

EDUCATION CITY

INFRASTRUCTURE DEVELOPMENT OF EDUCATION CITY, KARACHI PHASE - 1 (4800 Acres)

PACKAGE - 1-A(i)
CA NO. CGDC/PIU/ECP/2024/PKG-1-A(i)

ADDENDUM NO. 1

NOVEMBER, 2024



GOVERNMENT OF SINDH



CGD CONSULTING

EDUCATION CITY

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

ADDENDUM NO. 1**Queries Reply**

S.no	Contractor Queries	Procuring Agency
Queries Raised by M/s Sherjan Mosakhail & Sons		
1	Item# PH/E-1 Page-113: Providing, Laying & Fixing in trench i/c fitting, jointing & testing etc complete in all respect the high Density Polyethylene PE pipes (HDPE-100) for W/S confining ISO 4427/DIN8074/8075 B.S 3580 & PSI 3051. PN-10.	Item# PH/E-1 Page-113 is as per CSR 2024 and as per requirement of the project.
2	Item# E-2/Page -116: Laying P.E pipes of all types and fixing in trench i/c cutting, fitting and jointing with Butt Fusion joint i/c testing with water to Specified tied pressure. Laying and Jointing P.E pipes (i/c cost of jointing material).	Item# E-2/Page -116 is as per CSR 2024 and as per requirement of the project.
3	Item# C-8/24 Page-45: Laying floor of approved with glazed tiles 1/4" thick dado of approved color & size jointing in white cement and laid over 1 :2 cement sand mortar 3/4" thick including grouting with matching color and finishing complete in all respects.	Item# C-8/24 Page-45 is as per CSR 2024 and as per requirement of the project.
4	Item# C-8/25 Page-46: Laying floors of approved coloured glazed tiles 1/4" thick floor of approved color & size jointing in white cement and laid over 1 :2 cement sand mortar 3/4" thick including grouting with matching color and finishing complete in all respects.	Item# C-8/25 Page-46 is as per CSR 2024 and as per requirement of the project.
Queries Raised by M/s Kainatt Enterprises		
5	Single Stage Envelope Procedure: In PARA 18 of Bidding Data Sheet, the requirement states that a financial proposal of bid is to be opened only for prequalified firms Pre-Bid Meeting mandatory criteria. As we are prequalified and have submitted all necessary technical and financial documents. Could you clarify the necessity of these mandatory requirements? In principle, under a single-stage procedure, only BOQ documents are submitted with the bid	As the bid is only for prequalified contractors, therefore contractors are required to submit financial Bid duly signed and stamp by the bidder as mandatory requirement alongwith work methodology and time schedule of the Project.
6	Required Documentation: PARA 7(h)(m) of Bidding Data Sheet requires additional documents for equipment and financial competency. However, we have already provided these documents during the prequalification process. Could you please clarify why such documents are needed again?	These information required in the tender document shall be considered as an additional document and hence it will not effect financial evaluation of bid.
7	Experience Requirements: Appendix N to the bid requires details of three completed works during the last five years of having similar nature and size. As we have already submitted comprehensive experience documents during prequalification, could you explain the rationale for this additional requirement? This exercise will be wasted duplication of efforts.	
8	BOQ Discrepancies: There appears to be an error in the calculation of BOQ items of road work and the total amount in the Grand Summary for schedule items is incorrect. Please correct this discrepancy	Necessary correction have been made in the enclosed BOQ and same has been uploaded on Authority's and Education City's website.
9	Grand Summary Format: In the Grand Summary for Package I-A (1), the column for schedule items may be left vacant, as amounts will vary once we provide above or below percentages for the works.	
10	Main Summary Format: Page 1 of 22 in the BOQ presents a summary of four items-Water Supply, Storm Water Drain, Irrigation, and Sewerage-that lacks separate columns for schedule and non-schedule items. How separate a amounts can be presented in this format?	Schedule and Non-Schedule items of the BOQ have been segregated as desired. Amended BoQs (enclosed herewith) have been uploaded on Authority's and Education City's website.
11	SST Amount: The Grand Summary of the BOQ does not specify the amount or percentage for SST. Please provide this information	Bidders have to take into account all the prevailing federal, provisional and local taxes while quoting the rates. Present prevailing SST is 15%.



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12	Container Office and Accommodation: Under special provisions (11.I(a)), it is stated that the contractor shall establish a container office and accommodation complex (approximately 5000 sq. ft.). As no drawings has been provided, could you please clarify what type of accommodations are required beyond three office containers?	The Bidder has to provide portable cabins / container office and accommodation. Total requirement of the floor area is 5000 sq.ft.. The bidder has to provide three containers as defined in clause 11 of Special Provision.
13	Mobile and Telephone Costs: For Engineer and Employer Facilities (11.I(i)), the requirement states an average cost of Rs. 35,000/month for mobile and telephone use. Could you clarify how many personnel will be given this amount?	The Contractor shall provide Rs. 35,000/- per month to employer and Rs. 35,000/- per month to Engineer for mobile and telephone as mentioned in Clause-11.
14	Equipment Ownership: Regarding Engineer and Employer facilities, it states that equipment used by the engineer and employer will become the property of the employer and must be handed over in good working condition upon project completion. Could you specify what equipment is being referred to?	The equipment mentioned in Clause 11 (d) & (e), will be property of the Employer and must be handed over in good working condition upon project completion.
15	Performance Security & Mobilization Advance: The performance security may kindly be reducing from 5% and the mobilization advance may be increase from 5% to a reasonable percentage.	The performance security and mobilization advance shall remain 5% in form of Deposit at call or payorder or Demand Draft or a Bank Guarantee issued by a scheduled bank in Pakistan
16	Engineers Facilities: The facilities for Engineer and Employer are very costly and involve a huge amount. Due to this heavy amount the project cost can be increased. It is proposed these facilities may be provided in the BOQ Separately.	As discussed during the Pre-Bid Meeting, the Engineer's Facilities will remain as it is mentioned in Bidding Documents and Contractor has to adjust in their Contract Rate.
17	SITE Visit: Please arrange site visit to get ourselves information about the site	As discussed during the Pre-Bid Meeting, the bidders willing for site visit shall submit written request to the Employer atleast 24 hours prior to visit the site.
18	Time for Submission of Bid	The Time for Submission of Bid has been extended till 15th November, 2024 by 1400 hrs
Queries Raised by M/s JN & Co.		
19	Clarifications are required for the sub categories of these specialization codes CE- I I & EE-1 I.	As the Prequalification process is complete so these queries are irrelevant.
20	In the Bidding Data Sheet Point (I 8a) (Evaluation/Qualification Criteria) mode of evaluation is not clearly defined as Single Stage Single Envelop or Single Stage Two Envelope.	Since the pre-qualification has been completed therefore, the Evaluation/Qualification criteria shall be Single Stage One Envelope.
21	In the BOQ the tax percentage for SST is not defined/ overwrite.	Bidders have to take into account all the prevailing federal, provisional and local taxes while quating the rate. Present prevailing SST is 15%.
22	In the BOQ the Engineering Facilities head is not available/overwrite.	As discussed during the Pre-Bid Meeting, the Engineer's Facilities will remain as it is mentioned in Bidding Documents and Contractor has to adjust in their Contract Rate.
23	Amount for the Average Annual Turnover is not defined in Appendix-M.	This is an additional information and have no impact on financial evaluation
24	Amount for the contract of similar size an'd nature is not defined in Appendix-N (BN-1)	
25	Key personnel details are not defined in Appendix-N (BN-2).	
26	Please clarify BN-3 for CA Category firms.	
27	Arithmetical errors are observed in the boq which will affect the quoting % of the premium on schedule items. (Identified errors are attached in Annexure-A).	Necessary correction have been made in the enclosed BOQ and same has been uploaded on Authority's and Education City Project website. Refer Addendum - 1.

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28	Also, it was said in the pre-bid Pre-Bid Meeting that the Performance Security will be 2% of the contract/bid price. Please confirm the same.	The performance security and mobilization advance shall remain 5% each in form of Deposit at call or payorder or Demand Draft or a Bank Guarantee issued by a scheduled bank in Pakistan
29	With respect to above mentioned clarification, kindly provide extension of time for suitable period to prepare the bid as per updated RFP documents/Corrigendum.	The Time for Submission of Bid has been extended till 15th November, 2024 by 1400 hrs
Queries Raised by M/s ZKB		
30	Engineer Facilities in BOQ The Conditions of Contract specify the provision of engineer facilities, which represents a significant cost. Given that these facilities could amount to millions, could you confirm if these will be included as a separate line item in the Bill of Quantities (BOQ)?	As discussed during the Pre-Bid Meeting, the Engineer's Facilities will remain as it is mentioned in Bidding Documents and Contractor has to adjust in their Contract Rate.
31	Mobilization Advance To enable effective mobilization and smooth project startup, we request that the mobilization advance be increased to at least 10% of the contract value. This increase would help offset initial project costs and enhance our capacity to deliver efficiently from the outset. Could this adjustment be considered?	The performance security and mobilization advance shall remain 5% each in form of Deposit at call or payorder or Demand Draft or a Bank Guarantee issued by a scheduled bank in Pakistan
32	Ambiguities in BOQ There appear to be several ambiguities and inconsistencies within the BOQ, such as repeated items across both scheduled and non-scheduled sections, as well as redundancy in certain "providing and laying" activities. These duplications create potential for confusion and could impact pricing. Could you provide clarification or an updated BOQ that resolves these issues?	As already explained above in point no. 1, 2, 3 & 4. These items are as per CSR 2024 and as per requirement of the project. Necessary correction have been made in the enclosed BOQ and same has been uploaded on Authority's and Education City's website. Refer Addendum - 1.
33	Confirmation of Funds Availability The bidding data indicates that the Employer has arranged funding from its own sources. To avoid potential project interruptions due to financial constraints, could we consider this as a definitive confirmation of the funds' availability for the full duration of the project's execution?	N/A
34	Utilities Availability on Site Please clarify whether essential utilities, such as water and electricity, will be available on-site for contractor use. If these resources are not provided, contractors may need to make separate arrangements, which could affect project logistics and costs.	It is the responsibility of Contractor. Please refer Clause 10.1 of Special Provisions.
35	Provision of Drawings in PDF Format For ease of understanding and to facilitate a more precise review of project requirements, we request that all project drawings be provided in PDF format. This will allow for more accurate assessment and reference during bid preparation and eventual project execution.	Drawings provided with the Tender Documents are comprehensive, complete and sufficient to fill the BOQ. However, same has been uploaded on Education City Project's website.
36	Submission of Tender Drawings Could you confirm whether it is mandatory to submit the tender drawings alongside our bid submission? This will help ensure that all required documentation is prepared as per the submission guidelines.	Yes
37	Handwritten vs. Typed BOQ Submission Please clarify if the BOQ must be completed by hand, or if a typed (digitally filled) BOQ submission is acceptable. This information will help us ensure that the bid format aligns with the submission requirements and avoids potential disqualification.	Both are Acceptable

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38	Additionally, given the need to address these queries and incorporate any necessary changes, we respectfully request an extension of at least two weeks to the current bid submission deadline. This additional time will allow us to prepare a comprehensive and responsive bid.	The Time for Submission of Bid has been extended till 15th November, 2024 by 1400 hrs



UPDATED BOQ



ADDENDUM NO. 1

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CIVIL & INFRASTRUCTURE				
Sub-Head	Name of Work	Schedule Items Amount (Rs.)	Non Schedule Items Amount (Rs.)	Total Amount (Rs.)
		A	B	C = (A+B)
1	SCHEDULE & NON SCHEDULE ITEMS			
i.	ROAD WORK & BOX CULVERTS.			
ii.	WATER SUPPLY & WATER SUPPLY RESERVIOR, STORM WATER DRAIN, IRRIGATION & IRRIGATION RESERVOIR, SEWERAGE.			
iii.	GATE HOUSE			
iv.	GATE HOUSE PLUMBING WATER SUPPLY			
v.	BRIDGE			
vi.	STREAMS			
vii.	URBAN FOREST			
	Total Amount Rs.			
ELECTRICAL				
Sub-Head	Name of Work	Schedule Items Amount (Rs.)	Non Schedule Items Amount (Rs.)	Total Amount (Rs.)
		D	E	F = (D+E)
2	SCHEDULE & NON SCHEDULE ITEMS			
i.	BRIDGE			
ii.	GATE HOUSE			
iii.	STREET LIGHTINING			
iv.	MV DISTRIBUTION			
	Total Amount Rs.			
Total Amount (Rs.) G = (C + F)				
SST				
Grand Total Cost				



ROADS WORK & BOX CULVERTS



BILL OF QUANTITY ROAD WORK PACKAGE - 1-A(i)

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SUMMARY

Sub-Head	Name of Work	Amount (Rs.)
1	SCHEDULE ITEMS	
i)	CIVIL WORKS	1,493,410,034
ii)	BOX CULVERTS	35,205,854
	Add Premium Above or Below _____% on Schedule Items	
	Sub-Total (A)	
2	NON-SCHEDULE ITEMS	
i)	CIVIL WORKS	
ii)	HORTICULTURE	
iii)	BOX CULVERT	
	Sub-Total (B)	
	Total (A+B)	



BILL OF QUANTITY ROAD WORK PACKAGE - 1-A(i)

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S No.	Item #	DESCRIPTION	UNIT	QTY	RATE (Rs)	AMOUNT Rs.
	A	SINDH SCHEDULE RATE MAY - 2024 (HIGHWAYS WORKS)				
		CONSTRUCTION OF ROAD				
		EARTH WORK				
1	HW-1 page-211	Clearing and grubbing the site by cutting, up rooting and removing all rubbish and shrubs including disposal to (outside limits) designated places.	SM	280150.00	31.00	8,684,650
2	HW-2 page-211	Compaction of Natural Ground upto a depth of 20cm (8"inch) below the natural ground level compacted upto 90% density modified AASHTO.	SM	212154.60	50.40	10,692,592
3	C-8/68 page-50	Providing & fixing cement paving blocks flooring having size of 197 x 97 x 60 (mm) of city /quddra / cobble shape with pigmented, having strength b/w 5000 psi to 8500 psi i/c filling the joints with hill sand over a bed of 2" thick hill sand or stone dust and laying and compacting in specified manner/ pattern and design etc complete.(Pigmented) (PSI 5000 to 8500e / Tameer Works or Equivalent manufacturer)				
	i)	60mm Cosmic, zigzag/Plain interlock paver	SM	57645.36	2,276.17	131,210,639
	ii)	Providing laying cobble stone / CC tile size 600xx 600 mm.	SM	38430.24	2,276.17	87,473,759
4	HW-9 page-212	Preparing sub grade including earth excavation or filling to an average depth of 9" dressing to camber and consolidation with power Roller.				
	(a)	Subgrade preparation	SM	190274.70	176.41	33,566,360
5	M Basic/1 page-10	Carriage of 100Cft /5Tons of all materials like, Stone aggregate, Spawl, Coal, Lime, Surkhi, etc. B.G Rail fastening points and crossing bridge, Girders, Pipes, Sheets Rails, M.S Bars etc. or 1000 Nos. Bricks (10"5"x3") or 1000Nos. Tiles(12"x6"x2") or 150Cft of Timber or 100 Maunds of fuel wood by trucks or any other means owned by the contractors.				
	i.	Carriage 1st mile to 6th mile	CM	78614.60	511.08	40,178,350
	ii.	Carriage (100km or 62.15 mile - 6mile =56.15 56.15 x 105.93 = 5947.97 / 100 = 59.48 / Cft 59.48 x 35.32 = 2100.83 / Cm. around project approved source material.	CM	78614.60	2,100.83	165,155,910
	iii.	Note :- Incase from where the source will pass, the rate will be calculated or deducted on the basis of kilometers. Rs. 105.93 / 100Cft or 37.414/ Cm per mile.	CM			
6	HW-11d page-213	Preparing Sub-Base by supplying and spreading well graded pit or bed run gravel having a liquit limt not greater than 25 and plasticity index not greater than 6 in proper camber and grade including watering rolling and compacting in layers, thickness of each compacted layer not compacted exceeding upto 6" 98-100% density as per modified AASHO density (Rate i/c all cost of materials T&P and carriage upto 3 chanins)	CM	35359.59	3,429.99	121,283,040



