

Location : BH12

Pile Length (M)	10.000	If Liquefied strata than liquified level	No
Pile cutoff Length (m)	1.000	Pile Terminating level	
Angle of Internal Friction at Pile Tip (Degree)	ϕ	31	
Cohesion at Pile tip (t/m2)	c	0	

Bearing Capacity Factor			
Nc	Nq	Ny	
9	25	27.52	31

Ultimate pile capacity, $Q_u = Q_p + Q_s = \{ A_p N_c C_p + A_p (1/2 D \gamma N_y + P_d N_q) \} + \{ \text{Sum } (K P D_i \tan \alpha s_i) + \alpha \times C_a A_s \}$
 $Q_p = \text{End bearing resistance, } Q_s = \text{Frictional resistance}$

1 Pile dia (m) = 0.45

Depth from	Depth to	Length below cutoff (m)	Thickness of sand layer	Li	Cs T/m2	alpha	Pile dia D, m	Circumferential area As, m2	K	phi	Y (metric ton/m3)	Ysub (metric ton/m3)	po' ton/m2	Qs, Tonne	Qp, Tonne	Qu, Tonne	Qsafe in compression, Metric Tonne	Q safe Uplift, Metric Tonne
0.00	2.50			2.50			Ignored				0.0							
2.50	9.60			7.10	3.33	0.78	0.45	10.04		0	1.75	0.75	5.33	26.07				
9.60	10.00		0.40	0.40			0.45	0.57	1.00	31	1.80	0.80	5.49	1.86				
15D =	6.75	9.00	0.40	6.75			0.45			0	1.85	0.85	5.74	27.93	23.65	51.58	20.63	10.13

2 Pile dia (m) = 0.5

Depth from	Depth to	Length below cutoff (m)	Thickness of sand layer	Li	Cs T/m2	alpha	Pile dia D, m	Circumferential area As, m2	K	phi	Y (metric ton/m3)	Ysub (metric ton/m3)	po' ton/m2	Qs, Tonne	Qp, Tonne	Qu, Tonne	Qsafe in compression, Metric Tonne	Q safe Uplift, Metric Tonne
0.00	2.50			2.50			Ignored				0.0							
2.50	9.60			7.10	3.33	0.78	0.50	11.15		0	1.75	0.75	5.33	28.97				
9.60	10.00		0.40	0.40			0.50	0.63	1.00	31	1.80	0.80	5.49	2.07				
15D =	7.50	9.00	0.40	7.50			0.50			0	1.85	0.85	6.38	31.04	32.44	63.48	25.39	11.52

3 Pile dia (m) = 0.6

Depth from	Depth to	Length below cutoff (m)	Thickness of sand layer	Li	Cs T/m2	alpha	Pile dia D, m	Circumferential area As, m2	K	phi	Y (metric ton/m3)	Ysub (metric ton/m3)	po' ton/m2	Qs, Tonne	Qp, Tonne	Qu, Tonne	Qsafe in compression, Metric Tonne	Q safe Uplift, Metric Tonne
0.00	2.50			2.50			Ignored				0.0							
2.50	9.60			7.10	3.33	0.78	0.60	13.38		0	1.75	0.75	5.33	34.76				
9.60	10.00		0.40	0.40			0.60	0.75	1.00	31	1.80	0.80	5.49	2.48				
15D =	9.00	9.00	0.40	9.00			0.60			0	1.85	0.85	7.65	37.25	56.06	93.31	37.32	14.46



Location : BH13

Pile Length (M)	9.000	If Liquefied strata than liquified level	No
Pile cutoff Length (m)	1.000	Pile Terminating level	
Angle of Internal Friction at Pile Tip (Degree)	∅	0	
Cohesion at Pile tip (t/m2)	c	6.7	

Bearing Capacity Factor			
Nc	Nq	Ny	
9	0.00	0.00	0.00

Ultimate pile capacity, $Q_u = Q_p + Q_s = \{ A_p N_c C_p + A_p (1/2 D \gamma N_y + P_D N_q) + \{ \text{Sum } (K P_D i \tan \alpha_s) + \alpha \times C_a A_s \}$
 $Q_p = \text{End bearing resistance, } Q_s = \text{Frictional resistance}$

1 Pile dia (m) = 0.45

Depth from	Depth to	Length below cutoff (m)	Thickness of sand layer	Li	Cav, T/m2	alpha	Pile dia D, m	Circumferential area, m2	K	phi	Y (metric ton/m3)	Ysub (metric ton/m3)	po' ton/m2	Qs, Tonne	Qp, Tonne	Qu, Tonne	Qsafe in compression, Metric Tonne	Q safe Uplift, Metric Tonne	
0.00	2.00			2.00			Ignored												
2.00	9.00	8.00		7.00	4.46	0.58	0.45	9.90						25.60					
							0.45							25.60	9.59	35.19	14.08		9.22

2 Pile dia (m) = 0.5

0.00	2.00			2.00			Ignored													
2.00	9.00			7.00	4.46	0.58	0.50	11.00						28.44						
		8.00					0.50							28.44	11.84	40.28	16.11		10.48	

