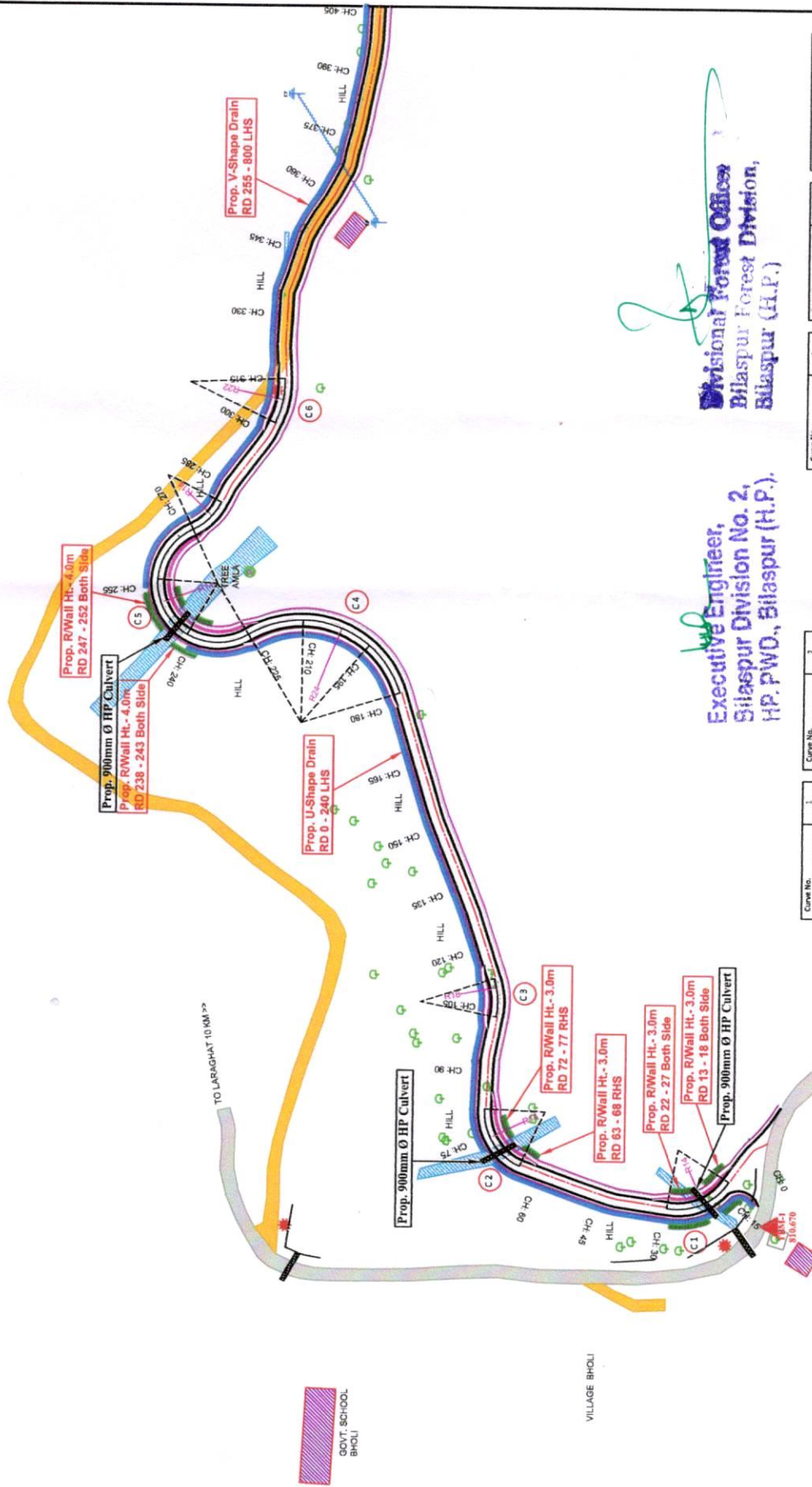


TOPOGRAPHICAL SURVEY PLAN FOR CONSTRUCTION OF LINK ROAD BHOLI TO LOWER BHOLI GASSOUR (Including 1 No. Bridge) FROM KM.-0/000 TO KM.-2/320 UNDER NABARD.

