

**Name of Work:- DEVELOPMENT OF SHIP DOCKING AND REPAIR INFRASTRUCTURE IN PATHFINDER CREEK AT VADINAR**

CONSTRUCTION OF OUTFITTING JETTIES AND APPROACH TRESTLE IN PATHFINDER CREEK AT VADINAR					
Item No	Quantity	ABSTRACT	Unit	Unit Rate	Amount (In Rs)
		Item Description			
A) GEOTECHNICAL INVESTIGATION					
A-1	6.00	<p>Conducting geotechnical investigation at the proposed locations as per the drawings including the cost of boring through soils of various strengths and drilling through all kinds of weathered and hard rocks with water depth up to 20 m, collection of 90/100mm diameter and 450mm long undisturbed samples (UDS) from bore holes at various locations, conducting SPT in in-situ condition and conducting laboratory experiments on the collected samples for a depth of EL (-) 40 m. The cost shall also include preparation and submission of draft report for comments and geotechnical investigation report including detailed results of laboratory studies, recommendation for foundation design etc. including the cost of jack-up barge, drilling rig, other drilling tools and accessories and personnel, minor tools etc.</p> <p>Note: - The rate includes mobilization, demobilization, shifting/repositioning of barge and equipment between locations, manpower, fuel, consumables, anchoring/mooring, all tools &amp; plants, and all incidental charges required for complete execution of the work within a duration of Three (03) months from work order/notice to proceed.</p>	Nos	2,200,000.00	13,200,000.00
Sub Total A =					13,200,000.00
B) OUTFITTING JETTY 1 AND 2					
B-1	1.00	<p>Supply, transport to site, deliver, construct test and anchor piles/system, install testing arrangements equipment and spares, barges, reaction anchors, structural frame systems with working platforms and access ways as necessary with provision of specialist personal, to carry out initial vertical pile load test on test pile (bored cast in-situ pile) selected by Authority Engineer including construction of test pile, anchor pile, anchorage system, kent ledge frame, testing equipment, labour, etc with interpretation of test results complete. The cost of all materials such as RCC (cement, sand, aggregate, water), reinforcement, structural steel, nuts and bolts, prestressing wires, testing equipment, etc all complete shall be paid under this item. Load test shall be conducted on test piles with a maximum load of 3 times the working load on piles. Test pile and anchor piles or anchorage system if any shall be completely cut and removed above seabed after the completion of test.</p> <p>Note: Test pile shall be carried out prior to any working pile construction, and the location of test pile shall not obstruct the working pile. Test pile location shall be within the proposed jetty area.</p>	Each	1,02,81,441.00	10,281,441.00
B-2	57.00	<p>Carrying out Routine Dynamic load test on vertical pile in jetty and approach trestle with test load and testing procedure as per ASTM 4945 latest, including cost of all materials for making platform with steel members, weight materials, all labour charges, workmanship instrumentation, electronic devices, mechanical handling equipment, all other materials required for successful completion of load test, including removal of added portion of pile for testing after completion of test.</p> <p><b>Note: Dynamic load test shall be carried out on working piles, and the pile head shall be extended by at least 2m above the pile cut-off level. The test piles shall be selected by the Authority Engineer for each structure based his judgement and it is to be treated as final.</b></p>	Each	2,50,000.00	14,250,000.00
B-3	564.00	<p>Shifting and setting up of piling plant and equipment using gantry and platform or jackup rig, tripods, winch / pile driving rig, rotary drilling rig, bailers, chisellers etc (as per the methodology of work) at each pile location for providing of vertical MS steel liner for boring work and for concreting the piles including fabrication and erection of pile driving plant, staging with various steel plates, girders, angles, channels etc., including cost of steel items, welding charges, strutting and fixing in position at each location, cost of mobilization and demobilization of all equipment, transportation charges of all materials to worksite, all labour charges and minor tools etc. complete.</p>	Nos	34,500.00	19,458,000.00
B-4	5438.73	<p>Supplying, fabricating and driving 8mm MS liner (upto refusal level) of piles with stiffeners including bending, cutting, and welding and installation in position up to the specified level below sea bed level through all types of soil , fixing the liners in position including necessary bracings etc., for stability until the completion of all deck works etc., complete as per drawings and specifications.</p>	MT	1,09,107.00	593,403,852.91
B-5	4900.00	<p>Boring / drilling / bailing out through all types of strata for 1500 mm dia vertical pile for piles from the existing seabed level to founding level (hard rock) including cost of winch / Pile driving rig, rotary drilling machine, RCD machine, bailer, chisel, POL, all labour charges, minor tools and plant etc. complete. Pile termination criteria shall be as specified in the construction drawings and specifications. Any tests including SPT, rock strength etc as required shall be carried out by the contractor in addition to the energy criteria specified in the construction drawings. The cost includes all such testing at the specified laboratories or field, and no extra claim whatsoever shall be entertained in this regard. I) Ordinary soil strata</p>	Rmt	12,600.00	61,740,000.00
	2520.00	II) Hard strata	Rmt	17,200.00	43,344,000.00
B-6	40.00	<p>Boring / drilling / bailing out through all types of strata for 2100 mm dia vertical pile for piles from the existing seabed level to founding level (hard rock) including cost of winch / Pile driving rig, rotary drilling machine, RCD machine, bailer, chisel, POL, all labour charges, minor tools and plant etc. complete. Pile termination criteria shall be as specified in the construction drawings and specifications. Any tests including SPT, rock strength etc as required shall be carried out by the contractor in addition to the energy criteria specified in the construction drawings. The cost includes all such testing at the specified laboratories or field, and no extra claim whatsoever shall be entertained in this regard. I) Ordinary soil strata</p>	Rmt	14,000.00	560,000.00
	18.00	II) Hard strata	Rmt	18,300.00	329,400.00
B-7	98.34	<p><b>Epoxy grout:</b> Supply, transport, handle and place in position epoxy grout as per specifications and drawings in between the temporary lines and steel piles without airgaps as per drawings including cost of all materials, grouting charges, all labour charges, transportation charges and minor tools etc. complete.</p>	Cum	30,000.00	2,950,344.00

CONSTRUCTION OF OUTFITTING JETTIES AND APPROACH TRESTLE IN PATHFINDER CREEK AT VADINAR					
Item No	Quantity	ABSTRACT	Unit	Unit Rate	Amount (In Rs)
		Item Description			
B-8	10303.93	<b>Pile Reinforcement:</b> Supply, deliver and transportation of CRS reinforcement steel with a minimum yield strength of 500 N/mm2 and minimum elongation of 16% or equivalent confirming to IS 1786 with corrosion resistant (CR) element for Fabrication and fixing of reinforcement cages of pile as per drawing for cast-in-situ piles including cost of fabrication, fixing dowels, shear ties, cutting, bending, tying, lapping and welding in position wherever necessary with black 18 SWG annealed binding wire, all labour charges, transportation charges of all materials to Work Site, cost of binding wires, all other items including cover blocks required for the work and minor tools etc. complete.	MT	1,01,200.00	1,042,757,594.56
B-9	34875.00	<b>Pile concrete:</b> Providing and laying REINFORCED CEMENT CONCRETE OF M-40 GRADE in accordance with IS 456 (Latest Edition) using graded crushed coarse aggregate 20 mm and down size in PILES at Approach Trestle and Jetty by using tremie with hopper arrangements , providing pockets, openings, recesses, chamfering, etc., wherever required, vibrating, tamping, curing and rendering if required to give a smooth and even surface etc. including providing window of suitable size 300 mm above cut-off level and letting the concrete to overflow and including plasticizer and Bipolar as per manufacture's specification .etc. all complete as specified, shown and directed. (Payment will be made for effective length of pile i.e. from founding level to cut-off level.) (Excluding the cost of Reinforcement). The cement shall be Portland Slag Cement confirming to IS 455(Latest Edition).	CUM	9,607.00	335,044,125.00
B-10	560.00	Dressing / chipping of the RCC pile head including cutting of steel liners & trimming of extra concreted pile above the designed cut off level and exposing the reinforcement to receive fresh concrete for beams, bracing, pile caps etc., bending the reinforcement for new works, cost of all equipment, all labour charges, minor tools etc. complete.	Nos	6,325.00	3,542,000.00
B-11	291.03	Supply, fabricate, transport, handle and erect in position of guide pin piles of 1500mm diameter made of Structural steel with thickness as shown in construction drawings and material as specified in construction drawings and specifications its equivalent and including profile cutting, assembling, hoisting, fixing in position, welding, inspection and applying a priming coat of approved steel primer and top coat of minimum thickness as specified in the specifications and drawings including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete. The cost shall include all fabrication, transportation of the piles assembly, minor equipment and all labour charges etc. complete.  Note: The concrete and the reinforcement for the guide pin piles are paid separately with the RCC piles.	MT	1,63,000.00	47,437,326.32