BILL OF QUANTITY ROAD WORK PACKAGE - 1-A(i)

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S No.	Item #	DESCRIPTION	UNIT	QTY	RATE (Rs)	AMOUNT Rs.
7	HW-13B page-214	Providing and laying Aggregate base course in proper grade and camber having CBR 80% as per AASHTO standard specifications i/c spreading and compacting by approved mechanical means (Motor grader, Vibratory roller and Smooth wheel roller etc) watering to maintain the moisture content the compaction of each layer shall 100 percent to the max dry density (Rate i/c all cost of materials T&P and carriage upto 3 chains).	CM	43255.01	4,893.72	211,677,908
8	HW-39/14 page-221	Providing & fixing Precast Edge Block 3750 PSI Industrial Made Size 6 inches thick x 12 inches long x 18 inches high including the cost of Cartage, excavation, form Work for haunching, 1450 PSI lean concrete, 2250 PSI concrete for haunching, 1:4 cement sand mortar.				
	i	Size - 6" x12"x 18" (150 x300 x450mm)	RM	8448.00	2,225.09	18,797,560
9	HW-23A page-217	Providing and laying Plant mixed Asphalt Concrete Binder Course compacted thickness 3 inches (75mm thick) as per approved job mix formula using crush aggregate from approved sources. Using asphalt of grade 80/100 during laying temperature not less than 140C compacted by steel wheel & PTR roller. The procedure of laying binder course material & methodology shall fully comply with AASHTO and as directed by Engineer Incharge. Minimum bitumen content should be 3.5% binder course shall be spreading using paver machine. Rolling & Finishing to design proper grade line level and camber etc: (Machinery with POLs cost of material carriage).	SM	82858.65	2,871.34	237,915,356
10	HW-24B page-218	Laying to Proper line and grade plant mixed Asphalt concrete paver finished (Hydraulic / Electronic control) Prepared to specified formula according to job mix formula approved by Engineer incharge including rolling and finishing to Proper line, grade level and camber etc: (Machinery with POLs cost of material carriage).	SM	141725.85	2,138.44	303,072,227
11	HW-31a page-219	Applying priming coat or tack coat with approved binder at the required rate including cleaning the road surface thoroughly, heating to the required temperature and spraying the binder with pressure as directed etc, complete. Base rate per kg 182.42x 0.70 kg required per sqm = 127.69 + 37.67 = 165.36	SM	141725.85	165.36	23,435,787
12	HW-31b page-219	Applying priming coat or tack coat with approved binder at the required rate including cleaning the road surface thoroughly, heating to the required temperature and spraying the binder with pressure as directed etc, complete. Base rate per kg 182.42x 0.20 kg required per sqm = 36.48 + 37.67 = 74.15 (Bitumen Basic rate page-24/No123)	SM	82858.65	74.15	6,143,969
13	HW-39/4 page-221	Cutting and removing trees within distances of 100 ft:				
	a	Upto 2.0ft : Girth.	Each	45.00	2,763.26	124,347
	b	2.50 Ft. to 6.0 Ft. Girth.	Each	30.00	5,397.57	161,927



BILL OF QUANTITY ROAD WORK PACKAGE - 1-A(i)

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S No.	Item #	DESCRIPTION	UNIT	QTY	RATE (Rs)	AMOUNT Rs.
	c	Removal of trees 150 mm to 300mm girth including uprooting and disposal to (outside limits) designated places.	Each	50.00	559.29	27,965
14	HW-39/12 page-221	Supplying and Fixing of reflectorize Road Studs Double Face, Flush surface type.				
	i)	Reflectorized Pavement Stud (Flush Profile Type - Double) 100x100mm	Each	9308.10	1,520.42	14,152,221
15	HW-39/13 page-221	Pavement marking in Reflective Thermo Plastic Paint for Lines of 6" Width.				
	i)	Pavement Marking in reflective TP Paint for Line of 15 cm width.	RM	56658.00	282.51	16,006,452
	HW-39/18 page-222	Traffic Signs				
16	a)	Providing & Fixing traffic sign 3' dia G.I. Pipe post and sign of equilateral triangular shape each side 3' long i/c Painting, Marking as directed each.	Each	10.00	55,873.81	558,738
	b)	Providing & Fixing 3' dia G.I single post sign of circular shape 3' Dia i/c Painting, Marking as directed each.	Each	10.00	55,873.81	558,738
	c)	Providing & Fixing Rectangular shape 3'x2' comprizing 2Nos: 3" Dia G.I pipe Post i/c Painting, writing as directed each.	Each	10.00	52,117.78	521,178
17	HW-18/(c) II page-222	Providing & Fixing In formatory Sign Rectangular shape 4' x 3' comprizing 2 Nos: 3" Dia G.I pipe Post i/c Painting, writing as directed each.	Each	8.00	56,706.63	453,653
18	HW-40 page-223	Scarifying the existing road surface by means of Cold Milling upto the depth of 0 30mm including removal of excavated material from the site	SM	8000.00	192.18	1,537,440
19	HW-43 page-224	The Composite Rates below are inclusive of cartage / carriage of materials from approved quareis/source of material.No separate carriage of materials to be incorporated in the estimate or to be paid to the contractor)				
	HW-43/16 page-225	Lean Concrete 1450 psi	CM	50.00	13,892.95	694,648
20	HW-43/10 page-224	Class - B 2400 psi	CM	13.95	18,243.05	254,491
21	HW-43/8 page-224	Class - A3 4000 psi (For Roundabout Water Bodies etc)	CM	225.00	29,946.55	6,737,974
22	C-1/7a page-15	(a) Excavation in hard rock requiring blasting and disposal of excavated material (blasted material) upto 50 ft. lead (including dressing and levelling to designed section etc, complete.				
	a)	Grade - 1	CM	8500.00	907.72	7,715,620
	b)	Grade - 2	CM	8000.00	984.72	7,877,760
	c)	Grade - 3	CM	7500.00	1,189.58	8,921,850

BILL OF QUANTITY ROAD WORK PACKAGE - 1-A(i)

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S No.	Item #	DESCRIPTION	UNIT	QTY	RATE (Rs)	AMOUNT Rs.
23	C-18/108 page-86	Stone cladding of required size on wall facing of approved design shape and pattern set in cement sand mortar ratio 1:2 in gray cement 3/4" thick in/c washing of joints with net white cement salary and pigment in desire shape in/c cutting and dressing the stone tile to proper profile in/c labour etc complete as per specification as directed by the Engineer / Incharge.	SM	350.00	5,831.17	2,040,910
24	C-18/125 page-87	Providing and laying 2mm thick grip PVC water proofing Membrane over to coat of bitumen black Japan mixed with carosine oil with burning lamp over roof in/c necessary overlaps etc complete.	SM	1200.00	2,187.50	2,625,000
25	C-6/23 page-39	Stone Pitching including sub-base with hammer dressed stone on surface laid-in courses including Carriage of materials Chains.	CM	3292.80	7,030.80	23,151,018
TOTAL SCHEDULE ITEMS Rs.						1,493,410,034



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S.No	Item #	DESCRIPTION	UNIT	QTY	RATE	AMOUNT Rs.
	B	NON SCHEDULE ITEMS				
		CONSTRUCTION OF ROAD				
		EARTH WORK				
1	HW-1	Stripping all type material with disposal any lead & lift.	CM	10,000.00		
		EXCAVATION OF UNSUITABLE OR SURPLUS MATERIAL				
2	HW-2	Formation of Embankment Road way Excavation in common material up to required level in ordinary soil and using excavated earth Laying in layers including all lead and lift in project area, dressing, leveling of earth to design section and location, compaction by sheep foot roller / power roller with optimum moisture content to achieve minimum 95% of modified A.A.S.H.T.O dry density complete as per drawings and specifications and as directed by The Engineer	CM	130425.75		
3	HW-3	Formation of embankment from borrow excavation in common material including laying in 6" (150mm) layer, clod breaking, ramming, dressing and compaction by sheep foot roller / power roller with optimum moisture content to achieve minimum 95% of modified A.A.S.H.T.O dry density complete, up to any lift and lead out side of project boundry, complete as per drawings and specifications and as directed by The Engineer.	CM	188451.25		
4	HW-4	Excavation and disposal of unsuitable or surplus material any kind any lift of 5ft max (1.50m) and lead upto 100 ft (30m) which declared in writing by the engineer to be unsuitable for use or surplus to the requirement of project. Directed by the engineer incharge.				
		Excavate unsuitable common material also disposal any lead & lift.	CM	10,000.00		
5	HW-5	Excavate surplus common material also disposal any lead & lift.	CM	17,500.00		
6	HW-6	Providing, fabrication, painting/ galvanizing complete placing and fixing following signs as shown on the drawings and detail or as directed by the Engineer, complete in all respect including structural steel work, embedded parts, foundations, earthwork and related civil works.				
	i)	Gantry Sign 11.50 x 1.20M	Each	4.00		
	ii)	Gantry Sign 8.00 x 1.20M	Each	4.00		
7	HW-7	This work shall consist of furnishing non reflective or reflective chlorinated rubber based or thermoplastic paint material or retroreflective preformed pavement marking (tape) whichever is called for in the Special Provisions and shown in the Bill of Quantities, for sampling and packing, for the preparation of the surface and for the application of the paint to the pavement surface all in accordance with these Specifications.				

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S.No	Item #	DESCRIPTION	UNIT	QTY	RATE	AMOUNT Rs.
	i)	Pavement Marking in reflective TP Paint for 4M Arrows.	EACH	25.00		
8	HW-8	Thermo Plastic reflective paint on kerb blocks. Complete in all respects as directed by the engineer incharge.	SM	18,334.80		
9	HW-9	Providing and applying waterproofing system as described below to concrete surfaces including surface preparation (screeding, crack filling, grouting, prime coat etc.) where required.				
	i)	Providing & applying Cementitious / Crystalline Waterproofing of Fospak brand or approved equivalent as per drawings and details	SM	1200.00		
10	HW-10	Providing and laying Skirting of approved coloured non skid porcelain tiles 10mm thick laid in white cement and pigment on a bed of 20mm thick cement mortar 1:2.	SM	975.00		
11	HW-11	Providing and laying floors of approved coloured non skid porcelain tiles 10mm thick laid in white cement and pigment on a bed of 20mm thick cement mortar 1:2.	SM	325.00		
12	HW-12	Providing and fixing Stone coping on wall, beams, columns etc. (As approved by Architect) top to be laid on cement sand mortar including setting with matching cement slurry and jointing/washing the ledges, curing and cleaning etc. Complete as per Drawings, and as directed by the Consultants.	SM	375.00		
13	HW-13	Providing and laying Precast PCC Bullnose Kerb-stone, size 900 x 300 x 150 mm including setting, jointing and pointing in CM 1:4, Complete with all respects as per drawings, details & approved by Architect.	RM	1000.00		
14	HW-14	Providing & fixing Precast Edge Block 3750 PSI Industrial Made Size 6 inches thick x 12 inches long x 18 inches high including the cost of Cartage, excavation, form Work for haunching, 1450 PSI lean concrete, 2250 PSI concrete for haunching, 1:4 cement sand mortar.				
	i	Size - 6" x12"x 12" (150 x300 x300mm)	RM	38090.00		
	ii	Size - 6" x12"x 12" (150 x300 x300mm)	RM	23760.00		
15	HW-15	Supplying and Fixing of reflectorize Road Studs Double Face, Flush surface type.				
	i)	Reflectorized Pavement Stud (Flush Type-single) 100x100mm	Each	6205.40		
16	HW-16	Pavement marking in Reflective Thermo Plastic Paint for Lines of 8" Width.				
	ii)	Pavement Marking in reflective TP Paint for Line of 20 cm width.	RM	8000.00		
TOTAL NON SCHEDULE ITEMS Rs.						-

BILL OF QUANTITY OF HORTICULTURE WORK

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
HORTICULTURE WORKS						
		Non-Schedule Items				
1		Supplying and stacking approved garden soil (sweet earth) free from salts, pebbles and grass roots etc including all leads and lifts. Complete with all respects as per drawings, details & approved by Architect.	13250.25	Cum		
2		Supplying, stacking and spreading cow dung manure / Slaughter House manure and mixing the same up to any depth in the already laid sweet earth including breaking clods, dressing fine for Trees in pits and sprinkling water, raking and rolling complete. Complete with all respects as per drawings, details & approved by Architect.	4416.75	Cum		
3		Providing and Planting Ground covers and 3" depth dung manure as approved by the Architect including sweet earth filling up to 9" depth as shown on the drawings Complete with all respects as per drawings, details & approved by Architect.	2450.00	Sqm		
4		Supplying and stacking live (Dacca) grass in slabs with earth intact including all lead and lift & maintenance for 45 days. as shown on the drawings Complete with all respects as per drawings, details & approved by Architect.	58890.00	Sqm		
5		Providing and laying matte random stone in lawn spaces etc. Complete with all respects as per drawings, details & approved by Architect.	300.00	SM		
6		Plantation Providing and fixing Planting following Trees / Shurbs / Palm with making Pits and filling Sweet Earth Complete with all respects as per drawings, details & approved by Architect. (Pots Size Tree Heights & Plantation Heights approved by Architect.)				
		Trees 4m Height				
i)		NEEM Grith 4" x Height - 4m Pot size 24"	225.00	Each		
ii)		GUL MOHER Grith 4" x Ht - 4m Pot size 24"	225.00	Each		
iii)		DALBERGIA SISSOO Grth 4" xHt 4m Pot size 24"	225.00	Each		
iv)		TABEBUIA Grith - 4" x Height - 4m	300.00	Each		
v)		ACALIA NILOTIC - 4" x Height - 4m	275.00	Each		
vi)		TERMINALIA ARJUNE Grith - 4"x Ht - 4m Pot size 24"	250.00	Each		
vii)		SUMBUL CICEGI	225.00	Each		
viii)		KANGI PALM Height - 4m Pot size 24"	225.00	Each		
ix)		Flowers/Shrubs (Any approved Variety) 1m Height	1550.00	Sqm		
x)		Cassia Nodosa	250.00	Each		
7		Providing & fixing fountain with all specified material use to as shown on the drawings i/c water proof motor pump lights wiring etc complete with all respects as per drawings, details & approved by Architect.	14.00	Each		
Total Non-Schedule Items Amount Rs.						-

BILL OF QUANTITY OF STRUCTURE (BOX CULVERTS)

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S No.	Item #	DESCRIPTION	UNIT	QTY	RATE	AMOUNT Rs.
	A	SINDH SCHEDULE RATE MAY - 2024				
STRUCTURE						
1	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).				
	a)	0' to 7.0' (0 to 2.15m) depth	CM	2,687.09	645.75	1,735,188
2	C1/13 Page-16	Earth work compaction of earthwork (Soft, ordinary or hard soil).				
	a)	Laying earth in 6" layers levelling and dressing complete.	CM	741.99	44.85	33,278
2a	C1/21 Page-17	Filling,watering and ramming earth in under floors with surplus earth from foundation etc. lead up to one chain and lift upto 5 feet.	CM	741.99	229.58	170,346
	HW/43 page-224	The Composite Rates below are inclusive of cartage/carriage of materials from approved quareis/source of material.No separate carriage of materials to be incorporated in the estimate or to be paid to the contractor)				
3	HW-43/1 page-224	Concrete Class A1 Under Ground.	CM	73.12	24,021.96	1,756,486
4	HW-43/2 page-224	Concrete Class A1 On Ground	CM	505.76	26,096.27	13,198,450
5	HW-43/3 page-224	Concrete Class A1 Elevated	CM	505.76	27,100.60	13,706,399
6	HW-43/16 page-225	Lean Concrete Class-E (cylinder strength 1450 psi)	CM	100.67	13,892.95	1,398,603
7	HW-43/29 page-225	Premoulded Joint Filler 12mm Thick	SM	11.64	5,410.27	62,976
8	HW-43/36 page-226	Providing & fixing water stops size 8" wide as per required area complete with all respart as per drawing and specification directed by engineer incharge.	RM	600.40	3,432.24	2,060,717
9	C-2/19(b) page-20	Dismantling cement concrete with all respart directed by engineer incharge.	CM	210.00	3,077.78	646,334
10	C-6/12 page-38	Grouting stone pitching or apron in 1:3 cement mortar.	SM	98.40	4,441.84	437,077
	Total Rs.					35,205,854



BILL OF QUANTITY OF STRUCTURE (BOX CULVERTS)

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S No.	Item #	DESCRIPTION	UNIT	QTY	RATE	AMOUNT Rs.
	B	NON SCHEDULE				
1	BC-1	Fabrication of deformed steel reinforcement for cement concrete including cutting,bending, laying in position, making joints and fastenings including cost of binding wire (also includes removal of rust from bars.) a) Deformed bar Grade -60 confirming to ASTM A706	Cwt	2384.38		
	Total Rs.					



