PROPOSED COMMUNITY HOUSING PROJECT

146 - 152 JOHNSTON STREET, CASINO NSW 2470
LOTS 155 - 158, DP 834821
CIVIL DRAWINGS FOR ROADWORKS, STORMWATER DRAINAGE, SEWER & WATER RETICULATION

ISSUED FOR DEVELOPMENT APPLICATION

SCHEDULE OF DRAWINGS:

NORTH

LOCALITY PLAN
N.T.S.

ISSUE	DESCRIPTION	DATE
2	ISSUED FOR DEVELOPMENT APPLICATION	19.12.2023
1	ISSUED FOR CLIENT REVIEW - DESIGN CHANGES AFTER COUNCIL MEETING	06.12.2023
0	ISSUED FOR CLIENT REVIEW 70%	24.10.2023

DESIGNED: A.SCHMID | DATE: DEC 2023
DRAWN: A.SCHMID | SCALE: AS SHOWN
SURVEYING: MDE | SHEET SIZE: A1

FOR DEVELOPMENT APPLICATION ONLY

MDE Manage Design Engineer

CLIENT: MOMENTUM COLLECTIVE

TITLE: CASINO COMMUNITY HOUSING PROJECT

PROJECT: PROPOSED COMMUNITY HOUSING
146 - 152 JOHNSTON STREET
CASION, NSW 2470
LOTS 155 - 158, DP 834821

CIVIL DRAWINGS

DRAWING TITLE: COVER SHEET

DWG No: C01 | SHEET: 01 OF 17 | REV: 2

LOT 151 DP834821

LOT 152 DP834821

LOT 153 DP834821

LOT 1542 DP864510

JOHNSTON ST CORE+CLUSTER HOUSING

CLARK ST CHIFF HOUSING

PROPOSED POST AND SLEEPER RETAINING WALL ALONG BOUNDARY UP TO 0.7m HIGH

WHEEL STOPS TO BE INSTALLED ON ALL CAR PARKING BAYS TO AS2890 STANDARDS

PROTECT EXISTING SEWER HOUSE CONNECTION AND RETAIN TO SERVICE C&C HOUSING

LOT 14 DP1091559

CAR PARKING BAYS

WHEEL STOPS TO BE INSTALLED ON ALL CAR PARKING BAYS TO AS2890 STANDARDS

CH50.482

CH50.000 REVERSING ZONE

CH45.000

CH40.000

CH35.000

CH30.000

CH25.000

CH20.000

CH15.000

CH10.000

CH5.000

CH0.000

DRIVEWAY 1

PWD

PWD ACCESS

PROPOSED POST AND SLEEPER RETAINING WALL ALONG BOUNDARY UP TO 0.5m HIGH

CLUSTER BUILDING 01

TERRACE

TERRACE ROOFED

ENTRY

ENTRY

COURT 1: ENTRY + LSCP

PIT 1-1

PIT 1-2

PIT 1-3

PIT 1-4

PIT 1-5

PIT 1-6

PIT 1-7

PIT 1-8

Dia.225mm

Dia.225mm

Dia.150mm

Dia.300mm

Dia.300mm

2 STOREY BUILDING

CORE BUILDING:

BIN STORE

SERVICE: VAN

CROSSOVER

FOOTPATH 1m WIDE

CLUSTER BUILDING 02

TERRACE

TERRACE

TERRACE

TERRACE

PIT 2-1

PIT 2-2

PIT 2-3

PIT 2-4

PIT 2-5

Dia.150mm

Dia.225mm

Dia.600x300mm

Dia.600x300mm

Court 2: ENTRY+ lscp to CHIFF

COURT 3: LSCP + PLAY

SEWER LINE TO BE REMOVED AND CAPPED AT BOUNDARY (LOCATION APPROXIMATE ONLY)

CLUSTER BUILDING 03

TERRACE

TERRACE

TERRACE

CAR PARKING BAYS

PWD ACCESS

PWD

REVERSING ZONE

SERVICES

BIN STORE

DRIVEWAY 2

FOOTPATH 1m WIDE

CROSSOVER

PIT 3-1

PIT 3-2

PIT 4-1

PIT 4-2

Dia.150mm

SEWER CLEARANCE ZONE

CONSTRUCT WATER METER FOR FOR CHIFF HOUSING WATER SUPPLY ON EXISTING WATER TAP

DRIVEWAY NOTE:
1. THE LOCATION AND CONSTRUCTION OF THE DRIVEWAY SHALL COMPLY WITH AS2890.
2. THE DRIVEWAY GRADIENTS AND WIDTHS IN ACCORDANCE WITH RICHMOND VALLEY COUNCIL SPECIFICATION FOR THE CONSTRUCTION OF VEHICULAR ACCESSWAYS.
3. DRIVEWAY 2 CHIFF HOUSING, REFER ALSO TO C05 - LONGITUDINAL SECTIONS - CHIFF DRIVEWAY

EXISTING SEWER MANHOLE CONSTRUCT NEW SEWER CONNECTION FOR CHIFF HOUSING

PLACE BOX CULVERTS 0.3m HIGH, 0.6m WIDTH OVER 5m LENGTH

EXISTING FOOTPATH

EXISTING CONCRETE FOOTPATH IS ENCROACHING ON SUBJECT LOT BY UP TO 0.4m

PROPOSED WATER METER FOR C+C HOUSING

EXISTING CROSSOVER TO BE REMOVED

LOCATE EXISTING WATER LINE AND REDIRECT TO PROPOSED WM LOCATION

PLACE BOX CULVERTS 0.3m HIGH, 0.6m WIDTH OVER 5m LENGTH

EXISTING SWALE

DRIVEWAY NOTE:
1. THE LOCATION AND CONSTRUCTION OF THE DRIVEWAY SHALL COMPLY WITH AS2890.
2. THE DRIVEWAY GRADIENTS AND WIDTHS IN ACCORDANCE WITH RICHMOND VALLEY COUNCIL SPECIFICATION FOR THE CONSTRUCTION OF VEHICULAR ACCESSWAYS.
3. REMOVE EXISTING CONCRETE PATH AT CROSSOVER.
4. DRIVEWAY 1 C+C HOUSING, REFER ALSO TO C04 - LONGITUDINAL SECTIONS - C+C DRIVEWAY

JOHNSTON STREET

CLARK STREET

NORTH

Horizontal Scale 1:200 (A1)
1:400 (A3)

GENERAL ARRANGEMENT PLAN

SCALE 1:250

LEGEND

- PROPOSED CONCRETE DRIVEWAY AND CAR PARKING BAYS
- PROPOSED INTERNAL CONCRETE FOOTPATH
- PROPOSED BUILDING FOOTPRINT
- 6m WIDE EXISTING SEWER LINE ZONE OF INFLUENCE
- EXISTING COMMS PIT
- EXISTING POWER POLE
- EXISTING ELECTRICAL JUNCTION BOX
- EXISTING STAY ANCHOR POLE
- EXISTING STREET LIGHT
- EXISTING WATER TAP FOR FUTURE WM CONNECTION
- EXISTING WATER METER
- EXISTING STORMWATER KERB ADAPTER
- EXISTING SEWER MANHOLE
- PROPOSED DRAINAGE PIT REFERENCE NUMBER (PIT CHIFF 2-1)
- PROPOSED STORMWATER PIT
- PROPOSED STORMWATER HEADWALL
- PROPOSED UNDERGROUND DETENTION TANK
- CADASTRAL BOUNDARY SUBJECT LOT
- CADASTRAL BOUNDARY ADJOINING PROPERTIES
- CADASTRAL BOUNDARY TO BE CONSOLIDATED
- EXISTING BUILDING ADJOINING PROPERTIES
- EXISTING WATERMAIN
- EXISTING COMMUNICATION LINE
- EXISTING DRAINAGE PIPE
- EXISTING SEWER GRAVITY LINE
- TOP OF EXISTING SWALE
- EXISTING OVERHEAD POWER LINE
- EXISTING ROAD LINE MARKING
- DESIGN SURFACE CONTOURS 0.2m INTERVAL
- PROPOSED DRIVEWAY CENTRELINE
- PROPOSED SWALE CENTRELINE
- TOP OF PROPOSED SWALE
- PROPOSED NEW DRAINAGE LINE
- PROPOSED RETAINING WALL

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CIVIL DRAWINGS

DRAWING TITLE: GENERAL ARRANGEMENT PLAN

DWG No: C02 | SHEET: 02 OF 17 | REV: 2

Document Set ID: 1906120
Version: 1, Version Date: 15/02/2024

CONCRETE:

C1 Workmanship and materials to comply with AS3600, AS2870, AS3610, AS1379, AS1478, AS3582 and AS3972 for liquid retaining structures also comply with AS3735.

C2 Wet concrete to be uniform, homogeneous, cohesive and able to work readily into corners and around reinforcement completely filling formwork without segregation, excess free water on surface, loss of material or contamination. Concrete to have good dimensional stability and able to resist plastic settlement cracking, thermal cracking and shrinkage cracking.

C3 Review location of embedded items to minimize possible zones of poor compaction that may compromise structural integrity.

C4 Externally exposed concrete to be classification B1 U.N.O.

C5 Concrete quality shall be as follows:

Element	f'c MPa	Slump mm	Max Agg.	Reinforcement cover			
				Internal		External	
				Btm	Top	Btm	Top
CONCRETE PAVEMENT	32	80	20	75mm MIN.			

U.N.O. Concrete shall be "Normal Class" to AS1379.

C6 Sampling, testing and acceptance
Permanent records of plant assessment and project assessment shall be maintained at the plant and project respectively. Copies of these records shall be given promptly to the Engineer.
Concrete is subject to project assessment.
Sampling and testing shall comply with AS1379 and this specification and all such costs shall be borne by the contractor.
The sampling and site treatment of project control test specimens shall be carried out by a NATA laboratory other than that of the supplier.
Acceptance of concrete prior to placement shall be based on measured slump for compliance with the specification. Acceptance to hardened concrete for design properties shall be in accordance with AS1379.

C7 U.N.O. Concrete shrinkage to be 700 microstrain maximum at 56 days. Test method AS 1012 Part 13.

C8 Construction tolerances to be in accordance with AS3610.

C9 Provide drip grooves in soffit of beams and slabs at external perimeter of structures. Ensure cover to reinforcement is achieved.

C10 Depths of beams are given first and include slab thickness.

C11 For chamfers, drip grooves, reglets, etc. refer to Architects' details.

C12 Do not make holes, penetrations, recesses, chases, nor embed pipes (other than those shown on structural drawings) without approval of superintendent. Do not place conduits, pipes etc within cover concrete. Locate conduits, pipes etc only in middle third of slab or beam depth and between reinforcement layers, and spaced at 3 x diameter centres minimum. Do not cut reinforcement at penetrations without approval.

C13 Concrete cover shall be maintained by the use of plastic bar chairs at 750mm maximum centres U.N.O. Plastic tipped ferrous chairs not permitted.

C14 Construction joints where not shown shall be located to the approval of the Engineer in writing.

C15 Symbols on drawings for grade and type of reinforcement are as follows :–
N Denotes grade 500 normal ductility deformed bar to AS4671
R Denotes grade 250 normal ductility plain round bar to AS4671
SL Denotes grade 500 low ductility welded square mesh to AS4671
RL Denotes grade 500 low ductility welded rectangular mesh to AS4671

C16 Reinforcement is shown diagramatically and not necessarily in true position.

C17 Splices in reinforcement shall be made only in positions shown or otherwise approved in writing by the Engineer.

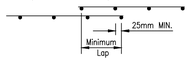
C18 Cogs and hooks to be standard in accordance with AS3600

C19 Reinforcement splices unless noted otherwise on the drawing.
All spices shall conform to the following table:

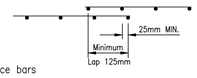
Deformed Bar Diameter	Minimum Bar Development Length				
	Footings	Slabs	Walls/Columns	Beams<350MM DEEP	Beams>350MM DEEP
N12	460	350	350	350	460
N16	610	480	470	480	620
N20	800	660	600	660	850
N24	1070	850	800	850	1100
N28	1370	1060	1000	1060	1370
N32	1690	1270	1220	1270	1650
N36	2030	1490	1460	1490	1930

i) Plain Bars – Actual lap length for plain (non–deformed) bars shall be 1.5 times the basic lap length.
ii) Epoxy–Coated Bars – Actual lap length shall be 1.5 times the basic lap length.
iii) Lightweight Concrete – Actual lap length shall be 1.3 times the basic lap length.
iv) Structural elements built using slip forms – actual lap length shall be 1.3 times the basic lap length.

C20 Fabric splices shall be made by either of the following methods:–
(1) Lapping of fabric (Standard Fabric)



(2) Lapping of fabric (Mesh Type)



(3) Use of splice bars

Splice bar length is 800mm or 1000mm for horizontal bars where more than 300mm concrete cast below bar.

Fabric Reference	Spacing of Bars mm	
	At sheet ends	At sheet sides
RL1218	75	300
RL1118	100	300
RL1018	125	300
RL918	150	300
RL718, RL818	200	300
SL102, SL81	200	200
SL82, SL92	300	300

C21 Welding of reinforcement is only permitted where shown on the drawings or otherwise approved by the Engineer. Where welding of reinforcement is approved, it shall be carried out in accordance with AS1554. Part 3.

C22 Dowels shall be sawn to length. In skewed joints, dowels shall be aligned with the longitudinal joints. Dowel alignment to be maintained by use of a support assembly suitable to ensure a horizontal and vertical tolerance of 5 in 400.

C23 Minimum lap of fabric shall be two transverse wires plus 30 mm. Minimum 500mm lap length for trench mesh.

C24 All concrete shall be placed and cured in accordance with Australian Standards. Curing must be applied to slabs immediately after finishing and onto walls and columns immediately after removal of formwork. Curing compounds must be compatible with future finishes and comply with AS3799.

C25 Builder shall be responsible for design of formwork, shoring and scaffolding. Formwork and shoring shall comply with AS3610. Scaffolding shall comply with AS1576.

