GENERAL NOTES:

G1. STRUCTURAL DRAWINGS SHALL BE READ WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS, SPECIFICATIONS AND WRITTEN INSTRUCTION AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.

G2. THESE STRUCTURAL DRAWINGS MUST NOT BE SCALED. DIMENSIONS SHALL BE TAKEN FROM THE ARCHITECTURAL DRAWINGS OR FROM THE ACTUAL WORKS MEASURED ON SITE. ALL DIMENSIONS SHOWN SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION, FABRICATION OR ORDERING OF MATERIALS IS COMMENCED. ANY DISCREPANCIES TO BE REFERRED TO THE CONSULTING ENGINEER BEFORE PROCEEDING WITH THE WORK.

G3. ALL WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARD CODES (INCLUDING ALL AMENDMENTS), THE SPECIFICATION, THE NATIONAL CONSTRUCTION CODE, AND MUST CONFORM TO THE REQUIREMENTS OF ALL STATUTORY AUTHORITIES HAVING JURISDICTION OVER THE WORK.

G4. STRUCTURAL DRAWINGS DO NOT INCLUDE FINISHES, HOLES AND RECESSES NOT DETAILED ON STRUCTURAL DRAWINGS. ANY SUCH DETAILS SHOULD BE SHALL BE APPROVED BY THE CONSULTING ENGINEER PRIOR TO CONSTRUCTION

G5. NO SUBSTITUTIONS ARE TO BE MADE, OR SIZES OF STRUCTURAL MEMBERS VARIED, WITHOUT FIRST OBTAINING THE WRITTEN CONSENT OF THE CONSULTING ENGINEER. NO COST VARIATION WILL BE ALLOWED FOR SUBSTITUTIONS.

G6. STRUCTURAL DOCUMENTATION IS DESIGNED FOR IN-SERVICE CONDITIONS ONLY.

G7. THE CONTRACTOR IS TO MAKE ALL ALLOWANCES FOR PROPRIETARY PRODUCTS ON COSTS, FABRICATION PROCESSES, STRUCTURAL MEMBER REQUIREMENTS DETERMINED BY FABRICATION AND ERECTION PROCESSES NECESSARY TO COMPLETE THE DESIGN INTENT SHOWN HEREIN AND ON THE ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS.

G8. SHOP DRAWINGS WILL BE APPROVED FOR STRUCTURAL SUFFICIENCY ONLY, AND NO DIMENSIONS WILL BE CHECKED.

G9. ALLOW FIVE WORKING DAYS MINIMUM FOR REVIEW OF SHOP DRAWINGS FROM RECEIPT BY MIGLIC MACLEOD. ALLOW FIVE WORKING DAYS FOR RESPONSES TO REQUESTS FOR INFORMATION AND ISSUANCE OF DESIGN ADVICE.

G10. DURING CONSTRUCTION, THE STRUCTURE SHALL BE MAINTAINED IN A SAFE AND STABLE CONDITION AND SHALL NOT BE OVERSTRESSED. THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION IS THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR IS TO PROVIDE ALL NECESSARY TEMPORARY BRACING AND SUPPORTS. CONTRACTOR TO ENGAGE A SUITABLY QUALIFIED STRUCTURAL ENGINEER TO DESIGN AND INSPECT ANY TEMPORARY WORKS INCLUDING FORMWORK, PROPPING AND THE LIKE.

G11. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

G12. THE WORD "ENGINEER" USED IN THESE NOTES REFERS TO AN EMPLOYEE OR NOMINATED REPRESENTATIVE OF MIGLIC MACLEOD.

G13. FOR ALL INSPECTIONS REQUIRED IN THESE DOCUMENTS, A MINIMUM OF 48 HOURS NOTICE IS REQUIRED.

G14. COPYRIGHT IN ALL DRAWINGS AND OTHER DOCUMENTS PROVIDED BY MIGLIC MACLEOD SHALL REMAIN VESTED IN MIGLIC MACLEOD UNLESS SPECIFICALLY ASSIGNED.

G15. ANY PROPOSED VARIATION IN THE CONSTRUCTION SEQUENCE SHOWN OR IMPLIED HEREIN SHALL BE TAKEN UP BY THE CONTRACTOR AT THE TIME OF SUBMITTING A PRICE.

G16. NOTES AND DETAILS HEREIN SHALL APPLY TO ALL SUBSEQUENT ENGINEERS INSTRUCTIONS, U.N.O.

G17. UNLESS OTHERWISE NOTED, ALL EXCESS SPOIL FROM, BUT NOT LIMITED TO, SITE STRIPPING, BULK EXCAVATION, DETAIL EXCAVATIONS, SERVICE TRENCHES, IMPORTED MATERIAL FOR ACCESS ROADS AND THE LIKE, SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR COST. WHERE THERE ARE A VARIETY OF MATERIALS TO BE REMOVED THE CONTRACTOR IS TO CONSULT THE SUPERINTENDENT TO INVESTIGATE IF ANY MATERIAL IS TO BE RETAINED FOR USE ON SITE.

HEALTH AND SAFETY:

HS1. THE CONTRACTOR SHALL COMPLY WITH ALL THE APPLICABLE OCCUPATIONAL HEALTH AND SAFETY ACTS, CODES OF PRACTICE, GUIDANCE NOTES, AUSTRALIAN STANDARDS AND OTHER RELEVANT DOCUMENTATION.

HS2. CURRENT LEGISLATION REQUIRES THAT ALL PERSONS ARE TO CONSIDER THEIR ACTIONS OR LACK OF ACTION ON THE HEALTH AND SAFETY OF THEMSELVES AND OTHERS. ADVICE ON HEALTH AND SAFETY LEGISLATION IS AVAILABLE FROM THE HEALTH AND SAFETY EXECUTIVE OR OFFICER NOMINATED FOR THE PROJECT.

HS3. THE CONTRACTOR SHALL IDENTIFY HAZARDS OF WORK SEQUENCES WHICH MAY BE A RISK TO THE HEALTH AND SAFETY OF CONSTRUCTION WORKERS. IF POSSIBLE AVOID THE RISK COMPLETELY, IF NOT ADVISE THE SITE MANAGEMENT FOR INCLUSION IN THE HEALTH AND SAFETY PLAN.

HS4. THE CONTRACTOR SHALL CARRY OUT RISK ASSESSMENTS FOR ALL OF THEIR ACTIVITIES AND WHERE NECESSARY INTRODUCE SUITABLE CONTROL MEASURES, OR PROVIDE PROTECTIVE CLOTHING/ EQUIPMENT TO MINIMISE THOSE RISKS. COPIES OF THE RISK ASSESSMENTS MUST BE PROVIDED TO SITE MANAGEMENT FOR INSPECTION.

HS5. EXCAVATION FOR TRENCHES REQUIRED FOR INSTALLATION OF SERVICES SHALL BE IN ACCORDANCE WITH OCCUPATIONAL HEALTH AND SAFETY CODE OF PRACTICE." SAFETY PRECAUTIONS IN TRENCHING OPERATIONS", AND ALL OTHER NECESSARY STATUARY AUTHORITY REGULATIONS AND RECOMMENDATIONS.

HS6. THE CONTRACTOR IS TO PROVIDE TEMPORARY HOARDINGS AND SITE FENCING TO SITE PERIMETER AS REQUIRED PRIOR TO EXCAVATIONS. FENCES ERECTED ON STREET BOUNDARIES TO COMPLY WITH COUNCIL REQUIREMENTS.

HS7. THE CONTRACTOR SHALL DEVELOP, IMPLEMENT AND ADMINISTER A WORKPLACE HEATH AND SAFETY PROGRAM THAT WILL ENSURE THAT ALL CONSTRUCTION ACTIVITIES ARE PERFORMED TO THE RELEVANT WORKPLACE HEATH AND SAFETY REQUIREMENTS AND ANY OTHER RELEVANT STATUTORY REQUIREMENTS

HS8. THE WORKPLACE HEATH AND SAFETY PROGRAM MUST BE CO-ORDINATED WITH ADJOINING PROPERTY OWNERS AND ALL RELEVANT PARTIES AS NECESSARY TO ENSURE A SAFE BUILDING ENVIRONMENT AT ALL TIMES

STRUCTURAL STEELWORK GALVANISING:

SG1. ALL STRUCTURAL STEELWORK EXPOSED TO EXTERNAL ENVIRONMENT, BOLTS AND FIXINGS ARE TO BE HOT DIP GALVANISED IN ACCORDANCE WITH A.S.4680. STRUCTURAL STEEL ELEMENTS ARE TO HAVE A MINIMUM ZINC MASS OF 600g/m². PROVIDE 10mm DIAMETER GALVANISING DRAIN HOLES AS REQUIRED. ALL GALVANISING DRAIN HOLES ARE TO BE PLUGGED WITH SILICONE SEALANT AND PAINTED TO MATCH STRUCTURE AFTER ERECTION.