WATER SUPPLY, STORM WATER DRAINAGE AND IRRIGATION



MAIN SUMMARY OF AMOUNT Rs.

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Description	Schedule Items Amount (Rs) A	Non-Schedule Items Amount (Rs) B	Total Amount Rs. C=(A+B)
A	WATER SUPPLY			
B	STORM WATER DRAIN			
C	IRRIGATION			
D	SEWERAGE			
	SUB TOTAL RS. :			



BILL OF QUANTITIES
WATER SUPPLY PACKAGE 1-A(i)

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	SCHEDULE ITEMS	
i)	CIVIL & WATER SUPPLY WORK	543,083,721
ii)	WATER SUPPLY BORE, RESEVOIR & PUMP STATION	45,495,168
	Add Premium Above or Below _____% on Schedule Items	
	Sub-Total (A)	
2	NON-SCHEDULE ITEMS	
i)	CIVIL & WATER SUPPLY WORK	
ii)	WATER SUPPLY BORE, RESEVOIR & PUMP STATION	
	Sub-Total (B)	
	Total (A+B)	



BILL OF QUANTITIES (WATER SUPPLY)

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate (PKR)	Amount
A		SINDH SCHEDULE RATE MAY - 2024				
		WATER SUPPLY SYSTEM				
	E-1	Providing, Laying and Jointing P.E pipes.				
1	PH/E-1 Page-113	Providing,Laying & Fixing in trench i/c fitting, jointing & testing etc complete in all respect the high Density Polythylene PE pipes (HDPE-100) for W/S confirming ISO 4427/DIN8074/8075 B.S 3580 & PSI 3051. PN-10				
	PN-10/q Page-114	a. 315mm Dia	RM	6107.00	15,383.35	93,946,118.45
	PN-10/t Page-114	b. 450mm Dia.	RM	1980.00	31,127.51	61,632,469.80
	PN-10/q Page-114	c. 610mm Dia	RM	535.00	58,804.00	31,460,140.00
	PN-10/q Page-114	d. 760mm Dia	RM	1412.00	82,612.00	116,648,144.00
	PN-10/q Page-115	e. 1070mm Dia	RM	1096.00	163,161.09	178,824,554.64
1a	E-2/Page-116	Laying P.E pipes of all types and fixing in trench i/c cutting, fitting and jointing with Butt Fussion joint i/c testing with water to Specified fied pressure. Laying and Jointing P.E pipes (i/c cost of jointing material).				
	E-2/q Page-117	a. 315mm Dia	RM	6107.00	344.49	2,103,800.43
	E-2/q Page-117	b. 450mm Dia.	RM	1980.00	434.31	859,933.80
	E-2/q Page-117	c. 610mm Dia	RM	535.00	494.20	264,397.00
	E-2/q Page-117	d. 760mm Dia	RM	1412.00	613.97	866,925.64
	E-2/q Page-117	e. 1070mm Dia	RM	1096.00	613.97	672,911.12
1b	C-4/ Page-96	Cartage of U.P.V.C/P.E pipes of any class by mechanical transport i/c loading unloading and stacking at site.				
	i)/Page-99	a. 315mm Dia	RM	6107.00	27.85	170,079.95
	l)/Page-100	b. 450mm Dia.	RM	1980.00	54.89	108,682.20
	n)/Page-101	c. 610mm Dia	RM	535.00	73.19	39,156.65
	o)/Page-101	d. 760mm Dia	RM	1412.00	31.79	44,887.48
	q)/Page-102	e. 1070mm Dia	RM	1096.00	63.58	69,683.68
2	PH Basic C-11/page-66	HDPE-100 END CAPS PN-10.				
	11/Page-66	315mm Dia	Nos.	13.00	11,000.00	143,000.00
	A/Page-148	(I) EARTH WORK (FOR PIPE LINES)				



BILL OF QUANTITIES (WATER SUPPLY)

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate (PKR)	Amount
3	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	CM	18,418.58	645.75	11,893,798.61
4	PH/A-3 Page-149	Excavation for pipe line in trenches, and pits in hard soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain also filling watering ramming & compaction as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	CM	9,917.70	699.56	6,938,026.21
5	C1/13 Page-16	Earth work compaction Compaction of earth work (Soft, ordinary or hard soil).				
	a)	Laying earth in 6" layers levelling and dressing complete.	CM	12,430.01	44.85	557,485.95
5a	C1/21 Page-17	Filling, watering and ramming earth in under floors with surplus earth from foundation etc. lead up to one chain and lift upto 5 feet.	CM	12,430.01	229.58	2,853,681.70
6	C-5/29 page-34	Supplying and filling sand under floor and plugging in walls.	CM	12,793.38	2,031.60	25,991,030.81
	B/Page-106	Providing, Laying and Jointing RCC ASTM pipes (Rubber Gasket Joints).				
	B-1/ Page-106	Providing, Laying RCC pipes of A.S.T.MC-76-62 T/C-76-70 of Class-II wall Band fixing in trench i/c cutting, fitting and jointing with rubber ring i/c testing with water to specified pressure.				
7	B-1/d Page-106	18" Dia RCC Pipe	RM	195.00	7,853.06	1,531,346.70
	B-1/g Page-106	27" Dia RCC Pipe.	RM	150.00	14,640.24	2,196,036.00
	B-1/d Page-106	33" Dia RCC Pipe. Basic rate (30")	RM	105.00	2,276.31	239,012.55
	B-1/d Page-106	42" Dia RCC Pipe.	RM	65.00	36,388.90	2,365,278.50
	C-2/ Page-88	Cartage of RCC pipes any class/ ASTM/ Prestressed with collars by mechanical transport i/c loading unloading and stacking at site.				
7a	C-2/f Page-90	18" Dia RCC Pipe	RM	195.00	116.24	22,666.80
	C-2/i Page-91	27" Dia RCC Pipe.	RM	150.00	232.67	34,900.50
	C-2/j Page-91	33" Dia RCC Pipe. Basic rate (30")	RM	105.00	279.22	29,318.10
	C-2/k Page-92	42" Dia RCC Pipe.	RM	65.00	465.36	30,248.40
8	C-11/9 Page-63	Bitumen coating to plastered or cement concrete surface.	SM	300.00	234.89	70,467.00



BILL OF QUANTITIES (WATER SUPPLY)

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate (PKR)	Amount
9	M.Basic A-11/Page-66	HDPE-100 Elbow (outer dia) 22-1/2 Degrees - 315mm	Nos.	19.00	16,398.00	311,562.00
10	M.Basic A-11/Page-66	HDPE Siphon Band 45 Degrees - 315mm	Nos.	4.00	16,398.00	65,592.00
11	M.Basic D-11/Page-67	HDPE Siphon Tee 315x 315x 315mm	Nos.	4.00	24,596.00	98,384.00
TOTAL OF SCHEDULE ITEMS RS. :						543,083,721
B		NON SCHEDULE				
		WATER SUPPLY SYSTEM				
1	WS-1	Placement of 1:3:6 CC thrust blocks for bends, elbow end piece and whereas mentioned on drawings/details	Nos.	50.00		
2	WS-2	Construction of Gate Valve, Air Valve & Washout Valve chambers with material including, excavation, base top RCC slab, RCC cover, plaster, bitumen coating. (SR cement shall be used). Complete in all respect drawing, Design & Specification, directed by engineer Incharge.				
	a.	315mm Dia Chamber Size (1065x 1065mm)	Nos.	9.00		
	b.	610mm Dia Chamber Size (1525x 1525mm)	Nos.	2.00		
	c.	760mm Dia Chamber Size (1525x 1525mm)	Nos.	1.00		
	d.	1070mm Dia Chamber Size (1830x1830mm)	Nos.	2.00		
3	WS-3	Providing and installing 2way pillar hydrant test pressure 25 bar, 2.5" brass landing valve female instantaneous BS 336 intel 4" 150 class flange 190 PCD with 2' x2' x 3' PCC foundation & required all accessories as per drawing & detail complete in all respects.	Nos.	67.00		
4	WS-4	CI body gate valves with flanges (Key operated). Complete in all respect drawing, Design & Specification, directed by engineer Incharge.				
	a)	315mm Dia	Nos.	9.00		
	b)	610mm Dia	Nos.	2.00		
	c)	760mm Dia	Nos.	1.00		
	d)	1070mm Dia	Nos.	2.00		
5	WS-5	Specials (Elbo)				
	a)	HDPE Siphon Band 45 Degrees - 760mm	Nos.	2.00		
6	WS-6	Specials (Tee)				
	a)	HDPE Siphon Tee 450x 450x 315mm	Nos.	3.00		
	b)	HDPE Siphon Tee 760x 760x 315mm	Nos.	1.00		
	c)	HDPE Siphon Tee 1070x 1070x 1070mm	Nos.	2.00		
	d)	HDPE Siphon Tee 1070x 1070x 315mm	Nos.	1.00		



BILL OF QUANTITIES (WATER SUPPLY)

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate (PKR)	Amount
	e)	HDPE Siggot Tee 610x 610x 610mm	Nos.	1.00		
	f)	HDPE Siggot Tee 1070x 1070x 610mm	Nos.	1.00		
	g)	HDPE Siggot Tee 1070x 1070x 760mm	Nos.	1.00		
	h)	HDPE Siggot Tee 1200x 1200x 1200mm	Nos.	1.00		
7	WS-7	Specials (Reducer)				
	a)	HDPE Siggot Reducer 450~315mm	Nos.	1		
	b)	HDPE Siggot Reducer 1070~315mm	Nos.	1		
	c)	HDPE Siggot Reducer 1200~315mm	Nos.	1		
	d)	HDPE Siggot Reducer 400~355mm	Nos.	1		
	e)	HDPE Siggot Reducer 500~400mm	Nos.	1		
	f)	HDPE Siggot Reducer 560~500mm	Nos.	1		
	g)	HDPE Siggot Reducer 610~450mm	Nos.	1		
	h)	HDPE Siggot Reducer 1070~450mm	Nos.	1		
	i)	HDPE Siggot Reducer 1070~610mm	Nos.	1		
	j)	HDPE Siggot Reducer 710~560mm	Nos.	1		
	k)	HDPE Siggot Reducer 900~710mm	Nos.	1		
	l)	HDPE Siggot Reducer 1070~900mm	Nos.	1		
	m)	HDPE Siggot Reducer 1070~1200mm	Nos.	1		
8		HDPE-100 END CAPS PN-10.				
	i)	610mm Dia	Nos.	2.00		
	ii)	760mm Dia	Nos.	2.00		
	iii)	1070mm Dia	Nos.	1.00		
		TOTAL OF NON SCHEDULE ITEMS RS. :				



BILL OF QUANTITIES WATER SUPPLY RESERVOIR

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description	Unit	Qty	Rate PKR	Amount PKR
	A	SINDH SCHEDULE RATE MAY - 2024				
	PH-Aii/ page-155	Earth work for Storage Tank/Reservoir				
1	A-ii/5 Page-157	Excavation for tanks and reservoir in all kind of soils murum hard average or soft i/c trimming and dressing sides to true alignment/design sections/profiles and shape levelling of beds of trenches to correct level and grade i/c laying of earth in 6" layer for construction of banks also compaction and dressing and disposal of surplus earth. Excavated earth within a one chain as directed by Engineer Incharge i/c providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required depth as per drawing & detail, lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	CM	4,855.50	747.99	3,631,865
	HW/43 page-224	The Composite Rates below are inclusive of cartage/carriage of materials from approved quareis/source of material.No separate carriage of materials to be incorporated in the estimate or to be paid to the contractor)				
2	HW-43/1 page-224	Concrete Class A1 Under Ground.	CM	523.92	24,021.96	12,585,585
	HW-43/2 page-224	Concrete Class A1 On Ground	CM	294.89	26,096.27	7,695,529
	HW-43/3 page-224	Concrete Class A1 Elevated	CM	19.70	27,100.60	533,882
3	HW-43/16 page-225	Lean Concrete Class-E (cylinder strength 1450 psi)	CM	136.24	13,892.95	1,892,776
4	HW-43/36 page-226	Providing & fixing pvc water stops size 8" wide complete in with all respect as per drawing and specification directed by engineer incharge.	RM	206.80	3,432.24	709,787
5	C-4/11(i) page-26	Providing and fixing ornamental cement jalli 2" thick (1 : 2 : 4) without steel Complete in all respects.	SM	24.00	1,517.59	36,422
6	C-4/24 page-27	Providing and laying 1 : 3 : 6 cement concrete solid block masonry wall 6" and below in thickness set in 1 : 6 cement mortar in ground floor Super Structure including raking out joints & curring etc, complete.	CM	125.25	18,183.44	2,277,476
7	C-8/16d page-45	Providing and laying 3" thick topping of cement concrete Class-D including Surface finishing and dividiiing into panels:				
	d)	3" (75mm) thick	SM	913.10	1,560.20	1,424,619
8	C-9/11 page-52	Cement plaster ratio1:4 upto 12' height complete in all respects				
	11-b)	1/2" thick Internal Plaster	SM	212.18	428.57	90,934
	11-c)	3/4" thick External Plaster	SM	90.93	579.10	52,658



BILL OF QUANTITIES WATER SUPPLY RESERVOIR

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description	Unit	Qty	Rate PKR	Amount PKR
9	C-18/125 page-87	Providing and laying 2mm thick grip PVC water proofing Membrane over to coat of bitumen black Japan mixed with carosine oil with burning lamp overroof in/c necessary overlaps etc complete.	SM	2295.10	2,187.50	5,020,531
	N/page-129	TUBE WELLS.				
10	N/4(d) page-130	Boring for tube well in all water bearing soils from depth 300.1 to 400 ft. or 91.51 to 122 meter below ground level i/c sinking and with drawing of casing pipe. d) 375 mm (15" dia)	RM	250.00	29,357.06	7,339,265
11	N/6 page-131	Taking and preserving 2 LBs (1 Kg) sample of per strata from borre holes.	P. Sample	2.00	2,880.00	5,760
12	N/7 page-131	Taking samples of water from bore hole and placing in two separate bottles.	P. Sample	2.00	2,952.00	5,904
13	N/8a page-131	Development of tube well Testing charges of samples from Laboratory	P.RM	100.00	787.44	78,744
14	N/8b page-131	Supplying & fixing M.S bail plug	P.Each	2.00	15,373.80	30,748
15	N/18g page-133	Shrouding with graded bajri (3/8" to 1/8") or (9 to 3 mm) in between bore and blind pipe for the following diameters of strainers.	RM	220.00	4,271.62	939,756
16	C1/4(f) page-98	Cartage of U.P.V.C/P.E pipes of any class by mechanical transport i/c loading unloading and stacking at site.	RM	250.00	7.60	1,900
17	D/6(h) page-112	Providing, Laying uPVC pipes of Class 'D' fixing in trench i/c cutting, fitting and jointing with solvent cement i/c Testing with water to a head of 122 meter or 400 ft.dia 6" (150mm) complete in all respects.	RM	250.00	4,564.11	1,141,028
		TOTAL OF SCHEDULE ITEMS RS. :				45,495,168
	B	NON SCHEDULE				
	A)	EXTERNAL RESERVOIR STATION				
1	RS-1	Providing & fixing 1 Nos. Etanorm 125-100-250 GG flow 1000 IGPM head 200ft motor 75 k.watt 100hp @ 2 Pole approved pump for water Lifting including float switch, water proof cable, check valve with union, Ms pipe, Ms Bend with flanges, flange joints, sluice valve, Non return valve, flanges, holding clamps, gaskit, nut bolts, solution, inlet/outlet connection & relative accessories complete job Motor Control Unit 75 k.watt, Automatic starter switch, Am meter, Voltmeter, Conductor, Breakers, switches & Cover plate (M.S), S.S. Nut bolts, Rubber packing, Cable tie, Clamps. (G.I) with testing commisioning in all respects as per drawings details and insutruccion of engineering incharge.	Nos.	1.00		
2	RS-2	Providing and installing submersible pump BPDS 8/95-121 pump with motor flow 350 IGPM head 450ft motor 55 k.watt 75hp 2 pole complete in all respects.	Nos.	2.00		



