structural drawings prepared by Northrop provided at Attachment 3 incorporate the recommendation of the preliminary flood engineering advice and hence achieve the requirements of Conditions C1(a)(ii) and (iii) of development consent SSD-10396.

If you require any further information, please contact Jason Watkins at our offices.

For and on behalf of

Martens & Associates Pty Ltd

Dr Daniel Martens

LLB(Hons1), BSc(Hons1), MEngSc, PhD, FIEAust, CPEng, NER, RPEQ, APEC Eng, IntPE(Aus)

Director, Principal Engineer

Attachment 1: Endorsement of Dr Daniel Martens

Department of Planning, Housing & Infrastructure

Our ref: SSD-10396-PA-15

Mr Jordan Rodgers
Group Property and Development Manager
Sell and Parker Pty Ltd
11 Medow Way
Banksmeadow, NSW 2109

28 February 2024

Subject: Appointment of Dr Daniel Martens

Dear Mr Rodgers

I refer to your request dated 9 February 2024 for the Planning Secretary's endorsement of Dr Daniel Martens of Martens and Associates to prepare a report certifying that the design of the noise wall will achieve the requirements of Conditions C1(a)ii and (iii) or Condition C1(a)(iv), if applicable, under Condition C1(b) of SSD of 10396.

The Department has reviewed the nomination and information you have provided and is satisfied that the nominee is suitably qualified and experienced. Accordingly, I can advise that the Planning Secretary endorses the appointment of Dr Daniel Martens, of Martens and Associates to prepare a report certifying the design of the noise wall meets the requirements of the relevant conditions.

If you wish to discuss the matter further, please contact Emma Barnet on 9274 6412.

Yours sincerely

Principal Planning Officer
Industry Assessments

As nominee of the Planning Secretary

Attachment 2: Preliminary Flood Engineering Advice

Contact
J. Watkins

Our Ref
P2309926JC02V01

Pages
4

22 April 2024

Sell & Parker Pty Ltd
Att: Neil Sher
(by email)

DRAFT ADVICE

Dear Neil,

Preliminary Engineering Advice for Proposed Noise Wall Flood Management Requirements, Resource Recovery Facility at 23-43 and 45 Tattersall Road, Kings Park NSW

1 Overview

We are pleased to provide this preliminary flood management advice in respect of the proposed noise walls (the **Noise Walls**) approved to be constructed at the Resource Recovery Facility at 23-43 and 45 Tattersall Road, Kings Park NSW (the **Site**). The advice has been prepared on the basis of the scope of work outlined in our fee proposal dated 30 January 2024. In summary, this included in respect of the Noise Walls:

1. A review of the consent conditions for the development as contained at Annexure A in Sell & Parker Pty Ltd v Minister for Planning 2023 (LEC Proceedings No 2022/265917) (the **Consent**).

2. An inspection of the Site including the specific locations where the Noise Walls are approved to be constructed.

3. A detailed review of the flood modelling undertaken by Arcadis (the **Flood Model**) for the Noise Walls prior to the grant of consent, as documented in the Arcadis Memorandum Kings Park Metal Recovery and Recycling Facility Expansion – Addendum Flood Assessment Report, dated 4 April 2023 (the **Addendum Flood Assessment**).

4. Refinement of the Flood Model to optimise noise wall opening specifications to ensure that the resultant flood impacts are consistent with the Consent.

2 Consent Requirement

This advice has been prepared in response to condition C1 of the Consent, which says:

C1. Prior to the commencement of construction of the noise walls, the Applicant must:

(a) finalise the design of the noise walls in the eastern part of the Site to the satisfaction of the Planning Secretary. The final noise wall design must:

(i) be undertaken by a suitably qualified, independent and experienced expert(s) whose appointment has been endorsed by the Planning Secretary;

*(ii) enable appropriate flow of flood water during flood events between the 1% annual exceedance probability (**AEP**) and probable maximum flood (**PMF**) to ensure the effect of flooding at offsite properties is restricted to an acceptable level;*

(iii) include consideration of the recommendations provided in Section 4 of the Arcadis Addendum Flood Assessment Report dated 4 April 2023;

(iv) or provide for another suitable engineering solution in relation to flood management agreed by the Planning Secretary.

(b) provide a report to the Planning Secretary, prepared by a suitably qualified, independent and experienced person(s) whose appointment has been endorsed by the Planning Secretary, certifying that the design of the noise walls will achieve the requirements of Conditions C1(a)(ii) and (iii), or Condition C1(a)(iv) if applicable.

Our advice provides specific commentary on items C1(a)(ii) – (iii) above.

3 Site Inspection

We confirm that our inspection of the Site and Noise Wall locations was completed on 31 January 2024. During the inspection we were able to view existing stormwater infrastructure, the boundary walls and fencing, and the locations of all proposed Noise Walls.

4 Consideration of the Arcadis Addendum Flood Assessment

The Flood Model documented in the Addendum Flood Assessment was based on Blacktown Council's (**Council**) Eastern Creek Hydraulic Assessment dated November 2014 prepared by Catchment Simulation Solutions (the **Eastern Creek Flood Study**). The Flood Model incorporated some minor modifications to the Eastern Creek Flood Study model including:

1. Updated Lidar survey from 2010 to 2019 for part of the model domain.
2. Updated building footprints.
3. Incorporation of all permanent fences and walls within the Site that affect overland flows.
4. Adjustment of the 1D/2D interface along the Waller Creek (to east of Site) and Breakfast Creek (to south of Site).
5. Subdivision of several local inflow polygons to better represent overland flows entering the Site.
6. Inclusion of key drainage networks within the Site as identified by Site survey.
7. Incorporation of the Noise Walls.

Our review of the Flood Model concluded that it was generally fit for purpose. A minor adjustment was required to the position of the eastern boundary wall to ensure that it properly aligned with the model cells to prevent 'cell leakage' (which had led to part of the wall being ineffective).

In respect of the Noise Walls, these were represented in the Flood Model in a simplified manner using a 'layered flow constriction' approach which assumed 75 % blockage of 1 x 1 m openings spaced every 1.2 m along the length of the Noise Walls located in the Shear yard area south of Building B.

5 Noise Wall Requirements for Flood Impact Mitigation

To address condition C1(a)(ii), we consider that the most efficient means of providing flood flow conduits through the noise walls is by way of wider box culverts (or similar) at ground level which would be closed during operation, but would be opened in the event of an impending flood event. These will have the capacity to pass significant flows and will not be susceptible to potential blockage.

We have iteratively run the Flood Model (with the eastern wall correction noted at Section 4) to optimise the number and location of culverts. Culverts were modelled as 1D elements within the Tuflow hydraulic model domain assuming no blockage (based on no real debris potential, presence of the eastern boundary wall, and large culvert sizes). The modelling approach aimed to:

1. Result in off-site flood impacts that are broadly consistent with those reported in the Addendum Flood Assessment.

2. Minimise the number of culvert openings to reduce the time involved with opening these structures in the event of a flood.

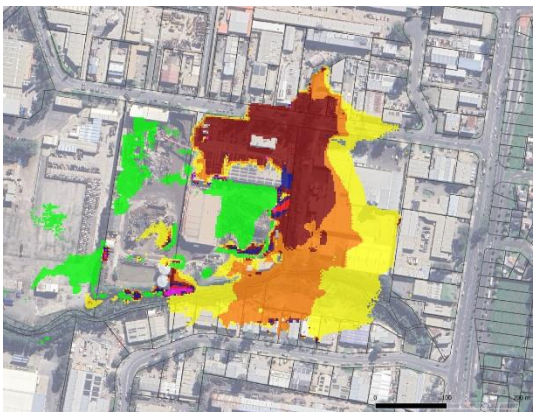
3. Optimise the location of culvert openings to ensure the effect of flooding at offsite properties is restricted to an acceptable level.

Based on the above methodology, we recommend that four culverts, each with 2 m wide x 1 m high openings, are required. Recommended locations are provided in Figure 1.

Figure 1: Recommended culvert locations.

At Table 1 we have plotted 1% AEP and PMF flood level afflux resulting from the Noise Walls, comparing the 2023 Arcadis Addendum Flood Assessment outcomes with those contained in this advice. We observe that the recommended culverts, consistent with the Addendum Flood Assessment, do not impact off-site 1% AEP flood levels. Off-site PMF impacts are reduced to the east and north due to the minor model correction (noted at Section 4) and correspondingly marginally increased to the west. In general, PMF afflux is consistent with the Addendum Flood Assessment and considered acceptable. The recommended culvert arrangement therefore satisfies condition C1(a)(ii).

Table 1: Modelled Noise Wall afflux (m).

Event	2023 Addendum Flood Assessment	2024 Recommended Culvert Configuration
1% AEP Afflux -0.01> -0.01 - 0.01 0.01 - 0.03 0.03 - 0.05 0.05 - 0.1 0.1 - 0.25 0.25 - 0.4 0.4<		
PMF Afflux -0.01> -0.01 - 0.01 0.01 - 0.03 0.03 - 0.05 0.05 - 0.1 0.1 - 0.25 0.25 - 0.4 0.4<		

If you require any further information, please contact Jason Watkins at our offices.

For and on behalf of

Martens & Associates Pty Ltd

Dr Daniel Martens

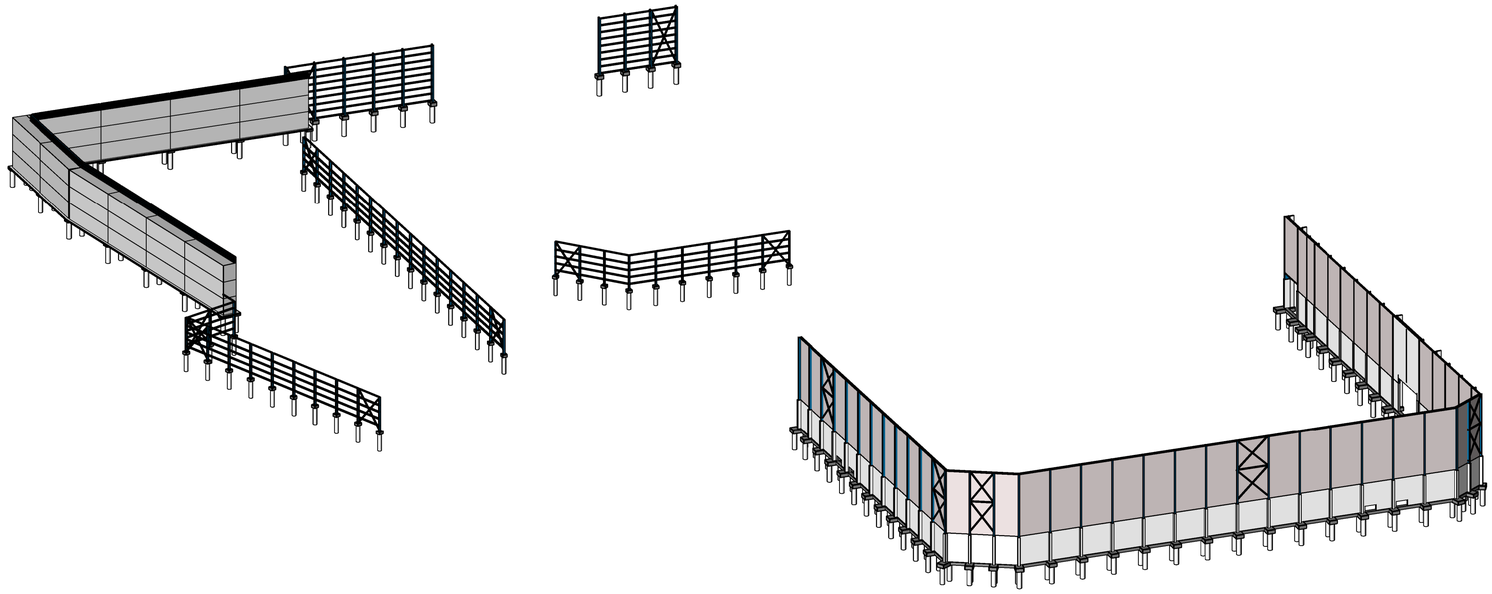
LLB(Hons1), BSc(Hons1), MEngSc, PhD, FIEAust, CPEng, NER, RPEQ, APEC Eng, IntPE(Aus)

Director, Principal Engineer

Attachment 3: Structural Drawings (Northrop, 2024)

TATTERSALL RD KINGS PARK – SOUND BARRIER

45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148
STRUCTURAL DOCUMENTATION



DRAWING LIST		
DWG NO.	REVISION	DRAWING NAME
S00.00	A	COVER SHEET AND DRAWING LIST
S00.11	A	SPECIFICATION NOTES - SHEET 1
S00.12	A	SPECIFICATION NOTES - SHEET 2
S10.00	A	OVERALL PLAN
S20.10	A	WALL FOUNDATION PART PLANS - SHEET 1
S20.11	A	WALL FOUNDATION PART PLANS - SHEET 2
S30.10	A	WALL FRAMING PART PLANS - SHEET 1
S30.11	A	WALL FRAMING PART PLANS - SHEET 2
S30.12	A	WALL FRAMING PART PLANS - SHEET 3
S40.10	A	WALL ELEVATIONS - SHEET 1
S40.11	A	WALL ELEVATIONS - SHEET 2
S40.50	A	WALL SECTIONS - SHEET 1
S60.10	A	TYPICAL FOUNDATION DETAILS
S60.15	A	SLAB ON GROUND DETAILS
S70.10	A	TYPICAL STEEL DETAILS
S70.11	A	TYPICAL SHIPPING CONTAINER WALL DETAILS - SHEET 1
S70.12	A	TYPICAL SHIPPING CONTAINER WALL DETAILS - SHEET 2
S80.10	A	TYPICAL CONCRETE DETAILS
S90.10	A	TYPICAL SLIDING FLOOD DOOR DETAILS

DRAWN: SID PANICKER DESIGNED: HERMANN LEE JOB MANAGER: CHRISTOPHER VOSNAKIS VERIFIER: JONATHAN LOW

FOR CONSTRUCTION

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR INFORMATION	SP		LH	16.02.24
2	ISSUED FOR INFORMATION	SP		HL	09.05.24
3	ISSUED FOR 90%	SP		HL	01.07.24
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

CLIENT
SELL & PARKER SINCE 1966
DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT
ALGORRY ZAPPIA & ASSOCIATES
BUILDING DESIGNERS & STRUCTURAL ENGINEERS

ALL SETOUT TO ARCHITECT'S DRAWINGS. DIMENSIONS TO BE VERIFIED WITH ARCHITECT AND BUILDER BEFORE COMMENCING SHOP DRAWINGS OR SITE WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.

NORTHROP
Sydney
Level 11, 345 George Street, Sydney, N.S.W. 2000
Ph (02) 9241 4188 Email: sydney@northrop.com.au
ABN 81 094 433 100

PROJECT
TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE
STRUCTURAL DRAWING COVER SHEET AND DRAWING LIST

JOB NUMBER **SY233442**
DRAWING NUMBER **S00.00**
REVISION **A**
DRAWING SHEET SIZE = A1

GENERAL

G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND ALL OTHER CONSULTANT'S DRAWINGS.

G2. ALL DISCREPANCIES SHALL BE REFERRED TO THE PROJECT MANAGER AND RESOLVED BEFORE PROCEEDING WITH THE WORK.

G3. ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE BUILDER ON SITE. THE STRUCTURAL DRAWINGS SHALLNOT BE SCALED FOR DIMENSIONS. THE RL's SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND ARE FOR THE SOLE PURPOSE OF ASSISTING THE STRUCTURAL DOCUMENTATION. THEY ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES. REFER TO ARCHITECTURAL DRAWINGS FOR CONFIRMATION OF ALL RL's, ALL LEVELS ARE IN METRES (m) AND DIMENSIONS ARE IN MILLIMETRES (mm).

G4. NOTES ON ANY DRAWING APPLY TO ALL DRAWINGS IN THE SET UNLESS NOTED OTHERWISE.

G5. CONSTRUCTION USING THESE DRAWINGS SHALL NOT COMMENCE UNTIL A CONSTRUCTION CERTIFICATE HAS BEEN ISSUED AND THE DRAWINGS ARE DESIGNATED "ISSUED FOR CONSTRUCTION".

G6. NO CHANGES IN ANY STRUCTURAL ELEMENT SHALL BE MADE WITHOUT WRITTEN APPROVAL FROM NORTHROP CONSULTING ENGINEERS. IF THERE IS A DISCREPANCY THEN FOR TENDER PURPOSES ALLOW FOR THE MOST EXPENSIVE OPTION. NORTHROP CONSULTING ENGINEERS SHALL BE CONTACTED TO CONFIRM PRIOR TO CONSTRUCTION.

G7. NORTHROP CONSULTING ENGINEERS ACCEPTS NO RESPONSIBILITY FOR ANY WORK NOT INSPECTED OR NOT APPROVED BY NORTHROP CONSULTING ENGINEERS DURING CONSTRUCTION.

G8. ALL WORKMANSHIP, TESTING, MATERIALS AND SUPERVISION ARE TO BE IN ACCORDANCE WITH THESE SPECIFICATIONS, AND THE RELEVANT FEDERAL AND STATE WHS LEGISLATION.

RESPONSIBILITIES:

G9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL SERVICES IN THE VICINITY OF THE WORKS. ANY SERVICES SHOWN ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL SERVICES PRIOR TO COMMENCING AND SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED TO SERVICES, AS WELL AS ANY LOSS INCURRED AS A RESULT OF THE DAMAGE TO ANY SERVICE.

G10. PROPRIETARY ITEMS SPECIFIED SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS. DO NOT VARY SPECIFIED PROPRIETARY PRODUCTS WITHOUT WRITTEN APPROVAL FROM THE NORTHROP.

G11. THE WEATHER PROOFING OF THE BUILDING IS THE ARCHITECT'S/ BUILDER'S RESPONSIBILITY. THIS INCLUDES (BUT IS NOT LIMITED TO) THE SPECIFICATION AND FIXING DETAILS OF CLADDING, SHEETING, FLASHING, MEMBRANES, STEPS, SETDOWNS & RECESSES.

G12. ALL ARCHITECTURAL FITMENTS SUCH AS GLAZING, PARTITIONS, CEILINGS ETC., SHOULD ALLOW FOR THE SHORT AND LONG TERM MOVEMENT OF STRUCTURAL ELEMENTS. FOR BEAMS AND SLABS SPANNING LESS THAN 8m AN ALLOWANCE OF AT LEAST 20mm SHOULD BE MADE. CONSULT NORTHROP WHERE SPANS EXCEED 8m.

G13. THE BUILDER SHALL PROVIDE CERTIFICATION FOR ANY DESIGN AND CONSTRUCT COMPONENT BY A SUITABLY QUALIFIED CHARTERED PROFESSIONAL ENGINEER REGISTERED AS REQUIRED BY THE RELEVANT FEDERAL AND STATE LEGISLATION.

SAFETY:

G14. THESE DRAWINGS AND ISSUED WRITTEN INSTRUCTIONS DURING THE COURSE OF THE CONTRACT DEPICT THE COMPLETE STRUCTURE. THEY DO NOT DESCRIBE A WORK METHOD. THE ARRANGEMENT, DESIGN AND INSTALLATION OF TEMPORARY WORKS REMAINS THE RESPONSIBILITY OF THE CONTRACTOR.

G15. THE DETERMINATION OF A SAFE WORK METHOD REMAINS THE RESPONSIBILITY OF THE CONTRACTOR. ANY ELEMENT WHICH POSES AN UNACCEPTABLE LEVEL OF SAFETY RISK TO CONSTRUCT SHALL BE REFERRED TO THE STRUCTURAL ENGINEER. TEMPORARY BRACING AND SUPPORT OF STRUCTURE IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MAINTAINED DURING ALL STAGES OF CONSTRUCTION.

G16. ANY PRODUCTS SPECIFIED OR USED ARE TO BE VERIFIED BY THE CONTRACTOR AS BEING SAFE AND APPROPRIATE FOR USE. NORTHROP CONSULTING ENGINEERS DO NOT TAKE ANY RESPONSIBILITY FOR THE USE OF UNSAFE PRODUCTS.

LOADING AND OTHER REQUIREMENTS:

G17. THE STRUCTURAL COMPONENTS DETAILED ON THESE STRUCTURAL DRAWINGS ARE JOB SPECIFIC AND HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND BUILDING CODE OF AUSTRALIA FOR THE FOLLOWING FIRE RATINGS, WIND LOADS, FLOOR USAGE AND EARTHQUAKE LOADS.

GENERAL:

- IMPORTANCE LEVEL	= 2
- ULTIMATE ANNUAL PROBABILITY OF EXCEEDANCE	= 1/500

DEAD AND LIVE LOADS:

- N/A.

WIND LOADS:

- REGION	= A2
- REGIONAL WIND SPEED VR	
- ULTIMATE V500	= 45 m/s
- SERVICE V25	= 37 m/s
- TERRAIN CATEGORY	= TC3
- TERRAIN MULTIPLIER Mz,cat	= 0.83 FOR H<=10m, 0.9 FOR H=16m
- WIND DIRECTION MULTIPLIER Md	= 1.0
- SHIELDING MULTIPLIER Ms	= 1.0
- TOPOGRAPHIC MULTIPLIER Mt	= 1.0
- DESIGN WIND SPEED	
- ULTIMATE Vdes,θ	= 40.9 m/s
- SERVICE Vdes,θ	= 33.3 m/s

EARTHQUAKE LOADS:

- PROBABILITY FACTOR (kp)	= 1
- DUCTILITY FACTOR (μ)	= 2
- STRUCTUAL PERFORMANCE FACTOR (Sp)	= 0.77
- HAZARD FACTOR (Z)	= 0.08
- SITE SUB-SOIL CLASS	= Ce – SHALLOW SOIL
- EARTHQUAKE DESIGN CATEGORY (EDC)	= I
- DESIGN REQUIRED	= SIMPLE STATIC CHECK

FIRE RATING LEVELS:

- AS PER THE NCC AND PROJECT FIRE ENGINEERING REPORTS OR AS SHOWN BELOW (WHICHEVER IS MORE ONEROUS)	
- ACOUSTIC WALLS	= -/-/-

G18. ALL EQUIPMENT ATTACHED TO OR SUSPENDED FROM THE STRUCTURE SHALL HAVE THEIR SUPPORTING BRACKETS, FIXINGS AND ANY OTHER ATTACHMENT HARDWARE DESIGNED TO RESIST THE EARTHQUAKE FORCES CALCULATED IN ACCORDANCE WITH AS1170.4 SECTION 8 USING THE EARTHQUAKE DESIGN PARAMETERS LISTED ABOVE. THIS DESIGN IS TO BE CARRIED OUT BY THE RELEVANT SUBCONTRACTOR, WITH CERTIFICATION PROVIDED BY A CHARTERED PROFESSIONAL ENGINEER REGISTERED AS REQUIRED BY THE RELEVANT FEDERAL AND STATE LEGISLATION.

G19. ALL BARRIERS NOT DOCUMENTED ON THE NORTHROP STRUCTURAL DRAWINGS ARE TO BE DESIGNED FOR THE LOADING SPECIFIED IN THE TABLE ABOVE. THIS DESIGN IS TO BE CARRIED OUT BY THE RELEVANT SUBCONTRACTOR, WITH CERTIFICATION PROVIDED BY A CHARTERED PROFESSIONAL ENGINEER REGISTERED AS REQUIRED BY THE RELEVANT FEDERAL AND STATE LEGISLATION.

CONSTRUCTION PHASE SERVICES (WITNESS POINTS)

WP1. OBTAIN NORTHROP CONSULTING ENGINEERS WRITTEN INSTRUCTION AT THE FOLLOWING HOLD POINTS:
- PREPARATION OF FOUNDING MATERIAL, INCLUDING PIER BORE HOLES.
- PILE AND FOOTING REINFORCEMENT PRIOR TO PLACEMENT OF CONCRETE.
- WALL REINFORCEMENT PRIOR TO PLACEMENT OF CONCRETE.
- STEEL PRIOR TO SHEETING OR INSTALLATION OF HEBEL PANELLING.