B-12	7055.12	Manufacturing, transporting, supplying and erecting in position Reinforced Cement Concrete Precast Elements of approach trestle and jetty such as pile muff, beams, slabs, etc. of M-40 grade with 20mm and downsize graded crushed stone aggregates/gravel. for all leads, levels, shapes and thickness including cost of plasticiser, bipolar etc. as per manufacturer's specification including all moulds, shuttering and centering, vibrating, tamping, curing, chamfering wherever required, finishing the top surface as specified, providing lifting hooks, metal inserts, making holes pockets, transporting to site, erecting, levelling, aligning and fixing in position. all complete and including plasticizer and Bipolar as per manufacture's specifications (excluding the Cost of Reinforcement and M.S. Inserts) and as directed. The cement shall be Portland Slag Cement confirming to IS 455(Latest Edition).	CUM	14,992.00	105,770,333.85
B-13	17326.58	<b>In Situ Concrete:</b> Providing and laying in situ RCC OF M-40 GRADE with 20 mm and downsize graded crushed stone aggregates/ gravel in Approach Trestle and jetty. e.g. foundations, beams, slabs, pile caps, pedestals, pipe sleepers, surface application for all concrete surfaces, and including shuttering and formwork with required scaffoldings and supports plasticizer and Bipolar as per manufacture's specification providing pockets, openings, recesses, chamfering, etc., wherever required, vibrating, tamping, curing and rendering if required to give a smooth and even surface etc. (excluding the Cost of Reinforcement ) for all depths in any shape, position and thickness etc. all complete as specified, shown and directed. The cement shall be Portland Slag Cement confirming to IS 455(Latest Edition).	CUM	11,105.00	192,411,644.72
B-14	4017.72	<b>Precast &amp; In Situ members reinforcement:</b> Supply, deliver and transportation of CRS reinforcement steel with a minimum yield strength of 500 N/mm2 and minimum elongation of 16% or equivalent confirming to IS 1786 with corrosion resistant (CR) element for Fabrication and fixing of reinforcement cages as per drawing for cast-in-situ & Precast members including cost of fabrication, fixing dowels, shear ties, cutting, bending, tying, lapping and welding in position wherever necessary with black 18 SWG annealed binding wire, all labour charges, transportation charges of all materials to Work Site, cost of binding wires, all other items including cover blocks required for the work and minor tools etc. complete.	MT	1,06,500.00	427,887,394.21
B-15	59.38	Supply, fabricate, transport, handle and erect in position of structural steel shapes, plates, anchor bolts and built up sections in pile muff support plates conforming to IS 2062 E350 including profile cutting, assembling, hoisting, fixing in position, welding, inspection and applying a priming coat of approved steel primer and top coat of minimum thickness as specified in the specifications made of approved paint all as per specifications and drawings including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete. The cost shall include all fabrication, transportation of the steel structure assembly in part or as a whole, lifting using floating crafts and cranes, erection and fixing on the concrete structure with appropriate supporting arrangement, base plates and anchor bolts etc complete.	MT	1,53,700.00	9,125,962.09
B-16	914.00	<b>Screed concrete:</b> Supply, transport to site, deliver, place, compact, cure and test M30 grade plain cement concrete wearing coat of 100 mm average thickness with polypropylene fibres laid at suitable slope on the jetty and approach trestle complete as per drawings and specification including expansion joints at approved locations and filling the expansion joints with asphaltic material like mexpht etc. including cost of plasticiser, bipolar etc. as per manufacturer's specification.	CUM	10,400.00	9,505,600.00
B-17	6.00	Supplying and fixing in position 50 mm (2X25 mm) thick BITUMEN IMPREGNATED FIBRE BOARD conforming to IS:1838 of approved quality in expansion joints at all locations and levels in concrete structures etc. all complete as shown, specified and directed. -	Sq.m	3,500.00	21,000.00

CONSTRUCTION OF OUTFITTING JETTIES AND APPROACH TRESTLE IN PATHFINDER CREEK AT VADINAR					
Item No	Quantity	ABSTRACT	Unit	Unit Rate	Amount (In Rs)
		Item Description			
B-18	985.20	Supply, fabricate, transport, handle and install in position of <b>stainless steel rub strip</b> on the top of deck slab as per drawing and specification. -	Rmt	10,500.00	10,344,600.00
B-19	87.07	<b>Drain hole:</b> Providing Drain holes reinforcement concrete in deck slab with 100mm dia. PVC pipe, extending through the full width of the structure as per the drawing including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete.	Rmt	550.00	47,886.67
B-20	17.60	<b>Hand rail:</b> Supply, fabricate, transport, handle and erect in position stainless steel handrails using pipes and toe plates of stainless steel conforming to SS316L including profile cutting, assembling, hoisting, fixing in position, welding, inspection including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete.	Rmt	7,600.00	133,760.00
B-21	4.00	Supply and fix in position cast iron bollards of working loads capacity of 100 MT of approved make, including galvanized holding down bolts, nuts, washers (80microns zinc coating) and painting as per specification and drawings complete.	No.	1,65,000.00	660,000.00
B-22	77.00	Supply and fix in position cast iron bollards of working loads capacity of 125 MT of approved make, including galvanized holding down bolts, nuts, washers (80microns zinc coating) and painting as per specification and drawings complete.	No.	2,05,000.00	15,785,000.00
B-23	2.00	Supply and fix in position cast iron bollards of working loads capacity of 50 MT of approved make, including galvanized holding down bolts, nuts, washers (80microns zinc coating) and painting as per specification and drawings complete.	No.	1,15,000.00	230,000.00
B-24	528.00	Supplying, Testing and fixing of DAV Fender (1000 H) or equivalent having Energy absorption capacity including all required accessories etc a, including cost of fender with all its accessories, all labour charges, transportation charges up to site and minor tools etc., complete.	Rmt	3,55,000.00	187,440,000.00
B-25	1465.60	Supplying, testing, fixing and installation of DD fender or equivalent system including cost of fender with all its accessories, steel fender including all labour charges, transportation charges up to site, installation and fixing of fenders on to the piles and minor tools etc., complete.	Rmt	7,000.00	10,259,200.00
B-26	8.00	Supply, fabricate, transport, handle and install in position 200 mm I.D 32mm thick stainless steel mooring rings with suitable eyebolts for fixing to the berth face as per approved drawing and direction of the Engineer. Stainless steel materials shall be confirmed to AISI: 316 grade quality.	Nos	9,400.00	75,200.00
B-27	108580.00	<b>Flat footed CR 100 Rail:</b> Supply, transport, handle and erect in position flat footed CR100 rail conforming to IS 3443 including profile cutting, assembling, hoisting, fixing in position, welding, inspection, testing including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete.	Kg	420.00	45,603,600.00
B-28	1200.00	Providing, fixing and providing panzer belt along the jetty to cover the running cables at the specified location including the cost of transportation, fixing charges, labour and other minor tools etc. complete	Rmt	1,000.00	1,200,000.00
B-29	44.00	Providing, fixing and providing electrical connection of the lamp post at the specified location including the cost of transportation, fixing charges, labour and other minor tools etc. complete	Nos	45,000.00	1,980,000.00
B-30	8.00	Providing, fixing and providing electrical connection of the cope box with cover at the specified location including the cost of transportation, fixing charges, labour and other minor tools etc. complete	Nos	10,000.00	80,000.00
				<b>Sub Total B =</b>	<b>3,193,659,265.34</b>
<b>C) OUTFITTING JETTY-3</b>					
C-1	1.00	Supply, transport to site, deliver, construct test and anchor piles/system, install testing arrangements equipment and spares, barges, reaction anchors, structural frame systems with working platforms and access ways as necessary with provision of specialist personal, to carry out initial vertical pile load test on test pile (bored cast in-situ pile) selected by Authority Engineer including construction of test pile, anchor pile, anchorage system, kent ledge frame, testing equipment, labour, etc with interpretation of test results complete. The cost of all materials such as RCC (cement, sand, aggregate, water), reinforcement, structural steel, nuts and bolts, prestressing wires, testing equipment, etc all complete shall be paid under this item. Load test shall be conducted on test piles with a maximum load of 3 times the working load on piles. Test pile and anchor piles or anchorage system if any shall be completely cut and removed above seabed after the completion of test.  Note: Test pile shall be carried out prior to any working pile construction, and the location of test pile shall not obstruct the working pile. Test pile location shall be within the proposed jetty area.	Each	1,02,81,441.00	10,281,441.00
C-2	19.00	Carrying out Routine Dynamic load test on vertical pile in jetty and approach trestle with test load and testing procedure as per ASTM 4945 latest, including cost of all materials for making platform with steel members, weight materials, all labour charges, workmanship instrumentation, electronic devices, mechanical handling equipment, all other materials required for successful completion of load test, including removal of added portion of pile for testing after completion of test.  <b>Note: Dynamic load test shall be carried out on working piles, and the pile head shall be extended by at least 2m above the pile cut-off level. The test piles shall be selected by the Authority Engineer for each structure based his judgement and it is to be treated as final.</b>	Each	2,50,000.00	4,750,000.00