3 Pile dia (m) = 0.6

0.00	2.00			2.00			Ignored													
2.00	9.00			7.00	4.46	0.58	0.60	13.19						34.13						
		8.00					0.60							34.13	17.05	51.18	20.47		13.14	



Location: BH14

Pile Length (M)	14.000	If Liquefied strata than liquified level	No
Pile cutoff Length (m)	1.000	Pile Terminating level	
Angle of Internal Friction at Pile Tip (Degree)	∅	0	
Cohesion at Pile tip (t/m2)	c	3.3	

Bearing Capacity Factor		
Nc	Nq	Ny
9	0.00	0.00

Ultimate pile capacity, $Q_u = Q_p + Q_s = \{ A_p N_c C_p + A_p (1/2 D \gamma N_y + P_D N_q) \} + \{ \text{Sum } (K P D_i \tan \alpha_{si}) + \alpha \times C_a A_s \}$
 $Q_p = \text{End bearing resistance, } Q_s = \text{Frictional resistance}$

1 Pile dia (m) = 0.45

Depth from	Depth to	Length below cutoff (m)	Thickness of sand layer	Li	Cav, T/m2	alpha	Pile dia D, m	Circumferent ial area As, m2	K	phi	Y (metric ton/m3)	Ysub (metric ton/m3)	po' ton/m2	Qs, Tonne	Qp, Tonne	Qu, Tonne	Qsafe in copression, Metric Tonne	Q safe Uplift, Metric Tonne
0.00	2.00			2.00			Ignored											
2.00	14.00	13.00		12.00	2.66	1.00	0.45	16.96						45.13				
							0.45							45.13	4.72	49.85	19.94	15.99

2 Pile dia (m) = 0.5

Depth from	Depth to	Length below cutoff (m)	Thickness of sand layer	Li	Cav, T/m2	alpha	Pile dia D, m	Circumferent ial area As, m2	K	phi	Y (metric ton/m3)	Ysub (metric ton/m3)	po' ton/m2	Qs, Tonne	Qp, Tonne	Qu, Tonne	Qsafe in copression, Metric Tonne	Q safe Uplift, Metric Tonne
0.00	2.00			2.00			Ignored											
2.00	14.00	13.00		12.00	2.66	1.00	0.50	18.85						50.14				
							0.50							50.14	5.83	55.97	22.39	18.15

3 Pile dia (m) = 0.6

Depth from	Depth to	Length below cutoff (m)	Thickness of sand layer	Li	Cav, T/m2	alpha	Pile dia D, m	Circumferent ial area As, m2	K	phi	Y (metric ton/m3)	Ysub (metric ton/m3)	po' ton/m2	Qs, Tonne	Qp, Tonne	Qu, Tonne	Qsafe in copression, Metric Tonne	Q safe Uplift, Metric Tonne
0.00	2.00			2.00			Ignored											
2.00	14.00	13.00		12.00	2.66	1.00	0.60	22.62						60.17				
							0.60							60.17	8.40	68.57	27.43	22.70



Location: BH15

Pile Length (M)	8.000	If Liquefied strata than liquified level	No
Pile cutoff Length (m)	1.000	Pile Terminating level	
Angle of Internal Friction at Pile Tip (Degree)	∅	31	
Cohesion at Pile tip (t/m2)	c	0	

Bearing Capacity Factor			
Nc	Nq	Ny	
9	25	27.52	31

Ultimate pile capacity, $Q_u = Q_p + Q_s = \{ A_p N_c C_p + A_p (1/2 D \gamma N_y + P_b N_q) \} + \{ \text{Sum } (K P D_i \tan \alpha_{si}) + \alpha \times C_a A_s \}$
 $Q_p =$ End bearing resistance, $Q_s =$ Frictional resistance

1 Pile dia (m) = 0.45

Depth from	Depth to	Length below cutoff (m)	Thickness of sand layer	Li	C, T/m2	alpha	Pile dia D, m	Circumferential area, As, m2	K	phi	Y (metric ton/m3)	Ysub (metric ton/m3)	po' ton/m2	Qs, Tonne	Qp, Tonne	Qu, Tonne	Qsafe in copression, Metric Tonne	Q safe Uplift, Metric Tonne
0.00	2.50			2.50			Ignored				0.0							
2.50	6.80			4.30	3.56	0.78	0.45	6.08		0	1.75	0.75	3.23	16.88				
6.80	8.00		1.20	1.20			0.45	1.70	1.00	31	1.80	0.80	3.71	3.78				
15D =	6.75	7.00	1.20	6.75			0.45			0	1.85	0.85	5.74	20.66	23.65	44.31	17.72	7.57

2 Pile dia (m) = 0.5

Depth from	Depth to	Length below cutoff (m)	Thickness of sand layer	Li	C, T/m2	alpha	Pile dia D, m	Circumferential area, As, m2	K	phi	Y (metric ton/m3)	Ysub (metric ton/m3)	po' ton/m2	Qs, Tonne	Qp, Tonne	Qu, Tonne	Qsafe in copression, Metric Tonne	Q safe Uplift, Metric Tonne
0.00	2.50			2.50			Ignored				0.0							
2.50	6.80			4.30	3.56	0.78	0.50	6.75		0	1.75	0.75	3.23	18.76				
6.80	8.00		1.20	1.20			0.50	1.88	1.00	31	1.80	0.80	3.71	4.20				
15D =	7.50	7.00	1.20	7.50			0.50			0	1.85	0.85	6.38	22.95	32.44	55.39	22.16	8.62