WP2. PROVIDE MINIMUM 48 HOURS NOTICE FOR ANY REQUIRED INSPECTIONS.

FOUNDATIONS

F1. ASSUMED GEOTECHNICAL PARAMETERS (OF CFA PILES FOUNDED IN BEDROCK OF AT LEAST MEDIUM STRENGTH):
- BORED PIERS = 3500 kPa ALLOWABLE END BEARING
  = 350 kPa ALLOWABLE SKIN FRICTION (COMPRESSION)
  = 175 kPA ALLOWABLE SKIN FRICTION (TENSION)

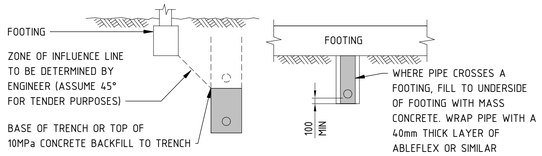
F2. A GEOTECHNICAL INVESTIGATION HAS BEEN CARRIED OUT, REFER TO REPORT No. 36415PH2rpt PREPARED BY JK GEOTECHNICS. THIS REPORT IS FOR INFORMATION ONLY, IT IS NOT A COMPLETE DESCRIPTION OF CONDITIONS AT OR BELOW GROUND LEVEL.

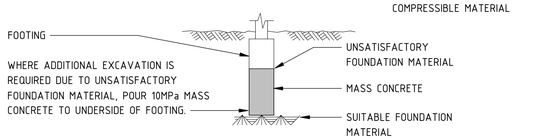
F3. THE CONTRACTOR SHALL ENGAGE A QUALIFIED GEOTECHNICAL ENGINEER REGISTERED AS REQUIRED BY THE RELEVANT FEDERAL AND STATE LEGISLATION TO INSPECT AND APPROVE THE FOUNDATION MATERIAL AND CONFIRM THE ABOVE ASSUMED GEOTECHNICAL PARAMETERS. OBTAIN GEOTECHNICAL ENGINEERS APPROVAL FOR ALL FOUNDATIONS AND SUBMIT CERTIFICATE IN WRITING TO NORTHROP CONSULTING ENGINEERS PRIOR TO CONCRETING FOUNDATIONS.

F4. ENSURE STABILITY OF ADJACENT BUILDINGS, FOOTPATHS, DRIVEWAYS AND FINISHED GROUND IS MAINTAINED DURING ALL STAGES OF CONSTRUCTION.

F5. DO NOT ALLOW EXCAVATED MATERIAL TO BE STOCKPILED WITHIN 1500mm OF FOOTING TRENCHES OR PITS. NO EARTH OR DETRITUS IS TO FALL INTO THE FOOTING TRENCHES BEFORE OR DURING CONCRETE PLACEMENT.

F6. THE UNDERSIDE OF FOUNDATIONS SHALL CONFORM TO THE FOLLOWING REGARDLESS OF NOMINATED LEVELS:





F7. FOOTINGS SHALL BE CENTRALLY LOCATED UNDER WALLS AND COLUMNS UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.

F8. FOOTINGS SHALL BE EXCAVATED TO THE DETAILED DEPTH AND WIDTH. FOOTINGS SHALL BE INSPECTED AND FILLED WITH CONCRETE AS SOON AS POSSIBLE TO AVOID EITHER SOFTENING OF THE FOUNDATION MATERIAL OR DRYING OUT BY EXPOSURE TO WEATHER. WHERE THIS IS NOT ACHIEVABLE, A 50mm THICK BLINDING SLAB WITH 10MPa CONCRETE IS TO BE POURED IMMEDIATELY AFTER EXCAVATION.

F9. THE BASE OF ALL FOUNDATIONS SHALL BE FREE OF WATER AND CLEANED OF LOOSE MATERIAL OR DEBRIS PRIOR TO PLACEMENT OF CONCRETE. ALLOW TO PROVIDE TEMPORARY LINERS OR SHORING FOR FOUNDATIONS, PILES AND PILE CAPS, SUMPS AND/OR BLINDING SLABS AS DEEMED NECESSARY.

PILING FOR DESIGN AND CONSTRUCTION

PP1. PILES HAVE BEEN DESIGNED FOR A MINIMUM DESIGN LIFE OF 50 YEARS BASED ON THE EXPOSURE CONDITIONS THAT EXIST ON THIS SITE.

VARIATIONS

PP2. NO VARIATIONS FOR ADDITIONAL PILING DEPTHS WILL BE CONSIDERED UNLESS IT CAN BE PROVEN THAT THE SUBSURFACE CONDITIONS ENCOUNTERED DIFFER MARKEDLY FROM THE GEOTECHNICAL BOREHOLES.

GEOTECHNICAL REPORT

PP3. A GEOTECHNICAL REPORT HAS BEEN CARRIED OUT, REFER TO REPORT No.36415PH2rpt PREPARED BY JK GEOTECHNICS DATED 08th APRIL 2024 THIS REPORT IS FOR INFORMATION ONLY, IT IS NOT A COMPLETE DESCRIPTION OF CONDITIONS AT OR BELOW GROUND LEVEL. THE REPORT IS PRELIMINARY AND FURTHER TESTING NEEDS TO BE CARRIED OUT FOLLOWING DEMOLITION.

STANDARDS

PP4. ALL PILES INCLUDING MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH AS2159-2009 PILING-DESIGN AND INSTALLATION.

TOLERANCES

PP5. - LEVEL OF CUT-OFF: +/-50mm.
- CENTRE OF SHAFT AT CUT-OFF: +/-25mm FROM THE DESIGN CUT-OFF LEVEL.
- 1% MAXIMUM INCLINATION.

INSTALLATION

PP6. PILING CONTRACTOR TO PROVIDE AN INSTALLATION CERTIFICATE FOR THE PILES CERTIFYING THAT THE PILES HAVE BEEN INSTALLED TO THE DESIGN REQUIREMENTS (SPECIFIED SOCKET LENGTH ETC). MAIN CONTRACTOR TO MONITOR INSTALLATION OF PILES (RECORD DEPTHS) AS PART OF THEIR QUALITY CONTROL.

PILING FOR DESIGN AND CONSTRUCTION (CONTINUED)

APPROVALS

PP7. ALL PROPOSED PILING METHODS WILL BE SUBJECT TO THE STRUCTURAL ENGINEER'S APPROVAL. SUBMIT THE FOLLOWING FOR APPROVAL:
- INSTALLATION METHODOLOGY.
- TEST SCHEDULE AND METHODOLOGY.

THIS SHALL NOT RELIEVE THE PILING CONTRACTOR FROM ANY OBLIGATIONS, AND THE PILING CONTRACTOR SHALL REMAIN COMPLETELY LIABLE FOR THE PILE WORKS.

PP8. REFER TO DRAWINGS FOR STRUCTURAL DESIGN.

PILE TESTING AND CERTIFICATION:

PP12. PROVIDE DYNAMIC LOAD TESTING TO 5% OF PILES (MINIMUM OF 2 TESTS) IN ACCORDANCE WITH AS2159. NORTHROP ENGINEERS ARE TO NOMINATE PILE FOR TESTING.

CERTIFICATION

PP13. PROVIDE INTEGRITY PILE TESTS TO 20% OF ALL PILES (CONCRETE PILES ONLY) IN ACCORDANCE WITH AS2159.

PP14. ALLOW FOR ONE SUCCESSFUL LATERAL LOAD TEST IN ACCORDANCE WITH AS 2159.

CERTIFICATION

PP15. PROVIDE GEOTECHNICAL CERTIFICATION FROM A CHARTERED (NER) ENGINEER ON THE PILING CONTRACTORS LETTERHEAD CERTIFYING THE PILES HAVE BEEN DESIGNED IN ACCORDANCE WITH THAT APPROPRIATE STANDARDS AND CAN SUPPORT THE DESIGN LOADS WITHIN THE SPECIFIED TOLERANCES.

SURVEY

PP16. PILES TO BE SURVEYED TO CONFIRM LOCATION IS WITHIN TOLERANCE STATED ABOVE. SURVEY RESULTS TO BE FORWARDED TO NORTHROP ENGINEERS PRIOR TO RIG BEING REMOVED FROM SITE.

FORMWORK

FW1. THE DESIGN, CERTIFICATION, CONSTRUCTION, INSPECTION AND PERFORMANCE OF THE FORMWORK AND FALSE WORK SHALL BE THE RESPONSIBILITY OF THE FORMWORK SUB-CONTRACTOR, EXCEPT TO THE EXTENT THAT FORMWORK DESIGN IS SHOWN ON THE STRUCTURAL DRAWINGS.

FW2. FORMWORK SHALL BE CERTIFIED BY A CHARTERED PROFESSIONAL STRUCTURAL ENGINEER REGISTERED AS REQUIRED BY THE RELEVANT FEDERAL AND STATE LEGISLATION AND EXPERIENCED IN FORMWORK DESIGN IN ACCORDANCE WITH WORKCOVER REGULATIONS AND THE WORKCOVER CODE OF PRACTICE.

FW3. FORMWORK SHALL BE DESIGNED IN ACCORDANCE WITH AS3610.1. THE DESIGN SHALL ACCOMMODATE MOVEMENTS AND LOAD RE-DISTRIBUTION DUE TO ANY POST TENSIONING.

FW4 PROVIDE RESTRAINT OR SUPPORT TO ENSURE STABILITY OF FORMWORK THAT IS INDEPENDENT OF THE PERMANENT STRUCTURE. APPROVAL FROM NORTHROP CONSULTING ENGINEERS IS REQUIRED IF FORMWORK SUPPORT IS REQUIRED FROM THE PERMANENT STRUCTURE.

FW5. FOUNDATIONS SUPPORTING THE FORMWORK SHALL BE DETERMINED BY THE FORMWORK SUB-CONTRACTOR FROM THE CONDITIONS EXISTING ON SITE AT THE TIME OF CONSTRUCTION. REFER TO THE GEOTECHNICAL REPORT FOR THE SITE.

FW6. FORMWORK CONSTRUCTION DIMENSIONAL TOLERANCES AND STRIPPING TIMES SHALL COMPLY WITH AS3610.1 AND AS3600 UNLESS OTHERWISE APPROVED BY NORTHROP CONSULTING ENGINEERS.

FW7. DURING CONSTRUCTION, SUPPORT PROPPING WILL BE REQUIRED WHERE LOADS FROM STACKED MATERIALS, FORMWORK AND OTHER SUPPORTED SLABS INDUCE LOADS IN A SLAB OR BEAM WHICH EXCEED THE DESIGN CAPACITY FOR STRENGTH OR SERVICEABILITY LIMIT STATES AT THAT AGE. ONCE THE NOMINATED 28 DAY STRENGTH HAS BEEN ATTAINED, THESE LOADS SHALL NOT EXCEED THE DESIGN SUPERIMPOSED LOADS AS SHOWN ON THE LOADING PLANS.

FW8. IT IS TO BE ANTICIPATED IN MULTI-STOREY CONSTRUCTION THAT BACK-PROPPING MAY BE REQUIRED TO EXTEND A NUMBER OF LEVELS BELOW THE FLOOR BEING CAST. PROP REMOVAL IS TO BE PROGRAMMED TO AVOID DISTRESS TO PREVIOUSLY CAST FLOORS. RE-SHORING OR BACKPROPPING PROPOSALS SHALL BE SUBJECT TO THE APPROVAL OF NORTHROP CONSULTING ENGINEERS.

FW9. FORMED CONCRETE SURFACES SHALL HAVE FORMWORK CLASS AND SURFACE FINISHES IN ACCORDANCE WITH AS3610, AS SPECIFIED BY THE PROJECT ARCHITECT.

FW10. DO NOT PLACE PERMANENT LOADS ON THE CONCRETE STRUCTURE UNTIL AFTER FORMWORK AND PROPPING IS REMOVED.

FW11. REFER TO PROJECT ARCHITECT'S DRAWINGS FOR TEST PANEL REQUIREMENTS. REINFORCEMENT FOR TEST PANELS SHALL BE SIMILAR TO THAT IN THE PERMANENT STRUCTURE REPRESENTED BY THE TEST PANEL.

FW12. BEFORE PLACING REINFORCEMENT IN THE FORMWORK, APPLY A RELEASE AGENT TO THE FACE OF THE FORMWORK IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

FW13. DO NOT APPLY A RELEASE AGENT TO THE FACE OF CONCRETE WHERE CONCRETE SURFACE FINISH OR APPLIED COVERINGS ARE INCOMPATIBLE WITH RELEASE AGENT.

FW14. CHAMFER RE-ENTRANT ANGLES AND FILLET ALL CORNERS BY 25mm U.N.O. PROVIDE DRIP GROOVES TO UNDERSIDE OF ALL EXPOSED EDGES.

FW15. BEFORE PLACING CONCRETE, REMOVE ALL WATER, DUST AND DEBRIS FROM THE FORMWORK.

FW16. FILL ALL HOLES LEFT BY FORMWORK TIE BOLTS WITH MORTAR MATCHING THE COLOUR OF THE FINISHED SURFACE.

WORKPLACE HEALTH AND SAFETY

WHS1. THE CONTRACTOR AND ALL SUBCONTRACTORS ARE RESPONSIBLE FOR CONSTRUCTING THE WORK IN ACCORDANCE WITH THE WORK HEALTH AND SAFETY (WHS) ACT 2011; WHS REGULATIONS 2017; RELEVANT CODES OF PRACTICE, AUSTRALIAN STANDARDS AND OTHER REGULATORY REQUIREMENTS. THE PRINCIPLE CONTRACTOR MUST INFORM ALL STAKEHOLDERS, INCLUDING NORTHROP, OF NEW HAZARDS IDENTIFIED IN THE COURSE OF PLANNING AND UNDERTAKING THE WORKS.

WHS2. DURING THE DESIGN OF THE STRUCTURE NORTHROP HAS IDENTIFIED RESIDUAL HAZARDS RELATING TO THE DESIGN OF THE STRUCTURAL WORKS THAT WE CONSIDER TO BE UNUSUAL OR NON-TYPICAL. HAZARDS WHICH ARE NORMAL WORKPLACE HAZARDS, ARE TO BE MANAGED BY PERSONS IN CONTROL OF THE WORKPLACE THROUGH A WHS SYSTEM TO MANAGE THE NORMAL HAZARDS ASSOCIATED WITH CONSTRUCTION, USE AND MAINTENANCE OF THE STRUCTURE. THE RESIDUAL HAZARDS IDENTIFIED ON THE NORTHROP DRAWINGS ARE NOT AN ENTIRE ASSESSMENT OF HAZARDS, AND DO NOT RELIEVE OTHER PARTIES OR STAKEHOLDERS OF THE THEIR RESPONSIBILITY UNDER THE WHS ACT 2011, WHS REGULATIONS 2017, AND THE CODE OF PRACTICE FOR SAFE DESIGN OF STRUCTURES.

WHS3. TEMPORARY BRACING AND SUPPORT OF STRUCTURE IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MAINTAINED DURING ALL STAGES OF CONSTRUCTION.

WHS4. RESIDUAL HAZARDS ARE SHOWN ON THE NORTHROP DRAWINGS IDENTIFIED BY: S1

CONCRETE

C1. CARRY OUT ALL CONCRETE WORK IN ACCORDANCE WITH AS3600 AND THE PROJECT STRUCTURAL SPECIFICATION. ALL CONCRETE SUPPLY SHALL COMPLY WITH AS1379.

C2. CONCRETE PROPERTIES AND COVER TO REINFORCING:

CONCRETE PROPERTIES				
ELEMENT		CONCRETE STRENGTH f'c (MPa)	MAXIMUM 56 DAY DRY SHRINKAGE	COVER (mm)
PILES		40	-	75
PILE CAPS		40	-	40
WALLS	EXTERNAL FACES	40	-	40

NORTHROP'S PERFORMANCE SPECIFICATION FOR CONCRETE ONLY INCLUDES THE PROPERTIES THAT ARE RELEVANT TO THE STRUCTURAL DESIGN IN ACCORDANCE WITH AS3600. THE CONCRETE CLASS (NORMAL, SPECIAL OR OTHERWISE) AND ASSOCIATED PRODUCTION AND TESTING REQUIREMENTS ARE TO BE DETERMINED BY THE CONCRETE SUPPLIER IN ACCORDANCE WITH AS1379 AND INCLUDED IN THE MIX DESIGN SUBMITTED FOR NORTHROP'S REVIEW.

MAXIMUM AGGREGATE SIZE = TO AS1379.
SLUMP DURING PLACING = TO AS1379; AND AS PER THE RECOMMENDATIONS OF THE PROJECT FORMWORK AND CONCRETING SUBCONTRACTORS.
EXPOSURE CLASSIFICATION = A2 EXTERNAL CONCRETE ELEMENTS.

ADMIXTURES USED IN THE CONCRETE MIX ARE TO COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS AND ARE TO BE INCLUDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ADMIXTURES ARE TO BE INCLUDED IN THE SUBMITTED MIX DESIGN FOR NORTHROP REVIEW.

C3. PERCENTAGE OF ENTRAINED AIR TO BE AS FOLLOWS U.N.O.:
- NON-ALPINE OR SUB-ALPINE AREAS (PER AS1170.3) = TO AS1379.
- FOR ALPINE OR SUB-ALPINE AREAS (PER AS1170.3) = AGGREGATE 10mm-20mm NOMINAL, 4%-8% IN ACCORDANCE WITH AS3600 AND AS1012.4 (SUBMIT TEST RESULTS).

CONCRETE TESTING:

C4. PROJECT CONTROL TESTING SHALL BE CARRIED OUT ON ALL CONCRETE IN ACCORDANCE WITH AS1379.

C5. ALL CONCRETE MIXES SHALL BE TESTED IN ACCORDANCE WITH AS1379 AND THE PROJECT SPECIFICATION BY A RECOGNISED TESTING LAB AND SUBMITTED FOR REVIEW BY NORTHROP CONSULTING ENGINEERS. TEST CYLINDERS ARE TO BE KEPT ON SITE.

C6. PROJECT ASSESSMENT OF CONCRETE STRENGTH IS REQUIRED. IN ADDITION TO THE REQUIREMENTS OF AS1379, A MINIMUM REQUIREMENT OF ONE SAMPLE PER BATCH SHALL APPLY TO CONCRETE IN COLUMNS, BEARING WALLS AND ALL PRECAST MEMBERS.

CONCRETE PROFILES:

C7. CONCRETE PROFILES:
- BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE THE SLAB THICKNESS.
- SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN SHOWN IN THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF NORTHROP CONSULTING ENGINEERS.
- PROVIDE DRIP GROOVES AT ALL EXPOSED EDGES, CHAMFERS, DRIP GROOVES, REGLETS ETC TO ARCHITECT'S DETAILS.

C8. ALL PENETRATIONS TO HAVE 2N16 TRIMMER BARS TOP AND BOTTOM TO EACH FACE U.N.O. EXTEND TRIMMERS 600mm BEYOND PENETRATION.

C9. SETDOWNS OR FALLS IN FLOOR SURFACES ARE NOT PERMITTED UNLESS SHOWN ON DRAWINGS. MAINTAIN MINIMUM SLAB THICKNESS SHOWN ON PLAN WHERE FALLS OCCUR.

C10. NO PENETRATIONS, CHASES OR EMBEDMENTS OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS, SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

C11. CAMBER REQUIREMENTS, IF ANY, IN BEAMS AND SLABS SHALL BE AS NOTED ON THE DRAWINGS. CAMBERS SHALL BE CHECKED BEFORE AND AFTER DEPROPPING TO DETERMINE THE DEFLECTION OF THE MEMBERS UNDER THEIR SELF-WEIGHT. PROVISION SHALL BE MADE IN THE FORMWORK SYSTEM FOR THE ENGINEER TO VARY THE SPECIFIED CAMBERS FOR SUBSEQUENT POURS ON THE BASIS OF THIS INFORMATION.

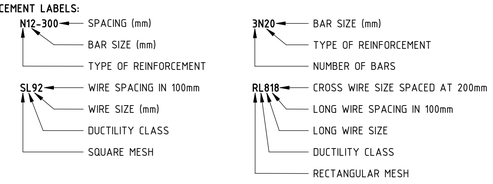
REINFORCEMENT:

C12. REINFORCEMENT QUALITY AND NOTATION:

REINFORCEMENT NOTATION			
SYMBOL	BAR TYPE	STRENGTH GRADE (MPa)	DUCTILITY CLASS
S	HOT-ROLLED DEFORMED RIB BAR	D250N	NORMAL
N	HOT-ROLLED DEFORMED RIB BAR	D500N	NORMAL
R	PLAIN ROUND BAR	R250N	NORMAL
RL	RECTANGULAR MESH OF DEFORMED RIB BAR	D500L	LOW
SL	SQUARE MESH OF DEFORMED RIB BAR	D500L	LOW
L-TM	TRENCH MESH	D500L	LOW

ALL REINFORCING BARS SHALL BE GRADE D500N AND ALL MESH SHALL BE GRADE D500L TO AS/NZS 4671-2019. UNLESS NOTED OTHERWISE DUCTILITY CLASS L REINFORCEMENT SHALL NOT BE USED.

REINFORCEMENT LABELS:



DRAWN: SID PANICKER
DESIGNED: HERMANN LEE
JOB MANAGER: CHRISTOPHER VOSNAKIS
VERIFIER: JONATHAN LOW

FOR CONSTRUCTION

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR INFORMATION	SP		HL	09.05.24
2	ISSUED FOR 90%	SP		HL	01.07.24
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

CLIENT: SELL & PARKER SINCE 1966
DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT: ALGORRY ZAPPIA & ASSOCIATES
BUILDING DESIGNERS & STRUCTURAL ENGINEERS

ALL SETOUT TO ARCHITECT'S DRAWINGS. DIMENSIONS TO BE VERIFIED WITH ARCHITECT AND BUILDER BEFORE COMMENCING SHOP DRAWINGS OR SITE WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.

NORTHROP
Sydney
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Ph (02) 9241 4188 Email: sydney@northrop.com.au
ABN 81 094 433 100

PROJECT: TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE: STRUCTURAL DRAWING SPECIFICATION NOTES - SHEET 1

JOB NUMBER: SY233442
DRAWING NUMBER: S00.11
REVISION: A
DRAWING SHEET SIZE = A1

CONCRETE (CONTINUED)

C13. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY, AND NOT NECESSARILY IN TRUE PROJECTION. BARS SHOWN ARE INDICATIVE ONLY AND LENGTHS MAY VARY. BEAM ELEVATIONS AND SLAB PLANS TAKE PRECEDENCE OVER SECTIONS. REFER TO SECTIONS FOR EXTRA BARS THAT MAY BE REQUIRED.

C14. USE ONLY PLASTIC OR CONCRETE CHAIRS AT EXTERNAL SURFACES.

C15. SITE BENDING OF REINFORCEMENT BARS SHALL BE DONE WITHOUT HEATING USING A RE-BENDING TOOL AND IN ACCORDANCE WITH AS3600 SECTION 17. BARS SHALL BE RE-BENT AGAINST A FLAT SURFACE OR A PIN WITH A DIAMETER NOT LESS THAN THE MINIMUM PIN SIZE PRESCRIBED IN AS3600. NORTHROP TO BE NOTIFIED FOR APPROVAL PRIOR TO SITE BENDING OF ANY REINFORCEMENT.

C16. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN ON THE STRUCTURAL DRAWINGS OR IN POSITIONS APPROVED IN WRITING BY NORTHROP CONSULTING ENGINEERS. LAPS SHALL NOT BE LESS THAN THE 1.25xDEVELOPMENT LENGTH FOR EACH BAR AND IN ACCORDANCE WITH AS3600 SECTION 13.

C17. LAPS IN MESH SHALL BE IN ACCORDANCE WITH AS3600 SECTION 13.

C18. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY NORTHROP CONSULTING ENGINEERS AND SHALL BE IN ACCORDANCE WITH AS1554.3.

C19. AT EXTERNALLY EXPOSED SURFACES NO METALLIC ITEMS INCLUDING FORM BOLTS, FORM SPACERS, METALLIC BAR CHAIRS AND TIE-WIRE ARE TO BE PLACED IN THE COVER ZONE.

