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GD002	SECONDARY ARTERIAL ROUTE TYPICAL CROSS SECTION	1.0
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GD004	LOCAL ROAD TYPICAL CROSS SECTION	1.0
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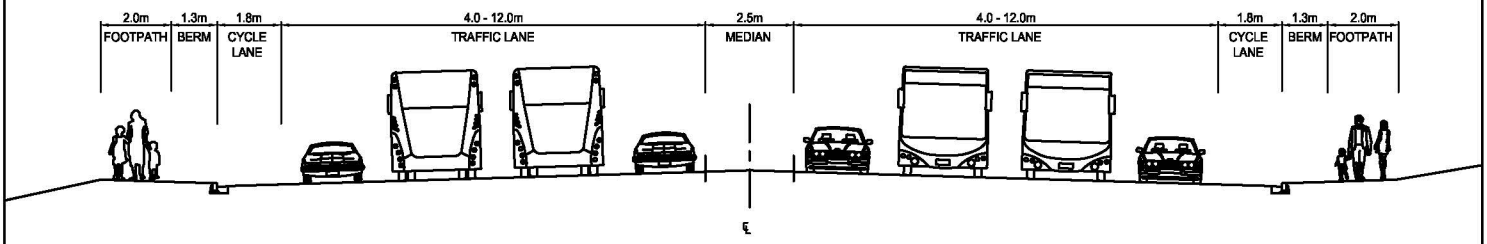
GD022	99%ILE CAR - TYPICAL TRACK	1.0

Drawing set for Chapter 7 - Road Layout and Geometric Design



NOTE: 1. This is an indicative cross section to assist designs. Actual cross sectional composition is to be agreed with AT.

2. The road cross section can be wider than shown if rear berms, batters or additional land for road purposes is required.

3. For minimum road rewserve dimension refer to ATCoP Chapter 3, Section 3.8.

REVISION	BY	DATE

Auckland Transport
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AUCKLAND TRANSPORT
CODE OF PRACTICE

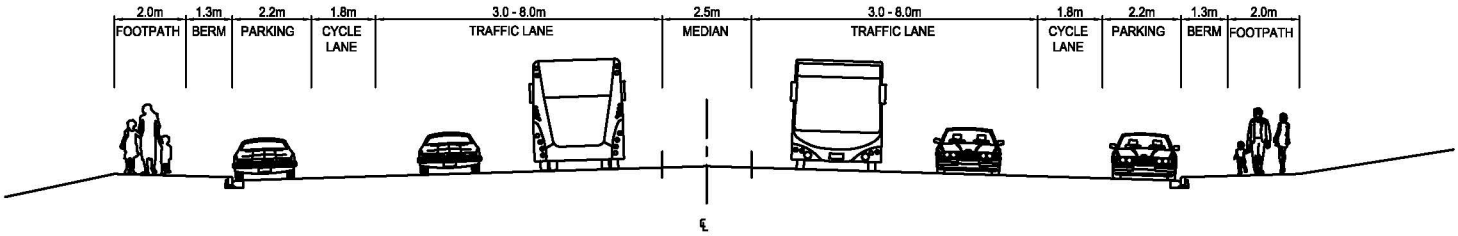
TITLE **PRIMARY ARTERIAL ROUTE EXAMPLE CROSS SECTION**

SCALE: N.T.S.

DRAWING No. GD001

VERSION 1.0

Drawing set for Chapter 7 - Road Layout and Geometric Design



NOTE: 1. This is an indicative cross section to assist designs. Actual cross sectional composition is to be agreed with AT.

2. The road cross section can be wider than shown if rear berms, batters or additional land for road purposes is required.

3. For minimum road rewserve dimension refer to ATCoP Chapter 3, Section 3.8.

REVISION	BY	DATE

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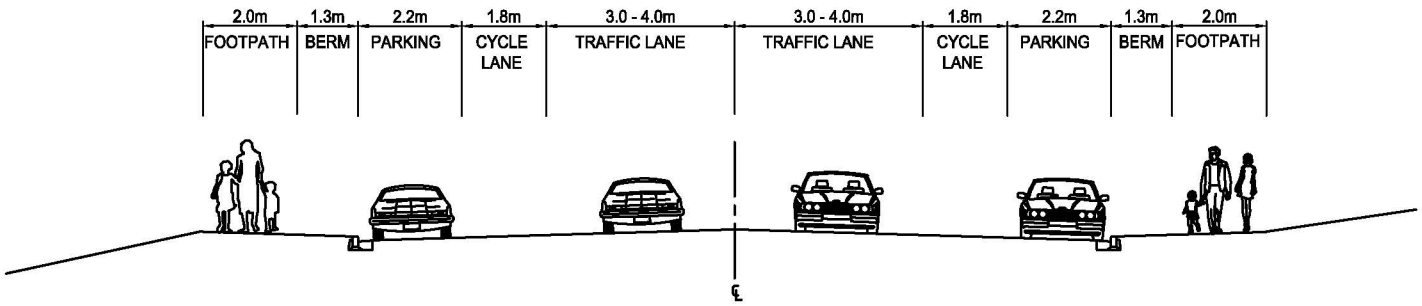
AUCKLAND TRANSPORT
CODE OF PRACTICE

TITLE **SECONDARY ARTERIAL ROUTE EXAMPLE CROSS SECTION**

SCALE: N.T.S.

DRAWING No. GD002

VERSION 1.0



NOTE: 1. This is an indicative cross section to assist designs. Actual cross sectional composition is to be agreed with AT.

2. The road cross section can be wider than shown if rear berms, batters or additional land for road purposes is required.

3. For minimum road rewserve dimension refer to ATCoP Chapter 3, Section 3.8.

REVISION	BY	DATE

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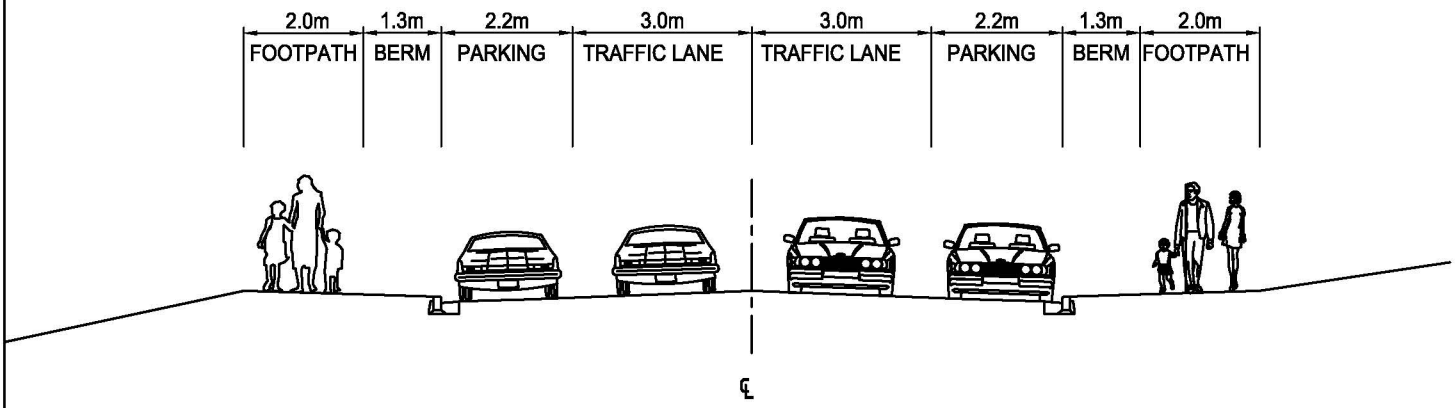
AUCKLAND TRANSPORT
CODE OF PRACTICE

TITLE
COLLECTOR ROUTE
EXAMPLE CROSS SECTION

SCALE: N.T.S.

DRAWING No. GD003

VERSION 1.0



NOTE: 1. This is an indicative cross section to assist designs. Actual cross sectional composition is to be agreed with AT.

2. The road cross section can be wider than shown if rear berms, batters or additional land for road purposes is required.

3. For minimum road rewserve dimension refer to ATCoP Chapter 3, Section 3.8.

REVISION	BY	DATE

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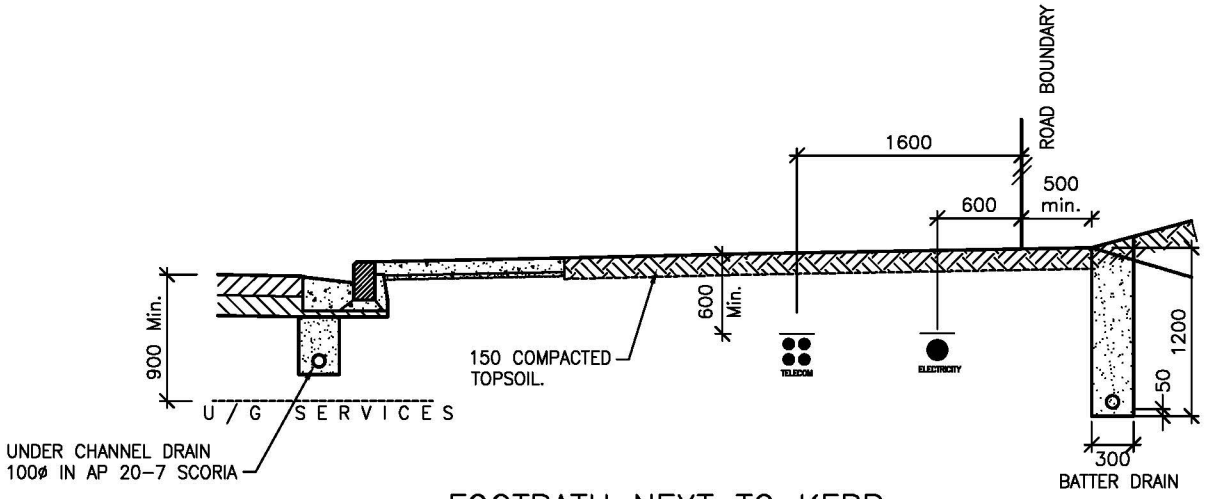
AUCKLAND TRANSPORT
CODE OF PRACTICE

TITLE
LOCAL ROAD
EXAMPLE CROSS SECTION

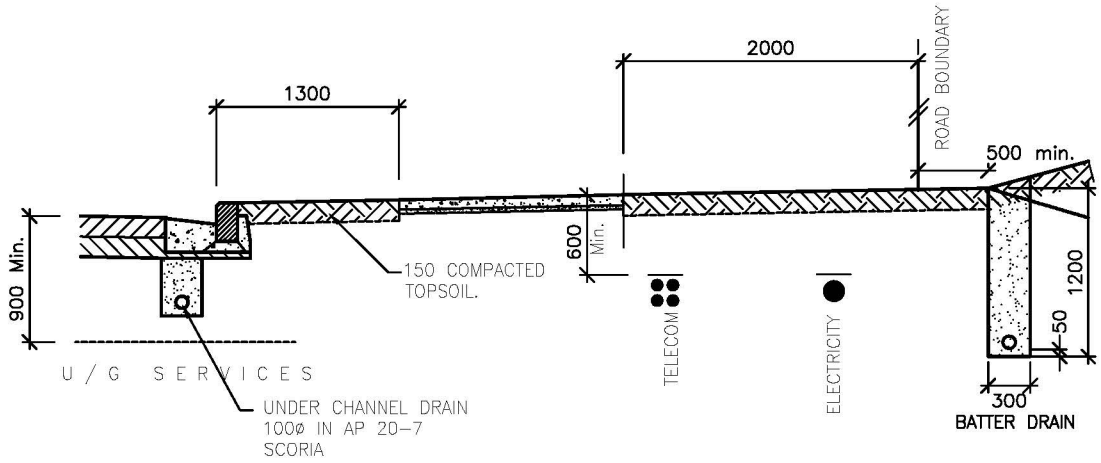
SCALE: N.T.S.