3 Pile dia (m) = 0.6

Depth from	Depth to	Length below cutoff (m)	Thickness of sand layer	Li	C, T/m2	alpha	Pile dia D, m	Circumferential area, As, m2	K	phi	Y (metric ton/m3)	Ysub (metric ton/m3)	po' ton/m2	Qs, Tonne	Qp, Tonne	Qu, Tonne	Qsafe in copression, Metric Tonne	Q safe Uplift, Metric Tonne
0.00	2.50			2.50			Ignored				0.0							
2.50	6.80			4.30	3.56	0.78	0.60	8.11		0	1.75	0.75	3.23	22.51				
6.80	8.00		1.20	1.20			0.60	2.26	1.00	31	1.80	0.80	3.71	5.04				
15D =	9.00	7.00	1.20	9.00			0.60			0	1.85	0.85	7.65	27.54	56.06	83.60	33.44	10.84



Location: BH16

Pile Length (M)	11.000	If Liquefied strata than liquefied level	No
Pile cutoff Length (m)	1.000	Pile Terminating level	
Angle of Internal Friction at Pile Tip (Degree)	∅	0	
Cohesion at Pile tip (t/m2)	c	3.3	

Bearing Capacity Factor	
Nc	Nq
9	0.00
	Ny
	0.00

Ultimate pile capacity, $Q_u = Q_p + Q_s = \{ A_p N_c C_p + A_p (1/2 D \gamma N_\gamma + P_D N_q) \} + \{ \text{Sum } (K P_D i \tan \alpha) \}$
 $Q_p = \text{End bearing resistance, } Q_s = \text{Frictional resistance}$

1 Pile dia (m) = 0.45

Depth from	Depth to	Length below cutoff (m)	Thickness of sand layer	Li	Cav, T/m2	alpha	Pile dia D, m	Circumferent ial area As, m2	K	phi	Y (metric ton/m3)	Ysub (metric ton/m3)	po' ton/m2	Qs, Tonne	Qp, Tonne	Qu, Tonne	Qsafe in copression, Metric Tonne	Q safe Uplift, Metric Tonne
0.00	2.00			2.00			Ignored											
2.00	11.00	10.00		9.00	4.86	0.58	0.45	12.72						35.86	4.72	40.59	16.24	12.63
							0.45							35.86	4.72	40.59	16.24	12.63

2 Pile dia (m) = 0.5

Depth from	Depth to	Length below cutoff (m)	Thickness of sand layer	Li	Cav, T/m2	alpha	Pile dia D, m	Circumferent ial area As, m2	K	phi	Y (metric ton/m3)	Ysub (metric ton/m3)	po' ton/m2	Qs, Tonne	Qp, Tonne	Qu, Tonne	Qsafe in copression, Metric Tonne	Q safe Uplift, Metric Tonne	
0.00	2.00			2.00			Ignored												
2.00	11.00	10.00		9.00	4.86	0.58	0.50	14.14						39.85	5.83	45.68	18.27	14.33	
							0.50							39.85	5.83	45.68	18.27	14.33	

3 Pile dia (m) = 0.6

Depth from	Depth to	Length below cutoff (m)	Thickness of sand layer	Li	Cav, T/m2	alpha	Pile dia D, m	Circumferent ial area As, m2	K	phi	Y (metric ton/m3)	Ysub (metric ton/m3)	po' ton/m2	Qs, Tonne	Qp, Tonne	Qu, Tonne	Qsafe in copression, Metric Tonne	Q safe Uplift, Metric Tonne	
0.00	2.00			2.00			Ignored												
2.00	11.00	10.00		9.00	4.86	0.58	0.60	16.96						47.82	8.40	56.22	22.49	17.90	
							0.60							47.82	8.40	56.22	22.49	17.90	



Ref : Appendix-C (cl 6.5.2) of IS 2911 (Part 1/Sec. 2) – 2010

$$\text{Stiffness factor } R = \sqrt[4]{\frac{EI}{KB}} \quad \text{for clay soil}$$

$$T = \sqrt[5]{\frac{EI}{\eta h}} \quad \text{for sandy soil}$$

E = Modulus of Elasticity of pile material = $5000 \sqrt{f_{ck}}$ E = 25×10^6 KN/m² for concrete for $f_{ck} = 25$ N/mm²I = Moment of Inertia = $\frac{\pi D^4}{64}$

