GENERAL NOTES

G1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS, THE SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.

G2 ANY DISCREPANCY ON THE DRAWINGS OR BETWEEN THE DRAWINGS AND/OR THE SPECIFICATION AND/OR THE SPECIFIED SAA STANDARD SHALL BE REFERRED TO THE SUPERINTENDENT AND A WRITTEN INSTRUCTION RECEIVED PRIOR TO PROCEEDING WITH THE WORK. DURING TENDERING THE TENDER SHALL ASSUME THE LARGER/GREATER CRITERIA IN TERMS OF COST IN THE ABSENCE OF OTHER INSTRUCTIONS.

G3 THE DOCUMENTED DESIGN CONSTITUTES THE MAIN STRUCTURAL FRAMING BUT DOES NOT INCLUDE A FULL SCOPE OF SECONDARY STEEL TO SUPPORT FACADE CLADDING, HANDRAILS, INTERNAL PARTITION WALLS, ETC.

G4 THESE DRAWINGS SHOW TYPICAL CONNECTION DETAILS ONLY. THE SHOP DRAFTER IS REQUIRED TO DEVELOP ALL CONNECTION DETAILS NOT SPECIFICALLY SHOWN. THE CONTRACTOR IS REQUIRED TO PRICE FOR ALL ASSOCIATED ENGINEERING DESIGN AND DETAILING FOR CONNECTIONS NOT SPECIFICALLY SHOWN.

G5 THE STRUCTURAL DRAWINGS DO NOT SHOW ALL DETAILS OF FIXTURES, INSERTS, SLEEVES, OPENINGS, ETC. REQUIRED BY THE VARIOUS TRADES. ALL SUCH DETAILS, INCLUDING OPENINGS FOR CONSTRUCTION PURPOSES, MUST BE APPROVED BY THE SUPERINTENDENT BEFORE PROCEEDING WITH CONSTRUCTION.

G6 WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE RELEVANT CURRENT AUSTRALIAN STANDARDS INCLUDING ALL AMENDMENTS, AND THE REQUIREMENTS OF THE LOCAL STATUTORY AUTHORITIES, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

G7 ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL LEVELS ARE IN METRES UNLESS NOTED OTHERWISE.

G8 ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION OR FABRICATION IS COMMENCED. THE ENGINEER'S DRAWINGS SHALL NOT BE SCALED.

G9 DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE AND ADJACENT STRUCTURES IN A STABLE CONDITION AND ENSURING NO PART SHALL BE OVERSTRESSED UNDER CONSTRUCTION ACTIVITIES.

G10 THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE SUPERINTENDENT BUT IT IS NOT AN AUTHORISATION FOR AN EXTRA. ANY CLAIM FOR AN EXTRA MUST BE SUBMITTED TO THE SUPERINTENDENT BEFORE THE WORK COMMENCES.

G11 ALL PROPS AND FORMWORK FOR FLOOR BEAMS AND SLABS SHALL BE REMOVED BEFORE CONSTRUCTION OF ANY MASONRY WALLS OR PARTITIONS ON THE FLOOR.

G12 ALL NON-LOADBEARING WALLS SHALL BE KEPT 20mm CLEAR OF THE UNDERSIDE OF SLABS AND BEAMS UNLESS NOTED OTHERWISE.

G13 THE STRUCTURAL WORK ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING LOADS:

AREA	SDL kg/m²	LIVE LOAD kg/m²
GROUND	1.0	4.0
PLANT ROOM	1.0	10.0
LEVEL 1 GENERAL	1.0	4.0
LEVEL 1 OFFICES	4.0	4.0
ROOF (NON TRAFICABLE)	0.6	0.25

CONCRETE NOTES

C1 ALL WORKSMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

C2 BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS. BEAMS AND SLABS ARE TO BE POURED TOGETHER UNLESS NOTED OTHERWISE.

C3 SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.

C4 NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE SUPERINTENDENT.

C5 CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN ON THE DRAWINGS OR SPECIFICALLY APPROVED BY THE SUPERINTENDENT.

C6 ALL EXPOSED CONCRETE CORNERS TO HAVE 15mm CHAMFER U.N.O.

C7 CAMBER TO SUSPENDED SLABS SHALL BE POSITIVE UPWARD CAMBER OF 3mm PER 1000mm SPAN UNLESS NOTED OTHERWISE. BEAMS SHALL BE CAMBERED AS SHOWN ON DRAWINGS. NO CAMBER IS REQUIRED TO POST-TENSIONED BEAMS AND SLABS.

C8 FORMWORK AND BACK PROPPING SHALL BE DESIGNED, CONSTRUCTED AND STRIPPED IN ACCORDANCE WITH AS3610. REFER TO ARCHITECTURAL DRAWINGS AND THE SPECIFICATION FOR CLASSES OF SURFACE FINISH.

C9 CONCRETE COMPONENTS AND QUALITY SHALL BE AS FOLLOWS:

ELEMENT	F'c (MPa)	SPECIAL REQUIREMENTS
SLABS	32	-
COLUMNS	60	-
PILE CAPS	32	-
-	-	-
-	-	-

MAXIMUM AGGREGATE SIZE SHALL BE 20mm

C10 ALL CEMENT IS TO BE "GP" GENERAL PURPOSE PORTLAND CEMENT OR "GB" GENERAL PURPOSE BLENDED CEMENT OR TYPE "SR" SULPHATE-RESISTING CEMENT AS REQUIRED COMPLYING WITH AS3972 UNLESS NOTED OTHERWISE ON THE DRAWINGS. EXTRA RAPID HARDENING SUPERSULPHATED AND HIGH ALUMINA CEMENTS AND CEMENTS CONTAINING CHLORIDE SHALL NOT BE USED. THE USE OF FLY ASH AND/OR SILICA FUME AS A CEMENT SUBSTITUTE, OTHER THAN THAT PROPORTION ALLOWED AS PART OF THE "GB" CEMENT CONTENT WILL ONLY BE PERMITTED AS PART OF A DESIGNED CONCRETE MIX WHICH HAS BEEN APPROVED IN WRITING BY THE SUPERINTENDENT.

C11 (D) DENOTES SPECIAL DURABLE CONCRETE WHERE THE ELEMENT HAS AT LEAST ONE FACE EXPOSED TO THE WEATHER OR POSSIBLE CORROSIVE ATTACK. (THIS CONCRETE REQUIRES A SPECIAL TOLERANCE FOR THE COVERS OF - 0mm + 10mm).
SPECIAL PRECAUTIONS ARE REQUIRED TO IMPROVE THE LONG TERM PERFORMANCE OF THESE FACES OF CONCRETE. IN PARTICULAR, NO METAL INSERTS, METAL BAR CHAIRS OR METAL FORM SPACERS OF ANY KIND ARE TO BE PLACED IN THE COVER ZONES WITHOUT THE EXPRESS PERMISSION OF THE SUPERINTENDENT. TAKE SPECIAL CARE TO AVOID SCRAP TIE WIRE OR OTHER MATERIAL BEING PRESENT. REFER DRAWINGS FOR LOCATIONS.

C12 CONCRETE SLUMP TO BE A MAXIMUM OF 80mm UNLESS NOTED OTHERWISE ON THE DRAWINGS.

C13 FREE DROPPING OF CONCRETE FROM A HEIGHT GREATER THAN 1000mm IS NOT PERMITTED.

C14 SURFACES RECEIVING GROUT SHALL BE LEFT ROUGH AND FREE OF LAITANCE.

C15 CONCRETE MUST BE CURED BY AN APPROVED METHOD IN ACCORDANCE WITH THE SPECIFICATION FOR SEVEN DAYS AFTER POURING.

C16 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION OR SCALE.

C17 REINFORCEMENT SYMBOLS:
N
NORMAL DUCTILITY CLASS HOT ROLLED DEFORMED BARS OR MESH TO AS/NZS 4671 WITH fsy=500 MPa.
R
NORMAL DUCTILITY CLASS 250N PLAIN ROUND BAR TO AS/NZS 4671 WITH fsy=250 MPa.
L
LOW DUCTILITY CLASS 500L REINFORCING MESH OR BAR TO AS/NZS 4671 WITH fsy=500 MPa.
LOW DUCTILITY CLASS L REINFORCEMENT IS NOT TO BE USED OTHER THAN WHERE SHOWN ON DRAWINGS.
THE NUMBER FOLLOWING THE BAR SYMBOL IS THE NORMAL BAR DIAMETER IN MILLIMETERS.

C18 MINIMUM COVER (mm) TO ALL REINFORCEMENT EXCEPT F41 MESH UNLESS OTHERWISE SHOWN SHALL BE AS FOLLOWS:

ELEMENT	FORMED & NOT EXPOSED TO WEATHER	FORMED & EXPOSED TO GROUND WATER & WEATHER	NOT FORMED, CAST AGAINST GROUND ETC.
COLUMNS	35	50	75
BEAMS	40	40	65
FOOTINGS	-	50	75
SLABS	30	40	65
PILE CAPS	-	50	75

C19 SPLICES IN REINFORCEMENT SHALL BE MADE IN THE POSITIONS SHOWN OR AS OTHERWISE APPROVED BY THE SUPERINTENDENT. MINIMUM LAP FOR ALL FABRICS SHALL BE THE SPACING OF TWO TRANSVERSE WIRES PLUS 25mm. GRADE 500N BARS SHALL BE LAPPED IN ACCORDANCE WITH THE STANDARD LAP LENGTH TABLE IF NOT STATED OTHERWISE ON THE DRAWINGS.

C20 WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE SUPERINTENDENT.

C21 ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED IN ITS CORRECT POSITION DURING CONCRETING BY APPROVED BAR CHAIRS, SPACERS OR SUPPORT BARS AT 1000mm MAXIMUM CENTRES. THE CHAIR MATERIAL SHALL SUIT THE EXPOSURE CONDITIONS.

C22 2N12 DIAGONAL CORNER BARS 1200mm LONG ARE REQUIRED AT ALL RE-ENTRANT CORNERS OF OPENINGS IN SLABS AND WALLS.

C23 REINFORCEMENT LENGTHS INDICATED ARE IN MILLIMETERS AND ARE PLAN LENGTH ONLY. TURN DOWNS AND CRANKS ARE NOT INCLUDED IN THE DIMENSION.

C24 BARS SHOWN STAGGERED ON PLAN SHALL BE PLACED ALTERNATELY.

C25 BARS SHALL BE EVENLY DISTRIBUTED OVER THE WIDTH OF THE STRIP INDICATED ON THE DRAWINGS UNLESS NOTED OTHERWISE.

C26 ALL EMBEDMENTS SHALL BE HOT DIP GALVANIZED.

C27 CONCRETE SHALL BE SEPARATED FROM SUPPORTING MASONRY BY TWO LAYERS OF MALTHOID (OR AN APPROVED EQUIVALENT). VERTICAL FACES OF CONCRETE SHALL BE KEPT FREE OF ADJOINING SURFACES BY 10mm THICKNESS OF ABLEFLEX (OR AN APPROVED EQUIVALENT) UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL NON-LOADBEARING WALLS SHALL BE KEPT CLEAR OF THE UNDERSIDE OF SLABS AND BEAMS BY 20mm UNLESS NOTED OTHERWISE ON THE DRAWINGS.

C28 BRICKWORK MUST NOT BE BUILT ON CONCRETE SLABS OR BEAMS UNTIL FORMWORK SUPPORTING SAME HAS BEEN REMOVED.

STRUCTURAL STEELWORK NOTES

S1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS4100, AS/NZ 4600, AS/NZS 1554 AND AS/NZS HB62 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

S2 UNLESS NOTED OTHERWISE, ALL STEEL SHALL BE:
- GRADE 300 PLUS FOR HOT ROLLED SECTIONS
- GRADE 300 PLUS FOR WELDED SECTIONS (WB, WC)
- GRADE 300 PLUS FOR MERCHANT BAR (ROUND, SQUARE AND FLAT)
- GRADE 250 FOR PLATES
- GRADE C350 FOR RHS, SHS AND CHS

S3 COMMERCIAL GRADE BOLTS SHALL CONFORM TO AS/NZS 1111 AND AS4100. HIGH STRENGH STRUCTURAL BOLTS SHALL CONFORM TO AS/NZ 1252 AND AS4100. WELDS SHALL CONFORM TO AS/NZS 1554 AND WELDING ELECTRODES TO AS/NZS 1553. THE INSPECTION/TESTING OF WELDS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL STEEL SPECIFICATION.

S4 ALL DETAILS, GAUGE LINES ETC, WHERE NOT SPECIFICALLY SHOWN ARE TO BE IN ACCORDANCE WITH AISC DESIGN CAPACITY TABLES FOR STRUCTURAL STEEL AND AISC STANDARDISED STRUCTURAL CONNECTIONS.

S5 BEFORE FABRICATION IS COMMENCED THE CONTRACTOR SHALL SUBMIT COPIES OF THE SHOP DRAWINGS TO THE SUPERINTENDENT FOR REVIEW. REVIEW DOES NOT INCLUDE CHECKING OF DIMENSIONS.

S6 ALL WELDS SHALL BE SP (SPECIAL PURPOSE) IN ACCORDANCE WITH AS1554. ALL BUTT WELDS SHALL BE FULL STRENGTH COMPLETE PENETRATION WELDS. ALL ELECTRODES SHALL BE CLASS E48XX.

S7 BOLT DESIGNATION:
4.6/S REFERS TO COMMERCIAL BOLTS OF STRENGTH GRADE 4.6 TO AS1111 TIGHTENED TO A SNUG TIGHT CONDITION.
8.8/S REFERS TO HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 TIGHTENED TO A SNUG TIGHT CONDITION.
8.8/TB REFERS TO HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100 AS A BEARING JOINT (SOME SLIP ALLOWED).
8.8/TF REFERS TO HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100 AS A FRICTION JOINT.

S8 ALL BOLTS, NUTS AND WASHERS SHALL BE HOT DIP GALVANISED.

S9 UNLESS SHOWN OTHERWISE ON THE DRAWINGS, ALL CONNECTIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING MINIMUM REQUIREMENTS:
(i) ALL WELDS SHALL BE 6mm CONTINUOUS FILLET WELDS ALL ROUND.
(ii) ALL BOLTS SHALL BE M20 - 8.8/S, WITH A MINUMUM OF 2 BOLTS PER CONNECTION. PURLIN BOLTS TO BE M12 - 8.8/S WITH A MINIMUM OF 2 BOLTS PER PURLIN END
(iii) ALL GUSSET AND CLEAT PLATES SHALL BE 10mm THICK
(iv) ALL CAP PLATES SHALL BE 12mm THICK
(v) ALL BASE PLATES SHALL BE 20mm THICK

S10 CONTACT SURFACES OF TF CONNECTIONS SHALL BE LEFT UNPAINTED AND FREE OF SCALE UNLESS OTHERWISE SPECIFIED. (INORGANIC ZINC SILICATE PAINT IS ACCEPTABLE IN 8.8/TF JOINTS).

S11 LOAD INDICATING WASHERS SHALL BE USED TO VERIFY TIGHTENING OF BOLTS IN TF AND TB CONNECTIONS. TORQUE WRENCHES SHALL NOT BE USED. A HARDENED WASHER SHALL BE USED UNDER THE BOLT HEAD OR NUT, WHICHEVER IS ROTATED. THE RE-USE OF FULLY TENSIONED BOLTS IS PROHIBITED.

S12 COLUMNS AND MULLIONS SHALL HAVE THEIR BASE PLATES FULLY GROUTED IN ACCORDANCE WITH THE SPECIFICATIONS AFTER PLUMBING AND LEVELLING ON NEOPRENE PACKERS.

S13 SUBSTITUTIONS FOR STEEL SECTIONS SHOWN ON DRAWINGS SHALL NOT BE MADE WITHOUT THE WRITTEN APPROVAL OF THE SUPERINTENDENT.

S14 CONCRETE ENCASED STEELWORK SHALL HAVE A MINIMUM OF 50mm OF CONCRETE ENCASEMENT REINFORCED WITH W5 WIRE WRAPPING AT 150 CTS OR FGW41 FABRIC UNLESS NOTED OTHERWISE.

S15 ALL STEELWORK BELOW GROUND OR FINISHED SURFACE LEVEL IS TO BE ENCASED IN 75mm MIN. CONCRETE ALL ROUND.

S16 THE ENDS OF ALL TUBULAR MEMBERS ARE TO BE SEALED WITH NOMINAL THICKNESS PLATES AND CONTINUOUS FILLET WELDED UNLESS NOTED OTHERWISE.

S17 ALL HOT DIP GALVANISED MEMBERS SHALL BE PROVIDED WITH VENT AND DRAINAGE HOLES IN ACCORDANCE WITH THE GALVANISER'S RECOMMENDATIONS AND TO THE ACCEPTANCE OF THE SUPERINTENDENT.

S18 WHERE MEMBERS SHOWN ON THE STRUCTURAL OR ARCHITECTURAL DRAWINGS ARE REQUIRED TO BE CURVED, BENT OR ROLLED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE METHODS REQUIRED TO ACHIEVE THE REQUIRED SHAPES WITHOUT LOCALISED DISTORTION OF THE MEMBERS.

S19 THE CONTRACTOR SHALL PROVIDE AND LEAVE IN PLACE, UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED, SUCH TEMPORARY BRACING AS IS NECESSARY TO STABILISE THE STRUCTURE DURING ERECTION.

S20 THE PURLIN AND GIRT DESIGN HAS BEEN BASED ON LYSAGHT PURLINS, ALTERNATIVE PURLINS OF EQUAL OR GREATER LOAD CAPACITY MAY BE SUBSTITUTED ONLY WITH THE WRITTEN APPROVAL FROM THE SUPERINTENDENT.

S21 PURLIN AND GIRT BOLTS AND BRIDGING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S DETAILS UNLESS SHOWN OTHERWISE.

S22 TRIMMING MEMBERS FOR MECHANICAL/HYDRAULIC PENETRATIONS ARE NOT NECESSARILY SHOWN.

S23 TRIMMING MEMBERS FOR VALLEYS, FREE EDGES, RIDGES, ETC. ARE NOT NECESSARILY SHOWN, BUT SHALL BE PROVIDED AT NO ADDITIONAL COST TO ALL EDGES OF SHEETING AT AN ANGLE OF OTHER THAN 90 DEGREES TO THE PURLIN/GIRTS. REFER TO PURLIN MANUFACTURER FOR DETAILS.

S24 THE CONTRACTOR SHALL PROVIDE ALL CLEATS AND DRILL ALL HOLES NECESSARY FOR FIXING STEEL, TIMBER AND OTHER ELEMENTS TO STEEL WHETHER OR NOT DETAILED ON THE STRUCTURAL DRAWINGS.

S25 THE FABRICATION AND ERECTION OF THE STRUCTURAL STEELWORK SHALL BE SUPERVISED BY QUALIFIED PERSONNEL EXPERIENCED IN SUCH SUPERVISION TO ENSURE THAT ALL REQUIREMENTS OF OH&S AND THE DESIGN ARE MET. DETAILS OF ERECTION SEQUENCE SHALL BE SUBMITTED TO THE SUPERINTENDENT FOR REVIEW PRIOR TO COMMENCEMENT OF ERECTION. THE APPROVED ERECTION SEQUENCE SHALL NOT BE VARIED DURING THE ERECTION PROCESS WITHOUT THE APPROVAL OF THE SUPERINTENDENT.

S26 STRUCTURAL STEELWORK SHALL HAVE THE FOLLOWING SURFACE TREATMENT IN ACCORDANCE WITH AS/NZS 2312 AND THE SPECIFICATION:

ELEMENT	SURFACE CLEANING	PRIME COAT	TOP COATS
ALL MEMBERS EXCEPT HOT DIPPED GALVANISED	CLASS 1	75 MICRONS	REFER ARCHITECT
EXPOSED STEELWORK HOT DIP GALVANISED	-	-	-

S27 CAMBERS
ALL RAFTERS AND BEAMS OVER 6000mm IN LENGTH SHALL BE CAMBERED 5mm UPWARDS FOR EVERY 2000mm OF LENGTH UNLESS NOTED OTHERWISE ON THE DRAWINGS.

STRUCTURAL DRAWING INDEX

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
04	22.11.07	ISSUED FOR INFORMATION	JG		
03	22.10.07	ISSUED FOR INFORMATION	MLJ		
02	19.10.07	ISSUED FOR INFORMATION	MLJ		
01	29.08.07	DESIGN DEVELOPMENT	MLJ		

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Drawn MLJ		
Designed VA		
Verified		
Approved		

Drawing Title: STANDARD NOTES AND STRUCTURAL DRAWING INDEX SHEET 1

Project No. 28803.003
Scale N.TS
Sheet Size A1
Drawing No. S01
Rev. 04

20 10 0 10 20 30 40 50 100mm

BORED PILE NOTES

BP1 SCOPE
THE WORK TO BE CARRIED OUT BY THE CONTRACTOR COMPRISES THE CONSTRUCTION OF THE BORED PILE FOOTINGS SHOWN ON THE DRAWINGS.

BP2 SITE INVESTIGATIONS
REFER TO FOOTING NOTES ON THE DRAWINGS FOR DETAILS OF GEOTECHNICAL REPORT.

BP3 DESIGN
ALL BORED PIERS SHALL BE DESIGNED TO THE REQUIREMENTS OF AS 2159.
THE BORED PILES MAY BE REDESIGNED BY THE CONTRACTOR, IN WHICH CASE THE DESIGN OF THE BORED PILES IS TO BE THE RESPONSIBILITY OF THE CONTRACTOR. THE DESIGN OF THE BORED PILES IS TO BE BASED ON THE REQUIRED SAFE WORKING LOADS AS NOTED ON THE DRAWINGS AND THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. ALTERNATIVE DESIGN COMPUTATIONS AND DRAWINGS ARE TO BE SUBMITTED TO THE SUPERINTENDENT, THE CERTIFYING ENGINEER AND THE BUILDING SURVEYOR IN ORDER TO OBTAIN A BUILDING PERMIT FOR THE BORED PILES.

BP4 TOLERANCES
THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SETTING OUT THE PIER LOCATIONS.
FOUNDING LEVELS OF THE BORED PILE BASES ARE TO BE DETERMINED ON SITE AND APPROVED BY THE GEOTECHNICAL ENGINEER.
TOPS OF THE BORED PILES ARE TO BE SUCH THAT THEY ARE WITHIN 0mm AND -50mm OF THE LEVELS INDICATED ON THE DRAWINGS.
THE VERTICAL CENTRELINE OF THE BORED PILES ARE TO BE WITHIN +50mm OF THE POSITION OF THE CENTRELINE OF EACH BORED PILE AS SHOWN ON THE DRAWINGS.
EVERY SHAFT SHALL BE BORED TO WITHIN A TOLERANCE IN RESPECT OF DEPARTURE FROM TRUE VERTICALLY OF 1 IN 120 OR 75mm WHICHEVER IS THE LESSER.

BP5 ROCK SOCKETS
THE ROCK SOCKET IS THE LENGTH OF SHAFT AT THE LOWER END OF THE BORED PILE WHICH IS ENTIRELY IN _____ _____ (___) ROCK (OR BETTER) AND IS THE PORTION OF THE SHAFT THROUGH WHICH THE LOAD IN THE CAISSON IS TRANSFERRED BY SIDE FRICTION TO THE FOUNDATION MATERIAL. THE VERTICAL SURFACE OF THE ROCK SOCKET MUST BE LEFT IN A ROUGH CONDITION BY SPIRAL GROOVING AFTER EXCAVATION, FREE FROM LOOSE MATERIAL AND/OR CLAY SMEAR.
THE CONTRACTOR IS TO MAKE ALLOWANCE IN HIS DESIGN AND ON SITE FOR VARYING ROCK CONDITIONS ALONG THE LENGTH OF THE ROCK SOCKET. THE LENGTH OF THE ROCK SOCKET IS TO BE ADJUSTED ACCORDINGLY TO SUIT THE ROCK CONDITIONS ENCOUNTERED DURING BORING OPERATIONS.

BP6 LINING OF SHAFTS
TEMPORARY LINING OF SHAFTS AS NECESSARY SHALL BE PROVIDED BY THE CONTRACTOR TO PREVENT COLLAPSE DUE TO THE PRESENCE OF UNSTABLE MATERIAL, GROUND WATER OR OTHER UNFORSEEN CIRCUMSTANCES. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT NECESSARY FOR PLACEMENT AND REMOVAL OF TEMPORARY LINERS.
PERMANENT LINING IS TO BE AS DETAILED ON THE DRAWINGS. ALTERNATIVELY, THE PERMANENT LINING ON THE BORED PILES MAY BE REDESIGNED AND DETAILED BY THE CONTRACTOR SUCH THAT THE LINING SHALL VERTICALLY ISOLATE THE BORED PILE FROM THE SURROUNDING GROUND WHILE PROVIDING THE REQUIRED HORIZONTAL SUPPORT.
WHERE THE FINAL CUT-OFF LEVEL IS ABOVE NATURAL GROUND LEVEL, THE PILES MUST BE FORMED TO THE CORRECT LEVEL BY USING TEMPORARY LINERS.

BP7 CLEARING OUT
AFTER EXCAVATIONS HAVE BEEN COMPLETED THE BASES SHALL BE CLEANED OUT AND RECEIVE APPROVAL FROM THE GEOTECHNICAL ENGINEER BEFORE REINFORCEMENT CAGES ARE SET IN POSITION AND CONCRETE PLACED.
CLEARING OUT THE BASE OF ANY SHAFT MEANS THAT ALL LOOSE AND SOFTENED MATERIAL SHALL BE REMOVED.

BP8 GROUND WATER
WATER SHALL BE DIVERTED TO A PROPERLY SITED SUMP AND THE PILING CONTRACTOR SHALL SUPPLY AND INSTALL A PUMP OF ADEQUATE CAPACITY AND HAVE ON SITE A STANDBY UNIT OF SIMILAR CAPACITY.
THE TOP OF THE HOLE SHALL BE PROPERLY COVERED TO PREVENT SURFACE WATER OR RAINFALL FROM ENTERING THE HOLE.

BP9 REINFORCEMENT
ALL STEEL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF AS1302, AS1303, AND AS3600.
LOOSE MILL SCALE, RUST OIL, PAINT, GREASE AND OTHER MATTER SHALL BE REMOVED BEFORE PLACING THE REINFORCEMENT IN POSITION AND THE REINFORCEMENT SHALL BE KEPT FREE OF SUCH MATTER UNTIL THE CONCRETE IS PLACED.
REINFORCEMENT SHALL BE PROPERLY FABRICATED INTO CAGES, SHALL BE INSTALLED IMMEDIATELY THE BASE OF ANY SHAFT HAS BEEN APPROVED AND SHALL BE SECURELY FIXED SO THAT NO VERTICAL MOVEMENT OCCURS WHILST CONCRETE IS BEING PLACED. APPROVED SPACERS SHALL BE PROVIDED AT 2 METRE MAXIMUM CENTRES ALONG THE LENGTH OF THE BORED PILE TO MAINTAIN ADEQUATE COVER.

BP10 CONCRETE PLACING
CONCRETE IN BASES AND SHAFTS SHALL BE PLACED CONTINUOUSLY UP TO THE UNDERSIDE OF PILE CAPS. CONCRETE SHALL NOT BE DROPPED BUT SHALL BE PLACED USING A CONCRETE PUMP OR A PROPERLY CONSTRUCTED CHUTE.
WHERE PERMITTED BY THE SUPERINTENDENT, CONCRETE SHALL BE PLACED UNDERWATER USING A TREMIE. POURING SHALL PROCEED WITH THE TREMIE DISCHARGE AT ALL TIMES BELOW THE TOP SURFACE OF THE POURED CONCRETE. THE CONCRETE LEVEL SHALL BE BROUGHT UP CONTINUOUSLY UNTIL THE TOP LAYER OF CONCRETE THAT HAS BEEN IN CONTACT WITH THE FREE WATER CAN BE SATISFACTORILY REMOVED AND CONCRETING CAN PROCEED ABOVE WATER IN THE USUAL MANNER. CONCRETING SHALL BE TEMPORARILY STOPPED WHEN THE CONCRETE IS WITHIN ONE METRE OF THE TOP OF EACH LENGTH OF LINER, IF PROVIDED, AND THAT LENGTH OF LINER SHALL BE WITHDRAWN AND THE CONCRETE VIBRATED WITH IMMERSION TYPE VIBRATIONS.

BP11 SAFETY
PROPER SAFETY PRECAUTIONS SHALL BE TAKEN TO AVOID INJURY TO PEOPLE.
UNATTENDED HOLES SHALL BE COVERED OR FENCED OFF AT ALL TIMES.

MASONRY NOTES

M1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3700 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
M2 THE DESIGN STRENGTH OF MASONRY SHALL BE IN ACCORDANCE WITH THE MASONRY SCHEDULE SHOWN ON THIS DRAWING. MORTAR ADMIXTURES SHALL NOT BE USED WITHOUT THE WRITTEN APPROVAL OF THE SUPERINTENDENT.
M3 NO CHASES SHALL BE CUT INTO LOAD-BEARING MASONRY WITHOUT THE APPROVAL OF THE SUPERINTENDENT.
M4 MORTAR JOINTS SHALL BE 10mm THICK AND HAVE A MAXIMUM TOOLED DEPTH OF 3mm UNLESS NOTED OTHERWISE. ALL PERPENDS AND BED JOINTS ARE TO BE FULLY FILLED WITH MORTAR.
M5 CLEANOUT HOLES SHALL BE PROVIDED AT THE BASE OF ALL CORES OR CAVITIES WHICH ARE TO BE GROUTED OR FILLED.
M6 ALL MORTAR OBSTRUCTIONS IN CORES OR CAVITIES SHALL BE REMOVED PRIOR TO GROUTING. THIS MAY BE DONE USING A ROD FROM THE TOP OF THE WALL. ALL MORTAR THUS REMOVED SHALL BE CLEANED FROM THE BOTTOM OF THE WALL BEFORE THE CLEANOUT HOLES ARE CLOSED FOR GROUTING.
M7 REINFORCING STEEL SHALL BE SECURELY FIXED IN POSITION BEFORE GROUTING.
M8 GROUT FOR BOND BEAMS, CORE FILLING OR CAVITY FILLING SHALL COMPRISE OF 1 PART CEMENT, 0.25 PART LIME, 3 PARTS 10mm AGGREGATE UNLESS NOTED OTHERWISE ON THE DRAWINGS. MAXIMUM SLUMP TO BE 230mm.
M9 CORES AND CAVITIES SHALL BE FILLED IN 1000mm MAXIMUM LIFTS. GROUTING OF CAVITIES BETWEEN MASONRY SKINS IS NOT TO TAKE PLACE UNTIL 3 DAYS AFTER MASONRY HAS BEEN LAID.
M10 GROUT SHALL BE THOROUGHLY COMPACTED USING A PLAIN BAR.
M11 WALL TIES SHALL BE PROVIDED AT 600mm MAXIMUM CENTRES HORIZONTALLY AND VERTICALLY AND CONSIST OF 3.1mm DIA. GALVANISED WIRE UNLESS NOTED OTHERWISE ON THE DRAWINGS.
M12 CONTROL JOINTS SHALL BE PLACED IN ALL MASONRY WALLS AT 6000mm MAXIMUM CENTRES HORIZONTALLY AND 4000mm MAXIMUM CENTRES VERTICALLY UNLESS NOTED OTHERWISE ON THE DRAWINGS. REFER TO THE ARCHITECT'S DRAWINGS FOR SPECIFIC LOCATIONS. CONTROL JOINTS SHALL ALSO BE PLACED ABOVE ONE CORNER OF ALL DOOR AND WINDOW OPENINGS UNLESS NOTED OTHERWISE.
M13 MORTAR DROPPINGS OR OTHER HARD MATERIALS SHALL BE KEPT CLEAR OF ALL CONTROL JOINTS. PLACE POLYSTYRENE OR SIMILAR IN ALL VERTICAL JOINTS TO AVOID MORTAR DROPPINGS FILLING THE JOINTS DURING CONSTRUCTION.
M14 JOINTS IN NON-LOAD BEARING WALLS SHALL BE FILLED WITH COMPRESSIBLE FILLER. REFER TO THE ARCHITECT'S SPECIFICATION FOR FIRE RATED WALLS.
M15 WALL FINISHES MUST BE JOINTED AT THE SAME LOCATIONS AS THE MASONRY CONTROL JOINTS TO AVOID UNCONTROLLED CRACKING IN WALL FINISHES.
M16 ALL MASONRY IS TO BE FIXED TO ADJOINING CONCRETE AND/OR STEEL SUPPORTING MEMBERS BY MFA 3/3 MASONRY ANCHORS (OR AN APPROVED EQUIVALENT) AT 600 MAXIMUM CENTRES VERTICALLY AND MFA 4/M MASONRY ANCHORS (OR AN APPROVED EQUIVALENT) AT 1000 MAXIMUM CENTRES HORIZONTALLY UNLESS OTHERWISE NOTED ON THE DRAWINGS.
M17 MASONRY ANCHORS ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
M18 SOLID BRICKS, SOLID BLOCKS OR CORE FILLED HOLLOW BLOCKS ARE TO BE USED AT ALL MASONRY ANCHOR LOCATIONS.

MASONRY SCHEDULE

ELEMENT	CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH (Mpa)	MORTAR MIX		
		CEMENT	LIME	SAND
NON LOAD BEARING BLOCKWORK WALLS	12	1	: 1 :	6
LOAD BEARING BLOCKWORK WALLS	12	1	: 0.25 :	3
NON LOAD BEARING BRICKWORK WALLS	40	1	: 1 :	6
LOAD BEARING BRICKWORK WALLS	40	1	: 0.25 :	3

WELDING NOTES

W1 ALL WELDS SHALL BE CATEGORY SP IN ACCORDANCE WITH AS1554 UNLESS NOTED OTHERWISE. ALL WELDING SHALL COMPLY WITH AS1554 AND AS4100.
W2 BEFORE COMMENCING FABRICATION SUBMIT DETAILS OF PROPOSED WELDING PROCEDURES USING THE FORM IN APPENDIX E OF AS1554.1.
W3 DO NOT COMMENCE FABRICATION UNTIL WELDING PROCEDURES HAVE BEEN ACCEPTED.
W4 OTHER THAN SITE WELDS, IF ANY, SHOWN ON THE SHOP DRAWINGS, DO NOT WELD ON SITE WITHOUT PRIOR APPROVAL FROM THE SUPERTINDENT. WHEREVER POSSIBLE, LOCATE SITE WELDS IN POSITIONS FOR DOWN HAND WELDING.
W5 ALL BUTT WELDS, EXCEPT WHEN PRODUCED WITH THE AID OF BACKING MATERIAL, SHALL HAVE THE ROOT OR INITIAL LAYER GOUGED OR CHIPPED OUT ON THE BACK SIDE BEFORE WELDING IS STARTED FROM THAT SIDE. BUTT WELDS MADE WITH THE USE OF A BACKING STRIP SHALL HAVE THE WELD METAL FUSED WITH THE BACKING STRIP. ENDS OF BUTTS SHALL HAVE THE START AND STOP ZONES REMOVED BY THE USE OF RUN ON AND RUN OFF PLATES. SUCH PLATES SHALL BE REMOVED AFTER USE.
W6 WELDING SHALL BE CARRIED OUT UNDER THE IMMEDIATE AND CONTINUOUS SUPERVISION OF A SUPERVISOR EMPLOYED BY THE FABRICATOR. THIS PERSON SHALL HAVE QUALIFICATIONS AS DESCRIBED IN AS1554 SECTION 4.11 AND THESE QUALIFICATIONS SHALL BE SUBMITTED TO THE SUPERINTENDENT ON REQUEST.
W7 WELDING SHALL BE PERFORMED ONLY BY WELDERS WITH QUALIFICATIONS AS DESCRIBED IN AS1554 SECTION 4.11.
W8 WHERE NDT IS SPECIFIED FOR INDIVIDUAL WELDS ON THE DRAWINGS, IT SHALL MEAN NON-DESTRUCTIVE TEST BY EITHER RADIOGRAPHIC OR ULTRASONIC MEANS.
W9 THE WELD EXAMINATION SHALL BE PERFORMED BY AN INDEPENDENT TESTING AUTHORITY. THE TEST REPORTS SHALL BE SUBMITTED TO THE SUPERINTENDENT.
W10 AFTER REPAIRING A FAULTY WELD REVEALED BY NON-DESTRUCTIVE EXAMINATION, REPEAT THE SPECIFIED EXAMINATION AND FURNISH THE TESTING AUTHORITY'S REPORT TO THE SUPERINTENDENT.

PRELIMINARY
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Drawn	MLJ	Signed	Date
Designed	VA	Signed	Date
Verified		Signed	Date
Approved		Signed	Date

Drawing Title: STANDARD NOTES SHEET 2

Project No. 28803.003
Scale N.TS
Sheet Size A1
Drawing No. S02
Rev. 04

20 10 0 10 20 30 40 50 100mm

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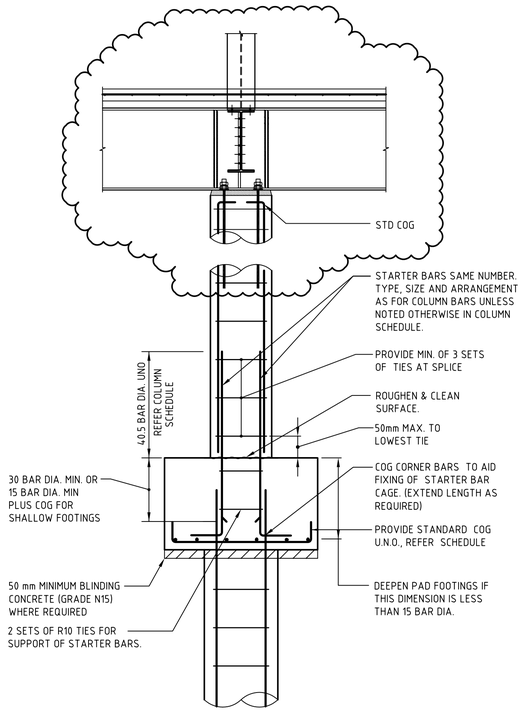
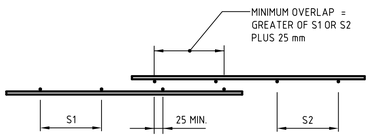


NOTES

1. FOR REINFORCEMENT, DIMENSIONS ETC, SEE COLUMN AND FOOTING SCHEDULE.
2. OVERBREAK BELOW FOOTINGS TO BE FILLED TO UNDERSIDE OF FOOTING WITH GRADE N15 CONCRETE.
3. OVERBREAK AROUND FOOTINGS TO BE FILLED WITH CONCRETE SAME GRADE AS FOOTINGS OR CEMENT STABILIZED SAND (7 % CEMENT BY VOLUME).
4. DETAILS ABOVE APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

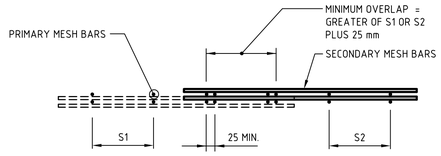
RC COLUMN / FOOTING STANDARD DETAIL SD1/1 (NTS)



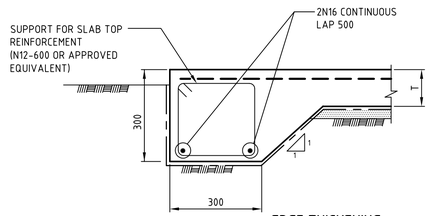
NOTES:

1. CROSS BARS/WIRES MUST PHYSICALLY INTERLOCK AS SHOWN

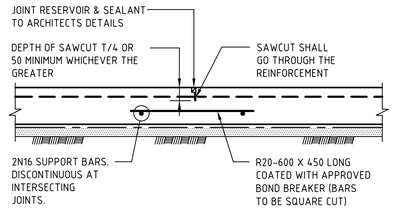
TENSION LAP SPLICE IN CONVENTIONAL MESH



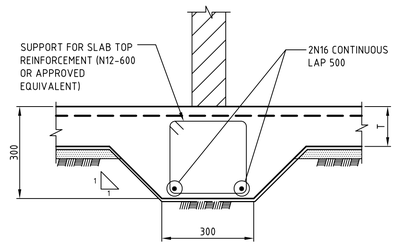
4 SHEET MESH LAP JUNCTION IN CONVENTIONAL MESH STANDARD DETAIL SD3/1 (NTS)



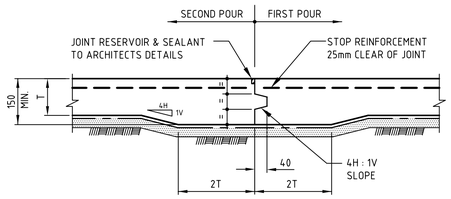
EDGE THICKENING



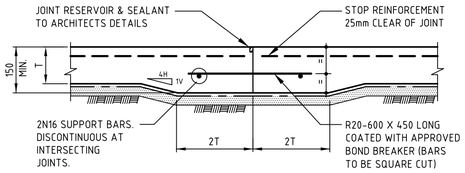
SAWCUT JOINT (S.C.J.)



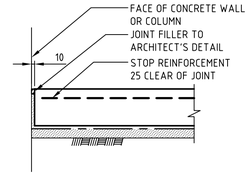
INTERNAL THICKENING
TYPICAL UNDER MASONRY WALLS



KEYED JOINT (K.J.)

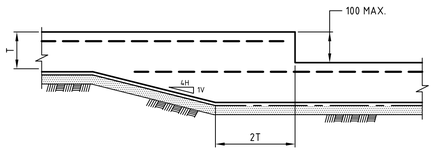


DOWELLED JOINT (D.J.)

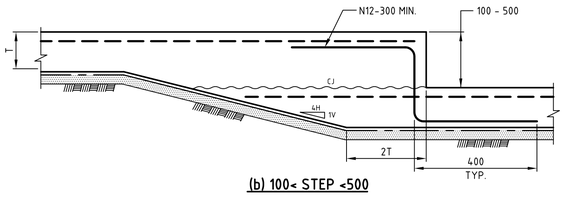


ISOLATION JOINT (I.J.)
PROVIDE ISOLATION JOINTS AT ALL CONCRETE COLUMNS AND WALLS U.N.O

ALTERNATIVE CONSTRUCTION JOINT (C.J.) DETAILS

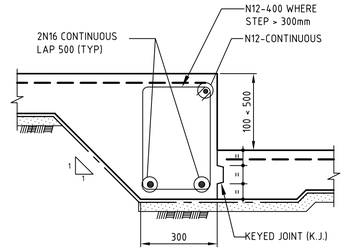


(a) STEP LESS THAN 100



(b) 100< STEP <500

SLAB ON GROUND SETDOWNS

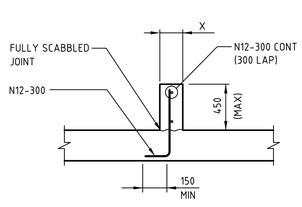


100 < STEP < 500 WITH KEYED JOINT
SLAB ON GROUND FLOOR SETDOWNS WITH C.J.

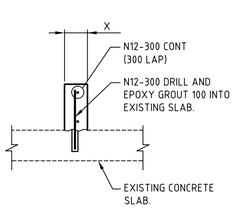
NOTES:

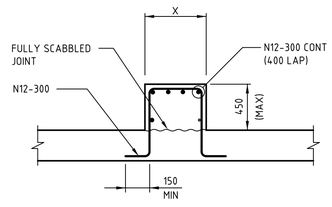
1. FOR SPECIFICATION OF SUB-BASE AND SUBGRADE REQUIREMENTS REFER TO PLANS.
2. DOWELS SHALL BE CORRECTLY ALIGNED AND SECURELY HELD PARALLEL TO THE SLAB SURFACE AND PERPENDICULAR TO THE LONGITUDINAL DIRECTION OF THE JOINT.
3. DOWELS SHALL BE OMITTED WITHIN 900 MM (HORIZONTALLY) OF A TRANSVERSE JOINT.
4. SAWCUT WITHIN 24 HOURS PERIOD AFTER CONCRETE IS POURED UNLESS AGREED OTHERWISE BY THE SUPERINTENDENT.

SLAB ON GROUND DETAILS - STANDARD DETAIL SD2/1 (N.T.S)

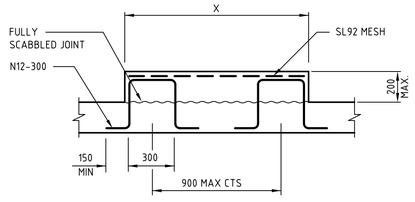


a) WHERE 'X'≤150mm





b) WHERE 150mm< 'X'≤1200mm



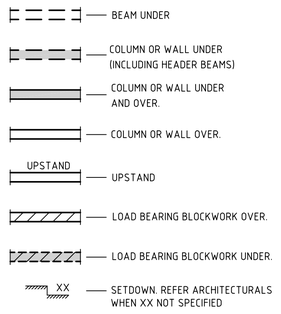
NOTES

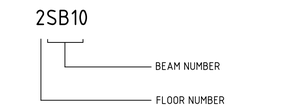
1. ADD FURTHER ROWS OF ⎍ BARS AT 900 MAX CTS FOR WIDER PLINTHS.
2. REFER SPECIFIC DETAIL WHERE HEIGHT LIMITS ARE EXCEEDED.

c) WHERE 'X'>1200mm

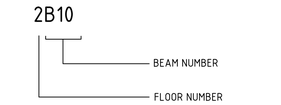
TYPICAL PLINTH / KERB DETAILS - STANDARD DETAIL SD4/1 (N.T.S.)

STANDARD NOTATION LEGEND

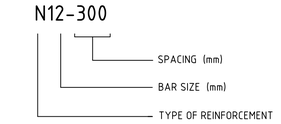


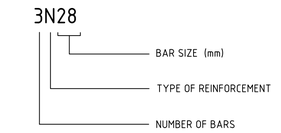


STEEL BEAMS

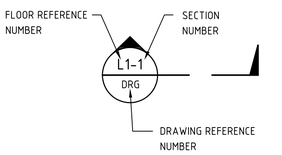


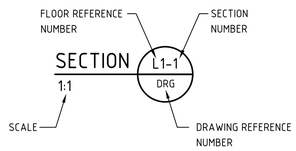
CONCRETE BEAMS





REINFORCEMENT





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Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

	Signed	Date
Drawn MLJ		
Designed VA		
Verified		
Approved		

Drawing Title: STANDARD DETAILS SHEET 1

Project No. 28803.003
Scale N.TS
Sheet Size A1
Drawing No. S05
Rev. 04

20 10 0 10 20 30 40 50 100mm

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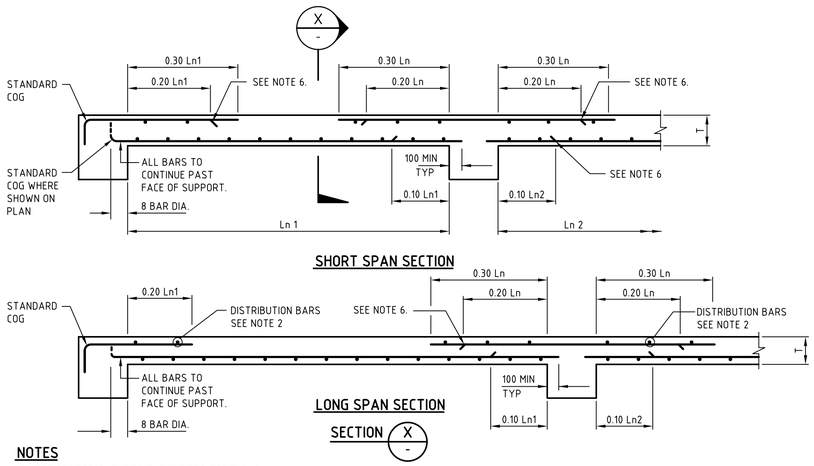
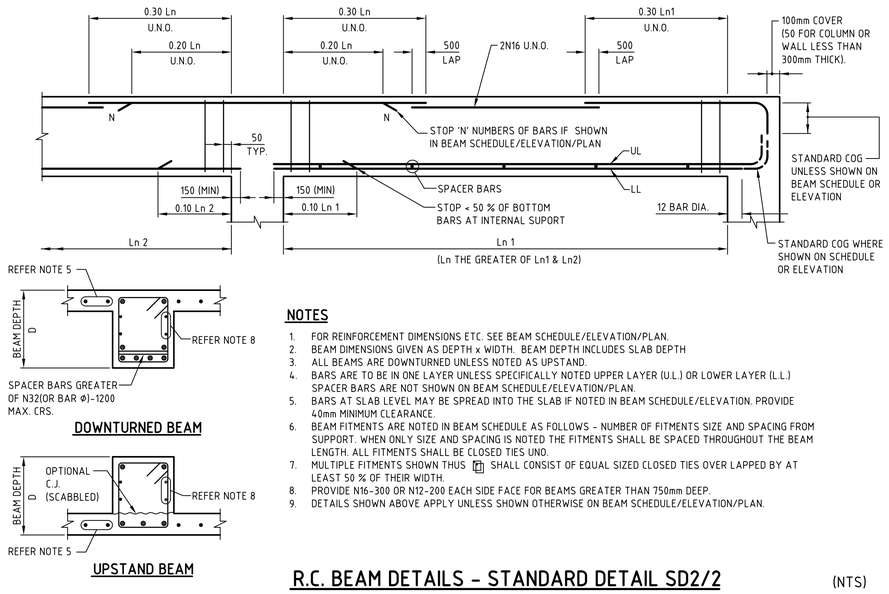


NOTES

1. FOR REINFORCEMENT,DIMENSIONS,ETC.,SEE PLANS.
2. WHENEVER SLAB REINFORCEMENT IS SHOWN ON PLAN IN ONE DIRECTION, DISTRIBUTION BARS ARE REQUIRED IN THE TRANSVERSE DIRECTION. REFER TO DISTRIBUTION REINFORCEMENT TABLE FOR ALL TOP & BOTTOM DISTRIBUTION BARS NOT SHOWN ON PLAN,
3. DETAILS ABOVE APPLY UNLESS SHOWN OTHERWISE ON THE PLANS.
4. FOR PRIMARY AND SECONDARY DIRECTIONS OF REINFORCEMENT SEE PLANS.
5. Ln IS THE GREATER OF TWO CONSECUTIVE SPANS (EG.Ln1 & Ln2)
6. ALTERNATIVELY, BARS OF THE SAME LENGTH ARE TO BE STAGGERED. BARS SHALL BE PLACED ALTERNATELY, WITH AT LEAST 50% OF THESE BEING THE LONGER BAR.
7. FOR SLABS REINFORCED WITH BOTTOM MESH, THE MESH SHALL BE IN ONE PIECE WITH MAIN WIRES IN DIRECTION OF SHORT SPAN, AND IN THE LOWER LAYER.