C20. ALL REINFORCEMENT, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION AND INSPECTED BY NORTHROP CONSULTING ENGINEERS PRIOR TO PLACING CONCRETE.

C21. DISTRIBUTION BARS TO MAIN REINFORCEMENT IN SLABS SHALL BE N12 AT 300 CTS. WITH 400mm LAPS U.N.O.

C22. REINFORCEMENT TO BE CHECKED BY ENGINEER PRIOR TO POURING. PROVIDE 48 HOURS NOTICE AND ALLOW SUFFICIENT TIME FOR ANY REMEDIAL WORK REQUIRED AFTER CHECKING PRIOR TO CONCRETE POUR.

C23. THE MINIMUM CLEAR SPACING BETWEEN CONDUITS, CABLES, PIPES AND BARS TO BE AS REQUIRED BY AS3600 BUT NOT LESS THAN THREE BAR DIAMETERS. CONDUITS IN SLABS TO BE PLACED ABOVE BOTTOM REINFORCEMENT AND BELOW TOP REINFORCEMENT.

C24. HOOKS, BENDS, SPLICES AND LAPS TO BE IN ACCORDANCE WITH AS3600.

CONCRETE PLACEMENT:

C25. SUBMIT FOR APPROVAL THE FOLLOWING TO THE ENGINEER:
- CURING PROCEDURE (PVA MEMBRANES NOT PERMITTED).
- STRIPPING AND BACK PROPPING PROCEDURE.
- DETAILS AND LOCATION OF CONDUITS AND PENETRATIONS.
- CONSTRUCTION JOINT LOCATIONS.

C26. CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF 7 DAYS, UNLESS SPECIFIED OTHERWISE. APPROVED SPRAY ON CURING COMPOUNDS THAT COMPLY WITH AS3799 MAY BE USED WHERE FLOOR FINISHES WILL NOT BE AFFECTED. POLYTHENE SHEETING OR WET HESSIAN MAY BE USED TO RETAIN CONCRETE MOISTURE WHERE PROTECTED FROM WIND AND TRAFFIC. CURING IS TO COMMENCE IMMEDIATELY AFTER CONCRETE PLACEMENT.

C27. ELAPSED TIME BETWEEN THE WETTING OF THE MIX AND THE DISCHARGE OF THE MIX AT THE SITE MUST NOT EXCEED THE CRITERIA IN THE ELAPSED DELIVERY TIMETABLE BELOW:

CONCRETE TEMPERATURE AT TIME OF DISCHARGE (°C)	MAXIMUM ELAPSED TIME (HOURS)
< 24	2.00
24 to 27	1.50
27 to 30	1.00
30 to 32	0.75
32 to 35	0.50

IF THE ELAPSED TIME IS LONGER THAN THE CORRESPONDING TIME IN THE TABLE ABOVE, OR THE TEMPERATURE IS GREATER THAN 35°C, EITHER NORTHROP CONSULTING ENGINEERS OR THE CONCRETE MIX DESIGN ENGINEER ARE TO BE CONTACTED TO CONFIRM WHETHER PLACEMENT IS TO PROCEED OR IF THE POUR IS TO BE STOPPED. IF THE POUR IS STOPPED, PRIOR TO ANY FURTHER CONCRETE PLACEMENT NORTHROP CONSULTING ENGINEERS ARE TO BE CONTACTED TO INSPECT THE WORKS AND DETERMINE WHAT, IF ANY, RECTIFICATION WORKS ARE REQUIRED. IF THE CONCRETE TEMPERATURE AT THE TIME OF DISCHARGE IS LESS THAN 5°C, CONCRETE SHALL BE REJECTED. IF AIR TEMPERATURE IS LESS THAN 10°C FOR LONGER THAN A 12 HOUR PERIOD, SUBMIT "COLD WEATHER CONCRETING PROCEDURES" FOR APPROVAL.

C28. MINIMUM COMPRESSIVE STRENGTH AT TIME OF STRIPPING SHALL BE IN ACCORDANCE WITH AS3600 TABLE 4.4.

C29. COMPACT ALL CONCRETE USING MECHANICAL VIBRATORS.

C30. PLACE CONCRETE CONTINUOUSLY BETWEEN CONSTRUCTION JOINTS SHOWN ON PLAN. DO NOT BREAK OR INTERRUPT SUCCESSIVE POURS SUCH THAT COLD JOINTS OCCUR. ANY REVISIONS OR ADDITIONS TO CONSTRUCTION JOINTS SHOWN ON PLAN REQUIRE APPROVAL FROM NORTHROP CONSULTING ENGINEERS.

C31. FACES OF CONSTRUCTION JOINTS TO BE CLEANED AND MECHANICALLY ROUGHENED PRIOR TO SUBSEQUENT, ADJACENT POURS.

C32. IN AREAS WHERE POLISHED OR BURNISHED CONCRETE IS NOMINATED, THE PLACEMENT, COMPACTION, CURING AND FINISHING IS TO BE BEST PRACTICE TO ACHIEVE A HIGH-QUALITY FINISH. REFER TO ARCHITECTURAL SPECIFICATION FOR DETAILS AND TO CEMENT & CONCRETE AGGREGATES AUSTRALIA BRIEFING 05 (DEC. 2006) FOR RECOMMENDATIONS OF BEST PRACTICE.

CONCRETE (ELAPSED DELIVERY TIMES)

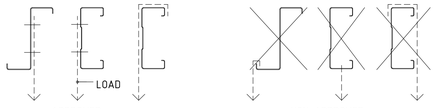
CE1. ELAPSED TIME BETWEEN THE WETTING OF THE MIX AND THE DISCHARGE OF THE MIX AT THE SITE MUST NOT EXCEED THE CRITERIA IN THE ELAPSED DELIVERY TIMETABLE BELOW:

ELAPSED DELIVERY TIME TABLE	
CONCRETE TEMPERATURE AT TIME OF DISCHARGE (°C)	MAXIMUM ELAPSED TIME (HOURS)
< 24	2.00
24 to 27	1.50
27 to 30	1.00
30 to 32	0.75
32 to 35	0.50

IF THE ELAPSED TIME IS LONGER THAN THE CORRESPONDING TIME IN THE TABLE ABOVE, OR THE TEMPERATURE IS GREATER THAN 35°C, EITHER NORTHROP CONSULTING ENGINEERS OR THE CONCRETE MIX DESIGN ENGINEER ARE TO BE CONTACTED TO CONFIRM WHETHER PLACEMENT IS TO PROCEED OR IF THE POUR IS TO BE STOPPED. IF THE POUR IS STOPPED, PRIOR TO ANY FURTHER CONCRETE PLACEMENT NORTHROP CONSULTING ENGINEERS ARE TO BE CONTACTED TO INSPECT THE WORKS AND DETERMINE WHAT, IF ANY, RECTIFICATION WORKS ARE REQUIRED.
IF THE CONCRETE TEMPERATURE AT THE TIME OF DISCHARGE IS NOT ≥ 5°C, CONCRETE SHALL BE REJECTED. IF AIR TEMPERATURE IS ≤ 10°C, (FOR ≥ A 12 HOUR PERIOD) SUBMIT "COLD WEATHER CONCRETING PROCEDURES" FOR APPROVAL.

PURLINS AND GIRTS

PG1. THE SUSPENSION OF CEILINGS,SERVICES ETC FROM PURLINS AND GIRTS SHALL BE IN ACCORDANCE WITH THE APPROVED METHODS DETAILED BELOW;



PG2. MINIMUM YIELD STRESSES OF PURLINS AND GIRTS TO BE 450MPa.
SURFACE TREATMENT OF ALL PURLINS AND GIRTS TO BE 350g/m² IN ACCORDANCE WITH AS1397-2001 U.N.O. LAPS, BRIDGING, BRACKETS AND PURLIN BOLTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

PG3. UNLESS OTHERWISE DETAILED FABRICATOR SHALL PROVIDE C10015 TRIMMER PURLINS ALONG WITH GENERAL PURPOSE BRACKETS TO SUPPORT EDGE OF ROOF SHEETING AT ALL HIPS, VALLEYS AND PENETRATIONS.

PG4. UNLESS OTHERWISE DETAILED, FABRICATOR SHALL ALLOW TO PROVIDE ONE ROW OF BRIDGING FOR PURLINS SPANNING UP TO 4.0m, TWO ROWS FOR PURLINS SPANNING BETWEEN 4.0m AND 8.0m AND THREE ROWS FOR SPANS GREATER THAN 8.0m INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

PG5. PURLIN CLEATS SHALL GENERALLY BE MINIMUM 75 WIDE x 8 PLATE U.N.O. WHERE THE DISTANCE BETWEEN THE UNDERSIDE OF PURLIN AND THE TOP OF THE BEAM EXCEEDS 150mm THE CLEATS SHALL BE MINIMUM 75 x 6 EA. UP TO A MAXIMUM HEIGHT OF 800mm.

PG6. PURLINS SHALL BE LAPPED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SHOWN ON THE DRAWINGS.

STEELWORK

S1. FABRICATE AND ERECT STRUCTURAL STEELWORK IN ACCORDANCE WITH AS4100-1998.

S2. PROVIDE HOLES, CLEATS AND FIXING FOR LIGHT STEEL/TIMBER FRAMING, FINISHES, ETC. SHOWN ON ARCHITECTURAL DRAWINGS.

S3. THESE DRAWINGS HAVE BEEN PREPARED TO INDICATE THE STRUCTURAL INTENT. THE SHOP DETAILER IS TO USE THESE DRAWINGS AS A BASIS FOR DIMENSIONAL COORDINATION WITH OTHER CONSULTANT'S DRAWINGS AND IS TO PREPARE DETAILED SHOP DRAWINGS. WHERE NECESSARY, THE SHOP DETAILER IS TO MAKE ASSUMPTIONS AND SUBMIT TO NORTHROP CONSULTING ENGINEERS FOR RESOLUTION. SHOP DETAILER IS TO ALLOW TO RE-WORK SHOP DRAWINGS AS NECESSARY. FABRICATOR SHALL PREPARE SHOP DRAWINGS AND SUBMIT THEM TO THE BUILDER FOR THEIR APPROVAL. BUILDER SHALL LODGE TWO HARD COPIES OF APPROVED DRAWINGS TO NORTHROP CONSULTING ENGINEERS FOR REVIEW PRIOR TO FABRICATION, (ALLOW 5 WORKING DAYS FOR REVIEW).

S4. TYPICAL STEELWORK CONNECTIONS (UNLESS NOTED OTHERWISE):
- PURLINS/WALL GIRTS: 8 CLEAT PLATES, 2 PURLIN BOLTS.

UNLESS NOTED OTHERWISE, USE:
- 10mm BASE, CAP, GUSSET, FIN AND END PLATES.
- M20 8.8/S BOLTS. (4.6/S GRADE TO BE USED FOR HOLD DOWN BOLTS).
- 6mm CONTINUOUS FILLET WELDS MADE WITH E4918 MILD STEEL ELECTRODES.
- ALL WELDS SP CATEGORY.

S5. NO PAINT ON MATING SURFACES WITH TF BOLTING UNLESS APPROVED BY NORTHROP CONSULTING ENGINEERS.

S6. TF or TB BOLTS TO BE INSTALLED WITH ONE HARDENED WASHER UNDER THE TURNED PART.

S7. USE LOAD INDICATING WASHERS FOR ALL TB AND TF CONNECTIONS.

S8. ALL BOLTS, SCREWS, HOLD DOWN BOLTS, MASONRY ANCHORS SHALL BE HOT DIP GALVANISED TO AS1214-1983, AS/NZS 4534-2006, AS/NZS 4680-2006 & AS/NZS 4792-2006. NO CONNECTION SHALL HAVE LESS THAN 2 BOLTS. ALL BOLTS AND WASHERS SHALL BE GALVANISED. ALL HOLES SHALL BE 2mm LARGER THAN THE BOLT DIAMETER UNLESS NOTED OTHERWISE.

S9. MINIMUM YIELD STRESS:
- HOT ROLLED SECTIONS = 300MPa.
- SQUARE HOLLOW SECTIONS = 350MPa.
- RECTANGULAR HOLLOW SECTIONS = 350MPa.
- CIRCULAR HOLLOW SECTION = 250MPa.
- HOT ROLLED PLATE = 250MPa.

S10. COLD FORMED SECTIONS TO CONFORM WITH:
- AS/NZS 1594-2002, AS/NZS 1595-1998, AS/NZS 4600-2005 AND AS 1397-2001, AS1397, AS/NZS1594 AND AS/NZS1595.
- MINIMUM YIELD STRESSES SECTIONS 450MPa.

S11. SURFACE TREATMENT UNLESS NOTED OTHERWISE:
- EXPOSED TO WEATHER = AS/NZS 2312-HDG600.

REFER TO PURLIN & GIRTS NOTES FOR SURFACE TREATMENT OF THESE ITEMS

S12. UNLESS OTHERWISE DETAILED, FABRICATOR SHALL PROVIDE C100 15 TRIMMER PURLINS ALONG WITH GENERAL PURPOSE BRACKETS TO SUPPORT EDGE OF ROOF SHEETING AT ALL HIPS, VALLEYS AND PENETRATIONS.

S13. FIX CROSS BRACING TO PURLINS AT 3000 MAX CENTRES WITH M10 BOLTS OR M6 HOOKS. BOLTS ARE TO BE MECHANICALLY FIXED TO PURLINS, WITH HOOKS TO BE LOOPED THROUGH THE WEB OF THE PURLINS AND SECURED USING A NUT TO ENSURE THEY WILL NOT BECOME LOOSE DURING MOVEMENT OF THE ROOF. ALTERNATIVELY, GALVANISED STRAP MAY BE USED TO SECURE THE BRACING. THE STRAP IS TO BE INSTALLED TO LIFT THE BRACE SUCH THAT IT IS PLUMB, WITH THE BRACE SCREW FIXED TO THE WEB OF THE PURLIN AT BOTH ENDS USING 2/12-14 TEKS SCREWS.

S14. ALL BURIED STEELWORK TO BE TREATED BY:
- THE APPLICATION OF A SINGLE COAT OF INTERNATIONAL PROTECTIVE COATINGS INTERZONE 954 APPLIED TO BARE CLEAN STEEL (THICKNESS 300-400 MICRONS). APPLY TO WHOLE OF RELEVANT MEMBER, TOP COAT IF REQUIRED BY ARCHITECT FOR VISUAL APPEARANCE.

OR
- THE APPLICATION OF HDG AS SPECIFIED IN S11 ABOVE FOLLOWED BY AN APPLICATION OF TWO COATS OF INTERNATIONAL PROTECTIVE COATINGS INTERPLUS 1180 (EACH COAT 150-250 MICRONS) WHERE BURIED IN THE GROUND.

THEN
- CONCRETE ENCASE STEELWORK WITH MASS CONCRETE (MINIMUM 75mm COVER TO STEELWORK).

STEELWORK (CONTINUED)

S15. STEELWORK TO BE CONCRETE ENCASED FOR FIRE RATING PURPOSES SHALL BE FREE FROM ALL LOOSE RUST, LOOSE MILL SCALE, DIRT, OIL, GREASE, ETC. AND REINFORCED WITH SL41 FABRIC OR EQUIVALENT BLACK IRON WIRE, 3mm DIA.

S16. BOLT SYMBOLS:
- 4.6/S = GRADE 4.6 BOLT / SNUG TIGHTENED.
- 8.8/S = GRADE 8.8 BOLT / SNUG TIGHTENED.
- 8.8/TF = GRADE 8.8 BOLT / FULLY TENSIONED FRICTION TYPE (USE LOAD INDICATOR WASHERS).
- 8.8/TB = GRADE 8.8 BOLT / FULLY TENSIONED BEARING TYPE (USE LOAD INDICATOR WASHERS).

S17. THE CONTRACTOR SHALL SUPPLY WRITTEN CERTIFICATION TO THE STRUCTURAL ENGINEER PRIOR TO THE ERECTION OF ANY STRUCTURAL STEEL STATING THAT THE BOLTS PROPOSED TO BE USED COMPLY WITH AS/NZS 1252-1996. HIGH STRENGTH BOLTS (8.8) ARE NOT TO BE WELDED.

S18. THE FABRICATION AND ERECTION OF THE STRUCTURAL STEEL WORK SHALL BE SUPERVISED BY A QUALIFIED PERSON EXPERIENCED IN SUCH SUPERVISION, IN ORDER TO ENSURE THAT ALL REQUIREMENTS OF THE DESIGN ARE MET.

S19. ALL MEMBERS SHALL BE SUPPLIED IN SINGLE LENGTHS. SPLICES SHALL ONLY BE PERMITTED IN LOCATIONS SHOWN ON THE STRUCTURAL DRAWINGS.

S20. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION BUTT WELDS CATEGORY SP TO AS1554.1-2004 U.N.O THE EXTENT ON NON-DESTRUCTIVE WELD EXAMINATION SHALL BE AS NOTED BELOW:
- RADIOGRAPHIC OR ULTRASONIC EXAMINATION SHALL BE TO AS/NZS 1554.1-2004, AS 2177-2006 AND AS2207-2007 AS APPROPRIATE.

S21. GROUT ALL STEEL BASES BY DRY PACKING USING GROUT WHICH IS NON-SHRINK AND HAS A MINIMUM COMPRESSIVE STRENGTH AT 7 DAYS OF 40MPa.

S22. PROVIDE SEAL PLATES TO THE ENDS OF ALL HOLLOW SECTIONS, WITH 'BREATHER' HOLES IF MEMBERS ARE TO BE HOT DIP GALVANISED.

S23. THESE DRAWINGS MAY NOT IDENTIFY ALL SECONDARY STEELWORK ELEMENTS THAT ARE REQUIRED FOR SUPPORT, FIXING AND FINISHING OF GLAZING, CLADDING AND LINING. THE TENDERER IS RESPONSIBLE FOR THE INCLUSION OF SUCH STEELWORK ELEMENTS TO THE EXTENT REQUIRED ON THE ARCHITECT'S DRAWINGS.

S24. IMPORTED STRUCTURAL STEEL MATERIAL

ALL STRUCTURAL STEELWORK USED ON THIS PROJECT SHALL BE COMPLIANT WITH AS4100, AND IN PARTICULAR:
- CERTIFIED MILL TEST REPORTS, OR TEST CERTIFICATES SHALL BE PROVIDED AS EVIDENCE OF COMPLIANCE WITH THE STANDARDS REFERRED TO IN AS4100. THESE CERTIFICATES SHALL BE SUBMITTED TO NORTHROP CONSULTING ENGINEERS FOR APPROVAL PRIOR TO COMMENCEMENT OF FABRICATION.
- PROVIDE TEST CERTIFICATED FOR COMPLIANCE FOR ALL FASTENERS. THESE CERTIFICATES SHALL BE SUBMITTED TO NORTHROP CONSULTING ENGINEERS FOR APPROVAL PRIOR TO FABRICATION.
- FOR COLD FORMED SECTIONS A "CERTIFICATE OF CONFORMITY TO AS1163-1991" SHALL BE SUBMITTED TO NORTHROP CONSULTING ENGINEERS FOR APPROVAL PRIOR TO FABRICATION.
- CERTIFICATES SHALL ONLY BE ACCEPTED FROM TESTING COMPANIES ACCREDITED BY A TESTING AUTHORITY RECOGNISED IN AUSTRALIA, EG NATA or JAS-ANZ CERTIFIED.
- UNIDENTIFIED STEEL ie. ANY STEEL THAT IS NOT ACCOMPANIED WITH EVIDENCE STATING COMPLIANCE WITH THE REQUIREMENT OF AS4100 SHALL ONLY BE USED STRICTLY IN ACCORDANCE WITH CLAUSE 2.2.3 OF AS4100.

IF MATERIALS SUPPLIED AND INSTALLED ARE SUBSEQUENTLY PROVEN TO BE NON COMPLIANT WITH THE SPECIFIED AUSTRALIAN STANDARDS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND COST TO UNDERTAKE NATA OR EQUIVALENT CERTIFIED TESTING TO PROVE CONFORMANCE TO THE AUSTRALIAN STANDARDS AND DESIGN SPECIFICATIONS. SIMILARLY ANY RECTIFICATION WORKS THAT MAY SUBSEQUENTLY BE REQUIRED TO SATISFY AUSTRALIAN CODE REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

CHEMICAL ANCHORS

CA01. UNLESS NOTED OTHERWISE, CHEMICAL ANCHORS SPECIFIED IN THESE DRAWINGS REFER TO HILTI HIT-HY 500V4 + HAS-U CHEMICAL INJECTION ANCHORS.

CA02. ALTERNATIVE CHEMICAL ANCHORS MAY BE SUBSTITUTED WITH PRIOR PERMISSION FROM THE SUPERINTENDENT.

CA03. MINIMUM EDGE DISTANCE AND SPACING SETOUT OF THE ANCHORS ARE SPECIFIED ON THESE DRAWINGS. IF THE INSTALLED DISTANCES ARE LESS THAN THAT SPECIFIED NOTIFY THE SUPERINTENDENT FOR INSTRUCTION.

CA04. CHEMICAL ANCHORS ARE TO BE STRICTLY INSTALLED TO MANUFACTURERS INSTALLATION PROCEDURE.

CA05. DIAMETER OF HOLES TO MANUFACTURES SPECIFICATION FOR NOMINATED BOLT/BAR DIAMETER. DRILL HOLES USING A ROTARY PERCUSSION DRILL. DO NOT CORE DRILL HOLES.

CA06. CLEAN AND DEGREASE BOLT/BARS PRIOR INSTALLATION.

CA07. ENSURE CHEMICAL IS ALLOWED TO FULLY CURE IN ACCORDANCE WITH MANUFACTURERS DETAILS PRIOR TO LOADING BOLTS/BARS.

TESTING REGIME FOR THE HILTI HIT-HY 200 AND HIT-V CHEMICAL INJECTION ANCHORS

TR01. HOLD DOWN ANCHORS:
- TEST MIN. 1 ANCHOR PER BASE PLATE.
- SHOULD THERE BE A FAILURE, ALL ANCHORS NEED TO BE TESTED FOR THAT BASE PLATE.

TEST LOADING IS AS FOLLOWS:
- M20 BOLTS-47kN
- M30 BOLTS - 108kN

THIS IS BASED ON AN 60% OF ULTIMATE CAPACITY OF THE BOLT. CARE SHOULD BE TAKEN NOT TO EXCEED THIS LOAD.