B = D = diameter of pile

Deflection of pile

$$y = \frac{11(e + Z_f) \times 1000}{12 EI}$$

H = lateral load in KN

y = deflection of pile head in mm

e = cantilever length above ground/ bed

E = Modulus of elasticity in KN/m²I = Moment of Inertia in m⁴Z_f = Depth of point of fixity in m**Calculation Details (Clay)**

	f _{ck} =	25 N/mm ²	
	E=	25000000 KN/m ²	
1 Pile dia	B=D(m)	0.45	
2 Pile Length	L(m)	8.00	
Pile Length			
3 (soft soil)	L1(m)	0.00	
			for Cohesive soil (medium stiff)
5 k ₁ = Modulus of subgrade reaction		19500.00 KN/m ³	
6 K = k ₁ × 0.3 / (1.5 × B)		8666.67	
7 I = Moment of inertia		0.00 m ⁴	
8 E = Modulus of elasticity		25000000 KN/m ²	
9 R		1.90	
10 L1/R		0.00	
11 2R		3.79	L=12 > 2R
12 3.5R			
13 Lf/R		2.00	
14 Lf		3.79	
15 e (m) eccentricity		0.00	
16 (Length of fixity)		6.68	
17 y = (Permissible deflection mm)		4.50	
18 H = lateral load capacity		49.89 KN =	4.99 Ton

Ref : Appendix-C (cl 6.5.2) of IS 2911 (Part 1/Sec. 2) – 2010

$$\text{Stiffness factor } R = \frac{4 \sqrt{EI}}{\sqrt{KB}} \quad \text{for clay soil}$$

$$T = \frac{5 \sqrt{EI}}{\sqrt{\eta h}} \quad \text{for sandy soil}$$

E = Modulus of Elasticity of pile material = $5000 \sqrt{f_{ck}}$ E = 25×10^6 KN/m² for concrete for $f_{ck} = 25$ N/mm²I = Moment of Inertia = $\pi D^4 / 64$

B = D = diameter of pile

Deflection of pile

$$y = \frac{11(e + Z_f) \times 1000}{12 EI}$$

H = lateral load in KN

y = deflection of pile head in mm

e = cantilever length above ground/ bed

E = Modulus of elasticity in KN/m²I = Moment of Inertia in m⁴Z_f = Depth of point of fixity in m**Calculation Details (Clay)**f_{ck} = 25 N/mm²E = 25000000 KN/m²

1 Pile dia	B=D(m)	0.50	
2 Pile Length	L(m)	8.00	
	Pile Length		
3 (soft soil)	L1(m)	0.00	
			for Cohesive soil
5 k1= Modulus of subgrade reaction		19500.00 KN/m ³	(medium stiff)
6 K = k1x0.3/(1.5 xB)		7800.00	
7 I= Moment of inertia		0.00 m ⁴	
8 E = Modulus of elasticity		25000000 KN/m ²	
9 R		2.11	
10 L1/R		0.00	
11 2R		4.21	L=12 > 2R
12 3.5R			
13 Lf/R		2.00	
14 Lf		4.21	
15 e (m)	eccentricity	0.00	
16	(Length of fixity)	6.68	
17 y=(Permissible deflection mm)		5.00	
18 H = lateral load capacity		61.59 KN =	6.16 Ton

Ref : Appendix-C (cl 6.5.2) of IS 2911 (Part 1/Sec. 2) – 2010

$$\text{Stiffness factor } R = \sqrt[4]{\frac{EI}{KB}} \quad \text{for clay soil}$$

$$T = \sqrt[5]{\frac{EI}{\eta h}} \quad \text{for sandy soil}$$

E = Modulus of Elasticity of pile material = $5000\sqrt{f_{ck}}$

E = 25×10^6 KN/m² for concrete for $f_{ck} = 25$ N/mm²

I = Moment of Inertia = $\pi D^4 / 64$

B = D = diameter of pile

Deflection of pile

$$y = \frac{11(e + Z_f) \times 1000}{12 EI}$$

H = lateral load in KN

y = deflection of pile head in mm

e = cantilever length above ground/ bed

E = Modulus of elasticity in KN/m²

I = Moment of Inertia in m⁴

Z_f = Depth of point of fixity in m

Calculation Details (Clay)

	f _{ck} =	25 N/mm ²	
	E=	25000000 KN/m ²	
1 Pile dia	B=D(m)	0.60	
2 Pile Length	L(m)	8.00	
	Pile Length		
3 (soft soil)	L1(m)	0.00	
			for Cohesive soil
5 k ₁ = Modulus of subgrade reaction		19500.00 KN/m ³	(medium stiff)
6 K = k ₁ × 0.3 / (1.5 × B)		6500.00	
7 I = Moment of inertia		0.01 m ⁴	
8 E = Modulus of elasticity		25000000 KN/m ²	
9 R		2.53	
10 L1/R		0.00	
11 2R		5.05	L=12 > 2R
12 3.5R			
13 Lf/R		2.00	
14 Lf		5.05	
15 e (m)	eccentricity	0.00	
16	(Length of fixity)	6.68	
17 y=(Permissible deflection mm)		6.00	
18 H = lateral load capacity		88.69 KN =	8.87 Ton

LOCATION -BH1

LABORATORY C.B.R. TEST DATA SHEET (As per IS : 2720 part XVI)