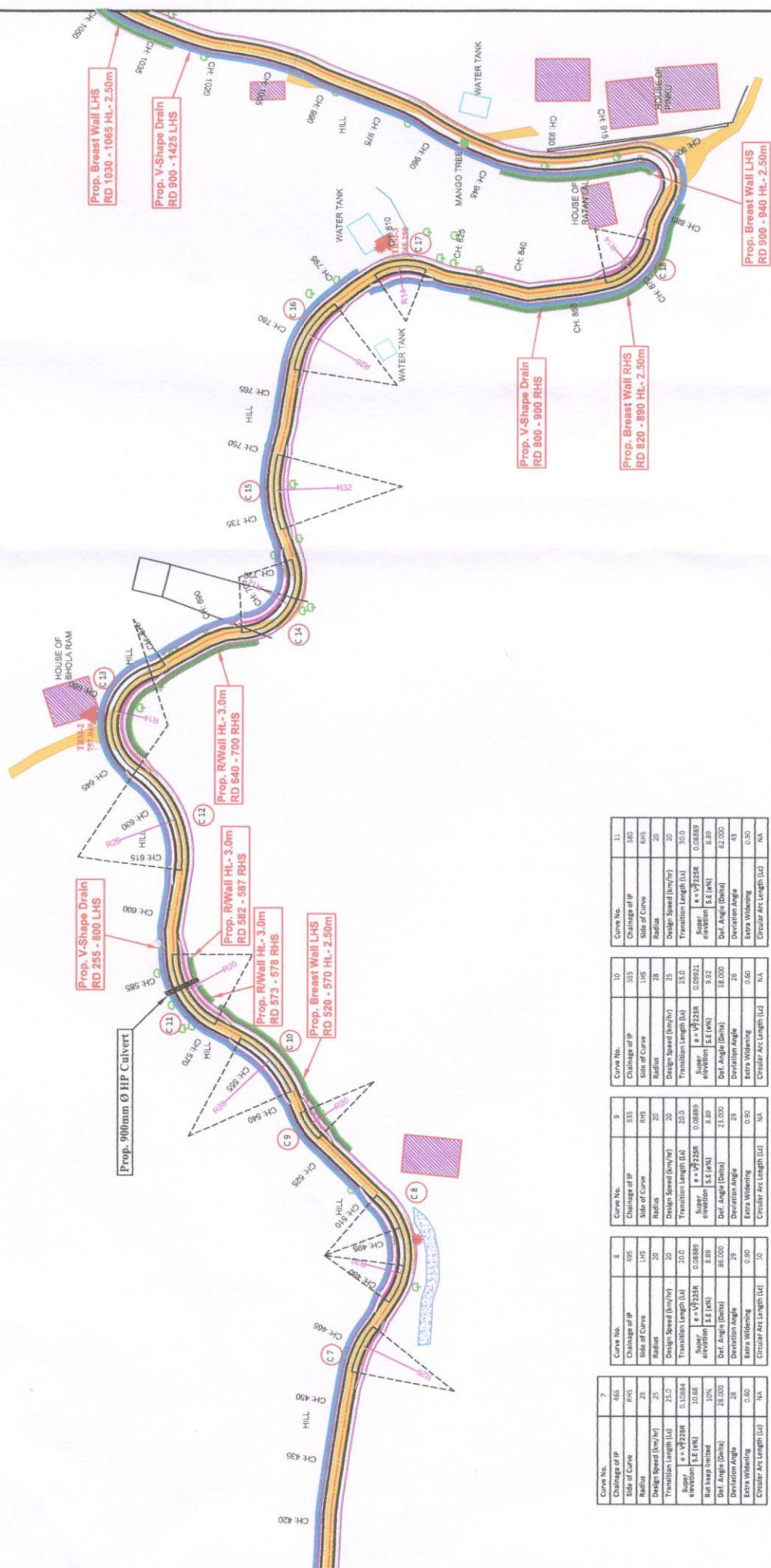
SHEET-1/4



**Executive Engineer,
Silaspur Division No. 2,
HP, PWD., Silaspur (H.P.).**

**Divisional Forest Officer,
Bilaspur Forest Division,
Bilaspur (H.P.).**

Curve No.	1	2	3	4	5	6
Chainage of IP	20	75	105	200	250	310
Side of Curve	RHS	RHS	LHS	LHS	RHS	LHS
Radius	15	14	18	24	14	22
Design Speed (km/hr)	30	30	30	25	20	25
Transition Length (Lt)	0.1208	0.1208	0.1208	0.1174	0.1208	0.1208
Super elevation	1.4 (4%)	1.4 (4%)	1.4 (4%)	1.1374	1.4 (4%)	1.4 (4%)
But keep limited	10%	10%	10%	10%	10%	10%
Def. Angle (Delta)	61	68	29	104.000	104.000	28.000
Dev. Angle (Delta)	61	68	35	32	83	80
Extra Widening	0.50	0.50	0.50	0.60	0.50	0.60
Circular Arc Length (Lt)	NA	NA	NA	17	15	NA



Curve No.	7
Chainage of IP	465
Side of Curve	RHS
Radius	28
Design Speed (km/hr)	25
Transition Length (Ls)	25.0
$e = V^2/2384$	0.10584
Supery elevation	10.68
But keep limited	10%
Def. Angle (Delta)	28.000
Deviation Angle	28
Extra Widening	0.50
Circular Arc Length (Lc)	NA

Curve No.	8
Chainage of IP	495
Side of Curve	LHS
Radius	20
Design Speed (km/hr)	20
Transition Length (m)	20.0
Super elevation	$e = V^2/25R$ 0.08889