BILL OF QUANTITIES WATER SUPPLY RESERVOIR

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description	Unit	Qty	Rate PKR	Amount PKR
3	RS-3	CI 160mm dia 1000 mm high vent pipe with ventilator cowl in U/G tank top slab.	Nos.	12.00		
4	RS-4	Crystalin waterproofing slurry at the rate of 1 kg./Sq.m. per coat to all exposed structural concrete surfaces.	SM	1,476.12		
5	RS-5	Providing & fixing MS Rungs dia 16mm @ 300mm c/c including fixing in position, complete in all respect as per drawing & detail directed Engineer incharge.	Nos.	64.00		
6	RS-6	uPVC Elbo 90 Degree 150mm (6") dia	P.Each	2.00		
7	RS-7	uPVC Tee 150mm (6") dia	P.Each	2.00		
8	RS-8	Placement of 1:3:6 CC thrust blocks for bends, elbow end piece and whereas mentioned on drawings/details	P.Each	10.00		
9	RS-9	Providing & fixing MS door with frame including hardware set, lock handle, red oxide, approved colour as per schedule complete in all respect as shown on the drawings:	SM	6.85		
10	RS-10	Providing & fixing MS louver window with frame including hardware set, lock handle, red oxide, approved colour as per schedule complete in all respect as shown on the drawings:	SM	1.50		
11	RS-11	Fabrication of deformed steel reinforcement for cement concrete including cutting, bending, laying in position, making joints and fastenings including cost of binding wire (also includes removal of rust from bars.) a) Deformed bar Grade -60 confirming to ASTM A706	Cwt	3018.24		
		TOTAL OF NON SCHEDULE ITEMS RS. :				



BILL OF QUANTITIES
STORM WATER DRAIN PACKAGE 1-A(i)

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	SCHEDULE ITEMS	
i)	CIVIL WORKS	258,243,398
	Add Premium Above or Below _____% on Schedule Items	
	Sub-Total (A)	
2	NON-SCHEDULE ITEMS	
i)	CIVIL WORKS	
	Sub-Total (B)	



BILL OF QUANTITIES STORM WATER DRAIN

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
	A	SINDH SCHEDULE RATE MAY - 2024				
		STORM WATER DRAIN SYSTEM				
1	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth with in a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	CM	17657.00	645.75	11,402,007.75
2	C1/13 Page-16	Earth work compaction of earthwork (Soft, ordinary or hard soil).				
	a)	Laying earth in 6" layers levelling and dressing complete.	CM	6013.80	44.85	269,718.93
3	C1/21 Page-17	Filling,watering and ramming earth in under floors with surplus earth from foundation etc. lead up to one chain and lift upto 5 feet.	CM	6013.80	229.58	1,380,648.20
4	HW/43 page-224	The Composite Rates below are inclusive of cartage/carriage of materials from approved quareis/source of material.No separate carriage of materials to be incorporated in the estimate or to be paid to the contractor)				
	HW/43-1 page-224	Concrete Class - A1	CM	6262.00	24,021.96	150,425,513.52
5	HW/43-16 page-225	Lean concrete plain machine mixed 1450psi. Complete in all respects.	CM	892.00	13,892.95	12,392,511.40
6	HW/43-17 page-225	Precast Concrete Class "A1"	CM	2192.69	26,432.94	57,959,243.21
7	C-17/2 Page-75	Fabrication of heavy steel work with angles, tees, flat iron, round iron and sheet iron for making trusses, girders, tands etc. including cutting, tanks etc. including cutting, drilling rivetting, handling assembling and fixing but excluding erection in position.	Cwt	574.00	20,366.45	11,690,342.30
8	C-11/9 Page-63	Bitumen coating to plastered or cement concrete surface.	SM	19685.00	234.89	4,623,809.65
9	C/4 page-96	Cartage of U.P.V.C/P.E pipes of any class by mechanical transport i/c loading unloading and stacking at site.				
	C4/f page-98	a) uPVC 150mm Catch Basin To main Drain crossing	RM	716.00	7.60	5,441.60
	C4/n page-101	c) uPVC 610mm For Road Crossing	RM	259.00	73.19	18,956.21
9a	D/4 page-111	Providing, Laying uPVC pipes of Class 'B' fixing in trench i/c cutting, fitting and jointing with solvent cement i/c testing with water to a head of 61 meter or 200 ft. with solvent cement joint.				
	D/4d page-111	a) uPVC 150mm Catch Basin To main Drain crossing	RM	716.00	2,508.19	1,795,864.04
	D/4l page-112	c) uPVC 610mm For Road Crossing	RM	259.00	24,244.56	6,279,341.04

BILL OF QUANTITIES STORM WATER DRAIN

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
		TOTAL OF SCHEDULE ITEMS RS. :				258,243,398
	B	NON SCHEDULE				
		STORM WATER DRAIN SYSTEM				
1	SW-1	Providing & fixing 0.25mm polythene sheet 1000 gauge High Density of 32 kg./Sq.m. to all exposed structural concrete surfaces.	SM	11297.00		
2	SW-2	Stone Soling under lean concrete complete in all respects.	Cm	1986.81		
3	SW-3	Fabrication of deformed steel reinforcement for cement concrete including cutting,bending, laying in position, making joints and fastenings including cost of binding wire (also includes removal of rust from bars.) a) Deformed bar Grade -60 confirming to ASTM A706	Cwt	29980.47		
		TOTAL OF NON SCHEDULE ITEMS RS. :				



BILL OF QUANTITIES
IRRIGATION PACKAGE 1-A(i)

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	SCHEDULE ITEMS	
i)	CIVIL WORKS	242,107,977
ii)	IRRIGATION RESEVOIR & PUMP STATION	14,202,603
	Add Premium Above or Below _____% on Schedule Items	
	Sub-Total (A)	
2	NON-SCHEDULE ITEMS	
i)	CIVIL WORKS	
ii)	IRRIGATION RESEVOIR & PUMP STATION	
	Sub-Total (B)	
	Total (A+B)	



BILL OF QUANTITIES IRRIGATION WORK

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
	A	SINDH SCHEDULE RATE MAY - 2024				
		IRRIGATION SYSTEM				
	E-1	Providing, Laying and Jointing P.E pipes.				
1	PH/E-1 Page-113	Providing, Laying & Fixing in trench i/c fitting, jointing & testing etc complete in all respect the high Density Polythylene PE pipes (HDPE-100) for W/S confirming ISO 4427/DIN8074/8075 B.S 3580 & PSI 3051. PN-10				
	PN-10/a Page-114	a. 25mm Dia for drip Irrigation (PN-10)	RM	37,455.00	190.26	7,126,188.30
	PN-10/d Page-114	a. 50mm Dia for drip Irrigation Connection Reservoir (PN-10)	RM	100.00	472.69	47,269.00
	PN-10/q Page-114	a. 315mm Dia (PN-10)	RM	11,870.00	15,383.35	182,600,364.50
1a	E-2/Page-116	Laying P.E pipes of all types and fixing in trench i/c cutting, fitting and jointing with Butt Fussion joint i/c testing with water to Specified fied pressure. Laying and Jointing P.E pipes (i/c cost of jointing material).				
	E-2/a Page-116	a. 25mm Dia for drip Irrigation (PN-10)	RM	37,455.00	89.97	3,369,826.35
	E-2/d Page-117	a. 50mm Dia for drip Irrigation Connection Reservoir (PN-10)	RM	100.00	104.95	10,495.00
	E-2/q Page-117	a. 315mm Dia (PN-10)	RM	11,870.00	344.49	4,089,096.30
1b	C-4/Page-96	Cartage of U.P.V.C/P.E pipes of any class by mechanical transport i/c loading unloading and stacking at site.				
	a)/Page-96	a. 25mm Dia for drip Irrigation (PN-10)	RM	37,455.00	0.96	35,956.80
	a)/Page-96	a. 50mm Dia for drip Irrigation Connection Reservoir (PN-10)	RM	100.00	0.96	96.00
	i)/Page-99	a. 315mm Dia (PN-10)	RM	11,870.00	27.85	330,579.50
2	PH Basic C-11/page-66	PE end caps on outgoing connection to plots and at end of pipeline. Complete in all respect drawing & Design directed by engineer Incharge.				
	11/Page-66	a. 315mm Dia	Nos.	16.00	11,000.00	176,000.00
3	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	CM	23,758.99	645.75	15,342,367.79



BILL OF QUANTITIES IRRIGATION WORK

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
4	C1/13 Page-16	Earth work compaction of earthwork (Soft, ordinary or hard soil).				
	a)	Laying earth in 6" layers levelling and dressing complete.	CM	11,621.96	44.85	521,244.91
4a	C1/21 Page-17	Filling, watering and ramming earth in under floors with surplus earth from foundation etc. lead up to one chain and lift upto 5 feet.	CM	11,621.96	229.58	2,668,169.58
5	C-5/29 page-34	Supplying and filling sand under floor and plugging in walls.	CM	10,825.86	2,031.60	21,993,817.18
6	B/Page-106	Providing, Laying and Jointing RCC ASTM pipes (Rubber Gasket Joints).				
	B-1/ Page-106	Providing, Laying RCC pipes of A.S.T.MC-76-62 T/C-76-70 of Class II wal lBand fixing in trench i/c cutting, fitting and jointing with rubber ring i/c testing with water to specified pressure.				
	B-1/d Page-106	18" Dia RCC Pipe	RM	350.00	7,853.06	2,748,571.00
6a	C-2/ Page-88	Cartage of RCC pipes any class/ ASTM/ Prestressed with collars by mechanical transport i/c loading unloading and stacking at site.				
	C-2/f Page-90	18" Dia RCC Pipe	RM	350.00	116.24	40,684.00
7	C-11/9 Page-63	Bitumen coating to plastered or cement concrete surface.	SM	200.00	234.89	46,978.00
8	M.Basic A-11/Page-66	HDPE-100 band (outer dia) 22-1/2 Degrees - 315mm	Nos.	18.00	16,398.00	295,164.00
	M.Basic A-11/Page-66	HDPE Sipgot Band 45 Degrees - 315mm	Nos.	15.00	16,398.00	245,970.00
9		Tee				
	M.Basic D-11/Page-67	HDPE Sipgot Tee 315x 315x 315mm	Nos.	17.00	24,596.00	418,132.00
	M.Basic D-1/Page-67	HDPE Sipgot Tee 50x 50x 50mm (Basic rate 63mm)	Nos.	1.00	1,007.00	1,007.00
TOTAL OF SCHEDULE ITEMS RS. :						242,107,977



BILL OF QUANTITIES IRRIGATION WORK

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
	B	NON SCHEDULE				
1	IRS-1	Placement of 1:3:6 CC thrust blocks for bends, elbow end piece and whereas mentioned on drawings / details	Nos.	55.00		
2	IRS-2	Construction of Gate Valve, Air Valve & Washout Valve chambers with material including, excavation, base top RCC slab, RCC cover, plaster, bitumen coating. (SR cement shall be used). Complete in all respect drawing, Design & Specification, directed by engineer Incharge.				
		a. 315mm Dia Chamber Size (1065x 1065mm)	Nos.	15.00		
3	IRS-3	CI body gate valves with flanges (Key operated). Complete in all respect drawing, Design & Specification, directed by engineer Incharge.				
		a. 315mm Dia	Nos.	15.00		
		TOTAL OF NON SCHEDULE ITEMS RS. :				



BILL OF QUANTITIES IRRIGATION RESERVOIR

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description	Unit	Qty	Rate PKR	Amount PKR
	A	SINDH SCHEDULE RATE MAY - 2024				
	PH-Aii	Earth work for Storage Tank/Reservoir				
1	Aii/5 Page-157	Excavation for tanks and reservoir in all kind of soils murum hard average or soft i/c trimming and dressing sides to true alignment/design sections/profiles and shape levelling of beds of trenches to correct level and grade i/c laying of earth in 6" layer for construction of banks also compaction and dressing and disposal of surplus earth. Excavated earth within a one chain as directed by Engineer Incharge i/c providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required depth as per drawing & detail, lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	CM	1139.72	747.99	852,499
2	HW/43 page-224	The Composite Rates below are inclusive of cartage/carriage of materials from approved quareis/source of material.No separate carriage of materials to be incorporated in the estimate or to be paid to the contractor)				
	HW-43/1 page-224	Concrete Class A1 Under Ground.	CM	80.31	24,021.96	1,929,201
	HW-43/2 page-224	Concrete Class A1 On Ground	CM	112.86	26,096.27	2,945,225
	HW-43/3 page-224	Concrete Class A1 Elevated	CM	78.71	27,100.60	2,133,088
3	HW-43/16 page-225	Lean Concrete (cylinder strength 1450 psi)	CM	18.72	13,892.95	260,076
4	C-6/1 page-35	Random, rubble masonry (uncoursed FOUNDATION AND PLINTH. i) Dry masonry.	CM	37.64	4,028.95	151,650
	N/page-129	TUBE WELLS.				
5	N/4(d) page-130	Boring for tube well in all water bearing soils from depth 300.1 to 400 ft. or 91.51 to 122 meter below ground level i/c sinking and with drawing of casing pipe. d) 375 mm (15" dia)	RM	125.00	29,357.06	3,669,633
6	N/6 page-131	Taking and preserving 2 LBs (1 Kg) sample of per strata from borre holes.	P. Sample	1.00	2,880.00	2,880
7	N/7 page-131	Taking samples of water from bore hole and placing in two separate bottles.	P. Sample	1.00	2,952.00	2,952
8	N/8a page-131	Development of tube well Testing charges of samples from Laboratory	P.RM	50.00	787.44	39,372
9	N/8b page-131	Supplying & fixing M.S bail plug	P.Each	1.00	15,373.80	15,374
10	N/18g page-133	Shrouding with graded bajri (3/8" to 1/8") or (9 to 3 mm) in between bore and blind pipe for the following diameters of strainers.	RM	125.00	4,271.62	533,953



BILL OF QUANTITIES IRRIGATION RESERVOIR

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description	Unit	Qty	Rate PKR	Amount PKR
11	C1/4(f) page-98	Cartage of U.P.V.C/P.E pipes of any class by mechanical transport i/c loading unloading and stacking at site.	RM	125.00	7.60	950
11a	D/6(h) page-112	Providing, Laying uPVC pipes of Class 'D' fixing in trench i/c cutting, fitting and jointing with solvent cement i/c Testing with water to a head of 122 meter or 400 ft. dia 6" (150mm) complete in all respects.	RM	125.00	4,564.11	570,514
12	C-18/125 page-87	Providing and laying 2mm thick grip PVC water proofing Membrane over to coat of bitumen black Japan mixed with carosine oil with burning lamp overroof in/c necessary overlaps etc complete.	SM	500.68	2,187.50	1,095,237.50
		TOTAL OF SCHEDULE ITEMS RS. :				14,202,603
	B	NON SCHEDULE				
	A)	EXTERNAL RESERVOIR STATION				
1	RS-1	Providing & fixing Etanorm 100-80-200 GG flow 500 IGPM, head 200ft motor 45 k.watt 60 hp @ 2 pole approved Motor pump for water Lifting including float switch, water proof cable, check valve with union, Ms pipe, Ms Bend with flanges, flange joints, sluice valve, Non return valve, flanges, holding clamps, gasket, nut bolts, solution, inlet/outlet connection & relative accessories complete job Motor Control Unit 45 k.watt 60 hp, Automatic starter switch, Am meter, Voltmeter, Conductor, Breakers, switches & Cover plate (M.S), S.S. Nut bolts, Rubber packing, Cable tie, Clamps. (G.I) with testing commssioning in all repects as per drawings details and insutruction of engineering incharge.	Nos.	1.00		
2	RS-2	Providing and installing submersible pump BPDS 8/95-121 pump with motor flow 350 IGPM head 450ft motor 55 k.watt 75hp 2 pole complete in all respects.	Nos.	1.00		
3	RS-3	MS 4" pipe ghoose neck for venting U/G tanks.	Nos.	2.00		
4	RS-4	Heavy duty cover & frame 900x 900mm with all respect. As per drawing detail & design directed by engineering Incharge.	Nos.	1.00		
5	RS-5	Crystalin waterproofing slurry at the rate of 1 kg./Sq.m. per coat to all exposed structural concrete surfaces.	SM	365.71		
6	RS-6	Providing & fixing MS door & Window with frame including hardware set, lock handle, red oxide, approved colour as per schedule complete in all respect as shown on the drawings:	SM	5.00		
7	RS-7	Fabrication of deformed steel reinforcement for cement concrete including cutting,bending, laying in position, making joints and fastenings including cost of binding wire (also includes removeal of rust from bars.) a) Deformed bar Grade -60 confirming to ASTM A706	Cwt	550.18		
		TOTAL OF NON SCHEDULE ITEMS RS. :				