Test condition: Soaked

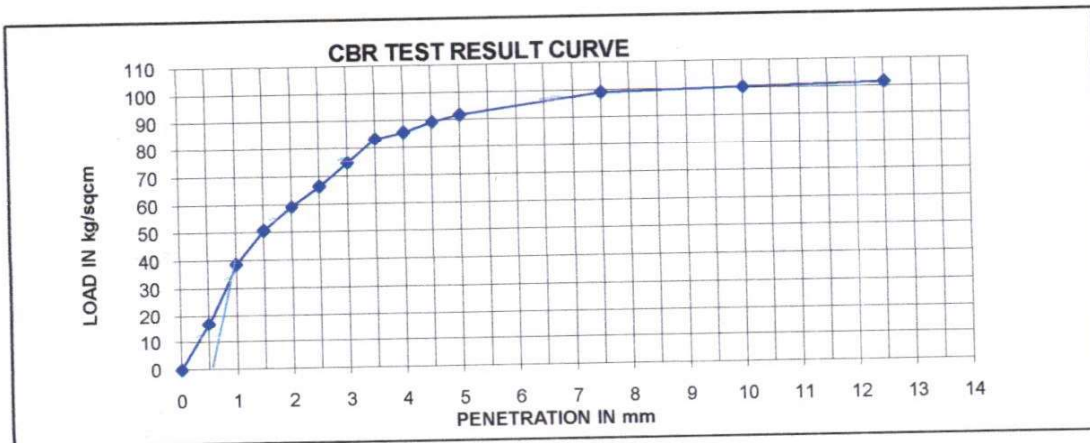
Nature of Sample: Compacted in 3 layers with 55 blows of 2.6 kg rammer
having 31 cm drop at OMC and 100% Proctor Density (approx)

Size of Mould = 15cm dia x 12.73 cm height Sample Taken = 6 kg

Penetration Data

Proving Ring Used: 1000kg

Penetration (mm)	TEST LOAD (kg)		Corrected load (kg)	Standard Load (kg)	% standard load (%)	C.B.R.
	Proving ring Reading	Load				
0	0	0				5.3
0.5	15	16.9				
1.0	35	38.7				
1.5	46	50.8				
2.0	54	59.3				
2.5	61	66.6	73.2	1370	5.3	
3.0	68	75.0				
3.5	76	83.5				
4.0	78	85.9				
4.5	81	89.5				
5.0	84	92.0	91.3	2055	4.4	
7.5	90	99.2				
10.0	91	100.4				
12.5	92	101.6				



LOCATON -BH2

LABORATORY C.B.R. TEST DATA SHEET (As per IS : 2720 part XVI)

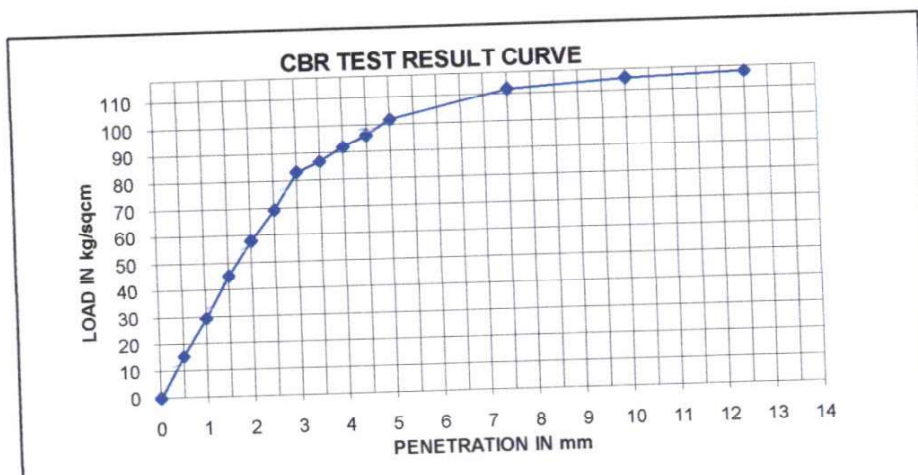
Test condition: Soaked

Nature of Sample: Compacted in 3 layers with 55 blows of 2.6 kg rammer
having 31 cm drop at OMC and 100% Proctor Density (approx)

Size of Mould = 15cm dia x 12.73 cm height Sample Taken = 6 kg

Penetration Data**Proving Ring Used: 1000kg**

Penetration (mm)	TEST LOAD (kg)		Corrected load (kg)	Standard Load (kg)	% standard load (%)	C.B.R.
	Proving ring Reading	Load				
0	0	0				
0.5	12.0	15.6				
1.0	22.9	29.7				
1.5	34.9	45.3				
2.0	44.7	58.1				
2.5	53.4	69.4	69.4	1370	5.1	
3.0	64.0	83.1				5.1
3.5	67.0	87.0				
4.0	71.0	92.2				
4.5	74.1	96.3				
5.0	78.5	101.9	101.9	2055	5.0	
7.5	86.1	111.9				
10.0	88.3	114.7				
12.5	89.4	116.1				



Location: BH3

LABORATORY C.B.R. TEST DATA SHEET (As per IS : 2720 part XVI)