DRAWING No. GD004

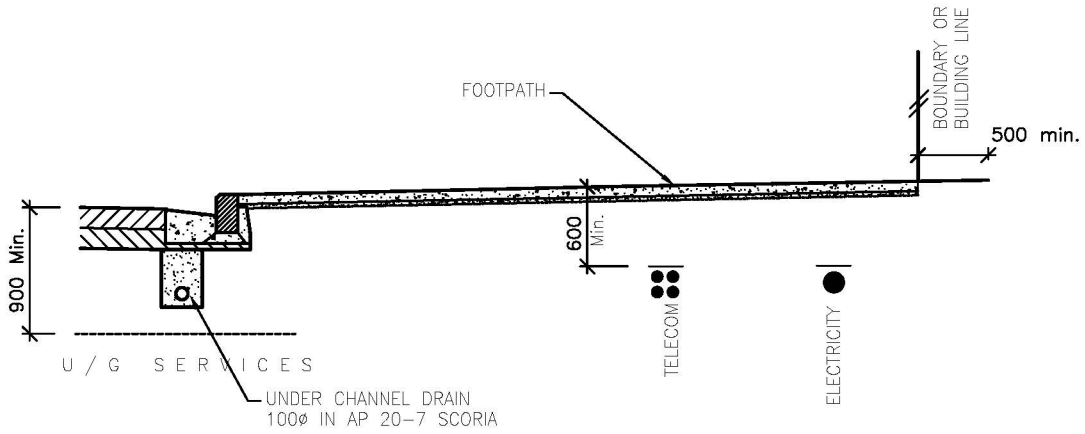
VERSION 1.0



FOOTPATH NEXT TO KERB



FOOTPATH SEPARATED FROM KERB



COMMERCIAL OR INDUSTRIAL

NOTES:

1. Berms may be widened to accomodate landscaping or other special features, subject to specific design and approval.
2. Any services laid under road carriageway shall have 900mm cover (Minimum)

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AUCKLAND TRANSPORT
CODE OF PRACTICE

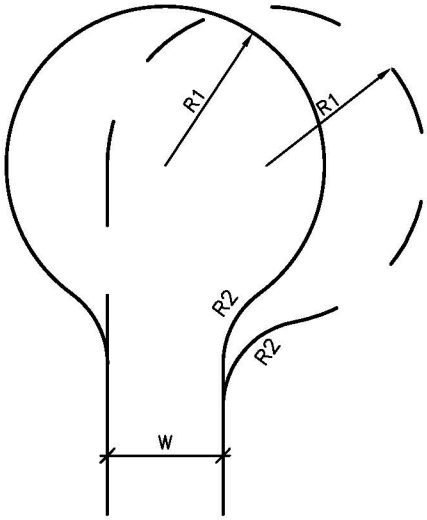
TITLE

TYPICAL BERMS

SCALE: N.T.S.

DRAWING No. GD005

VERSION 1.0



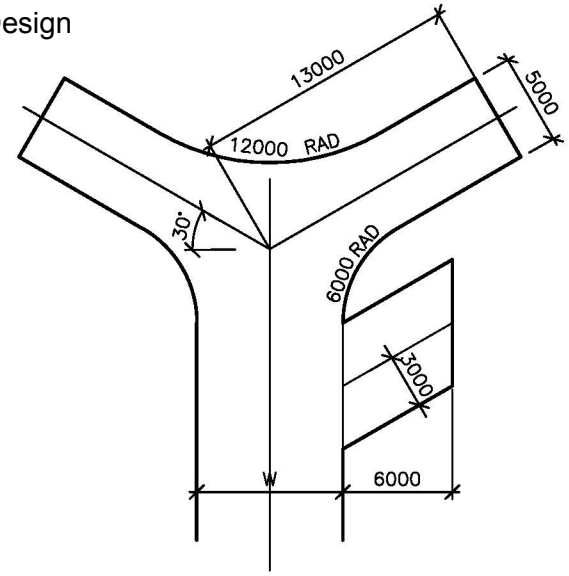
TYPES A (symmetrical) & B

N.T.S.

R1	R2
11	6
13	10

FOR 8m RIGID TRUCK

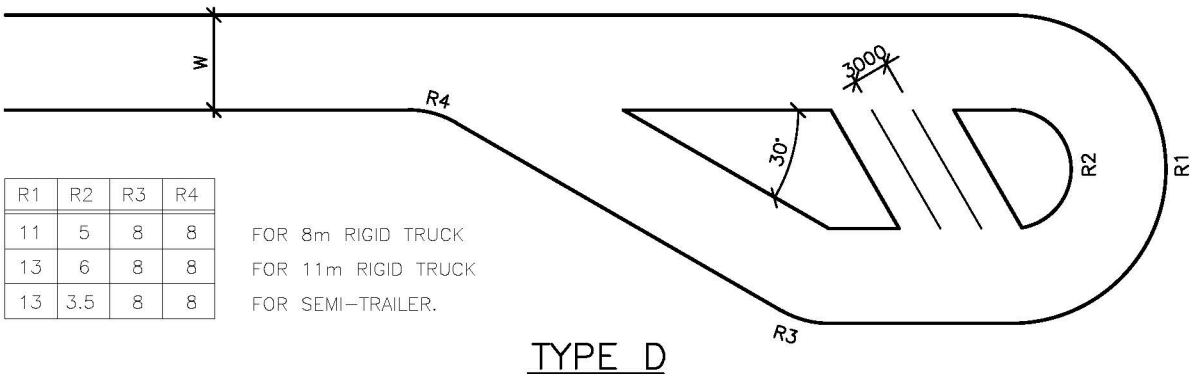
FOR 11m RIGID TRUCK & SEMI–TRAILER.



TYPE C

N.T.S.

FOR 8m RIGID TRUCK ONLY



R1	R2	R3	R4
11	5	8	8
13	6	8	8
13	3.5	8	8

FOR 8m RIGID TRUCK

FOR 11m RIGID TRUCK

FOR SEMI–TRAILER.

TYPE D

N.T.S.

NOTES:

1. Variations to the above layouts may be permitted providing designs meet Land Transport Safety Authority tracking curves for: 8m rigid truck, 11m rigid truck, semi–trailer as appropriate. The 8m rigid truck will generally be acceptable for $W \leq 8m$.
2. Design drawings must clearly indicate the tracking path of the design vehicle.
3. The Layout must satisfy the relevent tracking curve.
4. No Stopping At Any Time road–markings must be provided at all turning heads.

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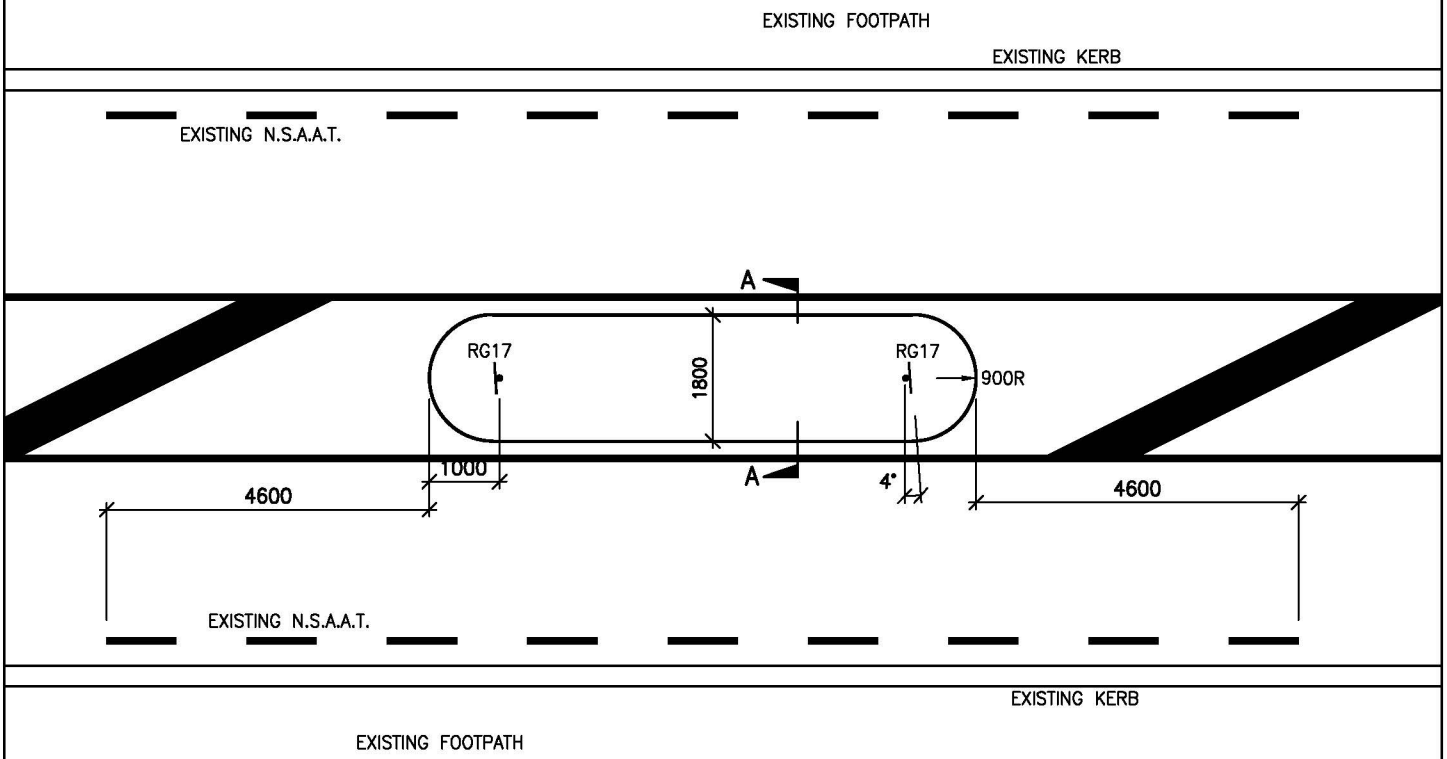
AUCKLAND TRANSPORT
CODE OF PRACTICE

TITLE: **TYPICAL CUL–DE–SAC LAYOUTS**

SCALE: N.T.S.

DRAWING No. GD006

VERSION 1.0

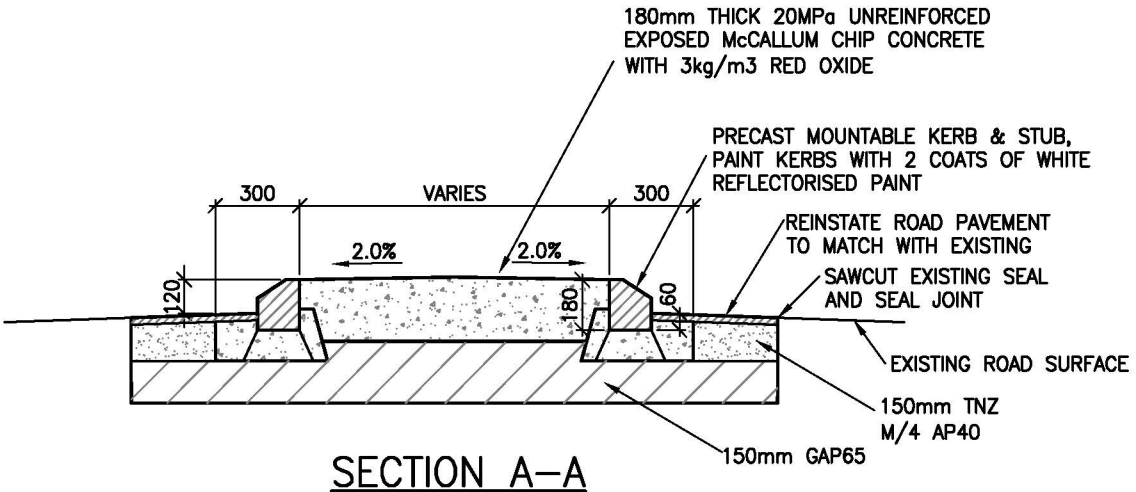


CONVENTIONAL TRAFFIC ISLAND LAYOUT

NOTES:

1. Kerb blocks & insitu concrete – 20 MPa
2. Slip form concrete – 20MPa
3. All RG17 signs on traffic islands to be installed with 4° rotation.

