City of Wanneroo

File Ref: 2021.153 AD387140 8154
Your Ref: Online ref: 421021
Enquiries: Mrs Chelsea Timms 9405 5300

9 February 2022

Ms A Feher
Tim Davies Landscaping
3 Pitino Court
OSBORNE PARK WA 6017

Dear Andrea

LANDSCAPE AND IRRIGATION APPROVAL
CATALINA CENTRAL STAGES 16-17 & 22 CLARKSON WAPC 155859 & 160750

I refer to your correspondence dated 20 October 2021 and write to advise that the City grants approval of the above-mentioned works as detailed in the attached plans. This conditional approval is subject to your compliance with:

1. The City's policies and standard specifications available on the City's website.
2. The conditions listed below and those marked-up in red on the attached plans.

Please note that this approval is an endorsement that the plans comply in general with the City's requirements; it is not an approval of the integrity and functionality of the design which remains the responsibility of the landscape architects.

Specific Conditions:

1. All works associated with the entry signage and artwork are not included in this approval. A separate DA is required for these works.
2. Trees 500L and larger require a 5 year maintenance period to adequately establish. Please note this will extend the maintenance period of all sites connected to the irrigation system.
3. Use Fortress5 Infrastructure protection for all *Araucaria* species as per Arbor Centre specifications.
4. Substitute *Chorizima cordatum*, *Lomandra longifolia*, *Westringia fruticosa*, *Acacia cognata*, *Melaleuca viridiflora*, *Ficinia nodosa* and *Hibbertia scandens* with other dryland species on the approved palette that will survive without supplementary irrigation. Refer to the Cottesloe Vegetation Complex list for suitable plant species (i.e. Cottesloe Central & South Vegetation Complex). These species are suited to the area and soil type. The species list is available at this link: https://apacewa.org.au/wp-content/uploads/2016/09/Cottesloe-yellow-12-pages.pdf
   Additional suitable species are listed in the rehabilitation list at this link: https://www.cottesloe.wa.gov.au/council-meetings/ordinary-council-meeting/22-november-2016/41/documents/namp.pdf
5. Please ensure that the font is clearly legible for planting pallets in future submissions and in the as-cons.

23 Dundebar Road, Wanneroo WA 6065 Locked Bag 1, Wanneroo WA 6946
T (08) 9405 5000 F (08) 9405 5499 E enquiries@wanneroo.wa.gov.au wanneroo.wa.gov.au

Standard Conditions:

1. The applicant and the contractor shall be responsible for the dust and sand drift control during the construction of the project in accordance with Department of Environmental Regulation guidelines. Disturbed areas shall be stabilised on completion and thereafter maintained to the City's satisfaction.
2. Where works impact traffic movement or public safety, temporary traffic management shall be employed in accordance with the current AS 1742.3 (Traffic Control Devices for Works on Roads). A traffic management plan is to be prepared in accordance with "Main Roads WA Traffic Management for Works on Roads Code of Practice" and submitted to the City for endorsement.
3. Provide hard landscaping to medians and verge areas where applicable to provide adequate clear zones as per *Australian Standard Manual of Uniform Traffic Control Devices Part 3: Traffic Control Devices for Works on Roads - Maintaining a Safe Workplace*. Generally, no planting in 0.6m strip from road kerb on roads with road speeds of less than 80km/hr unless approved by the City. Generally no planting in 1.2m strip from road kerb on roads with road speeds of equal or greater than 80km/hr unless approved by the City.

As of 1 July 2021, the City introduced new Land Development fees and charges. The new fees include assessment fees that cover the actual cost and expenses incurred by the City in providing services, commissioning or undertaking any review of documentation associated with development engineering and landscape matters including administrative services, technical resources, specialist advice and consultation. All fees are charged in accordance with Section 6.15, 6.16 and 6.17 of the Local Government Act (WA) 1995 (as amended). An invoice will be issued to the developer.

This approval is valid until April 2023 and may be subject to Part 18 Extension of Time for endorsement of diagram or plan of survey due to COVID-19 pandemic, which grants an automatic two-year extension to certain subdivision approvals as a result of the State of Emergency coming into effect on 16 March 2020.

Should you require clarification on any of the above then please contact the City's Landscape and Conservation Development Officer, Mrs Chelsea Timms on telephone 9405 5300.

Yours sincerely



Craig Wansbrough
MANAGER LAND DEVELOPMENT

Cc Tamala Park Regional Council

2021.153.1 8154

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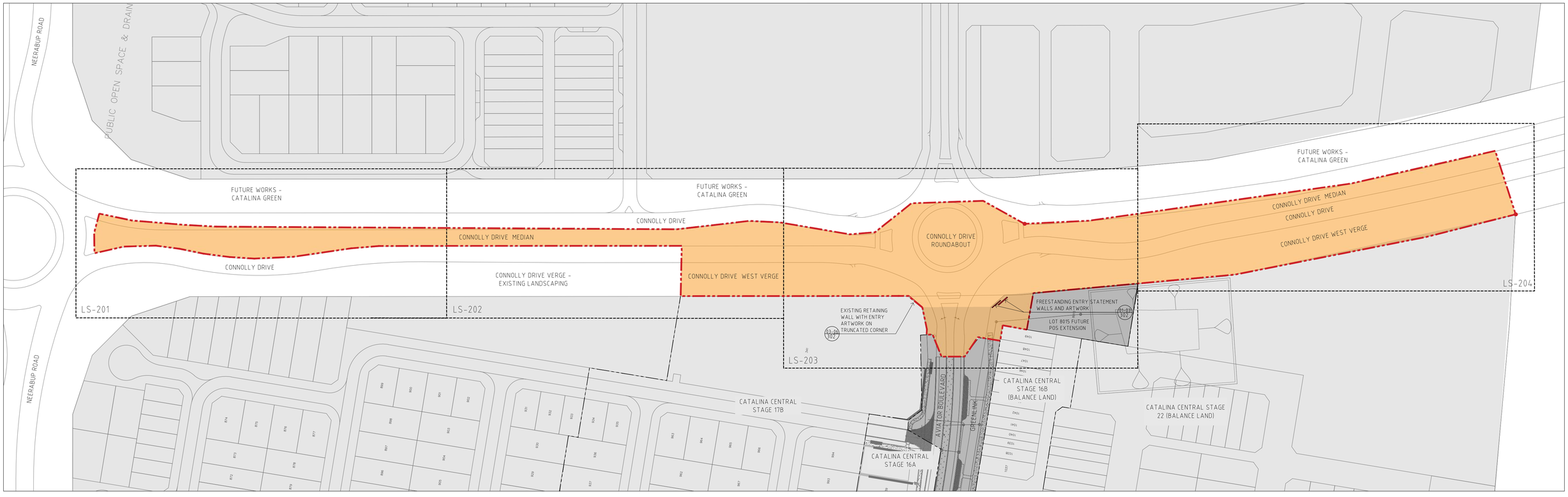
CATALINA CENTRAL STG 16-17 & 22
CONNOLLY DRIVE ROUNDABOUT
MEDIANS & WEST VERGE



01 101 COVER PAGE
PLAN 1:1000 @ A1

CITY OF WANNEROO
QUALITY CONTROL

LAND DEVELOPMENT OFFICER: MAJ
ASSETS PARKS TRIM NO. 21/499601
ASSETS CONSERVATION TRIM NO. 21/499601
ASSETS IRRIGATION TRIM NO. 21/499601
COMMUNITY FACILITIES TRIM NO. N/A

CITY OF WANNEROO

LETTER OF APPROVAL DATED 9/2/22 TRIM NO AD387140

LAND DEVELOPMENT NO 2021.153.1

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL WAPC NO.155859

WAPC NO. 160750

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

DWG	DWG NAME	SCALE @ A1	REV
LS-101	COVER PAGE	1:1000	B
LS-201	LANDSCAPE PLAN 1	1:250	B
LS-202	LANDSCAPE PLAN 2	1:250	B
LS-203	LANDSCAPE PLAN 3	1:250	B
LS-204	LANDSCAPE PLAN 4	1:250	B
LS-301	LANDSCAPE DETAILS & SCHEDULE	AS SHOWN	B
LS-302	ENTRY STATEMENT DETAILS	AS SHOWN	B

CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR CLIENT REVIEW	AF	30.09.21
B	ISSUE FOR APPROVAL	AF/NL	19.10.21

0 10 20 40 60 100m

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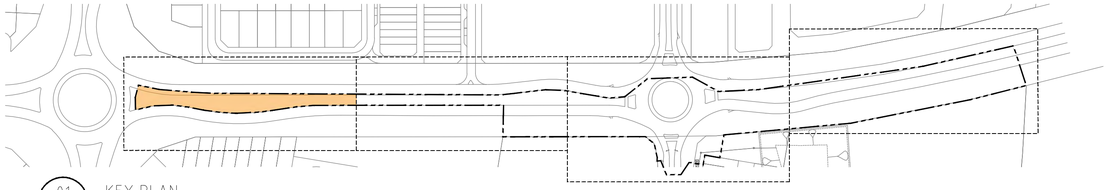
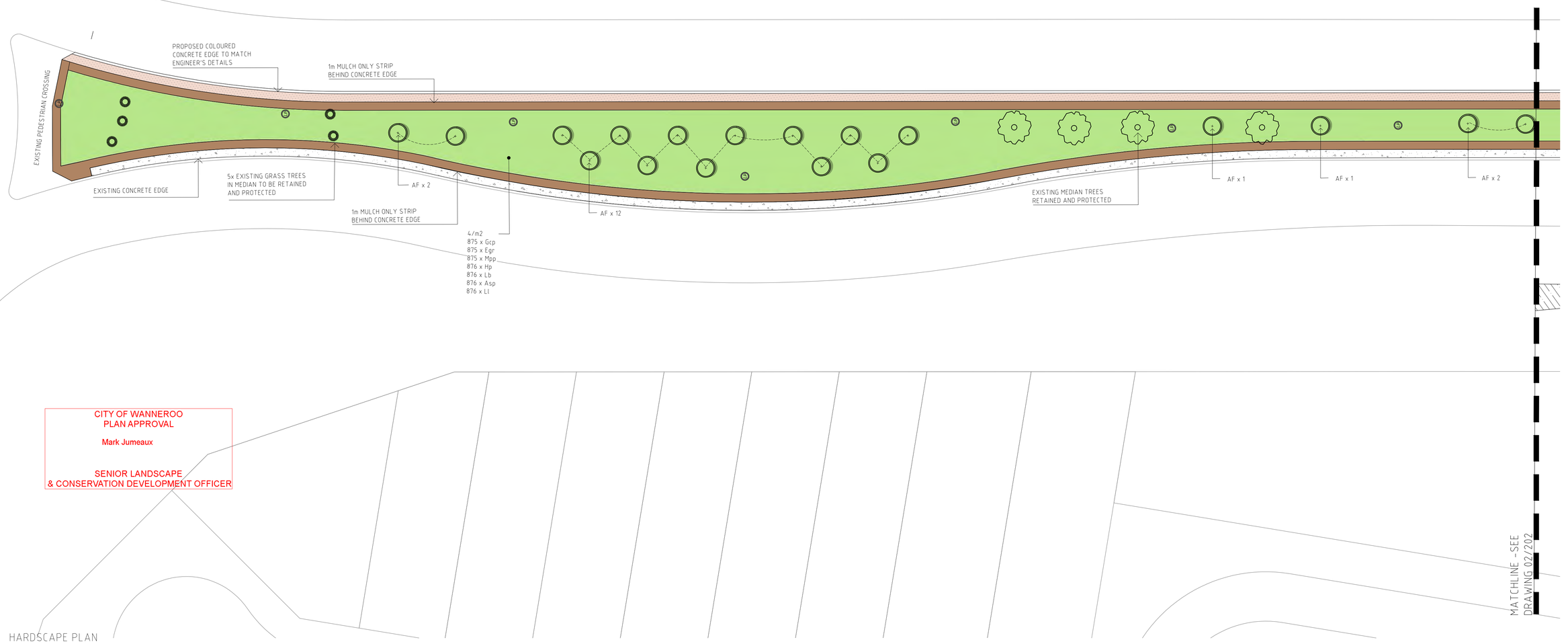
facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF
APPROVED	GD
SCALE	1:1000@A1
DRAWING TITLE	CONNOLLY DRIVE & ROUNDABOUT
DRAWING No.	12606-CC-CV-101
REVISION	B

© TIM DAVIES LANDSCAPING



01/201 KEY PLAN
PLAN NTS



CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

02/201 HARDSCAPE PLAN
PLAN 1:250 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS (MM) SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT.
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED. PREPARE EVEN SURFACE SUITABLE FOR PLANTING AND HARDSCAPE INSTALLATION THAT TIES INTO EXSITING LEVELS.
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS.
- FOR COOK ISLAND TRANSPLANTS, CONTRACTOR TO PREPARE 3x3x2M DEEP PLANTING HOLE. FOR ERYTHRINA TRANSPLANTS, PREPARE 2x2x1M DEEP HOLES. TRANSPLANT SUPPLY BY CLIENT. TRANSPLANT INSTALLATION AND MANAGEMENT WORKS ARE TO BE COORDINATED WITH SPECIALIST GROWER.
- CONTRACTOR TO EXCAVATE ALONG EXSITING CIVIL KERBLINE AS REQUIRED BY SPECIALIST TRANSPLANT GROWER TO ENABLE SPRAY ON ROOT CONTROL BARRIER INSTALLATION TO ALL COOK ISLAND TRANSPLANTS WITHIN 5M OF EXISTING KERBLINE AT A LENGTH OF 10M TO EACH SIDE OF TREE.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DRAWING LS-301.
- FOR ENTRY STATEMENT DETAILS REFER TO DRAWING LS-302 AND STRUCTURAL ENGINEER CERTIFIED DRAWINGS.

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT.
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- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DRAWING LS-301.
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LEGEND

SURFACE FINISHES

- CONCRETE PAVEMENT EXISTING / BY OTHERS
- PROPOSED CONCRETE PAVEMENT STANDARD GREY CONCRETE — 02-04/301
- PROPOSED CONCRETE PAVEMENT RED OXIDE CONCRETE — 02-04/301
- RED ASPHALT EXISTING / BY OTHERS
- PROPOSED RED ASPHALT DUP — 01/301
- MULCH MAINTENANCE STRIP 600mm
- MULCH ONLY TREATMENT
- STABILISED COMPACTED FINES — 05-06/301
- IRRIGATED PLANTING BED REFER TO PLANT PLAN AND SCHEDULE — 08-09/301

SITE FEATURES

- FEATURE BOULDERS — 07/301
- LP LIGHT POLE EXISTING / BY OTHERS
- ENTRY STATEMENT — 01-06/302
- 14.50 EXISTING CONTOURS
- 14.50 CIVIL DESIGN CONTOURS
- 15.00 PROPOSED CONTOURS
- RL 14.95 DESIGN LEVELS — 05/301
- ALUMINIUM EDGE

TREES

- EXISTING TREE TO BE RETAINED
- EXISTING TREE - INDICATIVE LOCATION
- EXISTING GRASS TREE - INDICATIVE LOCATION
- PROPOSED TRANSPLANT COOK ISLAND PINE
- PROPOSED TRANSPLANT ERYTHRINA
- PROPOSED 1000LT TREE SEE SCHEDULE
- PROPOSED 150-200LT MEDIAN TREE SEE SCHEDULE — 10/301
- PROPOSED 200LT VERGE TREE SEE SCHEDULE
- PROPOSED GRASS TREE

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR CLIENT REVIEW	AF	30.09.21
B	ISSUE FOR APPROVAL	AF/NL	19.10.21

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	LANDSCAPE PLAN 1
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-CV-201
SCALE	1:250A1		REVISION B

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

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& CONSERVATION DEVELOPMENT OFFICER

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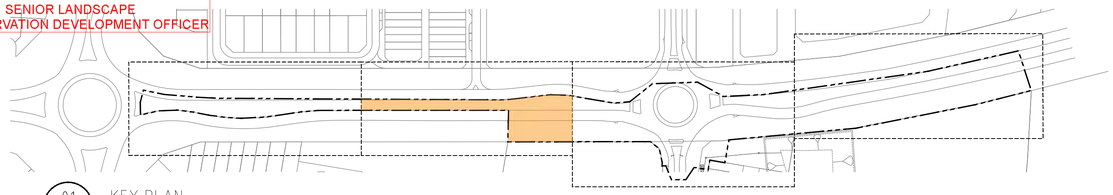
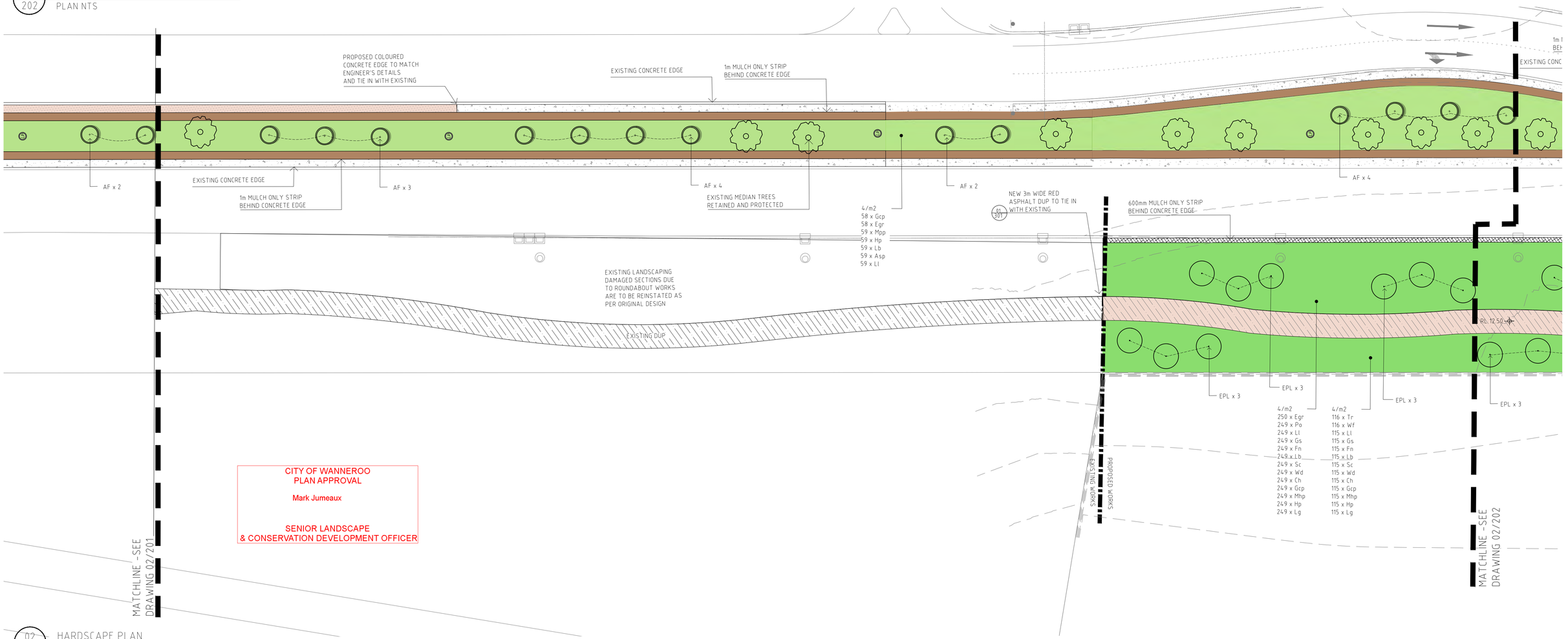


01/202 KEY PLAN
PLAN NTS



CITY OF WANNEROO
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02/202 HARDSCAPE PLAN
PLAN 1:250 @ A1

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LEGEND

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- PROPOSED CONCRETE PAVEMENT STANDARD GREY CONCRETE — 02-04/301
- PROPOSED CONCRETE PAVEMENT RED OXIDE CONCRETE — 02-04/301
- RED ASPHALT EXISTING / BY OTHERS
- PROPOSED RED ASPHALT DUP — 01/301
- MULCH MAINTENANCE STRIP 600mm
- MULCH ONLY TREATMENT
- STABILISED COMPACTED FINES — 05-06/301
- IRRIGATED PLANTING BED REFER TO PLANT PLAN AND SCHEDULE — 08-09/301

SITE FEATURES

- FEATURE BOULDERS — 07/301
- LIGHT POLE EXISTING / BY OTHERS (LP)
- ENTRY STATEMENT — 01-06/302
- EXISTING CONTOURS — 14.50
- CIVIL DESIGN CONTOURS — 14.50
- PROPOSED CONTOURS — 15.00
- DESIGN LEVELS RL 14.95 — 05/301
- ALUMINIUM EDGE

TREES

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- PROPOSED 200LT VERGE TREE SEE SCHEDULE
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0 1 2 4 6 10 20 25m

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	LANDSCAPE PLAN 2
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-CV-202
SCALE	1:250A1		REVISION B

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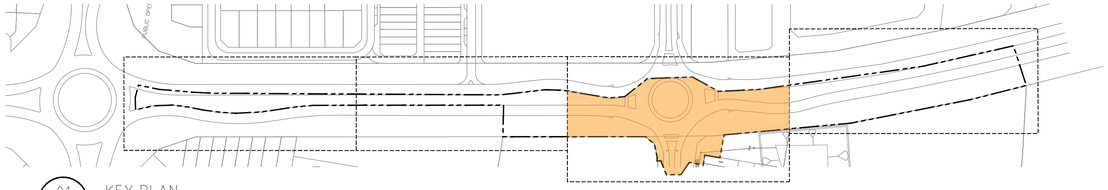

01 203 KEY PLAN
PLAN NTS



02 203 HARDSCAPE PLAN
PLAN 1:250 @ A1

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CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

LEGEND

SURFACE FINISHES

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- PROPOSED CONCRETE PAVEMENT RED OXIDE CONCRETE — 02-04 301
- RED ASPHALT EXISTING / BY OTHERS
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- MULCH MAINTENANCE STRIP 600mm
- MULCH ONLY TREATMENT
- STABILISED COMPACTED FINES — 03-06 301
- IRRIGATED PLANTING BED REFER TO PLANT PLAN AND SCHEDULE — 08-02 301

SITE FEATURES

- FEATURE BOULDERS — 07 301
- LIGHT POLE EXISTING / BY OTHERS
- ENTRY STATEMENT — 01-06 302
- EXISTING CONTOURS
- CIVIL DESIGN CONTOURS
- PROPOSED CONTOURS
- DESIGN LEVELS — 05 301
- ALUMINIUM EDGE

TREES

- EXISTING TREE TO BE RETAINED
- EXISTING TREE - INDICATIVE LOCATION
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- PROPOSED TRANSPLANT COOK ISLAND PINE
- PROPOSED TRANSPLANT ERYTHRINA
- PROPOSED 1000LT TREE SEE SCHEDULE
- PROPOSED 150-200LT MEDIAN TREE SEE SCHEDULE — 10 301
- PROPOSED 200LT VERGE TREE SEE SCHEDULE
- PROPOSED GRASS TREE

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR CLIENT REVIEW	AF	30.09.21
B	ISSUE FOR APPROVAL	AF/NL	19.10.21

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	LANDSCAPE PLAN 3
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-CV-203
SCALE	1:250A1		REVISION B

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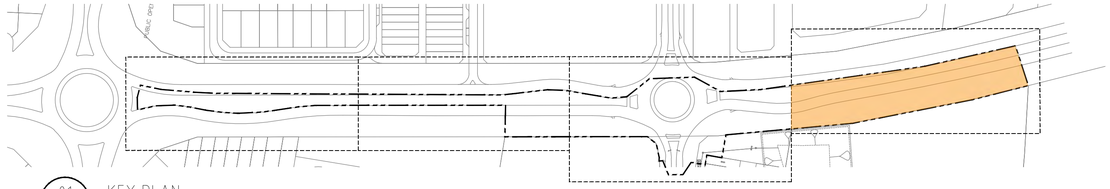
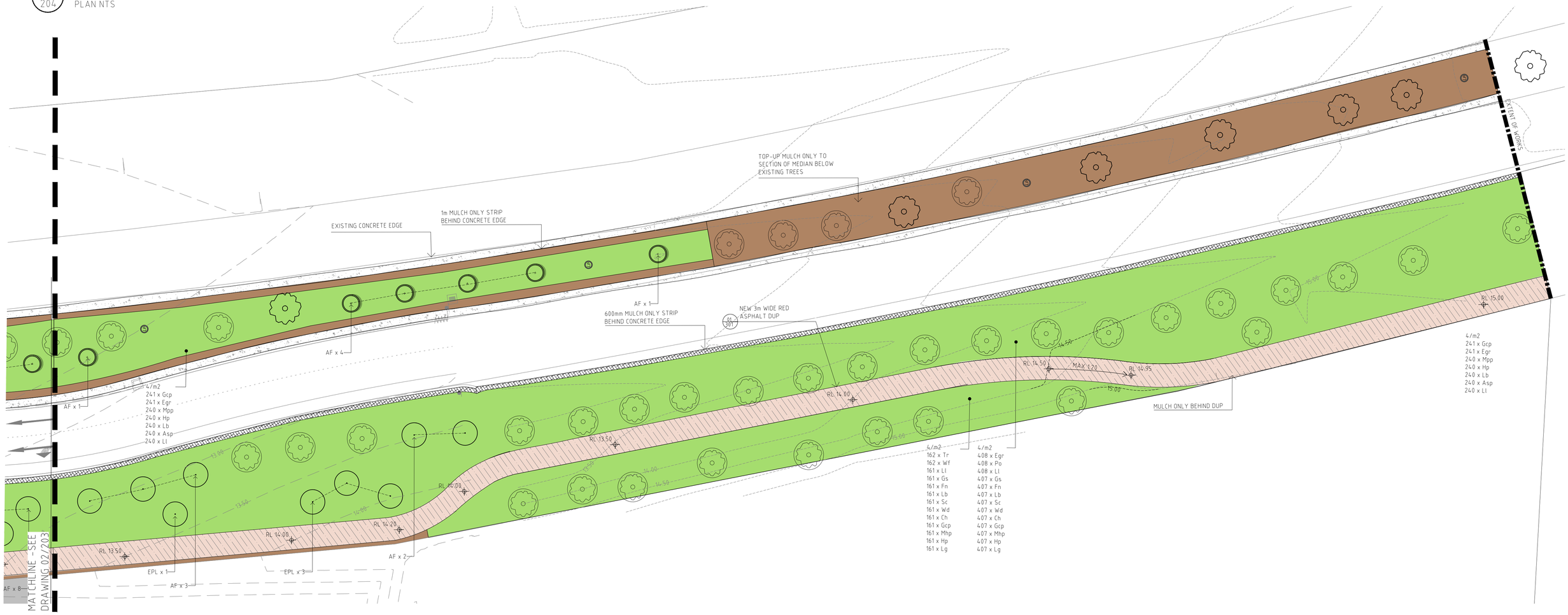


01/204 KEY PLAN
PLAN NTS



02/204 HARDSCAPE PLAN
PLAN 1:250 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS (MM) SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT.
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED. PREPARE EVEN SURFACE SUITABLE FOR PLANTING AND HARDSCAPE INSTALLATION THAT TIES INTO EXSITING LEVELS
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS
- FOR COOK ISLAND TRANSPLANTS, CONTRACTOR TO PREPARE 3x3x2M DEEP PLANTING HOLE. FOR ERYTHRINA TRANSPLANTS, PREPARE 2x2x1M DEEP HOLES. TRANSPLANT SUPPLY BY CLIENT. TRANSPLANT INSTALLATION AND MANAGEMENT WORKS ARE TO BE COORDINATED WITH SPECIALIST GROWER.
- CONTRACTOR TO EXCAVATE ALONG EXSITING CIVIL KERBLINE AS REQUIRED BY SPECIALIST TRANSPLANT GROWER TO ENABLE SPRAY ON ROOT CONTROL BARRIER INSTALLATION TO ALL COOK ISLAND TRANSPLANTS WITHIN 5M OF EXISTING KERBLINE AT A LENGTH OF 10M TO EACH SIDE OF TREE.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DRAWING LS-301
- FOR ENTRY STATEMENT DETAILS REFER TO DRAWING LS-302 AND STRUCTURAL ENGINEER CERTIFIED DRAWINGS

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-301
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DRAWING LS-301
- ALL 1000LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING.

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

LEGEND

SURFACE FINISHES

- CONCRETE PAVEMENT EXISTING / BY OTHERS
- PROPOSED CONCRETE PAVEMENT STANDARD GREY CONCRETE — 02-06/301
- PROPOSED CONCRETE PAVEMENT RED OXIDE CONCRETE — 02-06/301
- RED ASPHALT EXISTING / BY OTHERS
- PROPOSED RED ASPHALT DUP — 01/301
- MULCH MAINTENANCE STRIP 600mm
- MULCH ONLY TREATMENT
- STABILISED COMPACTED FINES — 05-06/301
- IRRIGATED PLANTING BED REFER TO PLANT PLAN AND SCHEDULE — 08-09/301

SITE FEATURES

- FEATURE BOULDERS — 07/301
- LP LIGHT POLE EXISTING / BY OTHERS
- ENTRY STATEMENT — 01-06/302
- EXISTING CONTOURS
- CIVIL DESIGN CONTOURS
- PROPOSED CONTOURS
- RL 14.95 DESIGN LEVELS — 05/301
- ALUMINIUM EDGE

TREES

- EXISTING TREE TO BE RETAINED
- EXISTING TREE - INDICATIVE LOCATION
- EXISTING GRASS TREE - INDICATIVE LOCATION
- PROPOSED TRANSPLANT COOK ISLAND PINE
- PROPOSED TRANSPLANT ERYTHRINA
- PROPOSED 100LT TREE SEE SCHEDULE
- PROPOSED 150-200LT MEDIAN TREE SEE SCHEDULE — 10/301
- PROPOSED 200LT VERGE TREE SEE SCHEDULE
- PROPOSED GRASS TREE

0 1 2 4 6 10 20 25m

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CATALINA CENTRAL

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DRAWN	AF
APPROVED	GD
SCALE	1:250A1
DRAWING TITLE	LANDSCAPE PLAN 4
DRAWING No.	12606-CC-CV-204
REVISION	B

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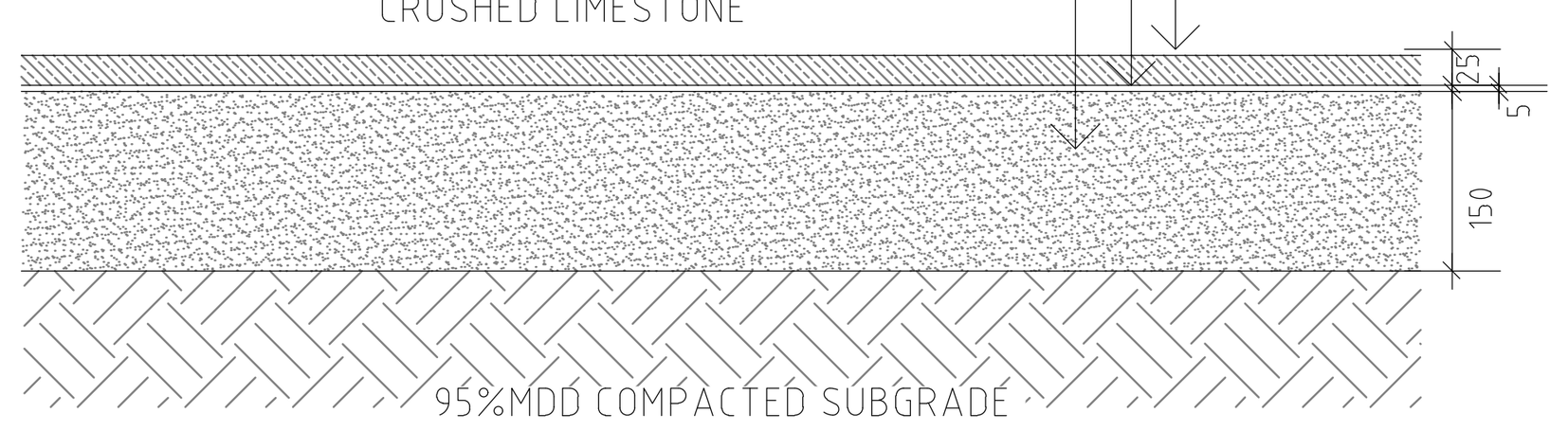
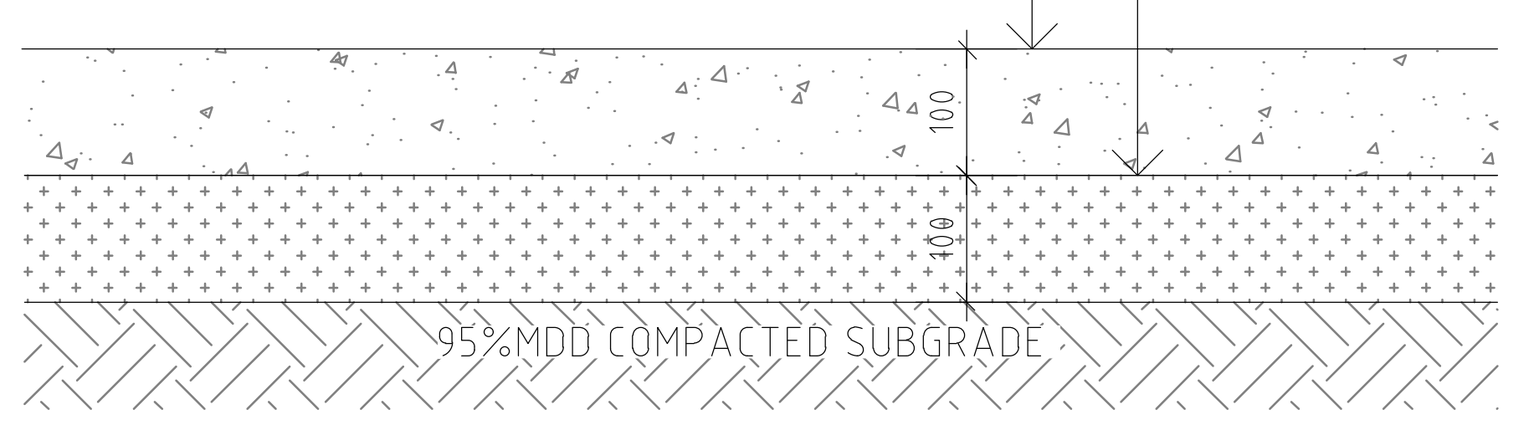
NOTE:
- MINIMUM 1% FALL TO NEAREST PLANTING OR DRAIN
- WHERE CONCRETE PAVING IS ADJACENT TO TURF, FINISH LEVEL OF TURF SHALL BE FLUSH WITH THE FINISH LEVEL OF CONCRETE.
- WHERE CONCRETE PAVING IS ADJACENT TO PLANTING, FINISH LEVEL OF MULCH TO PLANTING SHALL BE 20MM BELOW FINISHED PAVING LEVEL.
- ALL CONCRETE TO BE 32 MPa, MIN 20mm AGGREGATE & MAX SLUMP OF 65mm
- EXPANSION JOINT EVERY 6M, CONTRACTION JOINT EVERY 2M
- FINISH - AS NOMINATED IN LEGEND

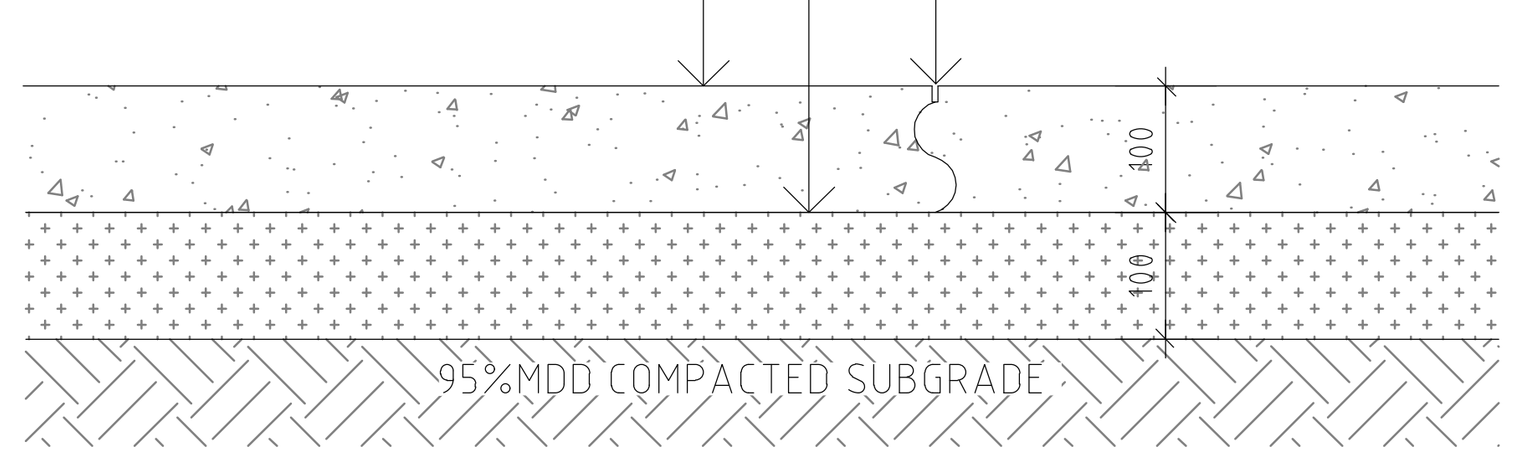


01 / 301 RED ASPHALT - DUP
TYPICAL DETAIL 1:10 @ A1



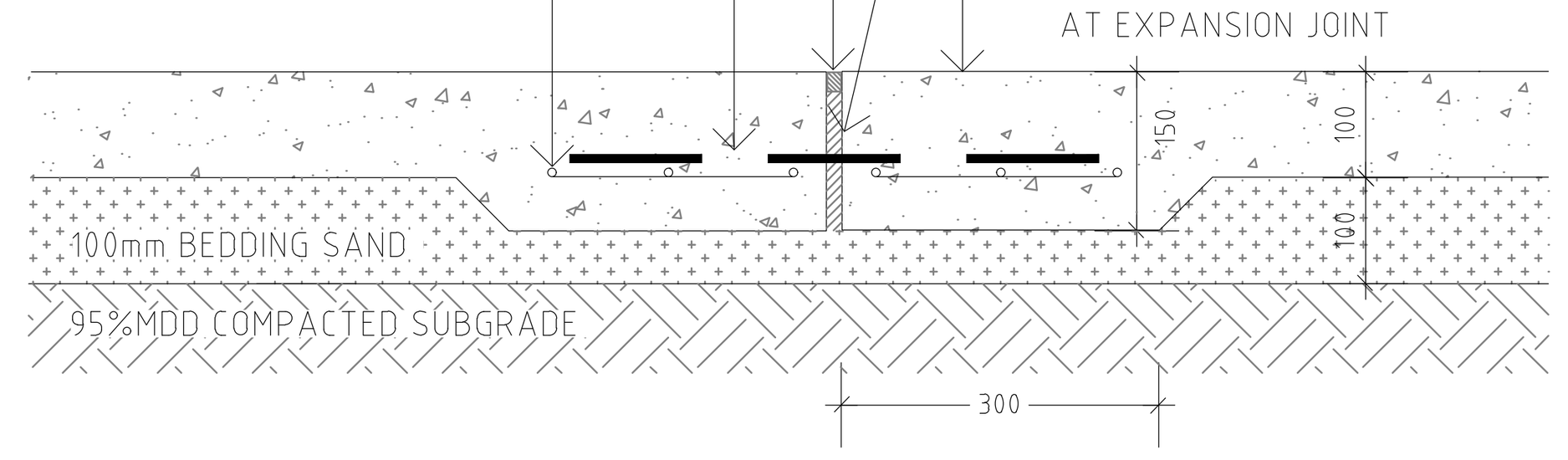
02 / 301 CONCRETE FOOTPATH
TYPICAL DETAIL 1:10 @ A1

NOTE:
- INSTALL LOCK JOINT @ 2m MAX CTS



03 / 301 CONTRACTION JOINT - LOCK JOINT
TYPICAL DETAIL 1:10 @ A1

NOTE:
- INSTALL EXPANSION JOINTS @ 6m MAX CTS
- INSTALL WHERE ABUTTING WALLS



04 / 301 EXPANSION JOINT
TYPICAL DETAIL 1:10 @ A1

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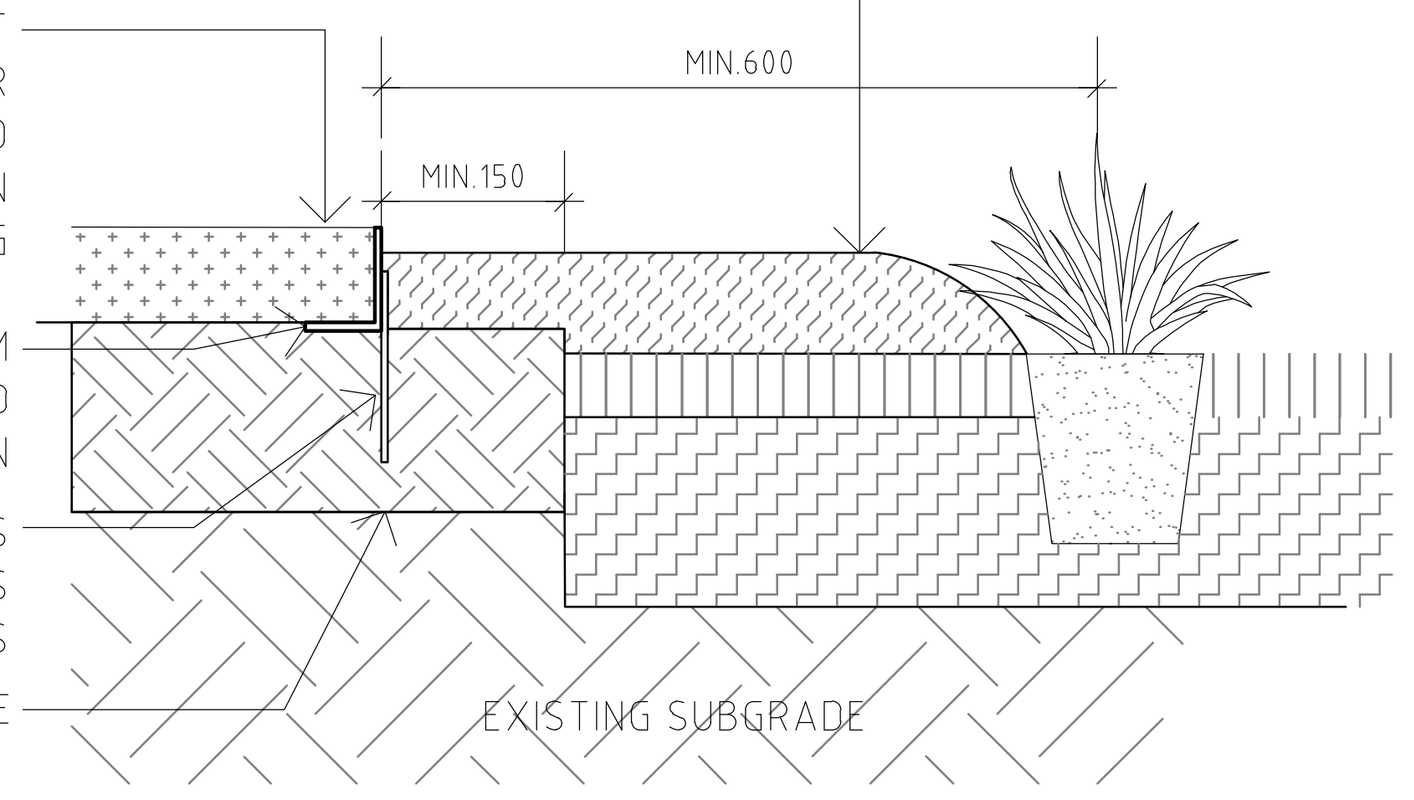
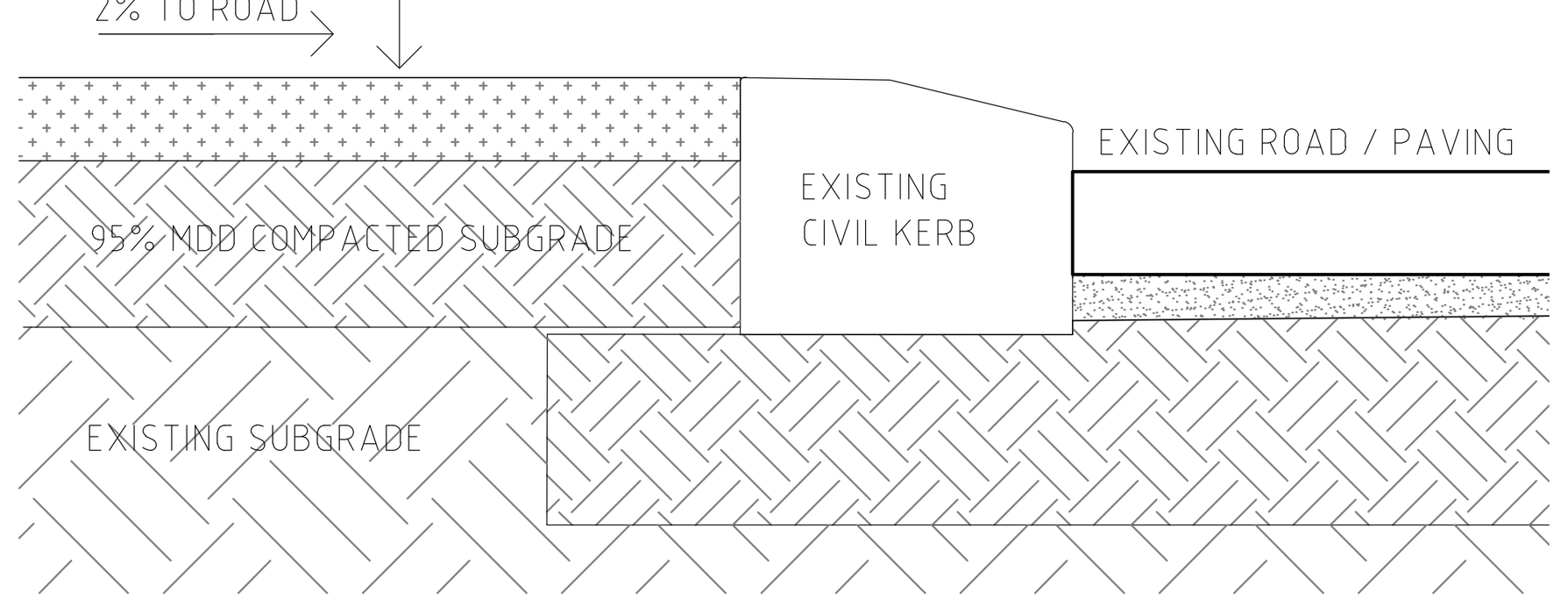
NOTE:
ALUMINIUM EDGING TO BE INSTALLED WITH SMOOTH RADIUS

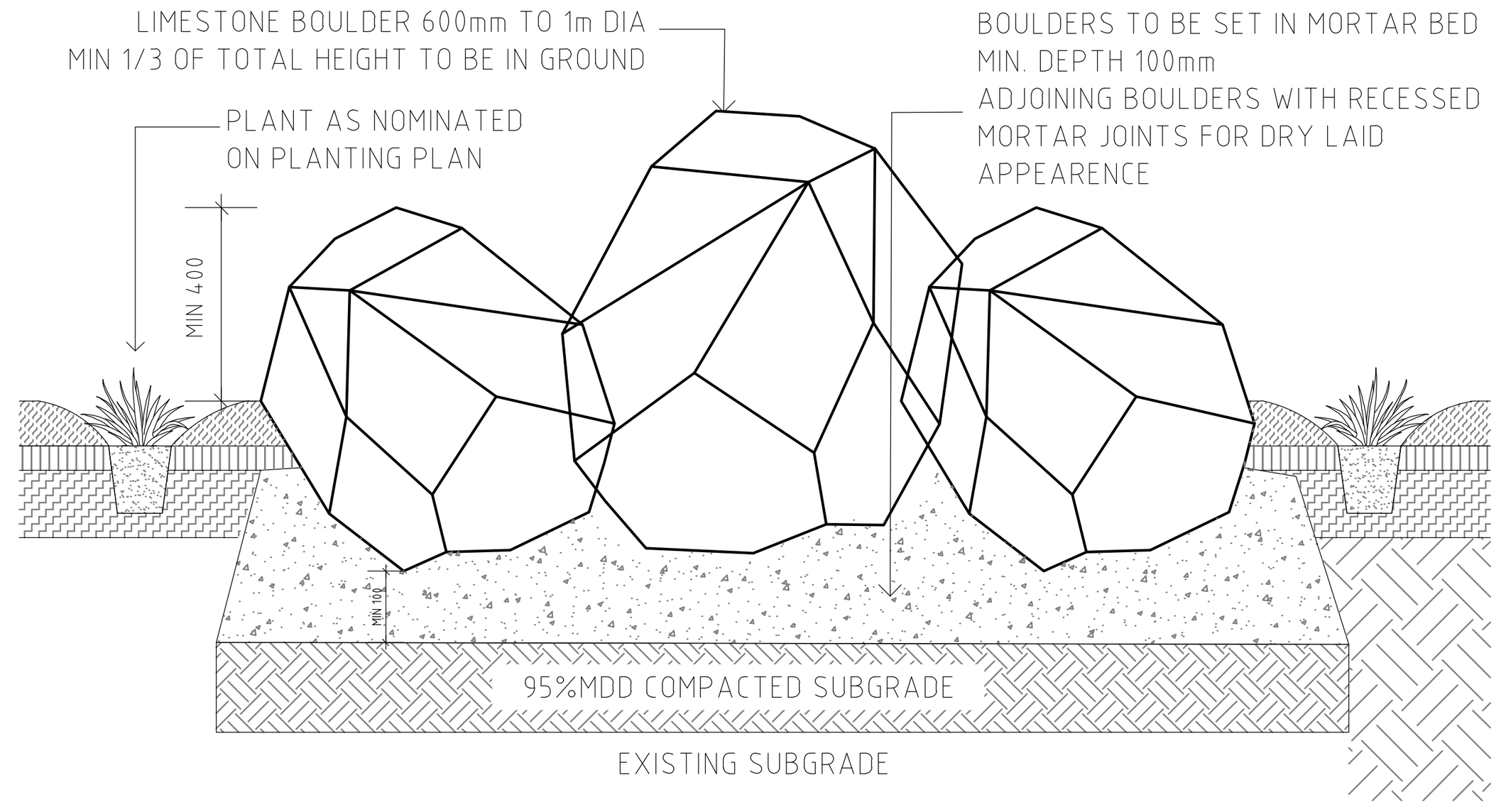


05 / 301 ALUMINUM EDGE / COMPACTED DUST TO GARDEN BED INTERFACE
TYPICAL DETAIL 1:10 @ A1



06 / 301 COMPACTED DUST TO CIVIL KERB INTERFACE
TYPICAL DETAIL 1:10 @ A1

LIMESTONE BOULDERS:
SOURCE: ON SITE
CONTRACTOR TO LIAISE WITH SUPERINTENDENT FOR SOURCING



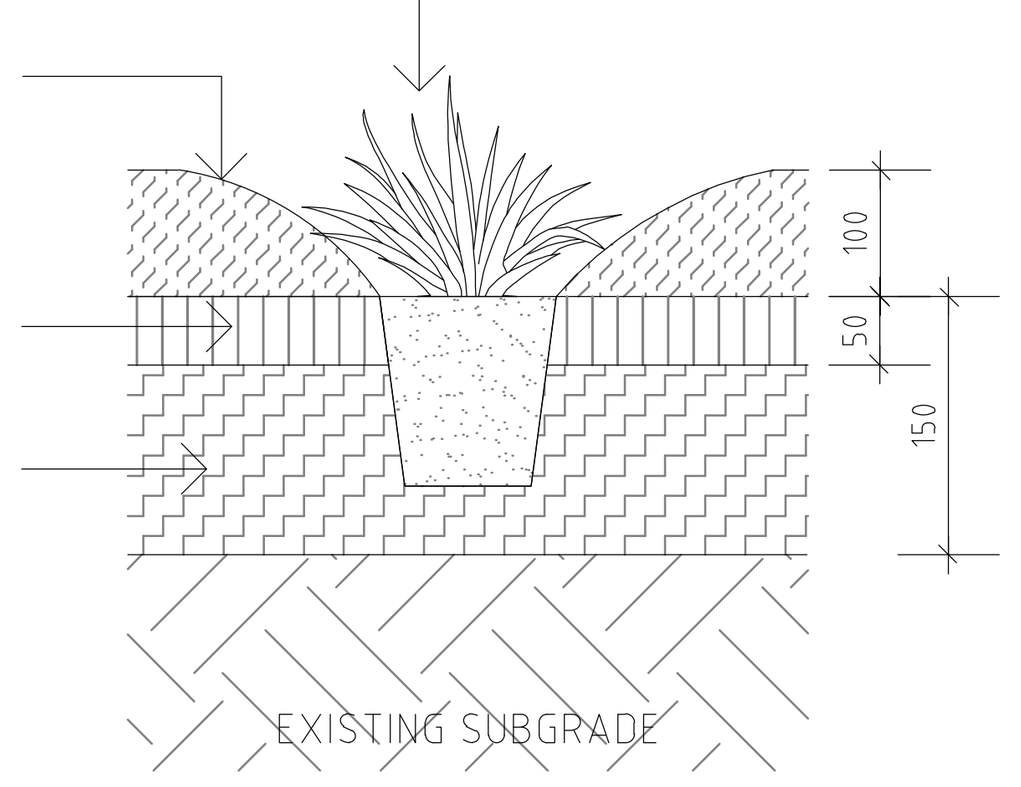
07 / 301 FEATURE BOULDER
TYPICAL DETAIL 1:20 @ A1

PLEASE ENSURE THE FONT IS ABLE TO BE CLEARLY READ IN FUTURE SUBMISSIONS AND IN THE AS CONS FOR THE PLANT PALETTE

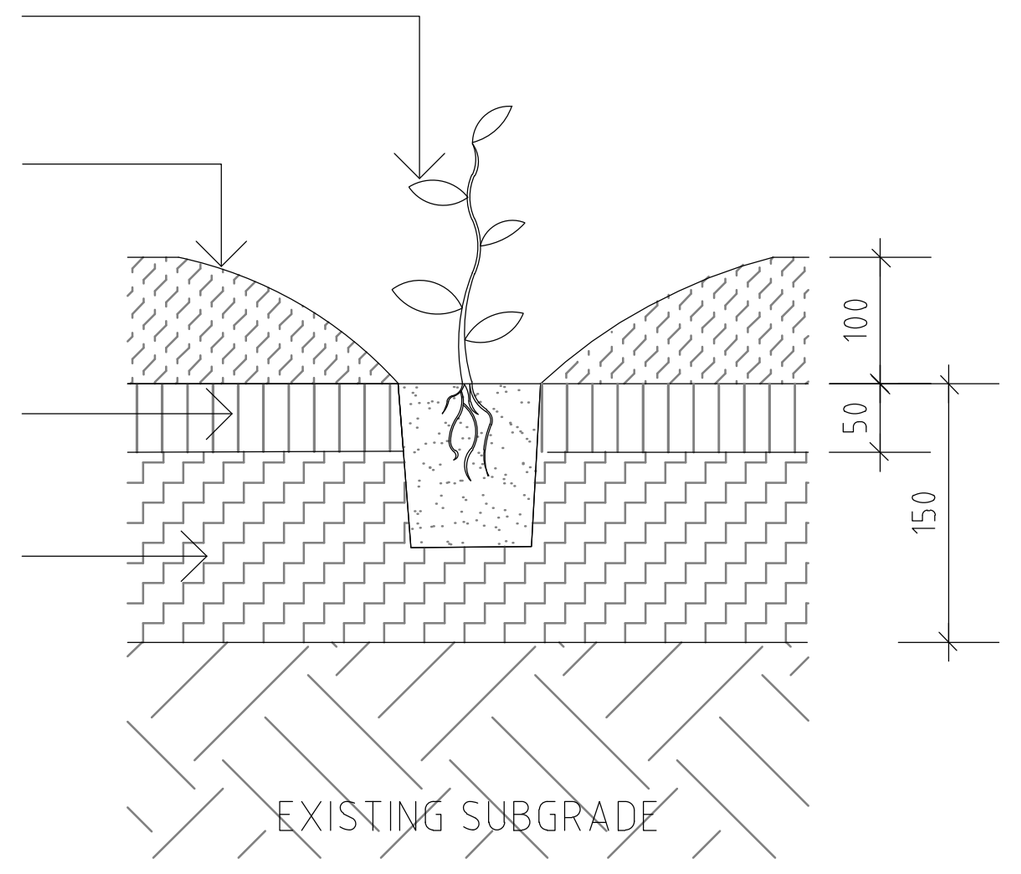
TREES 500L AND LARGER REQUIRE A 5 YEAR MAINTENANCE PERIOD TO ADEQUANTLEY ESTABLISH (TYP)
SUBSTITUTE FICINIA & HIBBERTIA SCANDENS WITH ANOTHER DRYLAND SPECIES IN THE APPROVED PALETTE THAT WILL SURVIVE WITHOUT SUPPLIMENTARY IRRIGATION (TYP)
FORTRESS5 INFRASTRUCTURE PROTECTION IS TO BE USED FOR ALL ARAUCARIA SPECIES AS PER ARBOR CENTRE SPECIFICATIONS (TYP)

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux
SENIOR LANDSCAPE & CONSERVATION DEVELOPMENT OFFICER

FERTILISER SCHEDULE AT INSTALLATION (REFER TO SPEC):		
LANGLEY AND AGRIFORM FERTILISER TABLETS OR SIMILAR APPROVED	TREE STOCK	4 TABLETS PER TREE
BAYLEYS NATIVE PLANT FOOD FERTILISER GRANULES OR SIMILAR APPROVED	SHRUBS AND GROUNDCOVERS	15g PER T/S 20g PER 130/140mm STOCK



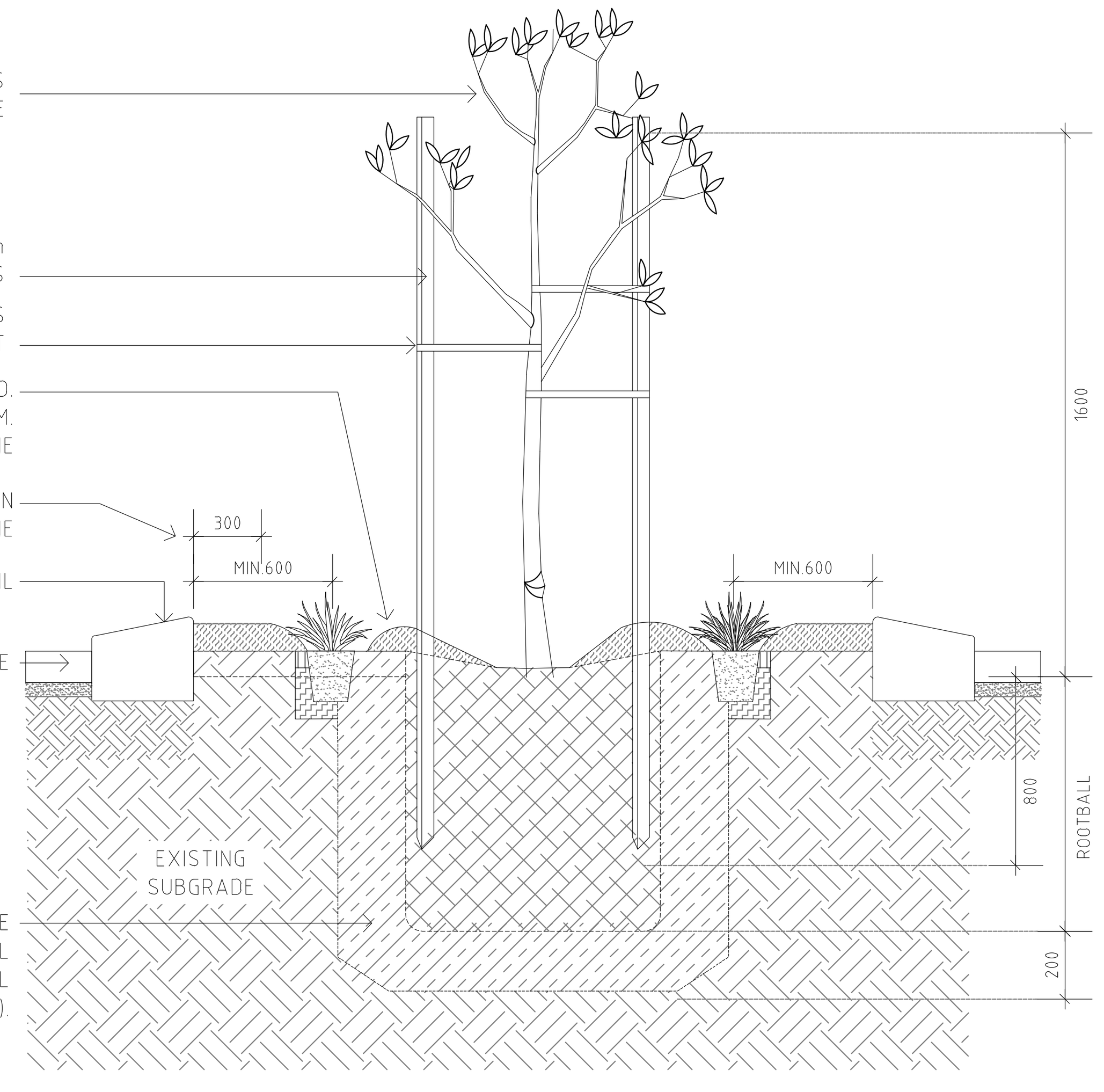
08 / 301 140mm SHRUB PLANTING
TYPICAL DETAIL 1:10 @ A1



09 / 301 T/S SHRUB PLANTING IN SWALE
TYPICAL DETAIL 1:10 @ A1

STAKING AND GUYING

>500LT AND TRANSPLANTS:	UNDERGROUND GUYING
200-500LT TREE STOCK:	3 X 2400x50x50mm HARDWOOD STAKES
45-150LT TREE STOCK:	2 X 1800x50x50mm HARDWOOD STAKES



10 / 301 45-500L TREE PLANTING
TYPICAL DETAIL 1:20 @ A1

Key	Species	Common Name	Plant per m2	Preferred pot size	Qty Verge	Qty Roundabout	Qty Median North	Qty Median South	Qty Entry Statement
Trees									
AC	Araucaria columnaris	Cook Island Pine	As shown	Transplant					2
AC	Araucaria columnaris	Cook Island Pine	As shown	1000L		4			
Af	Agonis flexuosa	WA Peppermint	As shown	1000L			31	10	2
Af	Agonis flexuosa	WA Peppermint	As shown	200L	13				2
Ei	Erythrina indica	Coral Tree	As shown	Transplant					6
EPl	Eucalyptus platypus	Coastal Moort	As shown	1000L					2
EPl	Eucalyptus platypus	Coastal Moort	As shown	200L	29				
MV	Melaleuca viridiflora	Red Flowering Paperbark	As shown	1000L					3
XP	Xanthorrhoea preissii	Grass Tree	As shown	Various trunk height					13
Shrubs and groundcovers									
Abr	Anigozanthos 'Big Red'	Kangaroo Paw	As shown	140mm					273
Ac	Adenanthos cuneatus	Basket Flower	As shown	140mm					184
Acl	Acacia cognata 'Limelight'	Bower of Beauty Wattle	As shown	140mm					2
Acr	Anigozanthos 'Bush Crystal'	Kangaroo Paw	As shown	140mm					120
An	Anigozanthos 'Nugget'	Kangaroo Paw	As shown	140mm					488
Asp	Acacia saligna 'Prostrate'	Dwarf Wattle	As shown	140mm			1225	408	45
Ca	Conostylis aculeata	Cottonhead	As shown	140mm					45
Cc	Conostylis candicans	Cotton Heads	As shown	140mm					100
Ch	Chorizema cordatum	Heart leaf Flame Pea	As shown	140mm	1371				395
Cv	Carpobrotus virescens	Pigface	As shown	140mm					45
Eac	Eremophila 'Amber Carpet'	Emu Bush	As shown	140mm					45
Egr	Eremophila glabra 'Roseworthy'	Emu Bush	As shown	140mm	1097	672	1222	410	797
~~Fn~~	~~Ficinia nodosa~~	~~Knobby Club Rush~~	As shown	140mm	1371				
Gcp	Grevillea crithmifolia 'Prostrate'	Green Carpet	As shown	140mm	1371	672	1222	410	909
Gs	Grevillea preissii 'Seaspray'	Seaspray	As shown	140mm	1371				221
Hor	Hibbertia 'Ocean Reef'	Glossy Leaved Coastal Guinea Flower	As shown	140mm					3
Hp	Hemiandra pungens	Purple Snake Bush	As shown	140mm	1371		1225	408	101
~~Hs~~	~~Hibbertia scandens~~	~~Snake Vine~~	As shown	140mm					103
Lb	Leucophyta brownii	Cushion Bush	As shown	140mm	1371		1225	408	394
Lg	Lepidosperma gladiatum	Coast Sword Sedge	As shown	140mm	1371				
Ll	Lomandra longifolia	Mat Rush	As shown	140mm	1372		1225	408	
Mhp	Melaleuca huegelii 'Prostrate'	Rambler	As shown	140mm	1371	672			265
Mp	Myoporum parvifolium	Creeping Boobialla	As shown	140mm		672			740
Mpp	Myoporum parvifolium 'Purpurea'	Purple Creeping Boobialla	As shown	140mm			1224	408	
Po	Patersonia occidentalis	Purple flag	As shown	140mm	1097				324
Sc	Scaevola crassifolia	Fanflower	As shown	140mm	1371	672			3
Scp	Scaevola crassifolia 'Prostrate'	Fanflower	As shown	140mm					303
Sn	Scaevola nitida	Fanflower	As shown	140mm					3
Tr	Templetonia retusa	Cockies Tongue	As shown	140mm	278				
Wd	Westringia dampieri	Shore Westringia	As shown	140mm	1371				398
Wf	Westringia fruticosa	Coastal Rosemary	As shown	140mm	278				

11 / 301 OVERALL PLANT SCHEDULE
N/A

CATALINA ESTATE
CATALINA CENTRAL

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF
APPROVED	GD
SCALE	AS SHOWN
DRAWING TITLE	LANDSCAPE DETAILS AND SCHEDULE
DRAWING No.	12606-CC-CV-301
REVISION	B

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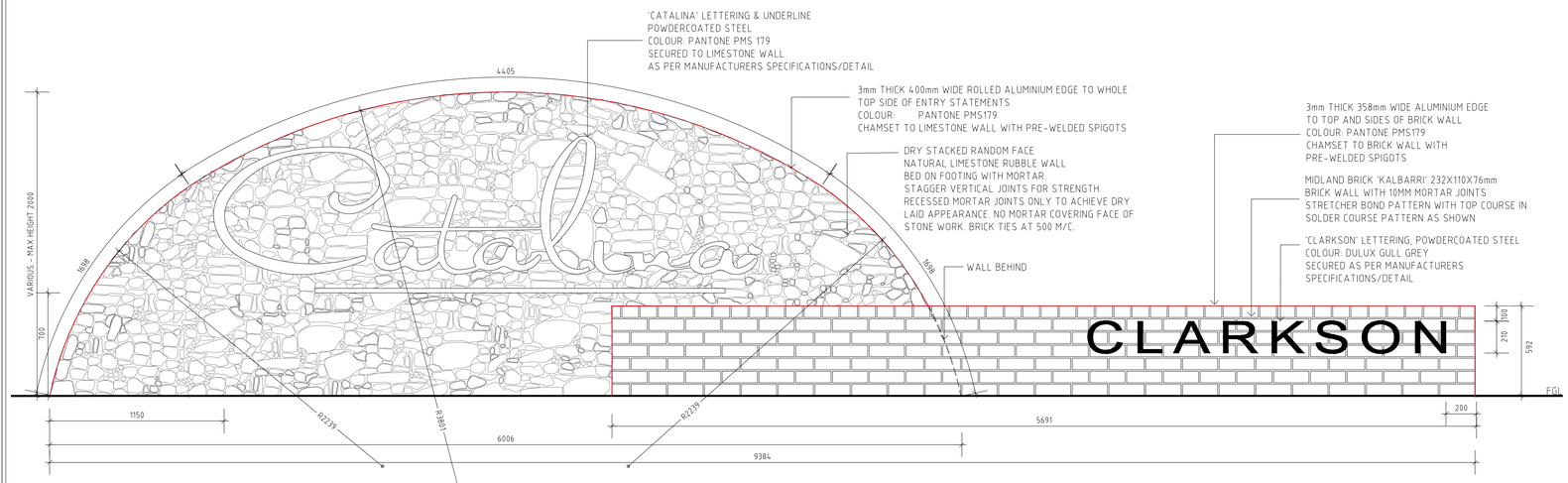
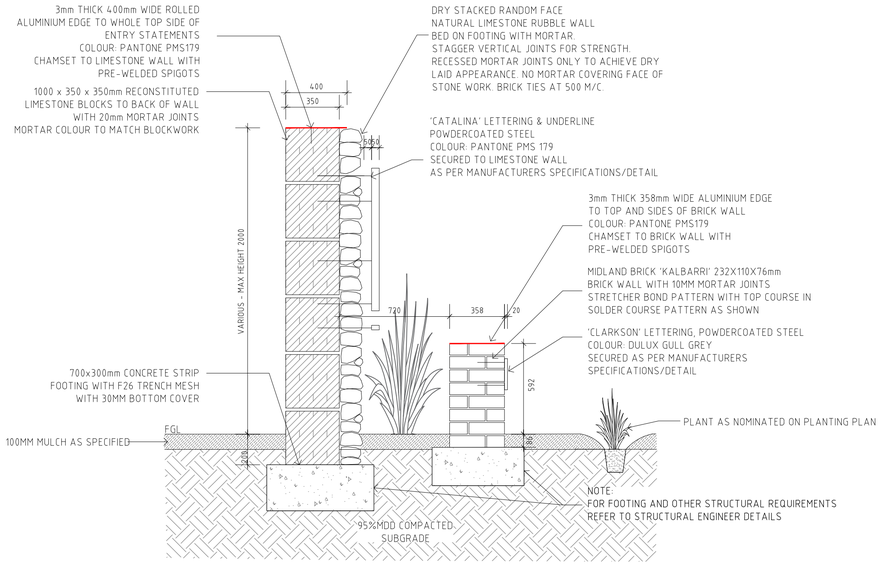
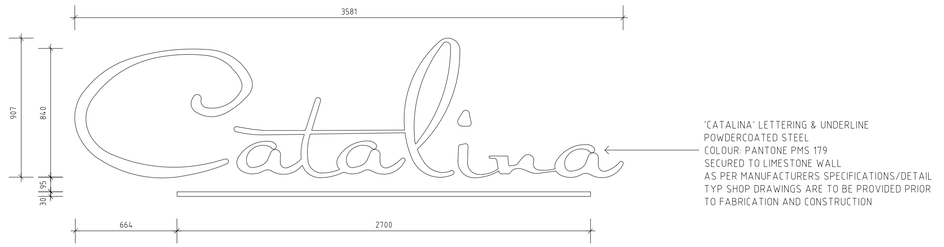


01 302 ENTRY STATEMENT - SOUTH WEST CORNER
ELEVATION 1:20 @ A1

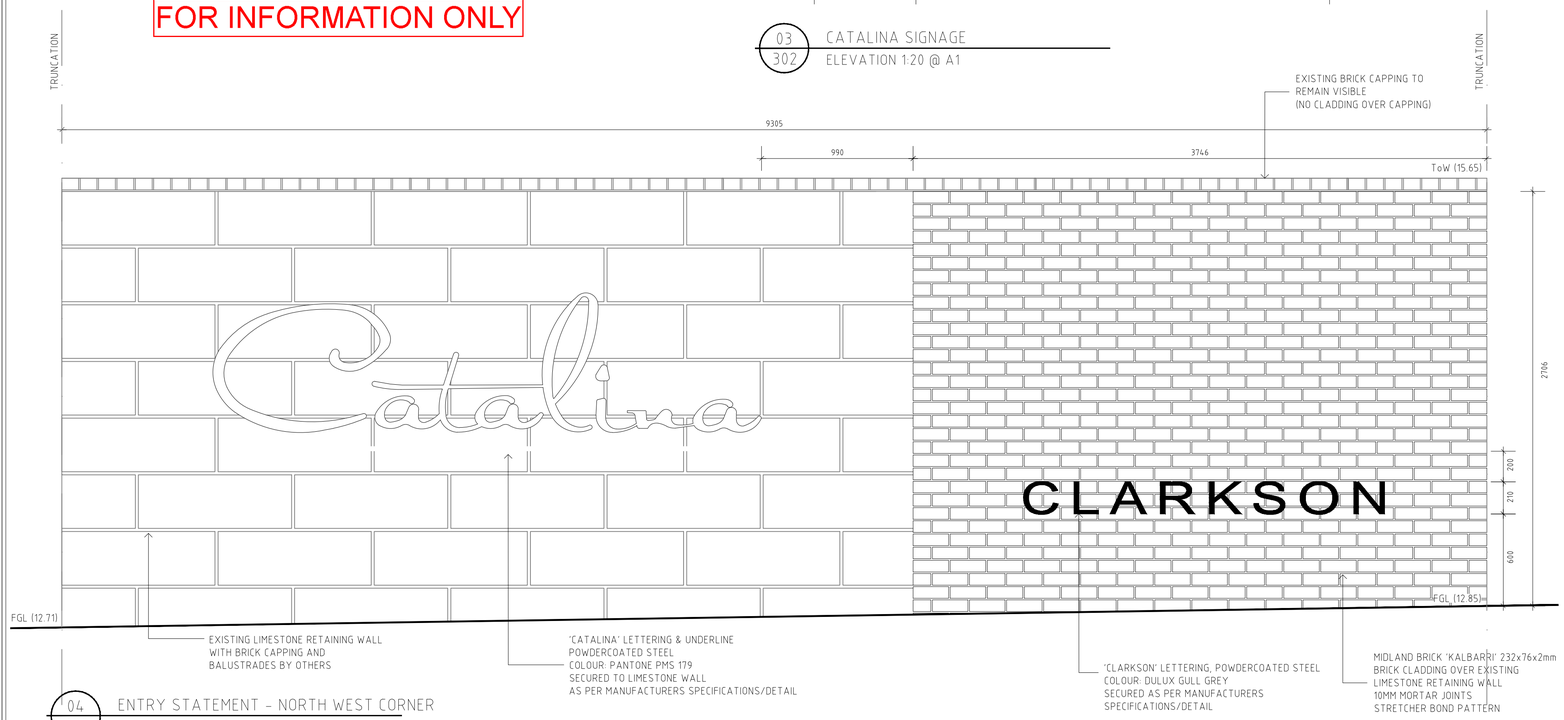


02 302 ENTRY WALL - SOUTH WEST CORNER
TYPICAL SECTION 1:20 @ A1

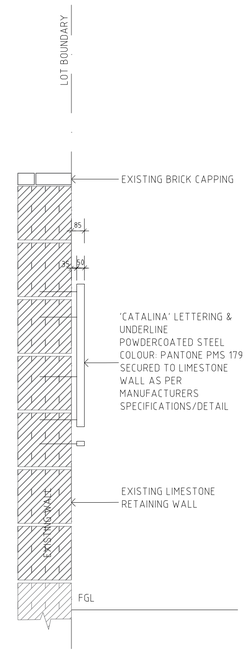


03 302 CATALINA SIGNAGE
ELEVATION 1:20 @ A1

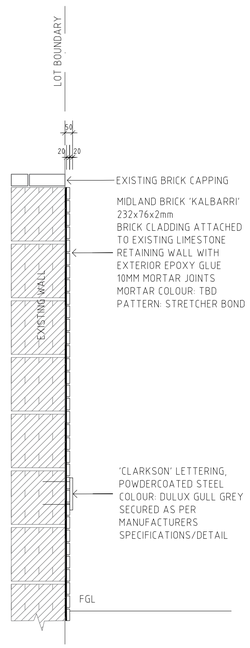
FOR INFORMATION ONLY



04 302 ENTRY STATEMENT - NORTH WEST CORNER
ELEVATION 1:20 @ A1



05 302 ENTRY SIGNAGE
NORTH WEST CORNER
SECTION 1:20 @ A1



06 302 ENTRY SIGNAGE & BRICK CLADDING
NORTH WEST CORNER
SECTION 1:20 @ A1

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- WRITTEN DIMENSIONS (MM) SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

ARTWORK NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING SHOP DRAWINGS AND BUILDING LICENSE FOR THE WORKS. FABRICATION IS NOT TO COMMENCE UNTIL THE BUILDING LICENSE APPROVAL IS IN PLACE AND PROVIDED TO THE SUPERINTENDENT. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE CERTIFICATE OF DESIGN COMPLIANCE FOR ALL SHOP DRAWINGS PROVIDED AS PART OF THE BUILDING LICENSE AND FABRICATION WORKS.
- ALL STEEL FABRICATION AND CONSTRUCTION WORKS TO BE TO ALL RELEVANT AUSTRALIAN STANDARDS.
- ALL STEEL WORK, FIXTURES AND FITTINGS TO BE HOT DIP GALVANISED. GALVANISATION TO BE CARRIED OUT AFTER ALL CUTTING, WELDING AND DRILLING HAS BEEN COMPLETED DURING FABRICATION. NO WELDING OR CUTTING IS TO BE CARRIED OUT ONCE STEEL HAS BEEN GALVANISED.
- ALL WELDS TO BE FULL. NO STITCH WELDING PERMITTED.
- STRUCTURE TO BE POWDER COATED TO COLOUR: AS NOMINATED IN DETAILS
- THE CONTRACTOR IS TO PROVIDE A FULL SET OF DETAILED SHOP DRAWINGS FOR ALL STRUCTURES FOR APPROVAL BY THE SUPERINTENDENT PRIOR TO FABRICATION TAKING PLACE.
- EVIDENCE OF COMPACTION TESTING UNDER ALL CONCRETE FOOTINGS, WALLS AND SURFACES IS TO BE PROVIDED BY THE CONTRACTOR.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE AGREED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- ALL CONCRETE TO BE A MINIMUM OF 32MPA UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- ALL WALLS AND BRICK CLADDING ARE TO BE TREATED WITH SACRIFICIAL ANTI-GRAFFITI COATING

CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR CLIENT REVIEW	AF	30.09.21
B	ISSUE FOR APPROVAL	AF/NL	19.10.21

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	ENTRY STATEMENT DETAILS
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-CV-302
SCALE	AS SHOWN		REVISION B

GENERAL NOTES

1. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS. ANY DISCREPANCIES SHALL BE REPORTED PRIOR TO FABRICATION AND CONSTRUCTION.
2. CHECK ALL DIMENSIONS ON SITE. REPORT ALL DISCREPANCIES.
3. DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
4. ALL STANDARDS REFERRED TO SHALL BE CURRENT PUBLICATIONS INCLUDING THEIR LATEST REVISIONS.
5. DIMENSIONS ON THE STRUCTURAL DRAWINGS ARE EXCLUSIVE OF FINISHES.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION METHOD AND MAINTENANCE OF SAFETY DURING THE CONSTRUCTION. SHOULD ANY ELEMENT PRESENT ITSELF TO BE DIFFICULT WITH RESPECT TO CONSTRUCTABILITY OR SAFETY, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO ALLOW FOR DIRECTION TO BE GIVEN PRIOR TO PROCEEDING WITH WORKS.
7. ALL WORKS TO CONFORM TO THE NATIONAL CONSTRUCTION CODE "NCC".
8. THE STRUCTURE HAS BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE RELEVANT CODE/STANDARD PROVISIONS FOR THE STRUCTURE IN ITS SERVICE CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE & ADJACENT STRUCTURES DURING THE CONSTRUCTION PROCESS AND IS RESPONSIBLE TO ENSURE THAT NO STRUCTURAL ELEMENT IS IN ANY WAY OVERSTRESSED DURING THE CONSTRUCTION PROCESS. ANY TEMPORARY BRACING/SUPPORT WHICH IS REQUIRED IS TO BE DESIGNED AND INSTALLED BY APPROPRIATE SUB-CONTRACTORS.
9. THIS OFFICE DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE DESIGN, NOMINATION, SPECIFICATION OR INSTALLATION OF ANY TEMPORARY RETAINING OR UNDERPINNING WORKS INCLUDING BUT NOT LIMITED TO GROUT INJECTION, SHORING OR SHEET PILING AS THIS IS CARRIED OUT BY SPECIALIST CONSULTANTS AND SUBCONTRACTORS.
10. CONTRACTOR SHALL ENSURE THAT THE STRUCTURE AND ADJACENT STRUCTURES ARE NOT UNDERMINED OR SURCHARGED.
11. WATERPROOFING OF STRUCTURAL ELEMENTS AS REQUIRED IS TO BE DESIGNED, NOMINATED, SPECIFIED & INSTALLED BY SPECIALIST SUBCONTRACTORS OR THE BUILDER. THIS OFFICE ACCEPTS NO RESPONSIBILITY FOR THE WATERPROOFING OF STRUCTURES.
12. THE DESIGN, NOMINATION & SPECIFICATION OF SITE DRAINAGE IS THE RESPONSIBILITY OF THE BUILDER OR SPECIALIST SUB CONSULTANTS.
13. ALL CONSTRUCTION SHALL BE UNDERTAKEN BY COMPETENT AND SUITABLY QUALIFIED PERSONS.
14. UNLESS DRAWINGS ARE ISSUED "REV 0 - ISSUED FOR CONSTRUCTION" THEY ARE NOT TO BE USED FOR CONSTRUCTION AND ARE FOR ADVICE AND REVIEW ONLY.

FOOTINGS

1. COMPACT ALL GRADES BELOW FOOTINGS AND SLAB ON GROUND TO ACHIEVE A MINIMUM PERTH SAND PENETROMETER (PSP) READING IN ACCORDANCE WITH AS1289.6.3.3 OF:
   - SINGLE STOREY: 6 BLOWS PER 300mm
   - MULTI STOREY: 7 BLOWS PER 300mm
2. ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS".
3. THE FOOTING DETAIL RECOMMENDED REQUIRES ONGOING MAINTENANCE OF THE SITE TO ENSURE ITS STRUCTURAL PERFORMANCE. REFER TO CSIRO PUBLICATION 10-91 "GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE" FOR DETAILS. THESE RECOMMENDATIONS AND FOOTING DETAILS PROVIDED ARE BASED ON PERFORMANCE AS DEFINED IN AS2870. MINOR FOUNDATION MOVEMENT IS TO BE EXPECTED WHICH CAN RESULT IN CRACKING RELATING TO DAMAGE CATEGORY '2'. THIS IS DEEMED TO BE NON-STRUCTURAL CRACKING.
4. ALL SAND SHALL BE CLEAN WELL GRADED SAND AND SHALL BE COMPACTED IN 300mm LAYERS. ALL SAND FILL SHALL BE CLEAN, FREE DRAINING, WELL GRADED SAND WITH NO MORE THAN 5% PASSING A 75 µM SIEVE. WHERE ENGINEER CONTROLLED FILL IS REQUIRED, THE SAND IS TO BE COMPACTED IN LAYERS OF 300mm TO ACHIEVE AT LEAST 7 PSP BLOWS FROM 150mm-450mm, 7 PSP BLOWS FROM 450mm-750mm AND 8PSP BLOWS FROM 750mm-1050mm.
5. POUR LOWER LEVEL FOOTINGS FIRST. DIFFERENCE IN FOUNDING LEVEL OF ADJACENT FOOTINGS SHALL NOT EXCEED HALF OF THE CLEAR DISTANCE BETWEEN THEM.
6. STEP FOOTINGS 514 (MAX) TO SUIT SITE LEVELS U.N.O.
7. ALL FOOTINGS AND GROUND SLABS ARE TO BE BUILT IN ACCORDANCE WITH
   - AS2870 - RESIDENTIAL SLABS AND FOOTINGS
   - AS3798 - GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS.
9. WHERE SERVICE PIPES PASS THROUGH THE FOOTINGS, SPECIFIED TOTAL THICKNESS OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED. FOR CLASS 'M' & 'H1' SITES, PROVIDE A CLOSED CELL POLYETHYLENE PACKING OF AT LEAST 20MM AROUND ALL SERVICES PASSING THROUGH CONCRETE. FOR CLASS 'H2' & 'E' SITES PROVIDE A CLOSED CELL POLYETHYLENE PACKING OF AT LEAST 40MM AROUND ALL SERVICES PASSING THROUGH CONCRETE. VERTICAL PENETRATIONS DO NOT REQUIRE LAGGING.

CONCRETE

1. ALL CONCRETE SHALL BE IN ACCORDANCE WITH AS3600
2. CONCRETE QUALITY; REFER TO TABLE

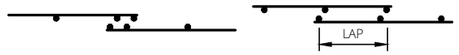
ELEMENT	GRADE OF CONCRETE f'c (MPa)	MAX. AGGREGATE. SIZE (mm)	SLUMP (mm)
FOOTINGS	N20	20	80
SLAB ON GROUND - INTERNAL	N20	20	80
SLAB ON GROUND - EXTERNAL	N40	20	80
SUSPENDED SLAB - INTERNAL	N32	20	80
SUSPENDED SLAB - EXTERNAL	N40	20	80
COLUMNS	N40	14	80

   - INTERNAL - PROTECTED FROM WEATHER, CONTAINED WITHIN THE MAIN BUILDING BY WALLS & ROOF ETC.
   - EXTERNAL - EXPOSED/OPEN TO WEATHER EG: UNDERSIDE OF EXTERNAL CANTILEVER, BALCONY SLABS, SLAB OVER ALFRESCO AREAS ETC.
3. ALL CEMENT SHALL CONFORM TO AS 3972, ALL CEMENT TO BE USED GENERAL PURPOSE CEMENT "TYPE GP". BLENDED CEMENTS "TYPE GB" SHALL NOT BE USED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
4. BUILD ALL FORMWORK FROM ARCHITECTURAL DRAWINGS. CONFIRM ANY CAST-IN ITEMS SUCH AS BOLTS, ANGLES, TIES, FLASHING, PLUMBING AND ELECTRICAL FITTINGS ETC.
5. ALL CONCRETE SHALL BE VIBRATED BY AN APPROVED IMMERSION TYPE VIBRATOR. THE FINISHED CONCRETE SHALL COMPLETELY FILL THE FORMWORK, ENCASE ALL REINFORCEMENT AND ENSURE SEGREGATION OF THE CONCRETE DOES NOT OCCUR.
6. POUR BEAMS AND SLABS MONOLITHICALLY.
7. CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
8. CAST-IN CONDUITS SHALL HAVE A MINIMUM 25mm CONCRETE COVER AND SHALL BE PLACED BETWEEN, NOT OUTSIDE, THE LAYERS OF REINFORCEMENT.
9. WHERE CONCRETE BEARS ON BRICKWORK, PROVIDE TWO LAYERS OF APPROVED BOND BREAKER BETWEEN WALLS AND SUSPENDED SLAB (ALSO APPLICABLE TO WALLS OVER SUSPENDED SLAB) U.N.O.
10. ALL CONCRETE SHALL BE MOIST CURED FOR 7 DAYS BY EITHER:
    - CONTINUOUS WATER PONDING
    - WET HESSIAN
    - APPROVED CURING MEMBRANE

    CURING COMPOUNDS ARE PERMITTED, PROVIDED THAT THEY COMPLY WITH AS3799 AND DO NOT EFFECT THE FLOOR FINISHES. THE USE OF PVA BASED COMPOUNDS IS NOT RECOMMENDED.
11. ALL REINFORCEMENT SHALL BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE POURING CONCRETE.
12. ADMIXTURES SHALL NOT BE USED WITHOUT WRITTEN APPROVAL FROM THE DESIGN ENGINEER.
13. UNLESS STATED ON THE ATTACHED PLANS, IT IS ASSUMED THAT POLISHED, HONED OR EXPOSED FINISHES WILL NOT BE USED TO CONCRETE SURFACES. REFER TO THIS OFFICE FOR FURTHER ADVICE IF USING ANY OF THE FINISHES STATED ABOVE.

REINFORCEMENT

1. SYMBOLS DENOTED IN DRAWINGS FOR GRADE AND STRENGTH OF REINFORCEMENT
   - SL & RL - GRADE 500 WELDED WIRE REINFORCING MESH TO AS/NZS4671.
   - L - GRADE 500 STEEL REINFORCING WIRE TO AS/NZS4671.
   - N - GRADE 500 HOT ROLLED DEFORMED REINFORCING BAR TO AS/NZS4671
   - R - GRADE 250 R PLAIN BAR TO AS/NZS4671.
   - W - GRADE 500 L COLD DRAWN ROUND WIRE TO AS/NZS4671.
2. SPLICE REINFORCEMENT IN ACCORDANCE WITH AS3600.
   - MESH SHALL BE LAPPED SO THAT THE TWO OUTERMOST MAIN WIRES OF ONE SHEET OVERLAP THE TWO MOST OUTERMOST MAIN WIRES OF THE OTHER SHEET.



   - THE SPLICE LENGTH OF BARS SHALL BE AS GIVEN IN THE FOLLOWING TABLE, EXCEPT WHERE OTHER DIMENSIONS ARE STATED ON THE ACTUAL DETAILS.
   - BASIC TENSILE LAP LENGTH FOR GRADE 500N DEFORMED BARS (mm).

f'c (Mpa)	EXP CLASS	BAR TYPE					
		N12	N16	N20	N24	N28	N32
≥ 32	≥ A1	500	750	1000	1250	1500	1750

3. PROVIDE STANDARD HOOKS OR COGS TO BAR ENDS IN ACCORDANCE WITH AS3600.
4. ALL REINFORCEMENT SHALL BE ADEQUATELY AND ACCURATELY TIED AND SUPPORTED ON PLASTIC, OR PLASTIC TIPPED CHAIRS. FULL PLASTIC CHAIRS ARE TO BE FOR EXTERNAL CONCRETE WHEN LOCATED WITHIN 1km OF THE COAST.
5. THE FIRST CONCRETE BEAM LIGATURE SHALL BE POSITIONED NO MORE THEN 50mm FROM ANY ADJACENT SUPPORT FACE.
6. THE FIRST CONCRETE COLUMN TIE SHALL BE PLACED NO MORE THAN 50mm FOR ANY ADJACENT SUPPORT FACE
7. ALL REINFORCEMENT TO SLAB ON GROUND SHALL BE SUPPORTED BY PLASTIC BAR CHAIRS AT 600 CRS MAX. TO MAINTAIN TOP COVER.
8. STEEL NOTATION
   - UT - UPPER TOP
   - UB - UPPER BOTTOM
   - LT - LOWER TOP
   - LB - LOWER BOTTOM
9. REINFORCING SHALL NOT BE BENT OR HEATED ON SITE WITHOUT APPROVAL FROM THE DESIGN ENGINEER. INCLUDED LUGS TO CAST IN ELEMENTS.
10. THE REINFORCEMENT SPECIFIED WILL ASSIST IN CONTROLLING CRACKING OF THE CONCRETE BUT WILL NOT PREVENT FROM IT OCCURRING.
11. U.N.O CLEAR COVER TO REINFORCEMENT SHALL BE:

ELEMENT	REQUIRED COVER (mm)	
	INTERNAL	EXTERNAL
FOOTINGS	65	65
GROUND SLAB (TOP COVER)	25	45
SUSPENDED SLAB	REFER TO SUSPENDED SLAB PLAN FOR COVER REQUIREMENTS	
CONCRETE BEAM	REFER TO SUSPENDED SLAB PLAN FOR COVER REQUIREMENTS	
COLUMN (CONCRETE & FRC)	40 TO FITMENTS	
FOR ENVIRONMENTAL CLASSIFICATION OF "SEVERE", FULL PLASTIC CHAIRS SHOULD BE USED FOR ALL EXTERNAL CONCRETE		
U.N.O REQUIRED COVER INCLUDES TOP, BOTTOM & SIDE COVER.		

ANCHORS

10. ALL MECHANICAL AND CHEMICAL ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
11. THE FOLLOWING TABLE PROVIDES MINIMUM ANCHOR CAPACITY REQUIREMENTS FOR UNCRACKED SUBSTRATES

MINIMUM WORKING LOAD ANCHOR CAPACITY		
BRICKWORK SUBSTRATE	SHEAR (kN)	TENSION (kN)
MEDIUM DUTY	2.5	2.5
CONCRETE SUBSTRATE	SHEAR (kN)	TENSION (kN)
MEDIUM DUTY	9	7
HEAVY DUTY	18	17

STRUCTURAL STEEL

1. ALL STEELWORK SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AS4100 AND AS1554.
2. ALL STEELWORK SHALL BE NEW.
3. GRADE OF STEELWORK TO BE:
   - STRUCTURAL STEEL - GRADE 300 IN ACCORDANCE WITH AS/NZS3679
   - HOLLOW SECTIONS - CHS TO COMPLY WITH AS/NZS 1163-C250L0/C350L0
     - RHS/SHS TO COMPLY WITH AS/NZS1163-C450L0
   - PLATE - GRADE 300 IN ACCORDANCE WITH AS/NZS3678
   - FLAT BAR - GRADE 250 IN ACCORDANCE WITH AS/NZS3679
4. ALL HOLLOW SECTIONS SHALL BE FULLY SEALED USING 3mm SEAL PLATES.
5. GRADE 8.8 BOLTS SHALL BE TO AS1252. GRADE 4.6 BOLTS SHALL BE TO AS1111.
6. DO NOT WELD GRADE 8.8 BOLTS.
7. BOLT DESIGNATION (EXAMPLE) = 5-M20/S
   NUMBER OF BOLTS = 5 No
   SIZE = Ø 20mm
   TIGHTENING /S = SNUG TIGHTENED
   /TB = FULLY TENSIONED BEARING TYPE CONNECTION
   /TF = FULLY TENSIONED FRICTION TYPE CONNECTION
   'FINGER TIGHT' = TIGHTENED WITH HAND SPANNER THEN TURNED BACK HALF A TURN AGAINST AN APPROVED LOCK NUT.
8. UNLESS NOTED OTHERWISE ALL CLEATS, GUSSETS, AND STIFFENER PLATES SHALL BE 10mm THICK.
9. MINIMUM BOLTED CONNECTION SHALL BE 2-M16 8.8/S U.N.O. NO THREADS SHALL BE PERMITTED IN THE SHEAR PLANE. ALL /TB AND /TF BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH AS4100.
10. ALL BOLTS, NUTS AND ACCESSORIES SHALL BE HOT DIP GALVANIZED TO AS/NZS1214.
11. WELDING SHALL COMPLY WITH AS/NZS1554 AND SHALL HAVE A MINIMUM WELD CATEGORY OF GENERAL PURPOSE (GP). USE E48XX OR W50X WELDING CONSUMABLES U.N.O.
12. WELDS SHALL BE 6mm CONTINUOUS FILLET (6CFW) UNLESS OTHERWISE NOTED.
13. CFW DENOTES CONTINUOUS FILLET WELD TO AS/NZS1554. FSBW DENOTES PRE-QUALIFIED, FULL PENETRATION BUTT WELD TO AS/NZS1554.
13. ALL WELDING SHALL BE CARRIED OUT BY AN EXPERIENCED OPERATOR. STEELWORK SHALL BE CLEANED BACK TO WHITE METAL SURFACE AND FREE OF RUST, SCALE, ETC. PRIOR TO WELDING. PURLIN AND GIRT CLEATS SHALL BE CATEGORY GP WELDS, ALL OTHER WELDS SHALL BE CATEGORY SP UNLESS NOTED OTHERWISE. SUPERVISE AND TEST ALL CATEGORY SP WELDS IN ACCORDANCE WITH AS1554.
14. TOUCH UP ALL SITE WELDS WITH 2 COATS OF 'COLD GALV' ZINC RICH PAINT.
15. WELDING SYMBOLS ARE IN ACCORDANCE WITH AS1101.
15. SECTIONS SHALL NOT BE SPLICED OTHER THAN AT JOINTS SHOWN, UNLESS APPROVED BY THE ENGINEER.
16. THE CONTRACTOR SHALL PROVIDE ALL CLEATS AND HOLES WHETHER OR NOT SHOWN FOR FIXING NON STRUCTURAL ELEMENTS OF STEELWORK.
17. ALL SURFACE TREATMENT OF STRUCTURAL STEEL SHALL COMPLY WITH AS/NZS 2312 AND THE NATIONAL CONSTRUCTION CODE. MINIMUM SURFACE TREATMENT SHALL BE:

    EXTERNAL STEELWORK/STEELWORK CAST INTO CONCRETE:
    HOT DIP GALVANIZED IN ACCORDANCE WITH AS4680 AND AS1627.4 OR AS1627.5
    RATE 600gm/SqM

    INTERNAL STRUCTURAL STEELWORK:
    SAND BLAST TO CLASS 2.5 AND COAT WITHIN 4 HOURS WITH 2 COATS INORGANIC ZINC SILICATE
    (75 MICRONS DFT)

    STEELWORK IN CONTACT WITH SOIL:
    SUITABLY TREATED IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE & CORROSIONS SPECIALISTS RECOMMENDATIONS. CONTACT THIS OFFICE FOR FURTHER ADVICE.

    PURLINS AND GIRTS:
    ALL PURLINS AND GIRTS TO BE FROM G450 Z350 STEEL TO AS1397
18. PURLINS AND GIRTS ARE DESIGNED AND NOTED ON DRAWINGS IN ACCORDANCE WITH LYSAGHT BUILDING AND STRAMIT INDUSTRIES LITERATURE. SHOULD THE CONTRACTOR WISH TO ADOPT ALTERNATIVE PROPRIETARY BRANDS FULL DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
19. ALL PURLIN AND GIRT CLEATS AND BOLTING TO BE IN ACCORDANCE WITH PURLIN MANUFACTURER'S RECOMMENDED DETAILS UNLESS NOTED OTHERWISE.
20. ALL BOLTS AND ANCHORS SHALL COMPLY WITH MANUFACTURERS SPECIFICATIONS INSTALLED IN STRICT ACCORDANCE WITH THOSE SPECIFICATIONS. NO SUBSTITUTION PERMITTED WITHOUT ENGINEER APPROVAL.

MAINTENANCE

1. ALL STRUCTURES ARE REQUIRED TO BE INSPECTED & MAINTAINED BY SUITABLY QUALIFIED PERSONS DURING THEIR LIFE TO ENSURE THEY REMAIN SERVICEABLE & FIT FOR USE. THIS INCLUDES BUT IS NOT LIMITED TO SITE DRAINAGE, SIGNS OF CORROSION, CRACKING, EXCESSIVE DEFLECTION OR ANY OTHER INDICATION OF STRUCTURAL DISTRESS.
2. FOR 'S' SLIGHTLY REACTIVE SITES & GREATER, THE BUILDER / OWNER IS TO NOTIFY THE ENGINEER PRIOR TO PLANTING TREES OR SHRUBS WITHIN 2.5m OF THE BUILDING OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE AS THIS WALL ALTER THE FOOTING DESIGN.

DESIGN CRITERIA

IMPORTANCE LEVEL	
IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE	1
SITE CLASSIFICATION	
IN ACCORDANCE WITH AS2870. BASED ON GEOLOGICAL CHARTS. ASSUMED ALLOWABLE BEARING PRESSURE: 150kPa	A
WIND CLASSIFICATION	
IN ACCORDANCE WITH AS1170.2	
WIND REGION	**A1**
TERRAIN CATEGORY	**TC2**
ULTIMATE LIMIT STATE REGIONAL WIND SPEED:	**41 m/s**
SERVICEABILITY LIMIT STATE REGIONAL WIND SPEED:	**34 m/s**
DURABILITY CLASSIFICATION	
FOR COMPONENTS BUILT INTO MASONRY IN ACCORDANCE WITH AS3700 AND AS2699	R4
ENVIRONMENT CLASSIFICATION	
FOR PROTECTION OF STEELWORK IN ACCORDANCE WITH SECTION 3.4.4.4 OF THE NATIONAL CONSTRUCTION CODE. FOR STRUCTURES OTHER THAN CLASS 1 AND 10 REFER TO AS2312.	MODERATE
IMPOSED ACTIONS	
IN ACCORDANCE WITH AS1170.1	
GENERAL AREAS	1.5kPa
BALCONIES	2.0kPa
ROOF (NON TRAFFICABLE)	0.25kPa

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REV	ISSUE DATE	DRAWN	ENG.	CHECK	DESCRIPTION
0	14-10-21	B.W	A.L	B.W	ISSUED FOR CONSTRUCTION

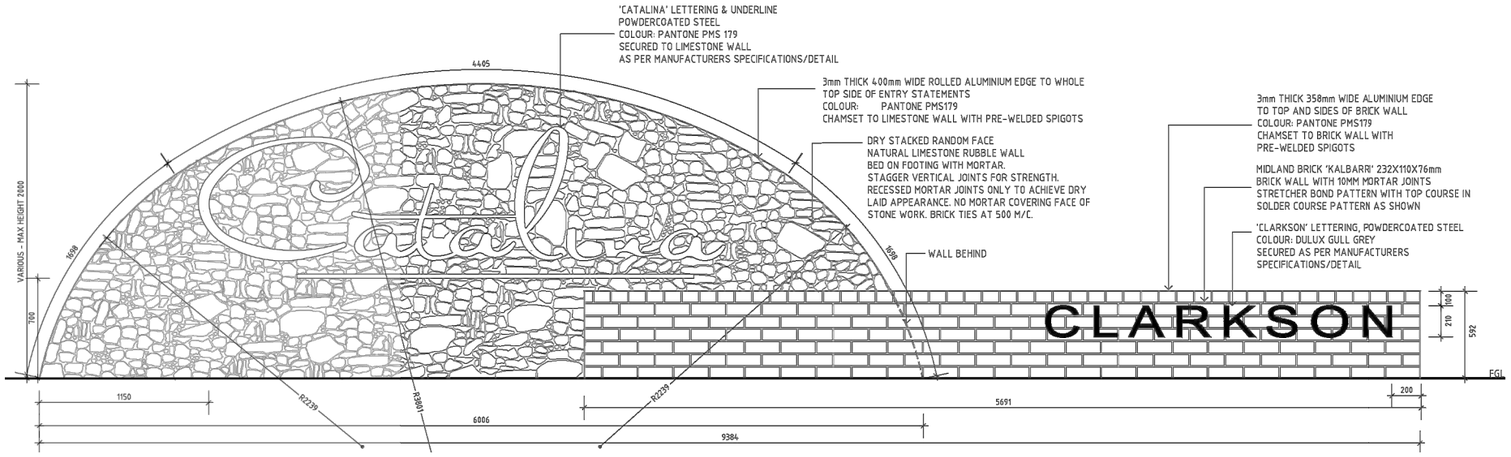
LOCATION
PROPOSED ENTRY STATEMENT
CATALINA ESTATE, CLARKSON

CLIENT
TIM DAVIES LANDSCAPING

TITLE
GENERAL NOTES

A.M. LALLI
BE (Hons) MIEAust CPEng NER
Membership No. 2879750
The Institution of Engineers Australia
MIE AUST

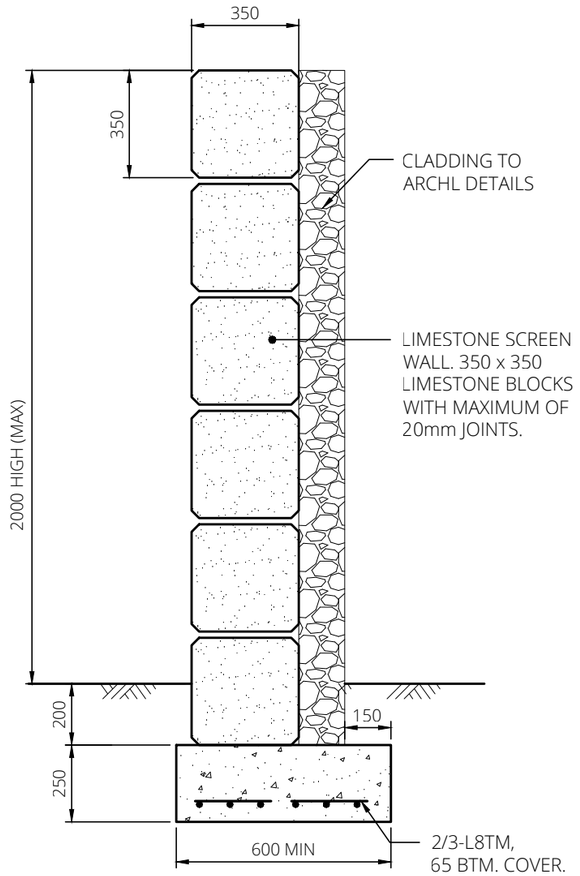
JOB NO. 21-4810
SCALE AT A3 N.T.S
SHEET NO. S1 OF 3



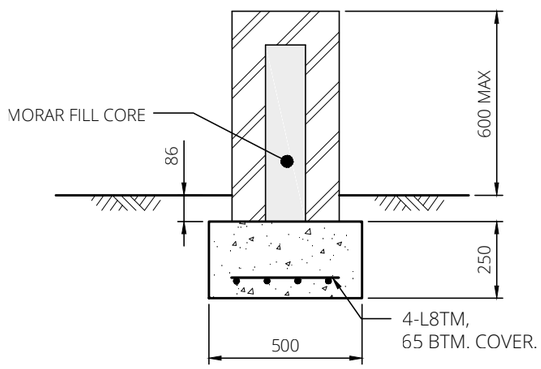
ENTRY STRUCTURE ELEVATION

- **NOT TO SCALE**

FOR INFORMATION ONLY



LIMESTONE WALL DETAIL



LOW WALL DETAIL

LIMESTONE RETAINING WALL NOTES

1. MINIMUM DRY DENSITY OF LIMESTONE BLOCKS TO BE 1800kg/m^3, WITH A MINIMUM CRUSHING STRENGTH OF AT LEAST 2MPa WHEN LAID IN A STRETCHER BOND PATTERN.
2. COMPACT GROUND UNDER AND IN FRONT OF RETAINING WALL TO RESIST SEVEN 6 BLOWS PER 300mm WHEN TESTED WITH A PERTH SAND PENETROMETER IN ACCORDANCE WITH AS 1289.63.3.
3. THESE WALLS ARE APPLICABLE TO SANDY SOILS ONLY.
4. BLOCKS TO BE FULLY BEDDED AND GROUTED IN MORTAR. USE M4 MORTAR WHEN WALL IS LOCATED LESS THAN 1km FROM COASTLINE OR 100m FROM LARGE BODIES OF SALT WATER (R4 REGIONS). USE M3 MORTAR FOR ALL OTHER AREAS.

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0	14-10-21	B.W	A.L	B.W	ISSUED FOR CONSTRUCTION

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A.M. LALLI
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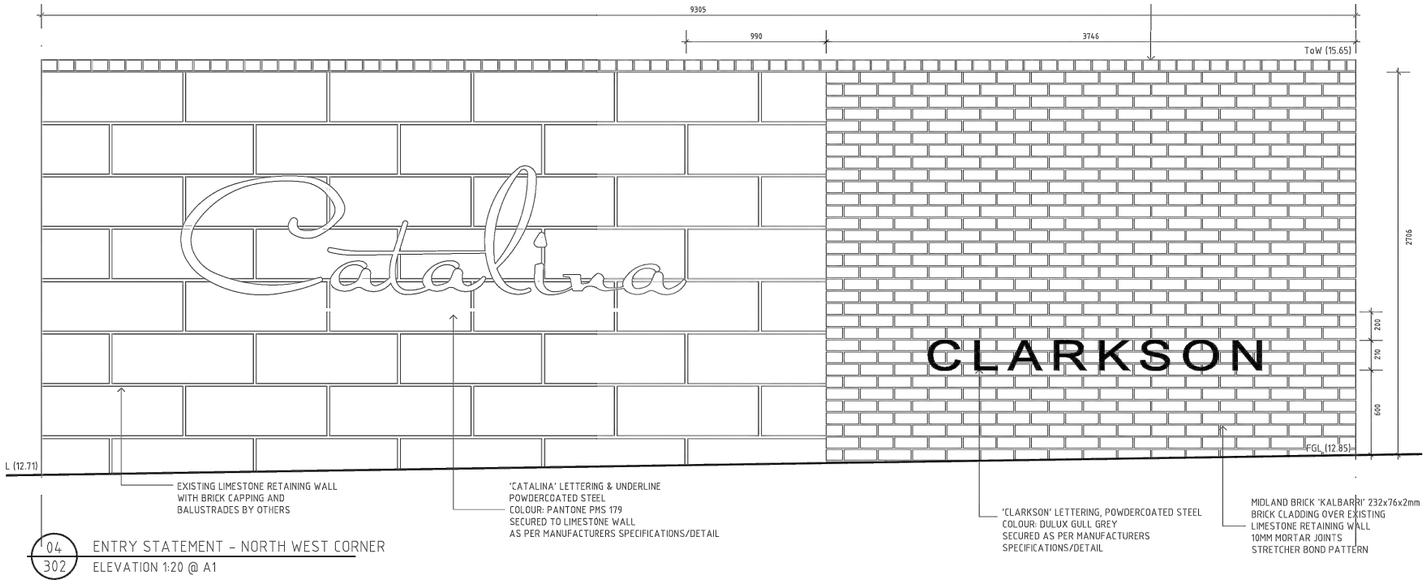
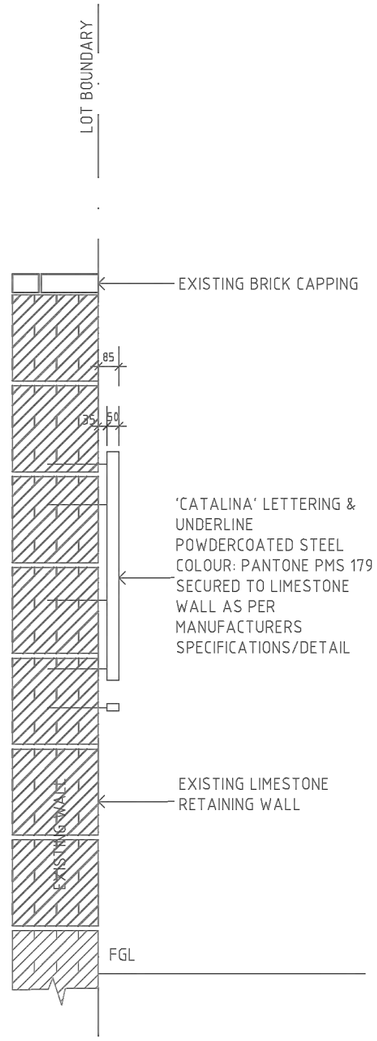
JOB NO. 21-4810

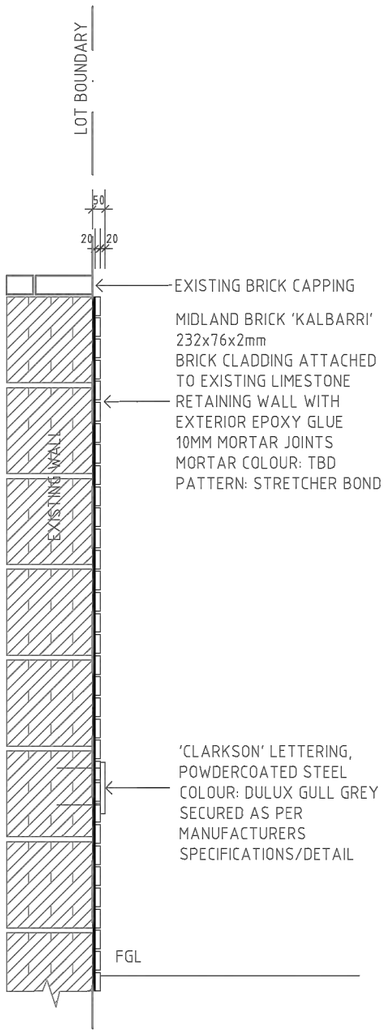
SCALE AT A3 1:20

SHEET NO. S2 OF 3



04/302 ENTRY STATEMENT - NORTH WEST CORNER
ELEVATION 1:20 @ A1





NOTE

THIS OFFICE CAN CONFIRM THAT THE ADDITION OF THE BRICK TILES AND THE SIGNAGE WILL NOT STRUCTURALLY IMPACT THE EXISTING WALL.

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REV	ISSUE DATE	DRAWN	ENG.	CHECK	DESCRIPTION
0	14-10-21	B.W	A.L	B.W	ISSUED FOR CONSTRUCTION

LOCATION
PROPOSED ENTRY STATEMENT
CATALINA ESTATE, CLARKSON

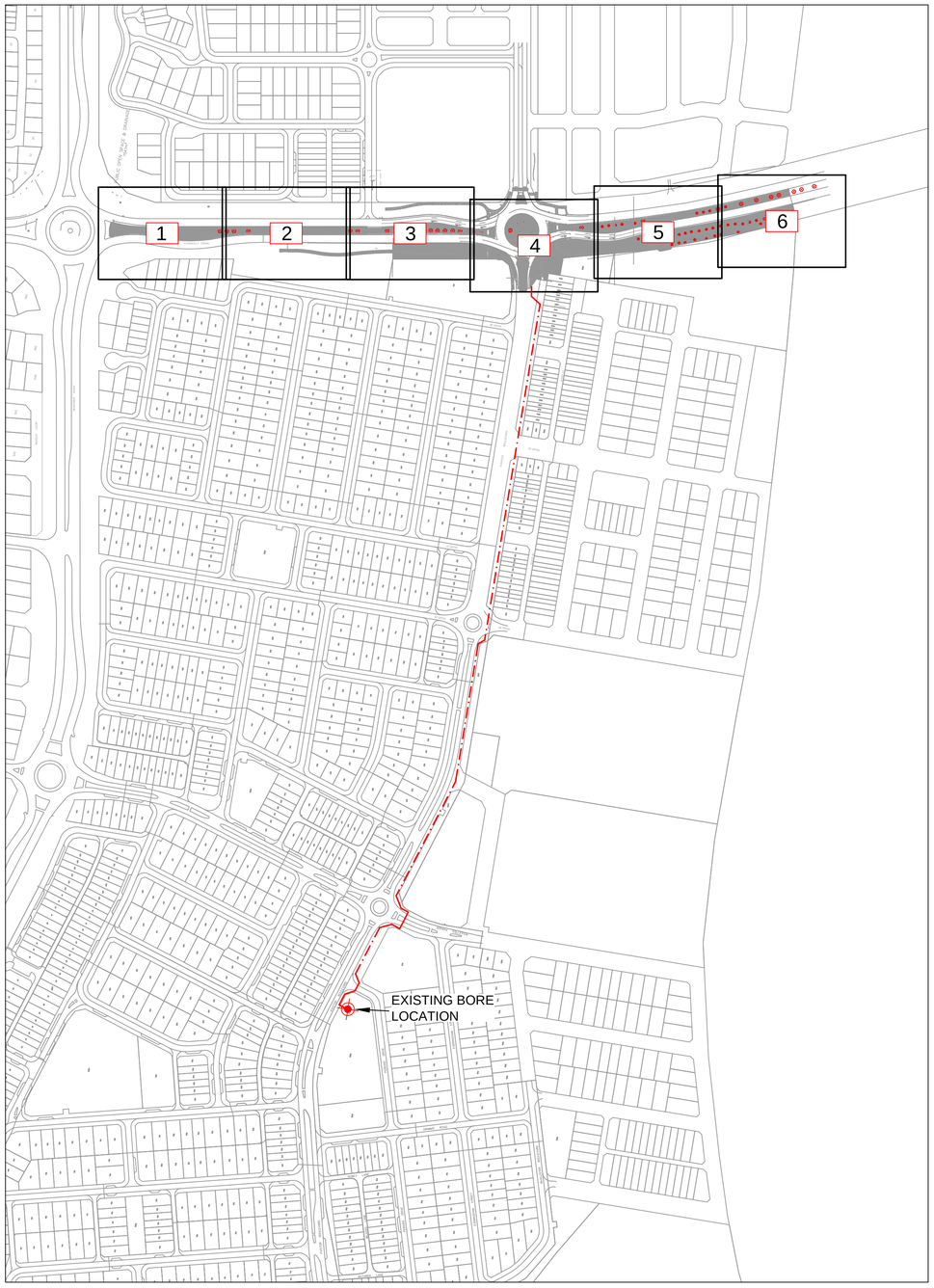
CLIENT
TIM DAVIES LANDSCAPING

TITLE
EXISTING WALL DETAILS

A.M. LALLI
BE (Hons) MIEAust CPEng NER
Membership No. 2879750
The Institution of Engineers Australia
MIE AUST

JOB NO. 21-4810
SCALE AT A3 N.T.S
SHEET NO. S3 OF 3

CATALINA CONNOLLY ENTRY
IRRIGATION WORKS



CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

AUTOCAD FILENAME: Catalina Connolly Entry Design IRev A1.dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	15/10/2021	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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NewGround DESIGN SERVICES

SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

PROJECT : CATALINA CONNOLLY ENTRY
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
15/10/2021	18310-00	COVER PAGE

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm/hr	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	2.35	250	–	40	11	TRANS.TREES	1	2.35	–
2	6.08	350	12	40	40	GARDEN	2	6.08	–
3	4.07	250	32	40	15	GARDEN	3	4.07	–
4	4.15	250	32	40	15	GARDEN	4	4.15	–
5	3.72	250	–	40	15	NEW TREES	5	3.72	–
6	6.10	350	12	40	40	GARDEN	6	6.10	–
7	6.19	250	32	40	15	GARDEN	7	6.19	–
8	6.25	350	12	40	40	GARDEN	8	6.25	–
9	4.17	250	–	40	15	NEW TREES	9	4.17	–
10	5.60	250	32	40	15	GARDEN	10	5.60	–
11	5.77	250	32	40	15	GARDEN	11	5.77	–
12	4.34	350	12	40	40	GARDEN	12	4.34	–
13	5.77	250	32	40	15	GARDEN	13	5.77	–
14	5.65	250	32	40	15	GARDEN	14	5.65	–
15	5.63	250	32	40	15	GARDEN	15	5.63	–

DAILY RUN TIME: 5 HRS & 21 MIN WEEKLY RUN TIME: 26 HRS & 45 MIN

SHEET 1 OF 8

SHEET 2 OF 8

CITY OF WANNEROO
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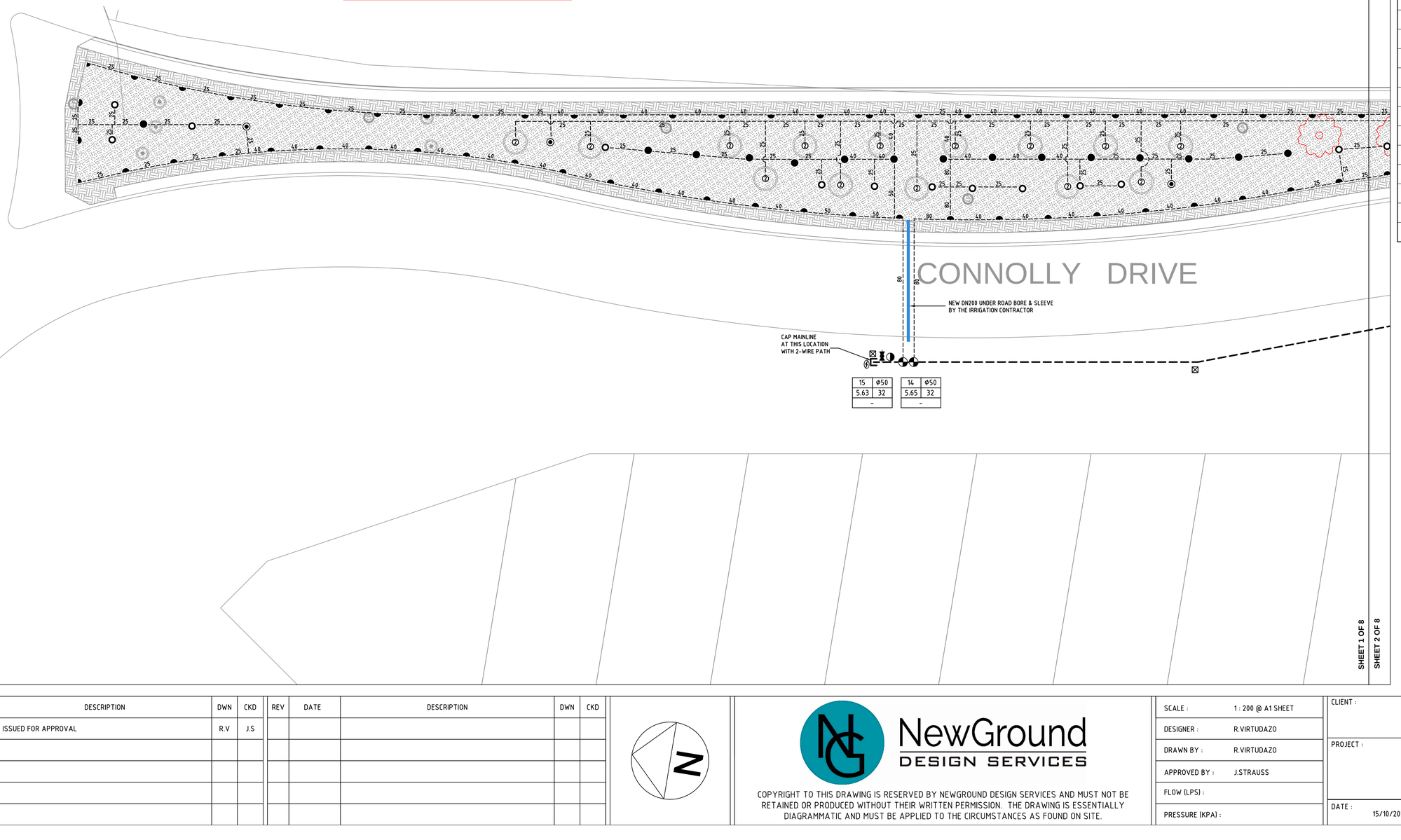
& CONSERVATION DEVELOPMENT OFFICER



LEGEND:	"SPRINKLERS"					
SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1
	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)					
200 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z 6P WITH BLUE FLEX 3.26 LPM @ 250 kPA					
1000 L	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA					
TRANSPLANT150 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 14.12 LPM @ 250 kPA					
TRANSPLANT300 L	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA					
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN					
	EXISTING BORE LOCATION					
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE					
	50mm MAINLINE FLUSHING VALVE					
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION					
	P2 CABLE PIT					
	LIGHTNING SURGE PROTECTION					
	DN110 PN12.5 PE100 MDPE POLY MAINLINE (UNDER STAGE 1 WORKS)					
	DN110 PN12.5 PE100 MDPE POLY MAINLINE					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)					
	EXISTING DN250 PVC SLEEVE					

VALVE LABEL LEGEND

FLOW (LPS)	2 ø50	VALVE SIZE
	3.29 32	PRECIPITATION RATE
	–	DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Connolly Entry Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	15/10/2021	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

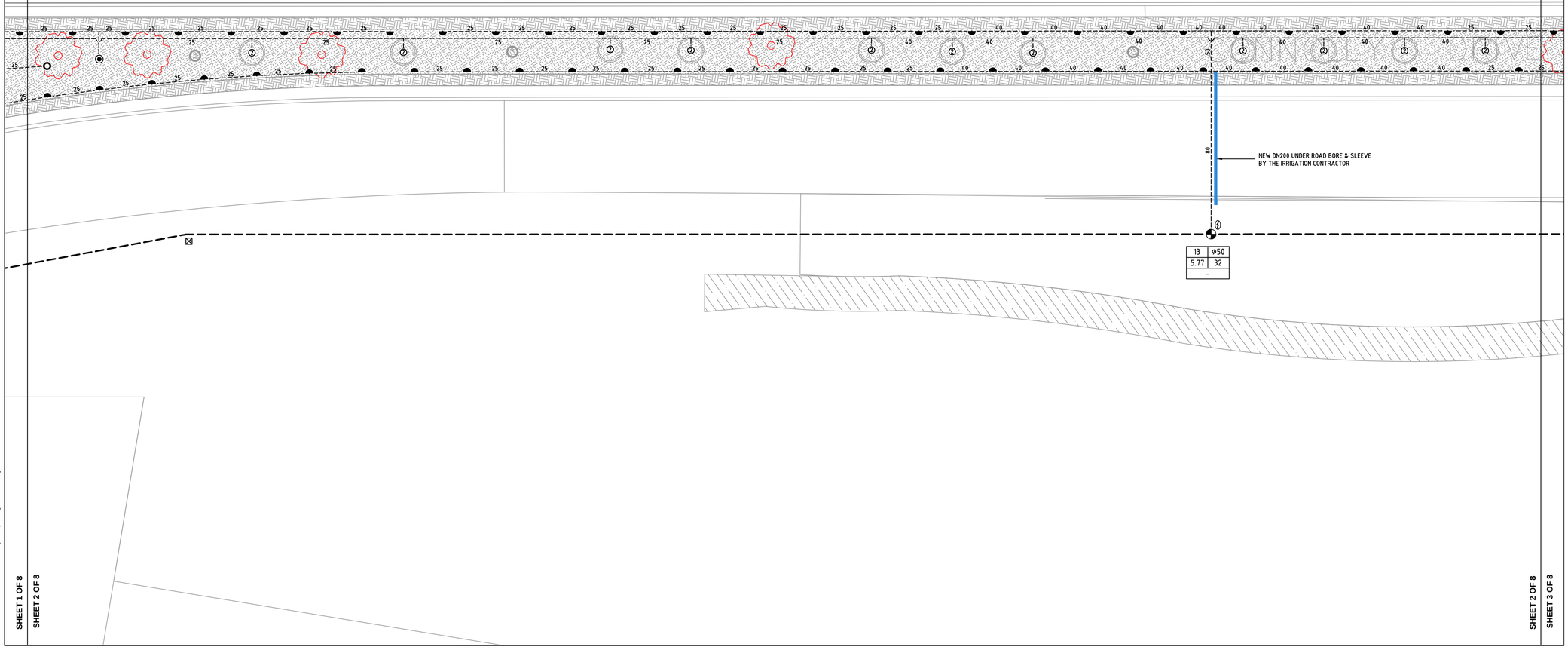
PROJECT : CATALINA CONNOLLY ENTRY
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
15/10/2021	18310-01	1 OF 8

SHEET 1 OF 8
SHEET 2 OF 8
SHEET 2 OF 8
SHEET 3 OF 8

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER



SHEET 1 OF 8
SHEET 2 OF 8
SHEET 2 OF 8
SHEET 3 OF 8

AUTOCAD FILENAME: Catalina Connolly Entry Design (Rev A1).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER
SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)

200 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z 6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
1000 L	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
TRANSPLANT150 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 14.12 LPM @ 250 kPA
TRANSPLANT300 L	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EXISTING BORE LOCATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE (UNDER STAGE 1 WORKS)
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING DN250 PVC SLEEVE

VALVE LABEL LEGEND

FLOW (LPS)	2	ø50 VALVE SIZE
	3.29	32 PRECIPITATION RATE
	-	DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
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   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	15/10/2021	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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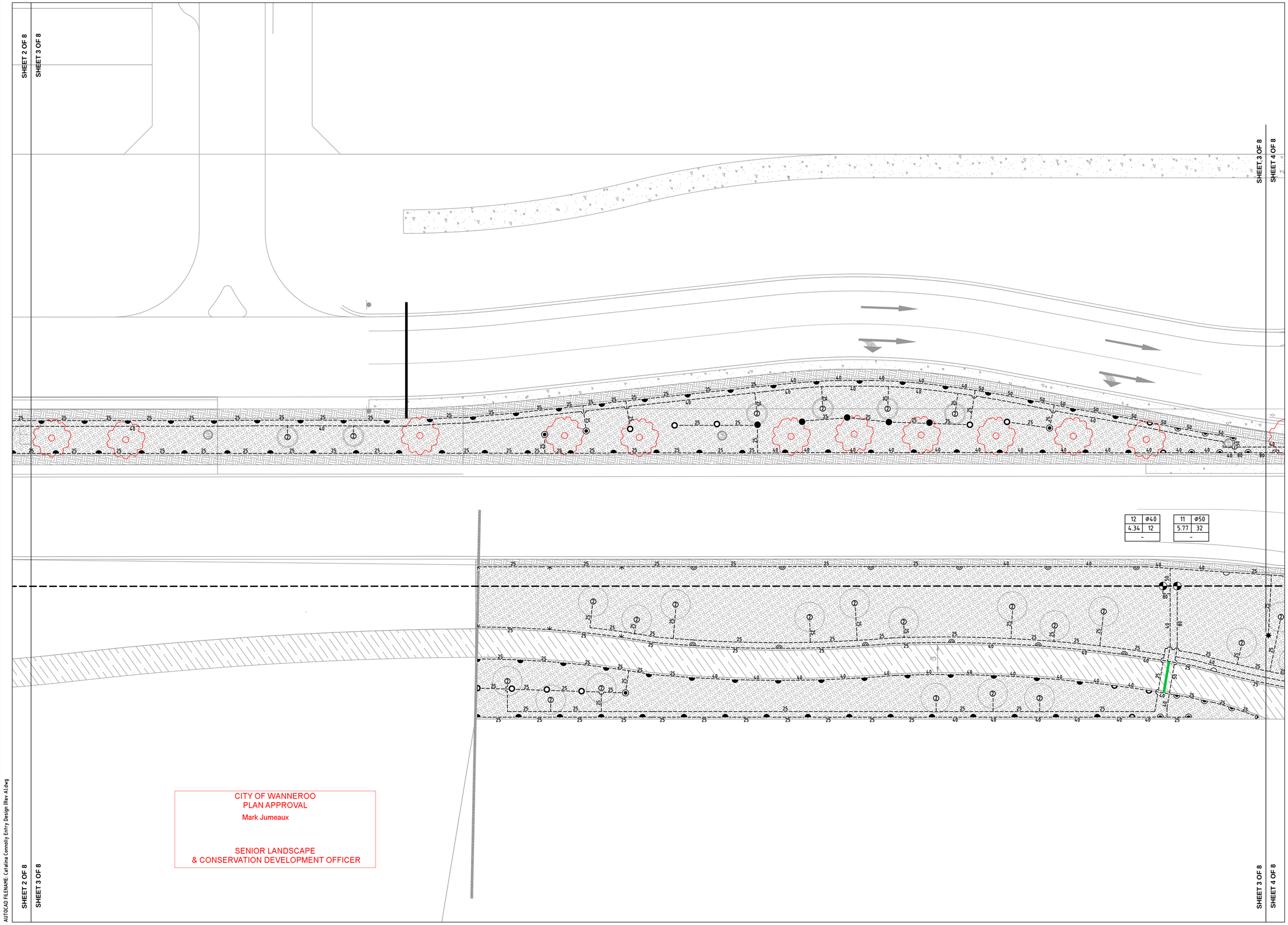
NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TDL

PROJECT :
CATALINA CONNOLLY ENTRY
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
15/10/2021	18310-02	2 OF 8



CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

AUTOCAD FILENAME: Catalina Connolly Entry Design (Rev A).dwg

LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER
SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)

200 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z 6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
1000 L	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
TRANSPLANT150 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 14.12 LPM @ 250 kPA
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	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EXISTING BORE LOCATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE (UNDER STAGE 1 WORKS)
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING DN250 PVC SLEEVE

VALVE LABEL LEGEND

FLOW (LPS)	2	Ø50 VALVE SIZE
	3.29	32 PRECIPITATION RATE
	-	DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
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5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
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6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA LTD 6582

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	15/10/2021	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

PROJECT : CATALINA CONNOLLY ENTRY IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
15/10/2021	18310-03	3 OF 8

SHEET 3 OF 8
SHEET 4 OF 8
SHEET 4 OF 8
SHEET 5 OF 8

CAP MAINLINE AT THIS LOCATION WITH 2-WIRE PATH

10	Ø50
5.60	32
-	

9	Ø40
4.17	-

2	Ø50
6.08	12
-	

3	Ø40
4.07	32
-	

4	Ø40
4.15	32
-	

5	Ø40
3.72	-
-	

1	Ø40
2.35	-
-	

CONNECT TO THE CAPPED GARDEN LATERAL UNDER STAGE 1 WORKS

CONNECT TO THE CAPPED MAINLINE UNDER STAGE 1 WORKS

CONNECT TO THE CAPPED GARDEN LATERAL UNDER STAGE 1 WORKS

CONNECT TO THE CAPPED GARDEN & TREE LATERAL UNDER STAGE 1 WORKS

8015

1049

1048

1047

SHEET 3 OF 8
SHEET 4 OF 8
SHEET 4 OF 8
SHEET 5 OF 8

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

AUTOCAD FILENAME: Catalina Connolly Entry Design (Rev A).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
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VALVE LABEL LEGEND

FLOW (LPS)	2	Ø50	VALVE SIZE
	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

NOTE:
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3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	15/10/2021	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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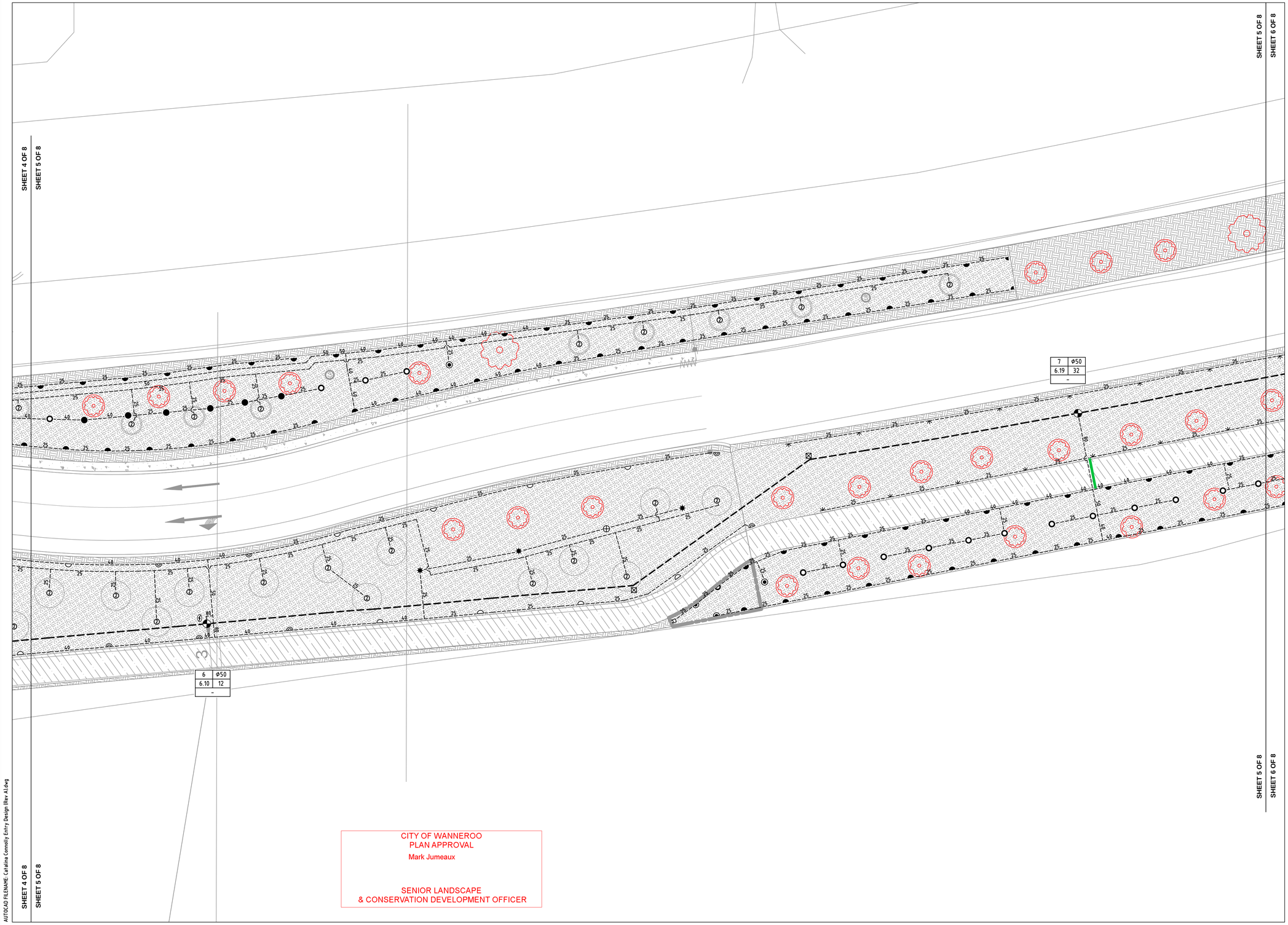
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TDL

PROJECT :
CATALINA CONNOLLY ENTRY
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
15/10/2021	18310-04	4 OF 8



CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

AUTOCAD FILENAME: Catalina Connolly Entry Design (Rev A).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER
SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)

200 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z 6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
1000 L	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
TRANSPLANT150 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 14.12 LPM @ 250 kPA
TRANSPLANT300 L	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EXISTING BORE LOCATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE (UNDER STAGE 1 WORKS)
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING DN250 PVC SLEEVE

VALVE LABEL LEGEND

FLOW (LPS) | Ø50 VALVE SIZE | 32 PRECIPITATION RATE | - DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
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   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	15/10/2021	ISSUED FOR APPROVAL	R.V	J.S

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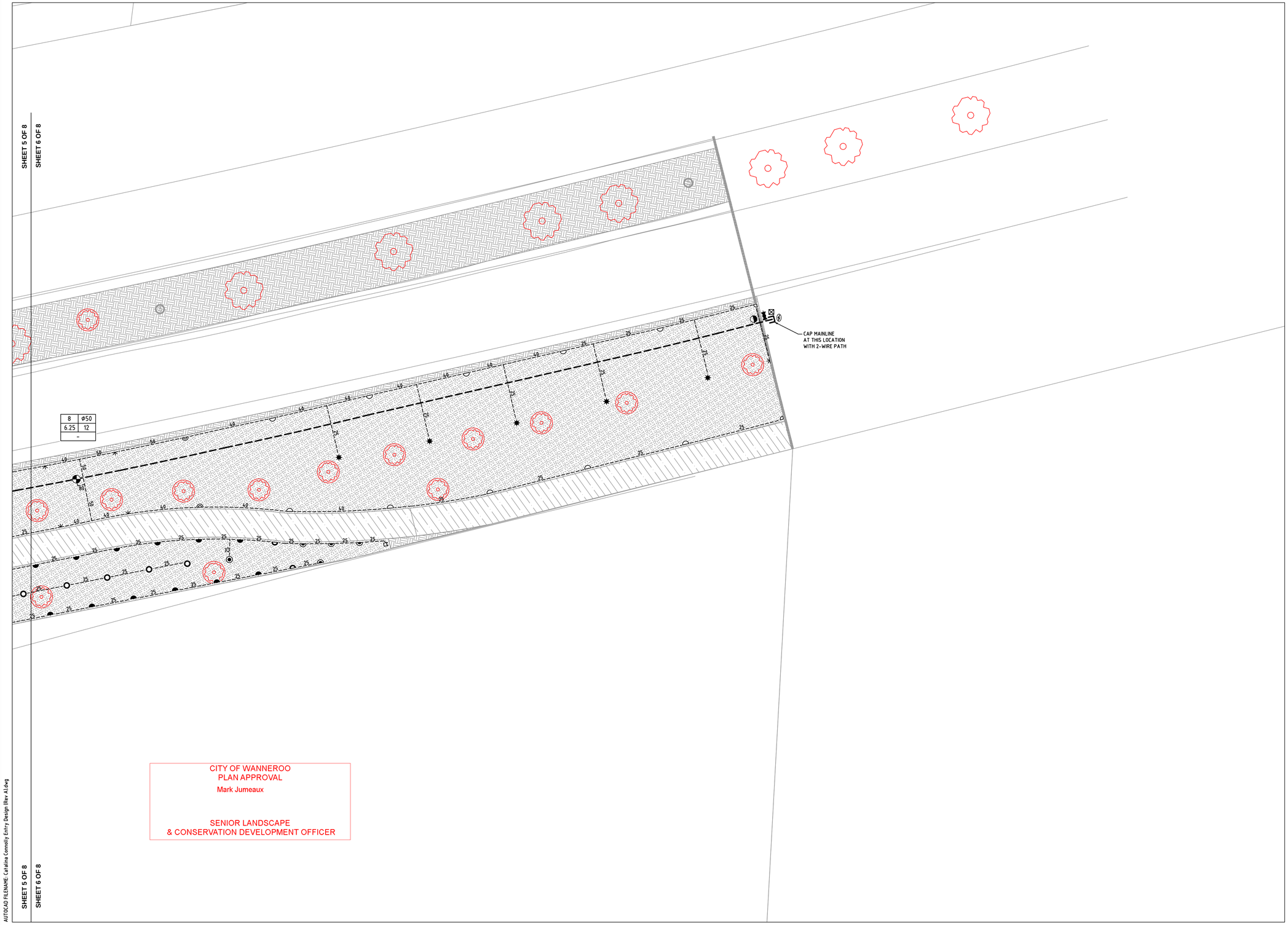
NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

PROJECT : CATALINA CONNOLLY ENTRY IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
15/10/2021	18310-05	5 OF 8



CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

AUTOCAD FILENAME: Catalina Connolly Entry Design IRev A1.dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
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	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
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	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
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	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN					
	EXISTING BORE LOCATION					
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE					
	50mm MAINLINE FLUSHING VALVE					
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION					
	P2 CABLE PIT					
	LIGHTNING SURGE PROTECTION					
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	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)					
	EXISTING DN250 PVC SLEEVE					

VALVE LABEL LEGEND

FLOW (LPS)	2	ø50 — VALVE SIZE
	3.29	32 — PRECIPITATION RATE
	–	DECODER NO.

NOTE:
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CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — IRRIGATION / TURF CONSULTANT

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	15/10/2021	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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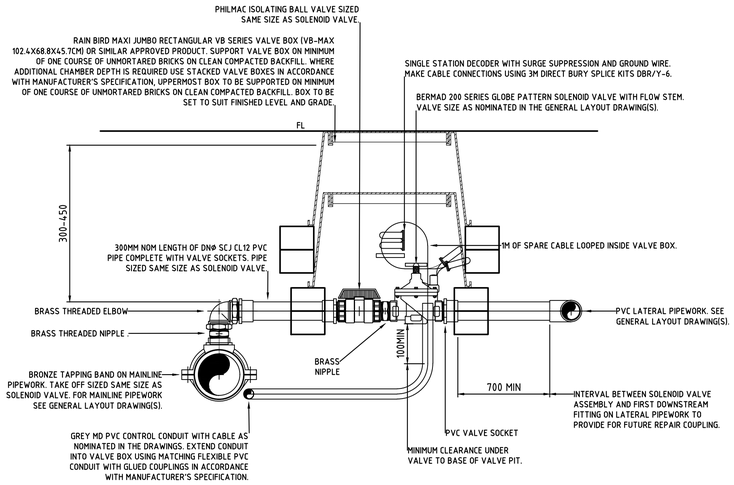
NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TDL

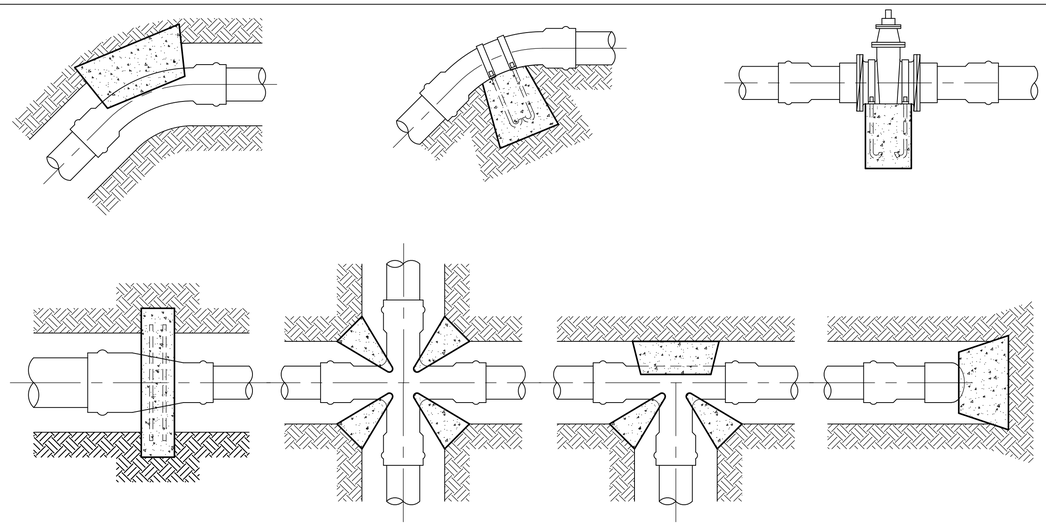
PROJECT :
CATALINA CONNOLLY ENTRY
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
15/10/2021	18310-06	6 OF 8



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

NOTE:
MINIMUM BEARING AREA TO BE IN ACCORDANCE WITH TYPE OF FITTING AND SOIL TYPE AS PER PIPE MANUFACTURERS RECOMMENDATIONS

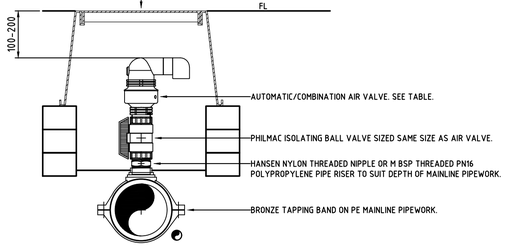
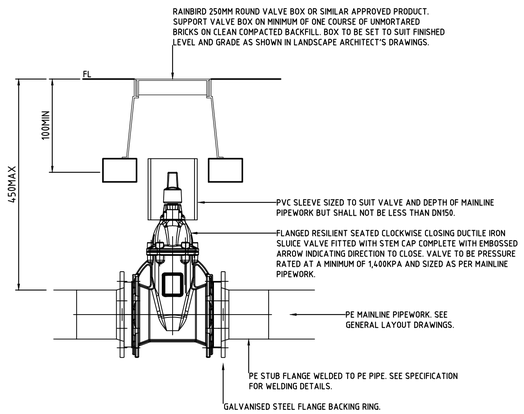


TABLE OF AIR VALVES	
MAINLINE SIZE (DN)†	AIR VALVE‡
LESS THAN 63	PN16 DN20 COMBINATION AIR VALVE
75-140	PN16 DN25 COMBINATION AIR VALVE
150-200	PN16 DN50 COMBINATION AIR VALVE
† SEE GENERAL LAYOUT DRAWING(S). ‡ SEE ALSO SPECIFICATION.	

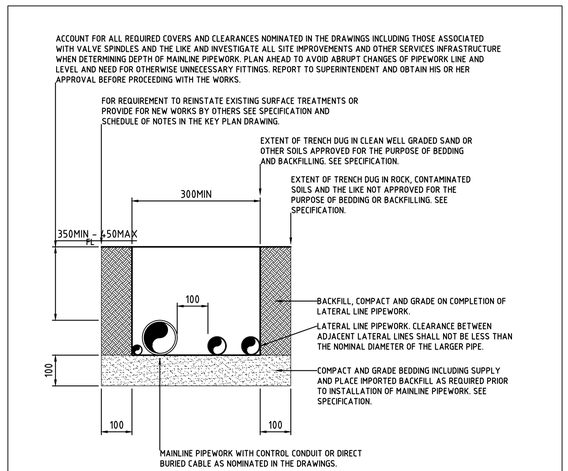
TYPICAL AIR VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL MAINLINE ISOLATION VALVE INSTALLATION

NOT TO SCALE



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

AUTOCAD FILENAME: Catalina Connolly Entry Design IRev A1.dwg

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FLOW (LPS) :	
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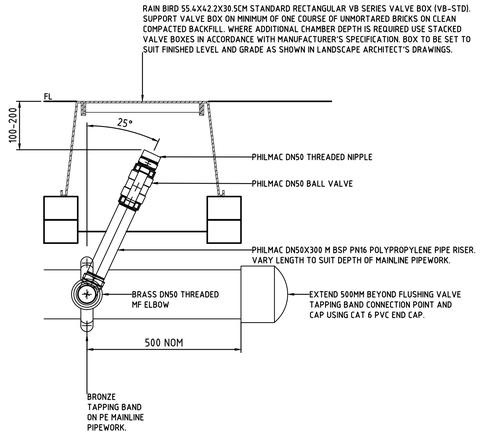
CLIENT :
TDL

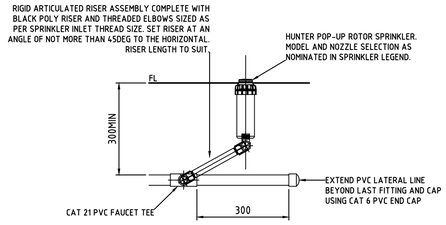
PROJECT :
CATALINA CONNOLLY ENTRY
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
15/10/2021	18310-07	7 OF 8



TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

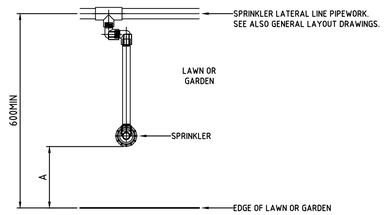
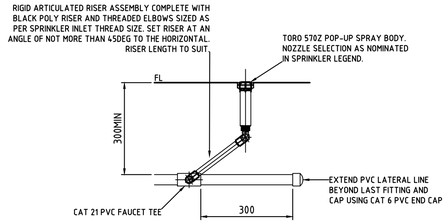


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	
† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.			