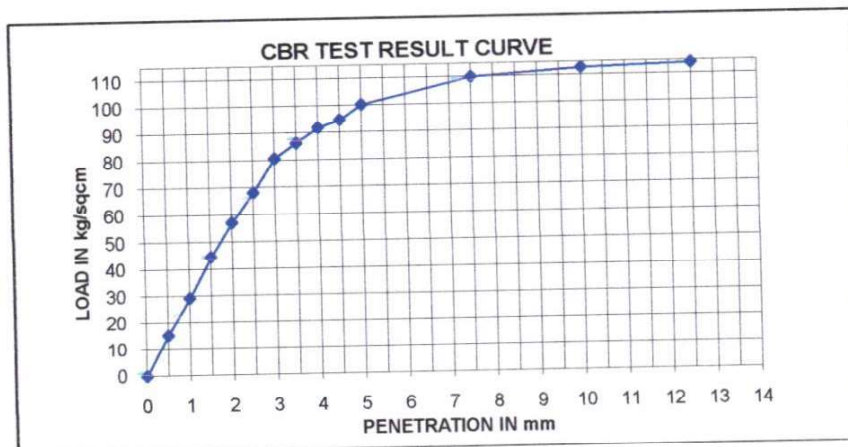
Test condition: Soaked

Nature of Sample: Compacted in 3 layers with 55 blows of 2.6 kg rammer
having 31 cm drop at OMC and 100% Proctor Density (approx)

Penetration Data

Proving Ring Used: 1000kg

Penetration (mm)	TEST LOAD (kg)		Corrected load (kg)	Standard Load (kg)	% standard load (%)	C.B.R.
	Proving ring Reading	Load				
0	0	0				5.0
0.5	13	15.3				
1.0	25	29.2				
1.5	38	44.6				
2.0	48	57.1				
2.5	58	68.2	68.2	1370	5.0	
3.0	68	80.8				
3.5	73	86.3				
4.0	78	91.9				
4.5	80	94.7				
5.0	85	100.3	100.3	2055	4.9	
7.5	93	110.0				
10.0	96	112.8				
12.5	97	114.2				



Location:-BH4

LABORATORY C.B.R. TEST DATA SHEET (As per IS : 2720 part XVI)

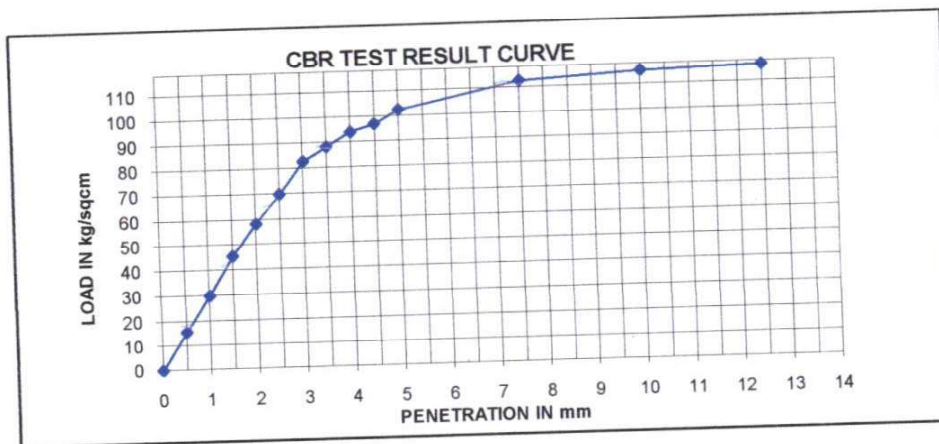
Test condition: Soaked

Nature of Sample: Compacted in 3 layers with 25 blows of 2.6 kg rammer
having 31 cm drop at OMC and 100% Proctor Density (approx)

Penetration Data

Proving Ring Used: 1000kg

Penetration (mm)	TEST LOAD (kg)		Corrected load (kg)	Standard Load (kg)	% standard load (%)	C.B.R.
	Proving ring Reading	Load				
0	0.0	0				
0.5	11.4	15.7				
1.0	21.8	29.9				
1.5	33.3	45.6				
2.0	42.6	58.4				
2.5	51.0	69.8	69.8	1370	5.1	
3.0	60.3	82.6				5.1
3.5	64.5	88.3				
4.0	68.6	94.0				
4.5	70.7	96.9				
5.0	74.9	102.6	102.6	2055	5.0	
7.5	82.2	112.6				
10.0	84.2	115.4				
12.5	85.3	116.8				



Location:-BH5

LABORATORY C.B.R. TEST DATA SHEET (As per IS : 2720 part XVI)

