Central Coast Council

CIVIL WORKS SPECIFICATION

STANDARD DRAWINGS

2020

ROADS TRANSPORT DRAINAGE AND SUBDIVISIONS
DESIGN AND CONSTRUCTION

THE CIVIL WORKS SPECIFICATION IS REFERENCED IN THE **CENTRAL COAST DEVELOPMENT CONTROL PLAN** AND CONSISTS OF THE FOLLOWING VOLUMES WHICH SHALL BE READ IN CONJUNCTION WITH ONE ANOTHER AS REQUIRED AND NOT IN ISOLATION. THESE DOCUMENTS ARE AVAILABLE ON COUNCIL'S WEBSITE:

DESIGN GUIDELINE

CONSTRUCTION SPECIFICATION

STANDARD DRAWINGS

GOSFORD OFFICE
49 Mann Street
GOSFORD NSW 2250

STANDARD DRAWINGS PREPARED BY
CENTRAL COAST COUNCIL
ROADS ASSETS PLANNING AND DESIGN UNIT

WYONG OFFICE
2 Hely Street
WYONG NSW 2259

Central Coast Council

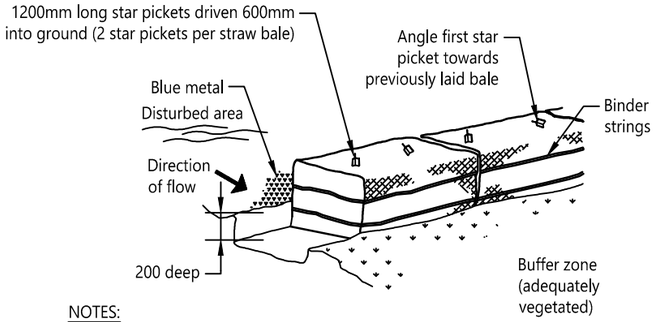
STANDARD DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE	REVISION
SD0100	**SOIL AND WATER MANAGEMENT SERIES**	
SD0101	SOIL EROSION AND SEDIMENT CONTROL	-
SD0102	WATER SENSITIVE URBAN DESIGN	-
SD0200	**EARTHWORKS SERIES (COUNCIL-USE ONLY)**	
SD0201	ROADSIDE BATTER CONSTRUCTION	-
SD0202	KEYSTONE RETAINING WALL	-
SD0203	SANDSTONE LOG RETAINING WALL	A
SD0204	POST AND PANEL WALL	-
SD0300	**PAVEMENT SERIES**	
SD0301	SUBSURFACE TRENCH DRAIN AND FLUSHING POINT	-
SD0302	TYPICAL FLEXIBLE PAVEMENT DESIGNS	-
SD0303	INTERLOCKING SEGMENTAL BLOCK PAVING	-
SD0304	NEW PAVEMENT TIE-IN TO EXISTING PAVEMENT	-
SD0400	**STORMWATER DRAINAGE SERIES**	
SD0401	STANDARD GRATED GULLY PIT	-
SD0402	OVERSIZE GULLY PIT	-
SD0403	RAISED GRATED GULLY PIT	-
SD0404	JUNCTION BOX	-
SD0405	FLUSH GRATED GULLY PIT	-
SD0406	FLUSH GRATED GULLY PIT FOR SB KERB	-
SD0407	DEPRESSED GRATED GULLY PIT	-
SD0408	MEDIAN GULLY PIT FOR SF KERB	-
SD0409	INDIVIDUAL-RUNG (STEP-IRON) LADDER FOR DRAINAGE PITS	-
SD0410	PRECAST CONCRETE LINTELS	-
SD0411	CONCRETE HEADWALL 375Ø TO 900Ø PIPES	-
SD0412	CONCRETE SUPPORT CRADLE	-
SD0413	GRAVITY SEWER MAIN PROTECTION	-
SD0414	INTERALLOTMENT DRAINAGE PIT	-
SD0415	OVERLAND FLOW PATH	-
SD0416	OPEN CHANNEL	-
SD0417	RCP/FRC DRAINAGE PIPE TRENCH CONSTRUCTION AND TRENCH DRAIN	-
SD0418	CONCRETE BULKHEAD AND TRENCHSTOP DETAILS	-
SD0500	**KERB AND CHANNEL SERIES**	
SD0501	KERB AND CHANNEL PROFILES	-
SD0502	KERB RAMPS	-
SD0503	RESIDENTIAL VEHICLE ACCESS CROSSING FOR ROADS WITH KERB AND CHANNEL	-
SD0504	RESIDENTIAL VEHICLE ACCESS CROSSING FOR ROADS WITHOUT KERB AND CHANNEL	-
SD0505	RESIDENTIAL, INDUSTRIAL AND COMMERCIAL VEHICLE ACCESS CROSSING WITH CULVERT	-
SD0506	INDUSTRIAL AND COMMERCIAL VEHICLE ACCESS CROSSING FOR ROADS WITH KERB AND CHANNEL	-
SD0507	INDUSTRIAL AND COMMERCIAL VEHICLE ACCESS CROSSING ROADS WITHOUT KERB AND CHANNEL	-
SD0508	VEHICLE ACCESS CROSSING AND DRIVEWAY PROFILES	-
SD0509	STANDARD PASSENGER CAR VERTICAL CLEARANCE PROFILE	-
SD0510	KERB STORMWATER OUTLET AND KERB ADAPTOR	-
SD0511	DISHED CROSSING FOR MINOR ROAD JUNCTIONS	-
SD0512	ISOLATED KERB AND CHANNEL AND SHOULDER WORKS	-
SD0513	FIXING KERB TO EXISTING PAVEMENT	-
SD0514	MEDIAN DRAINAGE BREAK FOR SF KERB	-
SD0600	**PEDESTRIAN AND CYCLIST SERIES**	
SD0601	FOOTPATH AND SHARED PATH	-
SD0602	SHARED PATH TERMINAL TREATMENT	-
SD0603	PEDESTRIAN REFUGE	-
SD0604	BUS STOP	A
SD0605	BUS STOP SHELTER	A
SD0606	REINFORCED CONCRETE STAIRS	-
SD0607	SHARED PATH BRIDGE	-
SD0700	**FENCE SERIES**	
SD0701	FULL AND PARTIAL BARRIER PEDESTRIAN FENCE	-
SD0702	BICYCLE SAFETY BARRIER FENCE	-
SD0703	POST AND RAIL FENCE AND TIMBER BOLLARD	-
SD0704	STEEL BOLLARD	-
SD0705	FIRE TRAIL STEEL POST AND CABLE FENCE	-
SD0706	FIRE TRAIL (SLIP RAIL) ACCESS GATE	-
SD0707	FIRE TRAIL (SWING) ACCESS GATE	-
SD0800	**PAVEMENT RESTORATION SERIES**	
SD0801	TRANSVERSE PAVEMENT TRENCH AND PIT RESTORATION	-
SD0802	LONGITUDINAL PAVEMENT TRENCH RESTORATION	-
SD0803	ASPHALT HEAVY PATCH RESTORATION	-
SD0804	INFRASTRUCTURE INSTALLATIONS AT ROUNDABOUTS	-
SD0805	FOOTWAY TRENCH AND PIT RESTORATION	-
SD0806	FOOTPATH AND SHARED PATH RESTORATION	-
SD0807	RESIDENTIAL VEHICLE ACCESS CROSSING RESTORATION	-

Central Coast Council

STANDARD DRAWING INDEX

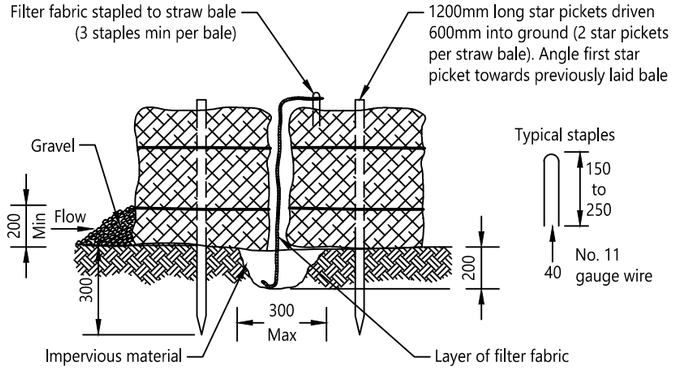
DRAWING NUMBER	DRAWING TITLE	REVISION	DRAWING NUMBER	DRAWING TITLE	REVISION
SD0900	**TRAFFIC MANAGEMENT SERIES**				
SD0901	PAVEMENT WIDTH SCHEDULE	-			
SD0902	RAISED INTERSECTION	-			
SD0903	FULLY MOUNTABLE ROUNDABOUT	-			
SD0904	MODIFIED T-INTERSECTION	-			
SD0905	RECONFIGURATION OF 4-WAY INTERSECTION	-			
SD0906	T-INTERSECTION LAYOUT	-			
SD0907	ASPHALT ROAD CUSHIONS	-			
SD0908	ROAD HUMPS	-			
SD0909	TWO-LANE SLOW POINT	-			
SD0910	POLICE ENFORCEMENT BAY	-			
SD0911	PAVEMENT MARKING SCHEDULE	-			
SD0912	STANDARD STREET NAME SIGN CONFIGURATION	-			
SD0913	ROAD AND TRAFFIC SIGN MOUNTING DETAILS	-			
SD0914	VEHICLE DEFLECTION PATHS	-			
SD0915	OFF-ROAD PARKING SPACES ON NARROW ROADS	-			
SD1000	**LANDSCAPE SERIES**				
SD1001	TYPICAL STREET TREE WITH PATH	-			
SD1002	TYPICAL AMENITY TREE	-			
SD1003	TYPICAL OPEN SPACE AND RECREATION STREET TREE	-			



NOTES:
1. Return one bale every 20m max.
2. Straw bale to be positioned 2.0m min from toe of batter

STRAW BALE BARRIERS

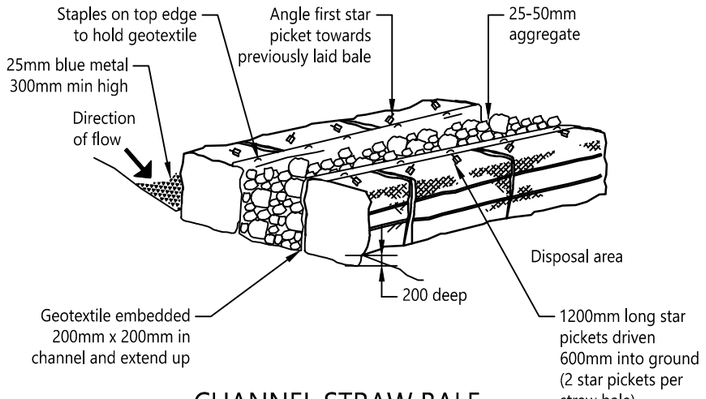
1



NOTES:
1. Bound bales to be placed on contour.
2. Minimum disturbance to existing ground cover.

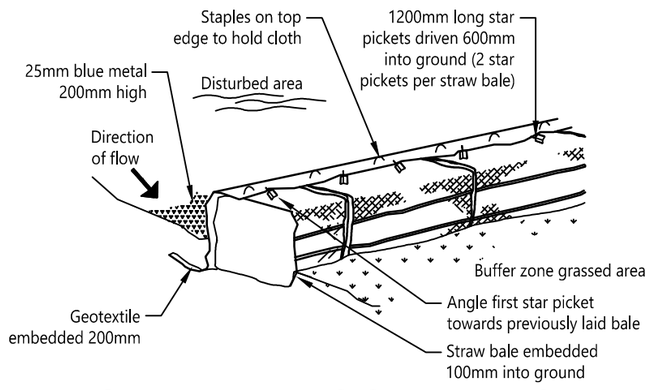
ALTERNATIVE SEDIMENT FENCE

2



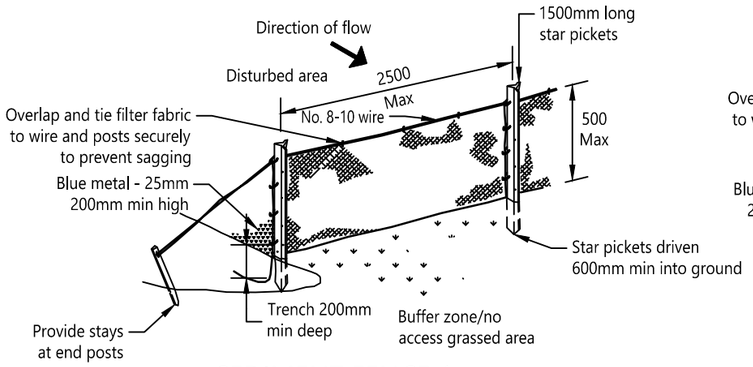
CHANNEL STRAW BALE

3



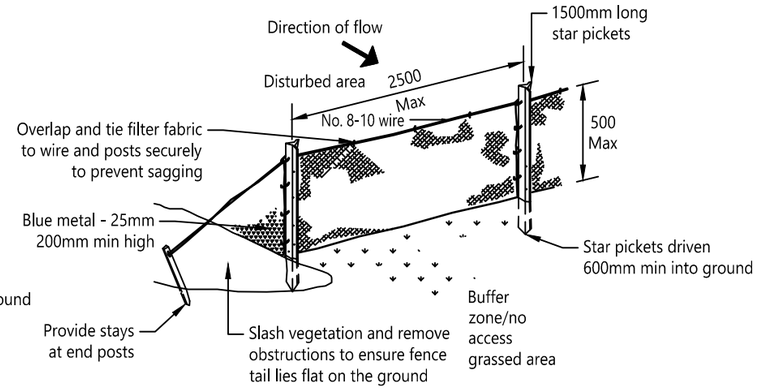
STRAW BALE AND GEOTEXTILE FENCE

4



SEDIMENT FENCE 1

5



SEDIMENT FENCE 2

6

NOTES:

1. THESE STANDARD DRAWINGS ARE BASED ON STANDARD DRAWINGS INCLUDED IN LANDCOM'S "BLUE BOOK" MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION.
2. LOCATION OF ALL RELEVANT STANDARD CONTROLS SHALL BE DEPICTED ON A DETAILED CONTOUR PLAN TO INDICATE THE MINIMUM REQUIREMENTS FOR CONSTRUCTION ACTIVITIES.
3. PLACEMENT OF CONTROLS TO BE APPROVED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. ALL WORK IS TO BE IN ACCORDANCE WITH CENTRAL COAST COUNCIL'S CIVIL WORKS CONSTRUCTION SPECIFICATION.
5. 'CLEAN' RUN-ON WATER FROM UPHILL SHOULD BE DIVERTED WHERE POSSIBLE, USING APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES.
6. 'DIRTY' SITE WATER SHALL BE TREATED USING APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES.
7. EXPOSED OR DISTURBED AREAS OF SOIL AND VEGETATION SHALL BE HYDROMULCHED OR PROTECTED BY SIMILAR GROUND COVER AT THE END OF EACH DAY OR AS SOON AS POSSIBLE.
8. ANY STOCKPILE MUST BE PROTECTED OVERNIGHT OR BEFORE RAIN WITH APPROPRIATE SEDIMENT CONTROLS.
9. ANY SAND STOCKPILE SHALL BE PROTECTED BY SEDIMENT CONTROL AND NOT LOCATED IN TABLE DRAINS.
10. ROADWAYS SHALL BE SWEPT CLEAN AT THE END OF THE DAY OR BEFORE RAIN.
11. TRUCK ROUTES TO BE MONITORED DAILY AND SWEPT/WASHED DOWN AS NECESSARY.
12. ALL SEDIMENT CONTROLS TO BE IN PLACE AT THE END OF WORK AND/OR PRIOR TO RAIN.
13. BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH CENTRAL COAST COUNCIL'S CIVIL WORKS CONSTRUCTION SPECIFICATION.
14. GROYNES OR SAUSAGES (BLUE METAL FILLED BAGS) SHALL BE PLACED IN FRONT OF CULVERT ENTRY DRAINAGE PITS.
15. PLASTIC LINER TO BE INSTALLED ON THE SIDE OF EACH PIT WHERE WATER ENTERS.
16. ALL STEEL 'STAR' PICKETS TO BE FITTED WITH PLASTIC SAFETY CAPS.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING: NOT TO SCALE

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

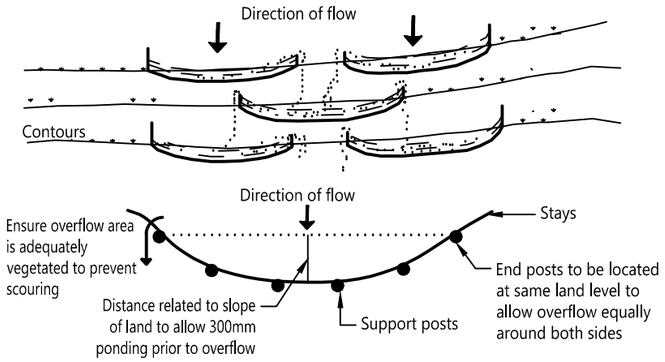
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

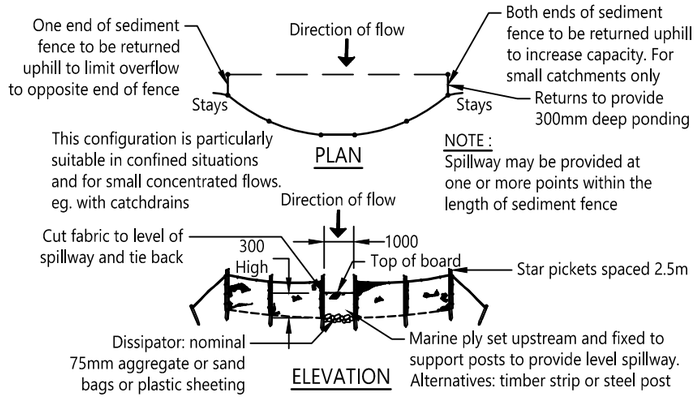
SOIL AND WATER MANAGEMENT SERIES
SOIL EROSION AND SEDIMENT CONTROL

DRAWING NUMBER	REV
SD0101	-
SHEET 1 OF 4	A3



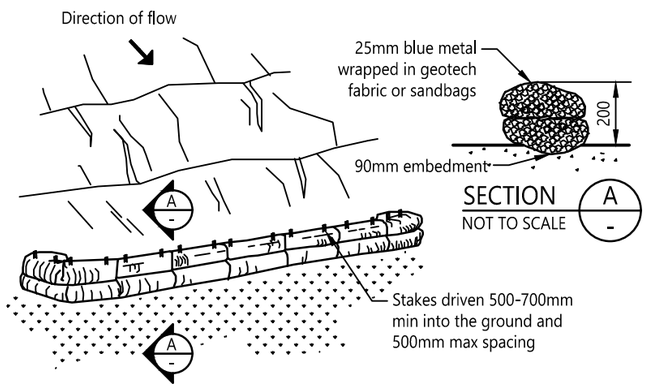
SEDIMENT FENCE LAYOUT SHOWING OVERFLOW LOCATIONS

7



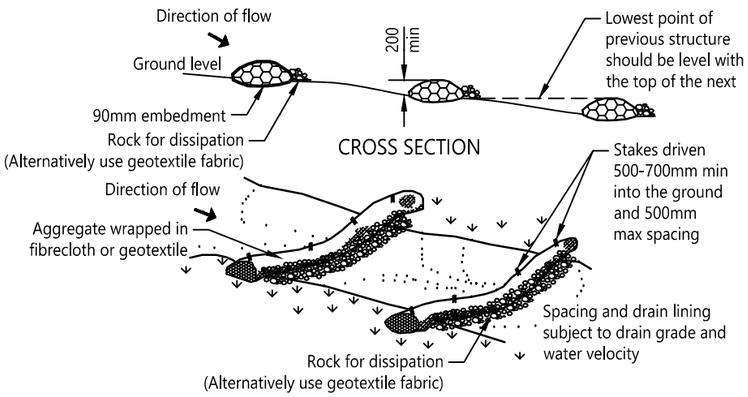
SEDIMENT FENCE LAYOUT SHOWING OVERFLOW

8



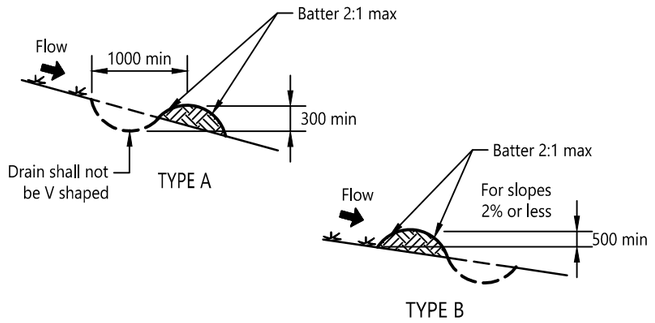
ROCK GROYNE OR SAUSAGE

9



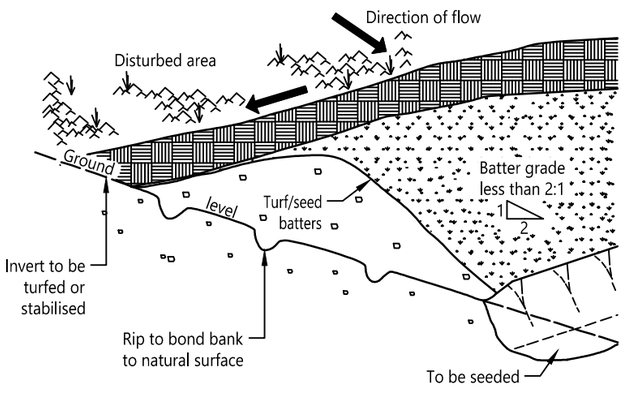
GRADE STABILISING STRUCTURE

10



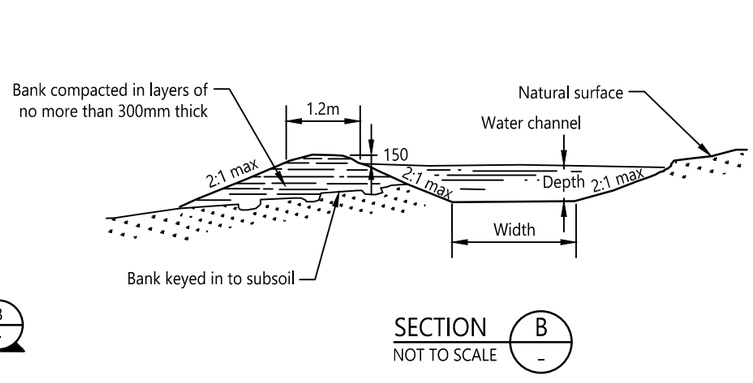
LOW FLOW DIVERSION DRAIN/BANK

11



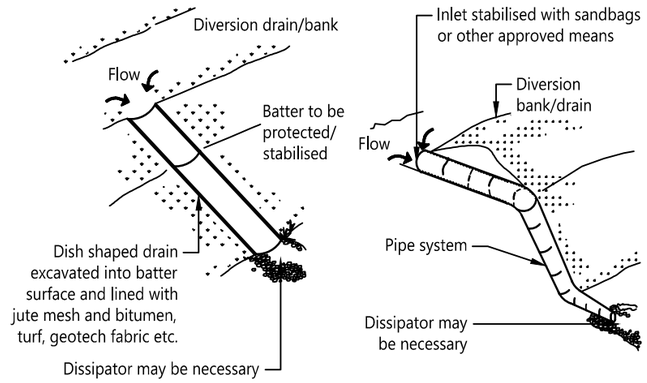
HIGH FLOW DIVERSION BANK

12



HIGH FLOW DIVERSION DRAIN

13



DROP DOWN DRAINS

14

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: NOT TO SCALE

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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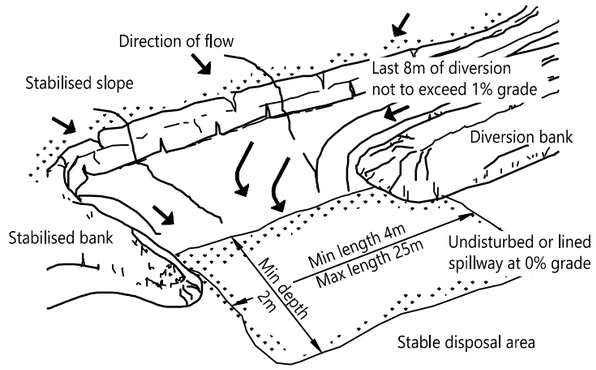
STANDARD DRAWING

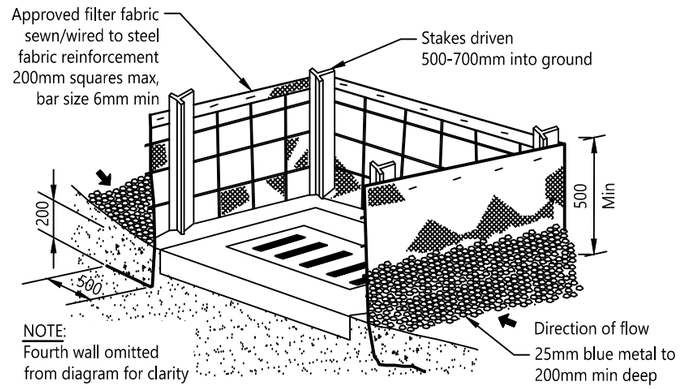
SOIL AND WATER MANAGEMENT SERIES
SOIL EROSION AND SEDIMENT CONTROL

DRAWING NUMBER	REV
SD0101	-
SHEET 2 OF 4	A3



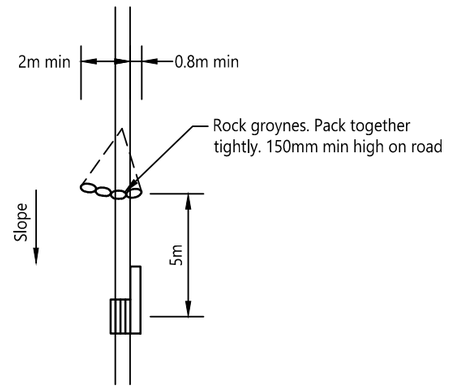
LEVEL SPREADER

15



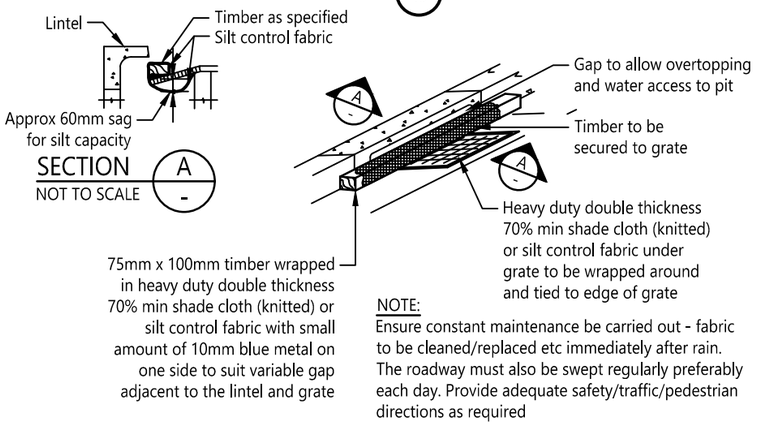
STORM INLET SEDIMENT TRAP

16



KERB INLET CONTROL - ON GRADE

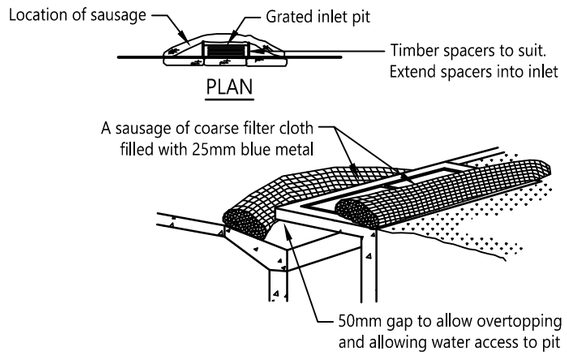
17



NOTE:
Ensure constant maintenance be carried out - fabric to be cleaned/replaced etc immediately after rain. The roadway must also be swept regularly preferably each day. Provide adequate safety/traffic/pedestrian directions as required

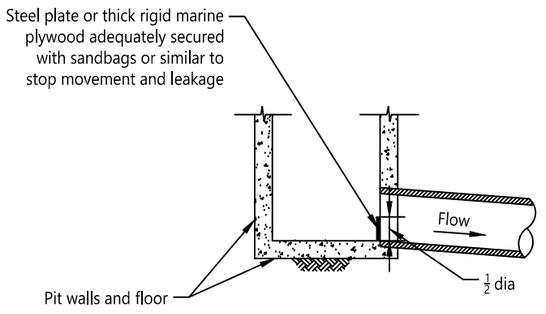
KERB INLET CONTROL

18



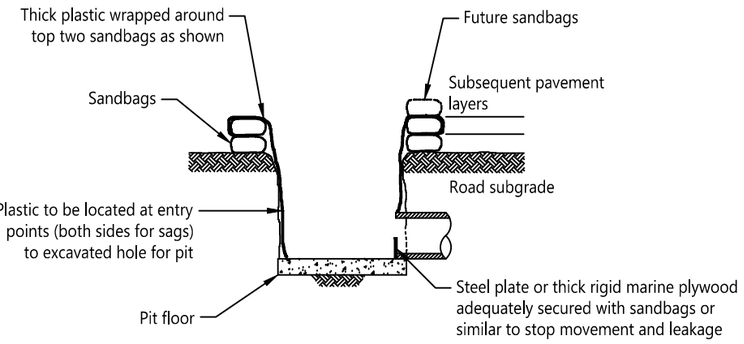
KERB INLET CONTROL - LOW POINT

19



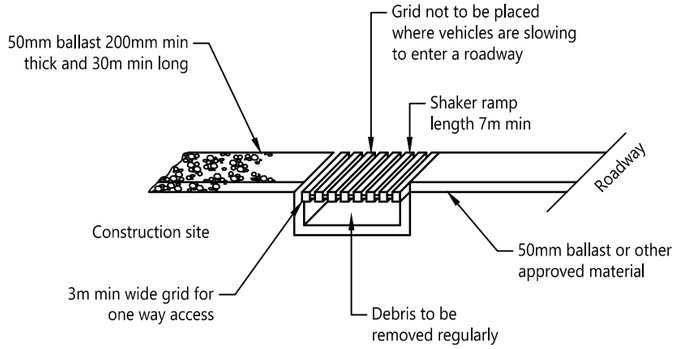
PIPE OUTLET CONTROL

20



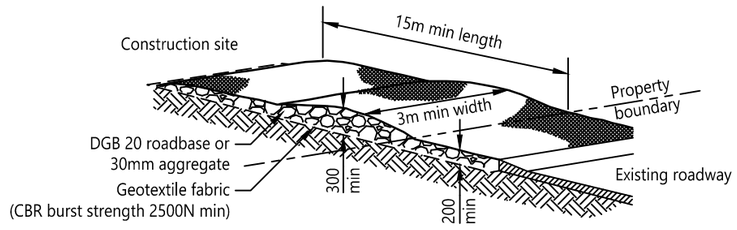
PIT CONSTRUCTION AND OUTLET PIPE CONTROL

21



SHAKER RAMP

22



STABILISED CONSTRUCTION SITE ACCESS DETAILS

23

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

NOT TO SCALE

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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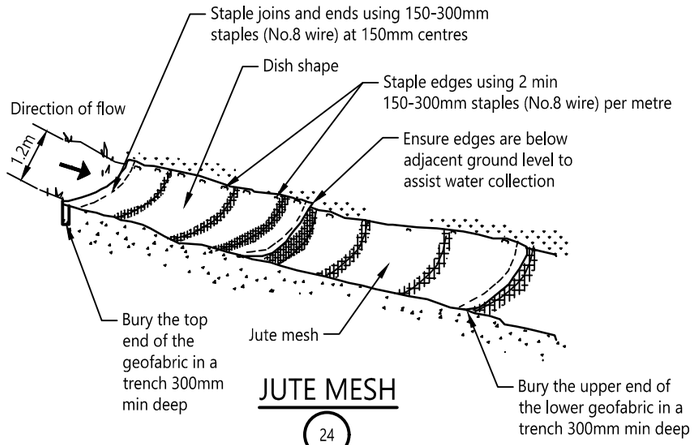
SOIL AND WATER MANAGEMENT SERIES
SOIL EROSION AND SEDIMENT CONTROL

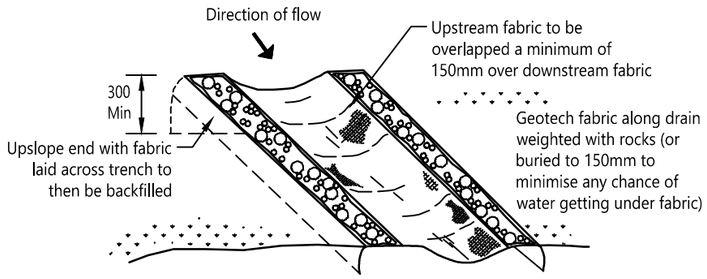
STANDARD DRAWING

DRAWING NUMBER	REV
SD0101	-
SHEET 3 OF 4	A3



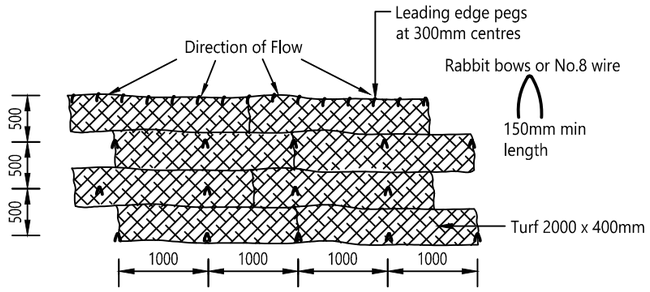
JUTE MESH

24



FABRIC LINED DRAIN

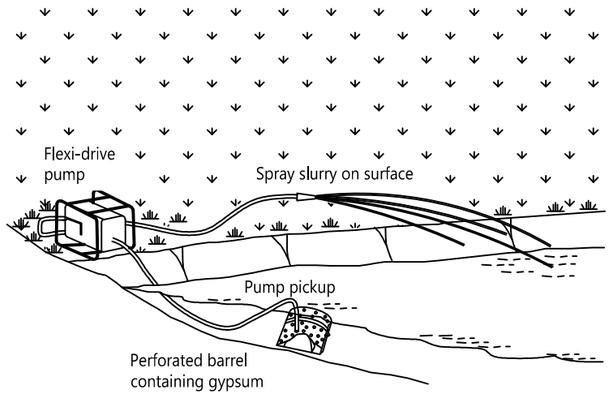
25



NOTE:
Anchor turf with wire netting and pin with rabbit bows on batter slopes, steep sites and drains to ensure stability of the turf ground cover.

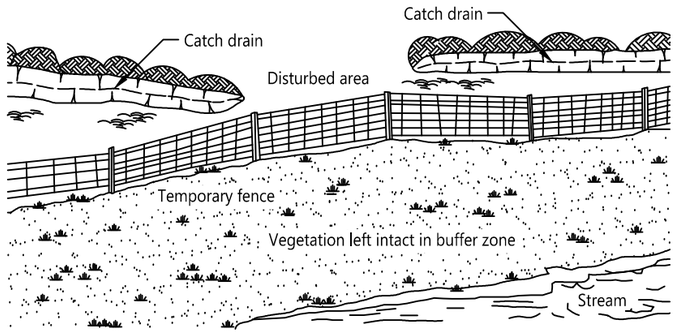
TURF LAYING CONFIGURATION

26



GYPSUM DOSING OF SEDIMENT PONDS

27



BUFFER ZONE

28

REV	AMENDMENT	DATE	DRAWN	APRVD	ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING	NOT TO SCALE
DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20
UNIT MANAGER APPROVAL	ASSETS PLANNING AND DESIGN

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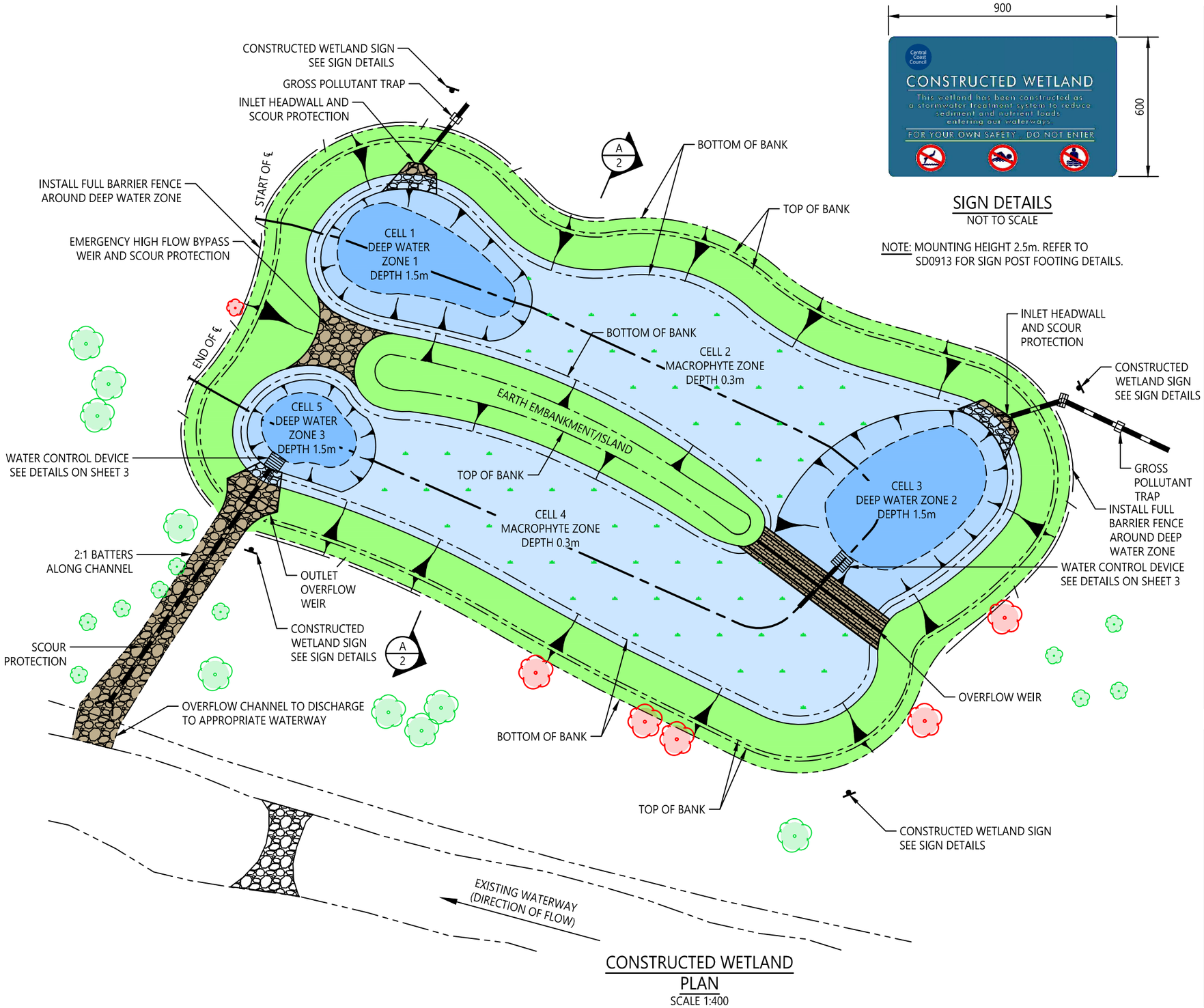
SOIL AND WATER MANAGEMENT SERIES
SOIL EROSION AND SEDIMENT CONTROL

STANDARD DRAWING

DRAWING NUMBER	REV
SD0101	-
SHEET 4 OF 4	A3



CONSTRUCTED WETLAND
PLAN
SCALE 1:400

SIGN DETAILS
NOT TO SCALE

NOTE: MOUNTING HEIGHT 2.5m. REFER TO SD0913 FOR SIGN POST FOOTING DETAILS.

NOTES:

1. THIS STANDARD DRAWING IS TO BE USED FOR GUIDANCE ONLY AND SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.
2. CONSTRUCTED WETLANDS SHALL BE DESIGNED BY A SUITABLY QUALIFIED AND EXPERIENCED ENGINEER, CIVIL DESIGNER, LANDSCAPE ARCHITECT AND/OR WETLAND ECOLOGIST.
3. PROMOTE SETTLING OF SEDIMENT LARGER THAN 125µM WITHIN THE INLET ZONE.
4. DIRECT MOST OF THE FLOW VOLUME THROUGH THE PLANTED MACROPHYTE ZONE TO ENHANCE SEDIMENTATION, FILTRATION, ADHESION AND BIOLOGICAL UPTAKE.
5. ENSURE FLOWS THROUGH THE WETLAND ARE DETAINED FOR 72 HOURS, USING THE OUTLET TO CONTROL FLOW RATES.
6. ENSURE THE MACROPHYTE ZONE IS PROTECTED FROM SCOURING AND DAMAGE TO THE PLANTS, BY KEEPING WATER VELOCITY UNDER 0.5m/s AND BYPASSING FLOWS AWAY FROM WETLAND ONCE THE MAXIMUM EXTENDED DETENTION DEPTH IS REACHED.
7. ENSURE THE CONSTRUCTED WETLAND CAN BE FULLY DRAINED WITHIN 48 HOURS AND APPROPRIATE ACCESS IS PROVIDED FOR MAINTENANCE PURPOSES.
8. ALL WEIR ROCK DIMENSIONS ARE 0.3m x 0.5m x 1.0m NOMINAL SANDSTONE.
9. WATER CONTROL DEVICES ARE TO BE SET TO INVERT OF THE BASIN.
10. BATTERS AND BENCHING SHALL INCLUDE 200mm TOPSOIL.
11. ALL BATTER SLOPES SHALL BE 3:1 (VEGETATED) OR 5:1 (GRASS) UNLESS OTHERWISE SPECIFIED.
12. ENSURE BATTERS DO NOT OBSTRUCT DRAINAGE PIT INLETS AND THAT ACCESS CAN BE GAINED TO MAINTAIN/CLEAN GROSS POLLUTANT TRAPS.
13. BARRIER FENCING SHALL BE IN ACCORDANCE WITH COUNCIL'S "BARRIER SELECTION GUIDELINES FOR CONSTRUCTED WETLANDS AND PERMANENT SEDIMENT PONDS".
14. CENTRAL COAST COUNCIL "CONSTRUCTED WETLAND" SIGN TO BE PLACED AT EACH CORNER OF WETLAND AND ANY PUBLIC ENTRY POINT.
15. DENSELY PLANT VEGETATION ON EDGE OF WETLAND MACROPHYTE ZONES. SEE OPERATIONS AND MAINTENANCE MANUAL SECTON 6.3 FOR INDICATIVE PLANT SPECIES.
16. EROSION AND SEDIMENT CONTROL DEVICES SHALL BE USED DURING CONSTRUCTION IN ACCORDANCE WITH COUNCIL'S CIVIL WORKS SPECIFICATION.
17. DESIGN CHECKLIST TO BE PROVIDED TO COUNCIL WITH CONCEPT DESIGN OF WETLAND - REFER TO APPENDIX C OPERATIONAL AND MAINTENANCE MANUAL.

LEGEND

- Design control line
- Proposed stormwater drainage pipe
- Stormwater pit/water control device
- Sign and post
- Existing tree
- Tree to be removed
- Proposed batter slope

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 4000 8000 12000 16000 20000

1:400

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

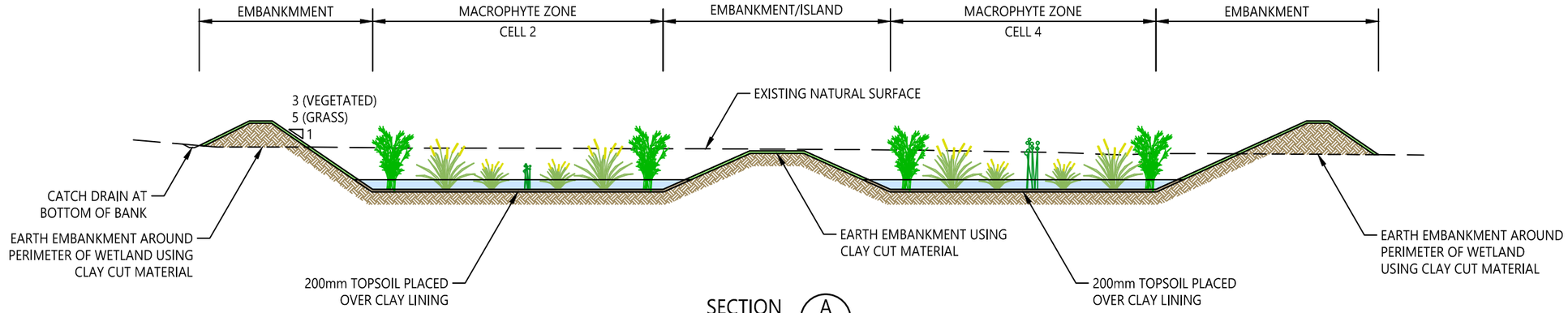
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

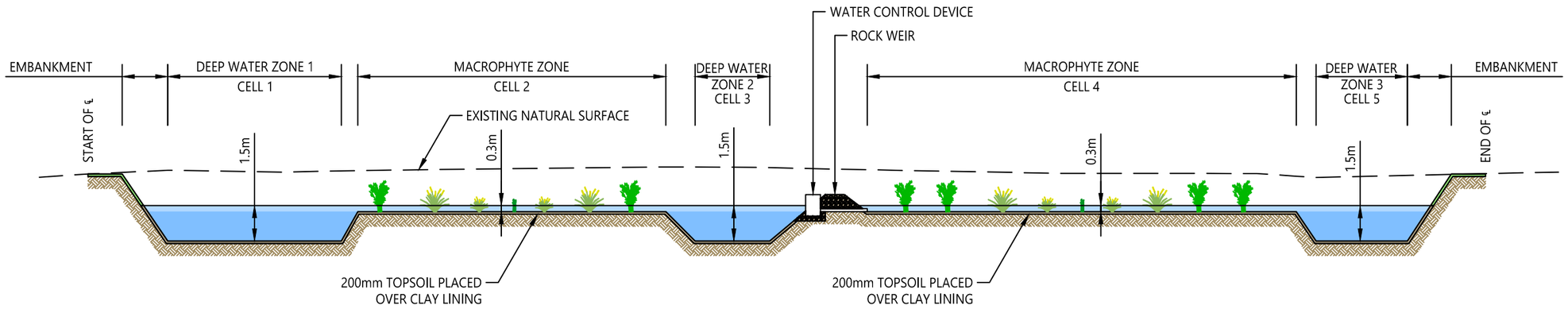
STANDARD DRAWING

SOIL AND WATER MANAGEMENT SERIES
WATER SENSITIVE URBAN DESIGN

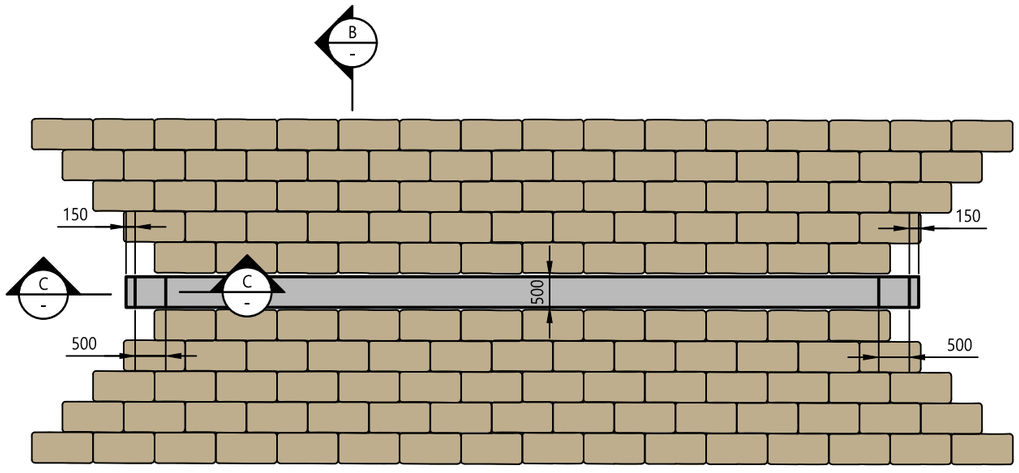
DRAWING NUMBER	REV
SD0102	-
SHEET 1 OF 17	A3



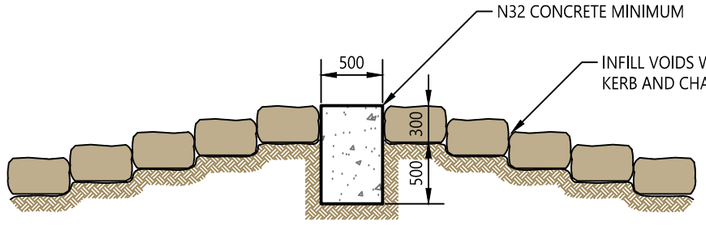
SECTION A / 1
NOT TO SCALE



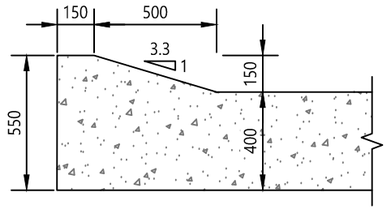
DESIGN CONTROL LONG SECTION
NOT TO SCALE



WEIR DETAIL
SCALE 1:100



SECTION B / -
SCALE 1:50



SECTION C / -
SCALE 1:25

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

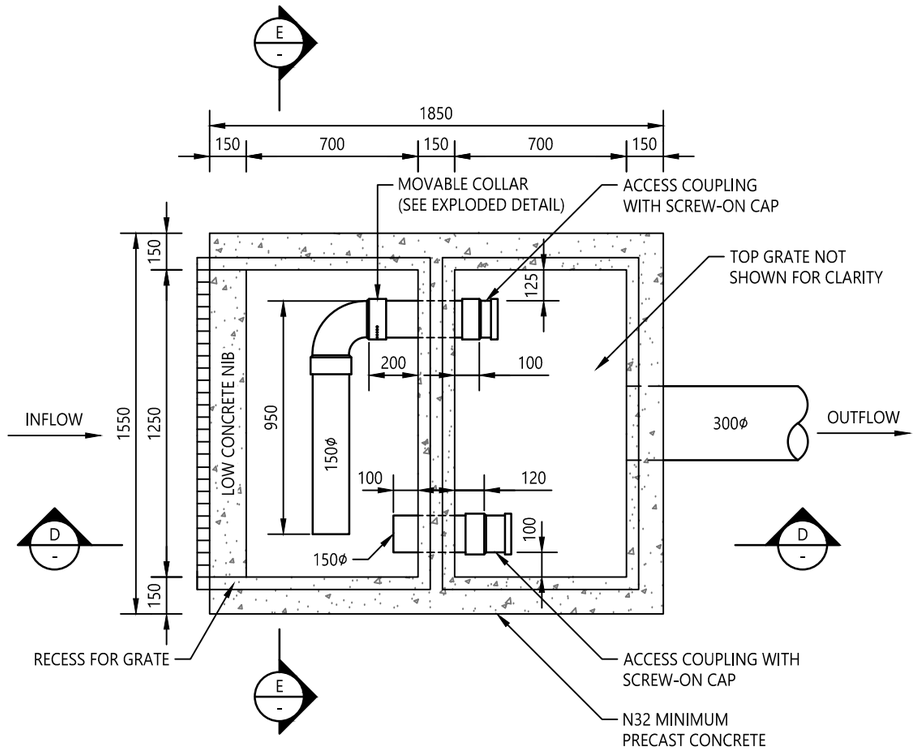
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

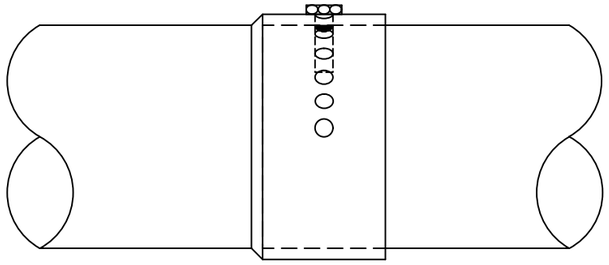
STANDARD DRAWING

SOIL AND WATER MANAGEMENT SERIES
WATER SENSITIVE URBAN DESIGN

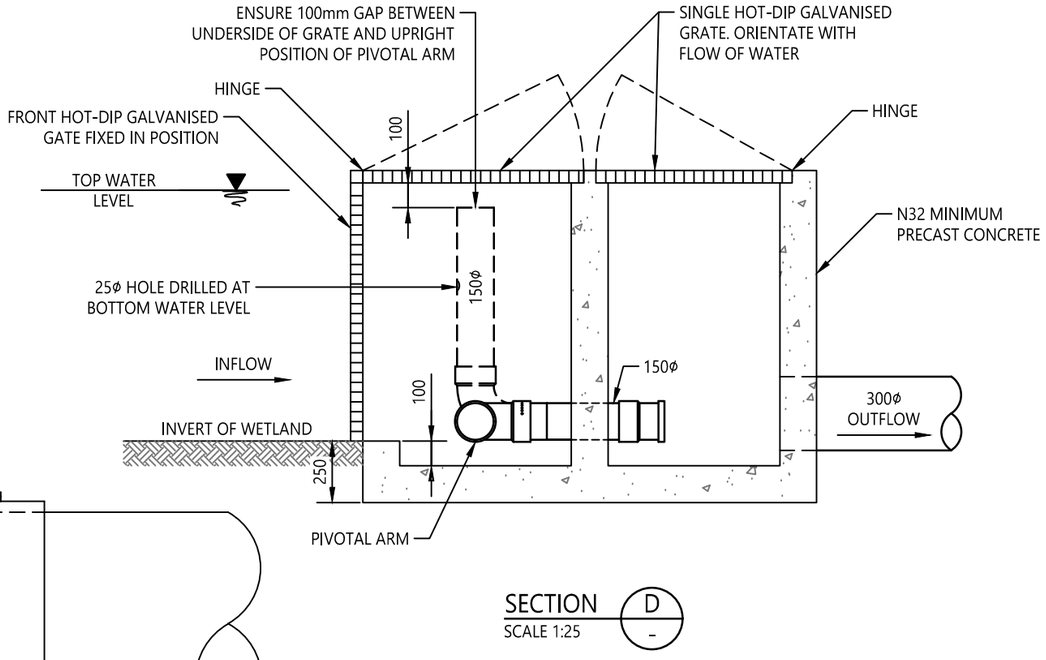
DRAWING NUMBER	REV
SD0102	-
SHEET 2 OF 17	A3



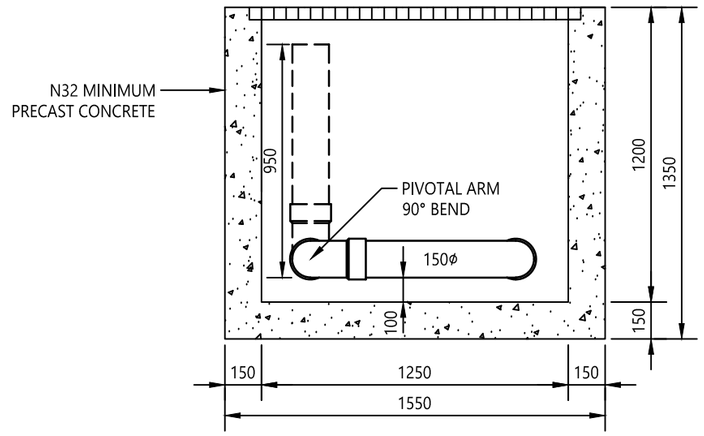
TYPICAL WATER CONTROL DEVICE PLAN
SCALE 1:25



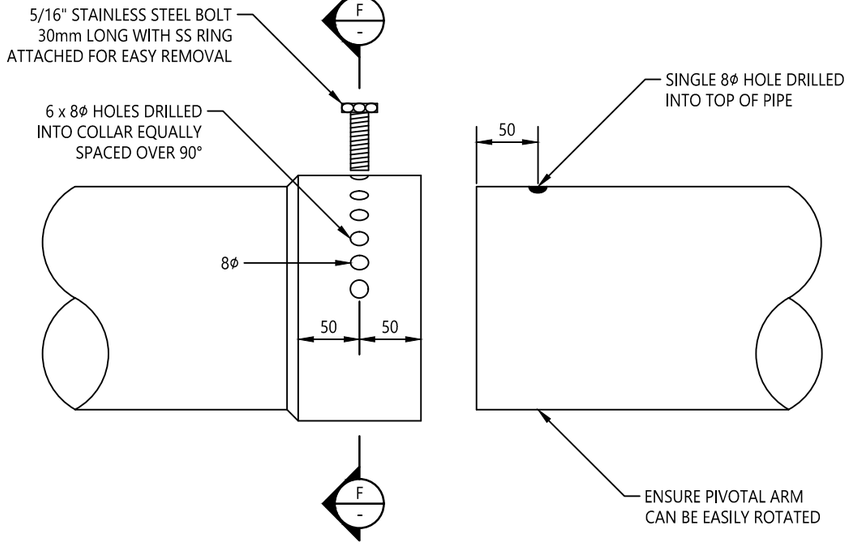
MOVABLE COLLAR DETAIL
SCALE 1:5



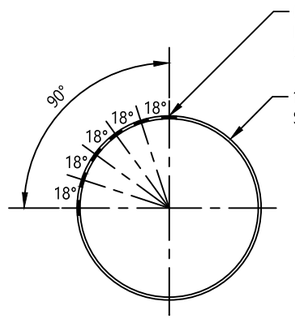
SECTION D
SCALE 1:25



SECTION E
SCALE 1:25



MOVABLE COLLAR EXPLODED VIEW
SCALE 1:5



SECTION F
SCALE 1:5

NOTES:

1. WATER CONTROL DEVICES SHALL BE INDIVIDUALLY DESIGNED TO SUIT THE REQUIRED SIZE AND DEPTH OF THE DEVICE LOCATION.
2. WATER CONTROL DEVICES SHALL BE PRECAST CONCRETE.
3. ALL GRATES TO BE HOT-DIP GALVANISED.
4. ALL PIPES TO BE DWV PIPES CLASS SN4 OR EQUIVALENT.
5. ALL JOINTS TO BE SOLVENT WELDED EXCEPT MOVABLE COLLAR.
6. WETLAND INLET DRAINAGE PIPE LONG SECTION(S) SHALL BE PROVIDED TO SHOW THE DESIGN STORM AEP, FLOW RATES, PIPE SIZE, GRADE AND INVERT LEVELS.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 50 100 150 200 250 1:5
0 250 500 750 1000 1250 1:25
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

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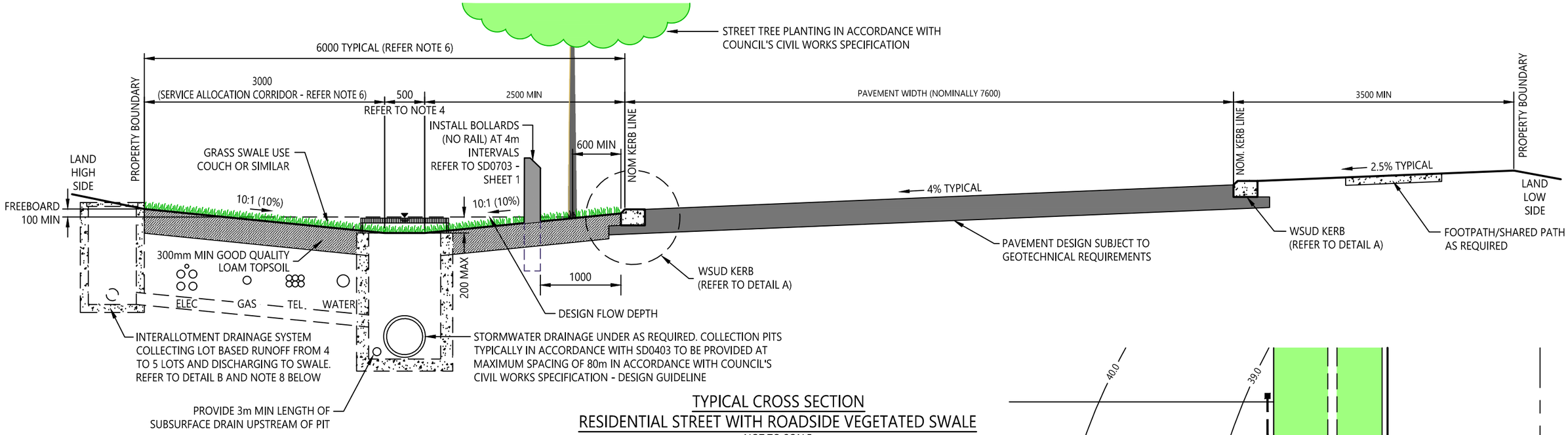
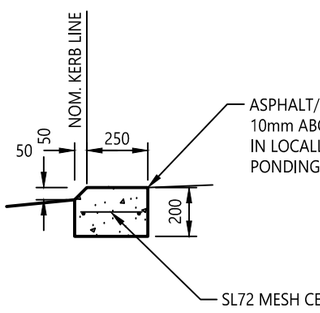
SOIL AND WATER MANAGEMENT SERIES
WATER SENSITIVE URBAN DESIGN

STANDARD DRAWING

DRAWING NUMBER	REV
SD0102	-
SHEET 3 OF 17	A3



TYPICAL CROSS SECTION
RESIDENTIAL STREET WITH ROADSIDE VEGETATED SWALE
NOT TO SCALE



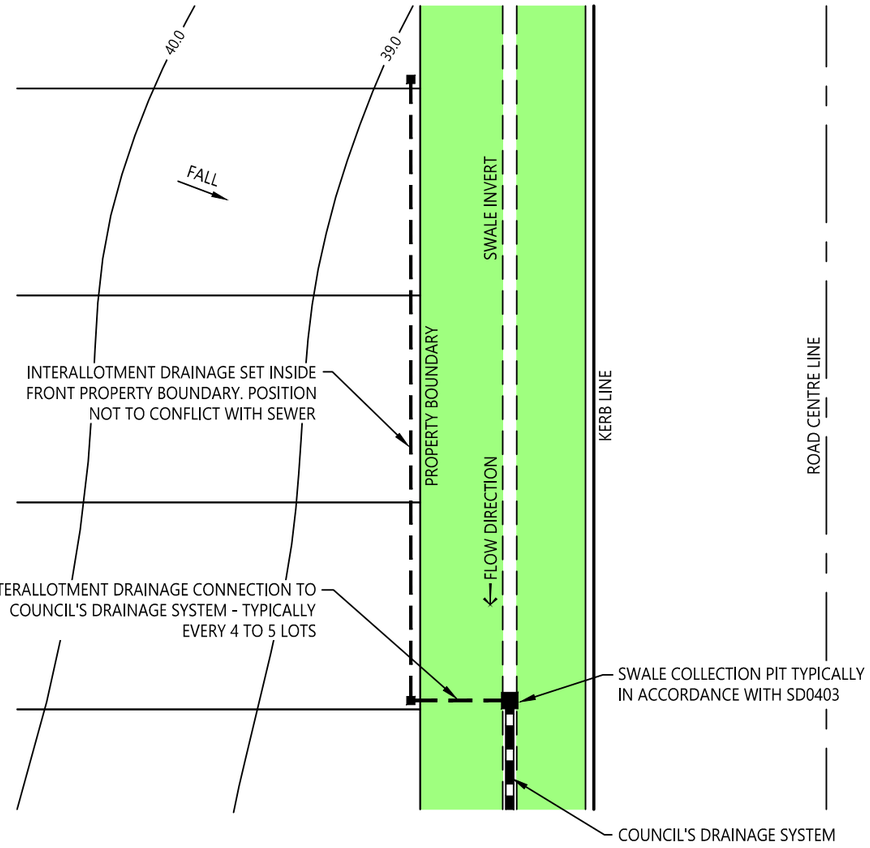
DETAIL A
WSUD KERB
NOT TO SCALE

KERB NOTES:

1. CONTROL JOINTS ARE TO BE PROVIDED AT INTERVALS NOT EXCEEDING 3m.
2. CONCRETE STRENGTH GRADE SHALL BE N25 MINIMUM.

NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH COUNCIL'S CIVIL WORKS SPECIFICATION - DESIGN GUIDELINE.
2. SWALE VERGE TREATMENT ONLY SUITABLE FOR USE ON ROADS CLASSIFIED AS ACCESS LANEWAYS, ACCESS ROADS OR LOCAL ROADS.
3. FOR STREETS WITH FOOTWAY/SWALES ANY REQUIRED FOOTPATH SHALL BE LOCATED ON THE OPPOSITE VERGE TO THE TREATMENT MEASURE.
4. HYDRAULIC MODELLING IS TO BE UNDERTAKEN TO ENSURE FLOW DEPTH, WIDTH AND SAFETY REQUIREMENTS FOR BOTH MINOR AND MAJOR EVENTS ARE MET. REFER TO COUNCIL'S CIVIL WORKS SPECIFICATION - DESIGN GUIDLINE FOR DETAILS. MAXIMUM PERMISSIBLE VELOCITY IS 1.0m/s.
5. 1 IN 100 YEAR FLOWS AT SWALE SAG POINTS ARE TO BE COLLECTED AND CONVEYED UNDER THE ROAD AS NO OVERLAND FLOWPATH TO THE LAND LOW SIDE WILL EXIST.
6. SERVICE ALLOCATION CORRIDOR MAY BE REDUCED IF SHARED TRENCHING ADOPTED (ABSOLUTE MINIMUM 1950mm) OR FOR RETROFIT DESIGN APPLICATIONS. FOR FURTHER GUIDANCE REFER TO 'GUIDE TO CODES AND PRACTICES FOR STREETS OPENING', NSW STREETS OPENING CONFERENCE, 2007. MINIMUM VERGE WIDTHS TO COMPLY WITH COUNCIL'S CIVIL WORKS SPECIFICATION - DESIGN GUIDELINE.
7. FOR LONGITUDINAL GRADES <2% INSTALL SUBSURFACE DRAINAGE TO PREVENT WATERLOGGING. GRADES >4% TO BE CONSTRUCTED WITH CHECK DAMS.
8. HOUSE DRAIN STORMWATER CONNECTIONS TO HIGH SIDE OF ROAD KERB OR KERB AND CHANNEL ARE NOT PERMITTED. IF DRAINAGE OF LOTS ON HIGH SIDE OF ROAD IS REQUIRED, THEN INTERALLOTMENT DRAINAGE MUST BE CONSTRUCTED INSIDE THE FRONT PROPERTY BOUNDARY TO SERVICE THE LOTS.



DETAIL B
TYPICAL INTERALLOTMENT DRAINAGE CONFIGURATION
NOT TO SCALE

ROADSIDE VEGETATED SWALE

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: NOT TO SCALE

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

SOIL AND WATER MANAGEMENT SERIES
WATER SENSITIVE URBAN DESIGN

DRAWING NUMBER	REV
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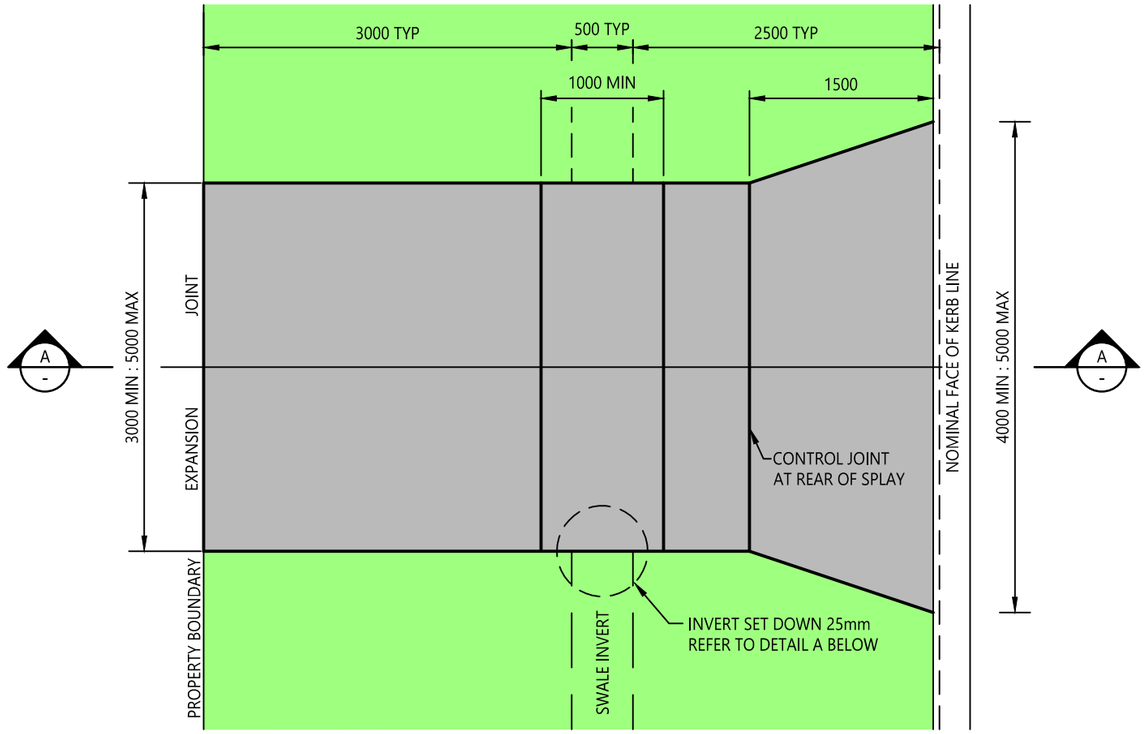
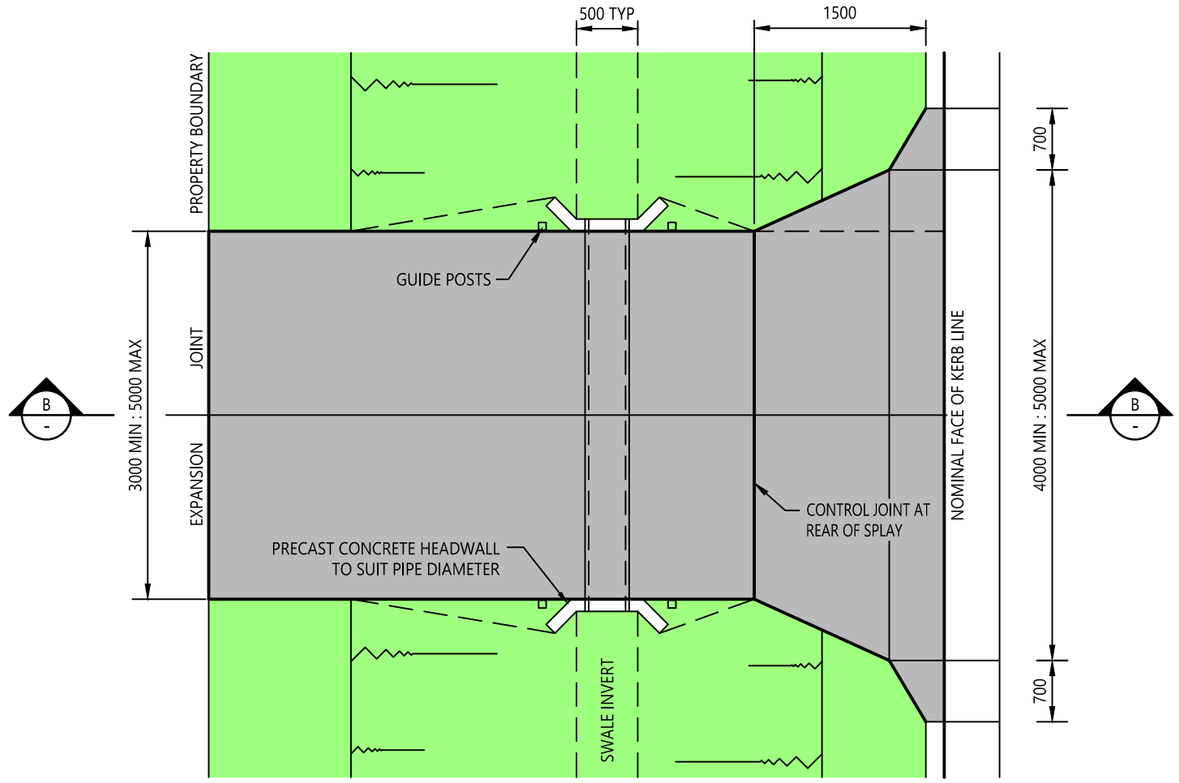


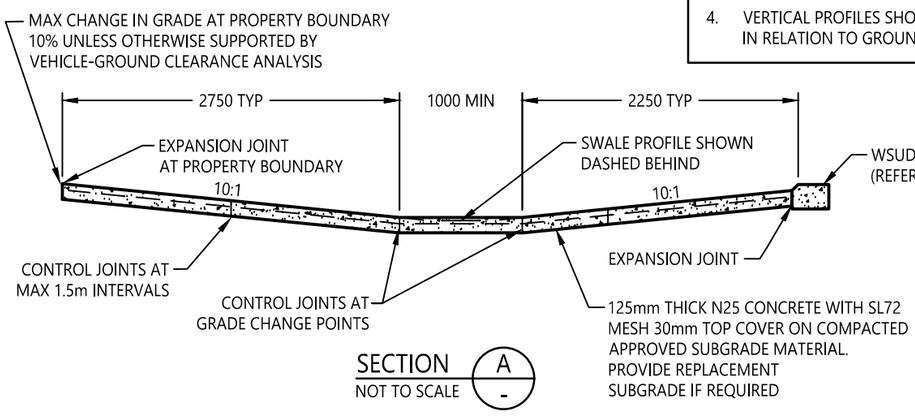


TYPE 1 - VEHICLE ACCESS CROSSING
NOT TO SCALE

NOTES:

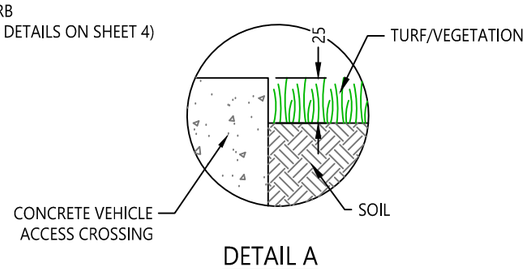
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH COUNCIL'S CIVIL WORKS SPECIFICATION.
2. FOR SWALES WITH SUBSURFACE DRAINAGE OR BIORETENTION SWALES, SUBSURFACE TREATMENT SHALL BE CONTINUOUS UNDER VEHICLE ACCESS CROSSING.
3. REFER TO COUNCIL'S CIVIL WORKS SPECIFICATION AND SD0503 FOR DETAILS ON EXPANSION AND CONTROL JOINTS.
4. VERTICAL PROFILES SHOWN ON THIS DRAWING COMPLY WITH THE REQUIREMENTS OF AS/NZS 2890.1 IN RELATION TO GROUND CLEARANCE TEMPLATES FOR THE B85 VEHICLE.

TYPE 2 - VEHICLE ACCESS CROSSING
NOT TO SCALE

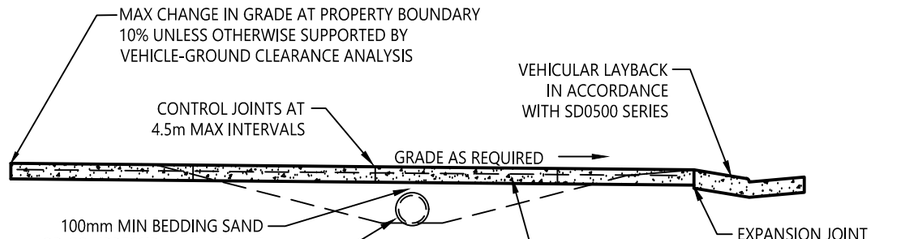


SECTION A - NOT TO SCALE

TYPE 1
AT-GRADE CROSSING
NOT TO SCALE



DETAIL A
NOT TO SCALE



SECTION B - NOT TO SCALE

(NOTE: TYPE 2 CROSSING FOR RETROFIT APPLICATIONS OR AS ADVISED BY COUNCIL'S REPRESENTATIVE)

TYPE 2
CONDUIT CROSSING
NOT TO SCALE

VEHICLE ACCESS CROSSINGS FOR ROADSIDE VEGETATED SWALES

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: NOT TO SCALE

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

SOIL AND WATER MANAGEMENT SERIES
WATER SENSITIVE URBAN DESIGN

STANDARD DRAWING

DRAWING NUMBER	REV
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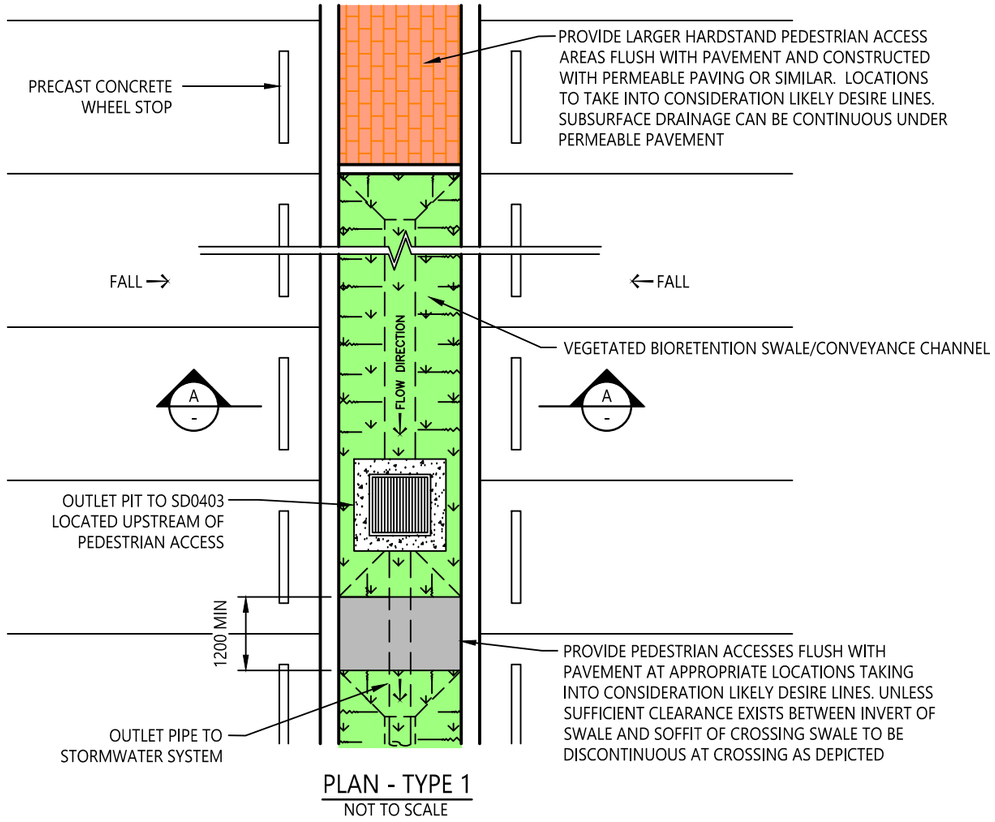
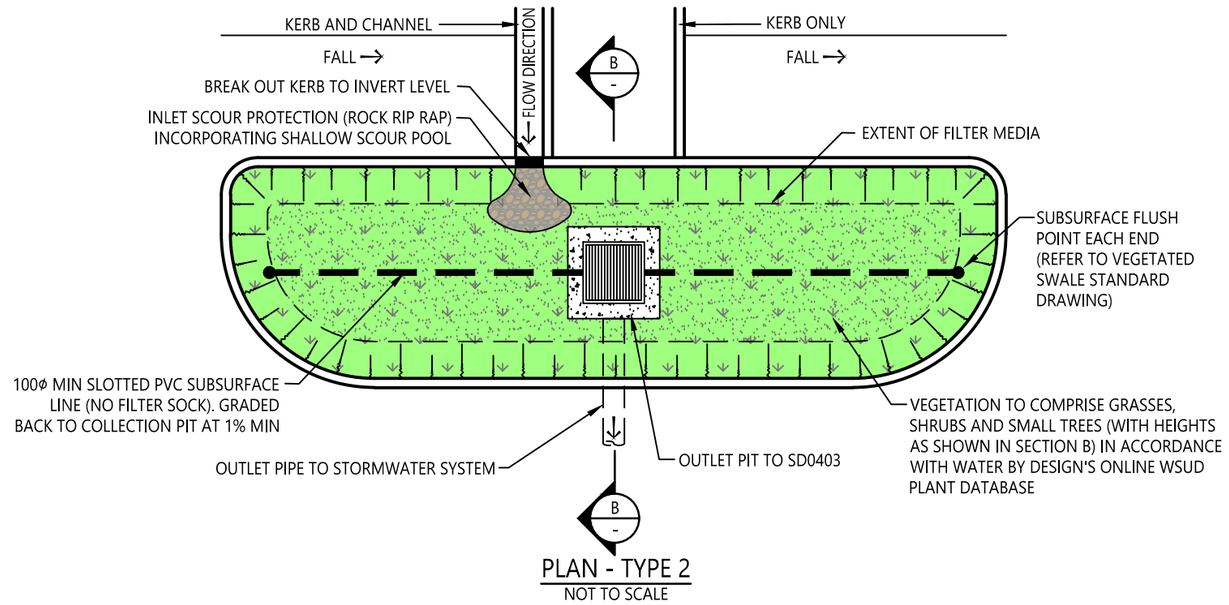


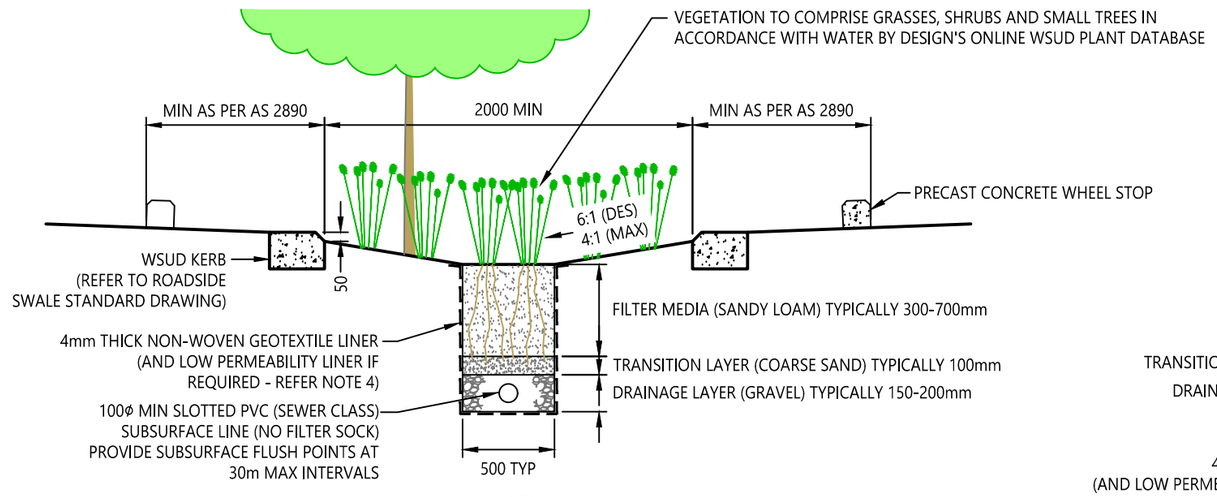
PLAN - TYPE 1
NOT TO SCALE

NOTES:

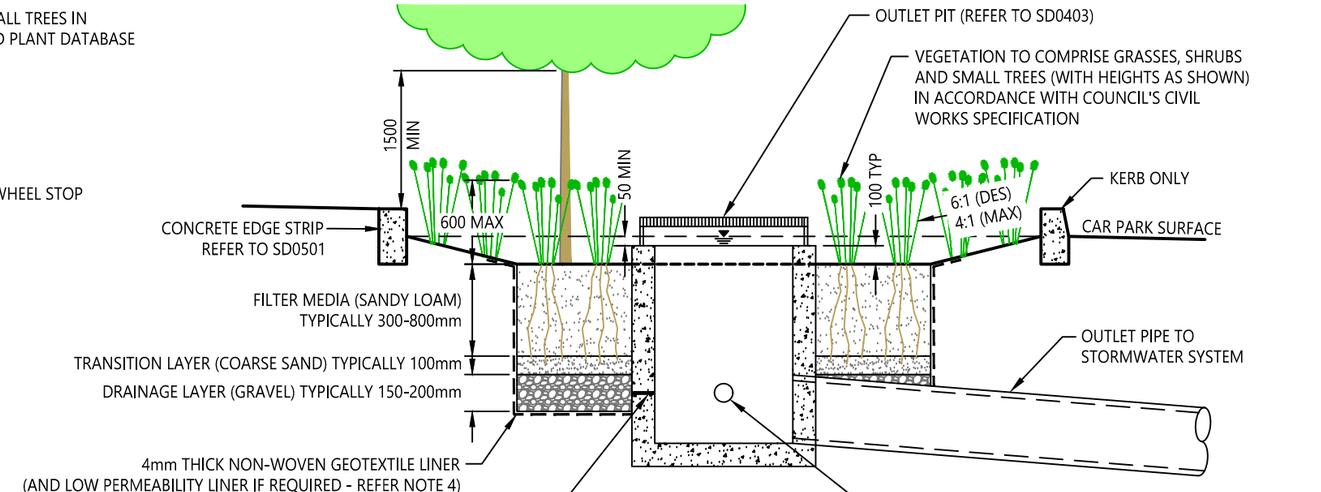
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH COUNCIL'S CIVIL WORKS SPECIFICATION.
2. HYDRAULIC MODELLING SHALL BE UNDERTAKEN TO ENSURE FLOW DEPTH, WIDTH AND SAFETY REQUIREMENTS FOR BOTH MINOR AND MAJOR EVENTS ARE MET. REFER TO COUNCIL'S CIVIL WORKS SPECIFICATION FOR DETAILS. MAXIMUM PERMISSIBLE VELOCITY IS 1.0m/s.
3. FOR BIORETENTION MEDIA SPECIFICATIONS REFER TO BIORETENTION BASIN STANDARD DRAWING.
4. LINING OF BIORETENTION SYSTEMS IS TO BE ASSESSED BASED ON GROUNDWATER CONDITIONS AND PROXIMITY OF SENSITIVE INFRASTRUCTURE. SEEK GEOTECHNICAL ENGINEER'S RECOMMENDATIONS IF UNCERTAIN.
5. MULCH, IF APPLIED, SHALL BE CRUSHED GRAVEL OR OTHER SIMILAR MATERIAL THAT WILL NOT FLOAT WHEN THE BIORETENTION AREA IS SUBMERGED.



PLAN - TYPE 2
NOT TO SCALE



SECTION A
NOT TO SCALE



SECTION B
NOT TO SCALE

WSUD CAR PARK TYPE 1 - BIORETENTION SWALE

WATER SENSITIVE URBAN DESIGN CAR PARKS

WSUD CAR PARK TYPE 2 - RAINGARDEN

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: NOT TO SCALE

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

SOIL AND WATER MANAGEMENT SERIES
WATER SENSITIVE URBAN DESIGN

STANDARD DRAWING

DRAWING NUMBER	REV
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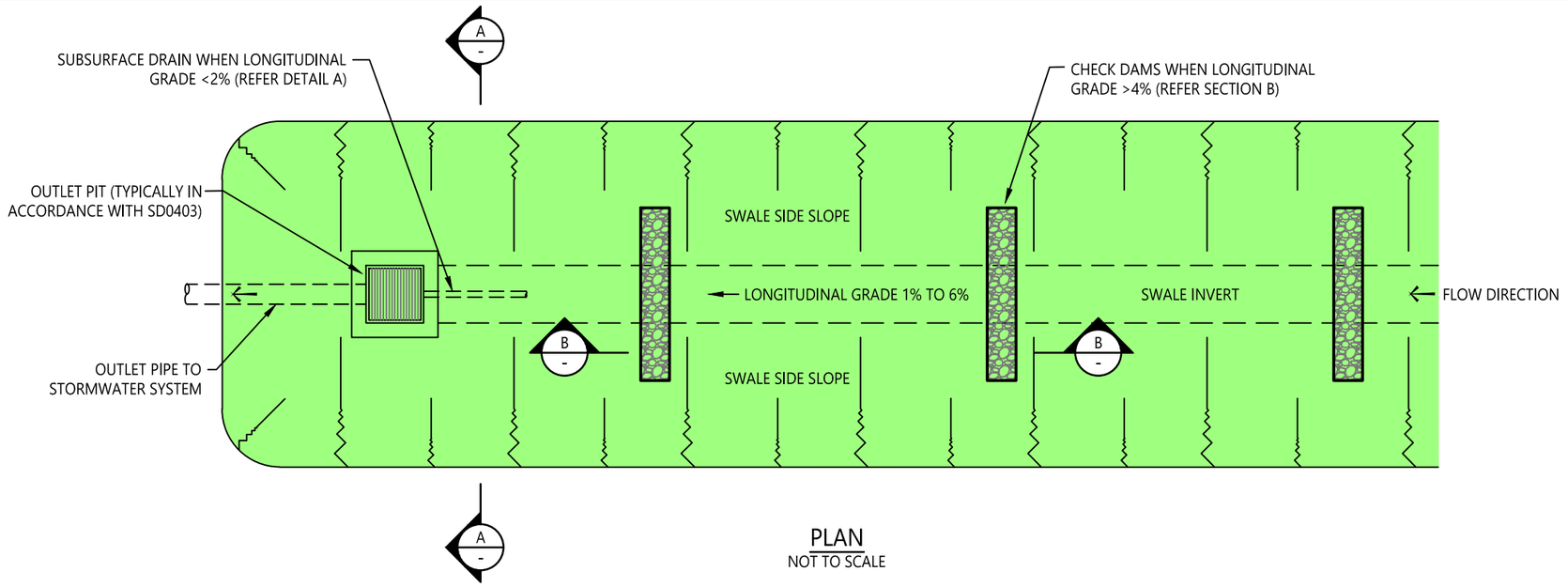
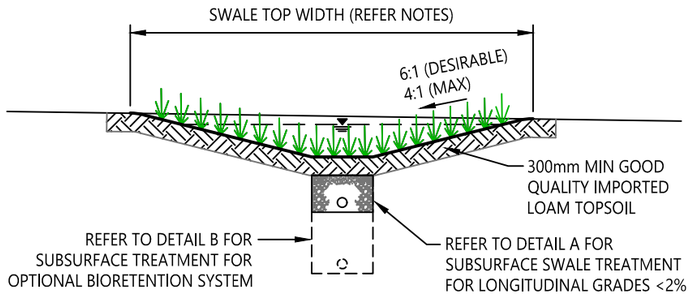


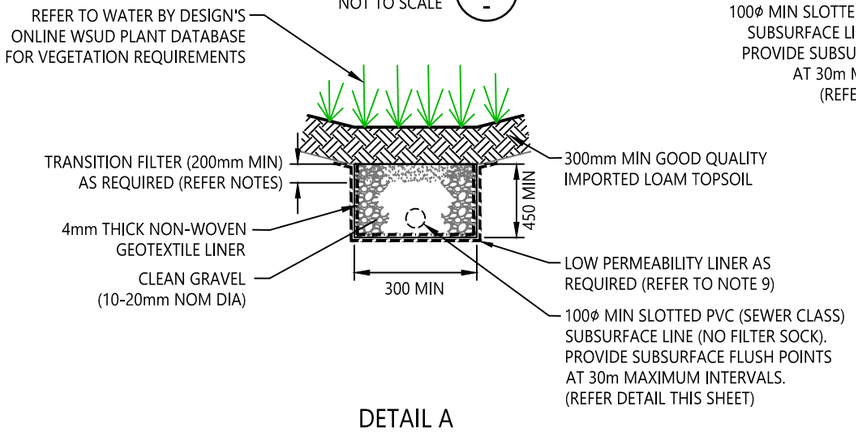
PLAN
NOT TO SCALE

NOTES:

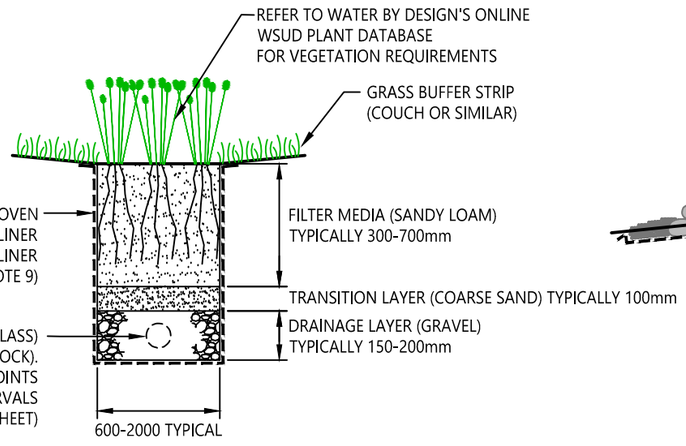
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH COUNCIL'S CIVIL WORKS SPECIFICATION.
2. PLANT SPECIES WITHIN SWALE SHALL BE IN ACCORDANCE WITH WATER BY DESIGN'S ONLINE WSUD PLANT DATABASE.
3. PITS AND GRATES SHALL CONFORM TO COUNCIL'S CIVIL WORKS SPECIFICATION.
4. SWALES SHALL BE BLENDED OR SMOOTHED TO THE NATURAL TOPOGRAPHY.
5. CHECK DAMS TO BE DESIGNED IN ACCORDANCE WITH MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION, VOLUME 1 (LANDCOM, 2004) AND MAY ALSO BE CONSTRUCTED USING CONCRETE, BLOCKWORK OR TIMBER BEAMS.
6. SWALE VEGETATION TO BE MAINTAINED GREATER THAN 100mm IN HEIGHT.
7. SWALE DIMENSIONS TO BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF COUNCIL'S CIVIL WORKS SPECIFICATION.
8. TRANSITION FILTER LAYER REQUIREMENT TO BE ASSESSED BASED ON PLANTING SOIL/TRENCH GRAVEL GRADING COMPATIBILITY.
9. LINING OF SUBSURFACE SYSTEMS IS TO BE ASSESSED BASED ON GROUNDWATER CONDITIONS AND PROXIMITY OF SENSITIVE INFRASTRUCTURE. SEEK GEOTECHNICAL ENGINEER'S RECOMMENDATIONS IF UNCERTAIN.



SECTION A
NOT TO SCALE

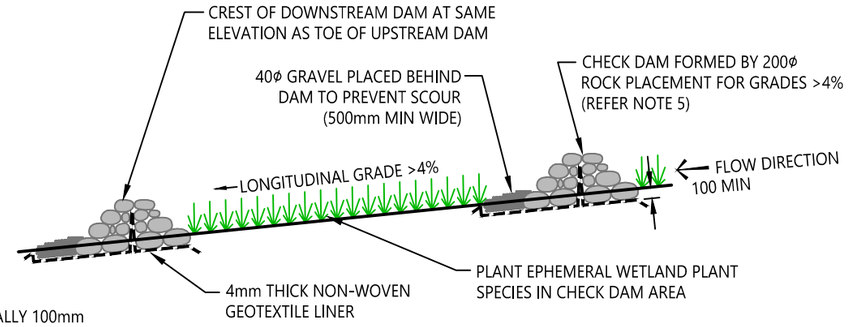


DETAIL A
NOT TO SCALE

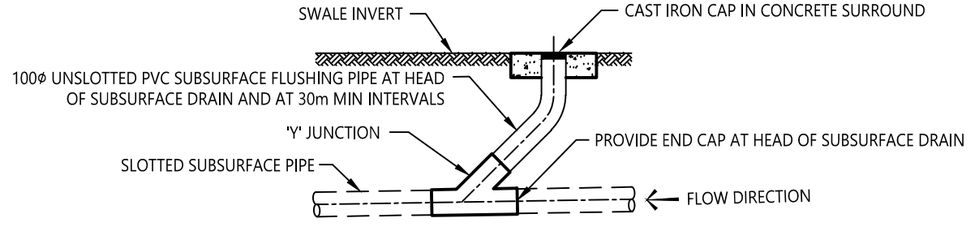


NOTE:
FOR BIORETENTION MEDIA SPECIFICATIONS REFER TO SHEET 4

DETAIL B
BIORETENTION SYSTEM CROSS SECTION
NOT TO SCALE



SECTION B
NOT TO SCALE



DETAIL C
SUBSURFACE DRAIN FLUSHING POINT
NOT TO SCALE

VEGETATED SWALE

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: NOT TO SCALE

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

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WATER SENSITIVE URBAN DESIGN

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DRAWING NUMBER	REV
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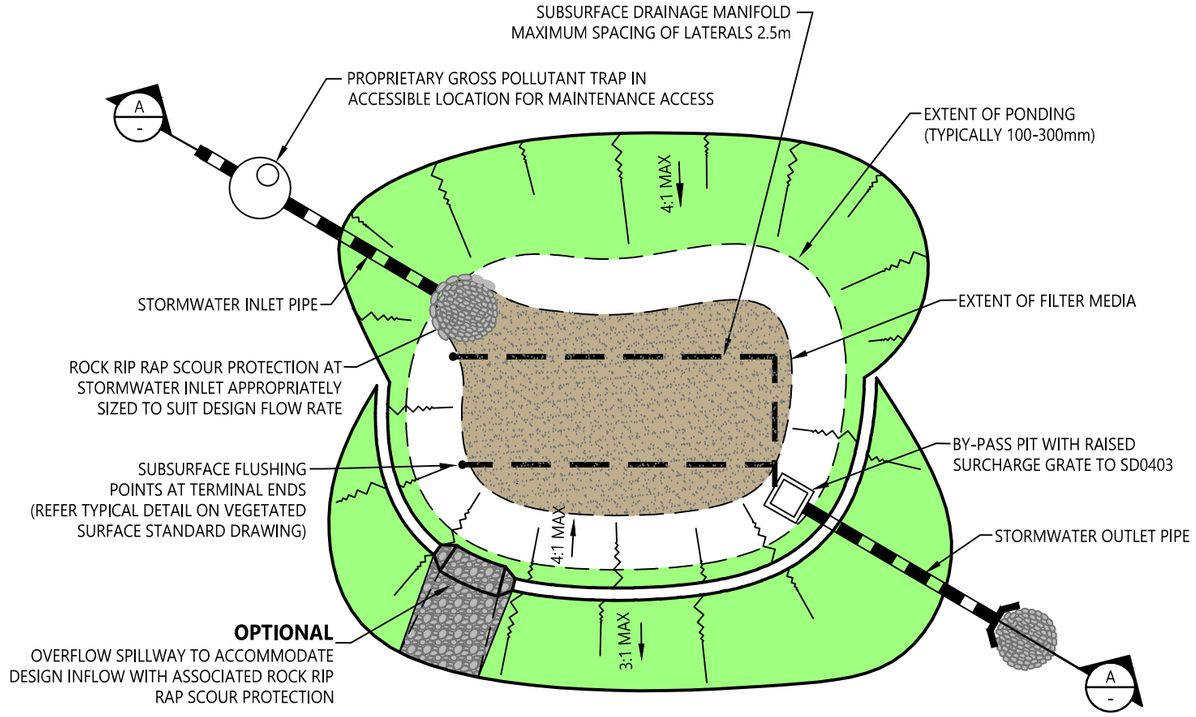


BIORETENTION BASIN PLAN
NOT TO SCALE

BIORETENTION MATERIAL SPECIFICATION SUMMARY

GENERAL
THE FOLLOWING SUMMARY HAS BEEN EXTRACTED AND ADAPTED FROM 'GUIDELINES FOR SOIL FILTER MEDIA IN BIORETENTION SYSTEMS (VERSION 2.01), FAWB - MARCH 2008 (THE FAWB SPECIFICATION). FOR FURTHER INFORMATION, REFERENCE SHOULD BE MADE TO THAT DOCUMENT.

FILTER MEDIA HYDRAULIC PROPERTIES
THE FILTER MATERIAL SHALL PREFERABLY BE A "WASHED SAND" OF SILICEOUS OR CALCAREOUS ORIGIN, ONE THAT HAS BEEN MINED AND PROCESSED. NATURAL SOILS OR TOPSOILS ARE NOT USUALLY SUITABLE.

THE MEDIA SHALL HAVE THE FOLLOWING MECHANICAL AND PHYSICAL PROPERTIES:

1. SATURATED HYDRAULIC CONDUCTIVITY IN THE RANGE OF 100 - 300mm/h. THIS CRITICAL ELEMENT IS TO BE DEMONSTRATED THROUGH LABORATORY TESTING (ASTM-F1815-06 STANDARD TEST METHODS FOR SATURATED HYDRAULIC CONDUCTIVITY, WATER RETENTION, POROSITY AND BULK DENSITY OF ATHLETIC FIELD ROOTZONES).
2. PARTICLE SIZE DISTRIBUTION/COMPOSITION REQUIREMENTS:

DESCRIPTION	PROPORTION	GRADING
CLAY AND SILT	<3%	<0.05mm
VERY FINE SAND	5-30%	0.05-0.15mm
FINE SAND	10-30%	0.15-0.25mm
MEDIUM TO COARSE SAND	40-60%	0.25-1.0mm
COARSE SAND	7-10%	1.0-2.0mm
FINE GRAVEL	<3%	2.0-3.4mm

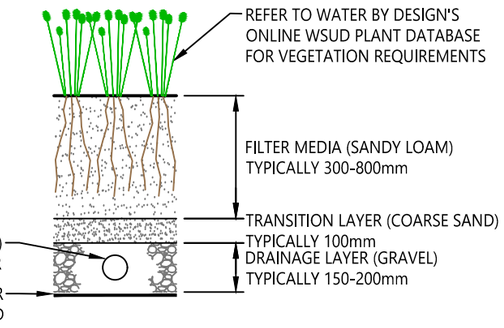
3. ORGANIC MATTER CONTENT - LESS THAN 5% (w/w)
4. PH - 5.7-7.5
5. ELECTRICAL CONDUCTIVITY (EC) < 1.2dS/m
6. PHOSPHOROUS < 100mg/kg

TRANSITION LAYER
AN INDICATIVE PARTICLE SIZE DISTRIBUTION IS PROVIDED BELOW.

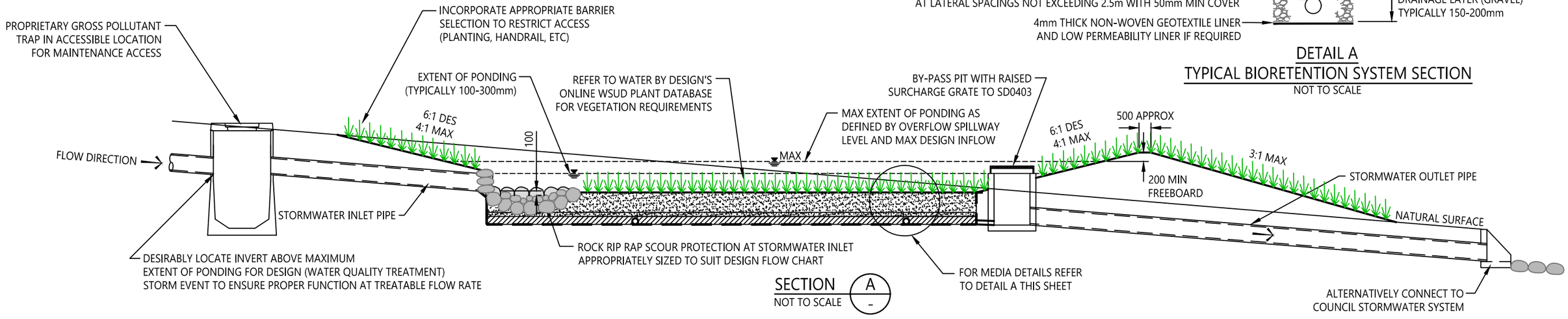
NOTE: GEOTEXTILE FABRICS ARE NOT PERMITTED FOR USE AS A TRANSITION LAYER DUE TO THE RISK OF CLOGGING.

SIEVE SIZE AS (mm)	% PASSING
0.075	0-3
0.15	0-4
0.3	0-16
0.6	12-40
1.18	40-65
2.36	70-100
4.75	90-100
9.5	100

DRAINAGE LAYER
THE DRAINAGE LAYER IS NORMALLY BETWEEN 150 - 200mm THICK AND IS TO BE A CLEAN, FINE GRAVEL, SUCH AS 2-5mm WASHED SCREENINGS. SUITABLE MATERIALS INCLUDE A HARD DURABLE AGGREGATE, SUCH AS BASALT OR SANDSTONE (SCORIA IS NOT AN ACCEPTABLE MATERIAL FOR THIS APPLICATION).



DETAIL A
TYPICAL BIORETENTION SYSTEM SECTION
NOT TO SCALE



SECTION A - NOT TO SCALE

BIORETENTION BASIN

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
NOT TO SCALE
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
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WATER SENSITIVE URBAN DESIGN

STANDARD DRAWING

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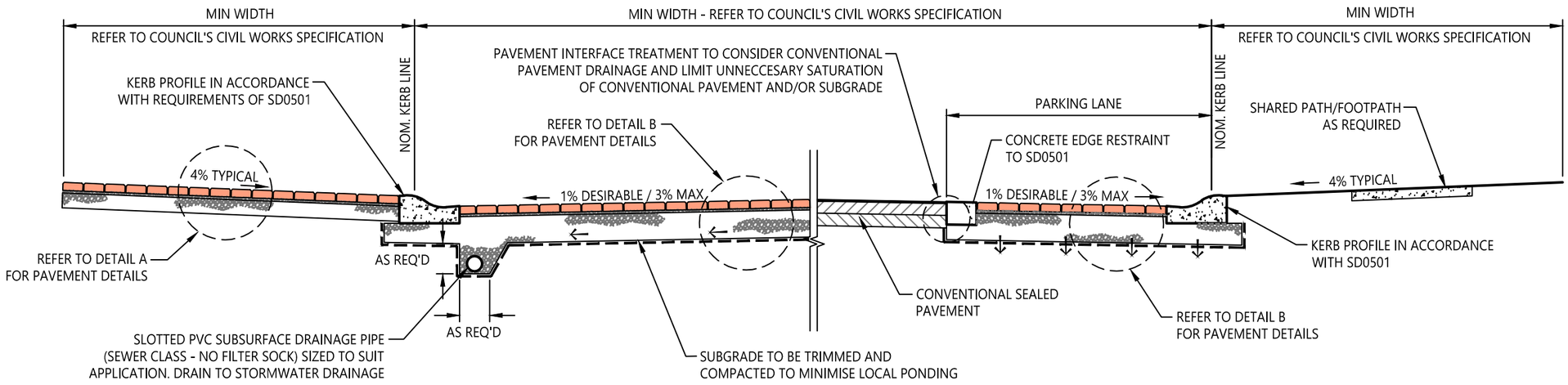
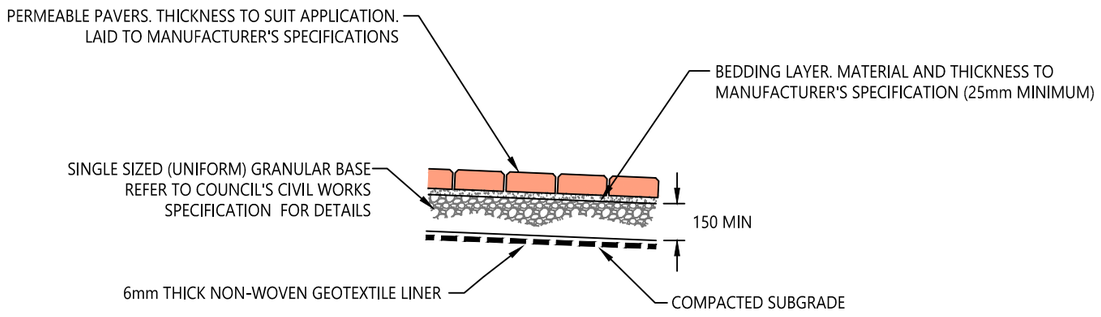


LOW PERMEABILITY SUBGRADE APPLICATION
NOT TO SCALE

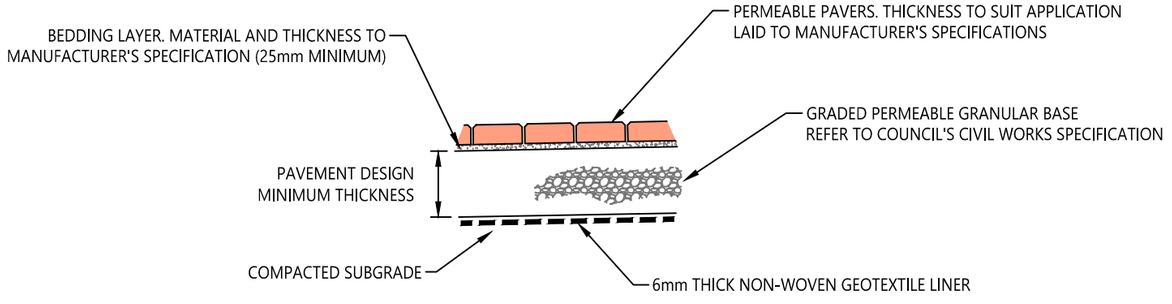
PERMEABLE SUBGRADE APPLICATION
NOT TO SCALE

NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH COUNCIL'S CIVIL WORKS SPECIFICATION.
2. LIGHT-DUTY PERMEABLE PAVEMENT DETAIL CONSIDERED SUITABLE FOR APPLICATIONS NOT SUBJECT TO TRUCK OR OTHER HEAVY VEHICLE LOADINGS SUCH AS CAR PARKS, DOMESTIC DRIVEWAYS AND HARD LANDSCAPING.
3. HEAVY-DUTY PERMEABLE PAVEMENT APPLICATION ONLY SUITABLE FOR USE IN TRAFFIC LANES ON ROADS CLASSIFIED AS ACCESS ROADS. FOR ROADS OF HIGHER CLASSIFICATION PERMEABLE PAVEMENTS SHALL BE LIMITED TO PARKING LANES ONLY.
4. A GEOTECHNICAL ENGINEER'S ASSESSMENT IS REQUIRED TO DETERMINE THE SUITABILITY OF THE SUBGRADE MATERIAL FOR ANY INFILTRATION (PERMEABLE SUBGRADE) APPLICATION. LOW PERMEABILITY SUBGRADE APPLICATION TYPICALLY USED WHERE SUBGRADE k<5x10-6 m/s.
5. POROUS ASPHALT AND POROUS CONCRETE PAVEMENTS NOT DETAILED IN THIS DRAWING ARE ALSO CONSIDERED SUITABLE FOR PERMEABLE PAVEMENT APPLICATIONS.



DETAIL A
LIGHT-DUTY PERMEABLE PAVEMENT DETAIL
NOT TO SCALE



DETAIL B
HEAVY-DUTY PERMEABLE PAVEMENT DETAIL
NOT TO SCALE

PERMEABLE PAVEMENT

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: NOT TO SCALE

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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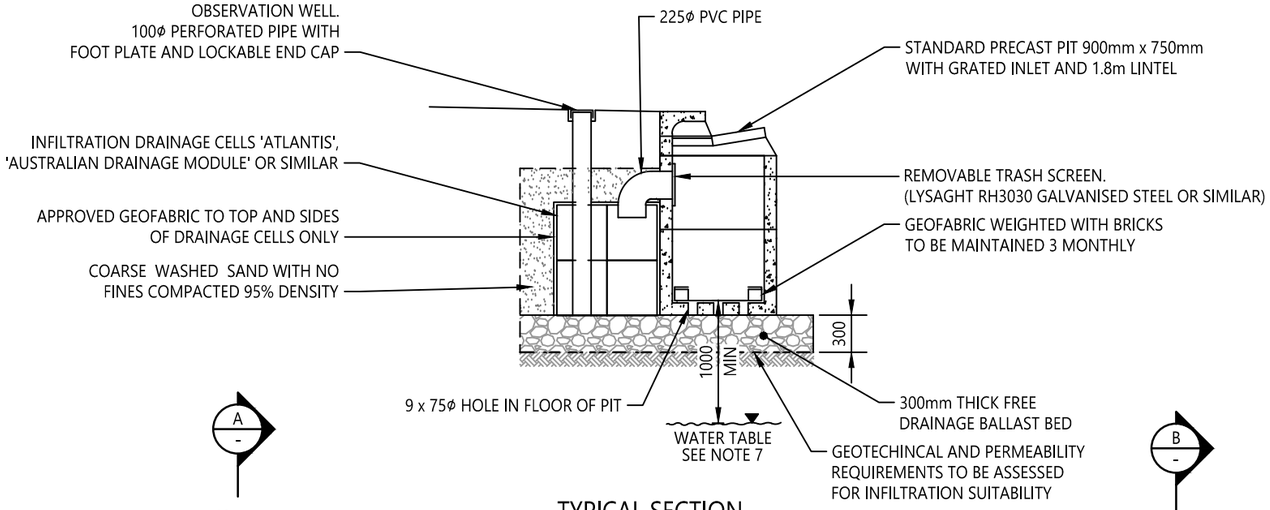
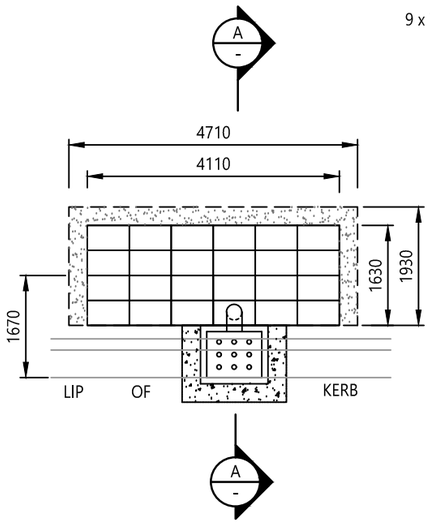


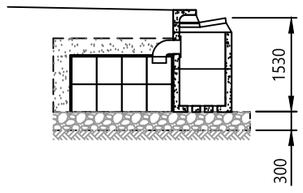
TYPICAL SECTION
SCALE 1:50

NOTES:

1. THIS STANDARD DRAWING IS BASED ON COUNCIL'S DRAWING 140-4-A3.
2. PRECAST DRAINAGE PITS ARE PREFERRED.
3. ALTERNATIVE PROPRIETARY PRODUCTS MAY ALSO BE UTILISED WITH THE APPROVAL OF COUNCIL'S REPRESENTATIVE.
4. DESIGN OF INFILTRATION PITS SHALL BE CARRIED OUT IN ACCORDANCE WITH CHAPTER 11 WSUD ENGINEERING PROCEDURES: STORMWATER, BY MELBOURNE WATER.
5. INFILTRATION SYSTEMS ARE BEST SUITED TO MODERATE TO HIGHLY PERMEABLE IN-SITU SOILS, SUCH AS SANDY LOAM TO SANDY SOILS.
6. GEOTECHNICAL ENGINEER TO TEST SOIL TO DETERMINE INFILTRATION RATE AND SUITABILITY OF THE IN-SITU SOIL FOR INFILTRATION.
7. BASE OF INFILTRATION PIT SHOULD BE 1m MINIMUM ABOVE THE SEASONAL HIGH WATER TABLE.

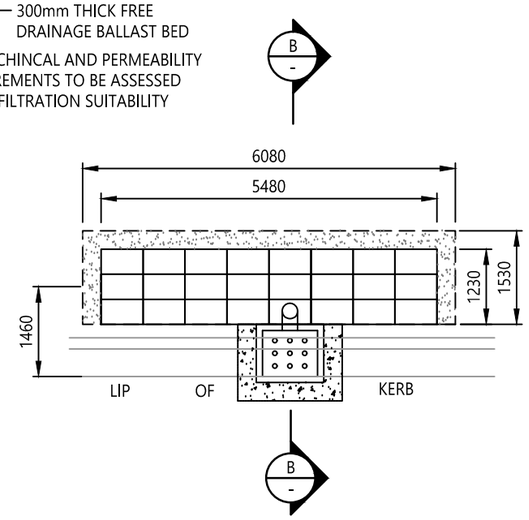


PLAN
SCALE 1:10

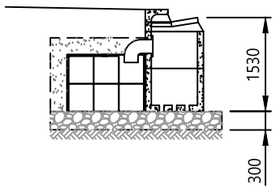


SECTION A
SCALE 1:10

INFILTRATION PIT
6 CELL x 4 CELL x 2 CELL
TYPE A

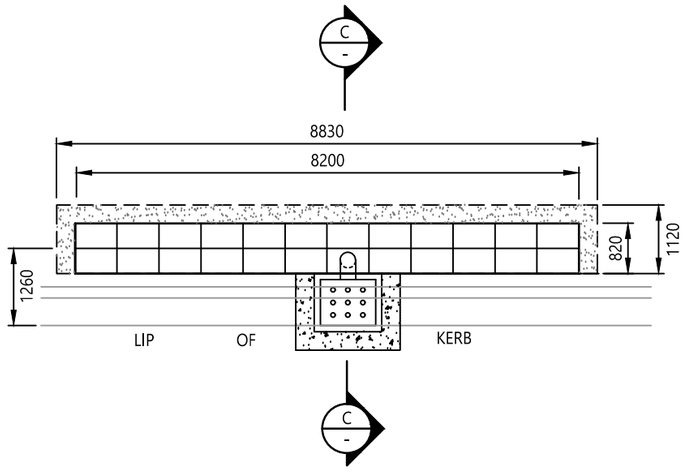


PLAN
SCALE 1:10

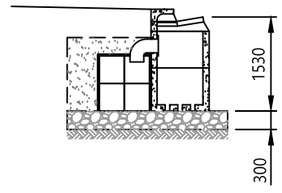


SECTION B
SCALE 1:10

INFILTRATION PIT
8 CELL x 3 CELL x 2 CELL
TYPE B



PLAN
SCALE 1:10



SECTION C
SCALE 1:10

INFILTRATION PIT
12 CELL x 2 CELL x 2 CELL
TYPE C

INFILTRATION PIT SYSTEM

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 500 1000 1500 2000 2500 1:50
0 1000 2000 3000 4000 5000 1:10
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

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LEGEND

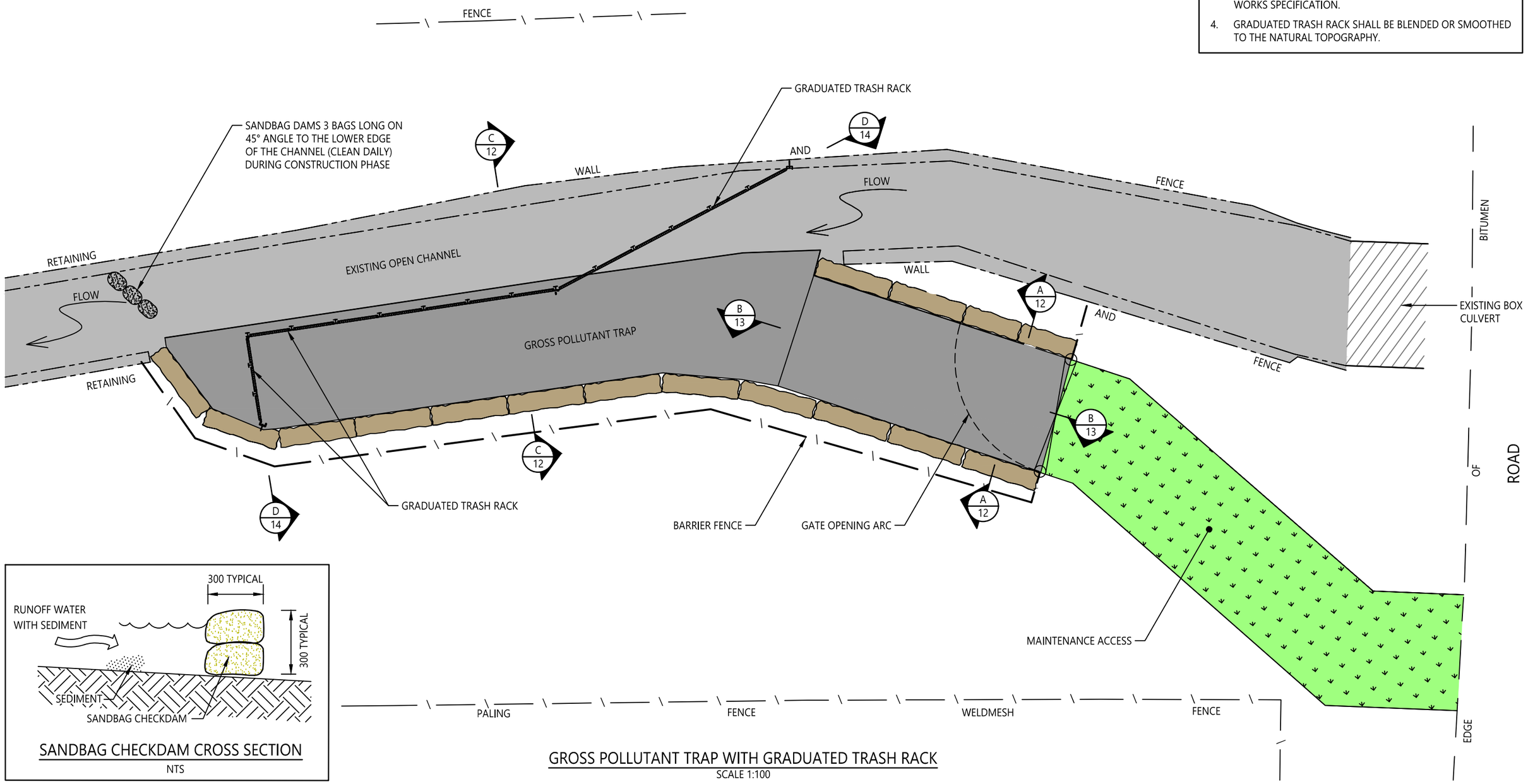
SANDSTONE BLOCK (500 x 500 x 2000)

CONCRETE SLAB

GRASSPAVE ACCESS OR EQUIVALENT

NOTES:

1. THIS STANDARD DRAWING IS BASED ON OPTIMAL STORMWATER'S DRAWING 13A38-CC DATED APRIL 2014 AND IS TO BE USED AS A GUIDE ONLY.
2. GRADUATED TRASH RACK MAY ALSO BE CONSTRUCTED USING CONCRETE OR BLOCKWORK.
3. GRADUATED TRASH RACK DIMENSIONS TO BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF COUNCIL'S CIVIL WORKS SPECIFICATION.
4. GRADUATED TRASH RACK SHALL BE BLENDED OR SMOOTHED TO THE NATURAL TOPOGRAPHY.



SANDBAG CHECKDAM CROSS SECTION

NTS

GROSS POLLUTANT TRAP WITH GRADUATED TRASH RACK

SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 1000 2000 3000 4000 5000

1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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DRAWING NUMBER	REV
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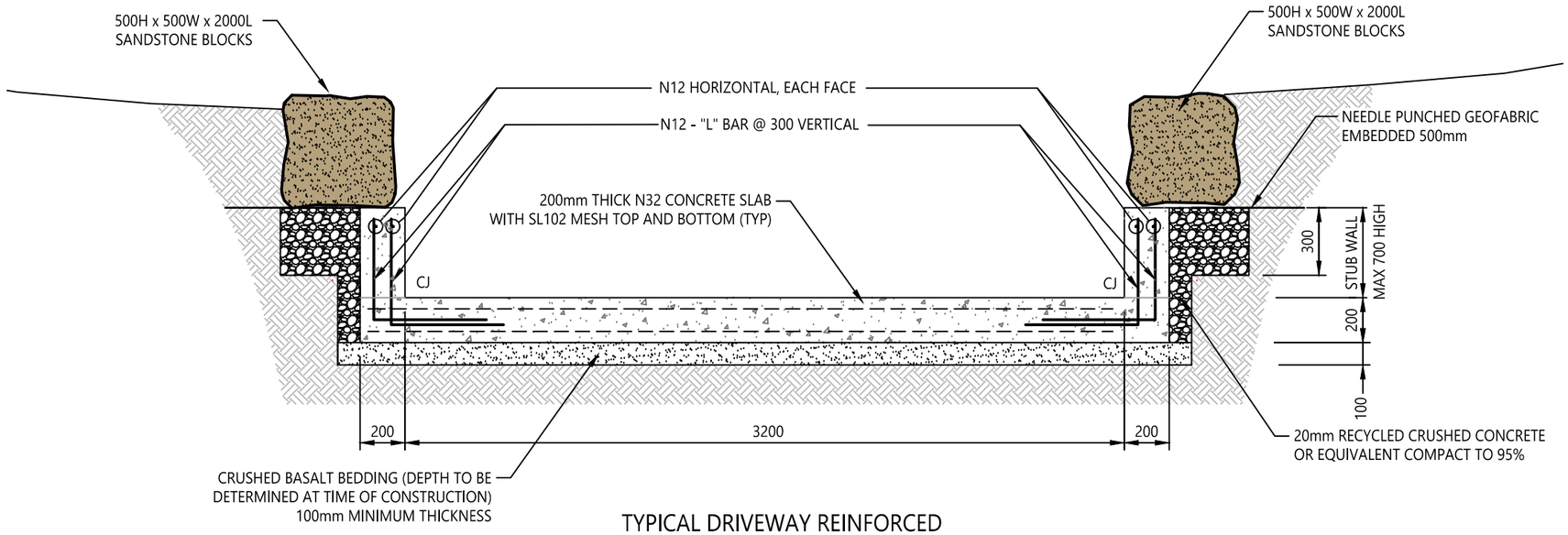
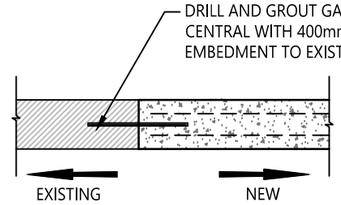


TYPICAL DRIVEWAY REINFORCED CONCRETE DETAILS

SECTION A/11
SCALE 1:25

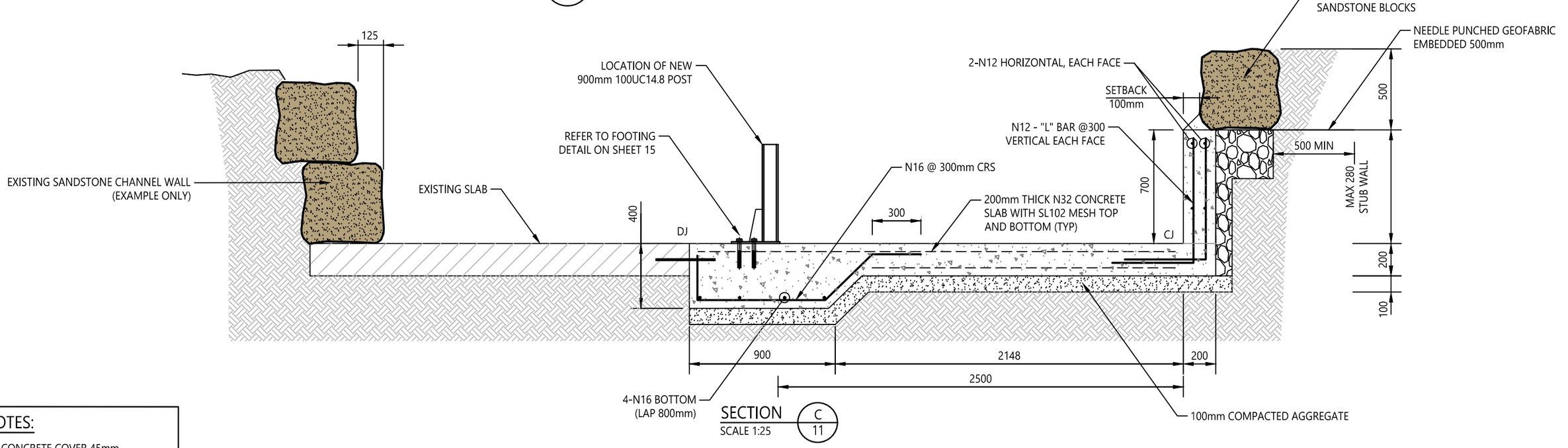
NOTES:

1. THIS STANDARD DRAWING IS BASED ON OPTIMAL STORMWATER'S DRAWING 13A38-CC DATED APRIL 2014 AND IS TO BE USED AS A GUIDE ONLY.
2. THIS STANDARD DRAWING SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.
3. BARRIER FENCING SHALL BE INSTALLED, AS REQUIRED, IN ACCORDANCE WITH COUNCIL'S BARRIER SELECTION GUIDELINES FOR CONSTRUCTION.
4. ALL CONCRETE SHALL BE PLACED AND JOINTED IN ACCORDANCE WITH COUNCIL'S CIVIL WORKS SPECIFICATION.



TYPICAL DOWEL JOINT (DJ) PLAN DETAIL AT EXISTING SLAB AND NEW SLAB INTERFACE

SCALE 1:25



SECTION C/11
SCALE 1:25

NOTES:

1. CONCRETE COVER 45mm.
2. CONCRETE STRENGTH GRADE N32.

REINFORCED CONCRETE DETAILS FOR GRADUATED TRASH RACK

SCALE 1:25

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 250 500 750 1000 1250
1:25
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
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DRAWING NUMBER	REV
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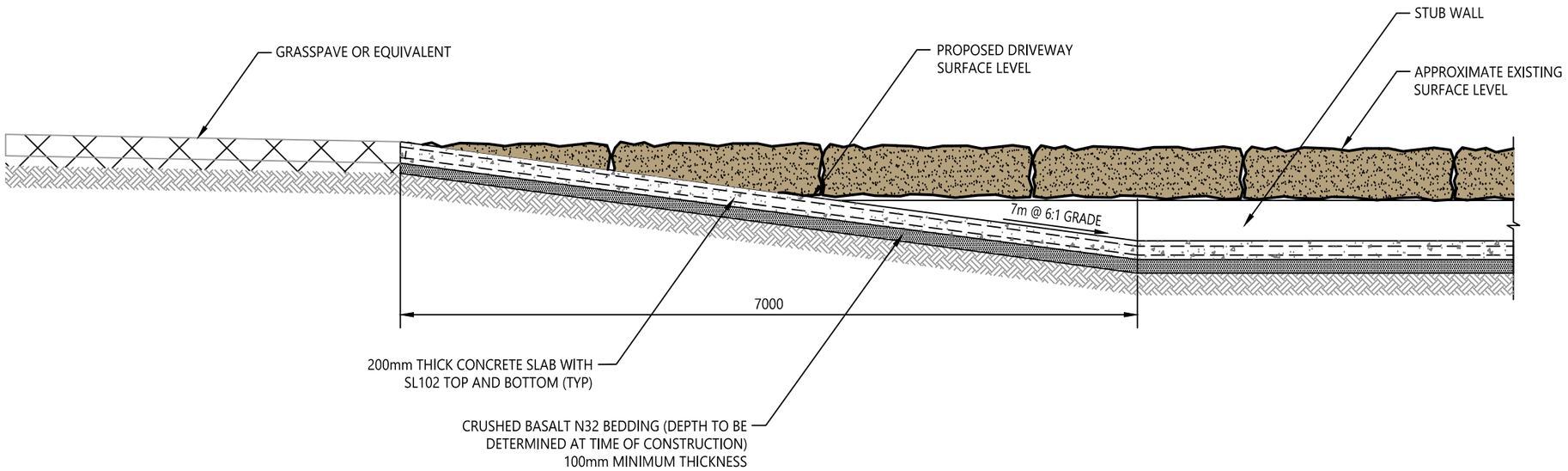

SECTION B/11
SCALE 1:50

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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DRAWING NUMBER	REV
SD0102	-
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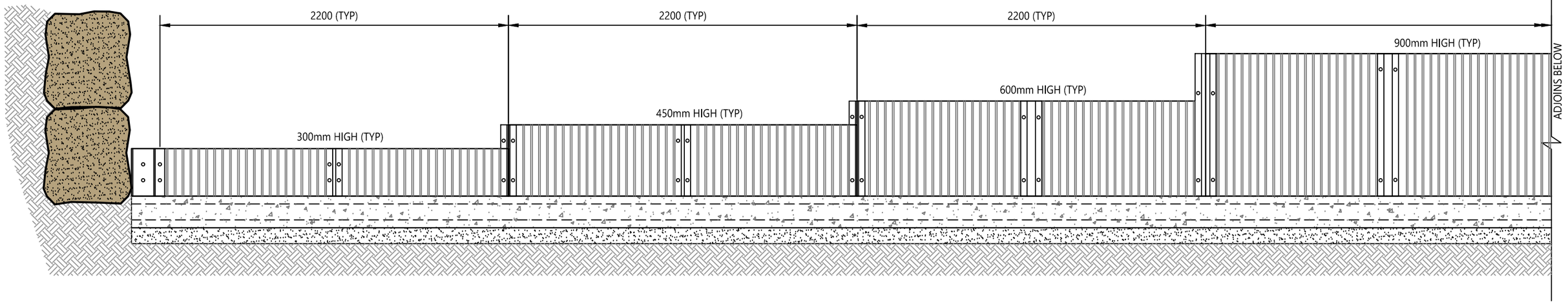

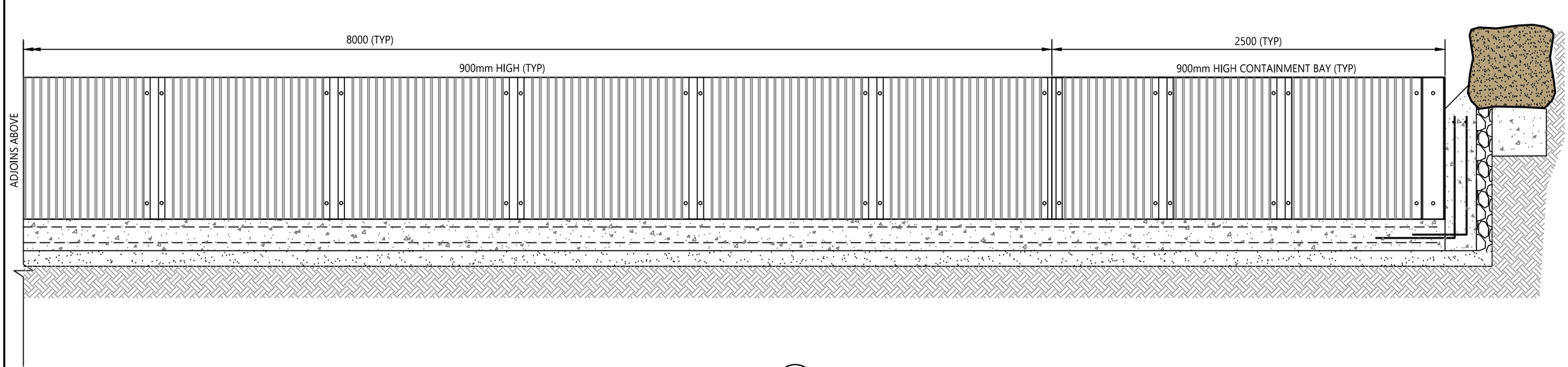

SECTION D/11
SCALE 1:25

NOTE:
FOR CONNECTION DETAILS REFER TO SHEET 5.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 250 500 750 1000 1250
1:25
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
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DRAWING NUMBER	REV
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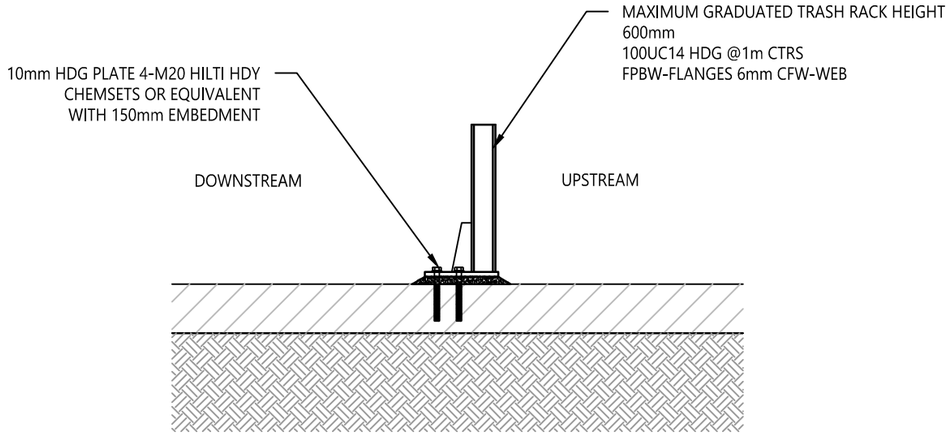
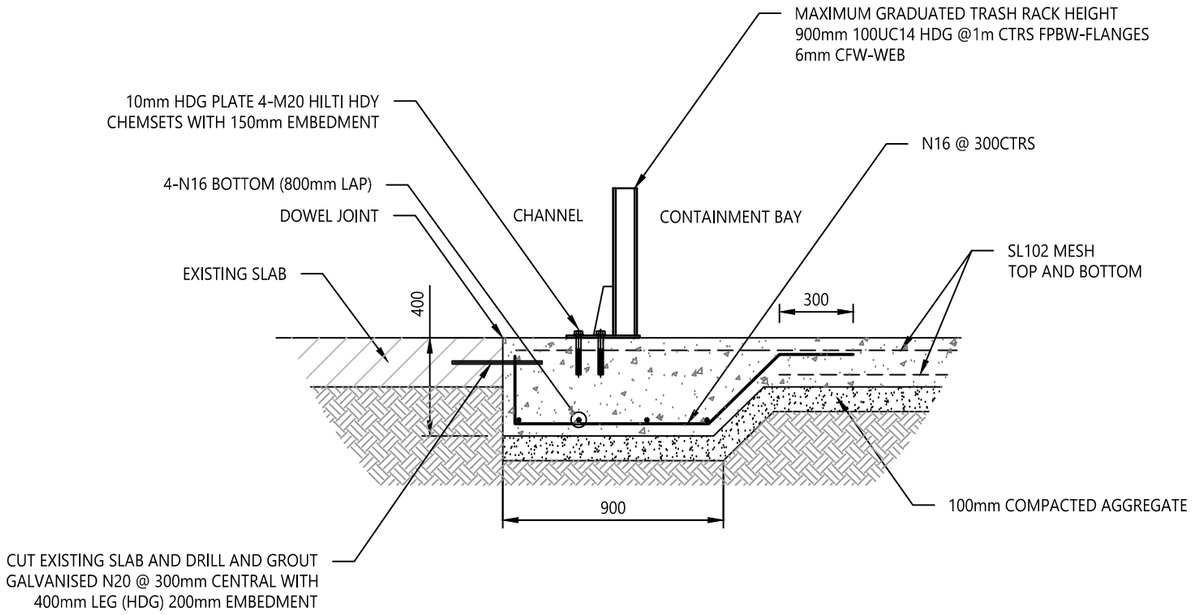


SUPPORT CONNECTION WITH EXISTING SLAB DETAILS FOR 100UC BEAM (MAX HEIGHT 600mm)

SCALE 1:25



FOOTING DETAIL FOR 100UC BEAM (MAX HEIGHT 900mm)

SCALE 1:25

NOTES:

1. RACKS NOT SHOWN FOR CLARITY.
2. EXISTING SLAB IN THE CHANNEL TO BE CHECKED ON SITE BY SUPERVISOR.
3. GROUT IF REQUIRED BELOW POSTS TO MAKE THEM VERTICAL.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 250 500 750 1000 1250

1:25

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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DRAWING NUMBER	REV
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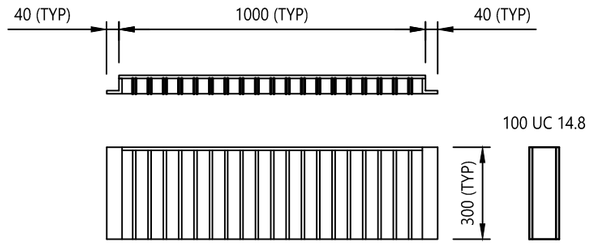
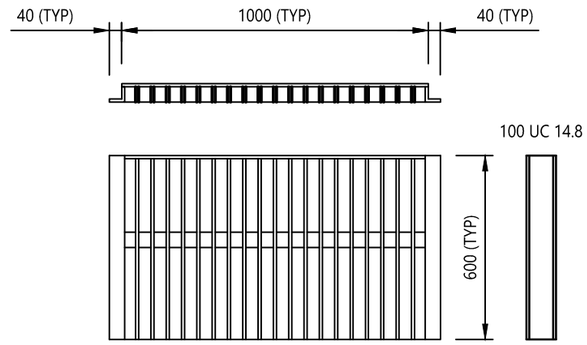


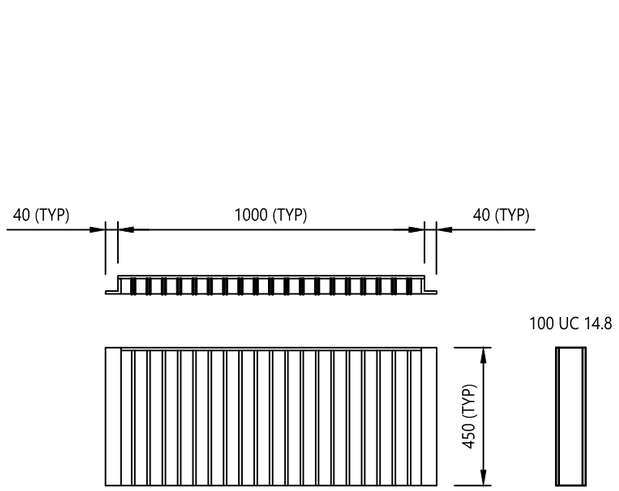
300mm RACK DETAILS WITH SUPPORT POST

SCALE 1:20
(NOTE: 2 PANELS)



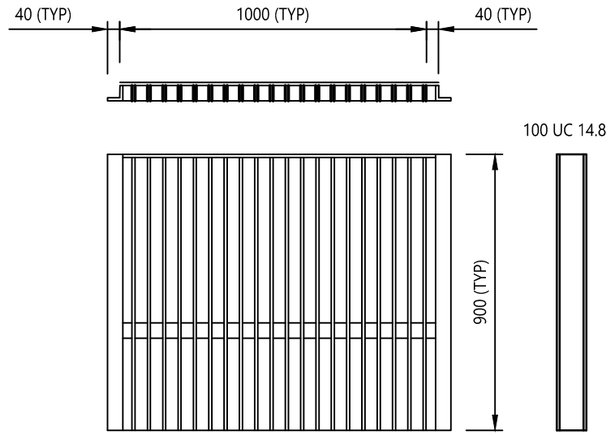
600mm RACK DETAILS WITH SUPPORT POST

SCALE 1:20
(NOTE: 2 PANELS)



450mm RACK DETAILS WITH SUPPORT POST

SCALE 1:20
(NOTE: 2 PANELS)



900mm RACK DETAILS WITH SUPPORT POST

SCALE 1:20

NOTE:

7 PANELS WITH WIDTH OF 1040mm AND 3 PANELS WITH WIDTH OF 630mm FOR 900mm HEIGHT OF RACKS.

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000

1:20

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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STANDARD DRAWING

DRAWING NUMBER	REV
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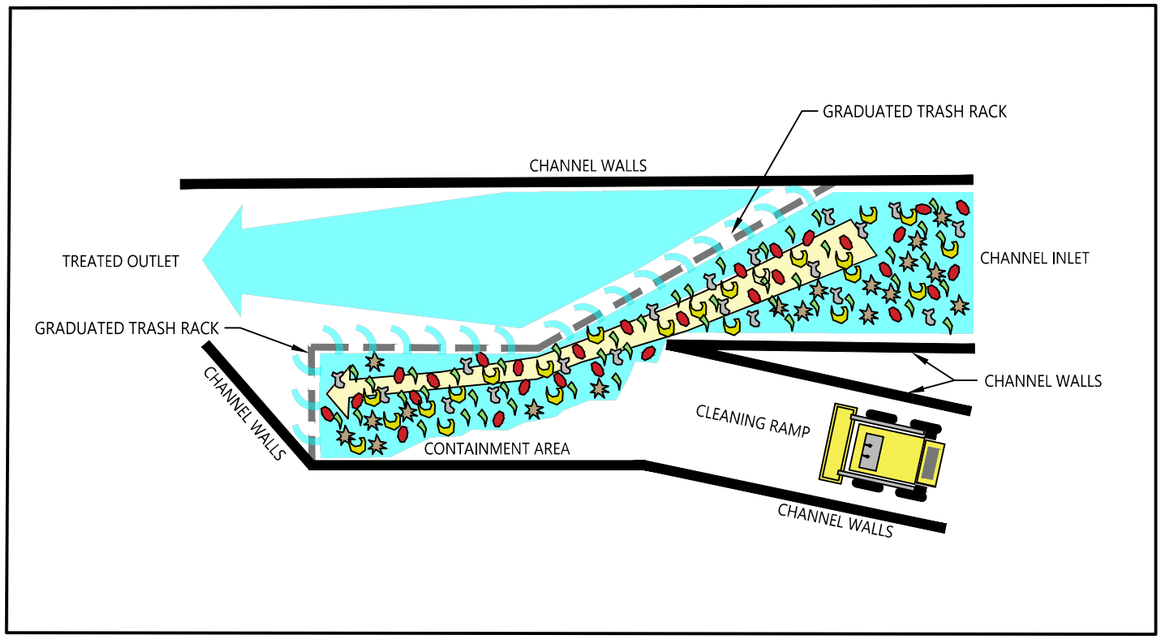
TYPICAL GRADUATED TRASH RACK PHOTO



TYPICAL GRADUATED TRASH RACK DIAGRAM

REV	AMENDMENT	DATE	DRAWN	APRVD	SCALE ON ORIGINAL A3 SIZE DRAWING
					NOT TO SCALE
					ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

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STANDARD DRAWING

DRAWING NUMBER	REV
SD0102	-
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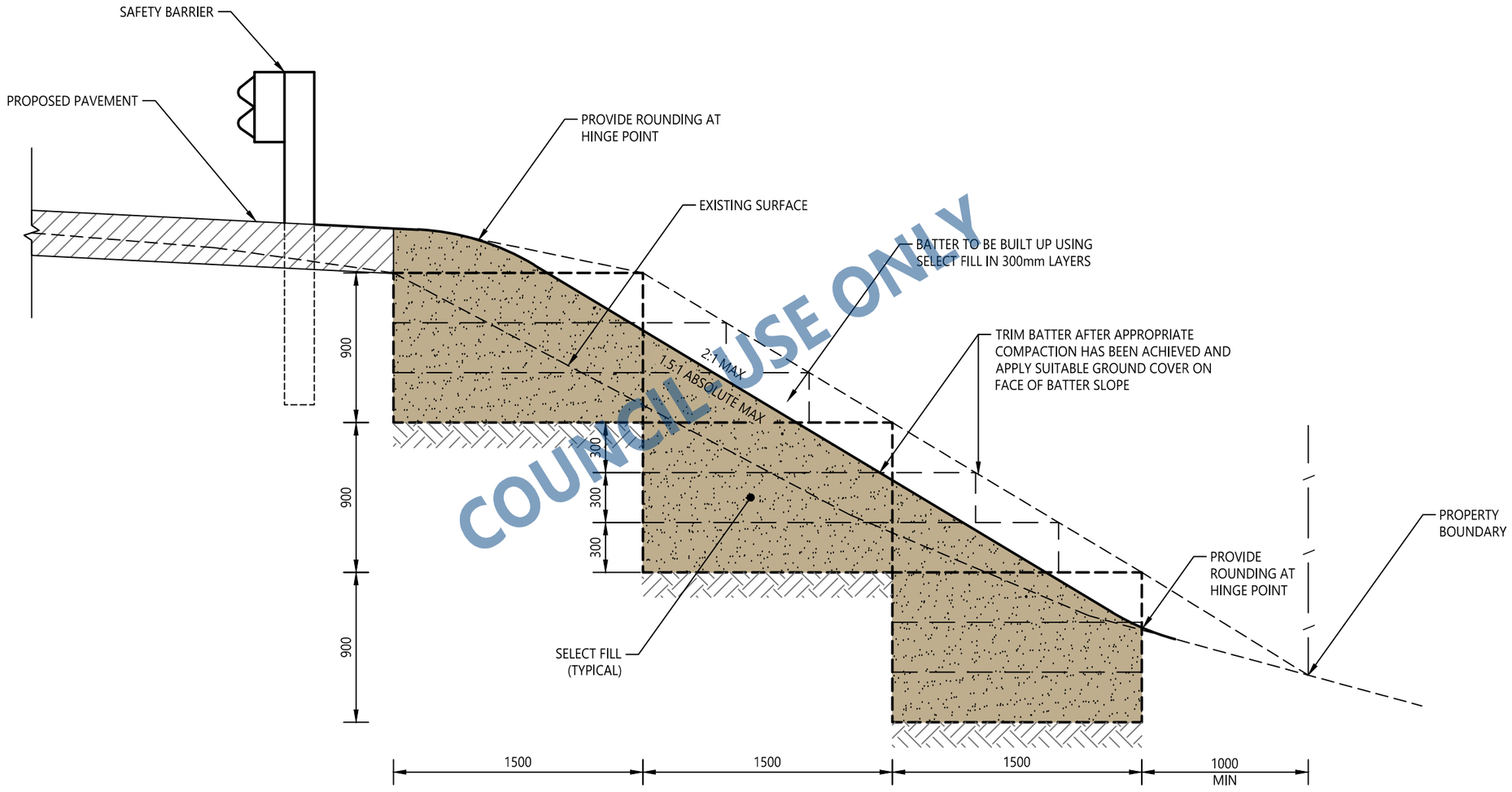
NOTES:

1. VEGETATION TO BE REMOVED AS REQUIRED TO ENABLE ROADSIDE BATTER CONSTRUCTION.
2. BENCH SELECT FILL INTO EXISTING SURFACE, EXTEND COMPACTED FILL BEYOND BATTER FINISHED SURFACE LEVEL AND TRIM TO EVEN PROFILE. PLACE FILL IN 300mm MAX LAYERS TO 95% STANDARD COMPACTION.
3. FINAL LAYER 300mm BELOW FINISHED SURFACE LEVEL SHALL BE COMPACTED TO MINIMUM RELATIVE DENSITY OF 100% STANDARD.
4. CONSIDER INSTALLING GEOGRID OR EQUIVALENT ON TOP OF EACH TERRACED LAYER.



ROADSIDE BATTER CROSS SECTION
SCALE 1:30

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 300 600 900 1200 1500

1:30

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

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ROADS TRANSPORT DRAINAGE AND WASTE

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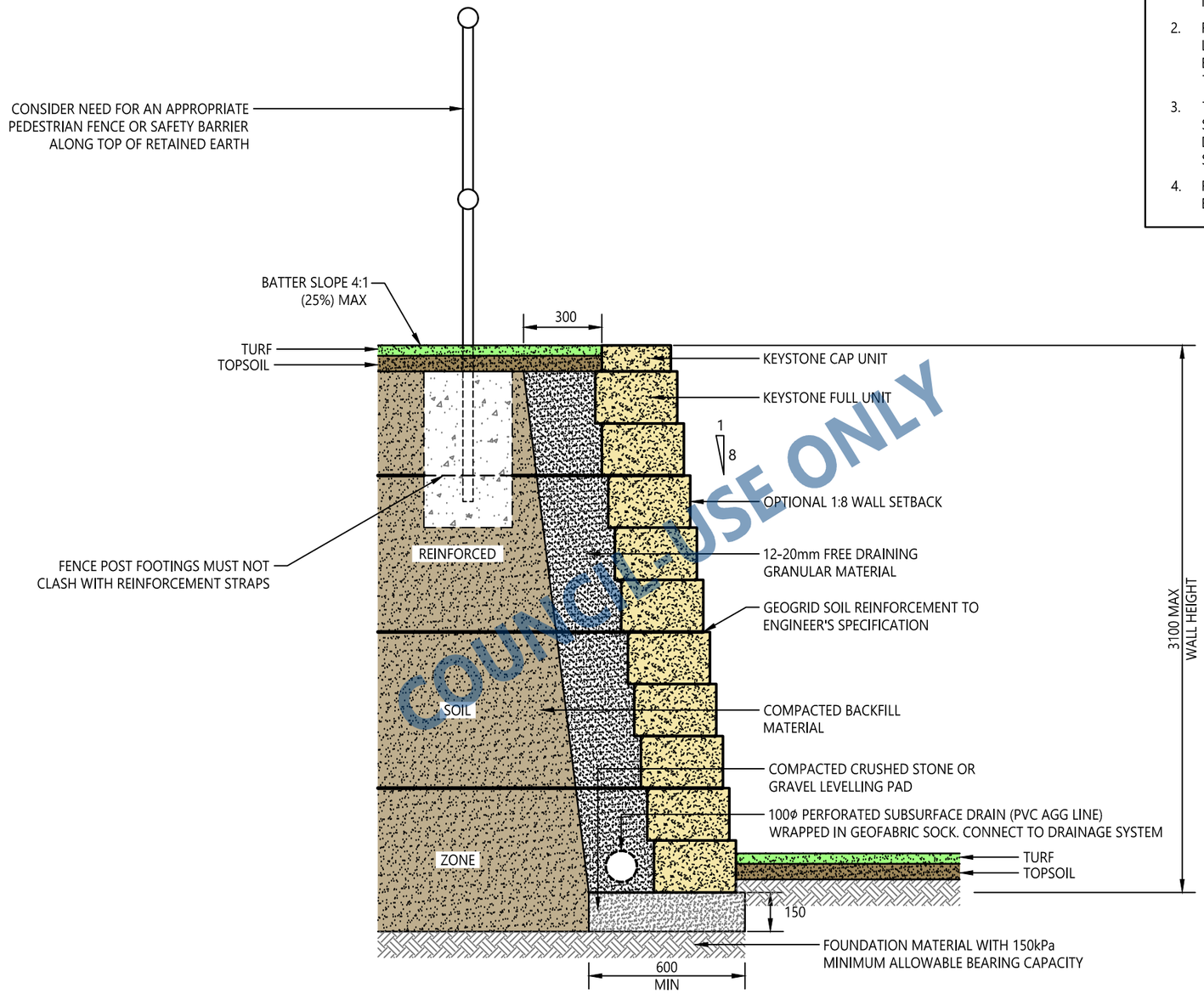
STANDARD DRAWING

EARTHWORKS SERIES
ROADSIDE BATTER CONSTRUCTION

DRAWING NUMBER	REV
SD0201	-
SHEET 1 OF 1	A3

NOTES:

1. THIS STANDARD DRAWING IS TO BE USED FOR GUIDANCE ONLY AND SHALL NOT BE USED AS A DESIGN OR FOR CONSTRUCTION PURPOSES.
2. RETAINING WALLS GREATER THAN 1m IN HEIGHT AND/OR SUBJECT TO LIVE LOADS SHALL BE DESIGNED BY A SUITABLY QUALIFIED AND EXPERIENCED ENGINEER, TAKING INTO ACCOUNT PREVAILING GROUND CONDITIONS, TRAFFIC LOADING AND STRUCTURAL LOADINGS.
3. THE DESIGNER OF AN EARTH RETAINING STRUCTURE SHALL PROVIDE A SAFETY IN DESIGN REPORT THAT SPECIFIES THE HAZARDS RELATING TO THE DESIGN OF THE STRUCTURE, IN ACCORDANCE WITH WORK HEALTH AND SAFETY LEGISLATION.
4. RETAINING WALLS SHALL BE DESIGNED IN ACCORDANCE WITH AS 4678 EARTH RETAINING STRUCTURES AND THE MANUFACTURER'S SPECIFICATION.



TYPICAL KEYSTONE WALL CROSS SECTION
SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000
1:20

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

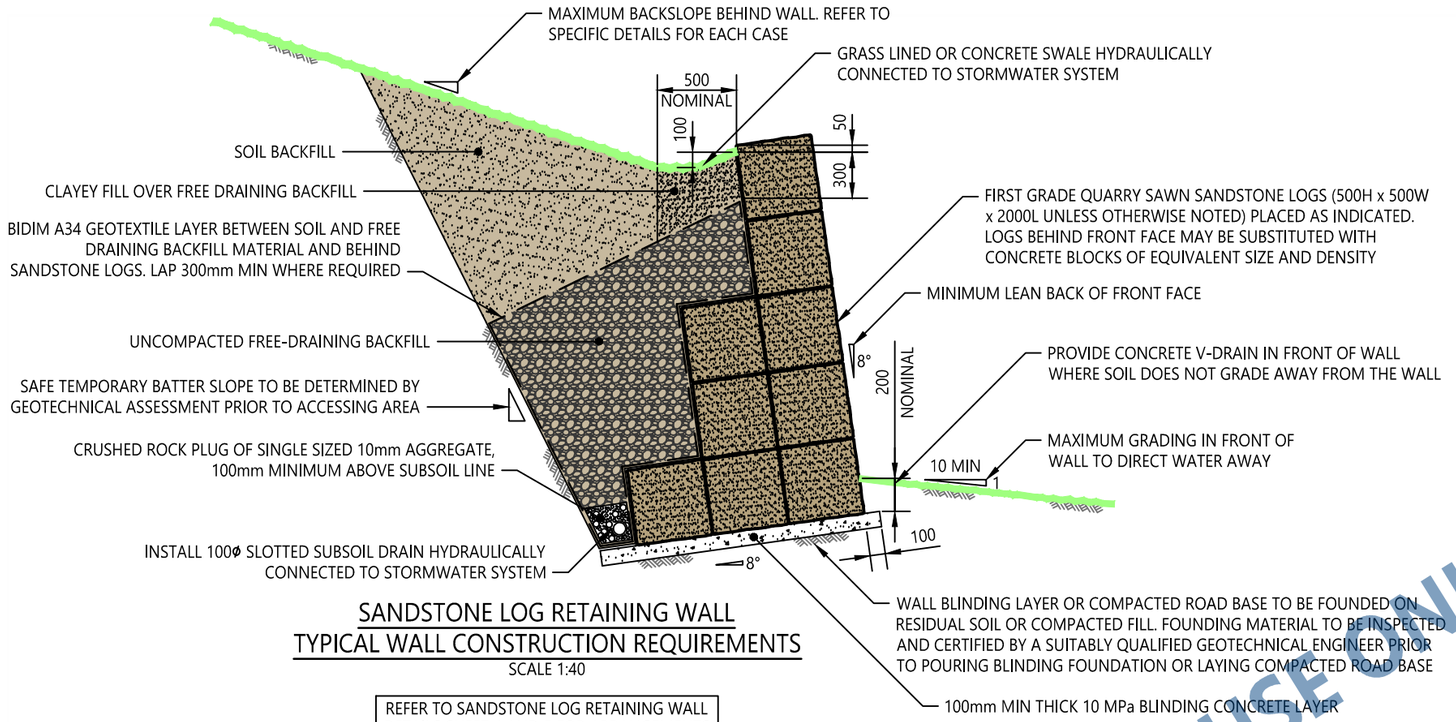
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

EARTHWORKS SERIES
KEYSTONE RETAINING WALL

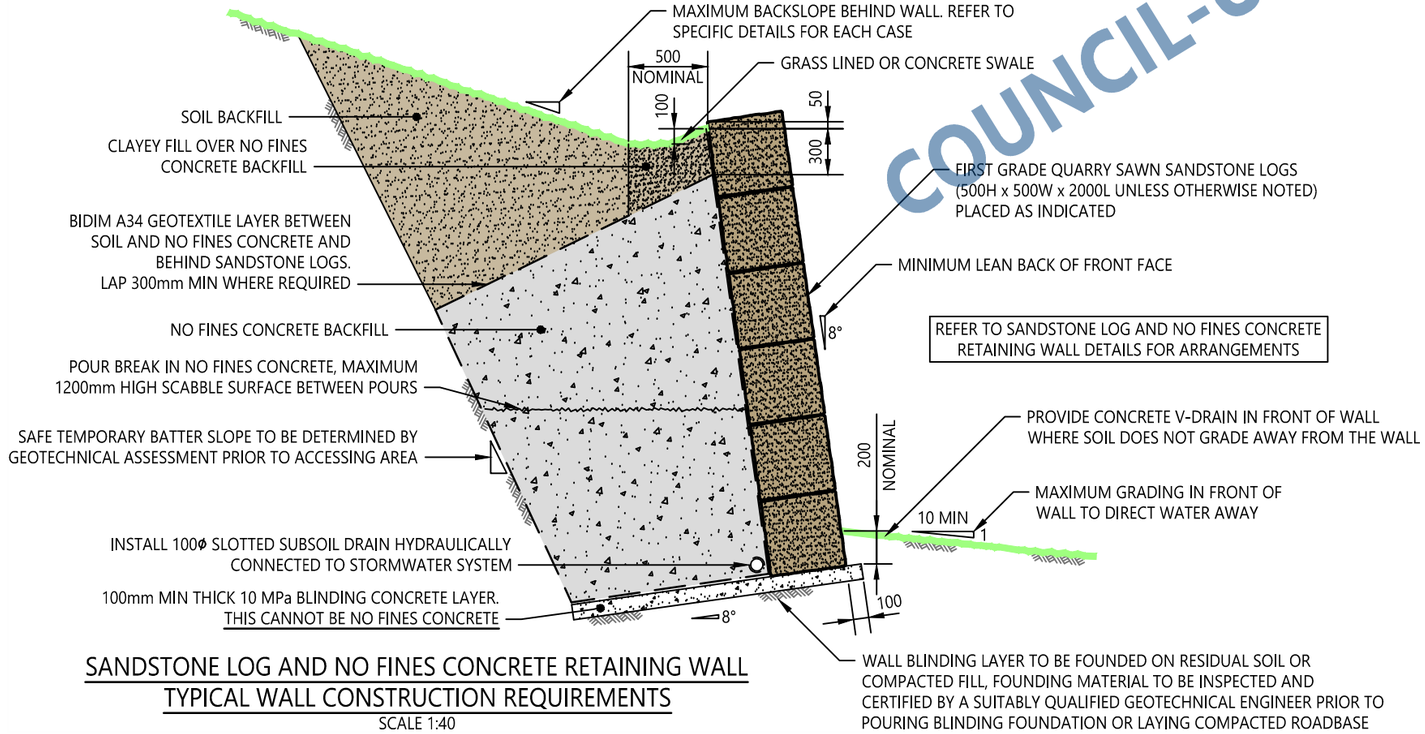
DRAWING NUMBER	REV
SD0202	-
SHEET 1 OF 1	A3



SANDSTONE LOG RETAINING WALL TYPICAL WALL CONSTRUCTION REQUIREMENTS

SCALE 1:40

REFER TO SANDSTONE LOG RETAINING WALL DETAILS SHEET 4 AND 5 FOR ARRANGEMENTS



SANDSTONE LOG AND NO FINES CONCRETE RETAINING WALL TYPICAL WALL CONSTRUCTION REQUIREMENTS

SCALE 1:40

NOTES:

1. THIS STANDARD DRAWING IS BASED ON STRUCTURAL ENGINEERING DRAWING NUMBERS S01-S06 PREPARED BY NORTHROP CONSULTING ENGINEERING SERVICES FOR CENTRAL COAST COUNCIL DATED 29/8/19.
2. THIS STANDARD DRAWING IS TO BE USED FOR GUIDANCE ONLY AND SHALL NOT BE USED AS A DESIGN OR FOR CONSTRUCTION PURPOSES. CENTRAL COAST COUNCIL AND NORTHROP CONSULTING ENGINEERING SERVICES SHALL NOT BE HELD LIABLE FOR THE FAILURE OF ANY EARTH-RETAINING STRUCTURES BASED ON THE USE OF THIS STANDARD DRAWING, NEGLIGENCE ON THE PART OF THE DESIGNER OR CONSTRUCTOR AND THE LIMITATIONS EXPRESSED WITHIN COUNCIL'S COMPLETE CIVIL WORKS SPECIFICATION.
3. THIS STANDARD DRAWING IS TO BE USED FOR GUIDANCE ONLY AND SHALL NOT BE USED AS A DESIGN OR FOR CONSTRUCTION PURPOSES.
4. RETAINING WALLS GREATER THAN 1m HEIGHT AND/OR SUBJECT TO LIVE LOADS AND/OR CONSTRUCTED WITHIN THE ZONE OF INFLUENCE OF ANOTHER RETAINING WALL OR STRUCTURE SHALL BE DESIGNED BY A SUITABLY QUALIFIED (NER) AND EXPERIENCED ENGINEER, TAKING INTO ACCOUNT PREVAILING GROUND CONDITIONS AND STRUCTURAL LOADINGS ON A CASE-BY-CASE BASIS.
5. THE DESIGNER OF AN EARTH-RETAINING STRUCTURE SHALL PROVIDE A SAFETY IN DESIGN REPORT THAT SPECIFIES THE HAZARDS RELATING TO THE DESIGN OF THE STRUCTURE, IN ACCORDANCE WITH WORK HEALTH AND SAFETY LEGISLATION.
6. RETAINING WALLS SHALL BE DESIGNED IN ACCORDANCE WITH AS 4678 EARTH-RETAINING STRUCTURES.
7. SANDSTONE LOGS SHALL BE PLACED IN A STABLE INTERLOCKING MANNER, ROUGHLY COURSED AND BEDDED ON THEIR SAWN FACE.
8. FRONT FACING LOGS TO BE FIRST GRADE QUARRY SAWN.
9. RETAINING WALLS SHOULD NOT BE CONSTRUCTED WITHIN THE ZONE OF INFLUENCE OF ANOTHER RETAINING WALL OR STRUCTURAL FOUNDATION, REFER TO SHEET 2 FOR ZONE OF INFLUENCE DIAGRAMS.

DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS HAVE BEEN ADOPTED IN PREPARING THESE SANDSTONE LOG RETAINING WALL EXAMPLES. THE DESIGN ENGINEER MUST NOTE THESE ASSUMPTIONS AND ENSURE THE PROJECT SPECIFIC DESIGN PARAMETERS ARE USED IN THE DESIGN OF EACH AND EVERY "FOR CONSTRUCTION" SANDSTONE LOG RETAINING WALL.

PARAMETER	ADOPTED VALUE	COMMENTS
WALL CLASSIFICATION	B	
SURCHARGE LIVE LOAD	5kPa	
SOIL DENSITY (y)	19 kN/m^3	
INTERNAL FRICTION ANGLE (ϕ')	28°	
DRAINED COHESION (c')	0kPa	CONSERVATIVELY IGNORED IN DESIGN.
WALL FRICTION (δ)	0°	BETWEEN THE SOIL AND BACK FACE OF THE WALL. CONSERVATIVELY IGNORED IN DESIGN DUE TO VARIANCE IN POTENTIAL GEOTEXTILE MATERIAL TO BE USED.
COEFFICIENT OF FRICTION 1 (μ_1) (SANDSTONE TO SOIL)	0.5	FRICTION BETWEEN THE BASE OF THE WALL/FOUNDATION AND THE SOIL. ADAPTED AS tanϕ'.
COEFFICIENT OF FRICTION 2 (μ_2) (SANDSTONE TO SANDSTONE)	0.6	FRICTION ANGLE BETWEEN THE SANDSTONE LOGS.
ALLOWABLE BEARING CAPACITY OF SANDSTONE LOGS	700kPa	

10. ROAD TRAFFIC SURCHARGE LOADS HAVE NOT BEEN ALLOWED FOR IN THE DESIGN.
11. FENCE AND/OR BARRIER LOADS HAVE NOT BEEN ALLOWED FOR IN THE DESIGN.
12. NO HYDROSTATIC LOADS ARE APPLIED TO THE SANDSTONE LOG RETAINING WALLS. ALL RETAINING WALLS ARE INSTALLED WITH FREE DRAINING BACKFILL AND SUBSOIL DRAINAGE HYDRAULICALLY LINKED TO THE STORMWATER SYSTEM.
13. NO FINES CONCRETE BACKFILL TO HAVE MINIMUM DENSITY OF 18 kN/m^3 AND SHALL BE POURED IN MAXIMUM HEIGHTS OF 1200mm.

REV	AMENDMENT	DATE	DRAWN	APRVD
A	ENHANCED DETAILS FOR VARIOUS WALL HEIGHTS	23/3/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 400 800 1200 1600 2000

1:40

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

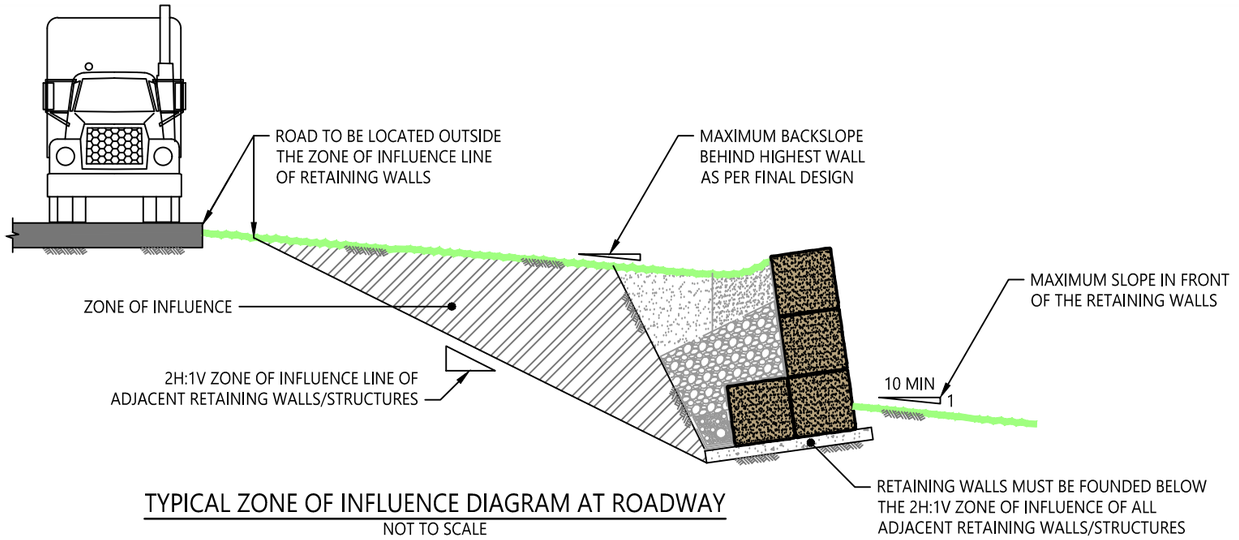
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

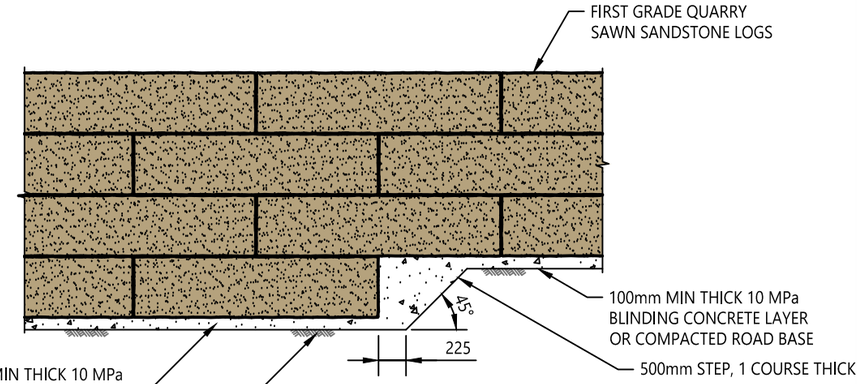
EARTHWORKS SERIES
SANDSTONE LOG RETAINING WALL

DRAWING NUMBER	REV
SD0203	A
SHEET 1 OF 5	A3



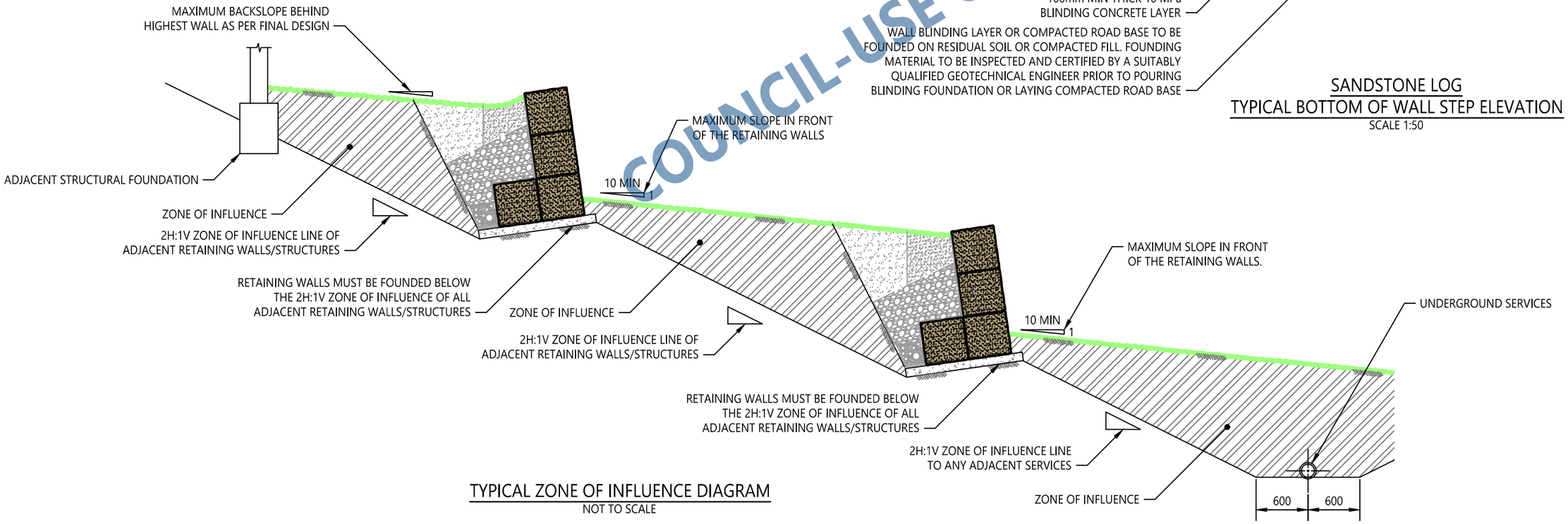
TYPICAL ZONE OF INFLUENCE DIAGRAM AT ROADWAY

NOT TO SCALE



SANDSTONE LOG
TYPICAL BOTTOM OF WALL STEP ELEVATION

SCALE 1:50



TYPICAL ZONE OF INFLUENCE DIAGRAM

NOT TO SCALE

RETAINING WALLS SHOULD NOT BE CONSTRUCTED WITHIN THE ZONE OF INFLUENCE OF ANOTHER RETAINING WALL OR STRUCTURAL FOUNDATION

REV	AMENDMENT	DATE	DRAWN	APRVD
A	ENHANCED DETAILS FOR VARIOUS WALL HEIGHTS	23/3/20	TW	MB

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

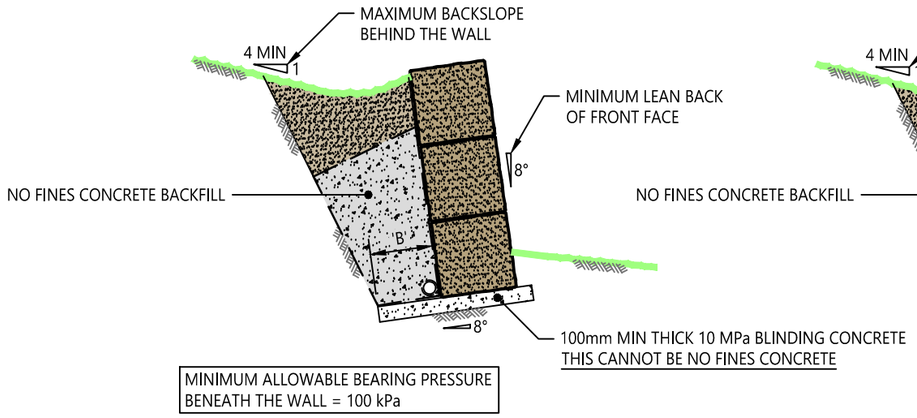
ROADS TRANSPORT DRAINAGE AND WASTE

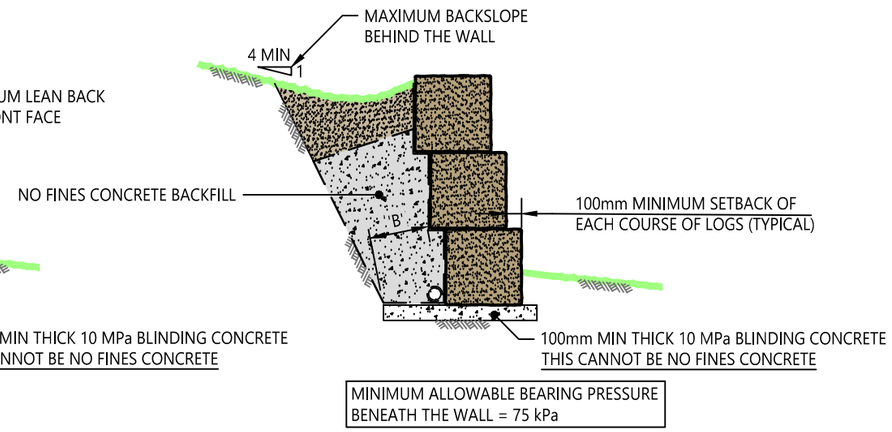
Central Coast Council

EARTHWORKS SERIES
SANDSTONE LOG RETAINING WALL

STANDARD DRAWING

DRAWING NUMBER	REV
SD0203	A
SHEET 2 OF 5	A3

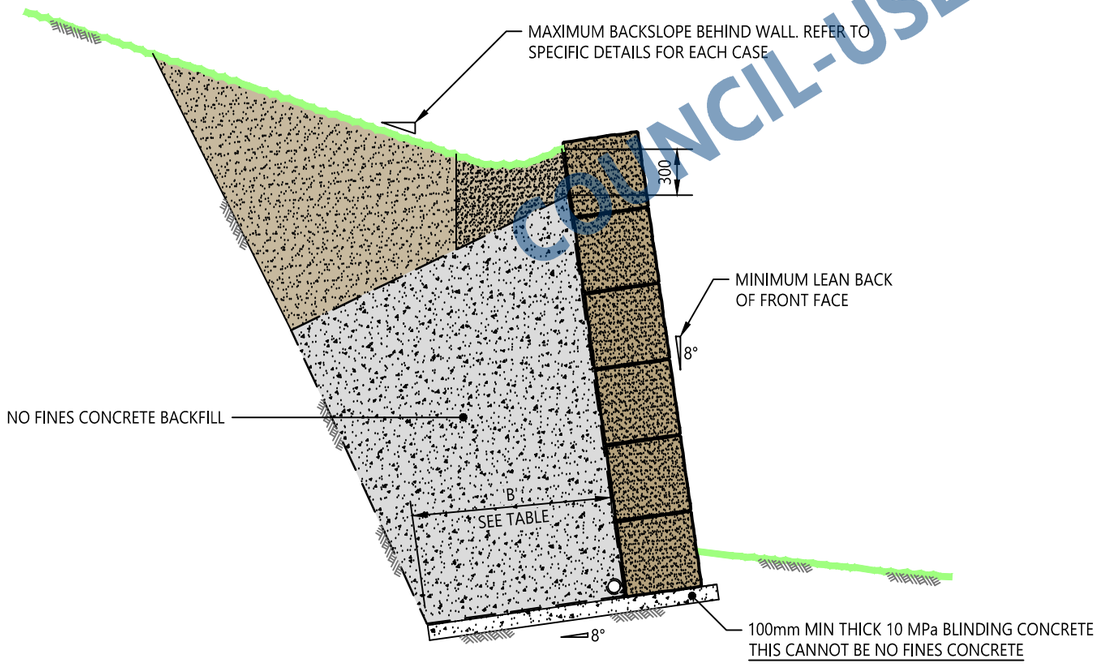




NUMBER OF LOGS HIGH	MINIMUM WIDTH OF NO FINES CONCRETE BACKFILL 'B'	REQUIRED ALLOWABLE BEARING CAPACITY
2	200mm	50 kPa
3	500mm	100 kPa

2 AND 3 LOG HIGH ARRANGEMENT UP TO 4H:1V BACKSLOPE

SCALE 1:40



NUMBER OF LOGS HIGH	MINIMUM WIDTH OF NO FINES CONCRETE BACKFILL 'B'	REQUIRED ALLOWABLE BEARING CAPACITY
4	800mm	125 kPa
5	1000mm	150 kPa
6	1250mm	150 kPa
7	1500mm	175 kPa
8	1750mm	175 kPa

4-8 LOG HIGH ARRANGEMENT UP TO 4H:1V BACKSLOPE

SCALE 1:40

REV	AMENDMENT	DATE	DRAWN	APRVD
A	ENHANCED DETAILS FOR VARIOUS WALL HEIGHTS	23/3/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 400 800 1200 1600 2000

1:40

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

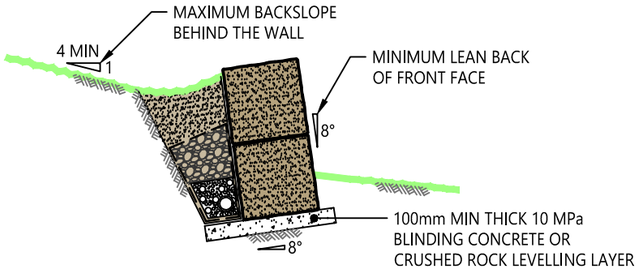
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

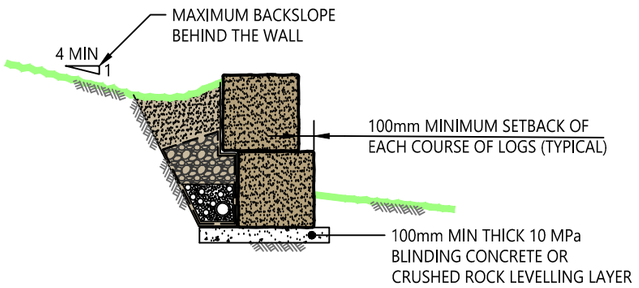
STANDARD DRAWING

EARTHWORKS SERIES
SANDSTONE LOG RETAINING WALL

DRAWING NUMBER	REV
SD0203	A
SHEET 3 OF 5	A3



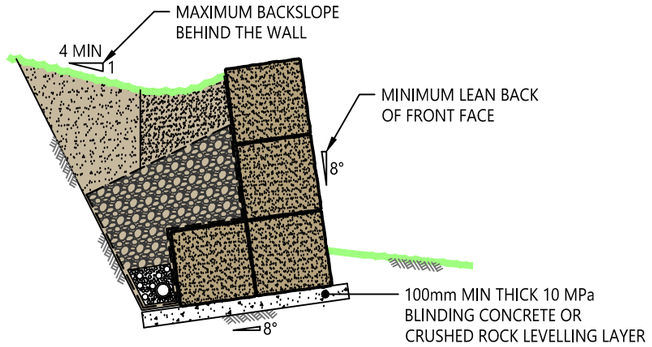
MINIMUM ALLOWABLE BEARING PRESSURE
BENEATH THE WALL = 50 kPa



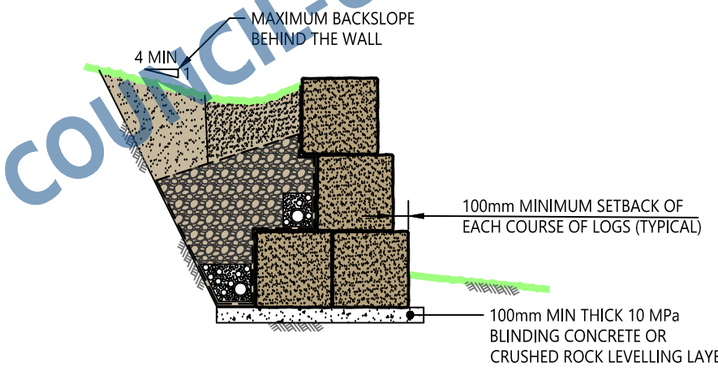
MINIMUM ALLOWABLE BEARING PRESSURE
BENEATH THE WALL = 50 kPa

2 LOG HIGH ARRANGEMENTS UP TO 4H:1V BACKSLOPE

SCALE 1:40



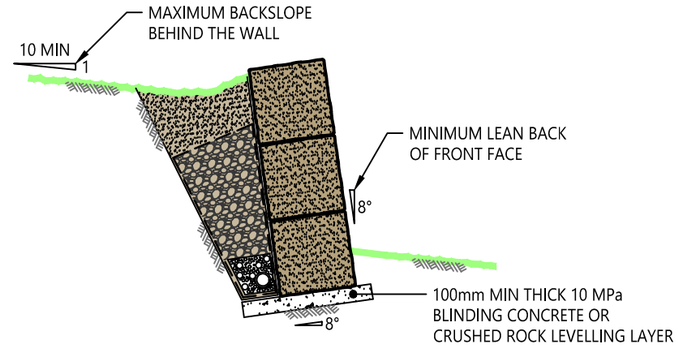
MINIMUM ALLOWABLE BEARING PRESSURE
BENEATH THE WALL = 100 kPa



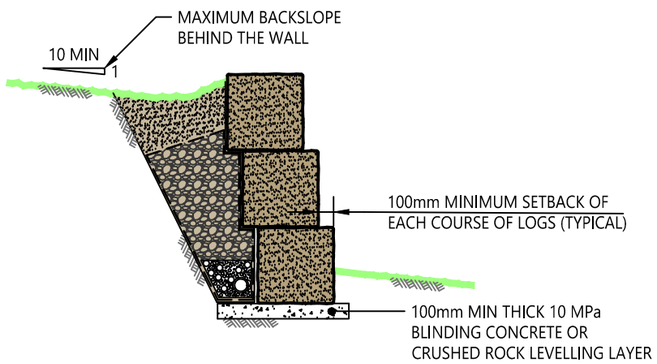
MINIMUM ALLOWABLE BEARING PRESSURE
BENEATH THE WALL = 75 kPa

3 LOG HIGH ARRANGEMENTS UP TO 4H:1V BACKSLOPE

SCALE 1:40



MINIMUM ALLOWABLE BEARING PRESSURE
BENEATH THE WALL = 100 kPa



MINIMUM ALLOWABLE BEARING PRESSURE
BENEATH THE WALL = 50 kPa

3 LOG HIGH ARRANGEMENTS UP TO 10H:1V BACKSLOPE

SCALE 1:40

INTERNAL FRICTION ANGLE OF RETAINED SOIL (ϕ') = 33° or GREATER

REV	AMENDMENT	DATE	DRAWN	APRVD
A	ENHANCED DETAILS FOR VARIOUS WALL HEIGHTS	23/3/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 400 800 1200 1600 2000

1:40

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

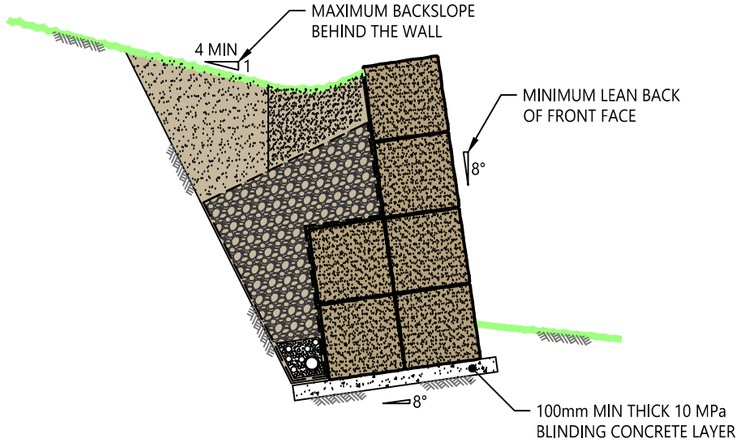
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

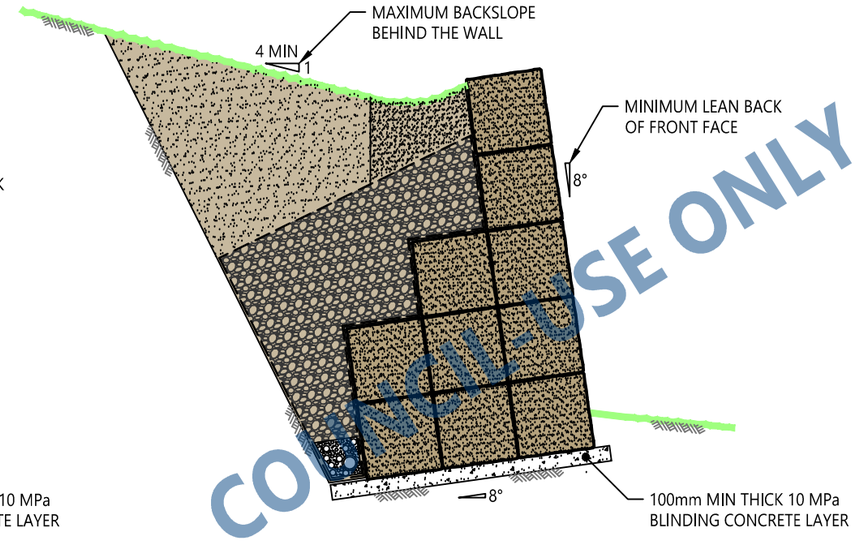
EARTHWORKS SERIES
SANDSTONE LOG RETAINING WALL

DRAWING NUMBER	REV
SD0203	A
SHEET 4 OF 5	A3



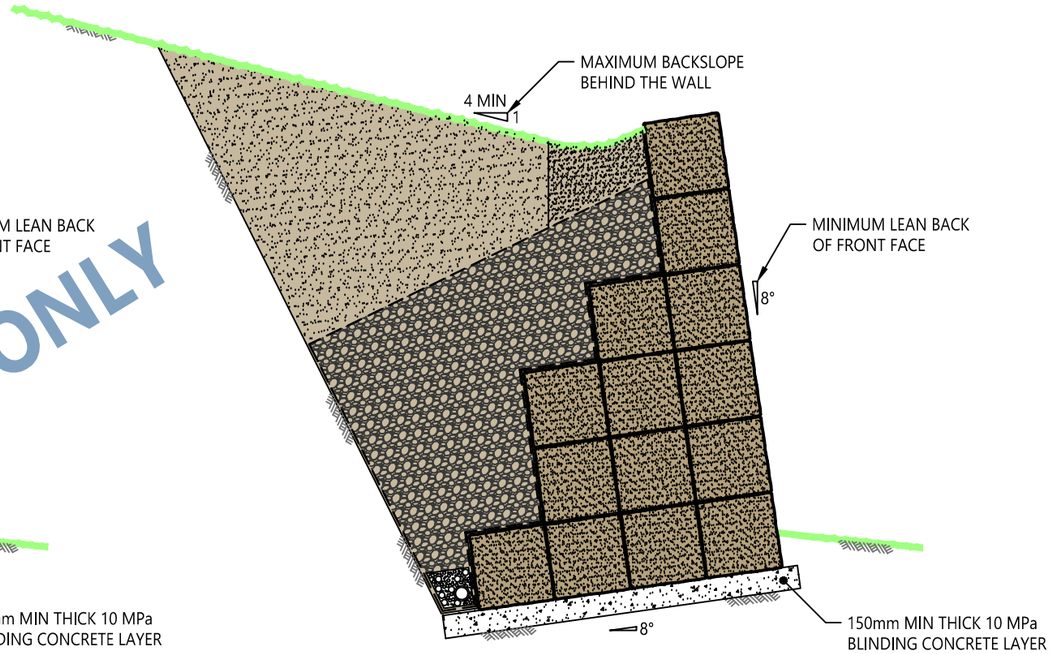
MINIMUM ALLOWABLE BEARING PRESSURE
BENEATH THE WALL = 150 kPa

4 LOG HIGH UP TO 4H:1V BACKSLOPE
SCALE 1:40



MINIMUM ALLOWABLE BEARING PRESSURE
BENEATH THE WALL = 150 kPa

5 LOG HIGH UP TO 4H:1V BACKSLOPE
SCALE 1:40



MINIMUM ALLOWABLE BEARING PRESSURE
BENEATH THE WALL = 150 kPa

6 LOG HIGH UP TO 4H:1V BACKSLOPE
SCALE 1:40

REV	AMENDMENT	DATE	DRAWN	APRVD
A	ENHANCED DETAILS FOR VARIOUS WALL HEIGHTS	23/3/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 400 800 1200 1600 2000

1:40

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

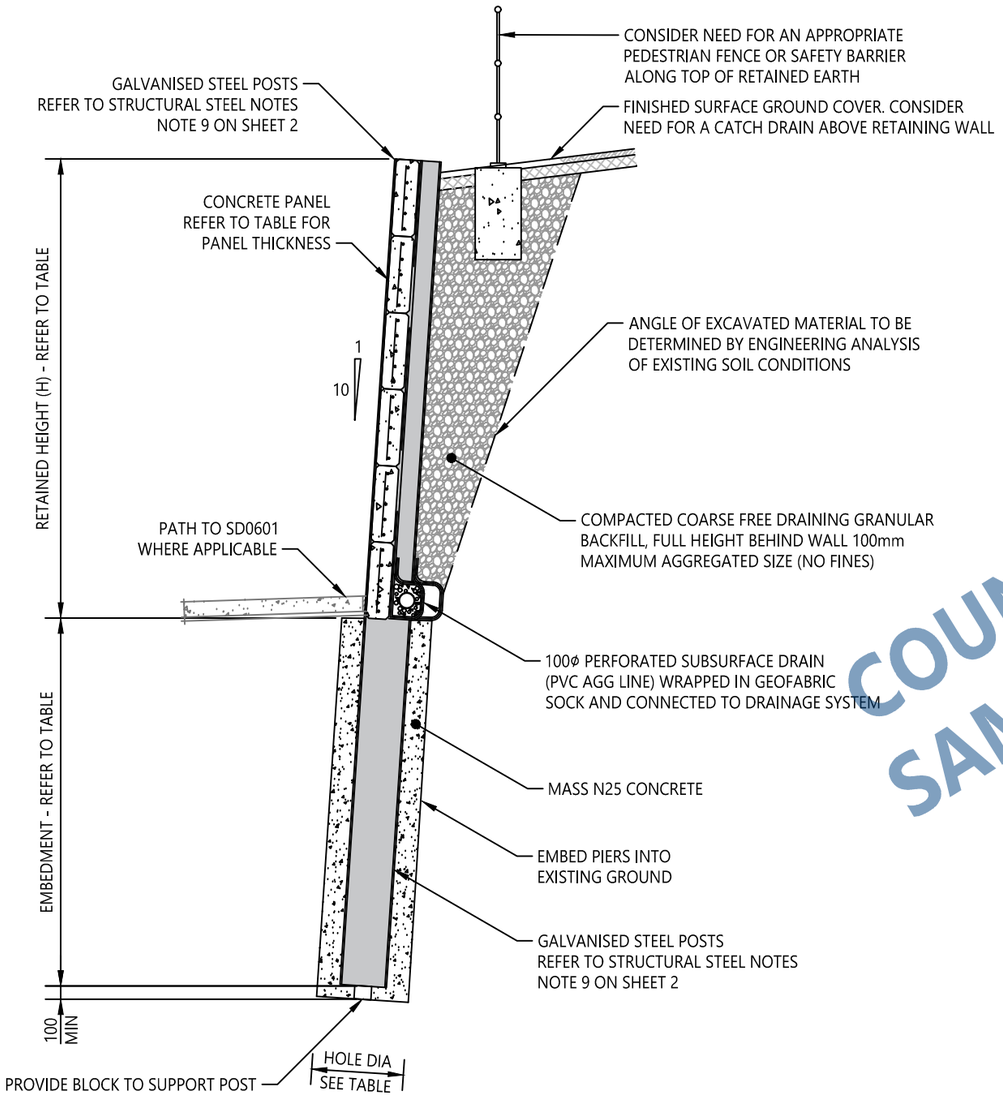
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

EARTHWORKS SERIES
SANDSTONE LOG RETAINING WALL

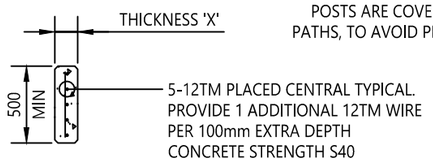
STANDARD DRAWING

DRAWING NUMBER	REV
SD0203	A
SHEET 5 OF 5	A3

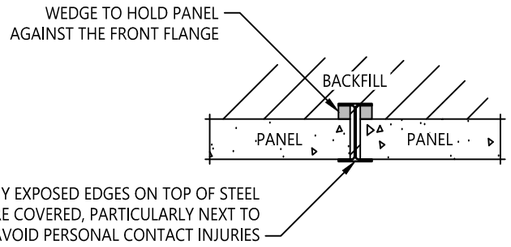


CANTILEVERED STEEL AND CONCRETE PANEL RETAINING WALL SECTION STEEL POSTS AT 2400 MAX CENTRES

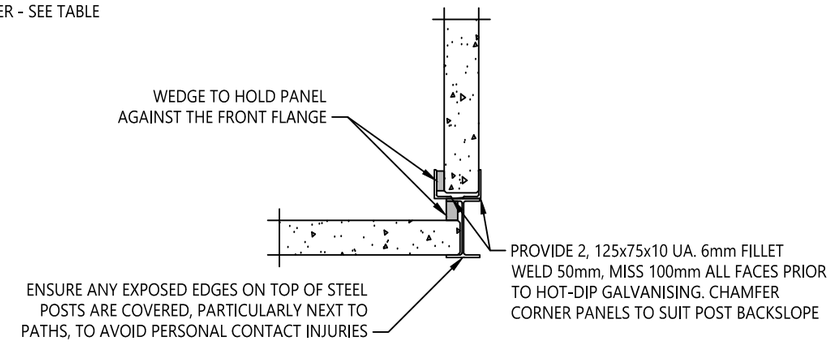
NOT TO SCALE



TYPICAL CONCRETE PANEL



STEEL POST PLAN



STEEL POST CORNER DETAIL

POST AND PANEL RETAINING WALL REQUIREMENTS[1]						
DESIGN WALL HEIGHT (H)	POST SIZE	POST CENTRES (MAX)	EMBEDMENT DEPTHS		HOLE DIAMETER	PANEL THICKNESS[2] 'X'
			FIRM COHESIVE CLAY	VERY STIFF COHESIVE CLAY		
1500	200UB25	2400	2100	1800	450ø	150
1800	200UB30	2400	2700	2100	450ø	150
2100	250UB37	2400	3100	2600	450ø	150
2400	310UB40	2400	3600	2800	450ø	175
2700	310UB40	2400	4000	3000	450ø	175
3000	360UB50	2400	4500	3600	600ø	175

NOTES:

1. STRUCTURAL DESIGN SHALL BE UNDERTAKEN ON A SITE SPECIFIC BASIS TO DETERMINE EACH OF THE ABOVE REQUIREMENTS.
2. PANEL THICKNESS SHALL REMAIN UNIFORM FOR THE COMPLETE RETAINING WALL STRUCTURE.
3. CONCRETE PANEL REINFORCEMENT COVER SHALL BE INCREASED FOR RETAINING WALLS SUBJECT TO A MARINE ENVIRONMENT.

