
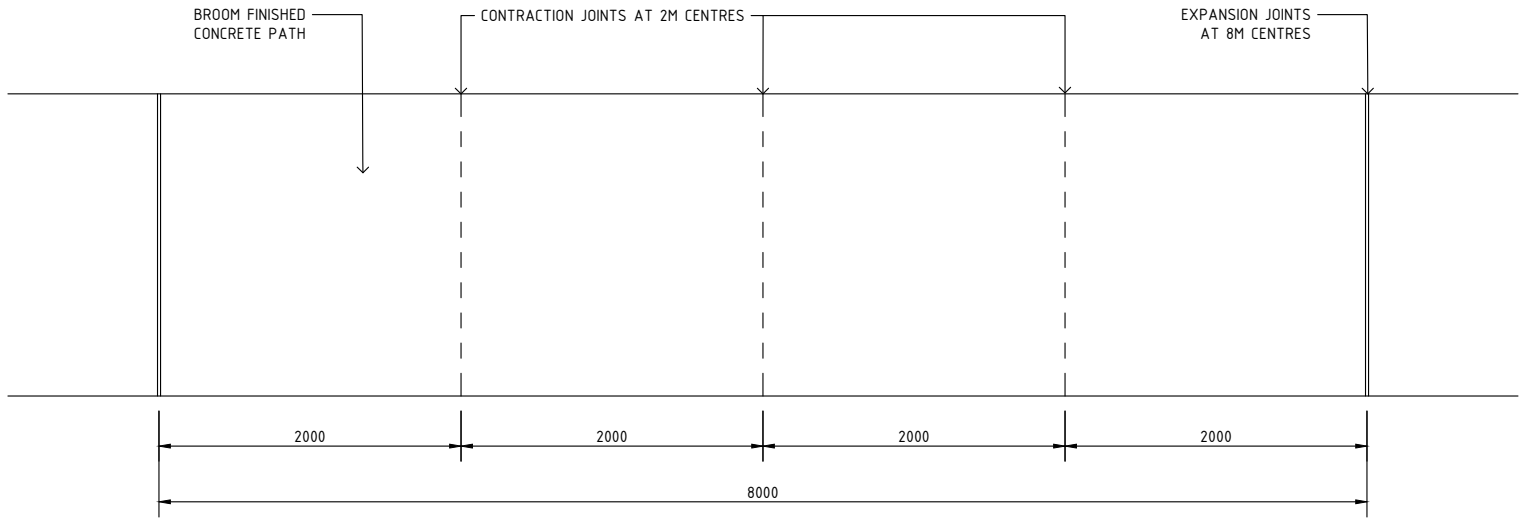


# FOOTPATH, RAMP AND GRAB RAIL DETAILS

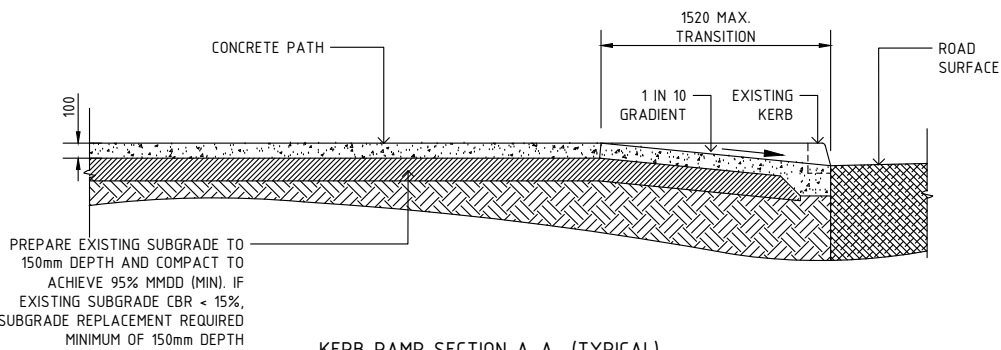
## STANDARD TYPICAL DRAWINGS

### TECHNICAL SERVICES - DESIGN DRAWINGS

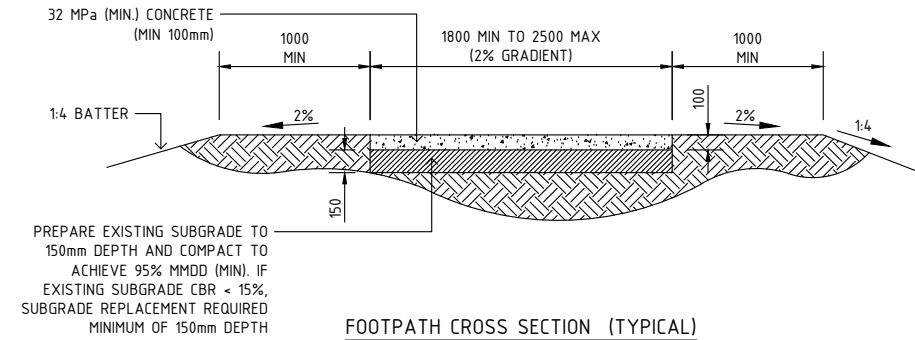
						PROJECT TITLE:	STANDARD DRAWING	SURVEY DATUM	<div>City of Karratha Lot 1083 Welcome Road PO Box 219 - Karratha Western Australia 6714 Em:enquiries@karratha.wa.gov.au   Ph: 08 9186 8555</div> <div>COPYRIGHT</div> <div>The