C-3	192.00	Shifting and setting up of piling plant and equipment using gantry and platform or jackup rig, tripods, winch / pile driving rig, rotary drilling rig, bailers, chisellers etc (as per the methodology of work) at each pile location for providing of vertical MS steel liner for boring work and for concreting the piles including fabrication and erection of pile driving plant, staging with various steel plates, girders, angles, channels etc., including cost of steel items, welding charges, strutting and fixing in position at each location, cost of mobilization and demobilization of all equipment, transportation charges of all materials to worksite, all labour charges and minor tools etc. complete.	Nos	34,500.00	6,624,000.00

CONSTRUCTION OF OUTFITTING JETTIES AND APPROACH TRESTLE IN PATHFINDER CREEK AT VADINAR					
Item No	Quantity	ABSTRACT	Unit	Unit Rate	Amount (In Rs)
		Item Description			
C-4	1680.57	Supplying, fabricating and driving 8mm MS liner (upto refusal level) of piles with stiffeners including bending, cutting, and welding and installation in position up to the specified level below sea bed level through all types of soil , fixing the liners in position including necessary bracings etc., for stability until the completion of all deck works etc., complete as per drawings and specifications.	MT	1,09,107.00	183,361,553.26
C-5	1710.00	Boring / drilling / bailing out through all types of strata for 1500 mm dia vertical pile for piles from the existing seabed level to founding level (hard rock) including cost of winch / Pile driving rig, rotary drilling machine, RCD machine, bailer, chisel, POL, all labour charges, minor tools and plant etc. complete. Pile termination criteria shall be as specified in the construction drawings and specifications. Any tests including SPT, rock strength etc as required shall be carried out by the contractor in addition to the energy criteria specified in the construction drawings. The cost includes all such testing at the specified laboratories or field, and no extra claim whatsoever shall be entertained in this regard. I) Ordinary soil strata	Rmt	12,600.00	21,546,000.00
	855.00	II) Hard strata	Rmt	17,200.00	14,706,000.00
C-6	18.00	Boring / drilling / bailing out through all types of strata for 2100 mm dia vertical pile for piles from the existing seabed level to founding level (hard rock) including cost of winch / Pile driving rig, rotary drilling machine, RCD machine, bailer, chisel, POL, all labour charges, minor tools and plant etc. complete. Pile termination criteria shall be as specified in the construction drawings and specifications. Any tests including SPT, rock strength etc as required shall be carried out by the contractor in addition to the energy criteria specified in the construction drawings. The cost includes all such testing at the specified laboratories or field, and no extra claim whatsoever shall be entertained in this regard. I) Ordinary soil strata	Rmt	14,000.00	252,000.00
	9.00	II) Hard strata	Rmt	18,300.00	164,700.00
C-7	45.78	<b>Epoxy grout:</b> Supply, transport, handle and place in position epoxy grout as per specifications and drawings in between the temporary lines and steel piles without airgaps as per drawings including cost of all materials, grouting charges, all labour charges, transportation charges and minor tools etc. complete.	Cum	30,000.00	1,373,436.00
C-8	2997.59	<b>Pile Reinforcement:</b> Supply, deliver and transportation of CRS reinforcement steel with a minimum yield strength of 500 N/mm2 and minimum elongation of 16% or equivalent confirming to IS 1786 with corrosion resistant (CR) element for Fabrication and fixing of reinforcement cages of pile as per drawing for cast-in-situ piles including cost of fabrication, fixing dowels, shear ties, cutting, bending, tying, lapping and welding in position wherever necessary with black 18 SWG annealed binding wire, all labour charges, transportation charges of all materials to Work Site, cost of binding wires, all other items including cover blocks required for the work and minor tools etc. complete.	MT	1,01,200.00	303,356,399.25
C-9	10857.58	<b>Pile concrete:</b> Providing and laying REINFORCED CEMENT CONCRETE OF M-40 GRADE in accordance with IS 456 (Latest Edition) using graded crushed coarse aggregate 20 mm and down size in PILES at Approach Trestle and Jetty by using tremie with hopper arrangements , providing pockets, openings, recesses, chamfering, etc., wherever required, vibrating, tamping, curing and rendering if required to give a smooth and even surface etc. including providing window of suitable size 300 mm above cut-off level and letting the concrete to overflow and including plasticizer and Bipolar as per manufacture's specification .etc. all complete as specified, shown and directed. (Payment will be made for effective length of pile i.e. from founding level to cut-off level.) (Excluding the cost of Reinforcement). The cement shall be Portland Slag Cement confirming to IS 455(Latest Edition).	CUM	9,607.00	104,308,789.05
C-10	190.00	Dressing / chipping of the RCC pile head including cutting of steel liners & trimming of extra concreted pile above the designed cut off level and exposing the reinforcement to receive fresh concrete for beams, bracing, pile caps etc., bending the reinforcement for new works, cost of all equipment, all labour charges, minor tools etc. complete.	Nos	6,325.00	1,201,750.00
C-11	134.61	Supply, fabricate, transport, handle and erect in position of guide pin piles of 1500mm diameter made of Structural steel with thickness as shown in construction drawings and material as specified in construction drawings and specifications its equivalent and including profile cutting, assembling, hoisting, fixing in position, welding, inspection and applying a priming coat of approved steel primer and top coat of minimum thickness as specified in the specifications and drawings including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete. The cost shall include all fabrication, transportation of the piles assembly, minor equipment and all labour charges etc. complete.  Note: The concrete and the reinforcement for the guide pin piles are paid separately with the RCC piles.	MT	1,63,000.00	21,941,096.60
C-12	2520.00	Manufacturing, transporting, supplying and erecting in position Reinforced Cement Concrete Precast Elements of approach trestle and jetty such as pile muff, beams, slabs, etc. of M-40 grade with 20mm and downsize graded crushed stone aggregates/gravel. for all leads, levels, shapes and thickness including cost of plasticiser, bipolar etc. as per manufacturer's specification including all moulds, shuttering and centering, vibrating, tamping, curing, chamfering wherever required, finishing the top surface as specified, providing lifting hooks, metal inserts, making holes pockets, transporting to site, erecting, levelling, aligning and fixing in position. all complete and including plasticizer and Bipolar as per manufacture's specifications (excluding the Cost of Reinforcement and M.S. Inserts) and as directed. The cement shall be Portland Slag Cement confirming to IS 455(Latest Edition).	CUM	14,992.00	37,779,840.00
C-13	5258.12	<b>In Situ Concrete:</b> Providing and laying in situ RCC OF M-40 GRADE with 20 mm and downsize graded crushed stone aggregates/ gravel in Approach Trestle and jetty. e.g. foundations, beams, slabs, pile caps, pedestals, pipe sleepers, surface application for all concrete surfaces, and including shuttering and formwork with required scaffoldings and supports plasticizer and Bipolar as per manufacture's specification providing pockets, openings, recesses, chamfering, etc., wherever required, vibrating, tamping, curing and rendering if required to give a smooth and even surface etc. (excluding the Cost of Reinforcement ) for all depths in any shape, position and thickness etc. all complete as specified, shown and directed. The cement shall be Portland Slag Cement confirming to IS 455(Latest Edition).	CUM	11,105.00	58,391,402.89

CONSTRUCTION OF OUTFITTING JETTIES AND APPROACH TRESTLE IN PATHFINDER CREEK AT VADINAR					
Item No	Quantity	ABSTRACT	Unit	Unit Rate	Amount (In Rs)
		Item Description			
C-14	1270.22	<b>Precast &amp; In Situ members reinforcement:</b> Supply, deliver and transportation of CRS reinforcement steel with a minimum yield strength of 500 N/mm <sup>2</sup> and minimum elongation of 16% or equivalent confirming to IS 1786 with corrosion resistant (CR) element for Fabrication and fixing of reinforcement cages as per drawing for cast-in-situ & Precast members including cost of fabrication, fixing dowels, shear ties, cutting, bending, tying, lapping and welding in position wherever necessary with black 18 SWG annealed binding wire, all labour charges, transportation charges of all materials to Work Site, cost of binding wires, all other items including cover blocks required for the work and minor tools etc. complete.	MT	1,06,500.00	135,278,425.67
C-15	26.58	Supply, fabricate, transport, handle and erect in position of structural steel shapes, plates, anchor bolts and built up sections in pile muff support plates conforming to IS 2062 E350 including profile cutting, assembling, hoisting, fixing in position, welding, inspection and applying a priming coat of approved steel primer and top coat of minimum thickness as specified in the specifications made of approved paint all as per specifications and drawings including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete. The cost shall include all fabrication, transportation of the steel structure assembly in part or as a whole, lifting using floating cranes and cranes, erection and fixing on the concrete structure with appropriate supporting arrangement, base plates and anchor bolts etc complete.	MT	1,53,700.00	4,084,786.53
C-16	487.92	<b>Screed concrete:</b> Supply, transport to site, deliver, place, compact, cure and test M30 grade plain cement concrete wearing coat of 100 mm average thickness with polypropylene fibres laid at suitable slope on the jetty and approach trestle complete as per drawings and specification including expansion joints at approved locations and filling the expansion joints with asphaltic material like mexpht etc. including cost of plasticiser, bipolar etc. as per manufacturer's specification.	CUM	10,400.00	5,074,368.00
C-17	295.60	Supply, fabricate, transport, handle and install in position of <b>stainless steel rub strip</b> on the top of deck slab as per drawing and specification. -	Rmt	10,500.00	3,103,800.00