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: NOT TO SCALE

DRAWN	D MILLER / T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

EARTHWORKS SERIES
POST AND PANEL WALL

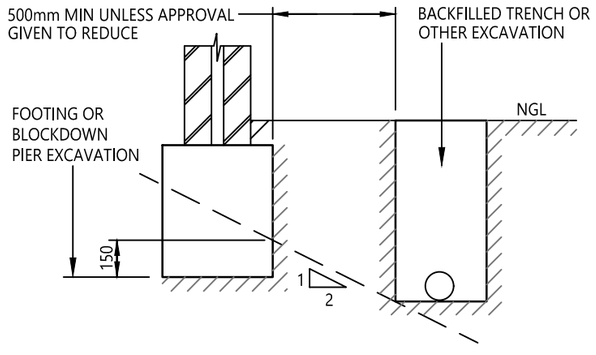
DRAWING NUMBER	REV
SD0204	-
SHEET 1 OF 3	A3

GENERAL NOTES:

1. THIS STANDARD DRAWING IS BASED ON STRUCTURAL ENGINEERING DRAWING NUMBER 18099-ST PREPARED BY CUBO CONSULTING PTY LTD FOR CENTRAL COAST COUNCIL DATED 23/11/18.
2. THIS STANDARD DRAWING IS TO BE USED FOR GUIDANCE ONLY AND SHALL NOT BE USED AS A DESIGN OR FOR CONSTRUCTION PURPOSES.
3. CENTRAL COAST COUNCIL AND CUBO CONSULTING PTY LTD SHALL NOT BE HELD LIABLE FOR THE FAILURE OF ANY EARTH-RETAINING STRUCTURES BASED ON THE USE OF THIS STANDARD DRAWING, NEGLIGENCE ON THE PART OF THE DESIGNER OR CONSTRUCTOR AND THE LIMITATIONS EXPRESSED WITHIN COUNCIL'S COMPLETE CIVIL WORKS SPECIFICATION.
4. RETAINING WALLS GREATER THAN 1m HEIGHT AND/OR SUBJECT TO LIVE LOADS AND/OR CONSTRUCTED WITHIN THE ZONE OF INFLUENCE OF ANOTHER RETAINING WALL OR STRUCTURE SHALL BE DESIGNED BY A SUITABLY QUALIFIED (NER) AND EXPERIENCED ENGINEER, TAKING INTO ACCOUNT PREVAILING GROUND CONDITIONS AND STRUCTURAL LOADINGS ON A CASE-BY-CASE BASIS.
5. PIER HOLE INSPECTIONS FOR RETAINING WALLS SHALL BE UNDERTAKEN BY A GEOTECHNICAL ENGINEER TO VERIFY WALL DESIGN.
6. STEEL POSTS TO BE HOT-DIP GALVANISED WITH A MINIMUM COATING THICKNESS OF 600 g/m² TO ENSURE A MIN COATING OF 85 MICRONS.
7. RETAINING WALLS SHALL BE DESIGNED IN ACCORDANCE WITH AS 4678 EARTH-RETAINING STRUCTURES.
8. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE BUILDER TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES.
9. THE STRUCTURAL COMPONENTS DETAILED ON THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND STATUTORY REGULATIONS FOR THE FOLLOWING LOADINGS: FOR IMPORTANCE LEVEL: 2 (AS/NZS 1170.0/BCA). THE RELEVANT PROVISIONS OF AS 1170.4 HAVE BEEN APPLIED FOR A HAZARD FACTOR (Z) OF 0.09 AND FOR A PROBABILITY FACTOR (kp) OF 1.0 AND A SUBSOIL CLASS Ce.

FOUNDATION NOTES:

1. FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING INTENSITY OF 100kPa ON STIFF CLAY. THIS FOUNDATION MATERIAL SHALL BE UNIFORM AND BE APPROVED BY THE ENGINEER FOR THIS PRESSURE BEFORE PLACING MEMBRANE, REINFORCEMENT OR CONCRETE.
2. FOOTINGS SHALL BE LOCATED CENTRALLY UNDER WALLS AND COLUMNS UNLESS OTHERWISE NOTED.
3. DO NOT EXCEED A RISE OF 1 IN A RUN OF 2 FOR THE LINE OF SLOPE BETWEEN ADJACENT FOOTINGS OR EXCAVATIONS.
4. DO NOT BACKFILL RETAINING WALLS (OTHER THAN CANTILEVER WALLS) UNTIL FLOOR CONSTRUCTION AT TOP AND BOTTOM IS COMPLETED. BACKFILL SHALL BE COMPACTED TO 96% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2% (ENSURE FREE DRAINING BACKFILL AND DRAINAGE IS IN PLACE).
5. UNLESS OTHERWISE APPROVED BY THE ENGINEER/SUPERINTENDENT, THE LIMITS OF EXCAVATIONS NEAR FOOTINGS SHALL BE AS SET OUT IN THE DETAIL BELOW.



PRIOR TO ANY EXCAVATION NEAR EXISTING FOOTINGS, THE BUILDER SHALL DETERMINE THE DEPTH OF FOUNDING OF EXISTING FOOTINGS BY LOCAL INVESTIGATORY EXCAVATION.

GENERAL EXCAVATION SHALL NOT PROCEED BELOW A LEVEL 150mm ABOVE THE UNDERSIDE OF EXISTING FOOTINGS UNTIL INSTRUCTION IS OBTAINED FROM THE ENGINEER ON PROCEDURES AND PRECAUTIONS TO BE TAKEN.

BACKFILL MATERIAL BEHIND GALVANISED STEEL POSTS:

1. BACKFILL IS TO BE FREE DRAINING COARSE GRANULAR MATERIAL WITH THE FOLLOWING CHARACTERISTICS:

   pH > 5

   RESISTIVITY > 5000 OHM.CM

   CHLORIDES < 5000 ppm (0.5%)
2. THE USE OF BOTTOM ASH FROM FUEL RESIDUE OR OTHER SIMILAR MATERIAL IS NOT PERMITTED.
3. THE CONTRACTOR IS TO PROVIDE A TEST CERTIFICATE CONFIRMING ADHERENCE TO THE ABOVE PARAMETERS PRIOR TO THE DELIVERY OR INSTALLATION OF THE FILL MATERIAL.

STRUCTURAL STEEL NOTES:

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100 AND AS 1554 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
2. UNLESS OTHERWISE NOTED ALL MATERIAL SHALL BE:
   - GRADE 250 HOT-ROLLED PLATES COMPLYING WITH AS 3678
   - GRADE 250 HOT-ROLLED FLATS
   - GRADE 300PLUS UB, UC, PFC, ANGLES, AND TFB
   - GRADE 300 WB, WC COMPLYING WITH AS 3679.2
   - GRADE C350 RHS, CHS COMPLYING WITH AS 1163
3. BOLTS:

   4.6/S - COMMERCIAL BOLTS OF GRADE 4.6 TO AS 1111, SNUG TIGHTENED.

   8.8/S - HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS 1252 SNUG TIGHTENED.

   8.8/TB - HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS 1252 FULLY TENSIONED TO AS 4100 AS BEARING JOINT.

   8.8/TF - HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS 1252 FULLY TENSIONED TO AS 4100 AS A FRICTION JOINT WITH FACING SURFACES LEFT UNCOATED.

   ALL BOLTS SHALL BE M20 GRADE 8.8/S UNLESS OTHERWISE NOTED.

   NO CONNECTION SHALL HAVE LESS THAN 2 BOLTS.

   ALL BOLTS, NUTS AND WASHERS TO BE GALVANISED.

   TB AND TF BOLTS TO BE INSTALLED USING APPROVED LOAD INDICATING WASHERS, OR BY TURN OF NUT CONTROL OF TENSIONING.
4. WELDING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 1554.1. WELDING CONSUMABLES SHALL BE E48XX OR W50X U.N.O. ALL WELDS SHALL BE 6mm CFW SP CATEGORY U.N.O. CPBW SHALL BE SP CATEGORY U.N.O. INSPECTION SHALL BE CARRIED OUT TO AS 1554.1. ALL GP/SP WELDS SHALL BE 100% VISUALLY SCANNED. SP WELDS ALLOW FOR 100% VISUAL EXAMINATION U.N.O. BUTT WELDS SHALL BE COMPLETE PENETRATION WELDS TO AS 1554.
5. ALL DETAILS, GAUGE LINES ETC. WHERE NOT SPECIFICALLY SHOWN ARE TO BE IN ACCORDANCE WITH AISC DESIGN CAPACITY TABLES FOR STRUCTURAL STEEL AND AISC STANDARDISED STRUCTURAL CONNECTIONS. PLATES TO BE 10mm THICK, EX-STANDARD SQUARE EDGE FLATS U.N.O.
6. STEELWORK TO BE CONCRETE ENCASED SHALL BE WRAPPED WITH F41 STEELWIRE FABRIC AND SHALL HAVE 50 mm MINIMUM CONCRETE COVER TO THE STRUCTURAL STEEL.
7. PROVIDE SEAL PLATES TO ALL HOLLOW SECTIONS. PROVIDE VENT HOLES TO HOLLOW MEMBERS AND DRAIN HOLES TO ALL MEMBERS TO BE HOT-DIP GALVANISED, TO ENSURE THAT SECTIONS DO NOT HOLD WATER WHEN ERECTED IN FINAL LOCATION ON SITE.
8. IT IS THE BUILDER'S RESPONSIBILITY TO ENSURE THAT STEELWORK IS SECURELY TEMPORARILY BRACED AS NECESSARY TO STABILISE THE STRUCTURE DURING ERECTION.
9. STRUCTURAL STEELWORK SHALL HAVE THE FOLLOWING SURFACE TREATMENT IN ACCORDANCE WITH AS/NZS 2312:

ELEMENT	SURFACE CLEANING	PROTECTIVE COATING
INTERNAL	CLASS St 2 $\frac{1}{2}$	INORGANIC ZINC SILICATE 75µm
EXTERNAL (>1km COAST)	CLASS St 2 $\frac{1}{2}$	HOT-DIP GALVANISED (HDG600)

10. THE BUILDER SHALL PROVIDE ALL CLEATS AND DRILL ALL HOLES NECESSARY FOR FIXING STEEL TO STEEL AND TIMBER TO STEEL WHETHER OR NOT DETAILED ON THE DRAWINGS.
11. THE FABRICATION AND ERECTION OF THE STRUCTURAL STEELWORK SHALL BE UNDERTAKEN BY A QUALIFIED PERSON EXPERIENCED IN SUCH SUPERVISION, IN ORDER TO ENSURE THAT ALL REQUIREMENTS OF THE DESIGN ARE MET. ALL BEAMS AND RAFTERS SHALL BE FABRICATED AND ERECTED WITH NATURAL CAMBER UP.

CONCRETE NOTES:

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600, AS 1379 AND AS 3610 CURRENT EDITIONS WITH AMENDMENTS, EXCEPT WHERE VARIED BY ANY APPLICABLE CONTRACT DOCUMENTS.
2. CONCRETE QUALITY:

   ALL CEMENT TO BE TYPE SL, SHRINKAGE LIMITED CEMENT IN ACCORDANCE WITH AS 3972, EXCEPT THAT THE MAXIMUM SHRINKAGE OF THE CEMENT IN THE MORTAR TEST SAMPLE IN ACCORDANCE WITH AS 2350 SHALL BE LESS THAN 600 MICROSTRAIN.

ELEMENT	STRENGTH GRADE	SLUMP (mm)	MAX AGGREG SIZE (mm)	MIN CEMENT CONTENT (kg/m³)
PIER HOLES	N20	80	20	150
WALERS	S40	80	20	300

   PROJECT ASSESSMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 1379 CLAUSE B7.
3. ALL CONCRETE IN SLABS AND BEAMS TO BE PROPORTIONED TO LIMIT DRYING SHRINKAGE TO 650 MICROSTRAIN AT 56 DAYS.
4. DETAILS OF THE PROPOSED MIX TO BE SUBMITTED AND APPROVAL OBTAINED PRIOR TO POURING ANY CONCRETE.
5. SHRINKAGE TESTS SHALL BE CARRIED OUT BY AN APPROVED NATA REGISTERED LABORATORY IN ACCORDANCE WITH AS 1012 PART 13. TESTS SHALL BE CONDUCTED ON THE FIRST BATCH OF CONCRETE USED IN SUSPENDED SLABS AND SUBSEQUENTLY AT THE RATE OF ONE TEST EVERY ADDITIONAL 100m³ OF CONCRETE SUPPLIED. THREE SPECIMENS SHALL BE TAKEN FOR EACH TEST AND THE SHRINKAGE SHALL BE THE AVERAGE OF THE THREE RESULTS. THE COST OF TESTING SHALL BE BORNE BY THE CONTRACTOR AS SHALL ANY ADDITIONAL TESTS REQUIRED IF THE CONCRETE FAILS TO MEET THE SPECIFIED SHRINKAGE LIMITS.
6. NO ADMIXTURES OTHER THAN LOW RANGE WRA SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING.
7. CLEAR CONCRETE COVER TO ALL REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE SHOWN. COVER MAY NEED TO BE INCREASED FOR FIRE RATING.

EXPOSURE CLASS TO AS 3600	MINIMUM CONCRETE GRADE	CAST AGAINST GROUND	CAST IN FORMS AND EXPOSED	CAST IN FORMS AND NOT EXPOSED
B1 (EXTERNAL)	32	60mm	40mm	-
FOOTINGS	25	50mm	-	-

NOTE: WHERE CONCRETE IS POURED ON A VAPOURPROOF MEMBRANE 0.2 mm MINIMUM THICKNESS, THE COVER TO CONCRETE CAST AGAINST GROUND MAY BE REDUCED BY 10 mm.

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

NOT TO SCALE

DRAWN	D MILLER / T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

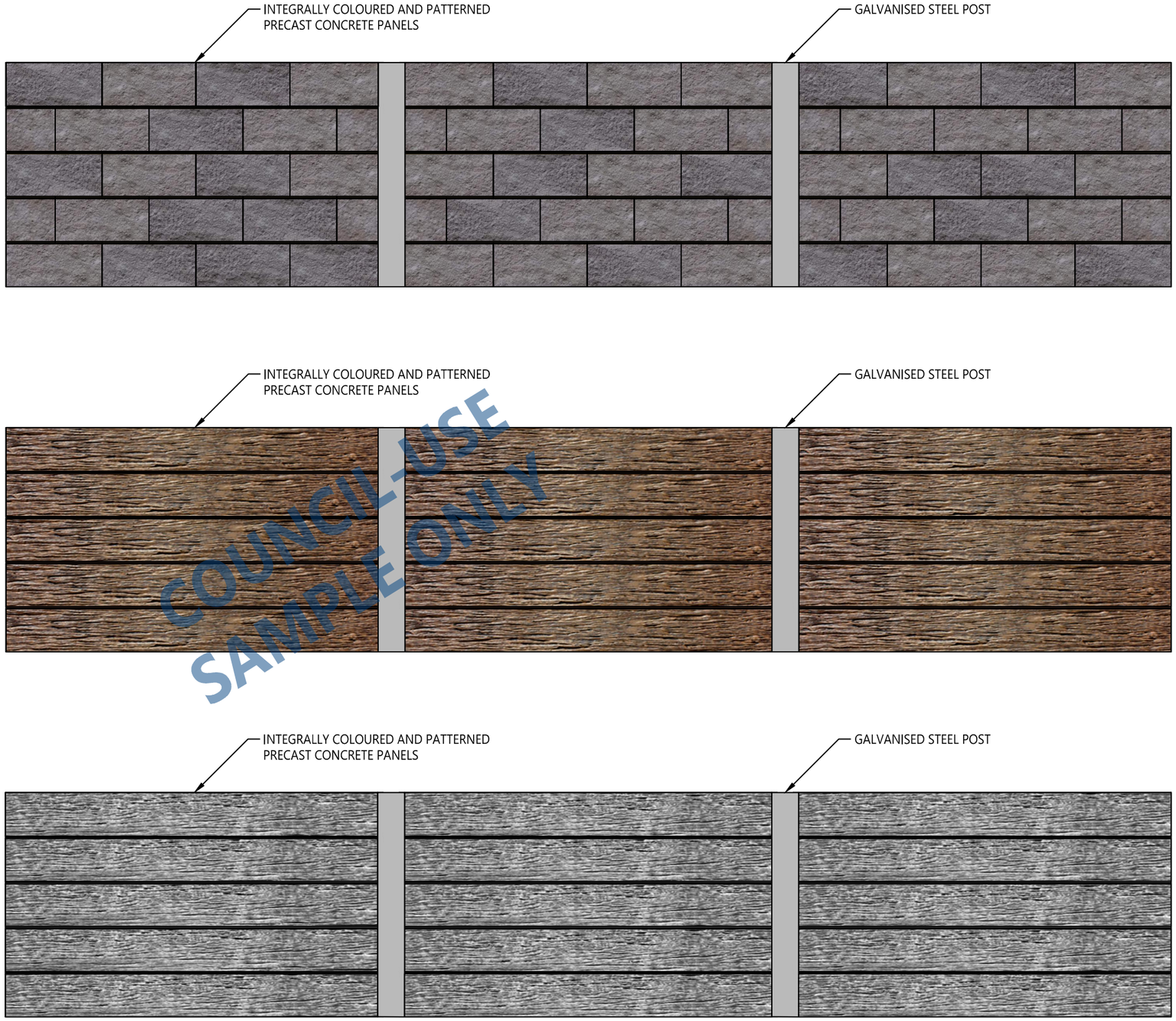
EARTHWORKS SERIES
POST AND PANEL WALL

STANDARD DRAWING

DRAWING NUMBER	REV
SD0204	-
SHEET 2 OF 3	A3

CONCRETE NOTES (CONTINUED):

8. CONCRETE SIZES SHOWN DO NOT INCLUDE THICKNESSES OF APPLIED FINISHES. NO FINISH WHICH DECREASES COVER IS ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
9. DEPTHS OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS.
10. NO HOLES, CHASES, BLOCKOUTS, DUCTS OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
11. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.
12. ALL CONCRETE COLUMNS GREATER THAN 1.2 METRES IN HEIGHT SHALL BE POURED A MINIMUM OF 4 HOURS PRIOR TO SLAB OR BEAM OVER.
13. THE FINISHED CONCRETE SHALL BE MECHANICALLY VIBRATED TO ACHIEVE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
14. CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF THREE DAYS, AND THE PREVENTION OF LOSS OF MOISTURE FOR A TOTAL OF 7 DAYS FOLLOWED BY A GRADUAL DRYING OUT. APPROVED SPRAYED ON CURING COMPOUNDS THAT COMPLY WITH AS 3799 MAY BE USED WHERE FLOOR FINISHES WILL NOT BE AFFECTED (REFER MANUFACTURER'S SPECIFICATION). POLYTHENE SHEETING OR WET HESSIAN MAY BE USED IF PROTECTED FROM WIND AND TRAFFIC.
15. CONSTRUCTION SUPPORT PROPPING IS TO BE LEFT IN PLACE WHERE NEEDED TO AVOID OVERSTRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING. NO BRICKWORK OR PARTITION WALLS ARE TO BE CONSTRUCTED ON SUSPENDED LEVELS UNTIL SEVEN DAYS AFTER PROPPING HAS BEEN REMOVED AND THE SLAB PRE-LOADED WITH THE BRICKS OR UNITS TO BE USED IN THE WALL.
16. REPAIRS TO CONCRETE SHALL NOT BE ATTEMPTED WITHOUT THE PERMISSION OF THE ENGINEER.
17. CAST-IN FIXINGS, BOLTS ETC. SHALL NOT BE ALTERED WITHOUT THE PERMISSION OF THE ENGINEER.
18. CONDUITS, PIPES ETC. SHALL ONLY BE LOCATED IN THE MIDDLE THIRD OF THE SLAB DEPTH AND SPACED AT NOT LESS THAN 3 DIAMETERS. CONDUITS AND PIPES SHALL NOT BE PLACED WITHIN THE COVER TO REINFORCEMENT.
19. SLABS AND BEAMS SHALL BE CONSTRUCTED TO BEAR ONLY ON THE BEAMS, WALLS, COLUMNS ETC. SHOWN ON THE DRAWINGS. ALL OTHER BUILDING ELEMENTS SHALL BE KEPT 12mm CLEAR OF SOFFITS OF STRUCTURE.
20. INTEGRALLY COLOURED AND PATTERNED PRECAST CONCRETE PANELS SHOULD BE USED FOR AESTHETIC REASONS. REFER TO ADJACENT SAMPLE PANEL ELEVATIONS.



SAMPLE PANEL ELEVATIONS
NOT TO SCALE

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: NOT TO SCALE

DRAWN	D MILLER / T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

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Central Coast Council

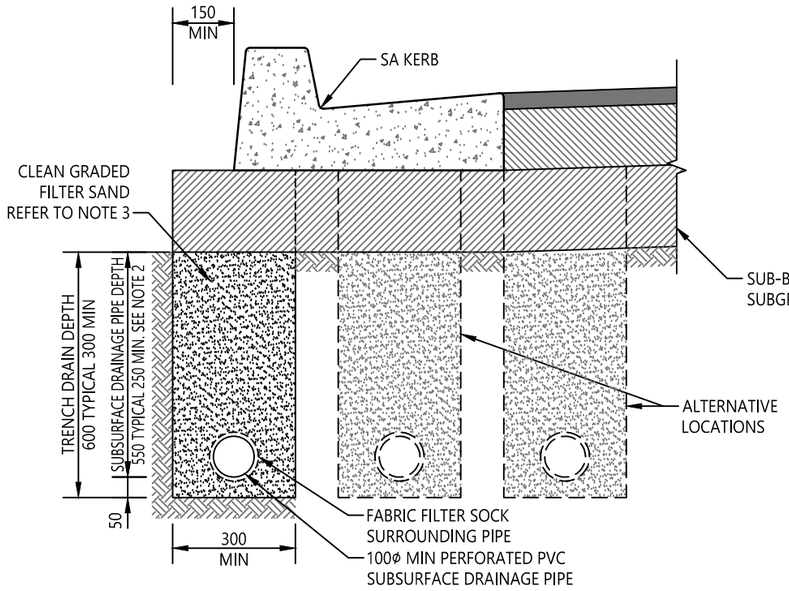
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

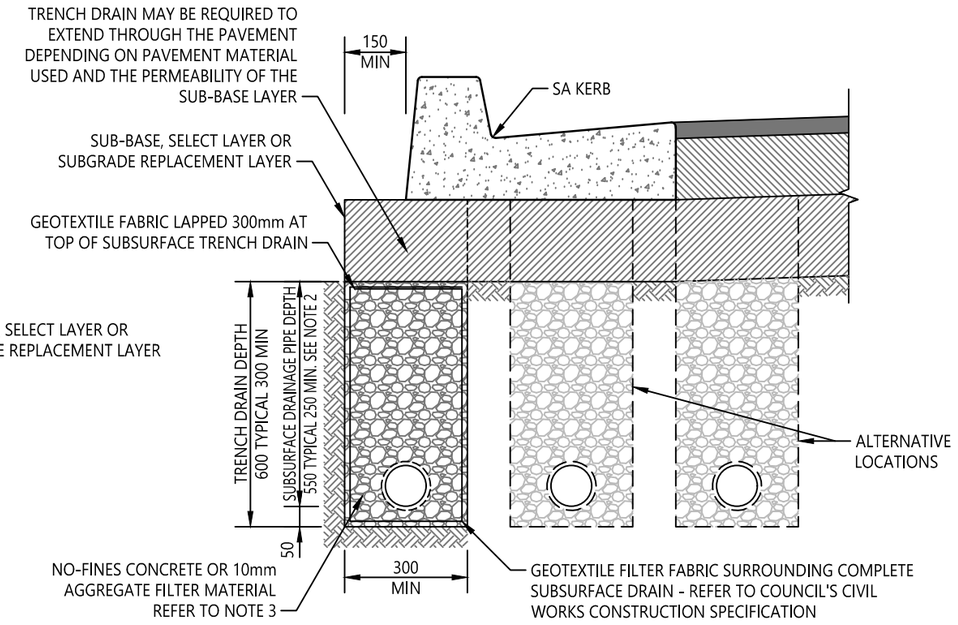
EARTHWORKS SERIES
POST AND PANEL WALL

DRAWING NUMBER	REV
SD0204	-
SHEET 3 OF 3	A3



SUBSURFACE TRENCH DRAIN - TYPE 1

SCALE 1:15

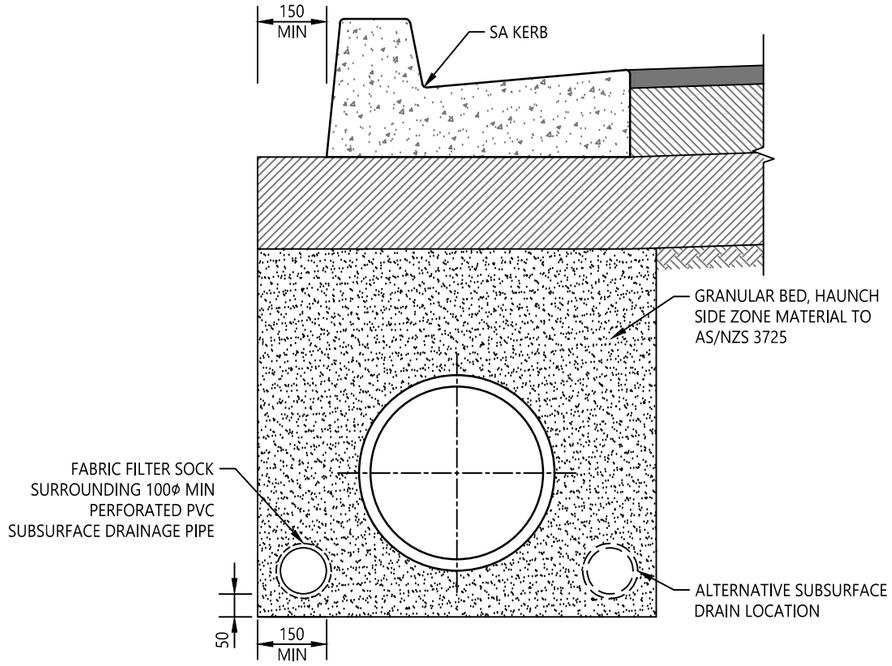


SUBSURFACE TRENCH DRAIN - TYPE 2

SCALE 1:15

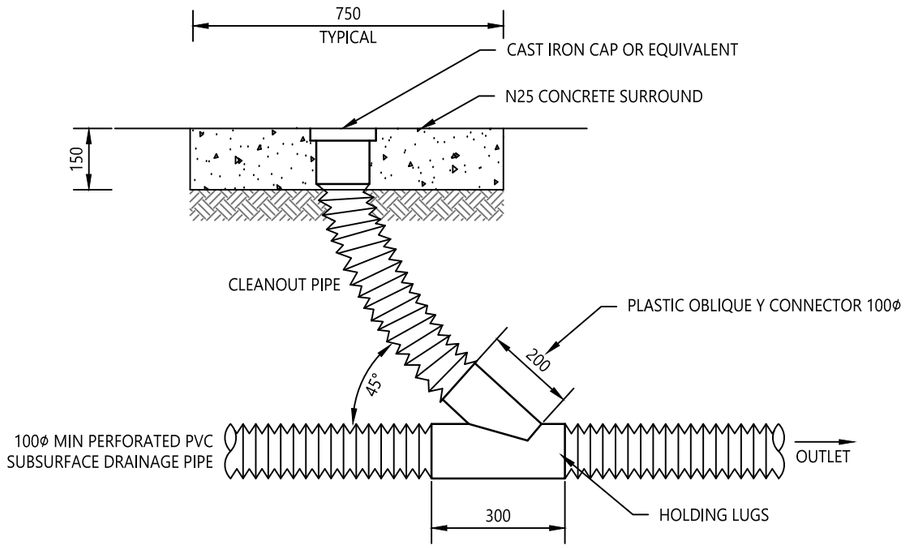
NOTES:

1. SUBSURFACE TRENCH DRAINS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH COUNCIL'S CIVIL WORKS CONSTRUCTION SPECIFICATION AND AUSTROADS ROAD DESIGN GUIDELINES.
2. THE SUBSURFACE TRENCH DRAINAGE PIPE INVERT SHALL BE LOCATED AT LEAST 250mm BELOW NATURAL PAVEMENT SUBGRADE OR 250mm BELOW THE BASE OF SUBGRADE REPLACEMENT LAYER OR 250mm BELOW SELECT PAVEMENT LAYER, WHICHEVER IS LOWER, UNLESS OTHERWISE REQUIRED IN THE APPROVED PAVEMENT DESIGN.
3. MATERIALS TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF COUNCIL'S CIVIL WORKS SPECIFICATION.
4. SUBSURFACE DRAINAGE DETAILS FOR RIGID PAVEMENTS, FULL DEPTH ASPHALT PAVEMENTS AND HEAVILY BOUND PAVEMENTS SHALL BE AS DETAILED ON DESIGN DRAWINGS.
5. SUBSURFACE TRENCH DRAINS SHOULD START AND END AT DRAINAGE PITS IN URBAN AREAS. FLUSHING POINTS SHALL OTHERWISE BE INSTALLED IN FOOTWAY OR VERGE AREAS AS REQUIRED.
6. MAXIMUM DISTANCE BETWEEN A FLUSHING POINT AND OUTLET SHALL BE 120m TO FACILITATE INSPECTION AND FLUSHING.
7. SUBSURFACE DRAINAGE PIPES MAY BE PLACED AT THE LOWEST POINT IN SUBGRADE REPLACEMENT PAVEMENTS.



SUBSURFACE PIPE IN STORMWATER DRAINAGE PIPE TRENCH NEAR PIT

SCALE 1:15



SECTION OF CLEANOUT (FLUSHING POINT)

NOT TO SCALE

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 150 300 450 600 750

1:15

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

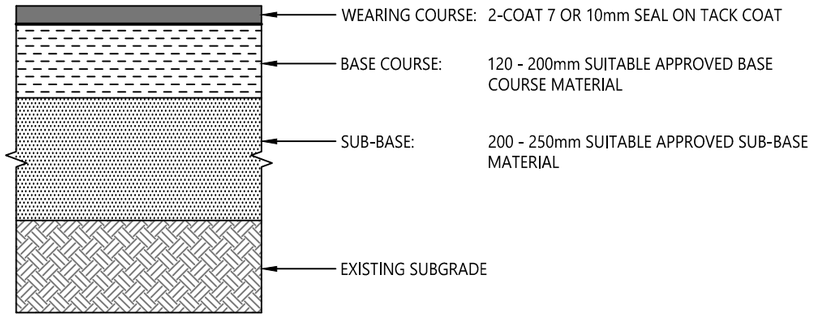
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

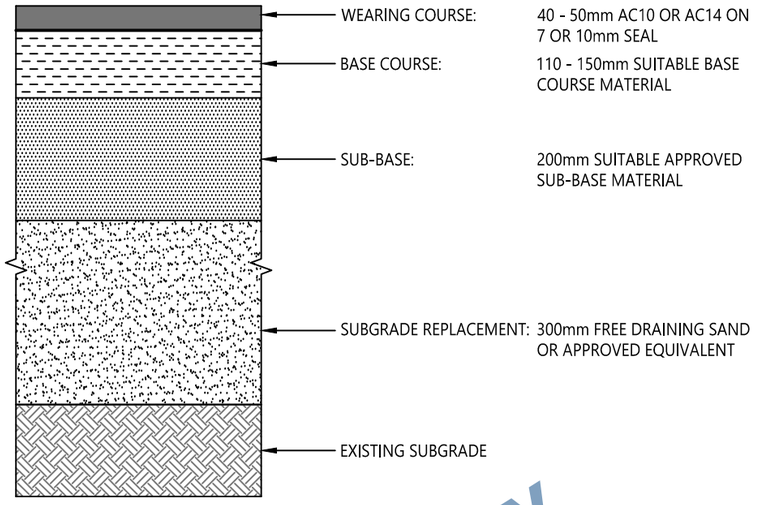
PAVEMENT SERIES
SUBSURFACE TRENCH DRAIN AND
FLUSHING POINT

DRAWING NUMBER	REV
SD0301	-
SHEET 1 OF 1	A3



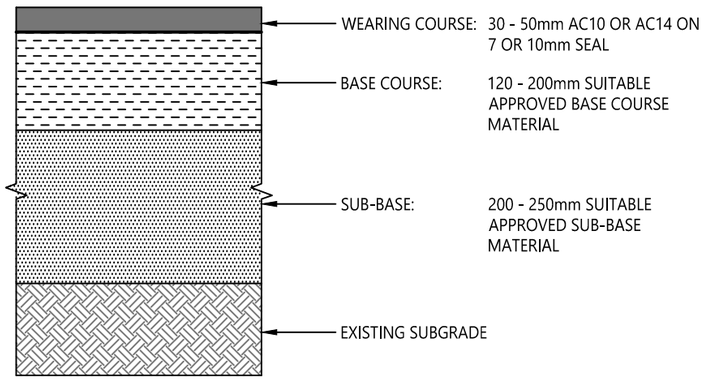
TYPICAL GRANULAR PAVEMENT WITH BITUMEN SEAL WEARING COURSE

SCALE 1:10



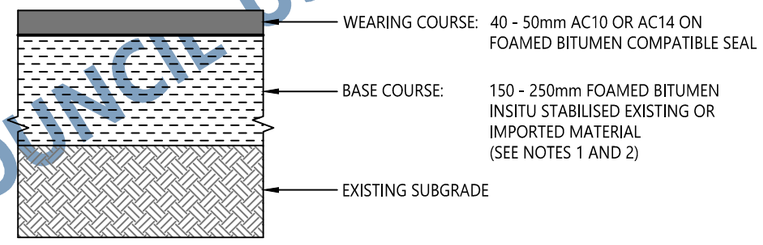
TYPICAL GRANULAR PAVEMENT WITH ASPHALT WEARING COURSE AND SUBGRADE REPLACEMENT

SCALE 1:10



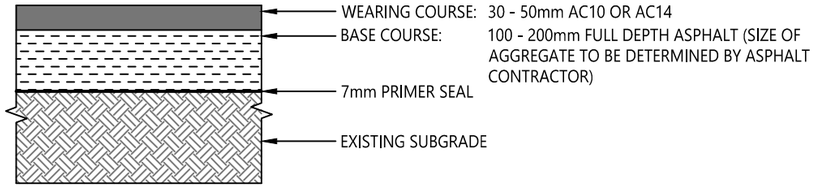
TYPICAL GRANULAR PAVEMENT WITH ASPHALT WEARING COURSE

SCALE 1:10



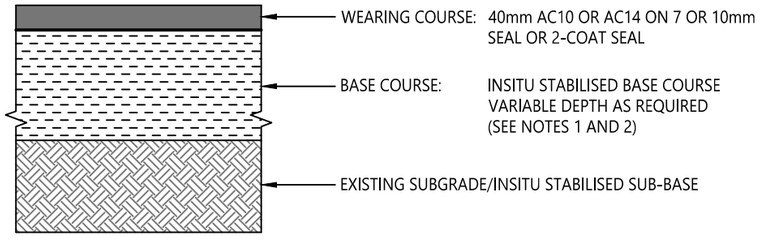
TYPICAL FOAMED BITUMEN INSITU STABILISED PAVEMENT

SCALE 1:10



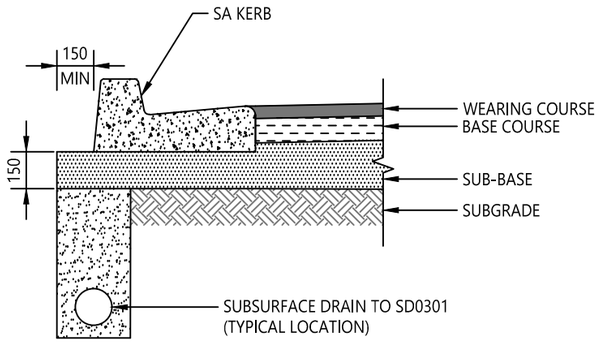
TYPICAL FULL DEPTH ASPHALT (FDA) PAVEMENT

SCALE 1:10



TYPICAL INSITU STABILISED PAVEMENT

SCALE 1:10



TYPICAL PAVEMENT DETAIL UNDER KERB

SCALE 1:25

NOTES:

1. THE PAVEMENT DESIGNS SHOWN ARE TYPICAL PAVEMENTS ONLY. SITE SPECIFIC GEOTECHNICAL TESTING, PAVEMENT DESIGN AND DETERMINATION OF THE SUBGRADE CBR VALUE MUST BE COMPLETED FOR EACH PROJECT.
2. THE TYPE, QUALITY AND THICKNESS OF MATERIAL USED IN EACH PAVEMENT LAYER, ESPECIALLY FOR ASPHALT WEARING COURSE, BASE COURSE AND SUB-BASE LAYERS IS TO BE DETERMINED BY ROAD HIERARCHY CONSIDERATIONS AND THE SITE SPECIFIC TRAFFIC LOADING (ESA). OTHER FACTORS THAT MAY AFFECT PAVEMENT THICKNESS INCLUDE WHETHER THE ROAD IS FOR RESIDENTIAL OR INDUSTRIAL USE AND IF THE ROAD IS A BUS ROUTE.
3. SEAL AGGREGATE SIZE IS GENERALLY 7 OR 10mm FOR THE CENTRAL COAST REGION, HOWEVER, THIS MAY BE AFFECTED BY TRAFFIC LOADING (ESA), PREVAILING CLIMATIC CONDITIONS AND CONSTRUCTABILITY REQUIREMENTS.
4. WHEN BOXING OUT, THE SIDES OF THE EXCAVATION MUST BE TRIMMED VERTICAL TO THE FULL DESIGN DEPTH. CROSSFALL AND DRAINAGE MUST BE PROVIDED AT THE BOTTOM OF THE EXCAVATION TO ELIMINATE DAMMING OF WATER/MOISTURE.
5. IF SPECIFIC SECTIONS OF LOW QUALITY EXISTING MATERIAL ARE FOUND, THEY WILL REQUIRE ADDITIONAL REPLACEMENT WORK AND/OR USE OF GEOTEXTILES AND/OR GEOGRID. DETERMINATION OF THE EXTENT OF THESE AREAS (IF ANY) IS TO BE UNDERTAKEN ON SITE AT THE TIME OF EXCAVATION.
6. CARE MUST BE TAKEN TO NOT STRESS SUBGRADE MATERIAL BY TRAFFICKING OF CONSTRUCTION EQUIPMENT.
7. SUBSURFACE DRAINAGE SHALL BE PROVIDED AT ALL EXCAVATION INTERFACES TO ELIMINATE DAMMING OF WATER/MOISTURE.
8. ANY AREAS TO BE WIDENED THAT ARE IN FILL SHALL BE BUILT UP IN LAYERS USING A SELECT SUBGRADE MATERIAL UP TO THE UNDERSIDE OF THE SUB-BASE LEVEL. EACH LAYER SHALL BE STEPPED IN. SELECTED EXCAVATED GRAVEL MATERIALS FROM THE SITE COULD BE RE-USED OR IMPORTED MATERIAL USED WHERE NECESSARY.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500 1:10

0 250 500 750 1000 1250 1:25

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

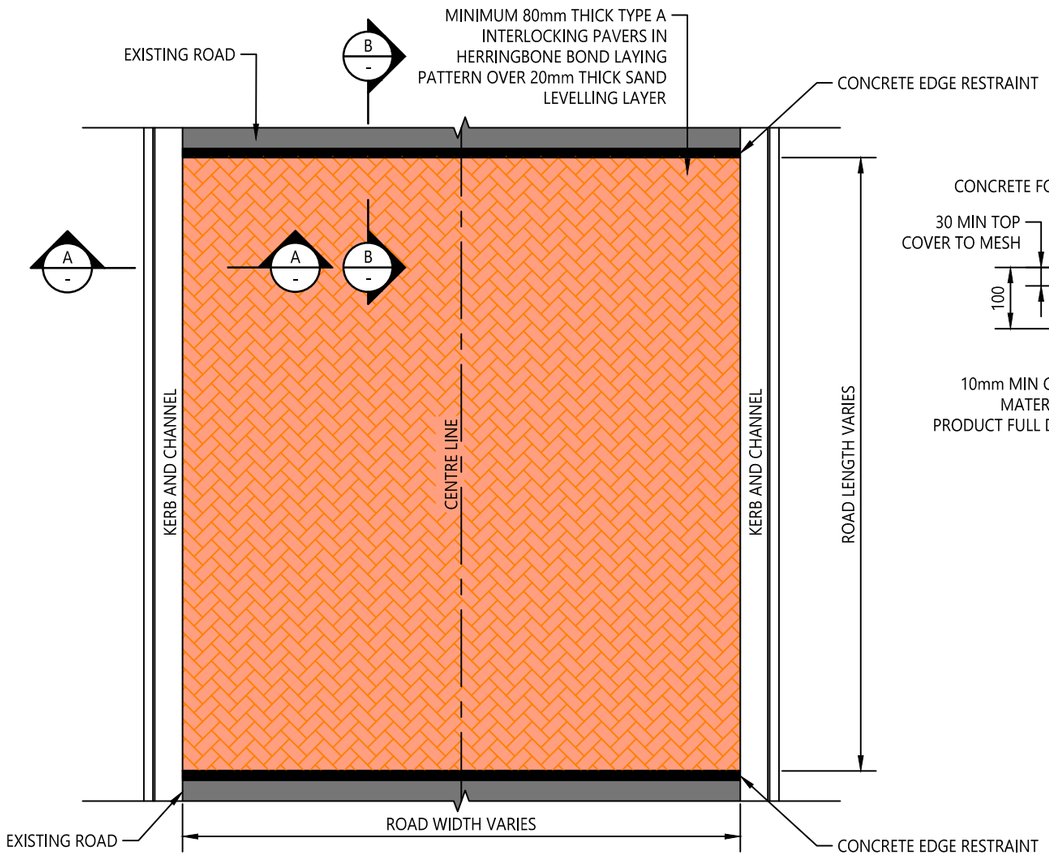
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

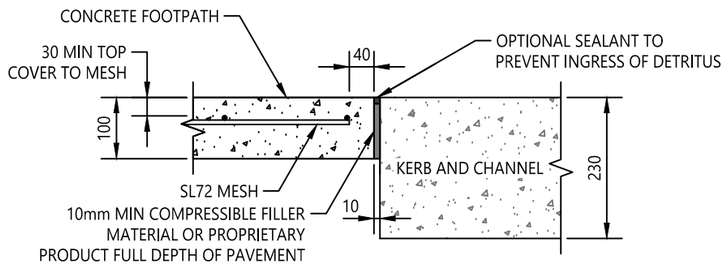
STANDARD DRAWING

PAVEMENT SERIES
TYPICAL FLEXIBLE PAVEMENT DESIGNS

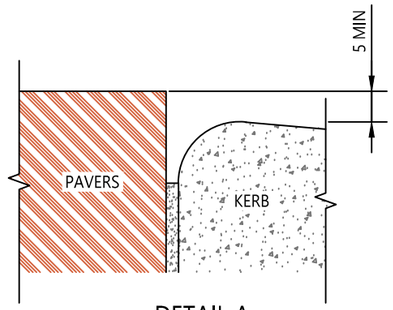
DRAWING NUMBER	REV
SD0302	-
SHEET 1 OF 1	A3



PLAN
SCALE 1:100



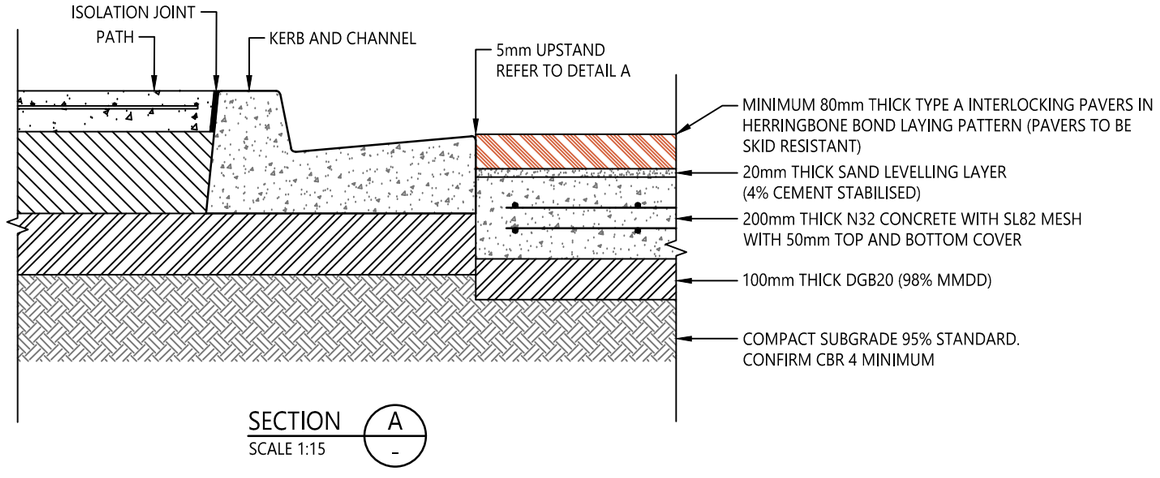
ISOLATION JOINT (IJ)
SCALE 1:10



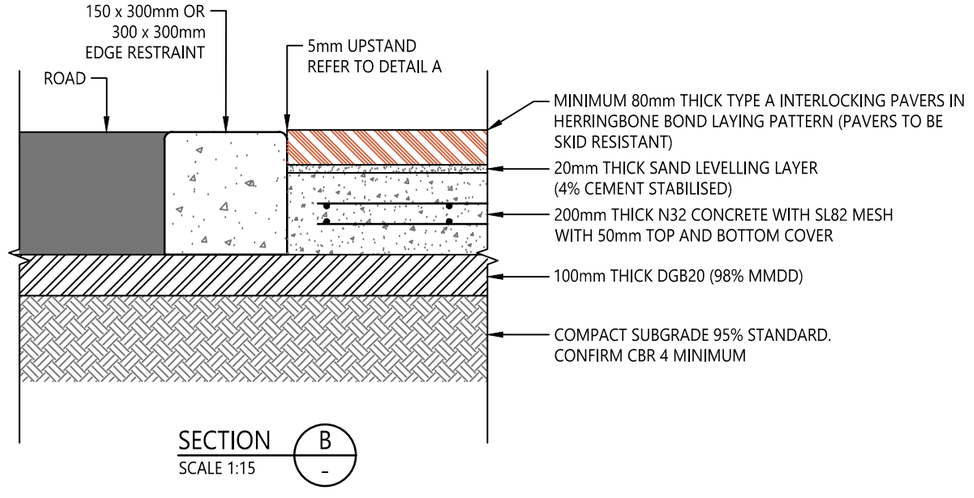
DETAIL A
SCALE 1:1

NOTES:

1. THIS STANDARD DRAWING IS BASED ON DETAILS PROVIDED BY SYDNEY CITY COUNCIL.
2. THE PAVEMENT SPECIFICATION SHOWN ON THIS STANDARD DRAWING IS A MINIMUM STANDARD FOR ROAD PAVEMENTS.
3. CONCRETE, CLAY (CLASS 4) OR SIMILAR MATERIALS SHOULD BE USED FOR THE PAVERS.
4. TYPE A PAVER AS DEFINED IN CMAA PA01 CONCRETE SEGMENTAL PAVEMENTS - DETAILING GUIDE (2014). DENTATED UNITS THAT KEY INTO EACH OTHER AND, BY THEIR PLAN GEOMETRY, INTERLOCK AND RESIST THE RELATIVE MOVEMENT OF JOINTS PARALLEL TO BOTH THE LONGITUDINAL AND TRANSVERSE AXES OF THE UNIT.
5. PAVERS SHALL HAVE A MINIMUM SLIP-RESISTANCE SURFACE CLASSIFICATION OF CLASS W UNDER AS/NZS 4586 WET PENDULUM TEST USING FOUR S RUBBER (SIMULATED STANDARD SHOE SOLE RUBBER).
6. PAVING IS NOT PERMITTED ON GRADES ABOVE 5%.



SECTION A - SCALE 1:15



SECTION B - SCALE 1:15

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	M GREENWOOD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

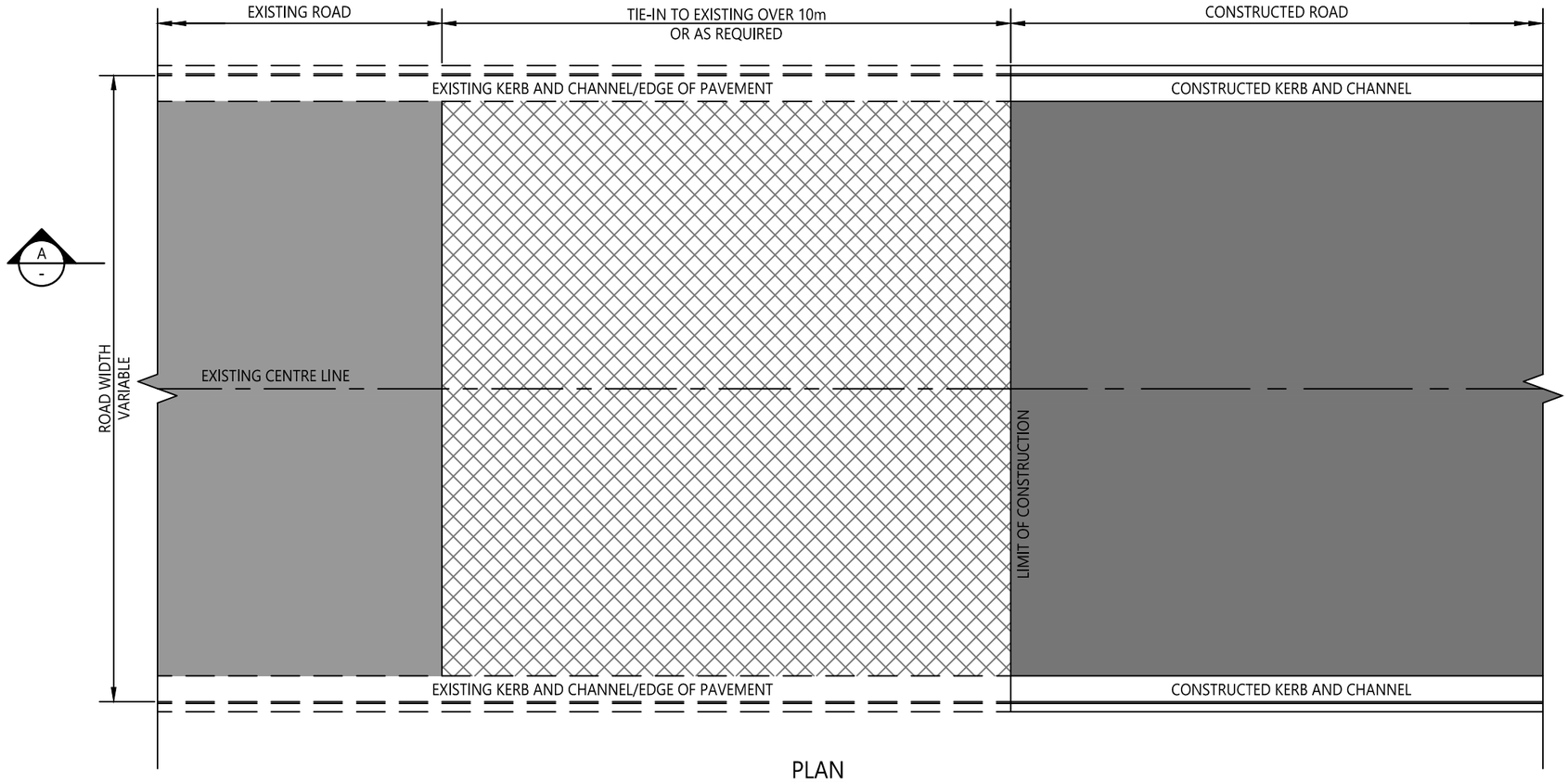
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

PAVEMENT SERIES
INTERLOCKING SEGMENTAL BLOCK PAVING

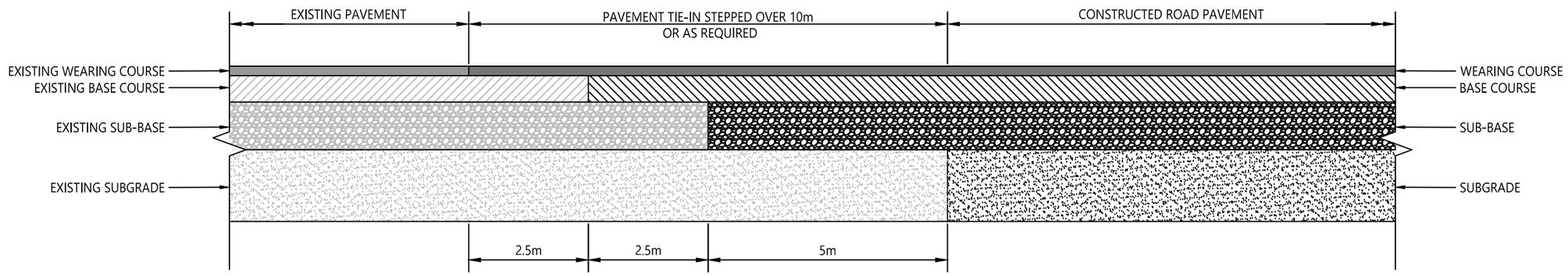
DRAWING NUMBER	REV
SD0303	-
SHEET 1 OF 1	A3



PLAN
SCALE 1:100

NOTES:

1. PAVEMENT TO BE CONSTRUCTED WITH RELEVANT CROSSFALL AND SUBSURFACE DRAINAGE TO ELIMINATE DAMMING OF WATER FROM THE PAVEMENT LAYERS.
2. SUBSURFACE DRAINAGE SHALL BE PROVIDED AT ALL EXCAVATION INTERFACES TO ELIMINATE DAMMING OF WATER.
3. WHERE TIE-IN INVOLVES A SECTION OF ROAD WITHOUT KERB AND CHANNEL, REGRADE TABLE DRAINS TO INVERT OF KERB LEVEL AND KERB ALIGNMENT AS REQUIRED.



SECTION A-
SCALE H 1:100
V 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000 1:20

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

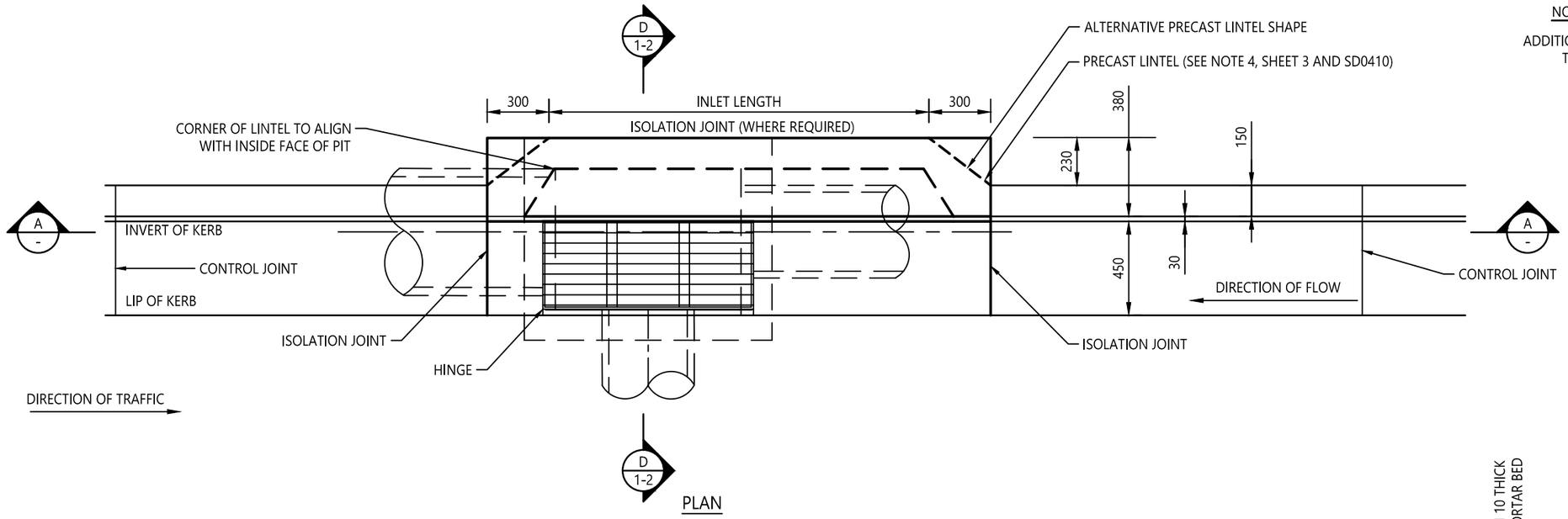
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

PAVEMENT SERIES
NEW PAVEMENT TIE-IN TO EXISTING PAVEMENT

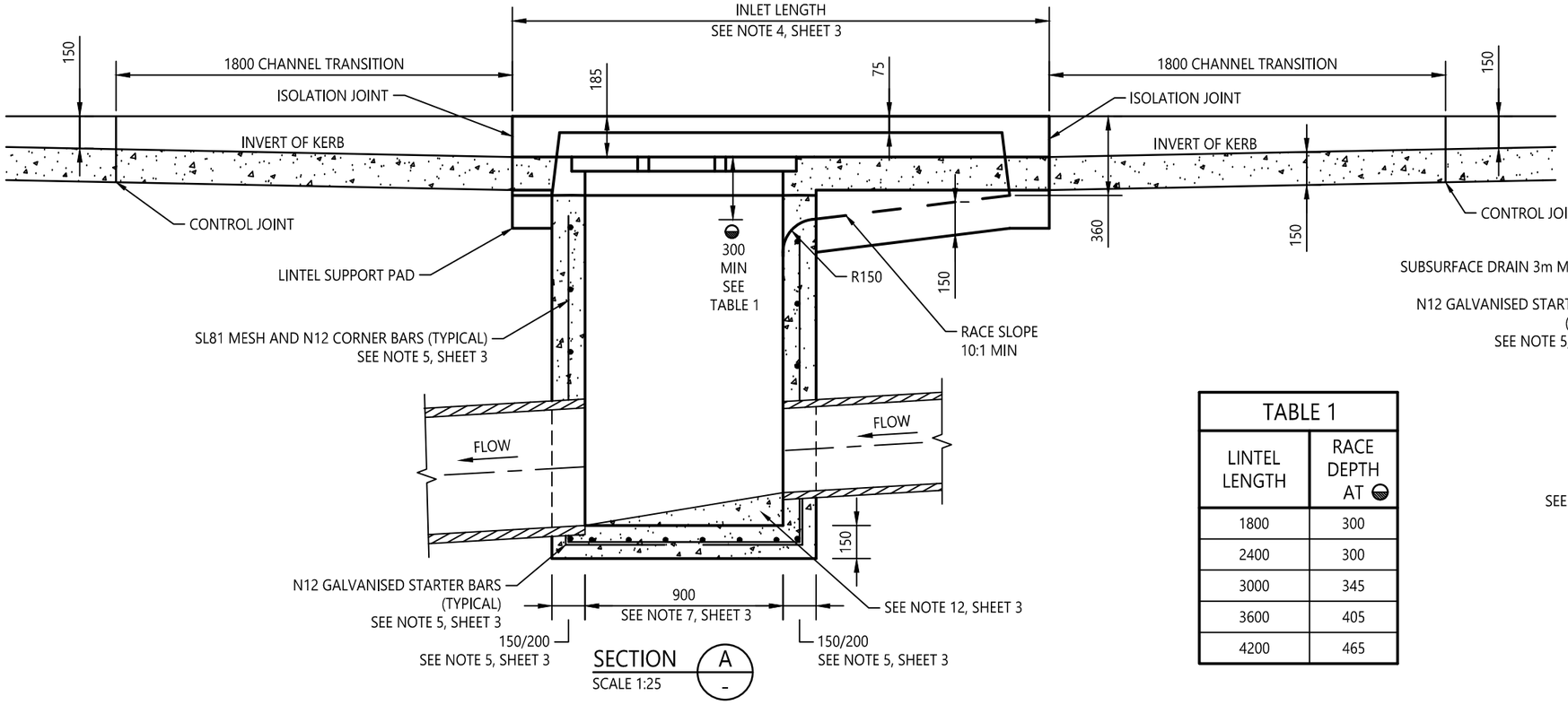
DRAWING NUMBER	REV
SD0304	-
SHEET 1 OF 1	A3



PLAN

STANDARD PIT (ON GRADE)

SCALE 1:25

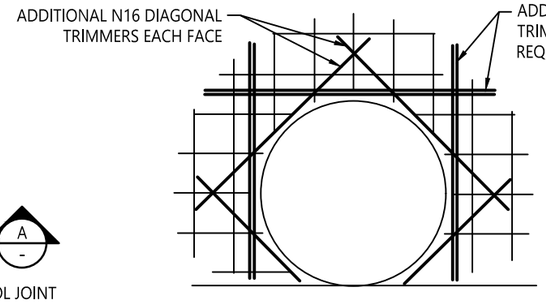


SECTION A-A

SCALE 1:25

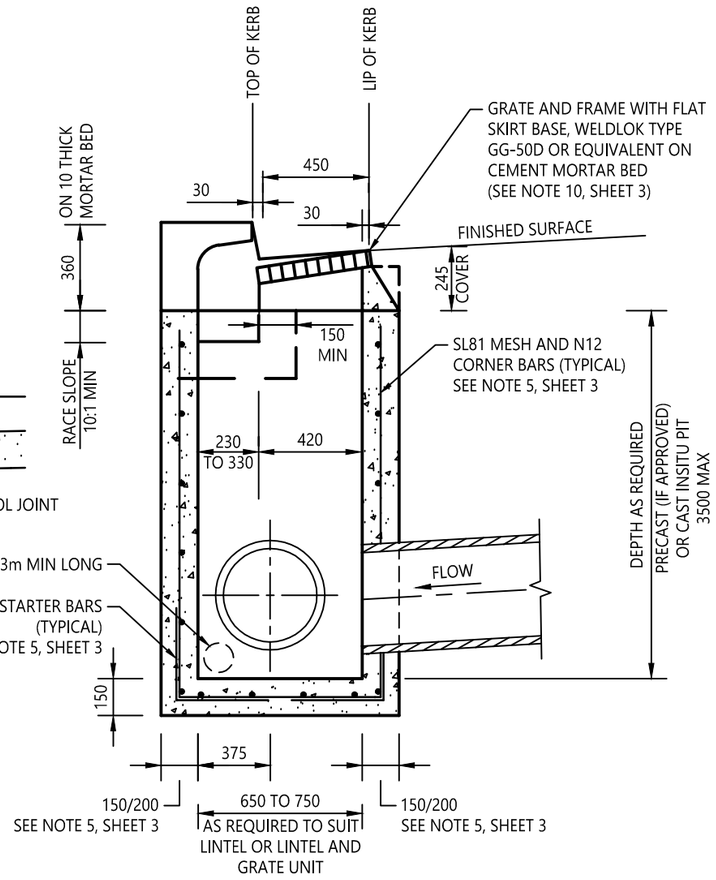
TABLE 1	
LINTEL LENGTH	RACE DEPTH AT ⊖
1800	300
2400	300
3000	345
3600	405
4200	465

NOTE: TRIMMERS TO COG INTO INTERSECTING WALLS WHERE NECESSARY.



TRIMMER DETAIL DIAGRAM

NOT TO SCALE



SECTION D-D

SCALE 1:25

FOR PIPE DIAMETER UP TO 525mm

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 250 500 750 1000 1250

1:25

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

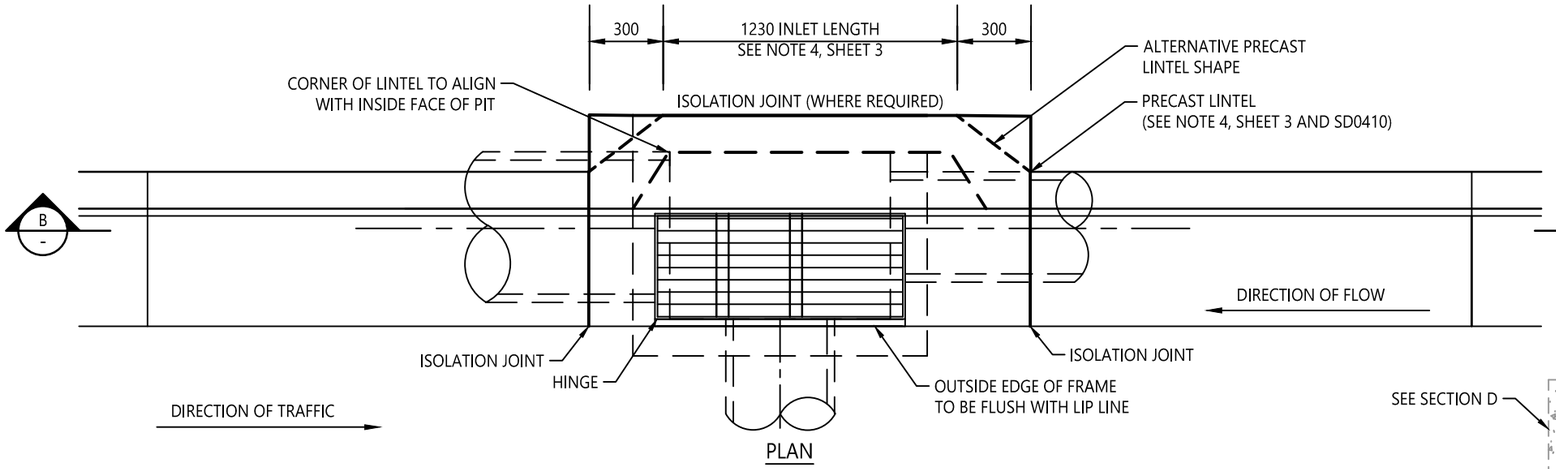
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STORMWATER DRAINAGE SERIES
STANDARD GRATED GULLY PIT

STANDARD DRAWING

DRAWING NUMBER	REV
SD0401	-
SHEET 1 OF 3	A3



PLAN

STANDARD PIT (NO RAMP)

SCALE 1:25

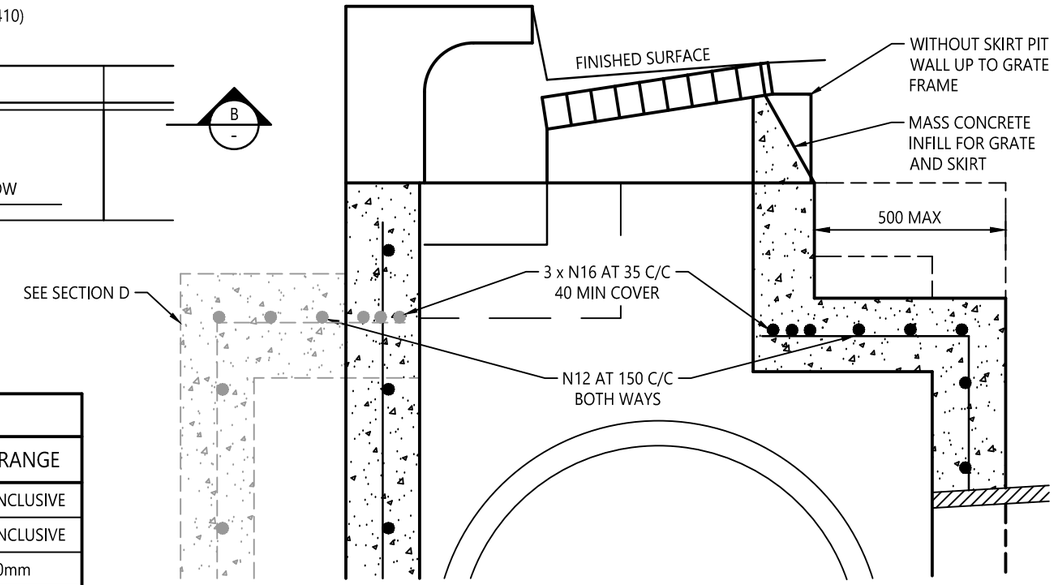
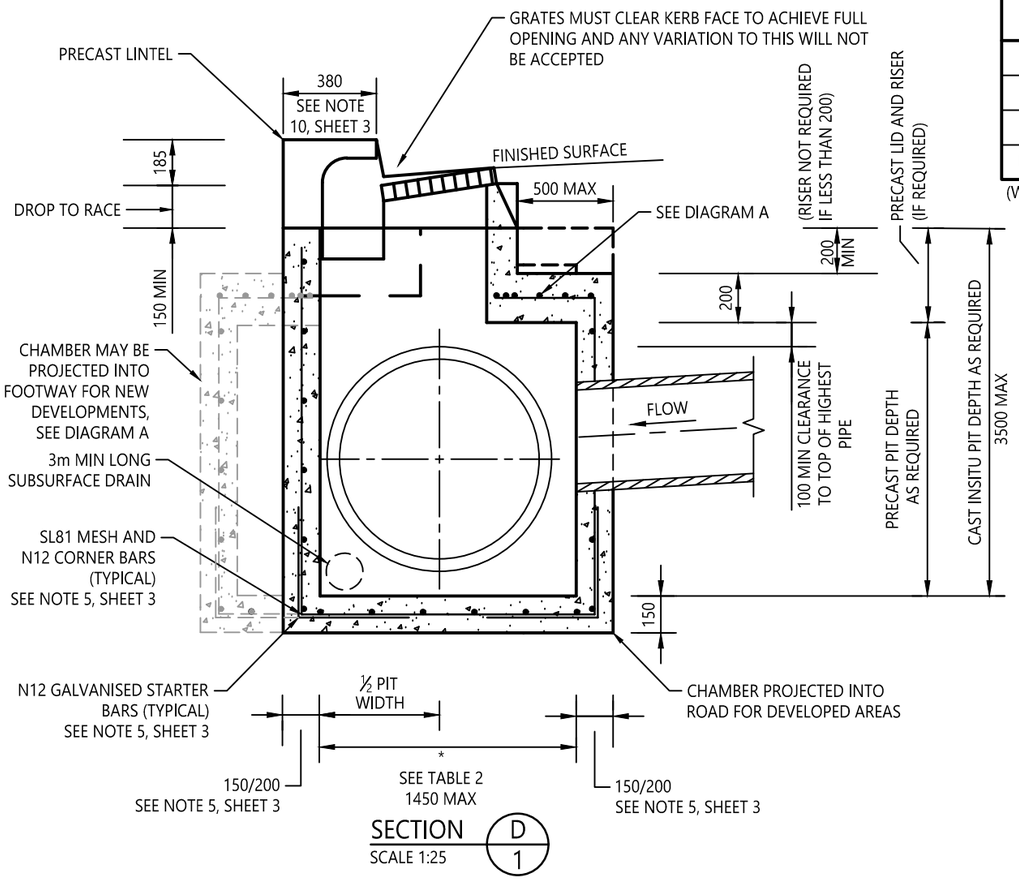


DIAGRAM A

NOT TO SCALE

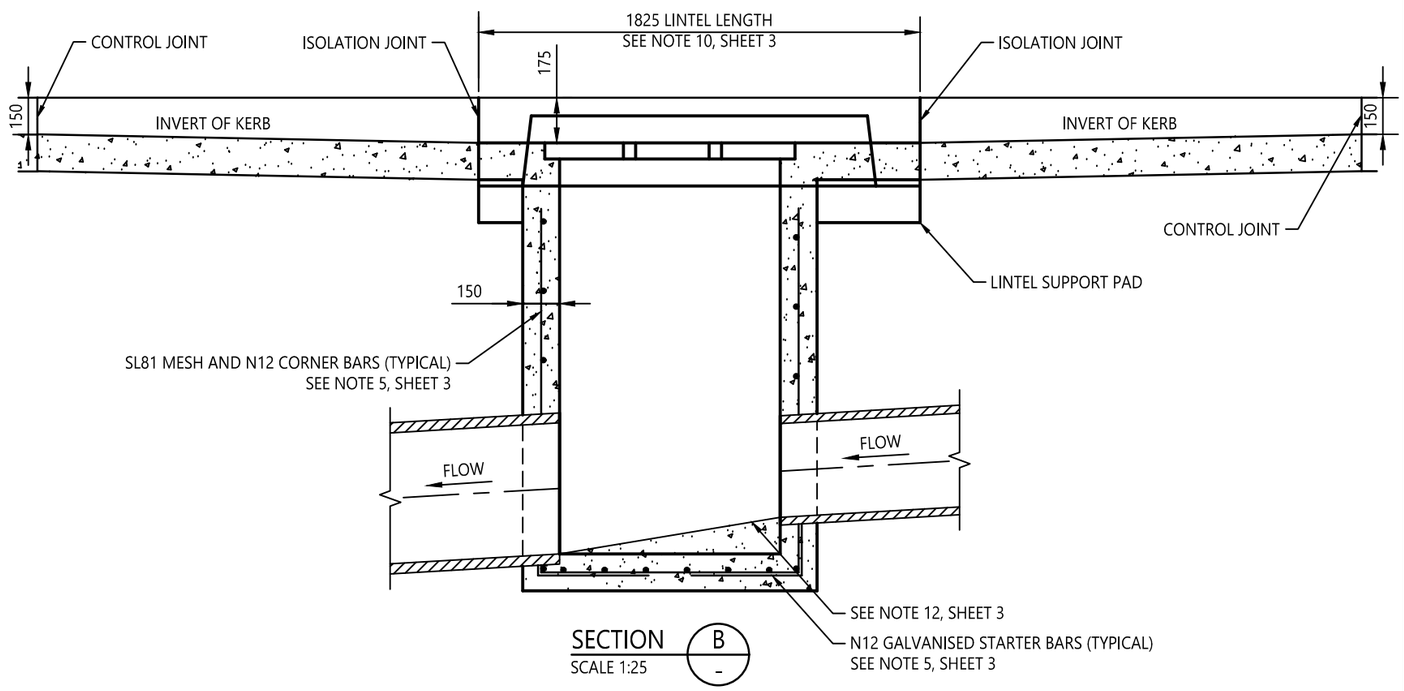
TABLE 2	
*	PIPE DIAMETER RANGE
900	600mm TO 750mm INCLUSIVE
1200	825mm TO 900mm INCLUSIVE
D+250	FOR PIPES > 900mm
ND+[(N-1)x250]+250	FOR MULTIPLE PIPES

(WHERE N=NUMBER OF LINES)



SECTION D / 1

SCALE 1:25



SECTION B / -

SCALE 1:25

(ENLARGED CHAMBER) FOR PIPE DIAMETER ABOVE 525mm AND MULTIPLE PIPES

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 250 500 750 1000 1250

1:25

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

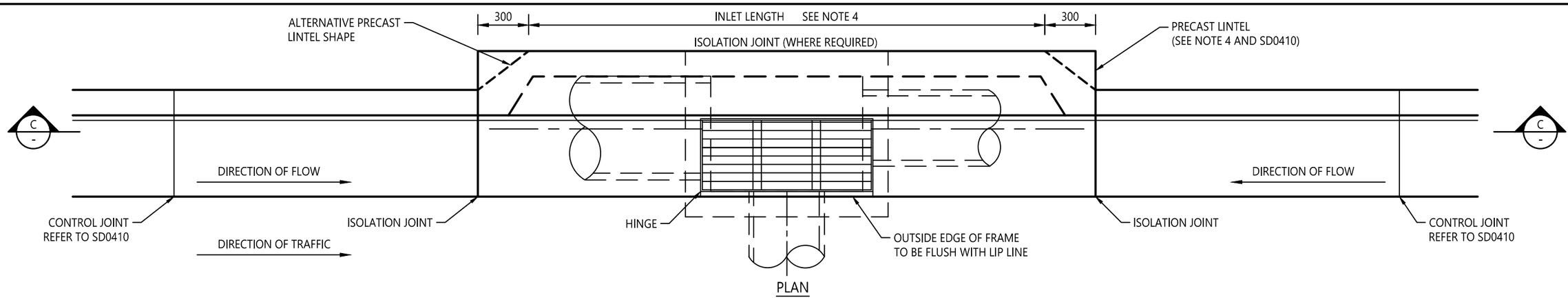
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STORMWATER DRAINAGE SERIES
STANDARD GRATED GULLY PIT

STANDARD DRAWING

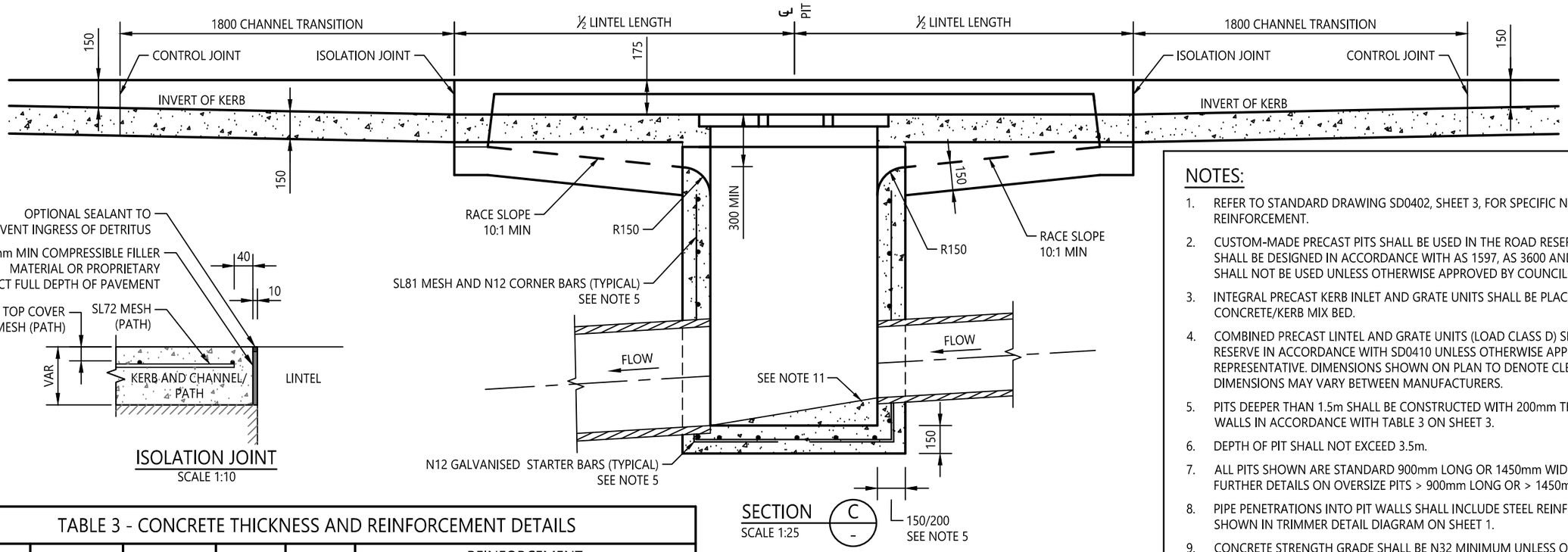
DRAWING NUMBER	REV
SD0401	-
SHEET 2 OF 3	A3

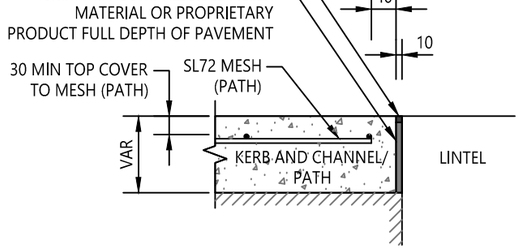


PLAN

STANDARD PIT SAG PIT

SCALE 1:25





ISOLATION JOINT

SCALE 1:10

SECTION C-C

SCALE 1:25

TABLE 3 - CONCRETE THICKNESS AND REINFORCEMENT DETAILS						
INTERNAL DEPTH (m)	BASE THICKNESS (mm)	WALL THICKNESS (mm)	MAX LENGTH (mm)	MAX WIDTH (mm)	REINFORCEMENT SEE NOTES 1 AND 2 BELOW	
					BASE	WALLS
≤ 1.5	150	150	900	1450	UNREINFORCED	
1.5 - 3.5	150	200			SL81 MESH - N12 500 x 500 GALVANISED STARTER BARS AT 200 C/C AND N12 500 x 500 CORNER BARS AT 400 C/C	
> 3.5	STRUCTURAL ENGINEERING DESIGN REQUIRED					

NOTES:
1. REFER TO STANDARD DRAWING SD0402 FOR OVERSIZE GULLY PIT DIMENSIONS
2. PIT WALLS AND BASE ON STATE ROADS AND B-DOUBLE ROUTES SHALL BE REINFORCED WITH RL1218 MESH - REFER TO TfNSW STANDARD DRAWING R0220 SERIES

NOTES:

1. REFER TO STANDARD DRAWING SD0402, SHEET 3, FOR SPECIFIC NOTES ON CONCRETE REINFORCEMENT.
2. CUSTOM-MADE PRECAST PITS SHALL BE USED IN THE ROAD RESERVE WHERE PRACTICABLE AND SHALL BE DESIGNED IN ACCORDANCE WITH AS 1597, AS 3600 AND AS 5100. 'KNOCKOUT PITS' SHALL NOT BE USED UNLESS OTHERWISE APPROVED BY COUNCIL'S REPRESENTATIVE.
3. INTEGRAL PRECAST KERB INLET AND GRATE UNITS SHALL BE PLACED ON A 150mm MINIMUM N20 CONCRETE/KERB MIX BED.
4. COMBINED PRECAST LINTEL AND GRATE UNITS (LOAD CLASS D) SHALL BE USED IN THE ROAD RESERVE IN ACCORDANCE WITH SD0410 UNLESS OTHERWISE APPROVED BY COUNCIL'S REPRESENTATIVE. DIMENSIONS SHOWN ON PLAN TO DENOTE CLEAR OPENINGS. MIN SIZE 1.2m. DIMENSIONS MAY VARY BETWEEN MANUFACTURERS.
5. PITS DEEPER THAN 1.5m SHALL BE CONSTRUCTED WITH 200mm THICK REINFORCED CONCRETE WALLS IN ACCORDANCE WITH TABLE 3 ON SHEET 3.
6. DEPTH OF PIT SHALL NOT EXCEED 3.5m.
7. ALL PITS SHOWN ARE STANDARD 900mm LONG OR 1450mm WIDE. REFER TO SD0402 FOR FURTHER DETAILS ON OVERSIZE PITS > 900mm LONG OR > 1450mm WIDE.
8. PIPE PENETRATIONS INTO PIT WALLS SHALL INCLUDE STEEL REINFORCEMENT TRIMMER BARS AS SHOWN IN TRIMMER DETAIL DIAGRAM ON SHEET 1.
9. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM UNLESS OTHERWISE SPECIFIED.
10. WELDLOK GRATE WITH FLAT SKIRT BASE TYPE GG 52D OR WELDLOK GRATE AND FRAME TYPE GG 50D OR APPROVED EQUIVALENT TO BE USED. GRATE AND FRAME SHALL BE LOAD CLASS D HOT-DIP GALVANISED 80-85 MICRONS THICK. ALL GRATES SHALL BE BICYCLE SAFE AND PROVIDED WITH LOCKING CLIP.
11. PROVIDE STEP-IRONS FOR PITS DEEPER THAN 600mm.
12. ALL PITS SHALL BE STREAMLINED AND BENCHED WHERE REQUIRED. NO RENDERING PERMITTED IN STRUCTURAL COMPONENTS.
13. 100ø SUBSURFACE DRAINAGE PIPE 3m MIN LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES.
14. THIS STANDARD DRAWING REFERS TO PITS CONSTRUCTED ADJACENT TO FLEXIBLE PAVEMENTS. TOTAL ISOLATION OF PITS IS REQUIRED ADJACENT TO RIGID PAVEMENTS.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500 1:10

0 250 500 750 1000 1250 1:25

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

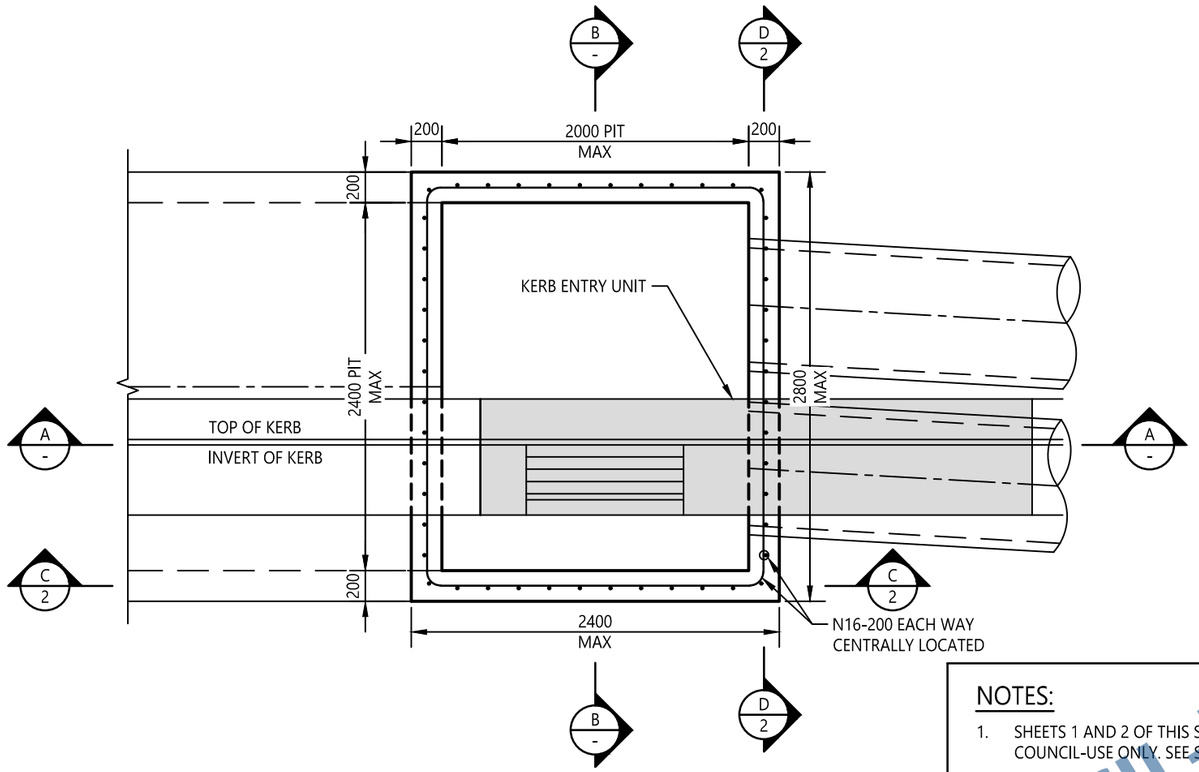
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

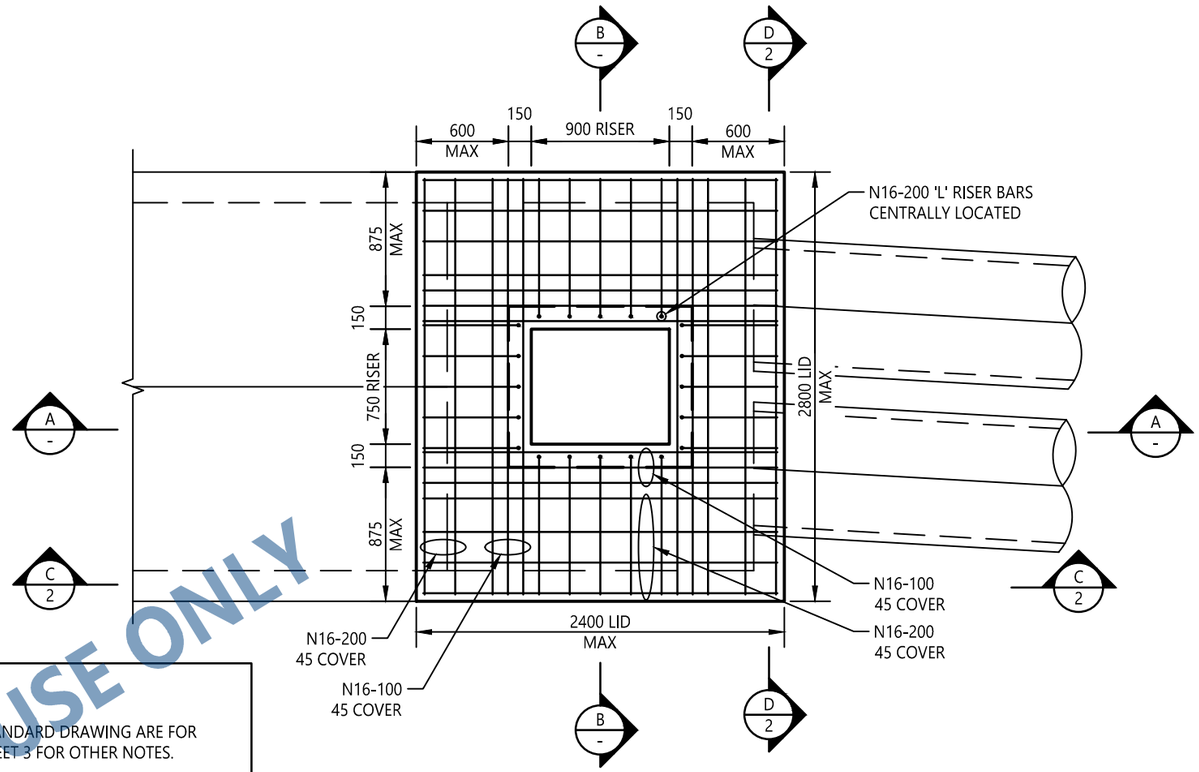
STANDARD DRAWING

STORMWATER DRAINAGE SERIES
STANDARD GRATED GULLY PIT

DRAWING NUMBER	REV
SD0401	-
SHEET 3 OF 3	A3



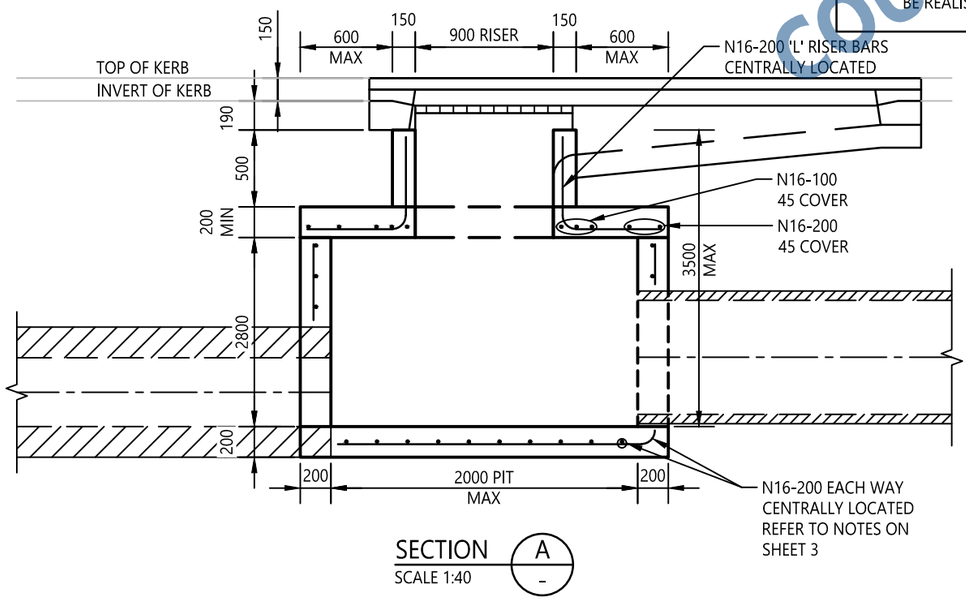
WALL REINFORCEMENT PLAN
SCALE 1:40



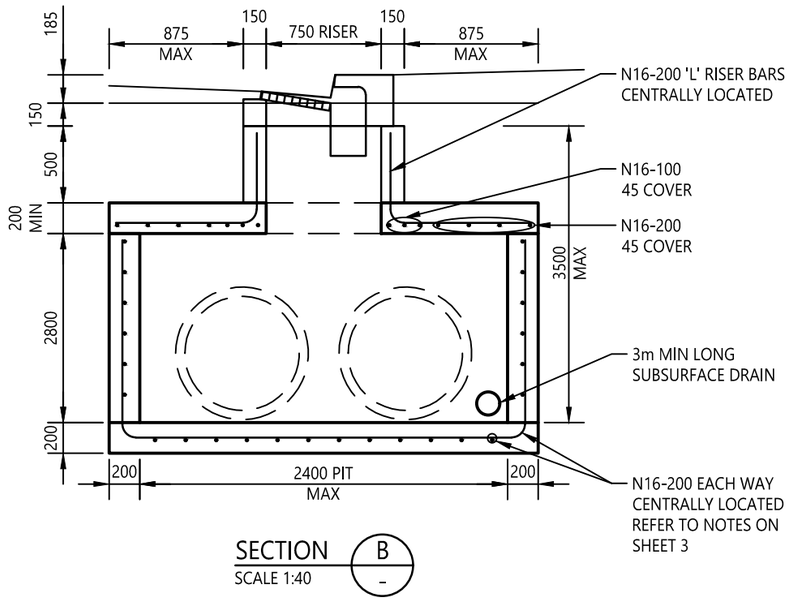
LID REINFORCEMENT PLAN
SCALE 1:40

NOTES:

1. SHEETS 1 AND 2 OF THIS STANDARD DRAWING ARE FOR COUNCIL-USE ONLY. SEE SHEET 3 FOR OTHER NOTES.
2. LARGER SIZE PITS OR IRREGULAR SHAPED PITS SHALL BE DESIGNED BY A SUITABLY QUALIFIED AND EXPERIENCED CIVIL/STRUCTURAL ENGINEER.
3. THE BENEFIT OF CONSTRUCTING A RISER WOULD NOT LIKELY BE REALISED FOR PIT DEPTHS <3m.



SECTION A
SCALE 1:40



SECTION B
SCALE 1:40

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 400 800 1200 1600 2000
1:40

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

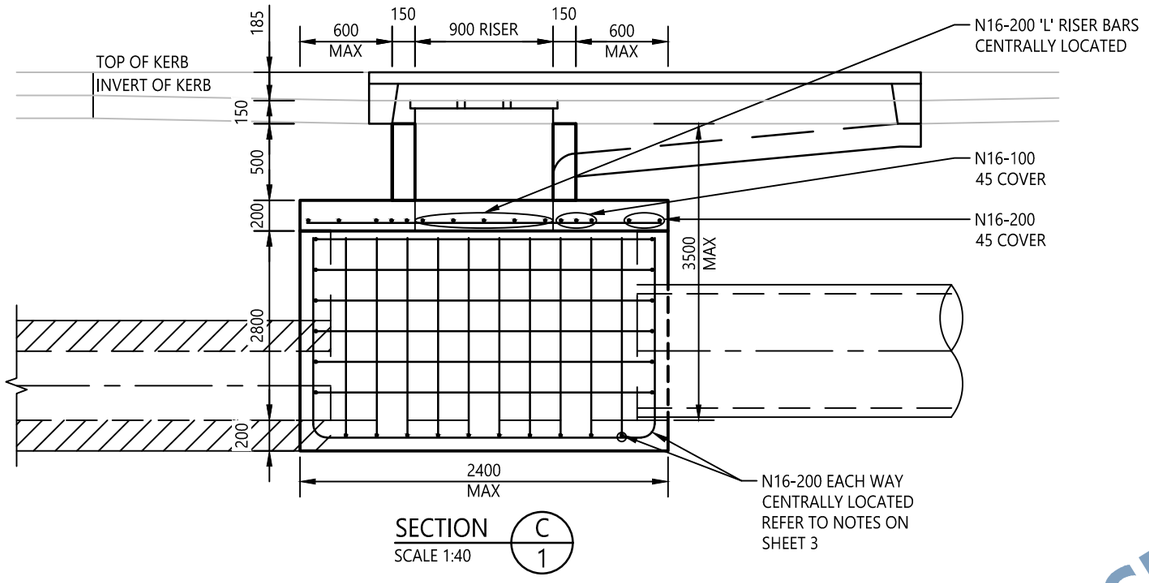
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

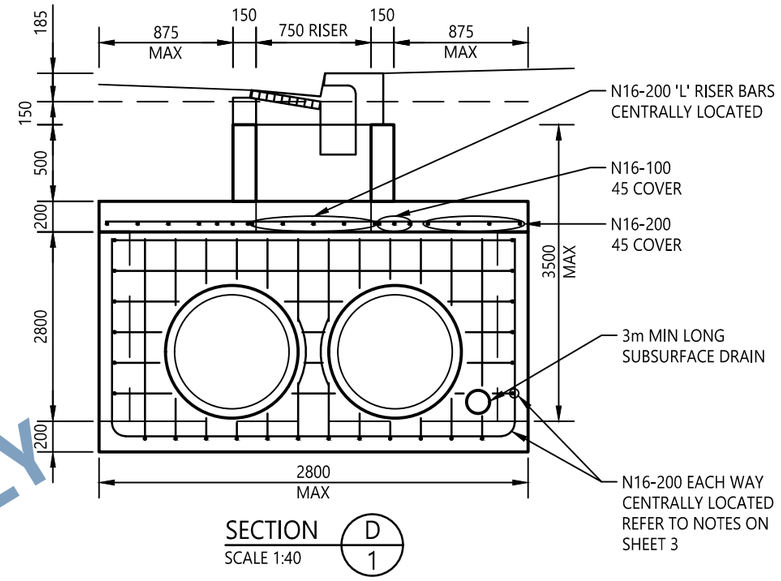
STORMWATER DRAINAGE SERIES
OVERSIZE GULLY PIT

STANDARD DRAWING

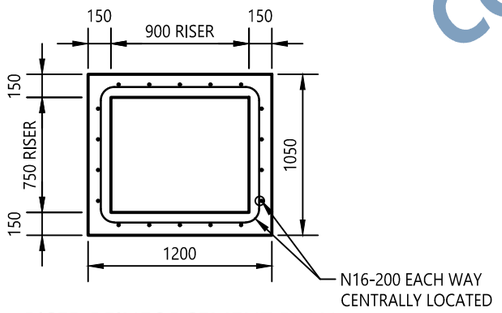
DRAWING NUMBER	REV
SD0402	-
SHEET 1 OF 3	A3



SECTION C
SCALE 1:40

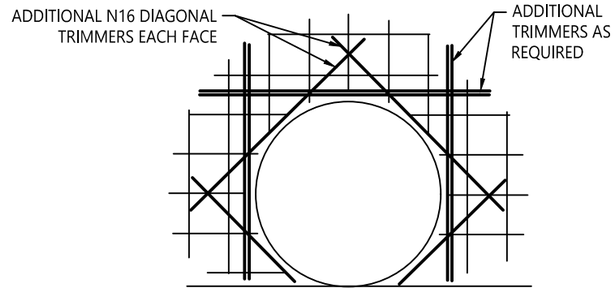


SECTION D
SCALE 1:40



RISER REINFORCEMENT PLAN
SCALE 1:40

NOTE: TRIMMERS TO COG INTO INTERSECTING WALLS WHERE NECESSARY.



TRIMMER DETAIL DIAGRAM
NOT TO SCALE

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 400 800 1200 1600 2000
1:40
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STORMWATER DRAINAGE SERIES
OVERSIZE GULLY PIT

STANDARD DRAWING

DRAWING NUMBER	REV
SD0402	-
SHEET 2 OF 3	A3

REINFORCED CONCRETE PIT NOTES:

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

2. EXPOSURE CLASSIFICATION AND CONCRETE STRENGTH GRADE IN ACCORDANCE WITH TABLE 4.3 AS 3600-2009:

EXPOSURE CLASSIFICATION	CONCRETE STRENGTH GRADE	LOCATION
B1	N32	1 TO 50km FROM COASTLINE
B2	N40	WITHIN 1km OF SALTWATER SHORELINE

3. MINIMUM CONCRETE COVER TO REINFORCEMENT SHALL COMPLY WITH TABLE 4.10.3.2 AS 3600-2009:

Exposure Classification	REQUIRED COVER (mm) CHARACTERISTIC STRENGTH (f'c)				
	20 MPa	25 MPa	32 MPa	40 MPa	≥50 MPa
A1	20	20	20	20	20
A2	(50)	30	25	20	20
B1	-	(60)	40	30	25
B2	-	-	(65)	45	35
C1	-	-	-	(70)	50
C2	-	-	-	-	65

4. DESIGN COVER TO REINFORCEMENT SHALL BE 65mm TO UNPROTECTED GROUND AND 40mm TO EXTERNAL EXPOSURE. THE REINFORCEMENT SHALL BE PLACED TOWARDS THE OUTSIDE FACE OF THE PANEL WITHIN THE ZONE DEFINED BY THESE LIMITS.

5. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON INSULATED STEEL OR PLASTIC CHAIRS, GENERALLY AT NOT GREATER THAN 800mm CENTRES BOTH WAYS.

6. ALL TIE WIRES SHALL BE BENT SO AS NOT TO INTRUDE INTO THE COVER ZONE.

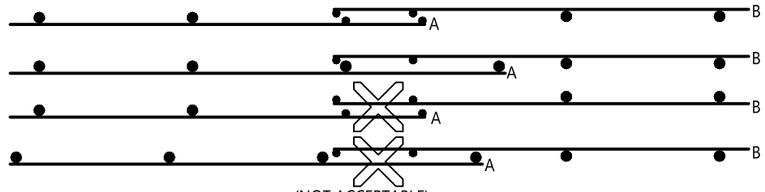
7. MINIMUM BAR SPLICE SHALL BE 450mm.

8. SPLICES IN REINFORCEMENT SHALL ONLY BE MADE IN POSITION SHOWN. LAPS SHALL BE IN ACCORDANCE WITH AS 3600 AND NOT LESS THAN THE DEVELOPMENT LENGTH FOR EACH BAR AS SHOWN IN THE TABLE BELOW UNLESS OTHERWISE NOTED:

BAR SIZE	LAP MIN
N10	450
N12	500
N16	650
N20	1000

BOTTOM BAR LAPPED AT SUPPORTS AND TOP BAR LAPPED AT MID SPAN

9. SLAB MESH SHALL BE LAPPED BY ONE FULL PANEL OF MESH SO THAT THE TWO OUTERMOST TRANSVERSE WIRES OF ONE SHEET OVERLAP THE TWO OUTERMOST TRANSVERSE WIRES OF THE SHEET BEING LAPPED SUCH AS SHOWN IN THE DIAGRAM BELOW:



(NOT ACCEPTABLE)

10. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS OTHERWISE SHOWN OR APPROVED BY THE ENGINEER.

11. ALL STEEL REINFORCEMENT SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF CONCRETE.

12. ADMIXTURES AND CONCRETE MATERIAL CONTAINING CALCIUM CHLORIDE OR OTHER CHLORIDE SALTS SHALL NOT BE USED. THE MATERIALS, MANUFACTURE, HANDLING, PLACING, FINISHING AND CURING OF THE CONCRETE SHALL BE IN ACCORDANCE WITH AS 3600 AND ACCEPTED BUILDING PRACTICE.

ELEMENT	SLUMP	AGG. SIZE MAX	CEMENT TYPE	AS 3600 (EXP. CLASS)	ADMIX.
PIT	80	20	A	32 MPa (B1) 40 MPa (B2)	Nil

13. NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

14. ALL CONCRETE SHALL BE COMPACTED WITH AN APPROVED INTERNAL VIBRATOR.

15. CONCRETE SHALL BE MOIST CURED FOR 7 DAYS SO THAT THE DESIGN REQUIREMENTS FOR SERVICEABILITY, DURABILITY AND STRENGTH ARE ACHIEVED. EFFECTIVE MOIST CURING MAY BE OBTAINED BY A COMBINATION OF MEANS SUCH AS WET CURING, SEALING WITH PLASTIC SHEETS OR OTHER MEANS APPROVED BY THE ENGINEER. PROPPING AND BACKPROPPING OF FORMWORK, AND STRIPPING OF FORMWORK ARE TO BE IN ACCORDANCE WITH AS 3610 AND AS 3600 UNLESS SPECIFICALLY VARIED BY THE SUPERVISING ENGINEER.

16. PIT WALLS HAVE BEEN DESIGNED FOR EARTH PRESSURES WITH LEVEL BACKFILL CONDITIONS. PITS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS 3735-2001 CONCRETE STRUCTURES FOR RETAINING LIQUIDS.

17. THE PIT STRUCTURE DETAILED HAS BEEN DESIGNED FOR LOAD CLASS D CLASSIFICATION IN ACCORDANCE WITH AS 3996-2006, WITH A NOMINAL WHEEL LOADING OF 8000kg. PIT COVERS AND GRATES SHALL BE OF ADEQUATE CAPACITY TO COMPLY WITH THE REQUIREMENTS OF THIS CLASSIFICATION.

18. AT PENETRATIONS IN SLABS, UNLESS OTHERWISE DETAILED, REINFORCEMENT SHALL NOT BE CUT BUT SHALL BE GATHERED EQUALLY TO EACH SIDE OF PENETRATION AND EXTRA REINFORCEMENT PROVIDED BETWEEN THE PENETRATIONS AS DIRECTED BY THE ENGINEER.

19. ALL RODS IN TRIMMER ROD GROUPS OF THE SAME LENGTH ARE TO HAVE A SPACING OF APPROXIMATELY 75mm CENTRES.

20. PROVIDE STEP-IRONS FOR PITS DEEPER THAN 600mm.

21. LARGER SIZE OR IRREGULAR SHAPED PITS SHALL BE DESIGNED BY AN APPROPRIATELY QUALIFIED AND EXPERIENCED ENGINEER.

22. DEPTH OF PIT SHALL NOT EXCEED 3.5m.

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

NOT TO SCALE

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

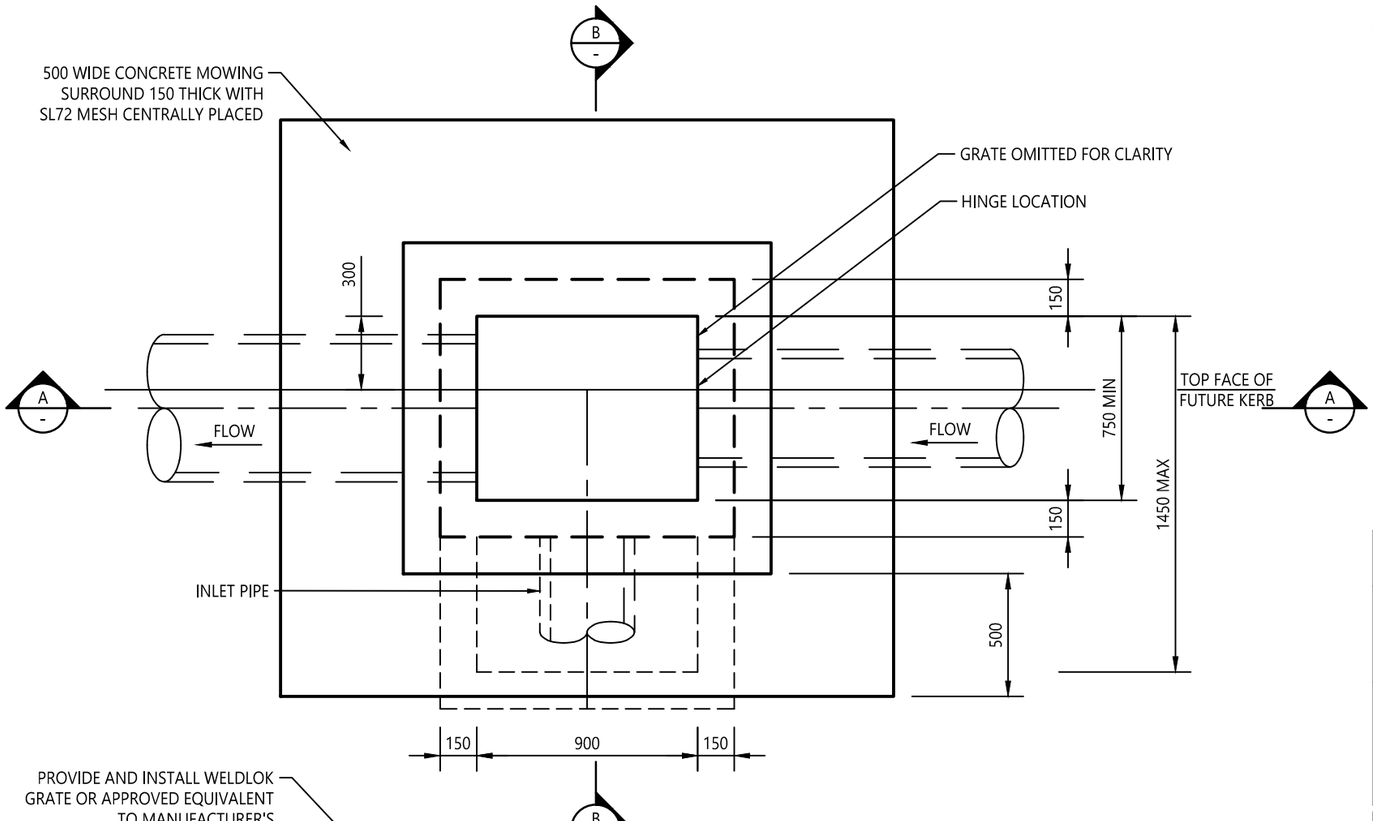
ROADS TRANSPORT DRAINAGE AND WASTE

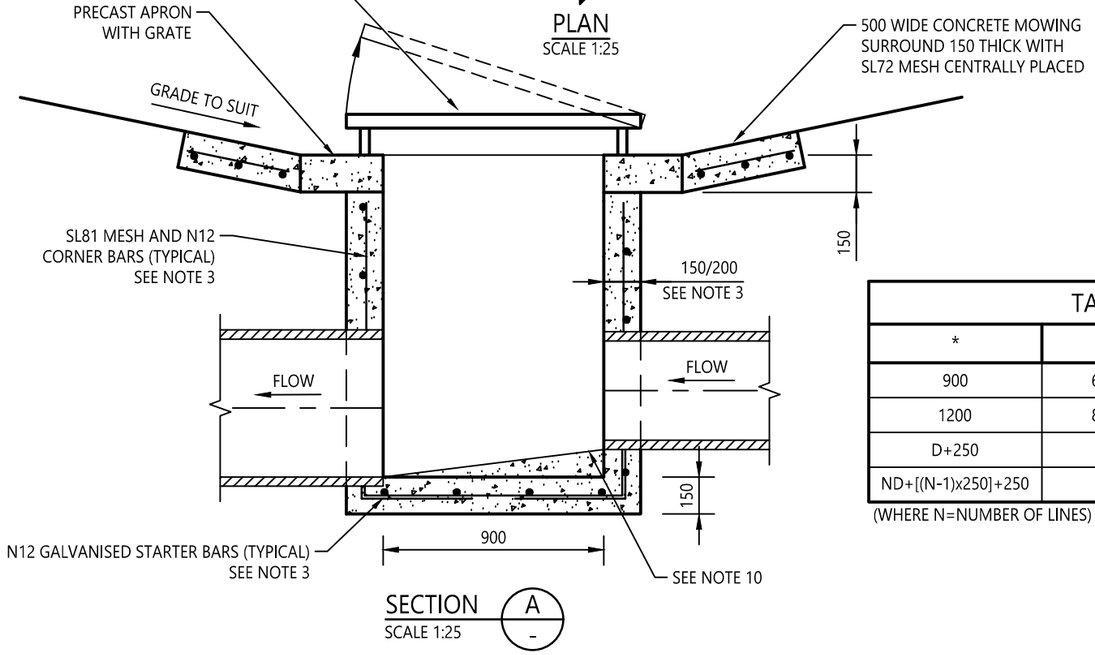
Central Coast Council

STANDARD DRAWING

STORMWATER DRAINAGE SERIES
OVERSIZE GULLY PIT

DRAWING NUMBER	REV
SD0402	-
SHEET 3 OF 3	A3





PLAN
SCALE 1:25

SECTION A
SCALE 1:25

TABLE 1	
*	PIPE DIAMETER RANGE
900	600mm TO 750mm INCLUSIVE
1200	825mm TO 900mm INCLUSIVE
D+250	FOR PIPES > 900mm
ND+[(N-1)x250]+250	FOR MULTIPLE PIPES

(WHERE N=NUMBER OF LINES)

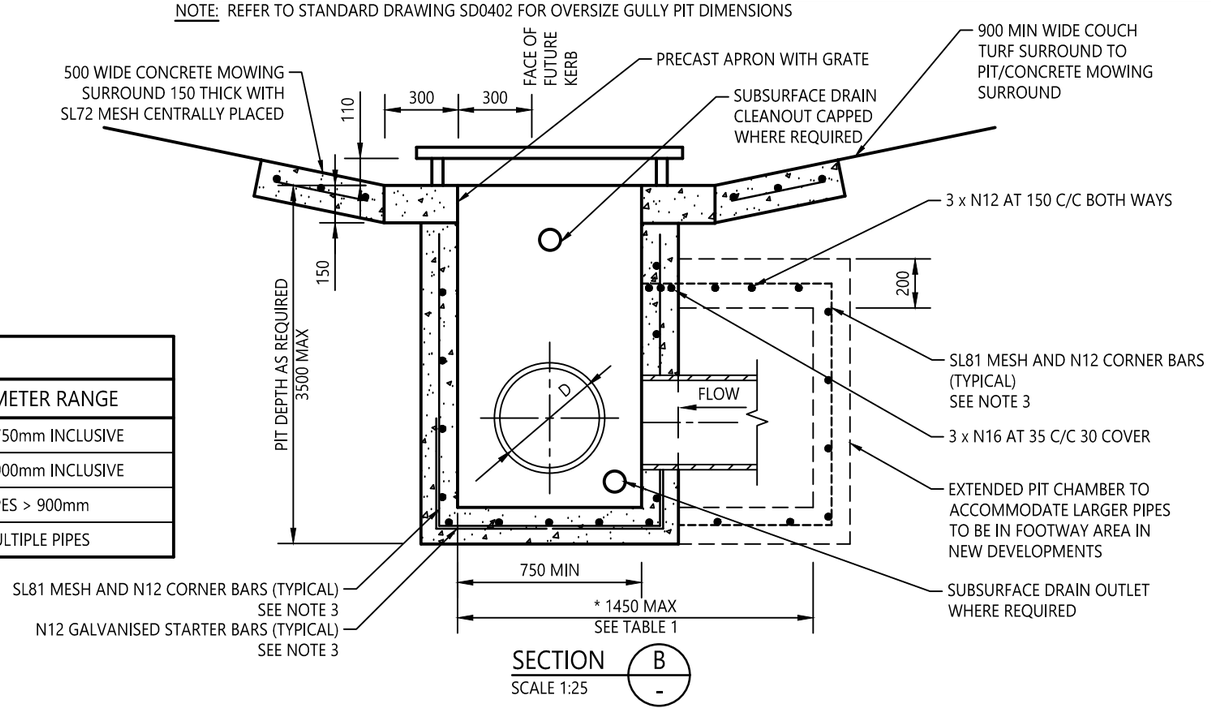
NOTES:

1. REFER TO STANDARD DRAWING SD0402, SHEET 3, FOR SPECIFIC NOTES ON CONCRETE REINFORCEMENT.
2. CUSTOM-MADE PRECAST PITS SHALL BE USED IN THE ROAD RESERVE WHERE PRACTICABLE AND SHALL BE DESIGNED IN ACCORDANCE WITH AS 1597, AS 3600 AND AS 5100. 'KNOCKOUT PITS' SHALL NOT BE USED UNLESS OTHERWISE APPROVED BY COUNCIL'S REPRESENTATIVE.
3. PITS DEEPER THAN 1.5m SHALL BE CONSTRUCTED WITH 200mm THICK REINFORCED CONCRETE WALLS IN ACCORDANCE WITH TABLE 2.
4. DEPTH OF PIT SHALL NOT EXCEED 3.5m.
5. ALL PITS SHOWN ARE STANDARD 900mm LONG OR 1450mm WIDE. REFER TO SD0402 FOR FURTHER DETAILS ON OVERSIZE PITS > 900mm LONG OR > 1450mm WIDE.
6. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM UNLESS OTHERWISE SPECIFIED.
7. BCP PLD-RSG99 PRECAST APRON WITH GRATE, WELDLOK SPG99 GRATE OR APPROVED EQUIVALENT TO BE USED. GRATE AND FRAME TO BE HOT-DIP GALVANISED 80-85 MICRONS THICK. ALL GRATES TO BE PROVIDED WITH LOCKING CLIP.
8. PROVIDE STEP-IRONS FOR PITS DEEPER THAN 600mm.
9. NO RENDERING PERMITTED IN STRUCTURAL COMPONENTS.
10. ALL PITS SHALL BE STREAMLINED AND BENCHED WHERE REQUIRED.
11. 100ø SUBSURFACE DRAINAGE PIPE 3m MIN LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES.
12. PROVIDE TWO MINIMUM WHITE REFLECTORISED GUIDE POSTS EITHER SIDE OF PIT, WHERE REQUIRED.

TABLE 2 - CONCRETE THICKNESS AND REINFORCEMENT DETAILS

INTERNAL DEPTH (m)	BASE THICKNESS (mm)	WALL THICKNESS (mm)	MAX LENGTH (mm)	MAX WIDTH (mm)	REINFORCEMENT SEE NOTE BELOW	
					BASE	WALLS
≤ 1.5	150	150	900	1450	UNREINFORCED	
1.5 - 3.5	150	200			SL81 MESH - N12 500 x 500 GALVANISED STARTER BARS AT 200 C/C AND N12 500 x 500 CORNER BARS AT 400 C/C	
> 3.5	STRUCTURAL ENGINEERING DESIGN REQUIRED					

NOTE: REFER TO STANDARD DRAWING SD0402 FOR OVERSIZE GULLY PIT DIMENSIONS



SECTION B
SCALE 1:25

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 250 500 750 1000 1250
1:25

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STORMWATER DRAINAGE SERIES
RAISED GRATED GULLY PIT

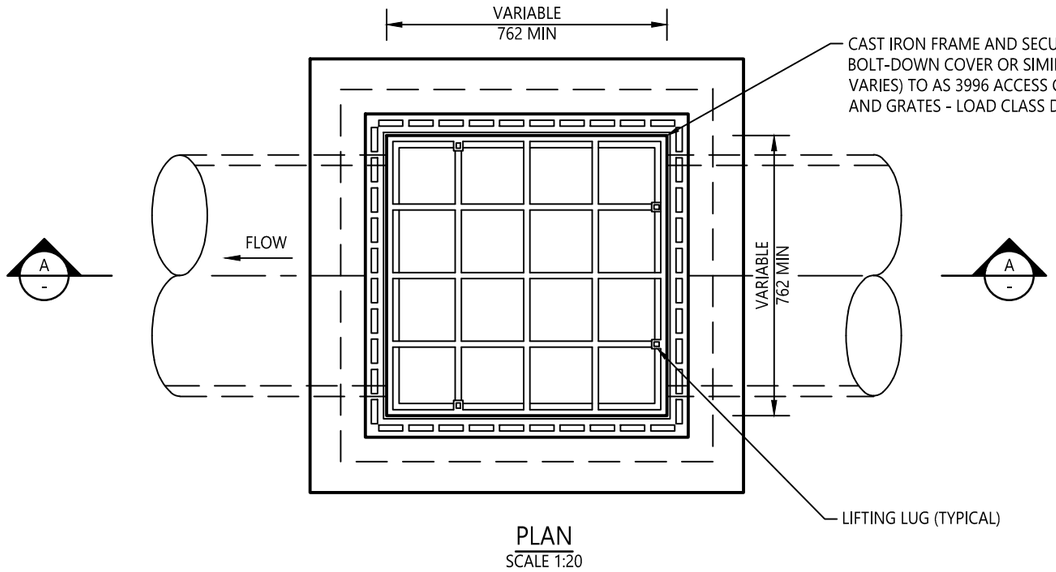
STANDARD DRAWING

DRAWING NUMBER	REV
SD0403	-
SHEET 1 OF 1	A3

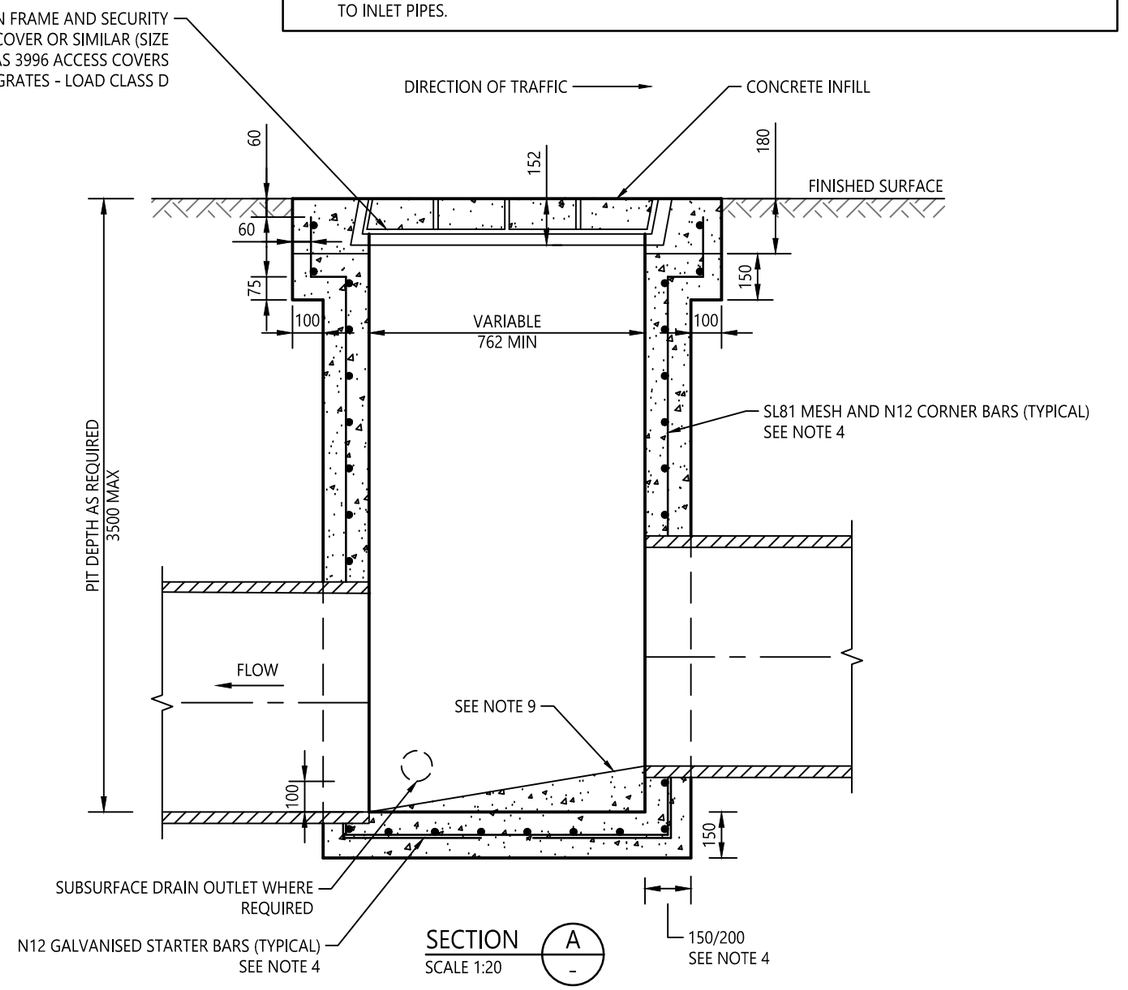
TABLE 1 - CONCRETE THICKNESS AND REINFORCEMENT DETAILS						
INTERNAL DEPTH (m)	BASE THICKNESS (mm)	WALL THICKNESS (mm)	MAX LENGTH (mm)	MAX WIDTH (mm)	REINFORCEMENT SEE NOTES 1 AND 2 BELOW	
					BASE	WALLS
≤ 1.5	150	150	900	1450	UNREINFORCED	
1.5 - 3.5	150	200			SL81 MESH - N12 500 x 500 GALVANISED STARTER BARS AT 200 C/C AND N12 500 x 500 CORNER BARS AT 400 C/C	
> 3.5	STRUCTURAL ENGINEERING DESIGN REQUIRED					

NOTES:
1. REFER TO STANDARD DRAWING SD0402 FOR OVERSIZE GULLY PIT DIMENSIONS
2. PIT WALLS AND BASE ON STATE ROADS AND B-DOUBLE ROUTES SHALL BE REINFORCED WITH RL1218 MESH - REFER TO TfNSW STANDARD DRAWING R0220 SERIES

NOTES:
1. REFER TO STANDARD DRAWING SD0402, SHEET 3, FOR SPECIFIC NOTES ON CONCRETE REINFORCEMENT.
2. CUSTOM-MADE PRECAST PITS SHALL BE USED IN THE ROAD RESERVE WHERE PRACTICABLE AND SHALL BE DESIGNED IN ACCORDANCE WITH AS 1597, AS 3600 AND AS 5100. 'KNOCKOUT PITS' SHALL NOT BE USED UNLESS OTHERWISE APPROVED BY COUNCIL'S REPRESENTATIVE.
3. CAST IRON FRAME AND COVER SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.
4. PITS DEEPER THAN 1.5m SHALL BE CONSTRUCTED WITH 200mm THICK REINFORCED CONCRETE WALLS IN ACCORDANCE WITH TABLE 1.
5. DEPTH OF PIT SHALL NOT EXCEED 3.5m.
6. PROVIDE STEP-IRONS FOR PITS DEEPER THAN 600mm.
7. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM UNLESS OTHERWISE SPECIFIED.
8. NO RENDERING PERMITTED IN STRUCTURAL COMPONENTS.
9. ALL PITS SHALL BE STREAMLINED AND BENCHED WHERE REQUIRED.
10. 100ϕ SUBSURFACE DRAINAGE PIPE 3m MIN LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES.



PLAN
SCALE 1:20



SECTION A-A
SCALE 1:20

CAST IRON FRAME AND COVER SIZE	
SINGLE	DOUBLE
762 x 762	762 x 1295
914 x 914	762 x 1600
-	914 x 1295
-	914 x 1905

MINIMUM PIT SIZES	
DEPTH	MIN SIZE
0-1200	762 x 762
1200-2400	762 x 1295
> 2400	762 x 1600

JUNCTION BOX WITH CAST IRON FRAME AND COVER

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000
1:20
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

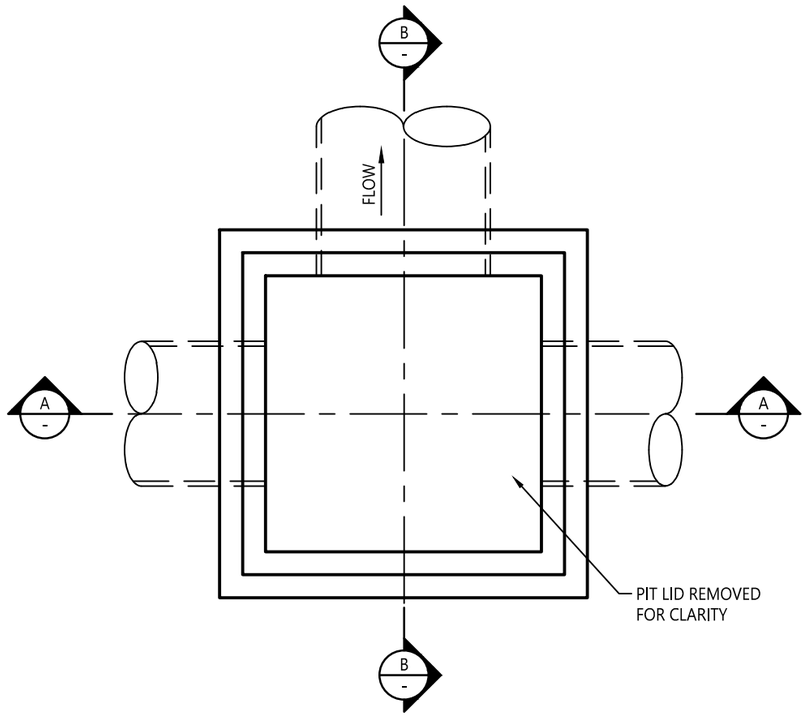
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STORMWATER DRAINAGE SERIES
JUNCTION BOX

STANDARD DRAWING

DRAWING NUMBER	REV
SD0404	-
SHEET 1 OF 2	A3



PLAN
SCALE 1:20

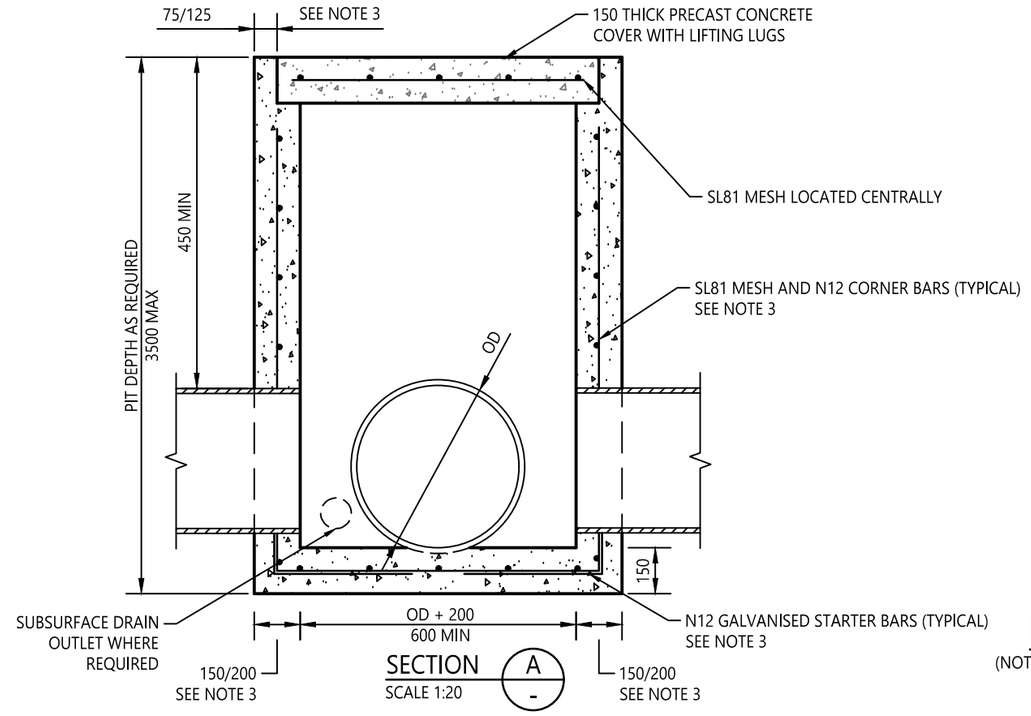
NOTES:

1. REFER TO STANDARD DRAWING SD0402, SHEET 3, FOR SPECIFIC NOTES ON CONCRETE REINFORCEMENT.
2. CUSTOM-MADE PRECAST PITS SHALL BE USED IN THE ROAD RESERVE WHERE PRACTICABLE AND SHALL BE DESIGNED IN ACCORDANCE WITH AS 1597, AS 3600 AND AS 5100. 'KNOCKOUT PITS' SHALL NOT BE USED UNLESS OTHERWISE APPROVED BY COUNCIL'S REPRESENTATIVE.
3. PITS DEEPER THAN 1.5m SHALL BE CONSTRUCTED WITH 200mm THICK REINFORCED CONCRETE WALLS IN ACCORDANCE WITH TABLE 2.
4. DEPTH OF PIT SHALL NOT EXCEED 3.5m.
5. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM UNLESS OTHERWISE SPECIFIED.
6. PROVIDE STEP-IRONS FOR PITS DEEPER THAN 600mm UNLESS OTHERWISE ADVISED BY COUNCIL'S REPRESENTATIVE.
7. ALL PITS SHALL BE STREAMLINED AND BENCHED WHERE REQUIRED. NO RENDERING PERMITTED IN STRUCTURAL COMPONENTS.
8. 100ø SUBSURFACE DRAINAGE PIPE 3m MIN LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES.

TABLE 2 - CONCRETE THICKNESS AND REINFORCEMENT DETAILS

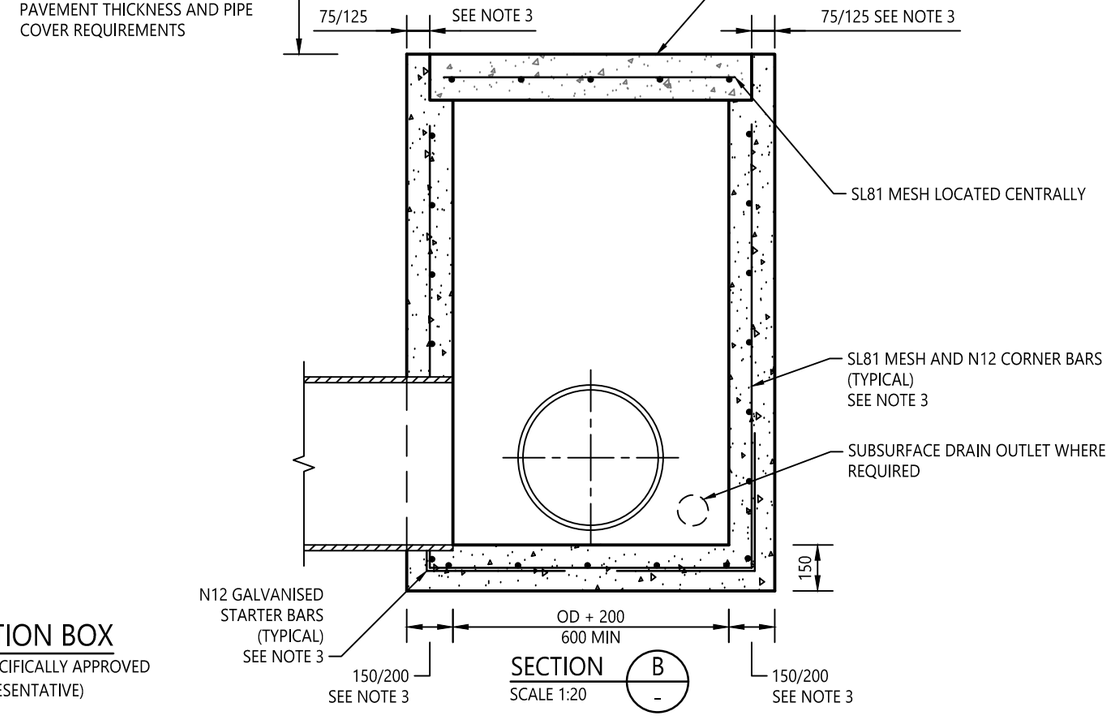
INTERNAL DEPTH (m)	BASE THICKNESS (mm)	WALL THICKNESS (mm)	MAX LENGTH (mm)	MAX WIDTH (mm)	REINFORCEMENT SEE NOTES 1 AND 2 BELOW	
					BASE	WALLS
≤ 1.5	150	150	900	1450	UNREINFORCED	
1.5 - 3.5	150	200			SL81 MESH - N12 500 x 500 GALVANISED STARTER BARS AT 200 C/C AND N12 500 x 500 CORNER BARS AT 400 C/C	
> 3.5	STRUCTURAL ENGINEERING DESIGN REQUIRED					

NOTES:
1. REFER TO STANDARD DRAWING SD0402 FOR OVERSIZE GULLY PIT DIMENSIONS
2. PIT WALLS AND BASE ON STATE ROADS AND B-DOUBLE ROUTES SHALL BE REINFORCED WITH RL1218 MESH - REFER TO TfNSW STANDARD DRAWING R0220 SERIES



BURIED JUNCTION BOX

(NOT PERMITTED UNLESS SPECIFICALLY APPROVED BY COUNCIL'S REPRESENTATIVE)



REV	AMENDMENT	DATE	DRAWN	APRVD	SCALE ON ORIGINAL A3 SIZE DRAWING: 0 200 400 600 800 1000 — 1:20	ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN	DRAWN C SHEPPEARD; CHECKED M BAMBER; DATE 28/4/20; UNIT MANAGER APPROVAL	ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

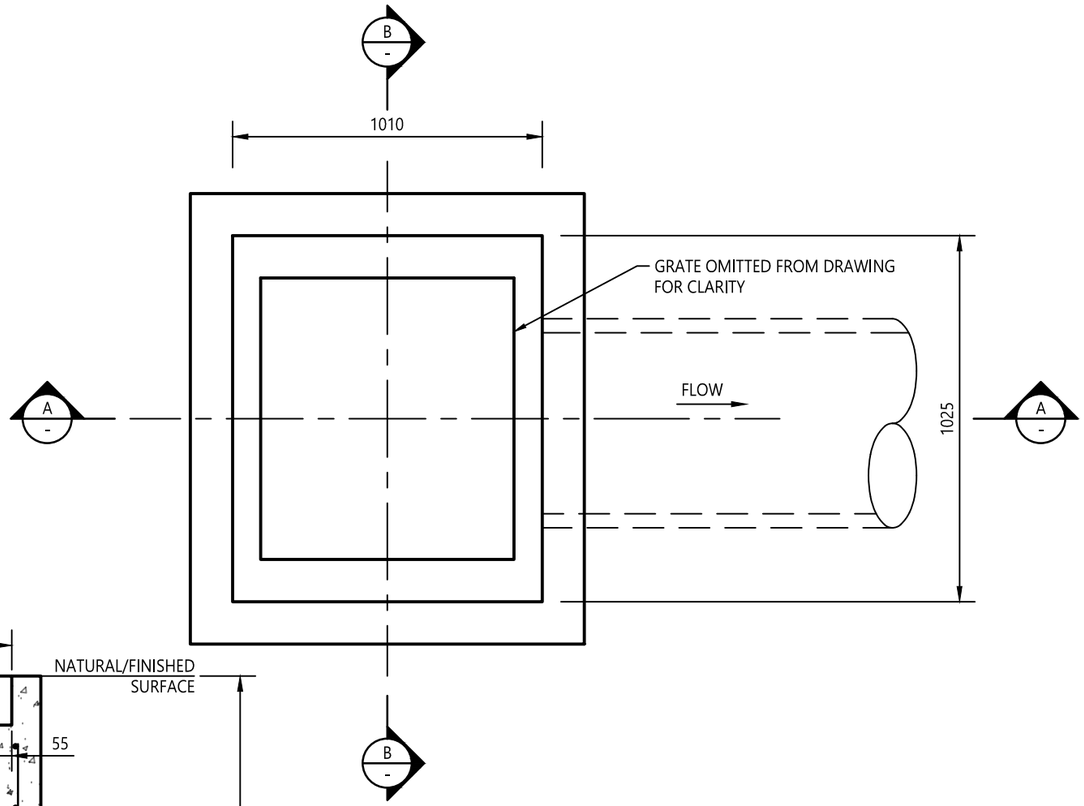
Central Coast Council

STANDARD DRAWING

STORMWATER DRAINAGE SERIES
JUNCTION BOX

DRAWING NUMBER SD0404 | REV -

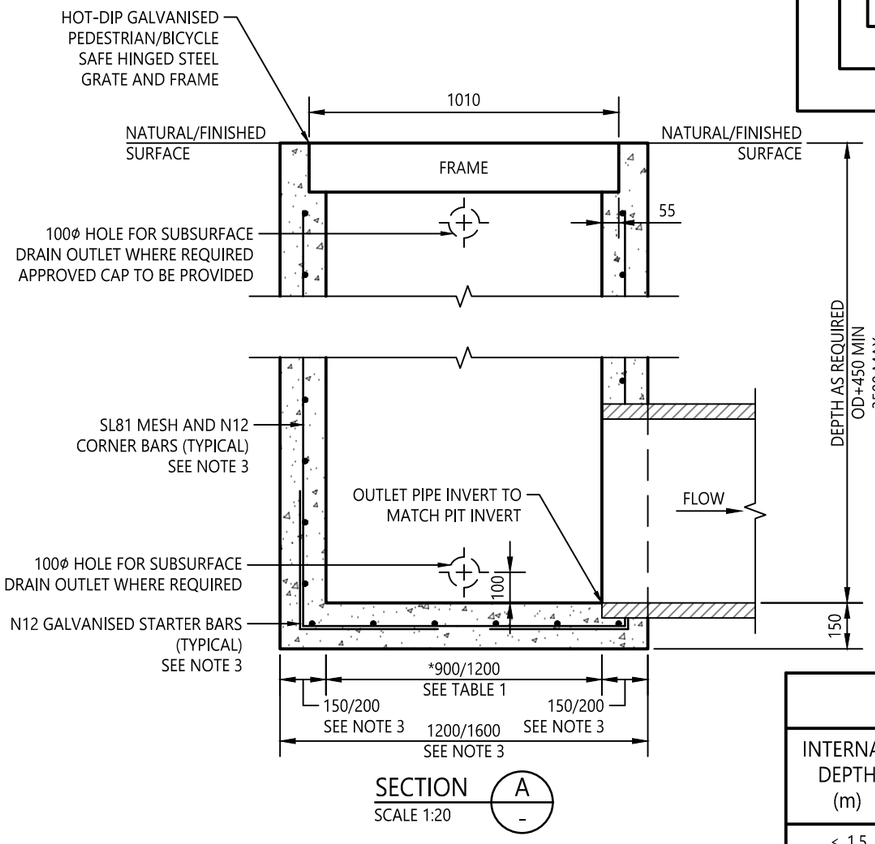
SHEET 2 OF 2 | A3



PLAN
SCALE 1:20

NOTES:

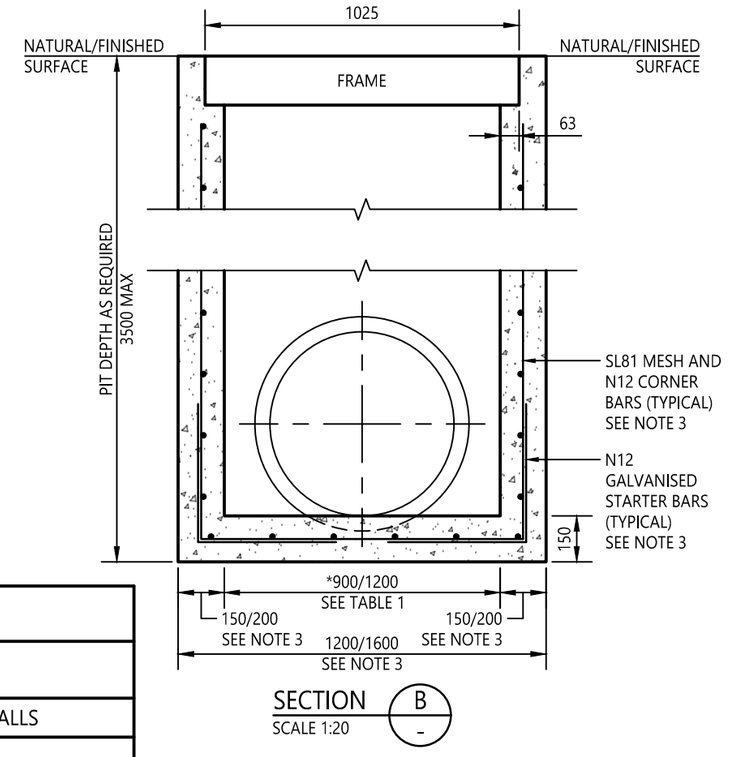
1. REFER TO STANDARD DRAWING SD0402, SHEET 3, FOR SPECIFIC NOTES ON CONCRETE REINFORCEMENT.
2. CUSTOM-MADE PRECAST PITS SHALL BE USED IN THE ROAD RESERVE WHERE PRACTICABLE AND SHALL BE DESIGNED IN ACCORDANCE WITH AS 1597, AS 3600 AND AS 5100. 'KNOCKOUT PITS' SHALL NOT BE USED UNLESS OTHERWISE APPROVED BY COUNCIL'S REPRESENTATIVE.
3. PITS DEEPER THAN 1.5m SHALL BE CONSTRUCTED WITH 200mm THICK REINFORCED CONCRETE WALLS IN ACCORDANCE WITH TABLE 2.
4. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM UNLESS OTHERWISE SPECIFIED.
5. GRATE AND FRAME SHALL BE WELDLOK GRATE HPG 9090D OR EQUIVALENT.
6. PROVIDE STEP-IRONS FOR PITS DEEPER THAN 600mm.
7. ALL EXPOSED EDGES SHALL BE ROUNDED WITH 20mm RADIUS.
8. NO RENDERING PERMITTED IN STRUCTURAL COMPONENTS.
9. ALL PITS SHALL BE STREAMLINED AND BENCHED WHERE REQUIRED.
10. 100ø SUBSURFACE DRAINAGE PIPE 3m MIN LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES.
11. PROVIDE 900mm MINIMUM TURF SURROUND AND SHAPE ADJACENT AREAS TO ASSIST WATER COLLECTION.



SECTION A
SCALE 1:20

TABLE 1	
*	PIPE DIAMETER RANGE
900	600mm TO 750mm INCLUSIVE
1200	825mm TO 900mm INCLUSIVE

(WHERE N=NUMBER OF LINES)



SECTION B
SCALE 1:20

TABLE 2 - CONCRETE THICKNESS AND REINFORCEMENT DETAILS						
INTERNAL DEPTH (m)	BASE THICKNESS (mm)	WALL THICKNESS (mm)	MAX LENGTH (mm)	MAX WIDTH (mm)	REINFORCEMENT SEE NOTE BELOW	
					BASE	WALLS
≤ 1.5	150	150	900	1450	UNREINFORCED	
1.5 - 3.5	150	200			SL81 MESH - N12 500 x 500 GALVANISED STARTER BARS AT 200 C/C AND N12 500 x 500 CORNER BARS AT 400 C/C	
> 3.5	STRUCTURAL ENGINEERING DESIGN REQUIRED					

NOTE: REFER TO STANDARD DRAWING SD0402 FOR OVERSIZE GULLY PIT DIMENSIONS

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000

1:20

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

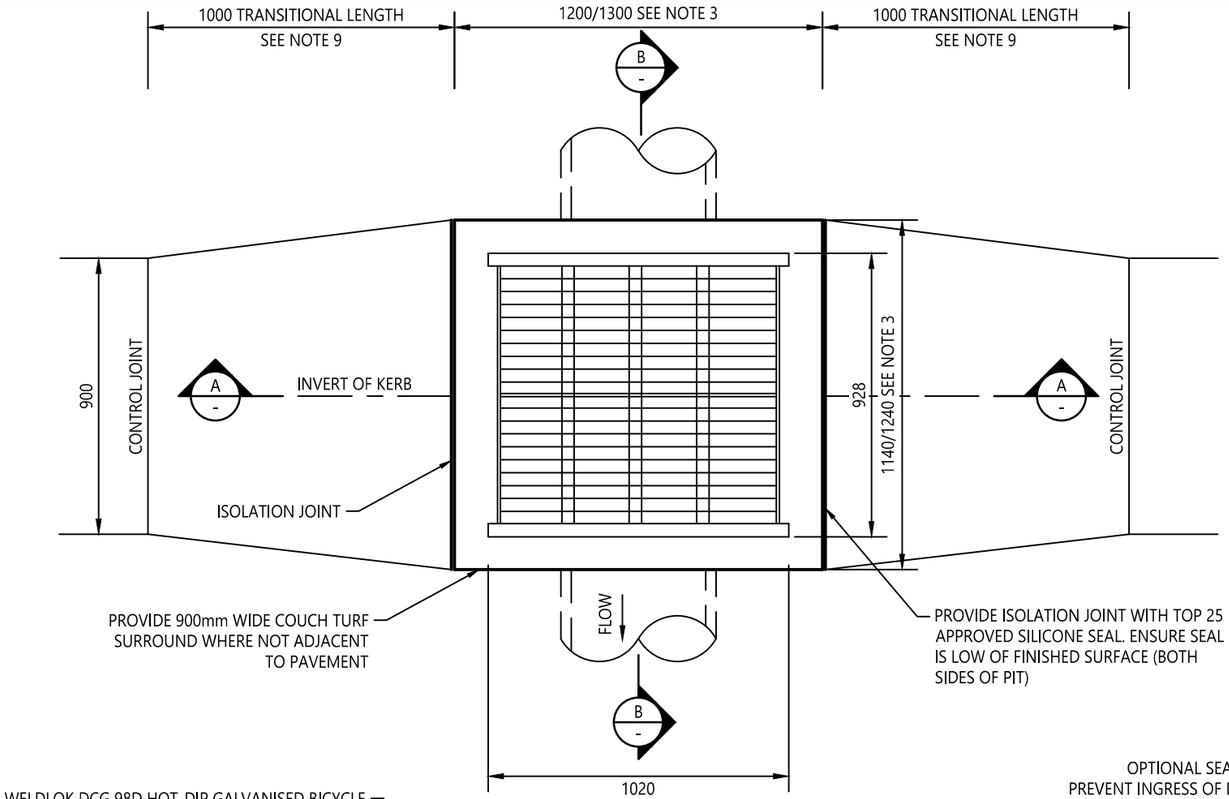
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

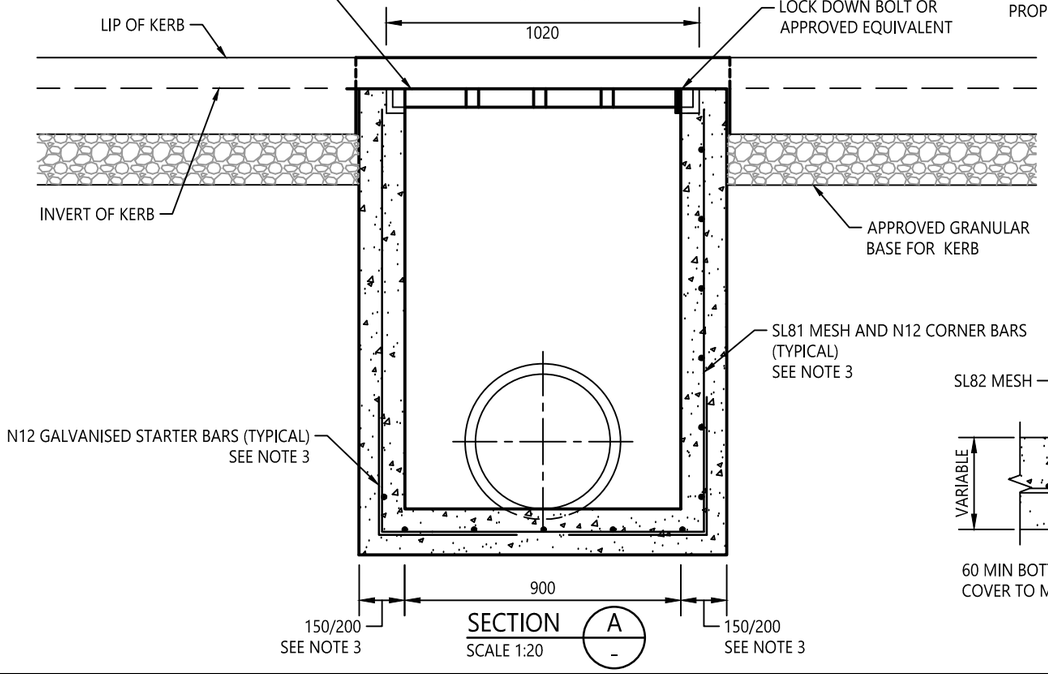
STORMWATER DRAINAGE SERIES
FLUSH GRATED GULLY PIT

STANDARD DRAWING

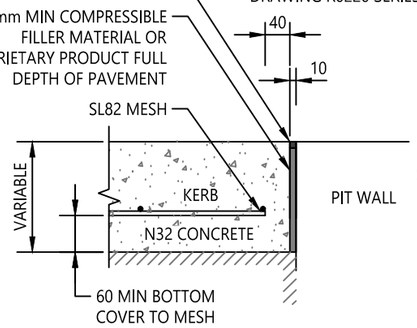
DRAWING NUMBER	REV
SD0405	-
SHEET 1 OF 1	A3



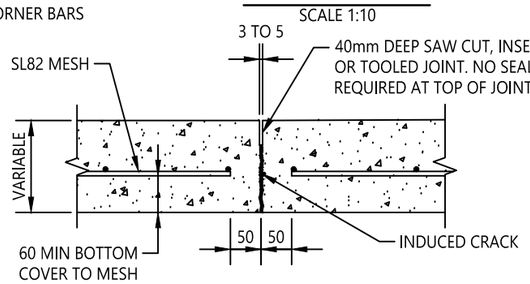
PLAN
SCALE 1:20



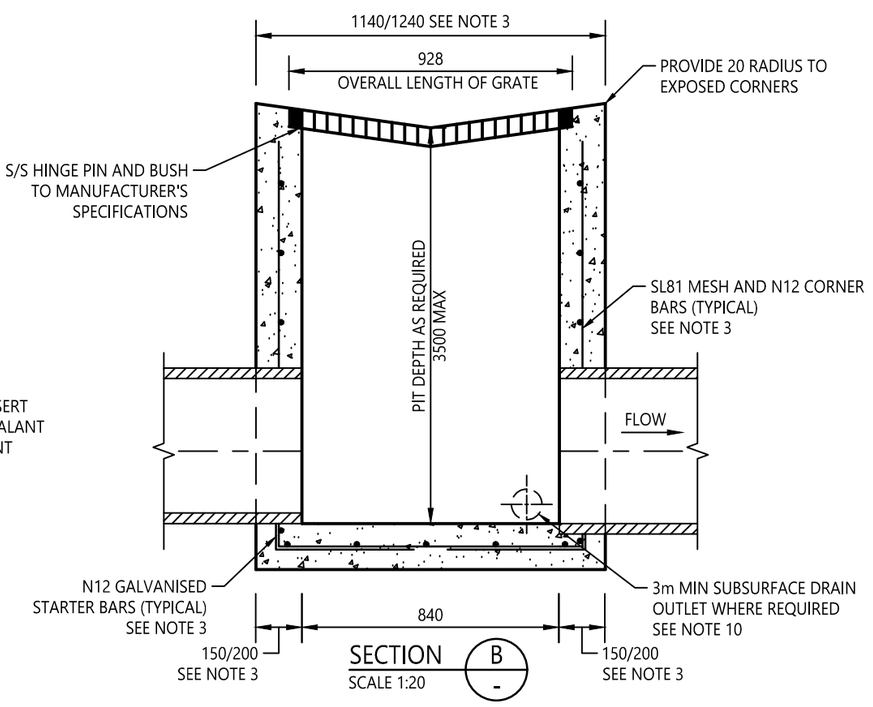
SECTION A
SCALE 1:20



ISOLATION JOINT
SCALE 1:10



CONTROL JOINT
SCALE 1:10



SECTION B
SCALE 1:20

NOTES:

1. REFER TO STANDARD DRAWING SD0402, SHEET 3, FOR SPECIFIC NOTES ON CONCRETE REINFORCEMENT.
2. CUSTOM-MADE PRECAST PITS SHALL BE USED IN THE ROAD RESERVE WHERE PRACTICABLE AND SHALL BE DESIGNED IN ACCORDANCE WITH AS 1597, AS 3600 AND AS 5100. 'KNOCKOUT PITS' SHALL NOT BE USED UNLESS OTHERWISE APPROVED BY COUNCIL'S REPRESENTATIVE.
3. PITS DEEPER THAN 1.5m SHALL BE CONSTRUCTED WITH 200mm THICK REINFORCED CONCRETE WALLS IN ACCORDANCE WITH TABLE 2.
4. DEPTH OF PIT SHALL NOT EXCEED 3.5m.
5. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM UNLESS OTHERWISE SPECIFIED.
6. PROVIDE STEP-IRONS FOR PITS DEEPER THAN 600mm.
7. NO RENDERING PERMITTED IN STRUCTURAL COMPONENTS.
8. ALL PITS SHALL BE STREAMLINED AND BENCHED WHERE REQUIRED.
9. DIFFERENCE IN SHAPE OF KERB TO MATCH SHAPE OF GRATE SURROUND SHALL BE SMOOTHED IN TRANSITIONAL LENGTH.
10. 100ø SUBSURFACE DRAINAGE PIPE 3m MIN LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES.

TABLE 2 - CONCRETE THICKNESS AND REINFORCEMENT DETAILS

INTERNAL DEPTH (m)	BASE THICKNESS (mm)	WALL THICKNESS (mm)	MAX LENGTH (mm)	MAX WIDTH (mm)	REINFORCEMENT SEE NOTES 1 AND 2 BELOW	
					BASE	WALLS
≤ 1.5	150	150	900	1450	UNREINFORCED	
1.5 - 3.5	150	200			SL81 MESH - N12 500 x 500 GALVANISED STARTER BARS AT 200 C/C AND N12 500 x 500 CORNER BARS AT 400 C/C	
> 3.5	STRUCTURAL ENGINEERING DESIGN REQUIRED					

NOTES:
1. REFER TO STANDARD DRAWING SD0402 FOR OVERSIZE GULLY PIT DIMENSIONS
2. PIT WALLS AND BASE ON STATE ROADS AND B-DOUBLE ROUTES SHALL BE REINFORCED WITH RL1218 MESH - REFER TO TfNSW STANDARD DRAWING R0220 SERIES

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 100 200 300 400 500 1:10
0 200 400 600 800 1000 1:20
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

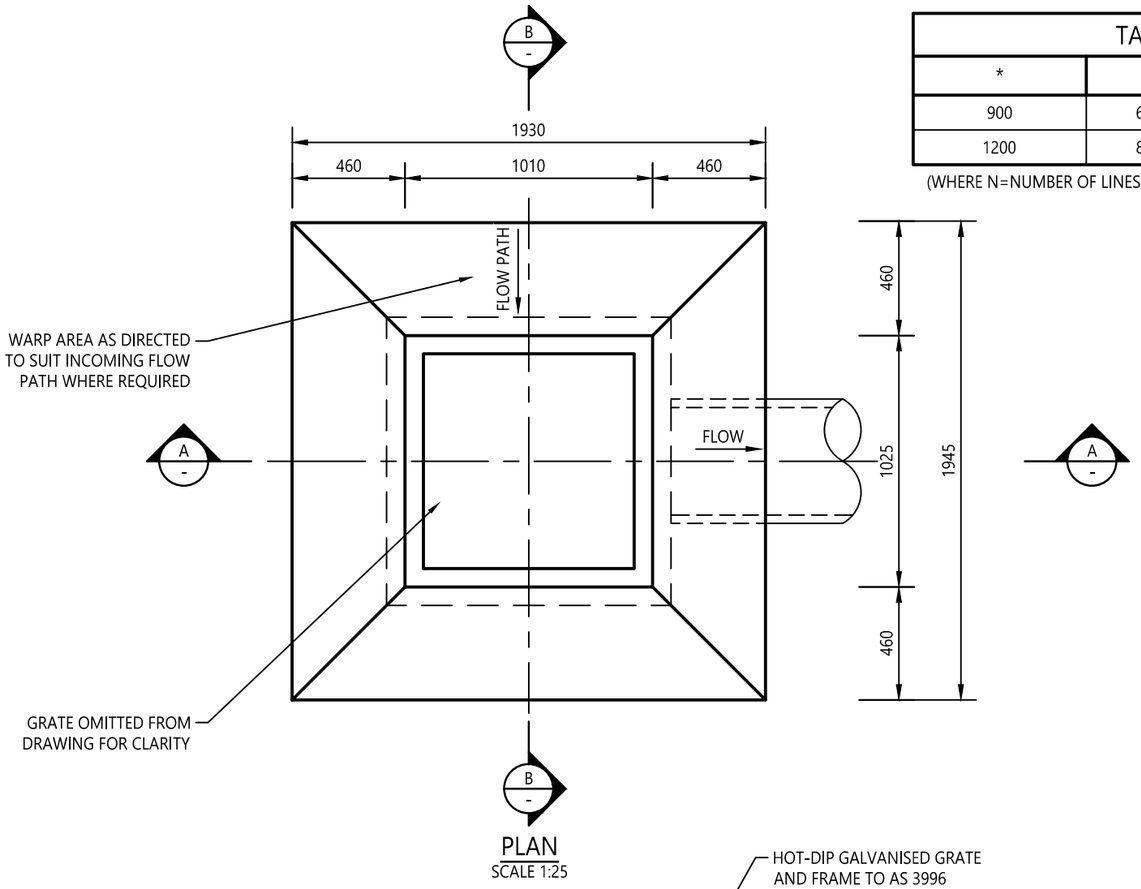
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

STORMWATER DRAINAGE SERIES
FLUSH GRATED GULLY PIT FOR SB KERB

DRAWING NUMBER	REV
SD0406	-
SHEET 1 OF 1	A3



PLAN
SCALE 1:25

TABLE 1	
*	PIPE DIAMETER RANGE
900	600mm TO 750mm INCLUSIVE
1200	825mm TO 900mm INCLUSIVE

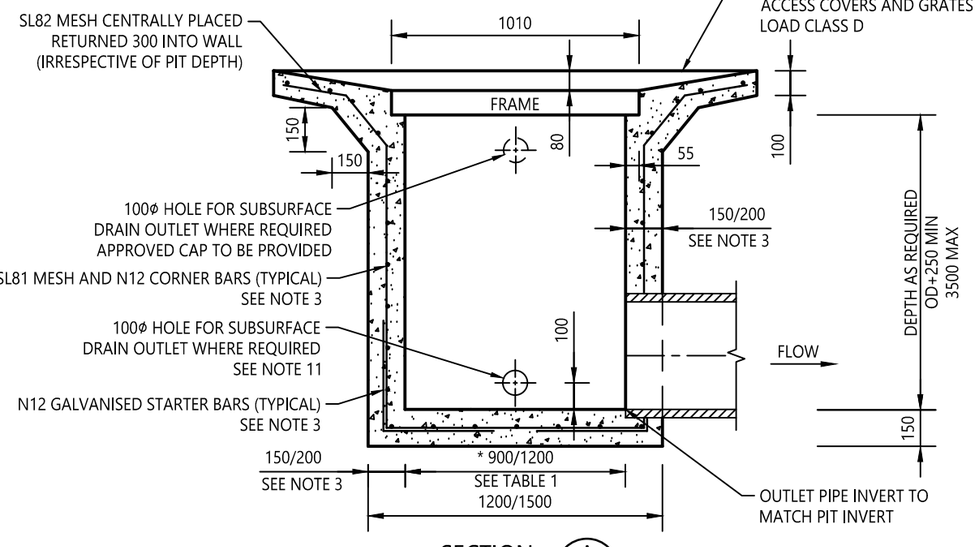
(WHERE N=NUMBER OF LINES)

NOTES:

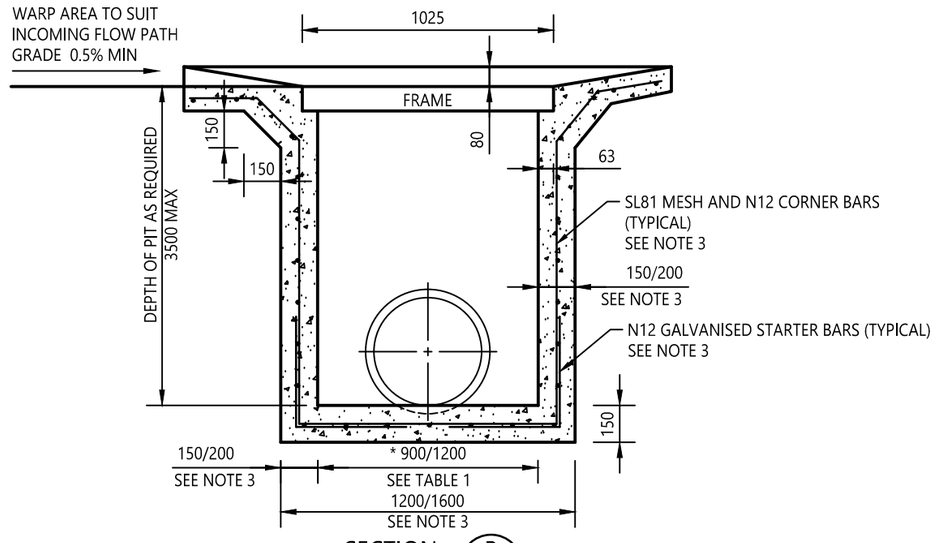
1. REFER TO STANDARD DRAWING SD0402, SHEET 3, FOR SPECIFIC NOTES ON CONCRETE REINFORCEMENT.
2. CUSTOM-MADE PRECAST PITS SHALL BE USED IN THE ROAD RESERVE WHERE PRACTICABLE AND SHALL BE DESIGNED IN ACCORDANCE WITH AS 1597, AS 3600 AND AS 5100. 'KNOCKOUT PITS' SHALL NOT BE USED UNLESS OTHERWISE APPROVED BY COUNCIL'S REPRESENTATIVE.
3. PITS DEEPER THAN 1.5m SHALL BE CONSTRUCTED WITH 200mm THICK REINFORCED CONCRETE WALLS IN ACCORDANCE WITH TABLE 2.
4. DEPTH OF PIT SHALL NOT EXCEED 3.5m.
5. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM UNLESS OTHERWISE SPECIFIED.
6. GRATE AND FRAME SHALL BE LOCKABLE WELDLOK GRATE HPG 9090D OR EQUIVALENT.
7. PROVIDE STEP-IRONS FOR PITS DEEPER THAN 600mm.
8. ALL EXPOSED EDGES SHALL BE ROUNDED WITH 20mm RADIUS.
9. NO RENDERING PERMITTED IN STRUCTURAL COMPONENTS.
10. ALL PITS SHALL BE STREAMLINED AND BENCHED WHERE REQUIRED.
11. 100ø SUBSURFACE DRAINAGE PIPE 3m MIN LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES.
12. PROVIDE 900mm MINIMUM TURF SURROUND AND SHAPE ADJACENT AREAS TO ASSIST WATER COLLECTION.
13. SHAPE ADJACENT AREAS TO ASSIST WATER COLLECTION.

TABLE 2 - CONCRETE THICKNESS AND REINFORCEMENT DETAILS						
INTERNAL DEPTH (m)	BASE THICKNESS (mm)	WALL THICKNESS (mm)	MAX LENGTH (mm)	MAX WIDTH (mm)	REINFORCEMENT SEE NOTE BELOW	
					BASE	WALLS
≤ 1.5	150	150	900	1450	UNREINFORCED	
1.5 - 3.5	150	200			SL81 MESH - N12 500 x 500 GALVANISED STARTER BARS AT 200 C/C AND N12 500 x 500 CORNER BARS AT 400 C/C	
> 3.5	STRUCTURAL ENGINEERING DESIGN REQUIRED					

NOTES: REFER TO STANDARD DRAWING SD0402 FOR OVERSIZE GULLY PIT DIMENSIONS



SECTION A
SCALE 1:25



SECTION B
SCALE 1:25

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING
0 250 500 750 1000 1250
1:25

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

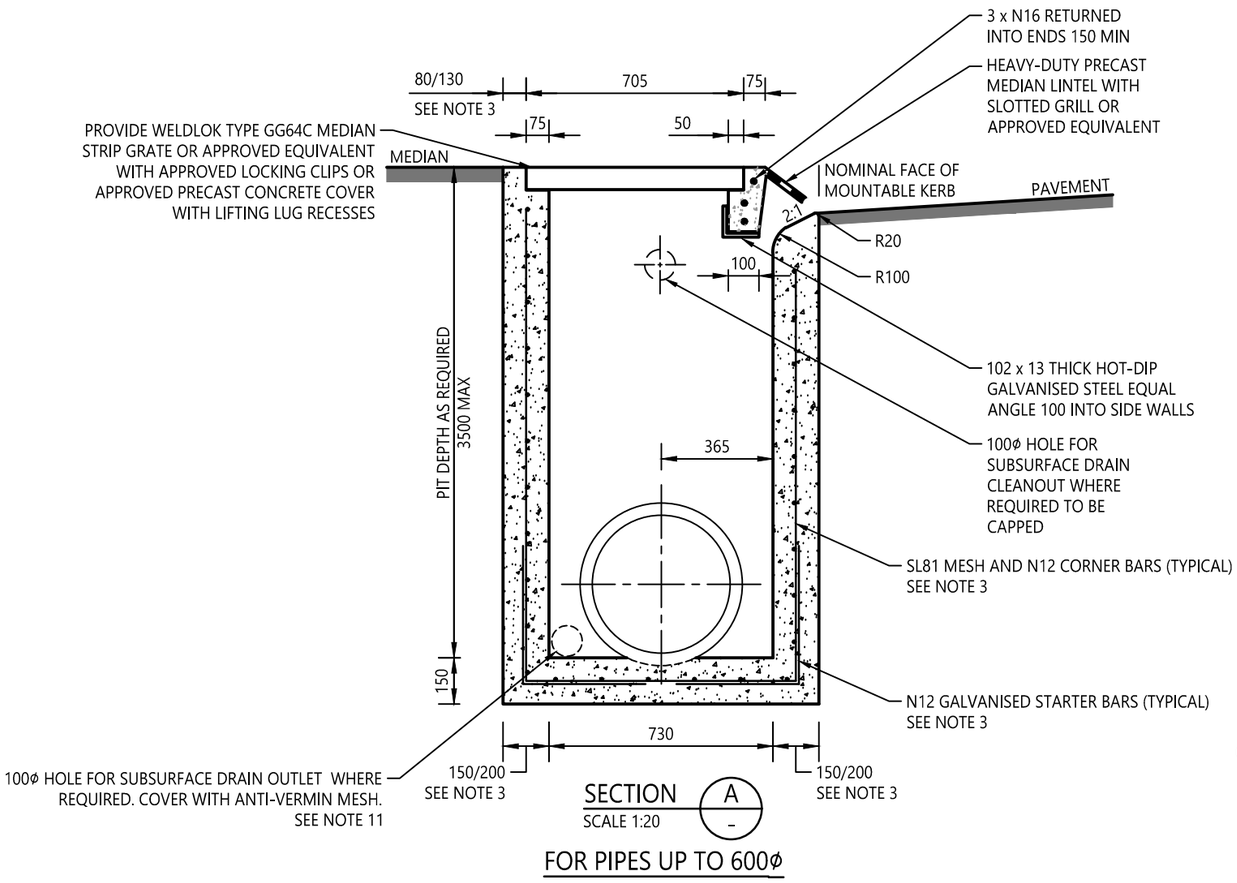
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

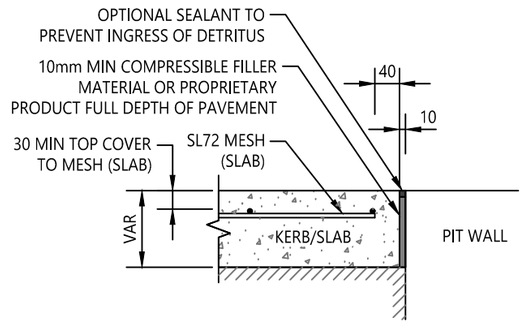
STORMWATER DRAINAGE SERIES
DEPRESSED GRATED GULLY PIT

DRAWING NUMBER	REV
SD0407	-
SHEET 1 OF 1	A3



SECTION A-
SCALE 1:20

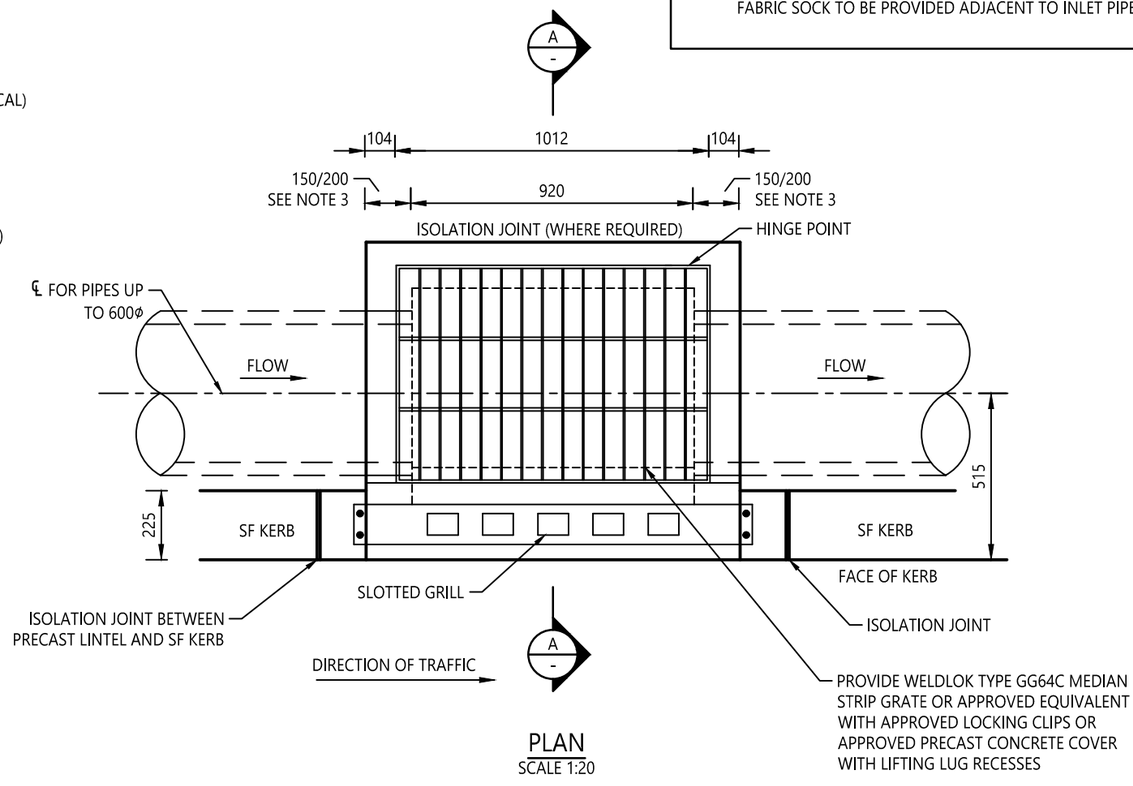
FOR PIPES UP TO 600ø



ISOLATION JOINT
SCALE 1:10

NOTES:

1. REFER TO STANDARD DRAWING SD0402, SHEET 3, FOR SPECIFIC NOTES ON CONCRETE REINFORCEMENT.
2. CUSTOM-MADE PRECAST PITS SHALL BE USED IN THE ROAD RESERVE WHERE PRACTICABLE AND SHALL BE DESIGNED IN ACCORDANCE WITH AS 1597, AS 3600 AND AS 5100. 'KNOCKOUT PITS' SHALL NOT BE USED UNLESS OTHERWISE APPROVED BY COUNCIL'S REPRESENTATIVE.
3. PITS DEEPER THAN 1.5m SHALL BE CONSTRUCTED WITH 200mm THICK REINFORCED CONCRETE WALLS IN ACCORDANCE WITH TABLE 1.
4. DEPTH OF PIT SHALL NOT EXCEED 3.5m.
5. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM UNLESS OTHERWISE SPECIFIED.
6. GRATE AND LINTEL PLATE SHALL BE HOT-DIP GALVANISED.
7. PROVIDE STEP-IRONS FOR PITS DEEPER THAN 600mm.
8. ALL EXPOSED EDGES SHALL BE ROUNDED WITH 20mm RADIUS.
9. NO RENDERING PERMITTED IN STRUCTURAL COMPONENTS.
10. ALL PITS SHALL BE STREAMLINED AND BENCHED WHERE REQUIRED.
11. 100ø SUBSURFACE DRAINAGE PIPE 3m MIN LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES.