Test condition: Soaked

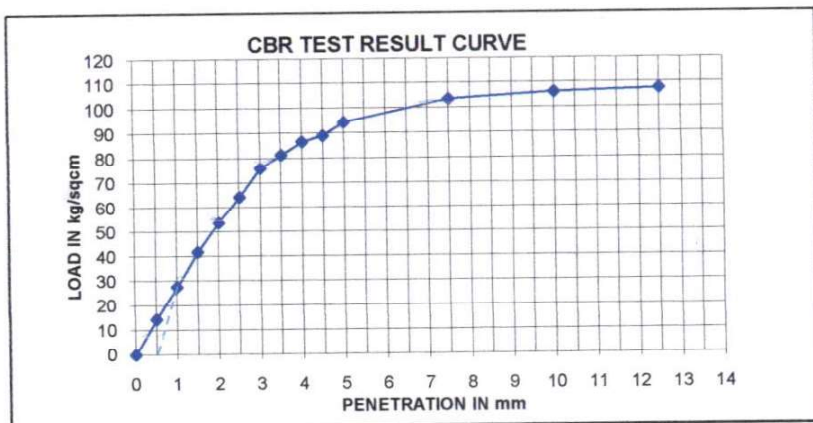
Nature of Sample: Compacted in 3 layers with 55 blows of 2.6 kg rammer
having 31 cm drop at OMC and 100% Proctor Density (approx)

Size of Mould = 15cm dia x 12.73 cm height Sample Taken = 6 kg

Penetration Data

Proving Ring Used: 1000kg

Penetration (mm)	TEST LOAD (kg)		Corrected load (kg)	Standard Load (kg)	% standard load (%)	C.B.R.
	Proving ring Reading	Load				
0	0	0				
0.5	13	14.4				
1.0	24	27.5				
1.5	36	42.0				
2.0	47	53.8				
2.5	56	64.2	77	1370	5.6	
3.0	66	76.0				5.6
3.5	71	81.3				
4.0	75	86.5				
4.5	78	89.1				
5.0	82	94.4	97	2055	4.7	
7.5	90	103.6				
10.0	92	106.2				
12.5	93	107.5				



Location:-BH6

LABORATORY C.B.R. TEST DATA SHEET (As per IS : 2720 part XVI)

Test condition: Soaked

Nature of Sample: Compacted in 3 layers with 55 blows of 2.6 kg rammer

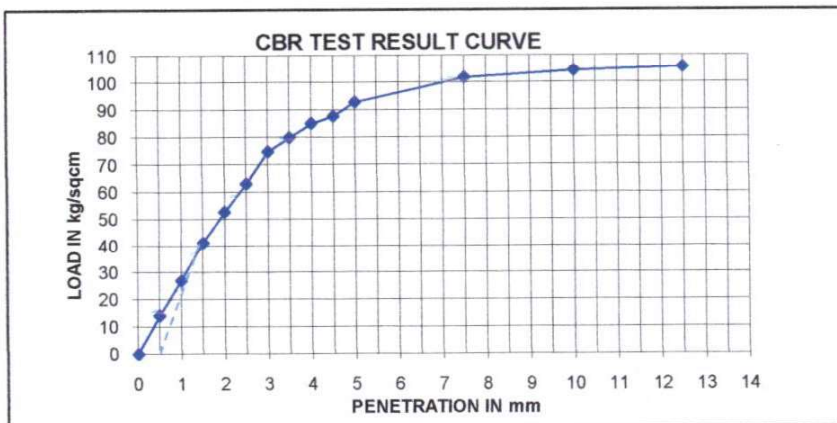
having 31 cm drop at OMC and 100% Proctor Density (approx)

Size of Mould = 15cm dia x 12.73 cm height Sample Taken = 6 kg

Penetration Data

Proving Ring Used: 1000kg

Penetration (mm)	TEST LOAD (kg)		Corrected load (kg)	Standard Load (kg)	% standard load (%)	C.B.R.
	Proving ring Reading	Load				
0	0	0				5.6
0.5	11	14.2				
1.0	21	27.1				
1.5	32	41.3				
2.0	41	52.9				
2.5	49	63.2	77.2	1370	5.6	
3.0	58	74.8				
3.5	62	80.0				
4.0	66	85.1				
4.5	68	87.7				
5.0	72	92.9	95.2	2055	4.6	
7.5	79	101.9				
10.0	81	104.5				
12.5	82	105.8				