SG2. ANY CHIPS OR FLAKING OF GALVANISING COATING TO STRUCTURAL STEELWORK PRIOR TO OR DURING ERECTION IS TO BE REPAIRED WITH TWO COATS OF ZINC RICH PAINT. ALL SITE WELDS OF GALVANISED STRUCTURAL STEELWORK ARE TO BE TOUCHED UP WITH TWO COATS OF ZINC RICH PAINT.

SG3. U.N.O. ALL GALVANISED STRUCTURAL STEELWORK IN CONTACT WITH THE GROUND IS TO BE COATED WITH DULUX PROTECTIVE COATING AS SPECIFIED TO 150mm ABOVE FINISHED SURFACE LEVEL. REFER MANUFACTURER'S SPECIFICATIONS FOR APPLICATION.

SG4. ADD BLOWHOLES TO THE END PLATES OF ANY TUBULAR MEMBERS REQUIRING GALVANISING.

SG5. GALVANISED SURFACES TO BE PAINTED MUST BE PRIMED IN A MANNER APPROPRIATE TO THE SPECIFIED TOP COATING. APPLICATION OF ADDITIONAL SURFACE PREPARATION AND COATING SYSTEMS SHALL COMPLY WITH MANUFACTURER'S WRITTEN SPECIFICATIONS.

PRELIMINARIES:

P1. PRIOR TO COMMENCEMENT OF WORKS, A DILAPIDATION SURVEY MUST BE UNDERTAKEN OF ADJACENT BUILDINGS AND PAVEMENTS. PHOTOGRAPHIC RECORDS TO BE KEPT UNTIL COMPLETION OF BUILDING PROJECT. SURVEY POINTS SHALL BE ESTABLISHED ON ADJACENT BUILDINGS - (A MIN. OF ONE NEAR GROUND LEVEL AND ONE NEAR THE TOP OF THE BUILDING IN EACH CASE) THE LOCATION AND LEVEL OF THESE POINTS SHALL BE MONITORED BY A LICENSED SURVEYOR AT MAXIMUM THREE WEEK INTERVALS INITIALLY, (MAY BE ADJUSTED AS THE PROJECT PROCEEDS). DATE AND RESULTS SHALL BE PROGRESSIVELY ADDED TO A SURVEY PLAN, AND COPIES FORWARDED TO THE ENGINEER AT EACH STAGE. THE TOP OF SOLDIERS SHALL BE LOCATED BY SURVEY UPON INSTALLATION, AND AT REGULAR INTERVALS DURING THE PROJECT. ANY MOVEMENT DETECTED SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER.

P2. PRIOR TO COMMENCEMENT OF WORKS THE CONTRACTOR IS TO PROVIDE A SECURITY HOARDING AROUND THE SITE. ALL PALING FENCES TO BE SHORED AS REQUIRED OR REPLACED. WHERE OBSTRUCTING BORED PIERS, BY A TEMPORARY BARRIER WITH THE CONSENT OF ADJOINING OWNERS.

P3. ALL BULK EXCAVATIONS TO BE DRAINED INTO SUMPS, FITTED WITH SILT TRAPS AND PUMPS. AND DISCHARGE INTO COUNCIL DRAINS TO COMPLY WITH COUNCIL AND E.P.A REQUIREMENTS.

NUISANCE:

N1. THE CONTRACTOR SHALL DEVELOP, IMPLEMENT AND ADMINISTER A PLAN THAT WILL ENSURE THE MANAGEMENT OF NOISE AND VIBRATION RESULTING FROM CONSTRUCTION WORKS. REFER TO SPECIFICATIONS FOR REQUIRED LIMITS, OTHERWISE, CONTACT THE ENGINEER FOR GUIDANCE

N2. THE CONTRACTOR WILL NEED TO ENSURE ALL ADJOINING PROPERTY REQUIREMENTS RELATING TO NOISE AND VIBRATION ARE MET

N3. IF IT IS ESTABLISHED THAT THERE ARE NO SITE SPECIFIC REQUIREMENTS, THEN THE CONTRACTOR SHALL REFER TO MINIMUM REQUIREMENTS FOR ABATEMENT OF NOISE AND VIBRATION NOMINATED BY RELEVANT STATUTORY REQUIREMENTS

N4. THE CONTRACTOR WILL NEED TO PREPARE AND ADVISE ON MONITORING AND MANAGEMENT OF NOISE AND VIBRATION BASED ON PROFESSIONAL ADVICE FROM SUITABLY QUALIFIED PERSON OR PERSONS

PROPRIETARY PRODUCTS:

PP1. PROPRIETARY PRODUCTS MUST BE DESIGNED AND DETAILED BY THE RELEVANT SPECIALIST MANUFACTURER AND INSTALLED TO MANUFACTURER'S RECOMMENDATIONS

PP2. WHERE APPROPRIATE, SHOP DRAWINGS OF STRUCTURAL PRODUCTS DESIGNED BY OTHERS MUST BE SUBMITTED TO THE ENGINEER FOR CO-ORDINATION PURPOSES PRIOR TO CONSTRUCTION.

TYPICAL ABBREVIATIONS:

AB1. REFER TO THE TABLE BELOW FOR COMMONLY USED ABBREVIATIONS AND THEIR DESCRIPTIONS

ABBREV.	MEANING	DESCRIPTION
TYP.	TYPICAL	DENOTED A NOTE IS TYPICAL TO ALL INSTANCES.
NOM.	NOMINAL	DENOTES A FIXING/CONNECTION OR SIMILAR IS TO BE AS PER RELEVENT CODE/STANDARD.
MAN. SPEC.	MANUFACTURER'S SPECIFICATION	MEMBER IS TO BE DESIGNED, CERTIFIED AND INSTALLED AS PER MANUFACTURERS REQUIREMENTS AND IS OUTSIDE THE SCOPE OF THIS OFFICE
U.N.O.	UNLESS OTHERWISE NOTED	DENOTES WHEN A NOTE IS STANDARD ACROSS SIMILAR INSTANCES UNLESS SPECIFICALLY NOTED OTHERWISE
ADD.	ADDITIONAL	DENOTES AN OCCURANCE IS ADDITIONAL TO WHAT HAS BEEN SHOWN IN OTHER VIEWS/SCHEDULES
N.S.O.P.	NOT SHOWN ON PLAN	DENOTES A MEMBER OR CONNECTION IN A VIEW THAT HAS NOT BEEN SHOWN IN PLAN VIEW
MIN.	MINIMUM	ELEMENT OR SPACING IS TO BE "NO LESS THAN" WHAT HAS BEEN NOTED
MAX.	MAXIMUM	ELEMENT OR SPACING IS TO BE "NO MORE THAN" WHAT HAS BEEN NOTED
CANT.	CANTILEVER	MEMBER IS TO CANTILEVER OVER THE SUPPORT
HORIZ.	HORIZONTAL	ELEMENT IS TO BE HORIZONTAL
VERT.	VERTICAL	ELEMENT IS TO BE VERTICAL

DESIGN DATA:

D1. THIS DESIGN WAS BASED ON THE STRUCTURAL PROVISIONS, PART B, OF THE NATIONAL CONSTRUCTION CODE OF AUSTRALIA, RELEVANT CODES AND AMENDMENTS AS LISTED. THIS BUILDINGS IMPORTANCE LEVEL IS AS PER TABLE B1.2a IN THE NATIONAL CONSTRUCTION CODE.