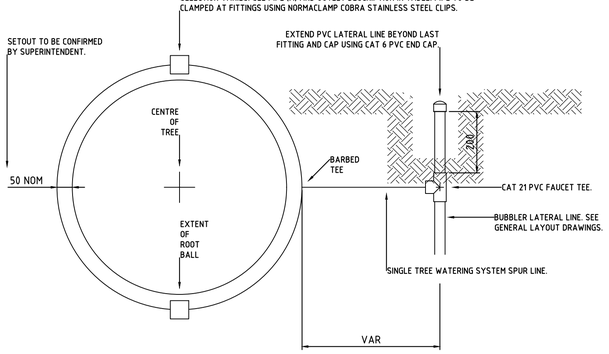
SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE



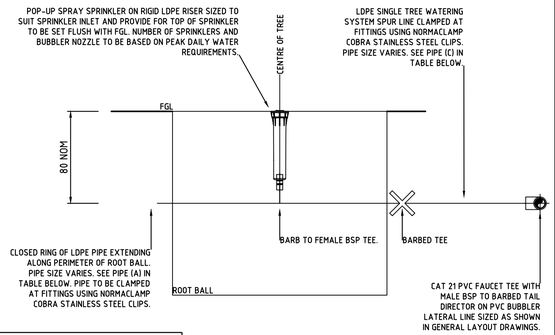


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
-	-	0-6	-	DN19	-	DN19
-	-	6-15	-	DN19	-	DN25
-	-	15-30	-	DN25	-	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

AUTOCAD FILENAME: Catalina Connolly Entry Design (Rev A).dwg

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FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TDL

PROJECT :
CATALINA CONNOLLY ENTRY
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
15/10/2021	18310-08	8 OF 8

CATALINA

CLARKSON, WA

Catalina

STAGE 43 STREETSCAPES

LANDSCAPE CONTRACT: CAT-65

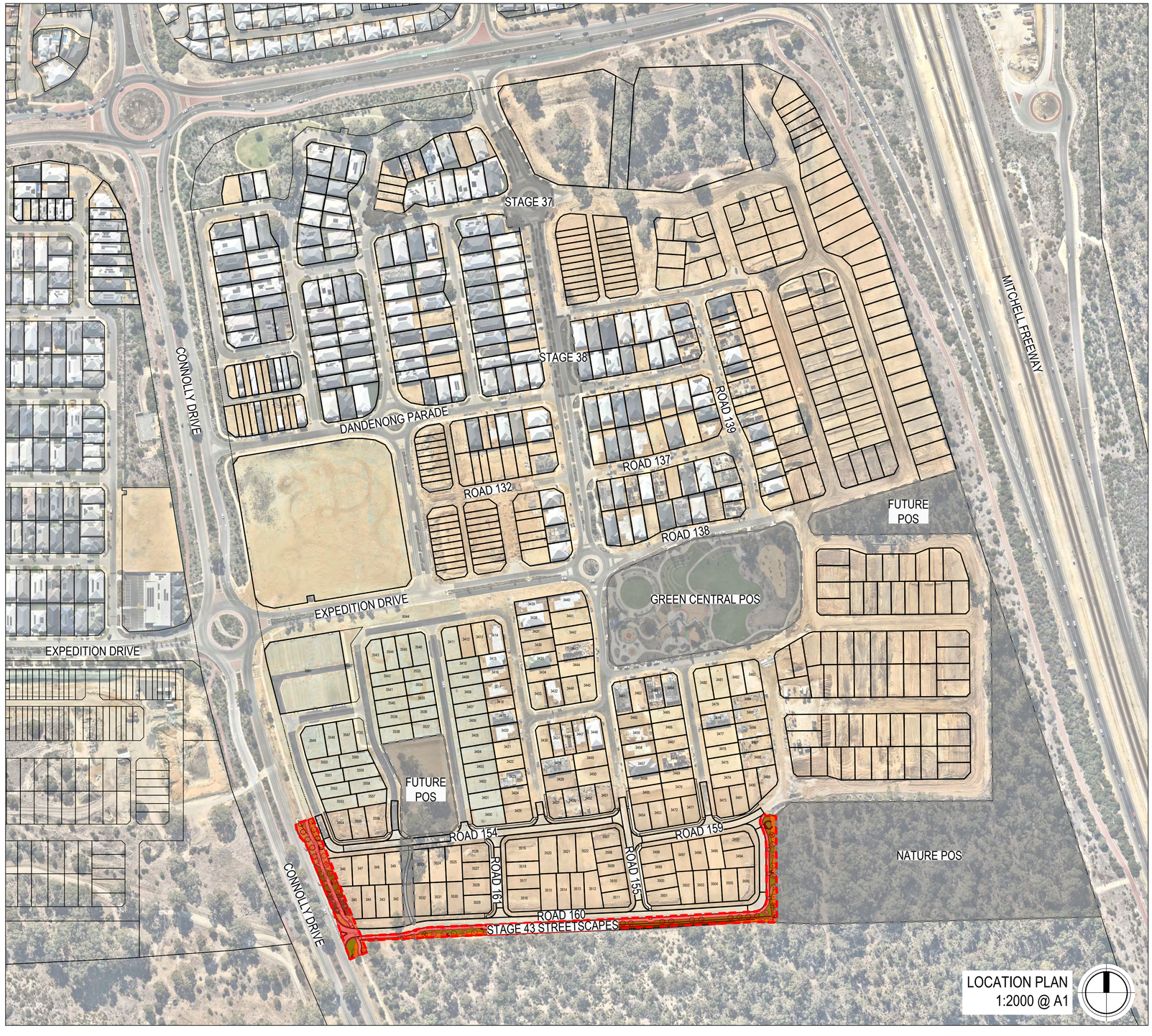
LANDSCAPE & IRRIGATION WORKS

CLIENT: CATALINA REGIONAL COUNCIL

ISSUE FOR: ***CONSTRUCTION***

DATE: **MARCH 2025**

SHEET LIST TABLE		
SHEET NUMBER	SHEET TITLE	REVISION
CAT-65-000	COVERSHEET	0
CAT-65-301	GRADING PLAN 1 OF 3	0
CAT-65-302	GRADING PLAN 2 OF 3	0
CAT-65-303	GRADING PLAN 3 OF 3	0
CAT-65-501	PLANTING PLAN 1 OF 3	0
CAT-65-502	PLANTING PLAN 2 OF 3	0
CAT-65-503	PLANTING PLAN 3 OF 3	0
CAT-65-900	TYPICAL DETAILS	0
CAT-65-980	TYPICAL NOTES	0



CATALINA Regional Council

emerge ASSOCIATES
Integrated Science & Design



LEGEND

- EXTENT OF WORKS
- 0.00 EXISTING CONTOURS
- 0.00 PROPOSED CONTOURS
- RL +00.00 SPOT LEVELS
- TW 0.00 TOP WALL SPOT HEIGHTS
- PROPOSED RETAINING WALLS BY CIVIL
- EXISTING DRAIN BY OTHERS

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFF-SITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PREFERENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
0	04.03.25	YL	ISSUE FOR CONSTRUCTION
C	04.02.25	JL	REVISED FOR APPROVAL
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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 43 STREETSCAPES
DRAWING TITLE
GRADING PLAN 1 OF 3
CLIENT
CATALINA REGIONAL COUNCIL

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SCALE 1: 250 @ A1 METRES
0 2.5 5 7.5 10 12.5

DRAWING NUMBER
CAT-65-301

REV
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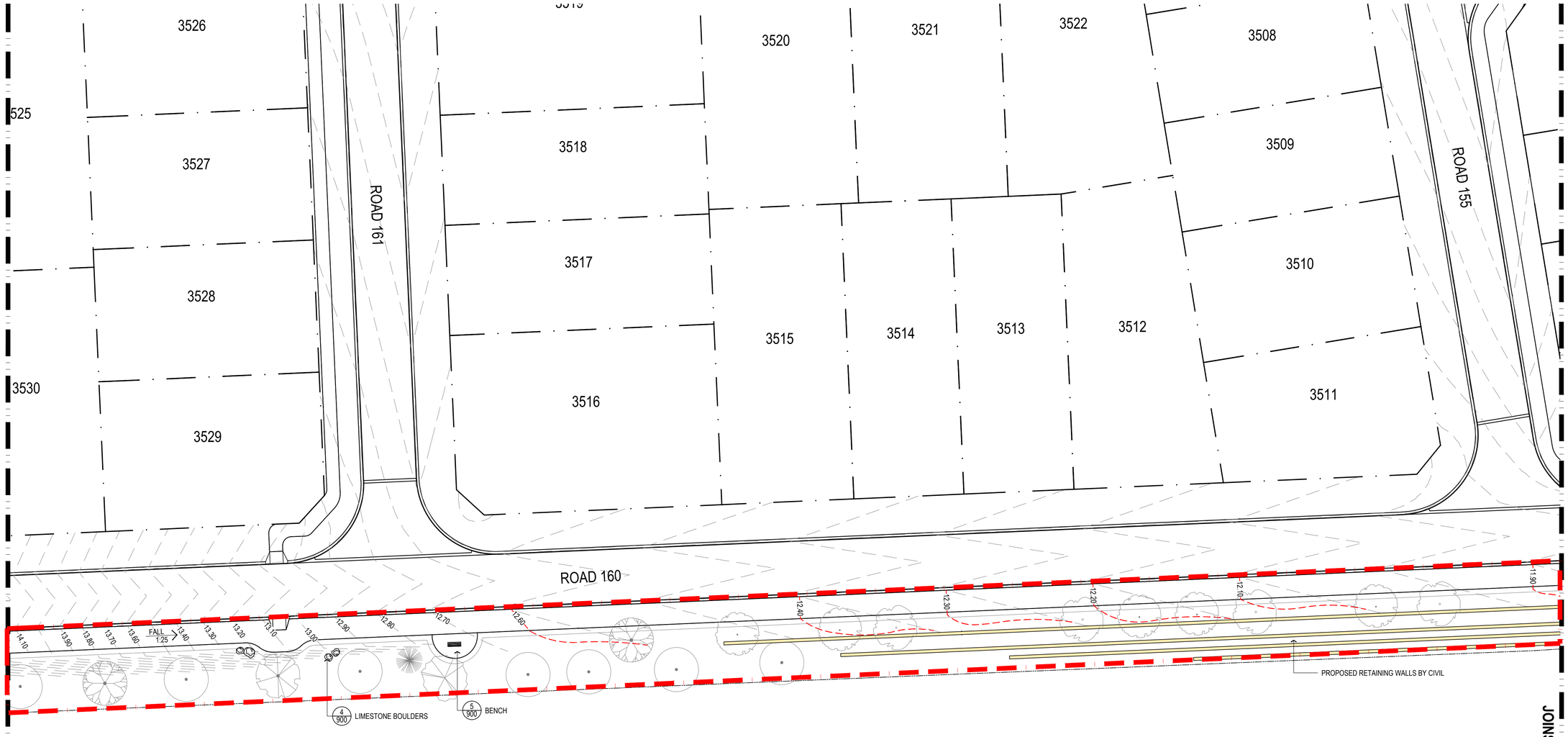
RE: U:\CURRENT PROJECTS\CATALINA, TAMALA PARK\C) DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 43 STREETSCAPES\CAT-65-301.DWG



LEGEND

- EXTENT OF WORKS
- 0.00 EXISTING CONTOURS
- 0.00 PROPOSED CONTOURS
- RL +00.00 SPOT LEVELS
- TW 0.00 TOP WALL SPOT HEIGHTS
- PROPOSED RETAINING WALLS BY CIVIL
- EXISTING DRAIN BY OTHERS

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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 43 STREETSCAPES
DRAWING TITLE
GRADING PLAN 2 OF 3
CLIENT
CATALINA REGIONAL COUNCIL

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DATE INITIALLY DRAWN	02.02.2024		

SCALE 1: 250 @ A1 METRES
0 2.5 5 7.5 10 12.5

DRAWING NUMBER
CAT-65-302

REV
0

DEF: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLI DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 43 STREETSCAPES\ JOB NAME & STAGE\CATALINA STAGE 43STREETSCAPES_GRD.DWG



LEGEND

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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 43 STREETSCAPES
DRAWING TITLE
GRADING PLAN 3 OF 3
CLIENT
CATALINA REGIONAL COUNCIL

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0 2.5 5 7.5 10 12.5

DRAWING NUMBER
CAT-65-303

REV
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REF: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLIENT DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 43 STREETSCAPES\JOB NAME ETAD\CAD FILES\CATALINA STAGE 43 STREETSCAPES_GRD.DWG



LEGEND

- EXTENT OF WORKS
- MIX 1 - GROUNDCOVERS (6 900) (7 900)
- MIX 2 - LOW SHRUBS (6 900) (7 900)
- MIX 3 - MEDIUM SHRUBS (6 900) (7 900)
- MULCH ONLY
- COLOURED CONCRETE - HOLCIM SANDSTONE (1 900)
- PROPOSED CONCRETE PATH (7 900)
- EXISTING DUAL USE PATH BY CIVIL
- SEATING BENCH (5 900)
- LIMESTONE BOULDERS (4 900)
- PROPOSED RETAINING WALLS, PENDING CONFIRMATION FROM CIVIL
- CONSERVATION FENCING (11 900)
- PROPOSED TREES (8 900) (9 900)
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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 43 STREETSCAPES
DRAWING TITLE
PLANTING PLAN 1 OF 3
CLIENT
CATALINA REGIONAL COUNCIL

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SCALE 1: 250 @ A1 METRES
0 2.5 5 7.5 10 12.5

DRAWING NUMBER CAT-65-501
REV 0

I:\SE1 LIVE\PROJECTS\CATALINA - TAMALA PARK\CLI DRAWINGS\DB CODE\ AUTOCAD\DB CODE\ LANDSCAPE\STAGE 43 STREETSCAPES\CAT-65-501_DB.DWG



LEGEND

- EXTENT OF WORKS
- MIX 1 - GROUNDCOVERS (6 900 / 7 900)
- MIX 2 - LOW SHRUBS (6 900 / 7 900)
- MIX 3 - MEDIUM SHRUBS (6 900 / 7 900)
- MULCH ONLY
- COLOURED CONCRETE - HOLCIM SANDSTONE (1 900)
- PROPOSED CONCRETE PATH (1 900)
- EXISTING DUAL USE PATH BY CIVIL
- SEATING BENCH (5 900)
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PROJECT
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CLARKSON, WA
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STAGE 43 STREETSCAPES
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PLANTING PLAN 2 OF 3
CLIENT
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0 2.5 5 7.5 10 12.5

DRAWING NUMBER
CAT-65-502

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JOB NAME - STAGE\CATALINA STAGE 43 STREETSCAPES.DWG



JOINS CAT-65-502

MIX 1

Key	Botanic Name	Common Name	Pot	Quantity
Coac	Conostylis aculeata	Prickly Cottonhead	Tube	707
Hepu	Hemiandra pungens	Snakebush	Tube	707
Jase	Jacksonia sericea	Waldjumi	Tube	707
Kepr	Kennedia prostrata	Running Postman	Tube	707
Lebr	Leucophyta brownii	Cushion Bush	Tube	707
Olax	Olearia axillaris	Coastal Daisy-bush	Tube	707
Sccr	Scaevola crassifolia	Cushion Fan Flower	Tube	707
Tere	Templetonia refusa	Cocky's tongue	Tube	707

MIX 2

Key	Botanic Name	Common Name	Pot	Qty.
Acsa	Acacia saligna 'prostrate'	Wattle	14 cm	130
Adcy	Adenanthos cygnorum	Wooly Bush	14 cm	130
Tere	Templetonia refusa	Cockies Tongue	14 cm	130
Thba	Thryptomene baeckeacea	Myrtle	14 cm	130

MIX 3

Key	Botanic Name	Common Name	Pot	Qty.
Ancu	Angianthus cunninghamii	Coastal Angianthus	Tube	95
Atci	Atriplex cinerea	Grey Saltbush	Tube	95
Bada	Banksia dallanneyi	Couch Honeypot	Tube	95
Ergl	Eremophila glabra	Tar Bush	Tube	95

MIX 4

Key	Botanic Name	Common Name	Pot	Qty.
Anfl	Anigozanthos flavidus	Kangeroo Paw	Tube	76
Daci	Darwinia citriodora	Lemon-Scented Myrtle	Tube	76
Ergl	Eremophila glabra	Tar Bush	Tube	76
Grcr	Grevillea crithmifolia	Grevillea	Tube	76
Hepu	Hemiandra pungens	Snakebush	Tube	76
Hicu	Hibbertia cuneiformis	Cut-Leaf Hibbertia	Tube	76
Mypa	Myoporum parvifolium	Creeping Boobialla	Tube	76

MIX 5

Key	Botanic Name	Common Name	Pot	Qty.
Coab	Conostylis aculeata	Prickly Cottonhead	Tube	253
Coca	Conostylis candicans	Grey Cottonheads	Tube	253
Grob	Grevillea obtusifolia 'Prostrate'	Grevillea	Tube	253
Hira	Hibbertia racemosa	Stalked Guinea Flower	Tube	253
Paoc	Pattersonia occidentalis	Long Purple Flag	Tube	253
Sccr	Scaevola crassifolia	Cushion Fan Flower	Tube	253
Scth	Scaevola thesioides	Silky Scaevola	Tube	253

CONSERVATION PLANTING

Key	Botanic Name	Common Name	Pot	Qty.
Acla	Acacia lasiocarpa	Wattle	Tube	593
Acro	Acacia rostelliffera	Summer-scented Wattle	Tube	593
Babl	Banksia blechnifolia	Southern Blechnum Banksia	Tube	593
Drse	Dryandra sessilis	Parrot Bush	Tube	593
Euma	Eucalyptus macrocarpa	Mottlecah	Tube	593
Goto	Gomphrolobium tomentosum	Hairy Yellow Pea	Tube	593
Hali	Hakea lissocarpha	Honey Bush	Tube	593
Hepu	Hemiandra pungens	Snakebush	Tube	593
Hihy	Hibbertia hypericoides	Yellow Buttercups	Tube	593
Mehu	Melaleuca huegelii	Chenille Honey Myrtle	Tube	593

PLANT AND TREE NUMBERS IN SCHEDULE ARE TO BE USED AS GUIDE ONLY. TENDERERS TO REFER LABELS ON PLANS FOR NUMBERS. PLANT NUMBERS AND SPECIES ARE SUBJECT TO AVAILABILITY.

TREE SCHEDULE

Sym.	Key	Botanic Name	Common Name	Qty.	Pot
Coca	Coca	Corymbia calophylla	Marri	4	100 Litre
Eude	Eude	Eucalyptus decipiens	Red Heart Moit	17	100 Litre
Eule	Eule	Eucalyptus leocoxylon	Yellow Gum	14	100 Litre
Eusp	Eusp	Eucalyptus spathulata	Swamp Mallet	11	100 Litre
Euto	Euto	Eucalyptus torquata	Coral Gum	5	100 Litre
Euut	Euut	Eucalyptus utilis	Coastal Mort	4	100 Litre
Mequ	Mequ	Melaleuca quinquenervia	Broadleaved Paperbark	6	100 Litre
Pape	Pape	Parortla persica	Persian Ironwood	8	100 Litre
Pich	Pich	Pistacia chinemsis	Chinese Pistachio	1	100 Litre
Xapr	Xapr	Xanthorrhoea preissii	Grass Tree	5	Transplant

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REV	DATE	BY	ISSUE OR AMENDMENT
0	04.03.25	YL	ISSUE FOR CONSTRUCTION
C	04.02.25	JL	REVISED FOR APPROVAL
B	08.08.24	JL	ISSUE FOR APPROVAL
A	02.02.24	JL	ISSUE FOR COMMENT

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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 43 STREETSCAPES
DRAWING TITLE
PLANTING PLAN 3 OF 3
CLIENT
CATALINA REGIONAL COUNCIL

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DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	02.02.2024		

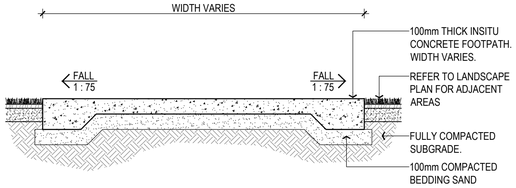
SCALE 1: 250 @ A1 METRES
0 2.5 5 7.5 10 12.5

DRAWING NUMBER CAT-65-503
REV. 0

REF: J:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLIENT DRAWINGS\JOB CODES\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 43 STREETSCAPES\CAT-65-503.DWG



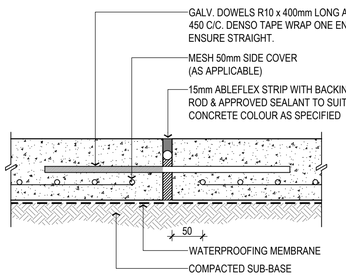
COLOURED CONCRETE:
GEOSTONE 'SANDSTONE'



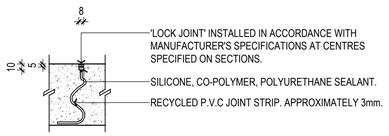
NOTES

1. FOUNDATION TO BE COMPACTED TO 95% MDD.
2. ALL CONCRETE FOOTPATH CONSTRUCTION TO BE A MIN 32MPa, 20mm AGGREGATE AND MAX SLUMP OF 80-100mm.
3. BEDDING - SAND (100mm MINIMUM).
4. EXPANSION JOINT EVERY 5.0M AS. SEE DETAIL 02/900
5. CONTRACTION JOINT EVERY 2.5M. SEE DETAIL 03/900
6. SURFACE TO BE BROOM FINISH, NON-SLIP, WITH SMOOTH EDGE APPROX 75mm WIDE AT EDGES AND JOINTS.
7. LONGITUDINAL GRADE SHOULD NOT EXCEED 1 IN 20.
8. WHERE LONGITUDINAL GRADE IS GREATER THAN 1 IN 14, LANDINGS WILL BE PROVIDED EVERY 6m.
9. VERTICAL CLEARANCES ALONG PATHS SHOULD BE A MINIMUM OF 2m.
10. WHERE STREET FURNITURE (POLES, BENCHES, RUBBISH BINS, POSTS, ETC) ARE LOCATED IN PATH, A MIN UNOBSTRUCTED WIDTH OF 1.2m MUST BE MAINTAINED.

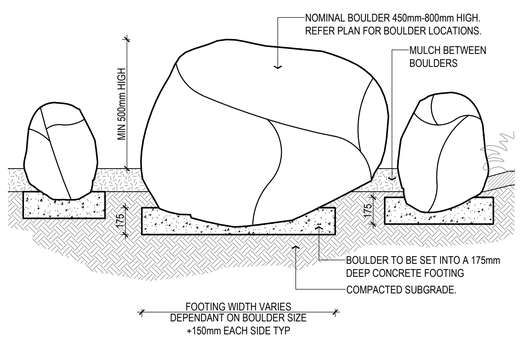
1 / 900 INSITU CONCRETE FOOTPATH - TYPICAL
SECTION — SCALE 1:20



2 / 900 TYPICAL EXPANSION JOINT
SECTION — SCALE 1:5



3 / 900 TYPICAL CONTRACTION JOINT
SECTION — SCALE 1:5



NOTES

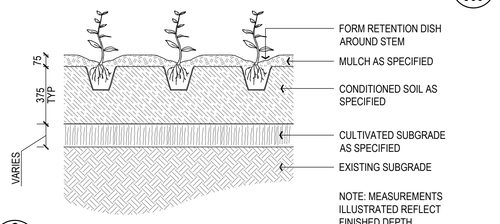
LIMESTONE BOULDERS TO BE SOURCED AND INSTALLED. MIN HEIGHT SIZE 450mm - MAX SIZE 800mm.
GENERALLY BOULDERS TO BE BURIED APPROX. 1/3 OF EXPOSED HEIGHT AND INSTALLED WITH A MORTAR BED

4 / 900 FEATURE BOULDERS
SECTION — SCALE 1:20

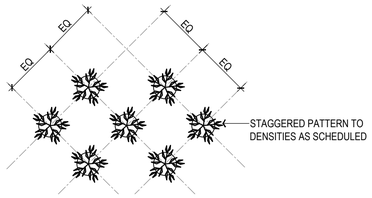


PRODUCT NAME	LINEA BENCH
PRODUCT SUPPLIER	STREET FURNITURE AUSTRALIA
PRODUCT CODE	LIB6 (1800mm)
PRODUCT FINISH	STAINLESS STEEL FRAME; ALUMINIUM WOODGRAIN BATTENS
PRODUCT COLOUR	TEXTURA MONUMENT FRAME; ALUMINIUM SPOTTED GUM BATTENS
PRODUCT FIXING	SURFACE FIXED

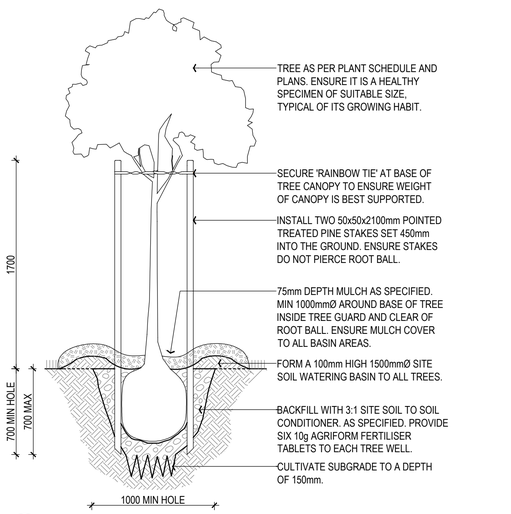
5 / 900 BENCH
IMAGE REFERENCE



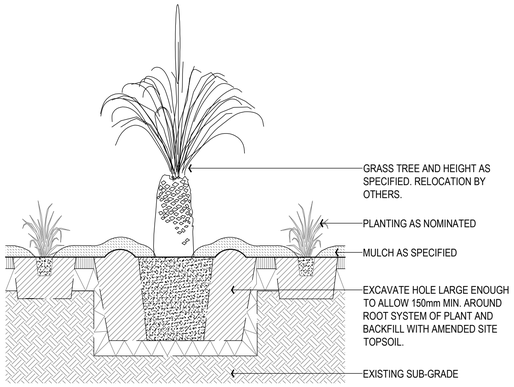
6 / 900 TUBESTOCK - 200mm POT PLANTING
SECTION — SCALE 1:20



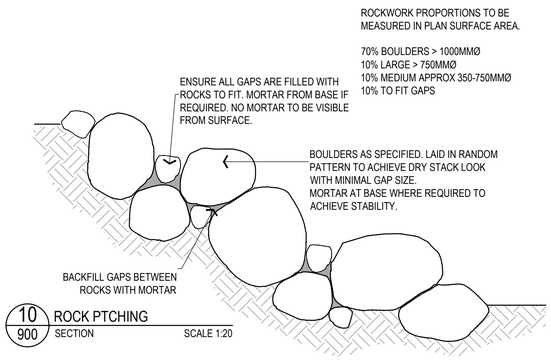
7 / 900 TYPICAL STAGGERED PLANTING PATTERN
PLAN — SCALE 1:20



8 / 900 TYPICAL 100 & 200 LITRE TREE PLANTING
SECTION — SCALE 1:25

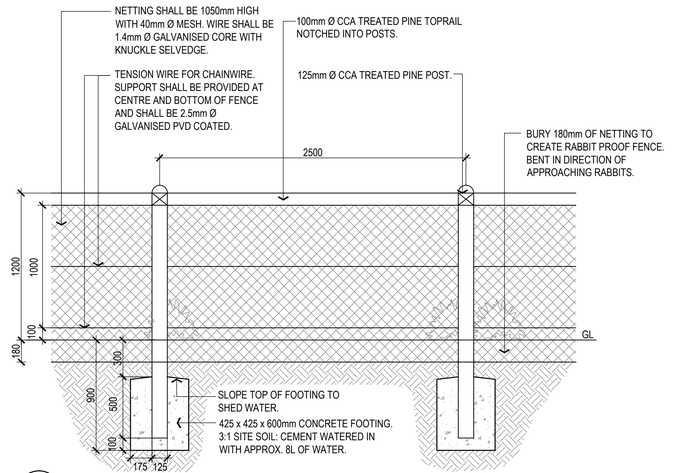


9 / 900 XANTHORRHOEA TRANSPLANT
SECTION — SCALE 1:20



10 / 900 ROCK PTCHING
SECTION — SCALE 1:20

NOTES:
1. ALL ENDS, JOINS AND TIES TO BE FINISHED NEATLY WITH NO WIRE PROTRUSIONS.
2. WIRE TO BE WRAPPED AROUND PINE POSTS TWICE, THEN WOUND BACK AROUND WIRE THREE TIMES AND CUT OFF FLUSH.
3. FENCING WIRE TO BE FIXED TO OUTSIDE OF FENCE, EXCEPT WHERE PARK ADJOINS PRIVATE PROPERTY, IT SHOULD BE FIXED TO INSIDE OF FENCE.
4. FENCE TO SMOOTHLY FOLLOW THE OVERALL CONTOURS OF THE LAND AS FOR BOLLARDS (NOT TO HAVE SUDDEN DIPS AND RISES).



11 / 900 CONSERVATION FENCING
SECTION — SCALE 1:25

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFFSITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
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Integrated Science & Design
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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 43 STREETSCAPES
.
DRAWING TITLE
TYPICAL DETAILS
.
CLIENT
CATALINA REGIONAL COUNCIL

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DESIGNED BY	JL	PRELIM DESIGN REVIEWED BY	ZF
DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	02.02.2024		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT-65-900	REV	0

REF: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLIENT\DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\LANDSCAPE\STAGE 43 STREETSCAPES\[JOB CODE]_JOB NAME_STAGE#_CATALINA STAGE 43 STREETSCAPES_SET.DWG

GENERAL NOTES

1. These drawings are to be read in conjunction with all architectural and other consultants' drawings and specifications and with such other written instructions as may be issued. Any discrepancies shall be referred to the superintendent for clarification before proceeding with work.
2. All dimensions are in millimetres and those relevant to setting out (excludes finishes) and offsite work shall be verified by the contractor before construction and fabrication are commenced. The engineer's drawings shall not be scaled.
3. All levels and grid co-ordinates are in metres.
4. During construction the contractor shall be responsible for maintaining the structure in a stable condition and no part shall be over stressed under construction activities.
5. Workmanship and materials shall be in accordance with the current edition of the relevant SAA codes and the by-laws and ordinances of the relevant building authority, except where varied by the contract documents.

DESIGN CRITERIA

1. Dead, live, wind and earthquake loads to AS1170.
2. Design Wind Speed
   Region A
   Terrain Category 2.5
   Regional Gust Wind Speed = 45m/sec (ULTIMATE LIMIT STATE)
   Regional Gust Wind Speed = 37m/sec (SERVICE LIMIT STATE)
3. Earthquake
   kp = 1.0
   Hazard Factor Z = 0.09 (Perth)
4. Foundations
   Foundations designed for Class 'S' site with minimum 150kPa allowable bearing pressure.
5. Live Loads

Decking:	3kPa to AS1170.1
Balustrade:	C3 to AS1170.1
Roof construction load:	0.25kPa to AS1170.1
Retaining Wall Surcharge:	3kPa to AS1170.1

BUILDER NOTE - COMPLIANCE INSPECTIONS

1. As part of the building licence for this project, the builder may be required to have the structural engineer certify the completed structure has been built in accordance with the approved drawings & /or with any subsequent written instructions.
2. If WA Structural Consulting are to provide this certification, the builder must arrange for WA Structural Consulting to inspect each of the structural items at appropriate stages. These items and stages include, but are not limited to the following:,
   2.1. Concrete reinforcement, prior to pouring of concrete in:
      2.1.1. Footing Excavations
      2.1.2. Slabs on ground
      2.1.3. Suspended slabs and beams
      2.1.4. Concrete columns and walls
      2.1.5. Retaining walls
   2.2. Structural steelwork prior to any cladding being fixed.
   2.3. Concrete wall panel connections.
3. The builder must provide appropriate evidence that the specified concrete has been supplied for each concrete element.
4. The builder must provide evidence that the required levels of foundation compaction have been achieved.
5. Where a geotechnical engineer has made specific recommendations, evidence that these have been achieved must be provided.
6. Unless fees for our inspections and certifications have been previously negotiated with WA Structural Consulting by others, these fees will be the builder's responsibility. It is required that the builder negotiate these fees with the engineer at a tender stage.
7. If the builder requires the fabrication drawings to be checked & certified by the project engineer, the costs associated with this will be the builder's responsibility, unless these fees have been previously negotiated with WA Structural Consulting by others. This must be confirmed by the builder.

CONCRETE AND REINFORCEMENT

1. All concrete works shall be in accordance with AS3600.
   Concrete specification shall be U.N.O.:

Location	F'C (MPA)	MAX.AGG SIZE (mm)	SLUMP (mm)
Footings	25	20	65
Slab on Ground	25	20	65
In Situ Retaining Walls	32	20	60
Precast	32	20	80
Cavity Fill	15	10	100

   Cover to Reinforcement shall be:

Location	Bottom (mm)	Top (mm)	Sides (mm)
Footing	70	50	50
Slab on Ground	50	40	50
In Situ Retaining Walls	32	20	60
Precast	50	40	40
Cavity Fill	50	50	20 U.N.O

2. Reinforcement shall be supported on approved plastic or plastic tipped wire chairs and hold rigidly in position as follows:
   a. Bars up to N12 and fabric - 800mm centres
   b. Bars N16 and larger - 1200mm centres
   * Welding reinforcement is not permitted unless approved by engineer.
3. Construction joints shall be scabbled, cleaned and coated with a cement/water slurry immediately prior to placing concrete.
4. Concrete shall be compacted using mechanical vibrators.
5. Concrete shall be cured for a minimum of 7 days by flooding, keeping continuously moist, the application of an approved curing compound or by other means approved by the engineer.
6. No holes or chases other than those shown on the drawings shall be made unless approved by engineer. Pipework passing through footing beams shall be to the approval of the engineer and shall be wrapped with a compressible material of minimum 6mm thickness.
7. Formwork and stripping times shall comply with AS3610. Remove formwork only when concrete has attained its design (f 'c) strength unless otherwise instructed by the structural engineer.
8. Control, expansion and contraction joints shall be constructed as detailed. Saw cut joints shall be made within 12 hours of concrete placement.
9. All mesh to conform with AS1304.
10. Reinforcement shall be in accordance with the following standards:
    R Indicates plain reinforcing bar R250N to AS/NZS4671
    L Indicates plain or deformed wire R500L or D500L to AS/NZS4671
    RL Indicates deformed rectangular mesh D500L to AS/NZS4671
    SL Indicates deformed square mesh D500L to AS/NZS4671
    N Indicates deformed bars D500N to AS/NZS4671
    S Indicates deformed bars D250N to AS/NZS4671
    TM Suffix indicates trench mesh using deformed bars D500L to AS/NZS4671
11. All galvanized items which are cast into concrete are to be passivated in a 0.2% sodium dichromate solution or equivalent.
12. All formwork shall be rigidly constructed of approved material. Formwork and supports shall be designed to withstand all possible load combinations during construction.

BAR DIAMETER (LARGEST)	LAP
12	600
16	800
20	1000
24	1200
28	1400
32	1600

Note: To be used U.N.O

14. Chemset Anchors U.N.O to be M16 HCR 8.8 rods with HILTI-HIT-HY-200 Adheisive minimum 150mm embedment. Installed in accordance with Manufacturers Specification and Installation Procedure.

FOUNDATIONS

1. Design is based on an allowable bearing pressure of 150kPa. It is the builder's responsibility to confirm the foundation type prior to commencing construction. Should the foundation type or bearing capacity not satisfy the above criteria the builder shall immediately contact engineer prior to construction proceeding.
2. Builder to grub out and remove all organic material and debris from the building platform.
3. Any soft areas shall be dug out and replaced with approved non-plastic fill.
4. All site preparation works shall be in accordance with site specific Geotechnical report and requirements.
5. Ensure a minimum of 8 blows per 300mm is achieved with a calibrated Perth Sand Penetrometer in accordance with AS1289.6.3.3
6. The building platform is to be shaped to ensure it drains to its perimeter and that such drainage is taken away from the platform area.
7. Footings at the lowest level must be the first footings constructed.
8. Located plumbing lines over top of footings and step footings.

MASONRY

1. All blockwork and brickwork shall be in accordance with AS3700
2. Concrete blocks shall be in accordance with AS2733
3. Reinforcement and concrete core filling shall comply with the notes on “concrete and reinforcement”.
4. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700.
5. Masonry units shall have a minimum compressive strength of 15MPa.
6. As follows:
   a. Bond beam reinforcement shall be continuous at intersecting walls and bars anchored and lapped to develop full tensile stress.
   b. Support reinforced brick lintels for 14 days minimum.
7. Cleanout blocks shall be provided at the base of all cores to be concrete filled. Alternatively the builder shall open such cores for cleaning by an approved method.
8. All cores to be concrete filled shall be cleaned out by hosing prior to final setting or mortar at all lifts or by rodding prior to concrete filling.
9. Retaining walls shall be fully core filled. Backfill to retaining walls shall not be carried out until 14 days after core filling.
10. Provide 10mm stack bonded control joints where shown. Control joint to consist of flexible masonry anchors every 3rd course. Brunswick type MFA 3/3. Apply flexible sealant over backing rod.
11. Cross walls shall be fully bonded for the full height of intersecting wall.
12. Horizontal chasing is not permitted without written approval from the engineer.
13. Lap wires 500mm at splices and around corners and COG 500mm into intersecting walls. 20mm cover to all wires.
14. All wires in external face of external leaf to be galvanised to AS/NZS4680.
15. Masonry ties are to be provided at no more than 600mm spacing in each direction, and max 300mm from top of wall, side of control joint or perimeter of opening.
16. Ties to be grade 316 stainless steel in corrosive environments.
17. Masonry abutting concrete footings to typically be isolated with 10mm Ableflex expansion foam or similar approved product UNO.

STRUCTURAL STEEL

1. All steelwork shall be in accordance with:
   AS4100 steel structures
   AS4600 cold formed steel structures
2. Fabricator to check all dimensions before cutting materials or manufacturing. fabrication to AS4100 UON. These drawing are to be read in conjunction with the project architectural and other consultants' drawings.
3. Unless noted otherwise all steel shall be:
   a. AS3678 grade 250 hot rolled plates
   b. AS3679.1 grade 300 hot rolled UB, PFC, TFC, TFB, EA, UA and FLATS
   c. AS3679.2 grade 300 WB and WC
   d. AS1163 grade 250 for circular hollow sections Ø165mm and less
   e. AS1163 grade 350 for circular hollow sections larger than Ø165mm and rectangular hollow sections.
   f. AS1397 500MPa for 1.2mm thick purlins and girts
   g. 450MPa for 1.6mm thick purlins and girts
   h. 450MPa for 1.0 thick CF Channels
   i. 450MPa for 1.6mm thick CF Channels
4. Galvanising shall be hot dipped to AS/NZS 4680
5. Bolts shall be galvanised and of sufficient length to exclude the thread from the shear plane. A suitable washer shall be used under all nuts, when tensioning is specified high strength bolts shall be fully tensioned with load indicating washers to the requirements of AS4100.
6. Bolt legend 4.6/S commercial grade 4.6 bolts snug tightened 8.8/S high strength grade 8.8 bolts snug tightened. 8.8/TB high strength grade 8.8 bolts tensioned bearing connection. 8.8/TF high strength grade 8.8 bolts tensioned friction connection.
7. Unless otherwise specified the following shall apply -
   a. Cleats, brackets, stiffeners etc. to be 10mm thick, ex-standard square edge flats U.N.O.
   b. Welding to be carried out in accordance with AS/NZS 1554. 1:1995 welding consumables to be E48XX or W50X U.N.O. all welds to be 6MM CFW SP category U.N.O CPBW to be SP category U.N.O.
   c. Inspection to be carried to AS/NZS 1554.1:1995. All GP/SP welds to be 100% visually scanned. SP welds allow for 25% visual examination U.N.O.
   d. 6mm end plates to all hollow sections (seal weld).
   e. Bolts to be G 8.8/S
   f. Bolt hole clearance 2mm
   g. Hold down bolt clearance 4mm
   h. Grout - a space for 40mm of 2:1 sand: cement mortar of damp earth consistency under all base plates.
   i. Connections - minimum of 2-M16 8.8/S bolts
   j. Bracing intersects on centrelines and centre of gravity for angles.
8. Fabricator shall allow for all cleats and other fixings required by the supervisor.
9. All column base plates shall be set on 20mm min. of 1:2 cement and sand grout.
10. Seal all open ends of pipes or RHS members. Grind off all visible welds and brand marks to neat appearance where specified.
11. See below:
    a. The contractor shall remain responsible at all times for providing all necessary temporary bracing and other supports during erection, to stabilise the partially constructed building.
    b. Particular attention must be paid to the buckling stability of beams and columns prior to the connection of purlins, girts, fly braces and other bracing elements.
    c. It is the responsibility of the builder to obtain proper technical advice wherever necessary to ensure the partially completed structure is safe from collapse.
12. Treatment:
    All steel connection plate and bolts to be hot dip galvanize (600 g/sqm)
    Holding down bolts - hot dip galvanize (600 g/sqm)
13. Bitumen paint all steelwork for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

STRUCTURAL TIMBER

1. Structural timber shall comply with AS1720 timber structure code.
2. All timber to be seasoned F14, class 2, strength group SD5, joint group JD2 and treated with creosote to hazard class H4 unless noted otherwise.
3. All timber work to be in accordance with :
   - AS1684 - SAA timber framing code.
   - AS1720 - SAA timber structures code.
4. All timber and steel connections to be in accordance with AS1720.
5. Ensure no knots or gum veins in timber used.
6. Coat all timber in contact with ground with bitumen paint or similar approved.
7. All structural details to be confirmed, checked and site measured by builder prior to construction. Report any discrepancies to structural engineer.
8. Treatment :
   - H1 - Interior use, above ground.
   - H2 - Interior use, above ground, subject to termites.
   - H3 - Exterior use, above ground, subject to periodic wetting.
   - H4 - Exterior use, in ground, subject to severe wetting.
   - H5 - Exterior use, in ground, with or in fresh water.
   - H6 - Exposed to marine water.
9. Required bending stress:
   - MGP10 fb = 16 MPa
   - MGP12 fb = 28 MPa
   - F14 fb = 36 MPa
   - GL17 fb = 40 MPa
   - LVL13 fb = 48 MPa
   - LVL15 fb = 59 MPa
   - LVL18 fb = 72 MPa
10. All bolted timber connections to be re-tightened at end of project prior to completion, ensure no splitting of timber occurs.
11. All proprietary systems (floor/wall/roofing) to be installed in strict accordance with manufacturer's specifications and details.
12. Bush Poles :
    - All timber to AS1720.
    - Minimum F11 grade CCA / H4 treated seasoned softwood. S6 strength group.
    - Free from decay, shakes & fractures,resin pockets and surface damage.
    - Heartwood not to exceed 50% of the diameter at each end or be within 35mm from the surface.
13. Bitumen paint all timber posts/columns for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

LIMESTONE RETAINING WALL SPECIFICATION NOTES

1. Width 'b' at any height to be no less than half of retained height 'h'. step wall to suit
2. Walls to be built on compacted sand, compact ground under footing to resist 7 blows per 300mm of a standard 16mm dia penetrometer over a depth of 600mm.
3. These walls are applicable to well drained sandy soil conditions only.
4. Walls resisting clay soil pressures and/or hydrostatic pressures to be referred to the engineer.
5. All reconstituted limestone to be first grade quality & free from soft pockets.
6. Rubble shall not be used to fill voids.
7. Reconstituted limestone to have a dry density of at least 1600 kg/m3 and a crushing strength of at least 5mpa.
8. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700. All mortar joints to be 20mm thick and fully mortared.
9. All topsoil, vegetation and deleterious matter shall be removed from the foundation area.
10. Vertical thickness of wall to be adequately bonded by building in header blocks - refer cross section
11. No backfilling until 7 days after walls have been built.
12. All backfilling shall be carried out using material which shall generally be sandy in nature and free from large pieces of rock to the extent that the
    material can be compacted using a vibrating plate compactor to meet the requirements of the specification.
13. Backfill shall not be dumped behind wall in a manner which will cause shock loading on the wall
14. Backfill shall be clean sand compacted in shallow (300) layers using light compacting equipment
15. In all cases the backfill material shall be selected such that once compacted, the standard of compaction can be measured using a standard perth penetrometer.
16. Compaction of the backfill material to the front and back of the wall to be compacted 95% modified max dry density.
17. Prior to practical completion the contractor shall provide written certification from a practising structural engineer that the wall construction & backfill compaction has been carried out in accordance with this drawing and the specification.
18. Construction Joints (CJ) shall be constructed within the retaining wall where noted below:
    (i) at max. 10m centres along wall face
    (ii) where the angle between faces of two walls exceeds 180 degrees, in which case the CJ is to be located on one side of the change in direction, at a distance away from the direction change equal to the base width of the wall.
19. Construction joints shall be 15mm wide and filled with expanded polyethylene (100mm deep) covered with a 25mm deep mastic of colour to match wall mortar. joints are to extend through wall and any fences, but need not extend through base course of limestone wall.
20. Select blocks to ensure intact faces only visible in facework.

ALUMINIUM

1. All Aluminium shall be in accordance with AS1664.
2. All Aluminium welding shall comply with AS1664.
3. Unless noted otherwise, all aluminium to be:
   - Plates: Grade 5083 H116/h321 or 5083 H112 Aluminium
   - SHS/RHS/CHS: Grade 6060-t5 aluminium
   - Fixings: grade 316 stainless steel
   - Welds: 5mm continuous fillet, category sp, filler allow to be grade 5186,5356 or 5556 aluminium
4. All fixings into Aluminium members to be stainless steel (SS316) or equivalent capacity aluminium fixings.
5. Provide nylon washers and packers for all and any connections between steel and aluminium.
6. Adequate protective coatings are to be applied to aluminum cast into concrete.

PRECAST CONCRETE

1. All precast units shown are for service conditions only. The contractor is responsible for all casting,lifting, transportation and propping requirements and must satisfy himself that they have been constructed to meet the design criteria noted. Any queries regarding precast concrete units shall be flagged during the tender process. If in doubt, ask.
2. Contractor to obtain Engineer's Design Certification for all elements of precast concrete work as required to the relevant Australian Standards (Lifting, bracing, propping as required).
3. Panels are to be securely propped until designed connections have been installed and are sufficiently restraining panels.
4. U.N.O all chemical anchors fixed into concrete panels to be galvanised HILTI-HAS-E-F rods with HILTI-HIT-HY-200 adhesive.
5. All grout used for panels shall be non shrink high strength grout to achieve min 40mpa compressive strength typ.
6. Precast concrete strength is for final position. Contractor to confirm required lifting strength in accordance with lifting engineers requirements. Shall be no less than 15 MPA.

HDPE DECKING AND BOARDS

1. All HDPE battens and other HDPE members to be supplied and installed in strict accordance with manufacturers specification.

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFFSITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
0	04.03.25	YL	ISSUE FOR CONSTRUCTION
C	04.02.25	JL	REVISED FOR APPROVAL
B	08.08.24	JL	ISSUE FOR APPROVAL
A	02.02.24	JL	ISSUE FOR COMMENT

THIS IS AN UNCONTROLLED DOCUMENT ISSUED FOR INFORMATION ONLY UNLESS SIGNED BELOW AT EACH RELEVANT STAGE.

INTERNAL DESIGN REVIEW
THIS DESIGN IS NOT AUTHORISED WITHOUT BEING INTERNALLY REVIEWED AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

INTERNAL PRETENDER REVIEW
THIS DRAWING IS NOT AUTHORISED FOR TENDER WITHOUT BEING INTERNALLY REVIEWED AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

AUTHORISED FOR CONSTRUCTION
THIS DRAWING IS NOT AUTHORISED FOR CONSTRUCTION UNLESS IT IS MARKED REV 1 OR HIGHER AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

emerge ASSOCIATES
Integrated Science & Design
PERTH (08) 9380 4988 • MARGARET RIVER (08) 9758 8159

PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 43 STREETSCAPES
DRAWING TITLE
TYPICAL NOTES
CLIENT
CATALINA REGIONAL COUNCIL

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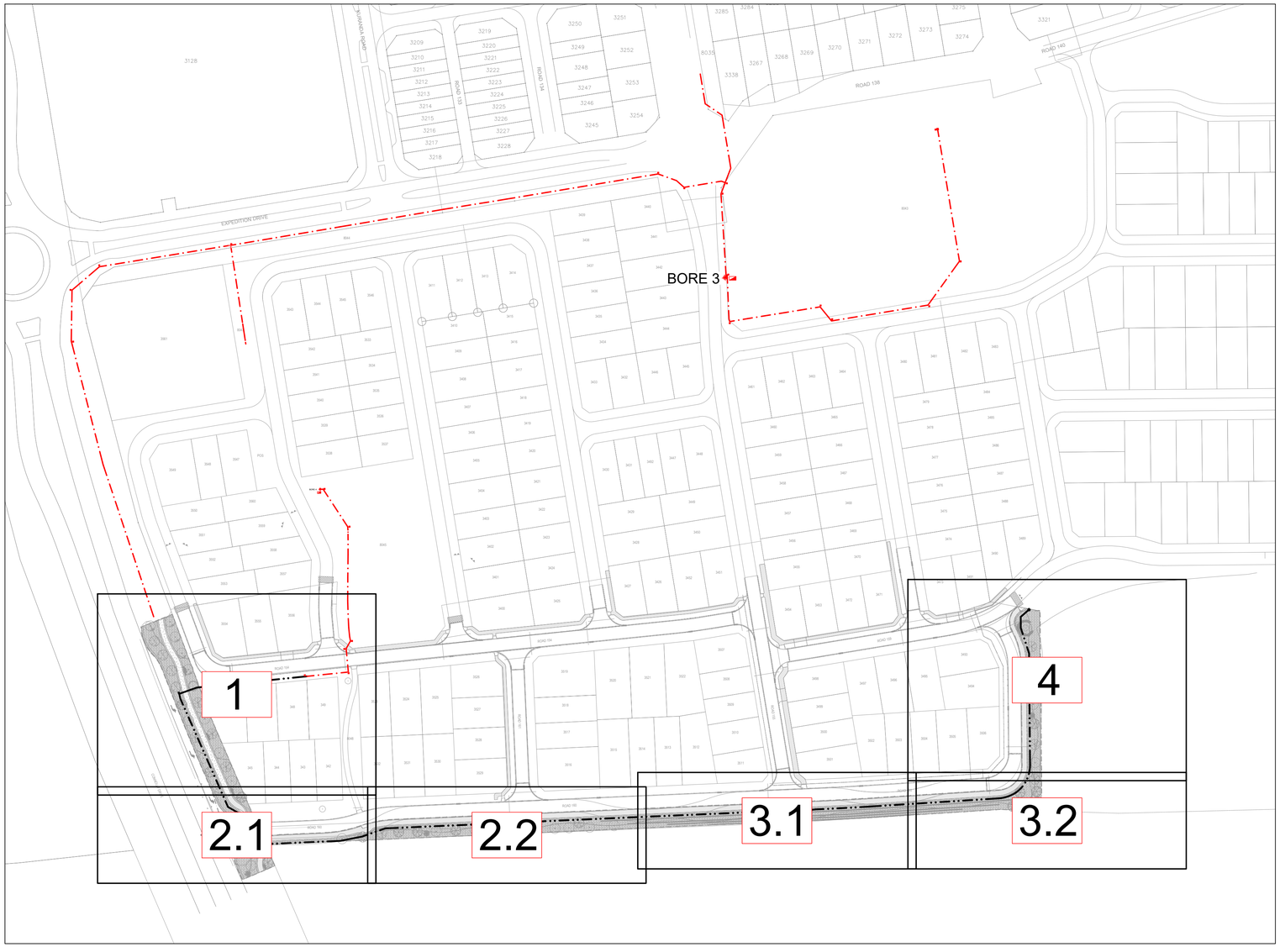
DESIGNED BY	JL	PRELIM DESIGN REVIEWED BY	ZF
DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	02.02.2024		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT-65-980	REV	0

REF U:\CURRENT PROJECTS\CATALINA, TAMALA PARK(CL) DRAWINGS\(JOB CODE) AUTOCAD\(JOB CODE) LANDSCAPE\STAGE 43 STREETSCAPES\(JOB NO) JOB NAME''STAGE\CAT65_CATALINA STAGE 43 STREETSCAPES_DET.DWG

CATALINA GREEN STAGE 43 STREETSCAPES
IRRIGATION WORKS



AUTOCAD FILENAME: Catalina Stage 43 Streetscapes Design (Rev C).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	10/07/2024	ISSUED FOR APPROVAL	R.V	J.S
B	23/07/2024	REVISED THE DESIGN TO SUIT THE NEW BORE IN POS 42	J.S	
C	20/02/2025	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

N

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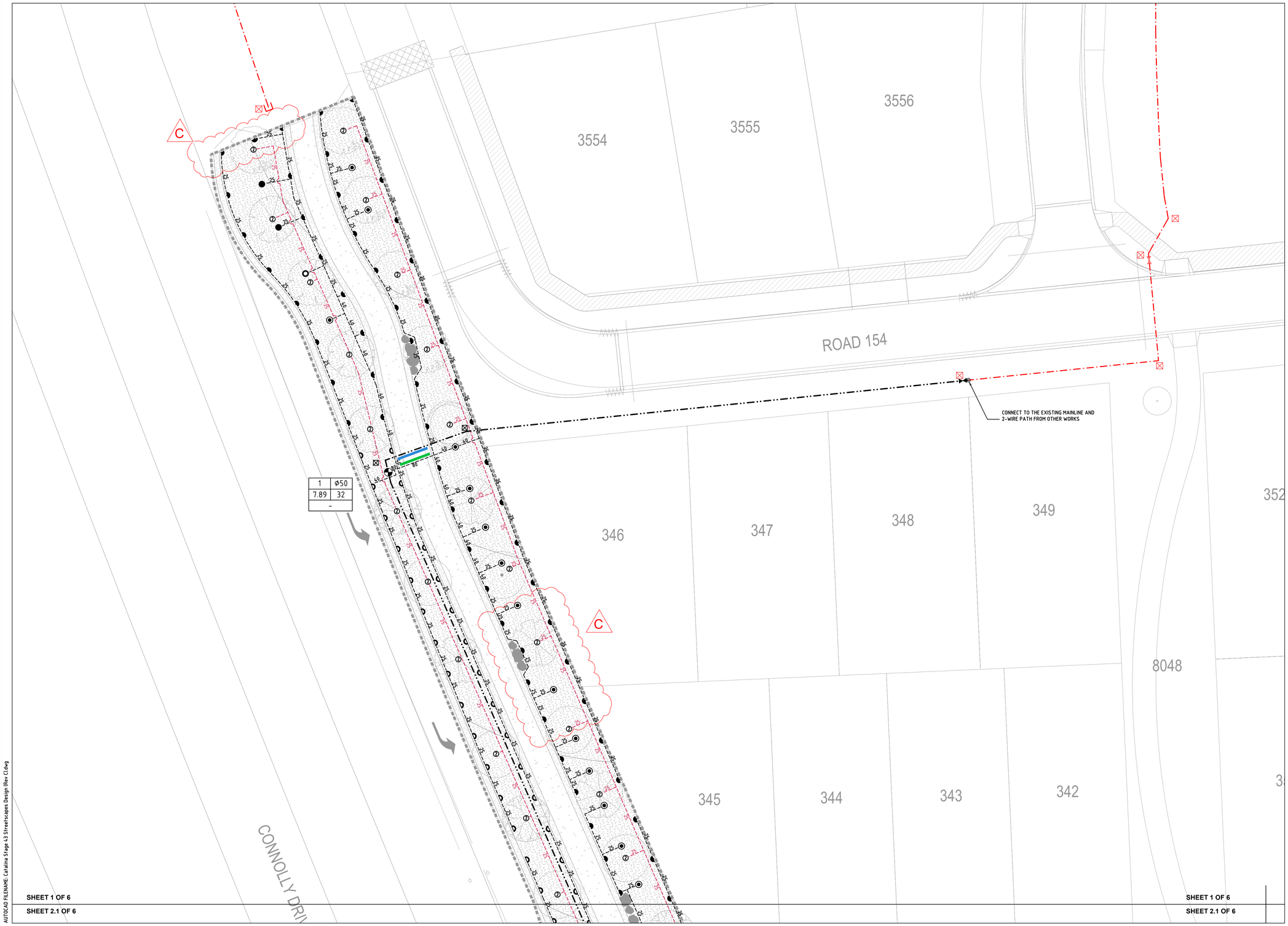
SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA GREEN STAGE 43 STREETSCAPES
IRRIGATION WORKS (KEY PLAN)
-

DATE :	DESIGN NO. :	SHEET NO. :
10/07/2024	18799-00	COVER PAGE



SHEET 1 OF 6

SHEET 2.1 OF 6

SHEET 1 OF 6

SHEET 2.1 OF 6

AUTOCAD FILENAME: Catalina Stage 43 Streetscapes Design (Rev C).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1
	FOR GARDEN AREAS REFER TO C.O.W. SPECIFICATION ITEM 1.6.2 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING 570Z-12P'S					
200 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA					
	BERMAD 200 SERIES DATA VALVE SIZE AS SHOWN					
	EXISTING BORE 3 LOCATION					
	EXISTING BORE PUMP CUBICLE WITH A SIGNAL SDS-100					
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE					
	50mm MAINLINE FLUSHING VALVE					
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION					
	P2 CABLE PIT					
	SD-SL SURGE ARRESTOR					
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE					
	DN110 PN12.5 PE100 MDPE POLY MAINLINE WITH LILAC STRIPE OR PLAIN BLACK ALONG STREETSCAPES. IF THIS PIPEWORK IS UNAVAILABLE REFER TO NOTE 8					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
25	uPVC SWJ CLASS 9 LATERAL LINE FOR TREES SIZE AS SHOWN					
	DN110 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS					
	DN160 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS					
	DN200 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS					
A	IRRIGATION REVISION					

STATION DATA								VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	7.89	250	32	40	15	GARDEN	1	7.89	-
2	7.66	250	32	40	15	GARDEN	2	7.66	-
3	2.88	250	-	-	15	TREES	3	2.23	-
							7	0.65	-
4	7.56	250	32	40	15	GARDEN	4	7.56	-
5	7.50	250	32	40	15	GARDEN	5	7.50	-
6	7.93	250	32	40	15	GARDEN	6	7.93	-
DAILY RUN TIME: 1 HRS & 30 MIN						WEEKLY RUN TIME: 7 HRS & 30 MIN			

VALVE LABEL LEGEND

VALVE NO / FLOW (LPS)

2	ϕ50	VALVE SIZE
3.29	32	PRECIPITATION RATE
-		DECODER NO.

NOTE:

1. THESE WORKS ARE TO BE INSTALLED TO MEET THE CITY OF WANNEROO IRRIGATION SPECIFICATIONS (JAN 2024 VERSION 1.0).
2. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
4. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
5. ALL SIGNAL 2-WIRE PATHS TO BE INSTALLED IN 40MD GREY CONDUIT.
6. ANY SPRINKLERS INSTALLED WITHIN TURF AREAS ON ROAD VERGES ARE TO BE INSTALLED WITH SQUARE CONCRETE SURROUNDS.
7. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SIGNAL SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
8. IF THE LILAC/PURPLE STRIPE OR PLAIN BLACK MAINLINE PIPEWORK IS UNAVAILABLE USE THE EQUIVALENT SIZED PN12.5 PE100 BLUE STRIPE. THE MAINLINE IS TO HAVE 150mm WIDE NON-DETECTABLE UNDERGROUND TAPE "WARNING IRRIGATION MAIN BELOW" BLUE WITH BLACK TEXT. INSTALL TAPE 100mm ABOVE THE TOP OF THE MAINLINE PIPEWORK.

CERTIFIED IRRIGATION DESIGNER – IRRIGATION AUSTRALIA – LANDSCAPE, TURF CONFERENCE

0 2 4 6 8 10m

SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	10/07/2024	ISSUED FOR APPROVAL	R.V	J.S
B	23/07/2024	REVISED THE DESIGN TO SUIT THE NEW BORE IN POS 42	J.S	
C	20/02/2025	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

N

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SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

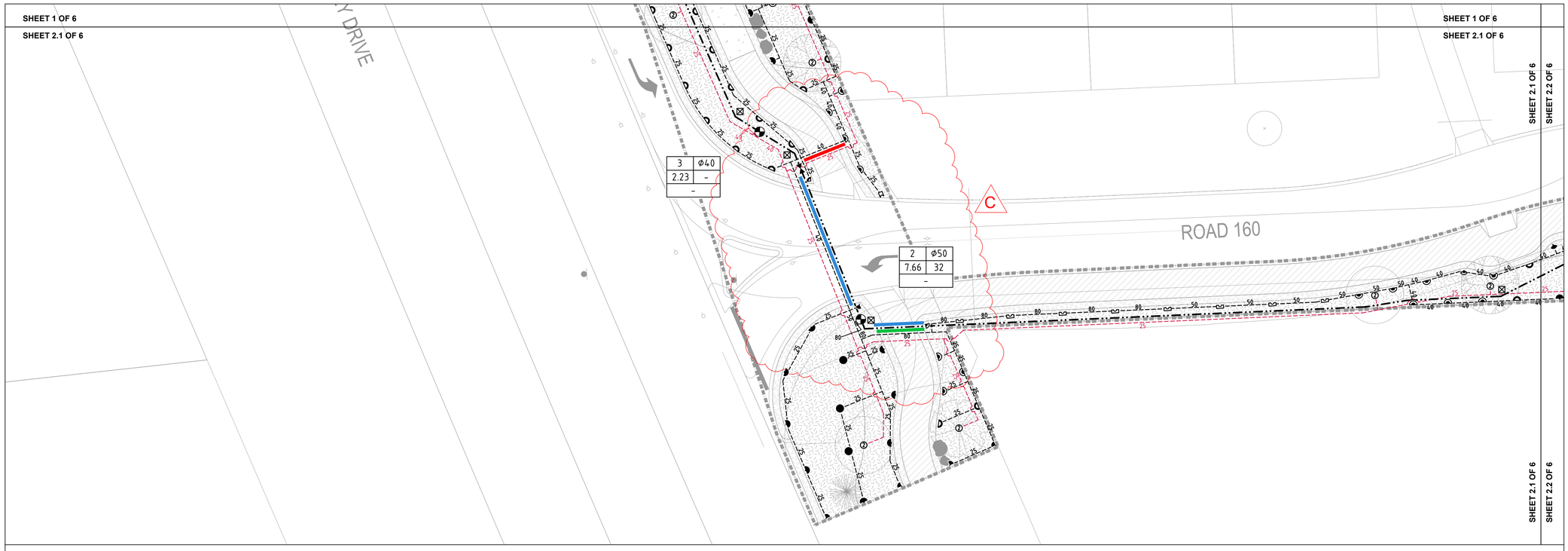
CLIENT :

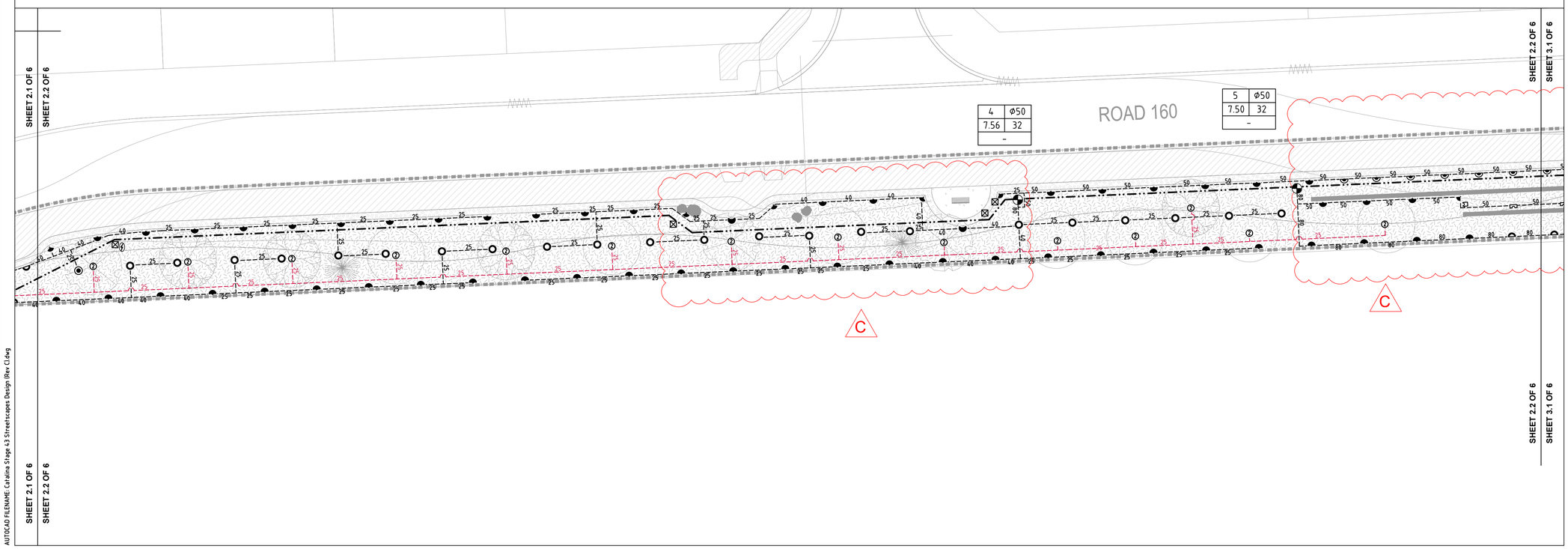
EMERGE ASSOCIATES

PROJECT :

CATALINA GREEN STAGE 43 STREETSCAPES
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
10/07/2024	18799-01	1 OF 6





LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
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200 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA					
	BERMAD 200 SERIES DATA VALVE SIZE AS SHOWN					
	EXISTING BORE 3 LOCATION					
	EXISTING BORE PUMP CUBICLE WITH A SIGNAL SDS-100					
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE					
	50mm MAINLINE FLUSHING VALVE					
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION					
	P2 CABLE PIT					
	SD-SL SURGE ARRESTOR					
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE					
	DN110 PN12.5 PE100 MDPE POLY MAINLINE WITH LILAC STRIPE OR PLAIN BLACK ALONG STREETSCAPES. IF THIS PIPEWORK IS UNAVAILABLE REFER TO NOTE 8					
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C	IRRIGATION REVISION					

STATION DATA								VALVE DATA	
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DAILY RUN TIME: 1 HRS & 30 MIN WEEKLY RUN TIME: 7 HRS & 30 MIN

VALVE LABEL LEGEND

VALVE NO / FLOW (LPS)

2	ø50 VALVE SIZE
3.29	32 PRECIPITATION RATE
–	DECODER NO.

NOTE:
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CERTIFIED IRRIGATION DESIGNER – IRRIGATION AUSTRALIA – LANDSCAPE / TURF CONNECTION

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Stage 43 Streetscapes Design (Rev C).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	10/07/2024	ISSUED FOR APPROVAL	R.V	J.S
B	23/07/2024	REVISED THE DESIGN TO SUIT THE NEW BORE IN POS 42	J.S	
C	20/02/2025	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

N

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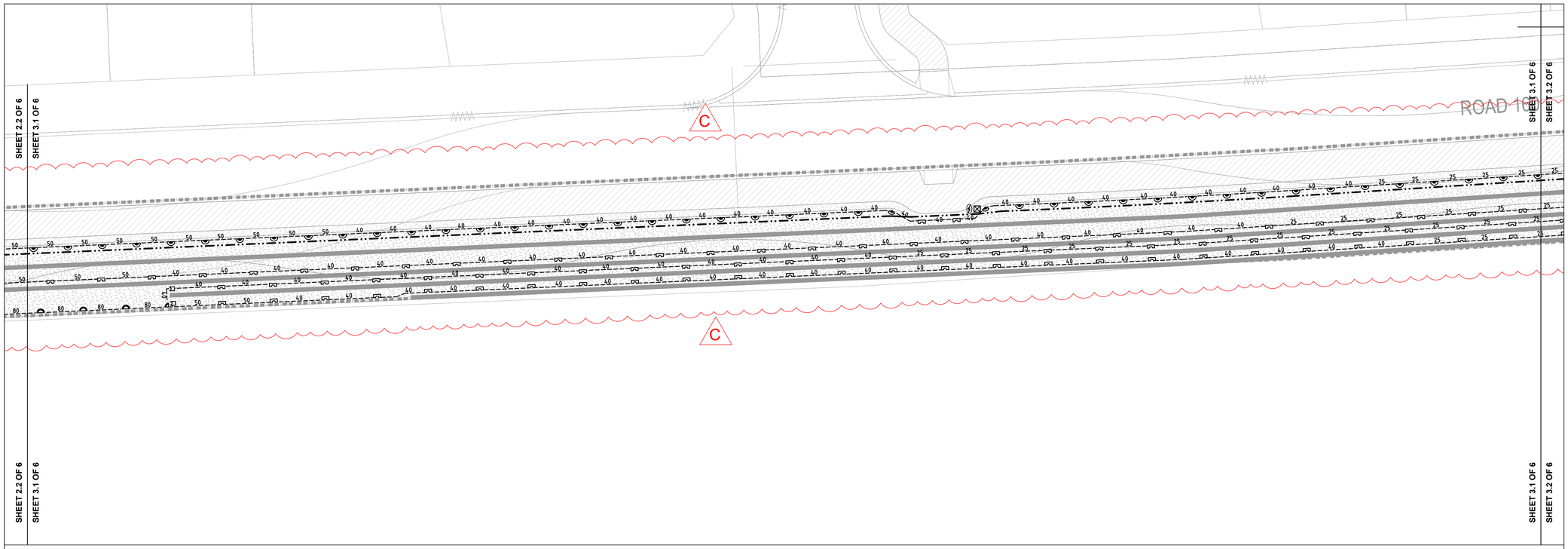
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : EMERGE ASSOCIATES

PROJECT : CATALINA GREEN STAGE 43 STREETSCAPES IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
10/07/2024	18799-02	2 OF 6



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	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE
	DN110 PN12.5 PE100 MDPE POLY MAINLINE WITH LILAC STRIPE OR PLAIN BLACK ALONG STREETSCAPES. IF THIS PIPEWORK IS UNAVAILABLE REFER TO NOTE 8
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
25	uPVC SWJ CLASS 9 LATERAL LINE FOR TREES SIZE AS SHOWN
	DN110 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS
	DN160 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS
	DN200 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS
C	IRRIGATION REVISION

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	7.89	250	32	40	15	GARDEN	1	7.89	-
2	7.66	250	32	40	15	GARDEN	2	7.66	-
3	2.88	250	-	-	15	TREES	3	2.23	-
							7	0.65	-
4	7.56	250	32	40	15	GARDEN	4	7.56	-
5	7.50	250	32	40	15	GARDEN	5	7.50	-
6	7.93	250	32	40	15	GARDEN	6	7.93	-

DAILY RUN TIME: 1 HRS & 30 MIN WEEKLY RUN TIME: 7 HRS & 30 MIN

VALVE LABEL LEGEND

VALVE NO / FLOW (LPS)

2	ø50 VALVE SIZE
3.29	32 PRECIPITATION RATE
-	DECODER NO.

NOTE:
1. THESE WORKS ARE TO BE INSTALLED TO MEET THE CITY OF WANNEROO IRRIGATION SPECIFICATIONS (JAN 2024 VERSION 1.0).
2. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
4. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
5. ALL SIGNAL 2-WIRE PATHS TO BE INSTALLED IN 40MD GREY CONDUIT.
6. ANY SPRINKLERS INSTALLED WITHIN TURF AREAS ON ROAD VERGES ARE TO BE INSTALLED WITH SQUARE CONCRETE SURROUNDS.
7. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SIGNAL SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
8. IF THE LILAC/PURPLE STRIPE OR PLAIN BLACK MAINLINE PIPEWORK IS UNAVAILABLE USE THE EQUIVALENT SIZED PN12.5 PE100 BLUE STRIPE. THE MAINLINE IS TO HAVE 150mm WIDE NON-DETECTABLE UNDERGROUND TAPE "WARNING IRRIGATION MAIN BELOW" BLUE WITH BLACK TEXT. INSTALL TAPE 100mm ABOVE THE TOP OF THE MAINLINE PIPEWORK.

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — LANDSCAPE/TURF CONTRACTOR — WA CHAPTER

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	10/07/2024	ISSUED FOR APPROVAL	R.V	J.S
B	23/07/2024	REVISED THE DESIGN TO SUIT THE NEW BORE IN POS 42	J.S	
C	20/02/2025	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

N

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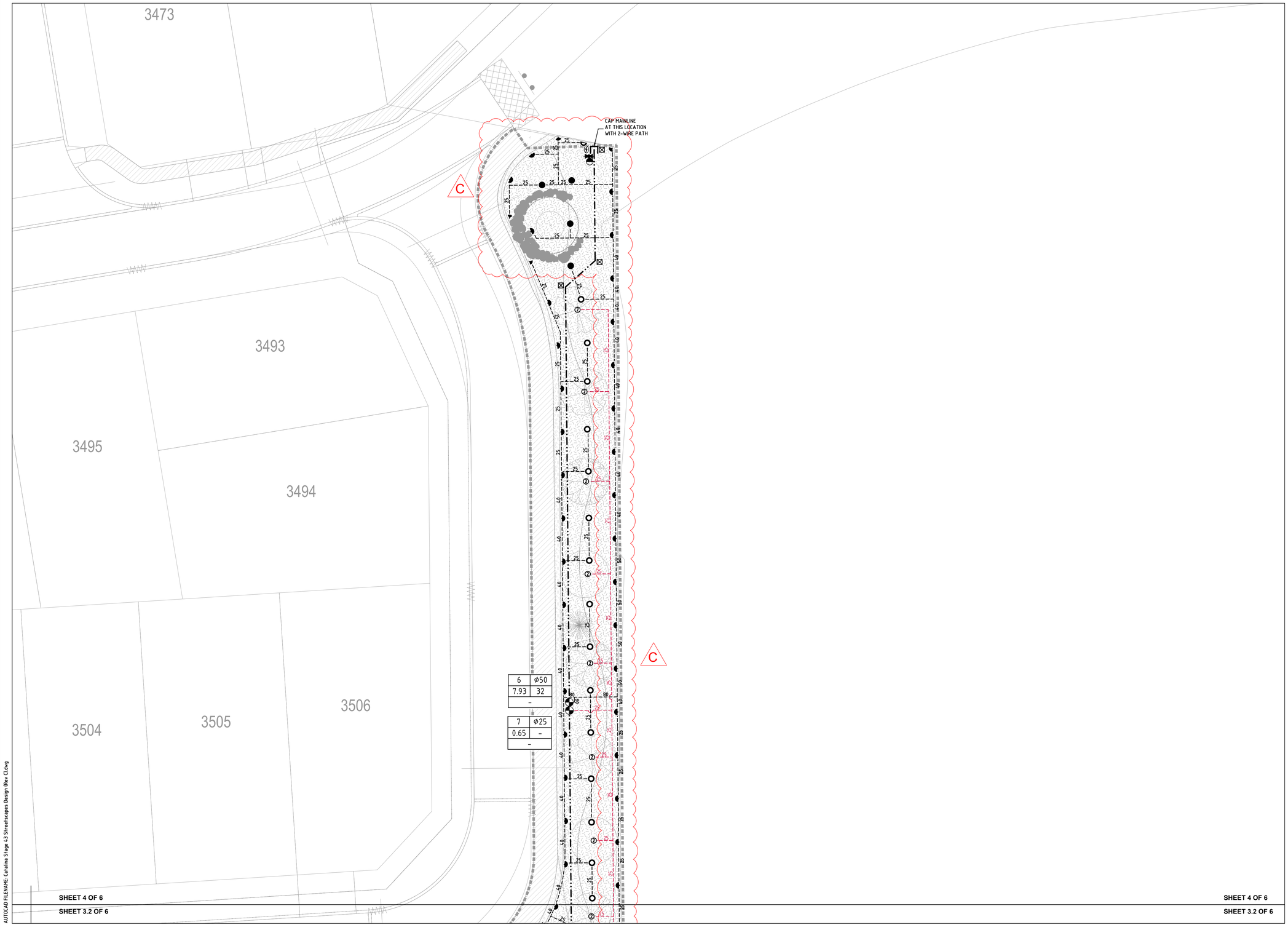
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : EMERGE ASSOCIATES

PROJECT : CATALINA GREEN STAGE 43 STREETSCAPES IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
10/07/2024	18799-03	3 OF 6

AUTOCAD FILENAME: Catalina Stage 43 Streetscapes Design (Rev C).dwg



AUTOCAD FILENAME: Catalina Stage 43 Streetscapes Design (Rev C).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	FOR GARDEN AREAS REFER TO C.O.W. SPECIFICATION ITEM 1.6.2 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING 570Z-12P'S
200 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
	BERMAD 200 SERIES DATA VALVE SIZE AS SHOWN
	EXISTING BORE 3 LOCATION
	EXISTING BORE PUMP CUBICLE WITH A SIGNAL SDS-100
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	SD-SL SURGE ARRESTOR
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE
	DN110 PN12.5 PE100 MDPE POLY MAINLINE WITH LILAC STRIPE OR PLAIN BLACK ALONG STREETSCAPES. IF THIS PIPEWORK IS UNAVAILABLE REFER TO NOTE 8
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	DN160 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS
	DN200 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS
C	IRRIGATION REVISION

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
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3	2.88	250	–	–	15	TREES	3	2.23	–
							7	0.65	–
4	7.56	250	32	40	15	GARDEN	4	7.56	–
5	7.50	250	32	40	15	GARDEN	5	7.50	–
6	7.93	250	32	40	15	GARDEN	6	7.93	–

DAILY RUN TIME: 1 HRS & 30 MIN WEEKLY RUN TIME: 7 HRS & 30 MIN

VALVE LABEL LEGEND

VALVE NO	2	ϕ50 VALVE SIZE
FLOW (LPS)	3.29	32 PRECIPITATION RATE
	–	DECODER NO.

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CERTIFIED IRRIGATION DESIGNER – IRRIGATION AUSTRALIA – IRRIGATION | TURF | COMMERCIAL

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	10/07/2024	ISSUED FOR APPROVAL	R.V	J.S
B	23/07/2024	REVISED THE DESIGN TO SUIT THE NEW BORE IN POS 42	J.S	
C	20/02/2025	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

N

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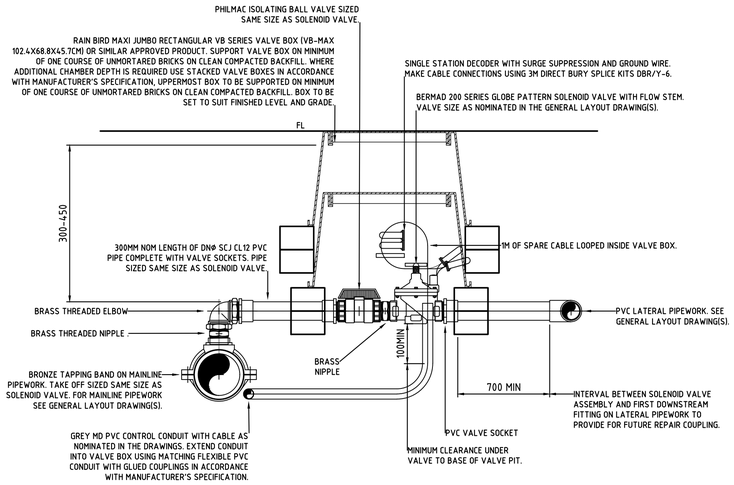
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

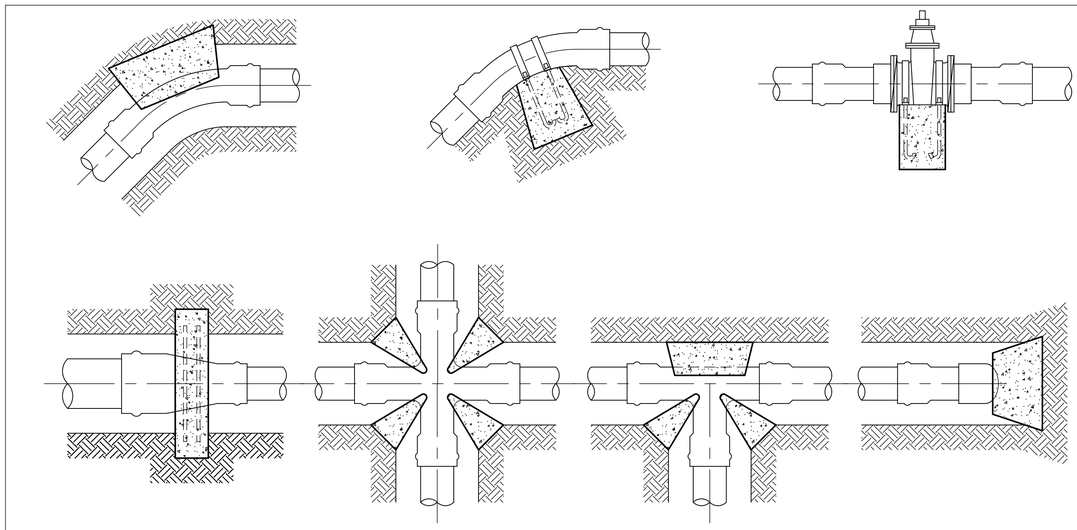
PROJECT :
CATALINA GREEN STAGE 43 STREETSCAPES
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
10/07/2024	18799-04	4 OF 6



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

NOTE:
MINIMUM BEARING AREA TO BE IN ACCORDANCE WITH TYPE OF FITTING AND SOIL TYPE AS PER PIPE MANUFACTURERS RECOMMENDATIONS

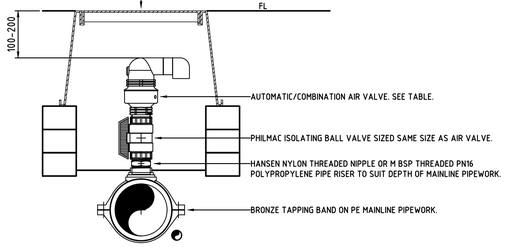
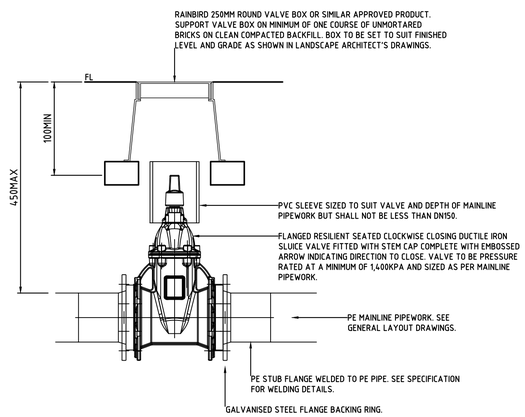


TABLE OF AIR VALVES	
MAINLINE SIZE (DN)†	AIR VALVE‡
LESS THAN 63	PN16 DN20 COMBINATION AIR VALVE
75-140	PN16 DN25 COMBINATION AIR VALVE
150-200	PN16 DN50 COMBINATION AIR VALVE
† SEE GENERAL LAYOUT DRAWING(S). ‡ SEE ALSO SPECIFICATION.	

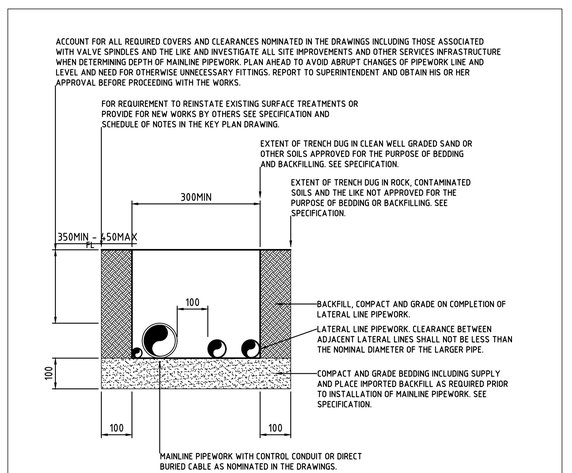
TYPICAL AIR VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL MAINLINE ISOLATION VALVE INSTALLATION

NOT TO SCALE



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 43 Streetscapes Design Rev C.dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	10/07/2024	ISSUED FOR APPROVAL	R.V	J.S
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REV	DATE	DESCRIPTION	DWN	CKD

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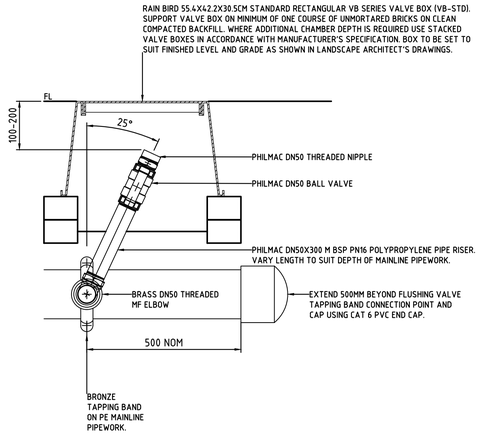
SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

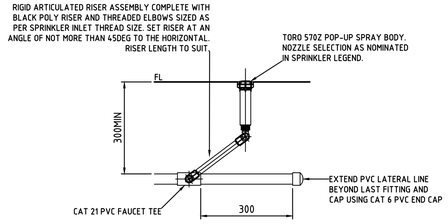
PROJECT :
CATALINA GREEN STAGE 43 STREETSCAPES
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
10/07/2024	18799-05	5 OF 6



TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

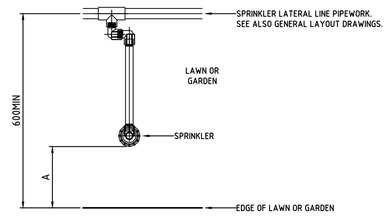


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	

† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.

SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE

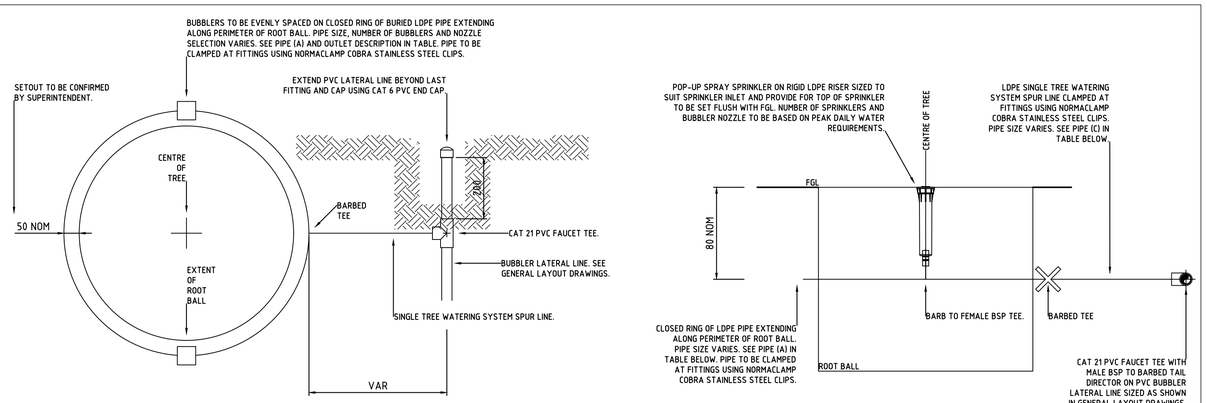


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
-	-	0-6	-	DN19	-	DN19
-	-	6-15	-	DN19	-	DN25
-	-	15-30	-	DN25	-	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 43 Streetscapes Design (Rev C).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	10/07/2024	ISSUED FOR APPROVAL	R.V	J.S
B	23/07/2024	REVISED THE DESIGN TO SUIT THE NEW BORE IN POS 42	J.S	
C	20/02/2025	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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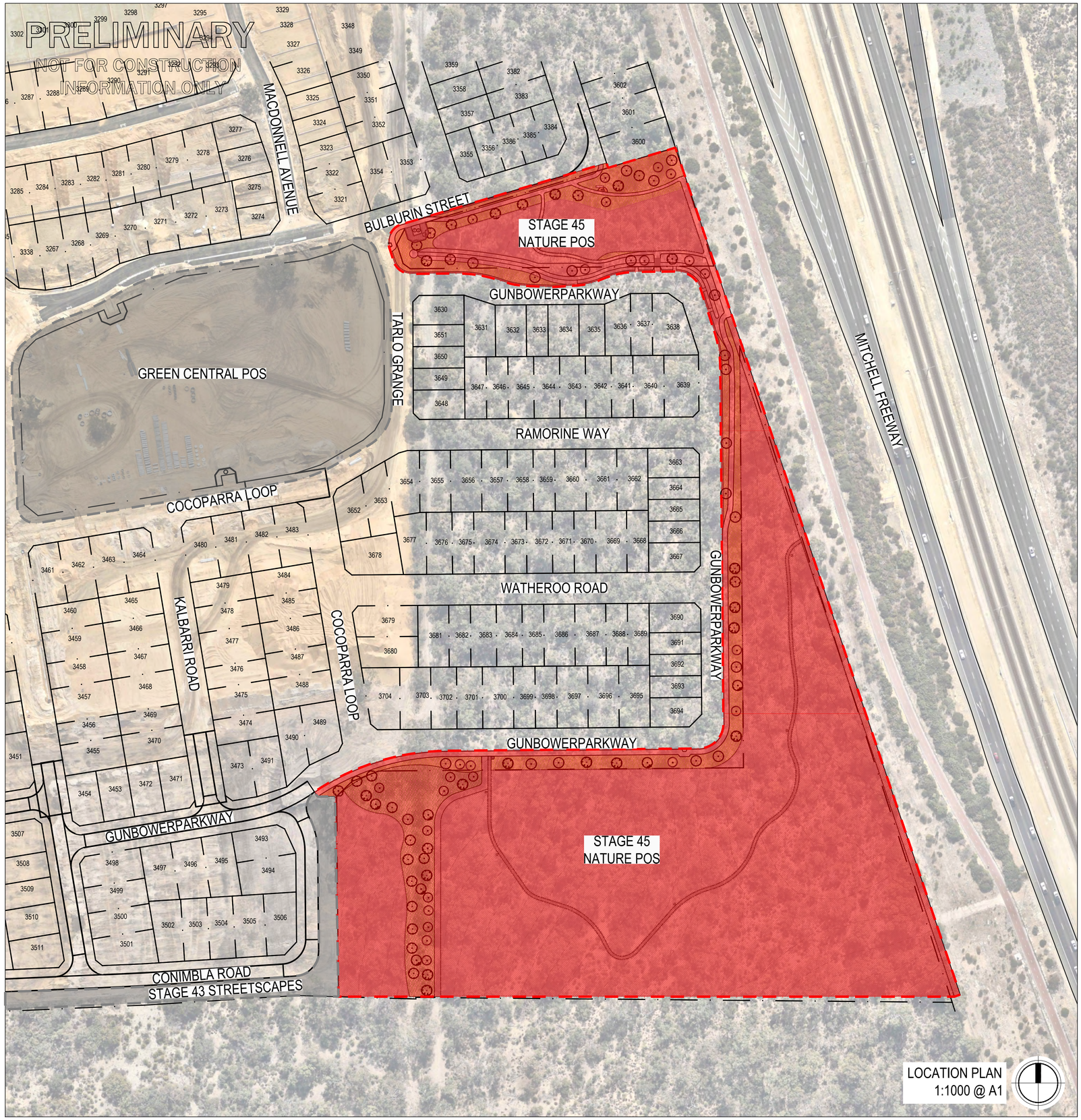
SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA GREEN STAGE 43 STREETSCAPES
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
10/07/2024	18799-06	6 OF 6



CATALINA

CLARKSON, W.A

STAGE 45 NATURE POS

LANDSCAPE CONTRACT: CAT75

LANDSCAPE & IRRIGATION WORKS

CLIENT: CATALINA REGIONAL COUNCIL

ISSUE FOR: ***APPROVAL***

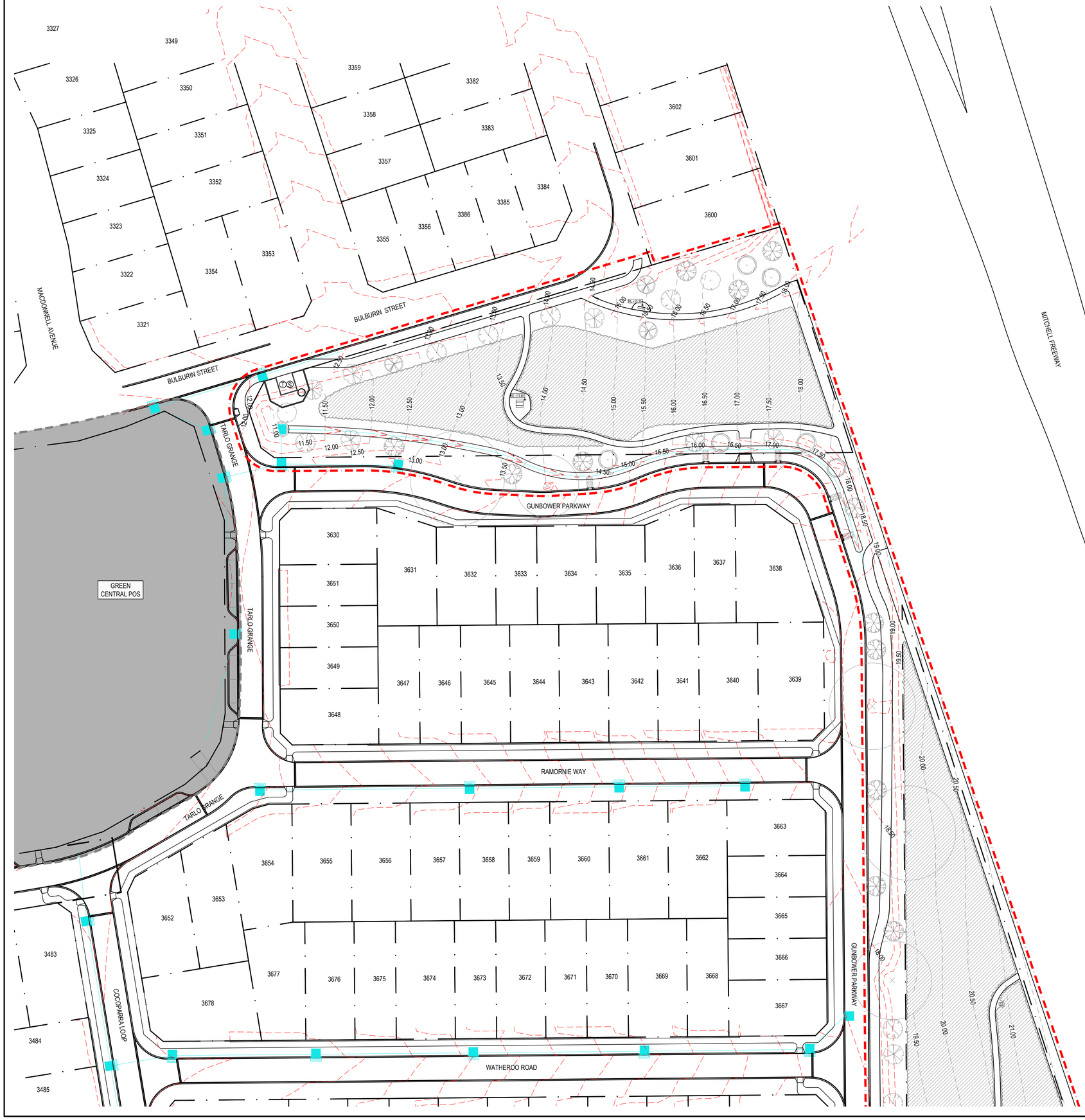
DATE: **MAY 2025**

Sheet List Table

Sheet Number	Sheet Title	Revision
CAT-75-000	COVERPAGE	A
CAT-75-301	GRADING PLAN 1 OF 2	A
CAT-75-302	GRADING PLAN 2 OF 2	A
CAT-75-401	HARDSCAPE PLAN 1 OF 2	A
CAT-75-402	HARDSCAPE PLAN 2 OF 2	A
CAT-75-501	PLANTING PLAN 1 OF 2	A
CAT-75-502	PLANTING PLAN 2 OF 2	A
CAT-75-901	DETAILS	A
CAT-75-980	NOTES	A

CATALINA Regional Council

emerge ASSOCIATES
Integrated Science & Design



LEGEND

- EXTENT OF WORKS
- 0.00 EXISTING CONTOURS
- 0.00 CIVIL PROPOSED CONTOURS
- 0.00 PROPOSED CONTOURS
- RL +00.00 SPOT LEVELS
- EXISTING VEGETATION TO BE RETAINED AND PROTECTED

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFF-SITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
A	09.05.25	JL	ISSUE FOR APPROVAL

THIS IS AN UNCONTROLLED DOCUMENT ISSUED FOR INFORMATION ONLY UNLESS SIGNED BELOW AT EACH RELEVANT STAGE.

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THIS DESIGN IS NOT AUTHORISED WITHOUT BEING INTERNALLY REVIEWED AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

INTERNAL PRETENDER REVIEW
THIS DRAWING IS NOT AUTHORISED FOR TENDER WITHOUT BEING INTERNALLY REVIEWED AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

AUTHORISED FOR CONSTRUCTION
THIS DRAWING IS NOT AUTHORISED FOR CONSTRUCTION UNLESS IT IS MARKED REV 1 OR HIGHER AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

emerge ASSOCIATES
Integrated Science & Design
PERTH (08) 9380 4988 • MARGARET RIVER (08) 9758 8159

PROJECT
CATALINA
CLARKSON, W.A
STAGE OR PHASE
STAGE 45 NATURE POS
DRAWING TITLE
GRADING PLAN 1 OF 2
CLIENT
CATALINA REGIONAL COUNCIL

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DESIGNED BY	JL	PRELIM DESIGN REVIEWED BY	ZF
DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	05.05.25		

SCALE 1: 500 @ A1 METRES
0 5 10 15 20 25

DRAWING NUMBER CAT-75-301
REV A

PRELIMINARY
NOT FOR CONSTRUCTION
INFORMATION ONLY

I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLD\DRAWINGS\LDB CODE\LANDSCAPE\STAGE 45 NATURE POS\CAT-75-301 STAGE 45 NATURE POS_SIGS.DWG



LEGEND

- EXTENT OF WORKS
- 0.00 EXISTING CONTOURS
- 0.00 CIVIL PROPOSED CONTOURS
- 0.00 PROPOSED CONTOURS
- RL +00.00 SPOT LEVELS
- EXISTING VEGETATION TO BE RETAINED AND PROTECTED

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PROJECT
CATALINA
CLARKSON, W.A
STAGE OR PHASE
STAGE 45 NATURE POS
DRAWING TITLE
GRADING PLAN 2 OF 2
CLIENT
CATALINA REGIONAL COUNCIL

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DRAWING NUMBER
CAT-75-302

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REF: I:\JOBS\PROJECTS\CATALINA, TAMALA PARK\CLIENT DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 45 NATURE POS\CAT-75-302 STAGE 45 NATURE POS_DES.DWG



LEGEND

- EXTENT OF WORKS
- PROPOSED CONCRETE PATH — 1 901
- EXPOSED AGGREGATE HARDSTAND — 5 901
- PROPOSED PLANTING — 12-13 901
- EXISTING VEGETATION TO BE RETAINED AND PROTECTED
- CRUSHED LIMESTONE PATH — 6 901
- EXISTING FIREBREAK TO BE RETAINED
- BLUE METAL GRAVEL BY OTHERS
- CULVERT UNDER PATH — 11 901
- (S) INTERPRETIVE SIGNAGE — 11 901
- (B) RUBBISH BIN — 10 901
- FB DBCA & CoW BOUNDARY SIGNAGE
- MAINTENANCE & PEDESTRIAN GATE — 8&9 901
- EXISTING CONSERVATION FENCING
- PROPOSED CONSERVATION FENCING — 7 901
- STAR PICKET FENCING
- PROPOSED TREES
- EXISTING TREE TO BE RETAINED AND PROTECTED

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PROJECT
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STAGE OR PHASE
STAGE 45 NATURE POS
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HARDSCAPE PLAN 1 OF 2
CLIENT
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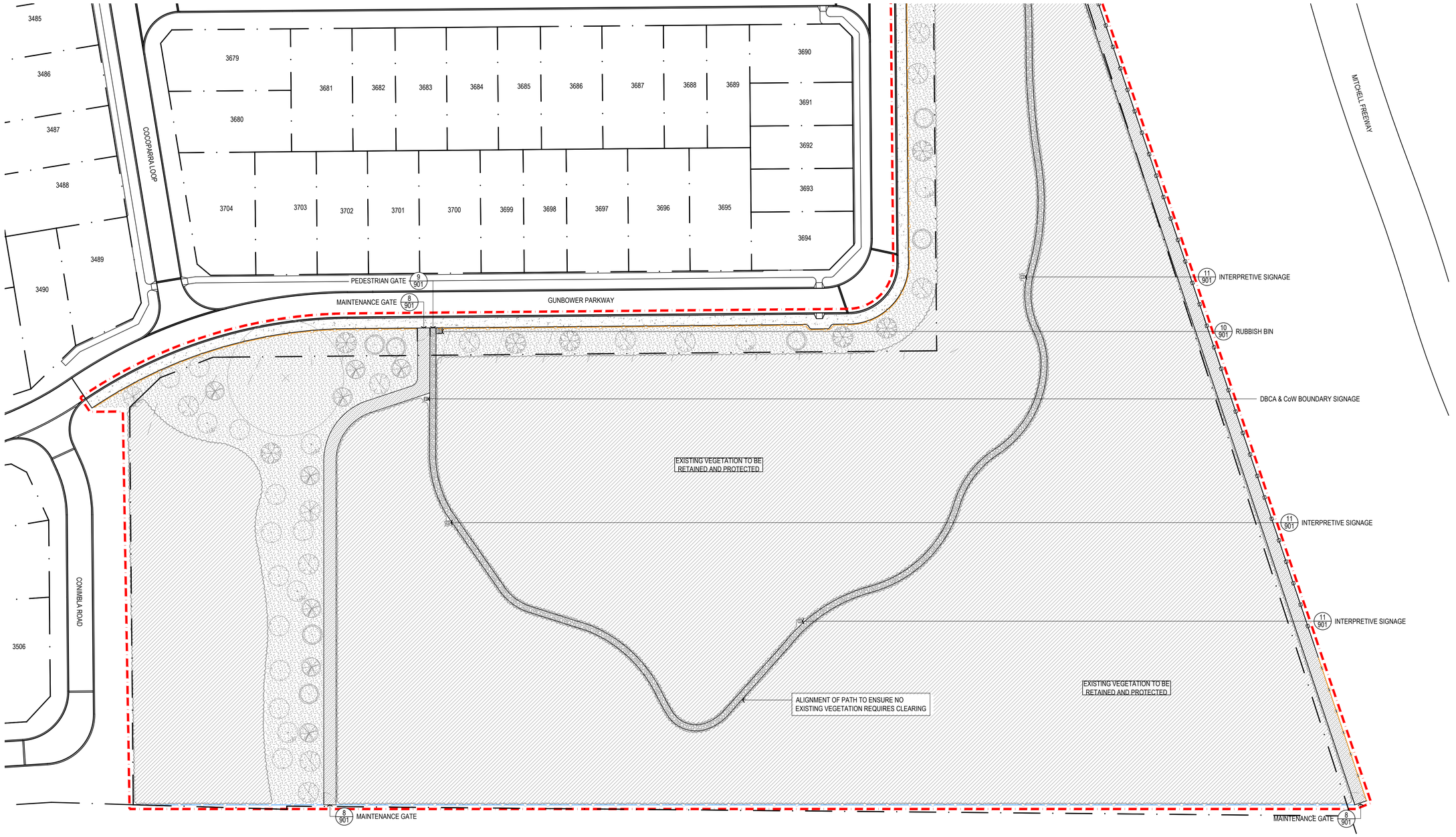

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Tree List

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
Agfl	Agfl	Agonis flexuosa	Willow Myrtle	100 Litre	5
Coca	Coca	Corymbia calophylla	Marri	100 Litre	13
Eude	Eude	Eucalyptus decipiens	Red Heart Moit	100 Litre	20
Eule	Eule	Eucalyptus leocoxylon	Yellow Gum	100 Litre	8
Eusp	Eusp	Eucalyptus spathulata	Swamp Mallet	100 Litre	11
Euto	Euto	Eucalyptus torquata	Coral Gum	100 Litre	12
Euut	Euut	Eucalyptus utilis	Coastal Moort	100 Litre	13
Mevi	Mevi	Melaleuca viridiflora	Broad-leaved Paperbark	100 Litre	6

Conservation Buffer

Key	Botanic Name	Common Name	Pot	Quantity
Acla	Acacia lasiocarpa	Wattle	Tube	2765
Acro	Acacia rostelliifera	Summer-Scented Wattle	Tube	2765
Babl	Banksia blechnifolia	Southern Blechnum Banksia	Tube	2765
Drse	Dryandra sessilis	Parrot Bush	Tube	2765
Euma	Eucalyptus macrocarpa	Mottlecah	Tube	2765
Goto	Gompholobium tomentosum	Hairy Yellow Pea	Tube	2765
Hali	Hakea lissocarpha	Honey Bush	Tube	2765
Hepu	Hemiandra pungens	Snakebush	Tube	2765
Hihy	Hibbertia hypericoides	Yellow Buttercups	Tube	2765
Mehu	Melaleuca huegelii	Chenille Honey Myrtle	Tube	2765

Infill Mix

Key	Botanic Name	Common Name	Pot	Quantity
Coac	Conostylis aculeata	Prickly Cottonhead	Tube	1070
Hepu	Hemiandra pungens	Snakebush	Tube	1070
Jase	Jacksonia sericea	Waldjumi	Tube	1070
Kepr	Kennedia prostrata	Running Postman	Tube	1070
Lebr	Leucophyta browii	Cushion Bush	Tube	1070
Olax	Olearia axillaris	Coastal Daisy Bush	Tube	1070
Sccr	Scaevola crassifolia	Cushion Fan Flower	Tube	1070
Tere	Templetonia refusa	Cocky's Tongue	Tube	1070

Swale Batter

Key	Botanic Name	Common Name	Pot	Quantity
Atis	Atriplex isatidea	Coastal Saltbush	Tube	431
Bame	Banksia menziesii	Firewood Banksia	Tube	431
Caqu	Calothamnus quadrifidus 'Clean and Green'	One Sided Bottlebrush	Tube	431
Hapr	Hakea prostrata	Harsh Hakea	Tube	431
Jase	Jacksonia sericea	Waldjumi	Tube	431
Legl	Lepidosperma gladiatum	Coast-Sword Sedge	Tube	431
Splo	Spinifex longifolius	Beach Spinifex	Tube	431

Swale Mix

Key	Botanic Name	Common Name	Pot	Quantity
Anfl	Anigozanthos flavidus	Tall Kangeroo Paw	Tube	294
Coac	Conostylis aculeata	Prickly conostylis	Tube	294
Hepu	Hemiandra pungens	Snakebush	Tube	294
Lelo	Lepidosperma longitudinale	Pithy Sword Sedge	Tube	294

PLANT AND TREE NUMBERS IN SCHEDULE ARE TO BE USED AS GUIDE ONLY. TENDERERS TO REFER LABELS ON PLANS FOR NUMBERS. PLANT NUMBERS AND SPECIES ARE SUBJECT TO AVAILABILITY.

LEGEND

- EXTENT OF WORKS
- CONSERVATION BUFFER PROPOSED PLANTING (12-13, 901)
- INFILL PROPOSED PLANTING (12-13, 901)
- SWALE BATTER PROPOSED PLANTING (12-13, 901)
- SWALE PROPOSED PLANTING (12-13, 901)
- PROPOSED TREES (14, 901)
- EXISTING TREE TO BE RETAINED AND PROTECTED

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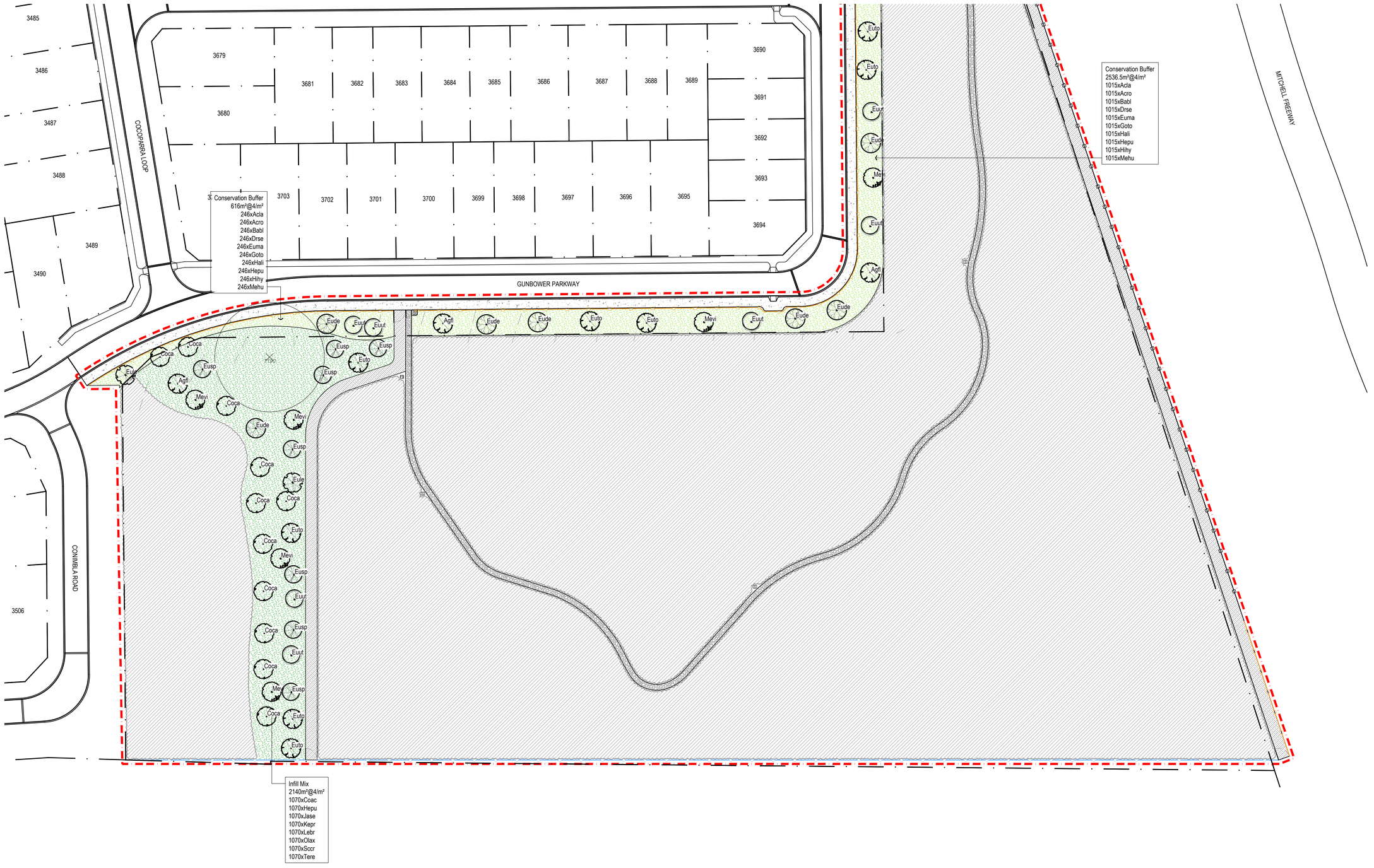

LEGEND

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- CONSERVATION BUFFER PROPOSED PLANTING (12-13 901)
- INFILL PROPOSED PLANTING (12-13 901)
- SWALE BATTER PROPOSED PLANTING (12-13 901)
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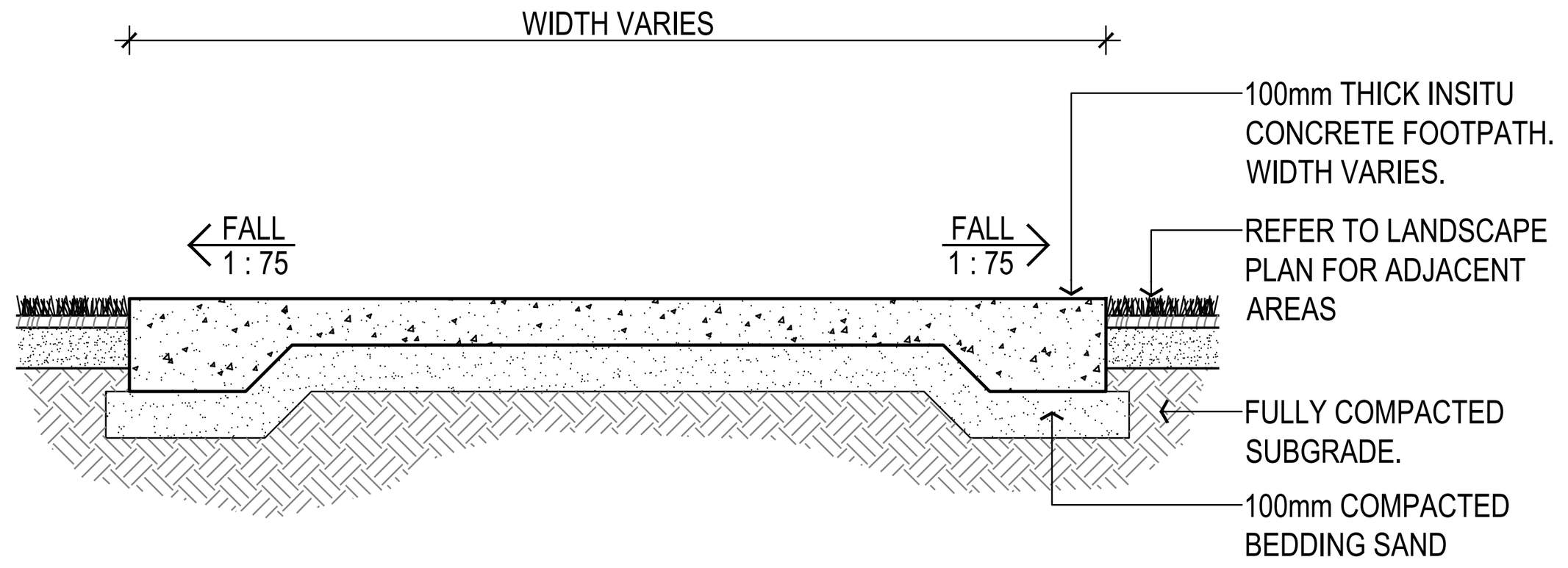
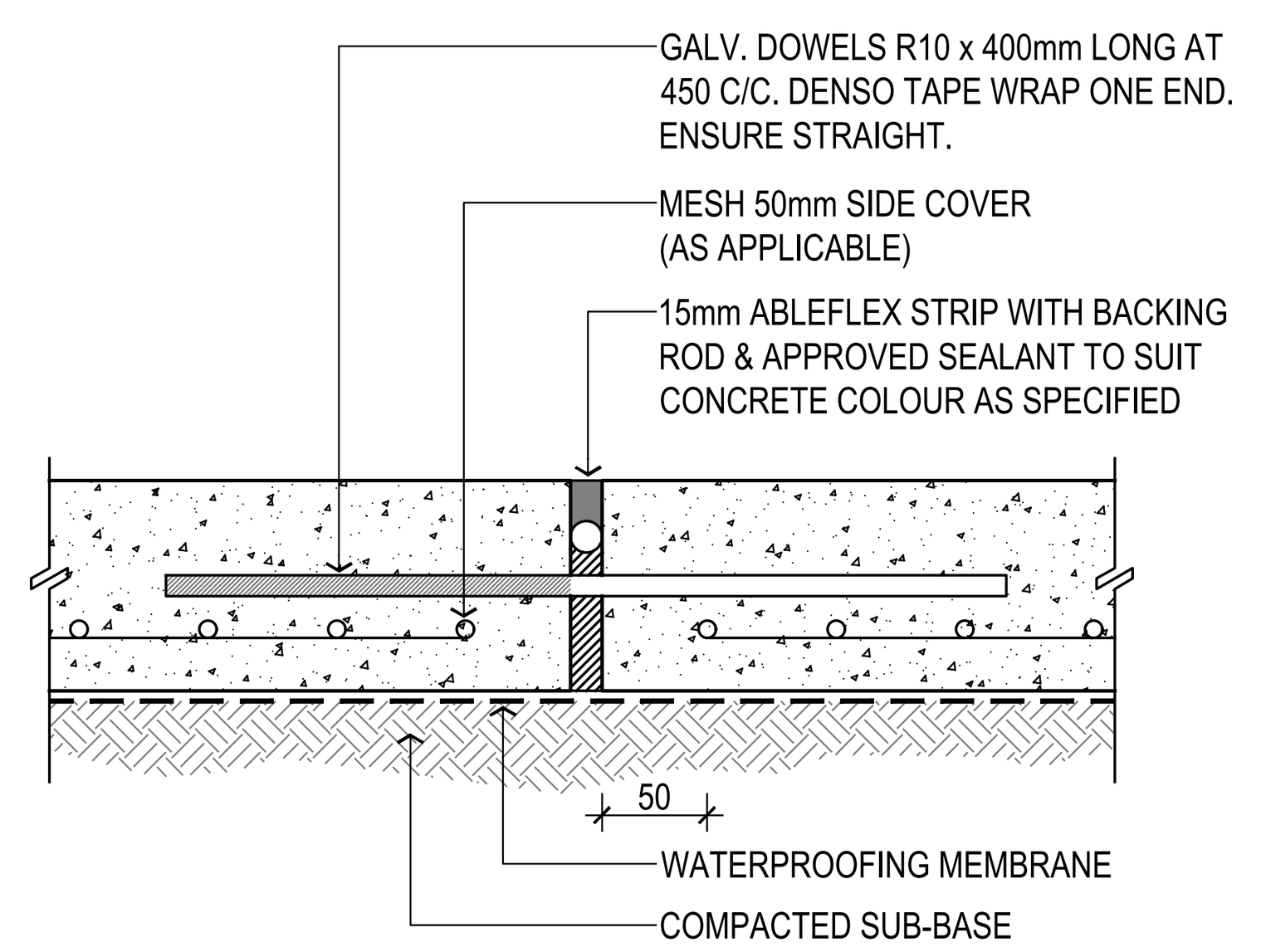


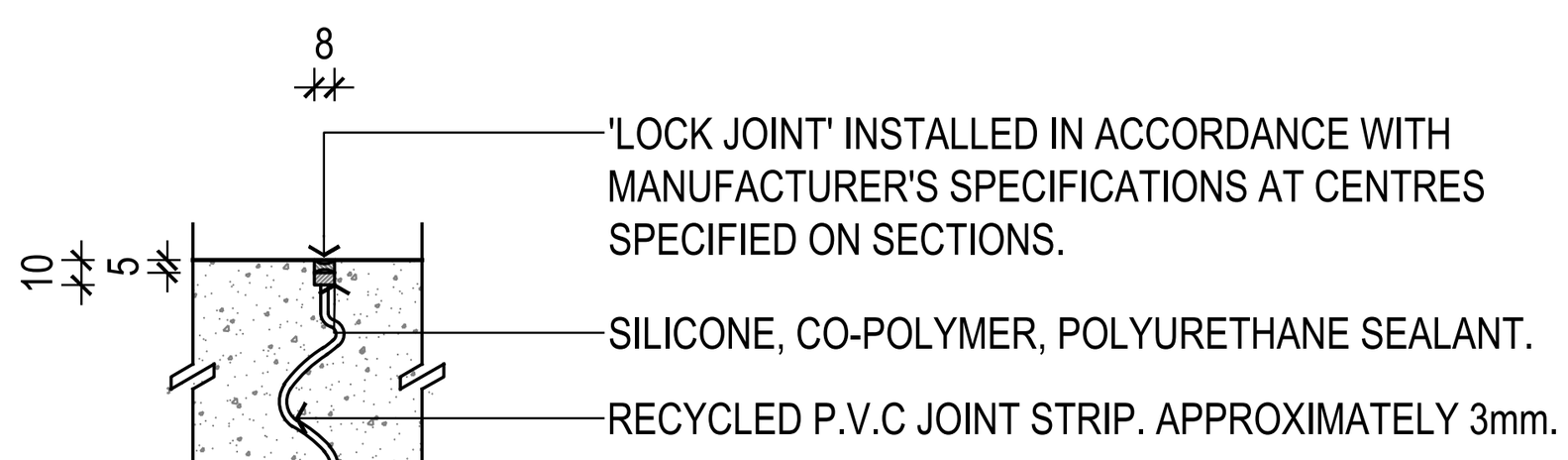
NOTES

1. FOUNDATION TO BE COMPACTED TO 95% MDD.
2. ALL CONCRETE FOOTPATH CONSTRUCTION TO BE A MIN 25MPa, 20mm AGGREGATE AND MAX SLUMP OF 80-100mm.
3. BEDDING - SAND (100mm MINIMUM).
4. EXPANSION JOINT EVERY 5.0M AS. SEE DETAIL 02/901
5. CONTRACTION JOINT EVERY 2.5M. SEE DETAIL 03/901
6. SURFACE TO BE BROOM FINISH, NON-SLIP, WITH SMOOTH EDGE APPROX 75mm WIDE AT EDGES AND JOINTS.
7. LONGITUDINAL GRADE SHOULD NOT EXCEED 1 IN 20.
8. WHERE LONGITUDINAL GRADE IS GREATER THAN 1 IN 14, LANDINGS WILL BE PROVIDED EVERY 6m.
9. VERTICAL CLEARANCES ALONG PATHS SHOULD BE A MINIMUM OF 2m.
10. WHERE STREET FURNITURE (POLES, BENCHES, RUBBISH BINS, POSTS, ETC) ARE LOCATED IN PATH, A MIN UNOBSTRUCTED WIDTH OF 1.2m MUST BE MAINTAINED.

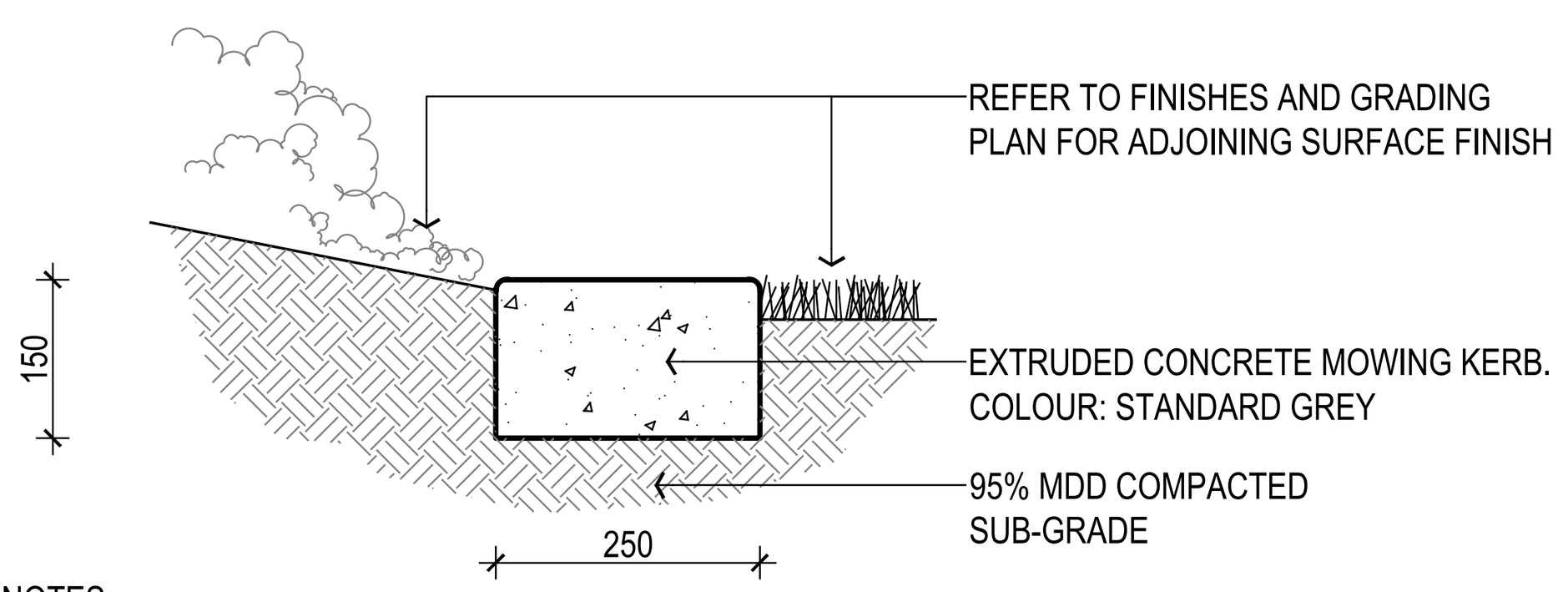
1/901 INSITU CONCRETE FOOTPATH - TYPICAL
SECTION — SCALE 1:20



2/901 TYPICAL EXPANSION JOINT
SECTION — SCALE 1:5

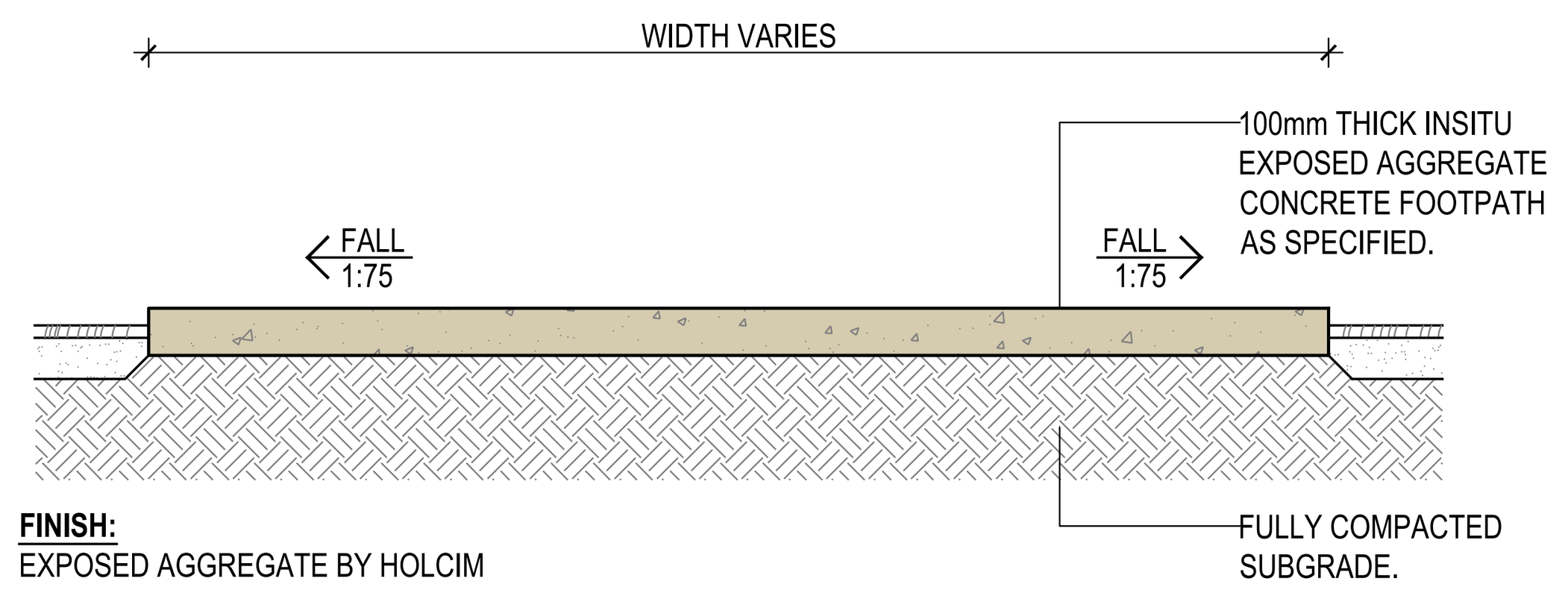


3/901 TYPICAL CONTRACTION JOINT
SECTION — SCALE 1:5



NOTES:
1. ALL CONCRETE TO BE 32MPa @ 28 DAYS
2. CONTRACTION JOINTS: RULED / STAMPED AT 2.0M INTERVALS
3. EXPANSION JOINTS: 6.0M INTERVALS TO LINE UP WITH FOOTPATH JOINTS.

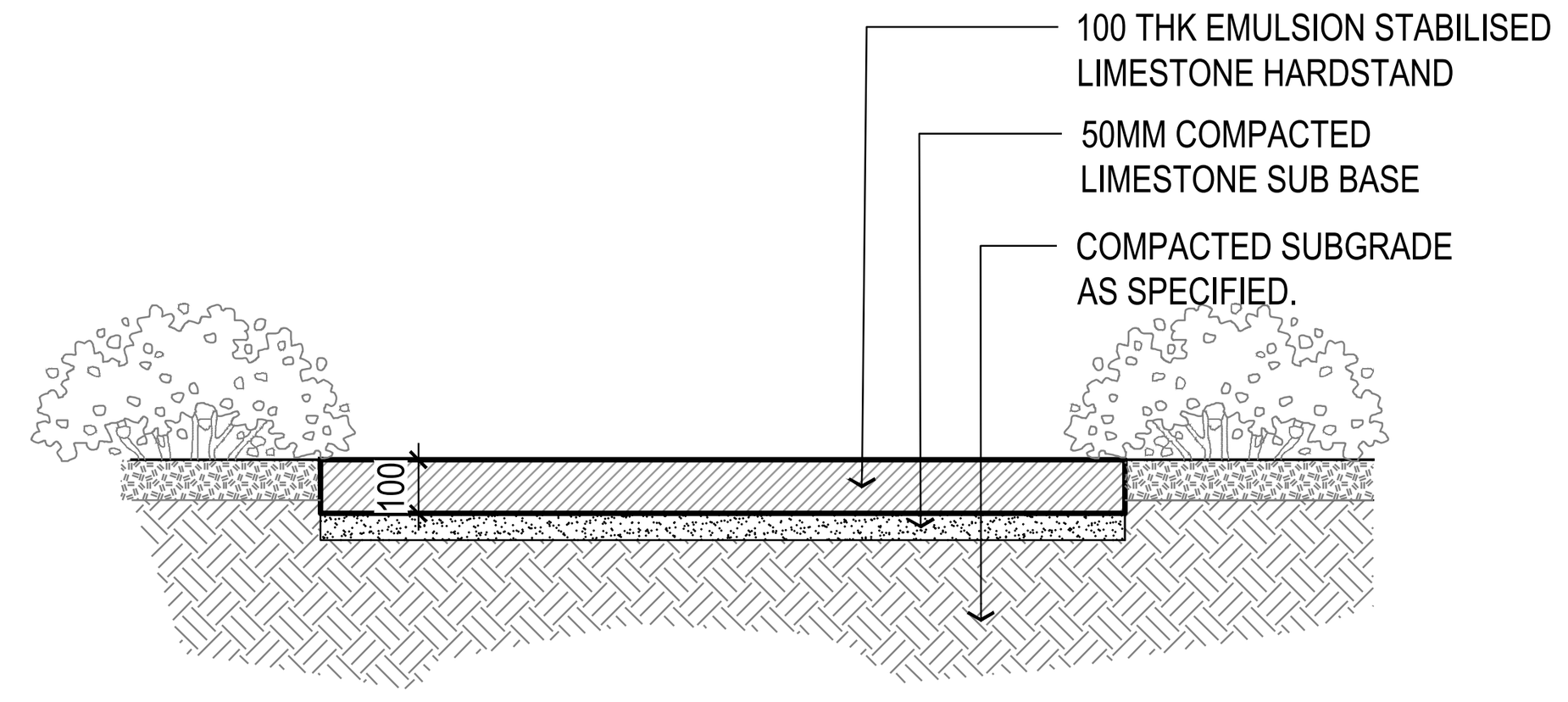
4/901 MOWING KERB
SECTION — SCALE 1:10



FINISH:
EXPOSED AGGREGATE BY HOLCIM

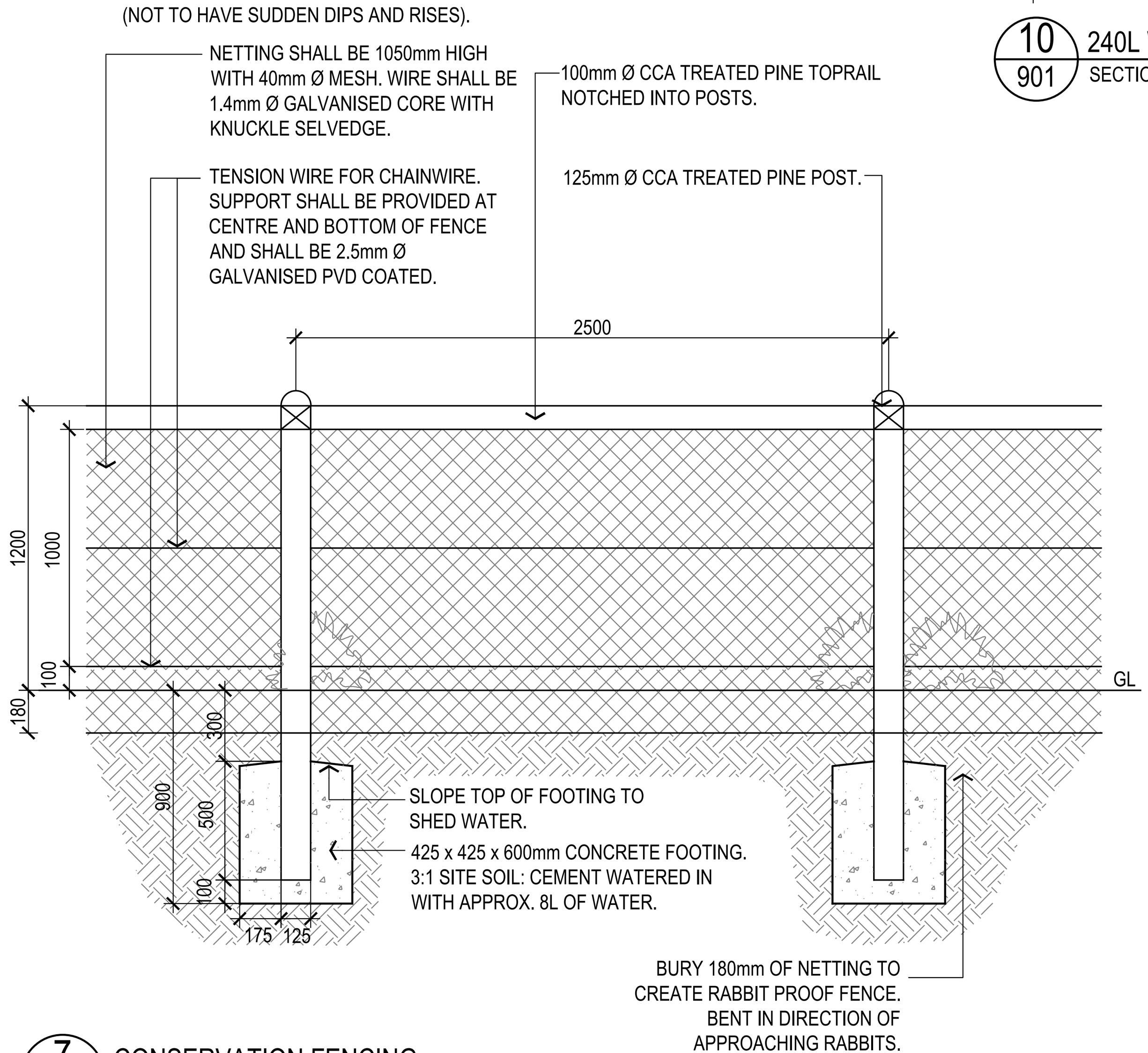


5/901 EXPOSED AGGREGATE HARDSTAND
SECTION — SCALE 1:20

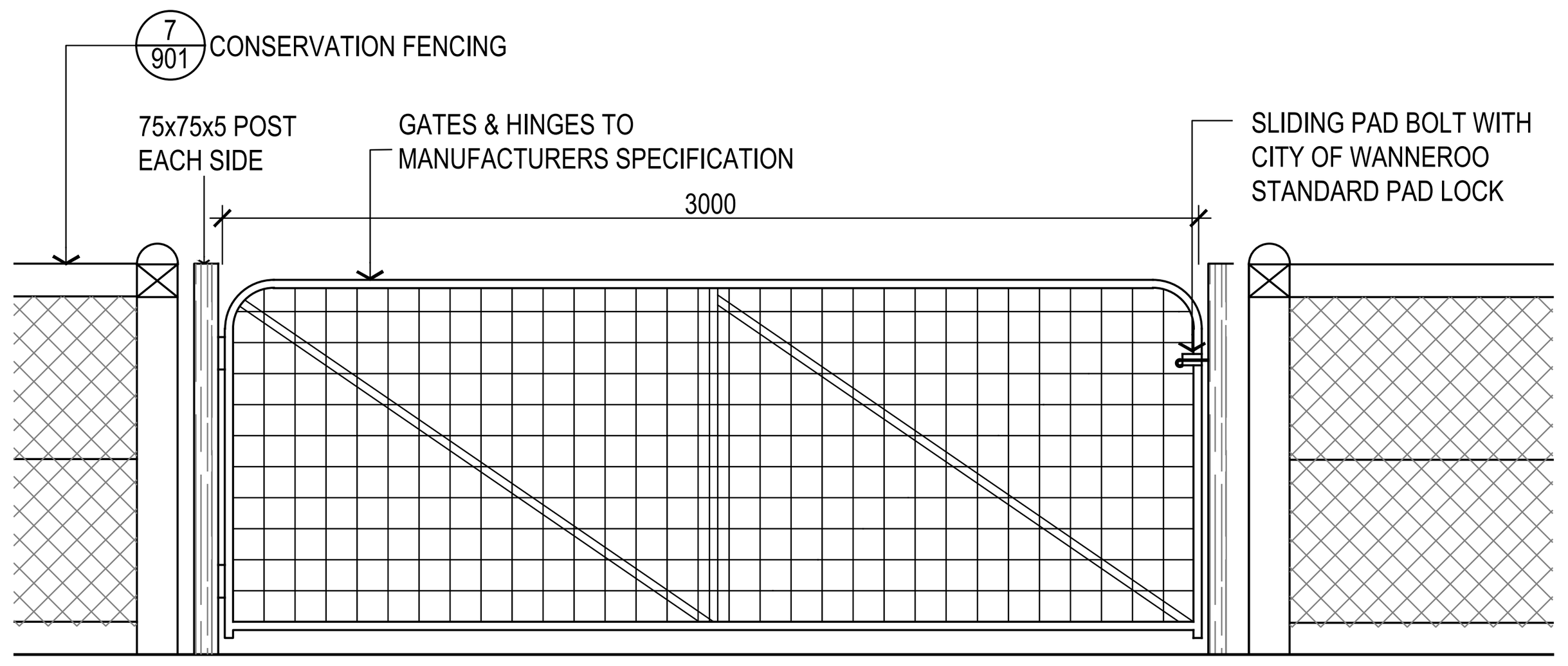


6/901 EMULSION STABILISED LIMESTONE
SECTION — SCALE 1:20

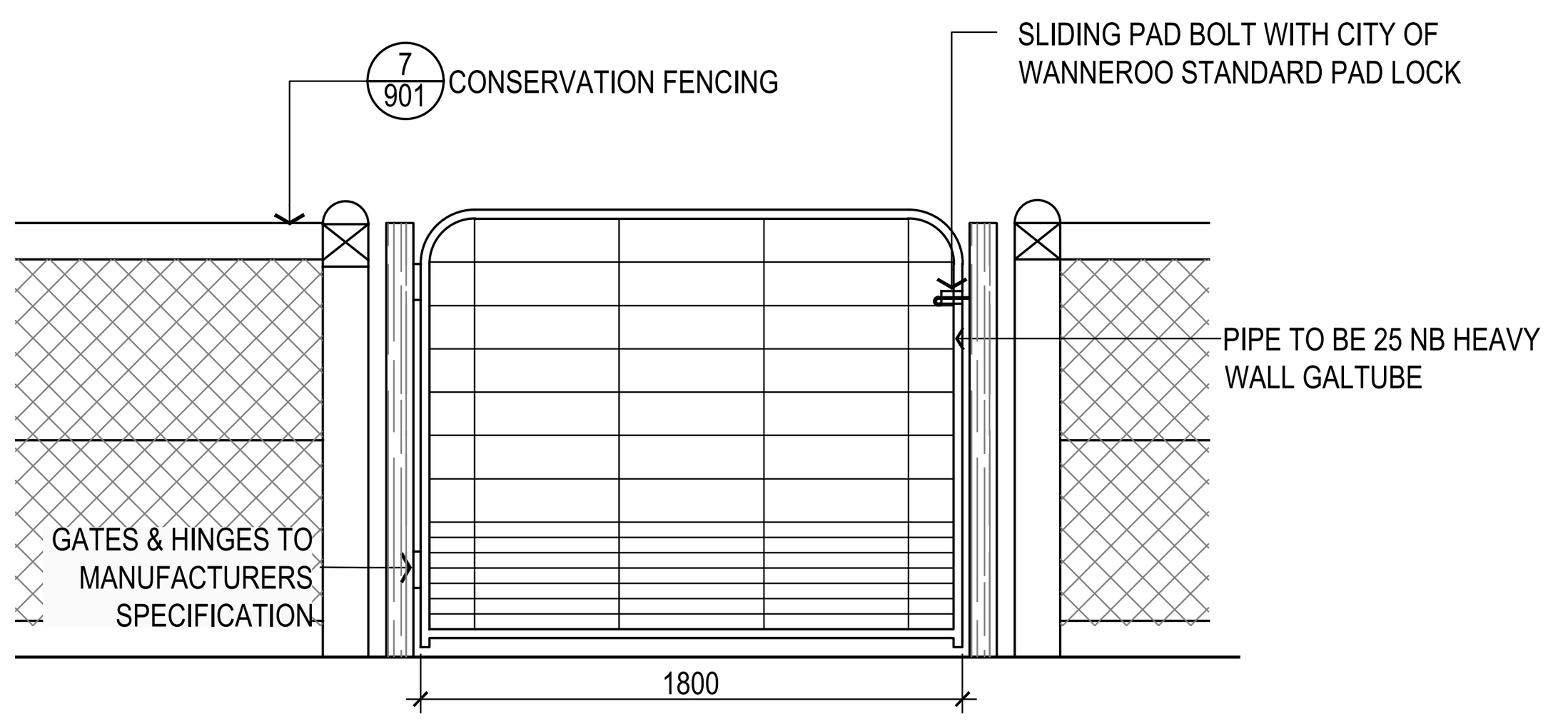
NOTES:
1. ALL ENDS, JOINS AND TIES TO BE FINISHED NEATLY WITH NO WIRE PROTRUSIONS.
2. WIRE TO BE WRAPPED AROUND PINE POSTS TWICE, THEN WOUND BACK AROUND WIRE THREE TIMES AND CUT OFF FLUSH.
3. FENCING WIRE TO BE FIXED TO OUTSIDE OF FENCE, EXCEPT WHERE PARK ADJOINS PRIVATE PROPERTY, IT SHOULD BE FIXED TO INSIDE OF FENCE.
4. FENCE TO SMOOTHLY FOLLOW THE OVERALL CONTOURS OF THE LAND AS FOR BOLLARDS (NOT TO HAVE SUDDEN DIPS AND RISES).



7/901 CONSERVATION FENCING
SECTION — SCALE 1:25

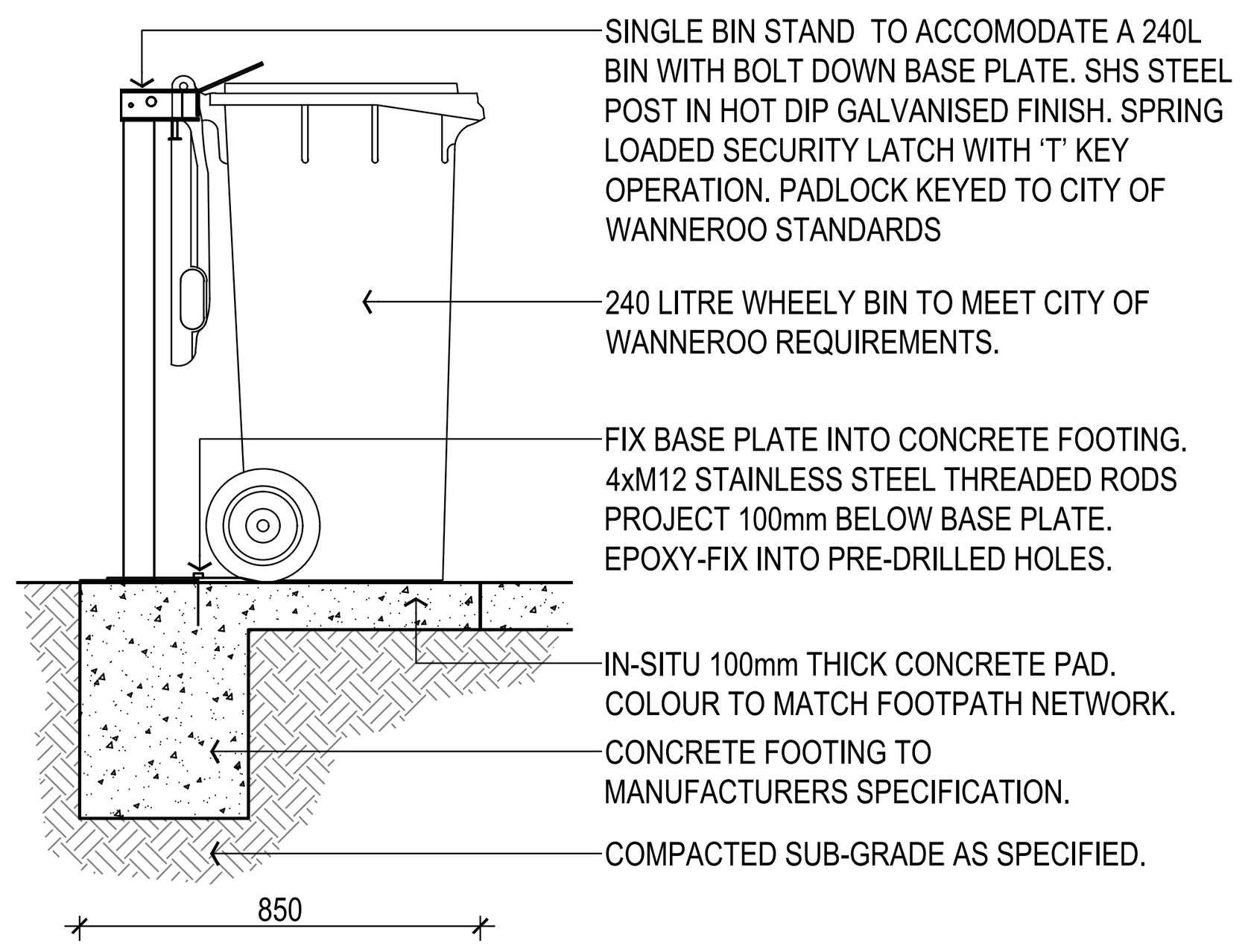


8/901 MAINTENANCE GATE - CoW STANDARD
SECTION — SCALE 1:25

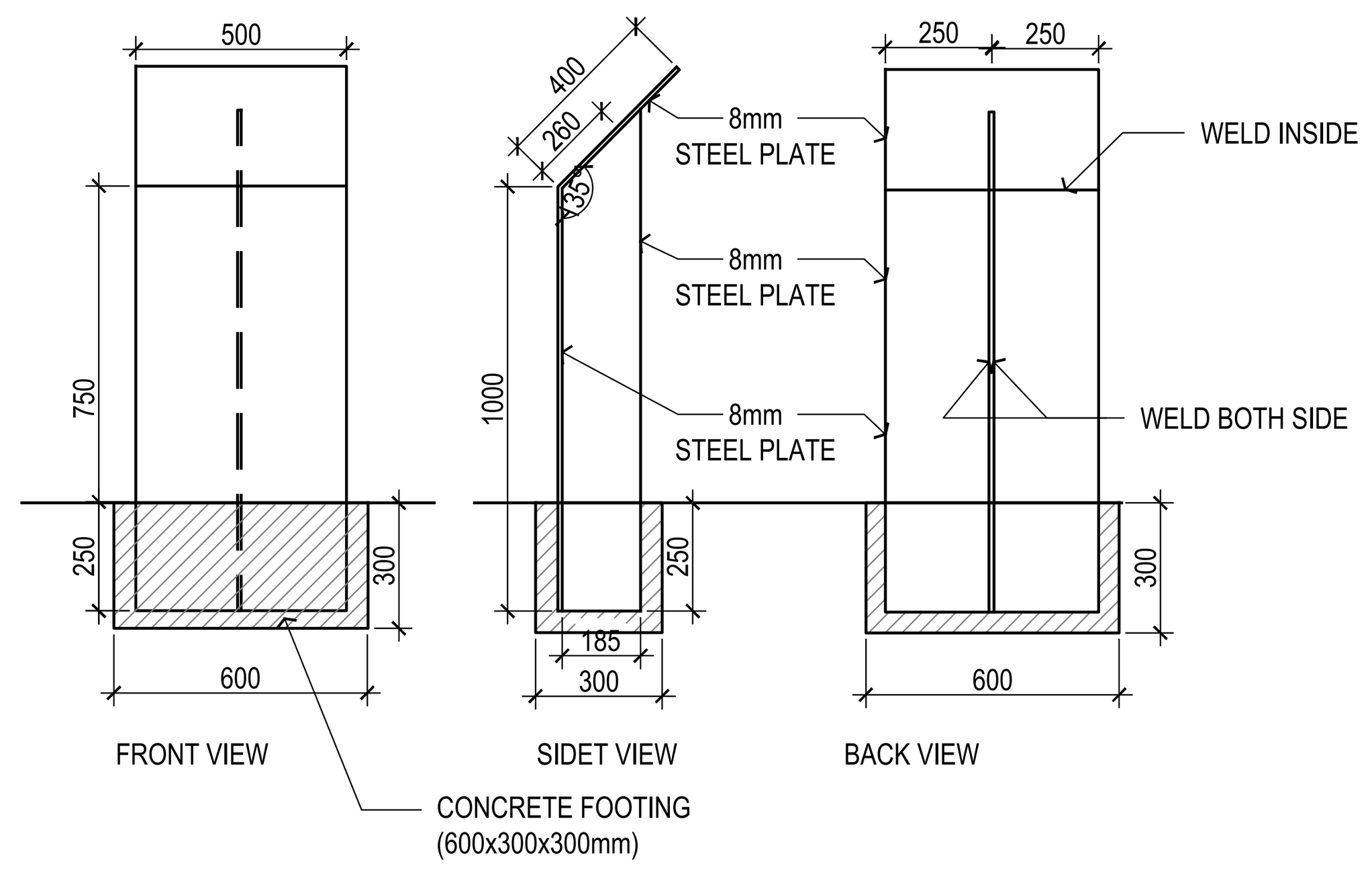


9/901 PEDESTRIAN GATE - CoW STANDARD
SECTION — SCALE 1:25

CITY OF WANNEROO RECOMMENDED SUPPLIER:
GC SALES
Contact: Paul Homes -92483726
WEB http://www.gcsales.com.au/



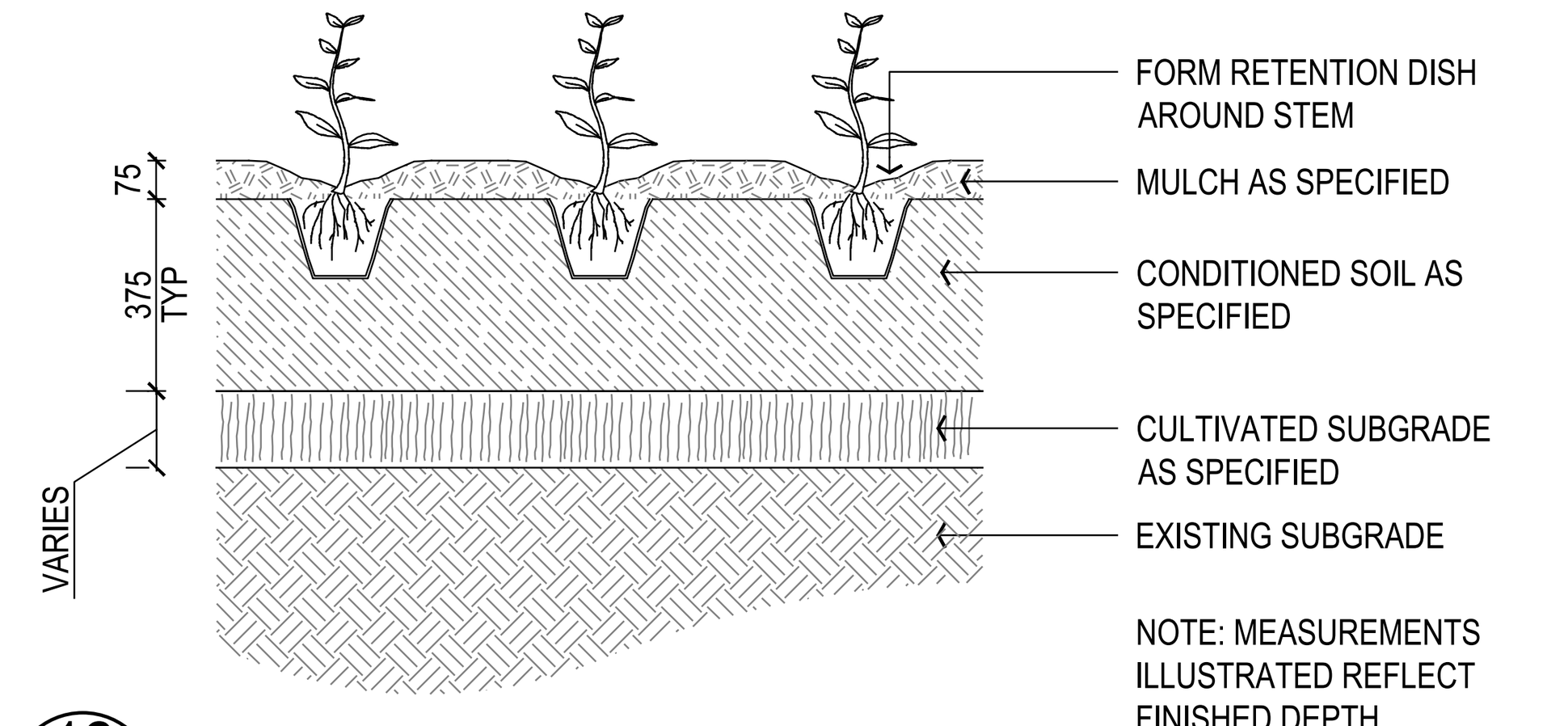
10/901 240L WHEELED BIN & STAND DETAIL
SECTION — SCALE 1:20



IMPORTANT NOTE:
1. ALL STEEL PLATE TO BE 8mm THICK.
2. PLATE TO BE PAINTED:
   GREEN (BUSHLAND AND WETLAND) PMS300 OR DULUX MISSLETOE
   OR
   BLUE (COASTAL FORESHORE) PMS300 OR DULUX BLAZE BLUE.
3. STRUCTURE TO BE COATED WITH APPROVED ANTI-GRAFFITI SURFACE/ COATING.
4. CONCRETE SHALL ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 20 MP AT 28 DAYS.

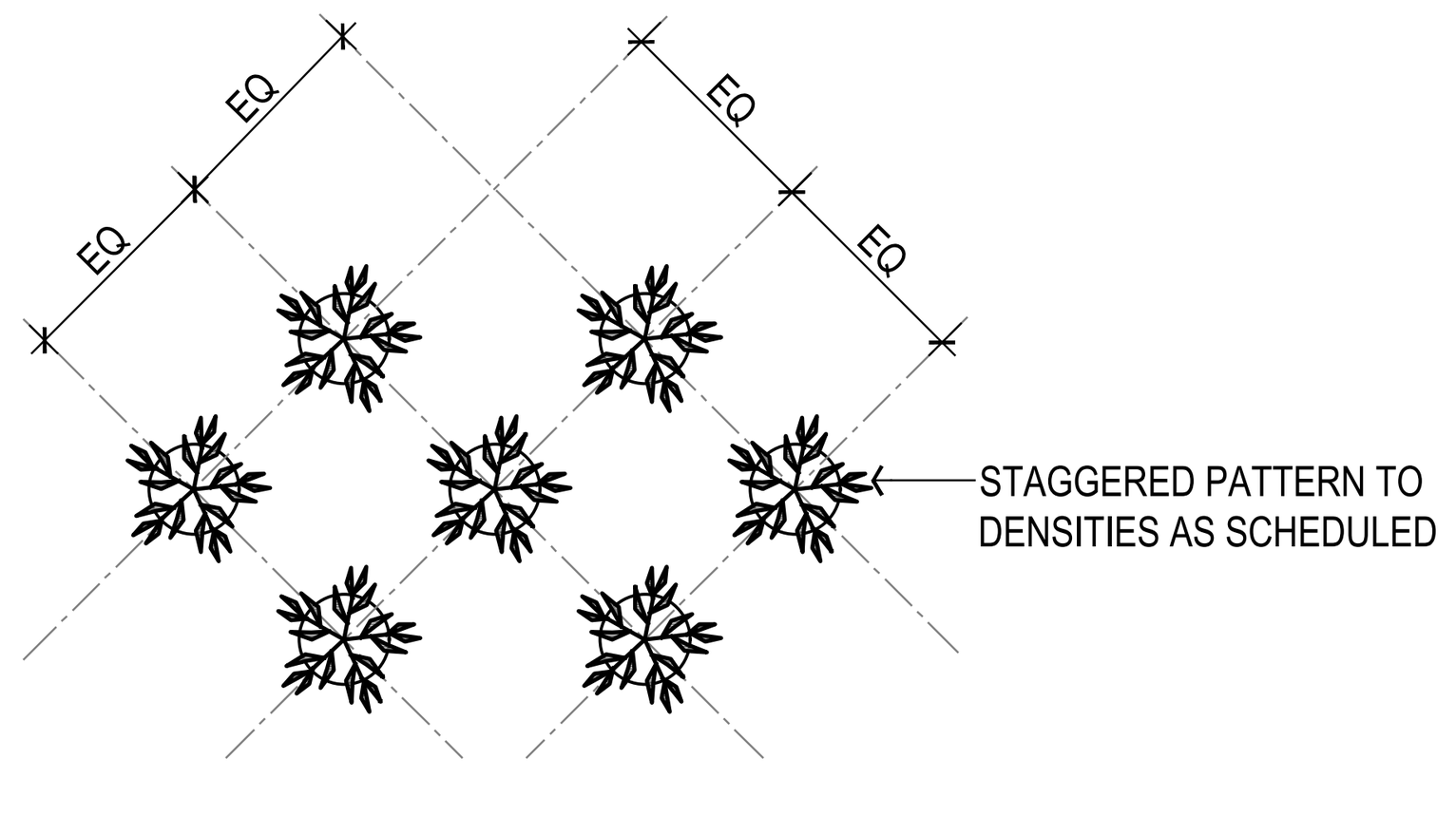
NOTE: TEXT TO BE PROVIDED BY THE CoW.

11/901 INTERPRETIVE SIGNAGE - CoW STANDARD
PLAN & ELEVATIONS — SCALE 1:20

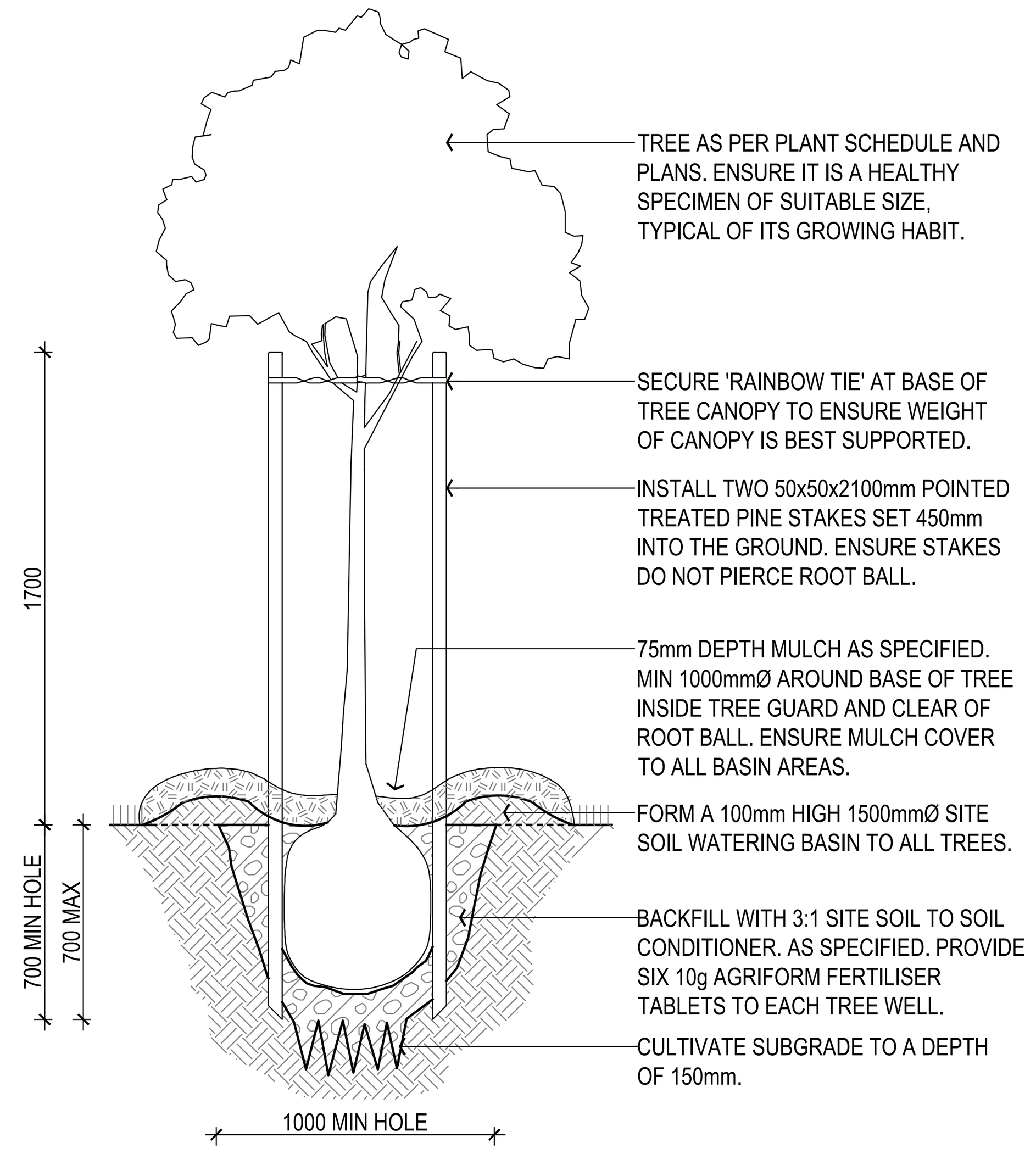


NOTE: MEASUREMENTS ILLUSTRATED REFLECT FINISHED DEPTH

12/901 TUBESTOCK - 200mm POT PLANTING
SECTION — SCALE 1:20



13/901 TYPICAL STAGGERED PLANTING PATTERN
PLAN — SCALE 1:20



14/901 TYPICAL 100 & 200 LITRE TREE PLANTING
SECTION — SCALE 1:25



PRODUCT NAME	LINEA TABLE
PRODUCT SUPPLIER	STREET FURNITURE AUSTRALIA
PRODUCT CODE	LIT10-DDA, LIB6
PRODUCT FINISH	POWDER COATED ALUMINIUM
PRODUCT COLOUR	LEGS: MONUMENT, BATTENS: ALUMINIUM SPOTTED GUM
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATIONS

15/901 LINEA PICNIC TABLE
IMAGE REFERENCE — NTS



PRODUCT NAME	LINEA SEATING BENCH
PRODUCT SUPPLIER	STREET FURNITURE AUSTRALIA
PRODUCT CODE	LIS10
PRODUCT FINISH	POWDER COATED ALUMINIUM
PRODUCT COLOUR	LEGS: MONUMENT, BATTENS: ALUMINIUM SPOTTED GUM
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATIONS

16/901 LINEA SEATING BENCH
IMAGE REFERENCE — NTS

PRELIMINARY
NOT FOR CONSTRUCTION
INFORMATION ONLY

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFFSITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
A	09.05.25	JL	ISSUE FOR APPROVAL

THIS IS AN UNCONTROLLED DOCUMENT ISSUED FOR INFORMATION ONLY UNLESS SIGNED BELOW AT EACH RELEVANT STAGE.

INTERNAL DESIGN REVIEW
THIS DESIGN IS NOT AUTHORISED WITHOUT BEING INTERNALLY REVIEWED AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

INTERNAL PRETENDER REVIEW
THIS DRAWING IS NOT AUTHORISED FOR TENDER WITHOUT BEING INTERNALLY REVIEWED AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

AUTHORISED FOR CONSTRUCTION
THIS DRAWING IS NOT AUTHORISED FOR CONSTRUCTION UNLESS IT IS MARKED REV 1 OR HIGHER AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

emerge ASSOCIATES
Integrated Science & Design
PERTH (08) 9380 4988 • MARGARET RIVER (08) 9758 8159

PROJECT
CATALINA
CLARKSON, W.A
STAGE OR PHASE
STAGE 45 NATURE POS
DRAWING TITLE
DETAILS
CLIENT
CATALINA REGIONAL COUNCIL

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DESIGNED BY	JL	PRELIM DESIGN REVIEWED BY	ZF
DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	05.05.25		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT-75-901	REV	A

REF U:\CURRENT PROJECTS\CATALINA, TAMALA PARK(CL) DRAWINGS\(JOB CODE) AUTOCAD\(JOB CODE) LANDSCAPE\STAGE 45 NATURE POS\CAT75_STAGE 45 NATURE POS_DET.DWG

GENERAL NOTES

1. These drawings are to be read in conjunction with all architectural and other consultants' drawings and specifications and with such other written instructions as may be issued. Any discrepancies shall be referred to the superintendent for clarification before proceeding with work.
2. All dimensions are in millimetres and those relevant to setting out (excludes finishes) and offsite work shall be verified by the contractor before construction and fabrication are commenced. The engineer's drawings shall not be scaled.
3. All levels and grid co-ordinates are in metres.
4. During construction the contractor shall be responsible for maintaining the structure in a stable condition and no part shall be over stressed under construction activities.
5. Workmanship and materials shall be in accordance with the current edition of the relevant SAA codes and the by-laws and ordinances of the relevant building authority, except where varied by the contract documents.