C-18	27.07	<b>Drain hole:</b> Providing Drain holes reinforcement concrete in deck slab with 100mm dia. PVC pipe, extending through the full width of the structure as per the drawing including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete.	Rmt	550.00	14,886.67
C-19	8.80	<b>Hand rail:</b> Supply, fabricate, transport, handle and erect in position stainless steel handrails using pipes and toe plates of stainless steel conforming to SS316L including profile cutting, assembling, hoisting, fixing in position, welding, inspection including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete.	Rmt	7,600.00	66,880.00
C-20	21.00	Supply and fix in position cast iron bollards of working loads capacity of 90 MT of approved make, including galvanized holding down bolts, nuts, washers (80microns zinc coating) and painting as per specification and drawings complete.	No.	1,45,000.00	3,045,000.00
C-21	126.31	Supplying, Testing and fixing of DAV Fender (1000 H) or equivalent having Energy absorption capacity including all required accessories etc a, including cost of fender with all its accessories, all labour charges, transportation charges up to site and minor tools etc., complete.	Rmt	3,55,000.00	44,840,050.00
C-22	356.80	Supplying, testing, fixing and installation of DD fender or equivalent system including cost of fender with all its accessories, steel fender including all labour charges, transportation charges up to site, installation and fixing of fenders on to the piles and minor tools etc., complete.	Rmt	7,000.00	2,497,600.00
C-23	4.00	Supply, fabricate, transport, handle and install in position 200 mm I.D 32mm thick stainless steel mooring rings with suitable eyebolts for fixing to the berth face as per approved drawing and direction of the Engineer. Stainless steel materials shall be confirmed to AISI: 316 grade quality.	Nos	9,400.00	37,600.00
C-24	29370.00	<b>Flat footed CR 100 Rail:</b> Supply, transport, handle and erect in position flat footed CR100 rail conforming to IS 3443 including profile cutting, assembling, hoisting, fixing in position, welding, inspection, testing including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete.	Kg	420.00	12,335,400.00
C-25	275.00	Providing, fixing and providing panzer belt along the jetty to cover the running cables at the specified location including the cost of transportation, fixing charges, labour and other minor tools etc. complete	Rmt	1,000.00	275,000.00
C-26	12.00	Providing, fixing and providing electrical connection of the lamp post at the specified location including the cost of transportation, fixing charges, labour and other minor tools etc. complete	Nos	45,000.00	540,000.00
C-27	3.00	Providing, fixing and providing electrical connection of the cope box with cover at the specified location including the cost of transportation, fixing charges, labour and other minor tools etc. complete	Nos	10,000.00	30,000.00
C-28	2.00	Supplying and fixing in position 50 mm (2X25 mm) thick BITUMEN IMPREGNATED FIBRE BOARD conforming to IS:1838 of approved quality in expansion joints at all locations and levels in concrete structures etc. all complete as shown, specified and directed. -	Sq.m	3,500.00	7,000.00
Sub Total C =					981,269,204.91
<b>D) APPROACH TRESTLE</b>					
D-1	1.00	Supply, transport to site, deliver, construct test and anchor piles/system, install testing arrangements equipment and spares, barges, reaction anchors, structural frame systems with working platforms and access ways as necessary with provision of specialist personal, to carry out initial vertical pile load test on test pile (bored cast in-situ pile) selected by Authority Engineer including construction of test pile, anchor pile, anchorage system, kent ledge frame, testing equipment, labour, etc with interpretation of test results complete. The cost of all materials such as RCC (cement, sand, aggregate, water), reinforcement, structural steel, nuts and bolts, prestressing wires, testing equipment, etc all complete shall be paid under this item. Load test shall be conducted on test piles with a maximum load of 3 times the working load on piles. Test pile and anchor piles or anchorage system if any shall be completely cut and removed above seabed after the completion of test.  <b>Note: Test pile shall be carried out prior to any working pile construction, and the location of test pile shall not obstruct the working pile. Test pile location shall be within the proposed jetty area.</b>	Each	85,13,025.00	8,513,025.00



CONSTRUCTION OF OUTFITTING JETTIES AND APPROACH TRESTLE IN PATHFINDER CREEK AT VADINAR					
Item No	Quantity	ABSTRACT	Unit	Unit Rate	Amount (In Rs)
		Item Description			
D-2	7.00	Carrying out Routine Dynamic load test on vertical pile in jetty and approach trestle with test load and testing procedure as per ASTM 4945 latest, including cost of all materials for making platform with steel members, weight materials, all labour charges, workmanship instrumentation, electronic devices, mechanical handling equipment, all other materials required for successful completion of load test, including removal of added portion of pile for testing after completion of test.  <b>Note: Dynamic load test shall be carried out on working piles, and the pile head shall be extended by at least 2m above the pile cut-off level. The test piles shall be selected by the Authority Engineer for each structure based his judgement and it is to be treated as final.</b>	Each	2,50,000.00	1,750,000.00
D-3	75.00	Shifting and setting up of piling plant and equipment using gantry and platform or jackup rig, tripods, winch / pile driving rig, rotary drilling rig, bailers, chisellers etc (as per the methodology of work) at each pile location for providing of vertical MS steel liner for boring work and for concreting the piles including fabrication and erection of pile driving plant, staging with various steel plates, girders, angles, channels etc., including cost of steel items, welding charges, strutting and fixing in position at each location, cost of mobilization and demobilization of all equipment, transportation charges of all materials to worksite, all labour charges and minor tools etc. complete.	Nos	34,500.00	2,587,500.00
D-4	436.58	Supplying, fabricating and driving 8mm MS liner (upto refusal level) of piles with stiffeners including bending, cutting, and welding and installation in position up to the specified level below sea bed level through all types of soil , fixing the liners in position including necessary bracings etc., for stability until the completion of all deck works etc., complete as per drawings and specifications.	MT	1,09,107.00	47,633,778.55
D-5	900.00	Boring / drilling / bailing out through all types of strata for 1200 mm dia vertical pile for piles from the existing seabed level to founding level (hard rock) including cost of winch / Pile driving rig, rotary drilling machine, RCD machine, bailer, chisel, POL, all labour charges, minor tools and plant etc. complete. Pile termination criteria shall be as specified in the construction drawings and specifications. Any tests including SPT, rock strength etc as required shall be carried out by the contractor in addition to the energy criteria specified in the construction drawings. The cost includes all such testing at the specified laboratories or field, and no extra claim whatsoever shall be entertained in this regard. I) Ordinary soil strata	Rmt	10,400.00	9,360,000.00
	270.00	II) Hard strata	Rmt	13,500.00	3,645,000.00
D-6	895.74	<b>Pile Reinforcement:</b> Supply, deliver and transportation of CRS reinforcement steel with a minimum yield strength of 500 N/mm2 and minimum elongation of 16% or equivalent confirming to IS 1786 with corrosion resistant (CR) element for Fabrication and fixing of reinforcement <b>cages of pile</b> as per drawing for cast-in-situ piles including cost of fabrication, fixing dowels, shear ties, cutting, bending, tying, lapping and welding in position wherever necessary with black 18 SWG annealed binding wire, all labour charges, transportation charges of all materials to Work Site, cost of binding wires, all other items including cover blocks required for the work and minor tools etc. complete.	MT	1,01,200.00	90,649,295.13
D-7	2206.35	<b>Pile concrete:</b> Providing and laying REINFORCED CEMENT CONCRETE OF M-40 GRADE in accordance with IS 456 (Latest Edition) using graded crushed coarse aggregate 20 mm and down size in PILES at Approach Trestle and Jetty by using tremie with hopper arrangements , providing pockets, openings, recesses, chamfering, etc., wherever required, vibrating, tamping, curing and rendering if required to give a smooth and even surface etc. including providing window of suitable size 300 mm above cut-off level and letting the concrete to overflow and including plasticizer and Bipolar as per manufacture's specification .etc. all complete as specified, shown and directed. (Payment will be made for effective length of pile i.e. from founding level to cut-off level.) (Excluding the cost of Reinforcement). The cement shall be Portland Slag Cement confirming to IS 455(Latest Edition).	CUM	9,607.00	21,196,385.82
D-8	75.00	Dressing / chipping of the RCC pile head including cutting of steel liners & trimming of extra concreted pile above the designed cut off level and exposing the reinforcement to receive fresh concrete for beams, bracing, pile caps etc., bending the reinforcement for new works, cost of all equipment, all labour charges, minor tools etc. complete.	Nos	6,325.00	474,375.00
D-9	1520.70	Manufacturing, transporting, supplying and erecting in position Reinforced Cement Concrete Precast Elements of approach trestle and jetty such as pile muff, beams, slabs, etc. of M-40 grade with 20mm and downsize graded crushed stone aggregates/gravel. for all leads, levels, shapes and thickness including cost of plasticiser, bipolar etc. as per manufacturer's specification including all moulds, shuttering and centering, vibrating, tamping, curing, chamfering wherever required, finishing the top surface as specified, providing lifting hooks, metal inserts, making holes pockets, transporting to site, erecting, levelling, aligning and fixing in position. all complete and including plasticizer and Bipolar as per manufacture's specifications (excluding the Cost of Reinforcement and M.S. Inserts) and as directed. The cement shall be Portland Slag Cement confirming to IS 455(Latest Edition).	CUM	14,992.00	22,798,274.43