concepts and information contained in this document are the Copyright of City of Karratha. Use or copying of the document in whole or part without written permission of City of Karratha constitutes and infringement of copyright.</div>	DRAWN BY:	IS	SCALE:	SHT:
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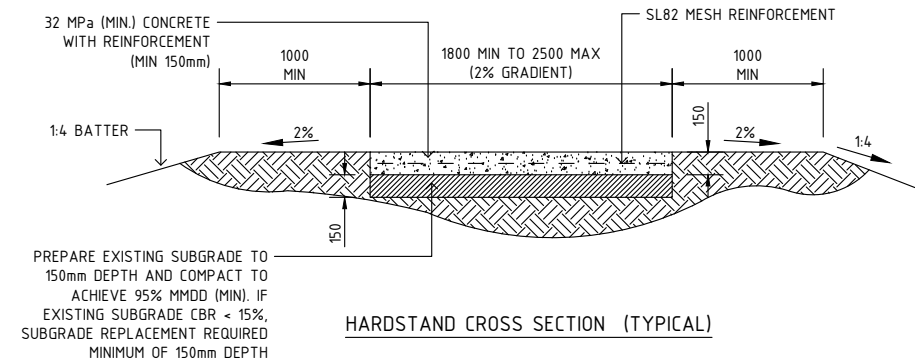
CONCRETE FOOTPATH (TYPICAL)



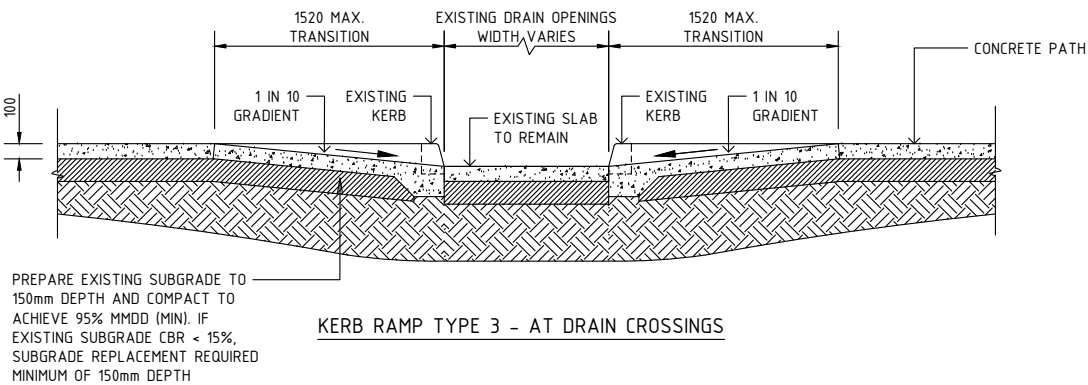
KERB RAMP SECTION A-A (TYPICAL)