LEGEND

TERM	ABBREVIATION	TERM	ABBREVIATION
BOTH SIDES	B/S	MAXIMUM	MAX
BOTTOM	B	MINIMUM	MIN
BLOCK WALL	BW	MISCELLANEOUS	MISC
BRICK WALL	BRW	NEAR FACE	NF
CENTRALLY PLACED	CENT	NEAR SIDE	N/S
CENTRE LINE	CL	NOMINAL	NOM
CENTRES	CTS	NOT SHOWN ON PLAN	NSOP
CIRCULAR HOLLOW SECTION	CHS	NOT SHOWN ON ELEVATION	NSOE
CONCRETE	CONC	NOT TO SCALE	NTS
CONCRETE WALL	CW	OPPOSITE	OPP
CONSTRUCTION JOINT	CJ	OVERALL	O/A
DEEP/DEPTH	D	PARALLEL	PFC
DIAMETER	DIA	FLANGE CHANNEL PLATE	PL
DIAMETER INSIDE	ID	PERMANENT ACTION (DEAD LOAD)	G
DIAMETER NOMINAL	DN	POST TENSION	PT
DIAMETER OUTSIDE	OD	QUANTITY	QTY
DRAWING	DWG	RADIUS	RAD
EACH FACE	EF	RECTANGULAR HOLLOW SECTION	RHS
EACH WAY	EW	REINFORCED CONCRETE	RC
EQUAL	EQ	REINFORCEMENT	REINF
EQUAL ANGLE	EA	REQUIRED	REQ'D
EXISTING	EXST	SQUARE	SQ
EXPANSION JOINT	EJ	SQUARED	SHS
FAR SIDE	F/S	HOLLOW SECTION	
FAR FACE	FF	TOP	T
FINISHED FLOOR LEVEL	FFL	TOP & BOTTOM	T&B
FLAT	FL	TYPICAL	TYP
GALVANISED	GALV	UNDER SIDE	U/S
GENERAL PURPOSE BRACKET	GPB	UNEQUAL ANGLE	UA
HIGH/HEIGHT	H	UNIVERSAL BEAM	UB
HORIZONTAL	HORIZ	UNIVERSAL COLUMN	UC
IMPOSED ACTION (LIVE LOAD)	Q	UNLESS NOTED OTHERWISE	UNO
INTERSECTION POINT	IP	VERTICAL	VERT
LONG/LENGTH	L	WIDE/WIDTH	W
LENGTH VARIES	LV		

LEGEND

150	DENOTES CONCRETE THICKNESS
⊠	DENOTES PENETRATION/VOID IN WALL, PROVIDE TRIMMER BARS
HW1/O	DENOTES HEBEL PANEL WALL OVER
HW1/U	DENOTES HEBEL PANEL WALL UNDER
HW1	DENOTES HEBEL PANEL WALL OVER AND UNDER
CTW1/O	DENOTES SHIPPING CONTAINER WALL OVER
CTW1	DENOTES SHIPPING CONTAINER WALL OVER AND UNDER
I SC1/O	DENOTES STEEL COLUMN OVER
I SC1	DENOTES STEEL COLUMN OVER AND UNDER
CJ	DENOTES CONSTRUCTION JOINT
DJ	DENOTES DOWELLED JOINT
SJ	DENOTES SAWN JOINT

DRAWN: SID PANICKER DESIGNED: HERMANN LEE JOB MANAGER: CHRISTOPHER VOSNAKIS VERIFIER: JONATHAN LOW

FOR CONSTRUCTION

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR INFORMATION	SP		HL	09.05.24
2	ISSUED FOR 90%	SP		HL	01.07.24
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

CLIENT: SELL & PARKER SINCE 1966
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ARCHITECT: ALGORRY ZAPPIA & ASSOCIATES
BUILDING DESIGNERS & STRUCTURAL ENGINEERS

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NORTHROP
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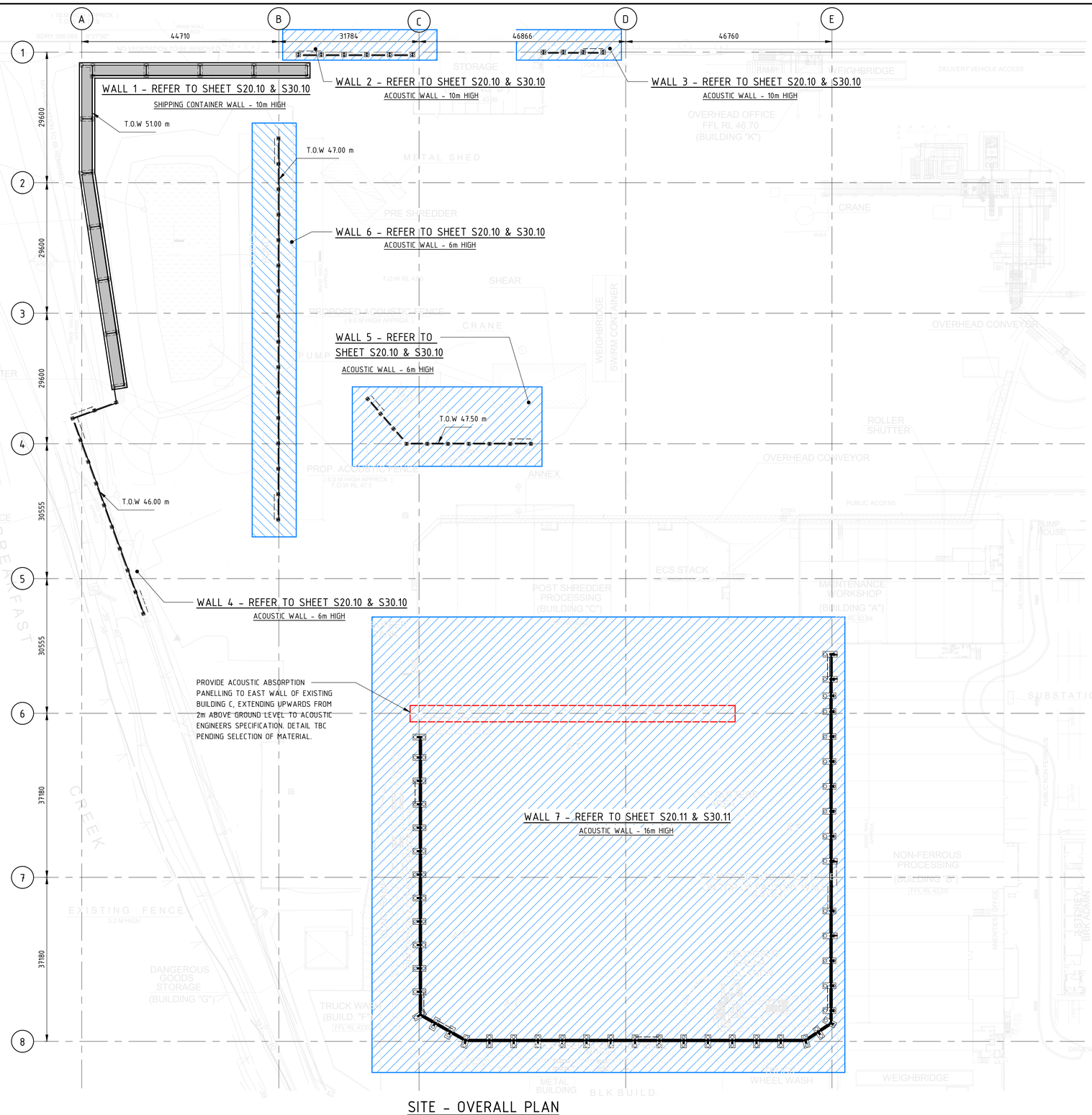
PROJECT: TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE: STRUCTURAL DRAWING SPECIFICATION NOTES - SHEET 2

JOB NUMBER: SY233442
DRAWING NUMBER: S00.12
REVISION: A
DRAWING SHEET SIZE = A1



SITE - OVERALL PLAN

GENERAL NOTES

- THE NORTHERN SECTION OF WALL 7, ON GRID E HAS BEEN DESIGNED TO SUPPORT FUTURE CONSTRUCTION OF WAREHOUSE STRUCTURE SUPPORTED OFF THE WALL COLUMNS. SEE DRAWING S30.12.
- WE HAVE MADE THE FOLLOWING ALLOWANCES IN OUR DESIGN FOR EFFECTED COLUMNS.:

  STEEL COLUMN (SC5):
  - M* = 850kN.m
  - V* = 130kN
  - N* = 250kN

  CONCRETE COLUMN (CC2):
  - M* = 980kN.m
  - V* = 130kN
  - N* = 390kN

- WE HAVE ASSUMED FUTURE CONNECTIONS WILL BE RETROFIT TO EXISTING COLUMNS

DRAWN: SID PANICKER
DESIGNED: HERMANN LEE
JOB MANAGER: CHRISTOPHER VOSNAKIS
VERIFIER: JONATHAN LOW

FOR CONSTRUCTION

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR INFORMATION	SP		LH	16.02.24
2	ISSUED FOR INFORMATION	SP		HL	09.05.24
3	ISSUED FOR 90%	SP		HL	01.07.24
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

CLIENT
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ARCHITECT
ALGORRY ZAPPIA & ASSOCIATES
BUILDING DESIGNERS & STRUCTURAL ENGINEERS
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1500 0 5000 10000 15000 20000 25000

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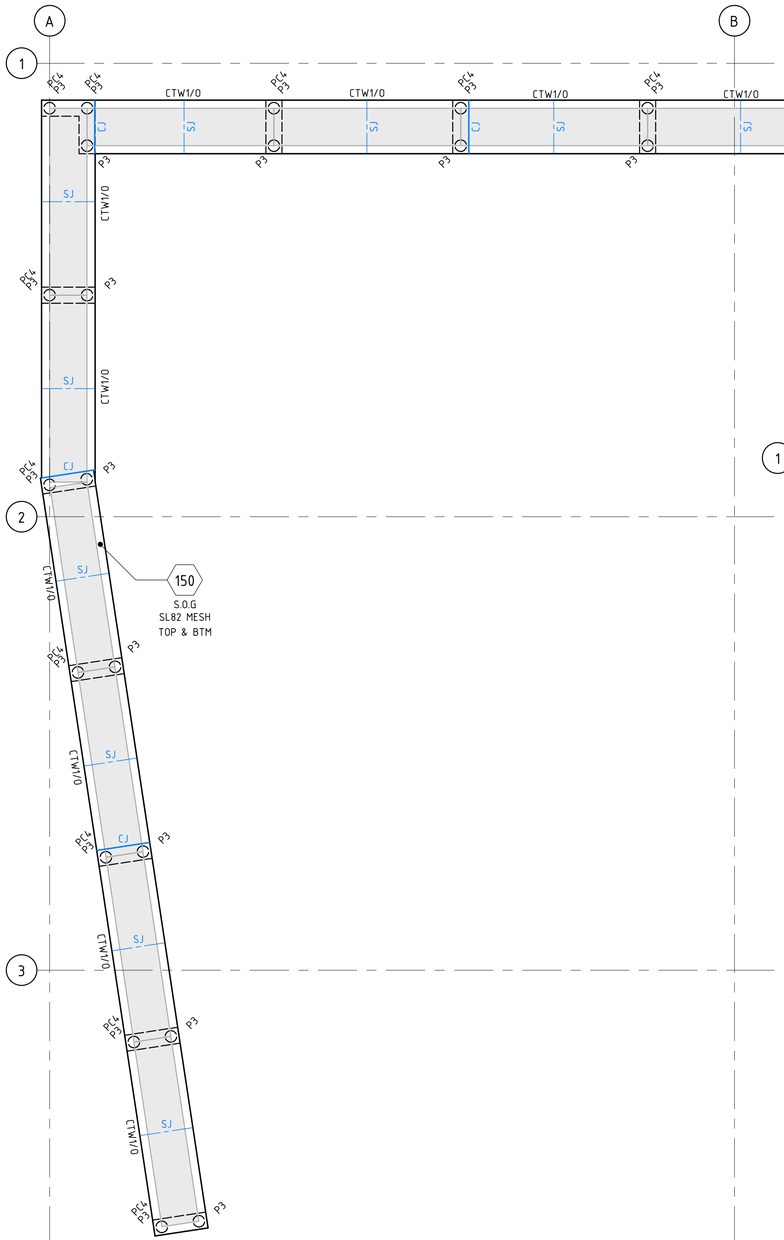
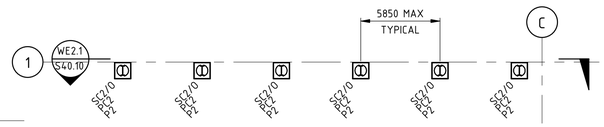
PROJECT
TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE
STRUCTURAL DRAWING OVERALL PLAN

JOB NUMBER **SY233442**
DRAWING NUMBER **S10.00**
REVISION **A**
DRAWING SHEET SIZE = A1



WALL 1 - PART PLAN



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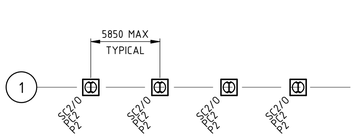
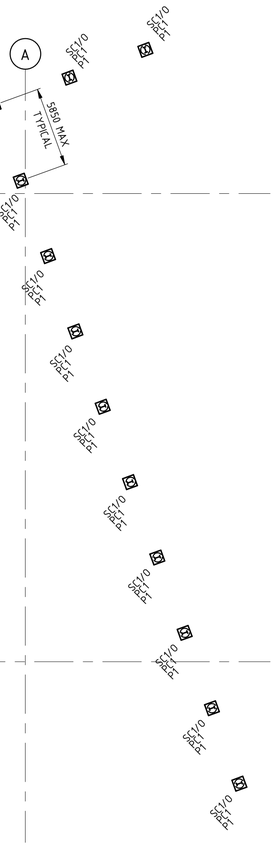
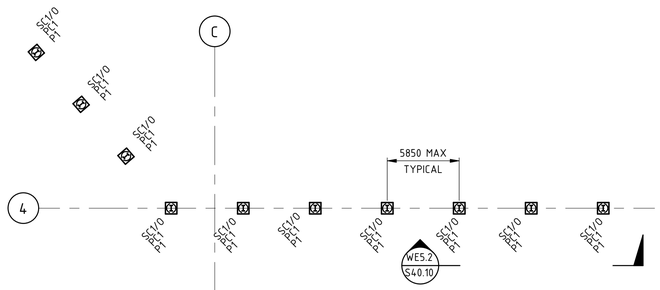


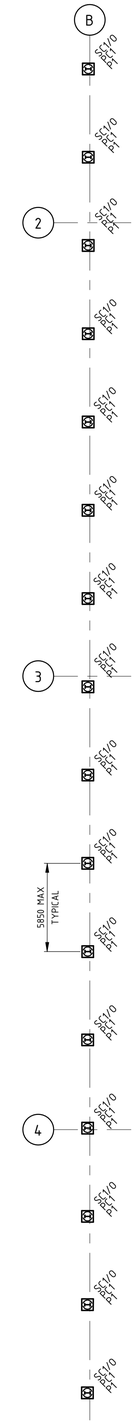
WALL 3 - PART PLAN



WALL 4 - PART PLAN



WALL 5 - PART PLAN



WALL 6 - PART PLAN

GENERAL NOTES

- FOR STRUCTURAL SPECIFICATIONS REFER TO DRAWINGS S00.11 TO S00.12.
- FOR SHIPPING CONTAINER WALL DETAILS REFER DRAWINGS S70.11 TO S70.12

FOUNDATION SCHEDULE

MARK	SIZE	COMMENT(S)
FOOTING BEAM		
FB1	500 DEEP x 600 WIDE	4N16 TOP & BTM, 2-LEG N12-200 TIES
PILE CAPS		
PC1	400 DEEP x 750 W x 750 B	4N16 U-BARS EW TOP & BTM
PC2	600 DEEP x 1050 W x 1050 B	5N20 U-BARS EW TOP & BTM
PC3	600 DEEP x 1300 W x 2950 B	8N28 U-BARS TOP & BTM, 4-LEG N12-200 TIES
PC4	400 DEEP x 1050 W x 3500 B	4N16 U-BARS EW TOP & BTM, 2-LEG N12-300 TIES
PC5	600 DEEP x 1300 W x 3250 B	8N28 U-BARS TOP & BTM + 4-LEG N12-200 TIES
PILES		
P1	600 DIA	5N20 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P2	750 DIA	7N24 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P3	750 DIA	6N24 N12-150 TIES, MIN. 2000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER

CONCRETE COLUMN SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE COLUMNS		
CC1	900 x 350 x 5500 H	12N24 VERTICALS, N12-200 TIES
CC2	1000 x 400 x 5500 H	12N24 VERTICALS, N12-200 TIES

STEEL COLUMN SCHEDULE

MARK	SIZE	COMMENT(S)
STEEL COLUMNS		
SC1	360 UB 44.7	MAX 5850mm SPACING BETWEEN MEMBERS.
SC2	610 UB 101	MAX 5850mm SPACING BETWEEN MEMBERS.
SC3	610 UB 113	MAX 5850mm SPACING BETWEEN MEMBERS.
SC4	125 x 125 x 4.0 SHS	FOR TOP OF SHIPPING CONTAINER FIXINGS.
SC5	800 WB 168	MAX 5650mm SPACING BETWEEN MEMBERS.
SC6	460 UB 67.1	COLUMN FOR LARGE OPENING.
SC7	200 PFC	STUB COLUMN FOR LARGE OPENING.

WALL SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE WALL		
CW1	250 THICK RC WALL	N12-250 VERTICALS, N16-200 HORIZONTALS. CONTROL JOINTS AT 12M CENTRES MAX. REFER DETAIL ON S80.10. NUMBER OF CJ TBC BUILDER. DJ AT 40M MAX.
CONTAINER WALLS		
CTW1	12200 L x 2440 W x 2900 H	SHIPPING CONTAINER WALL. SELL & PARKER TO CONFIRM DIMENSIONS. 3 CONTAINERS HIGH.
HEBEL WALL PANELS		
HW1	150 THICK	FIXED TO STEEL COLUMNS USING A 100 x 100 x 6 EA. SEE DRAWING S70.10.

LEGEND

CTW1/O	DENOTES SHIPPING CONTAINER WALL OVER
SC1/O	DENOTES STEEL COLUMN OVER
	DENOTES EXISTING ROAD
	DENOTES EXISTING TRUCK WASH
	DENOTES EXISTING TRUCK WHEEL WASH
	DENOTES EXISTING NON-FARROUS PROCESSING BUILDING "B"
	DENOTES WALL OPENING
CJ	DENOTES CONSTRUCTION JOINT
DJ	DENOTES DOWELLED JOINT
SJ	DENOTES SAWN JOINT
150	DENOTES CONCRETE THICKNESS

DRAWN: SID PANICKER
DESIGNED: HERMANN LEE
JOB MANAGER: CHRISTOPHER VOSNAKIS
VERIFIER: JONATHAN LOW

FOR CONSTRUCTION

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR INFORMATION	SP		HL	09.05.24
2	ISSUED FOR 90%	SP		HL	01.07.24
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

CLIENT: SELL & PARKER SINCE 1966
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ARCHITECT: ALGORRY ZAPPIA & ASSOCIATES
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NORTHROP
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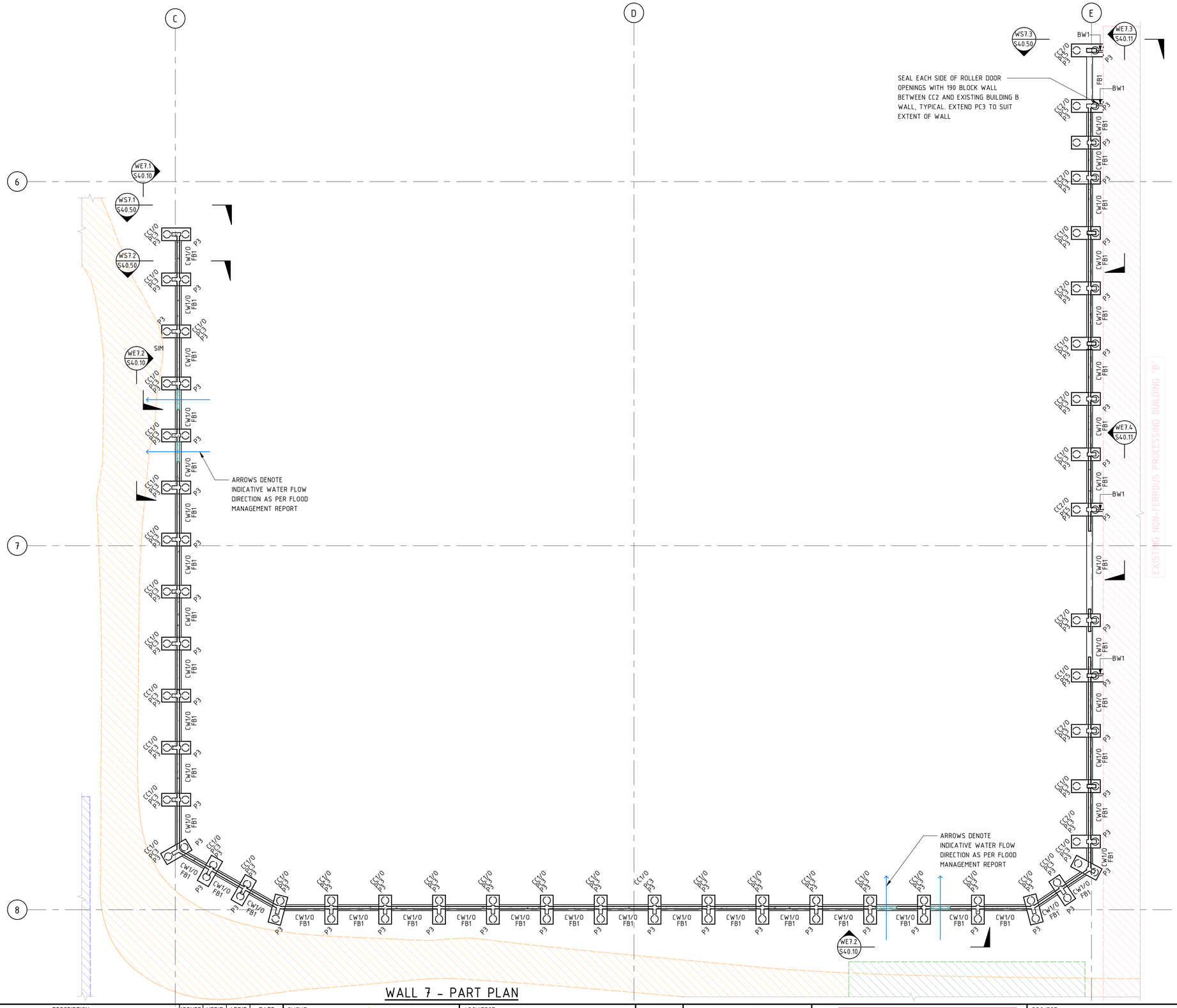
Ph (02) 9241 4188 Email: sydney@northrop.com.au
ABN 81 094 433 100

PROJECT: TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE: STRUCTURAL DRAWING WALL FOUNDATION PART PLANS - SHEET 1

JOB NUMBER: SY233442
DRAWING NUMBER: S20.10
REVISION: A
DRAWING SHEET SIZE = A1



WALL 7 - PART PLAN

GENERAL NOTES

- FOR STRUCTURAL SPECIFICATIONS REFER TO DRAWINGS S00.11 TO S00.12.
- FOR SLIDING FLOOD DOOR DETAILS REFER DRAWING S90.10

FOUNDATION SCHEDULE

MARK	SIZE	COMMENT(S)
FOOTING BEAM		
FB1	500 DEEP x 600 WIDE	4N16 TOP & BTM, 2-LEG N12-200 TIES
PILE CAPS		
PC1	400 DEEP x 750 W x 750 B	4N16 U-BARS EW TOP & BTM
PC2	600 DEEP x 1050 W x 1050 B	5N20 U-BARS EW TOP & BTM
PC3	600 DEEP x 1300 W x 2950 B	8N28 U-BARS TOP & BTM, 4-LEG N12-200 TIES
PC4	400 DEEP x 1050 W x 3500 B	4N16 U-BARS EW TOP & BTM, 2-LEG N12-300 TIES
PC5	600 DEEP x 1300 W x 3250 B	8N28 U-BARS TOP & BTM + 4-LEG N12-200 TIES
PILES		
P1	600 DIA	5N20 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P2	750 DIA	7N24 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P3	750 DIA	6N24 N12-150 TIES, MIN. 2000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER

CONCRETE COLUMN SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE COLUMNS		
CC1	900 x 350 x 5500 H	12N24 VERTICALS, N12-200 TIES
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SC3	610 UB 113	MAX 5850mm SPACING BETWEEN MEMBERS.
SC4	125 x 125 x 4.0 SHS	FOR TOP OF SHIPPING CONTAINER FIXINGS.
SC5	800 WB 168	MAX 5650mm SPACING BETWEEN MEMBERS.
SC6	460 UB 67.1	COLUMN FOR LARGE OPENING.
SC7	200 PFC	STUB COLUMN FOR LARGE OPENING.

WALL SCHEDULE

MARK	SIZE	COMMENT(S)
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CW1	250 THICK RC WALL	N12-250 VERTICALS, N16-200 HORIZONTALS. CONTROL JOINTS AT 12M CENTRES MAX. REFER DETAIL ON S80.10. NUMBER OF CJ TBC BUILDER. DJ AT 40M MAX.
CONTAINER WALLS		
CTW1	12200 L x 2440 W x 2900 H	SHIPPING CONTAINER WALL. SELL & PARKER TO CONFIRM DIMENSIONS. 3 CONTAINERS HIGH.
HEBEL WALL PANELS		
HW1	150 THICK	FIXED TO STEEL COLUMNS USING A 100 x 100 x 6 EA. SEE DRAWING S70.10.