BILL OF QUANTITIES
SEWERAGE PACKAGE - 1-A(i)

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	SCHEDULE ITEMS	
i)	CIVIL WORKS	88,062,726
	Add Premium Above or Below _____% on Schedule Items	
	Sub-Total (A)	
2	NON-SCHEDULE ITEMS	
i)	CIVIL WORKS	
	Sub-Total (B)	
	Total (A+B)	



BILL OF QUANTITIES SEWERAGE WORK

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	DESCRIPTION	Unit	Qty	Rate PKR	Amount PKR
A		SINDH SCHEDULE RATE MAY - 2024				
	A)	Sewerage System				
	a)	Piping Network				
1	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).				
	a)	0' to 7.0' (0 to 2.15m) depth	CM	25,990.00	645.75	16,783,043
	b)	7' below (2.15to4.50m) depth(Basic Rate 645.75) 5%	CM	17,326.67	678.04	11,748,175
2	C1/13 Page-16	Earth work compaction of earthwork (Soft, ordinary or hard soil).				
	a)	Laying earth in 6" layers levelling and dressing complete.	CM	41,686.03	44.85	1,869,618
2a	C1/21 Page-17	Filling,watering and ramming earth in under floors with surplus earth from foundation etc. lead up to one chain and lift upto 5 feet.	CM	41,686.03	229.58	9,570,279
3	C-5/29 page-34	Supplying and filling sand under floor and plugging in walls.	CM	1,673.48	2,031.60	3,399,842
4	B/Page-106	Providing, Laying and Jointing RCC ASTM pipes (Rubber Gasket Joints).				
	B-1/ Page-106	Providing, Laying RCC pipes of A.S.T.MC-76-62 T/C-76-70 of Class II wall Band fixing in trench i/c cutting, fitting and jointing with rubber ring/c testing with water to specified pressure.				
	B-1/a Page-106	a. 8" dia (200mm) (Basic Rate 225mm)	RM	8,545.00	3,068.40	26,219,478
	B-1/c Page-106	b. 15" dia (380mm)	RM	662.00	5,753.43	3,808,771
	B-1/6 Page-106	c. 18" dia (450mm) RCC Pipe	RM	1,530.00	7,853.06	12,015,182
5	C-2/ Page-88	Cartage of RCC pipes any class/ ASTM/ Prestressed with collars by mechanical transport i/c loading unloading and stacking at site.				
	C-2/c Page-89	a. 8" dia (200mm) (Basic Rate 225mm)	RM	8,545.00	45.40	387,943
	C-2/e Page-90	b. 15" dia (380mm)	RM	662.00	87.26	57,766
	C-2/f Page-90	c. 18" dia (450mm) RCC Pipe	RM	1,530.00	116.24	177,847
	b)	Manholes				



BILL OF QUANTITIES SEWERAGE WORK

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	DESCRIPTION	Unit	Qty	Rate PKR	Amount PKR
1	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).				
	a)	0' to 7.0' (0 to 2.15m) depth	CM	2,003.05	645.75	1,293,470
	b)	7' below(2.15to4.50m) depth (Basic Rate 645.75) 5%	CM	1,078.57	678.04	731,314
		TOTAL OF SCHEDULE ITEMS RS. :				88,062,726
B		NON SCHEDULE				
1	SWG-1	Constructing manhole or inspection chamber for the required dia of circular sewer and 12' depth with walls of B.B in cement mortar 1:3 cement plastered 1:3, 1/2" thick, inside of walls and 1" (25 mm) thick over benching and channel i/c fixing C.I manhole cover with frame of clear opening 2' x 2' (457x457 mm) of 4.5 cwt. embaded in 9" thick R.C.C 1:2:4 two way reinforced i/c fixing 1" (25 mm) dia M.S steps 6" (150 mm) wide projecting 4" (102 mm) from the face of wall at 12" (305 mm) C/C duly bitumen painted etc, complete as per standard specification and drawing.				
	a)	RCC Pipe 4" to 12" dia 4'-6"x3'x12'	Each	184.00		
	b)	RCC Pipe 15" dia 4'-6"x3'-6"x12'	Each	13.00		
	c)	RCC Pipe 18" to 21" dia 4'-6"x 4'x12'	Each	38.00		
		TOTAL OF NON SCHEDULE ITEMS RS. :				



GATE HOUSE



BILL OF QUANTITIES**PACKAGE - 1-A(i)**

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	SCHEDULE ITEMS	
i)	CIVIL WORKS	94,453,249
	Add Premium Above or Below _____% on Schedule Items	
	Sub-Total (A)	
2	NON-SCHEDULE ITEMS	
i)	CIVIL WORKS	
ii)	HORTICULTURE	
	Sub-Total (B)	
	Total (A+B)	



GATE HOUSE

BILL OF QUANTITIES

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
Schedule Item Sindh CSR-2024						
1	C-1/18b Page-17	Excavtion in foundation of Building and other structures including dag belling dressing,refilling around structrure with excavated earth Watering and ramming lead up to5 ft. , lead up to one chain (30 metre) and lift upto 5 ft. (1.5 metre) complete with all respects as per drawings, details and Engineer Incharge.	844.00	Cum	419.60	354,142.40
2	C-1/18c Page-17	In hard soil or soft murum.	422.00	Cum	419.60	177,071.20
3	C-18/91 Page-84	Providing Anti-termite treat ment by spraying / sprinkling /spreading Neptachler 0.5% Emulsion as an over all pre construction treatment in slab type construction along external foundation trenches of the building over complete parameter of the foundation trench etc, complete with all respects as per drawings, details and Engineer Incharge.	1,660.00	Sqm	797.75	1,324,265.00
4	C-6/1(i) Page-35	Stone filling dry hand packed as filling behind Foundation & Plinth Beam and aprons.with all respects as per drawings, details and Engineer Incharge.	408.00	Cum	4,028.95	1,643,811.60
5	C-7/38 Page-43	Providing & Laying single layer Polythene sheet 0.13 mm thick for water proofing as per specification and instruction of engineer incharge.	1,144.00	Sqm	258.35	295,552.40
6	C-18/125 Page-87	Providing and laying 2mm thick grip PVC water proofing Membrane over to coat of bitumen black Japan mixed with carosine oil with burning lamp overroof in/c necessary overlaps etc complete.	212.00	Sqm	2,187.51	463,752.12
7	C-18/98 Page-85	Placing, compacting, finishing and curing of concrete using ordinary Portland Cement/ Sulphate resistant cement / Slag cement as may be required: including screening, washing of aggregates and mixing of constituents using batching plant, transportation by transit mixer, pouring with pump in the required portion to achive a cylindrical strenth in the field as per ACI 214, with the specified consistency i/c the cost of shuttering, compaction with copmactor, excluding the cost of admixture, as approved and directed by the Engineer Incharge.				
		(i) 1450 PSI	250.00	Cum	14,147.43	3,536,857.50
		(ii) 2250 PSI	18.00	Cum	15,612.15	281,018.70
		(iv) 4000 PSI In Sub-Structure (Using S.R. Cement)				
		i. Foundation	210.00	Cum	31,798.95	6,677,779.50
		ii. Short Columns	32.00	Cum	31,798.95	1,017,566.40
		iii.Plinth Beam	46.00	Cum	31,798.95	1,462,751.70
		In Super Structure (Using O.P. Cement)				

GATE HOUSE

BILL OF QUANTITIES

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
		iv.Columns,Wall,Beam Slabs etc.	292.00	Cum	31,798.95	9,285,293.40
8	C-4/8a Page-26	Fabrication of deformed steel reinforcement for cement concrete including cutting, bending, laying in position, making joints and fastenings including cost of binding wire (all including reinforcement rust from bars.) a) Deformed bar Grade-60	1,218.08	Cwt	-	-
9	C-11/9 Page-63	Bitumen coating to plastered or cement concrete surface.	1,146.00	Sqm	234.89	269,183.94
10	C-4/23 Page-27	Providing and laying 1 : 3 : 6 Cement concrete solid Block masonry wall above 6" in thickness set in 1:6 cement mortar in G.Fground floor superstructure including raking out joints & curing etc, complete.	242.00	Cum	17,440.66	4,220,639.72
11	C-9/11 Page-52	Providing and laying Cement plaster 1:4 upto 12' height .complete with all respects as per drawings, details and Engineer Incharge.				
		b. (1/2" Interna Plasterl)	3046.00	Sqm	428.57	1,305,424.22
		c. (3/4" External Plaster)	830.00	Sqm	579.10	480,653.00
12	C-8/16 Page-45	Providing and laying 1" thick topping of cement concrete (1:2:4) including Surface finishing and dividiing into panels.complete with all respects as per drawings, details and Engineer Incharge.				
	i	a) 25mm thick	210.00	Sqm	705.53	148,161.30
	ii	d) 75mm thick	250.00	Sqm	1,560.20	390,050.00
13	C-9/36A Page-54	Preparing the surface and painting with matt finish l/c rubbing the surface with Bathy (silicon carbide rubbing brick) filling the voids with zink/chalk/ plaster of paris mixture, applying first coat premix, making the surface smooth and then painting 3 coats with matt finish of approved make etc: complete .(new surface). Three Coats. Complete with all respects as per drawings, details and Engineer Incharge.	3046.00	Sqm	530.15	1,614,836.90
	C-9/36B	2nd Coat & subsequent Coat	3046.00	Sqm	277.39	844,929.94
14	C-9/38A Page-54	Preparing the surface and painting with weather coat l/c rubbing the surface with rubbing brick /sand Paper,filling the voids with chalk/ plaster of Paris and then painting with weather coat of approved make. Three Coats complete with all respects as per drawings, details and Engineer Incharge.	958.00	Sqm	423.73	405,933.34
	C-9/38B	2nd Coat & subsequent Coat	958.00	Sqm	253.94	243,274.52
15	C-9/40A Page-54	Preparing the surface and painting with plastic emulsion paint of approved make l/c rubbing the surface with sand Paper,filling the voids with chalk/ plaster of paris and then painting etc complete.Three Coats complete with all respects as per drawings, details and Engineer Incharge.	1523.00	Sqm	416.52	634,359.96

GATE HOUSE**BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
16	C-17/2 Page-75	Fabrication of heavy steel work with angles, tees flat iron, round iron and sheet iron for making trusses, girders, tands etc. including cutting, tanks etc. including cutting, drilling rivetting, handling assembling & fixing but excluding erection in position .complete with all respects as per drawings, details and Engineer Incharge.	2,391.08	Cwt	20,366.45	48,697,811.27
17	C-8/24 Page-45	Laying floor of approved with glazed tiles 1/4" thick dado of approved color & size jointing in white cement and laid over 1:2 cement sand mortor 3/4" thick including grouting with matching color and finishing complete in all respects.	232.00	Sqm	4,189.51	971,966.32
18	C-8/25 Page-46	Laying floors of approved coloured glazed tiles 1/4" thick floor of approved color & size jointing in white cement and laid over 1:2 cement sand mortor 3/4" thick including grouting with matching color and finishing complete in all respects.	92.00	Sqm	3,501.30	322,119.60
19	C-8/28(vii) Page-46	Providing & Laying Full Body Porcelain Tile in Flooring or Facing of Approved Design Set in Gry Cement Motor 1:2 or of 3/4" Thickness I/C Washing & Joints With White Cement Slurry Using Colour Pigment for matching complete as per Spacification. (x) size 24"x36"x5/16"	212.00	Sqm	6,679.49	1,416,051.88
20	C-18/83 Page-83	Supply & fixing in position aluminum channels framing for hinged door or made with 5 mm thick tinted glass glazing (belgium) and alpja (japan) locks i/c handles stopers etc complete with all respects as per drawings, details and Engineer Incharge.(openable/fixing/sliding) (a) Deluxe model (White)	34.00	Sqm	17,816.73	605,768.82
21	C-18/84 Page-83	Supplying & fixing in position Aluminum channels framing for sliding windows & vantilators of made with 5 mm thick tinted glass glazing (Belgium) & aluminum fly screen i/c handles stopers & locking arrangement etc complete with all respects as per drawings, details and Engineer Incharge. (openable/fixing/sliding) (a) Deluxe model (White)	24.00	Sqm	25,681.21	616,349.04
22	C-18/111 Page-86	Providing & fixing in positions UPVC (openable/fixid/sliding) channels framing of sliding door windows & vantilators of unplyasticied polyvinyl chloride (UPVC) with fly screen i/c handle stoppers looking arrangement etc (approved by architect designer / drawing details) complete with all respects as per drawings, details and Engineer Incharge.	22.00	Sqm	37,317.40	820,982.80



GATE HOUSE**BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
23	C-10/51 Page-60	Providing & fixing in position doors, windows & ventilators of 1st class deodar wood frames, and 1-1/2" thick teak wood ply shutters of first class deodar wood skeleton (solid) styles and rails core of partial wood and teak ply wood (3 ply) on both side including holds fast hinges, iron tower bolts, handles and cleats with cord etc. complete with all respects as per drawing details & eninegeer incharge.	34.00	Sqm	32,857.38	1,117,150.92
24	HW-14 Page-221	Providing & fixing precast edge blocks 3750 PSI Industrial mad size 6" inches thick x 12 inches long x 18 inch high including the cost of cartage , excavation form work for haunching 1450 psi lean concrete for haunching 1:4 cement sand mortar (Kerb Blocks).				
	i	Size - 6" x12"x 18" (150 x300 x450mm)	288.00	RM	2,225.09	640,825.92
25	C-8/68 Page-50	Providing & fixing cement paving blocks flooring have size of 197 X 97 X 60 mm of city /quddra/cobble shape with pigmented having strength b/w 5000 psi to 8500 psi i/c filling the joints with hill sand over bed of 2" thick hill sand or stone dust and laying & compacting in specified manner / pattern and design etc. complete (pigmented) PSI 5000 to 8500e /tameer works or equivalent manufacturer)				
	i.	60mm Cosmic, zigzag/Plain interlock paver	952.00	Sqm	2,276.17	2,166,913.84
Total Schedule Amount (RS.)						94,453,249.17
Non Schedule Item						
1		Formation of embankment from borrow excavation in common material including laying in 6" (150mm) layer, clod breaking, ramming, dressing and compaction by sheep foot roller / power roller with optimum moisture content to achieve minimum 95% of modified A.A.S.H.T.O dry density complete, up to any lift and lead out side of project boundry, complete as per drawings and specifications and as directed by the engineer.	758.00	Cum		
2		Providing and applying waterproofing system as described below to concrete surfaces including surface preparation (screeding, crack filling, grouting, prime coat etc.).with all respects as per drawings, details and Engineer Incharge.				
	i	Cementatious / Crystalline Waterproofing (wet Area) of Fospak brand or approved equivalent as per drawings and details	92.00	Sqm		
3		Providing and fixing Aluminum composite panel cladding/Aluminium Cladding with metal framing mechanically fixed (brand / color / thickness / finish as per approved by the Architect). Including EPS thermal insulation, scaffolding, crane lifting, trim, flashing etc. complete with all respects as per drawings, details and Engineer Incharge.	1,041.00	Sqm		