DESIGN CRITERIA

1. Dead, live, wind and earthquake loads to AS1170.
2. Design Wind Speed
   Region A
   Terrain Category 2.5
   Regional Gust Wind Speed = 45m/sec (ULTIMATE LIMIT STATE)
   Regional Gust Wind Speed = 37m/sec (SERVICE LIMIT STATE)
3. Earthquake
   kp = 1.0
   Hazard Factor Z = 0.09 (Perth)
4. Foundations
   Foundations designed for Class 'S' site with minimum 150kPa allowable bearing pressure.
5. Live Loads

Decking:	3kPa to AS1170.1
Balustrade:	C3 to AS1170.1
Roof construction load:	0.25kPa to AS1170.1
Retaining Wall Surcharge:	3kPa to AS1170.1

BUILDER NOTE - COMPLIANCE INSPECTIONS

1. As part of the building licence for this project, the builder may be required to have the structural engineer certify the completed structure has been built in accordance with the approved drawings & /or with any subsequent written instructions.
2. If WA Structural Consulting are to provide this certification, the builder must arrange for WA Structural Consulting to inspect each of the structural items at appropriate stages. These items and stages include, but are not limited to the following:,
   - 2.1. Concrete reinforcement, prior to pouring of concrete in:
     - 2.1.1. Footing Excavations
     - 2.1.2. Slabs on ground
     - 2.1.3. Suspended slabs and beams
     - 2.1.4. Concrete columns and walls
     - 2.1.5. Retaining walls
   - 2.2. Structural steelwork prior to any cladding being fixed.
   - 2.3. Concrete wall panel connections.
3. The builder must provide appropriate evidence that the specified concrete has been supplied for each concrete element.
4. The builder must provide evidence that the required levels of foundation compaction have been achieved.
5. Where a geotechnical engineer has made specific recommendations, evidence that these have been achieved must be provided.
6. Unless fees for our inspections and certifications have been previously negotiated with WA Structural Consulting by others, these fees will be the builder's responsibility. It is required that the builder negotiate these fees with the engineer at a tender stage.
7. If the builder requires the fabrication drawings to be checked & certified by the project engineer, the costs associated with this will be the builder's responsibility, unless these fees have been previously negotiated with WA Structural Consulting by others. This must be confirmed by the builder.

CONCRETE AND REINFORCEMENT

1. All concrete works shall be in accordance with AS3600.
   Concrete specification shall be U.N.O.:

Location	F'C (MPA)	MAX.AGG SIZE (mm)	SLUMP (mm)
Footings	25	20	65
Slab on Ground	25	20	65
In Situ Retaining Walls	32	20	60
Precast	32	20	80
Cavity Fill	15	10	100

Cover to Reinforcement shall be:

Location	Bottom (mm)	Top (mm)	Sides (mm)
Footing	70	50	50
Slab on Ground	50	40	50
In Situ Retaining Walls	32	20	60
Precast	50	40	40
Cavity Fill	50	50	20 U.N.O

2. Reinforcement shall be supported on approved plastic or plastic tipped wire chairs and hold rigidly in position as follows:
   a. Bars up to N12 and fabric - 800mm centres
   b. Bars N16 and larger - 1200mm centres
   * Welding reinforcement is not permitted unless approved by engineer.
3. Construction joints shall be scabbled, cleaned and coated with a cement/water slurry immediately prior to placing concrete.
4. Concrete shall be compacted using mechanical vibrators.
5. Concrete shall be cured for a minimum of 7 days by flooding, keeping continuously moist, the application of an approved curing compound or by other means approved by the engineer.
6. No holes or chases other than those shown on the drawings shall be made unless approved by engineer. Pipework passing through footing beams shall be to the approval of the engineer and shall be wrapped with a compressible material of minimum 6mm thickness.
7. Formwork and stripping times shall comply with AS3610. Remove formwork only when concrete has attained its design (f 'c) strength unless otherwise instructed by the structural engineer.
8. Control, expansion and contraction joints shall be constructed as detailed. Saw cut joints shall be made within 12 hours of concrete placement.
9. All mesh to conform with AS1304.
10. Reinforcement shall be in accordance with the following standards:

R	Indicates plain reinforcing bar R250N to AS/NZS4671
L	Indicates plain or deformed wire R500L or D500L to AS/NZS4671
RL	Indicates deformed rectangular mesh D500L to AS/NZS4671
SL	Indicates deformed square mesh D500L to AS/NZS4671
N	Indicates deformed bars D500N to AS/NZS4671
S	Indicates deformed bars D250N to AS/NZS4671
TM	Suffix indicates trench mesh using deformed bars D500L to AS/NZS4671

11. All galvanized items which are cast into concrete are to be passivated in a 0.2% sodium dichromate solution or equivalent.
12. All formwork shall be rigidly constructed of approved material. Formwork and supports shall be designed to withstand all possible load combinations during construction.

BAR DIAMETER (LARGEST)	LAP
12	600
16	800
20	1000
24	1200
28	1400
32	1600

Note: To be used U.N.O

14. Chemset Anchors U.N.O to be M16 HCR 8.8 rods with HILTI-HIT-HY-200 Adheisive minimum 150mm embedment. Installed in accordance with Manufacturers Specification and Installation Procedure.

FOUNDATIONS

1. Design is based on an allowable bearing pressure of 150kPa. It is the builder's responsibility to confirm the foundation type prior to commencing construction. Should the foundation type or bearing capacity not satisfy the above criteria the builder shall immediately contact engineer prior to construction proceeding.
2. Builder to grub out and remove all organic material and debris from the building platform.
3. Any soft areas shall be dug out and replaced with approved non-plastic fill.
4. All site preparation works shall be in accordance with site specific Geotechnical report and requirements.
5. Ensure a minimum of 8 blows per 300mm is achieved with a calibrated Perth Sand Penetrometer in accordance with AS1289.6.3.3
6. The building platform is to be shaped to ensure it drains to its perimeter and that such drainage is taken away from the platform area.
7. Footings at the lowest level must be the first footings constructed.
8. Located plumbing lines over top of footings and step footings.

MASONRY

1. All blockwork and brickwork shall be in accordance with AS3700
2. Concrete blocks shall be in accordance with AS2733
3. Reinforcement and concrete core filling shall comply with the notes on "concrete and reinforcement".
4. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700.
5. Masonry units shall have a minimum compressive strength of 15MPa.
6. As follows:
   a. Bond beam reinforcement shall be continuous at intersecting walls and bars anchored and lapped to develop full tensile stress.
   b. Support reinforced brick lintels for 14 days minimum.
7. Cleanout blocks shall be provided at the base of all cores to be concrete filled. Alternatively the builder shall open such cores for cleaning by an approved method.
8. All cores to be concrete filled shall be cleaned out by hosing prior to final setting or mortar at all lifts or by rodding prior to concrete filling.
9. Retaining walls shall be fully core filled. Backfill to retaining walls shall not be carried out until 14 days after core filling.
10. Provide 10mm stack bonded control joints where shown. Control joint to consist of flexible masonry anchors every 3rd course. Brunswick type MFA 3/3. Apply flexible sealant over backing rod.
11. Cross walls shall be fully bonded for the full height of intersecting wall.
12. Horizontal chasing is not permitted without written approval from the engineer.
13. Lap wires 500mm at splices and around corners and COG 500mm into intersecting walls. 20mm cover to all wires.
14. All wires in external face of external leaf to be galvanised to AS/NZS4680.
15. Masonry ties are to be provided at no more than 600mm spacing in each direction, and max 300mm from top of wall, side of control joint or perimeter of opening.
16. Ties to be grade 316 stainless steel in corrosive environments.
17. Masonry abutting concrete footings to typically be isolated with 10mm Ableflex expansion foam or similar approved product UNO.

STRUCTURAL STEEL

1. All steelwork shall be in accordance with:
   AS4100 steel structures
   AS4600 cold formed steel structures
2. Fabricator to check all dimensions before cutting materials or manufacturing. fabrication to AS4100 UON. These drawing are to be read in conjunction with the project architectural and other consultants' drawings.
3. Unless noted otherwise all steel shall be:
   a. AS3678 grade 250 hot rolled plates
   b. AS3679.1 grade 300 hot rolled UB, PFC, TFC, TFB, EA, UA and FLATS
   c. AS3679.2 grade 300 WB and WC
   d. AS1163 grade 250 for circular hollow sections Ø165mm and less
   e. AS1163 grade 350 for circular hollow sections larger than Ø165mm and rectangular hollow sections.
   f. AS1397 500MPa for 1.2mm thick purlins and girts
   g. 450MPa for 1.6mm thick purlins and girts
   h. 450MPa for 1.0 thick CF Channels
   i. 450MPa for 1.6mm thick CF Channels
4. Galvanising shall be hot dipped to AS/NZS 4680
5. Bolts shall be galvanised and of sufficient length to exclude the thread from the shear plane. A suitable washer shall be used under all nuts, when tensioning is specified high strength bolts shall be fully tensioned with load indicating washers to the requirements of AS4100.
6. Bolt legend 4.6/S commercial grade 4.6 bolts snug tightened 8.8/S high strength grade 8.8 bolts snug tightened. 8.8/TB high strength grade 8.8 bolts tensioned bearing connection. 8.8/TF high strength grade 8.8 bolts tensioned friction connection.
7. Unless otherwise specified the following shall apply -
   a. Cleats, brackets, stiffeners etc. to be 10mm thick, ex-standard square edge flats U.N.O.
   b. Welding to be carried out in accordance with AS/NZS 1554. 1:1995 welding consumables to be E48XX or W50X U.N.O. all welds to be 6MM CFW SP category U.N.O CPBW to be SP category U.N.O.
   c. Inspection to be carried to AS/NZS 1554.1:1995. All GP/SP welds to be 100% visually scanned. SP welds allow for 25% visual examination U.N.O.
   d. 6mm end plates to all hollow sections (seal weld).
   e. Bolts to be G 8.8/S
   f. Bolt hole clearance 2mm
   g. Hold down bolt clearance 4mm
   h. Grout - a space for 40mm of 2:1 sand: cement mortar of damp earth consistency under all base plates.
   i. Connections - minimum of 2-M16 8.8/S bolts
   j. Bracing intersects on centrelines and centre of gravity for angles.
8. Fabricator shall allow for all cleats and other fixings required by the supervisor.
9. All column base plates shall be set on 20mm min. of 1:2 cement and sand grout.
10. Seal all open ends of pipes or RHS members. Grind off all visible welds and brand marks to neat appearance where specified.
11. See below:
    a. The contractor shall remain responsible at all times for providing all necessary temporary bracing and other supports during erection, to stabilise the partially constructed building.
    b. Particular attention must be paid to the buckling stability of beams and columns prior to the connection of purlins, girts, fly braces and other bracing elements.
    c. It is the responsibility of the builder to obtain proper technical advice wherever necessary to ensure the partially completed structure is safe from collapse.
12. Treatment:
    All steel connection plate and bolts to be hot dip galvanize (600 g/sqm)
    Holding down bolts - hot dip galvanize (600 g/sqm)
13. Bitumen paint all steelwork for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

STRUCTURAL TIMBER

1. Structural timber shall comply with AS1720 timber structure code.
2. All timber to be seasoned F14, class 2, strength group SD5, joint group JD2 and treated with creosote to hazard class H4 unless noted otherwise.
3. All timber work to be in accordance with :
   - AS1684 - SAA timber framing code.
   - AS1720 - SAA timber structures code.
4. All timber and steel connections to be in accordance with AS1720.
5. Ensure no knots or gum veins in timber used.
6. Coat all timber in contact with ground with bitumen paint or similar approved.
7. All structural details to be confirmed, checked and site measured by builder prior to construction. Report any discrepancies to structural engineer.
8. Treatment :
   - H1 - Interior use, above ground.
   - H2 - Interior use, above ground, subject to termites.
   - H3 - Exterior use, above ground, subject to periodic wetting.
   - H4 - Exterior use, in ground, subject to severe wetting.
   - H5 - Exterior use, in ground, with or in fresh water.
   - H6 - Exposed to marine water.
9. Required bending stress:
   - MGP10 fb = 16 MPa
   - MGP12 fb = 28 MPa
   - F14 fb = 36 MPa
   - GL17 fb = 40 MPa
   - LVL13 fb = 48 MPa
   - LVL15 fb = 59 MPa
   - LVL18 fb = 72 MPa
10. All bolted timber connections to be re-tightened at end of project prior to completion, ensure no splitting of timber occurs.
11. All proprietary systems (floor/wall/roofing) to be installed in strict accordance with manufacturer's specifications and details.
12. Bush Poles :
    - All timber to AS1720.
    - Minimum F11 grade CCA / H4 treated seasoned softwood. S6 strength group.
    - Free from decay, shakes & fractures,resin pockets and surface damage.
    - Heartwood not to exceed 50% of the diameter at each end or be within 35mm from the surface.
13. Bitumen paint all timber posts/columns for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

LIMESTONE RETAINING WALL SPECIFICATION NOTES

1. Width 'b' at any height to be no less than half of retained height 'h'. step wall to suit
2. Walls to be built on compacted sand, compact ground under footing to resist 7 blows per 300mm of a standard 16mm dia penetrometer over a depth of 600mm.
3. These walls are applicable to well drained sandy soil conditions only.
4. Walls resisting clay soil pressures and/or hydrostatic pressures to be referred to the engineer.
5. All reconstituted limestone to be first grade quality & free from soft pockets.
6. Rubble shall not be used to fill voids.
7. Reconstituted limestone to have a dry density of at least 1600 kg/m3 and a crushing strength of at least 5mpa.
8. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700. All mortar joints to be 20mm thick and fully mortared.
9. All topsoil, vegetation and deleterious matter shall be removed from the foundation area.
10. Vertical thickness of wall to be adequately bonded by building in header blocks - refer cross section
11. No backfilling until 7 days after walls have been built.
12. All backfilling shall be carried out using material which shall generally be sandy in nature and free from large pieces of rock to the extent that the
    material can be compacted using a vibrating plate compactor to meet the requirements of the specification.
13. Backfill shall not be dumped behind wall in a manner which will cause shock loading on the wall
14. Backfill shall be clean sand compacted in shallow (300) layers using light compacting equipment
15. In all cases the backfill material shall be selected such that once compacted, the standard of compaction can be measured using a standard perth penetrometer.
16. Compaction of the backfill material to the front and back of the wall to be compacted 95% modified max dry density.
17. Prior to practical completion the contractor shall provide written certification from a practising structural engineer that the wall construction & backfill compaction has been carried out in accordance with this drawing and the specification.
18. Construction Joints (CJ) shall be constructed within the retaining wall where noted below:
    (i) at max. 10m centres along wall face
    (ii) where the angle between faces of two walls exceeds 180 degrees, in which case the CJ is to be located on one side of the change in direction, at a distance away from the direction change equal to the base width of the wall.
19. Construction joints shall be 15mm wide and filled with expanded polyethylene (100mm deep) covered with a 25mm deep mastic of colour to match wall mortar. joints are to extend through wall and any fences, but need not extend through base course of limestone wall.
20. Select blocks to ensure intact faces only visible in facework.

ALUMINIUM

1. All Aluminium shall be in accordance with AS1664.
2. All Aluminium welding shall comply with AS1664.
3. Unless noted otherwise, all aluminium to be:
   - Plates: Grade 5083 H116/h321 or 5083 H112 Aluminium
   - SHS/RHS/CHS: Grade 6060-t5 aluminium
   - Fixings: grade 316 stainless steel
   - Welds: 5mm continuous fillet, category sp, filler allow to be grade 5186,5356 or 5556 aluminium
4. All fixings into Aluminium members to be stainless steel (SS316) or equivalent capacity aluminium fixings.
5. Provide nylon washers and packers for all and any connections between steel and aluminium.
6. Adequate protective coatings are to be applied to aluminum cast into concrete.

PRECAST CONCRETE

1. All precast units shown are for service conditions only. The contractor is responsible for all casting,lifting, transportation and propping requirements and must satisfy himself that they have been constructed to meet the design criteria noted. Any queries regarding precast concrete units shall be flagged during the tender process. If in doubt, ask.
2. Contractor to obtain Engineer's Design Certification for all elements of precast concrete work as required to the relevant Australian Standards (Lifting, bracing, propping as required).
3. Panels are to be securely propped until designed connections have been installed and are sufficiently restraining panels.
4. U.N.O all chemical anchors fixed into concrete panels to be galvanised HILTI-HAS-E-F rods with HILTI-HIT-HY-200 adhesive.
5. All grout used for panels shall be non shrink high strength grout to achieve min 40mpa compressive strength typ.
6. Precast concrete strength is for final position. Contractor to confirm required lifting strength in accordance with lifting engineers requirements. Shall be no less than 15 MPA.

HDPE DECKING AND BOARDS

1. All HDPE battens and other HDPE members to be supplied and installed in strict accordance with manufacturers specification.

PRELIMINARY
NOT FOR CONSTRUCTION
INFORMATION ONLY

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFFSITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
A	09.05.25	JL	ISSUE FOR APPROVAL

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INTERNAL PRETENDER REVIEW
THIS DRAWING IS NOT AUTHORISED FOR TENDER WITHOUT BEING INTERNALLY REVIEWED AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

AUTHORISED FOR CONSTRUCTION
THIS DRAWING IS NOT AUTHORISED FOR CONSTRUCTION UNLESS IT IS MARKED REV 1 OR HIGHER AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

emerge ASSOCIATES
Integrated Science & Design
PERTH (08) 9380 4988 • MARGARET RIVER (08) 9758 8159

PROJECT
CATALINA
CLARKSON, W.A
STAGE OR PHASE
STAGE 45 NATURE POS
DRAWING TITLE
NOTES
CLIENT
CATALINA REGIONAL COUNCIL

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DESIGNED BY	JL	PRELIM DESIGN REVIEWED BY	ZF
DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	05.05.25		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT-75-980	REV	A

REF U:\CURRENT PROJECTS\CATALINA, TAMALA PARK(CL) DRAWINGS\(JOB CODE) AUTOCAD\(JOB CODE) LANDSCAPE\STAGE 45 NATURE POS\CAT75_STAGE 45 NATURE POS_DET.DWG

CATALINA STAGE 45 NATURE POS
IRRIGATION WORKS



AUTOCAD FILENAME: Catalina Stage 45 POS Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	20/05/2025	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

N

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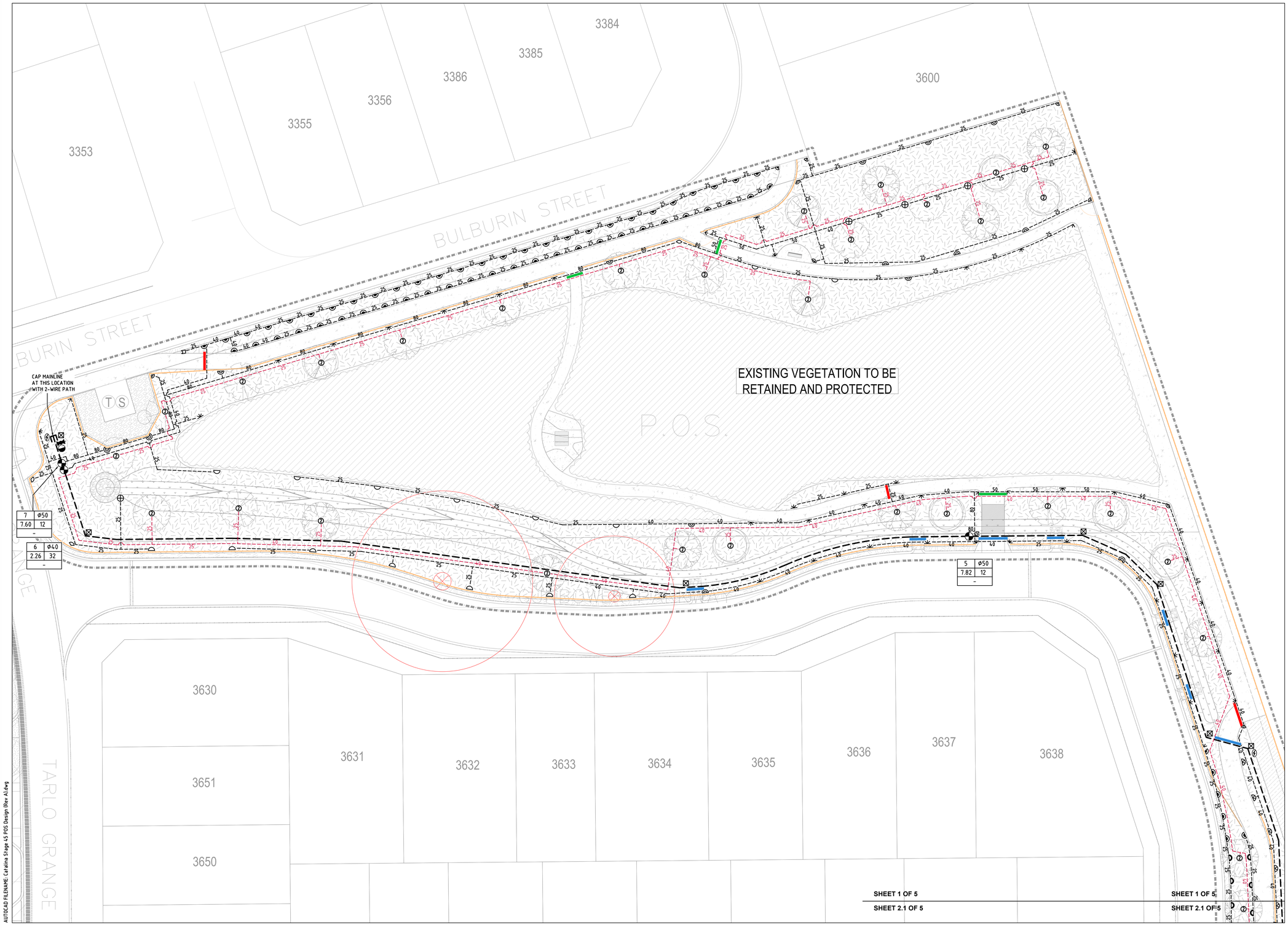
SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA STAGE 45 NATURE POS
IRRIGATION WORKS (KEY PLAN)
-

DATE :	DESIGN NO. :	SHEET NO. :
20/25/2025	18950-00	COVER PAGE



AUTOCAD FILENAME: Catalina Stage 45 POS Design (Rev A).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	2.5	350	9.7	10.7
	HUNTER	I-20-12	4.5LA	350	16.6	10.7
	HUNTER	I-20-12	2.0LA	350	8	8.5
	HUNTER	I-20-12	1.0SR	350	3.8	5.5
	TORO	570Z-12P	12	250	3.63	3.7
	TORO	570Z-12P	10	250	1.25-2.50	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

ALL GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER OR TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)

100 L — 2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA

BERMAD 200 SERIES DATA VALVE SIZE AS SHOWN

EXISTING BORE LOCATION

EXISTING BORE PUMP CUBICLE WITH A SIGNAL SDS-100

50mm MAINLINE FLUSHING VALVE

DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION

P2 CABLE PIT

SD-SL SURGE ARRESTOR

EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE

DN110 PN12.5 PE100 MDPE POLY MAINLINE WITH LILAC STRIPE OR PLAIN BLACK ALONG STREETSCAPES. IF THIS PIPEWORK IS UNAVAILABLE REFER TO NOTE 8

25 — uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN

25 — uPVC SWJ CLASS 9 LATERAL LINE FOR TREES SIZE AS SHOWN

DN110 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS

DN160 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS

DN200 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS

STATION DATA							VALVE DATA	
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	7.66	350	12	40	40	GARDEN	1	7.66	-
2	7.78	350	12	40	40	GARDEN	2	7.78	-
3	7.82	350	12	40	40	GARDEN	5	7.82	-
4	7.60	350	12	40	40	GARDEN	7	7.60	-
5	4.97	250	32	40	15	GARDEN	4	2.71	-
							6	2.26	-
6	4.78	250	-	-	15	TREES	3	4.78	-

DAILY RUN TIME: 3 HRS & 10 MIN — WEEKLY RUN TIME: 15 HRS & 50 MIN

VALVE LABEL LEGEND

VALVE NO / FLOW (LPS): 2 Ø50 / 3.29 32 / - — VALVE SIZE; PRECIPITATION RATE; DECODER NO.

NOTE:

1. THESE WORKS ARE TO BE INSTALLED TO MEET THE CITY OF WANNEROO IRRIGATION SPECIFICATIONS (JAN 2024 VERSION 1.0).
2. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
4. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
5. ALL SIGNAL 2-WIRE PATHS TO BE INSTALLED IN 40MD GREY CONDUIT.
6. ANY SPRINKLERS INSTALLED WITHIN TURF AREAS ON ROAD VERGES ARE TO BE INSTALLED WITH SQUARE CONCRETE SURROUNDS.
7. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SIGNAL SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW--
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
8. IF THE LILAC/PURPLE STRIPE OR PLAIN BLACK MAINLINE PIPEWORK IS UNAVAILABLE USE THE EQUIVALENT SIZED PN12.5 PE100 BLUE STRIPE. THE MAINLINE IS TO HAVE 150mm WIDE NON-DETECTABLE UNDERGROUND TAPE "WARNING IRRIGATION MAIN BELOW" BLUE WITH BLACK TEXT. INSTALL TAPE 100mm ABOVE THE TOP OF THE MAINLINE PIPEWORK.

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — DESIGNSCAPE FUTURE COMMUNITIES — CP24161

0 2.5 5 7.5 10 12.5m
SCALE 1:250 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	20/05/2025	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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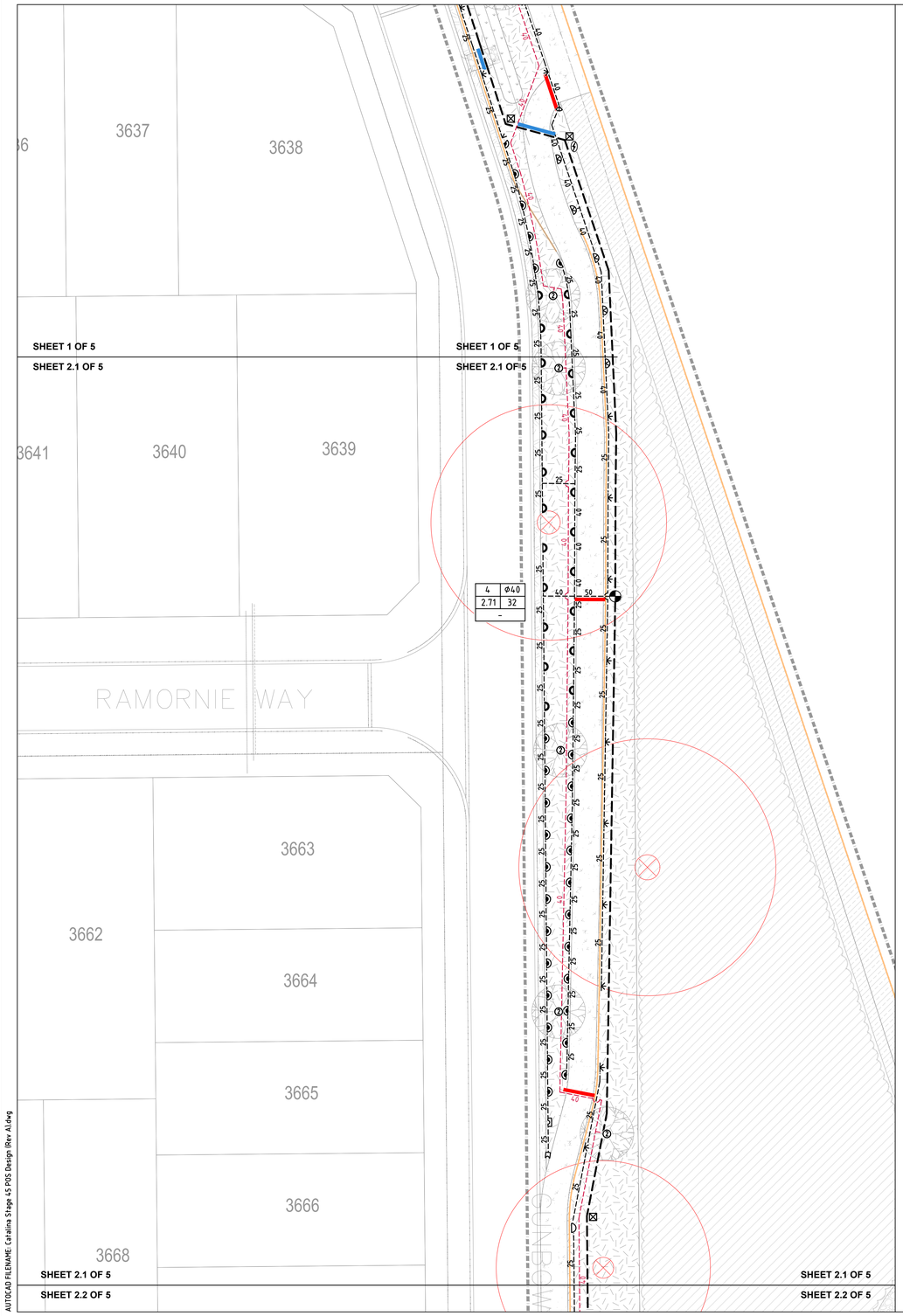
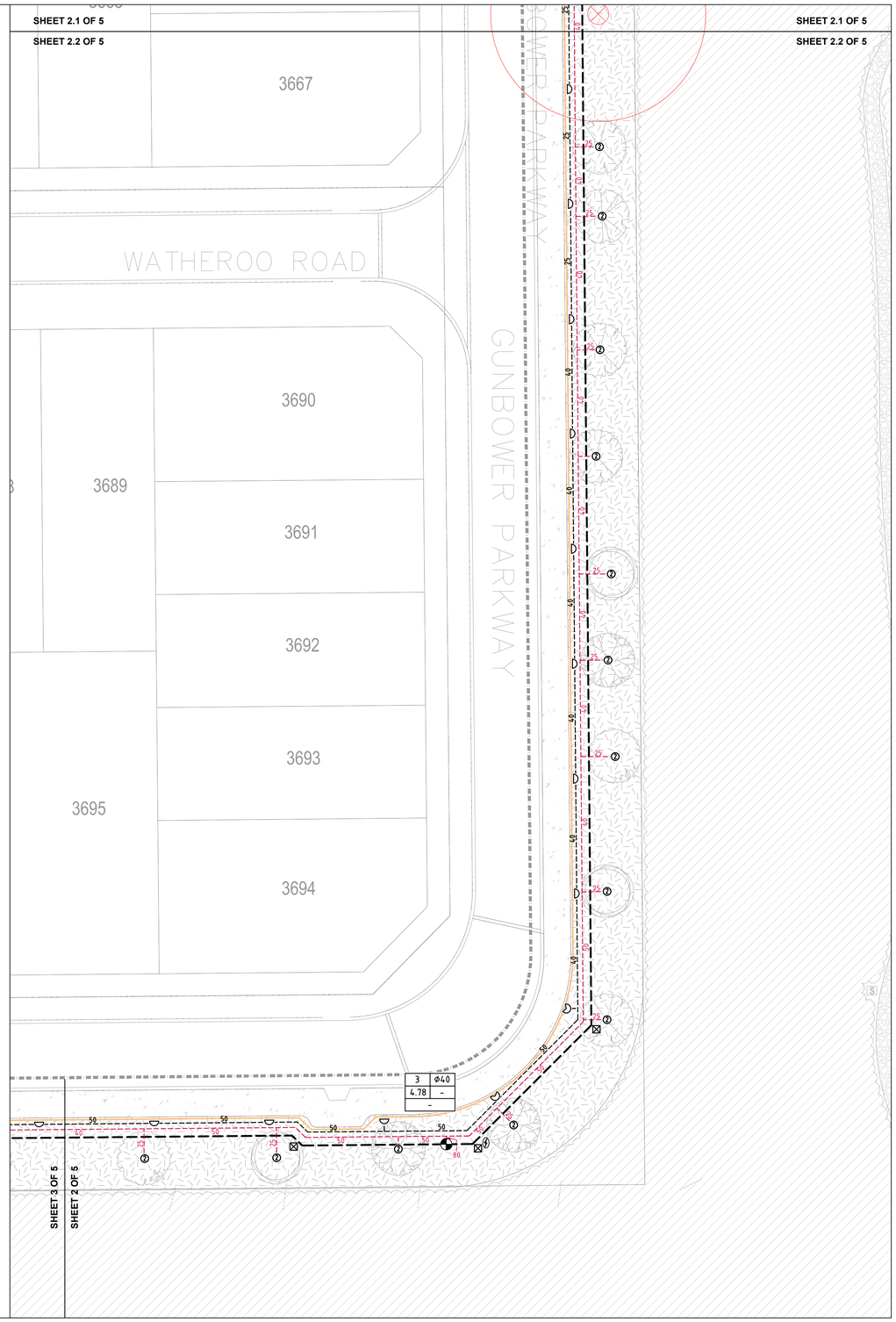
SCALE :	1 : 250 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA STAGE 45 NATURE POS
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
20/25/2025	18950-01	1 OF 5





LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	2.5	350	9.7	10.7
	HUNTER	I-20-12	4.5LA	350	16.6	10.7
	HUNTER	I-20-12	2.0LA	350	8	8.5
	HUNTER	I-20-12	1.0SR	350	3.8	5.5
	TORO	570Z-12P	12	250	3.63	3.7
	TORO	570Z-12P	10	250	1.25-2.50	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1
	ALL GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A ø20x300mm POLY ARTIC RISER OR TORO 570Z-12P'S (PART & FULL CIRCLES) ON A ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)					
100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA					
	BERMAD 200 SERIES DATA VALVE SIZE AS SHOWN					
	EXISTING BORE LOCATION					
	EXISTING BORE PUMP CUBICLE WITH A SIGNAL SDS-100					
	50mm MAINLINE FLUSHING VALVE					
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION					
	P2 CABLE PIT					
	SD-SL SURGE ARRESTOR					
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE					
	DN110 PN12.5 PE100 MDPE POLY MAINLINE WITH LILAC STRIPE OR PLAIN BLACK ALONG STREETSCAPES. IF THIS PIPEWORK IS UNAVAILABLE REFER TO NOTE 8					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
25	uPVC SWJ CLASS 9 LATERAL LINE FOR TREES SIZE AS SHOWN					
	DN110 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS					
	DN160 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS					
	DN200 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS					

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N (mm hr)	APP'N (mm week)	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	7.66	350	12	40	40	GARDEN	1	7.66	–
2	7.78	350	12	40	40	GARDEN	2	7.78	–
3	7.82	350	12	40	40	GARDEN	5	7.82	–
4	7.60	350	12	40	40	GARDEN	7	7.60	–
5	4.97	250	32	40	15	GARDEN	4	2.71	–
							6	2.26	–
6	4.78	250	–	–	15	TREES	3	4.78	–

DAILY RUN TIME: 3 HRS & 10 MIN WEEKLY RUN TIME: 15 HRS & 50 MIN

VALVE LABEL LEGEND

VALVE NO. / FLOW (LPS) | 2 | ø50 | VALVE SIZE
3.29 | 32 | PRECIPITATION RATE
– | DECODER NO.

NOTE:
1. THESE WORKS ARE TO BE INSTALLED TO MEET THE CITY OF WANNEROO IRRIGATION SPECIFICATIONS (JAN 2024 VERSION 1.0).
2. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
4. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
5. ALL SIGNAL 2-WIRE PATHS TO BE INSTALLED IN 40MD GREY CONDUIT.
6. ANY SPRINKLERS INSTALLED WITHIN TURF AREAS ON ROAD VERGES ARE TO BE INSTALLED WITH SQUARE CONCRETE SURROUNDS.
7. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SIGNAL SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
8. IF THE LILAC/PURPLE STRIPE OR PLAIN BLACK MAINLINE PIPEWORK IS UNAVAILABLE USE THE EQUIVALENT SIZED PN12.5 PE100 BLUE STRIPE. THE MAINLINE IS TO HAVE 150mm WIDE NON-DETECTABLE UNDERGROUND TAPE "WARNING IRRIGATION MAIN BELOW" BLUE WITH BLACK TEXT. INSTALL TAPE 100mm ABOVE THE TOP OF THE MAINLINE PIPEWORK.

CERTIFIED IRRIGATION DESIGNER – IRRIGATION AUSTRALIA – IDC4114

0 2.5 5 7.5 10 12.5m
SCALE 1:250 ON A1

AUTOCAD FILENAME: Catalina Stage 45 POS Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	20/05/2025	ISSUED FOR APPROVAL	R.V	J.S

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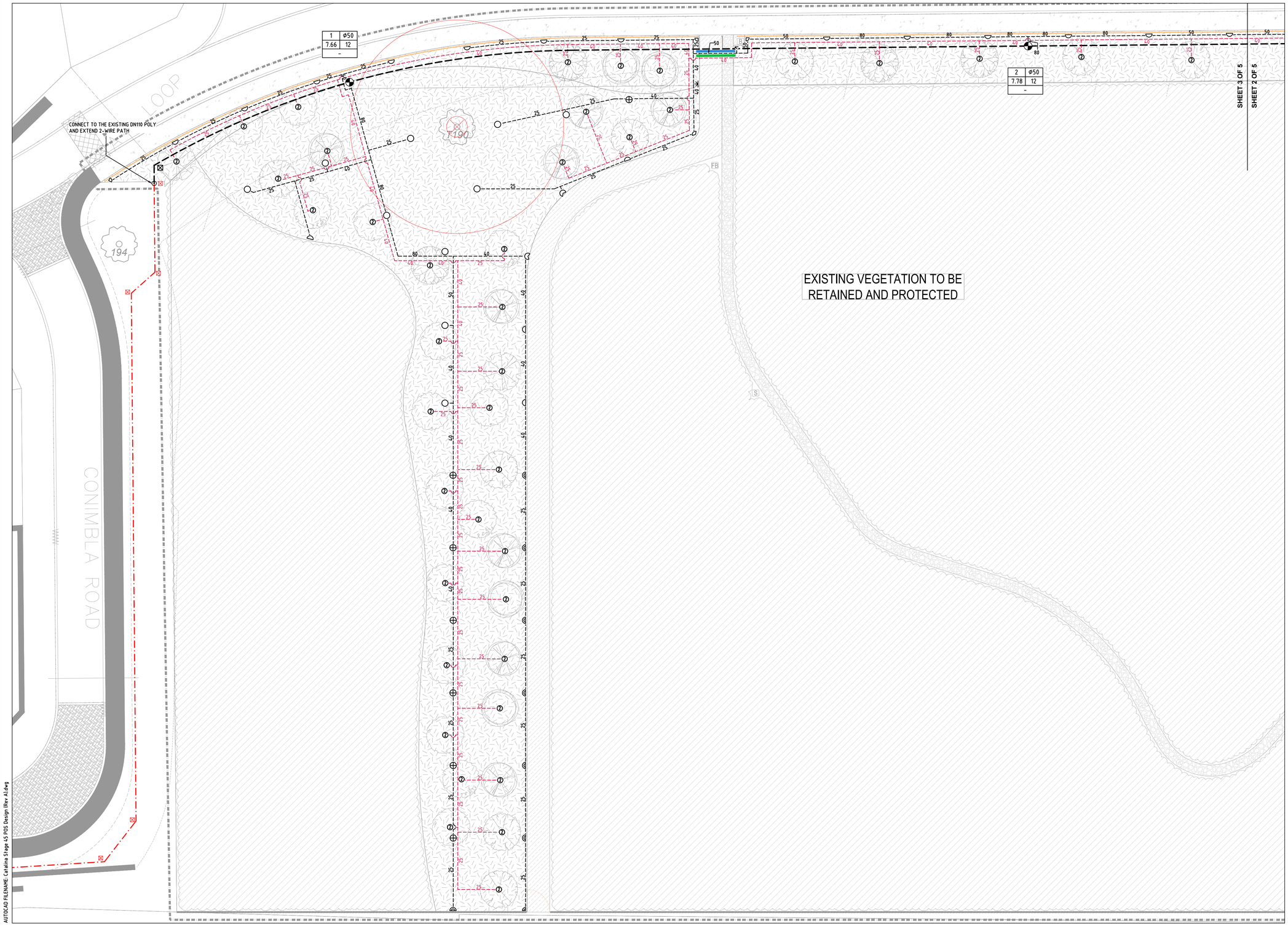
NewGround DESIGN SERVICES

SCALE :	1 : 250 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : EMERGE ASSOCIATES

PROJECT : CATALINA STAGE 45 NATURE POS IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
20/25/2025	18950-02	2 OF 5



AUTOCAD FILENAME: Catalina Stage 45 POS Design (Rev A).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
○	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	2.5	350	9.7	10.7
⊕	HUNTER	I-20-12	4.5LA	350	16.6	10.7
	HUNTER	I-20-12	2.0LA	350	8	8.5
	HUNTER	I-20-12	1.0SR	350	3.8	5.5
	TORO	570Z-12P	12	250	3.63	3.7
	TORO	570Z-12P	10	250	1.25-2.50	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1
	ALL GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A ø20x300mm POLY ARTIC RISER OR TORO 570Z-12P'S (PART & FULL CIRCLES) ON A ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)					
⑦ 100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA					
	BERMAD 200 SERIES DATA VALVE SIZE AS SHOWN					
	EXISTING BORE LOCATION					
	EXISTING BORE PUMP CUBICLE WITH A SIGNAL SDS-100					
	50mm MAINLINE FLUSHING VALVE					
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION					
⊠	P2 CABLE PIT					
	SD-SL SURGE ARRESTOR					
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE					
	DN110 PN12.5 PE100 MDPE POLY MAINLINE WITH LILAC STRIPE OR PLAIN BLACK ALONG STREETSCAPES. IF THIS PIPEWORK IS UNAVAILABLE REFER TO NOTE 8					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
25	uPVC SWJ CLASS 9 LATERAL LINE FOR TREES SIZE AS SHOWN					
	DN110 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS					
	DN160 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS					
	DN200 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS					

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N (mm/hr)	APP'N (mm/week)	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	7.66	350	12	40	40	GARDEN	1	7.66	–
2	7.78	350	12	40	40	GARDEN	2	7.78	–
3	7.82	350	12	40	40	GARDEN	5	7.82	–
4	7.60	350	12	40	40	GARDEN	7	7.60	–
5	4.97	250	32	40	15	GARDEN	4	2.71	–
							6	2.26	–
6	4.78	250	–	–	15	TREES	3	4.78	–

DAILY RUN TIME: 3 HRS & 10 MIN WEEKLY RUN TIME: 15 HRS & 50 MIN

VALVE LABEL LEGEND

VALVE NO. / FLOW (LPS) | 2 | ø50 | VALVE SIZE
3.29 | 32 | PRECIPITATION RATE
– | DECODER NO.

NOTE:
1. THESE WORKS ARE TO BE INSTALLED TO MEET THE CITY OF WANNEROO IRRIGATION SPECIFICATIONS (JAN 2024 VERSION 1.0).
2. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
4. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
5. ALL SIGNAL 2-WIRE PATHS TO BE INSTALLED IN 40MD GREY CONDUIT.
6. ANY SPRINKLERS INSTALLED WITHIN TURF AREAS ON ROAD VERGES ARE TO BE INSTALLED WITH SQUARE CONCRETE SURROUNDS.
7. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SIGNAL SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
8. IF THE LILAC/PURPLE STRIPE OR PLAIN BLACK MAINLINE PIPEWORK IS UNAVAILABLE USE THE EQUIVALENT SIZED PN12.5 PE100 BLUE STRIPE. THE MAINLINE IS TO HAVE 150mm WIDE NON-DETECTABLE UNDERGROUND TAPE "WARNING IRRIGATION MAIN BELOW" BLUE WITH BLACK TEXT. INSTALL TAPE 100mm ABOVE THE TOP OF THE MAINLINE PIPEWORK.

CERTIFIED IRRIGATION DESIGNER – IRRIGATION AUSTRALIA – DESIGNER/TURF COMMERCIAL

0 2.5 5 7.5 10 12.5m
SCALE 1:250 ON A1

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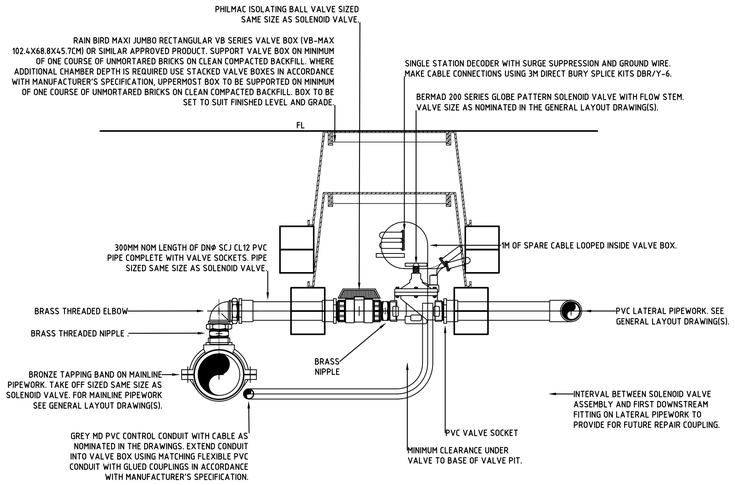
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : EMERGE ASSOCIATES

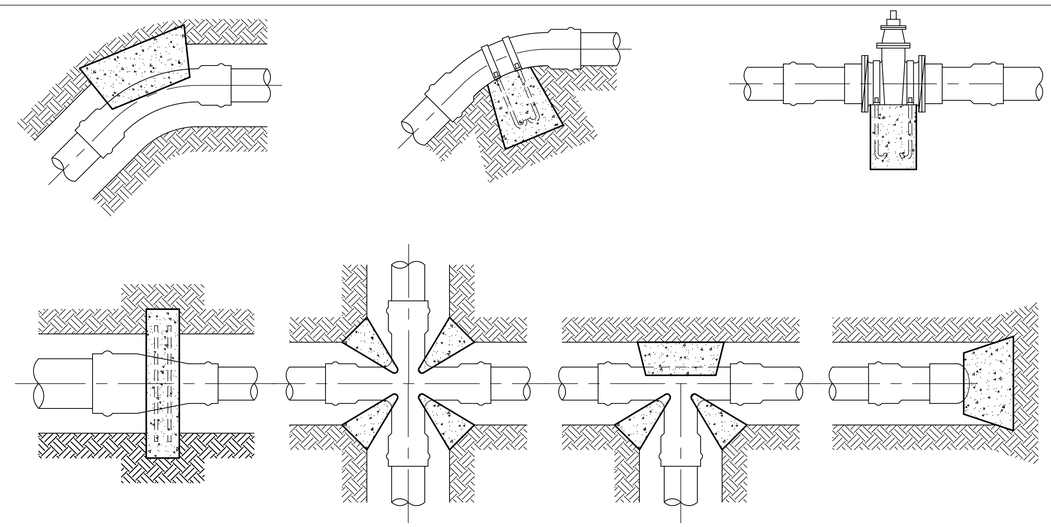
PROJECT : CATALINA STAGE 45 NATURE POS IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
20/25/2025	18950-03	3 OF 5



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

NOTE:
MINIMUM BEARING AREA TO BE IN ACCORDANCE WITH TYPE OF FITTING AND SOIL TYPE AS PER PIPE MANUFACTURERS RECOMMENDATIONS

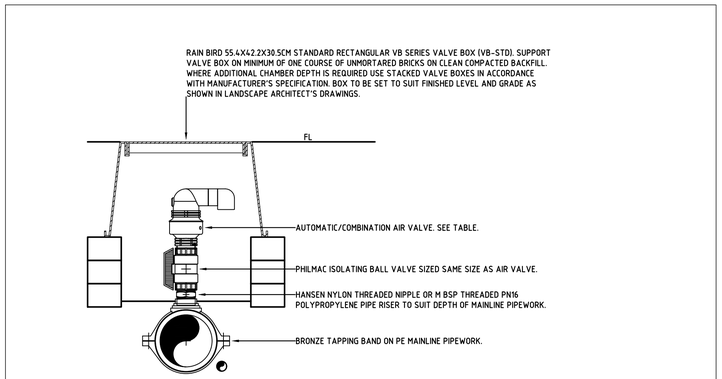
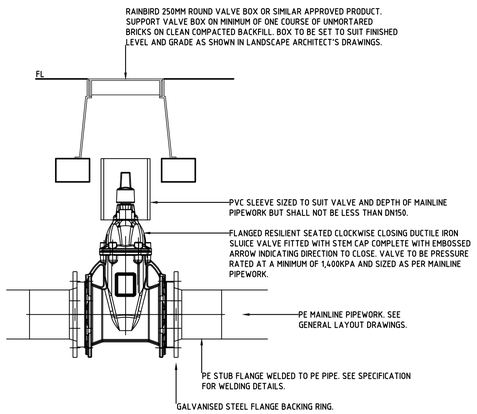


TABLE OF AIR VALVES	
MAINLINE SIZE (DN)†	AIR VALVE‡
LESS THAN 63	PN16 DN20 COMBINATION AIR VALVE
75-140	PN16 DN25 COMBINATION AIR VALVE
150-200	PN16 DN50 COMBINATION AIR VALVE
† SEE GENERAL LAYOUT DRAWING(S). ‡ SEE ALSO SPECIFICATION.	

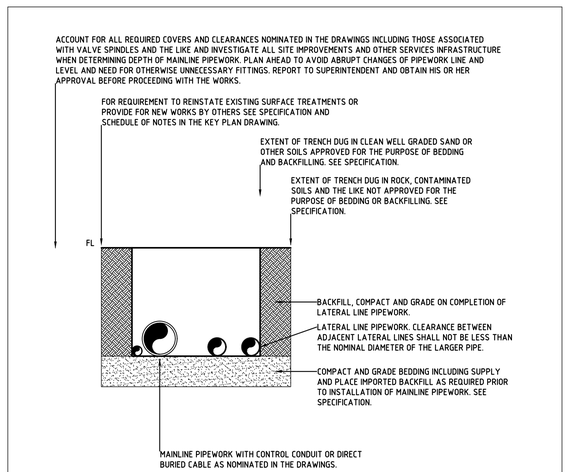
TYPICAL AIR VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL MAINLINE ISOLATION VALVE INSTALLATION

NOT TO SCALE



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 45 POS Design (Rev A).dwg

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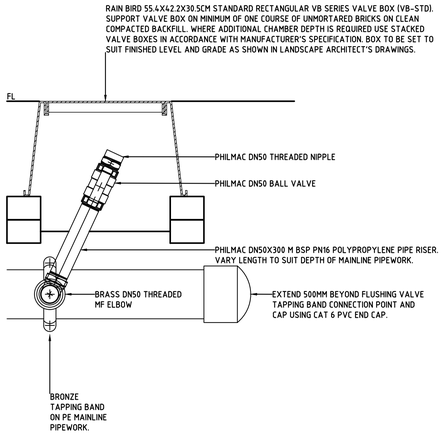
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

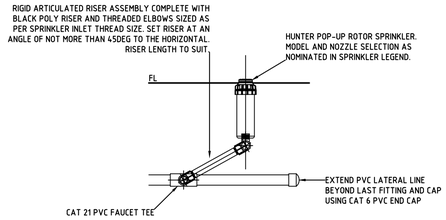
PROJECT :
CATALINA STAGE 45 NATURE POS
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
20/25/2025	18950-04	4 OF 5



TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

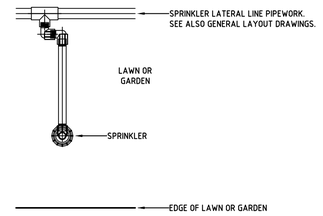
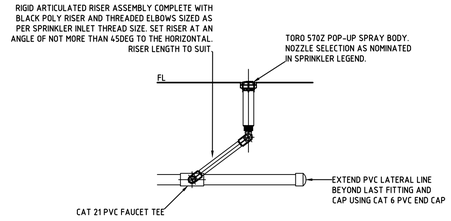


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	
† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.			

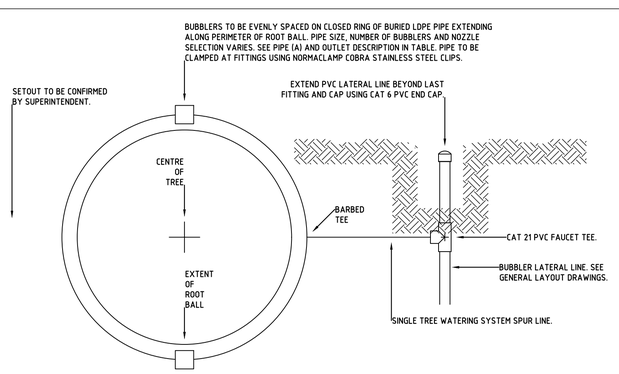
SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE



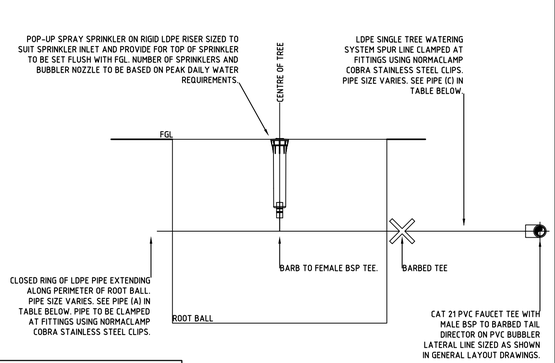


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
-	-	0-6	-	DN19	-	DN19
-	-	6-15	-	DN19	-	DN25
-	-	15-30	-	DN25	-	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 45 POS Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	20/05/2025	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA STAGE 45 NATURE POS
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
20/25/2025	18950-05	5 OF 5

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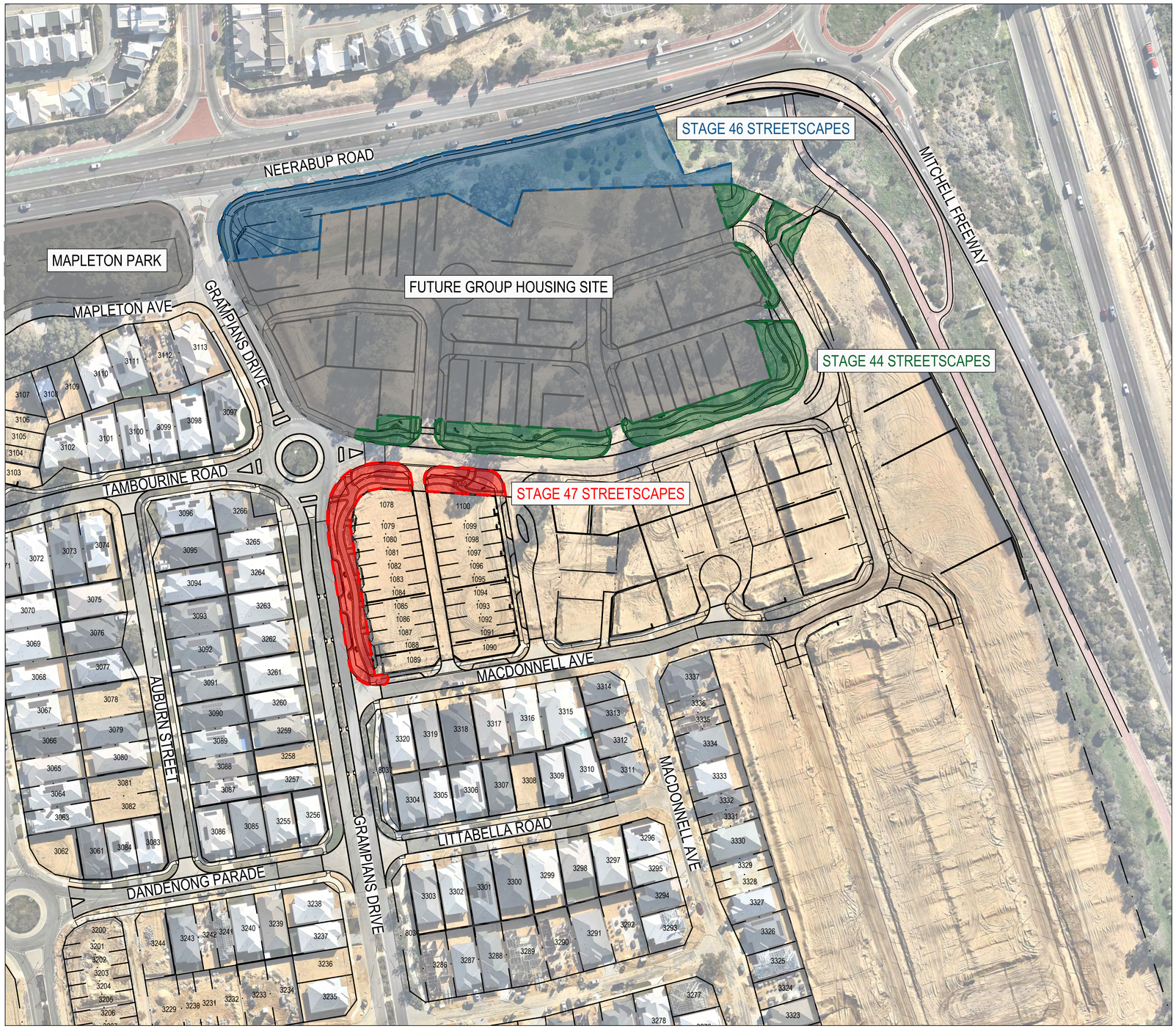

LOCATION PLAN
1:1000 @ A1

CATALINA

CLARKSON, WA

Catalina

STAGE 44-47 STREETSCAPES

LANDSCAPE CONTRACT: CAT-79

LANDSCAPE & IRRIGATION WORKS

CLIENT: CATALINA REGIONAL COUNCIL

ISSUE FOR: ***APPROVAL***

DATE: **SEPTEMBER 2025**

Sheet List Table		
Sheet Number	Sheet Title	Revision
CAT-79-000	COVERPAGE	A
CAT-79-201	OVERALL PLAN	A
CAT-79-301	LANDSCAPE PLAN 1 OF 3	A
CAT-79-302	LANDSCAPE PLAN 2 OF 3	A
CAT-79-303	LANDSCAPE PLAN 3 OF 3	A
CAT-79-901	DETAILS	A
CAT-79-981	NOTES	A

CATALINA Regional Council

emerge ASSOCIATES
Integrated Science & Design

PAGE CAT-79-301

PAGE CAT-79-302

PAGE CAT-79-303

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFF-SITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
A	12.09.25	JL	ISSUE FOR APPROVAL

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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 44-47 STREETSCAPES
DRAWING TITLE
OVERALL PLAN
CLIENT
CATALINA REGIONAL COUNCIL

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DATE INITIALLY DRAWN	11.08.25		

SCALE 1: 500 @A1 METRES
0 5 10 15 20 25

DRAWING NUMBER
CAT-79-201

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NEERABUP ROAD

EXISTING DUAL USE FOOTPATH

MULCH ONLY (8/901)

EXISTING SIGNAGE

Plant Mix 1
3914.3m²@3/m²
1174xAdcu
1174xAogr
1174xAtci
1174xGrepr
1174xGrob
1174xGrpr
1174xMehu
1174xOlax
1174xOleax
1174xWeda

Feature Mix 3
157.1m²@3/m²
94xBrib
94xDire
94xHepu
94xOrla
94xPaoc

Feature Mix 1
50.2m²@3/m²
50xAcla
50xCoac
50xCoca

Feature Mix 3
157.1m²@3/m²
94xBrib
94xDire
94xHepu
94xOrla
94xPaoc

Feature Mix 1
14.6m²@3/m²
15xAcla
15xCoac
15xCoca

Feature Mix 2
19.0m²@3/m²
29xAnhu
29xAnma

Edge Mix
26m²@3/m²
26xCoac
26xDire
26xLoma

Edge Mix
129.4m²@3/m²
129xCoac
129xDire
129xLoma

Plant Mix 3
82.6m²@3/m²
41xCaqu
41xErgl
41xGrcr
41xKepr
41xPhsp
41xTere

Feature Mix 2
56.2m²@3/m²
84xAnhu
84xAnma

EXISTING ENTRY STATEMENT

FUTURE GROUP HOUSING SITE

GRAMPIANS DRIVE

3113

3097

JOIN LINE. REFER PAGE CAT-79-303

JOIN LINE. REFER PAGE CAT-79-302

LEGEND

- EXTENT OF WORKS
- 0.00 EXISTING CONTOURS
- PROPOSED CONCRETE PATH (1/901)
- COLOURED CONCRETE FOOTPATH CCS: DRIFTWOOD (1/901)
- EXISTING FOOTPATH BY CIVIL
- EXISTING DUP BY CIVIL
- PLANTING MIX 1 (4-5/901)
- PLANTING MIX 2 (4-5/901)
- PLANTING MIX 3 (4-5/901)
- FEATURE PLANTING MIX 1 (4-5/901)
- FEATURE PLANTING MIX 2 (4-5/901)
- FEATURE PLANTING MIX 3 (4-5/901)
- EDGE PLANTING MIX (600mm WIDE) (4-5/901)
- MULCH ONLY (600mm WIDE) (8/901)
- BENCH SEAT (7/901)
- FEATURE BOULDER (9/901)
- PROPOSED TREES (6/901)
- EXISTING TREE TO BE RETAINED AND PROTECTED
- EXISTING TREE CANOPY

STANDARD NOTES

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PROJECT
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CLARKSON, WA
STAGE OR PHASE
STAGE 44-47 STREETSCAPES
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LANDSCAPE PLAN 1 OF 3
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SCALE 1: 250 @ A1 METRES
0 2.5 5 7.5 10 12.5

DRAWING NUMBER CAT-79-301
REV A

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JOIN LINE. REFER PAGE CAT-79-301

JOIN LINE. REFER PAGE CAT-79-303

FUTURE GROUP HOUSING SITE

MITCHELL FREEWAY

Plant Mix 2
45.2m²@3/m²
17xBoer
17xCasa
17xDrli
17xFino
17xGaca
17xMetr
17xScni
17xThmu

Plant Mix 3
45.3m²@3/m²
23xCaqu
23xErgl
23xGrcr
23xKepr
23xPhsp
23xTere

Plant Mix 3
61.3m²@3/m²
31xCaqu
31xErgl
31xGrcr
31xKepr
31xPhsp
31xTere

Edge Mix
11.6m²@3/m²
12xCoac
12xDire
12xLoma

Plant Mix 2
105.3m²@3/m²
39xBoer
39xCasa
39xDrli
39xFino
39xGaca
39xMetr
39xScni
39xThmu

Edge Mix
2.5m²@3/m²
2xCoac
2xDire
2xLoma

Plant Mix 3
61.2m²@3/m²
30xCaqu
30xErgl
30xGrcr
30xKepr
30xPhsp
30xTere

Plant Mix 2
14.1m²@3/m²
5xBoer
5xCasa
5xDrli
5xFino
5xGaca
5xMetr
5xScni
5xThmu

Edge Mix
6.8m²@3/m²
7xCoac
7xDire
7xLoma

Plant Mix 2
36.9m²@3/m²
14xBoer
14xCasa
14xDrli
14xFino
14xGaca
14xMetr
14xScni
14xThmu

Plant Mix 2
45.2m²@3/m²
17xBoer
17xCasa
17xDrli
17xFino
17xGaca
17xMetr
17xScni
17xThmu

Edge Mix
15.1m²@3/m²
15xCoac
15xDire
15xLoma

Edge Mix
59.2m²@3/m²
59xCoac
59xDire
59xLoma

Edge Mix
64.8m²@3/m²
65xCoac
65xDire
65xLoma

Plant Mix 3
80.5m²@3/m²
40xCaqu
40xErgl
40xGrcr
40xKepr
40xPhsp
40xTere

Plant Mix 3
66m²@3/m²
33xCaqu
33xErgl
33xGrcr
33xKepr
33xPhsp
33xTere

Plant Mix 2
237.2m²@3/m²
89xBoer
89xCasa
89xDrli
89xFino
89xGaca
89xMetr
89xScni
89xThmu

BENCH SEAT 7/901

Plant Mix 2
330.8m²@3/m²
124xBoer
124xCasa
124xDrli
124xFino
124xGaca
124xMetr
124xScni
124xThmu

Plant Mix 3
40.3m²@3/m²
20xCaqu
20xErgl
20xGrcr
20xKepr
20xPhsp
20xTere

21.50
21.50
21.50
21.50
21.00
20.00

Euto Xapr Barne Euut Alfr Agfl Baat Acor

LEGEND

- EXTENT OF WORKS
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- FEATURE PLANTING MIX 3 (4-5/901)
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- FEATURE BOULDER (9/901)
- PROPOSED TREES (6/901)
- EXISTING TREE TO BE RETAINED AND PROTECTED
- EXISTING TREE CANOPY

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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 44-47 STREETSCAPES
DRAWING TITLE
LANDSCAPE PLAN 2 OF 3
CLIENT
CATALINA REGIONAL COUNCIL

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SCALE 1: 250 @ A1 METRES
0 2.5 5 7.5 10 12.5

DRAWING NUMBER CAT-79-302
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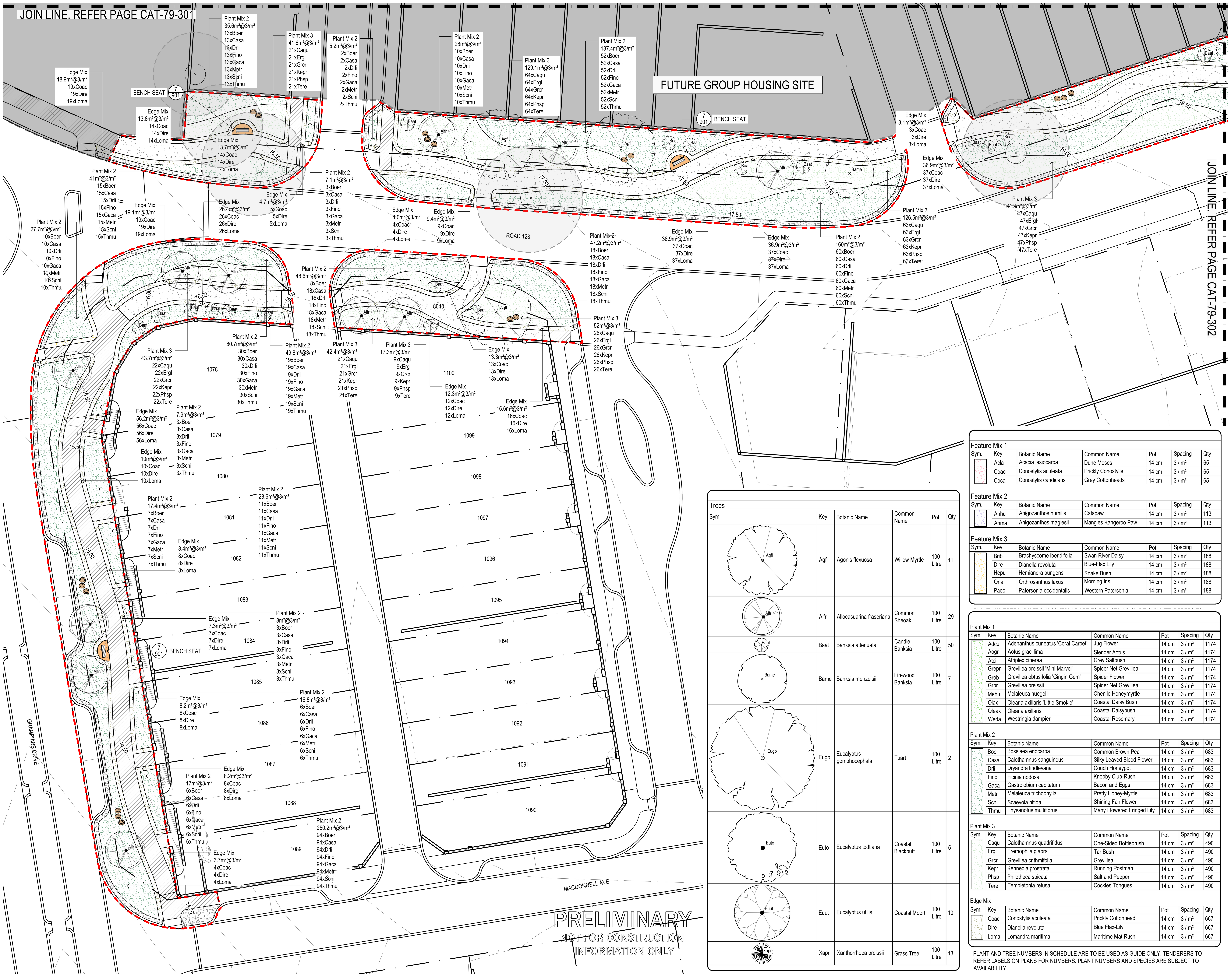

LEGEND

- EXTENT OF WORKS
- 0.00 EXISTING CONTOURS
- PROPOSED CONCRETE PATH (1/901)
- COLOURED CONCRETE FOOTPATH CCS: DRIFTWOOD (1/901)
- EXISTING FOOTPATH BY CIVIL
- EXISTING DUP BY CIVIL
- PLANTING MIX 1 (4-5/901)
- PLANTING MIX 2 (4-5/901)
- PLANTING MIX 3 (4-5/901)
- FEATURE PLANTING MIX 1 (4-5/901)
- FEATURE PLANTING MIX 2 (4-5/901)
- FEATURE PLANTING MIX 3 (4-5/901)
- EDGE PLANTING MIX (600mm WIDE) (4-5/901)
- MULCH ONLY (600mm WIDE) (8/901)
- BENCH SEAT (7/901)
- FEATURE BOULDER (9/901)
- PROPOSED TREES (6/901)
- EXISTING TREE TO BE RETAINED AND PROTECTED
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Trees

Sym.	Key	Botanic Name	Common Name	Pot	Qty
	Agfl	Agonis flexuosa	Willow Myrtle	100 Litre	11
	Alfr	Allocasuarina fraseriana	Common Sheoak	100 Litre	29
	Baat	Banksia attenuata	Candle Banksia	100 Litre	50
	Bame	Banksia menzeisii	Firewood Banksia	100 Litre	7
	Eugo	Eucalyptus gomphocephala	Tuart	100 Litre	2
	Euto	Eucalyptus todtiana	Coastal Blackbutt	100 Litre	5
	Euut	Eucalyptus utilis	Coastal Moort	100 Litre	10
	Xapr	Xanthorrhoea preissii	Grass Tree	100 Litre	13

Feature Mix 1

Sym.	Key	Botanic Name	Common Name	Pot	Spacing	Qty
	Acla	Acacia lasiocarpa	Dune Moses	14 cm	3 / m²	65
	Coac	Conostylis aculeata	Prickly Conostylis	14 cm	3 / m²	65
	Coca	Conostylis candicans	Grey Cottonheads	14 cm	3 / m²	65

Feature Mix 2

Sym.	Key	Botanic Name	Common Name	Pot	Spacing	Qty
	Anhu	Anigozanthos humilis	Catspaw	14 cm	3 / m²	113
	Anma	Anigozanthos maglesii	Mangles Kangeroo Paw	14 cm	3 / m²	113

Feature Mix 3

Sym.	Key	Botanic Name	Common Name	Pot	Spacing	Qty
	Brib	Brachyscome iberidifolia	Swan River Daisy	14 cm	3 / m²	188
	Dire	Dianella revoluta	Blue-Flax Lily	14 cm	3 / m²	188
	Hepu	Hemiandra pungens	Snake Bush	14 cm	3 / m²	188
	Orla	Orthrosanthus laxus	Morning Iris	14 cm	3 / m²	188
	Paoc	Patersonia occidentalis	Western Patersonia	14 cm	3 / m²	188

Plant Mix 1

Sym.	Key	Botanic Name	Common Name	Pot	Spacing	Qty
	Adcu	Adenanthus cuneatus 'Coral Carpet'	Jug Flower	14 cm	3 / m²	1174
	Aogr	Aotus gracillima	Slender Aotus	14 cm	3 / m²	1174
	Atci	Atriplex cinerea	Grey Saltbush	14 cm	3 / m²	1174
	Grepr	Grevillea preissii 'Mini Marvel'	Spider Net Grevillea	14 cm	3 / m²	1174
	Grob	Grevillea obtusifolia 'Gingin Gem'	Spider Flower	14 cm	3 / m²	1174
	Grpr	Grevillea preissii	Spider Net Grevillea	14 cm	3 / m²	1174
	Mehu	Melaleuca huegelii	Chenile Honeymyrtle	14 cm	3 / m²	1174
	Olax	Olearia axillaris 'Little Smokie'	Coastal Daisy Bush	14 cm	3 / m²	1174
	Oleax	Olearia axillaris	Coastal Daisybush	14 cm	3 / m²	1174
	Weda	Westringia dampieri	Coastal Rosemary	14 cm	3 / m²	1174

Plant Mix 2

Sym.	Key	Botanic Name	Common Name	Pot	Spacing	Qty
	Boer	Bossiaea eriocarpa	Common Brown Pea	14 cm	3 / m²	683
	Casa	Calothamnus sanguineus	Silky Leaved Blood Flower	14 cm	3 / m²	683
	Drli	Dryandra lindleyana	Couch Honeypot	14 cm	3 / m²	683
	Fino	Ficinia nodosa	Knobby Club-Rush	14 cm	3 / m²	683
	Gaca	Gastrolobium capitatum	Bacon and Eggs	14 cm	3 / m²	683
	Metr	Melaleuca trichophylla	Pretty Honey-Myrtle	14 cm	3 / m²	683
	Scni	Scaevola nitida	Shining Fan Flower	14 cm	3 / m²	683
	Thmu	Thysanotus multiflorus	Many Flowered Fringed Lily	14 cm	3 / m²	683

Plant Mix 3

Sym.	Key	Botanic Name	Common Name	Pot	Spacing	Qty
	Caqu	Calothamnus quadrifidus	One-Sided Bottlebrush	14 cm	3 / m²	490
	Ergl	Eremophila glabra	Tar Bush	14 cm	3 / m²	490
	Grcr	Grevillea crithmifolia	Grevillea	14 cm	3 / m²	490
	Kepr	Kennedia prostrata	Running Postman	14 cm	3 / m²	490
	Phsp	Philotheca spicata	Salt and Pepper	14 cm	3 / m²	490
	Tere	Templetonia retusa	Cockies Tongues	14 cm	3 / m²	490

Edge Mix

Sym.	Key	Botanic Name	Common Name	Pot	Spacing	Qty
	Coac	Conostylis aculeata	Prickly Cottonhead	14 cm	3 / m²	667
	Dire	Dianella revoluta	Blue Flax-Lily	14 cm	3 / m²	667
	Loma	Lomandra maritima	Maritime Mat Rush	14 cm	3 / m²	667

PLANT AND TREE NUMBERS IN SCHEDULE ARE TO BE USED AS GUIDE ONLY. TENDERERS TO REFER LABELS ON PLANS FOR NUMBERS. PLANT NUMBERS AND SPECIES ARE SUBJECT TO AVAILABILITY.

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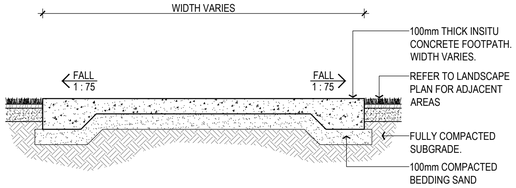
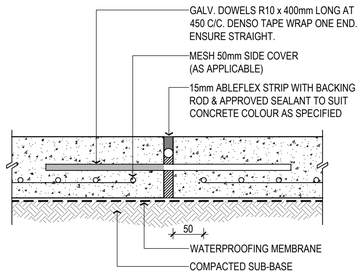
CCS DRIFTWOOD



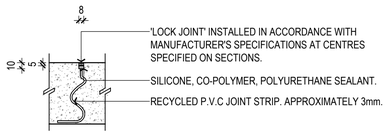
NOTES

1. FOUNDATION TO BE COMPACTED TO 95% MDD.
2. ALL CONCRETE FOOTPATH CONSTRUCTION TO BE A MIN 25MPa, 20mm AGGREGATE AND MAX SLUMP OF 80-100mm.
3. BEDDING - SAND (100mm MINIMUM).
4. EXPANSION JOINT EVERY 5.0M AS. SEE DETAIL 2/901
5. CONTRACTION JOINT EVERY 2.5M. SEE DETAIL 3/901
6. SURFACE TO BE BROOM FINISH, NON-SLIP, WITH SMOOTH EDGE APPROX 75mm WIDE AT EDGES AND JOINTS.
7. LONGITUDINAL GRADE SHOULD NOT EXCEED 1 IN 20.
8. WHERE LONGITUDINAL GRADE IS GREATER THAN 1 IN 14, LANDINGS WILL BE PROVIDED EVERY 6m.
9. VERTICAL CLEARANCES ALONG PATHS SHOULD BE A MINIMUM OF 2m.
10. WHERE STREET FURNITURE (POLES, BENCHES, RUBBISH BINS, POSTS, ETC) ARE LOCATED IN PATH, A MIN UNOBSTRUCTED WIDTH OF 1.2m MUST BE MAINTAINED.

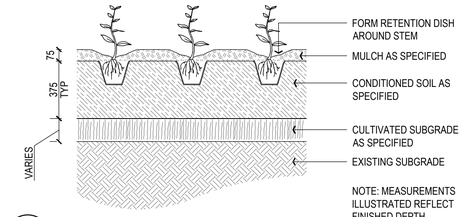
1 / 901 CONCRETE FOOTPATH
SECTION — SCALE 1:20



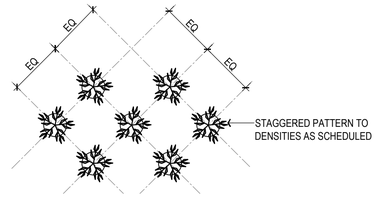
2 / 901 TYPICAL EXPANSION JOINT
SECTION — SCALE 1:5



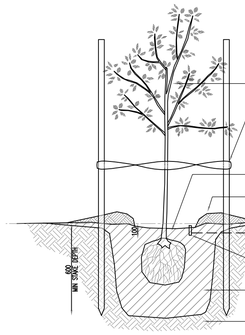
3 / 901 TYPICAL CONTRACTION JOINT
SECTION — SCALE 1:5



4 / 901 TUBESTOCK - 200mm POT PLANTING
SECTION — SCALE 1:20



5 / 901 TYPICAL STAGGERED PLANTING PATTERN
PLAN — SCALE 1:20



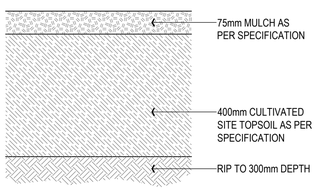
NOTES:
1. EXCAVATE A HOLE FOR THE NEW TREE TO TWICE THE DEPTH AND WIDTH OF THE ROOT BALL, ENSURING THE PIT BASE IS FRACTURED.
2. INSTALL THE TREE TO CENTER OF THE HOLE, ENSURING THE TOP OF ROOT BALL IS 100mm BELOW THE SURROUNDING GROUND LEVEL.
3. BACKFILL THE HOLE TO HALF ITS DEPTH WITH 3:1 MIXTURE OF SITE SOIL AND CONDITIONED SOIL, THEN LIGHTLY MOUND AND COMPACT.
4. ENSURE FERTILIZER SUCH AS TERRACOTTEM IS APPLIED AND MIXED THROUGHOUT THE SOIL MIXTURE AS PER RECOMMENDED RATES FOR SOIL TYPE AND SIZE OF HOLE.
5. COMPLETE BACKFILLING WITH REMAINING SOIL MIX AROUND THE ROOT BALL, WITH LIGHT COMPACTING.
6. TWO 1800x38x38mm HARDWOOD STAKES SHALL BE DRIVEN A MINIMUM OF 600mm AND A MAXIMUM OF 700mm BELOW FINISHED GROUND LEVEL, WITH ONE TO EACH SIDE OF THE PLANTING HOLE.
7. ENSURING THAT STAKES ARE CLEAR OF THE ROOT BALL, INSTALL ONE 12mm SIZE TREE TIE TUBE – BLACK RUBBOX, (OR SIMILAR APPROVED) ENSURE THAT THE TREE TIE IS SECURING THE STRAIGHT LEADER BETWEEN THE TWO STAKES.
8. TREE TIES SHALL BE DOUBLE KNOTTED ON THE STAKES AND FASTENED WITH 2 TWISTS, ON EITHER SIDE OF THE TREE, TO ALLOW FOR SLIGHT MOVEMENT WHILE ASSISTING THE TREE TO REMAIN STRAIGHT.
9. IMMEDIATELY AFTER PLANTING, SLOWLY APPLY A MINIMUM OF 40 LITRES WATER TO ROOT BALL AREA AVOIDING EROSION AND EXPOSING THE ROOT BALL.
10. INSTALL A THICK LAYER OF MULCH TO A MINIMUM DEPTH OF 75mm MOUNDED AT THE EDGES TO FORM A CIRCULAR WATERING BASIN AROUND THE TREE. AVOID ANY CONTACT OF THE MULCH WITH THE BASE STEM OF THE TREE (A MINIMUM OF 50mm FROM THE BASE STEM).
11. ENSURE THE EXCESS EXCAVATED SOIL IS DISPOSED OFF SITE TO AN APPROVED WASTE FACILITY.
12. TREE SPECIMEN SHALL HAVE A DEFINED CENTRAL LEADER. IN TREE SPECIES THAT DO NOT FORM A DOMINANT CENTRAL LEADER, EG. WALEE, WEEPING TREES, ALL TERMINAL BUDS ARE TO BE HEALTHY.
13. THE ROOTBALL SHALL REMAIN INTACT ON REMOVAL FROM THE CONTAINER WITH NO GREATER THAN 10% LOSS OF THE SOIL MEDIUM.

6 / 901 CITY OF WANNEROO - TYPICAL TREE PLANTING
SECTION — SCALE 1:20

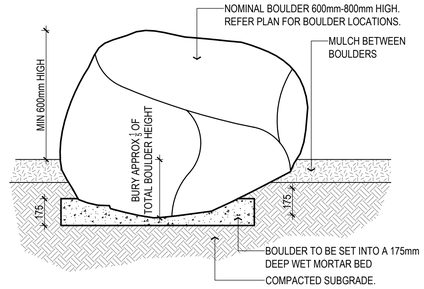


PRODUCT NAME	LINEA SEAT WITH ARMREST
PRODUCT SUPPLIER	STREET FURNITURE AUSTRALIA
PRODUCT CODE	LIS10 (1800mm)
PRODUCT FINISH	ALUMINIUM WOODGRAIN FINISH
PRODUCT COLOUR	BATTENS: SPOTTED GUM, FRAME: DULUX MONUMENT
PRODUCT FIXING	SURFACE FIX AS PER MANUFACTURER'S SPECIFICATIONS

7 / 901 BENCH SEAT
SECTION — SCALE 1:25



8 / 901 MULCH ONLY
SECTION — SCALE 1:10



9 / 901 FEATURE BOULDERS
SECTION — SCALE 1:20

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GENERAL NOTES

1. These drawings are to be read in conjunction with all architectural and other consultants' drawings and specifications and with such other written instructions as may be issued. Any discrepancies shall be referred to the superintendent for clarification before proceeding with work.
2. All dimensions are in millimetres and those relevant to setting out (excludes finishes) and offsite work shall be verified by the contractor before construction and fabrication are commenced. The engineer's drawings shall not be scaled.
3. All levels and grid co-ordinates are in metres.
4. During construction the contractor shall be responsible for maintaining the structure in a stable condition and no part shall be over stressed under construction activities.
5. Workmanship and materials shall be in accordance with the current edition of the relevant SAA codes and the by-laws and ordinances of the relevant building authority, except where varied by the contract documents.

DESIGN CRITERIA

1. Dead, live, wind and earthquake loads to AS1170.
2. Design Wind Speed
   Region A
   Terrain Category 2.5
   Regional Gust Wind Speed = 45m/sec (ULTIMATE LIMIT STATE)
   Regional Gust Wind Speed = 37m/sec (SERVICE LIMIT STATE)
3. Earthquake
   kp = 1.0
   Hazard Factor Z = 0.09 (Perth)
4. Foundations
   Foundations designed for Class 'S' site with minimum 150kPa allowable bearing pressure.
5. Live Loads

Decking:	3kPa to AS1170.1
Balustrade:	C3 to AS1170.1
Roof construction load:	0.25kPa to AS1170.1
Retaining Wall Surcharge:	3kPa to AS1170.1

BUILDER NOTE - COMPLIANCE INSPECTIONS

1. As part of the building licence for this project, the builder may be required to have the structural engineer certify the completed structure has been built in accordance with the approved drawings & /or with any subsequent written instructions.
2. If WA Structural Consulting are to provide this certification, the builder must arrange for WA Structural Consulting to inspect each of the structural items at appropriate stages. These items and stages include, but are not limited to the following:,
   - 2.1. Concrete reinforcement, prior to pouring of concrete in:
     - 2.1.1. Footing Excavations
     - 2.1.2. Slabs on ground
     - 2.1.3. Suspended slabs and beams
     - 2.1.4. Concrete columns and walls
     - 2.1.5. Retaining walls
   - 2.2. Structural steelwork prior to any cladding being fixed.
   - 2.3. Concrete wall panel connections.
3. The builder must provide appropriate evidence that the specified concrete has been supplied for each concrete element.
4. The builder must provide evidence that the required levels of foundation compaction have been achieved.
5. Where a geotechnical engineer has made specific recommendations, evidence that these have been achieved must be provided.
6. Unless fees for our inspections and certifications have been previously negotiated with WA Structural Consulting by others, these fees will be the builder's responsibility. It is required that the builder negotiate these fees with the engineer at a tender stage.
7. If the builder requires the fabrication drawings to be checked & certified by the project engineer, the costs associated with this will be the builder's responsibility, unless these fees have been previously negotiated with WA Structural Consulting by others. This must be confirmed by the builder.

CONCRETE AND REINFORCEMENT

1. All concrete works shall be in accordance with AS3600.
   Concrete specification shall be U.N.O.:

Location	F'C (MPA)	MAX.AGG SIZE (mm)	SLUMP (mm)
Footings	25	20	65
Slab on Ground	25	20	65
In Situ Retaining Walls	32	20	60
Precast	32	20	80
Cavity Fill	15	10	100

   Cover to Reinforcement shall be:

Location	Bottom (mm)	Top (mm)	Sides (mm)
Footing	70	50	50
Slab on Ground	50	40	50
In Situ Retaining Walls	32	20	60
Precast	50	40	40
Cavity Fill	50	50	20 U.N.O

2. Reinforcement shall be supported on approved plastic or plastic tipped wire chairs and hold rigidly in position as follows:
   a. Bars up to N12 and fabric - 800mm centres
   b. Bars N16 and larger - 1200mm centres
   * Welding reinforcement is not permitted unless approved by engineer.
3. Construction joints shall be scabbled, cleaned and coated with a cement/water slurry immediately prior to placing concrete.
4. Concrete shall be compacted using mechanical vibrators.
5. Concrete shall be cured for a minimum of 7 days by flooding, keeping continuously moist, the application of an approved curing compound or by other means approved by the engineer.
6. No holes or chases other than those shown on the drawings shall be made unless approved by engineer. Pipework passing through footing beams shall be to the approval of the engineer and shall be wrapped with a compressible material of minimum 6mm thickness.
7. Formwork and stripping times shall comply with AS3610. Remove formwork only when concrete has attained its design (f 'c) strength unless otherwise instructed by the structural engineer.
8. Control, expansion and contraction joints shall be constructed as detailed. Saw cut joints shall be made within 12 hours of concrete placement.
9. All mesh to conform with AS1304.
10. Reinforcement shall be in accordance with the following standards:

R	Indicates plain reinforcing bar R250N to AS/NZS4671
L	Indicates plain or deformed wire R500L or D500L to AS/NZS4671
RL	Indicates deformed rectangular mesh D500L to AS/NZS4671
SL	Indicates deformed square mesh D500L to AS/NZS4671
N	Indicates deformed bars D500N to AS/NZS4671
S	Indicates deformed bars D250N to AS/NZS4671
TM	Suffix indicates trench mesh using deformed bars D500L to AS/NZS4671

11. All galvanized items which are cast into concrete are to be passivated in a 0.2% sodium dichromate solution or equivalent.
12. All formwork shall be rigidly constructed of approved material. Formwork and supports shall be designed to withstand all possible load combinations during construction.

BAR DIAMETER (LARGEST)	LAP
12	600
16	800
20	1000
24	1200
28	1400
32	1600

Note: To be used U.N.O

14. Chemset Anchors U.N.O to be M16 HCR 8.8 rods with HILTI-HIT-HY-200 Adheisive minimum 150mm embedment. Installed in accordance with Manufacturers Specification and Installation Procedure.

FOUNDATIONS

1. Design is based on an allowable bearing pressure of 150kPa. It is the builder's responsibility to confirm the foundation type prior to commencing construction. Should the foundation type or bearing capacity not satisfy the above criteria the builder shall immediately contact engineer prior to construction proceeding.
2. Builder to grub out and remove all organic material and debris from the building platform.
3. Any soft areas shall be dug out and replaced with approved non-plastic fill.
4. All site preparation works shall be in accordance with site specific Geotechnical report and requirements.
5. Ensure a minimum of 8 blows per 300mm is achieved with a calibrated Perth Sand Penetrometer in accordance with AS1289.6.3.3
6. The building platform is to be shaped to ensure it drains to its perimeter and that such drainage is taken away from the platform area.
7. Footings at the lowest level must be the first footings constructed.
8. Located plumbing lines over top of footings and step footings.

MASONRY

1. All blockwork and brickwork shall be in accordance with AS3700
2. Concrete blocks shall be in accordance with AS2733
3. Reinforcement and concrete core filling shall comply with the notes on "concrete and reinforcement".
4. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700.
5. Masonry units shall have a minimum compressive strength of 15MPa.
6. As follows:
   a. Bond beam reinforcement shall be continuous at intersecting walls and bars anchored and lapped to develop full tensile stress.
   b. Support reinforced brick lintels for 14 days minimum.
7. Cleanout blocks shall be provided at the base of all cores to be concrete filled. Alternatively the builder shall open such cores for cleaning by an approved method.
8. All cores to be concrete filled shall be cleaned out by hosing prior to final setting or mortar at all lifts or by rodding prior to concrete filling.
9. Retaining walls shall be fully core filled. Backfill to retaining walls shall not be carried out until 14 days after core filling.
10. Provide 10mm stack bonded control joints where shown. Control joint to consist of flexible masonry anchors every 3rd course. Brunswick type MFA 3/3. Apply flexible sealant over backing rod.
11. Cross walls shall be fully bonded for the full height of intersecting wall.
12. Horizontal chasing is not permitted without written approval from the engineer.
13. Lap wires 500mm at splices and around corners and COG 500mm into intersecting walls. 20mm cover to all wires.
14. All wires in external face of external leaf to be galvanised to AS/NZS4680.
15. Masonry ties are to be provided at no more than 600mm spacing in each direction, and max 300mm from top of wall, side of control joint or perimeter of opening.
16. Ties to be grade 316 stainless steel in corrosive environments.
17. Masonry abutting concrete footings to typically be isolated with 10mm Ableflex expansion foam or similar approved product UNO.

STRUCTURAL STEEL

1. All steelwork shall be in accordance with:
   AS4100 steel structures
   AS4600 cold formed steel structures
2. Fabricator to check all dimensions before cutting materials or manufacturing. fabrication to AS4100 UON. These drawing are to be read in conjunction with the project architectural and other consultants' drawings.
3. Unless noted otherwise all steel shall be:
   a. AS3678 grade 250 hot rolled plates
   b. AS3679.1 grade 300 hot rolled UB, PFC, TFC, TFB, EA, UA and FLATS
   c. AS3679.2 grade 300 WB and WC
   d. AS1163 grade 250 for circular hollow sections Ø165mm and less
   e. AS1163 grade 350 for circular hollow sections larger than Ø165mm and rectangular hollow sections.
   f. AS1397 500MPa for 1.2mm thick purlins and girts
   g. 450MPa for 1.6mm thick purlins and girts
   h. 450MPa for 1.0 thick CF Channels
   i. 450MPa for 1.6mm thick CF Channels
4. Galvanising shall be hot dipped to AS/NZS 4680
5. Bolts shall be galvanised and of sufficient length to exclude the thread from the shear plane. A suitable washer shall be used under all nuts, when tensioning is specified high strength bolts shall be fully tensioned with load indicating washers to the requirements of AS4100.
6. Bolt legend 4.6/S commercial grade 4.6 bolts snug tightened 8.8/S high strength grade 8.8 bolts snug tightened. 8.8/TB high strength grade 8.8 bolts tensioned bearing connection. 8.8/TF high strength grade 8.8 bolts tensioned friction connection.
7. Unless otherwise specified the following shall apply -
   a. Cleats, brackets, stiffeners etc. to be 10mm thick, ex-standard square edge flats U.N.O.
   b. Welding to be carried out in accordance with AS/NZS 1554. 1:1995 welding consumables to be E48XX or W50X U.N.O. all welds to be 6MM CFW SP category U.N.O CPBW to be SP category U.N.O.
   c. Inspection to be carried to AS/NZS 1554.1:1995. All GP/SP welds to be 100% visually scanned. SP welds allow for 25% visual examination U.N.O.
   d. 6mm end plates to all hollow sections (seal weld).
   e. Bolts to be G 8.8/S
   f. Bolt hole clearance 2mm
   g. Hold down bolt clearance 4mm
   h. Grout - a space for 40mm of 2:1 sand: cement mortar of damp earth consistency under all base plates.
   i. Connections - minimum of 2-M16 8.8/S bolts
   j. Bracing intersects on centrelines and centre of gravity for angles.
8. Fabricator shall allow for all cleats and other fixings required by the supervisor.
9. All column base plates shall be set on 20mm min. of 1:2 cement and sand grout.
10. Seal all open ends of pipes or RHS members. Grind off all visible welds and brand marks to neat appearance where specified.
11. See below:
    a. The contractor shall remain responsible at all times for providing all necessary temporary bracing and other supports during erection, to stabilise the partially constructed building.
    b. Particular attention must be paid to the buckling stability of beams and columns prior to the connection of purlins, girts, fly braces and other bracing elements.
    c. It is the responsibility of the builder to obtain proper technical advice wherever necessary to ensure the partially completed structure is safe from collapse.
12. Treatment:
    All steel connection plate and bolts to be hot dip galvanize (600 g/sqm)
    Holding down bolts - hot dip galvanize (600 g/sqm)
13. Bitumen paint all steelwork for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

STRUCTURAL TIMBER

1. Structural timber shall comply with AS1720 timber structure code.
2. All timber to be seasoned F14, class 2, strength group SD5, joint group JD2 and treated with creosote to hazard class H4 unless noted otherwise.
3. All timber work to be in accordance with :
   - AS1684 - SAA timber framing code.
   - AS1720 - SAA timber structures code.
4. All timber and steel connections to be in accordance with AS1720.
5. Ensure no knots or gum veins in timber used.
6. Coat all timber in contact with ground with bitumen paint or similar approved.
7. All structural details to be confirmed, checked and site measured by builder prior to construction. Report any discrepancies to structural engineer.
8. Treatment :
   - H1 - Interior use, above ground.
   - H2 - Interior use, above ground, subject to termites.
   - H3 - Exterior use, above ground, subject to periodic wetting.
   - H4 - Exterior use, in ground, subject to severe wetting.
   - H5 - Exterior use, in ground, with or in fresh water.
   - H6 - Exposed to marine water.
9. Required bending stress:
   - MGP10 fb = 16 MPa
   - MGP12 fb = 28 MPa
   - F14 fb = 36 MPa
   - GL17 fb = 40 MPa
   - LVL13 fb = 48 MPa
   - LVL15 fb = 59 MPa
   - LVL18 fb = 72 MPa
10. All bolted timber connections to be re-tightened at end of project prior to completion, ensure no splitting of timber occurs.
11. All proprietary systems (floor/wall/roofing) to be installed in strict accordance with manufacturer's specifications and details.
12. Bush Poles :
    - All timber to AS1720.
    - Minimum F11 grade CCA / H4 treated seasoned softwood. S6 strength group.
    - Free from decay, shakes & fractures,resin pockets and surface damage.
    - Heartwood not to exceed 50% of the diameter at each end or be within 35mm from the surface.
13. Bitumen paint all timber posts/columns for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

LIMESTONE RETAINING WALL SPECIFICATION NOTES

1. Width 'b' at any height to be no less than half of retained height 'h'. step wall to suit
2. Walls to be built on compacted sand, compact ground under footing to resist 7 blows per 300mm of a standard 16mm dia penetrometer over a depth of 600mm.
3. These walls are applicable to well drained sandy soil conditions only.
4. Walls resisting clay soil pressures and/or hydrostatic pressures to be referred to the engineer.
5. All reconstituted limestone to be first grade quality & free from soft pockets.
6. Rubble shall not be used to fill voids.
7. Reconstituted limestone to have a dry density of at least 1600 kg/m3 and a crushing strength of at least 5mpa.
8. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700. All mortar joints to be 20mm thick and fully mortared.
9. All topsoil, vegetation and deleterious matter shall be removed from the foundation area.
10. Vertical thickness of wall to be adequately bonded by building in header blocks - refer cross section
11. No backfilling until 7 days after walls have been built.
12. All backfilling shall be carried out using material which shall generally be sandy in nature and free from large pieces of rock to the extent that the
    material can be compacted using a vibrating plate compactor to meet the requirements of the specification.
13. Backfill shall not be dumped behind wall in a manner which will cause shock loading on the wall
14. Backfill shall be clean sand compacted in shallow (300) layers using light compacting equipment
15. In all cases the backfill material shall be selected such that once compacted, the standard of compaction can be measured using a standard perth penetrometer.
16. Compaction of the backfill material to the front and back of the wall to be compacted 95% modified max dry density.
17. Prior to practical completion the contractor shall provide written certification from a practising structural engineer that the wall construction & backfill compaction has been carried out in accordance with this drawing and the specification.
18. Construction Joints (CJ) shall be constructed within the retaining wall where noted below:
    (i) at max. 10m centres along wall face
    (ii) where the angle between faces of two walls exceeds 180 degrees, in which case the CJ is to be located on one side of the change in direction, at a distance away from the direction change equal to the base width of the wall.
19. Construction joints shall be 15mm wide and filled with expanded polyethylene (100mm deep) covered with a 25mm deep mastic of colour to match wall mortar. joints are to extend through wall and any fences, but need not extend through base course of limestone wall.
20. Select blocks to ensure intact faces only visible in facework.

ALUMINIUM

1. All Aluminium shall be in accordance with AS1664.
2. All Aluminium welding shall comply with AS1664.
3. Unless noted otherwise, all aluminium to be:
   - Plates: Grade 5083 H116/h321 or 5083 H112 Aluminium
   - SHS/RHS/CHS: Grade 6060-t5 aluminium
   - Fixings: grade 316 stainless steel
   - Welds: 5mm continuous fillet, category sp, filler allow to be grade 5186,5356 or 5556 aluminium
4. All fixings into Aluminium members to be stainless steel (SS316) or equivalent capacity aluminium fixings.
5. Provide nylon washers and packers for all and any connections between steel and aluminium.
6. Adequate protective coatings are to be applied to aluminum cast into concrete.

PRECAST CONCRETE

1. All precast units shown are for service conditions only. The contractor is responsible for all casting,lifting, transportation and propping requirements and must satisfy himself that they have been constructed to meet the design criteria noted. Any queries regarding precast concrete units shall be flagged during the tender process. If in doubt, ask.
2. Contractor to obtain Engineer's Design Certification for all elements of precast concrete work as required to the relevant Australian Standards (Lifting, bracing, propping as required).
3. Panels are to be securely propped until designed connections have been installed and are sufficiently restraining panels.
4. U.N.O all chemical anchors fixed into concrete panels to be galvanised HILTI-HAS-E-F rods with HILTI-HIT-HY-200 adhesive.
5. All grout used for panels shall be non shrink high strength grout to achieve min 40mpa compressive strength typ.
6. Precast concrete strength is for final position. Contractor to confirm required lifting strength in accordance with lifting engineers requirements. Shall be no less than 15 MPA.

HDPE DECKING AND BOARDS

1. All HDPE battens and other HDPE members to be supplied and installed in strict accordance with manufacturers specification.

PRELIMINARY
NOT FOR CONSTRUCTION
INFORMATION ONLY

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFFSITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
A	12.09.25	JL	ISSUE FOR APPROVAL

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emerge ASSOCIATES
Integrated Science & Design

PROJECT
CATALINA
CLARKSON, WA

STAGE OR PHASE
STAGE 44-47 STREETSCAPES

DRAWING TITLE
NOTES

CLIENT
CATALINA REGIONAL COUNCIL

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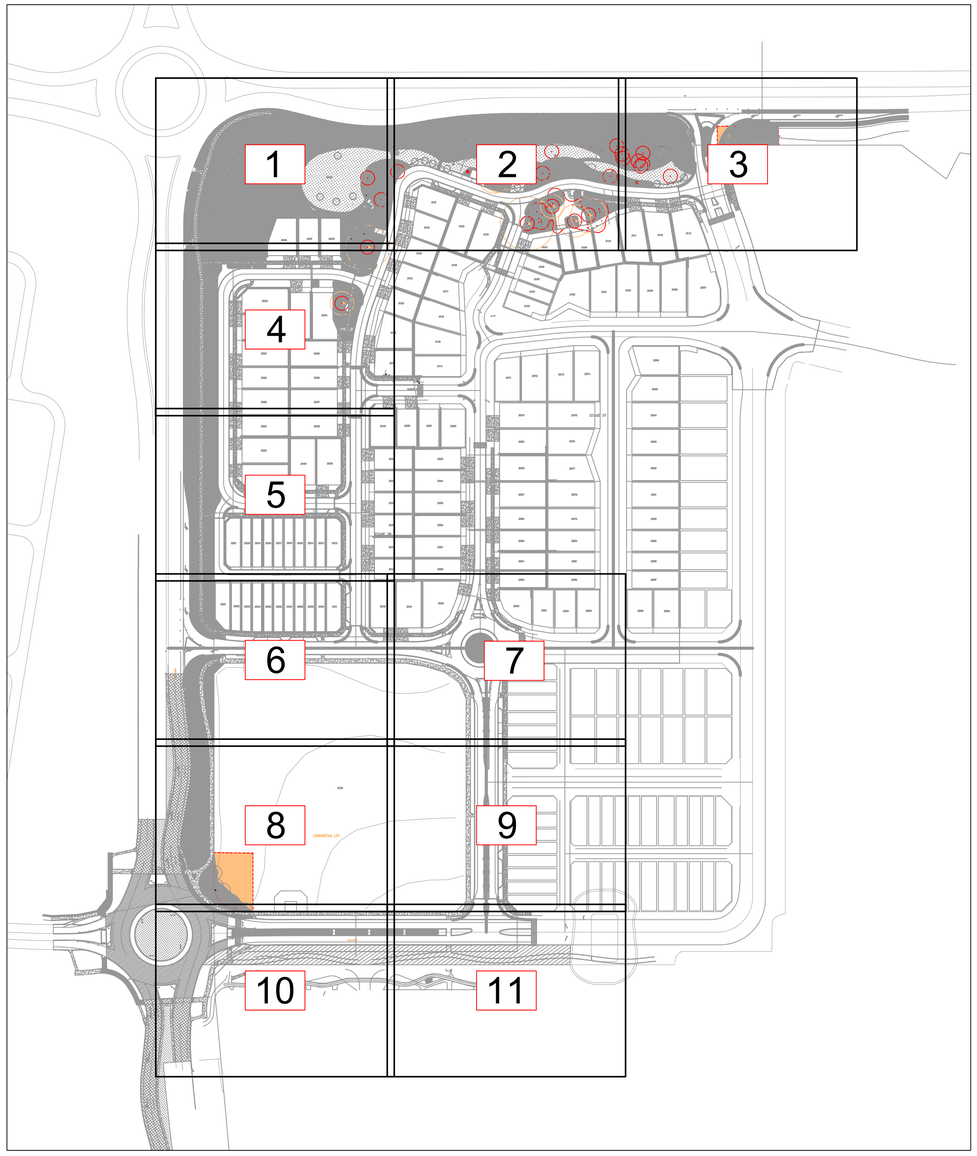
DESIGNED BY	JL	PRELIM DESIGN REVIEWED BY	ZF
DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	11.08.25		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT-79-981	REV	A

REF U:\CURRENT PROJECTS\CATALINA, TAMALA PARK(CL) DRAWINGS\(JOB CODE) AUTOCAD\(JOB CODE) LANDSCAPE\STAGE 44-47\CAT_CATALINA STAGE 44-47_DET.DWG

CATALINA GREEN STAGE 36
IRRIGATION WORKS



AUTOCAD FILENAME: Catalina Stage 36 Design (Rev AC).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	23/06/2022	ISSUED FOR APPROVAL	R.V	J.S
0	20/12/2022	ISSUED FOR CONSTRUCTION	R.V	J.S
AC	30/08/2023	AS CONSTRUCTED BY LD TOTAL	LDT	

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SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA GREEN STAGE 36
IRRIGATION WORKS (KEY PLAN)
-

DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	18418-00	COVER PAGE



AUTOCAD FILENAME: Catalina Stage 36 Design (Rev AC).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	4.0	350	16.2	12.2
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	HUNTER	I-20-04-SS	1.5SR	350	5.6	7.6
	HUNTER	I-20-04-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Φ20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Φ15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)
1 45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA
2 200/100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
2 500 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
4 TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EQUIP BORE WITH NEW GRUNDFOS PUMP: WITH VFD TO BE TO CITY OF WANNEROO SPECIFICATION
	NEW BORE PUMP CUBICLE WITH A HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER TO CITY OF WANNEROO SPECIFICATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING SLEEVE

VALVE LABEL LEGEND

VALVE NO — 2 | Φ50 — VALVE SIZE
FLOW (LPS) — 3.29 | 32 — PRECIPITATION RATE
– — DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — LICENSE

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	23/06/2022	ISSUED FOR APPROVAL	R.V	J.S
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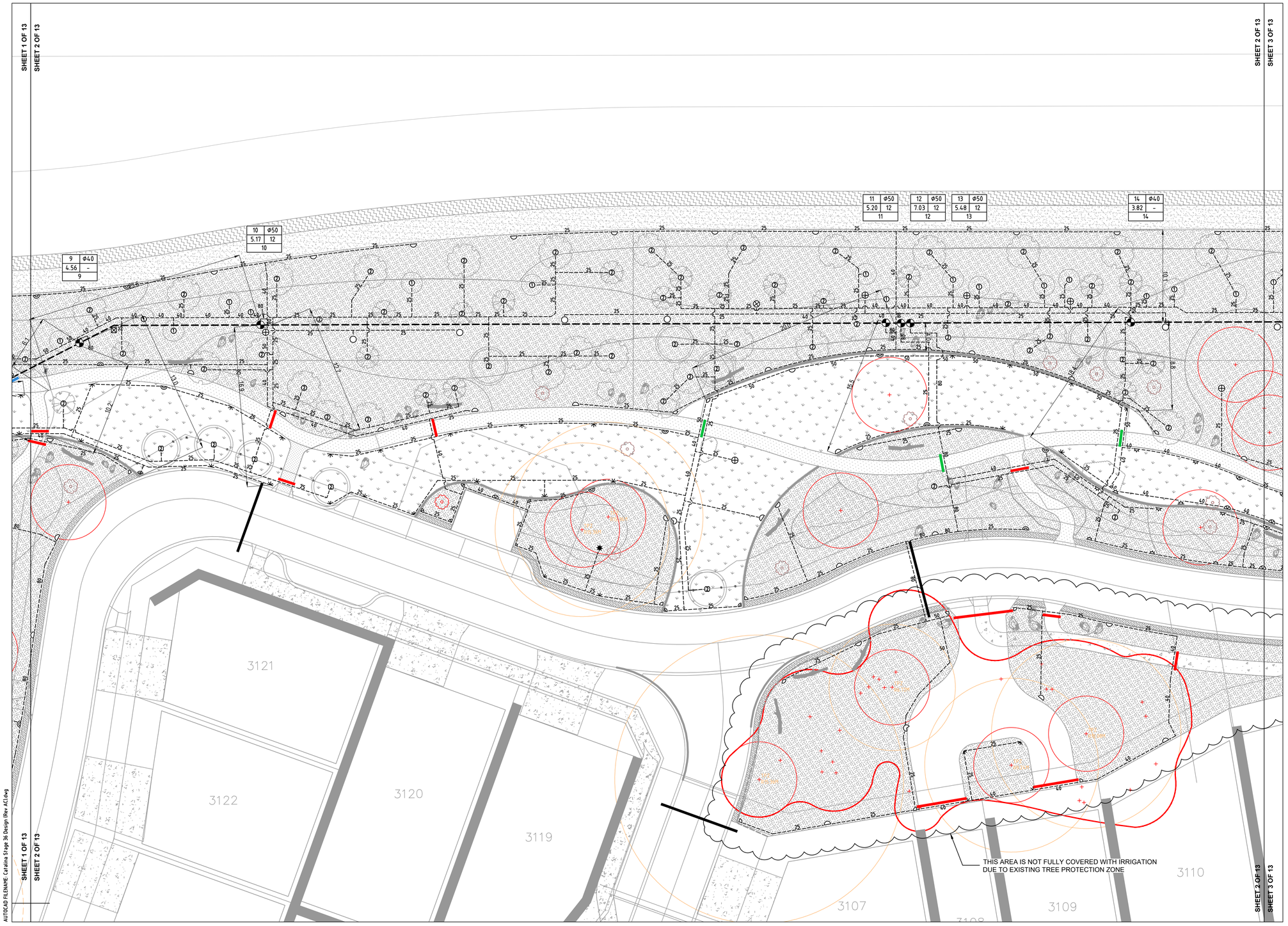
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA GREEN STAGE 36
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	18418-01	1 OF 13



AUTOCAD FILENAME: Catalina Stage 36 Design (Rev AC).dwg

LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	4.0	350	16.2	12.2
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	HUNTER	I-20-04-SS	1.5SR	350	5.6	7.6
	HUNTER	I-20-04-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	LARGE GARDEN AREAS – TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER SMALL GARDEN AREAS – TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)
1 45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA
2 200/100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
2 500 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EQUIP BORE WITH NEW GRUNDFOS PUMP: WITH VFD TO BE TO CITY OF WANNEROO SPECIFICATION
	NEW BORE PUMP CUBICLE WITH A HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER TO CITY OF WANNEROO SPECIFICATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	Ø50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	–		DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:–
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER – IRRIGATION AUSTRALIA – IRRIGATION | LANDSCAPE | TURF COMMERCIAL

0 2 4 6 8 10m

SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	23/06/2022	ISSUED FOR APPROVAL	R.V	J.S
0	20/12/2022	ISSUED FOR CONSTRUCTION	R.V	J.S
AC	30/08/2023	AS CONSTRUCTED BY LD TOTAL	LDT	

REV	DATE	DESCRIPTION	DWN	CKD

N

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NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :

TIM DAVIES LANDSCAPING

PROJECT :

CATALINA GREEN STAGE 36
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	18418-02	2 OF 13

SHEET 2 OF 13
SHEET 3 OF 13

15	Ø50
5.32	12
15	

16	Ø25
0.56	32
16	

CAP MAINLINE AT THIS LOCATION WITH 2-WIRE PATH

IRRIGATION WORKS UNDER ENTRY STATEMENTS (GROUP HOUSING LOT -LS602)

GARDEN AND TREES IN THIS SECTION TO BE LINKED INTO THE IRRIGATION UNDER ENTRY STATEMENTS

3111

3112

3113

AUTOCAD FILENAME: Catalina Stage 36 Design (Rev AC).dwg

SHEET 2 OF 13
SHEET 3 OF 13

LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	4.0	350	16.2	12.2
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	HUNTER	I-20-04-SS	1.5SR	350	5.6	7.6
	HUNTER	I-20-04-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)
① 45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA
② 200/100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
② 500 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
④ TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EQUIP BORE WITH NEW GRUNDFOS PUMP: WITH VFD TO BE TO CITY OF WANNEROO SPECIFICATION
	NEW BORE PUMP CUBICLE WITH A HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER TO CITY OF WANNEROO SPECIFICATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	Ø50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — LICENSE

0 2 4 6 8 10m

SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	23/06/2022	ISSUED FOR APPROVAL	R.V	J.S
0	20/12/2022	ISSUED FOR CONSTRUCTION	R.V	J.S
AC	30/08/2023	AS CONSTRUCTED BY LD TOTAL	LDT	

REV	DATE	DESCRIPTION	DWN	CKD

N

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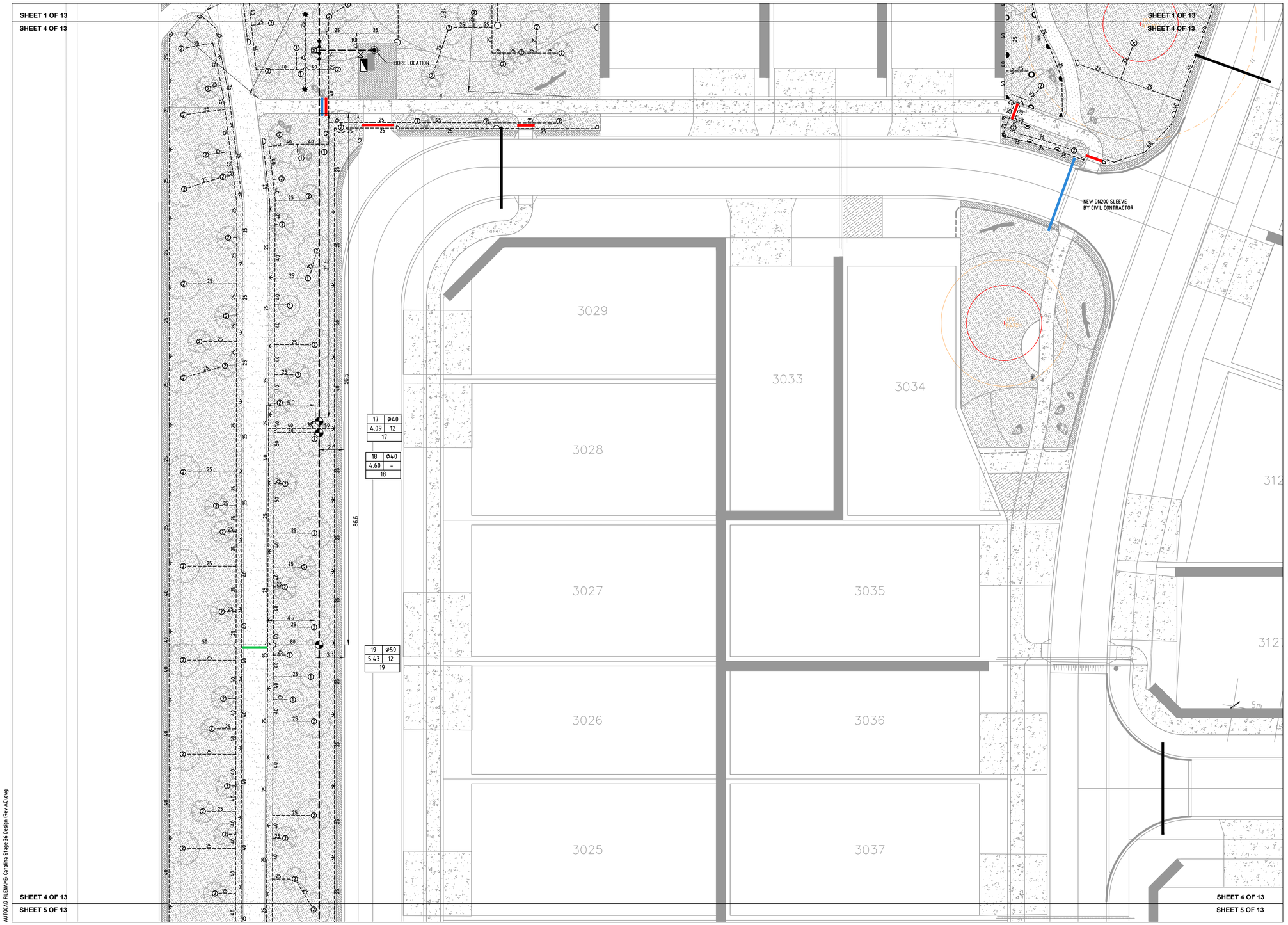
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA GREEN STAGE 36
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	18418-03	3 OF 13

SHEET 1 OF 13
SHEET 4 OF 13



SHEET 1 OF 13
SHEET 4 OF 13

SHEET 4 OF 13
SHEET 5 OF 13

SHEET 4 OF 13
SHEET 5 OF 13

AUTOCAD FILENAME: Catalina Stage 36 Design (Rev AC).dwg

LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	4.0	350	16.2	12.2
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	HUNTER	I-20-04-SS	1.5SR	350	5.6	7.6
	HUNTER	I-20-04-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Φ20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Φ15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)
1 45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA
2 200/100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
2 500 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EQUIP BORE WITH NEW GRUNDFOS PUMP: WITH VFD TO BE TO CITY OF WANNEROO SPECIFICATION
	NEW BORE PUMP CUBICLE WITH A HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER TO CITY OF WANNEROO SPECIFICATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	Φ50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — IDDWA — IRRIGATION & DRAINAGE / TURF COMMISSION

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	23/06/2022	ISSUED FOR APPROVAL	R.V	J.S
0	20/12/2022	ISSUED FOR CONSTRUCTION	R.V	J.S
AC	30/08/2023	AS CONSTRUCTED BY LD TOTAL	LDT	

REV	DATE	DESCRIPTION	DWN	CKD

N

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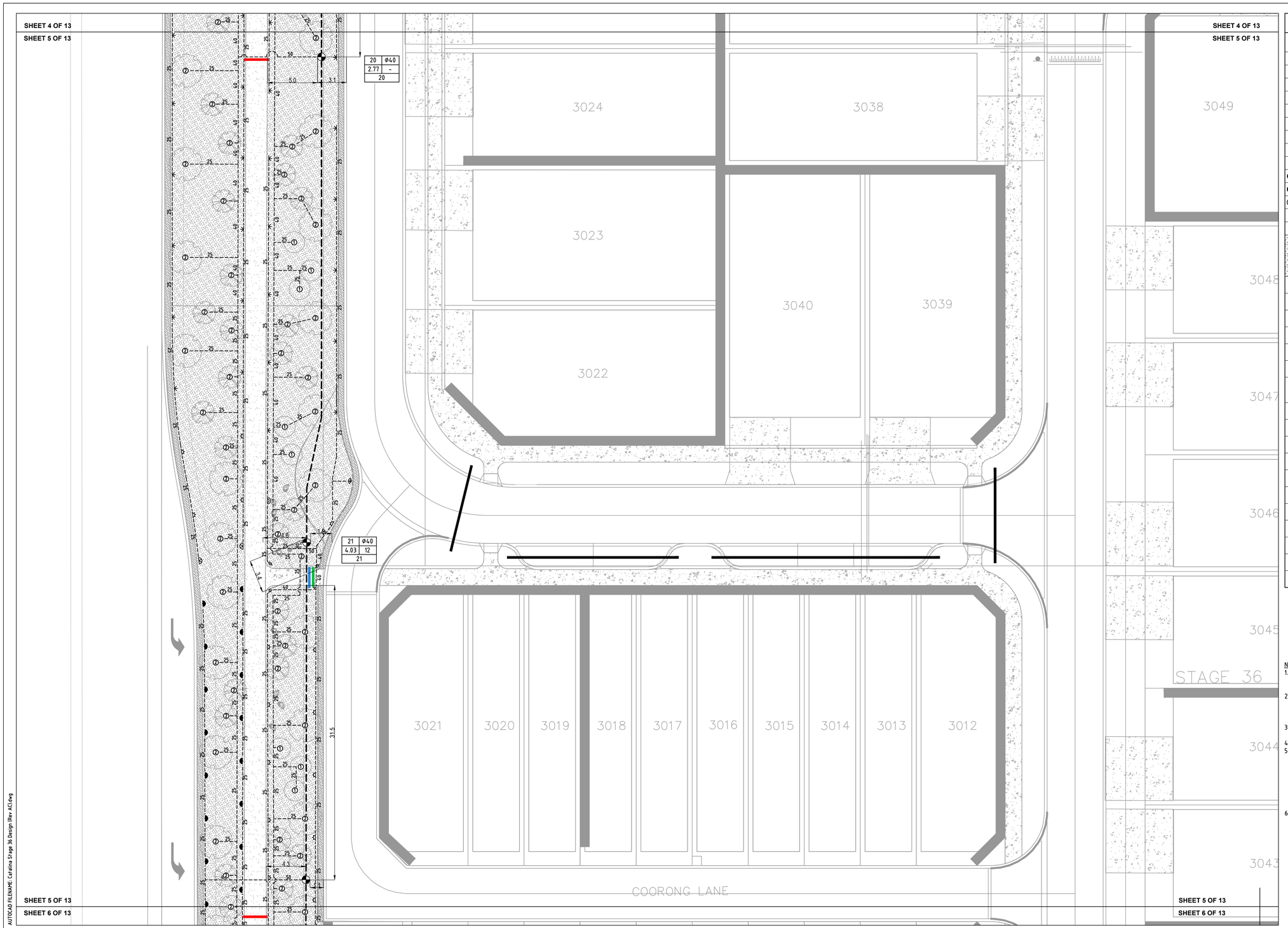
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA GREEN STAGE 36
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	18418-04	4 OF 13

SHEET 4 OF 13
SHEET 5 OF 13



SHEET 5 OF 13
SHEET 6 OF 13

AUTOCAD FILENAME: Catalina Stage 36 Design (Rev AC).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	4.0	350	16.2	12.2
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	HUNTER	I-20-04-SS	1.5SR	350	5.6	7.6
	HUNTER	I-20-04-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Φ20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Φ15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)
1 45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA
2 200/100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
2 500 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EQUIP BORE WITH NEW GRUNDFOS PUMP: WITH VFD TO BE TO CITY OF WANNEROO SPECIFICATION
	NEW BORE PUMP CUBICLE WITH A HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER TO CITY OF WANNEROO SPECIFICATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	Φ50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
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3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	23/06/2022	ISSUED FOR APPROVAL	R.V	J.S
0	20/12/2022	ISSUED FOR CONSTRUCTION	R.V	J.S
AC	30/08/2023	AS CONSTRUCTED BY LD TOTAL	LDT	

N

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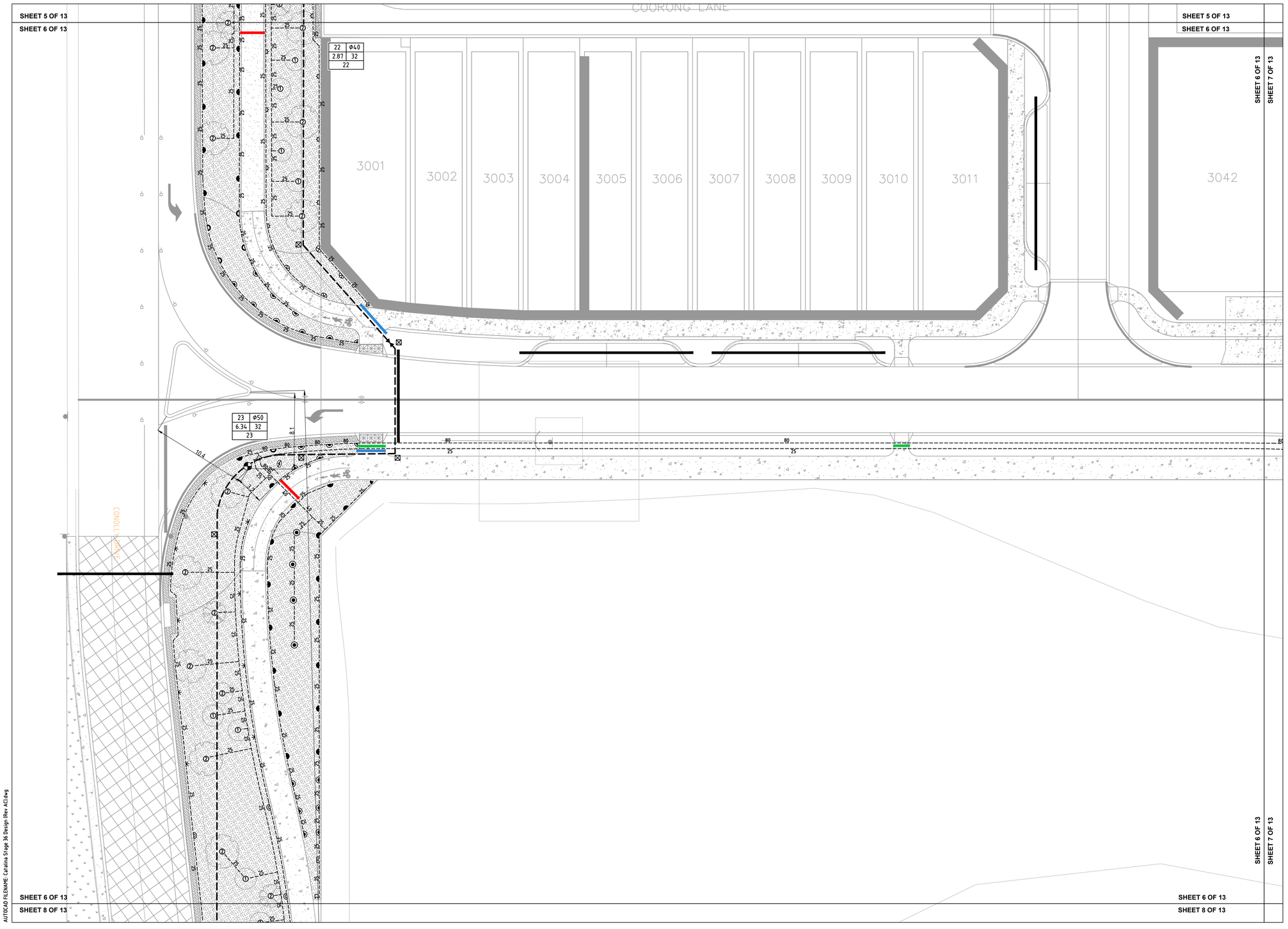
NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA GREEN STAGE 36
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	18418-05	5 OF 13



AUTOCAD FILENAME: Catalina Stage 36 Design (Rev AC).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	4.0	350	16.2	12.2
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	HUNTER	I-20-04-SS	1.5SR	350	5.6	7.6
	HUNTER	I-20-04-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Φ20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Φ15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)
1 45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA
2 200/100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
2 500 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EQUIP BORE WITH NEW GRUNDFOS PUMP: WITH VFD TO BE TO CITY OF WANNEROO SPECIFICATION
	NEW BORE PUMP CUBICLE WITH A HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER TO CITY OF WANNEROO SPECIFICATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	Φ50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA IA CID

0 2 4 6 8 10m

SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	23/06/2022	ISSUED FOR APPROVAL	R.V	J.S
0	20/12/2022	ISSUED FOR CONSTRUCTION	R.V	J.S
AC	30/08/2023	AS CONSTRUCTED BY LD TOTAL	LDT	

REV	DATE	DESCRIPTION	DWN	CKD

N

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SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

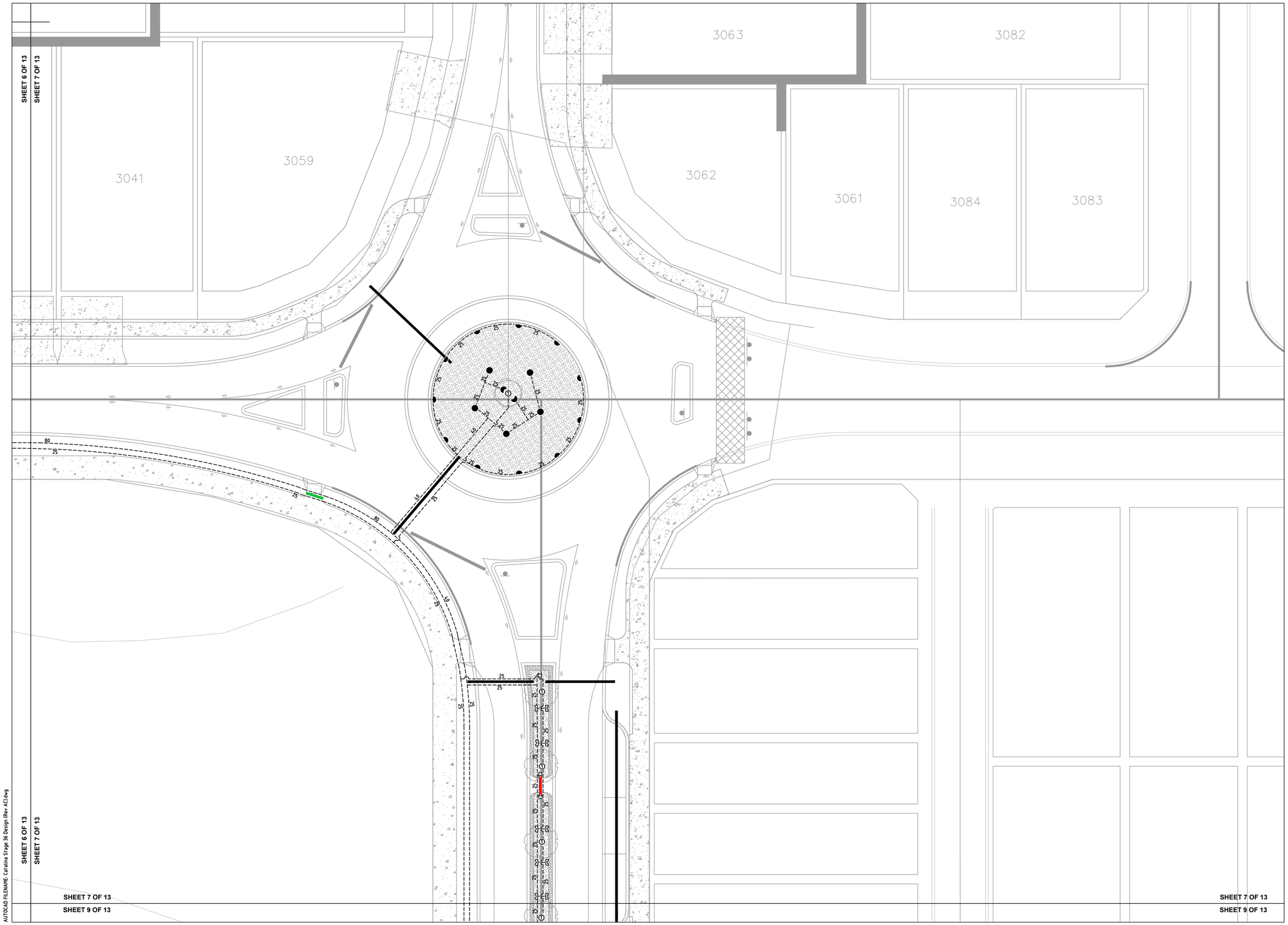
CLIENT :

TIM DAVIES LANDSCAPING

PROJECT :

CATALINA GREEN STAGE 36
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	18418-06	6 OF 13



LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	4.0	350	16.2	12.2
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	HUNTER	I-20-04-SS	1.5SR	350	5.6	7.6
	HUNTER	I-20-04-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)
1 45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA
2 200/100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
2 500 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EQUIP BORE WITH NEW GRUNDFOS PUMP: WITH VFD TO BE TO CITY OF WANNEROO SPECIFICATION
	NEW BORE PUMP CUBICLE WITH A HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER TO CITY OF WANNEROO SPECIFICATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	Ø50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA LICENSE IRRIGATION & TURF COMMISSION

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	23/06/2022	ISSUED FOR APPROVAL	R.V	J.S
0	20/12/2022	ISSUED FOR CONSTRUCTION	R.V	J.S
AC	30/08/2023	AS CONSTRUCTED BY LD TOTAL	LDT	

REV	DATE	DESCRIPTION	DWN	CKD

N

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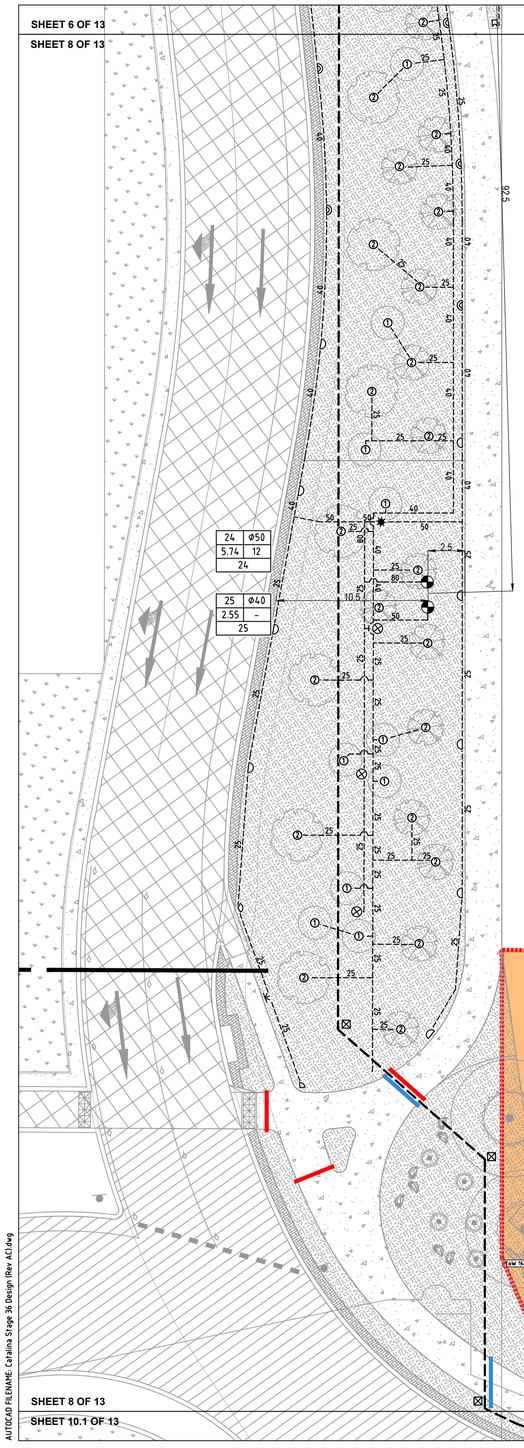
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA GREEN STAGE 36
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	18418-07	7 OF 13

SHEET 6 OF 13
SHEET 8 OF 13



SHEET 8 OF 13
SHEET 10.1 OF 13

SHEET 6 OF 13
SHEET 8 OF 13

3128

COMMERCIAL LOT

SHEET 8 OF 13
SHEET 9 OF 13

SHEET 8 OF 13
SHEET 10.1 OF 13

AUTOCAD FILENAME: Catalina Stage 36 Design (Rev AC).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	4.0	350	16.2	12.2
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	HUNTER	I-20-04-SS	1.5SR	350	5.6	7.6
	HUNTER	I-20-04-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Φ20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Φ15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)
1 45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA
2 200/100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
2 500 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
4 TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EQUIP BORE WITH NEW GRUNDFOS PUMP: WITH VFD TO BE TO CITY OF WANNEROO SPECIFICATION
	NEW BORE PUMP CUBICLE WITH A HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER TO CITY OF WANNEROO SPECIFICATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	Φ50 VALVE SIZE
FLOW (LPS)	3.29	32 PRECIPITATION RATE
	-	DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA LANDSCAPE/TURF CONNECTION

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	23/06/2022	ISSUED FOR APPROVAL	R.V	J.S
0	20/12/2022	ISSUED FOR CONSTRUCTION	R.V	J.S
AC	30/08/2023	AS CONSTRUCTED BY LD TOTAL	LDT	

REV	DATE	DESCRIPTION	DWN	CKD

N

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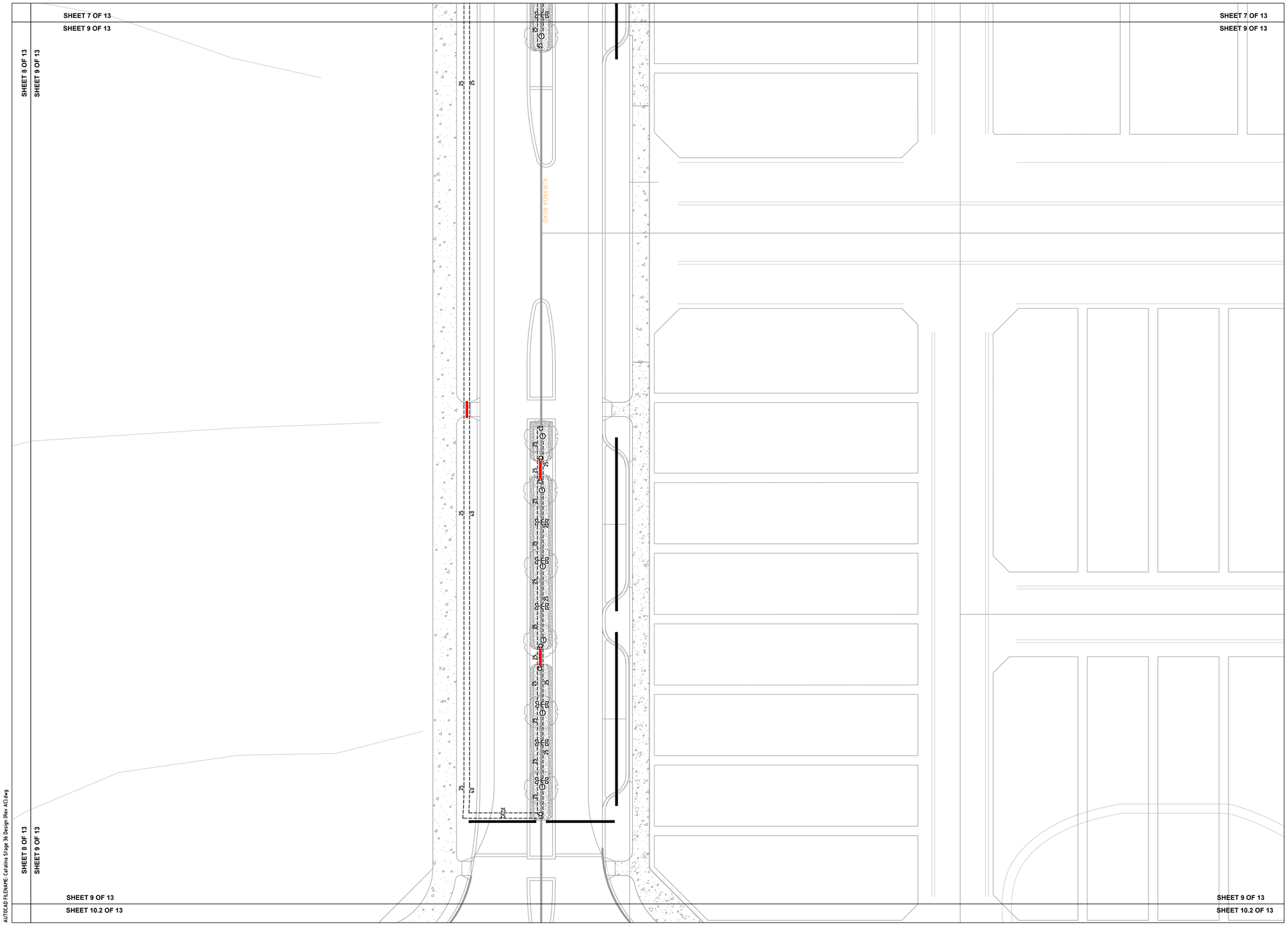
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA GREEN STAGE 36
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	18418-08	8 OF 13



LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	4.0	350	16.2	12.2
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	HUNTER	I-20-04-SS	1.5SR	350	5.6	7.6
	HUNTER	I-20-04-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)
1 45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA
2 200/100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
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	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
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	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	Ø50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
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3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
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6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA LANDSCAPE TURF COMMISSION

0 2 4 6 8 10m

SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Stage 36 Design (Rev AC).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	23/06/2022	ISSUED FOR APPROVAL	R.V	J.S
0	20/12/2022	ISSUED FOR CONSTRUCTION	R.V	J.S
AC	30/08/2023	AS CONSTRUCTED BY LD TOTAL	LDT	

REV	DATE	DESCRIPTION	DWN	CKD

N

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SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

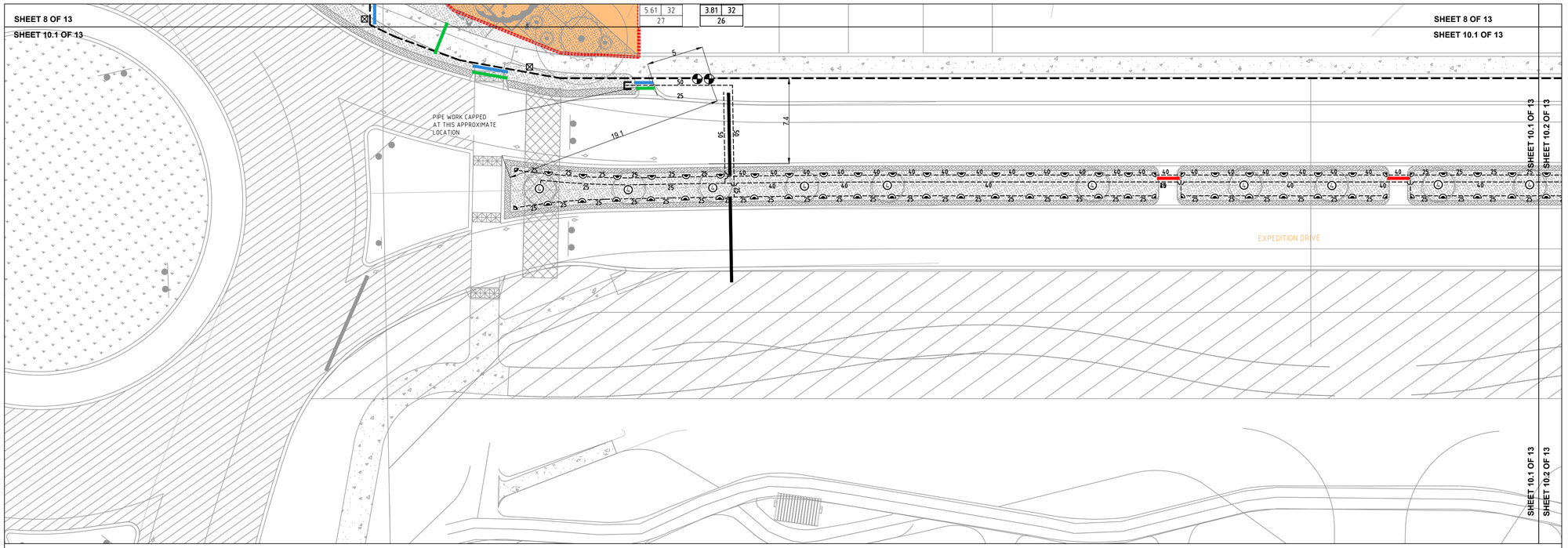
CLIENT :

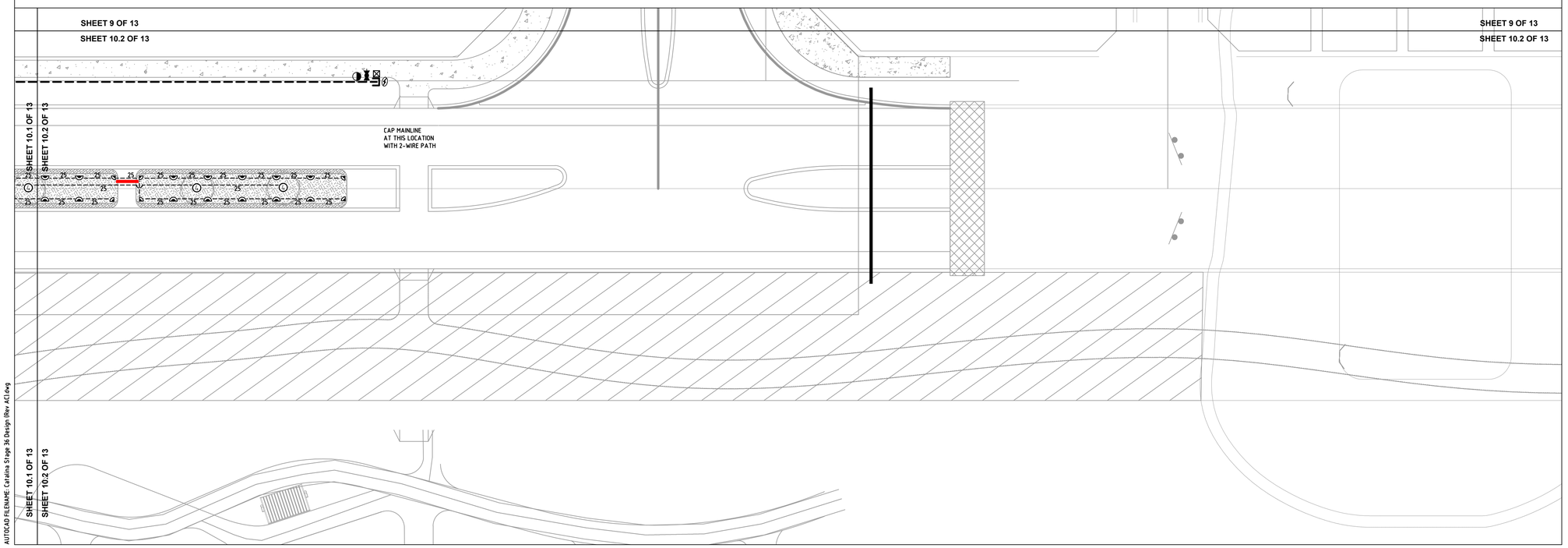
TIM DAVIES LANDSCAPING

PROJECT :

CATALINA GREEN STAGE 36
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	18418-09	9 OF 13





AUTOCAD FILENAME: Catalina Stage 36 Design (Rev AC).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	4.0	350	16.2	12.2
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	HUNTER	I-20-04-SS	1.5SR	350	5.6	7.6
	HUNTER	I-20-04-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Φ20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Φ15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)
1 45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA
2 200/100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
2 500 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
4 TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EQUIP BORE WITH NEW GRUNDFOS PUMP: WITH VFD TO BE TO CITY OF WANNEROO SPECIFICATION
	NEW BORE PUMP CUBICLE WITH A HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER TO CITY OF WANNEROO SPECIFICATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	Φ50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	23/06/2022	ISSUED FOR APPROVAL	R.V	J.S
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REV	DATE	DESCRIPTION	DWN	CKD

N

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SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA GREEN STAGE 36
IRRIGATION WORKS
-

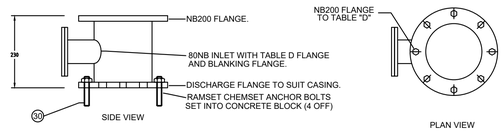
DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	18418-10	10 OF 13

STATION DATA							VALVE DATA	
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N ㎡	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	6.30	350	12	4.0	4.0	TURF	7	6.30	7
2	7.03	350	12	4.0	4.0	TURF	12	7.03	12
3	10.37	350	12	4.0	4.0	GARDEN	2	5.06	2
							4	5.31	4
4	10.79	350	12	4.0	4.0	GARDEN	5	5.00	5
							8	5.79	8
5	10.37	350	12	4.0	4.0	GARDEN	10	5.17	10
							11	5.20	11
6	10.28	350	12	4.0	4.0	GARDEN	13	5.48	13
							17	4.09	17
7	10.75	350	12	4.0	4.0	GARDEN	15	5.32	15
							19	5.43	19
8	9.77	350	12	4.0	4.0	GARDEN	21	4.03	21
							24	5.74	24
9	10.97	250	32	4.0	15	GARDEN	1	2.74	1
							6	1.90	6
							26	3.81	26
10	9.77	250	32	4.0	15	GARDEN	16	0.56	16
							22	2.87	22
							23	6.34	23
11	10.10	250	–	–	15	TREES	3	5.50	3
							18	4.60	18
12	10.93	250	–	–	15	TREES	20	2.77	20
							25	2.55	25
							27	5.61	27
13	8.22	250			15	TREES	14	3.82	14
							9	4.56	9
DAILY RUN TIME: 6 HRS & 20 MIN							WEEKLY RUN TIME: 31 HRS & 40 MIN		

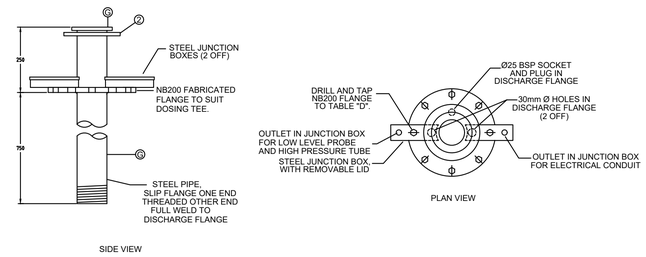
PIPE SIZE.	DIMENSIONS (mm)							CONCRETE PLINTH
	A.	B.	C.	D.	E.	F.	G.	
Ø50	300	150	500	150	1305	Ø25	50	Ø650 x 450
Ø80	600	200	800	200	1430	Ø25	80	Ø650 x 600
Ø100	600	200	1000	250	1430	Ø50	100	Ø750 x 600

ITEM DESCRIPTION
1. DISCHARGE FLANGE ASSEMBLY.
2. TE SLIP FLANGE
3. 90° LONG RADIUS FLANGED ELBOW.
4. 90° LONG RADIUS BUTTWELD ELBOW.
5. AUTOMATIC AIR/VACUUM RELEASE VALVE - METAL CONSTRUCTION.
6. STANDARD WT. BUTWELD TE FLANGED TEE.
7. TE BLANK FLANGE.
8. ARAD OCTAVE FLOW METER SIZED TO DISCHARGE Ø.
9. HEAVY DUTY ELECTRICAL CONDUIT.
10. CONCRETE PLINTH.
11. PRESSURE TUBE.
12. STEEL JUNCTION BOXES.
13. BORE CASING.
14. LOCKABLE COMMERCIAL VALVE BOX TO HOLD ARAD OCTAVE METER.
15. CONCRETE THRUST BLOCK.
16. C.I. FLANGE TO SOCKET CONNECTOR.
17. P.V.C. MAINLINE.
18. BSP SOCKET AND NIPPLE.
19. MILNES GUNMETAL TAPPING BAND. INSTALL HUNTER FLOW CLICK WHERE SPECIFIED. PLUG IF SOCKET NOT USED.
20. BUTTERFLY VALVE WITH NOTCH PLATE AND HANDLE. REMOVE HANDLE AND STORE IN PUMP CUBICLE.
21. TABLE "E" FLANGE SET.
22. GALVANISED STEEL DISCHARGE PIPE.
23. MILNES GUNMETAL TAPPING BAND. INSTALL FLOW SWITCH WHERE SPECIFIED. PLUG IF SOCKET NOT USED.
24. RAINBIRD MAXI JUMBO RECTANGULAR VALVE BOX (VB-MAX 102.4X68.8X45.7 CM)
25. DRILL & TAP FOR PRESSURE TAKE OFF TUBE. RUN TUBE BACK TO PRESSURE GAUGE IN CONTROL CABINET.
26. DUAL FLAP CHECK VALVE
27. LOCKABLE GALVANISED METER ENCLOSURE.
28. PUMP COLUMN.
29. 200NB GALVANISED STEEL FABRICATED DOSING TEE WITH 80NB INLET.
30. STUD BOLTS TO SUIT TABLE "D" FLANGE.
31. NOT ALLOCATED.
32. NOT ALLOCATED.

NOTES:
1. DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL STEEL PIPEWORK TO BE SCHEDULE 40.
3. ALL FLANGES TO BE TABLE "E".
4. ALL STEEL PIPEWORK AND FITTINGS TO BE HOT DIPPED GALVANISED AFTER FABRICATION.
5. ALL BOLTS STUDS AND NUTS TO BE GALVANISED, ALL BOLT TREADS TO PROTRUDE PAST NUT AFTER INSTALLATION.
6. ALL BOLTS USED IN CONCRETE TO BE "RAMSET CHEMSET" MASONRY ANCHORS UNLESS OTHERWISE STATED.
7. ALL BURIED STEEL PIPE TO BE "DENSO" WRAPPED AS PER MANUFACTURERS SPECIFICATIONS.
8. BUTTERFLY VALVES TO BE FITTED WITH STAINLESS STEEL DISC AND PADLOCK TAB.
9. ALL UNUSED SOCKETS TO BE FITTED WITH STEEL PLUG.
10. FLOW METER AND BUTTERFLY VALVE TO BE SAME SIZE AS PIPEWORK.
11. HIGH, LOW PRESSURE AND NO FLOW FITTINGS NOT SHOWN.



STANDARD DOSING TEE ASSEMBLY DETAIL - ITEM 29.



STANDARD DISCHARGE FLANGE ASSEMBLY DETAIL - ITEM 1.

PIPE SIZE.	DIMENSIONS (mm)							CONCRETE PLINTH
	A.	B.	C.	D.	E.	F.	G.	
Ø50	300	150	500	150	1305	Ø25	50	Ø650 x 450
Ø80	600	200	800	200	1430	Ø25	80	Ø650 x 600
Ø100	600	200	1000	250	1430	Ø50	100	Ø750 x 600

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13. BORE CASING.
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28. PUMP COLUMN.
29. 200NB GALVANISED STEEL FABRICATED DOSING TEE WITH 80NB INLET.
30. STUD BOLTS TO SUIT TABLE "D" FLANGE.
31. NOT ALLOCATED.
32. NOT ALLOCATED.

NOTES:
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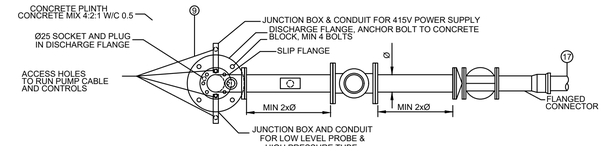
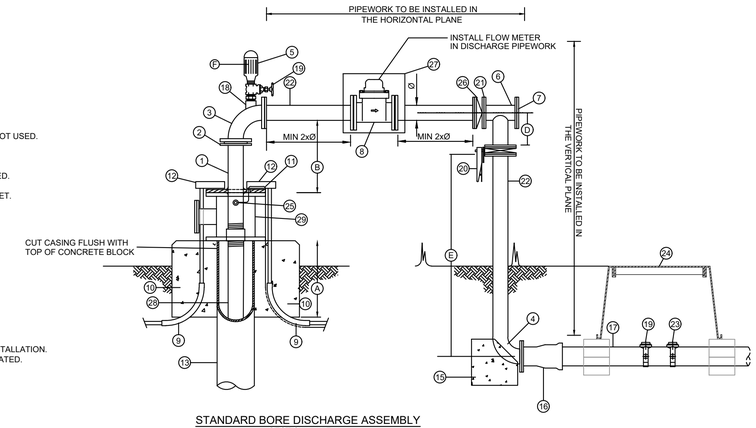


STANDARD BORE DISCHARGE ASSEMBLY
PLAN VIEW (JUNCTION BOXES ROTATED FOR CLARITY)



STANDARD BORE DISCHARGE ASSEMBLY
SECTIONAL VIEW

AUTOCAD FILENAME: Catalina Stage 36 Design (Rev AC).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	23/06/2022	ISSUED FOR APPROVAL	R.V	J.S
0	20/12/2022	ISSUED FOR CONSTRUCTION	R.V	J.S
AC	30/08/2023	AS CONSTRUCTED BY LD TOTAL	LDT	

REV	DATE	DESCRIPTION	DWN	CKD

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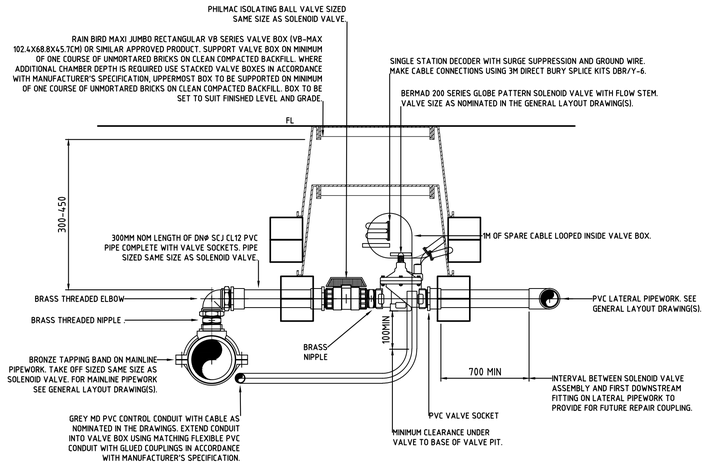
SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

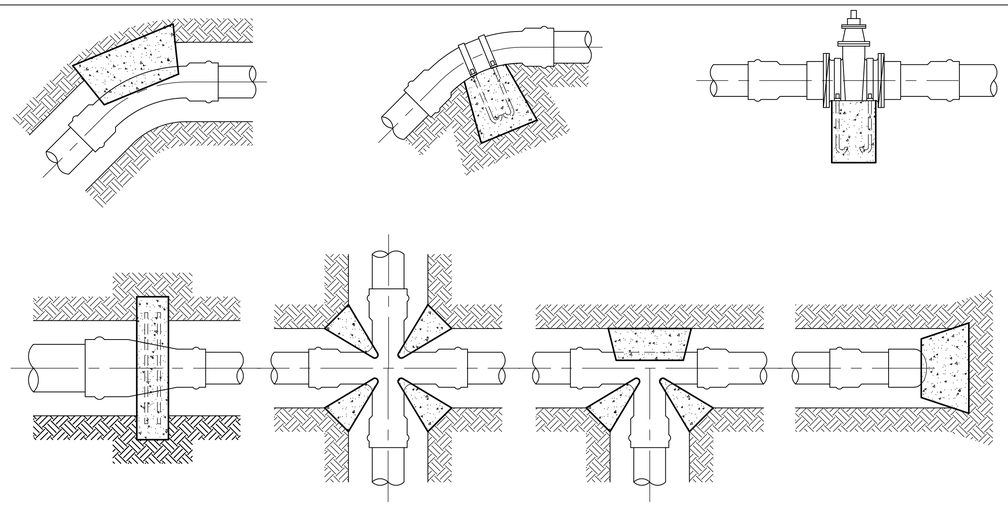
PROJECT :
CATALINA GREEN STAGE 36
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	18418-11	11 OF 13



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

NOTE:
MINIMUM BEARING AREA TO BE IN ACCORDANCE WITH TYPE OF FITTING AND SOIL TYPE AS PER PIPE MANUFACTURERS RECOMMENDATIONS

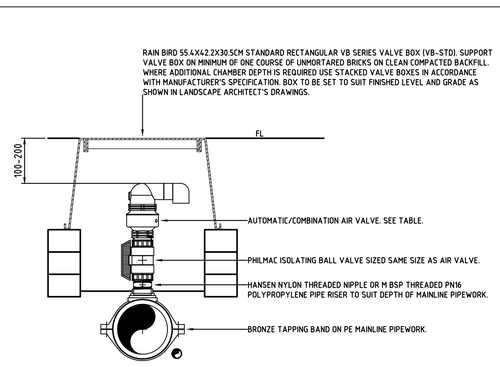
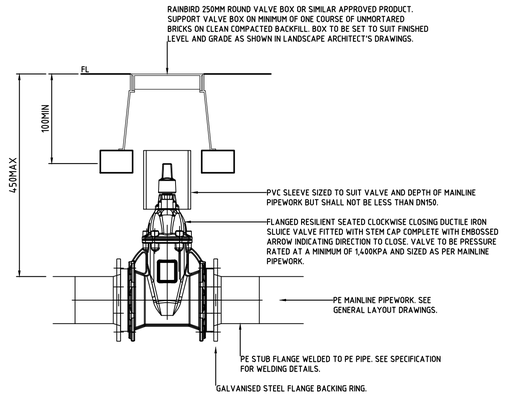


TABLE OF AIR VALVES	
MAINLINE SIZE (DN)†	AIR VALVE‡
LESS THAN 63	PN16 DN20 COMBINATION AIR VALVE
75-140	PN16 DN25 COMBINATION AIR VALVE
150-200	PN16 DN50 COMBINATION AIR VALVE
† SEE GENERAL LAYOUT DRAWING(S). ‡ SEE ALSO SPECIFICATION.	