D-10	2861.53	<b>In Situ Concrete:</b> Providing and laying In situ RCC OF M-40 GRADE with 20 mm and downsize graded crushed stone aggregates/ gravel in Approach Trestle and jetty. e.g. foundations, beams, slabs, pile caps, pedestals, pipe sleepers, surface application for all concrete surfaces, and including shuttering and formwork with required scaffoldings and supports plasticizer and Bipolar as per manufacture's specification providing pockets, openings, recesses, chamfering, etc., wherever required, vibrating, tamping, curing and rendering if required to give a smooth and even surface etc. (excluding the Cost of Reinforcement ) for all depths in any shape, position and thickness etc. all complete as specified, shown and directed. The cement shall be Portland Slag Cement confirming to IS 455(Latest Edition).	CUM	11,105.00	31,777,261.50

CONSTRUCTION OF OUTFITTING JETTIES AND APPROACH TRESTLE IN PATHFINDER CREEK AT VADINAR					
Item No	Quantity	ABSTRACT	Unit	Unit Rate	Amount (In Rs)
		Item Description			
D-11	852.93	<b>Precast &amp; In Situ members reinforcement:</b> Supply, deliver and transportation of CRS reinforcement steel with a minimum yield strength of 500 N/mm <sup>2</sup> and minimum elongation of 16% or equivalent confirming to IS 1786 with corrosion resistant (CR) element for Fabrication and fixing of reinforcement cages as per drawing for cast-in-situ & Precast members including cost of fabrication, fixing dowels, shear ties, cutting, bending, tying, lapping and welding in position wherever necessary with black 18 SWG annealed binding wire, all labour charges, transportation charges of all materials to Work Site, cost of binding wires, all other items including cover blocks required for the work and minor tools etc. complete.	MT	1,06,500.00	90,837,263.99
D-12	10.40	<b>PCC concrete:</b> Supply, transport to site, deliver, place, compact, cure and test M30 grade plain cement concrete for PCC underneath the slab concrete of 200 mm average thickness complete as per drawings and specification including cost of plasticiser, bipolar etc. as per manufacturer's specification.	CUM	10,000.00	104,000.00
D-13	27.90	Supply, fabricate, transport, handle and erect in position of structural steel shapes, plates, anchor bolts and built up sections in pile muff support plates conforming to IS 2062 E350 including profile cutting, assembling, hoisting, fixing in position, welding, inspection and applying a priming coat of approved steel primer and top coat of minimum thickness as specified in the specifications made of approved paint all as per specifications and drawings including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete. The cost shall include all fabrication, transportation of the steel structure assembly in part or as a whole, lifting using floating crafts and cranes, erection and fixing on the concrete structure with appropriate supporting arrangement, base plates and anchor bolts etc complete.	MT	1,53,700.00	4,288,764.88
D-14	102.56	<b>Screed concrete:</b> Supply, transport to site, deliver, place, compact, cure and test M30 grade plain cement concrete wearing coat of 100 mm average thickness with polypropylene fibres laid at suitable slope on the jetty and approach trestle complete as per drawings and specification including expansion joints at approved locations and filling the expansion joints with asphaltic material like mexphtl etc. including cost of plasticiser, bipolar etc. as per manufacturer's specification.	CUM	10,400.00	1,066,665.60
D-15	62.96	<b>Drain hole:</b> Providing Drain holes reinforcement concrete in deck slab with 100mm dia. PVC pipe, extending through the full width of the structure as per the drawing including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete.	Rmt	550.00	34,628.00
D-16	442.20	<b>Hand rail:</b> Supply, fabricate, transport, handle and erect in position stainless steel handrails using pipes and toe plates of stainless steel conforming to SS316L including profile cutting, assembling, hoisting, fixing in position, welding, inspection including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete.	Rmt	7,600.00	3,360,720.00
D-17	12.00	Supply and fix in position cast iron bollards of working loads capacity of 90 MT of approved make, including galvanized holding down bolts, nuts, washers (80microns zinc coating) and painting as per specification and drawings complete.	No.	1,45,000.00	1,740,000.00
D-18	89.16	Supplying, Testing and fixing of DAV Fender (400 H) or equivalent having Energy absorption capacity including all required accessories etc a, including cost of fender with all its accessories, all labour charges, transportation charges up to site and minor tools etc., complete.	Rmt	50,000.00	4,458,000.00
D-19	12.00	Supply, fabricate, transport, handle and install in position 200 mm I.D 32mm thick stainless steel mooring rings with suitable eyebolts for fixing to the berth face as per approved drawing and direction of the Engineer. Stainless steel materials shall be confirmed to AISI: 316 grade quality	Nos	9,400.00	112,800.00
D-20	2586.10	Demolition of existing approach trestle deck by using suitable drilling and cutting equipment and disposing them off at nearby disposal areas with a minimum lead distance of 1 km inclusive of all equipment, trucks if any, fuel, labour, machinery etc. all complete.	CUM	3,600.00	9,309,960.00
D-21	24.00	Providing, fixing and providing electrical connection of the lamp post at the specified location including the cost of transportation, fixing charges, labour and other minor tools etc. complete	Nos	45,000.00	1,080,000.00
D-22	21.00	<b>GSB:</b> Supply, transport to site, deliver, place, compact, Granular subbase underneath the slab concrete of 300 mm average thickness complete as per drawings and specification including cost of compaction, manpower minor tools etc., as per manufacturer's specification.	CUM	650.00	13,650.00
D-23	3.00	<b>Bearing:</b> Supply, transport to site, deliver, place, and fix the bearing set up underneath the slab concrete at the approach trestle complete as per drawings and specification including cost of transportation manpower minor tools etc., as per manufacturer's specification.	Nos	12,500.00	37,500.00
D-24	1.00	Supplying and fixing in position 50 mm (2X25 mm) thick BITUMEN IMPREGNATED FIBRE BOARD conforming to IS:1838 of approved quality in expansion joints at all locations and levels in concrete structures etc. all complete as shown, specified and directed. -	Sq.m	3,500.00	3,500.00
Sub-Total D =					356,832,347.89
<b>E) PUMP HOUSE</b>					
E-1	4.00	Carrying out Routine Dynamic load test on vertical pile in jetty and approach trestle with test load and testing procedure as per ASTM 4945 latest, including cost of all materials for making platform with steel members, weight materials, all labour charges, workmanship instrumentation, electronic devices, mechanical handling equipment, all other materials required for successful completion of load test, including removal of added portion of pile for testing after completion of test.  <b>Note: Dynamic load test shall be carried out on working piles and the pile head shall be extended by at least 2m above the pile cut-off level. The test piles shall be selected by the Authority Engineer for each structure based his judgement and it is to be treated as final.</b>	Each	2,50,000.00	1,000,000.00

CONSTRUCTION OF OUTFITTING JETTIES AND APPROACH TRESTLE IN PATHFINDER CREEK AT VADINAR					
Item No	Quantity	ABSTRACT	Unit	Unit Rate	Amount (In Rs)
		Item Description			
E-2	44.00	Shifting and setting up of piling plant and equipment using gantry and platform or jackup rig, tripods, winch / pile driving rig, rotary drilling rig, bailers, chisellers etc (as per the methodology of work) at each pile location for providing of vertical MS steel liner for boring work and for concreting the piles including fabrication and erection of pile driving plant, staging with various steel plates, girders, angles, channels etc., including cost of steel items, welding charges, strutting and fixing in position at each location, cost of mobilization and demobilization of all equipment, transportation charges of all materials to worksite, all labour charges and minor tools etc. complete.	Nos	34,500.00	1,518,000.00
E-3	324.00	Supplying, fabricating and driving 8mm MS liner (upto refusal level) of piles with stiffeners including bending, cutting, and welding and installation in position up to the specified level below sea bed level through all types of soil , fixing the liners in position including necessary bracings etc., for stability until the completion of all deck works etc., complete as per drawings and specifications.	MT	1,09,107.00	35,350,668.00
E-4	528.00	Boring / drilling / bailing out through all types of strata for 1200 mm dia vertical pile for piles from the existing seabed level to founding level (hard rock) including cost of winch / Pile driving rig, rotary drilling machine, RCD machine, bailer, chisel, POL, all labour charges, minor tools and plant etc. complete. Pile termination criteria shall be as specified in the construction drawings and specifications. Any tests including SPT, rock strength etc as required shall be carried out by the contractor in addition to the energy criteria specified in the construction drawings. The cost includes all such testing at the specified laboratories or field, and no extra claim whatsoever shall be entertained in this regard. I) Ordinary soil strata	Rmt	10,400.00	5,491,200.00
	158.40	II) Hard strata	Rmt	13,500.00	2,138,400.00