DISTRIBUTION REINFORCEMENT TABLE FOR INTERNAL SLABS WITH MINOR DEGREE OF CRACK CONTROL OR UNRESTRAINED.	
N12–300	FOR SLAB THICKNESS EQUAL OR LESS THAN 200mm
N12–250	FOR SLAB THICKNESS EQUAL OR LESS THAN 250mm
N12–200	FOR SLAB THICKNESS EQUAL OR LESS THAN 300mm
N12–170	FOR SLAB THICKNESS EQUAL OR LESS THAN 375mm
N12–150	FOR SLAB THICKNESS EQUAL OR LESS THAN 400mm
ALL DISTRIBUTION REINFORCEMENT TO BE LAPPED 400 WITH MAIN TOP BARS	

ONE & TWO WAY SLAB DETAILS - STANDARD DETAIL SD1/2 (NTS)



NOTES

1. FOR REINFORCEMENT DIMENSIONS ETC. SEE BEAM SCHEDULE/ELEVATION/PLAN.
2. BEAM DIMENSIONS GIVEN AS DEPTH x WIDTH. BEAM DEPTH INCLUDES SLAB DEPTH
3. ALL BEAMS ARE DOWNTURNED UNLESS NOTED AS UPSTAND.
4. BARS ARE TO BE IN ONE LAYER UNLESS SPECIFICALLY NOTED UPPER LAYER (U.L.) OR LOWER LAYER (L.L.) SPACER BARS ARE NOT SHOWN ON BEAM SCHEDULE/ELEVATION/PLAN.
5. BARS AT SLAB LEVEL MAY BE SPREAD INTO THE SLAB IF NOTED IN BEAM SCHEDULE/ELEVATION. PROVIDE 40mm MINIMUM CLEARANCE.
6. BEAM FITMENTS ARE NOTED IN BEAM SCHEDULE AS FOLLOWS - NUMBER OF FITMENTS SIZE AND SPACING FROM SUPPORT. WHEN ONLY SIZE AND SPACING IS NOTED THE FITMENTS SHALL BE SPACED THROUGHOUT THE BEAM LENGTH. ALL FITMENTS SHALL BE CLOSED TIES UNO.
7. MULTIPLE FITMENTS SHOWN THUS SHALL CONSIST OF EQUAL SIZED CLOSED TIES OVER LAPPED BY AT LEAST 50 % OF THEIR WIDTH.
8. PROVIDE N16-300 OR N12-200 EACH SIDE FACE FOR BEAMS GREATER THAN 750mm DEEP.
9. DETAILS SHOWN ABOVE APPLY UNLESS SHOWN OTHERWISE ON BEAM SCHEDULE/ELEVATION/PLAN.

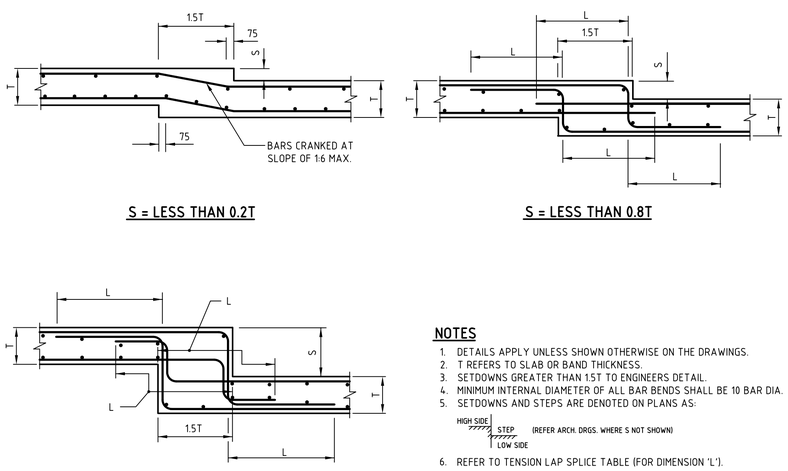
R.C. BEAM DETAILS - STANDARD DETAIL SD2/2 (NTS)

TENSION DEVELOPMENT LENGTH/SPLICE SCHEDULE (mm)				
BAR SIZE	LESS THAN 300 mm CONCRETE BELOW BAR OR VERTICAL BAR		MORE THAN 300 mm CONCRETE BELOW BAR	
	CONCRETE	GRADE	CONCRETE	GRADE
	25 MPa	⩾ 32 MPa	25 MPa	⩾ 32 MPa
N10	250	250	350	350
N12	350	300	400	400
N16	550	500	650	600
N20	800	700	950	850
N24	1050	950	1300	1150
N28	1300	1150	1600	1400
N32	1600	1400	2000	1750
N36 *	1950	1750	2450	2150
N40 *	2350	2050	2900	2550

NOTES:

1. THESE TENSION DEVELOPMENT / SPLICE LENGTHS APPLY TO BEAMS, SLABS AND WALLS U.N.O.
2. THE LENGTHS ARE BASED ON THE FOLLOWING MIN. COVER TO THE BAR: SLABS, WALLS - GREATER OF 25 MM OR BAR DIA. BEAMS - 40 MM.
3. VALUES FOR SLABS AND WALLS APPLY ONLY FOR BAR CLEAR SPACING OF 150 OR GREATER. VALUES FOR BEAMS APPLY ONLY FOR BAR CLEAR SPACINGS OF 80 OR GREATER. FOR SPACINGS LESS THAN THESE VALUES REFER TO THE DRAWINGS.
4. * VALUES FOR N36 AND N40 BARS ARE DEVELOPMENT LENGTHS ONLY. THESE BAR SIZES ARE NOT TO BE LAP SPLICED.

MINIMUM TENSION DEVELOPMENT LENGTHS / LAP SPLICES FOR BARS STANDARD DETAIL SD3/2



NOTES

1. DETAILS APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
2. T REFERS TO SLAB OR BAND THICKNESS.
3. SETDOWNS GREATER THAN 1.5T TO ENGINEERS DETAIL.
4. MINIMUM INTERNAL DIAMETER OF ALL BAR BENDS SHALL BE 10 BAR DIA.
5. SETDOWNS AND STEPS ARE DENOTED ON PLANS AS:

6. REFER TO TENSION LAP SPLICE TABLE (FOR DIMENSION 'L').

SUSPENDED FLOOR SETDOWNS SD4/2 (N.T.S)

NOTES

1. FOR PENETRATIONS LESS THAN 300 X 300 mm, BARS TO BE RE-ARRANGED AROUND PENETRATION.
2. FOR PENETRATIONS GREATER THAN 300 X 300 mm, BUT LESS THAN 1000 X 1000 mm USE ABOVE DETAILS.
3. FOR PENETRATIONS GREATER THAN 1000 X 1000 mm USE ABOVE DETAILS UNLESS NOTED OTHERWISE ON PLANS.
4. LOCATION OF PENETRATIONS TO BE TO THE APPROVAL OF THE SUPERINTENDENT.

PENETRATIONS IN SLABS - STANDARD DETAIL SD5/2 (NTS)

TYPICAL WALL REINFORCEMENT SCHEDULE			
WALL THICKNESS (mm)	ALTERNATIVE REINFORCEMENT BARS		FABRIC
	HORIZONTAL	VERTICAL	
150	N12–200 C	N12–200 C	SL102 C
200	N12–300 E.F. U.N.O.	N12–300 E.F. U.N.O.	N/A
250	N12–250 E.F. U.N.O.	N12–250 E.F. U.N.O.	N/A
MINIMUM SPLICE LENGTHS U.N.O.			
BAR SIZE	HORIZONTAL	VERTICAL	
N12	400	350	
N16	650	550	
FOR MESH SPLICE DETAILS REFER TO STANDARD DETAIL SD3/1 ON DRG S05.			
C - CENTRAL E.F. - EACH FACE			

TYPICAL WALL REINFORCEMENT SCHEDULE SD6/2

NOTES:
1. WALL REINFORCEMENT SHOWN IN THIS TABLE PROVIDES A MINOR DEGREE OF CRACK CONTROL TO RESTRAINED WALLS (AS3600 CLAUSE 11.6.2)
2. WALL REINFORCEMENT IN THE ABOVE TABLE APPLIES EXCEPT WHERE SHOWN OTHERWISE ON PLAN.

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Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

Drawn MLJ	Signed	Date	
Designed VA	Signed	Date	
Verified	Signed	Date	
Approved	Signed	Date	

Drawing Title: STANDARD DETAILS SHEET 2

Project No. 28803.003
Scale N.TS
Sheet Size A1
Drawing No. S06
Rev. 04

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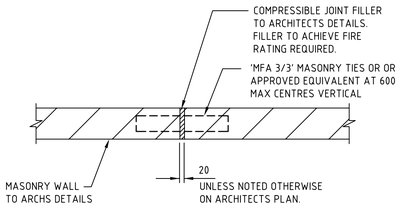
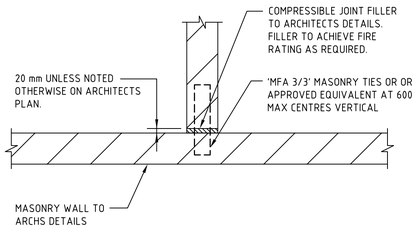


PLAN

VERTICAL CONTROL JOINT

NOTE - WALL REINFORCEMENT NOT CONTINUOUS THROUGH JOINT.

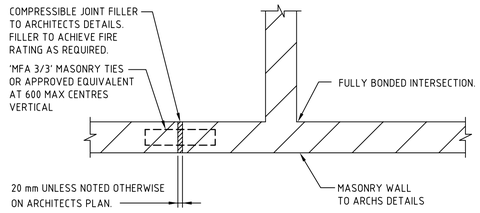
NOTE: REFER TO ARCHITECTS PLAN FOR CONTROL JOINT LOCATIONS 6m CTS MAX



PLAN

VERTICAL CONTROL JOINT

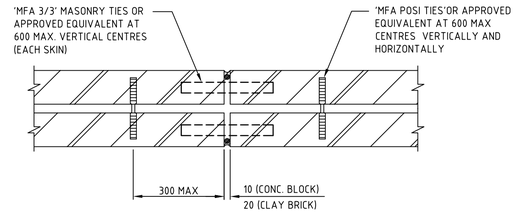
NOTE - WALL REINFORCEMENT NOT CONTINUOUS THROUGH JOINT.



PLAN

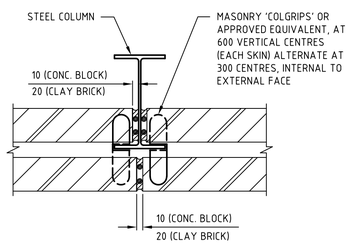
VERTICAL CONTROL JOINT

NOTE - WALL REINFORCEMENT NOT CONTINUOUS THROUGH JOINT.

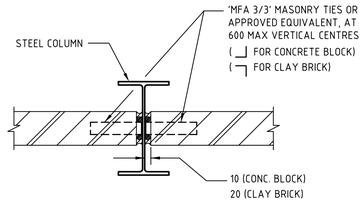


PLAN

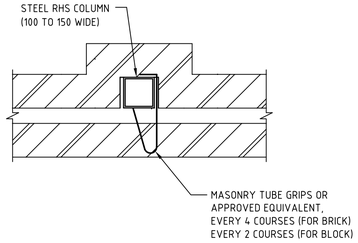
TYPICAL VERTICAL CONTROL JOINT AND CAVITY TIE DETAILS



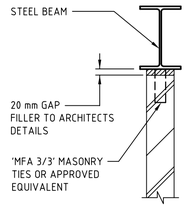
TYPICAL MASONRY WALLS TO STEEL COLUMN TYPE 1



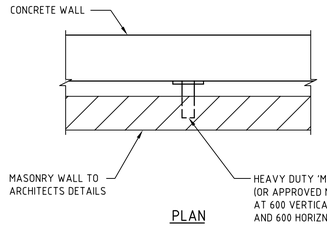
TYPICAL MASONRY WALLS TO STEEL COLUMN TYPE 2



TYPICAL MASONRY WALLS TO RHS POST

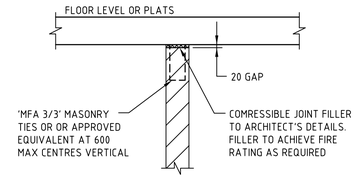


TYPICAL MASONRY WALL TO ROOF BEAM

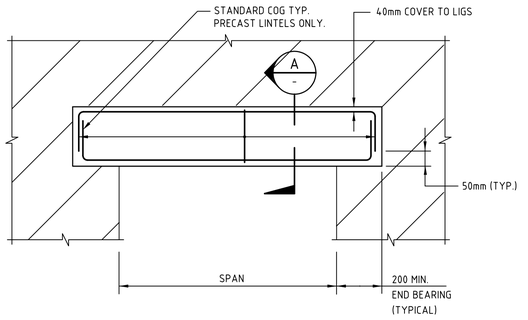


PLAN

TYPICAL MASONRY/BLOCKWORK VENEER WALL TO R.C. CONCRETE WALL



TYPICAL BLOCKWALL TO UNDERSIDE OF R.C. SLAB / PLATS



BOND BEAM PRECAST LINTEL

SECTION A -

TYPICAL PRECAST AND BOND BEAM LINTEL

PRECAST LINTEL SCHEDULE (F'c=32 MPa) NOT GENERALLY REQUIRED BY ARCHITECT				
WALL THICKNESS	SPAN (MAX.)	LINTEL SIZE DEPTH x WIDTH	REINFORCEMENT	
			BARS	LIGS
140	2400	190 x 140	1N20 T & B	R10 ⌐ AT 200
140	4400	390 x 140	1N20 T & B	R10 ⌐ AT 150
190	2400	190 x 190	2N20 T & B	R10 ⌐ AT 200
190	4400	390 x 140	2N20 T & B	R10 ⌐ AT 150

BOND BEAM LINTEL (F'c=20 MPa) GENERALLY REQUIRED BY ARCHITECT				
WALL THICKNESS	SPAN (MAX.)	LINTEL SIZE DEPTH x WIDTH	REINFORCEMENT	
			BARS	LIGS
140	1800	190 x 140	1N20 T & B	R10 ⌐ AT 300
140	2400	190 x 140	1N20 T & B	R10 ⌐ AT 150
190	1800	190 x 190	2N20 T & B	R10 ⌐ AT 300
190	2400	190 x 190	2N20 T & B	R10 ⌐ AT 150

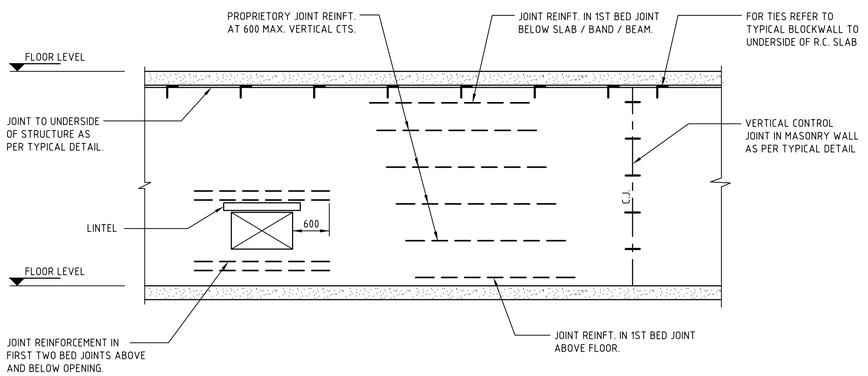
M.S. ANGLE LINTEL SCHEDULE		
UP TO SPAN (MM)	90 HOLLOW BLOCKWORK	BRICKWORK
1500	75 x 5 EA	90 x 6 EA
2000	90 x 6 EA	90 x 8 EA
2500	100 x 8 EA	150 x 90 x 8 UA
3000	150 x 90 x 8 UA	150 x 90 x 10 UA

LINTEL NOTES:
1. PROVIDE 200 MIN. BEARING EACH END.
2. LONG LEG OF ANGLE VERTICAL.
3. ABOVE LINTEL SIZES ASSUME MASONRY ARCHING IS POSSIBLE, AND NO OTHER VERTICAL LOADS ON WALL EXCEPT FOR SELF WEIGHT.

A TYPICAL HOLLOW BLOCK

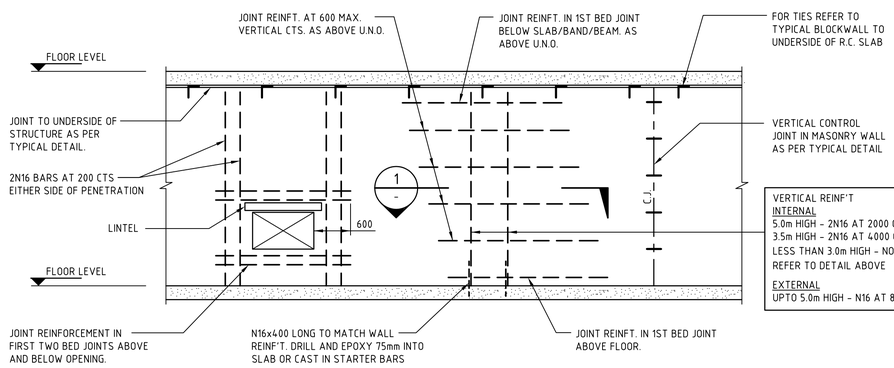
E TYPICAL BAND BEAM BLOCK

H TYPICAL LINTEL BLOCK

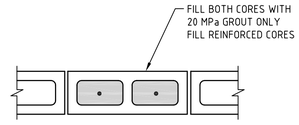


TYPICAL ELEVATION OF INTERNAL MASONRY WALL

NOTE - REFER ARCHITECT FOR LOCATIONS JOINT REINFORCEMENT TO CONSIST OF PROPRIETARY CONTINUOUS LONGITUDINAL GALVANISED WIRES (1mm NOM). MAXIMUM HEIGHT OF WALL 3000mm.



VERTICAL REINF'T
INTERNAL
5.0m HIGH - 2N16 AT 2000 CTS
3.5m HIGH - 2N16 AT 4000 CTS
LESS THAN 3.0m HIGH - NO REINF'T REQUIRED
REFER TO DETAIL ABOVE
EXTERNAL
UPTO 5.0m HIGH - N16 AT 800 CTS



SECTION 1 -

TYPICAL ELEVATION OF FULL HEIGHT REINFORCED BLOCKWALL

NOTE - REFER ARCHITECT FOR LOCATIONS

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
04	22.11.07	ISSUED FOR INFORMATION	JG		
03	22.10.07	ISSUED FOR INFORMATION	MLJ		
02	19.10.07	ISSUED FOR INFORMATION	MLJ		
01	29.08.07	DESIGN DEVELOPMENT	MLJ		

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Client: Melbourne Water

Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

	Signed	Date
Drawn MLJ		
Designed VA		
Verified		
Approved		

Drawing Title: MASONRY DETAILS SHEET 1

Project No. 28803.003
Scale N.TS
Sheet Size A1
Drawing No. S10
Rev. 04

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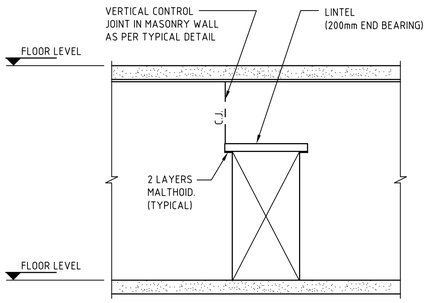
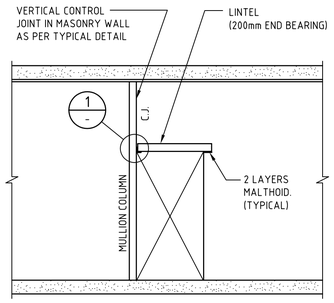
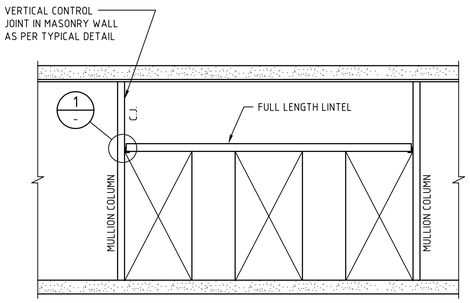


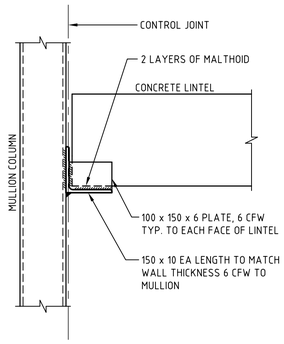
C.J. WHERE THERE IS NO MULLION



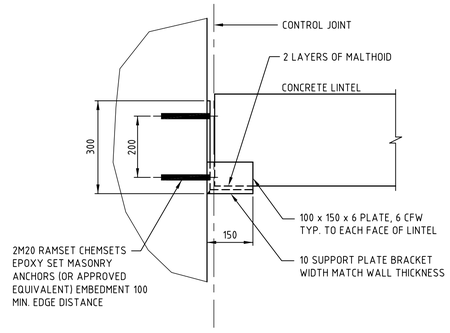
C.J. WHERE THERE IS A MULLION REQUIRED



C.J. WHERE THERE ARE MULLIONS REQUIRED AND CLOSELY SPACED DOORS

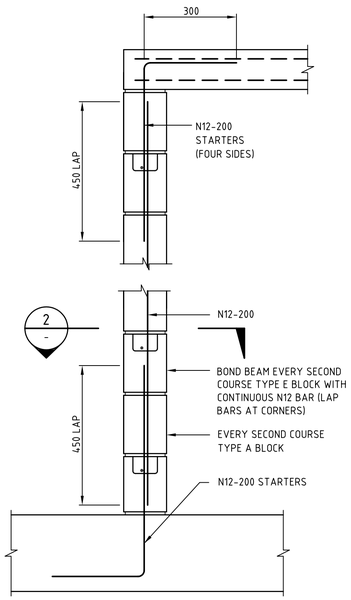


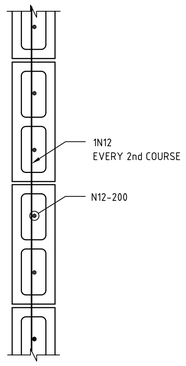
DETAIL 1/-



TYPICAL LINTEL TO CONCRETE ELEMENT CONNECTION DETAIL

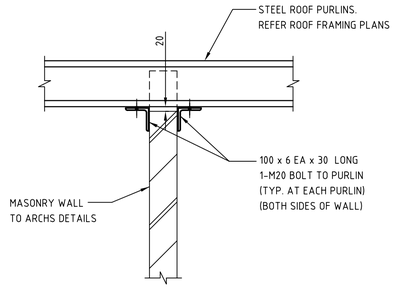
TYPICAL CONTROL JOINT DETAILS AT DOOR LOCATIONS



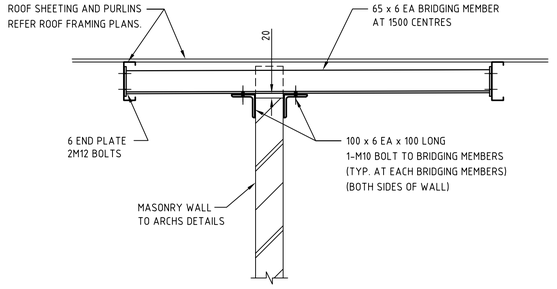


SECTION 2/-

TYPICAL SECTION THROUGH REINFORCED BLOCKWALL



TYPICAL MASONRY WALL TO STEEL ROOF PERPENDICULAR TO PURLINS



TYPICAL MASONRY WALL TO STEEL ROOF PARALLEL TO PURLINS

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
04	22.11.07	ISSUED FOR INFORMATION	JG		
03	22.10.07	ISSUED FOR INFORMATION	MLJ		
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Client: Melbourne Water

Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

Drawn	MLJ	Signed	Date
Designed	VA	Signed	Date
Verified		Signed	Date
Approved		Signed	Date

Drawing Title: MASONRY DETAILS SHEET 2

Project No. 28803.003
Scale N.TS
Sheet Size A1
Drawing No. S11
Rev. 04

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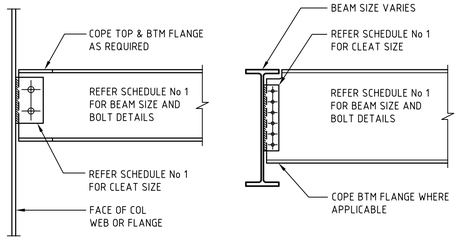
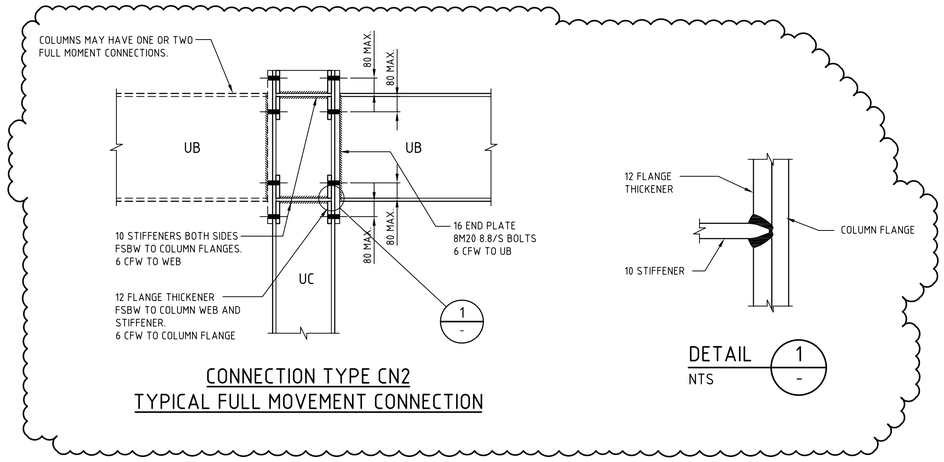
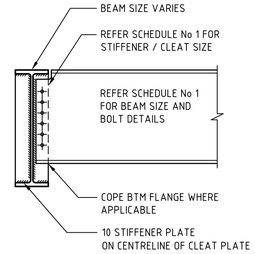


CONNECTION TYPE CN1

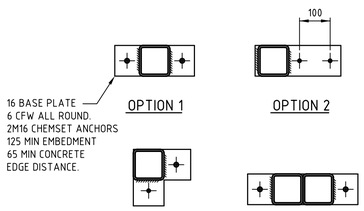
SCHEDULE No 1		
BEAM SIZE	CLEAT PL	No. OF BOLTS
150,180 PFC	10 mm	2-M20-8.8S
200,230,250 PFC	10 mm	2-M20-8.8S
300 PFC	10 mm	3-M20-8.8S
200 UB & UC	10 mm	2-M20-8.8S
250 UB & UC	10 mm	2-M20-8.8S
310 UB & UC	10 mm	3-M20-8.8S
360 UB	10 mm	3-M20-8.8S
410 UB	10 mm	4-M20-8.8S
460 UB	10 mm	5-M20-8.8S
530 UB	10 mm	6-M20-8.8S
610 UB	12 mm	7-M20-8.8S



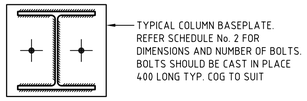
CONNECTION TYPE CN2
TYPICAL FULL MOVEMENT CONNECTION



CONNECTION TYPE CN3



TYPICAL SHS & RHS BASE PLATE DETAIL



TYPICAL UC BASE PLATE DETAIL

SCHEDULE No 2		
COLUMN SIZE	BASE PL	No OF BOLTS
150 UC	250 x 250 x 20	2M20-4.6/S
200 UC	300 x 300 x 20	2M20-4.6/S
250 UC	350 x 350 x 20	2M20-4.6/S

TYPICAL COLUMN BASE PLATE DETAILS

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04	22.11.07	ISSUED FOR INFORMATION	JG		
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Client: Melbourne Water

Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

	Signed	Date
Drawn MLJ		
Designed VA		
Verified		
Approved		

Drawing Title: STANDARD STEELWORK DETAILS SHEET 1

Project No. 28803.003
Scale N.TS
Sheet Size A1
Drawing No. S15
Rev. 04

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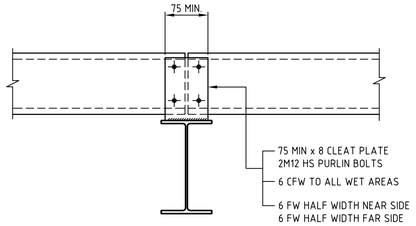
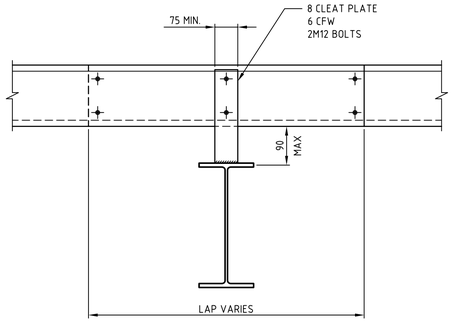
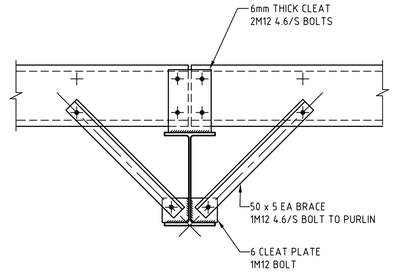


TYPICAL PURLIN CONNECTION DETAIL

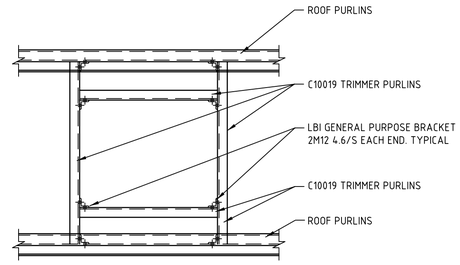


TYPICAL PURLIN LAP DETAIL TO PURLIN



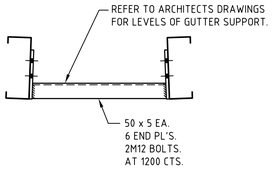
NOTE: ALL PURLIN BOLTS TO BE BHP BUILDING PRODUCTS HIGH STRENGTH M12 PURLIN BOLTS (PB1230HS) OR APPROVED EQUIVALENT.

TYPICAL FLY BRACE TO PURLIN DETAILS

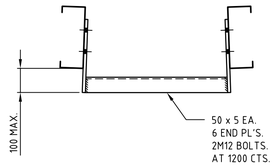


NOTE:
IF ROOF PENETRATION EXCEEDS NOMINATED PURLIN SPACING, PROVIDE DOUBLE ROOF PURLINS EACH SIDE OF PENETRATION

TYPICAL ROOF PENETRATION TRIMMER DETAIL

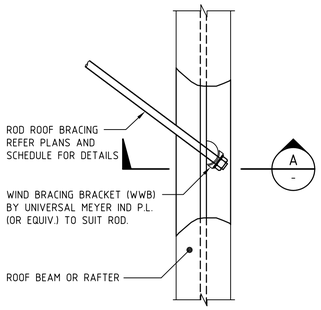


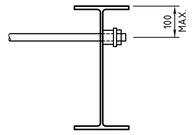
TYPICAL PURLIN STIFFENING AT GUTTER



ALTERNATIVE FOR DEEPER GUTTER SECTIONS

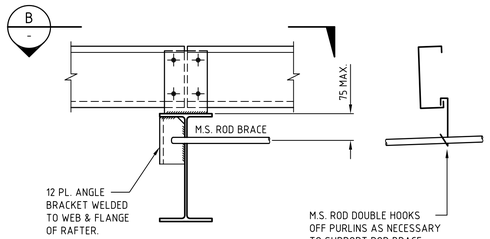
TYPICAL PURLIN STIFFENING AT GUTTER LOCATIONS



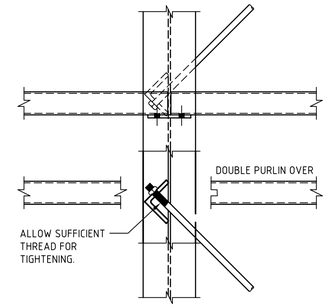


TYPICAL ROOF BRACING "D" BRACKET CONNECTION DETAILS

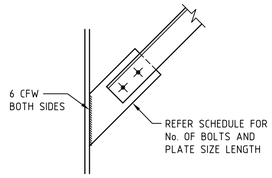
SECTION A -



TYPICAL ROOF BRACING "BR1" DETAILS

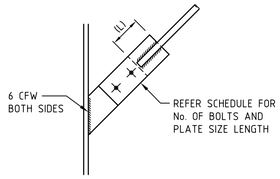


SECTION B -



SIZE	BOLTS	MINIMUM CLEAT
75 x 5 EA	2-M20 8.8/S	90 x 10 PLATE
75 x 6 EA	2-M20 8.8/S	90 x 10 PLATE
90 x 6 EA	3-M20 8.8/S	110 x 10 PLATE
100 x 6 EA	3-M20 8.8/S	130 x 10 PLATE
90 x 8 EA	4-M20 8.8/S	130 x 12 PLATE
100 x 8 EA	4-M20 8.8/S	130 x 12 PLATE

TYPICAL ANGLE BRACING END CONNECTION DETAIL



SIZE	BOLTS	MINIMUM CLEATS	MINIMUM WELD (L)
16 DIA	2-M16 8.8/S	75 x 10 PLATE	50mm
20 DIA	2-M16 8.8/S	75 x 10 PLATE	80mm
24 DIA	2-M16 8.8/S	75 x 10 PLATE	100mm
30 DIA	2-M20 8.8/S	100 x 10 PLATE	130mm

TYPICAL ROD BRACING END CONNECTION DETAIL

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
04	22.11.07	ISSUED FOR INFORMATION	JG		
03	22.10.07	ISSUED FOR INFORMATION	MLJ		
02	19.10.07	ISSUED FOR INFORMATION	MLJ		
01	29.08.07	DESIGN DEVELOPMENT	MLJ		

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Client: Melbourne Water

Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

	Signed	Date
Drawn MLJ		
Designed VA		
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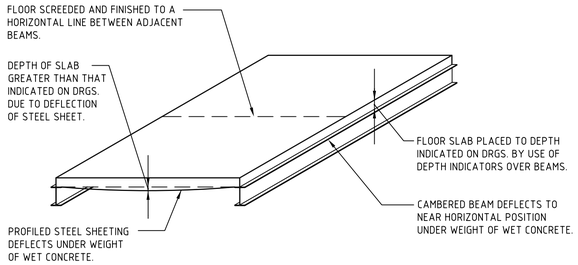
Drawing Title: STANDARD STEELWORK DETAILS SHEET 2

Project No. 28803.003
Scale N.TS
Sheet Size A1
Drawing No. S16
Rev. 04

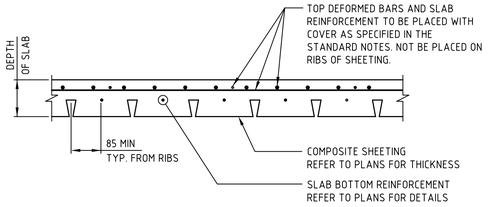
20 10 0 10 20 30 40 50 100mm



CONCRETE PLACEMENT PHILOSOPHY

STEEL DECKING NOTES

1. FOR REINFORCEMENT SIZE, SPACING AND DIMENSIONS, REFER TO PLAN.
2. ALL ADD'L TOP DEFORMED BARS TO BE PLACED ON TOP OF, AND TIED TO THE SLAB REINFORCEMENT.
3. STEEL DECKING PANELS TO BE CONTINUOUS OVER A MINIMUM OF 2 SPANS. SINGLE SPANS > 2500mm TO BE PROPPED AT MIDSPAN.
4. STEEL DECKING PANELS TO BE FASTENED TO TOP FLANGES OF STRUCTURAL STEELWITH 12mm DIA. PUDDLE WELDS AT 600 CENTRES ALONG EACH LINE OF SUPPORT USE WELDING RODS TO MANUFACTURERS SPECIFICATIONS.
5. STEEL DECKING PANELS TO HAVE THE SIDE LAPS FASTENED AT 1800 CENTRES MAX. WITH No.12 x 20 SELF DRILLING SCREWS.
6. ALL BOTTOM BARS, WHEN REQUIRED, TO BE PLACED IN STEEL DECKING TRAYS BEFORE FABRIC IS LAID AND TIED TO UNDERSIDE OF FABRIC.

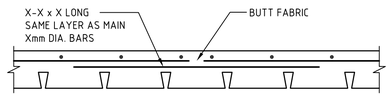


TYPICAL COMPOSITE SLAB DETAIL

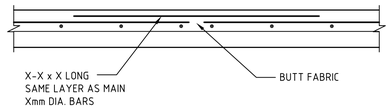
SLAB THICKNESS	MIN. TOP MESH
⩽ 150	SL62
⩾ 160	SL72
⩾ 190	SL82
⩾ 220	SL92

NOTES:
1. REINFORCEMENT IN THIS SCHEDULE PROVIDES A MINOR DEGREE OF CRACK CONTROL TO COMPOSITE SLABS IN ACCORDANCE WITH SECTION 3.11.2 OF THE COMPOSITE DESIGN MANUAL.
2. REINFORCEMENT IN THIS SCHEDULE IS IN ADDITION TO ANY REINFORCEMENT SHOWN ON STRUCTURAL PLANS
3. TOP MESH IS TO BE LAPPED IN MIDDLE THIRD OF SPAN TYPICALLY.

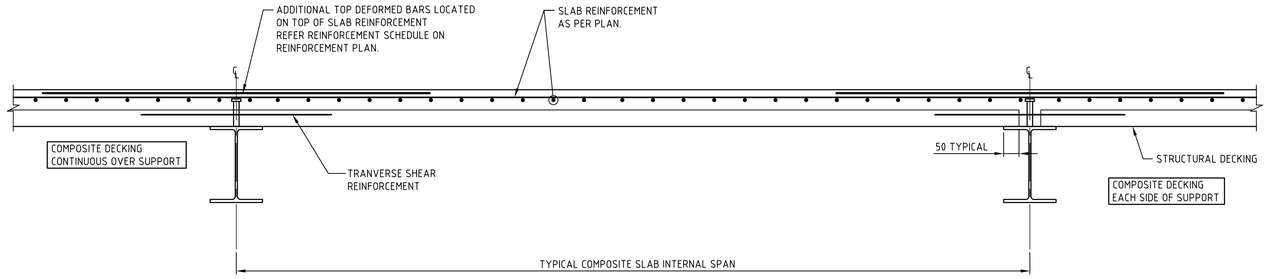
MINIMUM TOP REINFORCEMENT IN COMPOSITE SLABS U.N.O.



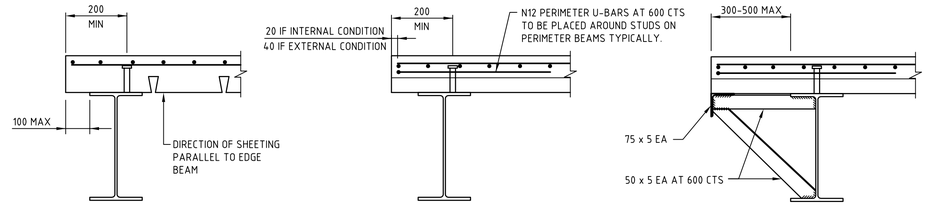
FABRIC LAP PARALLEL TO RIBS



FABRIC LAP ACROSS RIBS

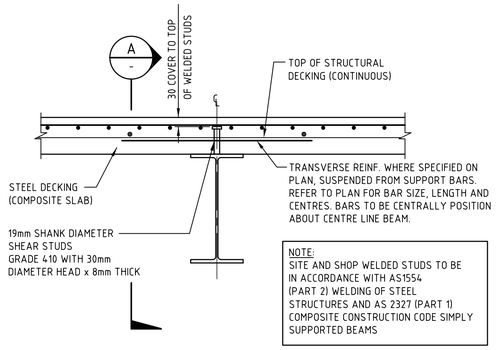


TYPICAL STEEL DECKING SLAB DETAIL

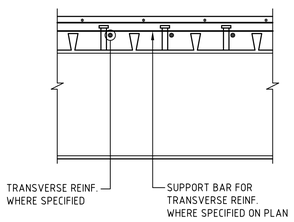


TYPE 1 TYPE 2 TYPE 3

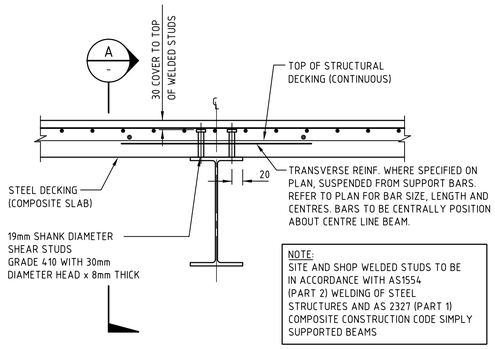
TYPICAL COMPOSITE SLAB EDGE DETAILS



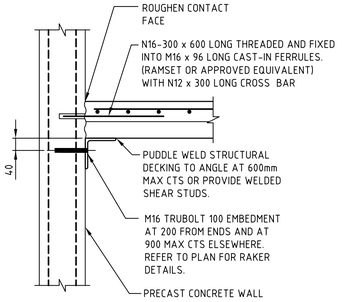
TYPICAL SINGLE STUD DETAIL
(WITH BAR TRANSVERSE REINF.)



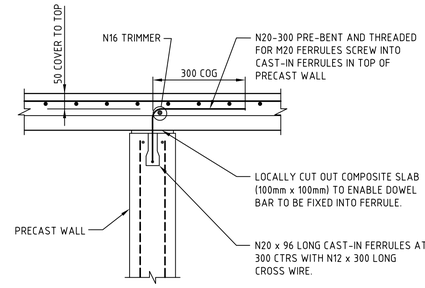
SECTION A
(WITH BAR TRANSVERSE REINF.)



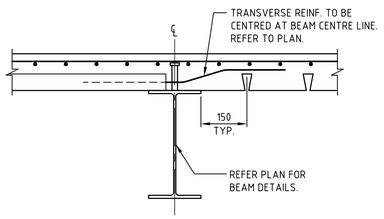
COMBINATION OF ABOVE ℄ DOUBLE STUD DETAIL
(WITH BAR TRANSVERSE REINF.)



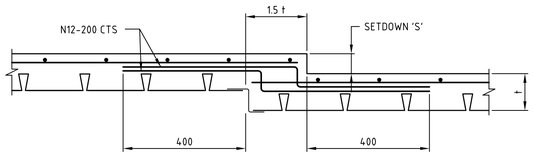
COMPOSITE SLAB TO PRECAST/CONCRETE WALL CONNECTION WHERE RAKER IS USED



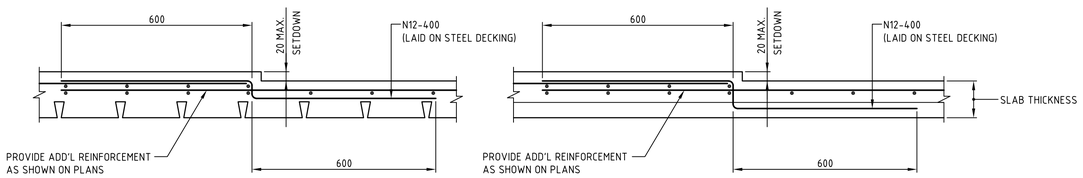
TYPICAL COMPOSITE SLAB OVER PRECAST WALL DETAIL



TYPICAL CHANGE IN DIRECTION OF COMPOSITE SLAB



TYPICAL COMPOSITE SLAB SETDOWN DETAIL
(WHERE 'S' IS LESS THAN 0.8 t)



TYPICAL STEP DOWN IN COMPOSITE SLAB DETAIL

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
04	22.11.07	ISSUED FOR INFORMATION	JG		
03	22.10.07	ISSUED FOR INFORMATION	MLJ		
02	19.10.07	ISSUED FOR INFORMATION	MLJ		
01	29.08.07	DESIGN DEVELOPMENT	MLJ		

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Client: Melbourne Water

Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

Drawn	MLJ	Signed	Date
Designed	VA	Signed	Date
Verified		Signed	Date
Approved		Signed	Date

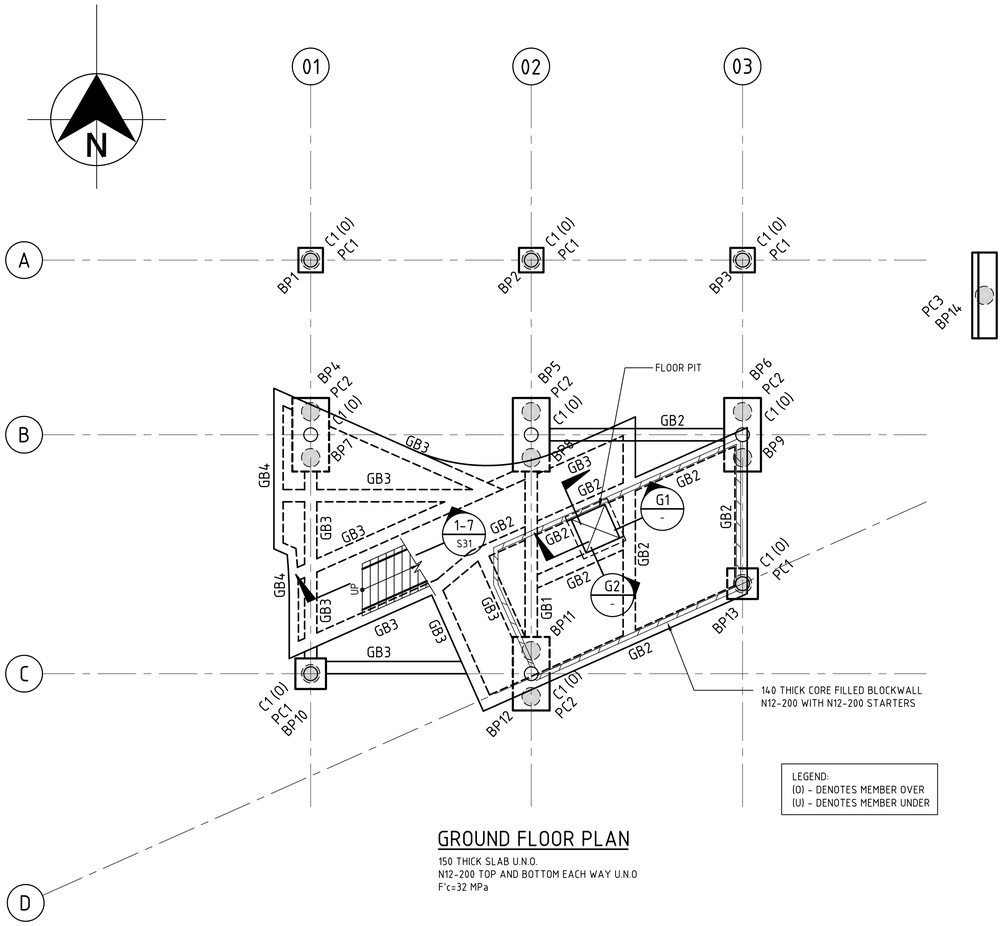
Drawing Title: COMPOSITE SLAB DETAILS SHEET 1

Project No. 28803.003
Scale N.TS
Sheet Size A1
Drawing No. S18
Rev. 04

20 10 0 10 20 30 40 50 100mm

REFERENCE DRGS.	DRG. No.
STRUCTURAL DRAWING INDEX	S01
STANDARD NOTES	S01-S02
STANDARD DETAILS	S05-S07
MASONRY DETAILS	S10-S11
STANDARD STEELWORK DETAILS	S15-S16
COMPOSITE SLAB DETAILS	S18
GROUND FLOOR PLAN	S20
FIRST FLOOR FRAMING AND REINF'T PLANS	S30
ROOF FRAMING PLAN	S40

FOR Q.S. ONLY



LEGEND:
(O) - DENOTES MEMBER OVER
(U) - DENOTES MEMBER UNDER

GROUND FLOOR PLAN

150 THICK SLAB U.N.O.
N12-200 TOP AND BOTTOM EACH WAY U.N.O
F'c=32 MPa

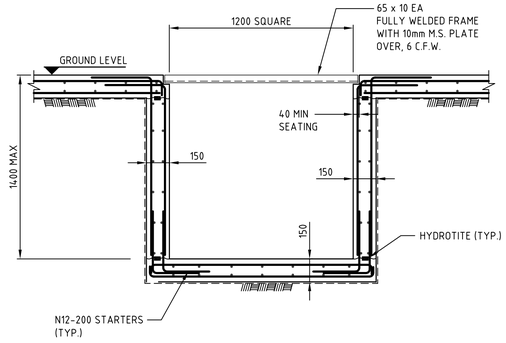
MEMBER SCHEDULE

MARK	SIZE	REMARKS
C1	450mm DIA.	8N16, N12-200 TIES
GB1	800 D x 400 W	RC BEAM, F'c=32MPa. 5N32 BOTTOM, 2N12 TOP, N12-200 LIGS, 2N12 SIDES
GB2	700 D x 400 W	RC BEAM, F'c=32MPa. 3N28 BOTTOM, 2N12 TOP, N12-250 LIGS, 2N12 SIDES
GB3	700 D x 400 W	RC BEAM, F'c=32MPa. 3N16 BOTTOM, 2N12 TOP, N12-300 LIGS, 2N12 SIDES
GB4	400 D x 300 W	RC BEAM, F'c=32MPa 3N16 BOTTOM, 2N12 TOP, N12-300 LIGS
PC1	800 x 800 x 1000 DEEP PILE CAP. REO RATE=60kg/m³	
PC2	2300 x 1200 x 1200 DEEP PILE CAP REO RATE=120 kg/m³	
PC3	REFER TO SECTION 1-5 / S31	

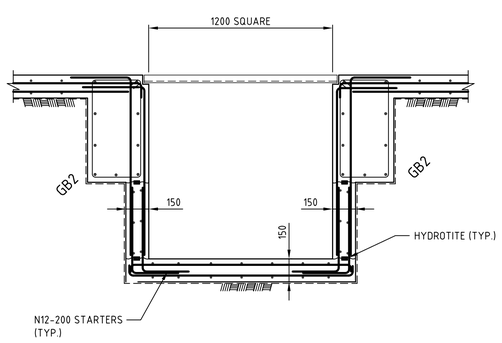
BORED PILE SCHEDULE

PILE NO.	PILE CUT OFF DEPTH 'A' (m)	INDICATIVE TOE OF PILE DEPTH 'B' (m)	SOCKET LENGTH 'S' (m)	PILE DIAMETER (mm)	DESIGN LOADS (kN)		REINFORCEMENT
					ULTIMATE	SERVICEABILITY	
BP1	1.0	14.5	9.0	600	538	406	8N24
BP2	1.0	14.5	9.0	600	538	406	8N24
BP3	1.2	14.5	9.0	600	538	406	8N24
BP4	1.2	15.0	9.5	600	564	428	8N24
BP5	1.2	15.0	9.5	600	564	428	8N24
BP6	1.2	15.0	9.5	600	564	428	8N24
BP7	1.2	15.0	9.5	600	564	428	8N24
BP8	1.2	15.0	9.5	600	564	428	8N24
BP9	1.2	15.0	9.5	600	564	428	8N24
BP10	1.2	19.5	14.0	600	772	589	8N24
BP11	1.2	15.0	9.5	600	564	428	8N24
BP12	1.2	15.0	9.5	600	564	428	8N24
BP13	1.0	19.5	14.0	600	772	589	8N24
BP14	1.0	14.5	9.0	600	538	406	8N24

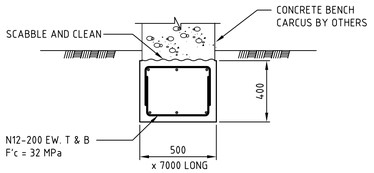
NOTE
GROUND LEVEL DEPTH = 0 PILE SOCKET AND FOUNDING LEVEL BASED ON STIFF SANDY CLAY.
CAPACITY REDUCTION FACTOR FOR GEOTECHNICAL STRENGTH IS 0.5
REINFORCEMENT COVER MIN 75mm, fc'=60MPa.