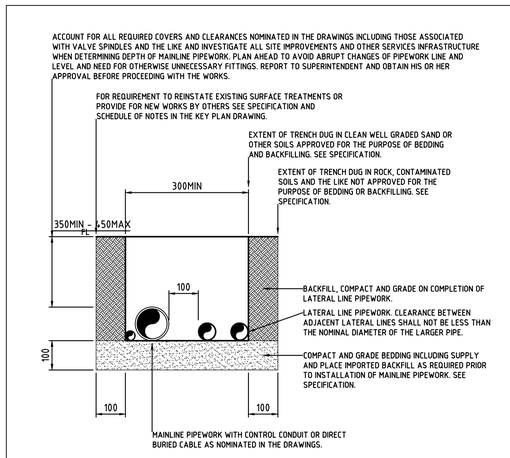
TYPICAL AIR VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL MAINLINE ISOLATION VALVE INSTALLATION

NOT TO SCALE



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 36 Design (Rev AC).dwg

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A	23/06/2022	ISSUED FOR APPROVAL	R.V	J.S
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DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
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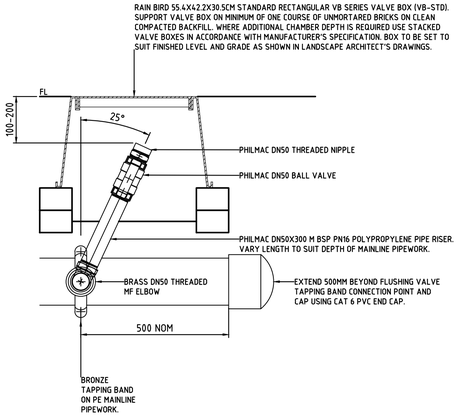
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

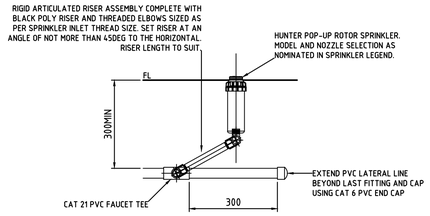
PROJECT :
CATALINA GREEN STAGE 36
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	18418-12	12 OF 13



TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

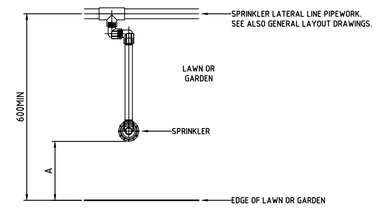
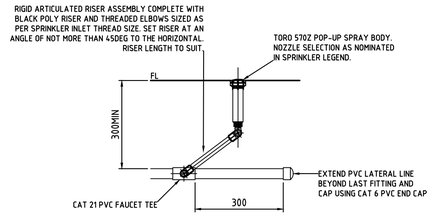


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	

† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.

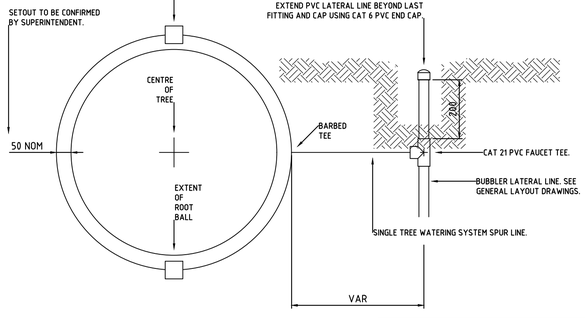
SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE



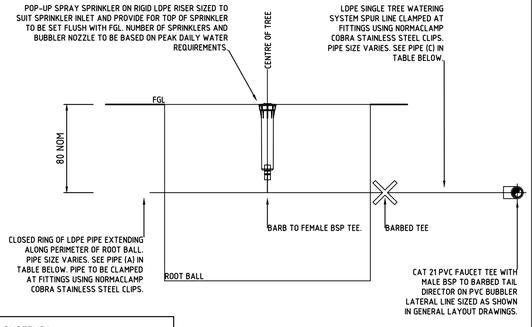


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
–	–	0-6	–	DN19	–	DN19
–	–	6-15	–	DN19	–	DN25
–	–	15-30	–	DN25	–	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 36 Design (Rev AC).dwg

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AC	30/08/2023	AS CONSTRUCTED BY LD TOTAL	LDT	

REV	DATE	DESCRIPTION	DWN	CKD

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SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :

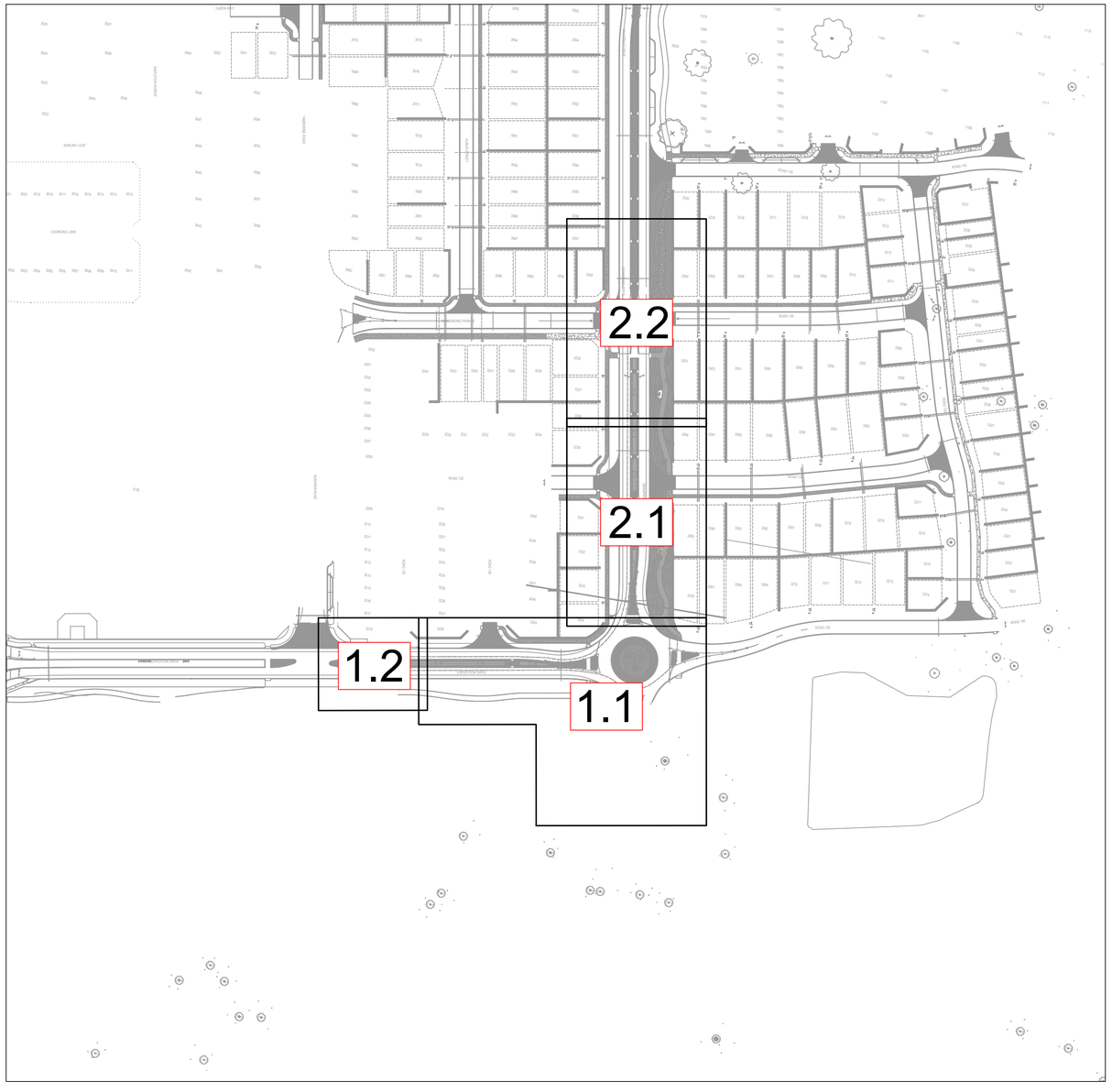
TIM DAVIES LANDSCAPING

PROJECT :

CATALINA GREEN STAGE 36
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
26/05/2022	1841B-13	13 OF 13

CATALINA GREEN STAGE 39
IRRIGATION WORKS



AUTOCAD FILENAME: Catalina Stage 39 Design (Rev 1).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	02/10/2023	ISSUED FOR APPROVAL	R.V	J.S
B	31/10/2023	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S
0	26/02/2024	ISSUED FOR CONSTRUCTION	P.K	J.S
1	29/02/2024	REVISED MAINLINE TO SUIT CONNECTION TO STAGE 36 BORE	J.S	

REV	DATE	DESCRIPTION	DWN	CKD

N

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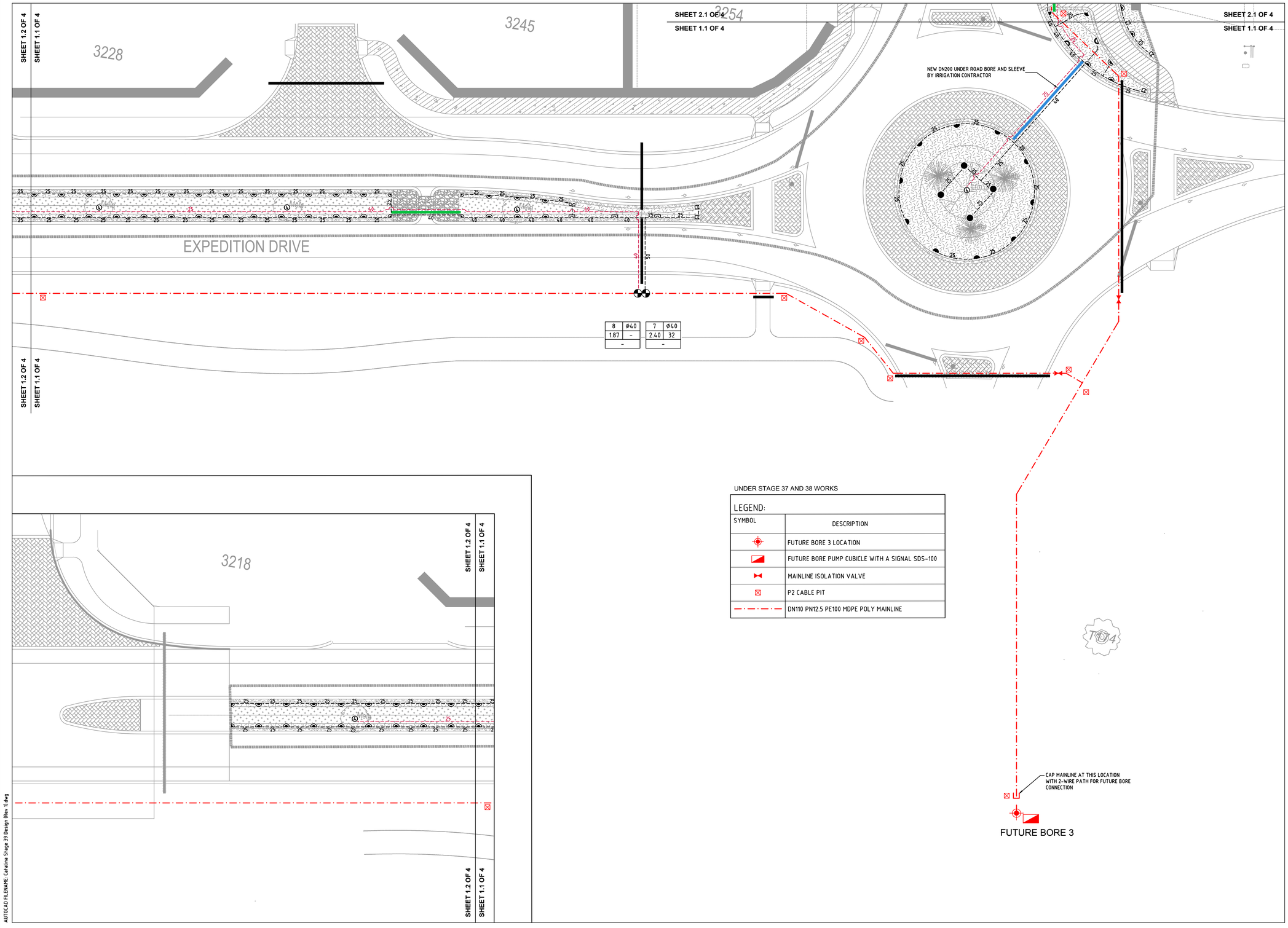
SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA GREEN STAGE 39
IRRIGATION WORKS (KEY PLAN)
-

DATE :	DESIGN NO. :	SHEET NO. :
02/10/2023	18664-00	COVER PAGE



UNDER STAGE 37 AND 38 WORKS

LEGEND:

SYMBOL	DESCRIPTION
	FUTURE BORE 3 LOCATION
	FUTURE BORE PUMP CUBICLE WITH A SIGNAL SDS-100
	MAINLINE ISOLATION VALVE
	P2 CABLE PIT
	DN110 PN12.5 PE100 MDPE POLY MAINLINE

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1
	FOR GARDEN AREAS REFER TO C.O.W. SPECIFICATION ITEM 1.6.2 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING 570Z-12P'S					
1500 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 14.12 LPM @ 250 kPA					
TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA					
	BERMAD 200 SERIES SOLENOID CONTROL VALVE WITH HUNTER DECODER (SIZE AS SHOWN)					
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE					
	50mm MAINLINE FLUSHING VALVE					
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION					
	P2 CABLE PIT					
	HUNTER LIGHTNING SURGE PROTECTION					
	DN110 PN12.5 PE100 MDPE POLY MAINLINE					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
	DN100 SLEEVE INSTALLED BY CIVIL CONTRACTOR					
	DN150 SLEEVE INSTALLED BY CIVIL CONTRACTOR					
	DN200 SLEEVE INSTALLED BY CIVIL CONTRACTOR (UNLESS OTHERWISE NOTED)					
	EXISTING SLEEVE					

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm HT	APP'N mm WEEK	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
4	8.68	250	32	40	15	GARDEN	7	2.40	-
							10	6.28	-
5	6.68	250	32	40	15	GARDEN	12	6.68	-
6	10.54	250	-	-	15	TREES	8	3.75	-
							9	1.87	-
							11	4.92	-

DAILY RUN TIME: 0 HRS & 45 MIN WEEKLY RUN TIME: 3 HRS & 45 MIN

VALVE LABEL LEGEND

2	Ø50	VALVE SIZE
3.29	32	PRECIPITATION RATE
-		DECODER NO.

NOTE:

1. CITY OF WANNEROO STANDARD IRRIGATION SPECIFICATION TO APPLY TO THESE WORKS (JUNE 2020).
2. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
4. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
5. ALL HUNTER ID2BLU 3.3mm² SOLID CORE RED AND BLUE TWISTED PAIR 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	02/10/2023	ISSUED FOR APPROVAL	R.V	J.S
B	31/10/2023	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S
0	26/02/2024	ISSUED FOR CONSTRUCTION	P.K	J.S
1	29/02/2024	REVISED MAINLINE TO SUIT CONNECTION TO STAGE 36 BORE	J.S	

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NewGround DESIGN SERVICES

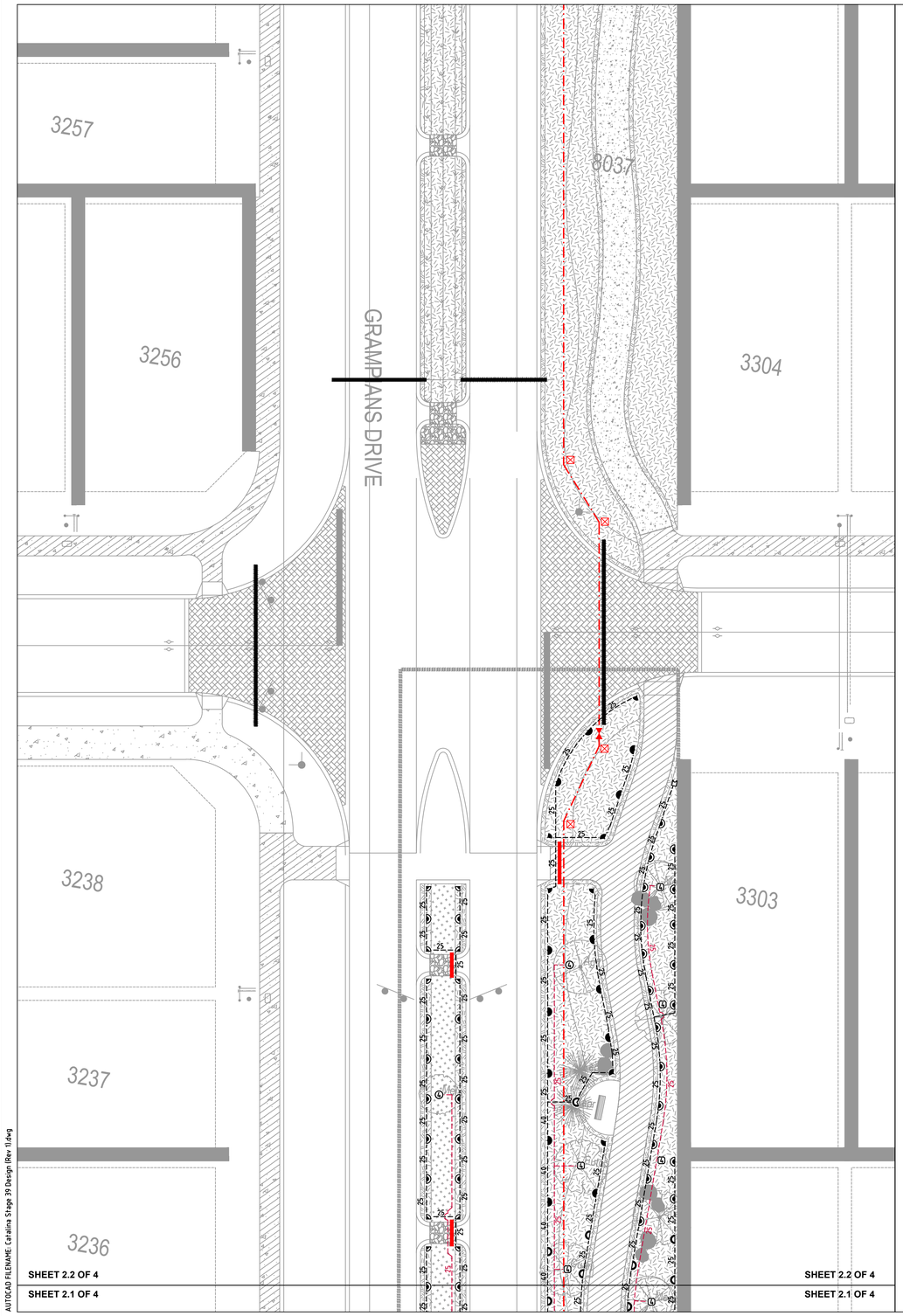
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

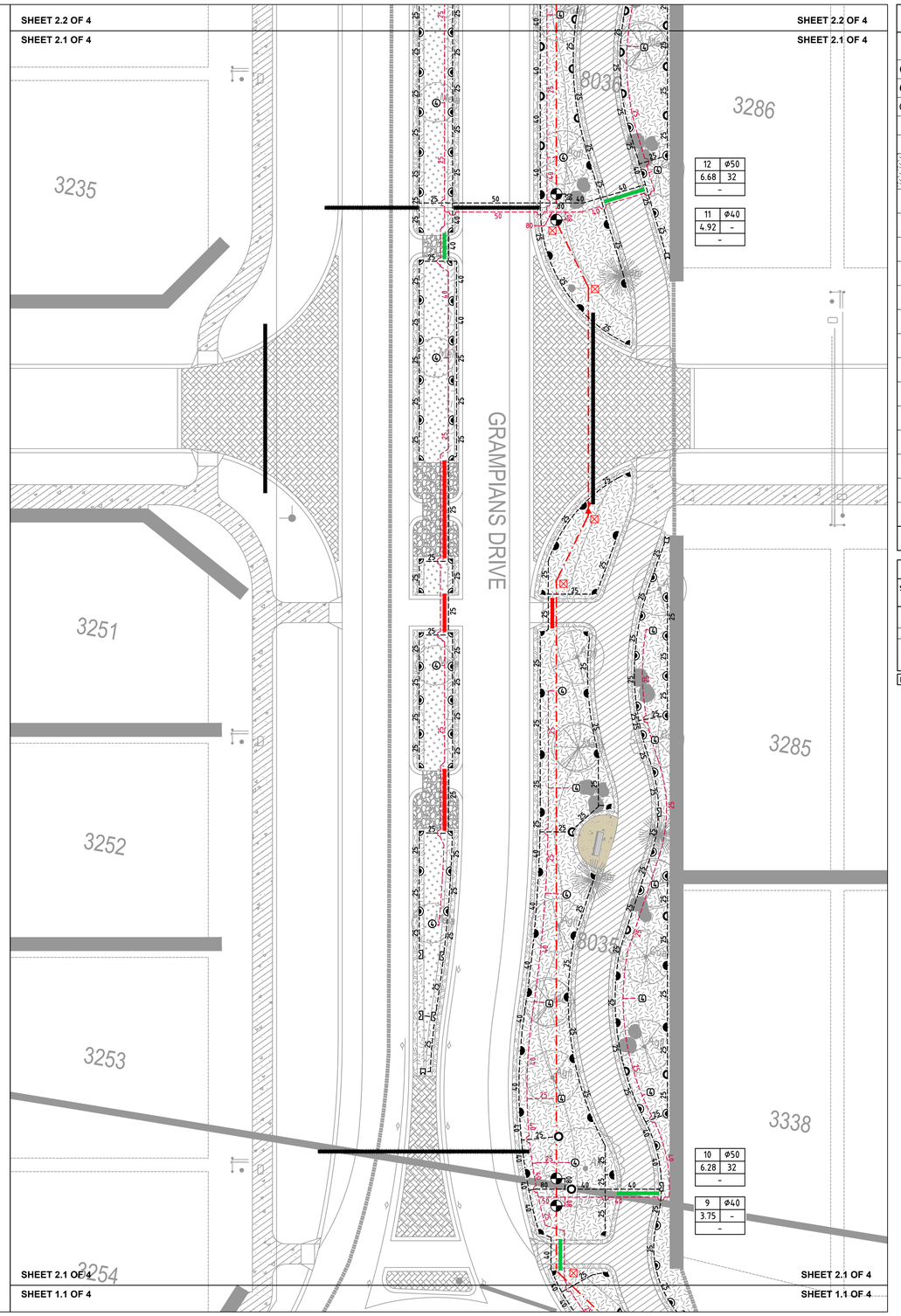
CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA GREEN STAGE 39
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
02/10/2023	18664-01	1 OF 4

AUTOCAD FILENAME: Catalina Stage 39 Design (Rev 1).dwg





LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
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	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION					
	P2 CABLE PIT					
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	DN200 SLEEVE INSTALLED BY CIVIL CONTRACTOR (UNLESS OTHERWISE NOTED)					
	EXISTING SLEEVE					

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N (mm hr)	APP'N (mm week)	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
4	8.68	250	32	40	15	GARDEN	7	2.40	–
							10	6.28	–
5	6.68	250	32	40	15	GARDEN	12	6.68	–
6	10.54	250	–	–	15	TREES	8	3.75	–
							9	1.87	–
							11	4.92	–

DAILY RUN TIME: 0 HRS & 45 MIN WEEKLY RUN TIME: 3 HRS & 45 MIN

VALVE LABEL LEGEND

2 ø50	VALVE SIZE
3.29 32	PRECIPITATION RATE
–	DECODER NO.

NOTE:
1. CITY OF WANNEROO STANDARD IRRIGATION SPECIFICATION TO APPLY TO THESE WORKS (JUNE 2020).
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   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA RECREATE. FUTURE COMMITMENT

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	02/10/2023	ISSUED FOR APPROVAL	R.V	J.S
B	31/10/2023	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S
0	26/02/2024	ISSUED FOR CONSTRUCTION	P.K	J.S
1	29/02/2024	REVISED MAINLINE TO SUIT CONNECTION TO STAGE 36 BORE	J.S	

REV	DATE	DESCRIPTION	DWN	CKD

N

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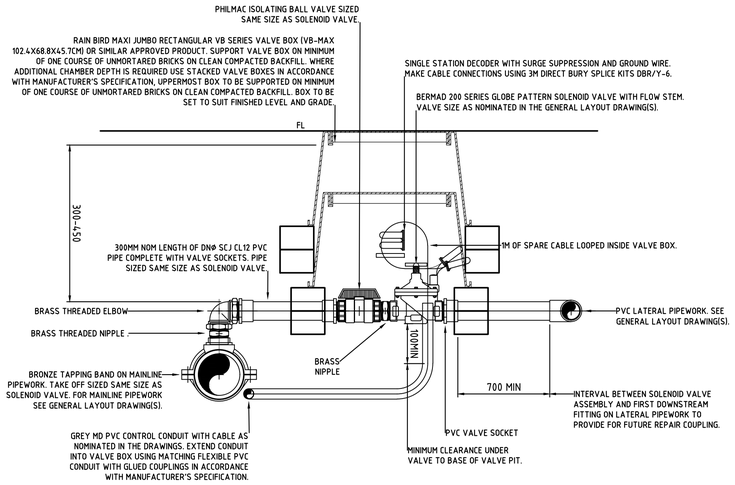
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : EMERGE ASSOCIATES

PROJECT : CATALINA GREEN STAGE 39 IRRIGATION WORKS -

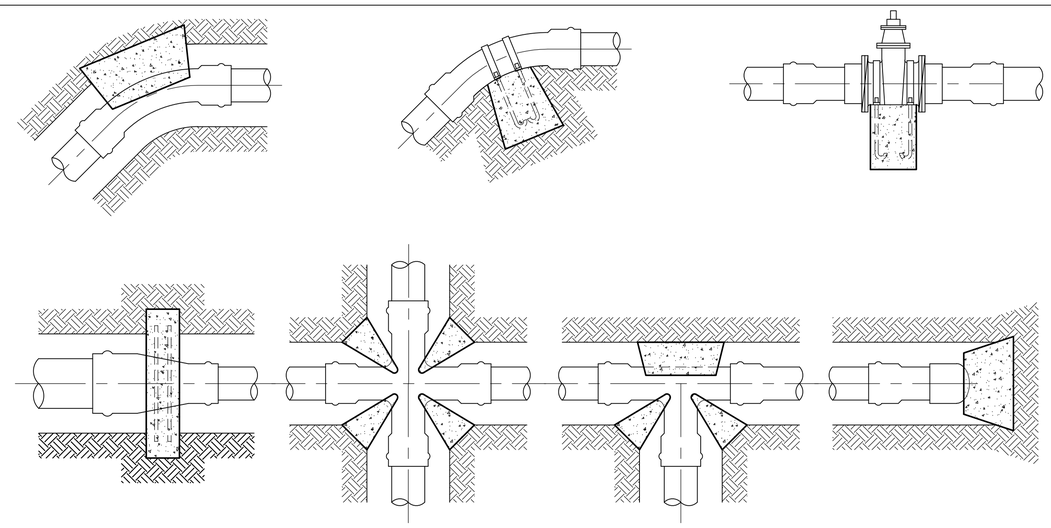
DATE :	DESIGN NO. :	SHEET NO. :
02/10/2023	18664-02	2 OF 4

AUTOCAD FILENAME: Catalina Stage 39 Design Rev 11.dwg



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

NOTE:
MINIMUM BEARING AREA TO BE IN ACCORDANCE WITH TYPE OF FITTING AND SOIL TYPE AS PER PIPE MANUFACTURERS RECOMMENDATIONS

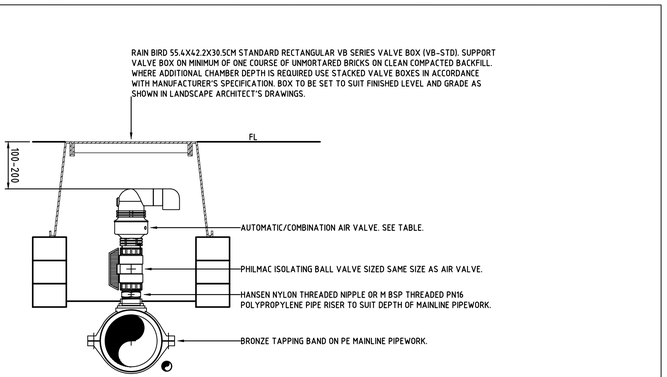
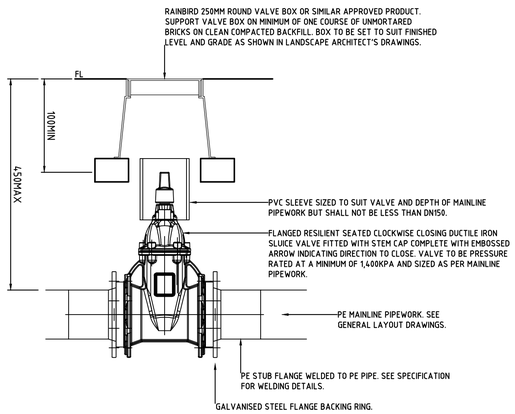


TABLE OF AIR VALVES	
MAINLINE SIZE (DN)†	AIR VALVE‡
LESS THAN 63	PN16 DN20 COMBINATION AIR VALVE
75-140	PN16 DN25 COMBINATION AIR VALVE
150-200	PN16 DN50 COMBINATION AIR VALVE
† SEE GENERAL LAYOUT DRAWING(S). ‡ SEE ALSO SPECIFICATION.	

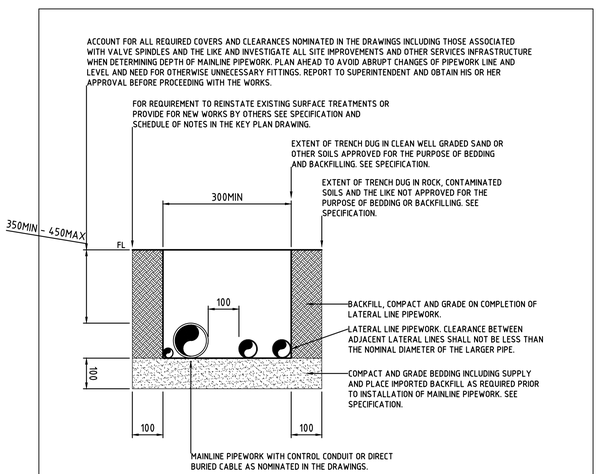
TYPICAL AIR VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL MAINLINE ISOLATION VALVE INSTALLATION

NOT TO SCALE



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 39 Design (Rev 1).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	02/10/2023	ISSUED FOR APPROVAL	R.V	J.S
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0	26/02/2024	ISSUED FOR CONSTRUCTION	P.K	J.S
1	29/02/2024	REVISED MAINLINE TO SUIT CONNECTION TO STAGE 36 BORE	J.S	

REV	DATE	DESCRIPTION	DWN	CKD

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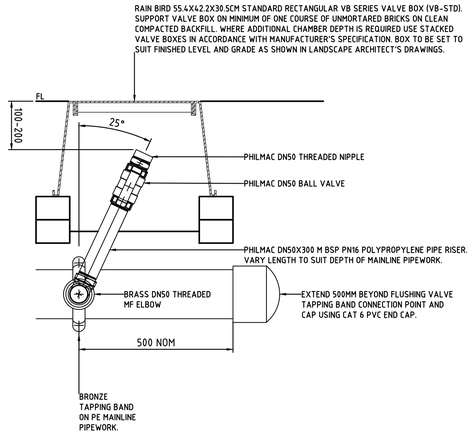
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

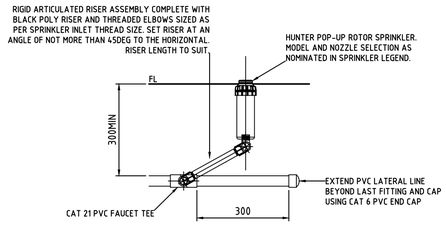
PROJECT :
CATALINA GREEN STAGE 39
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
02/10/2023	18664-03	3 OF 4



TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

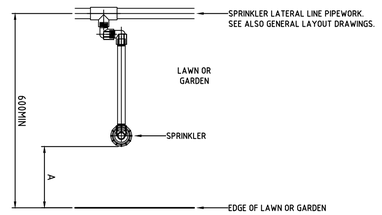
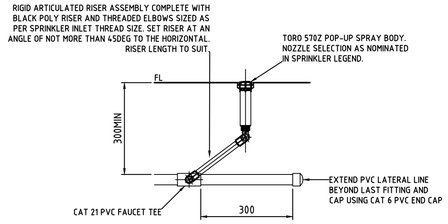


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	
† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.			

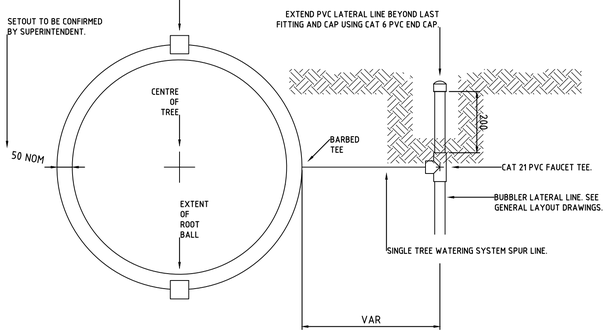
SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE



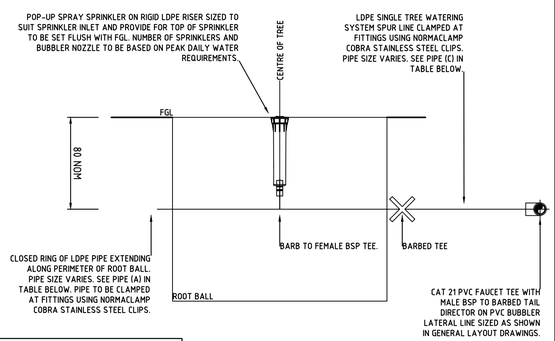


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
–	–	0-6	–	DN19	–	DN19
–	–	6-15	–	DN19	–	DN25
–	–	15-30	–	DN25	–	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 39 Design (Rev 11).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	02/10/2023	ISSUED FOR APPROVAL	R.V	J.S
B	31/10/2023	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S
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REV	DATE	DESCRIPTION	DWN	CKD

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SCALE :	1 : NTS @ A1 SHEET
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DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :

EMERGE ASSOCIATES

PROJECT :

CATALINA GREEN STAGE 39
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
02/10/2023	18664-04	4 OF 4



AUTOCAD FILENAME: Catalina Stage 42 Design (Rev 11).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	17/06/2024	ISSUED FOR APPROVAL	I.B	J.S
B	22/07/2024	REVISED THE IRRIGATION DESIGN WITH A NEW BORE CUBICLE AND ADDITIONAL MAINLINE	J.S	
C	21/08/2024	REVISED IRRIGATION DESIGN AS PER CLIENT'S COMMENT	J.S	
D	26/08/2024	REVISED IRRIGATION DESIGN AS PER NEW LANDSCAPING PLAN	P.K	J.S
E	16/10/2024	REVISED IRRIGATION DESIGN AS PER NEW LANDSCAPING PLAN	P.K	J.S

REV	DATE	DESCRIPTION	DWN	CKD
0	02/12/2024	ISSUED FOR CONSTRUCTION	I.B	J.S
1	11/04/2025	UPDATED IRRIGATION DESIGN TO NEW LANDSCAPE BASE, REISSUED FOR CONSTRUCTION	I.B	J.S

N

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NewGround DESIGN SERVICES

SCALE :	1 :1000 @ A1 SHEET
DESIGNER :	I.BOYES
DRAWN BY :	I.BOYES
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

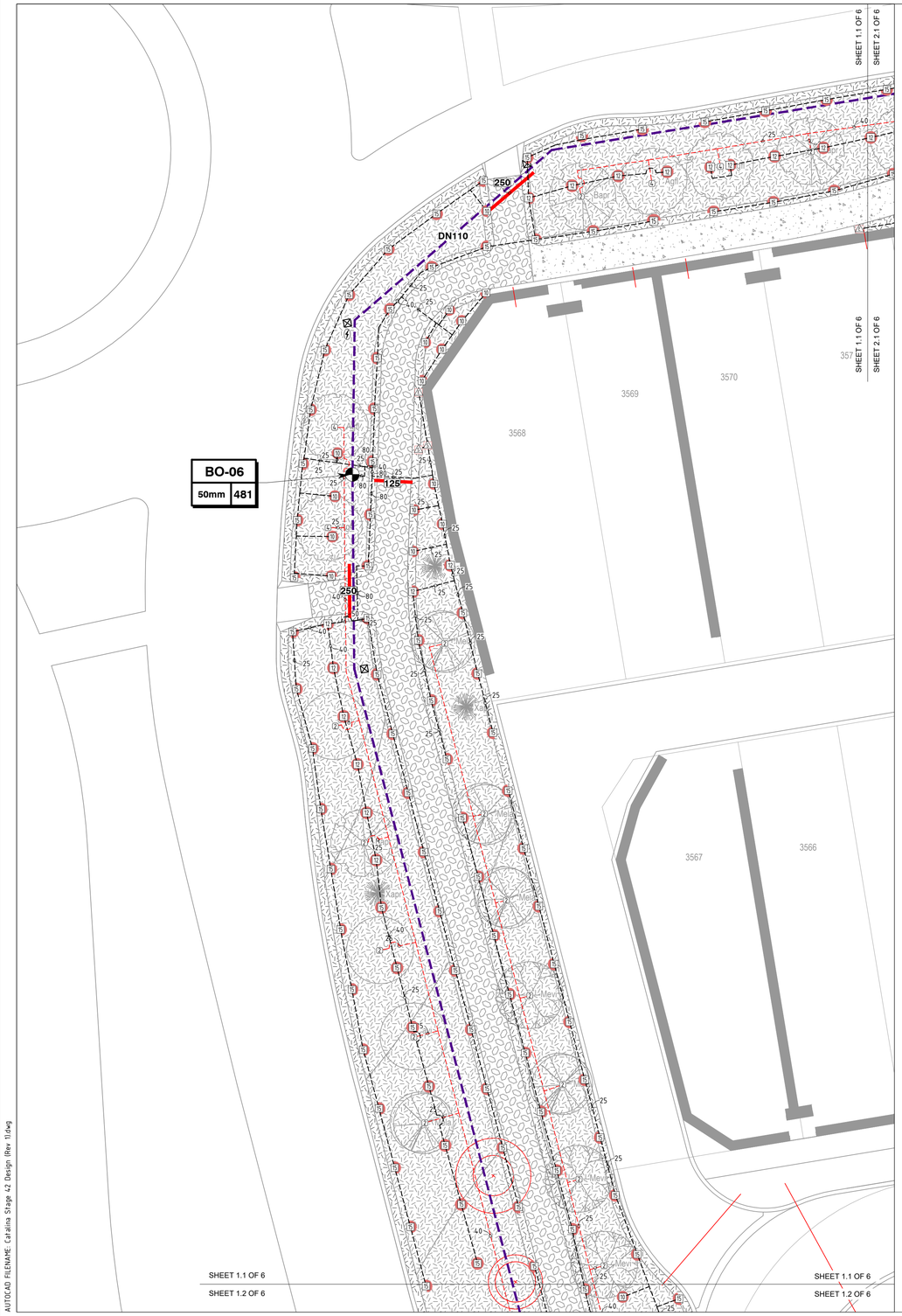
CLIENT :

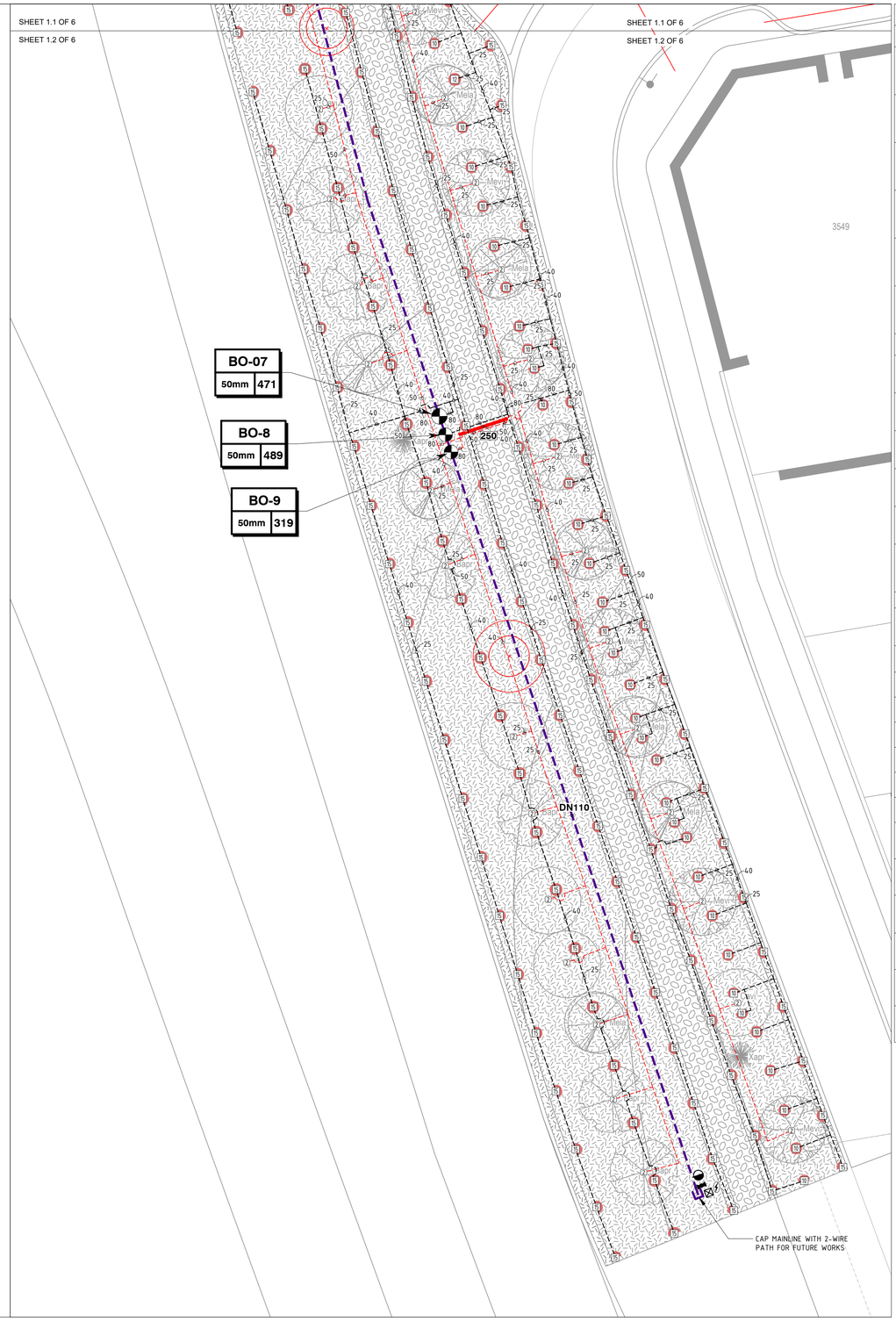
EMERGE ASSOCIATES

PROJECT :

CATALINA
STAGE 42
IRRIGATION WORKS- COVERSHEET

DATE :	DESIGN NO. :	SHEET NO. :
17/06/2024	18789-00	COVERSHEET





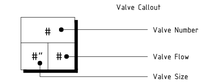
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/ MODEL/DESCRIPTION	kPa
10 Q 10 T 10 H 10 TT 10 TQ 10 F	TORO 570Z-12LP-PC 10 Series 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
12 Q 12 T 12 H 12 TT 12 TQ 12 F	TORO 570Z-12LP-PC 12 Series 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
15 Q 15 T 15 H 15 TT 15 TQ 15 F	TORO 570Z-12LP-PC 15 Series 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
2SST 4SST 4SST 4S-SST 3SST	TORO 570Z-12LP-PC Shrub Strip 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
②	2 x TORO FB-100 PC FLOOD BUBBLERS ON A TORO 570Z-6P WITH BLUE FLEX & EZY ELLS	200
④	4 x TORO FB-200A PC FLOOD BUBBLERS ON A TORO 570Z-6P WITH BLUE FLEX & EZY ELLS	200

SYMBOL	MANUFACTURER/ MODEL/DESCRIPTION	kPa	FL. l/min	RAD. m
4.5 □	HUNTER I-20-06-LA-SS 4.5LA 150mm ROTOR, S/S RISER & 300mm X 20mm ARTIC RISER	350	16.6	10.7
△	HUNTER I-20-06-SR 3.0SR 150mm ROTOR, S/S RISER, & 300mm X 20mm ARTIC RISER	350	11.2	11.2
③.0	HUNTER I-20-06-SS 3.0 150mm ROTOR, S/S RISER & 300mm X 20mm ARTIC RISER	350	12.3	11.9
④.0	HUNTER I-20-06-SS 4.0 150mm ROTOR, S/S RISER & 300mm X 20mm ARTIC RISER	350	16.2	12.2
⑤.0	HUNTER I-20-06-SS 5.0 150mm ROTOR, S/S RISER & 300mm X 20mm ARTIC RISER	350	20.6	12.8
2.5 ○	HUNTER I-20-12 2.5 STD. NOZZLE 300mm POPUP ROTOR ON 300mm X 20mm ARTIC RISER	350	10.7	9.7

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	BERMAD 200 SERIES DATAVALVE (SIZE AS SHOWN)
	MAINLINE ISOLATION VALVE (SAME SIZE AS MAIN)
	50mm MAINLINE AIR RELEASE VALVE LOCATE AT HIGH POINTS ON MAINLINE
	50mm MAINLINE FLUSHING VALVE
	SIGNAL SD-SL LIGHTNING SURGE PROTECTION ASSEMBLEY
	P2 CABLE PIT
	EXISTING P2 CABLE PIT
C	NEW BORE PUMP CUBICLE WITH A SIGNAL SDS-100
	uPVC SWJ CLASS 9 LATERAL (SIZE AS SHOWN)
	TREE LATERAL (SIZED AS SHOWN)
	DN110 PN12.5 PE100 MDPE (LILAC COEX, LILAC STRIPE OR BLACK WITH LILAC TAPE) POLY MAINLINE
	DN110 PN 12.5 PE100 MDPE POLY MAINLINE BLUE STRIPE
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE
	PIPE SLEEVE PE100 PN 10 (SIZE AS SHOWN)

Valve Callout



0 2 4 6 8 10m

SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Stage 42 Design (Rev 11).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	17/06/2024	ISSUED FOR APPROVAL	I.B	J.S
B	22/07/2024	REVISED THE IRRIGATION DESIGN WITH A NEW BORE CUBICLE AND ADDITIONAL MAINLINE	J.S	
C	21/08/2024	REVISED IRRIGATION DESIGN AS PER CLIENT'S COMMENT	J.S	
D	26/08/2024	REVISED IRRIGATION DESIGN AS PER NEW LANDSCAPING PLAN	P.K	J.S
E	16/10/2024	REVISED IRRIGATION DESIGN AS PER NEW LANDSCAPING PLAN	P.K	J.S

REV	DATE	DESCRIPTION	DWN	CKD
0	02/12/2024	ISSUED FOR CONSTRUCTION	I.B	J.S
1	11/04/2025	UPDATED IRRIGATION DESIGN TO NEW LANDSCAPE BASE, REISSUED FOR CONSTRUCTION	I.B	J.S

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DRAWN BY :	I.BOYES
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

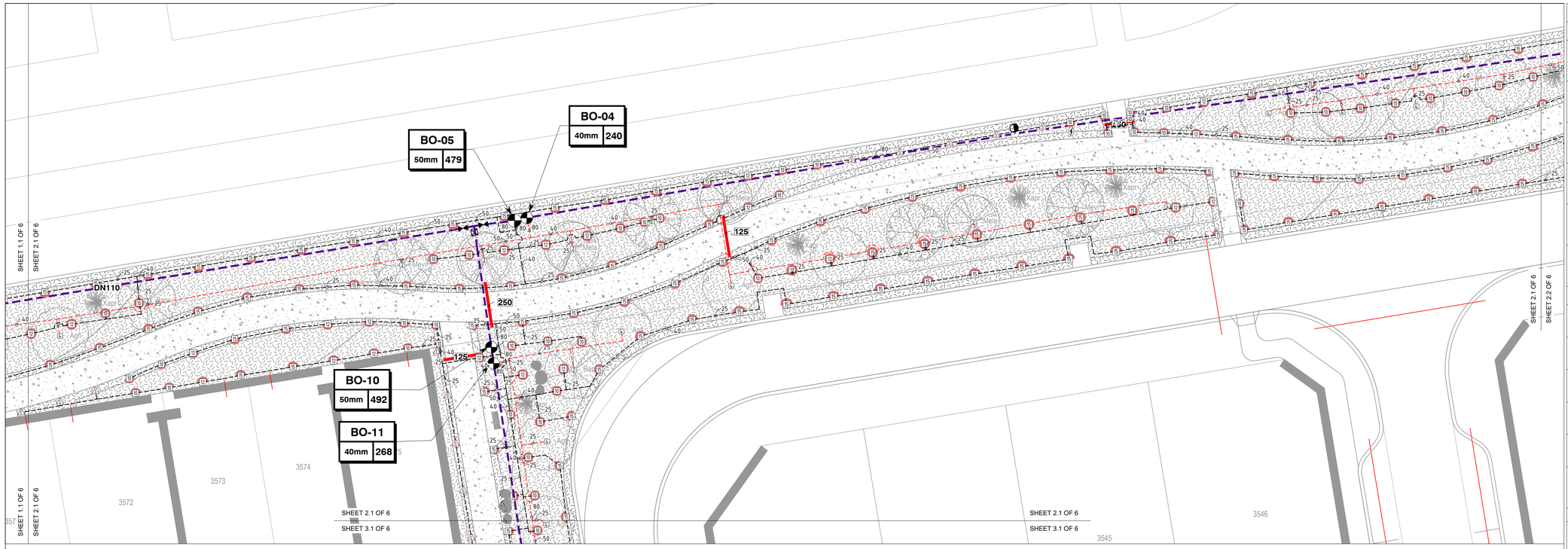
CLIENT :

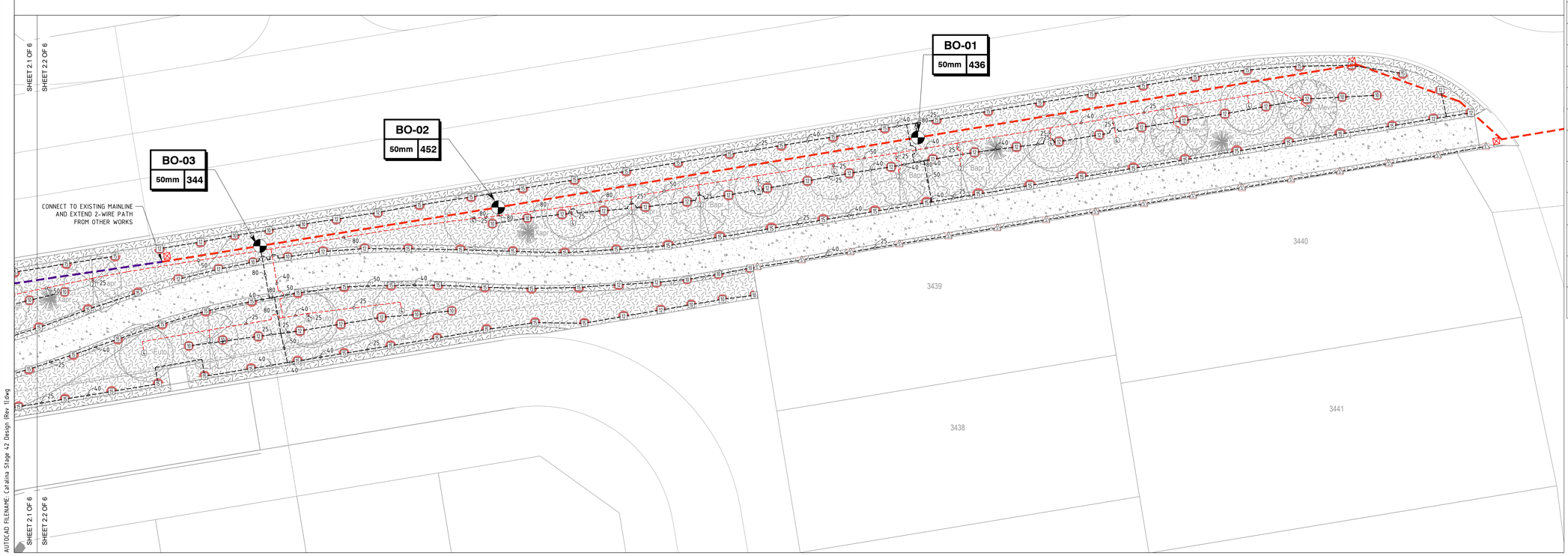
EMERGE ASSOCIATES

PROJECT :

CATALINA
STAGE 42
IRRIGATION WORKS

DATE :	DESIGN NO. :	SHEET NO. :
17/06/2024	18789-01	1 OF 6





IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/ MODEL/DESCRIPTION	kPa
10 Q, 10 T, 10 H, 10 TT, 10 TQ, 10 F	TORO 570Z-12LP-PC 10 Series 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
12 Q, 12 T, 12 H, 12 TT, 12 TQ, 12 F	TORO 570Z-12LP-PC 12 Series 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
15 Q, 15 T, 15 H, 15 TT, 15 TQ, 15 F	TORO 570Z-12LP-PC 15 Series 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
2SST, 4SST, 4SST, 4S-SST, 2SST	TORO 570Z-12LP-PC Shrub Strip 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
②	2 x TORO FB-100 PC FLOOD BUBBLERS ON A TORO 570Z-6P WITH BLUE FLEX & EZY ELLS	200
④	4 x TORO FB-200A PC FLOOD BUBBLERS ON A TORO 570Z-6P WITH BLUE FLEX & EZY ELLS	200

SYMBOL	MANUFACTURER/ MODEL/DESCRIPTION	kPa	FL. l/min	RAD. m
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③.0	HUNTER I-20-06-SS 3.0 150mm ROTOR, S/S RISER & 300mm X 20mm ARTIC RISER	350	12.3	11.9
④.0	HUNTER I-20-06-SS 4.0 150mm ROTOR, S/S RISER & 300mm X 20mm ARTIC RISER	350	16.2	12.2
⑤.0	HUNTER I-20-06-SS 5.0 150mm ROTOR, S/S RISER & 300mm X 20mm ARTIC RISER	350	20.6	12.8
2.5 ○	HUNTER I-20-12 2.5 STD. NOZZLE 300mm POPUP ROTOR ON 300mm X 20mm ARTIC RISER	350	10.7	9.7

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	BERMAD 200 SERIES DATAVALVE (SIZE AS SHOWN)
	MAINLINE ISOLATION VALVE (SAME SIZE AS MAIN)
	50mm MAINLINE AIR RELEASE VALVE LOCATE AT HIGH POINTS ON MAINLINE
	50mm MAINLINE FLUSHING VALVE
	SIGNAL SD-SL LIGHTNING SURGE PROTECTION ASSEMBLEY
	P2 CABLE PIT
	EXISTING P2 CABLE PIT
C	NEW BORE PUMP CUBICLE WITH A SIGNAL SDS-100
	uPVC SWJ CLASS 9 LATERAL (SIZE AS SHOWN)
	TREE LATERAL (SIZED AS SHOWN)
	DN110 PN12.5 PE100 MDPE (LILAC COEX, LILAC STRIPE OR BLACK WITH LILAC TAPE) POLY MAINLINE
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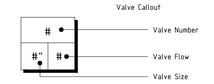
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE
	PIPE SLEEVE PE100 PN 10 (SIZE AS SHOWN)

Valve Callout



0 2 4 6 8 10m

SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Stage 42 Design (Rev 11).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	17/06/2024	ISSUED FOR APPROVAL	I.B	J.S
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REV	DATE	DESCRIPTION	DWN	CKD
0	02/12/2024	ISSUED FOR CONSTRUCTION	I.B	J.S
1	11/04/2025	UPDATED IRRIGATION DESIGN TO NEW LANDSCAPE BASE, REISSUED FOR CONSTRUCTION	I.B	J.S

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DESIGNER :	I.BOYES
DRAWN BY :	I.BOYES
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

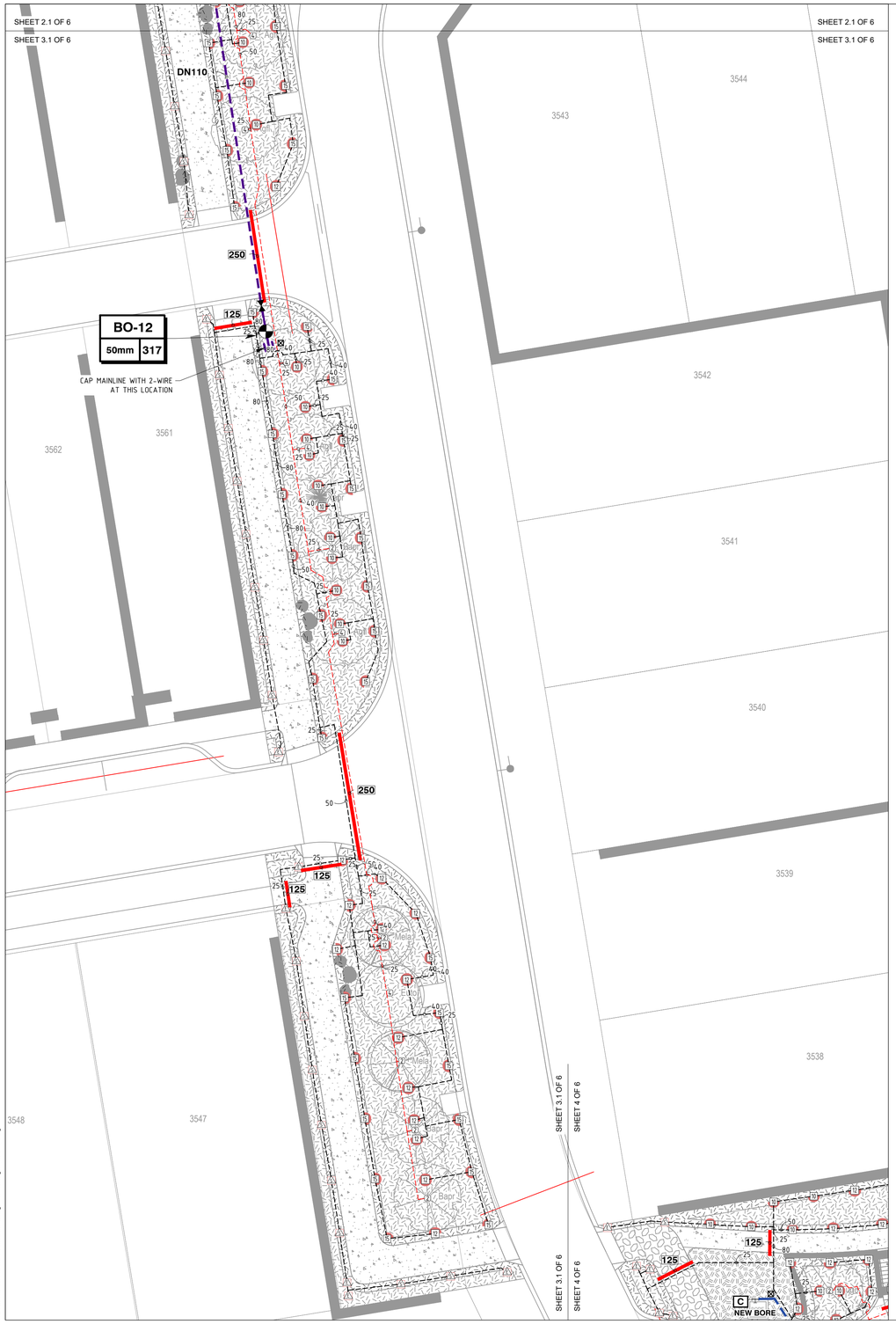
CLIENT :

EMERGE ASSOCIATES

PROJECT :

CATALINA
STAGE 42
IRRIGATION WORKS

DATE :	DESIGN NO. :	SHEET NO. :
17/06/2024	18789-02	2 OF 6





IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/ MODEL/DESCRIPTION	kPa
Q T H TT TQ F	TORO 570Z-12LP-PC 10 Series 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
Q T H TT TQ F	TORO 570Z-12LP-PC 12 Series 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
Q T H TT TQ F	TORO 570Z-12LP-PC 15 Series 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
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2	2 x TORO FB-100 PC FLOOD BUBBLERS ON A TORO 570Z-6P WITH BLUE FLEX & EZY ELLS	200
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SYMBOL	MANUFACTURER/ MODEL/DESCRIPTION	kPa	FL. l/min	RAD. m
4.5	HUNTER I-20-06-LA-SS 4.5LA 150mm ROTOR, S/S RISER & 300mm X 20mm ARTIC RISER	350	16.6	10.7
	HUNTER I-20-06-SR 3.0SR 150mm ROTOR, S/S RISER, & 300mm X 20mm ARTIC RISER	350	11.2	11.2
3.0	HUNTER I-20-06-SS 3.0 150mm ROTOR, S/S RISER & 300mm X 20mm ARTIC RISER	350	12.3	11.9
4.0	HUNTER I-20-06-SS 4.0 150mm ROTOR, S/S RISER & 300mm X 20mm ARTIC RISER	350	16.2	12.2
5.0	HUNTER I-20-06-SS 5.0 150mm ROTOR, S/S RISER & 300mm X 20mm ARTIC RISER	350	20.6	12.8
2.5	HUNTER I-20-12 2.5 STD. NOZZLE 300mm POPUP ROTOR ON 300mm X 20mm ARTIC RISER	350	10.7	9.7

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	BERMAD 200 SERIES DATAVALVE (SIZE AS SHOWN)
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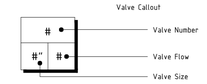
Valve Callout



0 2 4 6 8 10m

SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Stage 42 Design (Rev 11).dwg

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FLOW (LPS) :	
PRESSURE (KPA) :	

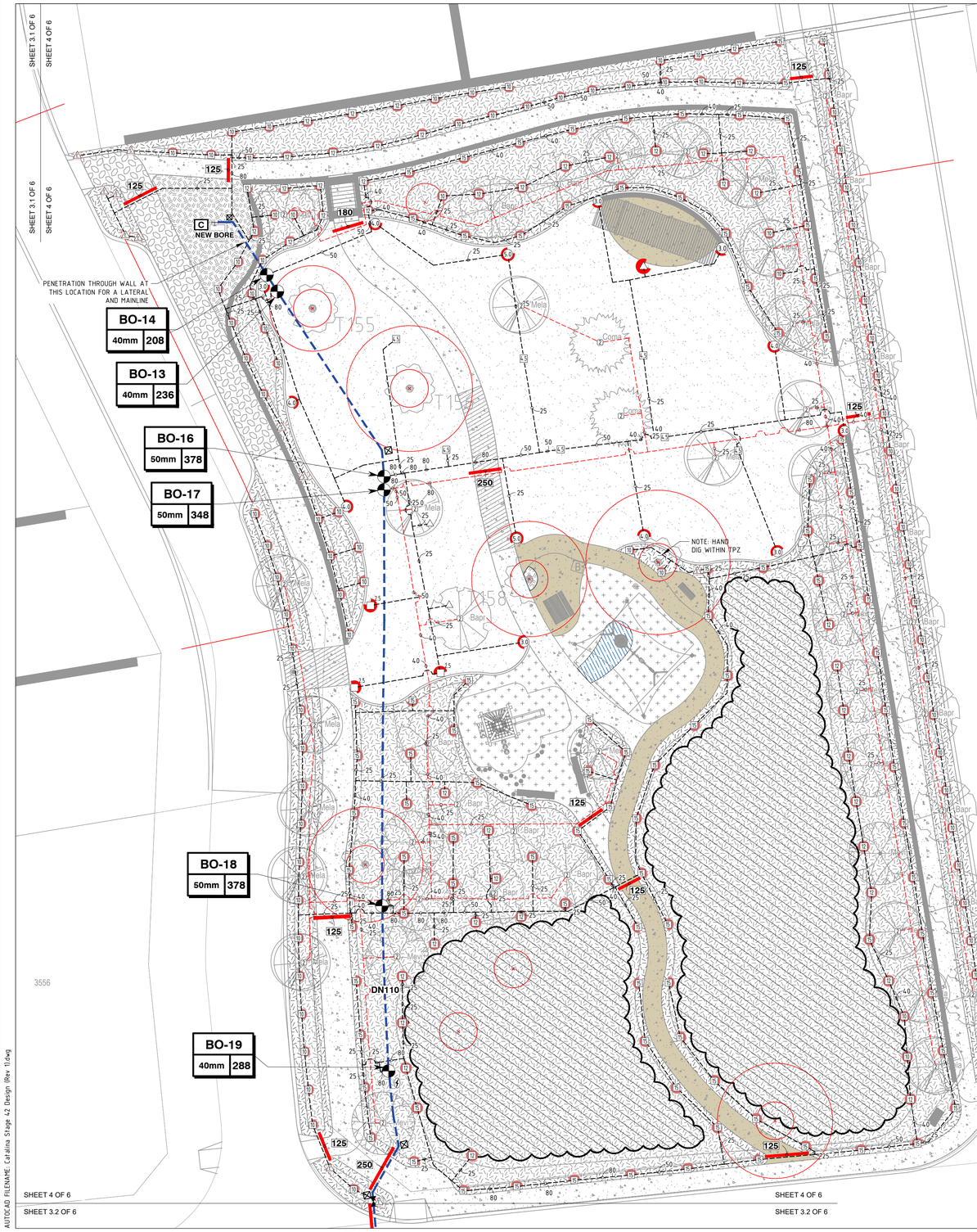
CLIENT :

EMERGE ASSOCIATES

PROJECT :

CATALINA
STAGE 42
IRRIGATION WORKS

DATE :	DESIGN NO. :	SHEET NO. :
17/06/2024	18789-03	3 OF 6



3405

VALVE SCHEDULE

STATION NUMBER	STATION l/min	PRECIP mm/hr	RUNTIME Mins	SIZE	TYPE	VALVE NUMBER	VALVE l/min	PRECIP mm/hr	DECODER NUMBER
1	377.6	16.0	30.0	50mm	Turf Rotor	BO-16	377.6	16.0	
2	436.0	32.0	15.0	50mm	Shrub Spray	BO-01	436.0	32.0	
3	344.4	32.0	15.0	50mm	Shrub Spray	BO-03	344.4	32.0	
4	478.6	32.0	15.0	50mm	Shrub Spray	BO-05	478.6	32.0	
5	481.3	32.0	15.0	50mm	Shrub Spray	BO-06	481.3	32.0	
6	471.3	32.0	15.0	50mm	Shrub Spray	BO-07	471.3	32.0	
7	488.6	32.0	15.0	50mm	Shrub Spray	BO-8	488.6	32.0	
8	492.4	32.0	15.0	50mm	Shrub Spray	BO-10	492.4	32.0	
9	316.9	32.0	15.0	50mm	Shrub Spray	BO-12	316.9	32.0	
10	236.0	32.0	15.0	40mm	Shrub Spray	BO-13	236.0	32.0	
11	207.8	32.0	15.0	40mm	Shrub Spray	BO-14	207.8	32.0	
12	377.9	32.0	15.0	50mm	Shrub Spray	BO-18	377.9	32.0	
13	287.5	32.0	15.0	40mm	Shrub Spray	BO-19	287.5	32.0	
14	325.6	32.0	15.0	50mm	Shrub Spray	BO-20	325.6	32.0	
15	451.6	-	15.0	50mm	Bubbler	BO-02	451.6	-	
16	240.2	-	15.0	40mm	Bubbler	BO-04	240.2	-	
17	319.1	-	15.0	50mm	Bubbler	BO-9	319.1	-	
18	347.9	-	15.0	50mm	Bubbler	BO-17	347.9	-	
19	367.2	-	15.0	40mm	Bubbler	BO-11	268.2	-	
				40mm	Bubbler	BO-21	99.0	-	

DAILY WATER CYCLE: 5 Hrs 00 Mins, WEEKLY WATER CYCLE: 25 Hrs 00 Mins

NOTE:

1. THESE WORKS ARE TO BE INSTALLED TO MEET THE CITY OF WANNEROO IRRIGATION SPECIFICATIONS (JAN 2024 VERSION 1.0).
2. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
4. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
5. ALL SIGNAL 2-WIRE PATHS TO BE INSTALLED IN 40MD GREY CONDUIT.
6. ANY SPRINKLERS INSTALLED WITHIN TURF AREAS ON ROAD VERGES ARE TO BE INSTALLED WITH SQUARE CONCRETE SURROUNDS.
7. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SIGNAL SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
8. IF THE LILAC/PURPLE STRIPE OR PLAIN BLACK MAINLINE PIPEWORK IS UNAVAILABLE USE THE EQUIVALENT SIZED PN12.5 PE100 BLUE STRIPE. THE MAINLINE IS TO HAVE 150mm WIDE NON-DETECTABLE UNDERGROUND TAPE "WARNING IRRIGATION MAIN BELOW" BLUE WITH BLACK TEXT. INSTALL TAPE 100mm ABOVE THE TOP OF THE MAINLINE PIPEWORK.

3400

3425

3556

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/ MODEL/DESCRIPTION	kPa
10 Q, 10 T, 10 H, 10 TT, 10 TQ, 10 F	TORO 570Z-12LP-PC 10 Series 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
12 Q, 12 T, 12 H, 12 TT, 12 TQ, 12 F	TORO 570Z-12LP-PC 12 Series 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
15 Q, 15 T, 15 H, 15 TT, 15 TQ, 15 F	TORO 570Z-12LP-PC 15 Series 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
2SST, 4EST, 4TST, 4SST, 4S-SST, 2SST	TORO 570Z-12LP-PC Shrub Strip 300mm POP-UP, MPR SPRAY NOZZLE. ON 300mm X 15mm POLY ARTIC RISER	200
②	2 x TORO FB-100 PC FLOOD BUBBLERS ON A TORO 570Z-6P WITH BLUE FLEX & EZY ELLS	200
④	4 x TORO FB-200A PC FLOOD BUBBLERS ON A TORO 570Z-6P WITH BLUE FLEX & EZY ELLS	200

SYMBOL	MANUFACTURER/ MODEL/DESCRIPTION	kPa	FL. l/min	RAD. m
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2.5 ○	HUNTER I-20-12 2.5 STD. NOZZLE 300mm POPUP ROTOR ON 300mm X 20mm ARTIC RISER	350	10.7	9.7

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
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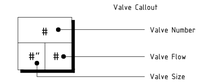
	MAINLINE ISOLATION VALVE (SAME SIZE AS MAIN)
	50mm MAINLINE AIR RELEASE VALVE LOCATE AT HIGH POINTS ON MAINLINE
	50mm MAINLINE FLUSHING VALVE
	SIGNAL SD-SL LIGHTNING SURGE PROTECTION ASSEMBLEY
	P2 CABLE PIT
	EXISTING P2 CABLE PIT
C	NEW BORE PUMP CUBICLE WITH A SIGNAL SDS-100
	uPVC SWJ CLASS 9 LATERAL (SIZE AS SHOWN)
	TREE LATERAL (SIZED AS SHOWN)
	DN110 PN12.5 PE100 MDPE (LILAC COEX, LILAC STRIPE OR BLACK WITH LILAC TAPE) POLY MAINLINE
	DN110 PN 12.5 PE100 MDPE POLY MAINLINE BLUE STRIPE
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE
	PIPE SLEEVE PE100 PN 10 (SIZE AS SHOWN)

Valve Callout



0 2 4 6 8 10m

SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	17/06/2024	ISSUED FOR APPROVAL	I.B	J.S
B	22/07/2024	REVISED THE IRRIGATION DESIGN WITH A NEW BORE CUBICLE AND ADDITIONAL MAINLINE	J.S	
C	21/08/2024	REVISED IRRIGATION DESIGN AS PER CLIENT'S COMMENT	J.S	
D	26/08/2024	REVISED IRRIGATION DESIGN AS PER NEW LANDSCAPING PLAN	P.K	J.S
E	16/10/2024	REVISED IRRIGATION DESIGN AS PER NEW LANDSCAPING PLAN	P.K	J.S

REV	DATE	DESCRIPTION	DWN	CKD
0	02/12/2024	ISSUED FOR CONSTRUCTION	I.B	J.S
1	11/04/2025	UPDATED IRRIGATION DESIGN TO NEW LANDSCAPE BASE, REISSUED FOR CONSTRUCTION	I.B	J.S

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SCALE :	1 :200 @ A1 SHEET
DESIGNER :	I.BOYES
DRAWN BY :	I.BOYES
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :

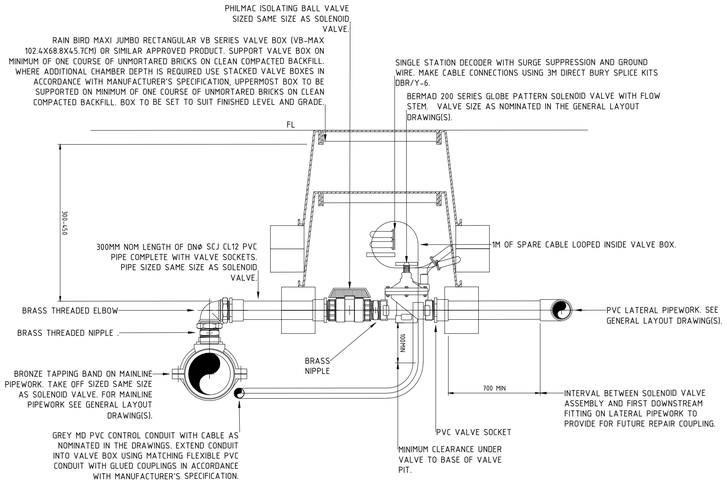
EMERGE ASSOCIATES

PROJECT :

CATALINA
STAGE 42
IRRIGATION WORKS

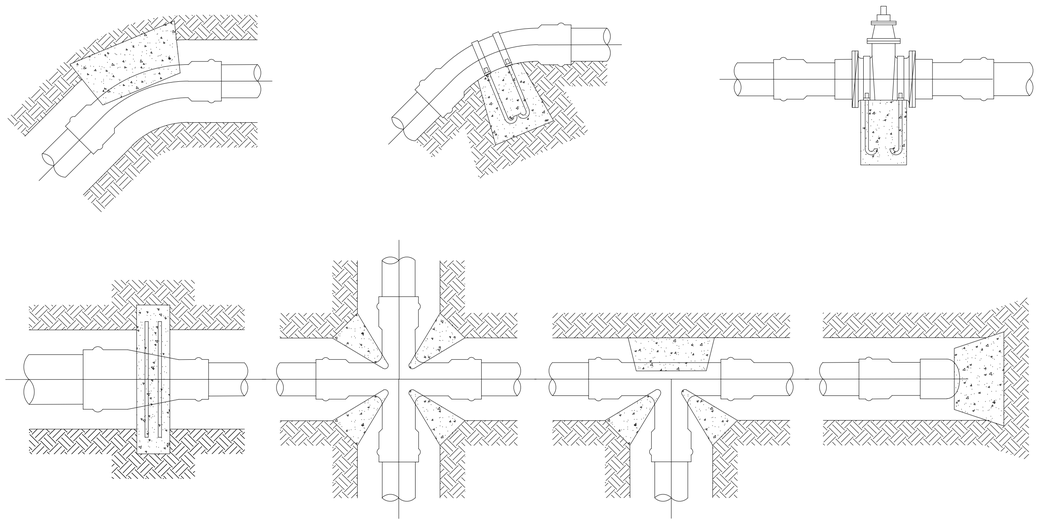
DATE :	DESIGN NO. :	SHEET NO. :
17/06/2024	18789-04	4 OF 6

AUTOCAD FILENAME: Catalina Stage 42 Design (Rev 11).dwg



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

NOTE:
MINIMUM BEARING AREA TO BE IN ACCORDANCE WITH TYPE OF FITTING AND SOIL TYPE AS PER PIPE MANUFACTURERS RECOMMENDATIONS

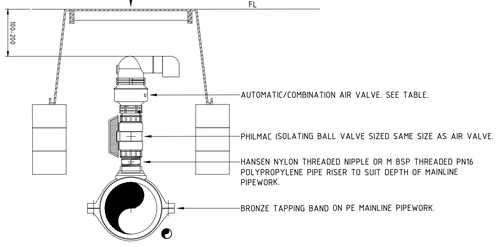
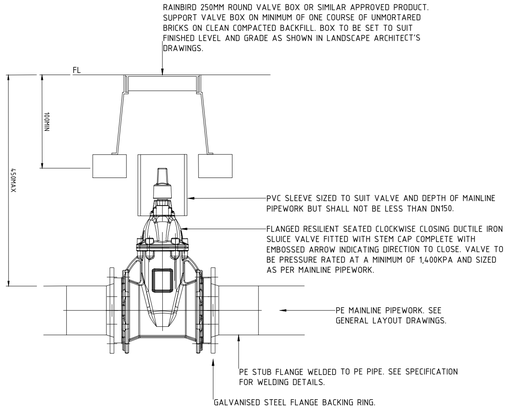


TABLE OF AIR VALVES	
MAINLINE SIZE (DN)†	AIR VALVE‡
LESS THAN 63	PN16 DN20 COMBINATION AIR VALVE
75-140	PN16 DN25 COMBINATION AIR VALVE
150-200	PN16 DN50 COMBINATION AIR VALVE
† SEE GENERAL LAYOUT DRAWING(S). ‡ SEE ALSO SPECIFICATION.	

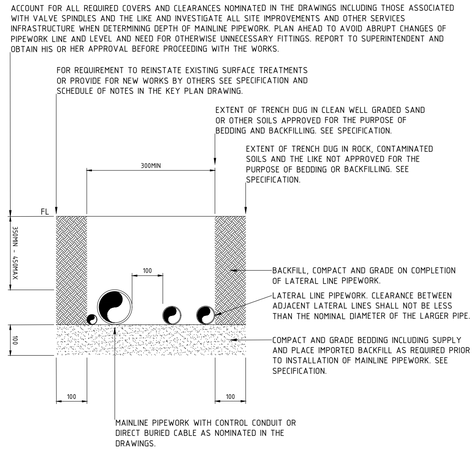
TYPICAL AIR VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL MAINLINE ISOLATION VALVE INSTALLATION

NOT TO SCALE



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 42 Design (Rev 1).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	17/06/2024	ISSUED FOR APPROVAL	I.B	J.S
B	22/07/2024	REVISED THE IRRIGATION DESIGN WITH A NEW BORE CUBICLE AND ADDITIONAL MAINLINE	J.S	
C	21/08/2024	REVISED IRRIGATION DESIGN AS PER CLIENT'S COMMENT	J.S	
D	26/08/2024	REVISED IRRIGATION DESIGN AS PER NEW LANDSCAPING PLAN	P.K	J.S
E	16/10/2024	REVISED IRRIGATION DESIGN AS PER NEW LANDSCAPING PLAN	P.K	J.S

REV	DATE	DESCRIPTION	DWN	CKD
0	02/12/2024	ISSUED FOR CONSTRUCTION	I.B	J.S
1	11/04/2025	UPDATED IRRIGATION DESIGN TO NEW LANDSCAPE BASE, REISSUED FOR CONSTRUCTION	I.B	J.S

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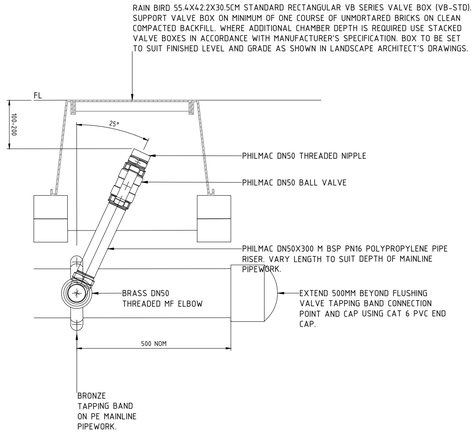
SCALE :	1 :NTS
DESIGNER :	I.BOYES
DRAWN BY :	I.BOYES
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

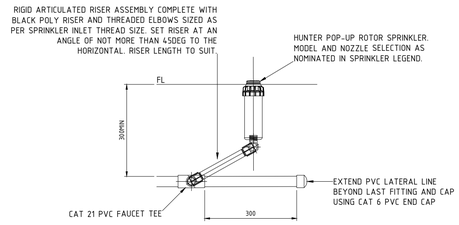
PROJECT :
CATALINA
STAGE 42
IRRIGATION WORKS-TYPICAL DETAILS

DATE :	DESIGN NO. :	SHEET NO. :
17/06/2024	18789-05	5 OF 6



TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

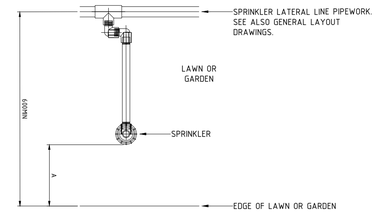
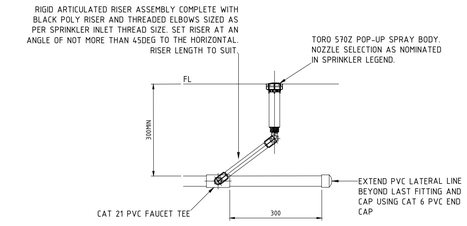


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	
† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.			

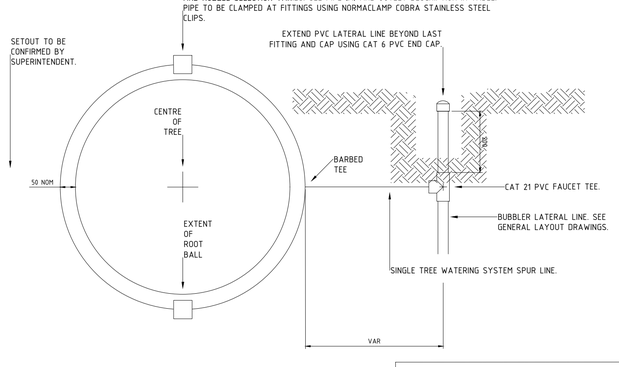
SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE



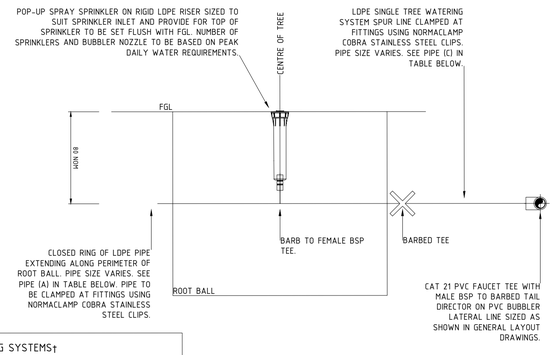


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
–	–	0-6	–	DN19	–	DN19
–	–	6-15	–	DN19	–	DN25
–	–	15-30	–	DN25	–	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 42 Design (Rev 11).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	17/06/2024	ISSUED FOR APPROVAL	I.B	J.S
B	22/07/2024	REVISED THE IRRIGATION DESIGN WITH A NEW BORE CUBICLE AND ADDITIONAL MAINLINE	J.S	
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REV	DATE	DESCRIPTION	DWN	CKD
0	02/12/2024	ISSUED FOR CONSTRUCTION	I.B	J.S
1	11/04/2025	UPDATED IRRIGATION DESIGN TO NEW LANDSCAPE BASE, REISSUED FOR CONSTRUCTION	I.B	J.S

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NewGround DESIGN SERVICES

SCALE :	1 :NTS
DESIGNER :	I.BOYES
DRAWN BY :	I.BOYES
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

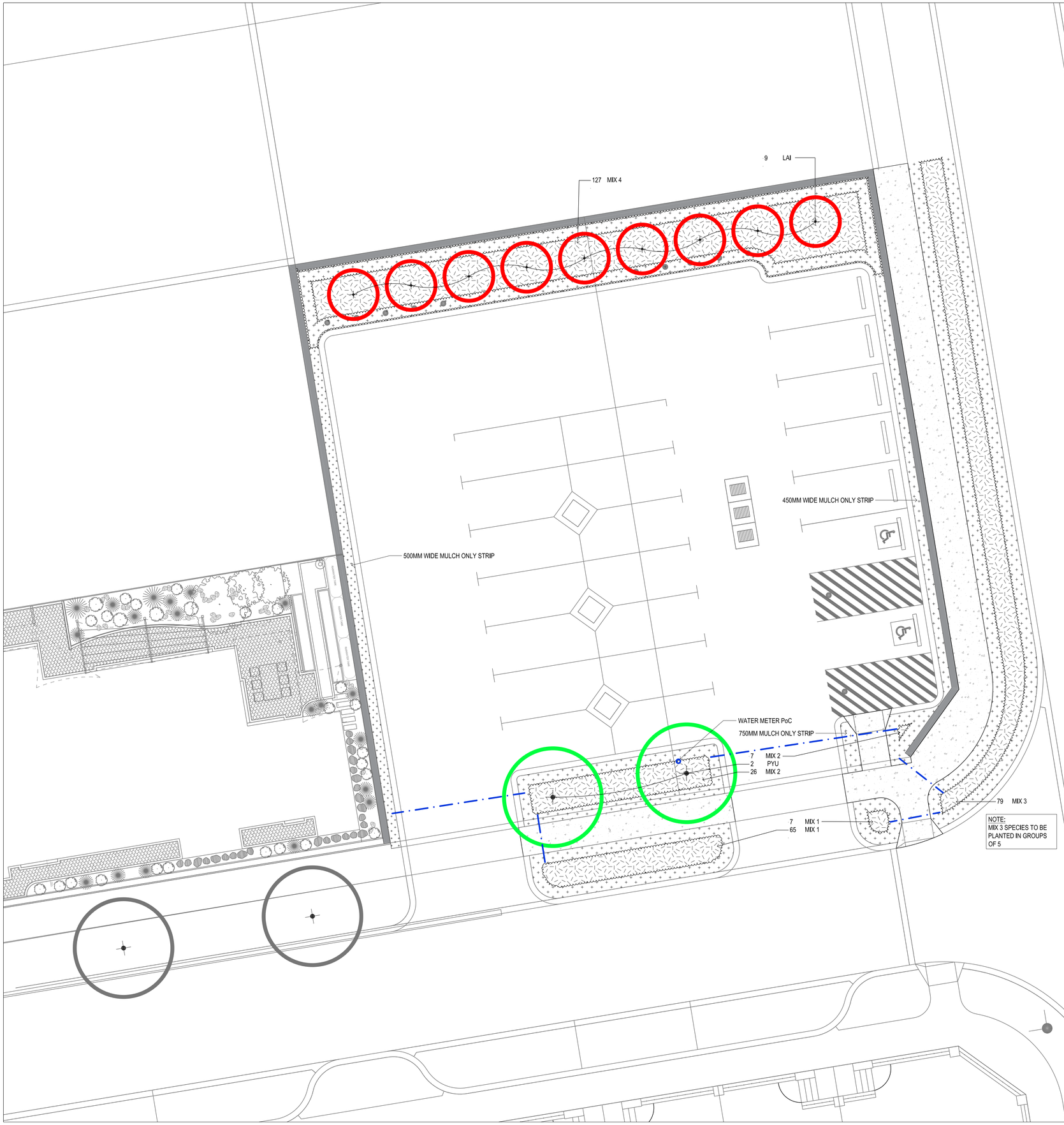
CLIENT :

EMERGE ASSOCIATES

PROJECT :

CATALINA
STAGE 42
IRRIGATION WORKS-TYPICAL DETAILS

DATE :	DESIGN NO. :	SHEET NO. :
17/06/2024	18789-06	6 OF 6



NOTE:
MIX 3 SPECIES TO BE PLANTED IN GROUPS OF 5

LEGEND

- Pyrus ussuriensis
- Lagerstroemia indica
- IRRIGATED MULCH GARDEN BEDS
- MULCH ONLY
- 150MM IRRIGATION SLEEVE PVC PN10

SHRUBS / TUBESTOCK

CODE	SP CODE	SPECIES	SIZE	DENSITY	COUNT
MIX 1	GGI	*Grevillea Gin Gin Gem*	130mm	6/m²	72
MIX 2	CGL	*Casuarina glauca Cousin IT*	130mm	2/m²	33
MIX 3	GGI	*Grevillea Gin Gin Gem*	130mm	2/m²	20
	CGL	*Casuarina glauca Cousin IT*			20
	ESI	*Eremophila Silver Flame*			20
	GGO	*Grevillea Gold Cluster*			20
MIX 4	CGL	*Casuarina glauca Cousin IT*	130mm	2/m²	21
	GCR	*Grevillea crithmithfolia prostrate*			21
	DRE	*Dianella revoluta*			21
	OAX	*Oleria axiliaris*			21
	WFR	*Westringia fruticosa*			21
	GGO	*Grevillea Gold Cluster*			21
				Total	311

TREES

CODE	SPECIES	SIZE	DENSITY	COUNT
LAI	*Lagerstroemia indica*	100L	As Shown	9
PYU	*Pyrus ussuriensis*	200L		2
			Total	11

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REV	DATE	DWN	DESCRIPTION
A	02.12.2024	LH	ISSUED FOR INFORMATION
B	24.02.2025	LH	ISSUED FOR APPROVAL

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PROJECT:
Catalina Sustainability Demonstration Home Carpark Planting
CLIENT:
Catalina Regional Council
TITLE
Planting Plan

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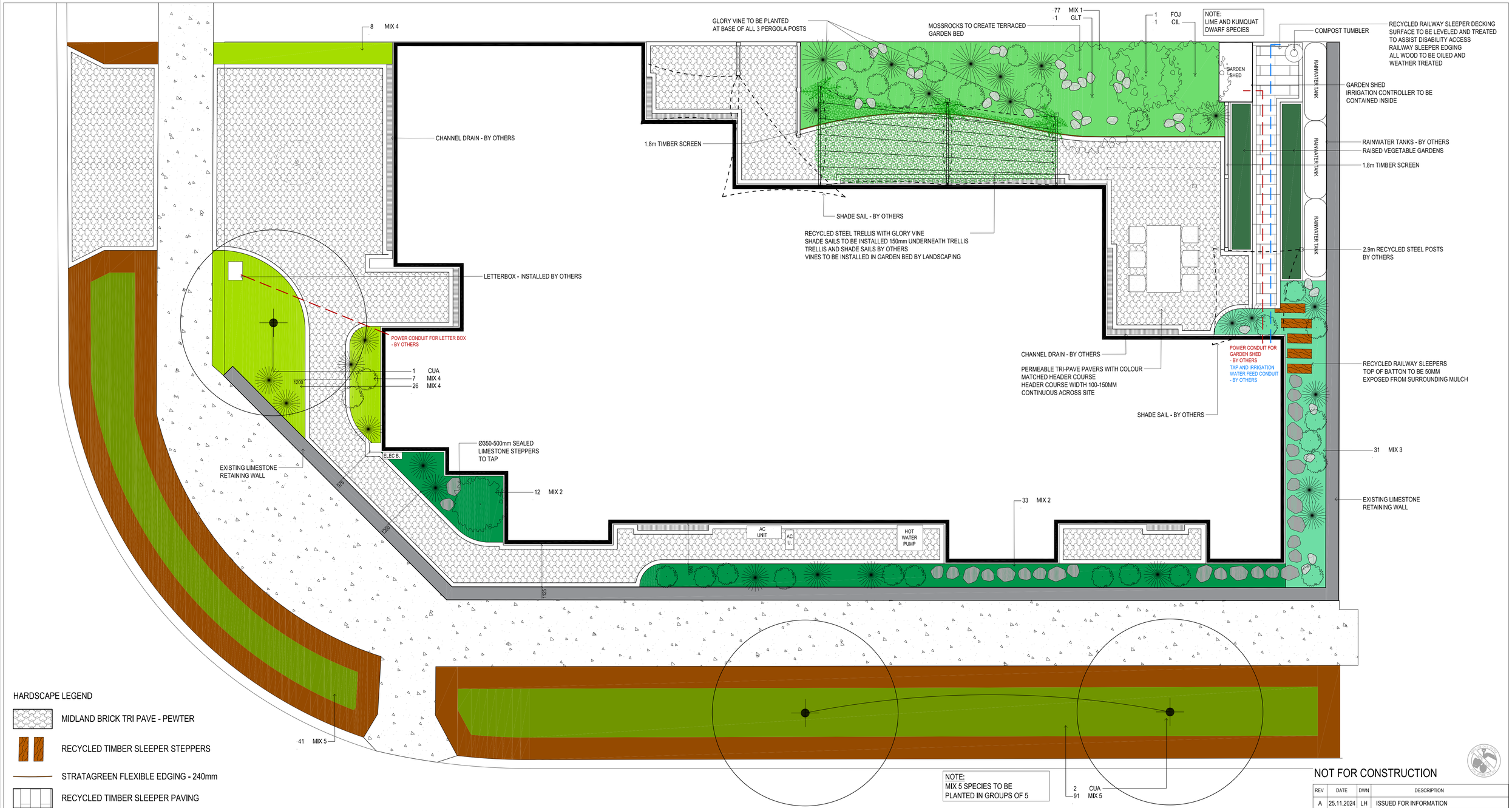
PROJECT NO:	DRAWN BY:	APPROVED BY:	REV:
XXX	LH	NZ	B
SCALE: 1:100	SHEET NO: 501	SHEET SIZE: A1	

1m 0m 1m 2m 5m
SCALE: 1:100



HARDSCAPE LEGEND

- MIDLAND BRICK TRI PAVE - PEWTER
- RECYCLED TIMBER SLEEPER STEPPERS
- STRATAGREEN FLEXIBLE EDGING - 240mm
- RECYCLED TIMBER SLEEPER PAVING
- Ø350-500mm SEALED LIMESTONE STEPPER
- MOSSROCK

PLANTING LEGEND

- MIX 1 - FEATURE PLANTING
- MIX 2 - SHADE TOLERANT PLANTING
- MIX 3 - SUN AND SHADE TOLERANT PLANTING
- MIX 4 - SUN TOLERANT PLANTING
- MIX 5 - VERGE PLANTING
- VEGETABLE GARDEN PLANTING
- MULCH ONLY

TREES				
CODE	SPECIES	SIZE	DENSITY	COUNT
CIL	*Citrus latifolia*	45L	As Shown	1
CUA	*Cupaniopsis anacardioides*	100L	As Shown	3
FOJ	*Fortunella japonica*	45L	As Shown	1
GLT	*Gleditsia triacanthos var. inermis*	200L	As Shown	1
			Total	6

SHRUBS / TUBESTOCK					
CODE	SP CODE	SPECIES	SIZE	DENSITY	COUNT
MIX 1	PGO	*Pittosporum Golf Balls*	130mm	3/m^2	5
	DRE	*Dianella revoluta*			5
	LLI	*Lomandra Lime Tuff*			5
	CGL	*Casuarina glauca*			5
	ASP	*Anigozanthos sp*			5
	WFR	*Westringia fruiticosa Zena*			5
	OLA	*Orthrosanthus Laxus*			5
	ALI	*Acacia Limelight*			6
	SCR	*Scaevola Crassifolia*			6
	TPU	*Thomasia purpurea*			6
	GLA	*Grevillea 'Lady O'*			6
	AAU	*Asplenium australasicum*			6
	OJA	*Ophiopogon japonicus 'mondo grass'*			6
	VHE	*Viola hederacea*			6

MIX 2	LSP	*Liriope sp*	130mm	3/m^2	5
	VHE	*Viola hederacea*			5
	AAU	*Asplenium australasicum*			5
	CNO	*Cliva nobilis*			5
	OJA	*Ophiopogon japonicus 'mondo grass'*			5
	FPU	*Ficus pumila*			5
	AEL	*Aspidistra elatior*			5
	BRO	*Bromeliads*			5
	CCO	*Chlorophytum comosum*			5
MIX 3	PGO	*Pittosporum Golf Balls*	130mm	3/m^2	3
	DRE	*Dianella revoluta*			3
	LLI	*Lomandra Lime Tuff*			3
	LTA	*Lomandra tasmania*			3
	CGL	*Casuarina glauca*			3
	ASP	*Anigozanthos sp*			2
	WFR	*Westringia fruiticosa Zena*			2
	ADE	*Alternanthera dentata*			2
	OLA	*Orthrosanthus Laxus*			2
	ALI	*Acacia Limelight*			2
	SCR	*Scaevola Crassifolia*			2
	TPU	*Thomasia purpurea*			2
	GLA	*Grevillea 'Lady O'*			2

MIX 4	DRE	*Dianella revoluta*	130mm	3/m^2	5
	ALI	*Acacia Limelight*			5
	TPU	*Thomasia purpurea*			6
	WFR	*Westringia fruiticosa Zena*			5
	LLI	*Lomandra Lime Tuff*			5
	PGO	*Pittosporum Golf Balls*			5
	OJA	*Ophiopogon japonicus 'mondo grass'*			5
	LSP	*Liriope sp*			5
MIX 5	GCR	*Grevillea crithmithfolia prostrate*	130mm	3/m^2	33
	GGI	*Grevillea Gin Gin Gem*			33
	EGL	*Eremophila glauca 'Cousin IT'*			33
	GGO	*Grevillea 'Gold Cluster'*			33
				Total	326

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REV	DATE	DWN	DESCRIPTION
A	25.11.2024	LH	ISSUED FOR INFORMATION
B	24.02.2025	LH	ISSUED FOR APPROVAL

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PROJECT:
Catalina Sustainability Demonstration Home
CLIENT:
Catalina Regional Council
TITLE
Planting Plan

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PROJECT NO	DRAWN BY	APPROVED BY	REV.
XXX	LH	NZ	B
SCALE: 1:50	SHEET NO: 501	SHEET SIZE: A1	

500mm 0m 500mm 1m 2.5m
SCALE: 1:50

Bambusa.brushwood/DOC/PROJECTS/0000 Lot Plan/pages/Catalina Sustainability Demonstration Home/CAD/4 Models/LdR/Catalina Demonstration Home.dwg

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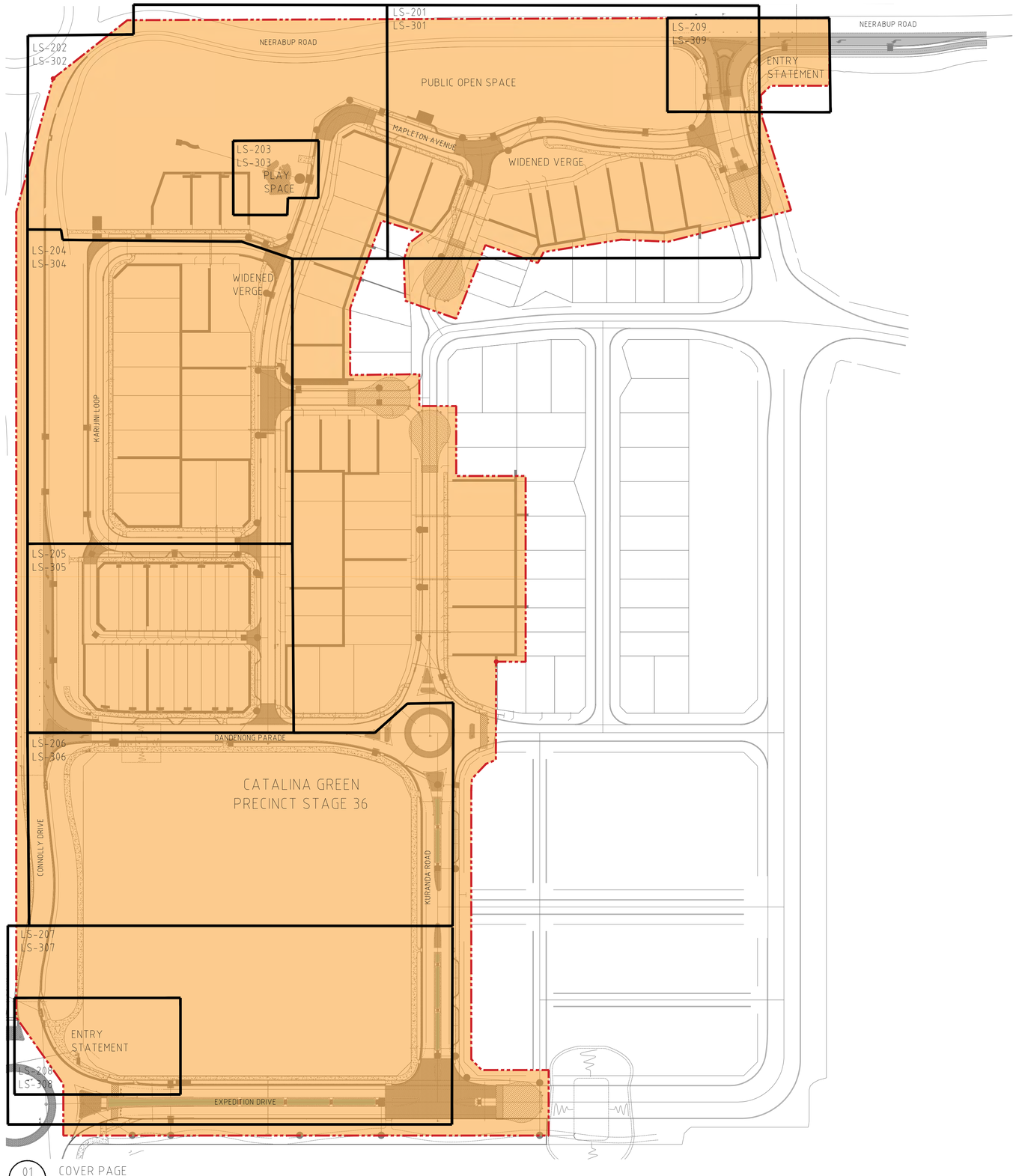

01
101
COVER PAGE
PLAN 1:1000 @ A1

CATALINA GREEN PRECINCT STAGE 36

DWG	DWG NAME	SCALE @ A1	REV
LS -101	COVER PAGE	1:1000	A
LS -201	HARDSCAPE PLAN 1	1:250	A
LS -202	HARDSCAPE PLAN 2	1:250	A
LS -203	HARDSCAPE PLAN 3	1:50	A
LS -204	HARDSCAPE PLAN 4	1:250	A
LS -205	HARDSCAPE PLAN 5	1:250	A
LS -206	HARDSCAPE PLAN 6	1:250	A
LS -207	HARDSCAPE PLAN 7	1:250	A
LS -208	HARDSCAPE PLAN 8	1:100	A
LS -209	HARDSCAPE PLAN 9	1:100	A
LS -301	SOFTSCAPE PLAN 1	1:250	A
LS -302	SOFTSCAPE PLAN 2	1:250	A
LS -303	SOFTSCAPE PLAN 3	1:50	A
LS -304	SOFTSCAPE PLAN 4	1:250	A
LS -305	SOFTSCAPE PLAN 5	1:250	A
LS -306	SOFTSCAPE PLAN 6	1:50	A
LS -307	SOFTSCAPE PLAN 7	1:250	A
LS -308	SOFTSCAPE PLAN 8	1:100	A
LS -309	SOFTSCAPE PLAN 9	1:100	A
LS -501	DETAILS 1	AS SHOWN	A
LS -502	DETAILS 2	AS SHOWN	A
LS -503	DETAILS 3	AS SHOWN	A
LS -504	DETAILS 4	AS SHOWN	A
LS -505	DETAILS 5	AS SHOWN	A
LS -506	DETAILS 6	AS SHOWN	A
LS -507	DETAILS 7	AS SHOWN	A
LS -508	DETAILS 8	AS SHOWN	A
LS -600	SCHEDULE & NOTES	AS SHOWN	A

0 10 20 40 60 100m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	JZ	22.06.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/NL
APPROVED	GD
SCALE	1:1000@A1
DRAWING TITLE	GREEN PRECINCT STAGE 1
DRAWING No.	12606-CG-STG36-101
REVISION	A

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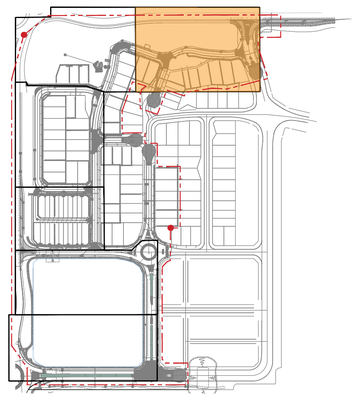

01 / 201 KEY PLAN
PLAN 1:4000 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
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EXCAVATION AND SITE PREPARATION:

- ALL BULK EARTHWORK TO BE COMPLETED BY CIVIL.
- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED.
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- REMOVED WEEDS AND ANY VEGETATION NOMINATED FOR REMOVAL PRIOR TO GRADING.
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- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-505
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
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LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- EXTENT OF WIDENED VERGE WORKS
- EXTENT OF ENTRY STATEMENT WORKS

EARTHWORKS

- EXISTING CONTOURS
- CIVIL CONTOURS
- PROPOSED POS CONTOURS (BULK EARTHWORKS BY CIVIL)

TREES

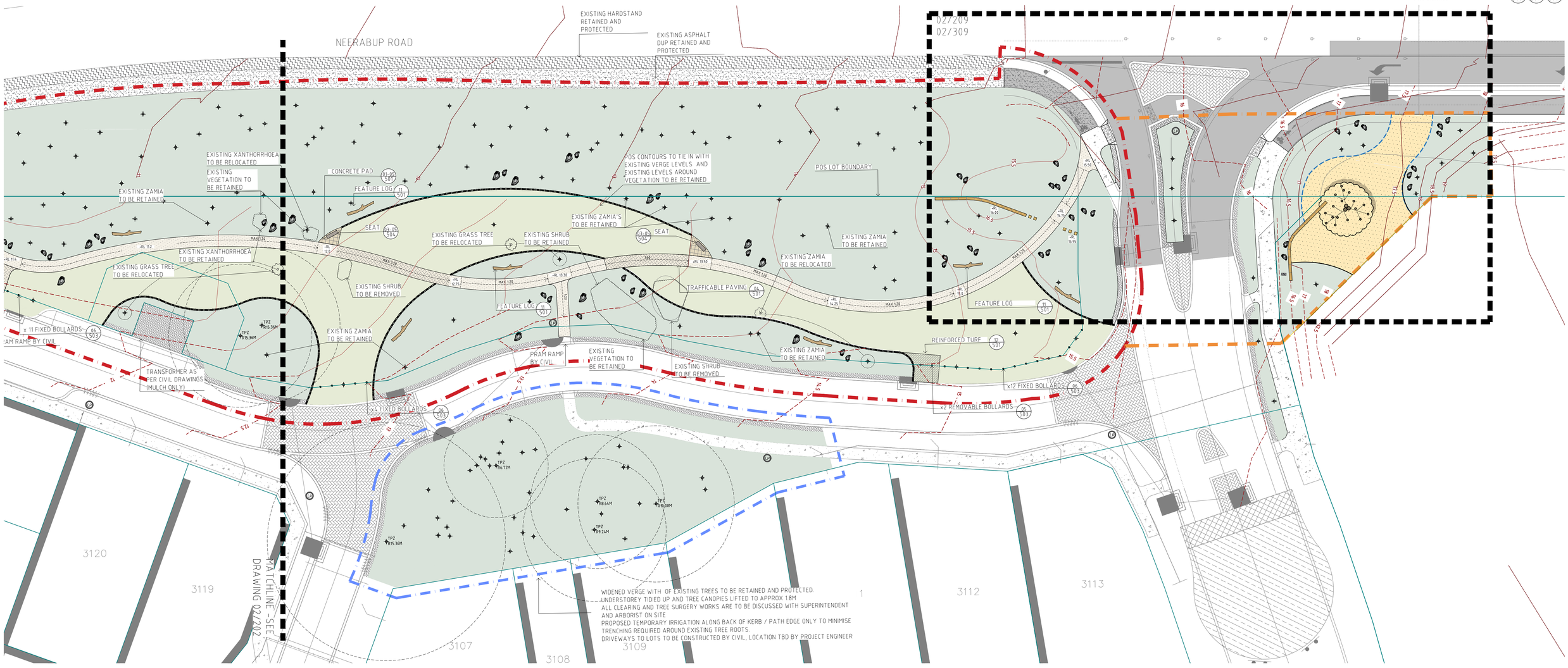
- TREE MARKER (EXISTING & PROPOSED) REFER TO SOFTSCAPE PLAN
- TPZ 8.64M — TREE PROTECTION ZONE (TPZ) WHERE IDENTIFIED BY ARBORIST

SURFACE FINISHES

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT / CONCRETE BY CIVIL
- EXISTING COMPACTED LIMESTONE
- PROPOSED CONCRETE PAVEMENT STANDARD GREY CONCRETE — 01-02 V3 / 501
- PROPOSED TRAFFICABLE CONCRETE STANDARD GREY CONCRETE — 04 / 501
- PROPOSED DECORATIVE CONCRETE — 01-02 / 501
- MULCH MAINTENANCE STRIP 600mm — 05 / 501
- PLANTING BED REFER TO SOFTSCAPE PLAN
- IRRIGATED TURF
- PROPOSED REINFORCED TURF MAINTENANCE ACCESS — 12 / 501
- PLAYGROUND SURFACING TYPE 1 — 06 / 502
- PLAYGROUND SURFACING TYPE 2 — 06 / 502
- COLOURED CONCRETE THICKENED EDGE BY CIVIL

FURNITURE & SITE FEATURES

- MOWING KERB (MK) — 06 / 501
- PLAYGROUND BLOCK EDGING — 07 / 501
- PLAYGROUND BOULDER EDGING — 08-09 / 501
- FEATURE BOULDERS — 10 / 501
- SHADE STRUCTURE — 01-02 / 503
- PICNIC SETTING — 01-02 / 504
- BENCH SEAT — 03-09 / 504
- BOLLARD FIXED — 06 / 503
- BOLLARD REMOVABLE — 05 / 503
- BIN — 07 / 503
- INFORMATION SIGNAGE — 06-09 / 504
- CoW PARK SIGN — 04 / 503
- LIGHT POLE BY OTHERS
- BIKE RACK — 08 / 503
- FEATURE LOG — 11 / 501
- LIMESTONE FEATURE BLOCKWORK — 02 / 508
- FREESTANDING ENTRY WALL AND SIGNAGE — 01-02 / 506, 01-02 / 507, 03-09 / 508



02 / 201 HARDSCAPE PLAN
PLAN 1:250 @ A1

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/NL
APPROVED	GD
SCALE	250@A1
DRAWING TITLE	HARDSCAPE PLAN 1
DRAWING No.	12606-CG-STG36-201
REVISION	A

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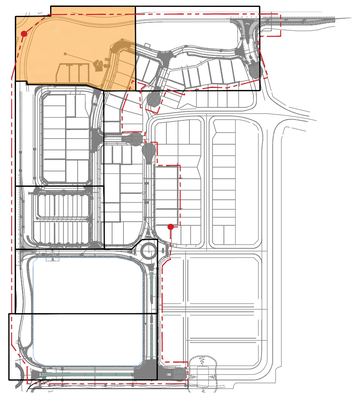

01 / 202 KEY PLAN
PLAN 1:4000 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
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- POS LOT BOUNDARY
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- EXTENT OF ENTRY STATEMENT WORKS

EARTHWORKS

- EXISTING CONTOURS
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TREES

- TREE MARKER (EXISTING & PROPOSED) REFER TO SOFTSCAPE PLAN
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- EXISTING ASPHALT PAVEMENT
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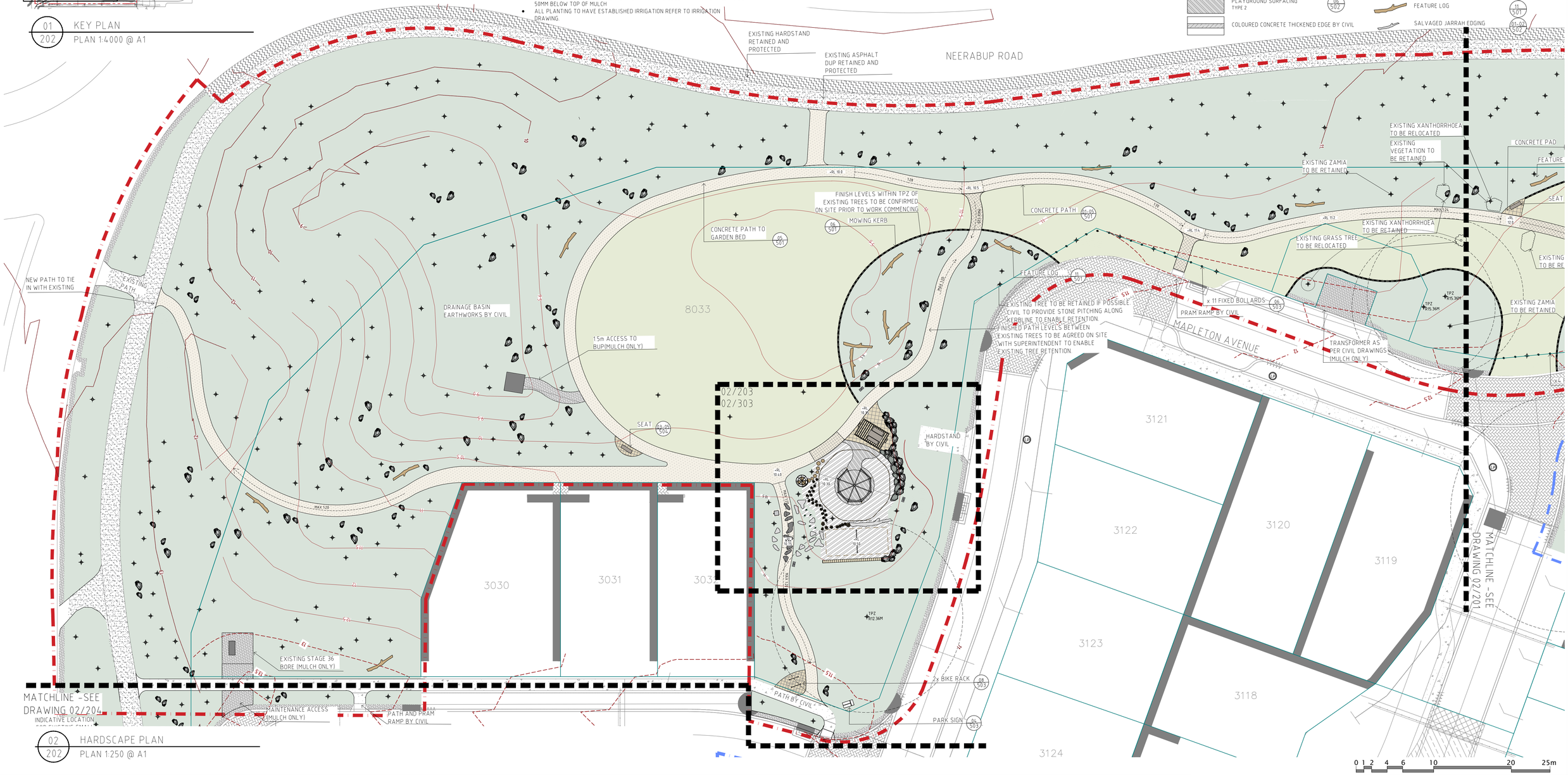
- EXISTING COMPACTED LIMESTONE
- PROPOSED CONCRETE PAVEMENT STANDARD GREY CONCRETE — 01-03\Y3 501
- PROPOSED TRAFFICABLE CONCRETE STANDARD GREY CONCRETE — 04 501
- PROPOSED DECORATIVE CONCRETE — 01-03 501
- MULCH MAINTENANCE STRIP 600mm — 05 501
- PLANTING BED REFER TO SOFTSCAPE PLAN
- IRRIGATED TURF
- PROPOSED REINFORCED TURF MAINTENANCE ACCESS — 12 501
- PLAYGROUND SURFACING TYPE 1 — 06 502
- PLAYGROUND SURFACING TYPE 2 — 06 502
- COLOURED CONCRETE THICKENED EDGE BY CIVIL

FURNITURE & SITE FEATURES

- MOWING KERB (MK) — 06 501
- PLAYGROUND BLOCK EDGING — 07 501
- PLAYGROUND BOULDER EDGING — 08-09 501
- FEATURE BOULDERS — 10 501
- SHADE STRUCTURE — 01-02 503
- PICNIC SETTING — 01-02 504
- BENCH SEAT — 03-05 504
- BOLLARD FIXED — 06 503
- BOLLARD REMOVABLE — 05 503
- BIN — 07 503
- INFORMATION SIGNAGE — 06-09 504
- CoW PARK SIGN — 04 503
- LP LIGHT POLE BY OTHERS
- BIKE RACK — 08 503
- FEATURE LOG — 11 501
- SALVAGED JARRAH EDGING — 01-02 502



02 / 202 HARDSCAPE PLAN
PLAN 1:250 @ A1

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CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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three prime court osborne park
western australia 6017
telephone +61 8 9441 0200
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enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/NL
APPROVED	GD
SCALE	250@A1
DRAWING TITLE	HARDSCAPE PLAN 2
DRAWING No.	12606-CG-STG36-202
REVISION	A

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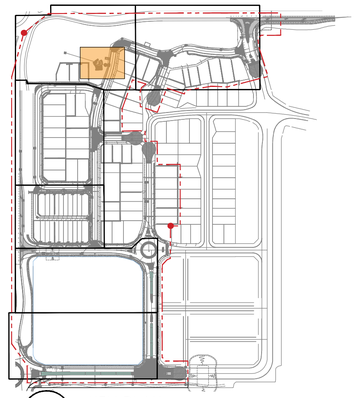

01 / 203 KEY PLAN
PLAN 1:4000 @ A1

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- ALL PLANTING TO HAVE ESTABLISHED IRRIGATION REFER TO IRRIGATION DRAWING

PLAY EQUIPMENT SELECTION:

PLAY PLANETARIUM
LAPPSET 'PLAY PLANETARIUM' 231005
SUPPLIER: LARK INDUSTRIES



STEEL CUBBY HOUSE
WITH CLIMBING PLANTS
COLOUR: DULUX COPPER
REFER TO DETAIL 09-13/LS502



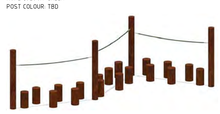
SWING SET
CODE 'SINGLE POST FRAME SWING' FRE-308
SUPPLIER: MIRACLE
COLOUR: TBD



STEEL STILTS
VARIOUS HEIGHT
POWDERCOATED STEEL
COLOUR: TBD



ROPE BALANCE LOG STEPPER
MIRACLE 'ROPE BALANCE LOG STEPPERS' NP-064 - CUSTOMISED
ROPE COLOUR: GREEN
POST COLOUR: TBD





02 / 203 HARDSCAPE & SETOUT PLAN
PLAN 1:50 @ A1

LEGEND

POS LOT BOUNDARY

EARTHWORKS

PROPOSED POS CONTOURS (BULK EARTHWORKS BY CIVIL)

TREES

TREE MARKER (EXISTING & PROPOSED) REFER TO SOFTSCAPE PLAN

TPZ R=8.64M TREE PROTECTION ZONE (TPZ) WHERE IDENTIFIED BY PROJECT ARBORIST

SURFACE FINISHES

- EXISTING CONCRETE PAVEMENT / CONCRETE BY CIVIL
- PROPOSED CONCRETE PAVEMENT STANDARD GREY CONCRETE — 01-02 / 501
- PROPOSED TRAFFICABLE CONCRETE STANDARD GREY CONCRETE — 04 / 501
- PROPOSED DECORATIVE CONCRETE — 02 / 503
- MULCH MAINTENANCE STRIP 600mm
- IRRIGATED PLANTING BED REFER TO SOFTSCAPE PLAN
- IRRIGATED TURF
- PLAYGROUND SURFACING - MULCH SOFTFALL REFER TO NOTE FOR THICKNESS
- PLAYGROUND SURFACING-RUBBER COLOUR 1 — 06 / 502
- PLAYGROUND SURFACING-RUBBER COLOUR 2 — 06 / 502
- ACRYLIC PAINT ON GREY CONCRETE PATH

FURNITURE & SITE FEATURES

- MOWING KERB (MK) — 06 / 501
- PLAYGROUND BLOCK EDGING — 07 / 501
- PLAYGROUND BOULDER EDGING — 08-02 / 501
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- SHADE STRUCTURE — 01-02 / 503
- PICNIC SETTING — 01-02 / 504
- BENCH SEAT — 03-02 / 504
- BIN — 07 / 503
- SALVAGED JARRAH EDGING — 01-02 / 502
- INFORMATION SIGNAGE — 06-02 / 504

PLAY EQUIPMENT
FOR PRODUCT SELECTION SEE SPECIFICATION NOTES

- SWING SET AND ASSOCIATED FALL ZONE
- CLIMBING DOME AND ASSOCIATED FALL ZONE
- STEEL CUBBY HOUSE WITH CLIMBER PLANTING - REFER TO PLANTING PLAN — 09-13 / 502
- ROPE BALANCE LOG STEPPER — 08 / 502
- STEEL STILTS — 07 / 502
- RAISED COLOURED CONCRETE STEPPERS IN VARIOUS COLOURS TDB — 05 / 502
- RAISED TIMBER STEPPERS — 03 / 502
- FLUSH TIMBER STEPPERS — 04 / 502

EXISTING TREE PROTECTION:

- ALL EXISTING TREES AND VEGETATION, INCLUDING GRASS TREES AND ZAMIA PALMS ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- ALL WORKS WITHIN TREE PROTECTION ZONES (TPZ) (INCLUDING TPZ OF TREES OUTSIDE STAGE BOUNDARY) ARE TO BE COMPLETED IN A TREE SENSITIVE METHOD TO MINIMISE IMPACTS THAT MAY HAVE A NEGATIVE EFFECT ON THE LONG TERM TREE WELFARE.
- PRIOR TO ANY TRENCHING, BELOW GROUND SERVICE INSTALLATION ETC CONTRACTOR TO ORGANSE QUALIFIED ARBORIST'S REVIEW AND SEEK APPROVAL FROM SUPERINTENDENT.
- TRUNK AND/OR BRUNCH PROTECTION MEASURES ARE TO BE APPLIED WHERE MACHINERY IS REQUIRED TO WORK IN CLOSE PROXIMITY TO ABOVE GROUND PARTS OF TREES. PROPOSED PROTECTIVE MEASURES ARE TO BE DISCUSSED WITH SUPERINTENDENT PRIOR TO CONSTRUCTION.
- WHERE TREE ROOTS ARE ENCOUNTERED WITHIN OR ADJACENT TPZ DURING EXCAVATION WORKS, ROOT PRUNING IS TO BE UNDERTAKEN ONLY WITH PRIOR APPROVAL OF THE SUPERINTENDENT AND UNDER THE DIRECT SUPERVISION OF A QUALIFIED ARBORIST.
- CANOPY PRUNING IS TO BE UNDERTAKEN ONLY WITH PRIOR APPROVAL OF THE SUPERINTENDENT AND UNDER THE DIRECT SUPERVISION OF A QUALIFIED ARBORIST.
- CONTRACTOR WILL BE LIABLE FOR ANY DETRIMENTAL DAMAGE AND/OR LOSS OF TREE DIRECTLY RELATED TO THE CONTRACTOR'S CONSTRUCTION OR MAINTENANCE ACTIVITIES. VALUE OF DAMAGE WILL BE CALCULATED BASED ON THE HELLIWELL SYSTEM.

0 0.5 1 2 3 4 5m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

TIM DAVIES LANDSCAPING
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western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	HARDSCAPE PLAN 3
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-203
SCALE	1:50@A1		REVISION A

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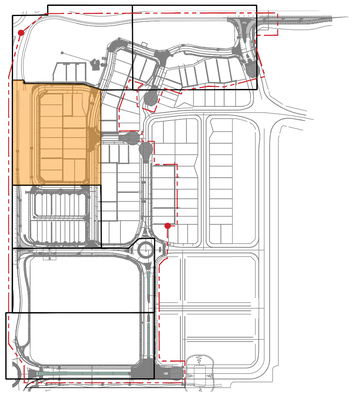

01 / 204 KEY PLAN
PLAN 1:4000 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
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- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
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- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
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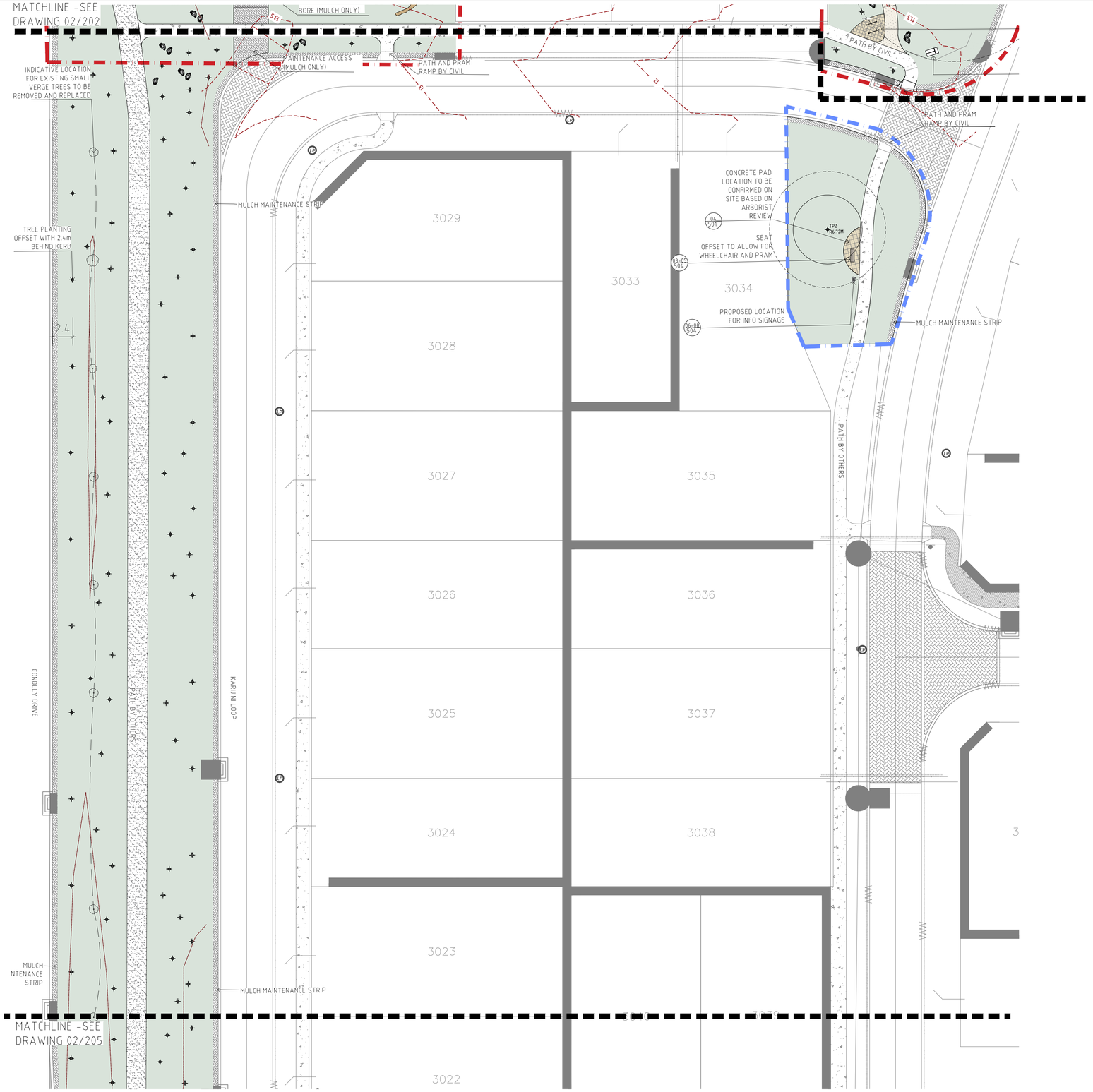

02 / 204 HARDSCAPE PLAN
PLAN 1:250 @ A1

LEGEND

EXTENT OF POS WORKS
POS LOT BOUNDARY
EXTENT OF WIDENED VERGE WORKS
EXTENT OF ENTRY STATEMENT WORKS

EARTHWORKS

EXISTING CONTOURS
CIVIL CONTOURS
PROPOSED POS CONTOURS (BULK EARTHWORKS BY CIVIL)

TREES

TREE MARKER (EXISTING & PROPOSED) REFER TO SOFTSCAPE PLAN
TREE PROTECTION ZONE (TPZ) WHERE IDENTIFIED BY ARBORIST
EXISTING TREES TO BE REMOVED &REPLACED

SURFACE FINISHES

EXISTING ASPHALT PAVEMENT
EXISTING CONCRETE PAVEMENT / CONCRETE BY CIVIL
EXISTING COMPACTED LIMESTONE
PROPOSED CONCRETE PAVEMENT STANDARD GREY CONCRETE — 01-02-03 501
PROPOSED TRAFFICABLE CONCRETE STANDARD GREY CONCRETE — 04 501
PROPOSED DECORATIVE CONCRETE — 01-02 501
MULCH MAINTENANCE STRIP 600mm — 05 501
PLANTING BED REFER TO SOFTSCAPE PLAN
IRRIGATED TURF
PROPOSED REINFORCED TURF MAINTENANCE ACCESS — 12 501
PLAYGROUND SURFACING TYPE 1 — 06 502
PLAYGROUND SURFACING TYPE 2 — 06 502
COLOURED CONCRETE THICKENED EDGE BY CIVIL

FURNITURE & SITE FEATURES

MOWING KERB (MK) — 06 501
PLAYGROUND BLOCK EDGING — 07 501
PLAYGROUND BOULDER EDGING — 08-09 501
FEATURE BOULDERS — 10 501
SHADE STRUCTURE — 01-03 503
PICNIC SETTING — 01-02 504
BENCH SEAT — 03-05 504
BOLLARD FIXED — 06 503
BOLLARD REMOVABLE — 05 503
BIN — 07 503
INFORMATION SIGNAGE — 06-09 504
CoW PARK SIGN — 04 503
LIGHT POLE BY OTHERS
BIKE RACK — 08 503
FEATURE LOG — 11 501

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-505
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING.
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH
- ALL PLANTING TO HAVE ESTABLISHED IRRIGATION REFER TO IRRIGATION

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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western australia 6017
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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	HARDSCAPE PLAN 4
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-204
SCALE	1:250@A1		REVISION A

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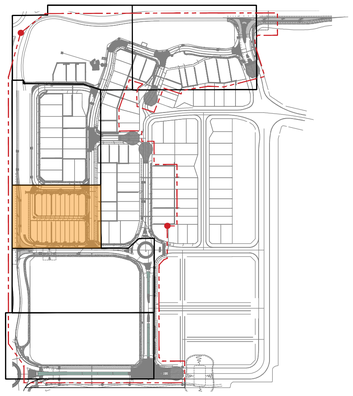

01
205
KEY PLAN
PLAN 1:4000 @ A1

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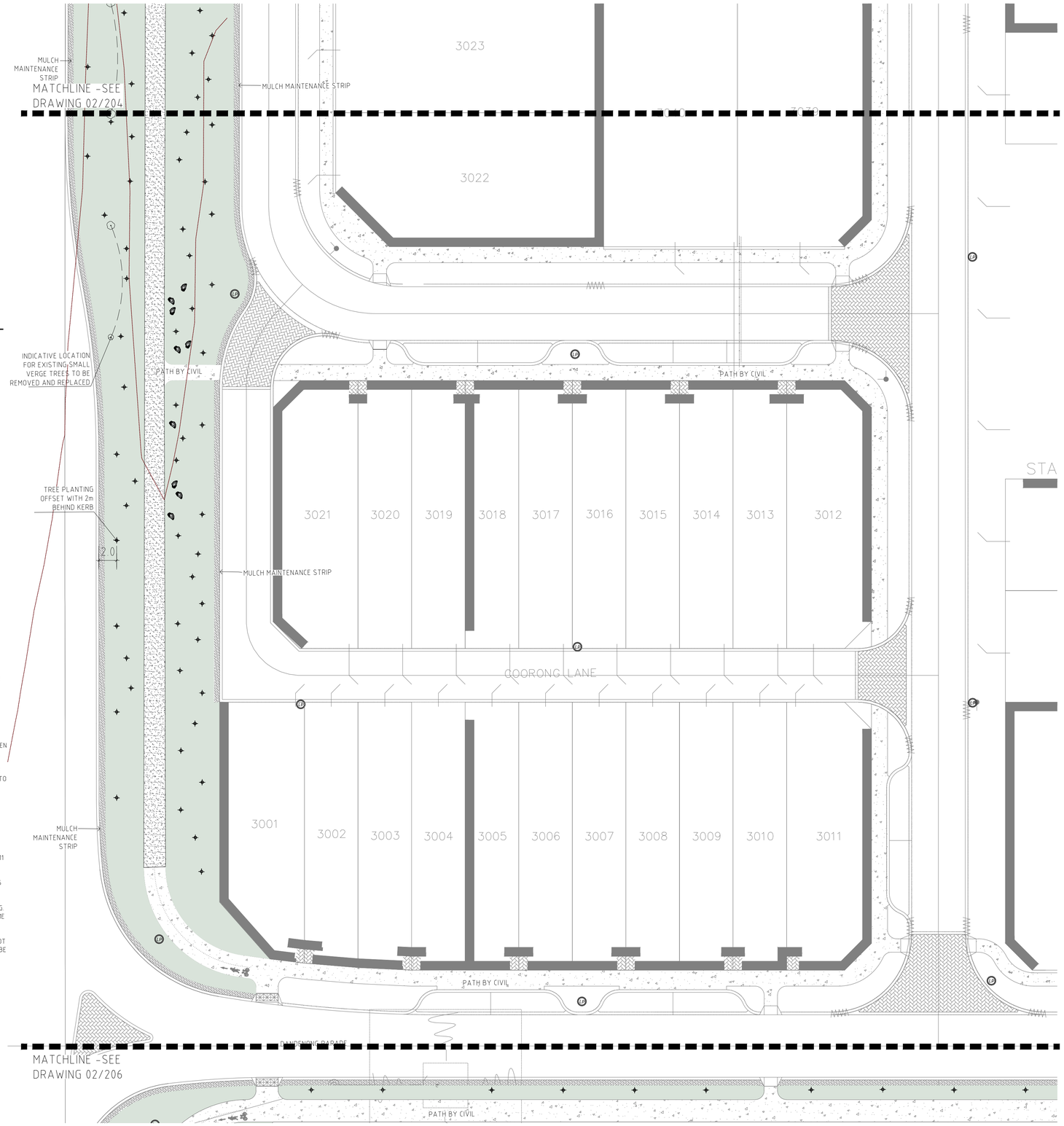
- ALL PLANTING TO HAVE ESTABLISHED IRRIGATION REFER TO IRRIGATION DRAWING.



02
205
HARDSCAPE PLAN
PLAN 1:250 @ A1

LEGEND

EXTENT OF POS WORKS
POS LOT BOUNDARY
EXTENT OF WIDENED VERGE WORKS
EXTENT OF ENTRY STATEMENT WORKS

EARTHWORKS

EXISTING CONTOURS
CIVIL CONTOURS
PROPOSED POS CONTOURS (BULK EARTHWORKS BY CIVIL)

TREES

TREE MARKER (EXISTING & PROPOSED) REFER TO SOFTSCAPE PLAN
TREE PROTECTION ZONE (TPZ) WHERE IDENTIFIED BY ARBORIST
EXISTING TREES TO BE REMOVED &REPLACED

SURFACE FINISHES

EXISTING ASPHALT PAVEMENT
EXISTING CONCRETE PAVEMENT / CONCRETE BY CIVIL
EXISTING COMPACTED LIMESTONE
PROPOSED CONCRETE PAVEMENT STANDARD GREY CONCRETE — 01-02\03 501
PROPOSED TRAFFICABLE CONCRETE STANDARD GREY CONCRETE — 06 501
PROPOSED DECORATIVE CONCRETE — 01-03 501
MULCH MAINTENANCE STRIP 600mm — 05 501
PLANTING BED REFER TO SOFTSCAPE PLAN
IRRIGATED TURF
PROPOSED REINFORCED TURF MAINTENANCE ACCESS — 12 501
PLAYGROUND SURFACING TYPE 1 — 06 502
PLAYGROUND SURFACING TYPE 2 — 06 502
COLOURED CONCRETE THICKENED EDGE BY CIVIL

FURNITURE & SITE FEATURES

MOWING KERB (MK) — 06 501
PLAYGROUND BLOCK EDGING — 07 501
PLAYGROUND BOULDER EDGING — 08-09 501
FEATURE BOULDERS — 10 501
SHADE STRUCTURE — 01-03 503
PICNIC SETTING — 01-02 505
BENCH SEAT — 03-05 505
BOLLARD FIXED — 06 503
BOLLARD REMOVABLE — 05 503
BIN — 07 503
INFORMATION SIGNAGE — 06-09 504
CoW PARK SIGN — 04 503
LIGHT POLE BY OTHERS
BIKE RACK — 08 503
FEATURE LOG — 11 501

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	HARDSCAPE PLAN 5
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-205
SCALE	1:250@A1		REVISION A

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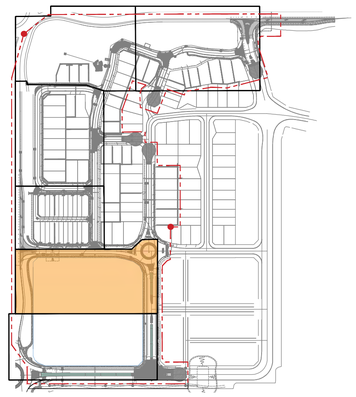

01
206
KEY PLAN
PLAN 1:4000 @ A1

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- EXTENT OF WIDENED VERGE WORKS
- EXTENT OF ENTRY STATEMENT WORKS

EARTHWORKS

- EXISTING CONTOURS
- CIVIL CONTOURS
- PROPOSED POS CONTOURS (BULK EARTHWORKS BY CIVIL)

TREES

- TREE MARKER (EXISTING & PROPOSED) REFER TO SOFTSCAPE PLAN
- TREE PROTECTION ZONE (TPZ) WHERE IDENTIFIED BY ARBORIST

TPZ Ø8.64M

SURFACE FINISHES

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT / CONCRETE BY CIVIL
- EXISTING COMPACTED LIMESTONE
- PROPOSED CONCRETE PAVEMENT STANDARD GREY CONCRETE — 01-03 / 13 / 501
- PROPOSED TRAFFICABLE CONCRETE STANDARD GREY CONCRETE — 04 / 501
- PROPOSED DECORATIVE CONCRETE — 01-03 / 501
- MULCH MAINTENANCE STRIP 600mm — 05 / 501
- PLANTING BED REFER TO SOFTSCAPE PLAN
- IRRIGATED TURF
- PROPOSED REINFORCED TURF MAINTENANCE ACCESS — 12 / 501
- PLAYGROUND SURFACING TYPE 1 — 06 / 502
- PLAYGROUND SURFACING TYPE 2 — 06 / 502
- COLOURED CONCRETE THICKENED EDGE BY CIVIL

FURNITURE & SITE FEATURES

- MOWING KERB (MK) — 06 / 501
- PLAYGROUND BLOCK EDGING — 07 / 501
- PLAYGROUND BOULDER EDGING — 08-02 / 501
- FEATURE BOULDERS — 10 / 501
- SHADE STRUCTURE — 01-03 / 503
- PICNIC SETTING — 01-02 / 504
- BENCH SEAT — 03-02 / 504
- BOLLARD FIXED — 06 / 503
- BOLLARD REMOVABLE — 05 / 503
- BIN — 07 / 503
- INFORMATION SIGNAGE — 06-09 / 504
- CoW PARK SIGN — 04 / 503
- LIGHT POLE BY OTHERS
- BIKE RACK — 08 / 503
- FEATURE LOG — 11 / 501

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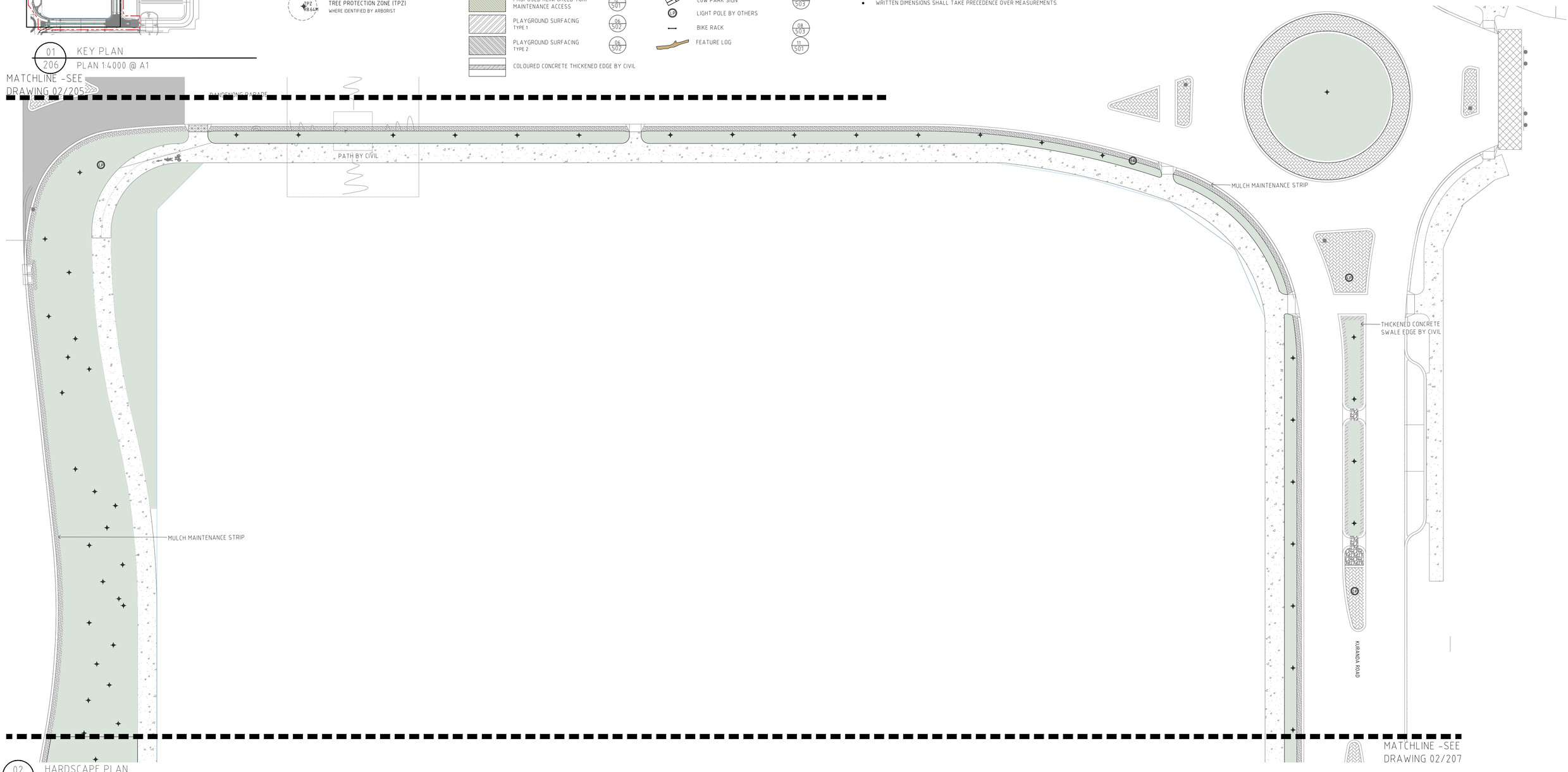

02
206
HARDSCAPE PLAN
PLAN 1:250 @ A1

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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western australia 6017
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facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	HARDSCAPE PLAN 6
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-206
SCALE	1:250@A1	REVISION	A

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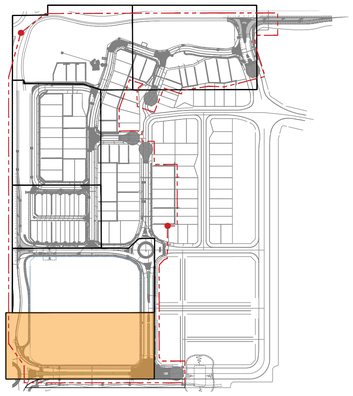

01
207
KEY PLAN
PLAN 1:4000 @ A1

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- EXTENT OF WIDENED VERGE WORKS
- EXTENT OF ENTRY STATEMENT WORKS

EARTHWORKS

- EXISTING CONTOURS
- CIVIL CONTOURS
- PROPOSED POS CONTOURS (BULK EARTHWORKS BY CIVIL)

TREES

- TREE MARKER (EXISTING & PROPOSED) REFER TO SOFTSCAPE PLAN
- TREE PROTECTION ZONE (TPZ) WHERE IDENTIFIED BY ARBORIST

TPZ 8864M

SURFACE FINISHES

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT / CONCRETE BY CIVIL
- EXISTING COMPACTED LIMESTONE
- PROPOSED CONCRETE PAVEMENT STANDARD GREY CONCRETE — 01-03 / 03 / 501
- PROPOSED TRAFFICABLE CONCRETE STANDARD GREY CONCRETE — 04 / 501
- PROPOSED DECORATIVE CONCRETE — 01-03 / 501
- MULCH MAINTENANCE STRIP 600mm — 05 / 501
- PLANTING BED REFER TO SOFTSCAPE PLAN
- IRRIGATED TURF
- PROPOSED REINFORCED TURF MAINTENANCE ACCESS — 12 / 501
- PLAYGROUND SURFACING TYPE 1 — 06 / 502
- PLAYGROUND SURFACING TYPE 2 — 06 / 502
- COLOURED CONCRETE THICKENED EDGE BY CIVIL

FURNITURE & SITE FEATURES

- MOWING KERB (MK) — 06 / 501
- PLAYGROUND BLOCK EDGING — 07 / 501
- PLAYGROUND BOULDER EDGING — 08-09 / 501
- FEATURE BOULDERS — 10 / 501
- SHADE STRUCTURE — 01-03 / 503
- PICNIC SETTING — 01-02 / 504
- BENCH SEAT — 03-05 / 504
- BOLLARD FIXED — 06 / 503
- BOLLARD REMOVABLE — 05 / 503
- BIN — 07 / 503
- INFORMATION SIGNAGE — 06-09 / 504
- CoW PARK SIGN — 04 / 503
- LIGHT POLE BY OTHERS
- BIKE RACK — 08 / 503
- FEATURE LOG — 11 / 501

3128

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
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- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- ALL BULK EARTHWORK TO BE COMPLETED BY CIVIL.
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PLANTING NOTES:

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- ALL PLANTING TO HAVE ESTABLISHED IRRIGATION REFER TO IRRIGATION DRAWING.

MATCHLINE -SEE DRAWING 02/208

COMMERCIAL LOT

MATCHLINE -SEE DRAWING 02/206

THICKENED CONCRETE SWALE EDGE BY CIVIL

ACCESS TO TRANSFORMER SITE (MULCH ONLY)

12

THICKENED CONCRETE SWALE EDGE BY CIVIL

17

EXPEDITION DRIVE

02
207
HARDSCAPE PLAN
PLAN 1:250 @ A1

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA GREEN STAGE 36

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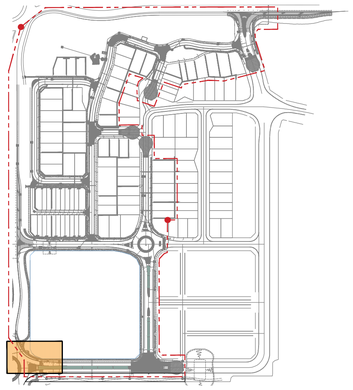

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PLAN 1:4000 @ A1

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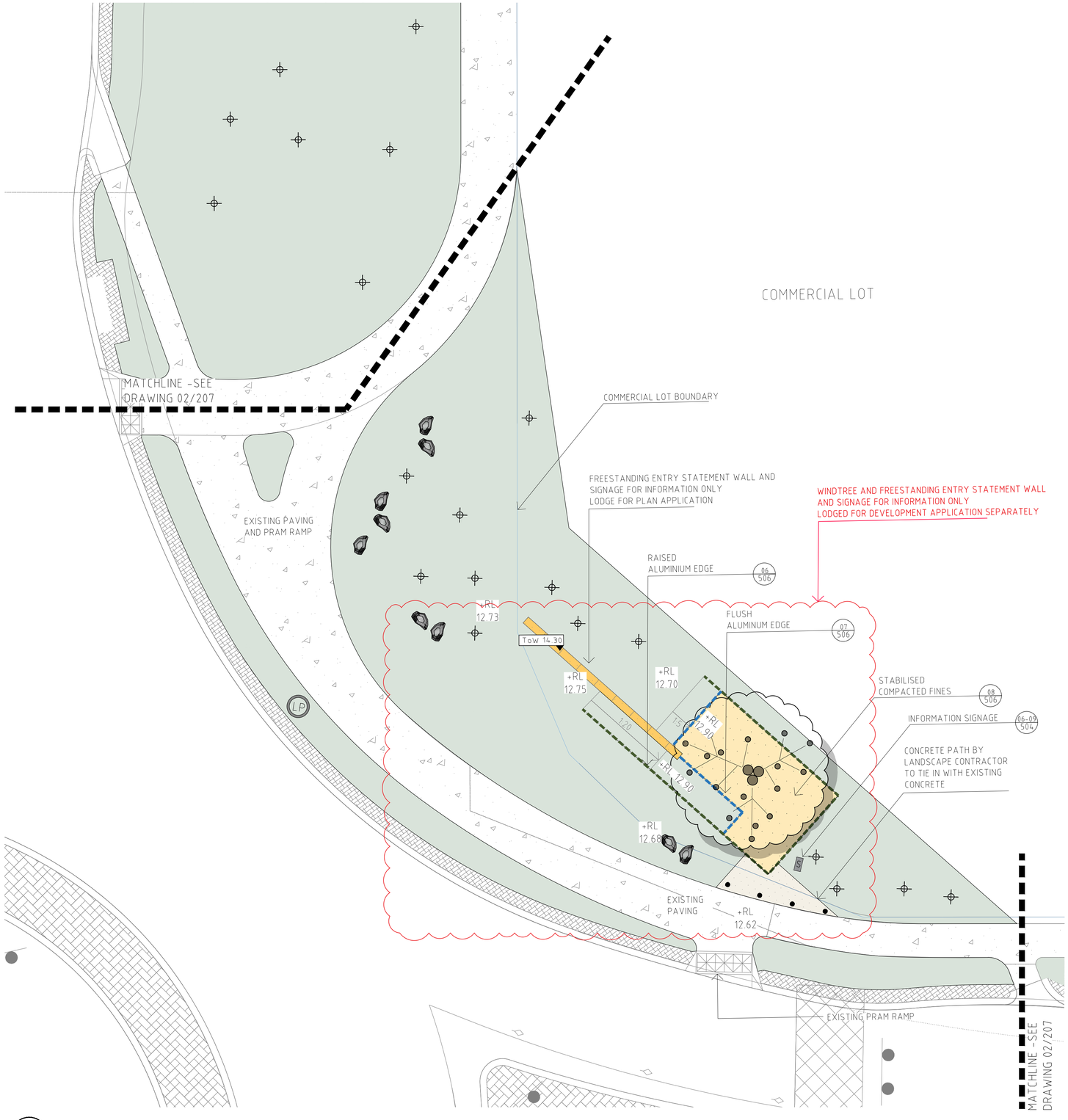
LIGHTING NOTES:

- WIND TREE TO BE INSTALLED WITH IN-BUILT LED LIGHTING
- 5W LED SPIKE LIGHTS TO BE INSTALLED ALONG FACE OF ENTRY WALL AT 1.2M CENTRES. POWER SOURCE: WIND TREE.
- POWER AND ELECTRICAL CONNECTION TO WIND TREE SUPPLIER'S DETAILS AND SPECIFICATIONS



TREES

TREE MARKER (EXISTING & PROPOSED)
REFER TO SOFTSCAPE PLAN

SURFACE FINISHES

- EXISTING CONCRETE PAVEMENT / CONCRETE BY CIVIL
- PROPOSED CONCRETE PAVEMENT STANDARD GREY CONCRETE — 01-05 501
- PROPOSED TRAFFICABLE CONCRETE STANDARD GREY CONCRETE — 04 501
- PROPOSED COMPACTED FINES — 08 506
- MULCH MAINTENANCE STRIP 600mm
- IRRIGATED PLANTING BED REFER TO SOFTSCAPE PLAN

FURNITURE & SITE FEATURES

- WIND TREE
- RAISED ALUMINIUM EDGING — 06 506
- FLUSH ALUMINIUM EDGING — 07 506
- FREESTANDING ENTRY WALL AND SIGNAGE — 01-04 506
- INFORMATION SIGNAGE — 06-02 504
- LIGHT POLE BY OTHERS
- FEATURE BOULDERS — 10 501
- BOLLARD FIXED — 06 503

02
208
HARDSCAPE PLAN
PLAN 1:100 @ A1

0 1 2 4 6 10m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/NL
APPROVED	GD
SCALE	1:250@A1
DRAWING TITLE	HARDSCAPE PLAN 8
DRAWING No.	12606-CG-STG36-208
REVISION	A

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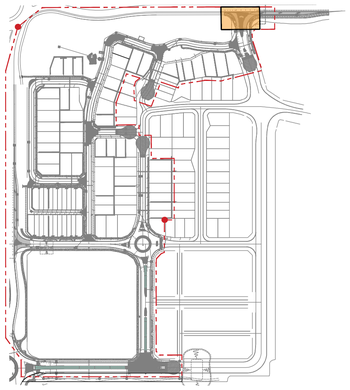

01
209
KEY PLAN
PLAN 1:4000 @ A1

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LIGHTING NOTES:

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LEGEND

EXTENT OF POS WORKS
POS LOT BOUNDARY
EXTENT OF WIDENED VERGE WORKS
EXTENT OF ENTRY STATEMENT WORKS

EARTHWORKS

EXISTING CONTOURS
CIVIL CONTOURS
PROPOSED POS CONTOURS (BULK EARTHWORKS BY CIVIL)

TREES

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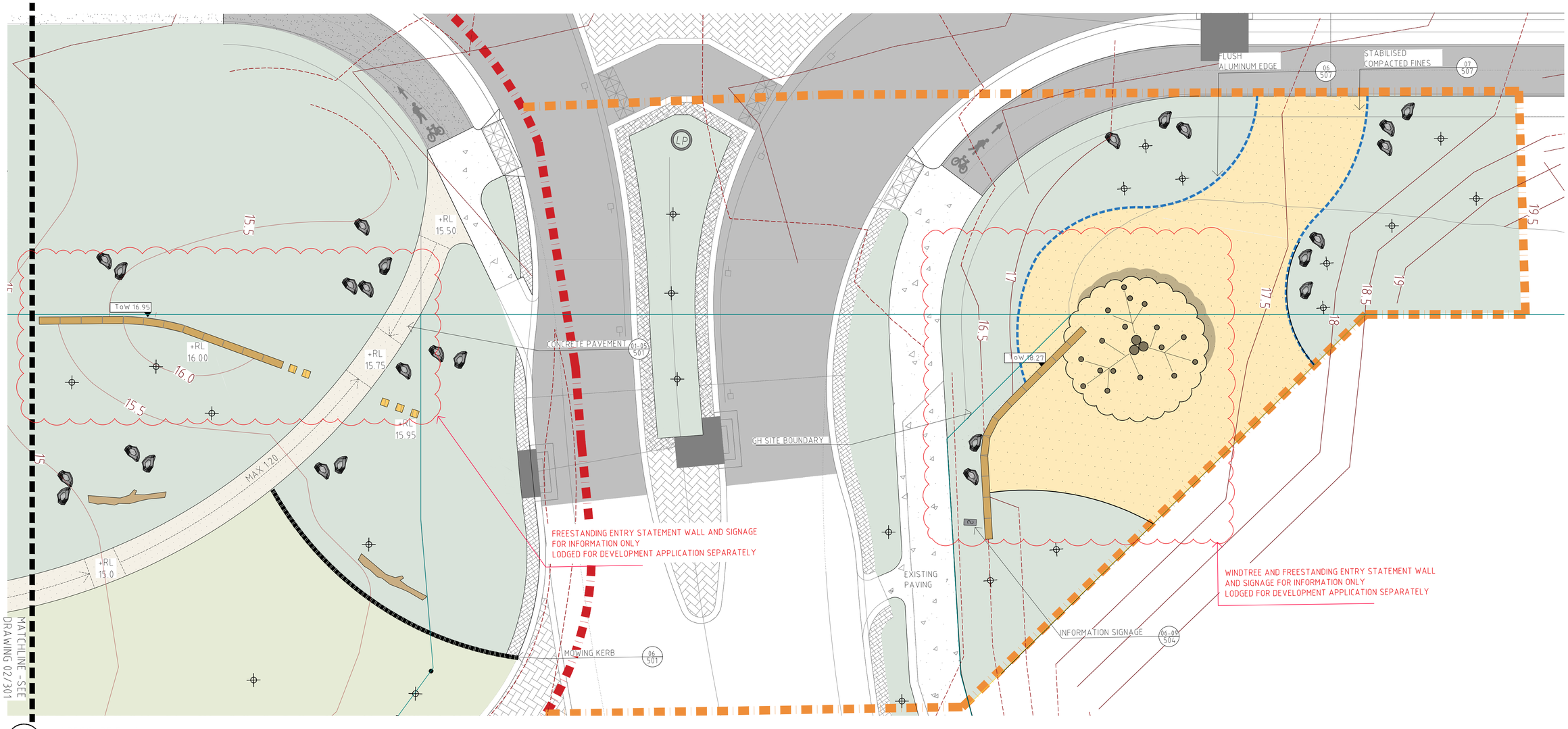
MULCH MAINTENANCE STRIP 600mm
IRRIGATED PLANTING BED REFER TO SOFTSCAPE PLAN

FURNITURE & SITE FEATURES

WIND TREE
FLUSH ALUMINIUM EDGING — 06 507
FREESTANDING ENTRY WALL AND SIGNAGE — 01-03 507 / 02-02 508
INFORMATION SIGNAGE — 06-09 504
LIGHT POLE BY OTHERS
LIMESTONE FEATURE BLOCKWORK — 02 508
MOWING KERB (MK) — 06 501
FEATURE LOG — 11 501
FEATURE BOULDERS — 10 501



02
209
HARDSCAPE PLAN
PLAN 1:100 @ A1

0 1 2 4 6 10m

CATALINA ESTATE
CATALINA GREEN STAGE 36

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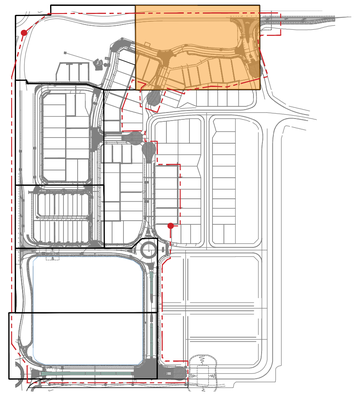

01 / 301 KEY PLAN
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- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-505
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING.
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH
- ALL PLANTING TO HAVE ESTABLISHED IRRIGATION REFER TO IRRIGATION DRAWING.