D2. THE STRUCTURAL ELEMENTS HAVE BEEN DESIGNED FOR LIVE LOADS IN ACCORDANCE WITH AS 1170.1 AND AS LISTED BELOW:

LOAD SCHEDULE	
AREA	LOADING
FLOORS - INTERNAL - EXTERNAL	3.0 kPa 3.0 kPa
ROOF	0.25 kPA MINIMUM

D3. WIND LOADS HAVE BEEN DETERMINED IN ACCORDANCE WITH AS1170 BASED ON THE FOLLOWING DESIGN CRITERIA:

WIND LOADS:	
ANNUAL PROBABILITY OF EXCEEDANCE	1000
REGION	A0
TERRAIN CATEGORY	2
REGIONAL WIND SPEED V_R (m/s)	46
SHIELDING M_S	1
TOPOGRAPHIC Mt	1

D3. EARTHQUAKE LOADS HAVE BEEN DETERMINED IN ACCORDANCE WITH AS1170 BASED ON THE FOLLOWING DESIGN CRITERIA:

EARTHQUAKE LOADS:	
ANNUAL PROBABILITY OF EXCEEDANCE	1000
PROBABILITY FACTOR K_P	1
HAZARD FACTOR	0.090
SITE SUBSOIL CLASS	Ce
EARTHQUAKE DESIGN CATGEGORY	2

D4. WIND LOADS HAVE BEEN BASED ON AS.1170.2 FOR ITEMS PROVIDED BY OTHERS THE AS.4055 WINDS CATEGORY IS N2.

D5. FOR ITEMS PROVIDE BY OTHERS THAT ARE LISTED IN AS.1170.4 CLAUSE 8.1.4 SHALL BE APPROPRIATELY FASTENED TO THE STRUCTURE AS PER AS.1170.4 CLAUSE 8.3.

TEMPORARY WORKS:

TW1. THE CONTRACTOR SHALL ALLOW FOR IN HIS PRICE ALL COSTS ASSOCIATED WITH THE DESIGN, SUPPLY, INSTALLATION AND REMOVAL OF ALL TEMPORARY BACK PROPPING, SAFETY SCREENS, SCAFFOLDING AND OTHER REQUIREMENTS OF THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL ENGAGE SUITABLY QUALIFIED ENGINEERS REFEREED TO AS "CONTRACTORS ENGINEER" TO DESIGN, INSPECT AND CERTIFY ALL TEMPORARY WORK, AND DEMOLITION WORKS

TW2. THE CONTRACTOR IS TO PROVIDE ALL TEMPORARY WORKS CONTRACTOR ENGINEERING DRAWINGS TO THE STRUCTURAL ENGINEER FOR INFORMATION

TW3. IT IS THE CONTRACTORS RESPONSIBLY TO ENSURE THE OVERALL STABILITY OF THE STRUCTURE WHILST UNDER CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ADVICE FROM THE CONTRACTORS ENGINEER

TW4. THE CONTRACTOR IS TO HAVE CONSTRUCTION METHODOLOGY STATEMENTS PREPARED AND SUBMITTED FOR GENERAL REVIEW TO ENSURE IT IS IN ACCORDANCE WITH THE DESIGN INTENT

TW5. ALL VERTICAL DISPLACEMENTS AND MOVEMENTS ARE TO BE LIMITED TO ENSURE THE STRUCTURE IS NOT SUBJECTED TO LOADS OR MOVEMENTS CAUSING STRUCTURAL DISTRESS TO ANY ELEMENT WHILE THE STRUCTURE IS BEING TEMPORARY SUPPORTED

TW6. DEPENDING ON THE CONTRACTORS PREFERRED CONSTRUCTION SEQUENCE, PRE-LOADING OF STRUCTURAL ELEMENTS MAY BE REQUIRED TO LIMIT TOTAL VERTICAL DISPLACEMENTS

TW7. STRUCTURE TO BE ADEQUATELY BRACED TO PREVENT ANY HORIZONTAL MOVEMENT OR DEFLECTIONS

STRUCTURAL STEELWORK:

S1. UNLESS NOTED OTHERWISE, ALL STEELWORK SHALL BE IN ACCORDANCE WITH A.S. 4100.

S2. STEEL COMPONENTS SHALL CONFORM TO THE FOLLOWING TABLE U.N.O.

COMPONENT	AUST. STANDARD	GRADE
PLATE	A.S. 3678	250
HOT ROLLED SECTIONS	A.S. 3679	300
CHS	A.S. 1163	C250
RHS & SHS	A.S. 1163	C350
PURLINS, GIRTS	A.S. 1397	450
WELDED BEAMS, COLUMNS	A.S. 3679	300
FLAT BARS, RODS	A.S. 3679	300

S3. THREE (3) COPIES OF WORKSHOP FABRICATION DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW. FABRICATION SHALL NOT COMMENCE UNTIL APPROVAL HAS BEEN RECEIVED. ALTERNATIVE DETAILS MAY BE SUBMITTED FOR APPROVAL. EXAMINATION DOES NOT INCLUDE CHECKING OF DIMENSIONS.

S4. THE CONTRACTOR SHALL PROVIDE AND LEAVE IN PLACE, UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED, SUCH TEMPORARY BRACING AS IS NECESSARY TO CONSTRUCT AND STABILIZE THE STRUCTURES.

S5. THE STRUCTURE SHALL NOT BE DISTORTED TO MATCH MISALIGNED HOLES. GROUTING OF SUPPORTS SHALL NOT COMMENCE UNTIL ALL STEELWORK IS PLUMBED WITHIN SPECIFIED TOLERANCES.

S6. SURVEY OF THE STRUCTURE MUST BE CARRIED OUT IMMEDIATELY AFTER THE STEELWORK HAS BEEN ERECTED AND PLUMBED. SURVEY RESULTS SHALL BE FORWARDED TO THE ENGINEER AND ARCHITECT FOR COMMENT WITHIN TWO WORKING DAYS OF THE SURVEY BEING CARRIED OUT. ALL SURVEYS ARE REQUIRED TO BE CARRIED OUT BY A LICENSED SURVEYOR. ALL RECTIFICATION SHALL BE AT THE CONTRACTOR'S EXPENSE.

S7. ENSURE EFFECTIVE SEPARATION OF DISSIMILAR METALS AT ALL TIMES.

S8. ALL PROPRIETARY FIXINGS / INSERTS ARE TO BE INSTALLED AND TIGHTENED BY TORQUE WRENCH IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION.

S9. TOLERANCES FOR FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE RELEVANT CURRENT SAA CODE.

S10. BOLT DESIGNATION:
- 4.6/S COMMERCIAL BOLTS OF GRADE 4.6 TO A.S. 1111 SNUG TIGHTENED.
- 8.8/S HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO A.S. 1252 SNUG TIGHTENED.
- 8.8/TBHIGH STRENGTH BOLTS OF GRADE 8.8 TO A.S. 1252 FULLY TENSIONED TO A.S. 4100 AS A BEARING JOINT.
- 8.8/TFHIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO A.S. 1252 FULLY TENSIONED TO A.S. 4100 AS A FRICTION JOINT WITH CONTACT SURFACES LEFT UNCOATED.

NOTE:
- ALL STRUCTURAL BOLTS MUST COMPLY WITH AUSTRALIAN STANDARDS.
- ALL STRUCTURAL BOLTS SHOULD HAVE AN ACCOMPANYING MANUFACTURERS COMPLIANCE/TEST CERTIFICATE, AND AN INDEPENDENT NATA ACCREDITED COMPLIANCE/TEST CERTIFICATE.
- ALL EXPOSED BOLTS ARE TO BE GALVANISED UNLESS NOTED OTHERWISE.

S11. UNLESS NOTED OTHERWISE, USE A MINIMUM CONNECTION CONSISTING OF 10mm CLEAT PLATES, 6 CFW, AND 2 No. M20 (8.8/S) BOLTS.ALL WELDING IS TO BE CARRIED OUT IN STRICT ACCORDANCE WITH A.S. 1554, PARTS 1 AND 2, USING STRUCTURAL PURPOSE WELDS. ALL WELDS TO BE 6mm CONTINUOUS FILLET WELDS (DENOTED AS C.F.W. ON DRAWINGS) FULL PERIMETER OF CONTACT WITH B-E49XX ELECTRODES, UNLESS NOTED OTHERWISE. ALL BUTT WELDS TO BE COMPLETE PENETRATION FULL STRENGTH BUTT WELDS (DENOTED AS F.S.B.W. ON DRAWINGS). ELECTRODES TO BE B-E49XX UNLESS NOTED OTHERWISE. WHERE FULL WELDED CONNECTIONS HAVE BEEN DETAILED, PROVIDE ALL NECESSARY ERECTION CLEATS AND BOLTS. IF ERECTION CLEATS AND BOLTS ARE EXPOSED, AFTER ERECTION CLEATS AND BOLTS ARE REMOVED, BOLT HOLES PLUG WELDED AND AREA AROUND GROUND SMOOTH AND FLUSH. WELD CATEGORY TO BE AS TABULATED BELOW:

ELEMENT	WELD CATEGORY
ALL U.N.O.	STRUCTURAL PURPOSE

S12. WELDING SHALL BE PERFORMED BY AN EXPERIENCED OPERATOR IN ACCORDANCE WITH A.S. 1554, AND INSPECTED AND CERTIFIED BY A QUALIFIED PERSON AS DESCRIBED IN A.S. 2214.