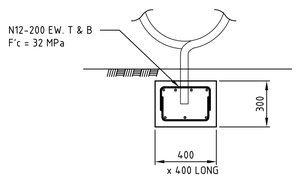
SECTION G1 / S020
1:20



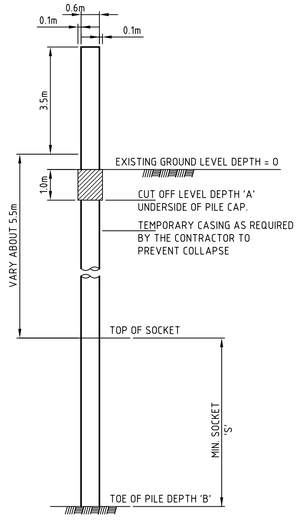
SECTION G2 / S020
1:20



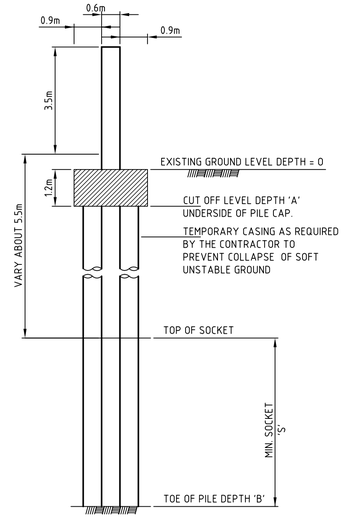
TYPICAL PARK BENCH FOOTING DETAIL 1:20



TYPICAL BIKE RACK FOOTING DETAIL 1:20



PILE ELEVATION SINGLE PILE CAP
SCALE 1:100



PILE ELEVATION DOUBLE PILE CAP
SCALE 1:100

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
05	22.11.07	ISSUED FOR INFORMATION	JG		
04	23.10.07	ISSUED FOR INFORMATION	MLJ		
03	22.10.07	ISSUED FOR INFORMATION	MLJ		
02	19.10.07	ISSUED FOR INFORMATION	MLJ		
01	29.08.07	DESIGN DEVELOPMENT	MLJ		

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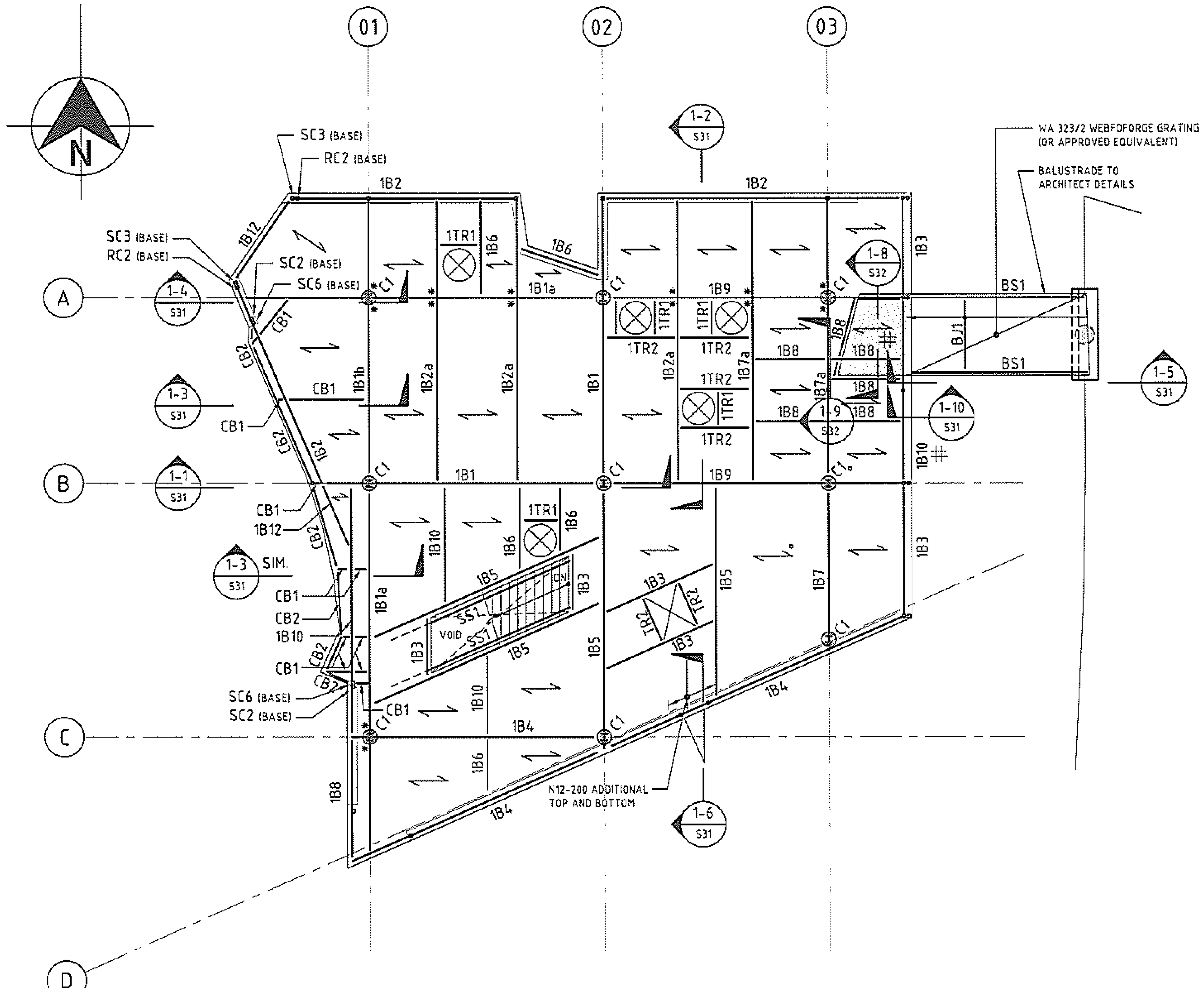
Drawn	MLJ	Signed	Date
Designed	VA	Signed	Date
Verified		Signed	Date
Approved		Signed	Date

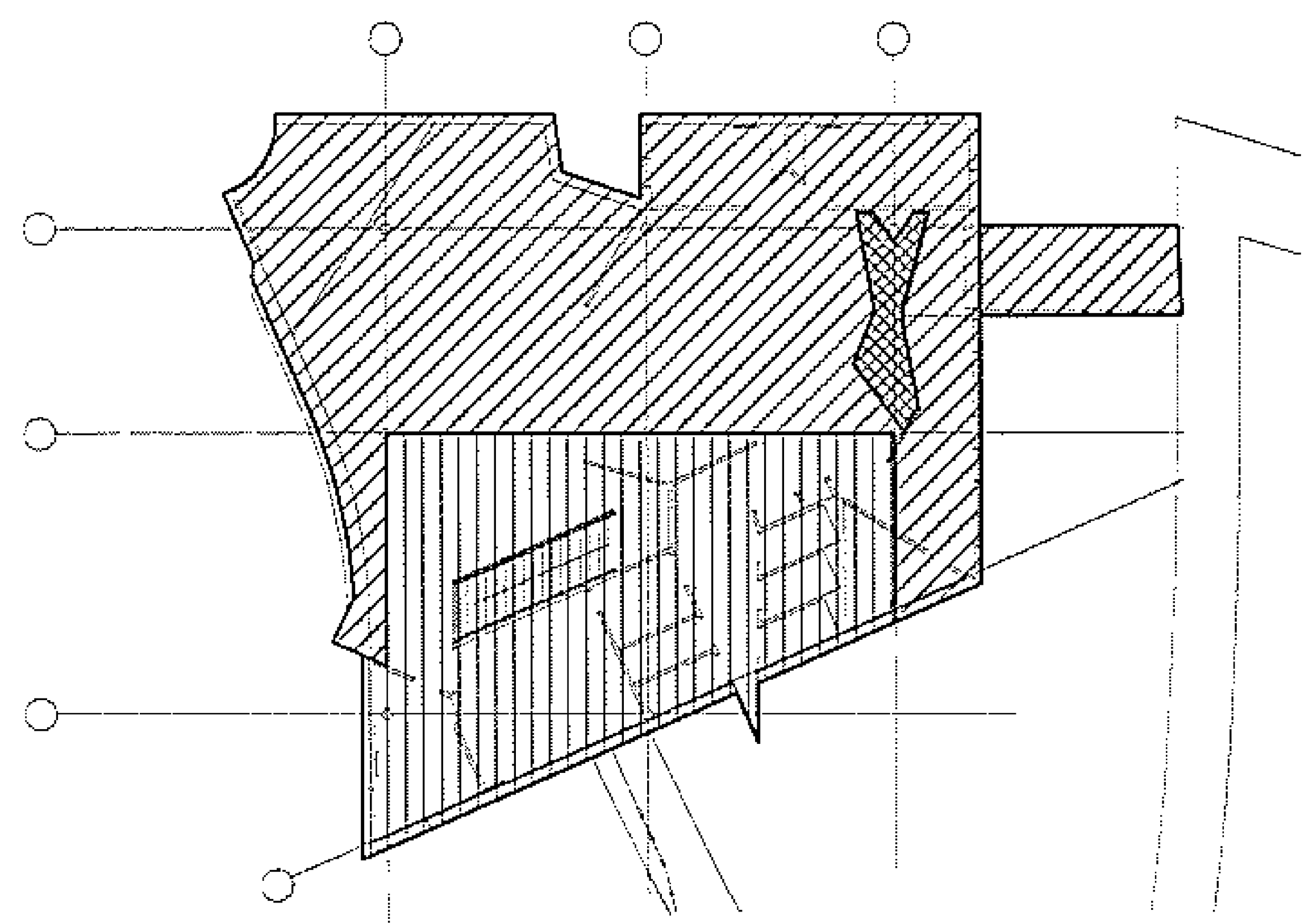
Drawing Title: GROUND FLOOR PLAN AND DETAILS

Project No. 28803.003
Scale 1:100
Sheet Size A1
Drawing No. S20
Rev. 05

20 10 0 10 20 30 40 50 100mm



FIRST FLOOR FRAMING PLAN



LOADING DIAGRAM

STEELWORK MEMBER CONNECTION SCHEDULE

MARK	SIZE	CONNECTION REFERENCE LHE	MID	RHE	STUD SET-OUT LHE	CENTRE	RHE	REMARKS
1B1	460UB82.1	REFER SECTION 1-1 / S31			200	200	200	19mm STUDS, FSBW
1B1a	610UB125	REFER SECTION 1-1 / S31			200	200	200	19mm STUDS, FSBW
1B1b	460UB59.7	REFER SECTION 1-1 / S31			200	200	200	19mm STUDS, FSBW
1B2	410UB59.7	CN3	CN3	CN3	200	200	200	19mm STUDS, FSBW
1B2a	410UB59.7	REFER SECTION 1-1 / S31			200	200	200	19mm STUDS, FSBW
1B3	310UB46.2	CN3		CN3	200	200	200	19mm STUDS, FSBW
1B4	460UB82.1	REFER SECTION 1-6 / S31			200	200	200	19mm STUDS, FSBW
1B5	460UB82.1	CN3		CN3	200	200	200	19mm STUDS, FSBW
1B6	200UB25.4	CN3		CN3	200	200	200	19mm STUDS, FSBW
1B7	410UB59.7	CN3		CN3	200	200	200	19mm STUDS, FSBW
1B7a	410UB59.7	REFER SECTION 1-1 / S31			200	200	200	19mm STUDS, FSBW
1B8	250 PFC	CN3		CN3	200	200	200	19mm STUDS, FSBW
1B9	460UB82.1	REFER SECTION 1-1 / S31			200	200	200	19mm STUDS, FSBW
1B10	360UB50.7	CN3		CN3	200	200	200	19mm STUDS, FSBW
1B11	NOT USED							
1B12	200 PFC	CN1		CN1				
1TR1	90 x 10 EA	CN1		CN1				
1TR2	200 PFC	CN1		CN1				
C1	450 DIA COLUMN.	REFER TO STD DETAILS / S05, S06						REO RATE=150kg/m³
BS1	300 PFC	REFER SECTION 1-5 / S31						
BJ1	150 PFC	CN3		CN3				
CB1	180 PFC	REFER SECTION 1-3 / S31						
CB2	150 PFC	CN1		CN1				
SS1	300 PFC	SECTION 1-7 / S31		CN3				

FOR STEELWORK CONNECTION REFERENCES - REFER TO DRG S15 AND S16 U.N.O.

LOADING LEGEND

USAGE	HATCH	DEAD LOAD	LIVE LOAD	COMMENTS
GENERAL		1.0 kPa	4.0 kPa	-
OFFICES		4.0 kPa	4.0 kPa	-
WATER TANK		1.0 kPa	30.0 kPa	-

REFERENCE DRGS.	DRG. No.
STRUCTURAL DRAWING INDEX	S01
STANDARD NOTES	S01-S02
STANDARD DETAILS	S05-S06
MASONRY DETAILS	S10-S11
STANDARD STEELWORK DETAILS	S15-S16
COMPOSITE SLAB DETAILS	S18
GROUND FLOOR PLAN	S20
FIRST FLOOR FRAMING AND REINF'T PLANS	S30
ROOF FRAMING PLAN	S40

LEGENDS:

- 140mm THICK BONDEK SLAB U.N.O. 1.0mm BONDEK N12-200 TOP, EACH WAY N12-400 BOTTOM
- F.S.B.W. BOTH SIDES, REFER TO SECTION 1-1 / S31
- 1.0m DIA PENETRATION, REFER TO ARCH DRG FOR LOCATION
- 50mm SET DOWN
- BEAM SET DOWN 50mm

NOTES :

1. FRAMING IS BASED ON PILE FOOTINGS CANTILEVERED OUT OF THE GROUND TO PROVIDE LATERAL SUPPORT
2. FIRE PROTECTION TO ARCHITECT'S DETAILS
3. ASSUMED TO BRITTLE FINISHES

TENDER
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver	App
06	12.12.07	ISSUED FOR INFORMATION	PR		
05	06.12.07	ISSUED FOR INFORMATION	MLJ		
04	22.11.07	ISSUED FOR INFORMATION	JG		
03	22.10.07	ISSUED FOR INFORMATION	MLJ		
02	19.10.07	ISSUED FOR INFORMATION	MLJ		
01	29.08.07	DESIGN DEVELOPMENT	MLJ		

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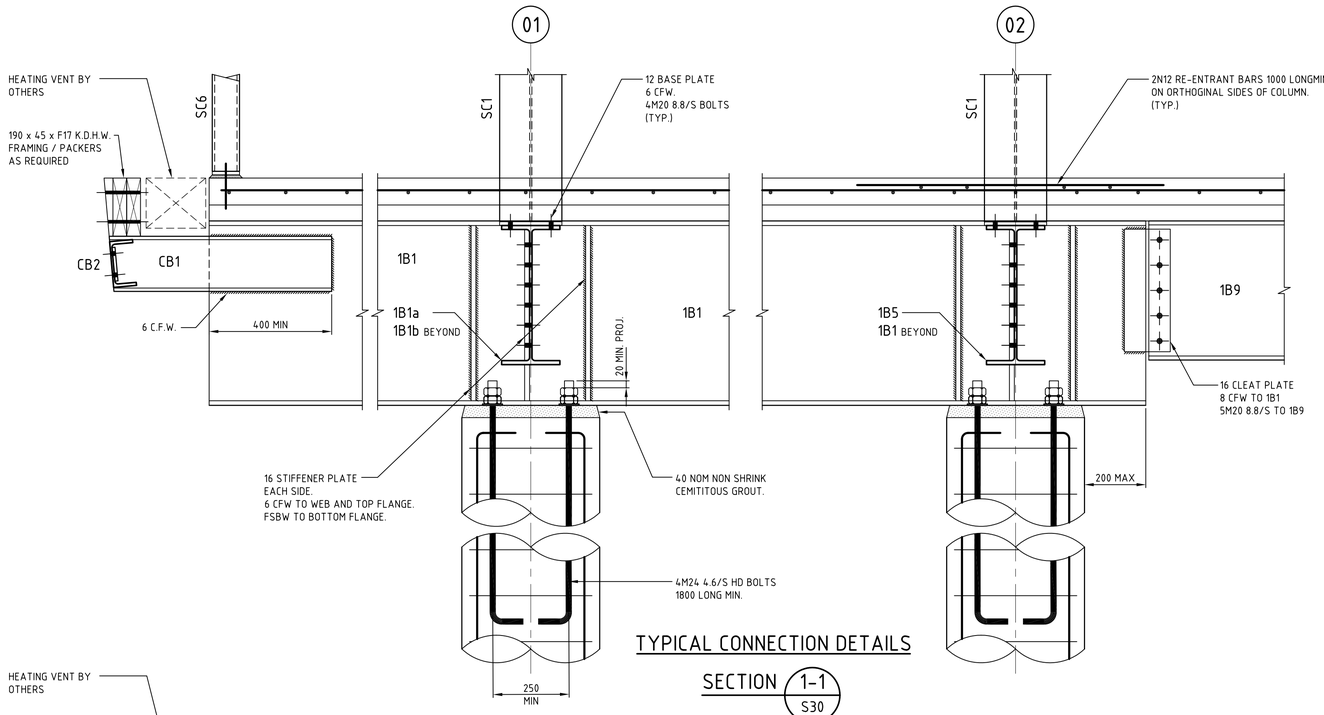
Client: Melbourne Water

Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

Drawn: MLJ | Designed: VA | Verified | Approved | Signed | Date

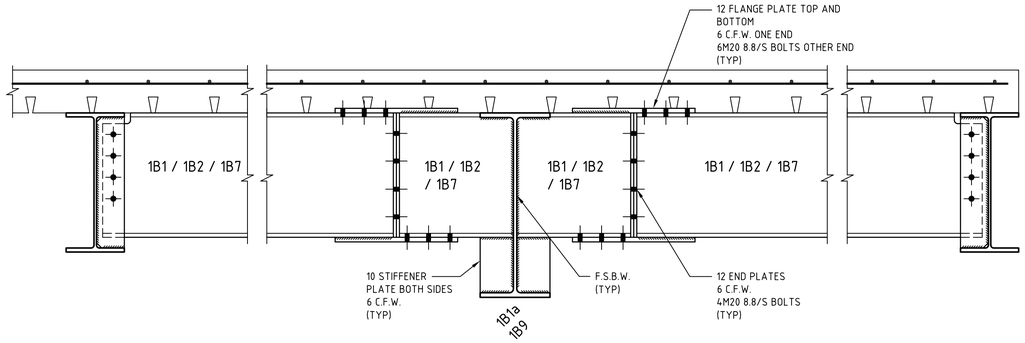
Drawing Title: FIRST FLOOR FRAMING AND REINFORCEMENT PLANS

Project No: 28803.003
Scale: 1:100
Sheet Size: A1
Drawing No: S30
Rev: 06

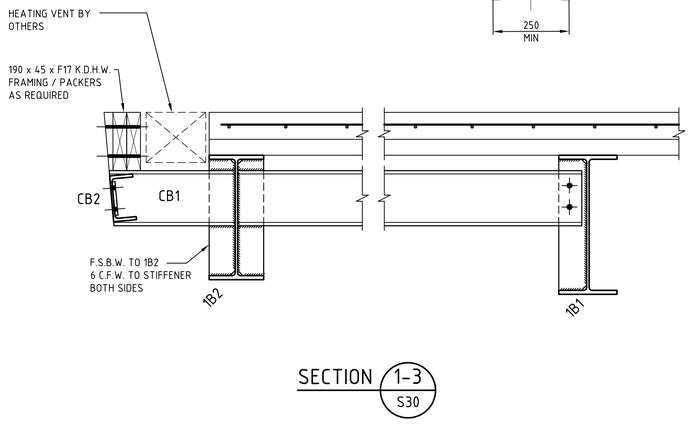


TYPICAL CONNECTION DETAILS

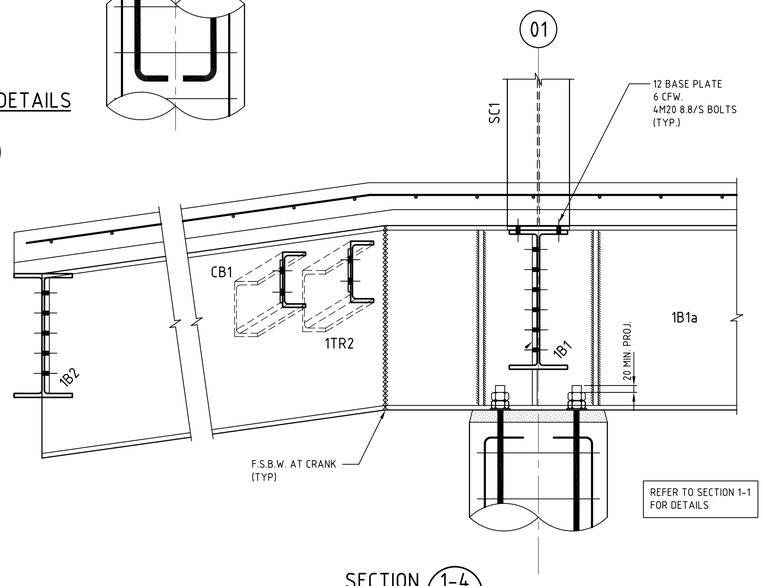
SECTION 1-1 S30



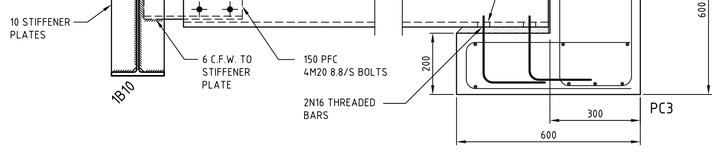
SECTION 1-2 S30



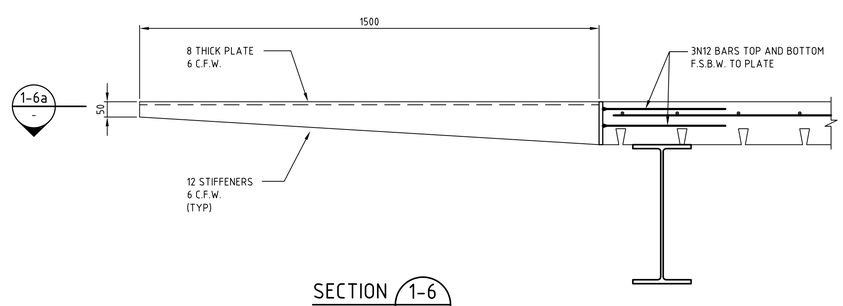
SECTION 1-3 S30



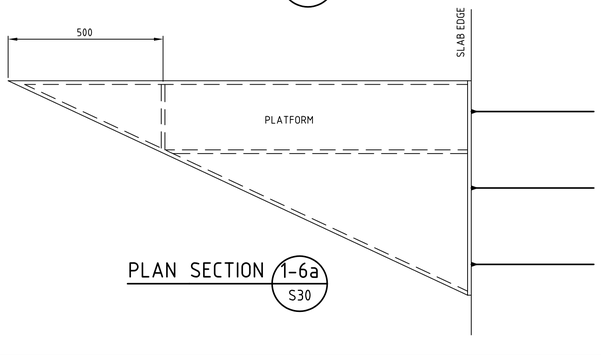
SECTION 1-4 S30



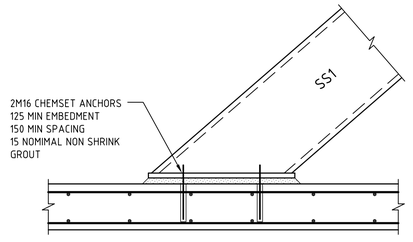
SECTION 1-5 S30



SECTION 1-6 S30



PLAN SECTION 1-6a S30



TYPICAL STAIR STRINGER BASE CONNECTION DETAIL

SECTION 1-7 S20

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
03	22.11.07	ISSUED FOR INFORMATION	JG		
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Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

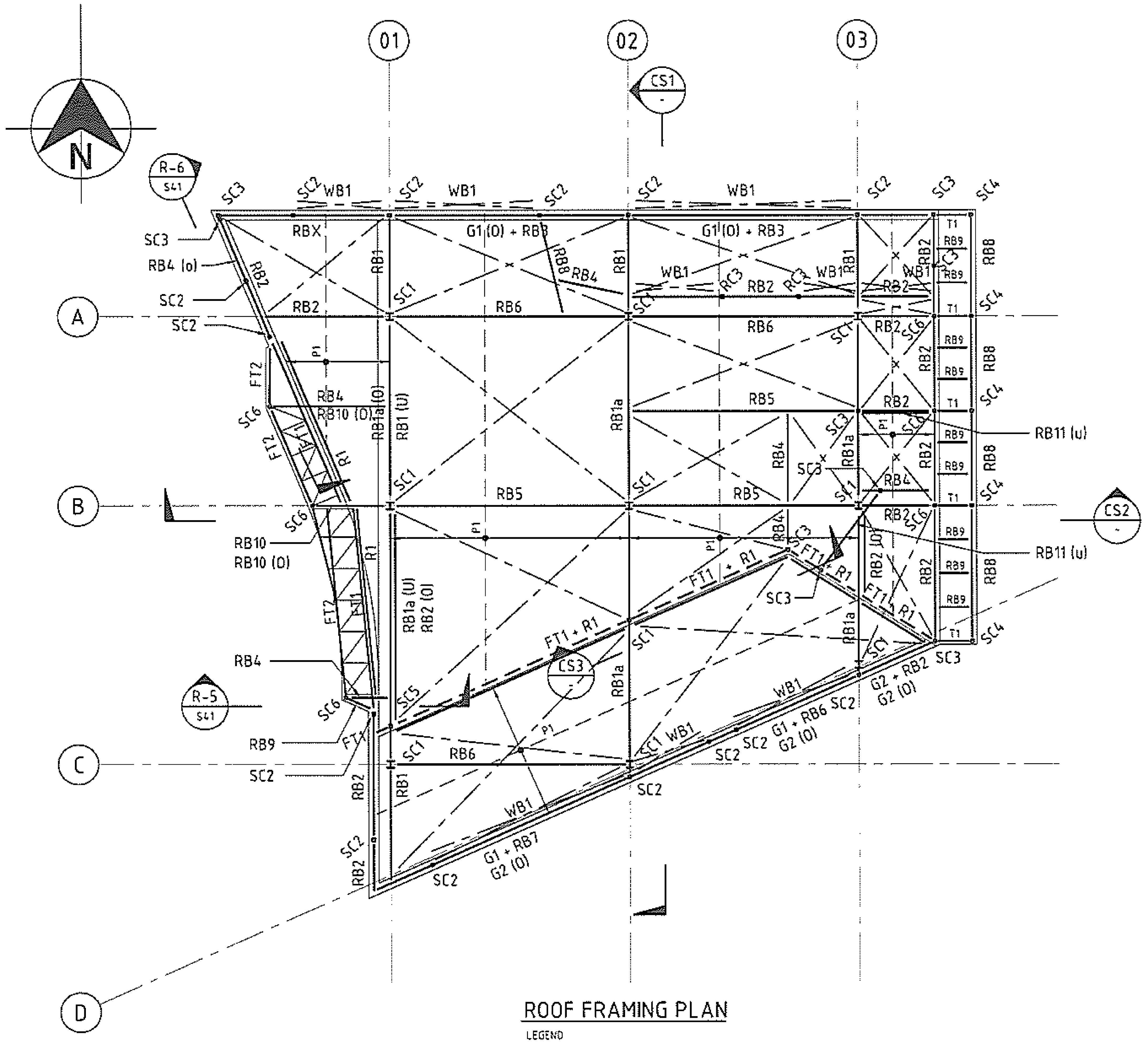
Drawn	MLJ	Signed	Date
Designed	VA	Signed	Date
Verified		Signed	Date
Approved		Signed	Date

Drawing Title: FIRST FLOOR DETAILS SHEET 1

Project No.	28803.003
Scale	AS NOTED
Sheet Size	A1
Drawing No.	S31
Rev.	03

20 10 0 10 20 30 40 50 100mm

REFERENCE DRGS.	DRG. No.
STRUCTURAL DRAWING INDEX	S01
STANDARD NOTES	S01-S02
STANDARD DETAILS	S05-S06
MASONRY DETAILS	S10-S11
STANDARD STEELWORK DETAILS	S15-S16
COMPOSITE SLAB DETAILS	S18
GROUND FLOOR PLAN	S20
FIRST FRAMING AND REINFORCEMENT PLANS	S30
ROOF FRAMING PLAN	S40



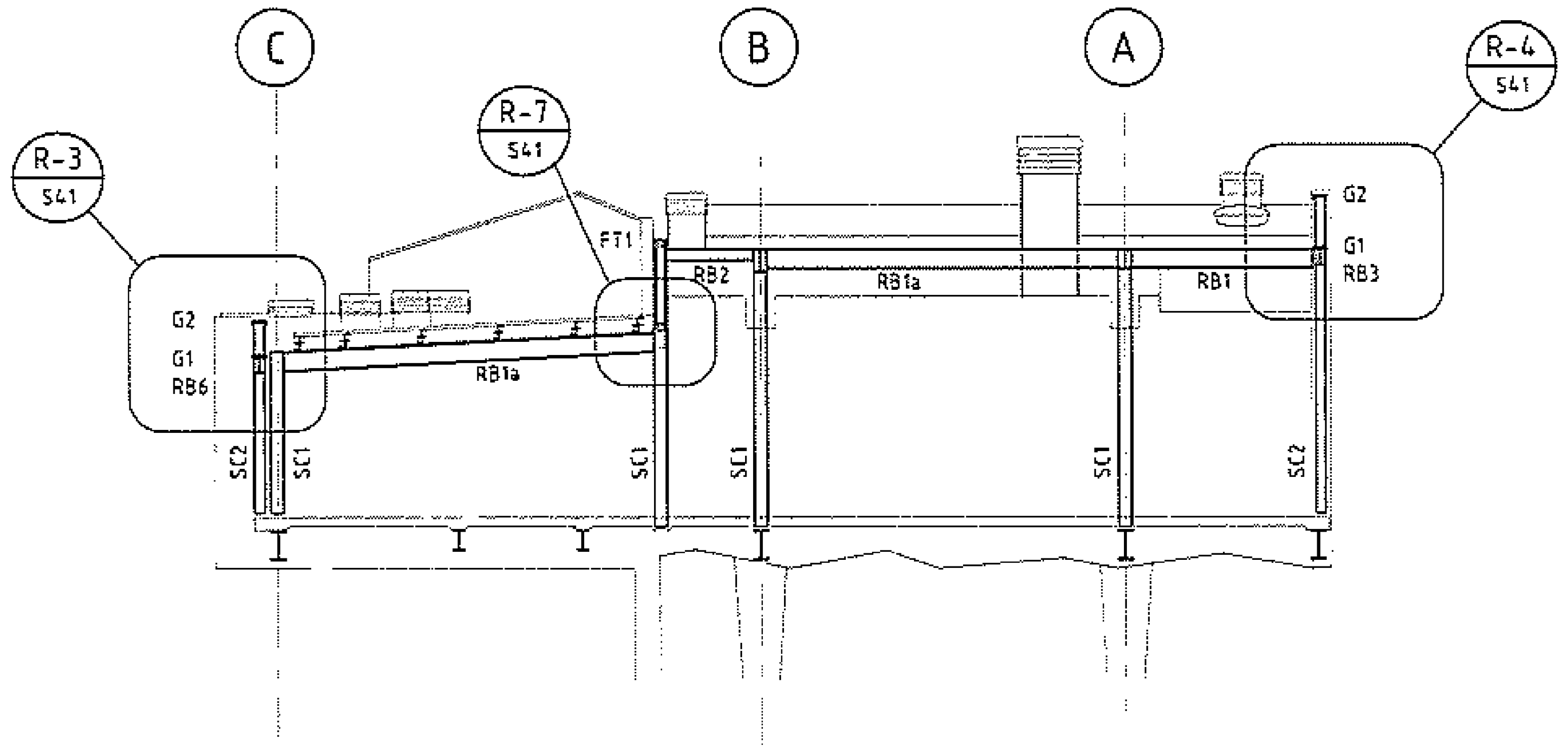
ROOF FRAMING PLAN

LEGEND
(O) - DENOTES MEMBER OVER
(U) - DENOTES MEMBER UNDER

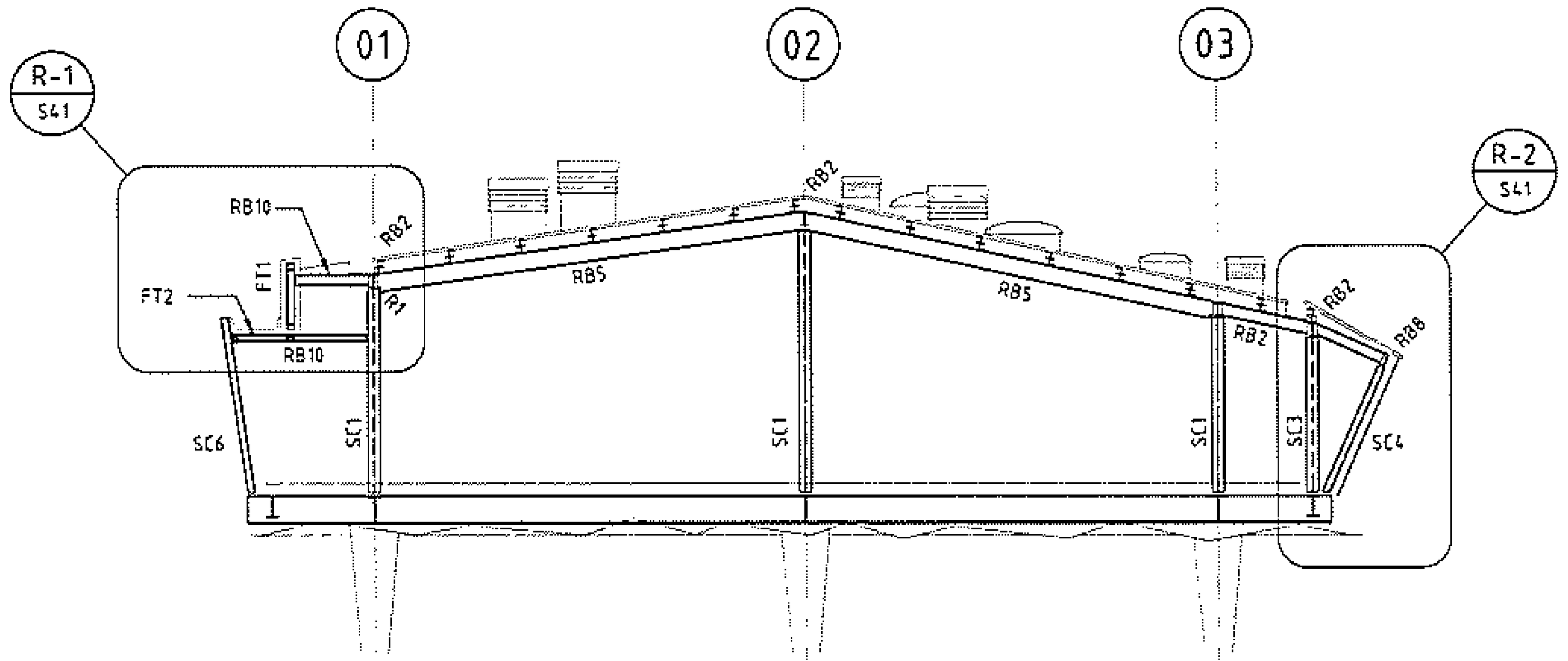
STEELWORK MEMBER REFERENCE SCHEDULE				
MARK	SIZE	CONNECTION REFERENCE		REMARKS
RB1	310 UB 40 4	CN1	CN1	-
RB1a	310 UB 40 4	CN3	CN3	PORTAL FRAME MEMBER
RB2	200 UB 25 4	CN1	CN1	-
RB3	250 UB 31 4	CN1	CN1	-
RB4	150 PFC	CN1	CN1	-
RB5	360 UB 50 7	CN1	CN1	-
RB6	NOT USED	-	-	-
RB7	200 UB 25 4	CN1/CN3	CN1/CN3	-
RB8	200 PFC	CN1	CN1	-
RB9	100 PFC	CN1	CN1	-
RB10	180 PFC	CN1	CN1	-
RB11	150 PFC			SLIDING DOOR SUPPORT
FT1	89 x 5 SHS	REFER TO SECTION R-6/S41		FASCIA TRUSS, FULLY WELDED FRAME
FT2	125 x 75 x 5 RHS	REFER TO SECTION R-5/S41		HORIZONTAL TRUSS, FULLY WELDED FRAME
R1	90 x 8 EA	6 CFW TO FT1		RAKER
T1	150 PFC			
FOR STEELWORK CONNECTION REFERENCES - REFER TO DRG S15 AND S16 U.N.O.				

STEELWORK MEMBER REFERENCE SCHEDULE				
MARK	SIZE	CONNECTION REFERENCE		REMARKS
SC1	200 UC 52 2	REFER TO SECTION 1-1/S31		PORTAL FRAME MEMBER
SC2	100 x 5 0 SHS	12 BASE PLATE, 6 CFW, 2M16 CHEMSET ANCHORS, 125 MIN EMBEDMENT, 100 MIN SPACING, 10 NOM NON SHRINK GROUT		-
SC3	89 x 5 0 SHS	12 BASE PLATE, 6 CFW, 2M16 CHEMSET ANCHORS, 125 MIN EMBEDMENT, 100 MIN SPACING, 10 NOM NON SHRINK GROUT		-
SC4	89 x 5 0 SHS	12 BASE PLATE, 6 CFW, 2M16 CHEMSET ANCHORS, 125 MIN EMBEDMENT, 100 MIN SPACING, 10 NOM NON SHRINK GROUT.		RAKING COLUMN
SC5	89 x 5 0 SHS	10 BASE PLATE, 6 CFW, 4M16 8 8/S BOLTS		STUB COLUMN
SC6	101 x 5 CHS	12 BASE PLATE, 6 CFW, 2M16 CHEMSET ANCHORS, 125 MIN EMBEDMENT, 100 MIN SPACING, 10 NOM NON SHRINK GROUT.		RAKING COLUMN
BR1	16mmφ ROD	-	-	TREADED
WB1	16mmφ ROD	-	-	TREADED
P1	Z20024 AT 1200 CTS	-	-	2 BRACES PER SPAN, LAPPED 900mm, PURLINS CONTINUOUS OVER SUPPORT
P2	75 x 6 EA AT 1200 CTS	-	-	
G1	200 PFC	CN1	CN1	GIRT
G2	150 PFC	CN1	CN1	GIRT
FOR STEELWORK CONNECTION REFERENCES - REFER TO DRG S15 AND S16 U.N.O.				

STEEL WALL STUDS SCHEDULE	
HEIGHT	SIZE
UP TO 3m	75 x 5 SHS
3m TO 4 5m	89 x 5 SHS



SECTION CS1 -



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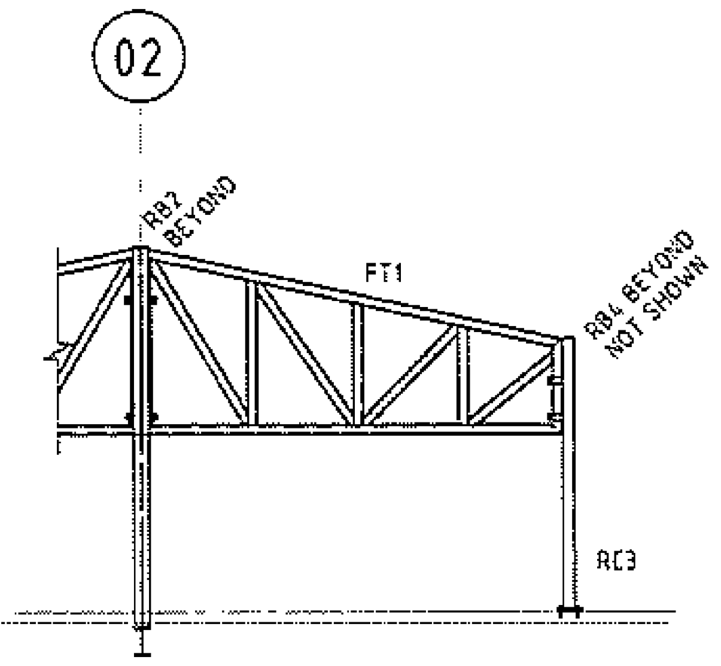

SECTION CS3 -

TENDER
NOT FOR CONSTRUCTION

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06	12.12.07	ISSUED FOR INFORMATION	PR		
05	06.12.07	ISSUED FOR INFORMATION	MLJ		
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03	22.10.07	ISSUED FOR INFORMATION	MLJ		
02	19.10.07	ISSUED FOR INFORMATION	MLJ		
01	29.08.07	DESIGN DEVELOPMENT	MLJ		

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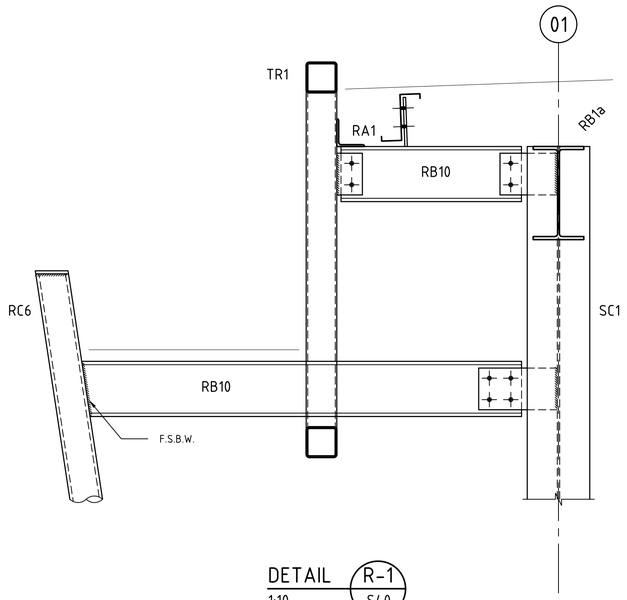
Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

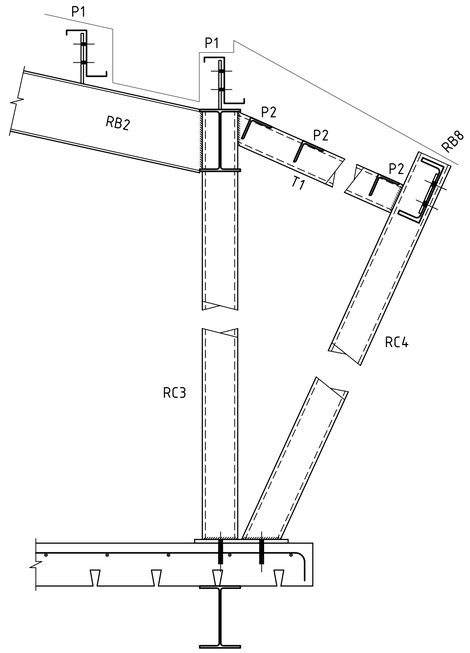
Drawn: MLJ
Designed: VA
Verified:
Approved:

Drawing Title: ROOF FRAMING PLAN

Project No: 28803.003
Scale: 1:100
Sheet Size: A1
Drawing No: S40
Rev: 06



DETAIL R-1 S40
1:10



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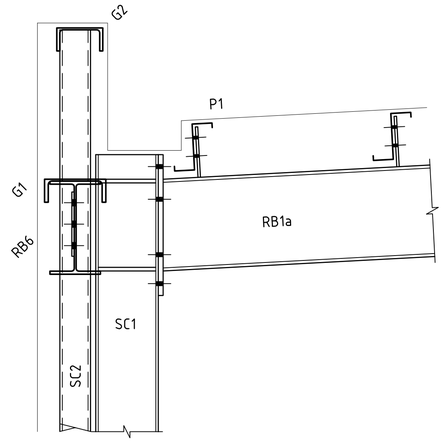

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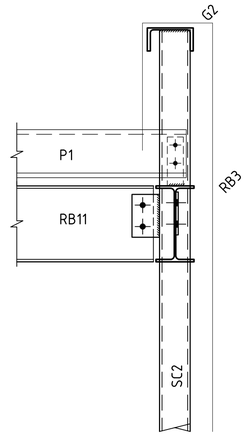

DETAIL R-4 S40
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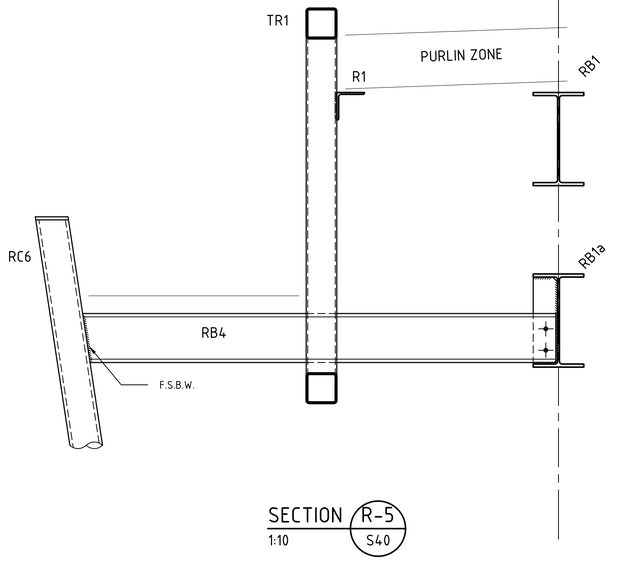

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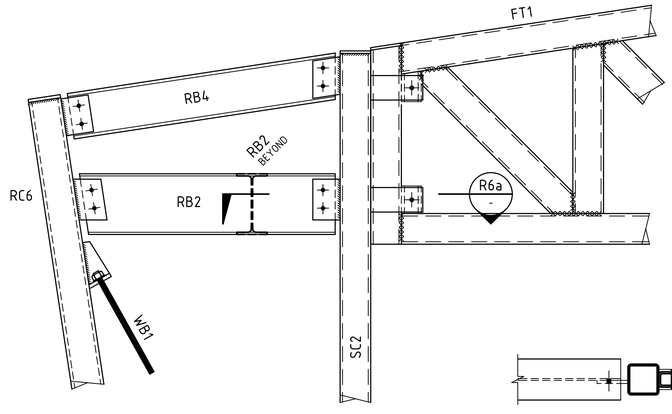

SECTION R-6 S40
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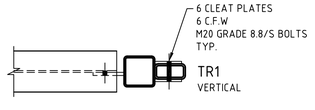

SECTION R6a -
1:10

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Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

	Signed	Date
Drawn: MLJ		
Designed: VA		
Verified		
Approved		

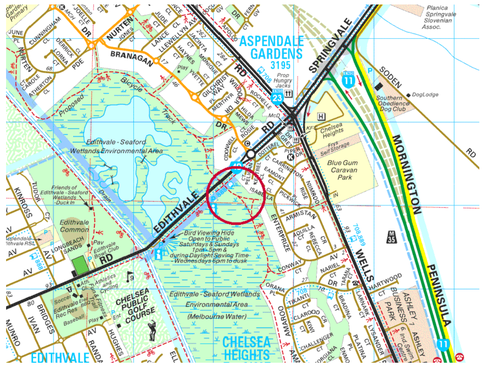
Drawing Title: ROOF FRAMING DETAILS SHEET 1

Project No.: 28803.003
Scale: AS NOTED
Sheet Size: A1
Drawing No.: S41
Rev.: 01

20 10 0 10 20 30 40 50 100mm

EDITHVALE-SEAFORD
WETLANDS DISCOVERY CENTRE

DRAWING INDEX



GENERAL NOTES

G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND DRAWINGS ISSUED BY THE SUPERINTENDENT AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.

G2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE (U.N.O.).

G3. ALL RADII ARE EXPRESSED IN METRES. (U.N.O.)

G4. EXISTING CONTOURS, LEVELS AND FEATURES ARE INDICATIVE ONLY

G5. ALL DIMENSIONS RELEVANT TO SETTING OUT SHALL BE CONFIRMED AND VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION IS COMMENCED. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE SUPERINTENDENT.

G6. WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE RELEVANT CURRENT VICROADS STANDARDS EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

G7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FLOW DIVERSION NECESSARY TO COMPLETE THE WORKS AT HIS EXPENSE.

EXCAVATION AND PAVEMENT NOTES

B1. AFTER EXCAVATION AND COMPACTION OF SUBGRADE HAS BEEN COMPLETED THE FORMED SURFACE SHALL BE PROOF ROLLED
THE FINAL PASS SHALL BE ACCOMPANIED BYTHE VISUAL INSPECTION TO OBSERVE FOR SOFT OR COMPRESSIBLE ZONES.

B2. APPROVED FILL MATERIALS SHALL BE PLACED IN UNIFORM LAYERS OF LOOSE THICKNESS NOT GREATER THAN 150mm AND COMPACTED AND PROOF ROLLED.

B3. THE CONTRACTOR SHALL ENSURE THAT ALL WORK SITES ARE MAINTAINED IN A SAFE AND STABLE CONDITION AND THAT ALL PARTS ARE WELL DRAINED AT ALL TIMES. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TEMPORARY SITE DRAINAGE TO THE APPROVAL OF THE SUPERINTENDENT.

B4. UNLESS NOTED OTHERWISE ALL BATTERS SHAPED TO FINAL PROFILE SHALL NOT BE STEEPER THAN:
- 1 IN 1 CUT IN ROCK
- 1 IN 4 CUT ELSEWHERE
- 1 IN 4 FILL

B5. TEMPORARY CONSTRUCTION BATTERS SHALL BE LIMITED TYPICALLY TO:
- 1 IN 1 CUT IN ROCK
- 1 IN 2 CUT ELSEWHERE

THE SUPERINTENDANTS APPROVAL IS NECESSARY WHERE STEEPER SLOPES ARE PROPOSED BY THE CONTRACTOR. STABILISATION AND EROSION PROTECTION SHALL BE PROVIDED AS DIRECTED BY THE SUPERINTENDENT, AT THE CONTRACTOR'S EXPENSE.