C26 Do not strip formwork until concrete is hardened sufficiently to withstand movement and form removal without damage. Strip formwork to AS3600 Clause 17.6 Remove form tie bolts without damaging concrete, parts of bolts left in concrete must not intrude into cover concrete. Flush fill holes using pre–mixed non–shrink cementitious repair mortar matching concrete surface colour, strength and durability and adequate bond. Remove props and formwork for beams and slabs and ensure concrete has gained adequate strength before constructing walls or placing other permanent loading on work.

C27 Slabs and beams shall bear only on the columns and walls shown on the drawings. All other building elements shall be kept 20mm clear from the soffits of structure.

C28 Where transverse tie bars are not shown provide N12–300 spliced where necessary and lap with main bars 400mm. All penetrations to have 2–N16 trimmer bars top and bottom to each face UNO. Extend trimmers 600mm beyond penetration.

C29 Site bending of reinforcement bars shall be done without heating. The bars shall be bent using a re–bending tool and against a flat surface or a pin with a diameter not less than the minimum pin size prescribed in AS3600.

C30 U.N.O. all hold down bolts shall be hot dipped galvanised.

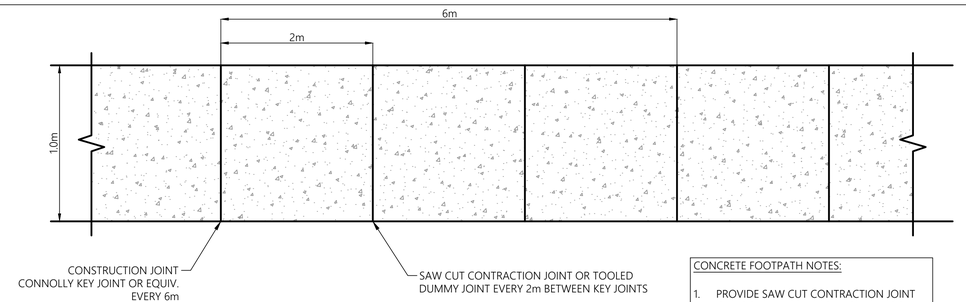
C31 U.N.O. all masonry anchors into concrete shall be M20 ramset trubolts (145 min embedment) or approved equivalent. Bolts shall be galvanised for internal environments. Stainless steel GR316 bolts should be used for all external conditions or in cavities where they are not readily accessible or visable.

C32 Install waterstops onto smooth concrete surface. Do not scabble concrete beneath water stops.

C33 Saw cut crack control joints as soon after casting as practicable to avoid spalling or ravelling of joint edges, and within 16 hours of casting to prevent thermal and/or shrinkage cracking of slab. Immediately after saw cutting, flush out joints to remove sawing residue and insert a temporary foamed plastic bead to keep joint clean prior to filling or sealing protect saw cuts from wheel loads for at least one week after cutting.

C34 Do not install sealants if expected maximum daily temperature exceeds 30° degrees celcius. Ensure recesses are clean and dry prior to installing fillers or sealants, and prepare in accordance with manufacturer's recommendations. Tolerance on sealant widths +5, –0 mm.

C35 Do not use formwork that forms a complete hole through concrete elements. Do not use reinforcement to support formwork.

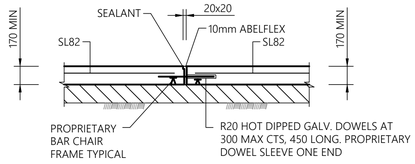


TYPICAL LAYOUT - CONCRETE FOOTPTAH

NOTE: REFER TO NRLG SD R-07 FOR DETAILS

CONCRETE FOOTPATH NOTES:

1. PROVIDE SAW CUT CONTRACTION JOINT OR TOOLED DUMMY JOINTS EVERY 2.0m WITH EXPANSION KEY JOINTS EVERY 6.0m, REFER TO NRLG STD DRAWING No. R-07 FOR DETAILS
2. THICKEN TO RIGID PAVEMENT DESIGN WHEREVER PATH BECOMES TRAFFICABLE
3. RESIDENTIAL DRIVEWAYS TO BE MAINTAINED AT RIGID PAVEMENT DESIGN THICKNESS, DOWEL PATH TO DRIVEWAY AT INTERFACE AS REQUIRED.

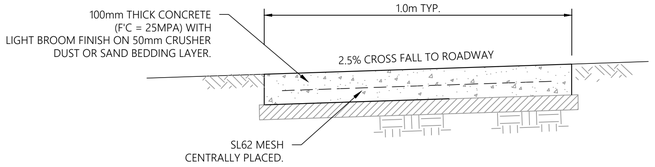


RIGID PAVEMENT EXPANSION JOINT - EJ

SCALE 1:20

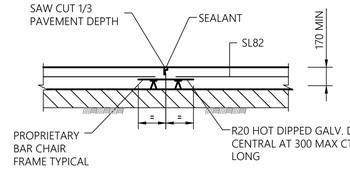
NOTE: DOWEL KEY JOINT 'CONNOLLY' OR EQUIV. ACCEPTED FOR RIGID PAVEMENT EXPANSION JOINT UPON AGREEMENT WITH SUPERINTENDENT.

EXPANSION JOINT (EJ) & SAWN DOWEL JOINT (SDJ1) NOTES
1. DOWELS TO BE PLASTIC WRAPPED FULL LENGTH.
2. DOWELS TO BE RIGIDLY SUPPORTED ON BAR CHAIR FRAME WITH DOWELS PERPENDICULAR TO SAW CUT.
3. MARK POSITION OF SAW CUT ON FORMWORK.
DO NOT POUR UNTIL POSITION OF MARK AND DOWEL FRAME HAS BEEN VERIFIED BY SUPERINTENDENT.



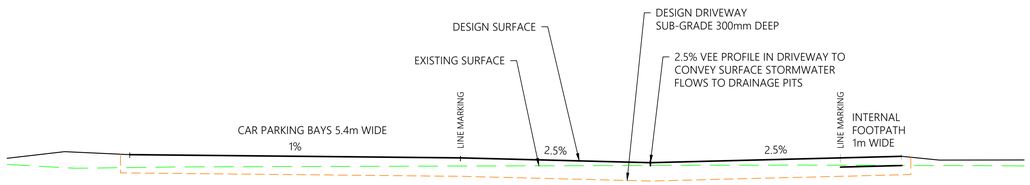
TYPICAL SECTION -CONCRETE PATH

NOTE: REFER TO NRLG SD R-07 FOR DETAILS



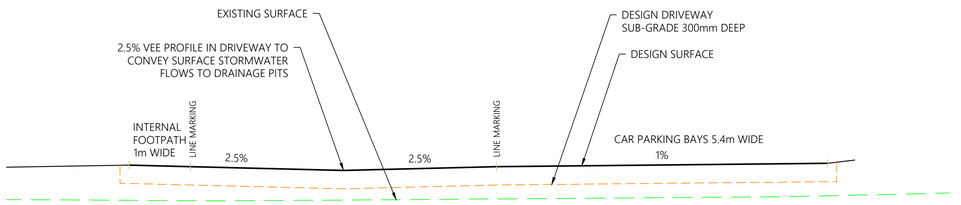
RIGID PAVEMENT SAWN DOWEL JOINT - SDJ

SCALE 1:20



TYPICAL SECTIONS - DRIVEWAY 1 - C+C HOUSING

Horizontal scale 1:50
Vertical scale 1:50

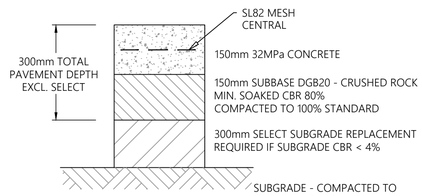


TYPICAL SECTIONS - DRIVEWAY 2 - CHIFF HOUSING

Horizontal scale 1:50
Vertical scale 1:50

TYPICAL PAVEMENT SECTION - RIGID PAVEMENT (SITE INTERNAL DRIVEWAY)

RIGID PAVEMENT
DESIGN TRAFFIC LOAD 1x10 ESA
25 YEAR DESIGN LIFE



RIGID PAVEMENT DESIGN

N.T.S

PAVEMENT DETAILS/NOTES:
PAVEMENT DESIGN IS PRELIMINARY AND IS SUBJECT TO SITE SUBGRADE CBR TESTING BY NATA ACCREDITED GEOTECHNICAL ENGINEER AND FINAL PAVEMENT DESIGN APPROVAL BY RICHMOND VALLEY COUNCIL

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CLIENT: MOMENTUM COLLECTIVE

TITLE: CASINO COMMUNITY HOUSING PROJECT

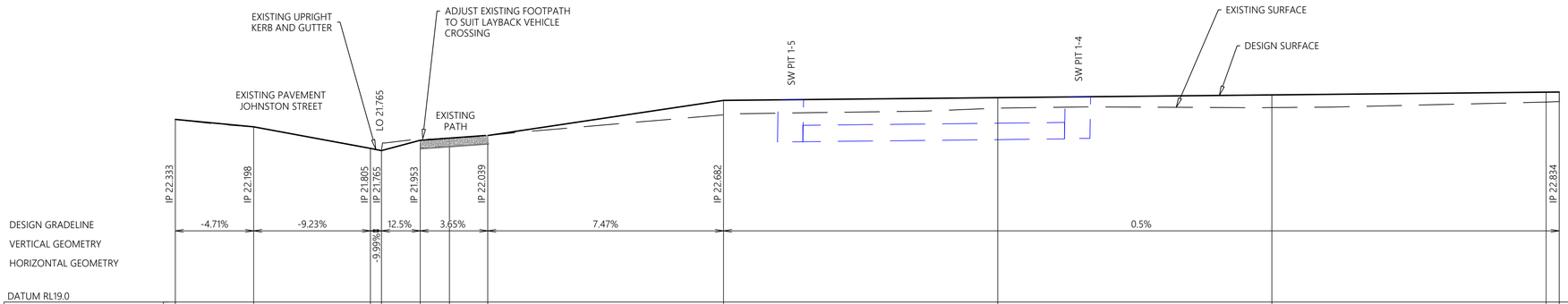
PROJECT: PROPOSED COMMUNITY HOUSING
146 - 152 JOHNSTON STREET
CASION, NSW 2470
LOTS 155 - 158, DP 834821

CIVIL DRAWINGS

DRAWING TITLE: TYPICAL SECTIONS AND NOTES

DWG No: C03 | SHEET: 03 OF 17 | REV: 2

Document Set ID: 1906120
Version: 1, Version Date: 15/02/2024



DESIGN GRADELINE
VERTICAL GEOMETRY
HORIZONTAL GEOMETRY

DATUM RL19.0

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NATURAL SURFACE	22.333	22.198	21.805	21.765	21.976	21.995	22.039	22.419	22.538	22.550	22.651	22.660	
CHAINAGES	0.000	2.858	7.119	7.519	9.019	10.000	11.396	20.000	30.000	40.000	50.000	50.482	

Horizontal 1:100 Vertical 1:50

C+C HOUSING - DRIVEWAY 1

Horizontal Scale 1:100 (A1)
1:200 (A3)

Vertical Scale 1:50 (A1)
1:100 (A3)

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PROJECT
PROPOSED COMMUNITY HOUSING
146 - 152 JOHNSTON STREET
CASION, NSW 2470
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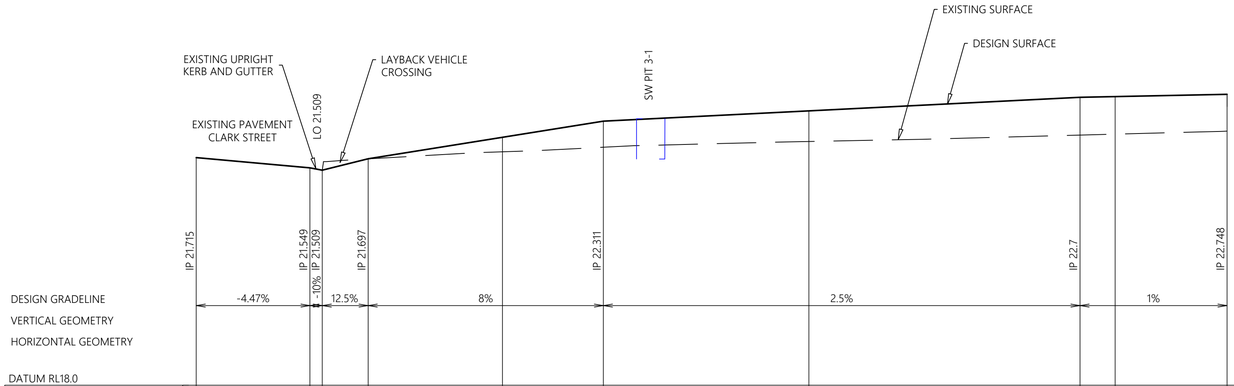
CIVIL DRAWINGS

DRAWING TITLE:
LONGITUDINAL SECTIONS - C+C DRIVEWAY

DWG No: C04 | SHEET: 04 OF 17 | REV: 2



DATUM RL18.0

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NATURAL SURFACE	21.715	21.549	21.509	21.694	21.810	21.884	21.979	22.083	22.098	22.147
CHAINAGES	0.000	3.715	4.115	5.615	10.000	13.295	20.000	28.854	30.000	33.652

Horizontal 1:100 Vertical 1:50

CHIFF HOUSING - DRIVEWAY 2

2 1 0 2 4 6
Horizontal Scale 1:100 (A1)
1:200 (A3)

1 0.5 0 1 2 3
Vertical Scale 1:50 (A1)
1:100 (A3)

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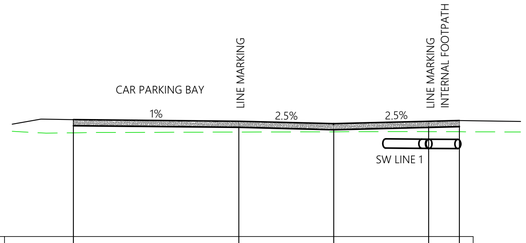
CIVIL DRAWINGS