EXISTING TREE PROTECTION:

- ALL EXISTING TREES AND VEGETATION, INCLUDING GRASS TREES AND ZAMIA PALMS ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- ALL WORKS WITHIN TREE PROTECTION ZONES (TPZ) (INCLUDING TPZ OF TREES OUTSIDE STAGE BOUNDARY) ARE TO BE COMPLETED IN A TREE SENSITIVE METHOD TO MINIMISE IMPACTS THAT MAY HAVE A NEGATIVE EFFECT ON THE LONG TERM TREE WELFARE.
- PRIOR TO ANY TRENCHING, BELOW GROUND SERVICE INSTALLATION ETC CONTRACTOR TO ORGANSE QUALIFIED ARBORIST'S REVIEW AND SEEK APPROVAL FROM SUPERINTENDENT.
- TRUNK AND/OR BRUNCH PROTECTION MEASURES ARE TO BE APPLIED WHERE MACHINERY IS REQUIRED TO WORK IN CLOSE PROXIMITY TO ABOVE GROUND PARTS OF TREES. PROPOSED PROTECTIVE MEASURES ARE TO BE DISCUSSED WITH SUPERINTENDENT PRIOR TO CONSTRUCTION.
- WHERE TREE ROOTS ARE ENCOUNTERED WITHIN OR ADJACENT TPZ DURING EXCAVATION WORKS, ROOT PRUNING IS TO BE UNDERTAKEN ONLY WITH PRIOR APPROVAL OF THE SUPERINTENDENT AND UNDER THE DIRECT SUPERVISION OF A QUALIFIED ARBORIST.
- CANOPY PRUNING IS TO BE UNDERTAKEN ONLY WITH PRIOR APPROVAL OF THE SUPERINTENDENT AND UNDER THE DIRECT SUPERVISION OF A QUALIFIED ARBORIST.
- CONTRACTOR WILL BE LIABLE FOR ANY DETRIMENTIAL DAMAGE AND/OR LOSS OF TREE DIRECTLY RELATED TO THE CONTRACTOR'S CONSTRUCTION OR MAINTENANCE ACTIVITIES. VALUE OF DAMAGE WILL BE CALCULATED BASED ON THE HELLIWELL SYSTEM.

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- EXTENT OF WIDENED VERGE WORKS
- EXTENT OF ENTRY STATEMENT WORKS

TREES

- EXISTING TREE TO BE RETAINED
- EXISTING MACROZAMIA TO BE RETAINED
- PROPOSED 1000LT TREE (SEE SCHEDULE)
- PROPOSED 500LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 200LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 90-100LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 45LT TREE (SEE SCHEDULE)
- SALVAGED GRASS TREE TRANSPLANTS
- JACARANDA MIMOSIFOLIA TRANSPLANTS

SURFACE FINISHES

- IRRIGATED TURF KIKUYU 04/505
- HIGH SHRUBS REFER TO PLANT PLAN AND SCHEDULE
- MEDIUM SHRUBS REFER TO PLANT PLAN AND SCHEDULE 01/505
- LOW SHRUBS AND GROUNDCOVERS REFER TO PLANT PLAN AND SCHEDULE
- TURF SUBSTITUTE REFER TO PLANT PLAN AND SCHEDULE
- VEGETATED SWALE/BASIN TUBESTOCKING MULCH) REFER TO PLANT PLAN AND SCHEDULE 02/505
- FEATURE PLANTING REFER TO PLANT PLAN AND SCHEDULE
- PLANTING AREA BELOW EXISTING TREE (TUBESTOCK ONLY) 03/505
- TREE INSTALLED WITH ROOT CONTROL BARRIER 07/505
- MULCH MAINTENANCE STRIP 600mm
- PLAYGROUND SURFACING TYPE 1 06/502
- PLAYGROUND SURFACING TYPE 2 06/502
- COLOURED CONCRETE THICKENED EDGE BY CIVIL

FURNITURE & SITE FEATURES

- MOWING KERB (MK) 06/501
- PLAYGROUND BLOCK EDGING 07/501
- PLAYGROUND BOULDER EDGING 08-09/501
- FEATURE BOULDERS 10/501
- SHADE STRUCTURE 01-02/503
- PICNIC SETTING 01-02/504
- BENCH SEAT 03-05/504
- BOLLARD FIXED 06/503
- BOLLARD REMOVABLE 05/503
- BIN 07/503
- INFORMATION SIGNAGE 06-08/504
- CoW PARK SIGN 04/503
- LIGHT POLE BY OTHERS
- BIKE RACK 08/503
- FEATURE LOG 11/501



02 / 301 SOFTSCAPE PLAN
PLAN 1:250 @ A1

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	SOFTSCAPE PLAN 1
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-301
SCALE	250@A1		REVISION A

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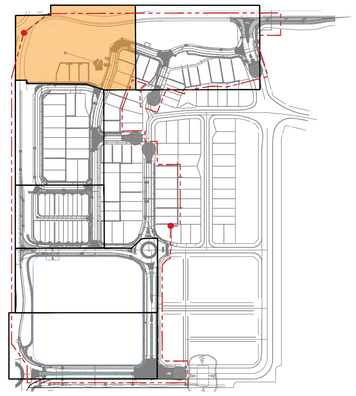

01 302 KEY PLAN
PLAN 1:4000 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
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- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- ALL BULK EARTHWORK TO BE COMPLETED BY CIVIL.
- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS WHERE APPLICABLE
- REMOVED WEEDS AND ANY VEGETATION NOMINATED FOR REMOVAL PRIOR TO GRADING.
- THE ENTIRE SITE IS TO BE GRADED AS PER PROPOSED LEVELS TO A SMOOTH EVEN SURFACE. NO UNDULATIONS, DIPS, MOUNDS AND THE LIKE TARE TO REMAIN. ALL LEVELS SHOULD GRADE EVENLY BETWEEN ALL SURROUNDING KERB LINES.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)

LEGEND

EXTENT OF POS WORKS
POS LOT BOUNDARY
EXTENT OF WIDENED VERGE WORKS
EXTENT OF ENTRY STATEMENT WORKS

TREES
EXISTING TREE TO BE RETAINED
EXISTING MACROZAMIA TO BE RETAINED
PROPOSED 1000LT TREE — SEE SCHEDULE
PROPOSED 500LT TREE — SEE SCHEDULE — 06 505
PROPOSED 200LT TREE — SEE SCHEDULE — 06 505
PROPOSED 90-100LT TREE — SEE SCHEDULE — 06 505
PROPOSED 45LT TREE — SEE SCHEDULE

SURFACE FINISHES
IRRIGATED TURF KIKUYU — 04 505
HIGH SHRUBS — REFER TO PLANT PLAN AND SCHEDULE
MEDIUM SHRUBS — REFER TO PLANT PLAN AND SCHEDULE — 01 505
LOW SHRUBS AND GROUNDCOVERS — REFER TO PLANT PLAN AND SCHEDULE
TURF SUBSTITUTE — REFER TO PLANT PLAN AND SCHEDULE
VEGETATED SWALE/BASIN TUBESTOCKING MULCH — REFER TO PLANT PLAN AND SCHEDULE — 02 505
FEATURE PLANTING — REFER TO PLANT PLAN AND SCHEDULE
PLANTING AREA BELOW EXISTING TREE (TUBESTOCK ONLY) — 03 505
TREE INSTALLED WITH ROOT CONTROL BARRIER — 02 505
MULCH MAINTENANCE STRIP 600mm

PLAYGROUND SURFACING TYPE 1 — 06 502
PLAYGROUND SURFACING TYPE 2 — 06 502
COLOURED CONCRETE THICKENED EDGE BY CIVIL

FURNITURE & SITE FEATURES
MOWING KERB (MK) — 06 501
PLAYGROUND BLOCK EDGING — 07 501
PLAYGROUND BOULDER EDGING — 08-09 501
FEATURE BOULDERS — 10 501
SHADE STRUCTURE — 01-03 503
PICNIC SETTING — 01-02 504
BENCH SEAT — 03-02 504

BOLLARD FIXED — 06 503
BOLLARD REMOVABLE — 06 503
BIN — 07 503
INFORMATION SIGNAGE — 06-09 504
CoW PARK SIGN — 04 503
LIGHT POLE BY OTHERS
BIKE RACK — 08 503
FEATURE LOG — 11 501
SALVAGED JARRAH EDGING — 01-02 502



02 302 SOFTSCAPE PLAN
PLAN 1:250 @ A1

EXISTING TREE PROTECTION:

- ALL EXISTING TREES AND VEGETATION, INCLUDING GRASS TREES AND ZAMIA PALMS ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- ALL WORKS WITHIN TREE PROTECTION ZONES (TPZ) (INCLUDING TPZ OF TREES OUTSIDE STAGE BOUNDARY) ARE TO BE COMPLETED IN A TREE SENSITIVE METHOD TO MINIMISE IMPACTS THAT MAY HAVE A NEGATIVE EFFECT ON THE LONG TERM TREE WELFARE.
- PRIOR TO ANY TRENCHING, BELOW GROUND SERVICE INSTALLATION ETC CONTRACTOR TO ORGANSE QUALIFIED ARBORIST'S REVIEW AND SEEK APPROVAL FROM SUPERINTENDENT.
- TRUNK AND/OR BRUNCH PROTECTION MEASURES ARE TO BE APPLIED WHERE MACHINERY IS REQUIRED TO WORK IN CLOSE PROXIMITY TO ABOVE GROUND PARTS OF TREES. PROPOSED PROTECTIVE MEASURES ARE TO BE DISCUSSED WITH SUPERINTENDENT PRIOR TO CONSTRUCTION.
- WHERE TREE ROOTS ARE ENCOUNTERED WITHIN OR ADJACENT TPZ DURING EXCAVATION WORKS, ROOT PRUNING IS TO BE UNDERTAKEN ONLY WITH PRIOR APPROVAL OF THE SUPERINTENDENT AND UNDER THE DIRECT SUPERVISION OF A QUALIFIED ARBORIST.
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PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-505
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING.
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH
- ALL PLANTING TO HAVE ESTABLISHED IRRIGATION REFER TO IRRIGATION DRAWING

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/NL
APPROVED	GD
SCALE	250@A1
DRAWING TITLE	SOFTSCAPE PLAN 2
DRAWING No.	12606-CG-STG36-302
REVISION	A

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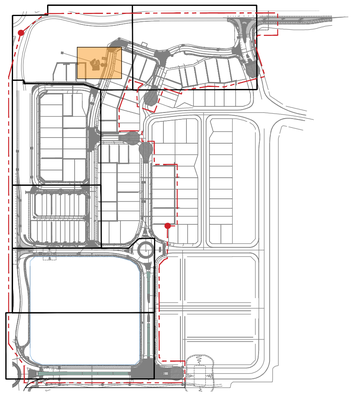

01 / 303 KEY PLAN
PLAN 1:4000 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
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- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
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- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- ALL BULK EARTHWORK TO BE COMPLETED BY CIVIL.
- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED.
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS WHERE APPLICABLE
- REMOVED WEEDS AND ANY VEGETATION NOMINATED FOR REMOVAL PRIOR TO GRADING.
- THE ENTIRE SITE IS TO BE GRADED AS PER PROPOSED LEVELS TO A SMOOTH EVEN SURFACE. NO UNDULATIONS, DIPS, MOUNDS AND THE LIKE TARE TO REMAIN. ALL LEVELS SHOULD GRADE EVENLY BETWEEN ALL SURROUNDING KERB LINES.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-505
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING.
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- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH
- ALL PLANTING TO HAVE ESTABLISHED IRRIGATION REFER TO IRRIGATION DRAWING.



02 / 303 SOFTSCAPE PLAN
PLAN 1:50 @ A1

LEGEND

TREES AND SHRUBS

- EXISTING TREE TO BE RETAINED
- EXISTING MACROZAMIA TO BE RETAINED
- PROPOSED 500LT TREE — SEE SCHEDULE — 06/505
- PROPOSED 200LT TREE — SEE SCHEDULE — 06/505
- PROPOSED 90-100LT TREE — SEE SCHEDULE — 06/505
- PROPOSED 45LT TREE
- (Hc) HARDENBERGIA COMPTONIANA

SURFACE FINISHES

- IRRIGATED TURF — KIKUYU — 04/505
- HIGH SHRUBS — REFER TO PLANT PLAN AND SCHEDULE
- MEDIUM SHRUBS — REFER TO PLANT PLAN AND SCHEDULE — 01/505
- LOW SHRUBS AND GROUNDCOVERS — REFER TO PLANT PLAN AND SCHEDULE
- PLANTING AREA BELOW EXISTING TREE — (TUBESTOCK ONLY) — 03/505
- MULCH MAINTENANCE STRIP 600mm
- PLAYGROUND SURFACING — TYPE 1 — 06/502
- PLAYGROUND SURFACING — TYPE 2 — 06/502
- ACRYLIC PAINT ON GREY CONCRETE PATH

FURNITURE & SITE FEATURES

- MOWING KERB (MK) — 06/501
- PLAYGROUND BLOCK EDGING — 07/501
- PLAYGROUND BOULDER EDGING — 08-09/501
- FEATURE BOULDERS — 10/501
- SHADE STRUCTURE — 01-02/503
- PICNIC SETTING — 01-02/504
- BENCH SEAT — 03-05/504
- BIN — 07/503
- SALVAGED JARRAH EDGING — 01-02/502
- INFORMATION SIGNAGE — 06-09/504

PLAY EQUIPMENT
FOR PRODUCT SELECTION SEE SPECIFICATION NOTES

- SWING SET AND ASSOCIATED FALL ZONE
- CLIMBING DOME AND ASSOCIATED FALL ZONE
- STEEL CUBBY HOUSE — WITH CLIMBER PLANTING - REFER TO PLANTING PLAN — 09-13/502
- ROPE BALANCE LOG STEPPER — 08/502
- STEEL STILTS — 07/502
- RAISED COLOURED CONCRETE STEPPERS — IN VARIOUS COLOURS TOB — 05/502
- RAISED TIMBER STEPPERS — 03/502
- FLUSH TIMBER STEPPERS — 04/502

EXISTING TREE PROTECTION:

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0 0.5 1 2 3 4 5m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	SOFTSCAPE PLAN 3
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-303
SCALE	1:50@A1		REVISION A

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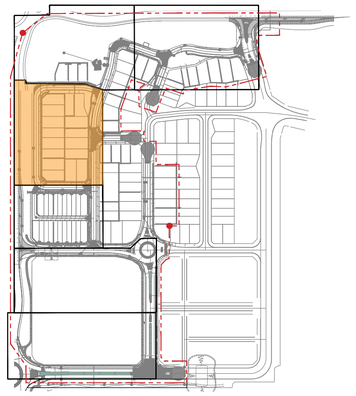

01/304 KEY PLAN
PLAN 1:4000 @ A1

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- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
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- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED.
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS WHERE APPLICABLE.
- REMOVED WEEDS AND ANY VEGETATION NOMINATED FOR REMOVAL PRIOR TO GRADING.
- THE ENTIRE SITE IS TO BE GRADED AS PER PROPOSED LEVELS TO A SMOOTH EVEN SURFACE. NO UNDULATIONS, DIPS, MOUNDS AND THE LIKE TARE TO REMAIN. ALL LEVELS SHOULD GRADE EVENLY BETWEEN ALL SURROUNDING KERB LINES.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)

EXISTING TREE PROTECTION:

- ALL EXISTING TREES AND VEGETATION, INCLUDING GRASS TREES AND ZAMIA PALMS ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- ALL WORKS WITHIN TREE PROTECTION ZONES (TPZ) (INCLUDING TPZ OF TREES OUTSIDE STAGE BOUNDARY) ARE TO BE COMPLETED IN A TREE SENSITIVE METHOD TO MINIMISE IMPACTS THAT MAY HAVE A NEGATIVE EFFECT ON THE LONG TERM TREE WELFARE.
- PRIOR TO ANY TRENCHING, BELOW GROUND SERVICE INSTALLATION ETC CONTRACTOR TO ORGANSE QUALIFIED ARBORIST'S REVIEW AND SEEK APPROVAL FROM SUPERINTENDENT.
- TRUNK AND/OR BRUNCH PROTECTION MEASURES ARE TO BE APPLIED WHERE MACHINERY IS REQUIRED TO WORK IN CLOSE PROXIMITY TO ABOVE GROUND PARTS OF TREES. PROPOSED PROTECTIVE MEASURES ARE TO BE DISCUSSED WITH SUPERINTENDENT PRIOR TO CONSTRUCTION.
- WHERE TREE ROOTS ARE ENCOUNTERED WITHIN OR ADJACENT TPZ DURING EXCAVATION WORKS, ROOT PRUNING IS TO BE UNDERTAKEN ONLY WITH PRIOR APPROVAL OF THE SUPERINTENDENT AND UNDER THE DIRECT SUPERVISION OF A QUALIFIED ARBORIST.
- CANOPY PRUNING IS TO BE UNDERTAKEN ONLY WITH PRIOR APPROVAL OF THE SUPERINTENDENT AND UNDER THE DIRECT SUPERVISION OF A QUALIFIED ARBORIST.
- CONTRACTOR WILL BE LIABLE FOR ANY DETRIMENTAL DAMAGE AND/OR LOSS OF TREE DIRECTLY RELATED TO THE CONTRACTOR'S CONSTRUCTION OR MAINTENANCE ACTIVITIES. VALUE OF DAMAGE WILL BE CALCULATED BASED ON THE HELLIWELL SYSTEM.



02/304 SOFTSCAPE PLAN
PLAN 1:250 @ A1

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- EXTENT OF WIDENED VERGE WORKS
- EXTENT OF ENTRY STATEMENT WORKS

TREES

- EXISTING TREE TO BE RETAINED
- EXISTING MACROZAMIA TO BE RETAINED
- PROPOSED 1000LT TREE (SEE SCHEDULE)
- PROPOSED 500LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 200LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 90-100LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 45LT TREE (SEE SCHEDULE)

SURFACE FINISHES

- IRRIGATED TURF (KIKUYU) 04/505
- HIGH SHRUBS (REFER TO PLANT PLAN AND SCHEDULE)
- MEDIUM SHRUBS (REFER TO PLANT PLAN AND SCHEDULE) 01/505
- LOW SHRUBS AND GROUNDCOVERS (REFER TO PLANT PLAN AND SCHEDULE)
- TURF SUBSTITUTE (REFER TO PLANT PLAN AND SCHEDULE)
- VEGETATED SWALE/BASIN (TUBESTOCK/2 MULCH) (REFER TO PLANT PLAN AND SCHEDULE) 02/505
- FEATURE PLANTING (REFER TO PLANT PLAN AND SCHEDULE)
- PLANTING AREA BELOW EXISTING TREE (TUBESTOCK ONLY) 03/505
- TREE INSTALLED WITH ROOT CONTROL BARRIER 07/505
- MULCH MAINTENANCE STRIP 600mm
- PLAYGROUND SURFACING TYPE 1 06/502
- PLAYGROUND SURFACING TYPE 2 06/502
- COLOURED CONCRETE THICKENED EDGE BY CIVIL

FURNITURE & SITE FEATURES

- MOWING KERB (MK) 06/501
- PLAYGROUND BLOCK EDGING 07/501
- PLAYGROUND BOULDER EDGING 08-09/501
- FEATURE BOULDERS 10/501
- SHADE STRUCTURE 01-03/503
- PICNIC SETTING 01-02/504
- BENCH SEAT 03-05/504
- BOLLARD FIXED 06/503
- BOLLARD REMOVABLE 05/503
- BIN 07/503
- INFORMATION SIGNAGE 06-08/506
- CoW PARK SIGN 04/503
- LIGHT POLE BY OTHERS
- BIKE RACK 08/503
- FEATURE LOG 11/501

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-505
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING.
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH
- ALL PLANTING TO HAVE ESTABLISHED IRRIGATION REFER TO IRRIGATION

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/NL
APPROVED	CD
SCALE	1:250@A1
DRAWING TITLE	SOFTSCAPE PLAN 4
DRAWING No.	12606-CG-STG36-304
REVISION	A

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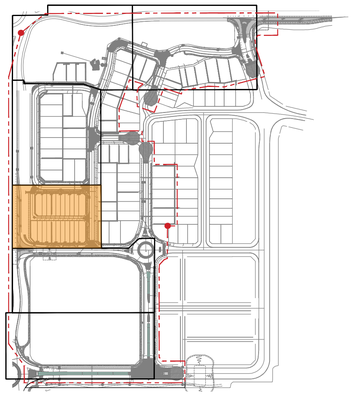

01
305
KEY PLAN
PLAN 1:4000 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- ALL BULK EARTHWORK TO BE COMPLETED BY CIVIL.
- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED.
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS WHERE APPLICABLE.
- REMOVED WEEDS AND ANY VEGETATION NOMINATED FOR REMOVAL PRIOR TO GRADING.
- THE ENTIRE SITE IS TO BE GRADED AS PER PROPOSED LEVELS TO A SMOOTH EVEN SURFACE. NO UNDULATIONS, DIPS, MOUNDS AND THE LIKE TARE TO REMAIN. ALL LEVELS SHOULD GRADE EVENLY BETWEEN ALL SURROUNDING KERB LINES.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES.
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-505
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING.
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH
- ALL PLANTING TO HAVE ESTABLISHED IRRIGATION REFER TO IRRIGATION DRAWING



02
305
SOFTSCAPE PLAN
PLAN 1:250 @ A1

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- EXTENT OF WIDENED VERGE WORKS
- EXTENT OF ENTRY STATEMENT WORKS

TREES

- EXISTING TREE TO BE RETAINED
- EXISTING MACROZAMIA TO BE RETAINED
- PROPOSED 1000LT TREE (SEE SCHEDULE)
- PROPOSED 500LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 200LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 90-100LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 45LT TREE (SEE SCHEDULE)

SURFACE FINISHES

- IRRIGATED TURF — KIKUYU 04/505
- HIGH SHRUBS — REFER TO PLANT PLAN AND SCHEDULE
- MEDIUM SHRUBS — REFER TO PLANT PLAN AND SCHEDULE 01/505
- LOW SHRUBS AND GROUNDCOVERS — REFER TO PLANT PLAN AND SCHEDULE
- TURF SUBSTITUTE — REFER TO PLANT PLAN AND SCHEDULE
- VEGETATED SWALE/BASIN — TUBESTOCK/2 MID MULCH, REFER TO PLANT PLAN AND SCHEDULE 02/505
- FEATURE PLANTING — REFER TO PLANT PLAN AND SCHEDULE
- PLANTING AREA BELOW EXISTING TREE (TUBESTOCK ONLY) 03/505
- TREE INSTALLED WITH ROOT CONTROL BARRIER 02/505
- MULCH MAINTENANCE STRIP 600mm
- PLAYGROUND SURFACING TYPE 1 06/502
- PLAYGROUND SURFACING TYPE 2 06/502
- COLOURED CONCRETE THICKENED EDGE BY CIVIL

FURNITURE & SITE FEATURES

- MOWING KERB (MK) 06/501
- PLAYGROUND BLOCK EDGING 07/501
- PLAYGROUND BOULDER EDGING 08-09/501
- FEATURE BOULDERS 10/501
- SHADE STRUCTURE 01-03/503
- PICNIC SETTING 01-02/504
- BENCH SEAT 03-05/504
- BOLLARD FIXED 06/503
- BOLLARD REMOVABLE 05/503
- BIN 07/503
- INFORMATION SIGNAGE 06-09/504
- CoW PARK SIGN 04/503
- LIGHT POLE BY OTHERS
- BIKE RACK 08/503
- FEATURE LOG 11/501

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/NL
APPROVED	GD
SCALE	1:250@A1
DRAWING TITLE	SOFTSCAPE PLAN 5
DRAWING No.	12606-CG-STG36-305
REVISION	A

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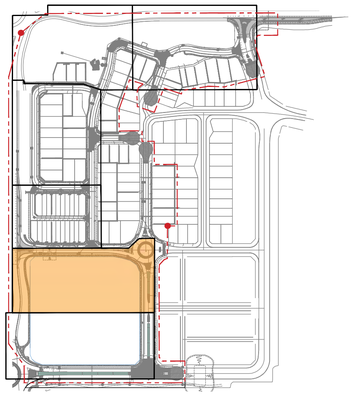

01 306 KEY PLAN
PLAN 1:4000 @ A1

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- EXTENT OF WIDENED VERGE WORKS
- EXTENT OF ENTRY STATEMENT WORKS

TREES

- EXISTING TREE TO BE RETAINED
- EXISTING MACROZAMIA TO BE RETAINED
- PROPOSED 1000LT TREE — SEE SCHEDULE
- PROPOSED 500LT TREE — SEE SCHEDULE — 06/505
- PROPOSED 200LT TREE — SEE SCHEDULE — 06/505
- PROPOSED 90-100LT TREE — SEE SCHEDULE — 06/505
- PROPOSED 45LT TREE — SEE SCHEDULE — 06/505

FURNITURE & SITE FEATURES

- MOWING KERB (MK) — 06/501
- PLAYGROUND BLOCK EDGING — 07/501
- PLAYGROUND BOULDER EDGING — 08-09/501
- FEATURE BOULDERS — 10/501
- SHADE STRUCTURE — 01-03/503
- PICNIC SETTING — 01-02/504
- BENCH SEAT — 03-05/504
- BOLLARD FIXED — 06/503
- BOLLARD REMOVABLE — 05/503
- BIN — 07/503
- INFORMATION SIGNAGE — 06-09/504
- CoW PARK SIGN — 04/503
- LIGHT POLE BY OTHERS
- BIKE RACK — 08/503
- FEATURE LOG — 01/501

SURFACE FINISHES

- IRRIGATED TURF KIKUYU — 04/505
- HIGH SHRUBS REFER TO PLANT PLAN AND SCHEDULE
- MEDIUM SHRUBS REFER TO PLANT PLAN AND SCHEDULE — 01/505
- LOW SHRUBS AND GROUNDCOVERS REFER TO PLANT PLAN AND SCHEDULE
- TURF SUBSTITUTE REFER TO PLANT PLAN AND SCHEDULE
- VEGETATED SWALE/BASIN TUBESTOCK/2 MULCH REFER TO PLANT PLAN AND SCHEDULE — 02/505
- FEATURE PLANTING REFER TO PLANT PLAN AND SCHEDULE
- PLANTING AREA BELOW EXISTING TREE (TUBESTOCK ONLY) — 03/505
- TREE INSTALLED WITH ROOT CONTROL BARRIER — 07/505
- MULCH MAINTENANCE STRIP 600mm
- PLAYGROUND SURFACING TYPE 1 — 06/502
- PLAYGROUND SURFACING TYPE 2 — 06/502

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- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- ALL BULK EARTHWORK TO BE COMPLETED BY CIVIL.
- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED.
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS WHERE APPLICABLE
- REMOVED WEEDS AND ANY VEGETATION NOMINATED FOR REMOVAL PRIOR TO GRADING.
- THE ENTIRE SITE IS TO BE GRADED AS PER PROPOSED LEVELS TO A SMOOTH EVEN SURFACE. NO UNDULATIONS, DIPS, MOUNDS AND THE LIKE TARE TO REMAIN. ALL LEVELS SHOULD GRADE EVENLY BETWEEN ALL SURROUNDING KERB LINES.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-505
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH
- ALL PLANTING TO HAVE ESTABLISHED IRRIGATION REFER TO IRRIGATION DRAWING.

MATCHLINE -SEE DRAWING 02/305

JM x 6

5/m2
86 x Egr
86 x Gcp
86 x Hpu
87 x Po
87 x Ll

JM x 8

5/m2
93 x Egr
93 x Gcp
93 x Hpu
93 x Po
94 x Ll

CP x 1

6/m2
36 x Acc
36 x Cql
36 x Dd
36 x Dlc
35 x Egb
35 x Egr

6/m2
135 x Acc
135 x Cql
135 x Dd
135 x Dlc
135 x Egb
135 x Egr

EM x 1

4/m2
43 x Acc
43 x Cql
43 x Dd
43 x Dlc
43 x Egb
43 x Egr
43 x Gcp
43 x Hp
43 x Hs
43 x Lb
43 x Ll
42 x Mip
42 x Po
42 x Scp
42 x Sn

ED x 3

4/m2
14.9 x Acc
14.9 x Cql
14.9 x Dd
14.9 x Dlc
14.9 x Egb
14.9 x Egr
14.9 x Gcp
14.9 x Hp
14.9 x Hs
14.9 x Lb
14.9 x Ll
14.9 x Mip
14.9 x Po
14.9 x Scp
14.9 x Sn

ED x 1

EM x 3

EG x 2

EM x 1

LSx 1

6/m2
254 x Cql
254 x Dd
254 x Egr
253 x Gcp
253 x Mip

5/m2
22 x Egr
22 x Gcp
21 x Hpu
21 x Po
21 x Ll

8/m2(TUBESTOCK)
20 x Be
20 x Coa
20 x Dcb
20 x Js
20 x Lg
20 x Lc
20 x Mip
20 x Scp

STREET TREE SPECIES SELECTION TO BE AGREED AS PART OF STREET TREE MASTERPLAN APPROVAL PROCESS

8/m2(TUBESTOCK)
24 x Be
24 x Coa
24 x Dcb
24 x Js
24 x Lg
24 x Lc
24 x Mip
24 x Scp

5/m2
104 x Egr
104 x Gcp
104 x Hpu
104 x Po
104 x Ll

KURANDA ROAD

MATCHLINE -SEE DRAWING 02/307

02 306 SOFTSCAPE PLAN
PLAN 1:250 @ A1

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	SOFTSCAPE PLAN 6
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-306
SCALE	1:250@A1		REVISION A

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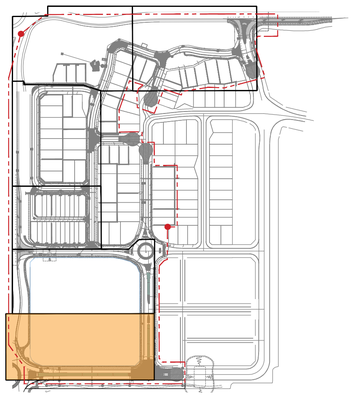

01 / 307 KEY PLAN
PLAN 1:4000 @ A1

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- EXTENT OF WIDENED VERGE WORKS
- EXTENT OF ENTRY STATEMENT WORKS

TREES

- EXISTING TREE TO BE RETAINED
- EXISTING MACROZAMIA TO BE RETAINED
- PROPOSED 1000LT TREE (SEE SCHEDULE)
- PROPOSED 500LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 200LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 90-100LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 45LT TREE (SEE SCHEDULE) 06/505

FURNITURE & SITE FEATURES

- MOWING KERB (MK) 06/501
- PLAYGROUND BLOCK EDGING 07/501
- PLAYGROUND BOULDER EDGING 08-02/501
- FEATURE BOULDERS 10/501
- SHADE STRUCTURE 01-03/503
- PICNIC SETTING 01-02/504
- BENCH SEAT 03-02/504
- BOLLARD FIXED 06/503
- BOLLARD REMOVABLE 05/503
- BIN 07/503
- INFORMATION SIGNAGE 06-09/504
- CoW PARK SIGN 04/503
- LIGHT POLE BY OTHERS
- BIKE RACK 08/503
- FEATURE LOG 10/501

SURFACE FINISHES

- IRRIGATED TURF KIKUYU 04/505
- HIGH SHRUBS REFER TO PLANT PLAN AND SCHEDULE
- MEDIUM SHRUBS REFER TO PLANT PLAN AND SCHEDULE 01/505
- LOW SHRUBS AND GROUNDCOVERS REFER TO PLANT PLAN AND SCHEDULE
- TURF SUBSTITUTE REFER TO PLANT PLAN AND SCHEDULE
- VEGETATED SWALE/BASIN TUBESTOCK/NO MULCH REFER TO PLANT PLAN AND SCHEDULE 02/505
- FEATURE PLANTING REFER TO PLANT PLAN AND SCHEDULE
- PLANTING AREA BELOW EXISTING TREE (TUBESTOCK ONLY) 03/505
- TREE INSTALLED WITH ROOT CONTROL BARRIER 07/505
- MULCH MAINTENANCE STRIP 600mm
- PLAYGROUND SURFACING TYPE 1 06/502
- PLAYGROUND SURFACING TYPE 2 06/502

3128

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLAN PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER
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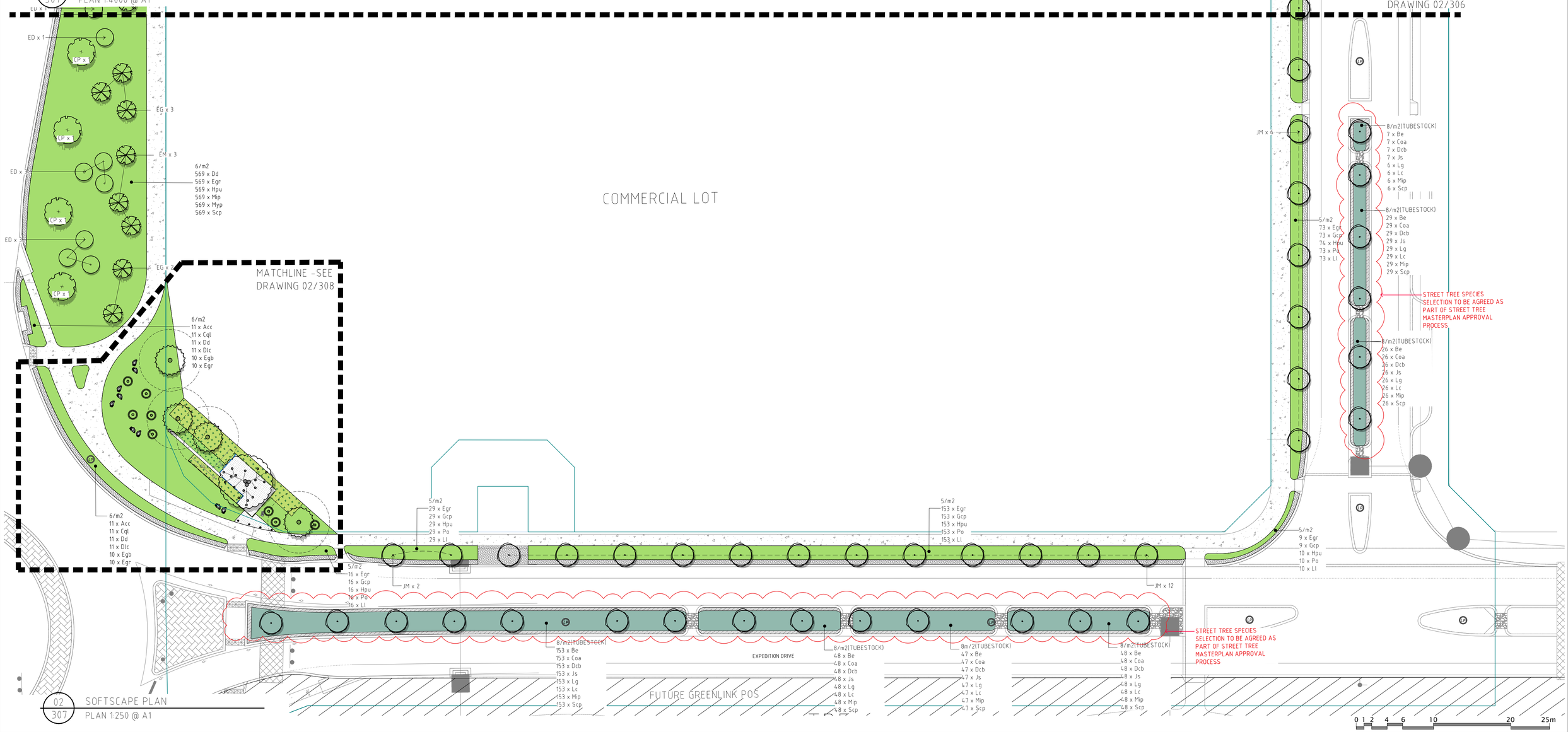
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- ALL BULK EARTHWORK TO BE COMPLETED BY CIVIL.
- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED.
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS WHERE APPLICABLE
- REMOVED WEEDS AND ANY VEGETATION NOMINATED FOR REMOVAL PRIOR TO GRADING.
- THE ENTIRE SITE IS TO BE GRADED AS PER PROPOSED LEVELS TO A SMOOTH EVEN SURFACE. NO UNDULATIONS, DIPS, MOUNDS AND THE LIKE TARE TO REMAIN. ALL LEVELS SHOULD GRADE EVENLY BETWEEN ALL SURROUNDING KERB LINES.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-505
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH
- ALL PLANTING TO HAVE ESTABLISHED IRRIGATION REFER TO IRRIGATION DRAWING.



02 / 307 SOFTSCAPE PLAN
PLAN 1:250 @ A1

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	SOFTSCAPE PLAN 7
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-307
SCALE	1:250@A1		REVISION A

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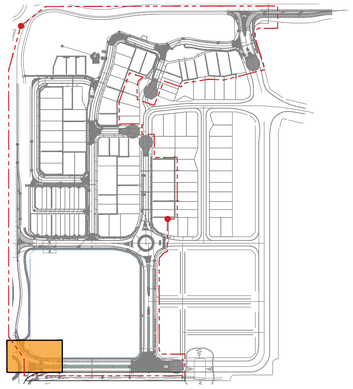

01
308
KEY PLAN
PLAN 1:4000 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
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- EXISTING GRADES ARE TO BE MAINTAINED.
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- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- ALL BULK EARTHWORK TO BE COMPLETED BY CIVIL.
- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED L SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RI SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPE
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- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXIS AND KERBS WHERE APPLICABLE
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- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-5
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECT SCHEDULES (LS-600)

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:01 TO LS-505
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PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOC APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FRO KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-505
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS L
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SEL TO SCHEDULES (LS-600)
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDE
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- ALL PLANTING TO HAVE ESTABLISHED IRRIGATION REFER TO IR DRAWING.

LIGHTING NOTES:

- WIND TREE TO BE INSTALLED WITH IN-BUILT LED LIGHTING
- 5W LED SPIKE LIGHTS TO BE INSTALLED ALONG FACE OF ENTRY WALL AT 1.2M CENTRES. POWER SOURCE: WIND TREE.
- POWER AND ELECTRICAL CONNECTION TO WIND TREE SUPPLIER'S DETAILS AND SPECIFICATIONS

EXISTING TREE PROTECTION:

- ALL EXISTING TREES AND VEGETATION INCLUDING GRASS T



02
308
SOFTSCAPE PLAN
PLAN 1:100 @ A1

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- EXTENT OF WIDENED VERGE WORKS
- EXTENT OF ENTRY STATEMENT WORKS

TREES & PLANTING

- EXISTING TREE TO BE RETAINED
- EXISTING MACROZAMIA TO BE RETAINED
- PROPOSED 500LT TREE SEE SCHEDULE
- PROPOSED 200LT TREE SEE SCHEDULE — 06/505
- PROPOSED 100-90LT TREE SEE SCHEDULE — 06/505
- PROPOSED 45LT TREE SEE SCHEDULE — 06/505
- SALVAGED GRASS TREE TRANSPLANTS
- JACARANDA MIMOSIFOLIA TRANSPLANTS

SURFACE FINISHES

- IRRIGATED TURF KIKUYU — 06/505
- HIGH SHRUBS REFER TO PLANT PLAN AND SCHEDULE
- MEDIUM SHRUBS REFER TO PLANT PLAN AND SCHEDULE — 01/505
- LOW SHRUBS AND GROUNDCOVERS REFER TO PLANT PLAN AND SCHEDULE
- FEATURE PLANTING REFER TO PLANT PLAN AND SCHEDULE
- MULCH MAINTENANCE STRIP 600mm

FURNITURE & SITE FEATURES

- WIND TREE
- RAISED ALUMINIUM EDGING — 06/506
- FLUSH ALUMINIUM EDGING — 07/506
- FREESTANDING ENTRY WALL AND SIGNAGE — 01-04/506
- LIGHT POLE BY OTHERS
- FEATURE BOULDERS — 10/501
- BOLLARD FIXED — 06/503
- INFORMATION SIGNAGE — 06-08/504

0 1 2 4 6 10m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

TIM DAVIES LANDSCAPING
three pitino court osborne park
western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
ens@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	SOFTSCAPE PLAN 8
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-308
SCALE	1:250@A1		REVISION A

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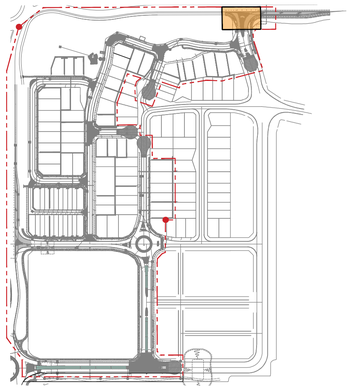

01 / 301 KEY PLAN
PLAN 1:4000 @ A1

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- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)

LIGHTING NOTES:

- WIND TREE TO BE INSTALLED WITH IN-BUILT LED LIGHTING
- 5W LED SPIKE LIGHTS TO BE INSTALLED ALONG FACE OF ENTRY WALL AT 1.2M CENTRES. POWER SOURCE: WIND TREE.
- POWER AND ELECTRICAL CONNECTION TO WIND TREE SUPPLIER'S DETAILS AND SPECIFICATIONS

PLANTING NOTES:

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- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH
- ALL PLANTING TO HAVE ESTABLISHED IRRIGATION REFER TO IRRIGATION DRAWING.

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- EXTENT OF WIDENED VERGE WORKS
- EXTENT OF ENTRY STATEMENT WORKS

TREES & PLANTING

- EXISTING TREE TO BE RETAINED
- EXISTING MACROZAMIA TO BE RETAINED
- PROPOSED 500LT TREE (SEE SCHEDULE)
- PROPOSED 200LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 100-90LT TREE (SEE SCHEDULE) 06/505
- PROPOSED 45LT TREE (SEE SCHEDULE) 06/505
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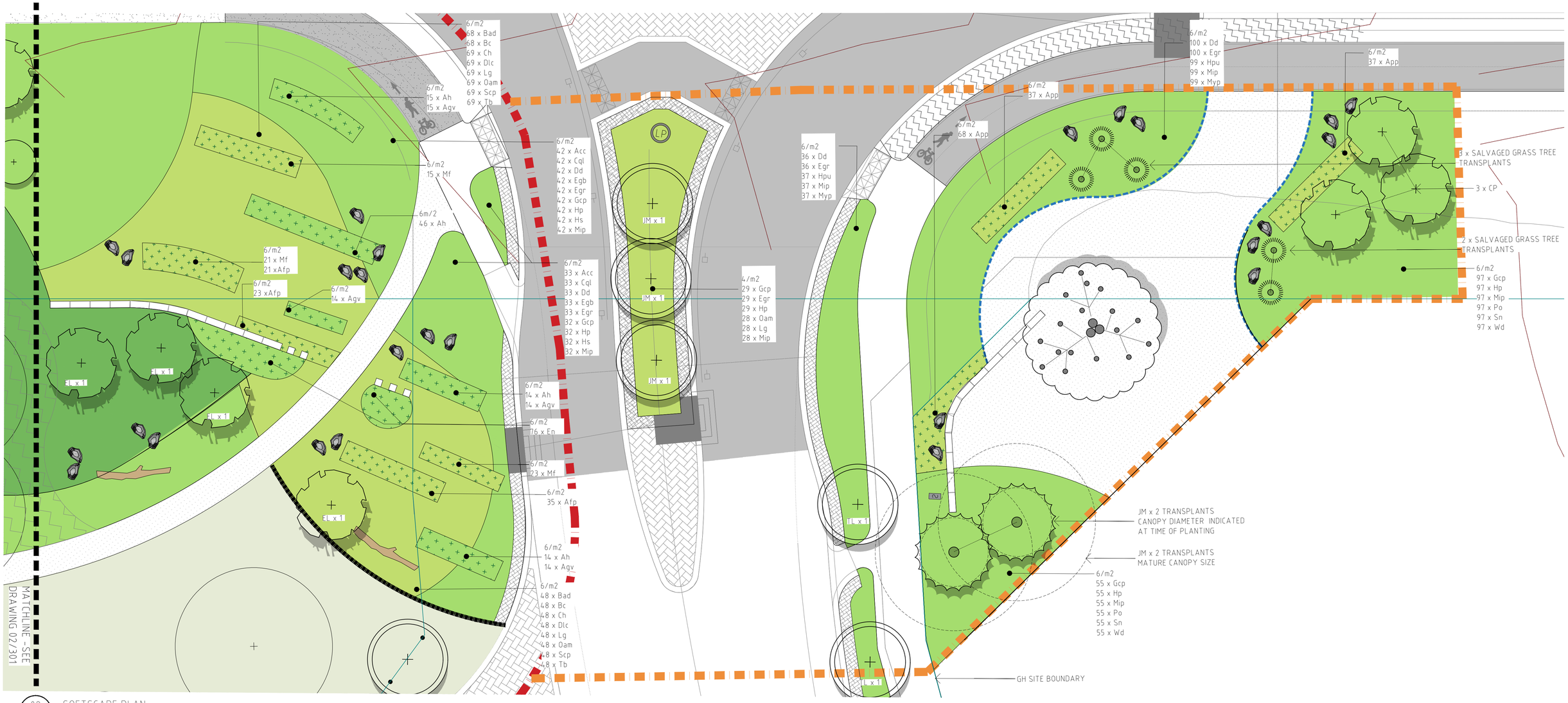
- MEDIUM SHRUBS REFER TO PLANT PLAN AND SCHEDULE 01/505
- LOW SHRUBS AND GROUNDCOVERS REFER TO PLANT PLAN AND SCHEDULE
- FEATURE PLANTING REFER TO PLANT PLAN AND SCHEDULE
- MULCH MAINTENANCE STRIP 600mm

FURNITURE & SITE FEATURES

- WIND TREE
- FLUSH ALUMINIUM EDGING 06/507
- MOWING KERB (MK) 06/501
- FEATURE LOG 11/501
- FEATURE BOULDERS 10/501
- INFORMATION SIGNAGE 06-09/504



02 / 309 SOFTSCAPE PLAN
PLAN 1:100 @ A1

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA GREEN STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

TIM DAVIES LANDSCAPING
three pitons court osborne park
western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/NL
APPROVED	GD
SCALE	250@A1
DRAWING TITLE	SOFTSCAPE PLAN 9
DRAWING No.	12606-CG-STG36-309
REVISION	A

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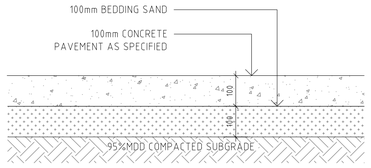
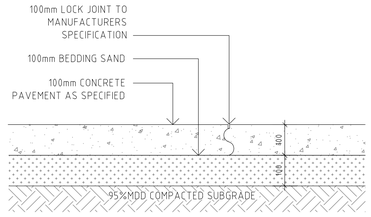
NOTE:
- MINIMUM 1% FALL TO NEAREST PLANTING OR DRAIN
- WHERE CONCRETE PAVING IS ADJACENT TO TURF, FINISH LEVEL OF TURF SHALL BE FLUSH WITH THE FINISH LEVEL OF CONCRETE.
- WHERE CONCRETE PAVING IS ADJACENT TO PLANTING, FINISH LEVEL OF MULCH TO PLANTING SHALL BE 20MM BELOW FINISHED PAVING LEVEL.
- ALL CONCRETE TO BE 32 MPa, MIN 20mm AGGREGATE & MAX SLUMP OF 65mm
- EXPANSION JOINT EVERY 6M, CONTRACTION JOINT EVERY 2M
- FINISH - AS NOMINATED IN LEGEND

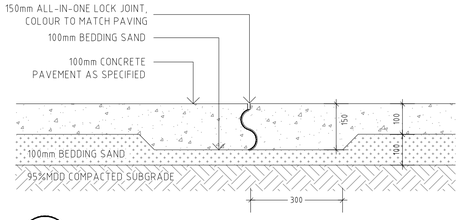


01 501 CONCRETE FOOTPATH
TYPICAL DETAIL 1:10 @ A1

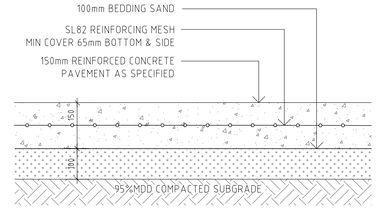
NOTE:
- INSTALL LOCK JOINT @ 2m MAX CTS



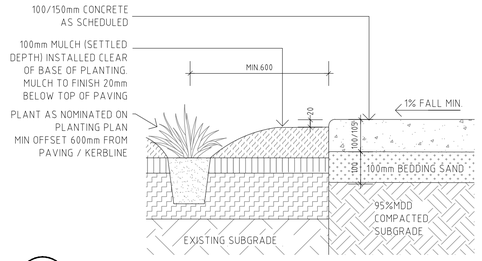
02 501 CONTRACTION JOINT - LOCK JOINT
TYPICAL DETAIL 1:10 @ A1



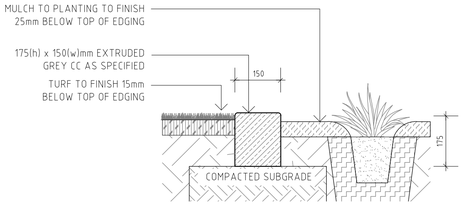
03 501 EXPANSION JOINT - TYPE 1
TYPICAL DETAIL 1:10 @ A1



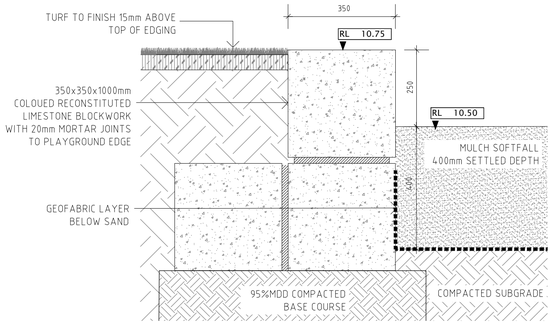
04 501 REINFORCED CONCRETE
TYPICAL DETAIL 1:10 @ A1



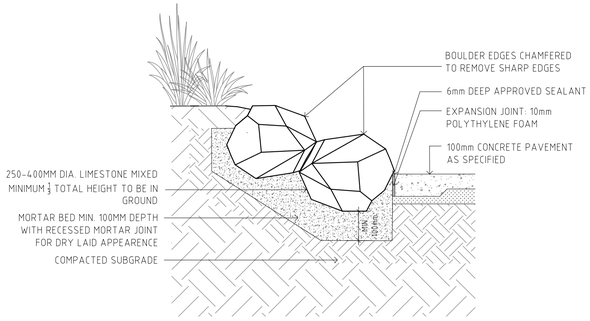
05 501 CONCRETE PATH TO GARDEN BED
TYPICAL SECTION 1:10 @ A1



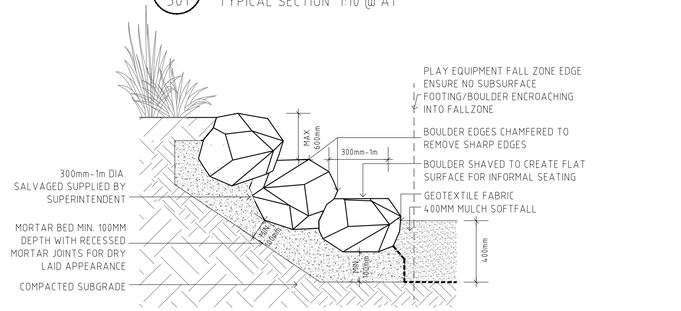
06 501 MOWING KERB
TYPICAL SECTION 1:10 @ A1



07 501 LIMESTONE PLAYGROUND EDGE
TYPICAL DETAIL 1:10 @ A1

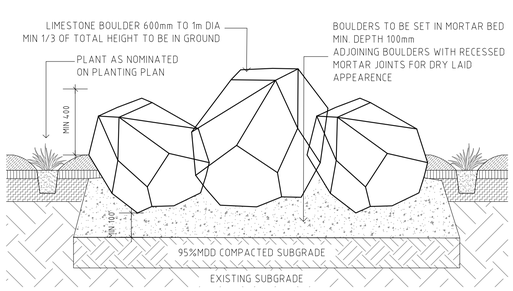


08 501 SALVAGED BOULDER PLAYGROUND EDGE 1
TYPICAL DETAIL 1:20 @ A1

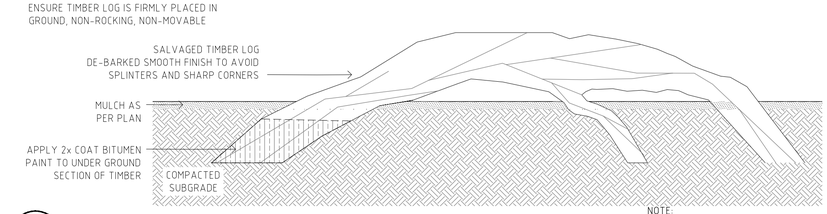


09 501 SALVAGED BOULDER PLAYGROUND EDGE 2
TYPICAL DETAIL 1:20 @ A1

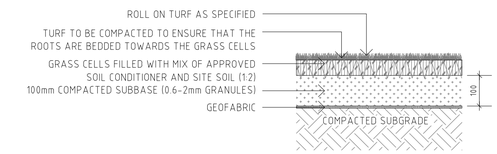
LIMESTONE BOULDERS:
SOURCE: ON SITE
CONTRACTOR TO LIAISE WITH SUPERINTENDENT FOR SOURCING



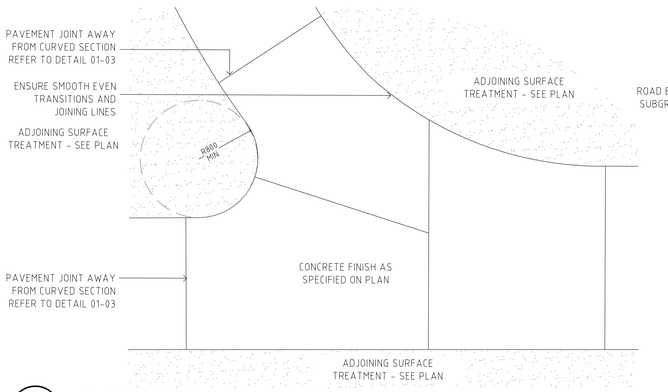
10 502 FEATURE BOULDER
TYPICAL DETAIL 1:20 @ A1



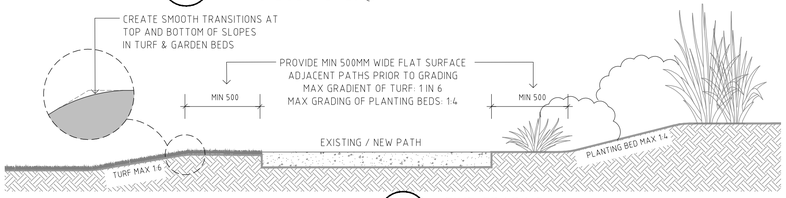
11 501 FEATURE LOG
TYPICAL DETAIL 1:20 @ A1



12 501 TRAFFICABLE PERMEABLE PAVEMENT
TYPICAL SECTION 1:10 @ A1

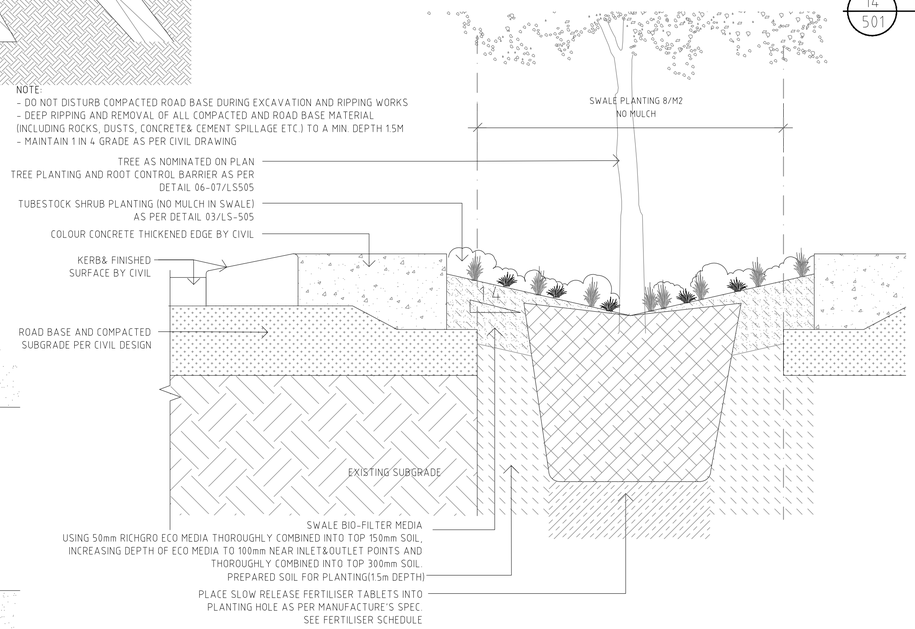


13 501 CONCRETE PAVEMENT - INTERSECTION
TYPICAL SECTION 1:50 @ A1



14 501 FINE GRADING
TYPICAL SECTION 1:20 @ A1

NOTE:
- DO NOT DISTURB COMPACTED ROAD BASE DURING EXCAVATION AND RIPPING WORKS
- DEEP RIPPING AND REMOVAL OF ALL COMPACTED AND ROAD BASE MATERIAL (INCLUDING ROCKS, DUSTS, CONCRETE& CEMENT SPILLAGE ETC.) TO A MIN. DEPTH 1.5M
- MAINTAIN 1 IN 4 GRADE AS PER CIVIL DRAWING



15 501 MEDIAN SWALE PLANTING
TYPICAL SECTION 1:10 @ A1

GENERAL NOTES:

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CATALINA ESTATE
CATALINA GREEN - STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/ NL	20.04.22
A	ISSUE FOR APPROVAL	AF/ JZ	05.07.22

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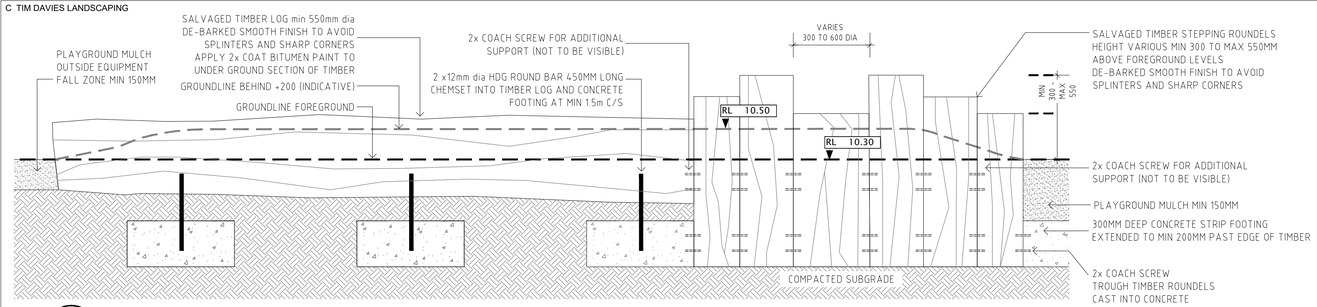
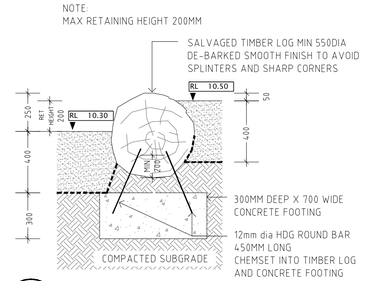
western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
esa@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	DETAILS 1 - HARDSCAPE
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-501
SCALE	AS SHOWN		REVISION A

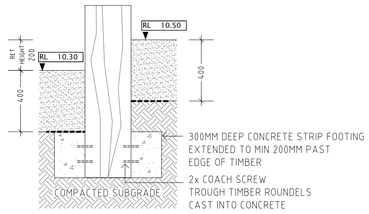
C TIM DAVIES LANDSCAPING



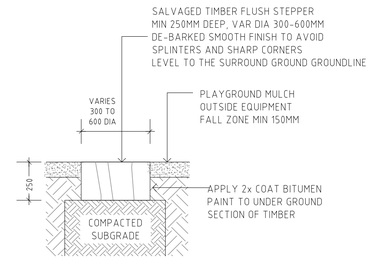
01 / 502 TIMBER STEPPER AND LOG RETAINING EDGE
TYPICAL ELEVATION 1:20 @ A1



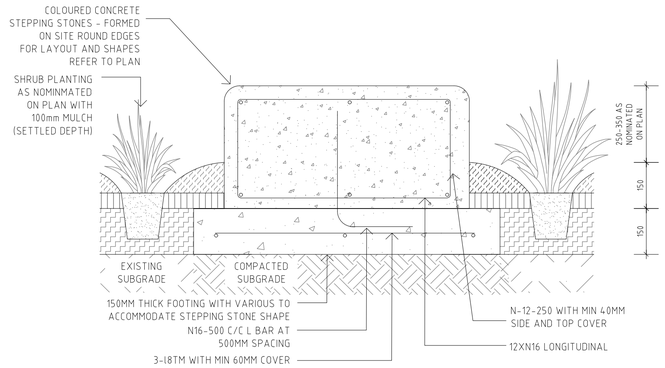
02 / 502 TIMBER LOG EDGING
TYPICAL SECTION 1:20 @ A1



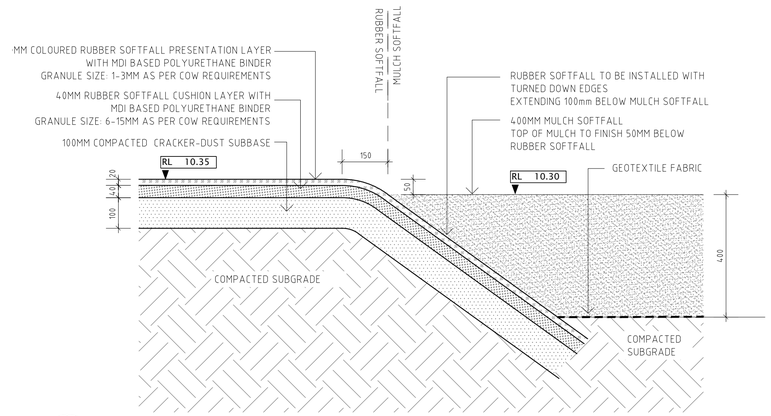
03 / 502 TIMBER STEPPER EDGING
TYPICAL SECTION 1:20 @ A1



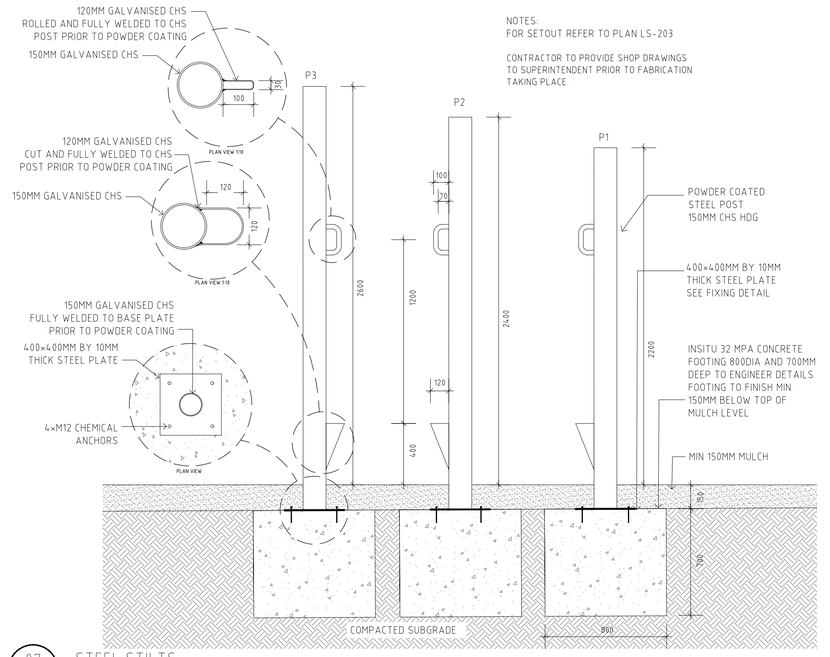
04 / 201 FLUSH TIMBER STEPPER
DETAIL 1:10 @ A1



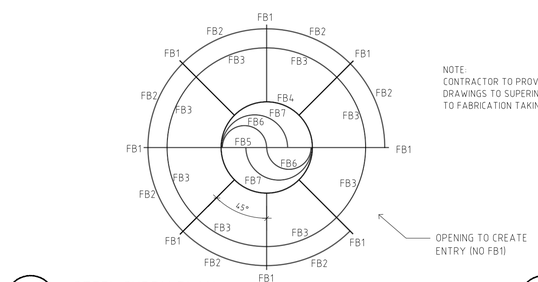
05 / 502 CONCRETE COLOURED STEPPERS
TYPICAL DETAIL 1:10 @ A1



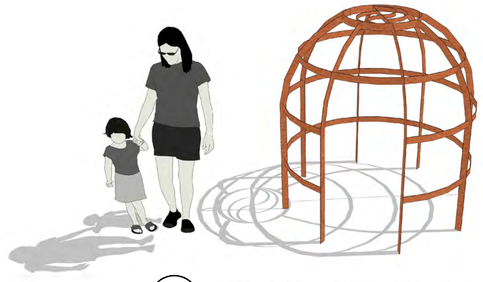
06 / 502 RUBBER SOFTFALL
TYPICAL DETAIL 1:10 @ A1



07 / 502 STEEL STILTS
TYPICAL SECTION 1:10 @ A1

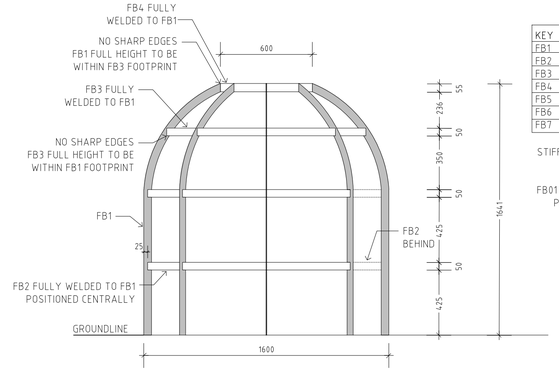


09 / 502 STEEL CUBBY PLAN
PLAN 1:20 @ A1



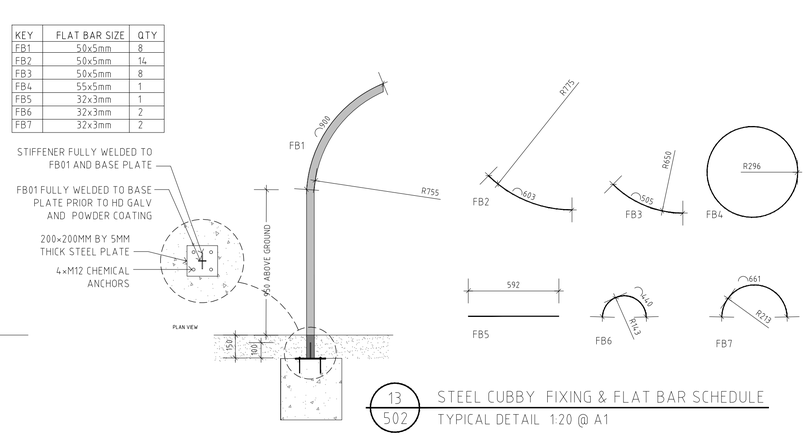
11 / 502 CATALINA GREEN LOGO
NTS

12 / 502 STEEL CUBBY INDICATIVE 3D VISUAL
NTS

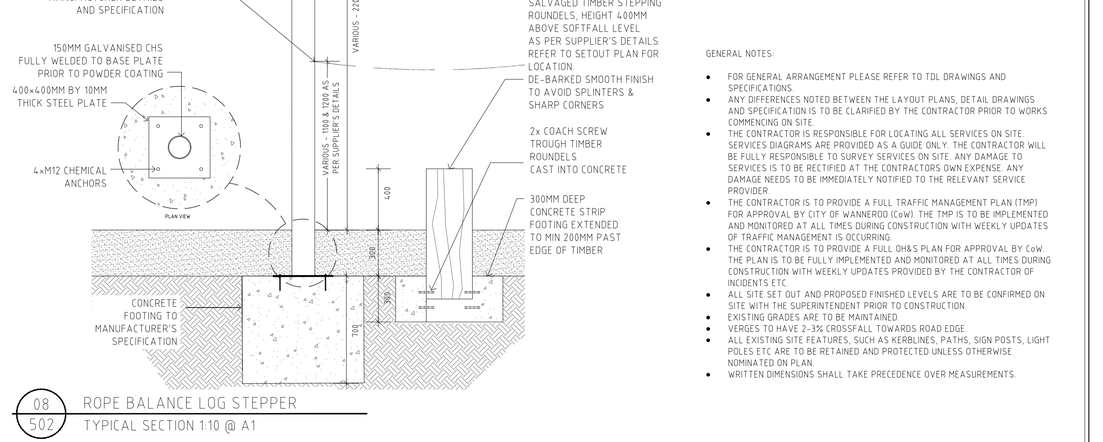


10 / 502 STEEL CUBBY ELEVATION
ELEVATION 1:20 @ A1

KEY	FLAT BAR SIZE	QTY
FB1	50x5mm	8
FB2	50x5mm	14
FB3	50x5mm	8
FB4	55x5mm	1
FB5	32x3mm	1
FB6	32x3mm	2
FB7	32x3mm	2



13 / 502 STEEL CUBBY FIXING & FLAT BAR SCHEDULE
TYPICAL DETAIL 1:20 @ A1



08 / 502 ROPE BALANCE LOG STEPPER
TYPICAL SECTION 1:10 @ A1

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CATALINA ESTATE
CATALINA GREEN-STAGE 36

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facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	DETAILS 2 - PLAY AREA
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-502
SCALE	AS SHOWN		REVISION A

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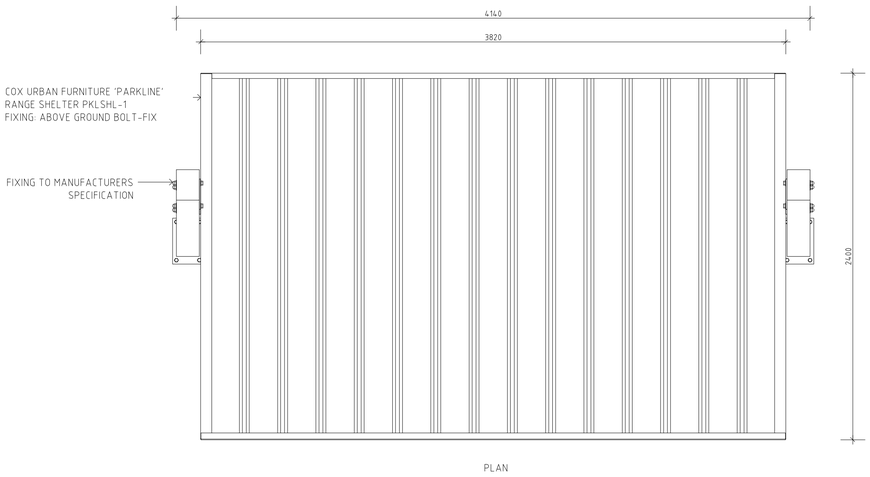
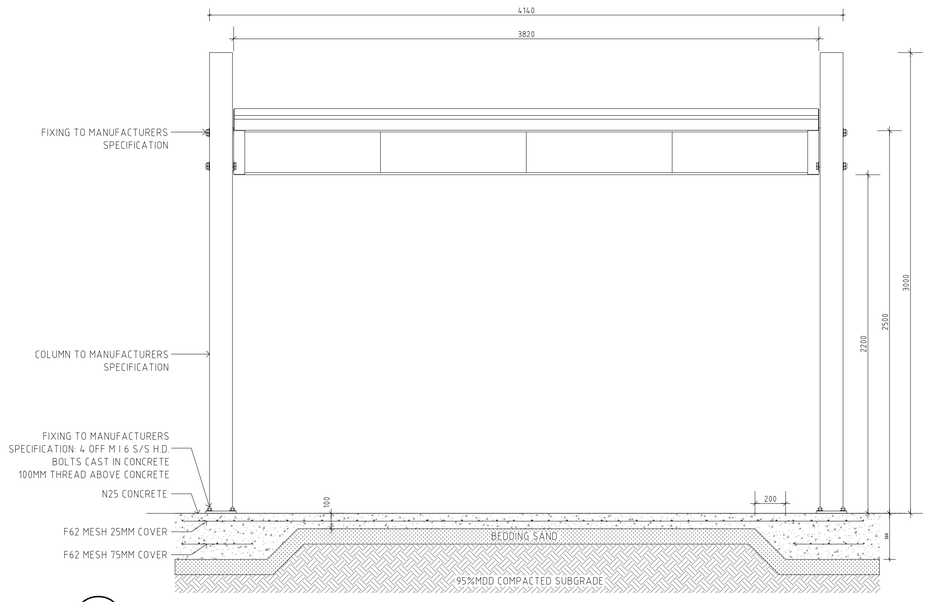


01 503 SHELTER PLAN
PLAN 1:20 @ A1

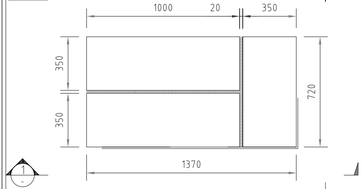


02 503 SHELTER ELEVATION AND CONCRETE PAD
ELEVATION 1:20 @ A1



03 503 SHELTER - INDICATIVE 3D VISUAL
NTS

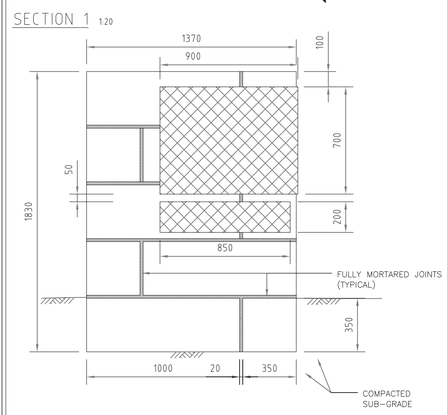
PLAN 1:20



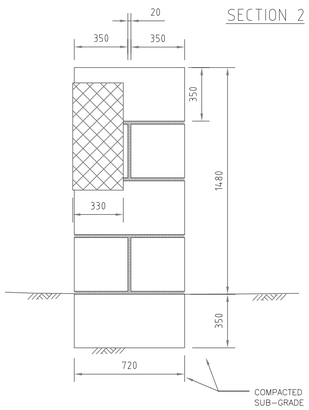
NOTES

- PANEL AND PLATE TO BE FABRICATED FROM 3mm ALUMINIUM SHEETING.
- PANEL TO BE FOLDED PRIOR TO DELIVERY ON SITE.
- PANEL AND PLATE TO BE ADHERED TO LIMESTONE STRUCTURE USING SUITABLE COMPOUND TO ENSURE A PERMANENT FIXING.
- WALL SHALL BE CONSTRUCTED FROM RECONSTITUTED LIMESTONE BLOCKS OF SIZES 1000mm x 350mm x 350mm BUILT IN ACCORDANCE WITH DETAILS ON THIS DRAWING.
- REFER TO LANDSCAPE CONSULTANT'S DRAWINGS FOR LOCATION OF WALL.
- DENSITY OF RECONSTITUTED LIMESTONE SHALL BE A MINIMUM OF 1650kg/m.
- ENSURE ALL JOINTS ARE FULLY MORTARED.
- MORTAR SHALL BE 1:1:6 (CEMENT; LIME; SAND). MORTAR COLOUR TO MATCH RECONSTITUTED LIMESTONE BLOCKS.

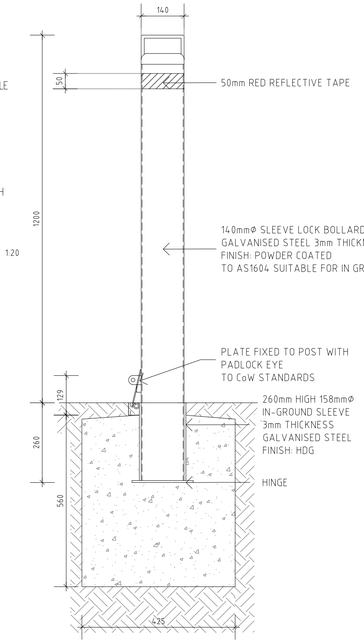
SECTION 1 1:20



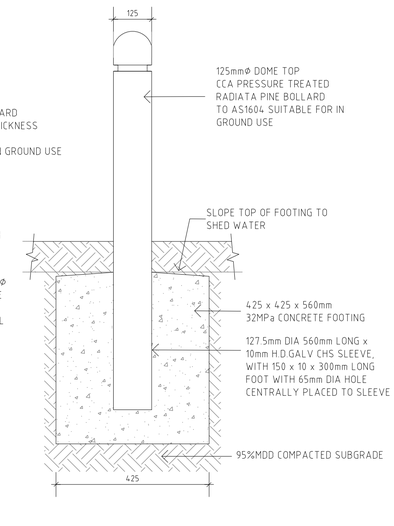
SECTION 2 1:20



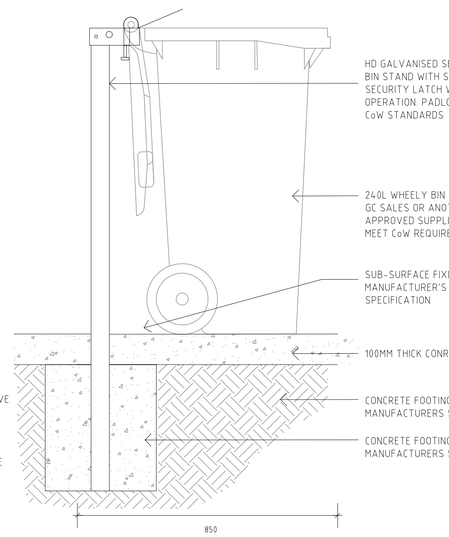
04 503 PARK SIGN - AS PER CoW STANDARD DRAWING TS 06-5-2
SECTION 1:20 @ A1



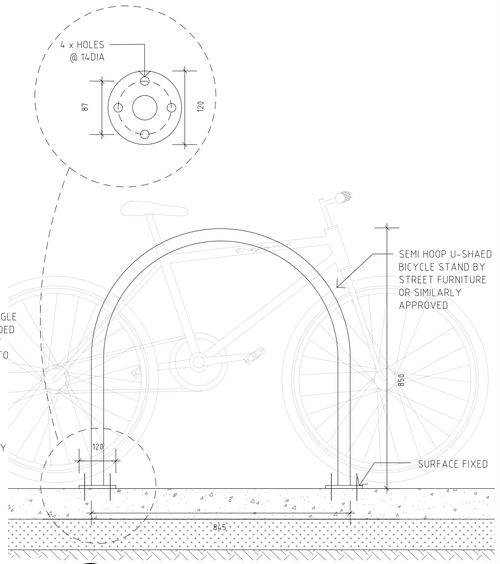
05 503 REMOVABLE BOLLARD
TYPICAL DETAIL 1:10 @ A1



06 503 FIXED BOLLARD
TYPICAL DETAIL 1:10 @ A1



07 503 BIN FIXING DETAIL
TYPICAL SECTION 1:10 @ A1



08 503 BIKE RACK
TYPICAL SECTION 1:10 @ A1

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CATALINA GREEN-STAGE 36

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A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/NL
APPROVED	GD
SCALE	AS SHOWN
DRAWING TITLE	DETAILS 3 - FURNITURE
DRAWING No.	12606-CG-STG36-503
REVISION	A

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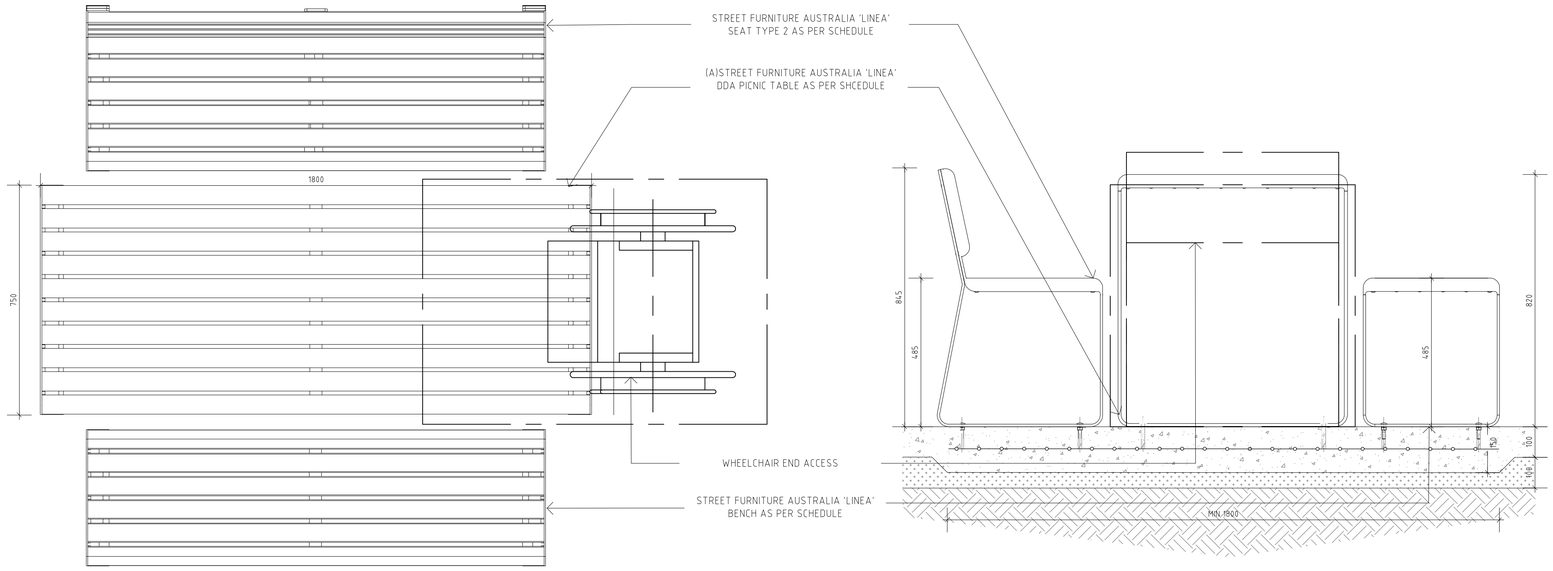
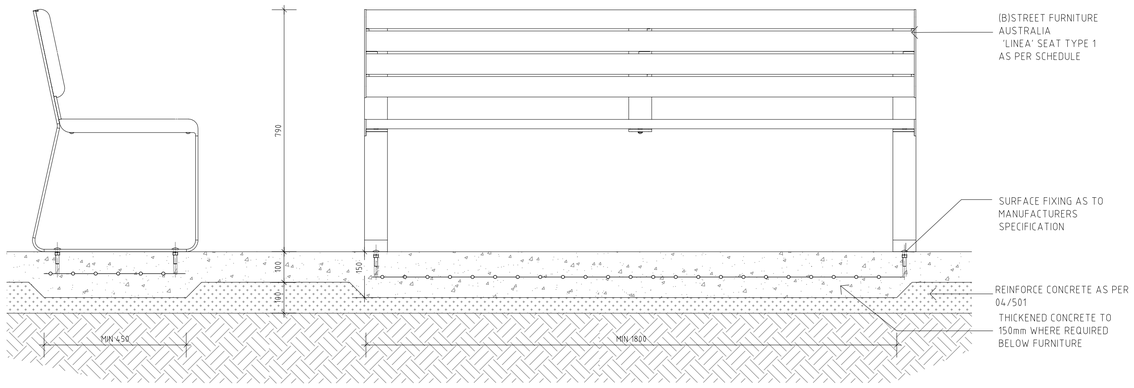


01 504 PICNIC SETTING
PLAN 1:10 @ A1

02 504 PICNIC SETTING
ELEVATION 1:10 @ A1



03 504 FREE STANDING SEAT
ELEVATION 1:10 @ A1

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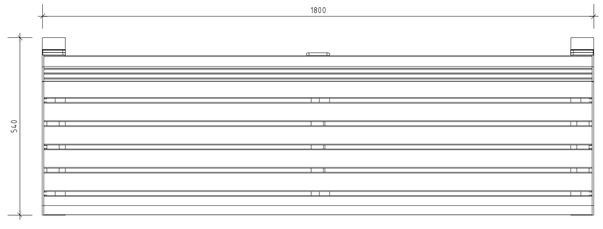
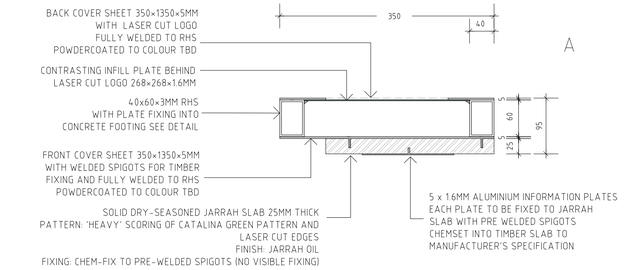


04 504 FREE STANDING SEAT
PLAN 1:10 @ A1

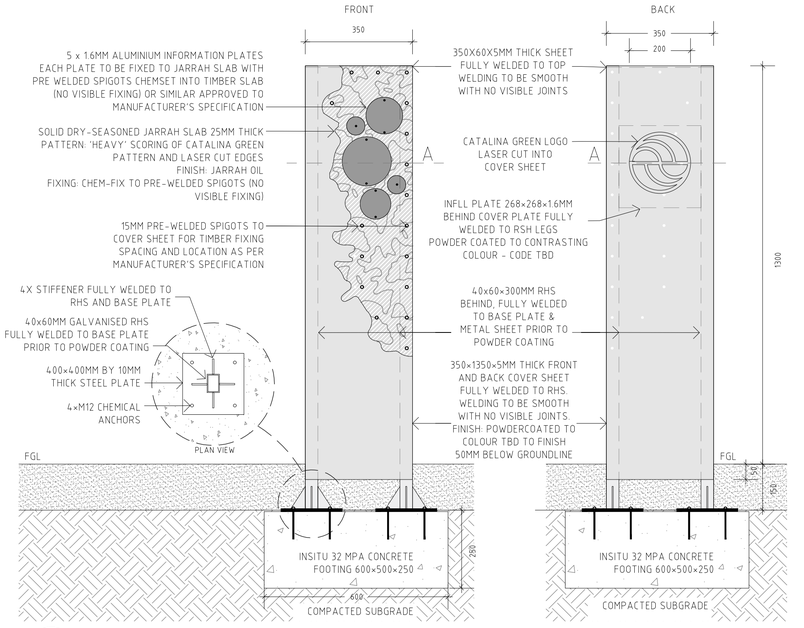


05 504 SEATING - INDICATIVE 3D VISUAL
NTS



NOTE:
CONTRACTOR TO PROVIDE SHOP DRAWINGS TO SUPERINTENDENT PRIOR TO FABRICATION TAKING PLACE.

06 504 INFORMATION SIGNAGE
PLAN 1:5 @ A1



07 504 INFORMATION SIGNAGE
ELEVATION 1:10 @ A1



EDIBLE PLANT SPECIES

RESCUED TREES IN WIDENED VERGES

09 504 INFORMATION SIGNAGE - POTENTIAL CONTENT
NTS



08 504 INFORMATION SIGNAGE - INDICATIVE 3D VISUAL
NTS

CATALINA ESTATE
CATALINA GREEN- STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	DETAILS 4 - FURNITURE
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-504
SCALE	AS SHOWN		REVISION A

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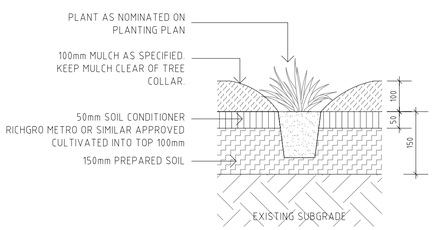
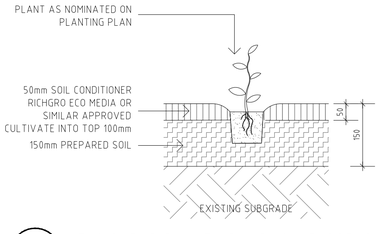


01 505 — 140/200mm SHRUB PLANTING TO PREPARED SOIL
TYPICAL DETAIL 1:10 @ A1

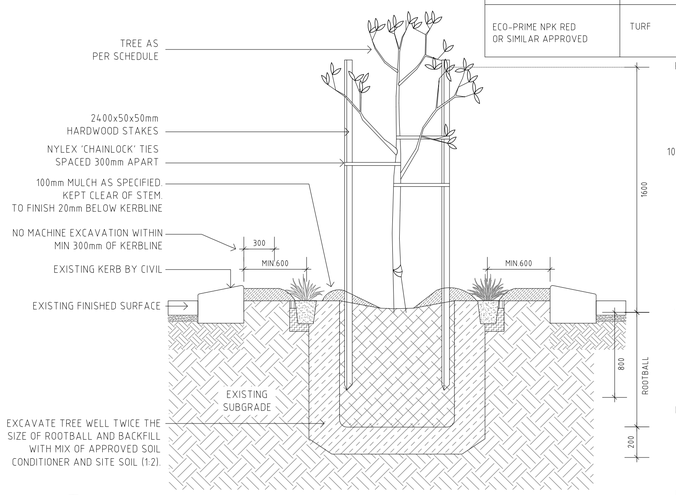


02 505 — T/S SHRUB PLANTING IN BASIN FLOOR/SWALE
TYPICAL DETAIL 1:10 @ A1

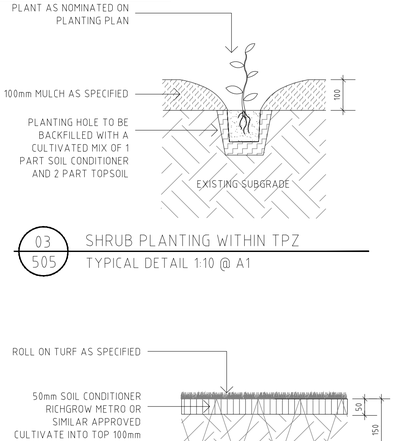
FERTILISER SCHEDULE AT INSTALLATION (REFER TO SPEC):		
AGRIFORM 20-4-4-2 FERTILISER TABLETS OR SIMILAR APPROVED	EXOTIC TREE STOCK	8 x 21g TABLETS PER TREE
LANGLEY TROFORTE 21-1-6 FERTILISER TABLETS OR SIMILAR APPROVED	NATIVE TREE STOCK	15 x 10g TABLETS PER TREE
BAYLEYS NATIVE PLANT FOOD FERTILISER GRANULES OR SIMILAR APPROVED	SHRUBS AND GROUNDCOVERS	15g PER T/S 20g PER 130/140mm STOCK
ECO-PRIME NPK RED OR SIMILAR APPROVED	TURF	10kg PER 50m2

STAKING AND GUYING

>500LT AND TRANSPLANTS:	UNDERGROUND GUYING
200-500LT TREE STOCK:	3 X 2400x50x50mm HARDWOOD STAKES
45-150LT TREE STOCK:	2 X 1800x50x50mm HARDWOOD STAKES

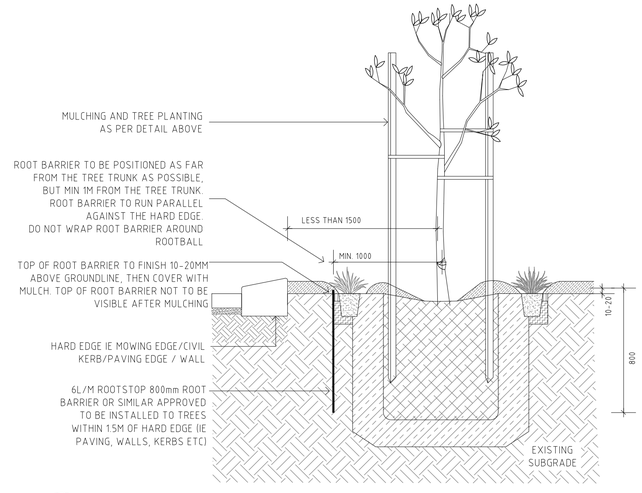


06 505 — 45-500L TREE PLANTING
TYPICAL DETAIL 1:20 @ A1



03 505 — SHRUB PLANTING WITHIN TPZ
TYPICAL DETAIL 1:10 @ A1

04 505 — ROLL ON TURF
TYPICAL DETAIL 1:10 @ A1



07 505 — LINEAR ROOT CONTROL BARRIER
TYPICAL DETAIL 1:20 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

Key	Species	Common Name	Plant per m2	Preferred pot size	Qty POS	Qty Entry 01 & 02	Qty Medians& Roundabouts	Qty Verges	Qty Total
Trees									
AA	Acacia acuminata	Mangart and Jam	As shown	200L	4				4
CP	Corymbia ptychocarpa	Swamp Bloodwood	As shown	200L	8	3		79	90
CP	Corymbia ptychocarpa	Swamp Bloodwood	As shown	100L	7				7
ED	Eucalyptus decipiens	Redheart Moit	As shown	45L				69	69
EE	Eucalyptus erythrocorys	Illyarrie	As shown	200L	10			18	28
EE	Eucalyptus erythrocorys	Illyarrie	As shown	45L				10	10
EG	Eucalyptus gomphocephala	Tuart	As shown	200L	7				7
EG	Eucalyptus gomphocephala	Tuart	As shown	100L	10			46	56
EL	Eucalyptus leucoxylon	Blue Gum	As shown	500L	13			1	14
EL	Eucalyptus leucoxylon	Blue Gum	As shown	200L		1		8	9
EL	Eucalyptus leucoxylon	Blue Gum	As shown	100L				4	4
EM	Eucalyptus marginata	Jarrah	As shown	100L	11			59	70
EM	Eucalyptus marginata	Jarrah	As shown	200L	5				5
ER	Eucalyptus rudis	Flooded Gum	As shown	200L	8				8
ER	Eucalyptus rudis	Flooded Gum	As shown	100L	8				8
ET	Eucalyptus todtiana	Coastal Blackbutt Pricklybark	As shown	100L	3				3
ET	Eucalyptus todtiana	Coastal Blackbutt Pricklybark	As shown	200L	3				3
ET	Eucalyptus todtiana	Coastal Blackbutt Pricklybark	As shown	500L	3			9	12
LS	liquidambar styraciflua	American Sweet Gum	As shown	1000L			1		1
JM	Jacaranda mimosifolia	Jacaranda	As shown	500L	3	6(Transplant)	3		12
JM	Jacaranda mimosifolia	Jacaranda	As shown	1000L				42	42
ML	Melaleuca lanceolata	Black Paperbark	As shown	100L	9				9
MP	Melaleuca presissiana	Stout Paperbark	As shown	200L	6				6
MP	Melaleuca presissiana	Stout Paperbark	As shown	100L	8				8
SA	Syzygium australe	Brush Cherry	As shown	200L	2				2
PC	Pistacia chinensis	Chinese Pistachio	As shown	500L				4	4
TL	Tristaniopsis laurina 'Luscious'	Water Gum	As shown	500L		3			3
TT	Tipuana tipu	Pride of Bolivia	As shown	500L				1	1
XP	Xanthorrhoea preissii	Grass Tree	As shown	Various trunk height		13(Transplant)			13
Groundcover Mix									
Acc	Adenanthos cuneatus 'Coral Carpet'	Jug Flower	As shown	t/s- 200mm	945	75		1779	2799
Cql	Calothamnus quadrifidus 'Little Ripper'	One Sided Bottlebrush	As shown	t/s- 200mm	1596	75	254	1779	3704
Dd	Dampiera diversifolia	Dampiera	As shown	t/s- 200mm	1596	526	254	2348	4724
Egb	Eremophila glabra 'Blue Horizon'	Emu Bush	As shown	t/s- 200mm	926	75		1779	2780
Egr	Eremophila glabra 'Roseworthy'	Emu Bush	As shown	t/s- 200mm	926	526	283	2933	4668
Gcp	Grevillea crithmifolia 'Prostrate'	Bare Twig Sedge	As shown	t/s- 200mm	1596	265	283	2090	4234
Hp	Hemiandra pungens 'Alba'	White Snake Bush	As shown	t/s- 200mm	1596	265	29	640	2530
Hpu	Hemiandra pungens	Snake Bush	As shown	t/s- 200mm		645		1450	2095
Hs	Hibbertia scandens	Snake Vine	As shown	t/s- 200mm	1577	75		640	2292
Mip	Myoporum insulare 'Prostrate'	Boobialla	As shown	t/s- 200mm	1596	797	685	2370	5448
Groundcover /Low Shrubs Mix									
Bad	Banksia ashbyi dwarf	Ashby's Banksia	As shown	t/s- 200mm	1082	117		1057	2256
Bc	Boronia crenulata	Aniseed Boronia	As shown	t/s- 200mm	1082	117		1057	2256
Ch	Chorizema cordatum prostrate	Heart-leaf Flame Pea	As shown	t/s- 200mm	1082	117		1057	2256
Dcb	Dampiera 'Coastal beach ball'	Dampiera	As shown	t/s- 200mm				1057	1057
Dlc	Dampiera linearis 'Cobalt Mound'	Dampiera	As shown	t/s- 200mm	1097	117		2006	3220
Lg	Lepidosperma gladiatum	Sea Rush	As shown	t/s- 200mm	1082	117	29	1086	2314
Ll	Lomandra longifolia	Mat Rush	As shown	t/s- 200mm	19			1523	1542
Lc	Lepidosperma calcicola	Coastal Sedge	As shown	t/s- 200mm	4				4
Oam	Olearia axillaris 'Mini'	Coast Daisy Bush	As shown	t/s- 200mm	1086	117	29	1086	2318
Scp	Scaevola crassifolia 'Prostrate'	Fanflower	As shown	t/s- 200mm	656	117		2564	3337
Kp	Kunzea pomifera	Muntries	As shown	t/s- 200mm	21				
Tb	Thryptomene baeckeacea	Myrtle	As shown	t/s- 200mm	1082	117		1057	2256
Dr	Dianella revoluta	Blueberry Lily	As shown	t/s- 200mm	49				
Midium to Large Shrubs Mix									
Ass	Adenanthos sericeus 'Silver Streak'	Woolly Bush	As shown	t/s- 200mm	1407			1043	2450
Bmd	Banksia menziesii dwarf	Firewood Banksia	As shown	t/s- 200mm	1407			1043	2450
Chi	Calothamnus hirsutus	Hairy Claw Flower	As shown	t/s- 200mm	1407			1043	2450
Mnl	Melaleuca nesophila 'Little Nessie'	Honey Myrtle	As shown	t/s- 200mm	1407			1043	2450
Po	Pattersonis occidentalis	Purple flag	As shown	t/s- 200mm	15	190		1523	1728
Sn	Scaevola nitida	Fanflower	As shown	t/s- 200mm	15	190		1981	2186
Wd	Westringia dampieri	Shore Westringia	As shown	t/s- 200mm		190			190
Lb	Leucophyta brownii	Cushion Bush	As shown	t/s- 200mm	15			938	953
Tr	Templetonia retusa	Cockies Tongue	As shown	t/s- 200mm	1407			1043	2450
Basin and Swale Planting Mix									
Be	Bossiaea eriocarpa	Common Brown pea	8	t/s			402		402
Cql	Calothamnus quadrifidus 'Little Ripper'	One Sided Bottlebrush	8	t/s	365			393	758
Coa	Coleonema alba	White Diosma	8	t/s			402		402
Dcb	Dampiera 'Coastal beach ball'	Dampiera	8	t/s			402		402
Gcp	Grevillea crithmifolia	Bare Twig Sedge	8	t/s	365				365
Js	Jacksonia sericea	Waldjumi	8	t/s			402		402
Lc	Lepidosperma calcicola	Coastal Sedge	8	t/s	365		402		767
Lg	Lepidosperma gladiatum	Sea Rush	8	t/s	365		402		767
Ll	Lomandra longifolia	Mat rush	8	t/s	365				365
Mip	Myoporum insulare	Boobialla	8	t/s	365		402		767
Mln	Melaleuca 'little nessie'	Dwarf honey Myrtle	8	t/s	365			394	759
Oa	oliearia axillaris	Coastal daisy bush	8	t/s	365			394	759
Scp	Scaevola crassifolia	Fanflower	8	t/s	365		402		767
Sn	Scaevola nitida	Fanflower	8	t/s	365				365
Tr	Templetonia retusa	Cockies Tongue	8	t/s	365				365
Planting group includes some of the below species due to location and design									
Afp	Anigozanthos flavidus 'Pink'	Kangaroo Paw	As shown	140mm		79			79
Agv	Anigozanthos 'Gold Velvet'	Kangaroo Paw	As shown	140mm		57			57
Ah	Anigozanthos humilis	Kangaroo Paw	As shown	140mm		89			89
App	Anigozanthos 'Pure Pink'	Kangaroo Paw	As shown	140mm		202			202
Csp	Chamelaucium sp. 'Lemon Drops'	Geraldton Wax	As shown	140mm	30				30
En	Eremophila nivea	Silky Eremophila	As shown	140mm		136			136
Hc	Hardenbergia comptoniana	Native Wisteria	As shown	140mm	4				4
Mf	Macrocarpa fuliginosa	Black Kangaroo Paw	As shown	140mm		59			59
Mp	Murraya paniculata	Orange jasmine	As shown	140mm		256			256
Substitute turf									
Myp	Myoporum parvifolium	Creeping Boobialla	As shown	t/s- 200mm	316	571		750	1321
Kep	Kennedia prostrata	Running Postman	As shown	t/s- 200mm	316			564	880
Egr	Eremophila glabra 'Roseworthy'	Emu Bush	As shown	t/s- 200mm	316			650	966

07 505 — OVERALL PLANT SCHEDULE
N/A

CATALINA ESTATE
CATALINA GREEN- STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	RF/JZ	01.08.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	DETAILS 5 - SOFTSCAPE & PLANT SCHEDULE
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-505
SCALE	AS SHOWN		REVISION A

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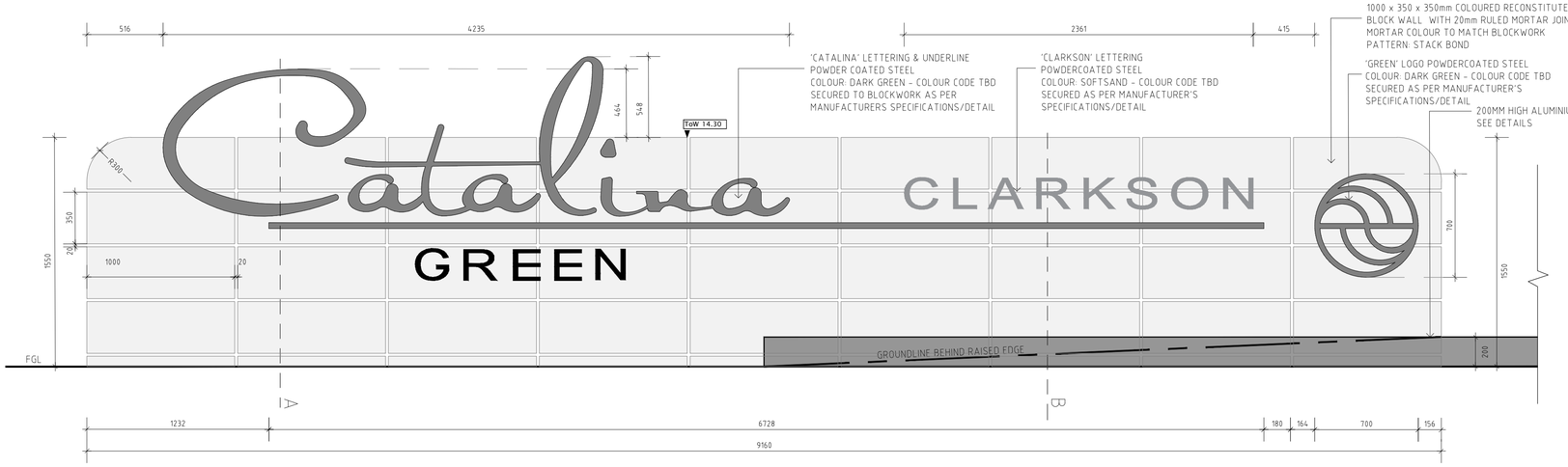
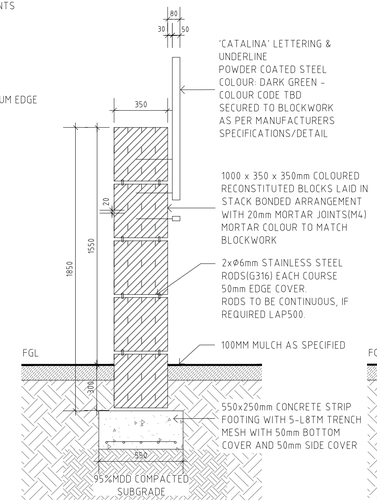
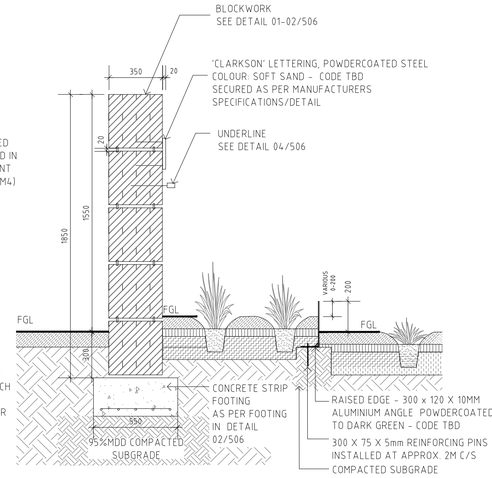


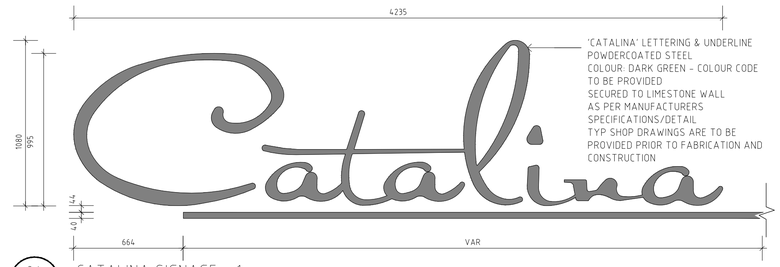
01 / 506 ENTRY STATEMENT AND SIGNAGE - COMMERCIAL SITE
ELEVATION 1:20 @ A1



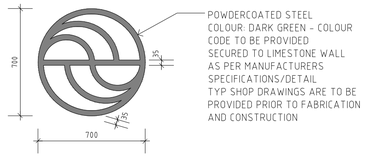
02 / 506 ENTRY WALL AND SIGNAGE - SECTION A
SECTION 1:20 @ A1



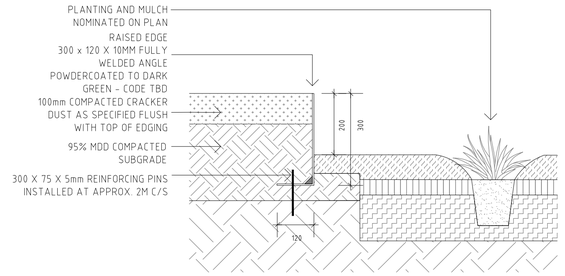
03 / 506 ENTRY WALL AND SIGNAGE - SECTION B
SECTION 1:20 @ A1



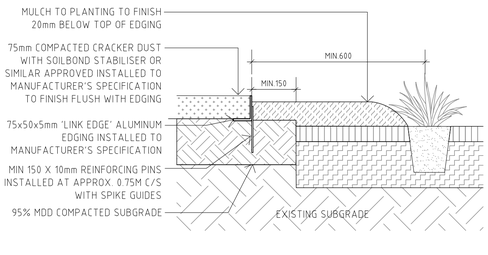
04 / 506 CATALINA SIGNAGE - 1
ELEVATION 1:20 @ A1



05 / 506 CATALINA SIGNAGE - 2
ELEVATION 1:20 @ A1



06 / 506 RAISED ALUMINUM EDGE / COMPACTED DUST TO GARDEN BED INTERFACE
TYPICAL DETAIL 1:10 @ A1



07 / 506 FLUSH ALUMINUM EDGE / COMPACTED DUST TO GARDEN BED INTERFACE
TYPICAL DETAIL 1:10 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

BLOCKWORK NOTES:

- RECONSTITUTED BLOCKWORK TO HAVE DRY DENSITY OF AT LEAST 1800 KG/M3/ AND A CRUSHING STRENGTH OF AT LEAST 5.0MPA
- MORTAR TO BE 2 : 1 : 9 (CEMENT : LIME : SAND). ALL JOINTS TO BE FULLY MORTARED.
- POINTING MORTAR TO BE 2 : 1 : 9 (CEMENT : LIME PUTTY : SAND).
- PROOF COMPACT CUT SURFACE AT BASE OF RETAINING WALL TO 95%MMDD TO A DEPTH OF 750MM. COMPACTION WILL BE DEEMED SATISFACTORY WHEN THE FOLLOWING BLOW COUNTS ARE ACHIEVED WITH A PERTH SAND PENETROMETER. TESTING TO BE CARRIED OUT EVERY 10 LINEAL METERS.

DEPTH	BLOW COUNT
0-150	SET
150-450	8 BLOWS
450-750	10 BLOWS

- ALL BACKFILLING SHALL BE CARRIED OUT USING MATERIAL WHICH SHALL GENERALLY BE SANDY IN NATURE AND FREE FROM LARGE PIECES OF ROCK TO THE EXTENT THAT THE MATERIAL CAN BE COMPACTED USING A VIBRATING PLATE COMPACTOR PLACE IN 300 MAX LIFTS.
- IN ALL CASES THE BACKFILL MATERIAL SHALL BE SELECTED SUCH THAT, ONCE COMPACTED, THE STANDARD OF COMPACTION CAN BE MEASURED USING A STANDARD PERTH PENETROMETER.
- THE BACKFILL MATERIAL TO THE FRONT AND BACK OF THE WALL SHALL BE COMPACTED TO ACHIEVE A MINIMUM OF 8 BLOWS/300MM WHEN TESTED USING A STANDARD PERTH SAND PENETROMETER. TESTING TO BE CARRIED OUT EVERY 10 LINEAL METERS EACH LIFT.

STEELWORK AND STRUCTURES:

- ALL STEEL, FABRICATION AND CONSTRUCTION WORKS TO BE TO ALL RELEVANT AUSTRALIAN STANDARDS AND CITY OF WANNEROO STANDARDS.
- ALL STEEL WORK, FIXTURES AND FITTINGS TO BE HOT DIP GALVANISED. GALVANISATION TO BE CARRIED OUT AFTER ALL CUTTING, WELDING AND DRILLING HAS BEEN COMPLETED DURING FABRICATION. NO WELDING OR CUTTING IS TO BE CARRIED OUT ONCE STEEL HAS BEEN GALVANISED.
- ALL WELDS TO BE FULL. NO STITCH WELDING PERMITTED.
- WHERE INDICATED, STEELWORK TO BE POWDER COATED. POWDER COATING TO BE CARRIED OUT AFTER HOT DIP GALVANISING.
- POWDER-COATING COLOURS NOMINATED ON DETAILS ARE TO BE CONFIRMED WITH SUPERINTENDENT PRIOR TO FABRICATION AND CONSTRUCTION.
- THE CONTRACTOR IS TO PROVIDE A FULL SET OF DETAILED SHOP DRAWINGS FOR ALL STRUCTURES FOR APPROVAL BY THE SUPERINTENDENT PRIOR TO FABRICATION TAKING PLACE.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE BUILDING LICENSE FOR THE WORKS. FABRICATION IS NOT TO COMMENCE UNTIL THE BUILDING LICENSE APPROVAL IS IN PLACE AND PROVIDED TO THE SUPERINTENDENT. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE CERTIFICATE OF DESIGN COMPLIANCE FOR ALL SHOP DRAWINGS PROVIDED AS PART OF THE BUILDING LICENSE AND FABRICATION WORKS.
- EVIDENCE OF COMPACTION TESTING UNDER ALL CONCRETE FOOTINGS, WALLS AND SURFACES IS TO BE PROVIDED BY THE CONTRACTOR.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE AGREED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- ALL CONCRETE TO BE A MINIMUM OF 25MPA UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- ALL PLAY AREA DESIGNS AND INSTALLATION WORKS ARE TO BE INSPECTED AND CERTIFIED AT EACH RELEVANT STAGE BY ANDREW REEDY OF PLAYCHECK OR SIMILAR APPROVED. THIS IS TO BE CARRIED OUT AT THE CONTRACTORS EXPENSE.

CONCRETE NOTES:

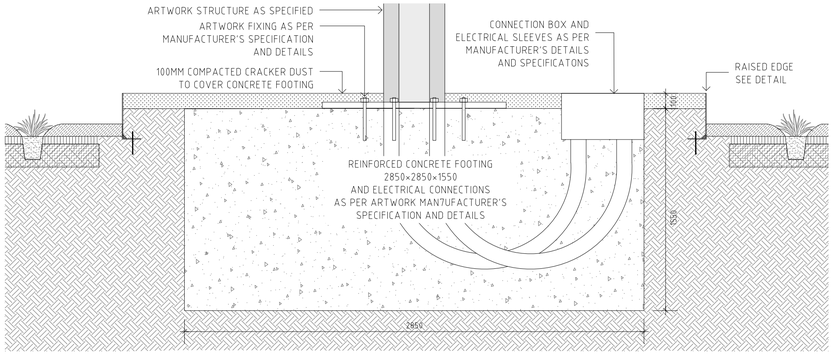
- ALL MATERIALS AND EXECUTION SHALL COMPLY WITH AS 3600 & AS 1379.
- BUILD FORMWORK TO AS 3610
- COVER TO REINFORCEMENT UNLESS OTHERWISE SHOWN SHALL BE
  -FOOTINGS 50mm
- COMPACT CONCRETE USING APPROVED INTERNAL VIBRATORS.
- ALL CONCRETE SHALL BE SUPPLIED BY AN APPROVED PRE-MIX COMPANY AS FOLLOWS:

GRADE	SLUMP	MAX AGG.
STRIP FOOTINGS	N25	80mm 20m

- NOTIFY THE SUPERINTENDENT AT LEAST 24 HOURS BEFORE PLACING CONCRETE.

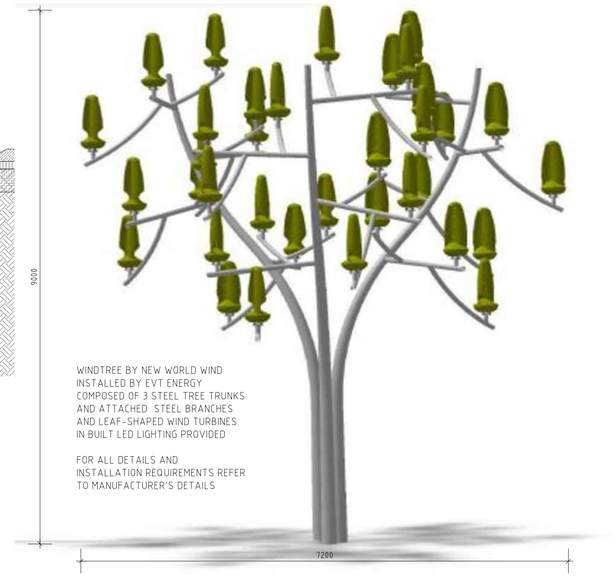
REINFORCEMENT NOTES.

- 'N' IS NORMAL DUCTILITY GRADE 500N DEFORMED BARS TO AS/NZS 4671.
- 'R' IS GRADE R250N HOT ROLLED PLAIN BARS TO AS/NZS 4671.
- 'L' IS HARD DRAWN WIRE REINFORCING FABRIC TO AS/NZS 4671.
- 'W' IS HARD DRAWN PLAIN WIRE TO AS/NZS 4671.
- PROVIDE 2-N16 REINFORCING BARS (2000 LONG) AT RE-ENTRANT CORNERS FOR SLABS ON GROUND.
- MINIMUM LAPS REQUIRED, FABRICS = 230MM, (MIN 2 TRANSVERSE BARS), N BARS = 50 DIAMETERS, R & W BARS = 50 DIAMETERS U.N.O.
- CLEAN ALL REINFORCEMENT PRIOR TO PLACING CONCRETE.
- ENSURE ALL REINFORCEMENT IS ADEQUATELY SUPPORTED ON APPROVED FULLY PLASTIC CHAIRS OR CONCRETE BLOCKS. STEEL REINFORCEMENT SHALL BE SUPPORTED ON CHAIRS OR BLOCKS COMPLYING WITH AS/NZS 2425 AT 600 MAX CRS.



08 / 506 ARTWORK FIXING
TYPICAL DETAIL 1:20 @ A1

DETAILS FOR INFORMATION ONLY
LODGED DEVELOPMENT APPLICATION SEPARATELY



WINDTREE BY NEW WORLD WIND
INSTALLED BY EVT ENERGY
COMPOSED OF 3 STEEL TREE TRUNKS
AND ATTACHED STEEL BRANCHES
AND LEAF-SHAPED WIND TURBINES.
IN BUILT LED LIGHTING PROVIDED

FOR ALL DETAILS AND
INSTALLATION REQUIREMENTS REFER
TO MANUFACTURER'S DETAILS

09 / 506 ARTWORK - INDICATIVE 3D VISUAL
NTS

CATALINA ESTATE
CATALINA GREEN- STAGE 36

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
B	ISSUE FOR DA	AF/JZ	25.05.22

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facsimile +61 8 9441 0201
ens@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	DETAILS 6 - ENTRY STATEMENT
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-506
SCALE	AS SHOWN		REVISION B

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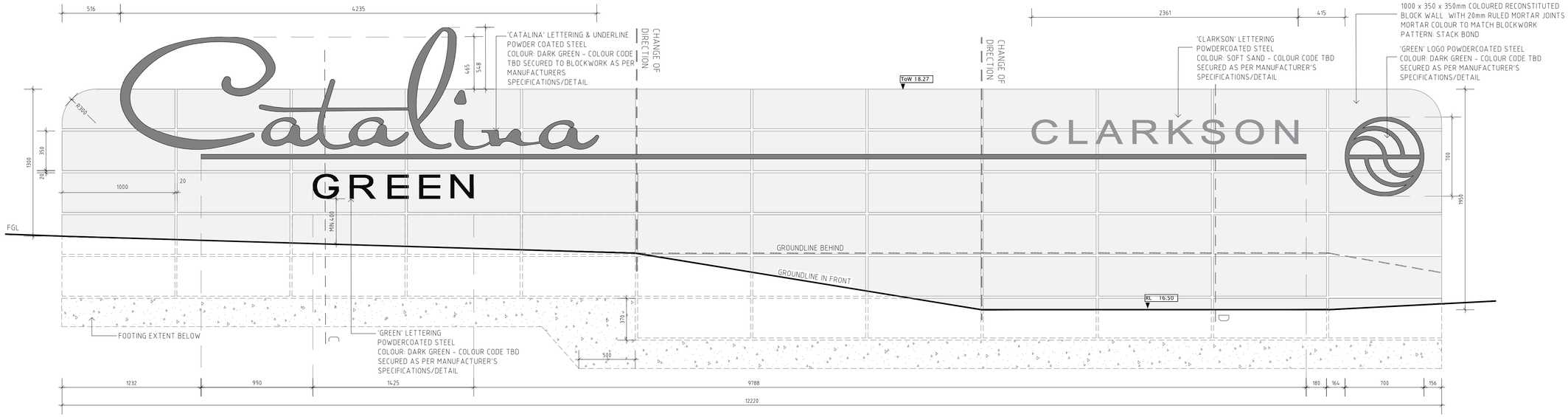
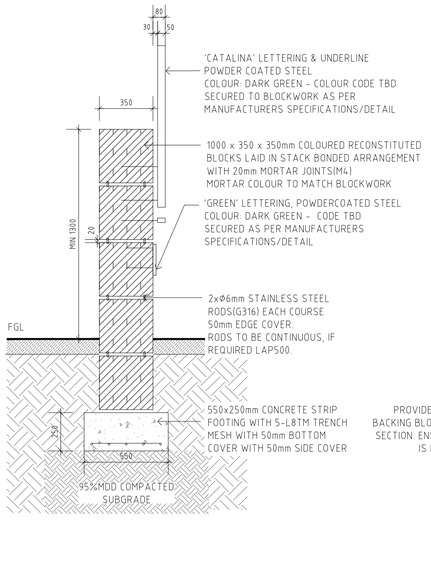
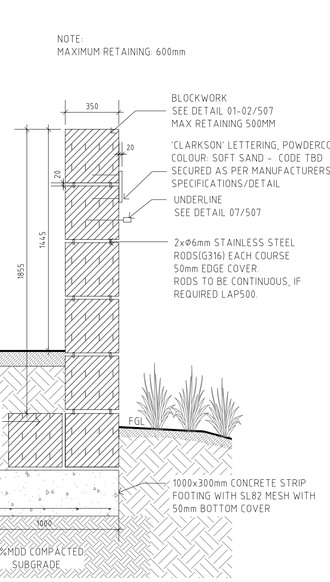


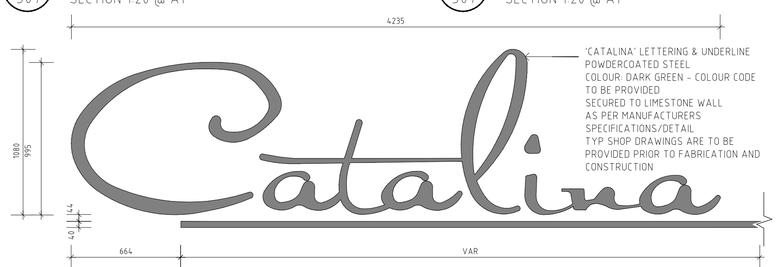
01 / 507 ENTRY STATEMENT AND SIGNAGE – GH SITE
ELEVATION 1:20 @ A1



02 / 507 ENTRY WALL AND SIGNAGE – SECTION C
SECTION 1:20 @ A1

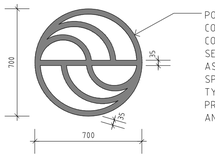


03 / 507 ENTRY WALL AND SIGNAGE – SECTION D
SECTION 1:20 @ A1

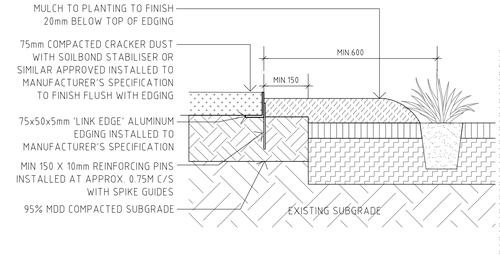


04 / 507 CATALINA SIGNAGE
ELEVATION 1:20 @ A1

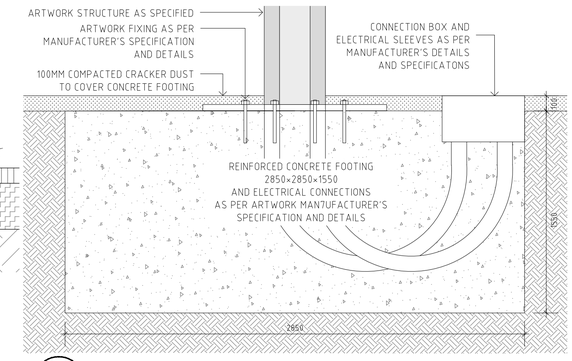
DETAILS FOR INFORMATION ONLY
LODGED DEVELOPMENT APPLICATION SEPARATELY



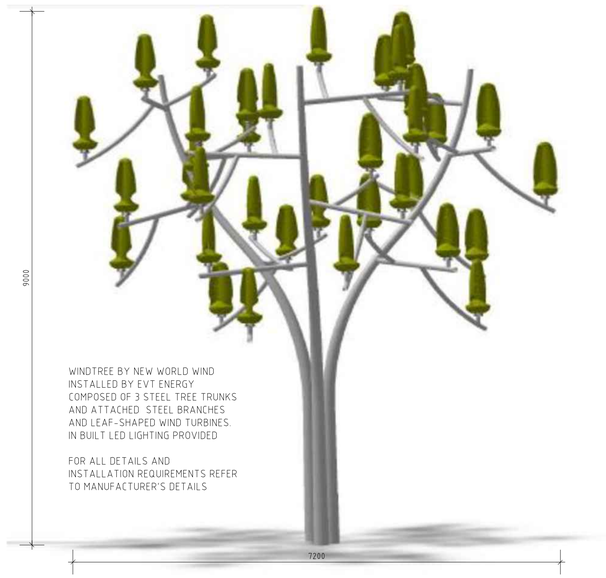
05 / 507 CATALINA SIGNAGE – 2
ELEVATION 1:20 @ A1



06 / 507 FLUSH ALUMINUM EDGE / COMPACTED DUST TO GARDEN BED INTERFACE
TYPICAL DETAIL 1:10 @ A1



07 / 507 ARTWORK FIXING
TYPICAL DETAIL 1:20 @ A1



WINDTREE BY NEW WORLD WIND INSTALLED BY EVT ENERGY COMPOSED OF 3 STEEL TREE TRUNKS AND ATTACHED STEEL BRANCHES AND LEAF-SHAPED WIND TURBINES. IN BUILT LED LIGHTING PROVIDED

FOR ALL DETAILS AND INSTALLATION REQUIREMENTS REFER TO MANUFACTURER'S DETAILS

08 / 507 ARTWORK – INDICATIVE 3D VISUAL
NTS

GENERAL NOTES:

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- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
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- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
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BLOCKWORK NOTES:

- RECONSTITUTED BLOCKWORK TO HAVE DRY DENSITY OF AT LEAST 1800 KG/M3/ AND A CRUSHING STRENGTH OF AT LEAST 5.0MPA.
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- POINTING MORTAR TO BE 2 : 1 : 9 (CEMENT : LIME PUTTY : SAND).
- PROOF COMPACT CUT SURFACE AT BASE OF RETAINING WALL TO 95%MMDD TO A DEPTH OF 750MM. COMPACTION WILL BE DEEMED SATISFACTORY WHEN THE FOLLOWING BLOW COUNTS ARE ACHIEVED WITH A PERTH SAND PENETROMETER. TESTING TO BE CARRIED OUT EVERY 10 LINEAL METERS.

DEPTH	BLOW COUNT
0-150	SET
150-450	8 BLOWS
450-750	10 BLOWS

- ALL BACKFILLING SHALL BE CARRIED OUT USING MATERIAL WHICH SHALL GENERALLY BE SANDY IN NATURE AND FREE FROM LARGE PIECES OF ROCK TO THE EXTENT THAT THE MATERIAL CAN BE COMPACTED USING A VIBRATING PLATE COMPACTOR PLACE IN 300 MAX LIFTS.
- IN ALL CASES THE BACKFILL MATERIAL SHALL BE SELECTED SUCH THAT, ONCE COMPACTED, THE STANDARD OF COMPACTION CAN BE MEASURED USING A STANDARD PERTH PENETROMETER.
- THE BACKFILL MATERIAL TO THE FRONT AND BACK OF THE WALL SHALL BE COMPACTED TO ACHIEVE A MINIMUM OF 8 BLOWS/300MM WHEN TESTED USING A STANDARD PERTH SAND PENETROMETER. TESTING TO BE CARRIED OUT EVERY 10 LINEAL METERS EACH LIFT.

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- ALL STEEL WORK, FIXTURES AND FITTINGS TO BE HOT DIP GALVANISED. GALVANISATION TO BE CARRIED OUT AFTER ALL CUTTING, WELDING AND DRILLING HAS BEEN COMPLETED DURING FABRICATION. NO WELDING OR CUTTING IS TO BE CARRIED OUT ONCE STEEL HAS BEEN GALVANISED.
- ALL WELDS TO BE FULL. NO STITCH WELDING PERMITTED.
- WHERE INDICATED, STEELWORK TO BE POWDER COATED. POWDER COATING TO BE CARRIED OUT AFTER HOT DIP GALVANISING.
- POWDER-COATING COLOURS NOMINATED ON DETAILS ARE TO BE CONFIRMED WITH SUPERINTENDENT PRIOR TO FABRICATION AND CONSTRUCTION.
- THE CONTRACTOR IS TO PROVIDE A FULL SET OF DETAILED SHOP DRAWINGS FOR ALL STRUCTURES FOR APPROVAL BY THE SUPERINTENDENT PRIOR TO FABRICATION TAKING PLACE.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE BUILDING LICENSE FOR THE WORKS. FABRICATION IS NOT TO COMMENCE UNTIL THE BUILDING LICENSE APPROVAL IS IN PLACE AND PROVIDED TO THE SUPERINTENDENT. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE CERTIFICATE OF DESIGN COMPLIANCE FOR ALL SHOP DRAWINGS PROVIDED AS PART OF THE BUILDING LICENSE AND FABRICATION WORKS.
- EVIDENCE OF COMPACTION TESTING UNDER ALL CONCRETE FOOTINGS, WALLS AND SURFACES IS TO BE PROVIDED BY THE CONTRACTOR.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE AGREED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
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- COVER TO REINFORCEMENT UNLESS OTHERWISE SHOWN SHALL BE
  -FOOTINGS 50mm
- COMPACT CONCRETE USING APPROVED INTERNAL VIBRATORS.
- ALL CONCRETE SHALL BE SUPPLIED BY AN APPROVED PRE-MIX COMPANY AS FOLLOWS:

GRADE	SLUMP	MAX. AGG.
STRIP FOOTINGS N25	80mm	20m

- NOTIFY THE SUPERINTENDENT AT LEAST 24 HOURS BEFORE PLACING CONCRETE.

REINFORCEMENT NOTES:

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- 'R' IS GRADE R250N HOT ROLLED PLAIN BARS TO AS/NZS 4671.
- 'L' IS HARD DRAWN WIRE REINFORCING FABRIC TO AS/NZS 4671.
- 'W' IS HARD DRAWN PLAIN WIRE TO AS/NZS 4671.
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- CLEAN ALL REINFORCEMENT PRIOR TO PLACING CONCRETE.
- ENSURE ALL REINFORCEMENT IS ADEQUATELY SUPPORTED ON APPROVED FULLY PLASTIC CHAIRS OR CONCRETE BLOCKS. STEEL REINFORCEMENT SHALL BE SUPPORTED ON CHAIRS OR BLOCKS COMPLYING WITH AS/NZS 2425 AT 600 MAX CRS.

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
B	ISSUE FOR DA	AF/JZ	25.05.22

CATALINA ESTATE
CATALINA GREEN- STAGE 36

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western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	DETAILS 7 – ENTRY STATEMENT
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-507
SCALE	AS SHOWN		REVISION B

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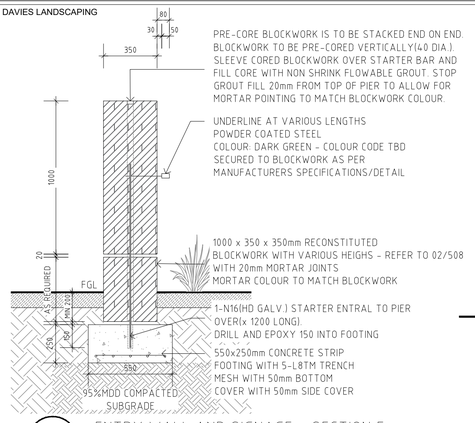
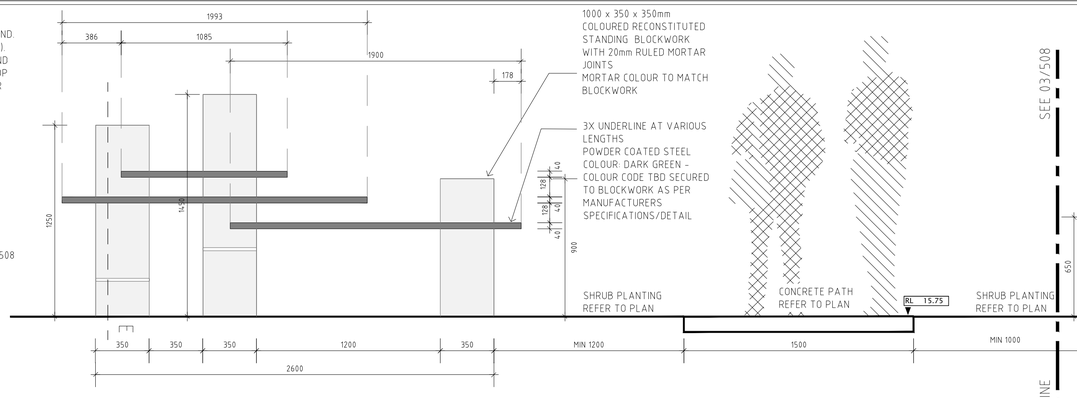
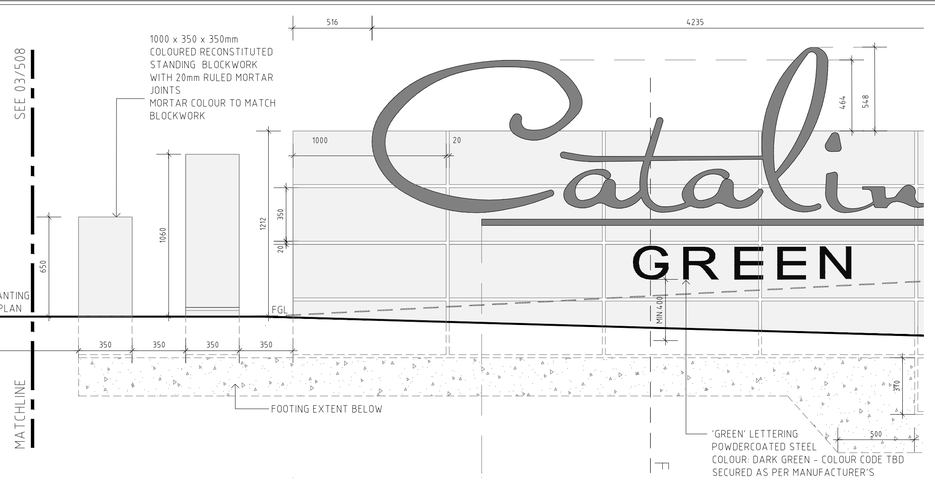
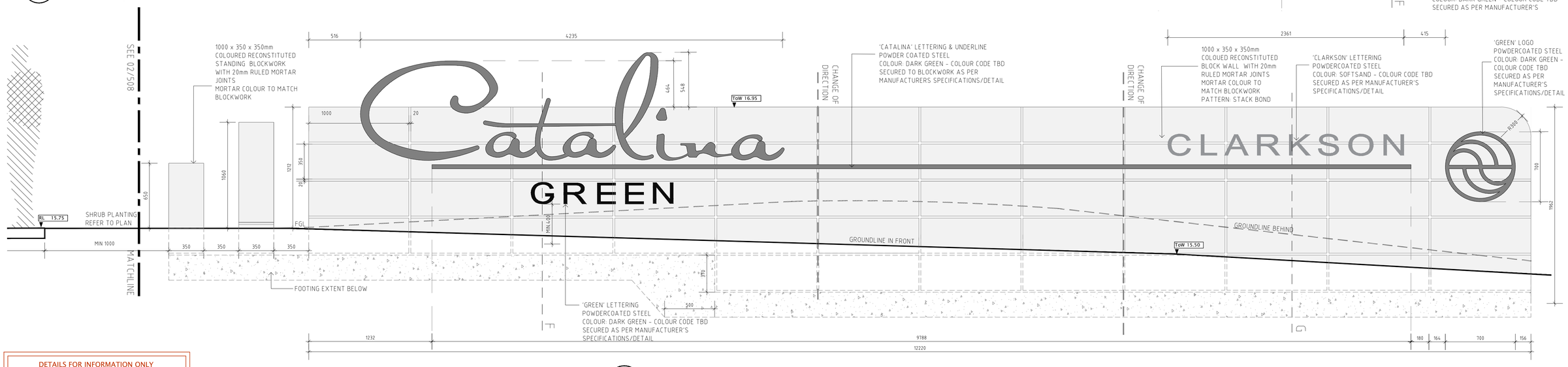


01 / 508 ENTRY WALL AND SIGNAGE - SECTION E
SECTION 1:20 @ A1



02 / 508 ENTRY STATEMENT AND SIGNAGE - POS SITE - 1
ELEVATION 1:20 @ A1





DETAILS FOR INFORMATION ONLY
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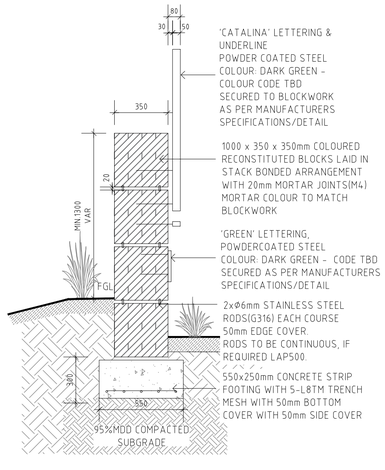

04 / 508 ENTRY WALL AND SIGNAGE - SECTION F
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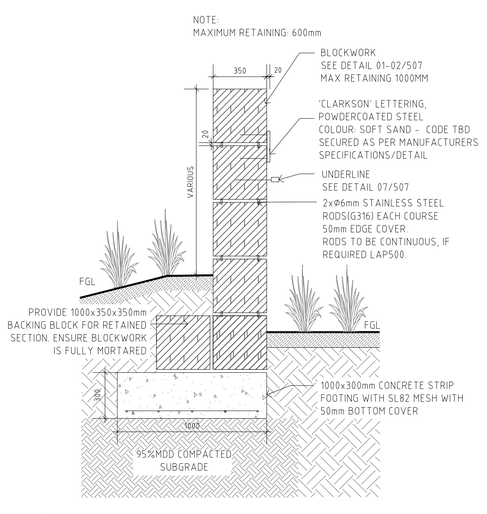
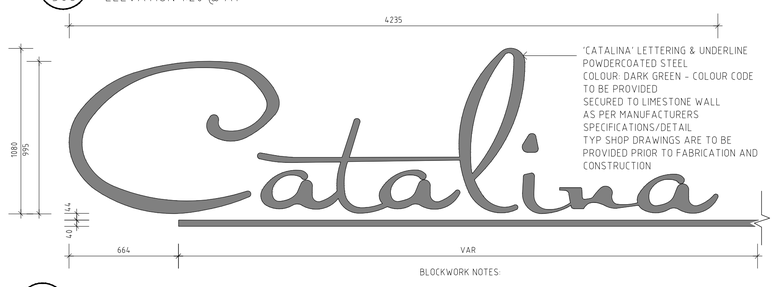
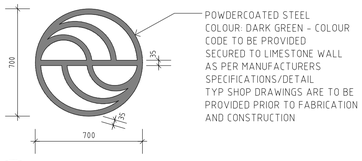


05 / 508 ENTRY WALL AND SIGNAGE - SECTION G
SECTION 1:20 @ A1

03 / 508 ENTRY STATEMENT AND SIGNAGE - POS SITE - 2
ELEVATION 1:20 @ A1



06 / 508 CATALINA SIGNAGE
ELEVATION 1:20 @ A1



07 / 508 CATALINA SIGNAGE - 2
ELEVATION 1:20 @ A1

BLOCKWORK NOTES:

- RECONSTITUTED BLOCKWORK TO HAVE DRY DENSITY OF AT LEAST 1800 KG/M3/ AND A CRUSHING STRENGTH OF AT LEAST 5.0MPA
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- ALL WELDS TO BE FULL NO STITCH WELDING PERMITTED.
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- POWDER-COATING COLOURS NOMINATED ON DETAILS ARE TO BE CONFIRMED WITH SUPERINTENDENT PRIOR TO FABRICATION AND CONSTRUCTION.
- THE CONTRACTOR IS TO PROVIDE A FULL SET OF DETAILED SHOP DRAWINGS FOR ALL STRUCTURES FOR APPROVAL BY THE SUPERINTENDENT PRIOR TO FABRICATION TAKING PLACE.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE BUILDING LICENSE FOR THE WORKS. FABRICATION IS NOT TO COMMENCE UNTIL THE BUILDING LICENSE APPROVAL IS IN PLACE AND PROVIDED TO THE SUPERINTENDENT. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE CERTIFICATE OF DESIGN COMPLIANCE FOR ALL SHOP DRAWINGS PROVIDED AS PART OF THE BUILDING LICENSE AND FABRICATION WORKS.
- EVIDENCE OF COMPACTION TESTING UNDER ALL CONCRETE FOOTINGS, WALLS AND SURFACES IS TO BE PROVIDED BY THE CONTRACTOR.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE AGREED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- ALL CONCRETE TO BE A MINIMUM OF 25MPA UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- ALL PLAY AREA DESIGNS AND INSTALLATION WORKS ARE TO BE INSPECTED AND CERTIFIED AT EACH RELEVANT STAGE BY ANDREW REEDY OF PLAYCHECK OR SIMILAR APPROVED. THIS IS TO BE CARRIED OUT AT THE CONTRACTORS EXPENSE.

CATALINA ESTATE
CATALINA GREEN- STAGE 36

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
B	ISSUE FOR DA	AF/JZ	25.05.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/NL
APPROVED	GD
SCALE	AS SHOWN
DRAWING TITLE	DETAILS 8 - ENTRY STATEMENT
DRAWING No.	12606-CG-STG36-508
REVISION	B

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GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXISTING TREE PROTECTION:

- ALL EXISTING TREES AND VEGETATION, INCLUDING GRASS TREES AND ZAMIA PALMS ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- ALL WORKS WITHIN TREE PROTECTION ZONES (TPZ) (INCLUDING TPZ OF TREES OUTSIDE STAGE BOUNDARY) ARE TO BE COMPLETED IN A TREE SENSITIVE METHOD TO MINIMISE IMPACTS THAT MAY HAVE A NEGATIVE EFFECT ON THE LONG TERM TREE WELFARE.
- PRIOR TO ANY TRENCHING, BELOW GROUND SERVICE INSTALLATION ETC CONTRACTOR TO ORGANISE QUALIFIED ARBORIST'S REVIEW AND SEEK APPROVAL FROM SUPERINTENDENT.
- TRUNK AND/OR BRUNCH PROTECTION MEASURES ARE TO BE APPLIED WHERE MACHINERY IS REQUIRED TO WORK IN CLOSE PROXIMITY TO ABOVE GROUND PARTS OF TREES. PROPOSED PROTECTIVE MEASURES ARE TO BE DISCUSSED WITH SUPERINTENDENT PRIOR TO CONSTRUCTION.
- WHERE TREE ROOTS ARE ENCOUNTERED WITHIN OR ADJACENT TPZ DURING EXCAVATION WORKS, ROOT PRUNING IS TO BE UNDERTAKEN ONLY WITH PRIOR APPROVAL OF THE SUPERINTENDENT AND UNDER THE DIRECT SUPERVISION OF A QUALIFIED ARBORIST.
- CANOPY PRUNING IS TO BE UNDERTAKEN ONLY WITH PRIOR APPROVAL OF THE SUPERINTENDENT AND UNDER THE DIRECT SUPERVISION OF A QUALIFIED ARBORIST.
- CONTRACTOR WILL BE LIABLE FOR ANY DETRIMENTIAL DAMAGE AND/OR LOSS OF TREE DIRECTLY RELATED TO THE CONTRACTOR'S CONSTRUCTION OR MAINTENANCE ACTIVITIES. VALUE OF DAMAGE WILL BE CALCULATED BASED ON THE HELLIWELL SYSTEM.

EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED.
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS WHERE APPLICABLE
- REMOVED WEEDS AND ANY VEGETATION NOMINATED FOR REMOVAL PRIOR TO GRADING.
- THE ENTIRE SITE IS TO BE GRADED AS PER PROPOSED LEVELS TO A SMOOTH EVEN SURFACE. NO UNDULATIONS, DIPS, MOUNDS AND THE LIKE TARE TO REMAIN. ALL LEVELS SHOULD GRADE EVENLY BETWEEN ALL SURROUNDING KERB LINES.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-505
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-501 TO LS-505
- FOR ALL SPECIFICATION NOTES, MATERIAL AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-600)
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING.
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH

STEELWORK AND STRUCTURES:

- ALL STEEL, FABRICATION AND CONSTRUCTION WORKS TO BE TO ALL RELEVANT AUSTRALIAN STANDARDS AND CITY OF WANNEROO STANDARDS.
- ALL STEEL WORK, FIXTURES AND FITTINGS TO BE HOT DIP GALVANISED. GALVANISATION TO BE CARRIED OUT AFTER ALL CUTTING, WELDING AND DRILLING HAS BEEN COMPLETED DURING FABRICATION. NO WELDING OR CUTTING IS TO BE CARRIED OUT ONCE STEEL HAS BEEN GALVANISED.
- ALL WELDS TO BE FULL. NO STITCH WELDING PERMITTED.
- WHERE INDICATED, STEELWORK TO BE POWDER COATED. POWDER COATING TO BE CARRIED OUT AFTER HOT DIP GALVANISING.
- POWDER-COATING COLOURS NOMINATED ON DETAILS ARE TO BE CONFIRMED WITH SUPERINTENDENT PRIOR TO FABRICATION AND CONSTRUCTION.
- THE CONTRACTOR IS TO PROVIDE A FULL SET OF DETAILED SHOP DRAWINGS FOR ALL STRUCTURES FOR APPROVAL BY THE SUPERINTENDENT PRIOR TO FABRICATION TAKING PLACE.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE BUILDING LICENSE FOR THE WORKS. FABRICATION IS NOT TO COMMENCE UNTIL THE BUILDING LICENSE APPROVAL IS IN PLACE AND PROVIDED TO THE SUPERINTENDENT. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE CERTIFICATE OF DESIGN COMPLIANCE FOR ALL SHOP DRAWINGS PROVIDED AS PART OF THE BUILDING LICENSE AND FABRICATION WORKS.
- ALL CONCRETE FOOTINGS TO HAVE A MINIMUM COVER OF 500MM IN THE PLAY AREA WHERE LOCATED WITHIN EQUIPMENT FALL ZONES.
- EVIDENCE OF COMPACTION TESTING UNDER ALL CONCRETE FOOTINGS, WALLS AND SURFACES IS TO BE PROVIDED BY THE CONTRACTOR.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE AGREED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- ALL CONCRETE TO BE A MINIMUM OF 32MPA UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- ALL PLAY AREA DESIGNS AND INSTALLATION WORKS ARE TO BE INSPECTED AND CERTIFIED AT EACH RELEVANT STAGE BY ANDREW REEDY OF PLAYCHECK OR SIMILAR APPROVED. THIS IS TO BE CARRIED OUT AT THE CONTRACTORS EXPENSE.