S13. ADOPT WELDING TECHNIQUES THAT PREVENT DISTORTION, AND ENSURE STRAIGHTNESS OF ALL MEMBERS DURING WELDING.

S14. ALL STEELWORK NOTED AS BEING STAINLESS STEEL SHALL BE IN ACCORDANCE WITH A.S. 1554, AND ALL WELDS ARE TO BE TO PART 6 OF A.S.1554.

S15. ALL STRUCTURAL STEELWORK UNLESS NOTED OTHERWISE SHALL HAVE THE FOLLOWING PROTECTIVE TREATMENT AS TABULATED BELOW:

ELEMENT	SURFACE PREPERATION	PROTECTIVE COATING
INTERNAL STEEL	APPROPRIATE TO TOP COATING	INORGANIC ZINC PHOSPHATE
EXTERNAL STEEL	CLASS 2.5 BLAST	HOT DIP GAVANISED IN ACCORDANCE WITH A.S. 4680

S16. THE CONTRACTOR SHALL PROVIDE ALL STEELWORK FITMENTS, BRACKETS, CONNECTORS ETC. NECESSARY TO COMPLETE THE PROJECT.THESE DRAWINGS INDICATE DESIGN INTENT ONLY. FULL STEELWORK DETAILING TO BE DEVELOPED BY THE CONTRACTOR IN CONSULTATION WITH THE SHOP DETAILER GIVING CONSIDERATION TO ARCHITECTURAL DESIGN REQUIREMENTS.

S17. CONCRETE ENCASED STEELWORK SHALL HAVE 75mm CONCRETE ENCASING, UNLESS OTHERWISE INDICATED. BARRIERS SHALL COMPLY WITH THE REQUIREMENTS OF A.S. 3660.1.

S18. THE ENDS OF ALL TUBULAR MEMBERS ARE TO BE SEALED WITH 6mm PLATE AND CONTINUOUS FILLET WELD UNLESS OTHERWISE SHOWN. ADD BLOWHOLES TO THE END PLATES OF ANY TUBULAR MEMBERS REQUIRING GALVANISING.

S19. PAINTING, AS SPECIFIED BY THE ARCHITECT, SHALL BE IN ACCORDANCE WITH AS. 2312, TO SUIT SITE EXPOSURE CONDITIONS.

S20. UNLESS NOTED OTHERWISE, BEAMS AND LINTELS SHALL BEAR A MINIMUM OF 230mm ON BRICKWORK ON A BED OF 12mm OF 2:1 SAND/CEMENT MORTAR.

S21. MASONRY TIES SHALL BE WELDED TO ALL STEELWORK IN CONTACT WITH MASONRY WALLS. UNLESS NOTED OTHERWISE, USE 3.25mm 'U' SHAPED GALVANISED TIES ANCHORED 75mm INTO MASONRY AT 400mm CTS MAX.

S22. CONCRETE ENCASED STEELWORK SHALL HAVE 75mm CONCRETE ENCASING, PROVIDE PRE-CAMBER TO STEELWORK AS NOTED OR SPECIFIED. OTHERWISE INDICATED. BARRIERS SHALL COMPLY WITH THE REQUIREMENTS OF A.S. 3660.1.

S23. WITH THE EXCEPTION OF STEEL MEMBERS WHICH ARE REQUIRED TO BE ENCASED IN CONCRETE, STEEL SURFACES ADJACENT TO CONNECTIONS WHICH ARE TO BE FIELD-WELDED, AND CONTACT SURFACES OF HIGH-STRENGTH BOLTED CONNECTIONS, ALL STRUCTURAL STEEL SURFACES SHALL HAVE PROTECTIVE COATING APPLIED BEFORE DELIVERY TO THE SITE. UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS, ALL EXPOSED STEELWORK AND EXTERNAL LINTELS SHALL BE HOT DIPPED GALVANISED WITH ALL BOLTS, NUTS AND WASHERS IN CONNECTIONS GALVANISED. UNLESS NOTED OTHERWISE, ALL OTHER STEELWORK SHALL HAVE AN INORGANIC ZINC SILICATE COATING. WHERE HOT DIPPED GALVANISED STEELWORK IS WELDED ON SITE OR OTHERWISE DAMAGED DURING TRANSPORT OR ERECTION, THE STEELWORK PROTECTION IS TO BE MADE GOOD BY APPLYING AN EQUIVALENT INORGANIC ZINC SILICATE PROTECTIVE COATING (COLD GAL). PRIOR TO APPLYING THIS COATING, ALL STEELWORK SHALL BE THOROUGHLY CLEANED OF ALL RUST, SCALE AND GREASE AND IF APPROPRIATE BE SAND BLASTED.

S24. UNLESS NOTED OTHERWISE, ALL PURLINS AND GIRTS DESIGNATED SHALL BE TO MANUFACTURER'S WRITTEN SPECIFICATIONS AND SHALL HAVE CONTINUOUS BRIDGING PIECES TO EACH BAY AS SHOWN ON THE STRUCTURAL DRAWINGS. PROVIDE HOOK BOLTS TO PURLINS ADJACENT TO BRACING MID POINTS TO CONTROL BRACE SAG, AND PROVIDE DIAGONAL SAG RODS TO WALL GIRTS AND PURLINS IN SLOPES GREATER THAN 20° FROM HORIZONTAL.

S24. UNLESS NOTED OTHERWISE, BOLT EDGE DISTANCES SHALL COMPLY WITH TABLE 9.1.5: AS 4100 - MINIMUM EDGE DISTANCES, AS OUTLINED BELOW:

FOOTINGS:

F1. STRIP AND PAD FOOTINGS TO BE FOUNDED APPROXIMATELY 1100 MIN. BELOW FINISHED SURFACE LEVEL OR 200mm INTO STIFF CLAY, WHICHEVER IS DEEPER. ALL FOOTINGS SHALL BE FOUNDED IN ACCORDANCE WITH THE RELEVENT GEOTECHNICAL REPORT UNLESS STATED OTHERWISE.

F2. THE FOOTINGS HAVE BEEN DESIGNED FOR THE FOLLOWING ALLOWABLE BEARING PRESSURES:

ELEMENT	BEARING PRESSURE	COMMENTS
PAD FOOTINGS	160 kPa	-
STRIP FOOTINGS	130 kPa	-

F3. EACH EXCAVATION SHALL BE INSPECTED, AND APPROVAL OF THE FOUNDATION MATERIAL SHALL BE OBTAINED FROM THE RELEVANT BUILDING SURVEYOR PRIOR TO THE PLACEMENT OF ANY CONCRETE. IMMEDIATELY AFTER APPROVAL, PLACE CONCRETE.

F4. FOOTING EXCAVATION TO BE TRUE TO SHAPE AND FREE FROM LOOSE MATERIAL. ANY OVER EXCAVATION TO BE BACKFILLED WITH CONCRETE GRADE N20

F5. ANY EXCAVATION NEAR FOOTINGS SHALL NOT EXTEND BELOW FOUNDATION LEVEL WITHOUT THE ENGINEER'S APPROVAL.

F6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ANY EXCAVATION IN A STABLE CONDITION WITHOUT ADVERSELY AFFECTING SURROUNDING PROPERTY INCLUDING SERVICES.

F7. FOR GEOTECHNICAL CONDITIONS, REFER TO REPORT No. 4220165-3 BY CIVILTEST PTY LTD, DATED 22/06/2022.

F8. ALL RAFT SLAB FOOTINGS SHALL BE IN ACCORDANCE WITH AS 2870.

F9. COMPACTED FILL UNDER RAFT SLABS SHALL BE IN ACCORDANCE WITH THE RELEVANT GEOTECHNICAL REPORT, AND A.S. 2870.

F10. TERMITE BARRIERS SHALL COMPLY WITH THE REQUIREMENTS OF A.S. 3660.1.

F11. STRIP FOOTING REINFORCEMENT TO BE COGGED AT ENDS, U.N.O.