CONCRETE NOTES

R1. ALL WORKMANSHIP AND MATERIALS SHALL BE GENERALLY IN ACCORDANCE WITH THE SPECIFICATION.

R2. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.

R3. ALL FABRIC LAPS SHALL BE FULL STRENGTH TO AS3600.

R4. WELDING OF REINFORCEMENT IS NOT PERMITTED WITHOUT THE APPROVAL OF THE SUPERINTENDENT.

R5. ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED IN ITS CORRECT POSITION DURING CONCRETING BY APPROVED BAR-CHAIR, SPACERS OR SUPPORT BARS.

R6. REINFORCEMENT FABRIC SHALL BE IN ACCORDANCE WITH AS1304

R7. FORMWORK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATION.

R8. CAST IN SITU STRENGTH SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE AND SHALL BE SUPPLIED IN ACCORDANCE WITH AS1379 (READY MIXED CONCRETE)
. . . . 32 MPa (28 DAY COMPRESSIVE STRENGTH)
- CONCRETE PAVEMENTS, HEADWALLS, RETAINING WALLS, CAUSEWAYS & CULVERTS
- ELSEWHERE . . . 25 MPa (28 DAY COMPRESSIVE STRENGTH)

R9. DETAILS OF CONCRETE MIX, AGGREGATE SIZE AND COLOUR, METHOD OF CURING AND FINISH SHALL BE SUBMITTED TO THE SUPERINTENDENT FOR APPROVAL.

R10. PRE-CAST CONCRETE UNITS TO CONFORM TO VICROADS SPECIFICATION REQUIREMENTS.

DRAINAGE NOTES

D1. ALL STORMWATER DRAINAGE PIPES GREATER THAN 150mm DIA SHALL BE REINFORCED CONCRETE CLASS 2(X) RUBBER RING JOINTED (U.N.O.) IN ACCORDANCE WITH THE SPECIFICATION.
ALL 150mm DIA PIPES TO BE UPVC CLASS SH (U.N.O.) IN ACCORDANCE WITH THE SPECIFICATION

D2. PIPELAYING SHALL COMMENCE AT THE DOWNSTREAM END OF THE WORK UNLESS OTHERWISE AGREED WITH THE SUPERINTENDENT. PIPE SOCKETS AND REBATES SHALL POINT UPSTREAM.

D3. TOP OF PIT COVER LEVELS (FINISHED) ARE INDICATIVE ONLY, COVER LEVELS SHALL MATCH TOP OF ADJACENT KERB LEVEL FOR SIDE ENTRY PITS AND PAVEMENT LEVEL FOR JUNCTION PITS.
TEMPORARY ENTRY TO PITS AND PIPES AT BULK EARTHWORKS STAGE SHALL BE PROVIDED TO THE APPROVAL OF THE SUPERINTENDENT.

D4. PIPES UNDER PAVEMENTS HAVE LIMITED CONSTRUCTION COVER (TYPICAL). THE CONTRACTOR SHALL PROTECT PIPES AGAINST DAMAGE DURING CONSTRUCTION.

D5. PIT LOCATION COORDINATES ARE NOT NECESSARILY TO CENTRE OF PIT. REFER TO THE RELEVANT PIT TYPE DETAIL FOR SET OUT POINT (SOP).

BIORETENTION MEDIA SPECIFICATION

NOTE: TO BE READ IN CONJUNCTION WITH "GUIDELINE SPECIFICATIONS FOR SOIL MEDIA IN A BIORETENTION SYSTEM (FAWB, MARCH 2007)

1. BIORETENTION SYSTEMS WITH IMPORTED MEDIA

THE BIORETENTION SOIL MEDIA SPECIFICATIONS REQUIRE FILTER MEDIA (400mm DEEP), A TRANSITION LAYER (100mm DEEP) AND A DRAINAGE LAYER (150mm DEEP).

2. FILTER MEDIA – GENERAL DESCRIPTION

THE MATERIAL CAN BE OF SILICEOUS OR CALCAREOUS ORIGIN. ONLY, MINIMAL LIGHT COMPACTION TO AVOID SUBSIDENCE AND UNEVEN DRAINAGE SHOULD BE CARRIED OUT. THE BIORETENTION SYSTEM WILL OPERATE SO THAT WATER WILL INFILTRATE INTO THE FILTER MEDIA AND MOVE VERTICALLY DOWN THROUGH THE PROFILE.
IN GENERAL, THE MEDIA SHOULD BE A SANDY LOAM TO LOAMY SAND SOIL WITH AN APPROPRIATELY HIGH PERMEABILITY UNDER COMPACTION AND SHOULD BE FREE OF RUBBISH AND DELETERIOUS MATERIAL. THE SOILS SHOULD CONTAIN SOME ORGANIC MATTER FOR INCREASED WATER HOLDING CAPACITY BUT BE LOW IN NUTRIENT CONTENT. IN GENERAL APPROPRIATE MATERIAL IS LIKELY TO BE APPROXIMATED BY A MIX OF 80–90% SAND, 10–20% LOAM SOIL AND 3–10% COMPOSTED ORGANICS OR PEAT.
THE HYDRAULIC CONDUCTIVITY OF THE FILTER MEDIA TO BE 180mm/hr.

3. FILTER MEDIA – TESTING REQUIREMENTS

TO DETERMINE WHETHER A SOIL IS SUITABLE THE FOLLOWING TESTS SHOULD BE UNDERTAKEN:
1. PARTICLE SIZE DISTRIBUTION (PSD)
2. AS4419–2003 – SOILS FOR LANDSCAPING AND GARDEN USE
3. SATURATED HYDRAULIC CONDUCTIVITY – BY THE McINTYRE AND JAKOBSEN (1998) METHOD
4. WATER HOLDING CAPACITY – REQUIRED WHERE PSD DOES NOT MEET SPECIFICATIONS BUT SILT + CLAY IS <12% OR IN REGIONS LIKELY TO EXPERIENCE EXTENDED DRY SPELLS

4. FILTER MEDIA – DETAILED SPECIFICATION

PARTICLE SIZE DISTRIBUTION
A SUITABLE SOIL WILL HAVE STRUCTURAL INTEGRITY AND A INFILTRATION RATE IN THE FOLLOWING APPROPRIATE RANGE:

CLAY	2–4%	(<0.002mm)
SILT	4–8%	(0.002–0.05mm)
VERY FINE SAND	5–10%	(0.05–0.15mm)
FINE SAND	10–25%	(0.15–0.25mm)
MEDIUM TO COARSE SAND	60–70%	(0.25–1.0mm)
COARSE SAND	7–10%	(1.0–2.0mm)
FINE GRAVEL	<3%	(2.0–3.4mm)

PERMEABILITY – THE SATURATED HYDRAULIC CONDUCTIVITY REQUIRED IS 180mm/hr

5. TRANSITION LAYER

TRANSITION LAYER MATERIAL SHALL BE SAND / COARSE SAND MATERIAL. AN INDICATIVE PSD IS:

% PASSING	1.4mm 100%
	1.0mm 80%
	0.7mm 44%
	0.5mm 8.4%

6. DRAINAGE LAYER

THE DRAINAGE LAYER IS TO BE FINE GRAVEL, SUCH AS 2–5mm SCREENINGS.

6. MULCH LAYER

THE MULCH LAYER IS TO BE GRAVEL, 20mm SCREENINGS. THE AGGREGATE IS TO BE A CLEAN GRAVEL THAT IS SCREENED AND TO CONTAIN NO FINES.

LEGEND

ITEM	PROPOSED	EXISTING
GENERAL		
TITLE BOUNDARY		
KERB	B1	
KERB & CHANNEL, TRAY	B2	
OPEN INVERT DRAIN	OID	
FENCE	/ /	/ /
CONTOUR (METER)	5.000	EX 5.00
CONTOUR (INT)	5.300	EX 5.30
PAVEMENT LEVEL	+ P 2.000	+EX P 2.00
TOP OF KERB	+ TK. 5.200	+EX TK. 5.20
SPOT LEVEL AT CROSS	FLS 5.300	EX 5.30
DRAINAGE		
STORMWATER DRAIN	225ø RCP (RRJ)	D D
SUBSOIL DRAIN	SS SS	
STORMWATER PIT (JP)	■	□
GRATED PIT (GP)	▤	□
SERVICES		
GAS MAIN	G G	G G
WATER MAIN	W W	W W
ELECTRICAL CONDUIT	E E	E E
SEWER MAIN	S S	S S
TELECOM CABLES	T T	T T
STORMWATER DRAINAGE	D D	D D
FIRE MAIN	F F	F F
COMMUNICATIONS	C C	C C

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Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

Drawn	GS	Signed	Date
Designed	MH	Signed	Date
Verified		Signed	Date
Approved		Signed	Date

Drawing Title: GENERAL NOTES, LEGEND AND DRAWING SCHEDULE

Project No. 28803.004
Scale: NOT TO SCALE
Sheet Size: A1
Drawing No. C001
Rev. 02

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25 Jul 2007 10:28 AM – F:\multi\28803\001\CAD\Drgs\Civil\C001.DWG

01/04/08

MAINTAIN EXISTING SWALE DRAIN

CONSTRUCT SEP TO VICROADS STD DWG 1272

SAWCUT AND MATCH TO EXISTING PAVEMENT

INSTALL DRIVEABLE HEADWALL AS PER VICROADS STD DWG 1841

MATCH TO EXISTING PAVEMNT

PROPOSED BUS ZONE SIGN

INSTALL HEADWALL AS PER VICROADS STD DWG 1841

900 x 600 SEP

PROPOSED 375ø RCP. (SIZE PENDING VICROADS APPROVAL)

PROPOSED FOOTPATH

PROPOSED HARDSTAND BY OTHERS

PROPOSED BUS ZONE SIGN

PROPOSED VEHICLE CROSSING TO KINGSTON CITY COUNCIL STANDARD

REMOVE EXISTING TREE (TYPICAL)

REFER C004 FOR DETAILS 4

PROPOSED ASPHALT CARPARK

2.0m WIDE FOOTPATH. REFER LANDSCAPE ARCHITECT

REFER TO WETLAND DESIGN DOCUMENTATION FOR DRAINAGE OUTFALL WORKS

PROPOSED FOOTPATH REFER LANDSCAPE ARCHITECT FOR DETAILS

PROPOSED FOOTPATH REFER LANDSCAPE ARCHITECT FOR DETAILS

TREE TO BE REMOVED

GRASS AREA, SUPPLY 100mm APPROVED TOPSOIL AND HYDRO SEED

BIO - RETENTION REFER C004 FOR DETAILS

HEAVY DUTY CONCRETE PAVEMENT REFER C004 FOR DETAILS

CONCRETE FOOTPATH REFER C004 FOR DETAILS

ASPHALT PAVEMENT REFER C004 FOR DETAILS

CONCRETE FOOTPATH AND HARDSTAND REFER LANDSCAPE ARCHITECT PLANS

MELBOURNE ONE CALL SYSTEM DIAL 1100 DIAL BEFORE YOU DIG

WARNING AND DISCLAIMER

BEWARE OF UNDERGROUND SERVICES

The information provided in these drawings relating to the positions of underground services is intended to be only a guide for excavation works. Connell Wagner does not warrant or represent that the positions of those services shown on the drawings are accurate. Furthermore, services may exist of which Connell Wagner is unaware. The information provided should therefore not be relied upon and exact positions of services should be verified by hand excavation. Furthermore, Connell Wagner disclaims responsibility for damage or injury to any person caused directly or indirectly by any works affecting the services.

Dated: JULY 2007

Rev.	Date	Revision Details	Drn	Ver.	App.
07	01.10.2007	FOR DISCUSSION PURPOSES ONLY	MH		
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Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

Drawn GS	Signed	Date
Designed MH	Signed	Date
Verified	Signed	Date
Approved	Signed	Date

Drawing Title: LAYOUT AND PAVEMENT PLAN

PRELIMINARY
NOT FOR CONSTRUCTION

Project No. 28803.004

Scale 1:200

Sheet Size A1

Drawing No. C002

Rev. 12

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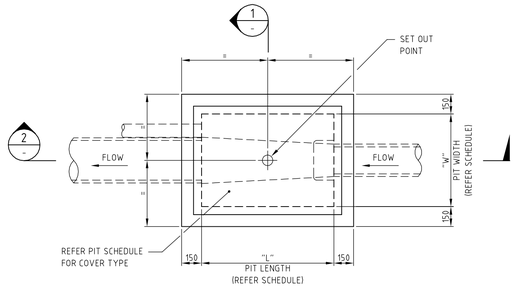
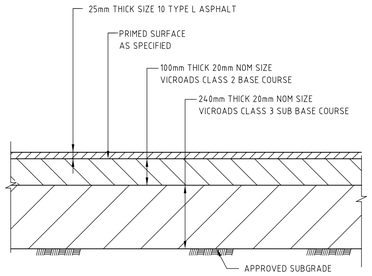
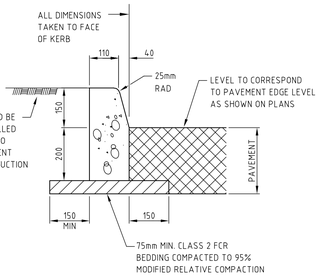


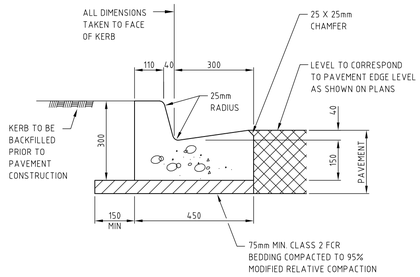
PLAN



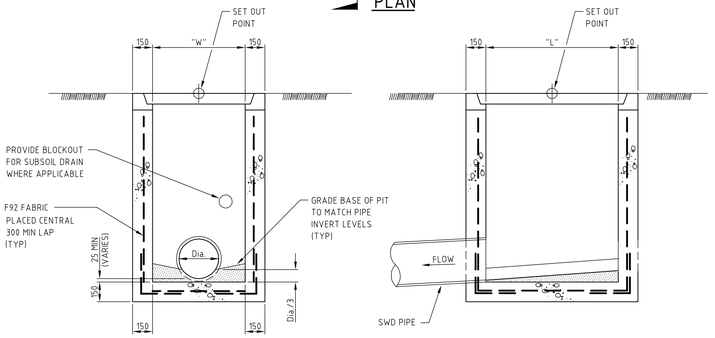
LIGHT DUTY ASPHALT PAVEMENT



KERB (B1)
SCALE 1:10



KERB AND CHANNEL (B2)
SCALE 1:10

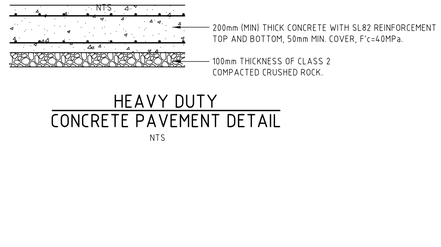


SECTION 1

SECTION 2

NOTE: FOR PIT DEPTH, WIDTH, LENGTH AND PIPE DETAILS REFER TO PIT SCHEDULE

GRATED PIT
SCALE 1:20

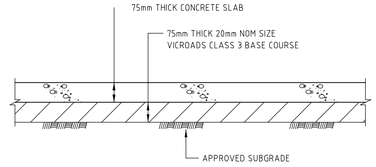


HEAVY DUTY
CONCRETE PAVEMENT DETAIL
NTS

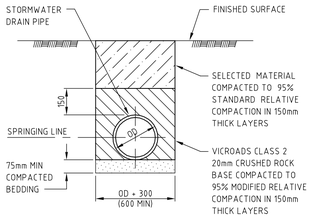
PIT SCHEDULE

PIT No.	EASTING (m)	NORTHING (m)	PIT DIMENSIONS LENGTH (mm)	PIT DIMENSIONS WIDTH (mm)	PIT TYPE	COVER LEVEL (m)	INLET LEVEL (m)	INLET Φ (mm)	FROM PIT No.	OUTLET LEVEL (m)	OUTLET Φ (mm)	TO PIT No.	DEPTH (m)	PIT COVER TYPE	COMMENTS
1			-	-	EP	-	-0.65	225	2	-0.65	-	-	-	-	END OF PIPE SUBMERGED UNDER WATER
2			900	750	SEP	0.85	0.05	375	3	0.05	225	1	0.80	LD	CONSTRUCT SEP AS PER VICROADS STD 1272
										0.15	375	4			
3			600 Height	750	HEAD WALL	0.90	-	-	-	0.18	375	2	0.60	-	CONSTRUCT HW TO VICROADS STD DWG 1841
4			600 Height	750	HEAD WALL	0.75	-	375	2	EX	-	-	0.60	-	CONSTRUCT HW TO VICROADS STD DWG 1841
5			-	-	EP	-	-0.65	225	6	-0.65	-	-	-	-	DEPTH & SIZE OF PIPE TO BE VERIFIED
6			600	600	GP	0.85	-	-	-	0.10	225	5	0.75	LD	CONSTRUCT GP AS PER DETAIL

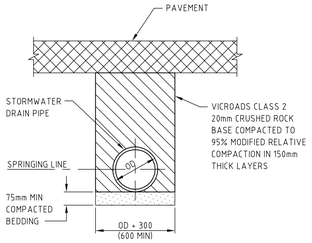
EP END OF PIPE
SEP SIDE ENTRY PIT
GP GRATED PIT



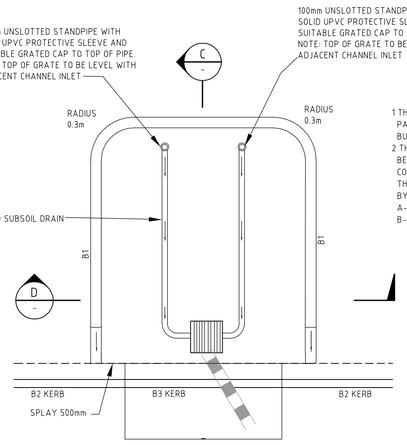
CONCRETE FOOTPATH
SCALE 1:10



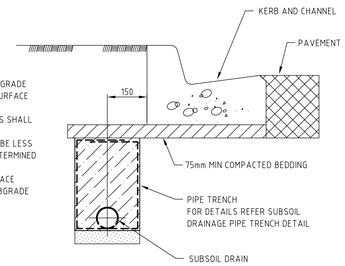
PIPE TRENCH UNDER LANDSCAPED AREAS
N.T.S.



PIPE TRENCH UNDER PAVEMENT
N.T.S.

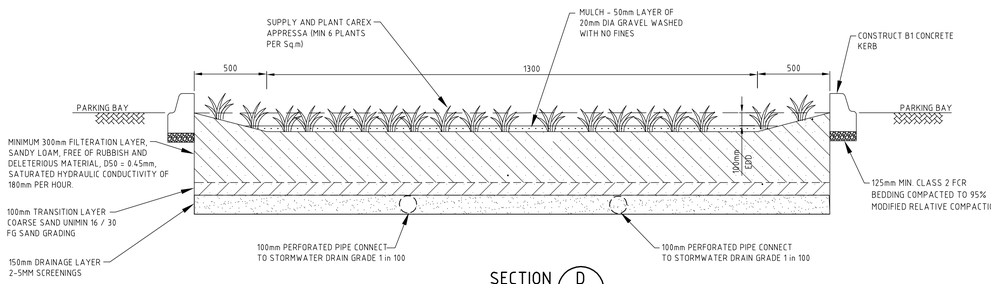


1 THE PIPES SHALL BE LAID ON A GRADE PARALLEL TO THE FINISHED SURFACE BUT NOT LESS THAN 1:150
2 THE INVERT LEVEL OF THE PIPES SHALL BE AS REQUIRED BY ADJOINING CONSTRUCTION BUT SHALL NOT BE LESS THAN THE GREATEST DEPTH DETERMINED BY THE FOLLOWING
A-500mm BELOW FINISHED SURFACE
B-300mm BELOW PAVEMENT SUBGRADE

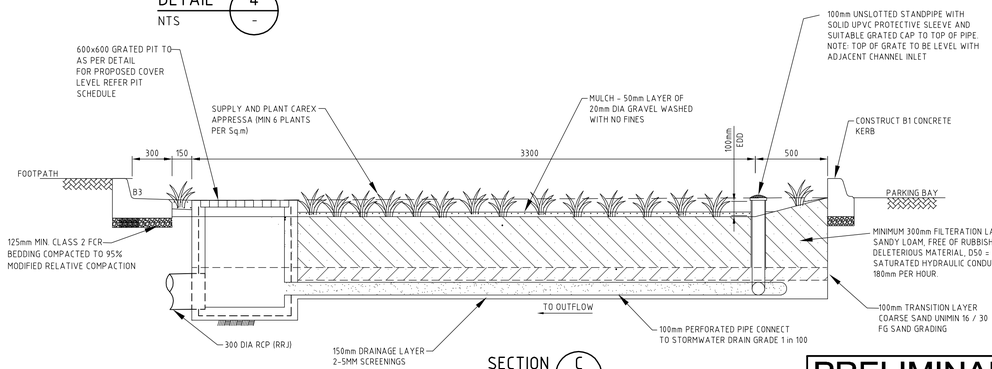


SUBSOIL DRAIN BEHIND KERB
SCALE 1:10

DETAIL 4
NTS



SECTION D
NTS



SECTION C
NTS

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
03	22.11.07	PRELIMINARY ISSUE	SRI		
02	21.11.07	PRELIMINARY ISSUE	MH		
01	24.08.07	PRELIMINARY ISSUE	MH		

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Client: Melbourne Water

Project: EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

	Signed	Date
Drawn GS		
Designed MH		
Verified		
Approved		

Drawing Title: DETAILS

Project No. 28803.004
Scale: NOT TO SCALE
Sheet Size: A1
Drawing No. C004
Rev. 03

20 10 0 10 20 30 40 50 100mm

05 Jul 2007 4:59 PM - F:\multi\v23709 003\CAD\Drgs\Civil\C300.DWG

MELBOURNE WATER EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

MECHANICAL SERVICES

DRAWING INDEX

DOOR GRILLE SCHEDULE		
SIZE	AIR L/s	WIDTH x HEIGHT
1	UP TO 100	600 x 150
2	100 - 200	600 x 300
3	201 - 350	600 x 450
4	351 - 450	600 x 600
5	451 - 600	600 x 750
× 6	601 - 700	600 x 900 ×
7	701 - 800	600 x 1050
8	801 - 900	600 x 1200
9	901 - 1000	600 x 1350
10	1001 - 1100	600 x 1500

× MAX. HEIGHT TO FIT BELOW STANDARD DOOR HANDLE.

NOTE : THIS TABLE IS FOR A SINGLE DOOR ONLY.

FLEXIBLE DUCT SCHEDULE	
DIAMETER	AIR QUANTITY - L/s (UP TO & INC.)
125	25
150	50
175	60
200	80
225	110
250	150
300	250
350	350
400	500
450	650
500	900

× SIZES ARE IN MILLIMETRES

ABBREVIATIONS

GENERAL				PIPEWORK	
AF	AIR FILTER	IU	INDUCTION UNIT	A	ACETYLENE
AHU	AIR HANDLING UNIT	KE	KITCHEN EXHAUST	AR	ARGON
B	BOILER	MCC	MOTOR CONTROL CENTRE	CA	COMPRESSED AIR
C	COOLER	OA	OUTSIDE AIR	CCW	CONDENSER WATER
CC	COOLING COIL	RA	RETURN AIR	CHW	CHILLED WATER
CDT	CHEMICAL DOSING TANK	RAG	RETURN AIR GRILLE	C02	CARBON DIOXIDE
CE	CARPARK EXHAUST	RM	CHILLER	CW	COLD WATER
CT	COOLING TOWER	S	SOUND ATTENUATOR	D	DRAIN
CU	CONDENSING UNIT	SA	SUPPLY AIR	DHW	DOMESTIC HOT WATER
E	EXHAUST	SP	STAIR PRESSURISATION	HHW	HEATING HOT WATER
EC	EVAPORATIVE COOLER	SPF	STAIR PRESSURISATION FAN	LPG	LIQUIFIED PETROLEUM GAS
EDH	ELECTRIC DUCT HEATER	SS	SMOKE SPILL	MA	MEDICAL AIR
EF	EXHAUST FAN	TE	TOILET EXHAUST	NB	NOMINAL BORE (STEEL PIPE)
ET	EXPANSION TANK	TEF	TOILET EXHAUST FAN	NG	NATURAL GAS
F	FAN	RAC	ROOM AIR CONDITIONER	NC	NORMALLY CLOSED
FA	FROM ABOVE	PAC	PACKAGE AIR CONDITIONER	NO	NORMALLY OPEN
FB	FROM BELOW	RHC	REHEAT COIL	NS	NOMINAL SIZE (COPPER PIPE)
FCU	FAN COIL UNIT	T	THERMOSTAT	N20	NITROUS OXIDE
GE	GENERAL EXHAUST	TA	TO ABOVE	02	OXYGEN
H	HEATER	TB	TO BELOW	P	PUMP
HC	HEATING COIL	VSD	VARIABLE SPEED DRIVE	ST	STEAM
HP	HEAT PUMP	BOD	BOTTOM OF DUCT ABOVE FLOOR LEVEL	V	VACUUM
HU	HUMIDIFIER				

GENERAL

G 1 These drawings shall be read in conjunction with all other drawings, specifications and instructions for this project including architectual, structural and services drawings.

G 2 Do not scale these drawings . Verify all dimensions from the Architects' drawings and by actual site measurements. Refer all discrepancies to the Architect for decision before proceeding with the work.

G 3 Each section or detail is numbered through the project. Section cutting planes are identified on the plans as follows:

Section View Reference Number → 1
Number of Sheet on which Section or View is shown → M203

Details are either circled or arrowed on the the plans as follows:

Reference Number → 1
Number of Sheet on which Detail is shown. → M200 *

Sectional and detail views are identified in their titles as follows:

Sectional View Reference Number → A
Number of Sheet on which Sectional Viewing plane is shown. → SECTION M201

Views are identified in their titles in the same manner as sections.

Where the section cutting plane and the drawn section do not appear on the same sheet, both should be referenced by inserting the relevant section number and drawing number in the cross section symbol. (This also applies to details)

Where the section or detail appears on the same drawing sheet, both should be referenced by inserting a letter. The drawing number in the lower half of the reference is replaced by a dash.

G 4 Unless otherwise stated all dimensions are in millimetres.

DUCTWORK & PIPEWORK

1. Ductwork sizes shown are clear internal dimensions. (In millimetres)
2. Room thermostats shall be installed 1700 millimetres above finished floor level and off the column centre
3. All workmanship and material shall conform to the relevant Australian Standards, Codes and the Contract Specification.
4. All ductwork shall conform to AS 4254 : Ductwork for Air Handling Systems in Buildings.
5. Door relief grille sizes shall be as tabulated in door grille schedule. Total Pressure Drop shall not exceed 12 Pa. NOTE : These sizes are for a single door grille
6. All tundishes associated with mechanical services shall be visible and be provided by hydraulic sevices contractor

ALTERATION SYMBOLS

Symbol	Description	Symbol	Description
	NEW DIFFUSER		NEW BOOT
	EXISTING DIFFUSER		EXISTING BOOT
D	EXISTING DIFFUSER DELETED	D	EXISTING BOOT DELETED
R	EXISTING DIFFUSER RELOCATED	R	EXISTING BOOT RELOCATED
T	NEW THERMOSTAT LOCATION		EXISTING DUCTWORK
T	EXISTING THERMOSTAT LOCATION.		EXISTING DUCTWORK AND EQUIPMENT TO BE REMOVED
T D	EXISTING THERMOSTAT TO BE REMOVED		EXISTING FLEXIBLE DUCT
T R T	EXISTING THERMOSTAT RELOCATED		

CEILING DIFFUSER SCHEDULE - LOUVRE CORE TYPE

AIR QTY (L/s)	NECK SIZE (mm x mm) THROW (m) 1.0 ~ 1.3	1.3 ~ 1.8	1.8 ~ 2.2	2.2 ~ 3.0	3.0 ~ 4.0
up to 50	150 x 150	150 x 150	150 x 150	150 x 150	150 x 150
55 ~ 70	225 x 225	150 x 150	150 x 150	150 x 150	150 x 150
75 ~ 120	300 x 300	225 x 225	225 x 225	225 x 225	225 x 225
125 ~ 150	375 x 375	300 x 300	225 x 225	225 x 225	225 x 225
155 ~ 200	450 x 450	375 x 375	300 x 300	225 x 225	225 x 225
205 ~ 250	-	450 x 450	375 x 375	300 x 300	300 x 300
255 ~ 300	-	-	450 x 450	375 x 375	300 x 300
305 ~ 350	-	-	-	450 x 450	375 x 375
355 ~ 450	-	-	-	525 x 525	450 x 450
455 ~ 525	-	-	-	-	525 x 525

NOTES :
1. ABOVE SIZES ARE BASED ON 4 - WAY THROW. FOR 3, 2 AND 1 - WAY BLANKED DIFFUSER NECK SHALL BE ADJUSTED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATION AS FOLLOWS : -
   3 WAY = AIR QUANTITY X 1.333
   2 WAY = AIR QUANTITY X 2.0
   1 WAY = AIR QUANTITY X 4.0
2. FACE SIZE SHALL BE 600 X 600 UNLESS NOTED OTHERWISE.

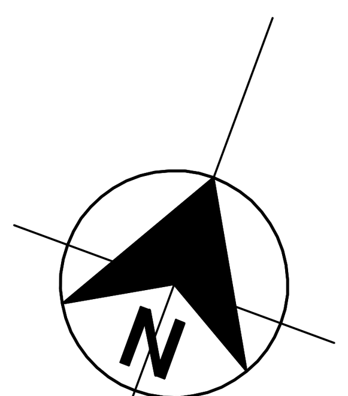
LEGEND FOR VENTILATION AND AIR CONDITIONING

Symbol	Description	Symbol	Description
	DUCT SECTION (SUPPLY AIR)	N-F/A	SUPPLY AIR DIFFUSER 4-WAY AIR PATTERN 3-WAY 2-WAY 1-WAY (SEE SQUARE DIFFUSER SCHEDULE)
	DUCT SECTION (RETURN, EXH AIR)		
	FLEXIBLE DUCT	N-F/A	SUPPLY AIR DIFFUSER 2 WAY AIR PATTERN (SEE SQUARE DIFFUSER SCHEDULE)
	ACOUSTICALLY LINED DUCT		
	SQUARE TO ROUND	N-F/A	SUPPLY AIR DIFFUSER 1 WAY AIR PATTERN (SEE SQUARE DIFFUSER SCHEDULE)
SU	SU - SET DOWN SD - SET DOWN		
	VOLUME CONTROL DAMPER	A	RECTANGULAR SUPPLY AIR DIFFUSER 4-WAY AIR PATTERN 3-WAY 2-WAY 1-WAY A = AIR FLOW QUANTITY (L/s)
	OPPOSED BLADE DAMPER	A	RECTANGULAR SUPPLY AIR DIFFUSER 2-WAY AIR PATTERN A = AIR FLOW QUANTITY (L/s)
	FLEXIBLE DUCT CONNECTION		
	SOUND ATTENUATOR	A	SUPPLY AIR REGISTER A = AIR FLOW QUANTITY (L/s)
	ELECTRIC DUCT HEATER	X x Y RAG	RETURN AIR GRILLE X x Y = GRILLE SIZE
AP AP	SIDE UNDERSIDE (ACCESS PANEL DUCT MOUNTED)	A	EXHAUST AIR GRILLE A = AIR FLOW QUANTITY (L/s)
A P	ACCESS PANEL (CEILING MOUNTED)	A	DOUBLE LIGHT AIR BOOT A = AIR FLOW QUANTITY (L/s)
	TURNING VANES	A	SINGLE LIGHT AIR BOOT A = AIR FLOW QUANTITY (L/s)
	ADJUSTABLE STREAM SPLITTER DAMPER	1	DOOR GRILLE (NUMBER INDICATES SIZE) SEE DOOR GRILLE SCHEDULE
FD	FIRE DAMPER	UC	UNDERCUT DOOR
CO_2	CARBON DIOXIDE SENSOR		AIR FLOW DIRECTION
T	THERMOSTAT	C	CONTROLLER
T	SENSOR (TEMPERATURE)	TD	TUNDISH
CHW	CHILLED WATER PIPING		DROPPER - FB OR TB
HHW	HEATING HOT WATER PIPING		TEE OFF - FB OR TB
CCW	CONDENSER WATER PIPING		RISER - FB OR TA
D	CONDENSATE DRAIN	R	REFRIGERATNT PIPING

NOTE: ALL SUPPLY, RETURN & RELIEF AIR DUCTWORK TO BE THERMALLY INSULATED UNLESS INDICATED OTHERWISE.

LEGEND FOR PIPING AND EQUIPMENT SCHEMATICS

Symbol	Description	Symbol	Description
	CALIBRATED BALANCING VALVE		SELF ACTING FLOW CONTROL VALVE
	ISOLATING VALVE		GAUGE COCK
	BALL VALVE		AUTO BY PASS VALVE
	THROTTLING VALVE	TMV	THERMOSTATIC MIXING VALVE
ST	STOP TAP		UNIVERSAL TEST PLUG
	CHECK VALVE		ORIFICE PLATE & PRESSURE TAPPINGS
HC	HOSE CONNECTION		ANNUBAR ELEMENT
	NEEDLE VALVE		VIBRATION ISOLATOR
M	2-WAY MOTORISED VALVE		INLINE CIRCULATING PUMP
S	SOLENOID VALVE		DRAIN TRAP
	2-WAY PNEUMATIC VALVE		FLEXIBLE PIPE/HOSE
	BALL FLOAT VALVE		AUTOMATIC AIR VENT
	STRAINER		CAPPED END
	STRAINER WITH DRAIN VALVE		TUNDISH
D	PRESSURE RELIEF VALVE	T	THERMOMETER POCKET
D	PRESSURE RELIEF VALVE	P	PRESSURE GAUGE WITH GAUGE COCK
M	3-WAY MOTORISED VALVE	T	DIAL TYPE THERMOMETER (IN PIPE SOCKET)
	PRESSURE REDUCING VALVE OUTLET PRESSURE (kPa)		EXPANSION TANK
L/s Ø	FLOW & PIPE SIZE INDICATION		CHEMICAL DOSING
DP	DIFFERENTIAL PRESSURE SENSOR	F	FLOW SWITCH



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TENDER DOCUMENT
NOT FOR CONSTRUCTION

Rev	Date	Revision Details	Drn	Ver.	App.
03	13.12.07	CO-ORDINATED TENDER ISSUE	GTM		
02	21.11.07	TENDER ISSUE	GTM		
01	22.08.07	DESIGN DEVELOPMENT	ADC		

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East Melbourne Victoria 3002

Project:
EDITHVALE - SEAFORD
WETLANDS DISCOVERY CENTRE

Drawing Title:
MECHANICAL SERVICES
DRAWING INDEX, LEGENDS

Drawn	Signed	Date	Verified	Signed	Date
GD			JW		
Designed	Signed	Date	Approved	Signed	Date
ADC			JHR		

Project No.	Scale:	Sheet Size
28803.001	1:100	A1
Drawing No.	Revision:	
M001	03	

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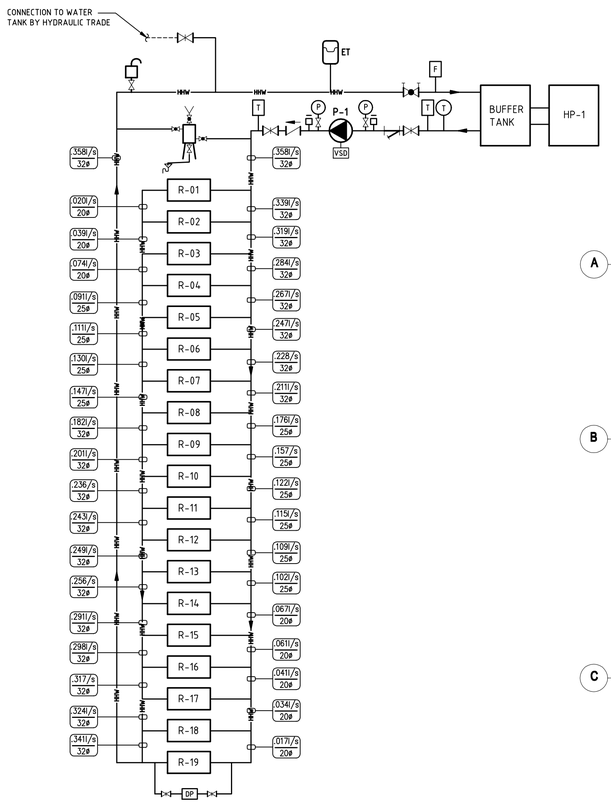

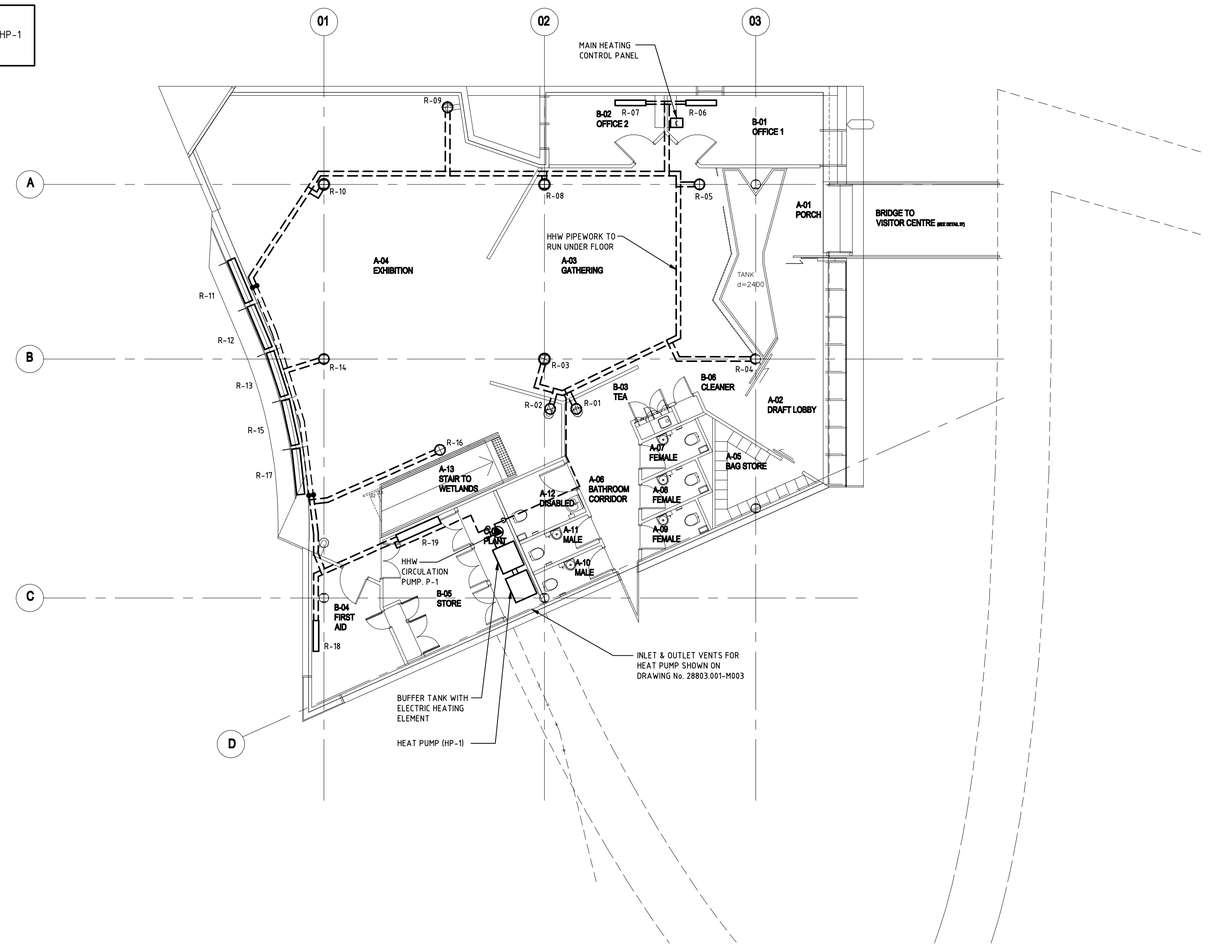

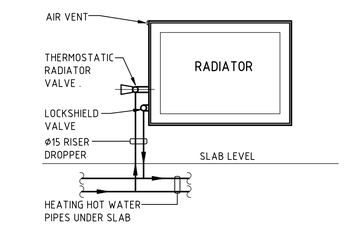

HHW PIPING SCHEMATIC

NOT TO SCALE

FLOOR PLAN-RADIATORS LAYOUT

TYPICAL RADIATOR ARRANGEMENT

NOT TO SCALE

NOTES
1. HHW PIPEWORK TO RUN BENEATH THE SLAB WITH PENETRATION UP TO RADIATORS UNLESS OTHERWISE INDICATED.
2. HHW PIPEWORK TO BE LAGGED WITH 25mm INSULATION.

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Project:

EDITHVALE - SEAFORD
WETLANDS DISCOVERY CENTRE

Drawing Title:

MECHANICAL SERVICES
RADIATOR LAYOUT
AND HHW PIPING SCHEMATIC

Drawn	Signed	Date	Verified	Signed	Date
GD			JW		
Designed	Signed	Date	Approved	Signed	Date
ADC			JHR		

Project No. 28803.001
Scale: 1:100
Sheet Size A1
Drawing No. M002
Revision: 03

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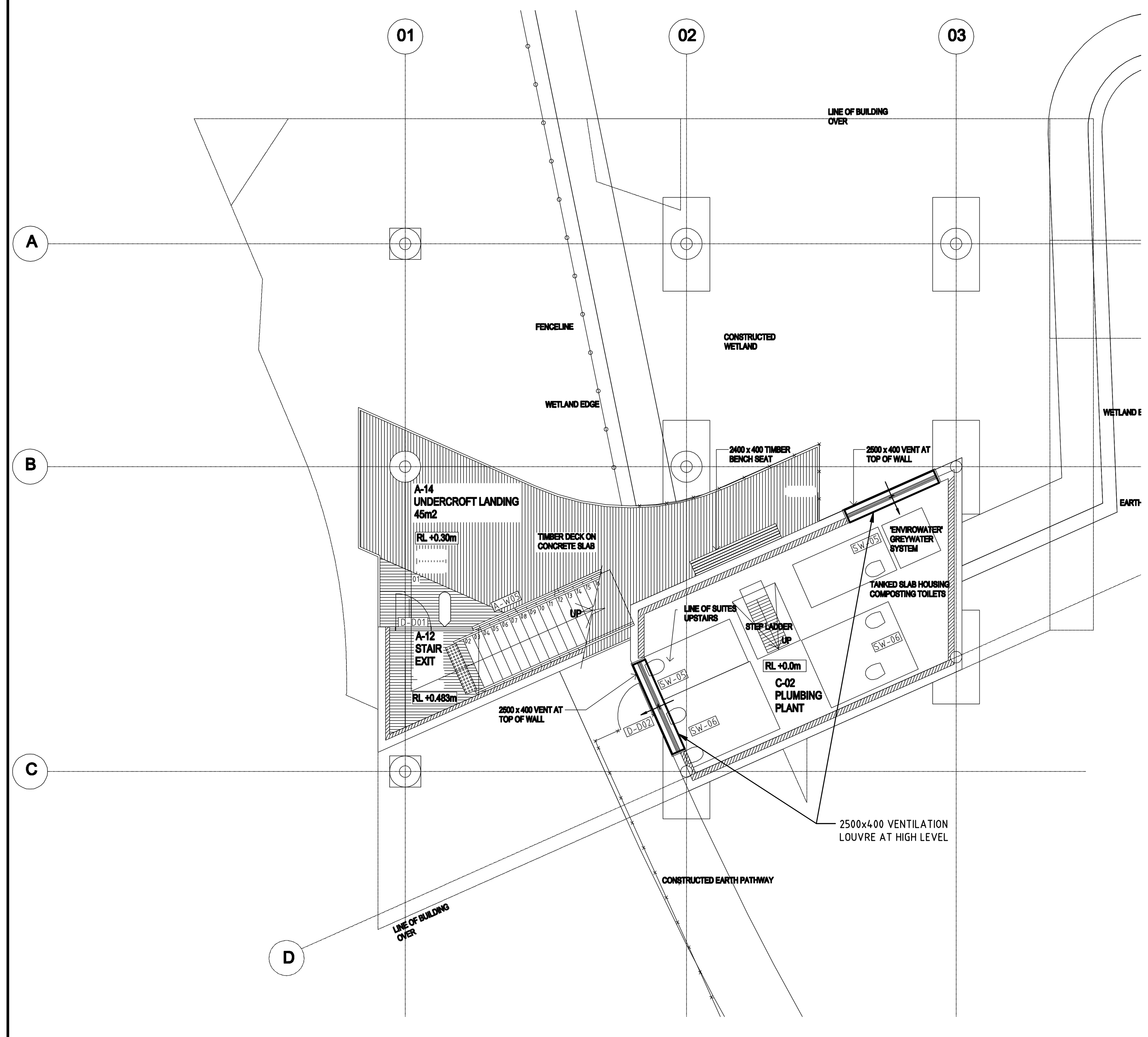
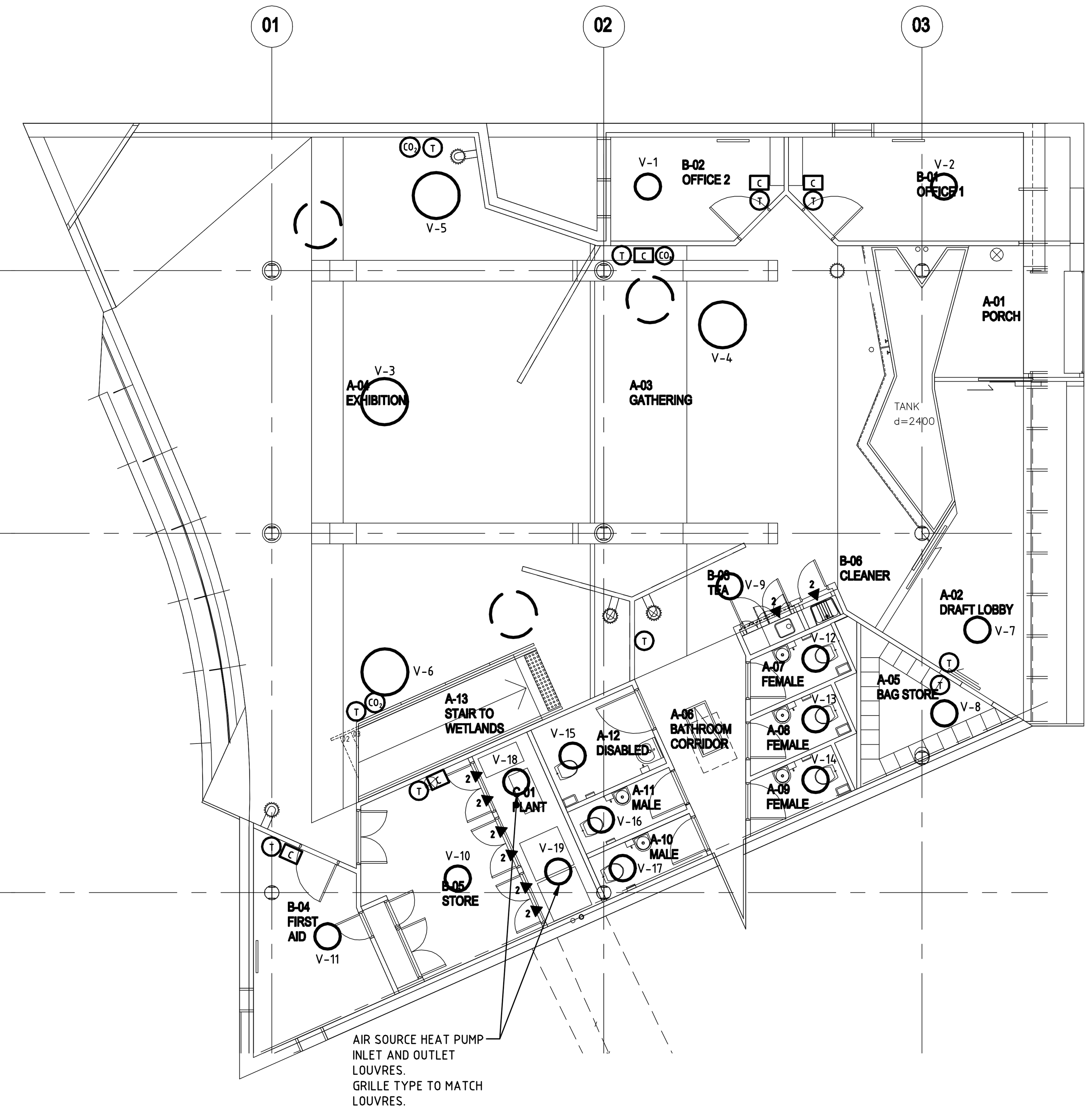
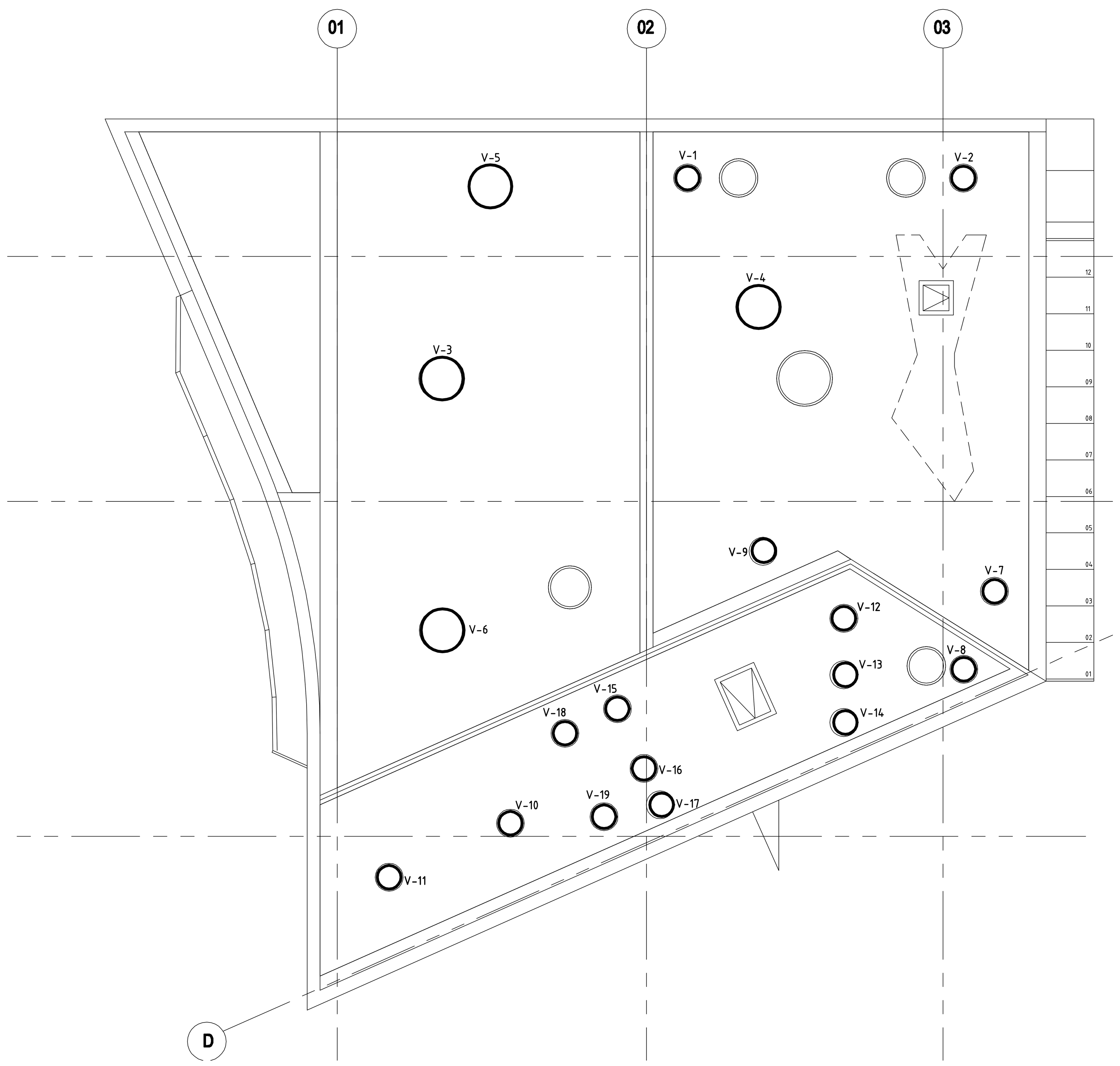


UNDERCROFT PLAN - VENTILATION LAYOUT



FLOOR AND CEILING PLAN - VENTILATION LAYOUT



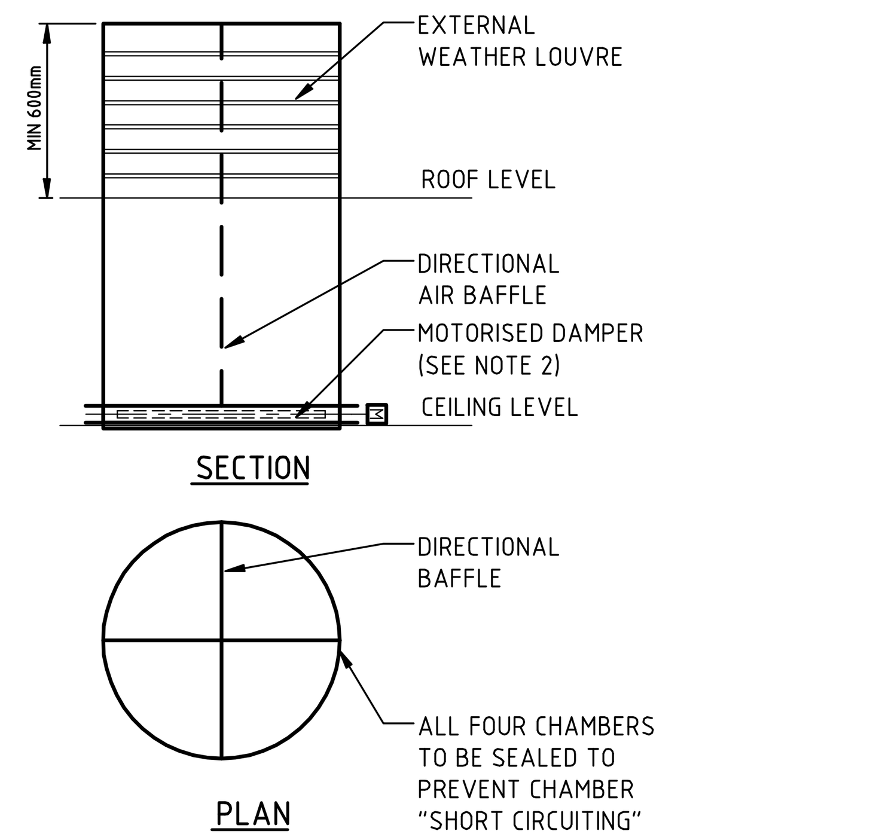
ROOF PLAN - VENTILATION LAYOUT

LEGEND

- 1000mm Ø "WIND-CATCHER"
- 1000mm Ø FLOOR GRILLE
- 600mm Ø "WIND-CATCHER"

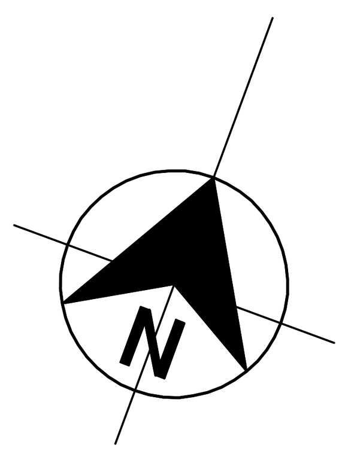
NOTES:

1. ANCHOR POINTS TO BE INSTALLED AT ROOF LEVEL FOR MAINTENANCE OF ALL VENTILATION OUTLETS/INLETS. ANCHOR POINTS TO BE LOCATED ON GRID LINES AND ATTACHED TO STRUCTURAL BEAMS BELOW. ANCHOR POINTS TO BE LOCATED NO MORE THAN 3m FROM ANY VENTILATION POINT. REFER TO ARCHITECTS DRAWINGS FOR FURTHER DETAILS.
2. DAMPER DESIGN TO ALLOW ACCESS FOR MAINTENANCE FROM BELOW.



