

FOOTING MARKING PLAN

### GENERAL ARRANGEMENT LEGEND

- : INDICATES COLUMN NUMBER
- : INDICATES LOAD BEARING WALL OR COLUMN OVER
- BH1 : BH1 INDICATES BOREHOLE NUMBER
- SF1/PF1 : INDICATES FOOTING TYPE. REFER TO SCHEDULE FOR DETAILS
- P1-A : P1 INDICATES PIER NUMBER  
A INDICATES PIER TYPE. REFER TO SCHEDULE FOR DETAILS
- : INDICATES BASE OF PAD FOOTING TO BE LOWERED TO SUIT DEPTH OF ADJACENT FOOTING EXCAVATION

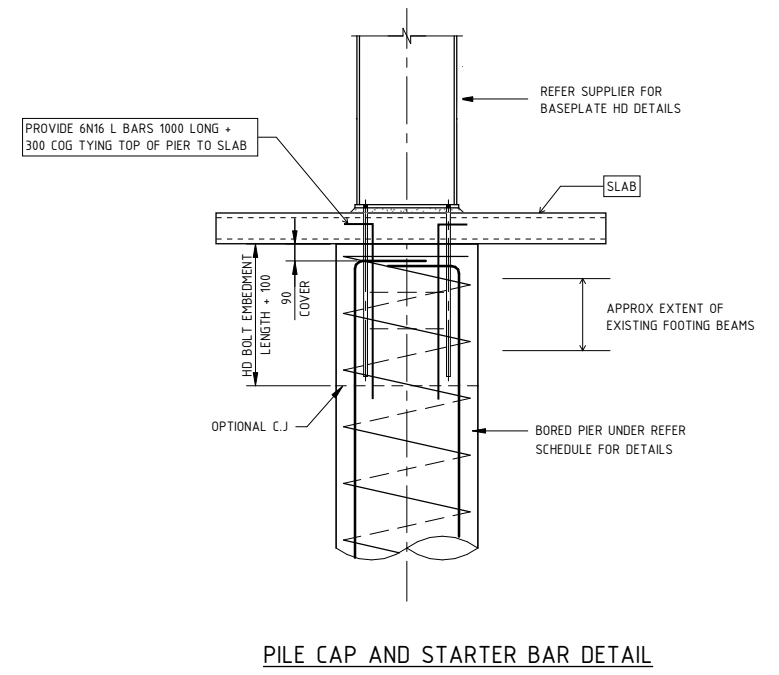
NOTES:

- REFER TO DRAWING No. 0001 & 0002 FOR CONSTRUCTION NOTES
- SELICK CONSULTANTS TO BE ADVISED IF MINIMUM BEARING CAPACITY NOT ACHIEVED
- ALL FOOTING MATERIAL TO BE INSPECTED BY GEOTECHNICAL ENGINEER AND BEARING PRESSURE TO BE CONFIRMED

### PIER SCHEDULE

MARK	DIA	REINFORCEMENT	CONC STRENGTH	DESIGN LOAD	F'b	Ca	SOCKET INTO 3000kPa ROCK
PA-?	1050mm	10N24 + N12-300 TIES	40MPa	1350kN	3000kPa	300kPa	1200mm

1500x1500x450 THICK PAD FOOTING (MINIMUM 150kPa BEARING MATERIAL). N16-200 U BARS EACH WAY TOP AND BOTTOM. DRILL AND EPOXY N16-300 CENTRAL INTO EXISTING SLAB AROUND PERIMETER. 600 LONG 150 EMBEDMENT.



PILE CAP AND STARTER BAR DETAIL

A	ISSUE FOR TENDER	07.03.22	AZ
ISSUE	DESCRIPTION	DATE	DRAWN



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PROJECT TITLE  
**TOOHEYS ELEPHANT HOUSE  
FV VESSEL**

CLIENT  
**LION**

DESIGNED BY  
AZ

CHECKED BY

AUTHORISED BY  
AZ

DATE  
07.03.2022

DRAWING TITLE  
**FOOTING MARKING PLAN**

PROJECT LOCATION  
**29 NYRANG ST LIDCOMBE**

SCALE AS NOTED	JOB NO 211263	DRAWING NO 100	REV A
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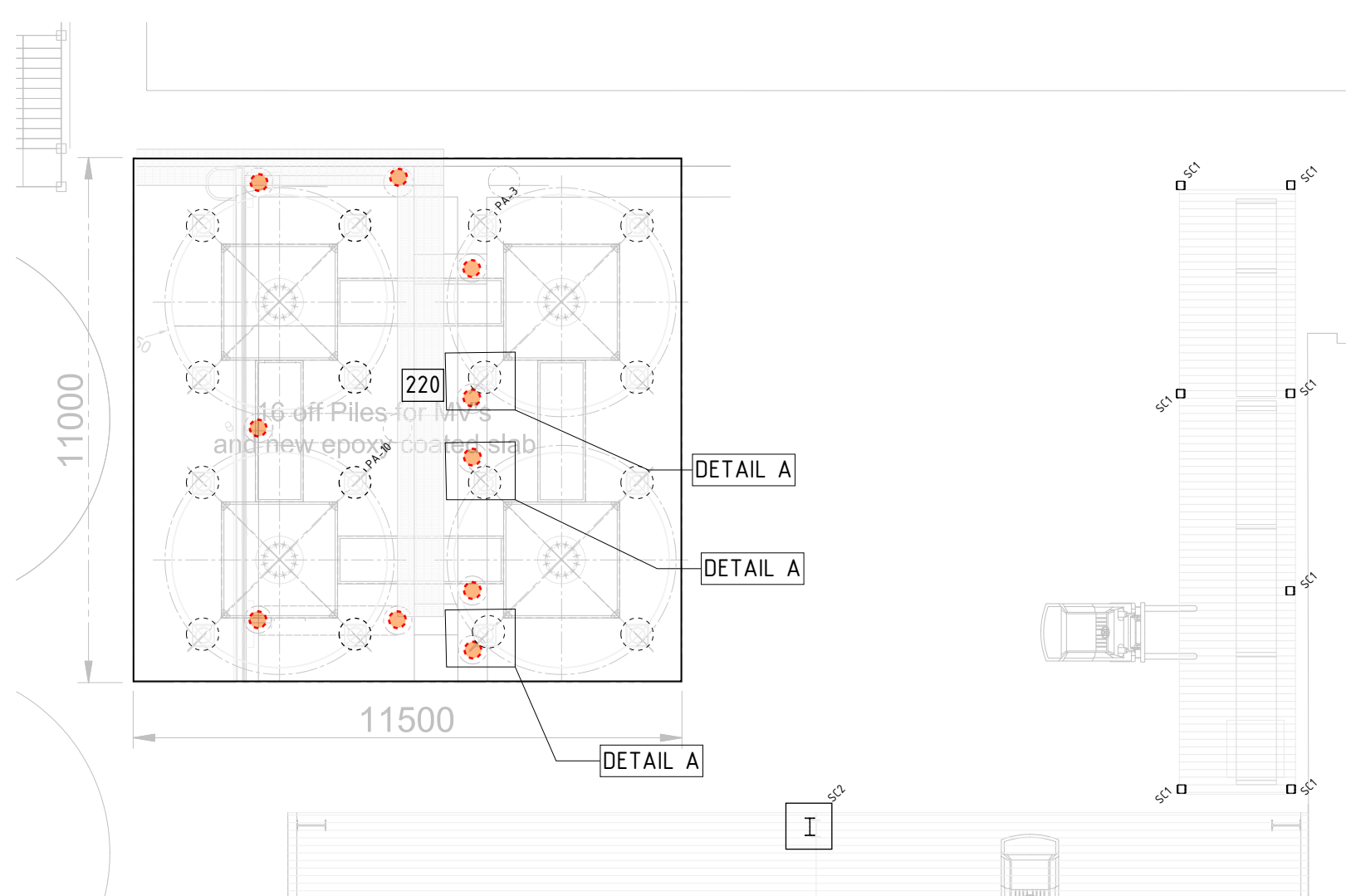
**GENERAL ARRANGEMENT LEGEND**