PLAN
SCALE 1:20

TABLE 1 - CONCRETE THICKNESS AND REINFORCEMENT DETAILS

INTERNAL DEPTH (m)	BASE THICKNESS (mm)	WALL THICKNESS (mm)	MAX LENGTH (mm)	MAX WIDTH (mm)	REINFORCEMENT SEE NOTES 1 AND 2 BELOW	
					BASE	WALLS
≤ 1.5	150	150	900	1450	UNREINFORCED	
1.5 - 3.5	150	200			SL81 MESH - N12 500 x 500 GALVANISED STARTER BARS AT 200 C/C AND N12 500 x 500 CORNER BARS AT 400 C/C	
> 3.5	STRUCTURAL ENGINEERING DESIGN REQUIRED					

NOTES:
1. REFER TO STANDARD DRAWING SD0402 FOR OVERSIZE GULLY PIT DIMENSIONS
2. PIT WALLS AND BASE ON STATE ROADS AND B-DOUBLE ROUTES SHALL BE REINFORCED WITH RL1218 MESH - REFER TO TfNSW STANDARD DRAWING R0220 SERIES

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 100 200 300 400 500 1:10
0 200 400 600 800 1000 1:20
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

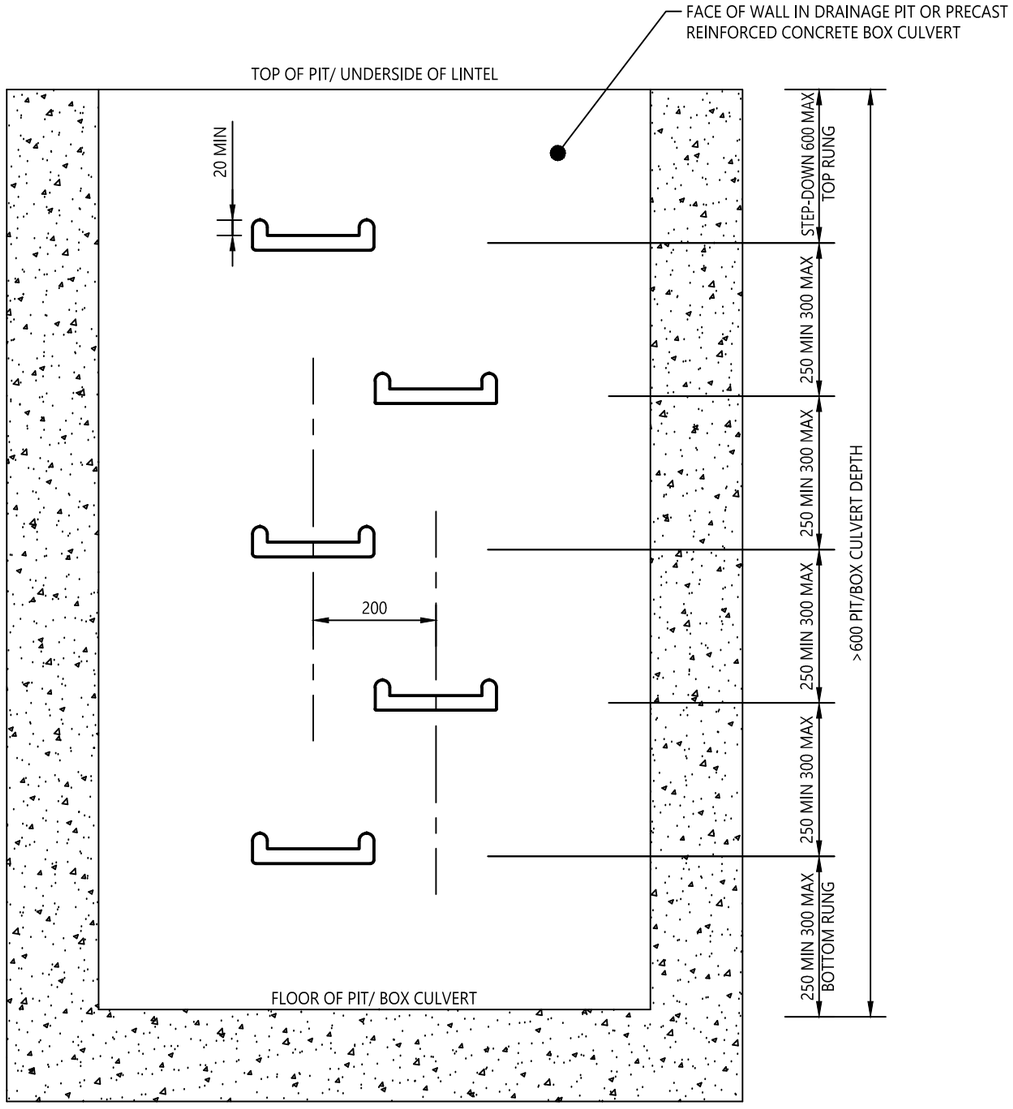
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

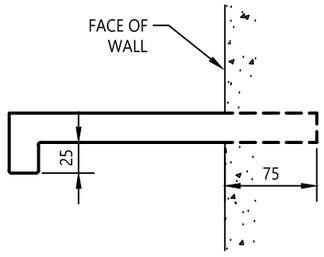
STORMWATER DRAINAGE SERIES
MEDIAN GULLY PIT FOR SF KERB

STANDARD DRAWING

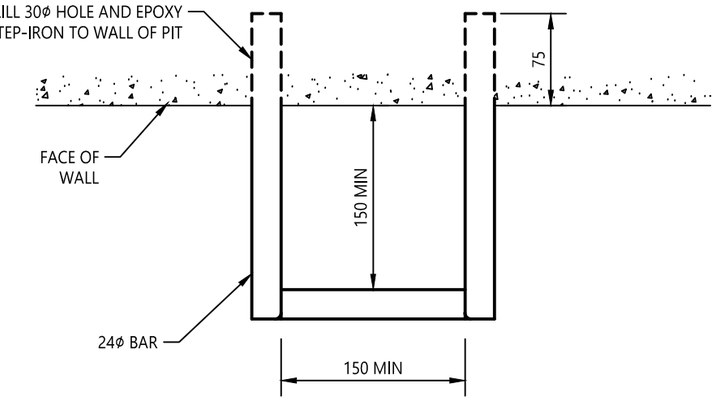
DRAWING NUMBER	REV
SD0408	-
SHEET 1 OF 1	A3



FRONT ELEVATION
SCALE 1:10



SIDE ELEVATION
SCALE 1:5



PLAN
SCALE 1:5

NOTES:

1. INDIVIDUAL-RUNG (STEP-IRON) LADDERS SHALL BE PROVIDED FOR PITS DEEPER THAN 600mm AND WHERE THE VERTICAL RISE DOES NOT EXCEED 6m BETWEEN LANDINGS. LADDERS EXCEEDING 3.5m FALL DISTANCE REQUIRE SOME FORM OF FALL ARREST SYSTEM.
2. PRECAST PITS SHOULD BE SUPPLIED WITH PREFABRICATED INDIVIDUAL RUNG (STEP-IRON) LADDERS INSTALLED.
3. INDIVIDUAL-RUNG (STEP-IRON) LADDERS SHALL COMPLY WITH AS 1657.
4. STEP-IRONS SHALL BE FABRICATED FROM 24mm DEFORMED BAR TO AS/NZS 4761 STEEL REINFORCING MATERIALS AND SHALL COMPLY WITH THE LOAD TESTING AND DEFLECTION REQUIREMENTS OF EN 13101.
5. STEP-IRONS SHALL BE HOT-DIP GALVANISED.
6. PROPRIETARY PLASTIC ENCAPSULATED STEP-IRONS OR EQUIVALENT PRODUCT MAY BE USED WHERE APPROVED BY COUNCIL'S REPRESENTATIVE.
7. STEP-IRONS SHALL BE LOCATED CLEAR OF STORMWATER THROUGH FLOWS AND ON WALLS CLEAR OF PIPES, WHERE PRACTICABLE.
8. ALL BENDS IN STEP-IRONS TO BE FORMED AROUND A <10mm PIN.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 50 100 150 200 250 1:5

0 100 200 300 400 500 1:10

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

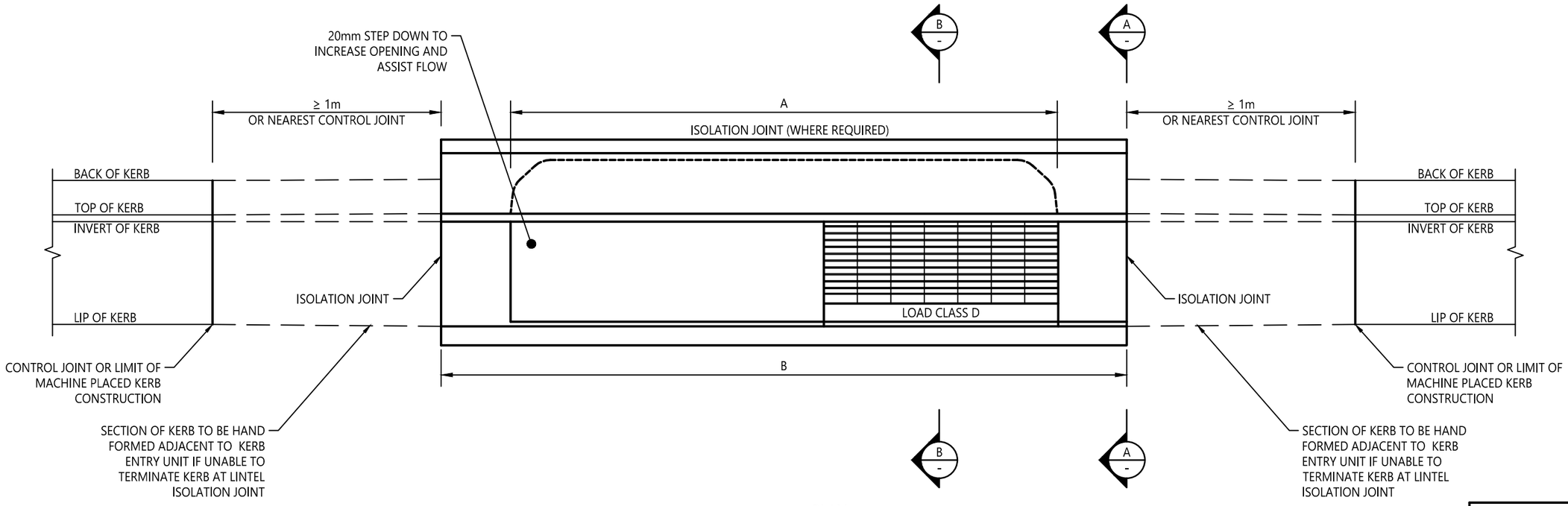
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STORMWATER DRAINAGE SERIES
INDIVIDUAL-RUNG (STEP-IRON)
LADDER FOR DRAINAGE PITS

STANDARD DRAWING

DRAWING NUMBER	REV
SD0409	-
SHEET 1 OF 1	A3

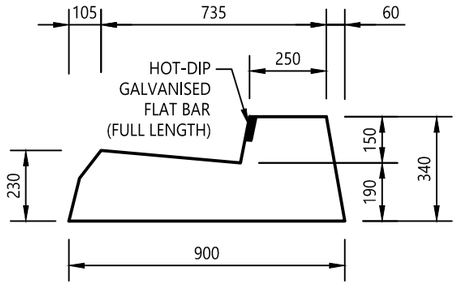


PLAN

INTEGRAL PRECAST KERB ENTRY UNIT

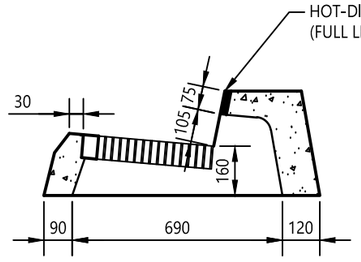
SCALE 1:20

KERB ENTRY UNITS	
OPENING A	OVERALL LENGTH B
1200	1500
1800	2400
2400	3000
3000	3600



END VIEW A

SCALE 1:20



SECTION B

SCALE 1:20

INDEX:

NOTES:

1. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM UNLESS OTHERWISE SPECIFIED.
2. COVER TO REINFORCEMENT SHALL BE 40mm MINIMUM UNLESS OTHERWISE SPECIFIED.
3. EXPOSED SURFACES SHALL BE OFF-STEEL FORM FINISH OR OF HIGH QUALITY STEEL FLOAT FINISH.
4. ALL EXPOSED EDGES SHALL BE ROUNDED WITH A 10mm RADIUS.
5. HOT-DIP GALVANISING SHALL BE IN ACCORDANCE WITH AS 4680.
6. INTEGRAL KERB ENTRY UNIT BASED ON BCP PRECAST PRODUCT DIMENSIONS AND SHALL BE LOAD CLASS D.
7. PRODUCT DIMENSIONS VARY BETWEEN MANUFACTURERS.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000

1:20

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

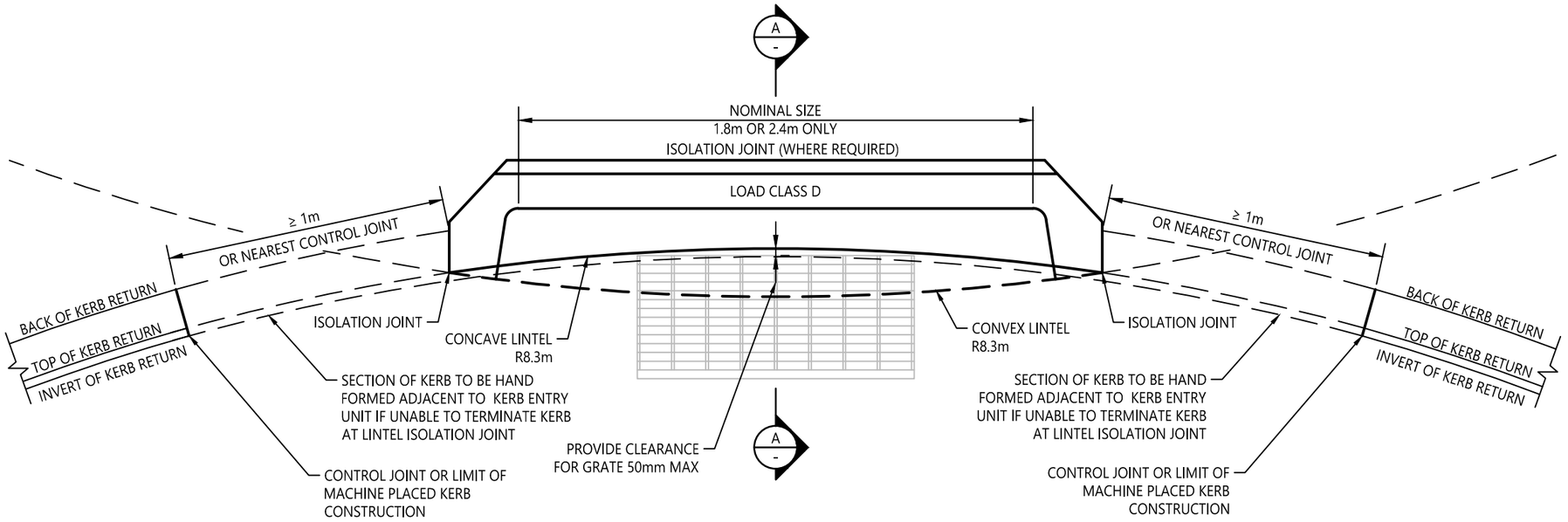
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STORMWATER DRAINAGE SERIES
PRECAST CONCRETE LINTELS

STANDARD DRAWING

DRAWING NUMBER	REV
SD0410	-
SHEET 1 OF 3	A3



PLAN

PRECAST STAND-ALONE CURVED KERB LINTEL UNIT

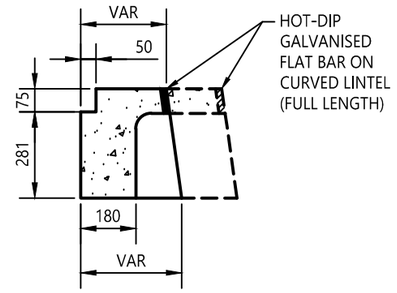
SCALE 1:20

INDEX:

NOTES:

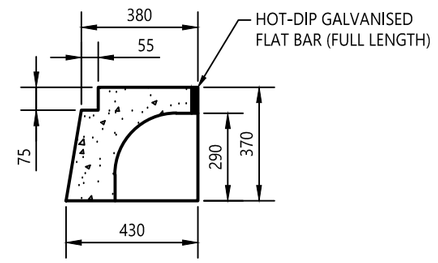
1. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM UNLESS OTHERWISE SPECIFIED.
2. COVER TO REINFORCEMENT SHALL BE 40mm MINIMUM UNLESS OTHERWISE SPECIFIED.
3. EXPOSED SURFACES SHALL BE OFF-STEEL FORM FINISH OR OF HIGH QUALITY STEEL FLOAT FINISH.
4. ALL EXPOSED EDGES SHALL BE ROUNDED WITH A 10mm RADIUS.
5. HOT-DIP GALVANISING SHALL BE IN ACCORDANCE WITH AS 4680.
6. STAND-ALONE LINTEL UNIT BASED ON BCP PRECAST PRODUCT DIMENSIONS AND SHALL BE LOAD CLASS D.
7. CURVED LINTEL UNIT BASED ON ROCLA PRODUCT DIMENSIONS AND SHALL BE LOAD CLASS D.
8. PRODUCT DIMENSIONS VARY BETWEEN MANUFACTURERS.

STAND-ALONE STRAIGHT KERB LINTELS	
OPENING A	OVERALL LENGTH B
900	1500
1200	1800
1740	2400
2500	3000
3000	3600
3600	4200



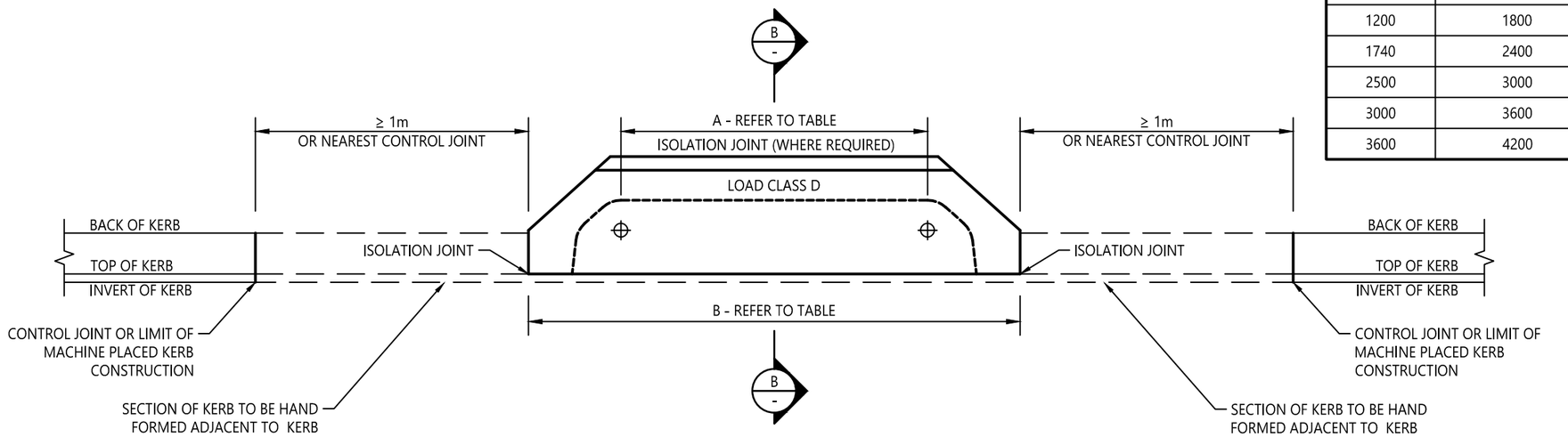
SECTION A - A

SCALE 1:20



SECTION B - B

SCALE 1:20



PLAN

PRECAST STAND-ALONE STRAIGHT KERB LINTEL UNIT

SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000

1:20

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

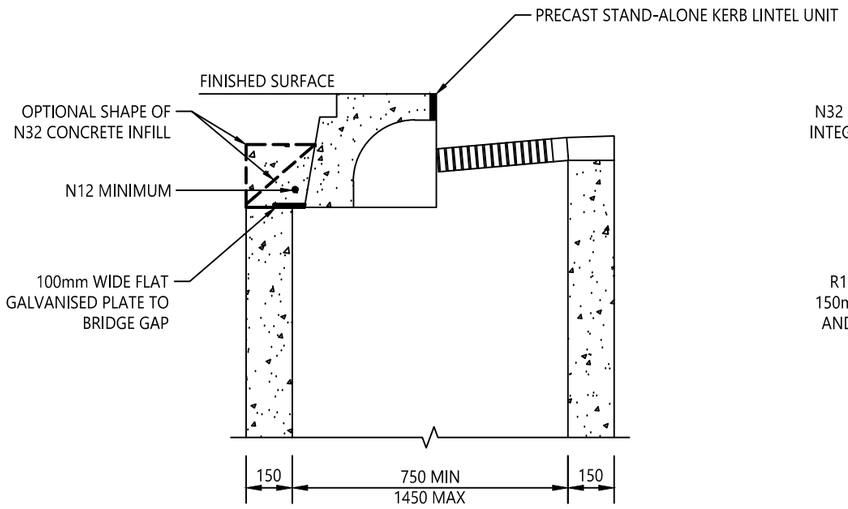
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STORMWATER DRAINAGE SERIES
PRECAST CONCRETE LINTELS

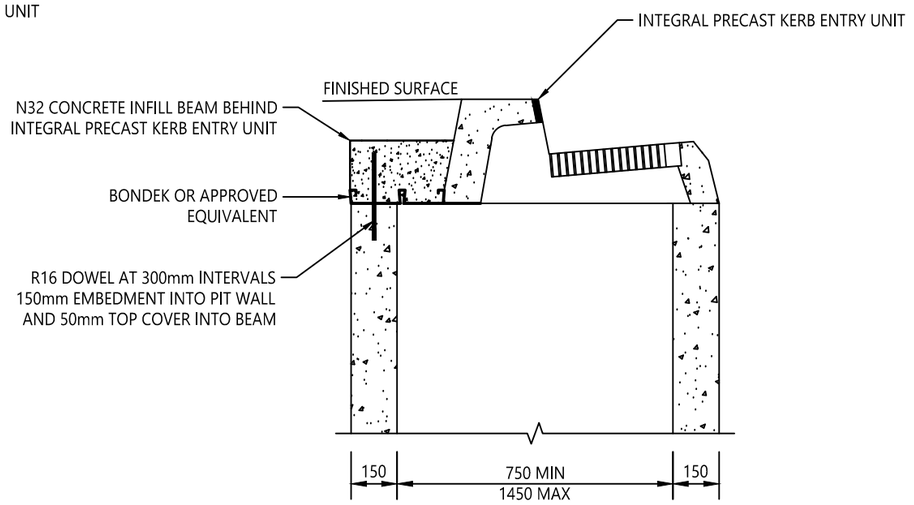
STANDARD DRAWING

DRAWING NUMBER	REV
SD0410	-
SHEET 2 OF 3	A3



INFILL DETAILS BEHIND PRECAST STAND-ALONE KERB LINTEL UNIT FOR PITS WIDER THAN 650mm

SCALE 1:20



INFILL DETAILS BEHIND PRECAST INTEGRAL KERB ENTRY UNIT FOR PITS WIDER THAN 650mm

SCALE 1:20

INDEX:

SHEET 1: INTEGRAL PRECAST KERB ENTRY UNIT.

SHEET 2: PRECAST STAND-ALONE STRAIGHT AND CURVED KERB LINTEL UNIT.

SHEET 3: INFILL DETAILS BEHIND LINTELS AND JOINT DETAILS.

NOTES:

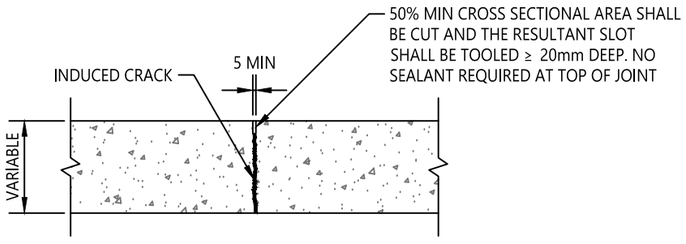
1. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM UNLESS OTHERWISE SPECIFIED.
2. COVER TO REINFORCEMENT SHALL BE 40mm MINIMUM UNLESS OTHERWISE SPECIFIED.
3. EXPOSED SURFACES SHALL BE OFF-STEEL FORM FINISH OR OF HIGH QUALITY STEEL FLOAT FINISH.
4. ALL EXPOSED EDGES SHALL BE ROUNDED WITH A 10mm RADIUS.
5. HOT-DIP GALVANISING SHALL BE IN ACCORDANCE WITH AS 4680.
6. STAND-ALONE LINTEL UNIT BASED ON BCP PRECAST PRODUCT DIMENSIONS AND SHALL BE LOAD CLASS D.
7. CURVED LINTEL UNIT BASED ON ROCLA PRODUCT DIMENSIONS AND SHALL BE LOAD CLASS D.
8. PRODUCT DIMENSIONS VARY BETWEEN MANUFACTURERS.

CONTROL JOINT (CJ) NOTES:

1. SAW CUT DEPTH OF THE WEAKENED PLANE JOINT SHALL BE 0.25 TIMES THICKNESS OF SLAB.
2. CONTROL JOINT SPACING SHALL BE 3m MAXIMUM IN KERB AND CHANNEL.
3. MAXIMUM CONTROL JOINT SPACING SHALL BE NO GREATER THAN 1.5 TIMES THE WIDTH OF THE SLAB PANEL.

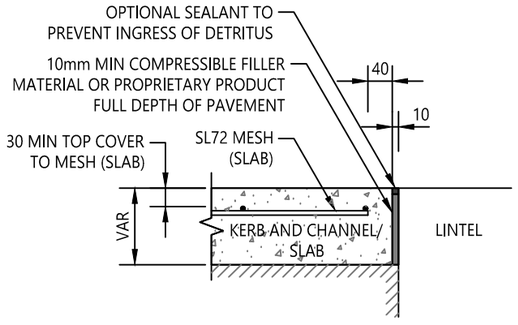
ISOLATION JOINT (IJ) NOTE:

1. ISOLATION JOINTS SHALL BE PROVIDED AT ALL LINTEL AND KERB AND CHANNEL INTERFACES AND BETWEEN ALL LINTELS AND FOOTPATH/SHARED PATH SLABS.



CONTROL JOINT IN KERB AND CHANNEL

SCALE 1:10



ISOLATION JOINT

SCALE 1:10

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500 1:10

0 200 400 600 800 1000 1:20

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

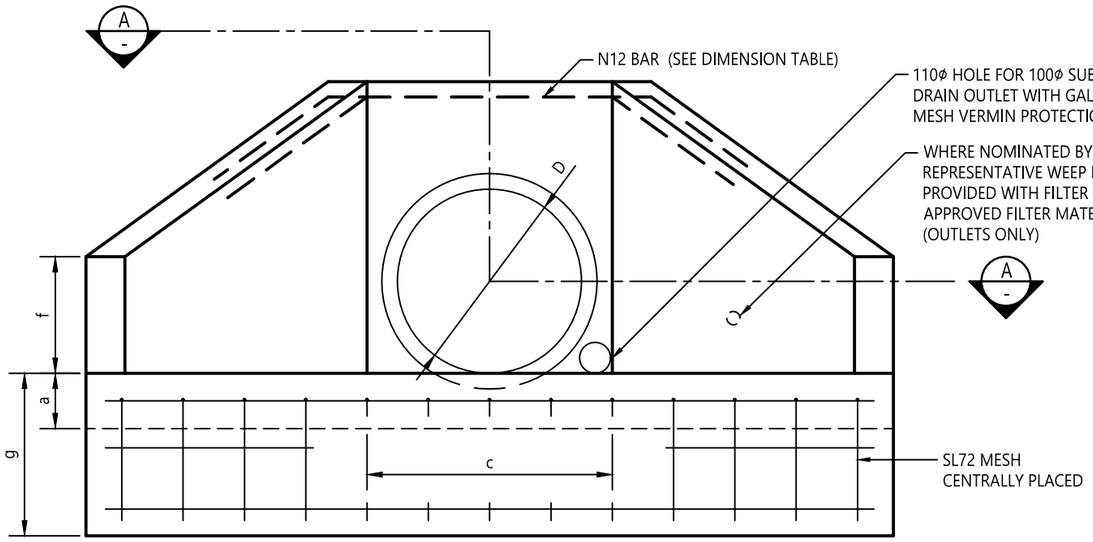
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

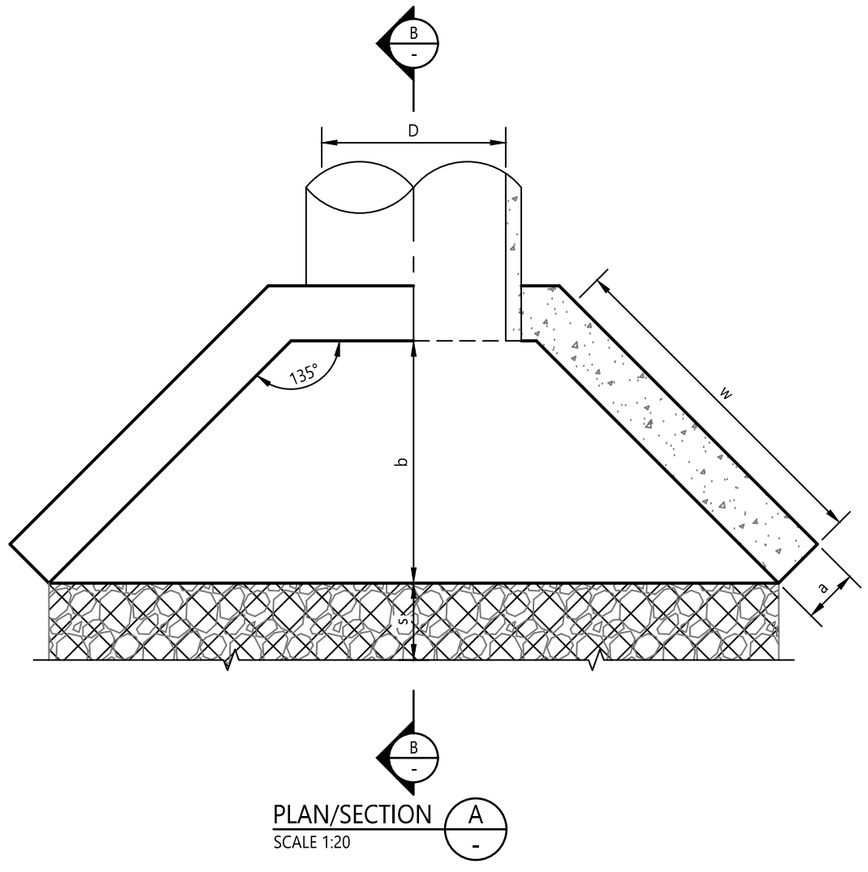
STORMWATER DRAINAGE SERIES
PRECAST CONCRETE LINTELS

STANDARD DRAWING

DRAWING NUMBER	REV
SD0410	-
SHEET 3 OF 3	A3



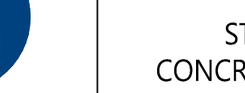
ELEVATION
SCALE 1:20

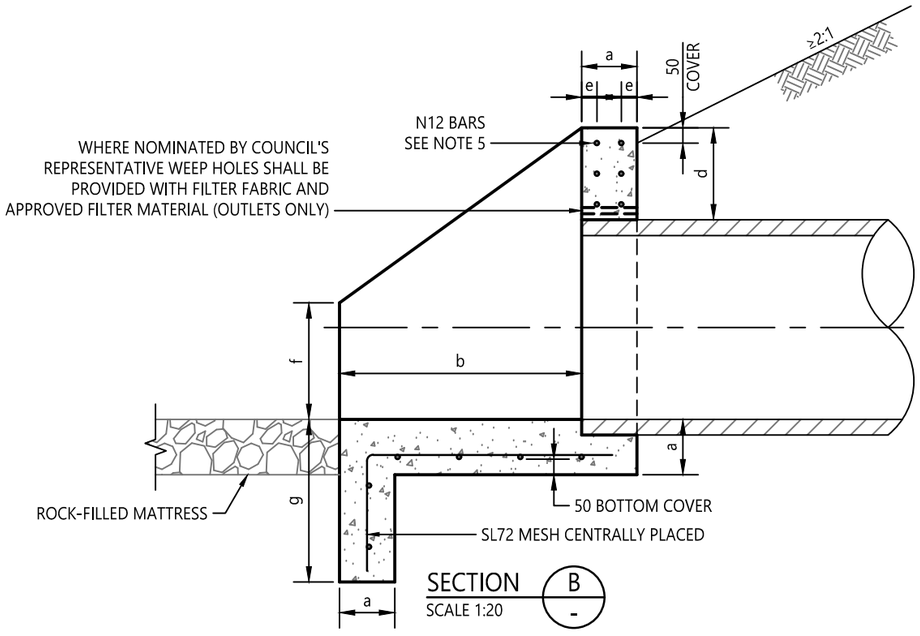


PLAN/SECTION A -
SCALE 1:20

NOTES:

1. USE OF PRECAST HEADWALL PREFERRED.
2. PROVIDE 25mm CHAMFER ON ALL EXPOSED SURFACES.
3. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM - REFER TO SD0402, SHEET 3, FOR SPECIFIC NOTES ON CONCRETE REINFORCEMENT.
4. HEADWALL WITH INTEGRAL ENERGY DISSIPATORS IN LIEU OF STANDARD HEADWALL SHALL BE PROVIDED WHERE CALCULATED VELOCITY EXCEEDS 2.0m/s.
5. WHERE ADDITIONAL HEIGHT TO RETAIN FILL IS REQUIRED KERB HEIGHT 'd', WINGWALL HEIGHT 'f' AND KERB WIDTH 'a' SHALL BE ADJUSTED WITH THE PROVISION OF ADDITIONAL REINFORCING.
6. WHERE NOMINATED BY COUNCIL'S REPRESENTATIVE OR SHOWN ON THE APPROVED PLANS, THE MATTRESS LENGTH SHALL BE ADJUSTED.
7. SAFETY FENCING SHALL BE PROVIDED AROUND THE HEADWALL WHERE DETERMINED BY COUNCIL'S REPRESENTATIVE.
8. REFER TO TfNSW STANDARD DRAWINGS FOR PIPE SIZES LARGER THAN 900ø.
9. REFER TO TfNSW STANDARD DRAWINGS FOR LARGER PIPE DIAMETERS, MULTIPLE PIPES AND BOX CULVERTS.

D	Nominal pipe diameter	375	450	525	600	675	750	900
a	Apron, cut-off wall, kerb and wingwall	150	150	150	180	190	205	230
b	Apron length	490	590	700	790	910	1025	1260
c	Face of headwall width	600	700	750	800	850	900	1050
d	Kerb height	230	230	230	300	300	300	300
e	Kerb reinforcement cover	40	40	40	50	50	50	50
f	Wingwall height	300	300	300	380	380	380	380
g	Cut-off wall depth	450	450	450	530	530	600	600
W	Wingwall	690	840	990	1120	1290	1450	1780
S	Mattress length (See note 6)	1800	2000	2000	2400	2400	3000	3000
E1	 L1	840	915	990	1100	1175	1250	1400
	L2	200	200	200	600	600	600	600
	Reinforcement diameter	12	12	12	12	12	12	12



SECTION B -
SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000

1:20

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

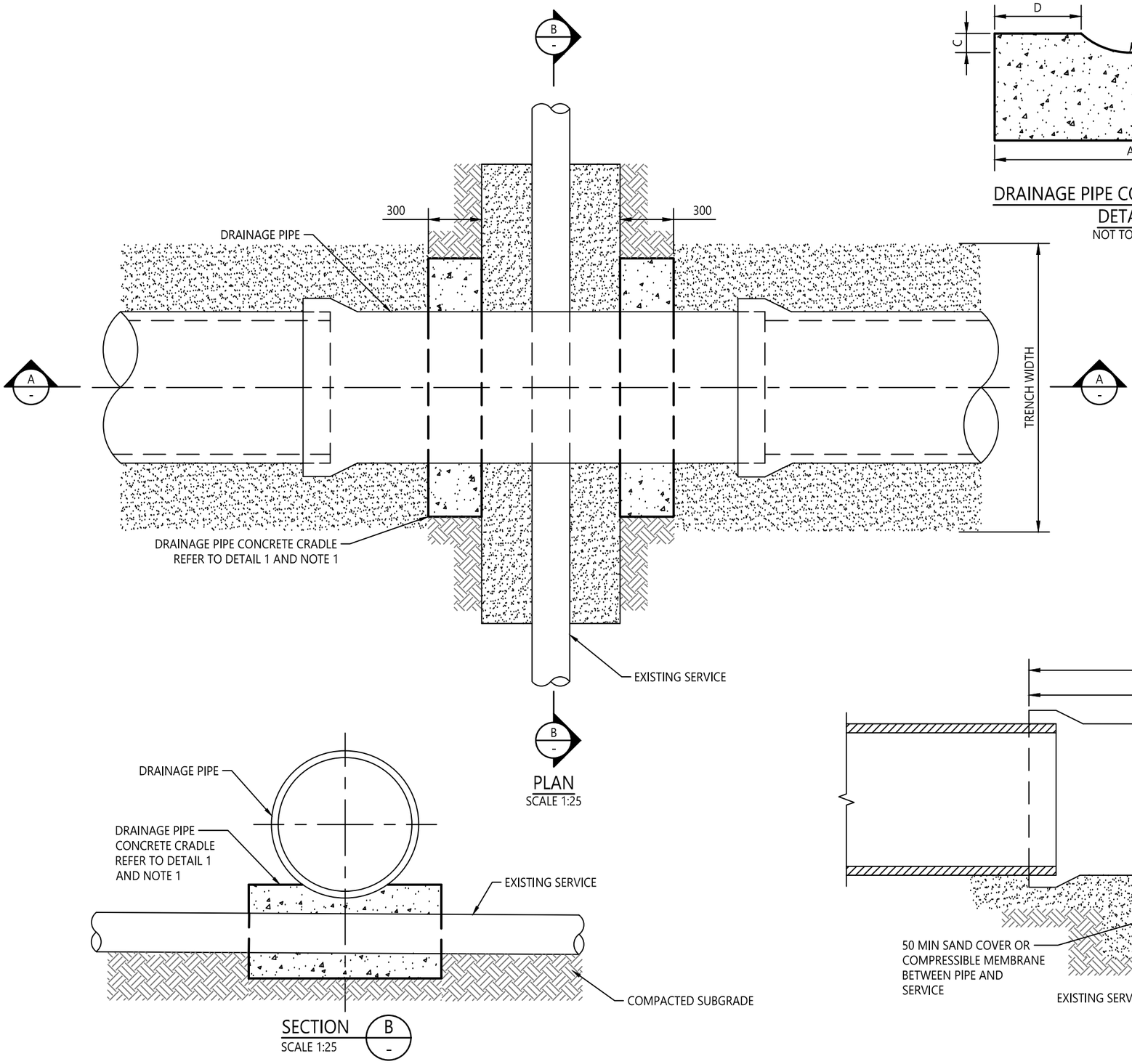
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

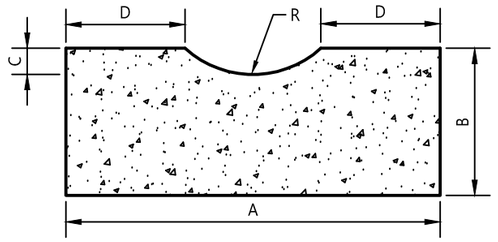
STORMWATER DRAINAGE SERIES
CONCRETE HEADWALL 375Ø TO 900Ø PIPES

DRAWING NUMBER	REV
SD0411	-
SHEET 1 OF 1	A3



PLAN
SCALE 1:25

SECTION B-
SCALE 1:25



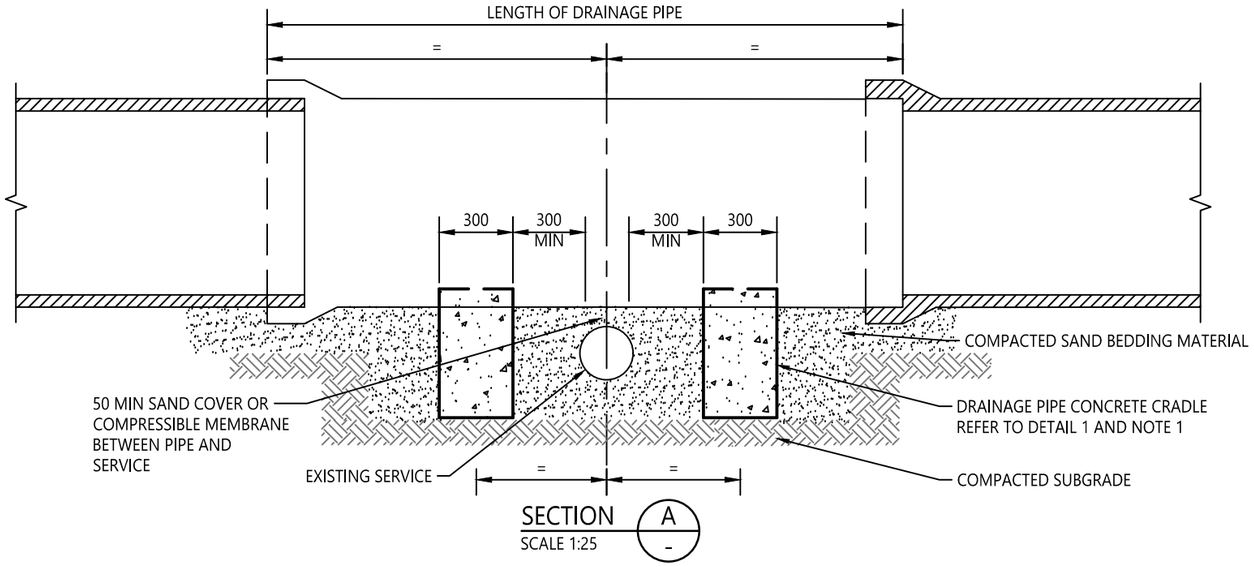
DRAINAGE PIPE CONCRETE CRADLE
DETAIL 1
NOT TO SCALE

NOTES:

1. CONCRETE STRENGTH GRADE SHALL BE N25 UNLESS OTHERWISE SPECIFIED.
2. CONSULT WITH UTILITY ASSET OWNER ON REQUIRED SERVICE SUPPORT AND CLEARANCE REQUIREMENTS.
3. ENSURE A FULL LENGTH OF DRAINAGE PIPE IS SUSPENDED ON DRAINAGE PIPE CONCRETE SUPPORT CRADLES.

DRAINAGE PIPE CONCRETE CRADLE DIMENSIONS

PIPE DIAMETER	A	B	C	D	R (RADIUS)
225	880	450 MIN	75	300	140
300	962	450 MIN	75	300	181
375	1045	450 MIN	75	300	223
450	1135	450 MIN	75	300	267
525	1215	450 MIN	75	300	308
600	1300	450 MIN	75	300	349
750	1465	450 MIN	75	300	432
825	1545	450 MIN	75	300	473
900	1630	450 MIN	75	300	515
1050	1795	450 MIN	75	300	597
1200	1960	450 MIN	75	300	680



SECTION A-
SCALE 1:25

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 250 500 750 1000 1250

1:25

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

STORMWATER DRAINAGE SERIES
CONCRETE SUPPORT CRADLE

DRAWING NUMBER SD0412

REV -

SHEET 1 OF 1

A3

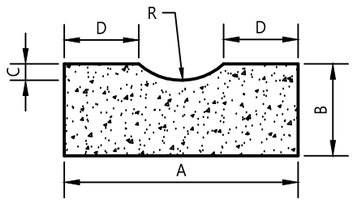
INDEX:

SHEET 1: CONCRETE CRADLE SUPPORTING DRAINAGE PIPE WHERE GRAVITY SEWER MAIN IS LOCATED BELOW DRAINAGE LINE.

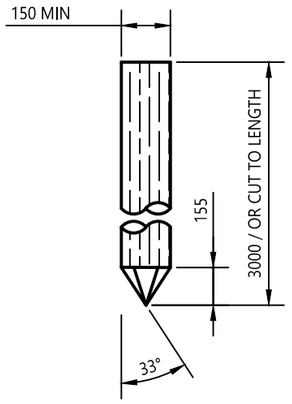
SHEET 2: CONCRETE CRADLE SUPPORTING GRAVITY SEWER MAIN WHERE DRAINAGE PIPE IS LOCATED BELOW THE GRAVITY SEWER MAIN.

NOTES:

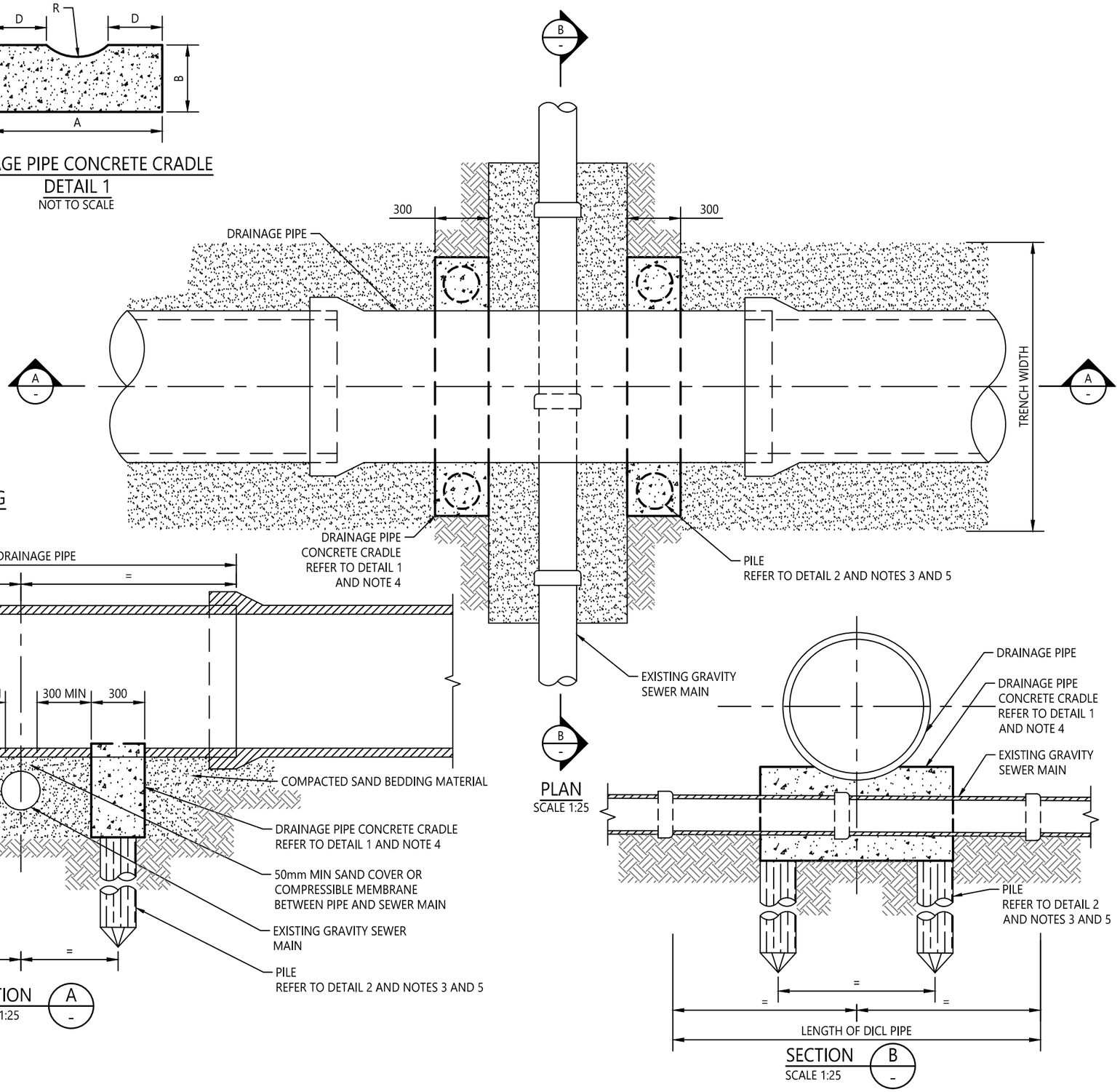
1. PRIOR TO COMMENCEMENT OF WORKS ALL AFFECTED GRAVITY SEWER MAINS SHALL BE RELINED USING NON-DESTRUCTIVE TRENCHLESS RE-LINING TECHNOLOGY.
2. ENSURE A FULL LENGTH OF DRAINAGE PIPE IS SUSPENDED ON DRAINAGE PIPE CRADLES.
3. ARRANGE A QUALIFIED GEOTECHNICAL INVESTIGATOR TO DETERMINE THE SOIL'S BEARING PROPERTIES. WHERE POOR SOIL BEARING CAPACITY HAS BEEN IDENTIFIED, TREATED PINE LOGS ARE TO BE USED. PINE LOGS ARE TO BE 150mm STRUCTURAL CLASS H5. PILES ARE TO BE DRIVEN UNTIL REFUSAL OR UNTIL SIGNIFICANT RESISTANCE IS MET. PILE TO BE CUT ONCE LENGTH HAS BEEN ACHIEVED.
4. CONCRETE STRENGTH GRADE SHALL BE N25 UNLESS OTHERWISE SPECIFIED.
5. ALL SERVICES TO BE EXPOSED IN THE AFFECTED AREA PRIOR TO COMMENCEMENT OF CONSTRUCTION.



DRAINAGE PIPE CONCRETE CRADLE
DETAIL 1
NOT TO SCALE



PILE - TREATED PINE LOG
DETAIL 2
SCALE 1:20



SECTION A
SCALE 1:25

PLAN
SCALE 1:25

SECTION B
SCALE 1:25

DRAINAGE PIPE CONCRETE CRADLE DIMENSIONS					
PIPE DIAMETER	A	B	C	D	R (RADIUS)
225	880	450 MIN	75	300	140
300	962	450 MIN	75	300	181
375	1045	450 MIN	75	300	223
450	1135	450 MIN	75	300	267
525	1215	450 MIN	75	300	308
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750	1465	450 MIN	75	300	432
825	1545	450 MIN	75	300	473
900	1630	450 MIN	75	300	515
1050	1795	450 MIN	75	300	597
1200	1960	450 MIN	75	300	680

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000 1:20

0 250 500 750 1000 1250 1:25

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STORMWATER DRAINAGE SERIES
GRAVITY SEWER MAIN PROTECTION

STANDARD DRAWING

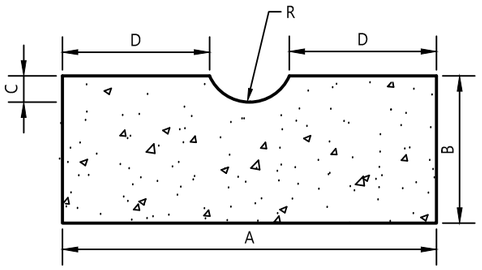
DRAWING NUMBER	REV
SD0413	-
SHEET 1 OF 2	A3

INDEX:

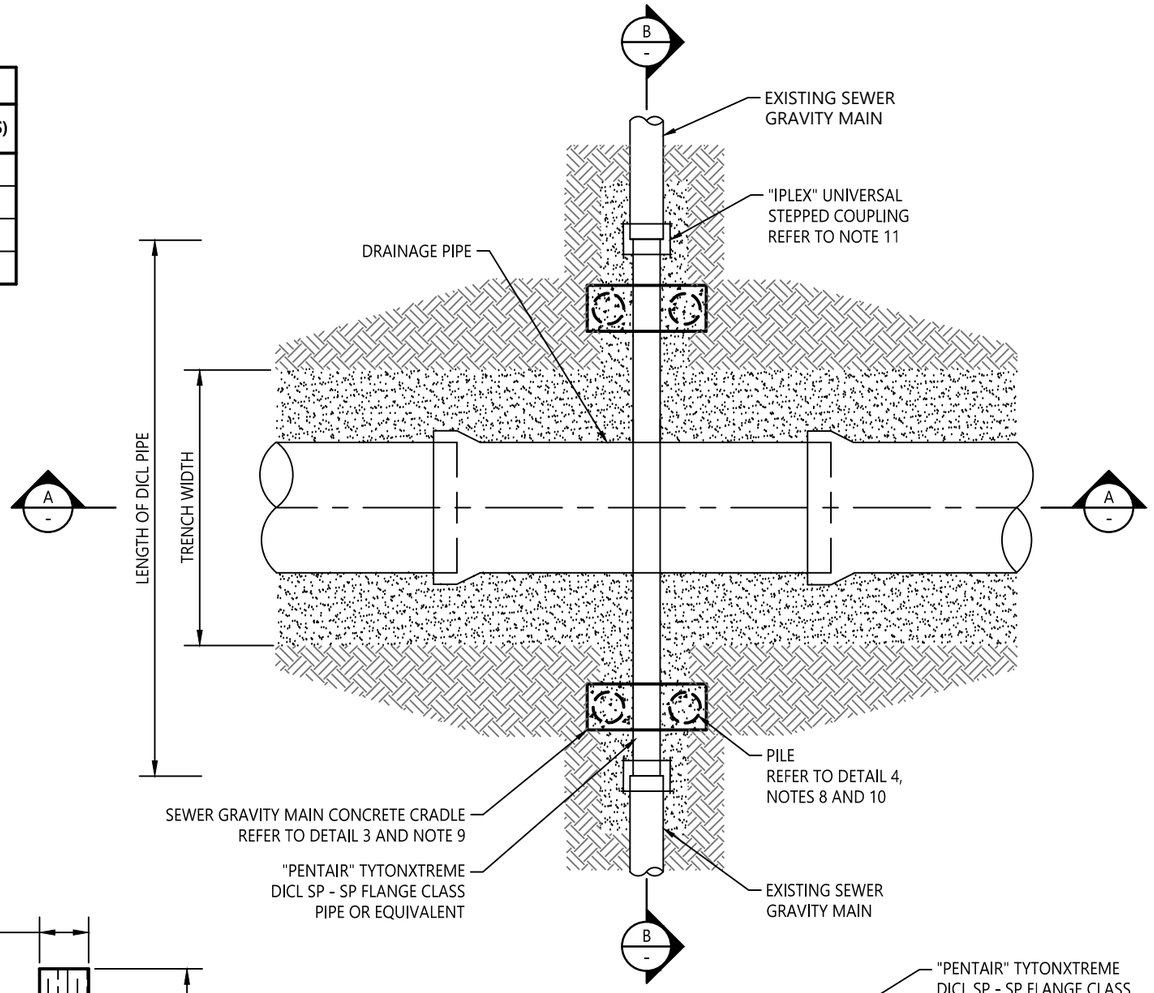
NOTES:

1. ALL DICL PIPES TO CONFORM TO AS/NZS 2280.
2. ALL DICL PIPE TO BE "PENTAIR" TYTONEXTREME SP - SP FLANGE CLASS OR EQUIVALENT.
3. THERE ARE TO BE NO DEFLECTIONS AT PIPE JOINTS.
4. THERE ARE TO BE NO DEFLECTIONS AT FITTINGS.
5. ALL FITTINGS ARE TO BE FBE - (FUSION BONDED EPOXY) COATED OR STAINLESS STEEL CONSTRUCTION.
6. ENSURE A FULL LENGTH OF DICL PIPE IS SUSPENDED ON PILES.
7. ONCE GRAVITY SEWER MAIN HAS BEEN REINSTATED ALL AFFECTED SEWER GRAVITY MAINS SHALL BE RELINED USING NON-DESTRUCTIVE TRENCHLESS RELINING TECHNOLOGY.
8. TO ENSURE SETTLING OF THE DRAINAGE EXCAVATION DOES NOT AFFECT SEWER GRAVITY MAINS, 150mm CLASS H5 TREATED PINE PILES ARE TO BE DRIVEN UNTIL REFUSAL, UNTIL PILES ARE BELOW INVERT LEVEL OF DRAINAGE EXCAVATION, OR SIGNIFICANT RESISTANCE IS MET. PILES TO BE CUT TO LENGTH ONCE THIS HAS BEEN ACHIEVED.
9. CONCRETE STRENGTH GRADE SHALL BE N25 UNLESS OTHERWISE SPECIFIED.
10. CAUTION: ALL SERVICES TO BE EXPOSED IN THE AFFECTED AREA PRIOR TO COMMENCEMENT OF CONSTRUCTION.
11. WHEN USING IPLEX UNIVERSAL STEPPED COUPLING, REFER TO MANUFACTURER'S HANDBOOK FOR SIZING AND PRODUCT CODES.

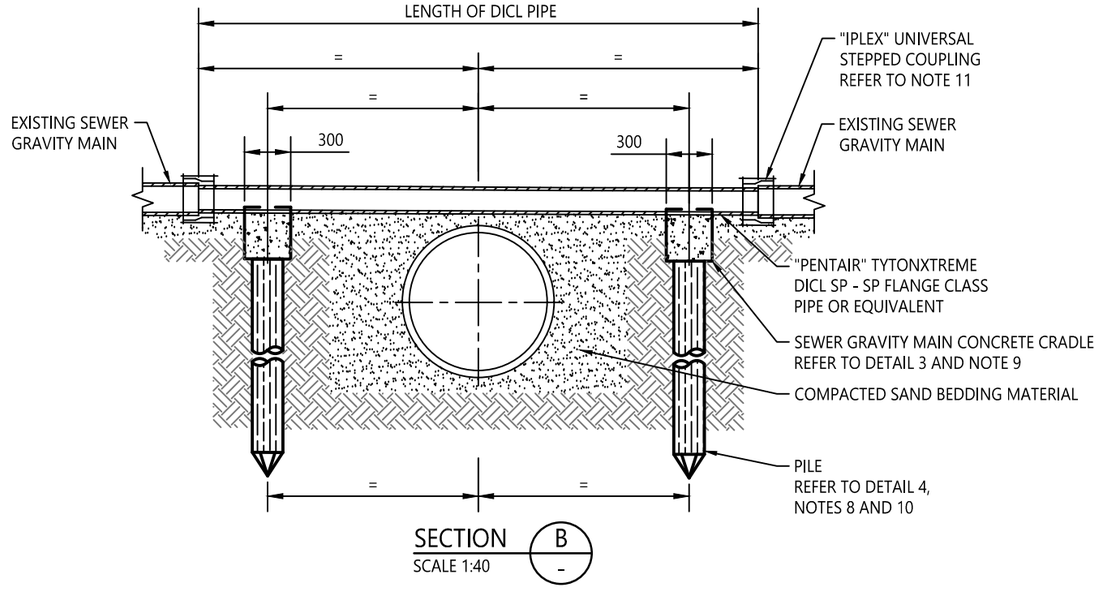
SEWER GRAVITY MAIN CONCRETE CRADLE DIMENSIONS					
PIPE DIAMETER	A	B	C	D	R (RADIUS)
100	715	300	35	300	61
150	765	300	75	300	88
225	840	450 MIN	75	300	130
300	915	450 MIN	75	300	172



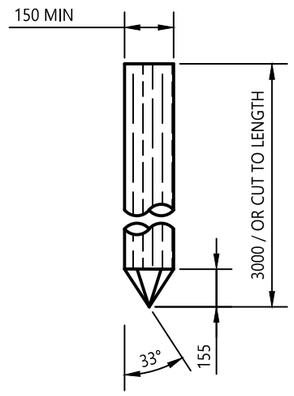
SEWER GRAVITY MAIN CONCRETE CRADLE
DETAIL 3
NOT TO SCALE



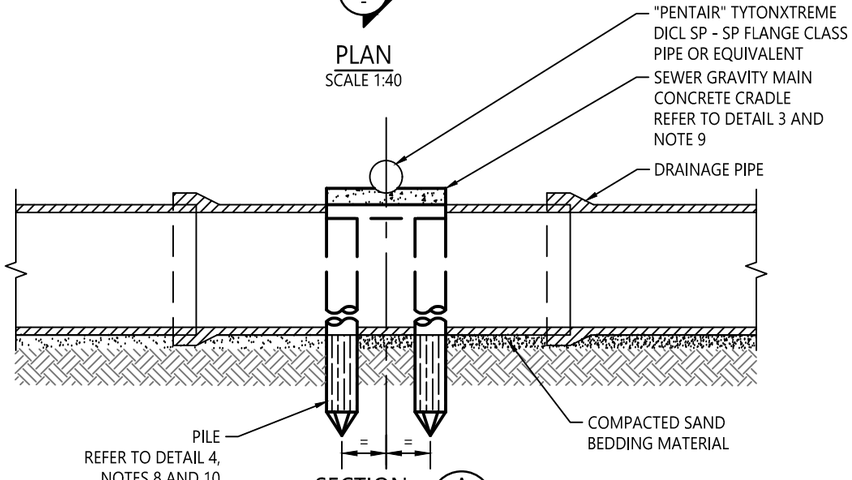
PLAN
SCALE 1:40



SECTION B
SCALE 1:40



PILE
TREATED PINE LOG
SCALE 1:20



SECTION A
SCALE 1:40

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000 1:20

0 400 800 1200 1600 2000 1:40

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

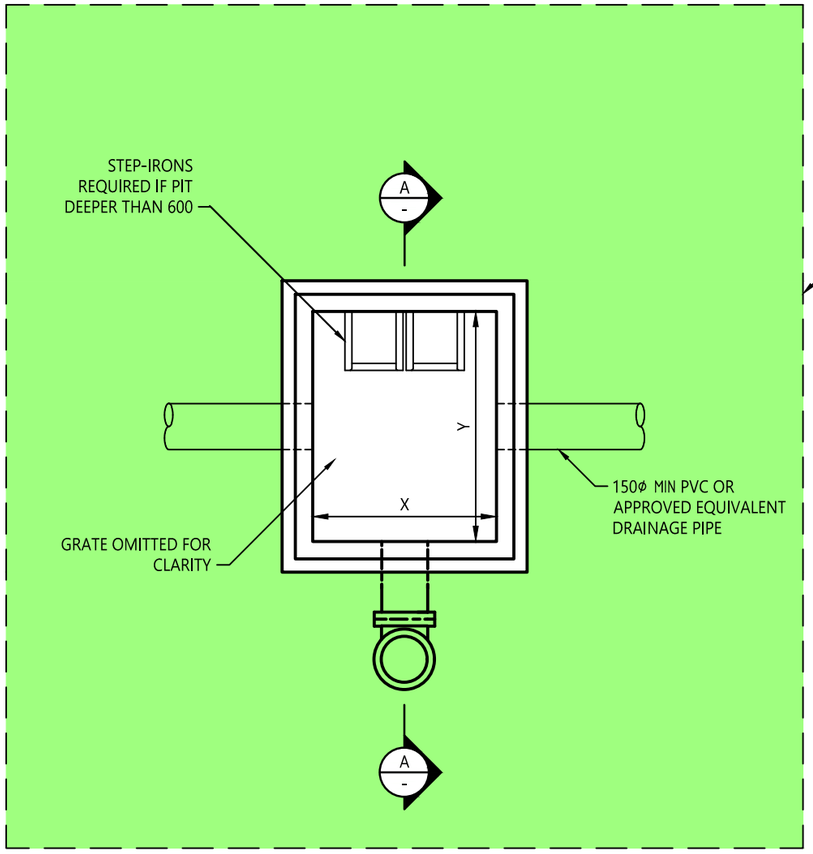
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

STORMWATER DRAINAGE SERIES
GRAVITY SEWER MAIN PROTECTION

DRAWING NUMBER	REV
SD0413	-
SHEET 2 OF 2	A3

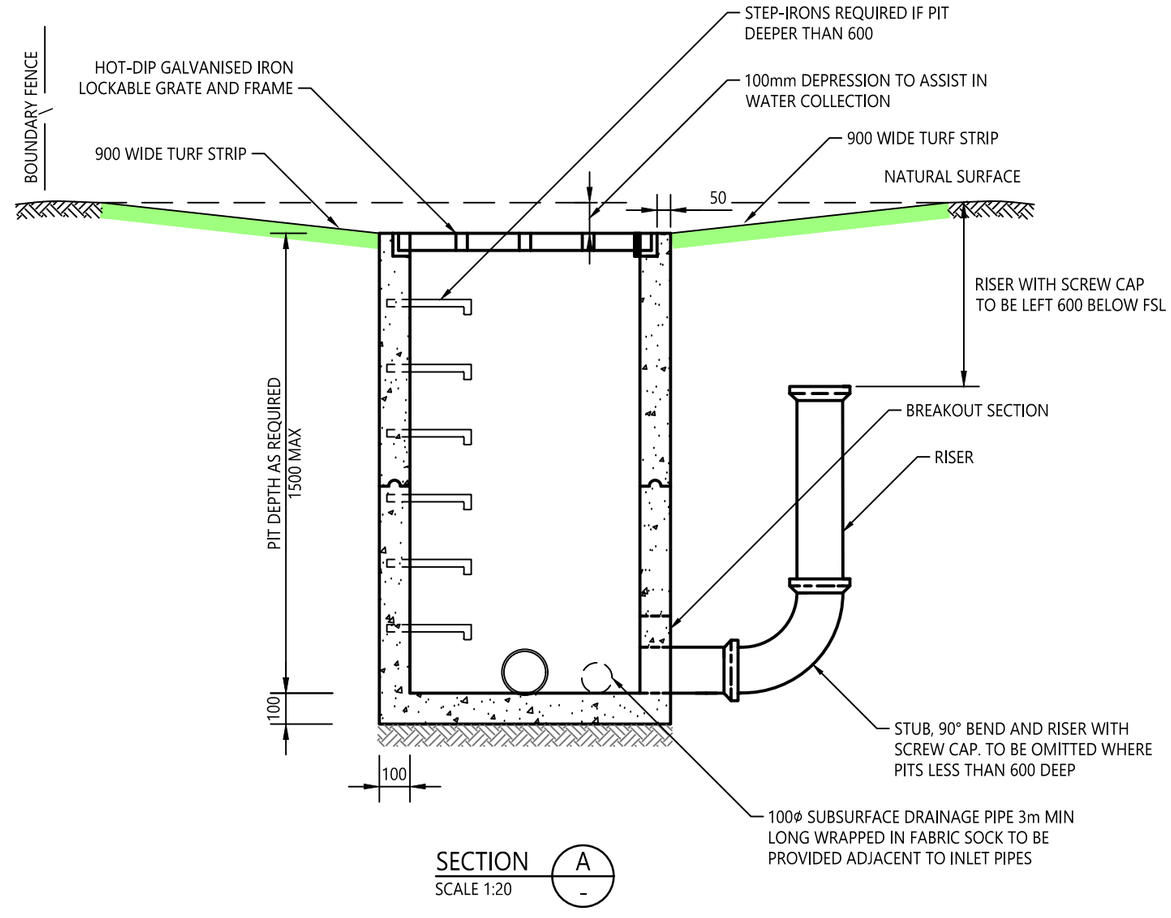


PLAN
SCALE 1:20

MINIMUM PIT DIMENSIONS				
		RESIDENTIAL PIT DEPTH		INDUSTRIAL PIT DEPTH
		450 - 1200	1200 - 1500	450-1500
PIT SIZE	X	450	600	750
	Y	450	750	750

NOTES:

1. THIS STANDARD DRAWING TO BE READ IN CONJUNCTION WITH COUNCIL'S CIVIL WORKS SPECIFICATION.
2. PRECAST PITS SHALL BE USED RATHER THAN CAST IN-SITU WHERE PRACTICABLE.
3. GRATE AND FRAME SHALL BE HOT-DIP GALVANISED.
4. DEPTH OF PIT SHALL NOT EXCEED 1.5m.
5. PROVIDE STEP-IRONS FOR PITS DEEPER THAN 600mm.
6. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM UNLESS OTHERWISE SPECIFIED.
7. ALL EXPOSED EDGES SHALL BE ROUNDED WITH 20mm RADIUS.
8. NO RENDERING PERMITTED IN STRUCTURAL COMPONENTS.
9. ALL PITS SHALL BE STREAMLINED AND BENCHED WHERE REQUIRED.
10. 100ø SUBSURFACE DRAINAGE PIPE 3m MIN LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES.



SECTION A
SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
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1:20
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
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DATE	28/4/20

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ASSETS PLANNING AND DESIGN

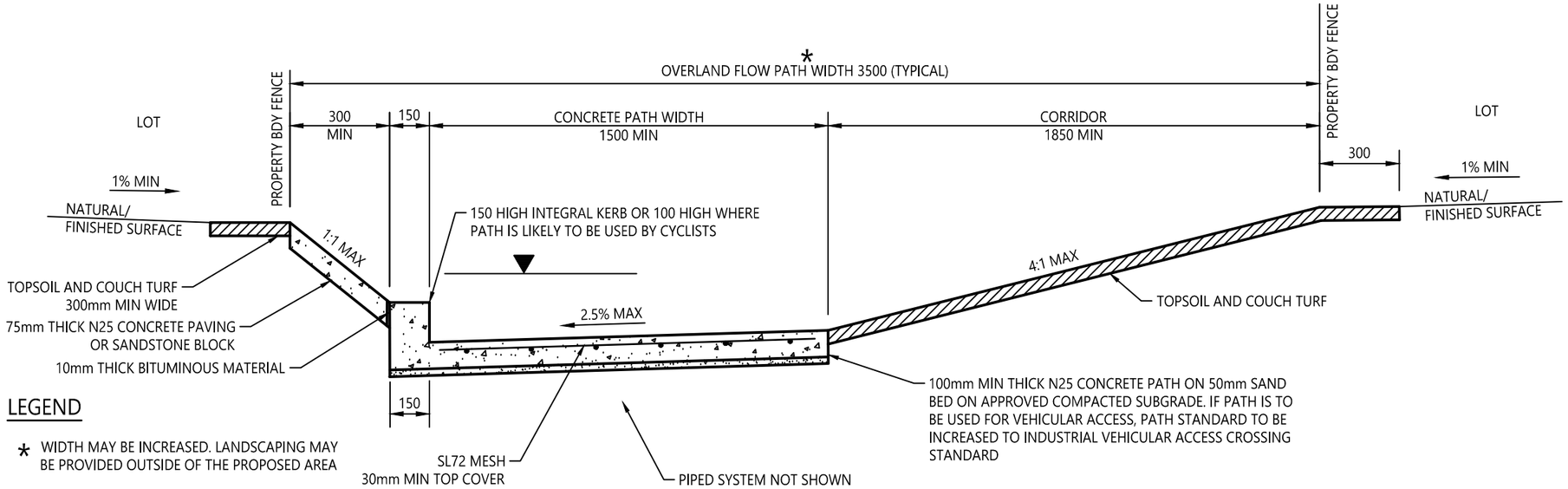
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STORMWATER DRAINAGE SERIES
INTERALLOTMENT DRAINAGE PIT

STANDARD DRAWING

DRAWING NUMBER	REV
SD0414	-
SHEET 1 OF 1	A3



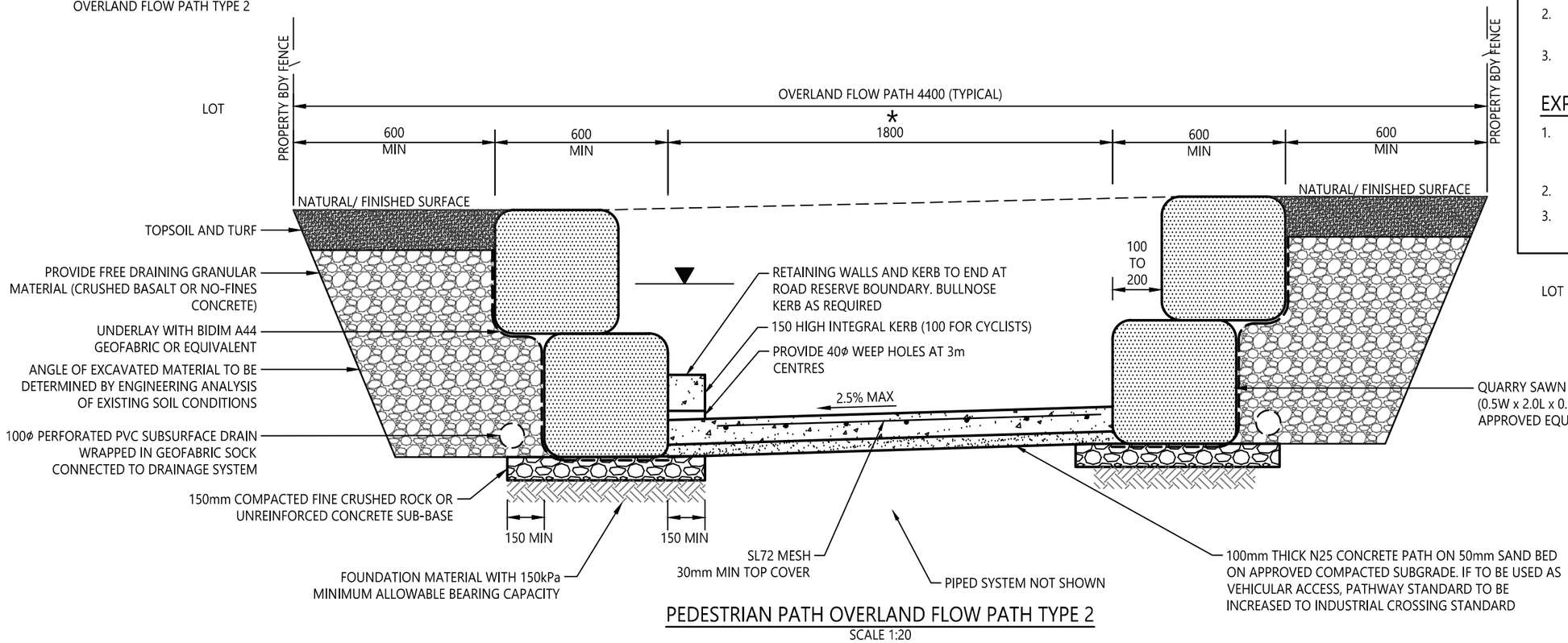
LEGEND

* WIDTH MAY BE INCREASED. LANDSCAPING MAY BE PROVIDED OUTSIDE OF THE PROPOSED AREA

▼ DENOTES REQUIRED CAPACITY OF OVERLAND FLOW PATH TO BE SHOWN ON DETAILED DESIGN SUPPORTED BY ALL RELEVANT CALCULATIONS. IF CAPACITY INSUFFICIENT, OVERALL WIDTH TO BE INCREASED OR PROVIDE PEDESTRIAN PATH OVERLAND FLOW PATH TYPE 2

PEDESTRIAN PATH OVERLAND FLOW PATH TYPE 1

SCALE 1:20



PEDESTRIAN PATH OVERLAND FLOW PATH TYPE 2

SCALE 1:20

INDEX:

NOTES:

1. DESIGN OF OVERLAND FLOW PATHS SHALL ADDRESS APPROPRIATE SAFETY CRITERIA FOR PEOPLE AND VEHICLES IN ACCORDANCE WITH CURRENT AUSTRALIAN RAINFALL AND RUNOFF GUIDELINES.
2. DEPTHS OF FLOW GENERALLY SHOULD NOT EXCEED 0.5m AND THE PRODUCT OF VELOCITIES AND DEPTHS IN MAJOR OVERLAND FLOW PATHS GENERALLY SHOULD NOT EXCEED $0.4m^2/s$ FOR MAJOR DESIGN STORM FLOWS.
3. ADJACENT STREET LIGHTING TO BE LOCATED TO PROVIDE ADEQUATE LIGHTING FOR PEDESTRIANS BUT NOT TO HINDER ADJACENT PROPERTY OWNERS.
4. IF PATHS ARE LONG ENOUGH TO WARRANT ADDITIONAL LIGHTING, CONSULT ASSET OWNER REGARDING LOCATION AND TYPE OF LIGHTING.
5. GENERALLY, A 300mm FREEBOARD TO FLOOR LEVEL WILL BE REQUIRED.

CONTROL JOINT (CJ) NOTES:

1. SAW CUT DEPTH OF THE WEAKENED PLANE JOINT SHALL BE 0.25 TIMES THICKNESS OF SLAB.
2. CONTROL JOINT SPACING SHALL BE 4.5m MAXIMUM IN FOOTPATH SLABS; AND 3m MAXIMUM IN KERB AND CHANNEL.
3. MAXIMUM CONTROL JOINT SPACING SHOULD BE NO GREATER THAN 1.5 TIMES THE WIDTH OF THE SLAB PANEL.

EXPANSION JOINT (EJ) NOTES:

1. EXPANSION JOINT SPACING SHALL BE 12m MAXIMUM IN FOOTPATH SLABS; AND WHERE KERB AND CHANNEL ABUTS A STRUCTURAL ELEMENT.
2. A SYSTEM TO CORRECTLY ALIGN DOWELS SHALL BE PROVIDED.
3. BOND-BREAKING COMPOUND AND END CAP MAY BE REPLACED WITH A PURPOSE-MADE DOWEL SLEEVE.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000

1:20

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
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UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

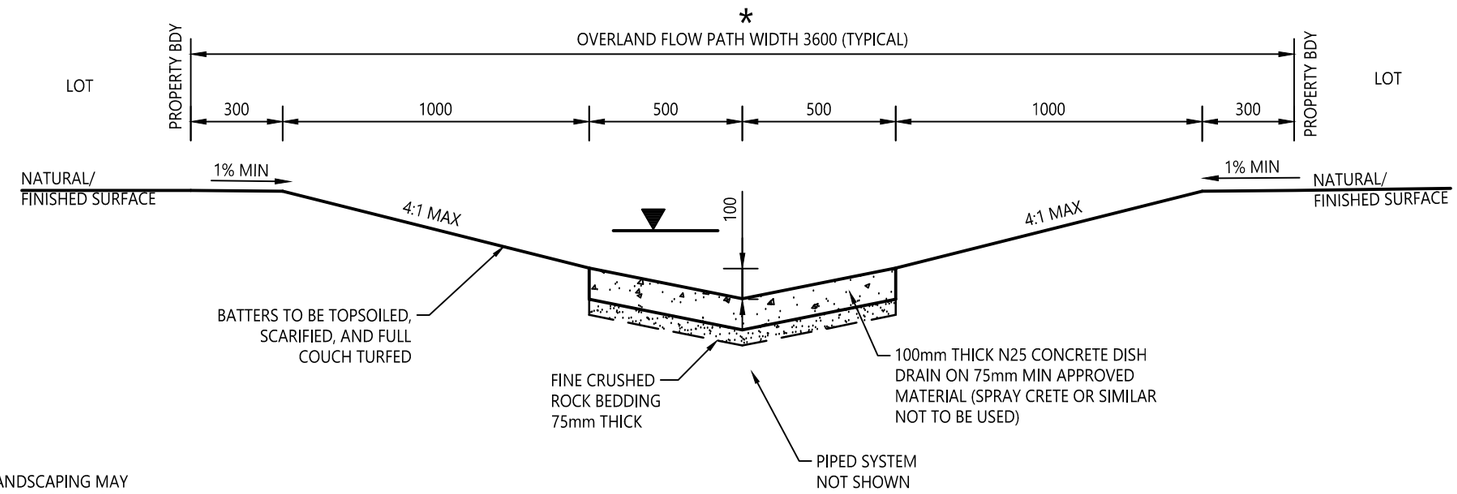
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STORMWATER DRAINAGE SERIES
OVERLAND FLOW PATH

STANDARD DRAWING

DRAWING NUMBER	REV
SD0415	-
SHEET 1 OF 2	A3



NON-PEDESTRIAN OVERLAND FLOW PATH TYPE 1

SCALE 1:20

LEGEND

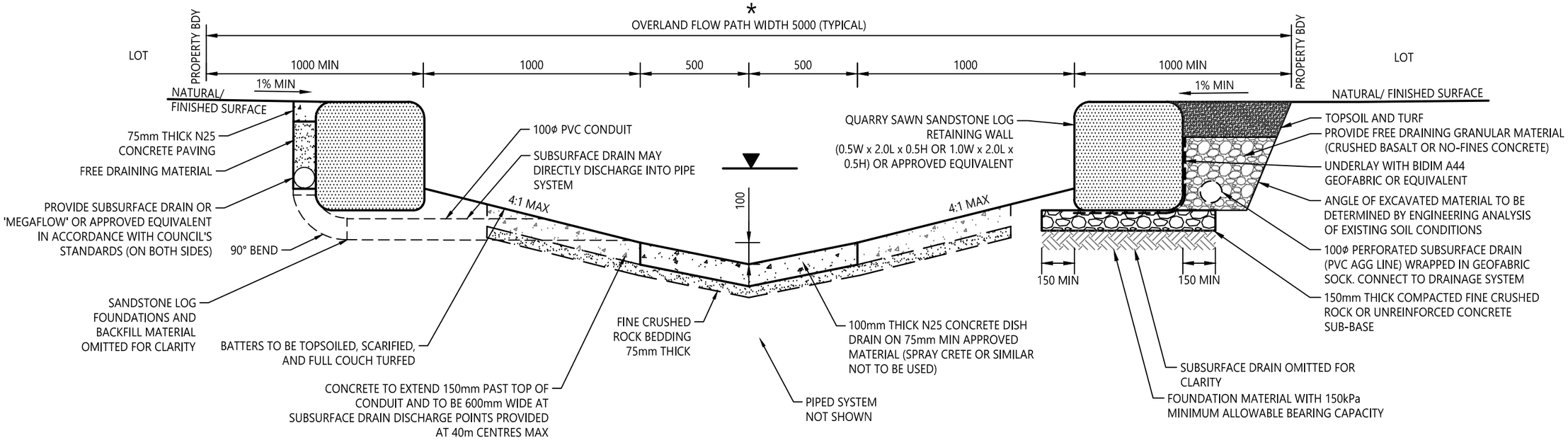
* WIDTH MAY BE INCREASED. LANDSCAPING MAY BE PROVIDED OUTSIDE OF THE PROPOSED AREA

▼ DENOTES REQUIRED CAPACITY OF OVERLAND FLOW PATH TO BE SHOWN ON DETAILED DESIGN SUPPORTED BY ALL RELEVANT CALCULATIONS. IF CAPACITY INSUFFICIENT, OVERALL WIDTH TO BE INCREASED OR PROVIDE OVERLAND FLOW PATH TYPE 2

INDEX:

NOTES:

1. DESIGN OF OVERLAND FLOW PATHS SHALL ADDRESS APPROPRIATE SAFETY CRITERIA FOR PEOPLE AND VEHICLES IN ACCORDANCE WITH CURRENT AUSTRALIAN RAINFALL AND RUNOFF GUIDELINES.
2. DEPTHS OF FLOW GENERALLY SHOULD NOT EXCEED 0.5m AND THE PRODUCT OF VELOCITIES AND DEPTHS IN MAJOR OVERLAND FLOW PATHS GENERALLY SHOULD NOT EXCEED 0.4m^2/s FOR MAJOR DESIGN STORM FLOWS.
3. INSTALL COUNCIL'S STANDARD FLOOD WARNING SIGNS WHERE DIRECTED.
4. DRAINAGE RESERVE/OVERLAND FLOW PATH SHALL BE ADEQUATELY FENCED.
5. ACCESS FOR MAINTENANCE SHALL BE PROVIDED.
6. CONTROL JOINTS IN DISH DRAIN TO BE 25mm DEEP AND PLACED AT NO MORE THAN 5m INTERVALS. EXPANSION JOINTS TO BE PLACED AT NO MORE THAN 12m INTERVALS. JOINTING MATERIAL TO BE APPROVED 10mm THICK BITUMINOUS MATERIAL TO THE FULL DEPTH OF THE CONCRETE OR AS DIRECTED BY COUNCIL'S REPRESENTATIVE.
7. GENERALLY A 300mm FREEBOARD TO FLOOR LEVEL WILL BE REQUIRED.



NON-PEDESTRIAN OVERLAND FLOW PATH TYPE 2

SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000

1:20

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
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DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

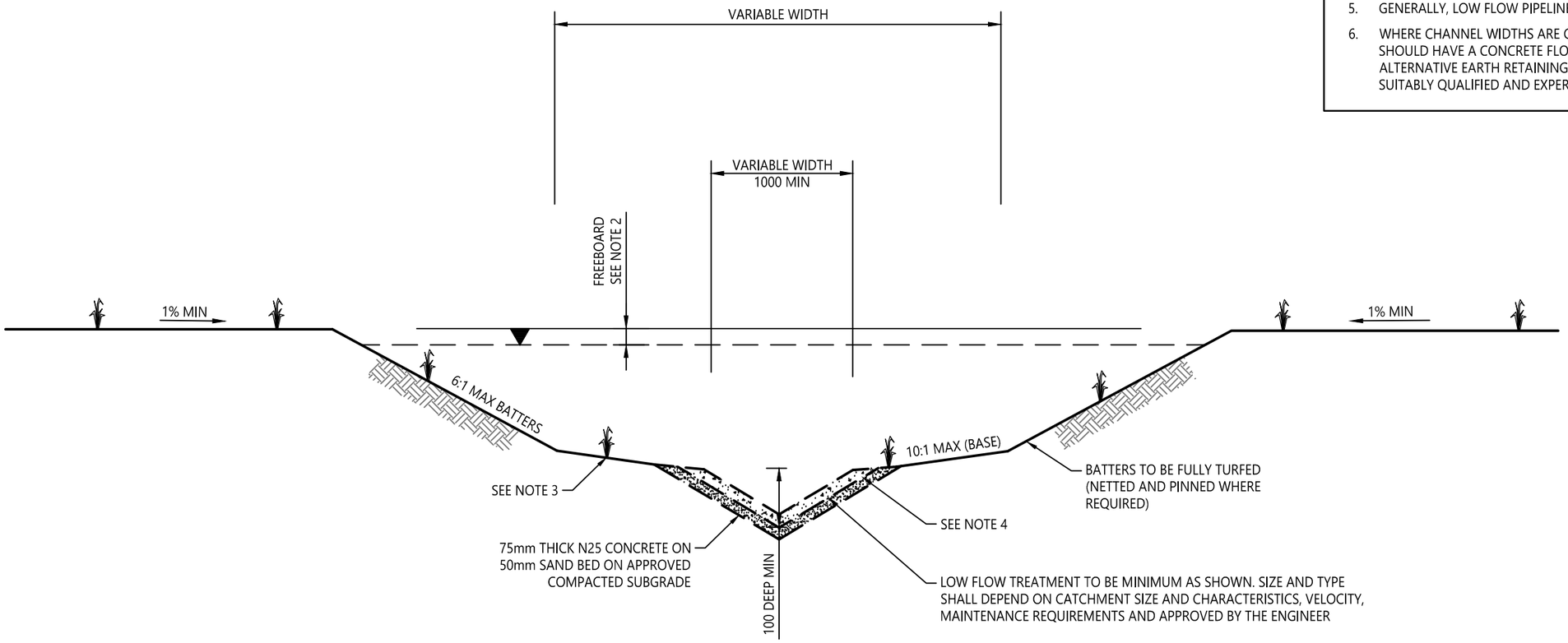
STORMWATER DRAINAGE SERIES
OVERLAND FLOW PATH

STANDARD DRAWING

DRAWING NUMBER	REV
SD0415	-
SHEET 2 OF 2	A3

NOTES:

1. THIS STANDARD DRAWING IS TO BE USED AS A GUIDE ONLY FOR THE PREPARATION OF OTHER DESIGNS.
2. FREEBOARD REQUIREMENTS VARY DEPENDING ON SITE LOCATION. REFER TO COUNCIL'S CIVIL WORKS DESIGN GUIDELINES AND CONSTRUCTION SPECIFICATION.
3. PROVIDE ADEQUATE SCOUR PROTECTION/VEGETATION STABILISING TREATMENT ADJACENT TO CONCRETE LOW FLOW TREATMENT.
4. SUBSURFACE DRAINAGE FOR CHANNEL BASE AND ADJACENT TO DROP STRUCTURES MAY BE REQUIRED.
5. GENERALLY, LOW FLOW PIPELINES WILL NOT BE PERMITTED.
6. WHERE CHANNEL WIDTHS ARE CONSTRAINED, THE CHANNEL SHOULD HAVE A CONCRETE FLOOR AND VERTICAL WALLS, OR ALTERNATIVE EARTH RETAINING STRUCTURE, DESIGNED BY A SUITABLY QUALIFIED AND EXPERIENCED ENGINEER.



OPEN CHANNEL
NOT TO SCALE

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: NOT TO SCALE

DRAWN	C SHEPPEARD
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DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

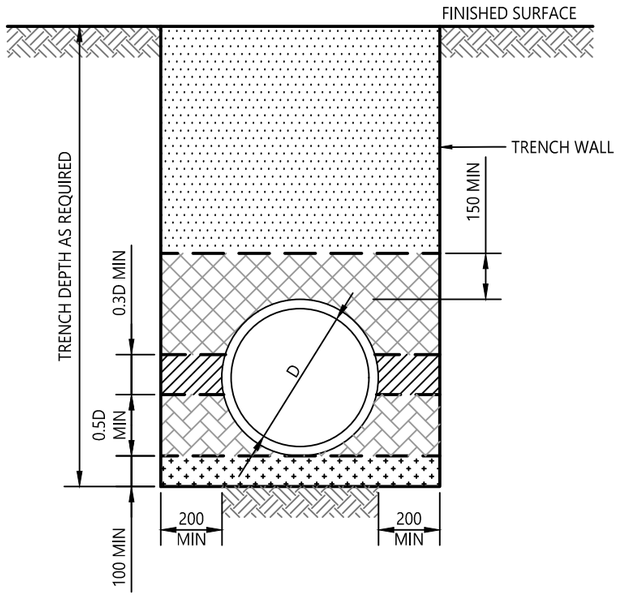
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

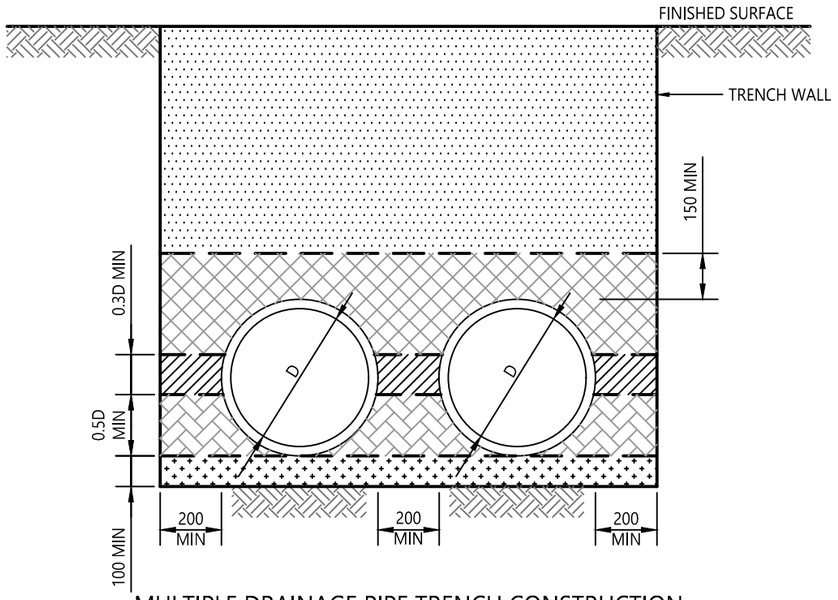
STANDARD DRAWING

STORMWATER DRAINAGE SERIES
OPEN CHANNEL

DRAWING NUMBER	REV
SD0416	-
SHEET 1 OF 1	A3



DRAINAGE PIPE TRENCH CONSTRUCTION
SCALE 1:20



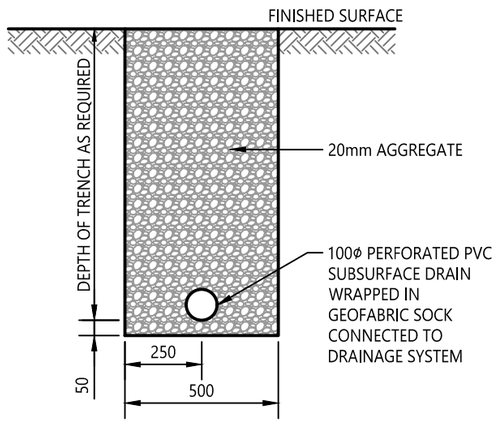
MULTIPLE DRAINAGE PIPE TRENCH CONSTRUCTION
SCALE 1:20

NOTES:

1. THIS DRAWING IS PARTLY BASED ON DETAILS IN TfNSW STANDARD DRAWING R0240-01 AND AS/NZS 3725.
2. BEDDING AND BACKFILLING OF REINFORCED CONCRETE PIPES AND FIBRE-REINFORCED CEMENT PIPES SHALL BE IN ACCORDANCE WITH AS/NZS 3725 TYPE HS SUPPORT.
3. REINFORCED CONCRETE PIPES SHALL BE MANUFACTURED IN ACCORDANCE WITH AS 4058; AND FIBRE REINFORCED CEMENT PIPES SHALL BE MANUFACTURED IN ACCORDANCE WITH AS 4139.
4. WHERE MINIMUM DISTANCES CANNOT BE ACHIEVED, A CONTROLLED LOW STRENGTH MATERIAL MAY BE USED.
5. WHERE PRACTICABLE, MINIMUM PIPE COVER SHALL BE PROVIDED TO THE PIPE MANUFACTURER'S SPECIFICATION, OR BY THE USE OF A PIPE CLASS PROGRAM.
6. TRENCH EXCAVATIONS AT LEAST 1.5m DEEP SHALL REQUIRE BENCHING, SHORING OR BATTERING TO SUPPORT ALL SIDES OF THE TRENCH, TO COMPLY WITH WORK HEALTH AND SAFETY LEGISLATION.

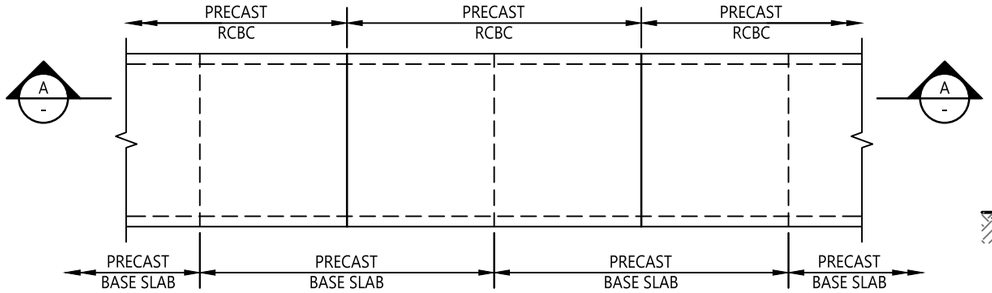
LEGEND

- BACKFILL/ROAD PAVEMENT
- OVERLAY ZONE
- SIDE ZONE
- HAUNCH ZONE
- BED ZONE
- NATURAL SURFACE OR COMPACTED FILL

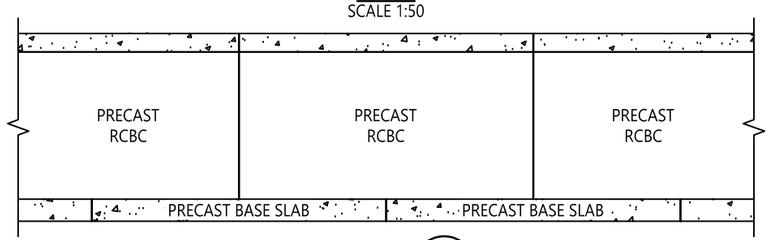


NOTE: PROVIDE FLUSHING POINTS AT 30m INTERVALS.

TRENCH DRAIN
SCALE 1:20



PLAN
SCALE 1:50

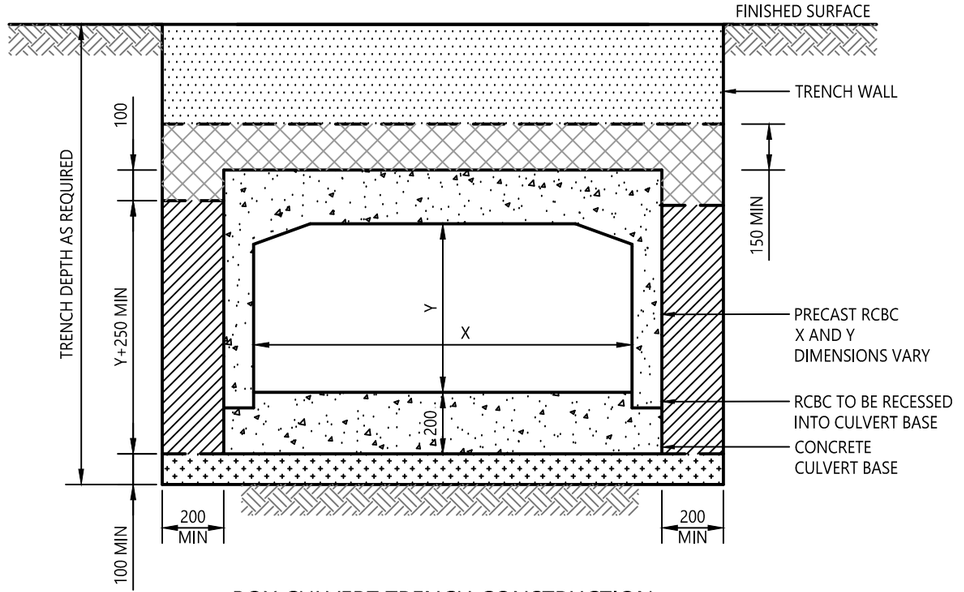


SECTION A-A
SCALE 1:50

BOX CULVERT PLACEMENT

BOX CULVERT PLACEMENT NOTES:

1. FULL LENGTH CULVERTS AND BASE SLABS SHALL BE STAGGERED TO ENSURE CULVERT JOINTS ARE LOCATED AT BASE SLAB MIDPOINTS.
2. SPLAY UNITS SHALL ALIGN WITH THEIR CORRESPONDING BASE SLAB.



BOX CULVERT TRENCH CONSTRUCTION
SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000 1:20
0 500 1000 1500 2000 2500 1:50
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

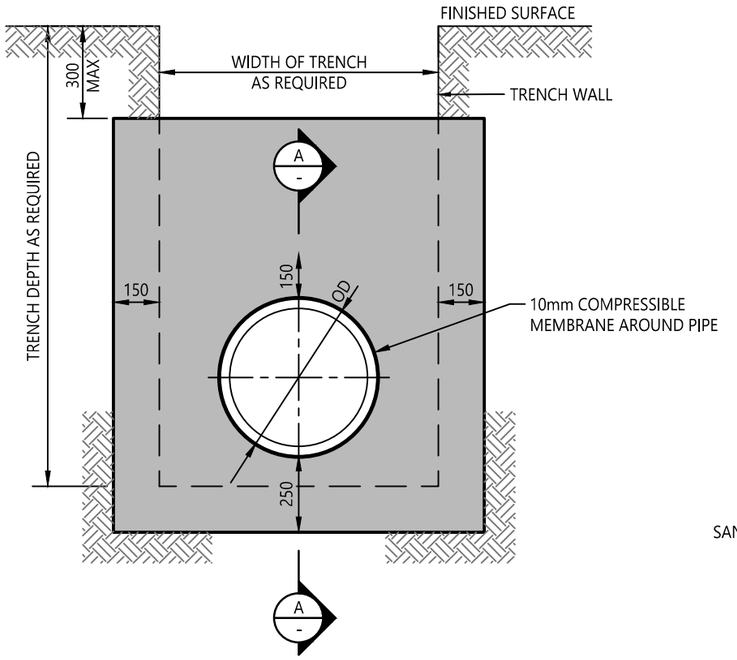
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

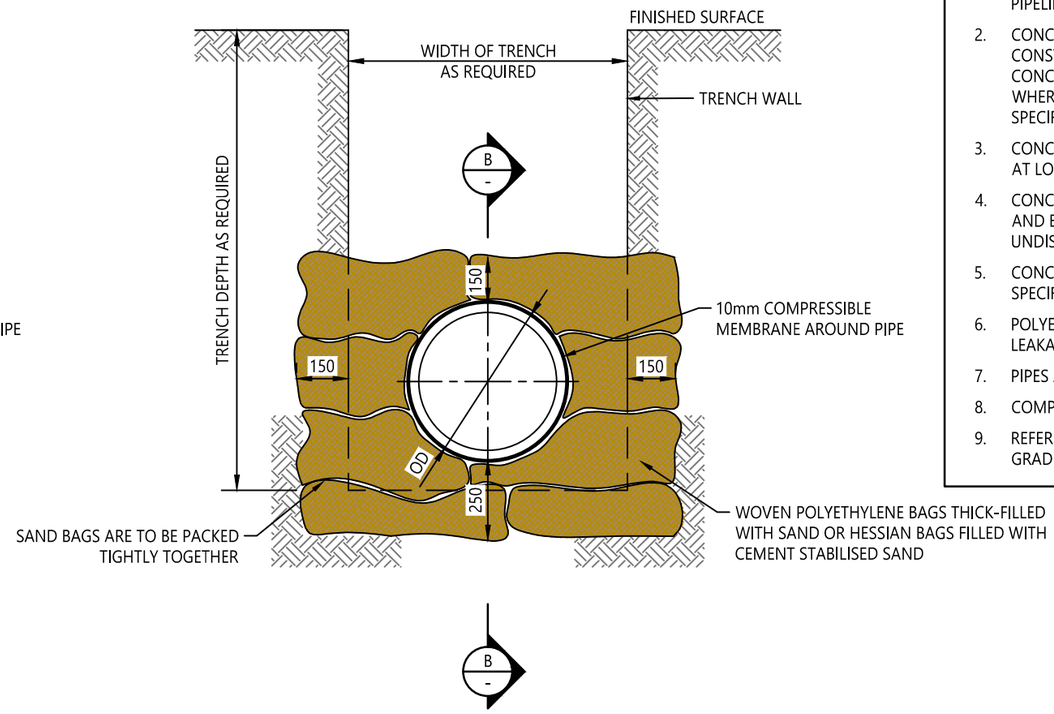
STORMWATER DRAINAGE SERIES
RCP/FRC DRAINAGE PIPE TRENCH CONSTRUCTION AND TRENCH DRAIN

STANDARD DRAWING

DRAWING NUMBER	REV
SD0417	-
SHEET 1 OF 1	A3



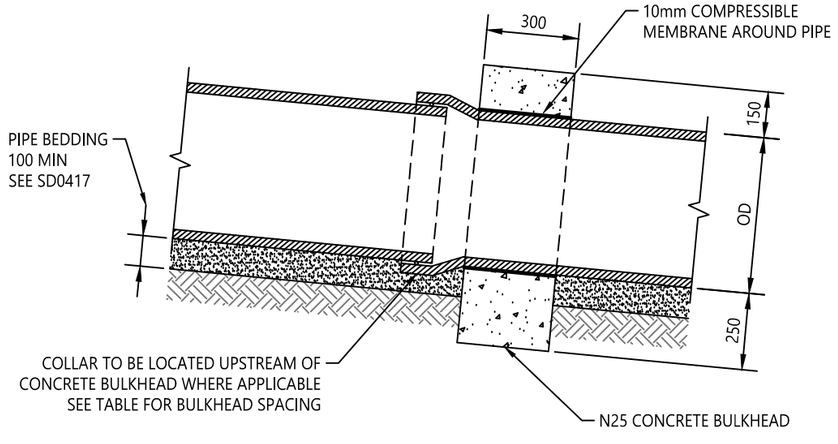
CONCRETE BULKHEAD
ELEVATION
SCALE 1:20



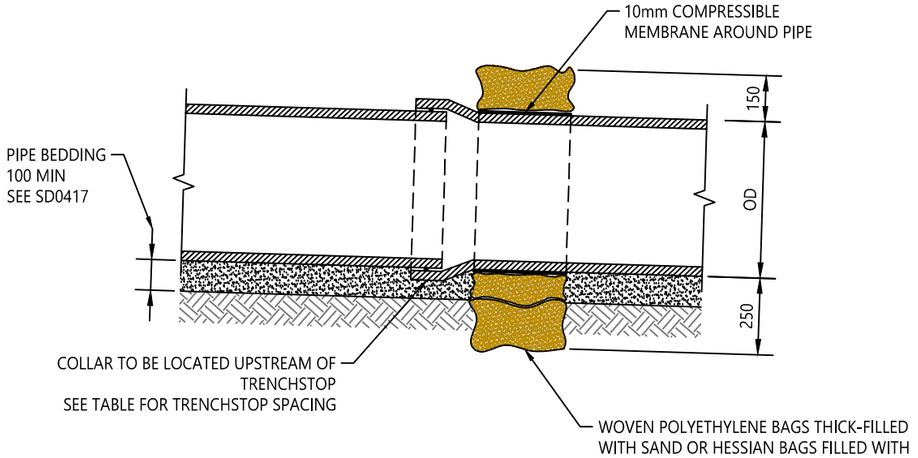
TRENCHSTOP
ELEVATION
SCALE 1:20

NOTES:

1. CONCRETE BULKHEADS AND TRENCHSTOPS FOR FLEXIBLE BURIED PIPELINES SHALL COMPLY WITH AS/NZS 2566.2.
2. CONCRETE BULKHEADS AND TRENCHSTOPS ALSO MAY BE CONSTRUCTED FOR FIBRE-REINFORCED CEMENT OR REINFORCED CONCRETE STORMWATER DRAINAGE PIPELINES ON STEEP SLOPES WHERE DETERMINED BY COUNCIL'S REPRESENTATIVE TO BE A SITE SPECIFIC REQUIREMENT.
3. CONCRETE BULKHEADS AND TRENCHSTOPS ARE TO BE CONSTRUCTED AT LOCATIONS AS SPECIFIED ON DESIGN DRAWINGS.
4. CONCRETE BULKHEADS AND TRENCHSTOPS TO BE KEYED INTO SIDES AND BOTTOM OF TRENCH AGAINST A BEARING SURFACE OF UNDISTURBED SOIL.
5. CONCRETE STRENGTH GRADE SHALL BE N25 UNLESS OTHERWISE SPECIFIED.
6. POLYETHYLENE OR HESSIAN BAGS SHALL BE SEALED TO PREVENT LEAKAGE OF CONTAINED MATERIAL.
7. PIPES ARE NOT TO BE DEFORMED DURING PLACEMENT OF CONCRETE.
8. COMPRESSIBLE MEMBRANE AROUND PIPE TO BE 10mm POLYSTYRENE.
9. REFER TO TABLE BELOW FOR APPROPRIATE TREATMENT BASED ON GRADE OF PIPELINE.



SECTION A
SCALE 1:20



SECTION B
SCALE 1:20

REQUIREMENT FOR BULKHEADS AND TRENCHSTOPS		
GRADE %	REQUIREMENT	SPACING (S) m
5 - 14	TRENCHSTOP	S = 100/GRADE%
15 - 29	CONCRETE BULKHEAD	S = L/GRADE% (450m MAX) WHERE L = 80 x PIPE LENGTH* (m) WHERE L>100m USE INTERMEDIATE TRENCHSTOPS AT SPACING <100/GRADE
30 - 50	CONCRETE ENCASEMENT AND CONCRETE BULKHEADS	S = 100/GRADE%
>50	SPECIAL DESIGN	

SOURCE: AS/NZS 2566.2
* PIPE LENGTH IS THE STANDARD PIPE LENGTH INSTALLED

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000
1:20

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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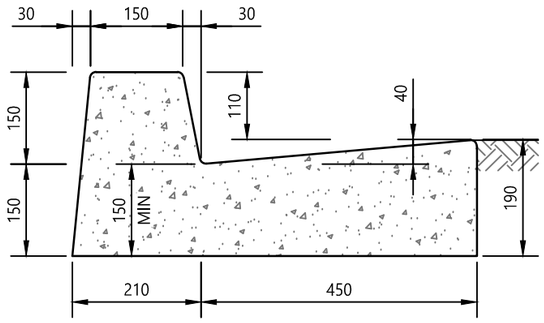
Central Coast Council

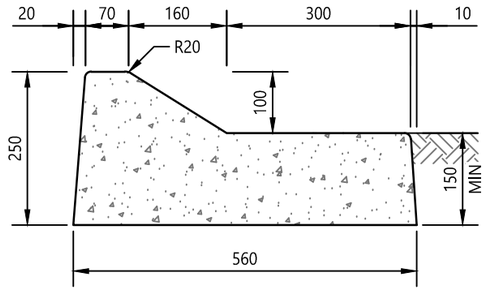
STANDARD DRAWING

STORMWATER DRAINAGE SERIES
CONCRETE BULKHEAD AND TRENCHSTOP DETAILS

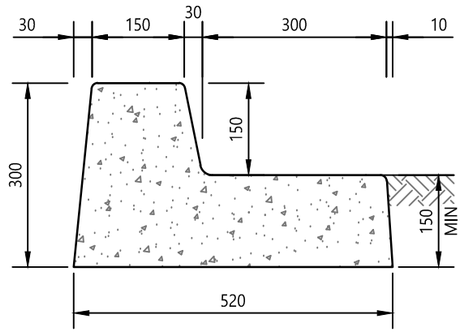
DRAWING NUMBER SD0418
REV -
SHEET 1 OF 1
A3



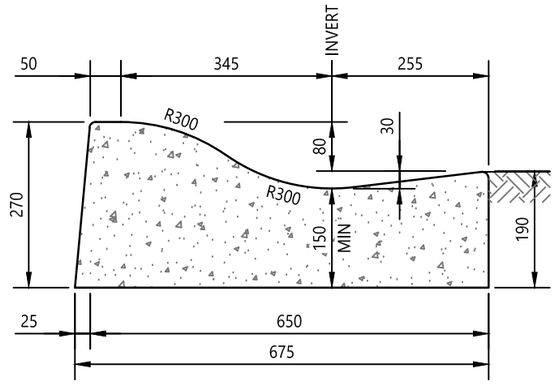
BARRIER KERB AND CHANNEL
(MODIFIED SA KERB)



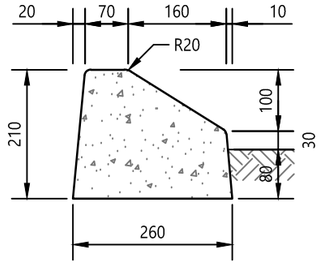
MOUNTABLE KERB AND CHANNEL
(SE KERB)



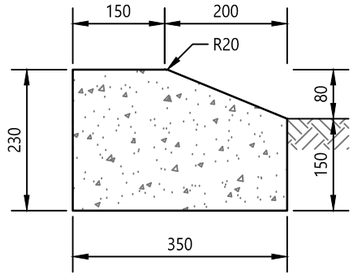
BARRIER KERB AND CHANNEL
(SL KERB)



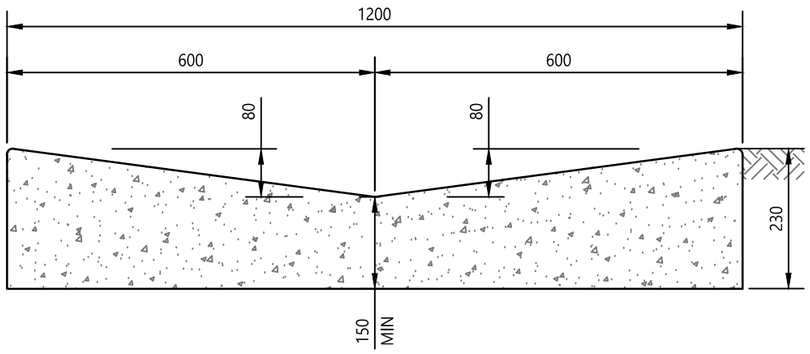
ROLL TOP KERB AND CHANNEL
(MODIFIED RT KERB)



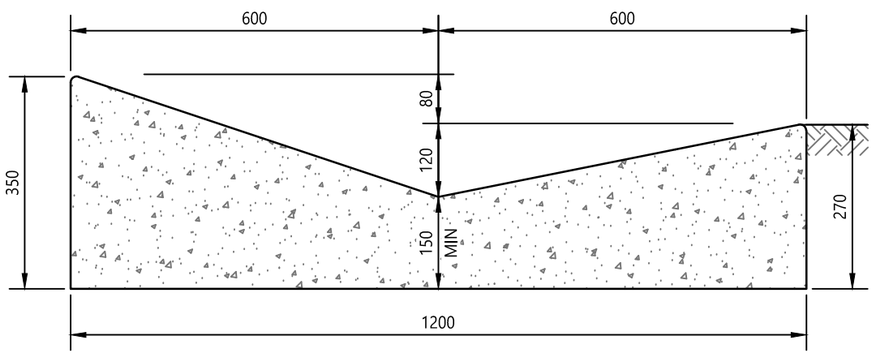
SEMI-MOUNTABLE KERB
(SF KERB)



FULLY MOUNTABLE KERB
(FM KERB)



SHOULDER CHANNEL - TYPE 1
(MODIFIED SO KERB)



SHOULDER CHANNEL - TYPE 2
(SK KERB)

NOTES:

1. CONCRETE STRENGTH GRADE SHALL BE N25 UNLESS OTHERWISE SPECIFIED AND SHALL CONFORM TO THE REQUIREMENTS OF AS 1379 SPECIFICATION AND SUPPLY OF CONCRETE.
2. REFER TO AS 2876 CONCRETE KERBS AND CHANNELS FOR SPECIFIC REQUIREMENTS.
3. REFER TO AS/NZS 4671 STEEL REINFORCING MATERIALS FOR SPECIFIC REQUIREMENTS.
4. CONTROL JOINT SPACING SHALL BE 3m MAXIMUM AND SHALL BE FORMED AS SHOWN ON SHEET 2.
5. ISOLATION JOINTS SHALL BE LOCATED WHERE KERB AND CHANNEL ABUTS A DRAINAGE PIT LINTEL OR OTHER STRUCTURAL ELEMENT AND SHALL BE FORMED AS SHOWN ON SHEET 2.
6. EXPANSION JOINTS SHALL BE LOCATED WHERE KERB AND CHANNEL ABUTS A RETROFITTED VEHICULAR ACCESS CROSSING LAYBACK OR AN INDUSTRIAL AND COMMERCIAL VEHICLE ACCESS CROSSING LAYBACK AND SHALL BE FORMED AS SHOWN ON SHEET 2.
7. SOME KERB AND CHANNEL DIMENSIONS SLIGHTLY VARY FROM TfNSW STANDARD SHAPES. REFER TO TfNSW KERB AND CHANNEL STANDARD DRAWINGS FOR WORKS ON TfNSW-CONTROLLED ROADS.
8. THINNEST PART OF KERB SHALL BE 150mm MINIMUM IRRESPECTIVE OF CONSTRUCTION TOLERANCES.
9. AL EXPOSED SURFACES SHALL BE SMOOTH STEEL TROWEL FINISHED AND ALL EXPOSED CORNERS TO HAVE A RADIUS OF 10mm UNLESS OTHERWISE SPECIFIED.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500

1:10

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

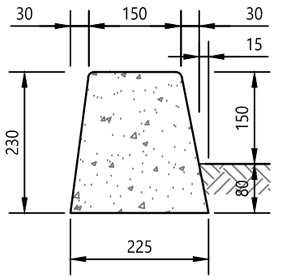
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

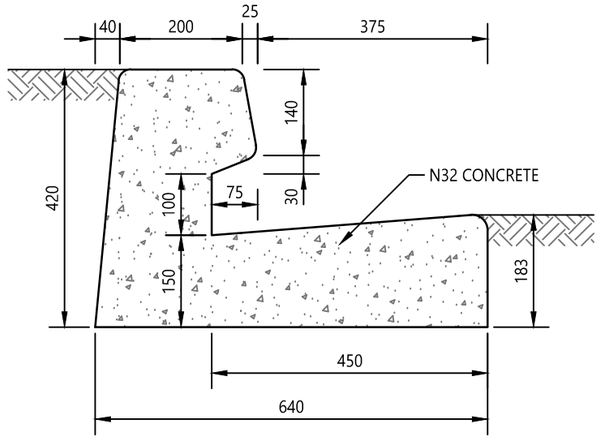
STANDARD DRAWING

KERB AND CHANNEL SERIES
KERB AND CHANNEL PROFILES

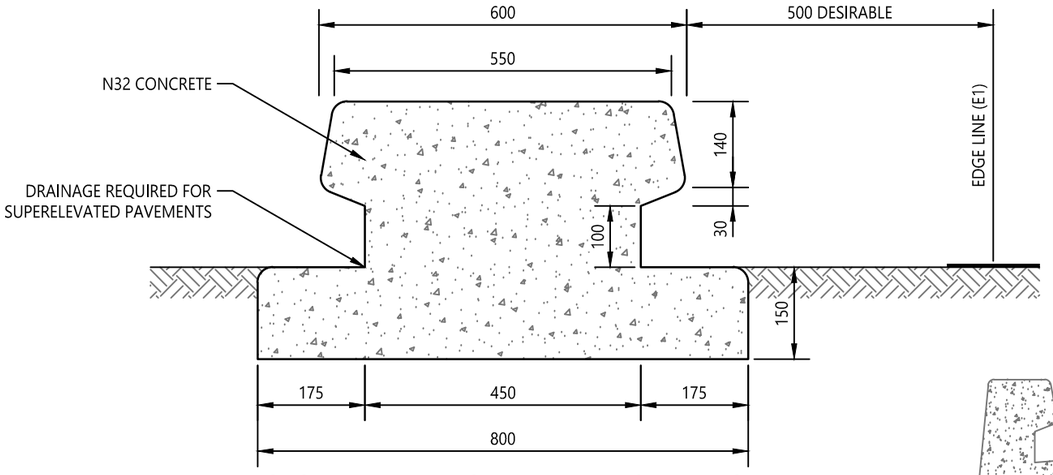
DRAWING NUMBER	REV
SD0501	-
SHEET 1 OF 2	A3



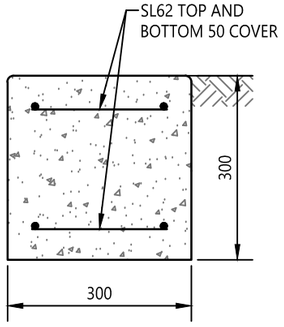
BARRIER KERB
(SM KERB)



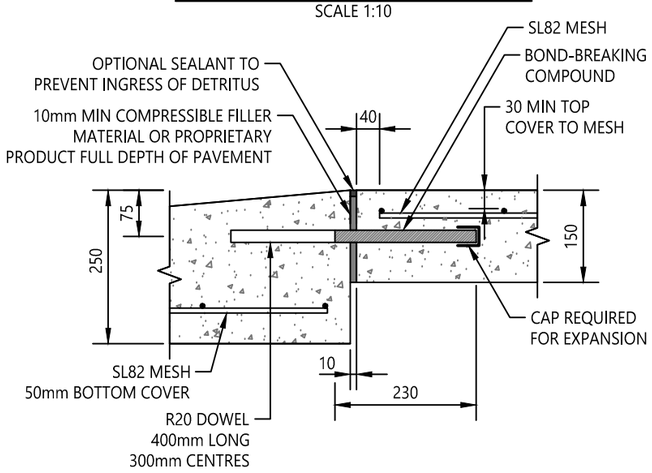
ELSHOLZ KERB
SPEED ZONES LESS THAN 70km/h
SCALE 1:10



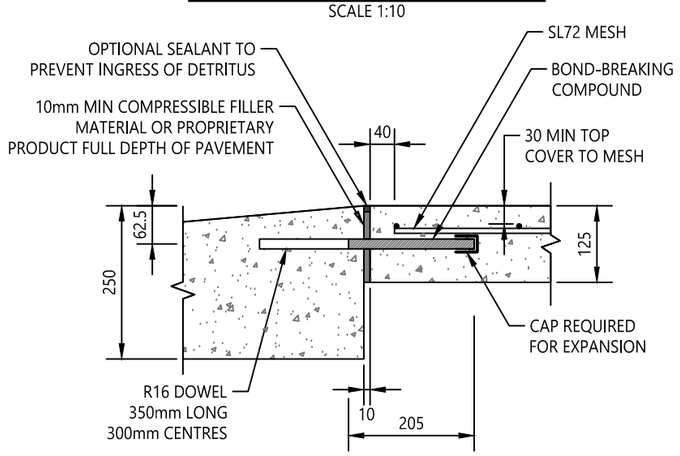
ELSHOLZ KERB - TYPICAL MEDIAN INSTALLATION
SPEED ZONES LESS THAN 70km/h
SCALE 1:10



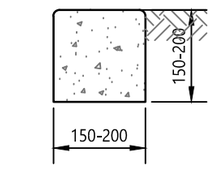
EDGE RESTRAINT
(300x300)



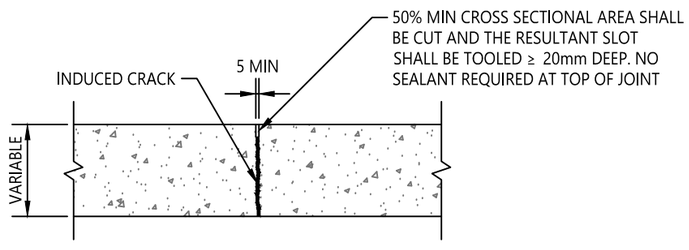
EXPANSION JOINT (EJ) 250mm TO 150mm
LAYBACK TO VEHICLE ACCESS CROSSING
SCALE 1:10



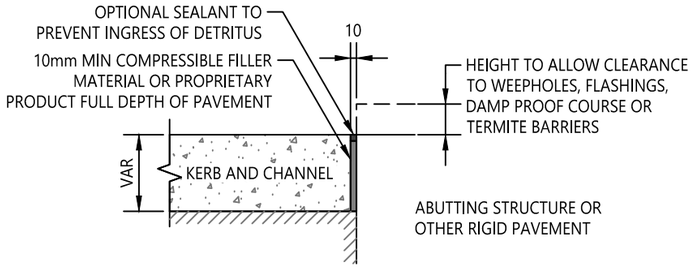
EXPANSION JOINT (EJ) 250mm TO 125mm
LAYBACK TO VEHICLE ACCESS CROSSING
SCALE 1:10



EDGE RESTRAINT
(150x150 200x200)



CONTROL JOINT IN KERB AND CHANNEL
SCALE 1:10



ISOLATION JOINT
SCALE 1:10

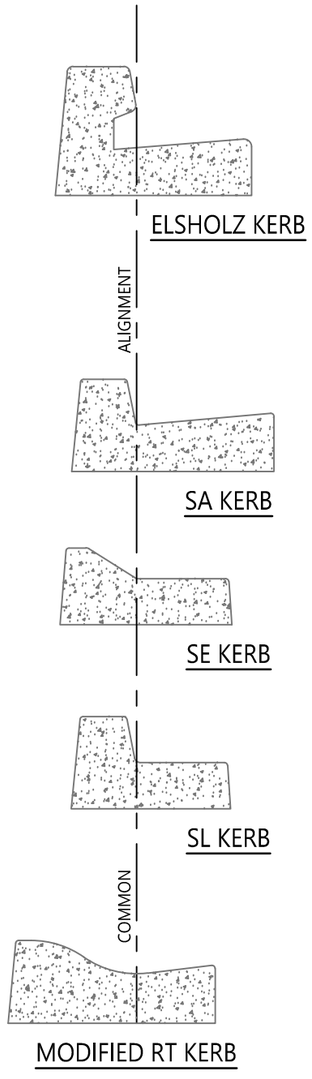


DIAGRAM SHOWING KERB ALIGNMENT
SOURCE: TfNSW STANDARD DRAWING R0740-01

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 100 200 300 400 500
1:10
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

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CHECKED	M BAMBER
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UNIT MANAGER APPROVAL
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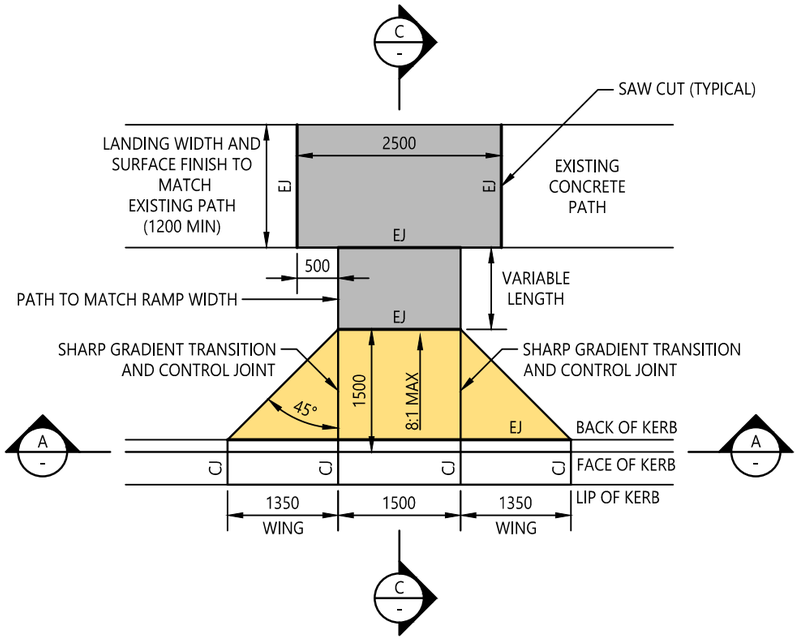
KERB AND CHANNEL SERIES
KERB AND CHANNEL PROFILES

STANDARD DRAWING

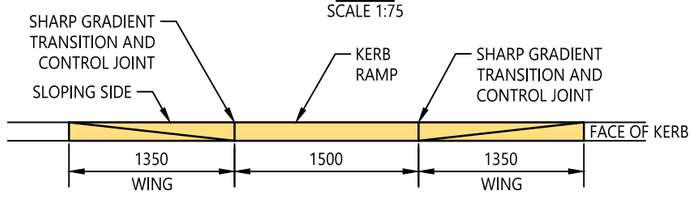
DRAWING NUMBER	REV
SD0501	-
SHEET 2 OF 2	A3



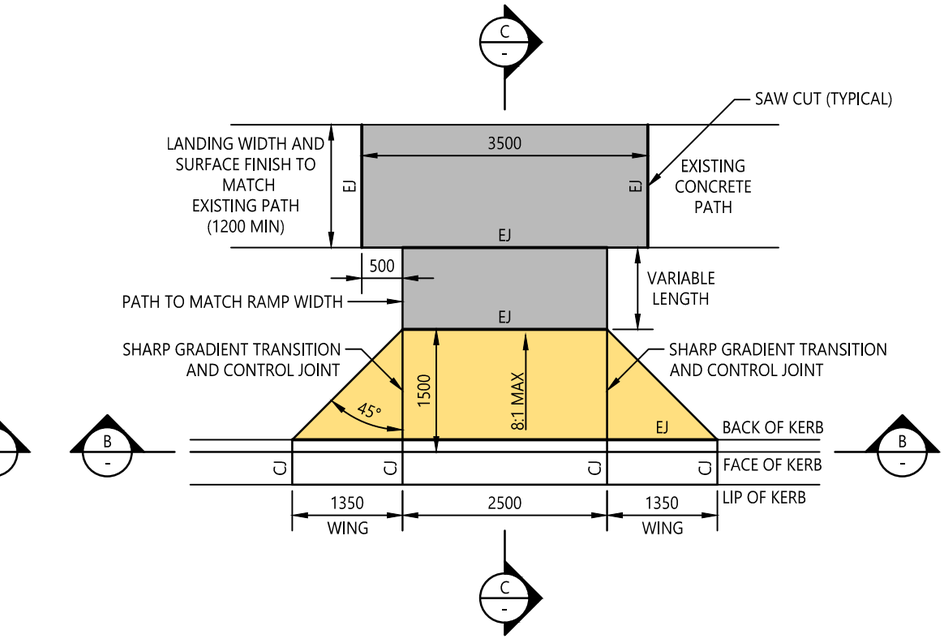
1500mm WIDE KERB RAMP CONNECTING TO EXISTING PATH

PLAN

SCALE 1:75



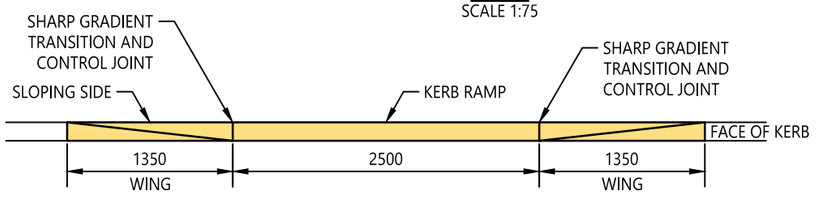
SECTION A - SCALE 1:50



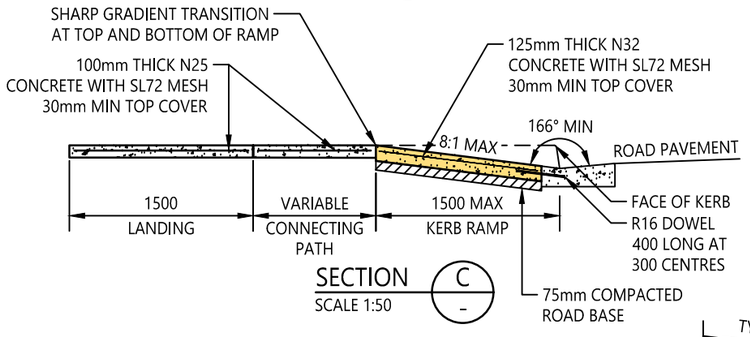
2500mm WIDE KERB RAMP CONNECTING TO EXISTING PATH

PLAN

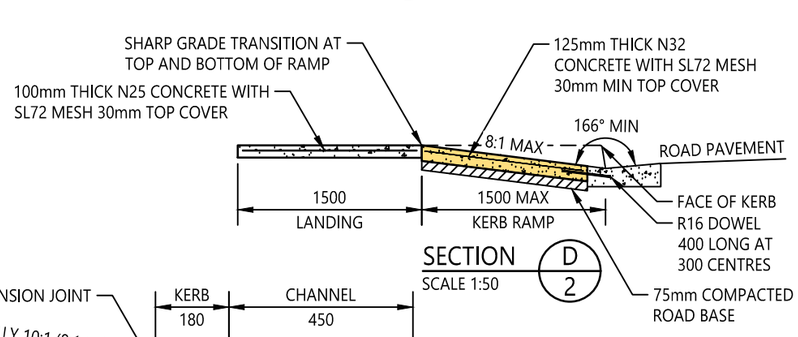
SCALE 1:75



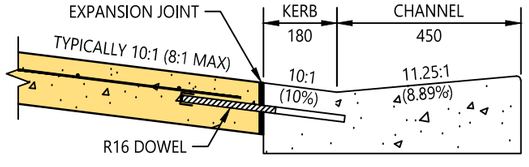
SECTION B - SCALE 1:50



SECTION C - SCALE 1:50

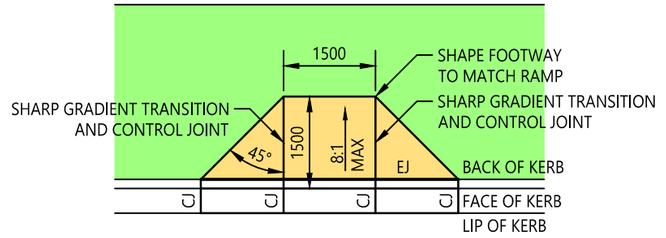


SECTION D - SCALE 1:50



KERB TO KERB RAMP INTERFACE

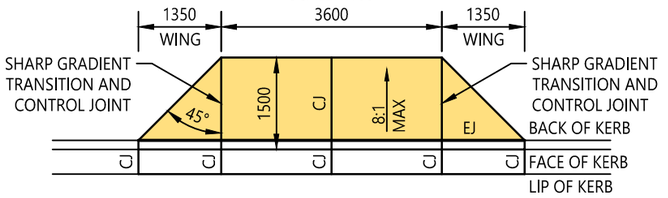
SCALE 1:15



KERB RAMP CONNECTING TO EXISTING FOOTWAY

PLAN

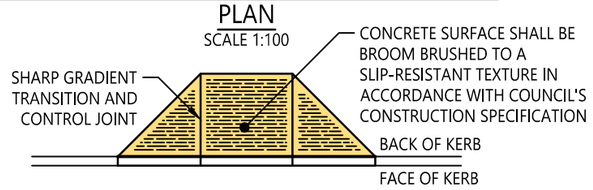
SCALE 1:100



KERB RAMP AT PEDESTRIAN (ZEBRA) CROSSING

PLAN

SCALE 1:100



KERB RAMP SURFACE FINISH DETAIL

PLAN

SCALE 1:100

GENERAL NOTES:

1. KERB RAMPS SHALL BE CONSTRUCTED AT ALL ROAD INTERSECTIONS, PARK ACCESSES ADJACENT TO OVERLAND FLOW PATHS AND WHERE SHOWN ON THE APPROVED DRAWINGS, IN ACCORDANCE WITH AS/NZS 1428.1 AND AS 3727.1.
2. KERB RAMPS SHOULD BE LOCATED ON THE DOWNSTREAM SIDE OF DRAINAGE PITS.
3. KERB RAMPS SHALL BE ALIGNED WITH THE DESIRED DIRECTION OF PEDESTRIAN TRAVEL AND WITH THE CORRESPONDING RAMP ON THE OPPOSITE SIDE OF THE ROAD.
4. THE KERB RAMP SHALL BE DEFINED BY SHARP GRADIENT TRANSITIONS (CHANGE IN GRADE) ON ALL FOUR SIDES OF RAMP. RAMP GRADIENT SHALL BE 10:1 TO 8:1 MAXIMUM.
5. KERB RAMPS SHALL BE CONSTRUCTED ON COMPACTED ROAD BASE 75mm MINIMUM THICK AND BE CONSTRUCTED IN ACCORDANCE WITH COUNCIL'S CIVIL WORKS SPECIFICATION.
6. EXISTING KERB AND CHANNEL SHALL BE SAW CUT, REMOVED AND REINSTATED IN ACCORDANCE WITH COUNCIL'S CIVIL WORKS SPECIFICATION.
7. KERB RAMPS MAY BE CONSTRUCTED IN ALTERNATIVE DECORATIVE MATERIALS IN COMMERCIAL AREAS, WITH TACTILE GROUND SURFACE INDICATORS TO AS 1428, AND SHALL MATCH THE GRADIENT AND DIMENSIONS SHOWN ON THIS STANDARD DRAWING.
8. KERB RAMP WING ANGLE MAY BE REDUCED FROM 45° TO 30° AT CONSTRAINED LOCATIONS WITH THE APPROVAL OF COUNCIL'S REPRESENTATIVE.

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

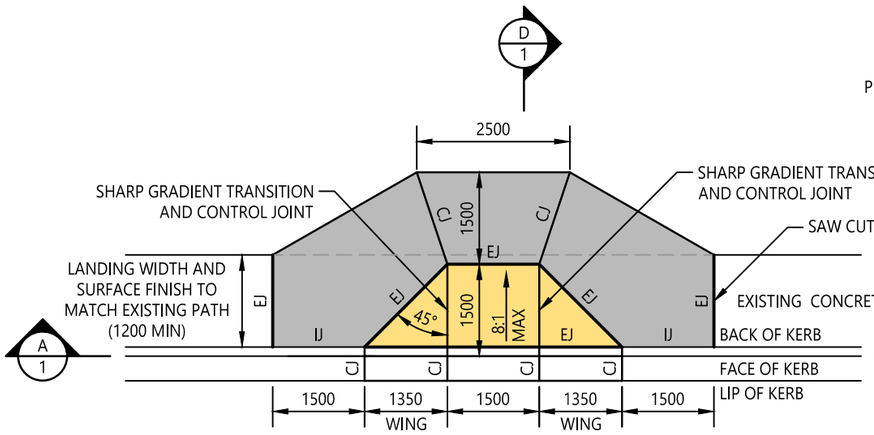
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

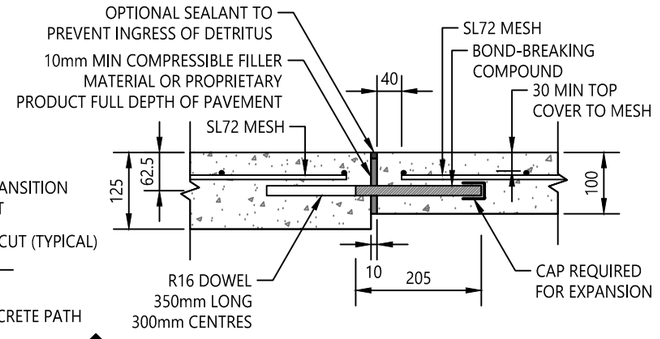
KERB AND CHANNEL SERIES
KERB RAMPS

DRAWING NUMBER	REV
SD0502	-
SHEET 1 OF 3	A3



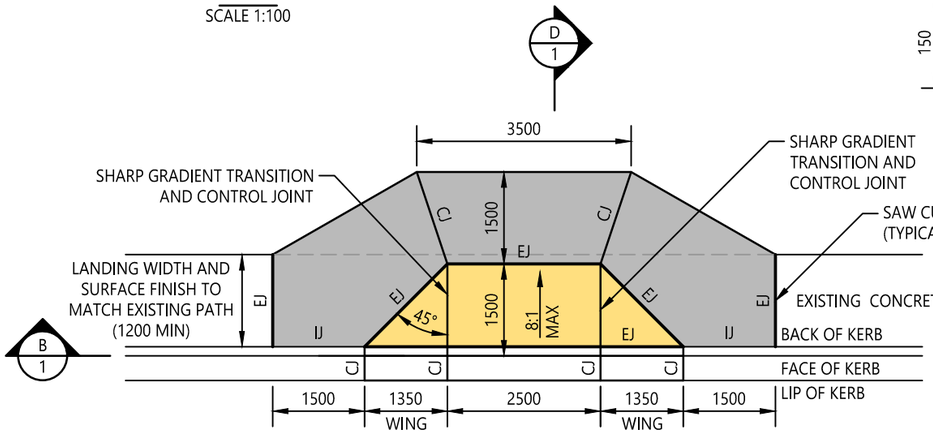
1500mm WIDE KERB RAMP CONNECTING TO EXISTING KERBSIDE PATH PLAN

SCALE 1:100



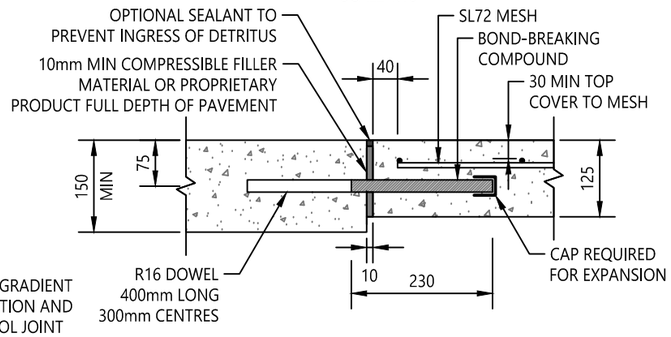
EXPANSION JOINT (EJ) 125mm TO 100mm KERB RAMP TO PATH

SCALE 1:10



2500mm WIDE KERB RAMP CONNECTING TO EXISTING KERBSIDE PATH PLAN

SCALE 1:100



EXPANSION JOINT (EJ) 150mm TO 125mm EXISTING CHANNEL TO KERB RAMP

SCALE 1:10

STEEL REINFORCEMENT NOTES:

1. STEEL REINFORCEMENT SHALL BE PROVIDED WITH A MINIMUM COVER OF 30mm TO THE TOP SURFACE OF THE PAVEMENT AND 40mm TO THE SLAB EDGE OR A FORMED JOINT.
2. STEEL REINFORCEMENT SHALL BE SUPPORTED BY BAR CHAIRS IN ACCORDANCE WITH AS/NZS 2425, AT A MAXIMUM OF 600mm CENTRES.
3. STEEL REINFORCEMENT SHALL BE LAPPED SO THAT A MINIMUM OF 2 CROSS BARS SHALL BE OVERLAPPED.
4. RE-ENTRANT CORNERS SHALL BE REINFORCED WITH TRIMMING STEEL REINFORCEMENT NOT LESS THAN 2xN12 BARS 1m MINIMUM LONG.
5. STEEL REINFORCING MESH SHALL BE TERMINATED EITHER SIDE OF THE CONTROL JOINT OR EXPANSION JOINT.

CONCRETE NOTES:

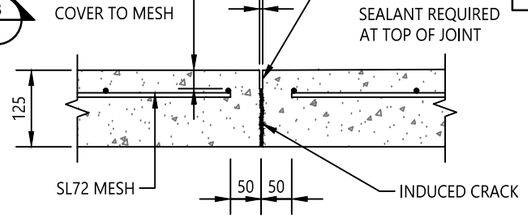
1. CONCRETE STRENGTH GRADE FOR COLOURED KERB RAMPS SHALL BE N32.
2. CONCRETE SHALL BE CONTINUOUSLY CURED FOR A MINIMUM 3 DAYS.
3. CONCRETE SHALL BE PROTECTED FROM TRAFFIC FOR A MINIMUM 7 DAYS.
4. KERB RAMP AND WINGS TO BE CONSTRUCTED WITH INTEGRALLY COLOURED CONCRETE. DOSE RATE: 1x20kg BAG OF YORKSTONE OXIDE PIGMENT COLOURING, OR EQUIVALENT, FOR EACH $1m^3$ OF CONCRETE (6 TO 7% PIGMENT BY WEIGHT OF CEMENT CONTENT).
5. CONCRETE TO BE BROOM FINISHED TO PROVIDE A SLIP-RESISTANT SURFACE AND SHALL HAVE A SMOOTH PERIMETER BORDER WITH 10mm RADIUS EDGES.

CONTROL JOINT (CJ) NOTES:

1. SAW CUT DEPTH OF THE WEAKENED PLANE JOINT SHALL BE 0.25 TIMES THICKNESS OF SLAB. CONTROL JOINTS SHALL BE INSTALLED WITHOUT A SMOOTH BORDER ON EACH SIDE OF THE JOINT (EXCEPT CONTROL JOINTS IN KERB RAMP).
2. CONTROL JOINT SPACING SHALL BE 2.5m IN FOOTPATH SLABS, 3.1m IN SHARED PATH SLABS; AND 3m MAXIMUM IN KERB AND CHANNEL.
3. MAXIMUM CONTROL JOINT SPACING SHOULD BE NO GREATER THAN 1.5 TIMES THE WIDTH OF THE SLAB PANEL.

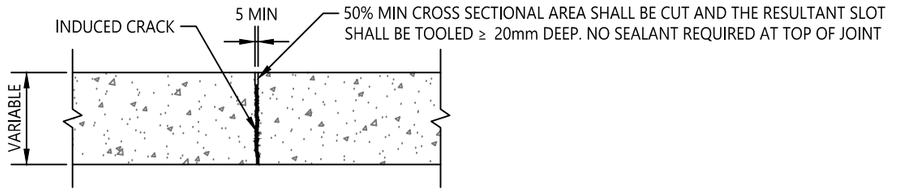
EXPANSION JOINT (EJ) NOTES:

1. EXPANSION JOINT SPACING SHALL BE 10m (12m MAXIMUM) IN FOOTPATH; AND 12.4m IN SHARED PATH SLABS; AND WHERE KERB AND CHANNEL ABUTS A COMMERCIAL AND INDUSTRIAL VEHICLE ACCESS CROSSING LAYBACK. EXPANSION JOINTS SHALL BE INSTALLED WITH A SMOOTH BORDER ON EACH SIDE OF THE JOINT.
2. A SYSTEM TO CORRECTLY ALIGN DOWELS SHALL BE PROVIDED.
3. BOND-BREAKING COMPOUND AND END CAP MAY BE REPLACED WITH A PURPOSE-MADE DOWEL SLEEVE.



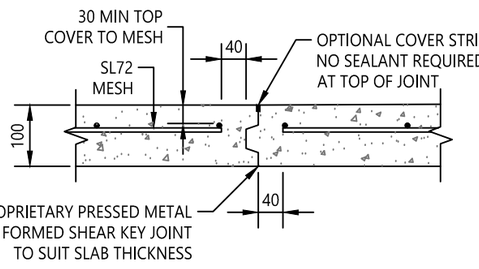
CONTROL JOINT (CJ) IN KERB RAMP

SCALE 1:10



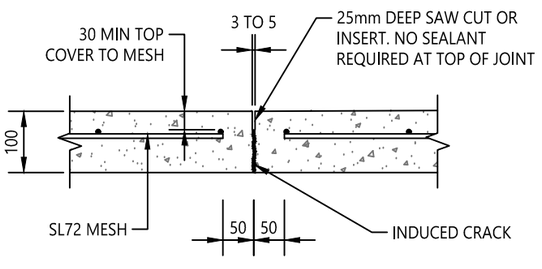
CONTROL JOINT IN KERB AND CHANNEL

SCALE 1:10



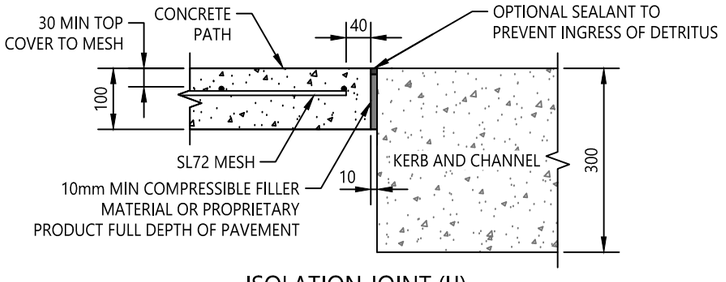
CONTROL JOINT (CJ) - TYPE 1

SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2

SCALE 1:10



ISOLATION JOINT (IJ)

SCALE 1:10

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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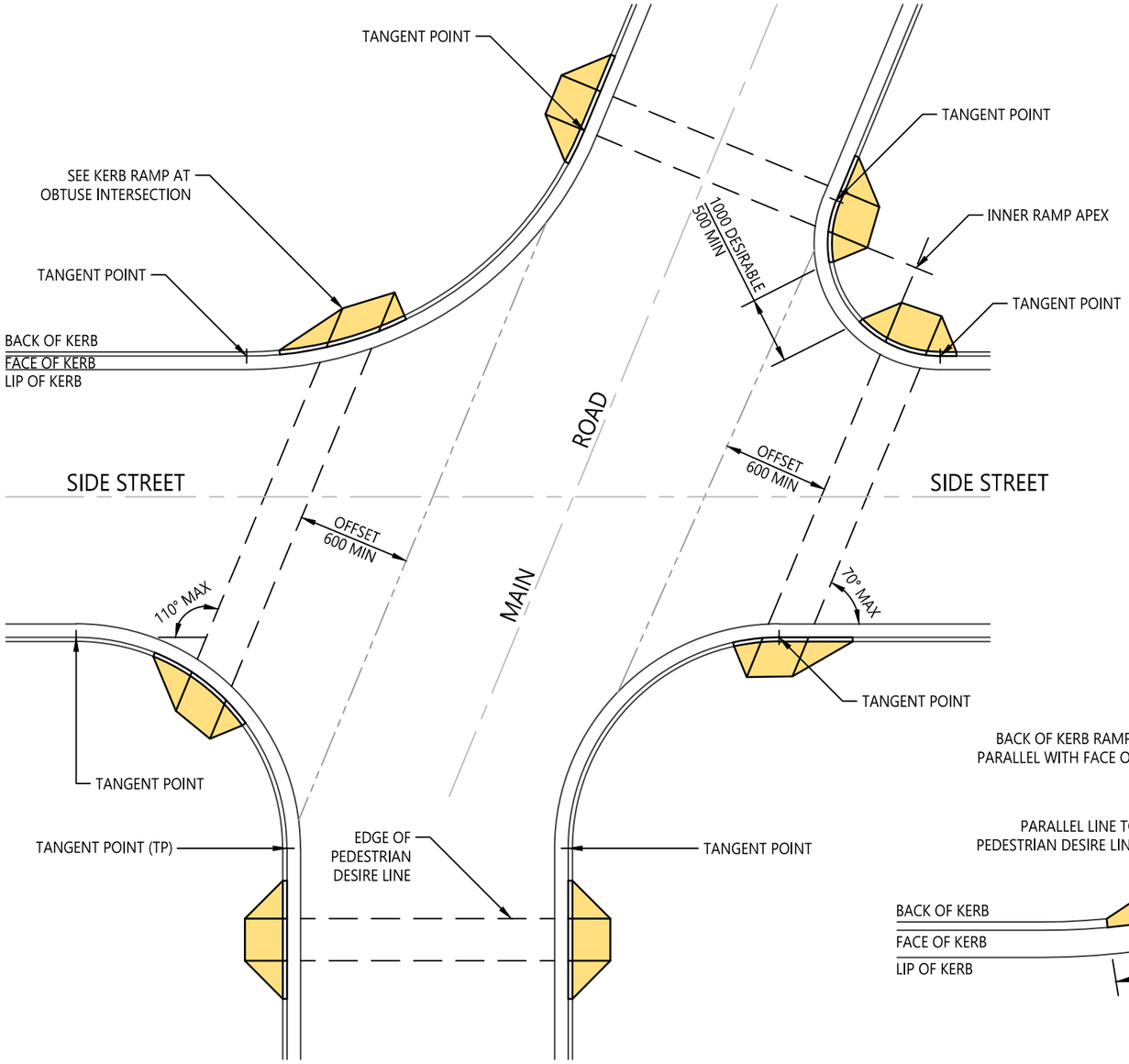
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

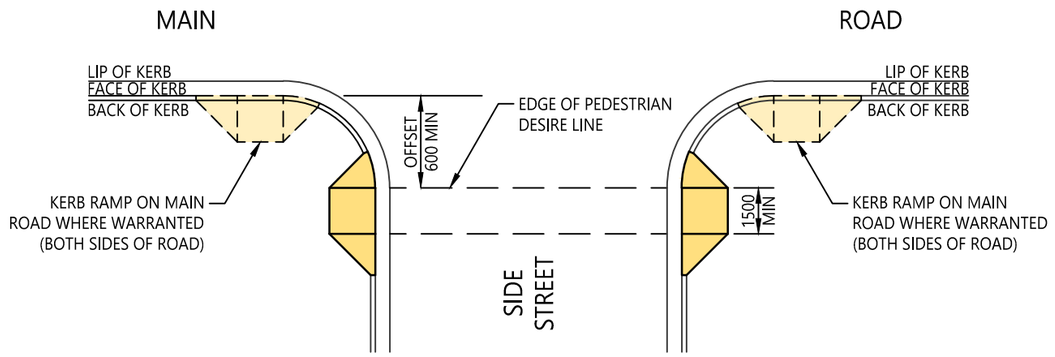
KERB AND CHANNEL SERIES
KERB RAMPS

STANDARD DRAWING

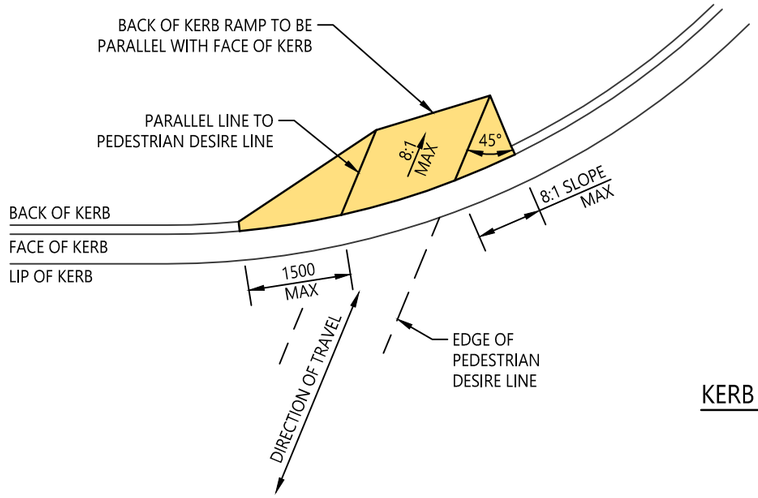
DRAWING NUMBER	REV
SD0502	-
SHEET 2 OF 3	A3



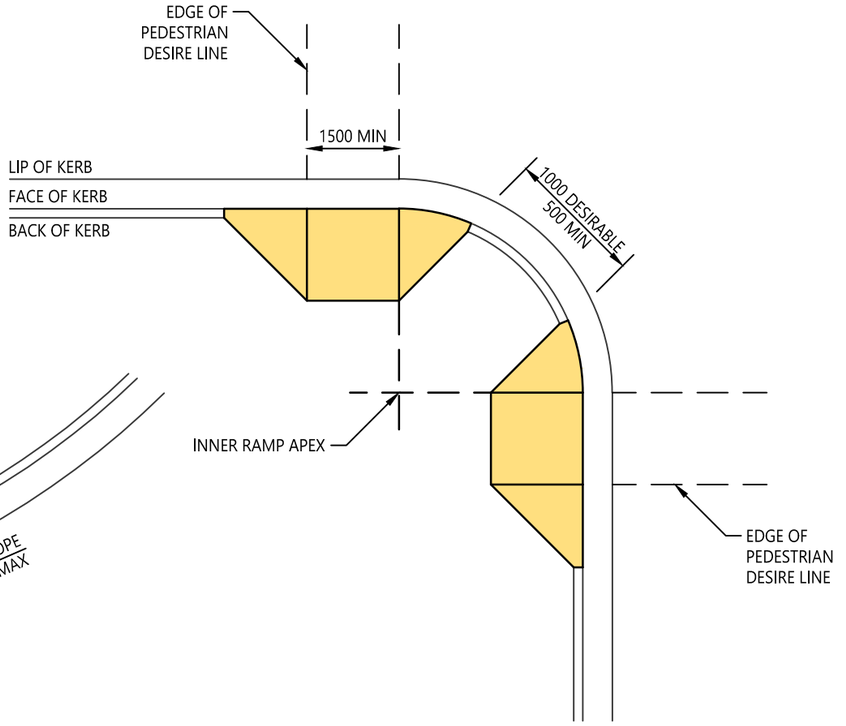
KERB RAMP ALIGNMENTS
NOT TO SCALE



KERB RAMPS AT T-INTERSECTION
NOT TO SCALE



KERB RAMP AT OBTUSE INTERSECTION
SCALE 1:100



KERB RAMPS WITH ADJACENT CROSSINGS
SCALE 1:100

NOTE:
THE ABOVE LAYOUTS ARE BASED ON TfNSW STANDARD DRAWING R0300-11

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

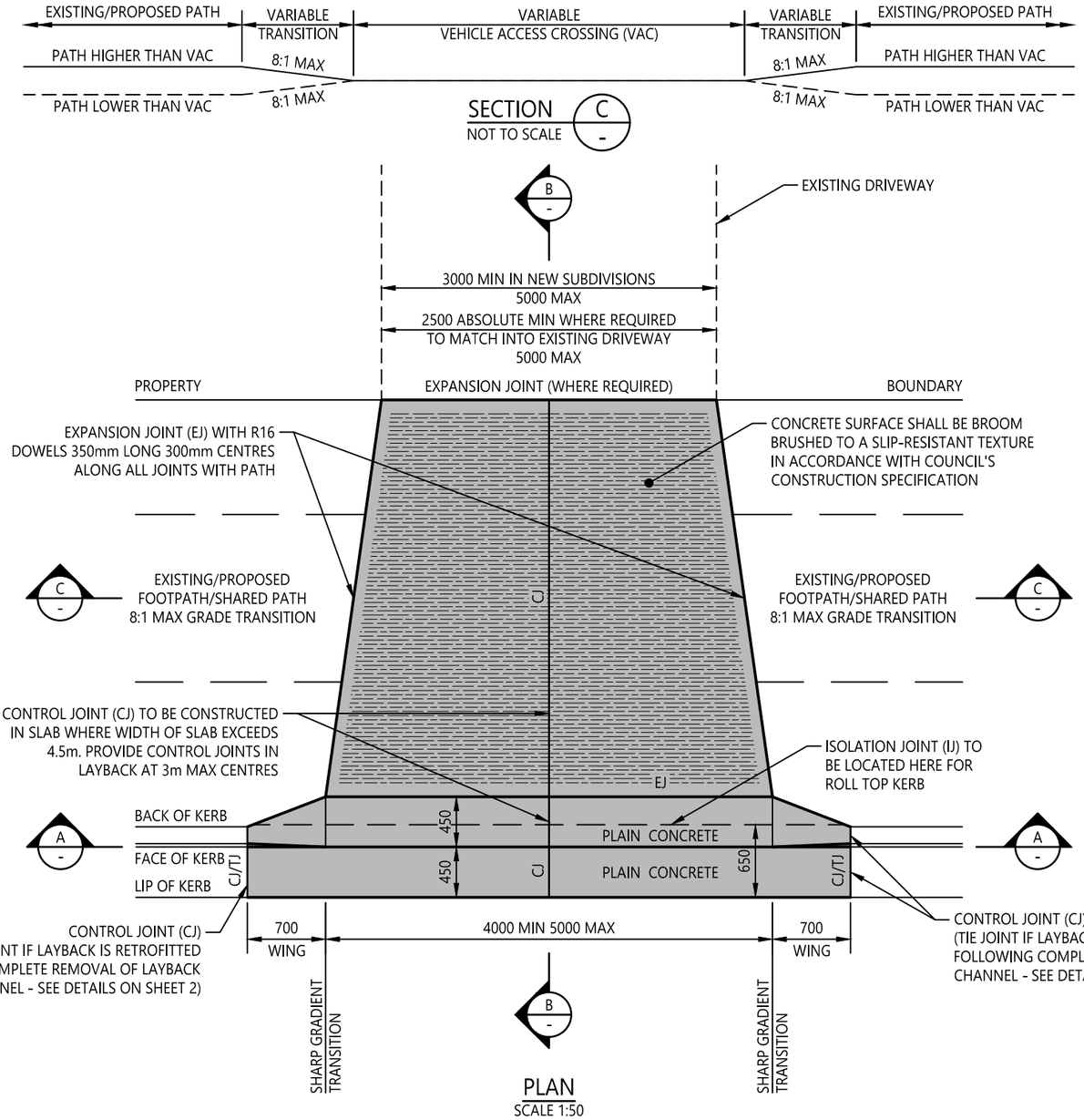
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

KERB AND CHANNEL SERIES
KERB RAMPS

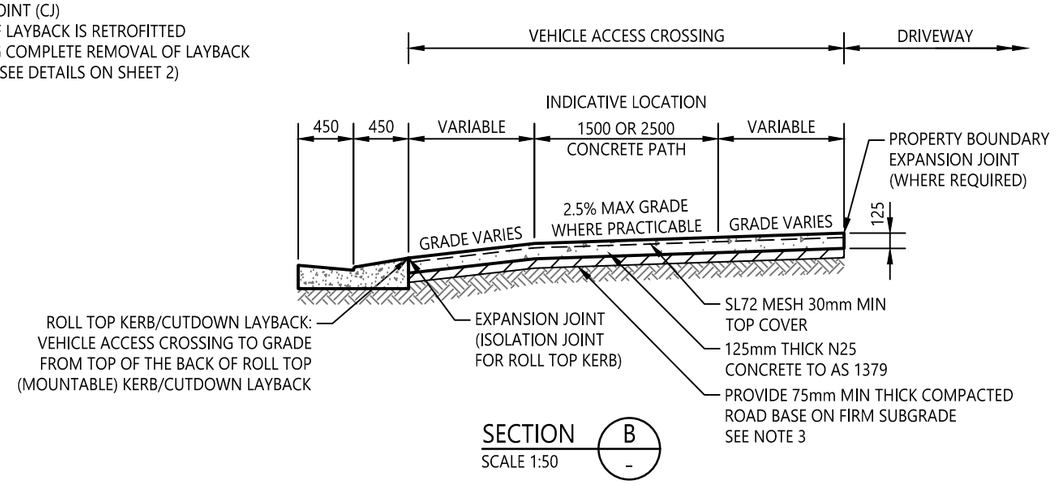
STANDARD DRAWING

DRAWING NUMBER	REV
SD0502	-
SHEET 3 OF 3	A3



NOTES:

1. THIS DRAWING IS TO BE USED AS A GUIDE ONLY. RESIDENTIAL VEHICULAR ACCESS CROSSINGS ARE TO BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AS 2890.1 AND AS 3727.1.
2. SUITABLY COMPACT APPROVED SUBGRADE MATERIAL. PROVIDE REPLACEMENT SUBGRADE IF REQUIRED.
3. CONCRETE STRENGTH GRADE SHALL BE N25 UNLESS OTHERWISE SPECIFIED AND SHALL CONFORM TO AS 1379 SPECIFICATION AND SUPPLY OF CONCRETE.
4. EXPANSION JOINTS SHALL BE 10mm WIDE AND FILLED WITH A PREFORMED COMPRESSIBLE BITUMEN-IMPREGNATED FILLER AT 12m CENTRES AS SHOWN ON SHEET 2.
5. CONTROL JOINTS SHALL BE FORMED AS SHOWN ON SHEET 2.
6. SAWN CONTROL JOINTS SHALL BE CUT AS SOON AS SURFACE IS HARD ENOUGH THAT IT WILL NOT CHIP, SPALL AND COLLAPSE ON THE CUTTING BLADE. GENERALLY, THIS SHOULD BE WITHIN 24 HOURS OF CONCRETE PLACEMENT.
7. REINFORCING MESH SHALL BE FABRICATED TO AS 4671 STEEL REINFORCING MATERIALS.
8. REINFORCING MESH IN SLABS SHALL BE PLACED WITH 30mm MINIMUM TOP COVER.
9. DOWELS TO BE GALVANISED AND INSTALLED PARALLEL TO EACH OTHER AND PARALLEL TO FINISHED SURFACE.
10. DOWELS ARE TO BE INSTALLED WITH DOWEL SLEEVE AND GREASED AT ONE END WITH A 10mm FREE MOVEMENT GAP AT THE GREASED END, UNLESS OTHERWISE NOTED.
11. WHERE A NEW CROSSING IS TO BE CONSTRUCTED IN EXISTING KERB AND CHANNEL, THE KERB MAY BE REMOVED BY SAW CUTTING ALONG THE INVERT. THE NEW LAYBACK SHALL BE TIED TO THE CHANNEL USING 400mm LONG N12 DEFORMED TIE-BARS DRILLED AND EPOXIED INTO THE EXISTING CHANNEL AT 300mm CENTRES. REFER TO DETAILS ON SHEET 2.
12. WHERE VEHICULAR ACCESS CROSSINGS ARE ALSO USED AS KERB RAMPS, THE LAYBACK SHALL BE MODIFIED TO OMIT THE 25mm BULLNOSE AND A KERB RAMP PROFILE AND SHAPE INTEGRATED WITH THE WHOLE VEHICULAR ACCESS CROSSING.
13. ALTERNATIVE DECORATIVE VEHICLE ACCESS CROSSING SURFACE TREATMENT MAY BE PROVIDED (NOT IN LAYBACK) AT THE LANDOWNER'S EXPENSE, OR IN COMMERCIAL AREAS, SUBJECT TO APPROVAL BY COUNCIL'S REPRESENTATIVE.
14. REFER TO SD0508 FOR APPROPRIATE DRIVEWAY PROFILE CONFIGURATION.
15. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.



REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

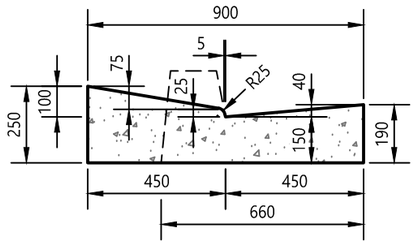
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

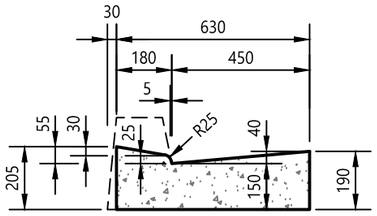
KERB AND CHANNEL SERIES
RESIDENTIAL VEHICLE ACCESS CROSSING FOR ROADS WITH KERB AND CHANNEL

STANDARD DRAWING

DRAWING NUMBER	REV
SD0503	-
SHEET 1 OF 2	A3

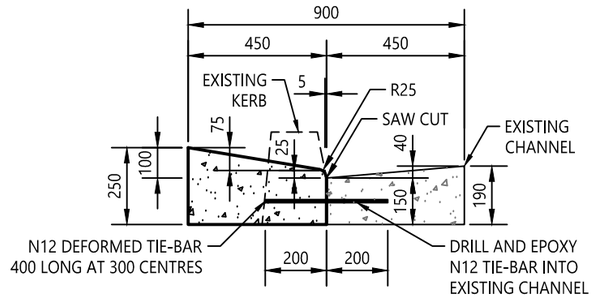


STANDARD LAYBACK
SCALE 1:20

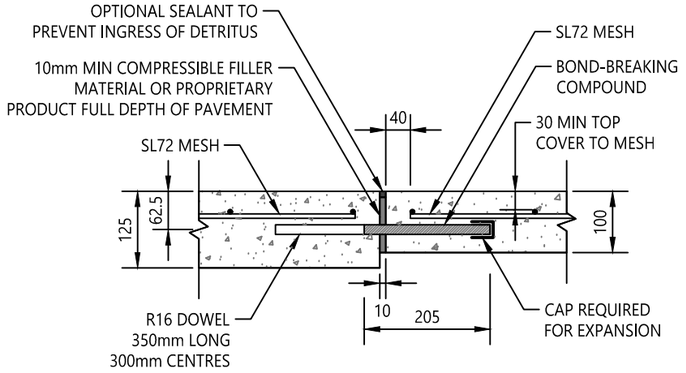


NON-STANDARD CUTDOWN LAYBACK
SCALE 1:20

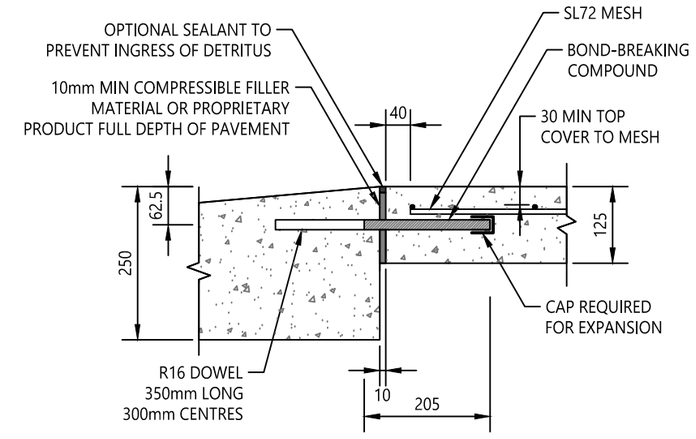
ONLY TO BE USED WITH APPROVAL
FROM COUNCIL'S REPRESENTATIVE



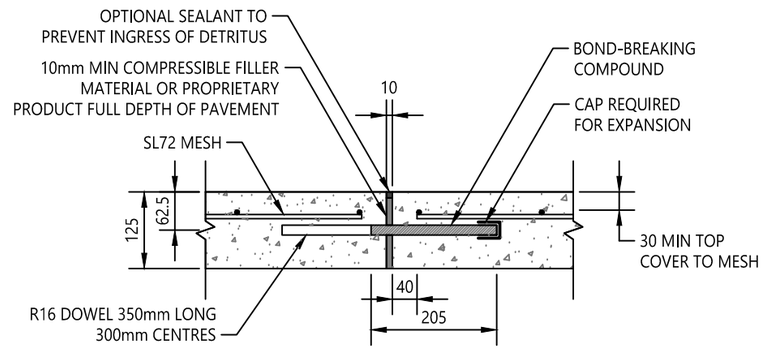
RETROFITTED LAYBACK TO EXISTING CHANNEL
SCALE 1:20



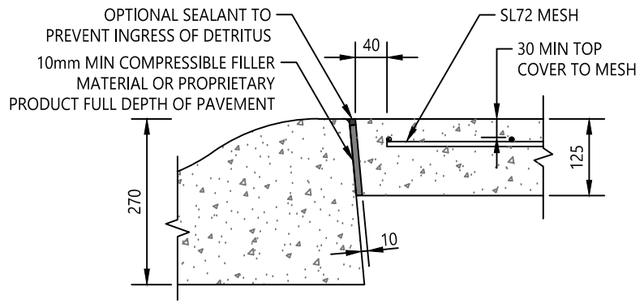
EXPANSION JOINT (EJ) 125mm TO 100mm
VEHICLE ACCESS CROSSING TO FOOTPATH
SCALE 1:10



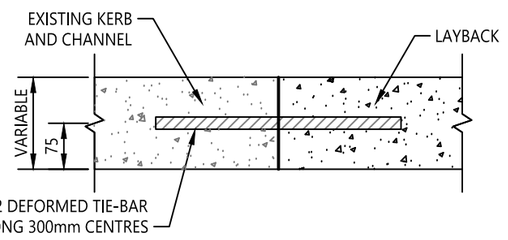
EXPANSION JOINT (EJ) 250mm TO 125mm
LAYBACK TO VEHICLE ACCESS CROSSING
SCALE 1:10



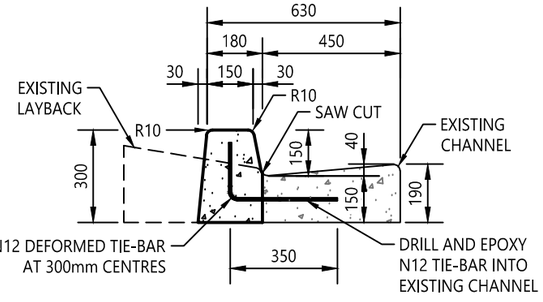
EXPANSION JOINT (EJ) 125mm
SCALE 1:10



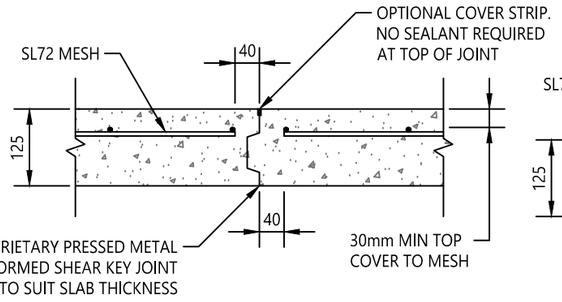
ISOLATION JOINT (IJ) 270mm TO 125mm
ROLL TOP KERB TO VEHICLE ACCESS CROSSING
SCALE 1:10



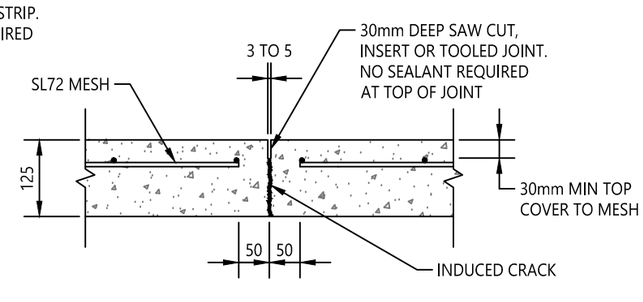
TIE JOINT (TJ) IN KERB AND CHANNEL TO
COMPLETELY RETROFITTED LAYBACK
SCALE 1:10



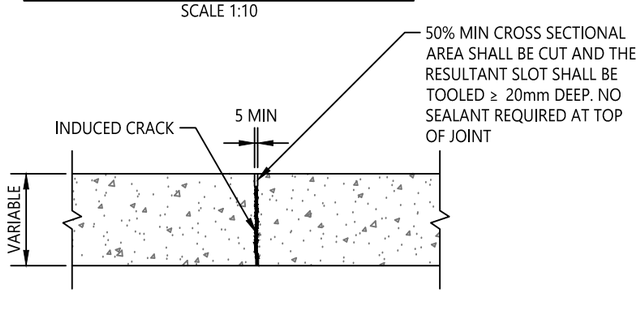
RETROFITTED KERB TO EXISTING CHANNEL
SCALE 1:20



CONTROL JOINT (CJ) - TYPE 1
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2
SCALE 1:10



CONTROL JOINT IN LAYBACK
SCALE 1:10

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

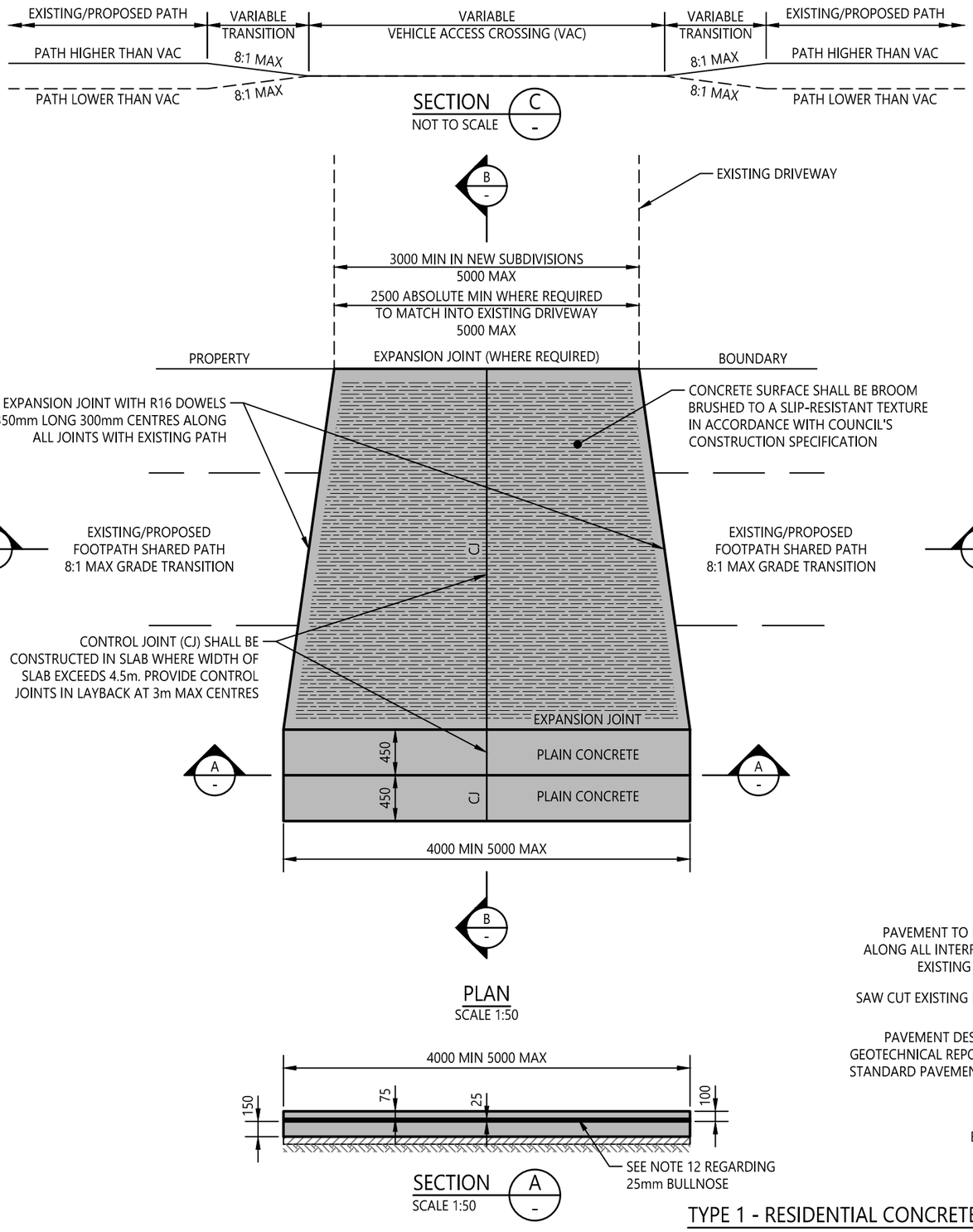
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

KERB AND CHANNEL SERIES
RESIDENTIAL VEHICLE ACCESS CROSSING
FOR ROADS WITH KERB AND CHANNEL

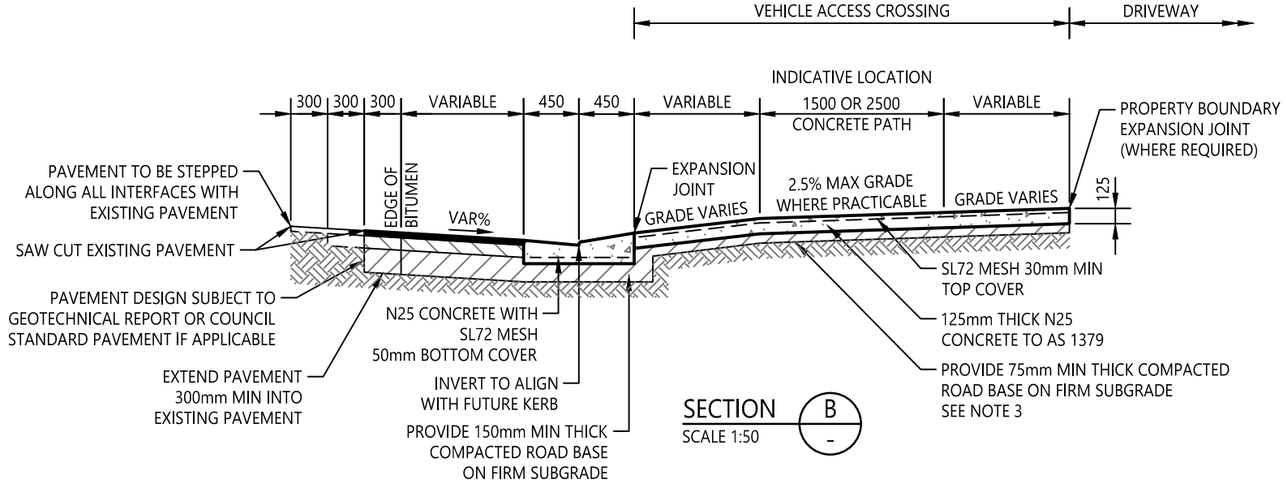
STANDARD DRAWING

DRAWING NUMBER	REV
SD0503	-
SHEET 2 OF 2	A3



NOTES:

1. THIS DRAWING IS TO BE USED AS A GUIDE ONLY. RESIDENTIAL VEHICULAR ACCESS CROSSINGS ARE TO BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AS 2890.1 AND AS 3727.1.
2. SUITABLY COMPACT APPROVED SUBGRADE MATERIAL. PROVIDE REPLACEMENT SUBGRADE IF REQUIRED.
3. CONCRETE STRENGTH GRADE SHALL BE N25 UNLESS OTHERWISE SPECIFIED AND SHALL CONFORM TO AS 1379 SPECIFICATION AND SUPPLY OF CONCRETE.
4. EXPANSION JOINTS SHALL BE 10mm WIDE AND FILLED WITH A PREFORMED COMPRESSIBLE BITUMEN-IMPREGNATED FILLER AT 12m CENTRES AS SHOWN ON SHEET 3.
5. CONTROL JOINTS SHALL BE FORMED AS SHOWN ON SHEET 3.
6. SAWN CONTROL JOINTS SHALL BE CUT AS SOON AS SURFACE IS HARD ENOUGH THAT IT WILL NOT CHIP, SPALL AND COLLAPSE ON THE CUTTING BLADE. GENERALLY, THIS SHOULD BE WITHIN 24 HOURS OF CONCRETE PLACEMENT.
7. REINFORCING MESH SHALL BE FABRICATED TO AS/NZS 4671 STEEL REINFORCING MATERIALS.
8. REINFORCING MESH IN SLABS SHALL BE PLACED WITH 30mm MINIMUM TOP COVER.
9. DOWELS SHALL BE GALVANISED AND INSTALLED PARALLEL TO EACH OTHER AND PARALLEL TO FINISHED SURFACE.
10. DOWELS SHALL BE INSTALLED WITH DOWEL SLEEVE AND GREASED AT ONE END WITH A 10mm FREE MOVEMENT GAP AT THE GREASED END, UNLESS OTHERWISE NOTED.
11. WHERE VEHICULAR ACCESS CROSSINGS ARE ALSO USED AS KERB RAMPS, THE LAYBACK SHALL BE MODIFIED TO OMIT THE 25mm BULLNOSE AND A KERB RAMP PROFILE AND SHAPE INTEGRATED WITH THE WHOLE VEHICULAR ACCESS CROSSING.
12. REFER TO SD0508 FOR APPROPRIATE DRIVEWAY PROFILE CONFIGURATION.
13. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.



TYPE 1 - RESIDENTIAL CONCRETE VEHICLE ACCESS CROSSING

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

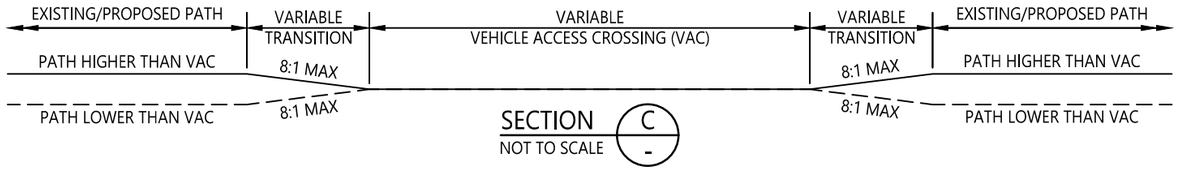
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

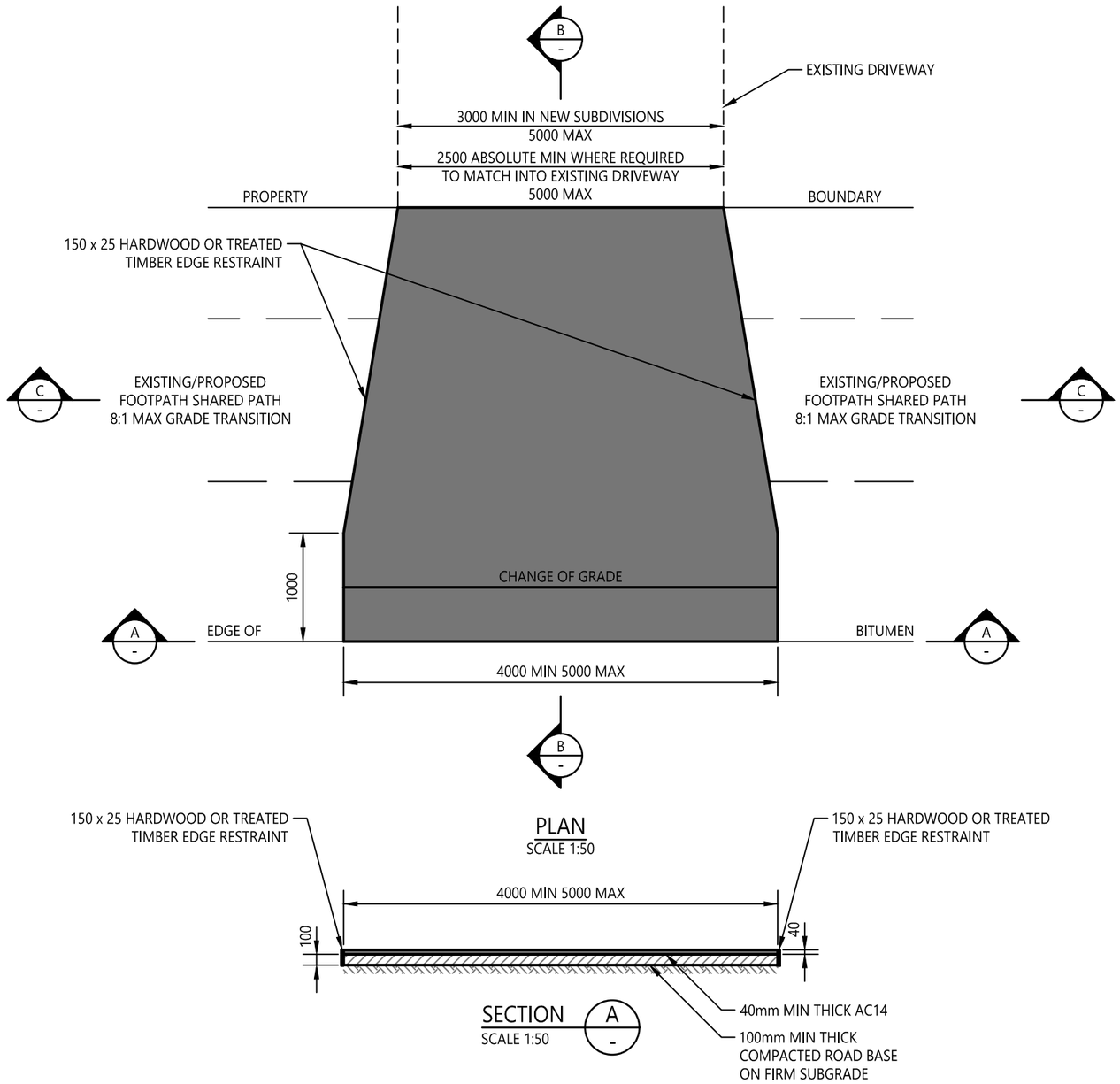
KERB AND CHANNEL SERIES
RESIDENTIAL VEHICLE ACCESS CROSSING
FOR ROADS WITHOUT KERB AND CHANNEL

STANDARD DRAWING

DRAWING NUMBER	REV
SD0504	-
SHEET 1 OF 3	A3



SECTION C
NOT TO SCALE

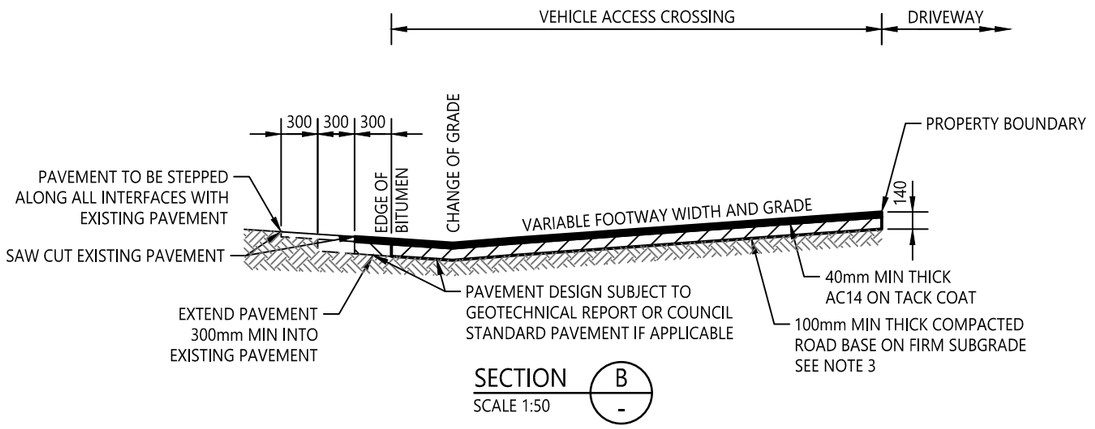


PLAN
SCALE 1:50

SECTION A
SCALE 1:50

NOTES:

1. THIS DRAWING IS TO BE USED AS A GUIDE ONLY. RESIDENTIAL VEHICULAR ACCESS CROSSINGS ARE TO BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AS 2890.1, AS 2150 AND AS 2008.
2. SUITABLY COMPACT APPROVED SUBGRADE MATERIAL. PROVIDE REPLACEMENT SUBGRADE IF REQUIRED.
3. WHERE CLAY OR ROCK IS ENCOUNTERED THE THICKNESS OF COMPACTED ROADBASE SHALL BE INCREASED OR THE SUBGRADE IMPROVED AS REQUIRED.
4. REFER TO SD0508 FOR APPROPRIATE DRIVEWAY PROFILE CONFIGURATION.
5. WHERE FREQUENT HEAVY VEHICLES ARE LIKELY TO USE THE VEHICLE ACCESS CROSSING, PAVEMENT TESTING AND DESIGN SHALL BE CARRIED OUT TO DETERMINE A SUITABLE PAVEMENT STRUCTURE AND WEARING COURSE; AND VEHICLE ACCESS CROSSING WIDTH SHALL BE WIDENED ACCORDINGLY TO SUIT THE SELECTED DESIGN VEHICLE.
6. IN RURAL AREAS, A BITUMEN SEAL MAY BE USED AS A WEARING COURSE ON 150mm THICK ROAD BASE OVER A SOUND COMPACTED SUBGRADE, SUBJECT TO THE APPROVAL OF COUNCIL'S REPRESENTATIVE.
7. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.