DRAWING TITLE: LONGITUDINAL SECTIONS - CHIFF DRIVEWAY

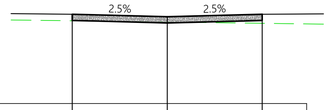
DWG No: C05 | SHEET: 05 OF 17 | REV: 2



DATUM R.L.19.0

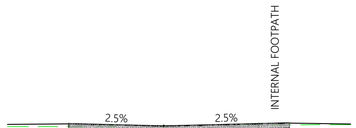
DESIGN SURFACE LEVEL	22.813	22.759	22.682	22.759	22.784	
EXISTING SURFACE LEVEL	22.385	22.409	22.419	22.423	22.419	
OFFSET	-8.500	-3.100	0.000	3.100	4.100	

CH 20.000



DATUM R.L.20.0

DESIGN SURFACE LEVEL	22.912	22.834	22.912	
EXISTING SURFACE LEVEL	22.701	22.660	22.619	
OFFSET	-3.100	0.000	3.100	



DATUM R.L.19.0

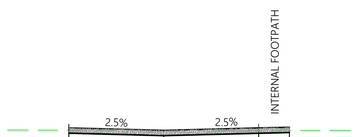
DESIGN SURFACE LEVEL	22.066	21.988	22.066	22.091	
EXISTING SURFACE LEVEL	21.965	21.995	22.018	22.022	
OFFSET	-3.100	0.000	3.100	4.100	

CH 10.000

DATUM R.L.20.0

DESIGN SURFACE LEVEL	22.913	22.859	22.782	22.859	
EXISTING SURFACE LEVEL	22.689	22.601	22.550	22.499	
OFFSET	-8.500	-3.100	0.000	3.100	

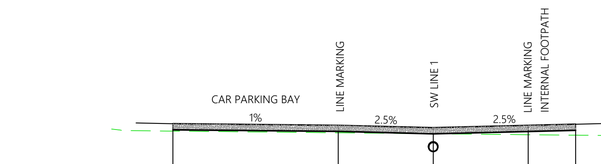
CH 40.000



DATUM R.L.19.0

DESIGN SURFACE LEVEL	21.843	21.765	21.843	21.868	
EXISTING SURFACE LEVEL	21.771	21.767	21.757	21.761	
OFFSET	-3.100	0.000	3.100	4.100	

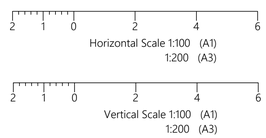
CH 7.520



DATUM R.L.19.0

DESIGN SURFACE LEVEL	22.863	22.809	22.732	22.809	22.848	
EXISTING SURFACE LEVEL	22.625	22.570	22.538	22.506	22.490	
OFFSET	-8.500	-3.100	0.000	3.100	4.650	

CH 30.000



ISSUE	DESCRIPTION	DATE
2	ISSUED FOR DEVELOPMENT APPLICATION	19.12.2023
1	ISSUED FOR CLIENT REVIEW - DESIGN CHANGES AFTER COUNCIL MEETING	06.12.2023
0	ISSUED FOR CLIENT REVIEW 70%	24.10.2023

DESIGNED: A.SCHMID | DATE: DEC 2023
DRAWN: A.SCHMID | SCALE: AS SHOWN
SURVEYING: MDE | SHEET SIZE: A1

FOR DEVELOPMENT APPLICATION ONLY

MDE Manage Design Engineer

CLIENT: MOMENTUM COLLECTIVE

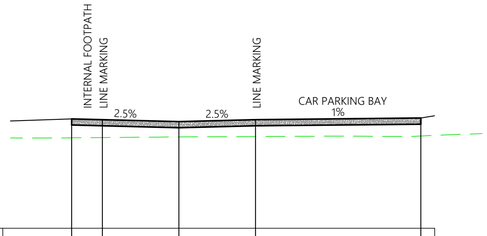
TITLE: CASINO COMMUNITY HOUSING PROJECT

PROJECT: PROPOSED COMMUNITY HOUSING
146 - 152 JOHNSTON STREET
CASION, NSW 2470
LOTS 155 - 158, DP 834821

CIVIL DRAWINGS

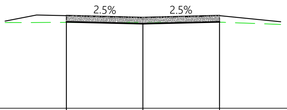
DRAWING TITLE: CROSS SECTION - C+C DRIVEWAY

DWG No: C06 | SHEET: 06 OF 17 | REV: 2



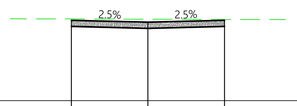
DATUM R.L.19.0					
DESIGN SURFACE LEVEL	22.566	22.541	22.479	22.541	22.595
EXISTING SURFACE LEVEL	21.949	21.958	21.979	21.991	22.008
OFFSET	-3.500	-2.500	0.000	2.500	7.900

CH 20.000



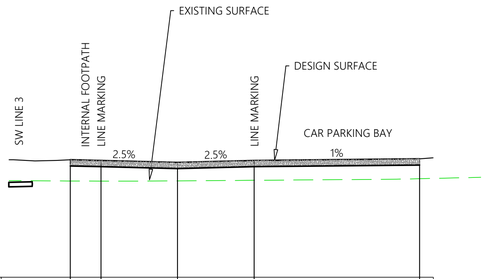
DATUM R.L.19.0				
DESIGN SURFACE LEVEL	22.110	22.048	22.110	
EXISTING SURFACE LEVEL	21.804	21.810	21.809	
OFFSET	-2.500	0.000	2.500	

CH 10.000



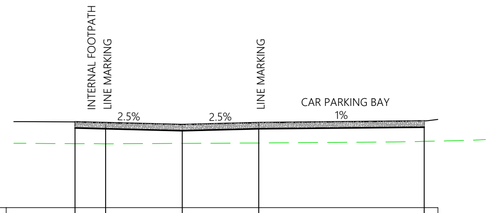
DATUM R.L.19.0				
DESIGN SURFACE LEVEL	21.623	21.561	21.623	
EXISTING SURFACE LEVEL	21.666	21.660	21.649	
OFFSET	-2.500	0.000	2.500	

CH 4.525



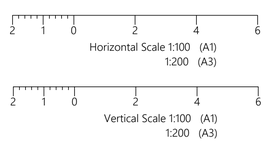
DATUM R.L.19.0					
DESIGN SURFACE LEVEL	22.836	22.811	22.748	22.811	22.865
EXISTING SURFACE LEVEL	22.144	22.138	22.147	22.166	22.218
OFFSET	-3.500	-2.500	0.000	2.500	7.900

CH 33.652



DATUM R.L.20.0					
DESIGN SURFACE LEVEL	22.799	22.774	22.712	22.774	22.828
EXISTING SURFACE LEVEL	22.090	22.085	22.098	22.111	22.165
OFFSET	-3.500	-2.500	0.000	2.500	7.900

CH 30.000



ISSUE	DESCRIPTION	DATE
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1	ISSUED FOR CLIENT REVIEW - DESIGN CHANGES AFTER COUNCIL MEETING	06.12.2023
0	ISSUED FOR CLIENT REVIEW 70%	24.10.2023

DESIGNED: A.SCHMID | DATE: DEC 2023
DRAWN: A.SCHMID | SCALE: AS SHOWN
SURVEYING: MDE | SHEET SIZE: A1

FOR DEVELOPMENT APPLICATION ONLY

MDE Manage Design Engineer

CLIENT: MOMENTUM COLLECTIVE

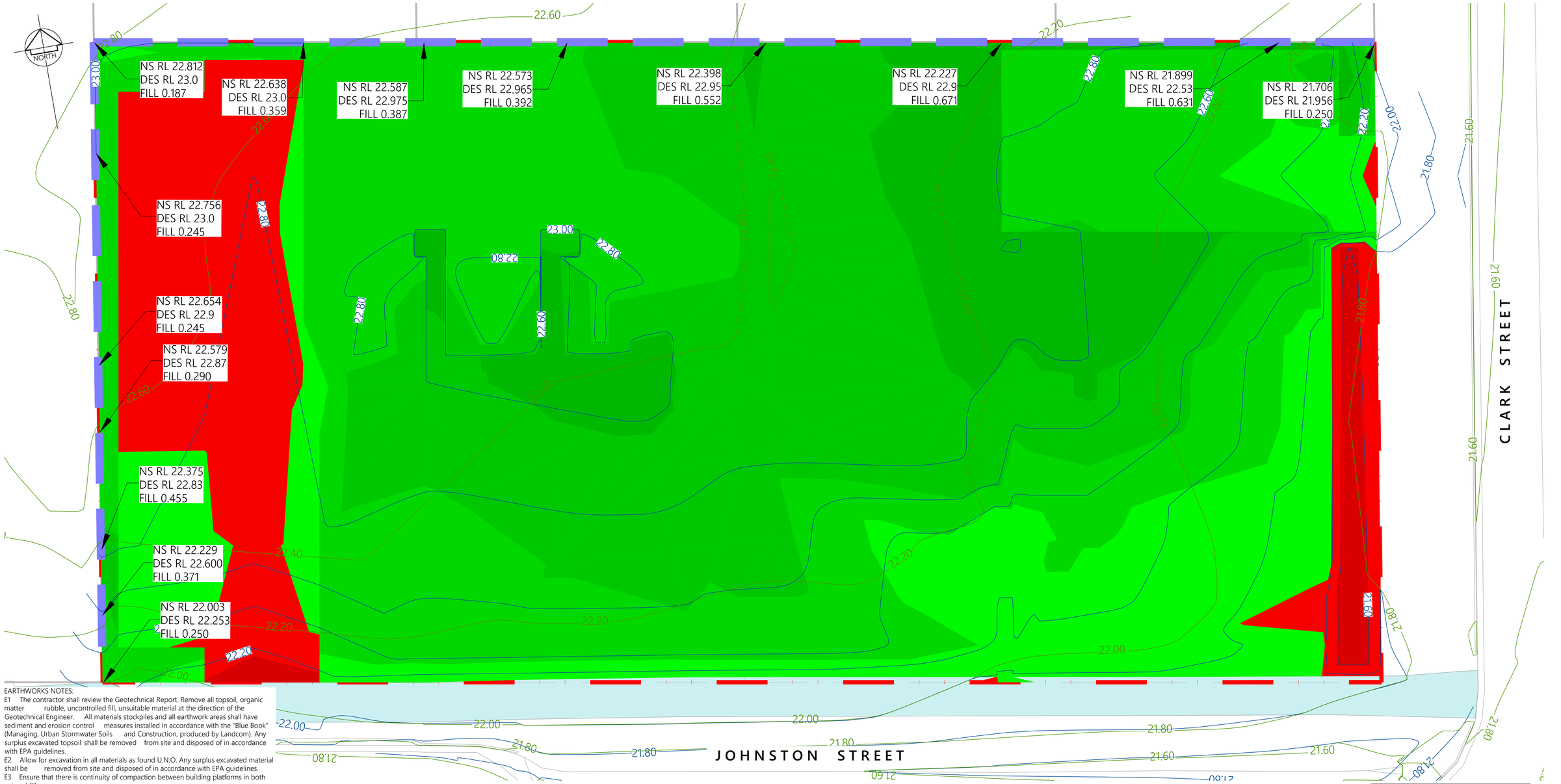
TITLE: CASINO COMMUNITY HOUSING PROJECT

PROJECT: PROPOSED COMMUNITY HOUSING
146 - 152 JOHNSTON STREET
CASION, NSW 2470
LOTS 155 - 158, DP 834821

CIVIL DRAWINGS

DRAWING TITLE: CROSS SECTION - CHIFF DRIVEWAY

DWG No: C07 | SHEET: 07 OF 17 | REV: 2



EARTHWORKS NOTES:

E1 The contractor shall review the Geotechnical Report. Remove all topsoil, organic matter rubble, uncontrolled fill, unsuitable material at the direction of the Geotechnical engineer. All materials stockpiles and all earthwork areas shall have sediment and erosion control measures installed in accordance with the "Blue Book" (Managing, Urban Stormwater Soils and Construction, produced by Landcom). Any surplus excavated topsoil shall be removed from site and disposed of in accordance with EPA guidelines.

E2 Allow for excavation in all materials as found U.N.O. Any surplus excavated material shall be removed from site and disposed of in accordance with EPA guidelines.

E3 Ensure that there is continuity of compaction between building platforms in both cut and fill areas.

E4 Testing of the sub-grade shall be carried out by an approved N.A.T.A. registered laboratory and in accordance with AS3798. Where the fill is to provide support to building floor slab, level 1 testing procedures (in accordance with AS3798) shall be followed, otherwise level 2 testing shall be undertaken.

E5 The contractor shall allow in their price for all costs associated with geotechnical testing during construction works.

E6 U.N.O. Provide suitable compaction equipment to achieve specified standards. Refer to geotechnical engineering report for site sub-grade preparation guidelines. All fill materials shall be placed in maximum 200mm thick layers and compacted at optimum moisture content (+/-2%) to achieve the following standards:

* Service trenches (not under pavements)	95% standard
* Service trenches under pavements	100% standard
* Top 600mm to subgrade level under paved areas	100% standard
* Landscaped and general areas	95% standard
Pavement:	
* Base Layer	100% standard
* Sub-Base Layer	100% standard

Testing of placed fill shall be at the direction of the geotechnical engineer and suitable for the works to be certified as completed.

E7 Provide to the superintendent all necessary test certificates and certifications for all earthworks and pavement preparations.

E8 Ensure that all earthworks areas are free draining and do not pond water. Provide temporary drainage or sump pumping as required until sufficient site stormwater drainage has been installed.

PRELIMINARY CUT TO FILL VOLUMES:

EARTHWORKS VOLUMES FROM NOMINAL STRIPPED SURFACE (50mm DEPTH) TO DESIGN EARTHWORKS SUBGRADE LEVEL.