TYPICAL "WIND-CATCHER" DETAIL (V-1 TO V-11)

NOT TO SCALE



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Rev	Date	Revision Details	Drn	Ver.	App.
03	13.12.07	CO-ORDINATED TENDER ISSUE	GTM		
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Project:

EDITHVALE - SEAFORD
WETLANDS DISCOVERY CENTRE

Drawing Title:

MECHANICAL SERVICES
VENTILATION LAYOUT

Drawn	Signed	Date	Verified	Signed	Date
GD			JW		
Designed	**Signed**	**Date**	**Approved**	**Signed**	**Date**
ADC			JHR		

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M003	03	

MELBOURNE WATER EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

ELECTRICAL SERVICES DRAWINGS

LIGHTING LEGEND

- F1 — 2x28W ULB FLUORESCENT LUMINAIRE, RECESSED, c/w DSI DIMMABLE ELECTRONIC BALLAST AND LAMPS. LUMINAIRE: THORN 'CINQUELINE' RANGE.
- F2 — 1x28W ULB FLUORESCENT LUMINAIRE, RECESSED, c/w ELECTRONIC BALLAST AND LAMP. LUMINAIRE: THORN 'CINQUELINE' RANGE.
- F3 — 2x26W COMPACT FLUORESCENT DOWNLIGHT, RECESSED, c/w DSI DIMMABLE ELECTRONIC BALLAST AND LAMPS. LUMINAIRE: THORN 'DOT 1250' RANGE.
- F4 — 1x54W FLUORESCENT LUMINAIRE, WALL MOUNTED c/w ELECTRONIC CONTROL GEAR AND LAMP. LUINAIRE: INLITE 'DELTA LIGHT-RANDOM 154'.
- F5 — 1x26W COMPACT FLUORESCENT DOWNLIGHT, RECESSED, c/w ELECTRONIC CONTROL GEAR AND IP COVER. IUMINAIRE: THORN 'DOT 1250' RANGE.
- F7 — NOT USED
- F6 — 1x28W FLUORESCENT LUMINAIRE, SURFACE MOUNTED, IP65 RATED c/w LAMP AND ELECTRONIC CONTROL GEAR. LUMINAIRE: THORN CAT No. LESOZ2D28W ('LEOPARD')
- F8 — 1x28W FLUORESCENT LUMINAIRE, SLIM PROFILE, SURFACE MOUNTED. c/w ELECTRONIC CONTROL GEAR, 4000°K LAMP AND COVER. LUMINAIRE: SYLVANIA CAT No: 50027 'SLIMLITE' COVER: SYLVANIA CAT No: 50029.
- D1 — 1x45W MR16 SPOTLIGHT. COMPLETE WITH CONTROL GEAR, LAMP, ADJUSTABLE BEAM ANGLE, WHITE TRIM AND CEILING SURFACE MOUNT BRACKET. LUMINAIRE: SELECON LIGHTING CAT No: ARDIIS 'AUREOL BEAM SHAPER'
- M1 — 35W METAL HALIDE LUMINAIRE, WALL MOUNTED WITH BLACK TRIM c/w CONTROL GEAR AND LAMP. LUMINAIRE: INLITE CAT No: 8352 043 000 ('TWIN EL C')
- EXIT — SINGLE SIDED LED BLADE TYPE EXIT LUMINAIRE, MAINTAINED (PICTOGRAM SIGNAGE). DIRECTIONAL ARROW AS INDICATED c/w NiMH BATTERY. PHOTOMETRIC CLASSIFICATION: Co:E1.25, C90:C1.25 LUMINAIRE: FAMCO CAT No:MRLF1MA2000 (MIRAGE LED EXIT RECESSED)
- EXIT — DOUBLE SIDED LED BLADE TYPE EXIT LUMINAIRE (PICTOGRAM SIGNAGE), MAINTAINED. DIRECTIONAL ARROWS AS INDICATED c/w NiMH BATTERY. PHOTOMETRIC CLASSIFICATION: Co:E1.6, C90:E1.25. LUMINAIRE: FAMCO CAT No. MRLF1ME2000 (MIRAGE LED EXIT RECESSED)
- Em1 — 1x10W QI EMERGENCY LUMINAIRE, RECESSED, NON-MAINTAINED c/w NiMH BATTERY.
- 15 AMP 240V FLUSH MOUNTED DIMMER SWITCH.
- 15 AMP 240V FLUSH MOUNTED SWITCH.
- 15 AMP 240V FLUSH MOUNTED TWO WAY SWITCH.
- LCP1 — LOCAL LIGHTING CONTROL PLATE WITH STANDARD BUTTONS AND WHITE BEZEL. ENERGY CONSERVATION SYSTEMS (ECS) CAT No: MLS LCP1
- PASSIVE INFRARED MOTION DETECTOR, CAPABLE OF DSI SWITCHING THE LIGHTING CIRCUIT. 'D' DENOTES DIRECT SWITCHING TYPE. ENERGY CONSERVATION SYSTEMS (ECS) CAT No: MLS2000DF; CAT No: MLS2000PF (DIRECT SWITCHING TYPE).

POWER / COMMUNICATIONS LEGEND

- 10A 1ϕ SINGLE SSO
- 10A 1ϕ DOUBLE SSO
- CL — 10A 1ϕ DOUBLE SSO (FOR CLEANERS)
- WP — 10A 1ϕ SINGLE SSO (WEATHERPROOF)
- BWU — 10A 1ϕ SINGLE SSO (BOILING WATER UNIT)
- CWU — 10A 1ϕ SINGLE SSO (CHILLED WATER UNIT)
- 32A 3ϕ SINGLE SSO
- DIRECT CONNECTION. No. OF PHASES AS INDICATED.
- ISOLATOR
- SINGLE DATA OUTLET
- 2 — MULTIPLE RJ45 CAT6 DATA POINTS (NUMBER DENOTES QUANTITY)
- T — TELSTRA TELEPHONE OUTLET (CONTRACTOR TO ORGANISE AND PAY SUBMISSIONS FEES).
- MATV — MATV OUTLET
- DISTRIBUTION BOARD
- 50x150mm SEGREGATED POWER AND COMMUNICATIONS SKIRTING DUCT, COMPLIANT WITH CAT 6 DATA CABLING REQUIREMENTS. COMPLETE WITH TRIM, CORNER PIECES, FIXINGS AND POWDER COATED TO ARCHITECTS PREFERED COLOUR (DELUX - SATIN WHITE). MODULINE 'TAL50150' OR APPROVED EQUIVALENT.
- FB — RECESSED FLOOR BOX. TO CONTAIN 2 No. SWITCHED SOCKET OUTLETS AND 2 No. CAT 6 RJ45 DATA OUTLETS. MODULINE FFB MM SERIES - LIASE WITH ARCHITECT FOR LID TYPE.
- 10A 1ϕ DOUBLE SSO (SUPPLIED WITH WORKSTATION) - TO BE HARD WIRED.
- CONDUIT, FUNCTION AND SIZING AS NOTED ON DRAWINGS.
- 400mm COMMS/DATA CABLE TRAY

SECURITY LEGEND

- PROXIMITY TYPE ACCESS CONTROL CARD READER
- DOOR RELEASE PUSH BUTTON.
- ELECTROMAGNETIC LOCK FOR SINGLE DOOR
- ELECTROMAGNETIC LOCK FOR DOUBLE DOORS
- BREAK GLASS DOOR RELEASE PUSH BUTTON
- REED SWITCH
- BUZZER

ABBREVIATIONS

AB	OUTLET MTD. 150mm ABOVE BENCH TOP
AD	AUTOMATIC DOOR
AV	AUDIOVISUAL EQUIPMENT
BWU	BOILING WATER UNIT
C	CEILING MOUNTED
CL	CLEANERS OUTLET - SUBCIRCUIT PROTECTED BY 30mA RCBO AT LOCAL DISTRIBUTION BOARD
CW	CHILLED WATER UNIT
DP	DATA PROJECTOR
HWU	HOT WATER UNIT
MB	MOTORISED BLINDS
PS	MOTORISED PROJECTION SCREEN
MW	MICROWAVE OVEN
MS	MOTORISED SCREEN
REF	REFRIGERATOR
TV	TELEVISION
UB	OUTLET MOUNTED UNDER BENCH
VM	VENDING MACHINE
WP	WEATHERPROOF OUTLET (IP56)
JP	JOINERY POWER
S	BRUSHED ALUMINIUM COVER (CLIPSAL CODE 'BA')
LCD	LCD MONITOR
AFFL	ABOVE FINISHED FLOOR LEVEL (mm)
B	CEILING MOUNT OUTLET FOR MOTORISED BLINDS

DRAWING INDEX

GENERAL NOTE:

1. LIGHT FITTINGS TO HAVE WHITE TRIM FOR MOUNTING INTO PLASTER, UNLESS NOTED OTHERWISE.

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EDITHVALE - SEAFORD
WETLANDS DISCOVERY CENTRE

Drawing Title:

ELECTRICAL SERVICES
DRAWING INDEX, LEGENDS

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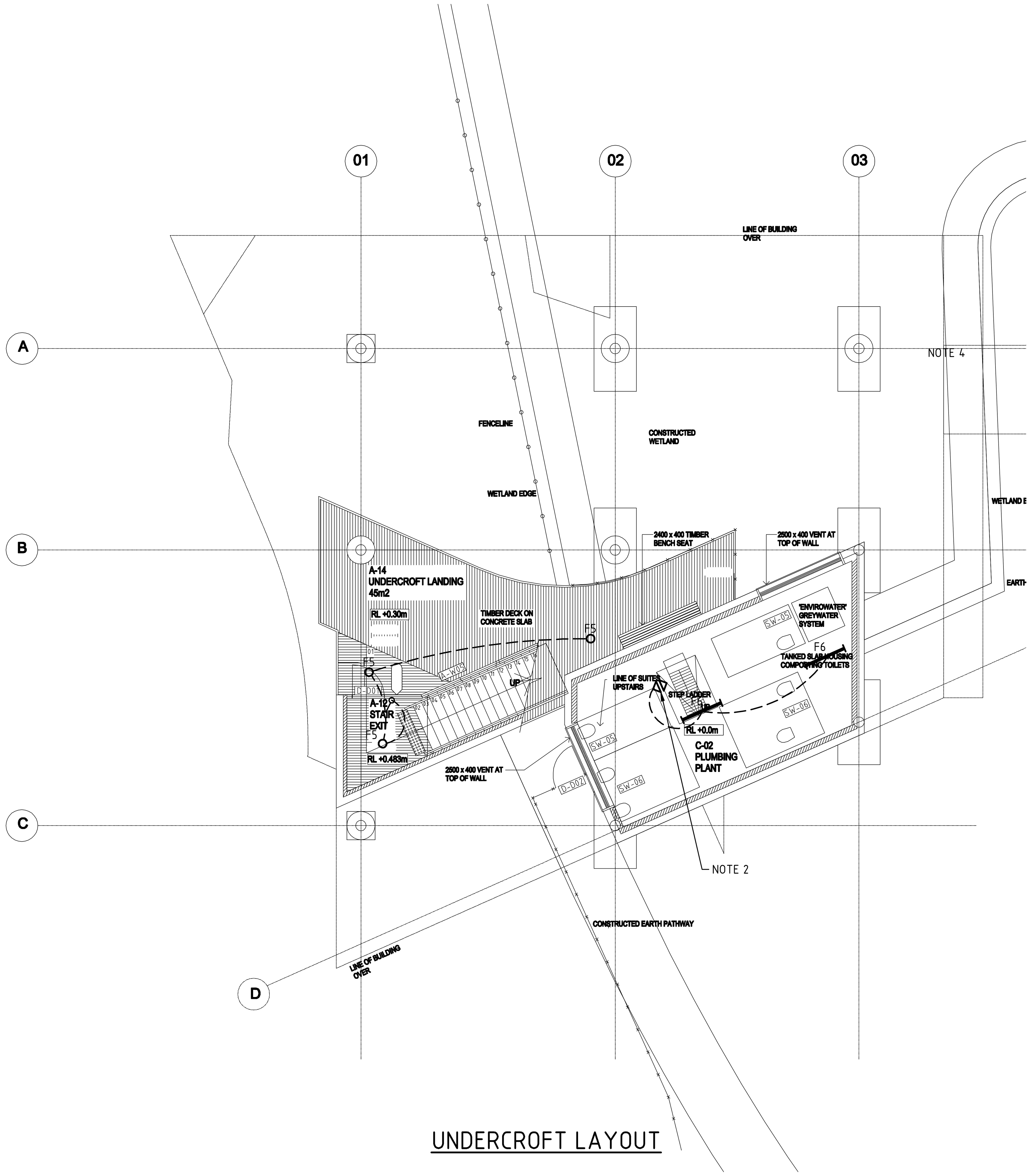
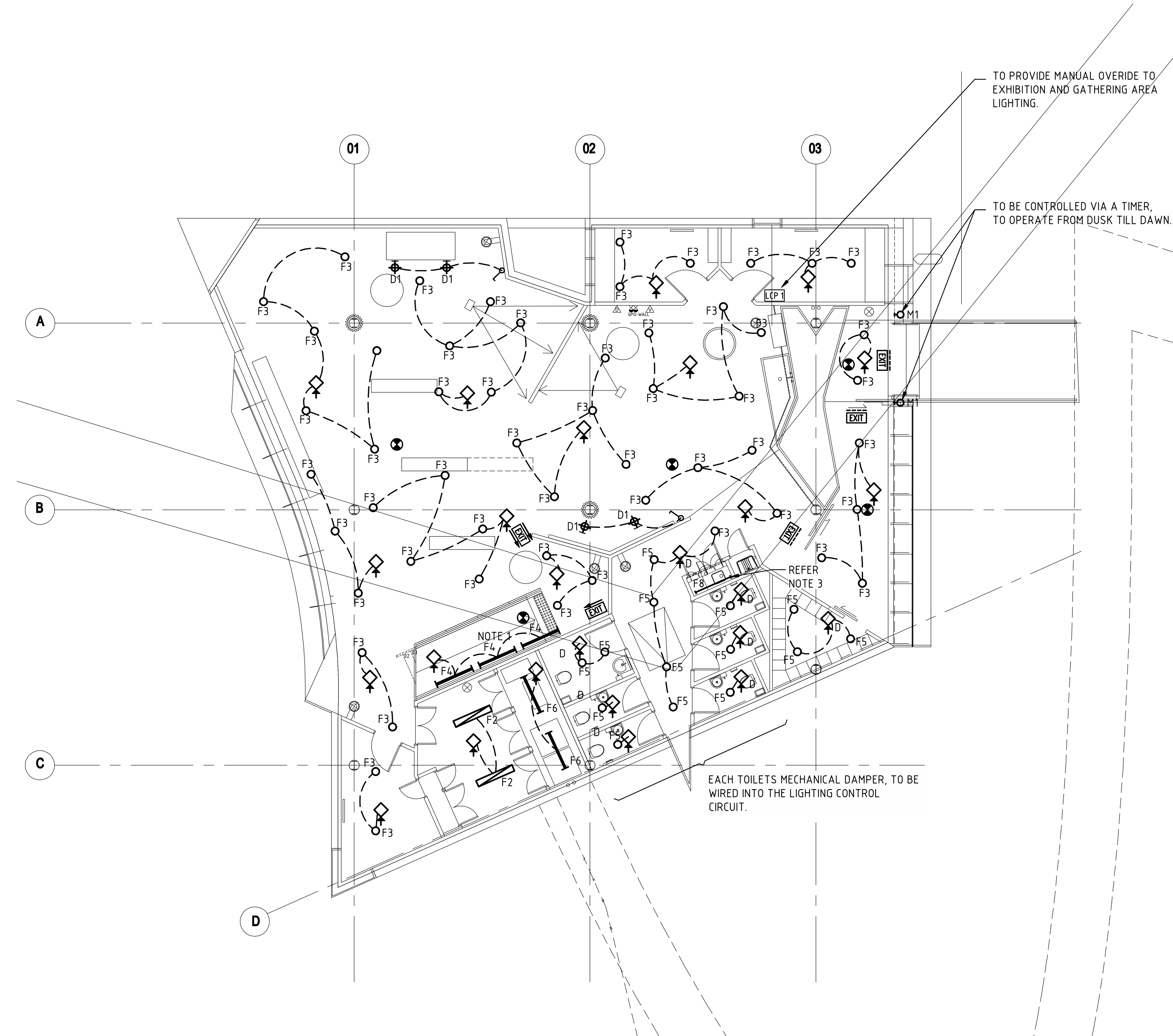


UNDERCROFT LAYOUT



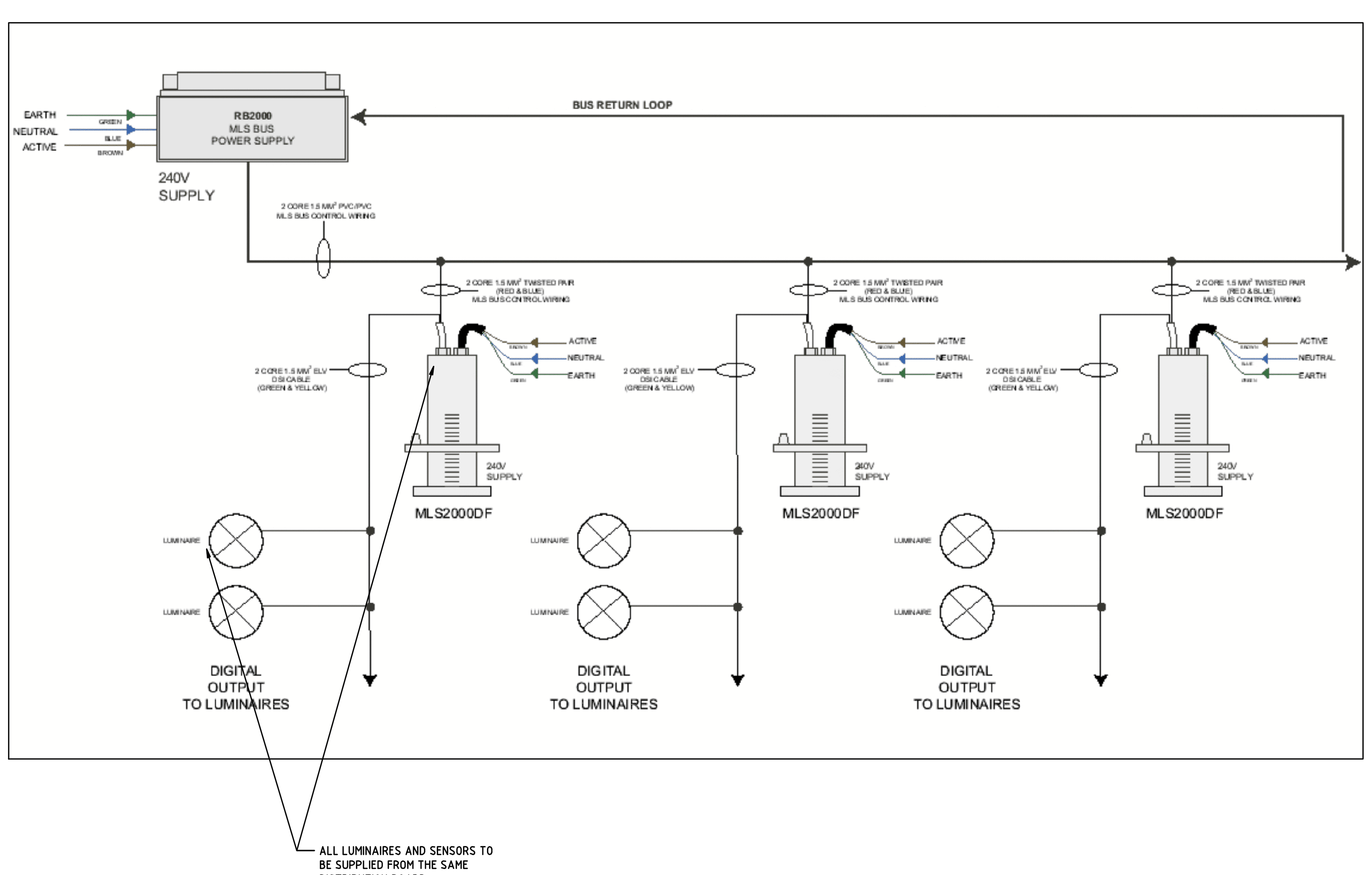
FLOOR LAYOUT

NOTES

1. MOUNTED AT 2200mm ABOVE STAIR TREAD.
2. LIGHTS TO AUTOMATICALLY TURN ON WHEN HATCH LID IS OPEN.
3. LIGHT FITTING MOUNTED ON JOINERY, BELOW HIGH LEVEL CUPBOARDS.REFER TO ARCHITECTS DRAWINGS. TO TURN ON AUTOMATICALLY VIA A REED SWITCH WHEN ACCESS DOOR IS OPEN.

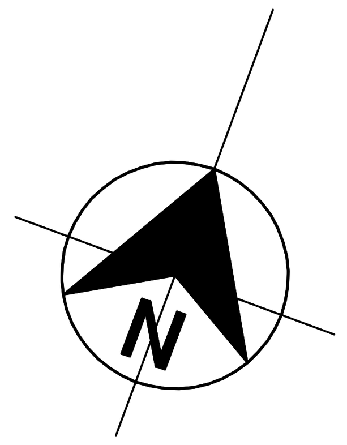
LIGHTING CONTROL STRATEGY

1. SMALL ROOMS TO BE CONTROLLED VIA MOVEMENT SENSORS, WITH A MANUAL LOCAL OVERRIDE SWITCH. WHERE DSI BALLASTS ARE INSTALLED LIGHTING CAN BE DIMMED ACCORING TO DAYLIGHT LEVELS.
2. WITHIN MAIN DISPLAY AREA; LIGHTING TO BE OFF WHEN NO MOVEMENT IN ENTIRE AREA IS DETECTED. WHEN MOVEMENT IS DETECTED BY A SENSOR, LIGHTS IN LOCAL AREA TO BE 100%, ALL OTHER AREAS AT 60%.
3. ALL LIGHTS MASTER CONTROLLED BY MAIN SWITCH PANEL.
4. EXTERNAL AND UNDERCROFT LIGHTS TO BE MASTER CONTROLLED VIA A TIMER CONTROLLER.



ALL LUMINAIRES AND SENSORS TO BE SUPPLIED FROM THE SAME DISTRIBUTION BOARD.

LIGHTING CONTROL SCHEMATIC



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Drawing Title:
ELECTRICAL SERVICES
LIGHTING LAYOUT

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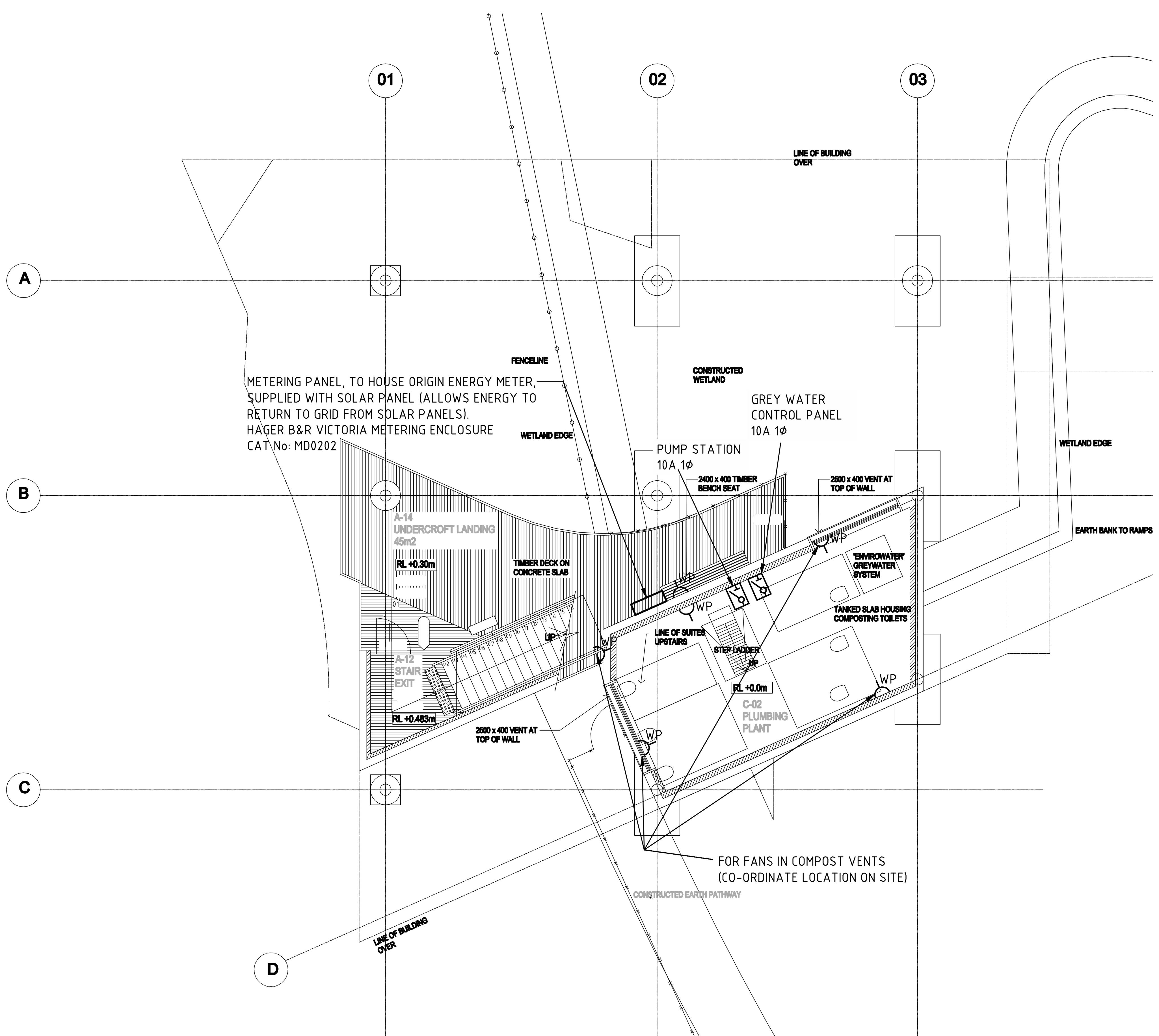
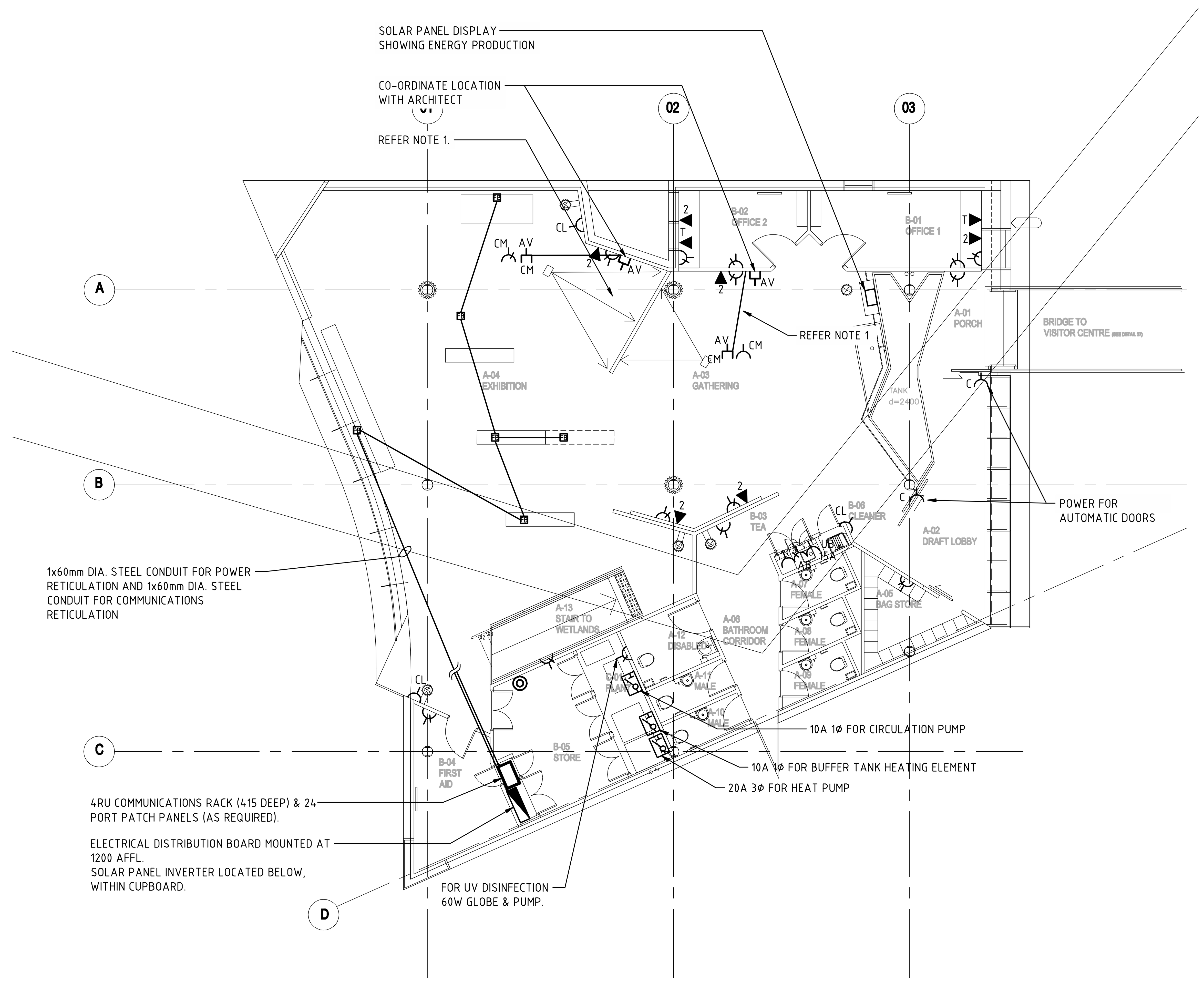
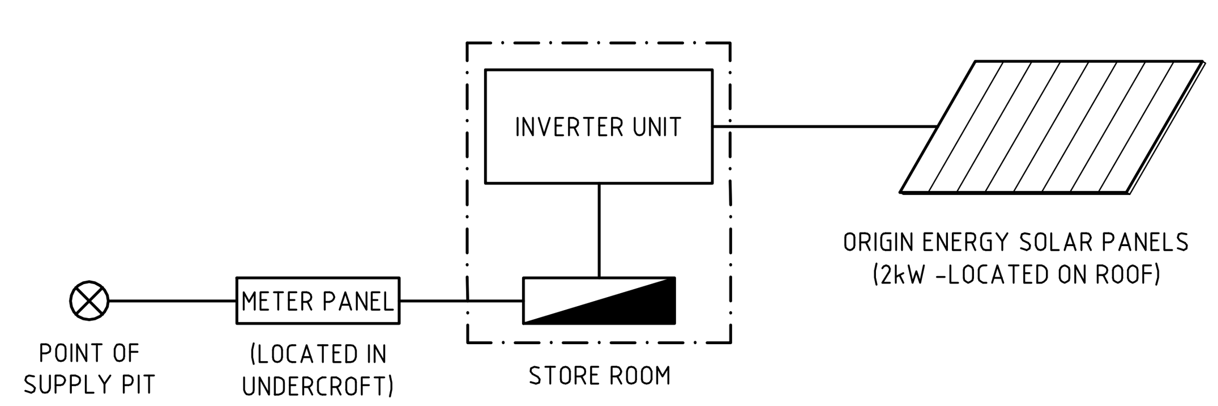


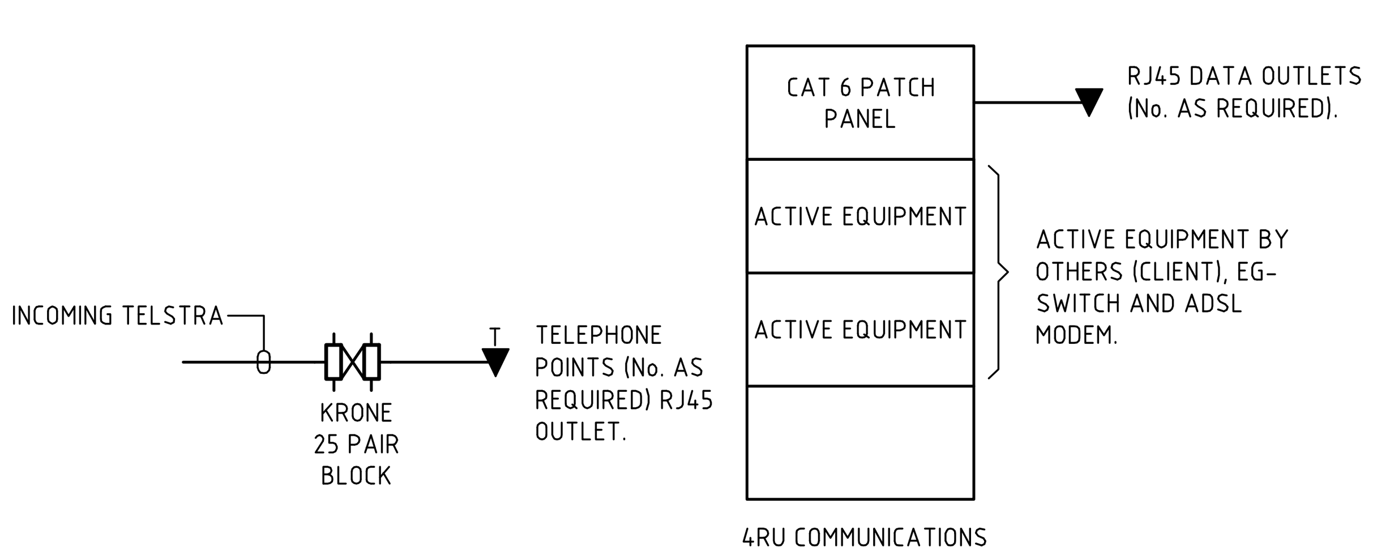
UNDERCROFT LAYOUT



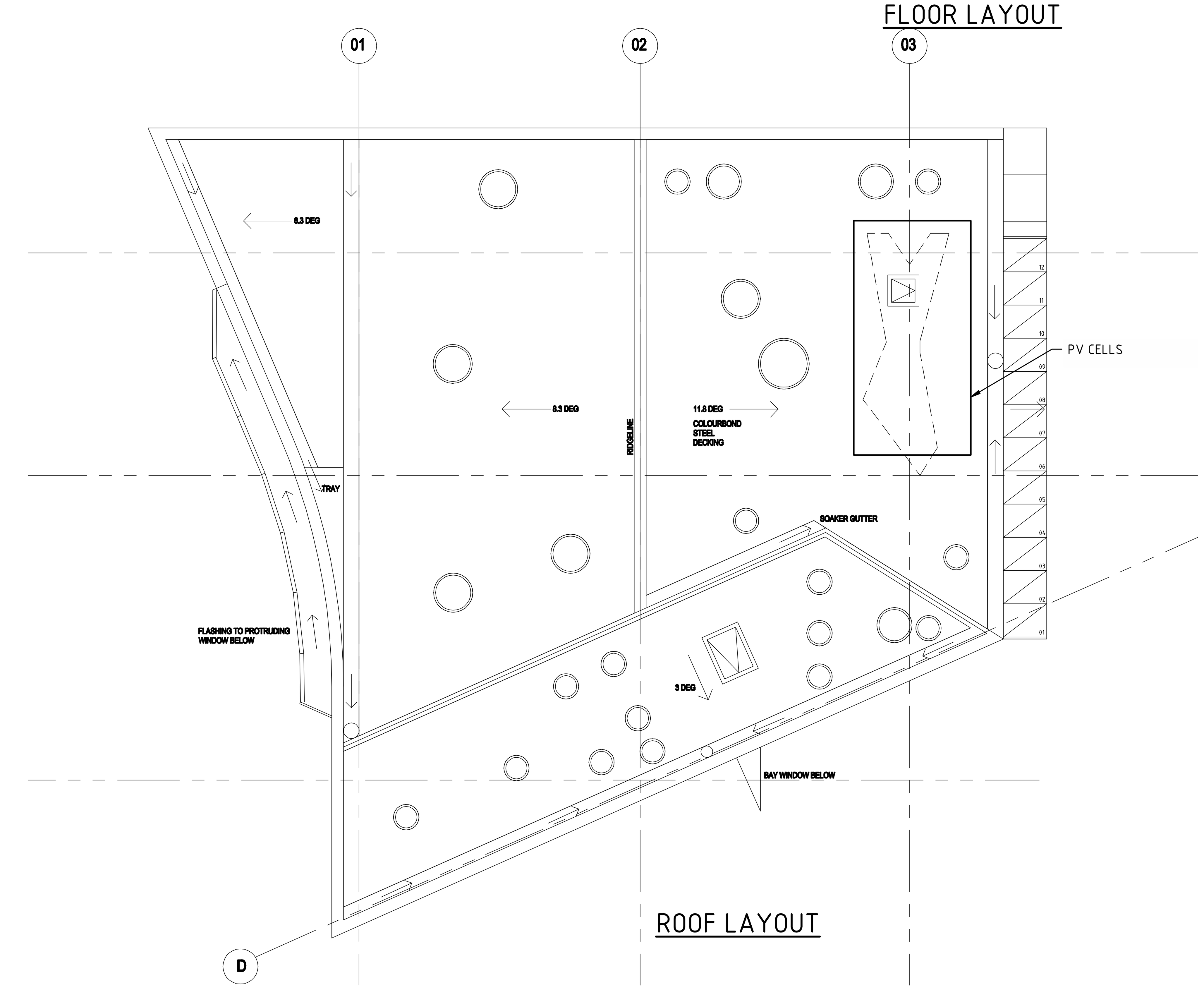
FLOOR LAYOUT



ELECTRICAL SCHEMATIC



COMMUNICATIONS SCHEMATIC



ROOF LAYOUT

NOTES:

1. AV POINTS LINK OVERHEAD PROJECTORS AND WALL MOUNTED OUTLETS - TO ALLOW LAPTOP CONNECTIONS. COORDINATE LOCATION ON SITE.
2. SECURITY HEAD END TO INCLUDE A COMPUTER, MONITOR, KEYBOARD AND MOUSE, CAPABLE OF PROGRAMMING AND CHANGING ALL SECURITY PARAMETERS.