SECTION B
SCALE 1:50

TYPE 2 - RESIDENTIAL ASPHALT VEHICLE ACCESS CROSSING

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 500 1000 1500 2000 2500
1:50
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

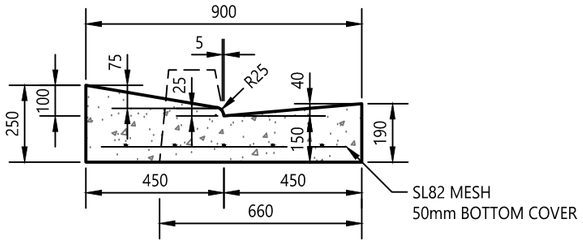
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

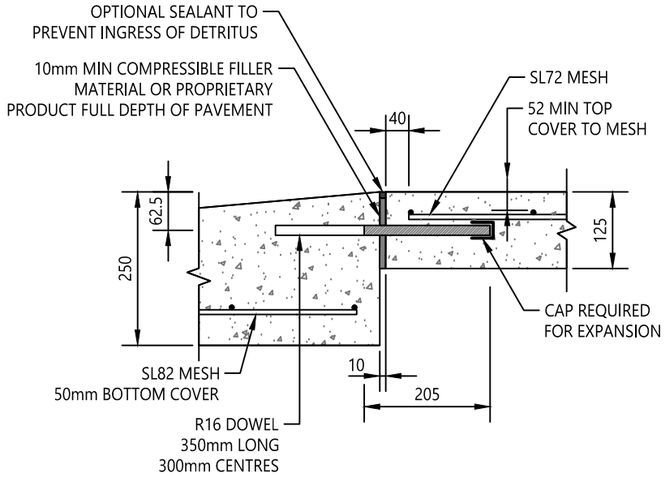
KERB AND CHANNEL SERIES
RESIDENTIAL VEHICLE ACCESS CROSSING
FOR ROADS WITHOUT KERB AND CHANNEL

STANDARD DRAWING

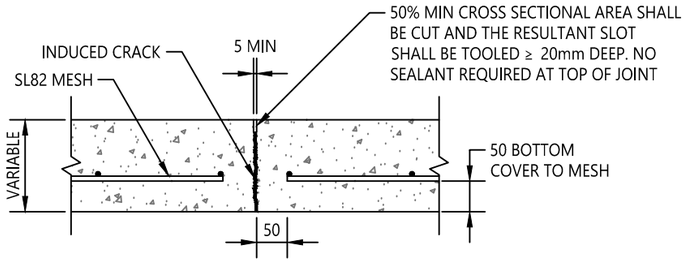
DRAWING NUMBER	REV
SD0504	-
SHEET 2 OF 3	A3



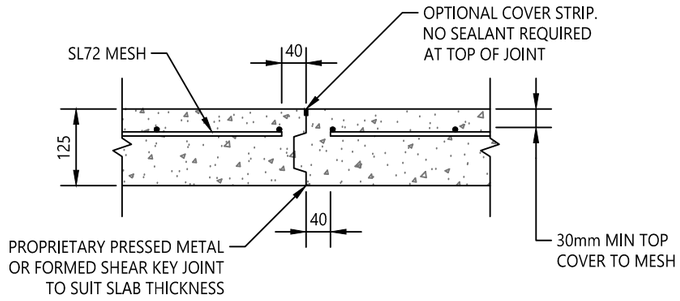
STANDARD LAYBACK
SCALE 1:20



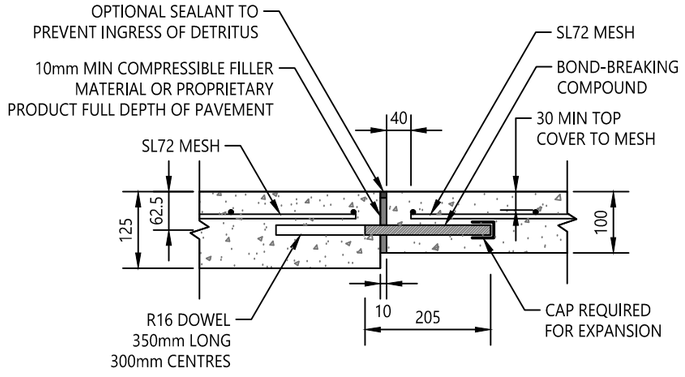
EXPANSION JOINT (EJ) 250mm TO 125mm
LAYBACK TO VEHICLE ACCESS CROSSING
SCALE 1:10



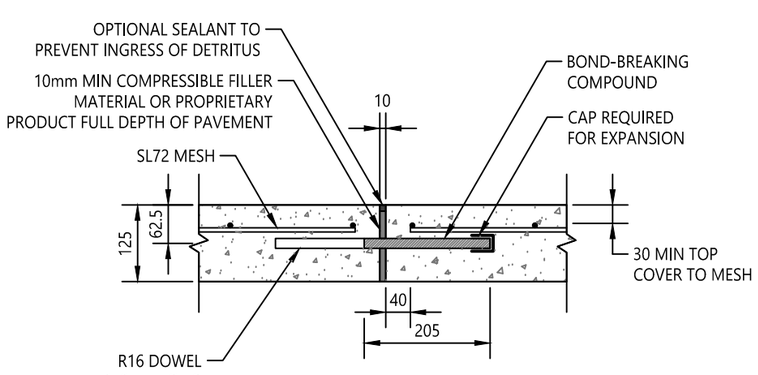
CONTROL JOINT(CJ) IN LAYBACK
SCALE 1:10



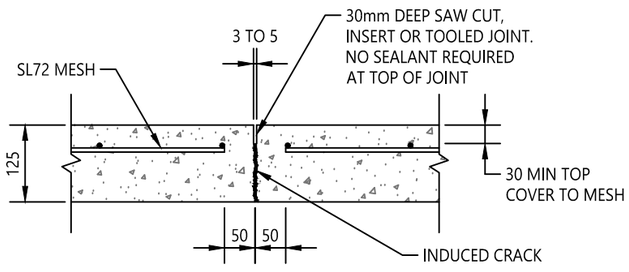
CONTROL JOINT (CJ) - TYPE 1
SCALE 1:10



EXPANSION JOINT (EJ) 125mm TO 100mm
VEHICLE ACCESS CROSSING TO FOOTPATH
SCALE 1:10



EXPANSION JOINT (EJ) 125mm
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2
SCALE 1:10

REV	AMENDMENT	DATE	DRAWN	APRVD	ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

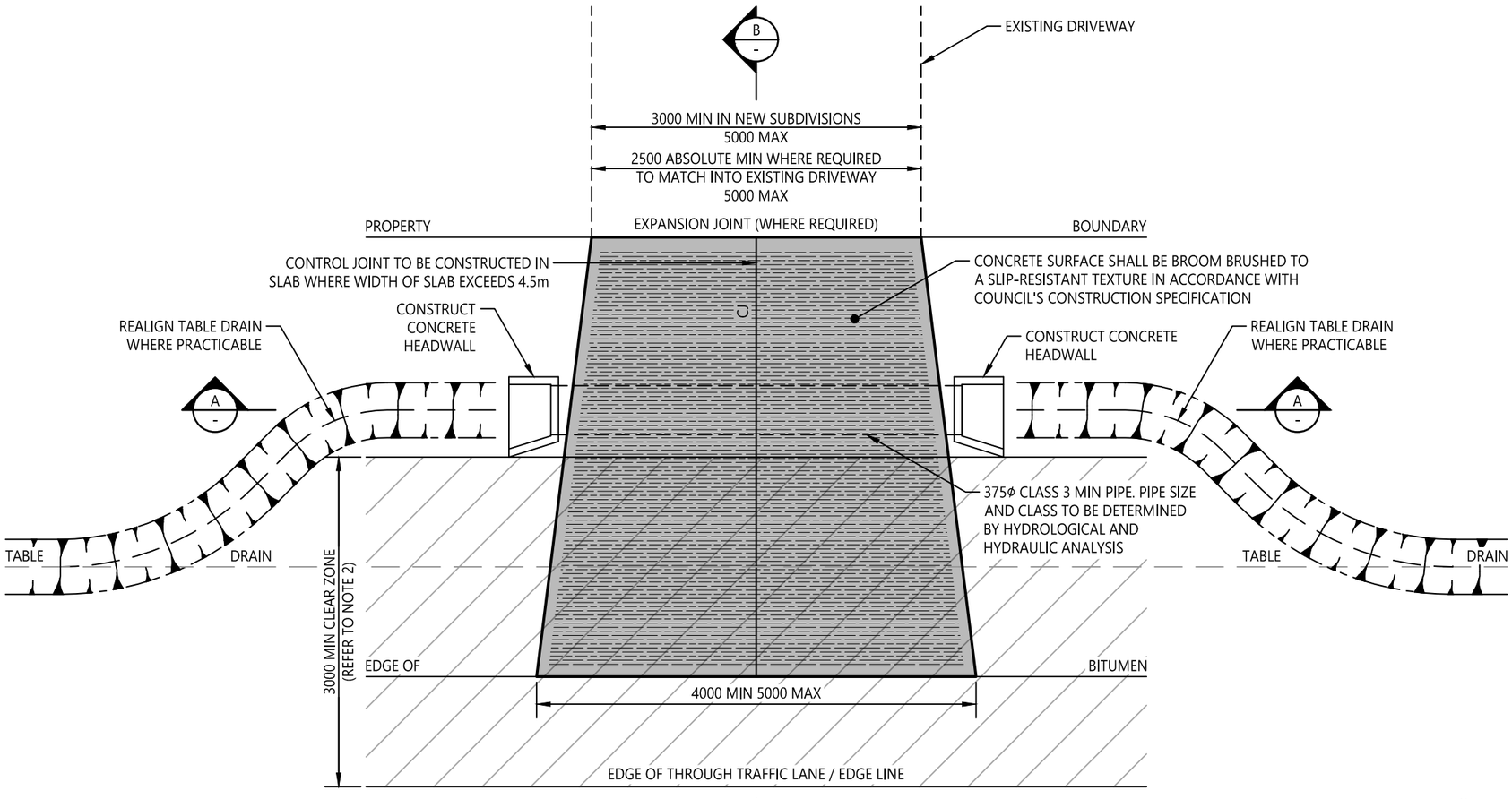
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

KERB AND CHANNEL SERIES
RESIDENTIAL VEHICLE ACCESS CROSSING
FOR ROADS WITHOUT KERB AND CHANNEL

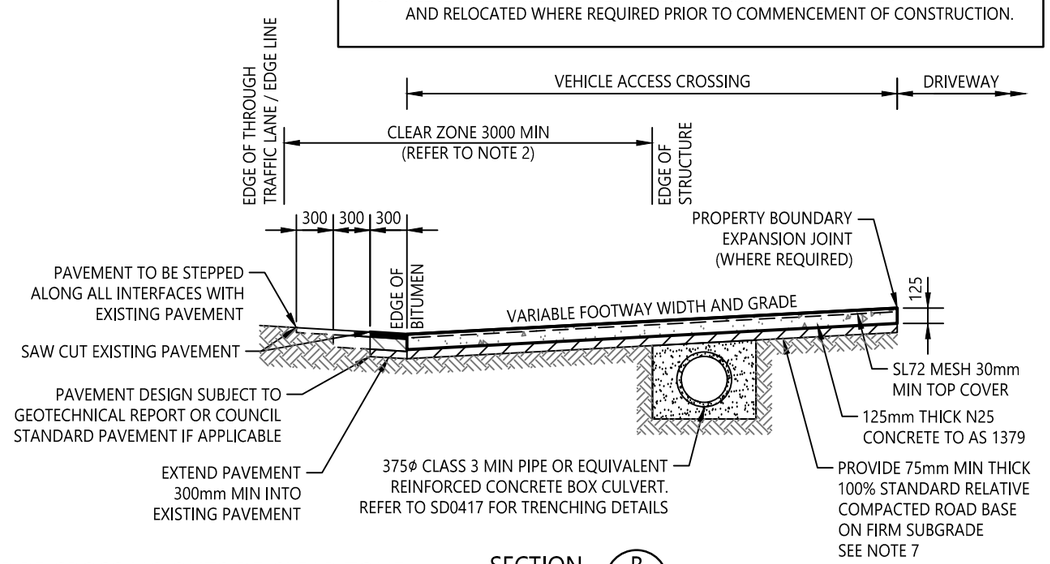
STANDARD DRAWING

DRAWING NUMBER	REV
SD0504	-
SHEET 3 OF 3	A3



NOTES:

1. THIS DRAWING IS TO BE USED AS A GUIDE ONLY. RESIDENTIAL VEHICULAR ACCESS CROSSINGS ARE TO BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AS 2890.1 AND AS 3727.1.
2. THE CLEAR ZONE SHOWN ON THIS PLAN IS INDICATIVE ONLY. THE CLEAR ZONE WIDTH SHALL BE DETERMINED FROM THE AUSTROADS GUIDE TO ROAD DESIGN - PART 6: ROADSIDE DESIGN, SAFETY AND BARRIERS.
3. TABLE DRAINS ARE TO BE 1m MINIMUM FROM FENCES OR SERVICES.
4. LOCATION OF EXISTING/FUTURE FOOTPATH NEEDS TO BE CONSIDERED WHEN POSITIONING PIPE CROSSING.
5. STORMWATER PIPE CAN BE REPLACED WITH A REINFORCED CONCRETE BOX CULVERT WHERE CONSIDERED SUITABLE.
6. SUITABLY COMPACT APPROVED SUBGRADE MATERIAL. PROVIDE REPLACEMENT SUBGRADE IF REQUIRED, TO COUNCIL'S CIVIL WORKS CONSTRUCTION SPECIFICATION.
7. CONCRETE STRENGTH GRADE SHALL BE N25 UNLESS OTHERWISE SPECIFIED AND SHALL CONFORM TO AS 1379 SPECIFICATION AND SUPPLY OF CONCRETE.
8. EXPANSION JOINTS SHALL BE 10mm WIDE AND FILLED WITH A PREFORMED COMPRESSIBLE BITUMEN-IMPREGNATED FILLER AT 12m CENTRES AS SHOWN ON SHEET 7.
9. CONTROL JOINTS SHALL BE FORMED AS SHOWN ON SHEET 7.
10. SAWN CONTROL JOINTS SHALL BE CUT AS SOON AS SURFACE IS HARD ENOUGH THAT IT WILL NOT CHIP, SPALL AND COLLAPSE ON THE CUTTING BLADE. GENERALLY, THIS SHOULD BE WITHIN 24 HOURS OF CONCRETE PLACEMENT.
11. REINFORCING MESH SHALL BE FABRICATED TO AS/NZS 4671 STEEL REINFORCING MATERIALS.
12. REINFORCING MESH IN SLABS SHALL BE PLACED WITH 30mm MINIMUM TOP COVER.
13. DOWELS TO BE GALVANISED AND INSTALLED PARALLEL TO EACH OTHER AND PARALLEL TO FINISHED SURFACE.
14. DOWELS ARE TO BE INSTALLED WITH DOWEL SLEEVE AND GREASED AT ONE END WITH A 10mm FREE MOVEMENT GAP AT THE GREASED END, UNLESS OTHERWISE NOTED.
15. REFER TO SD0508 FOR APPROPRIATE DRIVEWAY PROFILE CONFIGURATION.
16. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.



TYPE 1 - RESIDENTIAL CONCRETE VEHICLE ACCESS CROSSING WITH PIPE CROSSING OUTSIDE CLEAR ZONE

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

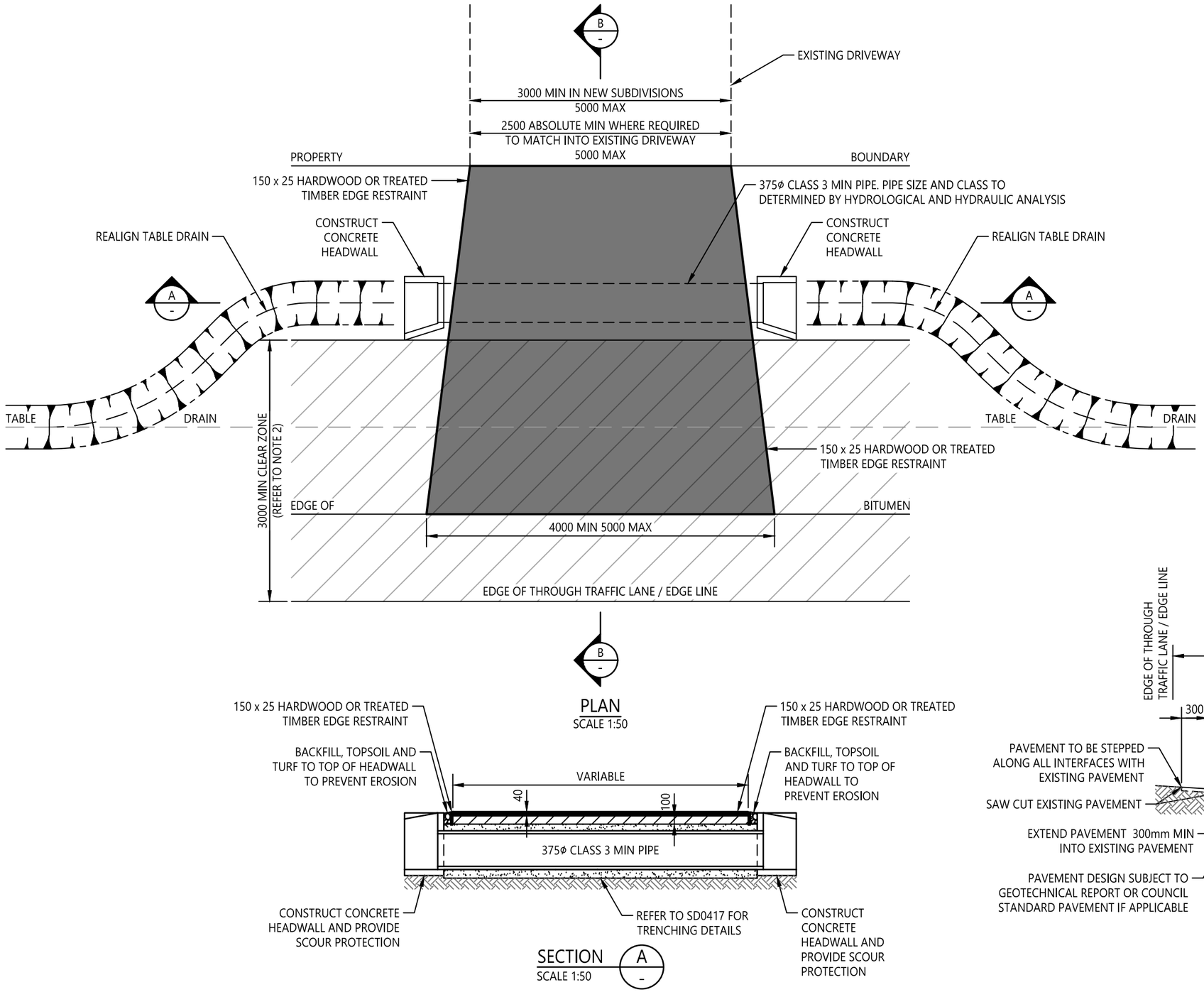
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

KERB AND CHANNEL SERIES
RESIDENTIAL, INDUSTRIAL AND COMMERCIAL
VEHICLE ACCESS CROSSING WITH CULVERT

DRAWING NUMBER	REV
SD0505	-
SHEET 1 OF 7	A3



NOTES:

1. THIS DRAWING IS TO BE USED AS A GUIDE ONLY. RESIDENTIAL VEHICULAR ACCESS CROSSINGS ARE TO BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AS 2890.1, AS 2150 AND AS 2008.
2. THE CLEAR ZONE SHOWN ON THIS PLAN IS INDICATIVE ONLY. THE CLEAR ZONE WIDTH SHALL BE DETERMINED FROM THE AUSTROADS GUIDE TO ROAD DESIGN - PART 6: ROADSIDE DESIGN, SAFETY AND BARRIERS.
3. TABLE DRAINS ARE TO BE 1m MINIMUM FROM FENCES OR SERVICES.
4. LOCATION OF EXISTING/FUTURE FOOTPATH NEEDS TO BE CONSIDERED WHEN POSITIONING PIPE CROSSING.
5. STORMWATER PIPE CAN BE REPLACED WITH A REINFORCED CONCRETE BOX CULVERT WHERE CONSIDERED SUITABLE.
6. SUITABLY COMPACT APPROVED SUBGRADE MATERIAL. PROVIDE REPLACEMENT SUBGRADE IF REQUIRED.
7. WHERE CLAY OR ROCK IS ENCOUNTERED THE THICKNESS OF COMPACTED ROADBASE SHALL BE INCREASED OR THE SUBGRADE IMPROVED AS REQUIRED.
8. REFER TO SD0508 FOR APPROPRIATE DRIVEWAY PROFILE CONFIGURATION.
9. WHERE FREQUENT HEAVY VEHICLES ARE LIKELY TO USE THE VEHICLE ACCESS CROSSING, PAVEMENT TESTING AND DESIGN SHALL BE CARRIED OUT TO DETERMINE A SUITABLE PAVEMENT STRUCTURE AND WEARING COURSE; AND VEHICLE ACCESS CROSSING WIDTH SHALL BE WIDENED ACCORDINGLY TO SUIT THE SELECTED DESIGN VEHICLE.
10. IN RURAL AREAS, A BITUMEN SEAL MAY BE USED AS A WEARING COURSE ON 150mm THICK ROAD BASE OVER A SOUND COMPACTED SUBGRADE, SUBJECT TO THE APPROVAL OF COUNCIL'S REPRESENTATIVE.
11. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

TYPE 2 - RESIDENTIAL ASPHALT VEHICLE ACCESS CROSSING WITH PIPE CROSSING OUTSIDE CLEAR ZONE

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

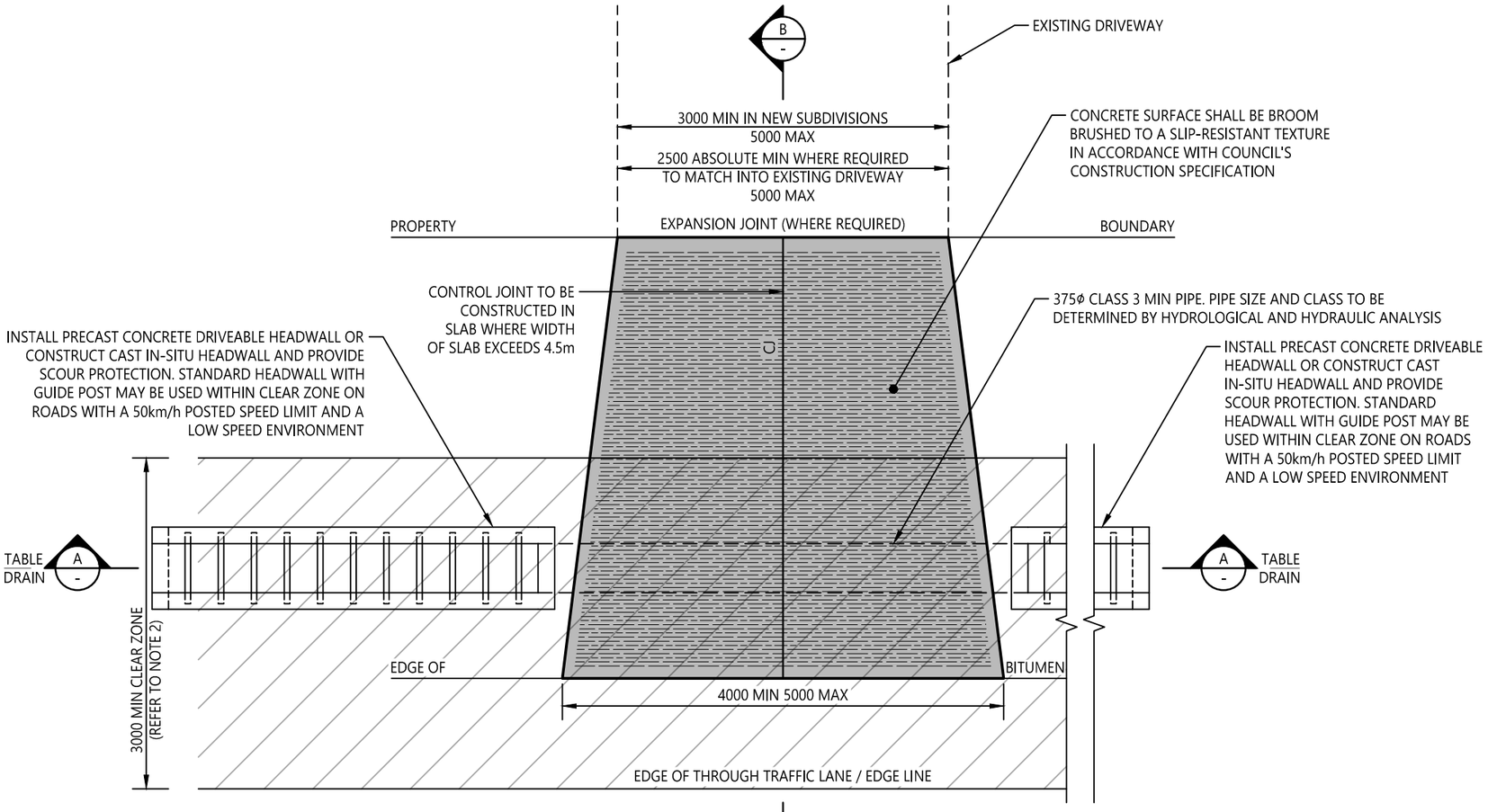
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

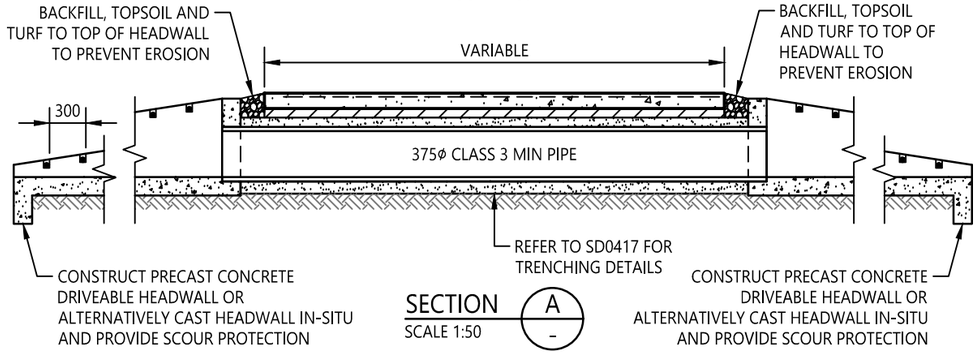
KERB AND CHANNEL SERIES
RESIDENTIAL, INDUSTRIAL AND COMMERCIAL
VEHICLE ACCESS CROSSING WITH CULVERT

STANDARD DRAWING

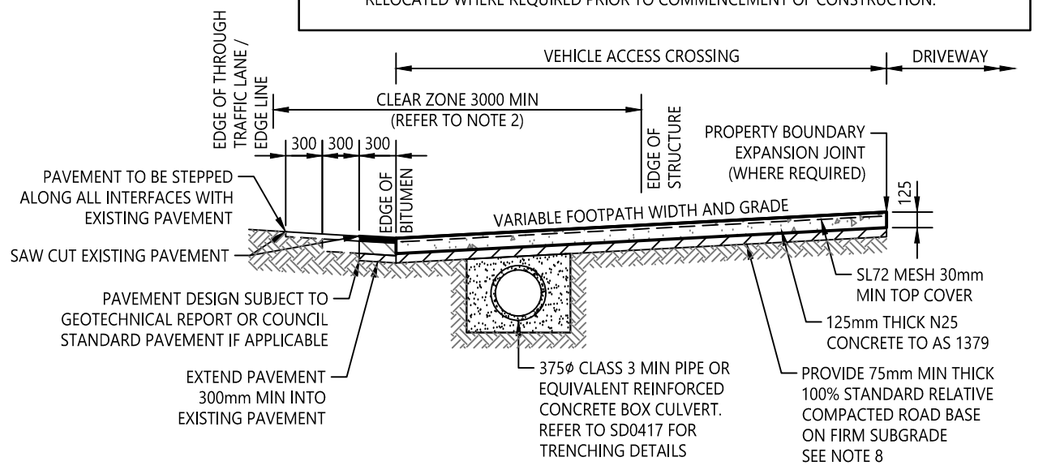
DRAWING NUMBER	REV
SD0505	-
SHEET 2 OF 7	A3



PLAN
SCALE 1:50



SECTION A
SCALE 1:50



SECTION B
SCALE 1:50

NOTES:

1. THIS DRAWING IS TO BE USED AS A GUIDE ONLY. RESIDENTIAL VEHICULAR ACCESS CROSSINGS ARE TO BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AS 2890.1 AND AS 3727.1.
2. THE CLEAR ZONE SHOWN ON THIS PLAN IS INDICATIVE ONLY. THE CLEAR ZONE WIDTH SHALL BE DETERMINED FROM THE AUSTROADS GUIDE TO ROAD DESIGN - PART 6: ROADSIDE DESIGN, SAFETY AND BARRIERS.
3. TABLE DRAINS ARE TO BE 1m MINIMUM FROM FENCES OR SERVICES.
4. LOCATION OF EXISTING/FUTURE FOOTPATH NEEDS TO BE CONSIDERED WHEN POSITIONING PIPE CROSSING.
5. CONSIDER INSTALLING A GRATE ON TOP OF THE DRIVEABLE HEADWALL AT LOCATIONS IN CLOSE PROXIMITY TO PEDESTRIAN AND CYCLIST ACTIVITY AREAS.
6. STORMWATER PIPE CAN BE REPLACED WITH A REINFORCED CONCRETE BOX CULVERT WHERE CONSIDERED SUITABLE.
7. SUITABLY COMPACT APPROVED SUBGRADE MATERIAL. PROVIDE REPLACEMENT SUBGRADE IF REQUIRED.
8. WHERE CLAY OR ROCK IS ENCOUNTERED THE THICKNESS OF COMPACTED ROADBASE SHALL BE INCREASED OR THE SUBGRADE IMPROVED AS REQUIRED.
9. CONCRETE STRENGTH GRADE SHALL BE N25 UNLESS OTHERWISE SPECIFIED AND SHALL CONFORM TO AS 1379 SPECIFICATION AND SUPPLY OF CONCRETE.
10. EXPANSION JOINTS SHALL BE 10mm WIDE AND FILLED WITH A PREFORMED COMPRESSIBLE BITUMEN-IMPREGNATED FILLER AT 12m CENTRES AS SHOWN ON SHEET 7.
11. CONTROL JOINTS SHALL BE FORMED AS SHOWN ON SHEET 7.
12. SAWN CONTROL JOINTS SHALL BE CUT AS SOON AS SURFACE IS HARD ENOUGH THAT IT WILL NOT CHIP, SPALL AND COLLAPSE ON THE CUTTING BLADE. GENERALLY, THIS SHOULD BE WITHIN 24 HOURS OF CONCRETE PLACEMENT.
13. REINFORCING MESH SHALL BE FABRICATED TO AS/NZS 4671 STEEL REINFORCING MATERIALS.
14. REINFORCING MESH IN SLABS SHALL BE PLACED WITH 30mm MINIMUM TOP COVER.
15. DOWELS TO BE GALVANISED AND INSTALLED PARALLEL TO EACH OTHER AND PARALLEL TO FINISHED SURFACE.
16. DOWELS ARE TO BE INSTALLED WITH DOWEL SLEEVE AND GREASED AT ONE END WITH A 10mm FREE MOVEMENT GAP AT THE GREASED END, UNLESS OTHERWISE NOTED.
17. REFER TO SD0508 FOR APPROPRIATE DRIVEWAY PROFILE CONFIGURATION.
18. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

TYPE 3 - RESIDENTIAL CONCRETE VEHICLE ACCESS CROSSING WITH PIPE CROSSING WITHIN CLEAR ZONE

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING
0 500 1000 1500 2000 2500
1:50

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

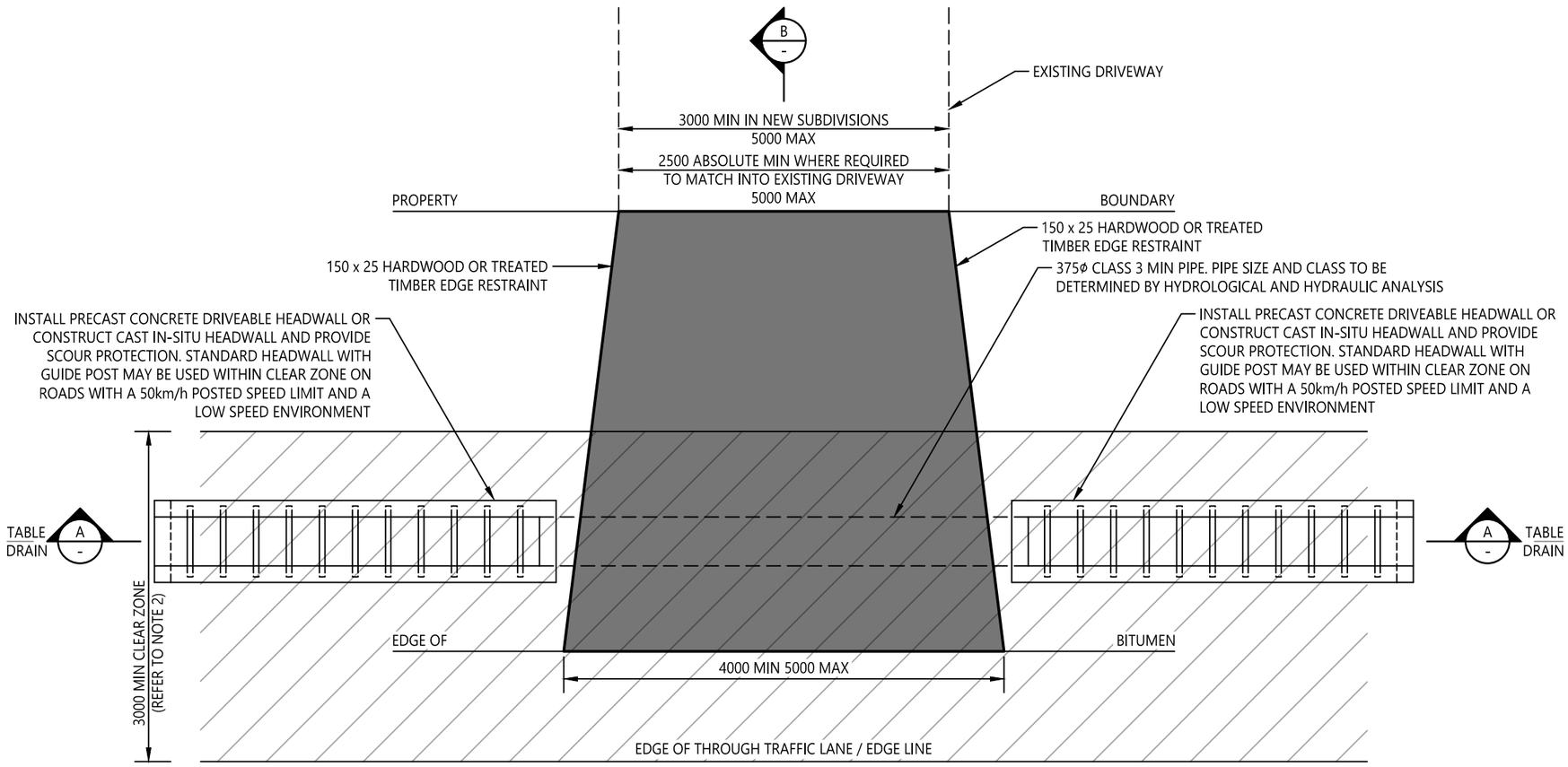
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

KERB AND CHANNEL SERIES
RESIDENTIAL, INDUSTRIAL AND COMMERCIAL
VEHICLE ACCESS CROSSING WITH CULVERT

STANDARD DRAWING

DRAWING NUMBER	REV
SD0505	-
SHEET 3 OF 7	A3



NOTES:

1. THIS DRAWING IS TO BE USED AS A GUIDE ONLY. RESIDENTIAL VEHICULAR ACCESS CROSSINGS ARE TO BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AS 2890.1, AS 2150 AND AS 2008.
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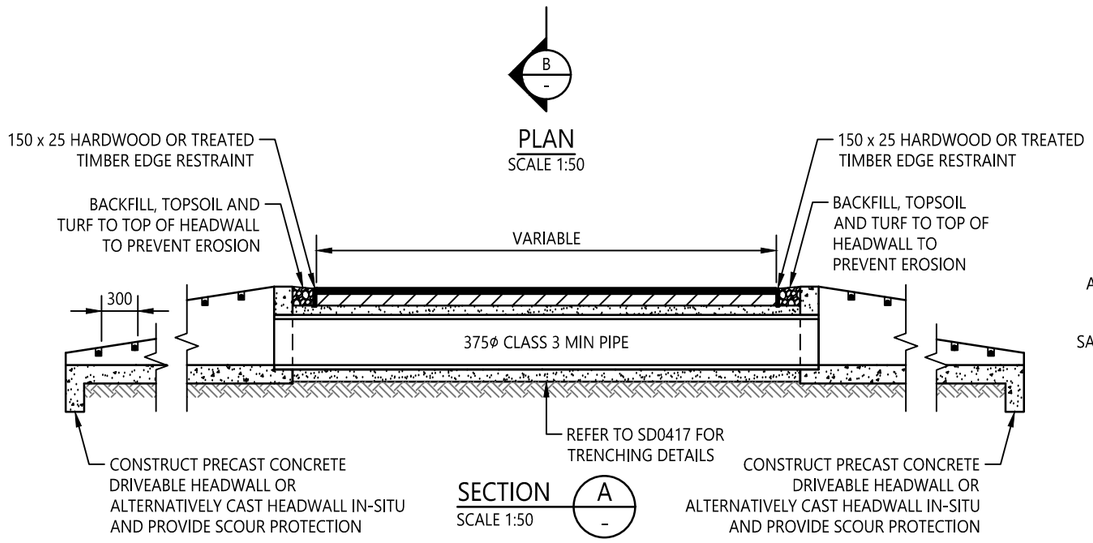
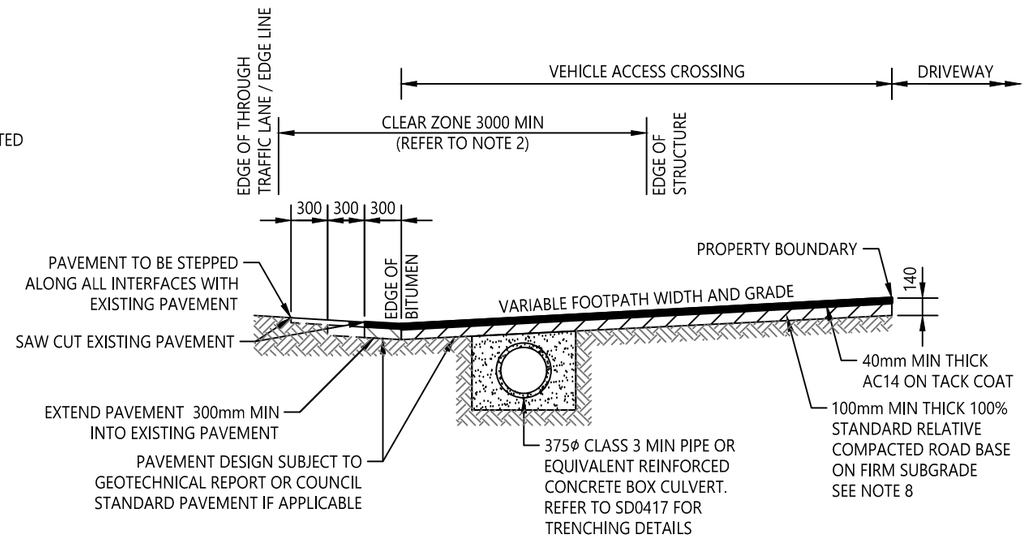
3. TABLE DRAINS ARE TO BE 1m MINIMUM FROM FENCES OR SERVICES.
4. LOCATION OF EXISTING/FUTURE FOOTPATH NEEDS TO BE CONSIDERED WHEN POSITIONING PIPE CROSSING.
5. CONSIDER INSTALLING A GRATE ON TOP OF THE DRIVEABLE HEADWALL AT LOCATIONS IN CLOSE PROXIMITY TO PEDESTRIAN AND CYCLIST ACTIVITY AREAS.
6. STORMWATER PIPE CAN BE REPLACED WITH A REINFORCED CONCRETE BOX CULVERT WHERE CONSIDERED SUITABLE.
7. SUITABLY COMPACT APPROVED SUBGRADE MATERIAL. PROVIDE REPLACEMENT SUBGRADE IF REQUIRED.
8. WHERE CLAY OR ROCK IS ENCOUNTERED THE THICKNESS OF COMPACTED ROADBASE SHALL BE INCREASED OR THE SUBGRADE IMPROVED AS REQUIRED.
9. REFER TO SD0508 FOR APPROPRIATE DRIVEWAY PROFILE CONFIGURATION.
10. WHERE FREQUENT HEAVY VEHICLES ARE LIKELY TO USE THE VEHICLE ACCESS CROSSING, PAVEMENT TESTING AND DESIGN SHALL BE CARRIED OUT TO DETERMINE A SUITABLE PAVEMENT STRUCTURE AND WEARING COURSE; AND VEHICLE ACCESS CROSSING WIDTH SHALL BE WIDENED ACCORDINGLY TO SUIT THE SELECTED DESIGN VEHICLE.
11. IN RURAL AREAS, A BITUMEN SEAL MAY BE USED AS A WEARING COURSE ON 150mm THICK ROAD BASE OVER A SOUND COMPACTED SUBGRADE, SUBJECT TO THE APPROVAL OF COUNCIL'S REPRESENTATIVE.
12. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.





TYPE 4 - RESIDENTIAL ASPHALT VEHICLE ACCESS CROSSING WITH PIPE CROSSING WITHIN CLEAR ZONE

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

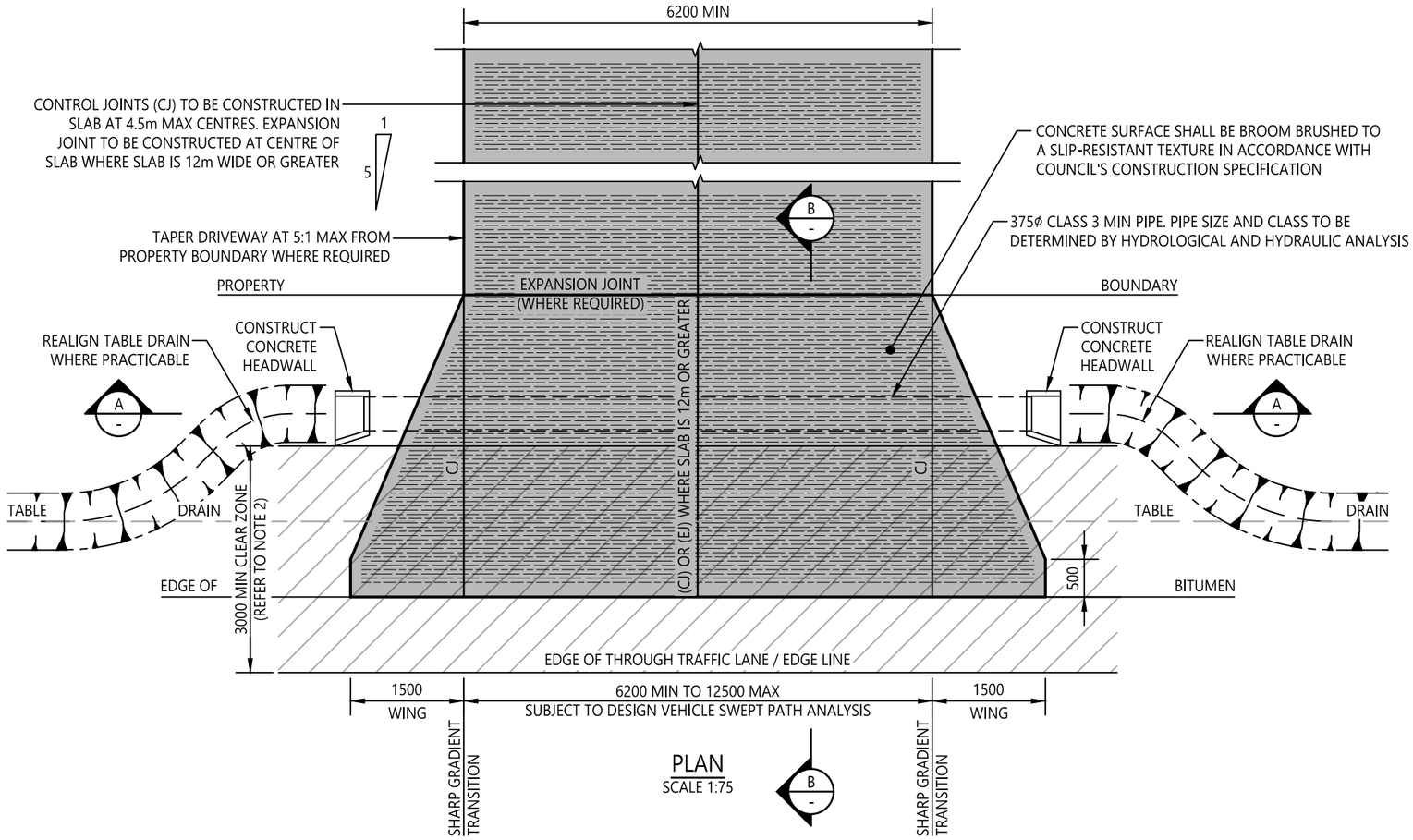
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

KERB AND CHANNEL SERIES
RESIDENTIAL, INDUSTRIAL AND COMMERCIAL
VEHICLE ACCESS CROSSING WITH CULVERT

STANDARD DRAWING

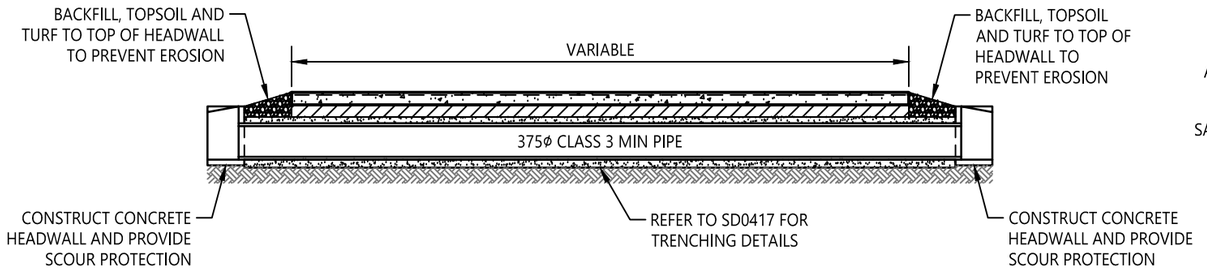
DRAWING NUMBER	REV
SD0505	-
SHEET 4 OF 7	A3



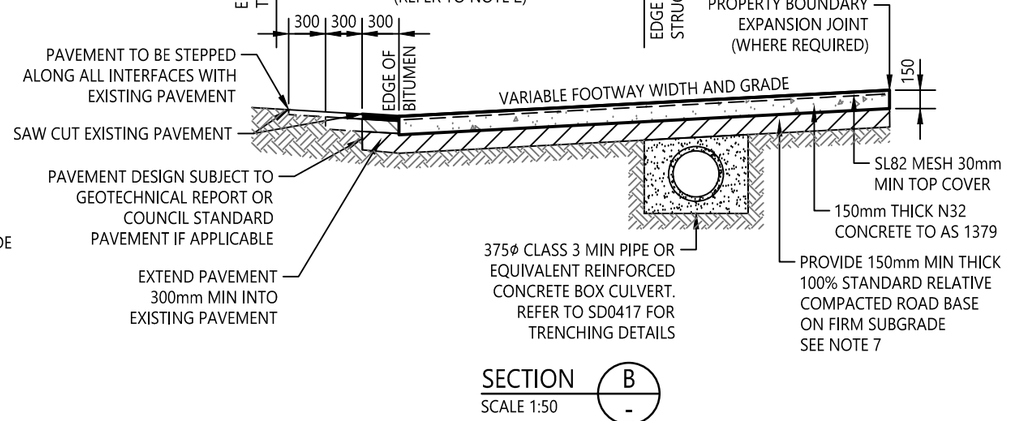
PLAN
SCALE 1:75

NOTES:

1. THIS DRAWING IS TO BE USED AS A GUIDE ONLY. INDUSTRIAL AND COMMERCIAL VEHICULAR ACCESS CROSSINGS ARE TO BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AS 2890.1 AND AS 3727.1 (GVM<10t) AS APPLICABLE.
2. THE CLEAR ZONE SHOWN ON THIS PLAN IS INDICATIVE ONLY. THE CLEAR ZONE WIDTH SHALL BE DETERMINED FROM THE AUSTROADS GUIDE TO ROAD DESIGN - PART 6: ROADSIDE DESIGN, SAFETY AND BARRIERS.
3. TABLE DRAINS ARE TO BE 1m MINIMUM FROM FENCES OR SERVICES.
4. LOCATION OF EXISTING/FUTURE FOOTPATH NEEDS TO BE CONSIDERED WHEN POSITIONING PIPE CROSSING.
5. STORMWATER PIPE CAN BE REPLACED WITH A REINFORCED CONCRETE BOX CULVERT WHERE CONSIDERED SUITABLE.
6. SUITABLY COMPACT APPROVED SUBGRADE MATERIAL. PROVIDE REPLACEMENT SUBGRADE IF REQUIRED.
7. WHERE CLAY OR ROCK IS ENCOUNTERED THE THICKNESS OF COMPACTED ROADBASE SHALL BE INCREASED OR THE SUBGRADE IMPROVED AS REQUIRED.
8. CONCRETE STRENGTH GRADE SHALL BE N32 UNLESS OTHERWISE SPECIFIED AND SHALL CONFORM TO AS 1379 SPECIFICATION AND SUPPLY OF CONCRETE.
9. EXPANSION JOINTS SHALL BE 10mm WIDE AND FILLED WITH A PREFORMED COMPRESSIBLE BITUMEN-IMPREGNATED FILLER AT 12m CENTRES AS SHOWN ON SHEET 7.
10. CONTROL JOINTS SHALL BE FORMED AS SHOWN ON SHEET 7.
11. SAWN CONTROL JOINTS SHALL BE CUT AS SOON AS SURFACE IS HARD ENOUGH THAT IT WILL NOT CHIP, SPALL AND COLLAPSE ON THE CUTTING BLADE. GENERALLY, THIS SHOULD BE WITHIN 24 HOURS OF CONCRETE PLACEMENT.
12. REINFORCING MESH SHALL BE FABRICATED TO AS/NZS 4671 STEEL REINFORCING MATERIALS.
13. REINFORCING MESH IN SLABS SHALL BE PLACED WITH 30mm MINIMUM TOP COVER.
14. DOWELS SHALL BE GALVANISED AND INSTALLED PARALLEL TO EACH OTHER AND PARALLEL TO FINISHED SURFACE.
15. DOWELS SHALL BE INSTALLED WITH DOWEL SLEEVE AND GREASED AT ONE END WITH A 10mm FREE MOVEMENT GAP AT THE GREASED END, UNLESS OTHERWISE NOTED.
16. REFER TO SD0508 FOR APPROPRIATE DRIVEWAY PROFILE CONFIGURATION.
17. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.



SECTION A
SCALE 1:75



SECTION B
SCALE 1:50

TYPE 5 - INDUSTRIAL AND COMMERCIAL CONCRETE VEHICLE ACCESS CROSSING WITH PIPE CROSSING OUTSIDE CLEAR ZONE

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

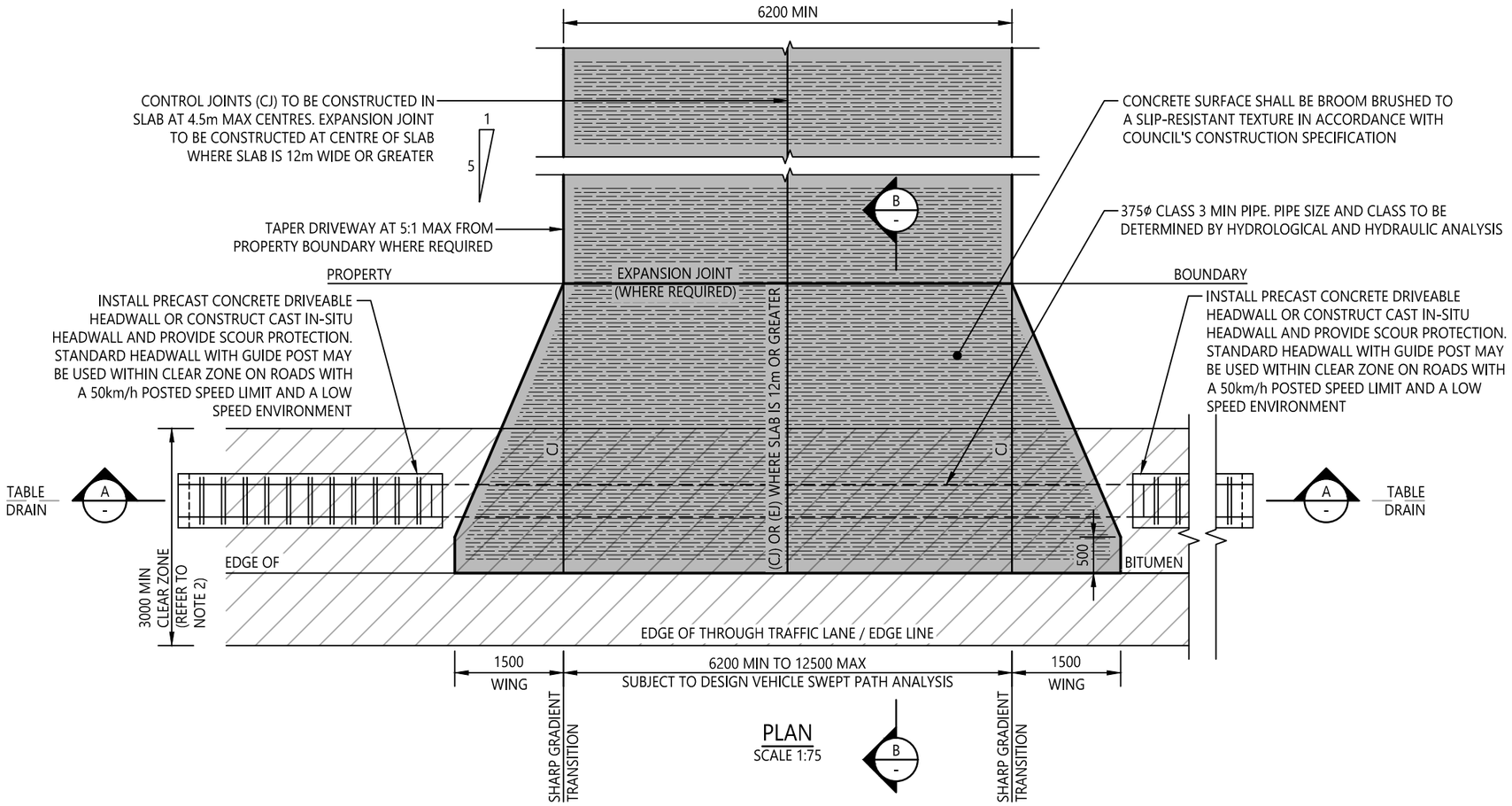
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

KERB AND CHANNEL SERIES
RESIDENTIAL, INDUSTRIAL AND COMMERCIAL
VEHICLE ACCESS CROSSING WITH CULVERT

DRAWING NUMBER	REV
SD0505	-
SHEET 5 OF 7	A3



NOTES:

1. THIS DRAWING IS TO BE USED AS A GUIDE ONLY. INDUSTRIAL AND COMMERCIAL VEHICULAR ACCESS CROSSINGS ARE TO BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AS 2890.1 AND AS 3727.1 (GVM<10t) AS APPLICABLE.
2. THE CLEAR ZONE SHOWN ON THIS PLAN IS INDICATIVE ONLY. THE CLEAR ZONE WIDTH SHALL BE DETERMINED FROM THE AUSTROADS GUIDE TO ROAD DESIGN - PART 6: ROADSIDE DESIGN, SAFETY AND BARRIERS.
3. TABLE DRAINS ARE TO BE 1m MINIMUM FROM FENCES OR SERVICES.
4. LOCATION OF EXISTING/FUTURE FOOTPATH NEEDS TO BE CONSIDERED WHEN POSITIONING PIPE CROSSING.
5. CONSIDER INSTALLING A GRATE ON TOP OF THE DRIVEABLE HEADWALL AT LOCATIONS IN CLOSE PROXIMITY TO PEDESTRIAN AND CYCLIST ACTIVITY AREAS.
6. STORMWATER PIPE CAN BE REPLACED WITH A REINFORCED CONCRETE BOX CULVERT WHERE CONSIDERED SUITABLE.
7. SUITABLY COMPACT APPROVED SUBGRADE MATERIAL. PROVIDE REPLACEMENT SUBGRADE IF REQUIRED.
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11. CONTROL JOINTS SHALL BE FORMED AS SHOWN ON SHEET 7.
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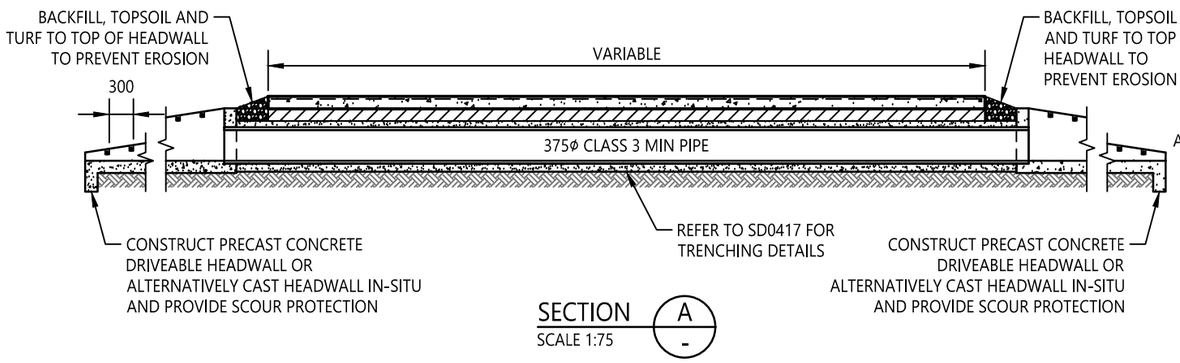
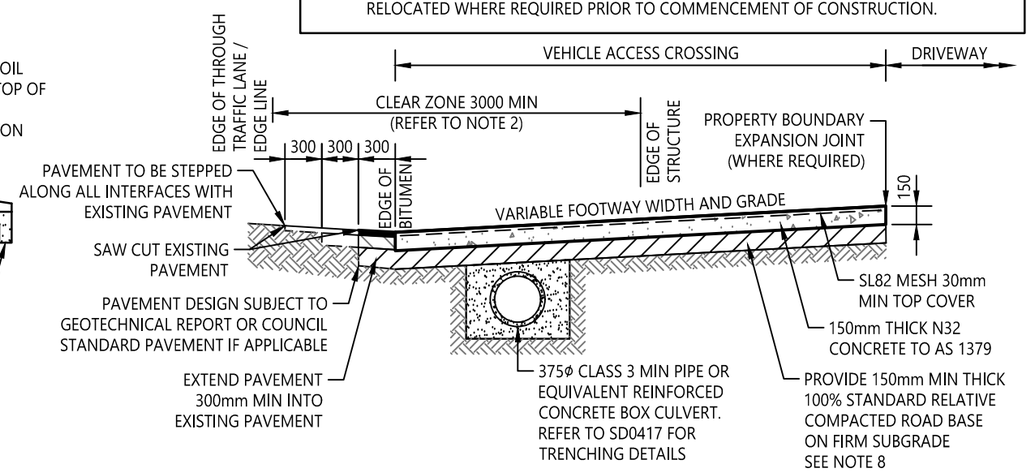
13. REINFORCING MESH SHALL BE FABRICATED TO AS/NZS 4671 STEEL REINFORCING MATERIALS.
14. REINFORCING MESH IN SLABS SHALL BE PLACED WITH 30mm MINIMUM TOP COVER.
15. DOWELS SHALL BE GALVANISED AND INSTALLED PARALLEL TO EACH OTHER AND PARALLEL TO FINISHED SURFACE.
16. DOWELS SHALL BE INSTALLED WITH DOWEL SLEEVE AND GREASED AT ONE END WITH A 10mm FREE MOVEMENT GAP AT THE GREASED END, UNLESS OTHERWISE NOTED.
17. REFER TO SD0508 FOR APPROPRIATE DRIVEWAY PROFILE CONFIGURATION.
18. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.





TYPE 6 - INDUSTRIAL AND COMMERCIAL CONCRETE VEHICLE ACCESS CROSSING WITH PIPE CROSSING WITHIN CLEAR ZONE

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

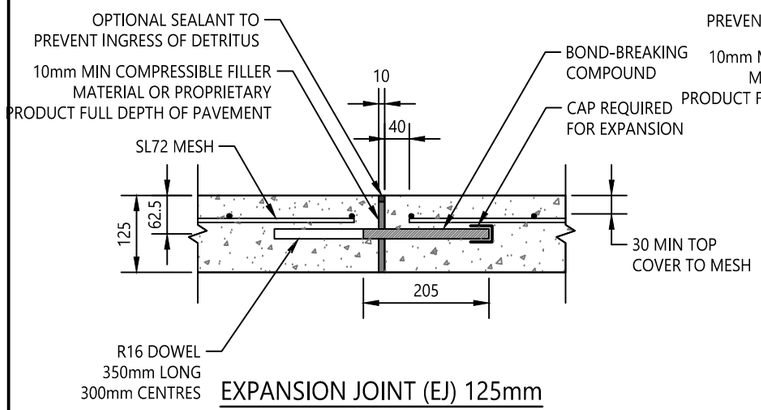
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

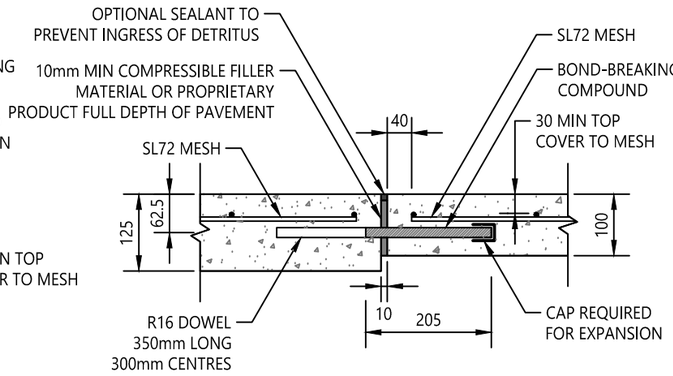
STANDARD DRAWING

KERB AND CHANNEL SERIES
RESIDENTIAL, INDUSTRIAL AND COMMERCIAL
VEHICLE ACCESS CROSSING WITH CULVERT

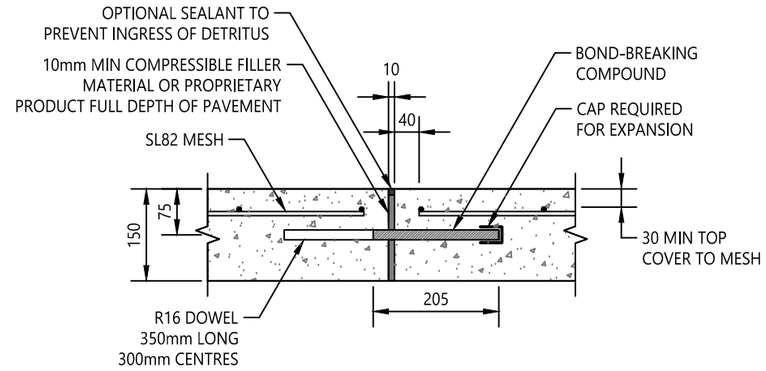
DRAWING NUMBER	REV
SD0505	-
SHEET 6 OF 7	A3



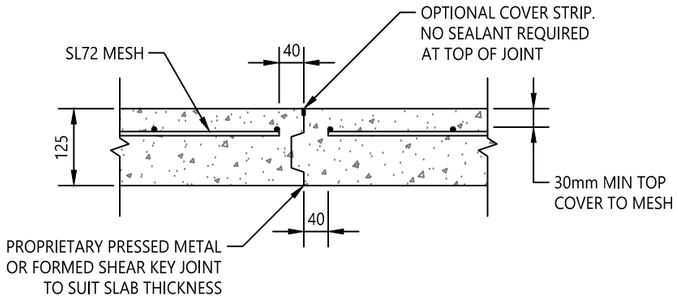
EXPANSION JOINT (EJ) 125mm
SCALE 1:10



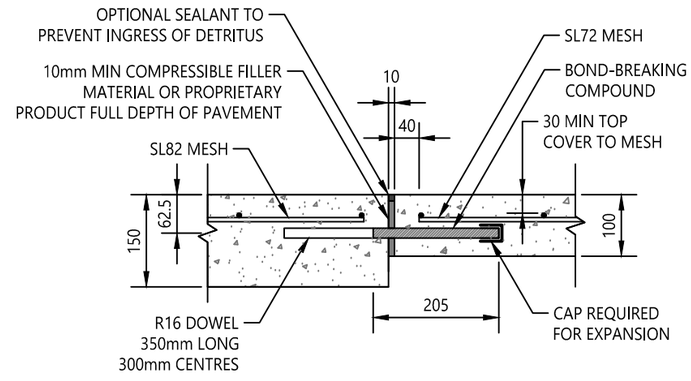
EXPANSION JOINT (EJ) 125mm TO 100mm
VEHICLE ACCESS CROSSING TO FOOTPATH
SCALE 1:10



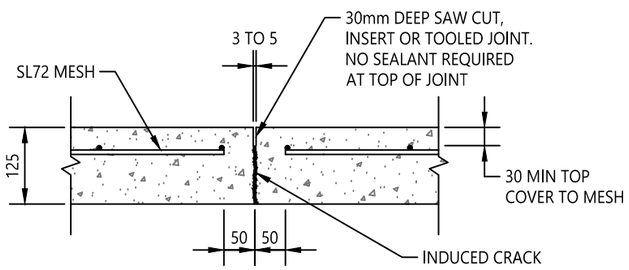
EXPANSION JOINT (EJ) 150mm
SCALE 1:10



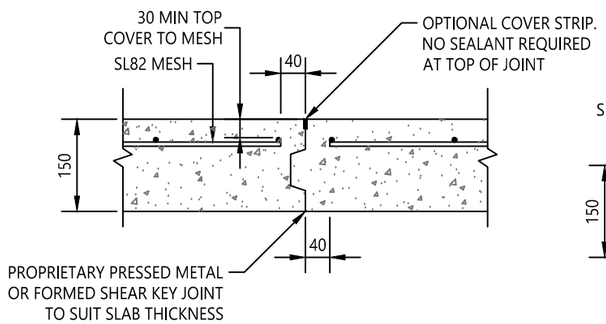
CONTROL JOINT (CJ) - TYPE 1
SCALE 1:10



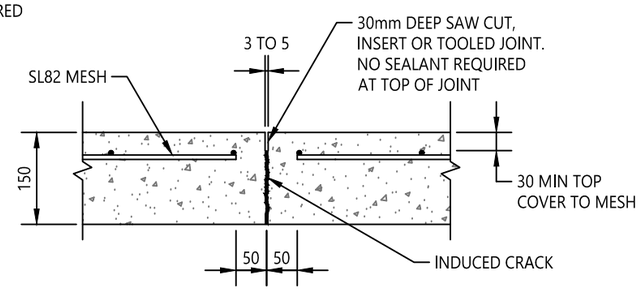
EXPANSION JOINT (EJ) 150mm TO 100mm
VEHICLE ACCESS CROSSING TO FOOTPATH
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2
SCALE 1:10



CONTROL JOINT (CJ) 150mm - TYPE 1
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2
SCALE 1:10

JOINT DETAILS - RESIDENTIAL

JOINT DETAILS - INDUSTRIAL AND COMMERCIAL

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 100 200 300 400 500
1:10
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

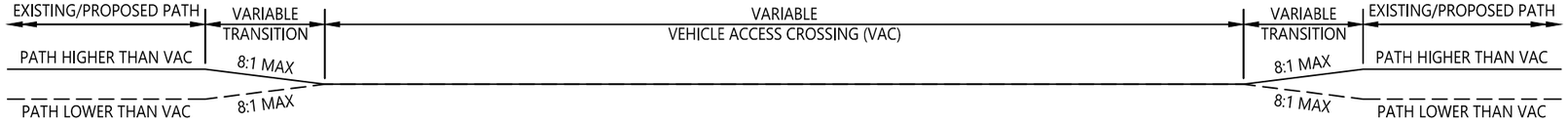
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

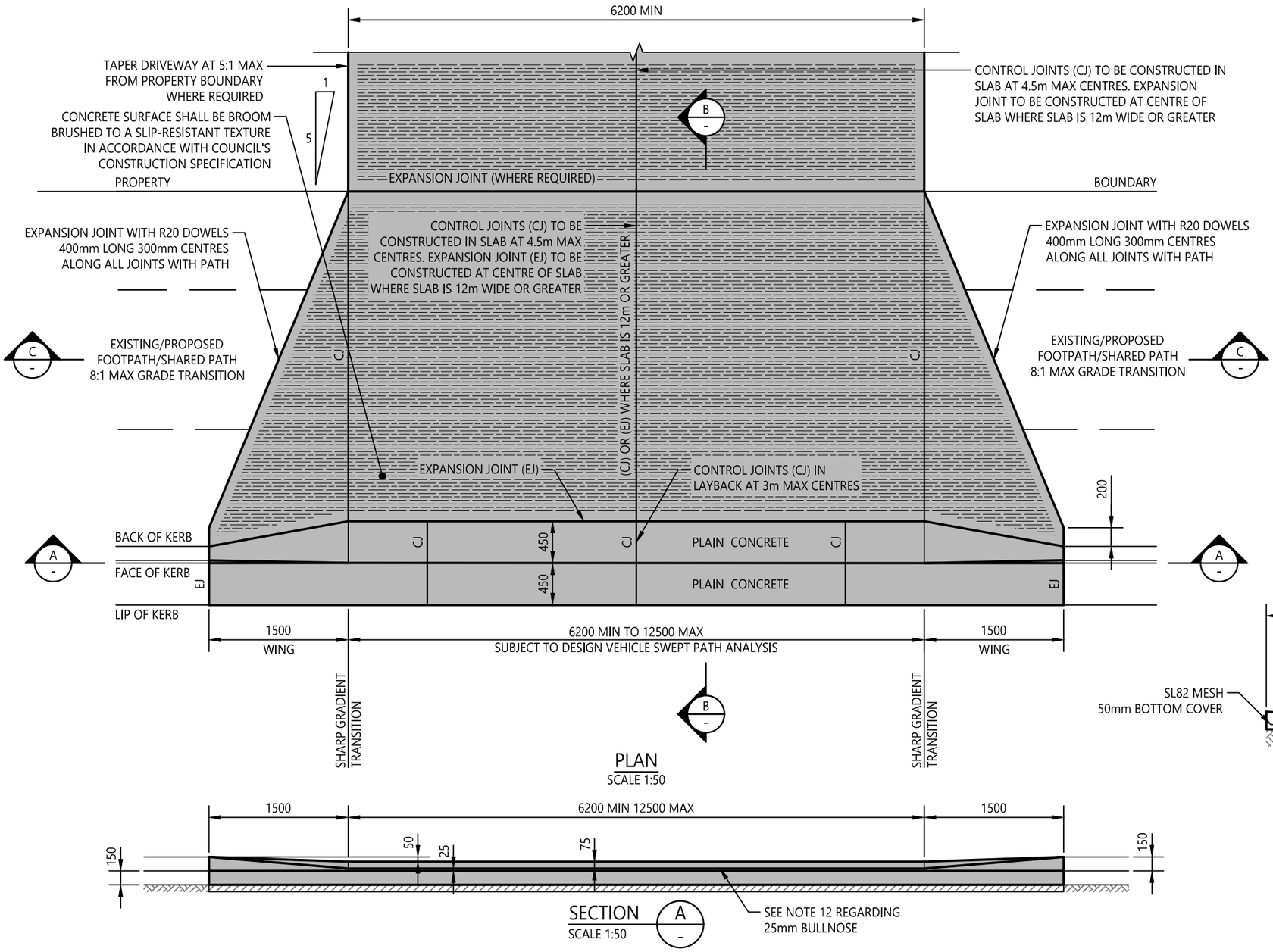
KERB AND CHANNEL SERIES
RESIDENTIAL, INDUSTRIAL AND COMMERCIAL
VEHICLE ACCESS CROSSING WITH CULVERT

STANDARD DRAWING

DRAWING NUMBER	REV
SD0505	-
SHEET 7 OF 7	A3

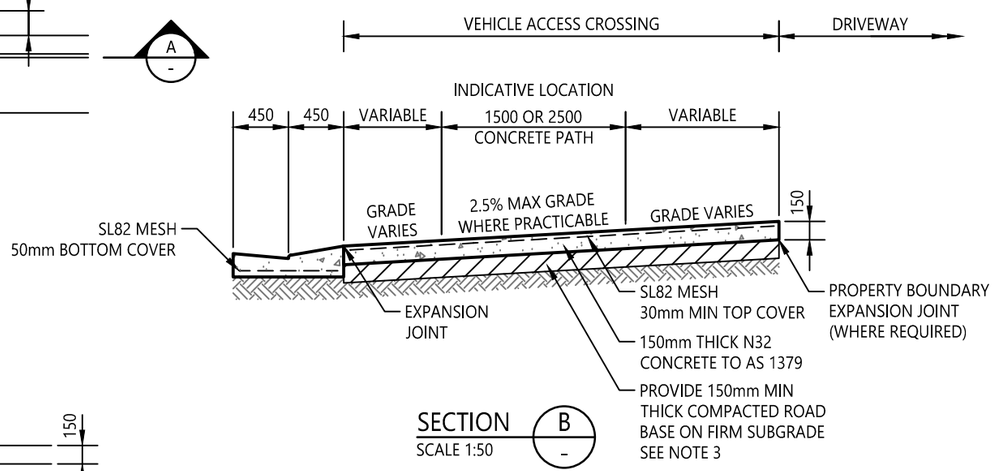


SECTION C
NOT TO SCALE



NOTES:

1. THIS DRAWING IS TO BE USED AS A GUIDE ONLY. INDUSTRIAL AND COMMERCIAL DRIVEWAYS ARE TO BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AS 2890.2 AND AS 3727.1 (GVM<10t) AS APPLICABLE.
2. SUITABLY COMPACT APPROVED SUBGRADE MATERIAL. PROVIDE REPLACEMENT SUBGRADE IF REQUIRED.
3. CONCRETE STRENGTH GRADE SHALL BE N32 UNLESS OTHERWISE SPECIFIED AND SHALL CONFORM TO AS 1379 SPECIFICATION AND SUPPLY OF CONCRETE.
4. EXPANSION JOINTS (EJ) IN SLAB SHALL BE 10mm WIDE AND FILLED WITH A PREFORMED COMPRESSIBLE BITUMEN-IMPREGNATED FILLER AT 12m CENTRES AS SHOWN ON SHEET 2.
5. CONTROL JOINTS (CJ) SHALL BE FORMED AS SHOWN ON SHEET 2.
6. SAWN CONTROL JOINTS SHALL BE CUT AS SOON AS SURFACE IS HARD ENOUGH THAT IT WILL NOT CHIP, SPALL AND COLLAPSE ON THE CUTTING BLADE. GENERALLY, THIS SHOULD BE WITHIN 24 HOURS OF CONCRETE PLACEMENT.
7. REINFORCING MESH SHALL BE FABRICATED TO AS/NZS 4671 STEEL REINFORCING MATERIALS.
8. REINFORCING MESH IN SLABS SHALL BE PLACED WITH 30mm MINIMUM TOP COVER.
9. DOWELS SHALL BE GALVANISED AND INSTALLED PARALLEL TO EACH OTHER AND PARALLEL TO FINISHED SURFACE.
10. DOWELS SHALL BE INSTALLED WITH DOWEL SLEEVE AND GREASED AT ONE END WITH A 10mm FREE MOVEMENT GAP AT THE GREASED END, UNLESS OTHERWISE NOTED.
11. WHERE VEHICULAR ACCESS CROSSINGS ARE ALSO USED AS KERB RAMPS, THE LAYBACK SHALL BE MODIFIED TO OMIT THE 25mm BULLNOSE AND A KERB RAMP PROFILE AND SHAPE INTEGRATED WITH THE WHOLE VEHICULAR ACCESS CROSSING.
12. WIDTH OF VEHICULAR ACCESS CROSSING TO BE DETERMINED BY SWEPT PATH ANALYSIS OF THE RELEVANT DESIGN VEHICLE.
13. REFER TO SD0508 FOR APPROPRIATE DRIVEWAY PROFILE CONFIGURATION.
14. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.



SECTION B
SCALE 1:50

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING
0 500 1000 1500 2000 2500
1:50

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

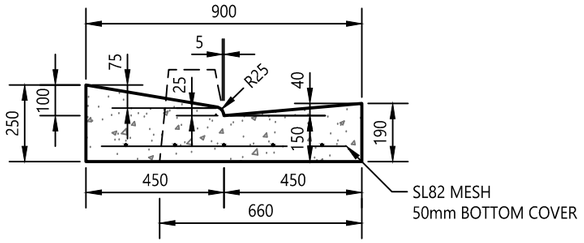
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

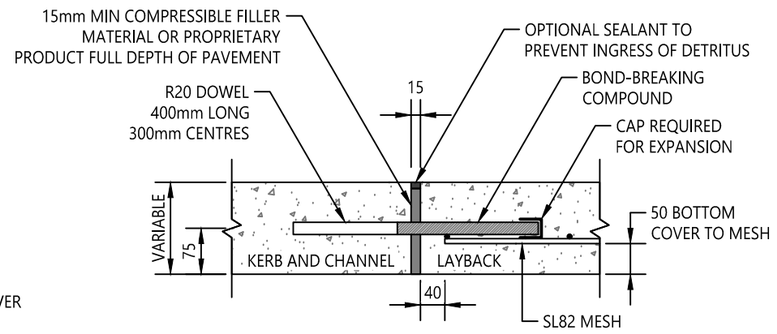
KERB AND CHANNEL SERIES
INDUSTRIAL AND COMMERCIAL VEHICLE ACCESS CROSSING FOR ROADS WITH KERB AND CHANNEL

STANDARD DRAWING

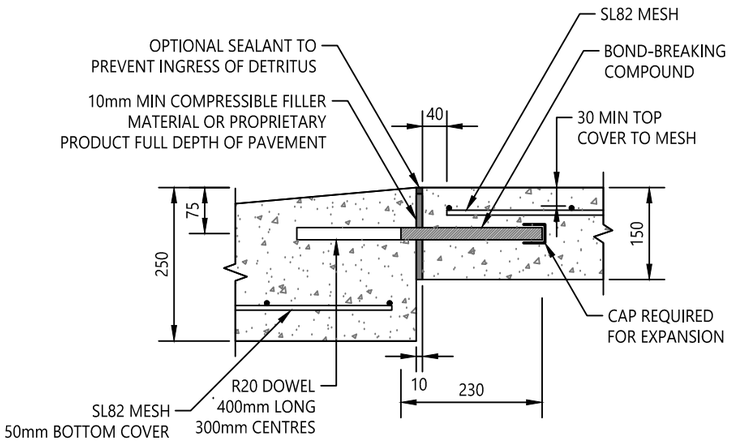
DRAWING NUMBER	REV
SD0506	-
SHEET 1 OF 2	A3



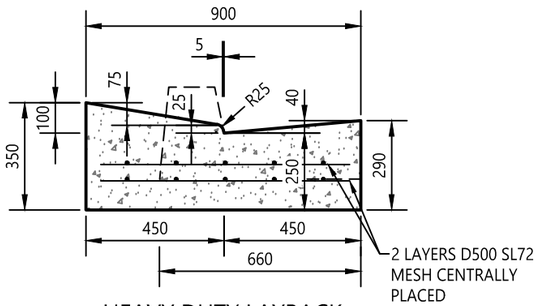
STANDARD LAYBACK
SCALE 1:20



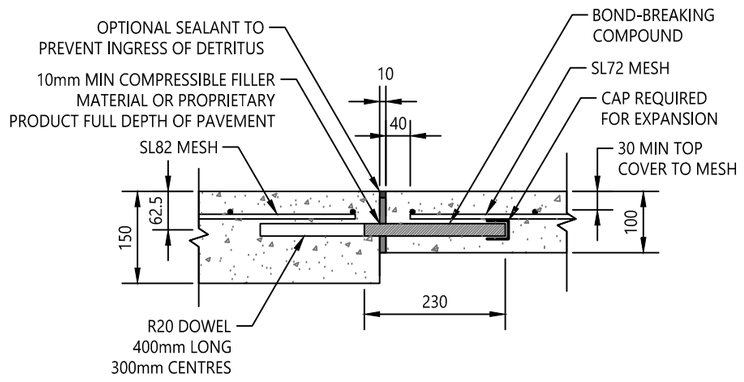
EXPANSION JOINT (EJ) KERB AND CHANNEL TO LAYBACK
SCALE 1:10



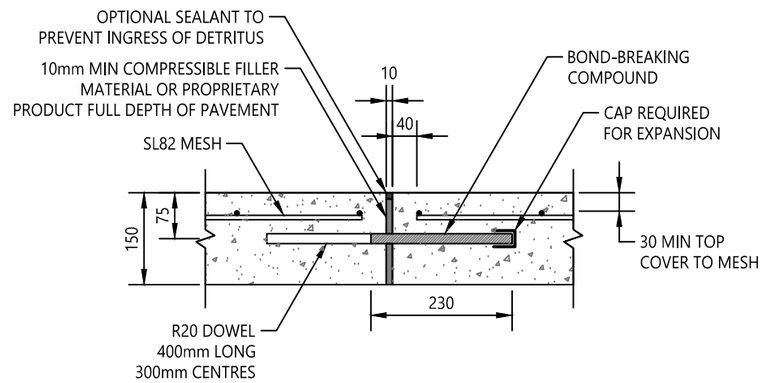
EXPANSION JOINT (EJ) 250mm TO 150mm
LAYBACK TO VEHICLE ACCESS CROSSING
SCALE 1:10



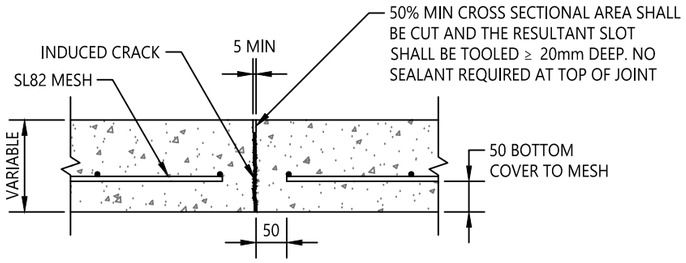
HEAVY DUTY LAYBACK
SCALE 1:20



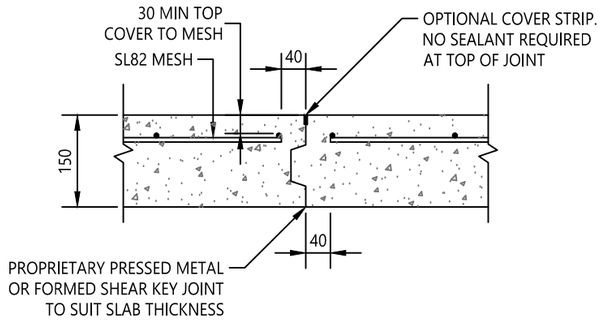
EXPANSION JOINT (EJ) 150mm TO 100mm
VEHICLE ACCESS CROSSING TO FOOTPATH
SCALE 1:10



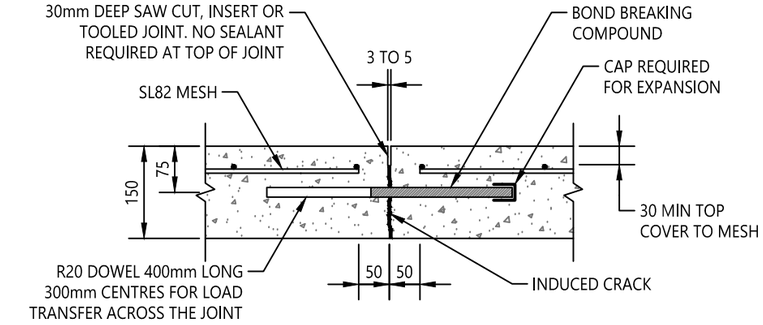
EXPANSION JOINT (EJ) 150mm
SCALE 1:10



CONTROL JOINT (CJ) IN LAYBACK
SCALE 1:10



CONTROL JOINT (CJ) 150mm - TYPE 1
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2
SCALE 1:10

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

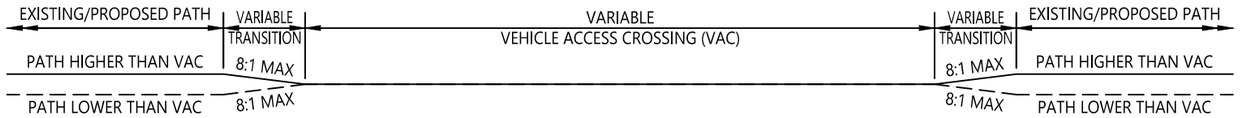
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

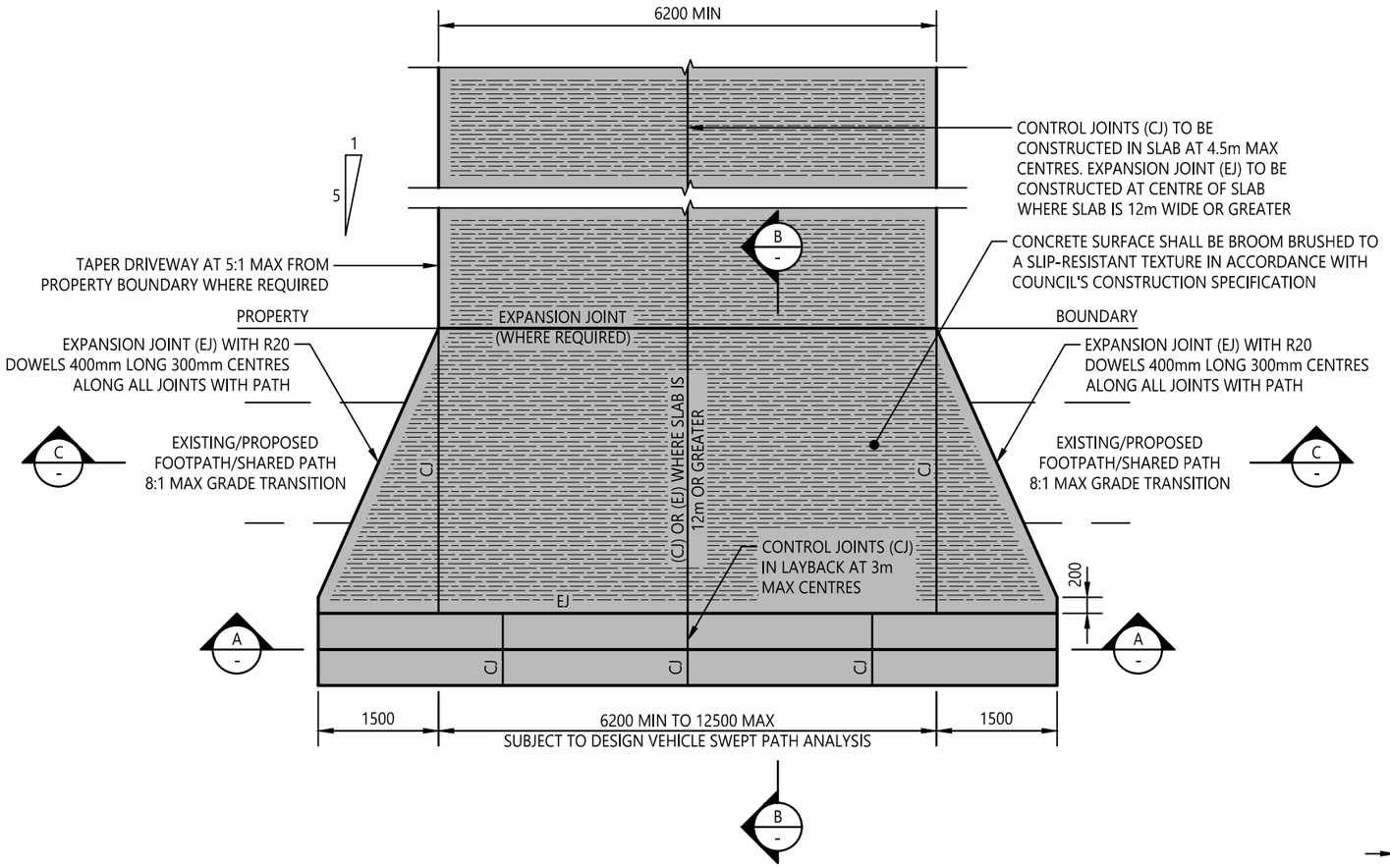
KERB AND CHANNEL SERIES
INDUSTRIAL AND COMMERCIAL VEHICLE ACCESS
CROSSING FOR ROADS WITH KERB AND CHANNEL

STANDARD DRAWING

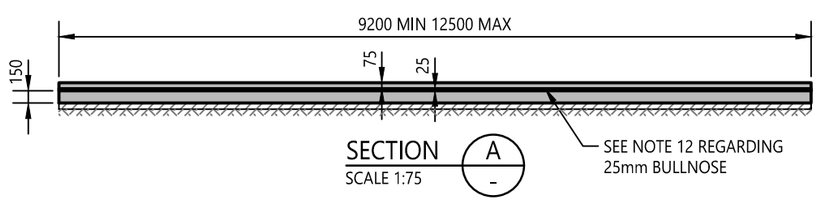
DRAWING NUMBER	REV
SD0506	-
SHEET 2 OF 2	A3



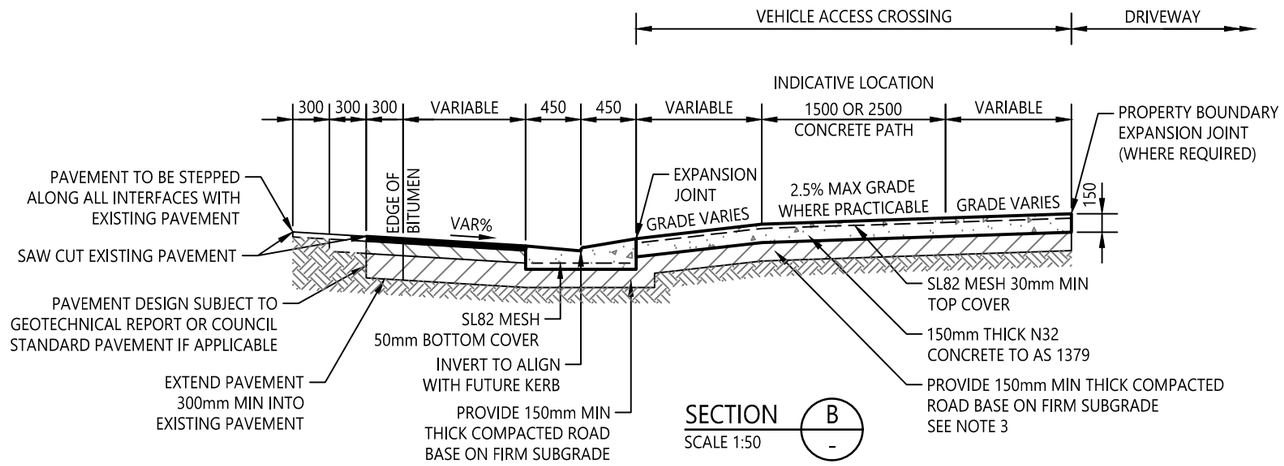
SECTION C
NOT TO SCALE



PLAN
SCALE 1:75



SECTION A
SCALE 1:75



SECTION B
SCALE 1:50

NOTES:

1. THIS DRAWING IS TO BE USED AS A GUIDE ONLY. INDUSTRIAL AND COMMERCIAL VEHICULAR ACCESS CROSSINGS ARE TO BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AS 2890.1 AND AS 3727.1 (GVM<10t) AS APPLICABLE.
2. SUITABLY COMPACT APPROVED SUBGRADE MATERIAL. PROVIDE REPLACEMENT SUBGRADE IF REQUIRED.
3. CONCRETE STRENGTH GRADE SHALL BE N32 UNLESS OTHERWISE SPECIFIED AND SHALL CONFORM TO AS 1379 SPECIFICATION AND SUPPLY OF CONCRETE.
4. EXPANSION JOINTS SHALL BE 10mm WIDE AND FILLED WITH A PREFORMED COMPRESSIBLE BITUMEN-IMPREGNATED FILLER AT 12m CENTRES AS SHOWN ON SHEET 2.
5. CONTROL JOINTS SHALL BE FORMED AS SHOWN ON SHEET 2.
6. SAWN CONTROL JOINTS SHALL BE CUT AS SOON AS SURFACE IS HARD ENOUGH THAT IT WILL NOT CHIP, SPALL AND COLLAPSE ON THE CUTTING BLADE. GENERALLY, THIS SHOULD BE WITHIN 24 HOURS OF CONCRETE PLACEMENT.
7. REINFORCING MESH SHALL BE FABRICATED TO AS/NZS 4671 STEEL REINFORCING MATERIALS.
8. REINFORCING MESH IN SLABS SHALL BE PLACED WITH 30mm MINIMUM TOP COVER.
9. DOWELS SHALL BE GALVANISED AND INSTALLED PARALLEL TO EACH OTHER AND PARALLEL TO FINISHED SURFACE.
10. DOWELS SHALL BE INSTALLED WITH DOWEL SLEEVE AND GREASED AT ONE END WITH A 10mm FREE MOVEMENT GAP AT THE GREASED END, UNLESS OTHERWISE NOTED.
11. WHERE VEHICULAR ACCESS CROSSINGS ARE ALSO USED AS KERB RAMPS, THE LAYBACK SHALL BE MODIFIED TO OMIT THE 25mm BULLNOSE AND A KERB RAMP PROFILE AND SHAPE INTEGRATED WITH WHOLE VEHICULAR ACCESS CROSSING.
12. REFER TO SD0508 FOR APPROPRIATE DRIVEWAY PROFILE CONFIGURATION.
13. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

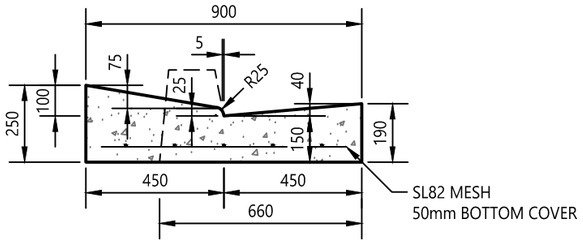
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

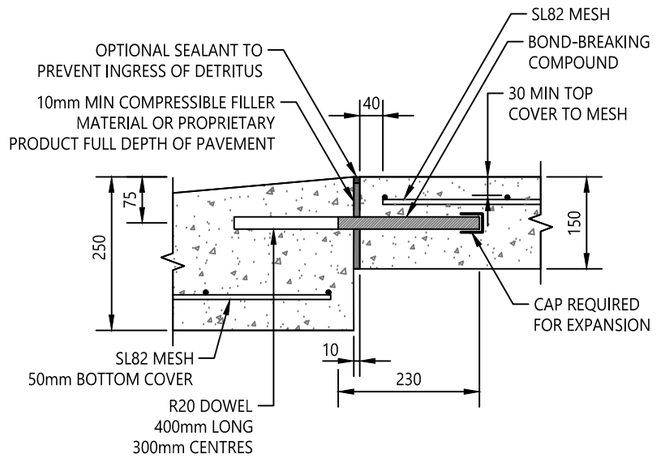
KERB AND CHANNEL SERIES
INDUSTRIAL AND COMMERCIAL VEHICLE ACCESS CROSSING ROADS WITHOUT KERB AND CHANNEL

STANDARD DRAWING

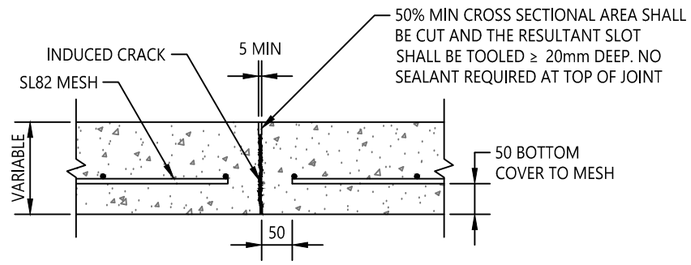
DRAWING NUMBER	REV
SD0507	-
SHEET 1 OF 2	A3



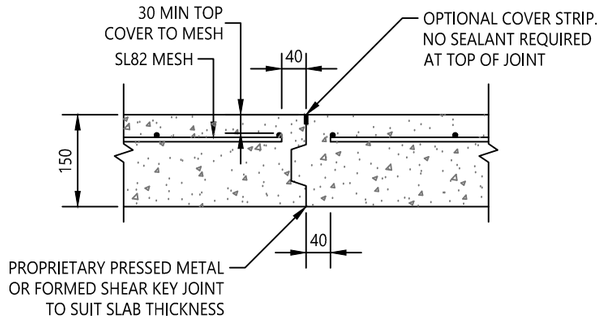
STANDARD LAYBACK
SCALE 1:20



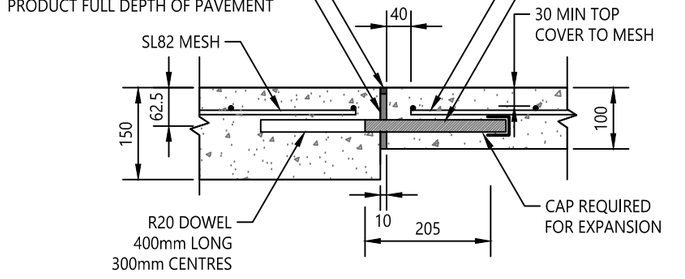
EXPANSION JOINT (EJ) 250mm TO 150mm
LAYBACK TO VEHICLE ACCESS CROSSING
SCALE 1:10



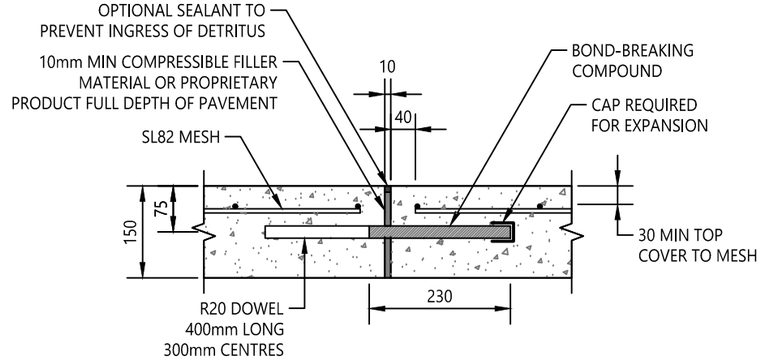
CONTROL JOINT (CJ) IN LAYBACK
SCALE 1:10



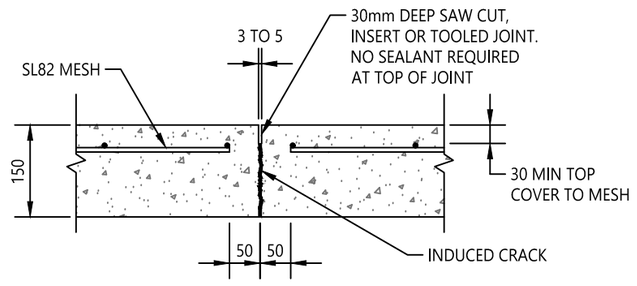
CONTROL JOINT (CJ) 150mm - TYPE 1
SCALE 1:10



EXPANSION JOINT (EJ) 150mm TO 100mm
VEHICLE ACCESS CROSSING TO FOOTPATH
SCALE 1:10



EXPANSION JOINT (EJ) 150mm
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2
SCALE 1:10

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

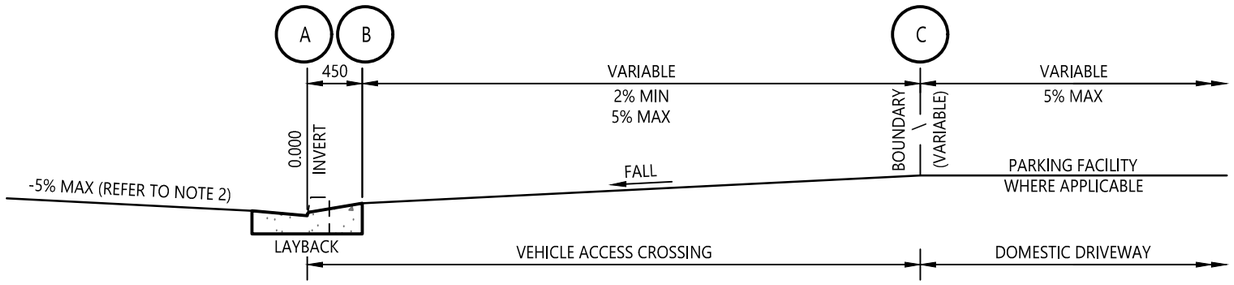
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

KERB AND CHANNEL SERIES
INDUSTRIAL AND COMMERCIAL VEHICLE ACCESS
CROSSING ROADS WITHOUT KERB AND CHANNEL

STANDARD DRAWING

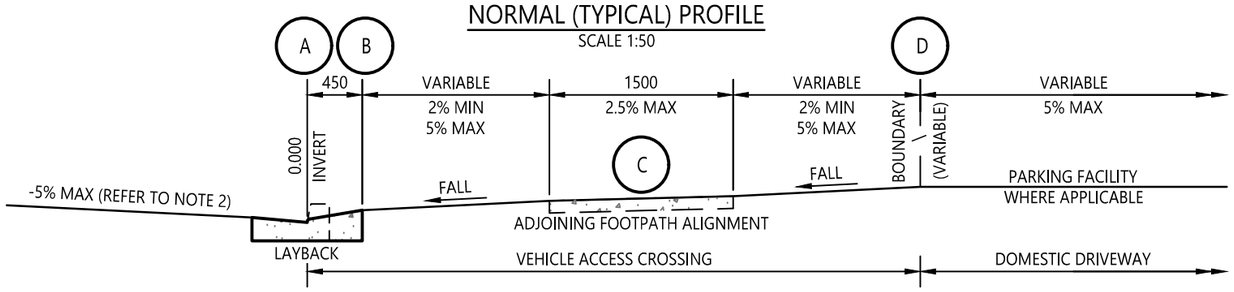
DRAWING NUMBER	REV
SD0507	-
SHEET 2 OF 2	A3



POINT	DESCRIPTION	LEVEL INFORMATION
A	KERB AND CHANNEL INVERT	DATUM FOR VEHICLE ACCESS CROSSING
B	REAR OF LAYBACK	100mm ABOVE KERB AND CHANNEL INVERT
C	BOUNDARY ALIGNMENT	PROVIDE A 10mm EXPANSION JOINT (WHERE REQUIRED)

NORMAL (TYPICAL) PROFILE

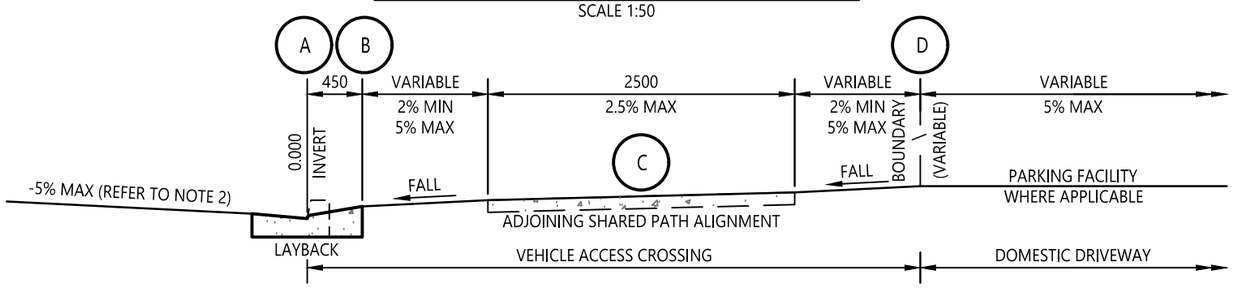
SCALE 1:50



POINT	DESCRIPTION	LEVEL INFORMATION
A	KERB AND CHANNEL INVERT	DATUM FOR VEHICLE ACCESS CROSSING
B	REAR OF LAYBACK	100mm ABOVE KERB AND CHANNEL INVERT
C	CONCRETE FOOTPATH	ADJOINING 1500mm WIDE CONCRETE FOOTPATH SHALL BE ALIGNED BETWEEN POINT B AND POINT D AND NOT EXCEED 2.5% CROSSFALL
D	BOUNDARY ALIGNMENT	PROVIDE A 10mm EXPANSION JOINT (WHERE REQUIRED)

NORMAL (TYPICAL) PROFILE WITH FOOTPATH

SCALE 1:50



POINT	DESCRIPTION	LEVEL INFORMATION
A	KERB AND CHANNEL INVERT	DATUM FOR VEHICLE ACCESS CROSSING
B	REAR OF LAYBACK	100mm ABOVE KERB AND CHANNEL INVERT
C	CONCRETE SHARED PATH	ADJOINING 2500mm WIDE CONCRETE SHARED PATH SHALL BE ALIGNED BETWEEN POINT B AND POINT D AND NOT EXCEED 2.5% CROSSFALL
D	BOUNDARY ALIGNMENT	PROVIDE A 10mm EXPANSION JOINT (WHERE REQUIRED)

NORMAL (TYPICAL) PROFILE WITH SHARED PATH

SCALE 1:50

NOTES:

1. VEHICLE ACCESS CROSSING PROFILES ON THIS STANDARD DRAWING ARE BASED ON AS/NZS 2890.1 OFF-STREET CAR PARKING AND THE B85 DESIGN VEHICLE WITH A GROUND CLEARANCE OF 120mm (LADEN). REFER TO COUNCIL'S STANDARD PASSENGER CAR VERTICAL CLEARANCE PROFILE STANDARD DRAWING SD0509.
2. A SITE SPECIFIC DESIGN BY A SUITABLY QUALIFIED AND EXPERIENCED CIVIL DESIGNER MAY BE REQUIRED DUE TO EXISTING CONSTRAINTS SUCH AS LOWER CLEARANCE VEHICLES OR WHERE LONGITUDINAL AND CROSSFALL GRADES ARE EXCESSIVE. WHERE LONGITUDINAL GRADES ARE EXCESSIVE AND/OR HORIZONTAL ALIGNMENTS ARE CURVED, CONSIDER USING A STEEL-TYNED COMB OR SIMILAR TREATMENT TO GROOVE THE CONCRETE SURFACE TO ACHIEVE GREATER SKID-RESISTANCE.
3. THE MAXIMUM GRADIENT OF DOMESTIC DRIVEWAYS SHALL BE 25%. THE MAXIMUM GRADIENT OF THE ASSOCIATED ACCESS DRIVEWAY ACROSS A PROPERTY LINE OR BUILDING ALIGNMENT SHALL BE 5% AND ACROSS A FOOTPATH OR SHARED PATH ALIGNMENT SHALL BE 2.5% WHERE PRACTICABLE IN EXISTING 'BROWNFIELD' AREAS.
4. TO PREVENT VEHICLES SCRAPING OR BOTTOMING, CHANGES IN GRADE IN EXCESS OF 12.5% FOR SUMMIT GRADE CHANGES AND 15% FOR SAG GRADE CHANGES REQUIRE INTRODUCTION OF A GRADE TRANSITION OR ROUNDING BETWEEN THE MAIN GRADE LINES.
5. ENSURE ALL ADJACENT AREAS ARE ADEQUATELY SHAPED, GRADED AND TURFED/CONCRETED OR HAVE STORMWATER DRAINAGE PROVIDED SHOULD THE VEHICLE ACCESS CROSSING ADVERSELY AFFECT STORMWATER RUNOFF OR ROAD USER SAFETY.
6. REFER TO COUNCIL'S VEHICLE ACCESS CROSSING STANDARD DRAWINGS FOR FURTHER DESIGN AND CONSTRUCTION DETAILS.
7. DEPTH OF SECONDARY GAP FLOW IN ROAD IS CRITICAL. PROVIDE 100mm MINIMUM FREEBOARD FROM MAJOR DESIGN STORM EVENT FLOW LEVEL TO HIGH POINT IN VEHICLE ACCESS CROSSING.
8. THE HIGHEST POINT IN LOW LEVEL ACCESSES SHALL BE 150mm MINIMUM ABOVE INVERT OF KERB IRRESPECTIVE OF THE TYPE OF LAYBACK USED.
9. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
10. THE VEHICLE ACCESS CROSSING APPLICANT IS TO PROVIDE INTERIM CONSTRUCTION PADS FOR SERVICE AUTHORITIES ENSURING CORRECT COVER IS PROVIDED TO FINISHED SURFACE LEVELS WHERE REQUIRED.
11. COUNCIL WILL NOT BE RESPONSIBLE IF VEHICLES CANNOT TRAVERSE THE DESIGN VEHICLE ACCESS CROSSING WHERE THE ABOVE GUIDELINES HAVE NOT BEEN TAKEN INTO ACCOUNT.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

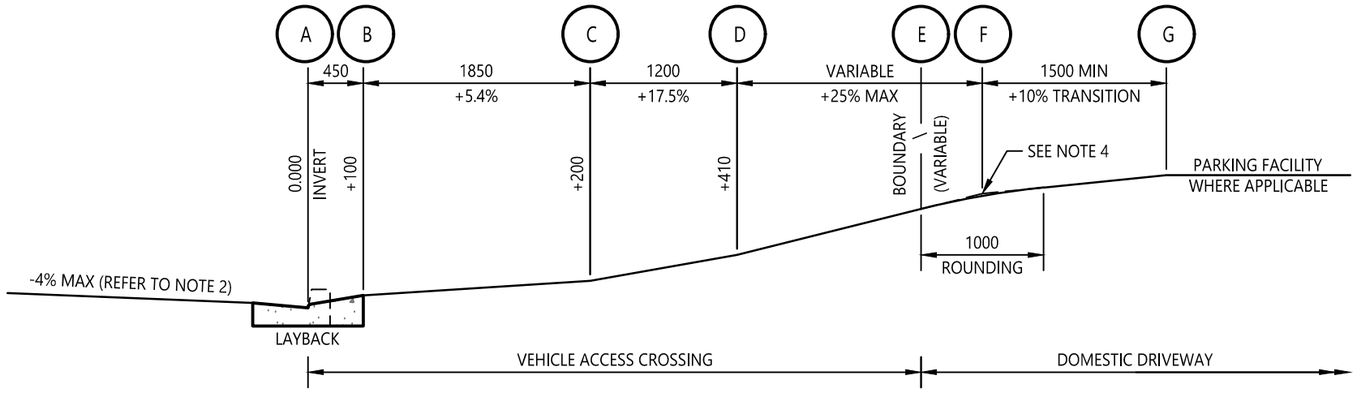
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

KERB AND CHANNEL SERIES
VEHICLE ACCESS CROSSING AND DRIVEWAY PROFILES

STANDARD DRAWING

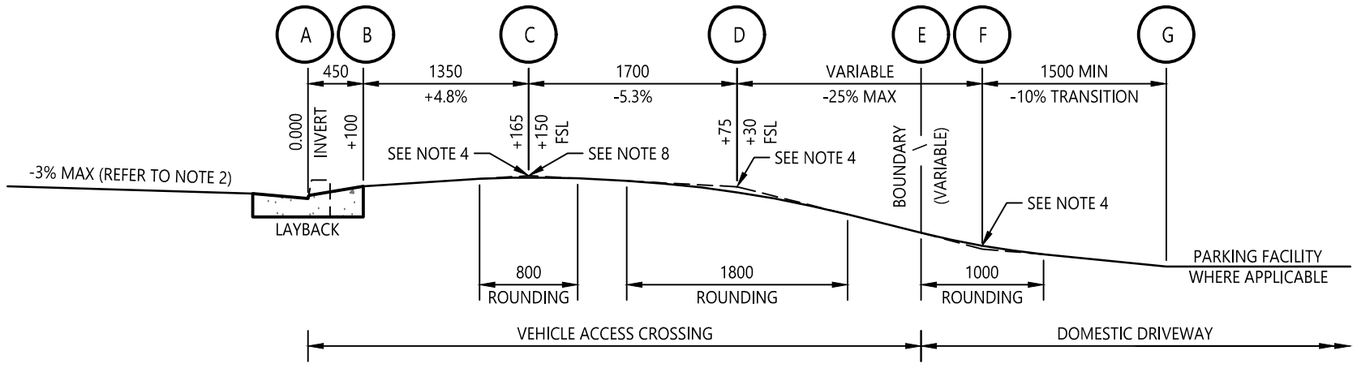
DRAWING NUMBER	REV
SD0508	-
SHEET 1 OF 4	A3



POINT	DESCRIPTION	LEVEL INFORMATION
A	KERB AND CHANNEL INVERT	DATUM FOR VEHICLE ACCESS CROSSING
B	REAR OF LAYBACK	100mm ABOVE KERB AND CHANNEL INVERT
C	2300 BEHIND INVERT	200mm ABOVE KERB AND CHANNEL INVERT
D	3500 BEHIND INVERT	410mm ABOVE KERB AND CHANNEL INVERT
E	BOUNDARY ALIGNMENT	PROVIDE A 10mm EXPANSION JOINT (WHERE REQUIRED)
F	1500 BEFORE PARKING	PROVIDE A TRANSITION OF 10% OVER 1500mm AND A 1000mm ROUNDING CENTRED ABOUT POINT F
G	PARKING FACILITY	5% MAXIMUM GRADE WHERE APPLICABLE

PROFILE FOR HIGH LEVEL ACCESSES WITHOUT PATH

SCALE 1:50



POINT	DESCRIPTION	LEVEL INFORMATION
A	KERB AND CHANNEL INVERT	DATUM FOR VEHICLE ACCESS CROSSING
B	REAR OF LAYBACK	100mm ABOVE KERB AND CHANNEL INVERT
C	1800 BEHIND INVERT	165mm ABOVE KERB AND CHANNEL INVERT. THE FINISHED SURFACE LEVEL (FSL) SHALL BE 150mm ABOVE THE KERB AND CHANNEL INVERT (15mm BELOW FORMWORK) BY PROVIDING AN 800mm ROUNDING CENTRED ABOUT POINT C
D	3500 BEHIND INVERT	75mm ABOVE KERB AND CHANNEL INVERT. THE FINISHED SURFACE LEVEL SHALL BE 30mm ABOVE THE KERB AND CHANNEL INVERT (45mm BELOW FORMWORK) BY PROVIDING AN 1800mm ROUNDING CENTRED ABOUT POINT D
E	BOUNDARY ALIGNMENT	PROVIDE A 10mm EXPANSION JOINT (WHERE REQUIRED)
F	1500 BEFORE PARKING	PROVIDE A TRANSITION OF 10% OVER 1500mm AND A 1000mm ROUNDING CENTRED ABOUT POINT F
G	PARKING FACILITY	5% MAXIMUM GRADE WHERE APPLICABLE

PROFILE FOR LOW LEVEL ACCESSES WITHOUT PATH

SCALE 1:50

NOTES:

1. VEHICLE ACCESS CROSSING PROFILES ON THIS STANDARD DRAWING ARE BASED ON AS/NZS 2890.1 OFF-STREET CAR PARKING AND THE B85 DESIGN VEHICLE WITH A GROUND CLEARANCE OF 120mm (LADEN). REFER TO COUNCIL'S STANDARD PASSENGER CAR VERTICAL CLEARANCE PROFILE STANDARD DRAWING SD0509.
2. A SITE SPECIFIC DESIGN BY A SUITABLY QUALIFIED AND EXPERIENCED CIVIL DESIGNER MAY BE REQUIRED DUE TO EXISTING CONSTRAINTS SUCH AS LOWER CLEARANCE VEHICLES OR WHERE LONGITUDINAL AND CROSSFALL GRADES ARE EXCESSIVE. WHERE LONGITUDINAL GRADES ARE EXCESSIVE AND/OR HORIZONTAL ALIGNMENTS ARE CURVED, CONSIDER USING A STEEL-TYNED COMB OR SIMILAR TREATMENT TO GROOVE THE CONCRETE SURFACE TO ACHIEVE GREATER SKID-RESISTANCE.
3. THE MAXIMUM GRADIENT OF DOMESTIC DRIVEWAYS SHALL BE 25%. THE MAXIMUM GRADIENT OF THE ASSOCIATED ACCESS DRIVEWAY ACROSS A PROPERTY LINE OR BUILDING ALIGNMENT SHALL BE 5% AND ACROSS A FOOTPATH OR SHARED PATH ALIGNMENT SHALL BE 2.5% WHERE PRACTICABLE IN EXISTING 'BROWNFIELD' AREAS.
4. TO PREVENT VEHICLES SCRAPING OR BOTTOMING, CHANGES IN GRADE IN EXCESS OF 12.5% FOR SUMMIT GRADE CHANGES AND 15% FOR SAG GRADE CHANGES REQUIRE INTRODUCTION OF A GRADE TRANSITION OR ROUNDING BETWEEN THE MAIN GRADE LINES.
5. ENSURE ALL ADJACENT AREAS ARE ADEQUATELY SHAPED, GRADED AND TURFED/CONCRETED OR HAVE STORMWATER DRAINAGE PROVIDED SHOULD THE VEHICLE ACCESS CROSSING ADVERSELY AFFECT STORMWATER RUNOFF OR ROAD USER SAFETY.
6. REFER TO COUNCIL'S VEHICLE ACCESS CROSSING STANDARD DRAWINGS FOR FURTHER DESIGN AND CONSTRUCTION DETAILS.
7. DEPTH OF SECONDARY GAP FLOW IN ROAD IS CRITICAL. PROVIDE 100mm MINIMUM FREEBOARD FROM MAJOR DESIGN STORM EVENT FLOW LEVEL TO HIGH POINT IN VEHICLE ACCESS CROSSING.
8. THE HIGHEST POINT IN LOW LEVEL ACCESSES SHALL BE 150mm MINIMUM ABOVE INVERT OF KERB IRRESPECTIVE OF THE TYPE OF LAYBACK USED.
9. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
10. THE VEHICLE ACCESS CROSSING APPLICANT IS TO PROVIDE INTERIM CONSTRUCTION PADS FOR SERVICE AUTHORITIES ENSURING CORRECT COVER IS PROVIDED TO FINISHED SURFACE LEVELS WHERE REQUIRED.
11. COUNCIL WILL NOT BE RESPONSIBLE IF VEHICLES CANNOT TRAVERSE THE DESIGN VEHICLE ACCESS CROSSING WHERE THE ABOVE GUIDELINES HAVE NOT BEEN TAKEN INTO ACCOUNT.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

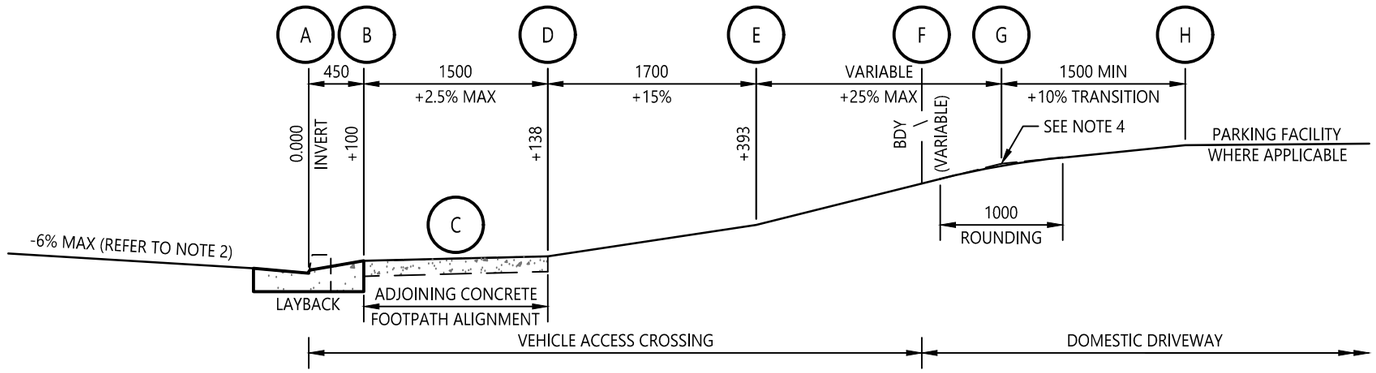
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

KERB AND CHANNEL SERIES
VEHICLE ACCESS CROSSING AND DRIVEWAY PROFILES

STANDARD DRAWING

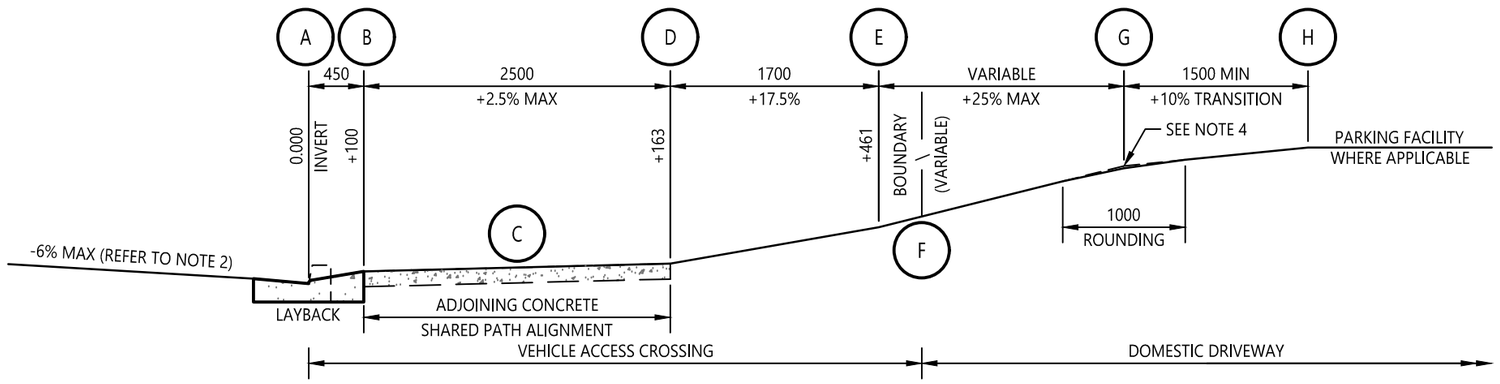
DRAWING NUMBER	REV
SD0508	-
SHEET 2 OF 4	A3



POINT	DESCRIPTION	LEVEL INFORMATION
A	KERB AND CHANNEL INVERT	DATUM FOR VEHICLE ACCESS CROSSING
B	REAR OF LAYBACK	100mm ABOVE KERB AND CHANNEL INVERT. PROVIDE A 10mm EXPANSION JOINT
C	CONCRETE FOOTPATH	ADJOINING 1500mm WIDE CONCRETE FOOTPATH SHALL BE ALIGNED BETWEEN POINT B AND POINT D AND NOT EXCEED 2.5% CROSSFALL
D	1950 BEHIND INVERT	138mm ABOVE KERB AND CHANNEL INVERT
E	3650 BEHIND INVERT	393mm ABOVE KERB AND CHANNEL INVERT
F	BOUNDARY (BDY) ALIGNMENT	PROVIDE A 10mm EXPANSION JOINT (WHERE REQUIRED)
G	1500 BEFORE PARKING	PROVIDE A TRANSITION OF 10% OVER 1500mm AND A 1000mm ROUNDING CENTRED ABOUT POINT G
H	PARKING FACILITY	5% MAXIMUM GRADE WHERE APPLICABLE

PROFILE FOR HIGH LEVEL ACCESSES WITH FOOTPATH

SCALE 1:50



POINT	DESCRIPTION	LEVEL INFORMATION
A	KERB AND CHANNEL INVERT	DATUM FOR VEHICLE ACCESS CROSSING
B	REAR OF LAYBACK	100mm ABOVE KERB AND CHANNEL INVERT. PROVIDE A 10mm EXPANSION JOINT
C	CONCRETE SHARED PATH	ADJOINING 2500mm WIDE CONCRETE SHARED PATH SHALL BE ALIGNED BETWEEN POINT B AND POINT D AND NOT EXCEED 2.5% CROSSFALL
D	2950 BEHIND INVERT	163mm ABOVE KERB AND CHANNEL INVERT
E	4650 BEHIND INVERT	461mm ABOVE KERB AND CHANNEL INVERT
F	BOUNDARY ALIGNMENT	PROVIDE A 10mm EXPANSION JOINT (WHERE REQUIRED)
G	1500 BEFORE PARKING	PROVIDE A TRANSITION OF 10% OVER 1500mm AND A 1000mm ROUNDING CENTRED ABOUT POINT G
H	PARKING FACILITY	5% MAXIMUM GRADE WHERE APPLICABLE

PROFILE FOR HIGH LEVEL ACCESSES WITH SHARED PATH

SCALE 1:50

NOTES:

1. VEHICLE ACCESS CROSSING PROFILES ON THIS STANDARD DRAWING ARE BASED ON AS/NZS 2890.1 OFF-STREET CAR PARKING AND THE B85 DESIGN VEHICLE WITH A GROUND CLEARANCE OF 120mm (LADEN). REFER TO COUNCIL'S STANDARD PASSENGER CAR VERTICAL CLEARANCE PROFILE STANDARD DRAWING SD0509
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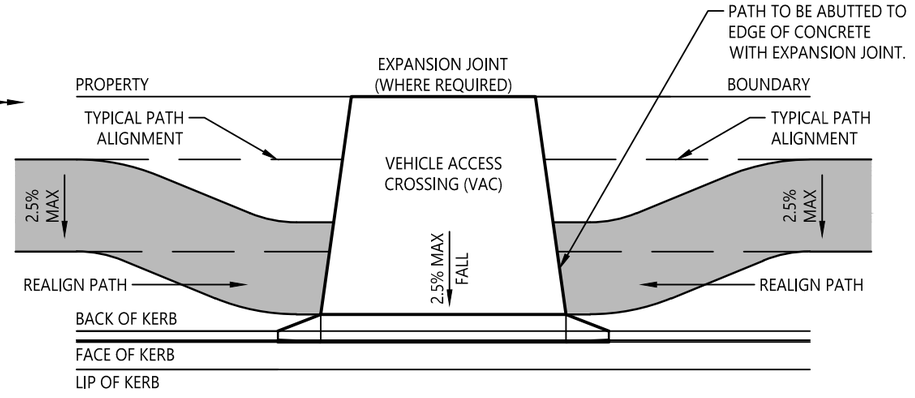
3. THE MAXIMUM GRADIENT OF DOMESTIC DRIVEWAYS SHALL BE 25%. THE MAXIMUM GRADIENT OF THE ASSOCIATED ACCESS DRIVEWAY ACROSS A PROPERTY LINE OR BUILDING ALIGNMENT SHALL BE 5% AND ACROSS A FOOTPATH OR SHARED PATH ALIGNMENT SHALL BE 2.5% WHERE PRACTICABLE IN EXISTING 'BROWNFIELD' AREAS.
4. TO PREVENT VEHICLES SCRAPING OR BOTTOMING, CHANGES IN GRADE IN EXCESS OF 12.5% FOR SUMMIT GRADE CHANGES AND 15% FOR SAG GRADE CHANGES REQUIRE INTRODUCTION OF A GRADE TRANSITION OR ROUNDING BETWEEN THE MAIN GRADE LINES.
5. ENSURE ALL ADJACENT AREAS ARE ADEQUATELY SHAPED, GRADED AND TURFED/CONCRETED OR HAVE STORMWATER DRAINAGE PROVIDED SHOULD THE VEHICLE ACCESS CROSSING ADVERSELY AFFECT STORMWATER RUNOFF OR ROAD USER SAFETY.
6. REFER TO COUNCIL'S VEHICLE ACCESS CROSSING STANDARD DRAWINGS FOR FURTHER DESIGN AND CONSTRUCTION DETAILS.
7. DEPTH OF SECONDARY GAP FLOW IN ROAD IS CRITICAL. PROVIDE 100mm MINIMUM FREEBOARD FROM MAJOR DESIGN STORM EVENT FLOW LEVEL TO HIGH POINT IN VEHICLE ACCESS CROSSING.
8. THE HIGHEST POINT IN LOW LEVEL ACCESSES SHALL BE 150mm MINIMUM ABOVE INVERT OF KERB IRRESPECTIVE OF THE TYPE OF LAYBACK USED.
9. ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
10. THE VEHICLE ACCESS CROSSING APPLICANT IS TO PROVIDE INTERIM CONSTRUCTION PADS FOR SERVICE AUTHORITIES ENSURING CORRECT COVER IS PROVIDED TO FINISHED SURFACE LEVELS WHERE REQUIRED.
11. COUNCIL WILL NOT BE RESPONSIBLE IF VEHICLES CANNOT TRAVERSE THE DESIGN VEHICLE ACCESS CROSSING WHERE THE ABOVE GUIDELINES HAVE NOT BEEN TAKEN INTO ACCOUNT.



CONCRETE PATH LOCATION AT HIGH AND LOW LEVEL ACCESSES

SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

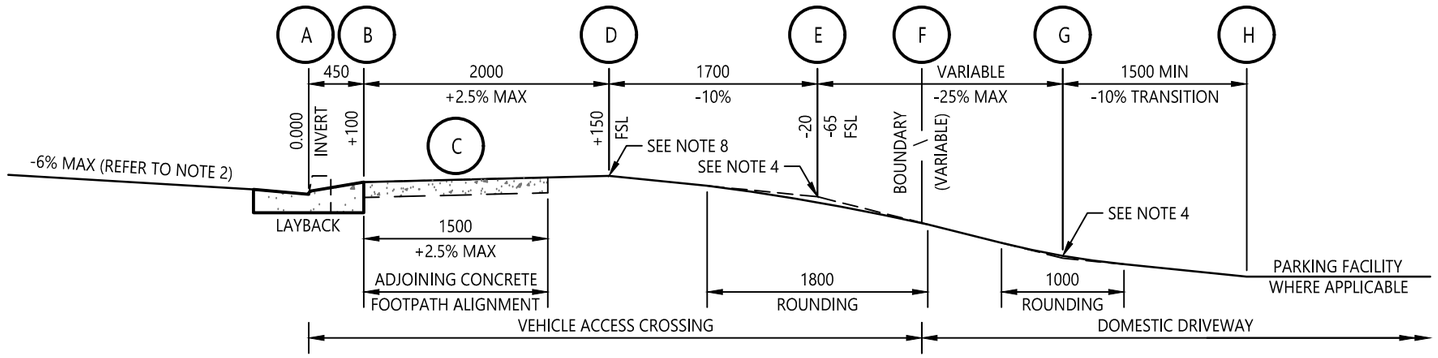
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

KERB AND CHANNEL SERIES
VEHICLE ACCESS CROSSING AND
DRIVEWAY PROFILES

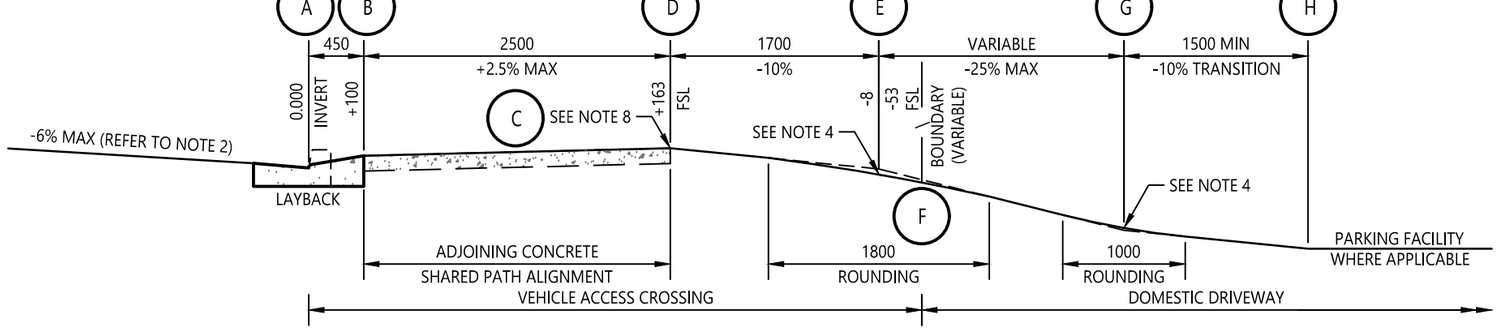
DRAWING NUMBER	REV
SD0508	-
SHEET 3 OF 4	A3



POINT	DESCRIPTION	LEVEL INFORMATION
A	KERB AND CHANNEL INVERT	DATUM FOR VEHICLE ACCESS CROSSING
B	REAR OF LAYBACK	100mm ABOVE KERB AND CHANNEL INVERT. PROVIDE A 10mm EXPANSION JOINT
C	CONCRETE FOOTPATH	ADJOINING 1500mm WIDE CONCRETE FOOTPATH SHALL BE ALIGNED BETWEEN POINT B AND POINT D AND NOT EXCEED 2.5% CROSSFALL
D	2450 BEHIND INVERT	150mm ABOVE KERB AND CHANNEL INVERT
E	4150 BEHIND INVERT	20mm BELOW KERB AND CHANNEL INVERT. THE FINISHED SURFACE LEVEL (FSL) SHALL BE 65mm BELOW THE KERB AND CHANNEL INVERT (45mm BELOW FORMWORK) BY PROVIDING AN 1800mm ROUNDING CENTRED ABOUT POINT E
F	BOUNDARY ALIGNMENT	PROVIDE A 10mm EXPANSION JOINT (WHERE REQUIRED)
G	1500 BEFORE PARKING	PROVIDE A TRANSITION OF 10% OVER 1500mm AND A 1000mm ROUNDING CENTRED ABOUT POINT G
H	PARKING FACILITY	5% MAXIMUM GRADE WHERE APPLICABLE

PROFILE FOR LOW LEVEL ACCESSES WITH FOOTPATH

SCALE 1:50



POINT	DESCRIPTION	LEVEL INFORMATION
A	KERB AND CHANNEL INVERT	DATUM FOR VEHICLE ACCESS CROSSING
B	REAR OF LAYBACK	100mm ABOVE KERB AND CHANNEL INVERT. PROVIDE A 10mm EXPANSION JOINT
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D	2950 BEHIND INVERT	163mm ABOVE KERB AND CHANNEL INVERT
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PROFILE FOR LOW LEVEL ACCESSES WITH SHARED PATH

SCALE 1:50

NOTES:

1. VEHICLE ACCESS CROSSING PROFILES ON THIS STANDARD DRAWING ARE BASED ON AS/NZS 2890.1 OFF-STREET CAR PARKING AND THE B85 DESIGN VEHICLE WITH A GROUND CLEARANCE OF 120mm (LADEN). REFER TO COUNCIL'S STANDARD PASSENGER CAR VERTICAL CLEARANCE PROFILE STANDARD DRAWING SD0509.
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3. THE MAXIMUM GRADIENT OF DOMESTIC DRIVEWAYS SHALL BE 25%. THE MAXIMUM GRADIENT OF THE ASSOCIATED ACCESS DRIVEWAY ACROSS A PROPERTY LINE OR BUILDING ALIGNMENT SHALL BE 5% AND ACROSS A FOOTPATH OR SHARED PATH ALIGNMENT SHALL BE 2.5% WHERE PRACTICABLE IN EXISTING 'BROWNFIELD' AREAS.
4. TO PREVENT VEHICLES SCRAPING OR BOTTOMING, CHANGES IN GRADE IN EXCESS OF 12.5% FOR SUMMIT GRADE CHANGES AND 15% FOR SAG GRADE CHANGES REQUIRE INTRODUCTION OF A GRADE TRANSITION OR ROUNDING BETWEEN THE MAIN GRADE LINES.
5. ENSURE ALL ADJACENT AREAS ARE ADEQUATELY SHAPED, GRADED AND TURFED/CONCRETED OR HAVE STORMWATER DRAINAGE PROVIDED SHOULD THE VEHICLE ACCESS CROSSING ADVERSELY AFFECT STORMWATER RUNOFF OR ROAD USER SAFETY.
6. REFER TO COUNCIL'S VEHICLE ACCESS CROSSING STANDARD DRAWINGS FOR FURTHER DESIGN AND CONSTRUCTION DETAILS.
7. DEPTH OF SECONDARY GAP FLOW IN ROAD IS CRITICAL. PROVIDE 100mm MINIMUM FREEBOARD FROM MAJOR DESIGN STORM EVENT FLOW LEVEL TO HIGH POINT IN VEHICLE ACCESS CROSSING.
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10. THE VEHICLE ACCESS CROSSING APPLICANT IS TO PROVIDE INTERIM CONSTRUCTION PADS FOR SERVICE AUTHORITIES ENSURING CORRECT COVER IS PROVIDED TO FINISHED SURFACE LEVELS WHERE REQUIRED.
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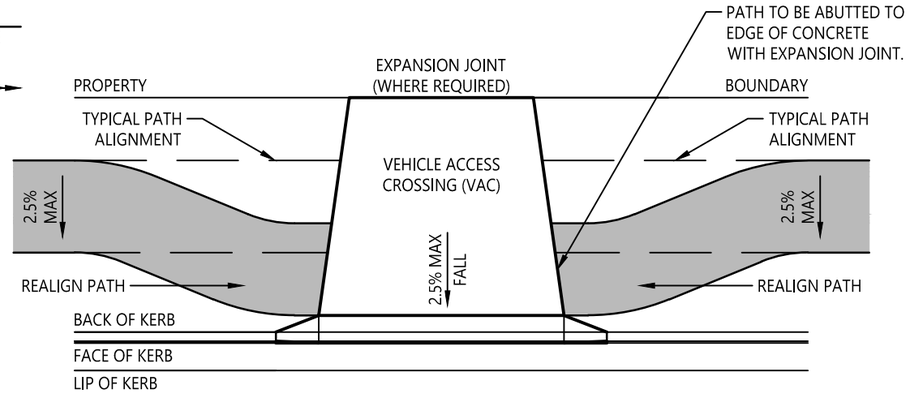


CONCRETE PATH LOCATION AT HIGH AND LOW LEVEL ACCESSES

SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

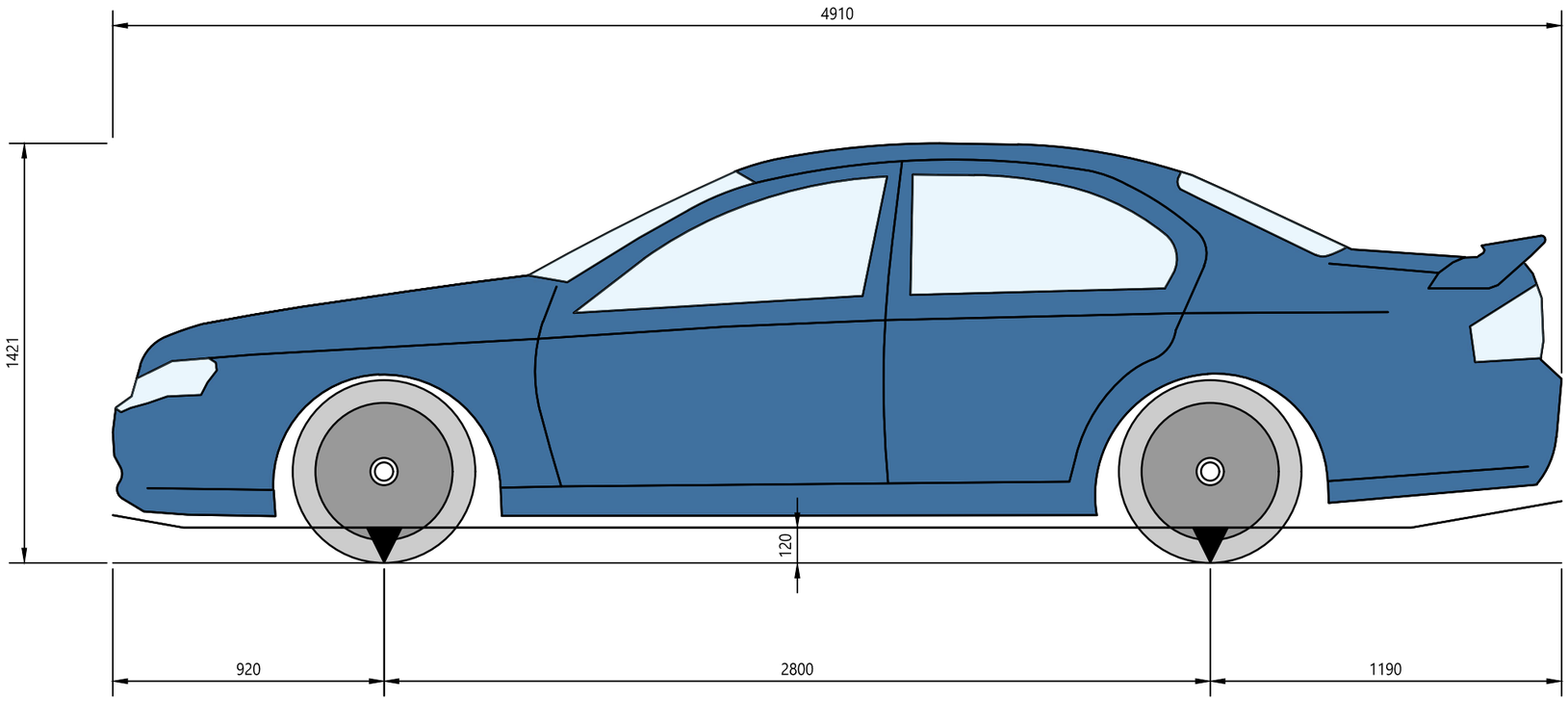
STANDARD DRAWING

KERB AND CHANNEL SERIES
VEHICLE ACCESS CROSSING AND
DRIVEWAY PROFILES

DRAWING NUMBER	REV
SD0508	-
SHEET 4 OF 4	A3

NOTES:

1. THIS DESIGN VEHICLE SHALL BE USED FOR CHECKING VERTICAL CLEARANCE PROFILES ON DOMESTIC VEHICULAR ACCESS CROSSINGS AND DRIVEWAYS ONLY.
2. THE GROUND CLEARANCE IS BASED ON THE DESIGN VEHICLE BEING LADEN WITH PASSENGERS AND FUEL.
3. THIS PROFILE WAS GENERATED USING AUTODESK VEHICLE TRACKING (FORMERLY AUTOTRACK) AND IS BASED ON THE B85 PASSENGER CAR PROFILE INCLUDED IN AS/NZS 2890.1: 2004.



B85 PASSENGER CAR DIMENSIONS TO AS/NZS 2890.1: 2004

OVERALL LENGTH	4910
OVERALL WIDTH	1870
OVERALL BODY HEIGHT	1421
MINIMUM BODY GROUND CLEARANCE	120
TRACK WIDTH	1770

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000

1:20

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

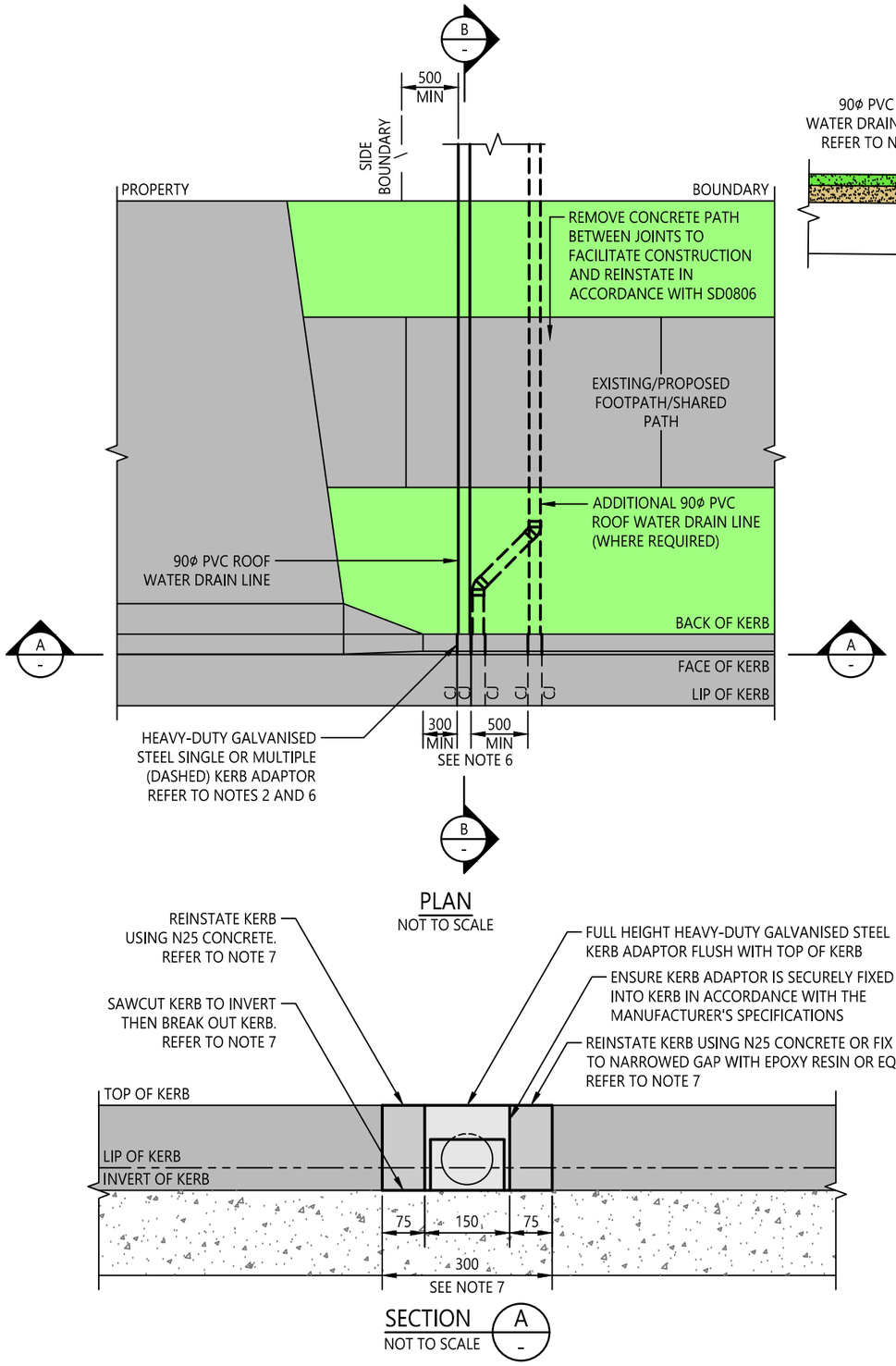
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

KERB AND CHANNEL SERIES
STANDARD PASSENGER CAR
VERTICAL CLEARANCE PROFILE

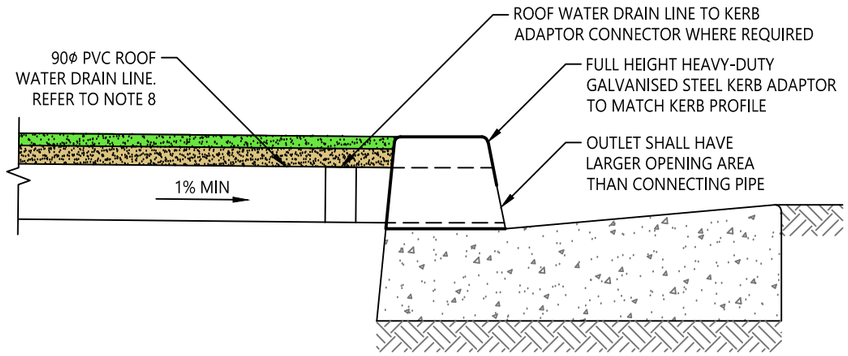
STANDARD DRAWING

DRAWING NUMBER	REV
SD0509	-
SHEET 1 OF 1	A3

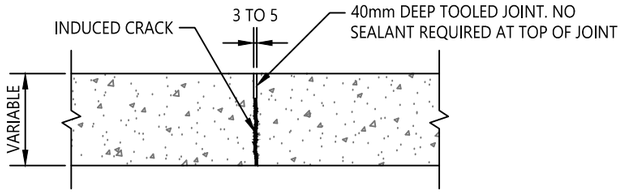


PLAN
NOT TO SCALE

SECTION A - NOT TO SCALE



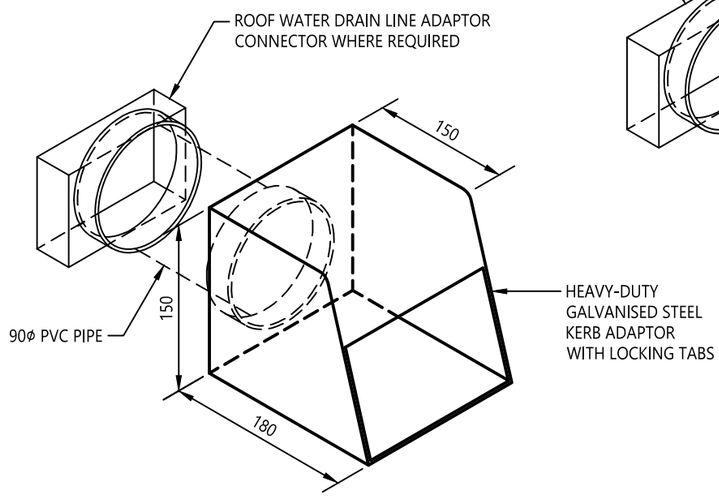
SECTION B - NOT TO SCALE



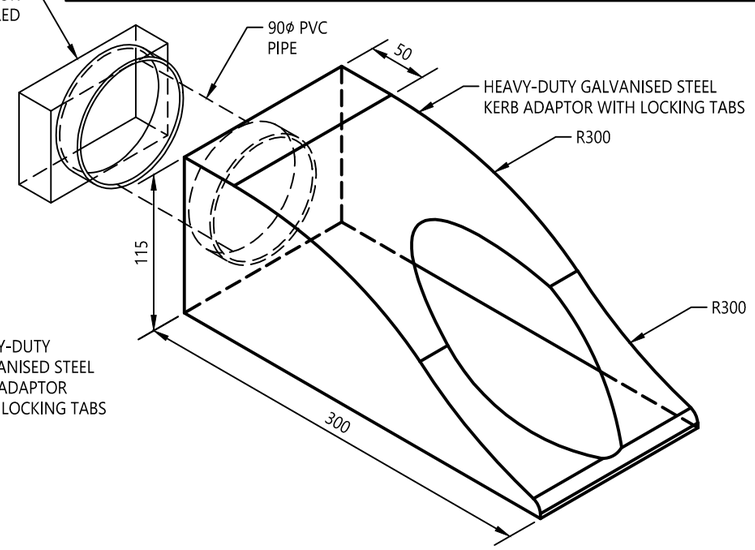
CONTROL JOINT (CJ) IN KERB AND CHANNEL
SCALE 1:10

NOTES:

1. KERB ADAPTOR DETAILS ON THIS STANDARD DRAWING ARE BASED ON ADAPTA-KERB AK2Z BARRIER Z KERB ADAPTOR , C&E ENTERPRISES PRODUCT CATALOGUE AND R&S GRATING DRAWING NUMBER PS-K-R-SM2.
2. KERB ADAPTORS SHALL BE HEAVY-DUTY GALVANISED STEEL. EQUIVALENT PRODUCTS MAY BE USED WITH THE APPROVAL OF COUNCIL'S REPRESENTATIVE. DIMENSIONS OF PROPRIETARY PRODUCTS MAY VARY.
3. ROOF WATER DRAINS AND THEIR CONNECTION TO THE STORMWATER DRAINAGE NETWORK ARE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE PROPERTY OWNER IS RESPONSIBLE FOR THE RESTORATION OF THE AFFECTED KERB AND CHANNEL, VERGE AND PATH.
4. WHERE ROOF WATER DRAINS CONNECT TO BARRIER KERB AND CHANNEL, A FULL HEIGHT KERB ADAPTOR MATCHING KERB AND CHANNEL PROFILE AND DRAIN LINE TO KERB ADAPTOR CONNECTOR (WHERE REQUIRED) SHALL BE USED. PROPRIETARY PRODUCTS ARE PREFERRED.
5. WHERE ROOF WATER DRAINS CONNECT TO ROLL TOP KERB AND CHANNEL, A KERB ADAPTOR MATCHING THE ROLL TOP KERB AND CHANNEL PROFILE AND DRAIN LINE TO KERB ADAPTOR CONNECTOR (WHERE REQUIRED) SHALL BE USED. PROPRIETARY PRODUCTS ARE PREFERRED.
6. SINGLE KERB ADAPTORS SHALL HAVE A MINIMUM OF 500mm CLEARANCE BETWEEN ANOTHER KERB ADAPTOR; OR USE MULTIPLE ADAPTOR AS SHOWN ON PLAN.
7. CREATE GAP IN WET CONCRETE KERB AND ALLOW CONCRETE TO SET ON EACH SIDE OF THE ADAPTOR AND LOCKING TABS. EXISTING KERB SHALL BE SAW CUT TO RETROFIT THE KERB ADAPTOR AS NECESSARY AND REINSTATED WITH GROUT, JOINT FILLER, EPOXY RESIN OR N25 CONCRETE.
8. PROVIDE 90ø PVC ROOF WATER DRAINS ACROSS FULL WIDTH OF VERGE.
9. ROOF WATER DRAIN ACROSS VERGE SHALL BE LAID WITH THE MAXIMUM AVAILABLE COVER AND WITH A MINIMUM GRADE OF 1% FALL TOWARDS THE ROAD.
10. REINSTATE ANY RECONSTRUCTED PATHS TO MATCH ORIGINAL FINISH IN ACCORDANCE WITH SD0806.
11. LARGER DIAMETER STORMWATER OUTLET PIPES SHALL BE CONNECTED TO A PIT IN COUNCIL'S DRAINAGE SYSTEM.



KERB ADAPTOR TO SUIT BARRIER KERB AND CHANNEL
ISOMETRIC VIEW
NOT TO SCALE



KERB ADAPTOR TO SUIT ROLL TOP KERB AND CHANNEL
ISOMETRIC VIEW
NOT TO SCALE

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: NOT TO SCALE

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

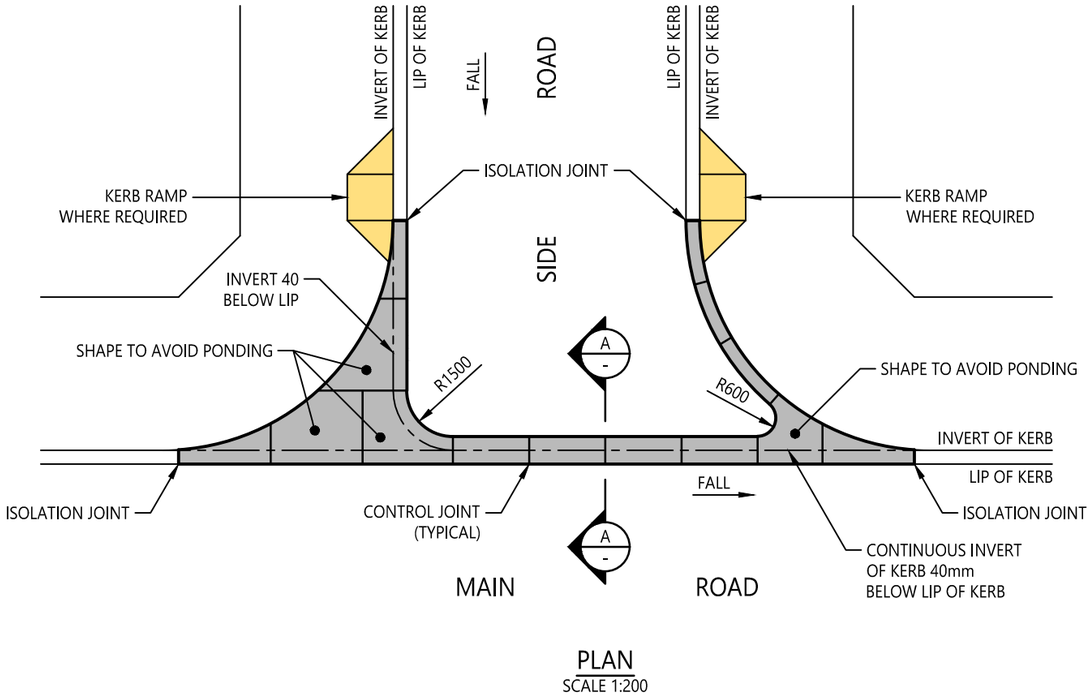
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

KERB AND CHANNEL SERIES
KERB STORMWATER OUTLET AND KERB ADAPTOR

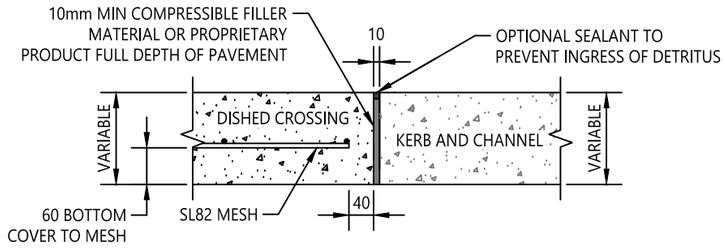
DRAWING NUMBER	REV
SD0510	-
SHEET 1 OF 1	A3



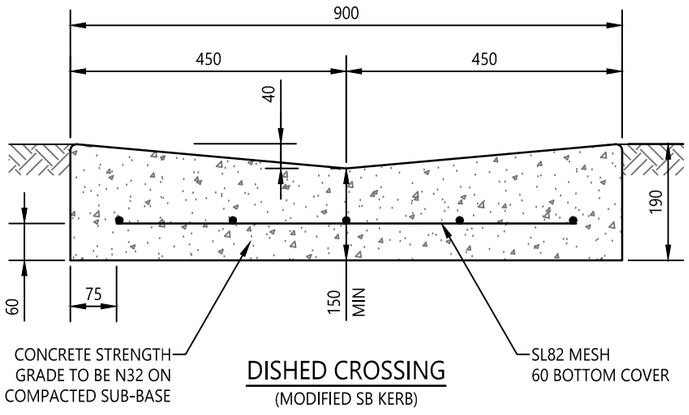
PLAN
SCALE 1:200

NOTES:

1. DISHED CROSSING SHALL BE 150mm MINIMUM THICK REINFORCED WITH SL82 MESH AND FORMED INTEGRAL WITH KERB.
2. CONCRETE STRENGTH GRADE SHALL BE N32 UNLESS OTHERWISE SPECIFIED.
3. CONTROL JOINT SPACING IN DISHED CROSSING SHALL BE 3m MAXIMUM AND SHALL BE FORMED AS SHOWN IN THE DETAIL ON THIS DRAWING.
4. KERB RAMPS TO BE LOCATED CLEAR OF DISHED CROSSING AND IN ACCORDANCE WITH SD0502.

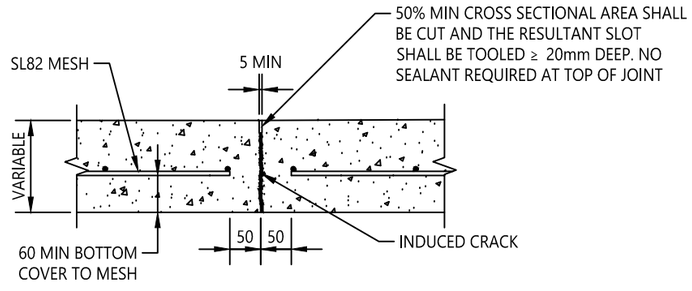


ISOLATION JOINT
SCALE 1:10



DISHED CROSSING
(MODIFIED SB KERB)

SECTION A
SCALE 1:10



CONTROL JOINT
SCALE 1:10

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 100 200 300 400 500 1:10
0 2000 4000 6000 8000 10000 1:200
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

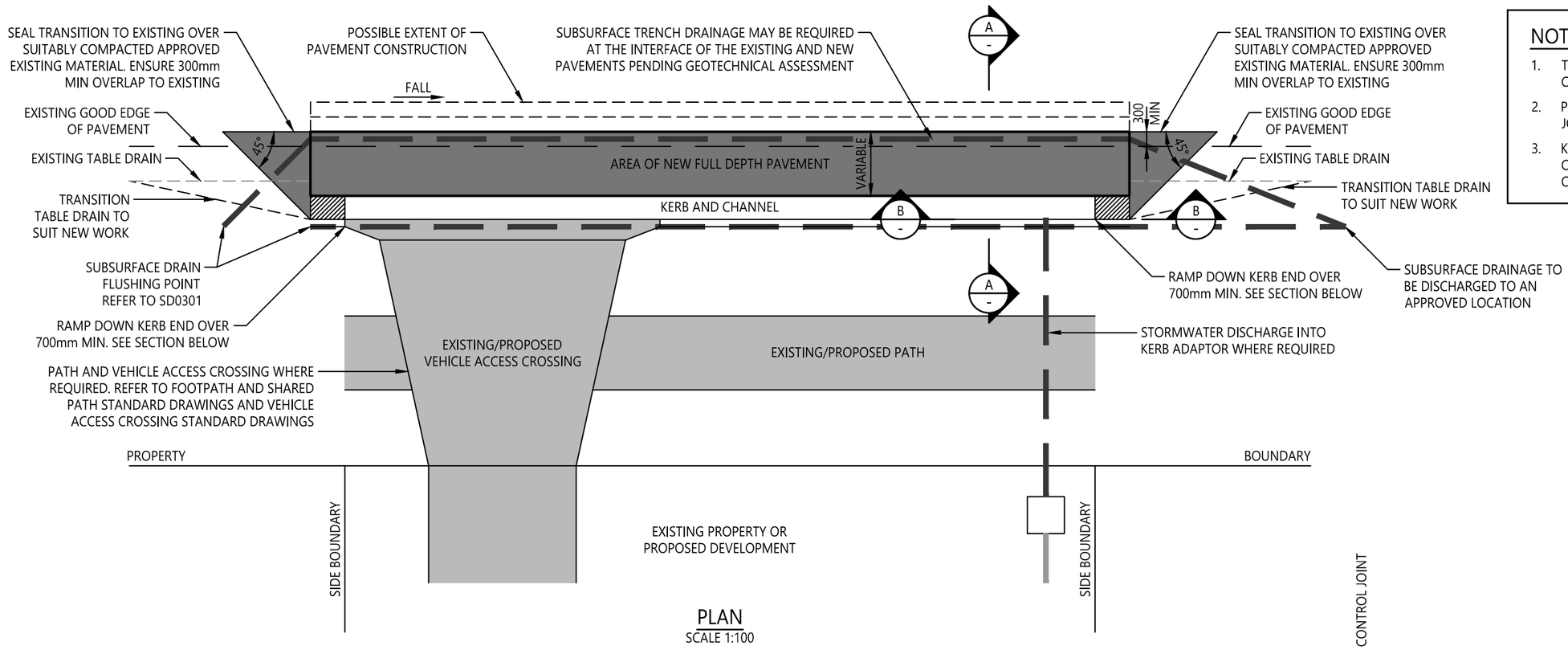
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

KERB AND CHANNEL SERIES
DISHED CROSSING FOR MINOR ROAD JUNCTIONS

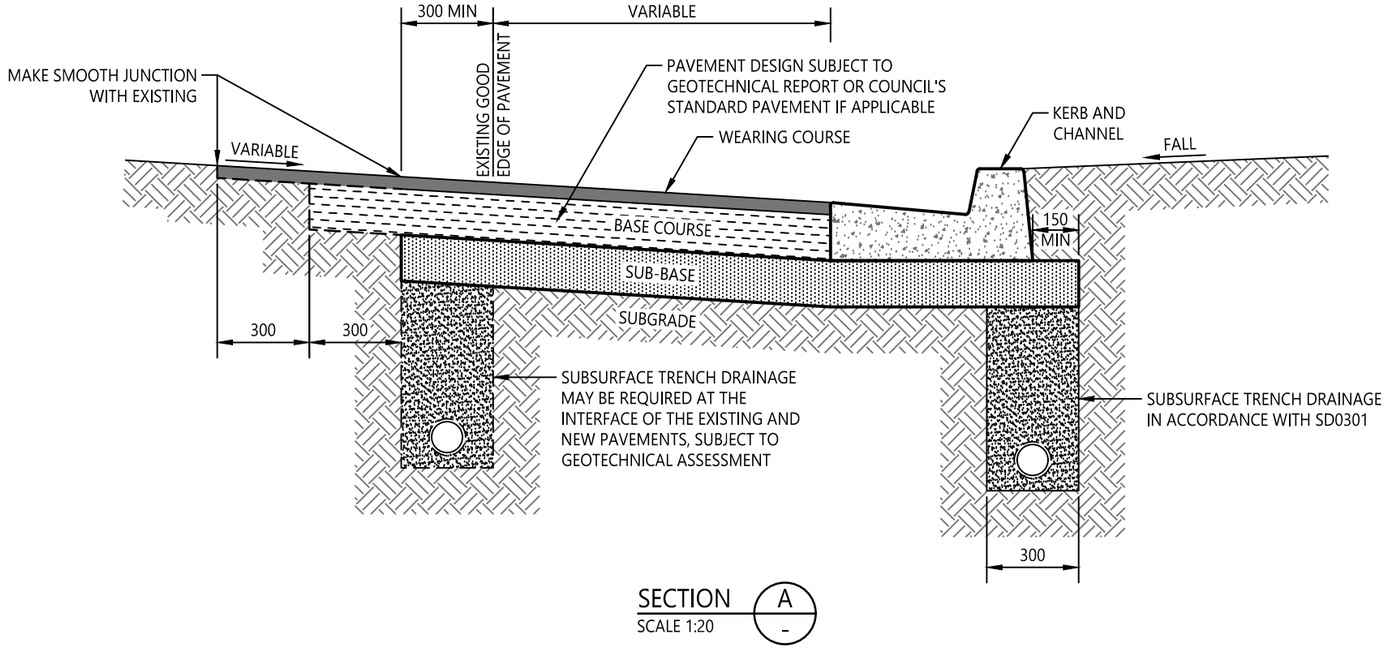
DRAWING NUMBER	REV
SD0511	-
SHEET 1 OF 1	A3



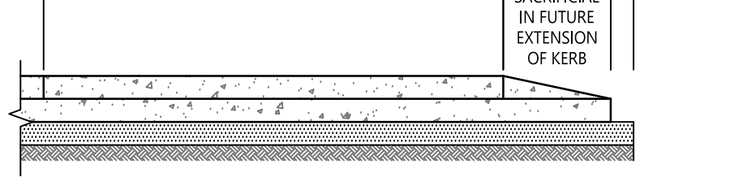
PLAN
SCALE 1:100

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH COUNCIL'S CIVIL WORKS CONSTRUCTION SPECIFICATION.
2. PAVEMENT JOINTS ALONG WHEEL PATHS SHOULD BE AVOIDED. JOINTS TO BE AT LANE OR SUMP LINES WHERE POSSIBLE.
3. KERB AND CHANNEL AND CONCRETE JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SD0501 IN COUNCIL'S CIVIL WORKS SPECIFICATION - STANDARD DRAWINGS.



SECTION A
SCALE 1:20



SECTION B
SCALE 1:40

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000 1:20

0 1000 2000 3000 4000 5000 1:100

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

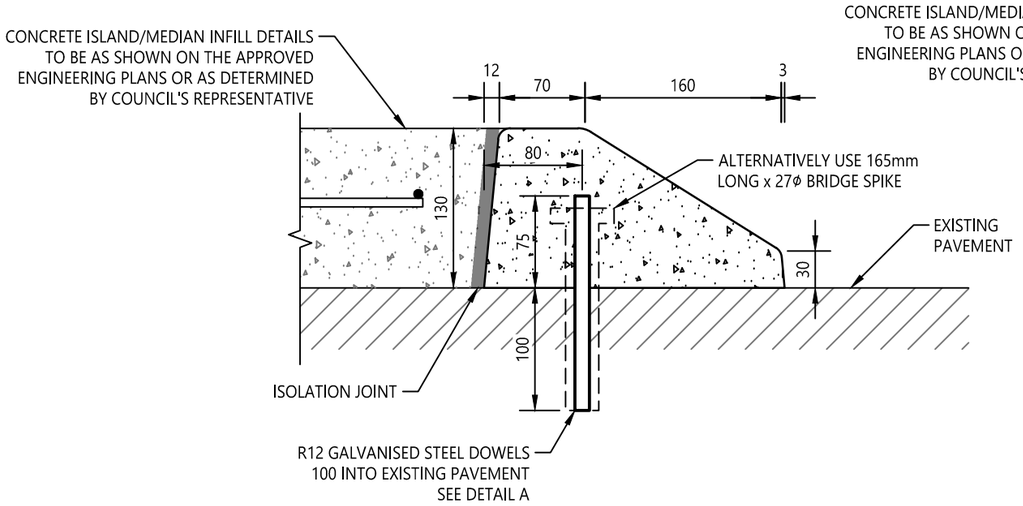
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

KERB AND CHANNEL SERIES
ISOLATED KERB AND CHANNEL AND SHOULDER WORKS

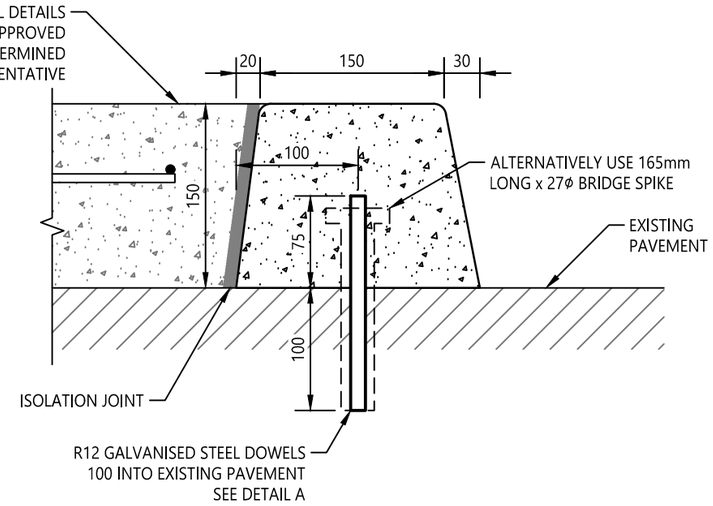
STANDARD DRAWING

DRAWING NUMBER	REV
SD0512	-
SHEET 1 OF 1	A3



DOWELLING SEMI-MOUNTABLE (SF) KERB TO EXISTING PAVEMENT DETAIL

SCALE 1:5

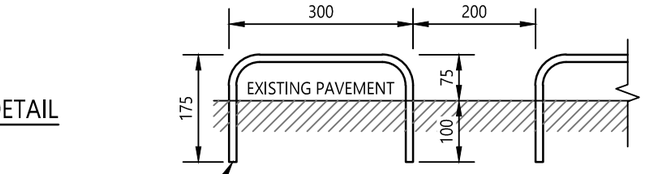


DOWELLING BARRIER (SM) KERB TO EXISTING PAVEMENT DETAIL

SCALE 1:5

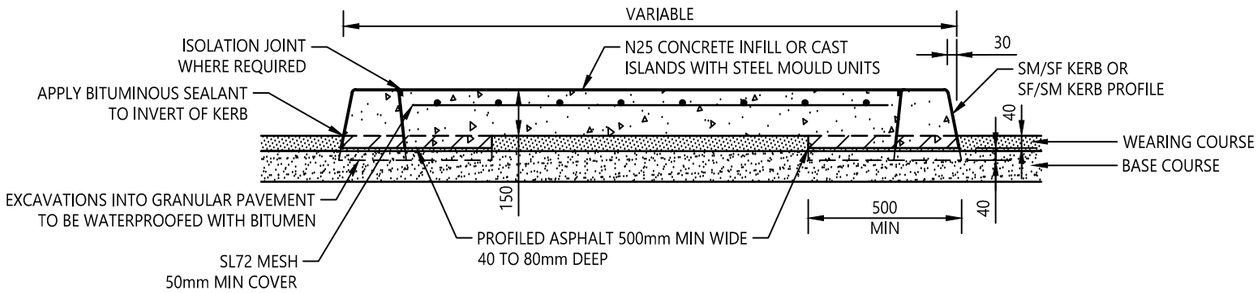
NOTES:

1. ONLY SEMI-MOUNTABLE (SF) KERB OR BARRIER (SM) KERB (KERB ONLY) TO BE FIXED TO EXISTING PAVEMENTS.
2. WHERE ROADS ARE TO BE RESEALED, KERBS SHALL BE RAISED SUFFICIENTLY TO COMPENSATE FOR THE RESEAL THICKNESS UNLESS MILLING OF THE EXISTING SURFACE TAKES PLACE.
3. ALTERNATIVELY, BRIDGE SPIKES MAY BE EMBEDDED 100mm MINIMUM AT 500mm CENTRES INTO THE PAVEMENT PRIOR TO CASTING KERB OVER THE SPIKES.
4. CONTROL JOINT SPACING IN KERB SHALL BE 3m MAXIMUM.
5. ISOLATION JOINTS SHALL BE LOCATED BETWEEN BACK OF KERB AND CONCRETE INFILL.



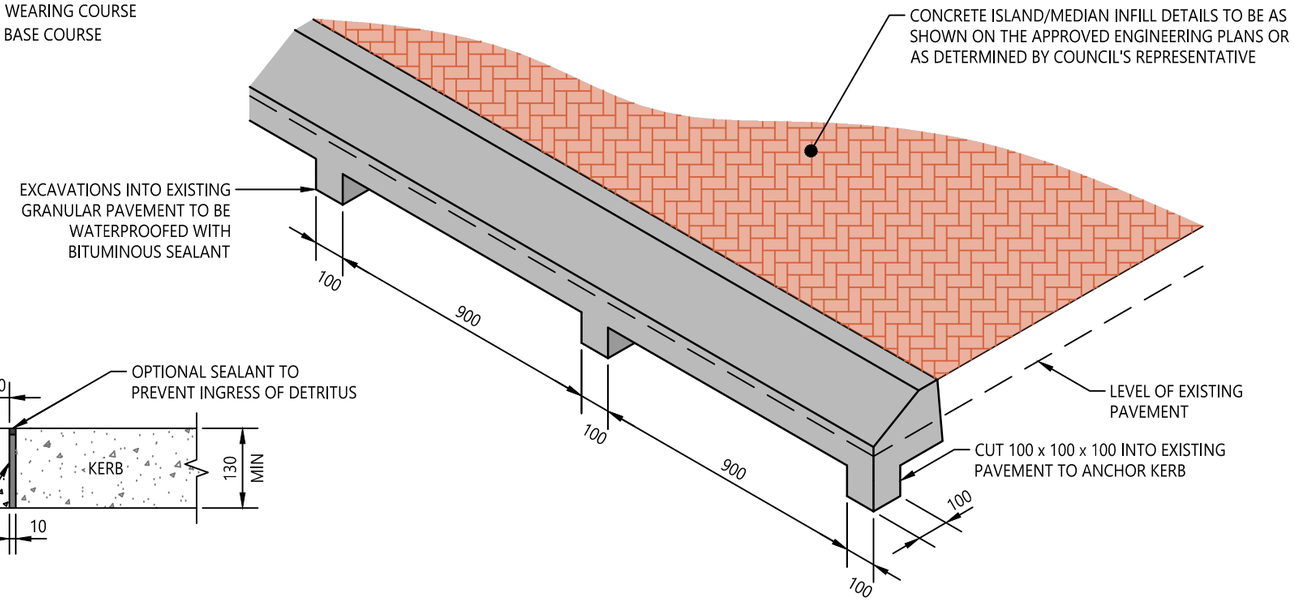
DETAIL A

SCALE 1:10



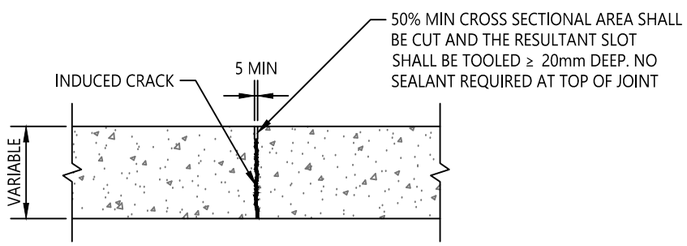
PROFILING EXISTING PAVEMENT TO KEY-IN TRAFFIC ISLANDS (PREFERRED OPTION)

SCALE 1:20



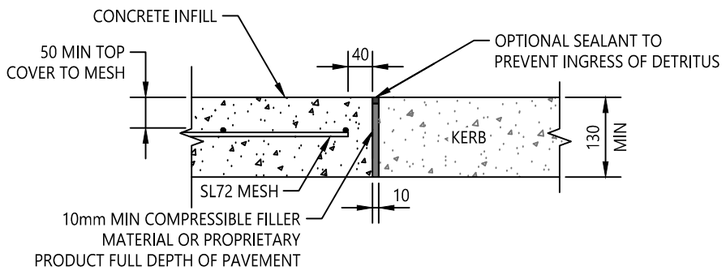
KERB ANCHORING INTO EXISTING PAVEMENT DETAIL

SCALE 1:20



CONTROL JOINT IN KERB

SCALE 1:10



ISOLATION JOINT (IJ)

SCALE 1:10

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

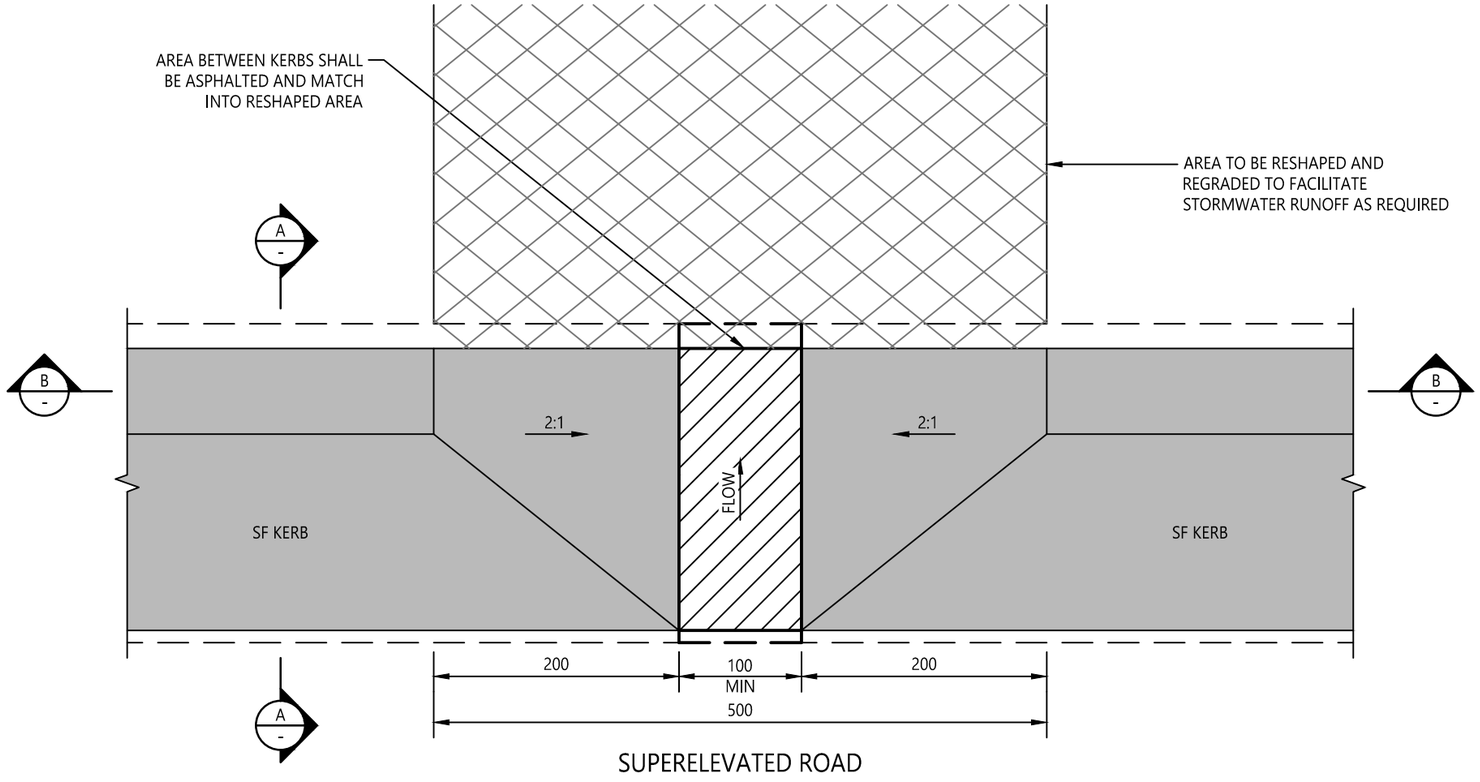
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

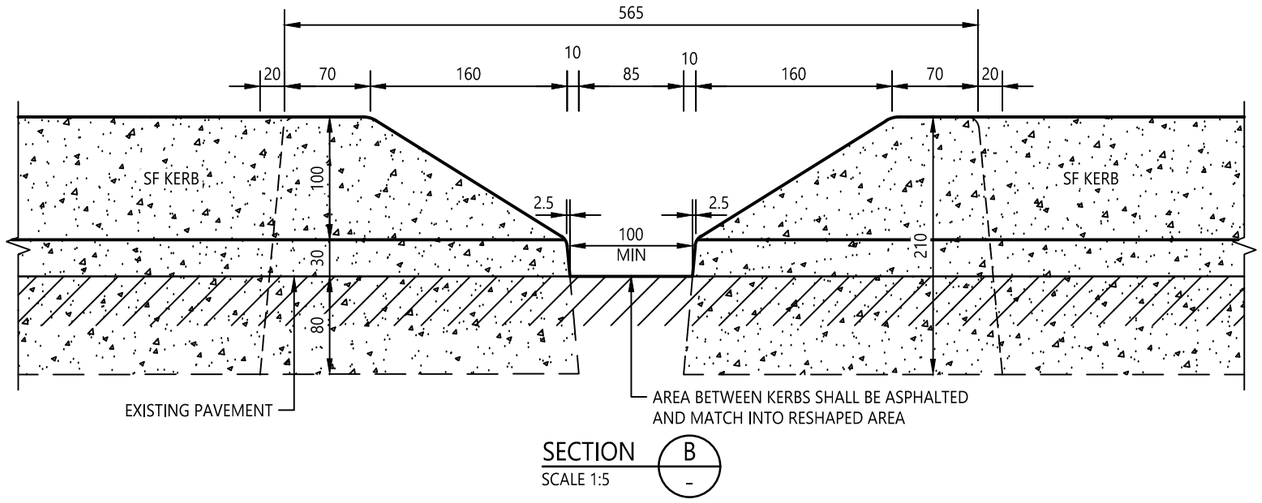
KERB AND CHANNEL SERIES
FIXING KERB TO EXISTING PAVEMENT

DRAWING NUMBER	REV
SD0513	-
SHEET 1 OF 1	A3

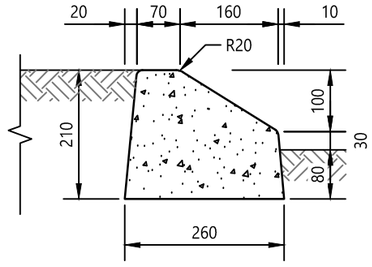


SUPERELEVATED ROAD

PLAN
SCALE 1:5



SECTION B
SCALE 1:5



SEMI-MOUNTABLE KERB
(SF KERB)

SECTION A
SCALE 1:10

NOTES:

1. MEDIAN DRAINAGE BREAKS SHALL ONLY BE CREATED WHERE THERE IS NO PIPE DRAINAGE SYSTEM WITHIN THE MEDIAN, WHERE THE ROAD IS SUPERELEVATED AND WHERE RESULTING STORMWATER SURFACE FLOWS DO NOT CREATE THE POTENTIAL FOR VEHICLE AQUAPLANING IN THE ADJACENT PAVEMENT.
2. CONCRETE STRENGTH GRADE SHALL BE N25 UNLESS OTHERWISE SPECIFIED.
3. CONTROL JOINT SPACING SHALL BE 3m MAXIMUM.
4. KERB BREAK CAN BE ANGLED WHERE REQUIRED TO ASSIST STORMWATER RUNOFF FLOW.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 50 100 150 200 250 1:5

0 100 200 300 400 500 1:10

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

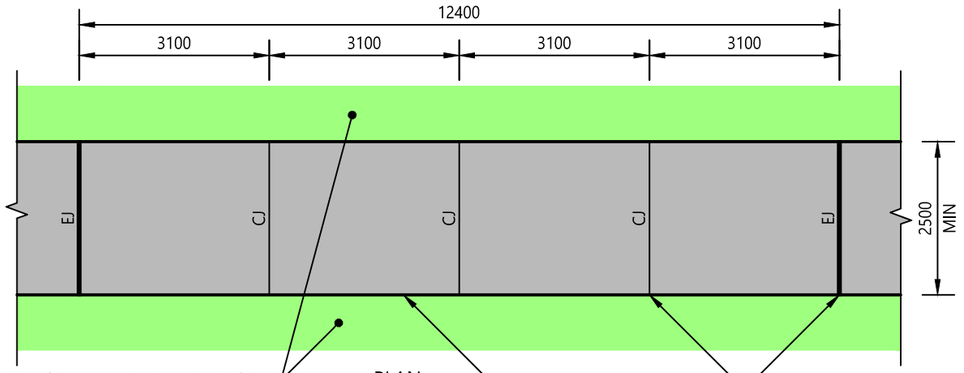
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

KERB AND CHANNEL SERIES
MEDIAN DRAINAGE BREAK FOR SF KERB

DRAWING NUMBER	REV
SD0514	-
SHEET 1 OF 1	A3

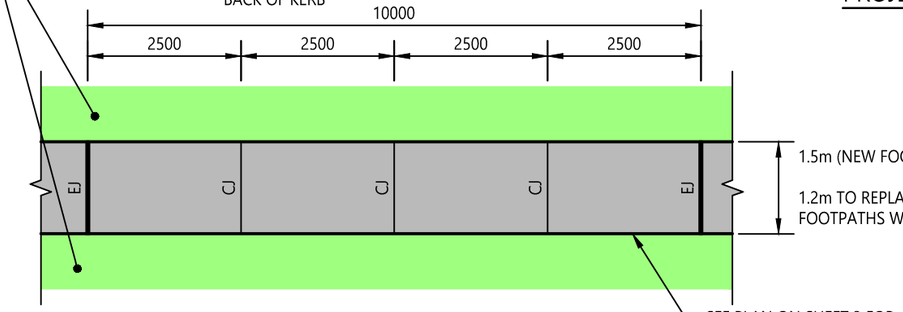


PROVIDE TWO COUCH TURF STRIPS (900mm WIDE MINIMUM) EACH SIDE FLUSH WITH CONSTRUCTED PATHS. RESIDUAL FOOTWAY/VERGE WIDTH EACH SIDE OF CONSTRUCTED OR EXISTING PATHS SHALL BE TOPSOILED AND TURFED FOR SUBDIVISION DEVELOPMENT WORKS AND WHERE THESE AREAS (BACK OF KERB TO PROPERTY BOUNDARY) ARE OTHERWISE COMPLETELY DISTURBED BY ROAD AND/OR PATH WORKS

SEE PLAN ON SHEET 3 FOR JOINT SPACING WHERE PATH IS ADJACENT TO BACK OF KERB

CONTROL JOINT (CJ) / EXPANSION JOINT (EJ) SEE DETAILS BELOW AND NOTES ON SHEET 4

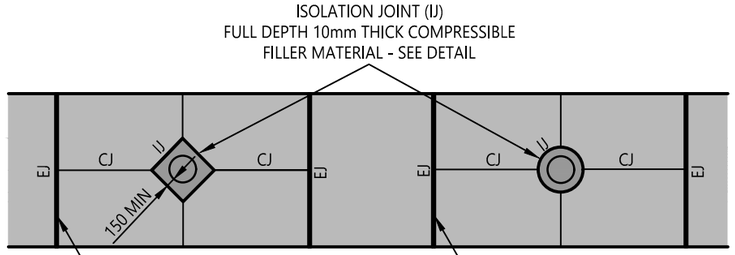
PLAN
SHARED PATH
SCALE 1:100



1.5m (NEW FOOTPATHS)

1.2m TO REPLACE EXISTING FOOTPATHS WHERE REQUIRED

SEE PLAN ON SHEET 3 FOR JOINT SPACING WHERE PATH IS ADJACENT TO BACK OF KERB



WHERE CJs ARE REQUIRED TO PROJECT FROM SERVICE PIT SURROUNDS LONGITUDINALLY, THE NEXT TRANSVERSE JOINT SHALL BE AN EXPANSION JOINT AS SHOWN, IRRESPECTIVE OF THE ABOVE DETAILS

JOINT LAYOUTS MAY BE VARIED TO SUIT SLAB. SIZES NOT TO BE LESS THAN 1.0m AND NOT MORE THAN LENGTH-TO-WIDTH RATIO OF 1:5 TO 1. JOINT LAYOUT SHALL BE SUBJECT TO THE APPROVAL OF COUNCIL'S REPRESENTATIVE

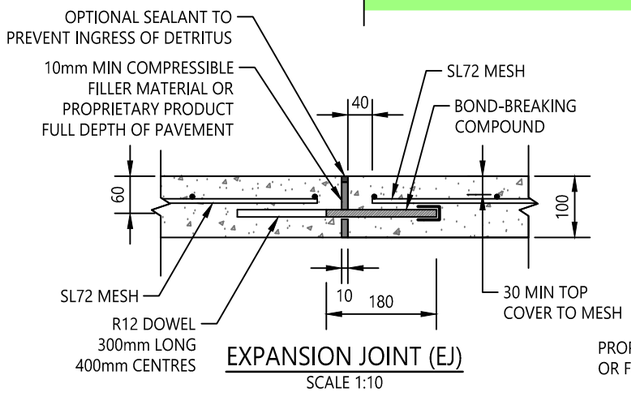
PROJECTION INTO SHARED PATHS
SCALE 1:100

GENERAL NOTES:

1. WHEN REPLACING EXISTING FOOTPATHS, ADOPT 1.5m WIDE 100mm MINIMUM THICK REINFORCED PATH.
2. ALL NEW FOOTPATHS AND SHARED PATHS SHALL BE 100mm MINIMUM THICK REINFORCED CONCRETE.
3. AVOID SERVICE PITS AND VALVES LOCATED WITHIN PATHS, WHERE PRACTICABLE.
4. SHARED PATH WIDTHS SHALL BE DETERMINED BY REFERRING TO THE TABLE BELOW AND THE ASSOCIATED AUSTROADS GUIDE TO ROAD DESIGN. JOINT SPACINGS FOR SHARED PATHS >2.5m WIDE SHALL BE ADJUSTED ACCORDINGLY.
5. WHERE PATHS ARE LOCATED WITHIN AREAS SUBJECT TO FLOODING, CONSIDER AN APPROPRIATE DESIGN STORM FLOOD LEVEL AND THE POTENTIAL NEED FOR FLOOD WARNING AND DEPTH MARKER SIGNS.
6. THE MAXIMUM JOINT SPACINGS ARE BASED ON A STANDARD MESH SIZE OF 6 x 2.4m, WITH MESH ORIENTATED ACCORDINGLY.