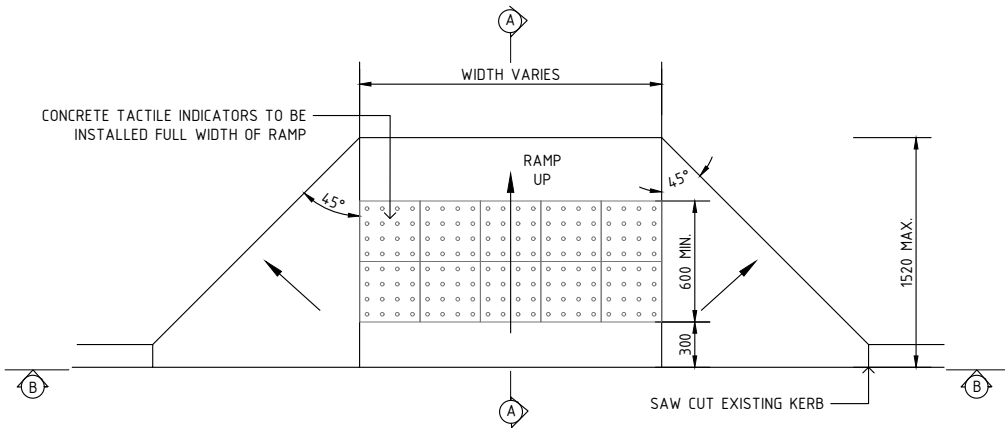
FOOTPATH CROSS SECTION (TYPICAL)



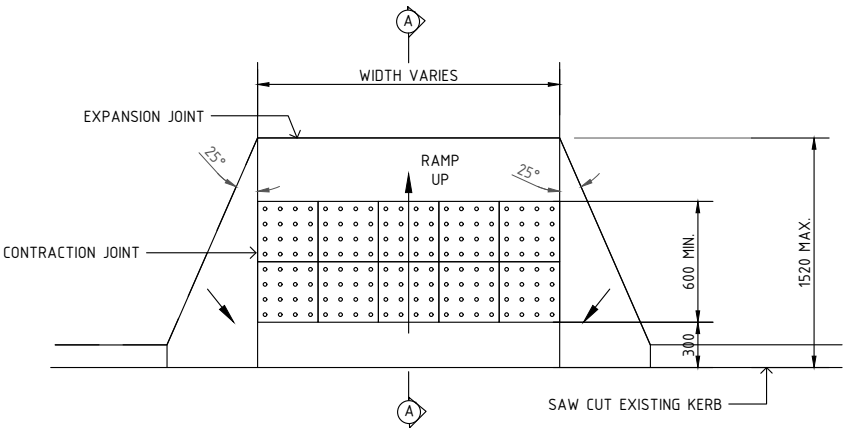
HARDSTAND CROSS SECTION (TYPICAL)



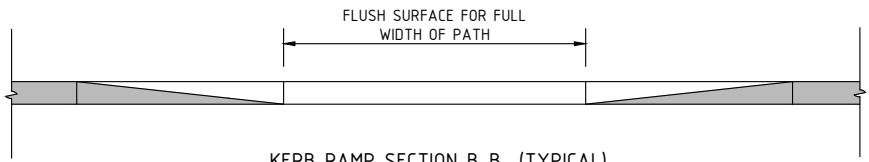
KERB RAMP TYPE 3 - AT DRAIN CROSSINGS



KERB RAMP TYPE 1 - KR1 (45° WING)



KERB RAMP TYPE 2 - KR1 (25° WING)



KERB RAMP SECTION B-B (TYPICAL)

NOTES:

ALL DIMENSIONS ARE IN MILLIMETERS

REFER MRWA DRAWING 9831-5649 FOR PEDESTRIAN GAP GRAB RAIL, TYPE B KERB RAMP DETAILS.

CONCRETE:

ALL CONCRETE USED IN WORKS SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 32 MPa AT 28 DAYS WITH A MAXIMUM SLUMP OF 80MM AND A MAXIMUM GRADED AGGREGATE SIZE OF 20 MM. CONCRETE SHALL BE PROVIDED BY A REPUTABLE PREMIXED CONCRETE COMPANY. EACH BATCH DELIVERED SHALL BE SUPPORTED WITH EVIDENCE OF STRENGTH, SLUMP, AGGREGATE SIZE, ETC.

PLACING CONCRETE:

THE BASE SHALL BE THOROUGHLY AND EVENLY MOISTENED PRIOR TO PLACING CONCRETE. 100 MM DEPTH FORMWORK RAILS SHALL BE USED TO FORM EACH SIDE OF THE FOOTPATH. CONCRETE SHALL BE PLACED EVENLY AND SHOVELLED INTO POSITION CONTINUOUSLY. IT SHALL BE CONSOLIDATED, ESPECIALLY AT ALL EDGES, TO REMOVE ALL VOIDS AND MAXIMISE DENSITY. NO BREAK IN OPERATIONS SHALL BE PERMITTED FROM TIME OF PLACING TO FINISHING EXCEPT AS AUTHORISED BY THE PRINCIPAL. THE PATHS GENERALLY SHALL BE CONSTRUCTED WITH A CROSSFALL OF 2% TOWARDS THE KERB TO ALLOW FOR EFFECTIVE WATER RUNOFF.