ISLAND SURFACING
McCALLUM EXPOSED AGGREGATE CONCRETE.



SECTION A–A
N.T.S.

REVISION	BY	DATE

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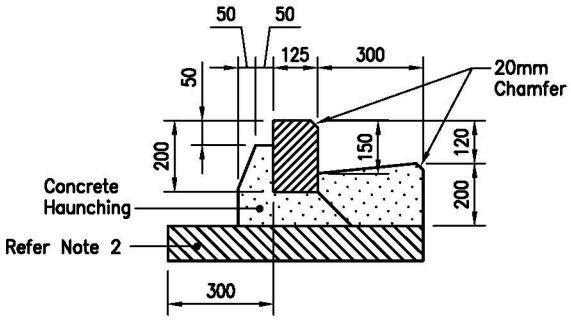
AUCKLAND TRANSPORT CODE OF PRACTICE

TITLE: STANDARD DETAIL FOR TRAFFIC ISLAND

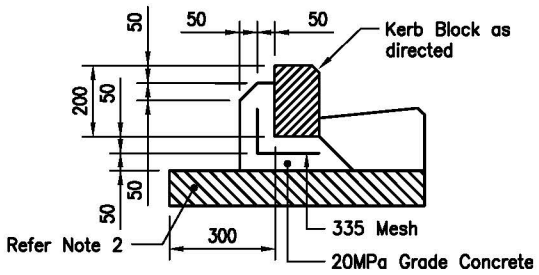
SCALE: N.T.S.

DRAWING No. GD007

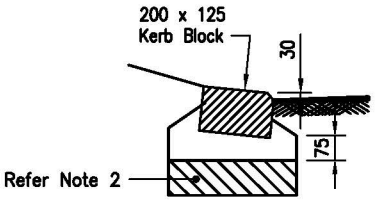
VERSION 1.0



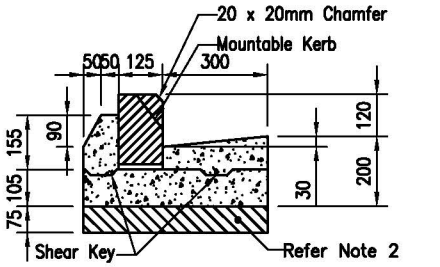
TYPE 1 STANDARD KERB AND CHANNEL



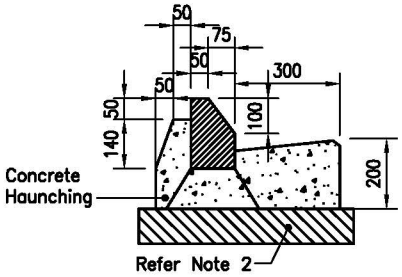
TYPE 1 KERB WITH REINFORCED HAUNCHING DETAIL



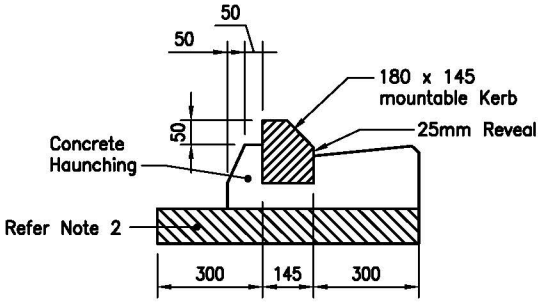
TYPE 1 ON SIDE VEHICLE CROSSING



TYPE 1 AND 2A WITH SHEAR KEY WHERE HIGH LATERAL LOADS ARE EXPECTED



TYPE 2A MOUNTABLE KERB AND CHANNEL



TYPE 2B MOUNTABLE KERB AND CHANNEL

TYPES 1 AND 2

BASALT OR PRE-CAST KERB AND CHANNEL

NOTES

1. Concrete grades:
   Precast kerb blocks 20MPa. In-Situ channel and haunching 20MPa. Extruded concrete 20MPa.

2. Bedding:
   Kerbing must be laid on 300mm. min. GAP65 subbase in roads and 100mm GAP40 in footpaths (where subgrade CBR>5). If the subgrade CBR<5 then roads and footpaths must be undercut and backfilled with an approved filling material.

3. Jointing:
   Precast kerbs to be neatly pointed with 10mm (min) cement mortar. Extruded kerbs cracking control joints formed or saw cut to a minimum depth of 30mm at max. 3.0m intervals. If footpath is adjacent to kerb the saw cuts must coincide with the concrete footpath joints. Joints between bluestone kerb blocks must be approximately 20mm wide (measured at the top and front faces) with neat square jointing 2 to 4 mm proud. Crack control joints must be located either side of vehicle crossings.

4. Basalt kerb blocks must not extend across vehicle or pram crossings.

5. All chamfers to be 20mm

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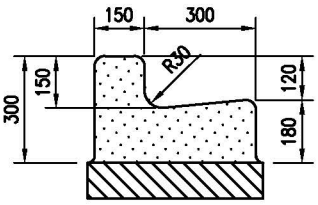
AUCKLAND TRANSPORT
CODE OF PRACTICE

TITLE: KERB AND CHANNEL TYPES 1 AND 2

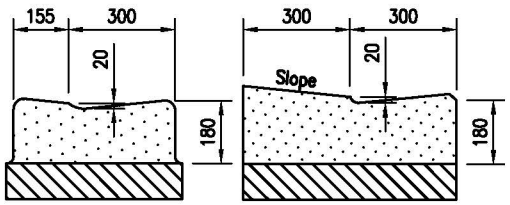
SCALE: N.T.S.

DRAWING No. GD008

VERSION 1.0



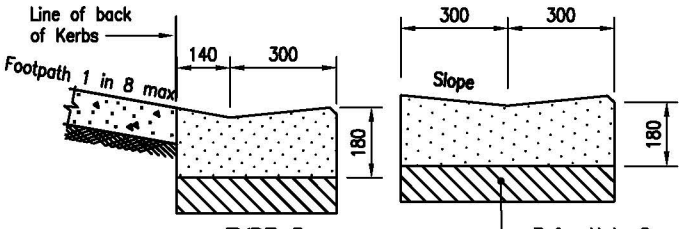
TYPE 3
EXTRUDED STANDARD KERB AND CHANNEL



TYPE 4 VEHICLE CROSSING

TYPE 4 INSITU VEHICLE CROSSING

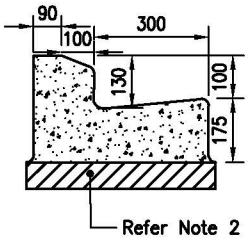
TYPE 4
VEHICLE CROSSINGS



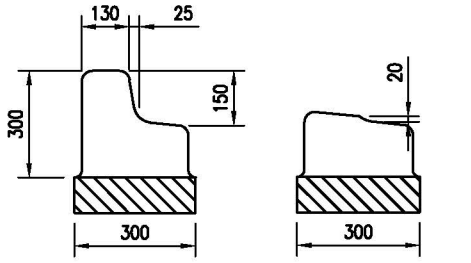
TYPE 5 PRAM CROSSING

TYPE 5 INSITU PRAM CROSSING

TYPE 5
PRAM CROSSINGS



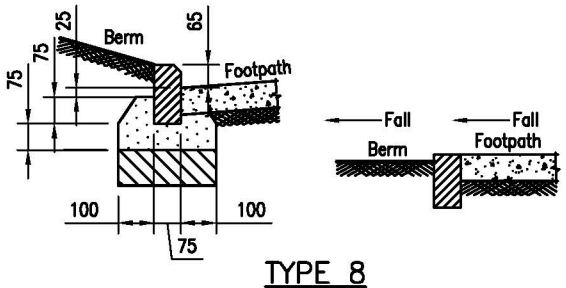
TYPE 6
EXTRUDED MOUNTABLE KERB AND CHANNEL



STANDARD KERB

VEHICLE CROSSING

TYPE 7
EXTRUDED KERB ONLY



TYPE 8
BASALT OR PRE-CAST KERB EDGING
(75x150)

NOTES

KERB & DISH CHANNEL ONLY (EXTRUDED)

1. Jointing
   Precast kerb neatly pointed with 10mm min. cement mortar. Extruded kerbs cracking control joints formed or saw cut to a minimum depth of 30mm at max. 3.00m. intervals to coincide with concrete footpath joints (where the kerb is adjacent to the footpath). Crack control joints between bluestone kerb blocks shall be approximately 20mm wide (measured at the top and front faces) with neat square jointing 2 to 4 mm proud. Joints must located either side of vehicle crossings.

2. Bedding
   Kerbing must be laid on 300mm. min. GAP65 subbase in roads and 100mm GAP40 in footpaths (where subgrade CBR>5). If the subgrade CBR<5 then roads and footpaths must be undercut and backfilled with appropriate backfill material.

3. Concrete Grades
   Precast kerb blocks 20 MPa. In-Situ channel and haunching 20 MPa. Extruded concrete 20 MPa.

4. All chamfers 20mm

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Auckland Transport
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AUCKLAND TRANSPORT
CODE OF PRACTICE

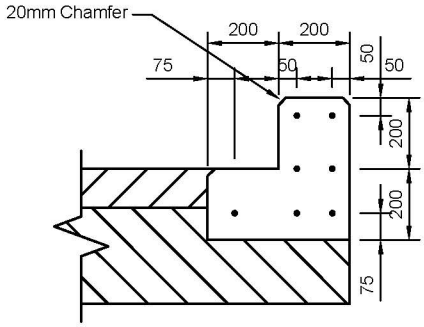
TITLE: KERB AND CHANNEL TYPES 3-8

SCALE: N.T.S.