E-5	545.00	<b>Pile Reinforcement:</b> Supply, deliver and transportation of CRS reinforcement steel with a minimum yield strength of 500 N/mm2 and minimum elongation of 16% or equivalent confirming to IS 1786 with corrosion resistant (CR) element for Fabrication and fixing of reinforcement cages of pile as per drawing for cast-in-situ piles including cost of fabrication, fixing dowels, shear ties, cutting, bending, tying, lapping and welding in position wherever necessary with black 18 SWG annealed binding wire, all labour charges, transportation charges of all materials to Work Site, cost of binding wires, all other items including cover blocks required for the work and minor tools etc. complete.	MT	1,01,200.00	55,154,000.00
E-6	1614.00	<b>Pile concrete:</b> Providing and laying REINFORCED CEMENT CONCRETE OF M-40 GRADE in accordance with IS 456 (Latest Edition) using graded crushed coarse aggregate 20 mm and down size in PILES at Approach Trestle and Jetty by using tremie with hopper arrangements , providing pockets, openings, recesses, chamfering, etc., wherever required, vibrating, tamping, curing and rendering if required to give a smooth and even surface etc. including providing window of suitable size 300 mm above cut-off level and letting the concrete to overflow and including plasticizer and Bipolar as per manufacture's specification .etc. all complete as specified, shown and directed. (Payment will be made for effective length of pile i.e. from founding level to cut-off level.) (Excluding the cost of Reinforcement). The cement shall be Portland Slag Cement confirming to IS 455(Latest Edition).	CUM	9,607.00	15,505,698.00
E-7	44.00	Dressing / chipping of the RCC pile head including cutting of steel liners & trimming of extra concreted pile above the designed cut off level and exposing the reinforcement to receive fresh concrete for beams, bracing, pile caps etc., bending the reinforcement for new works, cost of all equipment, all labour charges, minor tools etc. complete.	Nos	6,325.00	278,300.00
E-8	687.00	Manufacturing, transporting, supplying and erecting in position Reinforced Cement Concrete Precast Elements of approach trestle and jetty such as pile muff, beams, slabs, etc. of M-40 grade with 20mm and downsize graded crushed stone aggregates/gravel. for all leads, levels, shapes and thickness including cost of plasticiser, bipolar etc. as per manufacturer's specification including all moulds, shuttering and centring, vibrating, tamping, curing, chamfering wherever required, finishing the top surface as specified, providing lifting hooks, metal inserts, making holes pockets, transporting to site, erecting, levelling, aligning and fixing in position. all complete and including plasticizer and Bipolar as per manufacture's specifications (excluding the Cost of Reinforcement and M.S. Inserts) and as directed. The cement shall be Portland Slag Cement confirming to IS 455(Latest Edition).	CUM	14,992.00	10,299,504.00
E-9	354.63	<b>In Situ Concrete:</b> Providing and laying in situ RCC OF M-40 GRADE with 20 mm and downsize graded crushed stone aggregates/ gravel in Approach Trestle and jetty. e.g. foundations, beams, slabs, pile caps, pedestals, pipe sleepers, surface application for all concrete surfaces, and including shuttering and formwork with required scaffoldings and supports plasticizer and Bipolar as per manufacture's specification providing pockets, openings, recesses, chamfering, etc., wherever required, vibrating, tamping, curing and rendering if required to give a smooth and even surface etc. (excluding the Cost of Reinforcement ) for all depths in any shape, position and thickness etc. all complete as specified, shown and directed. The cement shall be Portland Slag Cement confirming to IS 455(Latest Edition).	CUM	11,105.00	3,938,179.11
E-10	344.93	<b>Precast &amp; In Situ members reinforcement:</b> Supply, deliver and transportation of CRS reinforcement steel with a minimum yield strength of 500 N/mm2 and minimum elongation of 16% or equivalent confirming to IS 1786 with corrosion resistant (CR) element for Fabrication and fixing of reinforcement cages as per drawing for cast-in-situ & Precast members including cost of fabrication, fixing dowels, shear ties, cutting, bending, tying, lapping and welding in position wherever necessary with black 18 SWG annealed binding wire, all labour charges, transportation charges of all materials to Work Site, cost of binding wires, all other items including cover blocks required for the work and minor tools etc. complete.	MT	1,06,500.00	36,734,556.19
E-11	6.90	Supply, fabricate, transport, handle and erect in position of structural steel shapes, plates, anchor bolts and built up sections in pile muff support plates conforming to IS 2062 E350 including profile cutting, assembling, hoisting, fixing in position, welding, inspection and applying a priming coat of approved steel primer and top coat of minimum thickness as specified in the specifications made of approved paint all as per specifications and drawings including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete. The cost shall include all fabrication, transportation of the steel structure assembly in part or as a whole, lifting using floating crafts and cranes, erection and fixing on the concrete structure with appropriate supporting arrangement, base plates and anchor bolts etc complete.	MT	1,53,700.00	1,060,530.00



CONSTRUCTION OF OUTFITTING JETTIES AND APPROACH TRESTLE IN PATHFINDER CREEK AT VADINAR					
Item No	Quantity	ABSTRACT	Unit	Unit Rate	Amount (In Rs)
		Item Description			
E-12	79.82	<b>Screed concrete:</b> Supply, transport to site, deliver, place, compact, cure and test M30 grade plain cement concrete wearing coat of 100 mm average thickness with polypropylene fibres laid at suitable slope on the jetty and approach trestle complete as per drawings and specification including expansion joints at approved locations and filling the expansion joints with asphaltic material like maxphalt etc. including cost of plasticiser, bipolar etc. as per manufacturer's specification.	CUM	10,400.00	830,115.00
E-13	98.00	<b>Hand rail:</b> Supply, fabricate, transport, handle and erect in position stainless steel handrails using pipes and toe plates of stainless steel conforming to SS316L including profile cutting, assembling, hoisting, fixing in position, welding, inspection including cost of all materials, fitting charges, all labour charges, transportation charges and minor tools etc. complete.	MT	7,600.00	744,800.00
E-14	943.25	Providing and laying REINFORCED CEMENT CONCRETE OF M-40 GRADE with 20 mm and down size graded crushed stone aggregates/ gravel in SUPER STRUCTURE such as Auction hall and toilet blocks in suspended floors, slabs, beams, columns, walls including counterforts, staircases, landings, steps, facias, fins, mouldings, gutters, shelves, window sills, canopies, lintels, girders, ducts, brackets, chajjas with drip moulds, pedestals, posts, struts, equipment/ machine foundations, ramps etc. (including single pour concreting as specified on the drawing), including shuttering and formwork with required scaffolding and supporting works, providing cement wash (wherever no other surface application is specified), providing pockets, openings, recesses, chamfering wherever required, vibrating, tamping, curing and rendering if required to give a smooth and even surface etc. including cost of plasticiser, bipolar etc. as per manufacturer's specification (excluding the Cost of Reinforcement ) FOR ALL HEIGHTS UPTO & INCLUSIVE OF 20 m ABOVE DECK SLAB LEVEL in any shape, position, thickness etc. all complete as specified, shown and directed. The cement shall be Porland Slag Cement confirming to IS 455(Latest Edition).	CUM	11,602.00	10,943,551.69
E-15	232.57	Providing and fixing in position of brickwork with common burnt clay FPS bricks of class designation in superstructure above plinth level in all shapes and sizes including mortar supplied by the manufacturer and as per the specification of the manufacture including cost of all brick materials, fixing charges, labour charges, transportation charges and minor tools etc. complete.	CUM	9,345.00	2,173,358.24
E-16	541.20	Supply, transport to site, deliver, place, compact, cure and test M30 grade plain cement concrete PCC flooring of 100 mm average thickness with complete as per drawings and specification including smooth finishing of the floor etc. including cost of labour, plasticiser, bipolar etc. as per manufacturer's specification.	CUM	10,000.00	5,412,000.00
E-17	5301.69	Plastering with cement mortar in 12 mm thick with 1:4 (one cement and four mainland river sand) cement mortar, including cost of Cement (53 grade Ordinary Portland cement confirming to IS 455), river sand , all labour charges, transportation charges of all materials to work site, scaffolding charges, cost of minor tools and plants etc. complete.	Sq.m	450.00	2,385,761.25
E-18	5729.27	Providing and applying two or more coats (to give a smooth and even shade) of premium acrylic emulsion paint conforming to IS:5411 of approved make and shade including cleaning and preparation of surface consisting of application of Plaster of Paris punning over entire surface, filling all holes and depressions with plaster of Paris, applying a coat of cement primer, two or more coats of oil based putty (as per manufacturer's recommendations to give a paste like putty), sandpapering etc. all complete.	Sq.M	156.00	893,766.54
E-19	18.00	Providing and fixing 12 mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in panelling fixed in aluminium doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings. Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side.	Sq.M.	1,186.00	21,348.00
E-20	103.20	Supplying and fixing Motor operated M.S. rolling shutters, conforming to IS : 6248 and as per approved Manufacturer's design & drawing including providing all accessories like shutter (constructed with inter locking lath sections formed out of cold rolled steel strips 0.9mm thick, 80mm wide and 1.25mm thick, 80mm wide respectively for shutter width upto 3.5M and above 3.5M), jointless M.S. channel section for guide (min. 3.15mm thick), M.S. girders, pressed bottom rails, shutter suspension stud shaft with pully and cage, top rolling springs, locking arrangement etc. Including all necessary electricals like motor, switching panels, switches, cables, wires etc. as required for smooth functioning of the shutter as per approved manufacturers drawings including painting with two coats approved make & shade and synthetic enamel paint over a coat of approved quality red oxide zinc chromate primer, making good of all damaged surfaces etc.	Sq.M	15,500.00	1,599,600.00