MATERIAL AND FURNITURE SELECTION:

SOIL CONDITIONER	TO TURF & GARDEN BED BASIN & SWALES	RICHGRO METRO OR SIMILAR APPROVED RICHGRO ECO MEDIA OR SIMILAR APPROVED
TURF	AS INDICATED ON DRAWINGS	KIKUYU (Pennisetum clandestinum)
REINFORCED TURF	MAINTENANCE ACCESS	ROOCYCLE GR RECYCLED PLASTIC TURF REINFORCEMENT MAT OR SIMILAR APPROVED
CONCRETE	PATHS, KERBS AND FOOTINGS CONCRETE PAD TO SHELTER	MIN 32MPA, MIN 20mm AGGREGATE & MAX SLUMP OF 65mm STANDARD GREY FINISH TO PATHS: BRUSH WITH NO PICTURE FRAME EDGES 25 MPA FINISH: EXPOSED AGGREGATE, COLOUR: HOLCIM 'JACKWOOD'
CONTRACTION JOINT	PATHS	100mm LOCK JOINT
EXPANSION JOINT	PATHS ABUTTING WALLS, KERBS ETC	150mm ALL-IN-ONE LOCK JOINT COLOUR TO MATCH PAVING 10mm POLYTHYLENE FOAM AND 6MM APPROVED SEALANT. COLOUR TO MATCH PAVING
GEOTEXTILE FABRIC	AS INDICATED ON DETAIL DRAWINGS	BIDIM A12 OR SIMILAR APPROVED
MULCH	GARDEN BEDS PLAYGROUND	PINE BARK MULCH PINE BARK TO MEET AS 4422 INCLUDING APPENDIX SELECTION CRITERIA REQUIREMENTS
RUBBER SOFTFALL	PLAYGROUND	RETECH RUBBER OR SIMILAR APPROVED COLOUR 1: 50% DARK GREEN, 30% WHITE, 20% BLACK COLOUR 2: 50% GREEN, 40% BEIGE, 10% BLACK
BOULDERS	PLAYGROUND & GARDEN BEDS	SALVAGED LIMESTONE
BLOCKWORK	PLAYGROUND, PARK SIGN & ENTRY STATEMENT	COLOURED RECONSTITUTED METER BLOCK 'DUNE' FROM BRIKMAKERS OR SIMILAR APPROVED MIN. BULK DENSITY 1600kg/m^3 COLOUR TO MATCH CIVIL BLOCKWORKS USED FOR COTTAGE LOT RETAINING WALLS SOURCES OF BLOCK TO BE COORDINATED WITH CIVIL CONTRACTOR
PARK FURNITURE	SHELTER SEAT (FREESTANDING) PICNIC SETTING BIKE RACK BIN BOLLARD FIXED BOLLARD REMOVABLE INFORMATION SIGNAGE	'PARKLINE' FROM COX URBAN FURNITURE COLOURS: FRAME - HAWTHORN GREEN (GLOSS) ROOF - BUSHLAND (MATT) 'LINEA' RANGE FROM STREET FURNITURE AUSTRALIA 1500I WITH ARMS AND BACKREST LIS10 COLOURS: FRAME - HERITAGE GREEN (GLOSS) BATTENS - 'CURLY BIRCH' ALUMINIUM WOODGRAIN 'LINEA' RANGE FROM STREET FURNITURE AUSTRALIA 1800MM DLIT10-DA PICNIC TABLE WITH WHEELCHAIR ACCESS SEAT 1 - 1500I WITH BACKREST, NO ARMREST LIB6 SEAT 2 - 1500I NO BACKREST, NO ARMREST LIB6 COLOURS: FRAME - HERITAGE GREEN (GLOSS) BATTENS - 'CURLY BIRCH' ALUMINIUM WOODGRAIN 'SEMI HOOP' FROM STREET FURNITURE AUSTRALIA FINISH: STAINLESS STEEL 316 240L WHEELY BIN PROVIDED BY GC SALES OR SIMILAR APPROVED 125mmΦ DOME TOP CCA PRESSURE TREATED RADIATA PINE BOLLARD TO AS1604 SUITABLE FOR IN GROUND USE 140mmΦ SLEEVE LOCKABLE BOLLARD GALVANISED STEEL COLOUR: CANARY YELLOW WITH RED REFLECTIVE TAPE TO AS1604 SUITABLE FOR IN GROUND USE TO CoW STANDARDS CUSTOM MADE POWDERCOATED ALUMINIUM WITH TIMBER AS PER DETAILS
PLAYGROUND	TIMBER LOGS AND STEPPERS ROPE BALANCE LOG STEPPERS STEEL STILTS SWING CLIMBING DOME CUBBY STRUCTURE COLOURED CONCRETE STEPPERS PAINTED CONCRETE PATTERN	SALVAGED JARRAH TIMBER DEBARKED SMOOTH FINISH WITH 2X COATS OF INTERGRAIN NATURE'S TIMBER OIL (JARRAH) OR SIMILAR APPROVED TO MEET 4685:2014 TIMBER TREATMENT REQUIREMENTS MIRACLE 'ROPE BALANCE LOG STEPPERS' NP-064 - CUSTOMISED WITH 4x POWDERCOATED STEEL VERTICAL POSTS AND 18x TIMBER STEPPERS ROPE COLOUR: GREEN POST COLOUR: TBD POWDERCOATED STEEL. HEIGHT 2.2 - 2.4 - 2.6 ABOVE GROUND COLOUR SELECTION TBD MIRACLE 'SINGLE POST FRAME SWING' FRE-308 1x INFANT SWING AND 1x STRAP SEAT COLOUR SELECTION TBD LAPPSET 'PLAY PLANETARIUM' 231005 ACCESSIBLE EQUIPMENT FROM LARK INDUSTRIES WITH SOUTHERN HEMISPHERE CONSTELLATION POWDERCOATED STEEL CUSTOM MADE AS PER DETAILS COLOUR: DULUX 'COPPER' COLOUR 1: CCS 'ECHIDNA' COLOUR 2: CCS 'BILBY' COLOUR 1: PLEXIPAVE 'SAHARA SAND' COLOUR 1: PLEXIPAVE 'BROWN'
ENTRY STATEMENT	RAISED ALUMINIUM EDGE FLUSH ALUMINIUM EDGE COMPACTED CRACKER DUST ARTWORK LETTERING AND SIGNAGE BLOCKWORK	300 x 120 X 10MM ALUMINIUM ANGLE POWDERCOATED TO DARK GREEN (CODE TBD) 75x50x5mm 'LINK EDGE' SOILBOND STABILISER OR SIMILAR APPROVED WINDTREE 36A BY NEW WORLD WIND INSTALLED BY EVT ENERGY POWDERCOATED STEEL TO DARK GREEN (CODE TBD) SEE ABOVE

CATALINA ESTATE
CATALINA GREEN- STAGE 36

REVISION	DESCRIPTION	BY	DATE
A-DRAFT	ISSUE FOR CLIENT REVIEW	AF/NL	20.04.22
A	ISSUE FOR APPROVAL	AF/JZ	05.07.22

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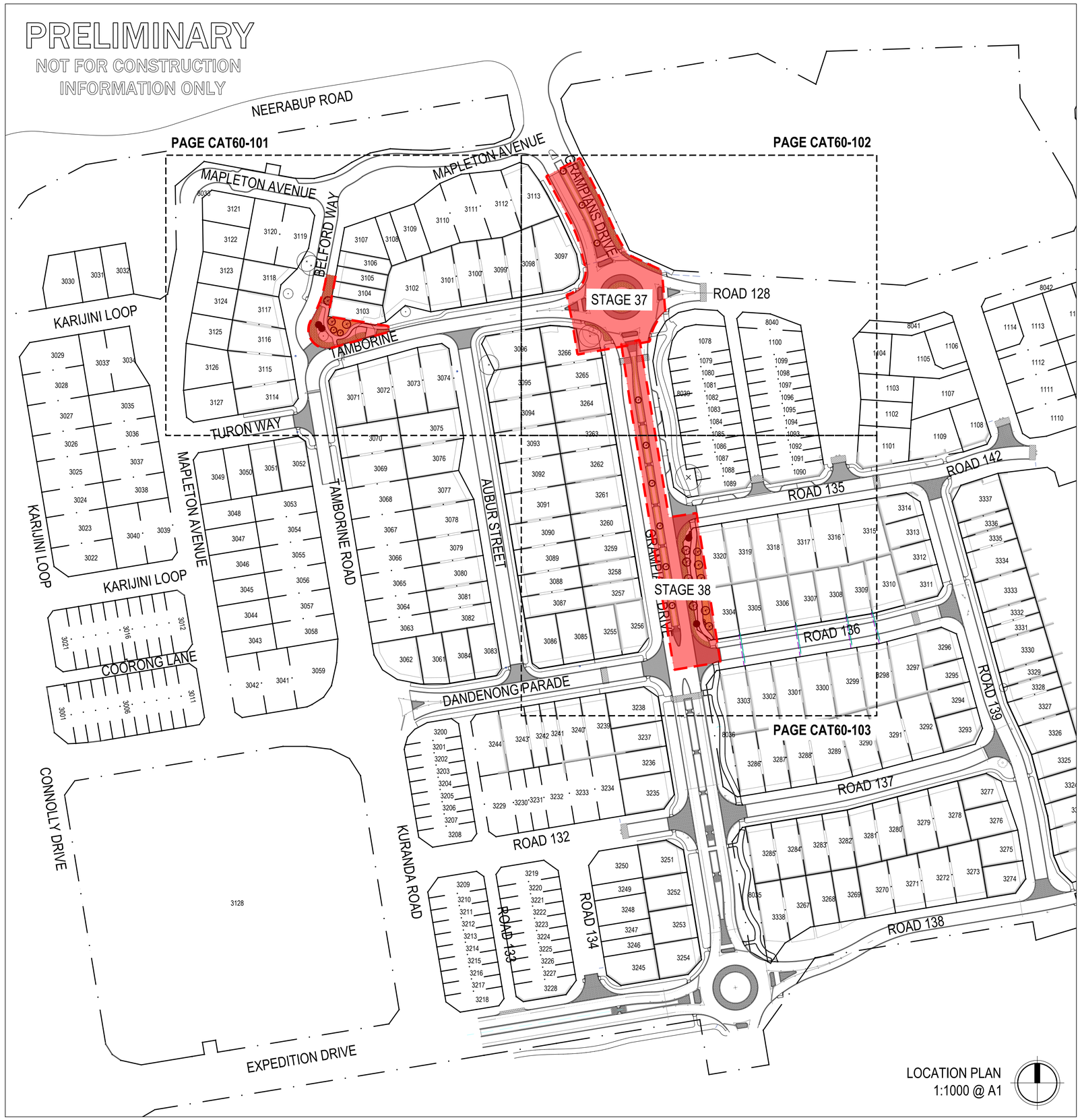
CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	SPECIFICATION NOTES
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CG-STG36-600
SCALE	AS SHOWN		REVISION A

PRELIMINARY
NOT FOR CONSTRUCTION
INFORMATION ONLY



CATALINA GREEN

CLARKSON, W.A

Catalina

STAGE 37-38 STREETSCAPE

LANDSCAPE CONTRACT: CAT60

LANDSCAPE & IRRIGATION WORKS

CLIENT:CATALINA REGIONAL COUNCIL

REVISED AS: ***CONSTRUCTED***

DATE: **MARCH 2025**

Sheet List Table

Sheet Number	Sheet Title	Revision
CAT60-000	COVERSHEET	C
CAT60-101	LANDSCAPE DRAWING 1 OF 3	C
CAT60-102	LANDSCAPE DRAWING 2 OF 3	C
CAT60-103	LANDSCAPE DRAWING 3 OF 3	C
CAT60-901	TYPICAL DETAILS	A
CAT60-902	TYPICAL NOTES	A

CATALINA Regional Council

emerge ASSOCIATES
Integrated Science & Design



LOCATION PLAN

LEGEND

- EXTENT OF WORKS
- PROPOSED COLOURED CONCRETE CCS DRIFTWOOD (1/901)
- PATH BY CIVIL
- PROPOSED PLANTING (2/901)
- SWALE PLANTING (NON-MULCHED) (2/901)
- MULCH ONLY
- PROPOSED TREES (4/901)
- EXISTING TREE TO BE RETAINED AND PROTECTED
- LIMESTONE BOULDERS (10/901)

SERVICES

- WATER LINE
- SEWER LINE
- DRAINAGE LINE
- POWER LINE
- STREET SIGN

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFF-SITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
C	31.03.25	JL	REVISED AS CONSTRUCTED
B	19.03.25	YL	ISSUE AS CONSTRUCTED
A	28.01.25	JL	ISSUE AS CONSTRUCTED
1	23.02.24	OW	ISSUE FOR CONSTRUCTION
0	01.12.23	OW	ISSUE FOR CONSTRUCTION
B	26.10.23	JL	ISSUE FOR APPROVAL
A	01.09.23	OW	ISSUE FOR REVIEW

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INTERNAL DESIGN REVIEW
THIS DESIGN IS NOT AUTHORISED WITHOUT BEING INTERNALLY REVIEWED AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

INTERNAL PRETENDER REVIEW
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PROJECT
CATALINA GREEN
CLARKSON, W.A
STAGE OR PHASE
STAGE 37-38 STREETSCAPE

DRAWING TITLE
LANDSCAPE DRAWING 1 OF 3

CLIENT
CATALINA REGIONAL COUNCIL

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DESIGNED BY	ZF	PRELIM DESIGN REVIEWED BY	ZF
DRAWN BY	OW	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	30.08.23		

SCALE 1: 250 @ A1 METRES
0 2.5 5 7.5 10 12.5

DRAWING NUMBER CAT60-101
REV C

DEF: L:\CURRENT PROJECTS\CATALINA, TAMA & PARK\CLL DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 37 38 & 39 STREETSCAPE\37 38 STREETSCAPE STAGE37-38.DWG

MATCHLINE. REFER TO DWG CAT60-101

3113

GRAMPIANS DRIVE

3097

3098

MIX 2
83.8 m²@4/m²
Paoc x 42
Sccr x 126
Fino x 84
Dire x 84

MIX 6
20.3 m²@6/m²
Fino x 41
Paoc x 41
Scae x 41

MIX 6
20.2 m²@6/m²
Fino x 40
Paoc x 40
Scae x 40

MIX 1
65.2 m²@6/m²
Anfi x 147
Coac x 98
Hepu x 98
Paoc x 49

MIX 2
25.1 m²@4/m²
Paoc x 13
Sccr x 38
Fino x 25
Dire x 25

MIX 2
96.6 m²@4/m²
Paoc x 48
Sccr x 145
Fino x 97
Dire x 97

MIX 3
75.4 m²@4/m²
Kepr x 60
Cavi x 121
Cali x 60
Adse x 60

Eugo

ROAD 128

TAMBORINE ROAD

PATH BY CIVIL

MULCH ONLY

MIX 2
19.7 m²@4/m²
Paoc x 10
Sccr x 30
Fino x 20
Dire x 20

MIX 4
51.8 m²@4/m²
Thpi x 34
Paoc x 34
Mene x 34
Lebr x 34
Cahi x 34
Bame x 34

3266

MIX 3
85.8 m²@4/m²
Kepr x 69
Cavi x 137
Cali x 69
Adse x 69

MIX 6
16 m²@6/m²
Fino x 32
Paoc x 32
Scae x 32

3265

MIX 6
16 m²@6/m²
Fino x 32
Paoc x 32
Scae x 32

MIX 1
42.8 m²@6/m²
Anfl x 96
Coac x 64
Hepu x 64
Paoc x 32

3264

GRAMPIANS DRIVE

8039

3094

MIX 6
9.2 m²@6/m²

MATCHLINE. REFER TO DWG CAT60-103

3263

8040

1078

1100

1104

1079

1099

1080

1098

1081

1097

1082

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1083

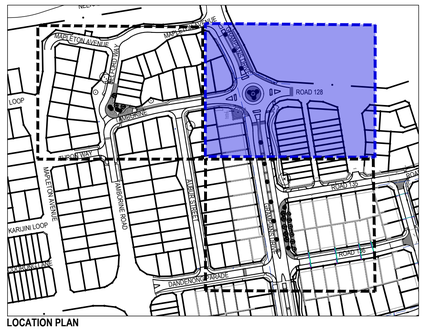
1095

1084

1094

1085

1093



MATCHLINE. REFER TO DWG CAT60-102

3263 3093 3262 3092 3261 3091 3260 3090 3259 3089 3258 3088 3257 3087 3256 3086 3255 3085 3238

1085 1086 1087 1088 1089 1093 1092 1091 1090

ROAD

3320 3319 3318 3317 3304 3305 3306 3303 3302 3301

GRAMPIANS DRIVE

MIX 6
9.2 m²@6/m²
Fino x 18
Paoc x 18
Scae x 18

MIX 1
33.1 m²@6/m²
Anfl x 75
Coac x 50
Hepu x 50
Paoc x 25

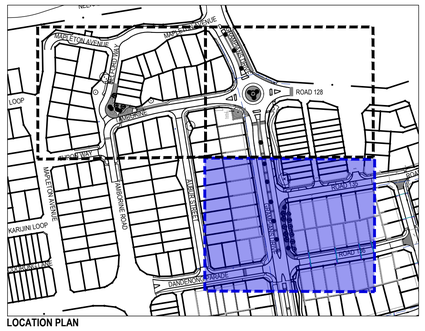
MIX 2
135.3 m²@4/m²
Paoc x 68
Sccr x 203
Fino x 135
Dire x 135

MIX 3
108.3 m²@4/m²
Kepr x 87
Cavi x 173
Cali x 87
Adse x 87

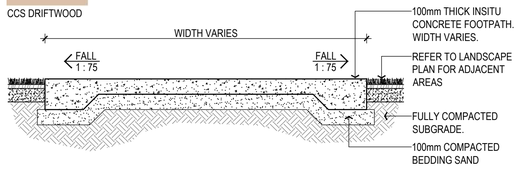
MIX 5
116.7 m²@4/m²
Accy x 93
Hava x 93
Jafu x 93
Mehu x 93
Myin x 93

MULCH ONLY

CONCRETE PATH
BY OTHERS



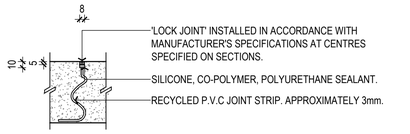
CCS DRIFTWOOD



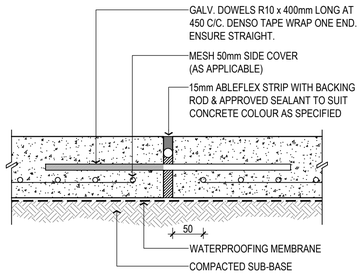
NOTES

1. FOUNDATION TO BE COMPACTED TO 95% MDD.
2. ALL CONCRETE FOOTPATH CONSTRUCTION TO BE A MIN 25MPa, 20mm AGGREGATE AND MAX SLUMP OF 80-100mm.
3. BEDDING - SAND (100mm MINIMUM).
4. EXPANSION JOINT EVERY 5.0M AS. SEE DETAIL 3/901
5. CONTRACTION JOINT EVERY 2.5M. SEE DETAIL 2/901
6. SURFACE TO BE BROOM FINISH, NON-SLIP, WITH SMOOTH EDGE APPROX 75mm WIDE AT EDGES AND JOINTS.
7. LONGITUDINAL GRADE SHOULD NOT EXCEED 1 IN 20.
8. WHERE LONGITUDINAL GRADE IS GREATER THAN 1 IN 14, LANDINGS WILL BE PROVIDED EVERY 6m.
9. VERTICAL CLEARANCES ALONG PATHS SHOULD BE A MINIMUM OF 2m.
10. WHERE STREET FURNITURE (POLES, BENCHES, RUBBISH BINS, POSTS, ETC) ARE LOCATED IN PATH, A MIN UNOBSTRUCTED WIDTH OF 1.2m MUST BE MAINTAINED.

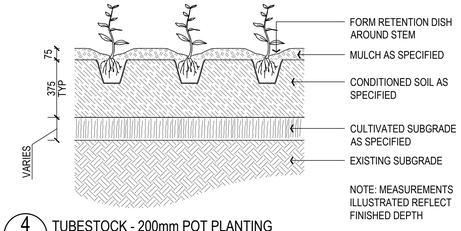
1 / 901 INSITU CONCRETE FOOTPATH - TYPICAL
SECTION — SCALE 1:20



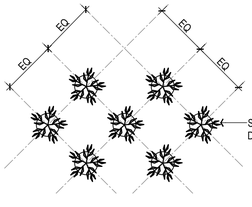
2 / 901 TYPICAL CONTRACTION JOINT
SECTION — SCALE 1:5



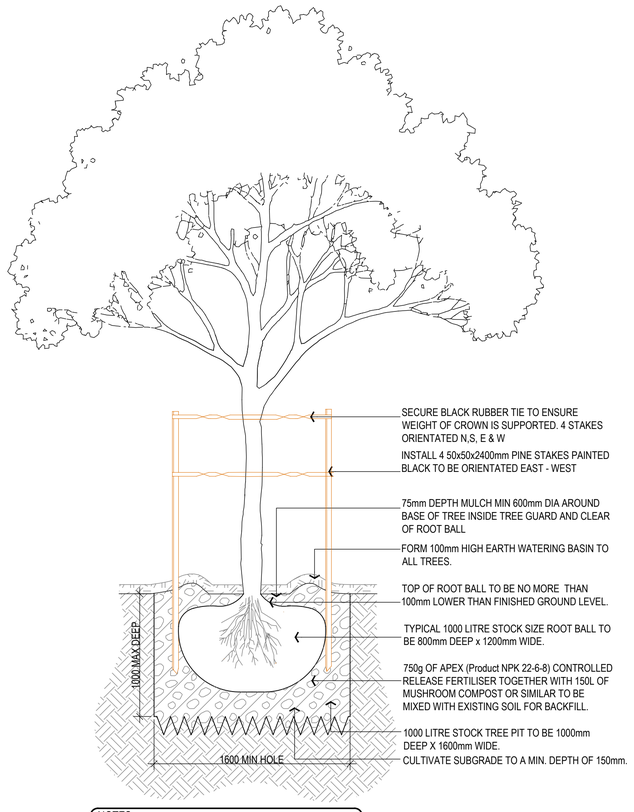
3 / 901 TYPICAL EDGE DETAIL (NON-TRAFFICABLE)
SECTION — SCALE 1:5



4 / 901 TUBESTOCK - 200mm POT PLANTING
SECTION — SCALE 1:20



5 / 901 TYPICAL STAGGERED PLANTING PATTERN
PLAN — SCALE 1:20



NOTES

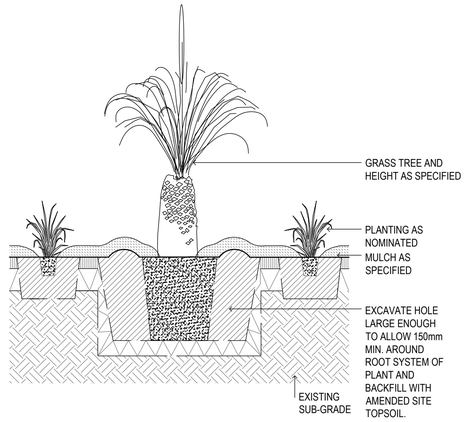
1000 LITRE TREE AS SPECIFIED & AS SHOWN ON PLANS. STOCK TO BE SOUGHT WITHIN 4 WEEKS OF CONTRACT APPROVAL, CONFIRM STOCK HAS BEEN SECURED IN WRITING TO LANDSCAPE ARCHITECT

6 / 901 TYPICAL 1500 LITRE TREE PLANTING
SECTION — SCALE 1:25



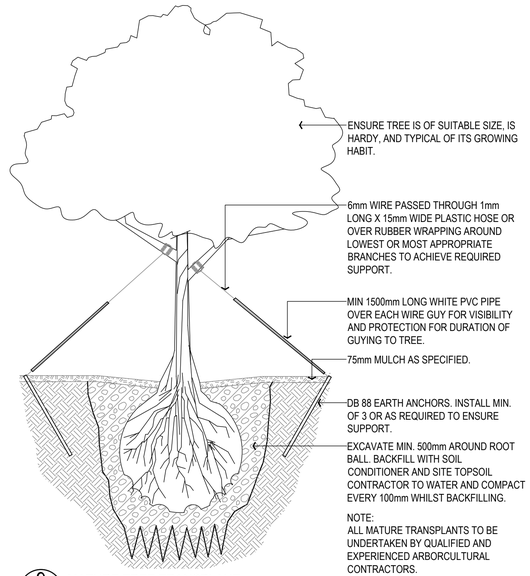
PRODUCT NAME	LINEA BENCH SEAT WITH ARMREST
PRODUCT SUPPLIER	STREET FURNITURE AUSTRALIA
PRODUCT CODE	LIB6
PRODUCT FINISH	ALUMINIUM WOODGRAIN FINISH
PRODUCT COLOUR	SLATS: SPOTTED GUM FRAMING: POWDERCOAT DULUX MONUMENT
PRODUCT FIXING	SURFACE FIX AS PER MANUFACTURER'S SPECIFICATIONS

7 / 901 BENCH SEAT
SECTION — SCALE 1:25

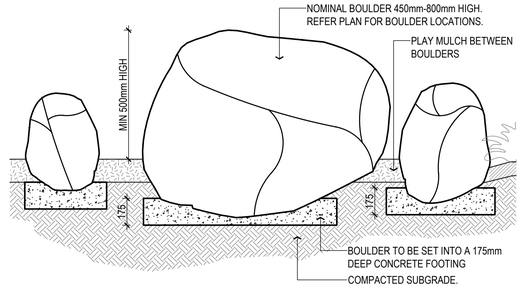


8 / 901 XANTHORRHOEA PREISSII TRANSPLANT
SECTION — SCALE 1:20

NOTE: DISPOSE OF ANY SURPLUS SOIL & STONES TO ENSURE THAT WATER IS NOT DEFLECTED FROM PLANTING POINT.



9 / 901 MATURE TREE TRANSPLANT
SECTION — SCALE 1:50



NOTES

LIMESTONE BOULDERS TO BE SOURCED AND INSTALLED. MIN HEIGHT SIZE 450mm - MAX SIZE 800mm. GENERALLY BOULDERS TO BE BURIED APPROX. 1/3 OF EXPOSED HEIGHT AND INSTALLED WITH A MORTAR BED

10 / 901 FEATURE BOULDERS @ MULCH
SECTION — SCALE 1:20

PRELIMINARY
NOT FOR CONSTRUCTION
INFORMATION ONLY

STANDARD NOTES

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2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
A	28.01.25	JL	ISSUE AS CONSTRUCTED
0	23.02.24	OW	ISSUE FOR CONSTRUCTION
A	01.09.23	OW	ISSUE FOR REVIEW

THIS IS AN UNCONTROLLED DOCUMENT ISSUED FOR INFORMATION ONLY UNLESS SIGNED BELOW AT EACH RELEVANT STAGE.

INTERNAL DESIGN REVIEW
THIS DESIGN IS NOT AUTHORISED WITHOUT BEING INTERNALLY REVIEWED AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

INTERNAL PRETENDER REVIEW
THIS DRAWING IS NOT AUTHORISED FOR TENDER WITHOUT BEING INTERNALLY REVIEWED AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

AUTHORISED FOR CONSTRUCTION
THIS DRAWING IS NOT AUTHORISED FOR CONSTRUCTION UNLESS IT IS MARKED REV 1 OR HIGHER AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

emerge ASSOCIATES
Integrated Science & Design
PERTH (08) 9380 4988 • MARGARET RIVER (08) 9758 8159

PROJECT
CATALINA GREEN
CLARKSON, W.A
STAGE OR PHASE
STAGE 37-38 STREETSCAPE

DRAWING TITLE
TYPICAL DETAILS

CLIENT
CATALINA REGIONAL COUNCIL

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DESIGNED BY	ZF	PRELIM DESIGN REVIEWED BY	ZF
DRAWN BY	OW	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	30.08.23		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT60-901	REV	A

REF: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLIENT DRAWINGS\CAD FOR CODES AUTOCAD\CAD CODE\ LANDSCAPE\STAGE 37,38 & 39 STREETSCAPE\CATLD_DET.DWG\PLOTTED

GENERAL NOTES

1. These drawings are to be read in conjunction with all architectural and other consultants' drawings and specifications and with such other written instructions as may be issued. Any discrepancies shall be referred to the superintendent for clarification before proceeding with work.
2. All dimensions are in millimetres and those relevant to setting out (excludes finishes) and offsite work shall be verified by the contractor before construction and fabrication are commenced. The engineer's drawings shall not be scaled.
3. All levels and grid co-ordinates are in metres.
4. During construction the contractor shall be responsible for maintaining the structure in a stable condition and no part shall be over stressed under construction activities.
5. Workmanship and materials shall be in accordance with the current edition of the relevant SAA codes and the by-laws and ordinances of the relevant building authority, except where varied by the contract documents.

DESIGN CRITERIA

1. Dead, live, wind and earthquake loads to AS1170.
2. Design Wind Speed
   Region A
   Terrain Category 2.5
   Regional Gust Wind Speed = 45m/sec (ULTIMATE LIMIT STATE)
   Regional Gust Wind Speed = 37m/sec (SERVICE LIMIT STATE)
3. Earthquake
   kp = 1.0
   Hazard Factor Z = 0.09 (Perth)
4. Foundations
   Foundations designed for Class 'S' site with minimum 150kPa allowable bearing pressure.
5. Live Loads

Decking:	3kPa to AS1170.1
Balustrade:	C3 to AS1170.1
Roof construction load:	0.25kPa to AS1170.1
Retaining Wall Surcharge:	3kPa to AS1170.1

BUILDER NOTE - COMPLIANCE INSPECTIONS

1. As part of the building licence for this project, the builder may be required to have the structural engineer certify the completed structure has been built in accordance with the approved drawings & /or with any subsequent written instructions.
2. If WA Structural Consulting are to provide this certification, the builder must arrange for WA Structural Consulting to inspect each of the structural items at appropriate stages. These items and stages include, but are not limited to the following;,
   2.1. Concrete reinforcement, prior to pouring of concrete in:
      2.1.1. Footing Excavations
      2.1.2. Slabs on ground
      2.1.3. Suspended slabs and beams
      2.1.4. Concrete columns and walls
      2.1.5. Retaining walls
   2.2. Structural steelwork prior to any cladding being fixed.
   2.3. Concrete wall panel connections.
3. The builder must provide appropriate evidence that the specified concrete has been supplied for each concrete element.
4. The builder must provide evidence that the required levels of foundation compaction have been achieved.
5. Where a geotechnical engineer has made specific recommendations, evidence that these have been achieved must be provided.
6. Unless fees for our inspections and certifications have been previously negotiated with WA Structural Consulting by others, these fees will be the builder's responsibility. It is required that the builder negotiate these fees with the engineer at a tender stage.
7. If the builder requires the fabrication drawings to be checked & certified by the project engineer, the costs associated with this will be the builder's responsibility, unless these fees have been previously negotiated with WA Structural Consulting by others. This must be confirmed by the builder.

CONCRETE AND REINFORCEMENT

1. All concrete works shall be in accordance with AS3600.
   Concrete specification shall be U.N.O.:

	F'C (MPA)	MAX.AGG SIZE (mm)	SLUMP (mm)
• Location			
• Footings	25	20	65
• Slab on Ground	25	20	65
• In Situ Retaining Walls	32	20	60
• Precast	32	20	80
• Cavity Fill	15	10	100

   Cover to Reinforcement shall be:

	Bottom (mm)	Top (mm)	Sides (mm)
• Location			
• Footing	70	50	50
• Slab on Ground	50	40	50
• In Situ Retaining Walls	32	20	60
• Precast	50	40	40
• Cavity Fill	50	50	20 U.N.O

2. Reinforcement shall be supported on approved plastic or plastic tipped wire chairs and hold rigidly in position as follows:
   a. Bars up to N12 and fabric - 800mm centres
   b. Bars N16 and larger - 1200mm centres
   * Welding reinforcement is not permitted unless approved by engineer.
3. Construction joints shall be scabbled, cleaned and coated with a cement/water slurry immediately prior to placing concrete.
4. Concrete shall be compacted using mechanical vibrators.
5. Concrete shall be cured for a minimum of 7 days by flooding, keeping continuously moist, the application of an approved curing compound or by other means approved by the engineer.
6. No holes or chases other than those shown on the drawings shall be made unless approved by engineer. Pipework passing through footing beams shall be to the approval of the engineer and shall be wrapped with a compressible material of minimum 6mm thickness.
7. Formwork and stripping times shall comply with AS3610. Remove formwork only when concrete has attained its design (f 'c) strength unless otherwise instructed by the structural engineer.
8. Control, expansion and contraction joints shall be constructed as detailed. Saw cut joints shall be made within 12 hours of concrete placement.
9. All mesh to conform with AS1304.
10. Reinforcement shall be in accordance with the following standards:

R	Indicates plain reinforcing bar R250N to AS/NZS4671
L	Indicates plain or deformed wire R500L or D500L to AS/NZS4671
RL	Indicates deformed rectangular mesh D500L to AS/NZS4671
SL	Indicates deformed square mesh D500L to AS/NZS4671
N	Indicates deformed bars D500N to AS/NZS4671
S	Indicates deformed bars D250N to AS/NZS4671
TM	Suffix indicates trench mesh using deformed bars D500L to AS/NZS4671

11. All galvanized items which are cast into concrete are to be passivated in a 0.2% sodium dichromate solution or equivalent.
12. All formwork shall be rigidly constructed of approved material. Formwork and supports shall be designed to withstand all possible load combinations during construction.

BAR DIAMETER (LARGEST)	LAP
12	600
16	800
20	1000
24	1200
28	1400
32	1600

Note: To be used U.N.O

14. Chemset Anchors U.N.O to be M16 HCR 8.8 rods with HILTI-HIT-HY-200 Adheisive minimum 150mm embedment. Installed in accordance with Manufacturers Specification and Installation Procedure.

FOUNDATIONS

1. Design is based on an allowable bearing pressure of 150kPa. It is the builder's responsibility to confirm the foundation type prior to commencing construction. Should the foundation type or bearing capacity not satisfy the above criteria the builder shall immediately contact engineer prior to construction proceeding.
2. Builder to grub out and remove all organic material and debris from the building platform.
3. Any soft areas shall be dug out and replaced with approved non-plastic fill.
4. All site preparation works shall be in accordance with site specific Geotechnical report and requirements.
5. Ensure a minimum of 8 blows per 300mm is achieved with a calibrated Perth Sand Penetrometer in accordance with AS1289.6.3.3
6. The building platform is to be shaped to ensure it drains to its perimeter and that such drainage is taken away from the platform area.
7. Footings at the lowest level must be the first footings constructed.
8. Located plumbing lines over top of footings and step footings.

MASONRY

1. All blockwork and brickwork shall be in accordance with AS3700
2. Concrete blocks shall be in accordance with AS2733
3. Reinforcement and concrete core filling shall comply with the notes on "concrete and reinforcement".
4. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700.
5. Masonry units shall have a minimum compressive strength of 15MPa.
6. As follows:
   a. Bond beam reinforcement shall be continuous at intersecting walls and bars anchored and lapped to develop full tensile stress.
   b. Support reinforced brick lintels for 14 days minimum.
7. Cleanout blocks shall be provided at the base of all cores to be concrete filled. Alternatively the builder shall open such cores for cleaning by an approved method.
8. All cores to be concrete filled shall be cleaned out by hosing prior to final setting or mortar at all lifts or by rodding prior to concrete filling.
9. Retaining walls shall be fully core filled. Backfill to retaining walls shall not be carried out until 14 days after core filling.
10. Provide 10mm stack bonded control joints where shown. Control joint to consist of flexible masonry anchors every 3rd course. Brunswick type MFA 3/3. Apply flexible sealant over backing rod.
11. Cross walls shall be fully bonded for the full height of intersecting wall.
12. Horizontal chasing is not permitted without written approval from the engineer.
13. Lap wires 500mm at splices and around corners and COG 500mm into intersecting walls. 20mm cover to all wires.
14. All wires in external face of external leaf to be galvanised to AS/NZS4680.
15. Masonry ties are to be provided at no more than 600mm spacing in each direction, and max 300mm from top of wall, side of control joint or perimeter of opening.
16. Ties to be grade 316 stainless steel in corrosive environments.
17. Masonry abutting concrete footings to typically be isolated with 10mm Ableflex expansion foam or similar approved product UNO.

STRUCTURAL STEEL

1. All steelwork shall be in accordance with:
   AS4100 steel structures
   AS4600 cold formed steel structures
2. Fabricator to check all dimensions before cutting materials or manufacturing. fabrication to AS4100 UON. These drawing are to be read in conjunction with the project architectural and other consultants' drawings.
3. Unless noted otherwise all steel shall be:
   a. AS3678 grade 250 hot rolled plates
   b. AS3679.1 grade 300 hot rolled UB, PFC, TFC, TFB, EA, UA and FLATS
   c. AS3679.2 grade 300 WB and WC
   d. AS1163 grade 250 for circular hollow sections Ø165mm and less
   e. AS1163 grade 350 for circular hollow sections larger than Ø165mm and rectangular hollow sections.
   f. AS1397 500MPa for 1.2mm thick purlins and girts
   g. 450MPa for 1.6mm thick purlins and girts
   h. 450MPa for 1.0 thick CF Channels
   i. 450MPa for 1.6mm thick CF Channels
4. Galvanising shall be hot dipped to AS/NZS 4680
5. Bolts shall be galvanised and of sufficient length to exclude the thread from the shear plane. A suitable washer shall be used under all nuts, when tensioning is specified high strength bolts shall be fully tensioned with load indicating washers to the requirements of AS4100.
6. Bolt legend 4.6/S commercial grade 4.6 bolts snug tightened 8.8/S high strength grade 8.8 bolts snug tightened. 8.8/TB high strength grade 8.8 bolts tensioned bearing connection. 8.8/TF high strength grade 8.8 bolts tensioned friction connection.
7. Unless otherwise specified the following shall apply -
   a. Cleats, brackets, stiffeners etc. to be 10mm thick, ex-standard square edge flats U.N.O.
   b. Welding to be carried out in accordance with AS/NZS 1554. 1:1995 welding consumables to be E48XX or W50X U.N.O. all welds to be 6MM CFW SP category U.N.O CPBW to be SP category U.N.O.
   c. Inspection to be carried to AS/NZS 1554.1:1995. All GP/SP welds to be 100% visually scanned. SP welds allow for 25% visual examination U.N.O.
   d. 6mm end plates to all hollow sections (seal weld).
   e. Bolts to be G 8.8/S
   f. Bolt hole clearance 2mm
   g. Hold down bolt clearance 4mm
   h. Grout - a space for 40mm of 2:1 sand: cement mortar of damp earth consistency under all base plates.
   i. Connections - minimum of 2-M16 8.8/S bolts
   j. Bracing intersects on centrelines and centre of gravity for angles.
8. Fabricator shall allow for all cleats and other fixings required by the supervisor.
9. All column base plates shall be set on 20mm min. of 1:2 cement and sand grout.
10. Seal all open ends of pipes or RHS members. Grind off all visible welds and brand marks to neat appearance where specified.
11. See below:
   a. The contractor shall remain responsible at all times for providing all necessary temporary bracing and other supports during erection, to stabilise the partially constructed building.
   b. Particular attention must be paid to the buckling stability of beams and columns prior to the connection of purlins, girts, fly braces and other bracing elements.
   c. It is the responsibility of the builder to obtain proper technical advice wherever necessary to ensure the partially completed structure is safe from collapse.
12. Treatment:
   All steel connection plate and bolts to be hot dip galvanize (600 g/sqm)
   Holding down bolts - hot dip galvanize (600 g/sqm)
13. Bitumen paint all steelwork for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

STRUCTURAL TIMBER

1. Structural timber shall comply with AS1720 timber structure code.
2. All timber to be seasoned F14, class 2, strength group SD5, joint group JD2 and treated with creosote to hazard class H4 unless noted otherwise.
3. All timber work to be in accordance with :
- AS1684 - SAA timber framing code.
- AS1720 - SAA timber structures code.
4. All timber and steel connections to be in accordance with AS1720.
5. Ensure no knots or gum veins in timber used.
6. Coat all timber in contact with ground with bitumen paint or similar approved.
7. All structural details to be confirmed, checked and site measured by builder prior to construction. Report any discrepancies to structural engineer.
8. Treatment :
- H1 - Interior use, above ground.
- H2 - Interior use, above ground, subject to termites.
- H3 - Exterior use, above ground, subject to periodic wetting.
- H4 - Exterior use, in ground, subject to severe wetting.
- H5 - Exterior use, in ground, with or in fresh water.
- H6 - Exposed to marine water.
9. Required bending stress:
- MGP10 fb = 16 MPa
- MGP12 fb = 28 MPa
- F14 fb = 36 MPa
- GL17 fb = 40 MPa
- LVL13 fb = 48 MPa
- LVL15 fb = 59 MPa
- LVL18 fb = 72 MPa
10. All bolted timber connections to be re-tightened at end of project prior to completion, ensure no splitting of timber occurs.
11. All proprietary systems (floor/wall/roofing) to be installed in strict accordance with manufacturer's specifications and details.
12. Bush Poles :
- All timber to AS1720.
- Minimum F11 grade CCA / H4 treated seasoned softwood. S6 strength group.
- Free from decay, shakes & fractures,resin pockets and surface damage.
- Heartwood not to exceed 50% of the diameter at each end or be within 35mm from the surface.
13. Bitumen paint all timber posts/columns for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

LIMESTONE RETAINING WALL SPECIFICATION NOTES

1. Width 'b' at any height to be no less than half of retained height 'h'. step wall to suit
2. Walls to be built on compacted sand, compact ground under footing to resist 7 blows per 300mm of a standard 16mm dia penetrometer over a depth of 600mm.
3. These walls are applicable to well drained sandy soil conditions only.
4. Walls resisting clay soil pressures and/or hydrostatic pressures to be referred to the engineer.
5. All reconstituted limestone to be first grade quality & free from soft pockets.
6. Rubble shall not be used to fill voids.
7. Reconstituted limestone to have a dry density of at least 1600 kg/m3 and a crushing strength of at least 5mpa.
8. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700. All mortar joints to be 20mm thick and fully mortared.
9. All topsoil, vegetation and deleterious matter shall be removed from the foundation area.
10. Vertical thickness of wall to be adequately bonded by building in header blocks - refer cross section
11. No backfilling until 7 days after walls have been built.
12. All backfilling shall be carried out using material which shall generally be sandy in nature and free from large pieces of rock to the extent that the
    material can be compacted using a vibrating plate compactor to meet the requirements of the specification.
13. Backfill shall not be dumped behind wall in a manner which will cause shock loading on the wall
14. Backfill shall be clean sand compacted in shallow (300) layers using light compacting equipment
15. In all cases the backfill material shall be selected such that once compacted, the standard of compaction can be measured using a standard perth penetrometer.
16. Compaction of the backfill material to the front and back of the wall to be compacted 95% modified max dry density.
17. Prior to practical completion the contractor shall provide written certification from a practising structural engineer that the wall construction & backfill compaction has been carried out in accordance with this drawing and the specification.
18. Construction Joints (CJ) shall be constructed within the retaining wall where noted below:

(i) at max. 10m centres along wall face
(ii) where the angle between faces of two walls exceeds 180 degrees, in which case the CJ is to be located on one side of the change in direction, at a distance away from the direction change equal to the base width of the wall.

19. Construction joints shall be 15mm wide and filled with expanded polyethylene (100mm deep) covered with a 25mm deep mastic of colour to match wall mortar. joints are to extend through wall and any fences, but need not extend through base course of limestone wall.
20. Select blocks to ensure intact faces only visible in facework.

ALUMINIUM

1. All Aluminium shall be in accordance with AS1664.
2. All Aluminium welding shall comply with AS1664.
3. Unless noted otherwise, all aluminium to be:
- Plates: Grade 5083 H116/h321 or 5083 H112 Aluminium
- SHS/RHS/CHS: Grade 6060-t5 aluminium
- Fixings: grade 316 stainless steel
- Welds: 5mm continuous fillet, category sp, filler allow to be grade 5186,5356 or 5556 aluminium
4. All fixings into Aluminium members to be stainless steel (SS316) or equivalent capacity aluminium fixings.
5. Provide nylon washers and packers for all and any connections between steel and aluminium.
6. Adequate protective coatings are to be applied to aluminum cast into concrete.

PRECAST CONCRETE

1. All precast units shown are for service conditions only. The contractor is responsible for all casting,lifting, transportation and propping requirements and must satisfy himself that they have been constructed to meet the design criteria noted. Any queries regarding precast concrete units shall be flagged during the tender process. If in doubt, ask.
2. Contractor to obtain Engineer's Design Certification for all elements of precast concrete work as required to the relevant Australian Standards (Lifting, bracing, propping as required).
3. Panels are to be securely propped until designed connections have been installed and are sufficiently restraining panels.
4. U.N.O all chemical anchors fixed into concrete panels to be galvanised HILTI-HAS-E-F rods with HILTI-HIT-HY-200 adhesive.
5. All grout used for panels shall be non shrink high strength grout to achieve min 40mpa compressive strength typ.
6. Precast concrete strength is for final position. Contractor to confirm required lifting strength in accordance with lifting engineers requirements. Shall be no less than 15 MPA.

HDPE DECKING AND BOARDS

1. All HDPE battens and other HDPE members to be supplied and installed in strict accordance with manufacturers specification.

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PROJECT
CATALINA GREEN
CLARKSON, W.A
STAGE OR PHASE
STAGE 37-38 STREETSCAPE

DRAWING TITLE
TYPICAL NOTES

CLIENT
CATALINA REGIONAL COUNCIL

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DRAWN BY	OW	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	30.08.23		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT60-902	REV	A

\\REF 1\ACTIVE\PROJECTS\CATALINA - TAMALA PARK\CLL DRAWINGS\DR CODE\ AUTOCAD\DR CODE\ LANDSCAPE\STAGE 37 38 & 39 STREETSCAPE\TYPICAL DETAILS.DWG



CATALINA BEACH

CLARKSON, W.A.

Catalina

STAGE 39 STREETSCAPE

LANDSCAPE CONTRACT: CAT61

LANDSCAPE & IRRIGATION WORKS

CLIENT:CATALINA REGIONAL COUNCIL

REVISED AS: ***CONSTRUCTED***

DATE: **MARCH 2025**

Sheet List Table		
Sheet Number	Sheet Title	Revision
CAT61-000	COVERSHEET	C
CAT61-101	LANDSCAPE DRAWING 1 OF 2	C
CAT61-102	LANDSCAPE DRAWING 2 OF 2	C
CAT61-901	TYPICAL DETAILS	A
CAT61-902	TYPICAL NOTES	A

CATALINA Regional Council

emerge ASSOCIATES Integrated Science & Design

MATCHLINE. REFER TO DWG CAT61-102 DRAWING 1

MIX 6
9.9 m²@6/m²
Adcu x 7
Mehu x 7
Paoc x 20
Scae x 20
Sccr x 7

MIX 1 (No Mulch)
10.2 m²@6/m²
Anfl x 15
Coac x 15
Hepu x 15
Lelo x 15

MIX 6
2.8 m²@6/m²
Adcu x 2
Mehu x 2
Paoc x 6
Scae x 6
Sccr x 2

MIX 6
2.8 m²@6/m²
Adcu x 2
Mehu x 2
Paoc x 6
Scae x 6
Sccr x 2

MIX 2
24.2 m²@4/m²
Dire x 24
Lelo x 24
Sccr x 32
Weda x 8
Grgi x 8

MIX 3
25.9 m²@4/m²
Adcu x 21
Caqu x 41
Cavi x 21
Kepr x 21

MIX 6
2.6 m²@6/m²
Adcu x 2
Mehu x 2
Paoc x 5
Scae x 5
Sccr x 2

MIX 6
2.6 m²@6/m²
Adcu x 2
Mehu x 2
Paoc x 5
Scae x 5
Sccr x 2

MIX 2
109.8 m²@4/m²
Dire x 110
Lelo x 110
Sccr x 146
Weda x 36
Grgi x 36

MIX 4
132.6 m²@4/m²
Bame x 88
Cahi x 88
Kupo x 88
Mene x 88
Paoc x 88
Thpi x 88

MIX 1 (No Mulch)
9.5 m²@6/m²
Anfl x 14
Coac x 14
Hepu x 14
Lelo x 14

MIX 1 (No Mulch)
33.1 m²@6/m²
Anfl x 50
Coac x 50
Hepu x 50
Lelo x 50

MIX 6
9.2 m²@6/m²
Adcu x 6
Mehu x 6
Paoc x 18
Scae x 18
Sccr x 6

7/901 BENCH

1/901 COLOURED CONCRETE PAD

MULCH ONLY

CONCRETE PATH BY CIVIL

MIX 6
9.2 m²@6/m²
Adcu x 6
Mehu x 6
Paoc x 18
Scae x 18
Sccr x 6

MULCH ONLY

MIX 6
9.2 m²@6/m²
Adcu x 6
Mehu x 6
Paoc x 18
Scae x 18
Sccr x 6

MIX 1 (No Mulch)
33.1 m²@6/m²
Anfl x 50
Coac x 50
Hepu x 50
Lelo x 50

MIX 6
9.2 m²@6/m²
Adcu x 6
Mehu x 6
Paoc x 18
Scae x 18
Sccr x 6

MIX 3
104.2 m²@4/m²
Adcu x 83
Caqu x 167
Cavi x 83
Kepr x 83

MIX 6
7.7 m²@6/m²
Adcu x 5
Mehu x 5
Paoc x 15
Scae x 15
Sccr x 5

MIX 6
4.5 m²@6/m²
Paoc x 14
Scth x 14

MIX 1 (No Mulch)
27.7 m²@6/m²
Anfl x 42
Coac x 42
Hepu x 42
Lelo x 42

MIX 6
1.5 m²@6/m²
Adcu x 1
Mehu x 1
Paoc x 3
Scae x 3
Sccr x 1

MIX 6
1.5 m²@6/m²
Adcu x 1
Mehu x 1
Paoc x 3
Scae x 3
Sccr x 1

MIX 1 (No Mulch)
5.2 m²@6/m²
Anfl x 8
Coac x 8
Hepu x 8
Lelo x 8

MIX 6
5.2 m²@6/m²
Adcu x 3
Mehu x 3
Paoc x 10
Scae x 10
Scor x 3

MIX 1 (No Mulch)
18.9 m²@6/m²
Anfl x 28
Coac x 28
Hepu x 28
Lelo x 28

MIX 6
5.2 m²@6/m²
Adcu x 3
Mehu x 3
Paoc x 10
Scae x 10
Scor x 3

MIX 6
9.2 m²@6/m²
Adcu x 6
Mehu x 6
Paoc x 18
Scae x 18
Sccr x 6

MIX 1 (No Mulch)
19.5 m²@6/m²
Anfl x 29
Coac x 29
Hepu x 29
Lelo x 29

MIX 6
9.3 m²@6/m²
Adcu x 6
Mehu x 6
Paoc x 19
Scae x 19
Sccr x 6

MIX 3
21.4 m²@4/m²
Adcu x 17
Caqu x 34
Cavi x 17
Kepr x 17

MIX 2
17.4 m²@4/m²
Dire x 17
Lelo x 17
Sccr x 23
Weda x 6
Grgi x 6

MULCH ONLY

CONCRETE PATH

7/901 BENCH

1/901 COLOURED CONCRETE PAD

MIX 3
99.8 m²@4/m²
Adcu x 80
Caqu x 160
Cavi x 80
Kepr x 80

MIX 2
110.5 m²@4/m²
Dire x 111
Lelo x 111
Sccr x 147
Weda x 37

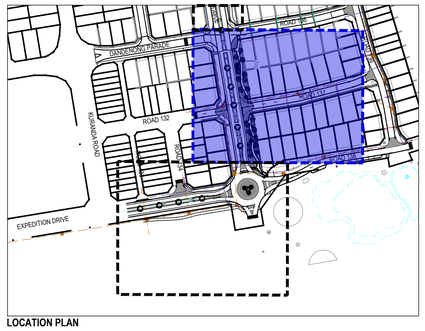
MIX 5
135.5 m²@4/m²
Acyy x 108
Hava x 108
Jasc x 108
Meth x 108
Myin x 108

3238 3237 3236 3235 3251 3249 3252 3248 3253 3247 3303 3302 3301 3300 3299 3298 3291 3290 3289 3288 3287 3286 8036 3284 3285 3283 3282 3281 3280 3270 3269 3268 3267 3338 8035

ROAD 137

GRAMPIANS DRIVE

MATCHLINE. REFER TO DWG CAT61-102 DRAWING 2



LOCATION PLAN

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LEGEND

- EXTENT OF WORKS
- PROPOSED COLOURED CONCRETE CCS DRIFTWOOD (1/901)
- PATH BY CIVIL
- PROPOSED PLANTING (2/901)
- SWALE PLANTING (NON-MULCHED) (2/901)
- MULCH ONLY
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PROJECT
CATALINA BEACH
CLARKSON, W.A.
STAGE OR PHASE
STAGE 39 STREETSCAPE

DRAWING TITLE
LANDSCAPE DRAWING 1 OF 2

CLIENT
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SCALE 1: 250 @ A1 METRES
0 2.5 5 7.5 10 12.5

DRAWING NUMBER
CAT61-101

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DEC U:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLD\DRAWING\JOB CODE\ MUTOCAD\JOB CODE\ LANDSCAPE\STAGE 37,38 & 39 STREETS\ CAT61 STREETSCAPE STAGE 39.DWG

MIX 1 (No Mulch)

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Lelo	Lepidosperma longitudinale	Pithy Sword Sedge	14 cm	495
	Hepu	Hemiandra pungens	Snakebush	14 cm	495
	Coac	Conostylis aculeata	Prickly Conostylis	14 cm	495
	Anfl	Anigozanthos flavidus	Tall Kangaroo Paw	14 cm	495

MIX 2

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Weda	Westringia dampieri	Shore Westringia	14 cm	130
	Sccr	Scaevola crassifolia	Cushion Fanflower	14 cm	520
	Lelo	Lepidosperma longitudinale	Pithy Sword Sedge	14 cm	391
	Grgi	Grevillea obtusifolia 'Gin Gin Gem'	Grevillea	14 cm	130
	Dire	Dianella revoluta	Black-anther Flax-lily	14 cm	391

MIX 3

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Kepr	Kennedia prostrata	Running Postman	14 cm	261
	Cavi	Carpobrotus virescens	Coastal Pigface	14 cm	261
	Caqu	Calothamnus quadrifidus 'Clean and Green'	One sided bottlebrush	14 cm	523
	Adcu	Adenanthos cunninghamii	Woolly Bush	14 cm	261

MIX 4

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Thpi	Thryptomene 'Pink Lace'	Pink Thryptomene	14 cm	88
	Paoc	Patersonia occidentalis	Native Iris	14 cm	88
	Mene	Melaleuca nesophila 'Little Nessy'	Honey Myrtle	14 cm	88
	Kupo	Kunzea pomifera	Muntrie	14 cm	88
	Cahi	Calothamnus hirsutus	Hairy Claw Flower	14 cm	88
	Bame	Banksia menziesii dwarf	Menzies' Banksia	14 cm	88

MIX 5

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Myin	Myoporum insulare compact	Boobialla	14 cm	108
	Meth	Melaleuca thymoides	Thyme Honey Myrtle	14 cm	108
	Jasc	Jacksonia furcellata	Grey Stinkwood	14 cm	108
	Hava	Hakea varia	Variable-leaved Hakea	14 cm	108
	Accy	Acacia cyclops	Red Eye Wattle	14 cm	108

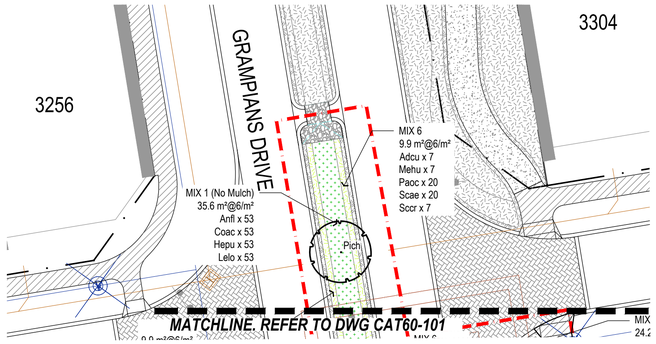
MIX 6

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Sccr	Scaevola crassifolia	Thick-leaved Fan Flower	14 cm	133
	Scae	Scaevola aemula 'Mauve Cluster' PBR	Fan Flower	14 cm	394
	Paoc	Patersonia occidentalis	Long Purple Flag	14 cm	394
	Mehu	Melaeuca huegelii prostrate	Chenille Honey-Myrtle	14 cm	133
	Adcu	Adenanthos cuneatus	Jug Flower	14 cm	133

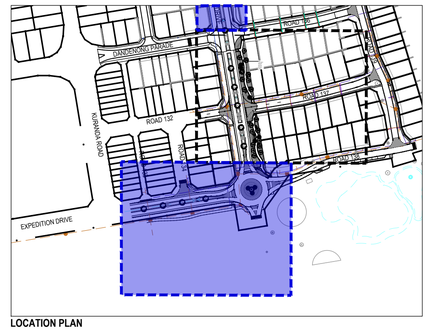
TREE LIST

Symbol	Key	Botanic Name	Common Name	Pot	Qty
Pich	Pich	Pistacia chinensis	Chinese Pistachio	1000 Litre	8
Pichi	Pichi	Pistacia chinensis	Chinese Pistachio	500 Litre	2
Xapr	Xapr	Xanthorrhoea preissii	Grass Tree	Transplant	8
Meex	Meex	Metrosideros excelsa	New Zealand Christmas Tree	Transplant	5
Euto	Euto	Eucalyptus todtiana	Coastal Blackbutt, Pricklybark	Transplant	1
Eugo	Eugo	Eucalyptus gomphocephala	Tuart	Transplant	1
Cuan	Cuan	Cupaniopsis anacardioides	Tuckeroo	Transplant	6
Agfl	Agfl	Agonis flexuosa	Weeping Peppermint	Transplant	7

NOTE:
- PLANT AND TREE NUMBERS IN SCHEDULE ARE TO BE USED AS GUIDE ONLY. TENDERERS TO REFER LABELS ON PLANS FOR NUMBERS. PLANT NUMBERS AND SPECIES ARE SUBJECT TO AVAILABILITY.
- PLANTS TO BE OFFSET MINIMUM 300MM FROM ALL HARDSTAND



1 / 102 LANDSCAPE PLAN



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2 / 102 LANDSCAPE PLAN

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STAGE OR PHASE
STAGE 39 STREETSCAPE

DRAWING TITLE
LANDSCAPE DRAWING 2 OF 2

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0 2.5 5 7.5 10 12.5

DRAWING NUMBER
CAT61-102

REV C

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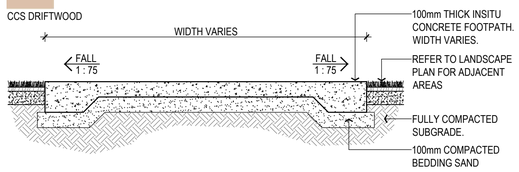
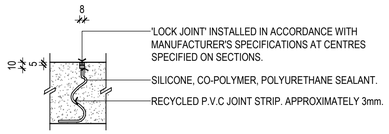
CCS DRIFTWOOD



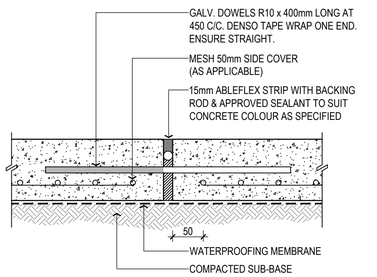
NOTES

1. FOUNDATION TO BE COMPACTED TO 95% MDD.
2. ALL CONCRETE FOOTPATH CONSTRUCTION TO BE A MIN 25MPa, 20mm AGGREGATE AND MAX SLUMP OF 80-100mm.
3. BEDDING - SAND (100mm MINIMUM).
4. EXPANSION JOINT EVERY 5.0M AS. SEE DETAIL 3/901
5. CONTRACTION JOINT EVERY 2.5M. SEE DETAIL 2/901
6. SURFACE TO BE BROOM FINISH, NON-SLIP, WITH SMOOTH EDGE APPROX 75mm WIDE AT EDGES AND JOINTS.
7. LONGITUDINAL GRADE SHOULD NOT EXCEED 1 IN 20.
8. WHERE LONGITUDINAL GRADE IS GREATER THAN 1 IN 14, LANDINGS WILL BE PROVIDED EVERY 6m.
9. VERTICAL CLEARANCES ALONG PATHS SHOULD BE A MINIMUM OF 2m.
10. WHERE STREET FURNITURE (POLES, BENCHES, RUBBISH BINS, POSTS, ETC) ARE LOCATED IN PATH, A MIN UNOBSTRUCTED WIDTH OF 1.2m MUST BE MAINTAINED.

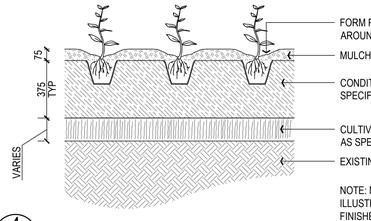
1 / 901 INSITU CONCRETE FOOTPATH - TYPICAL
SECTION — SCALE 1:20



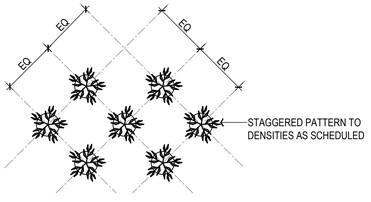
2 / 901 TYPICAL CONTRACTION JOINT
SECTION — SCALE 1:5



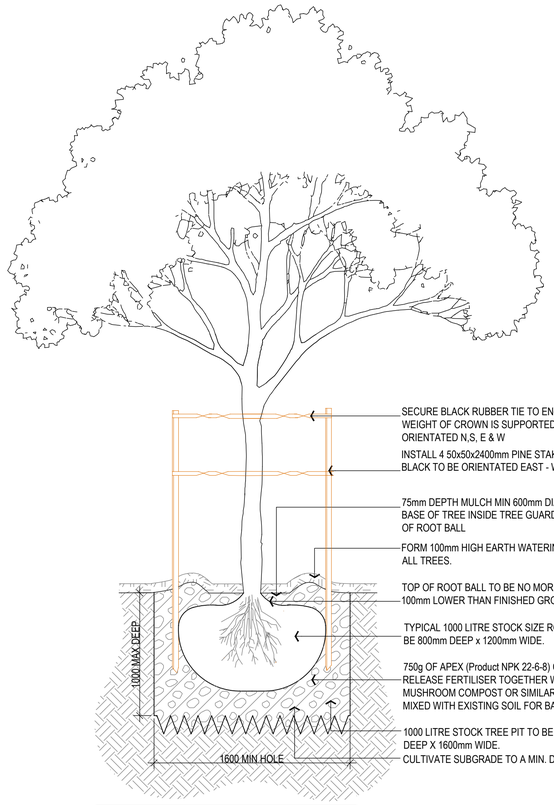
3 / 901 TYPICAL EDGE DETAIL (NON-TRAFFICABLE)
SECTION — SCALE 1:5



4 / 901 TUBESTOCK - 200mm POT PLANTING
SECTION — SCALE 1:20



5 / 901 TYPICAL STAGGERED PLANTING PATTERN
PLAN — SCALE 1:20



NOTES

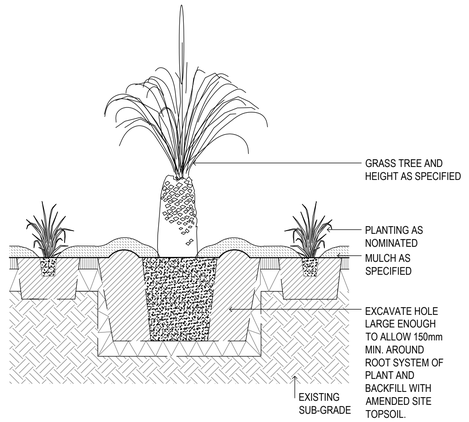
1000 LITRE TREE AS SPECIFIED & AS SHOWN ON PLANS. STOCK TO BE SOUGHT WITHIN 4 WEEKS OF CONTRACT APPROVAL, CONFIRM STOCK HAS BEEN SECURED IN WRITING TO LANDSCAPE ARCHITECT

6 / 901 TYPICAL 1500 LITRE TREE PLANTING
SECTION — SCALE 1:25



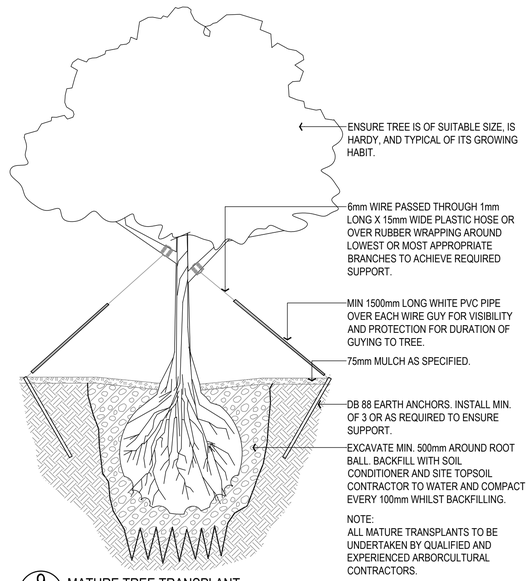
PRODUCT NAME	LINEA BENCH SEAT WITH ARMREST
PRODUCT SUPPLIER	STREET FURNITURE AUSTRALIA
PRODUCT CODE	LIB6
PRODUCT FINISH	ALUMINIUM WOODGRAIN FINISH
PRODUCT COLOUR	SLATS: SPOTTED GUM FRAMING: POWDERCOAT DULUX MONUMENT
PRODUCT FIXING	SURFACE FIX AS PER MANUFACTURER'S SPECIFICATIONS

7 / 901 BENCH SEAT
SECTION — SCALE 1:25

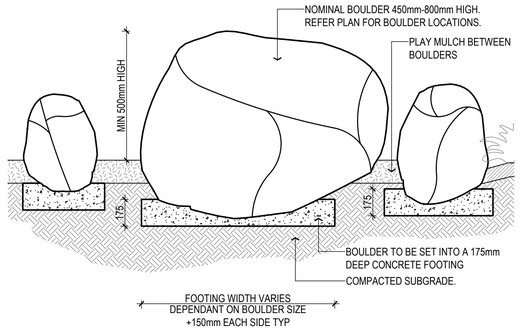


8 / 901 XANTHORRHOEA PREISSII TRANSPLANT
SECTION — SCALE 1:20

NOTE: DISPOSE OF ANY SURPLUS SOIL & STONES TO ENSURE THAT WATER IS NOT DEFLECTED FROM PLANTING POINT.



9 / 901 MATURE TREE TRANSPLANT
SECTION — SCALE 1:50



NOTES

LIMESTONE BOULDERS TO BE SOURCED AND INSTALLED. MIN HEIGHT SIZE 450mm - MAX SIZE 800mm. GENERALLY BOULDERS TO BE BURIED APPROX. 1/3 OF EXPOSED HEIGHT AND INSTALLED WITH A MORTAR BED

10 / 901 FEATURE BOULDERS @ MULCH
SECTION — SCALE 1:20

PRELIMINARY
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INFORMATION ONLY

STANDARD NOTES

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2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
A	28.01.25	JL	ISSUE AS CONSTRUCTED
0	01.12.23	OW	ISSUE FOR CONSTRUCTION
A	01.09.23	OW	ISSUE FOR REVIEW

THIS IS AN UNCONTROLLED DOCUMENT ISSUED FOR INFORMATION ONLY UNLESS SIGNED BELOW AT EACH RELEVANT STAGE.

INTERNAL DESIGN REVIEW
THIS DESIGN IS NOT AUTHORISED WITHOUT BEING INTERNALLY REVIEWED AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

INTERNAL PRETENDER REVIEW
THIS DRAWING IS NOT AUTHORISED FOR TENDER WITHOUT BEING INTERNALLY REVIEWED AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

AUTHORISED FOR CONSTRUCTION
THIS DRAWING IS NOT AUTHORISED FOR CONSTRUCTION UNLESS IT IS MARKED REV 1 OR HIGHER AND IS SIGNED HERE — EMERGE DIRECTOR — DATE

emerge ASSOCIATES
Integrated Science & Design
PERTH (08) 9380 4988 • MARGARET RIVER (08) 9758 8159

PROJECT
CATALINA BEACH
CLARKSON, W.A.
STAGE OR PHASE
STAGE 39 STREETSCAPE

DRAWING TITLE
TYPICAL DETAILS

CLIENT
CATALINA REGIONAL COUNCIL

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DESIGNED BY	ZF	PRELIM DESIGN REVIEWED BY	ZF
DRAWN BY	OW	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	30.08.23		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT61-901	REV	A

REF: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLD\DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE LANDSCAPE\STAGE 37,38 & 39 STREETSCAPE\CAT61 DETAILS.DWG

GENERAL NOTES
1. These drawings are to be read in conjunction with all architectural and other consultants' drawings and specifications and with such other written instructions as may be issued. Any discrepancies shall be referred to the superintendent for clarification before proceeding with work.
2. All dimensions are in millimetres and those relevant to setting out (excludes finishes) and offsite work shall be verified by the contractor before construction and fabrication are commenced. The engineer's drawings shall not be scaled.
3. All levels and grid co-ordinates are in metres.
4. During construction the contractor shall be responsible for maintaining the structure in a stable condition and no part shall be over stressed under construction activities.
5. Workmanship and materials shall be in accordance with the current edition of the relevant SAA codes and the by-laws and ordinances of the relevant building authority, except where varied by the contract documents.

DESIGN CRITERIA
1. Dead, live, wind and earthquake loads to AS1170.
2. Design Wind Speed
   Region A
   Terrain Category 2.5
   Regional Gust Wind Speed = 45m/sec (ULTIMATE LIMIT STATE)
   Regional Gust Wind Speed = 37m/sec (SERVICE LIMIT STATE)
3. Earthquake
   kp = 1.0
   Hazard Factor Z = 0.09 (Perth)
4. Foundations
   Foundations designed for Class 'S' site with minimum 150kPa allowable bearing pressure.
5. Live Loads

Decking:	3kPa to AS1170.1
Balustrade:	C3 to AS1170.1
Roof construction load:	0.25kPa to AS1170.1
Retaining Wall Surcharge:	3kPa to AS1170.1

BUILDER NOTE - COMPLIANCE INSPECTIONS
1. As part of the building licence for this project, the builder may be required to have the structural engineer certify the completed structure has been built in accordance with the approved drawings & /or with any subsequent written instructions.
2. If WA Structural Consulting are to provide this certification, the builder must arrange for WA Structural Consulting to inspect each of the structural items at appropriate stages. These items and stages include, but are not limited to the following:,
   - 2.1. Concrete reinforcement, prior to pouring of concrete in:
     - 2.1.1. Footing Excavations
     - 2.1.2. Slabs on ground
     - 2.1.3. Suspended slabs and beams
     - 2.1.4. Concrete columns and walls
     - 2.1.5. Retaining walls
   - 2.2. Structural steelwork prior to any cladding being fixed.
   - 2.3. Concrete wall panel connections.
3. The builder must provide appropriate evidence that the specified concrete has been supplied for each concrete element.
4. The builder must provide evidence that the required levels of foundation compaction have been achieved.
5. Where a geotechnical engineer has made specific recommendations, evidence that these have been achieved must be provided.
6. Unless fees for our inspections and certifications have been previously negotiated with WA Structural Consulting by others, these fees will be the builder's responsibility. It is required that the builder negotiate these fees with the engineer at a tender stage.
7. If the builder requires the fabrication drawings to be checked & certified by the project engineer, the costs associated with this will be the builder's responsibility, unless these fees have been previously negotiated with WA Structural Consulting by others. This must be confirmed by the builder.

CONCRETE AND REINFORCEMENT
1. All concrete works shall be in accordance with AS3600.
   Concrete specification shall be U.N.O.:

Location	F'C (MPA)	MAX.AGG SIZE (mm)	SLUMP (mm)
Footings	25	20	65
Slab on Ground	25	20	65
In Situ Retaining Walls	32	20	60
Precast	32	20	80
Cavity Fill	15	10	100

   Cover to Reinforcement shall be:

Location	Bottom (mm)	Top (mm)	Sides (mm)
Footing	70	50	50
Slab on Ground	50	40	50
In Situ Retaining Walls	32	20	60
Precast	50	40	40
Cavity Fill	50	50	20 U.N.O

2. Reinforcement shall be supported on approved plastic or plastic tipped wire chairs and hold rigidly in position as follows:
   a. Bars up to N12 and fabric - 800mm centres
   b. Bars N16 and larger - 1200mm centres
   * Welding reinforcement is not permitted unless approved by engineer.
3. Construction joints shall be scabbled, cleaned and coated with a cement/water slurry immediately prior to placing concrete.
4. Concrete shall be compacted using mechanical vibrators.
5. Concrete shall be cured for a minimum of 7 days by flooding, keeping continuously moist, the application of an approved curing compound or by other means approved by the engineer.
6. No holes or chases other than those shown on the drawings shall be made unless approved by engineer. Pipework passing through footing beams shall be to the approval of the engineer and shall be wrapped with a compressible material of minimum 6mm thickness.
7. Formwork and stripping times shall comply with AS3610. Remove formwork only when concrete has attained its design (f 'c) strength unless otherwise instructed by the structural engineer.
8. Control, expansion and contraction joints shall be constructed as detailed. Saw cut joints shall be made within 12 hours of concrete placement.
9. All mesh to conform with AS1304.
10. Reinforcement shall be in accordance with the following standards:
    - R Indicates plain reinforcing bar R250N to AS/NZS4671
    - L Indicates plain or deformed wire R500L or D500L to AS/NZS4671
    - RL Indicates deformed rectangular mesh D500L to AS/NZS4671
    - SL Indicates deformed square mesh D500L to AS/NZS4671
    - N Indicates deformed bars D500N to AS/NZS4671
    - S Indicates deformed bars D250N to AS/NZS4671
    - TM Suffix indicates trench mesh using deformed bars D500L to AS/NZS4671
11. All galvanized items which are cast into concrete are to be passivated in a 0.2% sodium dichromate solution or equivalent.
12. All formwork shall be rigidly constructed of approved material. Formwork and supports shall be designed to withstand all possible load combinations during construction.

BAR DIAMETER (LARGEST)	LAP
12	600
16	800
20	1000
24	1200
28	1400
32	1600

Note: To be used U.N.O

14. Chemset Anchors U.N.O to be M16 HCR 8.8 rods with HILTI-HIT-HY-200 Adheisive minimum 150mm embedment. Installed in accordance with Manufacturers Specification and Installation Procedure.

FOUNDATIONS
1. Design is based on an allowable bearing pressure of 150kPa. It is the builder's responsibility to confirm the foundation type prior to commencing construction. Should the foundation type or bearing capacity not satisfy the above criteria the builder shall immediately contact engineer prior to construction proceeding.
2. Builder to grub out and remove all organic material and debris from the building platform.
3. Any soft areas shall be dug out and replaced with approved non-plastic fill.
4. All site preparation works shall be in accordance with site specific Geotechnical report and requirements.
5. Ensure a minimum of 8 blows per 300mm is achieved with a calibrated Perth Sand Penetrometer in accordance with AS1289.6.3.3
6. The building platform is to be shaped to ensure it drains to its perimeter and that such drainage is taken away from the platform area.
7. Footings at the lowest level must be the first footings constructed.
8. Located plumbing lines over top of footings and step footings.

MASONRY
1. All blockwork and brickwork shall be in accordance with AS3700
2. Concrete blocks shall be in accordance with AS2733
3. Reinforcement and concrete core filling shall comply with the notes on "concrete and reinforcement".
4. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700.
5. Masonry units shall have a minimum compressive strength of 15MPa.
6. As follows:
   a. Bond beam reinforcement shall be continuous at intersecting walls and bars anchored and lapped to develop full tensile stress.
   b. Support reinforced brick lintels for 14 days minimum.
7. Cleanout blocks shall be provided at the base of all cores to be concrete filled. Alternatively the builder shall open such cores for cleaning by an approved method.
8. All cores to be concrete filled shall be cleaned out by hosing prior to final setting or mortar at all lifts or by rodding prior to concrete filling.
9. Retaining walls shall be fully core filled. Backfill to retaining walls shall not be carried out until 14 days after core filling.
10. Provide 10mm stack bonded control joints where shown. Control joint to consist of flexible masonry anchors every 3rd course. Brunswick type MFA 3/3. Apply flexible sealant over backing rod.
11. Cross walls shall be fully bonded for the full height of intersecting wall.
12. Horizontal chasing is not permitted without written approval from the engineer.
13. Lap wires 500mm at splices and around corners and COG 500mm into intersecting walls. 20mm cover to all wires.
14. All wires in external face of external leaf to be galvanised to AS/NZS4680.
15. Masonry ties are to be provided at no more than 600mm spacing in each direction, and max 300mm from top of wall, side of control joint or perimeter of opening.
16. Ties to be grade 316 stainless steel in corrosive environments.
17. Masonry abutting concrete footings to typically be isolated with 10mm Ableflex expansion foam or similar approved product UNO.

STRUCTURAL STEEL
1. All steelwork shall be in accordance with:
   AS4100 steel structures
   AS4600 cold formed steel structures
2. Fabricator to check all dimensions before cutting materials or manufacturing. fabrication to AS4100 UON. These drawing are to be read in conjunction with the project architectural and other consultants' drawings.
3. Unless noted otherwise all steel shall be:
   a. AS3678 grade 250 hot rolled plates
   b. AS3679.1 grade 300 hot rolled UB, PFC, TFC, TFB, EA, UA and FLATS
   c. AS3679.2 grade 300 WB and WC
   d. AS1163 grade 250 for circular hollow sections Ø165mm and less
   e. AS1163 grade 350 for circular hollow sections larger than Ø165mm and rectangular hollow sections.
   f. AS1397 500MPa for 1.2mm thick purlins and girts
   g. 450MPa for 1.6mm thick purlins and girts
   h. 450MPa for 1.0 thick CF Channels
   i. 450MPa for 1.6mm thick CF Channels
4. Galvanising shall be hot dipped to AS/NZS 4680
5. Bolts shall be galvanised and of sufficient length to exclude the thread from the shear plane. A suitable washer shall be used under all nuts, when tensioning is specified high strength bolts shall be fully tensioned with load indicating washers to the requirements of AS4100.
6. Bolt legend 4.6/S commercial grade 4.6 bolts snug tightened 8.8/S high strength grade 8.8 bolts snug tightened. 8.8/TB high strength grade 8.8 bolts tensioned bearing connection. 8.8/TF high strength grade 8.8 bolts tensioned friction connection.
7. Unless otherwise specified the following shall apply -
   a. Cleats, brackets, stiffeners etc. to be 10mm thick, ex-standard square edge flats U.N.O.
   b. Welding to be carried out in accordance with AS/NZS 1554. 1:1995 welding consumables to be E48XX or W50X U.N.O. all welds to be 6MM CFW SP category U.N.O CPBW to be SP category U.N.O.
   c. Inspection to be carried to AS/NZS 1554.1:1995. All GP/SP welds to be 100% visually scanned. SP welds allow for 25% visual examination U.N.O.
   d. 6mm end plates to all hollow sections (seal weld).
   e. Bolts to be G 8.8/S
   f. Bolt hole clearance 2mm
   g. Hold down bolt clearance 4mm
   h. Grout - a space for 40mm of 2:1 sand: cement mortar of damp earth consistency under all base plates.
   i. Connections - minimum of 2-M16 8.8/S bolts
   j. Bracing intersects on centrelines and centre of gravity for angles.
8. Fabricator shall allow for all cleats and other fixings required by the supervisor.
9. All column base plates shall be set on 20mm min. of 1:2 cement and sand grout.
10. Seal all open ends of pipes or RHS members. Grind off all visible welds and brand marks to neat appearance where specified.
11. See below:
    a. The contractor shall remain responsible at all times for providing all necessary temporary bracing and other supports during erection, to stabilise the partially constructed building.
    b. Particular attention must be paid to the buckling stability of beams and columns prior to the connection of purlins, girts, fly braces and other bracing elements.
    c. It is the responsibility of the builder to obtain proper technical advice wherever necessary to ensure the partially completed structure is safe from collapse.
12. Treatment:
    All steel connection plate and bolts to be hot dip galvanize (600 g/sqm)
    Holding down bolts - hot dip galvanize (600 g/sqm)
13. Bitumen paint all steelwork for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

STRUCTURAL TIMBER
1. Structural timber shall comply with AS1720 timber structure code.
2. All timber to be seasoned F14, class 2, strength group SD5, joint group JD2 and treated with creosote to hazard class H4 unless noted otherwise.
3. All timber work to be in accordance with :
   - AS1684 - SAA timber framing code.
   - AS1720 - SAA timber structures code.
4. All timber and steel connections to be in accordance with AS1720.
5. Ensure no knots or gum veins in timber used.
6. Coat all timber in contact with ground with bitumen paint or similar approved.
7. All structural details to be confirmed, checked and site measured by builder prior to construction. Report any discrepancies to structural engineer.
8. Treatment :
   - H1 - Interior use, above ground.
   - H2 - Interior use, above ground, subject to termites.
   - H3 - Exterior use, above ground, subject to periodic wetting.
   - H4 - Exterior use, in ground, subject to severe wetting.
   - H5 - Exterior use, in ground, with or in fresh water.
   - H6 - Exposed to marine water.
9. Required bending stress:
   - MGP10 fb = 16 MPa
   - MGP12 fb = 28 MPa
   - F14 fb = 36 MPa
   - GL17 fb = 40 MPa
   - LVL13 fb = 48 MPa
   - LVL15 fb = 59 MPa
   - LVL18 fb = 72 MPa
10. All bolted timber connections to be re-tightened at end of project prior to completion, ensure no splitting of timber occurs.
11. All proprietary systems (floor/wall/roofing) to be installed in strict accordance with manufacturer's specifications and details.
12. Bush Poles :
    - All timber to AS1720.
    - Minimum F11 grade CCA / H4 treated seasoned softwood. S6 strength group.
    - Free from decay, shakes & fractures,resin pockets and surface damage.
    - Heartwood not to exceed 50% of the diameter at each end or be within 35mm from the surface.
13. Bitumen paint all timber posts/columns for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

LIMESTONE RETAINING WALL SPECIFICATION NOTES
1. Width 'b' at any height to be no less than half of retained height 'h'. step wall to suit
2. Walls to be built on compacted sand, compact ground under footing to resist 7 blows per 300mm of a standard 16mm dia penetrometer over a depth of 600mm.
3. These walls are applicable to well drained sandy soil conditions only.
4. Walls resisting clay soil pressures and/or hydrostatic pressures to be referred to the engineer.
5. All reconstituted limestone to be first grade quality & free from soft pockets.
6. Rubble shall not be used to fill voids.
7. Reconstituted limestone to have a dry density of at least 1600 kg/m3 and a crushing strength of at least 5mpa.
8. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700. All mortar joints to be 20mm thick and fully mortared.
9. All topsoil, vegetation and deleterious matter shall be removed from the foundation area.
10. Vertical thickness of wall to be adequately bonded by building in header blocks - refer cross section
11. No backfilling until 7 days after walls have been built.
12. All backfilling shall be carried out using material which shall generally be sandy in nature and free from large pieces of rock to the extent that the material can be compacted using a vibrating plate compactor to meet the requirements of the specification.
13. Backfill shall not be dumped behind wall in a manner which will cause shock loading on the wall
14. Backfill shall be clean sand compacted in shallow (300) layers using light compacting equipment
15. In all cases the backfill material shall be selected such that once compacted, the standard of compaction can be measured using a standard perth penetrometer.
16. Compaction of the backfill material to the front and back of the wall to be compacted 95% modified max dry density.
17. Prior to practical completion the contractor shall provide written certification from a practising structural engineer that the wall construction & backfill compaction has been carried out in accordance with this drawing and the specification.
18. Construction Joints (CJ) shall be constructed within the retaining wall where noted below:
    (i) at max. 10m centres along wall face
    (ii) where the angle between faces of two walls exceeds 180 degrees, in which case the CJ is to be located on one side of the change in direction, at a distance away from the direction change equal to the base width of the wall.
19. Construction joints shall be 15mm wide and filled with expanded polyethylene (100mm deep) covered with a 25mm deep mastic of colour to match wall mortar. joints are to extend through wall and any fences, but need not extend through base course of limestone wall.
20. Select blocks to ensure intact faces only visible in facework.

ALUMINIUM
1. All Aluminium shall be in accordance with AS1664.
2. All Aluminium welding shall comply with AS1664.
3. Unless noted otherwise, all aluminium to be:
   - Plates: Grade 5083 H116/h321 or 5083 H112 Aluminium
   - SHS/RHS/CHS: Grade 6060-t5 aluminium
   - Fixings: grade 316 stainless steel
   - Welds: 5mm continuous fillet, category sp, filler allow to be grade 5186,5356 or 5556 aluminium
4. All fixings into Aluminium members to be stainless steel (SS316) or equivalent capacity aluminium fixings.
5. Provide nylon washers and packers for all and any connections between steel and aluminium.
6. Adequate protective coatings are to be applied to aluminum cast into concrete.

PRECAST CONCRETE
1. All precast units shown are for service conditions only. The contractor is responsible for all casting,lifting, transportation and propping requirements and must satisfy himself that they have been constructed to meet the design criteria noted. Any queries regarding precast concrete units shall be flagged during the tender process. If in doubt, ask.
2. Contractor to obtain Engineer's Design Certification for all elements of precast concrete work as required to the relevant Australian Standards (Lifting, bracing, propping as required).
3. Panels are to be securely propped until designed connections have been installed and are sufficiently restraining panels.
4. U.N.O all chemical anchors fixed into concrete panels to be galvanised HILTI-HAS-E-F rods with HILTI-HIT-HY-200 adhesive.
5. All grout used for panels shall be non shrink high strength grout to achieve min 40mpa compressive strength typ.
6. Precast concrete strength is for final position. Contractor to confirm required lifting strength in accordance with lifting engineers requirements. Shall be no less than 15 MPA.

HDPE DECKING AND BOARDS
1. All HDPE battens and other HDPE members to be supplied and installed in strict accordance with manufacturers specification.

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2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
A	28.01.25	JL	ISSUE AS CONSTRUCTED
0	01.12.23	OW	ISSUE FOR CONSTRUCTION
A	01.09.23	OW	ISSUE FOR REVIEW

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PROJECT
CATALINA BEACH
CLARKSON, W.A.
STAGE OR PHASE
STAGE 39 STREETSCAPE
DRAWING TITLE
TYPICAL NOTES
CLIENT
CATALINA REGIONAL COUNCIL

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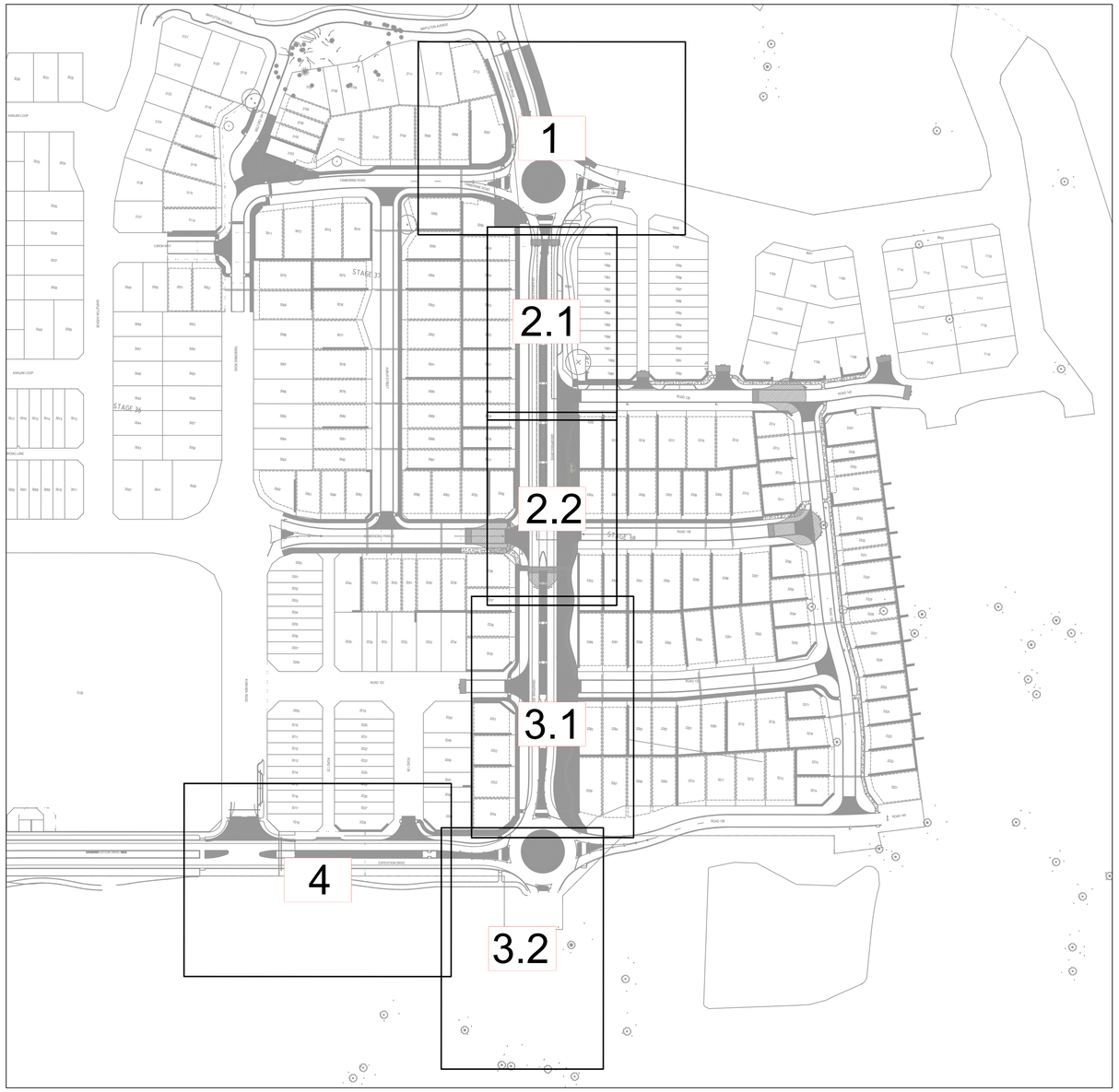
DRAWN BY	OW	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	30.08.23		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT61-902	REV	A

REF U:\CURRENT PROJECTS\CATALINA, TAMALA PARK(CL) DRAWINGS\(JOB CODE) AUTOCAD\(JOB CODE) LANDSCAPE\STAGE 37,38 & 39 STREETSCAPE\CAT61_DETAILS.DWG

CATALINA GREEN STAGE 37 AND 38

IRRIGATION WORKS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STAGE 36
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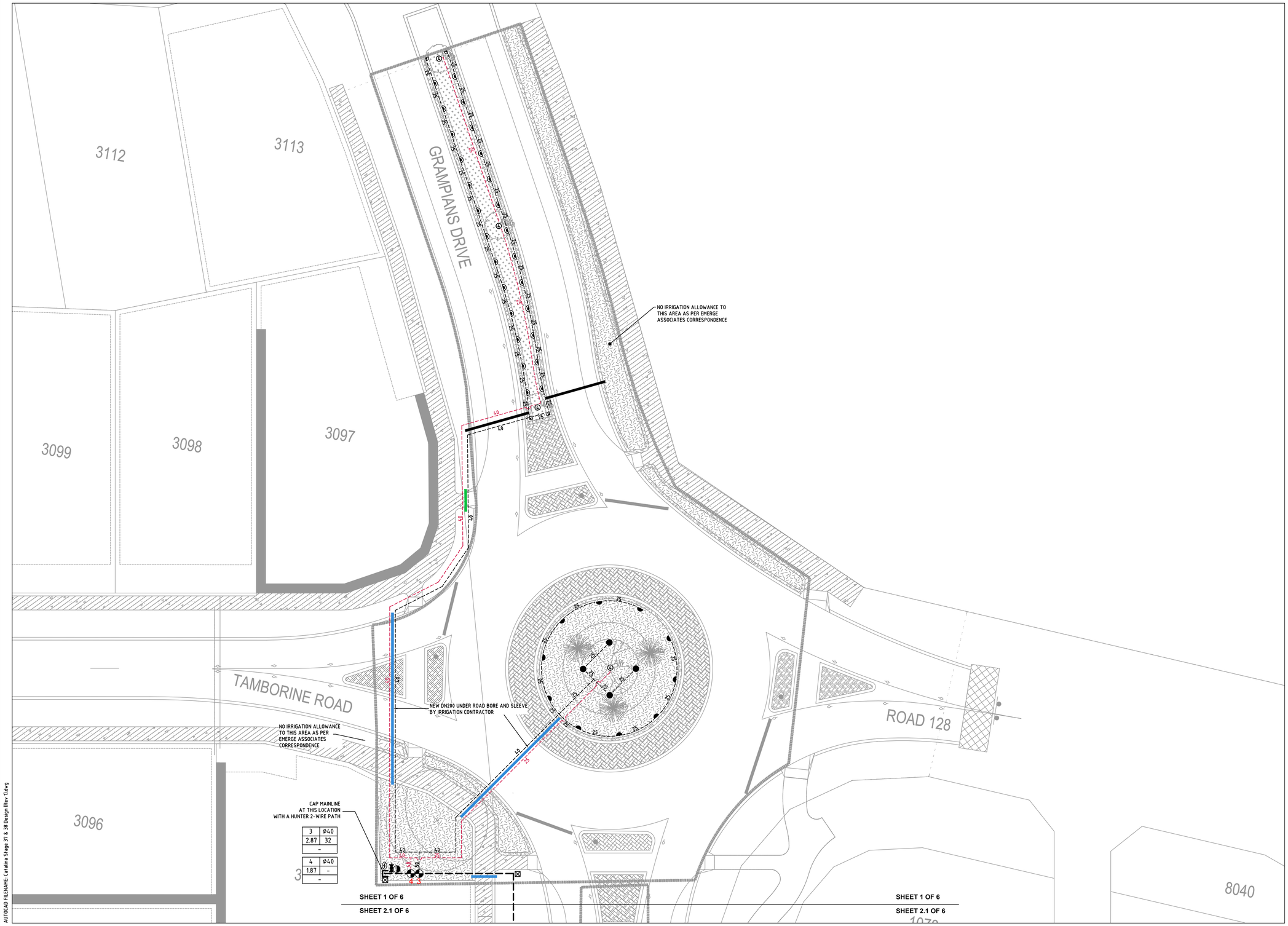

AUTOCAD FILENAME: Catalina Stage 37 & 38 Design (Rev 1).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	FOR GARDEN AREAS REFER TO C.O.W. SPECIFICATION ITEM 1.6.2 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING 570Z-12P'S
1500 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 14.12 LPM @ 250 kPA
TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CINTROL VALVE WITH HUNTER DECODER (SIZE AS SHOWN)
	FUTURE BORE -
	FUTURE CUBICLE WITH A SIGNAL SDS-100
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	HUNTER LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY CIVIL CONTRACTOR
	DN150 SLEEVE INSTALLED BY CIVIL CONTRACTOR
	DN200 SLEEVE INSTALLED BY CIVIL CONTRACTOR (UNLESS OTHERWISE NOTED)

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N $\frac{mm}{hr}$	APP'N $\frac{mm}{week}$	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	9.93	250	32	40	15	GARDEN	1	7.06	-
							3	2.87	-
2	7.97	250	-	-	15	TREES	2	6.10	-
							4	1.87	-

DAILY RUN TIME: 0 HRS & 30 MIN WEEKLY RUN TIME: 2 HRS & 30 MIN

VALVE LABEL LEGEND

2 | Φ50	VALVE SIZE
3.29 | 32	PRECIPITATION RATE
-	DECODER NO.

NOTE:
1. CITY OF WANNEROO STANDARD IRRIGATION SPECIFICATION TO APPLY TO THESE WORKS (JUNE 2020).
2. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
4. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
5. ALL HUNTER ID2BLU 3.3mm² SOLID CORE RED AND BLUE TWISTED PAIR 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	02/10/2023	ISSUED FOR APPROVAL	R.V	J.S
B	31/10/2023	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S
C	14/11/2023	DELETED VERGES IRRIGATION	R.V	J.S
0	26/02/2024	ISSUED FOR CONSTRUCTION	P.K	J.S
1	29/02/2024	REVISED MAINLINE TO SUIT CONNECTION TO STAGE 36 BORE	J.S	

REV	DATE	DESCRIPTION	DWN	CKD

N

NewGround DESIGN SERVICES

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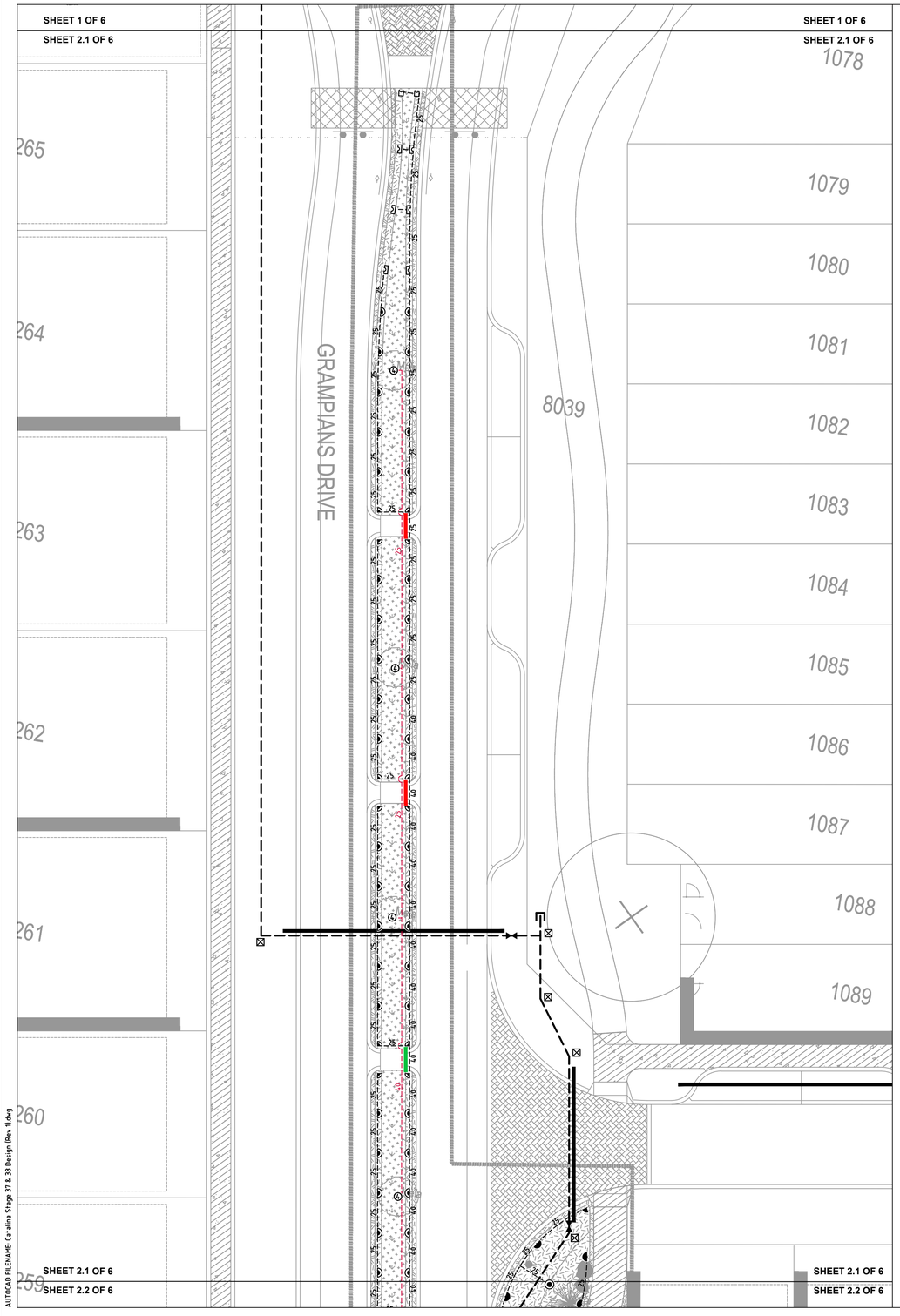
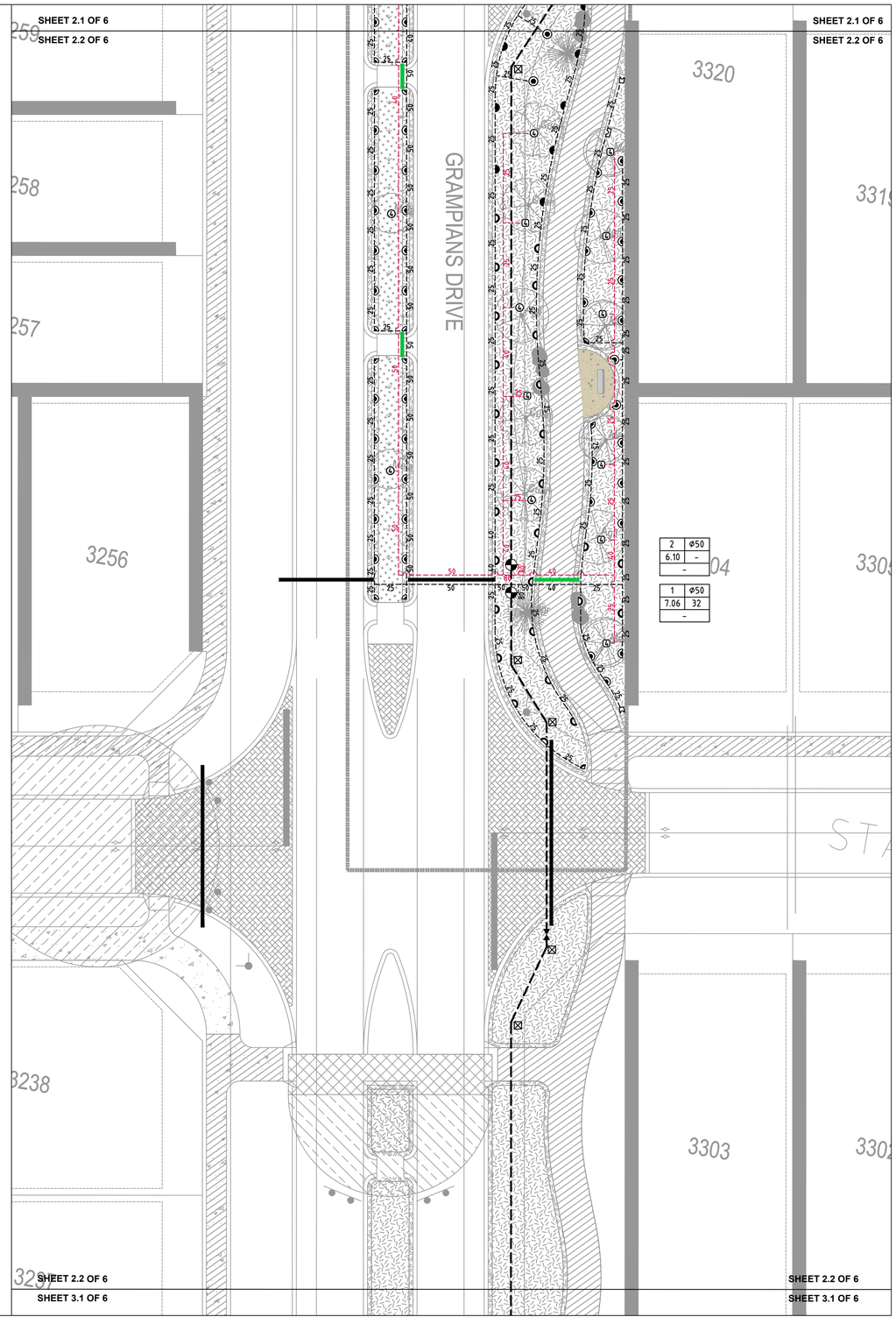
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : EMERGE ASSOCIATES

PROJECT : CATALINA GREEN STAGE 37 AND 38 IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
02/10/2023	18663-01	1 OF 6





LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	TORO	570Z-12P	15	250	2.84-11.36	4.6
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TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CINTROL VALVE WITH HUNTER DECODER (SIZE AS SHOWN)
	FUTURE BORE -
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	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	HUNTER LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY CIVIL CONTRACTOR
	DN150 SLEEVE INSTALLED BY CIVIL CONTRACTOR
	DN200 SLEEVE INSTALLED BY CIVIL CONTRACTOR (UNLESS OTHERWISE NOTED)

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm WEEK	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	9.93	250	32	40	15	GARDEN	1	7.06	-
							3	2.87	-
2	7.97	250	-	-	15	TREES	2	6.10	-
							4	1.87	-

DAILY RUN TIME: 0 HRS & 30 MIN WEEKLY RUN TIME: 2 HRS & 30 MIN

VALVE LABEL LEGEND

2 ø50	VALVE SIZE
3.29 32	PRECIPITATION RATE
-	DECODER NO.

NOTE:

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2. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
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5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA LTD

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Stage 37 & 38 Design Rev 11.dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	02/10/2023	ISSUED FOR APPROVAL	R.V	J.S
B	31/10/2023	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S
C	14/11/2023	DELETED VERGES IRRIGATION	R.V	J.S
0	26/02/2024	ISSUED FOR CONSTRUCTION	P.K	J.S
1	29/02/2024	REVISED MAINLINE TO SUIT CONNECTION TO STAGE 36 BORE	J.S	

REV	DATE	DESCRIPTION	DWN	CKD

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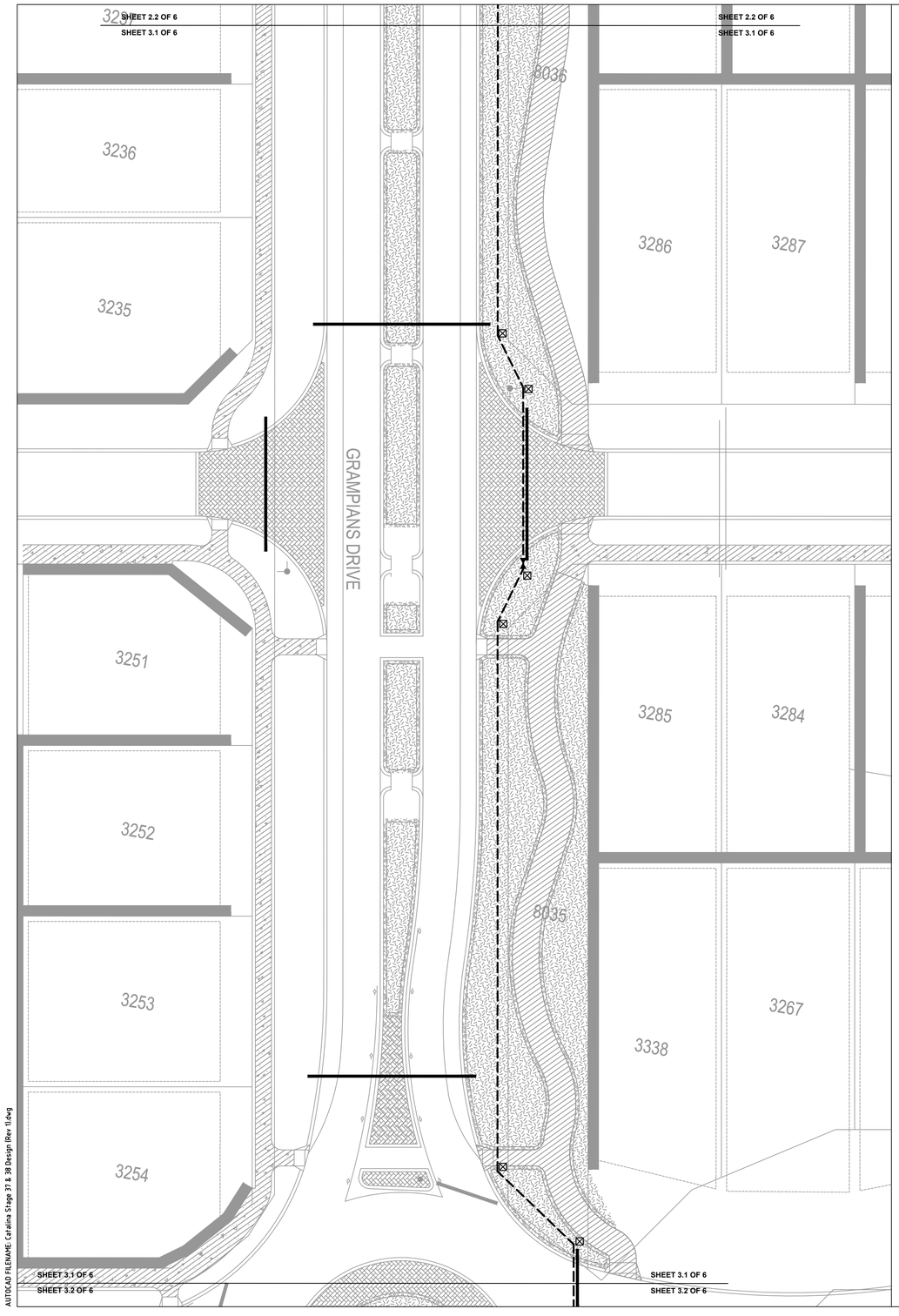
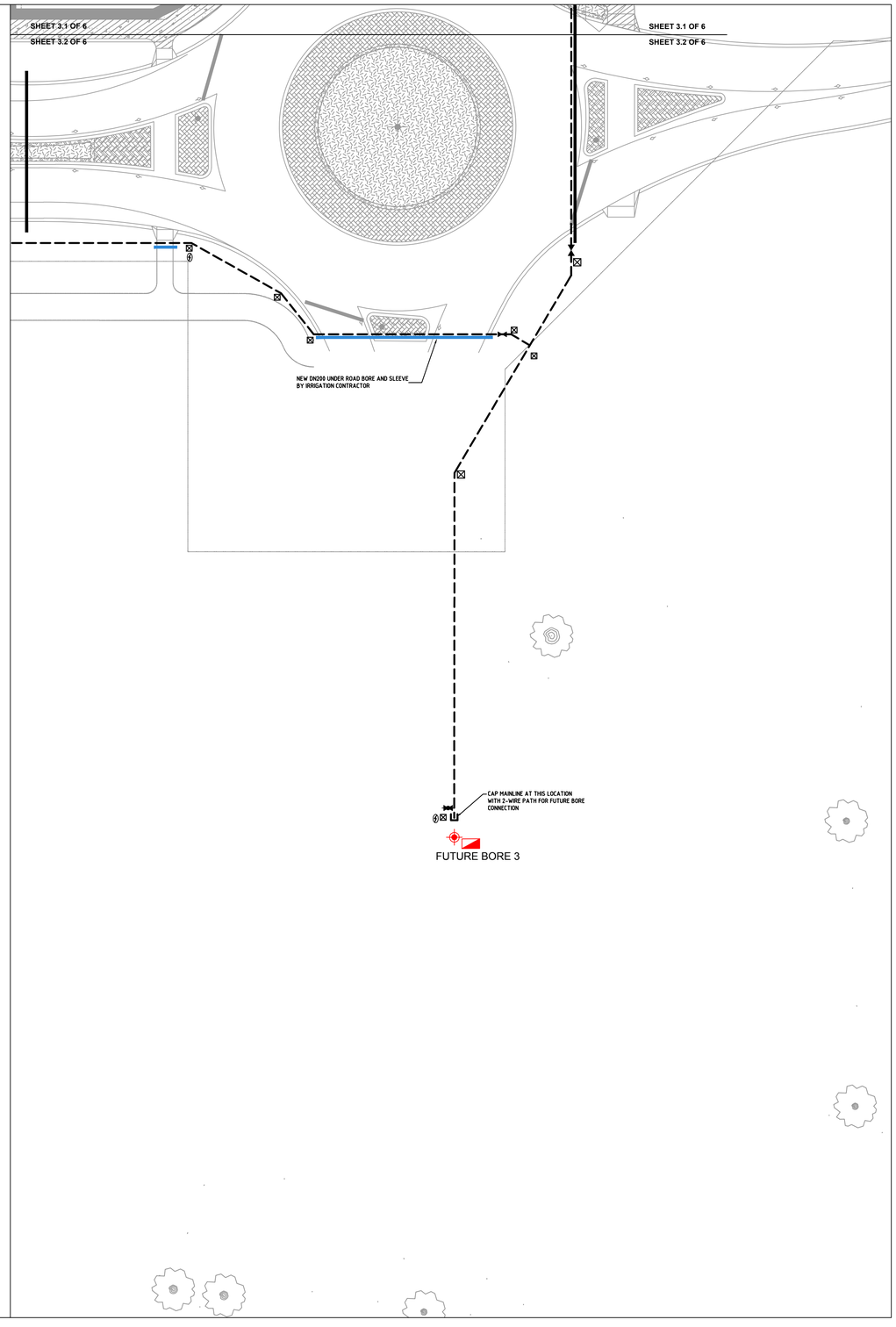
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA GREEN STAGE 37 AND 38
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
02/10/2023	18663-02	2 OF 6





LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	FOR GARDEN AREAS REFER TO C.O.W. SPECIFICATION ITEM 1.6.2 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING 570Z-12P'S
1500 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 14.12 LPM @ 250 kPA
TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CINTROL VALVE WITH HUNTER DECODER (SIZE AS SHOWN)
	FUTURE BORE -
	FUTURE CUBICLE WITH A SIGNAL SDS-100
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	HUNTER LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY CIVIL CONTRACTOR
	DN150 SLEEVE INSTALLED BY CIVIL CONTRACTOR
	DN200 SLEEVE INSTALLED BY CIVIL CONTRACTOR (UNLESS OTHERWISE NOTED)

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm/hr	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	9.93	250	32	40	15	GARDEN	1	7.06	-
							3	2.87	-
2	7.97	250	-	-	15	TREES	2	6.10	-
							4	1.87	-

DAILY RUN TIME: 0 HRS & 30 MIN WEEKLY RUN TIME: 2 HRS & 30 MIN

VALVE LABEL LEGEND

2	ø50	VALVE SIZE
3.29	32	PRECIPITATION RATE
-		DECODER NO.

NOTE:

1. CITY OF WANNEROO STANDARD IRRIGATION SPECIFICATION TO APPLY TO THESE WORKS (JUNE 2020).
2. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
4. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
5. ALL HUNTER ID2BLU 3.3mm² SOLID CORE RED AND BLUE TWISTED PAIR 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA 1772160

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Stage 37 & 38 Design (Rev 11).dwg

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REV	DATE	DESCRIPTION	DWN	CKD

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FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

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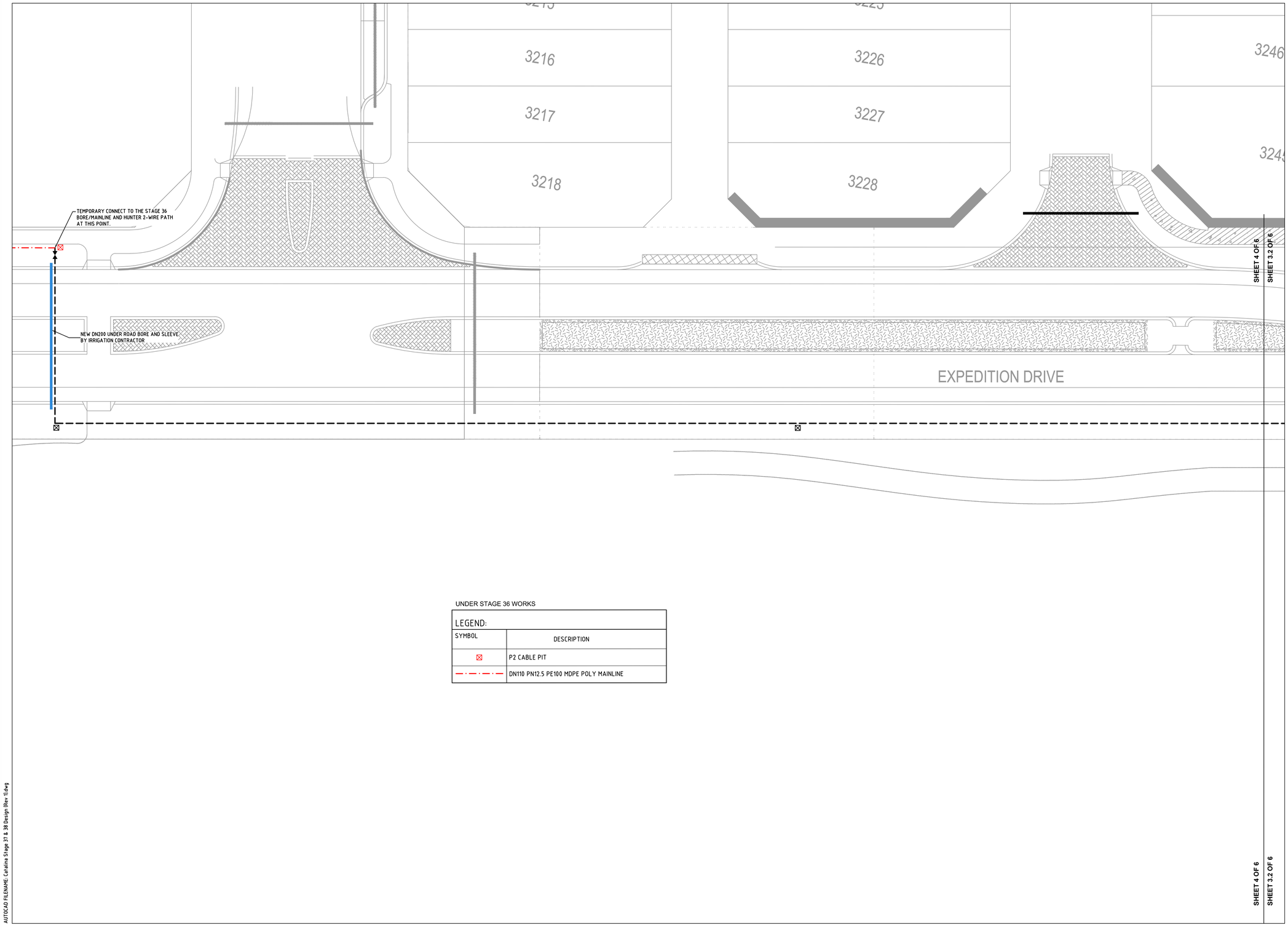
CATALINA GREEN STAGE 37 AND 38
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
02/10/2023	18663-03	3 OF 6



UNDER STAGE 36 WORKS

LEGEND:	
SYMBOL	DESCRIPTION
⊠	P2 CABLE PIT
— · — · — · —	DN110 PN12.5 PE100 MDPE POLY MAINLINE

LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
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	TORO	570Z-12P	12	250	1.82-7.27	3.7
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	TORO	570Z-12P	4SST	250	3.33	1.2x9.1
	FOR GARDEN AREAS REFER TO C.O.W. SPECIFICATION ITEM 1.6.2 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING 570Z-12P'S					
1500 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 14.12 LPM @ 250 kPA					
TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA					
	BERMAD 200 SERIES SOLENOID CINTROL VALVE WITH HUNTER DECODER (SIZE AS SHOWN)					
	FUTURE BORE -					
	FUTURE CUBICLE WITH A SIGNAL SDS-100					
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE					
	50mm MAINLINE FLUSHING VALVE					
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION					
	P2 CABLE PIT					
	HUNTER LIGHTNING SURGE PROTECTION					
	DN110 PN12.5 PE100 MDPE POLY MAINLINE					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
	DN100 SLEEVE INSTALLED BY CIVIL CONTRACTOR					
	DN150 SLEEVE INSTALLED BY CIVIL CONTRACTOR					
	DN200 SLEEVE INSTALLED BY CIVIL CONTRACTOR (UNLESS OTHERWISE NOTED)					

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm. week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
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							3	2.87	-
2	7.97	250	-	-	15	TREES	2	6.10	-
							4	1.87	-

DAILY RUN TIME: 0 HRS & 30 MIN WEEKLY RUN TIME: 2 HRS & 30 MIN

VALVE LABEL LEGEND

2	ø50 VALVE SIZE
3.29	32 PRECIPITATION RATE
-	DECODER NO.

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6. ALL GRASS TREES IN IRRIGATED AREAS REQUIRE NO SUPPLEMENTARY IRRIGATION AS RECOMMENDED BY GRASSTREES AUSTRALIA.

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA LOCATED

0 2 4 6 8 10m

SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Stage 37 & 38 Design (Rev 11).dwg

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APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

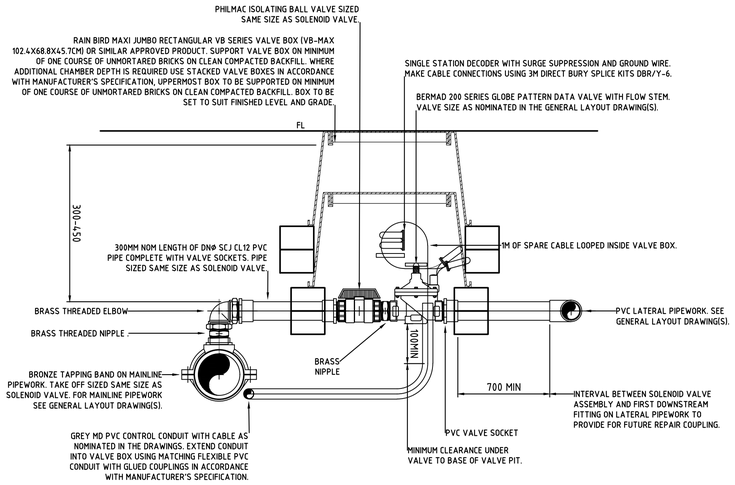
CLIENT :

EMERGE ASSOCIATES

PROJECT :

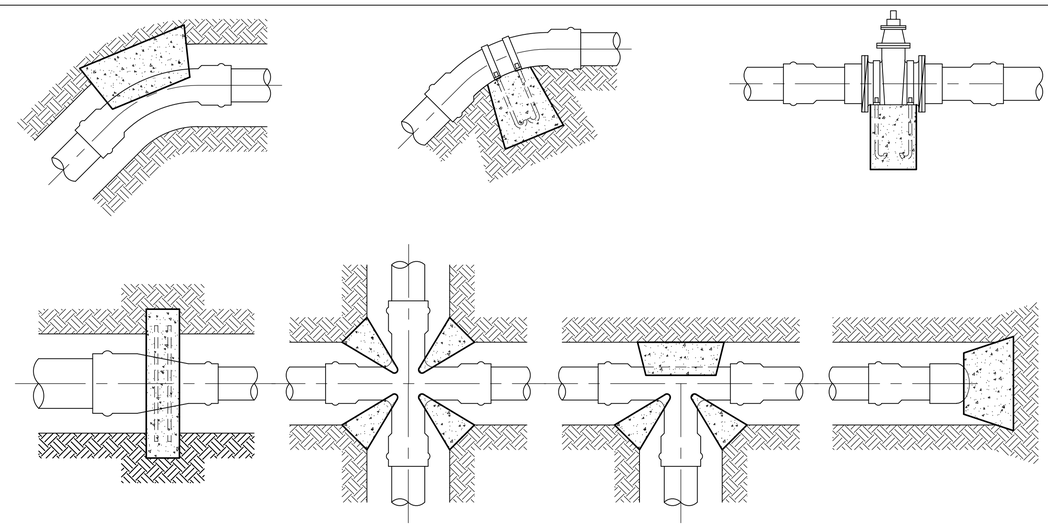
CATALINA GREEN STAGE 37 AND 38
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
02/10/2023	18663-04	4 OF 6



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

NOTE:
MINIMUM BEARING AREA TO BE IN ACCORDANCE WITH TYPE OF FITTING AND SOIL TYPE AS PER PIPE MANUFACTURERS RECOMMENDATIONS

RAIN BIRD 55.4X42.2X30.5CM STANDARD RECTANGULAR VB SERIES VALVE BOX (VB-STD). SUPPORT VALVE BOX ON MINIMUM OF ONE COURSE OF UNMORTARED BRICKS ON CLEAN COMPACTED BACKFILL. WHERE ADDITIONAL CHAMBER DEPTH IS REQUIRED USE STACKED VALVE BOXES IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION. BOX TO BE SET TO SUIT FINISHED LEVEL AND GRADE AS SHOWN IN LANDSCAPE ARCHITECT'S DRAWINGS.

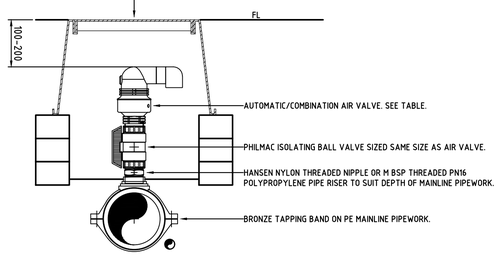
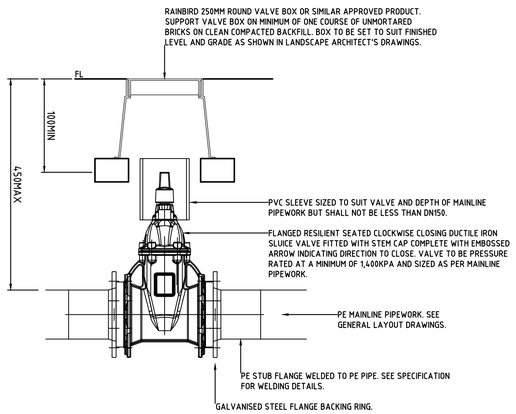


TABLE OF AIR VALVES	
MAINLINE SIZE (DN)†	AIR VALVE‡
LESS THAN 63	PN16 DN20 COMBINATION AIR VALVE
75-140	PN16 DN25 COMBINATION AIR VALVE
150-200	PN16 DN50 COMBINATION AIR VALVE
† SEE GENERAL LAYOUT DRAWING(S). ‡ SEE ALSO SPECIFICATION.	

TYPICAL AIR VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE

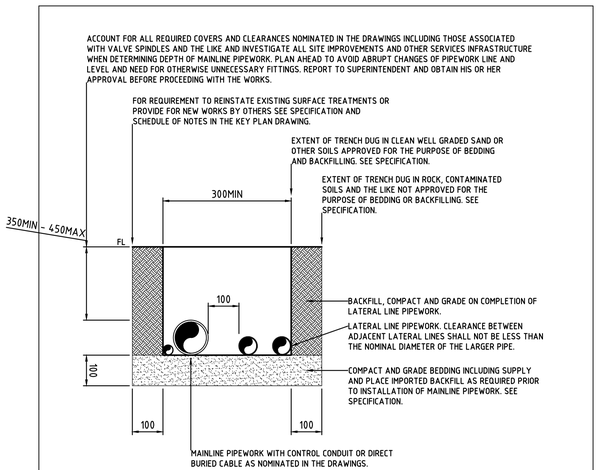
RAINBIRD 250MM ROUND VALVE BOX OR SIMILAR APPROVED PRODUCT. SUPPORT VALVE BOX ON MINIMUM OF ONE COURSE OF UNMORTARED BRICKS ON CLEAN COMPACTED BACKFILL. BOX TO BE SET TO SUIT FINISHED LEVEL AND GRADE AS SHOWN IN LANDSCAPE ARCHITECT'S DRAWINGS.



TYPICAL MAINLINE ISOLATION VALVE INSTALLATION

NOT TO SCALE

ACCOUNT FOR ALL REQUIRED COVERS AND CLEARANCES NOMINATED IN THE DRAWINGS INCLUDING THOSE ASSOCIATED WITH VALVE SPINDLES AND THE LIKE AND INVESTIGATE ALL SITE IMPROVEMENTS AND OTHER SERVICES INFRASTRUCTURE WHEN DETERMINING DEPTH OF MAINLINE PIPEWORK. PLAN AHEAD TO AVOID ABRUPT CHANGES OF PIPEWORK LINE AND LEVEL AND NEED FOR OTHERWISE UNNECESSARY FITTINGS. REPORT TO SUPERINTENDENT AND OBTAIN HIS OR HER APPROVAL BEFORE PROCEEDING WITH THE WORKS.



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 37 & 38 Design (Rev 11).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	02/10/2023	ISSUED FOR APPROVAL	R.V	J.S
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PRESSURE (KPA) :	

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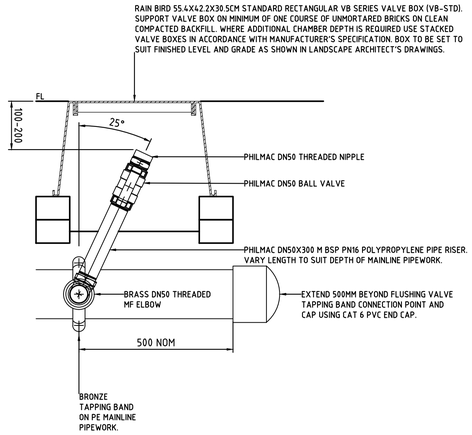
EMERGE ASSOCIATES

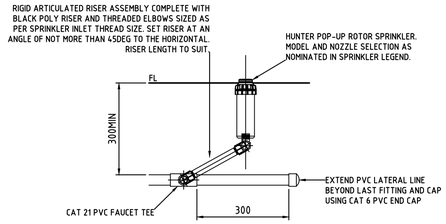
PROJECT :
CATALINA GREEN STAGE 37 AND 38
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
02/10/2023	18663-05	5 OF 6



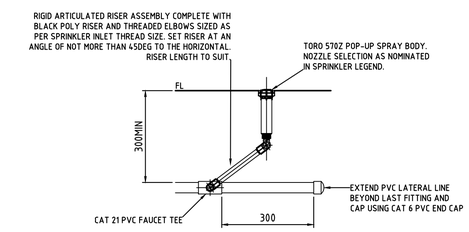
TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

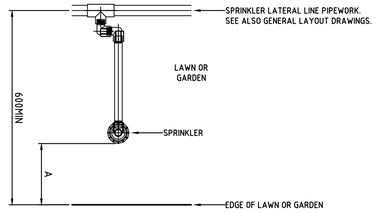
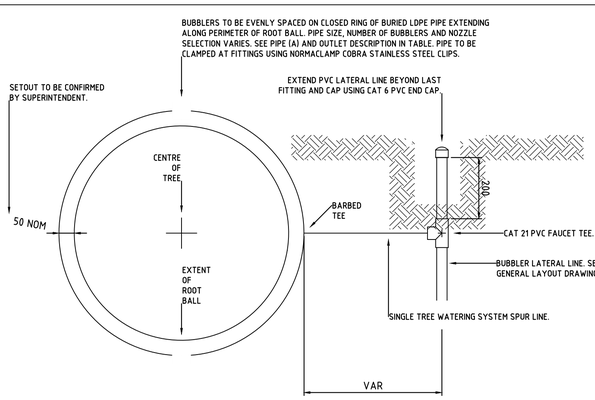


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	

† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.

SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE



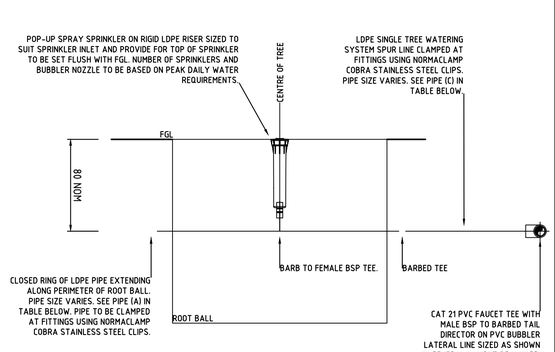


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
–	–	0-6	–	DN19	–	DN19
–	–	6-15	–	DN19	–	DN25
–	–	15-30	–	DN25	–	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 37 & 38 Design (Rev 1).dwg

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EMERGE ASSOCIATES

PROJECT :

CATALINA GREEN STAGE 37 AND 38
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
02/10/2023	18663-06	6 OF 6



LOCATION PLAN
1:1500 @ A1

CATALINA GREEN

CLARKSON, W.A.

Catalina

STAGE 39 GREEN CENTRAL POS

LANDSCAPE CONTRACT: CAT59

LANDSCAPE & IRRIGATION WORKS

CLIENT:CATALINA REGIONAL COUNCIL

RE-ISSUE FOR: ***CITY APPROVAL***

DATE: **JUNE 2025**

Sheet List Table

Sheet Number	Sheet Title	Revision
CAT59-000	COVERSHEET	A
CAT59-100	OVERALL PLAN	2
CAT59-301	GRADING PLAN 1 OF 2	3
CAT59-302	GRADING PLAN 2 OF 2	2
CAT59-401	HARDSCAPE PLAN 1 OF 2	3
CAT59-402	HARDSCAPE PLAN 2 OF 2	A
CAT59-501	PLANTING PLAN 1 OF 2	2
CAT59-502	PLANTING PLAN 2 OF 2	A
CAT59-503	MIYAWAKI FORREST PLAN	A
CAT59-801	SITE SECTIONS	1
CAT59-901	TYP HARDSCAPE 1	1
CAT59-902	TYP HARDSCAPE 2	1
CAT59-951	TYPICAL FURNITURE AND PLAY EQUIPTMENT	1
CAT59-952	SPORTS EQUIPTMENT AND SHELTER	1
CAT59-953	TYPICAL ARBOUR DETAIL	1
CAT59-954	PLAY STRUCTURE	1
CAT59-971	TYPICAL SOFTWORKS	1
CAT59-980	TYPICAL NOTES	1
CAT59-981	MATERIALS PALETTE	1

CATALINA Regional Council

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LEGEND

- EXTENT OF WORKS
- PROPOSED CONCRETE PATH — 1/901
- EXPOSED AGGREGATE PATH (COLOURS: 1. SPINIFEX 2. EUCALYPTUS) — 1/901
- REINFORCED CONCRETE PATH — 2/901
- MULCH ONLY — 9/901
- PLAY SAND — 8/901
- PROPOSED PLANTING — 1/971
- RUBBER SOFTFALL HF-06 ORANGE HF-14 APPLE GREEN — 6/901
- SPORTS SURFACE (LAYKOLD) — 11/901
- TURF — 3/971
- MK CONCRETE MOW KERB — 3/901
- RECONSTITUTED LIMESTONE WALL — 1/902
- CONCRETE SEATING WALL — 3/902
- COMPACTED LIMESTONE — 3/902
- D DRINKING FOUNTAIN — 6/951
- REMOVABLE BOLLARDS — 4/951
- B BIN — 7/951
- BBQ — 1/951
- TACTILE TILES — 10/901
- HANDRAIL TO STAIRS — 6/902
- LIGHT POLE — 2/951
- SE STEEL EDGING — 15/901
- BLUE METAL BY OTHERS
- BORE LOCATION
- PROPOSED TREES — 4-5/971
- EXISTING TREE TO BE RETAINED AND PROTECTED

STANDARD NOTES

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2	12.08.24	OW	REVISED FOR CONSTRUCTION
1	11.07.24	OW	REVISED FOR CONSTRUCTION
0	24.05.24	OW	ISSUE FOR CONSTRUCTION
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PROJECT
CATALINA GREEN
CLARKSON, W.A.
STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS

DRAWING TITLE
OVERALL PLAN

CLIENT
CATALINA REGIONAL COUNCIL

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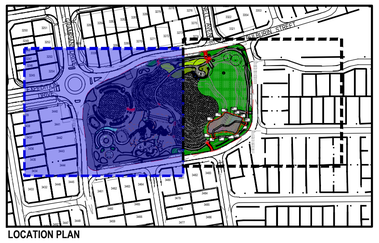
SCALE 1: 500 @ A1 METRES
0 5 10 15 20 25

DRAWING NUMBER
CAT59-100

REV 2

REF: I:\JOBS\CURRENT PROJECTS\CATALINA, YANGA PARK\CLIENT DRAWINGS\LDR CODE\ LANDCAD\LDR CODE\ LANDSCAPE\STAGE 39 - GREEN CENTRAL POS\CAT59_OCP_SD.DWG



GRAMPIANS DRIVE

BULBURIN STREET

EXPEDITION DRIVE

3245 3338 3267 3268 3269 3439 3440 3441 3438 3442 3437 3443 3436 3444 3435 3434

MATCHLINE REFER TO DWG CAT60-302

LEGEND

- EXTENT OF WORKS
- 0.00 EXISTING CONTOURS
- 0.00 PROPOSED CONTOURS
- RL +8.00 SPOT LEVELS
- TS +8.00 TOP OF STEP LEVELS
- BS +8.00 BOTTOM OF STEP LEVELS
- TW +8.00 BW +7.50 WALL SPOT HEIGHTS
- 1:1 TWL = SMALL EVENT TREATMENT
- 1:5 TWL= 20% AEP - MINOR RAINFALL TREATMENT
- 1:100 TWL = 1% AEP MAJOR RAINFALL EVENT
- SERVICES PIT

STANDARD NOTES

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3	4.09.24	ZF	REVISED FOR CONSTRUCTION
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1	11.07.24	OW	REVISED FOR CONSTRUCTION
0	24.05.24	OW	ISSUE FOR CONSTRUCTION
D	09.4.24	OW	ISSUE FOR APPROVAL
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PROJECT
CATALINA GREEN
CLARKSON, W.A.

STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS

DRAWING TITLE
GRADING PLAN 1 OF 2
.

CLIENT
CATALINA REGIONAL COUNCIL

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DATE INITIALLY DRAWN	24.10.23		

SCALE 1: 250 @ A1 METRES
0 2.5 5 7.5 10 12.5

DRAWING NUMBER CAT59-301
REV 3

REF I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLD\DRAWINGS\LDR CORE\ AUTOCAD\LDR CORE\ LANDCAD\POSTAGE 39 - GREEN CENTRAL POS\CAT59-301.DWG

BULBURIN STREET

RL +11.30
RL +11.50
RL +11.40
11.00
FALL 1:20
RL +10.40
9.99
10.16
10.50
10.00
9.50
9.00
FALL 1:3
+10.95
+10.50
10.00
9.50
9.55
8.50
TW +9.50
BW +8.50
MK
TS +9.50
TW +10.00
BW +9.50
9.00
TW +9.50
BW +9.00
BS +8.50
TW +10.00
BW +9.50
MK
BASE OF BASIN
+8.20
RL +8.60
8.50
8.00
7.50
8.20
12.00
12.00
FALL 1:3
8.50
9.00
9.50
10.00
10.50
11.00
11.50
12.00
FALL 1:3
FALL 1:3
FALL 1:4
RL +11.50
BASE OF BASIN
+7.40
7.50
8.00
8.50
9.00
9.50
10.00
10.50
11.00
FALL 1:6
FALL 1:20
11.50
MK
RL +10.80
RL +10.90
11.00
SEE MATCHLINE, REFER TO DWG CAT60-301

LOCATION PLAN

LEGEND

- EXTENT OF WORKS
- 0.00 EXISTING CONTOURS
- 0.00 PROPOSED CONTOURS
- RL +8.00 SPOT LEVELS
- TS +8.00 TOP OF STEP LEVELS
- BS +8.00 BOTTOM OF STEP LEVELS
- TW +8.00 / BW +7.50 WALL SPOT HEIGHTS
- 1:1 TWL = SMALL EVENT TREATMENT
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- SERVICES PIT

STANDARD NOTES

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PROJECT
CATALINA GREEN
CLARKSON, W.A.

STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS

DRAWING TITLE
GRADING PLAN 2 OF 2

CLIENT
CATALINA REGIONAL COUNCIL

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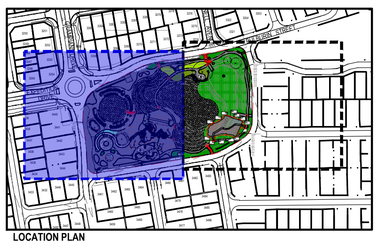
DATE INITIALLY DRAWN	24.10.23		

SCALE 1: 250 @ A1 METRES
0 2.5 5 7.5 10 12.5

DRAWING NUMBER CAT59-302
REV 2

REF I:\JOBS\PROJECTS\CATALINA, TAMALA PARK\CLIENT\DRAWINGS\JOB CODE\AUTOCAD\JOB CODE\LANDSCAPE\STAGE 39 - GREEN CENTRAL POS\DWG\CAT59-302.DWG



GRAMPIANS DRIVE

BULBURIN STREET

EXPEDITION DRIVE

3245 3338 3267 3268 3269

3440 3441 3442 3443 3444 3439 3438 3437 3436 3435 3434

STAIR 1 6 902

CONCRETE STAIRS WITH HANDRAIL 4 902

MAINTENANCE ACCESS WITH MOUNTABLE KERB AND REMOVABLE BOLLARDS

CONCRETE SEATING WALL 14 901

CUSTOM ARBOUR 2 2 953

CONCRETE SEATING WALL 14 901

CUSTOM ARBOUR 1 1 953

PARK SIGN 13 901

DDA PICNIC SETTING 3 951

BBQ 1 951

CUSTOM ARBOUR 2 2 953

DDA PICNIC SETTING 3 951

TIMBER LOG 13 951

CUSTOM ARBOUR 1 1 953

CONCRETE SEATING WALL 14 901

ROCK BOULDERS 12 901

TIMBER STUMPS 10 951

BOX JUMP 7 952

GYM COMBI 7 4 952

DIP PRESS 5 952

DIP BENCH 10 952

BACK SHAPE 6 952

MULTIMAX 2 8 952

BORE LOCATION

PECTORAL 9 952

LAPPSET 'MEMO' INTERACTIVE PLAY PILLARS 12 951

BIKE RACK 5 951

CONCRETE SEATING WALL 14 901

DDA PICNIC SETTING 3 951

SHELTER 14 951

DDA PICNIC SETTING 3 951

SHELTER 14 951

SHADE SAIL 9 951

BBQ 1 951

PLAY STRUCTURE 1 954

DOUBLE A FRAME SWING 8 951

SHADE SAIL 9 951

EXISTING TRANSFORMER SITE BY OTHERS

DOUBLE FLYING FOX 11 951

MK

MATCHLINE: REFER TO DWG CAT60-402

LEGEND

- EXTENT OF WORKS
- PROPOSED CONCRETE PATH — 1 901
- EXPOSED AGGREGATE PATH (COLOURS: 1.SPINIFEX 2. EUCALYPTUS) — 1 901
- REINFORCED CONCRETE PATH — 2 901
- PLAY MULCH ONLY — 9 901
- PLAY SAND — 8 901
- PROPOSED PLANTING — 1 971
- RUBBER SOFTFALL (HF-06 ORANGE, HF-14 APPLE GREEN) — 6 901
- SPORTS SURFACE (LAYKOLD) — 11 901
- TURF — 3 971
- MK CONCRETE MOW KERB — 3 901
- RECONSTITUTED LIMESTONE WALL — 1 902
- CONCRETE SEATING WALL — 14 901
- COMPACTED LIMESTONE — 3 902
- D DRINKING FOUNTAIN — 6 951
- REMOVABLE BOLLARDS — 4 951
- B BIN — 7 951
- BBQ — 1 951
- TACTILE TILES — 10 901
- HANDRAIL TO STAIRS — 4 902
- LIGHT POLE — 2 951
- SE STEEL EDGING — 15 901
- BLUE METAL BY OTHERS
- BORE LOCATION
- PROPOSED TREES — 4-5 971
- EXISTING TREE TO BE RETAINED AND PROTECTED
- SERVICES PIT

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PROJECT
CATALINA GREEN
CLARKSON, W.A.
STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS

DRAWING TITLE
HARDSCAPE PLAN 1 OF 2
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CLIENT
CATALINA REGIONAL COUNCIL

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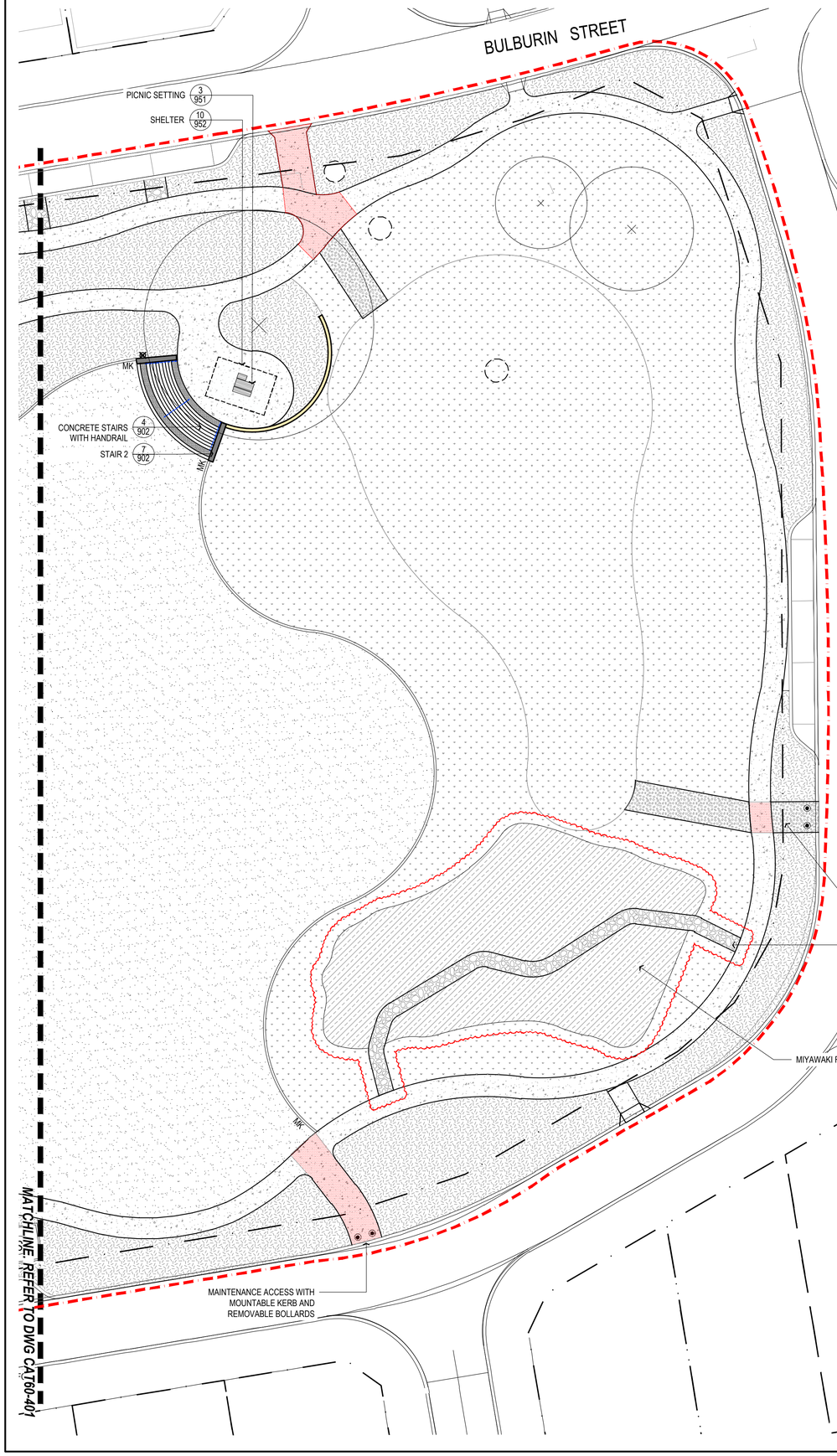
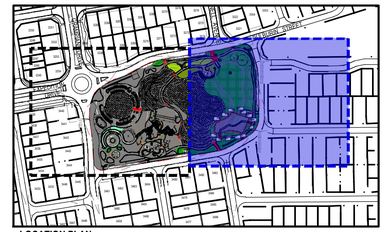
SCALE 1: 250 @ A1 METRES
0 2.5 5 7.5 10 12.5

DRAWING NUMBER CAT59-401
REV 3

REF: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\D_DRAWINGS\JOB CODE_AUTOCAD\JOB CODE LANDSCAPE\STAGE 39_GREEN CENTRAL POS\CAT59-01.DWG





LOCATION PLAN

LEGEND

- EXTENT OF WORKS
- PROPOSED CONCRETE PATH — 1 901
- EXPOSED AGGREGATE PATH (COLOURS: 1.SPINIFEX 2. EUCALYPTUS) — 1 901
- REINFORCED CONCRETE PATH — 2 901
- PLAY MULCH ONLY — 9 901
- PLAY SAND — 8 901
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- BBQ — 1 951
- TACTILE TILES — 10 901
- HANDRAIL TO STAIRS — 4 902
- LIGHT POLE — 2 951
- SE STEEL EDGING — 15 901
- BLUE METAL BY OTHERS
- BORE LOCATION
- PROPOSED TREES — 4-5 971
- EXISTING TREE TO BE RETAINED AND PROTECTED
- SERVICES PIT

STANDARD NOTES

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PROJECT
CATALINA GREEN
CLARKSON, W.A.

STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS

DRAWING TITLE
HARDSCAPE PLAN 2 OF 2

CLIENT
CATALINA REGIONAL COUNCIL

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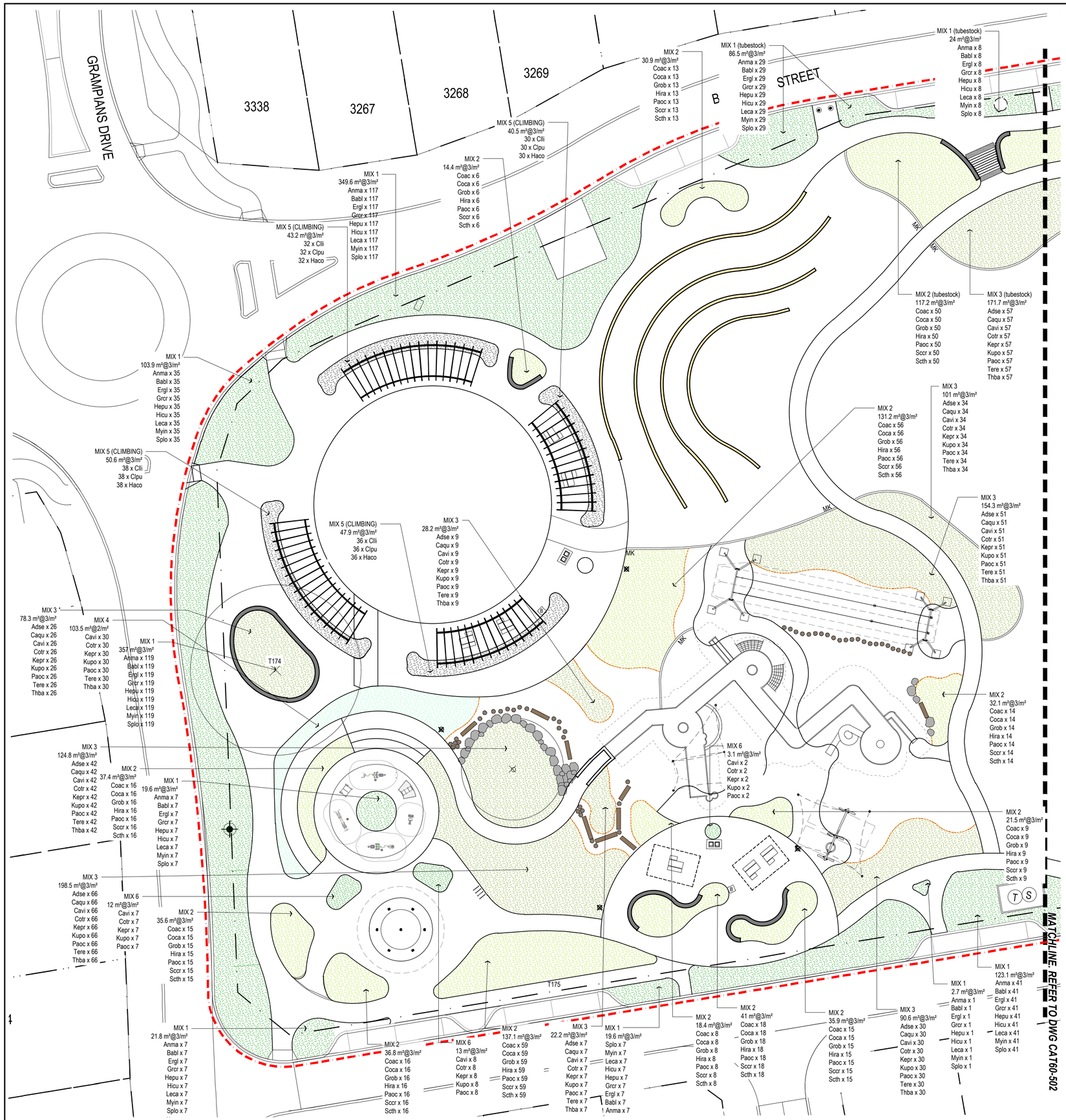
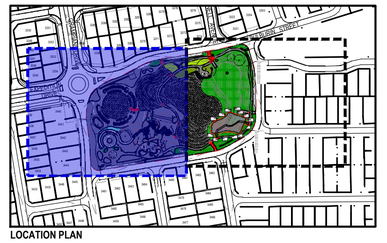
DATE INITIALLY DRAWN	24.10.23		

SCALE 1: 250 @ A1 METRES
0 2.5 5 7.5 10 12.5

DRAWING NUMBER CAT59-402
REV A

REF: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLD\DRAWINGS\JOB CODE\ LANDSCAPE\STAGE 39 - GREEN CENTRAL POS\CAT59_DCP_SET.DWG





TREE LIST

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
Agfl	Agfl	Agonis flexuosa	Willow Myrtle	400 Litre	49
Baat	Baat	Banksia attenuata	Coast Banksia, Slender Banksia	100 Litre	19
Bapr	Bapr	Banksia prionotes	Orange or Acorn Banksia	100 Litre	34
Coma	Coma	Corymbia maculata	Spotted Gum	Transplant	4
Cuan	Cuan	Cupaniopsis anacardioides	Tuckeroo	Transplant	2
Eugo	Eugo	Eucalyptus gomphocephala	Tuart	200 Litre	18
Euma	Euma	Eucalyptus marginata	Jarrah	200 Litre	19
Euto	Euto	Eucalyptus todtiana	Coastal Blackbutt, Prricklybark	100 Litre	6
Eutor	Eutor	Eucalyptus torquata	Coral Gum,Coolgardie Gum	100 Litre	11
Jami	Jami	Jacaranda mimosifolia	Fern Tree	Transplant	1
Lain500Lt	Lain500Lt	Lagerstroemia indica	Crepe Myrtle	500 Litre	6
Lain	Lain	Lagerstroemia indica	Crepe Myrtle	Transplant	5
Meth	Meth	Metrosideros thomasii	New Zealand Christmas Bush	Transplant	1
Pich500	Pich500	Pistacia chinensis	Chinese pistache	500 Litre	3

LEGEND

- EXTENT OF WORKS
- PLANTING MIX 1 (1-2 971)
- PLANTING MIX 2 (1-2 971)
- PLANTING MIX 3 (1-2 971)
- PLANTING MIX 4 (1-2 971)
- PLANTING MIX 5 CLIMBING MIX (1-2 971)
- PLANTING MIX 6 (1-2 971)
- BASIN SWALE AND SIDE SLOPE PLANTING (7 971)
- MIYAWAKI FORREST MIX A & B (7 971)
- MIYAWAKI FORREST MIX C & D (7 971)
- MIYAWAKI FORREST MIX E & F (7 971)
- MIYAWAKI FORREST MIX G & H (7 971)
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- EXISTING TREE TO BE RETAINED AND PROTECTED

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PROJECT
CATALINA GREEN
CLARKSON, W.A.

STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS

DRAWING TITLE
PLANTING PLAN 1 OF 2

CLIENT
CATALINA REGIONAL COUNCIL

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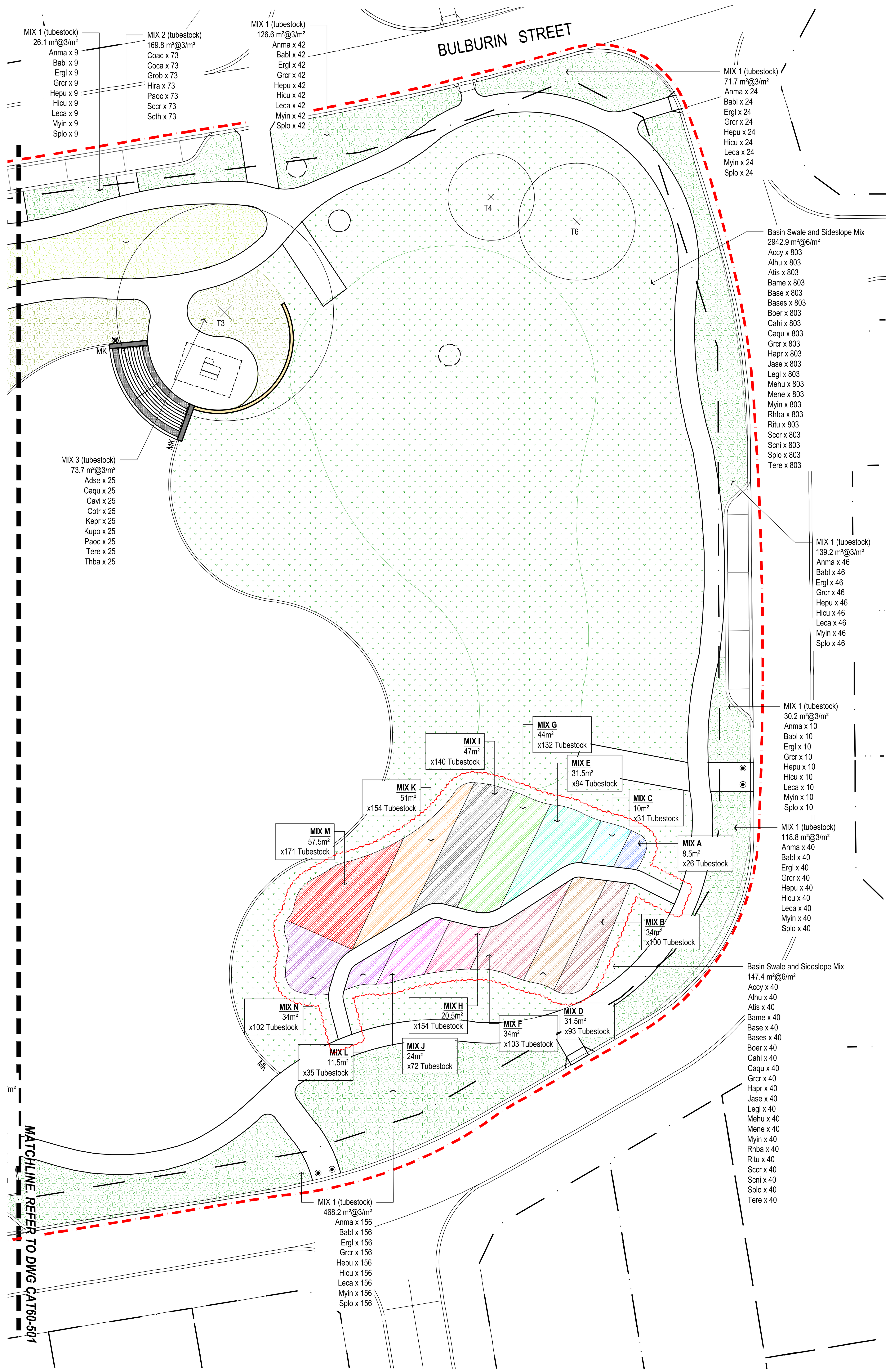
DRAWING NUMBER CAT59-501
REV 2

REF \\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLD\DRAWINGS\JOB CODE\ LANDSCAPE\STAGE 39 - GREEN CENTRAL POS\CAT59-501.DCP 2 SHEETS.DWG



Sym.	Key	Botanic Name	Common Name	Pot	Quantity
Pich	Pich	Pistacia chinensis	Chinese pistache	Transplant	10
Pyni	Pyni	Pyrus nivalis	Snow Pear	500 Litre	6
Xapr	Xapr	Xanthorrhoea preissii	Grass Trees	Transplant	2

Basin Swale and Sideslope Mix

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Accy	Acacia cyclops	Red Eye Wattle	Tube	843
	Alhu	Alyogyne huegelii	Native Hibiscus	Tube	843
	Atis	Atriplex isatidea	Coastal Saltbush	Tube	843
	Bame	Banksia menziesii	Firewood Banksia	Tube	843
	Base	Banksia seminuda	River Banksia	Tube	843
	Bases	Banksia sessilis	Parrot Bush	Tube	843
	Boer	Bossiaea eriocarpa	Common brown pea	Tube	843
	Cahi	Calothamnus hirsutus	Hairy claw flower	Tube	843
	Caqu	Calothamnus quadrifidus 'Clean and Green'	One sided bottlebrush	Tube	843
	Grcr	Grevillea crithmifolia	Grevillea	Tube	843
	Hapr	Hakea prostrata	Harsh Hakea	Tube	843
	Jase	Jacksonia sericea	Waldjumi	Tube	843
	Legl	Lepidosperma gladiatum	Coast Sword-sedge	Tube	843
	Mehu	Melaleuca huegelii	Chenille Honey-myrtle	Tube	843
	Mene	Melaleuca nesophila 'Little Nessy'	Honey Myrtle	14 cm	843
	Myin	Myoporum insulare	Coastal Boobialla	Tube	843
	Rhba	Rhagodia baccata	Berry saltbush	Tube	843
	Ritu	Ricinocarpos tuberculatus	Wedding Bush	Tube	843
	Sccr	Scaevola crassifolia	Cushion Fanflower	Tube	843
	Scni	Scaevola nitida	Shining Fan Flower	Tube	843
	Splo	Spinifex longifolius	Beach spinifex	Tube	843
	Tere	Templetonia retusa	Cockies Tongue	Tube	843

MIX 1

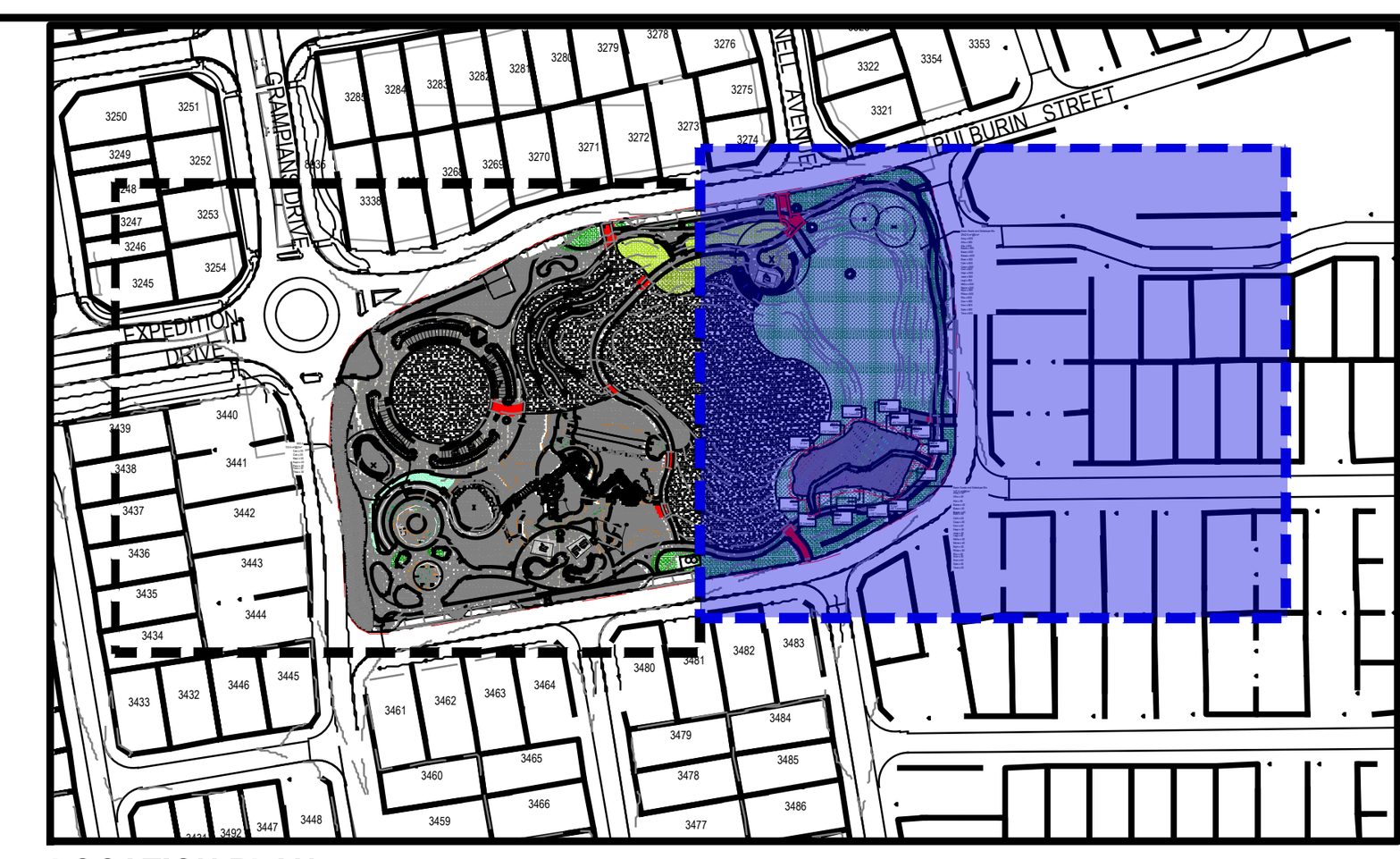
Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Anma	Anigozanthos manglesii	Mangles Kangaroo Paw	14 cm	334
	Babl	Banksia blechnifolia	Banksia	14 cm	334
	Ergl	Eremophila glabra	Tar Bush	14 cm	334
	Grcr	Grevillea crithmifolia	Grevillea	14 cm	334
	Hepu	Hemiandra pungens	Snakebush	14 cm	334
	Hicu	Hibbertia cuneiformis	Snake Bush	14 cm	334
	Leca	Lepidosperma calcicola	Coastal sedge	14 cm	334
	Myin	Myoporum insulare 'prostrate'	Boobialla	14 cm	334
	Splo	Spinifex longifolius	Beach spinifex	14 cm	334

MIX 2

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Coac	Conostylis aculeata	Prickly Conostylis	14 cm	245
	Coca	Conostylis candicans	Grey Cottonheads	14 cm	245
	Grob	Grevillea obtusifolia (prostrate)	Grevillea	14 cm	245
	Hira	Hibbertia racemosa	Stalked Guinea Flower	14 cm	245
	Paoc	Patersonia occidentalis	Long Purple Flag	14 cm	245
	Sccr	Scaevola crassifolia	Cushion Fanflower	14 cm	245
	Scth	Scaevola thesioides	Silky Scaevola	14 cm	245

MIX 3

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Adse	Adenanthos sericeus 'Silver Streak'	Woolly Bush	14 cm	265
	Caqu	Calothamnus quadrifidus 'Clean and Green'	One sided bottlebrush	14 cm	265
	Cavi	Carpobrotus virescens	Coastal Pigface	14 cm	265
	Cotr	Conospermum triplinervium	Tree Smoke Bush	14 cm	265
	Kepr	Kennedia prostrata	Running Postman	14 cm	265
	Kupo	Kunzea pomifera	Cushion Fanflower	14 cm	265
	Paoc	Patersonia occidentalis	Native Iris	14 cm	265
	Tere	Templetonia retusa	Cockies Tongue	14 cm	265
	Thba	Thryptomene baeckeacea (prostrate)	Myrtle	14 cm	265



LOCATION PLAN

MIX 4

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Cavi	Carpobrotus virescens	Coastal Pigface	14 cm	30
	Cotr	Conospermum triplinervium	Tree Smoke Bush	14 cm	30
	Kepr	Kennedia prostrata	Running Postman	14 cm	30
	Kupo	Kunzea pomifera	Cushion Fanflower	14 cm	30
	Paoc	Patersonia occidentalis	Native Iris	14 cm	30
	Tere	Templetonia retusa	Cockies Tongue	14 cm	30
	Thba	Thryptomene baeckeacea (prostrate)	Myrtle	14 cm	30

MIX 5 (CLIMBING)

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Clli	Clematis linearifolia	Slender Clematis	140mm	136
	Clpu	Clematis pubescens	Common Clematis	140mm	136
	Haco	Hardenbergia comptoniana	Native Lilac	140mm	136

MIX 6

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Cavi	Carpobrotus virescens	Woolly Bush	14 cm	17
	Cotr	Conospermum triplinervium	One sided bottlebrush	14 cm	17
	Kepr	Kennedia prostrata	Tree Smoke Bush	14 cm	17
	Kupo	Kunzea pomifera	Cockies Tongue	14 cm	17
	Paoc	Patersonia occidentalis	Albany Feather Flower	14 cm	17

MIX 1 (tubestock)

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Anma	Anigozanthos manglesii	Mangles Kangaroo Paw	Tube	364
	Babl	Banksia blechnifolia	Banksia	Tube	364
	Ergl	Eremophila glabra	Tar Bush	Tube	364
	Grcr	Grevillea crithmifolia	Grevillea	Tube	364
	Hepu	Hemiandra pungens	Snakebush	Tube	364
	Hicu	Hibbertia cuneiformis	Snake Bush	Tube	364
	Leca	Lepidosperma calcicola	Coastal sedge	Tube	364
	Myin	Myoporum insulare 'prostrate'	Boobialla	Tube	364
	Splo	Spinifex longifolius	Beach spinifex	Tube	364

MIX 2 (tubestock)

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Coac	Conostylis aculeata	Prickly Conostylis	14 cm	123
	Coca	Conostylis candicans	Grey Cottonheads	14 cm	123
	Grob	Grevillea obtusifolia (prostrate)	Grevillea	14 cm	123
	Hira	Hibbertia racemosa	Stalked Guinea Flower	14 cm	123
	Paoc	Patersonia occidentalis	Long Purple Flag	14 cm	123
	Sccr	Scaevola crassifolia	Cushion Fanflower	14 cm	123
	Scth	Scaevola thesioides	Silky Scaevola	14 cm	123

MIX 3 (tubestock)

Sym.	Key	Botanic Name	Common Name	Pot	Quantity
	Adse	Adenanthos sericeus 'Silver Streak'	Woolly Bush	Tube	82
	Caqu	Calothamnus quadrifidus 'Clean and Green'	One sided bottlebrush	Tube	82
	Cavi	Carpobrotus virescens	Coastal Pigface	Tube	82
	Cotr	Conospermum triplinervium	Tree Smoke Bush	Tube	82
	Kepr	Kennedia prostrata	Running Postman	Tube	82
	Kupo	Kunzea pomifera	Cushion Fanflower	Tube	82
	Paoc	Patersonia occidentalis	Native Iris	Tube	82
	Tere	Templetonia retusa	Cockies Tongue	Tube	82
	Thba	Thryptomene baeckeacea (prostrate)	Myrtle	Tube	82

NOTE:
- PLANT AND TREE NUMBERS IN SCHEDULE ARE TO BE USED AS GUIDE ONLY. TENDERERS TO REFER LABELS ON PLANS FOR NUMBERS. PLANT NUMBERS AND SPECIES ARE SUBJECT TO AVAILABILITY.
- PLANTS TO HAVE MINIMUM 600MM SETBACK FROM ALL HARDSTAND
- INSTALL THE MEDIUM AND LARGER SPECIES AT A DENSITY THAT CONSIDERS THEIR SIZE AT MATURITY AND ENSURE THEY ARE SETBACK 3M FROM EDGE OF GARDEN BEDS

LEGEND

Item	Ref
EXTENT OF WORKS	
PLANTING MIX 1	1-2 / 971
PLANTING MIX 2	1-2 / 971
PLANTING MIX 3	1-2 / 971
PLANTING MIX 4	1-2 / 971
PLANTING MIX 5 CLIMBING MIX	1-2 / 971
PLANTING MIX 6	1-2 / 971
BASIN SWALE AND SIDE SLOPE PLANTING	7 / 971
MIYAWAKI FORREST MIX A & B	7 / 971
MIYAWAKI FORREST MIX C & D	7 / 971
MIYAWAKI FORREST MIX E & F	7 / 971
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CLARKSON, W.A.

STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS

DRAWING TITLE
PLANTING PLAN 2 OF 2

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DRAWING NUMBER	CAT59-502	REV	A

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MIX A

Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	1
	Baat	Banksia attenuata	Tubestock	1
	Bagr	Banksia grandis	Tubestock	1
	Bail	Banksia illicifolia	Tubestock	1
	Bame	Banksia menziesii	Tubestock	1
	Base	Banksia sessilis	Tubestock	2
	Boer	Bossiaea eriocarpa	Tubestock	3
	Coac	Conostylis aculeata	Tubestock	2
	Coca	Conostylis candicans	Tubestock	1
	Dire	Dianella revoluta	Tubestock	1
	Euto	Eucalyptus todtiana	Tubestock	1
	Hali	Hakea lissocarpha	Tubestock	1
	Hihy	Hibbertia hypericoides	Tubestock	1
	Loma	Lomandra maritima	Tubestock	1
	Mesy	Melaleuca systena	Tubestock	1
	Olax	Olearia axillaris	Tubestock	1
	Pema	Petrophile macrostachya	Tubestock	1
	Stla	Stirlingia latifolia	Tubestock	1
	Tere	Templetonia retusa	Tubestock	1
	Xapr	Xanthorrhoea preissii	Tubestock	1

MIX B

Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	4
	Acpu	Acacia pulchella	Tubestock	2
	Acro	Acacia rostellifera	Tubestock	1
	Actr	Acacia truncata	Tubestock	2
	Alfr	Allocasuarina fraseriana	Tubestock	2
	Baat	Banksia attenuata	Tubestock	3
	Bagr	Banksia grandis	Tubestock	2
	Bail	Banksia illicifolia	Tubestock	1
	Bame	Banksia menziesii	Tubestock	3
	Base	Banksia sessilis	Tubestock	4
	Boer	Bossiaea eriocarpa	Tubestock	6
	Coac	Conostylis aculeata	Tubestock	7
	Coca	Conostylis candicans	Tubestock	2
	Dire	Dianella revoluta	Tubestock	6
	Euma	Eucalyptus marginata	Tubestock	1
	Euto	Eucalyptus todtiana	Tubestock	3
	Goto	Gompholobium tomentosum	Tubestock	3
	Hali	Hakea lissocarpha	Tubestock	5
	Hatr	Hakea trifurcata	Tubestock	2
	Hihy	Hibbertia hypericoides	Tubestock	5
	Hira	Hibbertia racemosa	Tubestock	2
	Jast	Jacksonia sternbergia	Tubestock	1
	Lepa	Leucopgon parviflorus	Tubestock	2
	Loma	Lomandra maritima	Tubestock	5
	Mesy	Melaleuca systena	Tubestock	4
	Olax	Olearia axillaris	Tubestock	6
	Pema	Petrophile macrostachya	Tubestock	1
	Sccr	Scaevola crassifolia	Tubestock	2
	Stla	Stirlingia latifolia	Tubestock	1
	Tere	Templetonia retusa	Tubestock	4
	Xabr	Xanthorrhoea brunonis	Tubestock	2
	Xapr	Xanthorrhoea preissii	Tubestock	6

MIX C

Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	2.
	Actr	Acacia truncata	Tubestock	1
	Alfr	Allocasuarina fraseriana	Tubestock	1
	Baat	Banksia attenuata	Tubestock	1
	Bagr	Banksia grandis	Tubestock	1
	Bail	Banksia illicifolia	Tubestock	1
	Bame	Banksia menziesii	Tubestock	1
	Base	Banksia sessilis	Tubestock	2
	Boer	Bossiaea eriocarpa	Tubestock	3
	Coac	Conostylis aculeata	Tubestock	3
	Coca	Conostylis candicans	Tubestock	1
	Dire	Dianella revoluta	Tubestock	3
	Eugo	Eucalyptus gomphocephala	Tubestock	1
	Euto	Eucalyptus todtiana	Tubestock	2
	Goto	Gompholobium tomentosum	Tubestock	1
	Hihy	Hibbertia hypericoides	Tubestock	1
	Hira	Hibbertia racemosa	Tubestock	1
	Lepa	Leucopgon parviflorus	Tubestock	1
	Loma	Lomandra maritima	Tubestock	1
	Peli	Petrophile linearis	Tubestock	1
	Pema	Petrophile macrostachya	Tubestock	1
	Xapr	Xanthorrhoea preissii	Tubestock	1

MIX D

Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	4
	Acpu	Acacia pulchella	Tubestock	1
	Actr	Acacia truncata	Tubestock	2
	Alfr	Allocasuarina fraseriana	Tubestock	2
	Baat	Banksia attenuata	Tubestock	3
	Bagr	Banksia grandis	Tubestock	2
	Bail	Banksia illicifolia	Tubestock	1
	Bame	Banksia menziesii	Tubestock	3
	Base	Banksia sessilis	Tubestock	4
	Boer	Bossiaea eriocarpa	Tubestock	7
	Coac	Conostylis aculeata	Tubestock	5
	Coca	Conostylis candicans	Tubestock	2
	Dire	Dianella revoluta	Tubestock	6
	Eugo	Eucalyptus gomphocephala	Tubestock	1
	Euto	Eucalyptus todtiana	Tubestock	2
	Goto	Gompholobium tomentosum	Tubestock	3
	Hali	Hakea lissocarpha	Tubestock	3
	Hatr	Hakea trifurcata	Tubestock	2
	Hihy	Hibbertia hypericoides	Tubestock	4
	Hira	Hibbertia racemosa	Tubestock	3
	Jast	Jacksonia sternbergia	Tubestock	1
	Lepa	Leucopgon parviflorus	Tubestock	1
	Loma	Lomandra maritima	Tubestock	5
	Mesy	Melaleuca systena	Tubestock	4
	Olax	Olearia axillaris	Tubestock	5
	Pema	Petrophile macrostachya	Tubestock	2
	Sccr	Scaevola crassifolia	Tubestock	2
	Stla	Stirlingia latifolia	Tubestock	1
	Tere	Templetonia retusa	Tubestock	4
	Xabr	Xanthorrhoea brunonis	Tubestock	2
	Xapr	Xanthorrhoea preissii	Tubestock	6

MIX E

Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	4
	Acpu	Acacia pulchella	Tubestock	2
	Actr	Acacia truncata	Tubestock	2
	Alfr	Allocasuarina fraseriana	Tubestock	2
	Baat	Banksia attenuata	Tubestock	3
	Bagr	Banksia grandis	Tubestock	3
	Bail	Banksia illicifolia	Tubestock	1
	Bame	Banksia menziesii	Tubestock	2
	Base	Banksia sessilis	Tubestock	4
	Boer	Bossiaea eriocarpa	Tubestock	5
	Coac	Conostylis aculeata	Tubestock	6
	Coca	Conostylis candicans	Tubestock	2
	Dire	Dianella revoluta	Tubestock	7
	Eugo	Eucalyptus gomphocephala	Tubestock	1
	Euma	Eucalyptus marginata	Tubestock	1
	Euto	Eucalyptus todtiana	Tubestock	2
	Goto	Gompholobium tomentosum	Tubestock	6
	Hali	Hakea lissocarpha	Tubestock	3
	Hatr	Hakea trifurcata	Tubestock	1
	Hihy	Hibbertia hypericoides	Tubestock	5
	Hira	Hibbertia racemosa	Tubestock	3
	Jast	Jacksonia sternbergia	Tubestock	1
	Lepa	Leucopgon parviflorus	Tubestock	1
	Loma	Lomandra maritima	Tubestock	5
	Mesy	Melaleuca systena	Tubestock	4
	Olax	Olearia axillaris	Tubestock	4
	Peli	Petrophile linearis	Tubestock	1
	Pema	Petrophile macrostachya	Tubestock	1
	Sccr	Scaevola crassifolia	Tubestock	2
	Tere	Templetonia retusa	Tubestock	3
	Xapr	Xanthorrhoea preissii	Tubestock	7

MIX F

Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	5
	Acpu	Acacia pulchella	Tubestock	2
	Actr	Acacia truncata	Tubestock	1
	Alfr	Allocasuarina fraseriana	Tubestock	2
	Baat	Banksia attenuata	Tubestock	4
	Bagr	Banksia grandis	Tubestock	3
	Bail	Banksia illicifolia	Tubestock	1
	Bame	Banksia menziesii	Tubestock	3
	Base	Banksia sessilis	Tubestock	4
	Boer	Bossiaea eriocarpa	Tubestock	7
	Coac	Conostylis aculeata	Tubestock	5
	Coca	Conostylis candicans	Tubestock	2
	Dire	Dianella revoluta	Tubestock	6
	Euto	Eucalyptus todtiana	Tubestock	3
	Goto	Gompholobium tomentosum	Tubestock	4
	Hali	Hakea lissocarpha	Tubestock	4
	Hatr	Hakea trifurcata	Tubestock	4
	Hihy	Hibbertia hypericoides	Tubestock	5
	Hira	Hibbertia racemosa	Tubestock	3
	Jast	Jacksonia sternbergia	Tubestock	1
	Lepa	Leucopgon parviflorus	Tubestock	2
	Loma	Lomandra maritima	Tubestock	5
	Mesy	Melaleuca systena	Tubestock	4
	Olax	Olearia axillaris	Tubestock	5
	Pema	Petrophile macrostachya	Tubestock	2
	Sccr	Scaevola crassifolia	Tubestock	3
	Stla	Stirlingia latifolia	Tubestock	1
	Tere	Templetonia retusa	Tubestock	4
	Xabr	Xanthorrhoea brunonis	Tubestock	2
	Xapr	Xanthorrhoea preissii	Tubestock	6

MIX G

Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	5
	Accy	Acacia cyclops	Tubestock	1
	Acpu	Acacia pulchella	Tubestock	2
	Acro	Acacia rostellifera	Tubestock	1
	Actr	Acacia truncata	Tubestock	2
	Alfr	Allocasuarina fraseriana	Tubestock	2
	Baat	Banksia attenuata	Tubestock	4
	Bagr	Banksia grandis	Tubestock	4
	Bail	Banksia illicifolia	Tubestock	1
	Bame	Banksia menziesii	Tubestock	4
	Base	Banksia sessilis	Tubestock	6
	Boer	Bossiaea eriocarpa	Tubestock	7
	Coac	Conostylis aculeata	Tubestock	8
	Coca	Conostylis candicans	Tubestock	2
	Dire	Dianella revoluta	Tubestock	8
	Eugo	Eucalyptus gomphocephala	Tubestock	1
	Euma	Eucalyptus marginata	Tubestock	1
	Euto	Eucalyptus todtiana	Tubestock	3
	Goto	Gompholobium tomentosum	Tubestock	3
	Hali	Hakea lissocarpha	Tubestock	5
	Hatr	Hakea trifurcata	Tubestock	4
	Hihy	Hibbertia hypericoides	Tubestock	9
	Hira	Hibbertia racemosa	Tubestock	5
	Jast	Jacksonia sternbergia	Tubestock	2
	Lepa	Leucopgon parviflorus	Tubestock	2
	Loma	Lomandra maritima	Tubestock	9
	Mesy	Melaleuca systena	Tubestock	4
	Olax	Olearia axillaris	Tubestock	6
	Sccr	Scaevola crassifolia	Tubestock	4
	Stla	Stirlingia latifolia	Tubestock	1
	Tere	Templetonia retusa	Tubestock	5
	Xabr	Xanthorrhoea brunonis	Tubestock	2
	Xapr	Xanthorrhoea preissii	Tubestock	9

MIX H

Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	2
	Acpu	Acacia pulchella	Tubestock	2
	Actr	Acacia truncata	Tubestock	1
	Alfr	Allocasuarina fraseriana	Tubestock	2
	Baat	Banksia attenuata	Tubestock	2
	Bagr	Banksia grandis	Tubestock	2
	Bail	Banksia illicifolia	Tubestock	1
	Bame	Banksia menziesii	Tubestock	2
	Base	Banksia sessilis	Tubestock	2
	Boer	Bossiaea eriocarpa	Tubestock	3
	Coac	Conostylis aculeata	Tubestock	3
	Coca	Conostylis candicans	Tubestock	1
	Dire	Dianella revoluta	Tubestock	6
	Eugo	Eucalyptus gomphocephala	Tubestock	1
	Euto	Eucalyptus todtiana	Tubestock	2
	Goto	Gompholobium tomentosum	Tubestock	2
	Hali	Hakea lissocarpha	Tubestock	1
	Hatr	Hakea trifurcata	Tubestock	1
	Hira	Hibbertia racemosa	Tubestock	3
	Jast	Jacksonia sternbergia	Tubestock	1
	Lepa	Leucopgon parviflorus	Tubestock	1
	Loma	Lomandra maritima	Tubestock	4
	Mesy	Melaleuca systena	Tubestock	2
	Olax	Olearia axillaris	Tubestock	2
	Peli	Petrophile linearis	Tubestock	1
	Pema	Petrophile macrostachya	Tubestock	1
	Sccr	Scaevola crassifolia	Tubestock	1
	Stla	Stirlingia latifolia	Tubestock	1
	Tere	Templetonia retusa	Tubestock	2
	Xabr	Xanthorrhoea brunonis	Tubestock	2
	Xapr	Xanthorrhoea preissii	Tubestock	4

MIX I

Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	7
	Acpu	Acacia pulchella	Tubestock	3
	Acro	Acacia rostellifera	Tubestock	1
	Actr	Acacia truncata	Tubestock	2
	Alfr	Allocasuarina fraseriana	Tubestock	2
	Baat	Banksia attenuata	Tubestock	6
	Bagr	Banksia grandis	Tubestock	4
	Bail	Banksia illicifolia	Tubestock	1
	Bame	Banksia menziesii	Tubestock	4
	Base	Banksia sessilis	Tubestock	6
	Boer	Bossiaea eriocarpa	Tubestock	7
	Coac	Conostylis aculeata	Tubestock	8
	Coca	Conostylis candicans	Tubestock	2
	Dire	Dianella revoluta	Tubestock	9
	Eugo	Eucalyptus gomphocephala	Tubestock	2
	Euma	Eucalyptus marginata	Tubestock	1
	Euto	Eucalyptus todtiana	Tubestock	2
	Goto	Gompholobium tomentosum	Tubestock	3
	Hali	Hakea lissocarpha	Tubestock	6
	Hatr	Hakea trifurcata	Tubestock	4
	Hihy	Hibbertia hypericoides	Tubestock	10
	Hira	Hibbertia racemosa	Tubestock	5
	Jast	Jacksonia sternbergia	Tubestock	2
	Lepa	Leucopgon parviflorus	Tubestock	2
	Loma	Lomandra maritima	Tubestock	7
	Mesy	Melaleuca systena	Tubestock	4
	Olax	Olearia axillaris	Tubestock	7
	Pema	Petrophile macrostachya	Tubestock	2
	Sccr	Scaevola crassifolia	Tubestock	4
	Stla	Stirlingia latifolia	Tubestock	1
	Tere	Templetonia retusa	Tubestock	5
	Xabr	Xanthorrhoea brunonis	Tubestock	2
	Xapr	Xanthorrhoea preissii	Tubestock	9

MIX J

Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	3
	Acpu	Acacia pulchella	Tubestock	1
	Actr	Acacia truncata	Tubestock	1
	Alfr	Allocasuarina fraseriana	Tubestock	2
	Baat	Banksia attenuata	Tubestock	2
	Bagr	Banksia grandis	Tubestock	2
	Bail	Banksia illicifolia	Tubestock	1
	Bame	Banksia menziesii	Tubestock	2
	Base	Banksia sessilis	Tubestock	2
	Boer	Bossiaea eriocarpa	Tubestock	3
	Coac	Conostylis aculeata	Tubestock	5
	Coca	Conostylis candicans	Tubestock	2
	Dire	Dianella revoluta	Tubestock	6
	Euma	Eucalyptus marginata	Tubestock	1
	Euto	Eucalyptus todtiana	Tubestock	2
	Goto	Gompholobium tomentosum	Tubestock	2
	Hali	Hakea lissocarpha	Tubestock	2
	Hatr	Hakea trifurcata	Tubestock	1
	Hihy	Hibbertia hypericoides	Tubestock	5
	Hira	Hibbertia racemosa	Tubestock	3
	Jast	Jacksonia sternbergia	Tubestock	2
	Lepa	Leucopgon parviflorus	Tubestock	1
	Loma	Lomandra maritima	Tubestock	5
	Mesy	Melaleuca systena	Tubestock	3
	Olax	Olearia axillaris	Tubestock	3
	Pema	Petrophile macrostachya	Tubestock	1
	Sccr	Scaevola crassifolia	Tubestock	1
	Tere	Templetonia retusa	Tubestock	4
	Xabr	Xanthorrhoea brunonis	Tubestock	1
	Xapr	Xanthorrhoea preissii	Tubestock	3

MIX K

Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	8
	Accy	Acacia cyclops	Tubestock	1
	Acpu	Acacia pulchella	Tubestock	3
	Acro	Acacia rostellifera	Tubestock	1
	Actr	Acacia truncata	Tubestock	2
	Alfr	Allocasuarina fraseriana	Tubestock	3
	Baat	Banksia attenuata	Tubestock	6
	Bagr	Banksia grandis	Tubestock	5
	Bail	Banksia illicifolia	Tubestock	2
	Bame	Banksia menziesii	Tubestock	5
	Base	Banksia sessilis	Tubestock	5
	Boer	Bossiaea eriocarpa	Tubestock	10
	Coac	Conostylis aculeata	Tubestock	9
	Coca	Conostylis candicans	Tubestock	2
	Dire	Dianella revoluta	Tubestock	9
	Eugo	Eucalyptus gomphocephala	Tubestock	2
	Euma	Eucalyptus marginata	Tubestock	1
	Euto	Eucalyptus todtiana	Tubestock	2
	Goto	Gompholobium tomentosum	Tubestock	3
	Hali	Hakea lissocarpha	Tubestock	5
	Hatr	Hakea trifurcata	Tubestock	4
	Hihy	Hibbertia hypericoides	Tubestock	9
	Hira	Hibbertia racemosa	Tubestock	5
	Jast	Jacksonia sternbergia	Tubestock	3
	Lepa	Leucopgon parviflorus	Tubestock	2
	Loma	Lomandra maritima	Tubestock	11
	Mesy	Melaleuca systena	Tubestock	6
	Olax	Olearia axillaris	Tubestock	7
	Pema	Petrophile macrostachya	Tubestock	2
	Sccr	Scaevola crassifolia	Tubestock	4
	Stla	Stirlingia latifolia	Tubestock	1
	Tere	Templetonia retusa	Tubestock	5
	Xabr	Xanthorrhoea brunonis	Tubestock	2
	Xapr	Xanthorrhoea preissii	Tubestock	9

MIX L

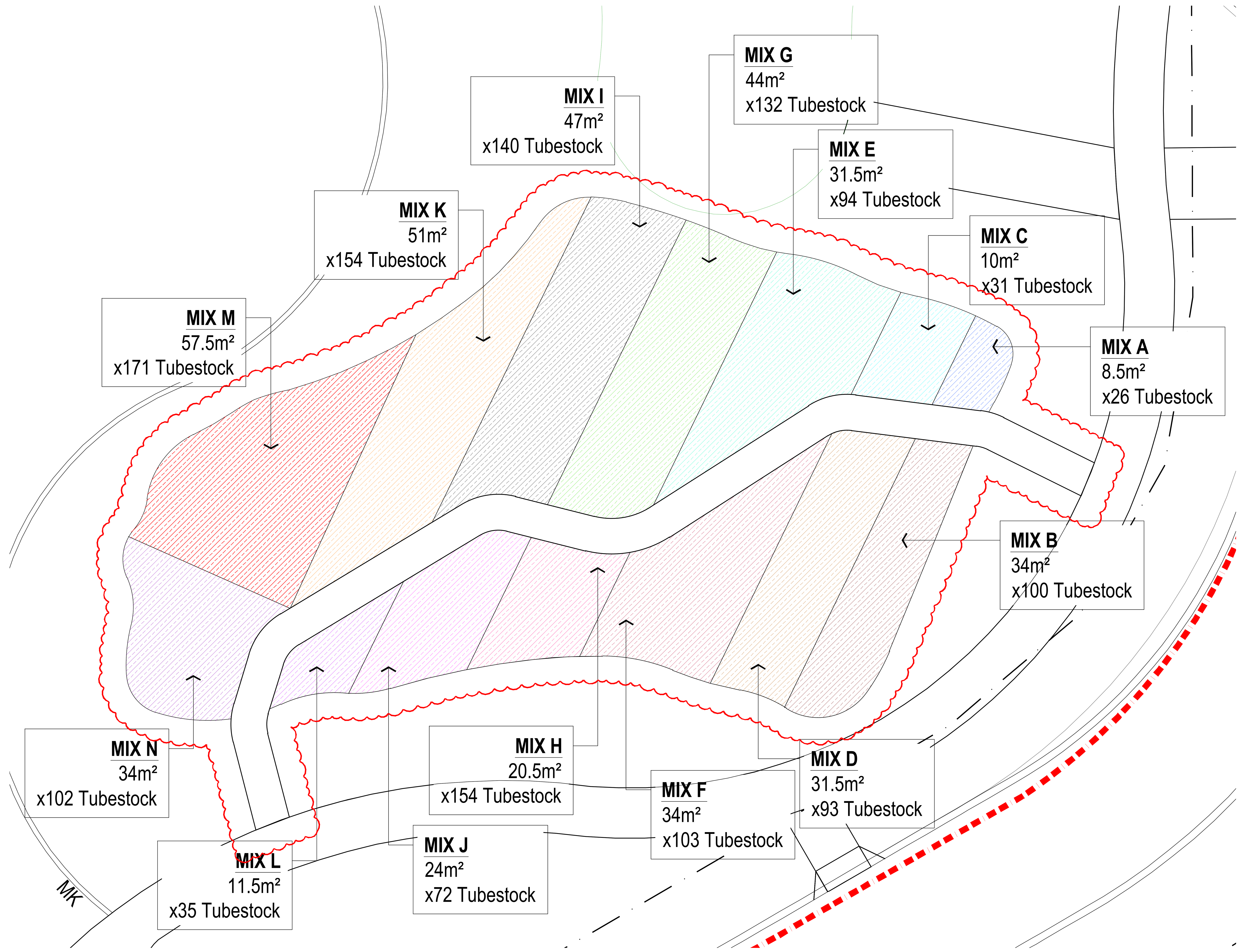
Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	2
	Actr	Acacia truncata	Tubestock	1
	Baat	Banksia attenuata	Tubestock	1
	Bagr	Banksia grandis	Tubestock	1
	Bail	Banksia illicifolia	Tubestock	1
	Bame	Banksia menziesii	Tubestock	2
	Base	Banksia sessilis	Tubestock	2
	Boer	Bossiaea eriocarpa	Tubestock	3
	Coac	Conostylis aculeata	Tubestock	3
	Coca	Conostylis candicans	Tubestock	2
	Dire	Dianella revoluta	Tubestock	3
	Euto	Eucalyptus todtiana	Tubestock	2
	Goto	Gompholobium tomentosum	Tubestock	2
	Hihy	Hibbertia hypericoides	Tubestock	1
	Hira	Hibbertia racemosa	Tubestock	1
	Loma	Lomandra maritima	Tubestock	1
	Olax	Olearia axillaris	Tubestock	1
	Peli	Petrophile linearis	Tubestock	1
	Pema	Petrophile macrostachya	Tubestock	1
	Tere	Templetonia retusa	Tubestock	1
	Xabr	Xanthorrhoea brunonis	Tubestock	1
	Xapr	Xanthorrhoea preissii	Tubestock	2

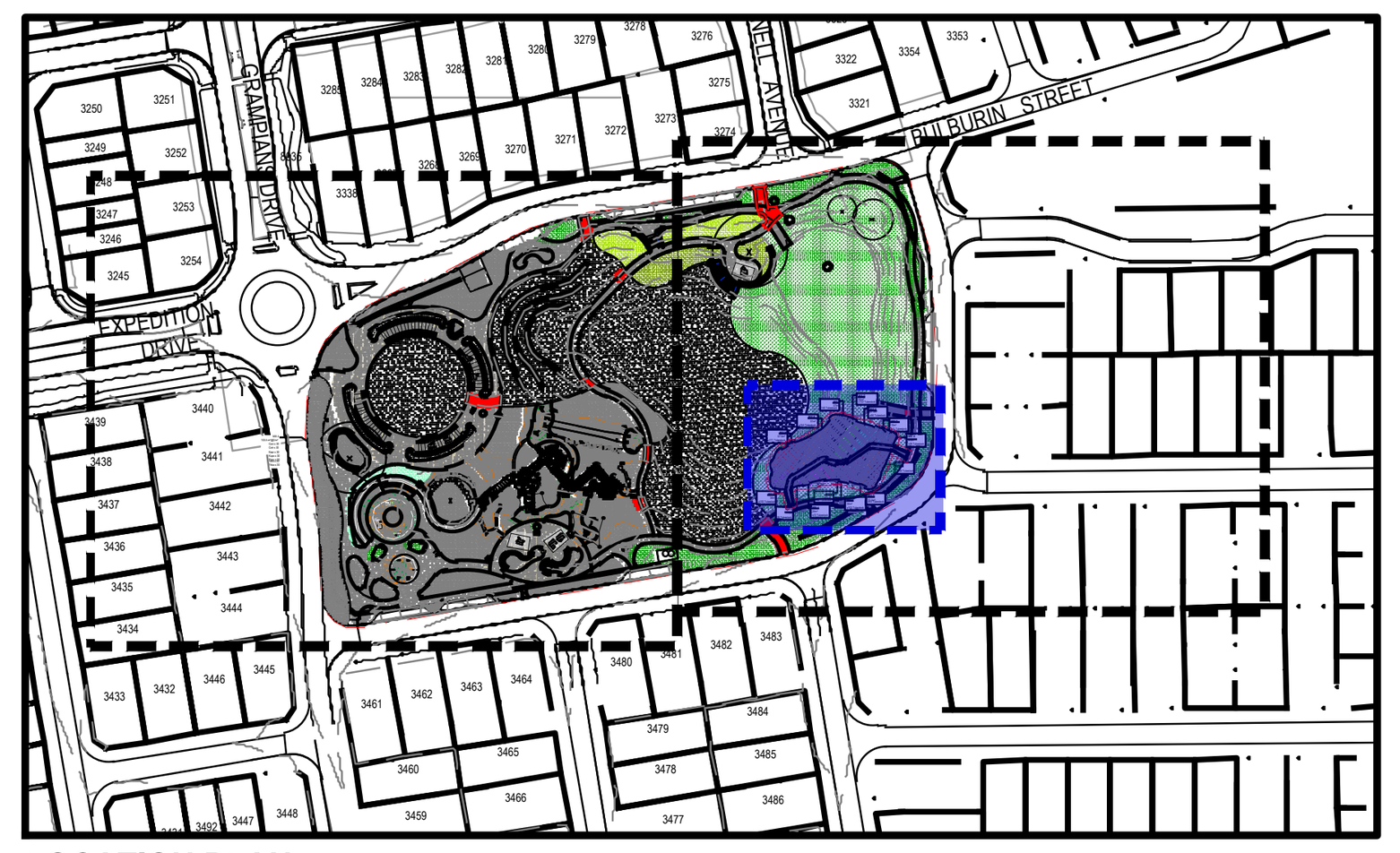
MIX M

Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	9
	Accy	Acacia cyclops	Tubestock	1
	Acpu	Acacia pulchella	Tubestock	2
	Acro	Acacia rostellifera	Tubestock	1
	Actr	Acacia truncata	Tubestock	2
	Alfr	Allocasuarina fraseriana	Tubestock	2
	Baat	Banksia attenuata	Tubestock	6
	Bagr	Banksia grandis	Tubestock	6
	Bail	Banksia illicifolia	Tubestock	1
	Bame	Banksia menziesii	Tubestock	6
	Base	Banksia sessilis	Tubestock	9
	Boer	Bossiaea eriocarpa	Tubestock	10
	Coac	Conostylis aculeata	Tubestock	10
	Coca	Conostylis candicans	Tubestock	2
	Dire	Dianella revoluta	Tubestock	9
	Eugo	Eucalyptus gomphocephala	Tubestock	2
	Euma	Eucalyptus marginata	Tubestock	1
	Euto	Eucalyptus todtiana	Tubestock	2
	Goto	Gompholobium tomentosum	Tubestock	4
	Hali	Hakea lissocarpha	Tubestock	9
	Hatr	Hakea trifurcata	Tubestock	4
	Hihy	Hibbertia hypericoides	Tubestock	18
	Hira	Hibbertia racemosa	Tubestock	3
	Jast	Jacksonia sternbergia	Tubestock	1
	Lepa	Leucopgon parviflorus	Tubestock	3
	Loma	Lomandra maritima	Tubestock	9
	Mesy	Melaleuca systena	Tubestock	5
	Olax	Olearia axillaris	Tubestock	8
	Pema	Petrophile macrostachya	Tubestock	4
	Sccr	Scaevola crassifolia	Tubestock	4
	Stla	Stirlingia latifolia	Tubestock	1
	Tere	Templetonia retusa	Tubestock	6
	Xabr	Xanthorrhoea brunonis	Tubestock	2
	Xapr	Xanthorrhoea preissii	Tubestock	9

MIX N

Sym.	Key	Botanic Name	Pot	Qty.
	Acco	Acacia cochlearis	Tubestock	4
	Actr	Acacia truncata	Tubestock	1
	Alfr	Allocasuarina fraseriana	Tubestock	2
	Baat	Banksia attenuata	Tubestock	3
	Bagr	Banksia grandis	Tubestock	4
	Bail	Banksia illicifolia	Tubestock	1
	Bame	Banksia menziesii	Tubestock	2
	Base	Banksia sessilis	Tubestock	3
	Boer	Bossiaea eriocarpa	Tubestock	6
	Coac	Conostylis aculeata	Tubestock	6
	Coca	Conostylis candicans	Tubestock	2
	Dire	Dianella revoluta	Tubestock	6
	Eugo	Eucalyptus gomphocephala	Tubestock	1
	Euto	Eucalyptus todtiana	Tubestock	2
	Goto	Gompholobium tomentosum	Tubestock	4
	Hali	Hakea lissocarpha	Tubestock	4
	Hatr	Hakea trifurcata	Tubestock	3
	Hihy	Hibbertia hypericoides	Tubestock	7
	Hira	Hibbertia racemosa	Tubestock	3
	Lepa	Leucopgon parviflorus	Tubestock	2
	Loma	Lomandra maritima	Tubestock	5
	Mesy	Melaleuca systena	Tubestock	4
	Olax	Olearia axillaris	Tubestock	5
	Peli	Petrophile linearis	Tubestock	1
	Pema	Petrophile macrostachya	Tubestock	1
	Sccr	Scaevola crassifolia	Tubestock	3
	Stla	Stirlingia latifolia	Tubestock	1
	Tere	Templetonia retusa	Tubestock	6
	Xabr	Xanthorrhoea brunonis	Tubestock	2
	Xapr	Xanthorrhoea preissii	Tubestock	8





LOCATION PLAN

LEGEND

- EXTENT OF WORKS
- PLANTING MIX 1 — 1-2/971
- PLANTING MIX 2 — 1-2/971
- PLANTING MIX 3 — 1-2/971
- PLANTING MIX 4 — 1-2/971
- PLANTING MIX 5 CLIMBING MIX — 1-2/971
- PLANTING MIX 6 — 1-2/971
- BASIN SWALE AND SIDE SLOPE PLANTING — 7/971
- MIYAWAKI FORREST MIX A & B — 7/971
- MIYAWAKI FORREST MIX C & D — 7/971
- MIYAWAKI FORREST MIX E & F — 7/971
- MIYAWAKI FORREST MIX G & H — 7/971
- MIYAWAKI FORREST MIX I & J — 7/971
- MIYAWAKI FORREST MIX K & L — 7/971
- MIYAWAKI FORREST MIX M & N — 7/971
- PROPOSED TREES — 4-5/971
- EXISTING TREE TO BE RETAINED AND PROTECTED

STANDARD NOTES

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Integrated Science & Design
PERTH (08) 9380 4988 • MARGARET RIVER (08) 9758 8159

PROJECT
CATALINA GREEN
CLARKSON, W.A.
STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS

DRAWING TITLE
MIYAWAKI FORREST PLAN

CLIENT
CATALINA REGIONAL COUNCIL

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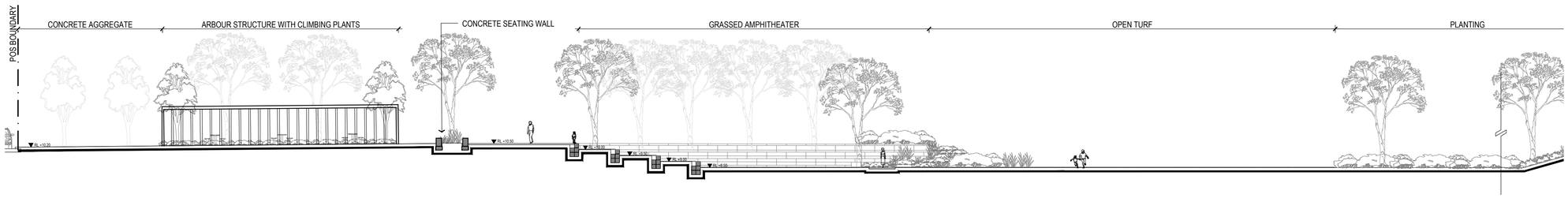
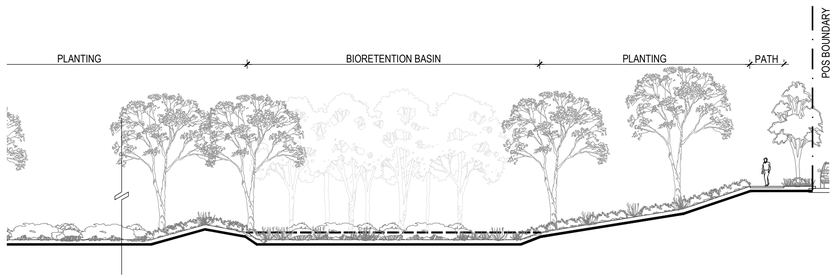
DATE INITIALLY DRAWN	24.10.23		
SCALE	1: 250 @ A1	METRES	0 2.5 5 7.5 10 12.5

DRAWING NUMBER CAT59-503
REV A

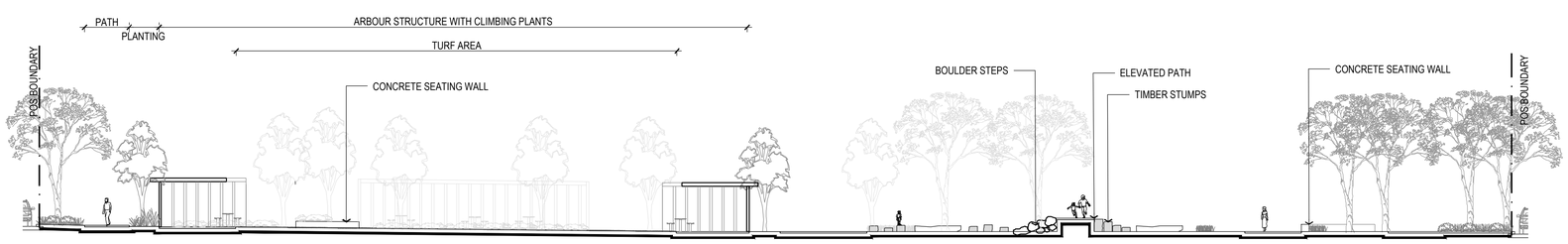
REF U:\CURRENT PROJECTS\CATALINA, TAMALA PARK(CL) DRAWINGS\(JOB CODE) AUTOCAD\(JOB CODE) LANDSCAPE\STAGE 39 - GREEN CENTRAL POS\CAT59 GCP DES.DWG





1 / 801 SECTION A
SECTION

SCALE 1:200



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SECTION

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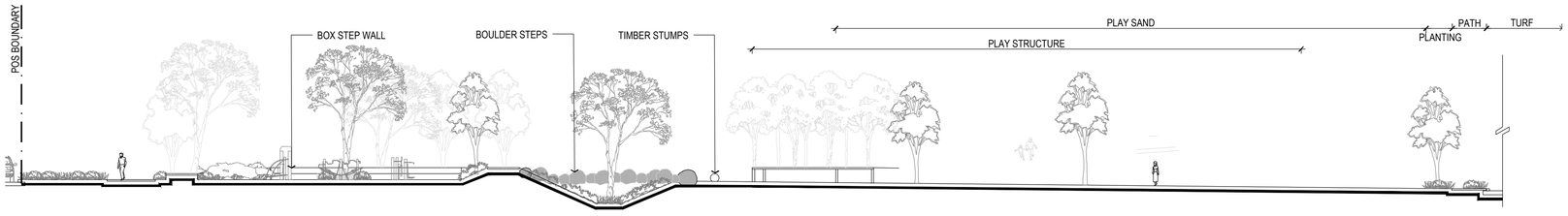

3 / 801 SECTION C
SECTION

SCALE 1:200



LOCATION PLAN

STANDARD NOTES

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C	27.03.24	OW	ISSUE FOR APPROVAL
B	16.02.24	OW	ISSUE FOR APPROVAL
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PROJECT
CATALINA GREEN
CLARKSON, W.A.
STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS

DRAWING TITLE
SITE SECTIONS
.
CLIENT
CATALINA REGIONAL COUNCIL

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SCALE 1: 500 @ A1 METRES
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DRAWING NUMBER
CAT59-801

REV
1

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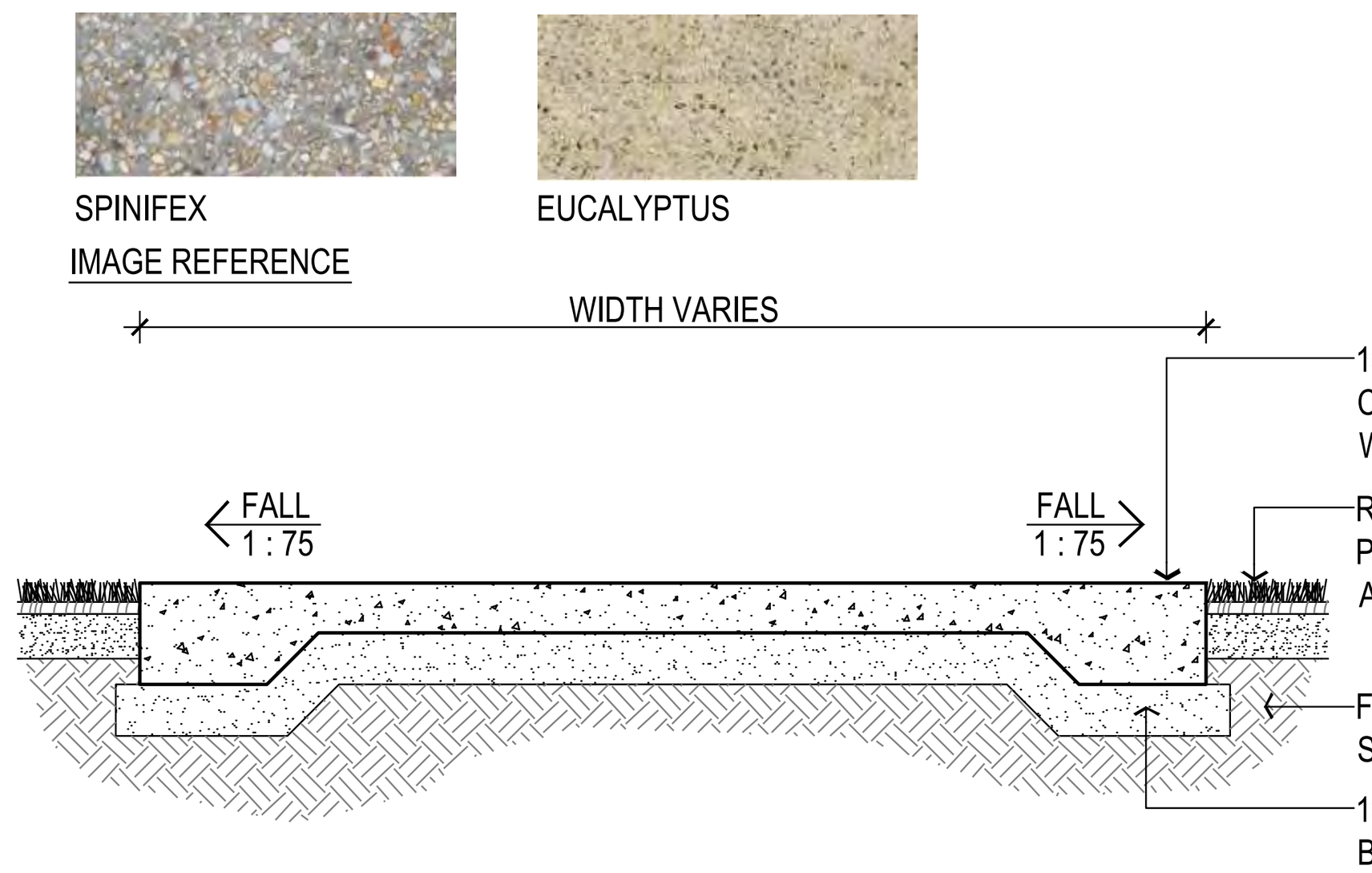
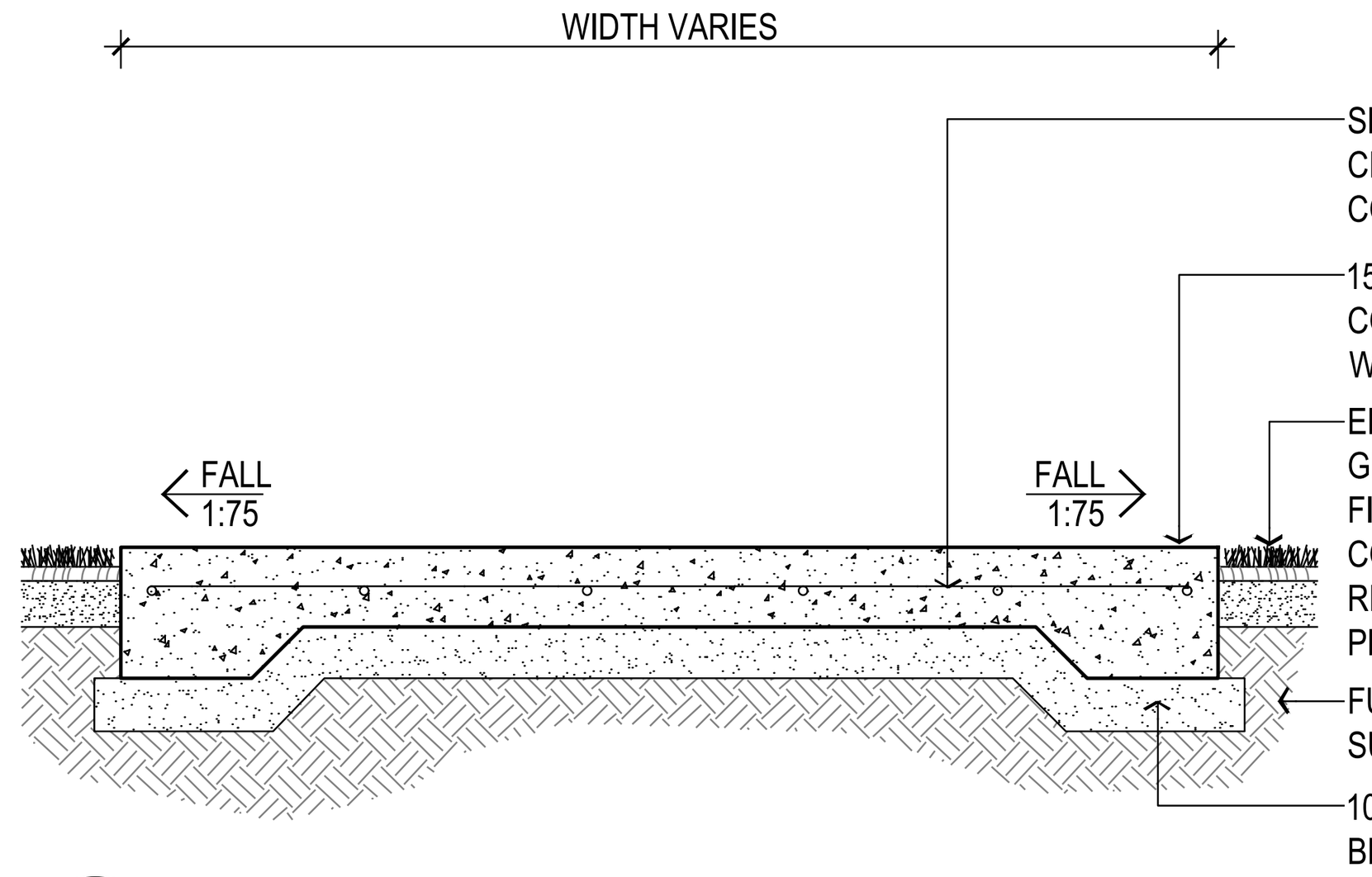


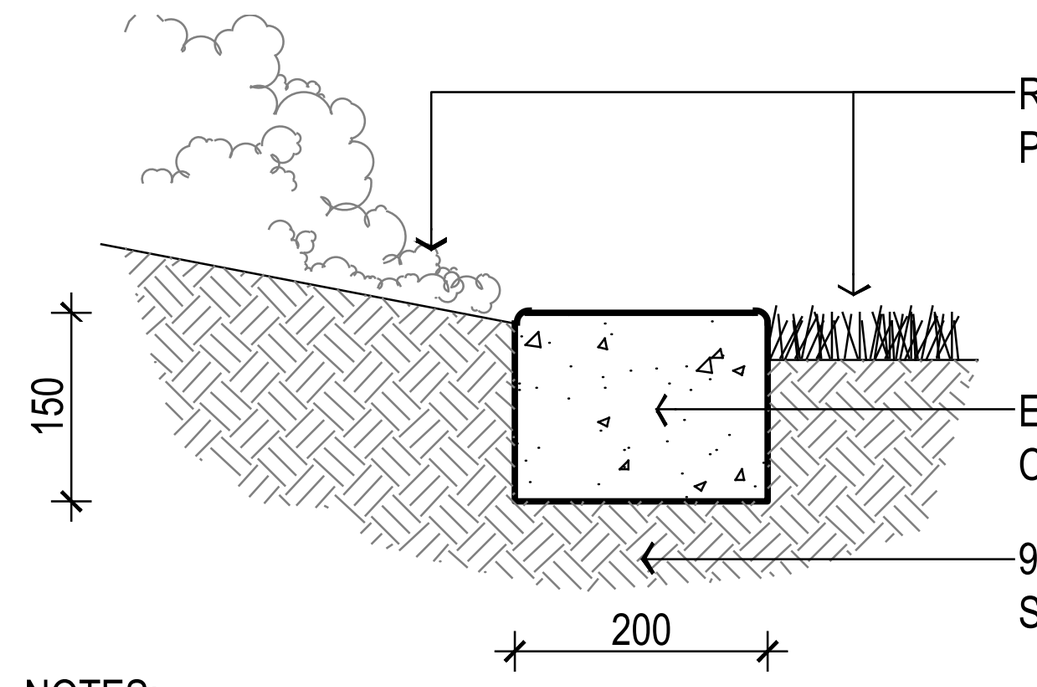
NOTES

1. FOUNDATION TO BE COMPACTED TO 95% MDD.
2. ALL CONCRETE FOOTPATH CONSTRUCTION TO BE A MIN 32MPa, 20mm AGGREGATE AND MAX SLUMP OF 90mm.
3. BEDDING - SAND (100mm MINIMUM).
4. EXPANSION JOINT EVERY 5.0M AS. SEE DETAIL 4/901
5. CONTRACTION JOINT EVERY 2.5M. SEE DETAIL 5/901
6. SURFACE TO BE BROOM FINISH, NON-SLIP, WITH SMOOTH EDGE APPROX 75mm WIDE AT EDGES AND JOINTS.
7. LONGITUDINAL GRADE SHOULD NOT EXCEED 1 IN 20.
8. WHERE LONGITUDINAL GRADE IS GREATER THAN 1 IN 14, LANDINGS WILL BE PROVIDED EVERY 6m.
9. VERTICAL CLEARANCES ALONG PATHS SHOULD BE A MINIMUM OF 2m.
10. WHERE STREET FURNITURE (POLES, BENCHES, RUBBISH BINS, POSTS, ETC) ARE LOCATED IN PATH, A MIN UNOBSTRUCTED WIDTH OF 1.2m MUST BE MAINTAINED.

1/901 INSITU CONCRETE FOOTPATH - TYPICAL
SECTION — SCALE 1:20

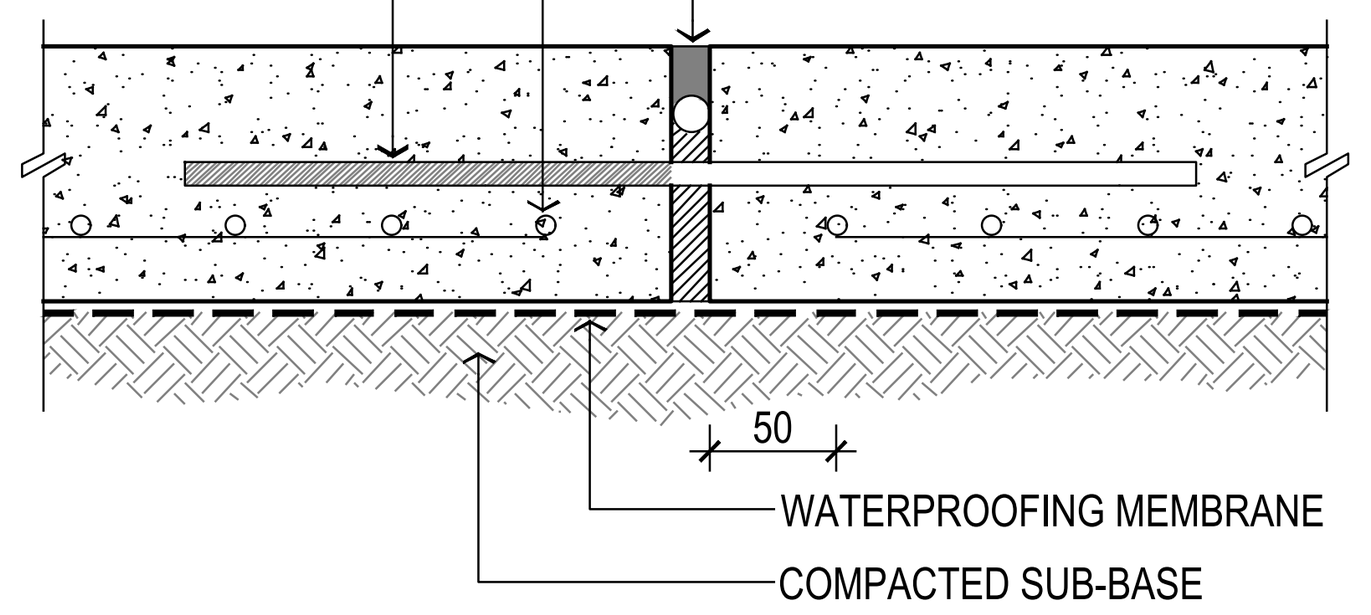


2/901 REINFORCED CONCRETE PATH FOR MAINTENANCE VEHICLE ACCESS
SECTION — SCALE 1:20

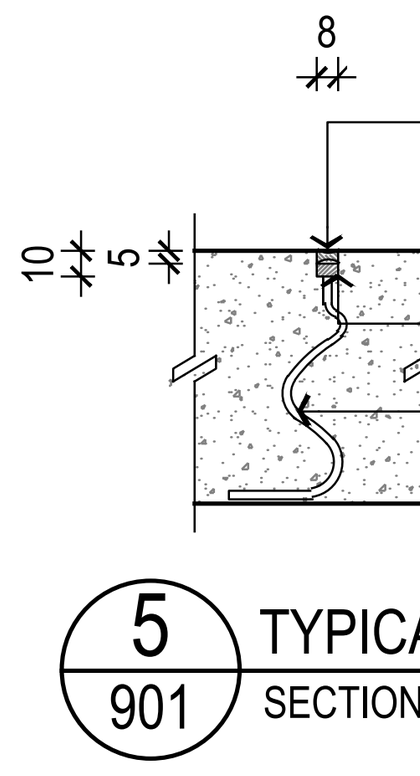


NOTES:
1. ALL CONCRETE TO BE 32MPa @ 28 DAYS
2. CONTRACTION JOINTS: RULED / STAMPED AT 1.5M INTERVALS
3. EXPANSION JOINTS: 6.0M INTERVALS TO LINE UP WITH FOOTPATH JOINTS.

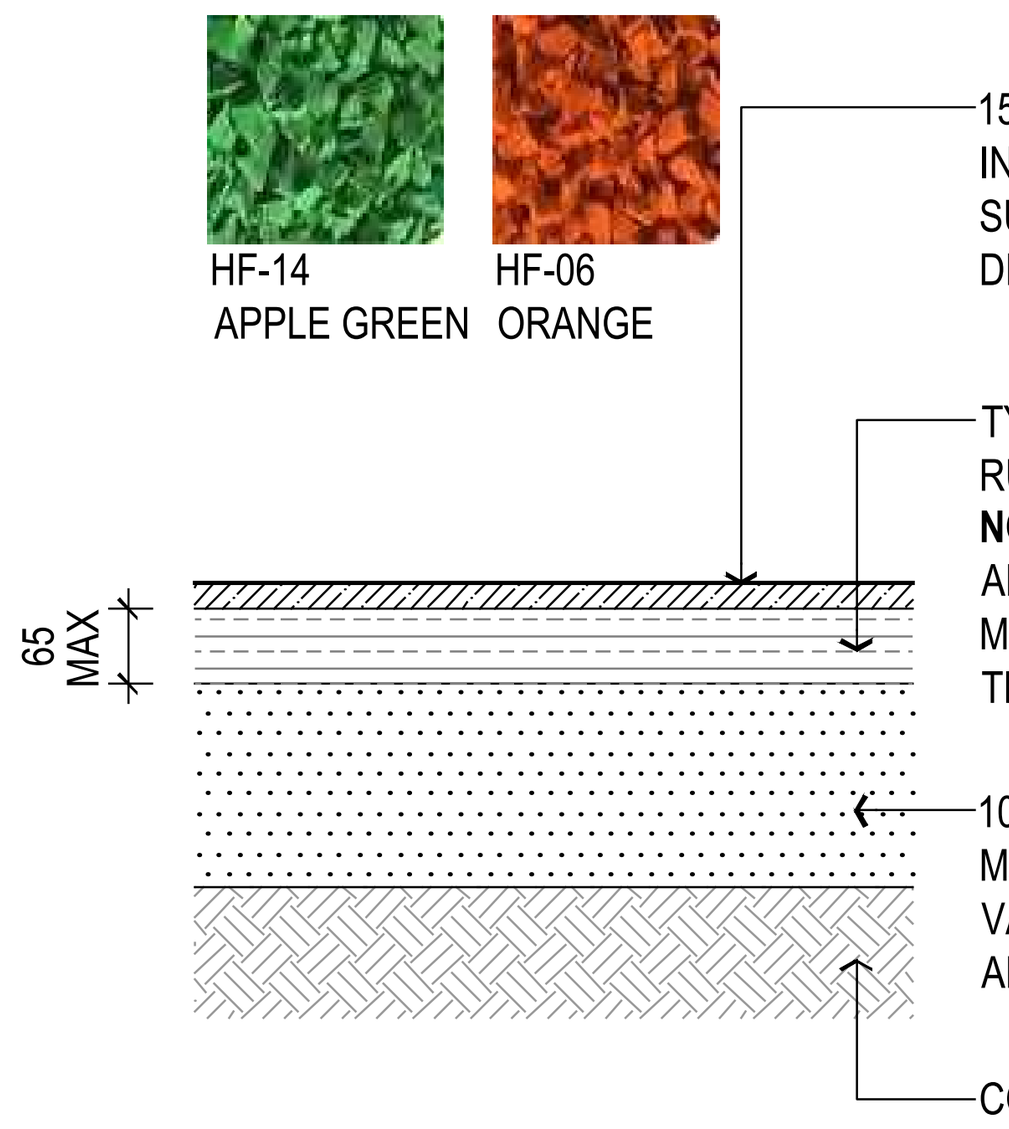
3/901 MOWING KERB
SECTION — SCALE 1:10



4/901 TYPICAL EDGE DETAIL (NON-TRAFFICABLE)
SECTION — SCALE 1:5

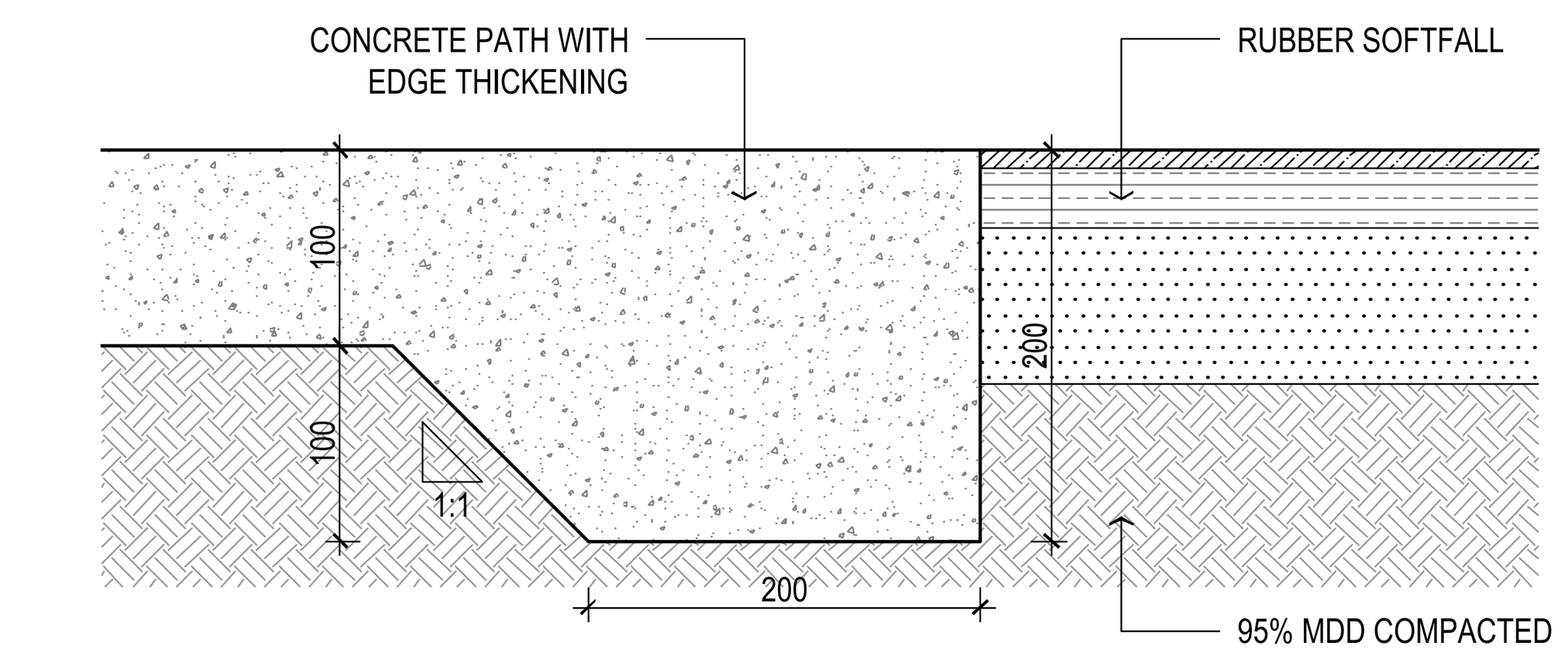


5/901 TYPICAL CONTRACTION JOINT
SECTION — SCALE 1:5

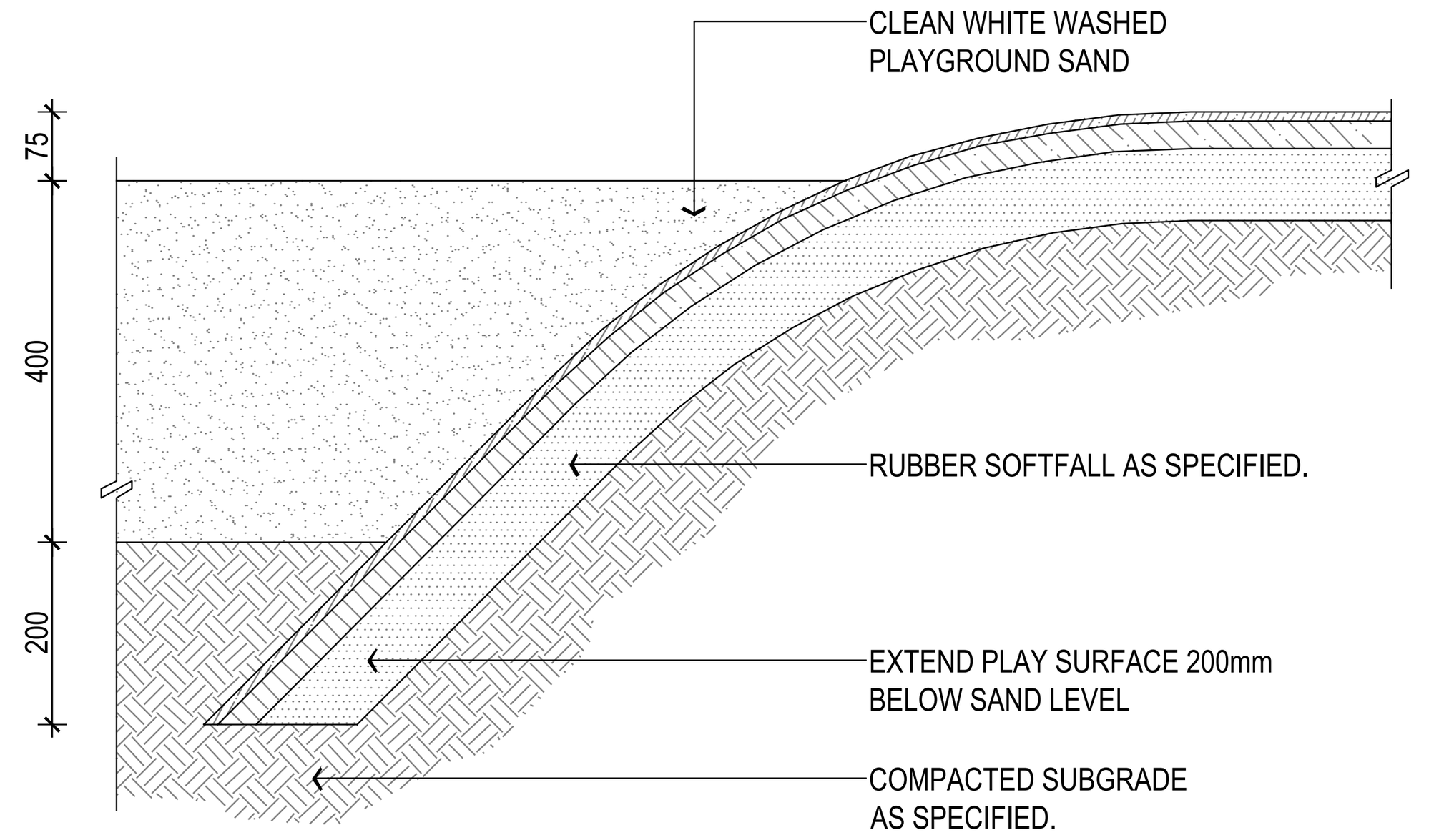


NOTE: INSTALL ALL PLAY EQUIPMENT AND SAFETY SURFACES TO RELEVANT AUSTRALIAN AND CITY OF WANNEROO STANDARDS.

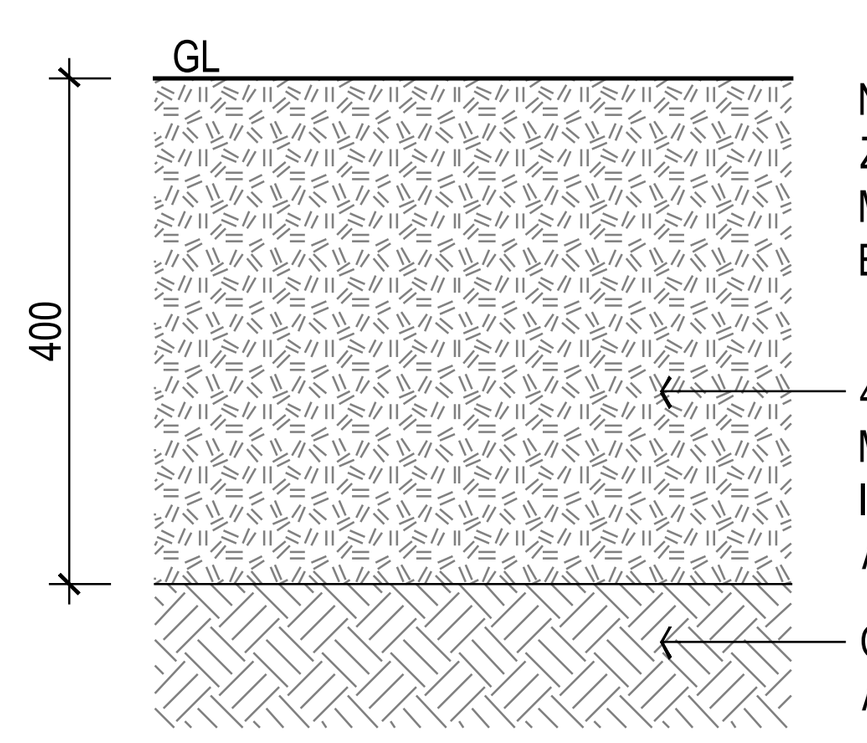
6/901 RUBBER SOFTFALL SURFACE
SECTION — SCALE 1:5



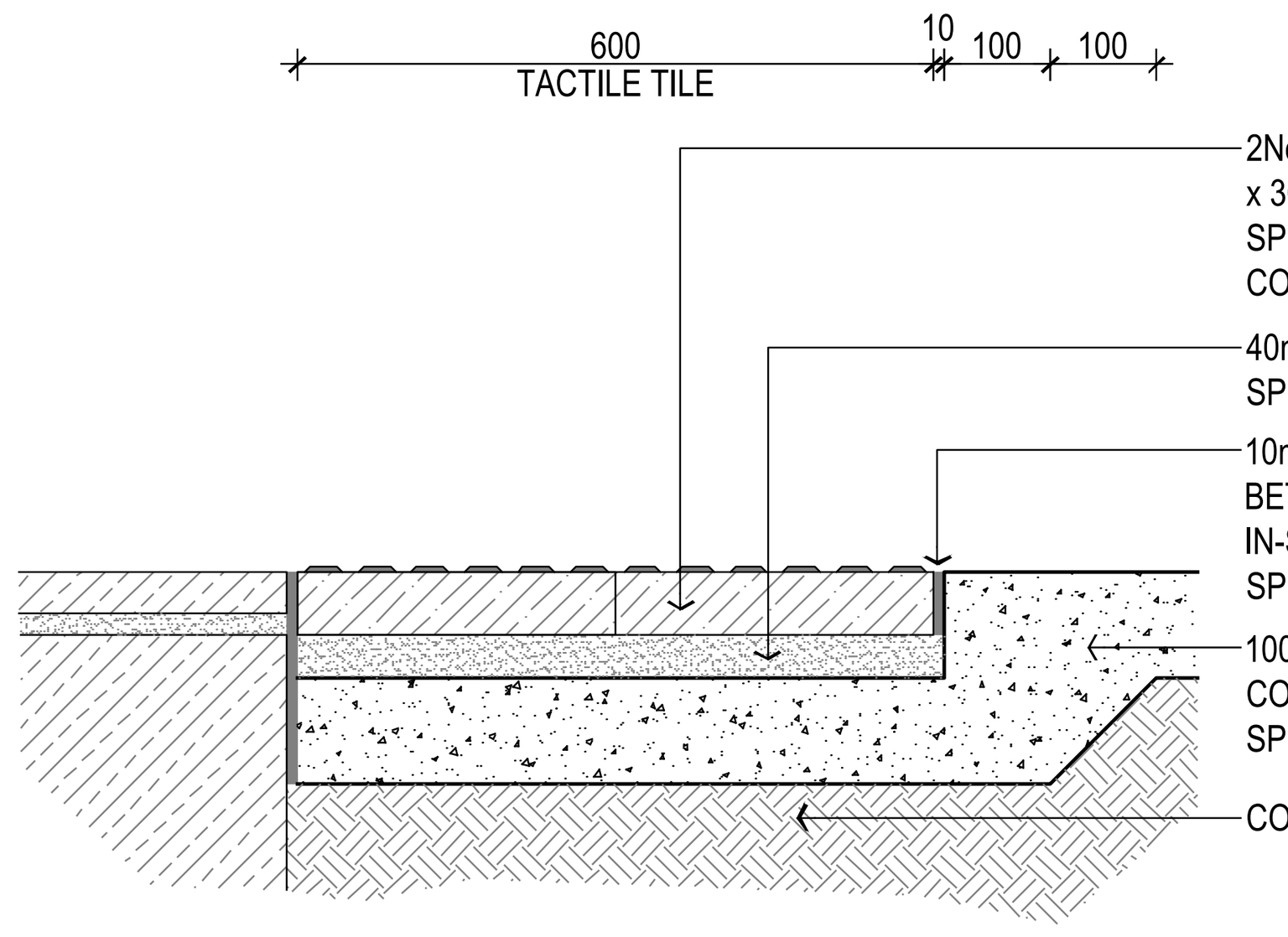
7/901 RUBBER SOFTFALL SURFACE TO PATH INTERFACE
SECTION — SCALE 1:5



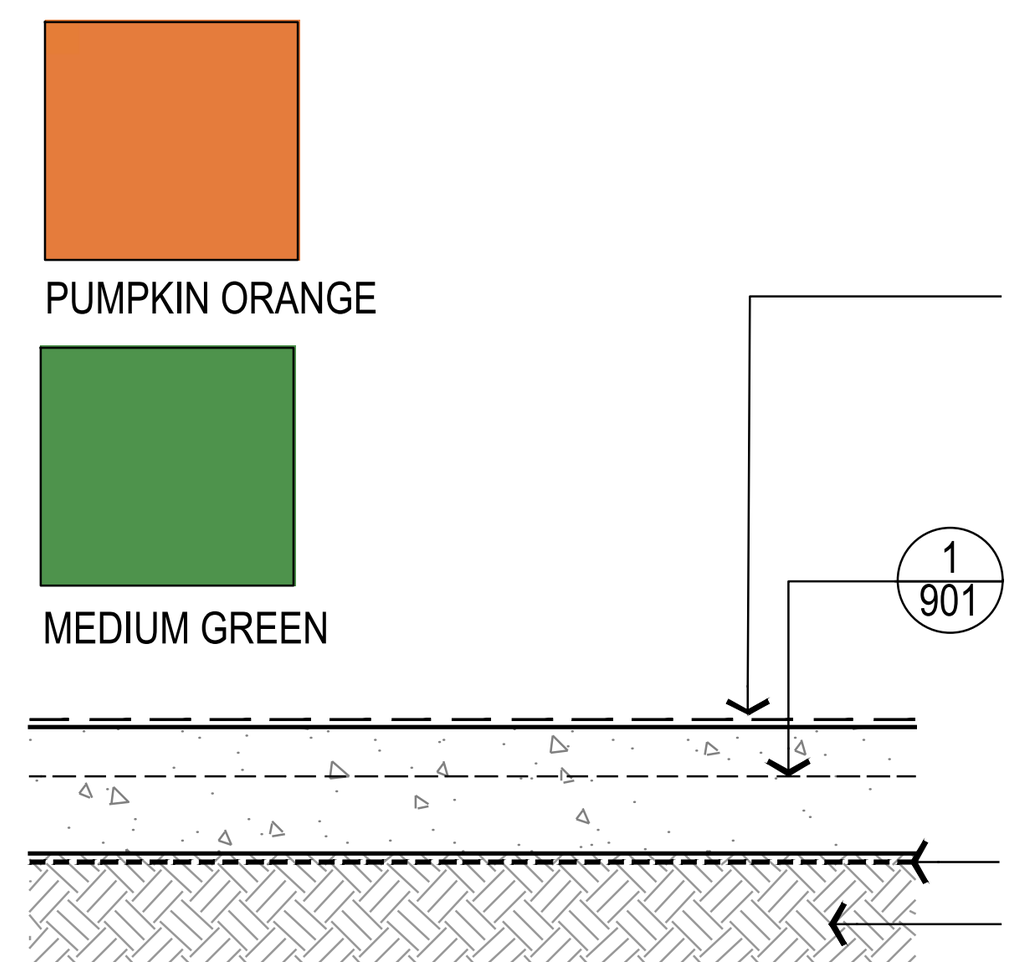
8/901 RUBBER SOFTFALL AND SAND PLAY SURFACE INTERFACE
SECTION — SCALE 1:10



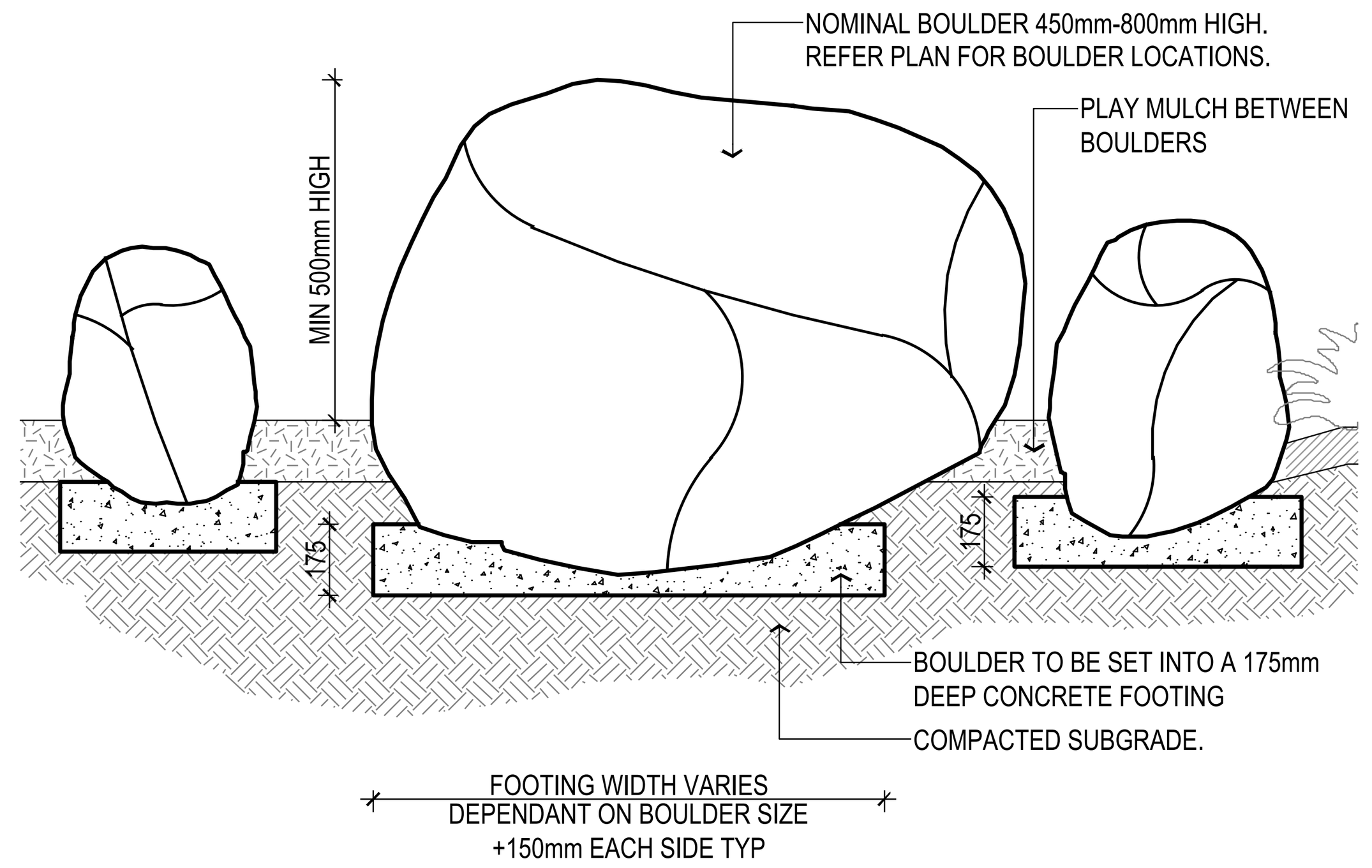
9/901 PLAY MULCH SOFTFALL DETAIL
SECTION — SCALE 1:10



10/901 TYPICAL TACTILE TILE DETAIL
SECTION — SCALE 1:10



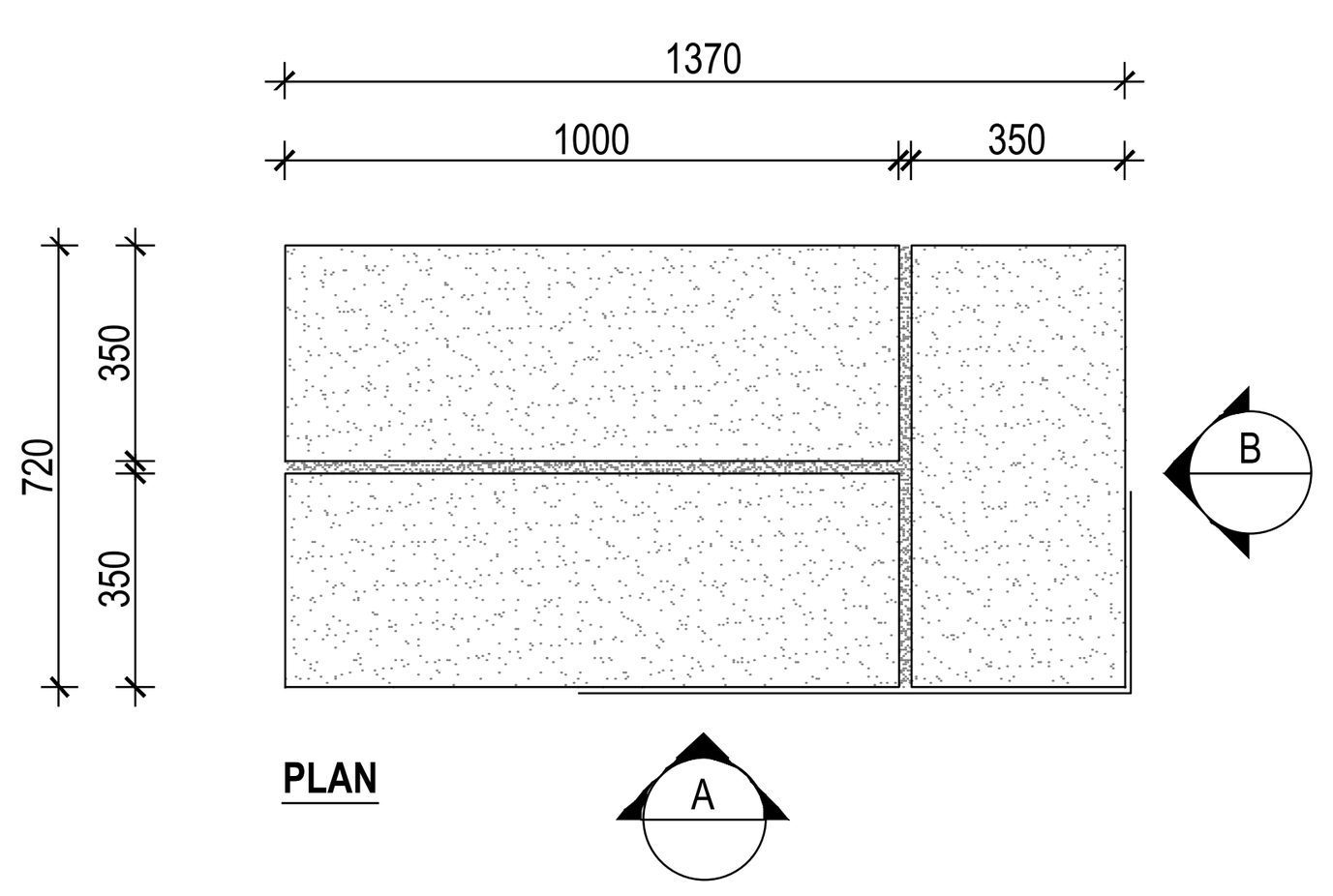
11/901 SPORTS SURFACE
SECTION — SCALE 1:10



NOTES

LIMESTONE BOULDERS TO BE SOURCED AND INSTALLED. MIN HEIGHT SIZE 450mm - MAX SIZE 800mm. GENERALLY BOULDERS TO BE BURIED APPROX. 1/3 OF EXPOSED HEIGHT AND INSTALLED WITH A MORTAR BED

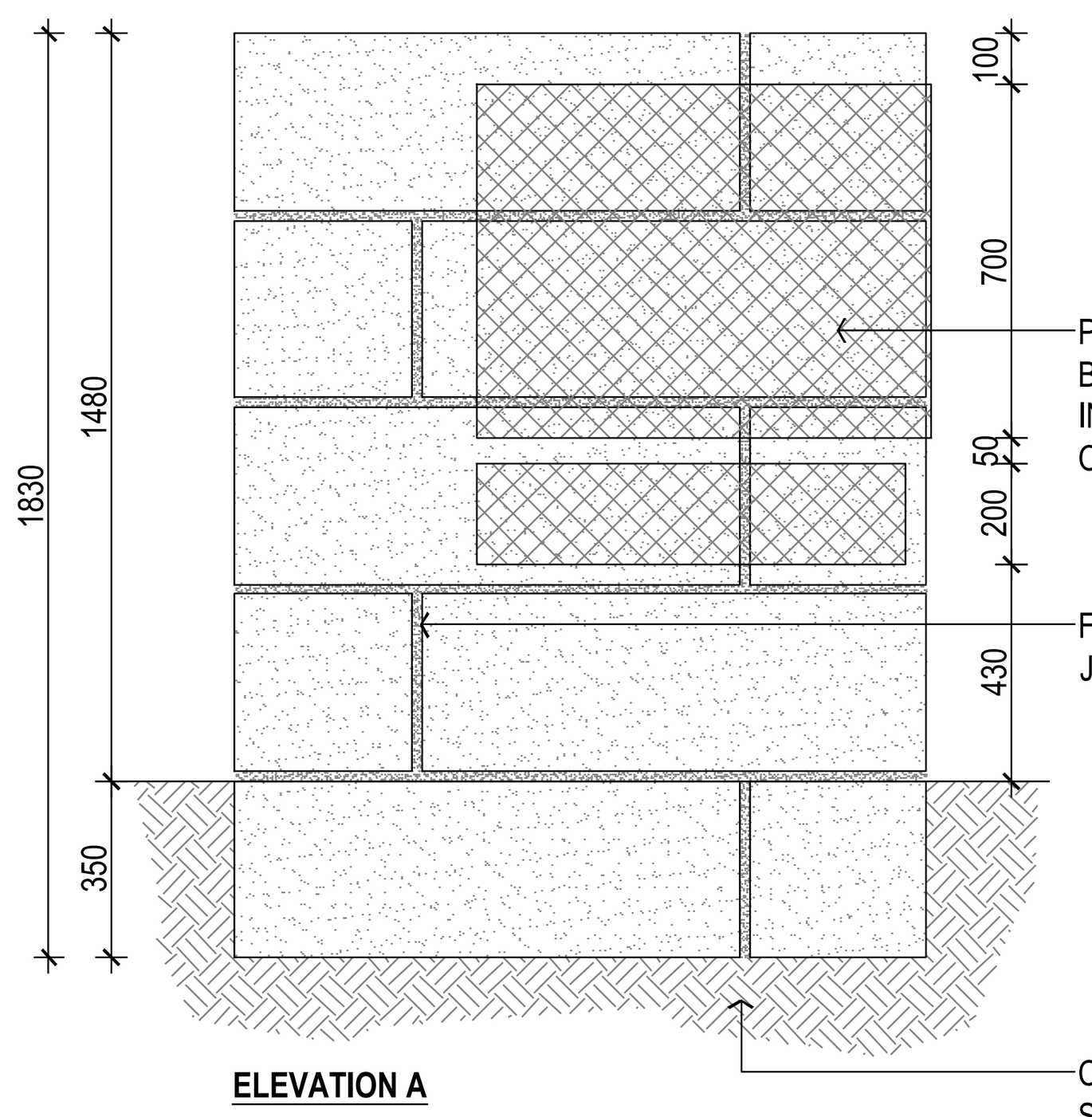
12/901 FEATURE BOULDERS @ MULCH
SECTION — SCALE 1:20

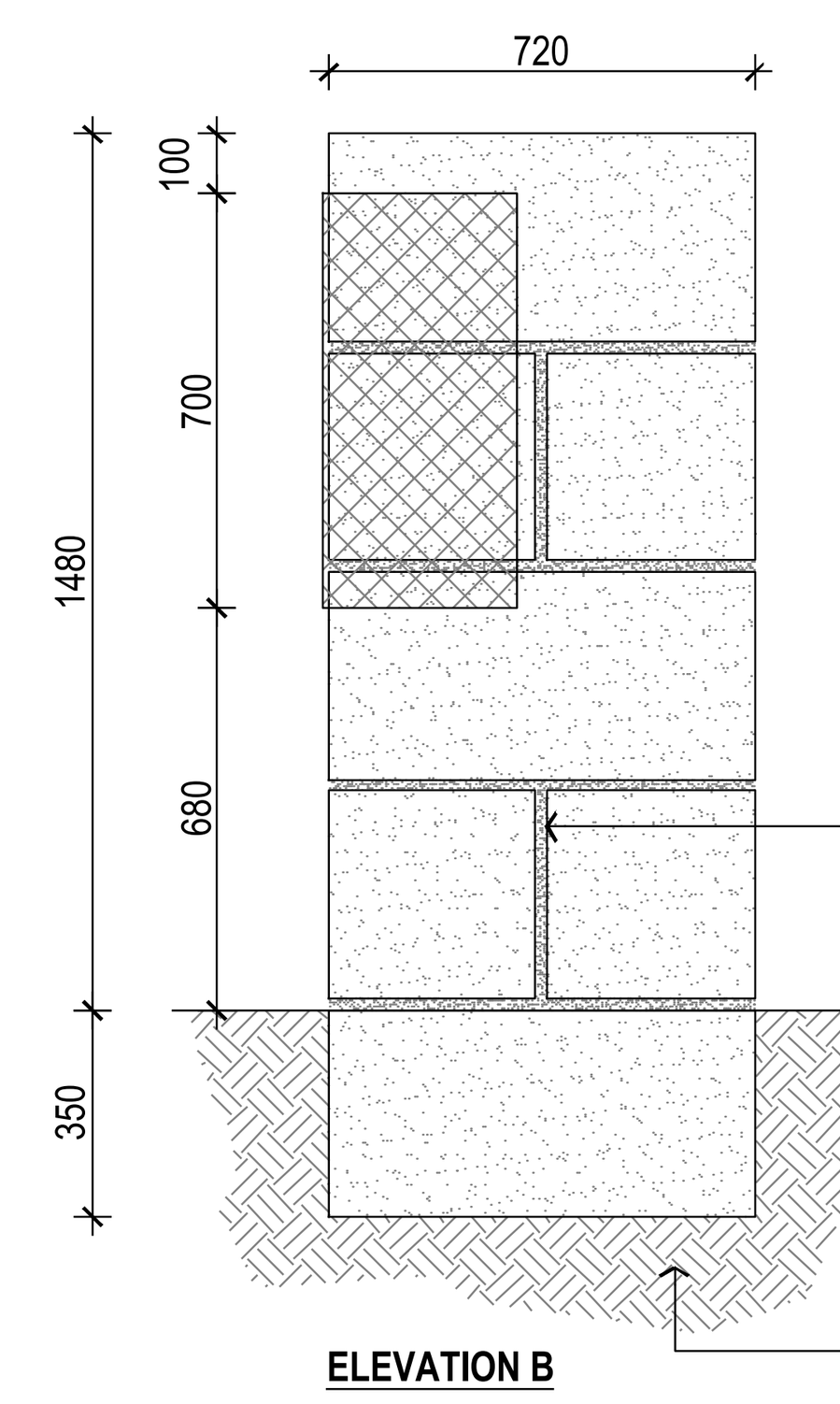


NOTES:
- PANEL AND PLATE TO BE FABRICATED FROM 3mm ALUMINUM SHEETING.
- PANEL TO BE FOLDED PRIOR TO DELIVERY ON SITE.
- PANEL AND PLATE TO BE ADHERED TO LIMESTONE STRUCTURE USING SUITABLE COMPOUND TO ENSURE A PERMANENT FIXING.
- WALL SHALL BE CONSTRUCTED FROM RECONSTITUTED LIMESTONE BLOCKS OF SIZES 1000mm x 350mm x 350mm BUILT IN ACCORDANCE WITH DETAILS ON THIS DRAWING.
- REFER TO LANDSCAPE CONSULTANT'S DRAWINGS FOR LOCATION OF WALL
- DENSITY OF RECONSTITUTED LIMESTONE WALL SHALL BE A MINIMUM OF 1650kg/m
- ENSURE ALL JOINTS ARE FULLY MORTARED.
- MORTAR SHALL BE 1:1:6 (CEMENT; LIME; SAND). MORTAR COLOUR TO MATCH RECONSTITUTED LIMESTONE BLOCKS.
- ALL EXPOSED SURFACES OF WALL SHALL BE COATED WITH ANTI-GRAFFITI TREATMENT ON COMPLETION OF WORKS.

COMPACTION REQUIREMENTS
- COMPACT SUB-GRADE BELOW WALL TO A MINIMUM OF 8 BLOWS PER 300mm TESTED USING A STANDARD PERTH PENETROMETER FOR A DEPTH OF 750mm BELOW THE UNDERSIDE OF WALL.

DESIGN WIND LOADING
- TERRAIN CATEGORY 1

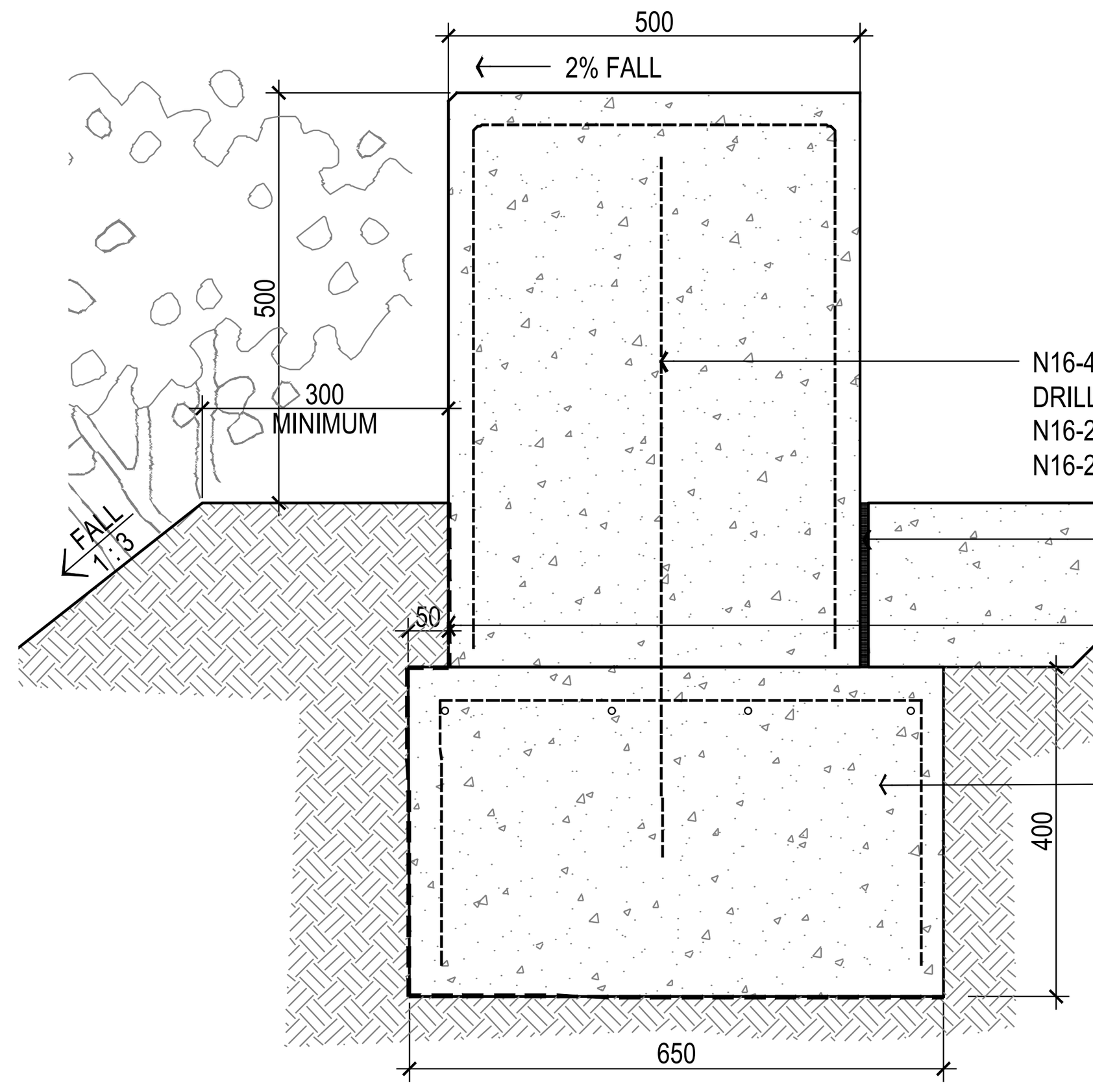




13/901 PARK SIGN WALL
PLAN & ELEVATIONS — SCALE 1:20

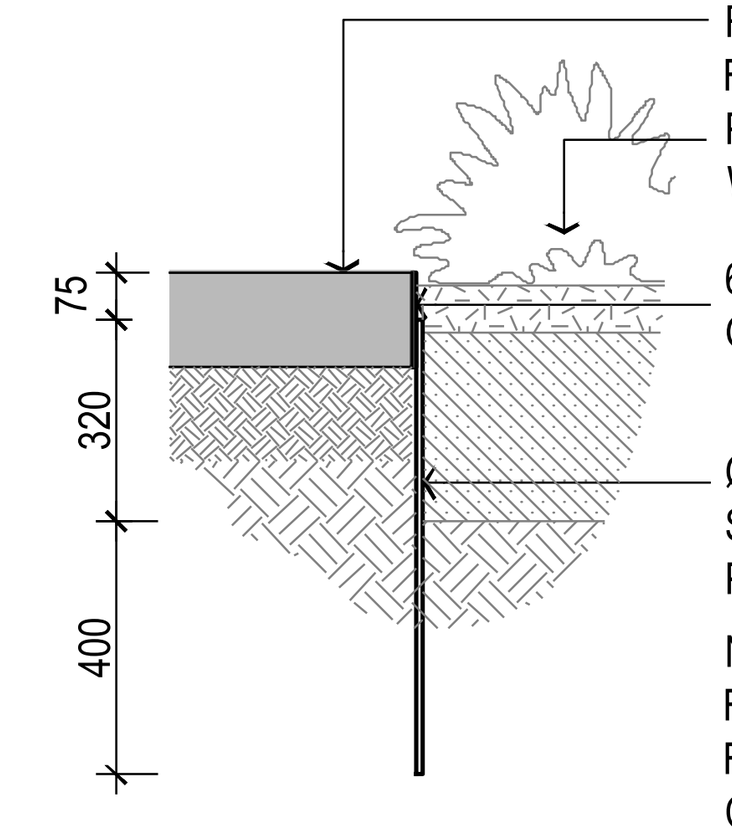
GENERAL NOTES

1. ALL PLAY EQUIPMENT, PLAY INFRASTUCTURE,, FITNESS EQUIPMENT, PARK FURNITURE, WALLS AND SPORT SUFACING TO HAVE A NON SCRIFICIAL ANTI-GRAFFITTI COATING APPLIED AS PER CITY OF WANNEROO STANDARD AND SPECIFICATIONS



CONCRETE WALL NOTES:
1. PROVIDE CONTROL JOINTS IN ALL WALLS AT 9m CTS
2. PROVIDE SAWN JOINTS IN ALL WALLS AT 3m CTS
3. WALLS & TOP SLAB TO N32 CONCRETE WITH OFF-WHITE CEMENT
4. OFF-FORM FINISH TO ALL EXPOSED FACES OF WALLS & SLABS TO BE CLASS 2
5. 10 x 10mm CHAMFER TO ALL EXPOSED EDGES
6. ENSURE ALL WALLS PROPPED DURING BACKFILLING & COMPACTION. USE ONLY LIGHTWEIGHT COMPACTION EQUIPMENT

14/901 TYPE 2 CONCRETE SEATING WALL
SECTION — SCALE 1:10



15/901 STEEL EDGING
SECTION — SCALE 1:20

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STAGE OR PHASE
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DRAWING TITLE
TYP HARDSCAPE 1
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CATALINA REGIONAL COUNCIL

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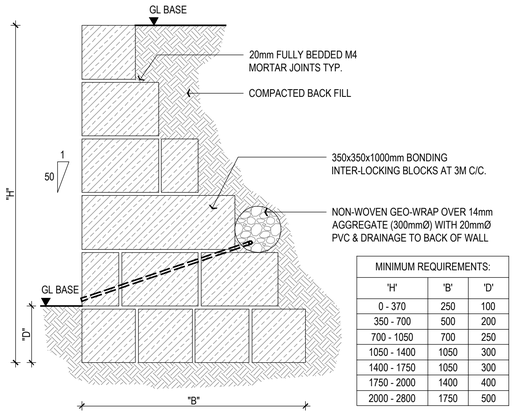
SCALE	AS SHOWN		
DRAWING NUMBER	CAT59-901	REV	1

REF \\WNLA.LOCAL\EMERGE\PROJECTS\CURRENT PROJECTS\CATALINA, TAMALA PARK(CL) DRAWINGS\(JOB CODE) AUTOCAD\(JOB CODE) LANDSCAPE\STAGE 39 - GREEN CENTRAL POS\CAT59 GCP DET.DWG

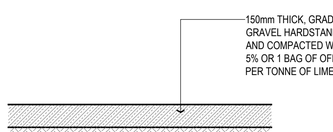


MINIMUM REQUIREMENTS:		
'H'	'B'	'D'
0 - 370	250	100
350 - 700	500	200
700 - 1050	700	250
1050 - 1400	1050	300
1400 - 1750	1050	300
1750 - 2000	1400	400
2000 - 2800	1750	500

NOTES

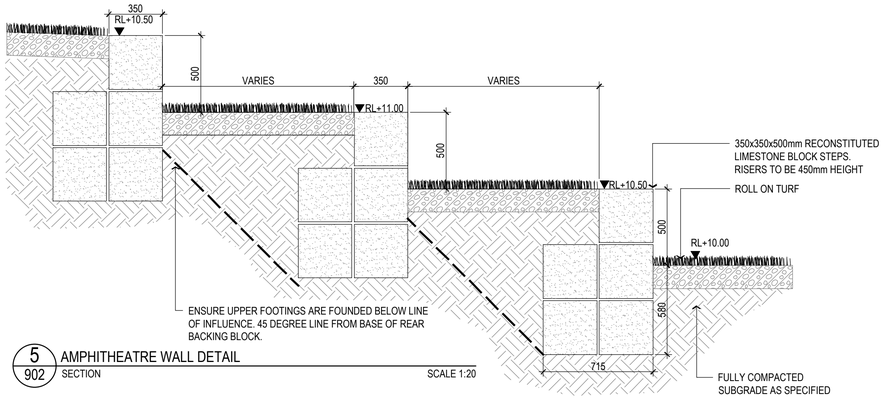
1. COMPACT GROUND UNDER FOOTING TO RESIST 8 BLOWS PER 300mm OF A STANDARD 16mmØ PENETROMETER OVER A DEPTH OF 600mm.
2. PROVIDE CONTROL JOINTS TO ALL RETAINING WALLS AT 10m CTS MAX. REFER TO DETAIL 00/00.
3. NO BACKFILLING UNTIL 7 DAYS AFTER WALLS HAVE BEEN BUILT.
4. THESE WALLS ARE APPLICABLE FOR SANDY SOIL CONDITIONS ONLY.
5. CLAYEY SOILS TO BE REFERRED TO ENGINEER.
6. HORIZONTAL BACKFILL ONLY.
7. TO REAR OF WALL USE RANDOM COURSED BONDED STONE IN 1 : CEMENT, 2 : LIME, 9, : SAND MORTAR. NO RUBBLE FILL PERMITTED.
8. 'D' TO CONSIST OF COMPACTED SUBGRADE NOT PLAY SAND OR MULCH / ETC.

1 / 902 LIMESTONE RETAINING WALL - TYPICAL
SECTION SCALE 1:20

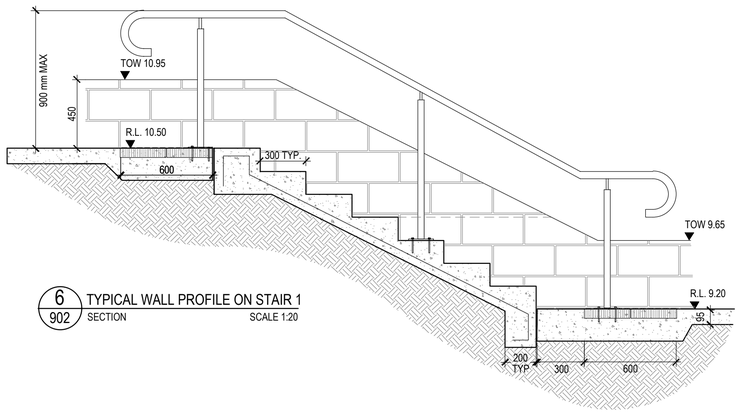


2 / 902 LIMESTONE RETAINING WALL CONTROL JOINT
SECTION SCALE 1:5

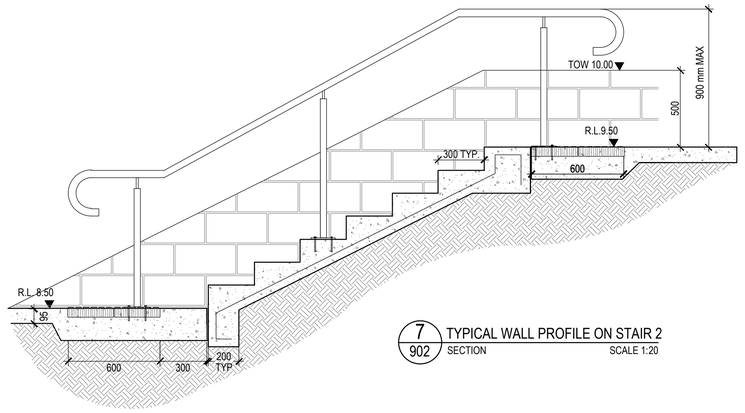
3 / 902 COMPACTED LIMESTONE ACCESS TRACK
SECTION SCALE 1:20



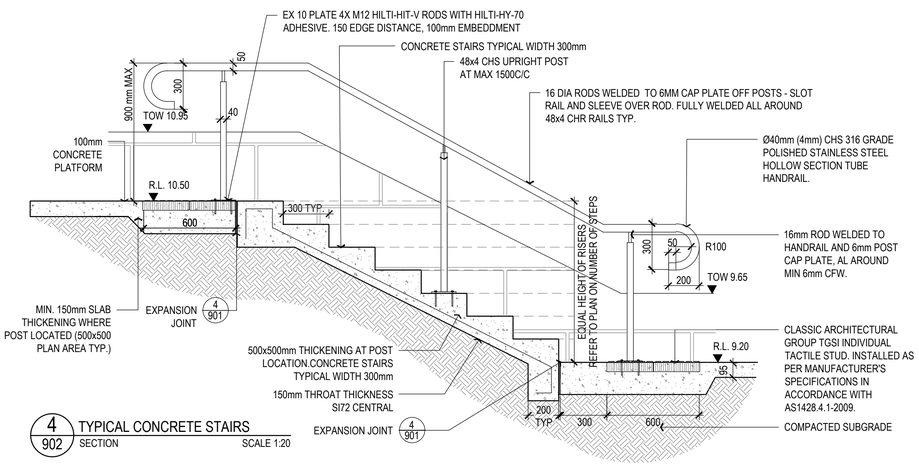
5 / 902 AMPHITHEATRE WALL DETAIL
SECTION SCALE 1:20



6 / 902 TYPICAL WALL PROFILE ON STAIR 1
SECTION SCALE 1:20



7 / 902 TYPICAL WALL PROFILE ON STAIR 2
SECTION SCALE 1:20



4 / 902 TYPICAL CONCRETE STAIRS
SECTION SCALE 1:20

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PROJECT
CATALINA GREEN
CLARKSON, W.A.
STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS
DRAWING TITLE
TYP HARDSCAPE 2
CLIENT
CATALINA REGIONAL COUNCIL

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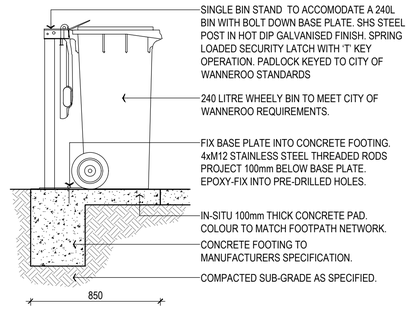
PRODUCT NAME	DOUBLE ACCESSIBLE BBQ CABINET
PRODUCT SUPPLIER	CHRISTIE
PRODUCT CODE	A SERIES
PRODUCT FINISH	AS PER MANUFACTURER SPECIFICATIONS
PRODUCT COLOUR	AS PER MANUFACTURER SPECIFICATIONS
PRODUCT FIXING	AS PER MANUFACTURER SPECIFICATIONS

1 951 BBQ
IMAGE REFERENCE NOT TO SCALE



PRODUCT NAME	BOLLARD REMOVABLE 140mm KEY LOCK WITH SLEEVE
PRODUCT SUPPLIER	SAFETY XPRESS
PRODUCT CODE	BOLRKL140
PRODUCT FINISH	AS PER MANUFACTURER'S SPECIFICATIONS
PRODUCT COLOUR	AS PER MANUFACTURER'S SPECIFICATIONS
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATIONS

4 951 REMOVABLE BOLLARD
IMAGE REFERENCE

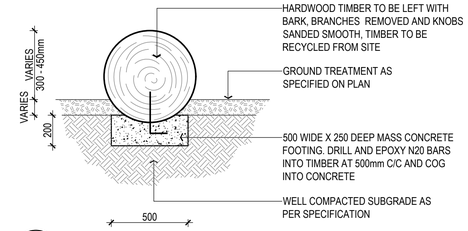


7 951 240L WHEELED BIN & STAND DETAIL
SECTION SCALE 1:20

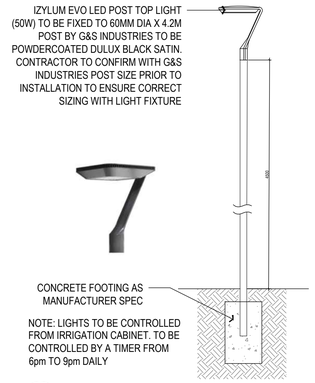


PRODUCT NAME	25M DOUBLE FLYING FOX
PRODUCT SUPPLIER	WILLPLAY, THROUGH ACTIVE DISCOVERY
PRODUCT CODE	CW-008 WITH ACCESSIBLE SEAT
PRODUCT FINISH	AS PER MANUFACTURER'S SPECIFICATIONS
PRODUCT COLOUR	POWDERCOATED 'MONUMENT'
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATIONS

11 951 DOUBLE FLYING FOX
IMAGE REFERENCE NOT TO SCALE



13 951 TYPICAL TIMBER NATURAL LOG
SECTION SCALE 1:20



2 951 LED LIGHT POLE
IMAGE REFERENCE SCALE 1:25



PRODUCT NAME	SEMI HOOP BICYCLE PARKING
PRODUCT SUPPLIER	STREET FURNITURE AUSTRALIA
PRODUCT CODE	BST03
PRODUCT FINISH	STAINLESS STEEL FRAME
PRODUCT COLOUR	STAINLESS STEEL
PRODUCT FIXING	SURFACE FIXED

5 951 BIKE RACKS
IMAGE REFERENCE



PRODUCT NAME	2 BAY SWING
PRODUCT SUPPLIER	WILLPLAY, THROUGH ACTIVE DISCOVERY
PRODUCT CODE	SW-011
PRODUCT FINISH	AS PER MANUFACTURER'S SPECIFICATIONS
PRODUCT COLOUR	UPRIGHTS: WOODGRAIN FINISH CROSS BAR: MONUMENT
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATIONS

8 951 A FRAME WITH BASKET AND SWING
IMAGE REFERENCE NOT TO SCALE



PRODUCT NAME	MEMO
PRODUCT SUPPLIER	LAPPSET
PRODUCT CODE	YA3900
PRODUCT FINISH	AS PER MANUFACTURER SPECIFICATIONS
PRODUCT COLOUR	GREEN POST
PRODUCT FIXING	AS PER MANUFACTURER SPECIFICATIONS

NOTES:
- CONTRACTOR TO ALLOW FOR ELECTRICAL CONNECTION

12 951 MEMO
IMAGE REFERENCE NOT TO SCALE



PRODUCT NAME	PARK TABLE AND PARK BENCH
PRODUCT SUPPLIER	STREET FURNITURE AUSTRALIA
PRODUCT CODE	PT9 ACCESSIBLE 2500L, PBS 2500L AND PBS 1500
PRODUCT FINISH	STAINLESS STEEL FRAME :ALUMINIUM WOODGRAIN BATTENS
PRODUCT COLOUR	TEXTURA MONUMENT FRAME :ALUMINIUM SPOTTED GUM BATTENS
PRODUCT FIXING	SURFACE FIXED AS PER MANUFACTURER'S SPECIFICATION

3 951 DDA PICNIC SETTING
IMAGE REFERENCE



PRODUCT NAME	DRINKING FOUNTAIN
PRODUCT SUPPLIER	GRILLEX
PRODUCT CODE	REVIVA DRINKING FOUNTAIN
PRODUCT FINISH	AS PER MANUFACTURER'S SPECIFICATION
PRODUCT COLOUR	POWDERCOATED MONUMENT
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATION

6 951 DRINK FOUNTAIN
IMAGE REFERENCE

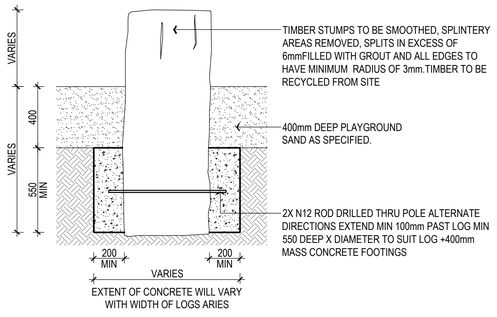


BRUNSWICK GREEN

CEDAR

PRODUCT NAME	SHADE SAIL
PRODUCT SUPPLIER	WEST COAST SHADE
PRODUCT CODE	COMMERCIAL 95 340
PRODUCT FINISH	AS PER MANUFACTURER SPECIFICATIONS
PRODUCT COLOUR	BRUNSWICK GREEN & CEDAR
PRODUCT FIXING	AS PER MANUFACTURER SPECIFICATIONS

9 951 SHADE SAIL
IMAGE REFERENCE NOT TO SCALE



NOTES
1. TIMBER TO BE OILED WITH A JARRAH APPROPRIATE PETROLEUM OIL. REFER PLANS FOR PAINTED TIMBER LOCATIONS.
2. HEIGHT OF LOGS TO RANGE FROM 100mm-500mm MAXIMUM ABOVE FINISHED MULCH LEVEL

10 951 TYPICAL SUBMERGED STUMP
SECTION SCALE 1:20



PRODUCT NAME	WARATAH SHELTER
PRODUCT SUPPLIER	IRON CLAD
PRODUCT CODE	W-6036-1
PRODUCT FINISH	AS PER MANUFACTURER'S SPECIFICATION
PRODUCT COLOUR	FRAMING POWDERCOATED 'IRONSTONE'
PRODUCT FIXING	SURFACE FIXED

NOTES:
- SHELTER COLUMNS WILL EXTEND BEYOND DECKING SURFACE

14 951 SHELTER
IMAGE REFERENCE

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PROJECT
CATALINA GREEN
CLARKSON, W.A.
STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS

DRAWING TITLE
TYPICAL FURNITURE AND PLAY EQUIPTMENT
.
CLIENT
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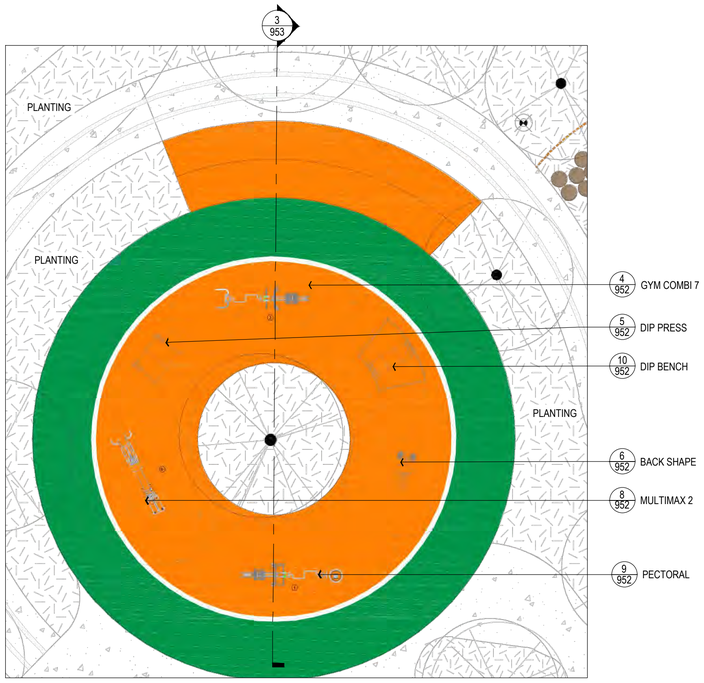


1 952 FITNESS AREA
PLAN
SCALE 1:100

ACCENT COLOUR: TRAFFIC YELLOW



2 952 FITNESS AREA RENDER
IMAGE REFERENCE



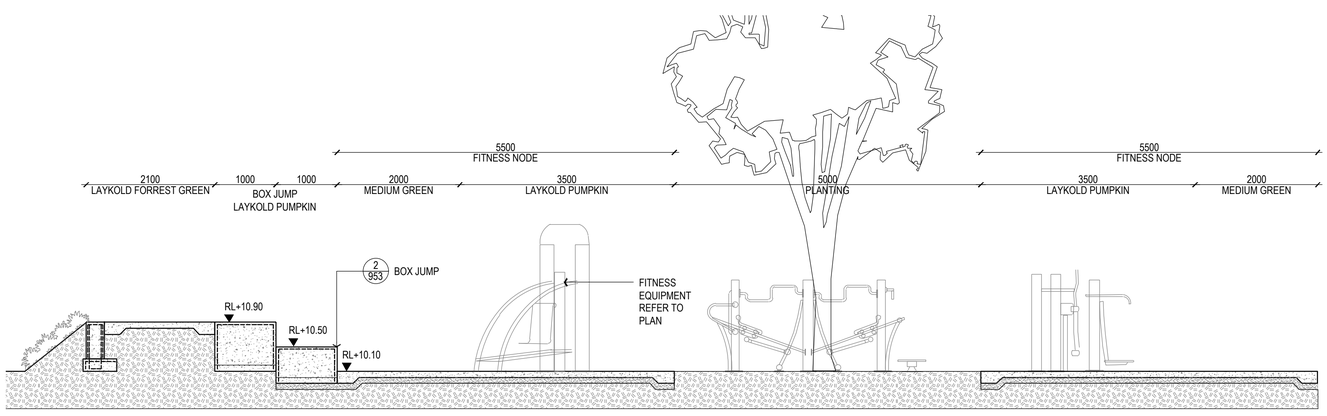
PRODUCT NAME	GYM MULTIMAX 2
PRODUCT SUPPLIER	DENFIT UNDER ACTIVE DISCOVERY
PRODUCT CODE	GYM MULTIMAX 2
PRODUCT FINISH	POWDERCOATED. COLOUR: IRONSTONE
PRODUCT COLOUR	ACCENT COLOUR: TRAFFIC YELLOW
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATION

8 952 GYM MULTIMAX
IMAGE REFERENCE



PRODUCT NAME	PECTORAL
PRODUCT SUPPLIER	DENFIT UNDER ACTIVE DISCOVERY
PRODUCT CODE	PECTORAL
PRODUCT FINISH	POWDERCOATED. COLOUR: IRONSTONE
PRODUCT COLOUR	ACCENT COLOUR: TRAFFIC YELLOW
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATION

9 952 PECTORAL
IMAGE REFERENCE



3 952 DETAIL
SECTION
SCALE 1:50



PRODUCT NAME	DIP BENCH 3
PRODUCT SUPPLIER	DENFIT UNDER ACTIVE DISCOVERY
PRODUCT CODE	DSW4101
PRODUCT FINISH	POWDERCOATED. COLOUR: IRONSTONE
PRODUCT COLOUR	ACCENT COLOUR: TRAFFIC YELLOW
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATION

10 952 DIP BENCH
IMAGE REFERENCE



PRODUCT NAME	GYM COMBI 7
PRODUCT SUPPLIER	DENFIT UNDER ACTIVE DISCOVERY
PRODUCT CODE	GYM COMBI 7
PRODUCT FINISH	POWDERCOATED. COLOUR: IRONSTONE
PRODUCT COLOUR	ACCENT COLOUR: TRAFFIC YELLOW
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATION

4 952 GYM COMBI 7
IMAGE REFERENCE



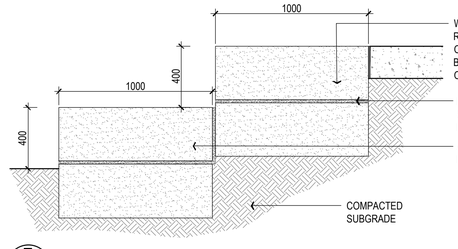
PRODUCT NAME	DIPPRESS
PRODUCT SUPPLIER	DENFIT UNDER ACTIVE DISCOVERY
PRODUCT CODE	PSPDP
PRODUCT FINISH	POWDERCOATED. COLOUR: IRONSTONE
PRODUCT COLOUR	ACCENT COLOUR: TRAFFIC YELLOW
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATION

5 952 DIP PRESS
IMAGE REFERENCE



PRODUCT NAME	BACKSHAPE
PRODUCT SUPPLIER	DENFIT UNDER ACTIVE DISCOVERY
PRODUCT CODE	BACKSHAPE
PRODUCT FINISH	POWDERCOATED. COLOUR: IRONSTONE
PRODUCT COLOUR	ACCENT COLOUR: TRAFFIC YELLOW
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATION

6 952 BACKSHAPE
IMAGE REFERENCE



7 952 BOX JUMP
SECTION
SCALE 1:20

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PROJECT
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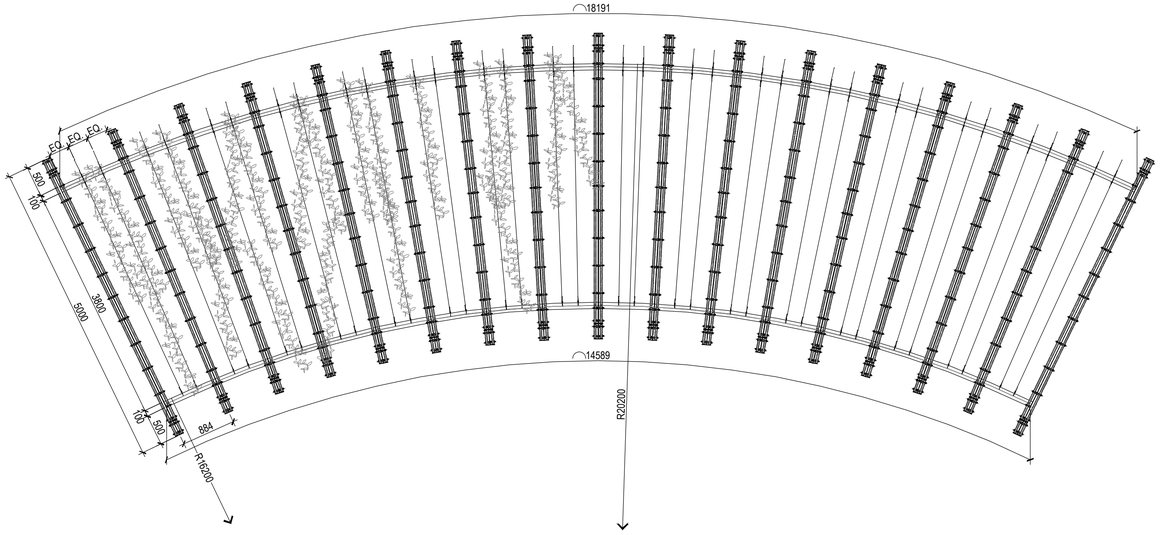
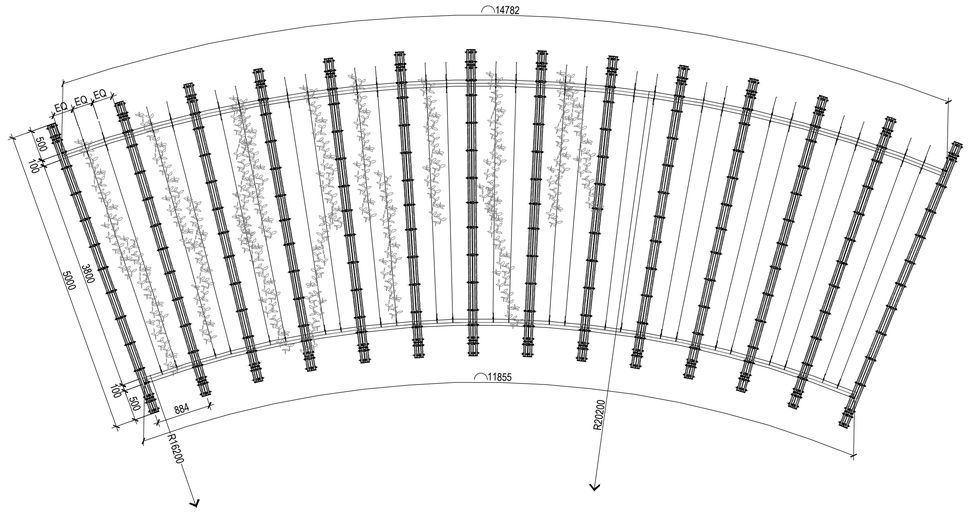
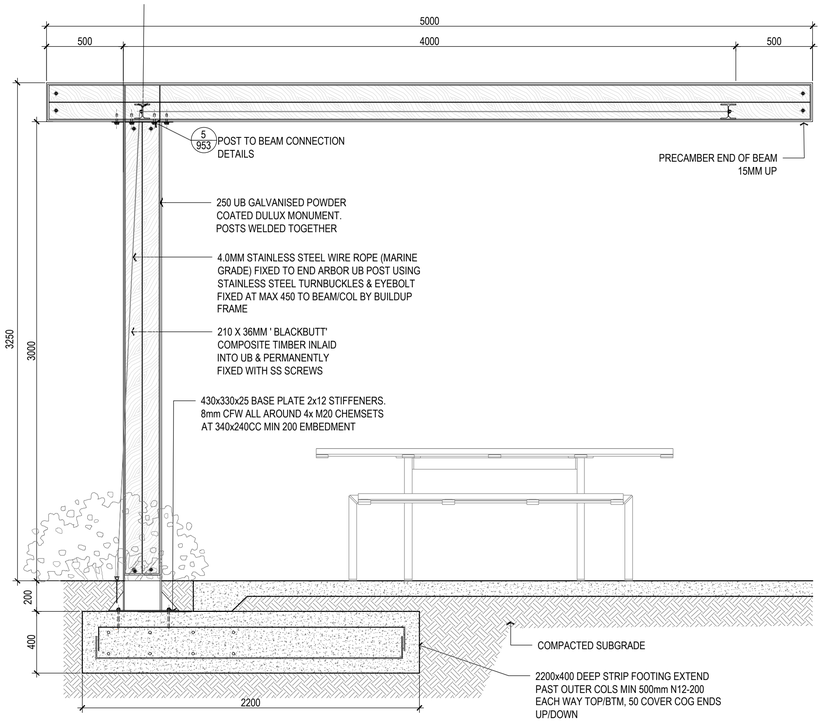


1 953 CUSTOM ARBOUR TYPE 1
PLAN
SCALE 1:50



2 953 CUSTOM ARBOUR TYPE 2
PLAN
SCALE 1:50

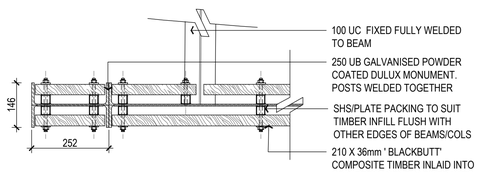


3 953 TYPICAL ARBOUR
SECTION
SCALE 1:20

450x150x25mm PLATE
(fy=250 MPa, fu=410 MPa)

229x70x6 STIFFENER TOP
234x70x6 STIFFENER BOTTOM
6mm CFW SP WEB WELDS
6MM CFW SP FLANGE WELDS
6MM CFW SP TOP STFR WELDS
6MM CFW SP BOT WEB WELDS
8M20 8.8N/TB BOLTS

5 953 POST TO BEAM CONNECTION
PLAN
SCALE 1:10



4 953 SECTION A
PLAN
SCALE 1:10

STRUCTURAL NOTES

ARBOUR IS NOT SUBJECT TO STRUCTURAL CERTIFICATION. CONTRACTOR TO COMPLETE

GENERAL NOTES

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PRELIMINARY
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PROJECT
CATALINA GREEN
CLARKSON, W.A.
STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS

DRAWING TITLE
TYPICAL ARBOUR DETAIL

CLIENT
CATALINA REGIONAL COUNCIL

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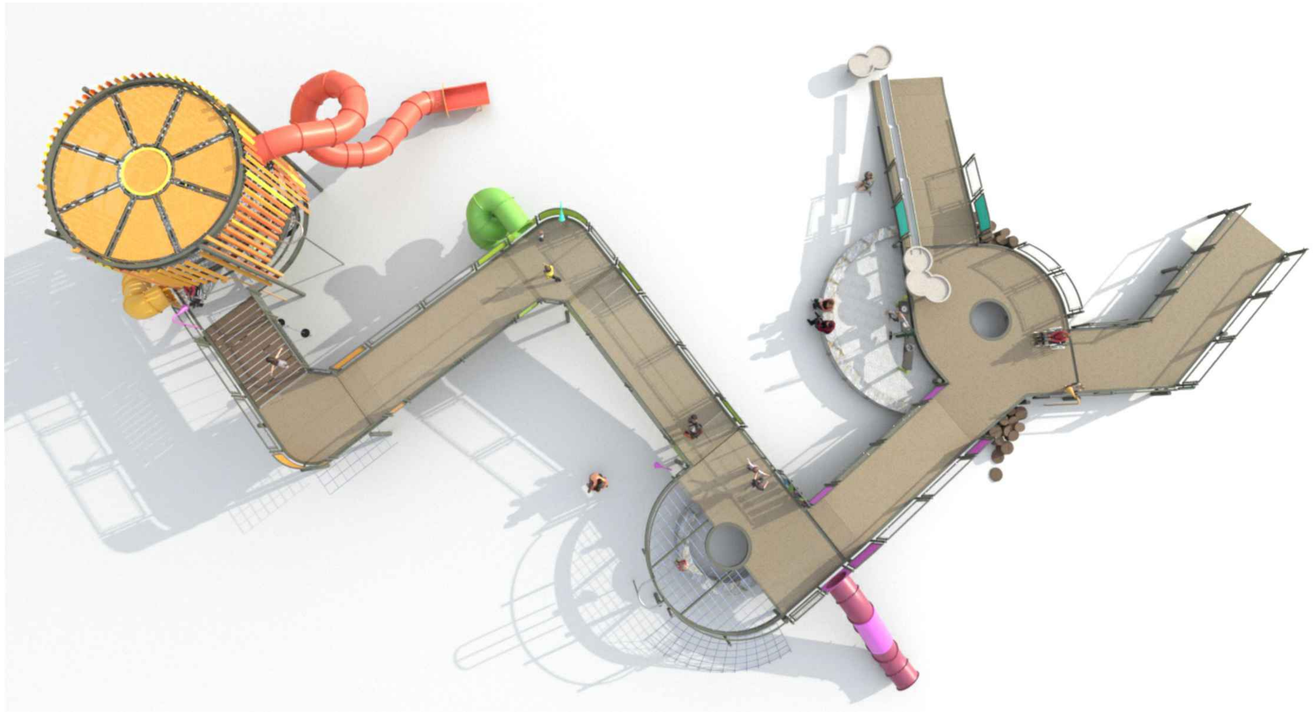





GENERAL NOTES

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PROJECT
CATALINA GREEN
CLARKSON, W.A.

STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS

DRAWING TITLE
PLAY STRUCTURE
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CATALINA REGIONAL COUNCIL

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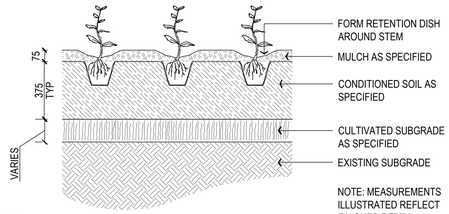
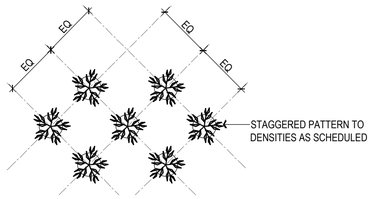
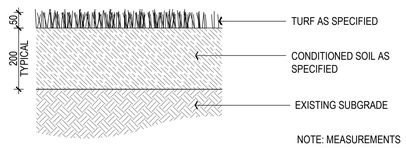


1 971 TUBESTOCK - 200mm POT PLANTING
SECTION SCALE 1:20

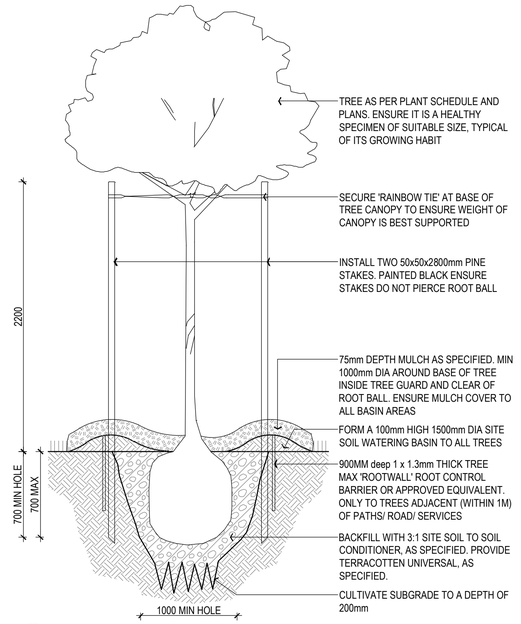


2 971 TYPICAL STAGGERED PLANTING PATTERN
PLAN SCALE 1:20

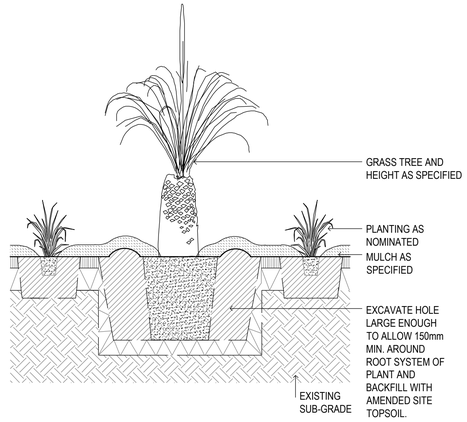


3 971 ROLL-ON TURF AREAS
SECTION SCALE 1:10

4 971 TYPICAL 100 & 200 LITRE TREE PLANTING
SECTION SCALE 1:25

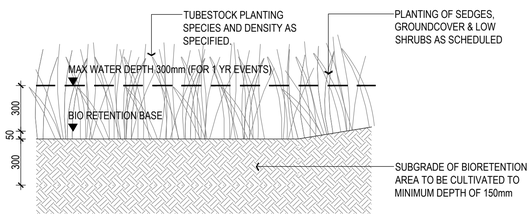


5 971 TYPICAL 400 & 500 LITRE TREE PLANTING
SECTION SCALE 1:25

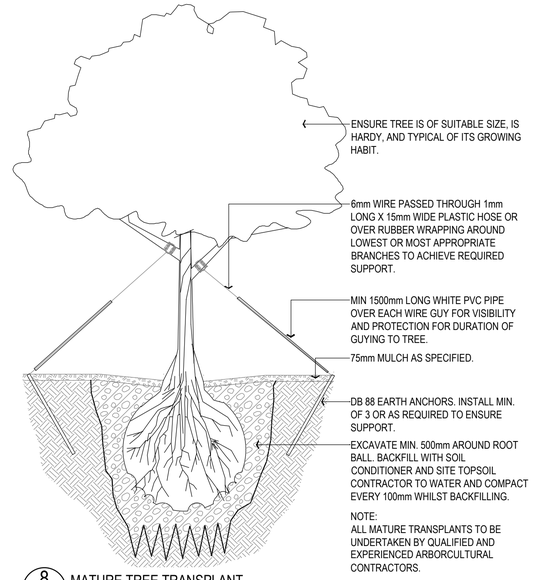


6 971 XANTHORRHOEA PREISSII TRANSPLANT
SECTION SCALE 1:20

NOTE: DISPOSE OF ANY SURPLUS SOIL & STONES TO ENSURE THAT WATER IS NOT DEFLECTED FROM PLANTING POINT.

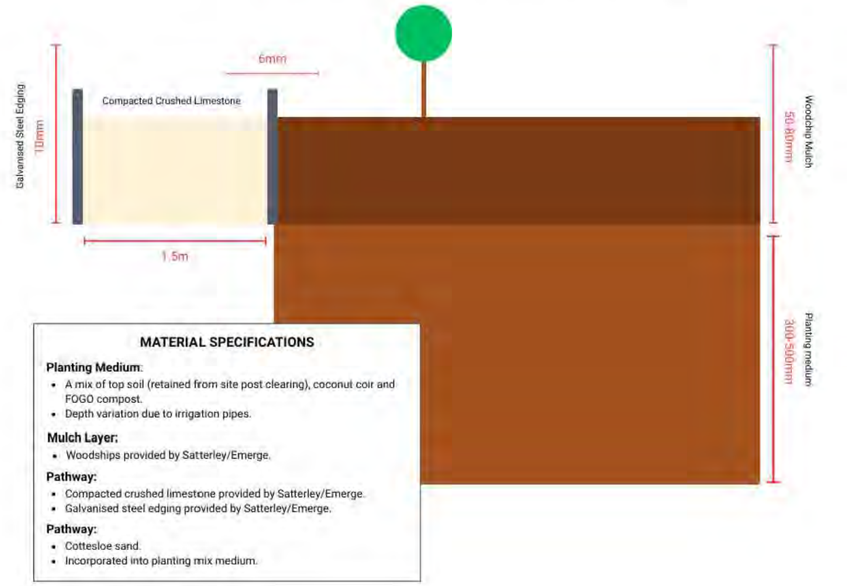


7 971 BIORETENTION AREA
SECTION SCALE 1:20



8 971 MATURE TREE TRANSPLANT
SECTION SCALE 1:50

CPF - CROSS SECTION DETAIL



MATERIAL SPECIFICATIONS

Planting Medium:
- A mix of top soil (retained from site post clearing), coconut coir and FOGO compost.
- Depth variation due to irrigation pipes.

Mulch Layer:
- Woodships provided by Satterley/Emerge.

Pathway:
- Compacted crushed limestone provided by Satterley/Emerge.
- Galvanised steel edging provided by Satterley/Emerge.

Pathway:
- Cottesloe sand.
- Incorporated into planting mix medium.

9 971 MIYAWAKI FOREST SOIL PROFILE
DETAIL PROVIDED BY CPA SCALE 1:20

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PROJECT
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CLARKSON, W.A.
STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS
DRAWING TITLE
TYPICAL SOFTWORKS
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GENERAL NOTES

1. These drawings are to be read in conjunction with all architectural and other consultants' drawings and specifications and with such other written instructions as may be issued. Any discrepancies shall be referred to the superintendent for clarification before proceeding with work.
2. All dimensions are in millimetres and those relevant to setting out (excludes finishes) and offsite work shall be verified by the contractor before construction and fabrication are commenced. The engineer's drawings shall not be scaled.
3. All levels and grid co-ordinates are in metres.
4. During construction the contractor shall be responsible for maintaining the structure in a stable condition and no part shall be over stressed under construction activities.
5. Workmanship and materials shall be in accordance with the current edition of the relevant SAA codes and the by-laws and ordinances of the relevant building authority, except where varied by the contract documents.

DESIGN CRITERIA

1. Dead, live, wind and earthquake loads to AS1170.
2. Design Wind Speed
   Region A
   Terrain Category 2.5
   Regional Gust Wind Speed = 45m/sec (ULTIMATE LIMIT STATE)
   Regional Gust Wind Speed = 37m/sec (SERVICE LIMIT STATE)
3. Earthquake
   kp = 1.0
   Hazard Factor Z = 0.09 (Perth)
4. Foundations
   Foundations designed for Class 'S' site with minimum 150kPa allowable bearing pressure.
5. Live Loads

Decking:	3kPa to AS1170.1
Balustrade:	C3 to AS1170.1
Roof construction load:	0.25kPa to AS1170.1
Retaining Wall Surcharge:	3kPa to AS1170.1

BUILDER NOTE - COMPLIANCE INSPECTIONS

1. As part of the building licence for this project, the builder may be required to have the structural engineer certify the completed structure has been built in accordance with the approved drawings & /or with any subsequent written instructions.
2. If WA Structural Consulting are to provide this certification, the builder must arrange for WA Structural Consulting to inspect each of the structural items at appropriate stages. These items and stages include, but are not limited to the following:,
   - 2.1. Concrete reinforcement, prior to pouring of concrete in:
     - 2.1.1. Footing Excavations
     - 2.1.2. Slabs on ground
     - 2.1.3. Suspended slabs and beams
     - 2.1.4. Concrete columns and walls
     - 2.1.5. Retaining walls
   - 2.2. Structural steelwork prior to any cladding being fixed.
   - 2.3. Concrete wall panel connections.
3. The builder must provide appropriate evidence that the specified concrete has been supplied for each concrete element.
4. The builder must provide evidence that the required levels of foundation compaction have been achieved.
5. Where a geotechnical engineer has made specific recommendations, evidence that these have been achieved must be provided.
6. Unless fees for our inspections and certifications have been previously negotiated with WA Structural Consulting by others, these fees will be the builder's responsibility. It is required that the builder negotiate these fees with the engineer at a tender stage.
7. If the builder requires the fabrication drawings to be checked & certified by the project engineer, the costs associated with this will be the builder's responsibility, unless these fees have been previously negotiated with WA Structural Consulting by others. This must be confirmed by the builder.

CONCRETE AND REINFORCEMENT

1. All concrete works shall be in accordance with AS3600.
   Concrete specification shall be U.N.O.:

Location	F'C (MPA)	MAX.AGG SIZE (mm)	SLUMP (mm)
Footings	25	20	65
Slab on Ground	25	20	65
In Situ Retaining Walls	32	20	60
Precast	32	20	80
Cavity Fill	15	10	100

   Cover to Reinforcement shall be:

Location	Bottom (mm)	Top (mm)	Sides (mm)
Footing	70	50	50
Slab on Ground	50	40	50
In Situ Retaining Walls	32	20	60
Precast	50	40	40
Cavity Fill	50	50	20 U.N.O

2. Reinforcement shall be supported on approved plastic or plastic tipped wire chairs and hold rigidly in position as follows:
   a. Bars up to N12 and fabric - 800mm centres
   b. Bars N16 and larger - 1200mm centres
   * Welding reinforcement is not permitted unless approved by engineer.
3. Construction joints shall be scabbled, cleaned and coated with a cement/water slurry immediately prior to placing concrete.
4. Concrete shall be compacted using mechanical vibrators.
5. Concrete shall be cured for a minimum of 7 days by flooding, keeping continuously moist, the application of an approved curing compound or by other means approved by the engineer.
6. No holes or chases other than those shown on the drawings shall be made unless approved by engineer. Pipework passing through footing beams shall be to the approval of the engineer and shall be wrapped with a compressible material of minimum 6mm thickness.
7. Formwork and stripping times shall comply with AS3610. Remove formwork only when concrete has attained its design (f 'c) strength unless otherwise instructed by the structural engineer.
8. Control, expansion and contraction joints shall be constructed as detailed. Saw cut joints shall be made within 12 hours of concrete placement.
9. All mesh to conform with AS1304.
10. Reinforcement shall be in accordance with the following standards:
    - R Indicates plain reinforcing bar R250N to AS/NZS4671
    - L Indicates plain or deformed wire R500L or D500L to AS/NZS4671
    - RL Indicates deformed rectangular mesh D500L to AS/NZS4671
    - SL Indicates deformed square mesh D500L to AS/NZS4671
    - N Indicates deformed bars D500N to AS/NZS4671
    - S Indicates deformed bars D250N to AS/NZS4671
    - TM Suffix indicates trench mesh using deformed bars D500L to AS/NZS4671
11. All galvanized items which are cast into concrete are to be passivated in a 0.2% sodium dichromate solution or equivalent.
12. All formwork shall be rigidly constructed of approved material. Formwork and supports shall be designed to withstand all possible load combinations during construction.

BAR DIAMETER (LARGEST)	LAP
12	600
16	800
20	1000
24	1200
28	1400
32	1600

Note: To be used U.N.O

14. Chemset Anchors U.N.O to be M16 HCR 8.8 rods with HILTI-HIT-HY-200 Adheisive minimum 150mm embedment. Installed in accordance with Manufacturers Specification and Installation Procedure.

FOUNDATIONS

1. Design is based on an allowable bearing pressure of 150kPa. It is the builder's responsibility to confirm the foundation type prior to commencing construction. Should the foundation type or bearing capacity not satisfy the above criteria the builder shall immediately contact engineer prior to construction proceeding.
2. Builder to grub out and remove all organic material and debris from the building platform.
3. Any soft areas shall be dug out and replaced with approved non-plastic fill.
4. All site preparation works shall be in accordance with site specific Geotechnical report and requirements.
5. Ensure a minimum of 8 blows per 300mm is achieved with a calibrated Perth Sand Penetrometer in accordance with AS1289.6.3.3
6. The building platform is to be shaped to ensure it drains to its perimeter and that such drainage is taken away from the platform area.
7. Footings at the lowest level must be the first footings constructed.
8. Located plumbing lines over top of footings and step footings.

MASONRY

1. All blockwork and brickwork shall be in accordance with AS3700
2. Concrete blocks shall be in accordance with AS2733
3. Reinforcement and concrete core filling shall comply with the notes on "concrete and reinforcement".
4. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700.
5. Masonry units shall have a minimum compressive strength of 15MPa.
6. As follows:
   a. Bond beam reinforcement shall be continuous at intersecting walls and bars anchored and lapped to develop full tensile stress.
   b. Support reinforced brick lintels for 14 days minimum.
7. Cleanout blocks shall be provided at the base of all cores to be concrete filled. Alternatively the builder shall open such cores for cleaning by an approved method.
8. All cores to be concrete filled shall be cleaned out by hosing prior to final setting or mortar at all lifts or by rodding prior to concrete filling.
9. Retaining walls shall be fully core filled. Backfill to retaining walls shall not be carried out until 14 days after core filling.
10. Provide 10mm stack bonded control joints where shown. Control joint to consist of flexible masonry anchors every 3rd course. Brunswick type MFA 3/3. Apply flexible sealant over backing rod.
11. Cross walls shall be fully bonded for the full height of intersecting wall.
12. Horizontal chasing is not permitted without written approval from the engineer.
13. Lap wires 500mm at splices and around corners and COG 500mm into intersecting walls. 20mm cover to all wires.
14. All wires in external face of external leaf to be galvanised to AS/NZS4680.
15. Masonry ties are to be provided at no more than 600mm spacing in each direction, and max 300mm from top of wall, side of control joint or perimeter of opening.
16. Ties to be grade 316 stainless steel in corrosive environments.
17. Masonry abutting concrete footings to typically be isolated with 10mm Ableflex expansion foam or similar approved product UNO.

STRUCTURAL STEEL

1. All steelwork shall be in accordance with:
   AS4100 steel structures
   AS4600 cold formed steel structures
2. Fabricator to check all dimensions before cutting materials or manufacturing. fabrication to AS4100 UON. These drawing are to be read in conjunction with the project architectural and other consultants' drawings.
3. Unless noted otherwise all steel shall be:
   a. AS3678 grade 250 hot rolled plates
   b. AS3679.1 grade 300 hot rolled UB, PFC, TFC, TFB, EA, UA and FLATS
   c. AS3679.2 grade 300 WB and WC
   d. AS1163 grade 250 for circular hollow sections Ø165mm and less
   e. AS1163 grade 350 for circular hollow sections larger than Ø165mm and rectangular hollow sections.
   f. AS1397 500MPa for 1.2mm thick purlins and girts
   g. 450MPa for 1.6mm thick purlins and girts
   h. 450MPa for 1.0 thick CF Channels
   i. 450MPa for 1.6mm thick CF Channels
4. Galvanising shall be hot dipped to AS/NZS 4680
5. Bolts shall be galvanised and of sufficient length to exclude the thread from the shear plane. A suitable washer shall be used under all nuts, when tensioning is specified high strength bolts shall be fully tensioned with load indicating washers to the requirements of AS4100.
6. Bolt legend 4.6/S commercial grade 4.6 bolts snug tightened 8.8/S high strength grade 8.8 bolts snug tightened. 8.8/TB high strength grade 8.8 bolts tensioned bearing connection. 8.8/TF high strength grade 8.8 bolts tensioned friction connection.
7. Unless otherwise specified the following shall apply -
   a. Cleats, brackets, stiffeners etc. to be 10mm thick, ex-standard square edge flats U.N.O.
   b. Welding to be carried out in accordance with AS/NZS 1554. 1:1995 welding consumables to be E48XX or W50X U.N.O. all welds to be 6MM CFW SP category U.N.O CPBW to be SP category U.N.O.
   c. Inspection to be carried to AS/NZS 1554.1:1995. All GP/SP welds to be 100% visually scanned. SP welds allow for 25% visual examination U.N.O.
   d. 6mm end plates to all hollow sections (seal weld).
   e. Bolts to be G 8.8/S
   f. Bolt hole clearance 2mm
   g. Hold down bolt clearance 4mm
   h. Grout - a space for 40mm of 2:1 sand: cement mortar of damp earth consistency under all base plates.
   i. Connections - minimum of 2-M16 8.8/S bolts
   j. Bracing intersects on centrelines and centre of gravity for angles.
8. Fabricator shall allow for all cleats and other fixings required by the supervisor.
9. All column base plates shall be set on 20mm min. of 1:2 cement and sand grout.
10. Seal all open ends of pipes or RHS members. Grind off all visible welds and brand marks to neat appearance where specified.
11. See below:
    a. The contractor shall remain responsible at all times for providing all necessary temporary bracing and other supports during erection, to stabilise the partially constructed building.
    b. Particular attention must be paid to the buckling stability of beams and columns prior to the connection of purlins, girts, fly braces and other bracing elements.
    c. It is the responsibility of the builder to obtain proper technical advice wherever necessary to ensure the partially completed structure is safe from collapse.
12. Treatment:
    All steel connection plate and bolts to be hot dip galvanize (600 g/sqm)
    Holding down bolts - hot dip galvanize (600 g/sqm)
13. Bitumen paint all steelwork for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

STRUCTURAL TIMBER

1. Structural timber shall comply with AS1720 timber structure code.
2. All timber to be seasoned F14, class 2, strength group SD5, joint group JD2 and treated with creosote to hazard class H4 unless noted otherwise.
3. All timber work to be in accordance with :
   - AS1684 - SAA timber framing code.
   - AS1720 - SAA timber structures code.
4. All timber and steel connections to be in accordance with AS1720.
5. Ensure no knots or gum veins in timber used.
6. Coat all timber in contact with ground with bitumen paint or similar approved.
7. All structural details to be confirmed, checked and site measured by builder prior to construction. Report any discrepancies to structural engineer.
8. Treatment :
   - H1 - Interior use, above ground.
   - H2 - Interior use, above ground, subject to termites.
   - H3 - Exterior use, above ground, subject to periodic wetting.
   - H4 - Exterior use, in ground, subject to severe wetting.
   - H5 - Exterior use, in ground, with or in fresh water.
   - H6 - Exposed to marine water.
9. Required bending stress:
   - MGP10 fb = 16 MPa
   - MGP12 fb = 28 MPa
   - F14 fb = 36 MPa
   - GL17 fb = 40 MPa
   - LVL13 fb = 48 MPa
   - LVL15 fb = 59 MPa
   - LVL18 fb = 72 MPa
10. All bolted timber connections to be re-tightened at end of project prior to completion, ensure no splitting of timber occurs.
11. All proprietary systems (floor/wall/roofing) to be installed in strict accordance with manufacturer's specifications and details.
12. Bush Poles :
    - All timber to AS1720.
    - Minimum F11 grade CCA / H4 treated seasoned softwood. S6 strength group.
    - Free from decay, shakes & fractures,resin pockets and surface damage.
    - Heartwood not to exceed 50% of the diameter at each end or be within 35mm from the surface.
13. Bitumen paint all timber posts/columns for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

LIMESTONE RETAINING WALL SPECIFICATION NOTES

1. Width 'b' at any height to be no less than half of retained height 'h'. step wall to suit
2. Walls to be built on compacted sand, compact ground under footing to resist 7 blows per 300mm of a standard 16mm dia penetrometer over a depth of 600mm.
3. These walls are applicable to well drained sandy soil conditions only.
4. Walls resisting clay soil pressures and/or hydrostatic pressures to be referred to the engineer.
5. All reconstituted limestone to be first grade quality & free from soft pockets.
6. Rubble shall not be used to fill voids.
7. Reconstituted limestone to have a dry density of at least 1600 kg/m3 and a crushing strength of at least 5mpa.
8. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700. All mortar joints to be 20mm thick and fully mortared.
9. All topsoil, vegetation and deleterious matter shall be removed from the foundation area.
10. Vertical thickness of wall to be adequately bonded by building in header blocks - refer cross section
11. No backfilling until 7 days after walls have been built.
12. All backfilling shall be carried out using material which shall generally be sandy in nature and free from large pieces of rock to the extent that the
    material can be compacted using a vibrating plate compactor to meet the requirements of the specification.
13. Backfill shall not be dumped behind wall in a manner which will cause shock loading on the wall
14. Backfill shall be clean sand compacted in shallow (300) layers using light compacting equipment
15. In all cases the backfill material shall be selected such that once compacted, the standard of compaction can be measured using a standard perth penetrometer.
16. Compaction of the backfill material to the front and back of the wall to be compacted 95% modified max dry density.
17. Prior to practical completion the contractor shall provide written certification from a practising structural engineer that the wall construction & backfill compaction has been carried out in accordance with this drawing and the specification.
18. Construction Joints (CJ) shall be constructed within the retaining wall where noted below:
    (i) at max. 10m centres along wall face
    (ii) where the angle between faces of two walls exceeds 180 degrees, in which case the CJ is to be located on one side of the change in direction, at a distance away from the direction change equal to the base width of the wall.
19. Construction joints shall be 15mm wide and filled with expanded polyethylene (100mm deep) covered with a 25mm deep mastic of colour to match wall mortar. joints are to extend through wall and any fences, but need not extend through base course of limestone wall.
20. Select blocks to ensure intact faces only visible in facework.