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EDITHVALE - SEAFORD WETLANDS DISCOVERY CENTRE

Drawing Title:
ELECTRICAL SERVICES
POWER & DATA COMMS LAYOUT

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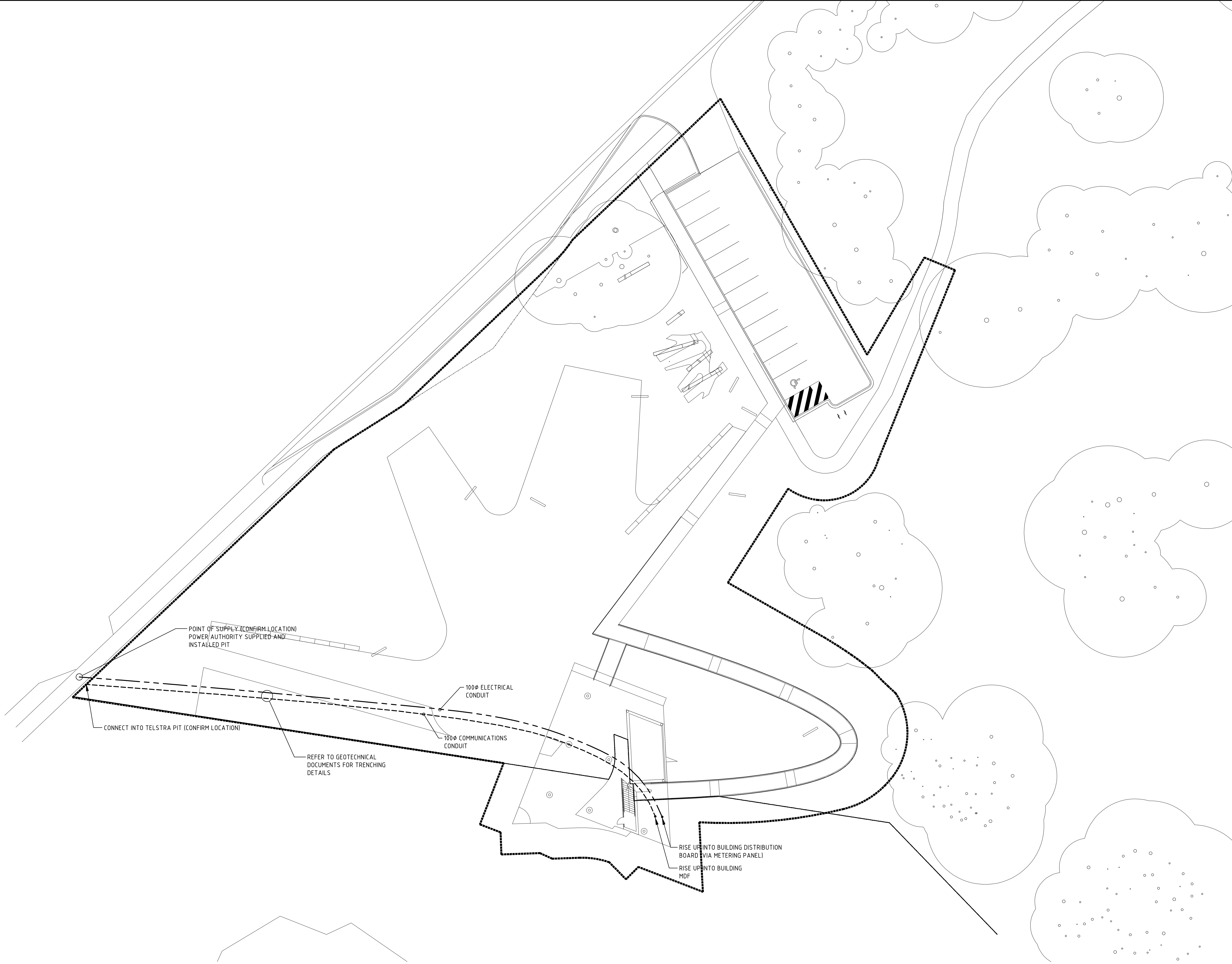

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EDITHVALE - SEAFORD WETLANDS DISCOVERY CENTRE

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ELECTRICAL SERVICES SITE PLAN

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MELBOURNE WATER EDITHVALE-SEAFORD WETLANDS DISCOVERY CENTRE

HYDRAULIC SERVICES

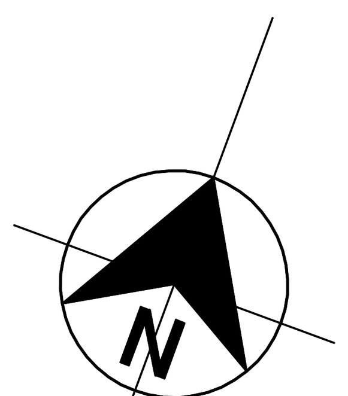
DRAWING INDEX

HYDRAULIC SERVICES PIPING AND EQUIPMENT LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SEWER	AAV	AIR ADMITTANCE VALVE
	VENT		PUMP
	COLD WATER	M	METER
	HOT WATER	R	GAS REGULATOR
	TEMPERED WATER	T	TEMPERING VALVE
FW	FILTERED WATER	TM	THERMOSTATIC MIXING VALVE
RO	REVERSE OZMOSIS		ISOLATION VALVE
PL	PRIMING LINE		CHECK VALVE
FL	FLUSH LINE		STRAINER
RCW	RECYCLED COLD WATER	M	MONITORED VALVE
/	SUBSOIL		BALANCE VALVE
	STORMWATER	ST	STOP VALVE
TW	TRADE WASTE	RPZD	REDUCE PRESSURE ZONE DEVICE
TWV TWV	TRADE WASTE VENT	A/B kPa	PRESSURE REDUCING VALVE
P	PUMPLINE		CONTROL PANEL
NG	NATURAL GAS		HOSE TAP WITH VACUUM BREAKER
ex	EXISTING		FIRE HYDRANT
	RISE / DROP		FIRE HOSE REEL
	DIRECTION OF FLOW	IO	INSPECTION OPENING
	JUMP UP	IOS	INSPECTION OPENING TO SURFACE
	EXISTING TO BE ABOLISHED	ST	FLOOR WASTE BUCKET/SILT TRAP
	EXISTING PIPEWORK CUT & SEALED		GRATED PIT
	BLANK FLANGED END	BT	BOUNDARY TRAP
	CAPPED END	Td	TUNDISH
	PIPE BREAK	FWG	FLOOR WASTE GULLY
OR	INSPECTION CHAMBER	RWO	RAINWATER OUTLET
A/P	ACCESS PANEL	ORG	OVERFLOW RELIEF GULLY
1	DESIGN NOTE REFERENCE	FC	FLOOD CONTROL VALVE
A / H006	DETAIL No. DWG No.	S 100 / V 100	FA OR TA PIPE TYPE PIPE SIZE FB OR TB

HYDRAULIC SERVICES ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AFFL	ABOVE FINNISHED FLOOR LEVEL	IC	INSPECTION CHAMBER
AAV	AIR ADMITTANCE VALVE	IL	INVERT LEVEL
BSN	BASIN	IM	ICE MACHINE
BFP	BACK FLOW PROTECTION	JU	JUMP UP
BPS	BED PAN STERILIZER	LPG	LIQUID PROPANE GAS
Bth	BATH	NC	NORMALLY CLOSED
BBth	BABY BATH	NG	NATURAL GAS
BWU	BOILING WATER UNIT	L/L	LOW LEVEL
BCWU	BOILING & CHILLED WATER UNIT	OF	OVER FLOW
CWU	CHILLED WATER UNIT	RL	REDUCED LEVEL
CS	CLEANERS SINK	RV	RELIEF VENT
C/S	CEILING SPACE	RW	RAIN WATER HARVEST
CW	COLD WATER	RWO	RAIN WATER OUTLET
C/W	COMPLETE WITH	S	SEWER
DF	DRINKING FOUNTAIN	SH	SLOPHOPPER
DG	DISCONNECTOR GULLY	Shr	SHOWER
DP	DOWN PIPE	Sk	SINK
DWM	DISH WASHING MACHINE	Sk(Db)	DOUBLE BOWL SINK
ED	ELEVATED DRAIN	SL	SURFACE LEVEL
ex	EXISTING	S/STEEL	STAINLESS STEEL
FA	FROM ABOVE	ST	SILT TRAP
FB	FROM BELOW	STV	STEAM VENT
FC	FLOOD CONTROL VALVE	SV	STACK VENT
FGL	FIRE GAUGE LINE	SW	STORMWATER
FH	FIRE HYDRANT SERVICE	TA	TO ABOVE
FHR	FIRE HOSE REEL	TB	TO BELOW
FFL	FINISHED FLOOR LEVEL	TW	TRADE WASTE
FS	FIRE SPRINKLER SERVICE	TWV	TRADEWASTE VENT
GIT	GREASE INTERCEPTOR TRAP	Tr	TROUGH
GV	GREASY VENT	IG	UNDER GROUND
GW	GREASY WASTE	US	UNDER SIDE OF SLAB
H/L	HIGH LEVEL	Ur	URINAL
HV	HEADER VENT	VB	VACUUM BREAKER
HW	HOT WATER	V	VENT
HWF	HOT WATER FLOW	VV	VERTICAL VENT
HWR	HOT WATER RETURN	W	WASTE
HWU	HOT WATER UNIT	WC	WATER CLOSET



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EDITHVALE - SEAFORD WETLANDS DISCOVERY CENTRE

Drawing Title:

HYDRAULIC SERVICES
DRAWING INDEX, LEGENDS, NOTES

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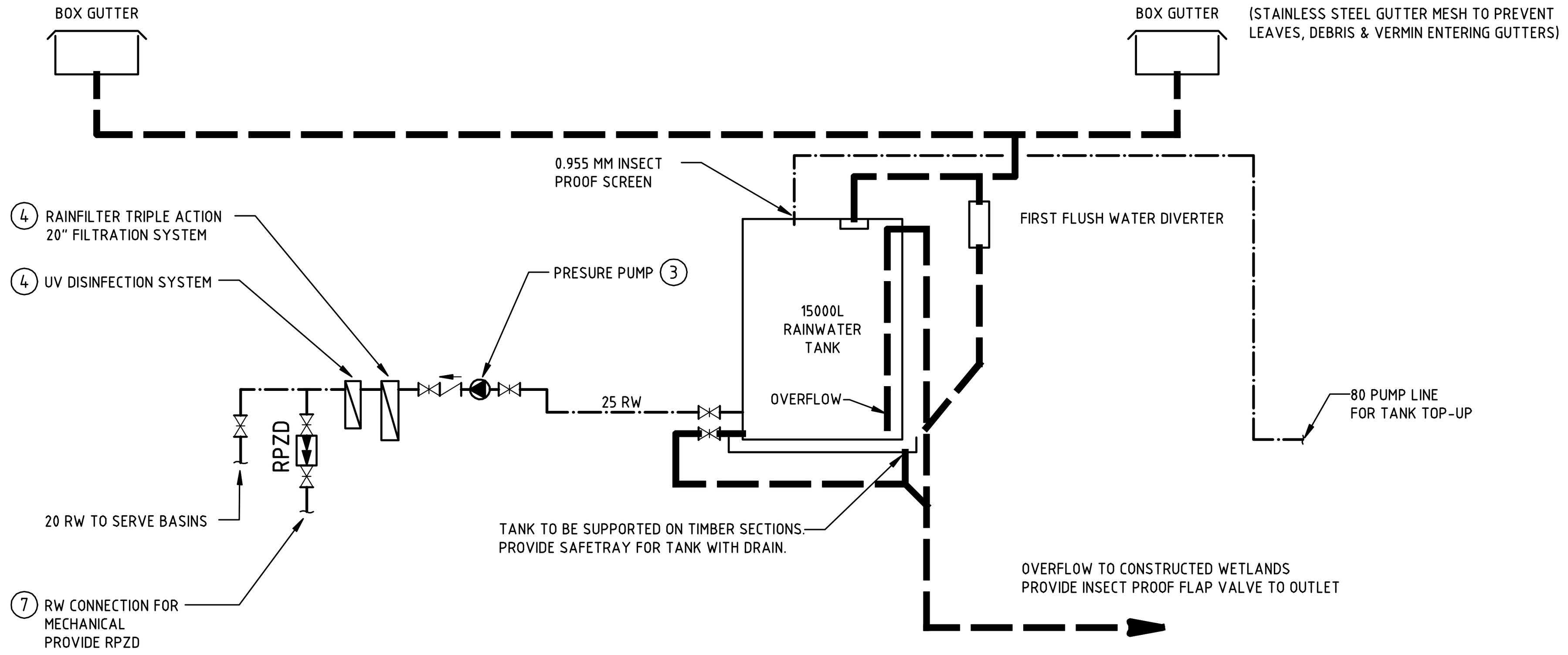
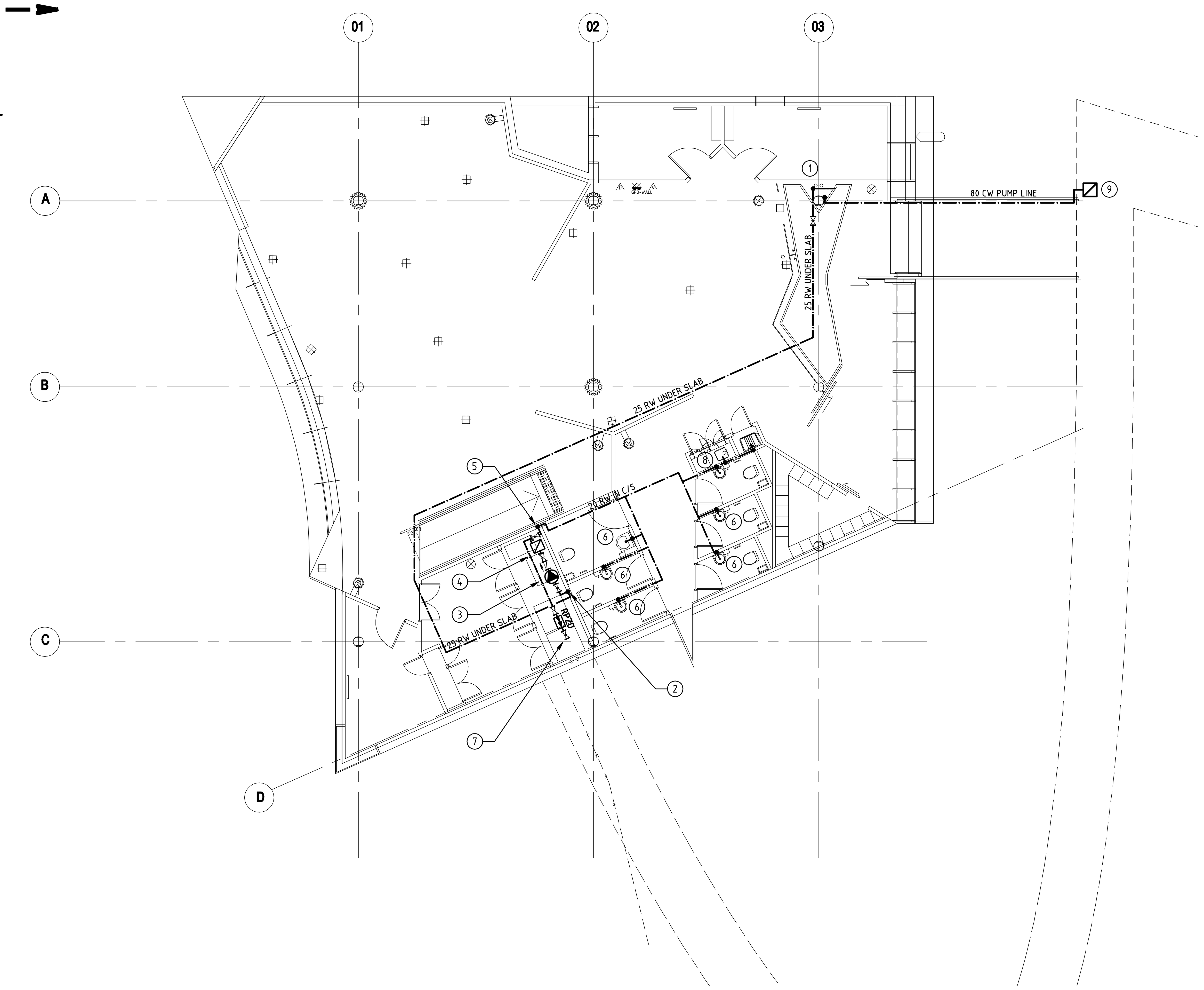
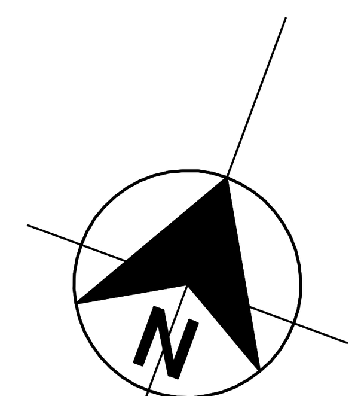


RAINWATER HARVEST SYSTEM SCHEMATIC



FLOOR PLAN - COLD WATER LAYOUT



GENERAL NOTES

1. OUTLET OF TANK TO BE 300MM AFFL. DROP 25 RW TO BELOW SLAB AND RUN UNDER SLAB TO PLANT ROOM.
2. 25 RW RISE FROM BELOW SLAB TO PLANT ROOM.
3. DAVEY HP 45-05T HOME PRESSURE SYSTEM PUMP WITH TORRIUM FLOW CONTROL COMPLETE WITH ALL ASSOCIATED VALVES AND PIPES, OR APPROVED EQUIVALENT.
4. RAIN FILTER TRIPLE ACTION 20" GRIT AND CARBON FILTER AND ULTRAVIOLET TECHNOLOGY OF AUSTRALASIA LC 30 UV DISINFECTION UNIT.
5. 20 RAIN WATER TO RISE TO CEILING SPACE AND RETICULATE TO BASINS.
6. 15 RW DROP IN WALL CAVITY TO BASIN.
7. PROVIDE 20 RW CONNECTION WITH RPZD FOR MECHANICAL CONTRACTOR.
8. 20 RW DROP IN WALL CAVITY PROVIDE RW OUTLET TO BASIN, TEA SINK AND CLEANERS SINK.
9. PROVIDE STEEL LOCKABLE BOX WITH 80 KAMLOCK AND BACKFLOW PROTECTION FOR CONNECTION BY MOBILE WATER SUPPLIER. RUN 80 PUMP LINE UNDER BRIDGE AND RISE NEXT TO TANK TO CEILING LEVEL.

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WETLANDS DISCOVERY CENTRE

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HYDRAULIC SERVICES
FLOOR PLAN COLD WATER LAYOUT

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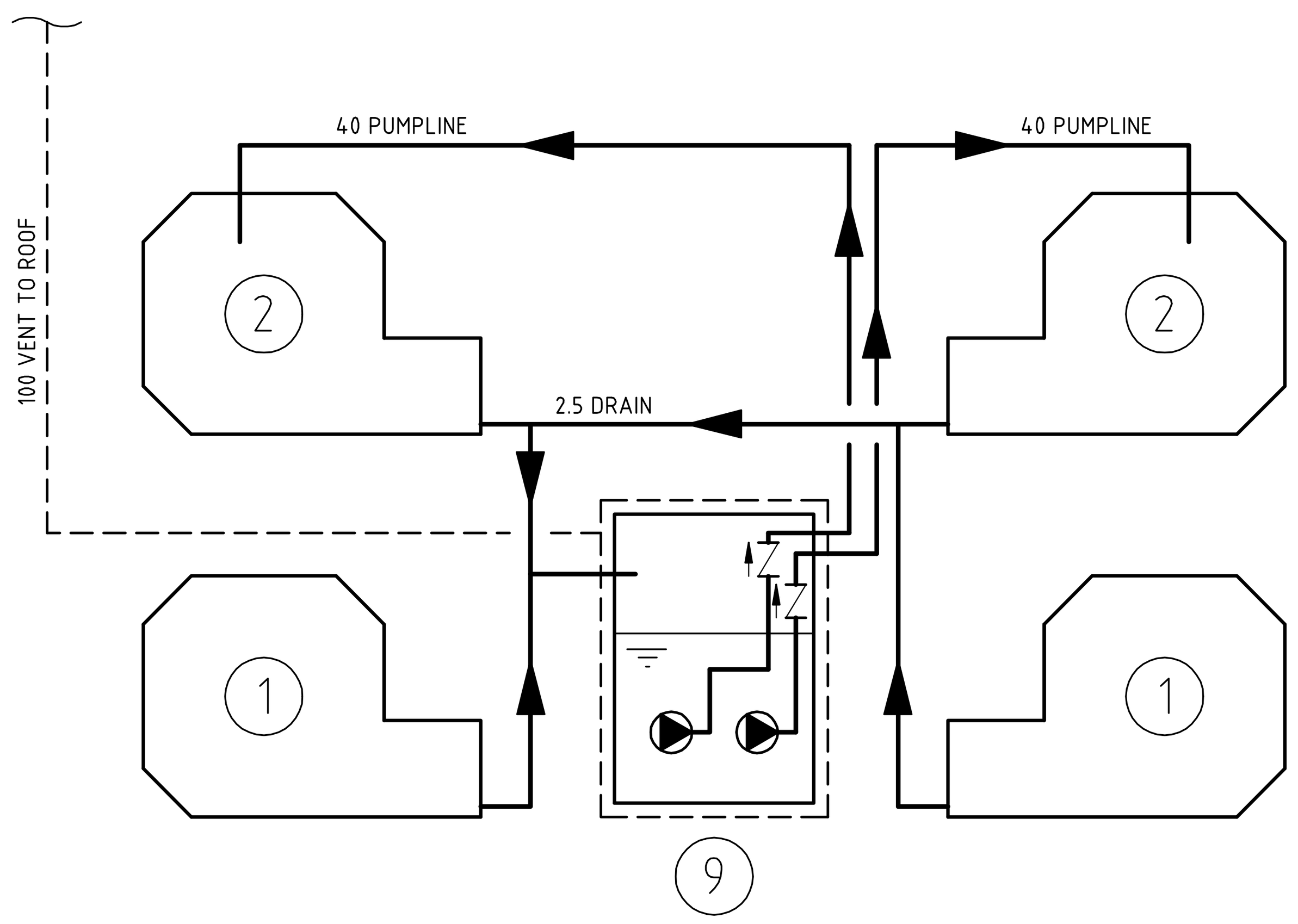
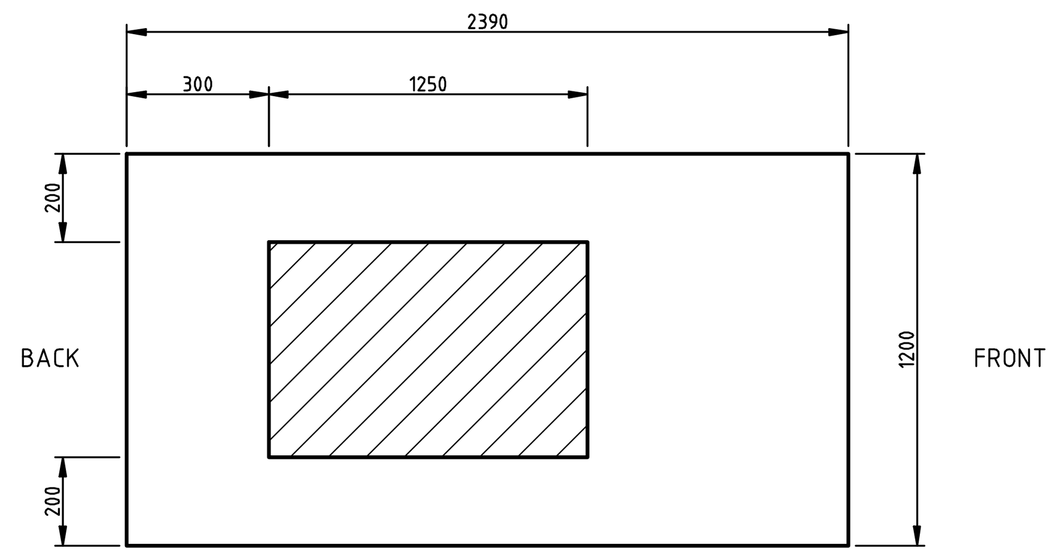


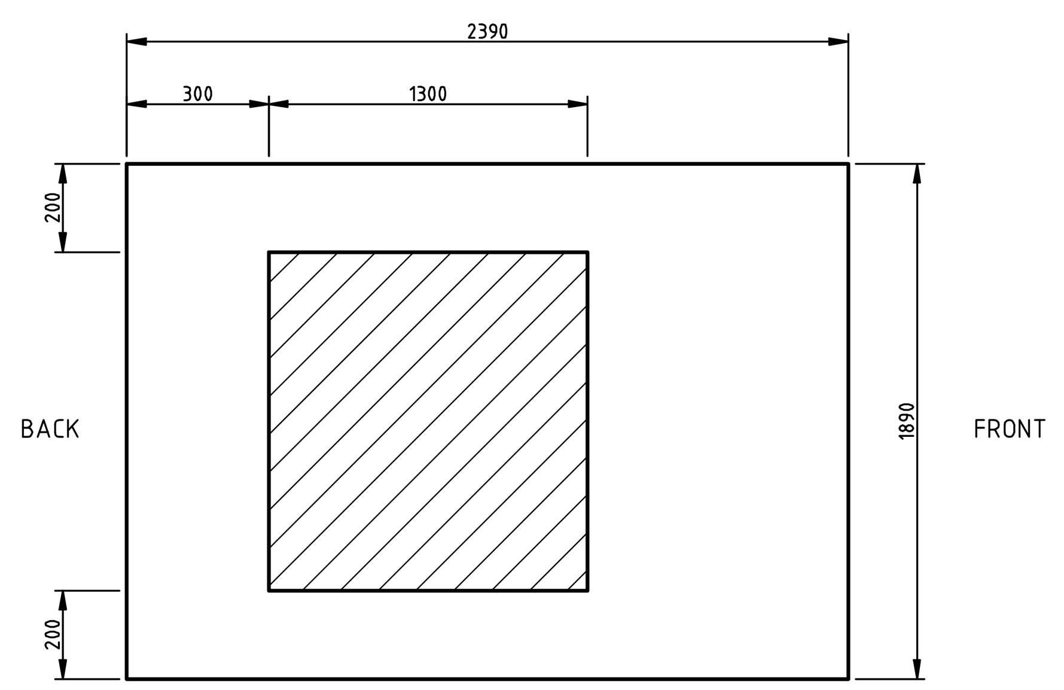
COMPOSTING TANKS ZERO DISCHARGE SCHEMATIC.

N.T.S.



CLIVUS MULTRUM CM 20

N.T.S.

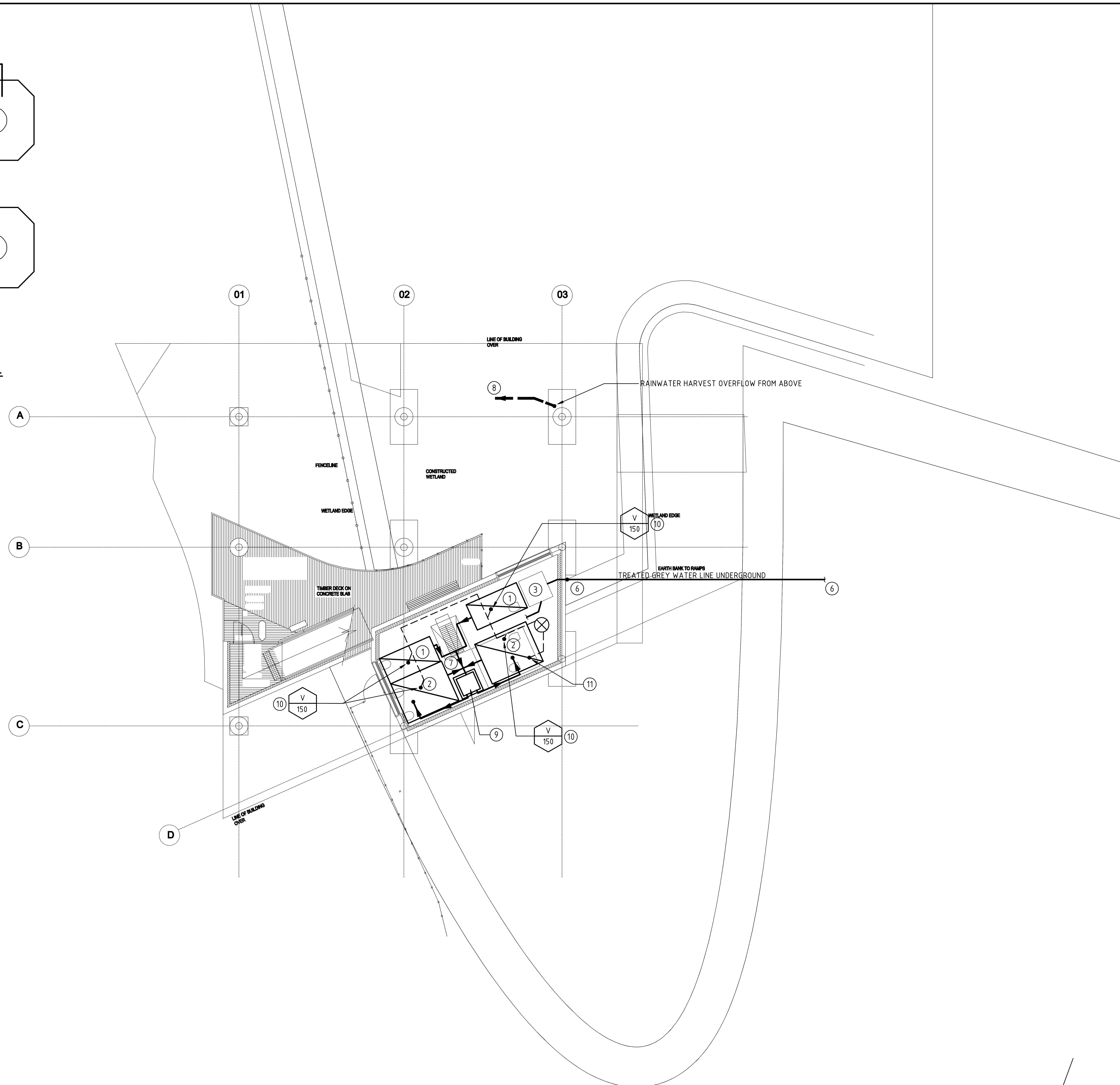


CLIVUS MULTRUM CM 40

N.T.S.

LOCATION OF VERTICAL CHUTE

NOTE: HATCHED AREA SHOWS ALLOWABLE CHUTE LOCATIONS



UNDERCROFT PLAN - SEWER & STORMWATER LAYOUT

GENERAL NOTES

1. CLIVUS MULTRUM CM 20 COMPOSTING TANK 1630 H X 2390 L X 1200 W CHUTE FROM ABOVE TO BE LOCATED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS
2. CLIVUS MULTRUM CM 40 COMPOSTING TANK 1780 H X 2430 L X 1890 W CHUTE FROM ABOVE TO BE LOCATED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS
3. 100 GREY WATER LINE FROM BASINS TO GREY WATER TREATMENT. REFER TO GROUND FLOOR HYDRAULICS DRG. H004 FOR CONTINUATION.
4. ENVIRO WATER 500 L GREYWATER TREATMENT SYSTEM. COMPLETE WITH GRIT CHAMBER, REACTION TANK, FILTER, UV DISINFECTION AND CONTROLS.
5. GREYWATER FROM BASINS. REFER TO HYDRAULICS FLOOR PLAN H004 FOR CONTINUATION.
6. TREATED GREY WATER OUTLET TO PENETRATE TANKED UNDERCROFT WALL AT HIGH LEVEL ABOVE 1 IN 100 FLOOD LEVEL AND DROP TO BELOW GROUND. PROVIDE 2 X 30 METRE LONG 100MM SLOTTED AG PIPE WITH FILTER SOCK IN 600MM WIDE X 500MM DEEP TRENCHES. BACKFILL WITH OPEN GRADED GRAVEL. COORDINATE LOCATION WITH LANDSCAPE CONTRACTOR.
7. LIQUID DISCHARGE FROM COMPOSTING TANKS TO BE RECIRCULATED VIA ZERO DISCHARGE TANKS AND THEM PUMPED BACK INTO THE TOP OF THE COMPOST TANKS.
8. 150 OVERFLOW FROM RAIN WATER TANK TO DROP TO BELOW SLAB AND DISCHARGE INTO CONSTRUCTED WETLANDS.
PROVIDE INSECT PROOF SCREEN TO OUTLET.
9. 1200W X 1200L X 1400D PUMPWELL BY STRUCTURES.
PROVIDE 2 X HV50.04, 240 VOLT HEAVY DUTY SUBMERSIBLE PUMPS AND KWIKSTART A/1 - FIMV24 DUAL ALTERNATING PUMP CONTROLLER, ALL BY ALL PURPOSE PUMPS OR APPROVED EQUIVALENT.
10. 150 VENT COMPLETE WITH CLIVUS MULTRUM 240 V FAN. COMBINE ALL 4 VENTS AND CONNECT TO PURAFIL ESD DRUM SCRUBBER FILTER
11. 250MM DIA EXTRACT DUCT CONNECTED TO DRUM SCRUBBER TO RISE TO ABOVE

Rev	Date	Revision Details	Drn	Ver.	App.
03	13.12.07	CO-ORDINATED TENDER ISSUE	KDI		
02	21.11.07	TENDER ISSUE	KDI		
01	22.08.07	DESIGN DEVELOPMENT	KDI		

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Melbourne Water
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East Melbourne Victoria 3002

Project:

EDITHVALE - SEAFORD
WETLANDS DISCOVERY CENTRE

Drawing Title:

HYDRAULIC SERVICES
UNDERCROFT PLAN
SEWER & STORMWATER LAYOUT

Drawn	Signed	Date	Verified	Signed	Date
KDI					
Designed	Signed	Date	Approved	Signed	Date
PSM					

Project No.	Scale:	Sheet Size
28803.001	1:100	A1
Drawing No. H003	Revision: 02	

SUBJECT TO FINAL
VERIFICATION AND APPROVAL

TENDER DOCUMENT
NOT FOR CONSTRUCTION

GENERAL NOTES

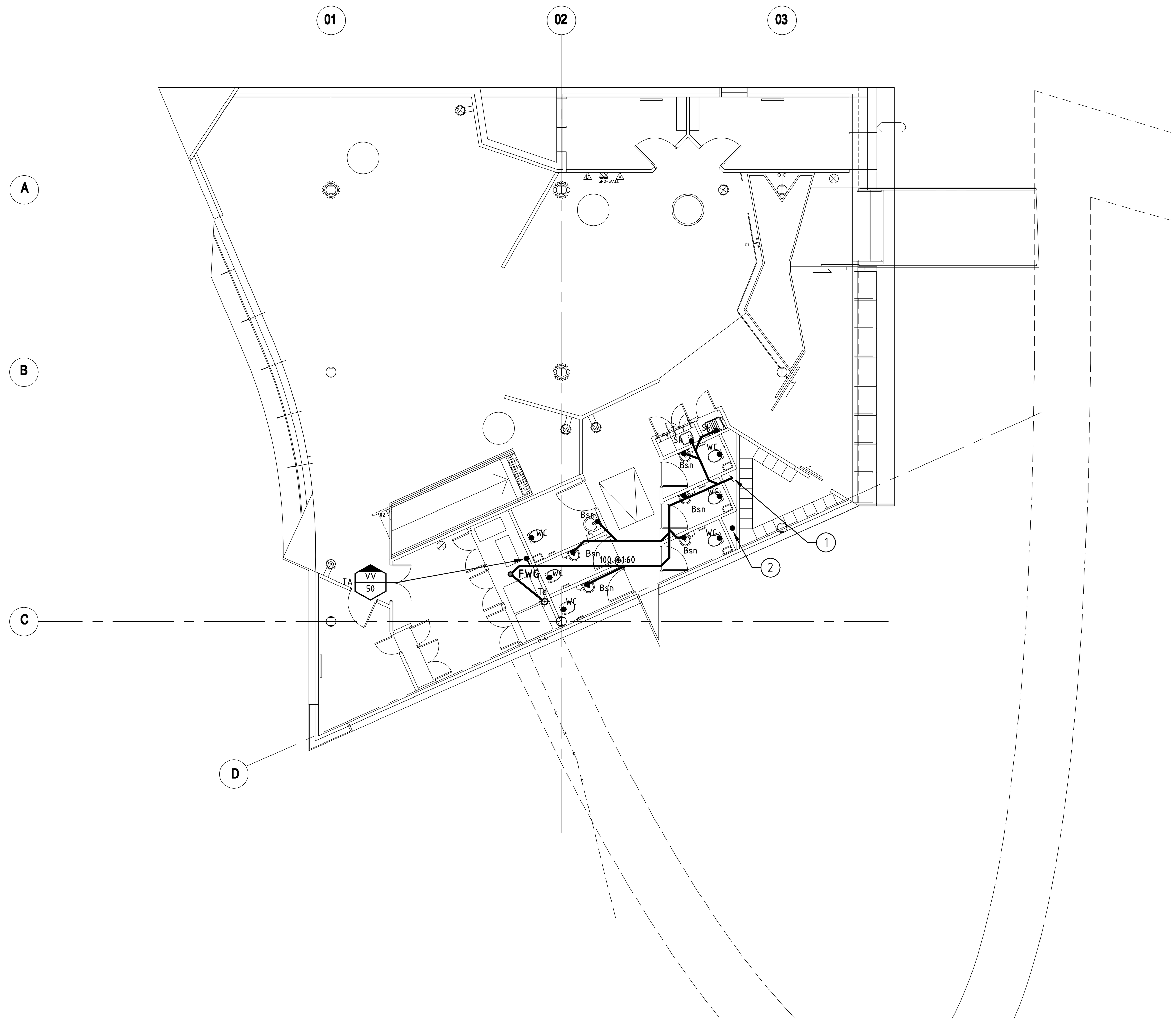
Bsn. 40 W TO 100 X 90° BEND TO SERVE BASIN.

Wc. CLIVUS MULTRUM TOILET PEDESTAL AND CHUTE TO BE CONNECTED TO COMPOSTING TANK BELOW.
REFER TO UNDERCROFT HYDRAULICS DRAWING H003 FOR CONTINUATION. CHUTE TO PROVIDE VERTICAL DROP TO COMPOST TANK BELOW. REFER TO DRAWING H003 FOR ALLOWABLE CHUTE LOCATIONS

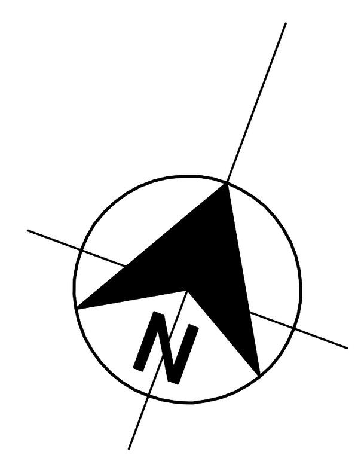
Td 50 TRAPPED TUNDISH FOR MECHANICAL PLANT. COORDINATE WITH MECHANICAL CONTRACTOR.

(1) GREY WATER LINE FROM BASINS TO CONNECT TO GREY WATER TREATMENT SYSTEM BELOW.
REFER TO UNDERCROFT HYDRAULICS DRAWING H003 FOR CONTINUATION.

(2) 250mm DIA EXTRACT DUCT FOR COMPOSTING TOILETS FROM BELOW TO RISE TO CEILING SPACE.



FLOOR PLAN - SEWER & STORMWATER LAYOUT



Rev	Date	Revision Details	Drn	Ver.	App.
03	13.12.07	CO-ORDINATED TENDER ISSUE	KDI		
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Project:

EDITHVALE - SEAFORD
WETLANDS DISCOVERY CENTRE

Drawing Title:

HYDRAULIC SERVICES
FLOOR PLAN LAYOUT
SEWER & STORMWATER OUTLET

Drawn	Signed	Date	Verified	Signed	Date
PSM					
Designed	Signed	Date	Approved	Signed	Date
KDI					

Project No. 28803.001 | Scale: 1:100 | Sheet Size A1

Drawing No. H004 | Revision: 03

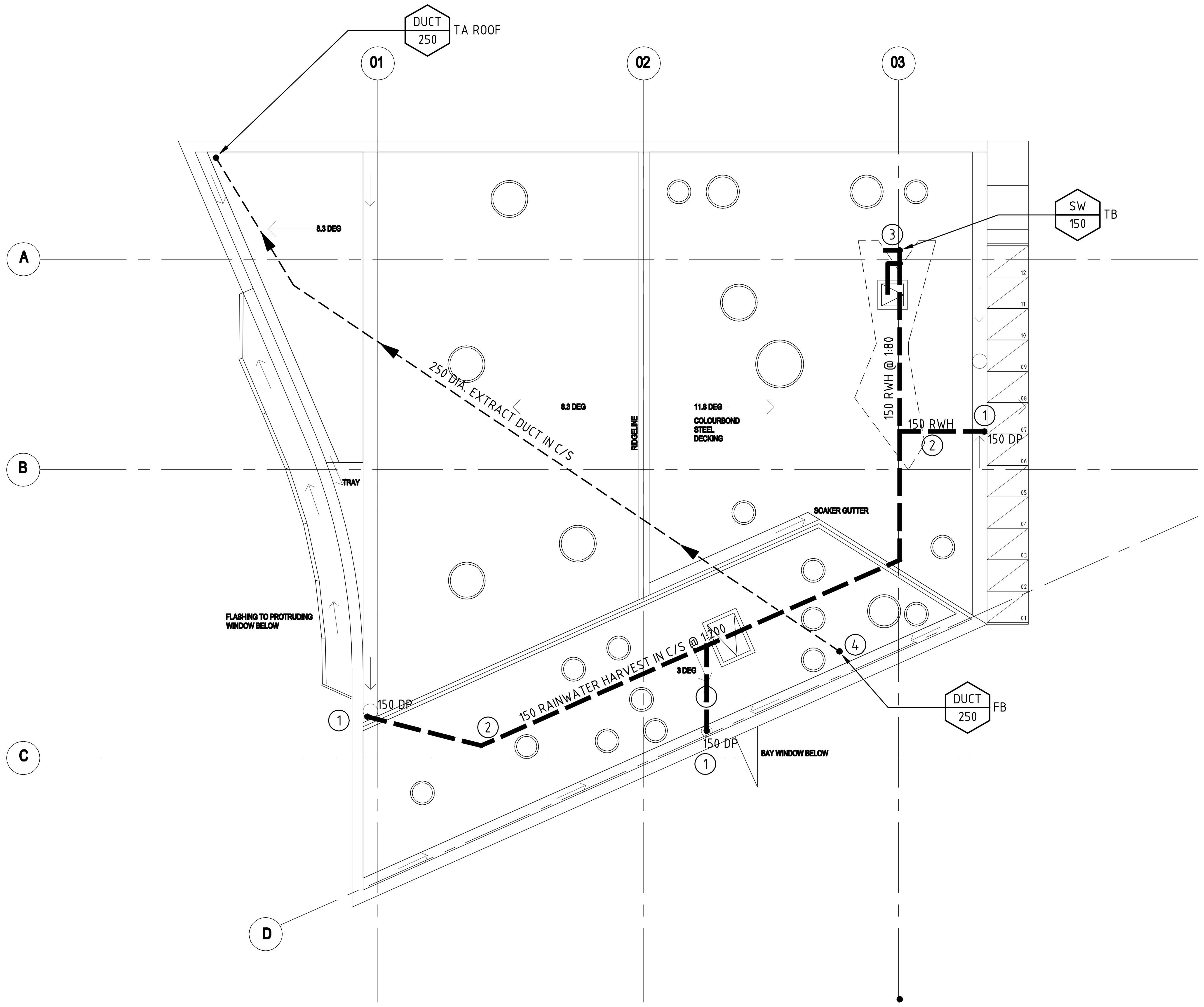
SUBJECT TO FINAL VERIFICATION AND APPROVAL

TENDER DOCUMENT
NOT FOR CONSTRUCTION

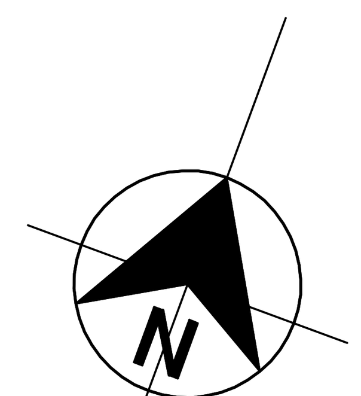
20 10 0 10 20 30 40 50 100mm

GENERAL NOTES

1. BOX GUTTER 450MM WIDE X 150MM DEEP. COMPLETE WITH 100MM DEEP SUMP AND 150MM DIA. DOWN PIPE.
2. 150 RAINWATER HARVEST TO RUN FROM BOX GUTTER TO RAINWATER TANK IN CEILING SPACE AT HIGH LEVEL. COMPLETE WITH FIRST FLUSH WATER DIVERTER. REFER TO DRAWING H002 FOR SCHEMATIC DETAILS.
3. 150 OVERFLOW FROM RAINWATER TANK TO RUN IN CEILING SPACE AND DROP IN CAVITY TO BELOW SLAB.
4. 250 MM DIA. EXTRACT DUCT FOR COMPOSTING TOILETS FROM BELOW TO RUN IN CEILING SPACE. DUCTWORK TO BE SIZED FOR A MAXIMUM PRESSURE DROP OF 50Pa. EXTRACT POINT TO BE LOCATED AT FURTHEST POINT FROM INLET VENTILATORS.



ROOF PLAN - SEWER & STORMWATER LAYOUT



Rev	Date	Revision Details	Drn	Ver.	App.
03	13.12.07	CO-ORDINATED TENDER ISSUE	KDI		
02	21.11.07	TENDER ISSUE	KDI		
01	22.08.07	DESIGN DEVELOPMENT	KDI		

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Project:

EDITHVALE - SEAFORD
WETLANDS DISCOVERY CENTRE

Drawing Title:

HYDRAULIC SERVICES
ROOF PLAN
SEWER & STORMWATER LAYOUT

Drawn	Signed	Date	Verified	Signed	Date
PSM					
Designed	Signed	Date	Approved	Signed	Date
KDI					

Project No. 28803.001 | Scale: 1:100 | Sheet Size A1

Drawing No. H005 | Revision: 02

SUBJECT TO FINAL VERIFICATION AND APPROVAL

TENDER DOCUMENT
NOT FOR CONSTRUCTION

EDITHVALE SEAFORD WETLANDS DISCOVERY CENTRE
CONSTRUCTED WETLAND

GENERAL NOTES

G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND DRAWINGS ISSUED BY THE PROJECT MANAGER AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.

G2. ALL LEVELS ARE EXPRESSED IN METRES ABOVE AUSTRALIAN HEIGHT DATUM (AHD).

G3. GRID COORDINATES ARE MGA

G4. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE (U.N.O.).

G5. ALL RADII ARE EXPRESSED IN METRES. (U.N.O.)

G6. FINISHED SURFACE CONTOURS ARE SHOWN FOR GUIDANCE ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION SETOUT PURPOSES.

G7. EXISTING CONTOURS, LEVELS AND FEATURES ARE INDICATIVE ONLY AND ARE BASED UPON SURVEY DRAWINGS AND DATA SUPPLIED BY AM SURVEY

G8. THE DRAWINGS SHALL NOT BE SCALED.

G9. ALL DIMENSIONS RELEVANT TO SETTING OUT SHALL BE CONFIRMED AND VERIFIED BY THE BUILDER BEFORE CONSTRUCTION IS COMMENCED. THE BUILDER SHALL REPORT ANY DISCREPANCIES TO THE PROJECT MANAGER.

G10. THE LOCATIONS OF ALL EXISTING SURFACE PITS, VALVE COVERS, ETC. SHOWN ON DRAWINGS HAVE BEEN REPRODUCED FROM SURVEY DETERMINED BY AM SURVEY THE LOCATIONS OF UNDERGROUND SERVICES HAVE BEEN NOTED FROM EXISTING RECORDS. AS VARIATIONS WITH RECORDS MAY EXIST COMPLETE ACCURACY CANNOT BE GUARANTEED. ALL EXISTING SERVICES LOCATIONS SHALL BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WORK.

G11. PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON THE SITE THE BUILDER SHALL CONTACT THE RELEVANT AUTHORITIES TO ASCERTAIN THE POSSIBLE LOCATION OF FURTHER SERVICES AND DETAILED LOCATION AND DEPTH OF ALL SERVICES AND ARRANGE FOR THEIR RELOCATION WHERE NECESSARY.

G12. THE BUILDER SHALL MAINTAIN ALL WORK SITES IN A SAFE AND STABLE CONDITION.

G13. WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RELEVANT CURRENT SAA AND VICROADS STANDARDS PLUS LOCAL STATUTORY AUTHORITIES REQUIREMENTS EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

G14. FOOTPATHS SHOWN ON DRAWINGS ARE INDICATIVE ONLY. REFER TO LANDSCAPE ARCHITECTS FOR FULL DETAILS, LOCATIONS AND LEVELS.

DRAINAGE NOTES

D1. ALL CONCRETE FOR SITEWORKS IS TO HAVE A 28 DAY CHARACTERISTIC STRENGTH OF 25 MPa U.N.O.

D2. ALL PIPES GREATER THAN 150mm DIA SHALL BE REINFORCED CONCRETE DRAINAGE PIPE CLASS X RUBBER RING JOINTED (U.N.O.) IN ACCORDANCE WITH THE SPECIFICATION. ALL 150mm DIA PIPES TO BE UPVC CLASS SH (U.N.O.) IN ACCORDANCE WITH THE SPECIFICATION

D3. PIPELAYING SHALL COMMENCE AT THE DOWNSTREAM END OF THE WORK UNLESS OTHERWISE AGREED WITH THE PROJECT MANAGER. PIPE SOCKETS AND REBATES SHALL POINT UPSTREAM.

D4. TOP OF PIT COVER LEVELS (FINISHED) ARE INDICATIVE ONLY.

D5. PIT LOCATION COORDINATES ARE NOT NECESSARILY TO CENTRE OF PIT. REFER TO THE RELEVANT PIT TYPE DETAIL FOR SET OUT POINT (SOP).

BULK EXCAVATION

B1. TOPSOIL (NOMINAL DEPTH 150mm) SHALL BE STRIPPED WITHIN THE LIMIT OF EARTHWORKS. QUANTITIES OF SELECT TOPSOIL MATERIAL FOR FUTURE LANDSCAPE WORKS SHALL BE STOCKPILED AS DIRECTED BY THE PROJECT MANAGER.

B2. AFTER BULK EXCAVATION HAS BEEN COMPLETED THE FORMED SURFACE SHALL BE PROOF ROLLED AND TESTED IN ACCORDANCE WITH THE SPECIFICATION. AFTER TOPSOIL STRIP IN FILL ZONES HAS BEEN COMPLETED THE SURFACE SHALL BE PROOF ROLLED AND TESTED IN ACCORDANCE WITH THE SPECIFICATION.

B3. ANY SOFT, WET OR UNSUITABLE SUBGRADE MATERIALS, AS DEFINED IN THE SPECIFICATION, SHALL BE REMOVED AND REPLACED WITH AN APPROVED MATERIAL.

B4. ALL SURPLUS EXCAVATED MATERIALS (EXCLUDING TOPSOIL) SHALL BE REMOVED FROM THE SITE AT THE BUILDER's EXPENSE TO A PLACE OF LEGAL DISPOSAL UNLESS DIRECTED OTHERWISE BY THE PROJECT MANAGER.

B5. APPROVED FILL MATERIALS SHALL BE PLACED IN UNIFORM LAYERS, COMPACTED ,TESTED AND PROOF ROLLED IN ACCORDANCE WITH THE SPECIFICATION.

WETLAND NOTES

W1. ROCK SHOULD BE HARD, TOUGH AND DURABLE WITH A CRUSHING STRENGTH OF AT LEAST 25MPa. ROCK SHALL BE FREE OF CLEAVAGE PLANES AND SHOULD NOT BE ADVERSELY AFFECTED BY REPEATED WETTING AND DRYING.

W2. ROCK SHOULD BE PREDOMINATELY ANGULAR IN SHAPE WITH NOT MORE THAN 25% OF ROCKS, DISTRIBUTED THOUGH THE GRADATION, HAVING A LENGTH MORE THAN TWICE THE BREADTH OR THICKNESS. NO ROCK SHOULD HAVE A LENGTH EXCEEDING 2.5 TIMES ITS BREADTH OR THICKNESS.

W3. ROCKS SHALL NOT BE SINGLE SIZED, BUT SHOULD BE A WELL GRADED MIXTURE.

ROCK BEACHING:
THE FOLLOWING ROCK GRADATION IS RECOMMENDED FOR ROCK BEACHING:
D_{90}=50mm
D_{50}=150mm
D_{10}=300mm

THE THICKNESS OF ROCK BEACHING SHALL BE TWICE THE MEDIAN DIAMETER ROCK.

W4. LINER TO BE GEOSYNTHETIC LINER WITH BENTONITE, ELCOSEAL OR APPROVED EQUIVALENT

W5. CLAY MUST BE IMPORTED TO SITE. IT MUST BE A NON-DISPERSIVE CLAY WITH A PERMEABILITY OF 1X10E-9 AND TO 95% STANDARD COMPACTION.

W6. CLAY IS TO BE GYPSUM STABILISED

CONCRETE NOTES

C1. ALL WORKMANSHIP AND MATERIALS SHALL BE GENERALLY IN ACCORDANCE WITH THE SPECIFICATION.

C2. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.

C3. ALL FABRIC LAPS SHALL BE FULL STRENGTH TO AS3600.

C4. WELDING OF REINFORCEMENT IS NOT PERMITTED WITHOUT THE APPROVAL OF THE PROJECT MANAGER.

C5. ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED IN ITS CORRECT POSITION DURING CONCRETING BY APPROVED BAR-CHAIR, SPACERS OR SUPPORT BARS.

C6. REINFORCEMENT FABRIC SHALL BE IN ACCORDANCE WITH AS1304

C7. FORMWORK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTION 801. (VICROADS)

C8. CONCRETE STRENGTH SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE AND SHALL BE SUPPLIED IN ACCORDANCE WITH AS1379 (READY MIXED CONCRETE)
. . . . 4.0 MPa (90 DAY FLEXURAL STRENGTH)
. . . . . 25 MPa (28 DAY COMPRESSIVE STRENGTH)

C9. DETAILS OF CONCRETE MIX, AGGREGATE SIZE AND COLOUR, METHOD OF CURING AND FINISH ARE TO BE SUBMITTED TO THE PROJECT MANAGER FOR APPROVAL BEFORE COMMENCING CONCRETE WORKS.

- CONCRETE ROAD PAVEMENTS
- ELSEWHERE

DRAWING INDEX

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
01					

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Project: EDITHVALE SEAFORD WETLANDS DISCOVERY CENTRE

Drawn NJB	Signed	Date	
Designed NJB	Signed	Date	
Verified	Signed	Date	
Approved	Signed	Date	

Drawing Title: CONSTRUCTED WETLAND FACE SHEET

Project No. MW13.043
Scale
Sheet Size A1
Drawing No. W001
Rev. 01

20 10 0 10 20 30 40 50 100mm

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PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
01					

Client: Melbourne Water

Project: EDITHVALE SEAFORD WETLANDS DISCOVERY CENTRE

Drawn	NJB	Signed	Date
Designed	NJB	Signed	Date
Verified		Signed	Date
Approved		Signed	Date

Drawing Title: CONSTRUCTED WETLAND LAYOUT

Project No.