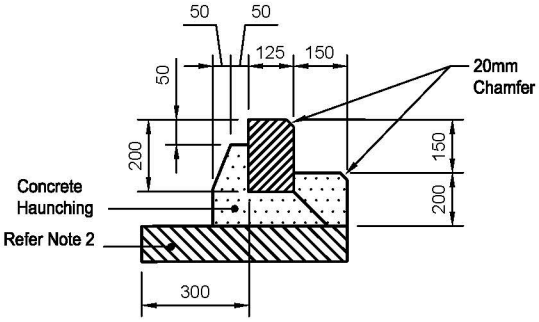
DRAWING No. GD009

VERSION 1.0

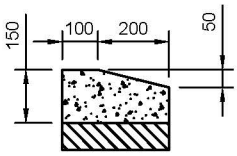
Drawing set for Chapter 7 - Road Layout and Geometric Design



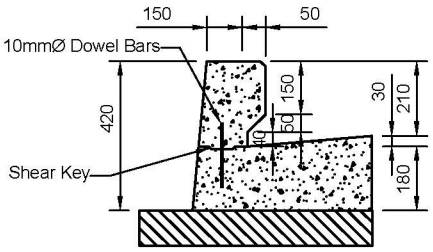
TYPE 9
EDGING NIB KERB



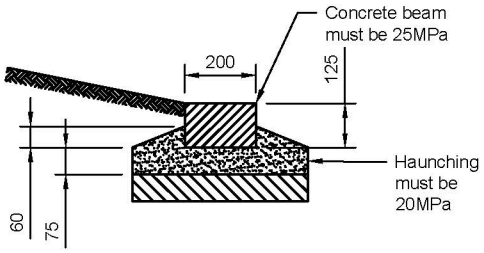
TYPE 10
KERB & STUB



TYPE 11
MOUNTABLE NIB KERB



TYPE 12
RAISED NON-MOUNTABLE SAFETY
KERB AND CHANNEL NIB



TYPE 13
FLAT EDGE BEAMS

NOTES

NOTES

1. Concrete grades:
   Precast kerb blocks 20MPa. In-Situ channel and haunching 20MPa. Extruded concrete 20MPa.

2. Bedding:
   Kerbing must be laid on 300mm. min. GAP65 subbase in roads and 100mm GAP40 in footpaths (where subgrade CBR>5). If the subgrade CBR<5 then roads and footpaths must be undercut and backfilled with an approved filling material.

3. Jointing:
   Precast kerb neatly pointed with 10mm (min) cement mortar. Extruded kerbs cracking control joints formed or saw cut to a minimum depth of 30mm at max. 3.00m intervals. If footpath is adjacent to kerb the saw cuts must coincide with the concrete footpath joints. Joints between bluestone kerb blocks must be approximately 20mm wide (measured at the top and front faces) with neat square jointing 2 to 4 mm proud. Crack control joints must located either side of vehicle crossings.

4. Basalt kerb blocks must not extend across vehicle or pram crossings.

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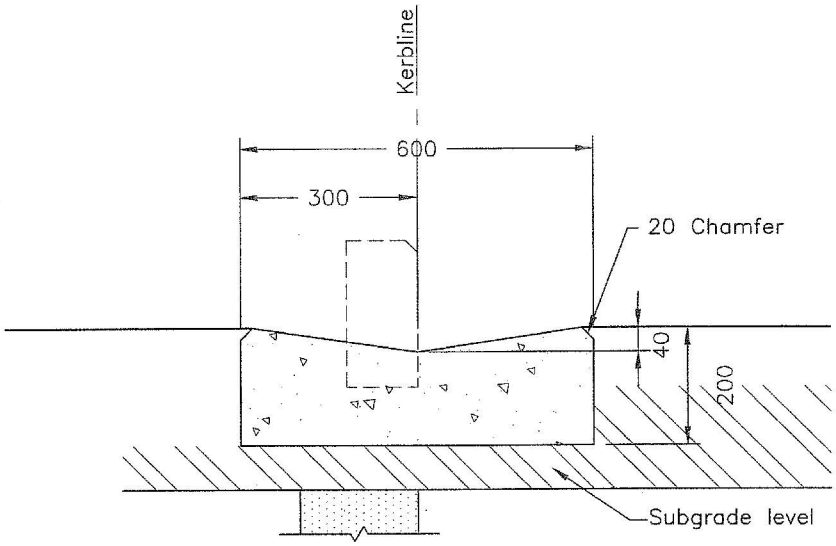
AUCKLAND TRANSPORT
CODE OF PRACTICE

TITLE: KERB & CHANNEL TYPES 9–12

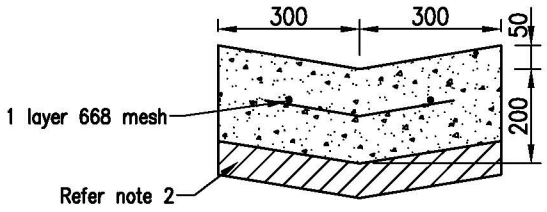
SCALE: N.T.S.

DRAWING No. GD010

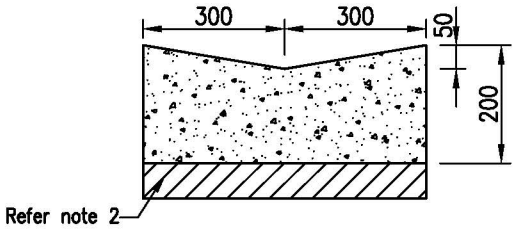
VERSION 1.0



V–DISH CHANNEL FOR PARKING AREA



V–DISH CHANNEL UNDER TRAFFIC



V–DISH CHANNEL INSITU NOT UNDER TRAFFIC

NOTES

1. Concrete Grades:
   Insitu concrete 20MPa
   Extruded concrete 20MPa

2. Bedding:
   To consist of 300mm (min) GAP65 subbase in roads and 100mm GAP40 in footpaths, (where CBR>5).

3. Jointing:
   Extruded channels cracking control joints formed or saw cut to a minimum depth of 30mm at max 3.00m intervals for unreinforced channels and 3.00m (max) for reinforced channels/nib. If there is a footpath adjacent to the channel/nib the sawcut must coincide with the concrete footpath joint.

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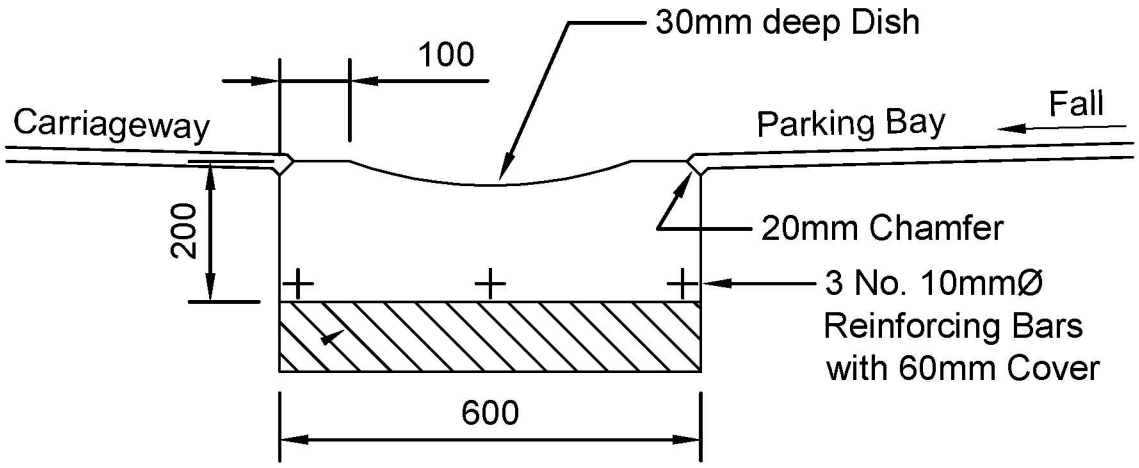
AUCKLAND TRANSPORT CODE OF PRACTICE

TITLE: V–DISH CHANNEL

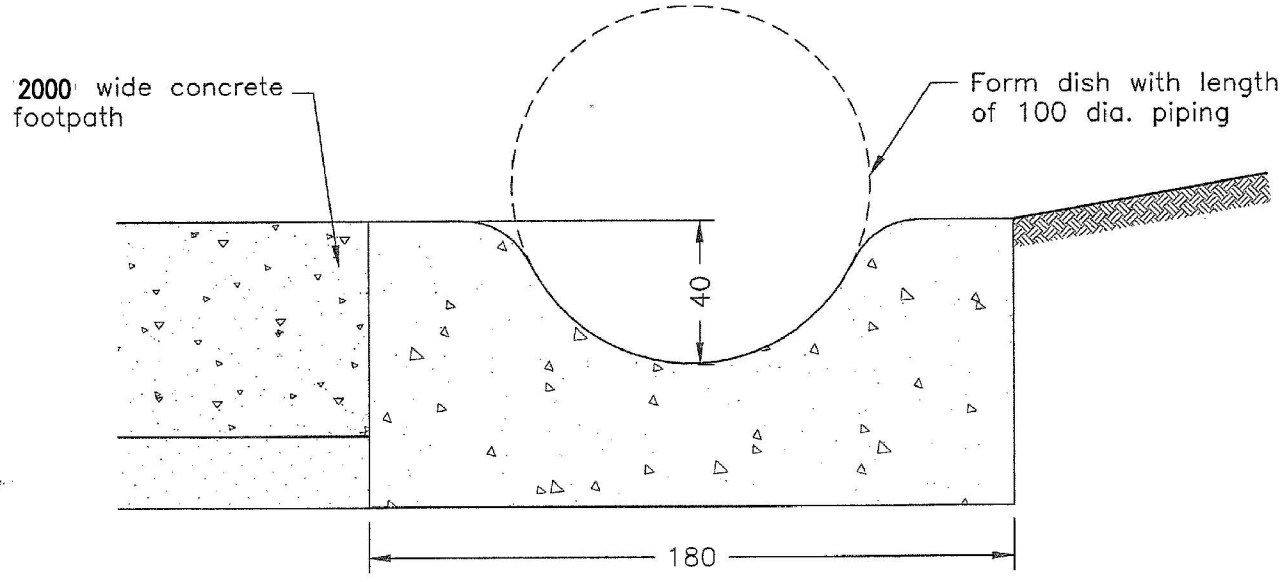
SCALE: N.T.S.

DRAWING No. GD011

VERSION 1.0

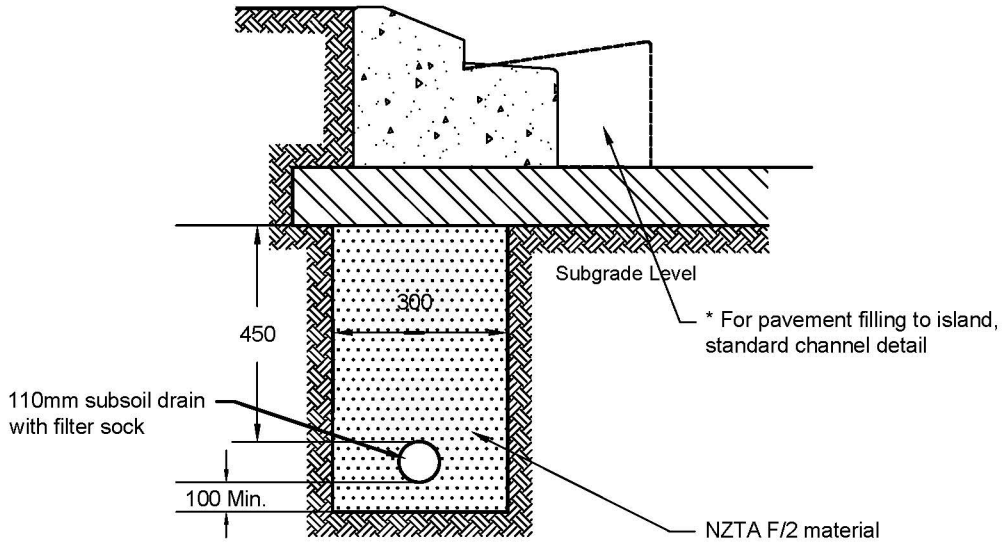


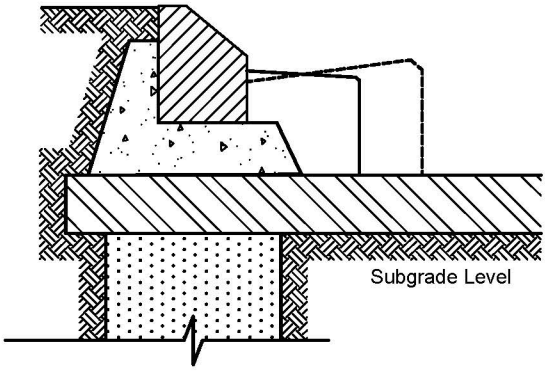
STANDARD CONCRETE
ROUND DISH CHANNEL



ROUND DISH CHANNEL
FOR LOW LEVEL PATH

REVISION	BY	DATE		AUCKLAND TRANSPORT CODE OF PRACTICE	SCALE: N.T.S.
			Auckland Transport An Auckland Council Organisation	TITLE: ROUND DISH CHANNEL	DRAWING No. GD012
					VERSION 1.0