AREA OF WORKS = 3,227 m²
TOPSOIL STRIPPING (NOMINAL 50mm DEPTH) = 161.35 m³
TO STOCKPILE FOR RE-USE IN LANDSCAPING WORKS

SUBGRADE DEPTHS UNDER PAVEMENTS - SUBGRADE 300mm BELOW PAVEMENT F.S.L

EARTHWORKS VOLUMES;

CUT = 35.6 m³
FILL = 1033.2 m³
IMPORT = 997.6 m³ FROM APPROVED FILL AREA OR STOCKPILE SITE

NOTE:
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LEGEND

- CUT 0.4 - 0.6m DEPTH
- CUT 0.2 - 0.4m DEPTH
- CUT 0.0 - 0.2m DEPTH
- FILL 0.0 - 0.2m DEPTH
- FILL 0.2 - 0.4m DEPTH
- FILL 0.4 - 0.6m DEPTH
- FILL 0.6 - 0.8m DEPTH
- FILL 0.8 - 1.0m DEPTH
- 454.1 NATURAL SURFACE CONTOURS 0.2m INTERVAL
- 455.0 DESIGN SURFACE CONTOURS 0.2m INTERVAL

ISSUE	DESCRIPTION	DATE
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1	ISSUED FOR CLIENT REVIEW - DESIGN CHANGES AFTER COUNCIL MEETING	06.12.2023
0	ISSUED FOR CLIENT REVIEW 70%	24.10.2023

DESIGNED: A.SCHMID
DRAWN: A.SCHMID
SURVEYING: MDE
DATE: DEC 2023
SCALE: AS SHOWN
SHEET SIZE: A1

FOR DEVELOPMENT APPLICATION ONLY

MDE Manage Design Engineer

CLIENT: MOMENTUM COLLECTIVE

TITLE: CASINO COMMUNITY HOUSING PROJECT

PROJECT: PROPOSED COMMUNITY HOUSING
146 - 152 JOHNSTON STREET
CASION, NSW 2470
LOTS 155 - 158, DP 834821

CIVIL DRAWINGS

DRAWING TITLE: BULK EARTHWORKS PLAN

DWG No: C08
SHEET: 08 OF 17
REV: 2

STRUCTURE NAME	1-1	1-2	1-3	1-4	1-5	1-6	1-7	1-8
STRUCTURE DESCRIPTION	INTERALLOTMENT PIT 450x450mm PIT & GRATE	INTERALLOTMENT PIT 600x600mm GRATE & FRAME	INTERALLOTMENT PIT 600x600mm GRATE & FRAME	FLUSH GRATED INLET PIT 900x900mm GRATE & FRAME	FLUSH GRATED INLET PIT 900x900mm GRATE & FRAME	INTERALLOTMENT PIT 600x600mm GRATE & FRAME	INTERALLOTMENT PIT 600x600mm GRATE & FRAME	HEADWALL
PIPE SIZE (mm)	150	225	225	300	300	300	600x300	
PIPE SIZE / CLASS	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	BC	
PIPE GRADE (%)	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	
PIPE SLOPE (1 in X)	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
PIPE FLOW (cumecs)	0.003	0.005	0.007	0.023	0.033	0.040	0.050	
CAPACITY FLOW (cumecs)	0.011	0.032	0.032	0.068	0.068	0.068	0.211	
FULL PIPE VELOCITY (m/s)	0.15	0.13	0.17	0.33	0.47	0.57	0.28	
NORMAL DEPTH VELOCITY (m/s)	0.50	0.59	0.63	0.87	0.96	1.01	0.92	
DATUM RL	14.000							
5YR HGL IN PIPE	22.235 / 22.228	22.189 / 22.177	22.175 / 22.136	22.135 / 22.133	22.130 / 22.132 / 22.099	22.067 / 22.073 / 22.044	21.979 / 21.962	21.859 / 21.775 / 21.764 / 21.723
DEPTH TO INVERT	0.573	0.607	0.637	0.673 / 0.703	0.738 / 0.768	0.768 / 0.798	0.673 / 0.703	0.813 / 0.843 / 0.366 / 0.366
INVERT LEVEL OF PIPE/DRAIN	22.177	22.143	22.113	22.077 / 22.047	22.008 / 21.978	21.926 / 21.896	21.826 / 21.796	21.704 / 21.674 / 21.634 / 21.634
DESIGN SURFACE LEVEL	22.750 (22.420)	22.750 (22.416)	22.750 (22.461)	22.746 (22.559)	22.694 (22.451)	22.499 (22.168)	22.516 (22.146)	22.000 (21.633)
SETOUT COORDINATES	506131.019E 6807457.676N	506124.320E 6807458.829N	506117.187E 6807460.068N	506109.576E 6807461.368N	506107.802E 6807451.075N	506116.731E 6807440.390N	506135.056E 6807437.589N	506133.723E 6807429.755N
CHAINAGE	0.000	6.798 / 6.798	7.239 / 14.037	7.722 / 21.759	10.444 / 32.203	13.924 / 46.127	18.538 / 64.665	7.946 / 72.611

STORMWATER LINE 1

STRUCTURE NAME	2-1	2-2	2-3	2-4	2-5
STRUCTURE DESCRIPTION	INTERALLOTMENT PIT 600x600mm GRATE & FRAME	INTERALLOTMENT PIT 600x600mm GRATE & FRAME	INTERALLOTMENT PIT 600x600mm GRATE & FRAME	INTERALLOTMENT PIT 600x600mm GRATE & FRAME	HEADWALL
PIPE SIZE (mm)	150	150	225	600x300	
PIPE SIZE / CLASS	uPVC	uPVC	uPVC	BC	
PIPE GRADE (%)	2.00%	1.00%	0.50%	0.50%	
PIPE SLOPE (1 in X)	50.0	100.0	200.0	200.0	
PIPE FLOW (cumecs)	0.005	0.008	0.009	0.018	
CAPACITY FLOW (cumecs)	0.022	0.015	0.032	0.211	
FULL PIPE VELOCITY (m/s)	0.30	0.43	0.23	0.10	
NORMAL DEPTH VELOCITY (m/s)	1.01	0.86	0.69	0.64	
DATUM RL	14.000				
5YR HGL IN PIPE	22.066 / 22.034	21.851 / 21.836	21.763 / 21.740	21.689 / 21.629 / 21.628	21.587
DEPTH TO INVERT	0.812	0.814 / 0.844	0.695 / 0.725	0.555 / 0.585	0.303 / 0.303
INVERT LEVEL OF PIPE/DRAIN	21.968	21.786 / 21.756	21.688 / 21.658	21.612 / 21.582	21.542 / 21.542
DESIGN SURFACE LEVEL	22.780 (22.139)	22.600 (22.171)	22.383 (22.169)	22.167 (22.017)	21.845 (21.545)
SETOUT COORDINATES	506157.486E 6807459.075N	506155.997E 6807450.092N	506154.882E 6807443.367N	506154.284E 6807434.256N	506153.011E 6807426.382N
CHAINAGE	0.000	9.106 / 9.106	6.817 / 15.923	9.130 / 25.053	7.977 / 33.030

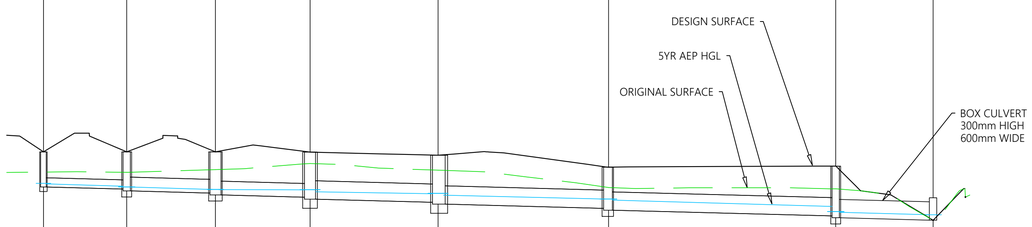
STORMWATER LINE 2

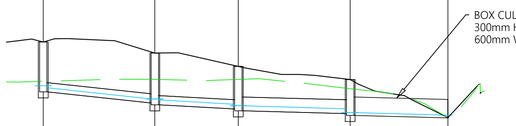
STRUCTURE NAME	3-1	3-2
STRUCTURE DESCRIPTION	INTERALLOTMENT PIT 600x600mm GRATE & FRAME	HEADWALL
PIPE SIZE (mm)	150	
PIPE SIZE / CLASS	uPVC	
PIPE GRADE (%)	0.79%	
PIPE SLOPE (1 in X)	127.2	
PIPE FLOW (cumecs)	0.015	
CAPACITY FLOW (cumecs)	0.014	
FULL PIPE VELOCITY (m/s)	0.86	
NORMAL DEPTH VELOCITY (m/s)	0.86	
DATUM RL	14.000	
5YR HGL IN PIPE	21.948 / 21.779	21.713 / 21.614
DEPTH TO INVERT	0.711	0.151 / 0.136
INVERT LEVEL OF PIPE/DRAIN	21.642	21.599 / 21.614
DESIGN SURFACE LEVEL	22.354 (21.918)	21.750 (21.830)
SETOUT COORDINATES	506175.956E 6807460.404N	506178.332E 6807455.420N
CHAINAGE	0.000	5.521 / 5.521

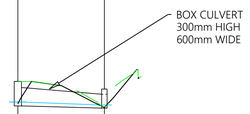
STORMWATER LINE 3

STRUCTURE NAME	4-1	4-2
STRUCTURE DESCRIPTION	HEADWALL	HEADWALL
PIPE SIZE (mm)	600x300	
PIPE SIZE / CLASS	BC	
PIPE GRADE (%)	0.50%	
PIPE SLOPE (1 in X)	200.0	
PIPE FLOW (cumecs)	0.021	
CAPACITY FLOW (cumecs)	0.010	
FULL PIPE VELOCITY (m/s)	0.53	
NORMAL DEPTH VELOCITY (m/s)	0.53	
DATUM RL	13.000	
5YR HGL IN PIPE	21.498	21.450
DEPTH TO INVERT	0.363 / 0.400	0.310 / 0.310
INVERT LEVEL OF PIPE/DRAIN	21.472 / 21.435	21.400 / 21.400
DESIGN SURFACE LEVEL	21.835 (21.831)	21.710 (21.409)
SETOUT COORDINATES	506174.237E 6807429.966N	506173.224E 6807422.980N
CHAINAGE	0.000	7.058 / 7.058

STORMWATER LINE 4







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EXISTING SERVICES NOTE:
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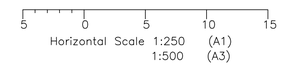
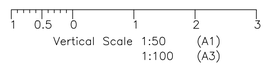
FOR SWALE DETAIL REFER TO C15 - SWALE LONGDITUDINAL SECTIONS AND DETAIL





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DESIGNED: A.SCHMID | DATE: DEC 2023
DRAWN: A.SCHMID | SCALE: AS SHOWN
SURVEYING: MDE | SHEET SIZE: A1

FOR DEVELOPMENT APPLICATION ONLY

MDE Manage Design Engineer

CLIENT: MOMENTUM COLLECTIVE

TITLE: CASINO COMMUNITY HOUSING PROJECT

PROJECT: PROPOSED COMMUNITY HOUSING
146 - 152 JOHNSTON STREET
CASION, NSW 2470
LOTS 155 - 158, DP 834821

CIVIL DRAWINGS

DRAWING TITLE: STORMWATER LONGITUDINAL SECTION

DWG No: C09 | SHEET: 09 OF 17 | REV: 2

Document Set ID: 1906120
Version: 1, Version Date: 15/02/2024

LOT 151
DP834821

LOT 152
DP834821

LOT 153
DP834821

LOT 1542
DP864510

LOT 14
DP1091559

CLARK STREET

JOHNSTON STREET

NORTH

Area 249m2
Area 54m2
Area 100m2
Area 98m2
Area 167m2
Area 248m2
Area 134m2
Area 209m2
Area 184m2
Area 234m2
Area 51m2
Area 350m2

PIT 1-1
PIT 1-2
PIT 1-3
PIT 1-4
PIT 1-5
PIT 1-6
PIT 1-7
PIT 1-8
PIT 2-1
PIT 2-2
PIT 2-3
PIT 2-4
PIT 2-5
PIT 3-1
PIT 3-2
PIT 4-1
PIT 4-2

EXISTING SWALE

22.80
22.60
22.40
22.20
22.00
21.80
21.60

Horizontal Scale 1:125 (A1)
1:250 (A3)

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PLANS TO BE PRINTED IN COLOUR

STORMWATER CATCHMENT PLAN
SCALE 1:125

LEGEND

- PROPOSED BUILDING
- PROPOSED DRIVEWAY
- STORMWATER CATCHMENT AREA
- 2-3 0.1877ha — STORMWATER CATCHMENT PIT REFERENCE & AREA (HA) NOTE: CATCHMENT AREA EXCLUDES ROOF AREA DUE TO TANK WATER COLLECTION
- LIMIT OF WORKS AREA
- PROPOSED LOT BOUNDARY
- 50.0 — DESIGN CONTOURS 0.2m INTERVAL
- STORMWATER CATCHMENTS BOUNDARY

ISSUE	DESCRIPTION	DATE
2	ISSUED FOR DEVELOPMENT APPLICATION	19.12.2023
1	ISSUED FOR CLIENT REVIEW - DESIGN CHANGES AFTER COUNCIL MEETING	06.12.2023
0	ISSUED FOR CLIENT REVIEW 70%	24.10.2023

FOR DEVELOPMENT APPLICATION ONLY

DESIGNED: A.SCHMID
DRAWN: A.SCHMID
SURVEYING: MDE
DATE: DEC 2023
SCALE: AS SHOWN
SHEET SIZE: A1

MDE Manage Design Engineer

CLIENT: MOMENTUM COLLECTIVE

TITLE: CASINO COMMUNITY HOUSING PROJECT

PROJECT: PROPOSED COMMUNITY HOUSING
146 - 152 JOHNSTON STREET
CASION, NSW 2470
LOTS 155 - 158, DP 834821

CIVIL DRAWINGS

DRAWING TITLE: STORMWATER CATCHMENT PLAN

DWG No: C10
SHEET: 10 OF 17
REV: 2

12D MODEL - HYDROLOGICAL DES

Project:	ABODE2 Johnston Street Casino
Drainage Model:	Design Drainage
Rainfall File:	AUS NSW Casino AEP %.12dhydro
Tc Method:	Direct
Rainfall Method:	IFD Table
Runoff C Method:	Direct