Scale: 1:100

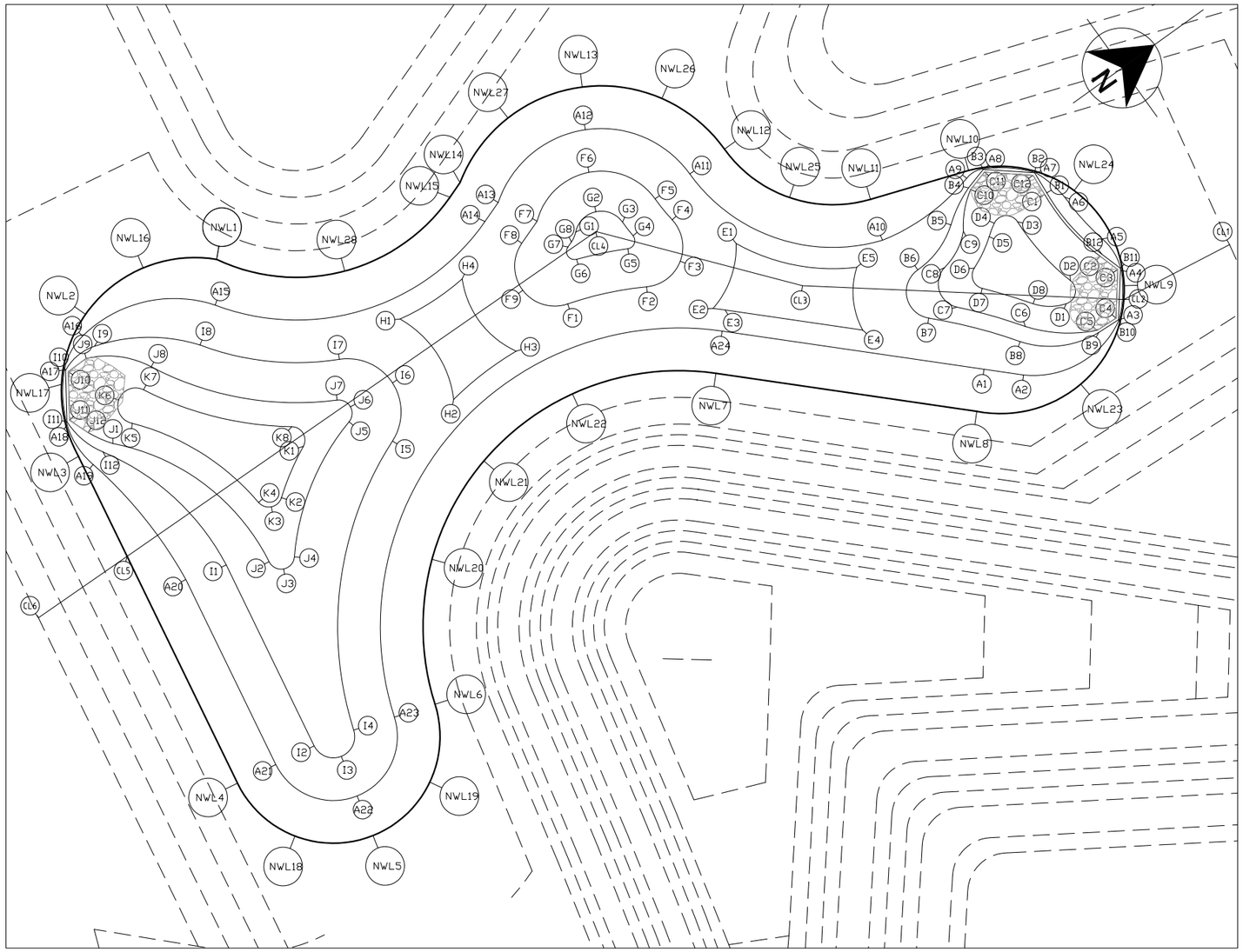
Sheet Size: A1

Drawing No.: MW13-043-W-002

Rev.: 01

20 10 0 10 20 30 40 50 100mm

02/00/00



SETOUT POND CONTOURS

Point no	Easting	Northing	RL
A 1	335616.206	5789034.879	-0.250
A 2	335617.246	5789035.958	-0.250
A 3	335617.652	5789040.080	-0.250
A 4	335616.200	5789041.221	-0.250
A 5	335614.815	5789041.334	-0.250
A 6	335612.723	5789041.099	-0.250
A 7	335611.356	5789040.757	-0.250
A 8	335610.104	5789039.282	-0.250
A 9	335610.008	5789038.525	-0.250
A10	335610.055	5789034.605	-0.250
A11	335603.824	5789030.181	-0.250
A12	335600.190	5789027.965	-0.250
A13	335600.504	5789023.720	-0.250
A14	335600.795	5789022.902	-0.250
A15	335597.443	5789012.851	-0.250
A16	335595.492	5789008.132	-0.250
A17	335596.129	5789006.835	-0.250
A18	335597.851	5789005.726	-0.250
A19	335599.637	5789005.650	-0.250
A20	335605.161	5789005.962	-0.250
A21	335612.771	5789004.660	-0.250
A22	335615.506	5789006.450	-0.250
A23	335613.918	5789009.308	-0.250
A24	335609.316	5789027.732	-0.250
B 1	335612.202	5789040.649	-0.450
B 2	335611.321	5789040.715	-0.450
B 3	335610.099	5789039.224	-0.450
B 4	335610.338	5789038.373	-0.450
B 5	335611.080	5789037.026	-0.450
B 6	335611.729	5789035.033	-0.450
B 7	335613.439	5789034.311	-0.450
B 8	335616.152	5789036.584	-0.450
B 9	335617.592	5789039.179	-0.450
B10	335617.635	5789040.062	-0.450
B11	335616.112	5789041.244	-0.450
B12	335615.268	5789040.982	-0.450
C 1	335612.192	5789040.549	-0.650
C 2	335615.299	5789040.887	-0.650
C 3	335616.091	5789041.133	-0.650
C 4	335617.533	5789040.015	-0.650
C 5	335617.492	5789039.184	-0.650
C 6	335615.804	5789037.073	-0.650
C 7	335613.729	5789035.421	-0.650
C 8	335612.243	5789035.896	-0.650
C 9	335611.545	5789037.269	-0.650
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C11	335610.209	5789039.201	-0.650
C12	335611.365	5789040.612	-0.650
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E 2	335608.430	5789027.953	-0.350
E 3	335608.740	5789028.287	-0.350
E 4	335612.356	5789032.039	-0.350
E 5	335610.317	5789033.231	-0.350

SETOUT POND CONTOURS

Point no	Easting	Northing	RL
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F 2	335606.319	5789026.400	-0.450
F 3	335606.274	5789027.982	-0.450
F 4	335604.837	5789028.644	-0.450
F 5	335603.823	5789028.581	-0.450
F 6	335601.569	5789027.145	-0.450
F 7	335601.926	5789024.496	-0.450
F 8	335602.264	5789023.547	-0.450
F 9	335603.716	5789022.550	-0.450
G 1	335603.099	5789025.434	-0.950
G 2	335602.921	5789026.494	-0.950
G 3	335603.822	5789027.081	-0.950
G 4	335604.463	5789027.102	-0.950
G 5	335604.748	5789026.662	-0.950
G 6	335603.949	5789024.869	-0.950
G 7	335603.385	5789024.872	-0.950
G 8	335603.307	5789025.090	-0.950
H 1	335601.911	5789018.182	-0.350
H 2	335605.531	5789018.061	-0.350
H 3	335605.427	5789021.018	-0.350
H 4	335602.046	5789020.953	-0.350
I 1	335605.601	5789007.510	-0.450
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I10	335596.164	5789006.870	-0.450
I11	335597.759	5789005.786	-0.450
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J 3	335606.980	5789009.170	-0.950
J 4	335606.850	5789009.763	-0.950
J 5	335603.928	5789014.382	-0.950
J 6	335603.502	5789014.751	-0.950
J 7	335603.004	5789014.490	-0.950
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J 9	335596.251	5789007.754	-0.950
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J11	335597.772	5789005.898	-0.950
J12	335598.549	5789006.194	-0.950
K 1	335603.680	5789012.447	-1.250
K 2	335604.762	5789010.662	-1.250
K 3	335604.821	5789010.155	-1.250
K 4	335604.404	5789009.861	-1.250
K 5	335599.233	5789007.740	-1.250
K 6	335598.228	5789007.836	-1.250
K 7	335598.461	5789008.818	-1.250
K 8	335602.825	5789012.531	-1.250

SETOUT WETLAND CENTRELINE

Point no	Easting	Northing
CL1	335617.771	5789045.085
CL2	335617.135	5789040.666
CL3	335609.693	5789031.173
CL4	335603.526	5789026.064
CL5	335603.178	5789004.679
CL6	335603.112	5789000.632

SETOUT NORMAL WATER LEVEL

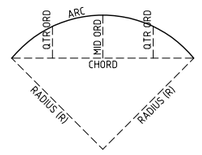
Point no	Easting	Northing	RL
NWL 1	335596.084	5789013.896	-0.050
NWL 2	335594.893	5789008.700	-0.050
NWL 3	335599.067	5789005.382	-0.050
NWL 4	335612.501	5789003.083	-0.050
NWL 5	335617.059	5789006.067	-0.050
NWL 6	335614.412	5789010.829	-0.050
NWL 7	335610.468	5789026.622	-0.050
NWL 8	335617.328	5789033.738	-0.050
NWL 9	335616.722	5789040.976	-0.050
NWL10	335609.808	5789038.752	-0.050
NWL11	335608.545	5789035.133	-0.050
NWL12	335603.824	5789031.781	-0.050
NWL13	335598.823	5789028.804	-0.050
NWL14	335599.066	5789022.988	-0.050
NWL15	335599.288	5789022.366	-0.050
NWL16	335596.084	5789013.896	-0.050
NWL17	335596.084	5789013.896	-0.050
NWL18	335595.212	5789012.729	-0.050
NWL19	335594.738	5789011.470	-0.050
NWL20	335594.617	5789010.130	-0.050
NWL21	335595.570	5789007.409	-0.050
NWL22	335596.501	5789006.438	-0.050
NWL23	335597.657	5789005.751	-0.050
NWL24	335614.096	5789003.133	-0.050

SETOUT NORMAL WATER LEVEL

Point no	Easting	Northing	RL
NWL25	335615.367	5789003.679	-0.050
NWL26	335616.375	5789004.625	-0.050
NWL27	335617.125	5789007.662	-0.050
NWL28	335616.672	5789008.969	-0.050
NWL29	335615.801	5789010.043	-0.050
NWL30	335609.930	5789013.904	-0.050
NWL31	335608.066	5789017.633	-0.050
NWL32	335607.958	5789021.800	-0.050
NWL33	335618.554	5789035.663	-0.050
NWL34	335618.772	5789037.503	-0.050
NWL35	335618.251	5789039.281	-0.050
NWL36	335614.571	5789041.736	-0.050
NWL37	335612.729	5789041.532	-0.050
NWL38	335611.114	5789040.624	-0.050
NWL39	335607.775	5789033.716	-0.050
NWL40	335606.719	5789032.704	-0.050
NWL41	335605.415	5789032.041	-0.050
NWL42	335602.261	5789031.563	-0.050
NWL43	335600.913	5789030.982	-0.050
NWL44	335599.760	5789030.074	-0.050
NWL45	335598.272	5789027.324	-0.050
NWL46	335598.143	5789025.863	-0.050
NWL47	335598.393	5789024.417	-0.050
NWL48	335599.689	5789019.794	-0.050
NWL49	335599.240	5789017.543	-0.050
NWL50	335598.087	5789015.559	-0.050

SETOUT NORMAL WATER LEVEL

Curve no		Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
NWL 1	2	-5.000	5.332	0.770	0.589	-0.050
NWL 2	3	-5.000	5.332	0.770	0.589	-0.050
NWL 4	5	-4.000	5.448	1.071	0.832	-0.050
NWL 5	6	-4.000	5.448	1.071	0.832	-0.050
NWL 6	7	9.600	16.277	4.509	3.603	-0.050
NWL 8	9	-4.639	7.263	1.753	1.382	-0.050
NWL 9	10	-4.639	7.263	1.753	1.382	-0.050
NWL11	12	5.000	5.790	0.923	0.709	-0.050
NWL12	13	-5.681	5.820	0.802	0.613	-0.050
NWL13	14	-5.681	5.820	0.802	0.613	-0.050



ARC SETOUT DETAIL
N.T.S

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
01					

Client: Melbourne Water

Project: EDITHVALE SEAFORD WETLANDS DISCOVERY CENTRE

Drawn	NJB	Signed	Date
Designed	NJB	Signed	Date
Verified		Signed	Date
Approved		Signed	Date

Drawing Title: CONSTRUCTED WETLAND SETOUT

Project No.

Scale: 1:100

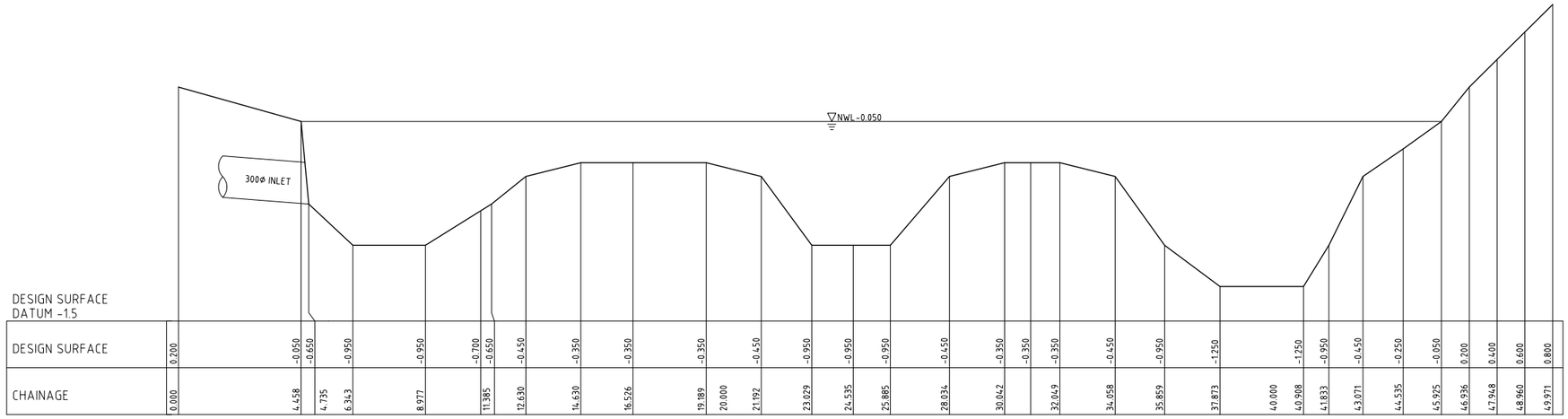
Sheet Size: A1

Drawing No.: W-003

Rev.: 01

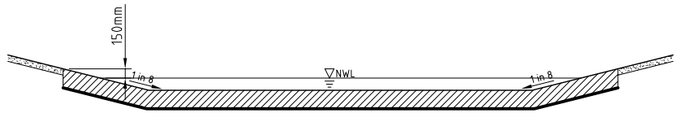
20 10 0 10 20 30 40 50 100mm

02/05/20

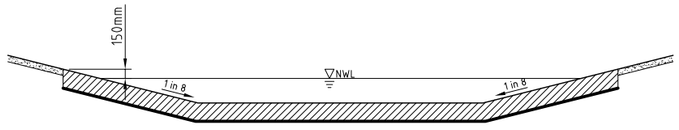


CLINE

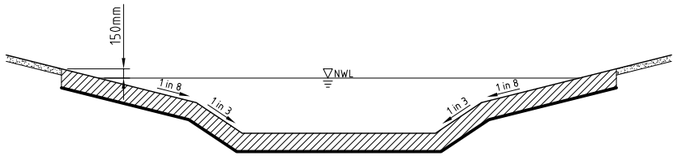
SCALE H 1:100
SCALE V 1:20



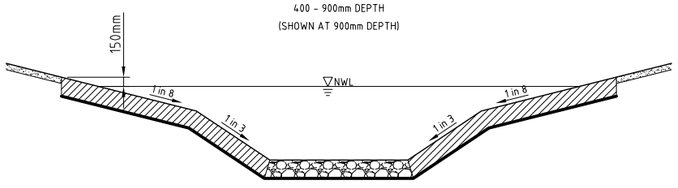
SHALLOW MARSH
0 - 200mm DEPTH
(SHOWN AT 200mm DEPTH)



DEEP MARSH
200 - 400mm DEPTH
(SHOWN AT 400mm DEPTH)



SUBMERGED MARSH
400 - 900mm DEPTH
(SHOWN AT 900mm DEPTH)



POND
900 - 1200mm DEPTH
(SHOWN AT 1200mm DEPTH)

LEGEND

- 100mm TOPSOIL
- 300mm TOPSOIL
- 300mm ROCK BEACHING
- GEOFABRICK LINER WITH BENTONITE

TYPICAL MARSH SECTIONS

NOT TO SCALE

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
01					

Connell Wagner

Connell Wagner Pty Ltd ABN 54 005 139 873
60 Albert Road (PO Box 321) South Melbourne
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Telephone: +61 3 8683 1333
Facsimile: +61 3 8683 1444
Email: cwmel@conwag.com

Client: Melbourne Water

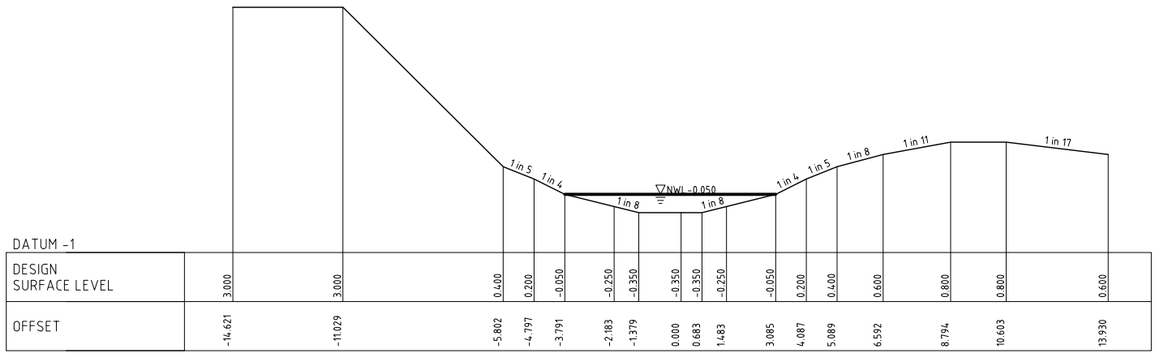
Project: EDITHVALE SEAFORD WETLANDS DISCOVERY CENTRE

Drawn NJB	Signed	Date	
Designed NJB	Signed	Date	
Verified	Signed	Date	
Approved	Signed	Date	

Drawing Title: CONSTRUCTED WETLAND LONGITUDINAL SECTION AND TYPICAL DETAILS

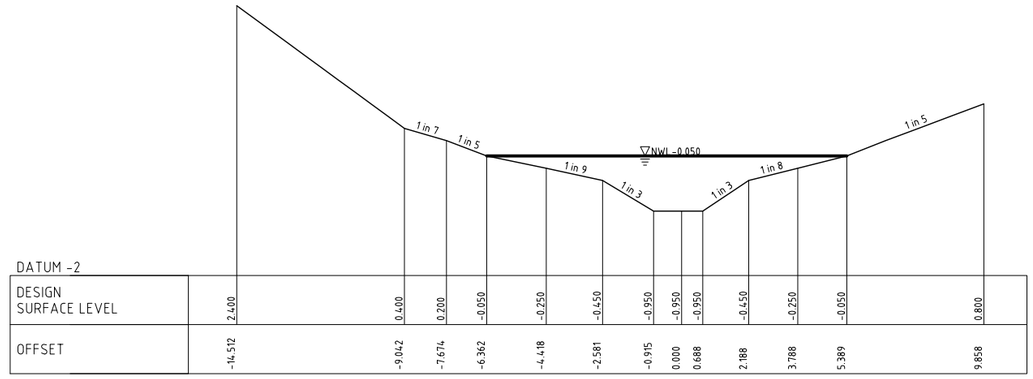
Project No. MW13.043
Scale V 1:20 H 1:100
Sheet Size A1
Drawing No. W004
Rev. 01

20 10 0 10 20 30 40 50 100mm



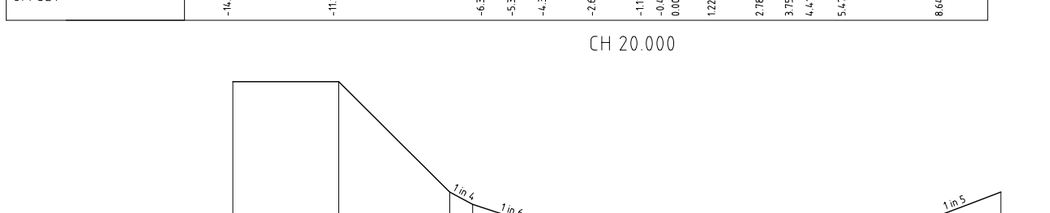
DATUM -1																							
DESIGN SURFACE LEVEL	3.000	3.000	0.400	0.200	-0.050	-0.250	-0.350	-0.350	-0.350	-0.250	-0.050	0.200	0.400	0.600	0.800	0.800	0.600						
OFFSET	-14.621	-11.029	-5.802	-4.797	-3.791	-2.183	-1.379	0.000	0.683	1.483	3.085	4.087	5.089	6.592	8.794	10.603	13.930						

CH 25.000



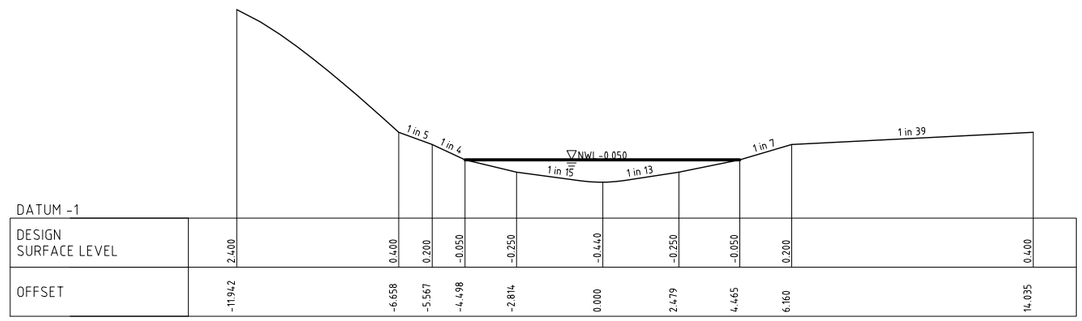
DATUM -2																							
DESIGN SURFACE LEVEL	2.400	0.400	0.200	-0.050	-0.250	-0.450	-0.950	-0.950	-0.950	-0.450	-0.250	-0.050	0.800										
OFFSET	-14.512	-9.042	-7.674	-6.362	-4.418	-2.581	-0.915	0.000	0.688	2.188	3.788	5.389	9.858										

CH 33.547



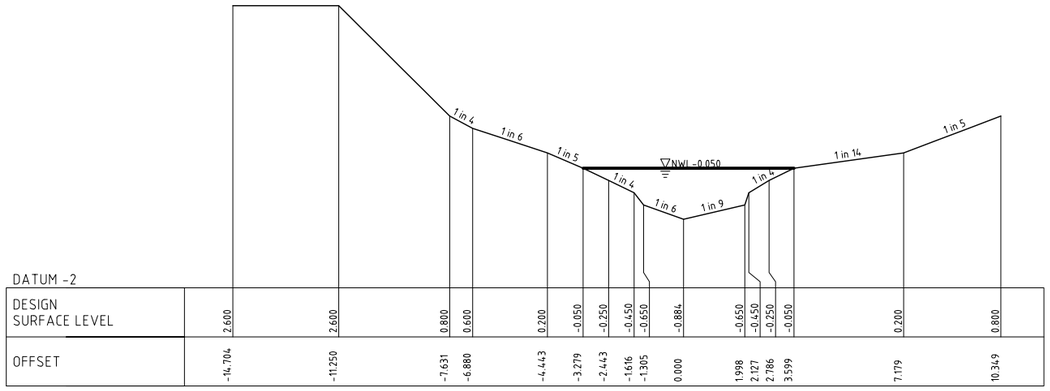
DATUM -1																							
DESIGN SURFACE LEVEL	2.800	2.800	0.400	0.200	-0.050	-0.250	-0.450	-0.650	-0.700	-0.650	-0.450	-0.250	-0.050	0.200	0.800								
OFFSET	-14.576	-11.140	-6.315	-5.309	-4.304	-2.696	-1.116	-0.452	0.000	1.221	2.787	3.751	4.416	5.472	8.642								

CH 20.000



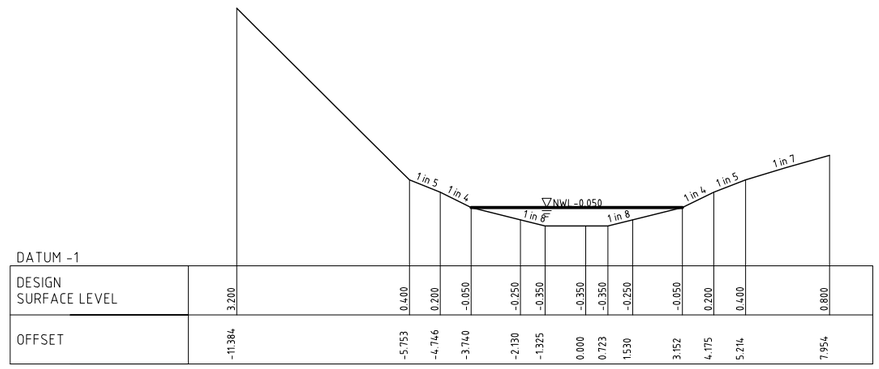
DATUM -1																							
DESIGN SURFACE LEVEL	2.400	0.400	0.200	-0.050	-0.250	-0.440	-0.250	-0.050	0.200	0.400													
OFFSET	-11.942	-6.658	-5.567	-4.498	-2.814	0.000	2.479	4.465	6.160	14.035													

CH 30.000



DATUM -2																							
DESIGN SURFACE LEVEL	2.600	2.600	0.800	0.600	0.200	-0.050	-0.250	-0.450	-0.650	-0.884	-0.650	-0.450	-0.250	-0.050	0.200	0.800							
OFFSET	-14.704	-11.250	-7.631	-6.880	-4.443	-3.279	-2.443	-1.616	-1.305	0.000	1.998	2.127	2.786	3.599	7.179	10.349							

CH 15.000



DATUM -1																							
DESIGN SURFACE LEVEL	3.200	0.400	0.200	-0.050	-0.250	-0.350	-0.350	-0.350	-0.250	-0.050	0.200	0.400	0.800										
OFFSET	-11.384	-5.753	-4.746	-3.740	-2.130	-1.325	0.000	0.723	1.530	3.152	4.175	5.214	7.954										

CH 25.539

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
01					

Client: Melbourne Water

Project: EDITHVALE SEAFORD WETLANDS DISCOVERY CENTRE

Drawn NJB	Signed	Date	
Designed NJB	Signed	Date	
Verified	Signed	Date	
Approved	Signed	Date	

Drawing Title: CONSTRUCTED WETLAND CROSS SECTIONS SHEET 1 OF 2

Project No.

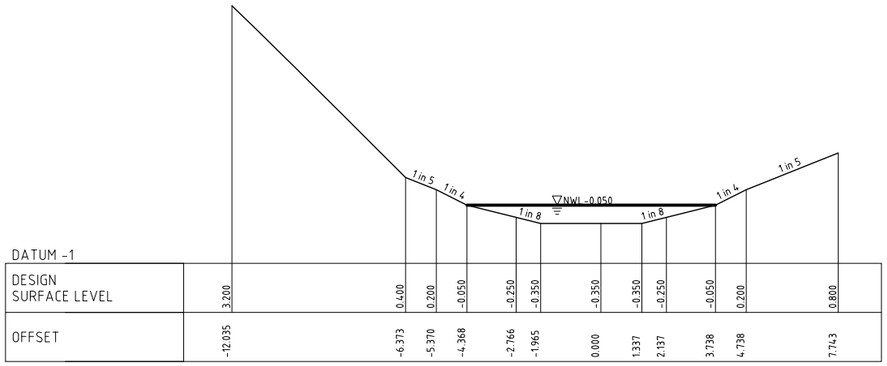
Scale V 1:50 H 1:100

Sheet Size A1

Drawing No. W-005

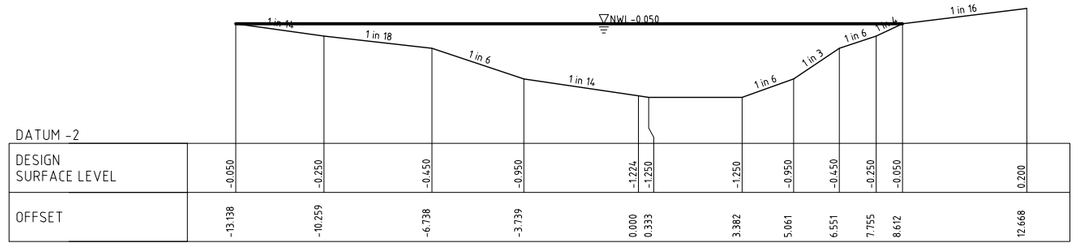
Rev. 01

20 10 0 10 20 30 40 50 100mm



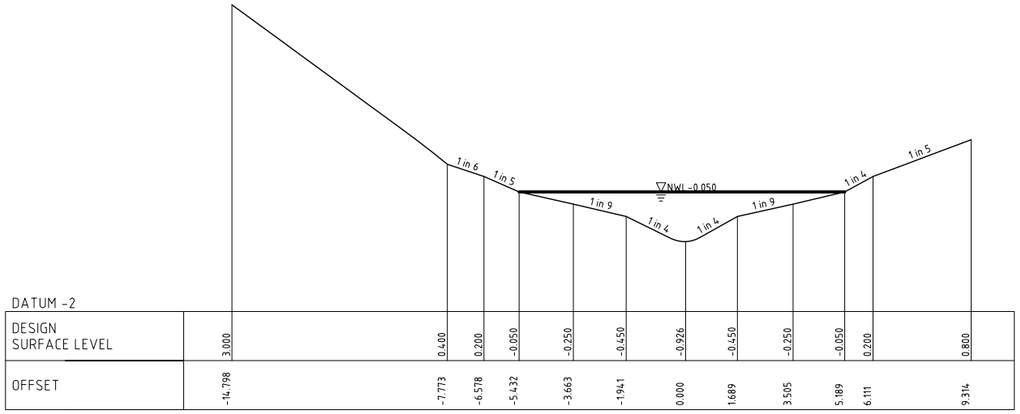
DATUM -1													
DESIGN SURFACE LEVEL	3.200	0.400	0.200	-0.050	-0.250	-0.350	-0.350	-0.350	-0.250	-0.050	0.200	0.800	
OFFSET	-12.035	-6.373	-5.370	-4.368	-2.766	-1.965	0.000	1.337	2.137	3.738	4.738	7.743	

CH 40.000



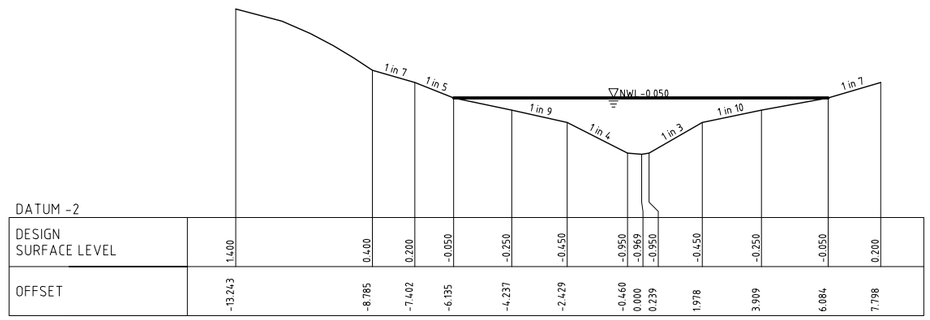
DATUM -2													
DESIGN SURFACE LEVEL	-0.050	-0.250	-0.450	-0.950	-1.224	-1.250	-1.250	-0.950	-0.450	-0.250	-0.050	0.200	
OFFSET	-13.138	-10.259	-6.738	-3.739	0.000	0.333	3.382	5.061	6.551	7.755	8.612	12.668	

CH 50.000



DATUM -2													
DESIGN SURFACE LEVEL	3.000	0.400	0.200	-0.050	-0.250	-0.450	-0.926	-0.450	-0.250	-0.050	0.200	0.800	
OFFSET	-14.798	-7.773	-6.578	-5.432	-3.663	-1.941	0.000	1.689	3.505	5.189	6.111	9.314	

CH 35.000



DATUM -2													
DESIGN SURFACE LEVEL	1.600	0.400	0.200	-0.050	-0.250	-0.450	-0.950	-0.969	-0.950	-0.450	-0.250	-0.050	0.200
OFFSET	-13.243	-8.785	-7.402	-6.135	-4.237	-2.429	-0.460	0.000	0.239	1.978	3.909	6.084	7.798

CH 45.000

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
01					

Client: Melbourne Water

Project: EDITHVALE SEAFORD WETLANDS DISCOVERY CENTRE

Drawn NJB	Signed	Date	
Designed NJB	Signed	Date	
Verified	Signed	Date	
Approved	Signed	Date	

Drawing Title: CONSTRUCTED WETLAND CROSS SECTIONS SHEET 2 OF 2

Project No.

Scale V 1:50 H 1:100

Sheet Size A1

Drawing No. W-006

Rev. 01

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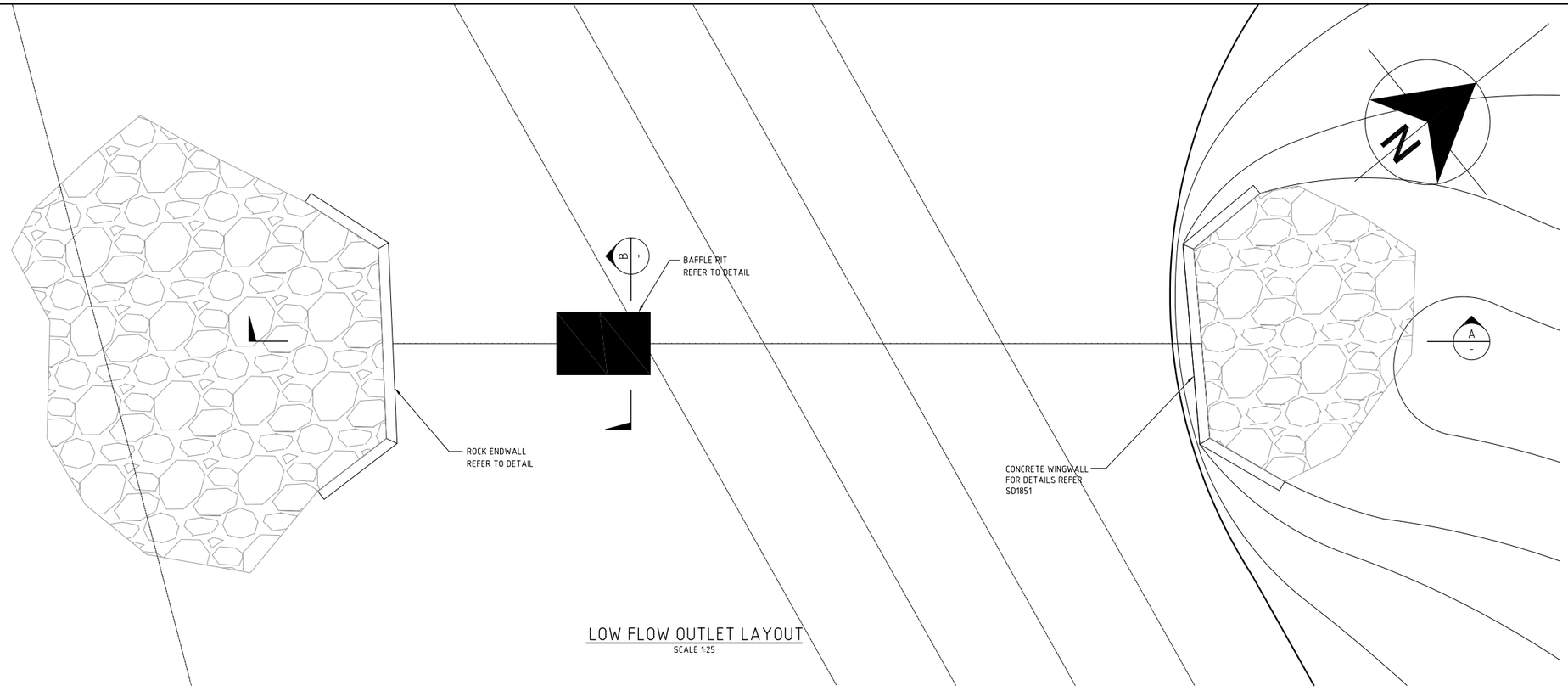
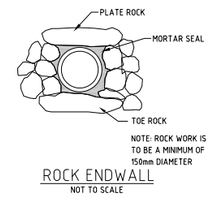
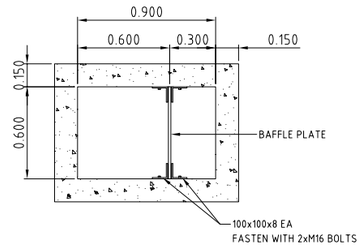


LOW FLOW OUTLET LAYOUT
SCALE 1:25

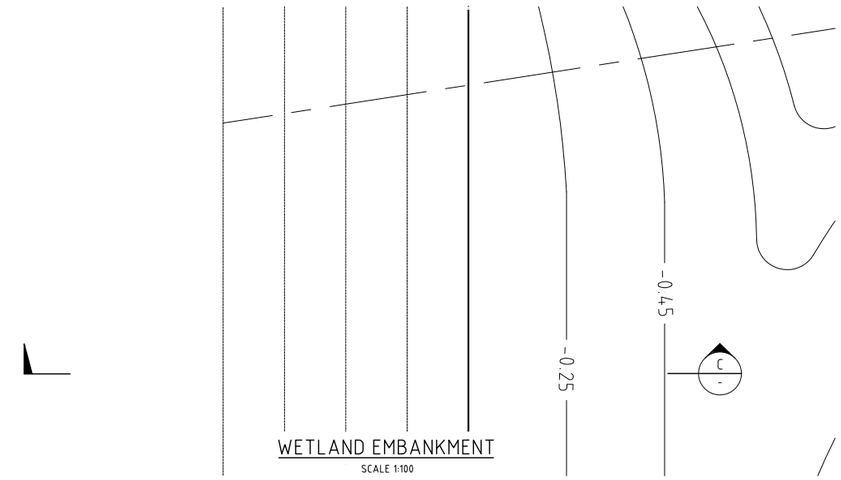


NOTE: ROCK WORK IS TO BE A MINIMUM OF 150mm DIAMETER

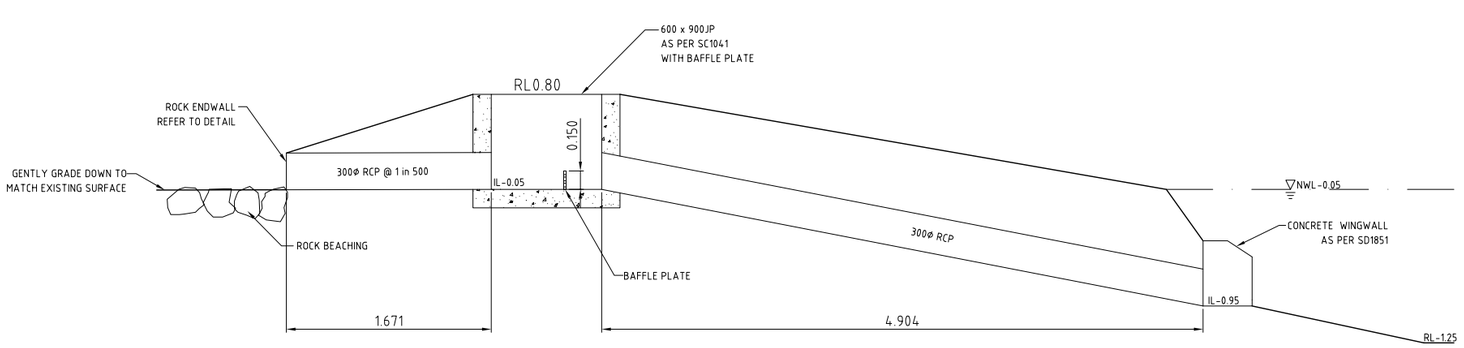
ROCK ENDWALL
NOT TO SCALE



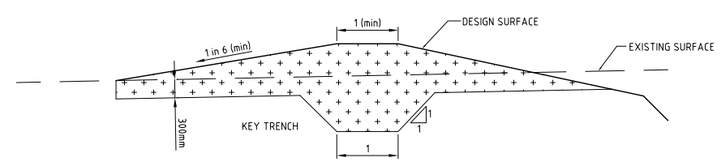
BAFFLE PIT DETAIL
SCALE 1:20



WETLAND EMBANKMENT
SCALE 1:100



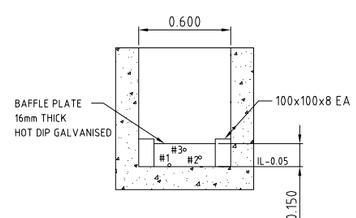
SECTION B
SCALE 1:25



LEGEND

NON DISPERSIVE IMPORTED CLAY
REFER TO MW13-043-W-001 FOR DETAILS

SECTION C
EMBANKMENT DETAIL
SCALE 1:50



SECTION B
SCALE 1:20

BAFFLE PLATE HOLES

HOLE NUMBER	HOLE DIAMETER	HOLE INVERT LEVEL
1	20mm	-0.050
2	20mm	0.025
3	20mm	0.100

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
01					

Connell Wagner
Connell Wagner Pty Ltd ABN 54 005 139 873
60 Albert Road (PO Box 321) South Melbourne
Victoria 3205 Australia
Telephone: +61 3 8683 1333
Facsimile: +61 3 8683 1444
Email: cwmel@conwag.com

Client: Melbourne Water

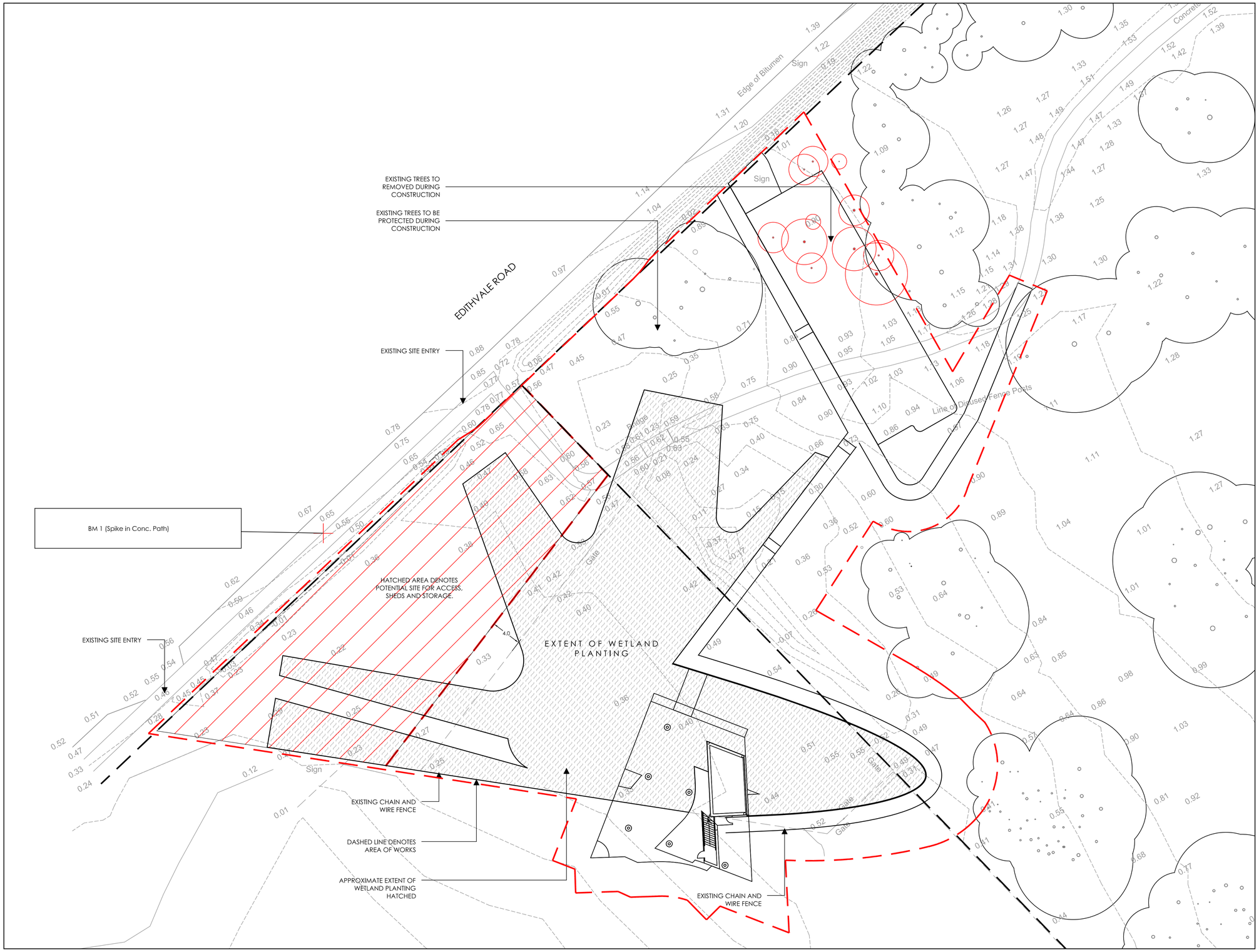
Project: EDITHVALE SEAFORD WETLANDS DISCOVERY CENTRE

Drawn	NJB	Signed	Date
Designed	NJB	Signed	Date
Verified		Signed	Date
Approved		Signed	Date

Drawing Title: CONSTRUCTED WETLAND DETAILS

Project No. MW13.043
Scale: AS SHOWN
Sheet Size: A1
Drawing No. W007
Rev. 01
00/00/00

20 10 0 10 20 30 40 50 100mm



SET OUT POINT

PROPERTY BOUNDARY

WETLAND PLANTING (SEEDS SOURCED FROM LOCAL PROVIDENCE)

INSITU CONCRETE FOOTPATH REFER 1&4/L-07

75MM GRANITIC SAND REFER 1/L-08

HDR:A HANDRAIL TYPE A REFER DETAIL 3A-L07

HDR:B HANDRAIL TYPE B REFER DETAIL 3B-L07

TREES TO BE REMOVED

TE FLUSH TIMBER EDGE REFER DETAIL 01-L08

PRECAST CONCRETE PIPE REFER DETAIL 02-L08

CONCRETE BENCH REFER DETAIL 01-L09

SCOPE OF WORKS

NEW 1800mm HIGH CHAIN LINK FENCE

NEW 900mm HIGH CHAIN LINK FENCE

PRE-CAST CONCRETE PLANT SPECIES TABLET REFER DETAIL 02-L09

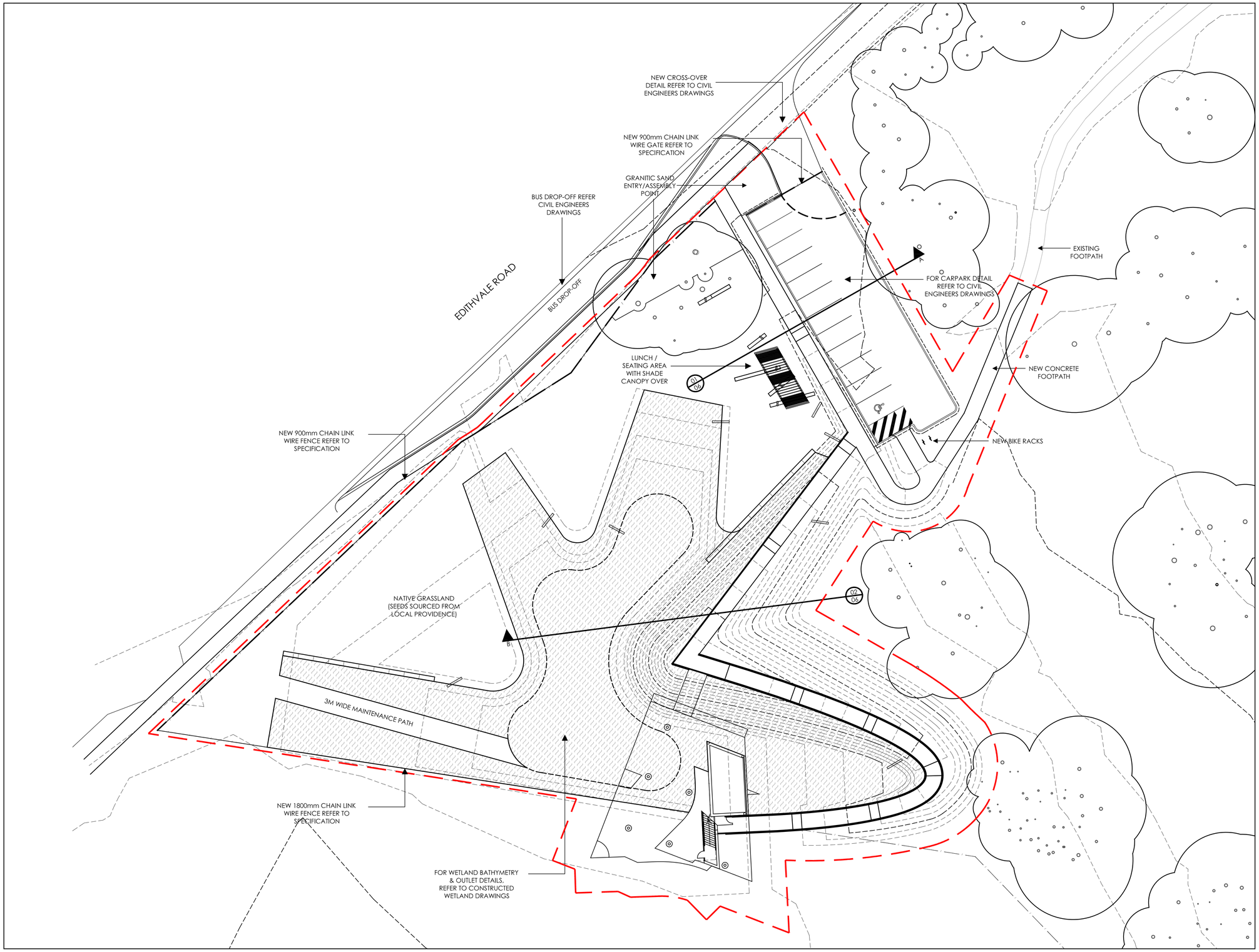
REV	DATE	BY	DESCRIPTION
D	04.12.07	MJ	TENDER
C	15.11.07	AD	PRELIMINARY TENDER
B	29.10.07	AD	CO-ORDINATION
A	18.10.07	AD	PRELIMINARY

OCULUS
level 3 289 flinders lane **melbourne** vic 3000
p 03.9663.3661 f 03.9663.3371 south@oculus.com.au

PROJECT
EDITHVALE SEAFORD WETLAND DISCOVERY CENTRE

DRAWING
WORKS BOUNDARY

SCALE	1:250 AT A1
PROJ. NO.	M-0717
DATE	04.12.07
DRAWING NO	L-00
DRAWN	AD
REV	D
CHECKED	MJ
STATUS	TENDER



SET OUT POINT

PROPERTY BOUNDARY

WETLAND PLANTING (SEEDS SOURCED FROM LOCAL PROVIDENCE)