S.G. (%)	8.89
Def. Angle (Delta)	86.000
Deviation Angle	29
Extra Widening	0.50
Circular Arc Length (m)	10

Curve No.	9
Chainage of IP	535
Side of Curve	RHS
Radius	20
Design Speed (km/hr)	20
Transition Length (Ls)	25.0
Superelevation	0.08889
$e = V^2/25R$	8.89
S.E. (%)	23.000
Def. Angle (Delta)	25
Deviation Angle	0.50
Extra Widening	N/A
Circular Arc Length (Lc)	

Curve No.	10
Chainage of IP	535
Side of Curve	LHS
Radius	28
Design Speed (km/hr)	25
Transition Length (Ls)	23.0
Super elevation	0.09921
S.C. (%)	9.92
Def. Angle (Delta)	38.000
Deviation Angle	25
Extra Widening	0.60
Circular Arc Length (Lc)	N/A

Curve No.	11
Chainage of IP	580
Side of Curve	RHS
Radius	20
Design Speed (km/hr)	20
Transition Length (L)	30.0
Super elevation	$e = V^2/225R$ 0.0889
S.E (e%)	8.89
Def. Angle (Delta)	62.000
Wearing Angle	43
Extra Widening	0.50
Circular Arc Length (Lc)	N/A

Curve No.	12
Chainage of IP	630
Side of Curve	LHS
Radius	26
Design Speed (km/hr)	25
Transition Length (Lt)	25.0
Superelevation	$e = 1/223R$
S.E (e%)	10.58
Def. Angle (Delta)	16%
Deviation Angle	63.000
Extra Widening	78
Circle Arc Length (Lc)	0.50
	N/A

