

Details of QC Testing facilities			
Name of the Division	Location	Availability of Quality testing facility	Remark.
Quality Assurance Circle (Central), Bhubaneswar			
Quality Assurance Division Cuttack.	Cuttack	Collection disturbed Soil Sample & logging of trial pits of 2 meters depth(Party to supply labour and materials)	
		Collection disturbed Soil Sample & logging of trial pits (Party to supply labour and materials)	
		Determination of Insitu dry density & natural moisture content of U/D samples IS 2720(Part-29)	
		Collection of Soil Sample by hand Auger(Party to supply labour)	
		Determination of Specific Gravity of Soil. IS 2720 (Part-3)	
		Determination of Liquid Limit test of Soil. IS 2720 (Part 5)	
		Determination of Shrinkage Limit. IS 2720 (Part -6)	
		Grain Size Analysis IS 2720 (Part -4)	
		Compaction Test	
		i) Standard Proctor Compaction	
		ii)Minuature Compaction	
		iii) Abbot's Compaction	
		iv)Modified (Heavy) Compaction IS 2720 (Part-7)	
		Permiabilty Test	
		i) Remoulded Soil Sample	
		ii)Un-Disturbed Soil Sample IS 2720 (Part-17)	
		Direct Shear Test	
		i) Remoulded Soil Sample	
		ii)Un-Disturbed Soil Sample IS 2720 (Part-13)	
		Triaxial Shear Test	
		i)Disturbed or Un-Disturbed Soil Sample (Quick)	
		ii)Consolidated. Undrained with pore pressure measurement Is 2720 (Part-12)	
		Un-confined Compression test	
		Laboratory Vane Shear test IS 2720 (Part-30)	
		C.B.R Test	
		IS : 2720 (Part - 16)	
		IS : 2720 (Part - 31)	
Plate Load Bearing Capacity Test at Site (S.B.C), Party to supply labour to and fro carring charge to testing materials and watch & ward of materials at site			
Consolidation Test IS: 2720 (Part-15)			
Determination of S.B.C Test by indirect method IS: 1904			
Field permiability test/penetration test/water loss (per stage of 1.5M or less) (Party to supply & operate m/c) IS:5529 part-I and part II			
Swelling Pressure Test IS: 2720 (Part-41)			

Name of the Division	Location	Availability of Quality testing facility	Remark.
		Free Swell Test IS: 2720 (Part-40)	
		Field permeability Test IS: 2720 (Part-40)	
		Grouting in drill hole at site (per stage)(Party to supply all equipments & labour)(IS:6066)	
		Chemical Analysis of Water as per IS:3025	
		B.O.D & C.O.D Analysis of water as per IS:3025	
		Turbidity Analysis of Water	
		Sodium/Potassium/Iron analysis of water/Cement	
		Dissolved oxygen analysis of Water	
		Residual Chloride in Water	
		Sulphide as Hydrogen sulphide in Water	
		Determination of dissolved carbon dioxide	
		Determination of Boron	
		Determination of Fluoride	
		Determination of Arsenic	
		Oil & grese determination of Water	
		Chemical analysis of Cement & Fly ash as per IS:4032	
		Cement Mortar analysis as per IS:1199	
		Alkali aggr. Reactivity Test as per IS: 2386 (part-VII)	
		Carbon Sulphate and Chloride content of Soil	
		Organic content of Soil IS:2720 (Part-22)	
		Determination of PH of Soil IS:2720(Part-26)	
		Soluble solid contnt of Soil IS:2720(Part-21)	
		Total Nitrogen of water	
		Specific Gravity	
		Water Absorption	
		Soundness of Aggregates	
		Impact Value	
		Abrasion Test	
		Aggregate Crushing Test	
		2" Cube Cutting Stone	
		Seive Analysis of sand & aggregates	
		Unit Weight of materials	
		Colour Test of Sand	
		Clay & Silt Content	
		Determination of Voids	
		Fakiness Index	
		Elongation Index	
		Bulk Density of Aggregate	
		Bulkage of Sand	
		Consistency & Setting time of Cement	
		Finess of Cement	

Name of the Division	Location	Availability of Quality testing facility	Remark.
		Expansion of Cement Casting of 2" mortar cube Slump Test Compressive Strength.(Rate for set of 3 Nos) Mix Design 75 cm masonry block Drill Core Cutting (Collection by Sampling Kit) Dimensional Tolerance Non-destructive test on concrete by ultrasonic instrument Tensile Strength	
Quality Assurance Division Bhubaneswar.	Bhubaneswar	<u>Soil</u> Liquid Limit & Plastic Limit Grain size Analysis Compaction <u>Concrete</u> Consistency & Setting time Fineness Soundness Casting of cement mortar Compressive strength Sieve analysis Water Absorption Impact Value Flakiness Index Elongation Index Specific Gravity Mix Design <u>Tests for road works</u> Seive analysis Water Absorption Abrasion <u>Tests for Bricks</u> Water Absorption Compressive strength <u>Tests for Sand</u> Sieve Analysis Silt & Clay Specific Gravity water Absorption	
Quality Assurance Division Nayagarh	Nayagarh	Liquid Limit of soil Plastic Limit of soil Grain size Analysis of soil	