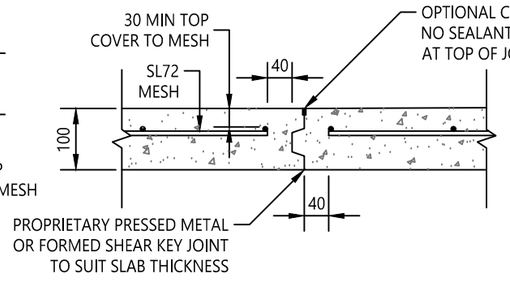
SHARED PATH WIDTH			
	LOCAL ACCESS PATH	REGIONAL PATH	RECREATIONAL PATH
DESIRABLE WIDTH	2.5	3.0	3.5
ACCEPTABLE WIDTH RANGE	2.0 - 3.0	2.5 - 4.0	3.0 - 4.0

SOURCE: AUSTROADS GUIDE TO ROAD DESIGN PART 6A

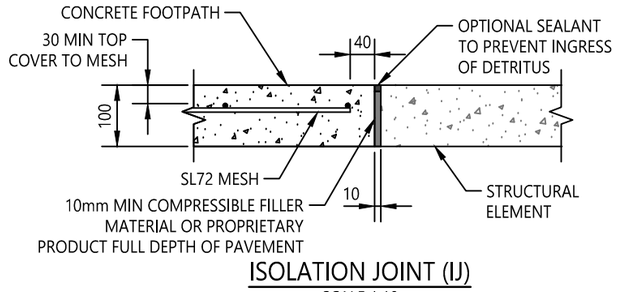


EXPANSION JOINT (EJ)
SCALE 1:10

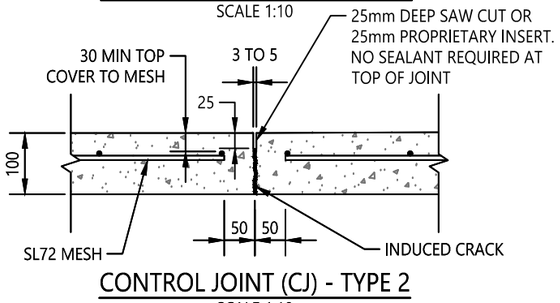
PLAN
FOOTPATH
SCALE 1:100



CONTROL JOINT (CJ) - TYPE 1
SCALE 1:10



ISOLATION JOINT (IJ)
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2
SCALE 1:10

FOOTPATH AND SHARED PATH GRADIENTS							
PATHS IN ROAD RESERVES				PATHS NOT IN ROAD RESERVES			
CROSSFALL		LONGITUDINAL GRADE		CROSSFALL		LONGITUDINAL GRADE	
MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
1%	2.5%	NEW ROADS		1%	2.5%	1%	5%[1]
		1%	5%				LANDING SPACING
		EXISTING ESTABLISHED ROADS (ADOPT GRADE OF EXISTING ROAD)					<3% N/A
							3% 25m MAX
		1% DESIRABLE MIN 0.3% ABSOLUTE MIN	10% DESIRABLE MAX 15% ABSOLUTE MAX				5% 15m MAX
							7%+ 9m MAX
							3% - 7% BY INTERPOLATION

PATH GRADIENT NOTES:

1. PATHS WITH GRADIENTS STEEPER THAN 5% ARE TO BE CONSIDERED AS RAMPS FOR DESIGN PURPOSES.
2. PROVIDE PATH GRADIENTS AND FLAT LANDINGS AS REQUIRED IN ACCORDANCE WITH AS 1428.1 AND THE ABOVE TABLE, WHERE CONSIDERED APPROPRIATE AND PRACTICABLE.
3. WHERE SHARED PATHS WITH GRADIENTS THAT REQUIRE FLAT LANDINGS FOR PEDESTRIANS UNDER AS 1428.1 AND RAMPS WHICH ARE GREATER THAN 200m LONG, THESE LANDINGS SHOULD BE PROVIDED ON BOTH SIDES ADJACENT TO THE SHARED PATH.
4. PATHS NOT IN ROAD RESERVES AND ON STEEP TERRAIN SHOULD BE MEANDERED TO MINIMISE LONGITUDINAL GRADIENTS, WHERE PRACTICABLE.
5. CONSIDER THE USE OF HANDRAILS ON BOTH SIDES OF SHARED PATHS NOT IN ROAD RESERVES, WHICH ARE CONSIDERED AS RAMPS, IN ACCORDANCE WITH AS 1428.1, WHERE PRACTICABLE.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500 1:10

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

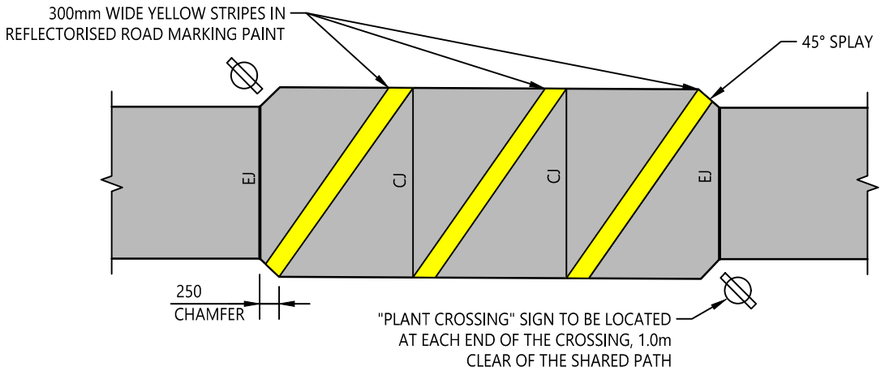
PEDESTRIAN AND CYCLIST SERIES
FOOTPATH AND SHARED PATH

DRAWING NUMBER SD0601

REV -

SHEET 1 OF 7

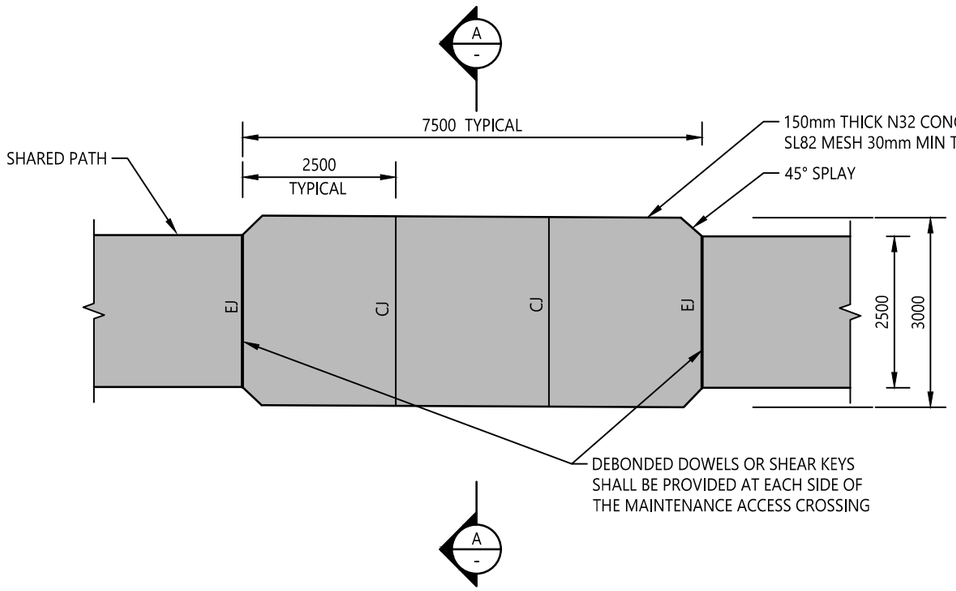
A3



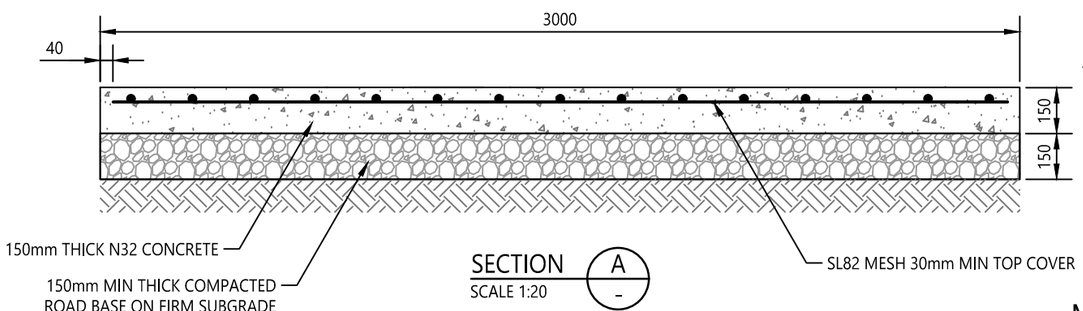
CROSSING MARKING PLAN
SCALE 1:100

MAINTENANCE ACCESS CROSSING NOTES:

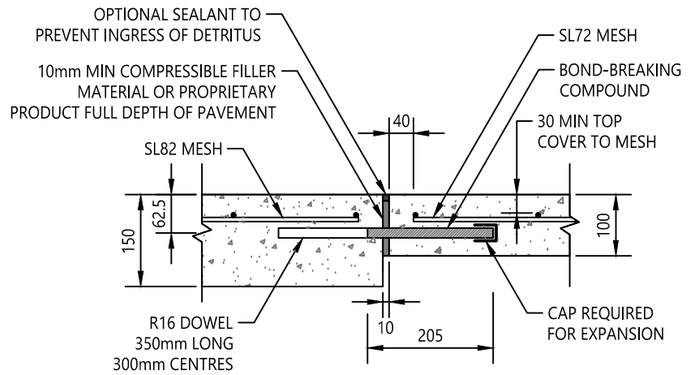
1. THE ALIGNMENT OF THE SHARED PATH IS TO BE IN ACCORDANCE WITH THE APPROVED ENGINEERING PLANS OR AS NOMINATED BY COUNCIL'S REPRESENTATIVE.
2. NON-STANDARD TREATMENTS WILL BE SUBJECT TO APPROVAL BY COUNCIL'S REPRESENTATIVE.
3. CROSSFALL ON ALL PATHS TO SUIT NATURAL GROUND SLOPE WHERE POSSIBLE. CROSSFALL SHALL BE 1% MINIMUM AND 2.5% MAXIMUM WHERE LOCATED IN FOOTWAYS AND VERGES. PATHS MAY BE SUPERELEVATED WHERE REQUIRED TO 6% MAXIMUM.
4. CONCRETE STRENGTH GRADE SHALL BE N32 UNLESS OTHERWISE SPECIFIED.
5. CONCRETE TO HAVE SLIP-RESISTANT BROOM FINISH WITH SMOOTH TROWELLED EDGES.
6. ALL JOINTS TO BE SMOOTH WITH MINIMUM IRREGULARITIES: FINISHED PATH SURFACES ARE TO BE EVEN TO WITHIN 5mm ON A 3m STRAIGHTEDGE.
7. TOP COVER TO ALL STEEL REINFORCEMENT SHALL BE 30mm MINIMUM.
8. SLIGHT VARIATIONS TO TYPICAL LENGTH, WIDTH AND PAVEMENT TYPE OF PLANT CROSSINGS MAY BE REQUIRED DUE TO SITE CONDITIONS.
9. THE ORIENTATION OF THE STRIPES SHALL GENERALLY BE AS SHOWN.
10. SHARED PATH SIGNS SHALL BE PROVIDED AND LOCATED GENERALLY IN ACCORDANCE WITH AUSTROADS GUIDELINES AND SHALL INCLUDE SIGNS FOR PEDESTRIANS, CYCLISTS AND ALL APPROACHING VEHICULAR TRAFFIC.



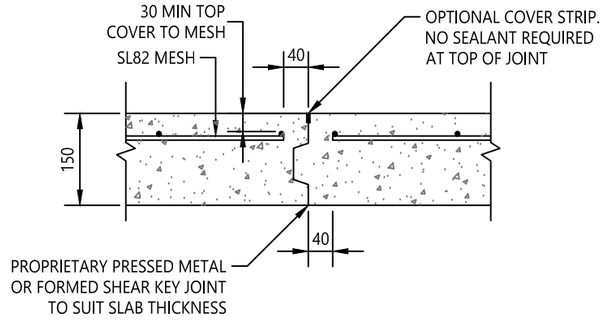
CROSSING JOINT PLAN
SCALE 1:100



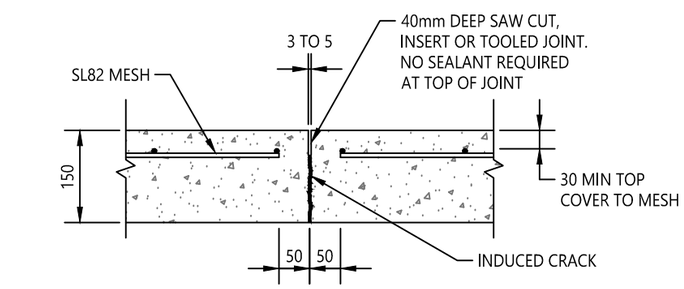
SECTION A
SCALE 1:20



EXPANSION JOINT (EJ) 150mm TO 100mm MAINTENANCE ACCESS CROSSING TO SHARED PATH
SCALE 1:10



CONTROL JOINT (CJ) 150mm - TYPE 1
SCALE 1:10



CONTROL JOINT (CJ 150mm - TYPE 2
SCALE 1:10

MAINTENANCE ACCESS CROSSING

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

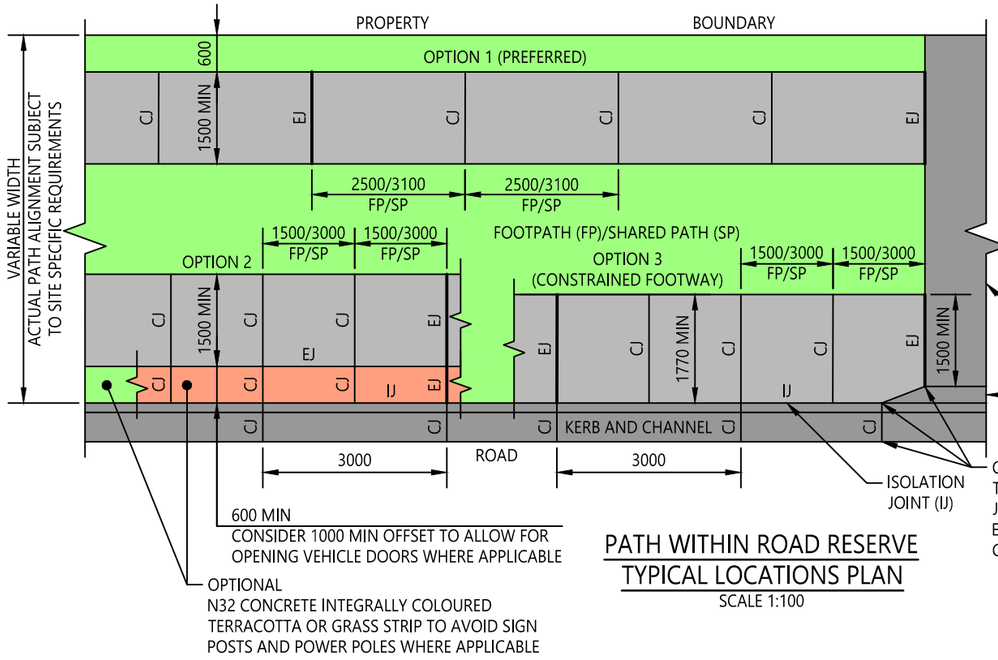
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

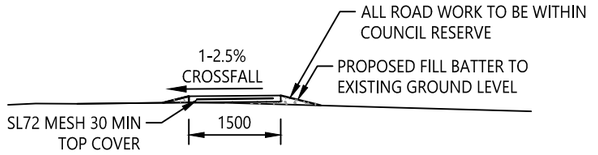
PEDESTRIAN AND CYCLIST SERIES
FOOTPATH AND SHARED PATH

STANDARD DRAWING

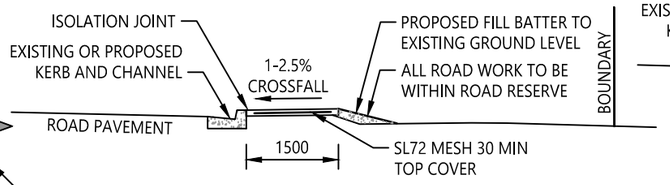
DRAWING NUMBER	REV
SD0601	-
SHEET 2 OF 7	A3



PATH WITHIN ROAD RESERVE
TYPICAL LOCATIONS PLAN
SCALE 1:100



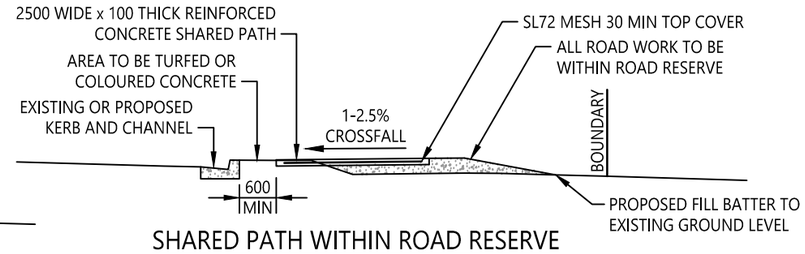
FOOTPATH WITHIN COUNCIL RESERVE
TYPICAL CROSS SECTION
SCALE 1:100



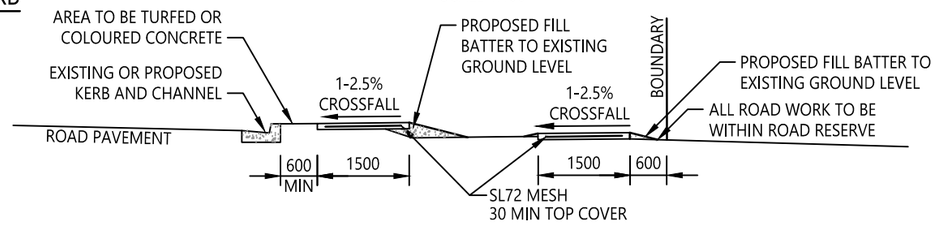
FOOTPATH ADJOINING BACK OF KERB
TYPICAL CROSS SECTION
SCALE 1:100

NOTE:

PROPOSED SHARED PATHS AND BICYCLE PATHS MUST BE REFERRED TO THE LOCAL AREA TRAFFIC COMMITTEE BEFORE IMPLEMENTATION DUE TO THE ASSOCIATED REGULATORY CONTROLS (SIGNS AND PAVEMENT MARKINGS).

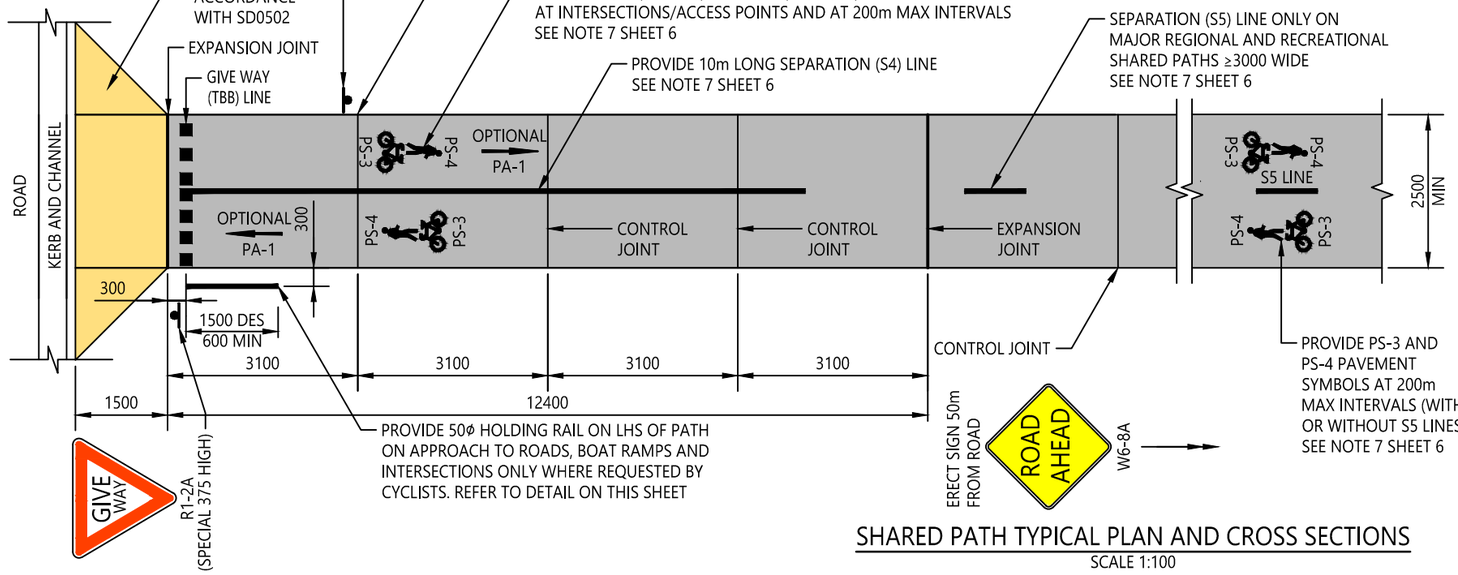


SHARED PATH WITHIN ROAD RESERVE
TYPICAL CROSS SECTION
SCALE 1:100



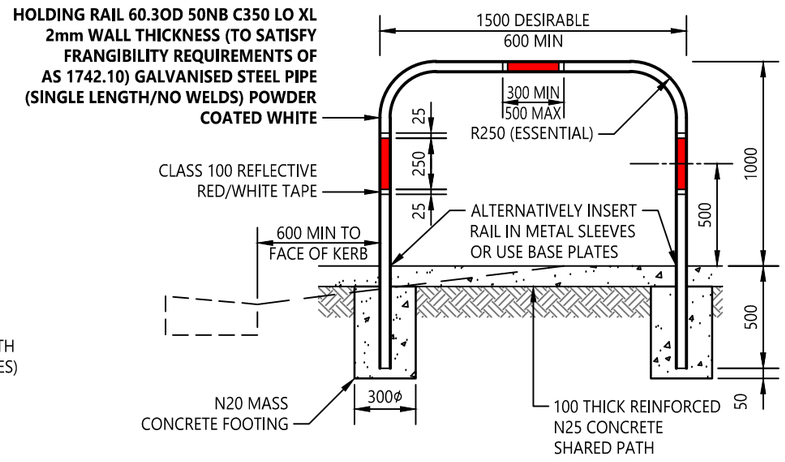
FOOTPATH WITHIN ROAD RESERVE
TYPICAL CROSS SECTION
SCALE 1:100

SHARED PATH WITHIN COUNCIL RESERVE
TYPICAL CROSS SECTION
SCALE 1:100



SHARED PATH TYPICAL PLAN AND CROSS SECTIONS
SCALE 1:100

HOLDING RAIL 60.3OD 50NB C350 LO XL 2mm WALL THICKNESS (TO SATISFY FRANGIBILITY REQUIREMENTS OF AS 1742.10) GALVANISED STEEL PIPE (SINGLE LENGTH/NO WELDS) POWDER COATED WHITE



HOLDING RAIL
SCALE 1:30

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 300 600 900 1200 1500 1:30

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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Central Coast Council

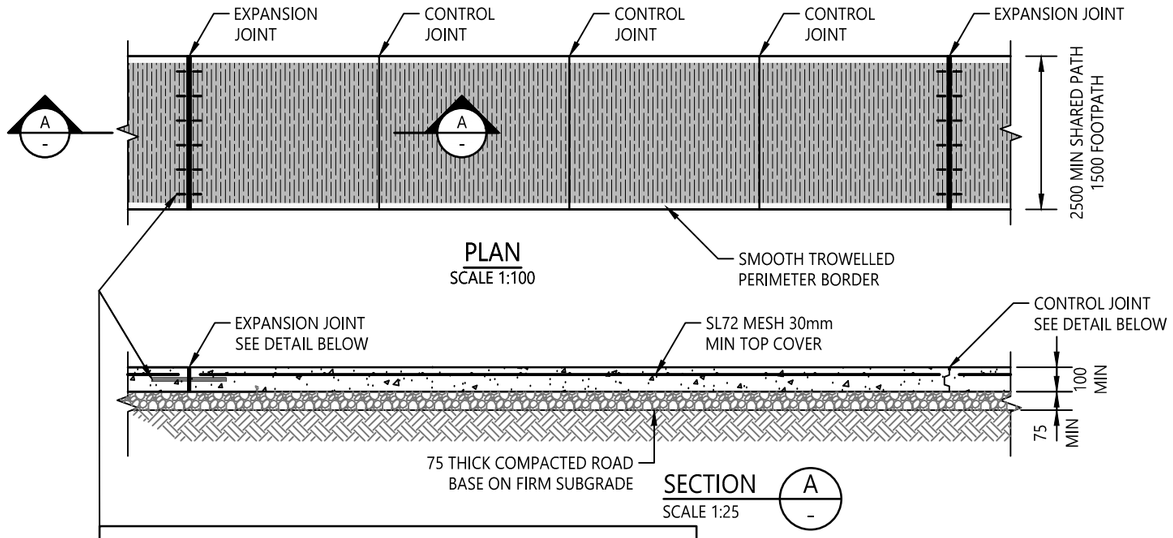
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
FOOTPATH AND SHARED PATH

STANDARD DRAWING

DRAWING NUMBER	REV
SD0601	-
SHEET 3 OF 7	A3

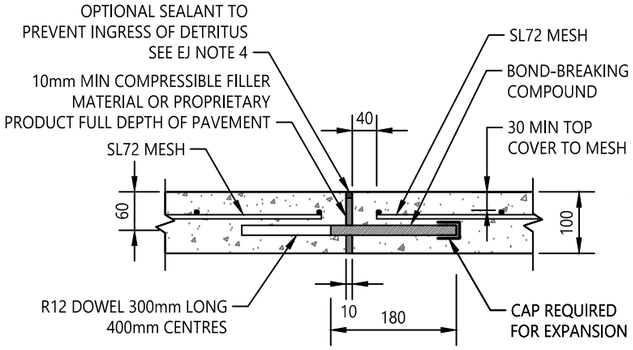


PLAN
SCALE 1:100

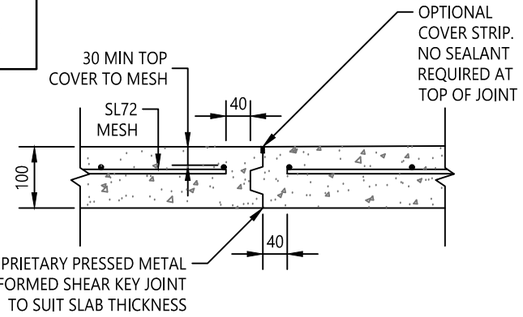
SECTION A-A
SCALE 1:25

DOWELS SHALL BE:
1. SMOOTH BAR R12 MIN 300 LONG.
2. INSTALLED WITH 150mm UNIVERSAL ROUND DOWEL SLEEVE.
3. GREASED AT ONE END OR APPROVED SLIP JOINT.
4. INSTALLED WITH 10mm MINIMUM FREE MOVEMENT GAP AT GREASED END.
5. EQUALLY SPACED AT 400 MAXIMUM CENTRES.
6. INSTALLED SQUARE TO JOINT AND PARALLEL TO EACH OTHER AND THE FINISHED PATH SURFACE.

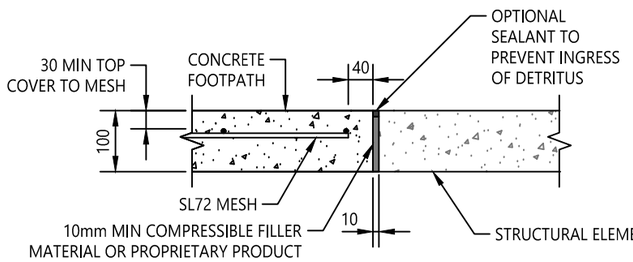
REINFORCED CONCRETE PATH



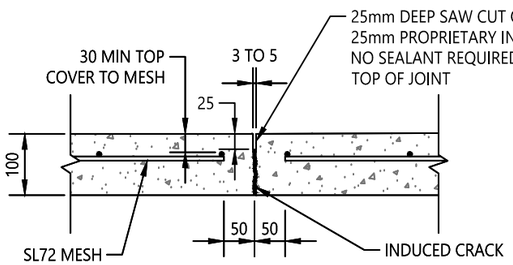
EXPANSION JOINT (EJ) 100mm PATH
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 1
SCALE 1:10



ISOLATION JOINT (IJ)
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2
SCALE 1:10

CONCRETE JOINT DETAILS

GENERAL PATH NOTES:

1. ALL FOOTPATHS AND SHARED PATHS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT AUSTROADS GUIDELINES, TfNSW SUPPLEMENTS AND BICYCLE GUIDELINES AND AS 3727.1.
2. MINIMUM RADIUS FOR CURVES ON THE CENTRE LINE SHALL BE 10m ON PATH AND SHOULD BE 5m FOR CURVES AT INTERSECTIONS.
3. CONCRETE FOOTPATHS SHALL BE 1.5m WIDE AND SHARED PATHS SHALL BE 2.5m MINIMUM WIDE.
4. CONCRETE PATHS SHALL HAVE A THICKNESS OF 100mm MINIMUM; AND 150mm MINIMUM THICKNESS AT MAINTENANCE VEHICLE CROSSINGS.
5. CROSSFALL SHALL BE 1 TO 2.5% DOWN IN THE DIRECTION OF THE ROAD OR NATURAL WATER COURSE/WATERWAY.
6. ALL SERVICE COVERS SHALL BE INCORPORATED IN THE CONCRETE AT THE APPROPRIATE LEVEL.
7. PROVIDE 225ø PVC DRAINAGE LINES WITH GRATED INLET PITS OR SIMILAR TREATMENT UNDER PATH AT LOCALISED DEPRESSIONS OR WHERE OTHERWISE NECESSARY.
8. ALL VEGETATION SHALL BE CLEARED FROM THE PATH 500mm MINIMUM HORIZONTALLY AND 2.5m MINIMUM VERTICALLY. TREES TO BE REMOVED SHALL BE REPLACED WITH SIMILAR NATIVE TREE SPECIES AND PLANTED IN THE VICINITY OF THE ORIGINAL TREES WITH A REPLACEMENT RATIO OF 2:1, WHERE PRACTICABLE.
9. PROVIDE SUITABLE ACCESS FOR PEDESTRIANS PAST THE WORK AREA AT ALL TIMES.

STEEL REINFORCEMENT NOTES:

1. STEEL REINFORCEMENT SHALL BE PROVIDED WITH A MINIMUM COVER OF 30mm TO THE TOP SURFACE OF THE PAVEMENT AND 40mm TO THE SLAB EDGE OR A FORMED JOINT. AN ALTERNATIVE FIBRE REINFORCEMENT SYSTEM MAY BE USED WHERE APPROVED BY COUNCIL'S REPRESENTATIVE. NYLON OR OTHER MATERIAL FIBRES MAY BE USED AS AN ALTERNATIVE CONCRETE REINFORCEMENT FOR SHRINKAGE CRACK CONTROL, SUBJECT TO THE APPROVAL OF COUNCIL'S REPRESENTATIVE.
2. STEEL REINFORCEMENT SHALL BE SUPPORTED BY BAR CHAIRS IN ACCORDANCE WITH AS/NZS 2425, AT A MAXIMUM OF 600mm CENTRES.
3. STEEL REINFORCEMENT SHALL BE LAPPED SO THAT A MINIMUM OF 2 CROSS BARS SHALL BE OVERLAPPED.
4. RE-ENTRANT CORNERS SHALL BE REINFORCED WITH TRIMMING STEEL REINFORCEMENT NOT LESS THAN 2xN12 BARS 1m MINIMUM LONG.
5. STEEL REINFORCING MESH SHALL BE TERMINATED EITHER SIDE OF THE CONTROL JOINT OR EXPANSION JOINT.

CONCRETE NOTES:

1. CONCRETE STRENGTH GRADE SHALL BE N25 UNLESS OTHERWISE SPECIFIED.
2. CONCRETE SHALL BE CONTINUOUSLY CURED FOR A MINIMUM 7 DAYS USING AN APPROVED CURING COMPOUND OR COVERED WITH PLASTIC SHEETING.
3. CONCRETE SHALL BE PROTECTED FROM TRAFFIC FOR A MINIMUM 7 DAYS. UNPLANNED CRACKING SHALL NOT BE ACCEPTED.
4. ALL EXPOSED CONCRETE EDGES SHALL BE ROUNDED TO A 10mm RADIUS.
5. CONCRETE TO BE BROOM FINISHED TO PROVIDE A SLIP-RESISTANT TEXTURE AND SHALL HAVE A SMOOTH PERIMETER BORDER WITH 10mm RADIUS EDGES.

CONTROL JOINT (CJ) NOTES:

1. CONTROL JOINTS SHALL BE FORMED BY SHEAR KEY JOINT (TYPE 1) OR WEAKENED PLANE JOINT (TYPE 2), AS DIRECTED BY COUNCIL'S REPRESENTATIVE. CONTROL JOINTS SHALL BE INSTALLED WITHOUT A SMOOTH BORDER ON EACH SIDE OF THE JOINT. TRIP STOPS OR EQUIVALENT SHOULD BE INSTALLED AT ALL CONTROL JOINTS IN VICINITY OF TREES - REFER TO SD1001 FOR FURTHER DETAILS.
2. WEAKENED PLANE CONTROL JOINTS (TYPE 2) SHALL BE FORMED BY A PROPRIETARY INSERT 25mm DEEP OR A SAW CUT 25mm DEEP, 3 TO 5mm WIDE. SAW CUT AS SOON AS THE CONCRETE WILL SUPPORT THE SAW CUTTING EQUIPMENT, WITHIN 24 HOURS OF CONCRETE PLACEMENT, TO INDUCE CRACKS AT A PLANNED LOCATION. UNPLANNED CRACKS IN SLABS WILL NOT BE ACCEPTED.
3. CONTROL JOINT SPACING SHALL BE 2.5m IN FOOTPATH SLABS; AND 3.1m IN SHARED PATH SLABS, UNLESS PATH IS ADJACENT TO KERB.
4. GENERALLY THE MAXIMUM CONTROL JOINT SPACING SHOULD BE NO GREATER THAN 1.5 TIMES THE WIDTH OF THE SLAB PANEL.

EXPANSION JOINT (EJ) NOTES:

1. EXPANSION JOINT SPACING SHALL BE 10m IN FOOTPATH; AND 12.4m IN SHARED PATH SLABS.
2. A SYSTEM TO CORRECTLY ALIGN DOWELS SHALL BE PROVIDED.
3. BOND-BREAKING COMPOUND AND END CAP MAY BE REPLACED WITH A PURPOSE-MADE DOWEL SLEEVE.
4. WHEN USING PREFORMED COMPRESSIBLE FILLER MATERIAL, SEALANT SHALL BE PLACED FLUSH WITH THE FINISHED SURFACE ONCE THE CONCRETE HAS BEEN CURED TO PREVENT INGRESS OF DETRITUS. CONCRETE SHALL INITIALLY BE SMOOTH TROWELLED EACH SIDE OF ALL EXPANSION JOINTS FOLLOWED BY BROOM FINISHING UP TO EACH SIDE OF THE JOINT.

ISOLATION JOINT (IJ) NOTES:

1. ISOLATION JOINTS SHALL BE PROVIDED WHERE PATHS ABUT ANOTHER STRUCTURAL ELEMENT.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

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CHECKED	M BAMBER
DATE	28/4/20

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ASSETS PLANNING AND DESIGN

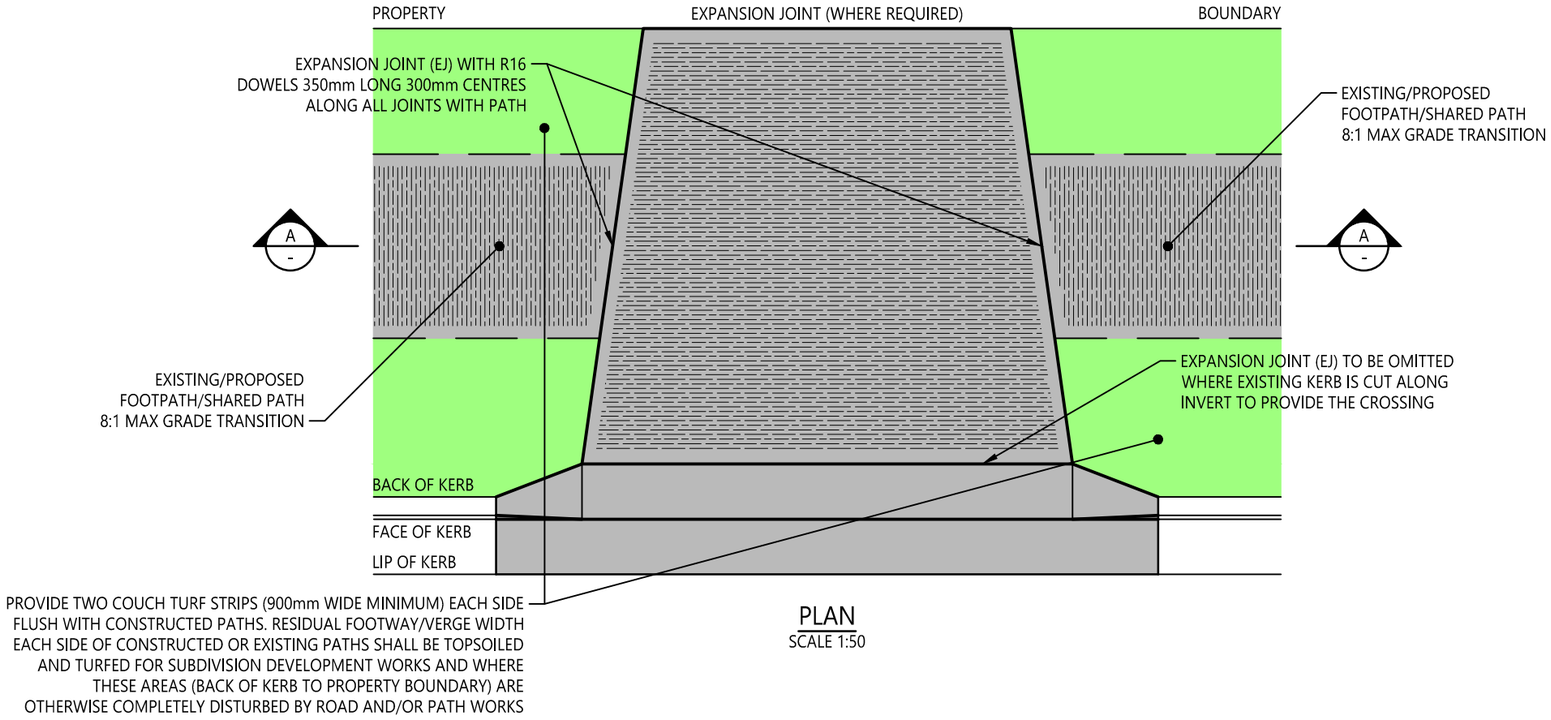
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

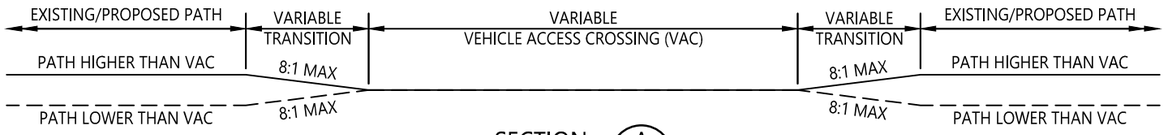
PEDESTRIAN AND CYCLIST SERIES
FOOTPATH AND SHARED PATH

STANDARD DRAWING

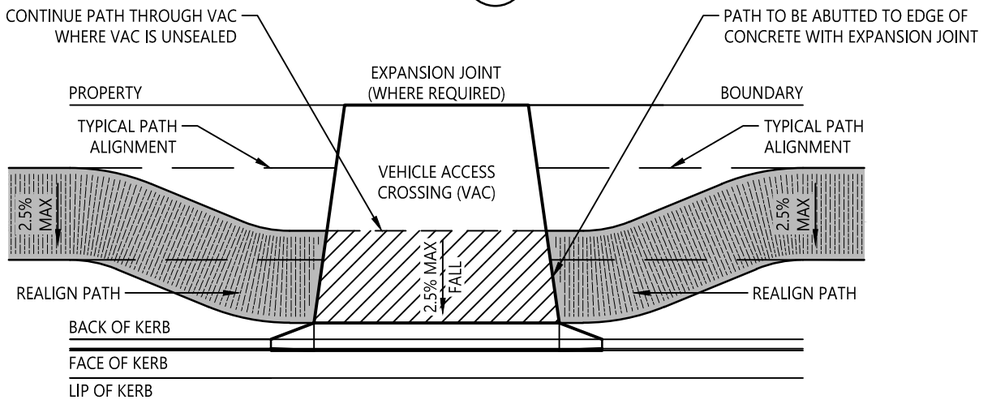
DRAWING NUMBER	REV
SD0601	-
SHEET 4 OF 7	A3



PLAN
SCALE 1:50



SECTION A
NOT TO SCALE

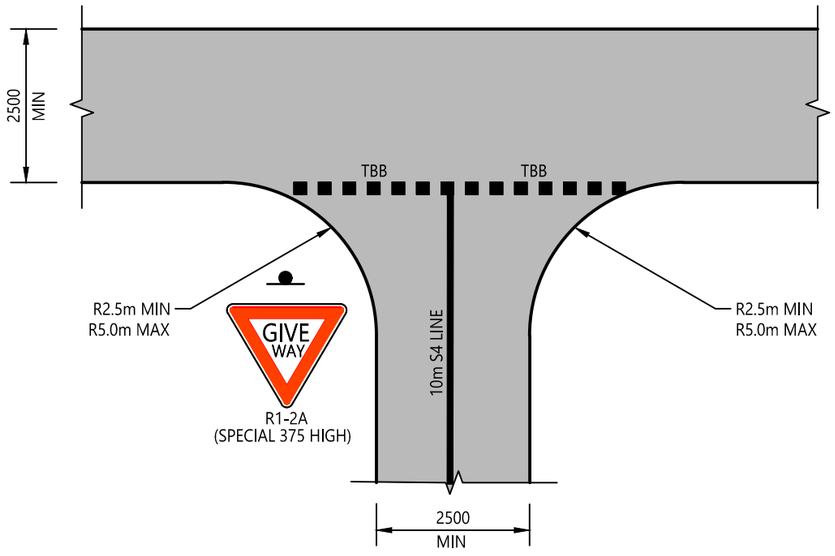


CONCRETE PATH LOCATION AT HIGH AND LOW LEVEL ACCESSES
SCALE 1:100

PATH CONNECTION DETAILS AT VEHICLE ACCESS CROSSINGS

INTERSECTION NOTES:

1. REFER TO AUSTROADS GUIDE TO ROAD DESIGN PART 6A FOR OTHER PATH INTERSECTION TREATMENTS.
2. CONCRETE JOINTS SHALL BE PROVIDED AS DETAILED ON SHEET 4 OF THIS STANDARD DRAWING.
3. PATH PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH COUNCIL'S CIVIL WORKS SPECIFICATION.



INTERSECTION OF SHARED PATHS
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 500 1000 1500 2000 2500 1:50
0 1000 2000 3000 4000 5000 1:100
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
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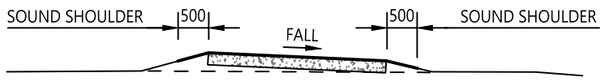
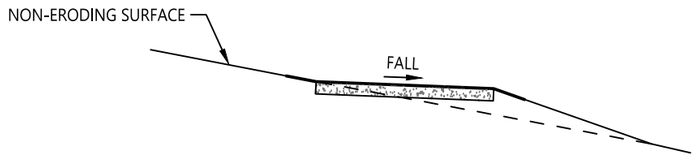
PEDESTRIAN AND CYCLIST SERIES
FOOTPATH AND SHARED PATH

STANDARD DRAWING

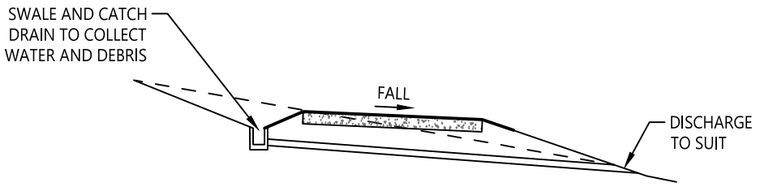
DRAWING NUMBER	REV
SD0601	-
SHEET 5 OF 7	A3



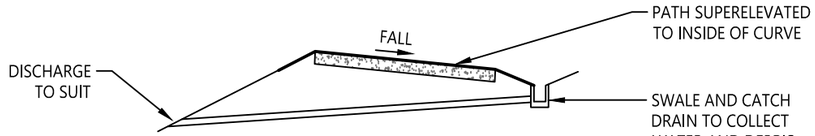
ELEVATED PATH IN FLAT TERRAIN



PATH WHERE EXISTING TERRAIN EXCEEDS PATH CROSSFALL



PATH WHERE EXISTING TERRAIN EXCEEDS PATH CROSSFALL (WITH SWALE)



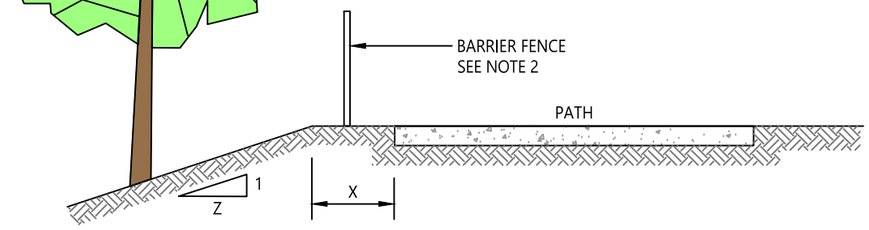
PATH ON A CURVE

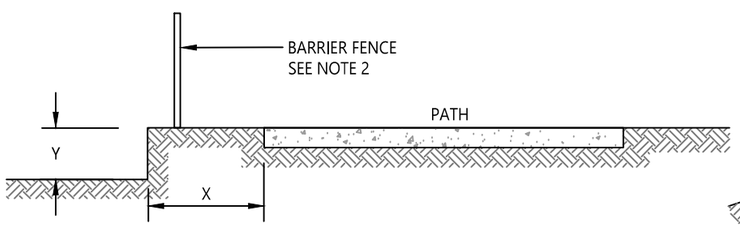
PATH FENCE BARRIERS AND DELINEATION NOTES:

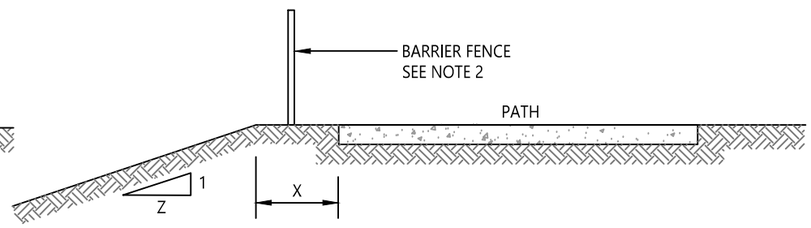
1. ALL BARRIER FENCE DETAILS ON THIS SHEET WERE SOURCED FROM AUSTROADS GUIDE TO ROAD DESIGN PART 6A: PATHS FOR WALKING AND CYCLING.
2. REFER TO COUNCIL'S STANDARD DRAWING SD0701 AND SD0702 FOR BARRIER FENCE DETAILS.
3. BOLLARDS AT ENTRANCES AND EXITS WHERE REQUIRED SHALL BE 1m MINIMUM HIGH REMOVABLE OR FOLD DOWN TYPE, 200mm DIAMETER AND POWDER COATED GOLDEN YELLOW WITH 300mm OF CLASS 100 REFLECTIVE TAPE (RED AND WHITE) DOWN STEM.
4. ALL DRAINAGE GRATES SHALL BE BICYCLE SAFE (WELDLOCK 9978-16 OR SIMILAR DIAMOND PATTERN).
5. PROVIDE 10m OF SEPARATION (S4) LINE APPROACHING ALL INTERSECTIONS, OR WHERE NECESSARY ON PATH SECTIONS WITH RESTRICTED VISIBILITY.
6. PROVIDE SHARED PATH REGULATORY SIGNS AT THE START OF ALL SHARED PATHS AND PROVIDE REPEATER SIGNS EVERY 500 METRES AND SHARED PATH PAVEMENT MARKINGS AT 200m MAXIMUM INTERVALS.
7. ALL PATH PAVEMENT MARKINGS SHALL BE APPLIED IN WHITE REFLECTORISED ROAD MARKING PAINT UNLESS OTHERWISE SPECIFIED OR DIRECTED BY COUNCIL'S REPRESENTATIVE. WHERE THERMOPLASTIC PAVEMENT MARKINGS ARE SPECIFIED, THE CONCRETE SURFACE SHALL BE PRIMED PRIOR TO APPLYING ANY PAVEMENT MARKINGS.

DRAINAGE AND CROSSFALL REQUIREMENTS

SCALE 1:10







	X (m)	Z (m)
FENCE NOT REQUIRED	<1 1 to 5	>8 >4
PARTIAL BARRIER FENCE REQUIRED	<5	3 to 4
FULL BARRIER FENCE REQUIRED	<5	<3

BATTER SLOPE WITH OBSTACLES

	X (m)	Y (m)
FENCE NOT REQUIRED*	<2	<0.25
PARTIAL BARRIER FENCE REQUIRED	<5	0.25 to 2
FULL BARRIER FENCE REQUIRED	<5	>2

*BATTER OFF THE SURFACE WHERE FALL IS WITHIN 1m OF PATH

VERTICAL FALL

	X (m)	Z (m)
FENCE NOT REQUIRED	<1 1 to 5	>8 >3
PARTIAL BARRIER FENCE REQUIRED	<5	1 to 3
FULL BARRIER FENCE REQUIRED	<5	<1

BATTER SLOPE WITHOUT OBSTACLES

REQUIREMENTS FOR FENCE BARRIERS AT BATTERS AND VERTICAL DROPS

NOT TO SCALE

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500

1:10

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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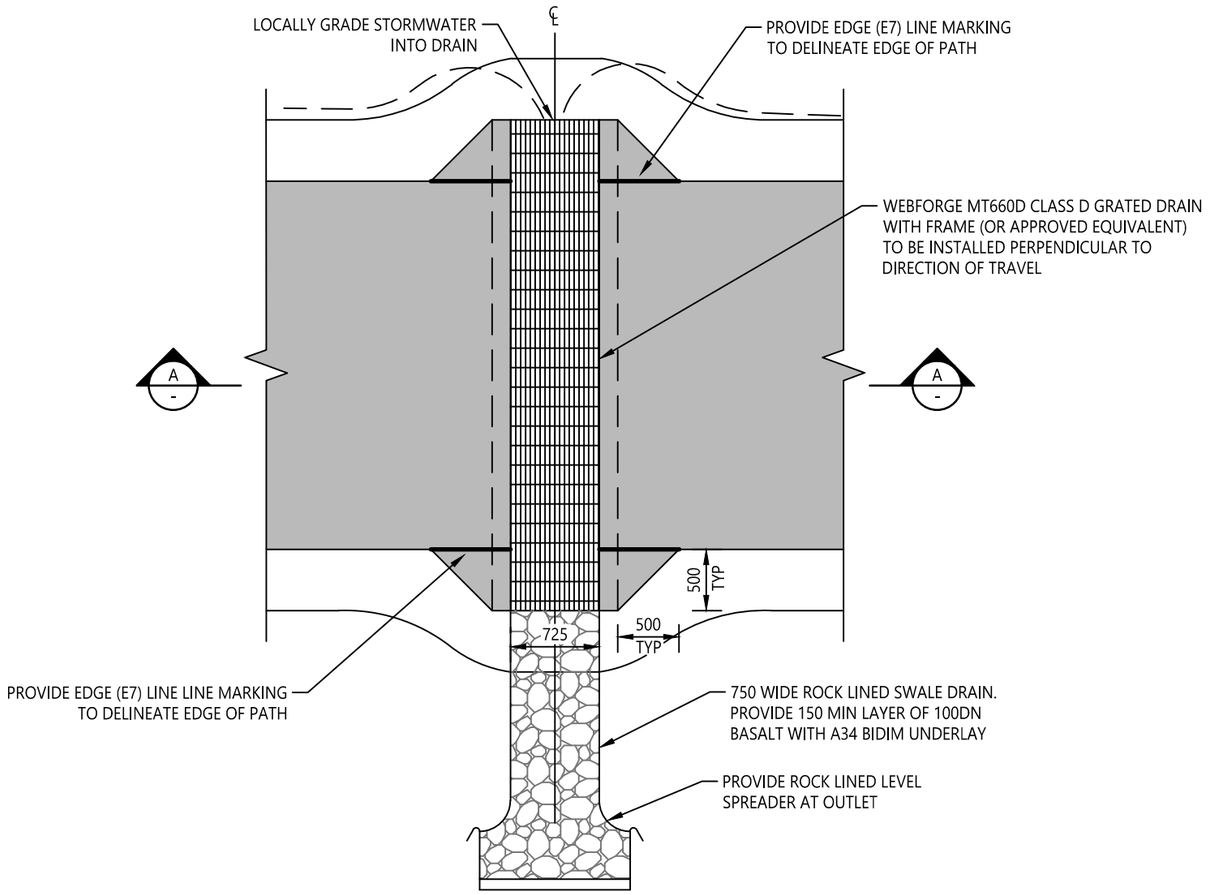
PEDESTRIAN AND CYCLIST SERIES
FOOTPATH AND SHARED PATH

STANDARD DRAWING

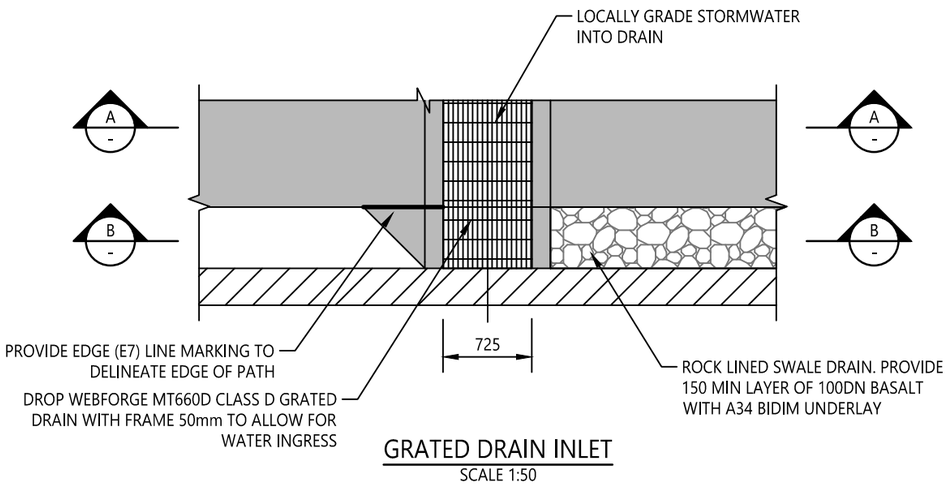
DRAWING NUMBER	REV
SD0601	-
SHEET 6 OF 7	A3

DRAIN NOTES:

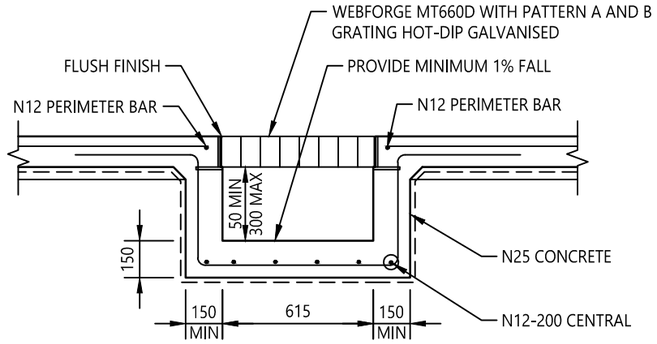
1. DETAILS ON THIS STANDARD DRAWING ARE BASED ON GHD's DRAWING 22-17579-C006 DATED 27/7/2015.
2. ALTERNATIVE PATH DRAINAGE TREATMENTS MAY BE SPECIFIED AND CONSTRUCTED IN CONSULTATION WITH COUNCIL'S REPRESENTATIVE.
3. PROVIDE A 1m DESIRABLE MINIMUM OFFSET FROM EDGE OF PATH TO INLET AND OUTLET STRUCTURES.



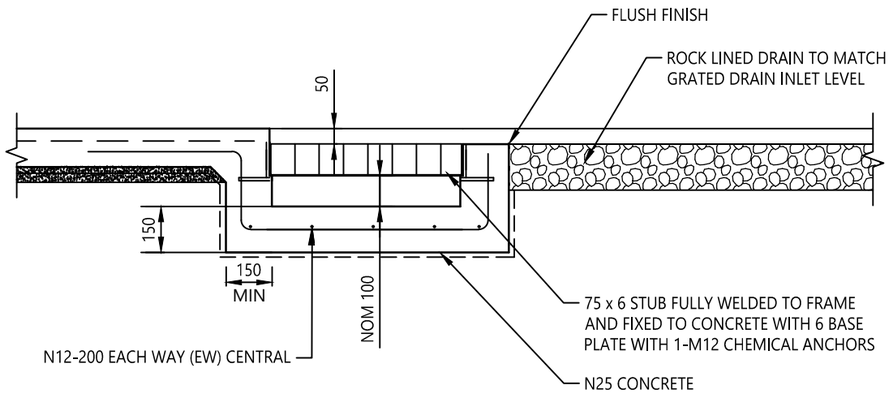
TYPICAL GRATED DRAIN
SCALE 1:50



GRATED DRAIN INLET
SCALE 1:50



SECTION A -
SCALE 1:25



SECTION B -
SCALE 1:20

TYPICAL GRATED DRAIN DETAILS

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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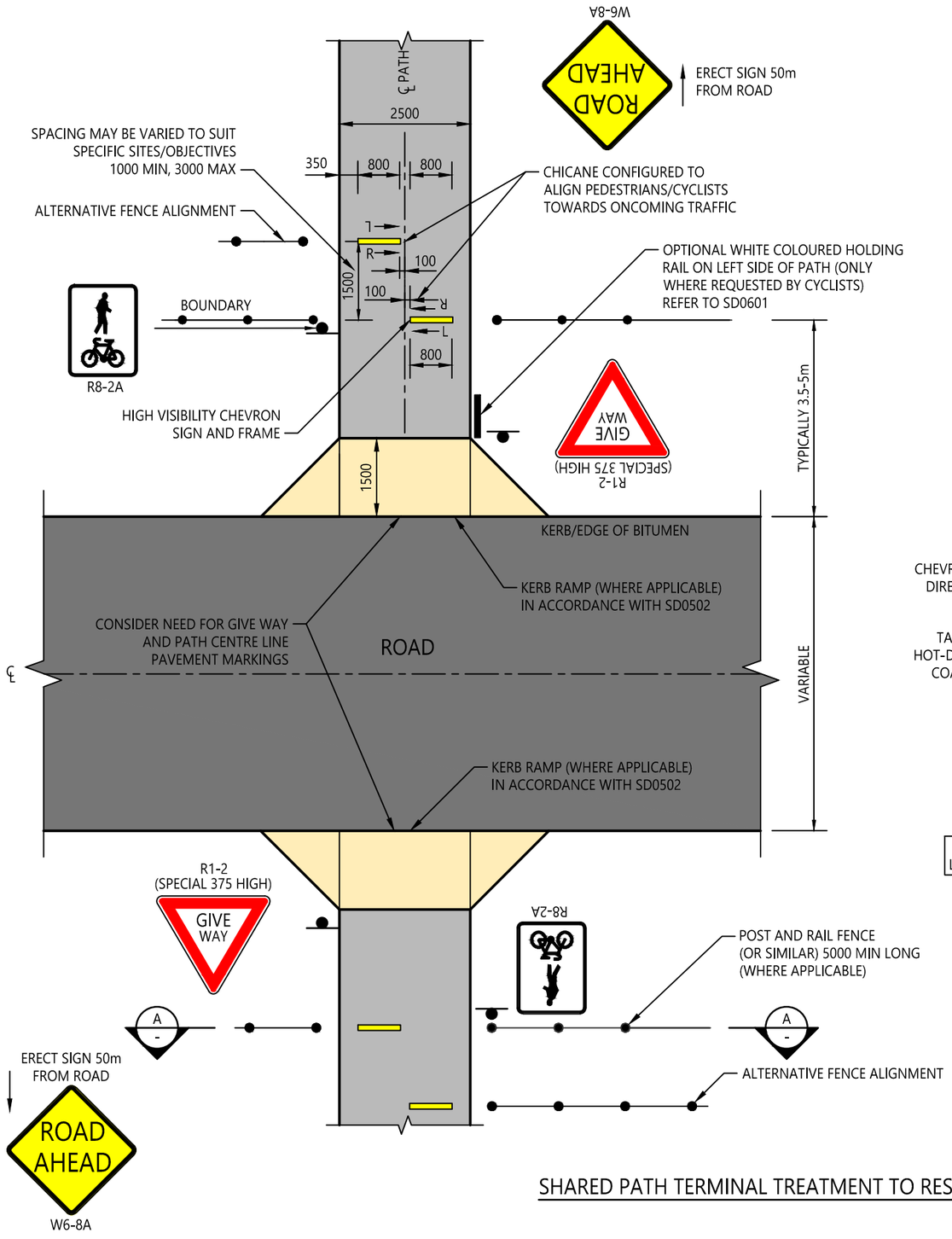
Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
FOOTPATH AND SHARED PATH

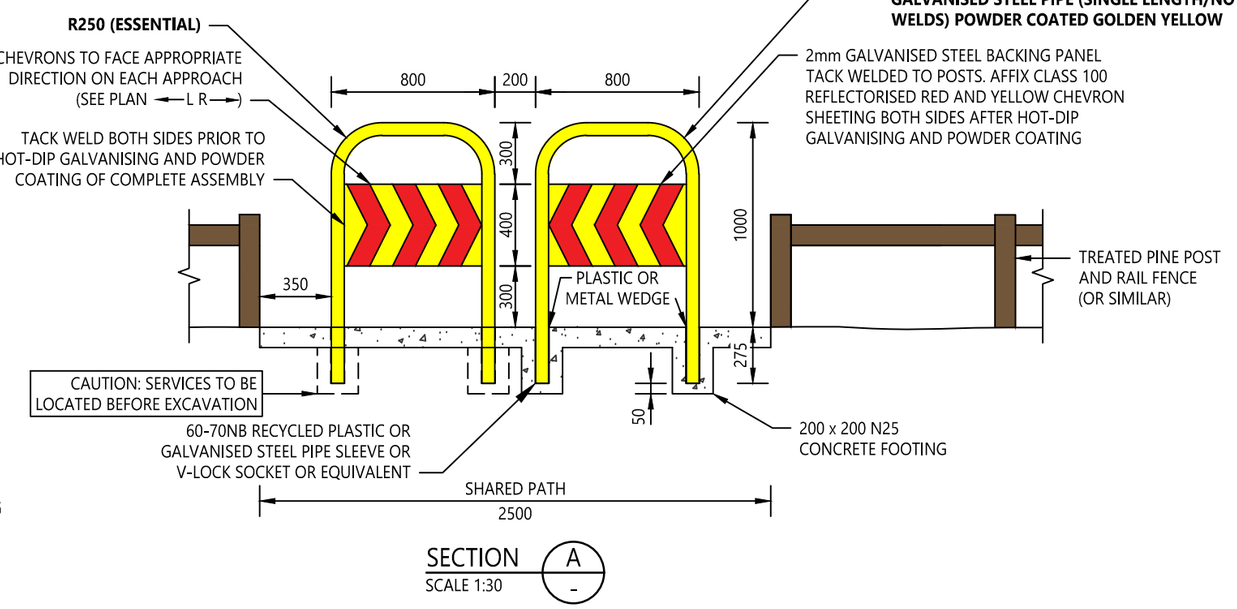
STANDARD DRAWING

DRAWING NUMBER	REV
SD0601	-
SHEET 7 OF 7	A3



NOTES:

1. INCLUSION OF CHICANES OR BOLLARDS AT PATH TERMINALS NEEDS TO BE CAREFULLY CONSIDERED AND JUSTIFIED TO AVOID THEIR UNNECESSARY PROLIFERATION AND POTENTIAL HAZARD TO PATH USERS.
2. MEANDER PATH ON APPROACHES WHERE PRACTICABLE (SEVERE MEANDER MAY OBVIATE NEED FOR CHICANE).
3. WHERE VEHICLE ACCESS IS REQUIRED FOR MAINTENANCE PURPOSES, IT IS PREFERABLE TO PROVIDE ACCESS ADJACENT TO THE PATH, RATHER THAN BY INSTALLING REMOVABLE/COLLAPSIBLE POSTS, WHICH POSE A HAZARD TO PEDESTRIANS AND CYCLISTS.
4. CONSIDER NEED FOR PATH LIGHTING IN AREAS OF POOR ILLUMINATION.
5. INSTALL SHARED PATH (R8-2A) AND END (R7-4A) SIGNS IN PLACE OF 'ROAD AHEAD' SIGN WHERE TERMINAL IS AT END OF PATH.
6. ISOLATION JOINTS SHALL BE PROVIDED AROUND THE BASE OF EACH BOLLARD.



SECTION A-A
SCALE 1:30

SHARED PATH TERMINAL TREATMENT TO RESTRICT CYCLIST SPEEDS AT PATH/ROAD INTERSECTIONS
TYPE 1
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 300 600 900 1200 1500 1:30

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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Central Coast Council

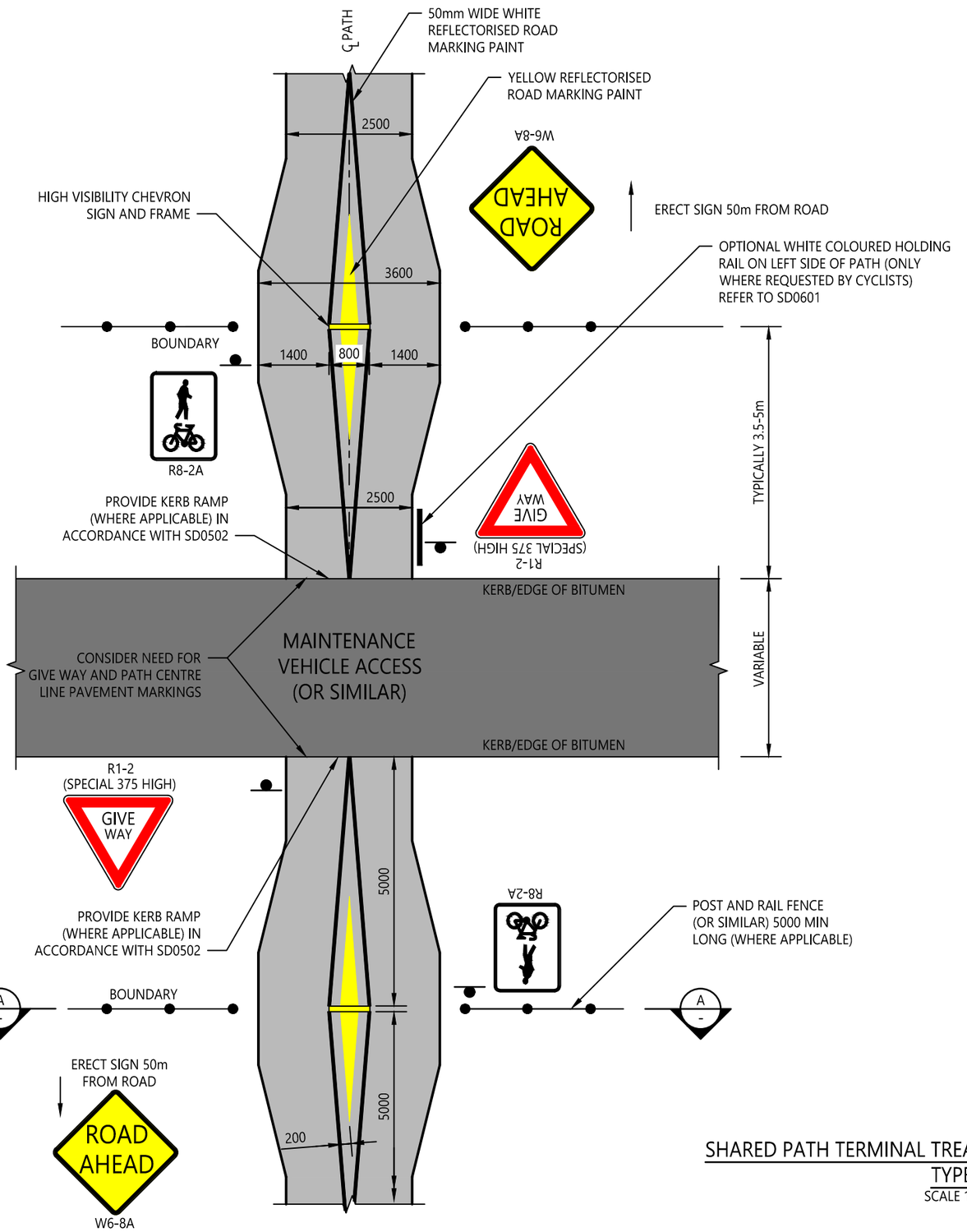
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
SHARED PATH TERMINAL TREATMENT

DRAWING NUMBER	REV
SD0602	-
SHEET 1 OF 5	A3



NOTES:

1. INCLUSION OF CHICANES OR BOLLARDS AT PATH TERMINALS NEEDS TO BE CAREFULLY CONSIDERED AND JUSTIFIED TO AVOID THEIR UNNECESSARY PROLIFERATION AND POTENTIAL HAZARD TO PATH USERS.
2. MEANDER PATH ON APPROACHES WHERE PRACTICABLE (SEVERE MEANDER MAY OBVIATE NEED FOR CHICANE).
3. WHERE VEHICLE ACCESS IS REQUIRED FOR MAINTENANCE PURPOSES, IT IS PREFERABLE TO PROVIDE ACCESS ADJACENT TO THE PATH, RATHER THAN BY INSTALLING REMOVABLE/COLLAPSIBLE POSTS, WHICH POSE A HAZARD TO PEDESTRIANS AND CYCLISTS.
4. CONSIDER NEED FOR PATH LIGHTING IN AREAS OF POOR ILLUMINATION.
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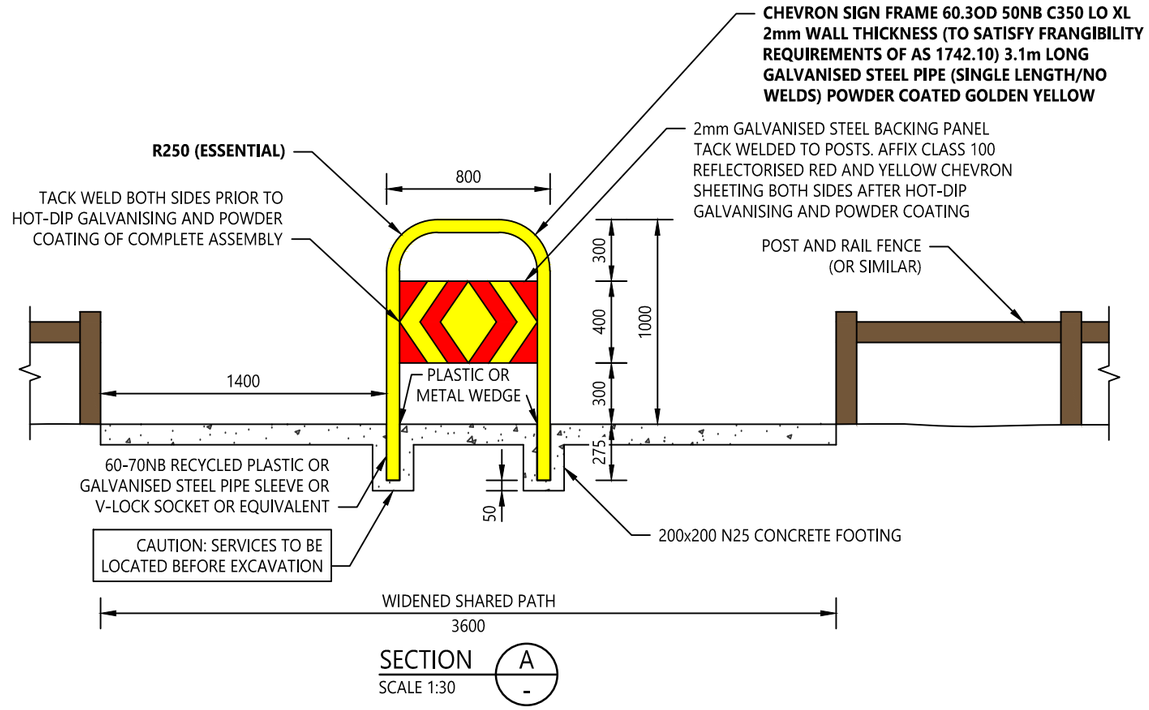
6. ISOLATION JOINTS SHALL BE PROVIDED AROUND THE BASE OF EACH BOLLARD.



SHARED PATH TERMINAL TREATMENT ON WIDENED PATH
TYPE 2
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 300 600 900 1200 1500 1:30

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

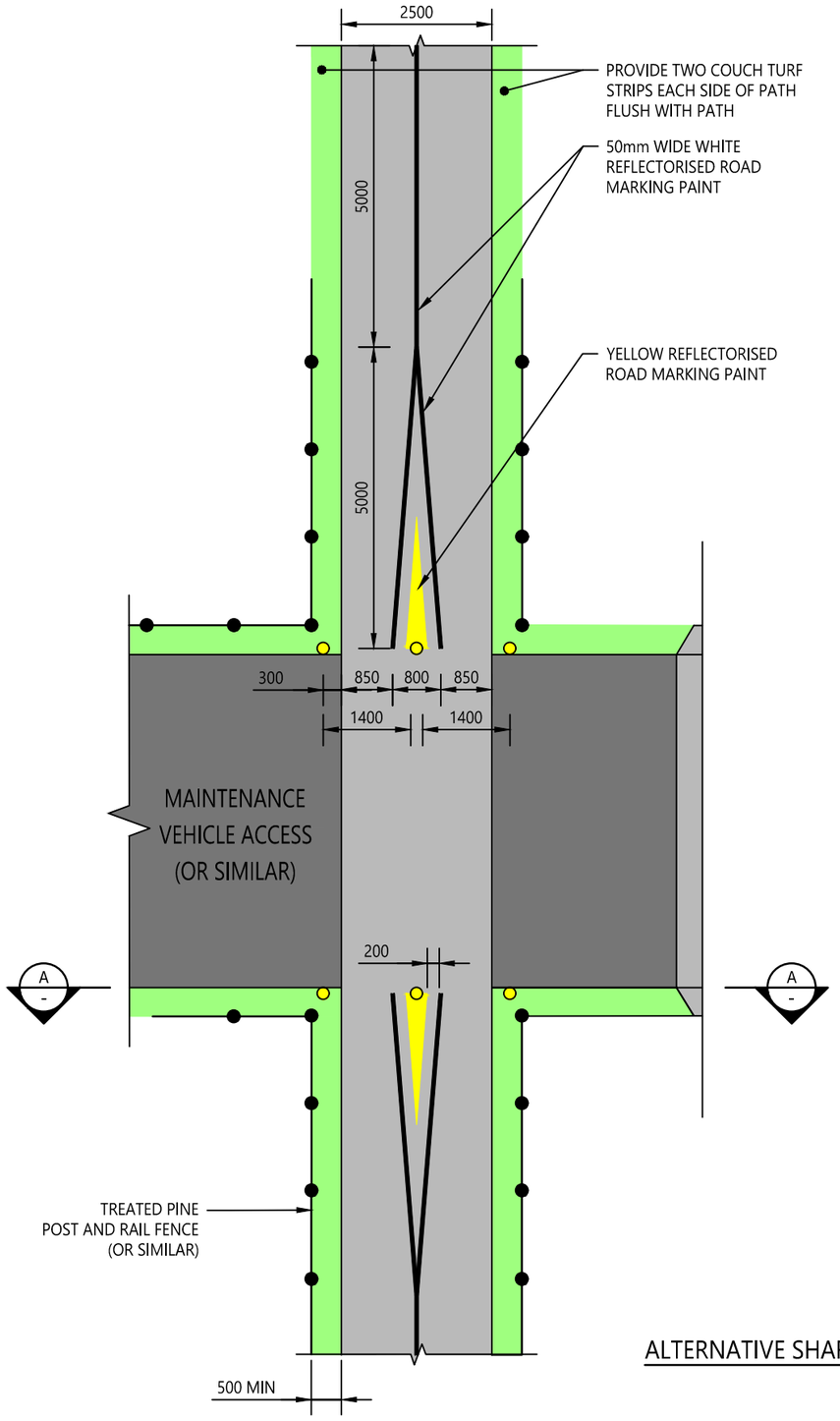
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

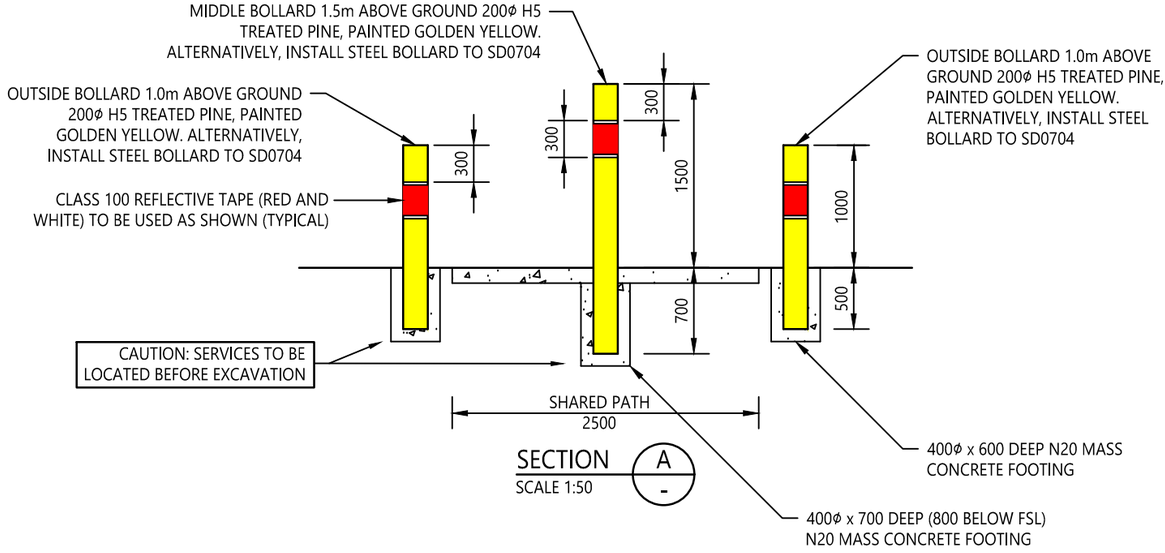
PEDESTRIAN AND CYCLIST SERIES
SHARED PATH TERMINAL TREATMENT

DRAWING NUMBER	REV
SD0602	-
SHEET 2 OF 5	A3



NOTES:

1. INCLUSION OF CHICANES OR BOLLARDS AT PATH TERMINALS NEEDS TO BE CAREFULLY CONSIDERED AND JUSTIFIED TO AVOID THEIR UNNECESSARY PROLIFERATION AND POTENTIAL HAZARD TO PATH USERS.
2. MEANDER PATH ON APPROACHES WHERE PRACTICABLE (SEVERE MEANDER MAY OBVIATE NEED FOR CHICANE).
3. WHERE VEHICLE ACCESS IS REQUIRED FOR MAINTENANCE PURPOSES, IT IS PREFERABLE TO PROVIDE ACCESS ADJACENT TO THE PATH, RATHER THAN BY INSTALLING REMOVABLE/COLLAPSIBLE POSTS, WHICH POSE A HAZARD TO PEDESTRIANS AND CYCLISTS.
4. CONSIDER NEED FOR PATH LIGHTING IN AREAS OF POOR ILLUMINATION.
5. INSTALL SHARED PATH (R8-2A) AND END (R7-4A) SIGNS IN PLACE OF 'ROAD AHEAD' SIGN WHERE TERMINAL IS AT END OF PATH.
6. ISOLATION JOINTS SHALL BE PROVIDED AROUND THE BASE OF EACH BOLLARD.



ALTERNATIVE SHARED PATH TERMINAL TREATMENT TO PREVENT VEHICLE ACCESS ONLY
TYPE 3
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500 1:50

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

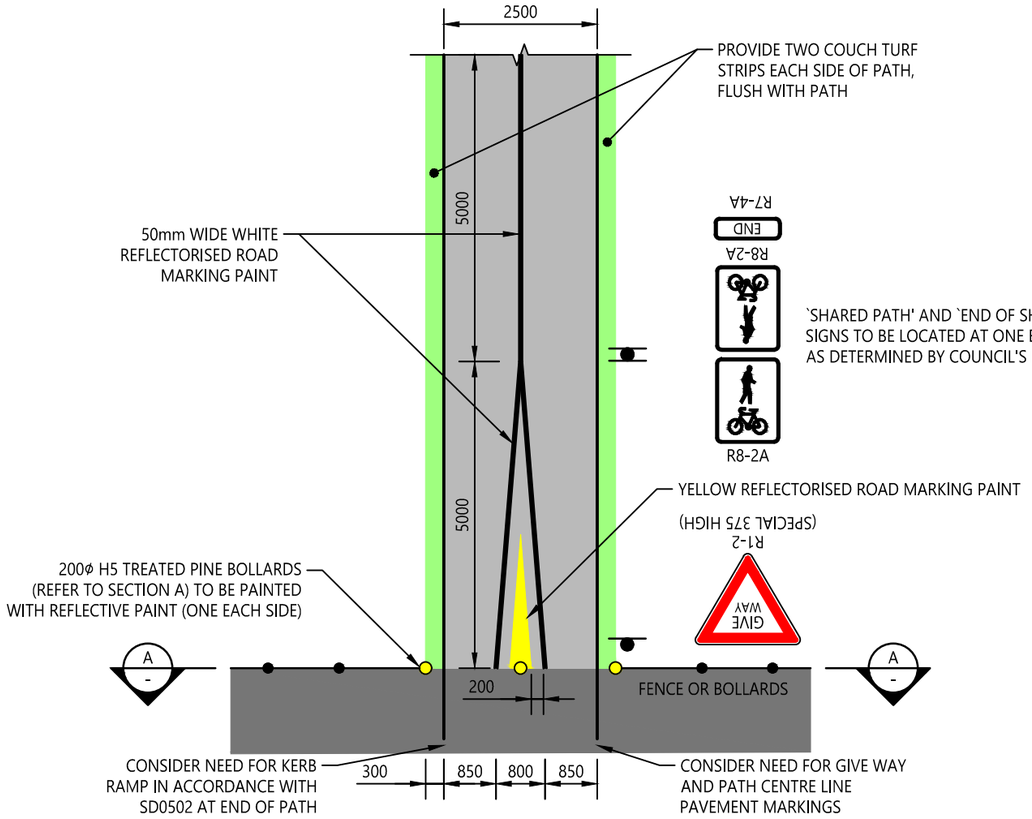
STANDARD DRAWING

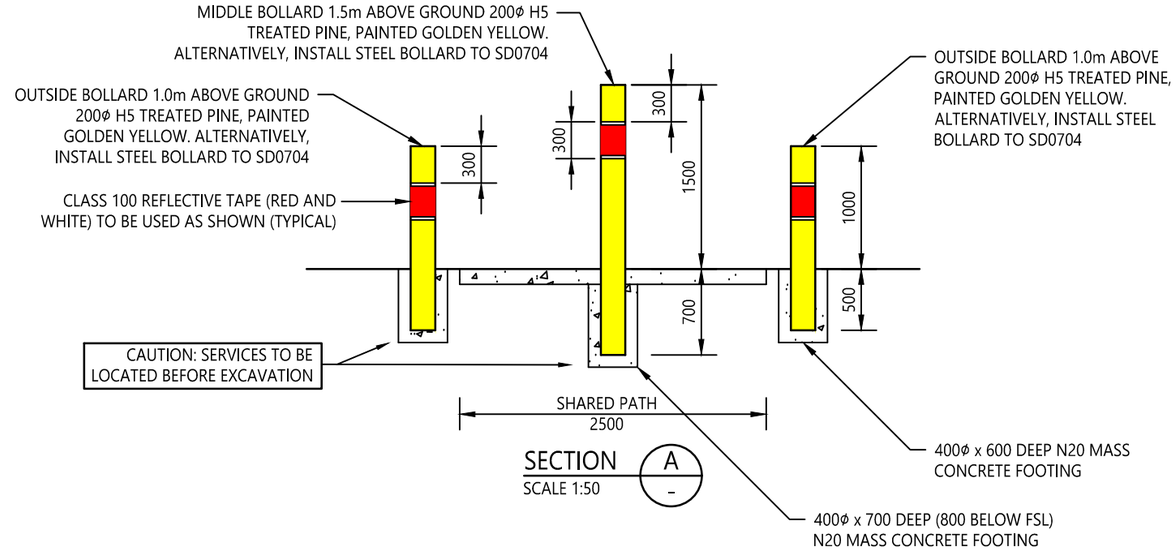
PEDESTRIAN AND CYCLIST SERIES
SHARED PATH TERMINAL TREATMENT

DRAWING NUMBER	REV
SD0602	-
SHEET 3 OF 5	A3

NOTES:

1. INCLUSION OF CHICANES OR BOLLARDS AT PATH TERMINALS NEEDS TO BE CAREFULLY CONSIDERED AND JUSTIFIED TO AVOID THEIR UNNECESSARY PROLIFERATION AND POTENTIAL HAZARD TO PATH USERS.
2. MEANDER PATH ON APPROACHES WHERE PRACTICABLE (SEVERE MEANDER MAY OBVIATE NEED FOR CHICANE).
3. WHERE VEHICLE ACCESS IS REQUIRED FOR MAINTENANCE PURPOSES, IT IS PREFERABLE TO PROVIDE ACCESS ADJACENT TO THE PATH, RATHER THAN BY INSTALLING REMOVABLE/COLLAPSIBLE POSTS, WHICH POSE A HAZARD TO PEDESTRIANS AND CYCLISTS.
4. CONSIDER NEED FOR PATH LIGHTING IN AREAS OF POOR ILLUMINATION.
5. INSTALL SHARED PATH (R8-2A) AND END (R7-4A) SIGNS IN PLACE OF 'ROAD AHEAD' SIGN WHERE TERMINAL IS AT END OF PATH.
6. ISOLATION JOINTS SHALL BE PROVIDED AROUND THE BASE OF EACH BOLLARD.





ALTERNATIVE SHARED PATH CONTROL
(STANDARD PATH WIDTH WHERE SHARED PATH ENDS AT ROAD, FOOTPATH, CAR PARK OR SIMILAR)
TYPE 4
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500 1:50

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

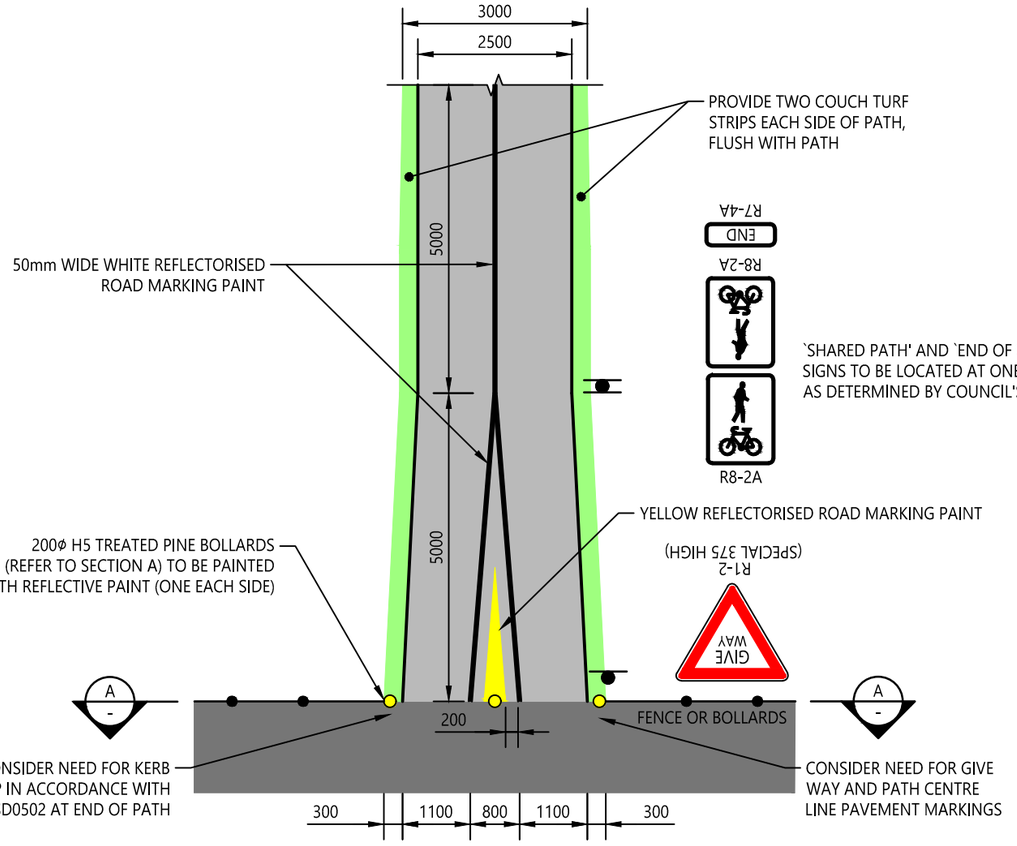
PEDESTRIAN AND CYCLIST SERIES
SHARED PATH TERMINAL TREATMENT

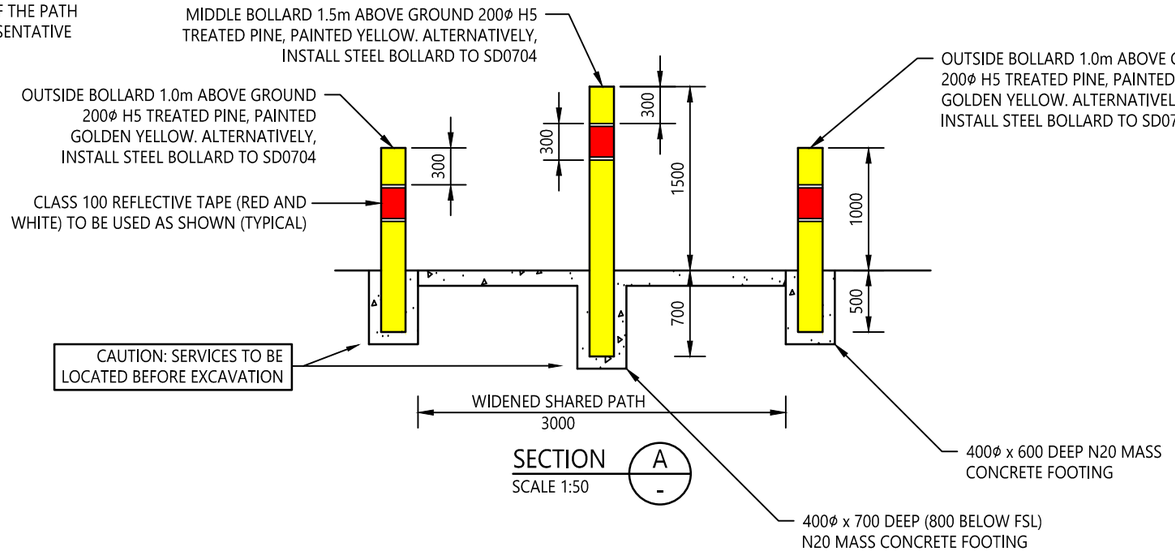
STANDARD DRAWING

DRAWING NUMBER	REV
SD0602	-
SHEET 4 OF 5	A3

NOTES:

1. INCLUSION OF CHICANES OR BOLLARDS AT PATH TERMINALS NEEDS TO BE CAREFULLY CONSIDERED AND JUSTIFIED TO AVOID THEIR UNNECESSARY PROLIFERATION AND POTENTIAL HAZARD TO PATH USERS.
2. MEANDER PATH ON APPROACHES WHERE PRACTICABLE (SEVERE MEANDER MAY OBVIATE NEED FOR CHICANE).
3. WHERE VEHICLE ACCESS IS REQUIRED FOR MAINTENANCE PURPOSES, IT IS PREFERABLE TO PROVIDE ACCESS ADJACENT TO THE PATH, RATHER THAN BY INSTALLING REMOVABLE/COLLAPSIBLE POSTS, WHICH POSE A HAZARD TO PEDESTRIANS AND CYCLISTS.
4. CONSIDER NEED FOR PATH LIGHTING IN AREAS OF POOR ILLUMINATION.
5. INSTALL 'PATH ENDS' SIGN IN PLACE OF 'ROAD AHEAD' SIGN WHERE TERMINAL IS AT END OF PATH.
6. INSTALL SHARED PATH (R8-2A) AND END (R7-4A) SIGNS IN PLACE OF 'ROAD AHEAD' SIGN WHERE TERMINAL IS AT END OF PATH.
7. ISOLATION JOINTS SHALL BE PROVIDED AROUND THE BASE OF EACH BOLLARD.





ALTERNATIVE SHARED PATH CONTROL
(WIDENED PATH WIDTH WHERE SHARED PATH ENDS AT ROAD, FOOTPATH, CAR PARK OR SIMILAR)
TYPE 5

SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

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0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

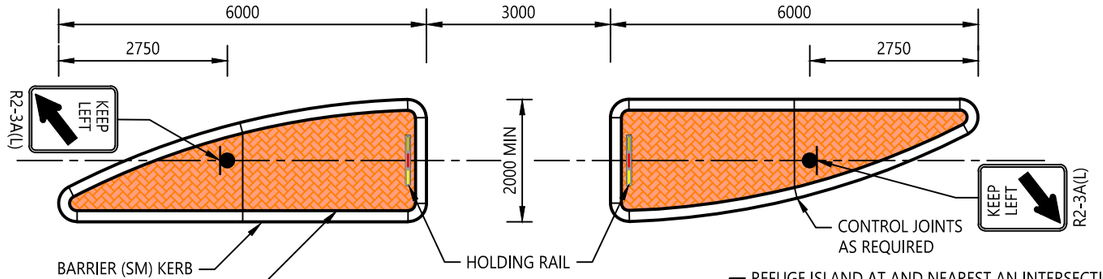
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

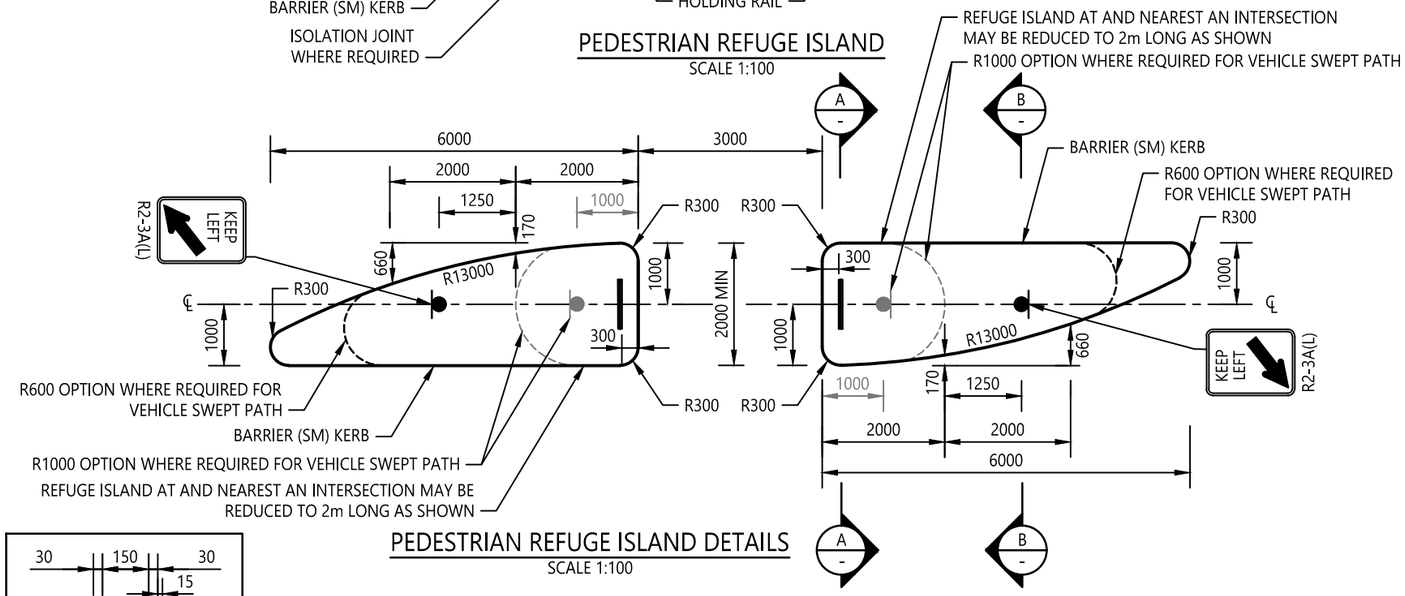
PEDESTRIAN AND CYCLIST SERIES
SHARED PATH TERMINAL TREATMENT

STANDARD DRAWING

DRAWING NUMBER	REV
SD0602	-
SHEET 5 OF 5	A3



PEDESTRIAN REFUGE ISLAND
SCALE 1:100

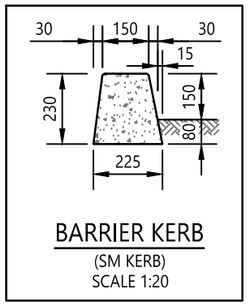


PEDESTRIAN REFUGE ISLAND DETAILS
SCALE 1:100

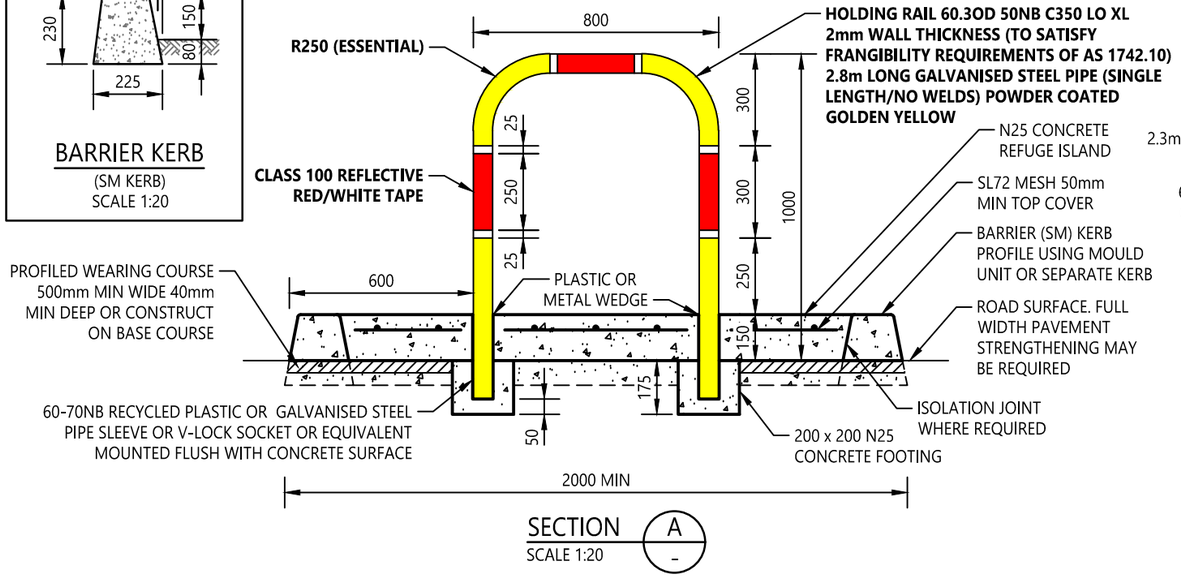
NOTES:

1. PEDESTRIAN REFUGE CONFIGURATIONS ARE BASED ON TfNSW TECHNICAL DIRECTION TDT 2011/01 AND AS 1742.10. GENERALLY, FOR NON-ARTERIAL ROADS WITH V_{85} = 50 TO 60km/h. RECOMMENDED FOR ROADS WITH ADT > 3,000. REFER TO TDT 2011/01 FOR 4-LANE 2-WAY ROADS.
2. WHEREVER PROVISION IS MADE FOR PEDESTRIANS/CYCLISTS TO CROSS AT TRAFFIC ISLANDS, BARRIER (SM) KERB MUST BE USED. AT MEDIAN REFUGE LOCATIONS, TRANSITION SF KERB TO SM KERB OVER 5m ON APPROACH AND DEPARTURE SIDES AND INSTALL HOLDING RAILS EACH SIDE OF THE MEDIAN.
3. ROAD WIDENING OR KERB EXTENSIONS SHOULD BE CONSIDERED IN ACCORDANCE WITH TDT 2011/01. PROVISION FOR CYCLISTS AND ROAD DRAINAGE MAY DICTATE THE REFUGE CONFIGURATION. ANY KERB EXTENSIONS MUST HAVE APPROPRIATE APPROACH DELINEATION, PREFERABLY E1/C4 TAPERS AND HAZARD SIGNS.
4. REFUGE ISLAND 2m MINIMUM WIDE AT CROSSING.
5. CROSSING GAP 3m MINIMUM OR 3.6m AT PEDESTRIAN (ZEBRA) CROSSINGS.
6. MINIMUM LANE WIDTH AT CROSSING TO BE 3.5m. MAY NEED WIDENING ON HORIZONTAL CURVES. ENSURE VEHICLE TURNING PATHS ARE CHECKED FOR APPROPRIATE DESIGN VEHICLE, ESPECIALLY ON BUS ROUTES.
7. HOLDING RAILS TO BE FRANGIBLE IN ACCORDANCE WITH AS 1742.10.
8. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
9. CONTROL JOINTS SHALL BE PROVIDED MIDWAY ALONG THE 6m LONG REFUGE ISLANDS AND AT 3m INTERVALS IN BARRIER (SM) KERB WHERE APPLICABLE.
10. ISOLATION JOINTS SHALL BE PROVIDED BETWEEN KERB AND CONCRETE INFILL WHERE REQUIRED.
11. TRAFFIC ISLAND KERB TO BE PAINTED WITH WHITE REFLECTORISED ROAD MARKING PAINT.
12. EDGE LINES TO BE MARKED ON ROADS ≥ 11m WIDE.
13. C3 LINES TO BE MARKED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT. ALL OTHER PAVEMENT MARKINGS TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT.
14. ALL OBSOLETE PAVEMENT MARKINGS TO BE COMPLETELY REMOVED.
15. STOP OR GIVE WAY INTERSECTION CONTROL MAY BE REQUIRED ON TERMINATING SIDE ROADS.
16. ENSURE CROSSING SIGHT DISTANCE REQUIREMENTS ARE ACHIEVED IN ACCORDANCE WITH AUSTROADS GUIDELINES:

DISTANCE 4m:	46m AT V_{85} = 50km/h	56m AT V_{85} = 60km/h
DISTANCE 5m:	58m AT V_{85} = 50km/h	69m AT V_{85} = 60km/h

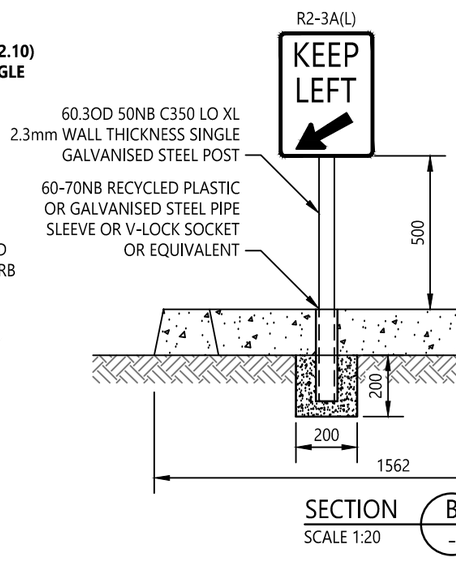


BARRIER KERB
(SM KERB)
SCALE 1:20



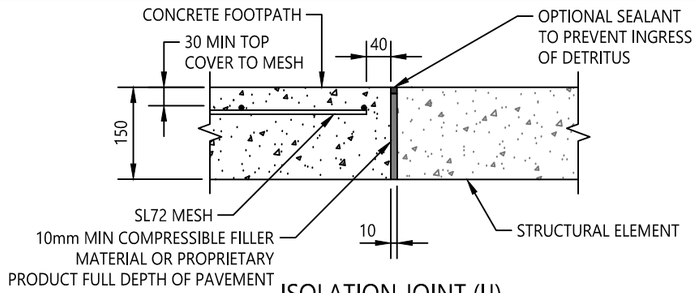
SECTION A
SCALE 1:20

HOLDING RAIL DETAILS

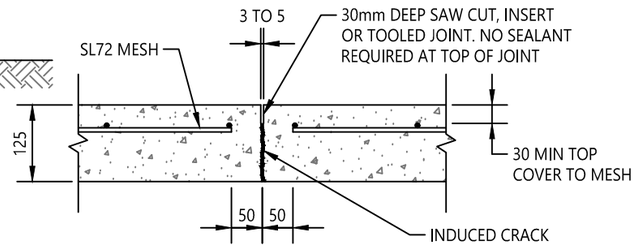


SECTION B
SCALE 1:20

KEEP LEFT SIGN AT PEDESTRIAN REFUGE ISLANDS



ISOLATION JOINT (IJ)
SCALE 1:10



CONTROL JOINT (CJ) 125mm
SCALE 1:10

					SCALE ON ORIGINAL A3 SIZE DRAWING	DRAWN	D MILLER/T WILLIS
						CHECKED	M BAMBER
					AS SHOWN	DATE	28/4/20
						UNIT MANAGER APPROVAL	
REV	AMENDMENT	DATE	DRAWN	APRVD	ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN	ASSETS PLANNING AND DESIGN	ROADS TRANSPORT DRAINAGE AND WASTE

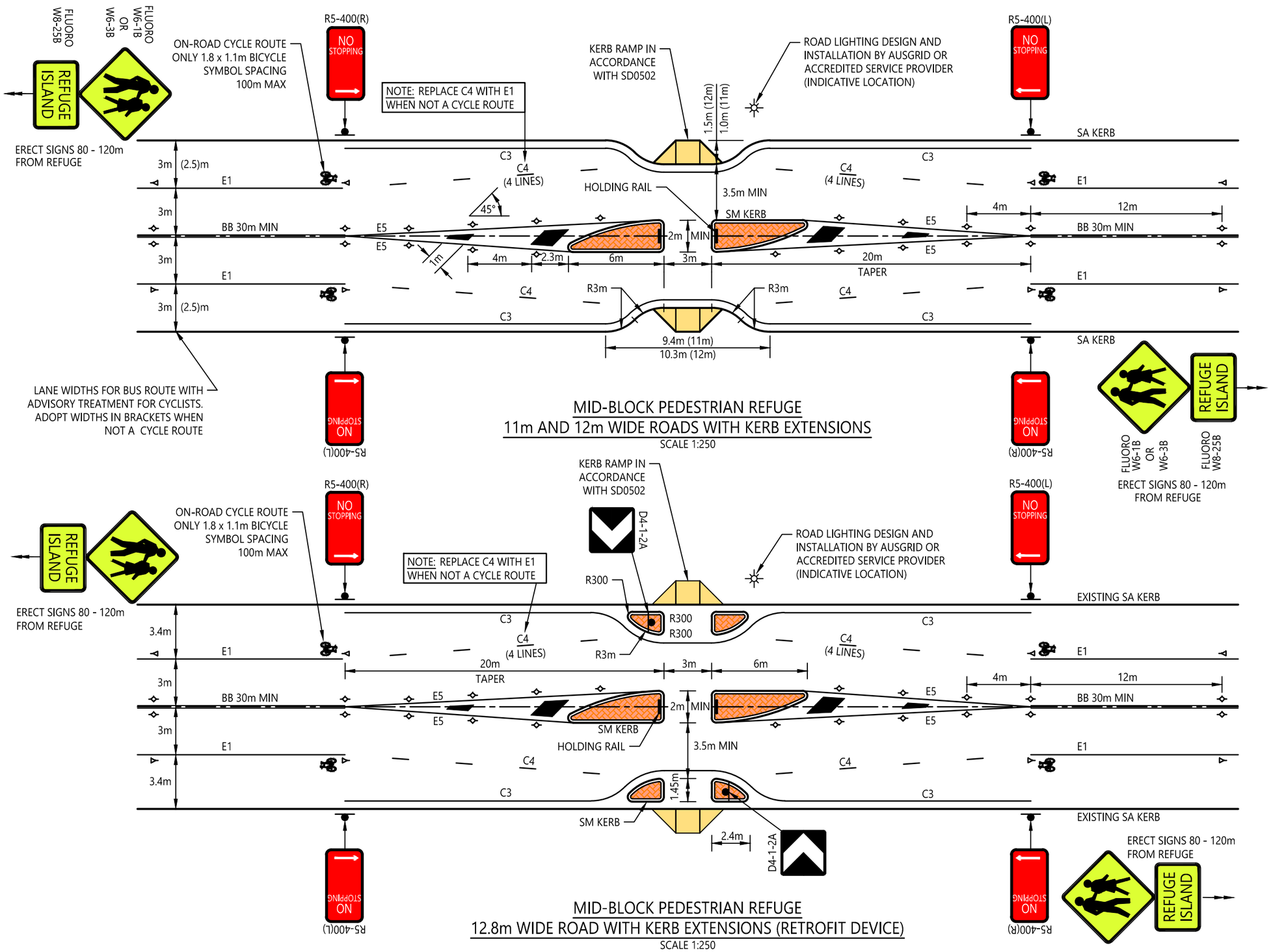
Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
PEDESTRIAN REFUGE

STANDARD DRAWING

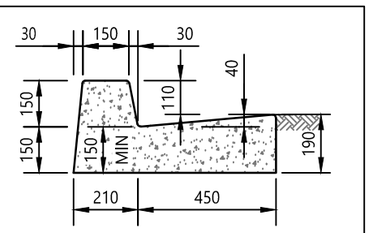
DRAWING NUMBER SD0603 | REV -

SHEET 1 OF 5 | A3

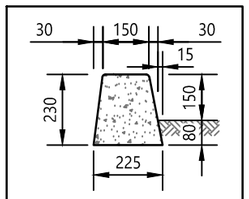


LEGEND

- Centre line
- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Proposed sign and post
- Road light
- Terracotta coloured stamped concrete infill



BARRIER KERB AND CHANNEL
(MODIFIED SA KERB)
SCALE 1:20



BARRIER KERB
(SM KERB)
SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000 1:20
0 2500 5000 7500 10000 12500 1:250
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

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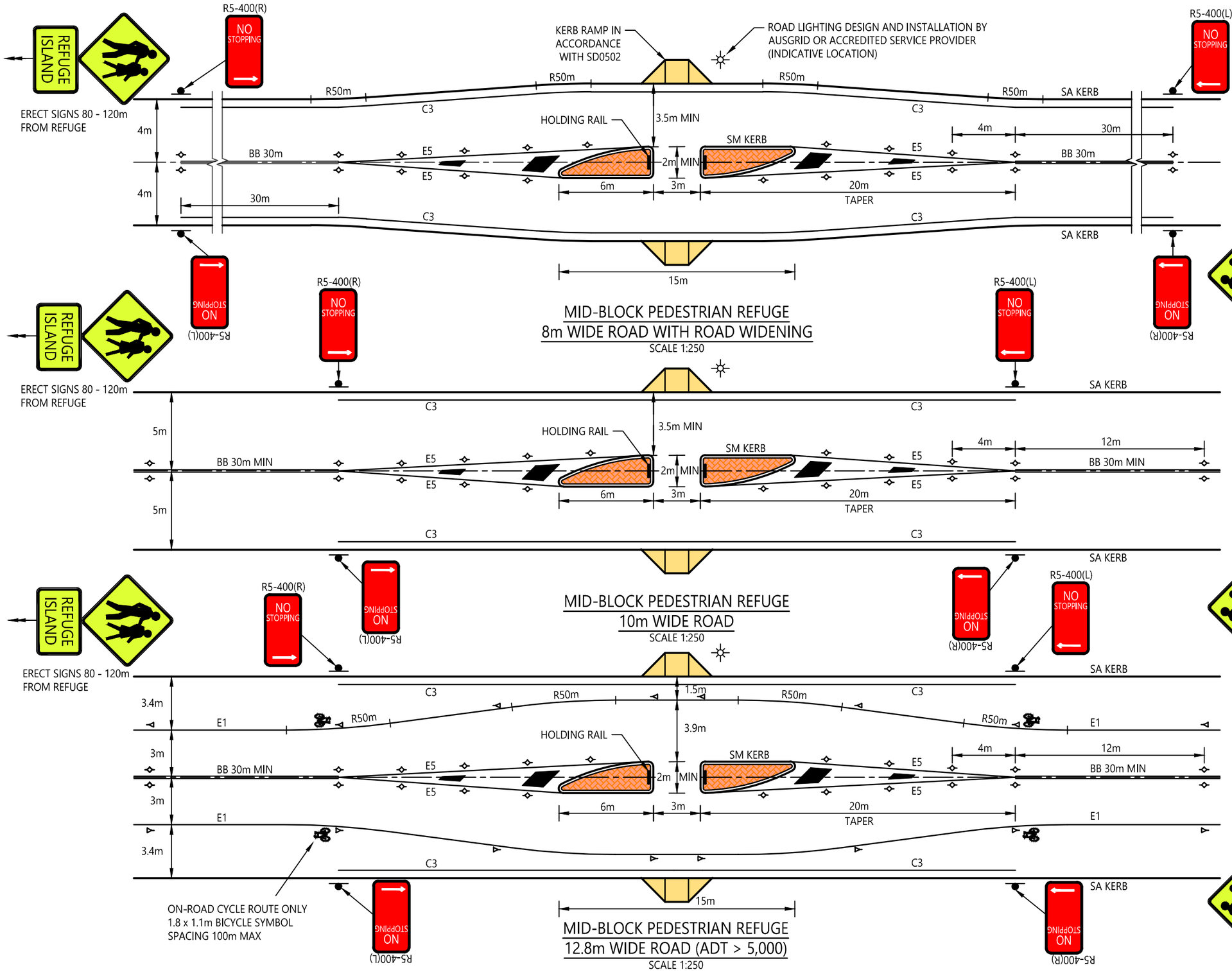
PEDESTRIAN AND CYCLIST SERIES
PEDESTRIAN REFUGE

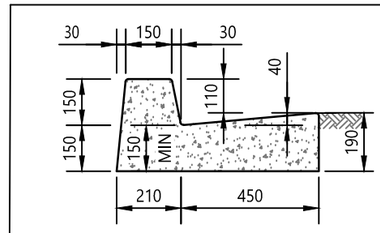
STANDARD DRAWING

DRAWING NUMBER	REV
SD0603	-
SHEET 2 OF 5	A3

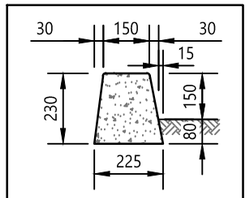


LEGEND

- Centre line
- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Proposed sign and post
- Road light
- Terracotta coloured stamped concrete infill



BARRIER KERB AND CHANNEL
(MODIFIED SA KERB)
SCALE 1:20



BARRIER KERB
(SM KERB)
SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000 1:20

0 2500 5000 7500 10000 12500 1:250

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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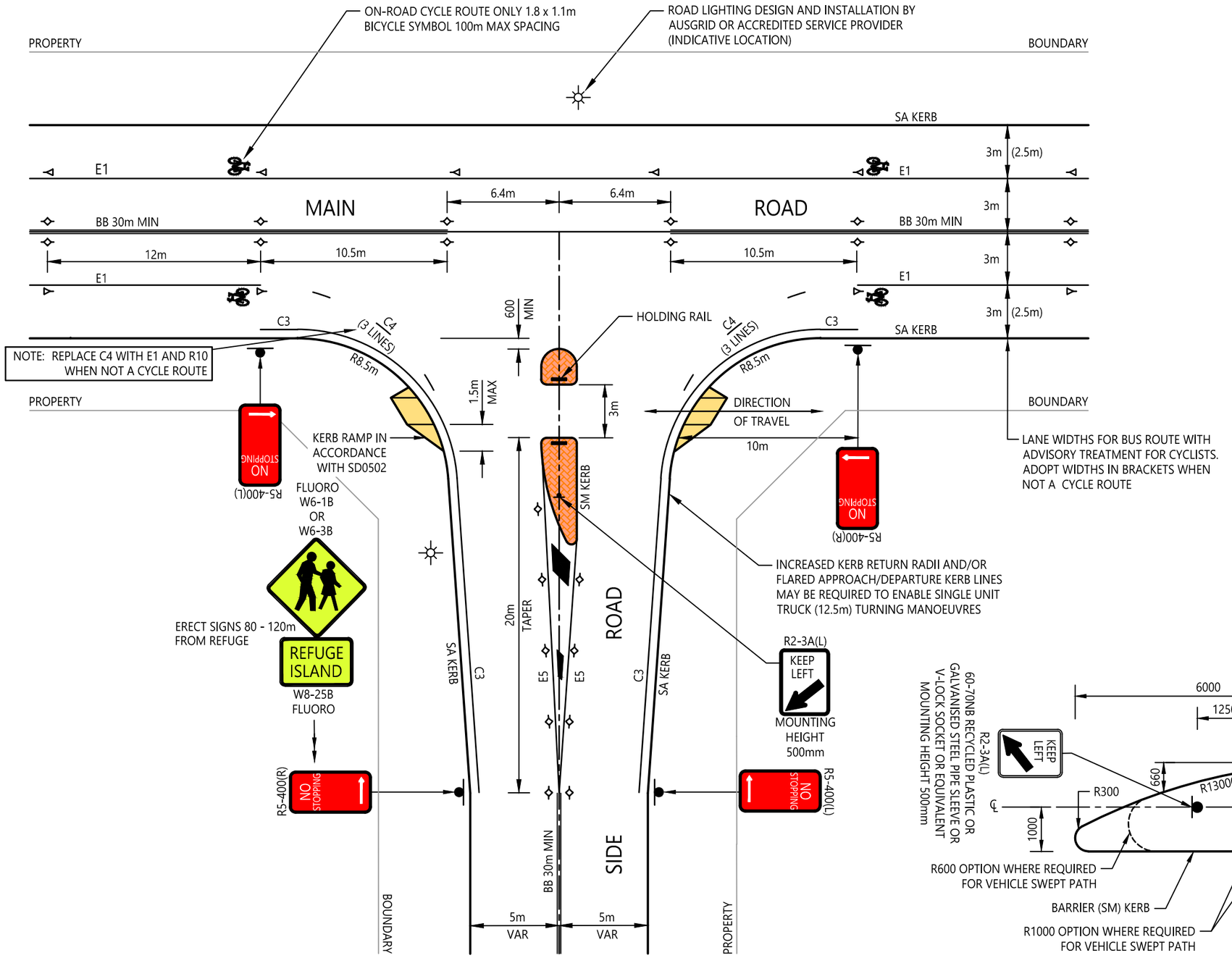
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
PEDESTRIAN REFUGE

DRAWING NUMBER	REV
SD0603	-
SHEET 3 OF 5	A3



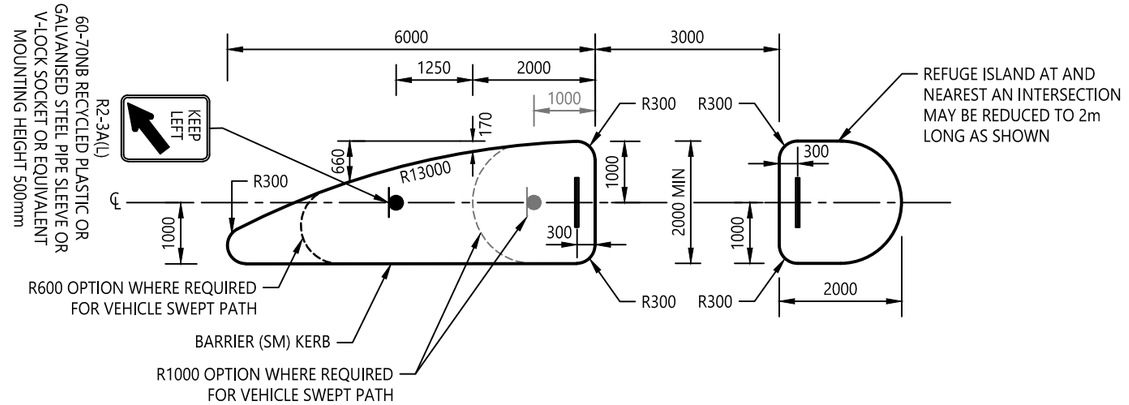
PEDESTRIAN REFUGE AT T-INTERSECTION
SCALE 1:250

NOTES:

1. TRAFFIC SIGNS TO BE ERECTED AS FOLLOWS:
   - MOUNTING HEIGHT: 2.5m (UNLESS OTHERWISE SHOWN)
   - LATERAL CLEARANCE: 0.6m (0.3 MIN) FROM EDGE OF SIGN TO KERB/EDGE OF BITUMEN
2. PAVEMENT MARKINGS TO BE APPLIED IN ACCORDANCE WITH COUNCIL'S PAVEMENT MARKING SPECIFICATIONS.
3. BB, E1, E5 AND C4 LINES TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT. DIAGONALS AND SYMBOLS TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL. C3 LINES TO BE MARKED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT.
4. TRAFFIC ISLAND KERB TO BE PAINTED WITH WHITE REFLECTORISED ROAD MARKING PAINT.
5. HOLDING RAILS TO BE FRANGIBLE IN ACCORDANCE WITH AS 1742.10.
6. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
7. LOCATION AND ALIGNMENT OF FOOTPATH(S) AND SHARED PATH(S) TO BE DETERMINED BASED ON SITE SPECIFIC REQUIREMENTS.

LEGEND

- Centre line
- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Proposed sign and post
- Road light
- Terracotta coloured stamped concrete infill or equivalent
- Bicycle symbol (advisory treatment)



PEDESTRIAN REFUGE ISLAND DETAILS
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 1000 2000 3000 4000 5000 1:100
0 2500 5000 7500 10000 12500 1:250
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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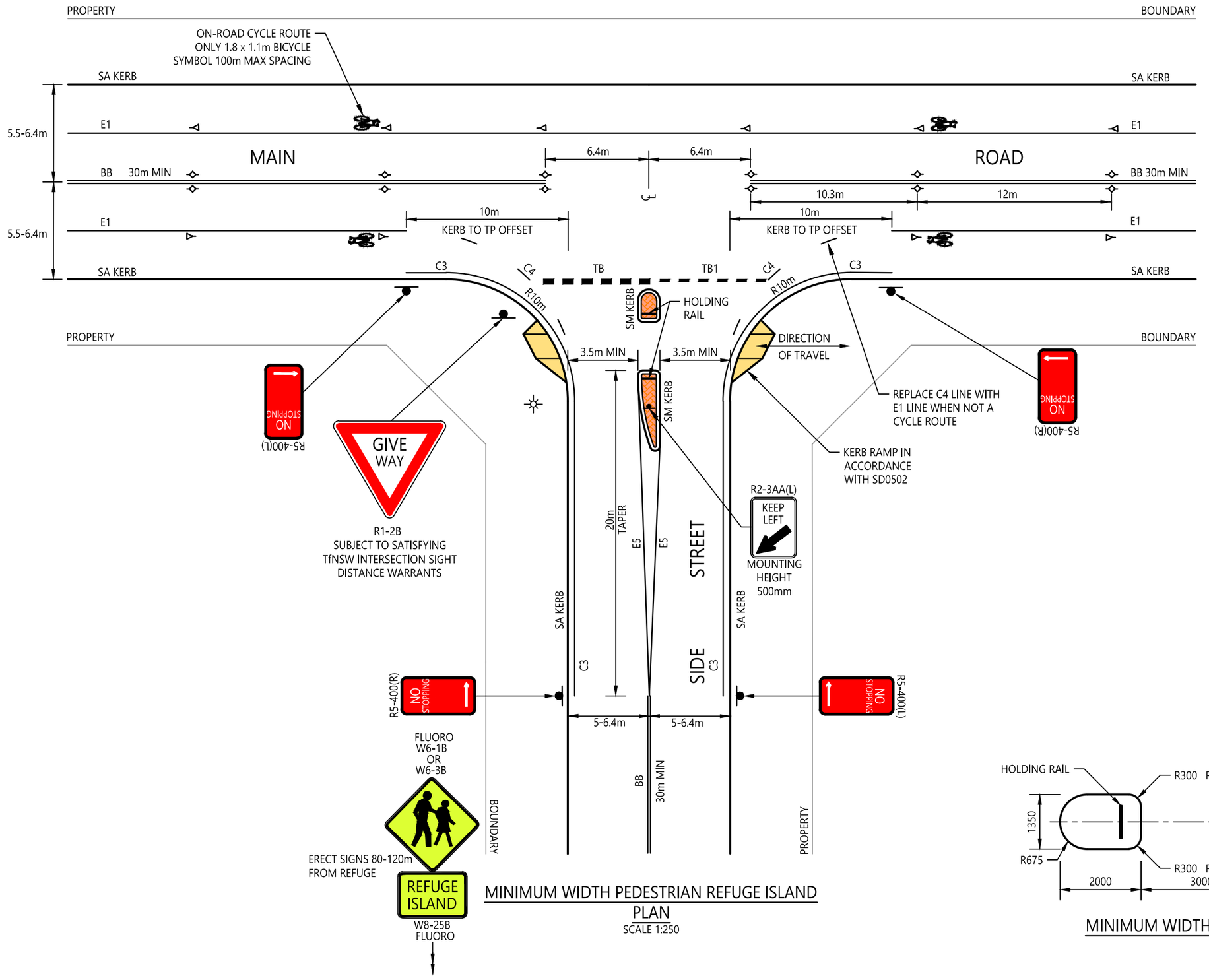
PEDESTRIAN AND CYCLIST SERIES
PEDESTRIAN REFUGE

STANDARD DRAWING

DRAWING NUMBER	REV
SD0603	-
SHEET 4 OF 5	A3



MINIMUM WIDTH PEDESTRIAN REFUGE ISLAND
PLAN
SCALE 1:250

NOTES:

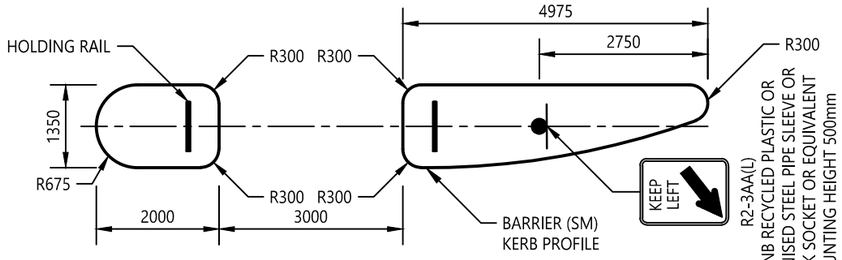
1. MINIMUM WIDTH PEDESTRIAN REFUGE ISLAND (1.35m WIDE) ONLY TO BE INSTALLED AT CONSTRAINED LOCATIONS TO ENABLE APPROPRIATE DESIGN VEHICLE TURNING PATHS, IN CONSULTATION WITH COUNCIL'S REPRESENTATIVE.
2. TRAFFIC SIGNS TO BE ERECTED AS FOLLOWS:

   MOUNTING HEIGHT: 2.5m (UNLESS OTHERWISE SPECIFIED)

   LATERAL CLEARANCE: 0.6m (0.3m MIN) FROM EDGE OF SIGN TO KERB/EDGE OF BITUMEN.
3. PAVEMENT MARKINGS TO BE APPLIED IN ACCORDANCE WITH COUNCIL'S PAVEMENT MARKING SPECIFICATION.
4. BB, E1, E5 AND C4 LINES TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT. TB, TB1 LINES AND SYMBOLS TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL. C3 LINES TO BE MARKED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT.
5. TRAFFIC ISLAND KERB TO BE PAINTED WITH WHITE REFLECTORISED ROAD MARKING PAINT.
6. HOLDING RAILS TO BE FRANGIBLE IN ACCORDANCE WITH AS1742.10.
7. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
8. LOCATION AND ALIGNMENT OF FOOTPATH(S) AND SHARED PATH(S) TO BE DETERMINED BASED ON SITE SPECIFIC REQUIREMENTS.

LEGEND

- Centre line
- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Proposed sign and post
- Road light
- Terracotta coloured stamped concrete infill or equivalent
- Bicycle symbol (advisory treatment)



MINIMUM WIDTH PEDESTRIAN REFUGE ISLAND DETAILS
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD
A	CHANGE TO ISLAND SHAPE	23/3/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 1000 2000 3000 4000 5000 1:100

0 2500 5000 7500 10000 12500 1:250

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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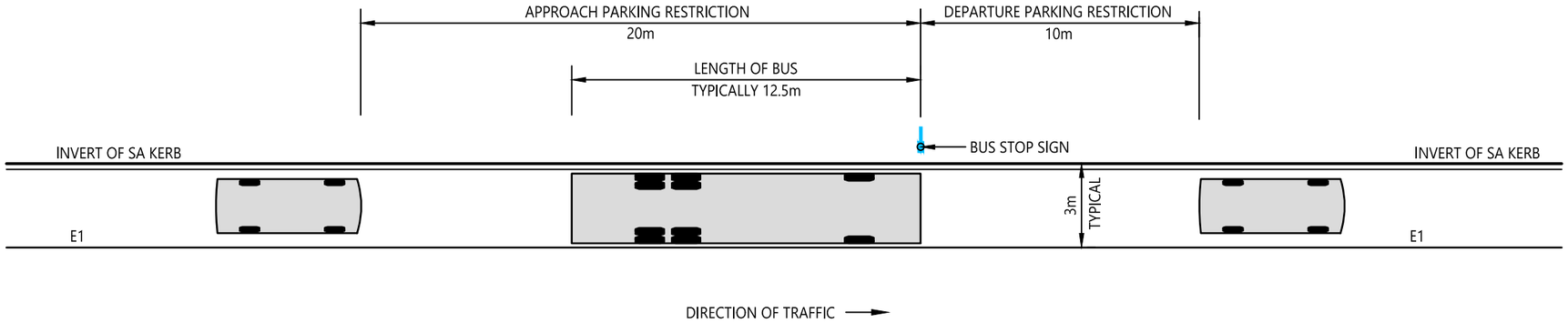
Central Coast Council

STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
PEDESTRIAN REFUGE

DRAWING NUMBER	REV
SD0603	A
SHEET 5 OF 5	A3



KERBSIDE BUS STOP

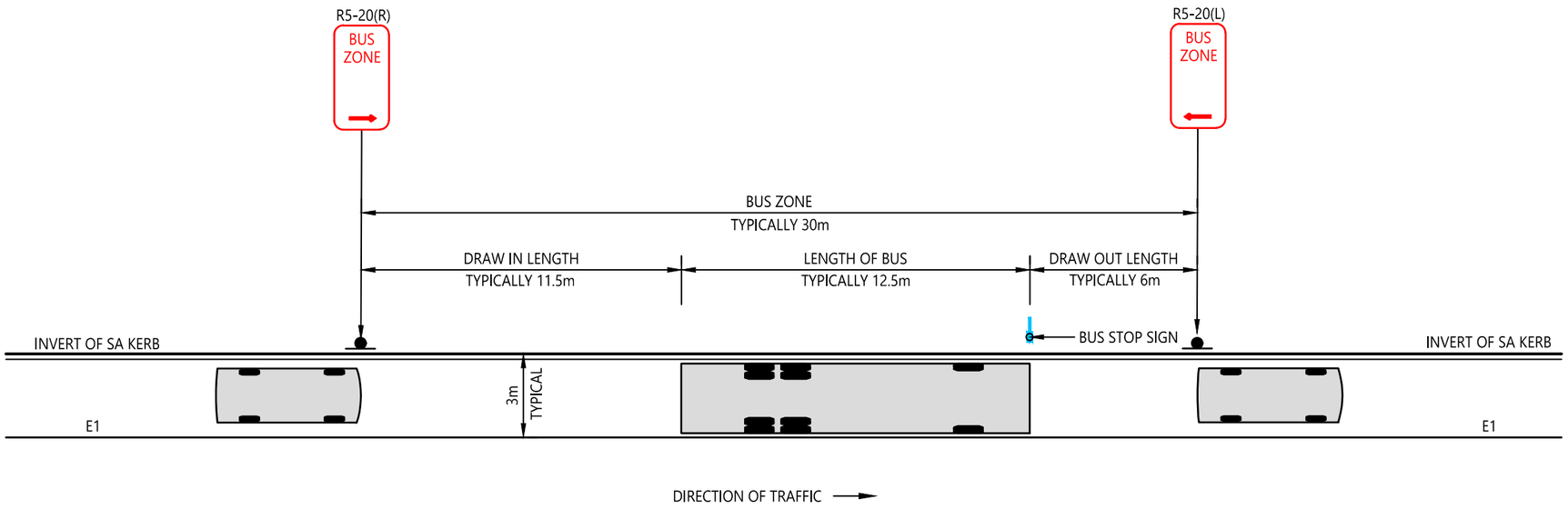
SCALE 1:200

NOTES:

1. BUS STOPS MAY BE LOCATED IN RESIDENTIAL AREAS WHERE INFREQUENT STOPPED BUSES TEMPORARILY BLOCK VEHICLE ACCESS CROSSINGS.
2. BUS STOPS SHOULD BE LOCATED ON THE DEPARTURE SIDE OF SIGNALISED INTERSECTIONS AND PEDESTRIAN CROSSING FACILITIES. BUS STOPS MAY BE LOCATED ON THE APPROACH OR DEPARTURE SIDE OF OTHER INTERSECTIONS. NO STOPPING RESTRICTIONS MAY BE UTILISED FOR REQUIRED DRAW IN/OUT LENGTHS.
3. BUS ZONES SHOULD BE INSTALLED AT BUS STOPS WHERE THE STATUTORY PARKING RESTRICTIONS (20m APPROACH AND 10m DEPARTURE) ARE CONSIDERED INEFFECTIVE AND REQUIRE REINFORCEMENT.
4. BUS ZONE LENGTHS SHOULD BE BASED ON THE FOLLOWING TABLE (ADAPTED FROM NSW STATE TRANSIT BUS INFRASTRUCTURE GUIDE):

BUS STOP DIMENSIONS (m)	STANDARD BUS	LONG RIGID BUS
LENGTH OF BUS	12.5	14.5
DRAW OUT LENGTH (MIN)	6.0	6.5
DRAW IN LENGTH (MIN)	11.5	14.0
BUS ZONE LENGTH (1 BUS)	30.0	35.0

5. BUS ZONE LENGTH FOR MULTIPLE BUS OPERATIONS SHALL BE CALCULATED BY THE ADDITION OF LENGTH OF BUSES + DRAW IN/OUT LENGTHS + REQUIRED GAP BETWEEN BUSES OF 1 TO 6m.



KERBSIDE BUS STOP WITH BUS ZONE

SCALE 1:200

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2000 4000 6000 8000 10000

1:200

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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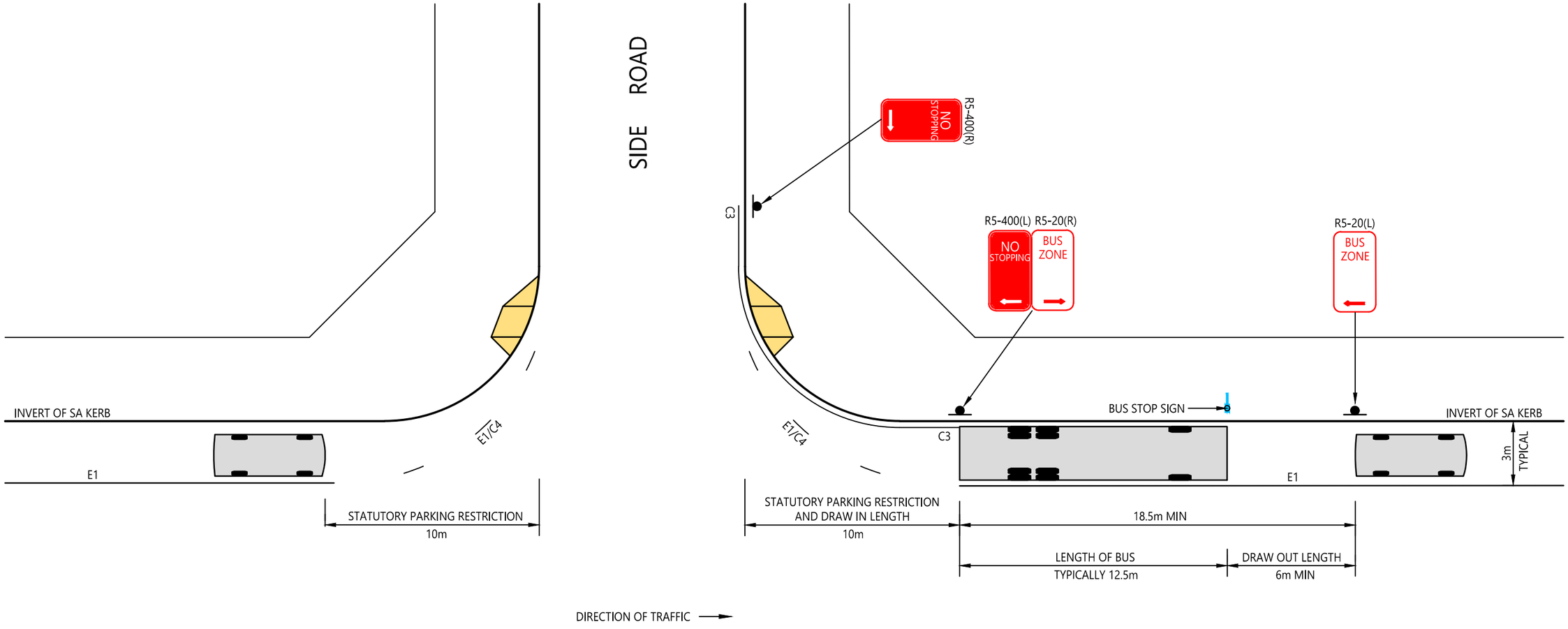
SHEET 1 OF 9	A3

NOTE:

BUS STOP/BUS ZONE MAY BE LOCATED ON APPROACH SIDE OF INTERSECTION EXCEPT WHERE THERE IS A HIGH VOLUME OF LEFT TURNING VEHICLES. DRAW OUT LENGTH MAY BE SUBSTITUTED BY STATUTORY PARKING RESTRICTION.



KERBSIDE BUS STOP WITH BUS ZONE ON DEPARTURE SIDE OF T-INTERSECTION

SCALE 1:200

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2000 4000 6000 8000 10000

1:200

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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DRAWING NUMBER	REV
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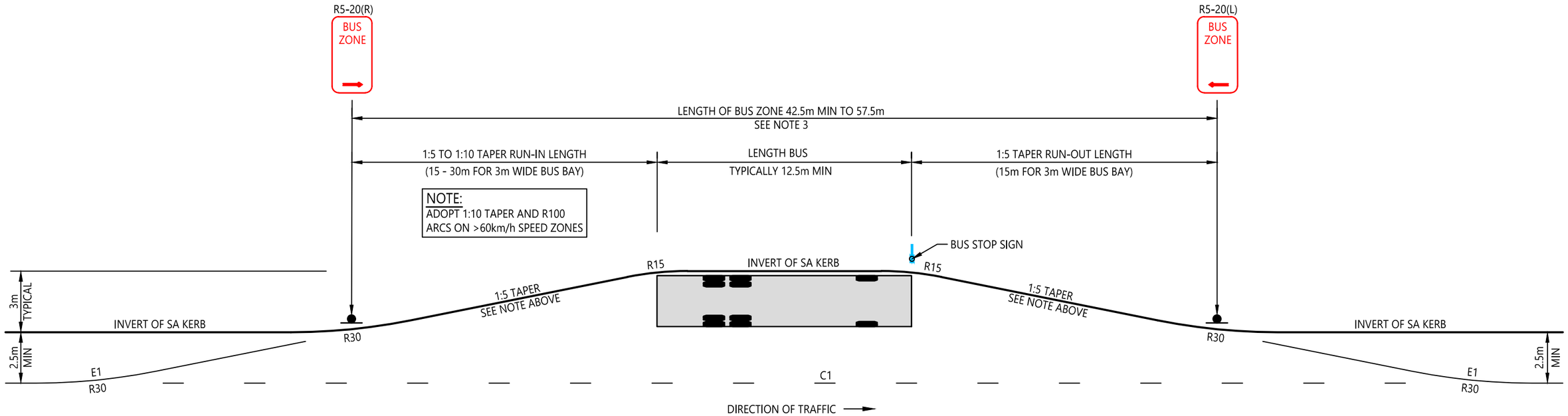
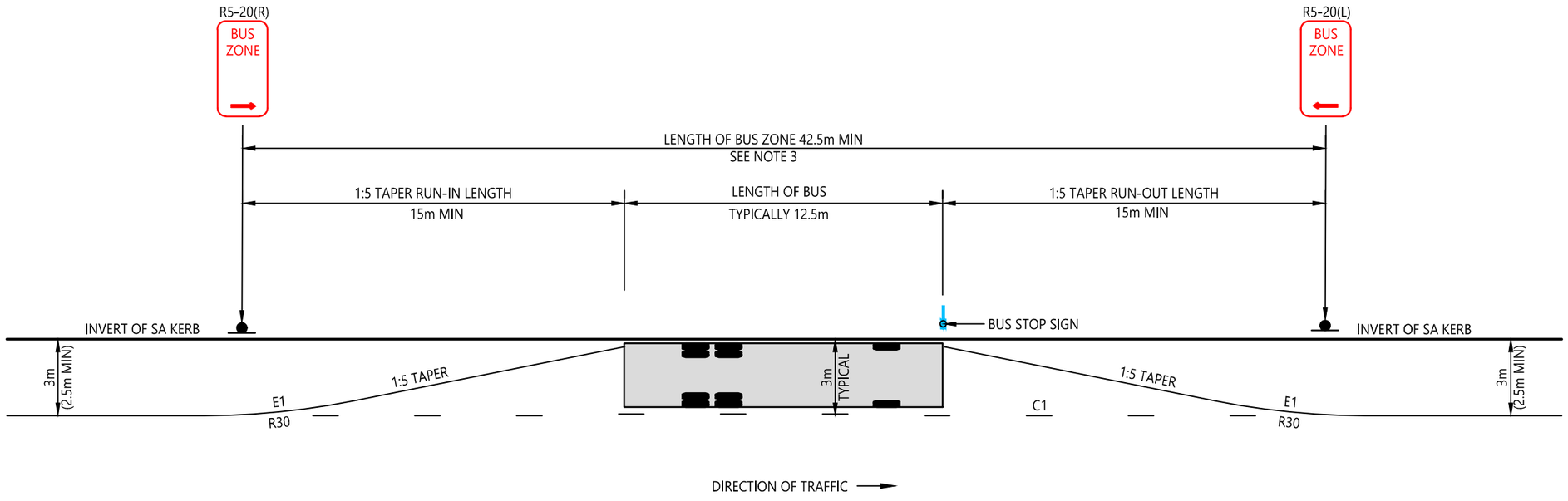


BUS ZONE WITH INDENTED BUS BAY
SCALE 1:200



BUS ZONE WITH KERBSIDE BUS BAY
SCALE 1:200

NOTES:

1. REFER TO BUS STOP INSTALLATION GUIDE FOR LOCAL COUNCILS: PART 1 - DESIGN MANUAL AND TfNSW SUPPLEMENT TO AUSTROADS GUIDE TO ROAD DESIGN PART 3 FOR FURTHER INFORMATION.
2. BUS BAYS IDEALLY SHOULD BE INSTALLED WHERE THE BUS STOP IS ADJACENT TO BUS OR BUS ONLY LANES.
3. THE BUS ZONE WITH INDENTED BUS BAY AND KERBSIDE BUS BAY LAYOUTS ARE INTENDED FOR ROADS WITH RELATIVELY HIGH TRAFFIC VOLUME AND FREQUENT BUS STOPPING MANOEUVRES. OTHERWISE, THE BUS STOP CONFIGURATION ON SHEETS 1 AND 2 SHOULD BE USED.
4. BUS BAY LAYOUTS SHOWN IN THIS STANDARD DRAWING SHALL ONLY BE PROVIDED IN LOW SPEED ENVIRONMENTS (TYPICALLY 50-60km/h SPEED ZONES) ON TWO-LANE, TWO-WAY ROADS.
5. ACCELERATION AND DECELERATION TAPERS SHALL BE INCLUDED WHERE THE POSTED SPEED LIMIT IS >60km/h.
6. BUS BAY LAYOUTS ON CYCLE ROUTES REQUIRE AN ALTERNATIVE LANE WIDTH AND PAVEMENT MARKING CONFIGURATION.

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2000 4000 6000 8000 10000

1:200

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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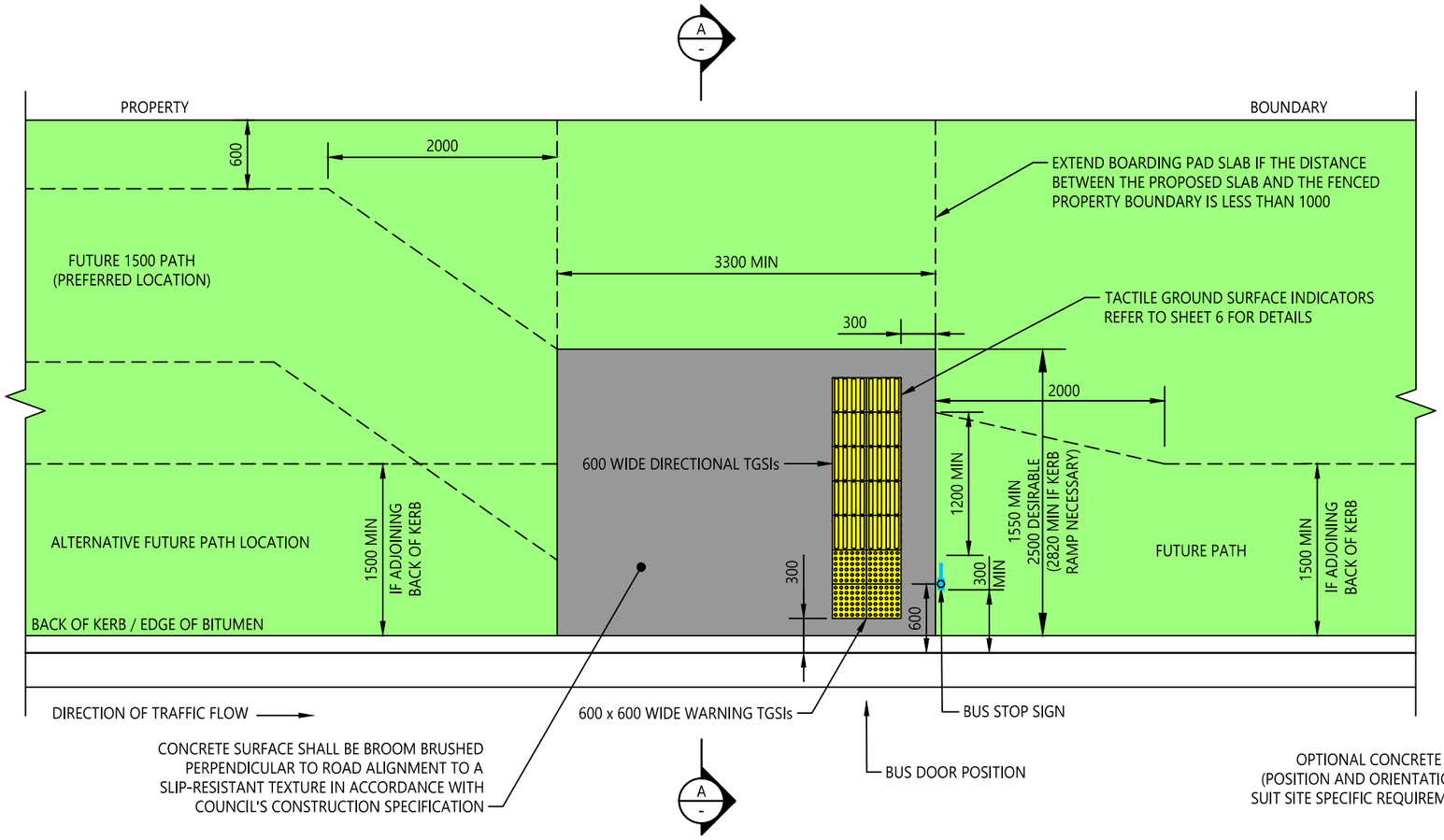
STANDARD DRAWING

DRAWING NUMBER	REV
SD0604	A
SHEET 3 OF 9	A3

GENERAL NOTES:

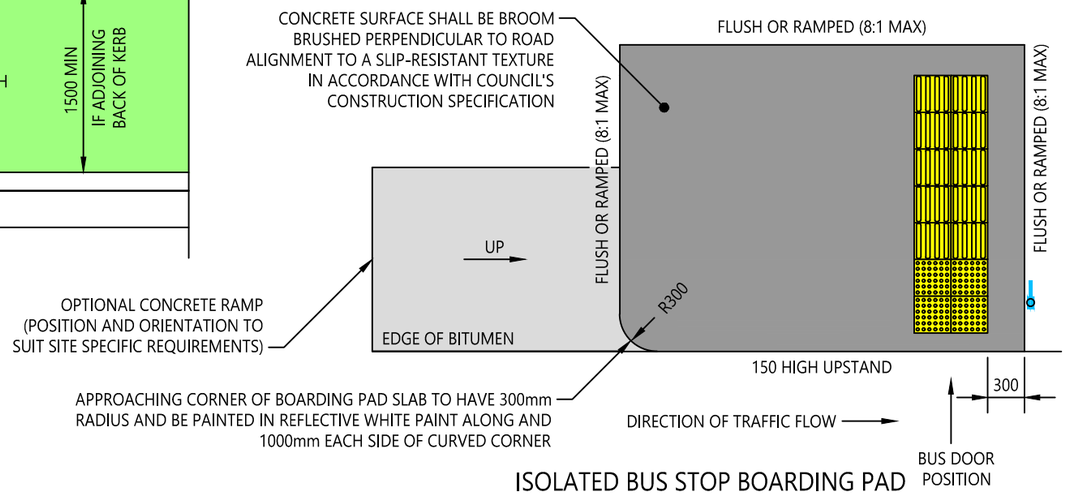
1. THE REQUIREMENTS OUTLINED ON THIS DRAWING APPLY TO THE DESIGN AND CONSTRUCTION OF NEW BUS STOPS WITH OR WITHOUT A SEAT OR SHELTER.
2. WHEN UPGRADING EXISTING BUS STOPS, SOME OF THESE REQUIREMENTS MAY NOT BE ACHIEVABLE, OR ECONOMICALLY JUSTIFIABLE, DUE TO THE CONFIGURATION OF THE EXISTING BUS STOP PADS AND OTHER FEATURES. TO ENSURE THE INTENT OF DISABILITY REQUIREMENTS ARE ACHIEVED, ANY MODIFICATIONS TO THIS DRAWING FOR THE PURPOSE OF UPGRADING EXISTING BUS STOPS MUST BE FIRST APPROVED BY THE ROADS AUTHORITY.



PLAN

ISOLATED BUS STOP BOARDING PAD (WITHOUT PATH)

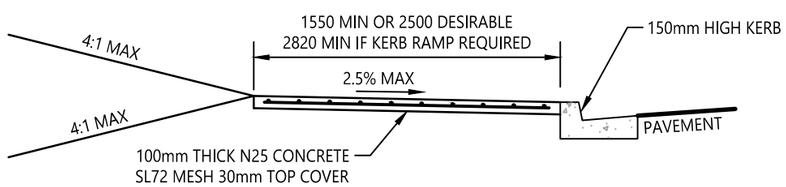
SCALE 1:50



ISOLATED BUS STOP BOARDING PAD (NO KERB AND CHANNEL)

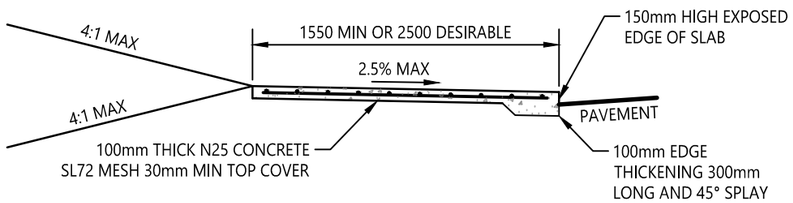
PLAN

SCALE 1:50



SECTION A - SCALE 1:50

WITH KERB AND CHANNEL



SECTION A - SCALE 1:50

WITHOUT KERB AND CHANNEL

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

DRAWN	M GREENWOOD/D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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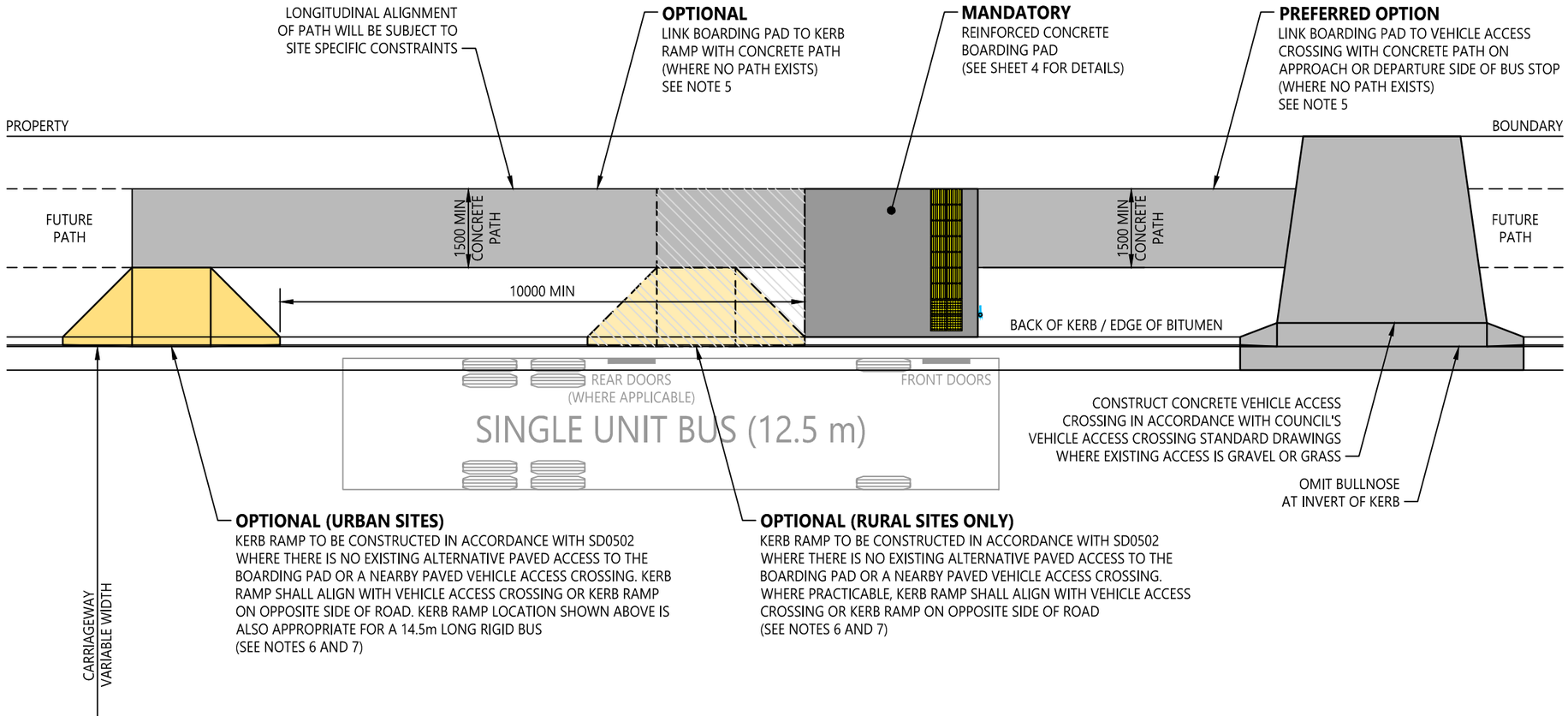
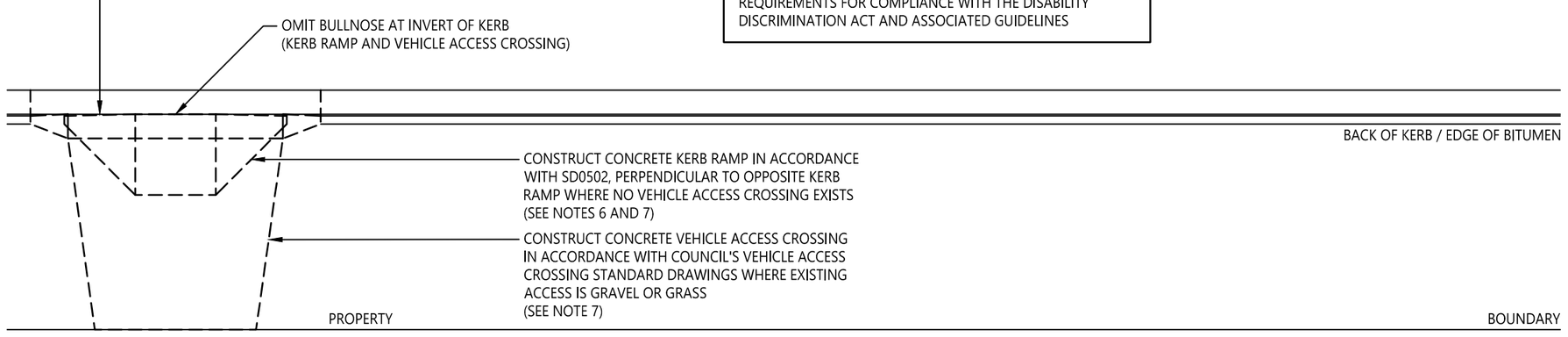


NOTE:

KERB RAMP AND/OR CONNECTING PATH AND/OR MODIFIED VEHICLE ACCESS CROSSING(S) ARE NOT ESSENTIAL REQUIREMENTS FOR COMPLIANCE WITH THE DISABILITY DISCRIMINATION ACT AND ASSOCIATED GUIDELINES



ISOLATED BUS STOP BOARDING PAD WITH OPTIONAL PATH CONNECTIVITY

SCALE 1:100

GENERAL NOTES:

1. THE REQUIREMENTS OUTLINED ON THIS DRAWING APPLY TO THE DESIGN AND CONSTRUCTION OF NEW BUS STOP BOARDING PADS WITH OR WITHOUT A SEAT OR SHELTER.
2. WHEN UPGRADING EXISTING BUS STOPS, SOME OF THESE REQUIREMENTS MAY NOT BE ACHIEVABLE, OR ECONOMICALLY JUSTIFIABLE, DUE TO THE CONFIGURATION OF THE EXISTING BUS STOP PADS AND OTHER FEATURES. TO ENSURE THE INTENT OF DISABILITY REQUIREMENTS ARE ACHIEVED, ANY MODIFICATIONS TO THIS DRAWING FOR THE PURPOSE OF UPGRADING EXISTING BUS STOPS MUST BE FIRST APPROVED BY THE ROADS AUTHORITY.

INSTALLATION NOTES:

1. LONGITUDINAL GRADE OF BOARDING PAD SHALL MATCH THE GRADE OF THE KERB OR EDGE OF BITUMEN AND CROSSFALL SHALL BE 2.5% MAXIMUM.
2. BUS STOP BOARDING PAD SHALL BE POSITIONED CLEAR OF UTILITY COVERS.
3. IF THE LOCATION IS LIKELY TO HAVE A BUS STOP SHELTER AT A FUTURE STAGE, THE BOARDING PAD SHALL BE CONSTRUCTED AS SHOWN ON SD0605.
4. IF NO PATH ADJOINS THE BOARDING PAD AND THERE IS AN EXISTING PATH WITHIN 50m, CONSTRUCT PATH TO LINK THE BOARDING PAD TO THE EXISTING PATH.
5. IF NO PATH ADJOINS THE BOARDING PAD AND THERE IS NO EXISTING PATH WITHIN 50m, A PATH MAY BE CONSTRUCTED LINKING THE BOARDING PAD TO A NEARBY PAVED VEHICLE ACCESS CROSSING.
6. IF A PATH EXISTS ON THE OPPOSITE SIDE OF THE ROAD, PROVIDE A PAIR OF KERB RAMPS UPSTREAM OF THE BOARDING PAD (AS SHOWN ON THIS DRAWING) ALIGNED WITH EACH OTHER ACROSS THE ROAD PAVEMENT AND CONNECT THE EXISTING PATH TO THE KERB RAMP.
7. KERB RAMPS SHALL ONLY BE INSTALLED OPPOSITE A VEHICLE ACCESS CROSSING OR ANOTHER KERB RAMP.
8. WHEN THE EXISTING PATH DOES NOT ADJOIN THE BACK OF KERB, THE PATH SHALL BE ALTERED TO LINK TO THE BOARDING PAD. PATH CHANGE IN DIRECTION SHALL BE DISABILITY DISCRIMINATION ACT COMPLIANT AND IN ACCORDANCE WITH AS 1428.1.
9. TACTILE GROUND SURFACE INDICATORS (TGSIs) SHALL HAVE A LUMINANCE CONTRAST TO THE SURROUNDING SURFACE. REFER TO AS/NZS 1428.4.1 FOR REQUIREMENTS.
10. WHEN THE BOARDING PAD IS AMENDED TO INCORPORATE A BUS STOP SHELTER, THE NEW SLAB SHALL BE DOWEL JOINTED TO THE EXISTING SLAB, PROVIDED THAT THE SLAB IS 200mm MINIMUM THICK TO ACCOMMODATE THE MOUNTING BOLT EMBEDMENT DEPTH OF 150mm.

KERB RAMP NOTES:

1. KERB RAMP SHALL BE 8:1 MAXIMUM SLOPE.
2. WIDEN KERB RAMP TO 2500mm FOR SHARED PATH RAMPS; AND TO 3600mm AT PEDESTRIAN (ZEBRA) CROSSINGS.
3. KERB RAMPS SHALL BE 125mm THICK N32 COLOURED CONCRETE REINFORCED WITH SL72 MESH 30mm MIN TOP COVER. REFER TO KERB RAMP STANDARD DRAWING SD0502 FOR DETAILS.
4. PROVIDE CONTROL JOINTS IN KERB EACH SIDE OF THE KERB RAMP AND OTHERWISE AT 3m INTERVALS.

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 1000 2000 3000 4000 5000

1:100

DRAWN	MG/DM/TW
CHECKED	M BAMBER
DATE	28/4/20

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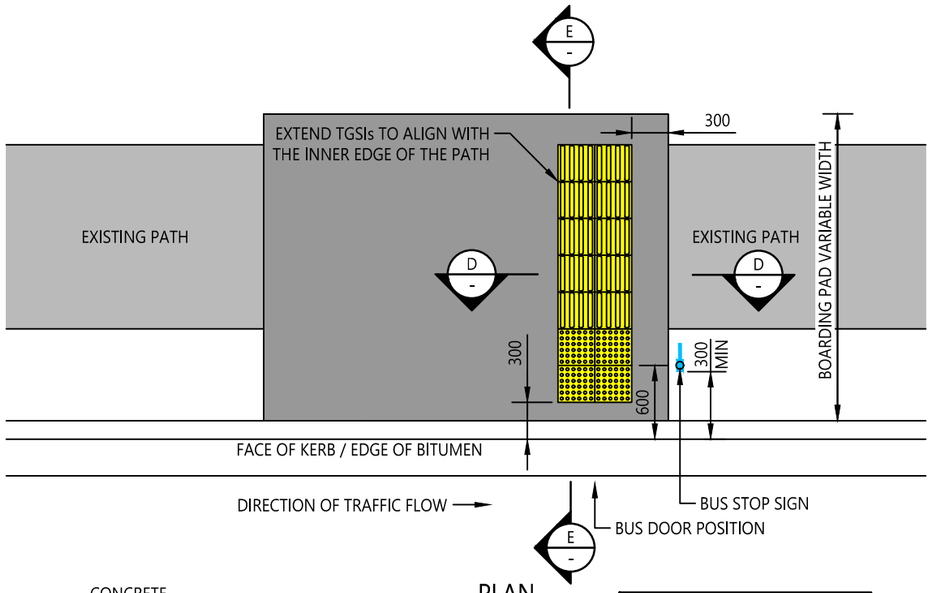
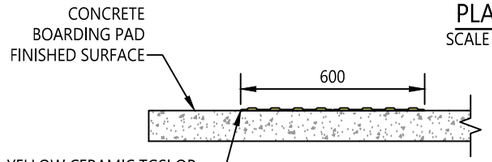
DRAWING NUMBER	REV
SD0604	A
SHEET 5 OF 9	A3



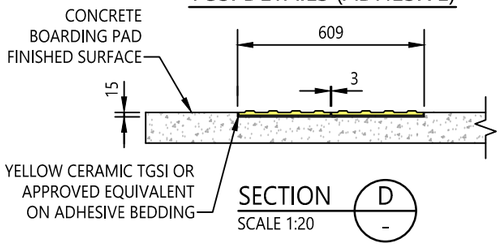
PLAN
SCALE 1:50



SECTION D
SCALE 1:20

(TWO TILES)

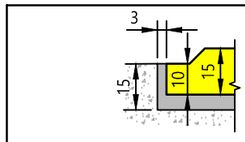
TGSI DETAILS (ADHESIVE)



SECTION D
SCALE 1:20

(TWO TILES)

TGSI DETAILS (RECESSED)



TYPICAL RECESS EDGE DETAIL
SCALE 1:2

TYPICAL EDGE DETAIL
SCALE 1:2

TACTILE GROUND SURFACE INDICATOR (TGSI) SPECIFICATION
BUS STOP BOARDING PADS

LOCATION	MATERIAL	COLOUR	LUMINANCE CONTRAST[2]	EXAMPLE PHOTO
URBAN AND RURAL NEW CONCRETE SLABS OR RETROFITTING TO EXISTING CONCRETE SLABS	INTEGRATED FIBRE-REINFORCED POLYMER SHEETS ON ADHESIVE MATERIAL	YELLOW	≥ 30%	
URBAN AND RURAL NEW CONCRETE SLABS OR RETROFITTING TO EXISTING CONCRETE SLABS	INTEGRATED CERAMIC/PORCELAIN TILES CAST IN PLACE ON ADHESIVE MATERIAL	YELLOW	≥ 30%	
CENTRAL BUSINESS DISTRICT OR COMMERCIAL AREAS[1]	DISCRETE OR INTEGRATED POLYURETHANE OR STAINLESS STEEL[2]	BLACK/SILVER	≥ 45%	
CENTRAL BUSINESS DISTRICTS OR COMMERCIAL AREAS[1]	COMPOSITE DISCRETE OR INTEGRATED STAINLESS STEEL WITH CARBORUNDUM OR POLYURETHANE INFILL[2]	SILVER AND BLACK	RAISED SURFACE ≥ 60% FOR ϕ24-25mm	

TABLE NOTES:

1. YELLOW IS THE STANDARD COLOUR FOR TGSIs FOR USE ACROSS THE CENTRAL COAST LGA. ALTERNATIVE TGSI COLOURS AND MATERIALS MAY BE USED IN CBD OR COMMERCIAL AREAS WHERE ARCHITECTURAL REQUIREMENTS MIGHT DICTATE THEIR USE.
2. TGSI LUMINANCE-CONTRAST TO THE BASE SURFACE SHALL BE IN ACCORDANCE WITH AS/NZS 1428.4.1. IF USED IN CBD AREAS, STAINLESS STEEL TGSI PLATES SHALL HAVE A LUMINANCE-CONTRAST OF ≥ 30%.
3. ALL TGSIs SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.

LEGEND

WARNING TACTILE GROUND SURFACE INDICATOR (TGSI) 300 x 300mm

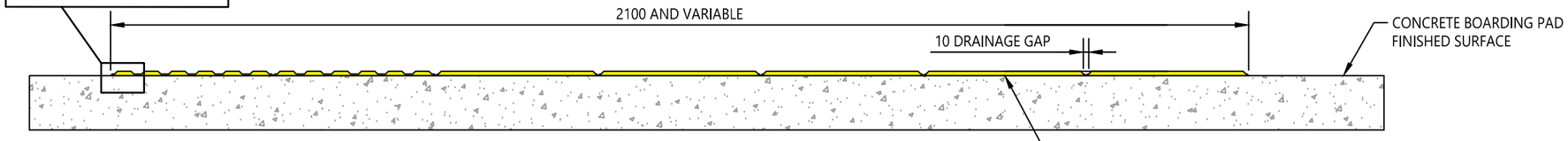
DIRECTIONAL TACTILE GROUND SURFACE INDICATOR (TGSI) 300 x 300mm

NOTES:

1. TACTILE GROUND SURFACE INDICATORS (TGSIs) SHALL BE SELECTED BASED ON THE TGSI SPECIFICATION TABLE ON THIS SHEET.
2. TGSIs SHALL BE SLIP-RESISTANT AND COMPLY WITH TESTING REQUIREMENTS SET OUT IN AS 4586.
3. CERAMIC TGSIs SHALL BE LAID LEVEL WITH THE SURROUNDING SURFACE TO ENSURE TACTILE STUDS STAND PROUD.
4. PROVIDE 15mm RECESS IN CONCRETE 609mm WIDE BY A VARIABLE LENGTH AS CALCULATED USING THE BELOW FORMULA:

   TGSI RECESS LENGTH = (3 + (N x 303))mm

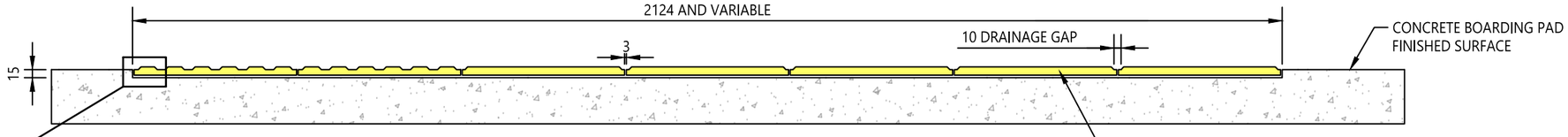
   WHERE N = NUMBER OF TGSIs IN A SINGLE ROW.
5. TGSIs SHALL BE LAID IN THE RECESS ON AN ADHESIVE APPROVED BY THE TGSI MANUFACTURER APPLIED WITH A SUITABLE SQUARE NOTCHED TROWEL.
6. PEDESTRIAN TRAFFIC SHALL BE AVOIDED FOR A MINIMUM OF 24 HOURS AFTER INSTALLATION.



SECTION E
SCALE 1:10

(SEVEN TILES)

TACTILE GROUND SURFACE INDICATOR (TGSI) DETAILS (ADHESIVE)



NOTE:
VARIABLE LENGTH TO SUIT PATH WIDTH AND SITE CONSTRAINTS: ALLOW ADDITIONAL LENGTH OF 303mm RECESS PER TILE.

SECTION E
SCALE 1:10

(SEVEN TILES)

TACTILE GROUND SURFACE INDICATOR (TGSI) DETAILS (RECESSED)

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500 1:10

0 500 1000 1500 2000 2500 1:50

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	MG/DM/TW
CHECKED	M BAMBER
DATE	28/4/20

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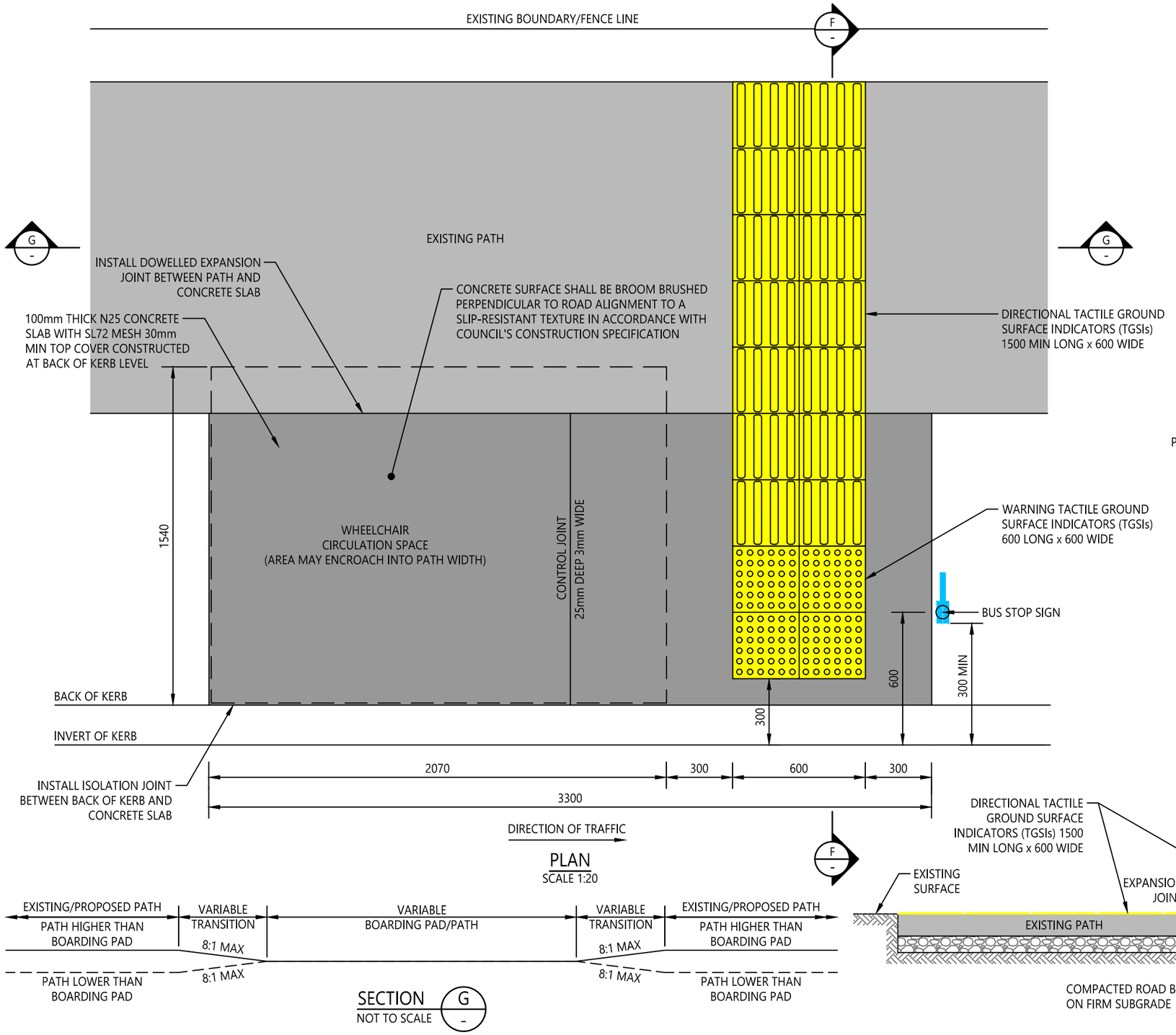
BUS STOP

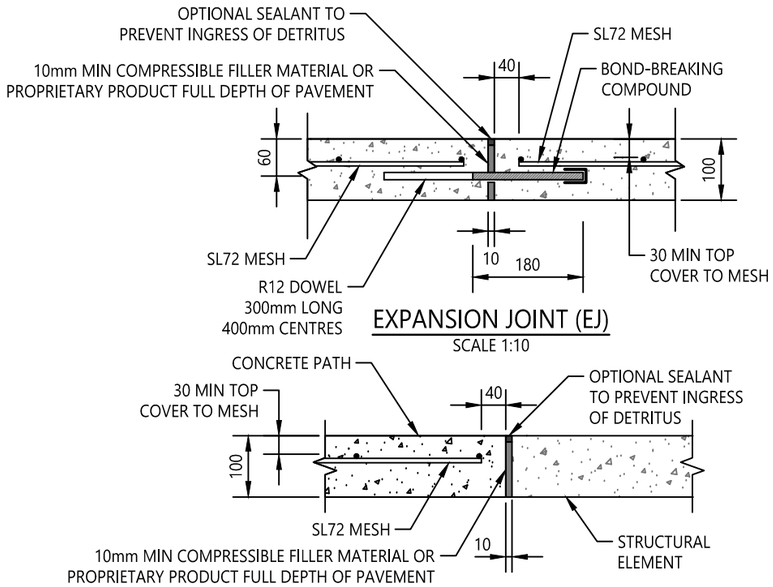
STANDARD DRAWING

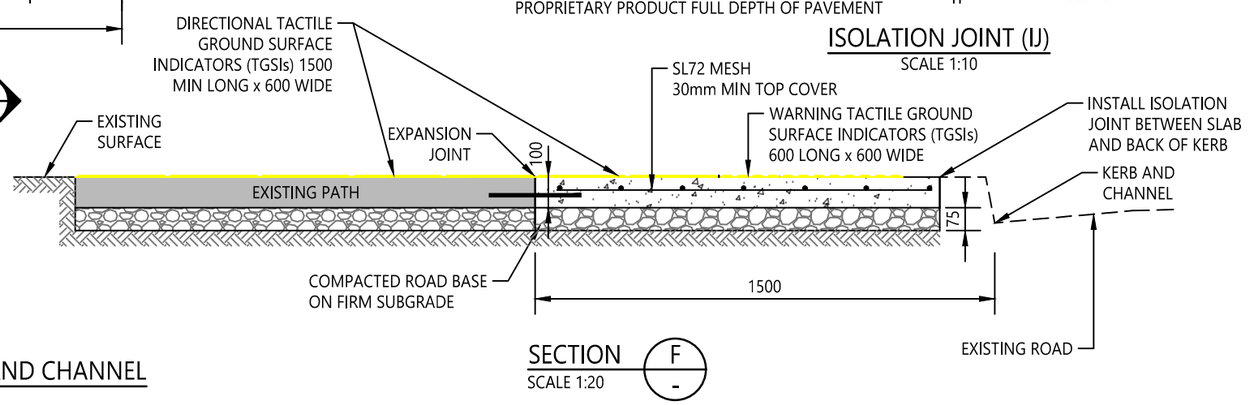
DRAWING NUMBER	REV
SD0604	A
SHEET 6 OF 9	A3



NOTES:

1. THIS CONFIGURATION IS DISABILITY DISCRIMINATION ACT (DDA) COMPLIANT ONLY IF THE ROAD HAS KERB AND CHANNEL OR A RAISED SLAB INSTALLED ADJACENT TO THE BUS STOP AS A RAISED PLATFORM FOR WHEELCHAIR ACCESS.
2. REFER TO SHEET 8 FOR DDA COMPLIANT BUS STOP WITH OPTIONAL CONFIGURATION FOR ROADS WITHOUT KERB AND CHANNEL.
3. BUS STOP BOARDING PAD SHALL BE POSITIONED CLEAR OF UTILITY COVERS.
4. SIZE AND ORIENTATION OF CONCRETE SLAB MAY BE VARIED TO SUIT SITE CONSTRAINTS AS LONG AS THE WHEELCHAIR CIRCULATION SPACE IS PROVIDED.
5. CROSSFALL OF CONCRETE SLAB SHALL BE 2.5% MAXIMUM.
6. CONCRETE SLAB TO BE BROOM FINISHED PERPENDICULAR TO ROAD ALIGNMENT WITH SMOOTH TROWELLED EDGES.
7. REFER TO SHEET 6 FOR DETAILS ON THE TACTILE GROUND SURFACE INDICATORS.
8. WHERE RETROFITTING BOARDING PADS AT EXISTING BUS STOPS, ANY EXISTING PATHS, OR FOOTWAY AREAS, MAY NEED RE-GRADING TO ACHIEVE THE BOARDING PAD 2.5% MAXIMUM CROSSFALL. LONGITUDINAL PATH/FOOTWAY GRADIENTS CONNECTING TO THE BOARDING PAD SHALL NOT EXCEED 8:1 (12.5%). REFER TO SECTION G ON THIS SHEET.