Curve No.	13
Chainage of IP	660
Side of Curve	RHS
Radius	14
Design Speed (km/hr)	20
Transition Length (m)	30.0
Super elevation	$e = 1/250$
Superelevation S.E. (%)	12.70
Butt keep limited	10%
Def. Angle (Grads)	128.000
Deviation Angle	61
Extra Widening	0.90
Circle Arc Length (m)	NA

Curve No.	14
Chainage of IP	710
Side of Curve	LHS
Radius	14
Design Speed (km/hr)	20
Transition Length (L _t)	30.0
Super elevation	0.12688
S.E. (%)	1.270
But keep limited	10%
Def. Angle (Delta)	106.000
Deviation Angle	61
Extra Widening	0.90
Clearance Length (L _c)	N/A

Curve No.	15
Chainage of IP	740
Side of Curve	RHS
Radius	32
Design Speed (km/hr)	25
Transition Length (L _t)	24.0
$e = \sqrt[3]{\frac{L_t}{225R}}$	0.06881
Super elevation	8.66
S.E. (v%)	34.000
Def. Angle (Delta)	21
Deviation Angle	0.60
Extra Widening	NA
Extra Area (sqm)	NA

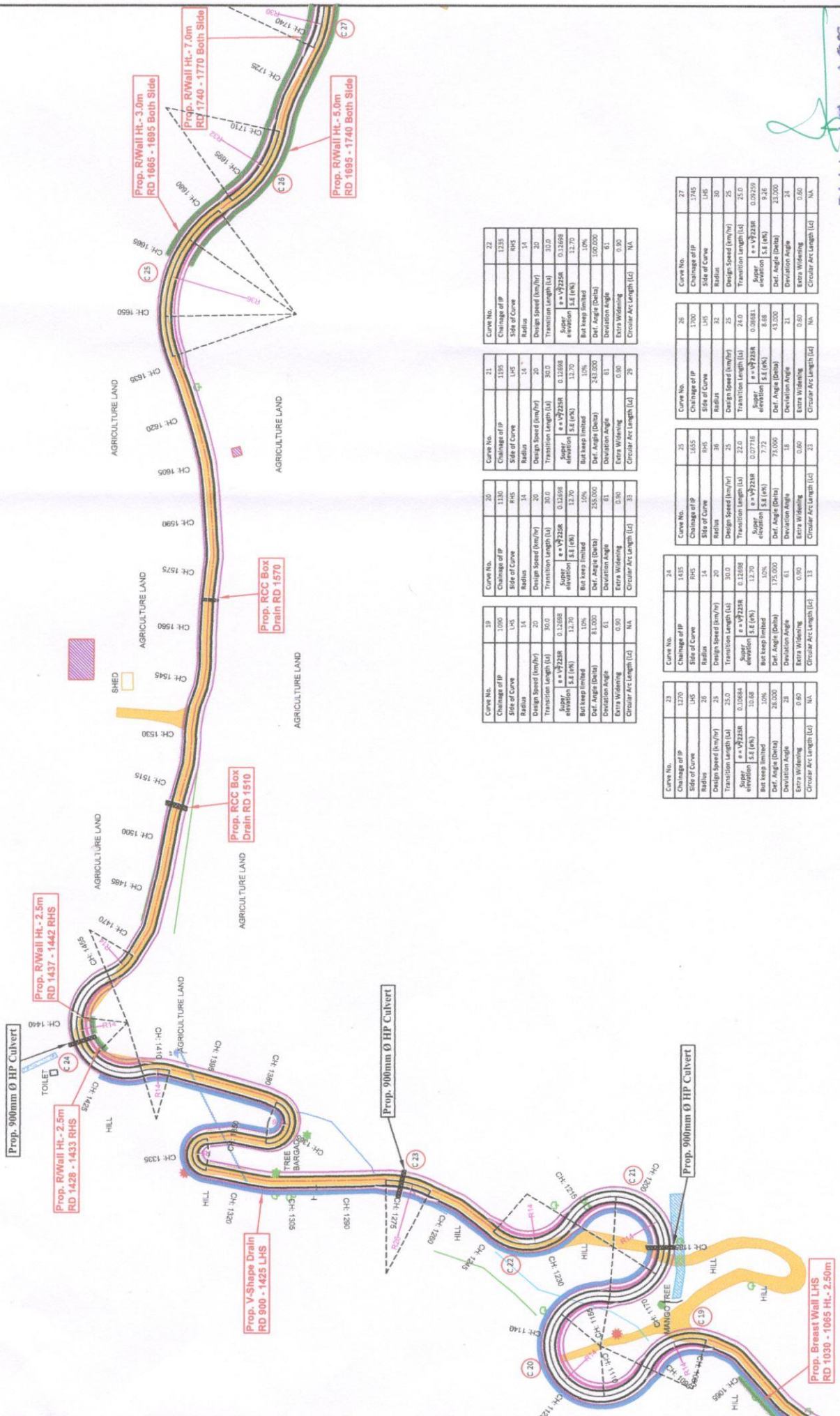
Curve No.	35
Chainage of IP	7980
Side of Curve	RHS
Radius	26
Design Speed (km/hr)	25
Transition Length (m)	25.0
Super elevation	0.10684
Side Slope	5:1 (e/s)
Butt keep limited	10%
Def. Angle (Delta)	44.000
Deviation Angle	28
Extra Widening	0.80
Proposed Area Lengths (m)	N/A

