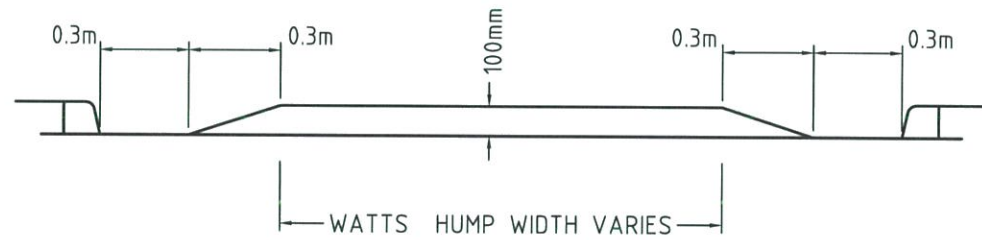
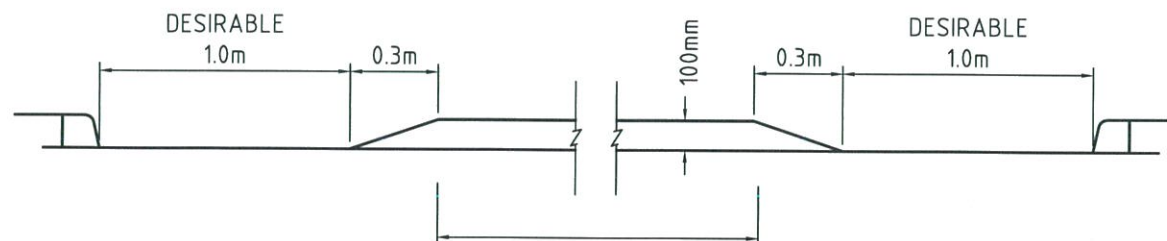


NOTES:

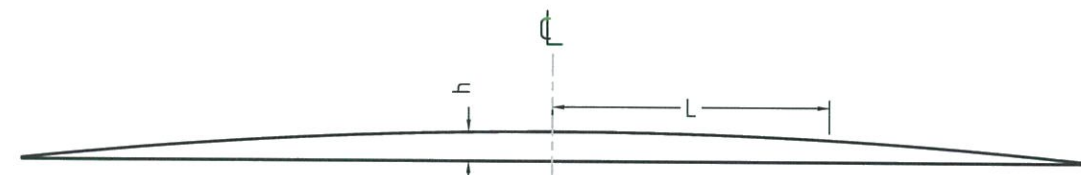
- PIANO MARKINGS ARE TO BE APPLIED ONTO THE RAMP AND NOT ONTO THE PRECEDING ASPHALT. (FOR FURTHER DETAILS REFER TO AS1742.13). PIANO MARKINGS SHOULD EXTEND ACROSS ENTIRE WIDTH.
- RAMP PROFILE SHOWN IS SUITABLE FOR USE ON BUS ROUTES AND IS PREFERRED BY TRANSPERTH TO THE USE OF PLATEAU OR FLAT TOP TYPE ROAD HUMPS.
- ALL STREET LIGHTING SHOULD BE DESIGNED AND INSTALLED IN ACCORDANCE WITH AS1158.
- USE MR-WDO-1 IF POSTED SPEED ≤ 50 km/h. USE W5-10/W8-2 IF POSTED SPEED ≥ 60 km/h. SIGN ASSEMBLIES W5-10/W8-2 OR MR-WDO-1 AND W3-4/W8-17-2 ARE GENERALLY NOT REQUIRED WHEN THE DEVICE IS PART OF AN AREA WIDE SCHEME, OR IN SPEED ZONES ≤ 40 km/h. THE 20 km/h ADVISORY SPEED MAY NOT BE APPROPRIATE IF A DIFFERENT RAMP GRADE AND/OR RAMP LENGTH IS USED.
- SIGN ASSEMBLY W3-4/W8-17-2 IS USED IN ADVANCE OF THE FIRST HUMP IN A SERIES. MR-WDO-1 OR W5-10/W8-2 MAY BE OMITTED IF THERE ARE NO SIDE ROADS OR IF THE SIDE ROADS HAVE SIGNAGE INSTALLED INDICATING THAT THERE ARE HUMPS ON THE INTERSECTING ROAD.
- ON FLAT GRADES A 0.3m DRAINAGE CHANNEL MAY BE REQUIRED. ON BICYCLE ROUTES A "BYPASS" MAY BE REQUIRED.



WATTS HUMP WIDTH VARIES
WATTS PROFILE HUMP (WITHOUT A BICYCLE BYPASS)
SECTION B-B



WATTS HUMP WIDTH VARIES
WATTS PROFILE HUMP (WITH A BICYCLE BYPASS)
SECTION B-B



DISTANCE 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
HEIGHT h(mm)	100	100	99	97	95	93	90	86	81	76	71	65	58	51	43	34	25	16	5	0

WATTS PROFILE HUMP
SECTION A-A

No.	DESCRIPTION	APPROVED & DATE	No.	DESCRIPTION	APPROVED & DATE
5	COLOR ADDED TO SIGNS.				
4	NOTE 7 DELETED.				
3	PIANO KEY MARKINGS EXTENDED, NOTE 1 AMENDED.	D. LANDMARK 24.3.10			
2	PIANO KEY MARKINGS CORRECTED.	D. LANDMARK 03.5.10			
1	NOTE 7 CHANGED, PIANO MARKINGS, NOTES 1, 5 AND SIGN DETAIL AMENDED. TABLE ADDED.	D. LANDMARK 14.6.07			

No.	DESCRIPTION	APPROVED & DATE	No.	DESCRIPTION	APPROVED & DATE

Government of Western Australia
mainroads WESTERN AUSTRALIA
 TECHNOLOGY AND ENVIRONMENT
 ROAD AND TRAFFIC ENGINEERING
 WATERLOO CRESCENT EAST PERTH 6004
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TYPICAL TREATMENT FOR ROAD HUMPS
ROAD HUMP-WATTS PROFILE
 LOCAL AUTHORITY

DESIGNED D. LANDMARK	04/04	VERIFIED D. SULLIVAN	11/5/04
DRAWN N. PANGABEAN	04/04	APPROVED R. GROVE	11/5/04
FILE NUMBER	67-08-69		
DRAWING NUMBER	200331-128-5		

SCALE N.T.S.
 MICROFILM DATE
A3