220 SLAB ON GROUND U.N.O. ON PLAN  
F'c = 40MPa

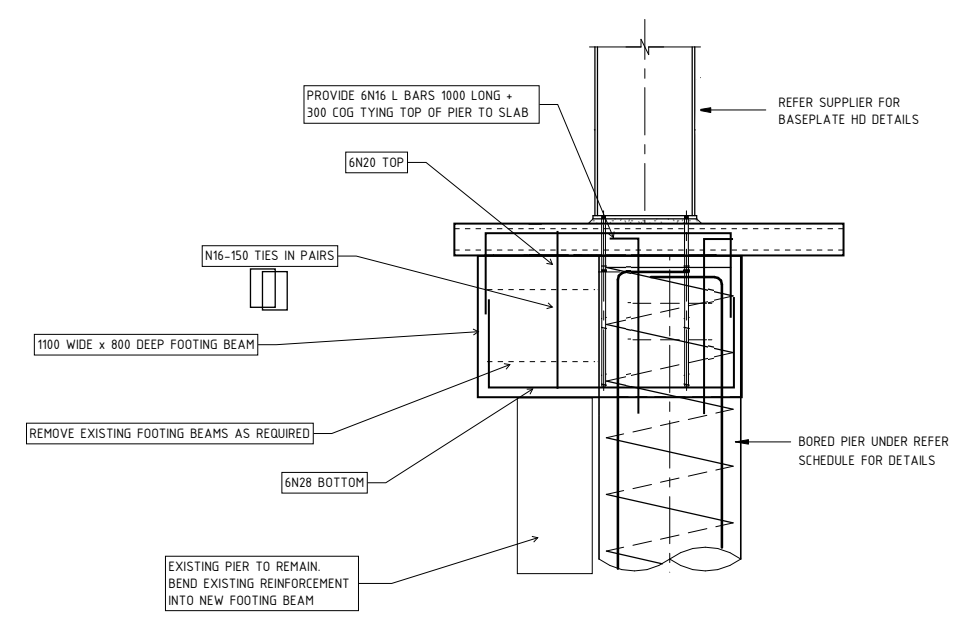
- : INDICATES COLUMN NUMBER
- : INDICATES LOADBEARING WALL OR COLUMN OVER
- : INDICATES LOADBEARING WALL OR COLUMN UNDER
- : INDICATES LOADBEARING WALL OR COLUMN UNDER & OVER
- : INDICATES SLAB THICKNESS OVERALL U.N.O.
- : INDICATES STEP IN SLAB
- : INDICATES SAW CUT JOINT
- : INDICATES KEYED JOINT
- : INDICATES FOOTING UNDER

NOTES:

- REFER TO DRAWING No. 0001 & 0002 FOR CONSTRUCTION NOTES
- SLAB TO BE POURED ON 80mm MINIMUM BASECOURSE WITH SAND BLINDING AND VAPOUR BARRIER



SLAB MARKING PLAN



DETAIL A - PILE CAP AT EXISTING PIER DETAIL. LOCATION TBC ON SITE

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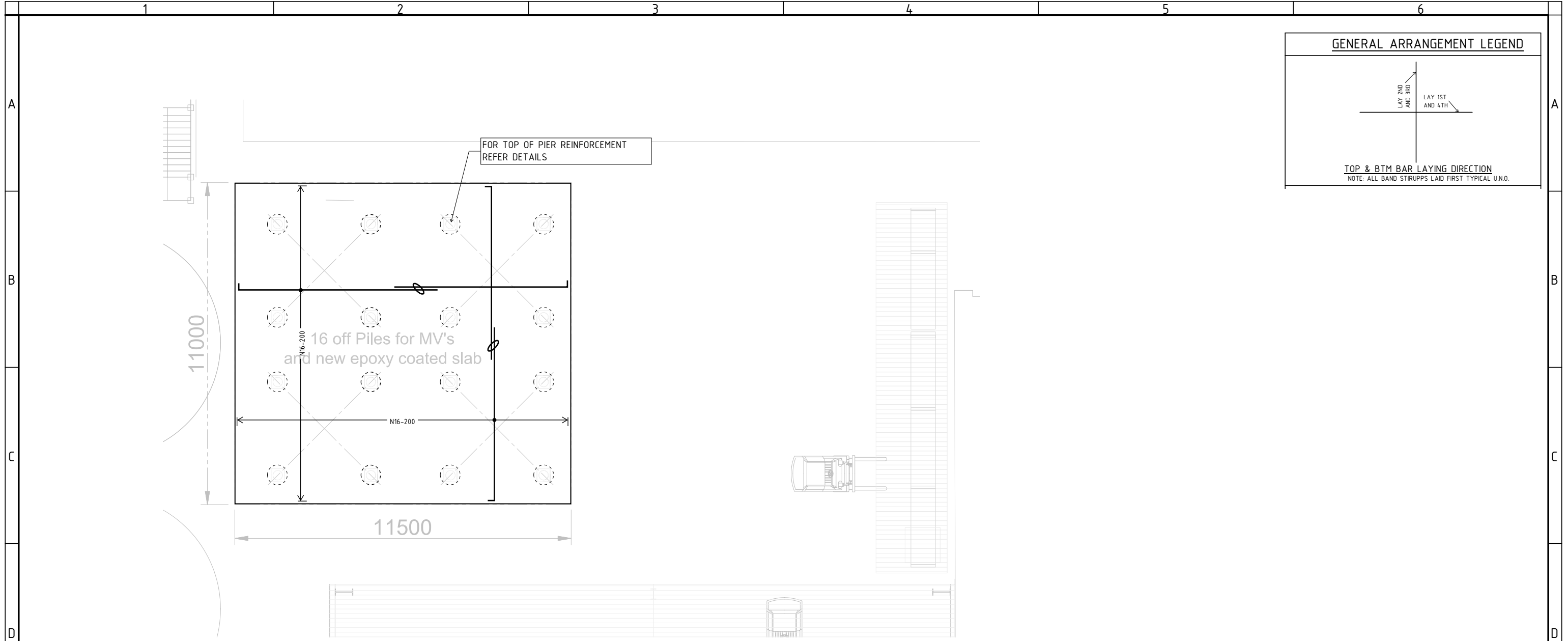
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07.03.2022

