Laboratory	**Subudhi Associates, Plot No-327/2702, Omfed Backside, Chandrasekharpur, Bhubaneswar, Odisha**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		MECHANICAL TESTING		
I.	**SOIL AND ROCK**			
1.	**Soil**	Moisture Content	IS 2720 (Part 2): 1973 (RA 2015)	0 to 80 %
		Specific gravity	IS 2720 (Part 3): 1980 (RA 2011) Section 1 & 2	1.4 to 3.00
		Grain size Analysis sieve	IS 2720 (Part 4): 1985 (RA 2015)	0.075 mm to 40 mm 0 to 100 %
		Liquid limit & Plastic Limit by Casagrande Apparatus	IS 2720 (Part 5): 1985 (RA 2015)	5 % to 100 %
		Light Compaction	IS 2720 (Part 7): 1980 (RA 2011)	OMC: 5 % to 40 % MDD: 1.10 gm/cc to 2.30 gm/cc
		Heavy compaction	IS 2720 (Part 8): 1983 (RA 2015)	OMC: 5 % to 40 % MDD: 1.10 gm/cc to 2.30 gm/cc
		Direct shear test	IS 2720 (Part 13): 1986 (RA 2015)	C=0 to 5 kg/cm^2 Ø= <50 °
		California bearing ratio (CBR)	IS 2720 (Part 16): 1987 (RA 2011)	3 % to 100 %
		Free swell index	IS 2720 (Part 40): 1977 (RA 2011)	0 to 80 %
2.	**Rock**	Unconfined Compressive strength	IS 9143:1979 (RA 2010)	10 N/mm^2 to 80 N/mm^2
		Water Absorption	IS 2386 (Part 3): 1963 (RA 2016)	0.1% to 5 %
		Specific gravity	IS 2386 (Part 3): 1963 (RA 2016)	2 to 4

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
II.	**BUILDING MATERIALS**			
1.	**Cement**	Fineness by dry sieve method	IS 4031 (Part 1): 1996 (RA 2010)	0.1 % to 10 %
		Soundness (Le-chatelier method	IS 4031 (Part 3): 1988 (RA 2010)	< 10 mm
		Consistency of standard cement paste	IS 4031 (Part 4): 1988 (RA 2009)	20 % to 40 %
		Initial setting time	IS 4031 (Part 5): 1988 (RA 2009)	30 min to 600 min
		Final setting time	IS 4031 (Part 5): 1988 (RA 2009)	30 min to 600 min
		Compressive strength of cement	Compressive strength of cement	5 N/mm^2 to 70 N/mm^2
2.	**Aggregate**	Sieve size Analysis	IS 2386 (Part 1): 1963 (RA 2016)	4.75 mm to 63 mm 0 to 100 %
		Flakiness & Elongation Index (FI &EI)	IS 2386 (Part 1): 1963 (RA 2016)	5 % to 50 %
		Deleterious Material	IS 2386 (Part 2): 1963 (RA 2016)	0 to 15 %
		Specific gravity	IS 2386 (Part 3): 1963 (RA 2016)	2.0 to 4.0
		Water Absorption	IS 2386 (Part 3): 1963 (RA 2016)	0.1 % to 5 %
		Aggregate Impact value(AIV)	IS 2386 (Part 4): 1963 (RA 2016)	0 to 50 %
		Los Angeles Abrasion value (LAA)	IS 2386 (Part 4): 1963 (RA 2016)	0 to 50 %
		Aggregate Crushing Strength(ACV)	IS 2386 (Part 4): 1963 (RA 2016)	0 to 50 %
		10 % fine value	IS 2386 (Part 4): 1963 (RA 2016)	1 kN to 200 kN

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
3.	**Fine Aggregate**	Specific gravity	IS 2386 (Part 3): 1963 (RA 2016)	2.0 to 4.0
		Water Absorption	IS 2386 (Part 3): 1963 (RA 2016)	0 to 5.0 %
		Sieve Analysis	IS 2386 (Part 1): 1963 (RA 2016)	0 to 100 %
		Silt Content.	CPWD specification Vol -1 Clause No. 3.1.3.2	0.5 % to 20 %
4.	**Harden Concrete**	Compressive strength of Concrete	IS 516:1999 (RA 2008)	1 N/mm^2 to 70 N/mm^2
		Flexural Strength of Concrete	IS 516:1999 (RA 2008)	1 N/mm^2 to 50 N/mm^2
5.	**Bricks**	Compressive Strength	IS 3495 (Part 1): 1992 (RA 2002)	1 N/mm^2 to 30 N/mm^2
		Water Absorption	IS 3495 (Part 2): 1992 (RA 2002)	3 % to 30 %
		Dimension test	IS 1077 (Part 1): 1992 (RA 2011)	5 cm to 800 cm
6.	**Paver Block**	Compressive Strength	IS 15658:2006 (RA 2011)	10 N/mm^2 to 80 N/mm^2
		Water Absorption	IS 15658:2006 (RA 2011)	2 % to 25 %
III.	**MECHANICAL PROPERTIES OF METALS**			
1.	**Steel for Concrete Reinforcement**	Tensile Test	IS 1608 (Part 1): 2018	100 mm^2 to 800 mm^2
		Yield Stress		10 N/mm^2 to 800 N/mm^2
		Elongation		1 % to 50 %
		Bend Test	IS 1599:2012 (RA 2015) IS 1786:2008 (RA 2013)	Qualitative 6 mm to 25 mm dia
		Mass per meter	IS 1786:2008 (RA 2013)	0.1 kg/m to 10 kg/m

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