ALUMINIUM

1. All Aluminium shall be in accordance with AS1664.
2. All Aluminium welding shall comply with AS1664.
3. Unless noted otherwise, all aluminium to be:
   - Plates: Grade 5083 H116/h321 or 5083 H112 Aluminium
   - SHS/RHS/CHS: Grade 6060-t5 aluminium
   - Fixings: grade 316 stainless steel
   - Welds: 5mm continuous fillet, category sp, filler allow to be grade 5186,5356 or 5556 aluminium
4. All fixings into Aluminium members to be stainless steel (SS316) or equivalent capacity aluminium fixings.
5. Provide nylon washers and packers for all and any connections between steel and aluminium.
6. Adequate protective coatings are to be applied to aluminum cast into concrete.

PRECAST CONCRETE

1. All precast units shown are for service conditions only. The contractor is responsible for all casting,lifting, transportation and propping requirements and must satisfy himself that they have been constructed to meet the design criteria noted. Any queries regarding precast concrete units shall be flagged during the tender process. If in doubt, ask.
2. Contractor to obtain Engineer's Design Certification for all elements of precast concrete work as required to the relevant Australian Standards (Lifting, bracing, propping as required).
3. Panels are to be securely propped until designed connections have been installed and are sufficiently restraining panels.
4. U.N.O all chemical anchors fixed into concrete panels to be galvanised HILTI-HAS-E-F rods with HILTI-HIT-HY-200 adhesive.
5. All grout used for panels shall be non shrink high strength grout to achieve min 40mpa compressive strength typ.
6. Precast concrete strength is for final position. Contractor to confirm required lifting strength in accordance with lifting engineers requirements. Shall be no less than 15 MPA.

HDPE DECKING AND BOARDS

1. All HDPE battens and other HDPE members to be supplied and installed in strict accordance with manufacturers specification.

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFFSITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
1	11.07.24	OW	REVISED FOR CONSTRUCTION
0	24.05.24	OW	ISSUE FOR CONSTRUCTION
E	09.04.24	OW	ISSUE FOR APPROVAL
D	27.03.24	OW	ISSUE FOR APPROVAL
C	16.02.24	OW	ISSUE FOR APPROVAL
B	11.12.23	OW	ISSUE FOR PRICING
A	24.10.23	OW	ISSUE FOR APPROVAL

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emerge ASSOCIATES
Integrated Science & Design
PERTH (08) 9380 4988 • MARGARET RIVER (08) 9758 8159

PROJECT
CATALINA GREEN
CLARKSON, W.A.
STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS
DRAWING TITLE
TYPICAL NOTES
CLIENT
CATALINA REGIONAL COUNCIL

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DRAWN BY	OW	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	24.10.23		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT59-980	REV	1

REF \\WNLA.LOCAL\EMERGE\PROJECTS\CURRENT PROJECTS\CATALINA, TAMALA PARK(CL) DRAWINGS\(JOB CODE) AUTOCAD\(JOB CODE) LANDSCAPE\STAGE 39 - GREEN CENTRAL POS\CAT59 GCP DET.DWG

NOTE: RECONFIRM ALL MATERIAL TYPES SPECIFICATION, SUPPLIER, FINISH AND COLOURS WITH SUPERINTENDENT PRIOR TO ORDERING AND MANUFACTURING

MATERIALS SPECIFICATION

SYMBOL	ITEM	SUPPLIER	PRODUCT	IMAGE	COLOUR	SIZE	FINISH
	INSITU CONCRETE PAVING	HOLCIM	EXPOSED AGGREGATE		SPINIFEX	POURED INSITU AS PER PLAN	EXPOSED
	INSITU CONCRETE PAVING	HOLCIM	EXPOSED AGGREGATE		EUCALYPTUS	POURED INSITU AS PER PLAN	EXPOSED
	INSITU CONCRETE PAVING				LIGHT GREY	POURED INSITU AS PER PLAN	BRUSHED
	RUBBER SOFTFALL	TREADWELL MESH			HF-14 APPLE GREEN	AS PER PLAN	
	RUBBER SOFTFALL	TREADWELL MESH			HF-06 ORANGE	AS PER PLAN	
	SPORTS SURFACE	LAYKOLD WEST COAST SPORTS SURFACES			MEDIUM GREEN	AS PER PLAN	
	SPORTS SURFACE	LAYKOLD WEST COAST SPORTS SURFACES			PUMPKIN ORANGE	AS PER PLAN	
	TGSI'S	MIDLAND BRICK	UNIT PAVERS TILES		CHARCOAL	400x400x60mm	
PICNIC SETTING							
	PICNIC SETTING	STREET FURNITURE AUSTRALIA	PICNIC SETTING		TEXTURA MONUMENT FRAMING		POWDER COATED
					ALUMINIUM WOODGRAIN BATTENS SPOTTED GUM		
CONCRETE SEATING							
	COLOURED CONCRETE WALL	CCS			CCS SNOW CONCRETE	AS PER PLAN	
SHADE SAIL							
	SHADE SAIL	WEST COAST SHADE	SHADE SAIL		BRUNSWICK GREEN	AS PER PLAN	
					CEDAR		
					TEXTURA MONUMENT POST		
D	DRINKING FOUNTAIN	GRILLEX	DRINKING FOUNTAIN		TEXTURA MONUMENT	AS PER PLAN	POWDER COATED

GENERAL NOTES

1. ALL PLAY EQUIPMENT, PLAY INFRASTUCTURE,, FITNESS EQUIPMENT, PARK FURNITURE, WALLS AND SPORT SUFACING TO HAVE A NON SCRIFICIAL ANTI-GRAFFITTI COATING APPLIED AS PER CITY OF WANNEROO STANDARD AND SPECIFICATIONS

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PROJECT
CATALINA GREEN
CLARKSON, W.A.
STAGE OR PHASE
STAGE 39 GREEN CENTRAL POS

DRAWING TITLE
MATERIALS PALETTE

CLIENT
CATALINA REGIONAL COUNCIL

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DATE INITIALLY DRAWN	24.10.23		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT59-981	REV	1

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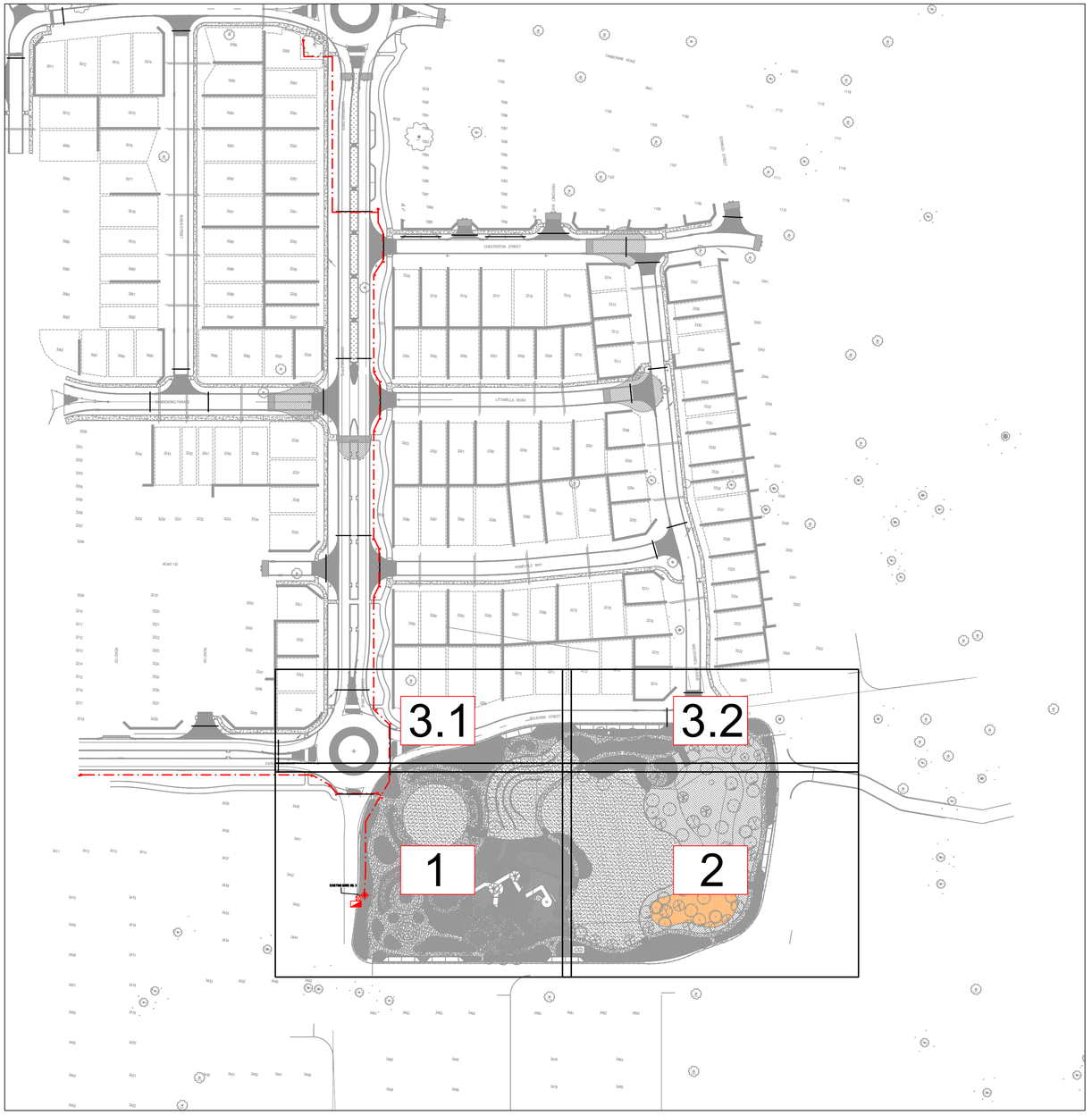
CATALINA GREEN CENTRAL POS
IRRIGATION WORKS



AUTOCAD FILENAME: Catalina Central POS Design (Rev 1).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	10/11/2023	ISSUED FOR APPROVAL	R.V	J.S
B	20/11/2023	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S
C	24/02/2024	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S
D	17/04/2024	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S
0	07/06/2024	ISSUED FOR CONSTRUCTION	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD
1	30/10/2024	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S

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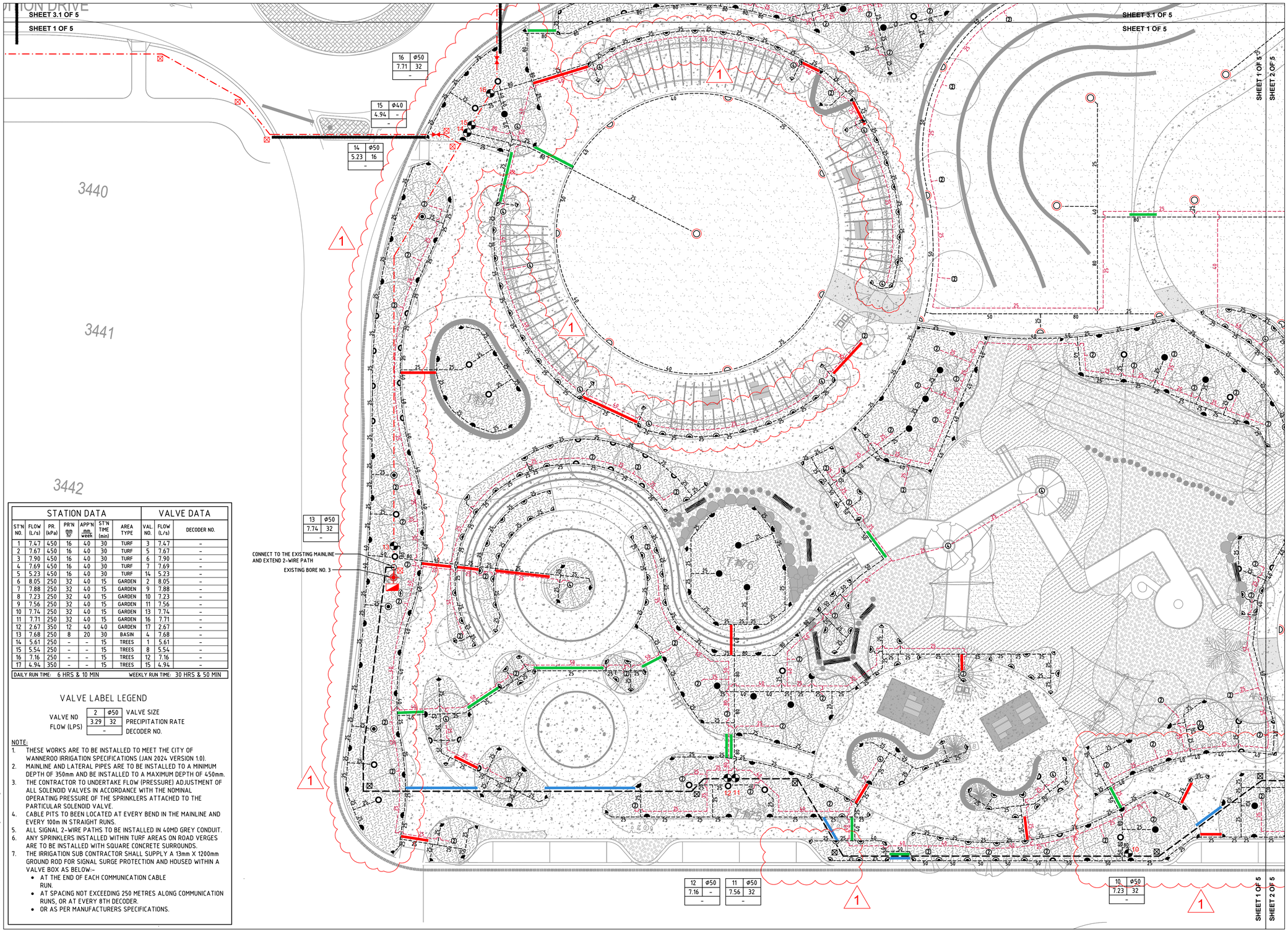
SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA GREEN CENTRAL POS
IRRIGATION WORKS (KEY PLAN)
-

DATE :	DESIGN NO. :	SHEET NO. :
07/11/2023	18675-00	COVER PAGE



STATION DATA							VALVE DATA	
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	7.47	450	16	40	30	TURF	3	7.47	–
2	7.67	450	16	40	30	TURF	5	7.67	–
3	7.90	450	16	40	30	TURF	6	7.90	–
4	7.69	450	16	40	30	TURF	7	7.69	–
5	5.23	450	16	40	30	TURF	14	5.23	–
6	8.05	250	32	40	15	GARDEN	2	8.05	–
7	7.88	250	32	40	15	GARDEN	9	7.88	–
8	7.23	250	32	40	15	GARDEN	10	7.23	–
9	7.56	250	32	40	15	GARDEN	11	7.56	–
10	7.74	250	32	40	15	GARDEN	13	7.74	–
11	7.71	250	32	40	15	GARDEN	16	7.71	–
12	2.67	350	12	40	40	GARDEN	17	2.67	–
13	7.68	250	8	20	30	BASIN	4	7.68	–
14	5.61	250	–	–	15	TREES	1	5.61	–
15	5.54	250	–	–	15	TREES	8	5.54	–
16	7.16	250	–	–	15	TREES	12	7.16	–
17	4.94	350	–	–	15	TREES	15	4.94	–

DAILY RUN TIME: 6 HRS & 10 MIN WEEKLY RUN TIME: 30 HRS & 50 MIN

VALVE LABEL LEGEND

VALVE NO	2	Φ50 VALVE SIZE
FLOW (LPS)	3.29	32 PRECIPITATION RATE
	–	DECODER NO.

NOTE:

1. THESE WORKS ARE TO BE INSTALLED TO MEET THE CITY OF WANNEROO IRRIGATION SPECIFICATIONS (JAN 2024 VERSION 1.0).
2. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
4. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
5. ALL SIGNAL 2-WIRE PATHS TO BE INSTALLED IN 40MD GREY CONDUIT.
6. ANY SPRINKLERS INSTALLED WITHIN TURF AREAS ON ROAD VERGES ARE TO BE INSTALLED WITH SQUARE CONCRETE SURROUNDS.
7. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SIGNAL SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-25-06-SS	18	450	62	18.3
	HUNTER	I-25-06-SS	13	450	48.5	15.5
	HUNTER	I-25-06-SS	10	450	43.9	16.2
	HUNTER	I-25-06-SS	8	450	36	15.2
	HUNTER	I-25-06-SS	7	450	29.1	14.6
	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	4.5LA	350	16.6	10.7
	HUNTER	I-20-12	2.0LA	350	8	8.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1
	ALL GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Φ20x300mm POLY ARTIC RISER OR TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Φ15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)					
	BASIN AREA - TO HAVE HUNTER I-20-12 ON A Φ20x300mm POLY ARTIC RISER (NOZZLES AS SHOWN) ALL SPRINKLERS ARE SPACED AT 120% RATED RADIUS					
200/100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA					
500/400 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z 6P WITH BLUE FLEX 7.06 LPM @ 250 kPA					
TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA					
	EXISTING BORE 3 LOCATION					
	EXISTING BORE PUMP CUBICLE WITH A SIGNAL SDS-100					
	BERMAD 200 SERIES DATA VALVE SIZE AS SHOWN					
	50mm MAINLINE FLUSHING VALVE					
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION					
	P2 CABLE PIT					
	SD-SL SURGE ARRESTOR					
	EXISTING MAINLINE ISOLATION VALVE					
	EXISTING P2 CABLE PIT					
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE					
	DN110 PN12.5 PE100 MDPE POLY MAINLINE WITH BLUE STRIPE ON INTERNAL SECTION OF POS.					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
25	uPVC SWJ CLASS 9 LATERAL LINE FOR TREES SIZE AS SHOWN					
25	uPVC SWJ CLASS 9 LATERAL LINE FOR BASIN SIZE AS SHOWN					
	DN110 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS					
	DN160 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS					
	DN200 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS					
	EXISTING SLEEVE					
	IRRIGATION REVISION					

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA IACA14M

0 2 4 6 8 10m

SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
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DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :

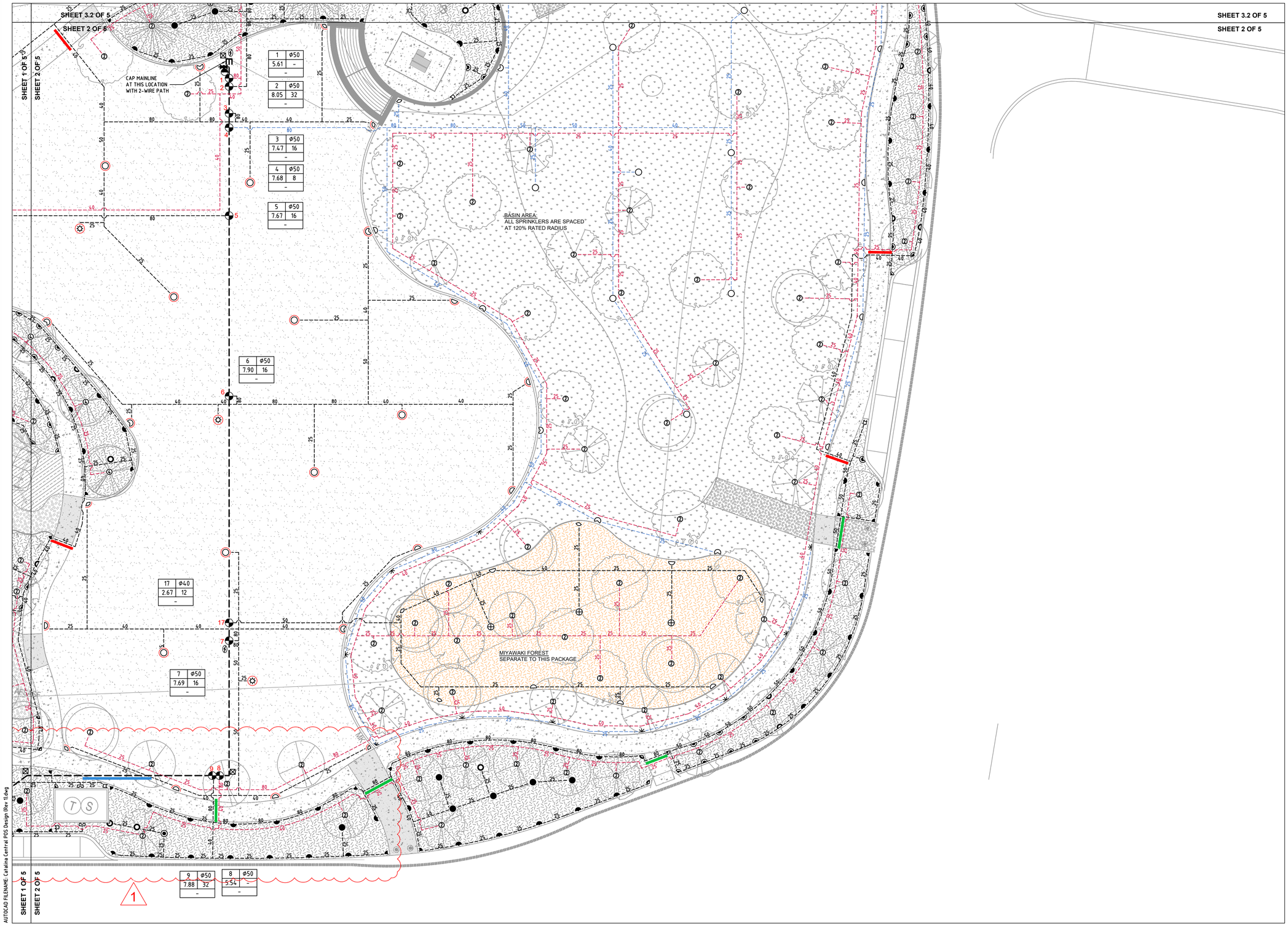
EMERGE ASSOCIATES

PROJECT :

CATALINA GREEN CENTRAL POS
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
07/11/2023	18675-01	1 OF 5

AUTOCAD FILENAME: Catalina Central POS Design (Rev 1).dwg



SHEET 3.2 OF 5
SHEET 2 OF 5

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-25-06-SS	18	450	62	18.3
	HUNTER	I-25-06-SS	13	450	48.5	15.5
	HUNTER	I-25-06-SS	10	450	43.9	16.2
	HUNTER	I-25-06-SS	8	450	36	15.2
	HUNTER	I-25-06-SS	7	450	29.1	14.6
	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	4.5LA	350	16.6	10.7
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0 2 4 6 8 10m
SCALE 1:200 ON A1

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PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA GREEN CENTRAL POS
IRRIGATION WORKS
-

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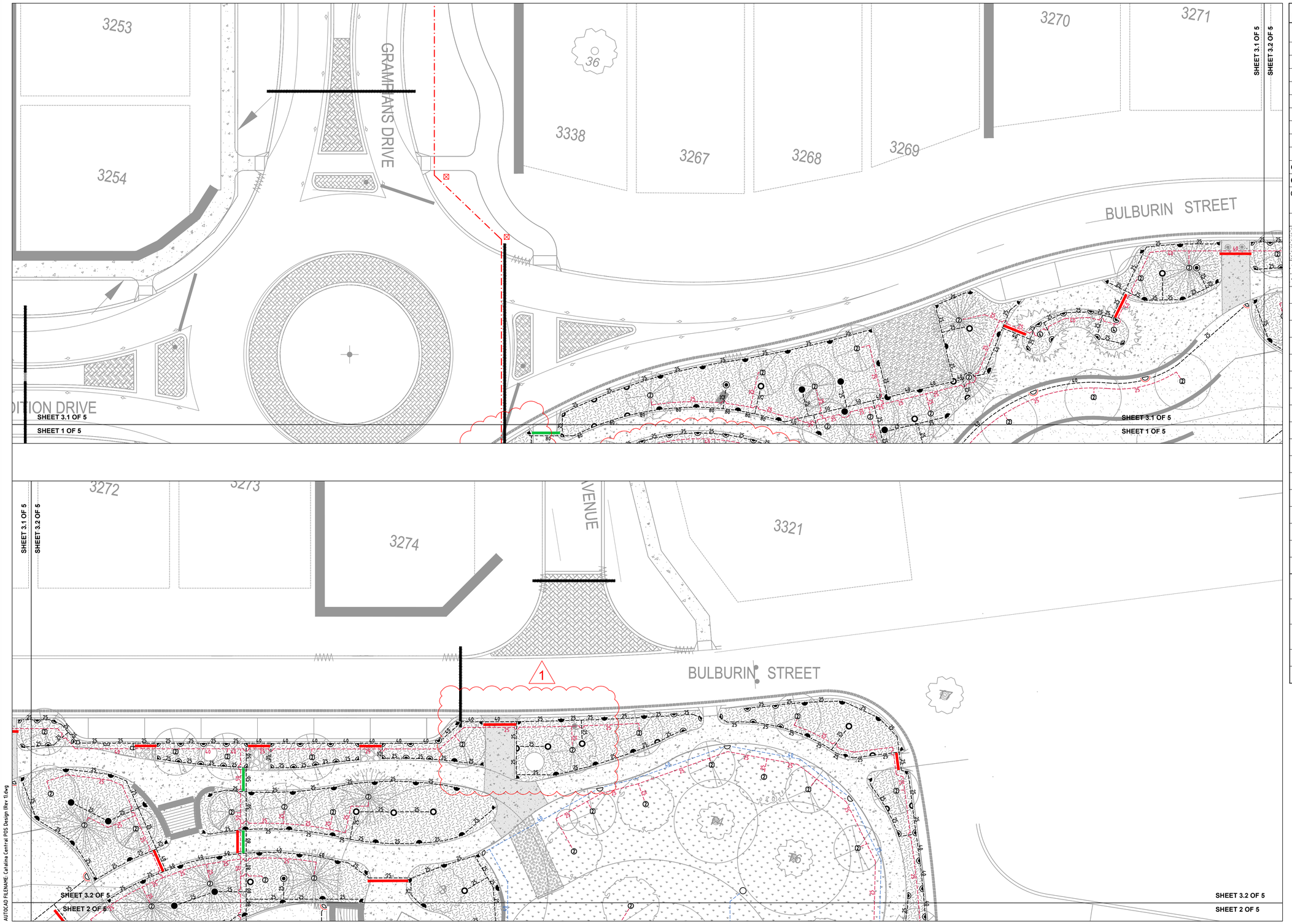
07/11/2023	18675-02	2 OF 5



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CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Central POS Design (Rev 1).dwg

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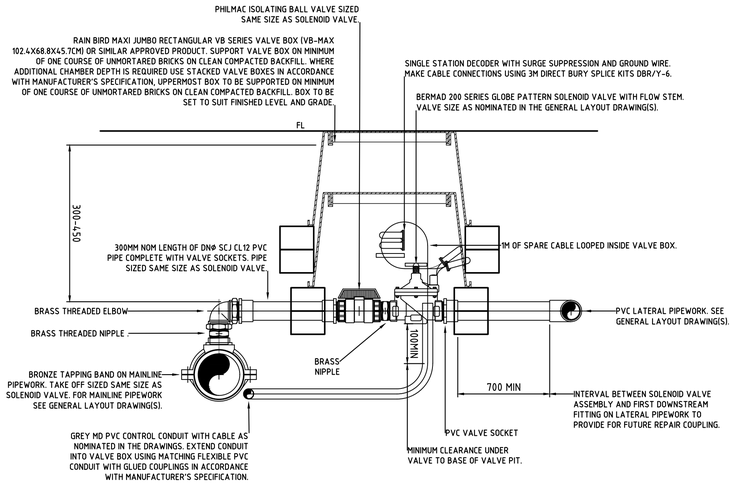
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

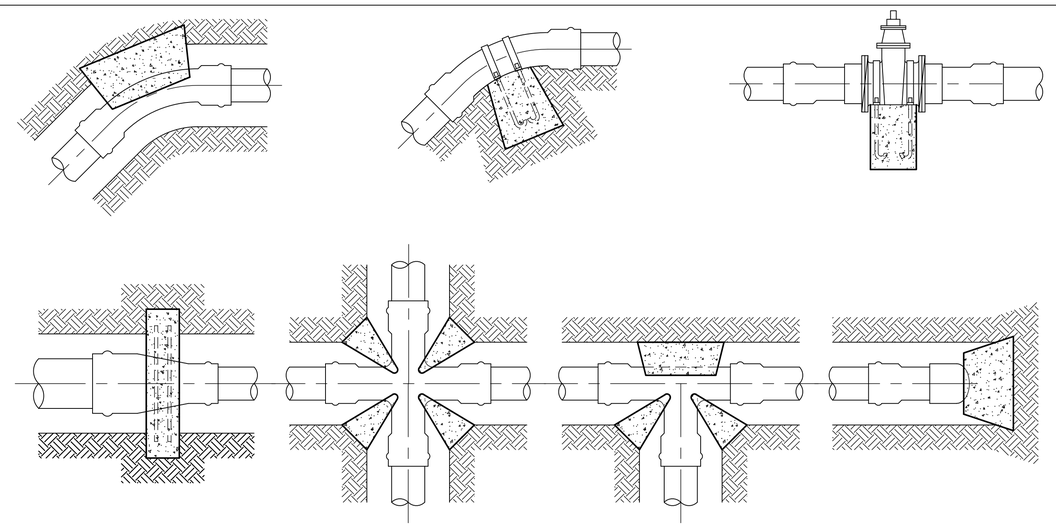
PROJECT :
CATALINA GREEN CENTRAL POS
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
07/11/2023	18675-03	3 OF 5



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

NOTE:
MINIMUM BEARING AREA TO BE IN ACCORDANCE WITH TYPE OF FITTING AND SOIL TYPE AS PER PIPE MANUFACTURERS RECOMMENDATIONS

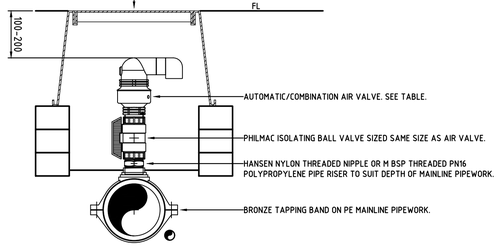
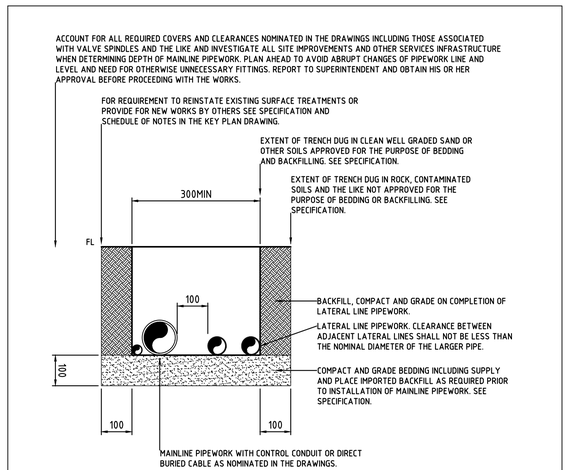


TABLE OF AIR VALVES	
MAINLINE SIZE (DN)†	AIR VALVE‡
LESS THAN 63	PN16 DN20 COMBINATION AIR VALVE
75-140	PN16 DN25 COMBINATION AIR VALVE
150-200	PN16 DN50 COMBINATION AIR VALVE
† SEE GENERAL LAYOUT DRAWING(S). ‡ SEE ALSO SPECIFICATION.	

TYPICAL AIR VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

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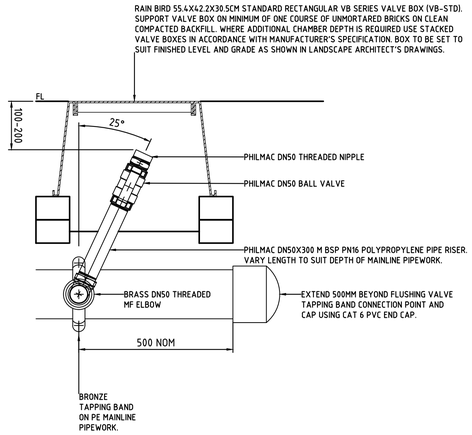
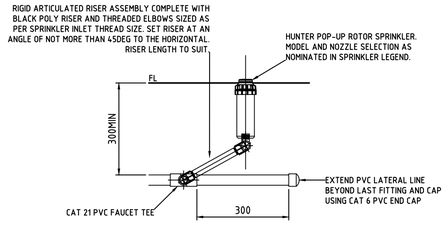
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
07/11/2023	18675-04	4 OF 5



TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

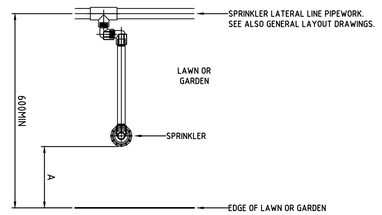
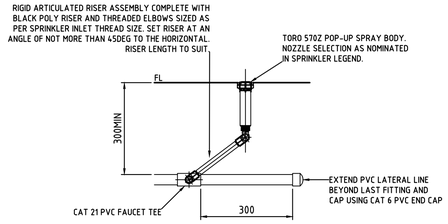


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	
† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.			

SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

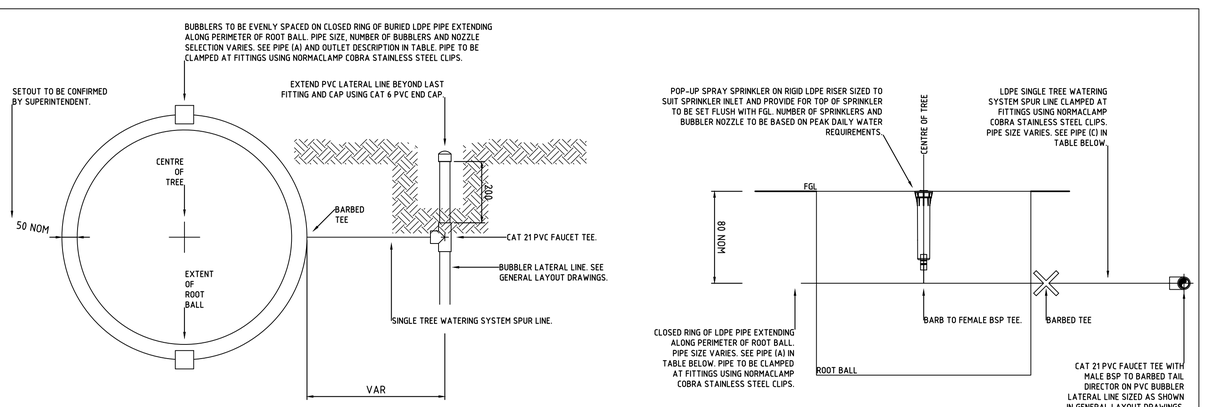


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
-	-	0-6	-	DN19	-	DN19
-	-	6-15	-	DN19	-	DN25
-	-	15-30	-	DN25	-	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

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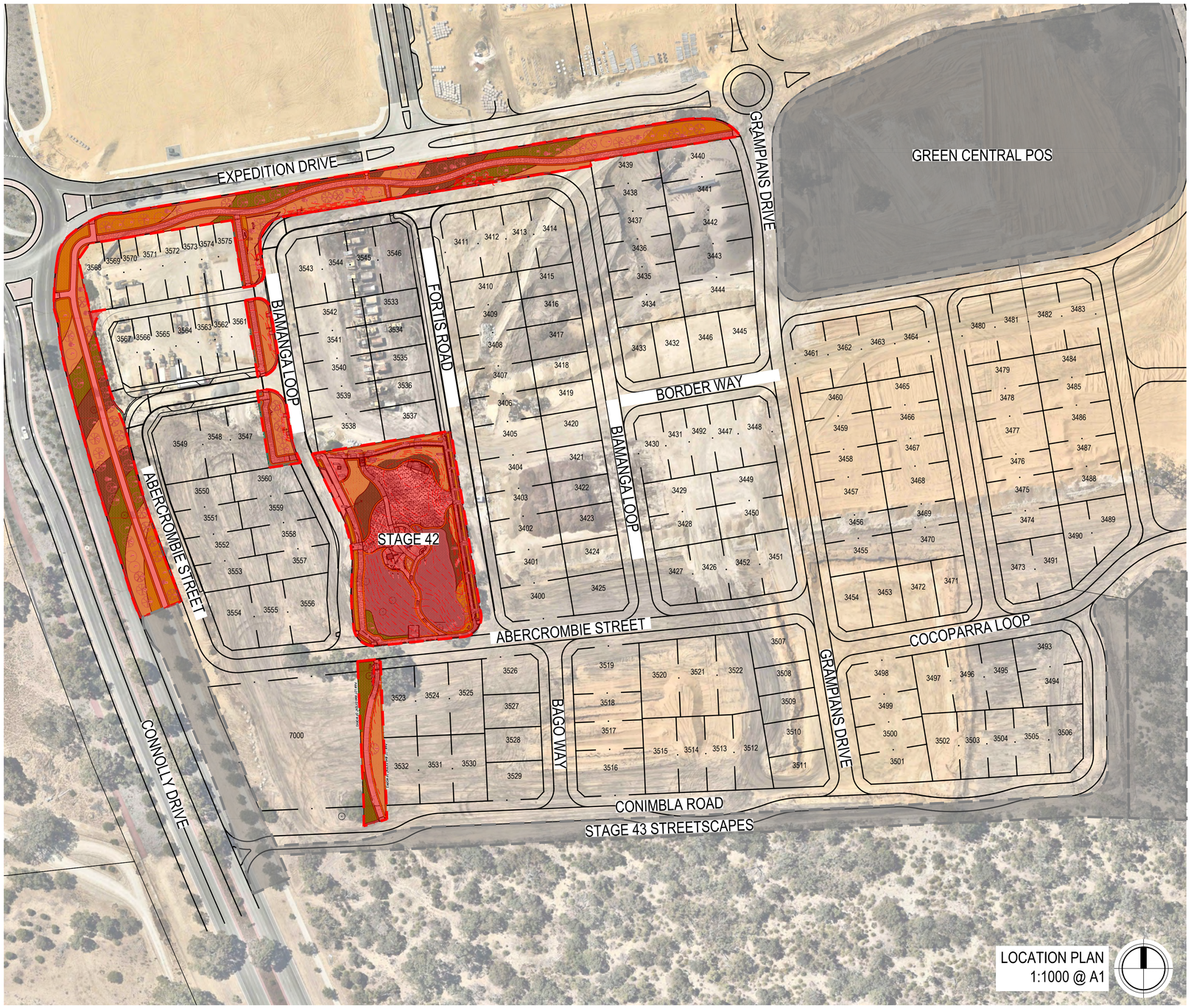
DATE :	DESIGN NO. :	SHEET NO. :
07/11/2023	18675-05	5 OF 5



CATALINA

CLARKSON, WA

Catalina

STAGE 42 POS

LANDSCAPE CONTRACT: CAT69

LANDSCAPE & IRRIGATION WORKS

CLIENT:CATALINA REGIONAL COUNCIL

REVISED FOR: ***CONSTRUCTION***

DATE: **JUNE 2025**

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3523 3524 3525 3526 3527 3528 3532 3531 3530 3529
3519 3520 3521 3522 3507 3518 3508 3517 3509 3515 3514 3513 3512 3510 3516 3511
3498 3499 3500 3501
7000

MAY NOT COME INTO USE OF WORKS

MAY NOT COME INTO USE OF WORKS

LEGEND

EXTENT OF WORKS

STANDARD NOTES

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1	11.02.25	JL	REVISED FOR CONSTRUCTION
0	08.11.24	OW	ISSUE FOR CONSTRUCTION
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C	07.08.24	JL	REVISED FOR APPROVAL
B	26.07.24	JL	ISSUE FOR APPROVAL
A	22.04.24	JL	ISSUE FOR COMMENT

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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 42 POS

DRAWING TITLE
SITE LAYOUT
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CLIENT
CATALINA REGIONAL COUNCIL

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DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	05.04.24		

SCALE 1: 750 @ A1 METRES
0 7.5 15 22.5 30 37.5

DRAWING NUMBER
CAT-69-200

REV
1

DEF: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CD\DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 42\POS\ 69-200.DWG



LEGEND

- EXTENT OF WORKS
- 0.00 EXISTING CONTOURS
- 0.00 PROPOSED CONTOURS BY CIVIL
- 0.00 PROPOSED CONTOURS
- RL 8.00 SPOT LEVELS
- BW +00.00 BOTTOM OF WALL HEIGHTS
- TW +00.00 TOP OF WALLS HEIGHTS
- TS +00.00 TOP OF STAIRS
- BS +00.00 BOTTOM OF STAIRS
- HANDRAILS
- TACTILES 14 901

EXISTING WORKS CONSTRUCTED UNDER CIVIL PACKAGE (FOR REFERENCE ONLY)

- EXISTING CIVIL DRAIN BY CIVIL
- EXISTING DRAIN PIT BY CIVIL

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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 42 POS

DRAWING TITLE
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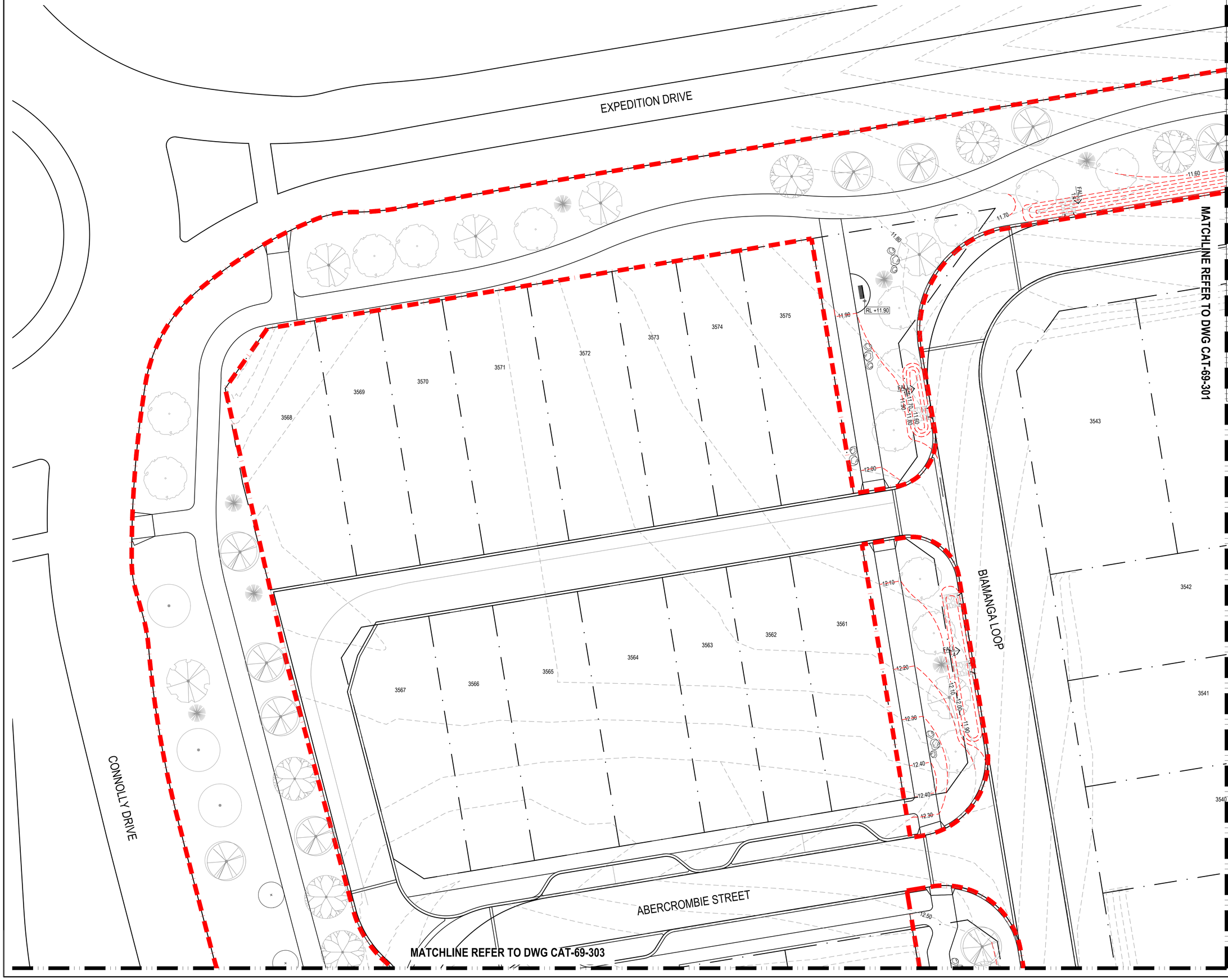
DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	05.04.24		

SCALE 1: 200 @ A1 METRES 4 6 8 10

DRAWING NUMBER CAT-69-301

REV 1

DE: \JOBS\PROJECTS\CATALINA, TAMALA PARK\CLD\DRAWING\JOB CODE\ JOB CODE\ LANDSCAPE\STAGE 42\CAT69_STAGE 42 POS.DWG



LEGEND

- EXTENT OF WORKS
- 0.00 EXISTING CONTOURS
- 0.00 PROPOSED CONTOURS BY CIVIL
- 0.00 PROPOSED CONTOURS
- RL 8.00 SPOT LEVELS
- BW +00.00 BOTTOM OF WALL HEIGHTS
- TW +00.00 TOP OF WALL HEIGHTS
- TS +00.00 TOP OF STAIRS
- BS +00.00 BOTTOM OF STAIRS
- HANDRAILS
- TACTILES

14 901

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- EXISTING DRAIN PIT BY CIVIL

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PROJECT
CATALINA
CLARKSON, WA
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DRAWING TITLE
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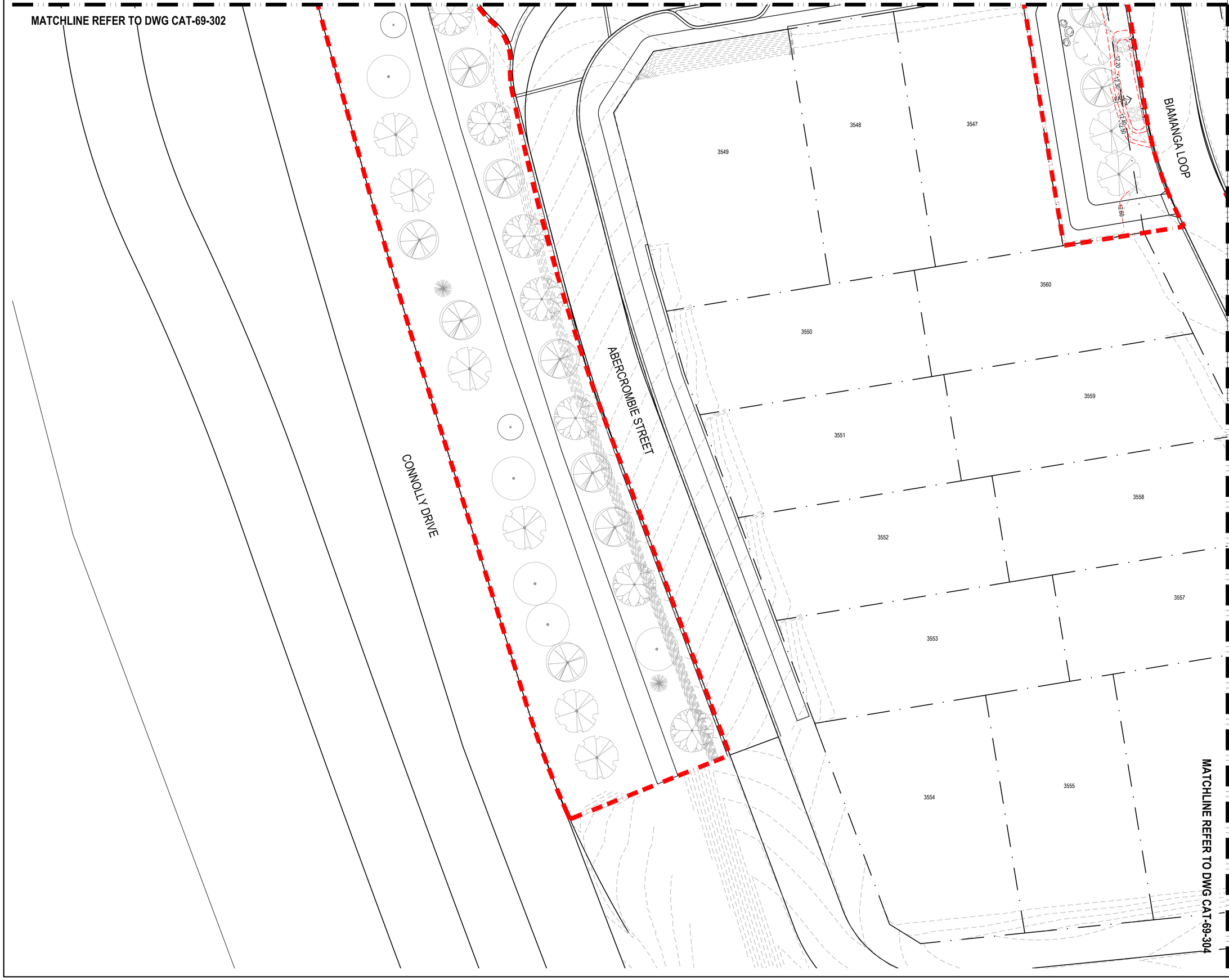
DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	05.04.24		

SCALE 1: 200 @ A1 METRES
0 2 4 6 8 10

DRAWING NUMBER CAT-69-302
REV 1

REF: J:\JOURNEY PROJECTS\CATALINA, TAMALA PARK\CLI DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 42\CAT69_STAGE 42 POS.DWG

MATCHLINE REFER TO DWG CAT-69-302



MATCHLINE REFER TO DWG CAT-69-304

LEGEND

- EXTENT OF WORKS
- 0.00 EXISTING CONTOURS
- 0.00 PROPOSED CONTOURS BY CIVIL
- 0.00 PROPOSED CONTOURS
- RL 8.00 SPOT LEVELS
- BW +00.00 BOTTOM OF WALL HEIGHTS
- TW +00.00 TOP OF WALL HEIGHTS
- TS +00.00 TOP OF STAIRS
- BS +00.00 BOTTOM OF STAIRS
- HANDRAILS
- TACTILES (14 901)

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DRAWING TITLE
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DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	05.04.24		

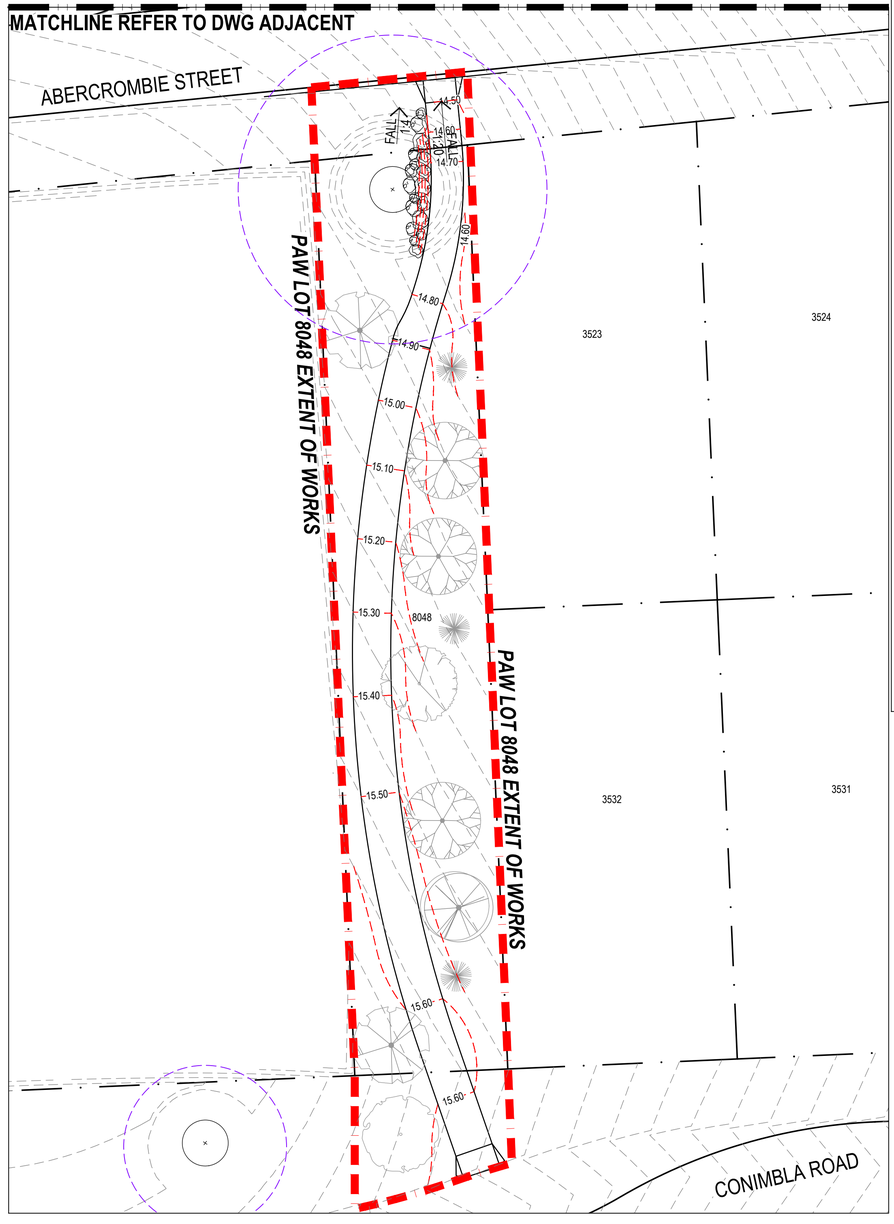
SCALE 1: 200 @ A1 METRES
0 2 4 6 8 10

DRAWING NUMBER
CAT-69-303

REV
1

DEF: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CL\DRAWINGS\JOB CODE\AUTOCAD\JOB CODE\LANDSCAPE\STAGE 42\CAT-69-303.DWG





LEGEND

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- 0.00 EXISTING CONTOURS
- 0.00 PROPOSED CONTOURS BY CIVIL
- 0.00 PROPOSED CONTOURS
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- HANDRAILS
- TACTILES (14 901)

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DATE INITIALLY DRAWN	05.04.24		

SCALE 1: 200 @ A1 METRES (0 2 4 6 8 10)

DRAWING NUMBER CAT-69-304 REV 2

REF: J:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLIENT DRAWINGS\DB CODE\ AUTOCAD\DB CODE\ LANDSCAPE\STAGE 42\CAT69_STAGE 42 POS.DWG

MATCHLINE REFER TO DWG CAT-69-402

EXPEDITION DRIVE

ROCK PITCHING BY LANDSCAPE CONTRACTOR

ROCK PITCHING BY LANDSCAPE CONTRACTOR

MATCHLINE REFER TO DWG BELOW

3439

3438

3437

3414

3413

3412

3411

FORTIS ROAD

BIAMANGA LOOP

EXPEDITION DRIVE

3440

3441

MATCHLINE REFER TO DWG ABOVE

GRAMPIANS DRIVE

GREEN CENTRAL POS

LEGEND

- EXTENT OF WORKS
- NON-TRAFFICABLE CONCRETE PATH — 1/901
- TRAFFICABLE CONCRETE PATH — 2/901
- EXISTING FOOTPATH BY OTHERS
- COLOURED CONCRETE HOLCIM: SANDSTONE — 9/901
- MK CONCRETE MOW KERB — 3/901
- RUBBER SOFTFALL — 6/901
- MULCH ONLY — 5/970
- PLAY MULCH SOFTFALL — 4/970
- COMPACTED LIMESTONE — 10/901
- PROPOSED PLANTING — 1-2/970
- TIMBER LOG & STEPPERS — 6-7/950
- LIMESTONE RETAINING — 12/901
- TURF — 3/970
- EXISTING VEGETATION
- LIMESTONE BOULDERS — 9/970
- B RUBBISH BIN — 1/950
- LED LIGHTPOLE — 8/950
- SEATING BENCH — 2/950
- HANDRAILS — 10/950
- TACTILE PAVERS — 14/901
- SE STEEL EDGING — 11/901
- PICNIC SETTING — 3/950
- REMOVABLE BOLLARD — 17/901
- PROPOSED TREES — 6-8/970
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0	08.11.24	OW	ISSUE FOR CONSTRUCTION
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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 42 POS

DRAWING TITLE
HARDSCAPE 1 OF 4
.
CLIENT
CATALINA REGIONAL COUNCIL

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SCALE 1: 200 @ A1 METRES
0 2 4 6 8 10

DRAWING NUMBER
CAT-69-401

REV
1

DFE: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CO_DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 42\CAT69_STAGE 42 POS_DETAILING

EXPEDITION DRIVE

CONNOLLY DRIVE

BIAMANGA LOOP

ABERCROMBIE STREET

EXISTING PATH BY OTHERS

ROCK PITCHING BY LANDSCAPE CONTRACTOR

2/950 SEATING BENCH

ROCK PITCHING BY LANDSCAPE CONTRACTOR

PRAM RAMP BY OTHERS

1/901 CONCRETE PATH

9/970 LIMESTONE BOULDERS

3567 3566 3565 3564 3563 3562 3561 3560 3559 3558 3557 3556 3555 3554 3553 3552 3551 3550 3549 3548 3547 3546 3545 3544 3543 3542 3541 3540 3539 3538 3537 3536 3535 3534 3533 3532 3531 3530 3529 3528 3527 3526 3525 3524 3523 3522 3521 3520 3519 3518 3517 3516 3515 3514 3513 3512 3511 3510 3509 3508 3507 3506 3505 3504 3503 3502 3501 3500 3499 3498 3497 3496 3495 3494 3493 3492 3491 3490 3489 3488 3487 3486 3485 3484 3483 3482 3481 3480 3479 3478 3477 3476 3475 3474 3473 3472 3471 3470 3469 3468 3467 3466 3465 3464 3463 3462 3461 3460 3459 3458 3457 3456 3455 3454 3453 3452 3451 3450 3449 3448 3447 3446 3445 3444 3443 3442 3441 3440 3439 3438 3437 3436 3435 3434 3433 3432 3431 3430 3429 3428 3427 3426 3425 3424 3423 3422 3421 3420 3419 3418 3417 3416 3415 3414 3413 3412 3411 3410 3409 3408 3407 3406 3405 3404 3403 3402 3401 3400 3399 3398 3397 3396 3395 3394 3393 3392 3391 3390 3389 3388 3387 3386 3385 3384 3383 3382 3381 3380 3379 3378 3377 3376 3375 3374 3373 3372 3371 3370 3369 3368 3367 3366 3365 3364 3363 3362 3361 3360 3359 3358 3357 3356 3355 3354 3353 3352 3351 3350 3349 3348 3347 3346 3345 3344 3343 3342 3341 3340 3339 3338 3337 3336 3335 3334 3333 3332 3331 3330 3329 3328 3327 3326 3325 3324 3323 3322 3321 3320 3319 3318 3317 3316 3315 3314 3313 3312 3311 3310 3309 3308 3307 3306 3305 3304 3303 3302 3301 3300 3299 3298 3297 3296 3295 3294 3293 3292 3291 3290 3289 3288 3287 3286 3285 3284 3283 3282 3281 3280 3279 3278 3277 3276 3275 3274 3273 3272 3271 3270 3269 3268 3267 3266 3265 3264 3263 3262 3261 3260 3259 3258 3257 3256 3255 3254 3253 3252 3251 3250 3249 3248 3247 3246 3245 3244 3243 3242 3241 3240 3239 3238 3237 3236 3235 3234 3233 3232 3231 3230 3229 3228 3227 3226 3225 3224 3223 3222 3221 3220 3219 3218 3217 3216 3215 3214 3213 3212 3211 3210 3209 3208 3207 3206 3205 3204 3203 3202 3201 3200 3199 3198 3197 3196 3195 3194 3193 3192 3191 3190 3189 3188 3187 3186 3185 3184 3183 3182 3181 3180 3179 3178 3177 3176 3175 3174 3173 3172 3171 3170 3169 3168 3167 3166 3165 3164 3163 3162 3161 3160 3159 3158 3157 3156 3155 3154 3153 3152 3151 3150 3149 3148 3147 3146 3145 3144 3143 3142 3141 3140 3139 3138 3137 3136 3135 3134 3133 3132 3131 3130 3129 3128 3127 3126 3125 3124 3123 3122 3121 3120 3119 3118 3117 3116 3115 3114 3113 3112 3111 3110 3109 3108 3107 3106 3105 3104 3103 3102 3101 3100 3099 3098 3097 3096 3095 3094 3093 3092 3091 3090 3089 3088 3087 3086 3085 3084 3083 3082 3081 3080 3079 3078 3077 3076 3075 3074 3073 3072 3071 3070 3069 3068 3067 3066 3065 3064 3063 3062 3061 3060 3059 3058 3057 3056 3055 3054 3053 3052 3051 3050 3049 3048 3047 3046 3045 3044 3043 3042 3041 3040 3039 3038 3037 3036 3035 3034 3033 3032 3031 3030 3029 3028 3027 3026 3025 3024 3023 3022 3021 3020 3019 3018 3017 3016 3015 3014 3013 3012 3011 3010 3009 3008 3007 3006 3005 3004 3003 3002 3001 3000 2999 2998 2997 2996 2995 2994 2993 2992 2991 2990 2989 2988 2987 2986 2985 2984 2983 2982 2981 2980 2979 2978 2977 2976 2975 2974 2973 2972 2971 2970 2969 2968 2967 2966 2965 2964 2963 2962 2961 2960 2959 2958 2957 2956 2955 2954 2953 2952 2951 2950 2949 2948 2947 2946 2945 2944 2943 2942 2941 2940 2939 2938 2937 2936 2935 2934 2933 2932 2931 2930 2929 2928 2927 2926 2925 2924 2923 2922 2921 2920 2919 2918 2917 2916 2915 2914 2913 2912 2911 2910 2909 2908 2907 2906 2905 2904 2903 2902 2901 2900 2899 2898 2897 2896 2895 2894 2893 2892 2891 2890 2889 2888 2887 2886 2885 2884 2883 2882 2881 2880 2879 2878 2877 2876 2875 2874 2873 2872 2871 2870 2869 2868 2867 2866 2865 2864 2863 2862 2861 2860 2859 2858 2857 2856 2855 2854 2853 2852 2851 2850 2849 2848 2847 2846 2845 2844 2843 2842 2841 2840 2839 2838 2837 2836 2835 2834 2833 2832 2831 2830 2829 2828 2827 2826 2825 2824 2823 2822 2821 2820 2819 2818 2817 2816 2815 2814 2813 2812 2811 2810 2809 2808 2807 2806 2805 2804 2803 2802 2801 2800 2799 2798 2797 2796 2795 2794 2793 2792 2791 2790 2789 2788 2787 2786 2785 2784 2783 2782 2781 2780 2779 2778 2777 2776 2775 2774 2773 2772 2771 2770 2769 2768 2767 2766 2765 2764 2763 2762 2761 2760 2759 2758 2757 2756 2755 2754 2753 2752 2751 2750 2749 2748 2747 2746 2745 2744 2743 2742 2741 2740 2739 2738 2737 2736 2735 2734 2733 2732 2731 2730 2729 2728 2727 2726 2725 2724 2723 2722 2721 2720 2719 2718 2717 2716 2715 2714 2713 2712 2711 2710 2709 2708 2707 2706 2705 2704 2703 2702 2701 2700 2699 2698 2697 2696 2695 2694 2693 2692 2691 2690 2689 2688 2687 2686 2685 2684 2683 2682 2681 2680 2679 2678 2677 2676 2675 2674 2673 2672 2671 2670 2669 2668 2667 2666 2665 2664 2663 2662 2661 2660 2659 2658 2657 2656 2655 2654 2653 2652 2651 2650 2649 2648 2647 2646 2645 2644 2643 2642 2641 2640 2639 2638 2637 2636 2635 2634 2633 2632 2631 2630 2629 2628 2627 2626 2625 2624 2623 2622 2621 2620 2619 2618 2617 2616 2615 2614 2613 2612 2611 2610 2609 2608 2607 2606 2605 2604 2603 2602 2601 2600 2599 2598 2597 2596 2595 2594 2593 2592 2591 2590 2589 2588 2587 2586 2585 2584 2583 2582 2581 2580 2579 2578 2577 2576 2575 2574 2573 2572 2571 2570 2569 2568

MATCHLINE REFER TO DWG CAT-69-401

MATCHLINE REFER TO DWG CAT-69-403

LEGEND

- EXTENT OF WORKS
- NON-TRAFFICABLE CONCRETE PATH 1/901
- TRAFFICABLE CONCRETE PATH 2/901
- EXISTING FOOTPATH BY OTHERS
- COLOURED CONCRETE HOLCIM: SANDSTONE 9/901
- CONCRETE MOW KERB (MK) 3/901
- RUBBER SOFTFALL 6/901
- MULCH ONLY 5/970
- PLAY MULCH SOFTFALL 4/970
- COMPACTED LIMESTONE 10/901
- PROPOSED PLANTING 1-2/970
- TIMBER LOG & STEPPERS 6-7/950
- LIMESTONE RETAINING 12/901
- TURF 3/970
- EXISTING VEGETATION
- LIMESTONE BOULDERS 9/970
- RUBBISH BIN (B) 1/950
- LED LIGHTPOLE 8/950
- SEATING BENCH 2/950
- HANDRAILS 10/950
- TACTILE PAVERS 14/901
- STEEL EDGING (SE) 11/901
- PICNIC SETTING 3/950
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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 42 POS

DRAWING TITLE
HARDSCAPE 2 OF 3
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CLIENT
CATALINA REGIONAL COUNCIL

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DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	05.04.24		

SCALE 1: 200 @ A1 METRES
0 2 4 6 8 10

DRAWING NUMBER CAT-69-402
REV 1

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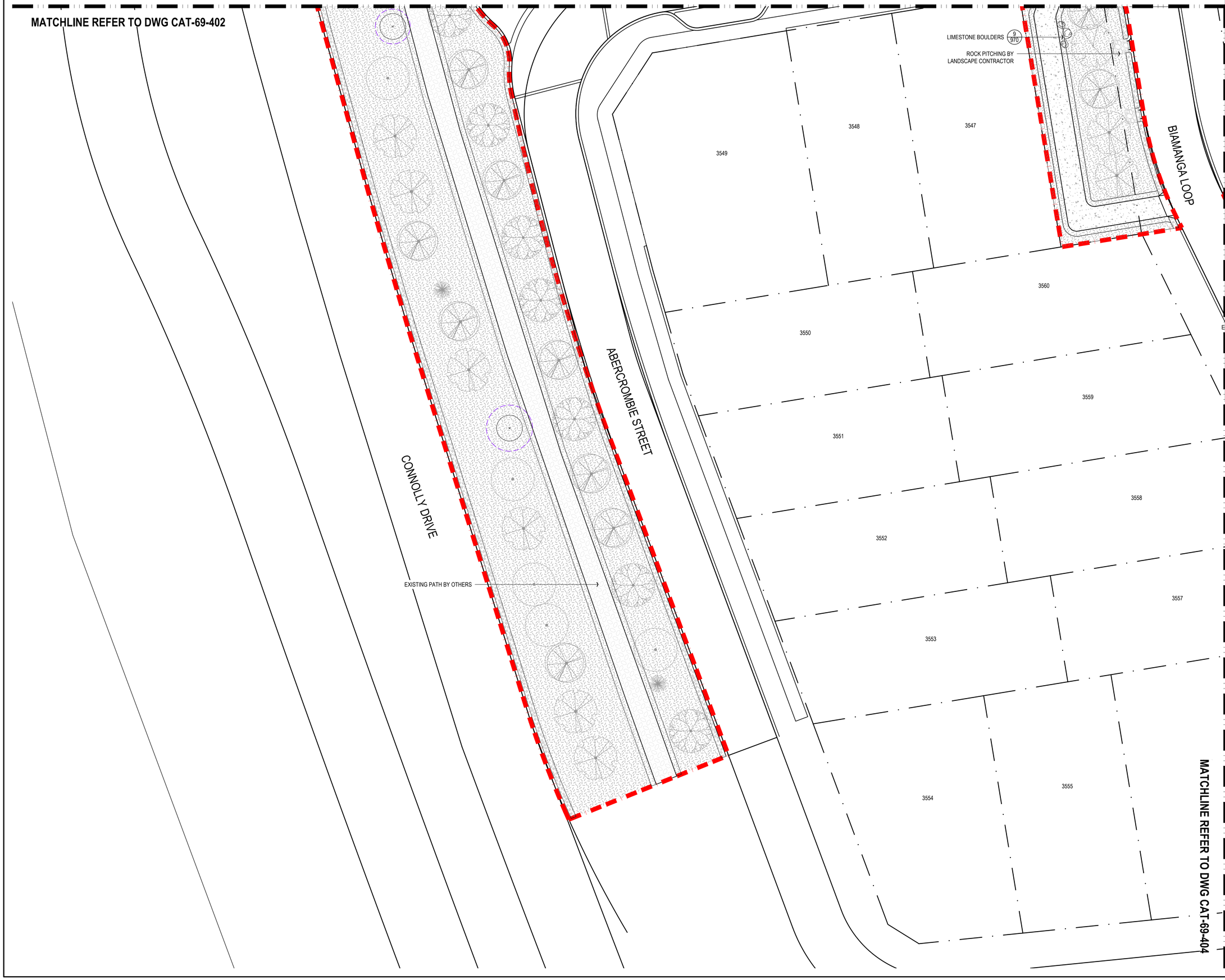
MATCHLINE REFER TO DWG CAT-69-402



MATCHLINE REFER TO DWG CAT-69-404

LEGEND

- EXTENT OF WORKS
- NON-TRAFFICABLE CONCRETE PATH 1/901
- TRAFFICABLE CONCRETE PATH 2/901
- EXISTING FOOTPATH BY OTHERS
- COLOURED CONCRETE HOLCIM: SANDSTONE 9/901
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- LIMESTONE RETAINING 12/901
- TURF 3/970
- EXISTING VEGETATION
- LIMESTONE BOULDERS 9/970
- RUBBISH BIN (B) 1/950
- LED LIGHTPOLE 8/950
- SEATING BENCH 2/950
- HANDRAILS 10/950
- TACTILE PAVERS 14/901
- STEEL EDGING (SE) 11/901
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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
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DRAWING TITLE
HARDSCAPE 3 OF 4
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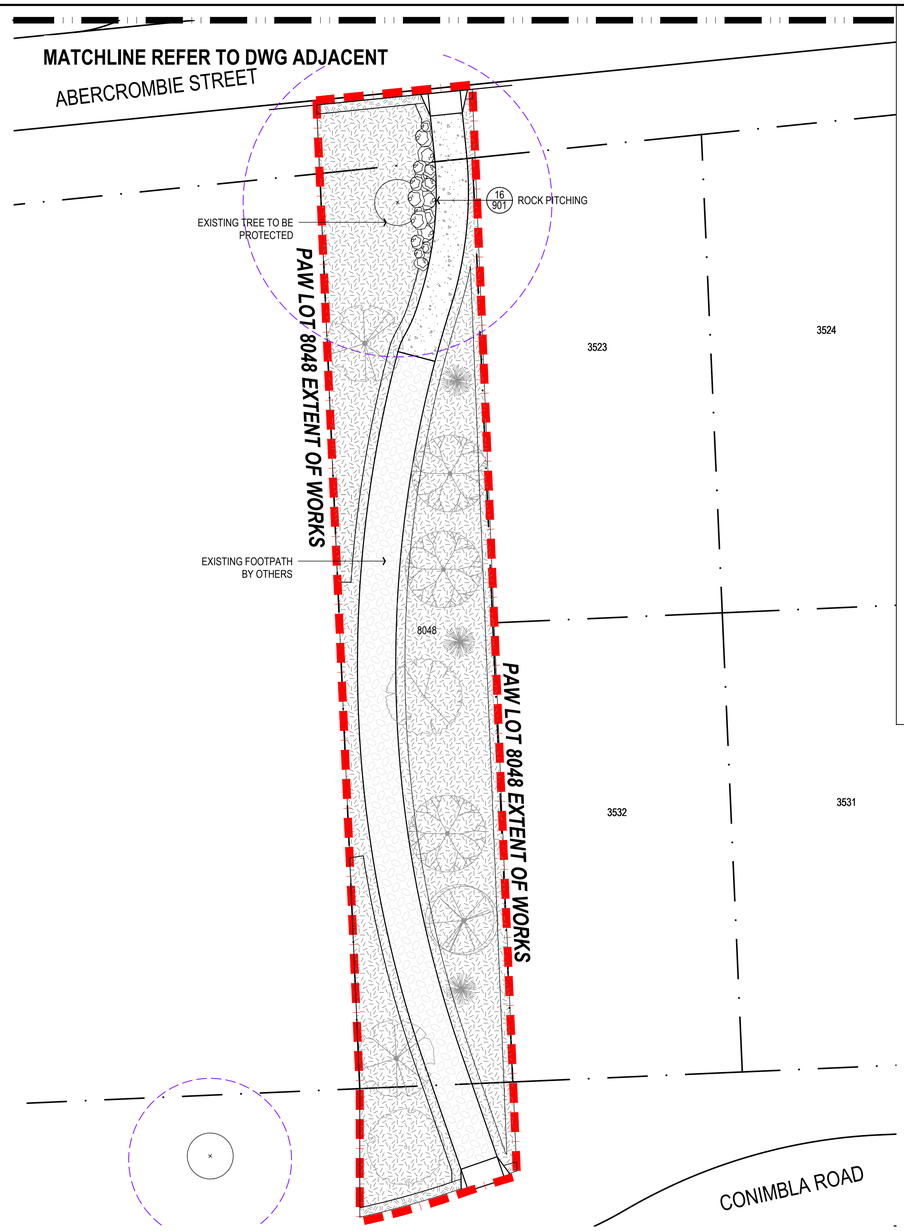
DRAWING NUMBER CAT-69-403
REV 1

J:\CURRENT PROJECTS\CATALINA, TAMALA PARK\C3_DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 42\CAT-69-403.DWG





LEGEND

- EXTENT OF WORKS
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- TRAFFICABLE CONCRETE PATH 2 901
- EXISTING FOOTPATH BY OTHERS
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- CONCRETE MOW KERB 3 901
- RUBBER SOFTFALL 6 901
- MULCH ONLY 5 970
- PLAY MULCH SOFTFALL 4 970
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- LIMESTONE RETAINING 12 901
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- LIMESTONE BOULDERS 9 970
- RUBBISH BIN 1 950
- LED LIGHTPOLE 8 950
- SEATING BENCH 2 950
- HANDRAILS 10 950
- TACTILE PAVERS 14 901
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0	08.11.24	OW	ISSUE FOR CONSTRUCTION
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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 42 POS

DRAWING TITLE
HARDSCAPE 4 OF 4
.
CLIENT
CATALINA REGIONAL COUNCIL

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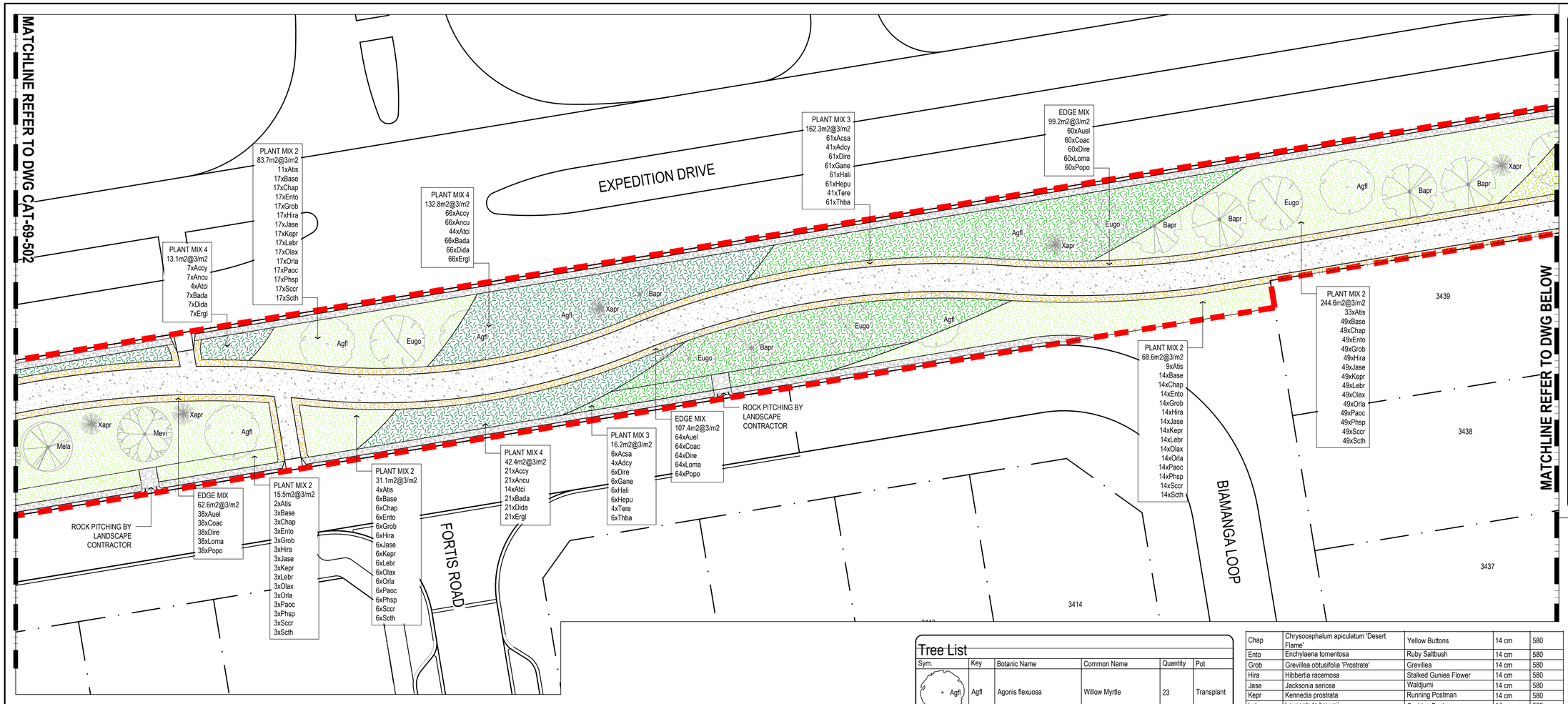
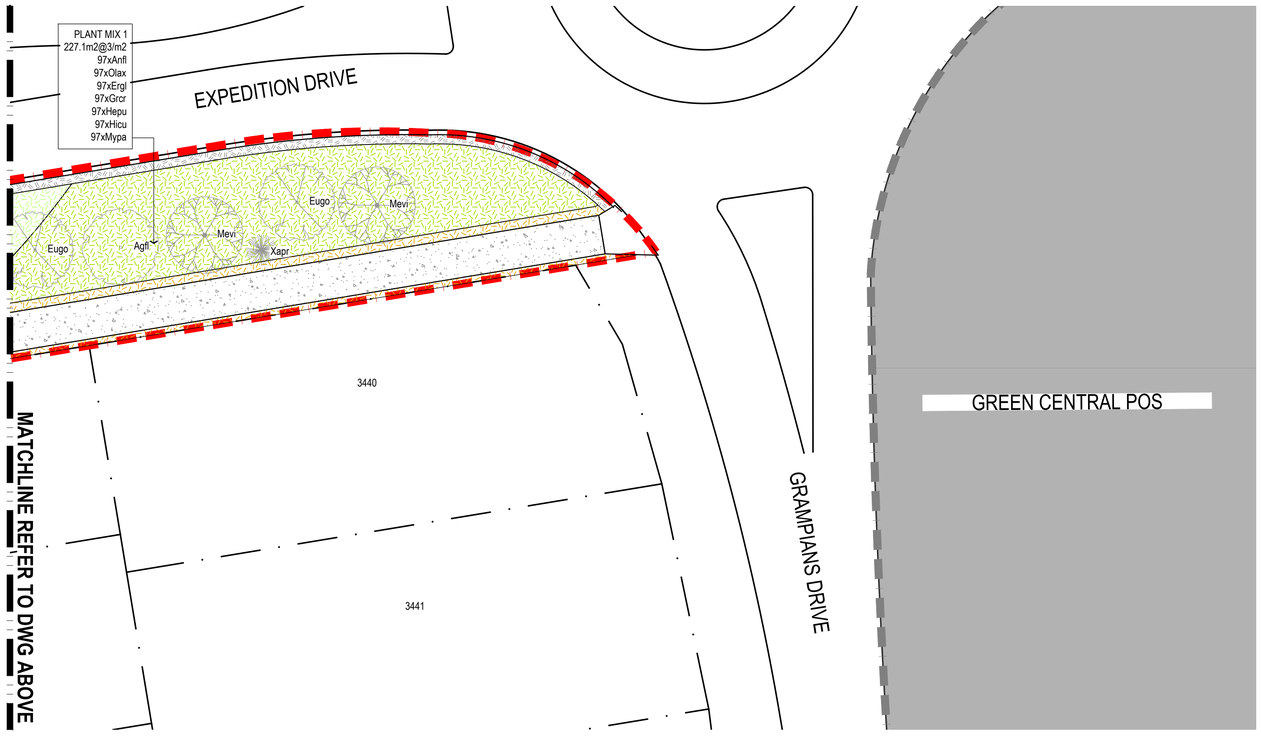
DATE INITIALLY DRAWN	05.04.24		

SCALE 1: 200 @ A1 METRES
0 2 4 6 8 10

DRAWING NUMBER CAT-69-404
REV 2

REF: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CD\DRAWINGS\JOB CODE\ JHTOCAD\JOB CODE\ LANDSCAPE\STAGE 42\CAT-69-404.DWG





Tree List

Sym.	Key	Botanic Name	Common Name	Quantity	Pot
Agfl	Agfl	Agonis flexuosa	Willow Myrtle	23	Transplant
Bapr	Bapr	Banksia prionotes	Acorn Banksia	36	45 Litre
Coma	Coca	Coymbia calophylla	Marri	2	Transplant
Eugo	Eugo	Eucalyptus gomphocephala	Tuart	10	Transplant
Cavi	Euut	Eucalyptus utilis	Coastal Moort	8	200 Litre
Mela	Mela	Melaleuca lanceolata	Rottnest Island Tea Tree	40	200 Litre
Mevi	Mevi	Melaleuca viridiflora	Broad Leaf Paperbark	23	200 Litre
Xapr	Xapr	Xanthorrhoea preissii	Grass Tree	18	Transplant

PLANT AND TREE NUMBERS IN SCHEDULE ARE TO BE USED AS GUIDE ONLY. TENDERERS TO REFER LABELS ON PLANS FOR NUMBERS. PLANT NUMBERS AND SPECIES ARE SUBJECT TO AVAILABILITY.

PLANT MIX 1

Key	Botanic Name	Common Name	Pot	Quantity
Anfl	Anigozanthos flavidus	Kangeroo Paw	14 cm	502
Ergl	Eremophila glabra	Tar Bush	14 cm	502
Grcr	Grevillea crithmifolia	Grevillea	14 cm	502
Hepu	Hemiandra pungens	Snakebush	14 cm	502
Hicu	Hibbertia cuneiformis	Cut-Leaf Hibbertia	14 cm	502
Mypa	Myoporum insulare Prostrate	Ground Cover Boobialla	14 cm	502
Olax	Olearia axillaris	Coastal Daisy Bush	14 cm	502

PLANT MIX 2

Key	Botanic Name	Common Name	Pot	Quantity
Atis	Atriplex isatidea	Coast Saltbush	14 cm	384
Base	Banksia sessilis	Parrot Bush	14 cm	580
Chap	Chrysocephalum apiculatum 'Desert Flame'	Yellow Buttons	14 cm	580
Ento	Enchylaena tomentosa	Ruby Saltbush	14 cm	580
Grob	Grevillea obtusifolia 'Prostrate'	Grevillea	14 cm	580
Hira	Hibbertia racemosa	Stalked Guniea Flower	14 cm	580
Jase	Jacksonia sericea	Waldjumi	14 cm	580
Kepr	Kennedia prostrata	Running Postman	14 cm	580
Lebr	Leucophyta brownii	Cushion Bush	14 cm	580
Olax	Olearia axillaris	Coastal daisy bush	14 cm	580
Orla	Orthrosanthus laxus	Morning Iris	14 cm	580
Paoc	Patersonia occidentalis	Long Purple Flag	14 cm	580
Phsp	Philotheca spicata	Salt and Pepper	14 cm	580
Sccr	Scaevola crassifolia	Cushion Fan Flower	14 cm	580
Scth	Scaevola thesioides	Silky Scaevola	14 cm	580

PLANT MIX 3

Key	Botanic Name	Common Name	Pot	Quantity
Acsa	Acacia saligna 'prostrate'	Wattle	14 cm	450
Adcy	Adenanthos cygnorum	Wooly Bush	14 cm	301
Dire	Dianella revoluta	Flax Lily	14 cm	450
Gane	Gastrolobium capitatum	Bacon and Eggs	14 cm	450
Hali	Hakea lissocarpha	Honey Bush	14 cm	450
Hepu	Hemiandra pungens	Snake Bush	14 cm	450
Tere	Templetonia refusa	Cockies Tongue	14 cm	301
Thba	Thryptomene baeckeacea	Myrtle	14 cm	450

PLANT MIX 4

Key	Botanic Name	Common Name	Pot	Quantity
Accy	Acacia cyclops	Red Eyed Wattle	14 cm	459
Ancu	Angianthus cunninghamii	Coastal Angianthus	14 cm	459
Atci	Atriplex cinerea	Grey Saltbush	14 cm	306
Bada	Banksia dallanneyi	Couch Honeypot	14 cm	459
Dida	Diplolaena dampiera	Dampier's Rose	14 cm	459
Ergl	Eremophila glabra	Tar Bush	14 cm	459

PLANT MIX 5

Key	Botanic Name	Common Name	Pot	Quantity
Alhu	Allocasuarina humilis	Dwarf Sheoak	20 cm	512
Atci	Atriplex cinerea	Grey Saltbush	14 cm	170
Dida	Diplolaena dampiera	Southern Dipolaena	20 cm	512
Dril	Dryandra lindleyana	Couch Honeypot	20 cm	512

PLANT MIX 6

Key	Botanic Name	Common Name	Pot	Quantity
Anvi	Anigozanthos viridis	Green Kangaroo Paw	14 cm	74
Babl	Banksia blechnifolia	Banksia	14 cm	74
Legl	Lepidosperma gladiatum	Coast Sword-sedge	14 cm	74

EDGE MIX

Key	Botanic Name	Common Name	Pot	Quantity
Auel	Austrostipa elegentissima	Feather Spear-Grass	14 cm	1063
Coac	Conostylis aculeata	Cottonhead	14 cm	1063
Dire	Dianella revoluta	Blue Flax-Lily	14 cm	1063
Loma	Lomandra maritima	Maritime Mat Rush	14 cm	1063
Popo	Poa poiformis	Tussock Grass	14 cm	1063

LEGEND

- EXTENT OF WORKS
- PLANTING MIX 1 — 1-2 970
- PLANTING MIX 2 — 1-2 970
- PLANTING MIX 3 — 1-2 970
- PLANTING MIX 4 — 1-2 970
- PLANTING MIX 5 — 1-2 970
- EDGE MIX — 1-2 970
- TURF — 3 970
- MULCH ONLY — 5 970
- EXISTING VEGETATION TO BE PROTECTED
- PROPOSED TREES — 6-8 970
- EXISTING TREES TO BE RETAINED AND PROTECTED
- EXISTING TREE CANOPY COVER

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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 42 POS
DRAWING TITLE
PLANTING 1 OF 4
CLIENT
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DATE INITIALLY DRAWN	05.04.24		

SCALE 1: 200 @ A1 METRES
0 2 4 6 8 10

DRAWING NUMBER CAT-69-501
REV 3

SEE U:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CAD\DRAWINGS\LDB CODE\ LANDSCAPE\STAGE 42\CAT69_STAGE 42 POS_PLANTING

EXPEDITION DRIVE

CONNOLLY DRIVE

BIAMANGA LOOP

ABERCROMBIE STREET

PLANT MIX 1
223.8m2@3/m2
96xAnfl
96xOlax
96xErgl
96xGrcr
96xHepu
96xHicu
96xMypa

PLANT MIX 2
128.0m2@3/m2
17xAtis
26xBase
26xChap
26xEnto
26xGrob
26xHira
26xJase
26xKepr
26xLebr
26xOlax
26xOrla
26xPaoc
26xPhsp
26xSccr
26xScth

PLANT MIX 2
59.4m2@3/m2
8xAtis
12xBase
12xChap
12xEnto
12xGrob
12xHira
12xJase
12xKepr
12xLebr
12xOlax
12xOrla
12xPaoc
12xPhsp
12xSccr
12xScth

PLANT MIX 3
21.2m2@3/m2
8xAcsa
5xAdcy
8xDire
8xGane
8xHali
8xHepu
5xTere
8xThba

PLANT MIX 3
150.7m2@3/m2
57xAcsa
38xAdcy
57xDire
57xGane
57xHali
57xHepu
38xTere
57xThba

PLANT MIX 4
35.0m2@3/m2
17xAccy
17xAncu
12xAtci
17xBada
17xDida
17xErgl

EDGE MIX
78.1m2@3/m2
47xAuel
47xCoac
47xDire
47xLoma
47xPopo

PLANT MIX 2
35.6m2@3/m2
5xAtis
7xBase
7xChap
7xEnto
7xGrob
7xHira
7xJase
7xKepr
7xLebr
7xOlax
7xOrla
7xPaoc
7xPhsp
7xSccr
7xScth

PLANT MIX 1
12.1m2@3/m2
5xAnfl
5xOlax
5xErgl
5xGrcr
5xHepu
5xHicu
5xMypa

EDGE MIX
42.8m2@3/m2
26xAuel
26xCoac
26xDire
26xLoma
26xPopo

PLANT MIX 1
4.9m2@3/m2
2xAnfl
2xOlax
2xErgl
2xGrcr
2xHepu
2xHicu
2xMypa

PLANT MIX 2
501.1m2@3/m2
67xAtis
100xBase
100xChap
100xEnto
100xGrob
100xHira
100xJase
100xKepr
100xLebr
100xOlax
100xOrla
100xPaoc
100xPhsp
100xSccr
100xScth

PLANT MIX 6
19.0m2@3/m2
19xAnvi
19xBabl
19xLegl

PLANT MIX 1
140.6m2@3/m2
60xAnfl
60xOlax
60xErgl
60xGrcr
60xHepu
60xHicu
60xMypa

EDGE MIX
23.8m2@3/m2
14xAuel
14xCoac
14xDire
14xLoma
14xPopo

PLANT MIX 2
9.1m2@3/m2
1xAtis
2xBase
2xChap
2xEnto
2xGrob
2xHira
2xJase
2xKepr
2xLebr
2xOlax
2xOrla
2xPaoc
2xPhsp
2xSccr
2xScth

PLANT MIX 2
102.7m2@3/m2
14xAtis
21xBase
21xChap
21xEnto
21xGrob
21xHira
21xJase
21xKepr
21xLebr
21xOlax
21xOrla
21xPaoc
21xPhsp
21xSccr
21xScth

EDGE MIX
177.7m2@3/m2
107xAuel
107xCoac
107xDire
107xLoma
107xPopo

EDGE MIX
101.8m2@3/m2
61xAuel
61xCoac
61xDire
61xLoma
61xPopo

PLANT MIX 1
85.1m2@3/m2
36xAnfl
36xOlax
36xErgl
36xGrcr
36xHepu
36xHicu
36xMypa

PLANT MIX 2
128.5m2@3/m2
17xAtis
26xBase
26xChap
26xEnto
26xGrob
26xHira
26xJase
26xKepr
26xLebr
26xOlax
26xOrla
26xPaoc
26xPhsp
26xSccr
26xScth

PLANT MIX 3
66.2m2@3/m2
25xAcsa
17xAdcy
25xDire
25xGane
25xHali
25xHepu
17xTere
25xThba

PLANT MIX 3
119m2@3/m2
45xAcsa
30xAdcy
45xDire
45xGane
45xHali
45xHepu
30xTere
45xThba

PLANT MIX 4
51.7m2@3/m2
26xAccy
26xAncu
17xAtci
26xBada
26xDida
26xErgl

EDGE MIX
37.5m2@3/m2
22xAuel
22xCoac
22xDire
22xLoma
22xPopo

PLANT MIX 6
18.8m2@3/m2
19xAnvi
19xBabl
19xLegl

EDGE MIX
18.7m2@3/m2
11xAuel
11xCoac
11xDire
11xLoma
11xPopo

PLANT MIX 2
154m2@3/m2
21xAtis
31xBase
31xChap
31xEnto
31xGrob
31xHira
31xJase
31xKepr
31xLebr
31xOlax
31xOrla
31xPaoc
31xPhsp
31xSccr
31xScth

PLANT MIX 6
2.6m2@3/m2
3xAnvi
3xBabl
3xLegl

EDGE MIX
3.9m2@3/m2
2xAuel
2xCoac
2xDire
2xLoma
2xPopo

PLANT MIX 6
33.1m2@3/m2
33xAnvi
33xBabl
33xLegl

Agfl Bapr Xapr Mevi Mela Euut

MATCHLINE REFER TO DWG CAT-69-501

MATCHLINE REFER TO DWG CAT-69-503

LEGEND

- EXTENT OF WORKS
- PLANTING MIX 1 — 1:2 970
- PLANTING MIX 2 — 1:2 970
- PLANTING MIX 3 — 1:2 970
- PLANTING MIX 4 — 1:2 970
- PLANTING MIX 5 — 1:2 970
- EDGE MIX — 1:2 970
- TURF — 1 970
- MULCH ONLY — 5 970
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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 42 POS

DRAWING TITLE
PLANTING 2 OF 4

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SCALE 1: 200 @ A1 METRES
0 2 4 6 8 10

DRAWING NUMBER
CAT-69-502

REV 1

REF: U:\DRIVE\PROJECTS\CATALINA, TAMALA PARK\CLIENT DRAWINGS\CAD FILES\CAD\LANDCAD\LOT CODE\ LANDCAPE\STAGE 42\CAT69_STAGE 42 POS.DWG

MATCHLINE REFER TO DWG CAT-69-502

PLANT MIX 4
116.6m2@3/m2
58xAccy
58xAncu
39xAtci
58xBada
58xDida
58xErgl

PLANT MIX 2
135.3m2@3/m2
18xAtis
27xBase
27xChap
27xEnto
27xGrob
27xHira
27xJase
27xKepr
27xLebr
27xOlax
27xOrla
27xPaoc
27xPhsp
27xSccr
27xScth

PLANT MIX 4
142.3m2@3/m2
71xAccy
71xAncu
47xAtci
71xBada
71xDida
71xErgl

PLANT MIX 3
179.2m2@3/m2
67xAcsa
45xAdcy
67xDire
67xGane
67xHali
67xHepu
45xTere
67xThba

PLANT MIX 2
243.3m2@3/m2
32xAtis
49xBase
49xChap
49xEnto
49xGrob
49xHira
49xJase
49xKepr
49xLebr
49xOlax
49xOrla
49xPaoc
49xPhsp
49xSccr
49xScth

PLANT MIX 1
72.3m2@3/m2
31xAnfl
31xOlax
31xErgl
31xGrcr
31xHepu
31xHicu
31xMypa

PLANT MIX 2
109.3m2@3/m2
15xAtis
22xBase
22xChap
22xEnto
22xGrob
22xHira
22xJase
22xKepr
22xLebr
22xOlax
22xOrla
22xPaoc
22xPhsp
22xSccr
22xScth

PLANT MIX 4
54.8m2@3/m2
27xAccy
27xAncu
18xAtci
27xBada
27xDida
27xErgl

PLANT MIX 3
74.1m2@3/m2
28xAcsa
19xAdcy
28xDire
28xGane
28xHali
28xHepu
19xTere
28xThba

PLANT MIX 2
47.4m2@3/m2
6xAtis
9xBase
9xChap
9xEnto
9xGrob
9xHira
9xJase
9xKepr
9xLebr
9xOlax
9xOrla
9xPaoc
9xPhsp
9xSccr
9xScth

PLANT MIX 1
167.6m2@3/m2
72xAnfl
72xOlax
72xErgl
72xGrcr
72xHepu
72xHicu
72xMypa

EDGE MIX
25.5m2@3/m2
15xAuel
15xCoac
15xDire
15xLoma
15xPopo

PLANT MIX 2
174.8m2@3/m2
23xAtis
35xBase
35xChap
35xEnto
35xGrob
35xHira
35xJase
35xKepr
35xLebr
35xOlax
35xOrla
35xPaoc
35xPhsp
35xSccr
35xScth

EDGE MIX
35.6m2@3/m2
21xAuel
21xCoac
21xDire
21xLoma
21xPopo

CONNOLLY DRIVE

BIAMANGA LOOP

ABERCROMBIE STREET

LEGEND

- EXTENT OF WORKS
- PLANTING MIX 1 (1:2 @ 970)
- PLANTING MIX 2 (1:2 @ 970)
- PLANTING MIX 3 (1:2 @ 970)
- PLANTING MIX 4 (1:2 @ 970)
- PLANTING MIX 5 (1:2 @ 970)
- EDGE MIX (1:2 @ 970)
- TURF (1 @ 970)
- MULCH ONLY (5 @ 970)
- EXISTING VEGETATION TO BE PROTECTED
- PROPOSED TREES (6-8 @ 970)
- EXISTING TREES TO BE RETAINED AND PROTECTED
- EXISTING TREE CANOPY COVER

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0	08.11.24	OW	ISSUE FOR CONSTRUCTION
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A	22.04.24	JL	ISSUE FOR COMMENT
REV	DATE	BY	ISSUE OR AMENDMENT

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Integrated Science & Design
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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 42 POS

DRAWING TITLE
PLANTING 3 OF 4
.
CLIENT
CATALINA REGIONAL COUNCIL

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DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	05.04.24		

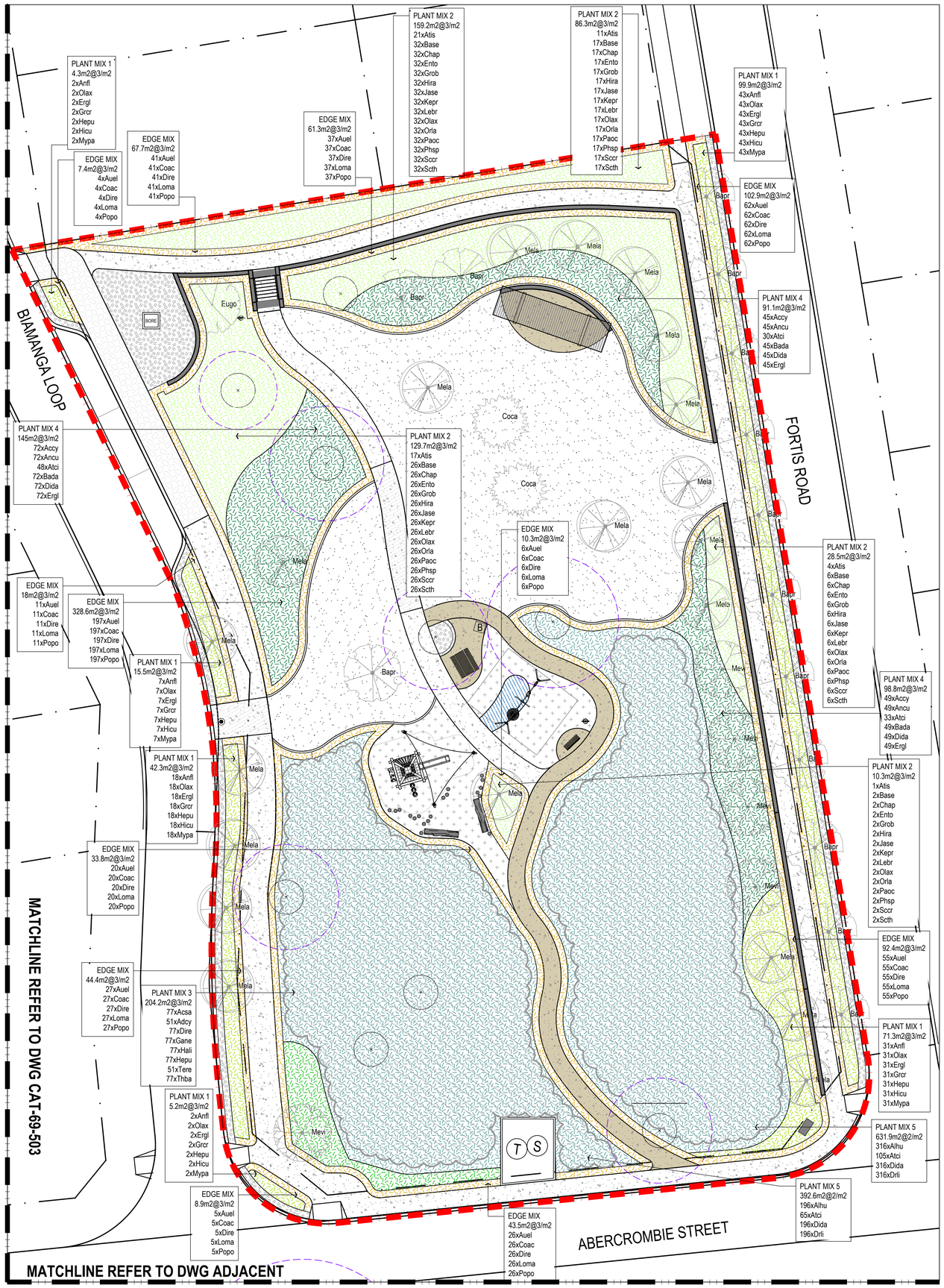
SCALE 1: 200 @A1 METRES
0 2 4 6 8 10

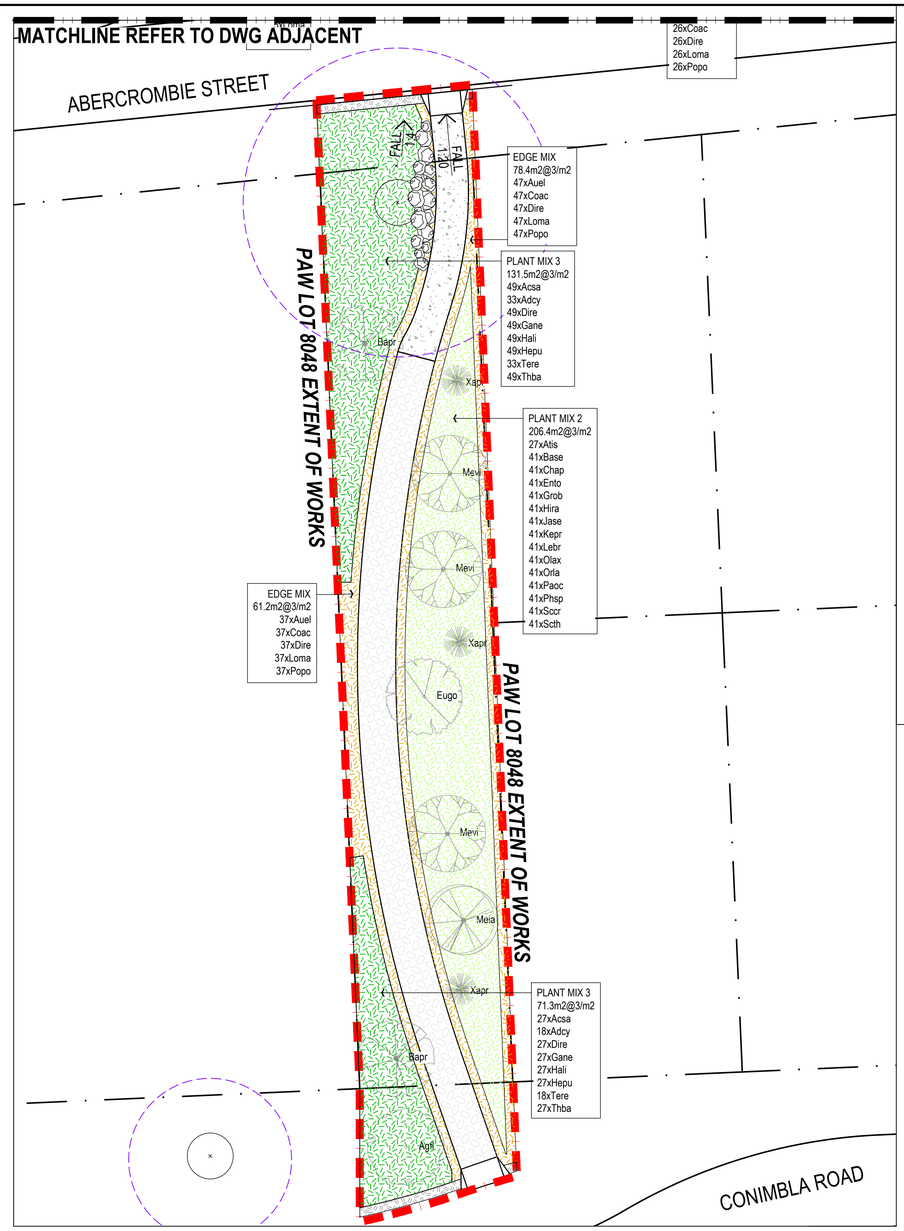
DRAWING NUMBER
CAT-69-503

REV
1

MATCHLINE REFER TO DWG CAT-69-504

REF: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLD\DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 42\CAT69_STAGE 42 POS.DWG





LEGEND

- EXTENT OF WORKS
- PLANTING MIX 1 — 1:2 970
- PLANTING MIX 2 — 1:2 970
- PLANTING MIX 3 — 1:2 970
- PLANTING MIX 4 — 1:2 970
- PLANTING MIX 5 — 1:2 970
- EDGE MIX — 1:2 970
- TURF — 1 970
- MULCH ONLY — 5 970
- EXISTING VEGETATION TO BE PROTECTED
- PROPOSED TREES — 6-8 970
- EXISTING TREES TO BE RETAINED AND PROTECTED
- EXISTING TREE CANOPY COVER

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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 42 POS

DRAWING TITLE
PLANTING 4 OF 4
.
CLIENT
CATALINA REGIONAL COUNCIL

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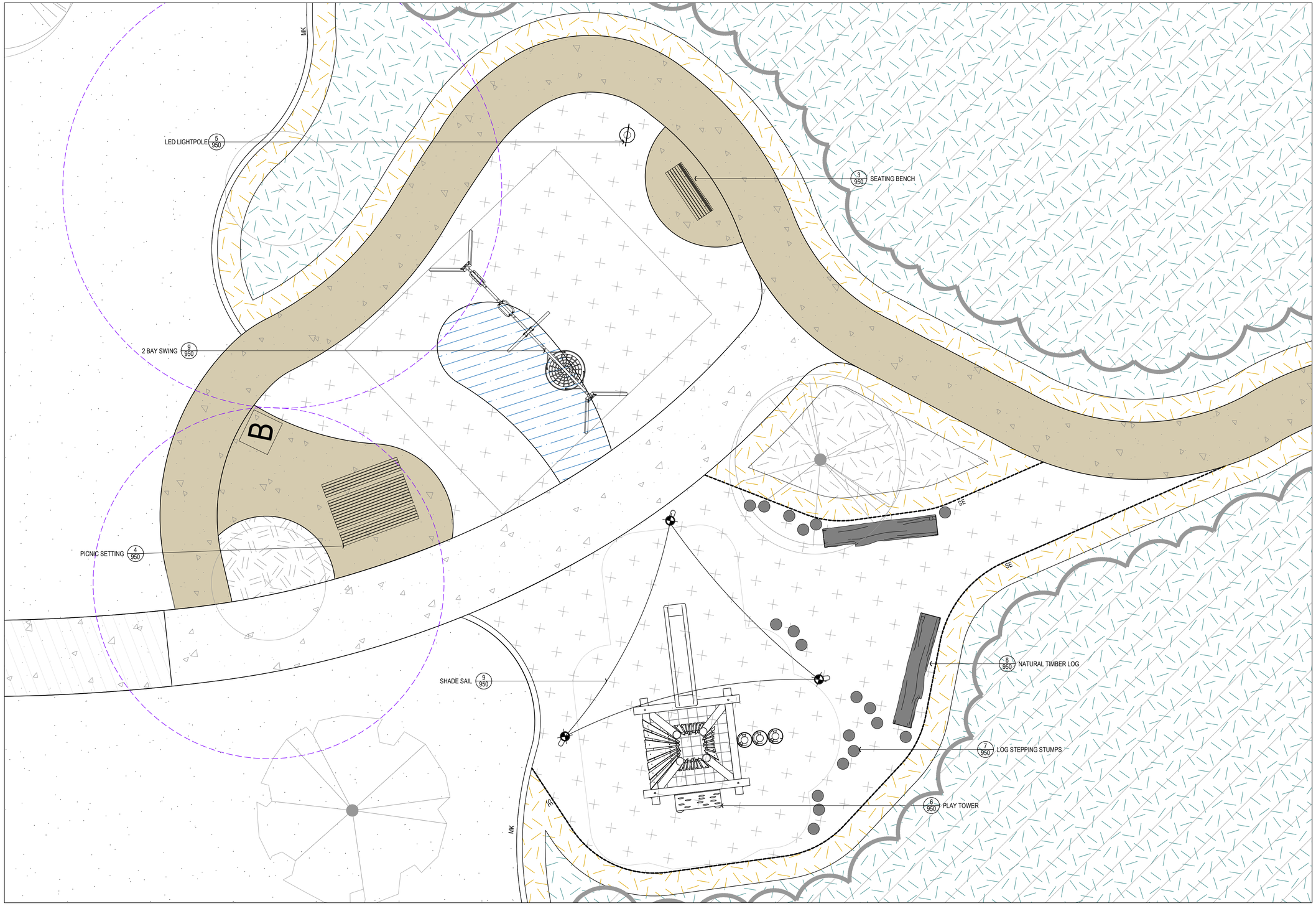
DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	05.04.24		

SCALE 1: 200 @ A1 METRES
0 2 4 6 8 10

DRAWING NUMBER CAT-69-504
REV 2

REF: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CL\DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 42\CAT-69-504.DWG



LEGEND

- EXTENT OF WORKS
- NON-TRAFFICABLE CONCRETE PATH — 1 901
- TRAFFICABLE CONCRETE PATH — 2 901
- EXISTING FOOTPATH BY OTHERS
- COLOURED CONCRETE HOLCIM: SANDSTONE — 9 901
- CONCRETE MOW KERB — 3 901
- RUBBER SOFTFALL — 6 901
- MULCH ONLY — 5 970
- PLAY MULCH SOFTFALL — 4 970
- COMPACTED LIMESTONE — 10 901
- PROPOSED PLANTING — 1-2 970
- TIMBER LOG & STEPPERS — 6-7 950
- LIMESTONE RETAINING — 12 901
- TURF — 3 970
- EXISTING VEGETATION
- LIMESTONE BOULDERS — 9 970
- RUBBISH BIN — 1 950
- LED LIGHTPOLE — 8 950
- SEATING BENCH — 2 950
- HANDRAILS — 10 950
- TACTILE PAVERS — 14 901
- STEEL EDGING — 11 901
- PICNIC SETTING — 3 950
- REMOVABLE BOLLARD — 17 901
- PROPOSED TREES — 6-8 970
- EXISTING TREES TO BE RETAINED AND PROTECTED
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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 42 POS
DRAWING TITLE
PLAYGROUND PLAN
CLIENT
CATALINA REGIONAL COUNCIL

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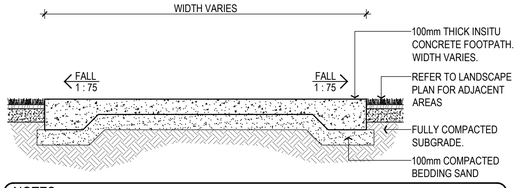
SCALE 1: 50 @ A1 METRES
0 0.5 1 1.5 2 2.5

DRAWING NUMBER
CAT-69-600
REV 2

REF \\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLD\DRAWINGS\JOB CODE\ LANDSCAPE\STAGE 42\CAD\ STAGE 42 POS.DWG

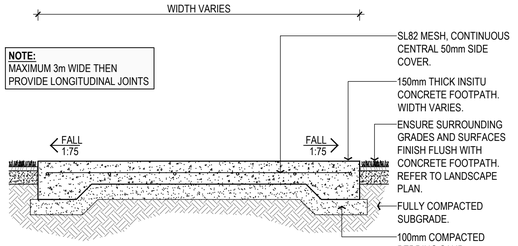


NOTES

1. FOUNDATION TO BE COMPACTED TO 95% MDD.
2. ALL CONCRETE FOOTPATH CONSTRUCTION TO BE A MIN 32MPa, 20mm AGGREGATE AND MAX SLUMP OF 80-100mm.
3. BEDDING - SAND (100mm MINIMUM).
4. EXPANSION JOINT EVERY 5.0M AS. SEE DETAIL 04/901
5. CONTRACTION JOINT EVERY 2.5M. SEE DETAIL 05/901
6. SURFACE TO BE BROOM FINISH, NON-SLIP, WITH SMOOTH EDGE APPROX 75mm WIDE AT EDGES AND JOINTS.
7. LONGITUDINAL GRADE SHOULD NOT EXCEED 1 IN 20.
8. WHERE LONGITUDINAL GRADE IS GREATER THAN 1 IN 14, LANDINGS WILL BE PROVIDED EVERY 6m.
9. VERTICAL CLEARANCES ALONG PATHS SHOULD BE A MINIMUM OF 2m.
10. WHERE STREET FURNITURE (POLES, BENCHES, RUBBISH BINS, POSTS, ETC) ARE LOCATED IN PATH, A MIN UNOBSTRUCTED WIDTH OF 1.2m MUST BE MAINTAINED.
11. MAXIMUM 3m WIDE THEN PROVIDE LONGITUDINAL JOINTS.

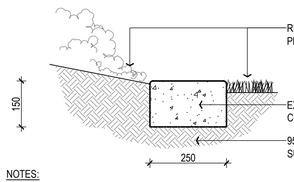
1 / 901 INSITU CONCRETE FOOTPATH - TYPICAL

SECTION — SCALE 1:20



2 / 901 REINFORCED CONCRETE PATH FOR MAINTENANCE VEHICLE ACCESS

SECTION — SCALE 1:20

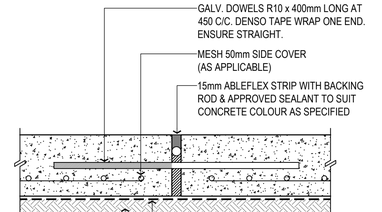


NOTES:

1. ALL CONCRETE TO BE 32MPa @ 28 DAYS
2. CONTRACTION JOINTS: RULED / STAMPED AT 1.5M INTERVALS
3. EXPANSION JOINTS: 6.0M INTERVALS TO LINE UP WITH FOOTPATH JOINTS.

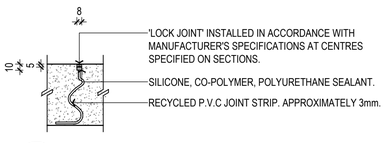
3 / 901 MOWING KERB

SECTION — SCALE 1:10



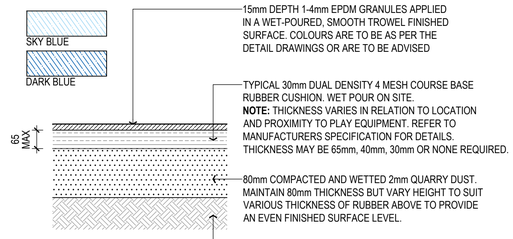
4 / 901 TYPICAL EDGE DETAIL (NON-TRAFFICABLE)

SECTION — SCALE 1:5



5 / 901 TYPICAL CONTRACTION JOINT

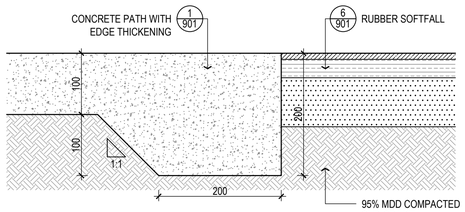
SECTION — SCALE 1:5



NOTE: INSTALL ALL PLAY EQUIPMENT AND SAFETY SURFACES TO RELEVANT AUSTRALIAN STANDARDS.

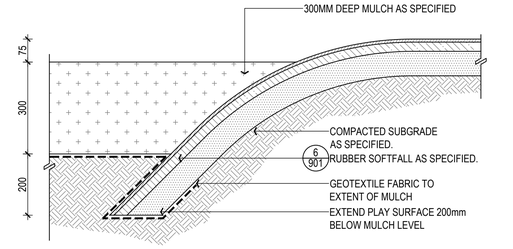
6 / 901 RUBBER SOFTFALL SURFACE

SECTION — SCALE 1:5



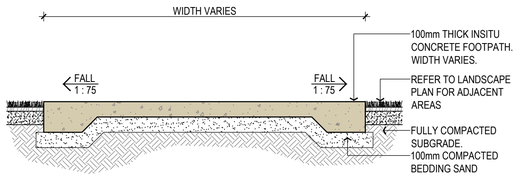
7 / 901 RUBBER SOFTFALL SURFACE TO PATH INTERFACE

SECTION — SCALE 1:5



8 / 901 RUBBER SOFTFALL AND PLAY MULCH INTERFACE

SECTION — SCALE 1:10

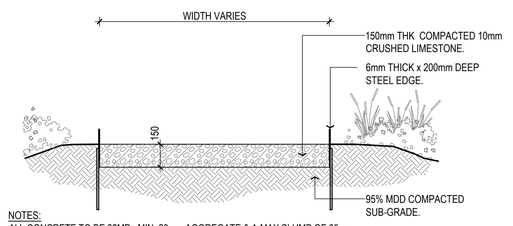


NOTES

FINISH - COLOURED CONCRETE BY HOLCIM
COLOUR - SANDSTONE
MAXIMUM 3m WIDE THEN PROVIDE LONGITUDINAL JOINTS

9 / 901 COLOURED CONCRETE

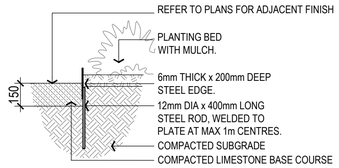
SECTION — SCALE 1:20



NOTES:
ALL CONCRETE TO BE 32MPa MIN, 20mm AGGREGATE & A MAX SLUMP OF 65mm.

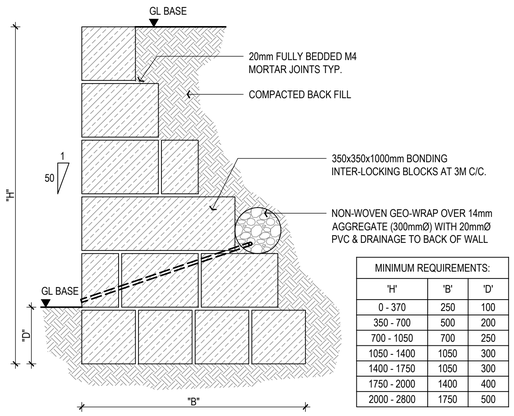
10 / 901 COMPACTED LIMESTONE

SECTION — SCALE 1:20



11 / 901 STEEL EDGING

SECTION — SCALE 1:20



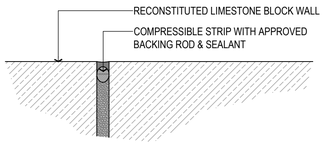
MINIMUM REQUIREMENTS:		
'H'	'B'	'D'
0 - 370	250	100
350 - 700	500	200
700 - 1050	700	250
1050 - 1400	1050	300
1400 - 1750	1050	300
1750 - 2000	1400	400
2000 - 2800	1750	500

NOTES

1. COMPACT GROUND UNDER FOOTING TO RESIST 7 BLOWS PER 300mm OF A STANDARD 16mmØ PENETROMETER OVER A DEPTH OF 600mm.
2. PROVIDE CONTROL JOINTS TO ALL RETAINING WALLS AT 10m CTS MAX. REFER TO DETAIL 13/901.
3. NO BACKFILLING UNTIL 7 DAYS AFTER WALLS HAVE BEEN BUILT.
4. THESE WALLS ARE APPLICABLE FOR SANDY SOIL CONDITIONS ONLY.
5. CLAYEY SOILS TO BE REFERRED TO ENGINEER.
6. HORIZONTAL BACKFILL ONLY.
7. TO REAR OF WALL USE RANDOM COURSED BONDED STONE IN 1 : CEMENT, 2 : LIME, 9, : SAND MORTAR. NO RUBBLE FILL PERMITTED.
8. 'D' TO CONSIST OF COMPACTED SUBGRADE NOT PLAY SAND OR MULCH / ETC.

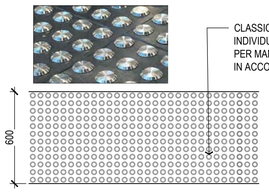
12 / 901 LIMESTONE RETAINING WALL - TYPICAL

SECTION — SCALE 1:20



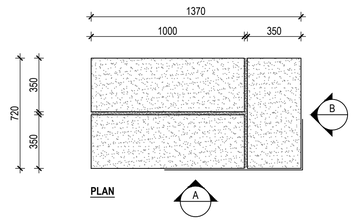
13 / 901 LIMESTONE RETAINING WALL CONTROL JOINT

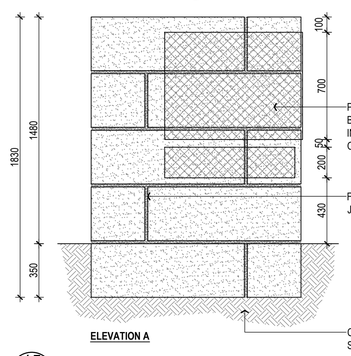
SECTION — SCALE 1:5

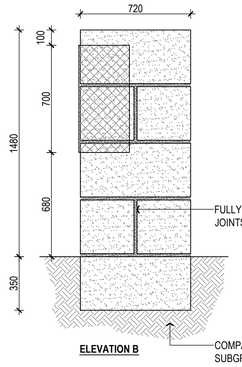


14 / 901 TACTILE STUDS

PLAN — SCALE 1:20







NOTES:

- PANEL AND PLATE TO BE FABRICATED FROM 3mm ALUMINUM SHEETING.
- PANEL TO BE FOLDED PRIOR TO DELIVERY ON SITE.
- PANEL AND PLATE TO BE ADHERED TO LIMESTONE STRUCTURE USING SUITABLE COMPOUND TO ENSURE A PERMANENT FIXING.
- WALL SHALL BE CONSTRUCTED FROM RECONSTITUTED LIMESTONE BLOCKS OF SIZES 1000mm x 350mm x 350mm BUILT IN ACCORDANCE WITH DETAILS ON THIS DRAWING.
- REFER TO LANDSCAPE CONSULTANT'S DRAWINGS FOR LOCATION OF WALL
- DENSITY OF RECONSTITUTED LIMESTONE WALL SHALL BE A MINIMUM OF 1650kg/m
- ENSURE ALL JOINTS ARE FULLY MORTARED.
- MORTAR SHALL BE 1:1:6 (CEMENT; LIME; SAND). MORTAR COLOUR TO MATCH RECONSTITUTED LIMESTONE BLOCKS.
- ALL EXPOSED SURFACES OF WALL SHALL BE COATED WITH ANTI-GRAFFITI TREATMENT ON COMPLETION OF WORKS.

COMPACTION REQUIREMENTS

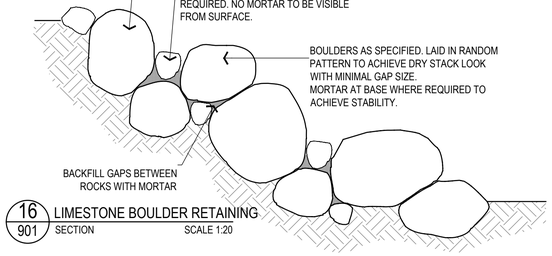
- COMPACT SUB-GRADE BELOW WALL TO A MINIMUM OF 8 BLOWS PER 300mm TESTED USING A STANDARD PERTH PENETROMETER FOR A DEPTH OF 750mm BELOW THE UNDERSIDE OF WALL.

DESIGN WIND LOADING

- TERRAIN CATEGORY 1

15 / 901 PARK SIGN WALL

PLAN & ELEVATIONS — SCALE 1:20



16 / 901 LIMESTONE BOULDER RETAINING

SECTION — SCALE 1:20



PRODUCT NAME	BOLLARD - REMOVABLE 140mm SLEEVE LOCK
PRODUCT SUPPLIER	SAFETY XPRESS
PRODUCT CODE	BOLRSL140M
PRODUCT FINISH	POWDER COATED CARBON STEEL
PRODUCT COLOUR	AS PER CITY OF WANNEROO STANDARDS
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATIONS

17 / 901 REMOVABLE BOLLARD

SECTION — SCALE 1:20

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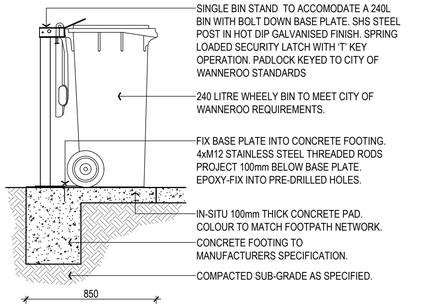


1 / 950 240L WHEELED BIN & STAND DETAIL
SECTION — SCALE 1:20



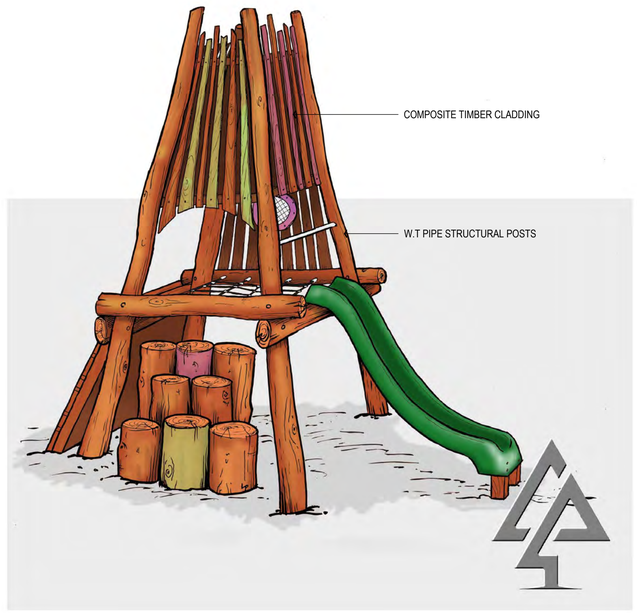
PRODUCT NAME	LINEA SEATING BENCH
PRODUCT SUPPLIER	STREET FURNITURE AUSTRALIA
PRODUCT CODE	LIS10
PRODUCT FINISH	POWDER COATED ALUMINIUM
PRODUCT COLOUR	LEGS: MONUMENT, BATTENS: ALUMINIUM SPOTTED GUM
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATIONS

2 / 950 LINEA SEATING BENCH
IMAGE REFERENCE — NTS



PRODUCT NAME	LINEA TABLE
PRODUCT SUPPLIER	STREET FURNITURE AUSTRALIA
PRODUCT CODE	LIT10-DDA, LIB6
PRODUCT FINISH	POWDER COATED ALUMINIUM
PRODUCT COLOUR	LEGS: MONUMENT, BATTENS: ALUMINIUM SPOTTED GUM
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATIONS

3 / 950 LINEA PICNIC TABLE
IMAGE REFERENCE — NTS



PRODUCT NAME	SUNNINGDALE TOWER
PRODUCT SUPPLIER	VAN RYT INDUSTRIES
PRODUCT CODE	142-SUT
PRODUCT FINISH	HDG CARBON STEEL, COMPOSITE MODWOOD CLADDING
PRODUCT COLOUR	SLIDE: GREEN, ROPE: BEIGE
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATIONS

4 / 950 SUNNINGDALE TOWER
IMAGE REFERENCE — NTS



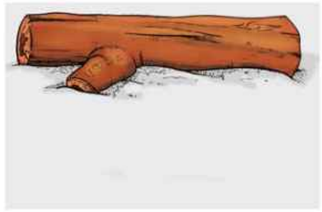
PRODUCT NAME	2 BAY SWING: FLAT - TODDLER - BASKET
PRODUCT SUPPLIER	WILLPLAY, ACTIVE DISCOVERY
PRODUCT CODE	SW-011
PRODUCT FINISH	UV STABLE HDPE, POWDER COATED ALUMINIUM
PRODUCT COLOUR	LEGS: KWILA, BATTENS: SMOOTH CREAM, ROPE: BLACK
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATIONS

5 / 950 2 BAY SWING: FLAT - TODDLER - BASKET
IMAGE REFERENCE — NTS



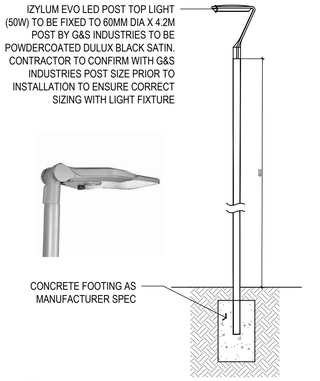
PRODUCT NAME	LOG STEPPING STUMPS
PRODUCT SUPPLIER	VAN RYT INDUSTRIES
PRODUCT CODE	001-STU
PRODUCT FINISH	WESTERN AUSTRALIA JARRAH TIMBER
PRODUCT COLOUR	AS PER MANUFACTURER'S SPECIFICATIONS
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATIONS

6 / 950 LOG STEPPING STUMPS
IMAGE REFERENCE — NTS



PRODUCT NAME	NATURAL TIMBER LOG
PRODUCT SUPPLIER	VAN RYT INDUSTRIES
PRODUCT CODE	005-LOG
PRODUCT FINISH	WESTERN AUSTRALIA JARRAH TIMBER
PRODUCT COLOUR	AS PER MANUFACTURER'S SPECIFICATIONS
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATIONS

7 / 950 NATURAL TIMBER LOG
IMAGE REFERENCE — NTS

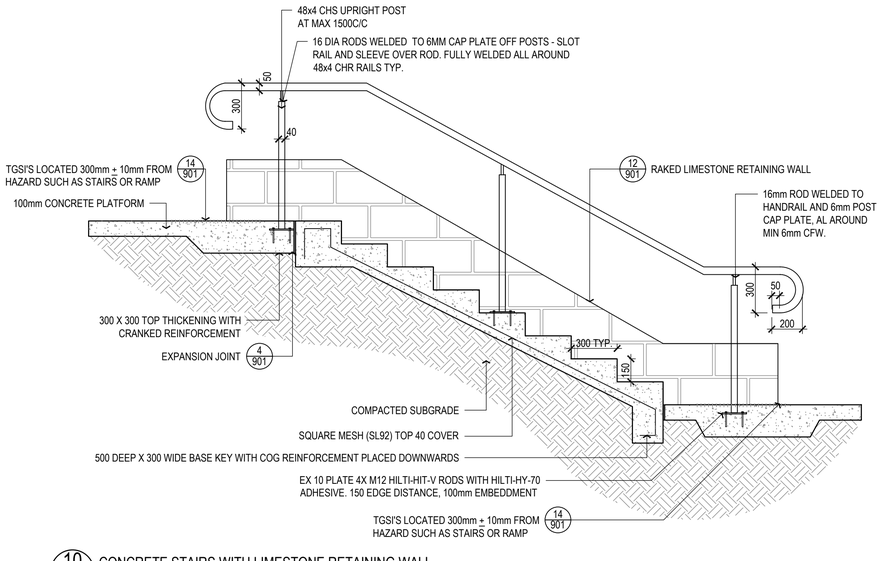


8 / 950 LED LIGHT POLE
IMAGE REFERENCE — SCALE 1:25



PRODUCT NAME	SHADE SAILS
PRODUCT SUPPLIER	WEST COAST SHADE
PRODUCT CODE	
PRODUCT FINISH	GALVANISED STEEL POSTS & Z16 FABRIC
PRODUCT COLOUR	POSTS: MONUMENT, FABRIC: LAGUNA BLUE
PRODUCT FIXING	PER MANUFACTURER'S SPECIFICATIONS

9 / 950 SHADE SAILS
IMAGE REFERENCE — NTS



10 / 950 CONCRETE STAIRS WITH LIMESTONE RETAINING WALL
SECTION — SCALE 1:20

STANDARD NOTES

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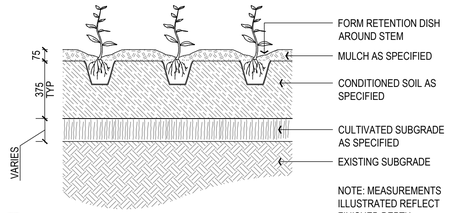
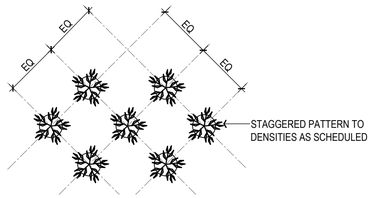
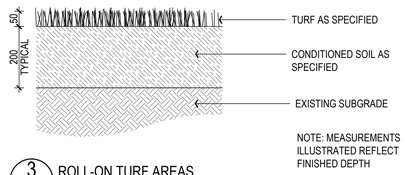


1 970 TUBESTOCK - 200mm POT PLANTING
SECTION — SCALE 1:20



2 970 TYPICAL STAGGERED PLANTING PATTERN
PLAN — SCALE 1:20

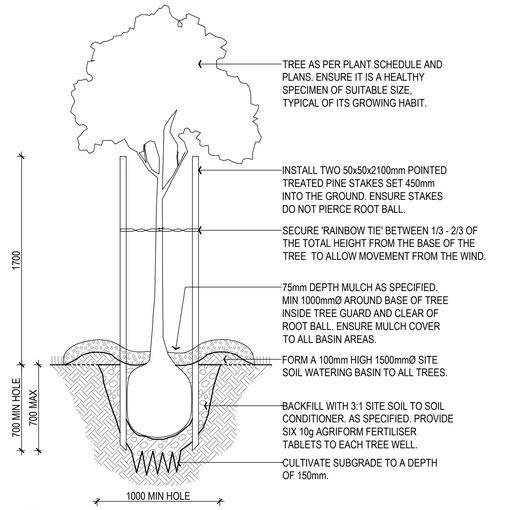


3 970 ROLL-ON TURF AREAS
SECTION — SCALE 1:10

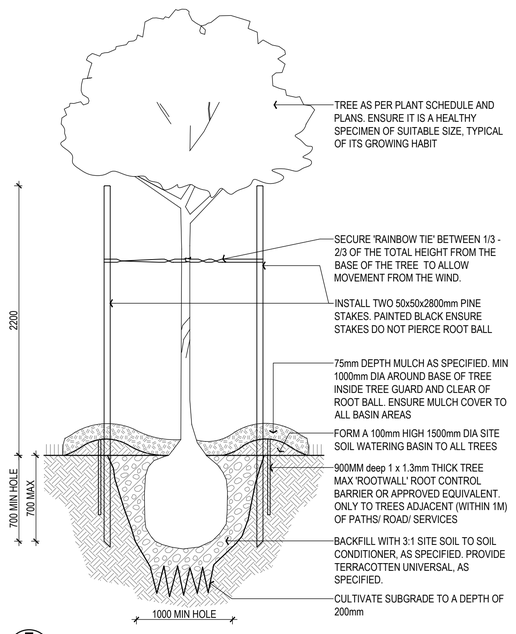
4 970 PLAY MULCH SOFTFALL DETAIL
SECTION — SCALE 1:10

NOTE:
MULCH TO BE KEYED IN TO ALL HARDSCAPES TO A MINIMUM DEPTH AND WIDTH OF 100mm.

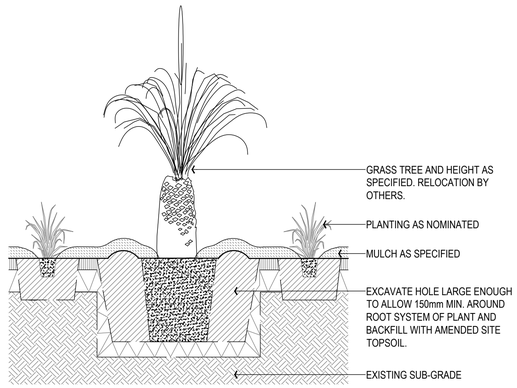
5 970 MULCH ONLY
SECTION — SCALE 1:10



6 970 TYPICAL 100 & 200 LITRE TREE PLANTING
SECTION — SCALE 1:25

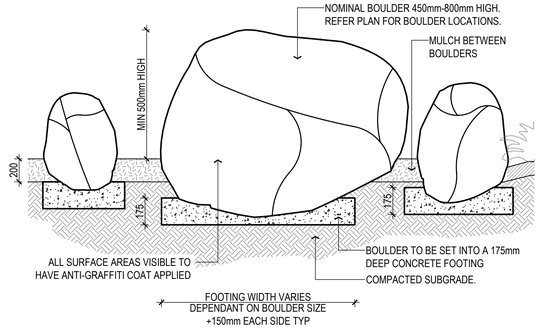


7 970 TYPICAL 400 & 500 LITRE TREE PLANTING
SECTION — SCALE 1:25



NOTE: TREE THE TREE TRANSPLANTS REQUIRED TO HAVE A FIVE-YEAR MAINTENANCE PERIOD DUE TO ADDITIONAL WATER REQUIREMENTS

8 970 XANTHORRHOEA TRANSPLANT
SECTION — SCALE 1:20



NOTES
LIMESTONE BOULDERS TO BE SOURCED AND INSTALLED. MIN HEIGHT SIZE 450mm - MAX SIZE 800mm.
GENERALLY BOULDERS TO BE BURIED APPROX. 1/3 OF EXPOSED HEIGHT AND INSTALLED WITH A MORTAR BED

9 970 LIMESTONE BOULDERS
SECTION — SCALE 1:20

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GENERAL NOTES

1. These drawings are to be read in conjunction with all architectural and other consultants' drawings and specifications and with such other written instructions as may be issued. Any discrepancies shall be referred to the superintendent for clarification before proceeding with work.
2. All dimensions are in millimetres and those relevant to setting out (excludes finishes) and offsite work shall be verified by the contractor before construction and fabrication are commenced. The engineer's drawings shall not be scaled.
3. All levels and grid co-ordinates are in metres.
4. During construction the contractor shall be responsible for maintaining the structure in a stable condition and no part shall be over stressed under construction activities.
5. Workmanship and materials shall be in accordance with the current edition of the relevant SAA codes and the by-laws and ordinances of the relevant building authority, except where varied by the contract documents.

DESIGN CRITERIA

1. Dead, live, wind and earthquake loads to AS1170.
2. Design Wind Speed
   Region A
   Terrain Category 2.5
   Regional Gust Wind Speed = 45m/sec (ULTIMATE LIMIT STATE)
   Regional Gust Wind Speed = 37m/sec (SERVICE LIMIT STATE)
3. Earthquake
   kp = 1.0
   Hazard Factor Z = 0.09 (Perth)
4. Foundations
   Foundations designed for Class 'S' site with minimum 150kPa allowable bearing pressure.
5. Live Loads

Decking:	3kPa to AS1170.1
Balustrade:	C3 to AS1170.1
Roof construction load:	0.25kPa to AS1170.1
Retaining Wall Surcharge:	3kPa to AS1170.1

BUILDER NOTE - COMPLIANCE INSPECTIONS

1. As part of the building licence for this project, the builder may be required to have the structural engineer certify the completed structure has been built in accordance with the approved drawings & /or with any subsequent written instructions.
2. If WA Structural Consulting are to provide this certification, the builder must arrange for WA Structural Consulting to inspect each of the structural items at appropriate stages. These items and stages include, but are not limited to the following:,
   2.1. Concrete reinforcement, prior to pouring of concrete in:
      2.1.1. Footing Excavations
      2.1.2. Slabs on ground
      2.1.3. Suspended slabs and beams
      2.1.4. Concrete columns and walls
      2.1.5. Retaining walls
   2.2. Structural steelwork prior to any cladding being fixed.
   2.3. Concrete wall panel connections.
3. The builder must provide appropriate evidence that the specified concrete has been supplied for each concrete element.
4. The builder must provide evidence that the required levels of foundation compaction have been achieved.
5. Where a geotechnical engineer has made specific recommendations, evidence that these have been achieved must be provided.
6. Unless fees for our inspections and certifications have been previously negotiated with WA Structural Consulting by others, these fees will be the builder's responsibility. It is required that the builder negotiate these fees with the engineer at a tender stage.
7. If the builder requires the fabrication drawings to be checked & certified by the project engineer, the costs associated with this will be the builder's responsibility, unless these fees have been previously negotiated with WA Structural Consulting by others. This must be confirmed by the builder.

CONCRETE AND REINFORCEMENT

1. All concrete works shall be in accordance with AS3600.
   Concrete specification shall be U.N.O.:

	F'C (MPA)	MAX.AGG SIZE (mm)	SLUMP (mm)
• Location			
• Footings	25	20	65
• Slab on Ground	25	20	65
• In Situ Retaining Walls	32	20	60
• Precast	32	20	80
• Cavity Fill	15	10	100

   Cover to Reinforcement shall be:

	Bottom (mm)	Top (mm)	Sides (mm)
• Location			
• Footing	70	50	50
• Slab on Ground	50	40	50
• In Situ Retaining Walls	32	20	60
• Precast	50	40	40
• Cavity Fill	50	50	20 U.N.O

2. Reinforcement shall be supported on approved plastic or plastic tipped wire chairs and hold rigidly in position as follows:
   a. Bars up to N12 and fabric - 800mm centres
   b. Bars N16 and larger - 1200mm centres
   * Welding reinforcement is not permitted unless approved by engineer.
3. Construction joints shall be scabbled, cleaned and coated with a cement/water slurry immediately prior to placing concrete.
4. Concrete shall be compacted using mechanical vibrators.
5. Concrete shall be cured for a minimum of 7 days by flooding, keeping continuously moist, the application of an approved curing compound or by other means approved by the engineer.
6. No holes or chases other than those shown on the drawings shall be made unless approved by engineer. Pipework passing through footing beams shall be to the approval of the engineer and shall be wrapped with a compressible material of minimum 6mm thickness.
7. Formwork and stripping times shall comply with AS3610. Remove formwork only when concrete has attained its design (f'c) strength unless otherwise instructed by the structural engineer.
8. Control, expansion and contraction joints shall be constructed as detailed. Saw cut joints shall be made within 12 hours of concrete placement.
9. All mesh to conform with AS1304.
10. Reinforcement shall be in accordance with the following standards:
    R Indicates plain reinforcing bar R250N to AS/NZS4671
    L Indicates plain or deformed wire R500L or D500L to AS/NZS4671
    RL Indicates deformed rectangular mesh D500L to AS/NZS4671
    SL Indicates deformed square mesh D500L to AS/NZS4671
    N Indicates deformed bars D500N to AS/NZS4671
    S Indicates deformed bars D250N to AS/NZS4671
    TM Suffix indicates trench mesh using deformed bars D500L to AS/NZS4671
11. All galvanized items which are cast into concrete are to be passivated in a 0.2% sodium dichromate solution or equivalent.
12. All formwork shall be rigidly constructed of approved material. Formwork and supports shall be designed to withstand all possible load combinations during construction.

BAR DIAMETER (LARGEST)	LAP
12	600
16	800
20	1000
24	1200
28	1400
32	1600

Note: To be used U.N.O

14. Chemset Anchors U.N.O to be M16 HCR 8.8 rods with HILTI-HIT-HY-200 Adheisive minimum 150mm embedment. Installed in accordance with Manufacturers Specification and Installation Procedure.

FOUNDATIONS

1. Design is based on an allowable bearing pressure of 150kPa. It is the builder's responsibility to confirm the foundation type prior to commencing construction. Should the foundation type or bearing capacity not satisfy the above criteria the builder shall immediately contact engineer prior to construction proceeding.
2. Builder to grub out and remove all organic material and debris from the building platform.
3. Any soft areas shall be dug out and replaced with approved non-plastic fill.
4. All site preparation works shall be in accordance with site specific Geotechnical report and requirements.
5. Ensure a minimum of 8 blows per 300mm is achieved with a calibrated Perth Sand Penetrometer in accordance with AS1289.6.3.3
6. The building platform is to be shaped to ensure it drains to its perimeter and that such drainage is taken away from the platform area.
7. Footings at the lowest level must be the first footings constructed.
8. Located plumbing lines over top of footings and step footings.

MASONRY

1. All blockwork and brickwork shall be in accordance with AS3700
2. Concrete blocks shall be in accordance with AS2733
3. Reinforcement and concrete core filling shall comply with the notes on "concrete and reinforcement".
4. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700.
5. Masonry units shall have a minimum compressive strength of 15MPa.
6. As follows:
   a. Bond beam reinforcement shall be continuous at intersecting walls and bars anchored and lapped to develop full tensile stress.
   b. Support reinforced brick lintels for 14 days minimum.
7. Cleanout blocks shall be provided at the base of all cores to be concrete filled. Alternatively the builder shall open such cores for cleaning by an approved method.
8. All cores to be concrete filled shall be cleaned out by hosing prior to final setting or mortar at all lifts or by rodding prior to concrete filling.
9. Retaining walls shall be fully core filled. Backfill to retaining walls shall not be carried out until 14 days after core filling.
10. Provide 10mm stack bonded control joints where shown. Control joint to consist of flexible masonry anchors every 3rd course. Brunswick type MFA 3/3. Apply flexible sealant over backing rod.
11. Cross walls shall be fully bonded for the full height of intersecting wall.
12. Horizontal chasing is not permitted without written approval from the engineer.
13. Lap wires 500mm at splices and around corners and COG 500mm into intersecting walls. 20mm cover to all wires.
14. All wires in external face of external leaf to be galvanised to AS/NZS4680.
15. Masonry ties are to be provided at no more than 600mm spacing in each direction, and max 300mm from top of wall, side of control joint or perimeter of opening.
16. Ties to be grade 316 stainless steel in corrosive environments.
17. Masonry abutting concrete footings to typically be isolated with 10mm Ableflex expansion foam or similar approved product UNO.

STRUCTURAL STEEL

1. All steelwork shall be in accordance with:
   AS4100 steel structures
   AS4600 cold formed steel structures
2. Fabricator to check all dimensions before cutting materials or manufacturing. fabrication to AS4100 UON. These drawing are to be read in conjunction with the project architectural and other consultants' drawings.
3. Unless noted otherwise all steel shall be:
   a. AS3678 grade 250 hot rolled plates
   b. AS3679.1 grade 300 hot rolled UB, PFC, TFC, TFB, EA, UA and FLATS
   c. AS3679.2 grade 300 WB and WC
   d. AS1163 grade 250 for circular hollow sections Ø165mm and less
   e. AS1163 grade 350 for circular hollow sections larger than Ø165mm and rectangular hollow sections.
   f. AS1397 500MPa for 1.2mm thick purlins and girts
   g. 450MPa for 1.6mm thick purlins and girts
   h. 450MPa for 1.0 thick CF Channels
   i. 450MPa for 1.6mm thick CF Channels
4. Galvanising shall be hot dipped to AS/NZS 4680
5. Bolts shall be galvanised and of sufficient length to exclude the thread from the shear plane. A suitable washer shall be used under all nuts, when tensioning is specified high strength bolts shall be fully tensioned with load indicating washers to the requirements of AS4100.
6. Bolt legend 4.6/S commercial grade 4.6 bolts snug tightened 8.8/S high strength grade 8.8 bolts snug tightened. 8.8/TB high strength grade 8.8 bolts tensioned bearing connection. 8.8/TF high strength grade 8.8 bolts tensioned friction connection.
7. Unless otherwise specified the following shall apply -
   a. Cleats, brackets, stiffeners etc. to be 10mm thick, ex-standard square edge flats U.N.O.
   b. Welding to be carried out in accordance with AS/NZS 1554. 1:1995 welding consumables to be E48XX or W50X U.N.O. all welds to be 6MM CFW SP category U.N.O CPBW to be SP category U.N.O.
   c. Inspection to be carried to AS/NZS 1554.1:1995. All GP/SP welds to be 100% visually scanned. SP welds allow for 25% visual examination U.N.O.
   d. 6mm end plates to all hollow sections (seal weld).
   e. Bolts to be G 8.8/S
   f. Bolt hole clearance 2mm
   g. Hold down bolt clearance 4mm
   h. Grout - a space for 40mm of 2:1 sand: cement mortar of damp earth consistency under all base plates.
   i. Connections - minimum of 2-M16 8.8/S bolts
   j. Bracing intersects on centrelines and centre of gravity for angles.
8. Fabricator shall allow for all cleats and other fixings required by the supervisor.
9. All column base plates shall be set on 20mm min. of 1:2 cement and sand grout.
10. Seal all open ends of pipes or RHS members. Grind off all visible welds and brand marks to neat appearance where specified.
11. See below:
   a. The contractor shall remain responsible at all times for providing all necessary temporary bracing and other supports during erection, to stabilise the partially constructed building.
   b. Particular attention must be paid to the buckling stability of beams and columns prior to the connection of purlins, girts, fly braces and other bracing elements.
   c. It is the responsibility of the builder to obtain proper technical advice wherever necessary to ensure the partially completed structure is safe from collapse.
12. Treatment:
   All steel connection plate and bolts to be hot dip galvanize (600 g/sqm)
   Holding down bolts - hot dip galvanize (600 g/sqm)
13. Bitumen paint all steelwork for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

STRUCTURAL TIMBER

1. Structural timber shall comply with AS1720 timber structure code.
2. All timber to be seasoned F14, class 2, strength group SD5, joint group JD2 and treated with creosote to hazard class H4 unless noted otherwise.
3. All timber work to be in accordance with :
- AS1684 - SAA timber framing code.
- AS1720 - SAA timber structures code.
4. All timber and steel connections to be in accordance with AS1720.
5. Ensure no knots or gum veins in timber used.
6. Coat all timber in contact with ground with bitumen paint or similar approved.
7. All structural details to be confirmed, checked and site measured by builder prior to construction. Report any discrepancies to structural engineer.
8. Treatment :
- H1 - Interior use, above ground.
- H2 - Interior use, above ground, subject to termites.
- H3 - Exterior use, above ground, subject to periodic wetting.
- H4 - Exterior use, in ground, subject to severe wetting.
- H5 - Exterior use, in ground, with or in fresh water.
- H6 - Exposed to marine water.
9. Required bending stress:
- MGP10 fb = 16 MPa
- MGP12 fb = 28 MPa
- F14 fb = 36 MPa
- GL17 fb = 40 MPa
- LVL13 fb = 48 MPa
- LVL15 fb = 59 MPa
- LVL18 fb = 72 MPa
10. All bolted timber connections to be re-tightened at end of project prior to completion, ensure no splitting of timber occurs.
11. All proprietary systems (floor/wall/roofing) to be installed in strict accordance with manufacturer's specifications and details.
12. Bush Poles :
- All timber to AS1720.
- Minimum F11 grade CCA / H4 treated seasoned softwood. S6 strength group.
- Free from decay, shakes & fractures,resin pockets and surface damage.
- Heartwood not to exceed 50% of the diameter at each end or be within 35mm from the surface.
13. Bitumen paint all timber posts/columns for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

LIMESTONE RETAINING WALL SPECIFICATION NOTES

1. Width 'b' at any height to be no less than half of retained height 'h'. step wall to suit
2. Walls to be built on compacted sand, compact ground under footing to resist 7 blows per 300mm of a standard 16mm dia penetrometer over a depth of 600mm.
3. These walls are applicable to well drained sandy soil conditions only.
4. Walls resisting clay soil pressures and/or hydrostatic pressures to be referred to the engineer.
5. All reconstituted limestone to be first grade quality & free from soft pockets.
6. Rubble shall not be used to fill voids.
7. Reconstituted limestone to have a dry density of at least 1600 kg/m3 and a crushing strength of at least 5mpa.
8. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700. All mortar joints to be 20mm thick and fully mortared.
9. All topsoil, vegetation and deleterious matter shall be removed from the foundation area.
10. Vertical thickness of wall to be adequately bonded by building in header blocks - refer cross section
11. No backfilling until 7 days after walls have been built.
12. All backfilling shall be carried out using material which shall generally be sandy in nature and free from large pieces of rock to the extent that the
    material can be compacted using a vibrating plate compactor to meet the requirements of the specification.
13. Backfill shall not be dumped behind wall in a manner which will cause shock loading on the wall
14. Backfill shall be clean sand compacted in shallow (300) layers using light compacting equipment
15. In all cases the backfill material shall be selected such that once compacted, the standard of compaction can be measured using a standard perth penetrometer.
16. Compaction of the backfill material to the front and back of the wall to be compacted 95% modified max dry density.
17. Prior to practical completion the contractor shall provide written certification from a practising structural engineer that the wall construction & backfill compaction has been carried out in accordance with this drawing and the specification.
18. Construction Joints (CJ) shall be constructed within the retaining wall where noted below:
(i) at max. 10m centres along wall face
(ii) where the angle between faces of two walls exceeds 180 degrees, in which case the CJ is to be located on one side of the change in direction, at a distance away from the direction change equal to the base width of the wall.
19. Construction joints shall be 15mm wide and filled with expanded polyethylene (100mm deep) covered with a 25mm deep mastic of colour to match wall mortar. joints are to extend through wall and any fences, but need not extend through base course of limestone wall.
20. Select blocks to ensure intact faces only visible in facework.

ALUMINIUM

1. All Aluminium shall be in accordance with AS1664.
2. All Aluminium welding shall comply with AS1664.
3. Unless noted otherwise, all aluminium to be:
- Plates: Grade 5083 H116/h321 or 5083 H112 Aluminium
- SHS/RHS/CHS: Grade 6060-t5 aluminium
- Fixings: grade 316 stainless steel
- Welds: 5mm continuous fillet, category sp, filler allow to be grade 5186,5356 or 5556 aluminium
4. All fixings into Aluminium members to be stainless steel (SS316) or equivalent capacity aluminium fixings.
5. Provide nylon washers and packers for all and any connections between steel and aluminium.
6. Adequate protective coatings are to be applied to aluminum cast into concrete.

PRECAST CONCRETE

1. All precast units shown are for service conditions only. The contractor is responsible for all casting,lifting, transportation and propping requirements and must satisfy himself that they have been constructed to meet the design criteria noted. Any queries regarding precast concrete units shall be flagged during the tender process. If in doubt, ask.
2. Contractor to obtain Engineer's Design Certification for all elements of precast concrete work as required to the relevant Australian Standards (Lifting, bracing, propping as required).
3. Panels are to be securely propped until designed connections have been installed and are sufficiently restraining panels.
4. U.N.O all chemical anchors fixed into concrete panels to be galvanised HILTI-HAS-E-F rods with HILTI-HIT-HY-200 adhesive.
5. All grout used for panels shall be non shrink high strength grout to achieve min 40mpa compressive strength typ.
6. Precast concrete strength is for final position. Contractor to confirm required lifting strength in accordance with lifting engineers requirements. Shall be no less than 15 MPA.

HDPE DECKING AND BOARDS

1. All HDPE battens and other HDPE members to be supplied and installed in strict accordance with manufacturers specification.

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFFSITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
1	11.02.25	JL	REVISED FOR CONSTRUCTION
0	08.11.24	OW	ISSUE FOR CONSTRUCTION
D	19.09.24	JL	REVISED FOR APPROVAL
C	07.08.24	JL	REVISED FOR APPROVAL
B	26.07.24	JL	ISSUE FOR APPROVAL
A	22.04.24	JL	ISSUE FOR COMMENT

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DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	05.04.24		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT-69-980	REV	1

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