DRAWING TITLE  
**SLAB MARKING PLAN**

PROJECT LOCATION  
**29 NYRANG ST LIDCOMBE**

SCALE  
**AS NOTED**

JOB NO <b>211263</b>	DRAWING NO <b>200</b>	REV <b>A</b>
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SLAB BOTTOM REINFORCEMENT PLAN

A	ISSUE FOR TENDER	07.03.22	AZ
ISSUE	DESCRIPTION	DATE	DRAWN



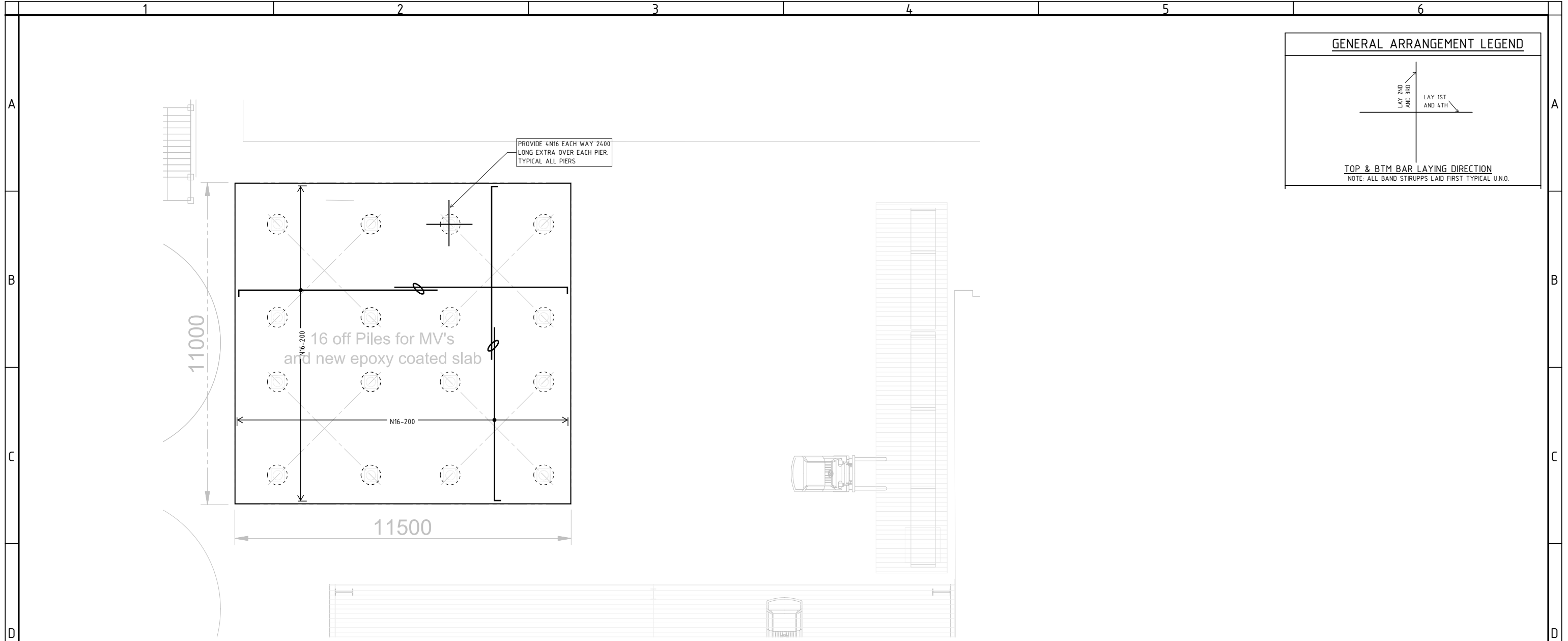
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PROJECT TITLE  
**TOOHEYS ELEPHANT HOUSE  
 FV VESSEL**  
 CLIENT  
**LION**


DESIGNED BY  
 AZ  
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 AZ  
 DATE  
 07.03.2022

DRAWING TITLE  
**SLAB BOTTOM  
 REINFORCEMENT PLAN**  
 PROJECT LOCATION  
**29 NYRANG ST LIDCOMBE**

SCALE  
**AS NOTED**  
 JOB NO  
**211263**  
 DRAWING NO  
**210**  
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SLAB TOP REINFORCEMENT PLAN

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						TOOHEYS ELEPHANT HOUSE FV VESSEL	AZ	SLAB TOP REINFORCEMENT PLAN	AS NOTED		
ISSUE DESCRIPTION		DATE	DRAWN			CLIENT	AUTHORISED BY	PROJECT LOCATION	JOB NO	DRAWING NO	REV
1				2		LION	AZ	29 NYRANG ST LIDCOMBE	211263	211	A
				3			DATE				
				4			07.03.2022				
				5							
				6							

**GENERAL**

G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND OTHER RELEVANT REFERENCE DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO SUPERINTENDENT FOR DECISION BEFORE PROCEEDING.

G2. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS. FIGURED DIMENSIONS ONLY SHALL BE USED. SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE BUILDER FROM ARCHITECTURAL DRAWINGS. ALL DISCREPANCIES SHALL BE REFERRED TO ARCHITECT FOR RESOLUTION.

G3. DURING CONSTRUCTION STRUCTURES SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERLOADED. TEMPORARY SUPPORT SHALL BE PROVIDED BY THE BUILDER IN ORDER TO KEEP THE WORKS AND ANY EXCAVATIONS STABLE AT ALL TIMES.

G4. THE BUILDING SHALL NOT BE ERECTED ON OR ADJACENT TO ANY OF THE FOLLOWING HAZARDS UNLESS THE HAZARD IS NOTED ON SELICK CONSULTANTS CONSTRUCTION DRAWINGS: EMBANKMENTS, BATTERS, RETAINING WALLS, PITS, SEWER, SERVICE TRENCHES OR ANY POTENTIAL SOURCE OF DAMAGE TO THE STRUCTURE. IF ANY SUCH HAZARDS ARE ENCOUNTERED, NOTIFY SELICK CONSULTANTS & AWAIT WRITTEN APPROVAL PRIOR TO PROCEEDING.