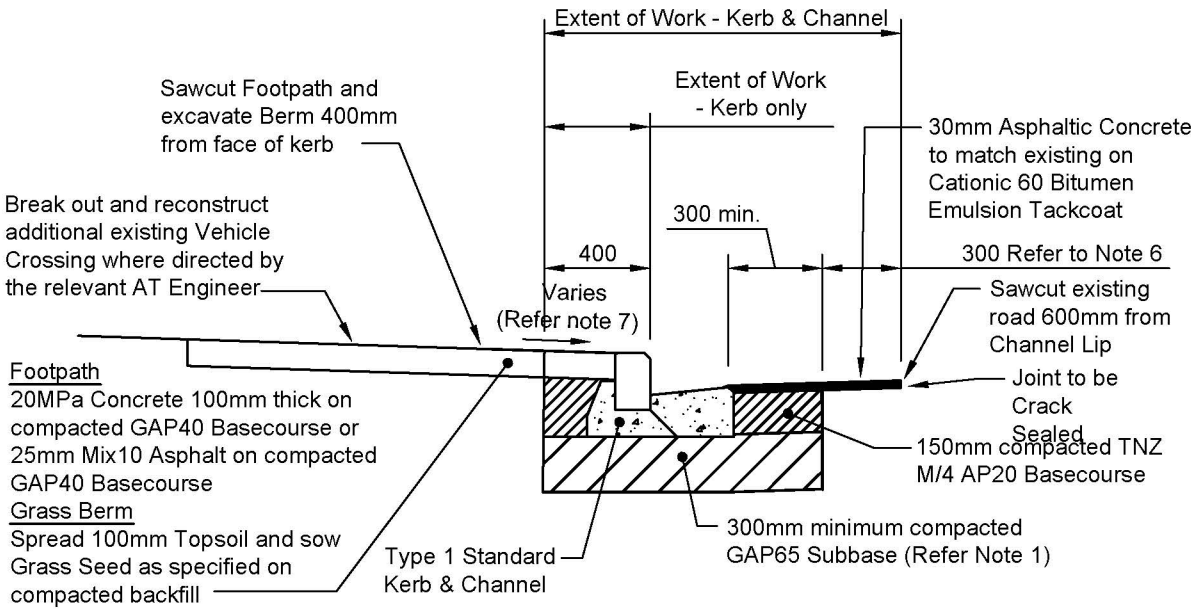




Notes:

1 All concrete, except kerb mix to be ordinary grade 20MPa and constructed in accordance with NZS 3109 with a broom finish. Sawcut expansion joints at 3m centres.

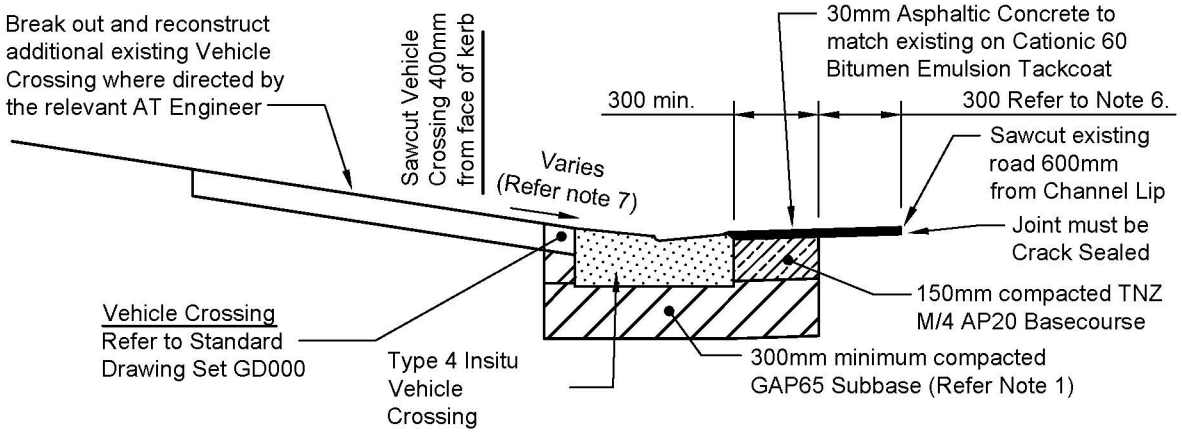
REVISION	BY	DATE		AUCKLAND TRANSPORT CODE OF PRACTICE	SCALE: N.T.S.
			Auckland Transport An Auckland Council Organisation	TITLE **MOUNTABLE KERB & NIB FOR TRAFFIC ISLANDS**	DRAWING No. GD013
					VERSION 1.0



TYPICAL SECTION FOR KERB & CHANNEL AND KERB ONLY REPLACEMENT

NOTES

1. Increase depth to match adjacent Pavement depth where required.
2. Break out and reconstruct existing Kerb and Channel. Salvage Basalt Kerb Blocks.
3. For Type 1 Kerb and Channel refer Auckland Transport Standard Plan No. GD007.
4. For Kerb only replacement some trimming of channel edge may be required and channel / kerb joint grouted to provide a water tight connection.
5. Footpaths to be constructed in accordance with Auckland Transport Standard Drawing Set FP000.
6. Increase width where required to achieve positive fall to the channel.
7. Positive fall to the kerb and channel must be achieved unless otherwise approved by the relevant AT Engineer.



TYPICAL SECTION FOR VEHICLE CROSSING REPLACEMENT

1. For Type 4 Vehicle Crossing Channel details refer to Auckland Transport Standard Plan No. GD008

REVISION	BY	DATE

Auckland Transport
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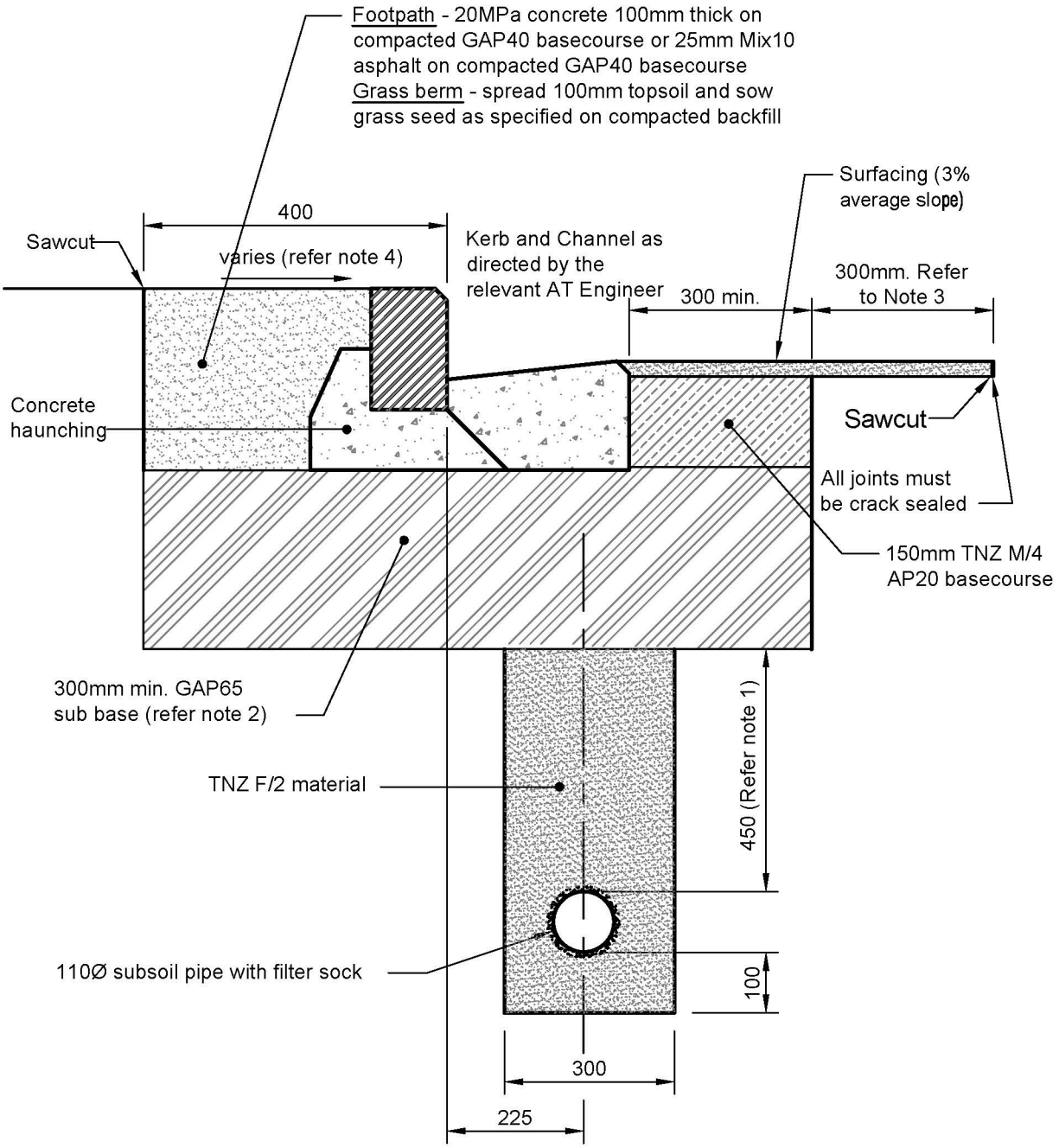
AUCKLAND TRANSPORT
CODE OF PRACTICE

TITLE: **KERB & CHANNEL REPLACEMENT DETAIL**

SCALE: N.T.S.

DRAWING No. GD014

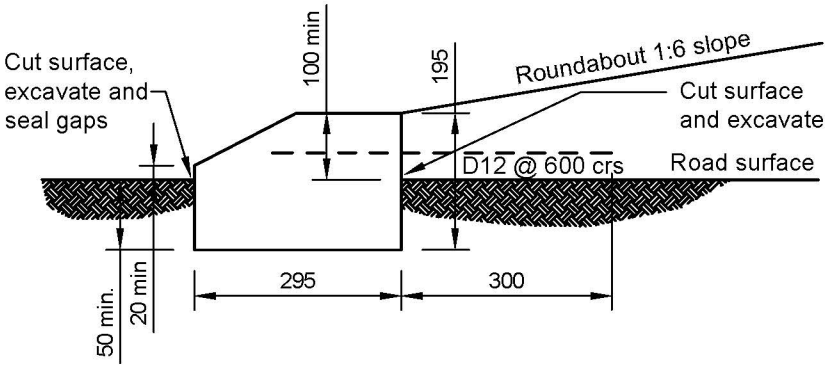
VERSION 1.0



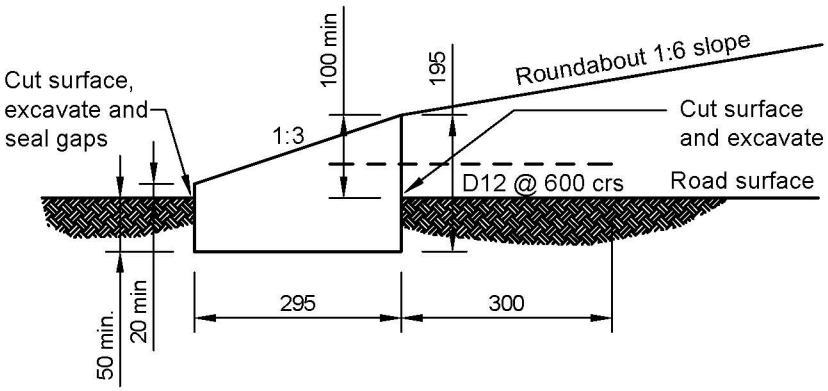
NOTES

1. The subsoil drain is to connect to a downstream street catchpit above the soffit level of the outlet pipe. Subsoil depth can be adjusted to meet this criteria.
2. Increase depth to match adjacent pavement depth where required.
3. Increase width where required to achieve positive fall to the channel.
4. Positive fall to the kerb and channel must be achieved unless otherwise approved by the relevant AT Engineer.