LEGEND

- CTW1/O — DENOTES SHIPPING CONTAINER WALL OVER
- SC1/O — DENOTES STEEL COLUMN OVER
- DENOTES EXISTING ROAD
- DENOTES EXISTING TRUCK WASH
- DENOTES EXISTING TRUCK WHEEL WASH
- DENOTES EXISTING NON-FARROUS PROCESSING BUILDING "B"
- DENOTES WALL OPENING
- CJ — DENOTES CONSTRUCTION JOINT
- DJ — DENOTES DOWELLED JOINT
- SJ — DENOTES SAWN JOINT
- 150 — DENOTES CONCRETE THICKNESS

DRAWN: SID PANICKER DESIGNED: HERMANN LEE JOB MANAGER: CHRISTOPHER VOSNAKIS VERIFIER: JONATHAN LOW

FOR CONSTRUCTION

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2	ISSUED FOR 90%	SP		HL	01.07.24
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

CLIENT: SELL & PARKER SINCE 1966
DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT: ALGORRY ZAPPIA & ASSOCIATES
BUILDING DESIGNERS & STRUCTURAL ENGINEERS

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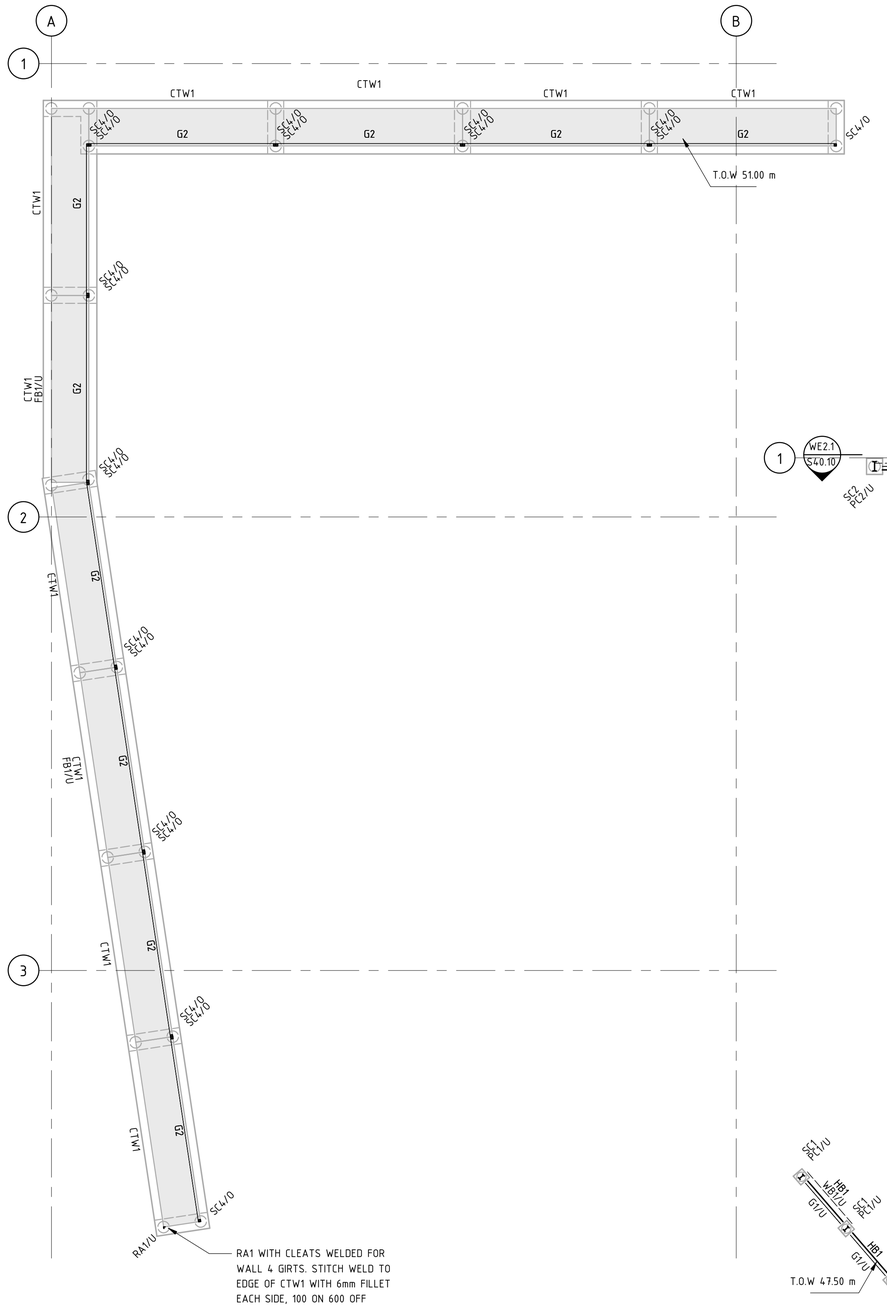
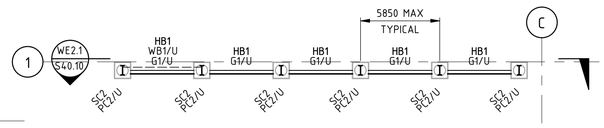
PROJECT: TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE: STRUCTURAL DRAWING WALL FOUNDATION PART PLANS - SHEET 2

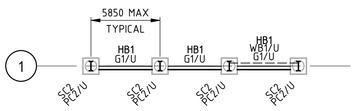
JOB NUMBER: SY233442
DRAWING NUMBER: S20.11
REVISION: A
DRAWING SHEET SIZE = A1



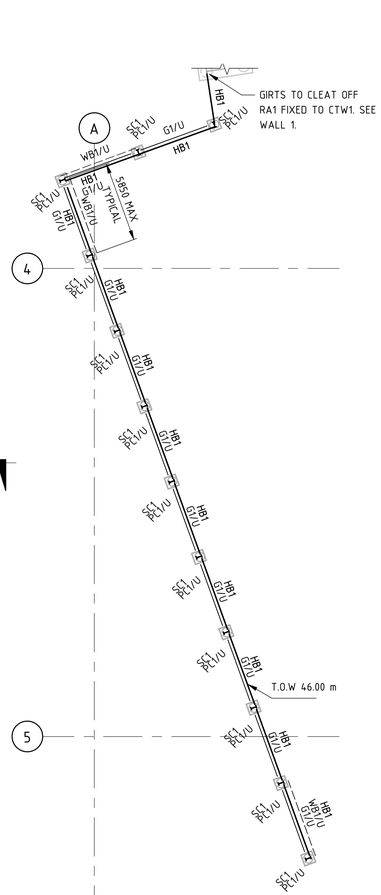
WALL 1 - PART PLAN



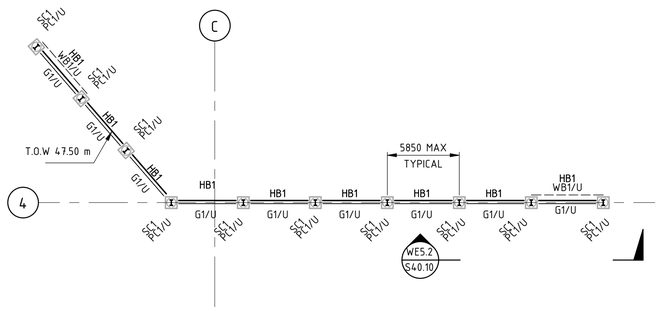
WALL 2 - PART PLAN



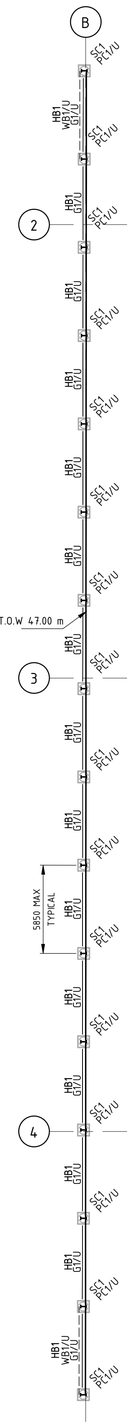
WALL 3 - PART PLAN



WALL 4 - PART PLAN



WALL 5 - PART PLAN



WALL 6 - PART PLAN

GENERAL NOTES

- FOR STRUCTURAL SPECIFICATIONS REFER TO DRAWINGS S00.11 TO S00.12.
- FOR SHIPPING CONTAINER WALL DETAILS REFER DRAWINGS S70.11 TO S70.12. NORTHROP HAS ASSUMED 40FT SHIPPING CONTAINERS WILL BE USED AND HAVE BASED DESIGN OFF THIS.

FOUNDATION SCHEDULE

MARK	SIZE	COMMENT(S)
FOOTING BEAM		
FB1	500 DEEP x 600 WIDE	4N16 TOP & BTM, 2-LEG N12-200 TIES
PILE CAPS		
PC1	400 DEEP x 750 W x 750 B	4N16 U-BARS EW TOP & BTM
PC2	600 DEEP x 1050 W x 1050 B	5N20 U-BARS EW TOP & BTM
PC3	600 DEEP x 1300 W x 2950 B	8N28 U-BARS TOP & BTM, 4-LEG N12-200 TIES
PC4	400 DEEP x 1050 W x 3500 B	4N16 U-BARS EW TOP & BTM, 2-LEG N12-300 TIES
PC5	600 DEEP x 1300 W x 3250 B	8N28 U-BARS TOP & BTM + 4-LEG N12-200 TIES
PILES		
P1	600 DIA	5N20 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P2	750 DIA	7N24 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P3	750 DIA	6N24 N12-150 TIES, MIN. 2000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER

CONCRETE COLUMN SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE COLUMNS		
CC1	900 x 350 x 5500 H	12N24 VERTICALS, N12-200 TIES
CC2	1000 x 400 x 5500 H	12N24 VERTICALS, N12-200 TIES

STEEL MEMBER SCHEDULE

MARK	SIZE	COMMENT(S)
GIRTS		
G1	C20015 - 1200 CTS MAX	LEGS DOWN, 1 ROW BRIDGING CENTRAL
G2	C30024 - 700 CTS MAX	LEGS DOWN, 3 ROWS BRIDGING AT QUARTER POINTS
HEADER BEAMS		
HB1	89 x 89 x 5.0 SHS	
HB2	150 x 150 x 5.0 SHS	
HB3	250x250x9.0SHS	
RAKING ANGLE		
RA1	90 x 90 x 6 EA	
STEEL COLUMNS		
SC1	360 UB 44.7	MAX 5850mm SPACING BETWEEN MEMBERS.
SC2	610 UB 101	MAX 5850mm SPACING BETWEEN MEMBERS.
SC3	610 UB 113	MAX 5850mm SPACING BETWEEN MEMBERS.
SC4	125 x 125 x 4.0 SHS	FOR TOP OF SHIPPING CONTAINER FIXINGS.
SC5	800 WB 168	MAX 5650mm SPACING BETWEEN MEMBERS.
SC6	460 UB 67.1	COLUMN FOR LARGE OPENING.
SC7	200 PFC	STUB COLUMN FOR LARGE OPENING.
STRUTS		
ST1	89 x 89 x 5.0 SHS	
ST2	125 x 125 x 5.0 SHS	
WALL BRACINGS		
WB1	90 x 90 x 6 EA	
WB2	90 x 90 x 6 EA	
WB3	125 x 125 x 12 EA	
WB4	150 x 150 x 10 EA	

WALL SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE WALL		
CW1	250 THICK RC WALL	N12-250 VERTICALS, N16-200 HORIZONTALS. CONTROL JOINTS AT 12M CENTRES MAX. REFER DETAIL ON S80.10. NUMBER OF CJ TBC BUILDER. DJ AT 40M MAX.
CONTAINER WALLS		
CTW1	12200 L x 2440 W x 2900 H	SHIPPING CONTAINER WALL. SELL & PARKER TO CONFIRM DIMENSIONS. 3 CONTAINERS HIGH.
HEBEL WALL PANELS		
HW1	150 THICK	FIXED TO STEEL COLUMNS USING A 100 x 100 x 6 EA. SEE DRAWING S70.10.

LEGEND

- HW1/U — DENOTES HEBEL PANEL WALL UNDER
- CTW1 — DENOTES SHIPPING CONTAINER WALL OVER AND UNDER
- I SC1 — DENOTES STEEL COLUMN OVER AND UNDER
- DENOTES EXISTING ROAD
- DENOTES EXISTING TRUCK WASH
- DENOTES EXISTING TRUCK WHEEL WASH
- DENOTES EXISTING NON-FERROUS PROCESSING BUILDING "B"
- DENOTES WALL OPENING

FOR CONSTRUCTION

DESIGNED: HERMANN LEE
DRAWN: SID PANICKER
JOB MANAGER: CHRISTOPHER VOSNAKIS
VERIFIER: JONATHAN LOW

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR INFORMATION	SP		LH	16.02.24
2	ISSUED FOR INFORMATION	SP		HL	09.05.24
3	ISSUED FOR 90%	SP		HL	01.07.24
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

CLIENT: SELL & PARKER SINCE 1966
DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT: ALGORRY ZAPPIA & ASSOCIATES
BUILDING DESIGNERS & STRUCTURAL ENGINEERS

ALL SETOUT TO ARCHITECT'S DRAWINGS.
DIMENSIONS TO BE VERIFIED WITH ARCHITECT AND BUILDER BEFORE COMMENCING SHOP DRAWINGS OR SITE WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.

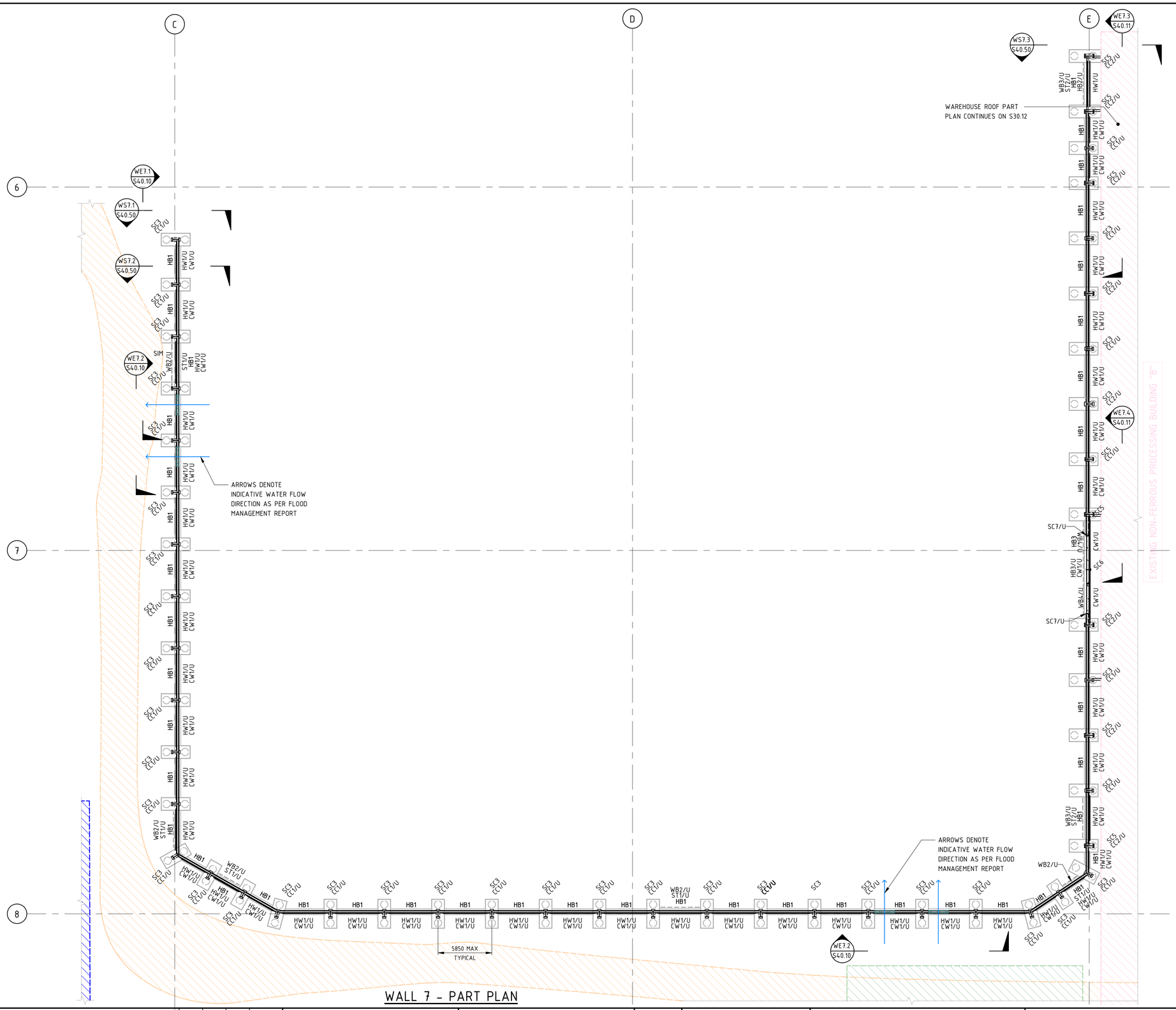
1:200 0 2000 4000 6000 8000 10000

NORTHROP
Sydney
Level 11, 345 George Street, Sydney, N.S.W. 2000
Ph (02) 9241 4188 Email: sydney@northrop.com.au
ABN 81 094 433 100

PROJECT: TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE: STRUCTURAL DRAWING WALL FRAMING PART PLANS - SHEET 1

JOB NUMBER: SY233442
DRAWING NUMBER: S30.10
REVISION: A
DRAWING SHEET SIZE = A1



WALL 7 - PART PLAN

DESIGNED: HERMANN LEE
DRAWN: SID PANICKER
JOB MANAGER: CHRISTOPHER VOSNAKIS
VERIFIER: JONATHAN LOW

GENERAL NOTES

- FOR STRUCTURAL SPECIFICATIONS REFER TO DRAWINGS S00.11 TO S00.12.
- FOR SLIDING FLOOD DOOR DETAILS REFER DRAWING S90.10

FOUNDATION SCHEDULE

MARK	SIZE	COMMENT(S)
FOOTING BEAM		
FB1	500 DEEP x 600 WIDE	4N16 TOP & BTM, 2-LEG N12-200 TIES
PILE CAPS		
PC1	400 DEEP x 750 W x 750 B	4N16 U-BARS EW TOP & BTM
PC2	600 DEEP x 1050 W x 1050 B	5N20 U-BARS EW TOP & BTM
PC3	600 DEEP x 1300 W x 2950 B	8N28 U-BARS TOP & BTM, 4-LEG N12-200 TIES
PC4	400 DEEP x 1050 W x 3500 B	4N16 U-BARS EW TOP & BTM, 2-LEG N12-300 TIES
PC5	600 DEEP x 1300 W x 3250 B	8N28 U-BARS TOP & BTM + 4-LEG N12-200 TIES
PILES		
P1	600 DIA	5N20 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P2	750 DIA	7N24 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P3	750 DIA	6N24 N12-150 TIES, MIN. 2000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER

CONCRETE COLUMN SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE COLUMNS		
CC1	900 x 350 x 5500 H	12N24 VERTICALS, N12-200 TIES
CC2	1000 x 400 x 5500 H	12N24 VERTICALS, N12-200 TIES

STEEL MEMBER SCHEDULE

MARK	SIZE	COMMENT(S)
GIRTS		
G1	C20015 - 1200 CTS MAX	LEGS DOWN, 1 ROW BRIDGING CENTRAL
G2	C30024 - 700 CTS MAX	LEGS DOWN, 3 ROWS BRIDGING AT QUARTER POINTS
HEADER BEAMS		
HB1	89 x 89 x 5.0 SHS	
HB2	150 x 150 x 5.0 SHS	
HB3	250x250x9.0SHS	
RAKING ANGLE		
RA1	90 x 90 x 6 EA	
STEEL COLUMNS		
SC1	360 UB 44.7	MAX 5850mm SPACING BETWEEN MEMBERS.
SC2	610 UB 101	MAX 5850mm SPACING BETWEEN MEMBERS.
SC3	610 UB 113	MAX 5850mm SPACING BETWEEN MEMBERS.
SC4	125 x 125 x 4.0 SHS	FOR TOP OF SHIPPING CONTAINER FIXINGS.
SC5	800 WB 168	MAX 5650mm SPACING BETWEEN MEMBERS.
SC6	460 UB 67.1	COLUMN FOR LARGE OPENING.
SC7	200 PFC	STUB COLUMN FOR LARGE OPENING.
STRUTS		
ST1	89 x 89 x 5.0 SHS	
ST2	125 x 125 x 5.0 SHS	
WALL BRACINGS		
WB1	90 x 90 x 6 EA	
WB2	90 x 90 x 6 EA	
WB3	125 x 125 x 12 EA	
WB4	150 x 150 x 10 EA	

WALL SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE WALL		
CW1	250 THICK RC WALL	N12-250 VERTICALS, N16-200 HORIZONTALS. CONTROL JOINTS AT 12M CENTRES MAX. REFER DETAIL ON S80.10. NUMBER OF CJ TBC BUILDER. DJ AT 40M MAX.
CONTAINER WALLS		
CTW1	12200 L x 2440 W x 2900 H	SHIPPING CONTAINER WALL. SELL & PARKER TO CONFIRM DIMENSIONS. 3 CONTAINERS HIGH.
HEBEL WALL PANELS		
HW1	150 THICK	FIXED TO STEEL COLUMNS USING A 100 x 100 x 6 EA. SEE DRAWING S70.10.