Minor 20.00 AEP(%) Storm Event

Node Name	Node Type	Setout Easting	Setout Northing	Setout RL	Grate RL	Cover RL	Catch ID	Time Tc	Intensity I	Runoff C	Area A	Full CA	Full Sum CA	Full Qc=CIA	Partial CA	Partial Sum CA	Partial Qc=CIA	Approach Flow Qa
(-)	(-)	(m)	(m)	(m)	(m)	(m)	(-)	(min)	(mm/hr)	(-)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)
1-1	IAD-450SQ	506131.02	6807457.68	22.75	22.75	22.75	1P	10.00	129.00	0.75	0.0098	0.0073	0.0073	2.6	0.0073	0.0073	2.6	2.6
1-2	IAD-600SQ	506124.32	6807458.83	22.75	22.75	22.75	1P	10.00	129.00	0.75	0.0101	0.0076	0.0076	2.7	0.0076	0.0076	2.7	2.7
1-3	IAD 600x900 CONC	506117.19	6807460.07	22.75	22.75	22.75	1P	10.00	129.00	0.75	0.0054	0.0040	0.0040	1.4	0.0040	0.0040	1.4	1.4
1-4	GSIP	506109.58	6807461.37	22.75	22.75	22.75	1P	10.00	129.00	0.75	0.0025	0.0019	0.0445	15.9	0.0009	0.0435	19.1	19.1
							1I	5.00	158.00	0.90	0.0224	0.0202			0.0202			
							2I	5.00	158.00	0.90	0.0249	0.0224			0.0224			
1-5	GSIP	506107.80	6807451.08	22.69	22.69	22.69	1P	10.00	129.00	0.75	0.0013	0.0010	0.0239	8.6	0.0005	0.0234	10.3	10.3
							1I	5.00	158.00	0.90	0.0121	0.0109			0.0109			
							2I	5.00	158.00	0.90	0.0134	0.0120			0.0120			
1-6	IAD-600SQ	506116.73	6807440.39	21.80	22.50	22.50	1P	10.00	129.00	0.75	0.0005	0.0004	0.0175	6.3	0.0002	0.0167	7.3	7.3
							1I	5.00	158.00	0.90	0.0047	0.0043			0.0043			
							2P	10.00	129.00	0.75	0.0014	0.0011			0.0005			
							2I	5.00	158.00	0.90	0.0130	0.0117			0.0117			
1-7	IAD-600SQ	506135.06	6807437.59	22.52	22.52	22.52	1P	10.00	129.00	0.75	0.0025	0.0019	0.0223	8.0	0.0009	0.0214	9.4	9.4
							1I	5.00	158.00	0.90	0.0227	0.0205			0.0205			
1-8	HW outlet	506133.72	6807429.76	21.63	22.00	22.00												
2-1	IAD-600SQ	506157.49	6807459.08	22.78	22.78	22.78	1P	10.00	129.00	0.75	0.0080	0.0060	0.0148	5.3	0.0030	0.0115	5.0	5.3
							2P	10.00	129.00	0.75	0.0010	0.0007			0.0004			
							2I	5.00	158.00	0.90	0.0090	0.0081			0.0081			
2-2	IAD-600SQ	506156.00	6807450.09	22.60	22.60	22.60	1P	10.00	129.00	0.75	0.0089	0.0067	0.0067	2.4	0.0067	0.0067	2.4	2.4
2-3	IAD-600SQ	506154.88	6807443.37	22.38	22.38	22.38	1P	10.00	129.00	0.75	0.0051	0.0038	0.0038	1.4	0.0038	0.0038	1.4	1.4
2-4	IAD-600SQ	506154.28	6807434.26	22.17	22.17	22.17	1P	10.00	129.00	0.75	0.0028	0.0021	0.0245	8.8	0.0010	0.0234	10.3	10.3
							1I	5.00	158.00	0.90	0.0249	0.0224			0.0224			
2-5	HW outlet	506153.01	6807426.38	21.54	21.84	21.84												
3-1	IAD-600SQ	506175.96	6807460.40	22.35	22.35	22.35	1P	10.00	129.00	0.75	0.0025	0.0019	0.0354	12.7	0.0009	0.0345	15.1	15.1
							1I	5.00	158.00	0.90	0.0224	0.0202			0.0202			
							2I	5.00	158.00	0.90	0.0149	0.0134			0.0134			
3-2	HW OUT	506178.33	6807455.42	21.60	21.75	21.75	1P	10.00	129.00	0.75	0.0005	0.0004	0.0004	0.1	0.0004	0.0004	0.1	0.1
4-1	HW inlet	506174.24	6807429.97	21.44	21.84	21.84	1P	10.00	129.00	0.75	0.0131	0.0098	0.0098	3.5	0.0098	0.0098	3.5	3.5
4-2	HW outlet	506173.22	6807422.98	21.40	21.63	21.71												

ISSUE	DESCRIPTION	DATE
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0	ISSUED FOR CLIENT REVIEW 70%	24.10.2023

DESIGNED: A.SCHMID | DATE: DEC 2023
DRAWN: A.SCHMID | SCALE: AS SHOWN
SURVEYING: MDE | SHEET SIZE: A1

FOR DEVELOPMENT APPLICATION ONLY

MDE Manage Design Engineer

CLIENT: MOMENTUM COLLECTIVE

TITLE: CASINO COMMUNITY HOUSING PROJECT

PROJECT: PROPOSED COMMUNITY HOUSING
146 - 152 JOHNSTON STREET
CASION, NSW 2470
LOTS 155 - 158, DP 834821

CIVIL DRAWINGS

DRAWING TITLE: STORMWATER COMPUTATIONS
CATCHMENT HYDROLOGY

DWG No: C11 | SHEET: 11 OF 17 | REV: 2

12D MODEL - HYDRAULIC DESIGN

Project:	ABODE2 Johnston Street Casino
Drainage Model:	Design Drainage
Rainfall File:	AUS NSW Casino AEP %.12dhydro
Rainfall Method:	IFD Table
Freeboard Limit:	0.15 m

Minor 20.00 AEP(%) Storm Event

Pipe ID	Pipe Type	Pipe Length	Pipe Size	Full Pipe Area Af	Pipe Grade	Full-area Tct	Full-area I	Full-area Sum CA	Pipe Flow Q	Capacity Flow Qcap	Q/Qcap Ratio	Full Pipe Vel Vf=Q/Af	Norm Depth Vel Vn=Q/An	Crit Depth Vel Vc=Q/Ac	Capacity Vel Vcap=Qcap/Af	US Node Grate RL	Pipe US IL	Pipe DS IL	DS Node Grate RL	Cover Min	Pipe DS Bend	Pipe DS Drop	US Node Ku	US Node Kw	Pipe V'head	P'head Loss (Ku.V'head)	WSE Loss (Kw.V'head)	Pipe T'head Loss	US Node HGL	Pipe US HGL	Pipe DS HGL	DS Node HGL	HGL Grade	F'board US
(-)	(-)	(m)	(mm)	(sq.m)	(%)	(min)	(mm/hr)	(ha)	(L/s)	(L/s)	(-)	(m/s)	(m/s)	(m/s)	(m/s)	(m)	(m)	(m)	(m)	(m)	(deg)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(%)	(m)
1-1 to 1-2	uPVC	6.80	150	0.018	0.50	10.00	129.00	0.0073	2.6	10.8	0.24	0.15	0.50	0.57	0.61	22.75	22.18	22.14	22.75	0.45	0.1	0.030	7.00		0.00	0.01		0.03	22.24	22.23	22.19	22.18	0.57	0.51
1-2 to 1-3	uPVC	7.24	225	0.040	0.50	10.06	128.76	0.0149	5.3	31.8	0.17	0.13	0.59	0.64	0.80	22.75	22.11	22.08	22.75	0.43	-0.2	0.030	1.50		0.00	0.00		0.04	22.18	22.18	22.14	22.14	0.55	0.57
1-3 to 1-4	uPVC	7.72	225	0.040	0.50	10.12	128.51	0.0189	6.8	31.8	0.21	0.17	0.63	0.69	0.80	22.75	22.05	22.01	22.75	0.49	-89.9	0.030	1.14		0.00	0.00		0.01	22.14	22.13	22.13	22.13	0.04	0.61
1-4 to 1-5	uPVC	10.44	300	0.071	0.50	10.18	128.24	0.0634	23.1	68.4	0.34	0.33	0.87	0.92	0.97	22.75	21.98	21.93	22.69	0.47	-49.6	0.030	5.83	6.06	0.01	0.03	0.03	0.04	22.13	22.10	22.07	22.07	0.30	0.61
1-5 to 1-6	uPVC	13.92	300	0.071	0.50	10.27	127.87	0.0873	33.3	68.4	0.49	0.47	0.96	1.03	0.97	22.69	21.90	21.83	22.50	0.38	-41.4	0.030	2.06	2.54	0.01	0.02	0.03	0.07	22.07	22.04	21.98	21.98	0.46	0.62
1-6 to 1-7	uPVC	18.54	300	0.071	0.50	10.38	127.39	0.1048	40.5	68.4	0.59	0.57	1.01	1.10	0.97	22.50	21.80	21.70	22.52	0.40	91.0	0.030	1.00		0.02	0.02		0.09	21.98	21.96	21.86	21.78	0.56	0.52
1-7 to 1-8	BC	7.95	600x300	0.180	0.50	10.54	126.74	0.1271	49.5	210.9	0.23	0.28	0.92	0.93	1.17	22.52	21.67	21.63	22.00	-0.45	0.0		2.18	3.04	0.00	0.01	0.01	0.04	21.78	21.76	21.72	21.72	0.52	0.74
2-1 to 2-2	uPVC	9.11	150	0.018	2.00	10.00	129.00	0.0148	5.3	21.5	0.25	0.30	1.01	0.70	1.22	22.78	21.97	21.79	22.60	0.68	0.0	0.030	7.00		0.00	0.03		0.18	22.07	22.03	21.85	21.85	2.02	0.71
2-2 to 2-3	uPVC	6.82	150	0.018	1.00	10.08	128.68	0.0215	7.7	15.2	0.50	0.43	0.86	0.80	0.86	22.60	21.76	21.69	22.38	0.56	-5.7	0.030	1.49		0.01	0.01		0.07	21.85	21.84	21.76	21.74	1.07	0.75
2-3 to 2-4	uPVC	9.13	225	0.040	0.50	10.13	128.44	0.0253	9.0	31.8	0.28	0.23	0.69	0.75	0.80	22.38	21.66	21.61	22.17	0.34	5.4	0.030			0.00			0.05	21.74	21.74	21.69	21.63	0.55	0.64
2-4 to 2-5	BC	7.98	600x300	0.180	0.50	10.21	128.12	0.0498	17.8	210.9	0.08	0.10	0.64	0.66	1.17	22.17	21.58	21.54	21.84	-0.45	0.0		1.67	1.73	0.00	0.00	0.00	0.04	21.63	21.63	21.59	21.59	0.52	0.54
3-1 to 3-2	uPVC	5.52	150	0.018	0.79	10.00	129.00	0.0354	15.1	13.6	1.12	0.86	0.86	1.05	0.77	22.35	21.64	21.60	21.75	-0.15	34.6	-0.015	4.53		0.04	0.17		0.05	21.95	21.78	21.71	21.61	1.19	0.41
4-1 to 4-2	BC	7.06	600x300	0.038	0.50	10.26	127.90	0.0644	23.0	9.5	2.41	0.60	0.64	1.38	0.25	21.84	21.44	21.40	21.63		0.0		1.61		0.00	0.00		0.04	21.50	21.50	21.45	21.45	0.59	0.34

ISSUE	DESCRIPTION	DATE
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0	ISSUED FOR CLIENT REVIEW 70%	24.10.2023

DESIGNED: A.SCHMID | DATE: DEC 2023
DRAWN: A.SCHMID | SCALE: AS SHOWN
SURVEYING: MDE | SHEET SIZE: A1

FOR DEVELOPMENT APPLICATION ONLY

MDE Manage Design Engineer

CLIENT: MOMENTUM COLLECTIVE

TITLE: CASINO COMMUNITY HOUSING PROJECT

PROJECT: PROPOSED COMMUNITY HOUSING
146 - 152 JOHNSTON STREET
CASION, NSW 2470
LOTS 155 - 158, DP 834821

CIVIL DRAWINGS

DRAWING TITLE: STORMWATER COMPUTATIONS
HYDRAULICS 5YR AEP MINOR EVENT

DWG No: C12 | SHEET: 12 OF 17 | REV: 2

12D MODEL - HYDRAULIC DESIGN SHEET

Project:	ABODE2 Johnston Street Casino
Drainage Model:	Design Drainage
Rainfall File:	AUS NSW Casino AEP %.12dhydro
Rainfall Method:	IFD Table
Freeboard Limit:	0.15 m