FINISHING:

THE FINISH SHALL BE OBTAINED BY SPREADING TO THE CORRECT LEVELS AND BROOM FINISHED TO PROVIDE A NON-SLIP DENSE SURFACE FREE OF ANY DEPRESSIONS, MARKS, HONEYCOMB SECTIONS OR ACCUMULATION OF FINE DUSTY ACCRETIONS LIABLE

TO CAUSE EXCESSIVE SURFACE WEAR. THE FINAL SURFACE SHALL BE TO THE SATISFACTION OF THE PRINCIPAL WHO SHALL RESERVE THE RIGHT TO REQUIRE THE REMOVAL OF THE AFFECTED SECTION OR THE CORRECTION OF ANY SURFACE DEFICIENCIES OF FINISH AT THE CONTRACTOR'S EXPENSE. EVERY TWO METRE PANEL IS TO HAVE A 50MM "PICTURE FRAME" EDGE SO AS TO CREATE A SMOOTH BORDER TO EACH PANEL. NO PICTURE FRAME AT CONSTRUCTION AND EXPANSION JOINT FOR SHARED PATH.

JOINING:

EXPANSION JOINTS SHALL BE CONSTRUCTED AT EVERY FOURTH (4) CONSTRUCTION JOINT, IE. EIGHT (8) METRES APART. THEY SHALL BE FULL DEPTH JOINTS 12MM WIDE AND SHALL BE FILLED WITH BITUMEN IMPREGNATED COMPRESSIBLE FILLER OR SIMILAR APPROVED MATERIAL. THE JOINT FILLER MATERIAL SHALL BE SUCH THAT WHEN IT IS SUBJECTED TO COMPRESSION IN HOT WEATHER, NO BITUMEN IS EXTRUDED. THE FOLLOWING MATERIALS ARE APPROVED:

NONPORITE - BITUMEN IMPREGNATED CANITE BY THE COLD SOLVENT PROCESS.  
EXPANDITE - FLEXCELL.

CONTRACTION JOINTS SHALL BE CONSTRUCTED EVERY TWO (2) METRES. THE TYPICAL CONTRACTION JOINT SHALL BE MADE BY TOOLING INTO THE SURFACE AT THE TIME OF PLACEMENT TO A DEPTH OF 20MM

CURING:

FRESH CONCRETE SHALL BE PROTECTED FROM SUN, WIND AND RAIN EXPOSURE. CONCRETE SHALL BE PREVENTED FROM DRYING OUT TOO RAPIDLY IN ACCORDANCE WITH AS 3799:1998.

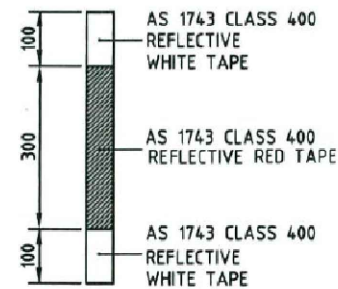
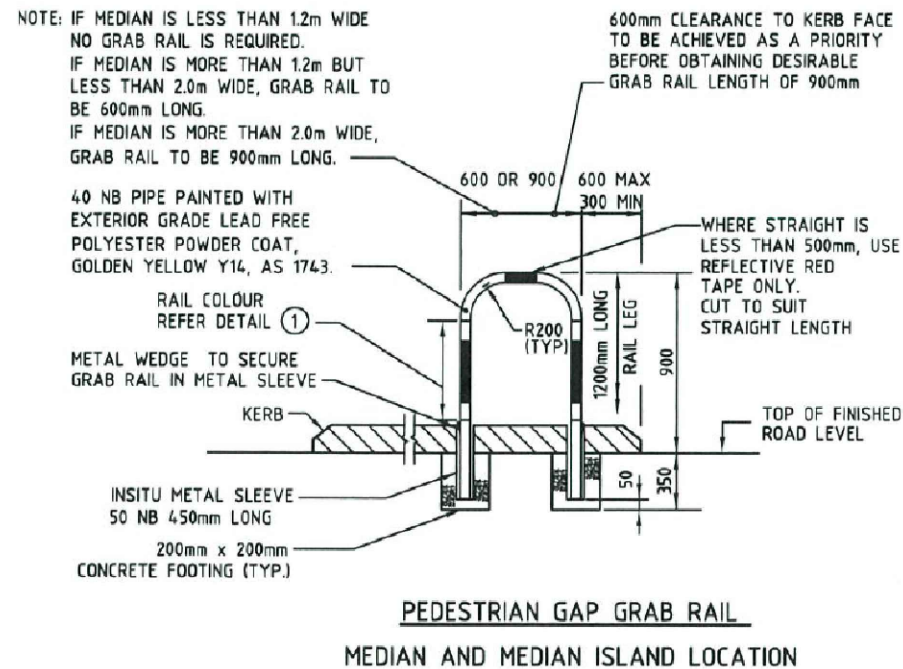
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DRAWING TITLE:	FOOTPATH DETAILS