FASTENERS TO CONCRETE:

FA1. CHEMICAL FASTENERS:
THE CHEMICAL PRODUCT SHALL BE A (MANUFACTURER NAME, PRODUCT NAME). THE ANCHOR ROD SHALL BE A M12 X 200 THREADED ROD, GALVANIZED, STEEL GRADE 8.8, INSTALLED IN A 14mm DIAMETER HOLE WITH A 110mm DEPTH AND TIGHTENED TO A MAXIMUM 100 NM TORQUE USING A CALIBRATED TORQUE WRENCH.
CLEANING ACCESSORIES PRESCRIBED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE USED.

FA2. TORQUE-CONTROLLED EXPANSION FASTENERS - THICK WALLED TYPE:
THE FASTENER SHALL BE A (MANUFACTURER NAME, PRODUCT NAME), M12 X 125 WITH GALVANISED COATING, INSTALLED IN A 18mm DIAMETER HOLE DRILLED TO A DEPTH OF 110mm AND TIGHTENED TO A TORQUE OF 70 NM USING A CALIBRATED TORQUE WRENCH.
SETTING TOOLS AND CLEANING ACCESSORISED PRESCRIBED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE USED.

FA3. DEFORMATION-CONTROLLED EXPANSION FASTENERS:
THE FASTENER SHALL BE A (MANUFACTURER NAME, PRODUCT NAME), WITH DIMENSIONS M12 X 50 AND ZINC COATING. THE HOLE SHALL BE DRILLED TO A 15mm DIAMETER AND 55mm DEPTH. A (MANUFACTURER NAME) 1/2" X 50mm SETTING TOOL OF (PRODUCT NUMBER) SHALL BE USED DURING INSTALLATIONS. AN M12 x 80, ZINC PLATED, STEEL GRADE 8.8 BOLT SHALL BE INSTALLED TO A MAXIMUM TORQUE OF 20NM USING A CALIBRATED TORQUE WRENCH.
CLEANING ACCESSORIES PRESCRIBED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE USED.
A SETTING TOOL SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
THE MINIMUM THREAD EMBEDMENT DEPTH REQUIRED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE OBSERVED.

FA4. CONCRETE SCREW:
THE FASTENER SHALL BE A (MANUFACTURER NAME, PRODUCT NAME), 10 X 75 WITH ZINC-PLATED COATING, INSTALLED IN A 10mm DIAMETER HOLE DRILLED TO A DEPTH OF 70mm AND TO A TORQUE THAT DOES NOT EXCEED 40 NM USING A CALIBRATED TORQUE WRENCH.
CLEANING ACCESSORIES PRESCRIBED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE USED.

FA5. TORQUE-CONTROLLED EXPANSION FASTENER - STUD TYPE:
THE FASTENER SHALL BE A (MANUFACTURER NAME, PRODUCT NAME), M12 X 100 WITH ZINC-PLATED COATING, INSTALLED IN A 12mm DIAMETER HOLE DRILLED TO A DEPTH OF 70mm AND TIGHTENED TO A TORQUE OF A 40 NM USING A CALIBRATED TORQUE WRENCH.
CLEANING ACCESSORIES PRESCRIBED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE USED.

FA6. CAST-IN ANCHOR CHANNEL:
THE ANCHOR CHANNEL SHALL BE A (MANUFACTURER NAME, PRODUCT NAME), ZINC-PLATED WITH THE FOLLOWING PARAMETERS: LCH = 450mm, BCH = 50mm, HCH = 30mm. THE CHANNEL BOLT SHALL BE A (MANUFACTURER NAME, PRODUCT NAME), M16 X 60, STEEL GRADE 8.8, ZINC-PLATED, AND TIGHTENED TO A MAXIMUM TORQUE EQUAL TO 60 NM USING A CALIBRATED TORQUE WRENCHED.
ANCHOR CHANNEL SHOULD BE SECURELY POSITIONED PRIOR TO POURING CONCRETE.
CONCRETE SHOULD BE PROPERLY COMPACTED AROUND THE HEAD OF THE ANCHORS.

SCREW PILE DESIGN CRITERIA:

SCP1. PILES SHOWN ON THE PLAN MAY BE RE-DESIGNED BY THE SPECIALIST CONTRACTOR. IF RE-DESIGNED, CONTACT ENGINEER FOR RELEVANT DESIGN CRITERIA FOR:
- EXTERNAL SURFACE THE CONTRACTOR THROUGH THEIR PILING CONTRACTOR SHALL BE RESPONSIBLE FOR GUARANTEEING THE MINIMUM LOADS FOR THE ULTIMATE AND SERVICEABILITY DESIGN STATES TO THE MAGNITUDES INDICATED IN THE DRAWINGS / DOCUMENTS. THIS INCLUDES ACHIEVING THE PERFORMANCE CRITERIA BELOW FOR THE SERVICE AND DURABILITY CONDITIONS.THE PILING CONTRACTOR IS EXPECTED TO SEEK CLARIFICATION OF ANY AMBIGUITY IN THE DOCUMENTATION.ALLOWANCE
- VERTICAL IN-SERVICE LOADINGS

SCP2. PERFORMANCE REQUIREMENTS SHALL BE AS FOLLOWS:

CRITERIA	SETTLEMENT UNIT
LONG TERM SETTLEMENT AT TOP OF PILE OR PILE GROUP	8mm MAX.
SETTLEMENT AT TOE OF A PILE	3mm MAX.
LONG TERM DIFFERENTIAL SETTLEMENT BETWEEN TOP OF PILE GROUPS (INCLUDING ELASTIC SHORTENING)	5mm MAX. (FOR PILE GROUPS WITH LESS THAN 10m BETWEEN GROUPS) 10mm MAX. (FOR PILE GROUPS BETWEEN 10m & 25m BETWEEN GROUPS)
LATERAL DISPLACEMENT AT TOP OF PILE OR PILE GROUP OR RAFT. (NOTE: STRESSES ARISING FROM LATERAL LOADS ARE NOT TO EXCEED THE ELASTIC CAPACITY OF THE SOIL)	2mm MAX.

DESIGN OF THE PILES SHALL BE CARRIED OUT AND CERTIFIED BY A SUITABILITY QUALIFIED ENGINEER IN ACCORDANCE WITH AS2159 AND AS1170 TO ACHIEVE THE LOADINGS DOCUMENTED ON MIGLIC MACLEOD DRAWINGS.COMPUTATIONS AND DRAWINGS OF THE OF THE PILING DESIGN SHALL BE SUBMITTED TO MIGLIC MACLEOD FOR REVIEW A MINIMUM OF 1 WEEK PRIOR TO THE COMMENCEMENT OF PILE INSTALLATION.

SCP3. COMPUTATIONS SHALL SHOW THE PROPOSED SYSTEM WILL MEET THE SPECIFIED PERFORMANCE REQUIREMENTS INCLUDING SHAFT DIAMETER AND GAUGE, DEPTHS, LOCATIONS AND DETAILS OF CONNECTION INTO THE SLAB AND GROUND BEAMS. SOURCES OF ASSUMED GEOTECHNICAL INFORMATION AND DESIGN PARAMETERS USED IN COMPUTATION MUST ALSO BE SUBMITTED. THE MINIMUM SAFE WORKING LOAD SHALL BE 10 TONNES UNLESS OTHERWISE NOTED.

SCP4. PILE DESIGN LOADS DO NOT INCLUDE THE EFFECTS OF PILE DOWN DRAG, PILE SELF WEIGHT AND PILE ECCENTRICITY. WHERE REQUIRED OR APPROPRIATE TO THE SITE, THE DESIGNER TO MAKE ALLOWANCES FOR THESE IN THE DESIGN. LATERAL LOAD ON THE PILES MUST BE CONSIDERED IF LOADS ARE SPECIFIED ON MIGLIC MACLEOD DRAWINGS.

SCP5. TESTING OF THE PILES SHALL BE IN ACCORDANCE WITH THE DESIGN ASSUMPTIONS OF AS2159 AND ANY RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT. A MINIMUM OF 3%%% OF PILES ON THIS PROJECT SHALL BE TESTED UNLESS OTHERWISE NOTED.

SCP6. A MINIMUM DEPTH FROM THE FINISHED FLOOR LEVEL OF THE BUILDING OF 3M SHALL BE ACHIEVED FOR ALL PILES. ACTUAL PILE DEPTH SHALL BE DETERMINED BY THE PILING DESIGN.

SCP7. ALL PILES ARE TO HAVE A CERTIFIED 50 YEAR LIFE MIN. AND A 10 YEAR WARRANTY AGAINST FOUNDATION SUBSIDENCE CAUSING STRUCTURAL DAMAGE TO THE CONCRETE SLAB OR WALLS OF THE BUILDING. SITE CONTAMINATION EFFECTS SHALL BE CONSIDERED WITH DURABILITY AND DOCUMENTED IN THE DESIGN TO BE SUBMITTED FOR REVIEW.