GATE HOUSE**BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
4		Providing and laying porcelain tiles skirting using high (dimension colour,thickness tile and shade as approved by the Architect) to be laid over cement sand scratched plaster 1:5 (1-cement, 5- fine sand) including setting the tiles with gray cement slurry jointing, cutting, washing the tiles with matching colour cement slurry, curing and cleaning etc., complete with all respects as per drawings, details and Engineer IncharBasege.	72.00	Sqm		
5		Providing and fixing painted gypsum board ceiling including suspension systems, attachment devices, hangers, edge mouldings, trim clips, trimming and any extra hangers as required, including making provision for light fixtures etc., complete as per drawings, details and as directed by the Consultants.	304.00	Sqm		
6		Providing and fixing 12mm thk. tempered glass with aluminium framing (size as approved by architect/drawings) Including clips, aluminum u channel for holding complete with all respects as per drawings, details and as per directed by the consultant / engineer Incharge.	948.00	Sqm		
7		Providing and fixing 12mm thk. tempered glass door (size as per approved by the Architect /drawings). Including, door stopper, locks, hardwares complete with all respects as per drawings, details and as per directed by the consultant / engineer Incharge.	10.00	Each		
8		Providing fabrication & fixing / installation Wooden Pargola with (thickness design & other requirement As per drawing details & approved by Architect) including angle Support Redoxide, enamel paint/Polish complete with all respects as per drawings, details & approved by Architect.	72.00	Sqm		
9		Providing and fixing wood benches with mention drawing details (design as per approved by Architect) including Enamel Paint/Polish complete with all respects as per drawings, details & approved by Architect.	6.00	Each		
10		Providing, fabricating and fixing MS staircase & related material including providing & applying Redoxide with Enamel Paint with complete with all respects as per drawings, details and Engineer Incharge.	23.00	Per Step		
Total Non Schedule Civil Amount (Rs.)						-
HORTICULTURAL WORKS (Non Schedule)						
1		Providing and Planting following Trees / Shurbs / Palm with making Pits and filling Sweet Earth as approved by the Architect or Consultant complete with all respects as per drawings, details and Engineer Incharge.				
		Trees 3M Height				

GATE HOUSE**BILL OF QUANTITIES**

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Item #	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
i		Flowers Shrub Ground Covered of approved height (Seasonal Variety)	50.00	Sqm		
ii		Naeem	50.00	Each		
iii		Gul Mohar	50.00	Each		
iv		Bougainvillea (1.2M Height)	50.00	Each		
v		Terminalia,	50.00	Each		
vi		Tabebuia,	50.00	Each		
vii		Date Palm	25.00	Each		
2		Supplying and stacking approved garden soil (sweet earth) free from salts, pebbles and grass roots etc including all leads and lifts.complete with all respects as per drawings, details and engineer Incharge.	67.04	Cum		
3		Supplying, stacking and spreading cow dung manure / Slaughter House manure and mixing the same up to any depth in the already laid sweet earth including breaking clods, dressing fine for Trees in pits and sprinkling water, raking and rolling complete with all respects as per drawings, details and engineer incharge.	67.04	Cum		
4		Supplying and stacking live (Dacca) grass in slabs with earth intact including all lead and lifts complete with all respects as per drawings, details and Engineer Incharge.	92.47	Sqm		
Total Non Schedule Horticulture Amount (Rs.)						-



GATE HOUSE PLUMBING



BILL OF QUANTITIES
PLUMBING & WATER SUPPLY OF GATE HOUSE PACKAGE 1-A(i)

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	SCHEDULE ITEMS	
i)	PLUMBING FIXTURES	958,126.00
ii)	WATER SUPPLY WORK	406,320.00
iii)	SEWERAGE & DRAINAGE	604,612.77
	Add Premium Above or Below _____ % on Schedule Items	
	Sub-Total (A)	
2	NON-SCHEDULE ITEMS	
i)	PLUMBING FIXTURES	
ii)	WATER SUPPLY WORK	
iii)	SEWERAGE & DRAINAGE	
	Sub-Total (B)	
	Total (A+B)	



BILL OF QUANTITIES
PLUMBING & WATER SUPPLY OF GATE HOUSE PACKAGE 1-A(i)

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
A		SINDH SCHEDULE RATE MAY - 2024				
	1.0	PLUMBING FIXTURES				
1	WS-1/4 page-186	Providing and fixing European type white glazed earthen ware wash down W.C. pan complete with & including the cost of white / black plastic seat (Best quality) and lid with C.P. brass hinges best quality and buffers 3 gallons white glazed earthen ware low level flushing cistem with siphon fitting 1½ " dia white porcelain enameled flush bend dia and making requisite number of holes in walls , plinth & floor for pipe connection & making good in cement concrete 1:2:4 (Foreign quality) . (ICL or equivalent).	Each	10	44,244.72	442,447.00
2	WS-1/19(b) page-188	Providing and fixing steel sinks stainless local bt make complete with cast iron or wrought iron LINA ALVH brackets 6 inches built into wall, 1- 1/2" rubber plug and chrome plated brass chain 1- 1/2" C.P brass waste with 1-1/2" P.V.C. waste pipe & making requisite number of holes in walls, plinth & floor for pipe connection & making good in cement concrete 1:2:4.				
	9b)	Steel Sink stainless size 36"x18" local make (standard pattern)	Each	2	10,215.27	20,431.00
3	WS-1/10 page-187	Providing and fixing 24"x18" lavatory basin in white glazed earthen ware complete with & including the cost of W.I. or C.I. cantilever bracket 6 inches built into wall, painted white in two coats after a primary coat of red lead paint, a pair of 1- 1/2" dia chrome plated pillar taps, 1-1/2" rubber plug & chrome plated brass chain 1-1/4" dia malleable iron or C.P. brass traps malleable iron or brass unions and making requisite number of holes in walls, plinth & floor for pipe connection & making good in cement concrete 1:2:4 (Foreign Equivalent).	Each	10	24,094.98	240,950.00
4	WS-1/11 page-187	Add extra for providing & fixing of earth ware pedestal white or coloured Glazed (Foreign or equivalent)	Each	10	3,675.07	36,751.00
5	WS-1/22 page-188	Providing and fixing 1.5 cm (1/2") dia connection pipe, including check nuts, etc; plastic rubber connection.	Each	26	760.50	19,773.00
6	WS-2/2(b) page-190	Providing and fixing C.P. brass toilet paper brackets complete (similar) to twyford design number 1108 (Suparear Quality).	Each	10	1,170.00	11,700.00
7	WS-2/(II)b page-190	Providing and fixing towel rail 24"x3/4" round or with brackets screws nuts & cleats etc. complete (Suparear quality).	Each	10	2,524.57	25,246.00
8	WS-2/5 page-190	Supplying & fixing soap tray of superior quality and design with fine finishing with C.P. screws etc. complete	Each	10	585.00	5,850.00
9	WS-6/11(B) page-198	S/fixing concealed stop cock of suprior best quality with C.P.head 1/2" dia	Each	25	1,848.60	46,215.00



BILL OF QUANTITIES
PLUMBING & WATER SUPPLY OF GATE HOUSE PACKAGE 1-A(i)

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
10	WS-6/14(b) page-199	Supplying & fixing wash basin mixture of superior quality with C.P. Crystal head 1/2" dia	Each	10	4,890.60	48,906.00
11	WS-6/17 page-199	Supplying & fixing Sink mixture cock of superior quality with C.P. head etc. complete	Each	2	2,550.60	5,101.00
12	WS-6/19A page-199	Supplying & fixing C.P muslim shower with double bib cock and ring pipe etc. complete	Each	10	5,475.60	54,756.00
		Sub total: Plumbing Fixtures				958,126.00
	2.0	Water Supply				
1	C-5/29 page-34	Supplying and filling sand under floor and plugging in walls.	Cu.m.	200.00	2,031.60	406,320.00
		Sub total: Water Supply				406,320.00
	3.0	Sewerage and Drainage				
1	PH/A-1 Page-148	Excavation for pipe line in trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth within a one chain as directed by Engineer Incharge . Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft. (1.52m) and lead upto one chain (30.5m).	Cu.m.	320.02	645.75	206,653.00
	C1/13 Page-16	Earth work compaction Compaction of earth work (Soft, ordinary or hard soil).				
	a)	Laying earth in 6" layers levelling and dressing complete.	Cu.m.	320.02	44.85	14,353.00
	C1/21 Page-17	Filling,watering and ramming earth in under floors with surplus earth from foundation etc. lead up to one chain and lift upto 5 feet.	Cu.m.	320.02	229.58	73,470.00
2	PH-D/6 page-112	Providing, Laying uPVC pipes of Class 'D' fixing in trench i/c cutting, fitting and jointing with solvent cement i/c Testing with water to a head of 122 meter or 400 ft.				
a	D/6(b) page-112	1 1/2" i/d 38mm	R.m	8.00	428.43	3,427.44
b	D/6(c) page-112	2" i/d 50mm	R.m	2.00	638.84	1,277.68
c	D/6(e) page-112	3" i/d 80mm	R.m	42.00	1,329.96	55,858.32
d	D/6(f) page-112	4" i/d 100mm	R.m	30.00	2,168.02	65,040.60
e	D/6(h) page-112	6" i/d 150mm	R.m	15.00	4,564.11	68,461.65
	C-4 page-96	Cartage of U.P.V.C/P.E pipes of any class by mechanical transport i/c loading unloading and stacking at site.				



BILL OF QUANTITIES
PLUMBING & WATER SUPPLY OF GATE HOUSE PACKAGE 1-A(i)

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

S.No	Item #	Description of Work	Unit	Qty.	Rate	Amount
2a	C/4(a) page-96	1 1/2" i/d 38mm	R.m	8.00	0.96	7.68
	C/4(a) page-96	2" i/d 50mm	R.m	2.00	0.96	1.92
	C/4(c) page-97	3" i/d 80mm	R.m	42.00	2.09	87.78
	C/4(d) page-97	4" i/d 100mm	R.m	30.00	3.49	104.70
	C/4(f) page-98	6" i/d 150mm	R.m	15.00	7.60	114.00
3	WS-2/3(b) page-190	Providing & fixing 15"x12" bavelled edge mirror of Belgium glass completed with 1/8" thick hard and C.P. screws fixed to wooden cleats (Suparear quality).	Each	10.00	3,510.00	35,100.00
4	WS-7/2 page-200	Providing chambers 15"x19" (inside dimension) x24" deep for house meters with 6" thick C.C. 1:2:4 blocks set in 1:6 cement mortar 6" thick C.C. 1:4:8 in foundation, " thick cement plaster 1:3 to all inside wall surfaces and to top 1" thick C.C. 1:2:4 fl.				
		i) upto 2ft depth	Nos.	4.00	9,051.80	36,207.00
5	WS-16/1c page-209	Manufacturing & Supplying of R.C.C manhole cover cast in 1:2:4 cement concrete ratio 3" inch deep at center reinforced with 1/2" dia tor steel bars with 4" c/c welded to a 3/16" thick 2 inch wide M.S Plate and two hooks of 3/8" inch dia tor bars including compacting, curing and transportation within 10 miles.	Nos.	4.00	6,556.10	26,224.00
6	WS-10/1 page-203	Providing & fixing 6"x4" C.C. gully trap with 4" outlet complete with 4" thick 1:2:4 for bed & 1/2" thick cement plaster (1:3) to the karb, C.I. grating 6"x6" & C.I. cover and frame 12"x12" (inside etc. complete).				
	a-i page-203	C.C. gully trap 6"x6"x4" C.I Cover and Frame	Nos.	6.00	3,037.32	18,224.00
		Sub total: Sewerage and Drainage				604,612.77



BILL OF QUANTITIES
PLUMBING & WATER SUPPLY OF GATE HOUSE PACKAGE 1-A(i)

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

Item #	Description of Work	Unit	Qty.	Rate	Amount
B	NON SCHEDULE ITEMS				
1.0	PLUMBING FIXTURES				
1	Providing and fixing chromium plated bottle trap with waste pipe, etc. complete:- 4 cm (1 1/2").	Each	17		
	Sub total: Plumbing Fixtures				-
2.0	Water Supply				
1	Providing, fixing, jointing and testing polypropylene random (PPR) pipes or approved equivalent pressure pipe for cold water as per DIN 16962, PN 8077-8078, PN-25 for pipes and Din 16962, PN-25 for fittings (polyfusion welded joints) inside building including fitting and specials (sockets, tee, elbows, bends, crosses, reducers, adaptor, plugs and union etc) supported on walls or suspended from roof slab or run in chases including pipe hangers, supports, cutting and making good the chases and holes, complete in all respects.				
i)	19 mm O.D	R.m	80		
ii)	40 mm O.D	R.m	10		
iii)	50 mm O.D	R.m	12		
2	Providing and installing Brass Ball / Handle valves of following nominal dia, including jointing, fitting, painting and testing complete in all respects to match with PPR/uPVC pipes of following diameters.				
i)	25 mm O.D	Each	10		
ii)	40 mm O.D	Each	2		
iii)	50 mm O.D	Each	2		
3	Supply and installation of Electric geysers of following capacity, including ball valves on inlet and outlet connections complete in all respects.				
i)	25 Gallons	Each	4		
	Sub total: Water Supply				-
3.0	Sewerage and Drainage				
1	Providing and fixing AGM uPVC floor trap 75mm of approved quality including PVC grating and cover.	Each	22		
2	Providing and fixing uPVC Floor Trap 100mm of approved quality including PVC grating and cover.	Each	6		
3	Providing and fixing 4" dia 100mm cowl for vent pipe of approved quality.	Each	4		
4	Providing and fixing angle drain for 4" dia 100mm rainwater pipe with brass top complete in all respects.	Each	4		
	Sub total: Sewerage and Drainage				-



BRIDGE



BILL OF QUANTITIES
BRIDGE-07 PACKAGE - 1-A(i)

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	SCHEDULE ITEMS	
i)	CIVIL & ARCHITECTURE WORK.	307,839,619
	Add Premium Above or Below _____% on Schedule Items	
	Sub-Total (A)	
2	NON-SCHEDULE ITEMS	
i)	CIVIL & ARCHITECTURE WORK.	
	Sub-Total (B)	
	Total (A+B)	



BILL OF QUANTITIES
BRIDGE B-07 GATE HOUSE (30m wide) WORKS

ADDENDUM NO. 1

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

No.	Item No.	Description	Unit	Qty	Rate (PKR)	Amount (PKR)
	A	SINDH SCHEDULE RATE MAY - 2024				
		Bridge B-7 GATE 30m Wide				
		EARTH WORKS				
1	C-1/18b page-17	Excavation in foundation of Building Bridges and other structures including dagbelling dressing, refilling around structure with excavated earth watering and ramming lead upto 5 ft. , lead upto one chain (30 metre) and lift upto 5 ft. (1.5 metre)	Cu.m.	3765.63	419.60	1,580,058.35
		PILING WORKS				
2	HW-43/40 page-226	Drilling of boreholes in pile 1000mm diameter in all kinds of sub-surface material including disposal of drilled material to designated places.				
	a)	0 - 20m	R.m.	1235.00	11,423.50	14,108,022.50
3	HW-43/42 page-226	Drilling of boreholes in pile 1200mm diameter in all kinds of sub-surface material including disposal of drilled material to designated places.				
	a)	0 - 20m	R.m.	500.00	22,643.25	11,321,625.00
4	C-4/4b page-24	Class 'E' 5mpa dummy concrete using specified cement to cover the exposed reinforcement of piles (Optional Item).	Cu.m.	31.26	10,479.09	327,576.35
5	HW-43/1 page-224	Class 'A1' providing & pouring reinforced concrete in pile of the following diameter using specified cement excluding the cost of reinforcement.				
	a)	Type-P1 1200 mm dia.	Cu.m.	565.55	24,021.96	13,585,619.48
	b)	Type-P2 1000 mm dia.	Cu.m.	970.22	24,021.96	23,306,586.03
		PLAIN AND REINFORCED CONCRETE				
6	C-4/5i page-24	Class 'E' 1450 psi concrete using specified cement as shown on the drawings and as directed by the Engineer.	Cu.m.	121.97	12,320.67	1,502,752.12
7	HW-43 page-224	Class 'A3' reinforced concrete using specified cement in following sub-structures:				
	HW-43/7 page-224	a) Concrete A-3 (Under Ground Pile Cap)	Cu.m.	1685.64	27,472.95	46,309,503.44
8	HW-43/8 page-224	b) Abutment transom (On Ground)	Cu.m.	966.73	29,946.55	28,950,228.28
		c) Pier Column	Cu.m.	148.64	29,946.55	4,451,255.19
		d) Pier cap & Barriers	Cu.m.	119.99	29,946.55	3,593,286.53
		e) Approach Slab	Cu.m.	100.20	29,946.55	3,000,644.31
		f) Shear key	Cu.m.	40.00	29,946.55	1,197,862.00
9	HW-43/21 page-225	Class 'D2' fairfaced Precast Prestressed reinforced concrete Box Girders, Diaphragms with specified cement including transportation, launching and placing in position, complete in all respect as shown on the drawings and specifications or as directed by the Engineer. (Excluding reinforcing bars, Prestressing strand & accessories.)	Cu.m.	2185.32	36,438.41	79,629,586.14