REVISION	BY	DATE		AUCKLAND TRANSPORT CODE OF PRACTICE	SCALE: N.T.S.
			Auckland Transport An Auckland Council Organisation	TITLE **KERB & CHANNEL REPLACEMENT WITH SUBSOIL DRAIN**	DRAWING No. GD015
					VERSION 1.0



STANDARD KERB PROFILE FOR ROUNDABOUTS



KERB PROFILE FOR ROUNDABOUTS TRAFFICKED BY BUSES

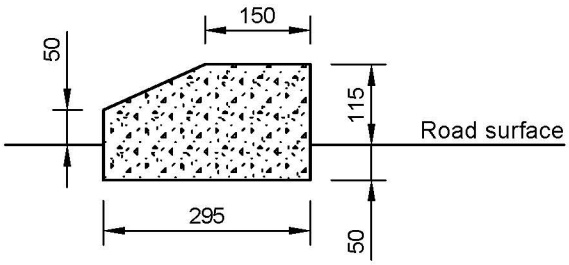
NOTES

1. 20MPa Concrete with 4Kg/m3 of Brown Oxide.

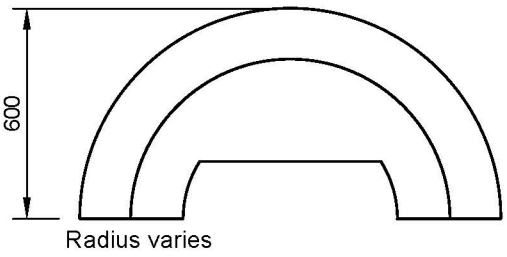
2. Splitter islands or pedestrian refuge islands shall be cast 50mm below finished road surface. Any over-excavation shall be backfilled, compacted and resurfaced to match adjacent surface.

3. Concrete apron to roundabouts. Where roundabout will not be infilled with concrete, a concrete apron 1m wide must be constructed behind the kerb.

4. Where required concrete infill to islands/roundabouts shall be 100mm thick, 20MPa concrete with exposed aggregate.



SECTION THROUGH TRAFFIC ISLAND KERB LAID ON ROAD SURFACE



PLAN ON BULLNOSE

REVISION	BY	DATE

Auckland Transport
An Auckland Council Organisation

AUCKLAND TRANSPORT
CODE OF PRACTICE

TITLE **ROUNDABOUT AND TRAFFIC ISLAND SLIP-FORMED KERBS**

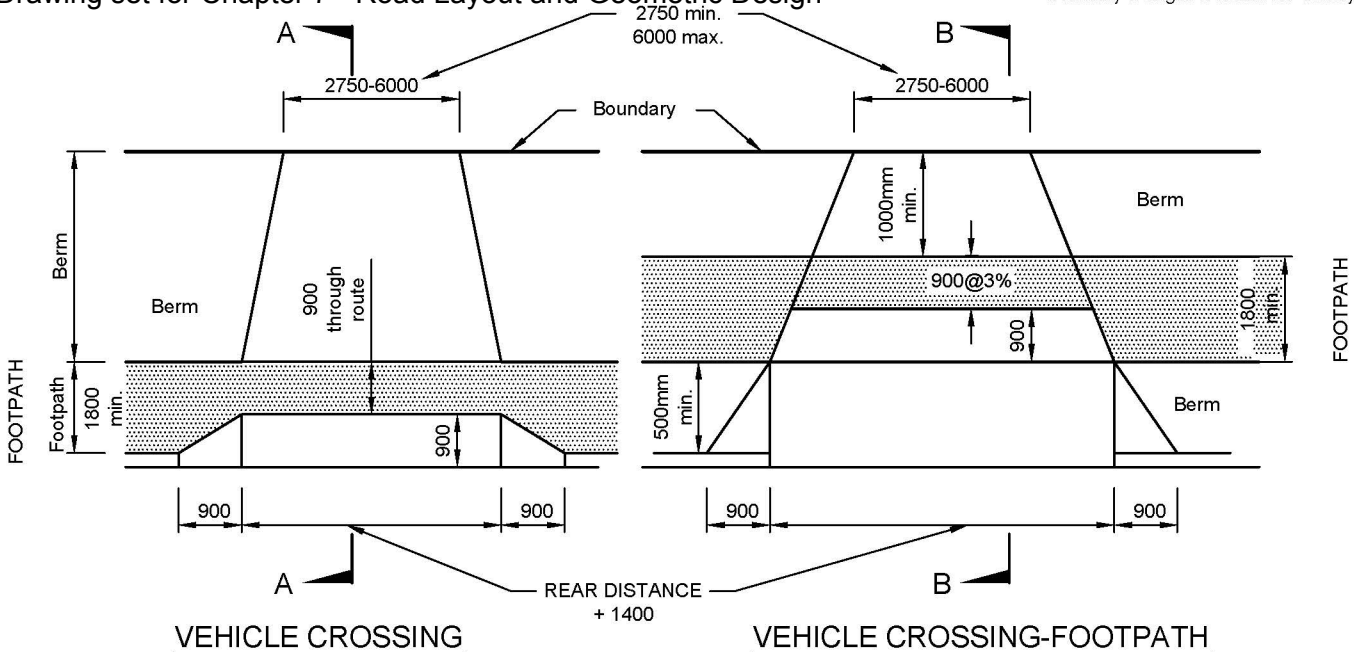
SCALE: N.T.S.

DRAWING No. GD016

VERSION 1.0

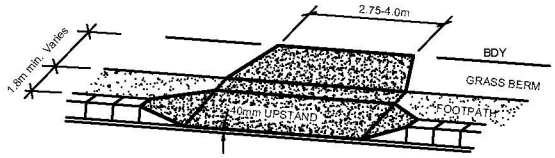
Drawings subject to change due to boundary changes to match AC Unitary Plan

Drawing set for Chapter 7 - Road Layout and Geometric Design

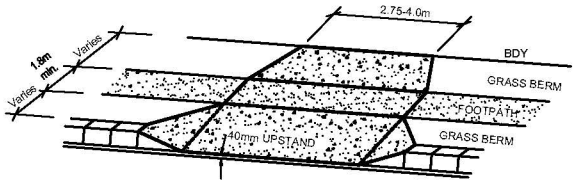


VEHICLE CROSSING FOOTPATH NEXT TO KERB

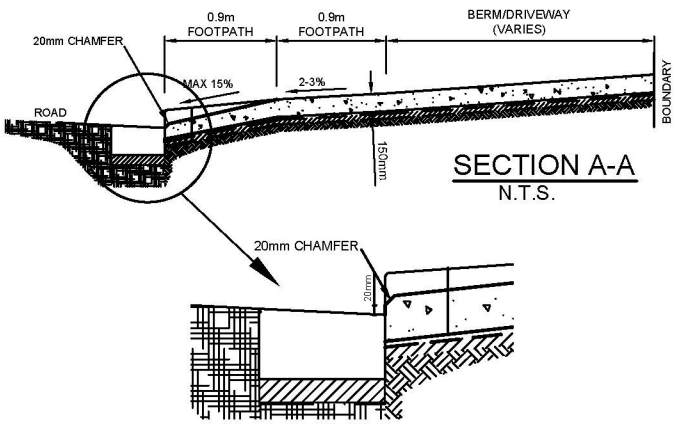
VEHICLE CROSSING-FOOTPATH SEPARATED FROM KERB



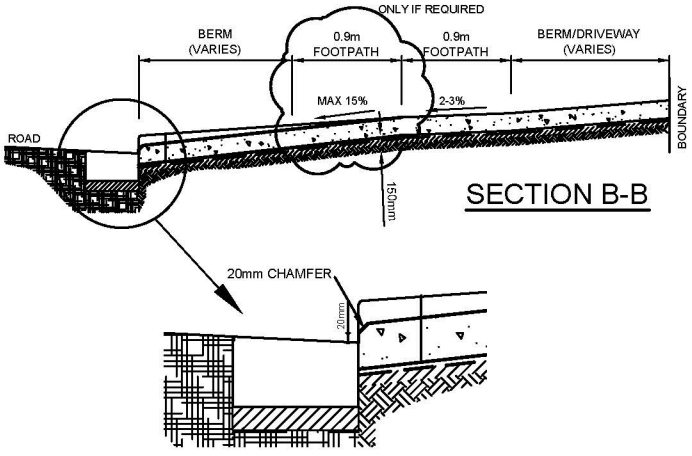
OBLIQUE VIEW
N.T.S.



OBLIQUE VIEW
N.T.S.



SECTION A-A
N.T.S.



SECTION B-B

Notes:

1. All dimensions are in millimetres unless noted otherwise.
2. All concrete to be 20 Mpa and constructed in accordance with NZS 3109 with a broom finish.
3. Saw cut expansion joints at 4m centres maximum each way in addition to saw cuts shown on dwg.
4. All work must comply with the NZTA's 'CoPTTM' (code of practice for temporary traffic management).
5. Construct in same material as surrounding footpath.