BUS STOP BOARDING PAD DETAILS FOR ROAD WITH CONCRETE PATH AND KERB AND CHANNEL

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000
1:20
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD/D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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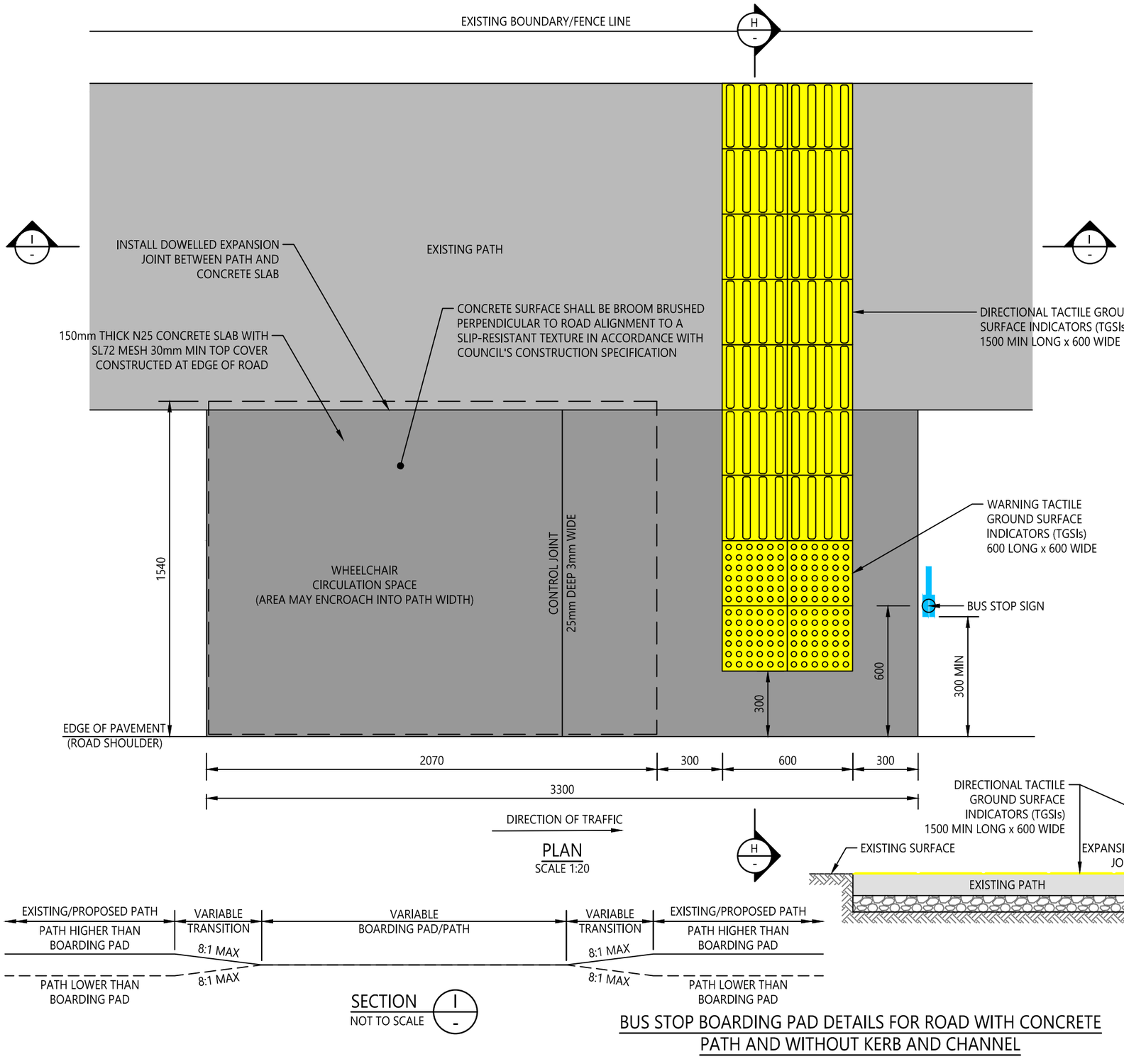
DRAWING NUMBER	REV
SD0604	A
SHEET 7 OF 9	A3

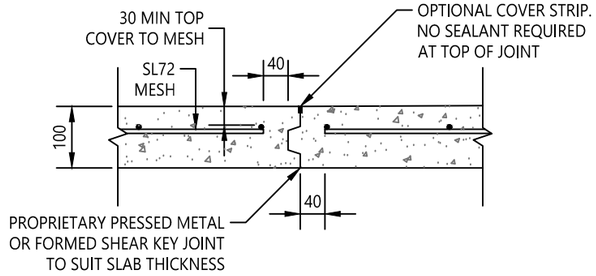


PLAN
SCALE 1:20

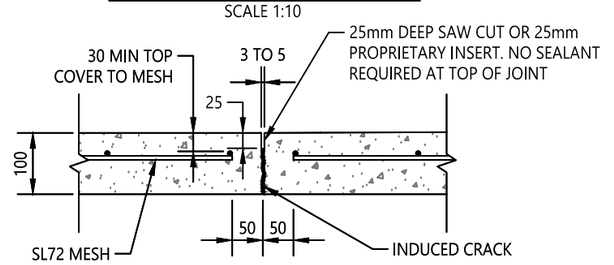
SECTION I
NOT TO SCALE

NOTES:

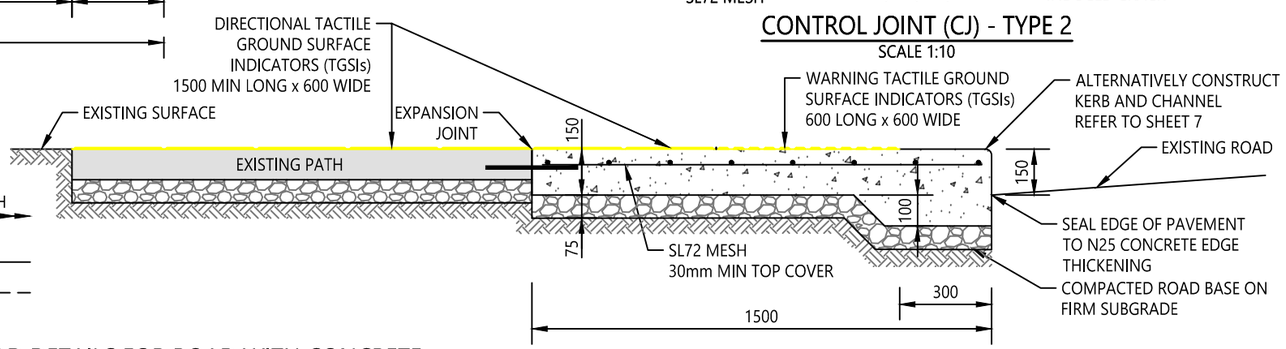
1. THIS CONFIGURATION IS DISABILITY DISCRIMINATION ACT (DDA) COMPLIANT ONLY IF THE ROAD HAS KERB AND CHANNEL OR A RAISED SLAB INSTALLED ADJACENT TO THE BUS STOP AS A RAISED PLATFORM FOR WHEELCHAIR ACCESS.
2. REFER TO SHEET 7 FOR DDA COMPLIANT BUS STOP WITH OPTIONAL CONFIGURATION FOR ROADS WITH KERB AND CHANNEL.
3. BUS STOP BOARDING PAD SHALL BE POSITIONED CLEAR OF UTILITY COVERS.
4. SIZE AND ORIENTATION OF CONCRETE SLAB MAY BE VARIED TO SUIT SITE CONSTRAINTS AS LONG AS THE WHEELCHAIR CIRCULATION SPACE IS PROVIDED.
5. CROSSFALL OF CONCRETE SLAB SHALL BE 2.5% MAXIMUM.
6. CONCRETE SLAB TO BE BROOM FINISHED PERPENDICULAR TO ROAD ALIGNMENT WITH SMOOTH TROWELLED EDGES.
7. REFER TO SHEET 6 FOR DETAILS ON THE TACTILE GROUND SURFACE INDICATORS.
8. WHERE RETROFITTING BOARDING PADS AT EXISTING BUS STOPS, ANY EXISTING PATHS, OR FOOTWAY AREAS, MAY NEED RE-GRADING TO ACHIEVE THE BOARDING PAD 2.5% MAXIMUM CROSSFALL. LONGITUDINAL PATH/FOOTWAY GRADIENTS CONNECTING TO THE BOARDING PAD SHALL NOT EXCEED 8:1 (12.5%). REFER TO SECTION I ON THIS SHEET.



CONTROL JOINT (CJ) - TYPE 1
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2
SCALE 1:10



SECTION H
SCALE 1:20

BUS STOP BOARDING PAD DETAILS FOR ROAD WITH CONCRETE PATH AND WITHOUT KERB AND CHANNEL

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000
1:20
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD/D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

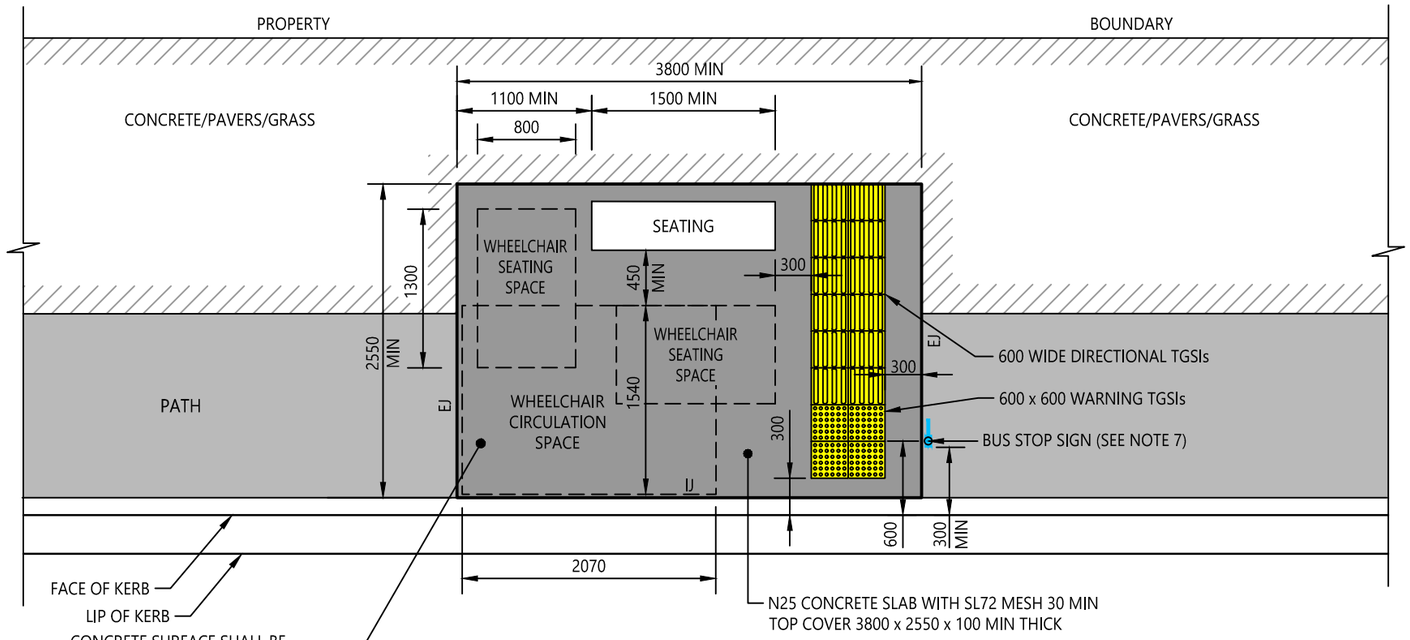
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
BUS STOP

STANDARD DRAWING

DRAWING NUMBER	REV
SD0604	A
SHEET 8 OF 9	A3

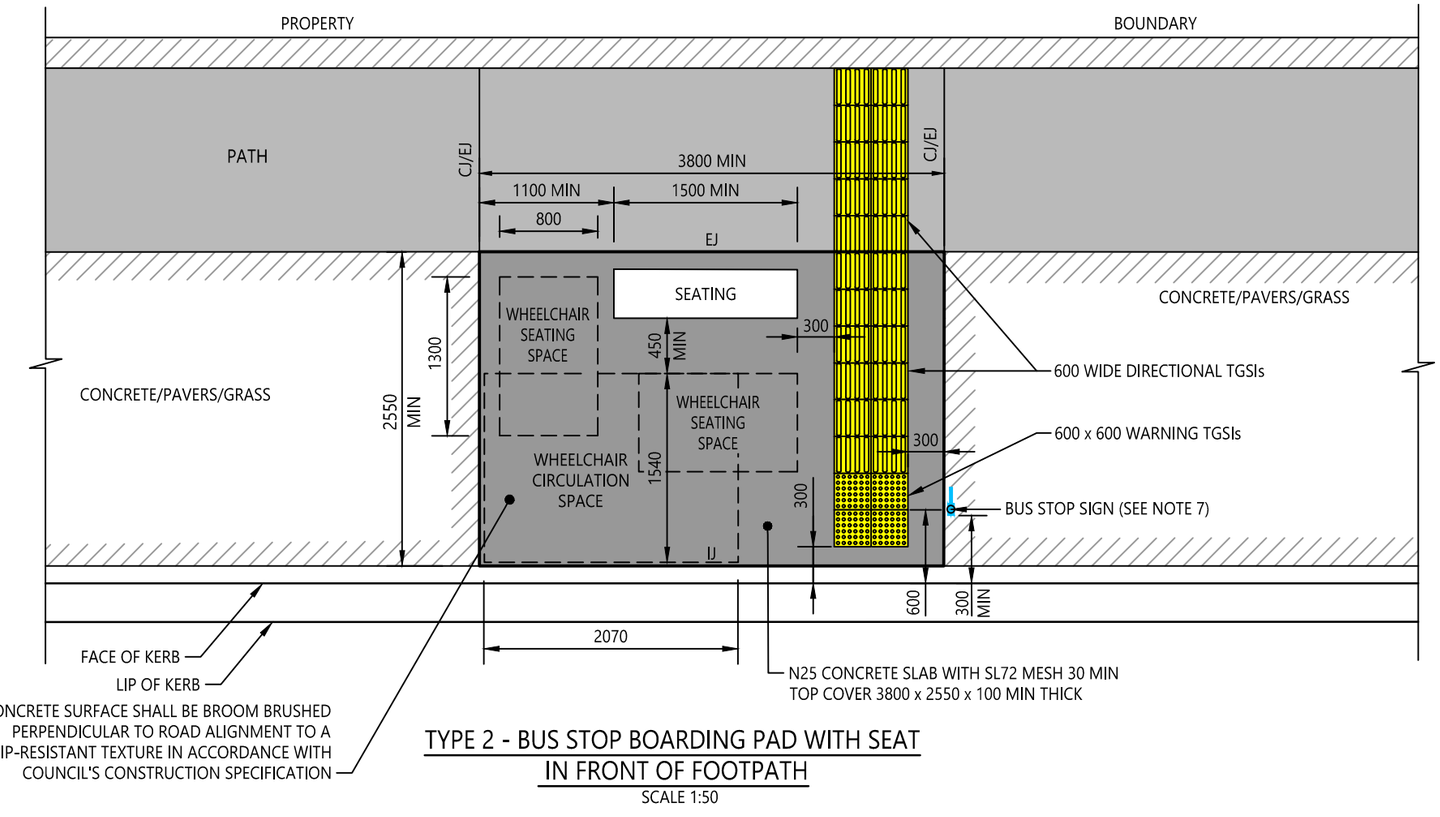


TYPE 1 - BUS STOP BOARDING PAD WITH SEAT SET BACK FROM FOOTPATH

SCALE 1:50

NOTES

1. THIS DRAWING IS BASED ON FIGURE D1 IN AS/NZS 1428.4.1:2009.
2. BUS STOP BOARDING PAD SHALL BE POSITIONED CLEAR OF UTILITY COVERS.
3. WHERE NO KERB AND CHANNEL EXISTS, THE SLAB SHALL BE 150mm ABOVE THE ADJOINING ROAD SURFACE.
4. THE SLAB MUST CONNECT TO THE ADJACENT PATH, FOOTWAY OR VERGE AREA AT A GRADIENT NO STEEPER THAN 14:1. NO STEPS ARE PERMITTED.
5. CONCRETE STRENGTH GRADE SHALL BE N25 WITH SL72 MESH 30mm MINIMUM TOP COVER.
6. SEAT MAY BE INSTALLED IN ALTERNATIVE LOCATIONS, SUBJECT TO THE APPROVAL OF COUNCIL'S REPRESENTATIVE AND THE REQUIREMENTS OF AS/NZS 1428.4.1.
7. BUS STOP SIGN POLE (B-POLE) FOR TfNSW UTILISED BUS STOPS SHALL BE DESIGNED AND INSTALLED TO TfNSW STANDARD T BU WS 90002 ST.
8. REFER TO SD0604 SHEETS 4 TO 8 FOR BUS STOP BOARDING PAD SLAB AND TGSI DETAILS.
9. PATH JOINTS TO BE CONSTRUCTED IN ACCORDANCE WITH SD0601.



TYPE 2 - BUS STOP BOARDING PAD WITH SEAT IN FRONT OF FOOTPATH

SCALE 1:50

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

DRAWN	D MILLER / T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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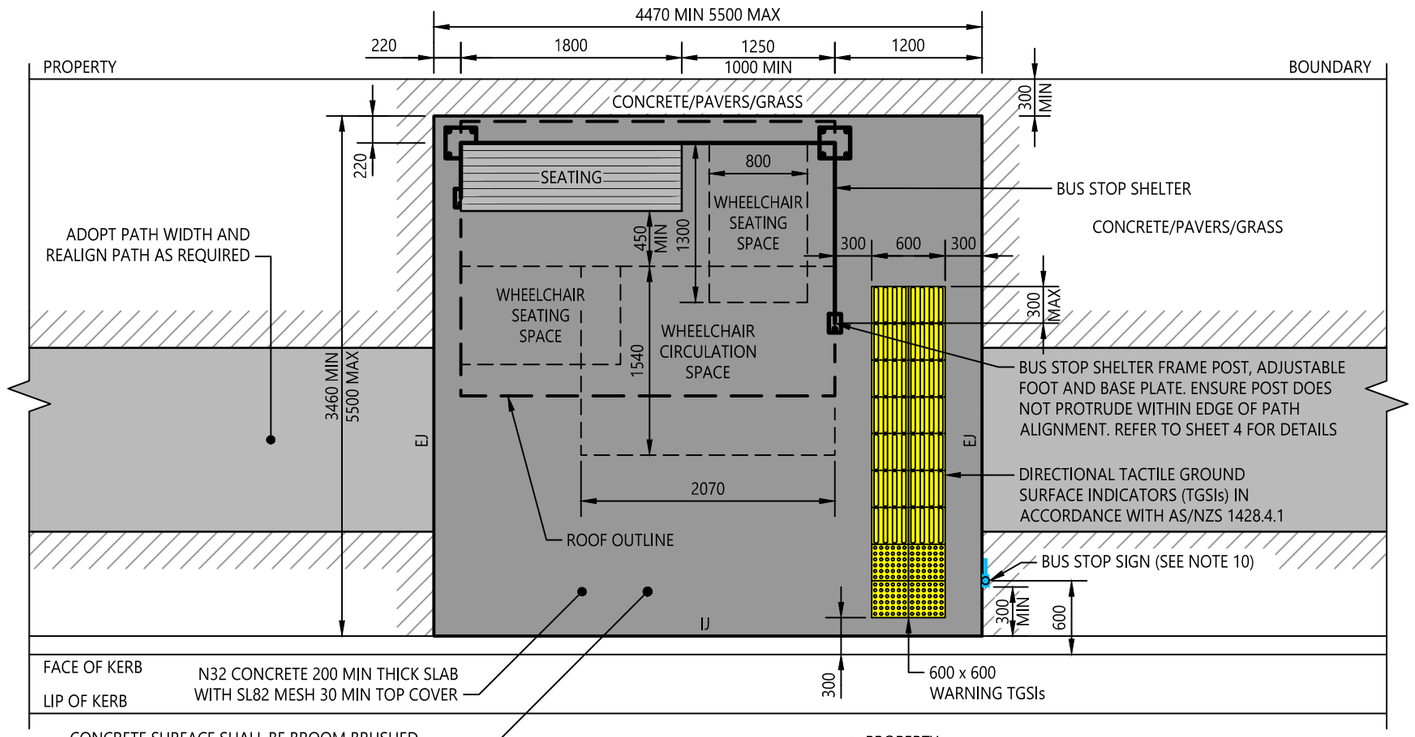
Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
BUS STOP

STANDARD DRAWING

DRAWING NUMBER	REV
SD0604	A
SHEET 9 OF 9	A3

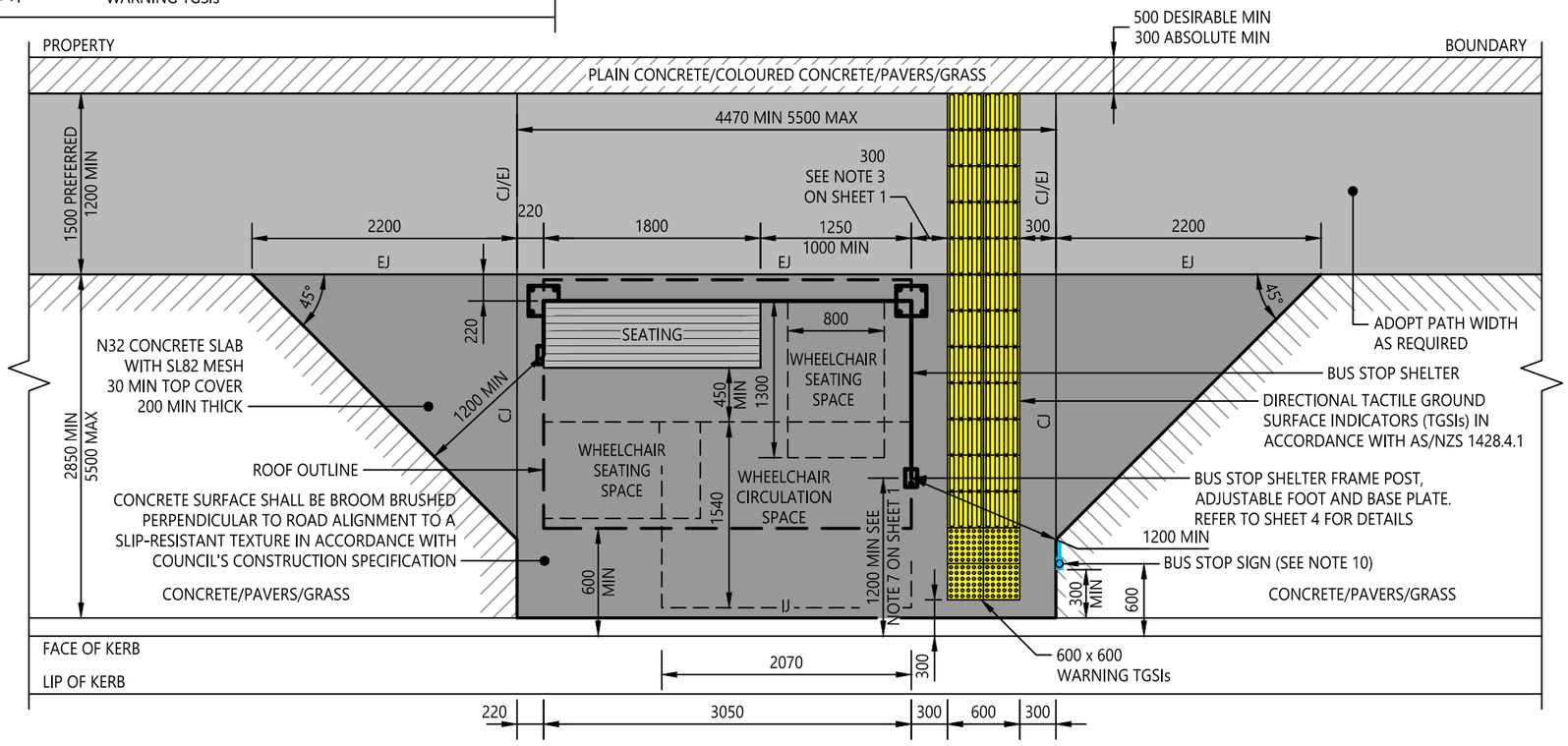


TYPE 1 - BUS STOP WITH SHELTER SET BACK FROM PATH

SCALE 1:50

NOTES:

1. THIS DRAWING IS BASED ON CLAUDE GROUP'S FORBES SHELTER DETAILS AND APPENDIX D OF AS/NZS 1428.4.1:2009.
2. VERTICAL CLEARANCE FROM PATH TO UNDERSIDE OF BUS STOP SHELTER ROOF SHALL BE 2.4m (PREFERRED) OR 2m (ABSOLUTE MINIMUM).
3. WHERE 2.2m SPLAY IS NOT PROVIDED ADJACENT TO BOARDING PAD AS SHOWN BELOW, THIS DIMENSION SHALL BE INCREASED FROM 300mm TO 1200mm, TO PROVIDE A TGSI-FREE ACCESS PATH FOR WHEELCHAIR USERS.
4. BUS STOP BOARDING PAD SHALL BE POSITIONED CLEAR OF UTILITY COVERS.
5. WHERE NO KERB AND CHANNEL EXISTS, THE SLAB SHALL BE 150mm ABOVE THE ADJOINING ROAD SURFACE.
6. THE SLAB MUST CONNECT TO THE ADJACENT PATH, FOOTWAY OR VERGE AREA AT A GRADIENT NO STEEPER THAN 14:1. NO STEPS ARE PERMITTED.
7. SHELTER MAY BE INSTALLED NEAR KERB (600mm MINIMUM OFFSET FROM INVERT OF KERB TO ROOF) IN COMMERCIAL AREAS WHERE AWNINGS ARE LOCATED AND SHALL BE CONFIGURED IN ACCORDANCE WITH AS/NZS 1428.4.1 AND DDA/DSAPT REQUIREMENTS.
8. CONCRETE STRENGTH GRADE SHALL BE N32 WITH STEEL REINFORCEMENT AS SHOWN ON SHEET 2.
9. OPTIONAL ADVERTISING PANEL MAY BE USED, SUBJECT TO THE APPROVAL OF COUNCIL'S REPRESENTATIVE.
10. BUS STOP SIGN POLE (B-POLE) FOR TfNSW UTILISED BUS STOPS SHALL BE DESIGNED AND INSTALLED TO TfNSW STANDARD T BU WS 90002 ST.
11. BOARDING PAD CONTROL JOINTS AND EXPANSION JOINTS SHALL BE CONSTRUCTED AS REQUIRED IN ACCORDANCE WITH COUNCIL'S CIVIL WORKS SPECIFICATION - CONSTRUCTION SPECIFICATION.
12. CONCRETE PATHS SHALL BE CONSTRUCTED IN ACCORDANCE WITH WITH SD0601.



TYPE 2 - BUS STOP WITH SHELTER IN FRONT OF PATH

SCALE 1:50

REV	AMENDMENT	DATE	DRAWN	APRVD
A	SHELTER AND STRUCTURAL DETAILS	22/1/20	TW	MB

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

DRAWN	D MILLER / T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

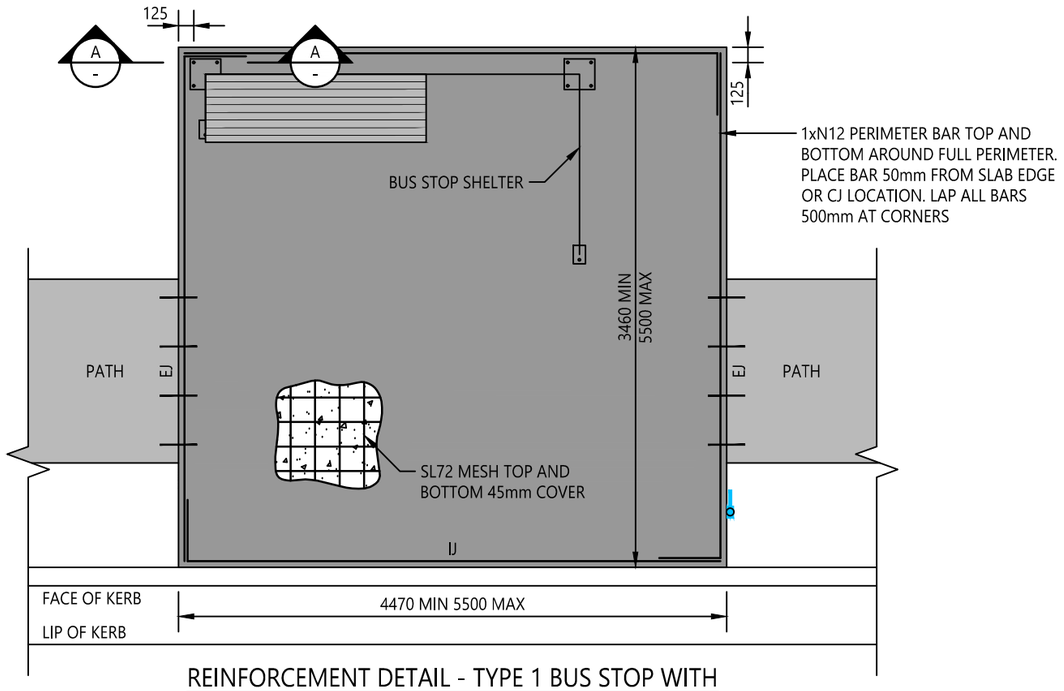
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

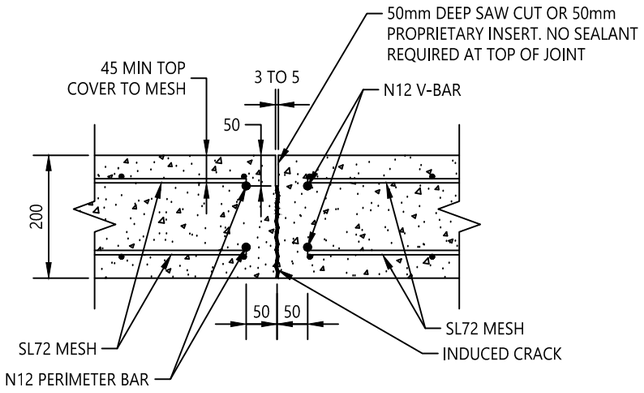
PEDESTRIAN AND CYCLIST SERIES
BUS STOP SHELTER

DRAWING NUMBER	REV
SD0605	A
SHEET 1 OF 5	A3



REINFORCEMENT DETAIL - TYPE 1 BUS STOP WITH SHELTER SET BACK FROM PATH

SCALE 1:50

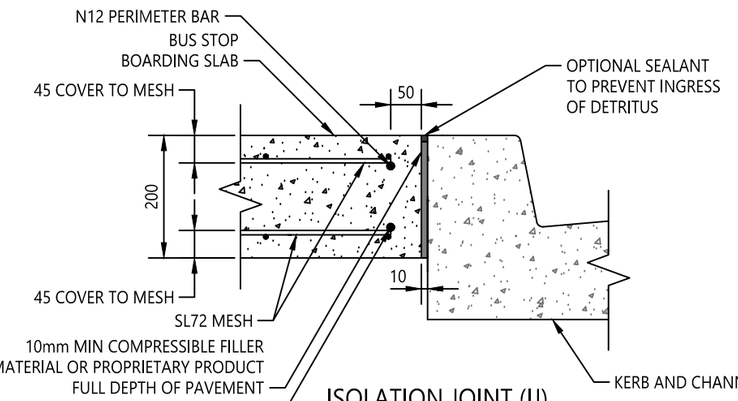


CONTROL JOINT (CJ)

SCALE 1:10

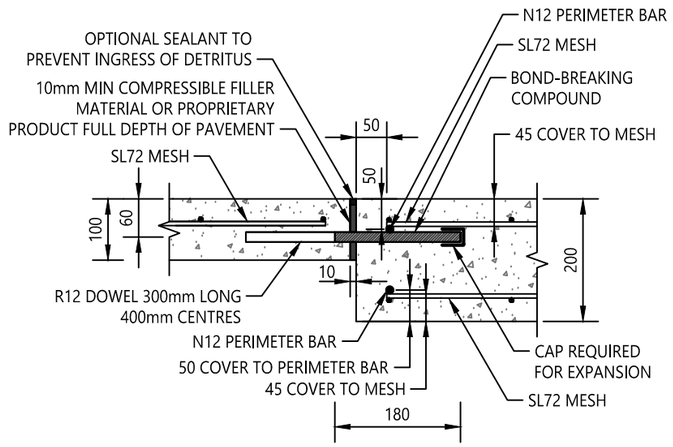
NOTES:

1. THE BUS SHELTER SLAB AND ANCHOR FIXINGS HAVE BEEN PREPARED BY NORTHROP CONSULTING ENGINEERING SERVICES BASED ON CENTRAL COAST COUNCIL STANDARD DRAWING SD0605. IF SD0605 CHANGES FOR ANY REASON, FURTHER ADVICE SHALL BE SOUGHT FROM A SUITABLY QUALIFIED STRUCTURAL ENGINEER.
2. ALL SLABS (UNLESS OTHERWISE NOTED) TO BE 200mm THICK, REINFORCED WITH SL72 MESH TOP AND BOTTOM. ENSURE FULL AND CONTINUOUS BEARING ON 100kPa (ALLOWABLE) FIRM NATURAL GROUND OR COMPACTED FILL WITH A COMPACTION OF 100% STANDARD DRY DENSITY.
3. THE CONCRETE SLAB AND ANCHOR FIXINGS ARE DESIGNED BASED ON SITE CONDITIONS DETAILED IN THE NOTES ON SHEET 3 AND THROUGHOUT THE DRAWING. IF ANY OF THE SITE CONDITIONS DIFFER FROM THOSE DESCRIBED ON THESE DRAWINGS, FURTHER ADVICE WILL BE REQUIRED FROM A QUALIFIED STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION COMMENCING.



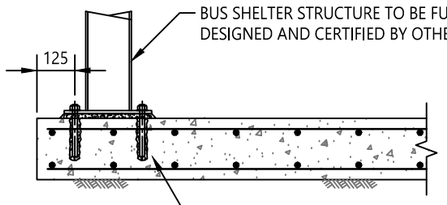
ISOLATION JOINT (IJ)

SCALE 1:10



EXPANSION JOINT (EJ) 100mm PATH TO 200mm BUS STOP SHELTER BOARDING SLAB

SCALE 1:10



SECTION A - A

SCALE 1:20

REINFORCEMENT DETAIL - TYPE 2 BUS STOP WITH SHELTER IN FRONT OF PATH

SCALE 1:50

REV	AMENDMENT	DATE	DRAWN	APRVD
A	SHELTER AND STRUCTURAL DETAILS	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER / T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
BUS STOP SHELTER

DRAWING NUMBER	REV
SD0605	A
SHEET 2 OF 5	A3

GENERAL

1. ALL WORKMANSHIP, TESTING, MATERIALS AND SUPERVISION ARE TO BE IN ACCORDANCE WITH THESE SPECIFICATIONS, THE WORK HEALTH AND SAFETY ACT 2011 AND CURRENT RELEVANT AUSTRALIAN STANDARDS.
2. PROPRIETARY ITEMS SPECIFIED SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS. DO NOT VARY SPECIFIED PROPRIETARY PRODUCTS WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
3. NOTES ON ANY DRAWING APPLY TO ALL DRAWINGS IN THE SET UNLESS OTHERWISE NOTED.
4. THE BUILDER SHALL PROVIDE CERTIFICATION ON ANY DESIGN AND CONSTRUCT COMPONENT BY A CHARTERED PROFESSIONAL ENGINEER (NPER).
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL SERVICES IN THE VICINITY OF THE WORKS. ANY SERVICES SHOWN ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL SERVICES PRIOR TO COMMENCING AND SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED TO SERVICES, AS WELL AS ANY LOSS INCURRED AS A RESULT OF THE DAMAGE TO ANY SERVICE.
6. THE STRUCTURAL COMPONENTS DETAILED ON THESE STRUCTURAL DRAWINGS ARE JOB SPECIFIC AND HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND BUILDING CODE OF AUSTRALIA FOR THE FOLLOWING FIRE RATINGS, WIND LOADS, FLOOR USAGE AND EARTHQUAKE LOADS.

WIND LOADS:

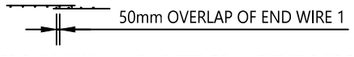
- IMPORTANCE LEVEL = 1
- REGION = A2
- ANNUAL PROBABILITY OF EXCEDENCE = 1:100
- REGIONAL WIND SPEED V = 41 m/s
- TERRAIN CATEGORY = 2
- TERRAIN MULTIPLIER Mz ,cat = 0.91
- WIND DIRECTION MULTIPLIER Md = 1.0
- SHIELDING MULTIPLIER Ms = 1.0
- TOPOGRAPHIC MULTIPLIER Mt = 1.0
- SITE WIND SPEED = 37.4 m/s

FOUNDATIONS

7. ASSUMED ALLOWABLE BEARING CAPACITY:
   - SLABS ON GROUND = 100 kPa.
8. THE SLAB AND FOOTINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS 2870 FOR CLASS M SITE. ENSURE STABILITY OF ADJACENT BUILDINGS AND PATHS IS MAINTAINED DURING ALL STAGES OF CONSTRUCTION.
9. DO NOT ALLOW EXCAVATED MATERIAL TO BE STOCKPILED WITHIN 1500mm OF FOOTING TRENCHES OR PITS. NO EARTH OR DETRITUS IS TO FALL INTO THE FOOTING TRENCHES BEFORE OR DURING CONCRETE PLACEMENT.
10. THE BASE OF ALL EXCAVATIONS SHALL BE FREE OF WATER AND CLEANED OF LOOSE MATERIAL OR DEBRIS PRIOR TO PLACEMENT OF CONCRETE.

SLAB ON GROUND

11. UNLESS OTHERWISE NOTED, SLABS TO BE 200mm THICK WITH SL72 FABRIC THROUGHOUT TOP AND BOTTOM. CONTRACTOR TO ENSURE FULL AND CONTINUOUS BEARING ON 100kPa (ALLOWABLE) FIRM NATURAL GROUND OR COMPACTED FILL, WITH A COMPACTION OF 100% STANDARD DRY DENSITY.
12. THE TWO OUTERMOST TRANSVERSE WIRES OF ONE SHEET OF MESH MUST OVERLAP THE TWO OUTERMOST TRANSVERSE WIRES OF SHEET BEING LAPPED, AS SHOWN BELOW:



13. PROVIDE 2-N12 TRIMMER BARS 2000mm LONG TIED TO UNDERSIDE OF FABRIC AT ALL RE-ENTRANT CORNERS.
14. ALL CONCRETE IS TO BE COMPACTED USING A MECHANICAL VIBRATOR.

CONCRETE (ELAPSED DELIVERY TIMES)

15. ELAPSED TIME BETWEEN THE WETTING OF THE MIX AND THE DISCHARGE OF THE MIX AT THE SITE MUST NOT EXCEED THE CRITERIA IN THE ELAPSED DELIVERY TIMETABLE BELOW:

ELAPSED DELIVERY TIME TABLE

CONCRETE TEMPERATURE AT TIME OF DISCHARGE (°C)	MAXIMUM ELAPSED TIME (HOURS)
< 24	2.00
24 to 27	1.50
27 to 30	1.00
30 to 32	0.75
32 to 35	0.50

CONCRETE PLACEMENT CONDITIONS SHALL BE IN ACCORDANCE WITH COUNCIL'S CIVIL WORKS SPECIFICATION.

CONCRETE AND REINFORCEMENT

16. CARRY OUT ALL CONCRETE WORK IN ACCORDANCE WITH AS 3600 AND NATSPEC CONCRETE STANDARDS.
17. CONCRETE PROPERTIES AND COVER TO REINFORCING:

COVER TO REINFORCEMENT

ELEMENT	EXPOSURE CLASSIFICATION	CONCRETE STRENGTH GRADE	MAXIMUM 56 DAY DRY SHRINKAGE	COVER (mm)
SLABS ON GROUND	A2 (>50km TO COASTLINE)	N25	650μm	45
	B1 (1-50km TO COASTLINE)	N32	650μm	45
	B2 (<1km TO COASTLINE)	N40	650μm	45

MAXIMUM AGGREGATE SIZE = 20mm UNLESS OTHERWISE NOTED

SLUMP DURING PLACING = 80mm ±10mm.

NO ADMIXTURES SHALL BE USED IN THE CONCRETE MIX UNLESS APPROVED IN WRITING BY COUNCIL'S REPRESENTATIVE.

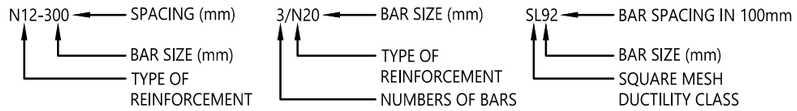
18. CONCRETE PROPERTIES FOR SLABS AND BEAMS SHALL BE VARIED FROM NORMAL CLASS AS FOLLOWS:
   - MINIMUM CEMENT CONTENT 250kg/m^3
   - MAXIMUM 56 DAY SHRINKAGE STRAIN = AS NOMINATED ABOVE
   - PRIOR TO COMMENCEMENT CONCRETE SUPPLIER TO PROVIDE DRYING SHRINKAGE TEST RESULTS FROM PRODUCTION ASSESSMENT AS EVIDENCE THAT SPECIFIED DRYING SHRINKAGE LIMITS CAN BE ACHIEVED USING NORMAL MIX DESIGN
20. PERCENTAGE OF ENTRAPPED AIR TO BE AS FOLLOWS:
   - FOR AGGREGATE 10mm-20mm NORMAL SIZE 8-4% IN ACCORDANCE WITH AS 3600 AND AS 1012.4 (SUBMIT TEST RESULTS) FOR ALPINE OR SUB-ALPINE AREAS.
21. SURFACE FINISHES:
   - SLABS (UNLESS OTHERWISE NOTED) - BROOM FINISH.
22. PLACE CONCRETE CONTINUOUSLY BETWEEN CONSTRUCTION JOINTS SHOWN ON PLAN. DO NOT BREAK OR INTERRUPT SUCCESSIVE POURS SUCH THAT COLD JOINTS OCCUR. ANY REVISIONS OR ADDITIONS TO CONSTRUCTION JOINTS SHOWN ON PLAN REQUIRE APPROVAL FROM COUNCIL'S REPRESENTATIVE.
23. REINFORCEMENT QUALITY AND NOTATION:

REINFORCEMENT NOTATION

SYMBOL	BAR TYPE	STRENGTH GRADE (MPa)	DUCTILITY CLASS	TO COMPLY WITH AUSTRALIAN STANDARD
N	HOT ROLLED DEFORMED RIB BAR	500	NORMAL	AS/NZS 4671
SL	SQUARE MESH OF DEFORMED RIB BAR	500	LOW	AS/NZS 4671

ALL REINFORCING BARS SHALL BE GRADE D500N TO AS/NZS 4671 AND ALL MESH SHALL BE GRADE 500L TO AS/NZS 4671. UNLESS OTHERWISE NOTED CLASS L REINFORCEMENT SHALL NOT BE USED.

REINFORCEMENT LABELS:



24. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY, AND NOT NECESSARILY IN TRUE PROJECTION. BARS SHOWN ARE INDICATIVE ONLY AND LENGTHS MAY VARY. BEAM ELEVATIONS TAKE PRECEDENCE OVER SECTIONS. SLAB PLANS TAKE PRECEDENCE OVER SECTIONS. REFER TO SECTIONS FOR EXTRA BARS THAT MAY BE REQUIRED.
25. USE ONLY PLASTIC OR CONCRETE CHAIRS AT EXTERNAL SURFACES.
26. SITE BENDING OF REINFORCEMENT BARS SHALL BE DONE WITHOUT HEATING USING A RE-BENDING TOOL. THE BARS SHALL BE RE-BENT AGAINST A FLAT SURFACE OR A PIN WITH A DIAMETER NOT LESS THAN THE MINIMUM PIN SIZE PRESCRIBED IN AS 3600.
27. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN ON THE STRUCTURAL DRAWINGS. LAPS SHALL NOT BE LESS THAN THE DEVELOPMENT LENGTH FOR EACH BAR AND IN ACCORDANCE WITH AS 3600.
28. LAPS IN MESH SHALL BE IN ACCORDANCE WITH AS 3600.
29. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
30. AT EXTERNALLY EXPOSED SURFACES NO METALLIC ITEMS INCLUDING FORM BOLTS, FORM SPACERS, METALLIC BAR CHAIRS AND TIE-WIRE ARE TO BE PLACED IN THE COVER ZONE.
31. ALL REINFORCEMENT, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION AND INSPECTED BY COUNCIL'S REPRESENTATIVE PRIOR TO PLACING CONCRETE.
32. HOLD DOWN BOLTS SHALL BE HOT-DIP GALVANISED.
33. CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF 7 DAYS, UNLESS OTHERWISE SPECIFIED. APPROVED SPRAY ON CURING COMPOUNDS THAT COMPLY WITH AS 3799 MAY BE USED WHERE FLOOR FINISHES WILL NOT BE AFFECTED. POLYTHENE SHEETING OR WET HESSIAN MAY BE USED TO RETAIN CONCRETE MOISTURE WHERE PROTECTED FROM WIND AND TRAFFIC. CURING IS TO COMMENCE IMMEDIATELY AFTER CONCRETE PLACEMENT.
34. FOR ELAPSED TIME BETWEEN THE WETTING OF THE MIX AND THE DISCHARGE OF THE MIX, REFER TO CONCRETE - ELAPSED DELIVERY TIMES NOTE.

REV	AMENDMENT	DATE	DRAWN	APRVD
A	SHELTER AND STRUCTURAL DETAILS	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

NOT TO SCALE

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER / T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

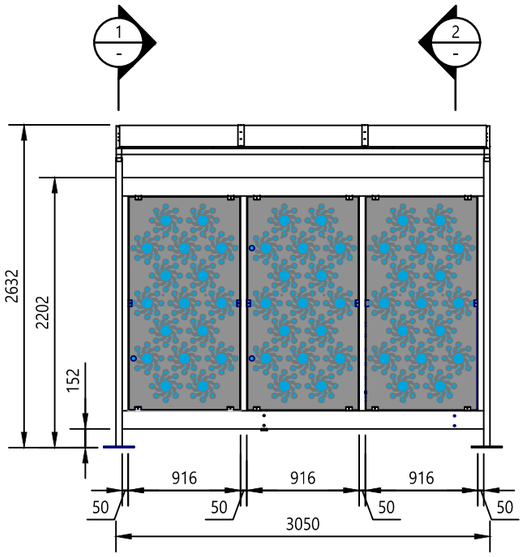
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

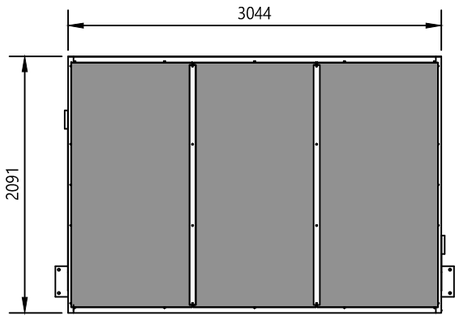
PEDESTRIAN AND CYCLIST SERIES
BUS STOP SHELTER

STANDARD DRAWING

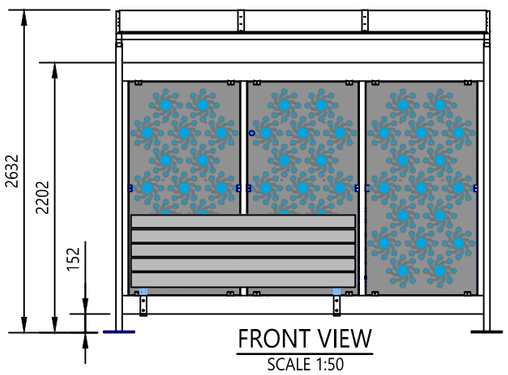
DRAWING NUMBER	REV
SD0605	A
SHEET 3 OF 5	A3



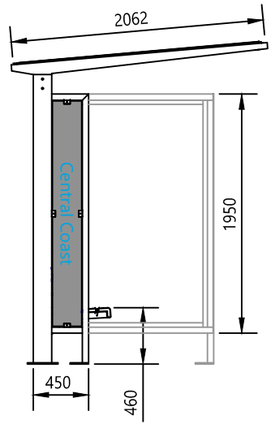
REAR VIEW
SCALE 1:50



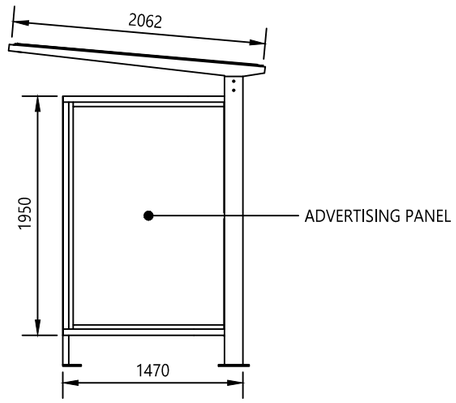
TOP VIEW
SCALE 1:50



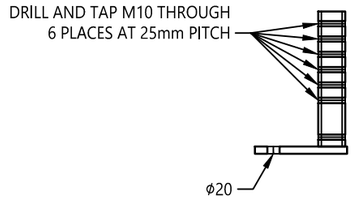
FRONT VIEW
SCALE 1:50



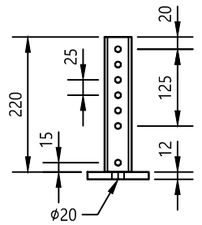
SECTION 1
SCALE 1:50



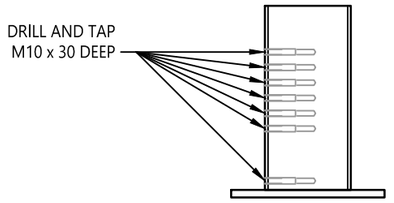
SECTION 2
SCALE 1:50



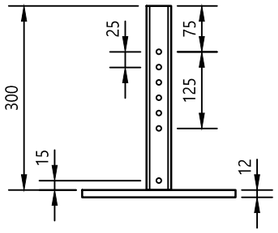
SECTION 4
SCALE 1:100



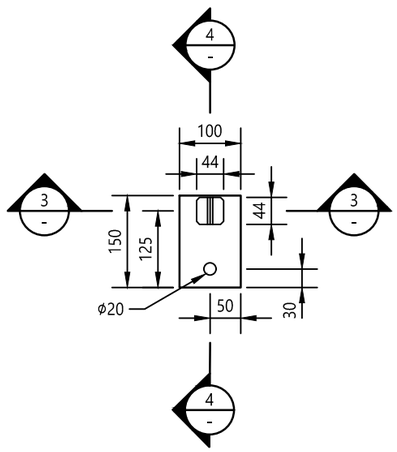
SECTION 3
SCALE 1:100



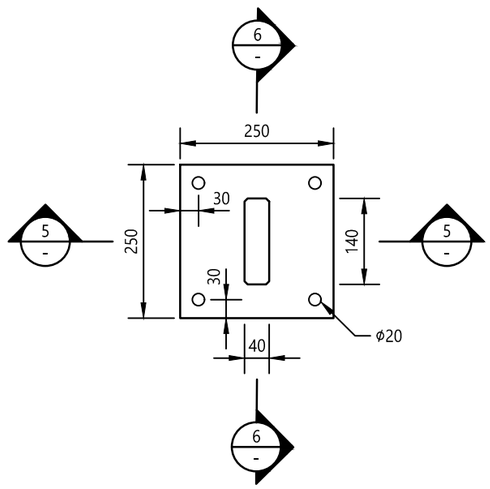
SECTION 6
SCALE 1:100



SECTION 5
SCALE 1:100



FRONT LEG ADJUSTABLE FEET
SCALE 1:100



REAR LEG ADJUSTABLE FEET
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD
A	SHELTER AND STRUCTURAL DETAILS	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500 1:50

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER / T WILLIS
CHECKED	M BAMER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

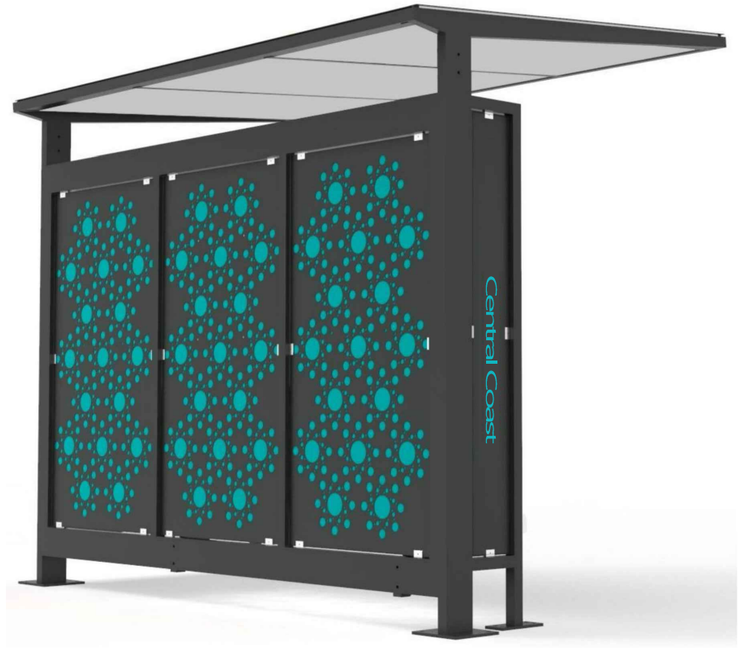
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
BUS STOP SHELTER

STANDARD DRAWING

DRAWING NUMBER	REV
SD0605	A
SHEET 4 OF 5	A3



BUS STOP SHELTER
NOT TO SCALE

(EXAMPLE ADVERTISING ONLY)

REV	AMENDMENT	DATE	DRAWN	APRVD
A	SHELTER AND STRUCTURAL DETAILS	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

NOT TO SCALE

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER / T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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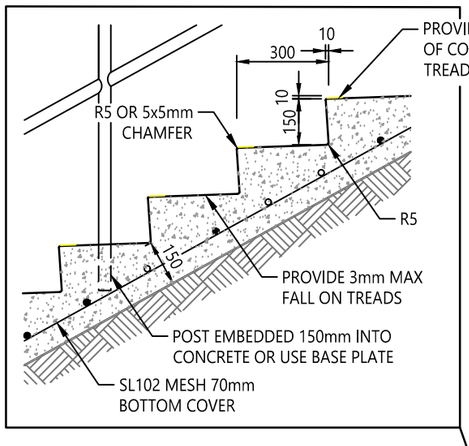
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

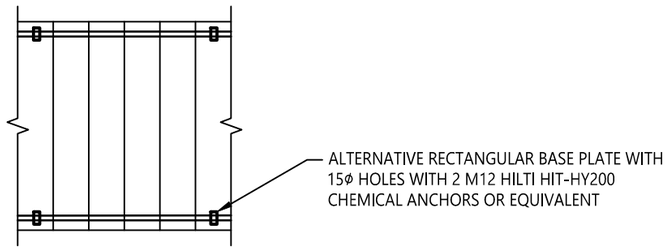
PEDESTRIAN AND CYCLIST SERIES
BUS STOP SHELTER

STANDARD DRAWING

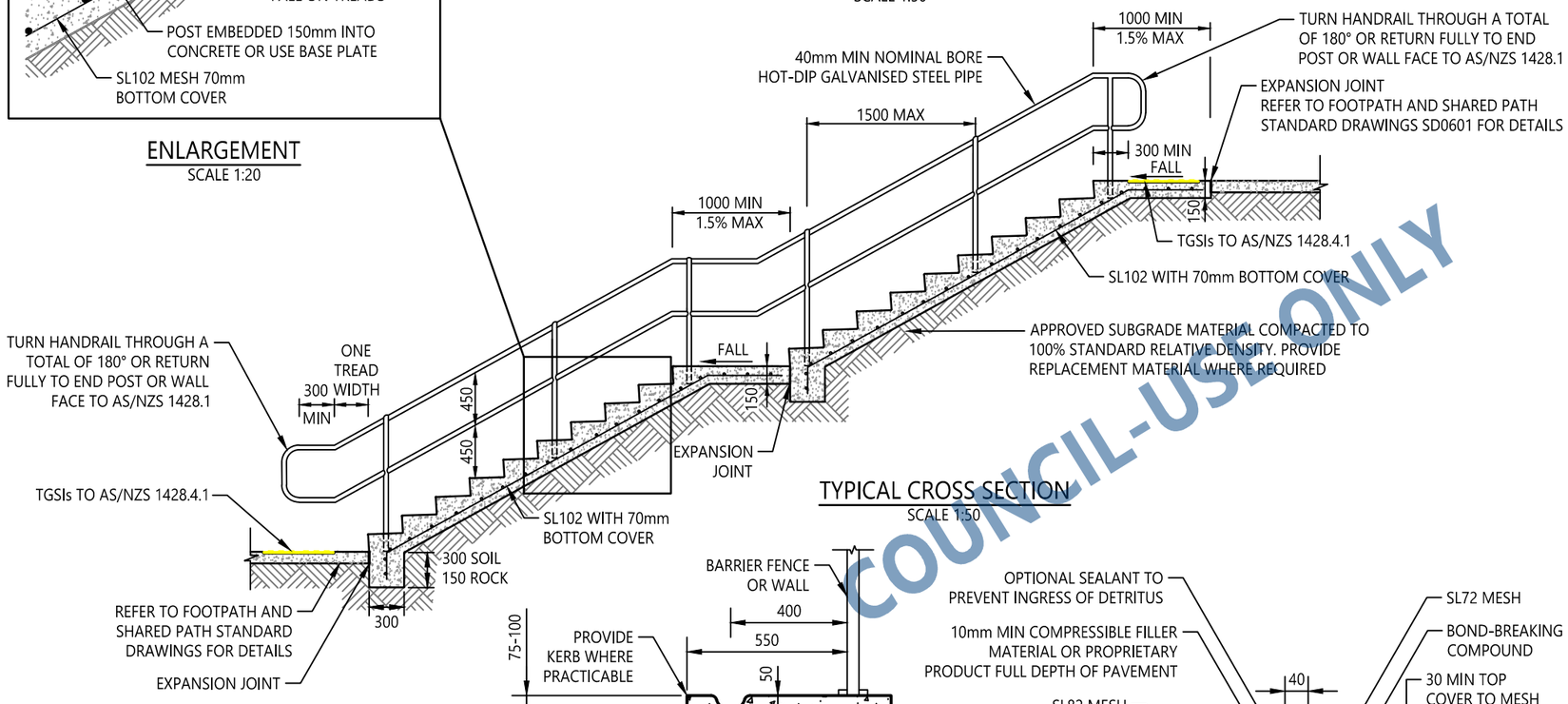
DRAWING NUMBER	REV
SD0605	A
SHEET 5 OF 5	A3



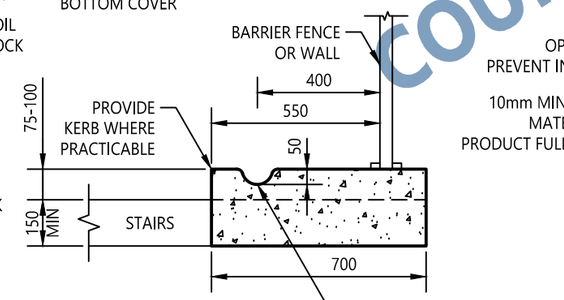
ENLARGEMENT
SCALE 1:20



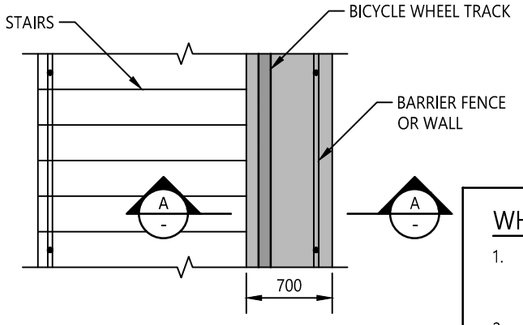
ORIENTATION OF RECTANGULAR BASE PLATE
SCALE 1:50



TYPICAL CROSS SECTION
SCALE 1:50



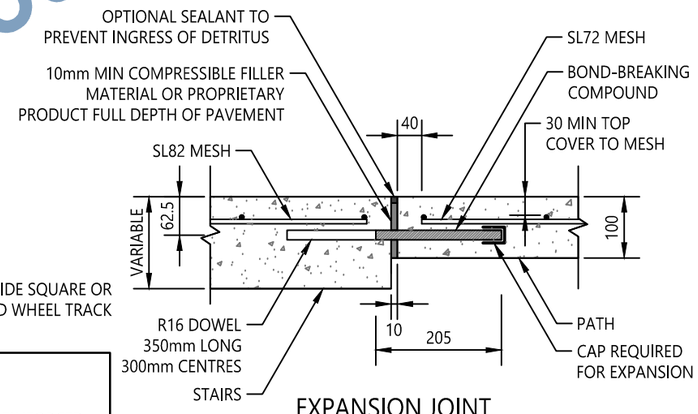
SECTION A-A
SCALE 1:20



BICYCLE WHEEL TRACK ON REINFORCED CONCRETE STAIRS
SCALE 1:50

WHEEL TRACK NOTES:

1. BICYCLE WHEEL TRACKS MAY BE PROVIDED ADJACENT TO REINFORCED CONCRETE STAIRS AT LOCATIONS WHICH LINK SHARED PATHS OR BICYCLE PATHS OR OTHER LOCATIONS FREQUENTED BY CYCLISTS.
2. GRADIENT OF RAMP SHOULD NOT EXCEED 25°.
3. ALTERNATIVE WHEEL TRACK SYSTEMS MAY BE RETROFITTED TO EXISTING STAIRS.



EXPANSION JOINT REINFORCED CONCRETE STAIRS TO PATH
SCALE 1:10

NOTES:

1. NOT TO BE USED AS A DESIGN OR FOR CONSTRUCTION PURPOSES.
2. STAIRS SHALL BE DESIGNED AND BUILT IN ACCORDANCE WITH AS/NZS 1428.1 AND AS 3600.
3. STAIRS SHALL BE DESIGNED TO ENSURE THE HANDRAIL AND TACTILE GROUND SURFACE INDICATORS (TGSIs) DO NOT ENCROACH INTO THE TRANSVERSE TRAVEL PATH.
4. WHERE STAIRS LINK SHARED PATHS, PROVISION SHALL BE MADE FOR WALKING CYCLES UP AND DOWN ADJACENT TO THE STAIRS IN ACCORDANCE WITH CURRENT AUSTROADS GUIDELINES. DETAILS SHALL BE SUBMITTED FOR APPROVAL TO COUNCIL'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
5. CONCRETE STRENGTH GRADE TO BE N32 MINIMUM. REFER TO AS 3600 CONCRETE STRUCTURES FOR RELEVANT EXPOSURE CLASSIFICATION.
6. NATURAL GROUND OR FILL MATERIAL ON WHICH THE CONCRETE STAIRS ARE FOUNDED SHALL BE COMPACTED TO 100% STANDARD RELATIVE DENSITY.
7. FULL DEPTH EXPANSION OR ISOLATION JOINTS SHALL BE PROVIDED AT THE INTERFACE BETWEEN STEPS AND OTHER CONCRETE FORMATIONS.
8. CONCRETE STEPS SHALL BE FINISHED WITH A:
   - SLIP-RESISTANT FINISH OR
   - NON-SKID STRIP OR
   - TREATMENT NEAR THE EDGE OF THE NOSING.
8. WHERE SMALL BANKS OF STEPS ARE LOCATED IN ISOLATION, ADVANCE WARNING SIGNS SHALL BE PROVIDED.
9. THE FOLLOWING DIMENSIONS SHALL BE ADHERED TO UNLESS OTHERWISE SHOWN ON THE APPROVED DRAWINGS OR INSTRUCTED BY COUNCIL'S REPRESENTATIVE:

	NUMBER OF STEPS PER FLIGHT	STAIR WIDTH (UNOBSTRUCTED)	RISER (R)	GOING (G)	SLOPE RELATIONSHIP (2R+G)
MINIMUM	2	1000	130	250	585
MAXIMUM	10	-	190	355	630
PREFERRED	-	-	150	300	600

10. THE NUMBER OF STAIRS PER FLIGHT AND THE LANDING DISTANCE SHALL NOT CHANGE WHERE THERE ARE MULTIPLE FLIGHTS OF STAIRS.
11. STAIRS SHALL NOT BE MADE AVAILABLE FOR PEDESTRIAN USE UNTIL HANDRAIL HAS BEEN INSTALLED.
12. THE SERVICE PROVIDER SHALL SUBMIT TO COUNCIL'S REPRESENTATIVE DETAILS OF THE HANDRAIL SYSTEM TO BE USED AT LEAST 14 DAYS PRIOR TO INSTALLATION.
13. HANDRAILS, UNLESS OTHERWISE SHOWN ON THE APPROVED DRAWINGS, SHALL BE:
    - INSTALLED WHERE THERE ARE MORE THAN 4 RISERS IN 1 FLIGHT
    - 40mm NOMINAL DIAMETER
    - HOT-DIP GALVANISED TO AS/NZS 4792 AFTER FABRICATION. CONSIDER USING STAINLESS STEEL COMPONENTS IN A MARINE ENVIRONMENT
    - MANUFACTURED IN ACCORDANCE WITH AS 1657
14. ALL WELDS OR CUTS MADE ON SITE SHALL BE:
    - APPROVED BY COUNCIL'S REPRESENTATIVE AND
    - TREATED WITH AN APPROVED EPOXY ZINC RICH TWO-PACK EPOXY PRIMER TO 125-150µm DRY FILM THICKNESS WITH A TOPCOAT OF SILVER ENAMEL
15. TGSIs SHALL BE:
    - "COBBLETAC" INLAID PORCELAIN TACTILE INDICATORS OR SIMILAR
    - YELLOW IN COLOUR WITH A MINIMUM LUMINANCE CONTRAST OF 30% TO THE BACKGROUND IN ACCORDANCE WITH AS/NZS 1428.4.1
    - LAID IN CONCRETE RECESS 609mm BY PATH WIDTH
    - LAID IN THE RECESS ON AN ADHESIVE APPROVED BY THE TGSI MANUFACTURER
    - APPLIED WITH A SUITABLE SQUARE NOTCHED TROWEL
    - LAID LEVEL WITH THE SURROUNDING SURFACE TO ENSURE TACTILE STUDS STAND PROUD
16. TRAFFIC SHALL BE AVOIDED FOR A MINIMUM OF 24 HOURS AFTER TGSI INSTALLATION.
17. INSTALL OVERLAND FLOW CONCRETE CHANNEL ADJACENT TO STAIRS WHERE REQUIRED TO PREVENT SCOURING BESIDE THE STAIRS.

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	M GREENWOOD/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

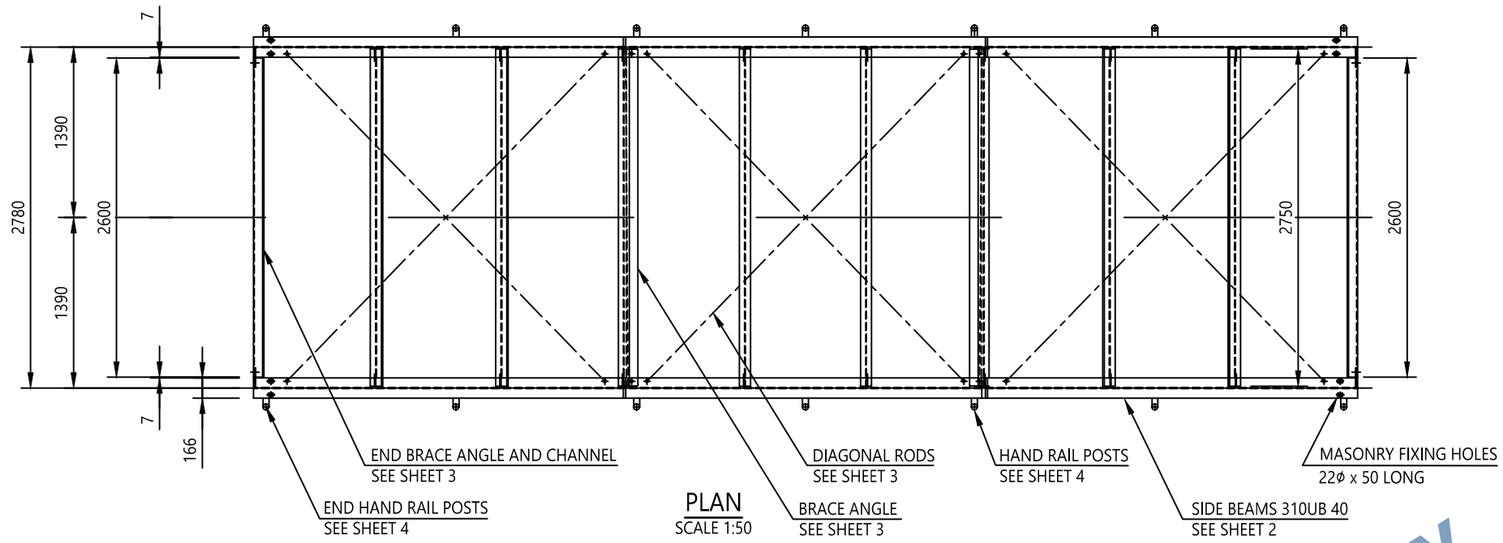
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
REINFORCED CONCRETE STAIRS

DRAWING NUMBER	REV
SD0606	-
SHEET 1 OF 1	A3



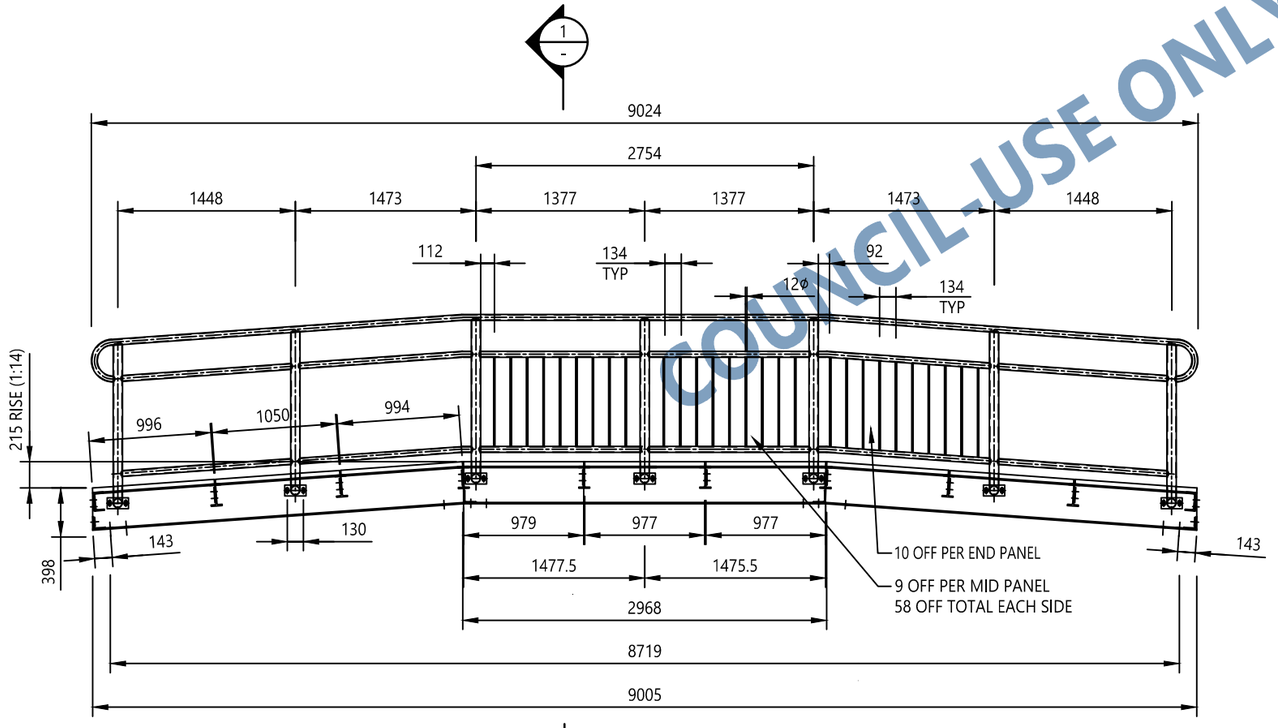
PLAN
SCALE 1:50

NOTES:

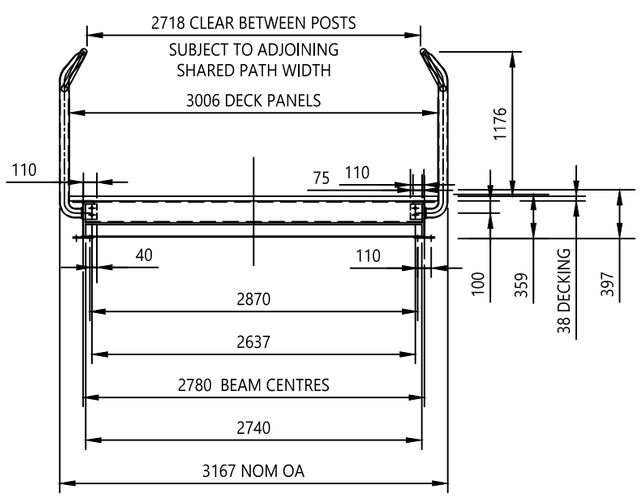
1. THIS STANDARD DRAWING IS BASED ON STEELWORKS ENGINEERING'S DRAWING SWE-1637 DATED 5/9/16.
2. THIS STANDARD DRAWING IS TO BE USED FOR GUIDANCE ONLY AND SHALL NOT BE USED AS A DESIGN OR FOR CONSTRUCTION PURPOSES.
3. SHARED PATH BRIDGES SHALL BE DESIGNED BY A SUITABLY QUALIFIED AND EXPERIENCED ENGINEER, TAKING INTO ACCOUNT PREVAILING GROUND CONDITIONS AND STRUCTURAL LOADINGS.
4. ALL WELDS TO BE 6mm CONTINUOUS FILLET USING E41XX ELECTRODES. ALL SLAG ETC TO BE CLEANED OFF IN PREPARATION FOR FULL HOT-DIP GALVANISING.
5. ALL HOLES 18ø FOR M16 8.8 BOLTS UNLESS OTHERWISE NOTED.
6. WIDTH OF SHARED PATH BRIDGE SHALL BE BASED ON FUTURE SHARED PATH WIDTH REQUIREMENTS. REFER TO SHARED PATH WIDTH TABLE ON SHEET 1 IN SD0601.

PANEL SIZES:

1015 x 3006 - 2
996 x 3006 - 4
977 x 3006 - 3



ELEVATION
SCALE 1:50



SECTION
SCALE 1:50

GENERAL ASSEMBLY

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 500 1000 1500 2000 2500
1:50
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

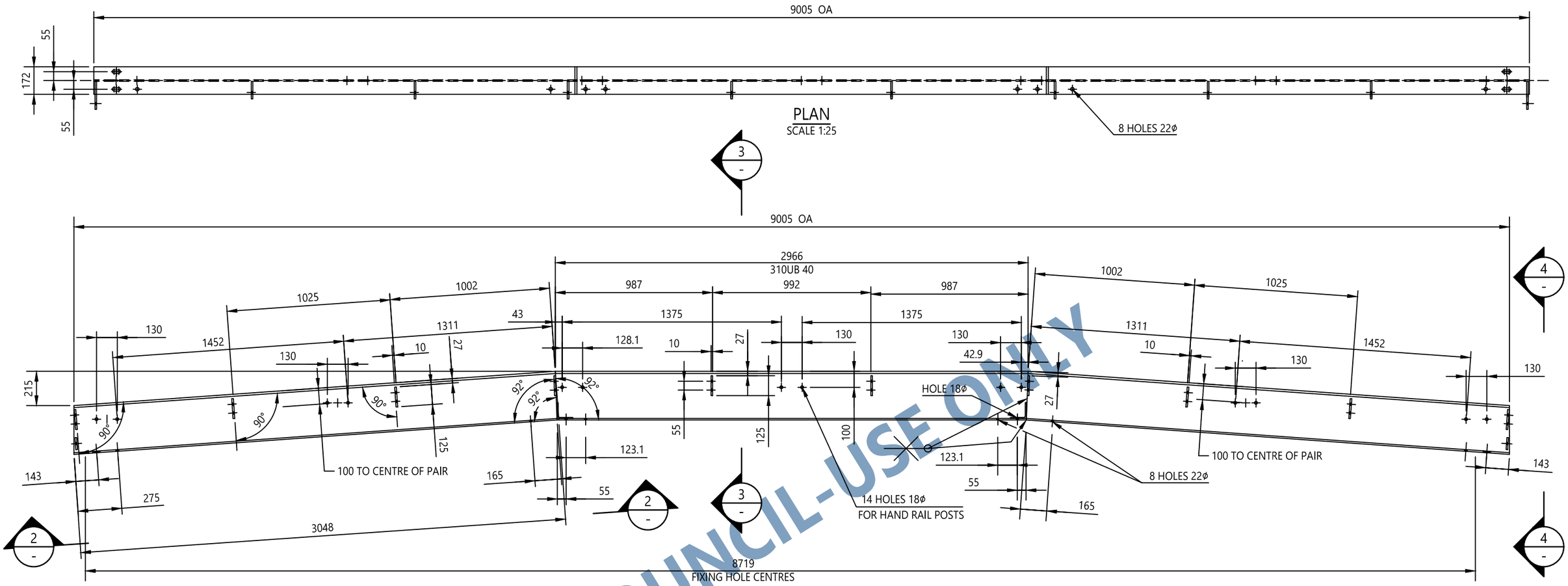
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

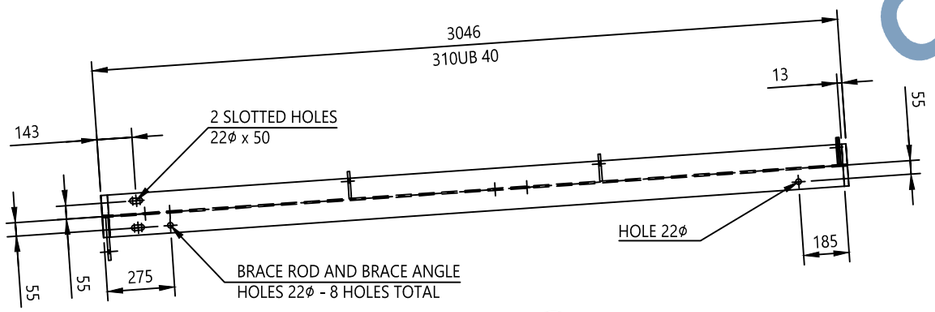
PEDESTRIAN AND CYCLIST SERIES
SHARED PATH BRIDGE

STANDARD DRAWING

DRAWING NUMBER	REV
SD0607	-
SHEET 1 OF 5	A3

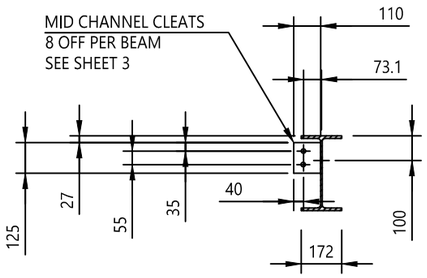


ELEVATION
SCALE 1:25

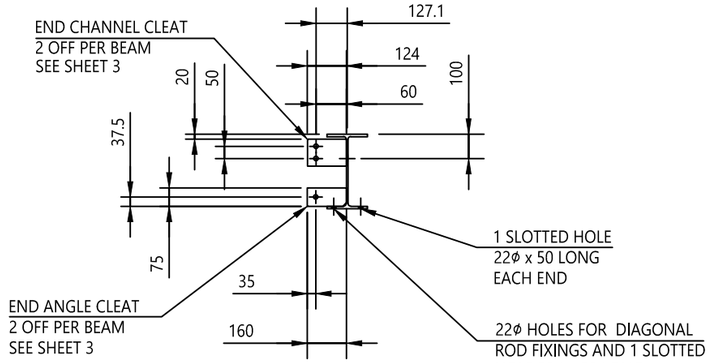


SECTION 2
SCALE 1:25

(UNDERSIDE)



SECTION 3
SCALE 1:25



SECTION 4
SCALE 1:25

MAIN BEAM DETAILS

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 250 500 750 1000 1250 1:25

0 500 1000 1500 2000 2500 1:50

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

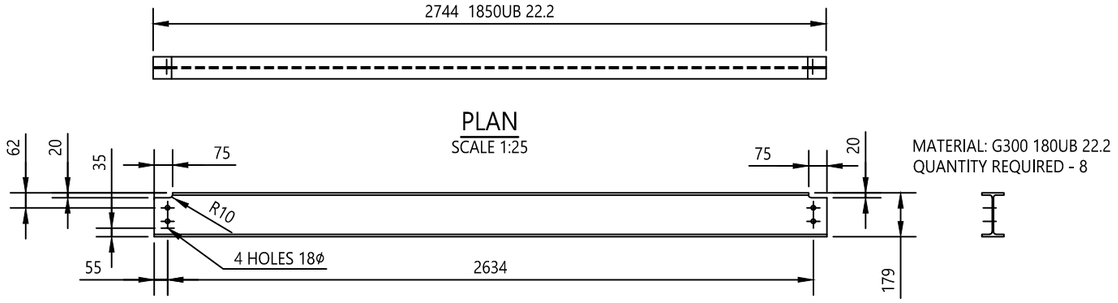
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
SHARED PATH BRIDGE

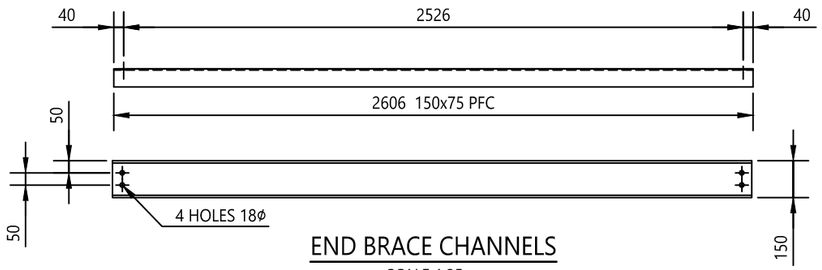
STANDARD DRAWING

DRAWING NUMBER	REV
SD0607	-
SHEET 2 OF 5	A3



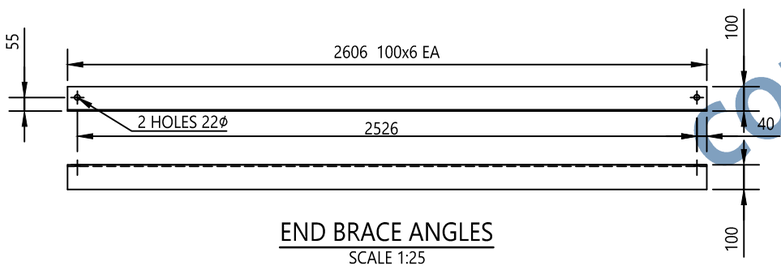
MATERIAL: G300 180UB 22.2
QUANTITY REQUIRED - 8

MID CROSS BRACE BEAMS
SCALE 1:25



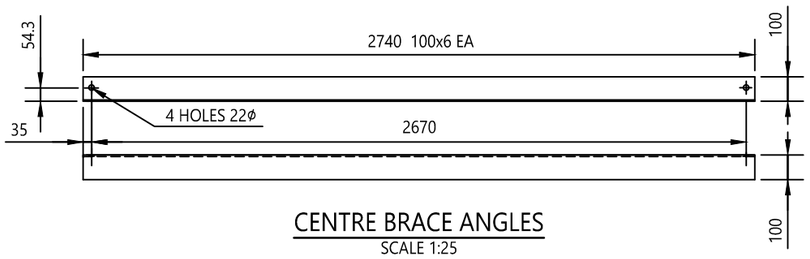
MATERIAL: G300 150x75 PFC
QUANTITY REQUIRED - 2

END BRACE CHANNELS
SCALE 1:25



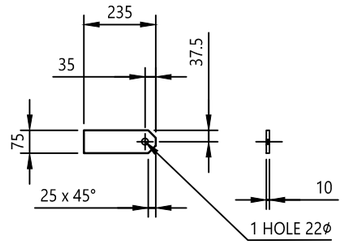
MATERIAL: G300 100x6 EA
QUANTITY REQUIRED - 2

END BRACE ANGLES
SCALE 1:25

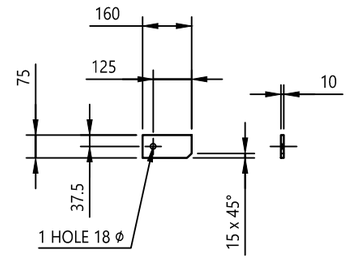


MATERIAL: G300 100x6 EA
QUANTITY REQUIRED - 2

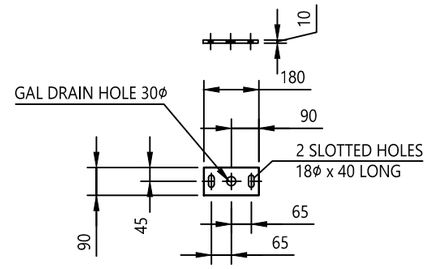
CENTRE BRACE ANGLES
SCALE 1:25



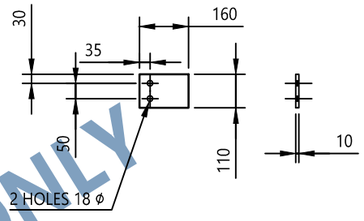
DIAGONAL ROD END PLATES
MATERIAL: G250 PLATE 10 x 75 x 235
12 OFF
SCALE 1:20



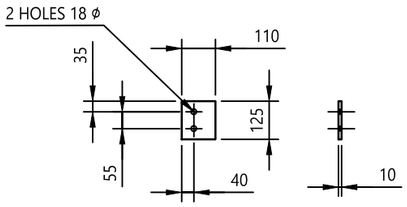
END ANGLE CLEATS
MATERIAL: G250 PLATE 10 x 75 x 160
4 OFF
SCALE 1:20



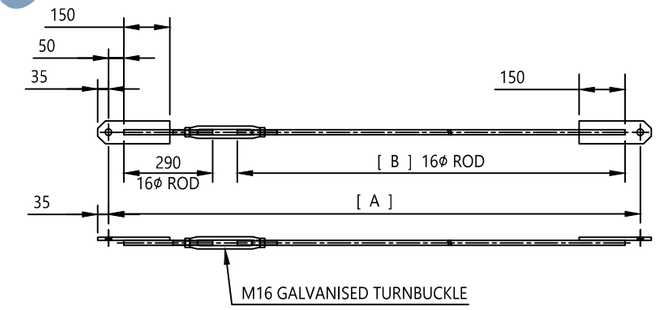
HANDRAIL POST FIXING PLATE
MATERIAL: G250 PLATE 10 x 90 x 180
14 OFF
SCALE 1:20

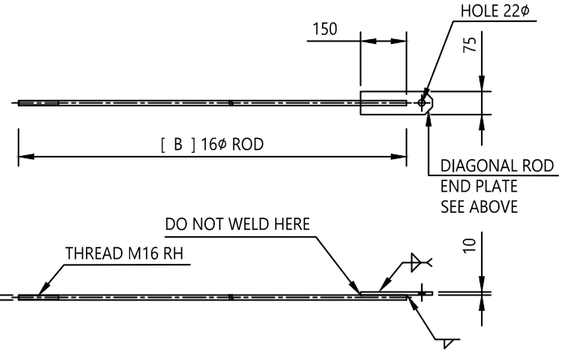


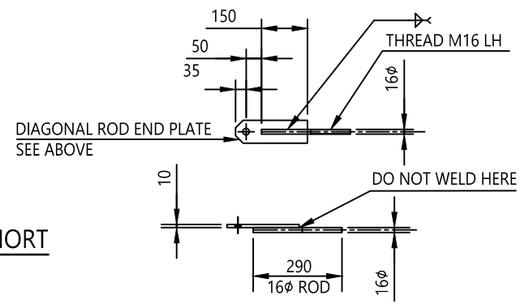
END CROSS BRACE CHANNELS CLEATS
4 OFF
MATERIAL: PLATE 10 x 110 x 160
SCALE 1:20



MID CROSS BRACE CHANNELS CLEATS
16 OFF
MATERIAL: G250 PLATE 10 x 110 x 125
SCALE 1:20







DIAGONAL ROD END - SHORT
18 OFF
SCALE 1:20

BRACE ROD LENGTH TABLE			
LOCATION	DIM. A CENTRES	DIM. B 16ø ROD	QUANTITY
END	3723	3303	4
MID	3715	3294	2

FINISHING:
ALL PARTS TO BE CLEANED UP IN PREPARATION FOR FULL HOT-DIP GALVANISING.

CROSS CHANNELS AND ANGLES AND DIAGONAL BRACE RODS DETAILS AND SMALL COMPONENT PROFILES

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000 1:20
0 250 500 750 1000 1250 1:25
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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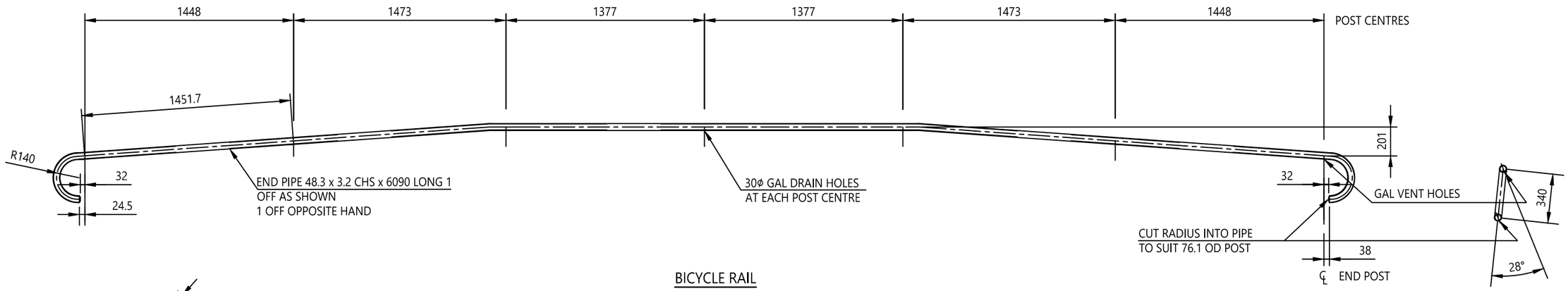
Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
SHARED PATH BRIDGE

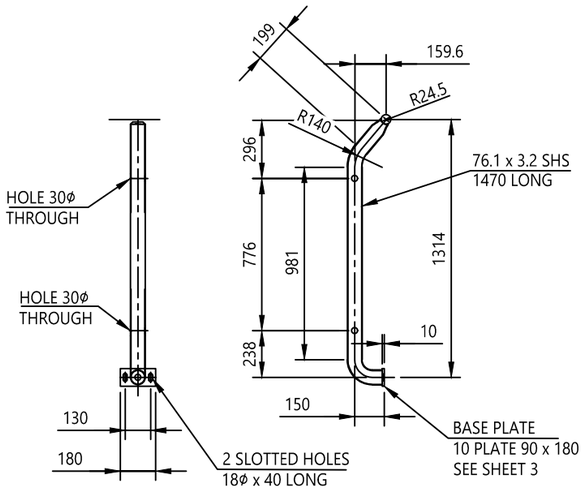
STANDARD DRAWING

DRAWING NUMBER	REV
SD0607	-
SHEET 3 OF 5	A3



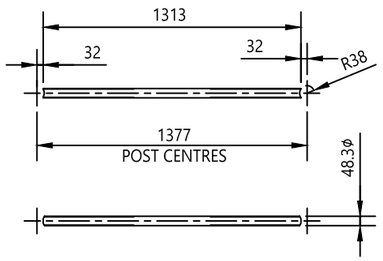
BICYCLE RAIL

1 OFF AS SHOWN
1 OFF OPPOSITE HAND
SCALE 1:30



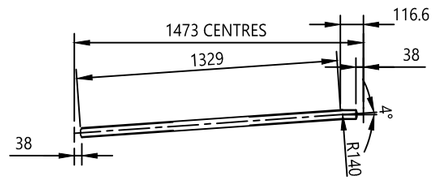
INTERMEDIATE POSTS

76.1 OD x 3.2 CHS
10 OFF AS SHOWN



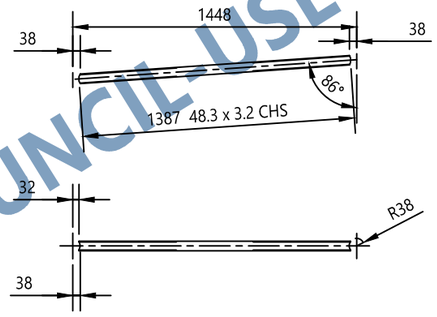
LEVEL HAND AND FOOT RAILS

48.3 OD x 3.5 CHS x 1313
4 OFF



GRADED INNER HAND AND FOOT RAILS

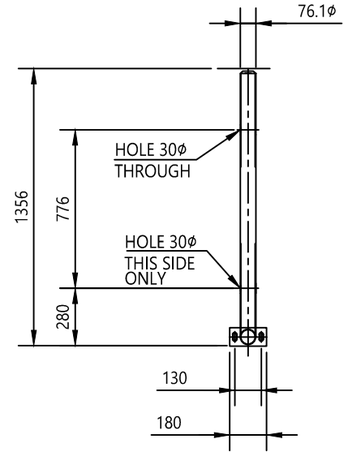
48.3 OD x 3.5 CHS x 1412 LONG
4 OFF



GRADED OUTER HAND AND FOOT RAILS

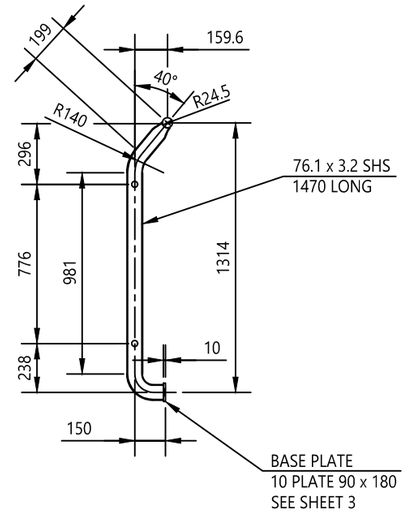
48.3 OD x 3.5 CHS x 1387 LONG
4 OFF

HANDRAIL AND COMPONENTS DETAILS

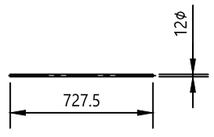


END POSTS

76.1 OD x 3.5 CHS
2 OFF AS SHOWN
2 OFF OPPOSITE HAND



WELDING AND FINISHING NOTE:
ALL WELDS TO BE 6mm CONTINUOUS FILLET UNLESS OTHERWISE NOTED USING E41XX ELECTRODES. ALL SLAG ETC TO BE CLEANED OFF IN PREPARATION FOR FULL HOT-DIP GALVANISING.



VERTICAL RAILS

12ø STEEL ROD
116 OFF AS SHOWN

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 300 600 900 1200 1500 1:30
0 3000 6000 9000 12000 25000 1:300
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

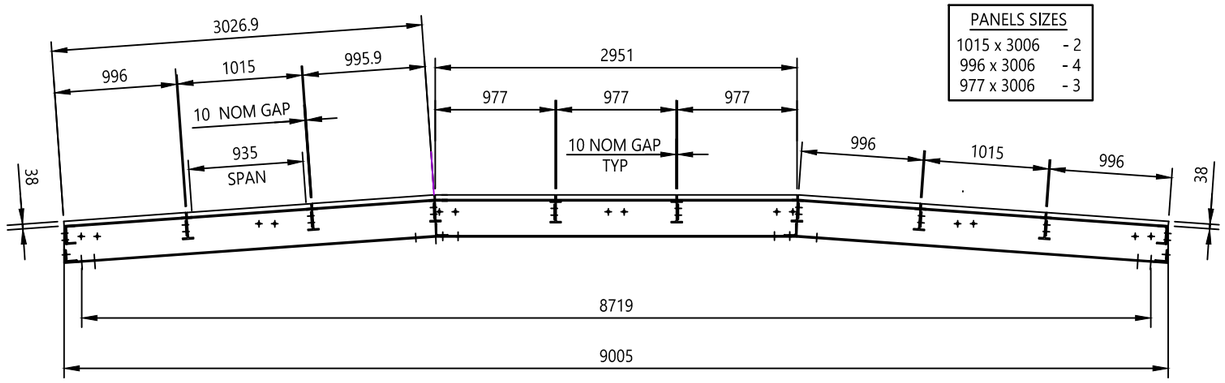
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
SHARED PATH BRIDGE

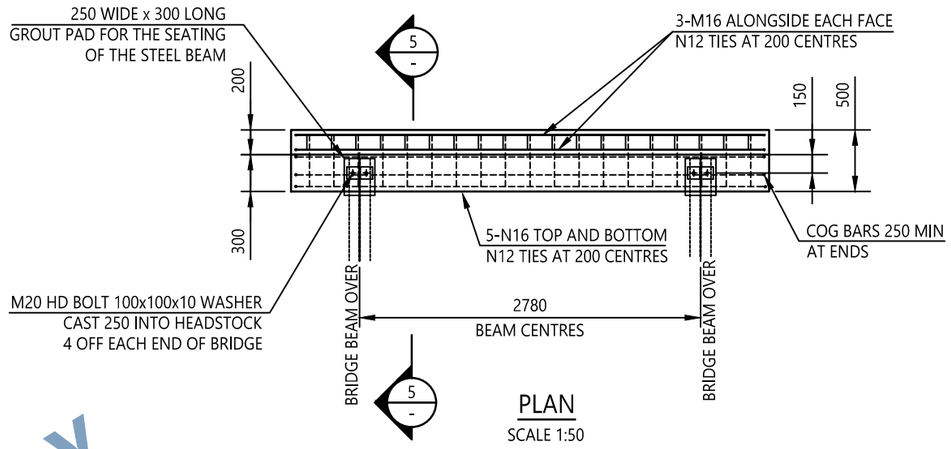
STANDARD DRAWING

DRAWING NUMBER	REV
SD0607	-
SHEET 4 OF 5	A3

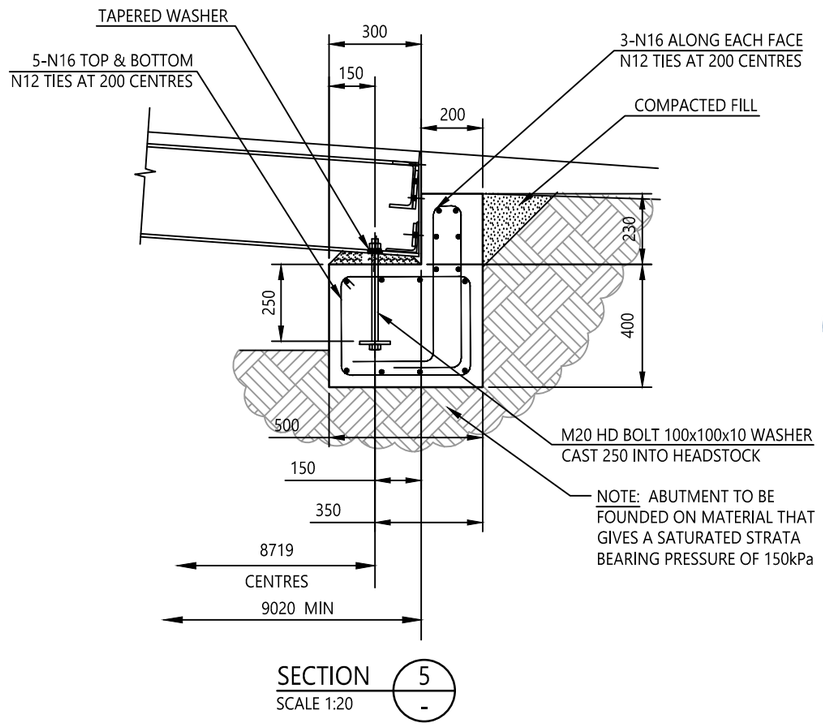


PANELS SIZES	
1015 x 3006	- 2
996 x 3006	- 4
977 x 3006	- 3

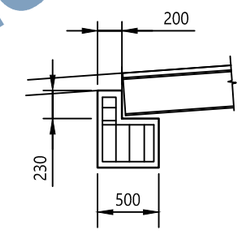
FRP GRATING
SCALE 1:50



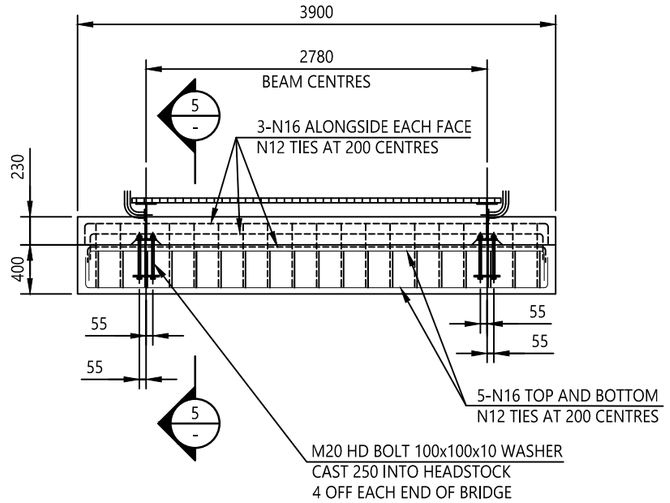
PLAN
SCALE 1:50



SECTION 5 -
SCALE 1:20



END VIEW
SCALE 1:50



ELEVATION
SCALE 1:50

DECKING PANEL SETOUT AND HEADSTOCK DETAILS

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000 1:20
0 500 1000 1500 2000 2500 1:50
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

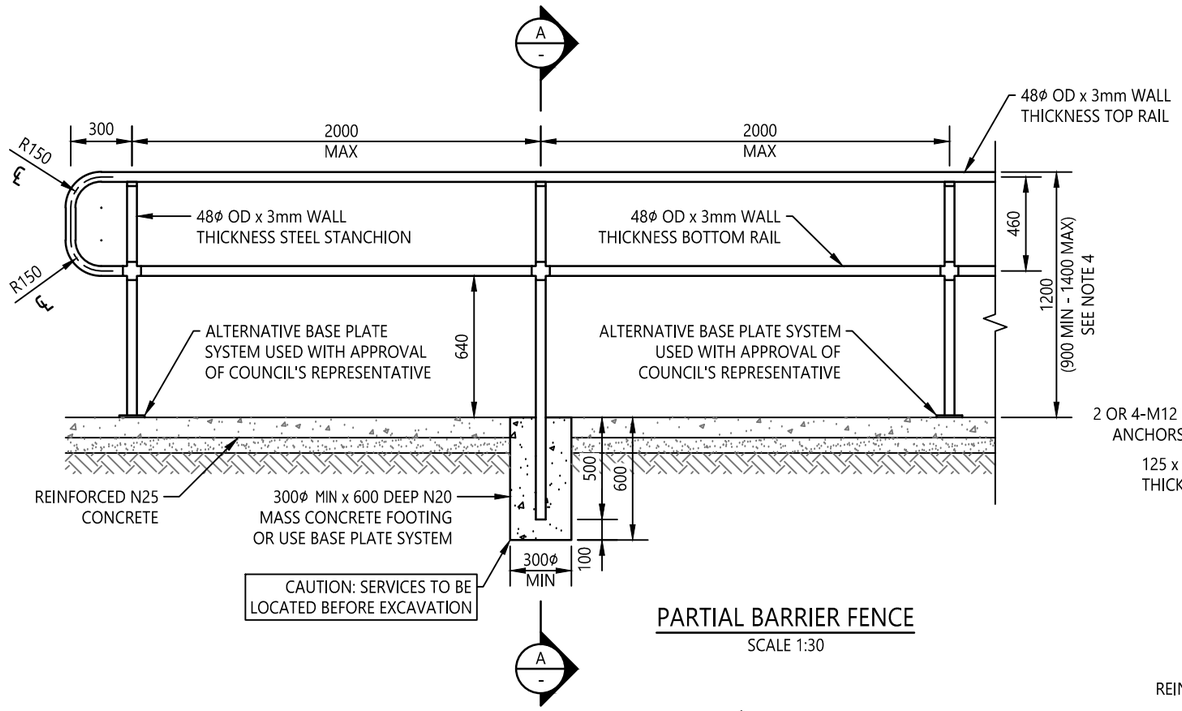
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
SHARED PATH BRIDGE

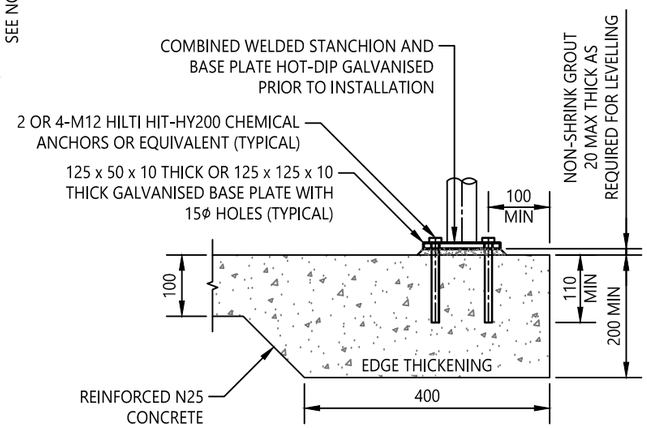
STANDARD DRAWING

DRAWING NUMBER	REV
SD0607	-
SHEET 5 OF 5	A3



PARTIAL BARRIER FENCE

SCALE 1:30

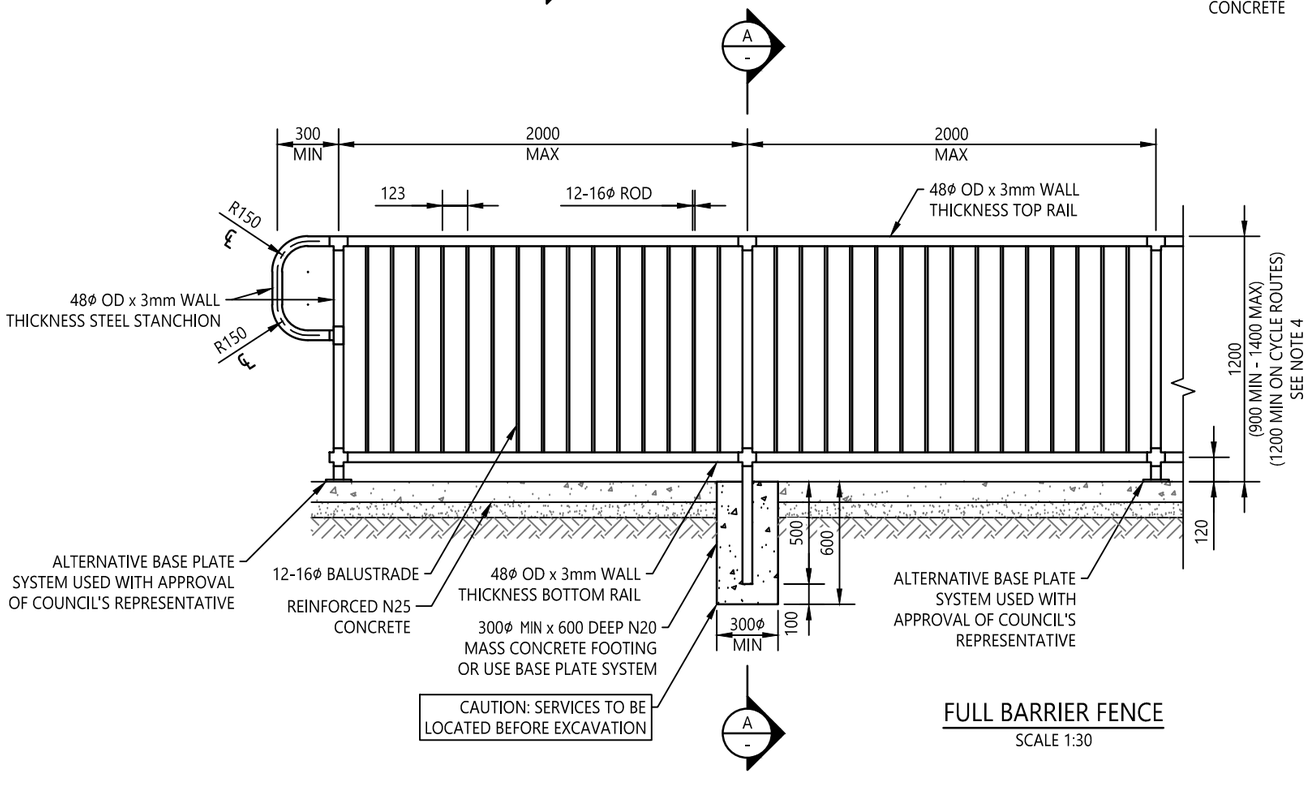


BASE PLATE DETAIL

SCALE 1:10

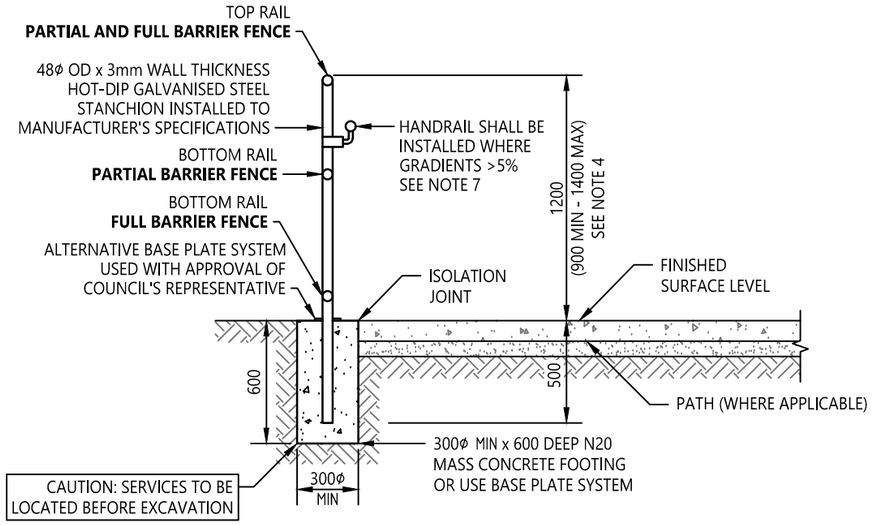
NOTES:

1. REFER TO THE RELEVANT AUSTROADS GUIDELINES AND AUSTRALIAN STANDARDS FOR DESIGN REQUIREMENTS OF BARRIER FENCES.
2. BARRIER FENCE TYPE SELECTION TO BE DETERMINED BY HAZARD RISK ASSESSMENT METHODOLOGY. REFER TO COUNCIL'S BARRIER SELECTION GUIDELINES AND THE MANUFACTURER'S SPECIFICATIONS.
3. REFER TO COUNCIL'S STANDARD DRAWING SD0601 FOR SHARED PATH REQUIREMENTS FOR BARRIER FENCES AT BATTERS AND VERTICAL DROPS.
4. WHERE THE FENCE IS PROTECTING PATH USERS FROM A VERY SEVERE HAZARD, THE FENCE HEIGHT SHALL BE INCREASED TO 1.4m OR HIGHER.
5. BARRIER FENCES PLACED WITHIN CLEAR ZONES IN ROAD RELATED AREAS SHOULD BE ASSESSED FOR ROADSIDE SUITABILITY.
6. TfNSW ROADSIDE AND MEDIAN PEDESTRIAN FENCES SHALL BE PROVIDED ON CLASSIFIED ROADS AND ON OTHER ROADS WHERE CONSIDERED BY COUNCIL'S REPRESENTATIVE TO BE APPROPRIATE FOR ROAD USER SAFETY REASONS.
7. PEDESTRIAN ASSIST DISABILITY HANDRAILS (865mm MIN 1000mm MAX HIGH) SHALL BE PROVIDED ON RAMPS IN ACCORDANCE WITH AS 1428.1, OR WHERE OTHERWISE REQUIRED BY COUNCIL'S REPRESENTATIVE.
8. TERMINAL TREATMENTS SHALL BE PROVIDED SO THAT THE BARRIER FENCE IS NOT HAZARDOUS TO CYCLISTS.
9. ALL STEEL COMPONENTS SHALL BE HOT-DIP GALVANISED TO AS/NZS 1214, AS/NZS 4680 AND AS/NZS 4792 AS REQUIRED. CONSIDER USING STAINLESS STEEL COMPONENTS IN A MARINE ENVIRONMENT.
10. COLOUR POWDER-COATING MAY BE APPLIED TO THE BARRIER FENCE WITH THE APPROVAL OF COUNCIL'S REPRESENTATIVE.
11. DIMENSIONS OF BARRIER FENCES MAY VARY BETWEEN MANUFACTURERS.



FULL BARRIER FENCE

SCALE 1:30



CONCRETE FOOTING DETAIL

SECTION A

SCALE 1:30

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500 1:10

0 300 600 900 1200 1500 1:30

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	CS/TW
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

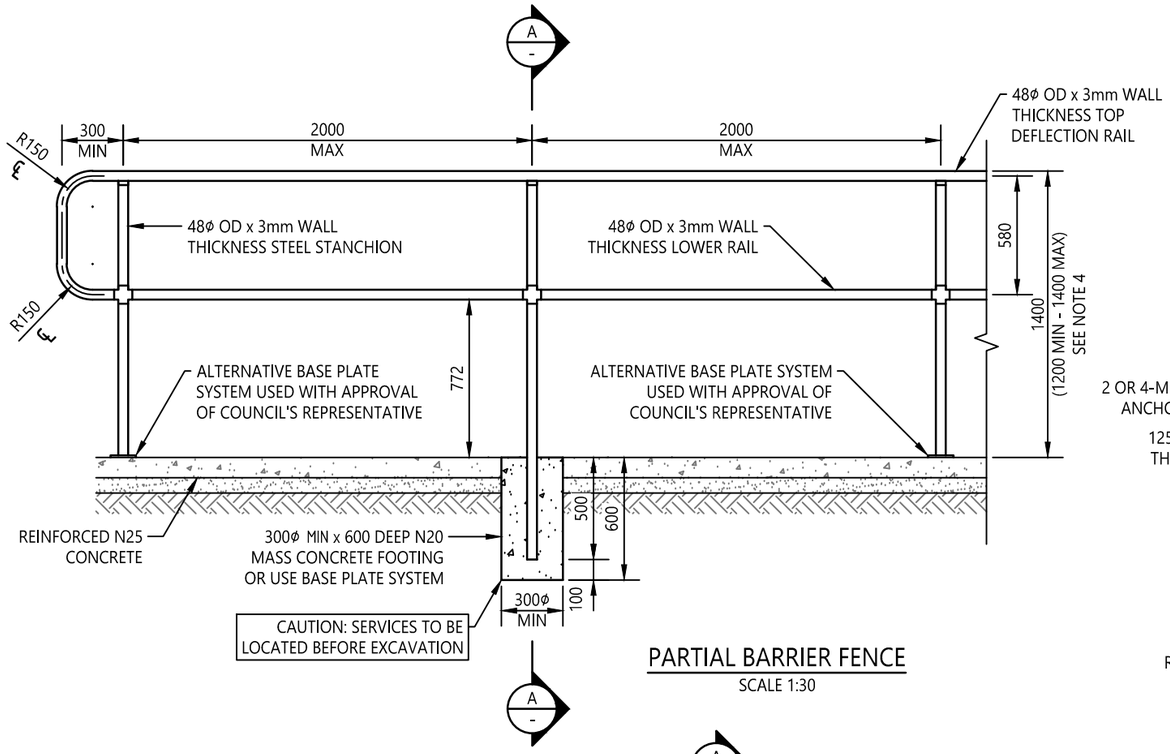
Central Coast Council

STANDARD DRAWING

FENCE SERIES

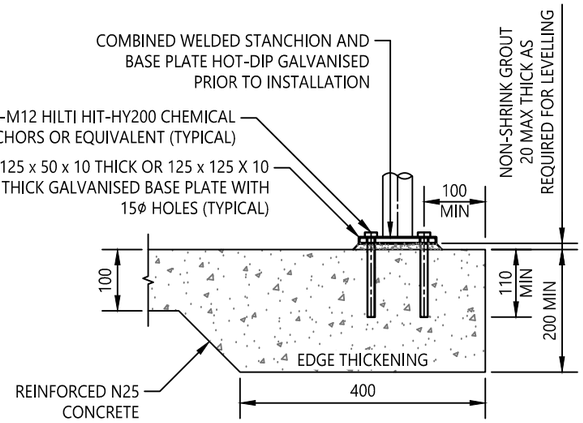
FULL AND PARTIAL BARRIER PEDESTRIAN FENCE

DRAWING NUMBER	REV
SD0701	-
SHEET 1 OF 1	A3



PARTIAL BARRIER FENCE

SCALE 1:30

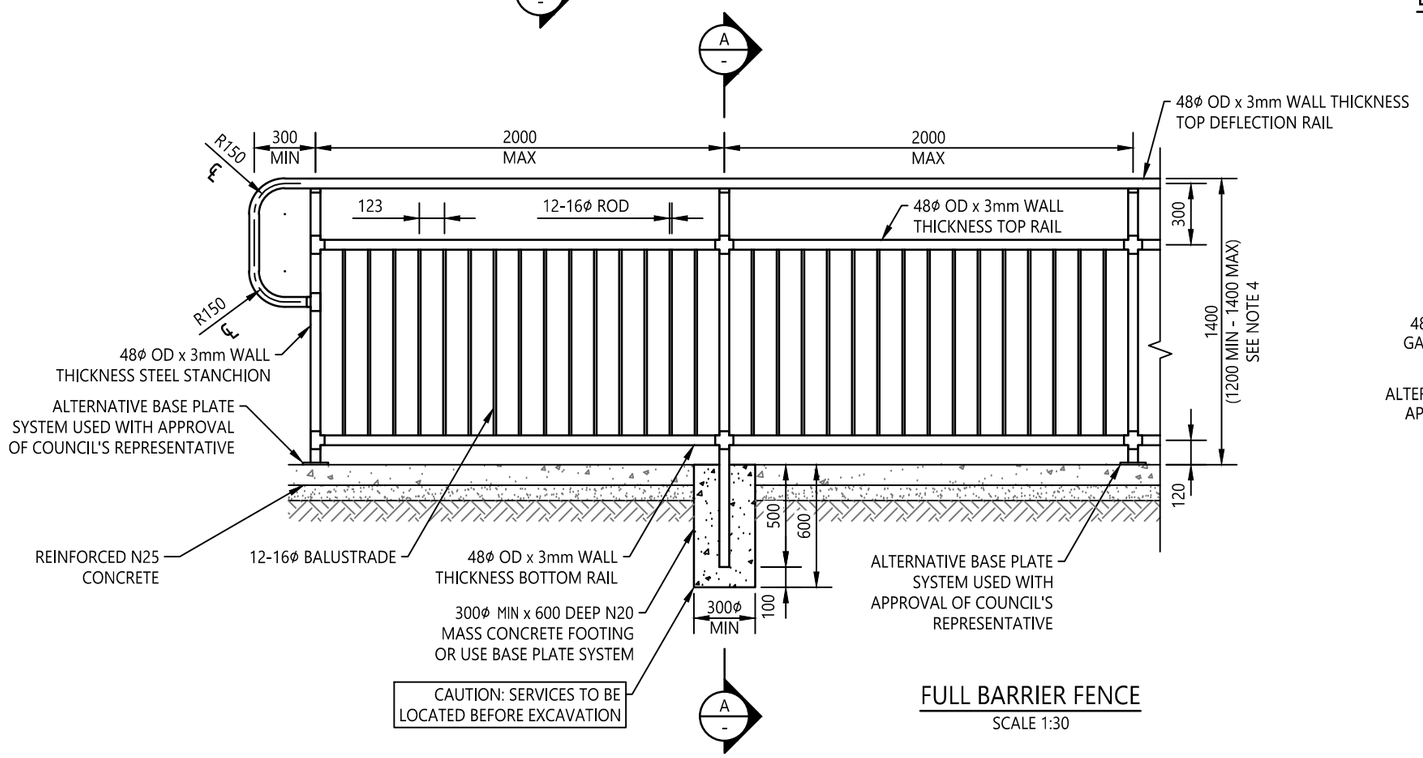


BASE PLATE DETAIL

SCALE 1:10

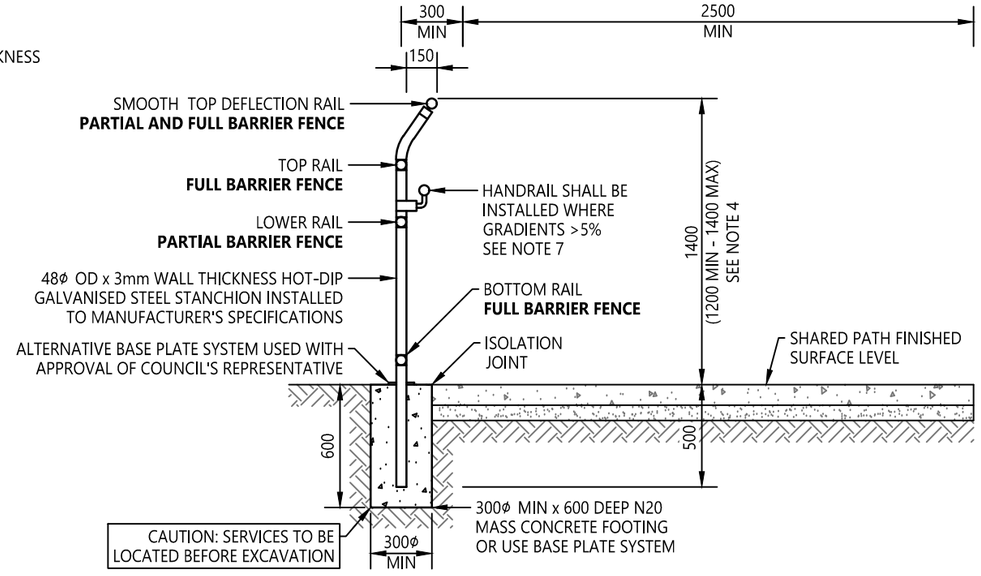
NOTES:

1. REFER TO THE RELEVANT AUSTROADS GUIDELINES AND AUSTRALIAN STANDARDS FOR DESIGN REQUIREMENTS OF BARRIER FENCES.
2. BARRIER FENCE TYPE SELECTION TO BE DETERMINED BY HAZARD RISK ASSESSMENT METHODOLOGY. REFER TO COUNCIL'S BARRIER SELECTION GUIDELINES AND THE MANUFACTURER'S SPECIFICATIONS.
3. REFER TO COUNCIL'S STANDARD DRAWING SD0601 FOR SHARED PATH REQUIREMENTS FOR BARRIER FENCES AT BATTERS AND VERTICAL DROPS.
4. WHERE THE FENCE IS PROTECTING PATH USERS FROM A VERY SEVERE HAZARD, THE FENCE HEIGHT SHALL BE INCREASED TO 1.4m OR HIGHER.
5. BARRIER FENCES PLACED WITHIN CLEAR ZONES IN ROAD RELATED AREAS SHOULD BE ASSESSED FOR ROADSIDE SUITABILITY.
6. TfNSW ROADSIDE AND MEDIAN PEDESTRIAN FENCES SHALL BE PROVIDED ON CLASSIFIED ROADS AND ON OTHER ROADS WHERE CONSIDERED BY COUNCIL'S REPRESENTATIVE TO BE APPROPRIATE FOR ROAD USER SAFETY REASONS.
7. PEDESTRIAN ASSIST DISABILITY HANDRAILS (865mm MIN 1000mm MAX HIGH) SHALL BE PROVIDED ON RAMPS IN ACCORDANCE WITH AS 1428.1, OR WHERE OTHERWISE REQUIRED BY COUNCIL'S REPRESENTATIVE.
8. TERMINAL TREATMENTS SHALL BE PROVIDED SO THAT THE BARRIER FENCE IS NOT HAZARDOUS TO CYCLISTS.
9. ALL STEEL COMPONENTS SHALL BE HOT-DIP GALVANISED TO AS/NZS 1214, AS/NZS 4680 AND AS/NZS 4792 AS REQUIRED. CONSIDER USING STAINLESS STEEL COMPONENTS IN A MARINE ENVIRONMENT.
10. COLOUR POWDER-COATING MAY BE APPLIED TO THE BARRIER FENCE WITH THE APPROVAL OF COUNCIL'S REPRESENTATIVE.
11. DIMENSIONS OF BARRIER FENCES MAY VARY BETWEEN MANUFACTURERS.



FULL BARRIER FENCE

SCALE 1:30



CONCRETE FOOTING DETAIL

SECTION A - A

SCALE 1:30

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500 1:10

0 300 600 900 1200 1500 1:30

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	CS/TW
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

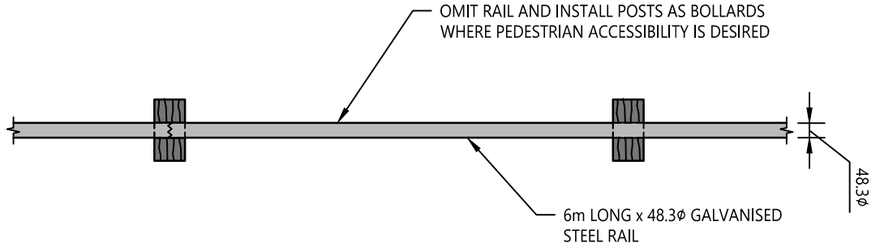
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

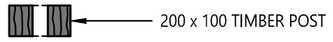
STANDARD DRAWING

FENCE SERIES
BICYCLE SAFETY BARRIER FENCE

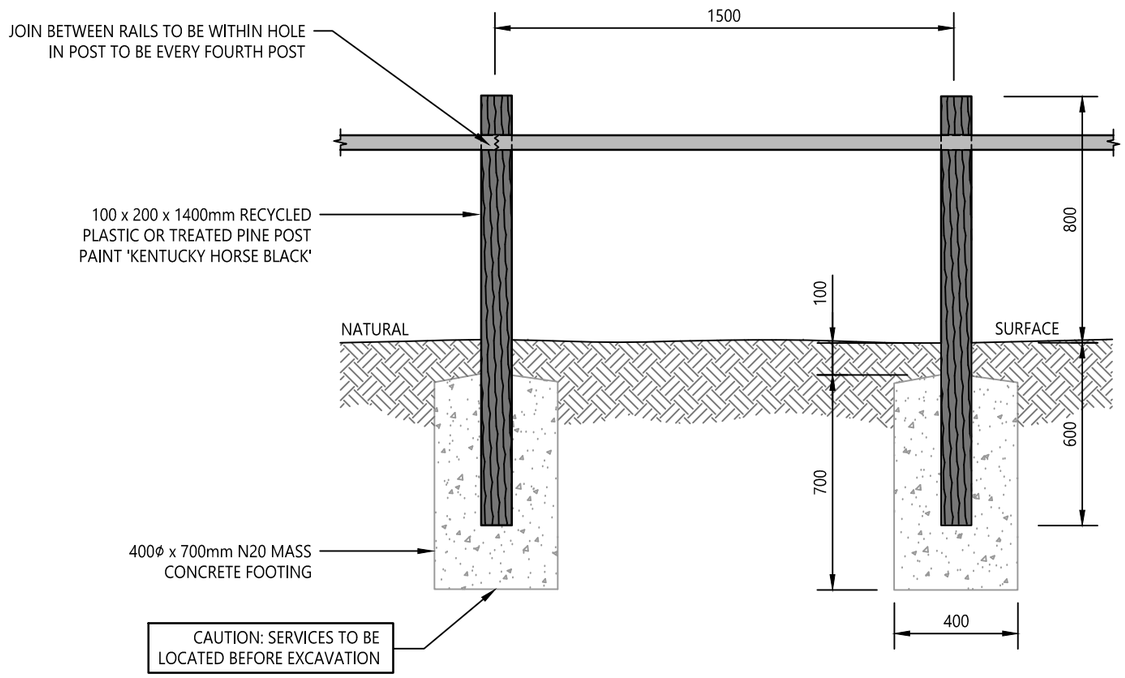
DRAWING NUMBER	REV
SD0702	-
SHEET 1 OF 1	A3



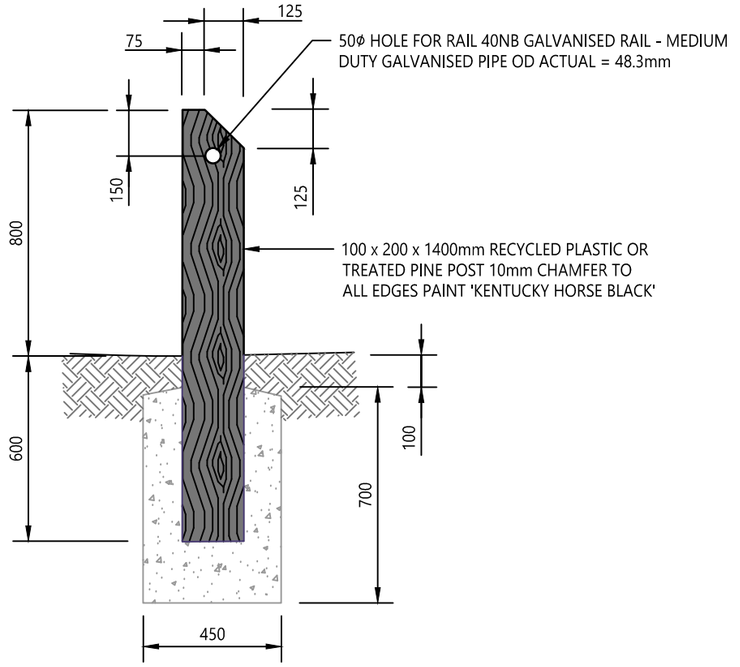
PLAN VIEW
SCALE 1:20



PLAN VIEW
SCALE 1:20



POST AND RAIL DETAILS
SCALE 1:20



POST DETAILS
SCALE 1:20

POST AND RAIL FENCE AND TIMBER BOLLARD - TYPE 1

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000

1:20

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

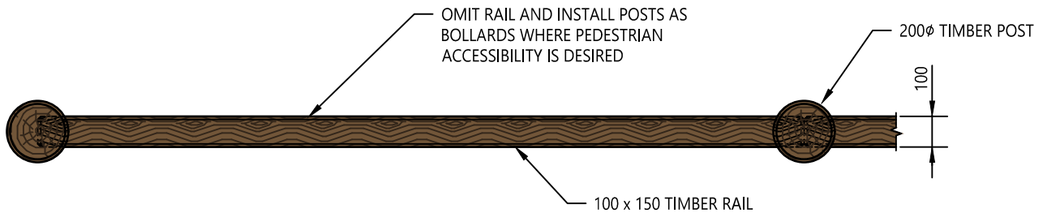
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

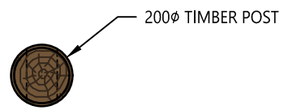
FENCE SERIES
POST AND RAIL FENCE AND TIMBER BOLLARD

STANDARD DRAWING

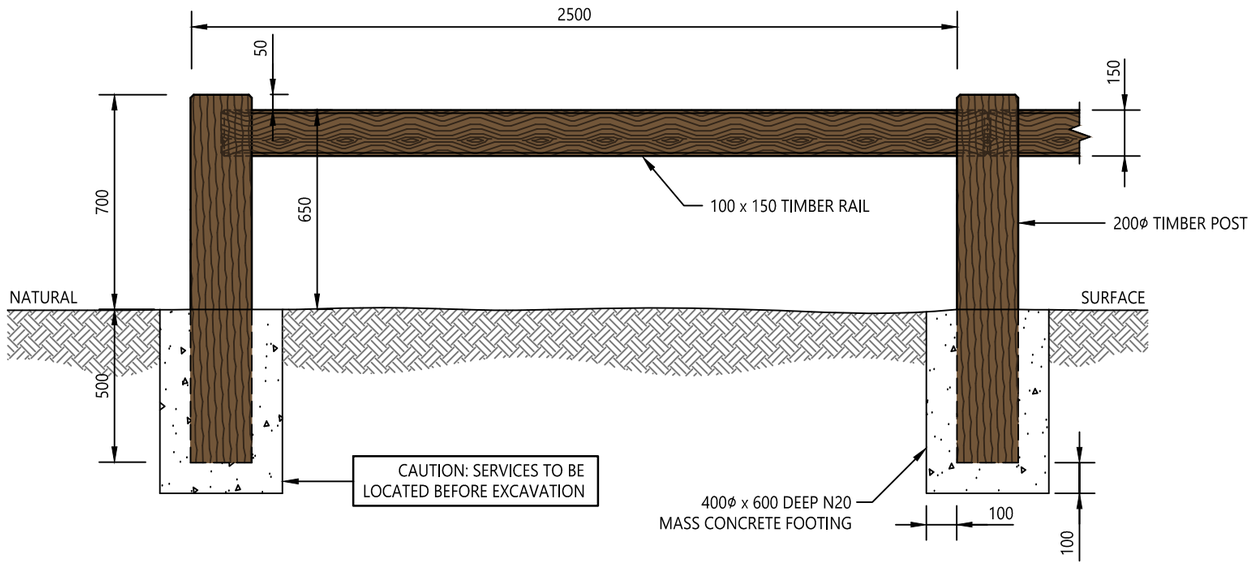
DRAWING NUMBER	REV
SD0703	-
SHEET 1 OF 2	A3



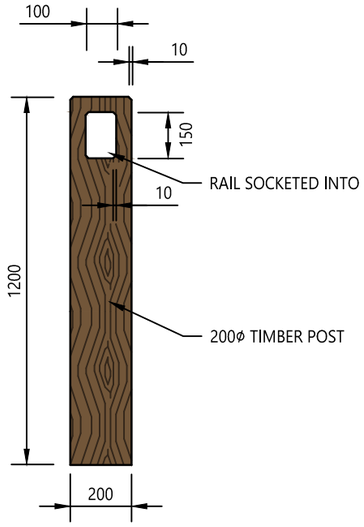
PLAN VIEW
SCALE 1:20



PLAN VIEW
SCALE 1:20



POST AND RAIL DETAILS
SCALE 1:20



POST DETAILS
SCALE 1:20

POST AND RAIL FENCE AND TIMBER BOLLARD - TYPE 2

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000
1:20
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

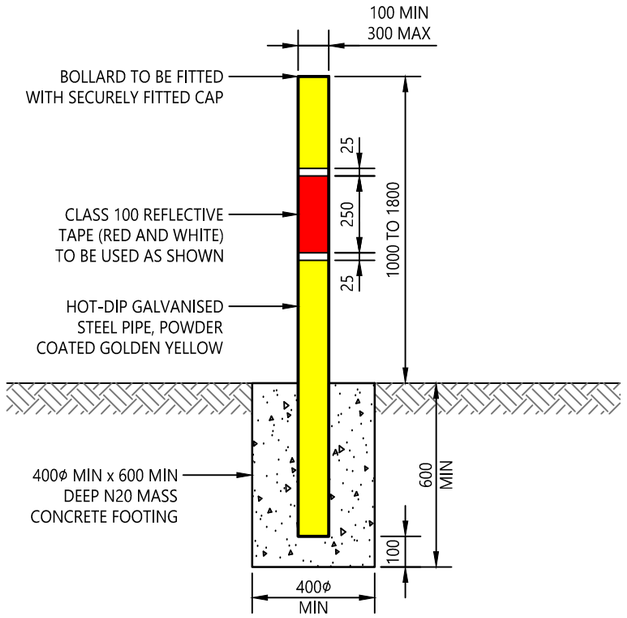
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

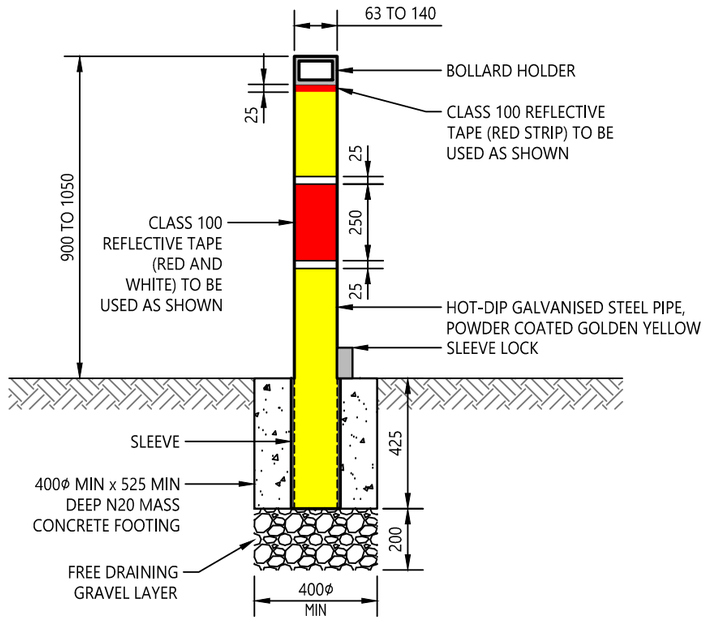
FENCE SERIES
POST AND RAIL FENCE AND TIMBER BOLLARD

STANDARD DRAWING

DRAWING NUMBER	REV
SD0703	-
SHEET 2 OF 2	A3



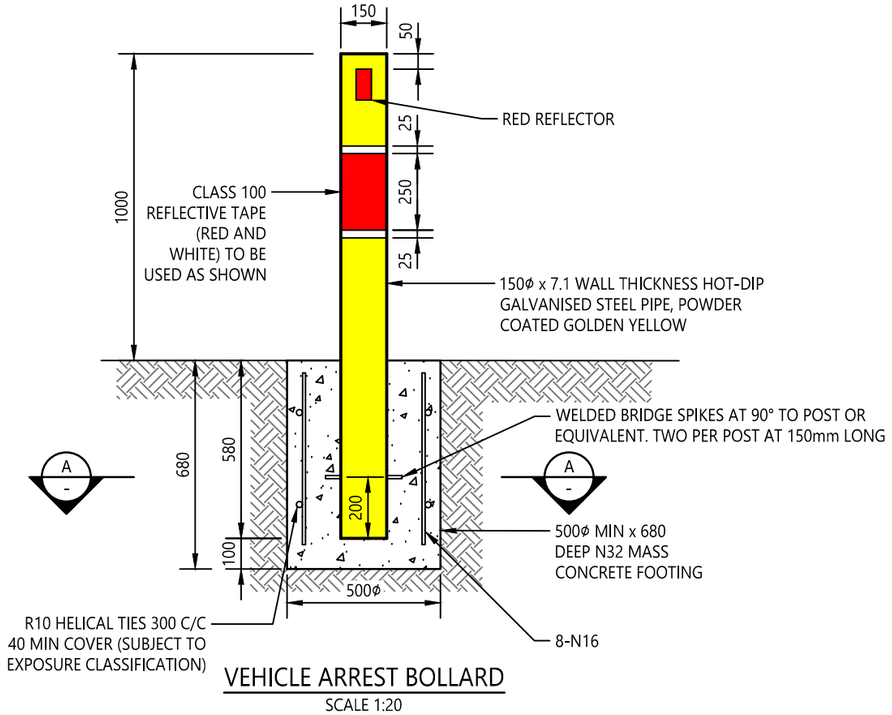
STEEL BOLLARD
SCALE 1:20



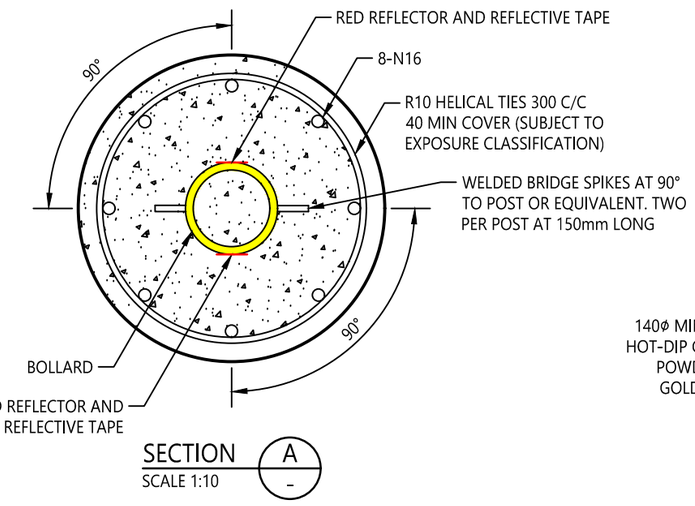
REMOVABLE BOLLARD
SCALE 1:20

NOTES:

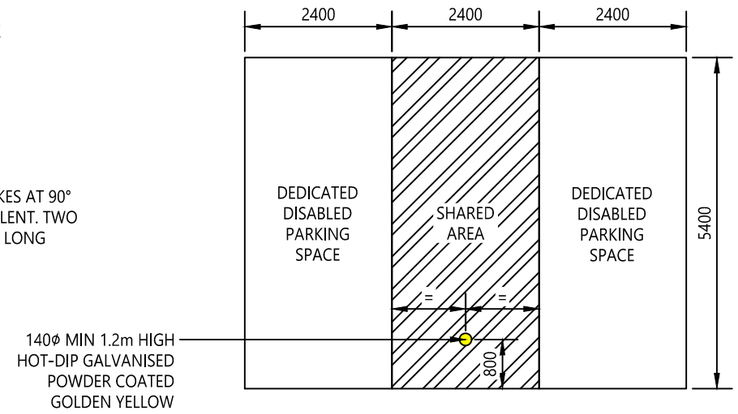
1. CONCRETE STRENGTH GRADE TO BE N20, UNLESS OTHERWISE SPECIFIED.
2. BOLLARDS SHALL BE HOT-DIP GALVANISED AND POWDER COATED GOLDEN YELLOW, UNLESS OTHERWISE SPECIFIED.
3. CONSIDER USE OF STAINLESS STEEL BOLLARDS FOR INSTALLATIONS IN A MARINE ENVIRONMENT.
4. BOLLARDS AND FIXINGS SHALL BE INSTALLED TO THE MANUFACTURER'S SPECIFICATIONS.
5. VEHICLE ARREST BOLLARDS SHALL BE INSTALLED IN A SERIES TO PREVENT VEHICLE PENETRATION.
6. DIMENSIONS OF BOLLARDS MAY VARY BETWEEN MANUFACTURERS.



VEHICLE ARREST BOLLARD
SCALE 1:20



SECTION A-
SCALE 1:10



DISABLED PARKING SPACE BOLLARD
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000 1:20

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

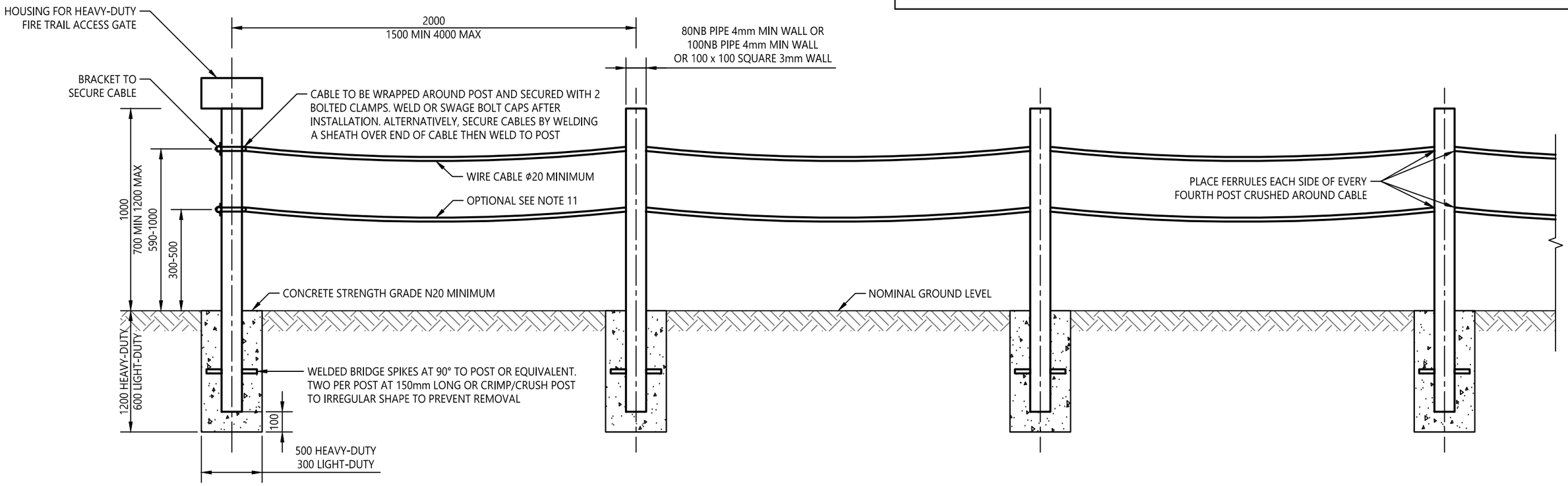
FENCE SERIES
STEEL BOLLARD

STANDARD DRAWING

DRAWING NUMBER	REV
SD0704	-
SHEET 1 OF 1	A3

NOTES:

1. THIS STANDARD DRAWING IS BASED ON DRAWING 1065WM050 BY iINVENT PTY LTD DATED 6/9/2017.
2. USE 80NB OR 100NB (4mm MINIMUM WALL) PIPE POSTS AS BOLLARDS OR CONCRETE OR SANDSTONE BLOCKS.
3. ALL STEELWORK TO BE HOT-DIP GALVANISED AFTER FABRICATION.
4. NOMINAL SPACE BETWEEN BOLLARDS 1500mm OR AS SHOWN IN THIS DRAWING.
5. CONCRETE STRENGTH GRADE TO BE N20 MINIMUM.
6. HEAVY-DUTY FOOTINGS 1200×500×500mm.
7. LIGHT-DUTY FOOTINGS 600×300×300mm.
8. ALTERNATIVE LIGHT-DUTY FOOTING Ø300×600.
9. BOLLARDS TO BE CAPPED AND FITTED WITH ANTI-TAMPER SCREWS.
10. GATE INSTALLATION (WHERE REQUIRED) TO BE SUPPORTED BY PLACEMENT OF BOLLARDS CABLED TOGETHER TO PREVENT ALTERNATIVE PATHS BEING FORMED AS DETAILED IN THIS DRAWING.
11. 60NB x 4mm WALL THICKNESS STAYS MAY BE REQUIRED AT TERMINAL ENDS OF THE FENCE AND AT CHANGES OF DIRECTION.
12. FOOTING DEPTH OF STAYS TO BE 500mm MINIMUM AND FOOTING WIDTH OF STAYS TO BE 400ø.
13. OPTIONAL DOUBLE CABLE TO BE USED FOR ADDITIONAL SECURITY IN AREAS WHERE SPECIFIED BY COUNCIL'S REPRESENTATIVE.
14. WHERE A PEDESTRIAN GAP IS REQUIRED, A GAP OF 400mm MAXIMUM SHOULD BE PROVIDED TO PREVENT ENTRY OF MOTORCYCLES.



FIRE TRAIL STEEL POST AND CABLE FENCE

SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000

1:20

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

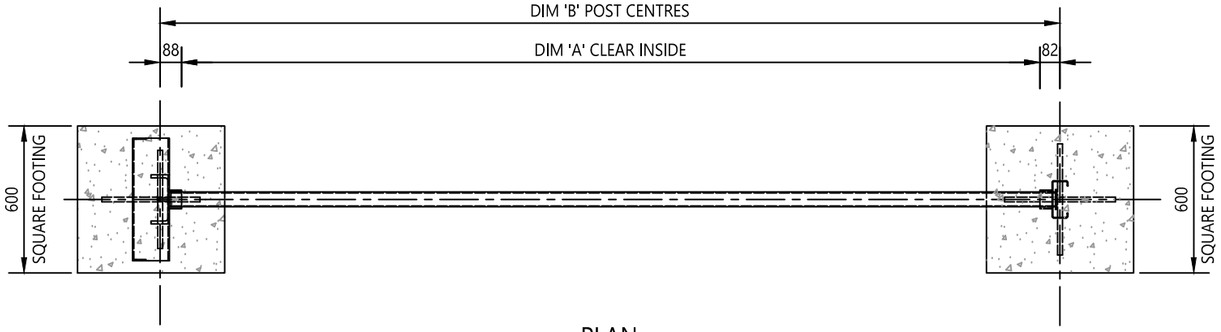
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

FENCE SERIES
FIRE TRAIL STEEL POST AND CABLE FENCE

DRAWING NUMBER	REV
SD0705	-
SHEET 1 OF 1	A3



PLAN

1 REQUIRED AS DRAWN

PARTS LIST				
ITEM	QTY	PART NUMBER	DESCRIPTION	VENDOR
1	1	1065WM055	FIXED POST WELDMENT	
2	1	1065WM057	SLIP RAIL WELDMENT	
3	1	1065WM058	END POST WELDMENT	

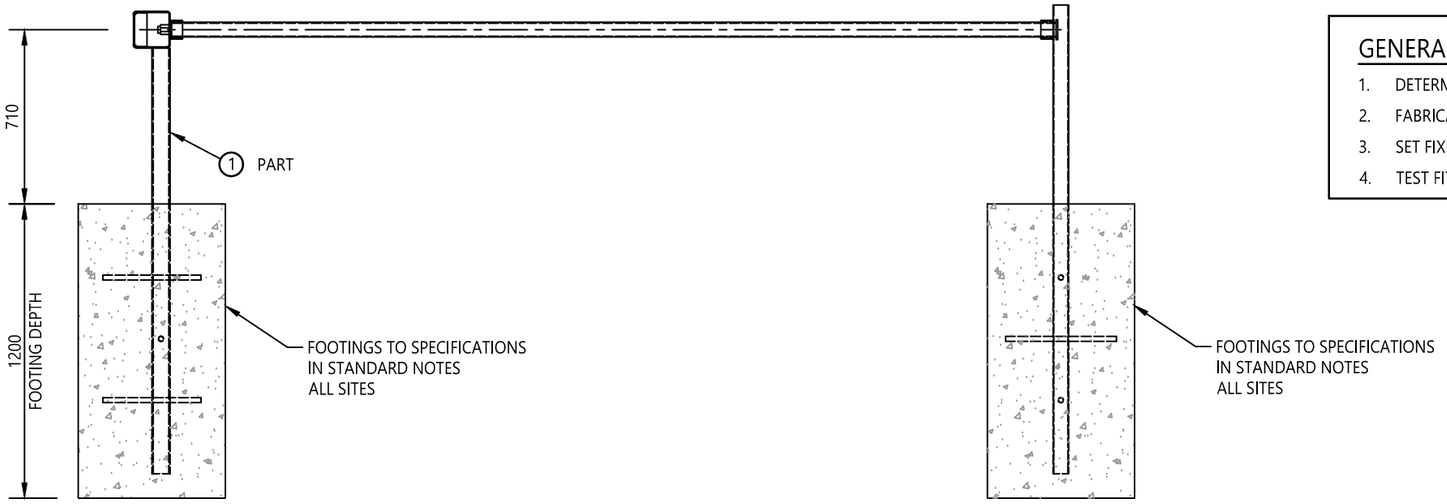
DIMENSION TABLE		
DIMENSION	LENGTH	COMENTS
DIM 'A'	3500	NOMINAL CLEAR OPENING
DIM 'B'	DIM 'A' + 170	POST CENTRES
DIM 'C'	DIM 'A' + 107	SLIP RAIL LENGTH SEE SHEET 4

STANDARD NOTES:

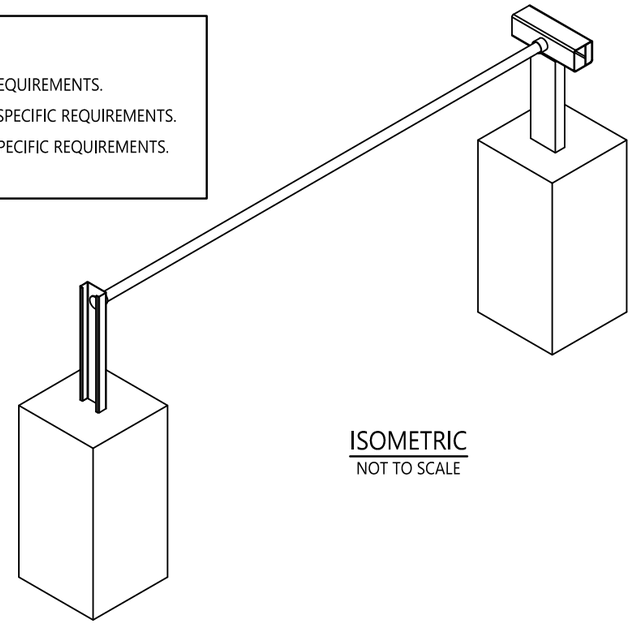
1. THIS STANDARD DRAWING IS BASED ON DRAWING 1065GA003 BY iINVENT PTY LTD DATED 6/5/2014.
2. UNLESS OTHERWISE SPECIFIED THE FOLLOWING STANDARDS APPLY. THIS DOES HOWEVER ALLOW FOR SITE SPECIFIC ALTERATIONS AS NECESSARY WHERE AGREED PRIOR TO PROCUREMENT.
3. ALL CONCRETE MUST BE PROCURED IN READY MIX STATE AND DOCUMENTATION ON STRENGTH GRADE (N20) AND VOLUMES PROVIDED TO COUNCIL UPON REQUEST.
4. ALL SPOIL FROM EXCAVATIONS MUST BE EITHER SPREAD ON SITE (TAKING CARE TO MINIMISE EROSION AN SEDIMENTATION AND IMPACT ON VEGETATION) OR DISPOSED OF AT COUNCIL'S WASTE MANAGEMENT FACILITY (RECEIPT TO BE PROVIDED ON REQUEST). THIS IS TO BE AGREED WITH COUNCIL'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORKS.
5. FIRE TRAIL GATES AND BOLLARDS SHALL BE FABRICATED TO STANDARDS DETAILED ON COUNCIL'S STANDARD DRAWING.
6. FIRE TRAIL GATES ARE TO OPEN INWARDS TO THE RESERVE (ASSIST PREVENTION OF ILLEGAL OPENING).
7. BOLLARDS ARE TO BE SPACED AS REGULARLY AS POSSIBLE TAKING INTO ACCOUNT TERRAIN, ACCESS FOR INSTALLATION AND SUBSURFACE CONDITIONS. THIS WILL MEAN CENTRES AT DISTANCES OF NO LESS THAN 1200mm AND NO MORE THAN 2200mm EXCEPT IN EXCEPTIONAL CIRCUMSTANCES.
8. GATES AND BOLLARDS TO BE PLACED TO COMPLETELY SHUT DOWN THE ACCESS WIDTH AS FAR AS REASONABLY POSSIBLE. ATTACH CABLES DIRECTLY TO GATE POSTS AND LOCATE TERMINAL BOLLARDS AS CLOSE AS POSSIBLE TO EXISTING FENCE LINES OR LANDSCAPE FEATURES. A KEY FOCUS IS TO REDUCE ENTRY OF MOTORCYCLES TO PUBLIC RESERVES.
9. GATES AND BOLLARDS ARE TO BE PLACED TO ACCOMMODATE SERVICES, INCLUDING (BUT NOT LIMITED TO) TELECOMMUNICATION, WATER, SEWER, DRAINAGE, ELECTRICITY AND GAS INFRASTRUCTURE.
10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO UNDERTAKE 'DIAL BEFORE YOU DIG' ASSESSMENT OF THE SITE BEFORE COMMENCEMENT OF CONSTRUCTION TO ENSURE THERE IS NO DAMAGE TO INFRASTRUCTURE.
11. GATES AND BOLLARDS ARE TO BE LOCATED TO USE NATURAL OR MAN-MADE FEATURES TO CLOSE DOWN ACCESS. FOR EXAMPLE, STEEP SLOPES, THICK VEGETATION AND DRAINAGE INFRASTRUCTURE. COUNCIL STAFF WILL PROVIDE CLARIFICATION ON INDIVIDUAL SITES ON REQUEST, OR AT SITE MEETINGS WHERE ARRANGED.
12. OPEN EARTHWORKS MUST BE MADE SAFE OR SUITABLE AND/OR BARRICADES USED AS NECESSARY WHILST AWAITING INSPECTION BY COUNCIL'S REPRESENTATIVE.
13. ONE STANDARD SIGN POST TO BE INSTALLED ADJACENT TO EACH GATE OR SLIP RAIL.
14. HOLD POINTS WILL BE INCLUDED AT COMPLETION OF THE EARTHWORKS, PRIOR TO THE CONCRETE POUR FOR EACH SITE.
15. WHERE REQUESTED, EXISTING LOG FENCING IS TO BE REMOVED AND DISPOSED OF APPROPRIATELY (TIP RECEIPTS TO BE PROVIDED TO COUNCIL'S REPRESENTATIVE).

GENERAL NOTES:

1. DETERMINE SITE SPECIFIC CLEAR INSIDE REQUIREMENTS.
2. FABRICATE SLIP RAIL WELDMENT TO SITE SPECIFIC REQUIREMENTS.
3. SET FIXED POST AND END POST TO SITE SPECIFIC REQUIREMENTS.
4. TEST FIT SLIP RAIL.



ELEVATION



ISOMETRIC

NOT TO SCALE

FIRE TRAIL (SLIP RAIL) ACCESS GATE - GENERAL ARRANGEMENT AND STANDARD NOTES

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 250 500 750 1000 1250

1:25

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

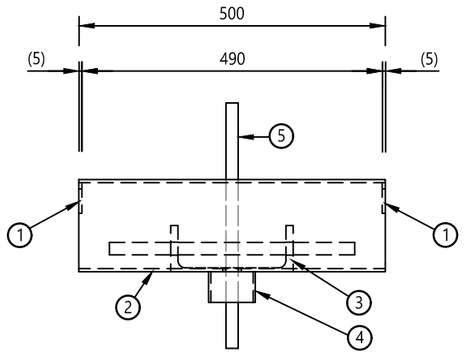
Central Coast Council

FENCE SERIES

FIRE TRAIL (SLIP RAIL) ACCESS GATE

STANDARD DRAWING

DRAWING NUMBER	REV
SD0706	-
SHEET 1 OF 4	A3

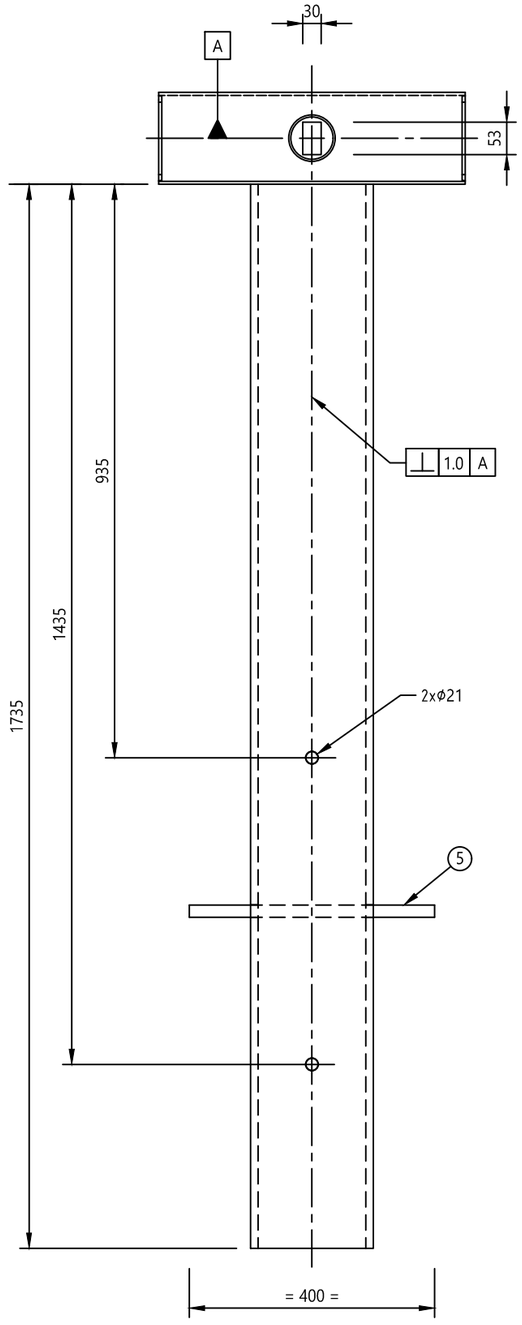


PLAN

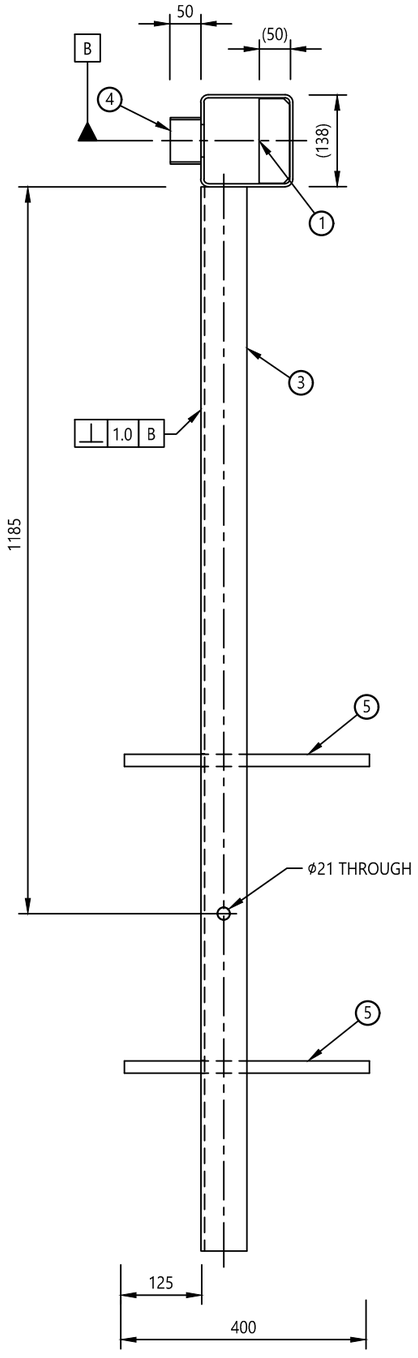
1 REQUIRED AS DRAWN

LEGEND

Part number ①



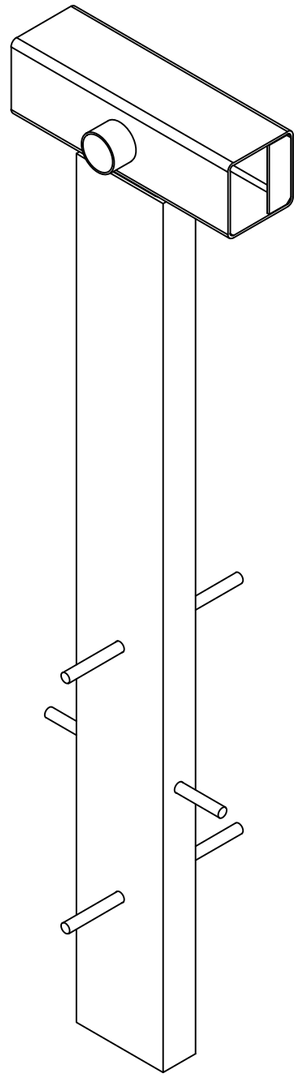
ELEVATION



END ELEVATION

NOTES:

1. THE STANDARD DRAWING IS BASED ON DRAWING 1065WM055 BY iINVENT PTY LTD DATED 21/5/2014.
2. ALL WELDS 5mm FILLET UNLESS OTHERWISE NOTED.
3. BREAK ALL CORNERS AND SHARPS.
4. FINISH FRAMES WITH HOT-DIP GALVANISING.
5. MAKE NECESSARY MODIFICATIONS FOR HOT-DIP GALVANISING.



ISOMETRIC

NOT TO SCALE

ALTERNATIVE SPIKE DETAILS (PART 5):

DRILL 12ø HOLE THROUGH POST PRIOR TO GALVANISING AND INSERT 10ø x 400mm LONG ROUND BAR AT TIME OF INSTALLATION.

PARTS LIST			
ITEM	QTY	MATERIAL	LENGTH
1	2	138x50x5mm PLATE AS 3678 - 250	
2	1	150x150x5mm SHS AS 1163-C350L0/C450L0	500mm
3	1	200 PFC AS 3679.1-250/300 PLUS	1735mm
4	1	90NB AS 1074/1163 MEDIUM	50mm
5	3	ø20 ROD AS 3678 - 250	400mm

FIXED POST WELDMENT

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500

1:10

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

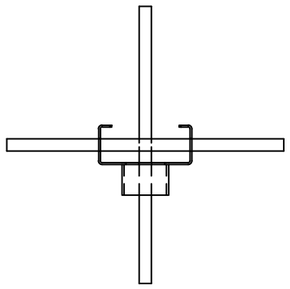
Central Coast Council

FENCE SERIES

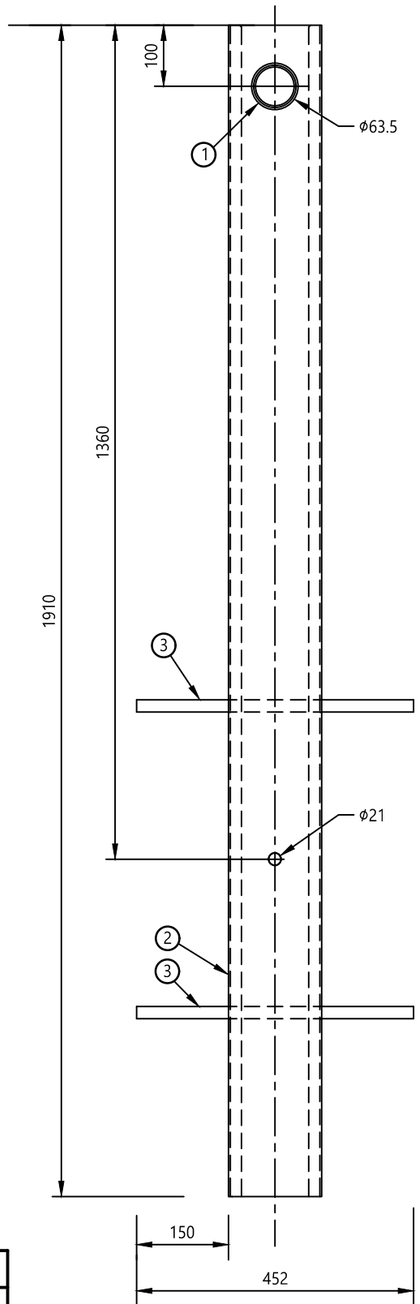
FIRE TRAIL (SLIP RAIL) ACCESS GATE

STANDARD DRAWING

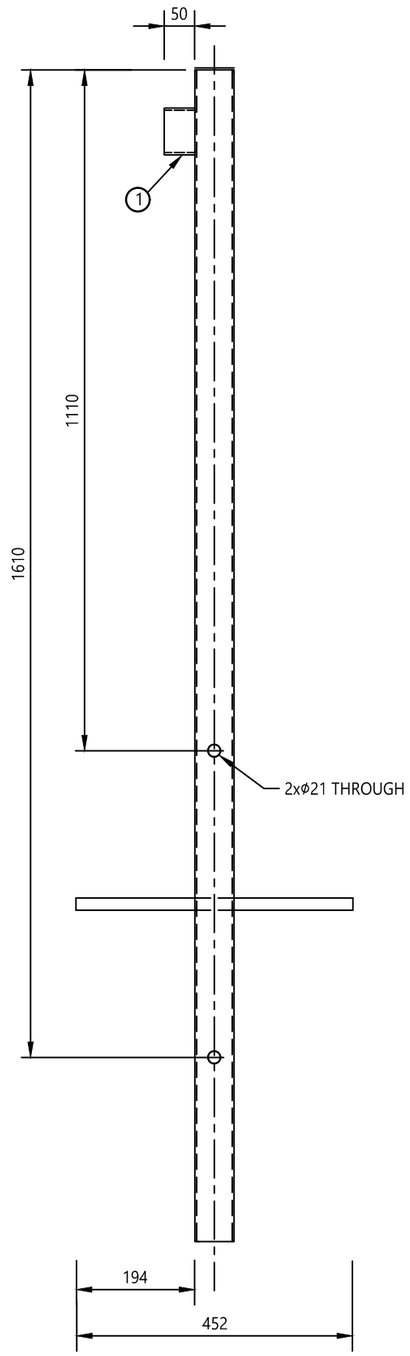
DRAWING NUMBER	REV
SD0706	-
SHEET 2 OF 4	A3



PLAN
1 REQUIRED AS DRAWN



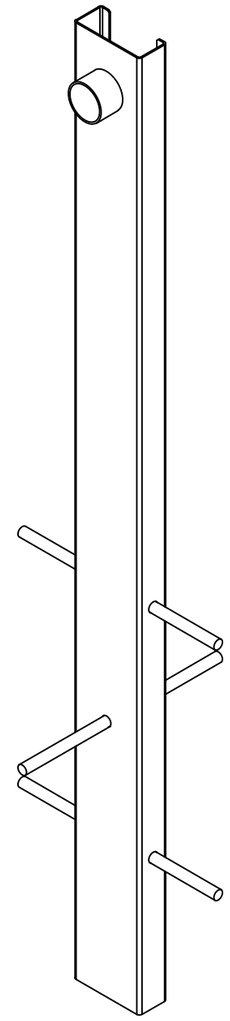
ELEVATION



END ELEVATION

NOTES:

1. THIS STANDARD DRAWING IS BASED ON DRAWING 1065WM058 BY iINVENT PTY LTD DATED 26/5/2014.
2. ALL WELDS 5mm FILLET UNLESS OTHERWISE NOTED.
3. BREAK ALL CORNERS AND SHARPS.
4. FINISH FRAMES WITH HOT-DIP GALVANISING.
5. MAKE NECESSARY MODIFICATIONS FOR HOT-DIP GALVANISING.



ISOMETRIC
NOT TO SCALE

PARTS LIST			
ITEM	QTY	MATERIAL	LENGTH
1	1	90NB AS 1074/1163 MEDIUM	50mm
2	1	LL15230 AS 3678 - 250	1910mm
3	3	ϕ20 ROD AS 3678 - 250	452mm

END POST WELDMENT

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 100 200 300 400 500
1:10

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

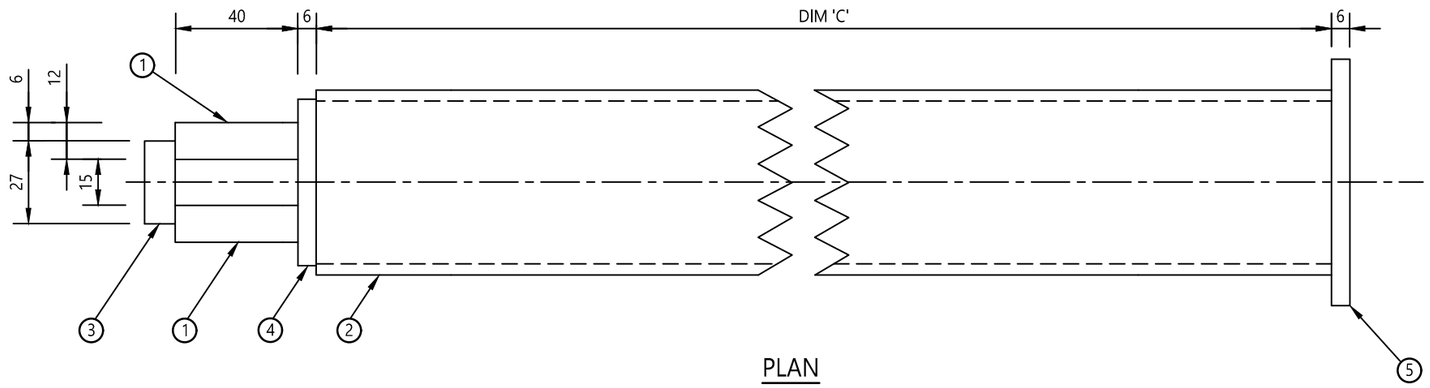
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

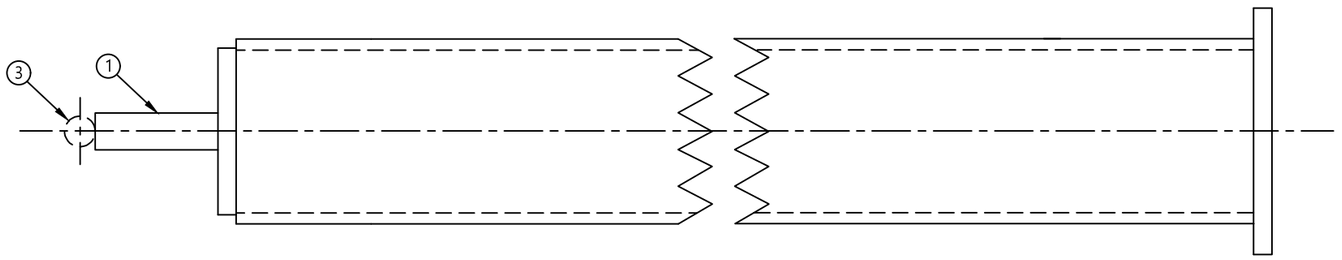
FENCE SERIES
FIRE TRAIL (SLIP RAIL) ACCESS GATE

STANDARD DRAWING

DRAWING NUMBER	REV
SD0706	-
SHEET 3 OF 4	A3



PLAN
1 REQUIRED AS DRAWN



ELEVATION

NOTES:

1. THIS STANDARD DRAWING IS BASED ON DRAWING 1065WM057, 1065PT501 AND 1065PT502 BY iINVENT PTY LTD DATED 26/5/2014.
2. ALL WELDS 5mm FILLET UNLESS OTHERWISE NOTED.
3. BREAK ALL CORNERS AND SHARPS.
4. FINISH FRAMES WITH HOT-DIP GALVANISING.
5. MAKE NECESSARY MODIFICTAIONS FOR HOT-DIP GALVANISING.
6. FOR DETAILS ON DIM 'C' SEE SHEET 1.

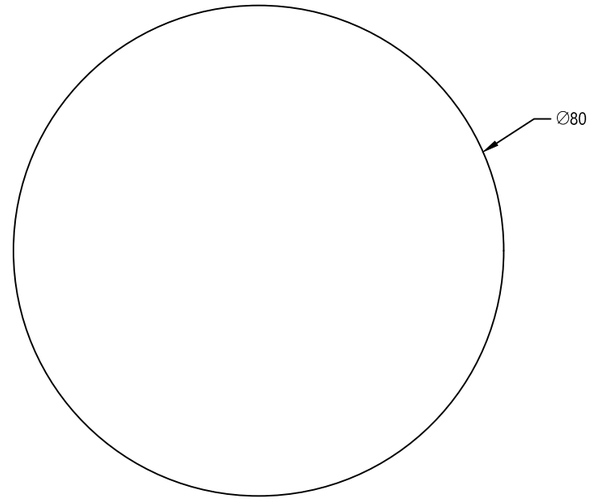


PLATE CUTTING
1 REQUIRED AS DRAWN
SCALE 1:1

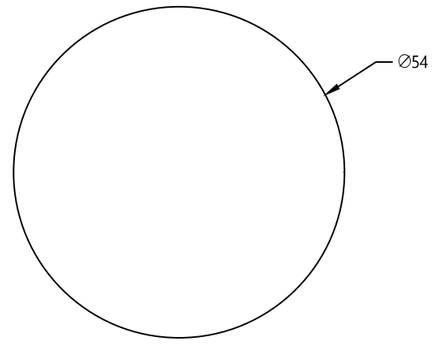


PLATE CUTTING
1 REQUIRED AS DRAWN
SCALE 1:1

PARTS LIST					
ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	LENGTH
1	2			12 SQUARE AS 3678-250	40mm
2	1			50NB AS 1074/1163 MEDIUM AS 1163-C350L0/C450L0	DIM 'C'
3	1			⌀10 ROD AS 3678 - 250	27mm
4	1	1065PT501	SMALL END PLATE		
5	1	1065PT502	LARGE END PLATE		

SLIP RAIL WELDMENT
SCALE 1:2

PARTS LIST		
MATERIAL	LENGTH	WIDTH
80 x 80 x 6 PLATE AS 3678 - 250	80.0	80.0
54 x 54 x 6 PLATE AS 3678 - 250	54.0	54.0

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 10 20 30 40 50 1:1
0 20 40 60 80 100 1:2
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

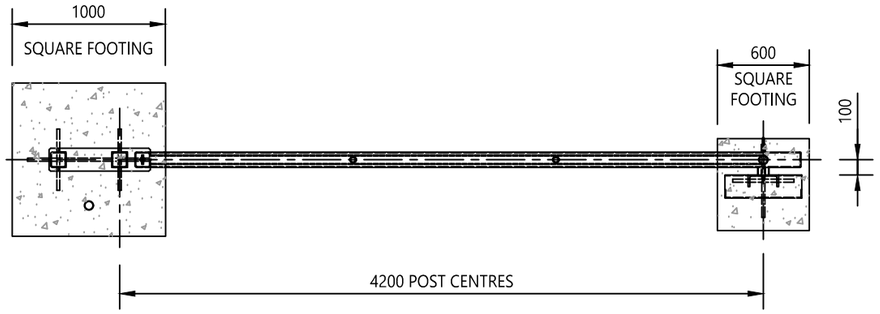
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

FENCE SERIES
FIRE TRAIL (SLIP RAIL) ACCESS GATE

STANDARD DRAWING

DRAWING NUMBER	REV
SD0706	-
SHEET 4 OF 4	A3



PLAN

1 REQUIRED AS DRAWN

GENERAL NOTES:

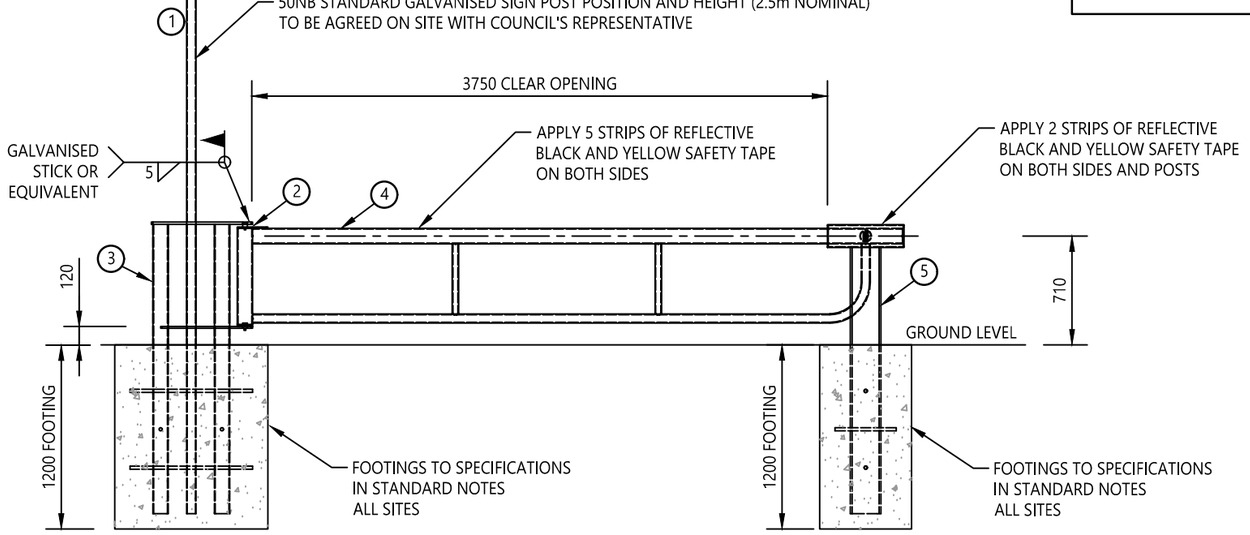
1. SET AND LEVEL GATE POST IN FOOTING.
2. SET AND LEVEL FIXED POST RELATIVE TO GATE POST.
3. AFTER CONCRETE SETS, ASSEMBLE GATE TO LOWER PIN IN GATE POST.
4. LOCATE TOP PIN AND CHECK GATE OPERATION.
5. WELD TOP PIN TO GATE POST AND APPLY SUITABLE GALVANISING PROTECTION.

LEGEND

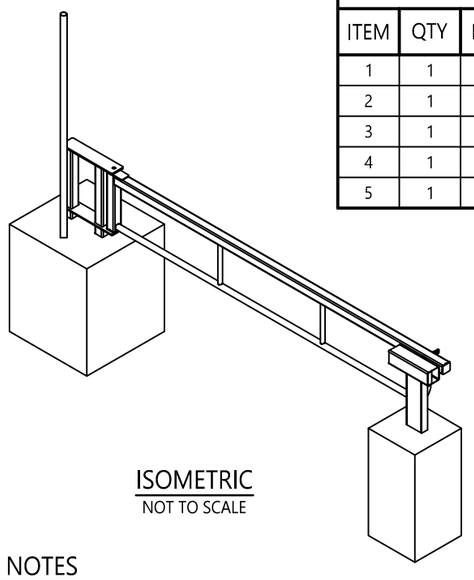
Part number ①

STANDARD NOTES:

1. THIS STANDARD DRAWING IS BASED ON DRAWING 1065GA001 BY iINVENT PTY LTD DATED 21/5/2014.
2. UNLESS OTHERWISE SPECIFIED THE FOLLOWING STANDARDS APPLY. THIS DOES HOWEVER ALLOW FOR SITE SPECIFIC ALTERATIONS AS NECESSARY WHERE AGREED PRIOR TO PROCUREMENT.
3. ALL CONCRETE MUST BE PROCURED IN READY MIX STATE AND DOCUMENTATION ON STRENGTH GRADE (N20) AND VOLUMES PROVIDED TO COUNCIL UPON REQUEST.
4. ALL SPOIL FROM EXCAVATIONS MUST BE EITHER SPREAD ON SITE (TAKING CARE TO MINIMISE EROSION AN SEDIMENTATION AND IMPACT ON VEGETATION) OR DISPOSED OF AT COUNCIL'S WASTE MANAGEMENT FACILITY (RECEIPT TO BE PROVIDED ON REQUEST). THIS IS TO BE AGREED WITH COUNCIL'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORKS.
5. FIRE TRAIL GATES AND BOLLARDS SHALL BE FABRICATED TO STANDARDS DETAILED ON COUNCIL'S STANDARD DRAWINGS.
6. FIRE TRAIL GATES ARE TO OPEN INWARDS TO THE RESERVE (ASSIST PREVENTION OF ILLEGAL OPENING).
7. BOLLARDS ARE TO BE SPACED AS REGULARLY AS POSSIBLE TAKING INTO ACCOUNT TERRAIN, ACCESS FOR INSTALLATION AND SUBSURFACE CONDITIONS. THIS WILL MEAN CENTRES AT DISTANCES OF NO LESS THAN 1200mm AND NO MORE THAN 2200mm EXCEPT IN EXCEPTIONAL CIRCUMSTANCES.
8. GATES AND BOLLARDS TO BE PLACED TO COMPLETELY SHUT DOWN THE ACCESS WIDTH AS FAR AS REASONABLY POSSIBLE. ATTACH CABLES DIRECTLY TO GATE POSTS AND LOCATE TERMINAL BOLLARDS AS CLOSE AS POSSIBLE TO EXISTING FENCE LINES OR LANDSCAPE FEATURES. A KEY FOCUS IS TO REDUCE ENTRY OF MOTORCYCLES TO PUBLIC RESERVES.
9. GATES AND BOLLARDS ARE TO BE PLACED TO ACCOMMODATE SERVICES, INCLUDING (BUT NOT LIMITED TO) TELECOMMUNICATION, WATER, SEWER, DRAINAGE, ELECTRICITY AND GAS INFRASTRUCTURE.
10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO UNDERTAKE 'DIAL BEFORE YOU DIG' ASSESSMENT OF THE SITE BEFORE COMMENCEMENT OF CONSTRUCTION TO ENSURE THERE IS NO DAMAGE TO INFRASTRUCTURE.
11. GATES AND BOLLARDS ARE TO BE LOCATED TO USE NATURAL OR MAN-MADE FEATURES TO CLOSE DOWN ACCESS. FOR EXAMPLE, STEEP SLOPES, THICK VEGETATION AND DRAINAGE INFRASTRUCTURE. COUNCIL STAFF WILL PROVIDE CLARIFICATION ON INDIVIDUAL SITES ON REQUEST, OR AT SITE MEETINGS WHERE ARRANGED.
12. OPEN EARTHWORKS MUST BE MADE SAFE OR SUITABLE AND/OR BARRICADES USED AS NECESSARY WHILST AWAITING INSPECTION BY COUNCIL'S REPRESENTATIVE.
13. ONE STANDARD SIGN POST TO BE INSTALLED ADJACENT TO EACH GATE OR SLIP RAIL.
14. HOLD POINTS WILL BE INCLUDED AT COMPLETION OF THE EARTHWORKS, PRIOR TO THE CONCRETE POUR FOR EACH SITE.
15. WHERE REQUESTED, EXISTING LOG FENCING IS TO BE REMOVED AND DISPOSED OF APPROPRIATELY (TIP RECEIPTS TO BE PROVIDED TO COUNCIL'S REPRESENTATIVE).