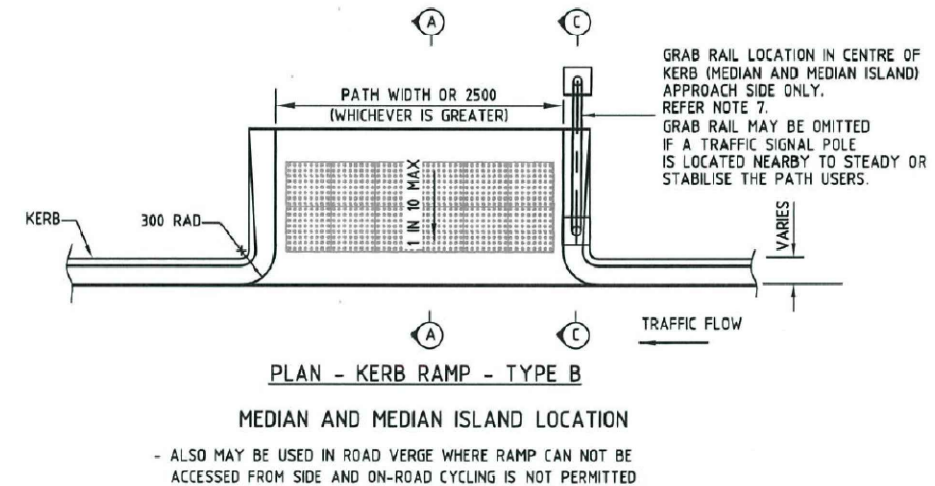
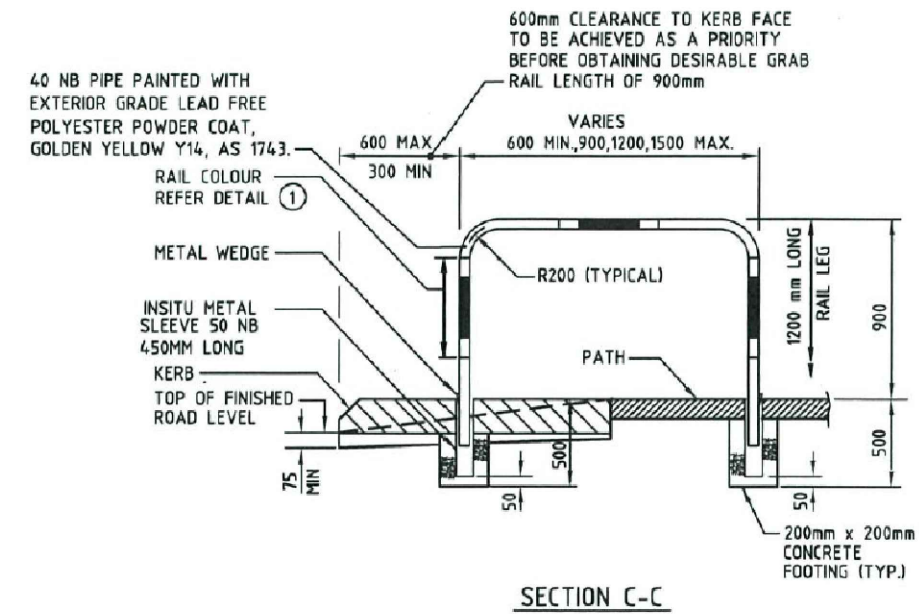
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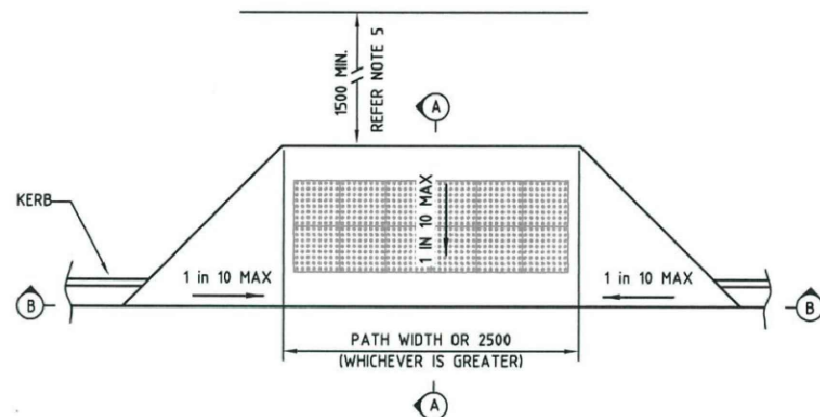