Major 1.00 AEP(%) Storm Event

Pipe ID	Pipe Type	Pipe Length	Pipe Size	Full Pipe Area Af	Pipe Grade	Full-area Tct	Full-area I	Full-area Sum CA	Full-area Qc=CIA	Part-area Tct	Part-area I	Part-area Sum CA	Part-area Qc=CIA	Pipe Flow Q	Excess Pipe Flow Qx	Capacity Flow Qcap	Q/Qcap Ratio	Full Pipe Vel Vf=Q/Af	Norm Depth Vel Vn=Q/An	Crit Depth Vel Vc=Q/Ac	Capacity Vel Vcap=Qcap/Af	US Node Grate RL	Pipe US IL	Pipe DS IL	DS Node Grate RL	Cover Min	Pipe DS Bend	Pipe DS Drop	US Node Ku	US Node Kw	Pipe V'head	P'head Loss (Ku.V'head)	WSE Loss (Kw.V'head)	Pipe T'head Loss	US Node HGL	Pipe US HGL	Pipe DS HGL	DS Node HGL	HGL Grade	F'board US
(-)	(-)	(m)	(mm)	(sq.m)	(%)	(min)	(mm/hr)	(ha)	(L/s)	(min)	(mm/hr)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(-)	(m/s)	(m/s)	(m/s)	(m/s)	(m)	(m)	(m)	(m)	(m)	(deg)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(%)	(m)
1-1 to 1-2	uPVC	6.80	150	0.018	0.50	10.00	226.00	0.0073	4.6	10.00	226.00	0.0073	4.6	4.6		10.8	0.43	0.26	0.59	0.67	0.61	22.75	22.18	22.14	22.75	0.45	0.1	0.030	7.00		0.00	0.02		0.01	22.37	22.35	22.34	22.34	0.09	0.38
1-2 to 1-3	uPVC	7.24	225	0.040	0.50	10.06	225.59	0.0149	9.3	10.00	226.00	0.0148	9.3	9.3		31.8	0.29	0.23	0.69	0.75	0.80	22.75	22.11	22.08	22.75	0.43	-0.2	0.030	1.50		0.00	0.00		0.00	22.34	22.34	22.33	22.33	0.04	0.41
1-3 to 1-4	uPVC	7.72	225	0.040	0.50	10.12	225.16	0.0189	11.8	10.06	225.57	0.0189	11.8	11.8		31.8	0.37	0.30	0.74	0.81	0.80	22.75	22.05	22.01	22.75	0.49	-89.9	0.030	1.14		0.00	0.01		0.01	22.33	22.33	22.32	22.33	0.07	0.42
1-4 to 1-5	uPVC	10.44	300	0.071	0.50	10.18	224.69	0.0634	39.6	5.00	278.00	0.0527	40.7	40.7		68.4	0.60	0.58	1.01	1.10	0.97	22.75	21.98	21.93	22.69	0.47	-49.6	0.030	5.84	6.08	0.02	0.10	0.10	0.02	22.33	22.22	22.21	22.23	0.12	0.42
1-5 to 1-6	uPVC	13.92	300	0.071	0.50	10.27	224.07	0.0873	54.3	5.09	277.09	0.0761	58.6	58.6		68.4	0.86	0.83	1.09	1.26	0.97	22.69	21.90	21.83	22.50	0.38	-41.4	0.030	2.06	2.54	0.04	0.07	0.09	0.05	22.23	22.14	22.10	22.10	0.28	0.47
1-6 to 1-7	uPVC	18.54	300	0.071	0.50	10.38	223.23	0.1048	65.0	5.20	275.89	0.0929	71.2	71.2		68.4	1.04	1.01	1.10	1.36	0.97	22.50	21.80	21.70	22.52	0.40	91.0	0.030	1.00		0.05	0.05		0.11	22.10	22.05	21.91	21.84	0.73	0.40
1-7 to 1-8	BC	7.95	600x300	0.180	0.50	10.54	222.12	0.1271	78.4	5.36	274.28	0.1144	87.1	87.1		210.9	0.41	0.48	1.10	1.12	1.17	22.52	21.67	21.63	22.00	-0.45	0.0		2.18	3.04	0.01	0.03	0.04	0.04	21.84	21.81	21.76	21.76	0.53	0.67
2-1 to 2-2	uPVC	9.11	150	0.018	2.00	10.00	226.00	0.0148	9.3	5.00	278.00	0.0115	8.8	9.3		21.5	0.43	0.53	1.17	0.85	1.22	22.78	21.97	21.79	22.60	0.68	0.0	0.030	6.50		0.01	0.09		0.17	22.15	22.06	21.91	21.91	1.62	0.63
2-2 to 2-3	uPVC	6.82	150	0.018	1.00	10.08	225.45	0.0215	13.5	10.00	226.00	0.0215	13.5	13.5		15.2	0.88	0.76	0.97	0.99	0.86	22.60	21.76	21.69	22.38	0.56	-5.7	0.030	1.49		0.03	0.04		0.07	21.91	21.87	21.80	21.77	1.03	0.69
2-3 to 2-4	uPVC	9.13	225	0.040	0.50	10.13	225.04	0.0253	15.8	10.06	225.59	0.0253	15.8	15.8		31.8	0.50	0.40	0.80	0.88	0.80	22.38	21.66	21.61	22.17	0.34	5.4	0.030			0.01			0.05	21.77	21.77	21.72	21.65	0.59	0.61
2-4 to 2-5	BC	7.98	600x300	0.180	0.50	10.21	224.50	0.0498	31.1	10.08	225.45	0.0497	31.1	31.1		210.9	0.15	0.17	0.78	0.80	1.17	22.17	21.58	21.54	21.84	-0.45	0.0		1.68	1.74	0.00	0.00	0.00	0.04	21.65	21.65	21.61	21.61	0.52	0.52
3-1 to 3-2	uPVC	5.52	150	0.018	0.79	10.00	226.00	0.0354	22.2	5.00	278.00	0.0345	26.6	26.6		13.6	1.96	1.51	1.51	1.54	0.77	22.35	21.64	21.60	21.75	-0.15	34.6	-0.015	2.95		0.12	0.34		0.05	22.13	21.79	21.74	21.61	0.95	0.22
4-1 to 4-2	BC	7.06	600x300	0.038	0.50	10.26	224.12	0.0644	40.1	10.05	225.65	0.0643	40.3	40.3	31.7	9.5	4.22	1.05	1.12	2.44	0.25	21.84	21.44	21.40	21.63		0.0		1.60		0.00	0.00		0.03	21.50	21.50	21.46	21.46	0.44	0.34

ISSUE	DESCRIPTION	DATE
2	ISSUED FOR DEVELOPMENT APPLICATION	19.12.2023
1	ISSUED FOR CLIENT REVIEW - DESIGN CHANGES AFTER COUNCIL MEETING	06.12.2023
0	ISSUED FOR CLIENT REVIEW 70%	24.10.2023

DESIGNED: A.SCHMID | DATE: DEC 2023
DRAWN: A.SCHMID | SCALE: AS SHOWN
SURVEYING: MDE | SHEET SIZE: A1

FOR DEVELOPMENT APPLICATION ONLY

MDE Manage Design Engineer

CLIENT: MOMENTUM COLLECTIVE

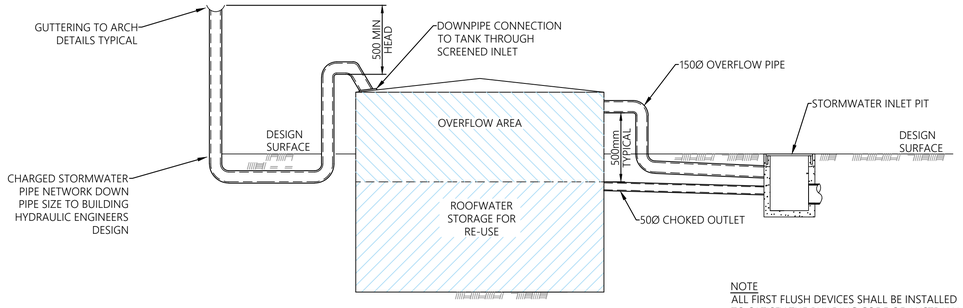
TITLE: CASINO COMMUNITY HOUSING PROJECT

PROJECT: PROPOSED COMMUNITY HOUSING
146 - 152 JOHNSTON STREET
CASION, NSW 2470
LOTS 155 - 158, DP 834821

CIVIL DRAWINGS

DRAWING TITLE: STORMWATER COMPUTATIONS
HYDRAULICS 100YR AEP MAJOR EVENT

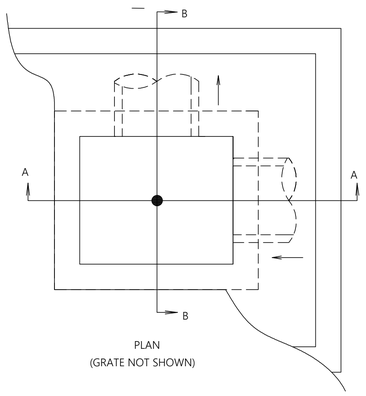
DWG No: C13 | SHEET: 13 OF 17 | REV: 2



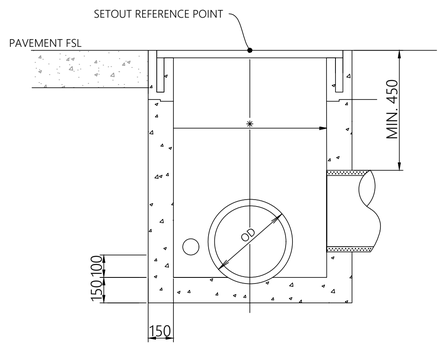
NOTE
ALL FIRST FLUSH DEVICES SHALL BE INSTALLED TO SATISFY THE BUILDING CODE OF AUSTRALIA AND TO ENSURE A MINIMUM 'HEAD' IS MAINTAINED TYPICAL

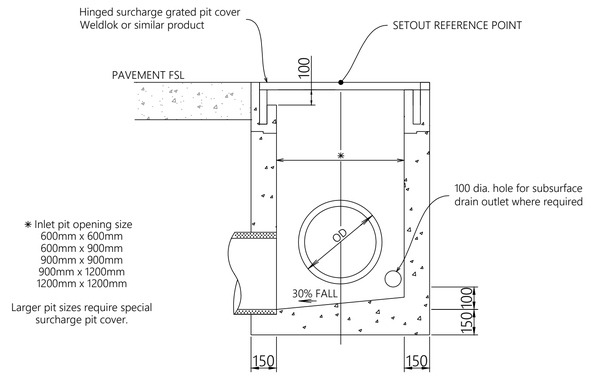
TYPICAL DETAIL - STORMWATER DETENTION NOMINAL 4m³ / TANK

SCALE 1:20



PLAN
(GRATE NOT SHOWN)





✳ Inlet pit opening size
600mm x 600mm
600mm x 900mm
900mm x 900mm
900mm x 1200mm
1200mm x 1200mm

Larger pit sizes require special surcharge pit cover.

ELEVATION

STORMWATER NOTES

1. ALL WORKS TO BE IN ACCORDANCE WITH AS3500.3 & RICHMOND VALLEY SHIRE COUNCIL STANDARDS.
2. ALL PIPES TO HAVE A MINIMUM GRADES IN ACCORDANCE WITH NRLG STANDARDS & QUDM DESIGN GUIDELINES
3. ALL DOWNPIPES (DP) TO BE SPECIFIED BY ARCHITECT. FOR EXACT LOCATION OF DOWNPIPES, REFER TO ARCHITECTURAL DRAWINGS.
4. ALL PIPES TO BE STROM-PRO OR UPVC OR APPROVED EQIV.
5. ALL UPVC PIPES TO BE SEWER GRADE AND TO AS1260.
6. ALL REINFORCED CONCRETE PIPES (RCP) TO BE SPIGOT AND SOCKET TYPE WITH RUBBER RINGS CLASS 4 MIN UNDER ROADWAYS TO AS4058.
7. ALL REINFORCED STORM-PRO PIPES TO BE SPIGOT AND SOCKET TYPE INSTALLED TO MANUFACTURERS SPECIFICATIONS
8. PITS TO BE CAST INSITU REINFORCED OR APPROVED PRE-CAST CONCRETE PITS OR EQUIVALENT PROPRIETARY PITS.
9. ALL LIDS AND GRATES TO BE PROPRIETARY HEAVY DUTY CLASS-D IN AREAS OF VEHICULAR TRAFFIC, LIGHT DUTY CLASS-B ELSEWHERE, IN ACCORDANCE WITH AS3996.
10. MINIMUM COVER TO STORMWATER PIPES TO BE AS FOLLOW U.N.O:
    TRAFFICABLE AREAS - 350mm, LANDSCAPED AREAS - 300mm.
11. PROVIDE 100Ø AG DRAINS IN FILTER SOCKS TO ALL LANDSCAPED AREAS, PLANTER BEDS AND STORMWATER PIPE TRENCHES.
12. ALL AG DRAINS TO BE BEDDED IN COARSE AGGREGATE AND TO BE CONNECTED TO STORMWATER SYSTEM.
13. ALL PITS, DETENTION TANKS AND PROPRIETARY POLLUTION CONTROL DEVICES TO BE CLEANED OF SEDIMENT AT 3 MONTH MAXIMUM INTERVALS DURING SITE CONSTRUCTION PERIOD.
14. ALL EXISTING SERVICES TO BE LOCATED PRIOR TO COMMENCEMENT OF WORK.
15. ANY FOOTPATHS, KERB AND GUTTER OR ROADWAY DISTURBED BY WORKS TO BE REINSTATED TO CURRENT COUNCIL REQUIREMENTS.
16. PROVIDE ACCESS LADDER TO TANKS OR DEEP PITS AS REQUIRED DURING CONSTRUCTION, REFER TO AS1657.
17. STEP IRONS TO BE INSTALLED IN STORMWATER PITS DEEPER THAN 1200mm IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS

PIT DETAIL NOTES:

1. COMPRESSIVE STRENGTH F'C FOR CAST INSITU CONCRETE TO BE A MINIMUM OF 32MPA AT 28 DAYS.
2. ALL DIMENSIONS ARE IN MILLIMETRES.
3. PROVIDE SL82 MESH CENTRALLY PLACED TO WALLS OF PITS > 1.5m DEEP. 50mm MIN COVER RETURN MESH 300mm INTO BASE AND SIDES
4. ALL STEELWORK SHALL BE HOT DIP GALVANISED IN ACCORDANCE WITH AS 1650
5. MAX DEPTH PIT 3500MM
6. PROVIDE MIN 30mm DROP THROUGH PIT
7. WHERE PIT IS DEEPER THAN 1200mm PROVIDE STEP IRONS.