REVISION	BY	DATE

Auckland Transport — An Auckland Council Organisation

AUCKLAND TRANSPORT CODE OF PRACTICE

TITLE: **RESIDENTIAL VEHICLE CROSSING**

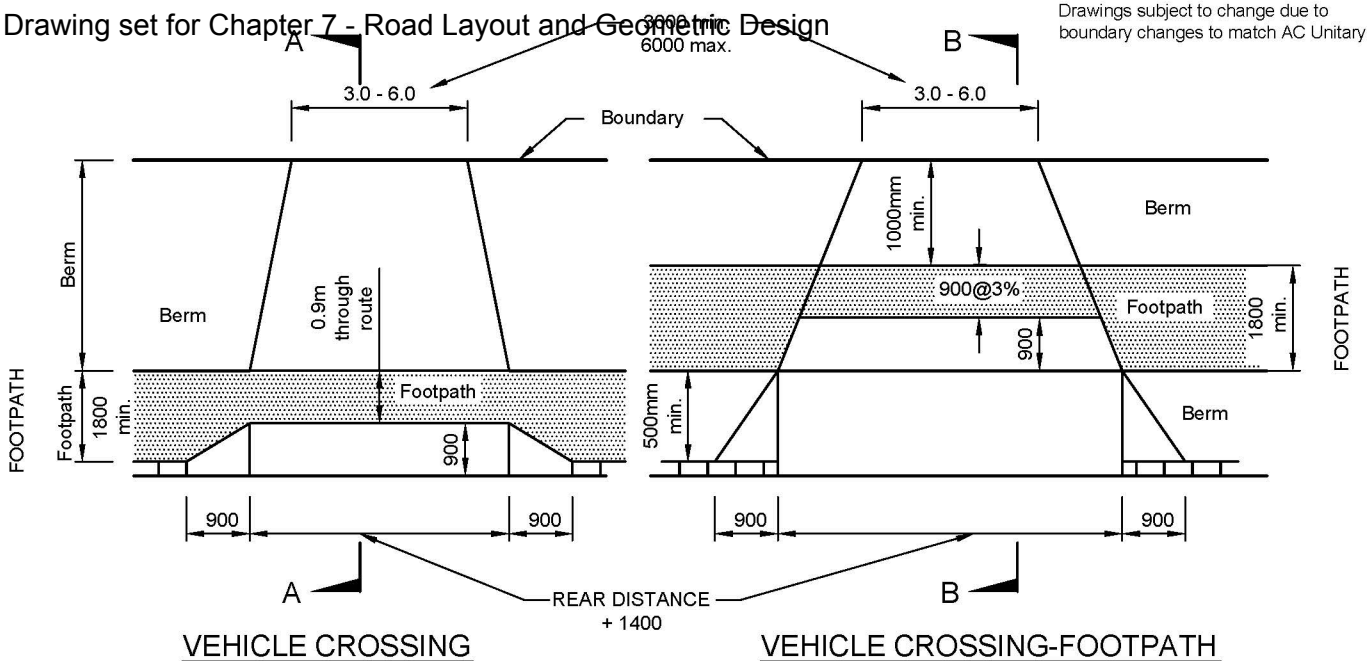
SCALE: N.T.S.

DRAWING No. GD017

VERSION 1.0

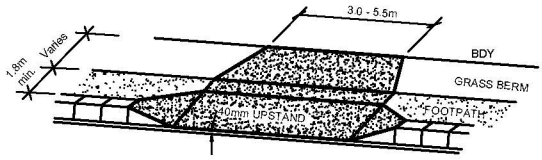
Drawing set for Chapter 7 - Road Layout and Geometric Design

Drawings subject to change due to boundary changes to match AC Unitary Plan

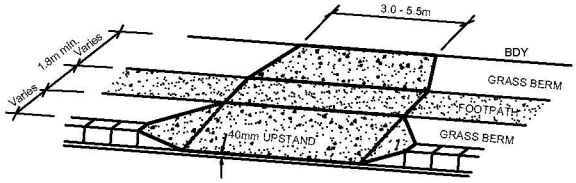


VEHICLE CROSSING FOOTPATH NEXT TO KERB

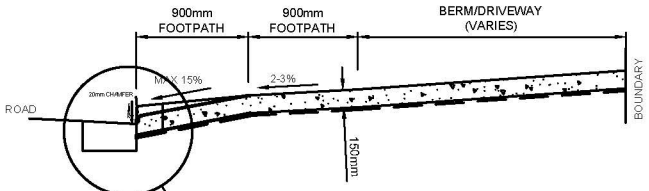
VEHICLE CROSSING-FOOTPATH SEPARATED FROM KERB



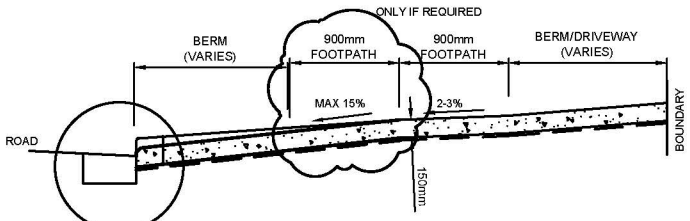
OBLIQUE VIEW
N.T.S.



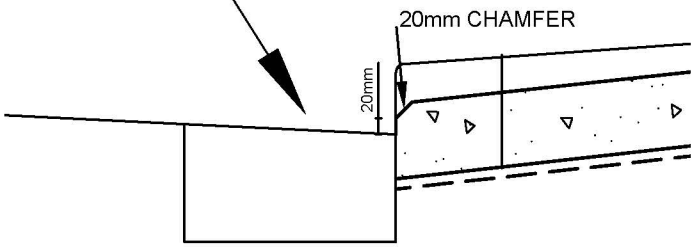
OBLIQUE VIEW
N.T.S.

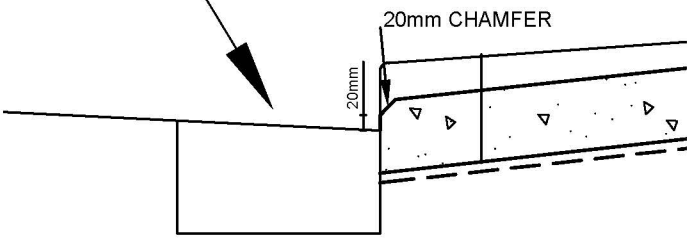


SECTION A-A
N.T.S.



SECTION B-B





Notes:

1. All dimensions are in millimetres unless noted otherwise.
2. All concrete to be 20 Mpa and constructed in accordance with NZS 3109 with a broom finish.
3. Saw cut expansion joints at 4m centres maximum each way in addition to saw cuts shown on dwg.
4. All work must comply with the NZTA's 'CoPTTM' (code of practice for temporary traffic management).
5. Construct in same material as surrounding footpath.

REVISION	BY	DATE

Auckland Transport — An Auckland Council Organisation

AUCKLAND TRANSPORT CODE OF PRACTICE

TITLE: **CENTRES / MIXED USE VEHICLE CROSSING**

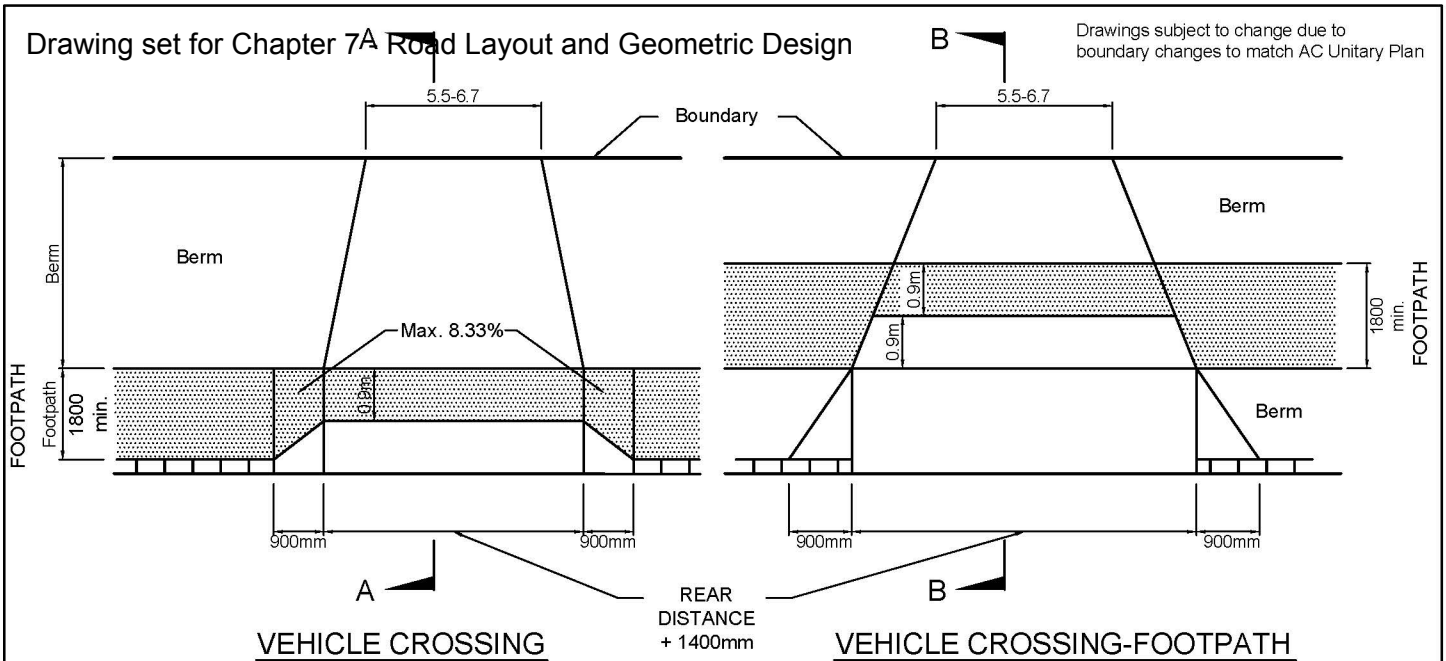
SCALE: N.T.S.

DRAWING No. GD018

VERSION 1.0

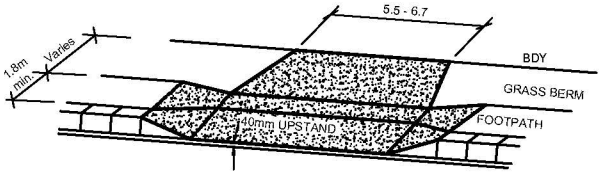
Drawing set for Chapter 7A Road Layout and Geometric Design

Drawings subject to change due to boundary changes to match AC Unitary Plan

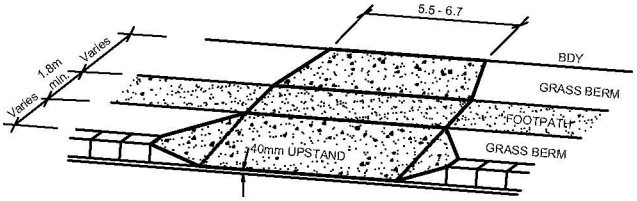


VEHICLE CROSSING FOOTPATH NEXT TO KERB

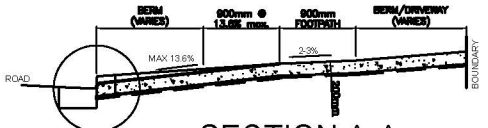
VEHICLE CROSSING-FOOTPATH SEPARATED FROM KERB



OBLIQUE VIEW
N.T.S.

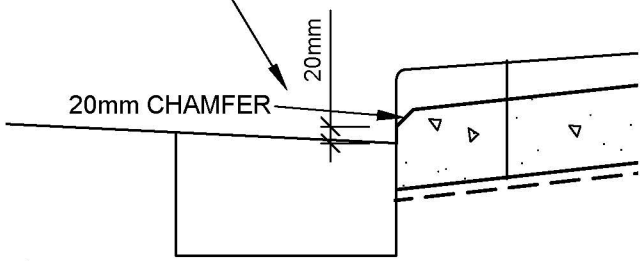


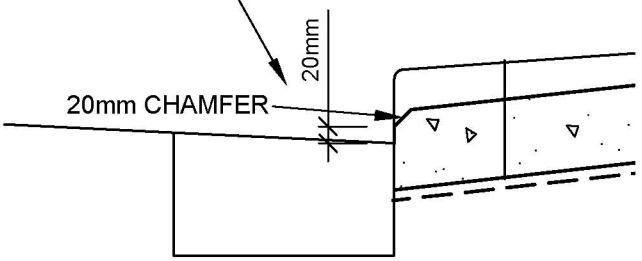
OBLIQUE VIEW
N.T.S.



SECTION A-A
N.T.S.

SECTION B-B
N.T.S.





Notes:

1. All dimensions are in millimetres unless noted otherwise.
2. All concrete to be 20 Mpa and constructed in accordance with NZS 3109 with a broom finish.
3. Saw cut expansion joints at 4m centres maximum each way in addition to saw cuts shown on dwg.
4. All work must comply with the NZTA's 'CoPTTM' (code of practice for temporary traffic management).
5. Construct in same material as surrounding footpath.