G5. THE BUILDER SHALL LOCATE ALL EXISTING & PROPOSED SERVICES & EASEMENTS. APPROVAL SHALL BE OBTAINED BY THE RELEVANT AUTHORITIES PRIOR TO BUILDING ON OR OVER ANY SERVICES OR EASEMENTS.

G6. THE BUILDER SHALL NOT EXCAVATE BELOW THE LEVEL OF THE NEW OR EXISTING FOOTINGS WITHOUT THE WRITTEN APPROVAL OF SELICK CONSULTANTS.

G7. THE WRITTEN CONSENT OF ADJOINING PROPERTY OWNERS SHALL BE OBTAINED BEFORE INSTALLATION OF UNDERPINNING, PLACEMENT OF ANCHORS, DRAINAGE LINES OR ANY OTHER WORK BEYOND THE PROPERTY BOUNDARY.

G8. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF CURRENT STANDARDS AUSTRALIA CODES, THE BUILDING CODE OF AUSTRALIA & ANY RELEVANT STATUTORY AUTHORITIES.

G9. THE STRUCTURAL COMPONENTS DETAILED ON THE STRUCTURAL DRAWINGS HAVE BEEN DESIGNED FOR THE FOLLOWING LOADS:

IMPORTANCE LEVEL = 2

FLOOR LOADS IN ACCORDANCE WITH AS1170 - PART 1: REFER TO LOADING PLANS.

WIND LOADS IN ACCORDANCE WITH AS1170 - PART 2:  
VR = 45 WHERE R = 500 years)  
REGION = A  
TERRAIN CATEGORY = 3

G10. CONSTRUCTION USING THE STRUCTURAL DRAWINGS SHALL NOT COMMENCE UNTIL A CONSTRUCTION CERTIFICATE IS ISSUED BY THE PRINCIPAL CERTIFYING AUTHORITY.

G11. THE CONTRACTOR SHALL GIVE AT LEAST 24 HOURS NOTICE OF ANY INSPECTIONS OF STRUCTURAL WORK.

**FOUNDATIONS**

F1. FOUNDATION DESIGN HAS BEEN BASED ON GEOTECHNICAL ENGINEERS REPORT No 85857 DATED JANUARY 2007 BY ARUP

F2. BORED PIERS HAVE BEEN DESIGNED FOR:  
ALLOWABLE END BEARING CAPACITY = REFER SCHEDULE ON 1000 SERIES DRAWINGS  
SHAFT ADHESION = REFER SCHEDULE ON 1000 SERIES DRAWINGS

PAD FOOTINGS HAVE BEEN DESIGNED FOR:  
ALLOWABLE END BEARING CAPACITY = REFER SCHEDULE ON 1000 SERIES DRAWINGS

F3. FOOTINGS SHALL BE LOCATED CENTRALLY UNDER WALLS AND COLUMNS UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS.

F4. FOOTINGS SHALL BE CONSTRUCTED AND BACKFILLED AS SOON AS POSSIBLE FOLLOWING EXCAVATION. IF CONCRETE IS NOT PLACED IMMEDIATELY AFTER EXCAVATION OF FOOTING, IF LEFT OVERNIGHT OR EXPOSED TO RAIN, PROVIDE A 50mm BLINDING LAYER OF WEAK (15MPa) CONCRETE TO THE BASE OF EXCAVATION FOUNDATION.

F5. EXCAVATE FOR FOUNDATIONS TO THE REQUIRED SIZES AND DEPTH. FOOTING FOUNDING LEVELS ARE PROVISIONAL SUBJECT TO ACTUAL SITE CONDITIONS.

F6. AT THE SUB-CONTRACTORS EXPENSE FOUNDATION MATERIAL IS TO BE INSPECTED & APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING REINFORCEMENT.

F7. LOCATE ALL PPES, RETAINING WALLS AND EXCAVATION OUTSIDE OF THE 1:2 (VERTICAL-HORIZONTAL) ZONE OF INFLUENCE FROM THE BOTTOM EDGE OF THE FOOTING

F8. WHERE SIDE SHEAR IS REQUIRED TO BE DEVELOPED, CLEAN AND ROUGHEN THE SIDES OF THE EXCAVATION TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.

F9. ALL LEVELS TO BE COORDINATED WITH IN-GROUND SERVICES. BASE OF FOOTINGS TO BE FOUNDED BELOW ZONE OF INFLUENCE OF ANY EXCAVATION.

F10. BUILDER TO CONFIRM TOP OF FOOTING LEVELS WITH ARCHITECT PRIOR TO CONSTRUCTION.

**PILING NOTES**

P1. ALL PILING IS TO BE IN ACCORDANCE WITH SA1 PILING CODE AS2159

P2. REFER FOUNDATION NOTES FOR SITE INVESTIGATION REPORT REFERENCES.

P3. PILING TO BE DESIGNED, CONSTRUCTED AND CERTIFIED IN ACCORDANCE WITH THE SPECIFICATION AND REQUIREMENTS SET OUT ON THE DRAWINGS. DETAILS OF EACH PILE TYPE AND CAPACITY ARE TO BE SUBMITTED TO THE CONTRACT ADMINISTRATOR FOR REVIEW BEFORE ANY PILING IS COMMENCED.

P4. PILES ARE TO BE DESIGNED FOR 50 YEAR STRUCTURAL LIFE AND CERTIFIED BY MANUFACTURER.

P5. SPLICES SHALL BE CAPABLE OF TRANSMISSION OF FULL MOMENT AND AXIAL CAPACITY OF PILE BETWEEN SECTIONS. SPLICES SHALL BE CONSTRUCTED TO MANUFACTURERS DETAIL AND REFERENCED IN MANUFACTURER.

P6. EACH PILE IS TO BE CONSTRUCTED WITHIN 1 IN 100 FOR VERTICALLY OR BETTER. NO ENCHROACHMENT OVER SITE BOUNDARY IS PERMITTED.

P7. TESTING TO BE CONDUCTED IN ACCORDANCE WITH AS2159.

P8. PILE HEADS SHALL BE CUT OFF TO REQUIRED LEVEL TO INCORPORATE THE PILES INTO THE STRUCTURE. IF ANY PILE IS DAMAGED BY DRIVING, OR IS OTHERWISE UNSOUND, AT OR BELOW CUT OFF LEVEL, NOTIFY THE ENGINEER AND OBTAIN INSTRUCTIONS FOR RECTIFICATION.

P9. ALTERNATIVE DESIGN(S) FOR THE FOUNDATION SYSTEM BASED UPON THE DESIGN LOADS, NOMINATED ON THE DRAWINGS MAY BE SUBMITTED FOR REVIEW. THE ALTERNATIVE DESIGN(S) WHEN PROPERLY INSTALLED, SHALL MEET THE PERFORMANCE REQUIREMENT AND COMPLY WITH THE PILING NOTES. THE DESIGN OF THE PILE CAPS SHALL BE INCLUDED IN THE ALTERNATIVE DESIGN.