LEGEND

- HW1/U — DENOTES HEBEL PANEL WALL UNDER
- CTW1 — DENOTES SHIPPING CONTAINER WALL OVER AND UNDER
- I SC1 — DENOTES STEEL COLUMN OVER AND UNDER
- DENOTES EXISTING ROAD
- DENOTES EXISTING TRUCK WASH
- DENOTES EXISTING TRUCK WHEEL WASH
- DENOTES EXISTING NON-FERROUS PROCESSING BUILDING "B"
- DENOTES WALL OPENING

FOR CONSTRUCTION

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR INFORMATION	SP		LH	16.02.24
2	ISSUED FOR INFORMATION	SP		HL	09.05.24
3	ISSUED FOR 90%	SP		HL	01.07.24
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

CLIENT: SELL & PARKER SINCE 1966
DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT: ALGORRY ZAPPIA & ASSOCIATES
BUILDING DESIGNERS & STRUCTURAL ENGINEERS

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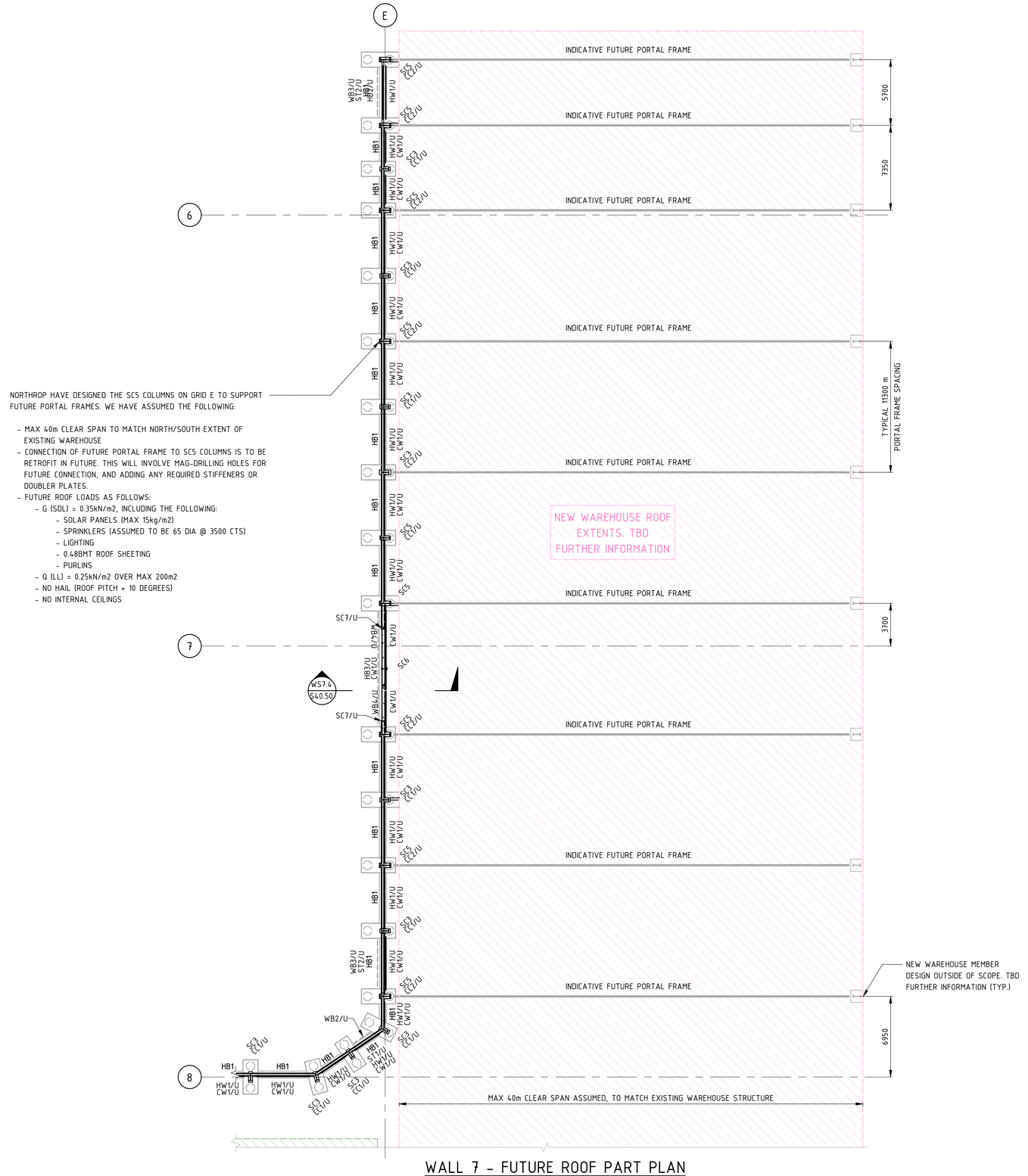
Ph (02) 9241 4188 Email: sydney@northrop.com.au
ABN 81 094 433 100

PROJECT: TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE: STRUCTURAL DRAWING WALL FRAMING PART PLANS - SHEET 2

JOB NUMBER: SY233442
DRAWING NUMBER: S30.11
REVISION: A
DRAWING SHEET SIZE = A1



WALL 7 - FUTURE ROOF PART PLAN

DESIGNED: HERMANN LEE
DRAWN: SID PANICKER
JOB MANAGER: CHRISTOPHER VOSNAKIS
VERIFIER: JONATHAN LOW

GENERAL NOTES

- FOR STRUCTURAL SPECIFICATIONS REFER TO DRAWINGS S00.11 TO S00.12.

FOUNDATION SCHEDULE

MARK	SIZE	COMMENT(S)
FOOTING BEAM		
FB1	500 DEEP x 600 WIDE	4N16 TOP & BTM, 2-LEG N12-200 TIES
PILE CAPS		
PC1	400 DEEP x 750 W x 750 B	4N16 U-BARS EW TOP & BTM
PC2	600 DEEP x 1050 W x 1050 B	5N20 U-BARS EW TOP & BTM
PC3	600 DEEP x 1300 W x 2950 B	8N28 U-BARS TOP & BTM, 4-LEG N12-200 TIES
PC4	400 DEEP x 1050 W x 3500 B	4N16 U-BARS EW TOP & BTM, 2-LEG N12-300 TIES
PC5	600 DEEP x 1300 W x 3250 B	8N28 U-BARS TOP & BTM + 4-LEG N12-200 TIES
PILES		
P1	600 DIA	5N20 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P2	750 DIA	7N24 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P3	750 DIA	6N24 N12-150 TIES, MIN. 2000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER

CONCRETE COLUMN SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE COLUMNS		
CC1	900 x 350 x 5500 H	12N24 VERTICALS, N12-200 TIES
CC2	1000 x 400 x 5500 H	12N24 VERTICALS, N12-200 TIES

STEEL MEMBER SCHEDULE

MARK	SIZE	COMMENT(S)
GIRTS		
G1	C20015 - 1200 CTS MAX	LEGS DOWN, 1 ROW BRIDGING CENTRAL
G2	C30024 - 700 CTS MAX	LEGS DOWN, 3 ROWS BRIDGING AT QUARTER POINTS
HEADER BEAMS		
HB1	89 x 89 x 5.0 SHS	
HB2	150 x 150 x 5.0 SHS	
HB3	250x250x9.0SHS	
RAKING ANGLE		
RA1	90 x 90 x 6 EA	
STEEL COLUMNS		
SC1	360 UB 44.7	MAX 5850mm SPACING BETWEEN MEMBERS.
SC2	610 UB 101	MAX 5850mm SPACING BETWEEN MEMBERS.
SC3	610 UB 113	MAX 5850mm SPACING BETWEEN MEMBERS.
SC4	125 x 125 x 4.0 SHS	FOR TOP OF SHIPPING CONTAINER FIXINGS.
SC5	800 WB 168	MAX 5650mm SPACING BETWEEN MEMBERS.
SC6	460 UB 67.1	COLUMN FOR LARGE OPENING.
SC7	200 PFC	STUB COLUMN FOR LARGE OPENING.
STRUTS		
ST1	89 x 89 x 5.0 SHS	
ST2	125 x 125 x 5.0 SHS	
WALL BRACINGS		
WB1	90 x 90 x 6 EA	
WB2	90 x 90 x 6 EA	
WB3	125 x 125 x 12 EA	
WB4	150 x 150 x 10 EA	

WALL SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE WALL		
CW1	250 THICK RC WALL	N12-250 VERTICALS, N16-200 HORIZONTALS. CONTROL JOINTS AT 12M CENTRES MAX. REFER DETAIL ON S80.10. NUMBER OF CJ TBC BUILDER. DJ AT 40M MAX.
CONTAINER WALLS		
CTW1	12200 L x 2440 W x 2900 H	SHIPPING CONTAINER WALL. SELL & PARKER TO CONFIRM DIMENSIONS. 3 CONTAINERS HIGH.
HEBEL WALL PANELS		
HW1	150 THICK	FIXED TO STEEL COLUMNS USING A 100 x 100 x 6 EA. SEE DRAWING S70.10.

LEGEND

- HW1/U — DENOTES HEBEL PANEL WALL UNDER
- CTW1 — DENOTES SHIPPING CONTAINER WALL OVER AND UNDER
- I SC1 — DENOTES STEEL COLUMN OVER AND UNDER
- DENOTES EXISTING ROAD
- DENOTES EXISTING TRUCK WASH
- DENOTES EXISTING TRUCK WHEEL WASH
- DENOTES EXISTING NON-FERROUS PROCESSING BUILDING "B"
- DENOTES WALL OPENING

FOR CONSTRUCTION

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

CLIENT: SELL & PARKER SINCE 1966
DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT: ALGORRY ZAPPIA & ASSOCIATES
BUILDING DESIGNERS & STRUCTURAL ENGINEERS

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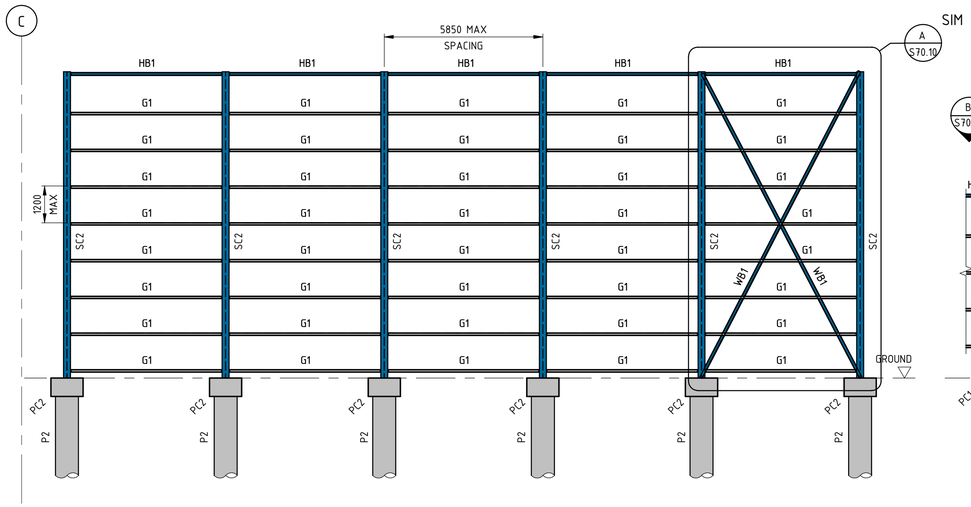
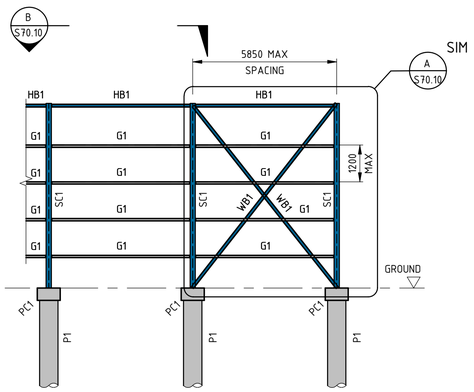
PROJECT: TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

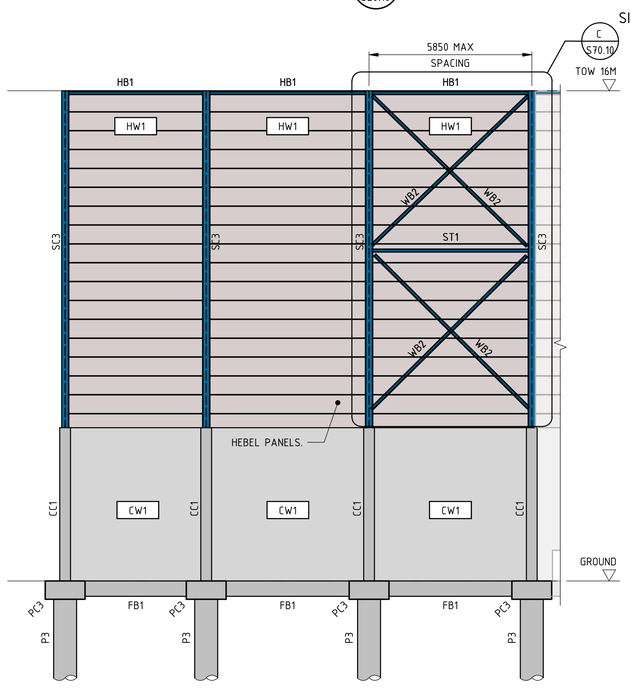
DRAWING TITLE: STRUCTURAL DRAWING WALL FRAMING PART PLANS - SHEET 3

JOB NUMBER: SY233442
DRAWING NUMBER: S30.12
REVISION: A
DRAWING SHEET SIZE = A1

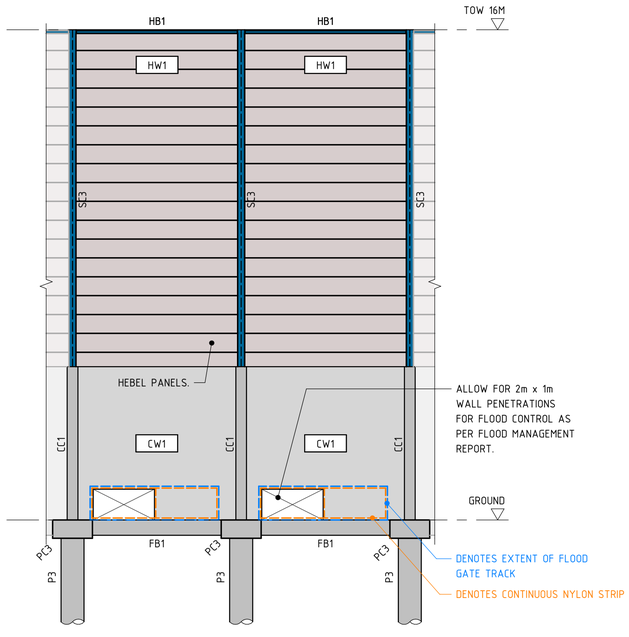




ELEVATION WE2.1 S20.10



ELEVATION WE5.2 S20.10



ELEVATION WE7.1 S20.11

ELEVATION WE7.2 S20.11

GENERAL NOTES

- FOR STRUCTURAL SPECIFICATIONS REFER TO DRAWINGS S00.11 TO S00.12.
- FOR SLIDING FLOOD DOOR DETAILS REFER DRAWING S90.10

FOUNDATION SCHEDULE

MARK	SIZE	COMMENT(S)
FOOTING BEAM		
FB1	500 DEEP x 600 WIDE	4N16 TOP & BTM, 2-LEG N12-200 TIES
PILE CAPS		
PC1	400 DEEP x 750 W x 750 B	4N16 U-BARS EW TOP & BTM
PC2	600 DEEP x 1050 W x 1050 B	5N20 U-BARS EW TOP & BTM
PC3	600 DEEP x 1300 W x 2950 B	8N28 U-BARS TOP & BTM, 4-LEG N12-200 TIES
PC4	400 DEEP x 1050 W x 3500 B	4N16 U-BARS EW TOP & BTM, 2-LEG N12-300 TIES
PC5	600 DEEP x 1300 W x 3250 B	8N28 U-BARS TOP & BTM + 4-LEG N12-200 TIES
PILES		
P1	600 DIA	5N20 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P2	750 DIA	7N24 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P3	750 DIA	6N24 N12-150 TIES, MIN. 2000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER

CONCRETE COLUMN SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE COLUMNS		
CC1	900 x 350 x 5500 H	12N24 VERTICALS, N12-200 TIES
CC2	1000 x 400 x 5500 H	12N24 VERTICALS, N12-200 TIES

STEEL MEMBER SCHEDULE

MARK	SIZE	COMMENT(S)
GIRTS		
G1	C20015 - 1200 CTS MAX	LEGS DOWN, 1 ROW BRIDGING CENTRAL
G2	C30024 - 700 CTS MAX	LEGS DOWN, 3 ROWS BRIDGING AT QUARTER POINTS
HEADER BEAMS		
HB1	89 x 89 x 5.0 SHS	
HB2	150 x 150 x 5.0 SHS	
HB3	250x250x9.0SHS	
RAKING ANGLE		
RA1	90 x 90 x 6 EA	
STEEL COLUMNS		
SC1	360 UB 44.7	MAX 5850mm SPACING BETWEEN MEMBERS.
SC2	610 UB 101	MAX 5850mm SPACING BETWEEN MEMBERS.
SC3	610 UB 113	MAX 5850mm SPACING BETWEEN MEMBERS.
SC4	125 x 125 x 4.0 SHS	FOR TOP OF SHIPPING CONTAINER FIXINGS.
SC5	800 WB 168	MAX 5650mm SPACING BETWEEN MEMBERS.
SC6	460 UB 67.1	COLUMN FOR LARGE OPENING.
SC7	200 PFC	STUB COLUMN FOR LARGE OPENING.
STRUTS		
ST1	89 x 89 x 5.0 SHS	
ST2	125 x 125 x 5.0 SHS	
WALL BRACINGS		
WB1	90 x 90 x 6 EA	
WB2	90 x 90 x 6 EA	
WB3	125 x 125 x 12 EA	
WB4	150 x 150 x 10 EA	

WALL SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE WALL		
CW1	250 THICK RC WALL	N12-250 VERTICALS, N16-200 HORIZONTALS. CONTROL JOINTS AT 12M CENTRES MAX. REFER DETAIL ON S80.10. NUMBER OF CJ TBC BUILDER. DJ AT 40M MAX.
CONTAINER WALLS		
CTW1	12200 L x 2440 W x 2900 H	SHIPPING CONTAINER WALL. SELL & PARKER TO CONFIRM DIMENSIONS. 3 CONTAINERS HIGH.
HEBEL WALL PANELS		
HW1	150 THICK	FIXED TO STEEL COLUMNS USING A 100 x 100 x 6 EA. SEE DRAWING S70.10.

DESIGNED: HERMANN LEE
DRAWN: SID PANICKER
JOB MANAGER: CHRISTOPHER VOSNAKIS
VERIFIER: JONATHAN LOW

FOR CONSTRUCTION

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR INFORMATION	SP		LH	16.02.24
2	ISSUED FOR INFORMATION	SP		HL	09.05.24
3	ISSUED FOR 90%	SP		HL	01.07.24
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

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ARCHITECT: ALGORRY ZAPPIA & ASSOCIATES
BUILDING DESIGNERS & STRUCTURAL ENGINEERS

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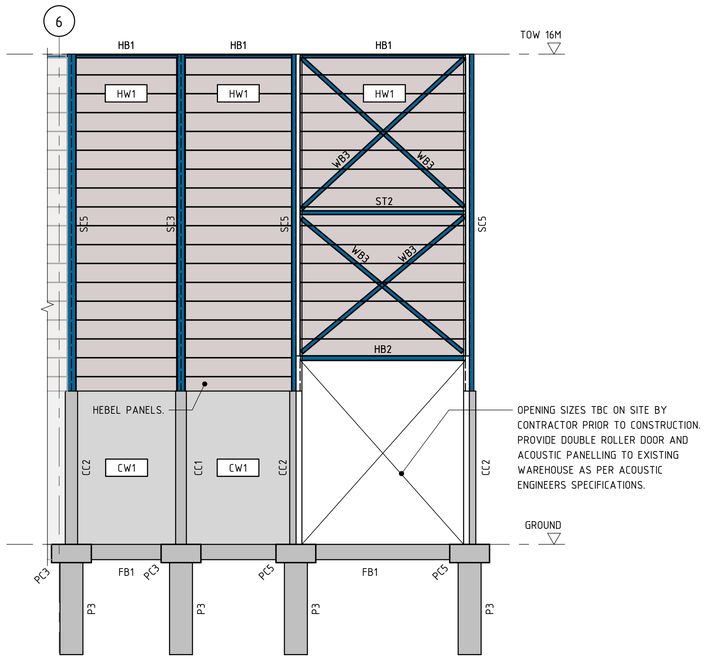
Ph (02) 9241 4188 Email: sydney@northrop.com.au
ABN 81 094 433 100

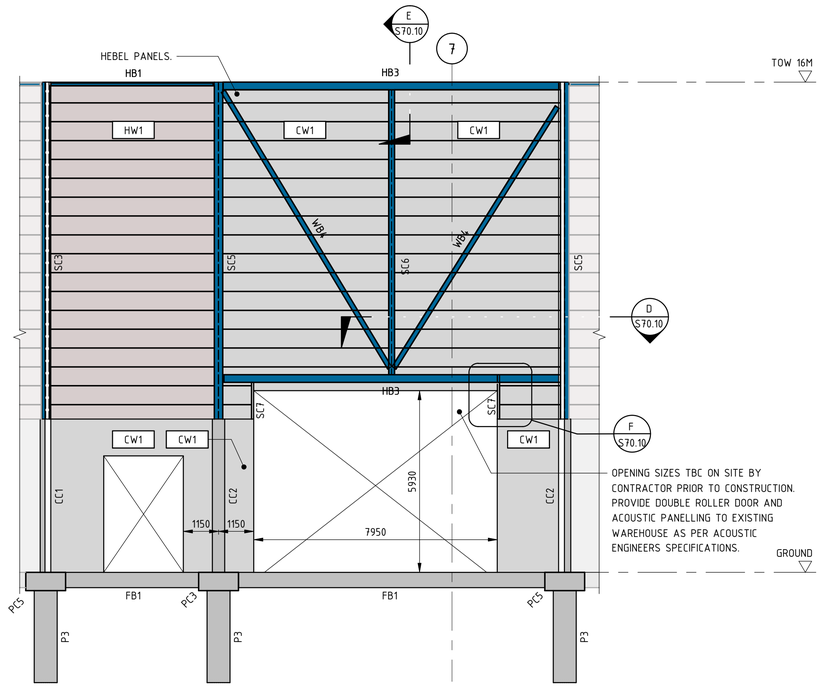
PROJECT: TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE: STRUCTURAL DRAWING WALL ELEVATIONS - SHEET 1

JOB NUMBER: SY233442
DRAWING NUMBER: S40.10
REVISION: A
DRAWING SHEET SIZE = A1



ELEVATION WE7.3 S20.11



ELEVATION WE7.4 S20.11

GENERAL NOTES

· FOR STRUCTURAL SPECIFICATIONS REFER TO DRAWINGS S00.11 TO S00.12.

FOUNDATION SCHEDULE

MARK	SIZE	COMMENT(S)
FOOTING BEAM		
FB1	500 DEEP x 600 WIDE	4N16 TOP & BTM, 2-LEG N12-200 TIES
PILE CAPS		
PC1	400 DEEP x 750 W x 750 B	4N16 U-BARS EW TOP & BTM
PC2	600 DEEP x 1050 W x 1050 B	5N20 U-BARS EW TOP & BTM
PC3	600 DEEP x 1300 W x 2950 B	8N28 U-BARS TOP & BTM, 4-LEG N12-200 TIES
PC4	400 DEEP x 1050 W x 3500 B	4N16 U-BARS EW TOP & BTM, 2-LEG N12-300 TIES
PC5	600 DEEP x 1300 W x 3250 B	8N28 U-BARS TOP & BTM + 4-LEG N12-200 TIES
PILES		
P1	600 DIA	5N20 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P2	750 DIA	7N24 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P3	750 DIA	6N24 N12-150 TIES, MIN. 2000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER

CONCRETE COLUMN SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE COLUMNS		
CC1	900 x 350 x 5500 H	12N24 VERTICALS, N12-200 TIES
CC2	1000 x 400 x 5500 H	12N24 VERTICALS, N12-200 TIES

STEEL MEMBER SCHEDULE

MARK	SIZE	COMMENT(S)
GIRTS		
G1	C20015 - 1200 CTS MAX	LEGS DOWN, 1 ROW BRIDGING CENTRAL
G2	C30024 - 700 CTS MAX	LEGS DOWN, 3 ROWS BRIDGING AT QUARTER POINTS
HEADER BEAMS		
HB1	89 x 89 x 5.0 SHS	
HB2	150 x 150 x 5.0 SHS	
HB3	250x250x9.0SHS	
RAKING ANGLE		
RA1	90 x 90 x 6 EA	
STEEL COLUMNS		
SC1	360 UB 44.7	MAX 5850mm SPACING BETWEEN MEMBERS.
SC2	610 UB 101	MAX 5850mm SPACING BETWEEN MEMBERS.
SC3	610 UB 113	MAX 5850mm SPACING BETWEEN MEMBERS.
SC4	125 x 125 x 4.0 SHS	FOR TOP OF SHIPPING CONTAINER FIXINGS.
SC5	800 WB 168	MAX 5650mm SPACING BETWEEN MEMBERS.
SC6	460 UB 67.1	COLUMN FOR LARGE OPENING.
SC7	200 PFC	STUB COLUMN FOR LARGE OPENING.
STRUTS		
ST1	89 x 89 x 5.0 SHS	
ST2	125 x 125 x 5.0 SHS	
WALL BRACINGS		
WB1	90 x 90 x 6 EA	
WB2	90 x 90 x 6 EA	
WB3	125 x 125 x 12 EA	
WB4	150 x 150 x 10 EA	

WALL SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE WALL		
CW1	250 THICK RC WALL	N12-250 VERTICALS, N16-200 HORIZONTALS. CONTROL JOINTS AT 12M CENTRES MAX. REFER DETAIL ON S80.10. NUMBER OF CJ TBC BUILDER. CJ AT 40M MAX.
CONTAINER WALLS		
CTW1	12200 L x 2440 W x 2900 H	SHIPPING CONTAINER WALL. SELL & PARKER TO CONFIRM DIMENSIONS. 3 CONTAINERS HIGH.
HEBEL WALL PANELS		
HW1	150 THICK	FIXED TO STEEL COLUMNS USING A 100 x 100 x 6 EA. SEE DRAWING S70.10.