BILL OF QUANTITIES
BRIDGE B-07 GATE HOUSE (30m wide) WORKS

ADDENDUM NO. 1

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

No.	Item No.	Description	Unit	Qty	Rate (PKR)	Amount (PKR)
10	HW-43/1 page-224	Class 'A1' fairfaced reinforced concrete using specified cement including polypropylene fibrous reinforcement in following super structures: (Barriers)	Cu.m.	79.00	24,021.96	1,897,734.84
11	HW-39/14 page-221	Providing & fixing Precast Edge Block 3750 PSI Industrial Made Size 6 inches thick x 12 inches long x 18 inches high including the cost of Cartage, excavation, form Work for haunching, 1450 PSI lean concrete, 2250 PSI concrete for haunching, 1:4 cement sand mortar.	R.m.	400.00	2,225.09	890,036.00
		PRESTRESSING				
12	HW-43/27 page-225	Providing, placing and prestressing High Tensile steel tendons conforming to ASTM A-416 (Grade 270) including all accessories complete as per specifications or as directed by the Engineer.	tonne	45.60	460,389.77	20,993,773.51
		BEARING PADS				
13	HW-43/38 page-226	Elastomeric bearing pads imported approved equivalent, of the following sizes & Types as shown on the drawing complete and as directed by the Engineer.				
		a). 300 X 400 X 50 mm	C.cm	603000	10.41	6,277,230.00
		PIPE FITTINGS				
14	PH-K/1(d) page-	Providing & fixing 31mm dia PVC pipe Class-B sleeves fitting accessories & fittings complete in all respect as shown on the drawings and specifications.	R.m.	124.00	40.69	5,045.56
15	HW-9 page-212	Preparing sub grade including earth excavation or filling to an average depth of 9" dressing to camber and consolidation with power Roller.	Sq.m	6006.00	176.41	1,059,518.46
16	M Basic/1 page-10	Carriage of 100Cft /5Tons of all materials like, Stone aggregate, Spawl, Coal, Lime, Surkhi, etc. B.G Rail fastening points and crossing bridge, Girders, Pipes, Sheets Rails, M.S Bars etc. or 1000 Nos. Bricks (10"5"x3") or 1000Nos. Tiles(12"x6"x2") or 150Cft of Timber or 100 Maunds of fuel wood by trucks or any other means owned by the contractors.				
	i.	Carriage 1st mile to 6th mile	CM	1740.20	511.08	889,381
	ii.	Carriage (100km or 62.15 mile - 6mile =56.15 56.15 x 105.93 = 5947.97 / 100 = 59.48 / Cft 59.48 x 35.32 = 2100.83 / Cm. around project approved source material.	CM	1740.20	2,100.83	3,655,864
	iii.	Note :- Incase from where the source will pass, the rate will be calculated or deducted on the basis of kilometers. Rs. 105.93 / 100Cft or 37.414/ Cm per mile.	CM			



BILL OF QUANTITIES
BRIDGE B-07 GATE HOUSE (30m wide) WORKS

ADDENDUM NO. 1

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

No.	Item No.	Description	Unit	Qty	Rate (PKR)	Amount (PKR)
17	HW-11d page-213	Preparing Sub-Base by supplying and spreading well graded pit or bed run gravel having a liquid limit not greater than 25 and plasticity index not greater than 6 in proper camber and grade including watering rolling and compacting in layers, thickness of each compacted layer not compacted exceeding upto 6" 98-100% density as per modified AASHTO density (Rate i/c all cost of materials T&P and carriage upto 3 chains).	Cu.m.	994.40	3,429.99	3,410,782.06
18	HW-13B page-214	Providing and laying Aggregate base course in proper grade and camber having CBR 80% as per AASHTO standard specifications i/c spreading and compacting by approved mechanical means (Motor grader, Vibratory roller and Smooth wheel roller etc) watering to maintain the moisture content the compaction of each layer shall 100 percent to the max dry density (Rate i/c all cost of materials T&P and carriage upto 3 chains).	Cu.m.	745.80	4,893.72	3,649,736.38
19	HW-23A page-217	Providing and laying Plant mixed Asphalt Concrete Binder Course compacted thickness 3 inches (75mm thick) as per approved job mix formula using crush aggregate from approved sources. Using asphalt of grade 80/100 during laying temperature not less than 140C compacted by steel wheel & PTR roller. The procedure of laying binder course material & methodology shall fully comply with AASHTO and as directed by Engineer Incharge. Minimum bitumen content should be 3.5% binder course shall be spreading using paver machine. Rolling & Finishing to design proper grade line level and camber etc: (Machinery with POLs cost of material carriage).	Sq.m	4830.32	2,871.34	13,869,491.03
20	HW-24B page-218	2" (50 mm) Thick Asphalt Concrete Wearing Course Plant Mix Laying to Proper line and grade plant mixed Asphalt concrete paver finished (Hydraulic / Electronic control) Prepared to specified formula according to job mix formula approved by Engineer incharge including rolling and finishing to Proper line, grade level and camber etc: (Machinery with POLs cost of material carriage).	Sq.m	7245.48	2,138.44	15,494,024.25
21	HW-31a page-219	Applying priming coat or tack coat with approved binder at the required rate including cleaning the road surface thoroughly, heating to the required temperature and spraying the binder with pressure as directed etc, complete. Base rate per kg 182.42x 0.70 kg required per sqm = 127.69 + 37.67 = 165.36	Sq.m	7245.48	165.36	1,198,112.57
22	HW-31b page-219	Applying priming coat or tack coat with approved binder at the required rate including cleaning the road surface thoroughly, heating to the required temperature and spraying the binder with pressure as directed etc, complete. Base rate per kg 182.42x 0.20 kg required per sqm = 36.48 + 37.67 = 74.15 (Bitumen Basic rate page-24/No123)	Sq.m	4830.32	74.15	358,168.23
		TRAFFIC MARKING & PAVEMENT STUDS				



BILL OF QUANTITIES
BRIDGE B-07 GATE HOUSE (30m wide) WORKS

ADDENDUM NO. 1

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

No.	Item No.	Description	Unit	Qty	Rate (PKR)	Amount (PKR)
23	HW-39/13 page-221	Pavement Marking in reflective TP Paint for Line of 15 cm width.	Sq.m	247.50	282.51	69,921.23
24	HW-39/12 page-221	Supplying and Fixing of reflectorize Road Studs Double Face, Flush surface type.				
	i)	Reflectorized Pavement Stud (Flush Profile Type - Double) 100x100mm	Nos.	100.00	1,520.42	152,042.00
		STEEL PIPES & PIPE FITTINGS				
25	PH-F/1c page-118	Manufacturing, Supplying & fixing black steel M.S pipe 150mm dia 5mm thick made out of M.S sheet confirming to API 5L grade X- 42 ERW & Externally 3 LPE coating inspection and tesing will be carried out as per DIN 30670 standard and internally CC Lining to be done as per AWWA C-205 standard i/c laying jointing with welding in trenches i/c cost of bends of any degree & testing with water specified pressure.	R.m.	60.00	13,135.07	788,104.20
		WATER PROOFING AND BUILT-UP ROOFING				
26	C-11/9 page-63	Two protective coats of hot bitumen grade 10/20 applied @ 1 Kg./sq.m. per coat	Sq.m	1345.51	234.89	316,046.84
		TOTAL COST OF SCHEDULE ITEMS				307,839,618.66



BILL OF QUANTITIES
BRIDGE B-7 GATE HOUSE (30m wide) WORKS

ADDENDUM NO. 1

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

No.	Description	Unit	Qty	Rate (PKR)	Amount (PKR)
NON SCHEDULE ITEMS					
	Bridge B-7 GATE 30m Wide				
1	Static Pile Load test on test pile as per latest version of ASTM D 1143 for the following diameter.				
	a) 600 tonne (1000mm diameter)	No.	0.80		
	b) 1230 tonne (1200mm diameter)	No.	0.80		
1a	Static Pile Load test on test pile as per latest version of ASTM D 1143 for the following diameter.				
	a) 300 tonne (1000mm diameter)	No.	0.80		
	b) 615 tonne (1200mm diameter)	No.	0.80		
2	Pile integrity test on all piles as per latest version of ASTM D 5882 for the following diameter.				
	a) 1000mm diameter	Each	25.60		
	b) 1200mm diameter	Each	19.20		
3	Precast concrete paving tiles of size 300 x 300 x 40 mm laid in approved pattern over 50mm thick sand cushion complete in all respects, as shown on drawings and as directed by the Engineer.	Sq.m.	650.00		
4	a) Providing & Laying Non Shrink grout.	Cum	12.22		
5	# 25mm dia Galvanized Mild steel dowel Bar placing at 350mm c/c fixing accessories & fixing as shown on the drawings or as directed by the Engineer.	No.	450.00		
6	Providing and fixing MS End plate 280x 280x 20mm with 350x 350x 50mm protective cover as per specifications and as per directed by the Engineer.	No.	48.00		
7	Providing and fixing MS plate 230 x 1720 x 20mm as per specifications and as per directed by the Engineer.	No.	24.00		
EXPANSION JOINTS:					
8	Expansion Joint between deck slab comprising DK NEW MONOCELL JOINT (DK NMC-50) or approved equivalent including Non shrink grout & anchoring system etc. complete in all respects as per manufacturer's instructions & as shown on the drawings.	R.m.	150.00		
9	50x50mm polyurethane sealant	R.m.	100.00		
10	Bitumenious impregnated Soft Board	R.m.	26.00		
11	Hot dip galvanized heavy duty railing including fabrication, erection/ embedding and Embeded parts including fixing and all fixing accessories etc.complete in all respect as shown on the drawings and as per specifications.	R.m.	200.00		

BILL OF QUANTITIES
BRIDGE B-7 GATE HOUSE (30m wide) WORKS

ADDENDUM NO. 1

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

No.	Description	Unit	Qty	Rate (PKR)	Amount (PKR)
12	Providing and applying traffic marking arrows using thermo plastic paint with glass beads, paint of specified quality as per drawings complete in all respect as directed by the Engineer.	Sq.m	80.00		
13	Providing, fabrication, painting/ galvanizing complete placing and fixing Gantry signs as shown on the drawings and detail or as directed by the Engineer, complete in all respect including structural steel work, embedded parts, foundations, earthwork and related civil works.				
a)	Gantry As per drawing & Specification	job	3.00		
14	Reinforcement As Per ASTM A706 Grade 60 including cutting,bending,binding and fixing in position for required components of Pre-Stressed Bridges.The rate also include the cost of binding wire and its labour fixing	tonne	1000.32		
	TOTAL COST OF NON SCHEDULE ITEMS				-



STREAMS



BILL OF QUANTITIES
STREAM PACKAGE 1-A(i)

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	NON-SCHEDULE ITEMS	
i)	CIVIL & ARCHITECTURE WORKS	
ii)	ELECTRICAL WORKS	
	TOTAL	



BILL OF QUANTITIES

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
STREAMS (CIVIL & ARCHITECTURAL WORKS)					
B NON SCHEDULE ITEMS					
1	Excavation for trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth in required area any lead & lift also refilling watering ramming & compaction around structure as directed by Engineer Incharge . Providing fence guards, lights, flag etc as per side requirement.	7,500	Cu.m.		
2	Supplying suitable earth from approved outside sources (borrowpits) including digging, loading and unloading, cartage upto site of work and filling in foundation trenches, plinth or under floor, etc. including breaking clods, dressing, watering and consolidation by ramming in layers not exceeding up to required depth full compaction complete including all lead and lift. The item rate shall include all costs related to the item complete in all respect as per drawing and as directed by the Consultants/ Engineer Incharge.	1,500	Cu.m.		
3	Providing and laying SF56 - 190 GSM 100% Polypropylene Mechanically and Thermally Bonded Isotropic Geotextile or approved equivalent. Including overlapping complete with all respects as per drawings, details and as per approved by the consultants / Engineer Incharge.	6,270	Sq.m.		
4	Providing and laying Gravel in trenches as per approved size and thickness. Including leveling and compacting where required complete in all respects as per drawings, details and as per approved by the Consultants / Engineer Incharge.	1,200	Cu.m.		
5	Providing and laying 1mm thick PVC Geomembrane Liner as per ASTM D7176-06 (Impervious Layer) or approved equivalent. Including overlapping and field seam testing of PVC Geomembrane liner as per ASTM D7177. Complete in all respects as per drawings, details and as per approved by the Consultants / Engineer Incharge.	6,270	Sq.m.		
6	Providing and laying NP 17 - 150 GSM Polypropylene Needle-Punched Geotextile or approved equivalent. Including overlapping complete with all respects as per drawings, details and as per approved by the consultants / Engineer Incharge.	6,270	Sq.m.		
7	Providing and laying fibre reinforced cement concrete consisting of Class B Concrete, 100% Polypropylene Fibrillated Fiber DCF-25/13 (Dosage is 1.8 kg per cubic meter) or approved equivalent excluding formwork. Including hoisting, placing, compacting, finishing, curing complete in all repect as as per drawings, details and as per approved by the consultants / Engineer Incharge.	1,026	Cu.m.		
8	Providing, laying and spreading graded aggreagte base course material upto any thickness in base course in required grade and AASHTO T-96, T-180 & T-193 compacted to the required density corresponding to 98% of the maximum dry density and approved mechanical means (vibratory roller, road packer and smooth wheel rollers, etc) as per design and specifications including watering also specific lab test, with all lead and lift, etc complete (actual compacted depth shall be considered for payment, complete as per drawings and specifications and as per directed by The Engineer.	375	Cu.m.		



BILL OF QUANTITIES

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
9	Providing laying and jointing fair face precast bullnose Kerb block approved quality and make having a minimum works cylindrical strength of 3000 lbs Class -A. per sq. inch at 28 days with a mix not leaner than 1:1-1/2:3 as per design and drawing, laid in cement mortar 1:3 and racking out joints, curing etc. I/C Excavation, back filling with 3" thick lean concrete under the kerb and back hanching 6"x9" (150mm x 229mm) 1:3:6 complete as desired, complete with all respects as per drawings, details and Engineer Incharge.				
i	Size - 6" x 36"x 12" (150 x900 x300mm)	2,820	R.m.		
10	Providing and laying ellipse, round or other shape pebble gravel bolder pathway with 1:3 mortar grout approved design as per architect drawing at required areas, also mortar base and making of grout setting levelling etc. complete as per drawings, details and Engineer Incharge.	1,050	Sq.m.		
11	Providing, laying & jointing pre-cast cobble stone as manufactured by Envicrete, Hub Block or equivalent approved by architect complete i/c sand filling bed 2" (0.050mm) thick and grouting of all voids with fine sand, complete with all respects as per drawings, details and Engineer Incharge.				
i	60 mm thk.	4,010	Sq.m.		
12	Providing and fixing Precast C.C Bench with consisting of fairface concrete (cast in place / precast 4000 psi as per Architects approval), 457mm wide 254mm thk & 580mm height, also hard cultural 2" x 1 1/4" wooden planks with screwed or nailed etc. Complete in all respects as per drawings, details and as directed by the Consultant / Engineer Incharge.	70	Each		
13	Construction of 4000 psi fair face concrete bench cast in place/precast with 150mm wide 8mm thick fiber cement board strip laminated to 25mm thick hard wood and screwed or nailed to concrete bench also strip light under bench and 2" thick cultural stone cladding fixed on concrete wall with 1" thick cement sand mortar and also 18"x 12"x 3 1/2" thick stone coping where required. (dimensions and design as per approved by the Architect). Complete in all respects as per drawings, details and as directed by the Consultant / Engineer Incharge.	336	R.m.		
14	Providing and planting Miyawaki Forest area consisting of multiple varieties of trees / plants of approved height, girth and pot size (Trees / Plants, shrubs & Bermuda grass as per approved by the Architect). Including, making of tree pits, filling sweet earth 0.225 thick, manure 0.075 thick all other components and as per techniques provided Consultant complete in all respects as per drawings, details and as per approved by the Consultants / Engineer Incharge.	5,303	Sq.m.		
15	Rough dressing of the area for lawn including picking stones, pebbles, stubble, grass roots and other injurious matters and breaking of clods complete including disposal of rubbish as per direction of engineer	6,550	Sq.m.		
16	Supplying and stacking approved garden soil (sweet earth) 0.225 thick free from salts, pebbles and grass roots etc including all leads and lifts.complete with all respects as per drawings, details and Engineer Incharge.	1,495	Cu.m.		