P10. FOR MINIMUM PILING CONCRETE GRADE STRENGTH REFER TO PIER SCHEDULE ON SHORING AND FOOTING MARKING PLAN.

P11. NO ALLOWANCE HAS BEEN MADE FOR ADDITIONAL PILES AND OTHER TEMPORARY STRUCTURES THAT MAY BE REQUIRED TO ADDRESS TEMPORARY CONSTRUCTION CONDITIONS, SUCH AS TEMPORARY RETENTION SYSTEMS, ALIMAK, CRANE AND HOIST BASES, ETC.

P12. THE PILE LOAD SPECIFIED ON THE DRAWINGS EXCLUDE THE WEIGHT OF THE PILE AND DOWNDRAW EFFECTS.

P13. CONTRACTOR IS TO CONFIRM THAT THE CHOSEN PILING METHOD IS APPROPRIATE IN TERMS OF MINIMIZING RISK OF DAMAGE TO ADJACENT BUILDINGS AND STRUCTURES, PAVEMENTS AND SERVICES.

P14. PRIOR TO COMMENCEMENT OF PILING WORKS THE CONTRACTOR IS TO UNDERTAKE A COMPREHENSIVE DILAPIDATION SURVEY OF EXISTING ADJACENT BUILDINGS AND STRUCTURES, PAVEMENTS AND SERVICES LIKELY TO BE IMPACTED BY THE PILING.

P15. DURING CONSTRUCTION WORKS ON-GOING MONITORING OF THE EXISTING ADJACENT BUILDINGS TO BE UNDERTAKEN TO ASSESS MOVEMENT AND IDENTIFY ANY POTENTIAL DAMAGE DUE TO THE PILING WORKS. NOTIFY THE ENGINEER/SUPERINTENDENT IF MOVEMENT OR DAMAGE IS IDENTIFIED.

**CONCRETE**

EXPOSURE CLASSIFICATION: EXTERNAL: B1

C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF AS3600 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS. PLACING OF CONCRETE SHALL GENERALLY BE IN ACCORDANCE WITH AS3600 CLAUSE 19.1.

C2. CONCRETE QUALITY TO BE IN ACCORDANCE WITH AS1379 AND AS FOLLOWS UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS:

ELEMENT	STRENGTH GRADE	SPECIFIED SLUMP	MAX. AGG. SIZE
PIERS/PILE	REFER SCHEDULE	80	20
SLAB ON GROUND	REFER PLANS	80	20

C3. PROJECT ASSESSMENT SHALL BE IN ACCORDANCE WITH AS1379. ALL ORGANISATIONS RESPONSIBLE FOR TESTING AND ASSESSMENT OF CONCRETE AND CONCRETE MATERIALS SHALL BE NATA REGISTERED. SAMPLING AND TESTING SHALL BE TO AS1012.

ACCEPTANCE CRITERIA - AVERAGE MUST EXCEED REQUIRED VALUE, NO SAMPLE TO BE LESS THAN 85% OF REQUIRED VALUE.

C4. NO PENETRATIONS, HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE ELEMENTS WITHOUT THE APPROVAL OF THE ENGINEER.

C5. FOR CHAMFERS, GROOVES, REGLES REFER TO ARCHITECTURAL DETAILS. MAINTAIN COVER AT ALL DETAILS.

C6. PLACE CONCRETE IN LAYERS SUCH THAT EACH SUCCEEDING LAYER IS BLENDED INTO THE PRECEDING ONE BY THE COMPACTION PROCESS. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS COMPLETELY FILLING THE FORMWORK AND THOROUGHLY EMBEDDING THE REINFORCEMENT.

C7. COMPACTION: USE IMMERSION AND SCREED VIBRATORS ACCOMPANIED BY HAND METHODS AS APPROPRIATE TO REMOVE AIR BUBBLES AND COMPACT THE MIX. USE FORM VIBRATORS WHERE USE OF IMMERSED VIBRATORS IS IMPRACTICABLE. ENSURE CONCRETE IS FULLY COMPACTED AND ENTRAPPED AIR REMOVED, BUT AVOID OVER VIBRATION THAT MAY CAUSE SEGREGATION. DO NOT USE VIBRATORS TO MOVE CONCRETE ALONG THE FORMS.

C8. CURE AS SOON AS THE SURFACE OF THE CONCRETE HAS HARDENED FOR A PERIOD OF NOT LESS THAN 7 DAYS. CURE BY ONE OF THE FOLLOWING MEANS:

PONDING OR CONTINUOUS SPRINKLING WITH WATER.  
THE USE OF WET COVERINGS SUCH AS HESSIAN OR SAND, PROTECTED BY PLASTIC COVER OR SIMILAR TO MAINTAIN MOISTURE IN COVERING.

SHEETING MUST BE PROTECTED FROM WIND AND TRAFFIC.  
APPROVED SPRAY ON CURING COMPOUNDS THAT COMPLY WITH AS3799 MAY BE USED WHERE FLOOR FINISHES WILL NOT BE AFFECTED.

C9. DURING HOT OR WINDY WEATHER, USE ALIPHATIC ALCOHOL SPRAYED ON AFTER SCREEDING TO PREVENT PLASTIC SHRINKAGE OF TOP SURFACE UNTIL CURING IS APPLIED.

C10. THE SUBCONTRACTOR SHALL GIVE AT LEAST 24 HOURS NOTICE SO THAT INSPECTION MAY BE MADE OF THE FOLLOWING:

MEMBRANE INSTALLED ON THE SUB-BASE (WHERE APPLICABLE).  
REINFORCEMENT AND TENDONS FIXED IN PLACE.  
CORES AND EMBEDMENTS FIXED IN PLACE.

NO CONCRETE SHALL BE PLACED UNTIL INSPECTION & REQUIRED WORKS ARE COMPLETED.

C11. UNDERLAY MEMBRANE SHALL BE HIGH-IMPACT RESISTANCE POLYETHYLENE FILM TO AS1326 GRADE IR3. LAP JOINTS SHALL HAVE AT LEAST 200mm OVERLAP, SEALED WITH PRESSURE-SENSITIVE ADHESIVE TAPE. PLACE METAL OR PLASTIC PLATES UNDER REINFORCING CHAIRS TO AVOID PUNCTURING MEMBRANE

C12. MAKE CONSTRUCTION JOINTS WHERE SHOWN ON THE STRUCTURAL DRAWINGS. DO NOT RELOCATE OR ELIMINATE A CONSTRUCTION JOINT, DO NOT MAKE A CONSTRUCTION JOINT NOT SHOWN ON THE STRUCTURAL DRAWINGS, WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER. BEFORE FRESH CONCRETE IS PLACED AT A CONSTRUCTION JOINT, ROUGHEN AND CLEAN THE HARDENED CONCRETE SURFACE OF THE JOINT, SO THAT ALL SOFT MATERIAL FOREIGN MATTER AND LAITANCE IS REMOVED. JUST PRIOR TO PLACEMENT, DAMPEN THE HARDENED CONCRETE SURFACE, WITHOUT LEAVING FREE WATER JUST BEFORE PLACING CONCRETE.