DRAWN: SID PANICKER DESIGNED: HERMANN LEE JOB MANAGER: CHRISTOPHER VOSNAKIS VERIFIER: JONATHAN LOW

FOR CONSTRUCTION

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR INFORMATION	SP		LH	16.02.24
2	ISSUED FOR INFORMATION	SP		HL	09.05.24
3	ISSUED FOR 90%	SP		HL	01.07.24
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

CLIENT
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ARCHITECT
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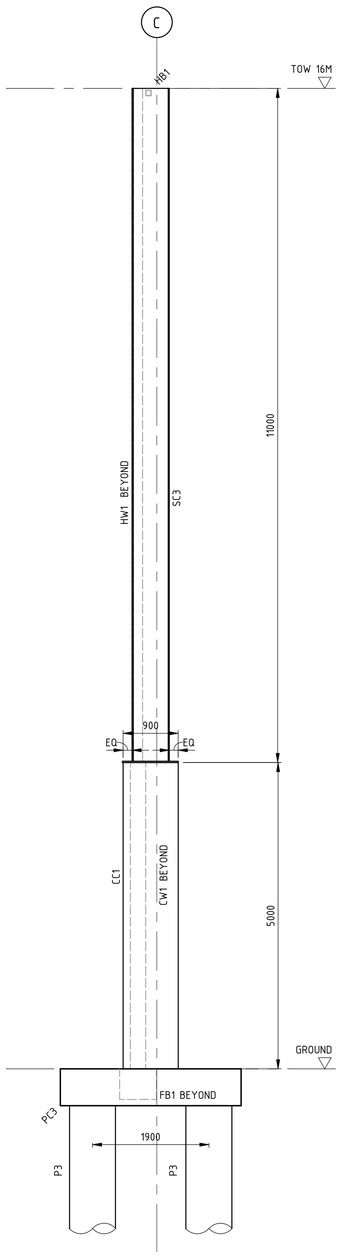
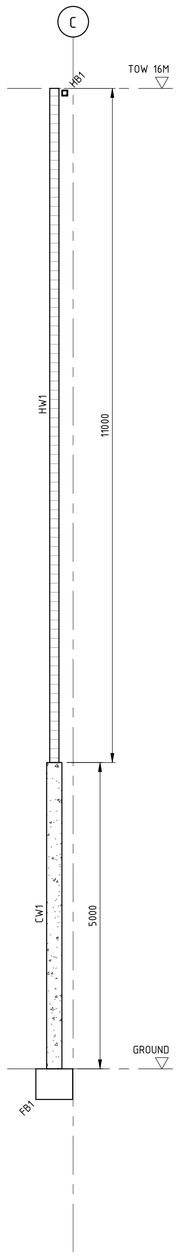
PROJECT
TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE
STRUCTURAL DRAWING WALL ELEVATIONS - SHEET 2

JOB NUMBER **SY233442**
DRAWING NUMBER **S40.11**
REVISION **A**
DRAWING SHEET SIZE = A1

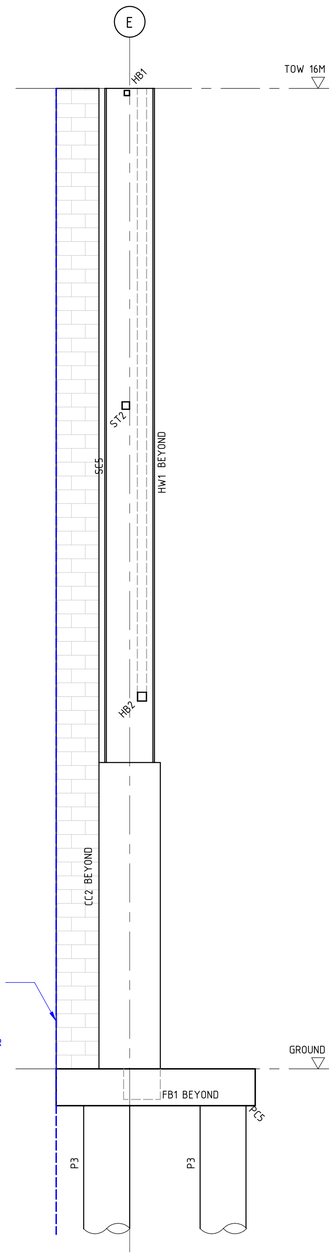


SECTION WS7.1 S20.11

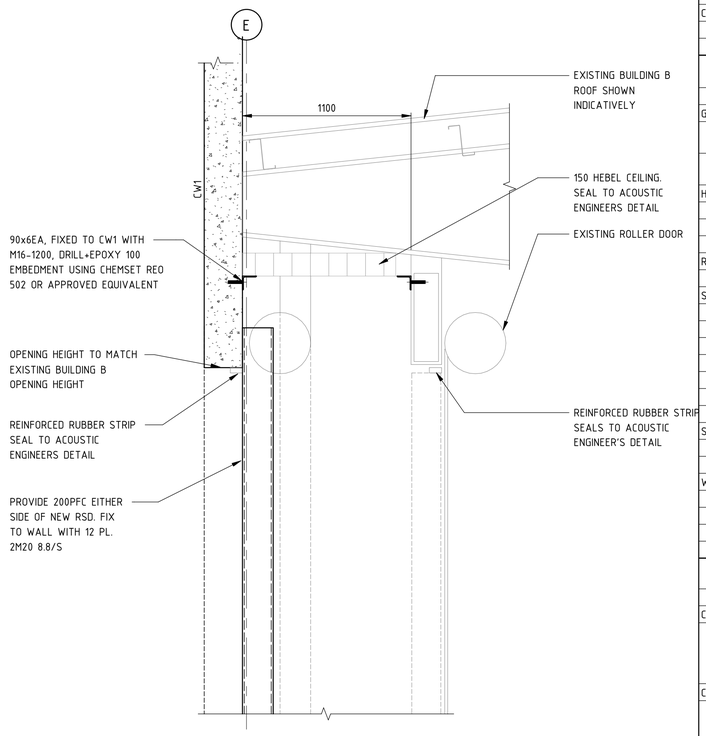


SECTION WS7.2 S20.11

EXISTING NON-FERROUS PROCESSING BUILDING "B". REFER TO ARCHITECTURAL DRAWING. CLEARANCES TO EXISTING STRUCTURE TBC ON SITE BY BUILDER PRIOR TO INSTALLATION OF PILES



SECTION WS7.3 S20.11



DOUBLE ROLLER DOOR SECTION

SECTION WS7.4 S30.12

GENERAL NOTES

- FOR STRUCTURAL SPECIFICATIONS REFER TO DRAWINGS S00.11 TO S00.12.

FOUNDATION SCHEDULE

MARK	SIZE	COMMENT(S)
FOOTING BEAM		
FB1	500 DEEP x 600 WIDE	4N16 TOP & BTM, 2-LEG N12-200 TIES
PILE CAPS		
PC1	400 DEEP x 750 W x 750 B	4N16 U-BARS EW TOP & BTM
PC2	600 DEEP x 1050 W x 1050 B	5N20 U-BARS EW TOP & BTM
PC3	600 DEEP x 1300 W x 2950 B	8N28 U-BARS TOP & BTM, 4-LEG N12-200 TIES
PC4	400 DEEP x 1050 W x 3500 B	4N16 U-BARS EW TOP & BTM, 2-LEG N12-300 TIES
PC5	600 DEEP x 1300 W x 3250 B	8N28 U-BARS TOP & BTM + 4-LEG N12-200 TIES
PILES		
P1	600 DIA	5N20 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P2	750 DIA	7N24 N12-300 TIES, MIN. 1000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER
P3	750 DIA	6N24 N12-150 TIES, MIN. 2000mm SOCKET DEPTH INTO CLASS IV SANDSTONE OR BETTER

CONCRETE COLUMN SCHEDULE

MARK	SIZE	COMMENT(S)
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CC2	1000 x 400 x 5500 H	12N24 VERTICALS, N12-200 TIES

STEEL MEMBER SCHEDULE

MARK	SIZE	COMMENT(S)
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G1	C20015 - 1200 CTS MAX	LEGS DOWN, 1 ROW BRIDGING CENTRAL
G2	C30024 - 700 CTS MAX	LEGS DOWN, 3 ROWS BRIDGING AT QUARTER POINTS
HEADER BEAMS		
HB1	89 x 89 x 5.0 SHS	
HB2	150 x 150 x 5.0 SHS	
HB3	250x250x9.0SHS	
RAKING ANGLE		
RA1	90 x 90 x 6 EA	
STEEL COLUMNS		
SC1	360 UB 44.7	MAX 5850mm SPACING BETWEEN MEMBERS.
SC2	610 UB 101	MAX 5850mm SPACING BETWEEN MEMBERS.
SC3	610 UB 113	MAX 5850mm SPACING BETWEEN MEMBERS.
SC4	125 x 125 x 4.0 SHS	FOR TOP OF SHIPPING CONTAINER FIXINGS.
SC5	800 WB 168	MAX 5650mm SPACING BETWEEN MEMBERS.
SC6	460 UB 67.1	COLUMN FOR LARGE OPENING.
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STRUTS		
ST1	89 x 89 x 5.0 SHS	
ST2	125 x 125 x 5.0 SHS	
WALL BRACINGS		
WB1	90 x 90 x 6 EA	
WB2	90 x 90 x 6 EA	
WB3	125 x 125 x 12 EA	
WB4	150 x 150 x 10 EA	

WALL SCHEDULE

MARK	SIZE	COMMENT(S)
CONCRETE WALL		
CW1	250 THICK RC WALL	N12-250 VERTICALS, N16-200 HORIZONTALS. CONTROL JOINTS AT 12M CENTRES MAX. REFER DETAIL ON S80.10. NUMBER OF CJ TBC BUILDER. DJ AT 40M MAX.
CONTAINER WALLS		
CTW1	12200 L x 2440 W x 2900 H	SHIPPING CONTAINER WALL. SELL & PARKER TO CONFIRM DIMENSIONS. 3 CONTAINERS HIGH.
HEBEL WALL PANELS		
HW1	150 THICK	FIXED TO STEEL COLUMNS USING A 100 x 100 x 6 EA. SEE DRAWING S70.10.

DRAWN: SID PANICKER
DESIGNED: HERMANN LEE
JOB MANAGER: CHRISTOPHER VOSNAKIS
VERIFIER: JONATHAN LOW

FOR CONSTRUCTION

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR INFORMATION	SP		HL	09.05.24
2	ISSUED FOR 90%	SP		HL	01.07.24
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

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ARCHITECT: ALGORRY ZAPPIA & ASSOCIATES
BUILDING DESIGNERS & STRUCTURAL ENGINEERS
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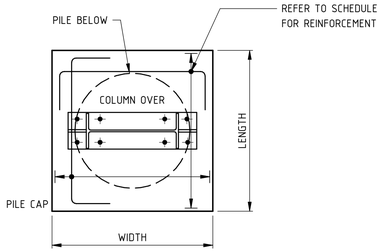
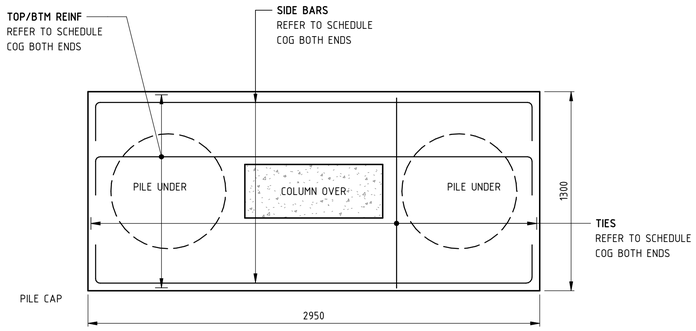
PROJECT: TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE: STRUCTURAL DRAWING WALL SECTIONS - SHEET 1

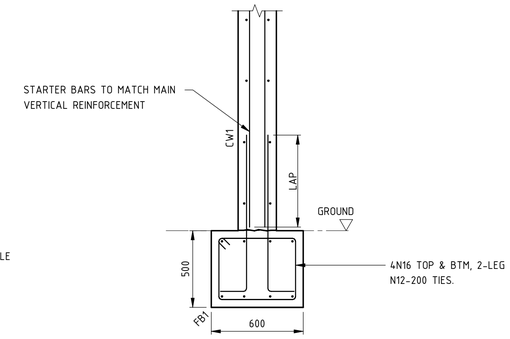
JOB NUMBER: SY233442
DRAWING NUMBER: S40.50
REVISION: A
DRAWING SHEET SIZE = A1



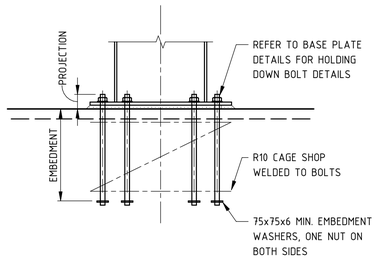
TYPICAL PC1/PC2 PILE CAP PLAN DETAIL



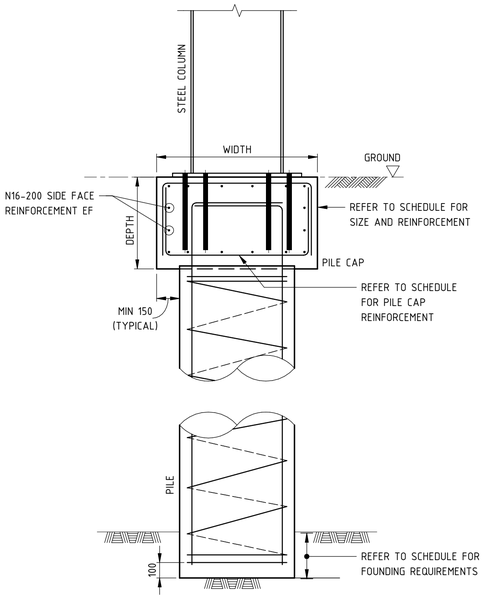
TYPICAL PC3 PILE CAP PLAN DETAIL



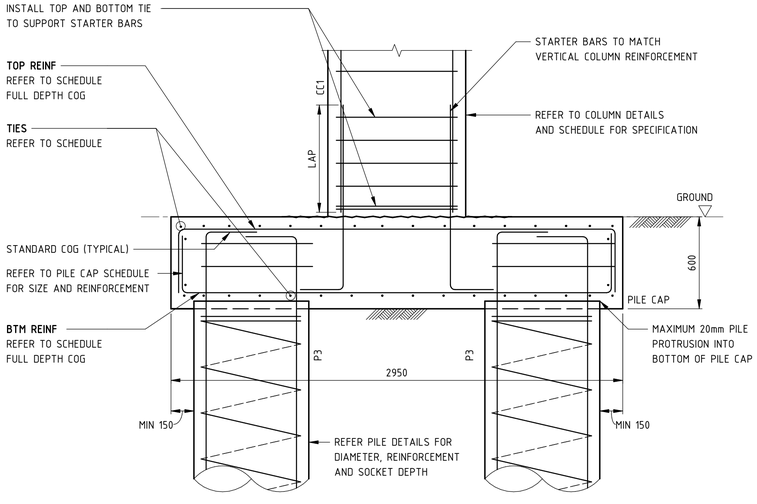
TYPICAL FB1 TO CW1 DETAIL



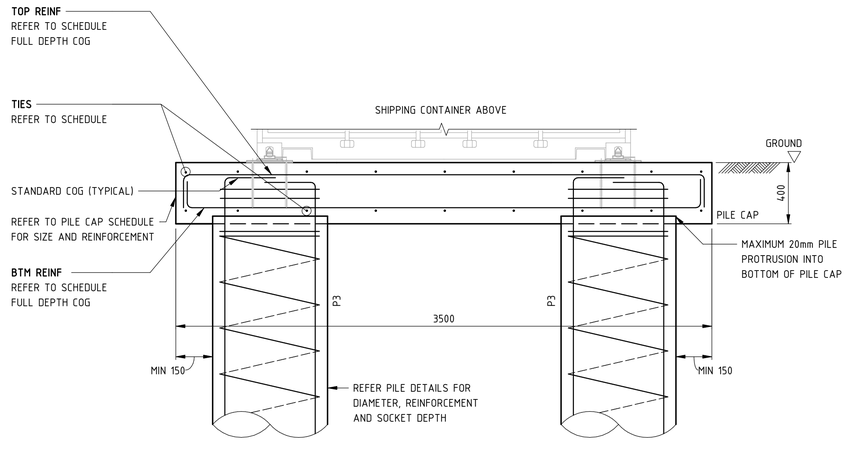
TYPICAL HOLDING DOWN BOLT CAGE DETAIL



TYPICAL PC1/PC2/PC4 PILE CAP DETAIL



TYPICAL PC3 PILE CAP DETAIL



TYPICAL PC4 PILE CAP DETAIL

REINFORCEMENT LAP SCHEDULE		
BAR SIZE	LAP LENGTH	COG LENGTH
N12	600	350
N16	700	500
N20	800	500
N24	1000	500
N28	1200	650
N32	1300	700
N36	1500	800

DRAWN: SID PANICKER
DESIGNED: HERMANN LEE
JOB MANAGER: CHRISTOPHER VOSNAKIS
VERIFIER: JONATHAN LOW

FOR CONSTRUCTION

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR 90%	SP		HL	01.07.24
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

CLIENT
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ARCHITECT
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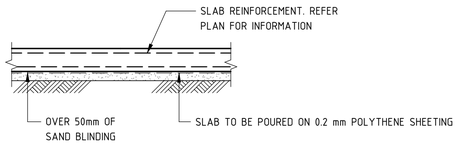
ABN 81 094 433 100

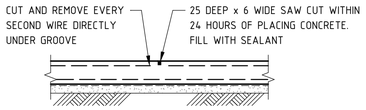
PROJECT
TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE
STRUCTURAL DRAWING TYPICAL FOUNDATION DETAILS

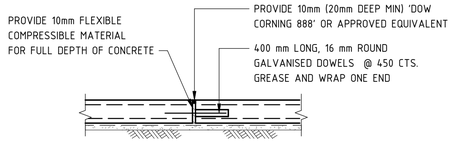
JOB NUMBER **SY233442**
DRAWING NUMBER **S60.10**
REVISION **A**
DRAWING SHEET SIZE = A1



TYPICAL SLAB ON GROUND DETAIL



TYPICAL SAWN JOINT DETAIL (SJ) DETAIL



TYPICAL DOWEL JOINT (DJ) DETAIL

DRAWN: SID PANICKER DESIGNED: HERMANN LEE JOB MANAGER: CHRISTOPHER VOSNAKIS VERIFIER: JONATHAN LOW

FOR CONSTRUCTION

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
A	ISSUED FOR CONSTRUCTION	SP	JL	HL	28.10.24

CLIENT

SELL & PARKER SINCE 1966

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ARCHITECT

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ABN 81 094 433 100

PROJECT

TATTERSALL RD KINGS PARK – SOUND BARRIER

45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE

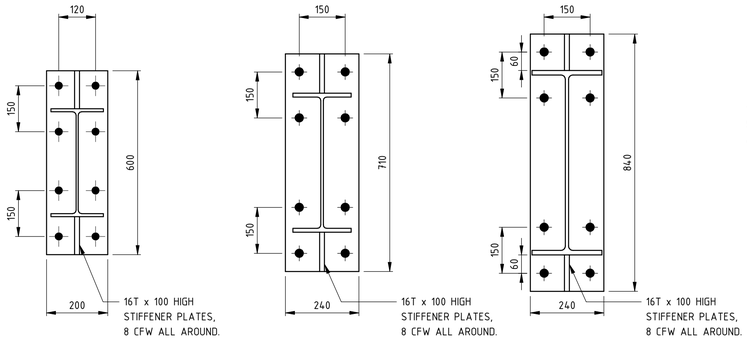
STRUCTURAL DRAWING SLAB ON GROUND DETAILS

JOB NUMBER **SY233442**

DRAWING NUMBER **S60.15**

REVISION **A**

DRAWING SHEET SIZE = A1



360UB COLUMNS

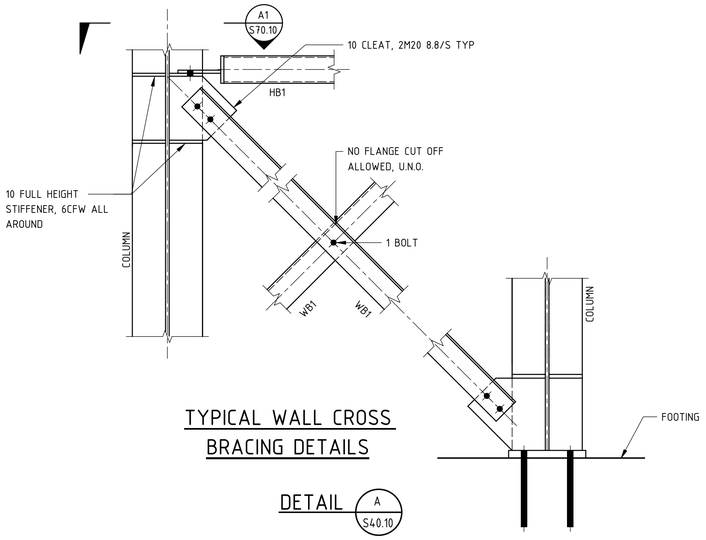
25 THICK BASEPLATE,
8M24 4.6/S HD BOLTS,
400 MIN EMBEDMENT
25 MAX LEVELLING GROUT

460UB COLUMNS

25 THICK BASEPLATE,
8M30 4.6/S HD BOLTS,
500 MIN EMBEDMENT
25 MAX LEVELLING GROUT

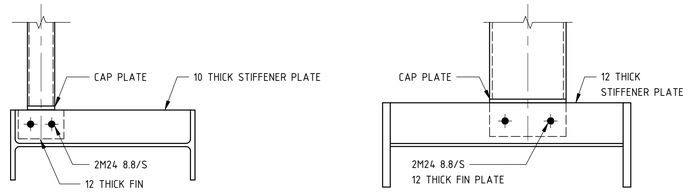
610UB COLUMNS

25 THICK BASEPLATE,
8M30 4.6/S HD BOLTS,
500 MIN EMBEDMENT
25 MAX LEVELLING GROUT



TYPICAL WALL CROSS BRACING DETAILS

DETAIL A S40.10

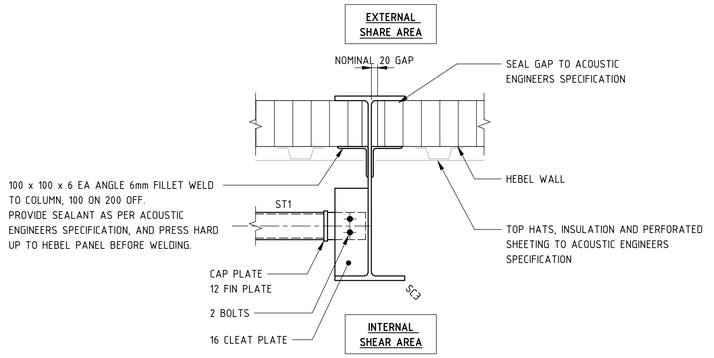


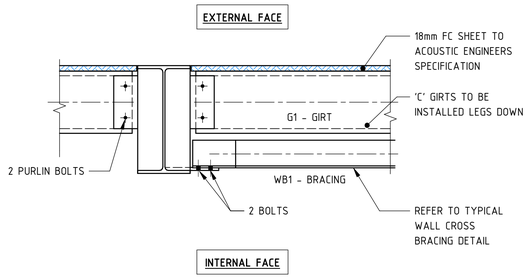
HB1 AND HB2

HB3

TYPICAL COLUMN TO HEADER BEAM CONNECTION

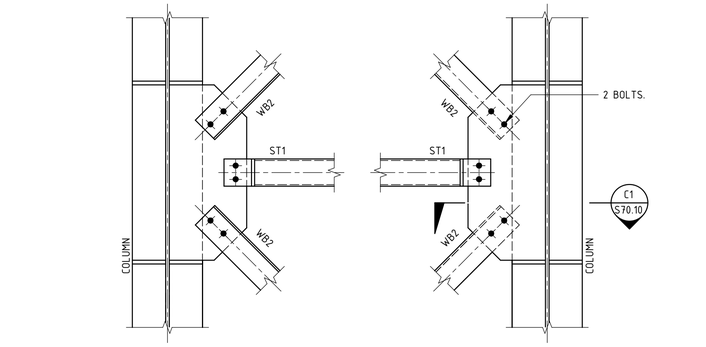
DETAIL A1 S70.10





TYPICAL 6m, 10m WALL BRACING & GIRT CONNECTION

DETAIL B S40.10

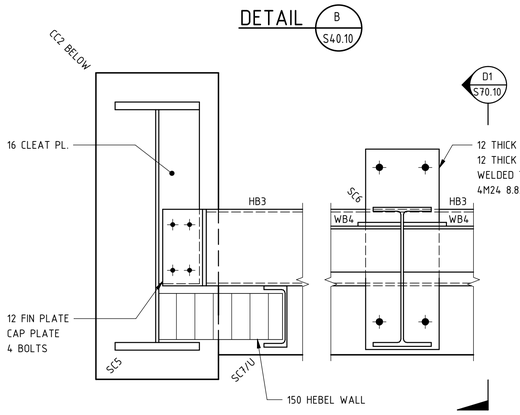


TYPICAL WALL CROSS BRACING TO STRUT DETAIL

DETAIL C S40.10

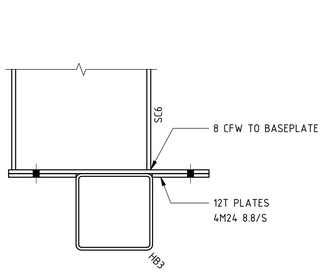
TYPICAL STRUT AND HEBEL TO COLUMN DETAIL