TYPICAL - CAST INSITU SURFACE INLET PIT (FLUSH GRATE)

N.T.S

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2	ISSUED FOR DEVELOPMENT APPLICATION	19.12.2023
1	ISSUED FOR CLIENT REVIEW - DESIGN CHANGES AFTER COUNCIL MEETING	06.12.2023
0	ISSUED FOR CLIENT REVIEW 70%	24.10.2023

DESIGNED: A.SCHMID | DATE: DEC 2023
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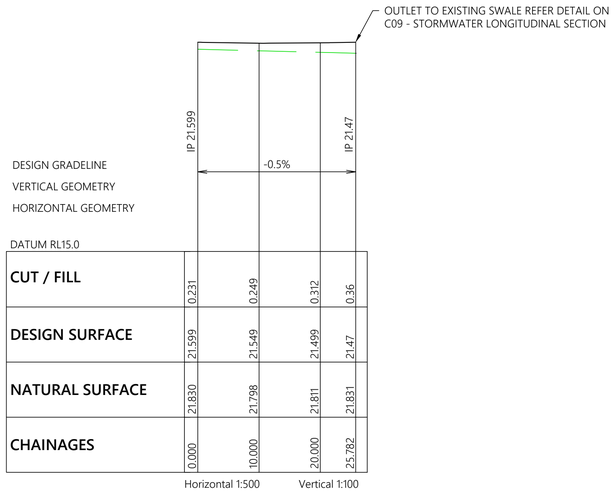
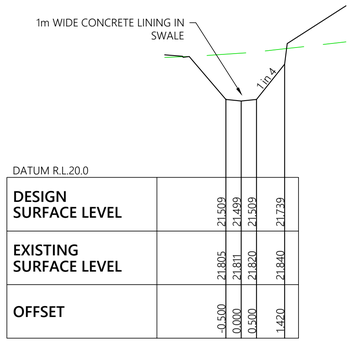
CIVIL DRAWINGS

DRAWING TITLE: STORMWATER PIT AND TANK DETAILS

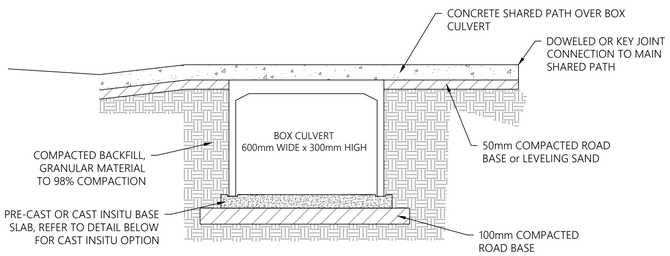
DWG No: C14 | SHEET: 14 OF 17 | REV: 2



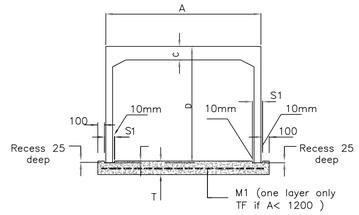
Swale CHIFF - Clark Street



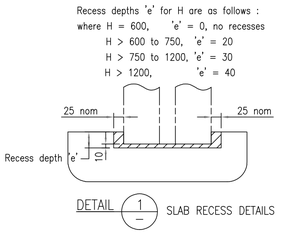
TYPICAL CROSS SECTION CLARK ST SWALE - CH 20.000



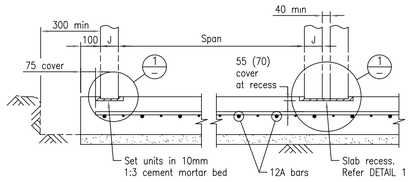
TYPICAL BOX CULVERT SECTION



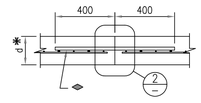
SLAB DETAILS - 1x CROWN UNITS



DETAIL 1 SLAB RECESS DETAILS



FOR SPANS OF 600 TO 1800



DOWELLED CONTRACTION JOINT
FOR SPANS OF 600 TO 1800
AND FOR ALL APRONS

BASE SLAB, APRON & WINGWALL DETAILS FOR PRE-CAST BOX CULVERT UNITS

N.T.S

NOTES: BASE SLAB, APRON & WINGWALLS (REFER ALSO TO AUSPEC STANDARD DRAWING ASD308)

1. Concrete strength to be 32MPa at 28 days
2. When culverts are to be built in saltwater a sulphate resistant cement is to be used
3. All exposed corners and re-entrant corners are to be chamfered 25mm
4. Reinforcement to have 40mm clear cover
5. Pedestrian barriers (eg. handrails) must be installed in pedestrian accessible areas where the drop exceeds 900mm or as directed by Council. See st andard drawing ASD806 for hand rail details
6. Where headwalls are installed in proximity to the adjoining road pavement, the designer must make an assessment of the related hazards, and provide guardrail (or equivalent) where necessary

NOM. SIZE	A	C	S1	S2	D	H	L	T	U	MESH
600x300	763	102	94	178	402	240	1000	180	400	SL81
600x375	763	102	92	174	477	260	1100	180	425	SL81
600x450	763	102	91	172	552	290	1200	180	450	SL81
750x300	917	102	97	184	402	240	1000	180	400	SL81
750x450	917	102	95	178	552	290	1200	180	450	SL81
750x600	917	102	94	172	702	340	1400	180	500	SL81
900x300	1076	102	98	186	477	260	1100	180	425	SL81
900x450	1076	102	97	184	552	290	1200	180	450	SL81
900x600	1076	102	94	1400				180	500	SL81
900x750	1076	102	91	174	852	390	1600	180	550	SL81
1050x450	1234	115	100	190	565	290	1200	180	450	SL81
1050x600	1234	115	97	184	715	340	1400	180	500	SL81
1050x750	1234	115	94	178	865	390	1600	180	550	SL81
1050x900	1234	115	91	172	1015	440	1800	180	600	SL81
1200x300	1394	125	103	196	575	290	1200	180	450	SL81
1200x450	1394	125	100	190	725	340	1400	180	500	SL81

5 0 5 10 15
Horizontal Scale 1:250 (A1) 1:500 (A3)

1 0.5 0 1 2 3
Vertical Scale 1:50 (A1) 1:100 (A3)

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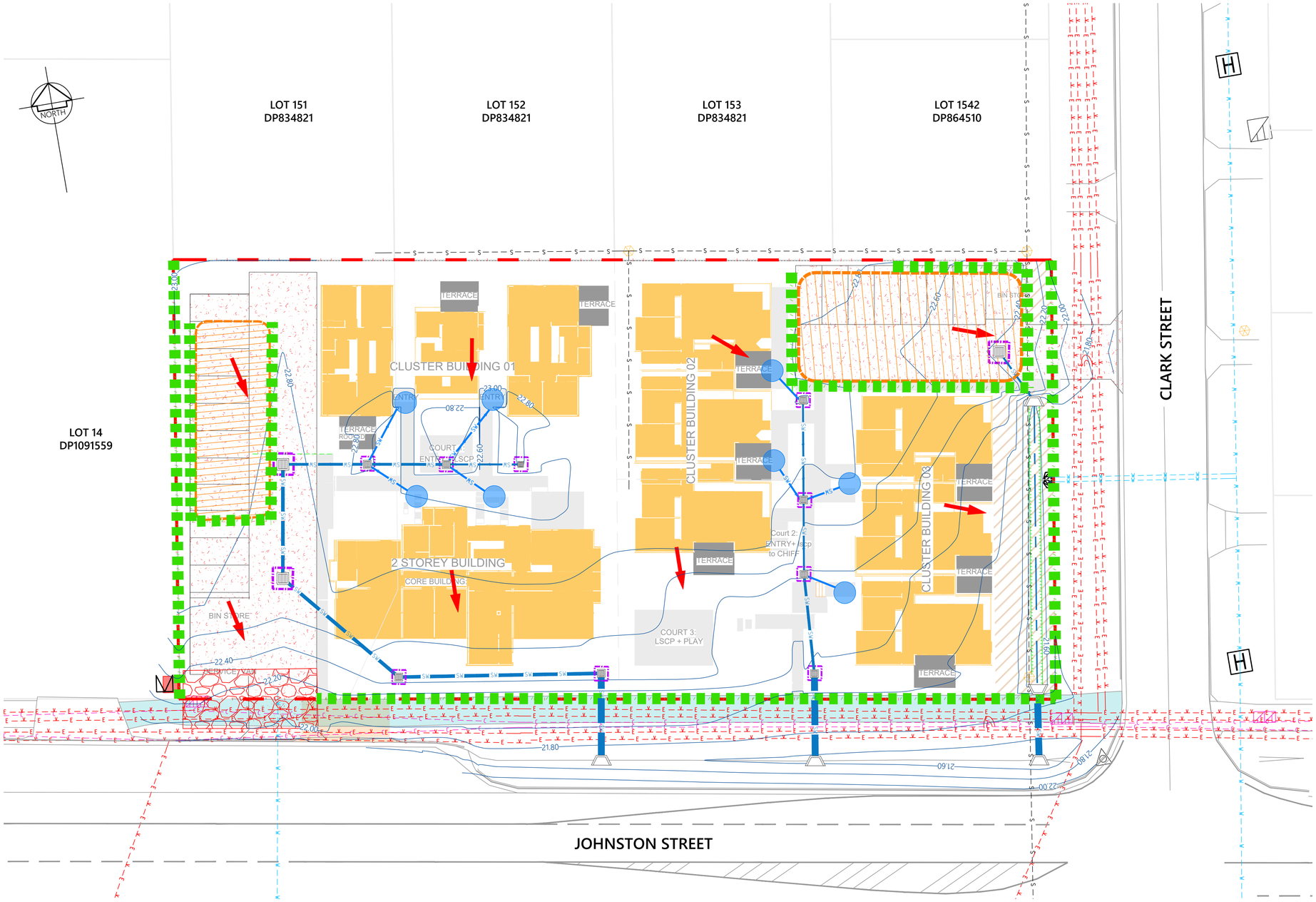
CIVIL DRAWINGS

DRAWING TITLE: SWALE LONGITUDINAL SECTIONS AND DETAIL

DWG No: C15
SHEET: 15 OF 17
REV: 2



EROSION & SEDIMENTATION CONTROL PLAN

SCALE 1:200

EROSION & SEDIMENT CONTROL NOTES:

1. SOIL STOCKPILES TO BE NO HIGHER THAN 2.0 METRES (1.0m PREFERABLE) IN LOCATIONS DIRECTED BY THE SUPERINTENDENT.
2. CONSTRUCT SEDIMENT FENCE AT LOCATIONS SHOWN AND AS DIRECTED BY SITE SUPERINTENDENT. SEDIMENT FENCE OR EQUIVALENT TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH COUNCILS ENGINEERING REQUIREMENTS.
3. UPON COMPLETION OF FINAL EARTHWORKS OR AFTER WRITTEN DIRECTION OF COUNCIL, IMMEDIATE SOIL CONSERVATION TREATMENTS SHALL BE APPLIED SO AS TO RENDER AREAS THAT HAVE BEEN DISTURBED, EROSION PROOF IN 14 DAYS.
4. ALL PERIMETER AND SILTATION CONTROL MEASURES ARE TO BE THE FIRST STEP IN CLEARING OR EARTHWORKS.
6. TEMPORARY SEDIMENTATION BASIN TO BE FLOCCULATED AND PUMPED OUT AFTER EVERY STORM EVENT. ALL FLOCCULATED SEDIMENT TO BE REMOVED FROM THE BASIN AT THE CONCLUSION OF THE CONTRACT PERIOD.
7. ALL TEMPORARY EARTH BERMS AND DIVERSION BANKS ARE TO BE TRACK ROLLED AND SEEDED OR MULCHED FOR TEMPORARY VEGETATION COVER AS SOON AS THEY HAVE BEEN FORMED.
8. PROVIDE FILTER SAUSAGE KERB INLET SEDIMENT TRAPS OR EQUIVALENT (TO THE SATISFACTION OF THE SUPERINTENDENT) TO ALL CONSTRUCTED INLET PITS AND STORMWATER PIPING.
9. ALL TOPSOIL IS TO BE STOCKPILED ON SITE FOR RE-USE (AWAY FROM TREES AND DRAINAGE LINES). MEASURES SHALL BE APPLIED TO PREVENT EROSION FROM THE STOCKPILES.
10. SOIL/GRASS - TOPSOIL, 100mm THICK SHALL BE APPLIED TO ALL DISTURBED AREAS. ALL REMAINING EXPOSED TOPSOIL SHALL BE SEEDED IMMEDIATELY UPON COMPLETION OF THE SOIL SPREADING OPERATION.