C13. CONSTRUCTION SUPPORT PROPPING SHALL BE LEFT IN PLACE AS REQUIRED IN ORDER TO AVOID OVERSTRESSING A COMPLETED FLOOR DUE TO CONSTRUCTION LOADING. ALL BACKPROPPING SHALL BE APPROVED BY THE ENGINEER.

C14. BRICKWORK OR UNREINFORCED CONCRETE MASONRY BLOCKWORK SHALL NOT BE BUILT ON SUSPENDED CONCRETE SLABS OR BEAMS UNTIL ALL SUPPORTING FORMWORK HAS BEEN REMOVED & INITIAL SLAB DEFLECTIONS HAVE OCCURRED.

C15. CONDUITS AND PIPES SHALL BE LOCATED IN THE MIDDLE OF THE SLAB OR BEAM DEPTH AND SHALL BE SPACED HORIZONTALLY AT A MINIMUM OF 3 TIMES THE CONDUIT DIAMETER.

C16. CONCRETE MIX DESIGN TO ACHIEVE MAXIMUM SHRINKAGE STRAIN OF 600um AT 56 DAYS. WATER/CEMENT RATIO TO BE A MAXIMUM OF 0.5.

C17. SLURRY USED TO LUBRICATE CONCRETE PUMP LINE IS NOT TO BE USED IN ANY STRUCTURAL MEMBERS.

**REINFORCEMENT**

R1. REINFORCEMENT SHALL GENERALLY COMPLY WITH AS3600 CLAUSE 17.2. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION ON STRUCTURAL DRAWINGS. ALL REINFORCING BARS SHALL BE GRADE D500N TO AS4671. ALL WELDED MESH SHALL BE GRADE 500L TO AS4671 AND SHALL BE SUPPLIED IN FLAT SHEETS.

**REINFORCEMENT SYMBOLS:**

N	GRADE 500N DEFORMED BAR TO AS4671
R	GRADE 250N ROUND BAR TO AS4671
S	GRADE 250N DEFORMED BAR TO AS4671
RL	GRADE 500L RECTANGULAR MESH TO AS4671
SL	GRADE 500L SQUARE MESH TO AS4671
TM	GRADE 500L TRENCH MESH TO AS4671

THE NUMBER IMMEDIATELY FOLLOWING THE REINFORCEMENT SYMBOL IS THE BAR DIAMETER IN MILLIMETRES. (E.G. N20 IS A Ø20 BAR GRADE 500N)  
ALL REINFORCEMENT TO BE LAID WITH TOLERANCE 0 TO 10mm WITH RESPECT TO COVER. MINIMUM COVER TO BE MAINTAINED IN ALL INSTANCES.

R2. CLEAR CONCRETE COVER SHALL BE IN ACCORDANCE WITH THE TABLE BELOW UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS:

ELEMENT	POURED AGAINST GROUND	POURED AGAINST SURFACE FORMS OR PLASTIC SHEETING	TOP CLEAR COVER
PAD/STRIP FOOTINGS	50	50	50
SLAB ON GROUND	NA	40	40
BORED PIERS	50 TO TIES	50 TO TIES	NA

WHERE DRIP GROOVES, REGLES ETC. OCCUR, COVER TO END OF BARS TO BE 45mm U.N.O. TO MAINTAIN 25mm COVER TO DRIP GROOVE/REGLES

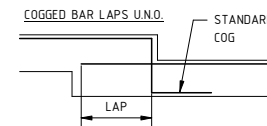
R3. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON PLASTIC TIPPED STEEL, PLASTIC OR CONCRETE CHAIRS GENERALLY AT NOT GREATER THEN 900 CENTRES BOTH WAYS FOR BARS & 600 CENTRES FOR MESH. BARS ARE TO BE TIED AT ALTERNATE INTERSECTIONS WITH WIRE TIES. IN EXPOSURE CONDITIONS OF B2 OR C, USE ONLY PLASTIC CHAIRS.

R4. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN OR OTHERWISE APPROVED IN WRITING BY SELICK CONSULTANTS. LAPS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:  
FOR SLABS/BAND BEAMS/WALLS/STAIRS

TENSION LAP LENGTH SCHEDULE		
BAR SIZE	- ALL BOTTOM REINFORCEMENT - ALL VERTICAL REINFORCEMENT - TOP REINFORCEMENT IN SLABS & BEAMS > 350mm DEEP	- TOP REINFORCEMENT IN SLABS & BEAMS > 350mm DEEP - HORIZONTAL BARS IN WALLS - ALL OTHER CASES
N12	500	650
N16	750	1000
N20	1000	1300
N24	1250	1600
N28	1500	1950
N32	1800	2300
N36	2100	2700
N40	2400	3150

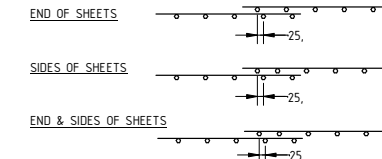
THESE LAPS ARE BASED ON 20mm MINIMUM COVER TO THE BAR AND 32MPa CONCRETE.  
WHERE LIGHTWEIGHT CONCRETE OR SLIP FORMS ARE USED LAP LENGTHS SHALL BE MULTIPLIED BY 1.3.

R5. ALL COGS TO BE STANDARD COGS UNLESS NOTED OTHERWISE.



R6. FABRIC END & SIDE LAPS ARE TO BE PLACED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS TO ACHIEVE A FULL TENSILE LAP. FABRIC SHALL BE LAID SO THAT THERE IS A MAXIMUM OF 3 LAYERS AT ANY LOCATION.

**FABRIC LAPS**



R7. DO NOT WELD REINFORCEMENT EXCEPT AS SHOWN ON THE DRAWINGS, OR AS APPROVED IN WRITING BY THE ENGINEER. IF APPROVED, SUCH WELDING SHALL COMPLY WITH AS1554.3.

R8. SITE BENDING OF DEFORMED REINFORCING BARS SHALL BE DONE WITHOUT HEATING USING MECHANICAL BENDING TOOLS.

R9. HILT HIT-RE 500 V3 OR EQUAL SHALL BE USED FOR ALL CHEMICAL ANCHORS DRILLED & EPOXIED U.N.O. ON THE STRUCTURAL DRAWINGS

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PROJECT TITLE  
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DRAWING TITLE  
**CONSTRUCTION NOTES  
SHEET 1**  
PROJECT LOCATION  
**29 NYRANG ST LIDCOMBE**

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**STRUCTURAL STEELWORK**

S1. DESIGN CONFORMS TO AS4100. FABRICATION AND ERECTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PROVISIONS OF AS4100 & AS5131.

