DESIGN STANDARDS
FOR
RURAL TWO (2) LANE ROADWAYS

GEOMETRIC DESIGN STANDARDS

	DESIGN SPEED (km/h)						
	30	50	60	80	100	110	120
STOPPING SIGHT DISTANCE (m)	29.6	57.4-62.8	74.3-84.6	112.8-139.4	157.0-205.0	179.5-246.4	202.9-285.6
PASSING SIGHT DISTANCE (m)	217	345	407	541	670	728	792
MINIMUM CURVE RADIUS (m) (E = 0.06 SUPERELEVATION)	30	90	135	250	435	560	755
PRINCIPAL ARTERIAL MAXIMUM GRADE (PERCENT)							
LEVEL	N/A	N/A	5	4	3	3	3
ROLLING	N/A	N/A	6	5	4	4	4
MOUTAINOUS	N/A	N/A	8	7	6	5	5
MINOR ARTERIAL MAXIMUM GRADE (PERCENT)							
LEVEL	N/A	N/A	5	4	3	3	3
ROLLING	N/A	N/A	6	5	4	4	4
MOUTAINOUS	N/A	N/A	8	7	6	5	5
COLLECTOR MAXIMUM GRADE (PERCENT)							
LEVEL	7	7	7	6	5	4	N/A
ROLLING	10	9	8	7	6	5	N/A
MOUTAINOUS	12	10	10	9	8	6	N/A
LOCAL MAXIMUM GRADE (PERCENT)							
LEVEL	8	7	7	6	5	N/A	N/A
ROLLING	11	10	10	8	6	N/A	N/A
MOUTAINOUS	16	14	13	10	N/A	N/A	N/A

LOCAL ROADS

DESIGN CONTROL	A.D.T. UNDER 400	A.D.T. 400 TO 1500	A.D.T. 1500 TO 2000	A.D.T. OVER 2000
DESIGN SPEED (km/h)				
LEVEL	60	80	80	80
ROLLING	50	60	60	60
MOUTAINOUS	30	50	50	50
TRAVELED WAY (m)				
LEVEL	5.4	6.6	6.6	7.2
ROLLING	5.4	6.0	6.6	7.2
MOUTAINOUS	5.4	6.0 **	6.6	7.2
SHOULDER	0.6	1.5 **	1.8	2.4
SURFACE TYPE	ROAD MIX ASPHALT SURFACE COURSE OR ASPHALT CONCRETE PAVEMENT			

** MOUNTAINOUS TERRAIN A.D.T.-400-600 5.4 m WIDTH AND 0.6 m SHOULDER

PRINCIPAL ARTERIALS

DESIGN CONTROL	A.D.T. UNDER 400	A.D.T. 400 TO 1500	A.D.T. 1500 TO 2000	D.H.V. OVER 200
DESIGN SPEED (km/h)				
LEVEL	110	110	110	110
ROLLING	100	100	100	100
MOUTAINOUS	80	80	80	80
TRAVELED WAY (m)				
LEVEL	7.2	7.2	7.2	7.2
ROLLING	7.2	7.2	7.2	7.2
MOUTAINOUS	6.6	6.6	6.6	7.2
SHOULDER	1.2	1.8 *	1.8*	2.4*
SURFACE TYPE	ASPHALT CONCRETE PAVEMENT			

COLLECTORS

DESIGN CONTROL	A.D.T. UNDER 400	A.D.T. 400 TO 1500	A.D.T. 1500 TO 2000	A.D.T. OVER 2000
DESIGN SPEED (km/h)				
LEVEL	60	80	80	100
ROLLING	50	60	60	80
MOUTAINOUS	30	50	50	60
TRAVELED WAY (m)				
LEVEL	6.0	6.6	6.6	7.2
ROLLING	6.0	6.6	6.6	7.2
MOUTAINOUS	6.0	6.6	6.6	7.2
SHOULDER	0.6	1.5 *	1.8 *	2.4 *
SURFACE TYPE	ROAD MIX ASPHALT SURFACE COURSE OR ASPHALT CONCRETE PAVEMENT			

MINOR ARTERIALS

DESIGN CONTROL	A.D.T. UNDER 400	A.D.T. 400 TO 1500	A.D.T. 1500 TO 2000	D.H.V. OVER 2000
DESIGN SPEED (km/h)				
LEVEL	100	100	100	100
ROLLING	80	80	80	80
MOUTAINOUS	60	60	60	60
TRAVELED WAY (m)				
LEVEL	7.2	7.2	7.2	7.2
ROLLING	6.6	6.6	6.6	7.2
MOUTAINOUS	6.6	6.6	6.6	7.2
SHOULDER	1.2	1.8*	1.8*	2.4*
SURFACE TYPE	ASPHALT CONCRETE PAVEMENT			

NOTES:

CLEAR ZONE - USE AASHTO "ROADSIDE DESIGN GUIDE" TO DETERMINE APPROPRIATE MINIMUM CLEAR ZONE.

* OPTIONAL APPLICATION : 1.2 m MINIMUM PAVED SHOULDER WITH THE REMAINING WIDTH AS UNTREATED BASE COURSE.

ALL DIMENSIONS ARE SHOWN IN METERS (m) UNLESS OTHERWISE NOTED.

REVISIONS

NO.	DATE	APPR.	REMARKS
1	12/07/98	S.A.	REVISED BOXES, AND CHANGED SHEET NUMBER.
2	04/14/99	B.A.	CORRECT TABLE READINGS IN PRINCIPAL ARTERIALS AND MINOR ARTERIALS.
3	10/26/99	FRW	REMOVED ASTRICK NOTE REFERING TO L2 m PAVED. AND CORRECTED TABLE FOR COLLECTORS.
4	02/22/01	FRW	ADDED ASTRICK NOTE AND ADDED ASTRICK TO COLLECTORS, PRINCIPAL, AND MINOR ARTERIALS.
5	04/10/01	FRW	CORRECTED DOUBLE ASTRICK NOTE, CORRECTED ALL TABLES. MATCH AASHTO WORDING.

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH

RECOMMENDED FOR APPROVAL

CHAIRMAN STANDARDS COMMITTEE — APR.10.2001 DATE

APPROVED

DEPUTY DIRECTOR — APR.10.2001 DATE

(METRIC)

STANDARD DRAWING TITLE: STANDARDS FOR RURAL TWO LANE HIGHWAYS

STD. DWG. NO.
815-3B