Curve No.	17
Chainage of IP	810
Side of Curve	RHS
Radius	14
Design Speed (km/hr)	20
Transition Length (Ls)	30.0
Super elevation	$e = 1/72.254$
SE (%)	12.70
But keep limited	10%
Def. Angle (Delta)	55.000
Deviation Angle	61
Extra Widening	0.50
Circle Arc Length (Ls)	84.8

Curve No.	18
Chainage of IP	870
Side of Curve	LHS
Radius	14
Design Speed (km/hr)	30
Transition Length (Lt)	30.0
Super elevation	$e = 1/22.5R$
S.E (%)	12.70
But knee limited	10%
Defr. Angle (Delta)	67.000
Deviation Angle	61
Extra Widening	0.90
Remarks: (If any)	Nil

Executive Engineer,
Bilaspur Division No. 2,
H.P. P.W.D., Bilaspur (H.P.).

Divisional Forest Officer
Bilaspur Forest Division
Bilaspur (H.P.)



Curve No.	Chainage of IP	Side of Curve	Radius	Design Speed (km/hr)	Transition Length (m)	Super elevation	But keep limited	Def. Angle (Deg)	Dev. Angle (Deg)	Extra Widening	Circular Arc Length (m)
23	1080	LHS	14	20	30.0	0.1268	10%	81.000	61	0.90	NA
24	1435	RHS	14	20	30.0	0.1268	10%	175.000	61	0.90	13
25	1605	RHS	30	25	30.0	0.1268	10%	73.000	18	0.60	23
26	1700	LHS	32	25	24.0	0.0881	8.88	43.000	31	0.60	NA
27	1745	LHS	30	25	25.0	0.0929	9.26	23.000	24	0.60	NA

Curve No.	Chainage of IP	Side of Curve	Radius	Design Speed (km/hr)	Transition Length (m)	Super elevation	But keep limited	Def. Angle (Deg)	Dev. Angle (Deg)	Extra Widening	Circular Arc Length (m)
28	1080	LHS	14	20	30.0	0.1268	10%	81.000	61	0.90	NA
29	1435	RHS	14	20	30.0	0.1268	10%	175.000	61	0.90	13
30	1605	RHS	30	25	30.0	0.1268	10%	73.000	18	0.60	23
31	1700	LHS	32	25	24.0	0.0881	8.88	43.000	31	0.60	NA
32	1745	LHS	30	25	25.0	0.0929	9.26	23.000	24	0.60	NA