E-21	19.58	Providing and fixing of glazing in aluminium door, window ventilator, shutters and partitions etc. with PVC neoprene gasket etc. complete as per the architectural drawings (cost of aluminium snap beading shall be paid in basic item). With glass panes of 5.00 mm thickness (weight not less than 10.00 Kg/Sqm) including cost of all materials, transportation charges of all materials to work site, all labour charges and minor tools etc., complete.	SQM	1,304.00	25,537.54
E-22	171.36	Providing and fixing anodised aluminium work for doors, windows, ventilators, louver window and partitions with extruded built up standard tubular and other sections of approved make conforming to IS 733 and IS 1285, anodised transparent or dyed to required shade according to IS 1868 (Minimum anodic coating of grade AC 15), fixed with Rawl plugs and screws of with fixing clips or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and skles with required PVC / neoprene felt etc.. Aluminium sections shall be smooth rust free, straight, mitred and jointed mechanically wherever required including cleat angle, aluminium strap beading for glazing / panelling, CP brass /stainless steel screws all complete as per architectural drawings (Glazing and panelling to be paid for separately).	KG	465.00	79,682.73
E-23	1.00	Providing, fixing and commissioning of the EOT crane of 10MT capacity at the specified location including the cost of transportation, fixing charges, labour and other minor tools etc. complete	Nos	35,00,000.00	3,500,000.00
E-24	1.00	Electrification and lighting (1% of building cost)	L.S		1,970,785.56
				<b>Subtotal E =</b>	<b>199,049,341.85</b>
<b>F) ELECTRICAL WORKS</b>					
F-1	2.00	Supply, Installation, Testing and commissioning of 500 kVA Transformers (11kV / 0.460kV, Dry Type) including cost of transformers, fixing in position and testing, transportation charges, all labour charges for fixing and hire charges etc complete.	Nos	24,00,000.00	4,800,000.00

CONSTRUCTION OF OUTFITTING JETTIES AND APPROACH TRESTLE IN PATHFINDER CREEK AT VADINAR					
Item No	Quantity	ABSTRACT	Unit	Unit Rate	Amount (In Rs)
		Item Description			
F-2	2.00	Supply, Installation, Testing and commissioning of 500 kVA Transformers (11kV / 0.433kV, Dry Type) including cost of transformers, fixing in position and testing, transportation charges, all labour charges for fixing and hire charges etc complete.	Nos	21,00,000.00	4,200,000.00
F-3	2.00	Supply, Installation, Testing and commissioning of 500 kVA Transformers (11kV / 0.380kV, Dry Type) including cost of transformers, fixing in position and testing, transportation charges, all labour charges for fixing and hire charges etc complete.	Nos	10,00,000.00	2,000,000.00
F-4	3.00	Supply, Installation, Testing and commissioning of High Voltage Switch gear (11kV) including cost of switch panel, fixing in position and testing, transportation charges, all labour charges for fixing and hire charges etc complete.	Nos	26,02,000.00	7,806,000.00
F-5	3.00	Supply, Installation, Testing and commissioning of 460V/433V/380V MV Switch Panel including cost of MV panel, fixing in position and testing, transportation charges, all labour charges for fixing and hire charges etc complete.	Nos	10,00,000.00	3,000,000.00
F-6	2.00	Supply, Installation, Testing and commissioning of Lighting Transformers (0.415kV/0.420kV) including transportation charges, all labour charges for fixing and hire charges etc complete.	Nos	7,50,000.00	1,500,000.00
F-7	3.00	Supply, Installation, Testing and commissioning of Frequency convertor(3LT/SW) including cost of frequency convertor, fixing in position and testing, transportation charges, all labour charges for fixing and hire charges etc complete.	Nos	6,00,000.00	1,800,000.00
F-8	2.00	Supply, Installation, Testing and commissioning of Lighting Distribution Board (LDB) including cost of LDB, fixing in position and testing, transportation charges, all labour charges for fixing and hire charges etc complete.	Nos	1,00,000.00	200,000.00
F-9	1.00	Supply, Installation, Testing and commissioning of Direct current distribution board (DCDB) including cost of DCDB, fixing in position and testing, transportation charges, all labour charges for fixing and hire charges etc complete.	Nos	1,50,000.00	150,000.00
F-10	62.00	Supplying, testing and fixing of LED lighting system including 8 m high <b>single sided lighting poles</b> , complete with 200 W LED luminaires, poles, mounting brackets/arms, junction boxes, internal and external wiring, cables, conduits, connectors, earthing arrangements, control gear and all other accessories required for proper functioning of the lighting system. The item shall also include transportation of lighting poles, LED lights and fixtures to site, erection, alignment, testing, commissioning, all labour charges, use of minor tools and tackles, and any incidental works necessary for satisfactory completion of the item, as per specifications and directions of the Engineer-in-Charge.	Nos	58,000.00	3,596,000.00
F-11	50.00	Supplying, testing and fixing of LED lighting system including <b>5 m high single sided lighting poles</b> , complete with 200 W LED luminaires, poles, mounting brackets/arms, junction boxes, internal and external wiring, cables, conduits, connectors, earthing arrangements, control gear and all other accessories required for proper functioning of the lighting system. The item shall also include transportation of lighting poles, LED lights and fixtures to site, erection, alignment, testing, commissioning, all labour charges, use of minor tools and tackles, and any incidental works necessary for satisfactory completion of the item, as per specifications and directions of the Engineer-in-Charge.	Nos	50,000.00	2,500,000.00
F-12	20.00	Supplying, testing and fixing of LED lighting system including <b>3 m length cantilever arm supported on walls of building</b> , complete with 350 W LED luminaires, poles, mounting brackets/arms, junction boxes, internal and external wiring, cables, conduits, connectors, earthing arrangements, control gear and all other accessories required for proper functioning of the lighting system. The item shall also include transportation of lighting poles, LED lights and fixtures to site, erection, alignment, testing, commissioning, all labour charges, use of minor tools and tackles, and any incidental works necessary for satisfactory completion of the item, as per specifications and directions of the Engineer-in-Charge.	Nos	50,000.00	1,000,000.00
F-13	1.00	Supply, Installation, Testing and commissioning of Earthing system for pump house, substation, approach trestle, outfitting jetties 1, 2 and 3 comprising of earthing strips, earth electrode including cost of materials, fixing in position and testing, transportation charges, all labour charges for fixing and hire charges etc complete.	Lot	1,000,000	1,000,000.00
F-14	50.00	Supply, Installation, Testing and commissioning of Miscellaneous Items like structural steel required for electrical equipment installation, chequered plate, GI pipes, safety items such as shock treatment charts, insulation mats, first aid box and danger boards etc., complete.	MT	150,000	7,500,000.00
F-15	2000.00	Supply, deliver and laying of Low-tension cable (1.1kv) XLPE insulated, PVC sheathed armoured screened cable of size 3.5C x 400 sq. mm with aluminium conductor conforming to IS-1554/7098, Part 1 of 1988 or its latest amendment including cost of LT cables, transportation charges, all labour charges etc complete.	Mtr	2,100.00	4,200,000.00
F-16	2000.00	Supply and Laying of GI hot dip / Powder coated perforated cable tray of 450 mm x 25 mm 14 swg thick(2.00 mm approx.) over the pedestal made of suitable GI angle of 50 x 50 x 5 mm in both sides and angle frame support / GI flat of 50 x 5 mm spanned at every one metre interval as per the drawing or as directed by the Nodal officer including cost of all materials and labour charges for fixing in position inside the master cable duct, transportation charges of all materials to worksite etc complete.	mtrs	2,500.00	5,000,000.00
F-17	2000.00	Supply, Erecting & Terminating of PVC/XLPE insulated armoured PVC sheathed cable of size 4C x 120 sq.mm. heavy duty with Aluminium conductor 1100 volts grade conductor 1100 volts grade 1554/7098(part-I) of 1988 to be laid from Nearest Sub Station to External Lighting DB	mtrs	3,000.00	6,000,000.00
F-18	2000.00	Supply, Erecting & Terminating of PVC/XLPE insulated armoured PVC sheathed cable of size 4C x 16 sq.mm. heavy duty with Aluminium conductor 1100 volts grade conductor 1100 volts grade 1554/7098(part-I) of 1988 to be laid from External Lighting DB to Each High Mast Panel	mtrs	600.00	1,200,000.00
F-19	2000.00	Supply, Erecting & Terminating of PVC/XLPE insulated armoured PVC sheathed cable of size 4C x 6 sq.mm. heavy duty with Copper conductor 1100 volts grade conforming to IS 1554/7098 (part-I) of 1988 to be laid from control panel to FPMCB connected High Mast.	mtrs	300.00	600,000.00
F-20	2000.00	Supply, Erecting & Terminating of PVC/XLPE insulated armoured PVC sheathed cable of size 3C x 2.5 sq.mm. heavy duty with Copper conductor 1100 volts grade conforming to IS 1554/7098 (part-I) of 1988	mtrs	1,000.00	2,000,000.00

CONSTRUCTION OF OUTFITTING JETTIES AND APPROACH TRESTLE IN PATHFINDER CREEK AT VADINAR					
Item No	Quantity	ABSTRACT	Unit	Unit Rate	Amount (In Rs)
		Item Description			
F-21	1.00	Supply, Installation, Testing and commissioning of Battery Charger and Accessories including cost of all materials, transportation charges, all labour charges etc complete.	Lot	2,500,000	2,500,000.00