DETAIL C1 S70.10



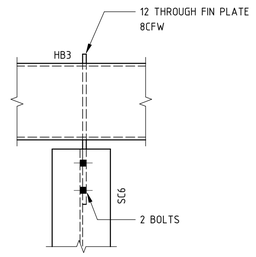
GRID 7 OPENING FRAMING CONNECTION DETAILS

DETAIL D S40.11



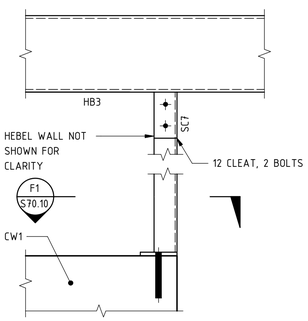
SC6 CONNECTION TO BOTTOM HB3 DETAIL

DETAIL D1 S70.10



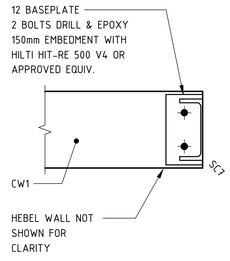
SC6 CONNECTION TO TOP HB3 DETAIL

DETAIL E S40.11



HB3 STUB COLUMN TO CONCRETE WALL DETAIL

DETAIL F S40.11



SC7 STUB COLUMN BASEPLATE DETAIL

DETAIL F1 S70.10

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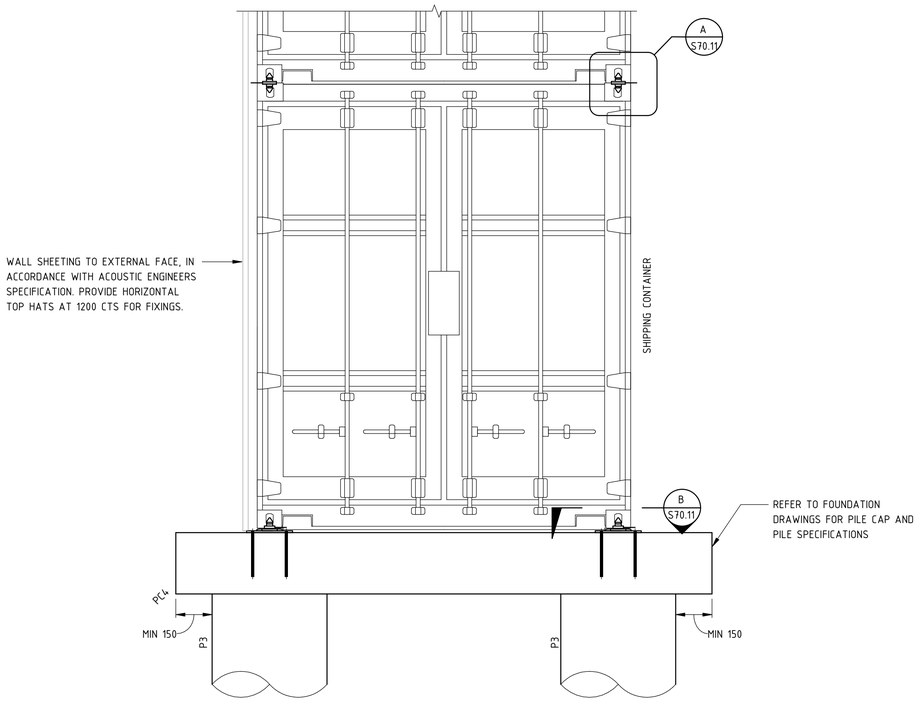
ABN 81 094 433 100

PROJECT: TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

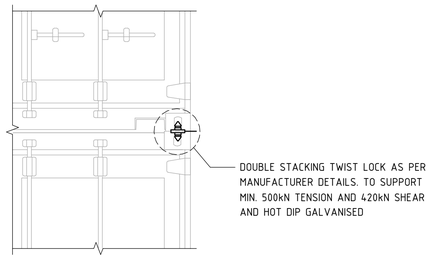
DRAWING TITLE: STRUCTURAL DRAWING TYPICAL STEEL DETAILS

JOB NUMBER: SY233442
DRAWING NUMBER: S70.10
REVISION: A
DRAWING SHEET SIZE = A1

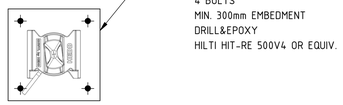
DRAWN: SID PANICKER
DESIGNED: HERMANN LEE
JOB MANAGER: CHRISTOPHER VOSNAKIS
VERIFIER: JONATHAN LOW



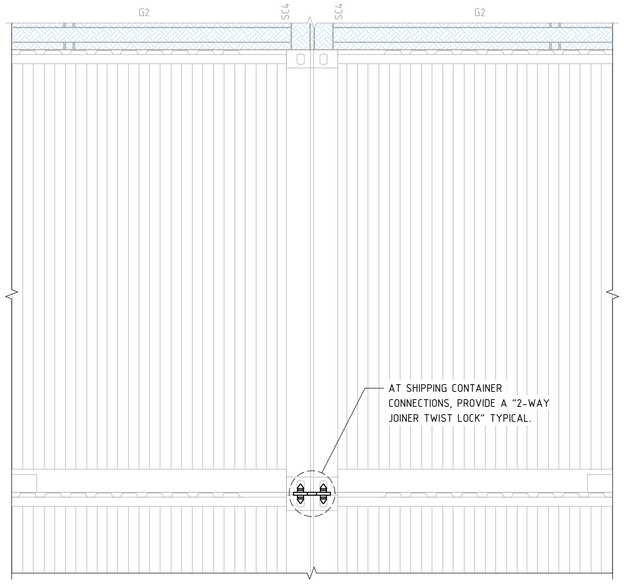
TYPICAL STACKED SHIPPING CONNECTION & CONTAINER TO PILE CAP CONNECTION DETAIL



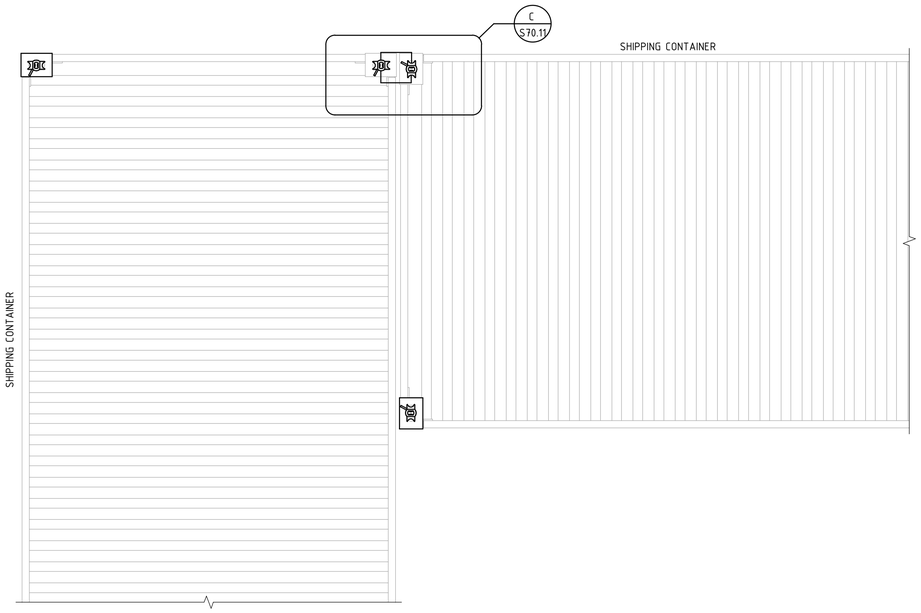
DETAIL A S70.11



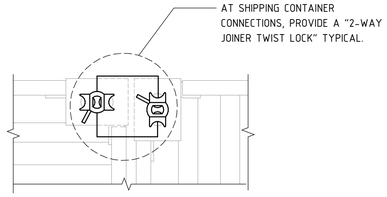
DETAIL B S70.11
SCALE 1:10



TYPICAL SHIPPING CONTAINER CONNECTION DETAIL



TYPICAL SHIPPING CONTAINER CORNER SECTION



DETAIL C S70.11
SCALE 1:10

DRAWN: SID PANICKER DESIGNED: HERMANN LEE JOB MANAGER: CHRISTOPHER VOSNAKIS VERIFIER: JONATHAN LOW

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PROJECT: **TATTERSALL RD KINGS PARK – SOUND BARRIER**

45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

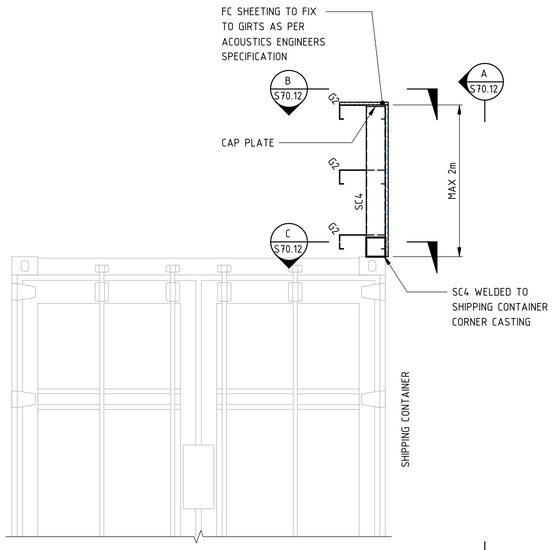
DRAWING TITLE: **STRUCTURAL DRAWING TYPICAL SHIPPING CONTAINER WALL DETAILS - SHEET 1**

JOB NUMBER: **SY233442**

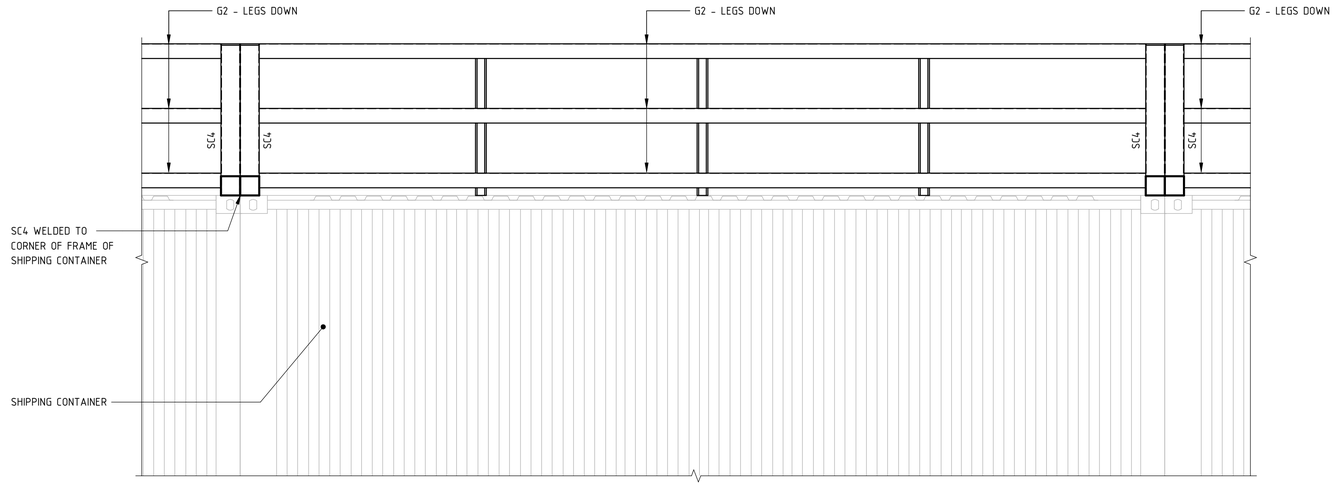
DRAWING NUMBER: **S70.11**

REVISION: **A**

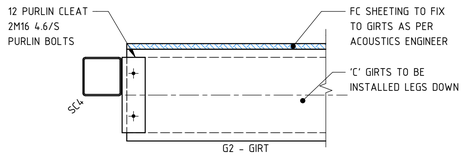
DRAWING SHEET SIZE = A1



TYPICAL TOP OF CONTAINER FIXING DETAIL

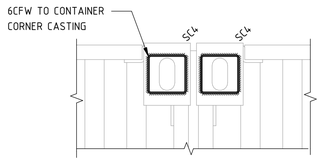


SECTION A S70.12



TYPICAL GIRT TO SC4 DETAIL

SECTION B S70.12
SCALE 1:10



TYPICAL SC4 TO CONTAINER WELD DETAIL

SECTION C S70.12
SCALE 1:10

DRAWN: SID PANICKER DESIGNED: HERMANN LEE JOB MANAGER: CHRISTOPHER VOSNAKIS VERIFIER: JONATHAN LOW

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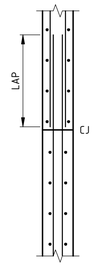
PROJECT
TATTERSALL RD KINGS PARK – SOUND BARRIER

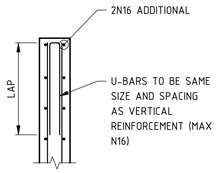
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE
STRUCTURAL DRAWING TYPICAL SHIPPING CONTAINER WALL DETAILS - SHEET 2

JOB NUMBER **SY233442**
DRAWING NUMBER **S70.12**
REVISION **A**
DRAWING SHEET SIZE = A1

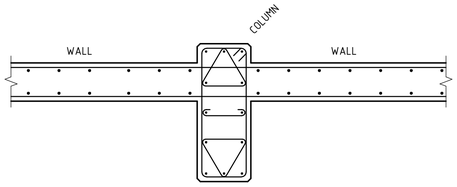


INTERMEDIATE SPLICE

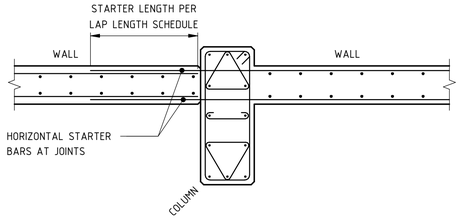


TOP OF WALL

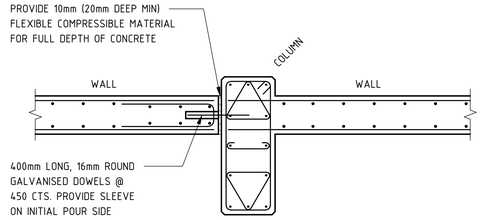
TYPICAL CONCRETE WALL SECTION DETAILS (DOUBLE LAYER)



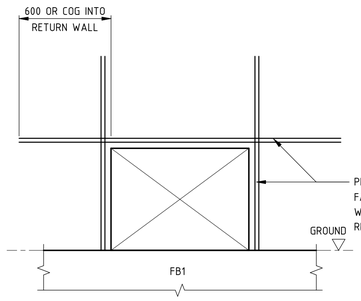
TYPICAL COLUMN TO WALL JUNCTION DETAIL



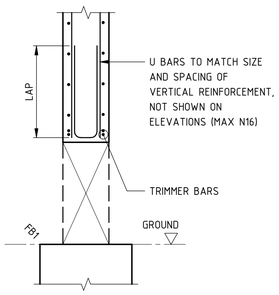
TYPICAL COLUMN TO WALL CONSTRUCTION JOINT DETAIL



TYPICAL COLUMN TO WALL DOWEL JOINT DETAIL

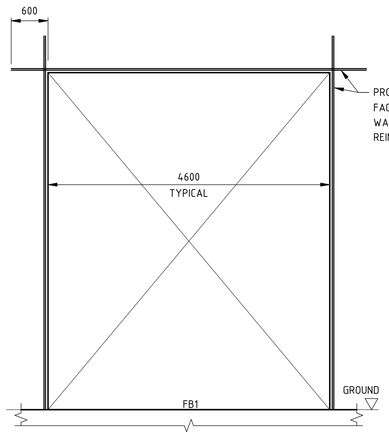


ELEVATION

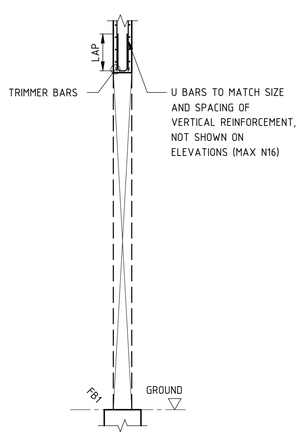


SECTION

TYPICAL TRIMMER BAR DETAIL AT FLOOD OPENINGS



ELEVATION

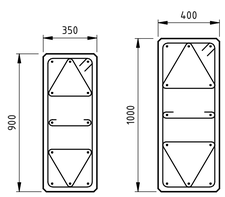


SECTION

TYPICAL TRIMMER BAR DETAIL AT DOOR OPENINGS

SCALE 1:50

REINFORCEMENT LAP LENGTHS	
BAR DIAMETER	CONCRETE GRADE 40MPa
N16	700
N20	900
N24	1100
MAXIMUM CLEAR GAP BETWEEN BARS TO BE 3 x BAR DIAMETER	



CC1 CC2

TYPICAL COLUMN PLAN DETAILS

DRAWN: SID PANICKER
DESIGNED: HERMANN LEE
JOB MANAGER: CHRISTOPHER VOSNAKIS
VERIFIER: JONATHAN LOW

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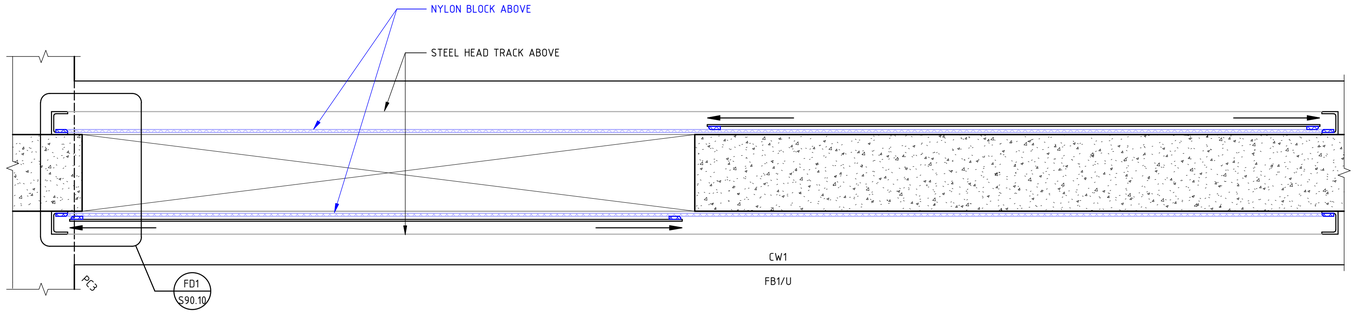
PROJECT
TATTERSALL RD KINGS PARK – SOUND BARRIER
45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

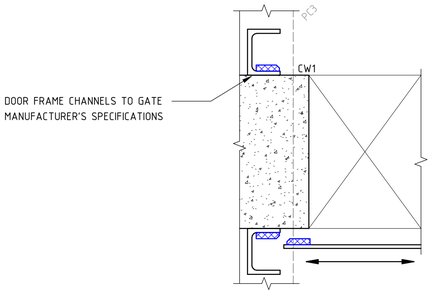
DRAWING TITLE
STRUCTURAL DRAWING TYPICAL CONCRETE DETAILS

JOB NUMBER **SY233442**
DRAWING NUMBER **S80.10**
REVISION **A**
DRAWING SHEET SIZE = A1



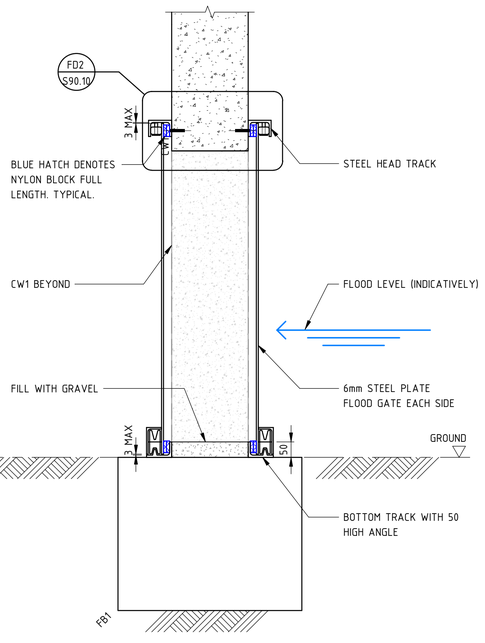
TYPICAL FLOOD DOOR PART PLAN

NOTE: THIS DRAWING IS TO BE USED BY THE GATE MANUFACTURER TO DESIGN AND DETAIL A SLIDING GATE WHICH MEETS THE STRUCTURAL PERFORMANCE REQUIREMENTS (FIXINGS AND STEEL THICKNESSES) AND THE ACOUSTIC PERFORMANCE REQUIREMENTS (NYLON BLOCKS AND MINIMUM STEEL THICKNESSES) AS SPECIFIED BY THE ACOUSTIC CONSULTANT PER P2309926JC02V01

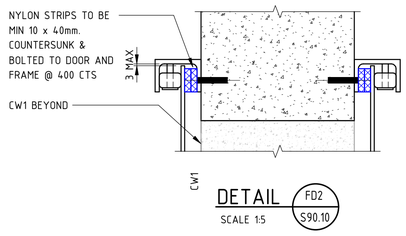


DETAIL FD1 / S90.10

SCALE 1:5



TYPICAL FLOOD DOOR SECTION



DETAIL FD2 / S90.10

SCALE 1:5

DRAWN: SID PANICKER
DESIGNED: HERMANN LEE
JOB MANAGER: CHRISTOPHER VOSNAKIS
VERIFIER: JONATHAN LOW

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PROJECT: **TATTERSALL RD KINGS PARK – SOUND BARRIER**

45 TATTERSALL ROAD, BLACKTOWN, NSW, 2148

DRAWING TITLE: **STRUCTURAL DRAWING TYPICAL SLIDING FLOOD DOOR DETAILS**

JOB NUMBER: **SY233442**

DRAWING NUMBER: **S90.10**

REVISION: **A**

DRAWING SHEET SIZE = A1