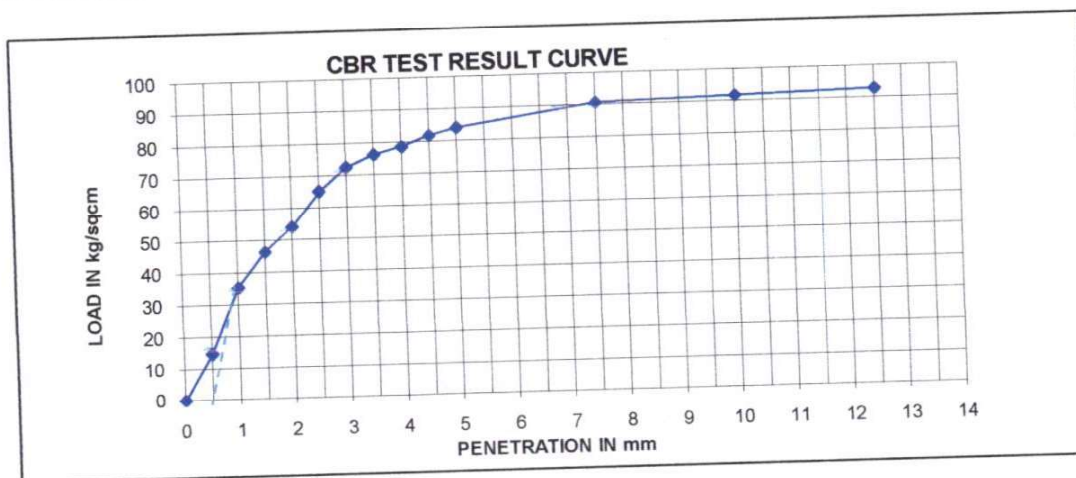
Location:-BH-7

LABORATORY C.B.R. TEST DATA SHEET (As per IS : 2720 part XVI)

Test condition: Soaked

Nature of Sample: Compacted in 3 layers with 25 blows of 2.6 kg rammer
having 31 cm drop at OMC and 100% Proctor Density (approx)**Penetration Data****Proving Ring Used: 1000kg**

Penetration (mm)	TEST LOAD (kg)		Corrected load (kg)	Standard Load (kg)	% standard load (%)	C.B.R
	Proving ring Reading	Load				
0	0	0				
0.5	12	14.8				
1.0	29	35.4				
1.5	38	46.5				
2.0	44	54.2				
2.5	53	65.2	71.6	1370	5.2	5.2
3.0	59	72.6				
3.5	62	76.4				
4.0	64	78.6				
4.5	67	81.9				
5.0	68	84.1	85.6	2055	4.2	
7.5	74	90.8				
10.0	75	91.9				
12.5	76	93.0				



Location: BH8

LABORATORY C.B.R. TEST DATA SHEET (As per IS : 2720 part X

Test condition: Soaked

Nature of Sample: Compacted in 3 layers with 55 blows of 2.6 kg rammer

having 31 cm drop at OMC and 100% Proctor Density (approx)

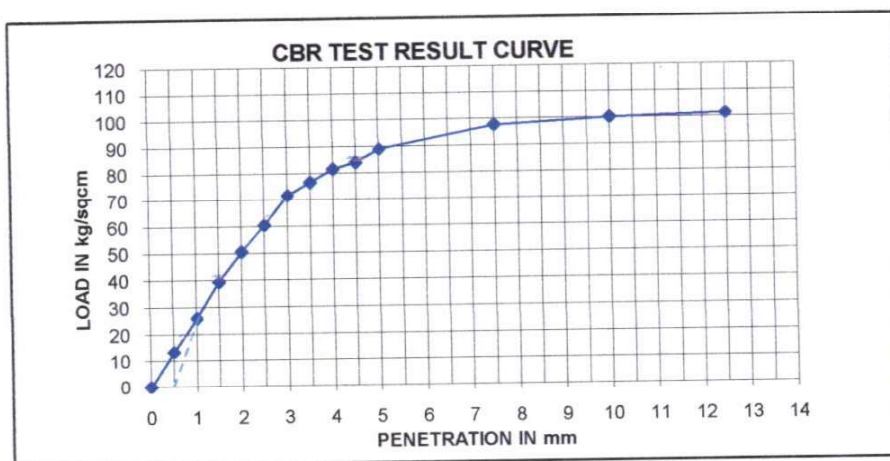
Size of Mould = 15cm dia x 12.73 cm height

Sample Taken = 6 kg

Penetration Data

Proving Ring Used: 1000kg

Penetration (mm)	TEST LOAD (kg)		Corrected load (kg)	Standard Load (kg)	% standard load (%)	C.B.R.
	Proving ring Reading	Load				
0	0	0				
0.5	11	13.6				
1.0	22	26.0				
1.5	33	39.6				
2.0	43	50.7				
2.5	51	60.6	70.5	1370	5.1	
3.0	60	71.8				5.1
3.5	64	76.7				
4.0	69	81.7				
4.5	71	84.2				
5.0	75	89.1	90.6	2055	4.4	
7.5	82	97.8				
10.0	84	100.2				
12.5	85	101.5				



Location BH-09

LABORATORY C.B.R. TEST DATA SHEET (As per IS : 2720 part XVI)

Test condition: Soaked

Nature of Sample: Compacted in 3 layers with 55 blows of 2.6 kg rammer
having 31 cm drop at OMC and 100% Proctor Density (approx)

Size of Mould = 15cm dia x 12.73 cm height Sample Taken = 6 kg

Penetration Data**Proving Ring Used: 1000kg**

Penetration (mm)	TEST LOAD (kg)		Corrected load (kg)	Standard Load (kg)	% standard load (%)	C.B.R.
	Proving ring Reading	Load				
0	0	0				
0.5	12	14.4				
1.0	23	27.5				
1.5	35	41.9				
2.0	45	53.6				
2.5	53	64.1	76	1370	5.5	
3.0	64	76.8				5.5
3.5	67	80.4				
4.0	71	85.2				
4.5	74	88.9				
5.0	78	94.2	97	2055	4.7	
7.5	86	103.3				
10.0	88	105.9				
12.5	89	107.3				