INSITU CONCRETE FOOTPATH REFER 1&4/L-07

75MM GRANITIC SAND REFER 1/L-08

HDR:A HANDRAIL TYPE A REFER DETAIL 3A-L07

HDR:B HANDRAIL TYPE B REFER DETAIL 3B-L07

TREES TO BE REMOVED

TE FLUSH TIMBER EDGE REFER DETAIL 01-L08

PRECAST CONCRETE PIPE REFER DETAIL 02-L08

CONCRETE BENCH REFER DETAIL 01-L09

SCOPE OF WORKS

NEW 1800mm HIGH CHAIN LINK FENCE

NEW 900mm HIGH CHAIN LINK FENCE

PRE-CAST CONCRETE PLANT SPECIES TABLET REFER DETAIL 02-L09

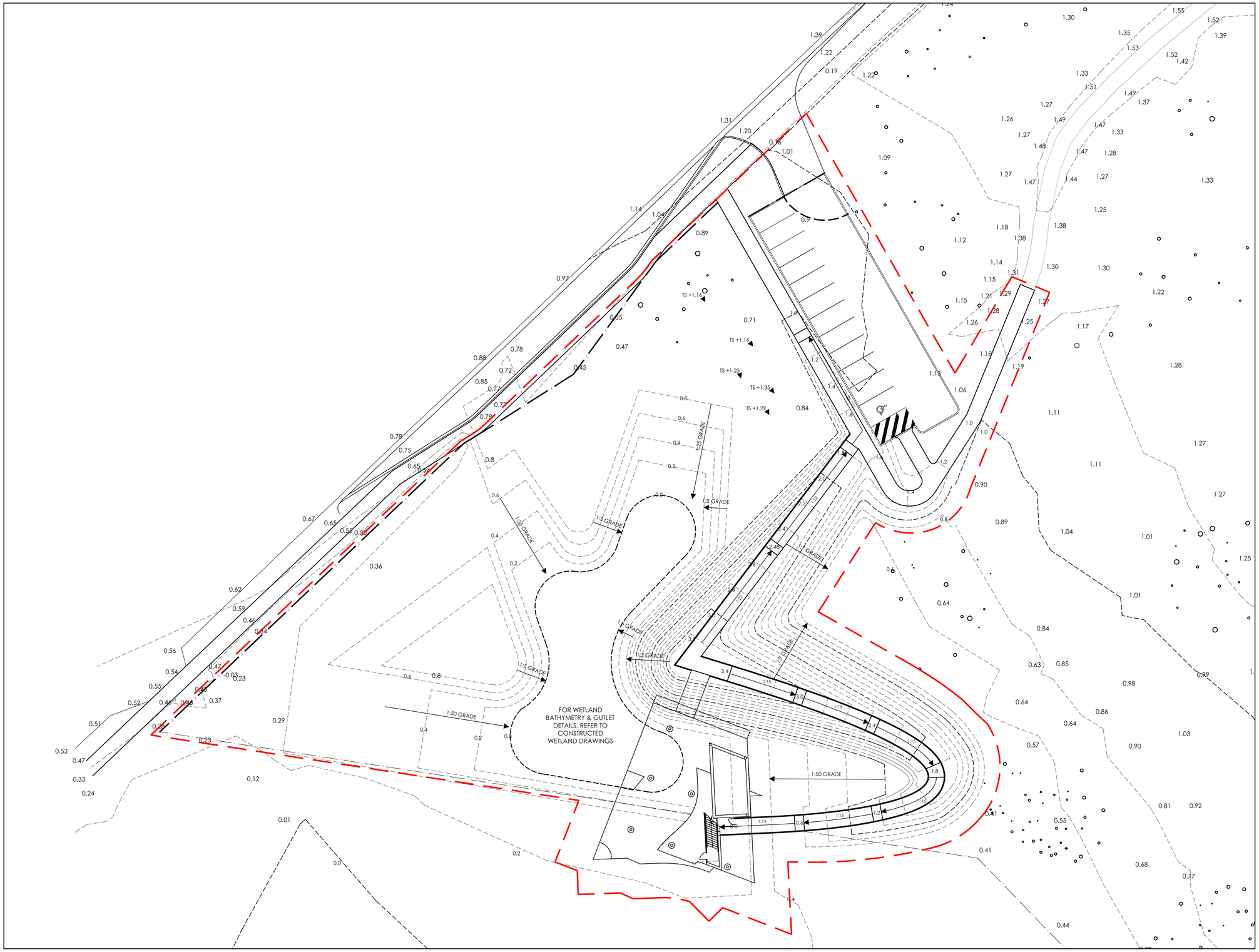
REV	DATE	BY	DESCRIPTION
D	04.12.07	MJ	TENDER
C	15.11.07	AD	PRELIMINARY TENDER
B	29.10.07	AD	CO-ORDINATION
A	18.10.07	AD	PRELIMINARY

OCULUS
level 3 289 flinders lane **melbourne** vic 3000
p 03.9663.3661 f 03.9663.3371 south@oculus.com.au

PROJECT
EDITHVALE SEAFORD
WETLAND DISCOVERY CENTRE

DRAWING
LANDSCAPE PLAN

SCALE	PROJ. NO.
1:250 AT A1	M-0717
DATE	DRAWING NO
04.12.07	L-01
DRAWN	REV
AD	D
CHECKED	STATUS
MJ	TENDER



SET OUT POINT

PROPERTY BOUNDARY

WETLAND PLANTING (SEEDS SOURCED FROM LOCAL PROVIDENCE)

INSITU CONCRETE FOOTPATH REFER 1&4/L-07

75MM GRANITIC SAND REFER 1/L-08

HDR:A HANDRAIL TYPE A REFER DETAIL 3A-L07

HDR:B HANDRAIL TYPE B REFER DETAIL 3B-L07

TREES TO BE REMOVED

TE FLUSH TIMBER EDGE REFER DETAIL 01-L08

PRECAST CONCRETE PIPE REFER DETAIL 02-L08

CONCRETE BENCH REFER DETAIL 01-L09

SCOPE OF WORKS

NEW 1800mm HIGH CHAIN LINK FENCE

NEW 900mm HIGH CHAIN LINK FENCE

PRE-CAST CONCRETE PLANT SPECIES TABLET REFER DETAIL 02-L09

REV	DATE	BY	DESCRIPTION
D	04.12.07	MJ	TENDER
C	15.11.07	AD	PRELIMINARY TENDER
B	29.10.07	AD	CO-ORDINATION
A	18.10.07	AD	PRELIMINARY

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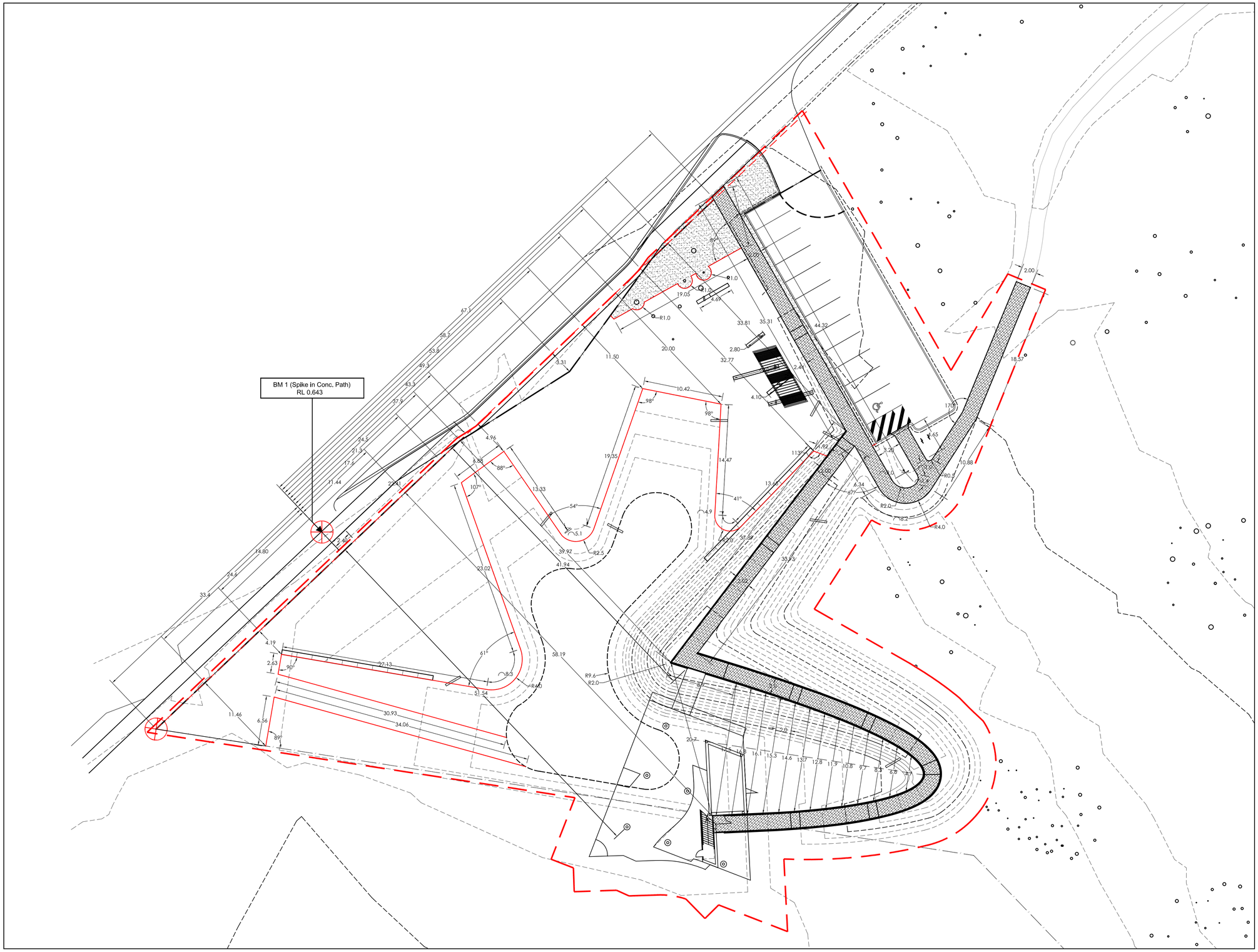
PROJECT
EDITHVALE SEAFORD
WETLAND DISCOVERY CENTRE

DRAWING
GRADING PLAN

SCALE	PROJ. NO.
1:250 AT A1	M-0717
DATE	DRAWING NO
04.12.07	L-02
DRAWN	REV
AD	D
CHECKED	STATUS
MJ	TENDER



SET OUT POINT

PROPERTY BOUNDARY

WETLAND PLANTING (SEEDS SOURCED FROM LOCAL PROVIDENCE)

INSITU CONCRETE FOOTPATH REFER 1&4/L-07

75MM GRANITIC SAND REFER 1/L-08

HDR:A HANDRAIL TYPE A REFER DETAIL 3A-L07

HDR:B HANDRAIL TYPE B REFER DETAIL 3B-L07

TREES TO BE REMOVED

TE FLUSH TIMBER EDGE REFER DETAIL 01-L08

PRECAST CONCRETE PIPE REFER DETAIL 02-L08

CONCRETE BENCH REFER DETAIL 01-L09

SCOPE OF WORKS

NEW 1800mm HIGH CHAIN LINK FENCE

NEW 900mm HIGH CHAIN LINK FENCE

PRE-CAST CONCRETE PLANT SPECIES TABLET REFER DETAIL 02-L09

REV	DATE	BY	DESCRIPTION
D	04.12.07	MJ	TENDER
C	15.11.07	AD	PRELIMINARY TENDER
B	29.10.07	AD	CO-ORDINATION
A	18.10.07	AD	PRELIMINARY

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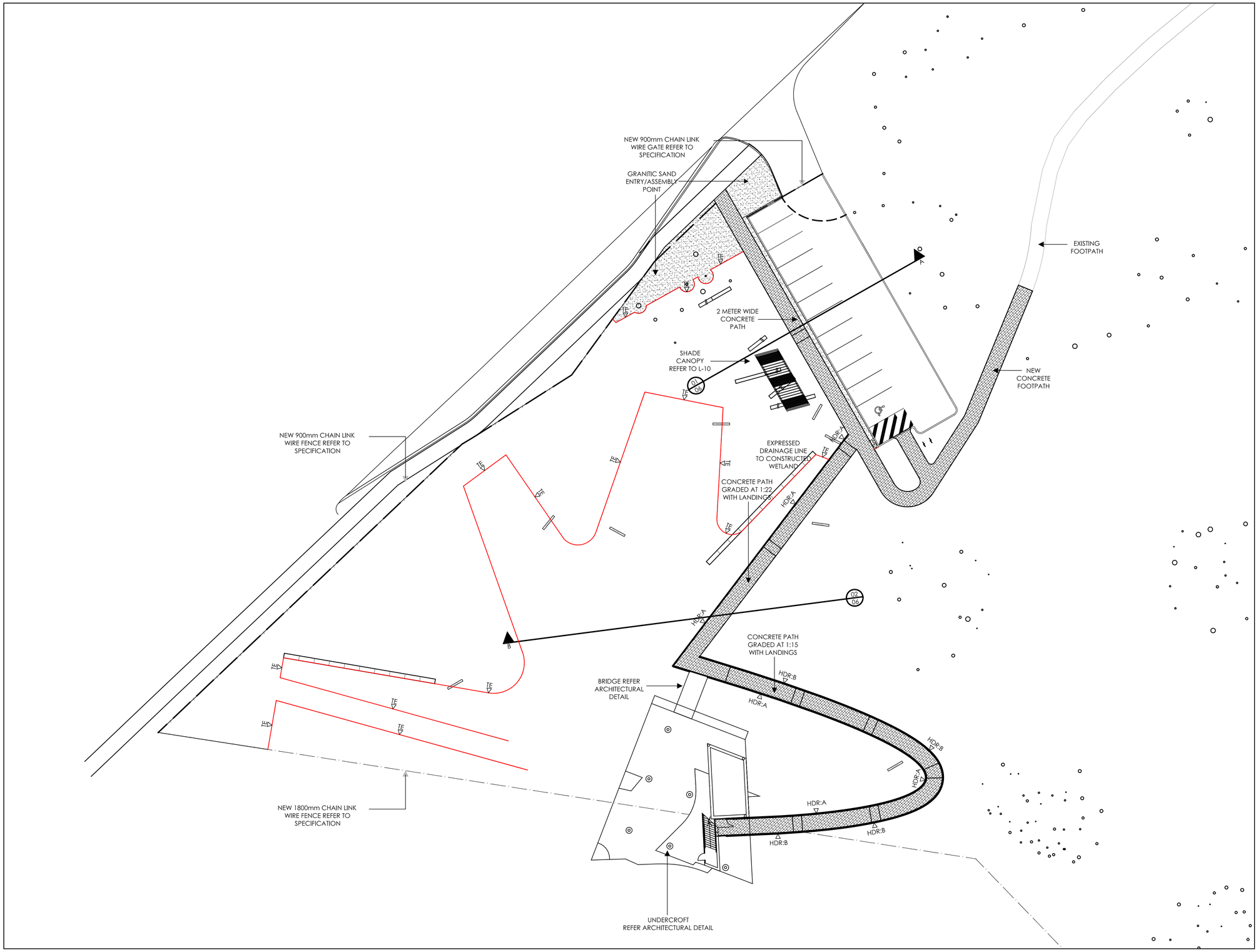
PROJECT
EDITHVALE SEAFORD
WETLAND DISCOVERY CENTRE

DRAWING
SET OUT PLAN

SCALE	1:250 AT A1
PROJ. NO.	M-0717
DATE	04.12.07
DRAWING NO	L-03
DRAWN	AD
REV	D
CHECKED	MJ
STATUS	TENDER



SET OUT POINT

PROPERTY BOUNDARY

WETLAND PLANTING (SEEDS SOURCED FROM LOCAL PROVIDENCE)

INSITU CONCRETE FOOTPATH REFER 1&4/L-07

75MM GRANITIC SAND REFER 1/L-08

HDR:A HANDRAIL TYPE A REFER DETAIL 3A-L07

HDR:B HANDRAIL TYPE B REFER DETAIL 3B-L07

TREES TO BE REMOVED

TF FLUSH TIMBER EDGE REFER DETAIL 01-L08

PRECAST CONCRETE PIPE REFER DETAIL 02-L08

CONCRETE BENCH REFER DETAIL 01-L09

SCOPE OF WORKS

NEW 1800mm HIGH CHAIN LINK FENCE

NEW 900mm HIGH CHAIN LINK FENCE

PRE-CAST CONCRETE PLANT SPECIES TABLET REFER DETAIL 02-L09

REV	DATE	BY	DESCRIPTION
D	04.12.07	MJ	TENDER
C	15.11.07	AD	PRELIMINARY TENDER
B	29.10.07	AD	CO-ORDINATION
A	18.10.07	AD	PRELIMINARY

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PROJECT
EDITHVALE SEAFORD
WETLAND DISCOVERY CENTRE

DRAWING
HARDSCAPE PLAN

SCALE	1:250 AT A1
PROJ. NO.	M-0717
DATE	04.12.07
DRAWING NO	L-04
DRAWN	AD
REV	D
CHECKED	MJ
STATUS	TENDER

NATIVE GRASSLAND PLANT SCHEDULE

SYMBOL	SPECIES	COMMON NAME	AREA
	Austrodanthonia geniculata	Kneed Wallaby-grass	2,461 Sqm
	Chloris truncata	Windmill grass	
	Microlaena stipoides		

WETLAND PLANT SCHEDULE MASTER LIST

SYMBOL	SPECIES	COMMON NAME	SPREAD	PLANTING DENSITY	AREA
EMBANKMENT ZONE					
	Ficinia nodosa	Knobby Club-sedge	H = 0.5-1.5m W = 0.6-2m	8 plants/ SQM	86 Sqm
	Carex appressa	Tall Sedge	H = 0.5-1.2m W = 0.5-1m		152 Sqm
LITORAL ZONE					
	Goodenia humilis	Swamp Goodenia	H=5-10cm W= 0.5-1.5m	4 plants/ SQM	534 Sqm
EPHEMERAL ZONE					
	Carex inversa	Knob Sedge	H = 0.1-0.3m W = 0.5-1m	6 plants/ SQM	360 Sqm
	Eleocharis acuta	Common Spike-sedge	H = 30-90cm W= 1.5m		230 Sqm
SHALLOW MARSH ZONE					
	Isolepis inundata	Swamp Club-sedge	H = 5-30cm W = 10-40cm	6 plants/ SQM	148 Sqm
DEEP MARSH ZONE					
	Triglochin procera	Water-ribbons	H =20-50cm	4 plants/ SQM	151 Sqm
	Schoenoplectus tabernaemontani	River Club Rush	stems 2.7m		100 Sqm
SUBMERGED ZONE					
	Potamogeton tricarinatus	Floating Pondweed	stems 2.7m	1 plant/ SQM	43 Sqm
OVERSHADOWED ZONE					
	Gahnia sieberiana	Red Fruit Sawsedge	stems 2.7m	6 plant/ SQM	54 Sqm

SET OUT POINT

PROPERTY BOUNDARY

WETLAND PLANTING (SEEDS SOURCED FROM LOCAL PROVIDENCE)

INSITU CONCRETE FOOTPATH REFER 1&4/L-07

75MM GRANITIC SAND REFER 1/L-08

HDR:A HANDRAIL TYPE A REFER DETAIL 3A-L07

HDR:B HANDRAIL TYPE B REFER DETAIL 3B-L07

TREES TO BE REMOVED

TE FLUSH TIMBER EDGE REFER DETAIL 01-L08

PRECAST CONCRETE PIPE REFER DETAIL 02-L08

CONCRETE BENCH REFER DETAIL 01-L09

SCOPE OF WORKS

NEW 1800mm HIGH CHAIN LINK FENCE

NEW 900mm HIGH CHAIN LINK FENCE

PRE-CAST CONCRETE PLANT SPECIES TABLET REFER DETAIL 02-L09

REV	DATE	BY	DESCRIPTION
D	04.12.07	MJ	TENDER
C	15.11.07	AD	PRELIMINARY TENDER
B	29.10.07	AD	CO-ORDINATION
A	18.10.07	AD	PRELIMINARY

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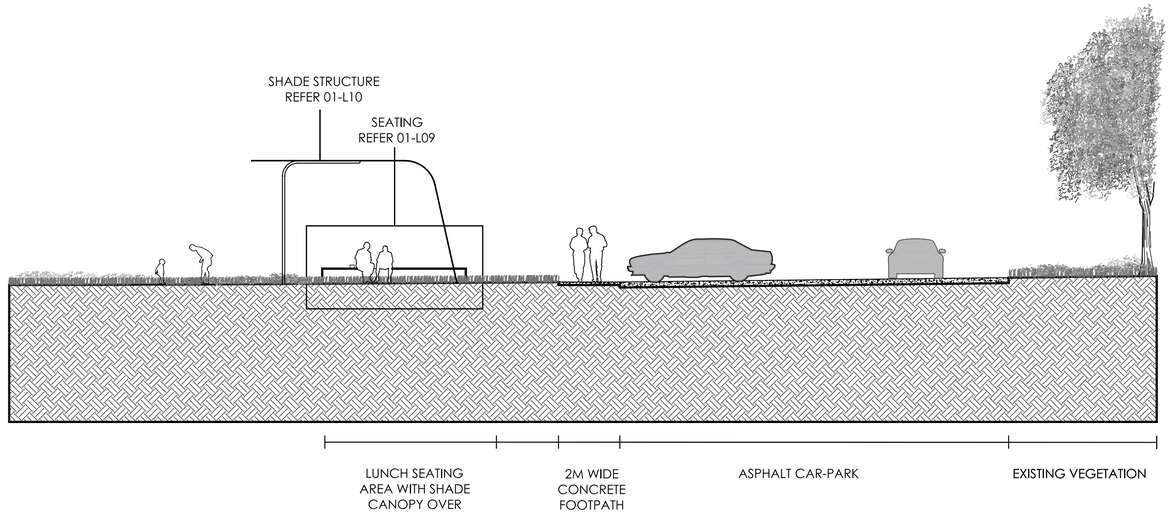
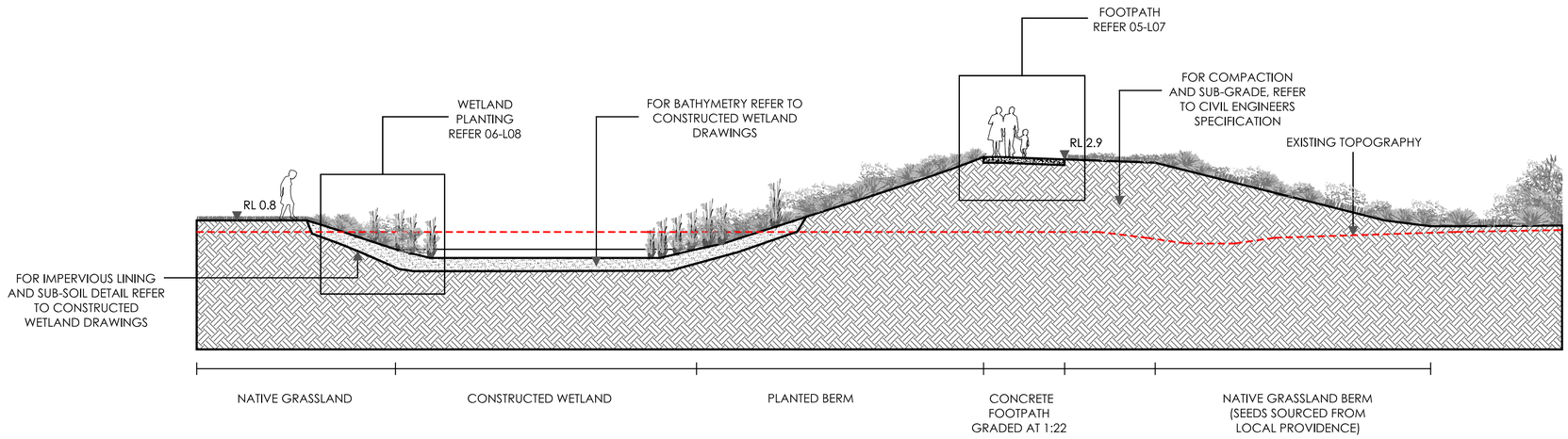
PROJECT
EDITHVALE SEAFORD
WETLAND DISCOVERY CENTRE

DRAWING
PLANTING PLAN

SCALE	PROJ. NO.
1:250 AT A1	M-0717
DATE	DRAWING NO
04.12.07	L-05
DRAWN	REV
AD	D
CHECKED	STATUS
MJ	TENDER



01/06 SECTION A



02/06 SECTION B

SET OUT POINT

PROPERTY BOUNDARY

WETLAND PLANTING (SEEDS SOURCED FROM LOCAL PROVIDENCE)

INSITU CONCRETE FOOTPATH REFER 1&4/L-07

75MM GRANITIC SAND REFER 1/L-08

HDR:A HANDRAIL TYPE A REFER DETAIL 3A-L07

HDR:B HANDRAIL TYPE B REFER DETAIL 3B-L07

TREES TO BE REMOVED

TE FLUSH TIMBER EDGE REFER DETAIL 01-L08

PRECAST CONCRETE PIPE REFER DETAIL 02-L08

CONCRETE BENCH REFER DETAIL 01-L09

SCOPE OF WORKS

NEW 1800mm HIGH CHAIN LINK FENCE

NEW 900mm HIGH CHAIN LINK FENCE

PRE-CAST CONCRETE PLANT SPECIES TABLET REFER DETAIL 02-L09

REV	DATE	BY	DESCRIPTION
D	04.12.07	MJ	TENDER
C	15.11.07	AD	PRELIMINARY TENDER
B	29.10.07	AD	CO-ORDINATION
A	18.10.07	AD	PRELIMINARY

O C U L U S
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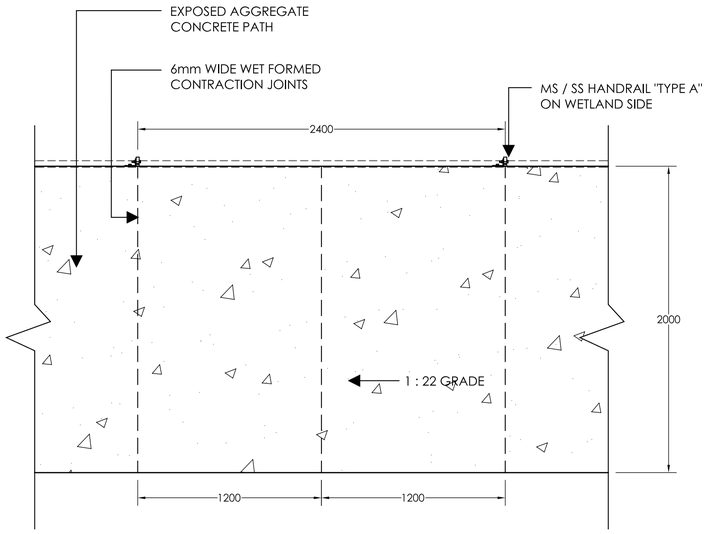
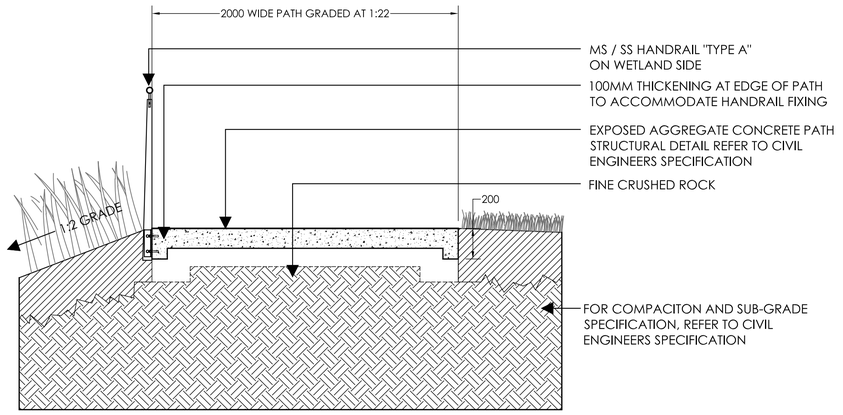
PROJECT
EDITHVALE SEAFORD
WETLAND DISCOVERY CENTRE

DRAWING
SITE SECTIONS

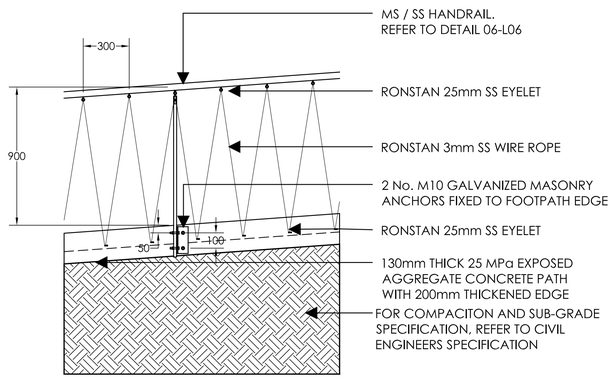
SCALE	PROJ. NO.
1:100 AT A1	M-0717
DATE	DRAWING NO
04.12.07	L-06
DRAWN	REV
AD	D
CHECKED	STATUS
MJ	TENDER



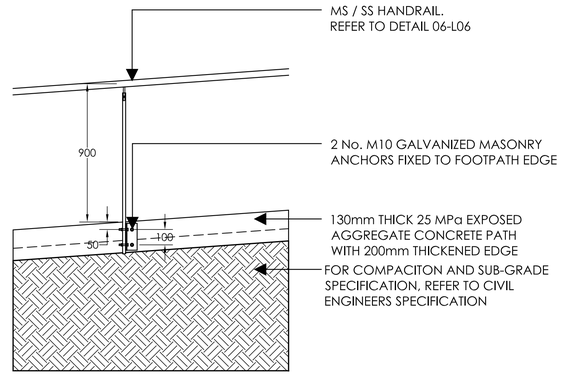
01 L-07 1:22 CONCRETE FOOTPATH WITH OPTIONAL HANDRAIL 1:20



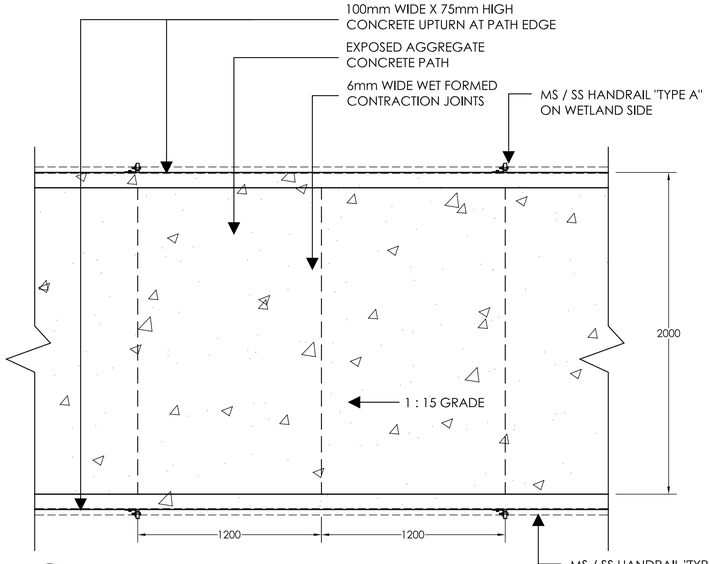
02 L-07 1:22 CONCRETE FOOTPATH WITH OPTIONAL HANDRAIL 1:20



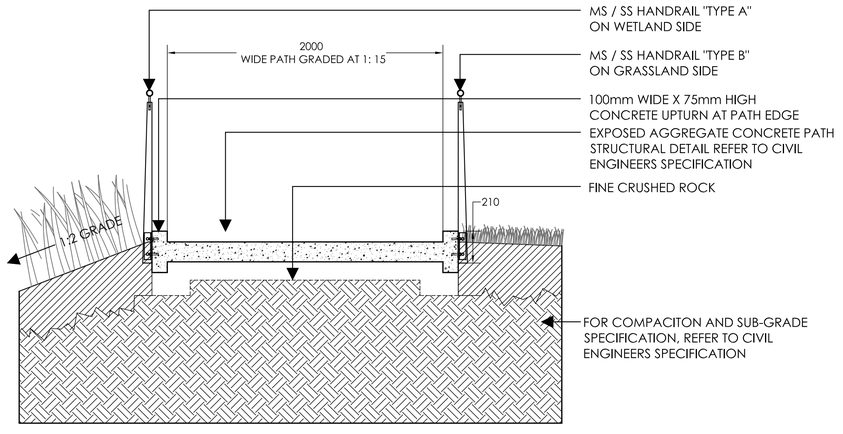
03A L-07 HANDRAIL FIXING TYPE 'A' 1:20



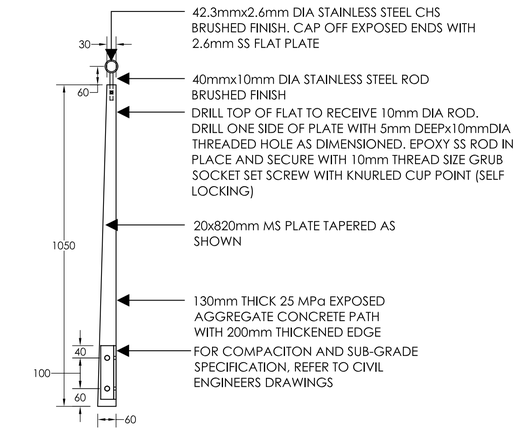
03B L-07 HANDRAIL FIXING TYPE 'B' 1:20



04 L-07 1:15 CONCRETE FOOTPATH WITH HANDRAIL 1:20



05 L-07 1:15 CONCRETE FOOTPATH 1:20



06 L-07 HANDRAIL FIXING 1:10

REV	DATE	BY	DESCRIPTION
D	04.12.07	MJ	TENDER
C	15.11.07	AD	PRELIMINARY TENDER
B	29.10.07	AD	CO-ORDINATION
A	18.10.07	AD	PRELIMINARY

SET OUT POINT

PROPERTY BOUNDARY

WETLAND PLANTING (SEEDS SOURCED FROM LOCAL PROVIDENCE)

INSITU CONCRETE FOOTPATH REFER 1&4/L-07

75MM GRANITIC SAND REFER 1/L-08

HDR:A HANDRAIL TYPE A REFER DETAIL 3A-L07

HDR:B HANDRAIL TYPE B REFER DETAIL 3B-L07

TREES TO BE REMOVED

TE FLUSH TIMBER EDGE REFER DETAIL 01-L08

PRECAST CONCRETE PIPE REFER DETAIL 02-L08

CONCRETE BENCH REFER DETAIL 01-L09

SCOPE OF WORKS

NEW 1800mm HIGH CHAIN LINK FENCE

NEW 900mm HIGH CHAIN LINK FENCE

PRE-CAST CONCRETE PLANT SPECIES TABLET REFER DETAIL 02-L09

OCULUS
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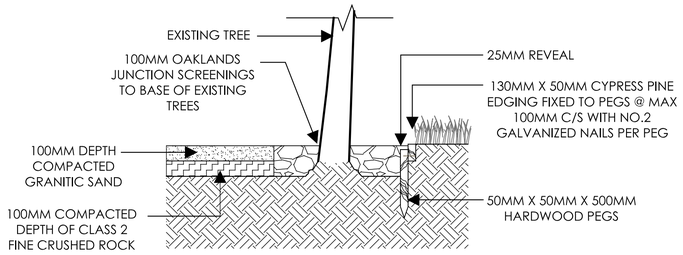
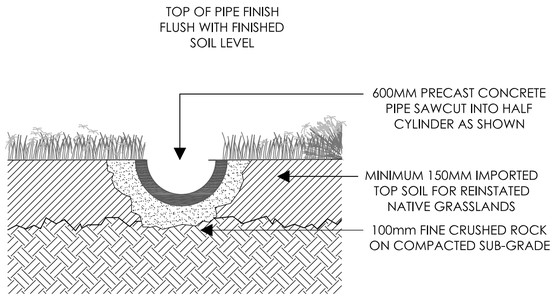
PROJECT
EDITHVALE SEAFORD
WETLAND DISCOVERY CENTRE

DRAWING
FOOTPATH DETAIL

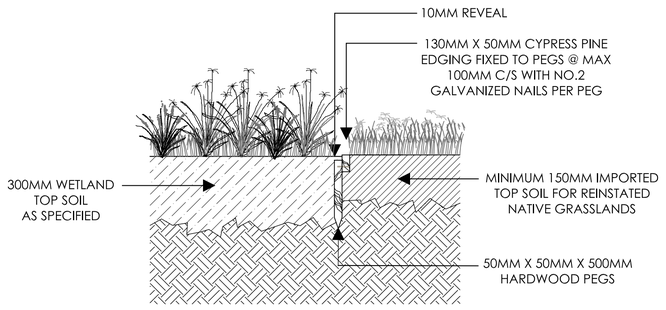
SCALE	PROJ. NO.
1:20 AT A1	M-0717
DATE	DRAWING NO
04.12.07	L-07
DRAWN	REV
AD	D
CHECKED	STATUS
MJ	TENDER



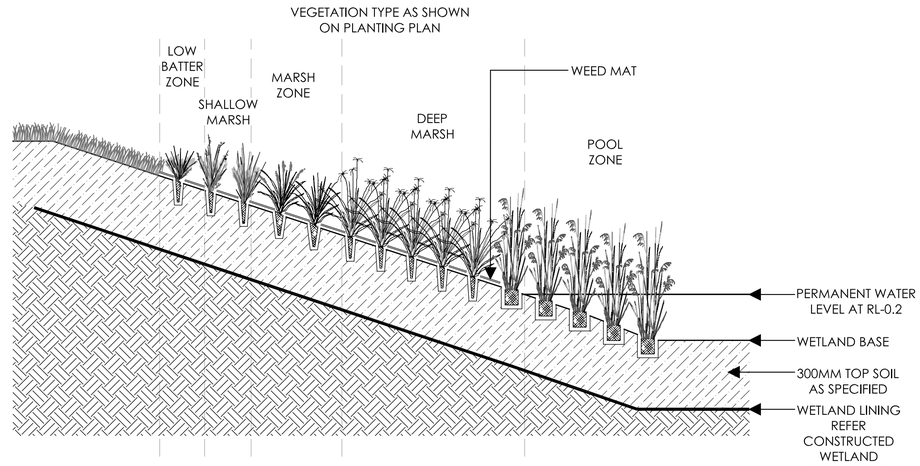
01 L-08 LILYDALE TOPPING WITH TIMBER EDGING 1:20



02 L-08 EXPRESSED DRAINAGE 1:20



04 L-08 WETLAND PERIMETER TIMBER EDGING 1:20



06 L-08 WETLAND PLANTING 1:20

REV	DATE	BY	DESCRIPTION
D	04.12.07	MJ	TENDER
C	15.11.07	AD	PRELIMINARY TENDER
B	29.10.07	AD	CO-ORDINATION
A	18.10.07	AD	PRELIMINARY

SET OUT POINT

PROPERTY BOUNDARY

WETLAND PLANTING (SEEDS SOURCED FROM LOCAL PROVIDENCE)

INSITU CONCRETE FOOTPATH REFER 1&4/L-07

75MM GRANITIC SAND REFER 1/L-08

HDR:A HANDRAIL TYPE A REFER DETAIL 3A-L07

HDR:B HANDRAIL TYPE B REFER DETAIL 3B-L07

TREES TO BE REMOVED

TE FLUSH TIMBER EDGE REFER DETAIL 01-L08

PRECAST CONCRETE PIPE REFER DETAIL 02-L08

CONCRETE BENCH REFER DETAIL 01-L09

SCOPE OF WORKS

NEW 1800mm HIGH CHAIN LINK FENCE

NEW 900mm HIGH CHAIN LINK FENCE

PRE-CAST CONCRETE PLANT SPECIES TABLET REFER DETAIL 02-L09

O C U L U S
level 3 289 flinders lane **melbourne** vic 3000
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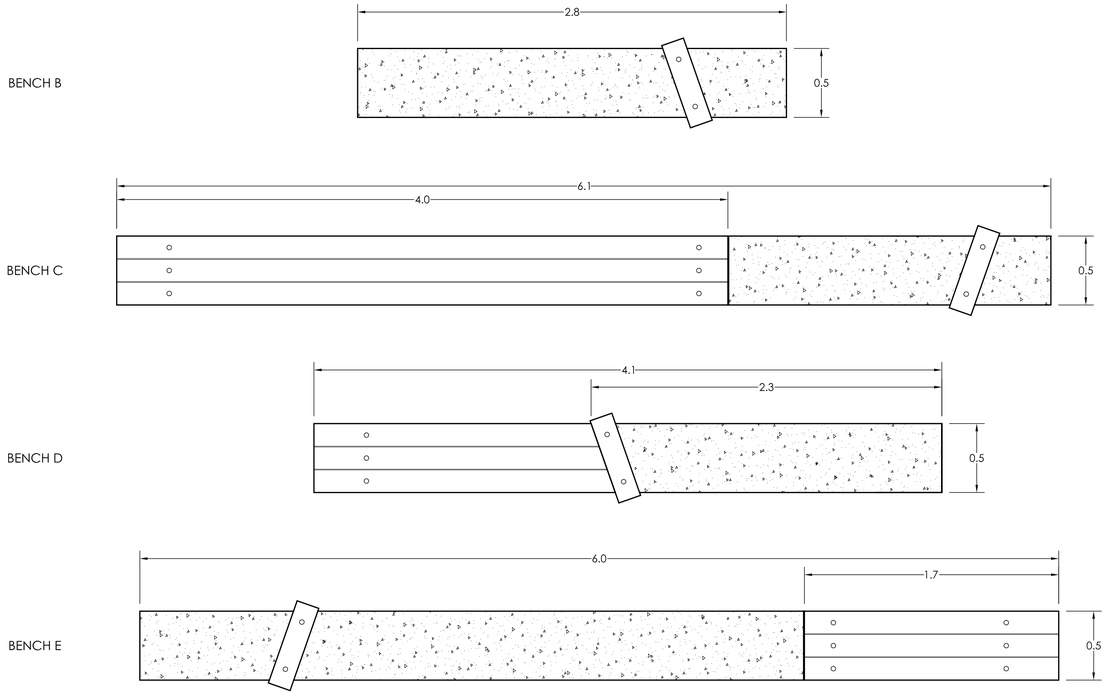
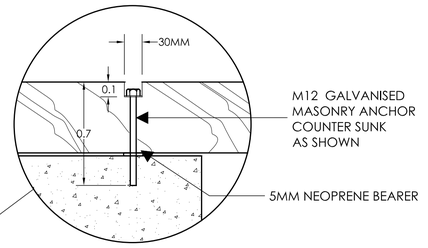
PROJECT
EDITHVALE SEAFORD
WETLAND DISCOVERY CENTRE

DRAWING
DETAILS

SCALE	PROJ. NO.
1:20 AT A1	M-0717
DATE	DRAWING NO
04.12.07	L-08
DRAWN	REV
AD	D
CHECKED	STATUS
MJ	TENDER



01 L-09 CONCRETE BENCHES 1:20



1 x Poa labillardieri

1 x Chloris truncata

1 x Eleocharis acuta

1 x Juncus pallidus

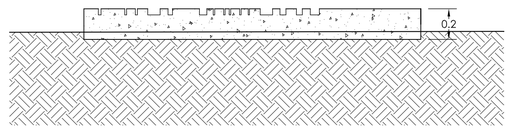
1 x Triglochin striata

1 x Montia australasica

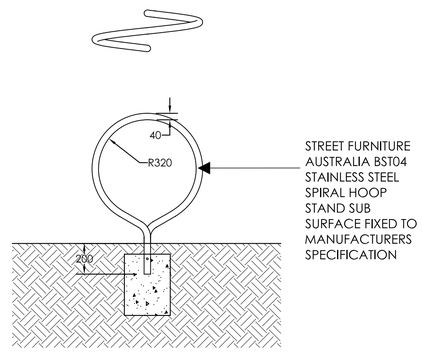
1 x Type A orientalis

*NB. FINAL SPECIES NAMES AND FONTS TO BE CONFIRMED

1 x Carex appressa



02 L-09 PRE-CAST CONCRETE PLANT SPECIES TABLET 1:20



03 L-09 BIKE RACK 1:20

REV	DATE	BY	DESCRIPTION
D	04.12.07	MJ	TENDER
C	15.11.07	AD	PRELIMINARY TENDER
B	29.10.07	AD	CO-ORDINATION
A	18.10.07	AD	PRELIMINARY

SET OUT POINT

PROPERTY BOUNDARY

WETLAND PLANTING (SEEDS SOURCED FROM LOCAL PROVIDENCE)

INSITU CONCRETE FOOTPATH REFER 1&4/L-07

75MM GRANITIC SAND REFER 1/L-08

HDR:A HANDRAIL TYPE A REFER DETAIL 3A-L07

HDR:B HANDRAIL TYPE B REFER DETAIL 3B-L07

TREES TO BE REMOVED

TE FLUSH TIMBER EDGE REFER DETAIL 01-L08

PRECAST CONCRETE PIPE REFER DETAIL 02-L08

CONCRETE BENCH REFER DETAIL 01-L09

SCOPE OF WORKS

NEW 1800mm HIGH CHAIN LINK FENCE

NEW 900mm HIGH CHAIN LINK FENCE

PRE-CAST CONCRETE PLANT SPECIES TABLET REFER DETAIL 02-L09

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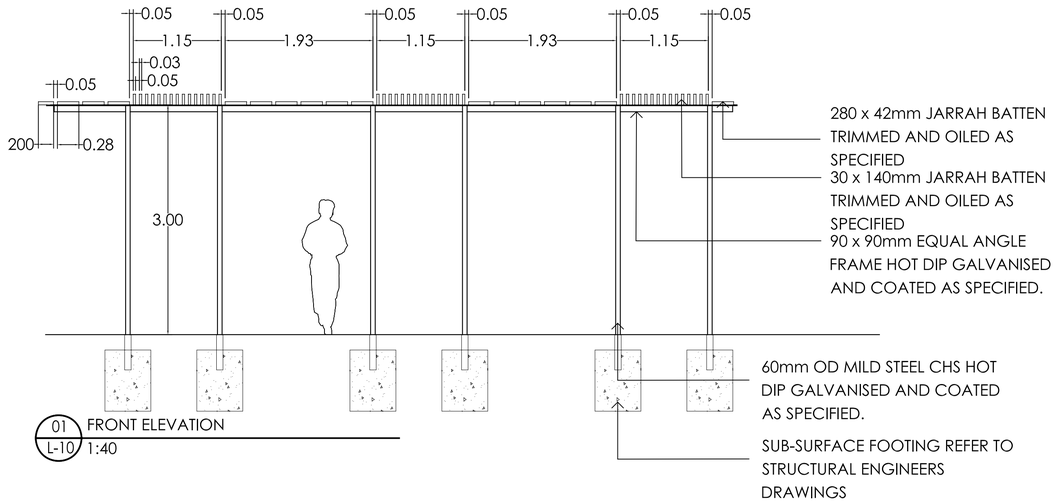
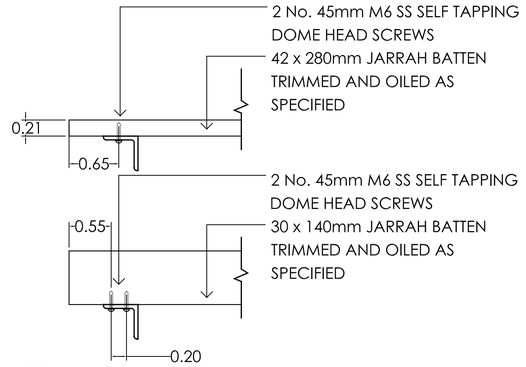
PROJECT
EDITHVALE SEAFORD
WETLAND DISCOVERY CENTRE

DRAWING
BENCH DETAIL

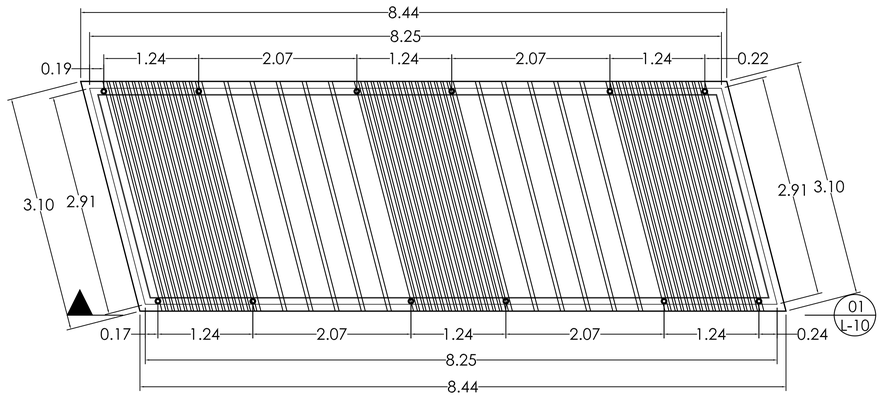
SCALE	PROJ. NO.
1:20 AT A1	M-0717
DATE	DRAWING NO
04.12.07	L-09
DRAWN	REV
AD	D
CHECKED	STATUS
MJ	TENDER



01 L-10 FRONT ELEVATION 1:40



3 L-10 SHADE CANOPY - BATTEN FIXING 1:5



02 L-10 PLAN 1:40

REV	DATE	BY	DESCRIPTION
D	04.12.07	MJ	TENDER
C	15.11.07	AD	PRELIMINARY TENDER
B	29.10.07	AD	CO-ORDINATION
A	18.10.07	AD	PRELIMINARY

SET OUT POINT

PROPERTY BOUNDARY

WETLAND PLANTING (SEEDS SOURCED FROM LOCAL PROVIDENCE)

INSITU CONCRETE FOOTPATH REFER 1&4/L-07

75MM GRANITIC SAND REFER 1/L-08

HDR:A HANDRAIL TYPE A REFER DETAIL 3A-L07

HDR:B HANDRAIL TYPE B REFER DETAIL 3B-L07

TREES TO BE REMOVED

TE FLUSH TIMBER EDGE REFER DETAIL 01-L08

PRECAST CONCRETE PIPE REFER DETAIL 02-L08

CONCRETE BENCH REFER DETAIL 01-L09

SCOPE OF WORKS

NEW 1800mm HIGH CHAIN LINK FENCE

NEW 900mm HIGH CHAIN LINK FENCE

PRE-CAST CONCRETE PLANT SPECIES TABLET REFER DETAIL 02-L09

OCULUS
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PROJECT
EDITHVALE SEAFORD
WETLAND DISCOVERY CENTRE

DRAWING
SHADE STRUCTURE DETAIL

SCALE	PROJ. NO.
1:40 AT A1	M-0717
DATE	DRAWING NO
04.12.07	L-10
DRAWN	REV
AD	D
CHECKED	STATUS
MJ	TENDER