ELEVATION



ISOMETRIC

NOT TO SCALE

PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION	VENDOR
1	1		50NB STANDARD GAL SIGN POST	
2	1	1065PT102	TOP PIN	
3	1	1065WM053	GATE POST WELDMENT	
4	1	1065WM054	GATE WELDMENT	
5	1	1065WM055	FIXED POST WELDMENT	

GENERAL ARRANGEMENT AND STANDARD NOTES

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 400 800 1200 1600 2000

1:40

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

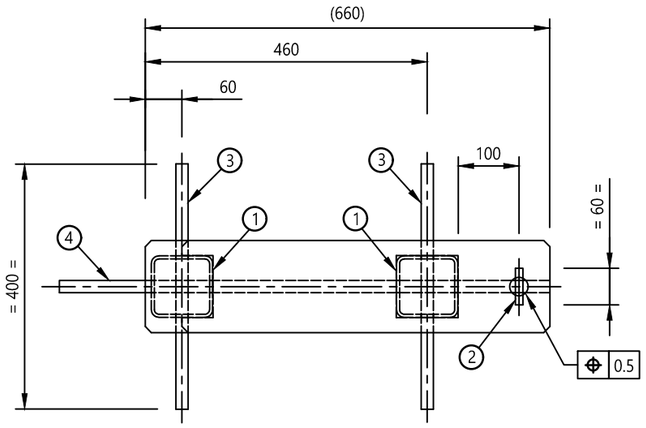
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

FENCE SERIES
FIRE TRAIL (SWING) ACCESS GATE

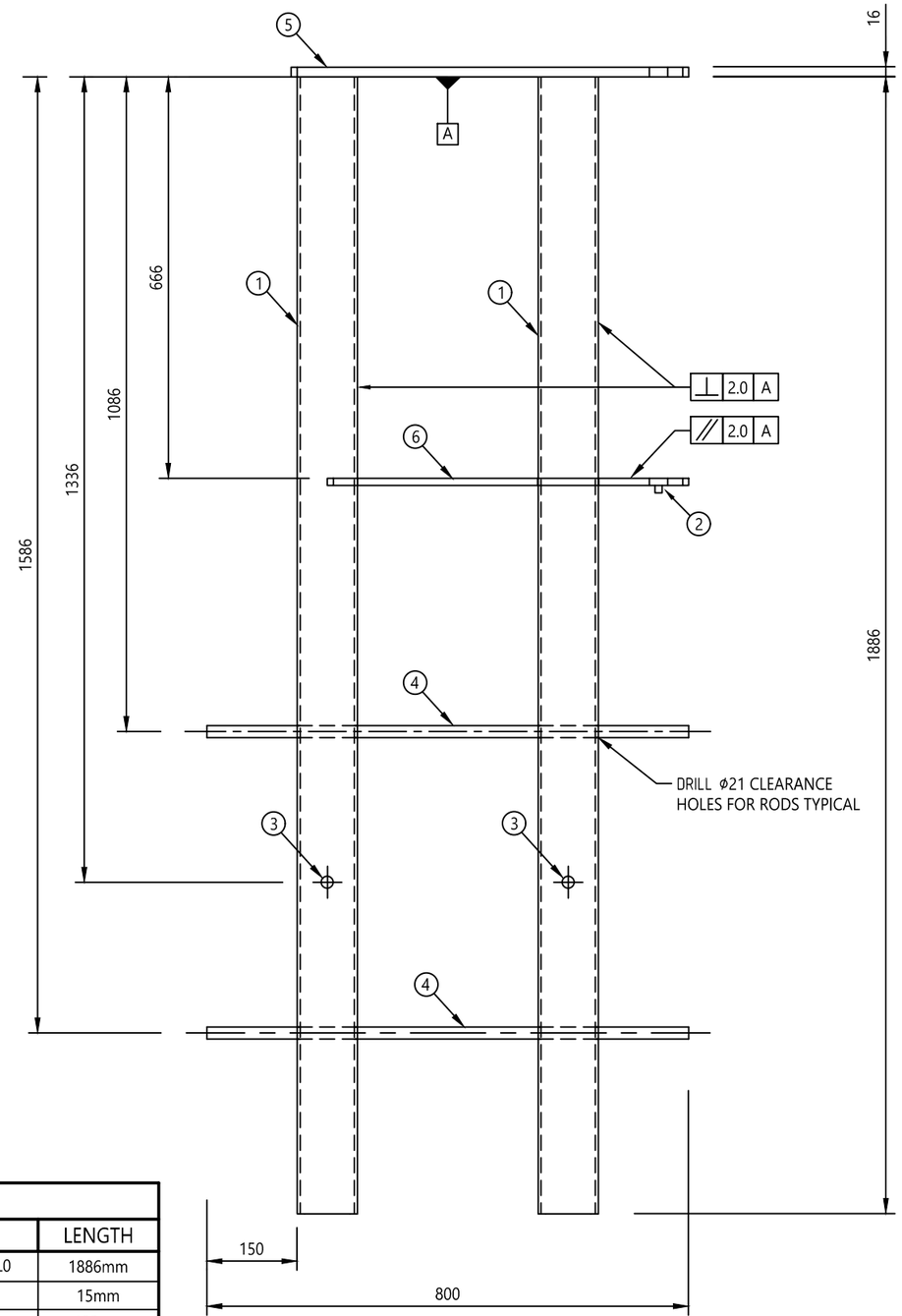
STANDARD DRAWING

DRAWING NUMBER	REV
SD0707	-
SHEET 1 OF 4	A3



PLAN

1 REQUIRED AS DRAWN

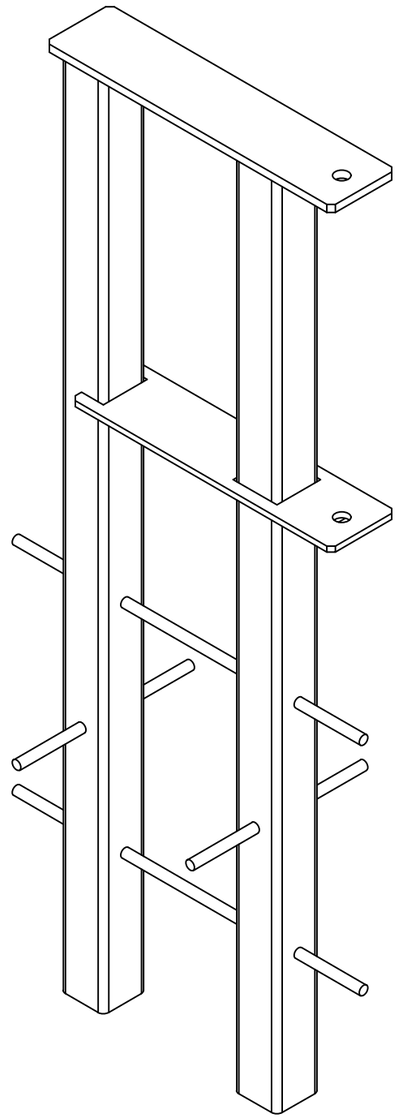


ELEVATION

GATE POST WELDMENT

NOTES:

1. THIS STANDARD DRAWING IS BASED ON DRAWING 1065WM053 BY iINVENT PTY LTD DATED 21/05/2014.
2. ALL WELDS TO BE 5mm FILLET UNLESS OTHERWISE NOTED.
3. BREAK ALL CORNERS AND SHARPS.
4. FINISH FRAMES WITH HOT-DIP GALVANISING.
5. MAKE NECESSARY MODIFICATIONS FOR HOT-DIP GALVANISING.



ISOMETRIC

NOT TO SCALE

LEGEND

Part number ①

PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	LENGTH
1	2			100x100x5mm SHS AS 1163-C350L0/C450L0	1886mm
2	1			12 SQUARE AS 3678 - 250	15mm
3	2			⌀20 ROD AS 3678 - 250	400mm
4	2			⌀20 ROD AS 3678 - 250	800mm
5	1	1065PT207	TOP HINGE PLATE		
6	1	1065PT208	BOTTOM HINGE PLATE		

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500

1:10

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

ROADS TRANSPORT DRAINAGE AND WASTE

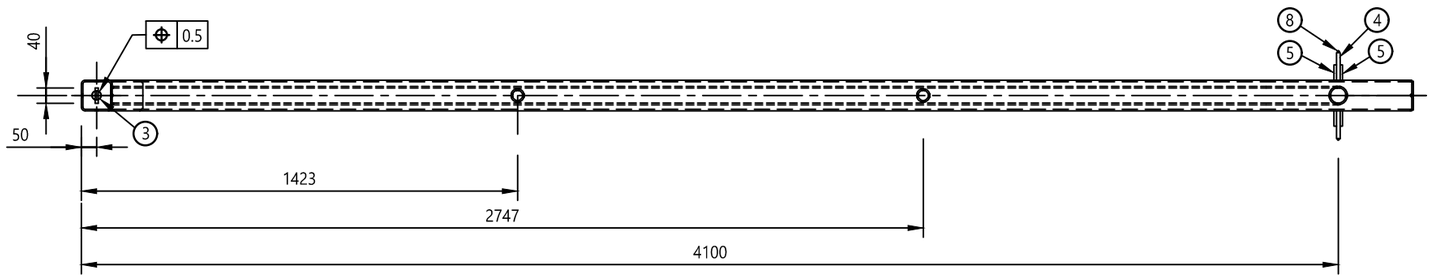
Central Coast Council

STANDARD DRAWING

FENCE SERIES

FIRE TRAIL (SWING) ACCESS GATE

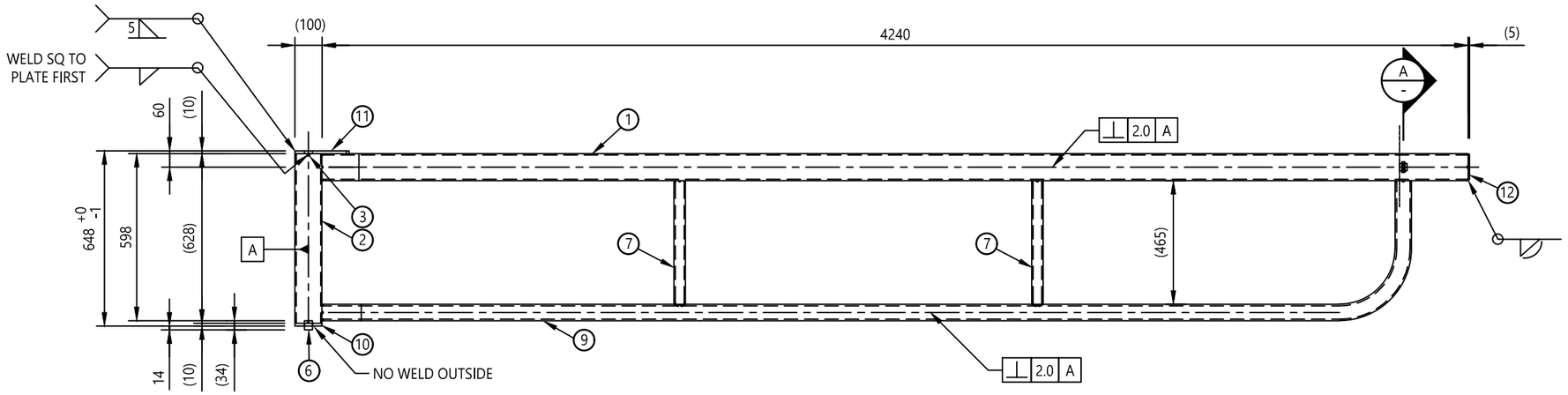
DRAWING NUMBER	REV
SD0707	-
SHEET 2 OF 4	A3



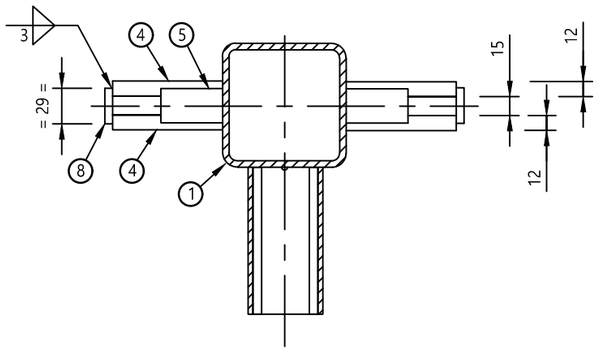
PLAN
SCALE 1:20
1 REQUIRED AS DRAWN

NOTES:

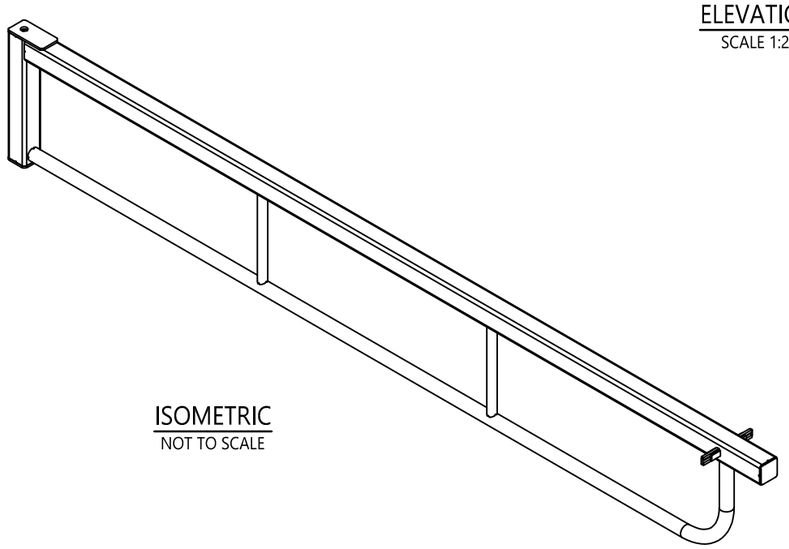
1. THIS STANDARD DRAWING IS BASED ON DRAWING 1065WM054 BY iINVENT PTY LTD DATED 21/05/2014.
2. ALL WELDS TO BE 5mm FILLET UNLESS OTHERWISE NOTED.
3. BREAK ALL CORNERS AND SHARPS.
4. FINISH FRAMES WITH HOT-DIP GALVANISING.
5. MAKE NECESSARY MODIFICATIONS FOR HOT-DIP GALVANISING.



ELEVATION
SCALE 1:20



SECTION A-A
SCALE 1:5



ISOMETRIC
NOT TO SCALE

GATE WELDMENT

LEGEND
Part number ①

PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	LENGTH
1	1			100x100x5 SHS AS 1163 - C350L0/C40L0	4240mm
2	1			100x100x5 SHS AS 1163 - C350L0/C40L0	628mm
3	1			12 SQUARE AS 3678 - 250	40mm
4	4			12 SQUARE AS 3678 - 250	90mm
5	4			50x27x8mm PLATE AS 3678 - 250	
6	1			ϕ30 BMS M1020	34mm
7	2			ϕ42.4x4.9 CHS AS 1163 - C350L0/C450L0	465mm
8	2			ϕ6 ROD AS 3678 - 250	29mm
9	1			ϕ60.3x5.54 CHS AS 1163 - C350L0/C450L0	4202mm
10	1	1065PT301	END CAPS		
11	1	1065PT308	END PLATE		
12	1	1065PT309	END CAPS		

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 50 100 150 200 250 1:5
0 200 400 600 800 1000 1:20
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

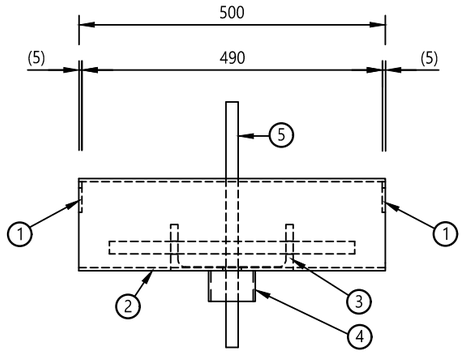
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

FENCE SERIES
FIRE TRAIL (SWING) ACCESS GATE

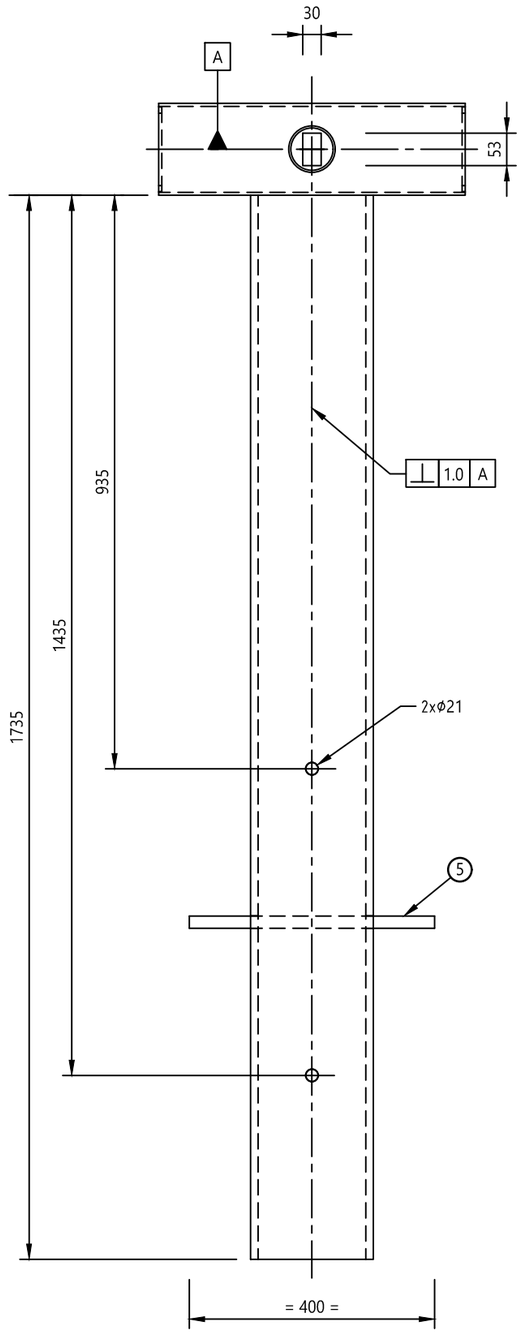
STANDARD DRAWING

DRAWING NUMBER	REV
SD0707	-
SHEET 3 OF 4	A3

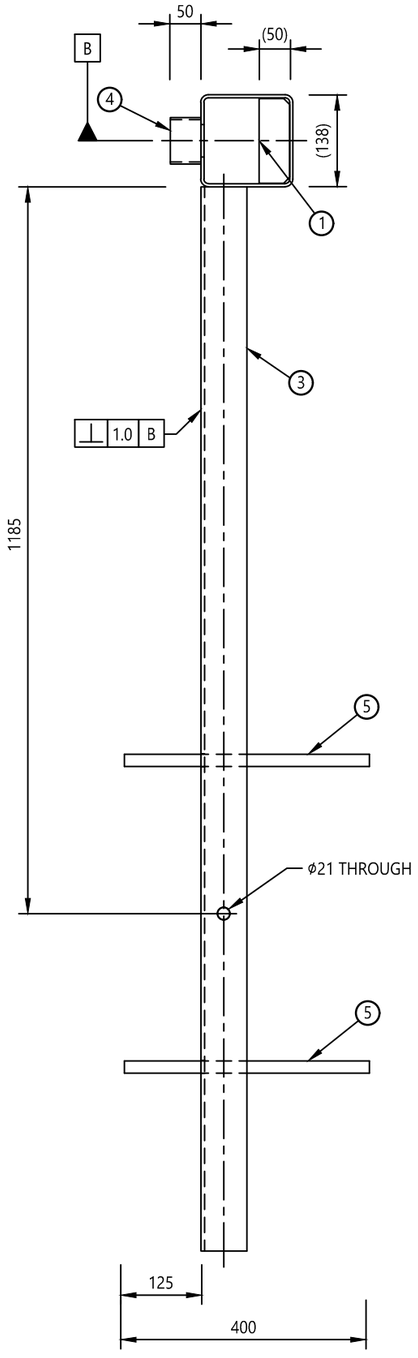


PLAN

1 REQUIRED AS DRAWN



ELEVATION

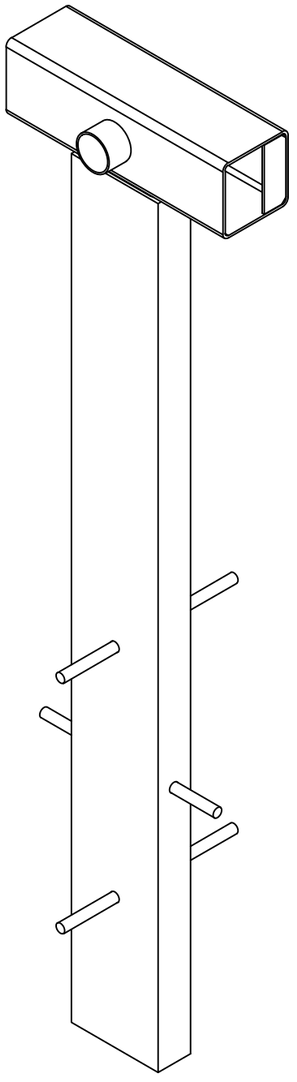


END ELEVATION

FIXED POST WELDMENT

NOTES:

1. THIS STANDARD DRAWING IS BASED ON DRAWING 1065WM055 BY iINVENT PTY LTD DATED 21/05/2014.
2. ALL WELDS TO BE 5mm FILLET UNLESS OTHERWISE NOTED.
3. BREAK ALL CORNERS AND SHARPS.
4. FINISH FRAMES WITH HOT-DIP GALVANISING.
5. MAKE NECESSARY MODIFICATIONS FOR HOT-DIP GALVANISING.



ISOMETRIC

NOT TO SCALE

LEGEND

Part number ①

ALTERNATIVE SPIKE DETAILS (PART 5):

DRILL 12ø HOLE THROUGH POST PRIOR TO GALVANISING AND INSERT 10ø x 400mm LONG ROUND BAR AT TIME OF INSTALLATION.

PARTS LIST

ITEM	QTY	MATERIAL	LENGTH
1	2	138x50x5mm PLATE AS 3678 - 250	
2	1	150x150x5mm SHS AS 1163-C350L0/C450L0	500mm
3	1	200 PFC AS 3679.1-250/300 PLUS	1735mm
4	1	90NB AS 1074/1163 MEDIUM	50mm
5	3	ø20 ROD AS 3678 - 250	400mm

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500

1:10

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

ROADS TRANSPORT DRAINAGE AND WASTE

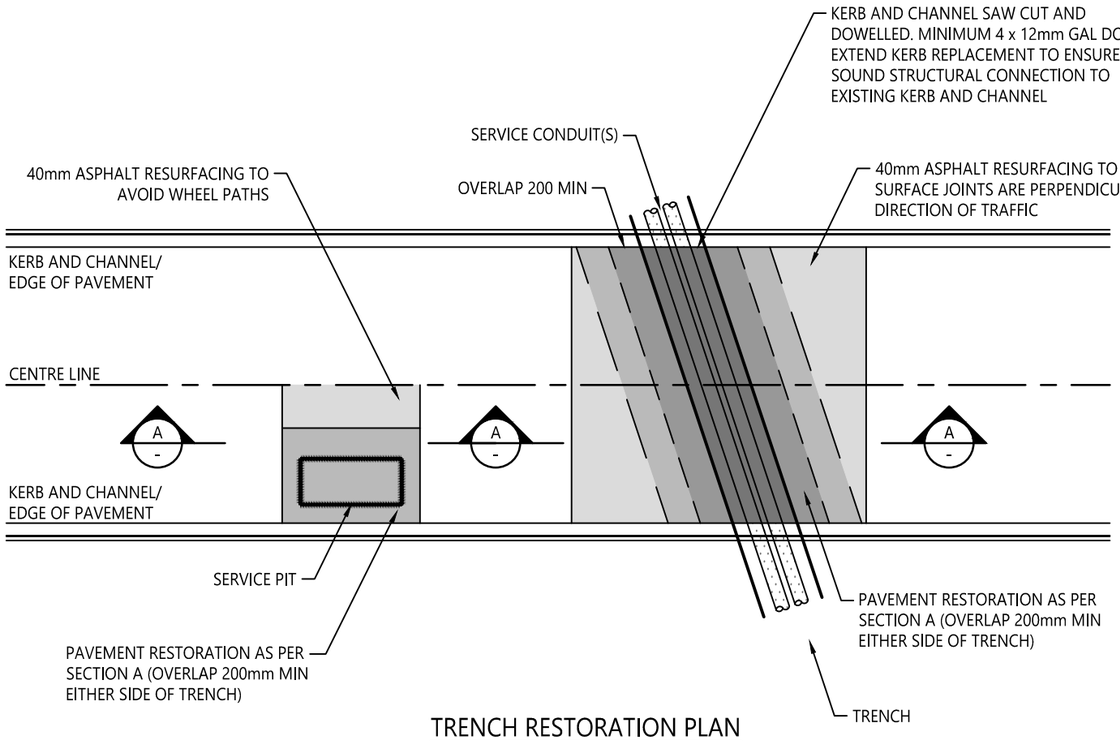
Central Coast Council

FENCE SERIES

FIRE TRAIL (SWING) ACCESS GATE

STANDARD DRAWING

DRAWING NUMBER	REV
SD0707	-
SHEET 4 OF 4	A3

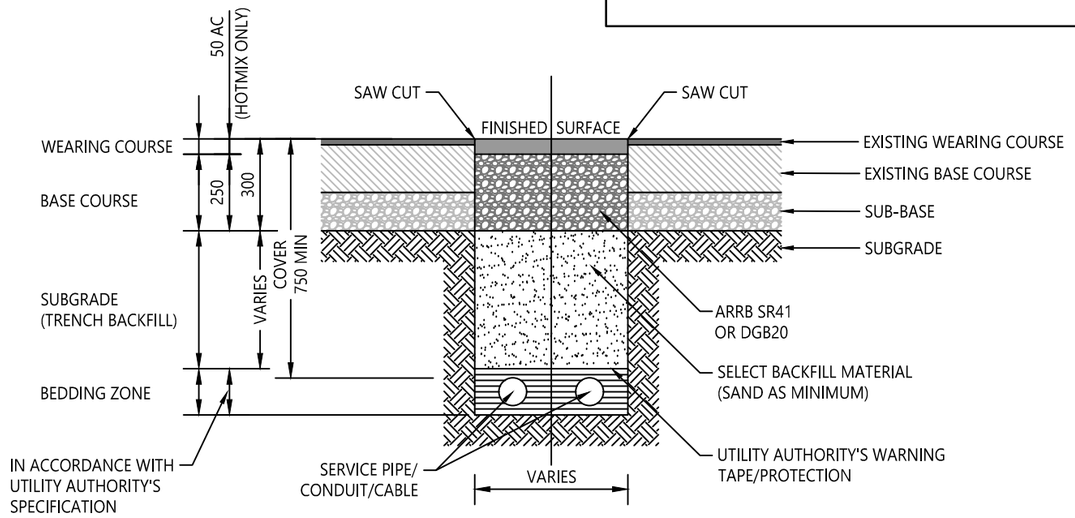


TRENCH RESTORATION PLAN

NOT TO SCALE

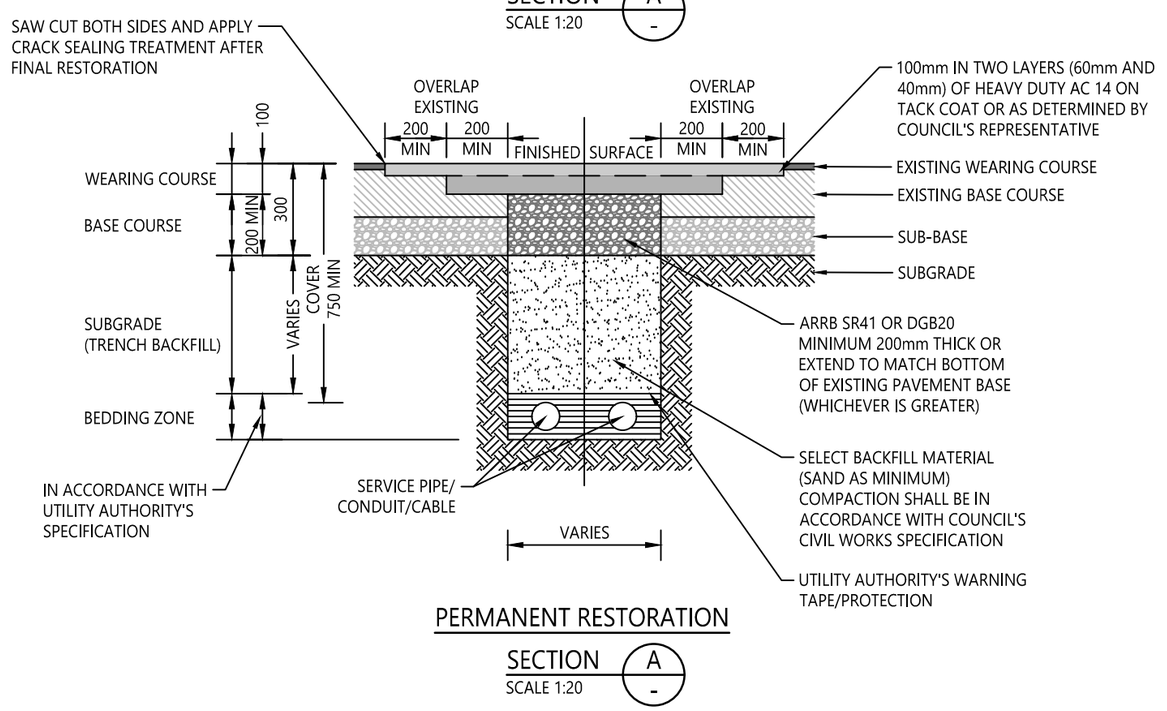
NOTE:

AT ALL LOCATIONS WHERE LONGITUDINAL TRENCHING TERMINATES, ADEQUATE SUBSURFACE DRAINAGE SHALL BE INSTALLED TO DISCHARGE ANY ACCUMULATED GROUND WATER INTO THE STORMWATER SYSTEM.



TEMPORARY RESTORATION

SECTION A - SCALE 1:20



PERMANENT RESTORATION

SECTION A - SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000

1:20

DRAWN	M GREENWOOD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

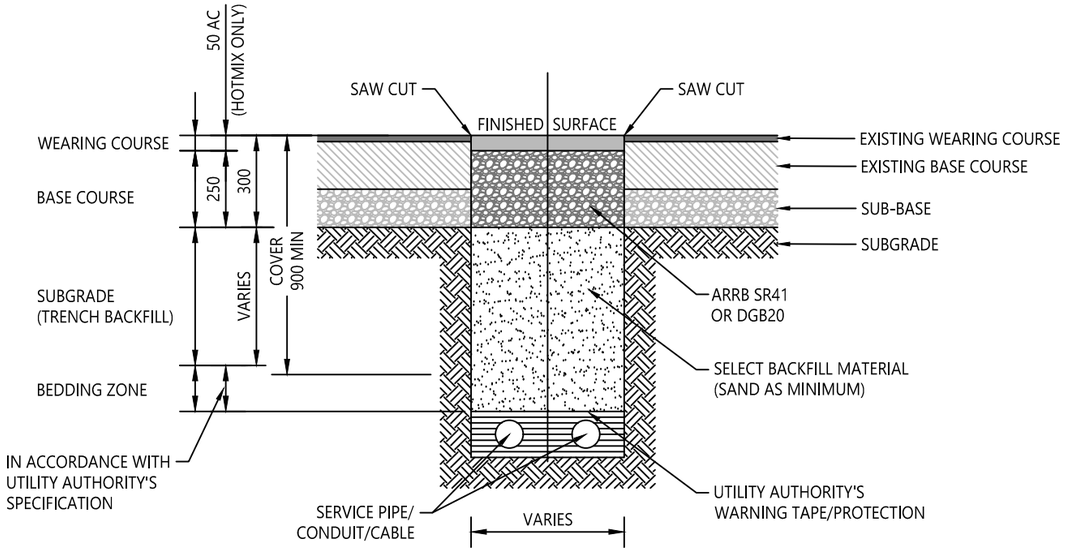
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PAVEMENT RESTORATION SERIES TRANSVERSE PAVEMENT TRENCH AND PIT RESTORATION

STANDARD DRAWING

DRAWING NUMBER	REV
SD0801	-
SHEET 1 OF 1	A3



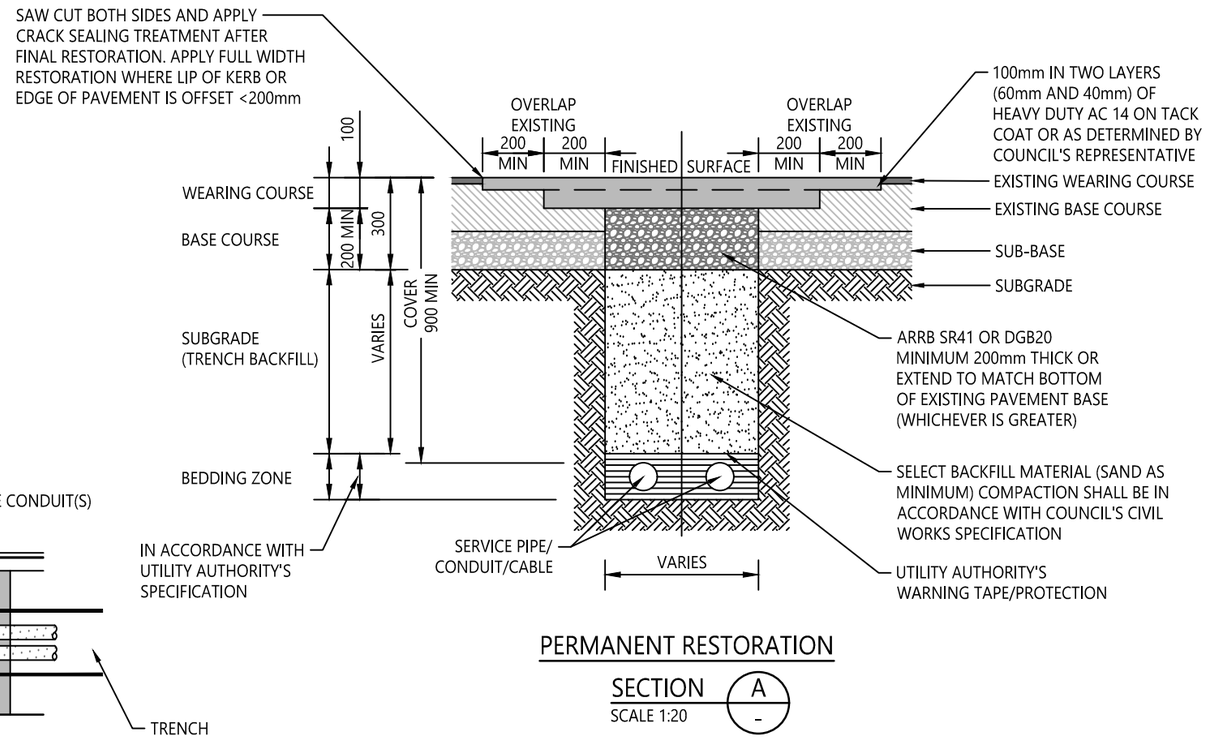
TEMPORARY RESTORATION

SECTION A-A

SCALE 1:20

NOTES:

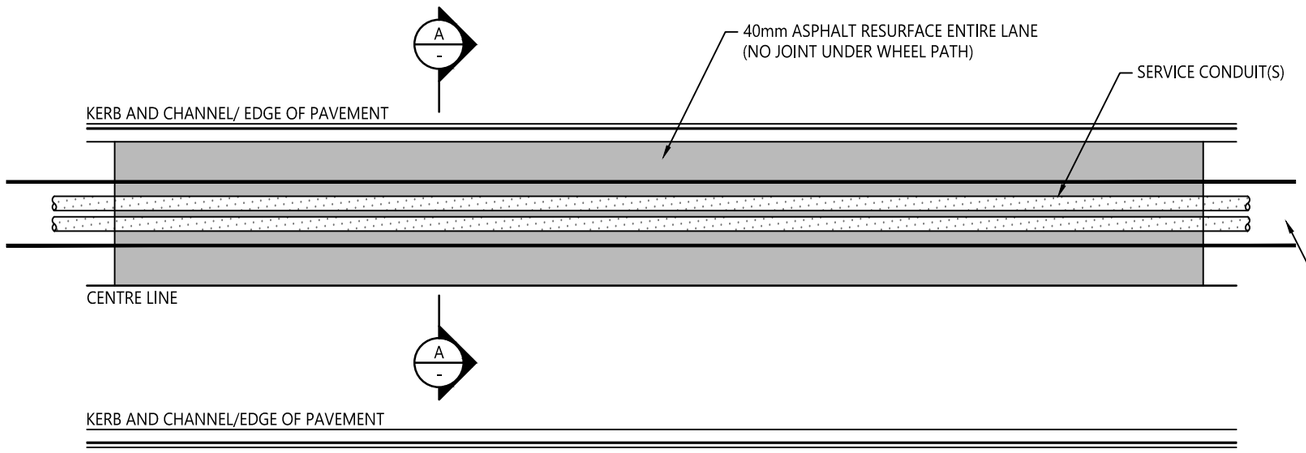
1. ALL TRAFFIC CONTROL OPERATIONS SHALL COMPLY WITH AS 1742.3 AND COUNCIL'S TRAFFIC CONTROL AT WORK SITES MANUAL.
2. NO UTILITY ALLOCATIONS EXIST IN OR UNDER CARRIAGEWAY PAVEMENTS.
3. ALL PROPOSED LONGITUDINAL INSTALLATIONS IN THE CARRIAGEWAY ARE CONSIDERED NON-CONFORMING AND REQUIRE COUNCIL APPROVAL.
4. AT ALL LOCATIONS WHERE LONGITUDINAL TRENCHING TERMINATES, ADEQUATE SUBSURFACE DRAINAGE SHALL BE INSTALLED TO DISCHARGE ANY ACCUMULATED GROUND WATER INTO THE STORMWATER SYSTEM.



PERMANENT RESTORATION

SECTION A-A

SCALE 1:20



TRENCH RESTORATION PLAN

NOT TO SCALE

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000

1:20

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	M GREENWOOD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

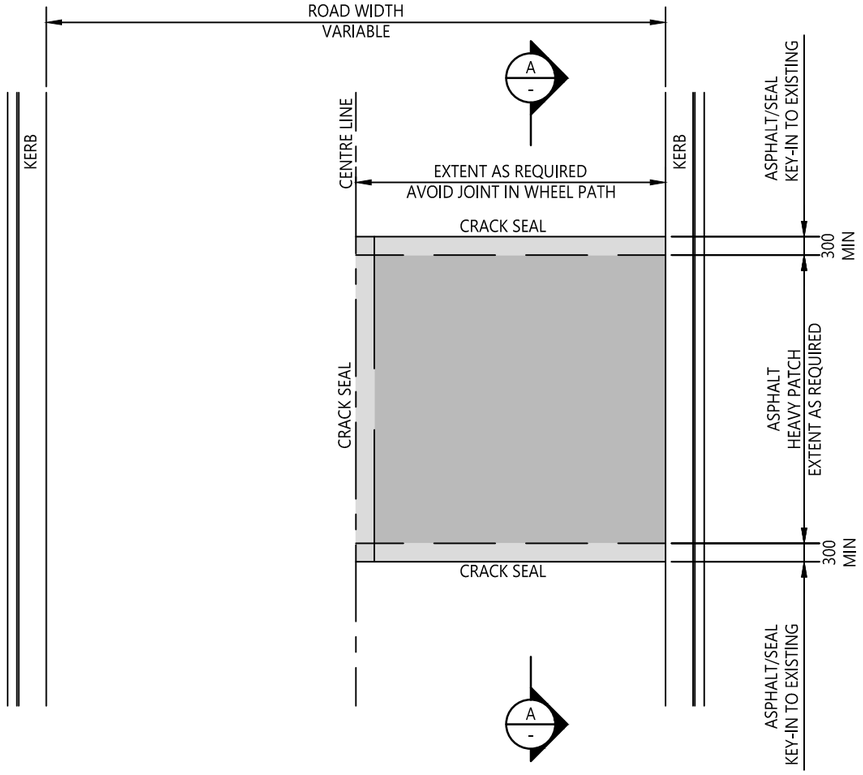
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

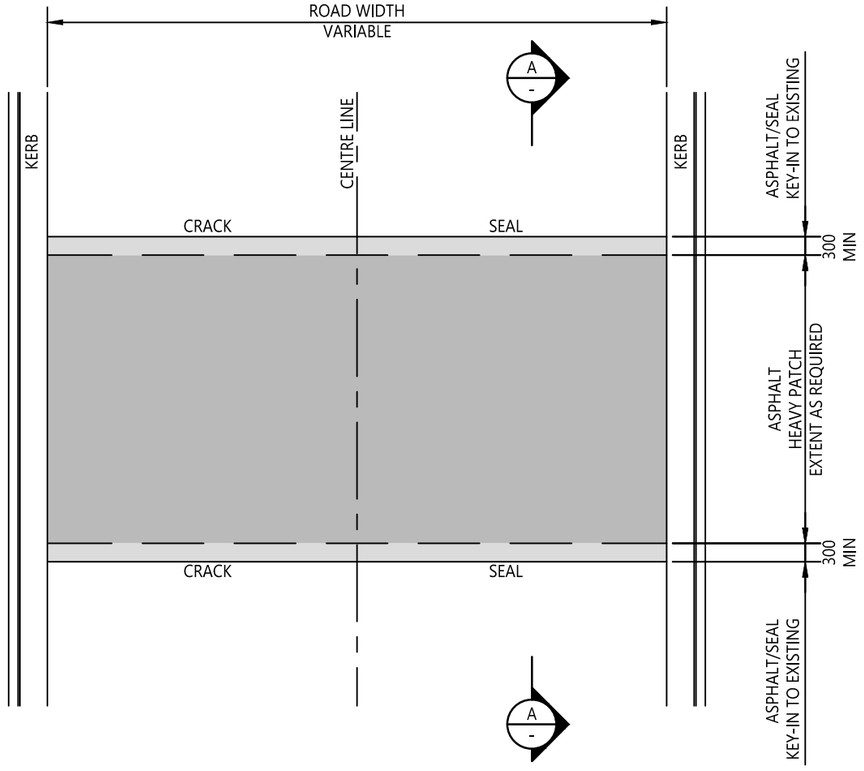
STANDARD DRAWING

PAVEMENT RESTORATION SERIES
LONGITUDINAL PAVEMENT TRENCH RESTORATION

DRAWING NUMBER	REV
SD0802	-
SHEET 1 OF 1	A3



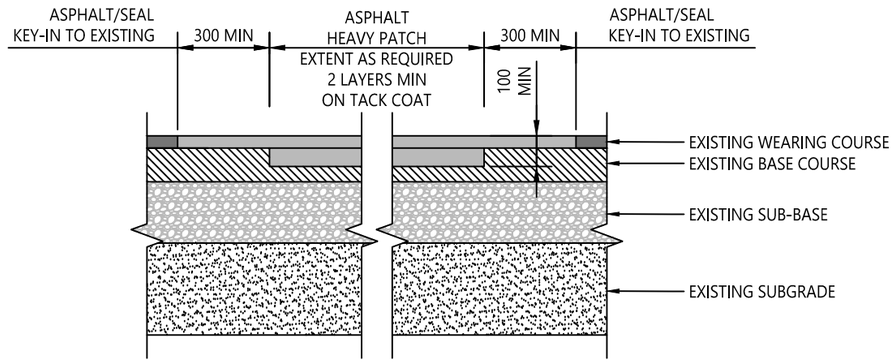
TYPICAL HEAVY PATCH
SCALE 1:100



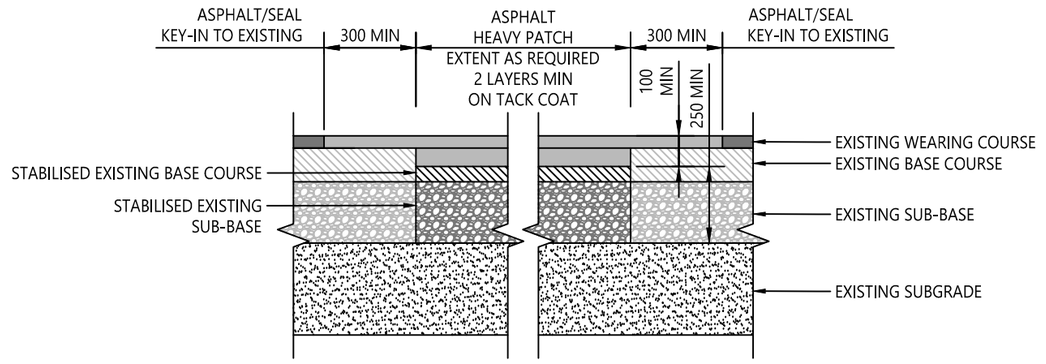
FULL WIDTH HEAVY PATCH
SCALE 1:100

NOTES:

1. ALL TRAFFIC CONTROL OPERATIONS SHALL COMPLY WITH AS 1742.3 AND COUNCIL'S TRAFFIC CONTROL AT WORK SITES MANUAL.
2. EXTENT, TYPE AND DEPTH OF HEAVY PATCH SHALL BE DETERMINED BY GEOTECHNICAL ANALYSIS AS REQUIRED.
3. ASPHALT TO BE COMPACTED IN LAYERS NO GREATER THAN 5 TIMES AGGREGATE SIZE.
4. ALL ASPHALT PATCHES TO FINISH FLUSH +/-2.5mm WITH CRACK SEAL AT ALL JOINTS (EMULSION AND SAND OR EQUIVALENT).
5. TACK COAT TO BE PROVIDED ON ALL EXCAVATIONS.
6. ALL PATCHES SHALL HAVE A WELL COMPACTED NON-BONY FINISH.
7. ALL PATCHES SHALL BE COMPLETED TO THE SIZE MARKED OUT BY COUNCIL'S REPRESENTATIVE.
8. ENLARGEMENT OF PATCHES MAY BE CARRIED OUT ONLY AFTER CONSULTATION WITH AND APPROVAL FROM COUNCIL'S REPRESENTATIVE.
9. AREAS DAMAGED OUTSIDE MARKED EXCAVATION CAUSED BY ASPHALT CONTRACTOR ARE TO BE BOXED OUT AND REINSTATED AT SERVICE PROVIDER'S EXPENSE.
10. AT ALL LOCATIONS WHERE LONGITUDINAL TRENCHING TERMINATES, ADEQUATE SUBSURFACE DRAINAGE SHALL BE INSTALLED TO DISCHARGE ANY ACCUMULATED GROUND WATER INTO THE STORMWATER SYSTEM.



ASPHALT HEAVY PATCH - GRANULAR OPTION
SECTION A - SCALE 1:20



ASPHALT HEAVY PATCH - STABILISED OPTION
SECTION A - SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000 1:20

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	MG/CS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

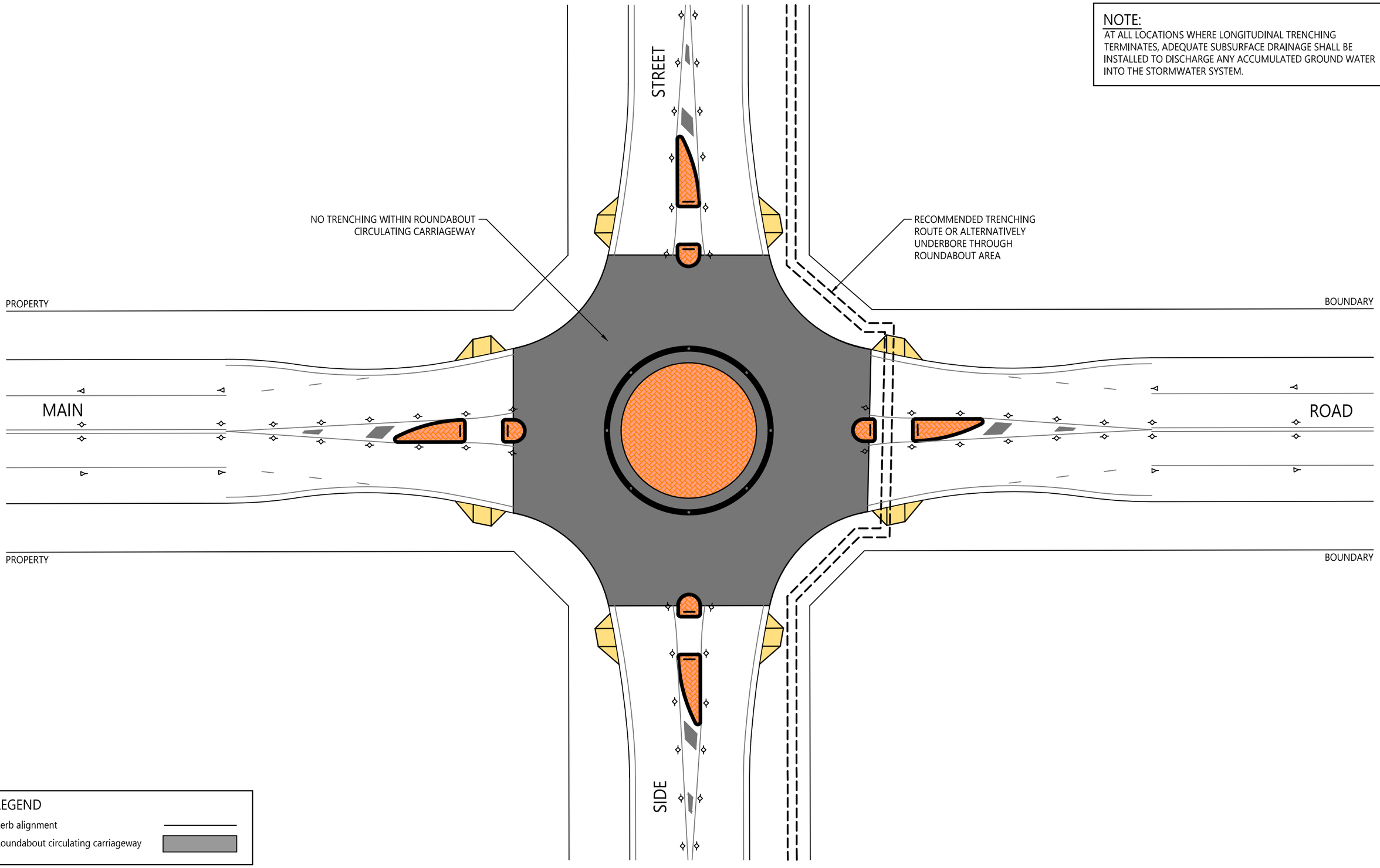
Central Coast Council

PAVEMENT RESTORATION SERIES
ASPHALT HEAVY PATCH RESTORATION

STANDARD DRAWING

DRAWING NUMBER	REV
SD0803	-
SHEET 1 OF 1	A3

NOTE:
AT ALL LOCATIONS WHERE LONGITUDINAL TRENCHING TERMINATES, ADEQUATE SUBSURFACE DRAINAGE SHALL BE INSTALLED TO DISCHARGE ANY ACCUMULATED GROUND WATER INTO THE STORMWATER SYSTEM.



REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

NOT TO SCALE

DRAWN	MG/TW
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

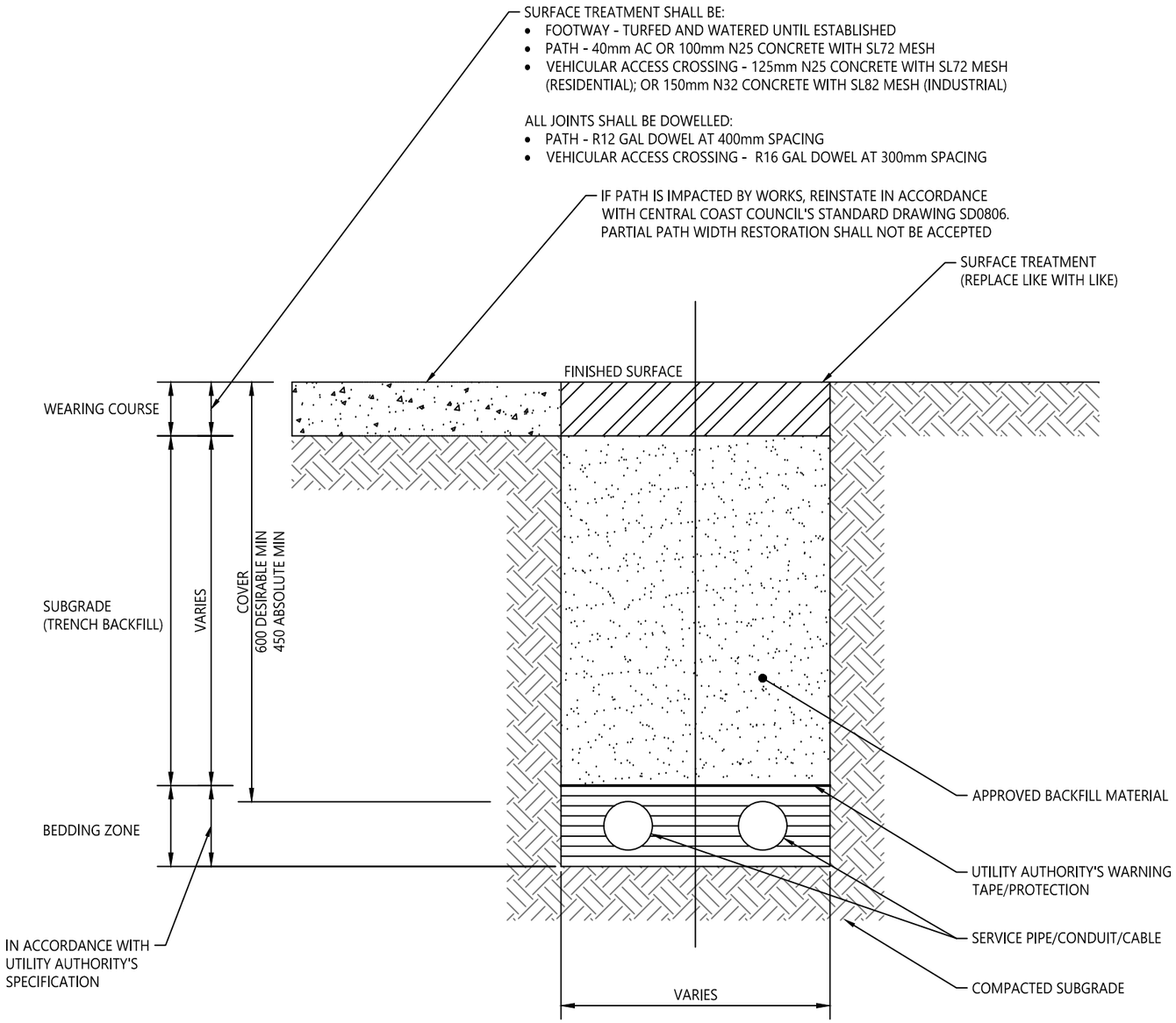
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PAVEMENT RESTORATION SERIES INFRASTRUCTURE INSTALLATIONS AT ROUNDABOUTS

STANDARD DRAWING

DRAWING NUMBER	REV
SD0804	-
SHEET 1 OF 1	A3



PIT, TRENCH CROSSING OR TRENCH LONGITUDINAL WITHIN FOOTWAYS

SCALE 1:10

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500

1:10

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	M GREENWOOD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

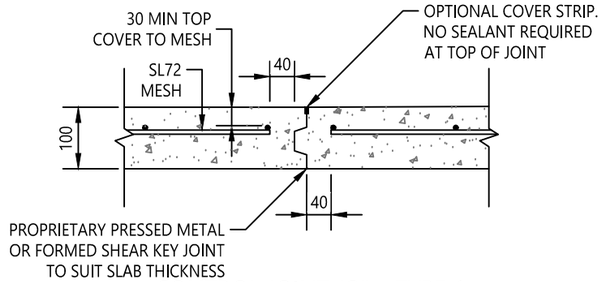
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PAVEMENT RESTORATION SERIES
FOOTWAY TRENCH AND PIT RESTORATION

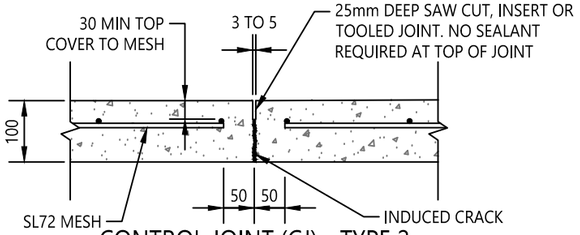
STANDARD DRAWING

DRAWING NUMBER	REV
SD0805	-
SHEET 1 OF 1	A3



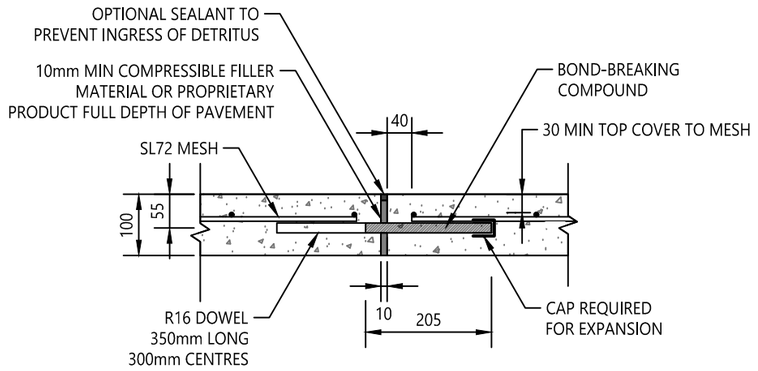
CONTROL JOINT (CJ) - TYPE 1

SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2

SCALE 1:10

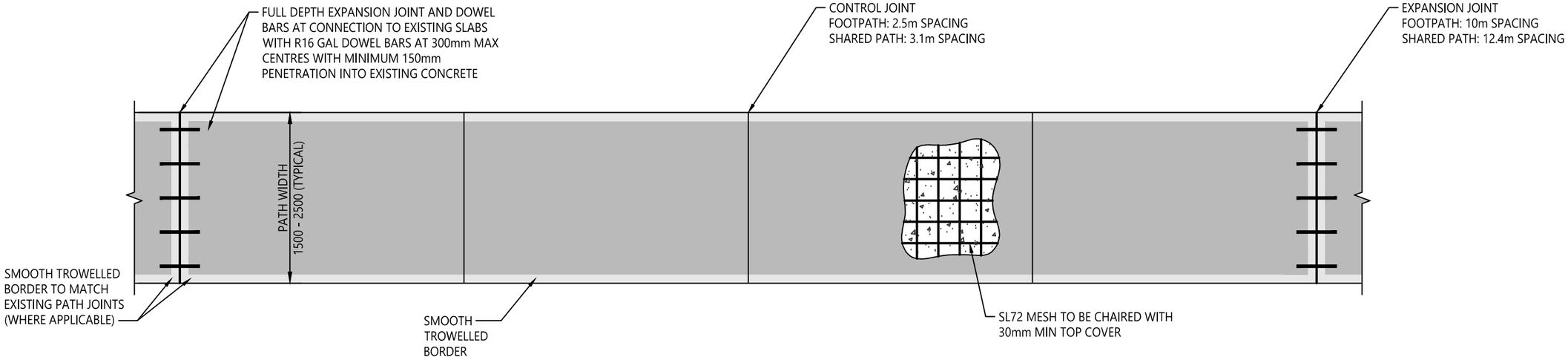


EXPANSION JOINT 100mm TO 100mm
PATH TO PATH

SCALE 1:10

NOTES:

1. ALL TRAFFIC CONTROL OPERATIONS SHALL COMPLY WITH AS 1742.3 AND COUNCIL'S TRAFFIC CONTROL AT WORK SITES MANUAL.
2. PARTIAL PATH WIDTH RECONSTRUCTION SHALL NOT BE ACCEPTED.
3. PATH SHALL BE 100mm MIN THICK WITH SL72 REINFORCEMENT MESH.
4. WHERE APPLICABLE, PATHS THROUGH RESIDENTIAL VEHICLE ACCESS CROSSINGS SHALL BE 125mm THICK N25 CONCRETE WITH SL72 MESH 30mm MIN TOP COVER WITH 16mm DOWELS AT 300 MAX SPACING.
5. PATHS SHALL BE COVE FINISHED TO PROVIDE A SLIP-RESISTANT SURFACE TEXTURE.
6. EDGING PROFILE SHALL MATCH EXISTING.
7. ALL SAW CUTS SHALL BE SQUARE TO PATH EDGE.
8. NO CHIPPED EDGES ON SAW CUTS SHALL BE ACCEPTED.
9. ALL DISTURBED AREAS SHALL BE BACKFILLED AND TURFED AFTER STRIPPING FORMWORK.



PLAN

SCALE 1:40

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500 1:10

0 400 800 1200 1600 2000 1:40

DRAWN	M GREENWOOD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

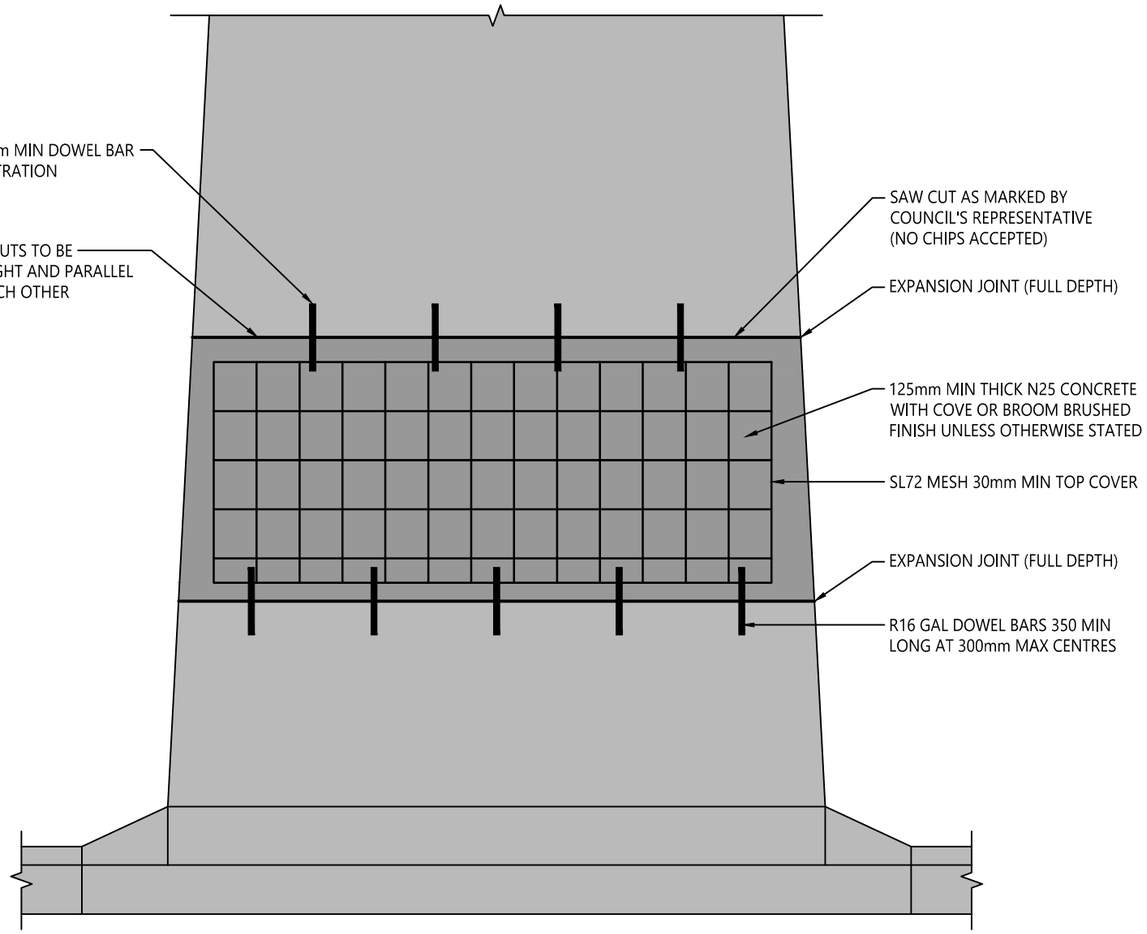
PAVEMENT RESTORATION SERIES
FOOTPATH AND SHARED PATH RESTORATION

STANDARD DRAWING

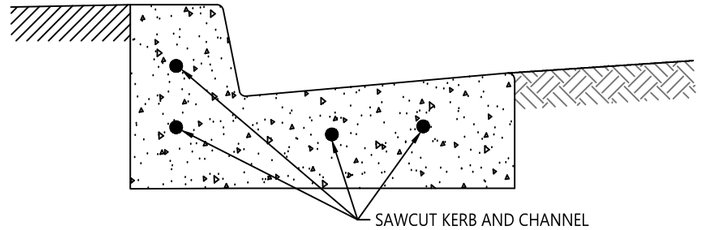
DRAWING NUMBER	REV
SD0806	-
SHEET 1 OF 1	A3

NOTES:

1. ALL TRAFFIC CONTROL OPERATIONS SHALL COMPLY WITH AS 1742.3 AND COUNCIL'S TRAFFIC CONTROL AT WORK SITES MANUAL.
2. ALL DISTURBED AREAS TO BE BACKFILLED DIRECTLY AFTER STRIPPING FORMWORK AND TURFED.
3. RESIDENTIAL VEHICLE ACCESS CROSSINGS 125mm MIN THICK N25 CONCRETE WITH SL72 MESH 30mm MIN TOP COVER WITH R16 DOWELS AT 300 MAX SPACING.
4. ADJACENT DAMAGED KERB AND CHANNEL DESTABILISED BY REMOVAL OF KERB AND EXCAVATION OF TRENCH SHALL BE INCLUDED IN RESTORATION AND DOWELLED AS SHOWN BELOW.



PLAN
SCALE 1:50



INTEGRAL KERB AND CHANNEL SECTION
SCALE 1:10

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500 1:10

0 500 1000 1500 2000 2500 1:50

DRAWN	M GREENWOOD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PAVEMENT RESTORATION SERIES
RESIDENTIAL VEHICLE ACCESS CROSSING RESTORATION

STANDARD DRAWING

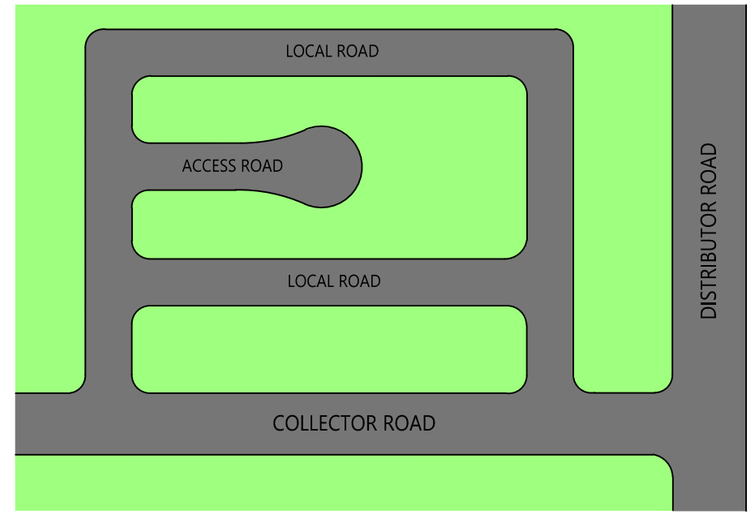
DRAWING NUMBER	REV
SD0807	-
SHEET 1 OF 1	A3

FUNCTIONAL RESIDENTIAL ROAD HIERARCHY AND PAVEMENT WIDTH SCHEDULE FOR ROAD RECONSTRUCTION IN EXISTING ESTABLISHED AREAS				
ROAD TYPE	ADT VOLUME (AVERAGE DAILY TRAFFIC)	PAVEMENT WIDTH (m) TWO-LANE TWO-WAY ≤50km/h SPEED LIMIT		
		MINIMUM WIDTH	BUS ROUTE	BUS AND ON ROAD[5] CYCLE ROUTE
ACCESS ROAD[8]	< 150	8[8] 2+4+2	-	-
LOCAL ROAD	150 - 1,000	10 2+3+3+2	11 2.5+3+3+2.5	12 3+3+3+3
COLLECTOR ROAD[9]	1,000 - 5,000	11 2.5+3+3+2.5	11 2.5+3+3+2.5	12 3+3+3+3
DISTRIBUTOR ROAD[9]	3,000 - 5,000+[7]	11 2.5+3+3+2.5	11 2.5+3+3+2.5	12[7] 3+3+3+3
INDUSTRIAL AREA	400+	13 3+3.5+3.5+3	13 3+3.5+3.5+3	13 3+3.5+3.5+3

FUNCTIONAL RESIDENTIAL ROAD HIERARCHY AND PAVEMENT WIDTH SCHEDULE FOR ROAD RECONSTRUCTION IN EXISTING ESTABLISHED AREAS				
ROAD TYPE	ADT VOLUME (AVERAGE DAILY TRAFFIC)	PAVEMENT WIDTH (m) TWO-LANE TWO-WAY ≤50km/h SPEED LIMIT		
		MINIMUM WIDTH	BUS ROUTE	BUS AND ON ROAD[5] CYCLE ROUTE
RURAL ROAD	≤1,000	8 1+3+3+1	8 1+3+3+1	9 1.5+3+3+1.5
RURAL ROAD	1,000 - 10,000+ REFER TO AUSTROADS GUIDES	9 - 13 3-3.5 LANES 1.5-3 SHOULDER	9 - 13	9 - 13

NOTES:

1. PAVEMENT WIDTHS (EXCEPT RURAL ROADS) APPLY TO EXISTING ESTABLISHED AREAS WITH A 20m ROAD RESERVE, ON-STREET PARKING AND BARRIER (SA) KERB.
2. WIDENING MAY BE REQUIRED ON CURVED RURAL ROAD ALIGNMENTS. URBAN ROAD WIDTHS SHOWN ARE MEASURED BETWEEN INVERTS OF KERB.
3. RURAL ROAD WIDTHS ARE BETWEEN EDGES OF BITUMEN.
4. EDGE LINES AND CENTRE LINES TO BE INCLUDED ON ALL URBAN ROADS ≥ 11m WIDE TO DEFINE PARKING LANES/TRAFFIC LANES, IRRESPECTIVE OF TRAFFIC VOLUME.
5. ON-ROAD ADVISORY TREATMENT FOR CYCLISTS ON DISTRIBUTOR/COLLECTOR ROADS ONLY, USING EDGE LINES AND BICYCLE SYMBOLS. LOCAL ROAD CYCLISTS CAN BE EXPECTED TO SHARE THE ROAD SPACE WITH MOTORISTS. CYCLISTS ON RURAL ROADS TO USE 1.5 TO 3m WIDE ROAD SHOULDERS WITH BICYCLE SYMBOL MARKINGS (ADVISORY TREATMENT).
6. BICYCLE/CAR PARKING LANES AND EXCLUSIVE BICYCLE LANES REQUIRE GREATER PAVEMENT WIDTHS AND BICYCLE LANE SIGNS TO GIVE THE LANES LEGAL STATUS.
7. CONSIDER INCREASING PAVEMENT WIDTH TO 12.6m, OR PROVIDING AN ALTERNATIVE TREATMENT, SUCH AS BICYCLE/CAR PARKING LANES, WHERE THE ADT VOLUME IS SIGNIFICANTLY GREATER THAN 5,000 VEHICLES/DAY.
8. CONSIDER 8m URBAN ROAD WIDTH ONLY FOR VERY SHORT LENGTHS OF ACCESS ROAD (< 100m) DUE TO POTENTIAL ADVERSE IMPACT ON AVAILABILITY OF ON-STREET PARKING ON BOTH SIDES OF ROAD; OR WHERE ROAD RESERVE IS < 20m.
9. TRAFFIC LANE WIDTHS ON HIGHER VOLUME AND SPEED COLLECTOR/DISTRIBUTOR ROADS WHICH ARE BUS ROUTES SHALL BE 3.5m MINIMUM WIDE.
10. REFER TO SHEETS 2 AND 3 FOR TYPICAL SECTIONS SHOWING THE MOST COMMONLY USED ROAD WIDTHS IN EXISTING ESTABLISHED AREAS.



FUNCTIONAL RESIDENTIAL ROAD HIERARCHY

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING: NOT TO SCALE

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

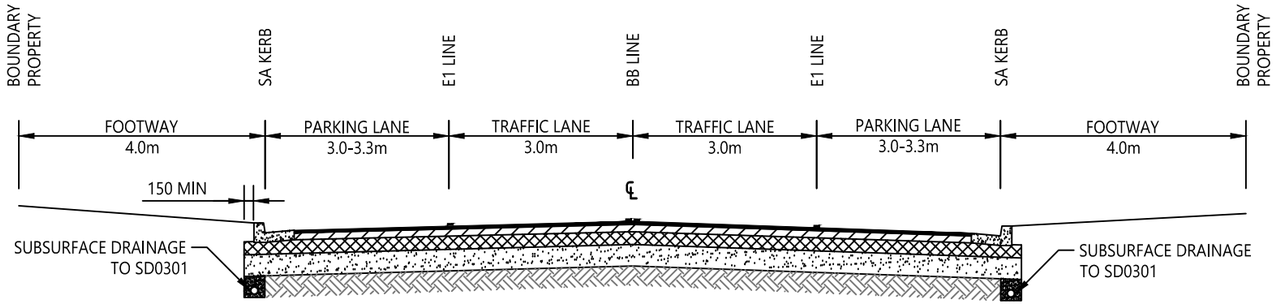
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
PAVEMENT WIDTH SCHEDULE

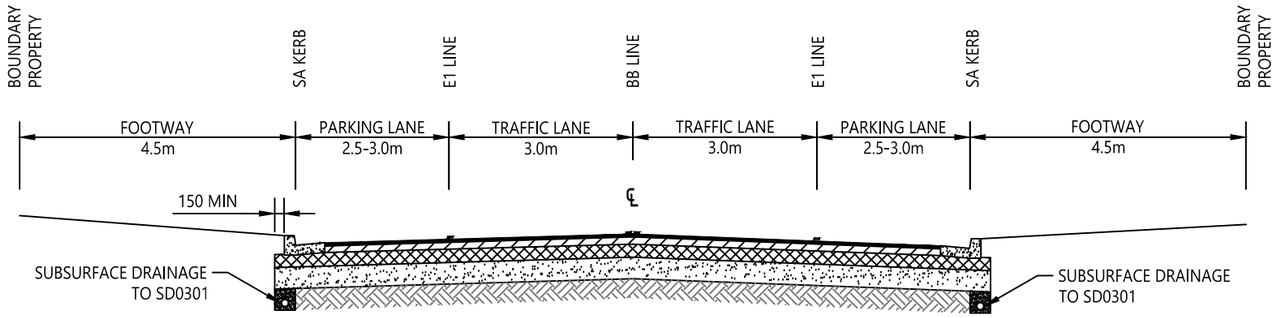
STANDARD DRAWING

DRAWING NUMBER	REV
SD0901	-
SHEET 1 OF 3	A3



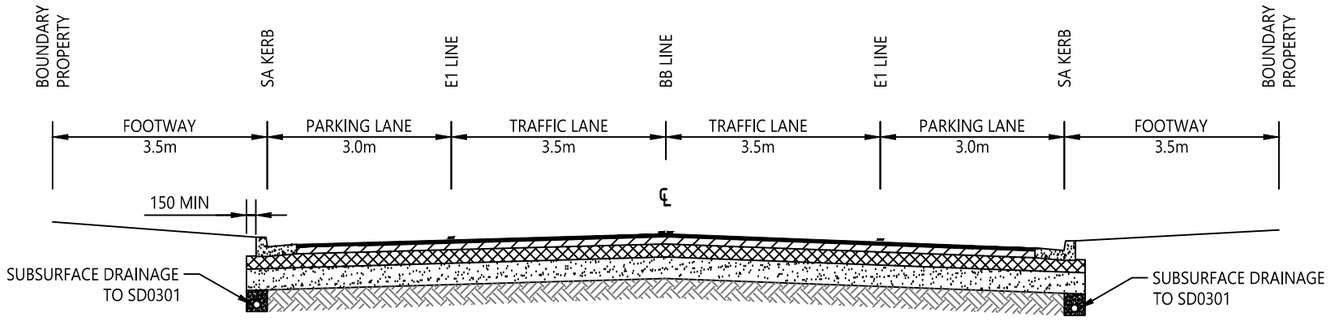
DISTRIBUTOR ROAD CROSS SECTION - 12-12.6m WIDE CARRIAGEWAY
TYPICAL ADT VOLUME 3,000 - 5,000+ VEHICLES

SCALE 1:100



COLLECTOR ROAD CROSS SECTION - 11-12m WIDE CARRIAGEWAY TYPICAL ADT VOLUME 1,000 - 5,000 VEHICLES

SCALE 1:100



INDUSTRIAL AREA ROAD CROSS SECTION - 13m WIDE CARRIAGEWAY TYPICAL ADT VOLUME 400+ VEHICLES

SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 1000 2000 3000 4000 5000

1:100

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

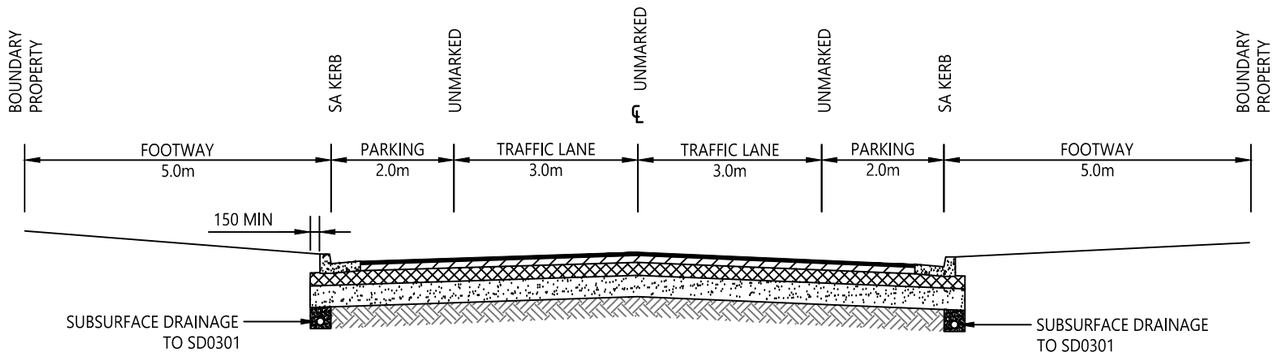
TRAFFIC MANAGEMENT SERIES
PAVEMENT WIDTH SCHEDULE

STANDARD DRAWING

DRAWING NUMBER	REV
SD0901	-
SHEET 2 OF 3	A3

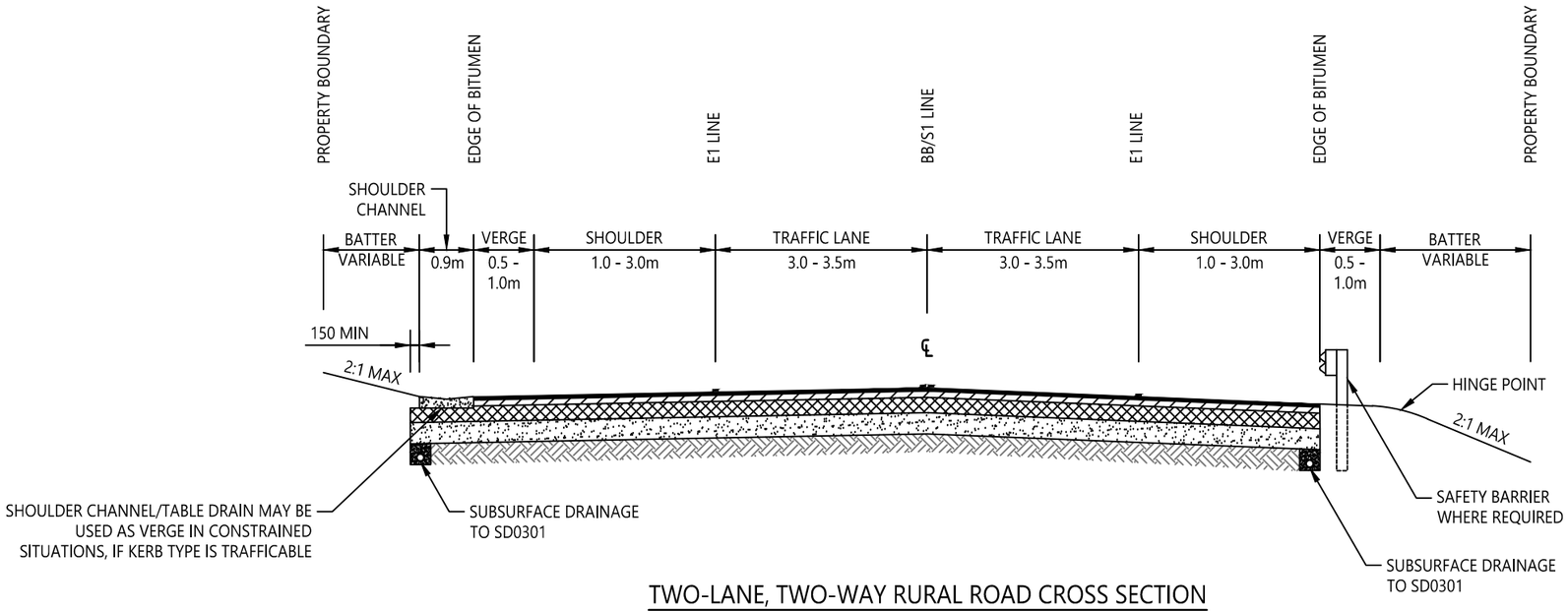
NOTES:

1. GUIDE POSTS AND SAFETY BARRIER TO BE INSTALLED AS REQUIRED.
2. BICYCLE SYMBOLS TO BE MARKED ON ROAD SHOULDERS AS AN ADVISORY TREATMENT WHERE WARRANTED, OR ON DESIGNATED CYCLE ROUTES.



LOCAL ROAD CROSS SECTION - 10m WIDE CARRIAGEWAY TYPICAL ADT VOLUME 150 - 1,000 VEHICLES

SCALE 1:100



TWO-LANE, TWO-WAY RURAL ROAD CROSS SECTION
8-13m WIDE CARRIAGEWAY
TYPICAL ADT VOLUME 150 - 10,000+ VEHICLES

SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 1000 2000 3000 4000 5000

1:100

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
PAVEMENT WIDTH SCHEDULE

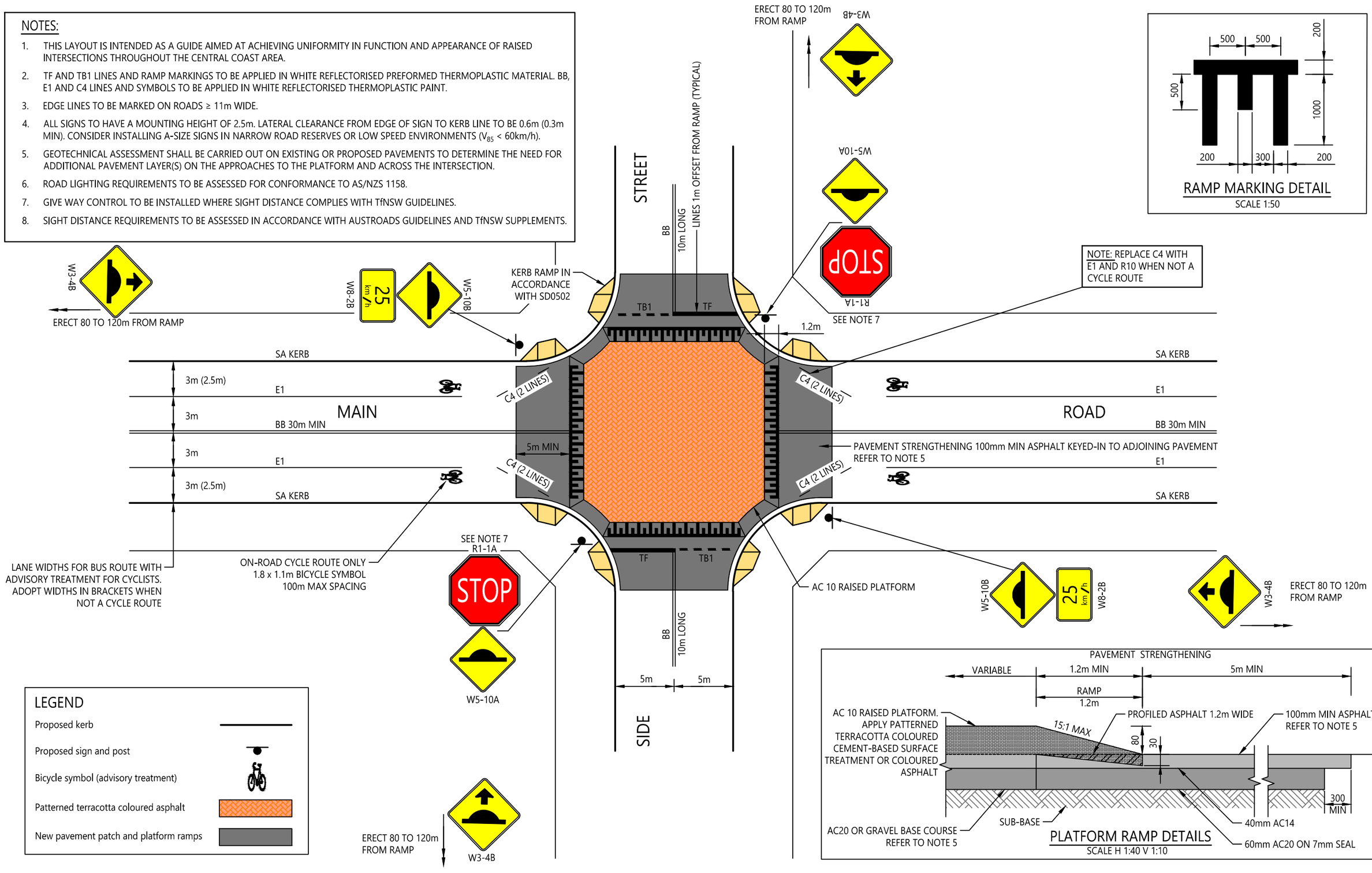
STANDARD DRAWING

DRAWING NUMBER	REV
SD0901	-
SHEET 3 OF 3	A3

NOTES:

1. THIS LAYOUT IS INTENDED AS A GUIDE AIMED AT ACHIEVING UNIFORMITY IN FUNCTION AND APPEARANCE OF RAISED INTERSECTIONS THROUGHOUT THE CENTRAL COAST AREA.
2. TF AND TB1 LINES AND RAMP MARKINGS TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL. BB, E1 AND C4 LINES AND SYMBOLS TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT.
3. EDGE LINES TO BE MARKED ON ROADS ≥ 11m WIDE.
4. ALL SIGNS TO HAVE A MOUNTING HEIGHT OF 2.5m. LATERAL CLEARANCE FROM EDGE OF SIGN TO KERB LINE TO BE 0.6m (0.3m MIN). CONSIDER INSTALLING A-SIZE SIGNS IN NARROW ROAD RESERVES OR LOW SPEED ENVIRONMENTS (V_{85} < 60km/h).
5. GEOTECHNICAL ASSESSMENT SHALL BE CARRIED OUT ON EXISTING OR PROPOSED PAVEMENTS TO DETERMINE THE NEED FOR ADDITIONAL PAVEMENT LAYER(S) ON THE APPROACHES TO THE PLATFORM AND ACROSS THE INTERSECTION.
6. ROAD LIGHTING REQUIREMENTS TO BE ASSESSED FOR CONFORMANCE TO AS/NZS 1158.
7. GIVE WAY CONTROL TO BE INSTALLED WHERE SIGHT DISTANCE COMPLIES WITH TfNSW GUIDELINES.
8. SIGHT DISTANCE REQUIREMENTS TO BE ASSESSED IN ACCORDANCE WITH AUSTROADS GUIDELINES AND TfNSW SUPPLEMENTS.

RAMP MARKING DETAIL
SCALE 1:50



LEGEND

- Proposed kerb
- Proposed sign and post
- Bicycle symbol (advisory treatment)
- Patterned terracotta coloured asphalt
- New pavement patch and platform ramps

PLATFORM RAMP DETAILS
SCALE H 1:40 V 1:10

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 3000 6000 9000 12000 15000
1:300

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

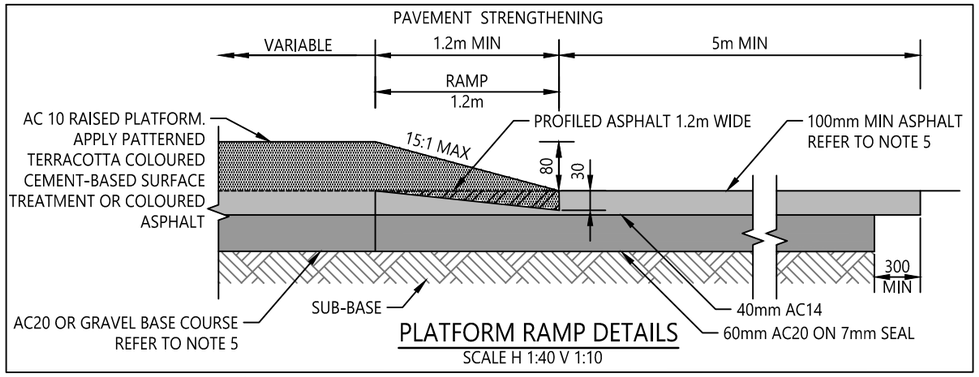
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

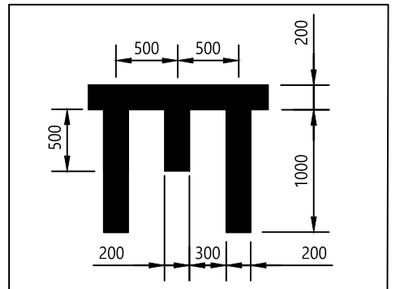
TRAFFIC MANAGEMENT SERIES
RAISED INTERSECTION

DRAWING NUMBER	REV
SD0902	-
SHEET 1 OF 3	A3



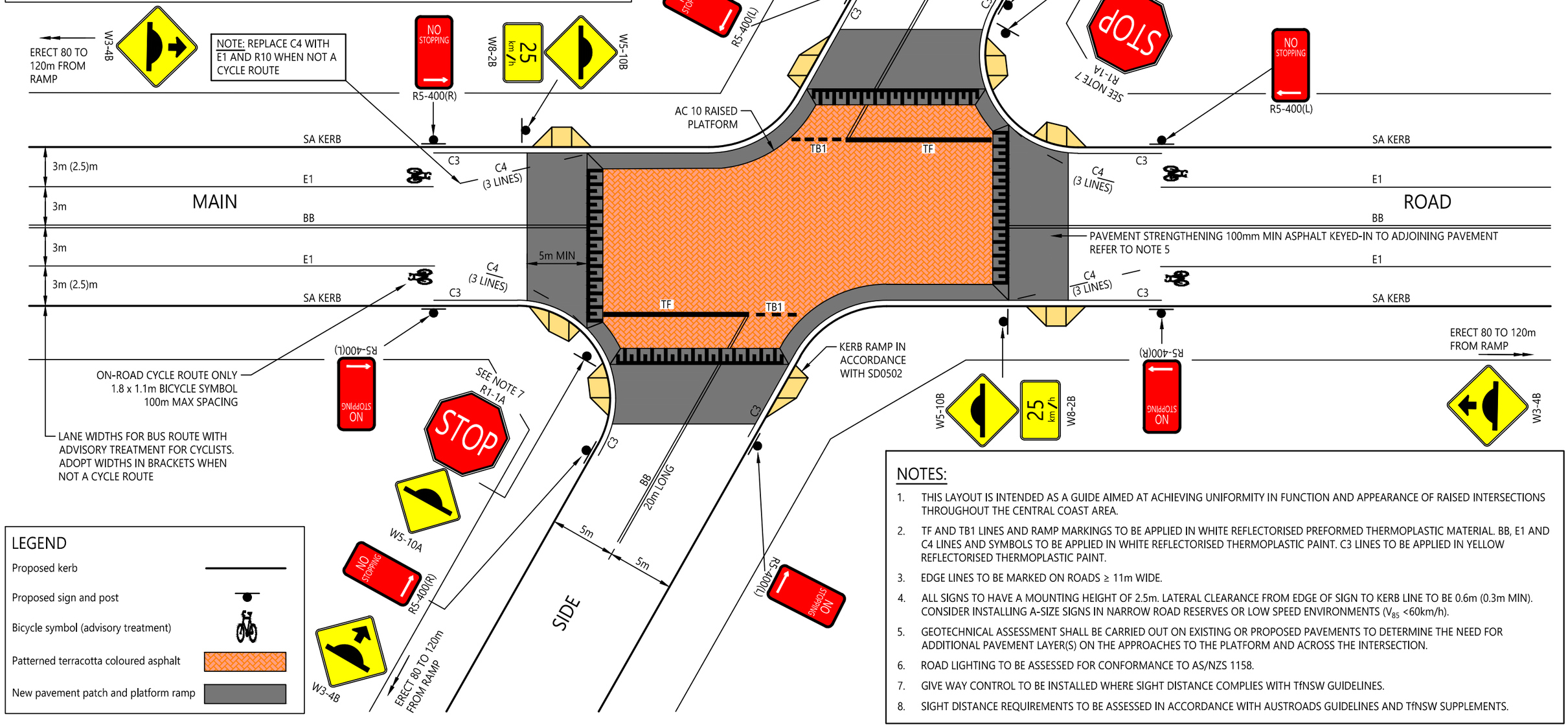
PLATFORM RAMP DETAILS

SCALE H 1:40 V 1:10



RAMP MARKING DETAIL

SCALE 1:50



LEGEND

- Proposed kerb
- Proposed sign and post
- Bicycle symbol (advisory treatment)
- Patterned terracotta coloured asphalt
- New pavement patch and platform ramp

NOTES:

1. THIS LAYOUT IS INTENDED AS A GUIDE AIMED AT ACHIEVING UNIFORMITY IN FUNCTION AND APPEARANCE OF RAISED INTERSECTIONS THROUGHOUT THE CENTRAL COAST AREA.
2. TF AND TB1 LINES AND RAMP MARKINGS TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL. BB, E1 AND C4 LINES AND SYMBOLS TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT. C3 LINES TO BE APPLIED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT.
3. EDGE LINES TO BE MARKED ON ROADS ≥ 11m WIDE.
4. ALL SIGNS TO HAVE A MOUNTING HEIGHT OF 2.5m. LATERAL CLEARANCE FROM EDGE OF SIGN TO KERB LINE TO BE 0.6m (0.3m MIN). CONSIDER INSTALLING A-SIZE SIGNS IN NARROW ROAD RESERVES OR LOW SPEED ENVIRONMENTS (V_{85} <60km/h).
5. GEOTECHNICAL ASSESSMENT SHALL BE CARRIED OUT ON EXISTING OR PROPOSED PAVEMENTS TO DETERMINE THE NEED FOR ADDITIONAL PAVEMENT LAYER(S) ON THE APPROACHES TO THE PLATFORM AND ACROSS THE INTERSECTION.
6. ROAD LIGHTING TO BE ASSESSED FOR CONFORMANCE TO AS/NZS 1158.
7. GIVE WAY CONTROL TO BE INSTALLED WHERE SIGHT DISTANCE COMPLIES WITH TfNSW GUIDELINES.
8. SIGHT DISTANCE REQUIREMENTS TO BE ASSESSED IN ACCORDANCE WITH AUSTROADS GUIDELINES AND TfNSW SUPPLEMENTS.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 3000 6000 9000 12000 15000

1:300

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

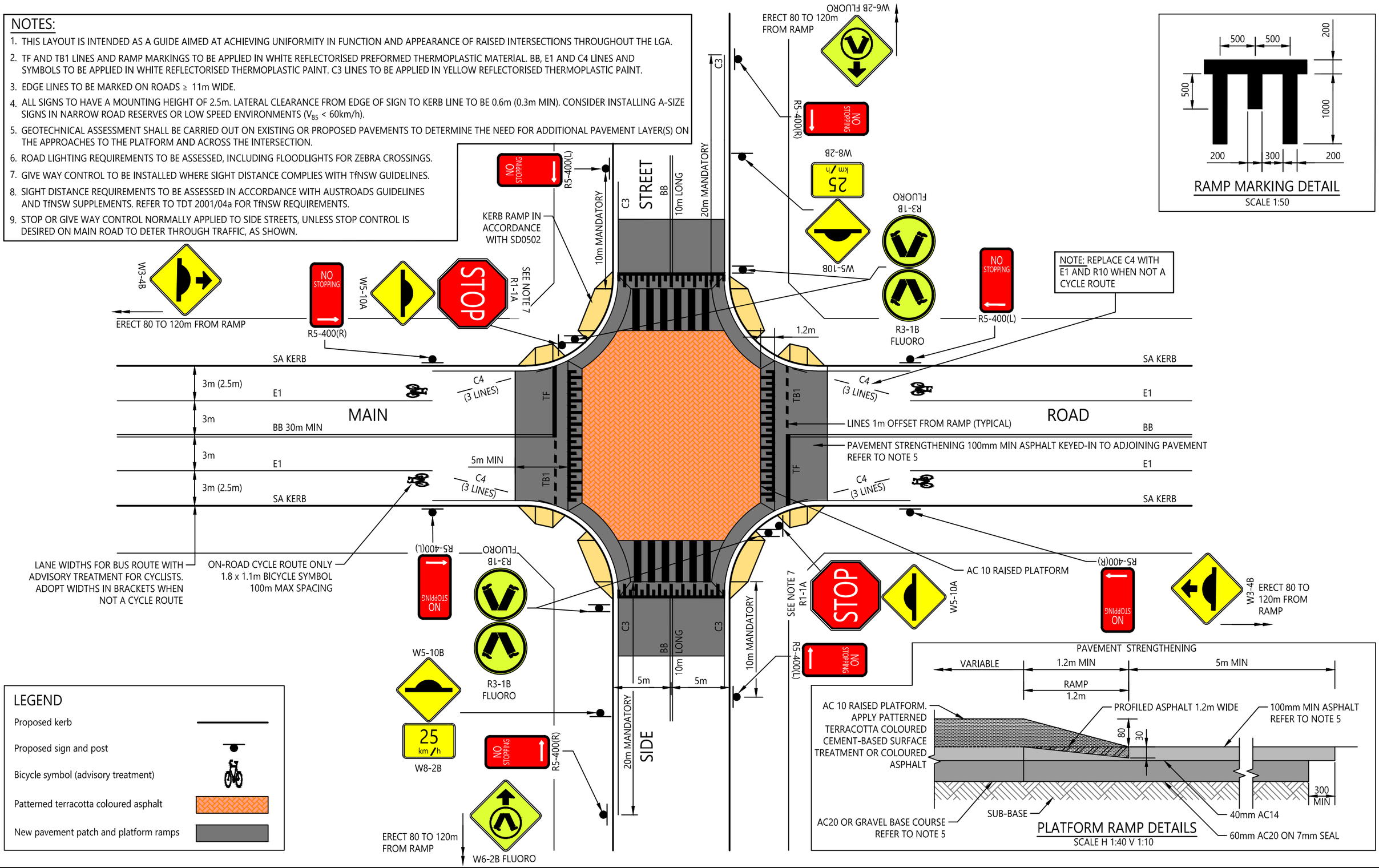
STANDARD DRAWING

TRAFFIC MANAGEMENT SERIES
RAISED INTERSECTION

DRAWING NUMBER	REV
SD0902	-
SHEET 2 OF 3	A3

NOTES:

1. THIS LAYOUT IS INTENDED AS A GUIDE AIMED AT ACHIEVING UNIFORMITY IN FUNCTION AND APPEARANCE OF RAISED INTERSECTIONS THROUGHOUT THE LGA.
2. TF AND TB1 LINES AND RAMP MARKINGS TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL. BB, E1 AND C4 LINES AND SYMBOLS TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT. C3 LINES TO BE APPLIED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT.
3. EDGE LINES TO BE MARKED ON ROADS ≥ 11m WIDE.
4. ALL SIGNS TO HAVE A MOUNTING HEIGHT OF 2.5m. LATERAL CLEARANCE FROM EDGE OF SIGN TO KERB LINE TO BE 0.6m (0.3m MIN). CONSIDER INSTALLING A-SIZE SIGNS IN NARROW ROAD RESERVES OR LOW SPEED ENVIRONMENTS (V_{85} < 60km/h).
5. GEOTECHNICAL ASSESSMENT SHALL BE CARRIED OUT ON EXISTING OR PROPOSED PAVEMENTS TO DETERMINE THE NEED FOR ADDITIONAL PAVEMENT LAYER(S) ON THE APPROACHES TO THE PLATFORM AND ACROSS THE INTERSECTION.
6. ROAD LIGHTING REQUIREMENTS TO BE ASSESSED, INCLUDING FLOODLIGHTS FOR ZEBRA CROSSINGS.
7. GIVE WAY CONTROL TO BE INSTALLED WHERE SIGHT DISTANCE COMPLIES WITH TfNSW GUIDELINES.
8. SIGHT DISTANCE REQUIREMENTS TO BE ASSESSED IN ACCORDANCE WITH AUSTROADS GUIDELINES AND TfNSW SUPPLEMENTS. REFER TO TDT 2001/04a FOR TfNSW REQUIREMENTS.
9. STOP OR GIVE WAY CONTROL NORMALLY APPLIED TO SIDE STREETS, UNLESS STOP CONTROL IS DESIRED ON MAIN ROAD TO DETER THROUGH TRAFFIC, AS SHOWN.



RAMP MARKING DETAIL
SCALE 1:50

PLATFORM RAMP DETAILS
SCALE H 1:40 V 1:10

LEGEND

- Proposed kerb
- Proposed sign and post
- Bicycle symbol (advisory treatment)
- Patterned terracotta coloured asphalt
- New pavement patch and platform ramps

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 3000 6000 9000 12000 15000
1:300
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
RAISED INTERSECTION

STANDARD DRAWING

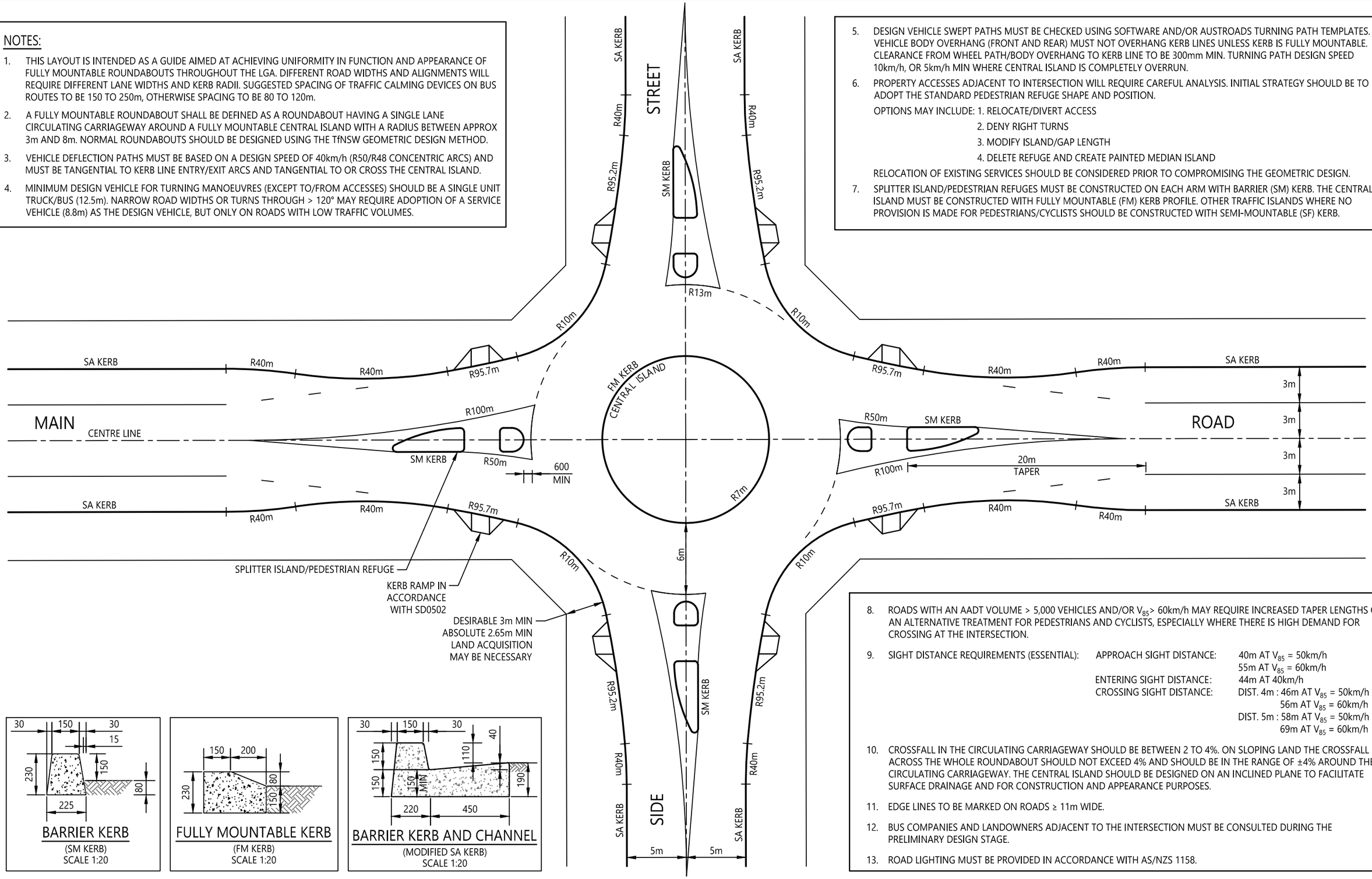
DRAWING NUMBER	REV
SD0902	-
SHEET 3 OF 3	A3

NOTES:

1. THIS LAYOUT IS INTENDED AS A GUIDE AIMED AT ACHIEVING UNIFORMITY IN FUNCTION AND APPEARANCE OF FULLY MOUNTABLE ROUNDABOUTS THROUGHOUT THE LGA. DIFFERENT ROAD WIDTHS AND ALIGNMENTS WILL REQUIRE DIFFERENT LANE WIDTHS AND KERB RADII. SUGGESTED SPACING OF TRAFFIC CALMING DEVICES ON BUS ROUTES TO BE 150 TO 250m, OTHERWISE SPACING TO BE 80 TO 120m.
2. A FULLY MOUNTABLE ROUNDABOUT SHALL BE DEFINED AS A ROUNDABOUT HAVING A SINGLE LANE CIRCULATING CARRIAGEWAY AROUND A FULLY MOUNTABLE CENTRAL ISLAND WITH A RADIUS BETWEEN APPROX 3m AND 8m. NORMAL ROUNDABOUTS SHOULD BE DESIGNED USING THE TfNSW GEOMETRIC DESIGN METHOD.
3. VEHICLE DEFLECTION PATHS MUST BE BASED ON A DESIGN SPEED OF 40km/h (R50/R48 CONCENTRIC ARCS) AND MUST BE TANGENTIAL TO KERB LINE ENTRY/EXIT ARCS AND TANGENTIAL TO OR CROSS THE CENTRAL ISLAND.
4. MINIMUM DESIGN VEHICLE FOR TURNING MANOEUVRES (EXCEPT TO/FROM ACCESSES) SHOULD BE A SINGLE UNIT TRUCK/BUS (12.5m). NARROW ROAD WIDTHS OR TURNS THROUGH > 120° MAY REQUIRE ADOPTION OF A SERVICE VEHICLE (8.8m) AS THE DESIGN VEHICLE, BUT ONLY ON ROADS WITH LOW TRAFFIC VOLUMES.
5. DESIGN VEHICLE SWEPT PATHS MUST BE CHECKED USING SOFTWARE AND/OR AUSTROADS TURNING PATH TEMPLATES. VEHICLE BODY OVERHANG (FRONT AND REAR) MUST NOT OVERHANG KERB LINES UNLESS KERB IS FULLY MOUNTABLE. CLEARANCE FROM WHEEL PATH/BODY OVERHANG TO KERB LINE TO BE 300mm MIN. TURNING PATH DESIGN SPEED 10km/h, OR 5km/h MIN WHERE CENTRAL ISLAND IS COMPLETELY OVERRUN.
6. PROPERTY ACCESSES ADJACENT TO INTERSECTION WILL REQUIRE CAREFUL ANALYSIS. INITIAL STRATEGY SHOULD BE TO ADOPT THE STANDARD PEDESTRIAN REFUGE SHAPE AND POSITION.

   OPTIONS MAY INCLUDE: 1. RELOCATE/DIVERT ACCESS
   2. DENY RIGHT TURNS
   3. MODIFY ISLAND/GAP LENGTH
   4. DELETE REFUGE AND CREATE PAINTED MEDIAN ISLAND

   RELOCATION OF EXISTING SERVICES SHOULD BE CONSIDERED PRIOR TO COMPROMISING THE GEOMETRIC DESIGN.
7. SPLITTER ISLAND/PEDESTRIAN REFUGES MUST BE CONSTRUCTED ON EACH ARM WITH BARRIER (SM) KERB. THE CENTRAL ISLAND MUST BE CONSTRUCTED WITH FULLY MOUNTABLE (FM) KERB PROFILE. OTHER TRAFFIC ISLANDS WHERE NO PROVISION IS MADE FOR PEDESTRIANS/CYCLISTS SHOULD BE CONSTRUCTED WITH SEMI-MOUNTABLE (SF) KERB.



BARRIER KERB
(SM KERB)
SCALE 1:20

FULLY MOUNTABLE KERB
(FM KERB)
SCALE 1:20

BARRIER KERB AND CHANNEL
(MODIFIED SA KERB)
SCALE 1:20

8. ROADS WITH AN AADT VOLUME > 5,000 VEHICLES AND/OR V_{85}> 60km/h MAY REQUIRE INCREASED TAPER LENGTHS OR AN ALTERNATIVE TREATMENT FOR PEDESTRIANS AND CYCLISTS, ESPECIALLY WHERE THERE IS HIGH DEMAND FOR CROSSING AT THE INTERSECTION.
9. SIGHT DISTANCE REQUIREMENTS (ESSENTIAL):

APPROACH SIGHT DISTANCE:	40m AT V_{85} = 50km/h 55m AT V_{85} = 60km/h
ENTERING SIGHT DISTANCE:	44m AT 40km/h
CROSSING SIGHT DISTANCE:	DIST. 4m : 46m AT V_{85} = 50km/h 56m AT V_{85} = 60km/h DIST. 5m : 58m AT V_{85} = 50km/h 69m AT V_{85} = 60km/h

10. CROSSFALL IN THE CIRCULATING CARRIAGEWAY SHOULD BE BETWEEN 2 TO 4%. ON SLOPING LAND THE CROSSFALL ACROSS THE WHOLE ROUNDABOUT SHOULD NOT EXCEED 4% AND SHOULD BE IN THE RANGE OF ±4% AROUND THE CIRCULATING CARRIAGEWAY. THE CENTRAL ISLAND SHOULD BE DESIGNED ON AN INCLINED PLANE TO FACILITATE SURFACE DRAINAGE AND FOR CONSTRUCTION AND APPEARANCE PURPOSES.
11. EDGE LINES TO BE MARKED ON ROADS ≥ 11m WIDE.
12. BUS COMPANIES AND LANDOWNERS ADJACENT TO THE INTERSECTION MUST BE CONSULTED DURING THE PRELIMINARY DESIGN STAGE.
13. ROAD LIGHTING MUST BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 3000 6000 9000 12000 15000

1:300

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

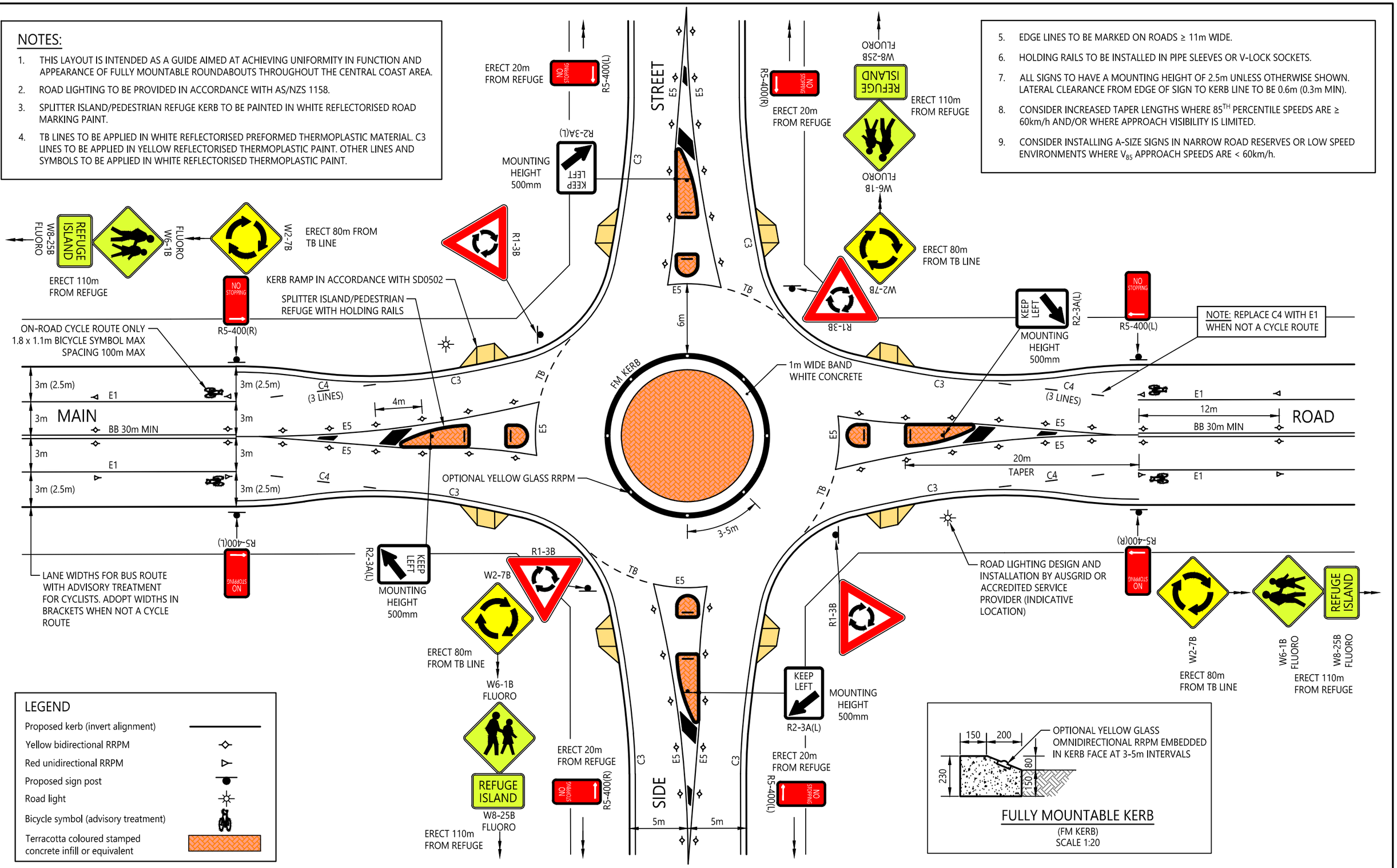
STANDARD DRAWING

TRAFFIC MANAGEMENT SERIES
FULLY MOUNTABLE ROUNDABOUT

DRAWING NUMBER	REV
SD0903	-
SHEET 1 OF 9	A3

NOTES:

1. THIS LAYOUT IS INTENDED AS A GUIDE AIMED AT ACHIEVING UNIFORMITY IN FUNCTION AND APPEARANCE OF FULLY MOUNTABLE ROUNDABOUTS THROUGHOUT THE CENTRAL COAST AREA.
2. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
3. SPLITTER ISLAND/PEDESTRIAN REFUGE KERB TO BE PAINTED IN WHITE REFLECTORISED ROAD MARKING PAINT.
4. TB LINES TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL. C3 LINES TO BE APPLIED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT. OTHER LINES AND SYMBOLS TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT.
5. EDGE LINES TO BE MARKED ON ROADS ≥ 11m WIDE.
6. HOLDING RAILS TO BE INSTALLED IN PIPE SLEEVES OR V-LOCK SOCKETS.
7. ALL SIGNS TO HAVE A MOUNTING HEIGHT OF 2.5m UNLESS OTHERWISE SHOWN. LATERAL CLEARANCE FROM EDGE OF SIGN TO KERB LINE TO BE 0.6m (0.3m MIN).
8. CONSIDER INCREASED TAPER LENGTHS WHERE 85TH PERCENTILE SPEEDS ARE ≥ 60km/h AND/OR WHERE APPROACH VISIBILITY IS LIMITED.
9. CONSIDER INSTALLING A-SIZE SIGNS IN NARROW ROAD RESERVES OR LOW SPEED ENVIRONMENTS WHERE V_{85} APPROACH SPEEDS ARE < 60km/h.



LEGEND

- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Proposed sign post
- Road light
- Bicycle symbol (advisory treatment)
- Terracotta coloured stamped concrete infill or equivalent

FULLY MOUNTABLE KERB
(FM KERB)
SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 3000 6000 9000 12000 15000
1:300

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

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UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
FULLY MOUNTABLE ROUNDABOUT

STANDARD DRAWING

DRAWING NUMBER	REV
SD0903	-
SHEET 2 OF 9	A3

GEOMETRIC DESIGN METHOD

STEP 1: DRAW INSCRIBED CIRCLE

STEP 2: DRAW LAYOUT CIRCLE

STEP 3: DRAW SPLITTER ISLAND ENTRY ARC

STEP 4: DRAW ENTRY KERBLINE ARC

STEP 5: DRAW SPLITTER ISLAND EXIT ARC

STEP 6: DRAW EXIT KERB LINE ARC

STEP 7: DRAW CENTRAL ISLAND (BASED ON DEFLECTION PATHS)

STEP 8: COMPLETE DESIGN LAYOUT

a) DRAW SPLITTER ISLANDS

b) ADJUST SIDE STREET SPLITTER ISLAND ENTRY/EXIT ARCS

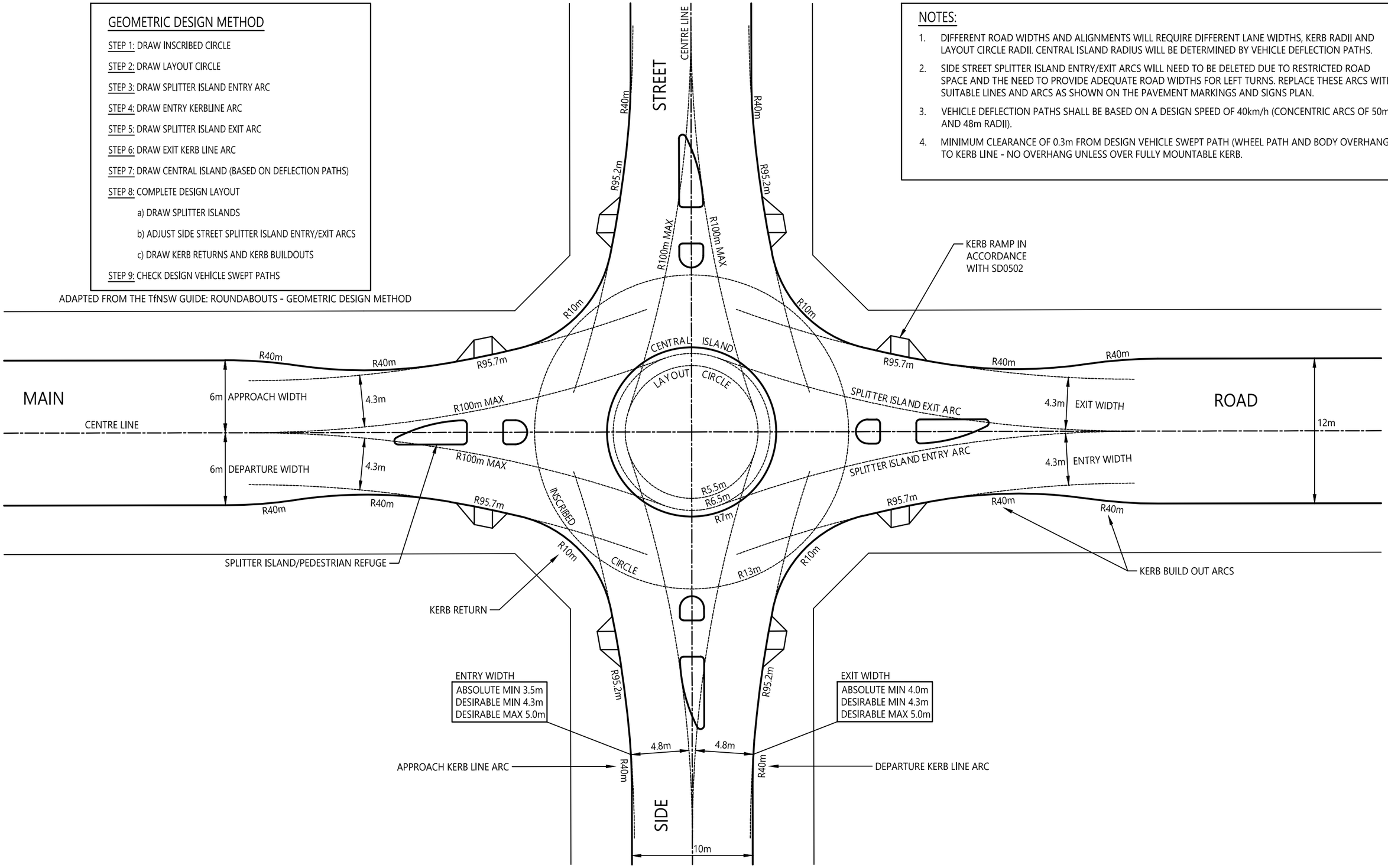
c) DRAW KERB RETURNS AND KERB BUILDOUTS

STEP 9: CHECK DESIGN VEHICLE SWEPT PATHS

ADAPTED FROM THE TfNSW GUIDE: ROUNDABOUTS - GEOMETRIC DESIGN METHOD

NOTES:

1. DIFFERENT ROAD WIDTHS AND ALIGNMENTS WILL REQUIRE DIFFERENT LANE WIDTHS, KERB RADII AND LAYOUT CIRCLE RADII. CENTRAL ISLAND RADIUS WILL BE DETERMINED BY VEHICLE DEFLECTION PATHS.
2. SIDE STREET SPLITTER ISLAND ENTRY/EXIT ARCS WILL NEED TO BE DELETED DUE TO RESTRICTED ROAD SPACE AND THE NEED TO PROVIDE ADEQUATE ROAD WIDTHS FOR LEFT TURNS. REPLACE THESE ARCS WITH SUITABLE LINES AND ARCS AS SHOWN ON THE PAVEMENT MARKINGS AND SIGNS PLAN.
3. VEHICLE DEFLECTION PATHS SHALL BE BASED ON A DESIGN SPEED OF 40km/h (CONCENTRIC ARCS OF 50m AND 48m RADII).
4. MINIMUM CLEARANCE OF 0.3m FROM DESIGN VEHICLE SWEPT PATH (WHEEL PATH AND BODY OVERHANG) TO KERB LINE - NO OVERHANG UNLESS OVER FULLY MOUNTABLE KERB.



REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 3000 6000 9000 12000 15000

1:300

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

TRAFFIC MANAGEMENT SERIES
FULLY MOUNTABLE ROUNDABOUT

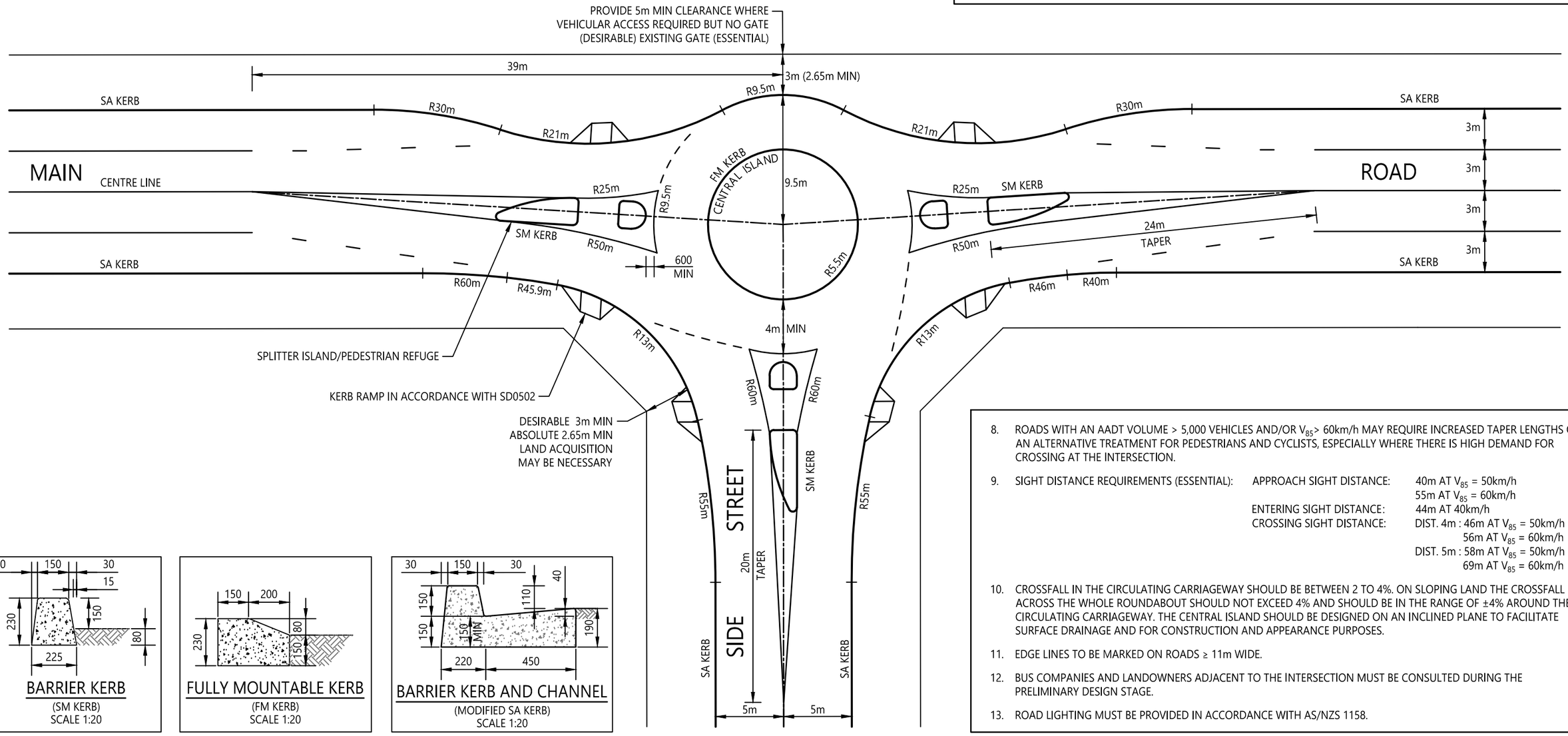
DRAWING NUMBER	REV
SD0903	-
SHEET 3 OF 9	A3

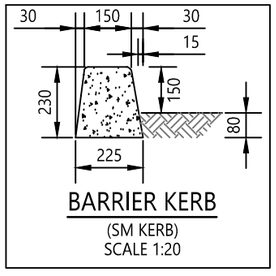
NOTES:

1. THIS LAYOUT IS INTENDED AS A GUIDE AIMED AT ACHIEVING UNIFORMITY IN FUNCTION AND APPEARANCE OF FULLY MOUNTABLE ROUNDABOUTS THROUGHOUT THE LGA. DIFFERENT ROAD WIDTHS AND ALIGNMENTS WILL REQUIRE DIFFERENT LANE WIDTHS AND KERB RADII. SUGGESTED SPACING OF TRAFFIC CALMING DEVICES ON BUS ROUTES TO BE 150 TO 250m, OTHERWISE SPACING TO BE 80 TO 120m.
2. A FULLY MOUNTABLE ROUNDABOUT SHALL BE DEFINED AS A ROUNDABOUT HAVING A SINGLE LANE CIRCULATING CARRIAGEWAY AROUND A FULLY MOUNTABLE CENTRAL ISLAND WITH A RADIUS BETWEEN APPROX 3m AND 8m. NORMAL ROUNDABOUTS SHOULD BE DESIGNED USING THE TfNSW GEOMETRIC DESIGN METHOD.
3. VEHICLE DEFLECTION PATHS MUST BE BASED ON A DESIGN SPEED OF 40km/h (R50/R48 CONCENTRIC ARCS) AND MUST BE TANGENTIAL TO KERB LINE ENTRY/EXIT ARCS AND TANGENTIAL TO OR CROSS THE CENTRAL ISLAND.
4. MINIMUM DESIGN VEHICLE FOR TURNING MANOEUVRES (EXCEPT TO/FROM ACCESSES) SHOULD BE A SINGLE UNIT TRUCK/BUS (12.5m). NARROW ROAD WIDTHS OR TURNS THROUGH > 120° MAY REQUIRE ADOPTION OF A SERVICE VEHICLE (8.8m) AS THE DESIGN VEHICLE, BUT ONLY ON ROADS WITH LOW TRAFFIC VOLUMES.
5. DESIGN VEHICLE SWEPT PATHS MUST BE CHECKED USING SOFTWARE AND/OR AUSTROADS TURNING PATH TEMPLATES. VEHICLE BODY OVERHANG (FRONT AND REAR) MUST NOT OVERHANG KERB LINES UNLESS KERB IS FULLY MOUNTABLE. CLEARANCE FROM WHEEL PATH/BODY OVERHANG TO KERB LINE TO BE 300mm MIN. TURNING PATH DESIGN SPEED 10km/h, OR 5km/h MIN WHERE CENTRAL ISLAND IS COMPLETELY OVERRUN.
6. PROPERTY ACCESSES ADJACENT TO INTERSECTION WILL REQUIRE CAREFUL ANALYSIS. INITIAL STRATEGY SHOULD BE TO ADOPT THE STANDARD PEDESTRIAN REFUGE SHAPE AND POSITION.

   OPTIONS MAY INCLUDE: 1. RELOCATE/DIVERT ACCESS
   2. DENY RIGHT TURNS
   3. MODIFY ISLAND/GAP LENGTH
   4. DELETE REFUGE AND CREATE PAINTED MEDIAN ISLAND

   RELOCATION OF EXISTING SERVICES SHOULD BE CONSIDERED PRIOR TO COMPROMISING THE GEOMETRIC DESIGN.
7. SPLITTER ISLAND/PEDESTRIAN REFUGES MUST BE CONSTRUCTED ON EACH ARM WITH BARRIER (SM) KERB. THE CENTRAL ISLAND MUST BE CONSTRUCTED WITH FULLY MOUNTABLE (FM) KERB PROFILE. OTHER TRAFFIC ISLANDS WHERE NO PROVISION IS MADE FOR PEDESTRIANS/CYCLISTS SHOULD BE CONSTRUCTED WITH SEMI-MOUNTABLE (SF) KERB.





BARRIER KERB
(SM KERB)
SCALE 1:20

FULLY MOUNTABLE KERB
(FM KERB)
SCALE 1:20

BARRIER KERB AND CHANNEL
(MODIFIED SA KERB)
SCALE 1:20

8. ROADS WITH AN AADT VOLUME > 5,000 VEHICLES AND/OR V_{85}> 60km/h MAY REQUIRE INCREASED TAPER LENGTHS OR AN ALTERNATIVE TREATMENT FOR PEDESTRIANS AND CYCLISTS, ESPECIALLY WHERE THERE IS HIGH DEMAND FOR CROSSING AT THE INTERSECTION.
9. SIGHT DISTANCE REQUIREMENTS (ESSENTIAL):

APPROACH SIGHT DISTANCE:	40m AT V_{85} = 50km/h 55m AT V_{85} = 60km/h
ENTERING SIGHT DISTANCE:	44m AT 40km/h
CROSSING SIGHT DISTANCE:	DIST. 4m : 46m AT V_{85} = 50km/h 56m AT V_{85} = 60km/h DIST. 5m : 58m AT V_{85} = 50km/h 69m AT V_{85} = 60km/h

10. CROSSFALL IN THE CIRCULATING CARRIAGEWAY SHOULD BE BETWEEN 2 TO 4%. ON SLOPING LAND THE CROSSFALL ACROSS THE WHOLE ROUNDABOUT SHOULD NOT EXCEED 4% AND SHOULD BE IN THE RANGE OF ±4% AROUND THE CIRCULATING CARRIAGEWAY. THE CENTRAL ISLAND SHOULD BE DESIGNED ON AN INCLINED PLANE TO FACILITATE SURFACE DRAINAGE AND FOR CONSTRUCTION AND APPEARANCE PURPOSES.
11. EDGE LINES TO BE MARKED ON ROADS ≥ 11m WIDE.
12. BUS COMPANIES AND LANDOWNERS ADJACENT TO THE INTERSECTION MUST BE CONSULTED DURING THE PRELIMINARY DESIGN STAGE.
13. ROAD LIGHTING MUST BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 3000 6000 9000 12000 15000

1:300

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

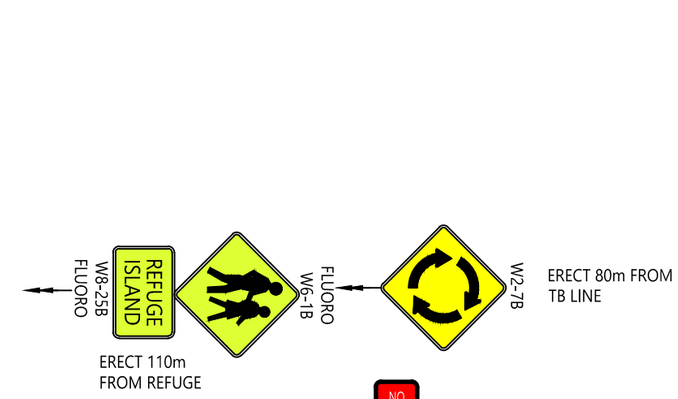
ROADS TRANSPORT DRAINAGE AND WASTE

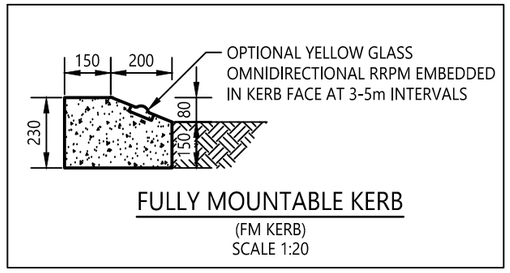
Central Coast Council

STANDARD DRAWING

TRAFFIC MANAGEMENT SERIES
FULLY MOUNTABLE ROUNDABOUT

DRAWING NUMBER	REV
SD0903	-
SHEET 4 OF 9	A3

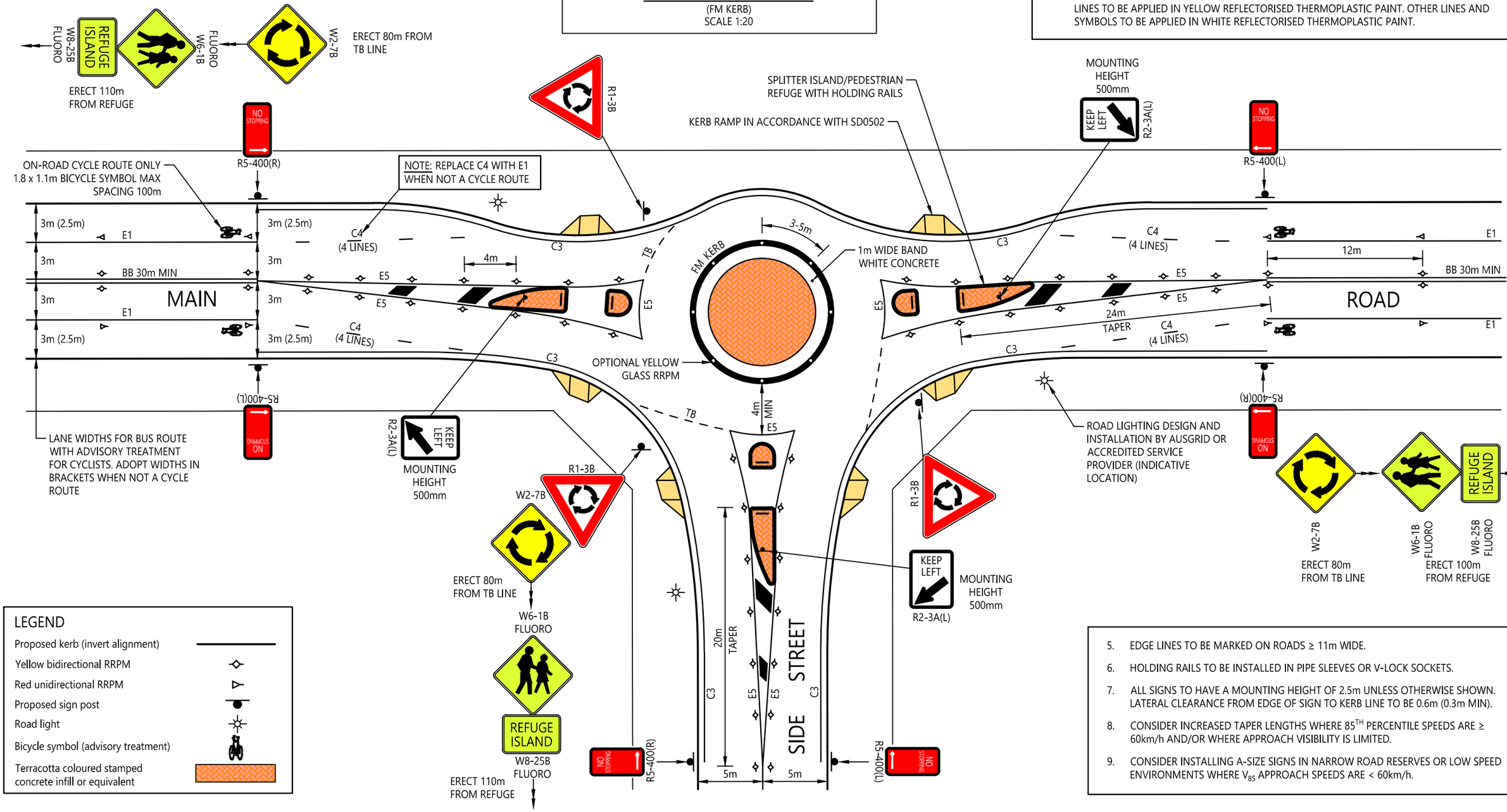




FULLY MOUNTABLE KERB
(FM KERB)
SCALE 1:20

NOTES:

1. THIS LAYOUT IS INTENDED AS A GUIDE AIMED AT ACHIEVING UNIFORMITY IN FUNCTION AND APPEARANCE OF FULLY MOUNTABLE ROUNDABOUTS THROUGHOUT THE CENTRAL COAST AREA.
2. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
3. SPLITTER ISLAND/PEDESTRIAN REFUGE KERB TO BE PAINTED IN WHITE REFLECTORISED ROAD MARKING PAINT.
4. TB LINES TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL. C3 LINES TO BE APPLIED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT. OTHER LINES AND SYMBOLS TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT.



LEGEND

- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Proposed sign post
- Road light
- Bicycle symbol (advisory treatment)
- Terracotta coloured stamped concrete infill or equivalent

5. EDGE LINES TO BE MARKED ON ROADS ≥ 11m WIDE.
6. HOLDING RAILS TO BE INSTALLED IN PIPE SLEEVES OR V-LOCK SOCKETS.
7. ALL SIGNS TO HAVE A MOUNTING HEIGHT OF 2.5m UNLESS OTHERWISE SHOWN. LATERAL CLEARANCE FROM EDGE OF SIGN TO KERB LINE TO BE 0.6m (0.3m MIN).
8. CONSIDER INCREASED TAPER LENGTHS WHERE 85TH PERCENTILE SPEEDS ARE ≥ 60km/h AND/OR WHERE APPROACH VISIBILITY IS LIMITED.
9. CONSIDER INSTALLING A-SIZE SIGNS IN NARROW ROAD RESERVES OR LOW SPEED ENVIRONMENTS WHERE V_{85} APPROACH SPEEDS ARE < 60km/h.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 3000 6000 9000 12000 15000

1:300

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

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UNIT MANAGER APPROVAL

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Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

TRAFFIC MANAGEMENT SERIES
FULLY MOUNTABLE ROUNDABOUT

DRAWING NUMBER	REV
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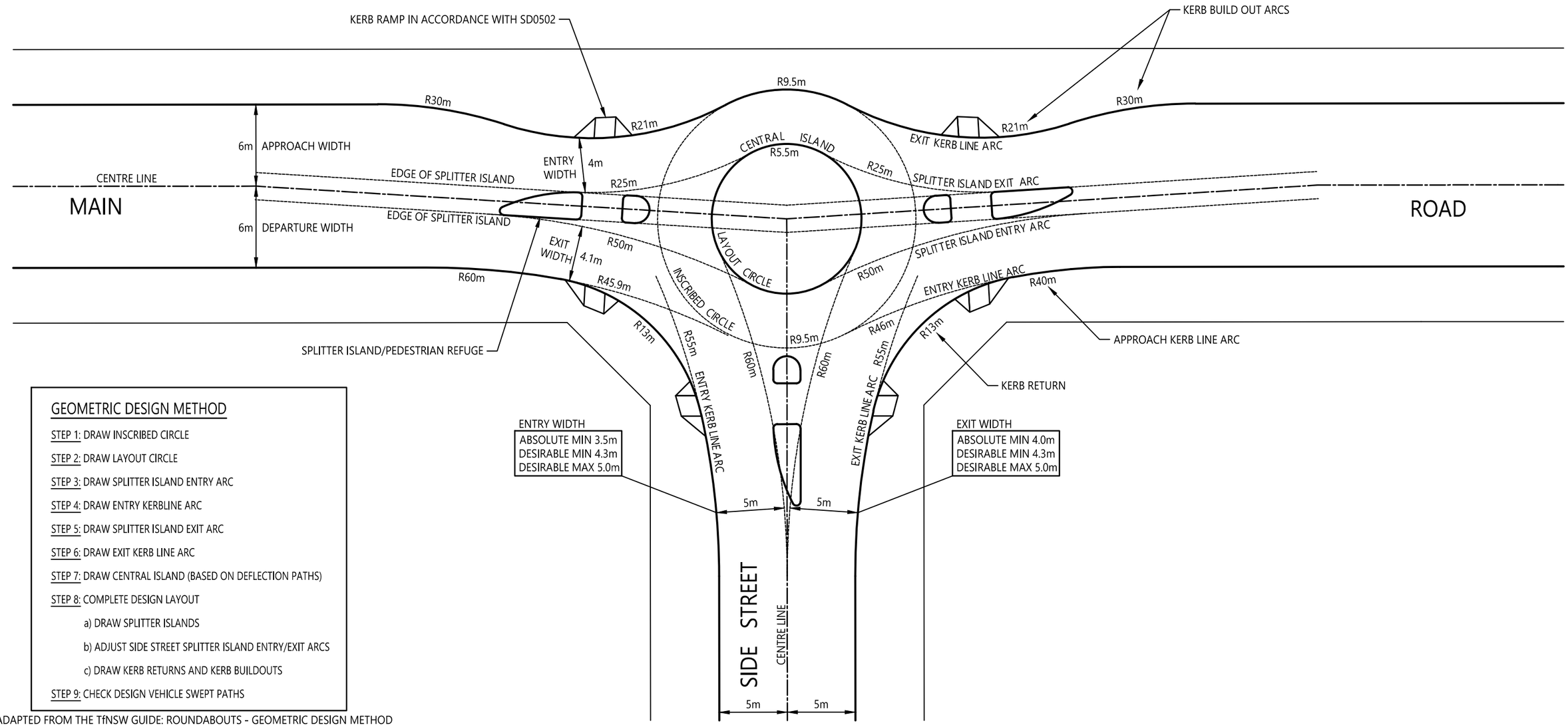
SHEET 5 OF 9	A3

NOTES:

1. DIFFERENT ROAD WIDTHS AND ALIGNMENTS WILL REQUIRE DIFFERENT LANE WIDTHS, KERB RADII AND LAYOUT CIRCLE RADII. CENTRAL ISLAND RADIUS WILL BE DETERMINED BY VEHICLE DEFLECTION PATHS.
2. SIDE STREET SPLITTER ISLAND ENTRY/EXIT ARCS WILL NEED TO BE DELETED DUE TO RESTRICTED ROAD SPACE AND THE NEED TO PROVIDE ADEQUATE ROAD WIDTHS FOR LEFT TURNS. REPLACE THESE ARCS WITH SUITABLE LINES AND ARCS AS SHOWN ON THE PAVEMENT MARKINGS AND SIGNS PLAN.
3. VEHICLE DEFLECTION PATHS SHALL BE BASED ON A DESIGN SPEED OF 40km/h (CONCENTRIC ARCS OF 50m AND 48m RADII).
4. MINIMUM CLEARANCE OF 0.3m FROM DESIGN VEHICLE SWEPT PATH (WHEEL PATH AND BODY OVERHANG) TO KERB LINE - NO OVERHANG UNLESS OVER FULLY MOUNTABLE KERB.



GEOMETRIC DESIGN METHOD

STEP 1: DRAW INSCRIBED CIRCLE

STEP 2: DRAW LAYOUT CIRCLE

STEP 3: DRAW SPLITTER ISLAND ENTRY ARC

STEP 4: DRAW ENTRY KERBLINE ARC

STEP 5: DRAW SPLITTER ISLAND EXIT ARC

STEP 6: DRAW EXIT KERB LINE ARC

STEP 7: DRAW CENTRAL ISLAND (BASED ON DEFLECTION PATHS)

STEP 8: COMPLETE DESIGN LAYOUT

a) DRAW SPLITTER ISLANDS

b) ADJUST SIDE STREET SPLITTER ISLAND ENTRY/EXIT ARCS

c) DRAW KERB RETURNS AND KERB BUILDOUTS

STEP 9: CHECK DESIGN VEHICLE SWEPT PATHS

ADAPTED FROM THE TfNSW GUIDE: ROUNDABOUTS - GEOMETRIC DESIGN METHOD

REV	AMENDMENT	DATE	DRAWN	APRVD

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SCALE ON ORIGINAL A3 SIZE DRAWING

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1:300

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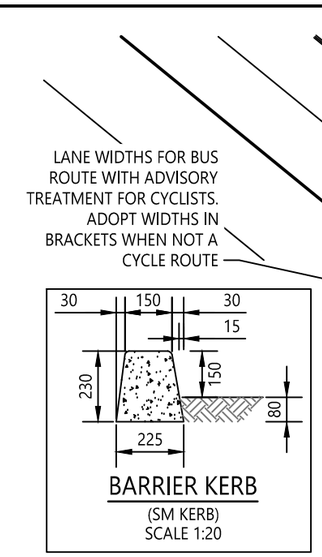
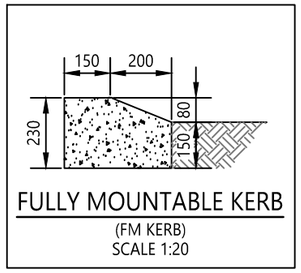
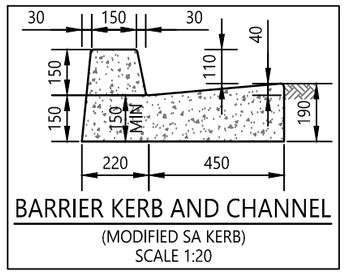
TRAFFIC MANAGEMENT SERIES
FULLY MOUNTABLE ROUNDABOUT

DRAWING NUMBER	REV
SD0903	-
SHEET 6 OF 9	A3







LANE WIDTHS FOR BUS ROUTE WITH ADVISORY TREATMENT FOR CYCLISTS. ADOPT WIDTHS IN BRACKETS WHEN NOT A CYCLE ROUTE

MAIN ROAD

SIDE STREET

SIDE STREET

MAIN ROAD

SA KERB

BB 30m MIN

E1

3m

(2.5m)

R30m

R50m

R95m

R95.5m

R94m

R12m

C3

C4 (3 LINES)

E5

SM KERB

4m

TB

600 MIN

4.5m

5.7m

3m

8.2m

5m

20m TAPER

R5-400(R) NO STOPPING

R5-400(L) NO STOPPING

R2-3A(L) KEEP LEFT

MOUNTING HEIGHT 500mm

R1-3B

KERB RAMP IN ACCORDANCE WITH SD0502

ALTERNATIVE CENTRAL ISLAND SHAPE

OPTIONAL YELLOW GLASS RRPM

FM KERB R20m

1m WIDE BAND WHITE CONCRETE

DESIRABLE 3m MIN

SPLITTER ISLAND/PEDESTRIAN REFUGE WITH HOLDING RAILS

ROAD LIGHTING DESIGN AND INSTALLATION BY AUSGRID OR ACCREDITED SERVICE PROVIDER (INDICATIVE LOCATION)

ON-ROAD CYCLE ROUTE ONLY
1.8 x 1.1m BICYCLE SYMBOL
SPACING 100m MAX

REFUGE ISLAND

W8-25B FLUORO

W6-1B FLUORO

W2-7B

W6-18 FLUORO

W8-23B FLUORO

ERECT 110m FROM REFUGE

ERECT 80m FROM TB LINE

ERECT 80m FROM TB LINE

LEGEND

- Centre line
- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Proposed sign and post
- Road light
- Bicycle symbol (advisory treatment)
- Terracotta coloured stamped concrete infill or equivalent

NOTES:

1. REFER TO NOTES ON SHEETS 1 AND 2.
2. ROTATE CENTRAL ISLAND APPROX 90° FOR SIDE STREETS WITH REVERSE STAGGER.
3. CONSTRUCT TRAFFIC ISLANDS IN ACCORDANCE WITH THE CONSTRUCTION DETAILS SHEETS.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 3000 6000 9000 12000 15000

1:300

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

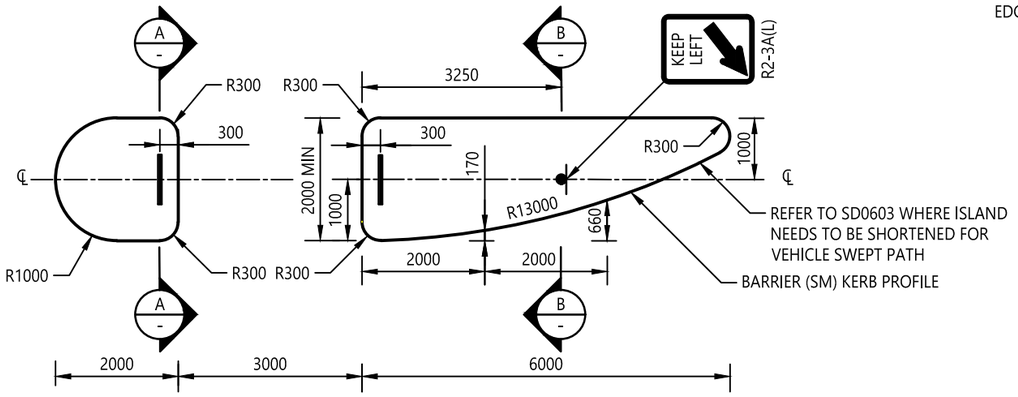
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
FULLY MOUNTABLE ROUNDABOUT

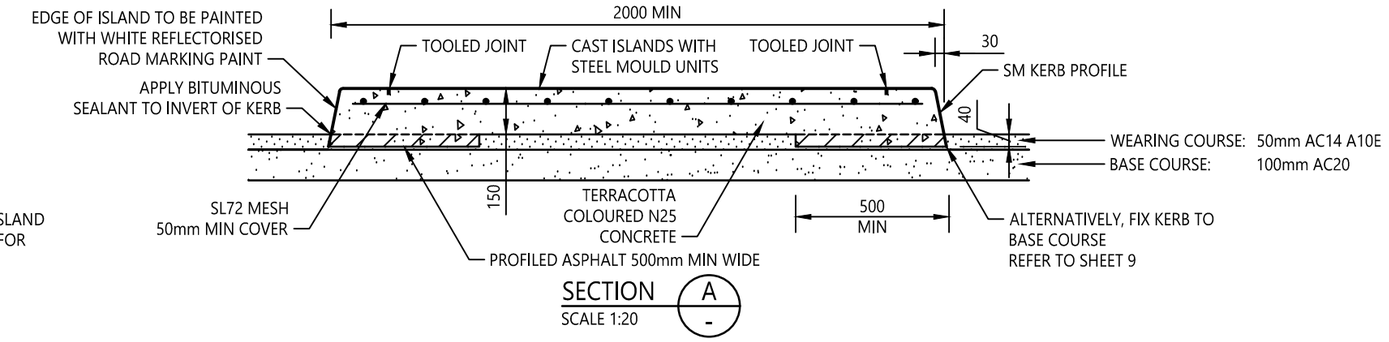
STANDARD DRAWING

DRAWING NUMBER	REV
SD0903	-
SHEET 7 OF 9	A3

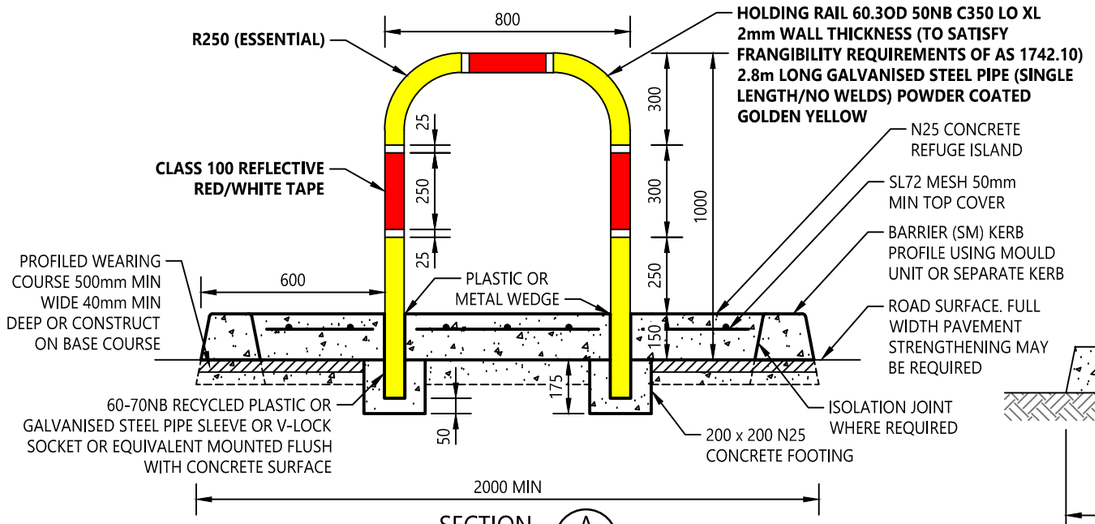


PEDESTRIAN REFUGE ISLAND DETAILS

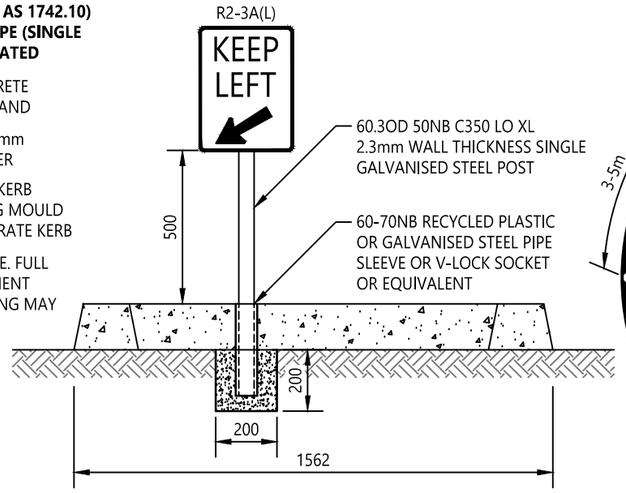
SCALE 1:100



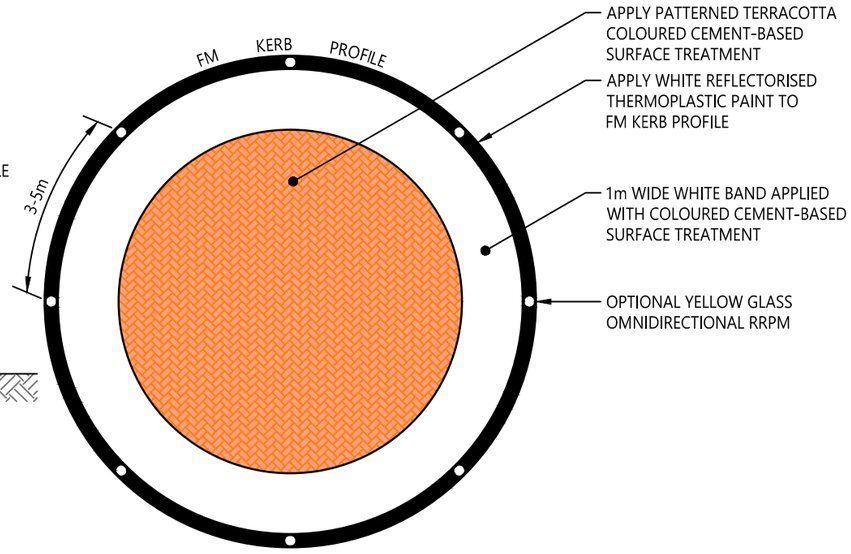
PEDESTRIAN REFUGE ISLAND ON WEARING COURSE DETAIL



HOLDING RAIL DETAIL

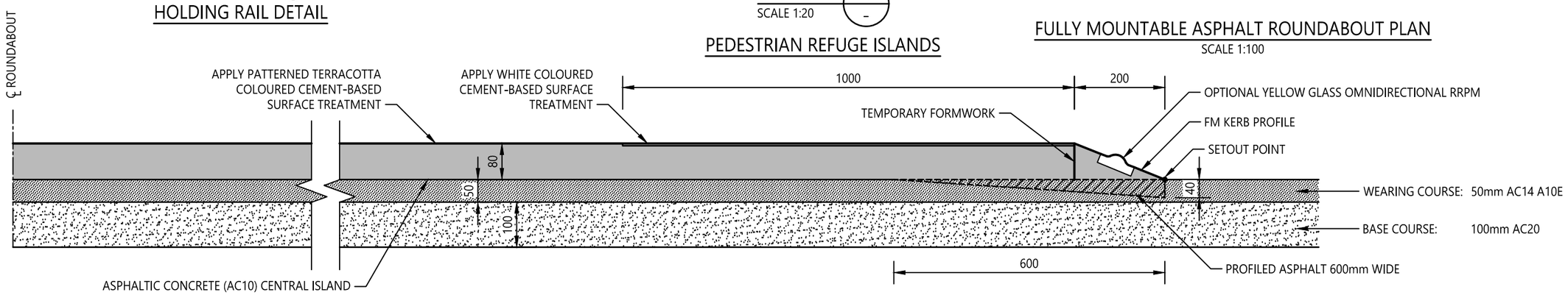


PEDESTRIAN REFUGE ISLANDS



FULLY MOUNTABLE ASPHALT ROUNDABOUT PLAN

SCALE 1:100



FULLY MOUNTABLE ROUNDABOUT - ASPHALT CENTRAL ISLAND DETAIL

SCALE 1:10

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

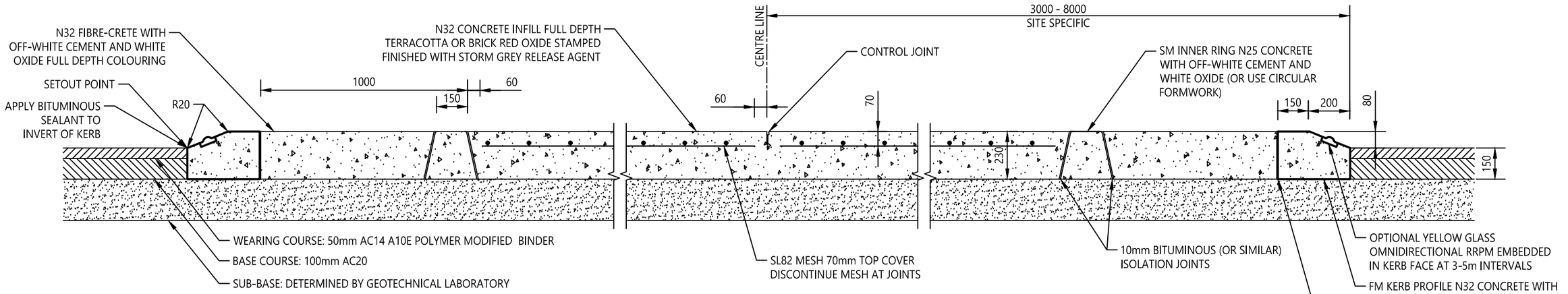
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

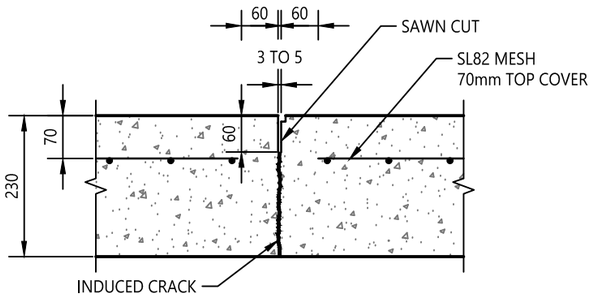
TRAFFIC MANAGEMENT SERIES
FULLY MOUNTABLE ROUNDABOUT

DRAWING NUMBER	REV
SD0903	-
SHEET 8 OF 9	A3



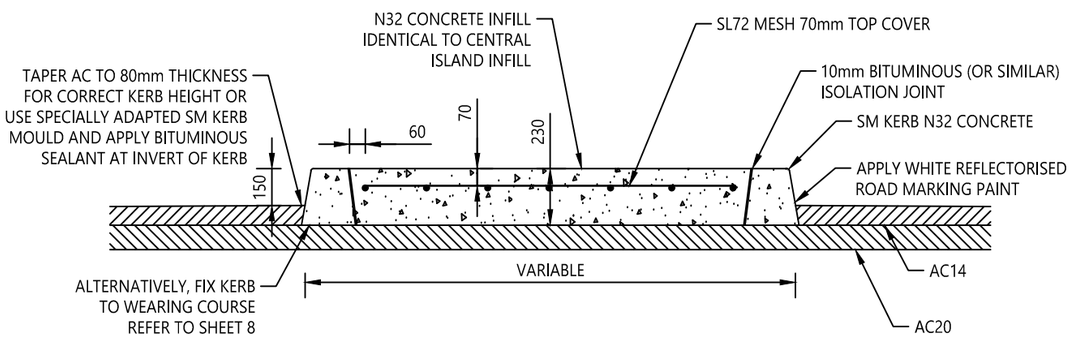
FULLY MOUNTABLE ROUNDABOUT - CONCRETE CENTRAL ISLAND DETAIL

SCALE 1:20



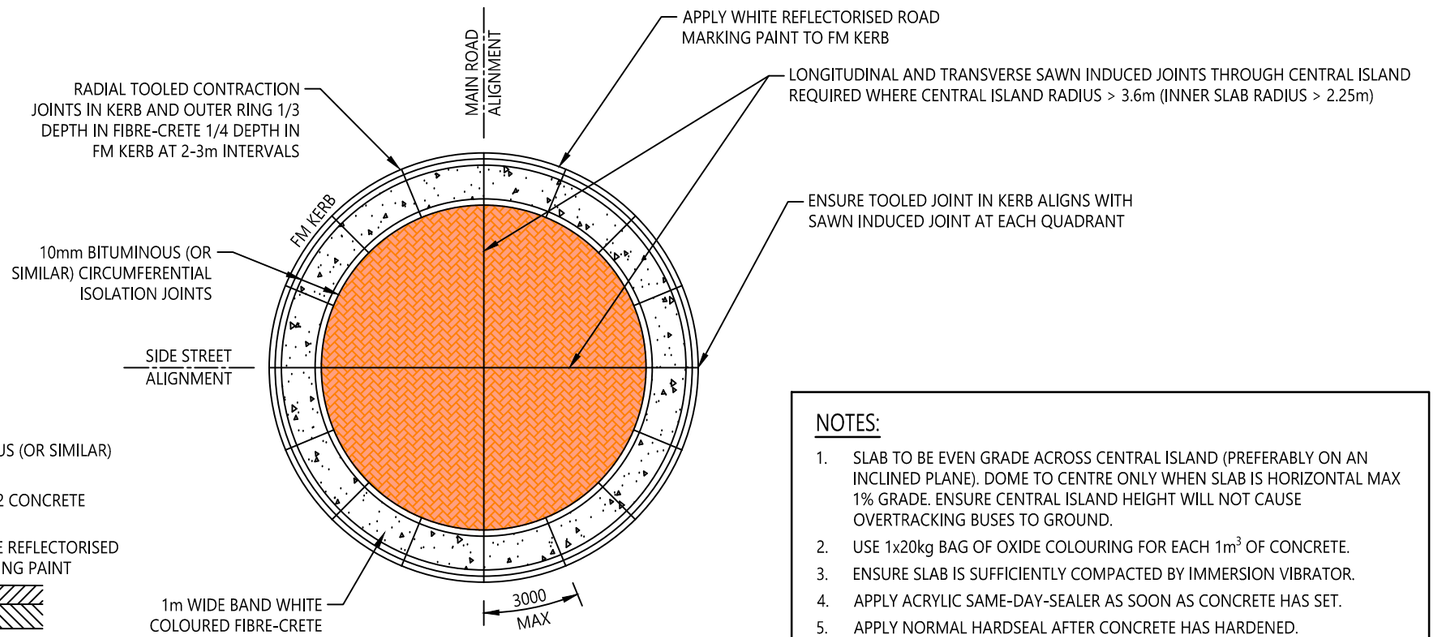
CONTROL JOINT

SCALE 1:10



TYPICAL PEDESTRIAN REFUGE ISLAND ON BASE COURSE DETAIL

SCALE 1:25



JOINT DIAGRAM

SCALE 1:20

NOTES:

1. SLAB TO BE EVEN GRADE ACROSS CENTRAL ISLAND (PREFERABLY ON AN INCLINED PLANE). DOME TO CENTRE ONLY WHEN SLAB IS HORIZONTAL MAX 1% GRADE. ENSURE CENTRAL ISLAND HEIGHT WILL NOT CAUSE OVERTRACKING BUSES TO GROUND.
2. USE 1x20kg BAG OF OXIDE COLOURING FOR EACH $1m^3$ OF CONCRETE.
3. ENSURE SLAB IS SUFFICIENTLY COMPACTED BY IMMERSION VIBRATOR.
4. APPLY ACRYLIC SAME-DAY-SEALER AS SOON AS CONCRETE HAS SET.
5. APPLY NORMAL HARDSEAL AFTER CONCRETE HAS HARDENED.
6. SAWN INDUCED JOINTS SHOULD BE CUT AS SOON AS SURFACE IS HARD ENOUGH THAT IT WILL NOT CHIP, SPALL AND COLLAPSE ON THE CUTTING BLADE. GENERALLY, THIS SHOULD BE WITHIN 24 HOURS OF CONCRETE PLACEMENT.
7. MAXIMUM UNJOINTED SLAB DIMENSION TO BE 4.5m.
8. PREVENT VEHICULAR OVERRUN OF CENTRAL ISLAND FOR AT LEAST 7 DAYS.
9. SLAB SURFACE SHOULD BE RESEALED EVERY 1 TO 2 YEARS.
10. ENSURE COMPACTED AC WEARING COURSE MATCHES THE FM KERB INVERT LEVEL (SETOUT POINT) FOR AN ISLAND HEIGHT OF 80mm (ESSENTIAL).

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	C SHEPPEARD
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DATE	28/4/20

UNIT MANAGER APPROVAL

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Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

TRAFFIC MANAGEMENT SERIES
FULLY MOUNTABLE ROUNDABOUT

DRAWING NUMBER	REV
SD0903	-
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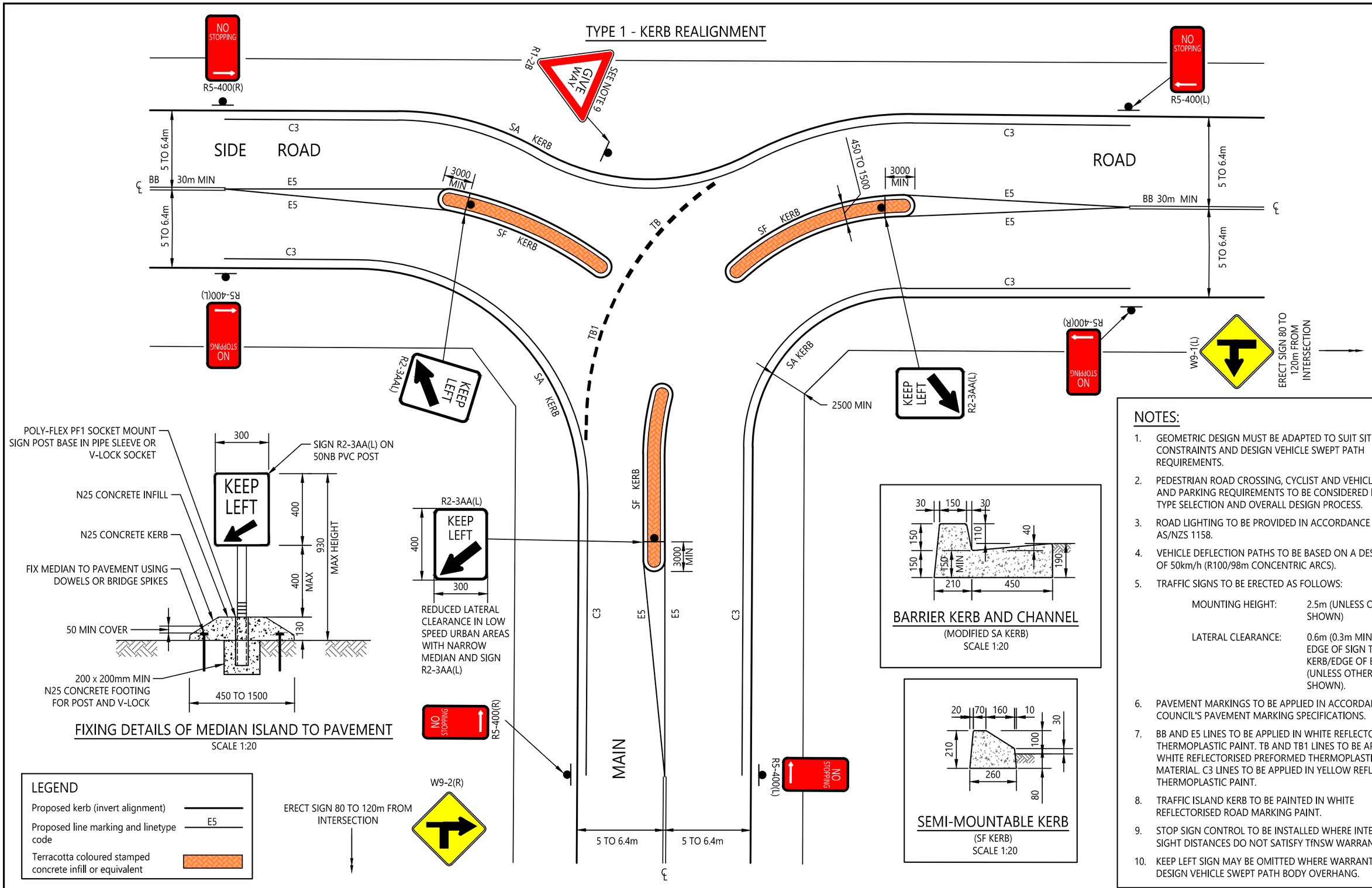
TYPE 1 - KERB REALIGNMENT



FIXING DETAILS OF MEDIAN ISLAND TO PAVEMENT

SCALE 1:20

REDUCED LATERAL CLEARANCE IN LOW SPEED URBAN AREAS WITH NARROW MEDIAN AND SIGN R2-3AA(L)

ERECT SIGN 80 TO 120m FROM INTERSECTION

BARRIER KERB AND CHANNEL

(MODIFIED SA KERB)
SCALE 1:20

SEMI-MOUNTABLE KERB

(SF KERB)
SCALE 1:20

LEGEND

- Proposed kerb (invert alignment)
- Proposed line marking and linetype code — E5
- Terracotta coloured stamped concrete infill or equivalent

NOTES:

1. GEOMETRIC DESIGN MUST BE ADAPTED TO SUIT SITE CONSTRAINTS AND DESIGN VEHICLE SWEPT PATH REQUIREMENTS.
2. PEDESTRIAN ROAD CROSSING, CYCLIST AND VEHICLE ACCESS AND PARKING REQUIREMENTS TO BE CONSIDERED IN DEVICE TYPE SELECTION AND OVERALL DESIGN PROCESS.
3. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
4. VEHICLE DEFLECTION PATHS TO BE BASED ON A DESIGN SPEED OF 50km/h (R100/98m CONCENTRIC ARCS).
5. TRAFFIC SIGNS TO BE ERECTED AS FOLLOWS:
   - MOUNTING HEIGHT: 2.5m (UNLESS OTHERWISE SHOWN)
   - LATERAL CLEARANCE: 0.6m (0.3m MIN) FROM EDGE OF SIGN TO KERB/EDGE OF BITUMEN (UNLESS OTHERWISE SHOWN).
6. PAVEMENT MARKINGS TO BE APPLIED IN ACCORDANCE WITH COUNCIL'S PAVEMENT MARKING SPECIFICATIONS.
7. BB AND E5 LINES TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT. TB AND TB1 LINES TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL. C3 LINES TO BE APPLIED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT.
8. TRAFFIC ISLAND KERB TO BE PAINTED IN WHITE REFLECTORISED ROAD MARKING PAINT.
9. STOP SIGN CONTROL TO BE INSTALLED WHERE INTERSECTION SIGHT DISTANCES DO NOT SATISFY TfNSW WARRANTS.
10. KEEP LEFT SIGN MAY BE OMITTED WHERE WARRANTED BY DESIGN VEHICLE SWEPT PATH BODY OVERHANG.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2500 5000 7500 10000 12500

1:250

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

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CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

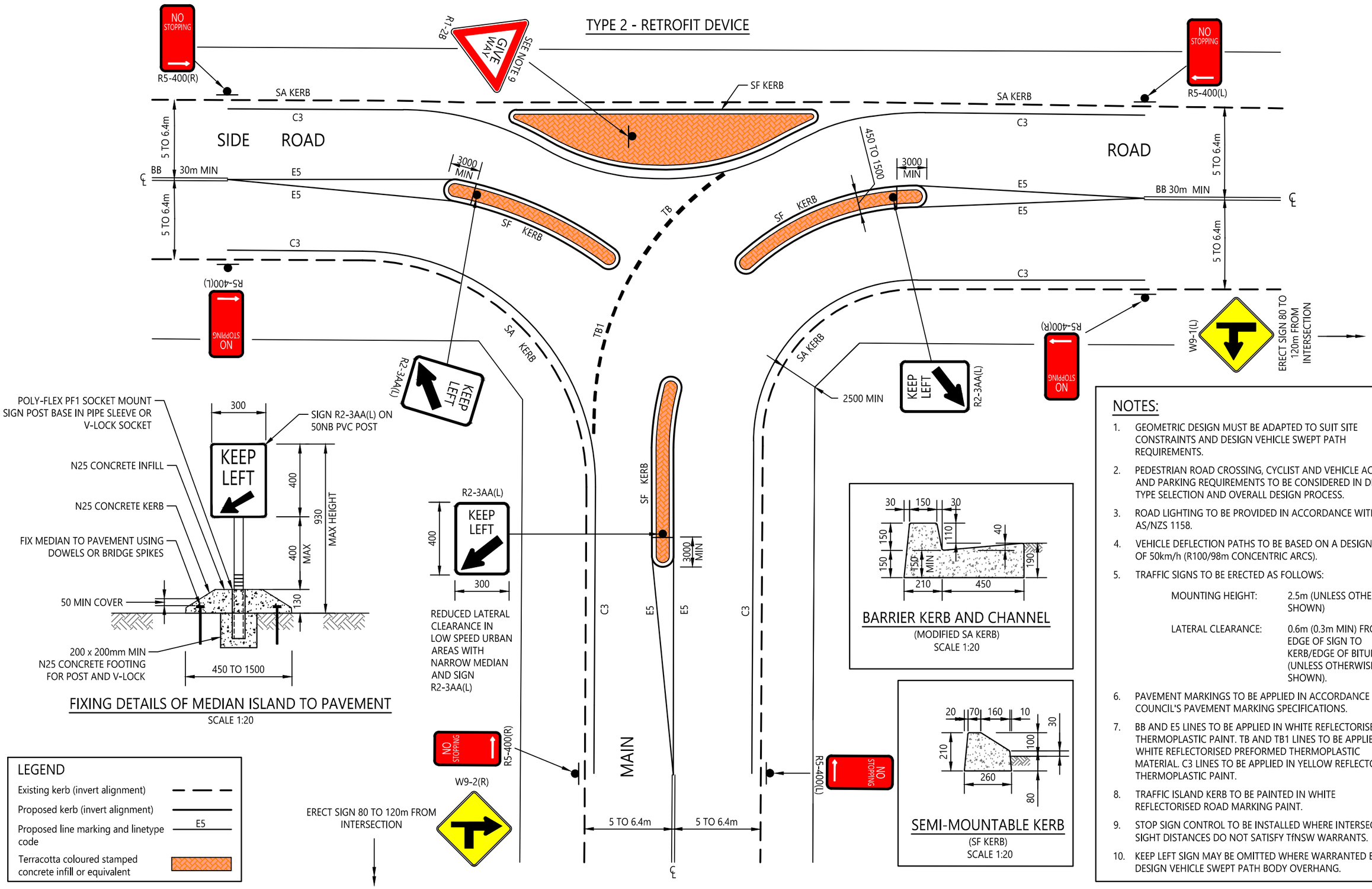
Central Coast Council

STANDARD DRAWING

TRAFFIC MANAGEMENT SERIES
MODIFIED T-INTERSECTION

DRAWING NUMBER	REV
SD0904	-
SHEET 1 OF 2	A3

TYPE 2 - RETROFIT DEVICE



FIXING DETAILS OF MEDIAN ISLAND TO PAVEMENT

SCALE 1:20

BARRIER KERB AND CHANNEL

(MODIFIED SA KERB)
SCALE 1:20

SEMI-MOUNTABLE KERB

(SF KERB)
SCALE 1:20

NOTES:

1. GEOMETRIC DESIGN MUST BE ADAPTED TO SUIT SITE CONSTRAINTS AND DESIGN VEHICLE SWEPT PATH REQUIREMENTS.
2. PEDESTRIAN ROAD CROSSING, CYCLIST AND VEHICLE ACCESS AND PARKING REQUIREMENTS TO BE CONSIDERED IN DEVICE TYPE SELECTION AND OVERALL DESIGN PROCESS.
3. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
4. VEHICLE DEFLECTION PATHS TO BE BASED ON A DESIGN SPEED OF 50km/h (R100/98m CONCENTRIC ARCS).
5. TRAFFIC SIGNS TO BE ERECTED AS FOLLOWS:
   - MOUNTING HEIGHT: 2.5m (UNLESS OTHERWISE SHOWN)
   - LATERAL CLEARANCE: 0.6m (0.3m MIN) FROM EDGE OF SIGN TO KERB/EDGE OF BITUMEN (UNLESS OTHERWISE SHOWN).
6. PAVEMENT MARKINGS TO BE APPLIED IN ACCORDANCE WITH COUNCIL'S PAVEMENT MARKING SPECIFICATIONS.
7. BB AND E5 LINES TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT. TB AND TB1 LINES TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL. C3 LINES TO BE APPLIED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT.
8. TRAFFIC ISLAND KERB TO BE PAINTED IN WHITE REFLECTORISED ROAD MARKING PAINT.
9. STOP SIGN CONTROL TO BE INSTALLED WHERE INTERSECTION SIGHT DISTANCES DO NOT SATISFY TfNSW WARRANTS.
10. KEEP LEFT SIGN MAY BE OMITTED WHERE WARRANTED BY DESIGN VEHICLE SWEPT PATH BODY OVERHANG.

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2500 5000 7500 10000 12500

1:250

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

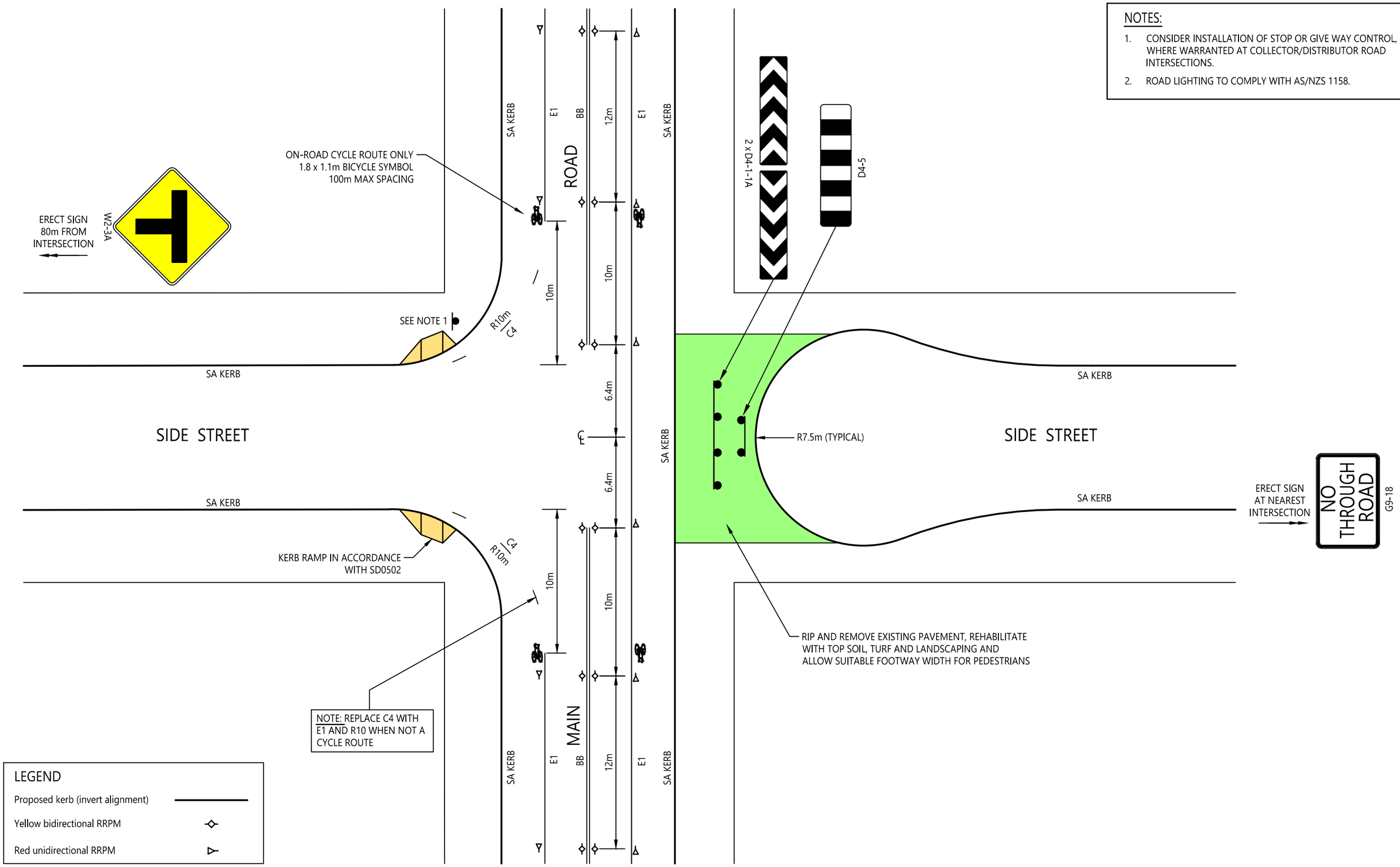
TRAFFIC MANAGEMENT SERIES
MODIFIED T-INTERSECTION

STANDARD DRAWING

DRAWING NUMBER	REV
SD0904	-
SHEET 2 OF 2	A3

NOTES:

1. CONSIDER INSTALLATION OF STOP OR GIVE WAY CONTROL, WHERE WARRANTED AT COLLECTOR/DISTRIBUTOR ROAD INTERSECTIONS.
2. ROAD LIGHTING TO COMPLY WITH AS/NZS 1158.



REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2500 5000 7500 10000 12500

1:250

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

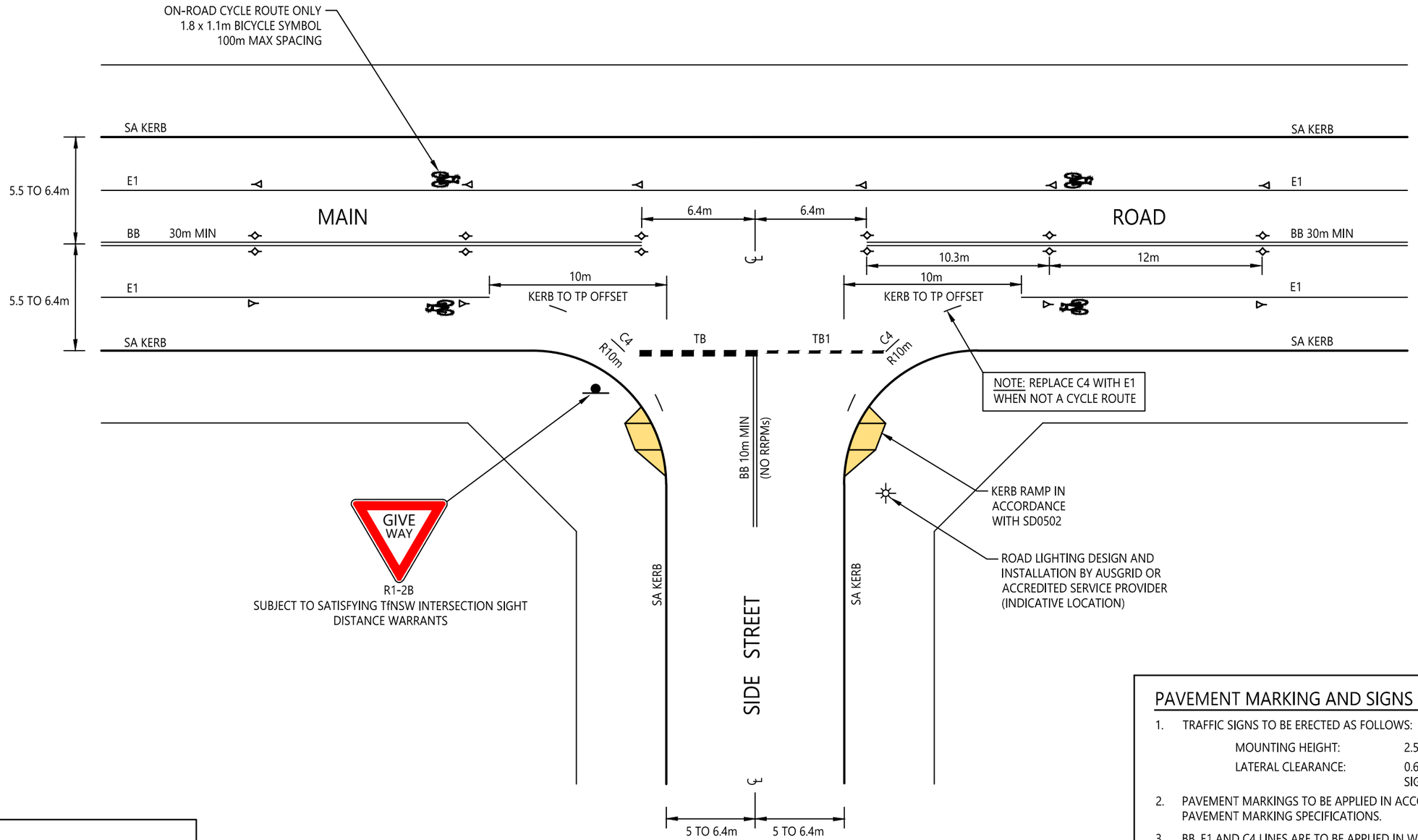
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
RECONFIGURATION OF 4-WAY INTERSECTION

STANDARD DRAWING

DRAWING NUMBER	REV
SD0905	-
SHEET 1 OF 1	A3



TYPICAL URBAN T-INTERSECTION LAYOUT
GIVE WAY CONTROL OPTION

LEGEND

- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Road light (indicative location)
- Bicycle symbol (advisory treatment)

PAVEMENT MARKING AND SIGNS NOTES:

1. TRAFFIC SIGNS TO BE ERECTED AS FOLLOWS:
   - MOUNTING HEIGHT: 2.5m (UNLESS OTHERWISE SHOWN)
   - LATERAL CLEARANCE: 0.6m (0.3m MIN) FROM EDGE OF SIGN TO KERB/EDGE OF BITUMEN
2. PAVEMENT MARKINGS TO BE APPLIED IN ACCORDANCE WITH COUNCIL'S PAVEMENT MARKING SPECIFICATIONS.
3. BB, E1 AND C4 LINES ARE TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT. TB, TB1 LINES AND SYMBOLS ARE TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL.
4. CONSIDER INSTALLING NO STOPPING SIGNS AND YELLOW C3 LINES WHERE STANDARD ROAD RULES NEED REINFORCEMENT.
5. APPLY SAME TRAFFIC SIGN AND PAVEMENT MARKINGS ON OPPOSITE SIDE OF ROAD FOR 4-WAY INTERSECTIONS.
6. CONSIDER INSTALLING DUPLICATE CONTROL SIGN ON OPPOSITE SIDE OF SIDE STREET TO REINFORCE CONTROL, WHERE WARRANTED BY SITE SPECIFIC REQUIREMENTS.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 2500 5000 7500 10000 12500
1:250
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

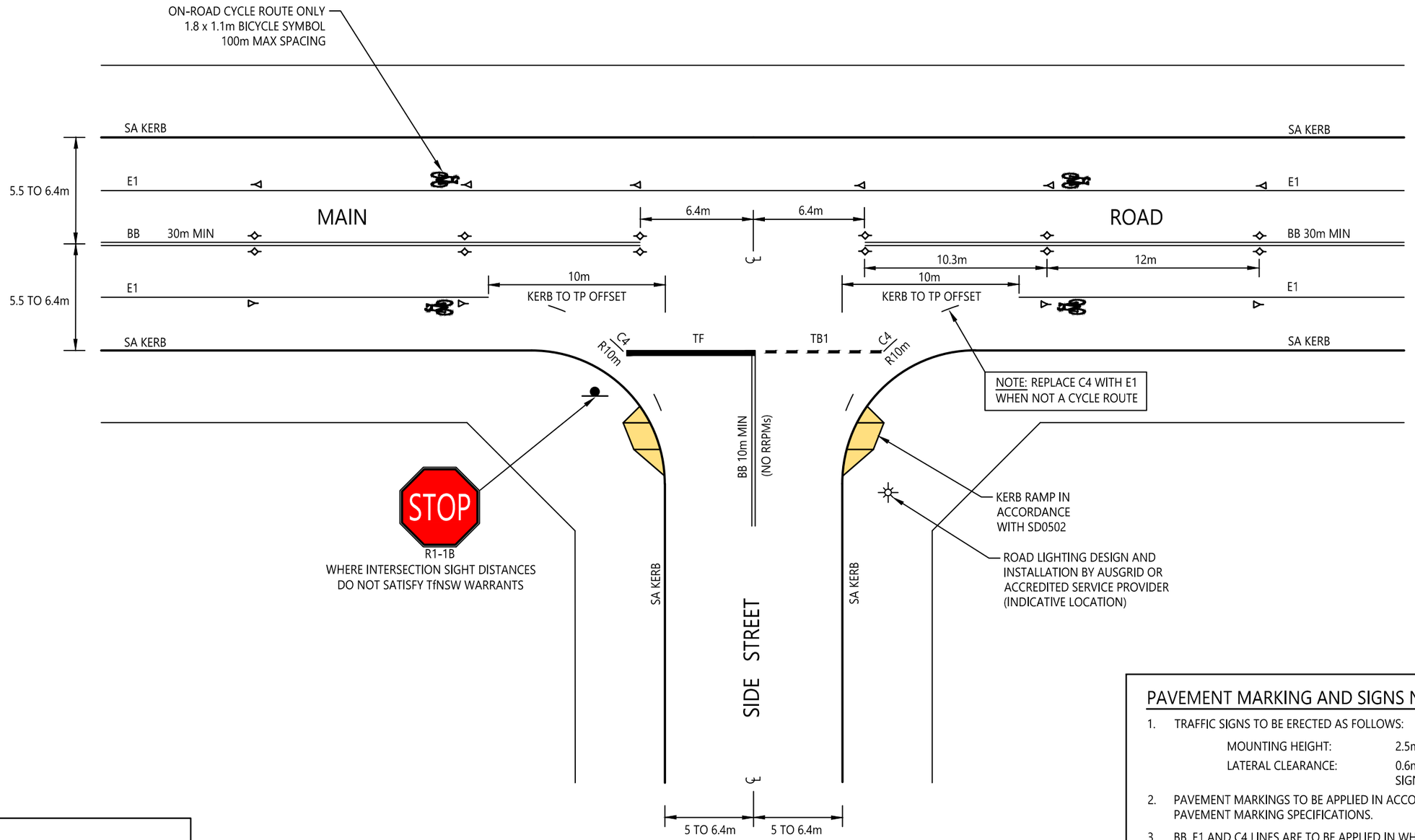
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
T-INTERSECTION LAYOUT

STANDARD DRAWING

DRAWING NUMBER	REV
SD0906	-
SHEET 1 OF 4	A3



TYPICAL URBAN T-INTERSECTION LAYOUT
STOP CONTROL OPTION

LEGEND

- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Road light (indicative location)
- Bicycle symbol (advisory treatment)

PAVEMENT MARKING AND SIGNS NOTES:

1. TRAFFIC SIGNS TO BE ERECTED AS FOLLOWS:
   - MOUNTING HEIGHT: 2.5m (UNLESS OTHERWISE SHOWN)
   - LATERAL CLEARANCE: 0.6m (0.3m MIN) FROM EDGE OF SIGN TO KERB/EDGE OF BITUMEN
2. PAVEMENT MARKINGS TO BE APPLIED IN ACCORDANCE WITH COUNCIL'S PAVEMENT MARKING SPECIFICATIONS.
3. BB, E1 AND C4 LINES ARE TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT. TB, TB1 LINES AND SYMBOLS ARE TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL.
4. CONSIDER INSTALLING NO STOPPING SIGNS AND YELLOW C3 LINES WHERE STANDARD ROAD RULES NEED REINFORCEMENT.
5. APPLY SAME TRAFFIC SIGN AND PAVEMENT MARKINGS ON OPPOSITE SIDE OF ROAD FOR 4-WAY INTERSECTIONS.
6. CONSIDER INSTALLING DUPLICATE CONTROL SIGN ON OPPOSITE SIDE OF SIDE STREET TO REINFORCE CONTROL, WHERE WARRANTED BY SITE SPECIFIC REQUIREMENTS.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 2500 5000 7500 10000 12500
1:250
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

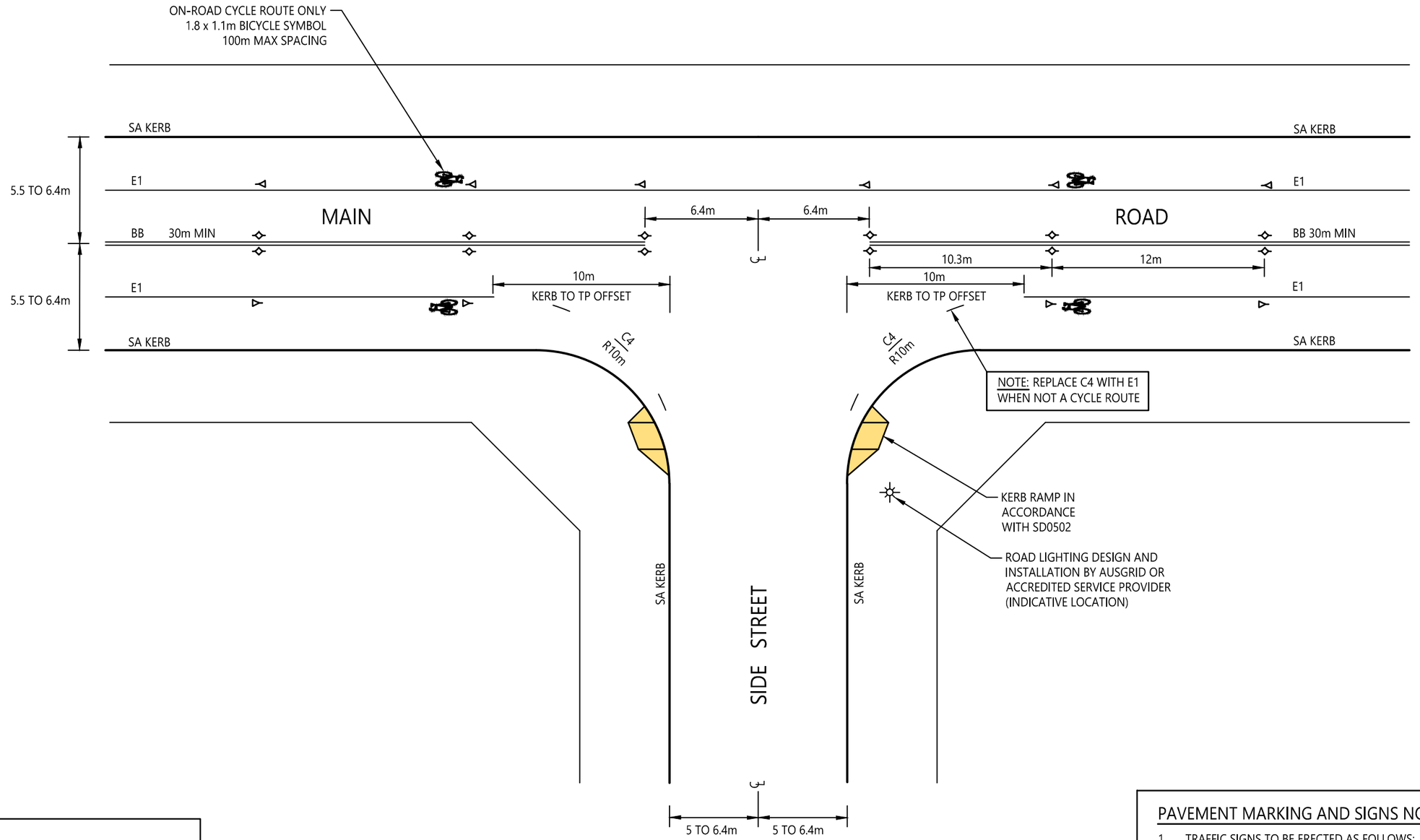
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

TRAFFIC MANAGEMENT SERIES
T-INTERSECTION LAYOUT

DRAWING NUMBER	REV
SD0906	-
SHEET 2 OF 4	A3



TYPICAL URBAN T-INTERSECTION LAYOUT
STANDARD ROAD RULES OPTION (NO CONTROL SIGNS)

LEGEND

- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Road light (indicative location)
- Bicycle symbol (advisory treatment)

PAVEMENT MARKING AND SIGNS NOTES:

1. TRAFFIC SIGNS TO BE ERECTED AS FOLLOWS:
   - MOUNTING HEIGHT: 2.5m (UNLESS OTHERWISE SHOWN)
   - LATERAL CLEARANCE: 0.6m (0.3m MIN) FROM EDGE OF SIGN TO KERB/EDGE OF BITUMEN
2. PAVEMENT MARKINGS TO BE APPLIED IN ACCORDANCE WITH COUNCIL'S PAVEMENT MARKING SPECIFICATIONS.
3. BB, E1 AND C4 LINES ARE TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT.
4. CONSIDER INSTALLING A 10m LONG BB LINE AT CENTRE LINE OF SIDE STREET WHERE WARRANTED BY SITE SPECIFIC REQUIREMENTS.

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2500 5000 7500 10000 12500

1:250

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

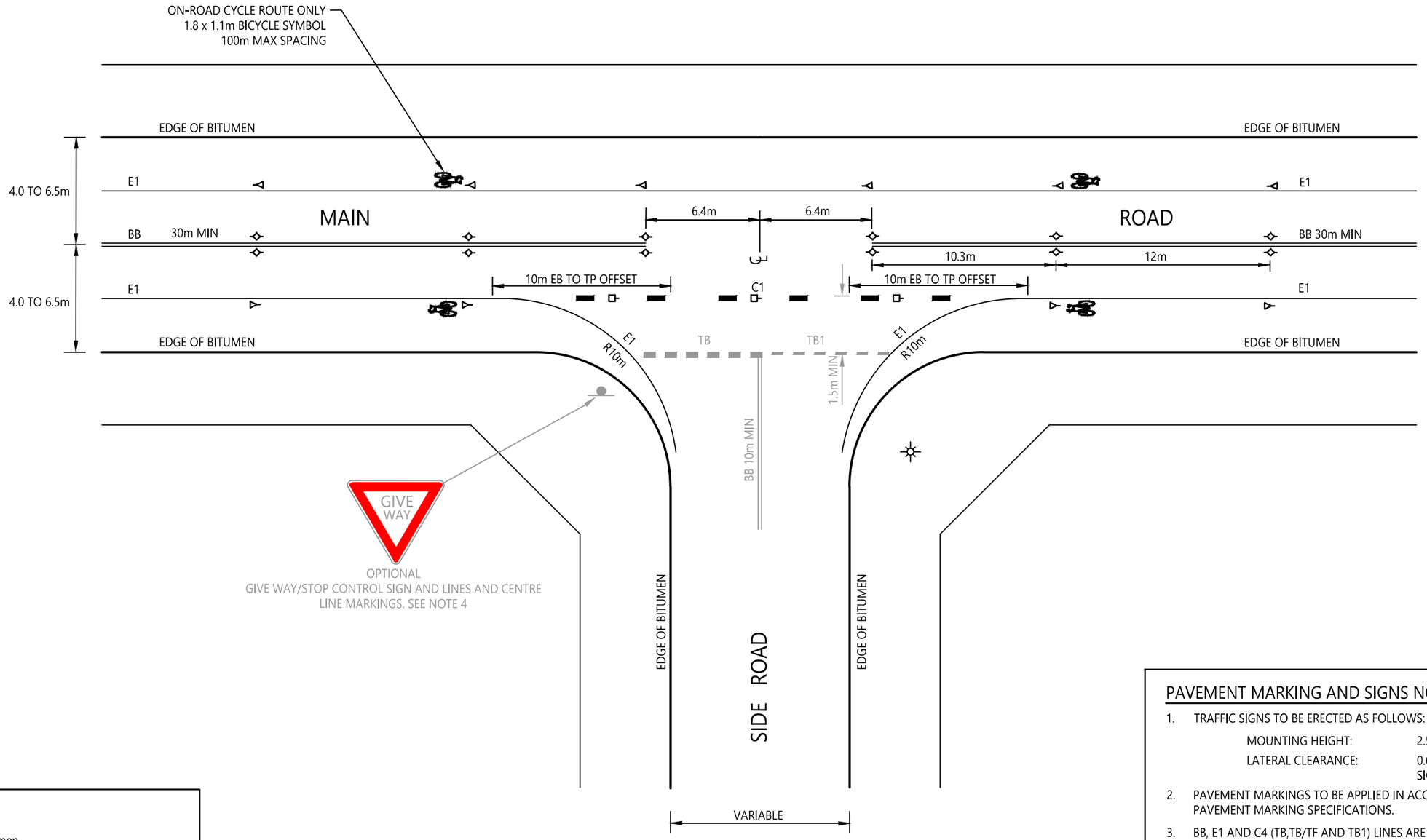
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
T-INTERSECTION LAYOUT

STANDARD DRAWING

DRAWING NUMBER	REV
SD0906	-
SHEET 3 OF 4	A3



LEGEND

- Proposed edge of bitumen
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- White unidirectional RRPM
- Road light (indicative location)
- Bicycle symbol (advisory treatment)

TYPICAL RURAL T-INTERSECTION LAYOUT
STANDARD ROAD RULES AND OPTIONAL CONTROL SIGNS

PAVEMENT MARKING AND SIGNS NOTES:

1. TRAFFIC SIGNS TO BE ERECTED AS FOLLOWS:
   - MOUNTING HEIGHT: 2.5m (UNLESS OTHERWISE SHOWN)
   - LATERAL CLEARANCE: 0.6m (0.3m MIN) FROM EDGE OF SIGN TO KERB/EDGE OF BITUMEN
2. PAVEMENT MARKINGS TO BE APPLIED IN ACCORDANCE WITH COUNCIL'S PAVEMENT MARKING SPECIFICATIONS.
3. BB, E1 AND C4 (TB,TB/TF AND TB1) LINES ARE TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC ROAD MARKING PAINT.
4. CONSIDER INSTALLING STOP OR GIVE WAY CONTROL SIGN AND LINES AND A 10m LONG BB LINE AT CENTRE LINE OF SIDE ROAD WHERE WARRANTED BY SITE SPECIFIC REQUIREMENTS. TYPE OF CONTROL TO BE DICTATED BY SIGHT DISTANCE REQUIREMENTS .
5. APPLY SAME TRAFFIC SIGN AND PAVEMENT MARKINGS ON OPPOSITE SIDE OF ROAD FOR 4-WAY INTERSECTIONS.
6. CONSIDER INSTALLING DUPLICATE CONTROL SIGN ON OPPOSITE SIDE OF SIDE ROAD TO REINFORCE CONTROL, WHERE WARRANTED BY SITE SPECIFIC REQUIREMENTS.

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2500 5000 7500 10000 12500

1:250

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

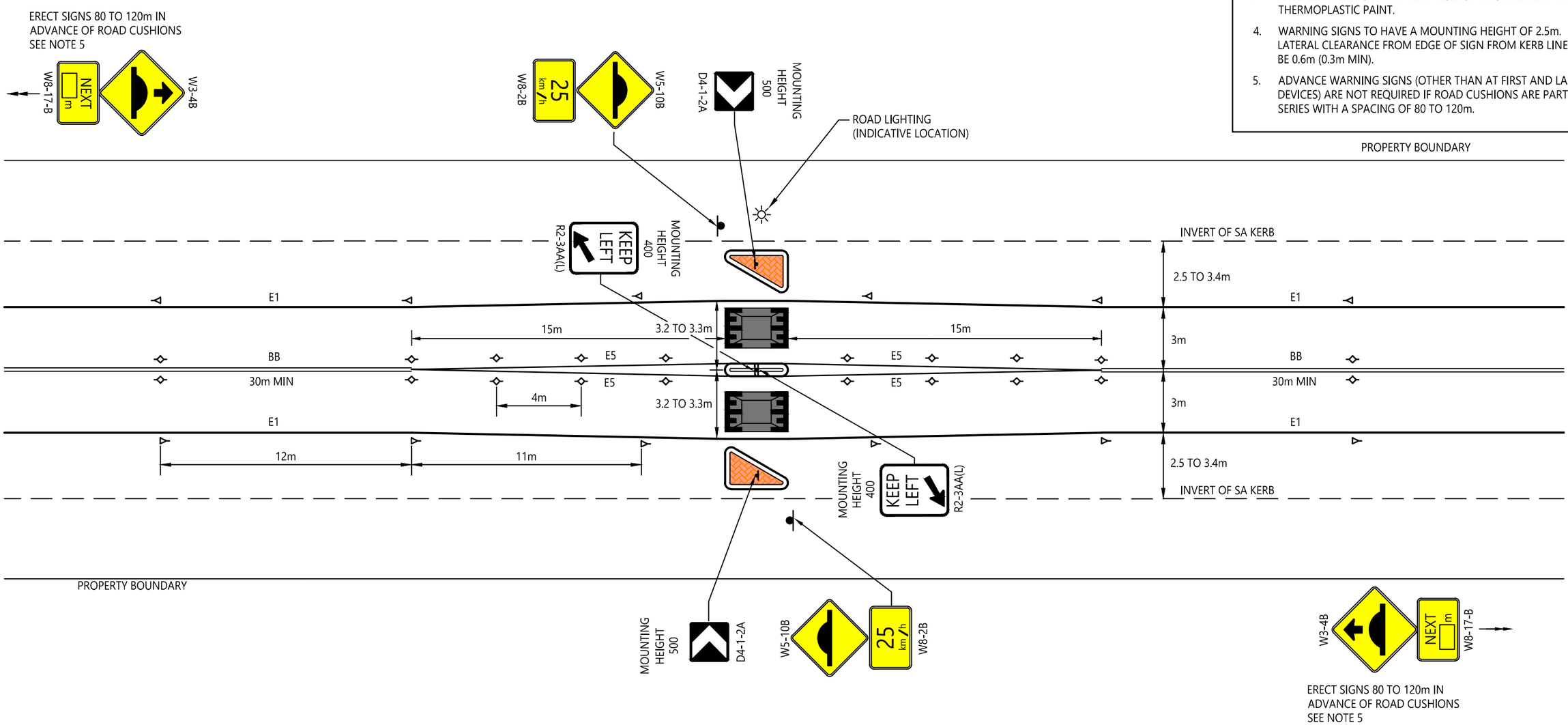
TRAFFIC MANAGEMENT SERIES
T-INTERSECTION LAYOUT

STANDARD DRAWING

DRAWING NUMBER	REV
SD0906	-
SHEET 4 OF 4	A3

NOTES:

1. ROAD CUSHIONS TO BE POSITIONED ADJACENT TO EXISTING ROAD LIGHTING, WHERE PRACTICABLE.
2. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158, WHERE APPLICABLE.
3. PAVEMENT MARKINGS TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT.
4. WARNING SIGNS TO HAVE A MOUNTING HEIGHT OF 2.5m. LATERAL CLEARANCE FROM EDGE OF SIGN FROM KERB LINE TO BE 0.6m (0.3m MIN).
5. ADVANCE WARNING SIGNS (OTHER THAN AT FIRST AND LAST DEVICES) ARE NOT REQUIRED IF ROAD CUSHIONS ARE PART OF A SERIES WITH A SPACING OF 80 TO 120m.



ROAD CUSHIONS
WITH PAVEMENT MARKINGS AND SIGNS PLAN
TYPICAL LAYOUT

SCALE 1:200

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2000 4000 6000 8000 10000

1:200

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

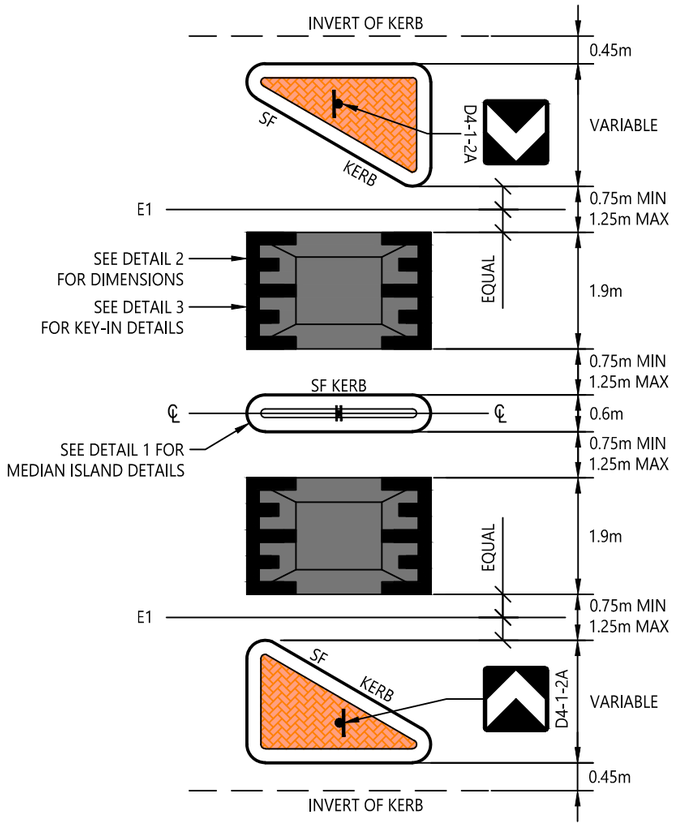
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

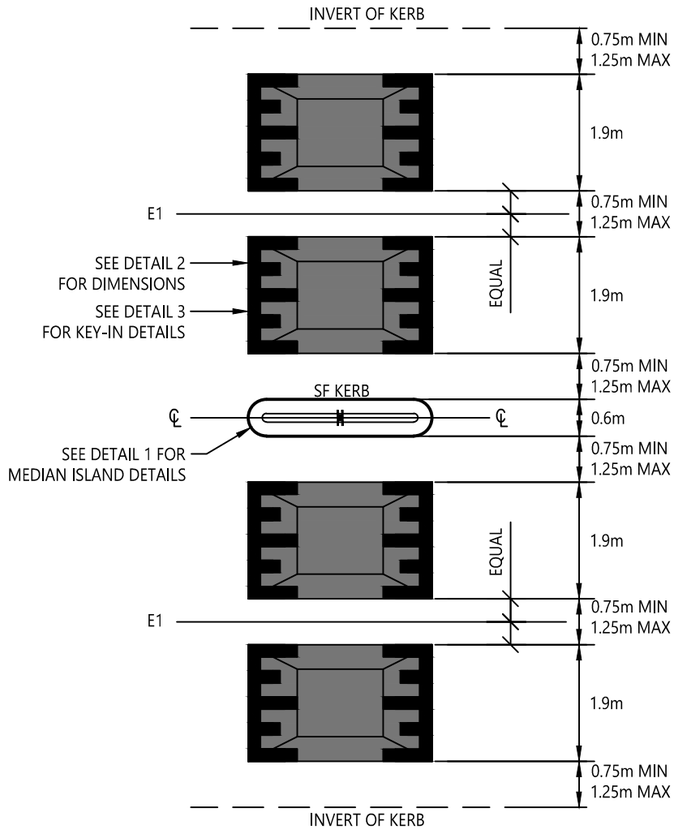
TRAFFIC MANAGEMENT SERIES
ASPHALT ROAD CUSHIONS

STANDARD DRAWING

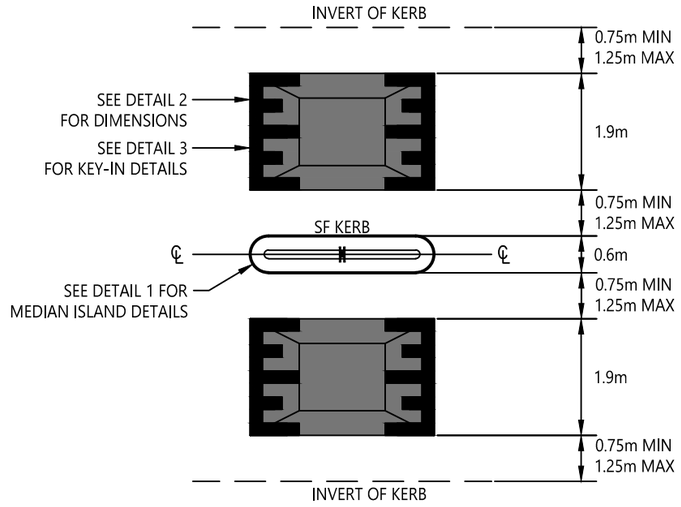
DRAWING NUMBER	REV
SD0907	-
SHEET 1 OF 3	A3



ROAD CUSHIONS WITH KERB BLISTERS AND MEDIAN ISLAND
TYPICAL LAYOUT
SCALE 1:100



ROAD CUSHIONS WITH MEDIAN ISLAND TYPICAL LAYOUT 1
SCALE 1:100



ROAD CUSHIONS WITH MEDIAN ISLAND
TYPICAL LAYOUT 2
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 1000 2000 3000 4000 5000

1:100

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

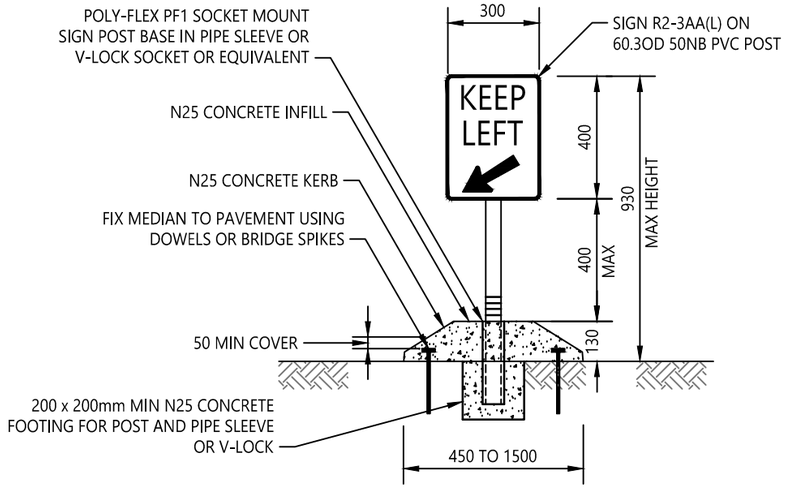
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
ASPHALT ROAD CUSHIONS

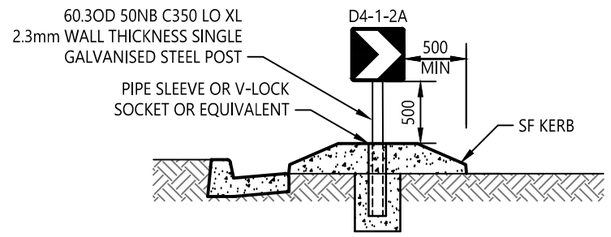
STANDARD DRAWING

DRAWING NUMBER	REV
SD0907	-
SHEET 2 OF 3	A3



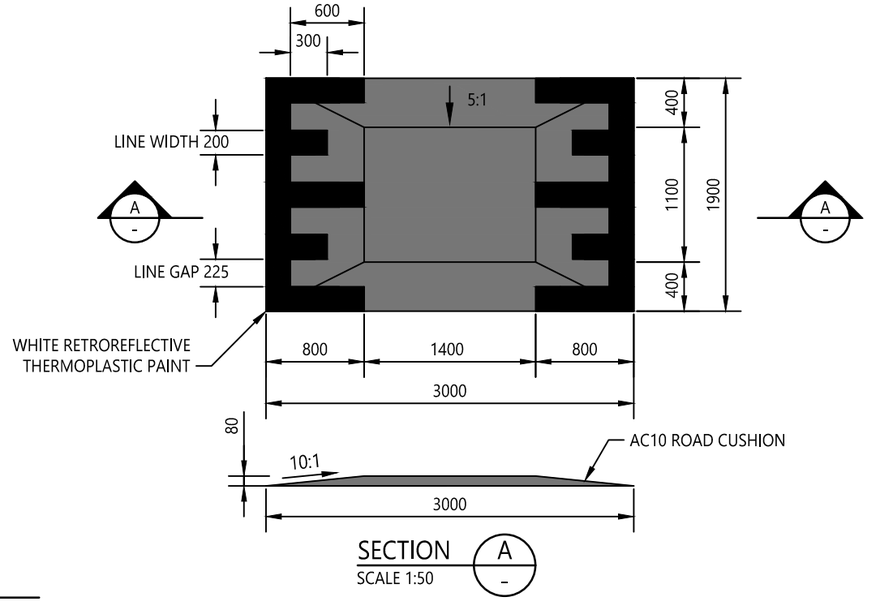
FIXING DETAILS OF MEDIAN ISLAND TO PAVEMENT

SECTION B - SCALE 1:20



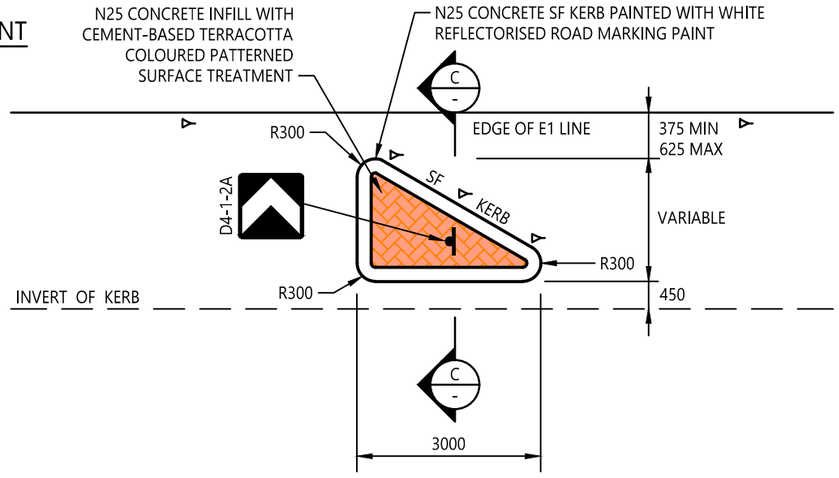
HAZARD SIGN CONFIGURATION

SECTION C - SCALE 1:50



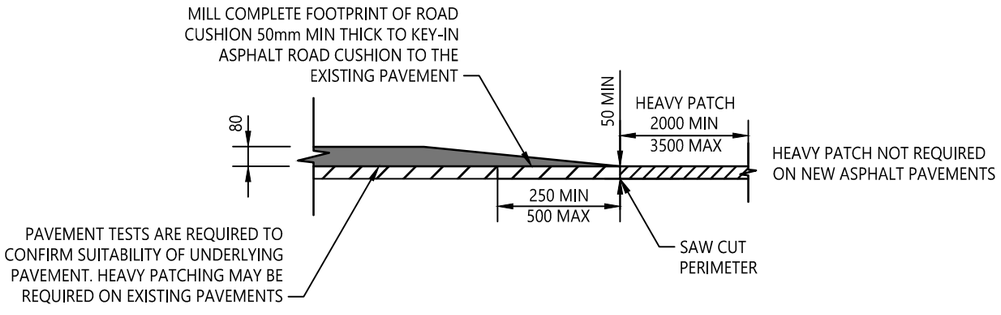
SECTION A - SCALE 1:50

1.9m WIDE ASPHALT ROAD CUSHION DETAIL 2



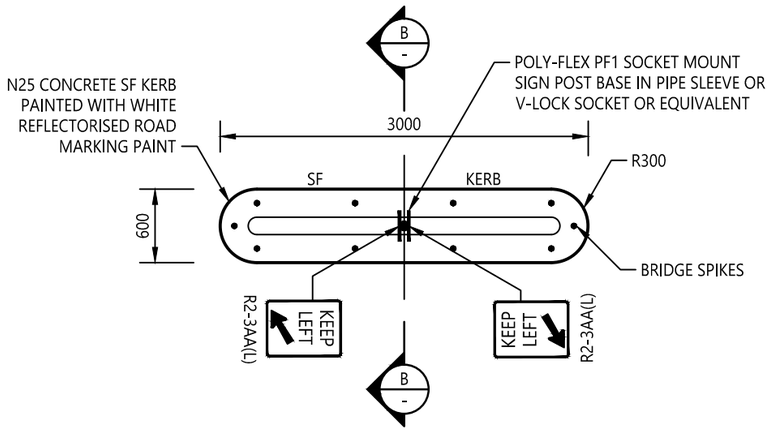
KERB BLISTER DETAIL

SCALE 1:100



ROAD CUSHION KEY-IN DETAIL 3

SCALE 1:25



MEDIAN ISLAND DETAIL 1

SCALE 1:50

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	C SHEPPEARD/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

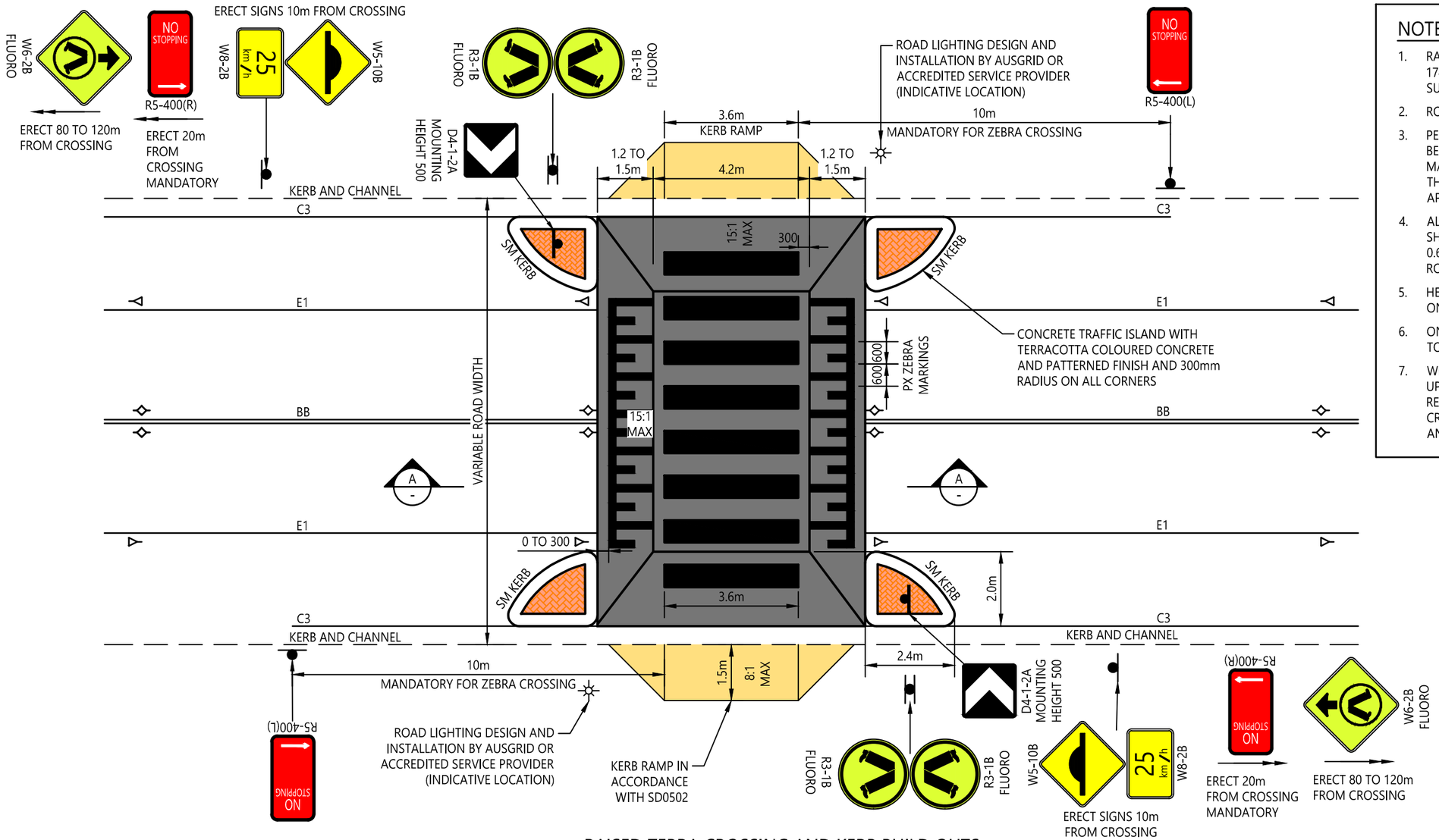
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

TRAFFIC MANAGEMENT SERIES
ASPHALT ROAD CUSHIONS

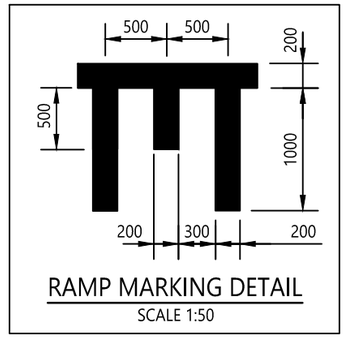
DRAWING NUMBER	REV
SD0907	-
SHEET 3 OF 3	A3



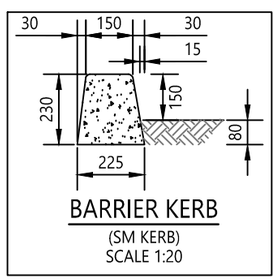
RAISED ZEBRA CROSSING AND KERB BUILD OUTS
SCALE 1:125

NOTES:

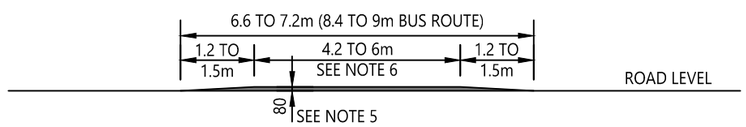
1. RAISED PEDESTRIAN (ZEBRA) CROSSINGS SHALL COMPLY WITH AS 1742.10 AND THE RELEVANT AUSTROADS GUIDELINES AND TfNSW SUPPLEMENTS.
2. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
3. PEDESTRIAN (ZEBRA) CROSSING AND RAMP PAVEMENT MARKINGS TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL. C3 LINES ARE TO BE APPLIED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT. ALL OTHER PAVEMENT MARKINGS ARE TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT.
4. ALL SIGNS TO HAVE A MOUNTING HEIGHT OF 2.5m UNLESS OTHERWISE SHOWN. LATERAL CLEARANCE FROM EDGE OF SIGN TO KERBLINE TO BE 0.6m (0.3m MIN). CONSIDER INSTALLING A-SIZE SIGNS IN NARROW ROAD RESERVES OR LOW SPEED ENVIRONMENTS (V_{85} < 60km/h).
5. HEIGHT OF RAISED ZEBRA CROSSING MAY BE INCREASED TO 100mm ON ROADS NOT USED BY BUSES.
6. ON BUS ROUTES, LENGTHEN THE RAISED PLATFORM AREA FROM 4.2m TO 6m.
7. WHERE RAISED PEDESTRIAN CROSSINGS ARE INCLUDED IN ROAD UPGRADE PROJECTS, KERB BUILD OUTS SHOULD BE CREATED BY REALIGNING THE KERB, CREATING AN AT-GRADE FOOTWAY/RAISED CROSSING INTERFACE AND INCLUSION OF A DRAINAGE SYSTEM AT ANY SUBSEQUENT TRAPPED LOW POINTS IN THE KERB.



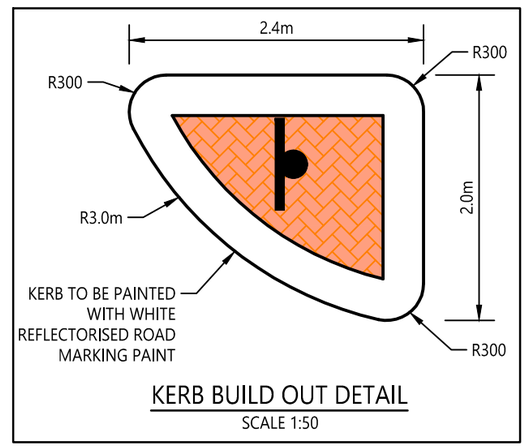
RAMP MARKING DETAIL
SCALE 1:50



BARRIER KERB
(SM KERB)
SCALE 1:20



SECTION A-
SCALE 1:125



KERB BUILD OUT DETAIL
SCALE 1:50

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

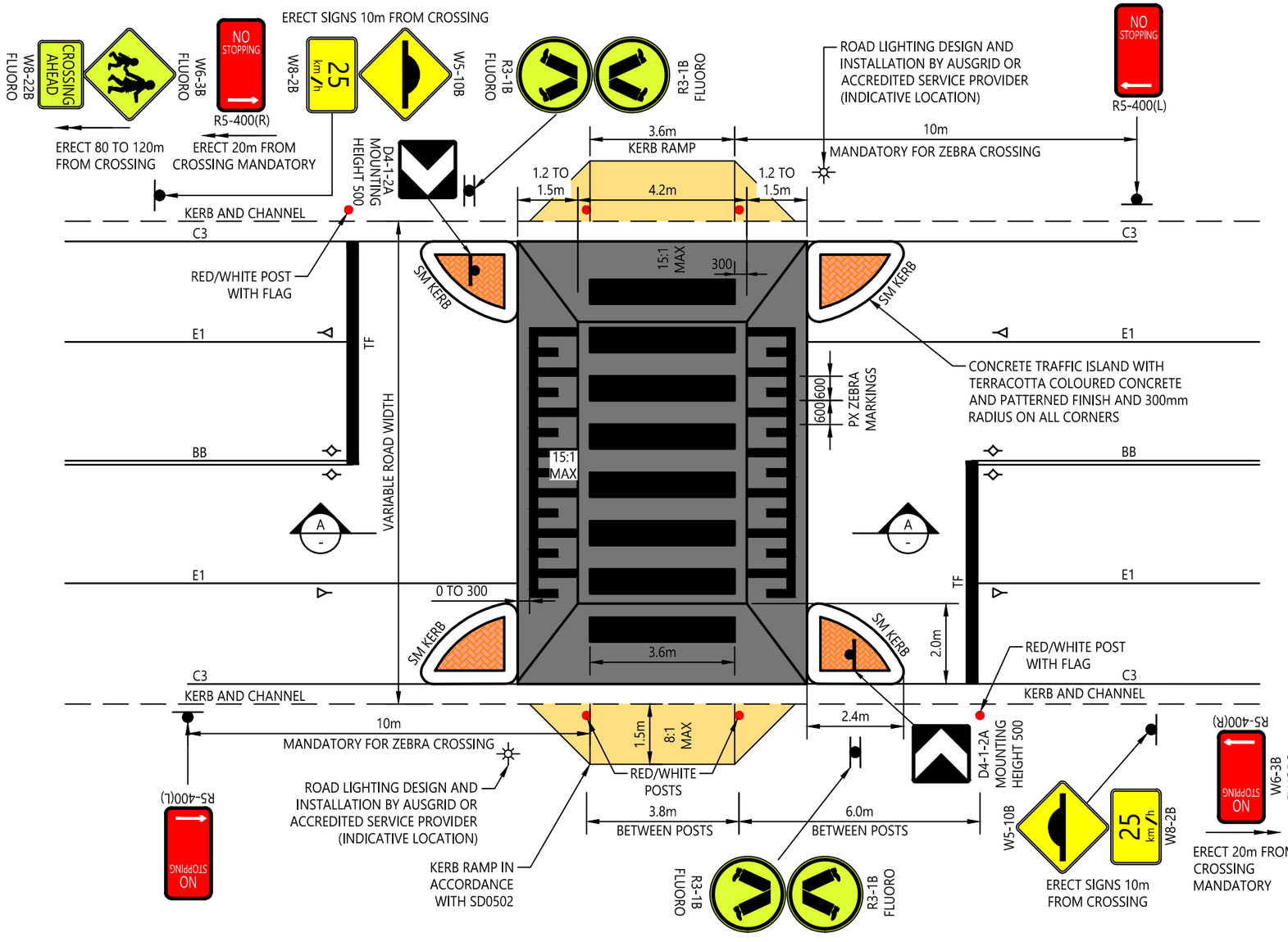
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
ROAD HUMPS

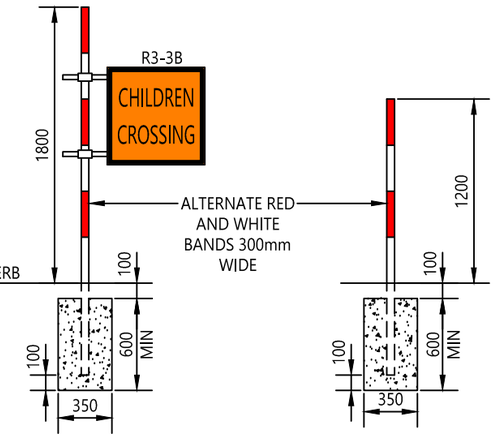
STANDARD DRAWING

DRAWING NUMBER	REV
SD0908	-
SHEET 1 OF 6	A3



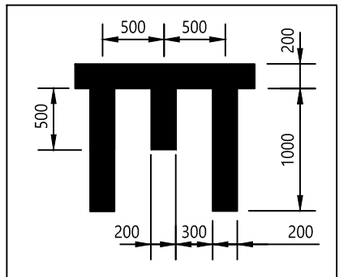
NOTES:

1. COMBINED RAISED ZEBRA/CHILDREN'S CROSSING SHALL COMPLY WITH AS 1742.10 AND THE RELEVANT AUSTROADS GUIDELINES AND TfNSW SUPPLEMENTS.
2. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
3. PEDESTRIAN (ZEBRA) CROSSING AND RAMP PAVEMENT MARKINGS TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL. C3 LINES ARE TO BE APPLIED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT. ALL OTHER PAVEMENT MARKINGS ARE TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT.
4. ALL SIGNS TO HAVE A MOUNTING HEIGHT OF 2.5m UNLESS OTHERWISE SHOWN. LATERAL CLEARANCE FROM EDGE OF SIGN TO KERB LINE TO BE 0.6m (0.3m MIN). CONSIDER INSTALLING A-SIZE SIGNS IN NARROW ROAD RESERVES OR LOW SPEED ENVIRONMENTS (V_{85} < 60km/h).
5. HEIGHT OF ZEBRA CROSSING MAY BE INCREASED TO 100mm ON ROADS NOT USED BY BUSES.
6. ON BUS ROUTES, LENGTHEN THE RAISED PLATFORM AREA FROM 4.2m TO 6m.
7. WHERE RAISED PEDESTRIAN CROSSINGS ARE INCLUDED IN ROAD UPGRADE PROJECTS, KERB BUILD OUTS SHOULD BE CREATED BY REALIGNING THE KERB, CREATING AN AT-GRADE FOOTWAY/RAISED CROSSING INTERFACE AND INCLUSION OF A DRAINAGE SYSTEM AT ANY SUBSEQUENT TRAPPED LOW POINTS IN THE KERB.



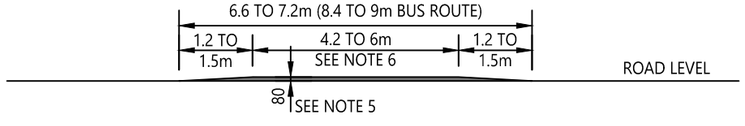
RED AND WHITE POST WITH FLAG
SCALE 1:40

RED AND WHITE POST
SCALE 1:40

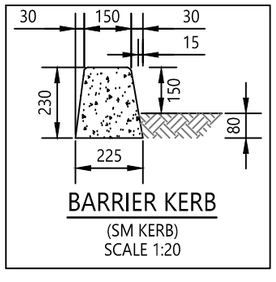


RAMP MARKING DETAIL
SCALE 1:50

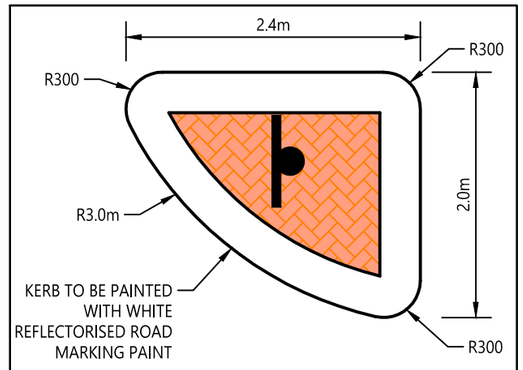
COMBINED RAISED ZEBRA/CHILDREN'S CROSSING AND KERB BUILD OUTS
SCALE 1:125



SECTION A - A
SCALE 1:125



BARRIER KERB
(SM KERB)
SCALE 1:20



KERB BUILD OUT DETAIL
SCALE 1:50

REV	AMENDMENT	DATE	DRAWN	APRVD	SCALE ON ORIGINAL A3 SIZE DRAWING	DRAWN	C SHEPPEARD
					AS SHOWN	CHECKED	M BAMBER
					ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN	DATE	28/4/20
						UNIT MANAGER APPROVAL	ASSETS PLANNING AND DESIGN

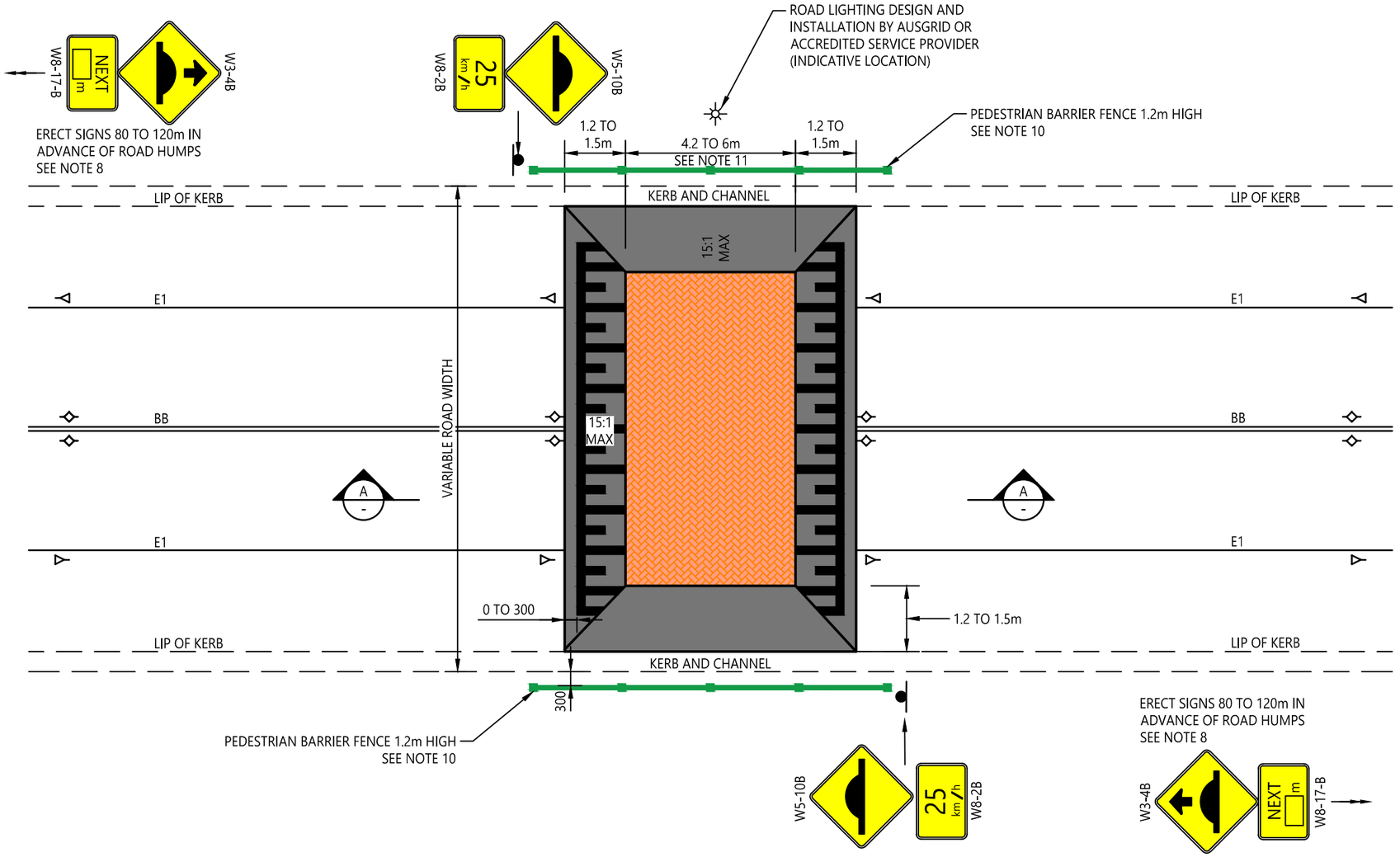
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

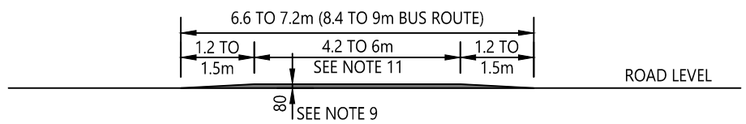
TRAFFIC MANAGEMENT SERIES
ROAD HUMPS

STANDARD DRAWING

DRAWING NUMBER	REV
SD0908	-
SHEET 2 OF 6	A3



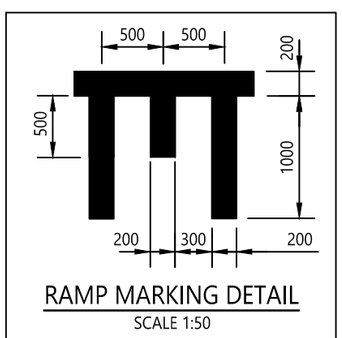
ASPHALT FLAT-TOP ROAD HUMP
SCALE 1:125



SECTION A
SCALE 1:125

NOTES:

1. FLAT-TOP ROAD HUMPS SHALL COMPLY WITH AS1742.13 AND USED ONLY ON ROADS WHERE A SPEED LIMIT OF 50km/h OR LESS APPLIES.
2. ROAD HUMPS TO BE POSITIONED ADJACENT TO EXISTING ROAD LIGHTING, WHERE PRACTICABLE.
3. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
4. REFER TO COUNCIL'S STANDARD DRAWING SD0803 FOR ASPHALT HEAVY PATCHING DETAILS IF ROAD PAVEMENT AND SUBGRADE IS NOT SUITABLE FOR ROAD HUMP INSTALLATION. GEOTECHNICAL TESTING REQUIRED TO DETERMINE IF THIS IS REQUIRED.
5. CONSIDER USE OF ASPHALT ROAD CUSHIONS AS A LESS HARSH TRAFFIC CALMING TREATMENT ON COUNCIL ROADS. REFER TO SD0907 FOR DETAILS.
6. RAMP MARKINGS TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL.
7. ALL SIGNS TO HAVE A MOUNTING HEIGHT OF 2.5m. LATERAL CLEARANCE FROM EDGE OF SIGN TO KERB LINE TO BE 0.6m (0.3m MIN). CONSIDER INSTALLING A-SIZE SIGNS IN NARROW ROAD RESERVES OR LOW SPEED ENVIRONMENTS (V_{85} < 60km/h).
8. ADVANCE WARNING SIGNS (W3-4B AND W8-17-2) ARE TO BE INSTALLED 80 TO 120m FROM THE FIRST HUMP IN A SERIES. W3-4B AND W8-17-2 ADVANCE WARNING SIGNS (OTHER THAN AT FIRST AND LAST DEVICES) ARE NOT REQUIRED IF ROAD HUMPS ARE PART OF A SERIES WITH A SPACING OF 80 TO 120m.
9. HEIGHT OF FLAT-TOP ROAD HUMP MAY BE INCREASED TO 100mm ON ROADS NOT USED BY BUSES.
10. PEDESTRIAN BARRIER FENCE TO BE INSTALLED ON EACH KERB SIDE OF ROAD HUMPS TO DETER PEDESTRIAN CROSSING MOVEMENTS. REFER TO COUNCIL'S STANDARD DRAWINGS SD0701 AND SD0702.
11. ON BUS ROUTES, LENGTHEN THE RAISED PLATFORM AREA FROM 4.2m TO 6m.



RAMP MARKING DETAIL
SCALE 1:50

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500 1:50

0 1250 2500 3750 5000 6250 1:125

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

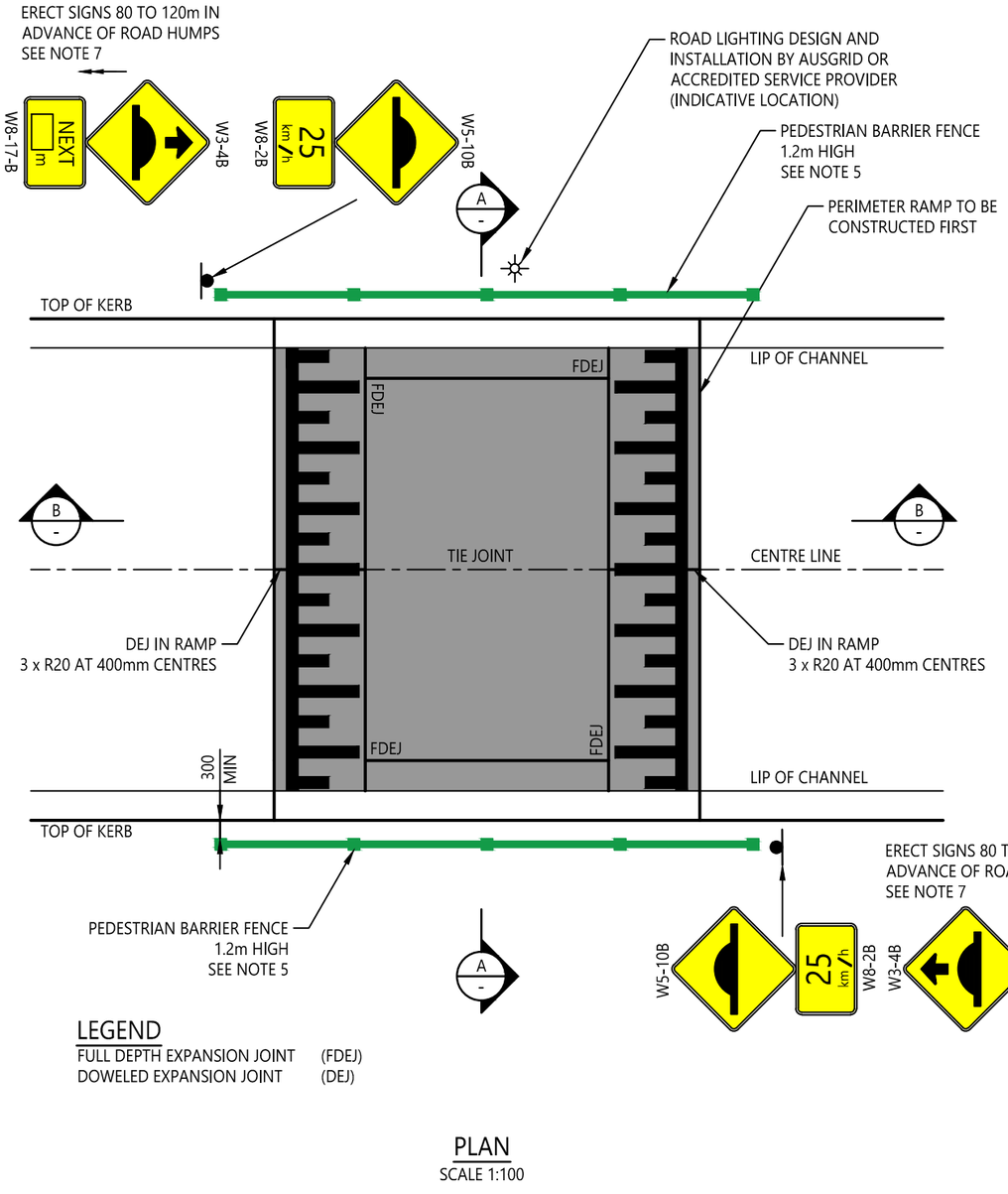
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
ROAD HUMPS

STANDARD DRAWING

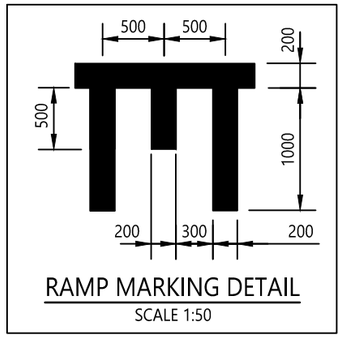
DRAWING NUMBER	REV
SD0908	-
SHEET 3 OF 6	A3



LEGEND

FULL DEPTH EXPANSION JOINT (FDEJ)
DOWELED EXPANSION JOINT (DEJ)

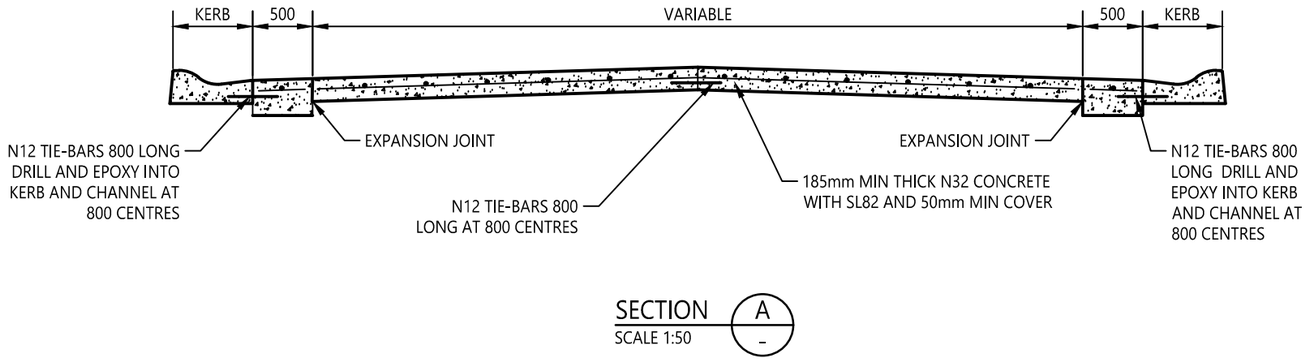
PLAN
SCALE 1:100



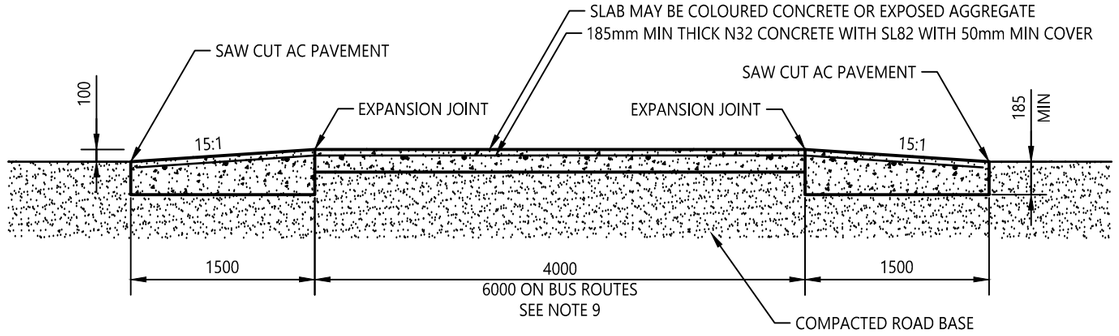
RAMP MARKING DETAIL
SCALE 1:50

NOTES:

1. CONCRETE STRENGTH GRADE TO BE N32 UNLESS OTHERWISE SPECIFIED.
2. ASPHALTIC CONCRETE (AC) TO BE PLACED PRIOR TO CONSTRUCTION OF RAISED DEVICE.
3. AN ALTERNATIVE ASPHALT STRUCTURE MAY BE CONSTRUCTED, SUBJECT TO COUNCIL APPROVAL.
4. ALL SIGNS TO HAVE A MOUNTING HEIGHT OF 2.5m. LATERAL CLEARANCE FROM EDGE OF SIGN TO KERB LINE TO BE 0.6m (0.3m MIN). CONSIDER INSTALLING A-SIZE SIGNS IN NARROW ROAD RESERVES OR LOW SPEED ENVIRONMENTS (V_{85} < 60km/h).
5. PEDESTRIAN BARRIER FENCE TO BE INSTALLED ON EACH KERB SIDE OF ROAD HUMPS TO DETER PEDESTRIAN CROSSING MOVEMENTS. REFER TO COUNCIL'S STANDARD DRAWINGS SD0701 AND SD0702.
6. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
7. ERECT SIGNS W3-4B AND W8-17-2 80 TO 120m IN ADVANCE OF ROAD HUMP AS REQUIRED BY AS 1742.13.
8. PAVEMENT MARKINGS TO BE PROVIDED AS REQUIRED. STANDARD ROAD HUMP PAVEMENT MARKINGS ON APPROACH AND DEPARTURE RAMPS SHOULD BE APPLIED WITH WHITE REFLECTORISED ROAD MARKING PAINT. IF THERMOPLASTIC PAINT IS APPLIED TO THE RAMPS, THE CONCRETE SURFACE SHALL BE PRIMED PRIOR TO APPLICATION OF PAVEMENT MARKINGS.
9. ON BUS ROUTES, LENGTHEN THE RAISED PLATFORM AREA FROM 4m TO 6m.



SECTION A
SCALE 1:50



SECTION B
SCALE 1:50

CONCRETE FLAT TOP ROAD HUMP

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 500 1000 1500 2000 2500 1:50
0 1000 2000 3000 4000 5000 1:100
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

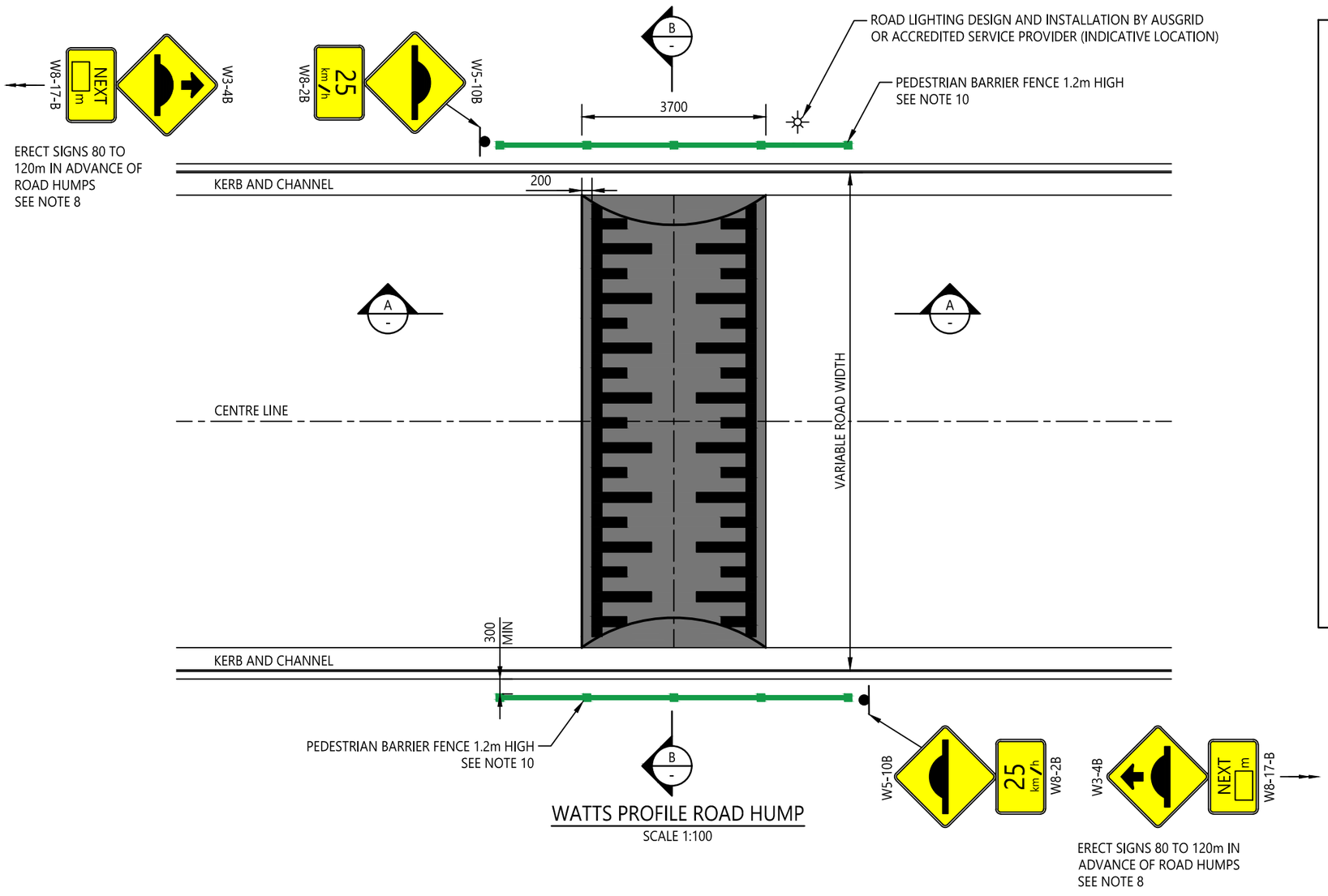
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
ROAD HUMPS

STANDARD DRAWING

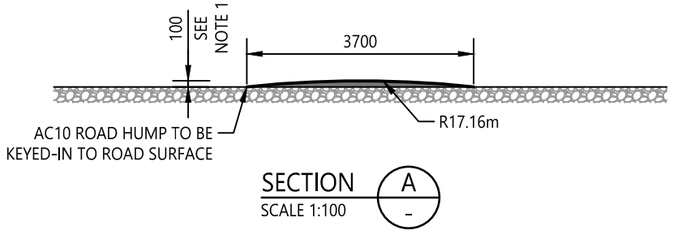
DRAWING NUMBER	REV
SD0908	-
SHEET 4 OF 6	A3



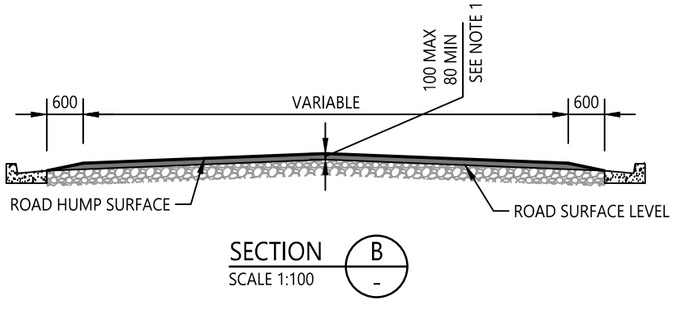
WATTS PROFILE ROAD HUMP
SCALE 1:100

NOTES:

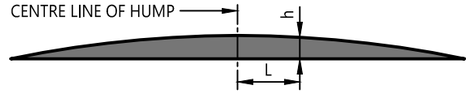
1. WATTS PROFILE ROAD HUMPS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS 1742.13 ONLY ON ROADS WHERE A SPEED LIMIT OF 50km/h OR LESS APPLIES. ROAD HUMP TO BE 100mm MAX HIGH AND SHALL NOT BE USED ON BUS ROUTES.
2. ROAD HUMPS TO BE POSITIONED ADJACENT TO EXISTING ROAD LIGHTING, WHERE PRACTICABLE.
3. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
4. REFER TO COUNCIL'S STANDARD DRAWING SD0803 FOR ASPHALT HEAVY PATCHING DETAILS IF ROAD PAVEMENT AND SUBGRADE IS NOT SUITABLE FOR ROAD HUMP INSTALLATION. GEOTECHNICAL TESTING REQUIRED TO DETERMINE IF THIS IS REQUIRED.
5. CONSIDER USE OF ASPHALT ROAD CUSHIONS AS A LESS HARSH TRAFFIC CALMING TREATMENT ON COUNCIL ROADS. REFER TO SD0907 FOR DETAILS.
6. RAMP MARKINGS TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL.
7. ALL SIGNS TO HAVE A MOUNTING HEIGHT OF 2.5m. LATERAL CLEARANCE FROM EDGE OF SIGN TO KERB LINE TO BE 0.6m (0.3m MIN). CONSIDER INSTALLING A-SIZE SIGNS IN NARROW ROAD RESERVES OR LOW SPEED ENVIRONMENTS (V_{85} < 60km/h).
8. ADVANCE WARNING SIGNS (W3-4B AND W8-17-2) ARE TO BE INSTALLED 80 TO 120m FROM THE FIRST HUMP IN A SERIES. W3-4B AND W8-17-2 ADVANCE WARNING SIGNS (OTHER THAN AT FIRST AND LAST DEVICES) ARE NOT REQUIRED IF ROAD HUMPS ARE PART OF A SERIES WITH A SPACING OF 80 TO 120m.
9. KERB BUILDOUTS SHOULD BE INCLUDED ON ROADS ≥ 11m WIDE, WITH APPROPRIATE PAVEMENT MARKINGS AND HAZARD SIGN DELINEATION.
10. PEDESTRIAN BARRIER FENCE TO BE INSTALLED ON EACH KERB SIDE OF ROAD HUMPS TO DETER PEDESTRIAN CROSSING MOVEMENTS. REFER TO COUNCIL'S STANDARD DRAWINGS SD0701 AND SD0702.
11. FIRST ROAD HUMP IN A SERIES OR AN ISOLATED ROAD HUMP SHOULD BE BETWEEN 50m AND 100m FROM THE START OF A STREET.
12. ROAD HUMP SPACING SHOULD BE BETWEEN 80m AND 120m.



SECTION A
SCALE 1:100



SECTION B
SCALE 1:100



L (m)	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.85
h (mm)	100	100	99	97	95	93	90	86	81	76	71	65	58	51	43	34	25	16	5	0

100mm HIGH WATTS PROFILE ROAD HUMP SETOUT
NOT TO SCALE

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 1000 2000 3000 4000 5000
1:100
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

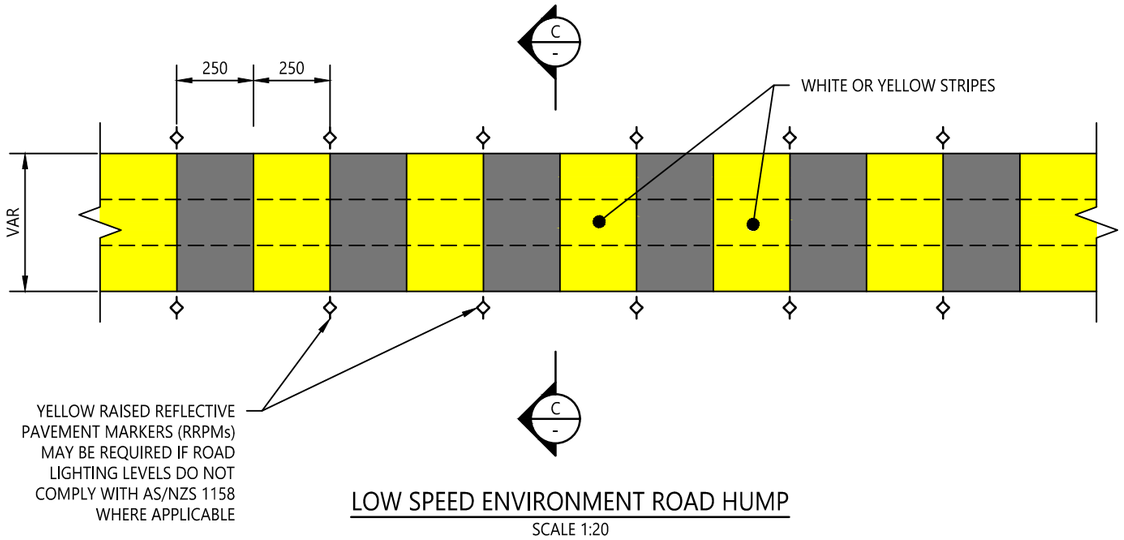
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
ROAD HUMPS

STANDARD DRAWING

DRAWING NUMBER	REV
SD0908	-
SHEET 5 OF 6	A3



LOW SPEED ENVIRONMENT ROAD HUMP

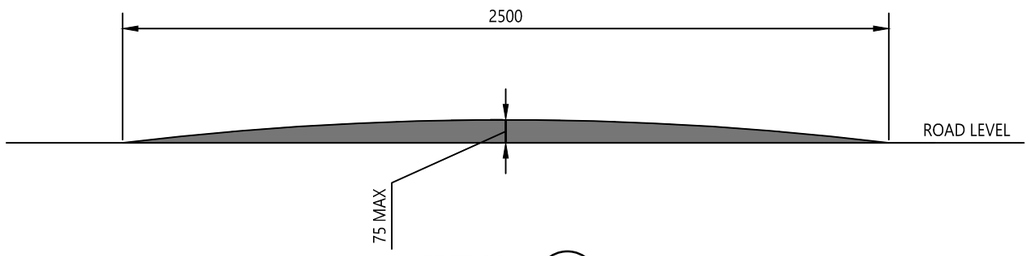
SCALE 1:20

NOTES:

1. LOW SPEED ENVIRONMENT ROAD HUMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AS 2890. UPON WHICH THIS STANDARD DRAWING IS BASED.
2. ROAD HUMPS TO BE POSITIONED ADJACENT TO EXISTING ROAD LIGHTING, WHERE PRACTICABLE.
3. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
4. LOW SPEED ENVIRONMENT ROAD HUMPS ARE FOR USE IN AREAS WHERE SPEED IS RESTRICTED TO 30km/h OR LESS, SUCH AS IN CAR PARKS.

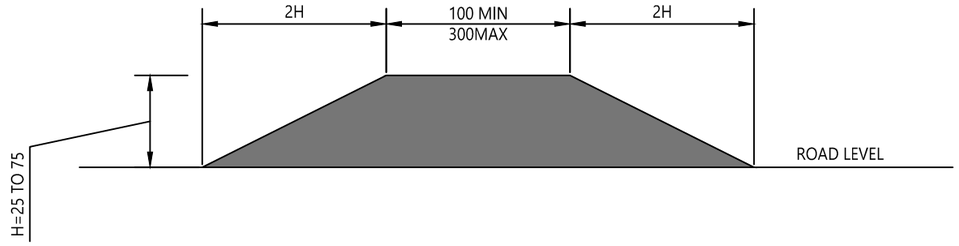
   TYPE 1: APPROPRIATE FOR USE ON LONG AISLES AND CIRCULATING ROADWAYS, SUCH AS LARGE OUTDOOR SURFACE CAR PARKS.

   TYPE 2: APPROPRIATE FOR USE IN CONFINED AREAS OF COVERED AND MULTI-STOREY CAR PARKS.



SECTION C - SCALE 1:20

LOW SPEED ENVIRONMENT ROAD HUMP
TYPE 1



SECTION C - SCALE 1:5

LOW SPEED ENVIRONMENT ROAD HUMP
TYPE 2

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 50 100 150 200 250 1:5

0 200 400 600 800 1000 1:20

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

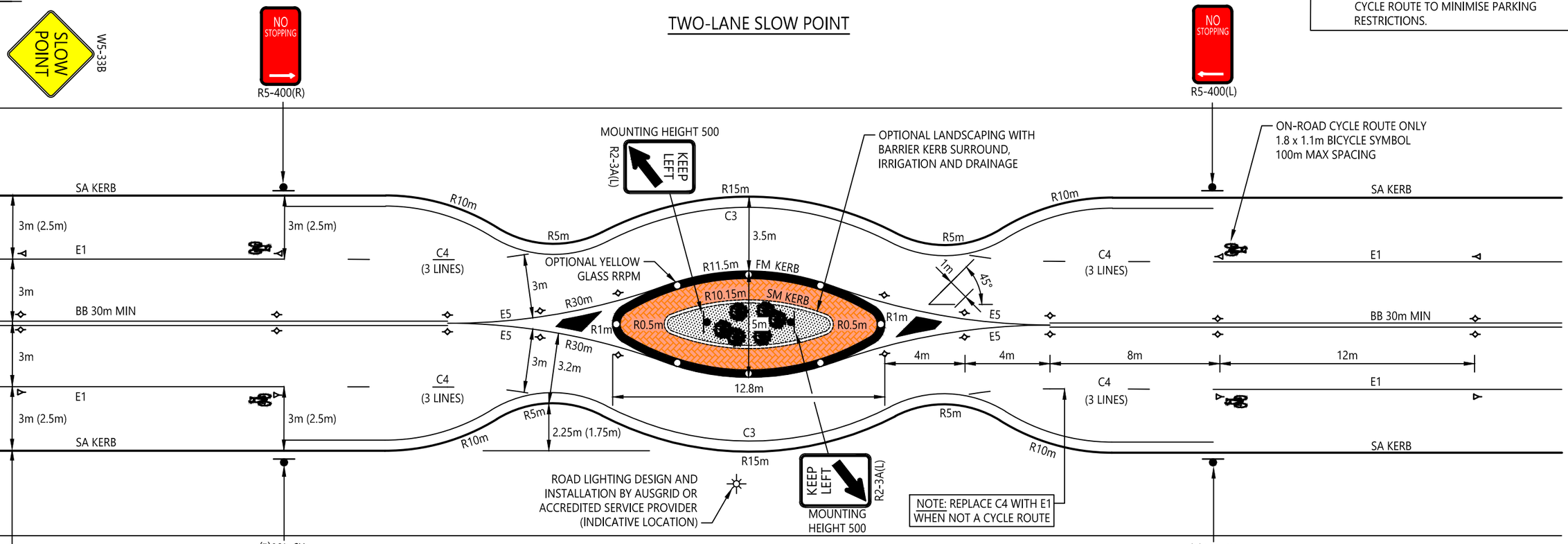
TRAFFIC MANAGEMENT SERIES
ROAD HUMPS

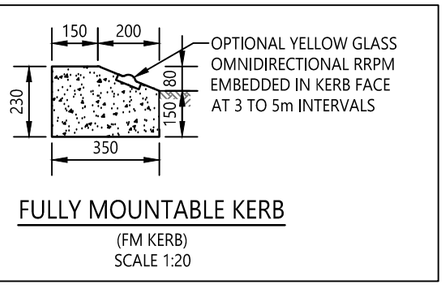
STANDARD DRAWING

DRAWING NUMBER	REV
SD0908	-
SHEET 6 OF 6	A3

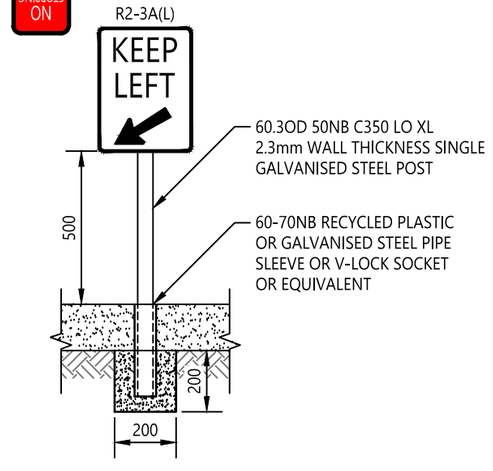
TWO-LANE SLOW POINT

NOTE: MOVE EACH NO STOPPING SIGN TO NEAREST BUILD OUT TANGENT POINT WHEN NOT A CYCLE ROUTE TO MINIMISE PARKING RESTRICTIONS.





FULLY MOUNTABLE KERB
(FM KERB)
SCALE 1:20



KEEP LEFT SIGN AT
TWO-LANE SLOW POINT

NOTES:

1. THIS LAYOUT IS INTENDED AS A GUIDE. DIFFERENT ROAD WIDTHS AND ACCESS LOCATIONS WILL DICTATE THE FINAL CONFIGURATION. SUGGESTED SPACING OF TRAFFIC CALMING DEVICES ON BUS ROUTES TO BE 150 TO 250m.
2. CONSIDER ALTERNATIVE TREATMENT FOR CYCLISTS (CYCLE LANES/BYPASS) WHERE AADT VOLUME IS > 5,000 VEHICLES.
3. VEHICLE DEFLECTION PATHS BASED ON DESIGN SPEED OF 40km/h.
4. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
5. C3 LINES TO BE MARKED IN YELLOW RELECTORISED THERMOPLASTIC PAINT. TRAFFIC ISLAND KERB FACES TO BE MARKED IN WHITE REFLECTORISED ROAD MARKING PAINT. OTHER PAVEMENT MARKINGS TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT.
6. INSTALL W5-33B SIGNS WHERE DEVICE IS NOT PART OF AN AREA-WIDE LATM SCHEME OR IF DEVICE SPACING IS > 120m.
7. EDGE LINES TO BE MARKED ON ROADS ≥ 11m WIDE.
8. ENSURE ADEQUATE APPROACH SIGHT DISTANCE: 40m AT 50km/h.
9. ENSURE VEHICLE TURNING PATH CHECKS MADE FOR APPROPRIATE DESIGN VEHICLE (INCLUDING IN/OUT OF ACCESSES).
10. CONSULT BUS COMPANIES AND ADJACENT LANDOWNERS DURING PRELIMINARY DESIGN STAGE.
11. ROADS < 11m WIDE MAY REQUIRE LOCALISED WIDENING AND E1 TAPERS ON KERB BUILDOUT APPROACHES.
12. CONSIDER INSTALLING A-SIZE SIGNS IN NARROW ROAD RESERVES OR LOW SPEED ENVIRONMENTS WHERE V_{85} APPROACH SPEEDS ARE < 60km/h.

ERECT SIGN 50m FROM DEVICE
SEE NOTE 6

LEGEND

- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Proposed sign and post
- Road light
- Bicycle symbol (advisory treatment)
- Terracotta coloured stamped concrete infill or equivalent

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2000 4000 6000 8000 10000

1:200

DRAWN	C SHEPPEARD/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

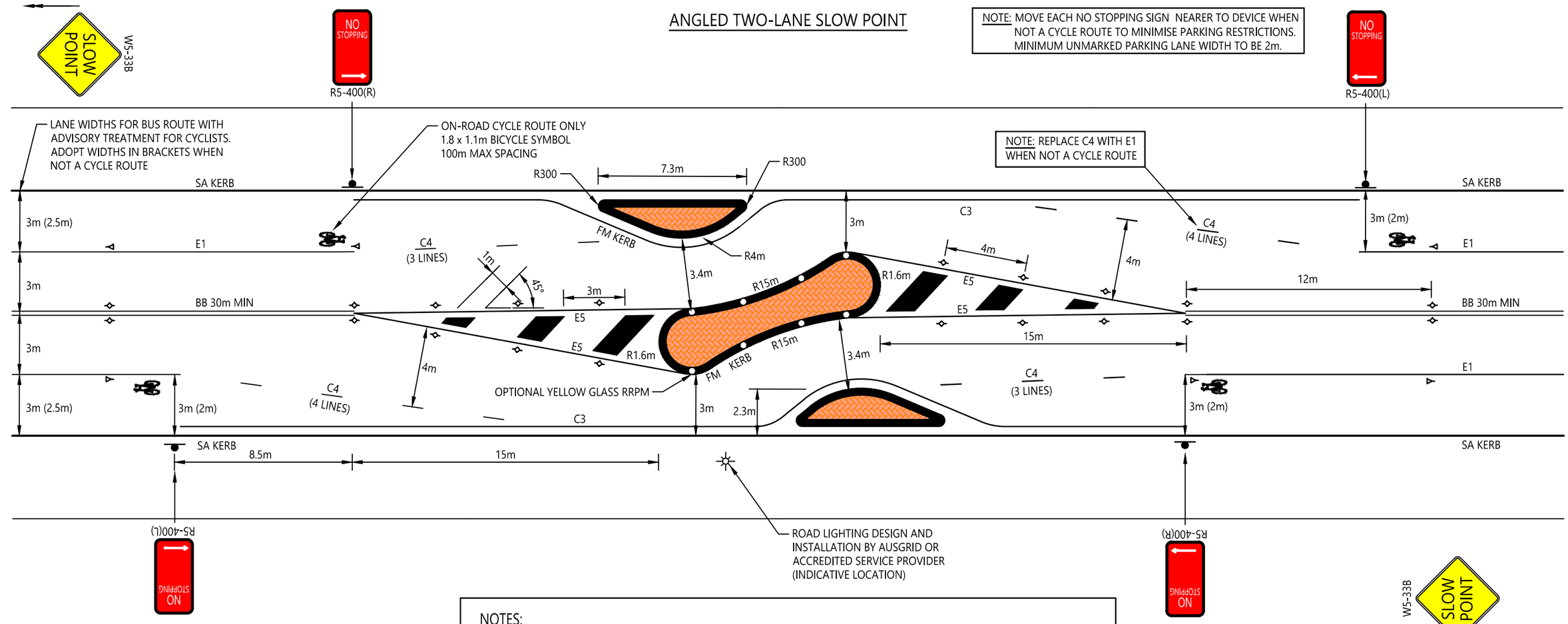
STANDARD DRAWING

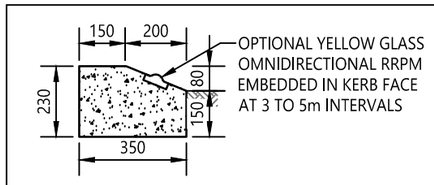
TRAFFIC MANAGEMENT SERIES
TWO-LANE SLOW POINT

DRAWING NUMBER	REV
SD0909	-
SHEET 1 OF 2	A3

ANGLED TWO-LANE SLOW POINT

NOTE: MOVE EACH NO STOPPING SIGN NEARER TO DEVICE WHEN NOT A CYCLE ROUTE TO MINIMISE PARKING RESTRICTIONS. MINIMUM UNMARKED PARKING LANE WIDTH TO BE 2m.

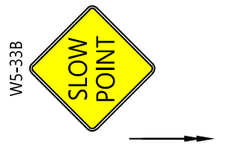




FULLY MOUNTABLE KERB
(FM KERB)
SCALE 1:20

NOTES:

1. THIS LAYOUT IS INTENDED AS A GUIDE. DIFFERENT ROAD WIDTHS AND ACCESS LOCATIONS WILL DICTATE THE FINAL CONFIGURATION. SUGGESTED SPACING OF TRAFFIC CALMING DEVICES ON BUS ROUTES TO BE 150 TO 250m.
2. CONSIDER ALTERNATIVE TREATMENT FOR CYCLISTS (CYCLE LANES/BYPASS) WHERE AADT VOLUME IS > 5,000 VEHICLES.
3. VEHICLE DEFLECTION PATHS BASED ON DESIGN SPEED OF 40km/h.
4. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
5. C3 LINES TO BE MARKED IN YELLOW RELECTORISED THERMOPLASTIC PAINT. TRAFFIC ISLAND KERB FACES TO BE MARKED IN WHITE REFLECTORISED ROAD MARKING PAINT. OTHER PAVEMENT MARKINGS TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT.
6. INSTALL W5-33B SIGNS WHERE DEVICE IS NOT PART OF AN AREA-WIDE LATM SCHEME OR IF DEVICE SPACING IS > 120m.
7. EDGE LINES TO BE MARKED ON ROADS ≥ 11m WIDE.
8. ENSURE ADEQUATE APPROACH SIGHT DISTANCE: 40m AT 50km/h.
9. ENSURE VEHICLE TURNING PATH CHECKS MADE FOR APPROPRIATE DESIGN VEHICLE (INCLUDING IN/OUT OF ACCESSES).
10. CONSULT BUS COMPANIES AND ADJACENT LANDOWNERS DURING PRELIMINARY DESIGN STAGE.
11. ROADS < 11m WIDE MAY REQUIRE LOCALISED WIDENING AND E1 TAPERS ON KERB BUILDOUT APPROACHES.
12. CONSIDER INSTALLING A-SIZE SIGNS IN NARROW ROAD RESERVES OR LOW SPEED ENVIRONMENTS WHERE V_{85} APPROACH SPEEDS ARE < 60km/h.



LEGEND

- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Proposed sign and post
- Road light
- Bicycle symbol (advisory treatment)
- Terracotta coloured stamped concrete infill or equivalent

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2000 4000 6000 8000 10000

1:200

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

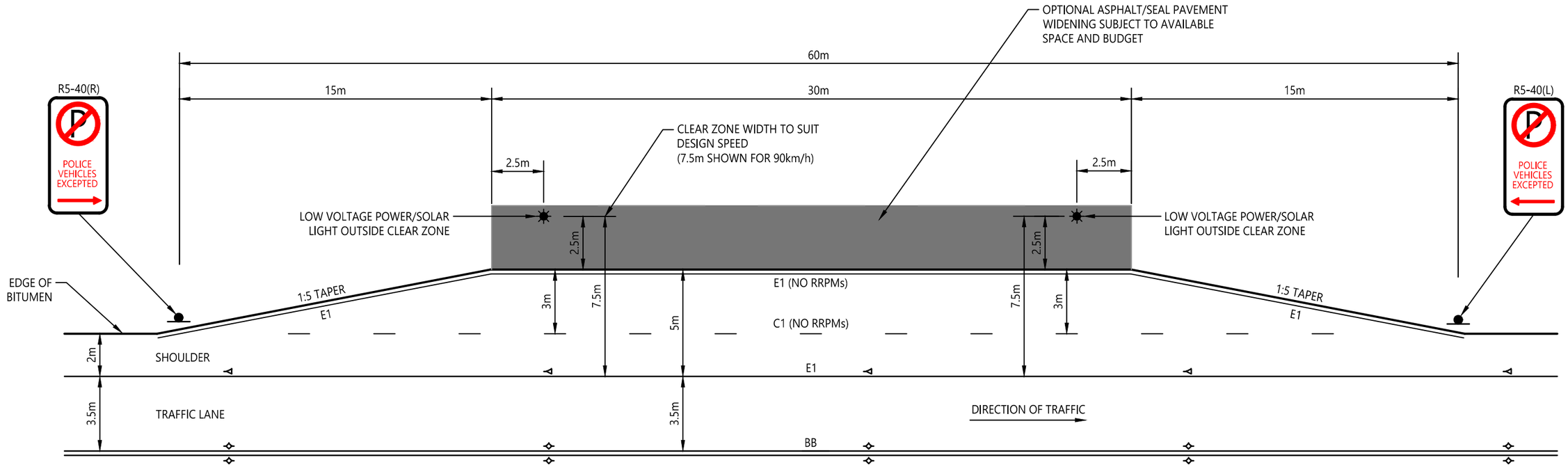
STANDARD DRAWING

TRAFFIC MANAGEMENT SERIES
TWO-LANE SLOW POINT

DRAWING NUMBER	REV
SD0909	-
SHEET 2 OF 2	A3

NOTES:

1. EXACT LOCATION OF POLICE ENFORCEMENT BAY TO BE DETERMINED BY NSW POLICE FORCE REPRESENTATIVES AND THE ROADS AUTHORITY.
2. ENSURE LOCATION IS SUITABLE IN TERMS OF AVAILABLE SIGHT DISTANCE, EXISTING SERVICES LOCATIONS AND TREES.
3. OVERHANGING TREES TO BE LOPPED CLEAR OF ROAD LIGHTING, ESPECIALLY WHERE SOLAR PANELS ARE POSITIONED.
4. TAPER LENGTHS AND CLEAR ZONE REQUIREMENTS MAY BE VARIED TO SUIT SITE SPECIFIC CONDITIONS AND THE PREVAILING V_{85} SPEED.



POLICE ENFORCEMENT BAY

SCALE 1:200

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2000 4000 6000 8000 10000

1:200

DRAWN	C SHEPPEARD
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DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

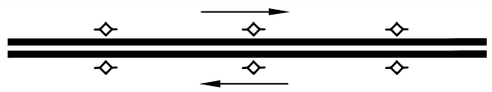
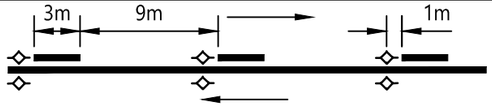
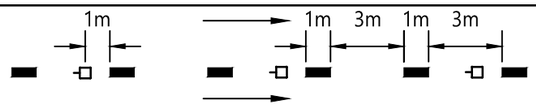
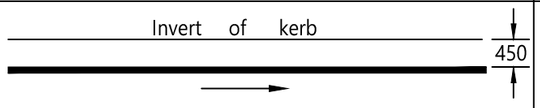
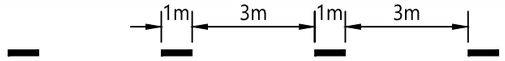
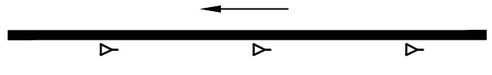
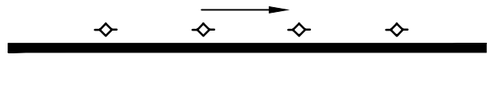
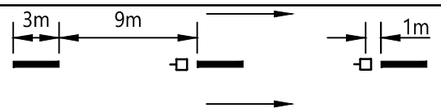
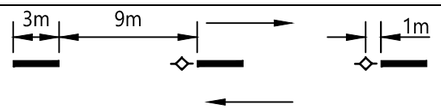
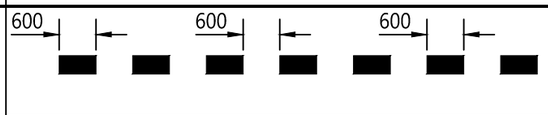
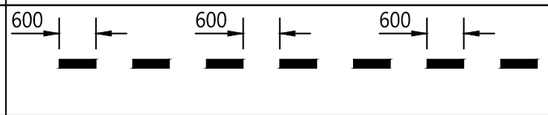
Central Coast Council

TRAFFIC MANAGEMENT SERIES
POLICE ENFORCEMENT BAY

STANDARD DRAWING

DRAWING NUMBER	REV
SD0910	-
SHEET 1 OF 1	A3

PAVEMENT MARKING SCHEDULE

	Line Type	Dimensions	Width (mm)	Line Colour	RRPM Type and Colour	RRPM Spacing (m)
LONGITUDINAL	BB - Dividing (barrier) lines (two-way)		100 100 100	White	Bidirectional Yellow	12
	BS - Dividing (barrier) lines (one-way)		100 100 100	White	Bidirectional Yellow	12
	C1 - Continuity line		150	White	Unidirectional White	8
	C3 - No stopping line		100	Yellow	-	-
	C4 - Bicycle lane continuity line		100	White	-	-
	E1 - Edge line		150	White	Unidirectional Red	12
	E5 - Outline edge line		150	White	Bidirectional Yellow	4
	L1 - Lane line		100	White	Unidirectional White	12
	S1 - Dividing (separation) line		100	White	Bidirectional Yellow	12
TRANSVERSE	TB - Give way line		300	White	-	-
	TB1 - Give way line (used on right side of road)		150	White	-	-
	TF - Stop line		300	White	-	-

NOTES:

1. REFER TO TfNSW DELINEATION GUIDELINES FOR FURTHER PAVEMENT MARKING SPECIFICATIONS AND OTHER ROAD AND PATH PAVEMENT MARKINGS.
2. THE PAVEMENT MARKINGS SHOWN ON THIS STANDARD DRAWING REPRESENT THE MOST COMMONLY USED LINE MARKINGS ON COUNCIL'S ROAD NETWORK.
3. ALL PAVEMENT MARKINGS TO BE APPLIED IN ACCORDANCE WITH COUNCIL'S PAVEMENT MARKING SPECIFICATION.
4. RAISED RETROREFLECTIVE PAVEMENT MARKERS (RRPMs) TO BE OFFSET 25 - 50mm FROM UNBROKEN LONGITUDINAL LINES, EXCEPT C3 LINES.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

NOT TO SCALE

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

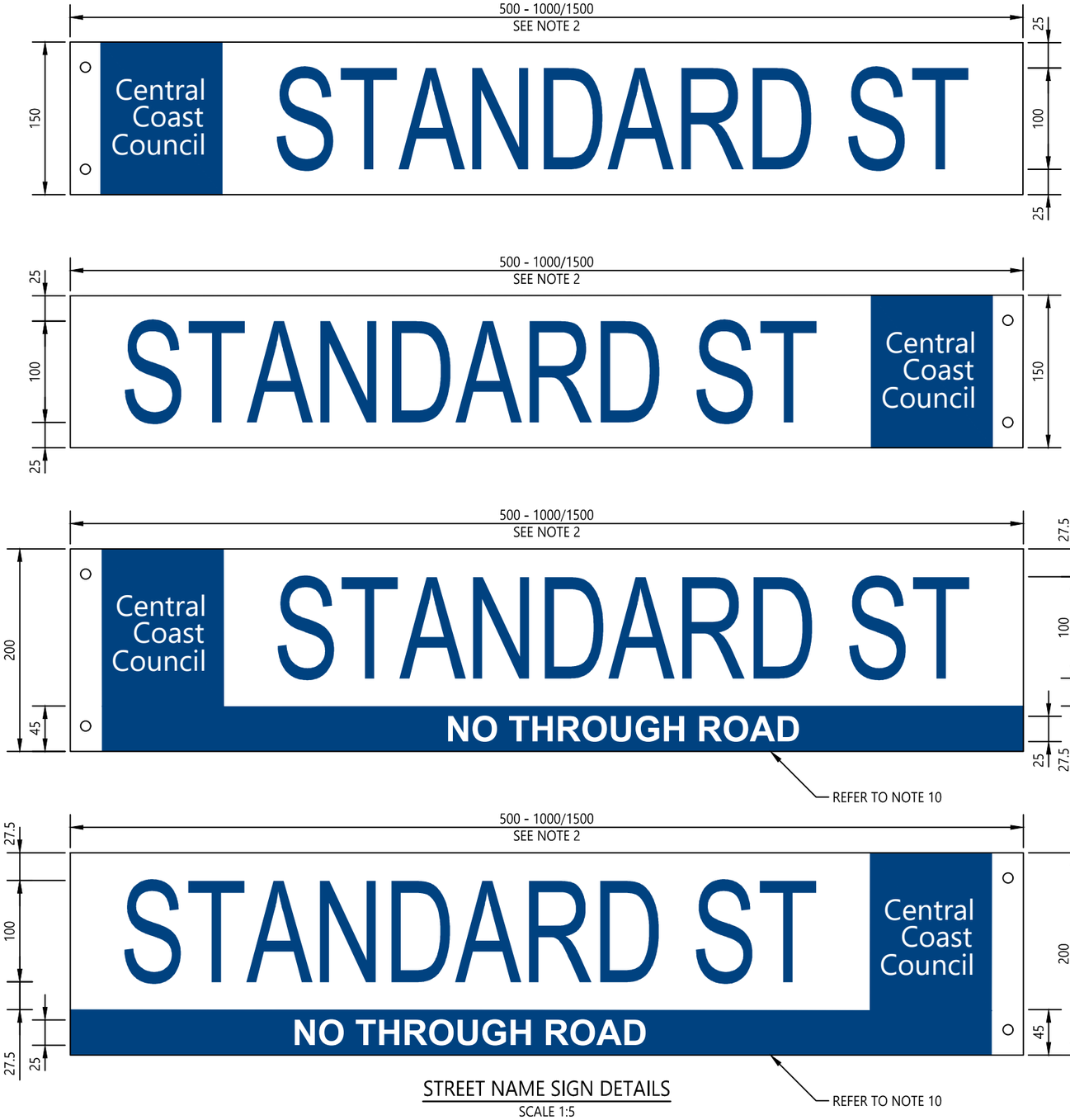
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
PAVEMENT MARKING SCHEDULE

STANDARD DRAWING

DRAWING NUMBER	REV
SD0911	-
SHEET 1 OF 1	A3



STREET NAME SIGN DETAILS
SCALE 1:5

NOTES:

1. COLOUR OF SIGNS: STREET NAME BLADE SHALL BE NON-REFLECTIVE DIGITALLY PRINTED (OR ECF) BLUE PMS 288 (RGB 0,66,128) ON WHITE CLASS 100 RETROREFLECTIVE BACKGROUND WITH CLEAR OVERLAMINATE.
2. SIGN MATERIAL SIZE AND SHAPE SHALL BE:
   - 6mm THICK ACRYLIC-PVC BLADE
   - CUT SQUARE AT ENDS
   - MINIMUM LENGTH 500mm
   - MAXIMUM LENGTH 1000mm (END MOUNTED), 1500mm (CENTRE MOUNTED)
   - STANDARD HEIGHT 150mm
   - SIGN HEIGHT WITH NO THROUGH ROAD SUPPLEMENTARY TEXT 200mm
3. REFLECTORISATION: THE BACKGROUND SHALL CONSIST OF WHITE CLASS 100 RETROREFLECTIVE MATERIAL, LAMINATED FROM THE TOP AND BOTTOM EDGE OF THE BLADE.
4. LETTERING TYPE AND SIZE TO AS 1742.5 AND AS 1744 (SPEED <80km/h): STREET NAME BLADES SHALL HAVE LETTERING WITH A HEIGHT OF 100mm SERIES D UPPER CASE WITH NARROW SPACING. SERIES C SHOULD ONLY BE USED WHERE LENGTH OF TEXT EXCEEDS MAXIMUM BLADE LENGTH OF 1200mm.
5. STREET NAME SIGNS SHALL BE PROVIDED AT ALL INTERSECTIONS WHERE SHOWN ON THE APPROVED ENGINEERING PLANS OR AS DIRECTED BY COUNCIL'S REPRESENTATIVE. WHERE SIDE STREET AND MAJOR ROAD SIGNS ARE MOUNTED ON THE ONE POST, THE SIDE STREET SIGN SHALL BE MOUNTED BELOW THE MAJOR ROAD SIGN.
6. STREET NAME SIGNS AT FULLY MOUNTABLE ROUNDABOUTS SHALL BE CONFIGURED AND INSTALLED AT LOCATIONS IN ACCORDANCE WITH SHEET 2.
7. SIGN POST LOCATIONS MAY BE VARIED BY COUNCIL'S REPRESENTATIVE WHERE POWER POLES, TREES OR SIMILAR FEATURES OBSTRUCT VIEWING OF SIGNS BY MOTORISTS.
8. ERECTION OF SIGNS BY DEVELOPERS SHALL BE SUBJECT TO APPROVAL BY COUNCIL'S REPRESENTATIVE.
9. NON-STANDARD SIGNS MAY BE USED SUBJECT TO PRIOR APPROVAL BY COUNCIL'S REPRESENTATIVE.
10. SIGN POST SHALL BE INSTALLED IN PIPE SLEEVE (PREFERRED) OR V-LOCK SOCKET IN PAVED FOOTWAY AREAS.
11. CONSIDER INSTALLATION OF G9-18A NO THROUGH ROAD SIGN(S) TO SUPPLEMENT INTEGRAL NO THROUGH ROAD STREET NAME SIGNS.

ABBREVIATIONS:

ALY	-	ALLEY	JNC	-	JUNCTION
AVE	-	AVENUE	LA	-	LANE
BVD	-	BOULEVARD	PDE	-	PARADE
CCT	-	CIRCUIT	PWY	-	PARKWAY
CL	-	CLOSE	PL	-	PLACE
CT	-	COURT	PL	-	PLAZA
CR	-	CRESCENT	RD	-	ROAD
DR	-	DRIVE	SQ	-	SQUARE
ESP	-	ESPLANADE	ST	-	STREET
GR	-	GROVE	TCE	-	TERRACE
HWY	-	HIGHWAY	WY	-	WAY
			WK	-	WALK

G9-18A

SEE NOTE 10

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 50 100 150 200 250

1:5

DRAWN	C SHEPPEARD/T WILLIS
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DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

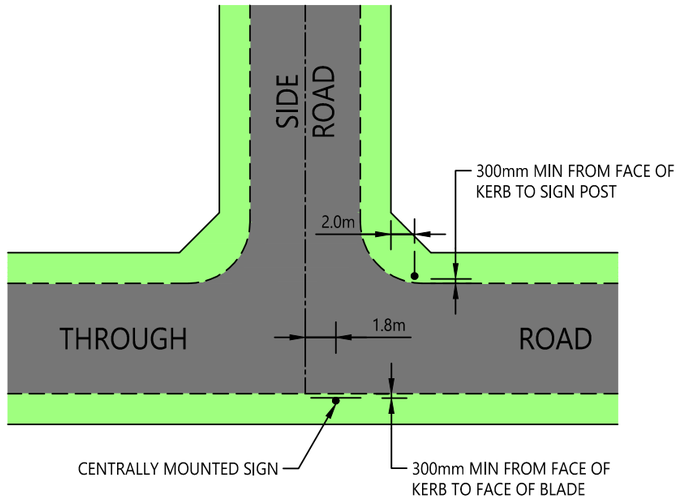
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

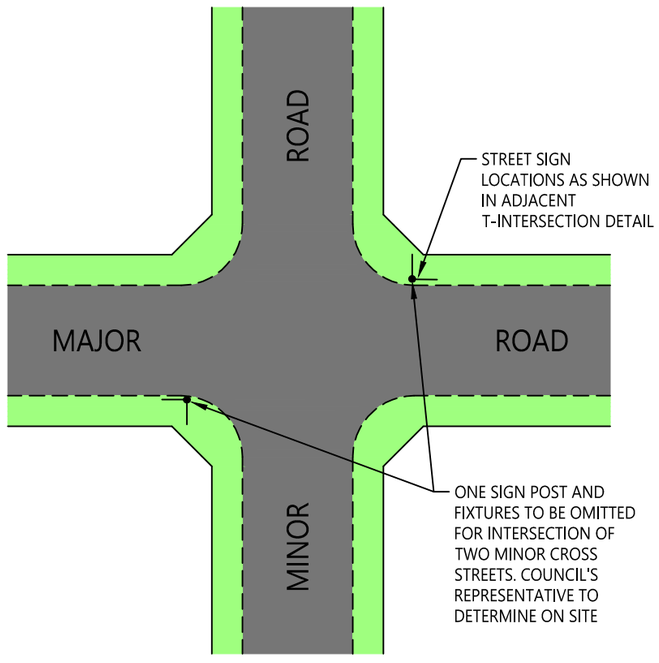
TRAFFIC MANAGEMENT SERIES
STANDARD STREET NAME SIGN CONFIGURATION

STANDARD DRAWING

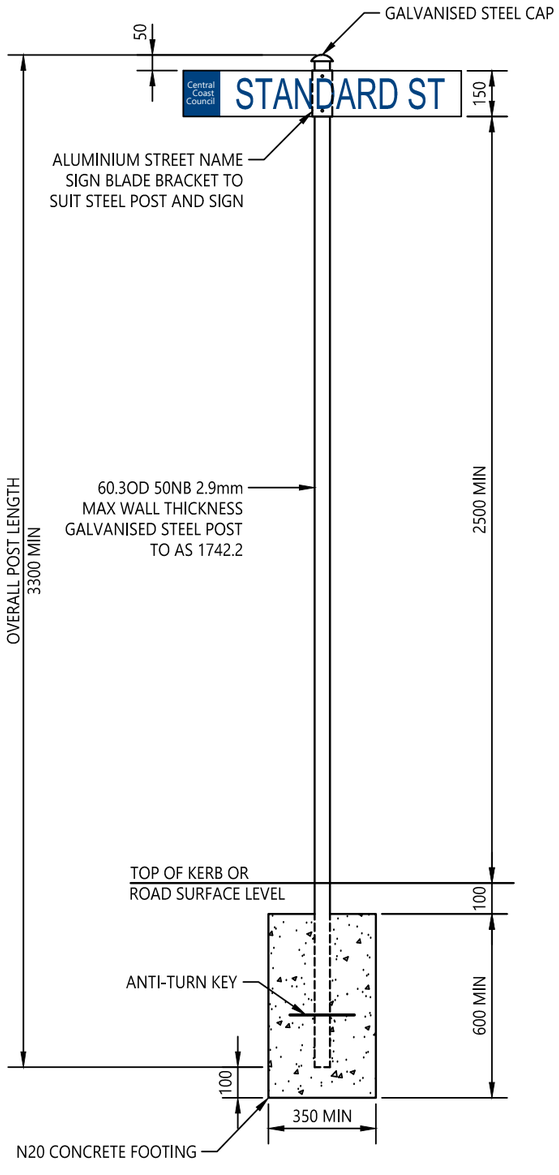
DRAWING NUMBER	REV
SD0912	-
SHEET 1 OF 2	A3



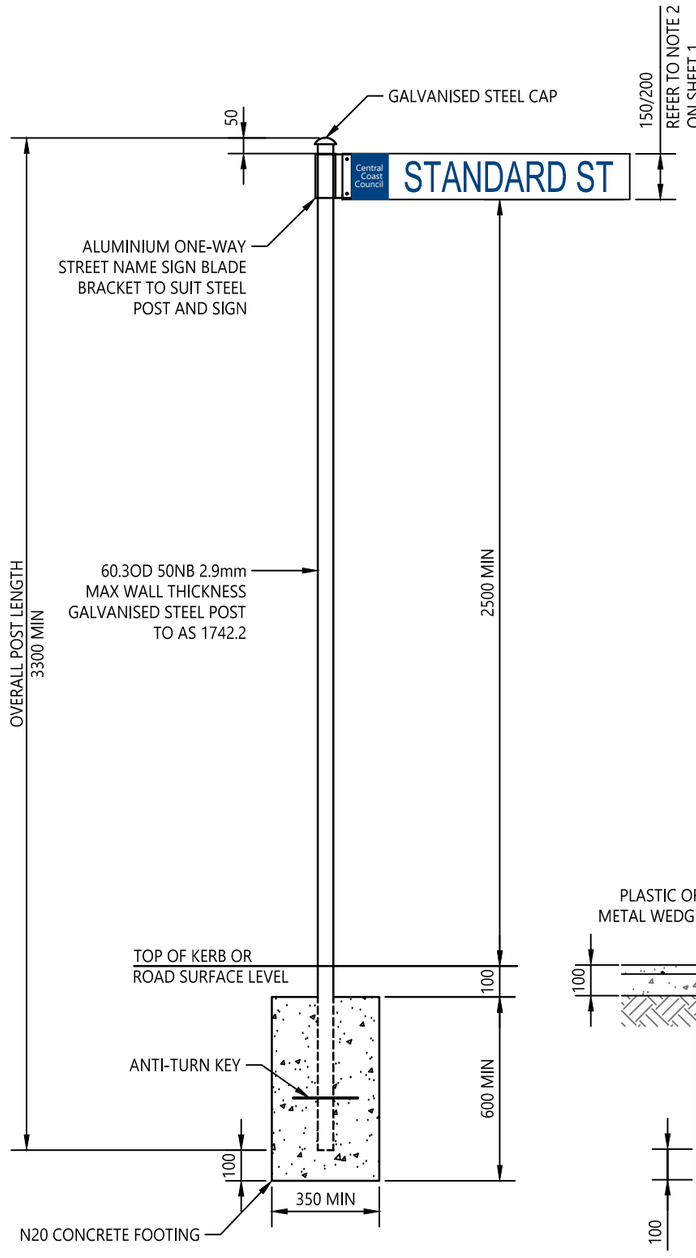
T-INTERSECTION
NOT TO SCALE



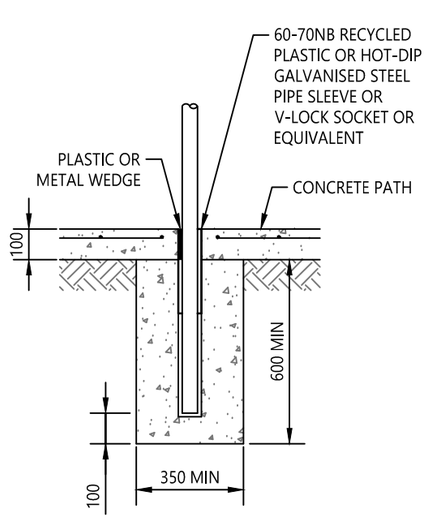
4-WAY INTERSECTION
NOT TO SCALE



STANDARD STREET NAME SIGN (CENTRE MOUNT)
SCALE 1:20



STANDARD STREET NAME SIGN (SIDE MOUNT)
SCALE 1:20



V-LOCK SOCKET DETAIL
SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 100 200 300 400 500 1:10
0 200 400 600 800 1000 1:20
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

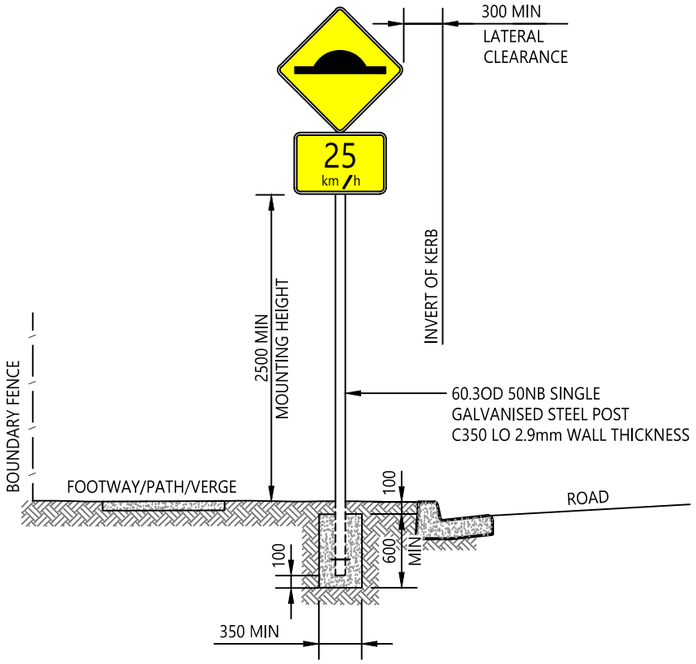
Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

TRAFFIC MANAGEMENT SERIES
STANDARD STREET NAME SIGN CONFIGURATION

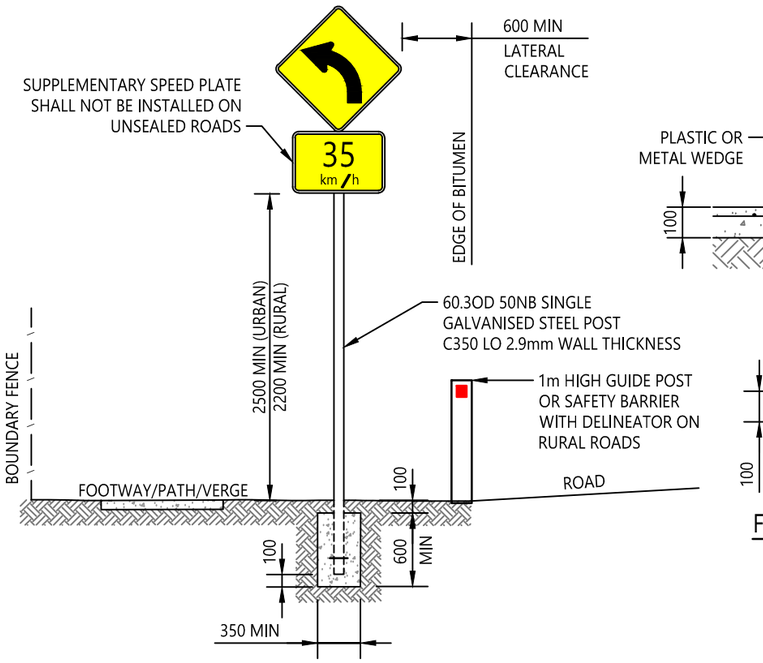
STANDARD DRAWING

DRAWING NUMBER	REV
SD0912	-
SHEET 2 OF 2	A3



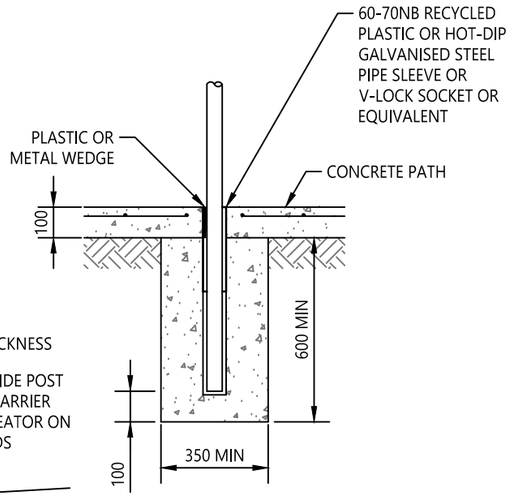
URBAN ROADS WITH KERB AND CHANNEL

SCALE 1:50



URBAN ROADS WITHOUT KERB AND CHANNEL AND RURAL ROADS

SCALE 1:50

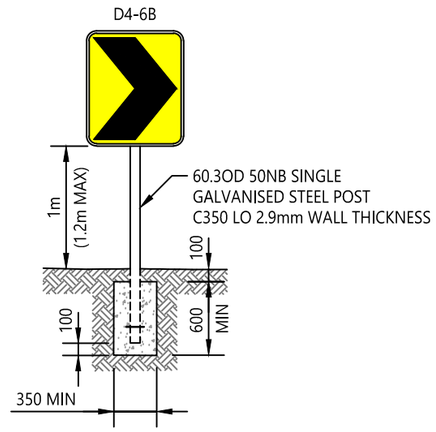


FOOTING DETAIL

SCALE 1:20

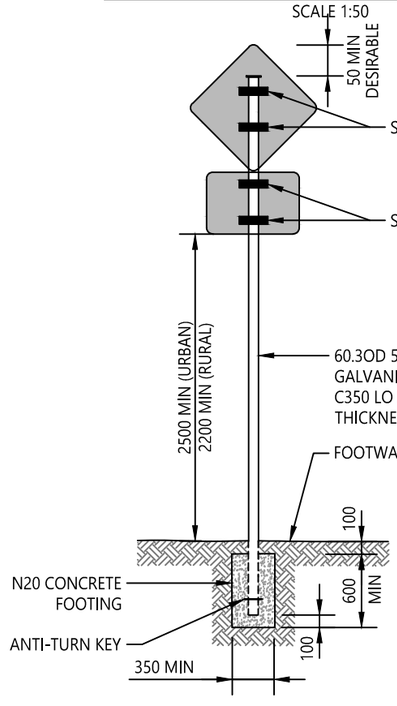
NOTES:

1. SIGN POST TYPE, DIMENSIONS AND FRANGIBILITY REQUIREMENTS SHALL BE IN ACCORDANCE WITH AS 1742.2.
2. SIGN POSTS LOCATED IN MEDIAN OR ROADSIDE TRAFFIC ISLANDS SHALL BE INSTALLED IN PIPE SLEEVE, V-LOCK SOCKET OR EQUIVALENT.
3. ROADSIDE SIGN POSTS LOCATED IN HIGH RISK AREAS, SUCH AS BUSY INTERSECTIONS OR LOCATIONS WITH A HISTORY OF DAMAGED SIGN POSTS, SHALL BE INSTALLED IN PIPE SLEEVE, V-LOCK SOCKET OR EQUIVALENT.
4. PIPE SLEEVE/V-LOCK AND WEDGE SHALL BE INSTALLED FLUSH WITH SURROUNDING CONCRETE SURFACE.



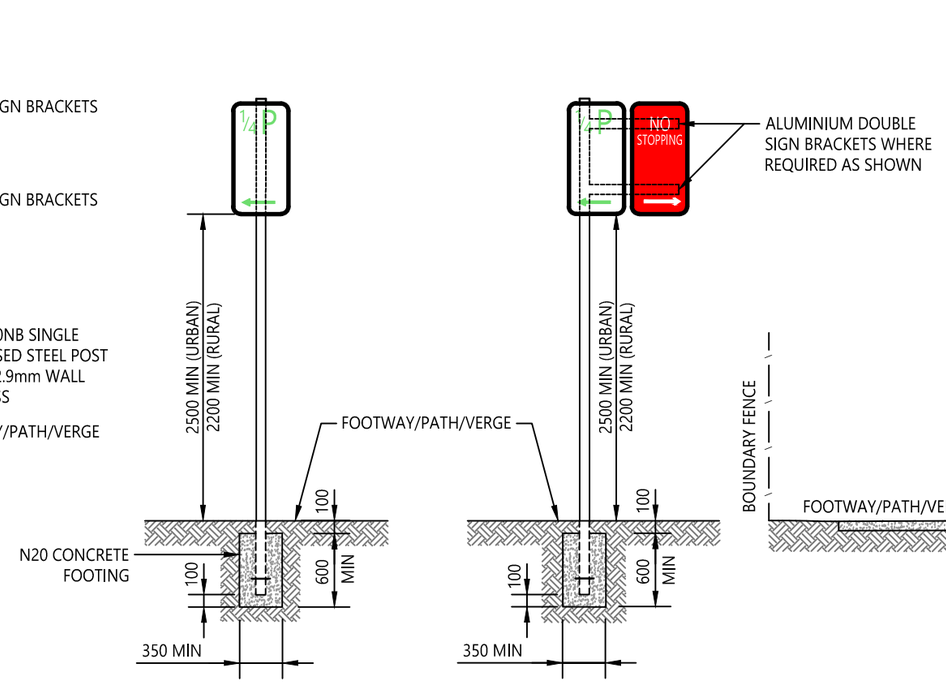
CHEVRON ALIGNMENT MARKER SIGN MOUNTING DETAILS

SCALE 1:50



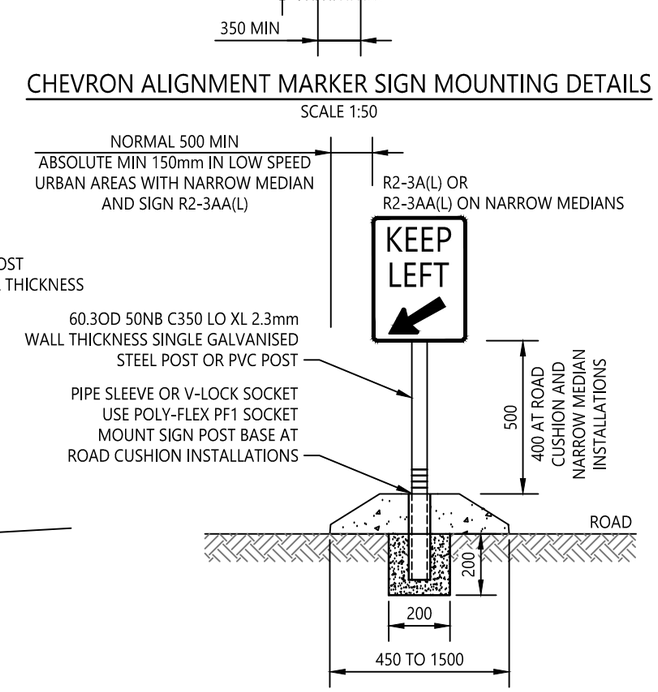
SIGN MOUNTING DETAILS

SCALE 1:50



PARKING RESTRICTION SIGN MOUNTING DETAILS

SCALE 1:50



MEDIAN ISLANDS

SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000 1:20

0 500 1000 1500 2000 2500 1:50

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	C SHEPPEARD/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

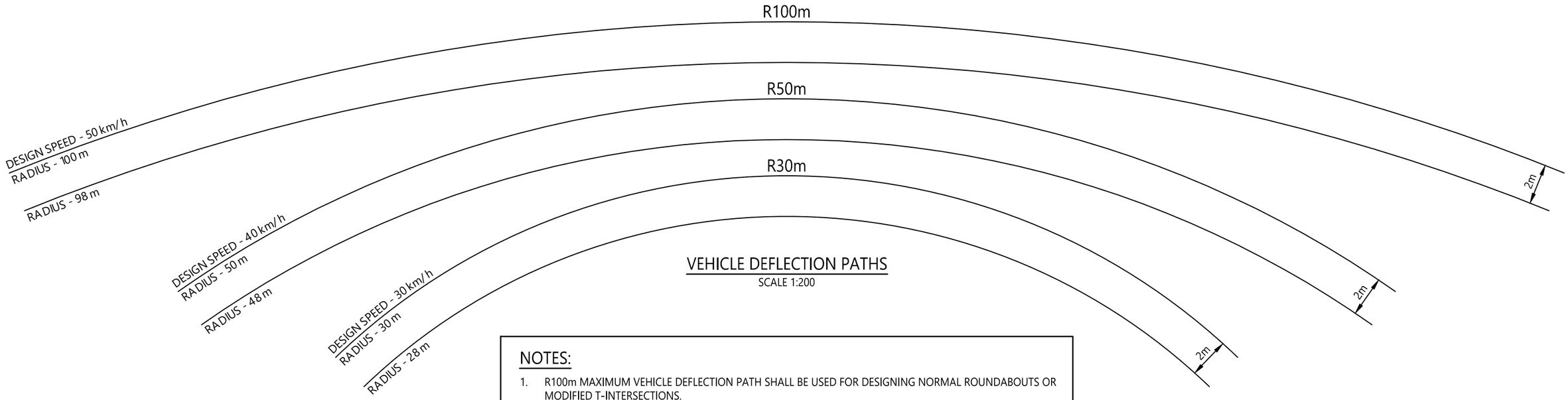
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

TRAFFIC MANAGEMENT SERIES
ROAD AND TRAFFIC SIGN MOUNTING DETAILS

DRAWING NUMBER	REV
SD0913	-
SHEET 1 OF 1	A3



VEHICLE DEFLECTION PATHS

SCALE 1:200

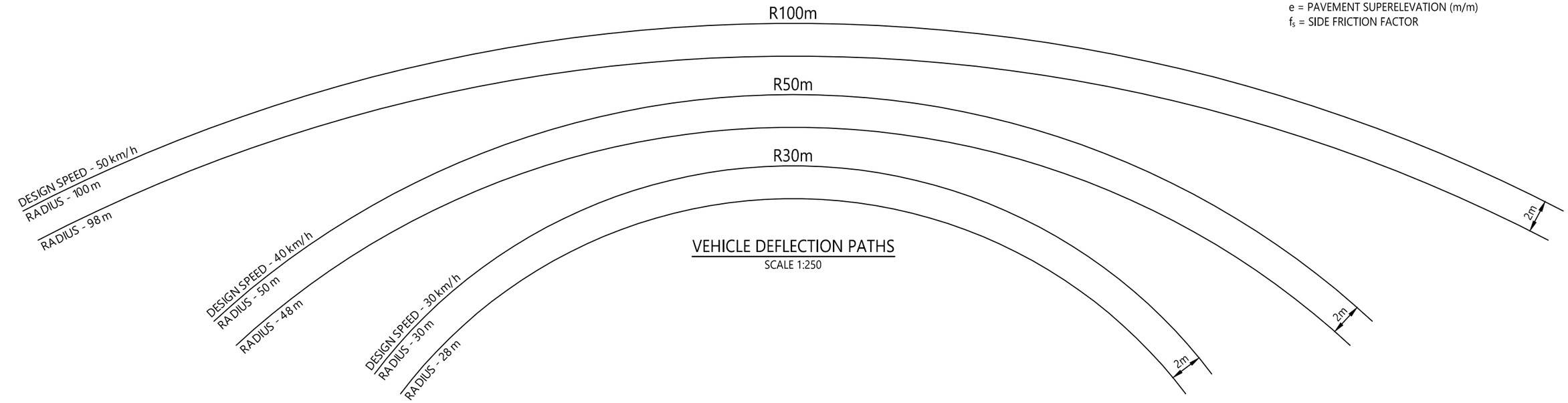
NOTES:

1. R100m MAXIMUM VEHICLE DEFLECTION PATH SHALL BE USED FOR DESIGNING NORMAL ROUNDABOUTS OR MODIFIED T-INTERSECTIONS.
2. R50m AND R30m MAXIMUM VEHICLE DEFLECTION PATHS SHALL BE USED FOR DESIGNING FULLY MOUNTABLE ROUNDABOUTS AND OTHER HORIZONTAL DEFLECTION TRAFFIC CALMING DEVICES IN LOW SPEED ENVIRONMENTS ONLY.
3. R50m AND R30m PATHS WERE DERIVED FROM THE HORIZONTAL CURVE EQUATION IN THE AUSTROADS GEOMETRIC DESIGN GUIDELINES, AS SHOWN ON THIS DRAWING.
4. VEHICLE DEFLECTION PATH TEMPLATES AND RELATED CAD METHODS SHALL BE USED IN ACCORDANCE WITH AUSTROADS GUIDELINES AND THE TfNSW GUIDELINE "ROUNDABOUTS - GEOMETRIC DESIGN METHOD".
5. VEHICLE DEFLECTION PATH TEMPLATES SHALL BE POSITIONED TANGENTIAL TO KERB LINE ENTRY/EXIT ARCS AND TANGENTIAL TO OR CROSS THE CENTRAL ISLAND.

HORIZONTAL CURVE EQUATION

$$V = \sqrt{127R(e + f_s)} \quad \text{OR} \quad R = \frac{V^2}{127(e + f_s)}$$

WHERE:
R = MINIMUM CURVE RADIUS (m)
V = VEHICLE SPEED (km/h)
e = PAVEMENT SUPERELEVATION (m/m)
f_s = SIDE FRICTION FACTOR



VEHICLE DEFLECTION PATHS

SCALE 1:250

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2000 4000 6000 8000 10000 1:200

0 2500 5000 7500 10000 12500 1:250

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

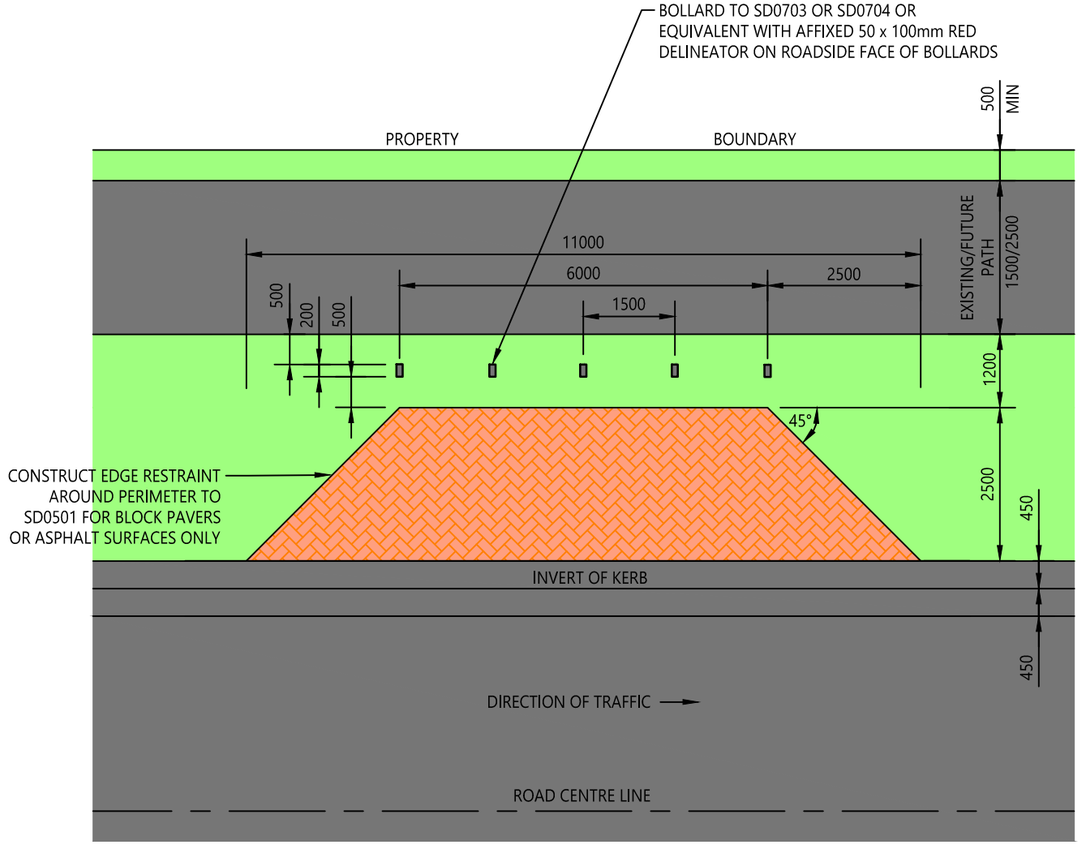
STANDARD DRAWING

TRAFFIC MANAGEMENT SERIES
VEHICLE DEFLECTION PATHS

DRAWING NUMBER	REV
SD0914	-
SHEET 1 OF 1	A3

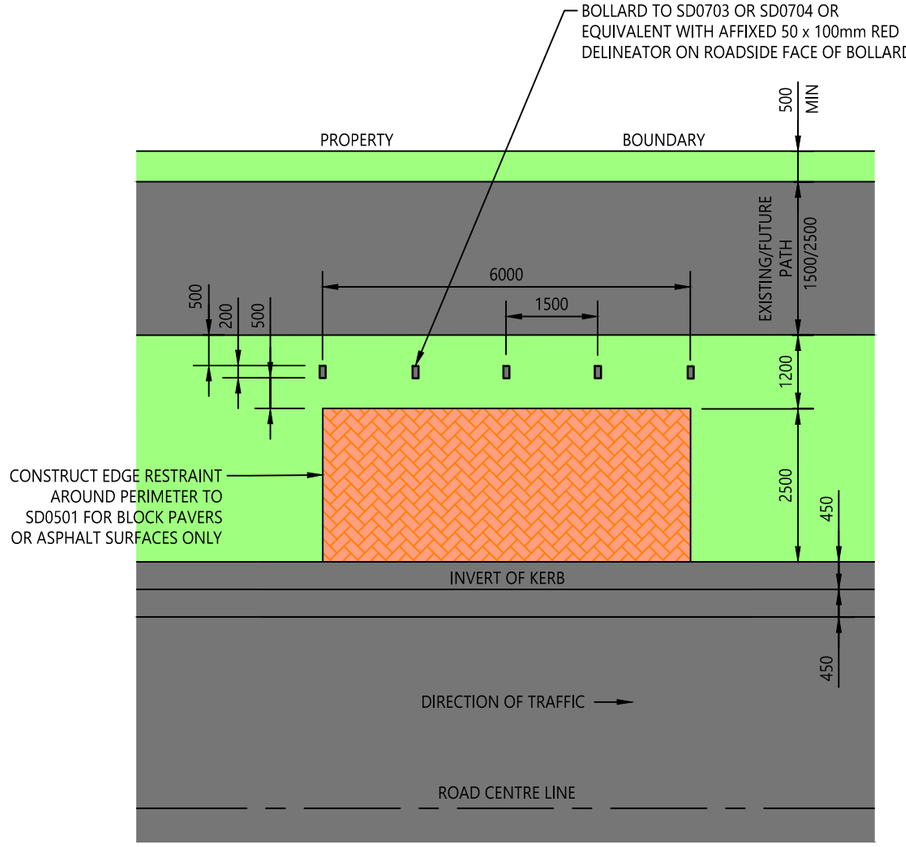
NOTES:

1. THIS STANDARD DRAWING IS BASED ON THE REQUIREMENTS OF TfNSW TECHNICAL DIRECTION TTD 2014/004 - OFF-ROAD PARKING PROVISION ON NARROW ROADS.
2. THE PREFERRED PRACTISE IS TO DESIGN ROADS WITH AN APPROPRIATE WIDTH TO OBVIATE THE NEED FOR OFF-ROAD PARKING SPACES. THEREFORE, THIS TREATMENT WOULD GENERALLY BE FOR RETROFITTING TO AN EXISTING ROAD OR BE INCLUDED WITHIN A SUBDIVISION DEVELOPMENT WITH NARROW CARRAGEWAYS.
3. THIS STANDARD DRAWING IS FOR GUIDANCE PURPOSES ONLY AND IS NOT TO BE USED FOR A DESIGN OR FOR CONSTRUCTION PURPOSES, FOLLOWING A SEPARATE DECISION TO IMPLEMENT OFF-ROAD PARKING ON A NARROW ROAD. THIS STANDARD DRAWING IS ALSO NOT TO BE USED FOR SHARED ZONES.
4. OFF-ROAD PARKING SPACES ON NARROW ROADS SHALL ONLY BE IMPLEMENTED ON URBAN RESIDENTIAL ROADS WITH A SPEED LIMIT ≤50km/h AND NOT WITHIN DESIGNATED NO STOPPING ZONES OR OTHER PARKING RESTRICTIONS, WHICH MAY ADVERSELY AFFECT MINIMUM SIGHT DISTANCE REQUIREMENTS.
5. PARKING SPACE DIMENSIONS SHALL BE IN ACCORDANCE WITH AS 2890.5 - PARKING FACILITIES. PARKING CONTROL SIGNS WHERE REQUIRED SHALL BE INSTALLED IN ACCORDANCE WITH AS 1742.11 AND THE APPLICABLE TfNSW SUPPLEMENT.
6. PARKING SPACES FOR DISABLED PERSONS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS 2890.5 - PARKING FACILITIES, INCLUDING PAVED CONNECTIVITY WITH PATHS AT SPECIFIC GRADES AND PARKING SPACE DELINEATION.
7. ENSURE RESIDUAL FOOTWAY/NATURE STRIP WIDTH IS 2.5m MINIMUM ON EACH SIDE OF THE ROAD TO ALLOW FOR EXISTING/FUTURE SHARED PATH WIDTH.
8. POSITION PARKING SPACES ADJACENT TO VEHICLE ACCESS CROSSINGS WHERE PRACTICABLE (DOWNSTREAM OF CROSSING PREFERRED).
9. AVOID SHORT LENGTHS OF ALTERNATING KERB-TYPES UNLESS SEPARATED BY VEHICLE ACCESS CROSSINGS.
10. DISHED CROSSING (SB KERB) PREFERRED TO ENABLE BETTER TRANSITION TO/FROM BARRIER (SA) KERB AND EASE OF INGRESS/EGRESS. ROLL TOP KERB WOULD BE MOST SUITABLE ON EXISTING NARROW ROADS IN SUBDIVISION AREAS.
11. TRANSITION CHANGES IN LONGITUDINAL KERB-TYPE OVER 3 TO 6m.
12. ENSURE ALL PUBLIC UTILITY SERVICES ARE NOT ADVERESLY AFFECTED BY THE OFF-ROAD PARKING SPACE(S) WITHIN THE ROAD OR FOOTWAY AREAS. HOUSE STORMWATER CONNECTIONS WILL REQUIRE CONSIDERATION OF CONSTRUCTABILITY REQUIREMENTS. EXISTING AC WATER MAINS UNDER SLABS MAY NEED REPLACEMENT.
13. SLAB TO BE 125mm THICK N32 CONCRETE INTEGRALLY COLOURED WITH 1x20kg BAG OF TERRACOTTA OXIDE FOR EACH 1m³ OF CONCRETE AND HERRINGBONE PATTERENED. ALTERNATIVE CONSTRUCTION MATERIALS MAY BE USED SUCH AS BLOCK PAVERS OR ASPHALT, WITH THE APPROVAL OF COUNCIL'S REPRESENTATIVE.
14. CONTROL JOINTS (AND EXPANSION JOINTS WHERE REQUIRED) AND ISOLATION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AS 3727. MAXIMUM CONTROL JOINT SPACING SHALL BE 4.5m, OR 1.5 TIMES THE WIDTH OF CONCRETE SLAB, WHICHEVER IS THE LESSER.



ONE PARALLEL PARKING SPACE

SCALE 1:100



ONE PARALLEL PARKING SPACE

(LONGITUDINALLY CONSTRAINED SITE)

SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 1000 2000 3000 4000 5000

1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

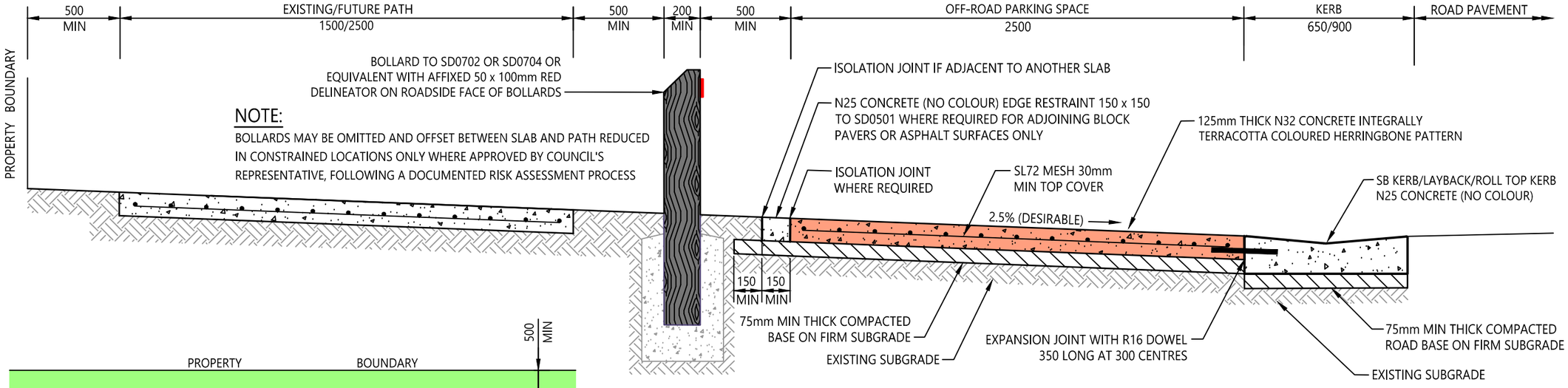
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

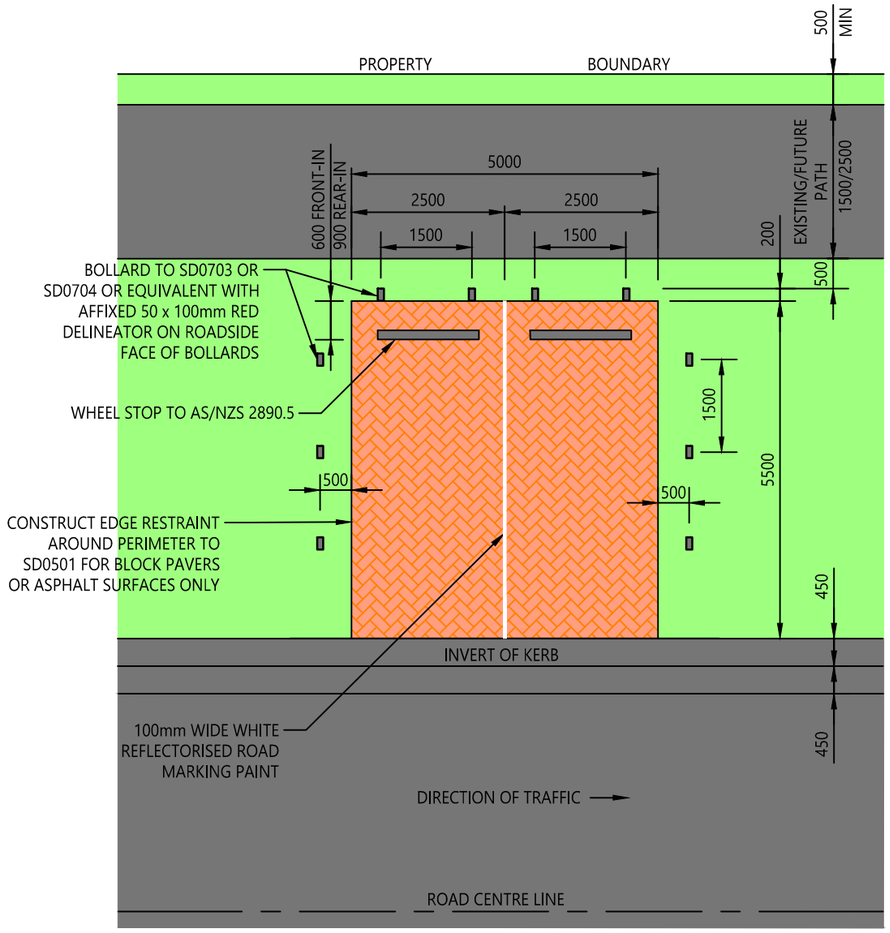
TRAFFIC MANAGEMENT SERIES
OFF-ROAD PARKING SPACES ON NARROW ROADS

DRAWING NUMBER	REV
SD0915	-
SHEET 1 OF 2	A3



TYPICAL SECTION

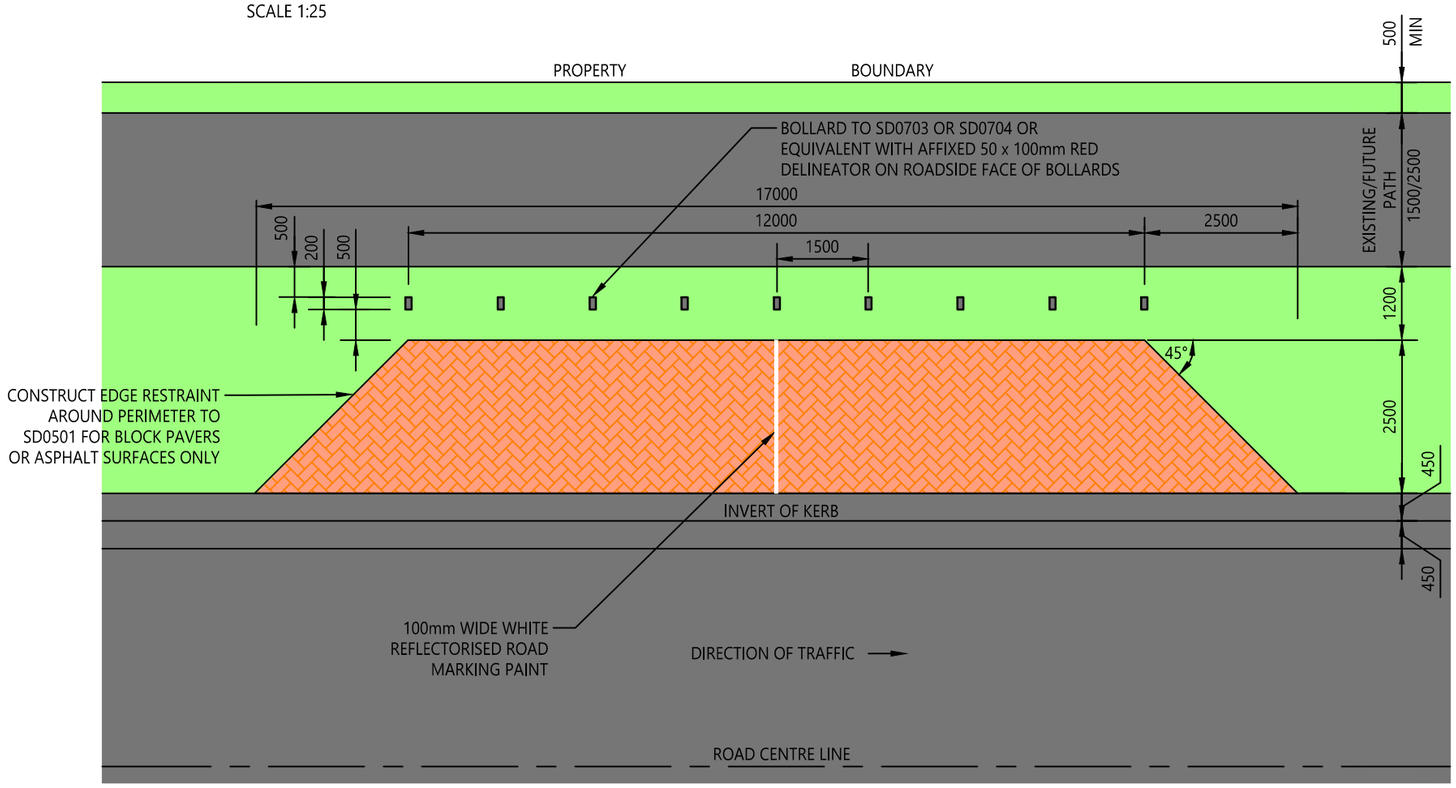
SCALE 1:25



TWO PERPENDICULAR PARKING SPACES

(LOW SPEED LOW VOLUME ROADS ONLY)

SCALE 1:100



TWO PARALLEL PARKING SPACES

SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

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0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

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CHECKED	M BAMBER
DATE	28/4/20

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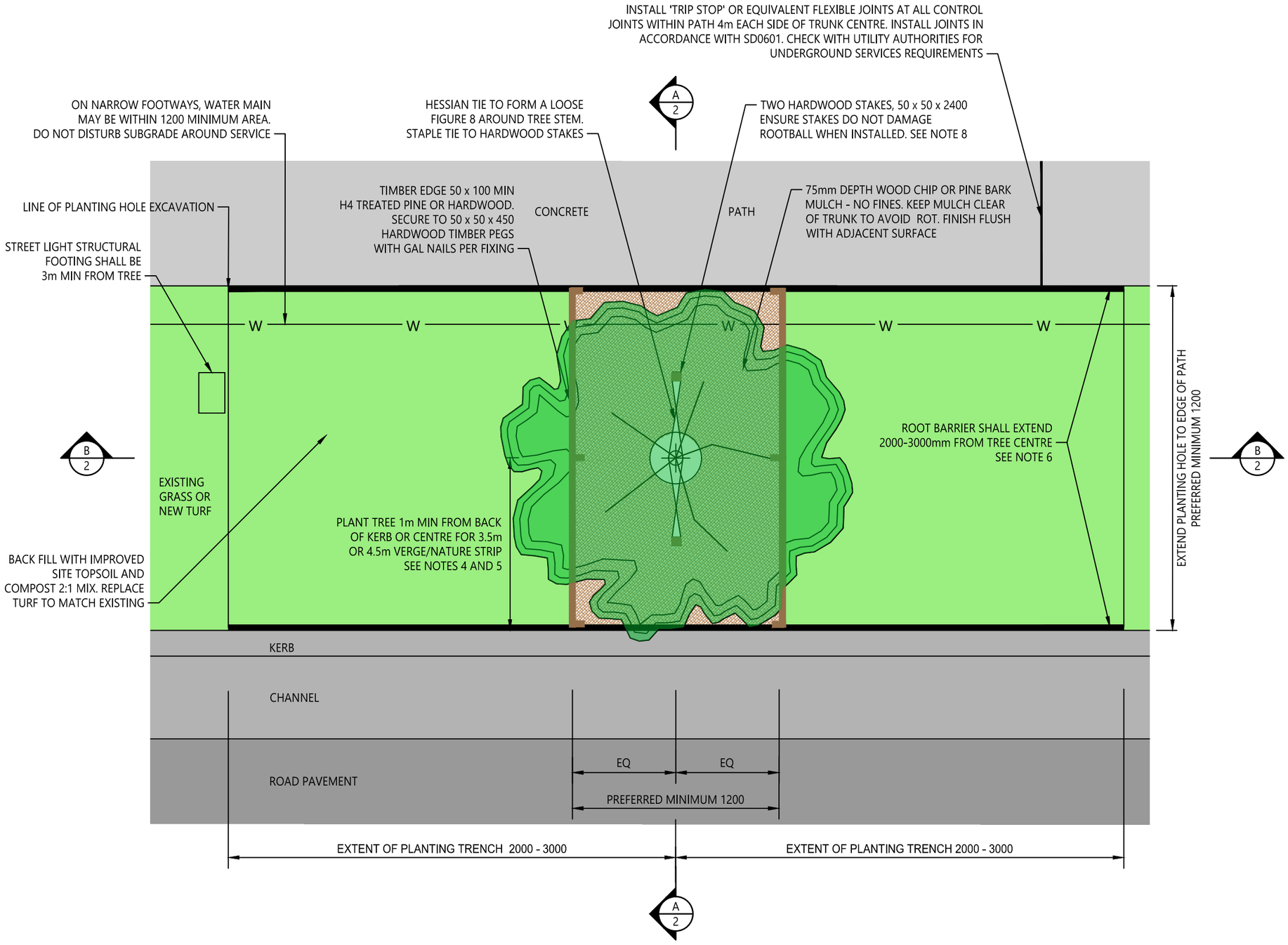
STANDARD DRAWING

TRAFFIC MANAGEMENT SERIES
OFF-ROAD PARKING SPACES ON NARROW ROADS

DRAWING NUMBER	REV
SD0915	-
SHEET 2 OF 2	A3



PLAN

TYPICAL STREET TREE WITH PATH

SCALE 1:25

NOTES:

1. THESE DETAILS ARE TO BE READ IN CONJUNCTION WITH COUNCIL'S CIVIL WORKS DESIGN GUIDELINE AND CONSTRUCTION SPECIFICATION AND OTHER RELEVANT COUNCIL DOCUMENTATION.
2. ALL UNDERGROUND SERVICES AND DWELLING OUTLET LOCATIONS SHALL BE CHECKED ON SITE PRIOR TO WORKS COMMENCING.
3. ALL TREES SHALL BE:
   - VIGOROUS AND HEALTHY
   - FREE FROM INSECTS AND DISEASE
   - MINIMUM 100L POT SIZE UNLESS OTHERWISE APPROVED BY COUNCIL'S REPRESENTATIVE
   - IN CONFORMANCE TO AS 2303 TREE STOCK FOR LANDSCAPE USE
   - AN APPROPRIATE SPECIES FOR PLANTING NEAR WATER OR SEWER UTILITIES
   - PLACED ALIGNED WITH SIDE BOUNDARY LINE
4. NO TREE SHALL BE CLOSER THAN:
   - 12m FROM BUILDING LINE AT INTERSECTIONS ON MAJOR ROADS OR 6m FROM MINOR ROADS
   - 3m FROM DRIVEWAYS OR ACCESS WAYS SUCH AS LANEWAYS
   - 3m FROM POWER POLES AND LIGHT POLES
   - 1m FROM BACK OF KERB (OR CENTRED FOR 3.5m AND 4.5m VERGE/NATURE STRIP WHERE APPROVED BY COUNCIL'S REPRESENTATIVE). ALSO SEE NOTE 5 BELOW.
   - AT LEAST 15m FROM BUS STOPS
   - 2.5m FROM STORMWATER KERB INLET PITS
5. TREES ≤ 70 TO 100mm DIAMETER AT THEIR BASE (DEPENDING ON SPECIES) ARE NOT CONSIDERED TO BE HAZARDOUS FIXED OBJECTS FOR VEHICLE OCCUPANTS IN AUSTROADS GUIDE TO ROAD DESIGN PART 6: ROADSIDE DESIGN, SAFETY AND BARRIERS. TREES > 100mm DIAMETER AT THEIR BASE WHEN MATURE SHALL NOT BE PLANTED WITHIN ROADSIDE CLEAR ZONE DISTANCES (3 TO 4.5m FROM EDGE OF THROUGH TRAVELLED WAY ON STRAIGHT ROADS IN URBAN AREAS WITH DESIGN SPEED ≤ 60km/h AND AVERAGE DAILY TRAFFIC VOLUME < 750 TO 6000).
6. INSTALL LINEAR ROOT BARRIER 600mm MINIMUM DEPTH. ROOT BARRIER SHALL SIT FLUSH WITH SURROUNDING SOIL AND BE COVERED BY MULCH.
7. WHERE POSSIBLE, MAXIMISE THE SPACE AVAILABLE FOR THE TREE ROOT ZONE BY CO-ORDINATING FOOTPATH LOCATIONS TO BE CLOSER TO THE PROPERTY BOUNDARY AND FURTHER FROM THE KERB.
8. ALL STAKES AND HESSIAN TIES SHALL BE REMOVED AT THE END OF THE LANDSCAPE CONTRACTOR'S MAINTENANCE PERIOD UNLESS OTHERWISE ADVISED BY COUNCIL'S REPRESENTATIVE.
9. ALL TIMBER IN CONTACT WITH GROUND SHALL BE CLASS 1 DURABILITY HARDWOOD OR EQUIVALENT H4 TREATED PINE.
10. FOR FURTHER INFORMATION ON STREET TREE PLANTING, INCLUDING THE SELECTION OF SUITABLE TREE SPECIES, REFER TO COUNCIL'S "GREENER PLACES STRATEGY", "GREEN STREETS PLAN" AND ANY OTHER RELEVANT DOCUMENTS.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 250 500 750 1000 1250

1:25

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

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CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

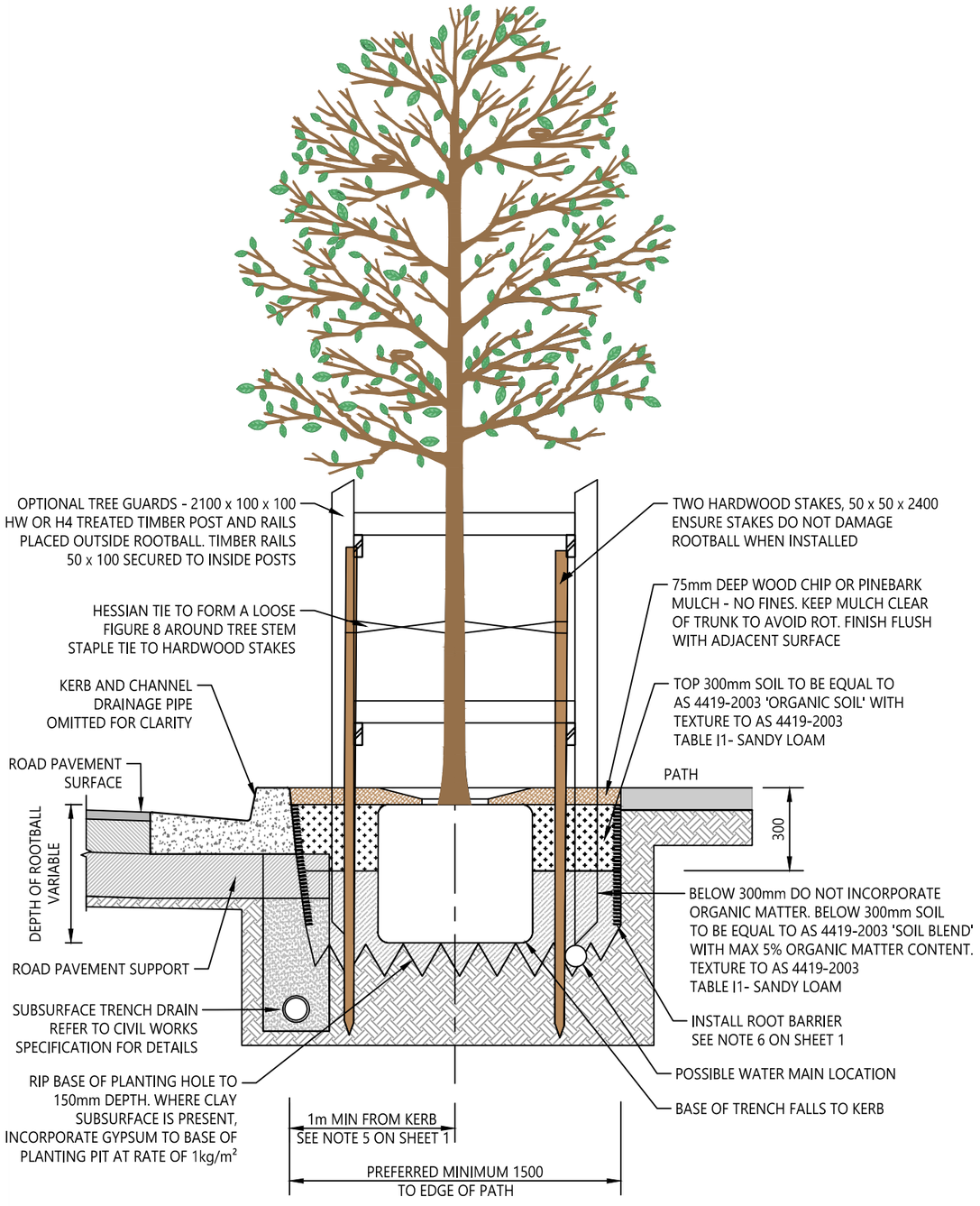
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

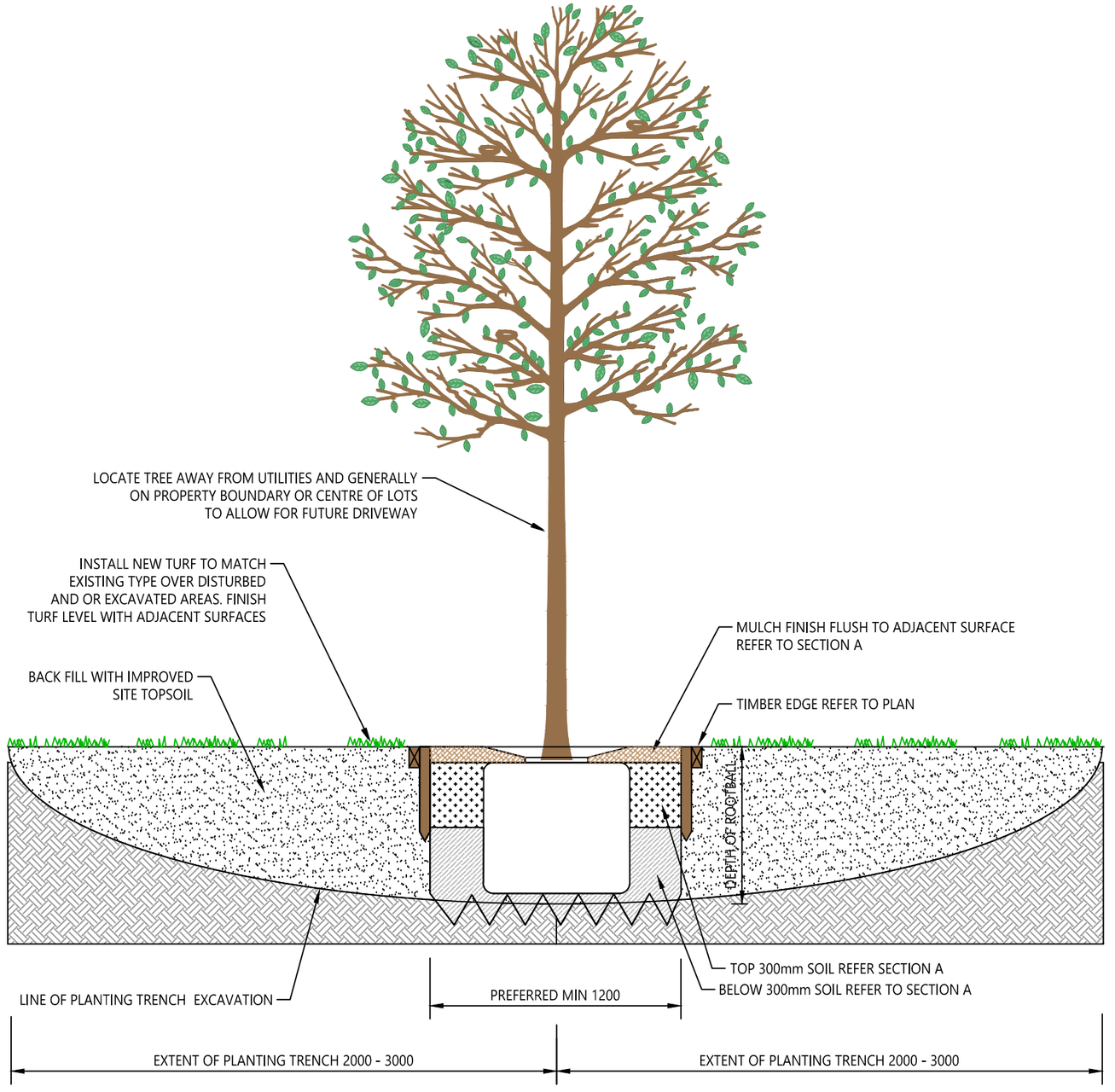
STANDARD DRAWING

LANDSCAPE SERIES
TYPICAL STREET TREE WITH PATH

DRAWING NUMBER	REV
SD1001	-
SHEET 1 OF 2	A3



SECTION A / 1
NOT TO SCALE



SECTION B / 1
SCALE 1:25

TYPICAL STREET TREE WITH PATH
SCALE 1:25

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING
0 250 500 750 1000 1250
1:25

DRAWN	KS/MG/DM
CHECKED	M BAMBER
DATE	28/4/20

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ROADS TRANSPORT DRAINAGE AND WASTE

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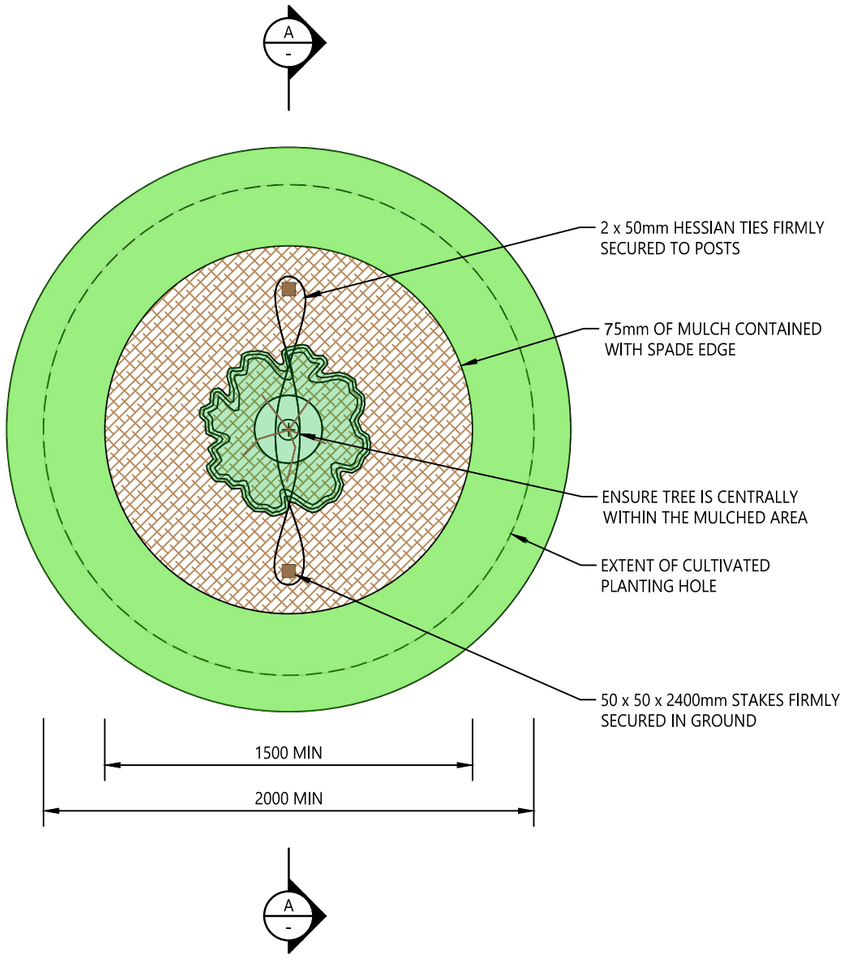
STANDARD DRAWING

LANDSCAPE SERIES
TYPICAL STREET TREE WITH PATH

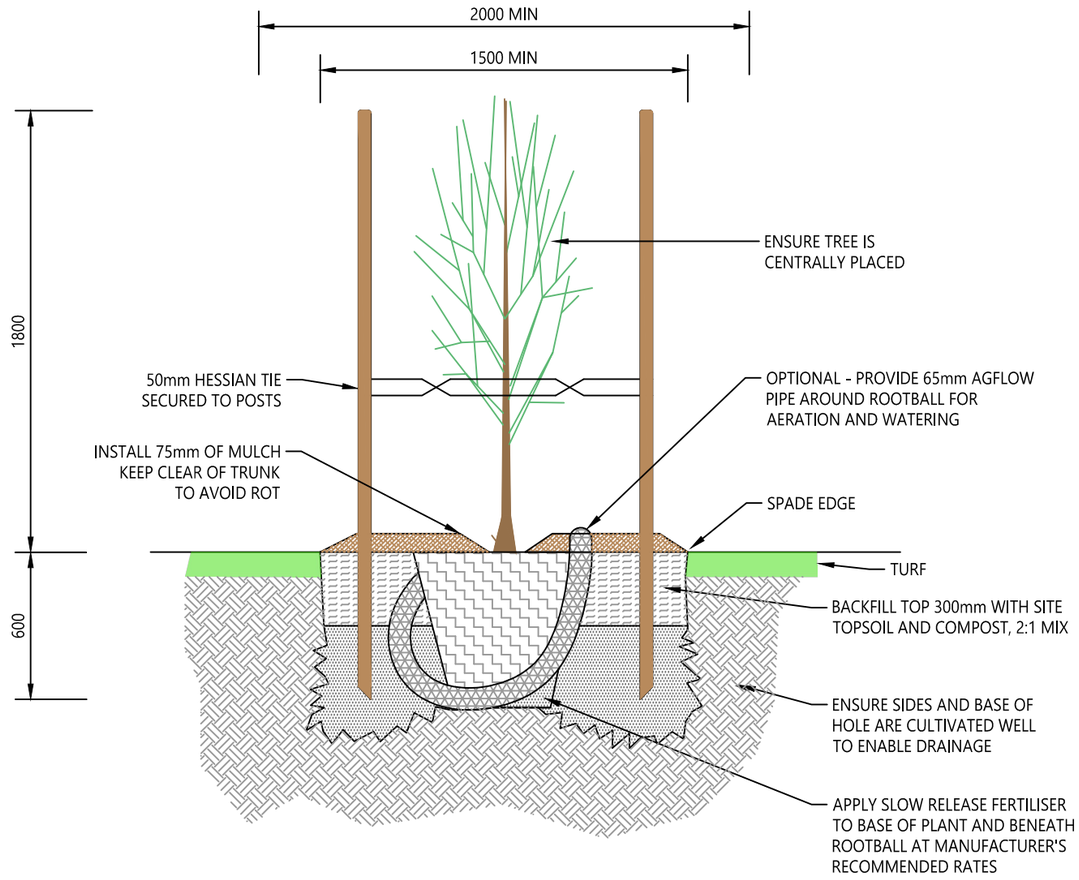
DRAWING NUMBER	REV
SD1001	-
SHEET 2 OF 2	A3

NOTE:

REFER TO COUNCIL'S WEBSITE FOR GUIDANCE ON THE SELECTION OF SUITABLE TREE SPECIES FOR PLANTING IN STREETSCAPES AND OTHER PUBLIC SPACES.



PLAN
SCALE 1:25



SECTION A-
SCALE 1:25

TYPICAL AMENITY TREE
SCALE 1:25

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 250 500 750 1000 1250

1:25

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	KS/MG/DM
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

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LANDSCAPE SERIES
TYPICAL AMENITY TREE

STANDARD DRAWING

DRAWING NUMBER	REV
SD1002	-
SHEET 1 OF 1	A3

NOTES:

1. REFER TO COUNCIL'S WEBSITE FOR GUIDANCE ON THE SELECTION OF SUITABLE TREE SPECIES FOR PLANTING IN STREETSCAPES AND OTHER PUBLIC SPACES.
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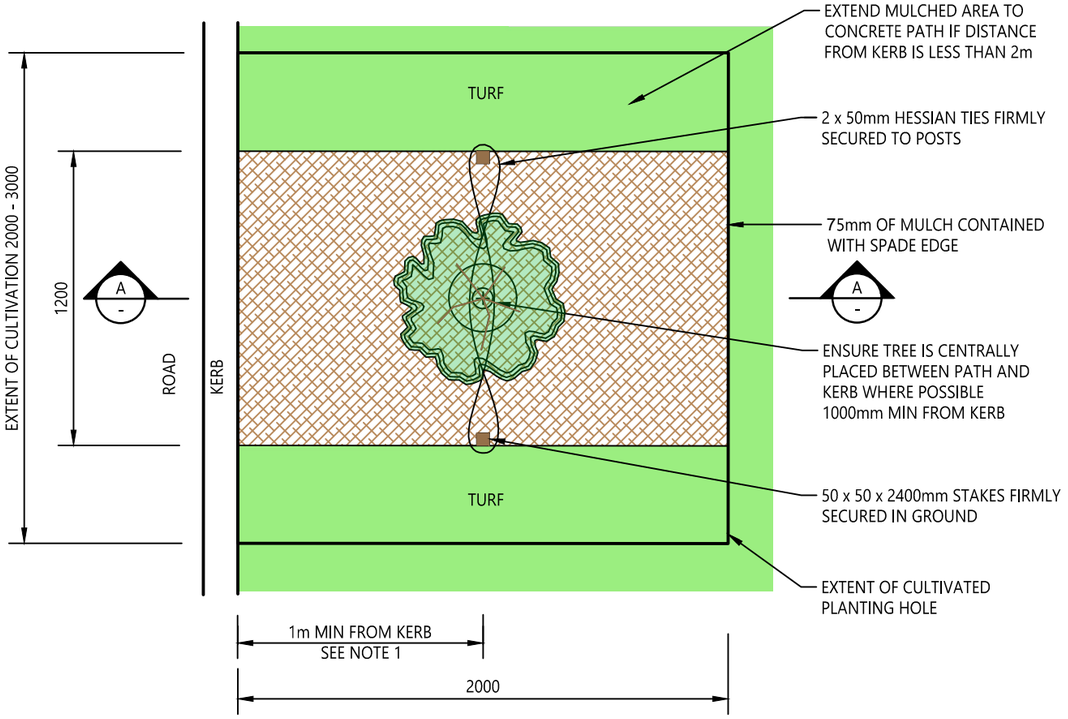
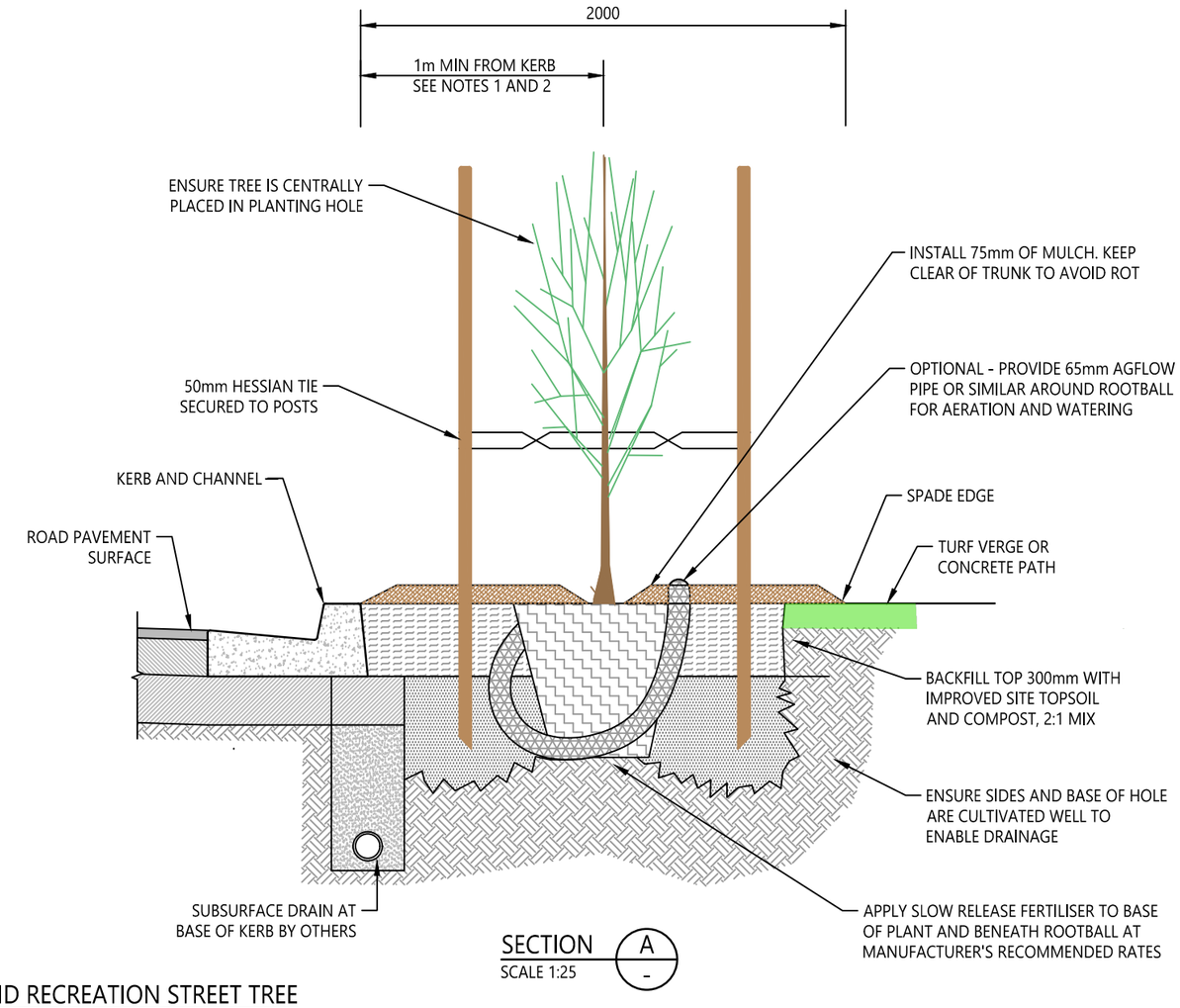


PLAN
SCALE 1:25



SECTION A-A
SCALE 1:25

TYPICAL OPEN SPACE AND RECREATION STREET TREE
SCALE 1:25

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 250 500 750 1000 1250
1:25
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	KS/MG/DM
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LANDSCAPE SERIES
TYPICAL OPEN SPACE AND RECREATION STREET TREE

STANDARD DRAWING

DRAWING NUMBER	REV
SD1003	-
SHEET 1 OF 1	A3