S2. IN ACCORDANCE WITH THE REQUIREMENTS OF AS/NZS 5131 THE CONSTRUCTION CATEGORIES FOR THIS PROJECT ARE DEFINED IN THE TABLE BELOW:

ELEMENT	IMPORTANCE LEVEL	SERVICE CATEGORY	FABRICATION CATEGORY	CONSTRUCTION CATEGORY
1 ALL STRUCTURAL STEELWORK U.N.O.	IL2	SC1	FC1	CC2
2 [PROVIDE A LIST OF DRAWINGS, COMPONENTS OR ASSEMBLIES WHERE A DIFFERENT CC TO ABOVE IS REQUIRED]	[IL2]	[SC2]	[FC1]	[CC3]

THE REQUIREMENTS OF EACH CONSTRUCTION CATEGORY ARE SPECIFIED IN ASS131 AND/OR THE PROJECT SPECIFIC SPECIFICATION. A QUALITY MANAGEMENT SYSTEM SHALL BE INCLUDED FOR ALL CONSTRUCTION CATEGORIES WHICH TYPICALLY INCLUDES PROJECT DOCUMENTATION REQUIREMENTS, MATERIAL SPECIFICATIONS, ASSEMBLY AND FABRICATION REQUIREMENTS, WELDING PLAN, ERECTION PLAN, INSPECTION AND TESTING PLANS

S3. UNLESS NOTED OTHERWISE, ALL STEEL SHALL CONFORM TO THE FOLLOWING AUSTRALIAN STANDARDS, IN RESPECT OF GRADE AND CONDITIONS OF SUPPLY:

COMPONENT	STANDARD	GRADE
ROLLED SECTIONS	AS3679.1	300
WELDED SECTIONS	AS3679.2	300
FLAT BARS	AS3679.1	300
PLATE/FLOOR PLATE	AS3678	300
HOLLOW SECTIONS	AS1163	C350
PURLINS/GIRTS		G450

TEST CERTIFICATES CONFIRMING CONFORMANCE ISSUED BY SUPPLIER SHALL BE AVAILABLE FOR INSPECTION.

S4. MEMBER SIZES SHALL BE AS SHOWN ON THE STRUCTURAL DRAWINGS.

S5. THE CONTRACTOR SHALL PREPARE WORKSHOP (SHOP DETAIL) DRAWINGS AND SHALL SUBMIT COPIES OF EACH DRAWING IN PDF FORMAT FOR EXAMINATION OF CONNECTION DETAILS. FABRICATION SHALL NOT COMMENCE UNTIL THE WORKSHOP DRAWINGS HAVE BEEN APPROVED. APPROVAL WILL BE PROVIDED FOR MEMBER SIZES AND CONNECTION STRENGTHS, BUT WILL NOT EXTEND TO DIMENSIONS. ALL DIMENSIONS AND SETOUTS SHALL BE OBTAINED FROM ARCHITECTURAL DRAWINGS. SHOULD VARIATIONS BE NECESSARY TO THE STRUCTURAL DETAILS PROVIDED, THESE SHALL BE REFERRED TO THE ENGINEER FOR APPROVAL BEFORE BEING INCLUDED ON SHOP DETAIL DRAWINGS. SHOP DETAIL DRAWINGS SHALL CLEARLY INDICATE:

- DIMENSIONS OF ITEMS.
- IDENTIFICATION.
- STEEL GRADE LOCATION.
- TYPE & SIZE OF WELDS/BOLTS PROCEDURES NECESSARY FOR SHOP & SITE ASSEMBLY.
- ORIENTATION OF MEMBERS.
- CAMBER.
- LOCATION OF TEMPORARY CONNECTIONS AND BRACING SURFACE PREPARATION METHOD AND COATING SYSTEM.
- WELDING AND BOLTING CATEGORIES.
- SHOP DETAILS SHALL PROVIDE FOR FIXING OR SUPPORT OF ANY BUILDING ELEMENTS SHOWN ON ARCHITECTURAL DRAWINGS.

S6. ALL WELDING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS1554.1. ELECTRODES SHALL BE TO AS1553, AS1858, AS2203 OR AS2717 AS APPROPRIATE. WELDS FOR STRUCTURAL CONNECTIONS SHALL BE WELD CATEGORY SP UNLESS NOTED OTHERWISE.

S7. BOLTING CATEGORIES ARE IDENTIFIED ON THE DRAWINGS IN THE FOLLOWING MANNER:

- 4.6/S COMMERCIAL BOLTS OF GRADE 4.6 SNUG TIGHTENED.
- 8.8/S HIGH STRENGTH BOLTS OF GRADE 8.8 SNUG TIGHTENED.
- 8.8/TB HIGH STRENGTH BOLTS OF GRADE 8.8 FULLY TENSIONED TO AS4100 AS A BEARING TYPE JOINT.
- 8.8/TFHIGH STRENGTH BOLTS OF GRADE 8.8 FULLY TENSIONED TO AS4100 AS A FRICTION TYPE JOINT WITH FAYING SURFACES LEFT UNCOATED.

S8. UNLESS NOTED OTHERWISE, HOLES SHALL BE 2mm LARGER THAN THE NOMINAL BOLT DIAMETER. WHERE SLOTTED OR OVERSIZE HOLES ARE PERMITTED ON THE STRUCTURAL DRAWINGS, THEY SHALL COMPLY WITH AS4100. HAND FLAME CUTTING OF BOLT HOLES IS NOT PERMITTED.

S9. UNLESS NOTED OTHERWISE, ALL BOLTS AND WASHERS SHALL BE GALVANISED.

S10. FABRICATION TOLERANCES SHALL COMPLY WITH AS4100, SECTION 14 UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.

S11. ALL BEAMS AND RAFTERS SHALL BE FABRICATED AND ERECTED WITH NATURAL CAMBER UP. PROVIDE STRUCTURAL MEMBERS IN SINGLE LENGTHS UNLESS SPLICES ARE SHOWN ON THE STRUCTURAL DRAWINGS.

S12. NON-DESTRUCTIVE WELD EXAMINATION SHALL BE AS FOLLOWS:

NON-DESTRUCTION WELD EXAMINATION (NDE) TABLE

TYPE OF WELD & CATEGORY	EXAMINATION METHOD	EXTENT (%) OF TOTAL WELD LENGTH
FILLET WELDS	VISUAL INSPECTION	100
BUTT WELDS,GP	VISUAL INSPECTION	100
BUTT WELDS,SP	VISUAL INSPECTION	100
BUTT WELDS,SP	RADIOGRAPHIC OR ULTRASONIC INSPECTION	10

CHIP ALL WELDS FREE OF SLAG. CONTRACTOR TO CONFIRM WITH ARCHITECT AS TO WHERE EXPOSED WELDS ARE TO BE GROUND FLUSH/SMOOTH.