REVISION	BY	DATE

Auckland Transport — An Auckland Council Organisation

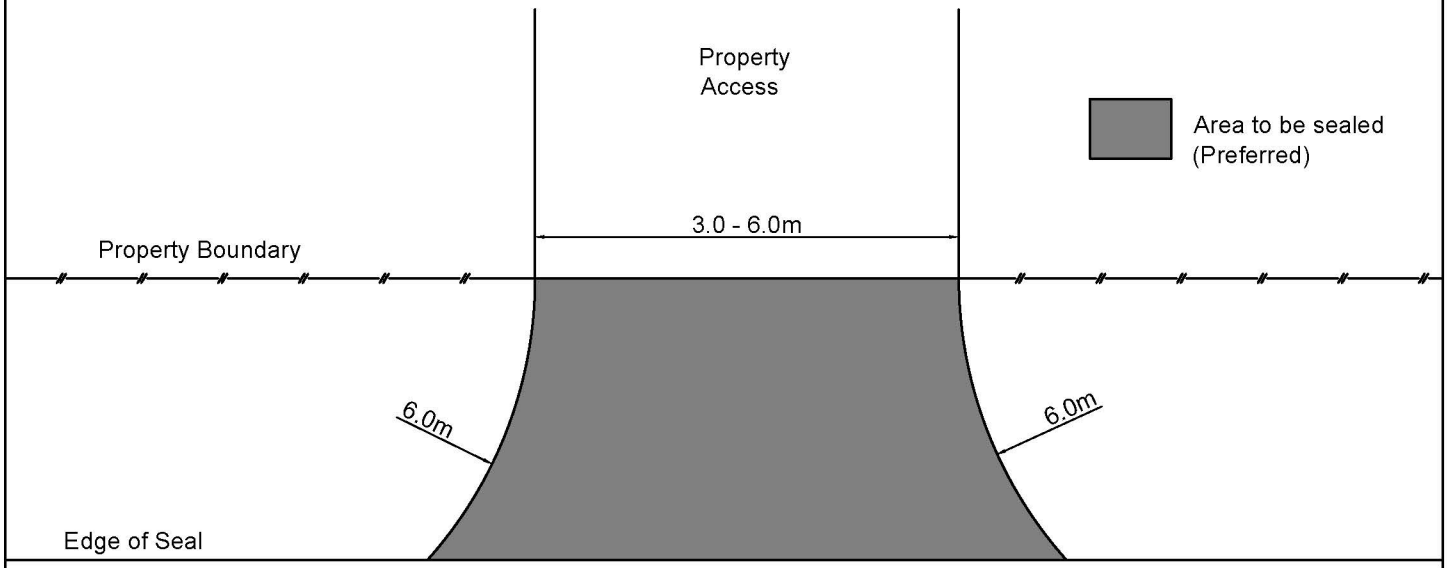
AUCKLAND TRANSPORT CODE OF PRACTICE

TITLE: **BUSINESS PARK / INDUSTRIAL / GENERAL BUSINESS VEHICLE CROSSING**

SCALE: N.T.S.

DRAWING No. GD019

VERSION 1.0



Roadway

Edge of Seal

Drawings subject to change due to
boundary changes to match AC Unitary Plan

REVISION	BY	DATE

Auckland Transport
An Auckland Council Organisation

AUCKLAND TRANSPORT
CODE OF PRACTICE

TITLE
RURAL CROSSOVER

SCALE: N.T.S.

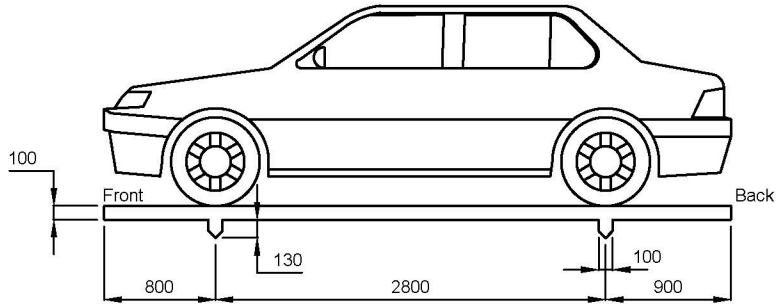
DRAWING No. GD020

VERSION 1.0

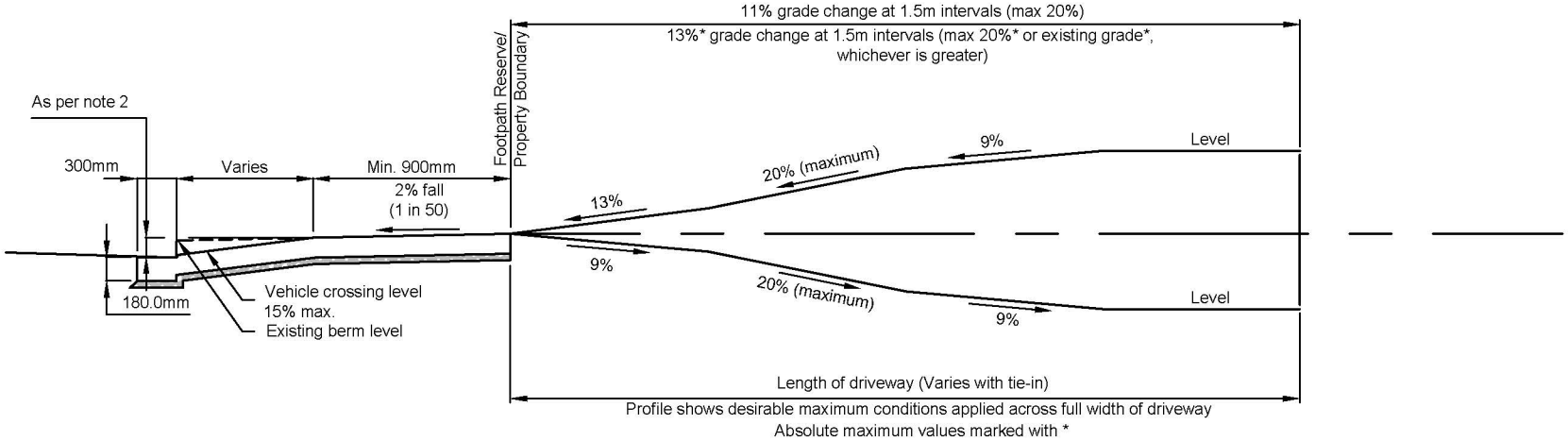
NOTES ON USE OF TEMPLATE

1. Heavily laden cars or cars with less clearance may still ground on a crossing designed in accordance with this template.

2. The designer should check that stormwater will remain in the channel and not run down the driveway. A freeboard of 200mm (ie. height above channel) is required to contain stormwater within the road unless it can be shown to the satisfaction of the Transport Asset Manager that such a condition is impractical and stormwater will not enter driveways as a result



STANDARD TEMPLATE FOR DESIGN OF VEHICLE CROSSING



TYPICAL INTERNAL DRIVEWAY PROFILE FOR RESIDENTIAL PROPERTIES

REVISION	BY	DATE

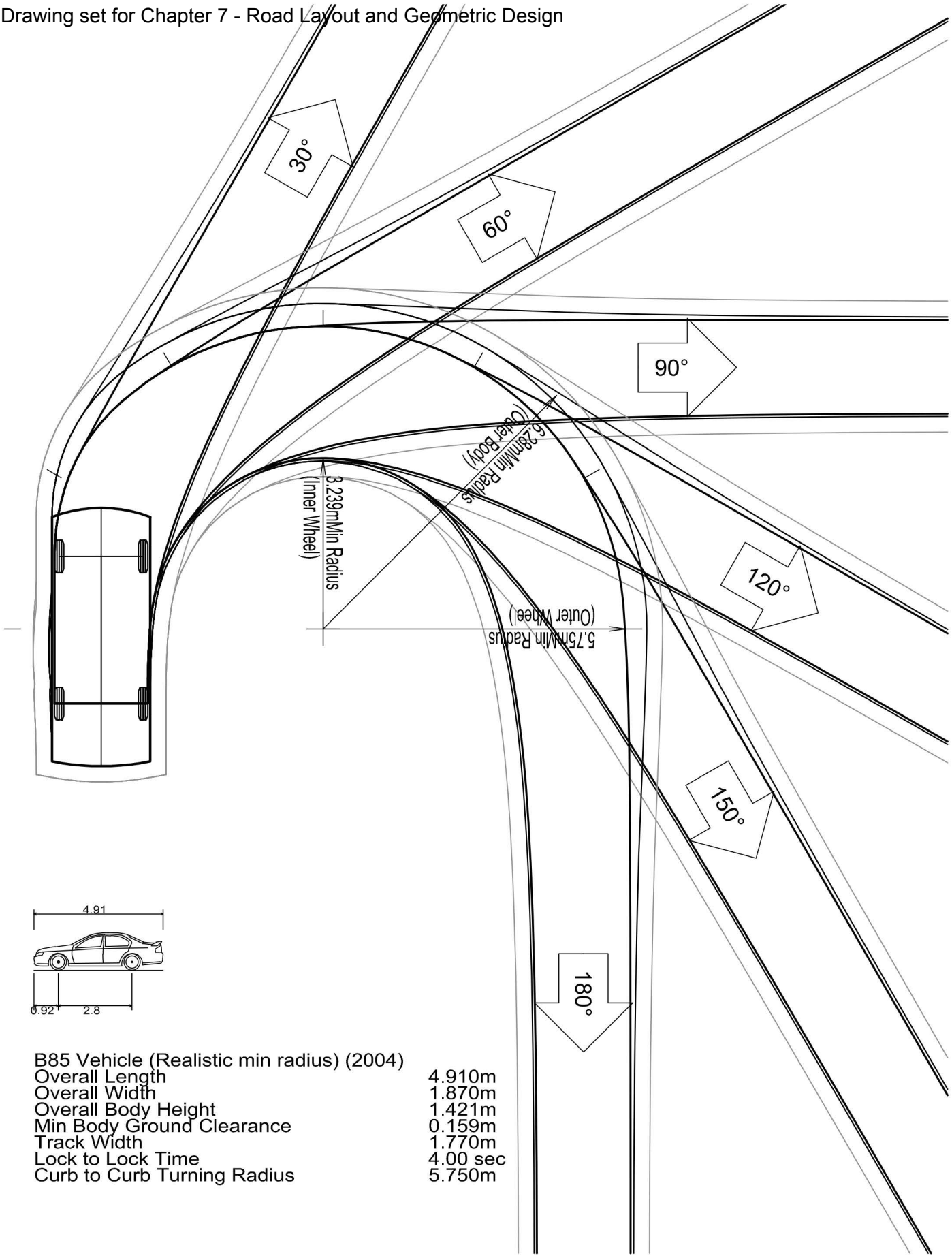
Auckland Transport
An Auckland Council Organisation

AUCKLAND TRANSPORT
CODE OF PRACTICE

TITLE
VEHICLE CROSSING DESIGN DETAILS

SCALE: N.T.S.
DRAWING No. GD021
VERSION 1.0

Drawing set for Chapter 7 - Road Layout and Geometric Design



B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	5.750m

REVISION	BY	DATE

Auckland Transport
An Auckland Council Organisation

AUCKLAND TRANSPORT
CODE OF PRACTICE

TITLE
85%ILE CAR TRACKING

SCALE: 1:100

DRAWING No. GD022

VERSION 1.0