SCP8. ALTERNATIVE PILING SYSTEMS TO THE SYSTEM PROPOSED WILL BE CONSIDERED. PILE PROPOSAL TO BE PROVIDED WITH THE TENDER DOCUMENTS.

SCP9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLED PILES MEETING THE DESIGN SPECIFICATIONS & PERFORMANCE REQUIREMENTS.

SCP10. PILES SHALL BE CONSTRUCTED AS PER THE PILING CONTRACTORS DESIGN AND TO SUIT THE SPECIFIC SITE GROUND CONDITIONS. ANY VARIATIONS TO THE GROUND CONDITIONS SHALL BE INCORPORATED INTO THE DESIGN AND REDESIGN CARRIED OUT BY THE PILING CONTRACTORS ENGINEER IF NECESSARY. IF LENGTHS LONGER THAN THE ORIGINAL PILING CONTRACTORS DESIGN ARE REQUIRED THE PILING CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE LENGTHS. NO VARIATION WILL BE ACCEPTED FOR LENGTHS GREATER THAN THE PILING CONTRACTORS DESIGN.

SCP11. THE PILING CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF PILES IF FLOATERS OR OTHER OBSTRUCTIONS ARE ENCOUNTERED. NO VARIATIONS WILL BE ACCEPTED FOR RE-PILING DUE TO FLOATERS/OBSTRUCTIONS.

SCP12. PILES SHALL BE FOUNDED TO A DEPTH BELOW THE MOISTURE AFFECTED AREA OF THE SOIL.

SCP13. NO VARIATIONS (E.G. ADDITIONAL LENGTH) ARE ALLOWED FOR SCREW PILES REQUIRED TO ENABLE THE PERFORMANCE REQUIREMENTS (AS SPECIFIED ABOVE) TO BE MET.

SLAB ON GROUND SUBGRADE PREPERATION:

SP1. STRIP ALL SURFACE MATERIAL INCLUDING TURF, TOPSOIL AND ALL ORGANIC MATTER TO A MINIMUM DEPTH OF 100mm BELOW NATURAL SURFACE. REMOVE ALL OLD DEBRIS, TREE ROOTS ETC. STOCKPILE TOPSOIL SEPARATELY.

SP2. THE EXPOSED AREA SHOULD THEN BE PROOF ROLLED TO ENSURE THAT NO LOCALISED SOFT SPOTS EXIST. IF ANY SUCH AREAS ARE REVEALED THEY SHOULD BE MADE GOOD WITH CLEAN GRANULAR FILL COMPACTED TO A DENSITY EQUIVALENT TO THAT OF THE SURROUNDING SOIL. PRIOR TO PLACING FILL MATERIAL.

SP3. PRIOR TO PLACING FILL MATERIAL, THE SURFACE OF THE SITE SHALL BE COMPACTED TO 98% OF THE DRY DENSITY AS MEASURED BY A.S.1289.

SP4. FILL MATERIAL, APPROVED BY THE ENGINEER, SHALL BE SPREAD AND COMPACTED, IN UNIFORM LAYERS NOT EXCEEDING 150mm LOOSE DEPTH. THE MINIMUM DEGREE OF COMPACTION OBTAINED SHALL BE 98% OF THE MODIFIED DRY DENSITY AS MEASURED OBTAINED BY A.S. 1289. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE ADJUSTED DURING COMPACTION AS NECESSARY TO ENSURE THAT THE SPECIFIED COMPACTION IS OBTAINED.

STRUCTURAL TIMBER:

ST1. ALL STRUCTURAL TIMBER SHALL CONFORM TO THE REQUIREMENTS OF A.S. 1720 SAA TIMBER ENGINEERING CODE AND A.S. 1684 SAA TIMBER FRAMING CODE.

ST2. FRAMING MEMBERS NOT MARKED TO CONFORM TO REQUIREMENTS OF AS.1684.2

ST3. ROOF TIE DOWNS AND TIE DOWNS OF LOADS TRANSFERRED FROM ROOF TO WALLS SHALL COMPLY WITH THE REQUIREMENTS OF AS.1684.2. FOR WIND CLASSIFICATION N3, U.N.O.

ST4. BRACING TO TIMBER FRAMING IS TO BE TO THE REQUIREMENTS OF AS.1684.2, FOR WIND CLASSIFICATION N3, U.N.O.

ST5. TIMBER PRESERVATION SHALL COMPLY WITH THE REQUIREMENTS OF A.S. 1684. ALL TIMBER SHALL BE PROTECTED AGAINST THE WEATHERING PROCESS BY THE APPLICATION AND PROPER MAINTENANCE OF COATINGS SUCH AS PAINTS, STAINS, WATER REPELLENT PRESERVATIVES.

ALL EXTERNAL TIMBER SHALL BE SHIELDED FROM WEATHER USING ROOF OVERHANGS, SCREENS, CAPPINGS AND FLASHINGS, FASCIAS AND BARGES, ETC. UNLESS DURABILITY REQUIREMENTS ARE FULLY MET.

PROVIDE SUITABLE MOISTURE BARRIER TO TOP OF ALL DECKING JOISTS AND BEARERS.

PROVIDE CN EMULSION COATING TO ENDS OF ALL EXPOSED TIMBER ELEMENTS. SUB FLOOR AREAS, ROOF SPACES AND WALL CAVITIES SHALL BE WELL VENTILATED.

ST6. ALL TIMBER CONNECTORS TO BE GALVANISED STEEL SUPPLIED BY PRYDA, OR EQUIVALENT. FOR SITES WITHIN 1KM OF SALT WATER BODIES, ALL TIMBER CONNECTORS EXTERNAL TO BUILDING ENVELOPE TO BE STAINLESS STEEL SUPPLIED BY PRYDA, OR EQUIVALENT.

ST7. PRECAUTIONS ARE TO BE TAKEN TO PREVENT SPLITTING OF TIMBER ELEMENTS.

ST8. NOTE THAT FLOOR FRAMING MAY BE REQUIRED TO BE TREATED TO H3 OF H4 TREATMENT LEVEL IF TERMITE PROTECTION IS REQUIRED. CONTRACTOR TO CHECK WITH THE BUILDING SURVEYOR AND THE LOCAL SHIRE OR COUNCIL.

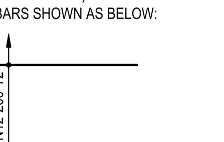
REINFORCEMENT:

R1. BAR NOTATION GIVES THE FOLLOWING INFORMATION IN THIS ORDER:
NO. OF BARS (IF REQUIRED)-GRADE-BAR SIZE (mm)-SPACING (mm, IF REQUIRED)-PLACING INFORMATION.
IE: 20-N12-200-T2

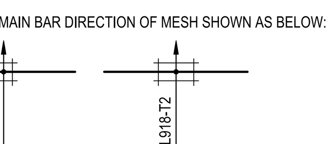
R2. MESH NOTATION GIVES THE FOLLOWING INFORMATION IN THIS ORDER:
SL OR RL SYMBOL FOLLOWED IMMEDIATELY BY REFERENCE NUMBER (IF STANDARD) OR SPECIAL CODE (IF NON-STANDARD)-PLACING INFORMATION.
IE: RL918-T2

R3. CODES FOR PLACING ARE AS FOLLOWS:
B1 (BOTTOM LAYER LAID 1ST)
B2 (BOTTOM LAYER LAID 2ND)
T1 (TOP LAYER LAID 3RD)
T2 (TOP LAYER LAID LAST)

R4. EXTENT OF BARS SHOWN AS BELOW:



R5. EXTENT AND MAIN BAR DIRECTION OF MESH SHOWN AS BELOW:



SQUARE MESH   RECTANGULAR MESH

R6. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND SHOULD NOT BE CONSIDERED NECESSARILY AS THE TRUE PROJECTION.

R7. REINFORCEMENT DIMENSIONS MUST NOT BE SCALED.