Name of the Division	Location	Availability of Quality testing facility	Remark.
		Compaction(MDd & OMC) Core cutter (FDD & OMC) Consolidation permeability Swell test Free swell index Liquid limit of Moorum Plastic limit of moorum Grain size Analysis of Moorum Compressive strength of cubes of concrete/ set Design mix of concrete entrapped Air in concrete Slump (Cone method Slump (compaction factor method) Water absorption of chips and metal Impact value of chips and metal Specific gravity of chips and metal seive analysis of chips and metal Abrasion value of chips and metal Crushing value of chips and metal Sieve analysis of sand silt content of sand Bulking of sand Specific gravity of sand Water absorption of stone Impact value of stone Specific gravity of stone soundness of stone Consistency of cement Initial setting time of cement Final setting time of cement Fineness of cement Compressive strength of cement cubes/ set	
Quality Assurance Division Chandikhol.	Chandikhol	-	Newly created Quality Assurance Division.
Quality Assurance Circle (West), Burla.			
Quality Assurance Division Hirakud	Hirakud	Sieve analysis/ Grain size analysis test Sp. Gravity of soil test Liquid limit & plastic limit test Shrinkage limit test Compaction test	

Name of the Division	Location	Availability of Quality testing facility	Remark.
		Permibility test	
		Triaxial shear test(Disturbed or undisturbed soil sample	
		Triaxial shear testconsolidated undrained with pore pressure measurement	
		Swelling pressure test.	
		CBR test	
		Gradation test of CA and FA/ sieve analysis test	
		Flakiness test of CA	
		Elongation test of C.A	
		Abrassion test of C.A	
		Impact test of C.A	
		Bulk density of C.A & F.A	
		Consistency & setting time of cement test	
		Sp. Gravity test of F.A & C.A	
		Crushing strength test of F.A & C.A	
		Soundness test of C.A	
		Water absorption test of C.A & F.A	
		Mortar casting of cement test	
		Bulkage test of sand	
		Silt Cotent of sand test	
		Compressive strength test of concrete cube & brick	
		Mix design	
		Pull out test	
		Tensile strength of steel Rod test.	
		Drill Core cutting of concrete	
		Dimentional Tolerance	
		Colour test of sand	
		Slump	
		Stone Cutting (2")	
		Chemical Analysis of water	
		PH Test	
		Alkalinity Test	
		Chloride content test	
		Total disolved solid test	
		Electrical conductivity test	
		Magnesium content test	
		Hardness test	
		Measuring & installation section	
		Settlement test of Hirakud Dam	
		Crack observation of Hirakud Dam Gallery	
		Seepage observation of Hirakud Dam	
		Drill hole observation of Hirakud dam	

Name of the Division	Location	Availability of Quality testing facility	Remark.
Quality Assurance Division Sundargarh	Sundargarh.	-	Newly created Quality Assurance Division.
Quality Assurance Division Balangir	Balangir.	-	Newly created Quality Assurance Division.
Quality Assurance Division Samal	Samal	-	Newly created Quality Assurance Division.
Quality Assurance Circle (South), Berhampur.			
Quality Assurance Division, Berhampur	Berhampur	Concrete	
		Aggregate	
		Soil	
		M. S. Bar	
		Water	
Quality Assurance Division, Bhawanipatna.	Bhawanipatna.	Sieve analysis	
		Silt content	
		Consistency & Setting	
		Time of cement	
		Casting of 2" mortarcube of cement	
		Compressive strength of cement/ cube	
		Impact value test aggregate	
		Abrasion value test C.Agg.	
		Flakiness Index	
		Bulk Density	
		Sp. Gravity	
		Water absorption	
		Mix design	
		Grain size analysis of soil	
		Standard proctor compaction	
		LL/PL test of soil	
		Unit weight of steel	
		% of elongation of steel	
		U. Tensile strength of steel	
		Soundness of stone	
2" cube cutting stone			
Dimentional Tollerence test of Brick.			
Quality Assurance Division Jaypore.	Jaypore	-	Newly created Quality Assurance Division.
Quality Assurance Circle (North), Baripada.			
Quality Assurance Division, Keonjhar	Keonjhar	Concrete cube test.	
		Gradation of fine & Coarse aggregate	
Quality Assurance Division, Baripada	Baripada	Concrete	
		Aggregate	

Name of the Division	Location	Availability of Quality testing facility	Remark.
Quality Assurance Division, Bhadrak	Bhadrak	Water	
		Concrete:	
		Compressive strength of concrete cube	
		Design Mix	
		Physical test of cement	
		Gradation of F.A & C.A	
		Silt content	
		Abrasion	
		Sp. Gravity of C.A & F.A	
		Soundness of C.A	
		Impact of C.A	
		Flakiness index of C.A	
		Elongation Index of C.A	
		Crushing value of C.A	
		Water absorption of C.A	
		Bulkage of sand	
		Compressive strength of fly ash cube	
		Water absorption of fly ash brick.	
		LL/PL of moroom	
		Grain size analysis	
Bulk density of C.A			