CONSTRUCTION SEQUENCE/SILT MANAGEMENT PROGRAM

1. PRE START
   ERECT SITE SIGNAGE. CONSTRUCT ENTRY AND EXIT POINT AS INDICATED.
   CONSTRUCT VEHICLE WASHDOWN AREA AND ASSOCIATED SILT MANAGEMENT DEVICES.
   CONSTRUCT SITE OFFICE AND STORAGE COMPOUND AREA.
   ERECT SILT FENCE AT LOW POINTS OF THE SITE AS DEMONSTRATED.
   ERECT TEMPORARY 3 STRAND WIRE FENCE TO EXISTING TREES TO BE RETAINED.
   CONSTRUCT ROCK CHECK DAMS AND SILT FENCES DOWNSTREAM OF BASIN. CONSTRUCT BASIN TO FULL DEPTH.
   CONSTRUCT BALANCE OF BASIN IN CONJUNCTION WITH CLEARING AND BULK EARTHWORKS OPERATIONS. BASIN TO BE UTILISED AS TEMPORARY SEDIMENT BASIN. DO NOT FILL IN FILTRATION MATERIAL UNTIL CONSTRUCTION OF DEVELOPMENT IS COMPLETE.
2. CLEARING AND BULK EARTHWORKS
   SILT FENCE, SAND BAGS AND EARTH RILLS TO BE ERECTED AS INDICATED OR REQUIRED DURING CLEARING.
   SUPERINTENDENT TO CONFIRM EXTENT OF CLEARING TO CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS.
   SILT FENCES AND EARTH RILLS WITHIN ROADS TO BE ERECTED AS INDICATED OR REQUIRED DURING EARTHWORKS.
3. CONSTRUCTION OF SEWER/ROOFWATER/STORMWATER/SERVICES
   EXCAVATED MATERIAL TO BE PLACED ON HIGH SIDE OF TRENCH AND TO PROTECT PIPE WORK AND DIRECT SURFACE MATERIAL AWAY FROM EXCAVATIONS.
   TOPSOIL AND GRASS SEED AREAS IN ALLOTMENTS IMMEDIATELY AFTER COMPLETING THE SEWER AND ROOFWATER DRAINAGE CONSTRUCTION.
   DEPRESS GROUND AROUND TEMPORARY FIELD INLETS TO CREATE SILT POND.
4. CONSTRUCTION - SEDIMENT BASINS
   SEDIMENT BASIN TO BE CONSTRUCTED TO THE EARTHWORK PROFILES SHOWN.
   STORMWATER OUTLET PIPES TO BE TEMPORARILY BLOCKED OFF UNTIL DECOMMISSIONING OF SEDIMENT BASIN (SUBSEQUENT TO CONSTRUCTION OF ALL STAGES).
   PLACE SPOIL FROM SEDIMENT BASIN INTO ALLOCATED AREA AS ENGINEERED FILL IN ACCORDANCE WITH THE STAGING ORDER.
5. CONSTRUCTION - STOCKPILING
   TEMPORARY SILT FENCE TO BE ERECTED 3m FROM TOE OF BATTER ON LOW SIDE OF STOCKPILING.
   STOCKPILE SITE TO BE CLEAR OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE A NUISANCE TO ADJOINING PROPERTIES.
6. CONSTRUCTION - ROADWORKS
   SILT FENCES TO ALLOTMENTS TO BE ERECTED.
   KERB INLET PROTECTION TO BE PROVIDED TO ALL GULLIES.
7. CONSTRUCTION - ALLOTMENTS
   TOPSOIL AND SEED ALLOTMENTS.
   SILT FENCES TO ALLOTMENTS TO BE RE-ERECTED.
   COVERS TO GULLY GRATES TO BE REMOVED IF THE SUPERINTENDENT INDICATED THE GRASS STRIKE IS SUFFICIENT (80% WITHIN 30 CALENDAR DAYS OF FINAL ALLOTMENT TRIMMING).
8. POST CONSTRUCTION - ALLOTMENTS
   TOPSOIL AND GRASS SEED ALL ALLOTMENTS.
   COVERS TO GULLY GRATES TO BE REMOVED IF THE SUPERINTENDENT INDICATES THE GRASS STRIKE IS SUFFICIENT (80% WITHIN 30 CALENDAR DAYS OF FINAL ALLOTMENT TRIMMING)..
9. POST CONSTRUCTION - BASIN
   BASIN TO CONTINUE ACTING AS SEDIMENT BASIN UNTIL COMPLETION OF ALL STAGES.
10. POST CONSTRUCTION - ROAD RESERVES
    TOPSOIL AND TURFING IS TO BE PROVIDED BEHIND KERB.
11. MAINTENANCE (PRE TO POST CONSTRUCTION)
    THE SILT FENCES ARE TO BE INSPECTED WEEKLY.
    ANY REPAIRS REQUIRED ARE TO BE EFFECTED IMMEDIATELY.
    SILT AFTER RAIN IS TO BE CLEANED FROM STREETS AND ALLOTMENTS IMMEDIATELY AND CORRECTIVE ACTION TAKEN TO AVOID A RE-OCCURRENCE OF THE FAILURE.
12. BASIN CONSTRUCTION
    SEDIMENT BASIN SHALL ONLY BE REMOVED AFTER APPROVAL BY SUPERINTENDENT AND COUNCIL.
    NO PLANTING OF VEGETATION FOR THE BASIN SHALL PROCEED UNTIL THE SEDIMENT BASIN HAS BEEN DECOMMISSIONED.

LEGEND

- DEVELOPMENT BOUNDARY
- NATURAL SURFACE CONTOURS 0.1m INTERVAL
- SEDIMENT FENCE - REFER TO SED 6-8 & 01.01 DETAILS SHEET
- HAY BALE SEDIMENT TRAP
- KERB INLET CONTROL - FILTER SAUSAGE
- INLET FILTER - SURFACE INLET DRAINAGE PIT
- TOPSOIL WINDROW & DESIGN SWALE
- FLOW DIRECTION
- SUGGESTED STOCKPILE SITE - REFER TO SED 4-1 ON DETAILS SHEET
- STABILISED SITE ACCESS - REFER TO SED 09.01 ON DETAILS SHEET
- TEMPORARY SEDIMENT BASIN

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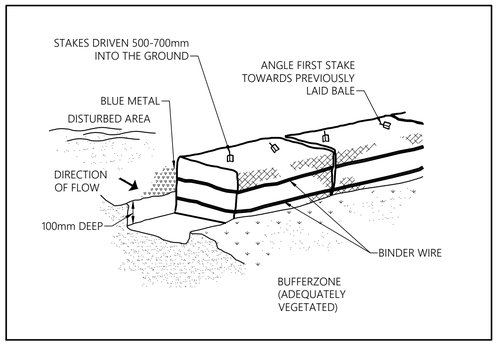
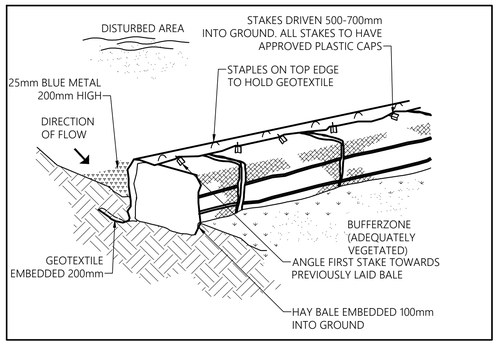
CIVIL DRAWINGS

DRAWING TITLE: EROSION AND SEDIMENTATION PLAN

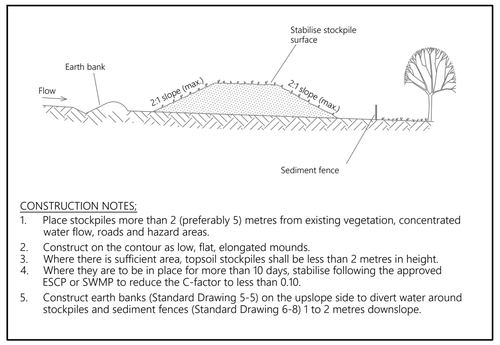
DWG No: C16 | SHEET: 16 OF 17 | REV: 2



SED_02.01: HAY BALE BARRIERS



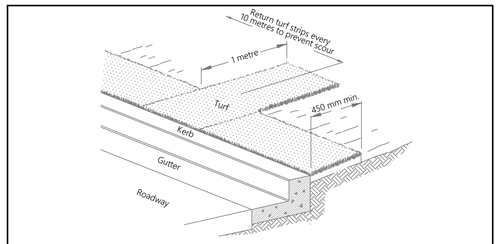
SED_02.02: HAY BALE & GEOTEXTILE FENCE



CONSTRUCTION NOTES:

1. Place stockpiles more than 2 (preferably 5) metres from existing vegetation, concentrated water flow, roads and hazard areas.
2. Construct on the contour as low, flat, elongated mounds.
3. Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
4. Where they are to be in place for more than 10 days, stabilise following the approved ESCP or SWMP to reduce the C-factor to less than 0.10.
5. Construct earth banks (Standard Drawing 5-5) on the upslope side to divert water around stockpiles and sediment fences (Standard Drawing 6-8) 1 to 2 metres downslope.

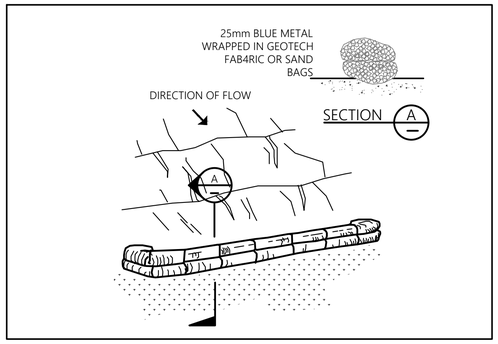
SED_4-1 STOCKPILES



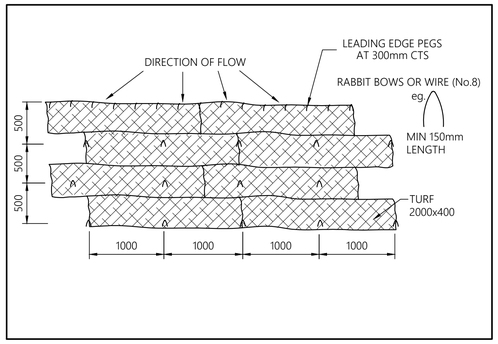
CONSTRUCTION NOTES:

1. Install a 450 mm minimum wide roll of turf on the footpath next to the kerb and at the same level as the top of the kerb.
2. Lay 1.4 metre long turf strips normal to the kerb every 10 metres.
3. Rehabilitate disturbed soil behind the turf strip following the ESCP/SWMP.

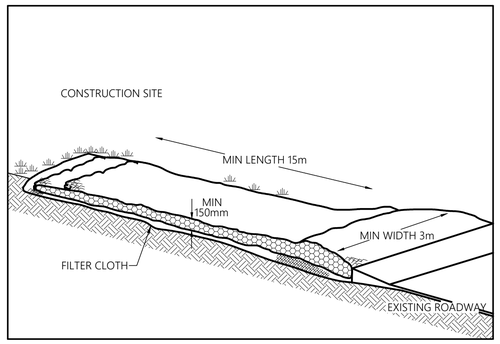
SED_6-13 KERBSIDE TURF STRIP



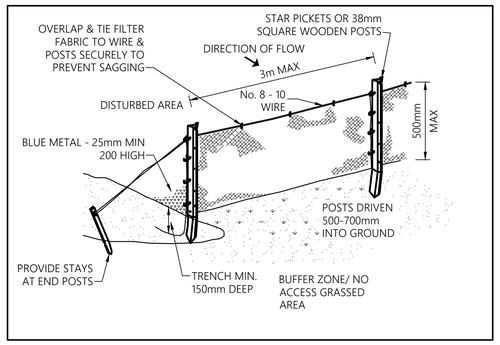
SED_03.01: ROCK GROYNE OR SAUSAGE



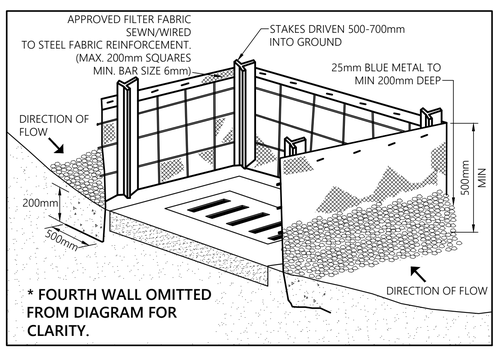
SED_07.02: TURF LAYING CONFIGURATION



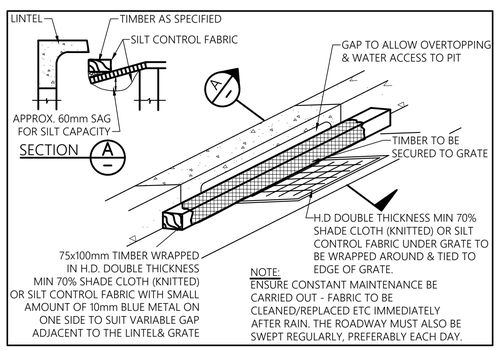
SED_09.01: STABILISED CONSTRUCTION ENTRANCE DETAILS



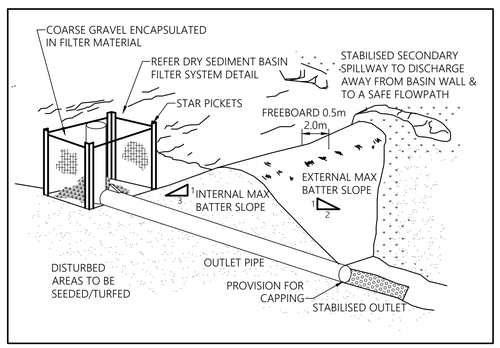
SED_01.01: SILT FENCE - TYPE 1



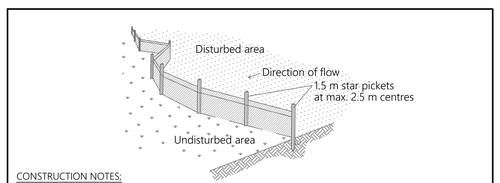
SED_11.05: STORM INLET SEDIMENT TRAP



SED_11.03: KERB INLET CONTROL



SED_10.01: SEDIMENT BASIN OUTLET



CONSTRUCTION NOTES:

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

SED_6-8 SEDIMENT FENCE NOTES

ISSUE	DESCRIPTION	DATE
2	ISSUED FOR DEVELOPMENT APPLICATION	19.12.2023
1	ISSUED FOR CLIENT REVIEW - DESIGN CHANGES AFTER COUNCIL MEETING	06.12.2023
0	ISSUED FOR CLIENT REVIEW 70%	24.10.2023

DESIGNED: A.SCHMID | DATE: DEC 2023
DRAWN: A.SCHMID | SCALE: AS SHOWN
SURVEYING: MDE | SHEET SIZE: A1

FOR DEVELOPMENT APPLICATION ONLY

MDE Manage Design Engineer

CLIENT: MOMENTUM COLLECTIVE

TITLE: CASINO COMMUNITY HOUSING PROJECT

PROJECT: PROPOSED COMMUNITY HOUSING
146 - 152 JOHNSTON STREET
CASION, NSW 2470
LOTS 155 - 158, DP 834821

CIVIL DRAWINGS

DRAWING TITLE: EROSION AND SEDIMENTATION DETAIL

DWG No: C17 | SHEET: 17 OF 17 | REV: 2