R8. SPLICE REINFORCEMENT ONLY WHERE SHOWN ON DRAWINGS. LAP LENGTH TO BE IN COMPLIANCE WITH AS3600.
WHERE SPLICES ARE NOT INDICATED IN THE DRAWINGS, SUITABLE LOCATIONS SHALL BE PROPOSED FOR WRITTEN APPROVAL BY THE STRUCTURAL ENGINEER.
WHERE DIMENSIONS AREN'T STATED ON THE ACTUAL DETAIL, THE SPLICED LENGTH OF BARS ARE GIVEN IN THE FOLLOWING TABLE:

TYPE OF MEMBER	TENSILE LAP LENGTH (mm) FOR GRADE 500N DEFORMED BARS							
	N10	N12	N16	N20	N24	N28	N32	N36
SLAB OR WALL WITH 300mm OR LESS DEPTH OF CONCRETE BELOW THE BAR	400	500	750	1000	1250	1500	1800	2100
OTHER MAIN BARS	550	650	1000	1300	1600	1950	2300	2700

ANCHORAGE / SPLICE LENGTH TABLE

SPLICE LENGTH OF TENSION BARS IN SLABS AND BEAMS (mm)

BAR SIZE	LESS THAN 300mm OF CONCRETE BELOW BAR OR VERTICAL BAR				MORE THAN 300mm OF CONCRETE BELOW BAR			
	CONCRETE GRADE				CONCRETE GRADE			
	N32		>= N40		N32		>= N40	
	SLAB	BEAM	SLAB	BEAM	SLAB	BEAM	SLAB	BEAM
N10	400	400	400	400	550	500	500	400
N12	500	450	450	450	650	600	600	600
N16	750	650	700	600	1000	850	900	800
N20	1000	900	900	800	1300	1150	1150	1050
N24	1250	1150	1100	1050	1600	1500	1450	1350
N28	1500	1450	1350	1300	1950	1900	1750	1700
N32	1800	1750	1600	1600	2300	2300	2100	2050
N36	2100	2100	1900	1900	2700	2700	2450	2450
APPROX. SPLICE RULE	55 db		50 db		75 db		65 db	
APPROX. ANCHORAGE RULE	45 db		40 db		60 db		55 db	

NOTES:
1. THESE LENGTHS APPLY FOR ALL BARS IN BEAMS AND SLABS.
2. THE MINIMUM COVER TO THE BAR UNDER CONSIDERATION IS TO BE THE GREATER OF 20mm FOR SLABS, 35mm FOR BEAMS.
3. THE CLEAR SPACING BETWEEN SPLICED BARS MUST BE LESS THAN ONE BAR DIAMETER
4. FOR N25 CONCRETE, MULTIPLY LENGTHS OF N32 CONCRETE BY 1.15
5. UNLESS SHOWN ON THE DRAWINGS THE SPLICE LOCATIONS MUST BE APPROVED BY THE ENGINEER
6. FOR ANCHORAGE LENGTHS OF BARS, MULTIPLY THE SPLICE LENGTHS BY 0.8
7. "db" DENOTES BAR DIAMETER
8. THE MINIMUM CLEAR SPACING OF BARS TO BE 75mm

R10. REINFORCEMENT SHALL BE SUPPORTED IN ITS CORRECT POSITION BY APPROVED CHAIRS, SPACER OR SUPPORT BARS, AND INSPECTED BY THE CONTRACT ADMINISTRATOR BEFORE CONCRETE IS POURED.

R11. REINFORCEMENT TO BE LAPPED ONLY AT LOCATIONS SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER. UNLESS NOTED OTHERWISE, ALL BARS SHALL BE LAPPED IN ACCORDANCE WITH SECTION 13 OF AS3600-2009.

R12. FABRIC SHALL BE LAPPED SUCH THAT THE TWO OUTERMOST WIRES OF ONE SHEET OVERLAP THE TWO OUTERMOST WIRES OF THE OTHER SHEET BY 25mm MINIMUM. ALL LAPS ARE TO BE WIRED AT MAX. 1000 CTS.

R13. ANY ALTERATION IN THE LOCATION OF A SPLICE FROM THAT SHOWN ON THE DRAWINGS SHALL BE TO THE ENGINEER'S APPROVAL.

R14. A MAXIMUM OF THREE SHEETS OF FABRIC ONLY SHALL BE LAPPED AT ANY POINT.

REINFORCEMENT (CONT.):

R9. UNLESS SHOWN SPECIFICALLY ON THE ACTUAL DETAIL, ALL EMBEDMENT LENGTHS FOR STARTER BARS AND SPLICE LENGTHS FOR COLUMN BARS SHALL BE DERIVED FROM THE FOLLOWING TABLE:

BAR SIZE (mm)	SPLICE LENGTH (mm)	COG LENGTH (mm)	NUMBER OF FITMENTS AT COLUMN BAR CRANK
N12	500	200	1-R10
N16	650	250	1-R10
N20	800	250	2-R10
N24	1000	300	1-R12
N28	1150	350	2-R12
N32	1300	400	3-R12
N36	1450	450	3-R12

R15. UNLESS OTHERWISE SHOWN, PROVIDE 3/N12 DIAGONAL CORNER BARS 1800 LONG AT ALL RE-ENTRANT CORNERS OF OPENINGS IN SLABS AND WALLS.

R16. REINFORCEMENT SHALL NOT BE BENT OR HEATED ON SITE WITHOUT THE ENGINEER'S PRIOR APPROVAL UNLESS SHOWN ON THE STRUCTURAL DRAWINGS. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED.

R17. REINFORCEMENT TYPE AND GRADE SHALL BE AS TABULATED BELOW:

SYMBOL	TYPE	AUSTRALIAN STANDARD	GRADE
N	HOT ROLLED DEFORMED BARS	4671	500L
SL	WELDED WIRE REINFORCEMENT MESH	4671	500L
R	HOT ROLLED PLAIN ROUND BAR	4671	250R
W	STEEL REINFORCING WIRE	4671	500L
L	REINFORCEMENT FABRIC	4671	500L
TM	HARD DRAWN STEEL TRENCH MESH	4671	500L

R18. MINIMUM COVER TO ALL REINFORCEMENT TO SATISFY EXPOSURE CLASSIFICATIONS WHERE STANDARD FORMWORK AND COMPACTION ARE USED SHALL BE AS FOLLOWS, UNLESS INDICATED ON THE DRAWINGS:

EXPOSURE CLASS	A1	A2	A2	B1
ELEMENT	RESIDENTIAL FORMED AND NOT EXPOSED TO WEATHER	NON-RESIDENTIAL FORMED AND EXPOSED TO WEATHER	NOT FORMED BELOW GROUND. IN CONTACT WITH NON-AGGRESSIVE SOIL	ABOVE GROUND EXTERIOR EXPOSED TO WEATHER
MIN. CONCRETE GRADE MPa REFER SCHEDULE ABOVE	32 MPa	32 MPa	32 MPa	40 MPa
PAD FOOTINGS STRIP FOOTINGS	50mm	-	65mm	-
SLABS	20mm	30mm	-	30mm

R19. UNLESS NOTED OTHERWISE, CONCRETE SLAB THICKNESS AND REINFORCEMENT SPECIFIED HEREIN DO NOT ALLOW FOR REQUIREMENTS FOR IN-SLAB HEATING SYSTEMS. CONSULT ARCHITECT AND ENGINEER IF SUCH SYSTEMS ARE TO BE USED, AND ALLOW FOR ADDITIONAL CONCRETE THICKNESS AND REINFORCEMENT AS REQUIRED.

R20. UNLESS NOTED OTHERWISE, REINFORCEMENT SPECIFIED HEREIN DOES NOT ALLOW FOR REQUIREMENTS FOR POLISHED OR HONED CONCRETE FINISHES. CONSULT ARCHITECT AND ENGINEER IF SUCH FINISHES ARE TO BE USED, AND ALLOW FOR ADDITIONAL REINFORCEMENT AS REQUIRED.

R21. ALL REINFORCEMENT SHOWN ON THESE DRAWINGS IS REPRESENTED DIAGRAMMATICALLY, AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.

R22. WELDING OF REINFORCEMENT INCLUDING TACK-WELDING FOR FIXING PURPOSES SHALL COMPLY WITH AS3600:2001 AND AS1554.3:2003. WELDING IS PERMITTED ONLY WHERE SHOWN IN THE DRAWINGS OR WHERE OTHERWISE APPROVED BY THE CONTRACT ADMINISTRATOR

R23. WHERE NO REINFORCEMENT IS SHOWN ON THE DRAWINGS AT RIGHT ANGLES TO THE MAIN REINFORCEMENT, PLACE N12-300 TRANSVERSE TO THE REINFORCEMENT SHOWN TO SUIT THE BAR LAYOUT SEQUENCE. ALL OPENINGS AND RE-ENTRANT CORNERS IN THE CONCRETE SHALL HAVE 2-N12 x 1200 LONG TOP AND BOTTOM DIAGONALLY ACROSS THE CORNER.