**RAIL COLOUR - DETAIL ①**

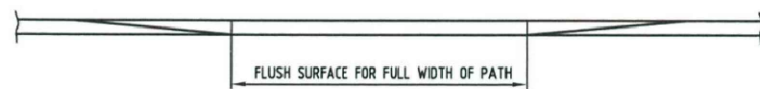
SOURCE: MRWA DRAWING 9831-5649



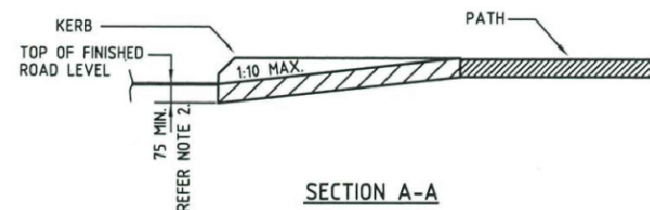
SOURCE: MRWA DRAWING 9831-5649






- USED WHEN RAMP CAN BE ACCESSED FROM SIDE (I.E. WINGS ARE ACCESSIBLE FOR PEOPLE WITH DISABILITIES)
- WHEN RAMP CAN BE ACCESSED FROM ONE SIDE ONLY IT IS ACCEPTABLE TO USE THE TYPE A "WING" ON ONE SIDE AND THE TYPE B "KERB RETURN" ON THE OTHER - REFER LEGEND
- USED TO FACILITATE ON-ROAD CYCLISTS TURNING INTO OR OUT OF PATH.



**SECTION B-B**



**LEGEND**

-  **TYPE 'A'** ROAD VERGE LOCATION
-  **TYPE 'B'** MEDIAN AND MEDIAN ISLAND LOCATION
-  **TYPE 'A' + 'B'** COMBINED

**NOTES:**

- ALL DIMENSIONS ARE IN MILLIMETERS
- EDGE OF RAMP SHALL BE FLUSH WITH ROAD PAVEMENT (ASPHALT OR SEAL).
- WHERE ASPHALT IS NOT TO BE APPLIED IN THE CURRENT STAGE, RAMP PAVEMENT DOWN TO ENSURE MINIMUM CONCRETE THICKNESS OF 75mm AT THE ENDING EDGE WHERE ASPHALT IS APPLIED LATER, IT SHALL OVERLAY THE LOWER SECTION OF THE RAMP.
- A MINIMUM OF 2500mm OF KERB SHALL BE PROVIDED BETWEEN ADJACENT RAMPS.
- PATHS PARALLEL TO THE KERB SHALL BE REALIGNED OR WIDENED TO PROVIDE A LEVEL SECTION 1.5m MINIMUM WIDTH BEHIND THE RAMP.
- PEDESTRIAN GAP SHALL BE A MINIMUM WIDTH OF 2.5m AND BE USED INSTEAD OF CURB RAMP IN MEDIANS, MEDIAN ISLANDS AND ISLANDS WHERE THE DISTANCE BETWEEN KERB FACE IS LESS THAN 4.5m.
- PEDESTRIAN GRAB RAIL SHALL BE PROVIDED AT MEDIAN AND MEDIAN ISLANDS GRATER THAN 1.2m WIDE. GRAB RAILS ARE TO BE PLACED ON THE TRAFFIC APPROACH SIDE OF THE RAMP AS SHOWN IN KERB RAMP - TYPE B DETAIL.
- KERB RAMPS TO BE SKEWED TO MATCH WITH THE DIRECTION OF THE ROAD CROSSING.

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DRAWING TITLE:	RAMP AND GRAB RAIL DETAILS

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