F-22	2.00	Supplying, Installation, testing and commissioning of Hot dip galvanised 16 mtr. height high mast lighting tower of 30 Mtr with lighting tower shaft in three sections suitable for 55 Mtr/sec wind speed with raising and lowering system comprising head frame, luminaries carriage suitable to install 16 nos luminaries in symmetrical arrangement, double drum winch, 6 mm dia SS wire rope, trailing cable, connector, integral power tool motor, manual handle, junction box, lightning finial, wiring material, power cables between panel and mast, MCB in base compartment, Carriage mounting clamps and bolts etc. Foundation bolts with nuts, Aviation abstraction warning lamp, Outdoor stand mounted feeder pillar with timer device and suitable control gears, LED luminaries of 200 watt - 16 nos / tower including cost of erection at site. (Make - Balal / Crompton / Havells etc)	Nos	2,500,000	5,000,000.00
F-23	12.00	Supply and fix in position exhaust fans of 400mm dia as specified in drawing of approved make, including bolts, nuts and other fixtures as per specification and drawings etc complete.	Nos	30,000.00	360,000.00
F-24	8.00	Supply, deliver and install shore power junction boxes and power sockets at 30m intervals along the outfitting jetties 1, 2 and 3 including cost of LT cables, transportation charges, all labour charges etc complete.	Nos	500,000.00	4,000,000.00
F-25	500.00	Supply, deliver and laying of High tension cable (11kV) XLPE insulated, PVC sheathed armoured screened cable of size 3C x 400 sq mm with aluminium conductor conforming to IS-1554/7098, Part 1 of 1988 or its latest amendment including cost of LT cables, transportation charges, all labour charges etc complete.	Mtr.	5,000.00	2,500,000.00
F-26	500.00	Excavation upto a depth of 1.5m and backfilling with murrum for laying High tension cable (11kV) for the specified with in the construction drawings and flattening for laying of the cable including the cost of manpower and equipment's complete.	Mtr.	2,000.00	1,000,000.00
F-27	1.00	Supply, installation, testing and commissioning of 160 KVA / 415V acoustic enclosure power generator set complete on suitable support frame, water cooled engine, 16 cylinder, 4 stroke, rated at 1500 RPM, conforming to ISO 3046 / BS 5514 and Brushless Alternator of self / Separately excited, self-regulated - Class 'H' insulation - Salient pole revolving field - Single / double bearing - PMG standard with accessories like Silencer suitably optimized to reduce noise - Sturdy base rail - 990 ltrs. free standing fuel tank. - 4 x 12 V dry, uncharged batteries with connecting leads and terminals Control panel: Powder coated control panel manufactured with 14 / 16 gauge CRCA sheet and provided with ACB of suitable rating with overload and short circuit protection - Voltmeter and ammeter with selector switch - KW / PF meters - Frequency meter - KWh meter - Indicating lamps for "Load On" and "Set Running", Current transformers - Aluminium busbars of suitable capacity with incoming and outgoing terminations - Instrument fuses duly wired and ferruled, manual control panel and batteries as directed by the Nodal officer including cost of all taxes and duties, transportation charges and commissioning of the machine at site etc. complete.(Preferable Make: Captiva / KCL/ Powerica or equivalent made in India approved by nodal officer).	Nos	4,000,000.00	4,000,000.00
F-28	4.00	Supply, installation, testing and commissioning of outdoor type floor mounted / self standing cubical panel pillar box with the general construction shall confirm to IS-8623-1977 (Part-1) or as per CPRI approval to accommodate switch gears up to 1000 Amps, 3 phase 415 Volts / 1100 V AC of size 1500 (H) x 1000(W) x 700(B) mm size with 2.00 nos front hinged door complete with locking arrangement with degree of Protection - IP 65 in acc. with IEC 60 529b. made out of 3.00 / 2.5 mm thick black sheet / CRCA sheet in different compartment to accommodate various size of electrical items ( As per supplying and fixing given in separate item) with suitable chamber for copper bus bar attachment (Busbar will be paid separately) . The panel should have an inner earthing, one coat of P.S. grey and over that two coats of electrostatic powder coated paint and danger plate as required. The rate including cost of all materials, transportation charges of all materials to worksite and labour charges, minor tools and plants etc. complete.	Nos	600,000.00	2,400,000.00
F-29	8.00	Supplying, installation, testing and commissioning of following capacity distribution bus trunking with copper bus bars of 80 x 10 mm size 4 strip of length up to 600 mm length on suitable heavy duty porcelain insulator for use on, 3 phase, 4 wire, 415 volts, 50 Hz, A.C. supply including drilling holes for supply tap off including cost of all materials, transportation charges of all materials to worksite, all labour charges etc complete.	Nos	20,000.00	160,000.00
F-30	8.00	Supplying, installation, testing and commissioning of following capacity distribution bus trunking with copper bus bars of 50 x 8 mm size 4 strip of length up to 600 mm length on suitable heavy duty porcelain insulator for use on, 3 phase, 4 wire, 415 volts, 50 Hz, A.C. supply including drilling holes for supply tap off including cost of all materials, transportation charges of all materials to worksite, all labour charges etc complete.	Nos	15,000.00	120,000.00
F-31	8.00	Supply, installation, testing and commissioning of 4 pole ACB of following range with microprocessor release confirms to IS - 60947 - 2. with all accessories in the existing cubical power panel board. Breaking capacity 50 KA including cost of all materials ,transportation charges of all materials to worksite, all labour charges etc complete. 1000 Amps, 4 pole, 415 Volts, TPN draw out ACBs, Make - L&T / ABB	Nos	200,000.00	1,600,000.00
F-32	8.00	Supplying, Installation, testing and commissioning of Cope point boxes made out of 50 x 50 x5 mm angles and with 6 mm MS plate with door arrangement on top for tapping of power supply with protection of enclosure IP-65, Painted with electrolytic powder coat inside and FRP coat of 1.00 mm thick on outside confirms to standard of IEC with Copper busbar of following capacities, including cost of all materials, transportation charges of all materials to worksite, all labour charges etc complete. 1000 Amps cap with copper busbar of 3P x 120 x 12 mm & 1N x 10 x 8 mm.	Nos	100,000.00	800,000.00

CONSTRUCTION OF OUTFITTING JETTIES AND APPROACH TRESTLE IN PATHFINDER CREEK AT VADINAR					
Item No	Quantity	ABSTRACT	Unit	Unit Rate	Amount (In Rs)
		Item Description			
F-33	2.00	Supplying, installing, testing and commissioning of <b>Miniature Circuit Breakers (MCBs)</b> for External Lighting Distribution Board (DB) suitable for 415V, 3-phase, 50 Hz AC system, conforming to IS/IEC standards, comprising 25A, TPN, 10 kA MCBs (5 Nos. for outgoing feeders and 1 No. spare) and 16A, SPN, 10 kA MCBs (8 Nos. for lighting circuits with contactors and timers and 1 No. spare), complete with thermal-magnetic trip mechanism, Type C characteristics, DIN rail mounting, internal interconnections, identification, and all accessories, ensuring protection against overload and short circuit, including integration with contactors, timers, and indication circuits, complete in all respects as per specifications.	Nos	1,000,000.00	2,000,000.00
Sub-Total F =					86,492,000.00
<b>G) FIREFIGHTING</b>					
G1	3.00	Providing, assembling and fixing of Fire water main pump diesel engine driven (360 m3/hr capacity) in position for fire water pump house including the cost of transportation, erection and commissioning including the cost of all materials and minor tools etc., complete	Nos	49,50,000.00	14,850,000.00
G2	2.00	Providing, assembling and fixing of Fire water Jackey pump motor driven (36 m3/hr capacity) in position for fire water pump house including the cost of transportation, erection and commissioning including the cost of all materials and minor tools etc., complete	Nos	29,70,000.00	5,940,000.00
G3	1.00	Providing, assembling and fixing of HP tank (3000L capacity) in position for fire water pump house including the cost of transportation, erection and commissioning including the cost of all materials and minor tools etc., complete	Nos	1,05,000.00	105,000.00
G4	8.00	Providing, assembling and fixing of Fire hydrants in position for outfitting jetty-1 and 2 including the cost of transportation, erection and commissioning including the cost of all materials and minor tools etc., complete	Nos	5,670.00	45,360.00
G5	20.00	Providing, assembling and fixing of Fire extinguishers in position for outfitting jetty-1 and 2 including the cost of transportation, erection and commissioning including the cost of all materials and minor tools etc., complete	Nos	5,500.00	110,000.00
G6	1700.00	Providing, laying and fixing of Fire water pipeline (MS 12" x 0.5" internal glass flake coating) in position for approach trestle and outfitting jetty-1 and 2 including the cost of transportation, laying of pipelines and commissioning including the cost of all materials and minor tools etc., complete	Rmt	1,200.00	2,040,000.00
G7	1.00	Providing, laying and fixing of Fire alarm system in position for approach trestle and outfitting jetty-1 and 2 including the cost of transportation and commissioning including the cost of all materials and minor tools etc., complete	L.S.	6,30,000.00	630,000.00
G8	1.00	Providing, laying and fixing of public address/Talk back system in position at required places for approach trestle and outfitting jetty-1 and 2 including the cost of transportation and commissioning including the cost of all materials and minor tools etc., complete	L.S.	2,62,500.00	262,500.00
G9	2.00	Providing, fixing and commissioning of the DTRO plant of 0.6MLD capacity at the specified location including the cost of transportation, fixing charges, labour and other minor tools etc. complete	L.S.	32,163,000.00	64,326,000.00
G10	2.00	Providing, fixing and commissioning of the centrifugal pump of 600 m3/hr capacity at the specified location including the cost of transportation, fixing charges, labour and other minor tools etc. complete	L.S.	5,25,000.00	1,050,000.00
G11	1500.00	Providing, laying and fixing of Potable water pipeline (219mm dia) in position for outfitting jetty-1 and 2 including the cost of transportation, laying of pipelines and commissioning including the cost of all materials and minor tools etc., complete	Rmt	735.00	1,102,500.00
Sub-Total G =					90,461,360.00
Total estimated cost of the project (A+B+C+D+E+F+G)					4,920,963,520.00