R24. FIRST SLAB BAR IS TO BE POSITIONED MAX. 100mm FROM FACE OF BEAMS, R.C. WALLS AND SLAB THICKNESS PARALLEL TO BAR. FIRST TIE TO BE PLACED MAX. 50mm FROM FACE OF COLUMN OR SUPPORTING WALL UNDER.

R25. FIX 2-N16 TRIMMER BARS AROUND OPENING IN EACH (TOP/BOTTOM) FACE OF MEMBER AND EXTENDING 600mm BEYOND THEIR CROSS OVER POINT

R26. UNLESS NOTED OTHERWISE, PLASTIC OR CONCRETE CHAIRS SHALL BE PLACED AT MAX. 600mm CRS. FOR FABRIC AND BARS UP TO 12mm IN DIAMETER, AND 900mm FOR BARS 16mm IN DIAMETER (AND GREATER). ALL REINFORCEMENT IS TO BE TIED SECURELY WITH GALVANISED WIRE AND ALL TIE ENDS TURNED INTO THE MEMBER (CLEAR OF THE COVER ZONE).

R27. REQUIRED COVER IS TO BE MAINTAINED TO ALL PIPES, CONDUITS, REGLETS, DRIP GROOVES ETC.

R28. UNLESS NOTED OTHERWISE SLAB REINFORCEMENT AT SUPPORTING WALLS AND SLAB REINFORCEMENT BARS SHALL EXTEND 100mm ONTO SUPPORTING WALLS, WITH 50% OF BOTTOM BARS COGGED TO ACHIEVE ANCHORAGE AT SIMPLY SUPPORTED ENDS. MESH IN SLABS SHALL EXTEND 100mm ONTO SUPPORTING WALL SAND INCLUDE AT LEAST ONE CROSS WIRE.

CONCRETE:

C1. EXCEPT WHERE VARIED BY CONTRACT DOCUMENTS, ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH A.S.3600 AND OTHER RELEVANT CURRENT AUSTRALIAN STANDARDS.

C2. U.N.O. CONCRETE SHALL HAVE A SLUMP OF 80mm AND A MAXIMUM AGGREGATE SIZE OF 20mm, AND HAVE A STRENGTH GRADE AS TABULATED BELOW:

ELEMENT	STRENGTH GRADE f'c TO A.S. 3600
FOOTINGS	N32
BORED PIERS/PILES	N32
SLABS	N32

ALL CONCRETE SHALL BE NOMINAL BLUESTONE AGGREGATE CONCRETE U.N.O.

C3. PLANT ASSESSMENT OF CONCRETE STRENGTH IS REQUIRED IN ACCORDANCE WITH A.S. 3600.

C4. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED IN THE FORM TO GIVE MAXIMUM COMPACTION WITHOUT SEGREGATION OF THE CONCRETE.

C5. THE BEAM DEPTH IS WRITTEN FIRST ON DRAWINGS AND INCLUDES SLAB THICKNESS, IF ANY.

C6. THE SIZE OF CONCRETE ELEMENTS DOES NOT INCLUDE THE THICKNESS OF ANY APPLIED FINISHES.

C7. THE LOCATIONS OF ANY CONSTRUCTION JOINTS NOT SHOWN SHALL BE TO THE DETAILS APPROVED BY THE ENGINEER.

C8. ANY HOLES, CHASES OR PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL NOT BE PLACED IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

C9. ANY CONDUITS, PIPES AND THE LIKE SHALL NOT BE PLACED WITHIN THE CONCRETE COVER.

C10. FORMWORK SHALL BE DESIGNED, CONSTRUCTED AND STRIPPED BY THE CONTRACTOR IN ACCORDANCE WITH A.S. 3610.

C11. THE USE OF CHLORIDE ADDITIVES IS EXPRESSLY FORBIDDEN IN ALL CONCRETE.

C12. CONCRETE IN FLOOR SLABS SHALL BE SUPPLIED WITH AN APPROVED WATER REDUCING ADDITIVE, USED STRICTLY IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION, UNLESS NOTED OTHERWISE.

C13. CURING OF CONCRETE TO BE IN ACCORDANCE WITH A.S. 3600, SAA CONCRETE STRUCTURES CODE. CURING SHALL BE BY APPLICATION OF AN APPROVED CURING COMPOUND OR BY COVERING WITH POLYTHENE SHEETING FOR AT LEAST SEVEN DAYS. SPECIFICATION REQUIREMENTS FOR MOIST CURING IN ANY AREAS FOR VINYL FLOORING.

C14. ALL GROUT BEDS BETWEEN STEEL MEMBERS AND CONCRETE COLUMNS/SUPPORTS ARE TO BE MBT MASTER FLOW 95 CLASS A CONSTRUCTION GROUT NOMINAL 20mm THICK OR APPROVED EQUIVALENT.

C15. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS AND SIZES OF PENETRATIONS.

C16. MAXIMUM LIFT OF POUR FOR CONCRETE ELEMENTS TO BE 3000mm UNLESS METHOD OF PLACEMENT HAS BEEN APPROVED BY THE ENGINEER.

BRICKWORK:

BR1. ALL BRICKWORK AND ITS TESTING SHALL COMPLY WITH THE CURRENT A.S. 3700 SAA MASONRY CODE.

BR2. ALL BRICKS USED ON THIS PROJECT SHALL HAVE A MINIMUM CHARACTERISTIC COMPRESSIVE STRENGTH OF 40MPa UNLESS OTHERWISE NOTED.

BR3. ALL BED AND PERPEND JOINTS SHALL BE SOLIDLY FILLED WITH 1:1:6 MORTAR, WITHOUT FURROWING, TO A NOMINAL THICKNESS OF 10mm. JOINTS SHALL BE NOT LESS THAN 6mm NOR MORE THAN 12mm THICK.

BR4. WALL TIES SHALL HAVE A MINIMUM EMBEDMENT OF 50mm IN THE MORTAR JOINT IN EACH LEAF OF BRICKWORK, AND SHALL COMPLY WITH THE REQUIREMENTS OF A.S. 2699 SIZE, TYPE, HORIZONTAL AND VERTICAL SPACING SHALL COMPLY WITH A.S. 3700 CLAUSE 4.10 ALL TIES TO BE GALVANISED. FOR SITES WITHIN 1KM OF SALT WATER BODIES, ALL TIES TO BE STAINLESS STEEL.

BR5. GROUT FOR CAVITY FILLING SHALL HAVE STRENGTH GRADE S32 WITH A SLUMP OF 250mm AND A MAXIMUM AGGREGATE SIZE OF 6mm UNLESS NOTED OTHERWISE. TESTING SHALL COMPLY WITH AS. 3600 FOR PROJECT ASSESSMENT.

BR6. STARTER BARS TO MATCH VERTICAL REINFORCEMENT TO BE PROVIDED AT BASE/TOP OF WALL WITHIN ADJACENT CONCRETE ELEMENTS. LENGTH OF BARS TO BE AS PER MIN. LAP LENGTH NOTED HEREIN U.N.O.

BR7. USE MORTAR TYPES M2, M3, OR M4 AS APPLICABLE TO EXPOSURE ENVIRONMENT, IN ACCORDANCE WITH A.S. 3700.

BR8. PROVIDE BRICKWORK ARTICULATION JOINTS TO B.C.A RECOMMENDATIONS AT LOCATIONS DEEMED SATISFACTORY BY ENGINEER AND ARCHITECT.

BR9. WHERE SLAB BEARS ON MASONRY, USE TWO LAYERS OF MALTHOID OR EQUIVALENT, MINIMUM 120mm BEARING.

Issue	Description	Drwn	Chkd	Appd.	Date
T1	TENDER	E.V.	A.Y.	D.E.	19.08.24
PT1	PRE-TENDER	E.V.	A.Y.	D.E.	05.08.24
DD1	DESIGN DEVELOPMENT	E.V.	A.Y.	D.E.	19.06.24

Client: PMDL mcglashan everist
pmdl-mea.com.au
PMDL ARCHITECTURE + DESIGN HK (LIMITED)
PMDL ARCHITECTURE + DESIGN PTY LTD ABN 56 062 961 317

Project: THE SCOTS JUNIOR SCHOOL ALBURY 393 PERRY STREET,ALBURY NSW 3640

Title: STANDARD NOTES - SHEET 1

Designed by: A.YONG
Drawn by: E.VURAL
Date: 12.04.24
Scale: N.T.S @ A0
Status: TENDER

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