**STRUCTURAL STEELWORK (CONTINUED)**

S13. ALL ROD BRACING TO HAVE GRADE S (STRUCTURAL) TURNBUCKLES. THE CAPACITY OF THE TURNBUCKLE IS TO EXCEED THE ULTIMATE CAPACITY OF THE ROD

S14. SURFACE TREATMENT AND PAINTING OF STEELWORK TO BE IN ACCORDANCE WITH AS2312 AND AS FOLLOWS:

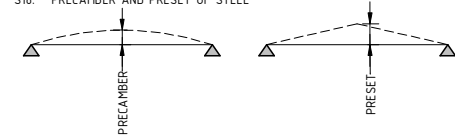
- ALL STEELWORK NOT ENCASED IN CONCRETE OR 'GALVANISED' SHALL HAVE THE SURFACES CLEANED BY ABRASIVE BLAST CLEANING TO CLASS 2-1/2 STANDARD IN ACCORDANCE WITH AS1627.4.
- ALL AREAS INACCESSIBLE AFTER FABRICATION SHALL BE CLEANED AND PAINTED PRIOR TO FABRICATION.
- UNLESS OTHERWISE NOTED ALL STEEL SURFACES SHALL BE COATED WITH
  - a) LUXAPRIME ZINC PHOSPHATE, OR APPROVED EQUIVALENT, TO A DRY FILM THICKNESS OF 75 MICRONS AND,
  - b) TOP COATS TO BE IN ACCORDANCE WITH THE ARCHITECTS SPECIFICATION.
- ALL PAINT TO BE APPLIED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS. MEMBERS BUILT INTO WALLS NOT MARKED GALVANISED TO BE COATED WITH JOTAPRIME TO 75UM NO TOP COAT OR EQUAL.
- WHERE NOTED 'GALVANISED', STEELWORK SHALL BE CHEMICALLY DESCALED AND CLEANED IN ACCORDANCE WITH AS1627.5 TO REMOVE ALL RUST, MILL SCALE, OIL, GREASE AND FOREIGN MATTER OF ALL DESCRIPTION LEAVING A UNIFORM SURFACE OF CLEAN METAL OR A TIGHTLY ADHERING COATING OF ZINC OR IRON PHOSPHATE. STEELWORK SHALL THEN BE GALVANISED IN ACCORDANCE WITH AS1650 BY IMMERSING IN A BATH OF MOLTEN ZINC TO PRODUCE A ZINC COATING WHICH SOLIDIFIES TO A DRY FILM MASS OF 600g/m<sup>2</sup>.
- ALL TRANSPORT AND ERECTION ABRASIONS, SITE WELDS, ETC. ARE TO BE REINSTATED BY THOROUGHLY WIRE BRUSHING ALL AFFECTED AREAS TO ACHIEVE A CLEAN SOUND SUBSTRATE AND PATCH COATED AS FOR PRIMING EXCEPT THAT THE MINIMUM FILM THICKNESS SHALL BE 50% GREATER THAN THE ORIGINAL PRIMER.
- ALL LOAD INDICATOR WASHERS SHALL BE SHERARDIZED. PROVIDE SEAL PLATES TO ALL HOLLOW SECTIONS, WITH BREATHER HOLES IF MEMBERS ARE TO BE HOT DIP GALVANISED. ERECTION TOLERANCES SHALL COMPLY WITH AS4100 SECTION 15 UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
- ALL STEELWORK SHALL BE TEMPORARILY BRACED IN A SECURE MANNER IN ORDER TO STABILISE THE STRUCTURE DURING ERECTION.
- FOR EACH GROUP OF ANCHOR BOLTS PROVIDE A TEMPLATE WITH SETTINGS OUT LINES CLEARLY MARKED FOR POSITIONING THE BOLTS WHEN CASTING IN.
- GALVANISING SHALL BE TO AS4680 (MEMBERS) OR AS1214 (THREADED FASTENERS).
- COATING MASS (MEMBERS):
  - AVERAGE = 600g/m<sup>2</sup>
  - MINIMUM = 550g/m<sup>2</sup>
- REMOVE ALL TEMPORARY CLEATS ON COMPLETION AND RESTORE THE SURFACE IN AN APPROVED MANNER.
- GROUT UNDER ALL BASE PLATES. BEFORE GROUTING, SUPPORT BASE PLATES ON STEEL PACKERS OR WEDGES. GROUT UNDER BASE PLATES AND INTO CORED HOLES WITH CONBEXTRA GP NON-SHRINK GROUT OR EQUIVALENT.
- MINIMUM COMPRESSIVE STRENGTH = 50MPa
- MINIMUM THICKNESS = 15mm
- MAXIMUM THICKNESS = 40mm

S15. ALL STEELWORK CONNECTIONS NOT INDICATED IN THE DOCUMENTATION TO BE ASSUMED TO BE STANDARD CLEAT & END PLATE MEMBER CONNECTIONS IN ACCORDANCE WITH THE AUSTRALIAN STEEL INSTITUTE DESIGN GUIDES FOR SIMPLE CONNECTIONS.

S16. HILTI HIT-RE 500 V3 OR EQUAL SHALL BE USED FOR ALL CHEMSET ANCHORS DRILLED & EPOXIED U.N.O ON THE STRUCTURAL DRAWINGS.

S17. ANY LOADS HUNG FROM ROOF PURLINS ARE TO BE HUNG FROM WEB OF PURLIN ONLY. DO NOT HANG LOADS FROM FLANGES OR LIP OF PURLIN.

S18. PRECAMBER AND PRESET OF STEEL



PRECAMBER REFERS TO THE INDUCTION OF A MIDSPAN DEFLECTION DURING THE FABRICATION PROCESS. REFER TO PLAN FOR LOCATION AND SIZE OF PRECAMBER

PRESET REFERS TO A FPBW CRANK IN A STEEL MEMBER TO ACHIEVE THE REQUIRED DEFLECTION FOR LOCATION OF CRANK REFER TO PLAN.

S19. THE MINIMUM SURFACE PREPERATION AND TREATMENT OF STEELWORK SHALL BE IN ACCORDANCE WITH AS2312 AND AS FOLLOWS:  
ALL STEELWORK SHALL BE HOT DIPPED GALVANISED

A	ISSUE FOR TENDER	07.03.22	AZ
ISSUE	DESCRIPTION	DATE	DRAWN



DO NOT SCALE OFF DRAWINGS  
VERIFY ALL DIMENSIONS ON SITE  
BEFORE COMMENCING WORK

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PROJECT TITLE  
**TOOHEYS ELEPHANT HOUSE  
FV VESSEL**

CLIENT  
**LION**

DESIGNED BY  
AZ

CHECKED BY

AUTHORISED BY  
AZ

DATE  
07.03.2022

DRAWING TITLE  
**CONSTRUCTION NOTES  
SHEET 2**

PROJECT LOCATION  
**29 NYRANG ST LIDCOMBE**

SCALE  
**AS NOTED**

JOB NO  
**211263**

DRAWING NO  
**002**

REV  
**A**