BILL OF QUANTITIES

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
17	Supplying, stacking and spreading cow dung manure / Slaughter House manure 0.075 thick and mixing the same up to any depth in the already laid sweet earth including breaking clods, dressing fine for Trees in pits and sprinkling water, raking and rolling complete with all respects as per drawings, details and Engineer Incharge.	500	Cu.m.		
18	Supplying and stacking live (Bermuda) grass in slabs with earth intact including all lead and lifts complete with all respects as per drawings, details and Engineer Incharge.	6,640	Sq.m.		
19	Providing and fixing MS / Fiber / PVC or any other Dust Bin with selected material (as per approved by the Architect). Including, square pipe for holding pipe. Complete with all respects. As per drawings, details and Engineer Incharge.	70	Each		
20	Providing and Planting following Trees / Shurbs / Palm with making Pits and filling Sweet Earth as approved by the Architect or Consultant.				
	Trees 3m Height				
i)	Neem (75-100mm Girth & 450-600mm dia pot size)	50	Each		
ii)	Gul mohar (75-100mm Girth & 450-600mm dia pot size)	50	Each		
iii)	Peepal (75-100mm Girth & 450-600mm dia pot size)	50	Each		
iv)	Mango (75-100mm Girth & 450-600mm dia pot size)	50	Each		
v)	Almond Tree (75-100mm Girth & 450-600mm dia pot size)	50	Each		
vi)	Babul Tree (75-100mm Girth & 450-600mm dia pot size)	50	Each		
vii)	Chikoo Tree (75-100mm Girth & 450-600mm dia pot size)	50	Each		
21	Palm 3m Height				
i)	Date Palm (75-100mm Girth & 450-600mm dia pot size)	50	Each		
ii)	Flowers/Shrubs (Any approved Variety) 1m Height	750	Sq.m.		
Total Amount Rs.					-



BILL OF QUANTITIES

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
STREAMS (ELECTRICAL WORKS)					
B NON SCHEDULE ITEMS					
1	Providing and fixing 100mmx 100mmx 6m high light poles (design as per approved by the Architect) with LED Pole Light IP-65 60-80W 4000K or approved equivalent. Including, 600mmx 600mmx 1200mm pole foundation, lean, junction box, single arm, M.S plate, bolts, internal wiring and other accessories complete in all respects as per drawings, details and as per directed by the Consultants / Engineer Incharge.	EACH	126		
1A	Supply, laying, termination, tagging, testing and commissioning of following size of single core / multicore, PVC insulated, PVC/PVC, XLPE/ PVC sheathed, non-armored Copper conductor 600V/1000V or 450/750V voltage grade cable in already laid raceways or in ducts including all accessories lugs, cable glands, etc., as per drawings and specifications, complete in all respect. Note: Contractor is advised to confirm the cable running length before commencement of work and termination as per site requirements.				
i)	4 Core - Cu.XLPE/PVC Cable (600/1000V)				
	4 Core - 16 Sq.mm	Rm.	1295		
ii)	1 Core - CU/PVC Cable (For Pole Earthing)				
	1 Core - 16 Sq.mm Cu/PVC Cable	Rm.	1295		
2	Supply, installation, testing & commissioning of following Isolators, in 16 SWG sheet steel enclosure with neutral and earth terminal strips, including all mounting accessories as per specification & drawing, complete in all respect.				
i	40A, TPN Isolator	No.	2		
ii	20A, SPN Isolator	No.	2		
3	Providing and laying of following size uPVC class D pipe for Incoming cable, Buried in ground/under road/under floor Including excavation for laying of pipe, bricks, warning tape, and backfilling with warning tape, and fresh soil as per specification as shown on the drawing, as per drawings and specification etc.,complete in all respect.				
	100 mm dia uPVC Pipe	Rm.	1295		
	50 mm dia uPVC Pipe	Rm.	100		
4	Supply & installing of Pull Box as per drawing and specification, complete in all respect.	No.	2		
5	Providing and Construction of Manhole Size 2'-0" x 2'-0" x 2'-6" deep, 6"thick, concrete 1:2:4 ratio with 2' round heavy duty cast iron cover, 100% water proof, as per specification as shown on the drawing, as per drawings and specification etc., complete in all respect.	No.	4		
6	Providing and fixing DB (Surface Type) with 18SWG Enclosure, changeover, circuit breakers and accessories etc. complete in all respects as per drawings, details and Engineer Incharge.	EACH	2		
Total Amount Rs.					-

URBAN FOREST



BILL OF QUANTITIES
URBAN FOREST PACKAGE 1-A(i)

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
1	NON-SCHEDULE ITEMS	
i)	CIVIL & ARCHITECTURE WORKS	
ii)	ELECTRICAL WORKS	
	TOTAL	



BILL OF QUANTITIES

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
URBAN FOREST (CIVIL & ARCHITECTURAL WORKS)					
B NON SCHEDULE ITEMS					
1	Excavation for trenches, and pits in soft soils i/c trimming and dressing sides to true alignment and shape levelling of beds of trenches to correct level and grade, cutting joint holes and disposal of surplus earth in required area any lead & lift also refilling watering ramming & compaction around structure as directed by Engineer Incharge . Providing fence guards, lights, flag etc as per side requirement.	12,200	Cu.m.		
2	Supplying suitable earth from approved outside sources (borrowpits) including digging, loading and unloading, cartage upto site of work and filling in foundation trenches, plinth or under floor, etc. including breaking clods, dressing, watering and consolidation by ramming in layers not exceeding up to required depth full compaction complete including all lead and lift. The item rate shall include all costs related to the item complete in all respect as per drawing and as directed by the Consultants/ Engineer Incharge.	2,650	Cu.m.		
3	Providing and laying SF56 - 190 GSM 100% Polypropylene Mechanically and Thermally Bonded Isotropic Geotextile or approved equivalent. Including overlapping complete with all respects as per drawings, details and as per approved by the consultants / Engineer Incharge.	6,188	Sq.m.		
4	Providing and laying Gravel in trenches as per approved size and thickness. Including leveling and compacting where required complete in all respects as per drawings, details and as per approved by the Consultants / Engineer Incharge.	1,238	Cu.m.		
5	Providing and laying 1mm thick PVC Geomembrane Liner as per ASTM D7176-06 (Impervious Layer) or approved equivalent. Including overlapping and field seam testing of PVC Geomembrane liner as per ASTM D7177. Complete in all respects as per drawings, details and as per approved by the Consultants / Engineer Incharge.	6,188	Sq.m.		
6	Providing and laying NP 17 - 150 GSM Polypropylene Needle-Punched Geotextile or approved equivalent. Including overlapping complete with all respects as per drawings, details and as per approved by the consultants / Engineer Incharge.	6,188	Sq.m.		
7	Providing and laying fibre reinforced cement concrete consisting of Class B Concrete, 100% Polypropylene Fibrillated Fiber DCF-25/13 (Dosage is 1.8 kg per cubic meter) or approved equivalent excluding formwork. Including hoisting, placing, compacting, finishing, curing complete in all respect as as per drawings, details and as per approved by the consultants / Engineer Incharge.	974	Cu.m.		
8	Providing, laying and spreading graded aggregate base course material upto any thickness in base course in required grade and AASHTO T-96, T-180 & T-193 compacted to the required density corresponding to 98% of the maximum dry density and approved mechanical means (vibratory roller, road packer and smooth wheel rollers, etc) as per design and specifications including watering also specific lab test, with all lead and lift, etc complete (actual compacted depth shall be considered for payment, complete as per drawings and specifications and as per directed by The Engineer.	160	Cu.m.		



BILL OF QUANTITIES

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
9	Providing laying and jointing fair face precast bullnose Kerb block approved quality and make having a minimum works cylindrical strength of 3000 lbs Class -A. per sq. inch at 28 days with a mix not leaner than 1:1-1/2:3 as per design and drawing, laid in cement mortar 1:3 and racking out joints, curing etc. I/C Excavation, back filling with 3" thick lean concrete under the kerb and back hanching 6"x9" (150mm x 229mm) 1:3:6 complete as desired, complete with all respects as per drawings, details and Engineer Incharge.				
i	Size - 6" x 36"x 12" (150 x900 x300mm)	424	R.m.		
10	Providing laying and jointing fair face Kerb block approved quality and make having a minimum works cylindrical strength of 3000 lbs Class -A. per sq. inch at 28 days with a mix not leaner than 1:1-1/2:3 as per design and drawing, laid in cement mortar 1:3 and racking out joints, curing etc. I/C Excavation, back filling with 3" thick lean concrete under the kerb and complete as desired, complete with all respects as per drawings, details and Engineer Incharge.				
i)	Size - 6" x 12"x 12" (150 x300 x300mm)	2,982	R.m.		
11	Providing and laying ellipse, round or other shape pebble gravel bolder pathway with 1:3 mortar grout approved design as per architect drawing at required areas, also mortar base and making of grout setting levelling etc. complete as per drawings, details and Engineer Incharge.	380	Sq.m.		
12	Providing, laying & jointing pre-cast cobble stone as manufactured by Envicrete, Hub Block or equivalent approved by architect complete i/c sand filling bed 2" (0.050mm) thick and grouting of all voids with fine sand, complete with all respects as per drawings, details and Engineer Incharge.				
i	60 mm thk.	1,450	Sq.m.		
13	Providing and fixing Precast C.C Bench with consisting of fairface concrete (cast in place / precast 4000 psi as per Architects approval), 457mm wide 254mm thk & 580mm height, also hard cultural 2" x 1 1/4" wooden planks with screwed or nailed etc. Complete in all respects as per drawings, details and as directed by the Consultant / Engineer Incharge.	50	Each		
14	Construction of 4000 psi fair face concrete bench cast in place/precast with 150mm wide 8mm thick fiber cement board strip laminated to 25mm thick hard wood and screwed or nailed to concrete bench also strip light under bench and 2" thick cultural stone clading fixed on concrete wall with 1" thick cement sand mortar and also 18"x 12"x 3 1/2" thick stone coping where required. (dimensions and design as per approved by the Architect). Complete in all respects as per drawings, details and as directed by the Consultant / Engineer Incharge.	150	R.m.		
15	Providing and planting Miyawaki Forest area consisting of multiple varieties of trees / plants of approved height, girth and pot size (Trees / Plants, shrubs as per approved by the Architect). Including, making of tree pits, sweet earth, cow dung , coal & all other components and as per techniques provided Consultant complete in all respects as per drawings, details and as per approved by the Consultants / Engineer Incharge.	22,223	Sq.m.		



BILL OF QUANTITIES

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
16	Rough dressing of the area for lawn including picking stones, pebbles, stubble, grass roots and other injurious matters and breaking of clods complete including disposal of rubbish as per direction of engineer	6,550	Sq.m.		
17	Supplying and stacking approved garden soil (sweet earth) 0.225 thick free from salts, pebbles and grass roots etc including all leads and lifts.complete with all respects as per drawings, details and Engineer Incharge.	950	Cu.m.		
18	Supplying, stacking and spreading cow dung manure / Slaughter House manure 0.075 thick and mixing the same up to any depth in the already laid sweet earth including breaking clods, dressing fine for Trees in pits and sprinkling water, raking and rolling complete with all respects as per drawings, details and Engineer Incharge.	282	Cu.m.		
19	Supplying and stacking live (Bermuda) grass in slabs with earth intact including all lead and lifts complete with all respects as per drawings, details and Engineer Incharge.	3,418	Sq.m.		
20	Providing and fixing MS / Fiber / PVC or any other Dust Bin with selected material (as per approved by the Architect). Including, square pipe for holding pipe. Complete with all respects. As per drawings, details and Engineer Incharge.	30	Each		
21	Providing installing lower bridge as per required location shown in drawing. also ms frame, ms pillar, ms curve beam, concrete foundation, wooden planks with wooden railing and other relative material as per requirement of bridge etc. complete in all respect as per drawings, details and as per approved by the consultants / Engineer Incharge.	50	R.m.		
22	Providing installing Elevated bridge as per required location shown in drawing. also ms frame, ms pillar, ms curve beam, concrete foundation, wooden planks with wooden railing and other relative material as per requirement of bridge etc. complete in all respect as per drawings, details and as per approved by the consultants / Engineer Incharge.	110	R.m.		
23	Providing fixing RCC concrete bollard 450mm dia height 800mm mosaic / Terrazo finish with strip LED light complete with all respects, as per drawings details and Engineer Incharge.	60	Each		
24	Providing and laying big rock stones shown in drawings (dimensions and design as per approved by the Architect). Complete in all respects as per drawings, detials and as directed by the Consultant / Engineer Incharge.	210	Cu.m		
25	Providing & Laying crushed stone 25~50mm thick approved by Engineer shown in drawings placing at proposed areas depth 3". Complete in all respects as per drawings, detials and as directed by the Consultant / Engineer Incharge.	440	Cu.m.		
26	Providing & Laying crushed stone 25~50mm thick approved by Engineer with mix sand placing in pathways depth 3", also compacting watering as per requirement. Complete in all respects as per drawings, detials and as directed by the Consultant / Engineer Incharge.	130	Cu.m.		



BILL OF QUANTITIES

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
27	Providing & fixing CC tile 4000 psi (size 6'x 6'x 3" & 6'x 2'x 3") cast in place/precast shown in drawing including placing compacting placing finishing curing complete also including screening and washing at stone aggregate with formwork. Complete in all respects as per drawings, details and as directed by the Consultant / Engineer Incharge.	15	Cu.m.		
28	Construction of washroom & cycle stand building furnished civil, electrical & plumbing work rate covered area. (dimensions and design as per approved by the Architect). Complete in all respects as per drawings, details and as directed by the Consultant / Engineer Incharge.	120	Sq.m.		
29	Providing and Planting following Trees / Shurbs / Palm with making Pits and filling Sweet Earth as approved by the Architect or Consultant.				
	Trees 3m Height				
i)	Neem (75-100mm Girth & 450-600mm dia pot size)	25	Each		
ii)	Gul mohar (75-100mm Girth & 450-600mm dia pot size)	25	Each		
iii)	Peepal (75-100mm Girth & 450-600mm dia pot size)	25	Each		
iv)	Mango (75-100mm Girth & 450-600mm dia pot size)	25	Each		
v)	Almond Tree (75-100mm Girth & 450-600mm dia pot size)	25	Each		
vi)	Babul Tree (75-100mm Girth & 450-600mm dia pot size)	25	Each		
vii)	Chikoo Tree (75-100mm Girth & 450-600mm dia pot size)	25	Each		
30	Palm 3m Height				
i)	Date Palm (75-100mm Girth & 450-600mm dia pot size)	25	Each		
ii)	Flowers/Shrubs (Any approved Variety) 1m Height	350	Sq.m.		
Total Amount Rs.					-



BILL OF QUANTITIES

Client / Owner : Project Implementation Unit
 Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
 Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
URBAN FOREST (ELECTRICAL WORKS)					
B NON SCHEDULE ITEMS					
1	Providing and fixing 100mmx100mmx6m high light poles (design as per approved by the Architect) with LED Pole Light IP-65 60-80W 4000K or approved equivalent. Including, 600mmx600mmx1200mm pole foundation, lean, junction box, single arm, M.S plate, bolts, internal wiring and other accessories complete in all respects as per drawings, details and as per directed by the Consultants / Engineer Incharge.	EACH	85		
	Supply, laying, termination, tagging, testing and commissioning of following size of single core / multicore, PVC insulated, PVC/PVC, XLPE/PVC sheathed, non-armored Copper conductor 600V/1000V or 450/750V voltage grade cable in already laid raceways or in ducts including all accessories lugs, cable glands, etc., as per drawings and specifications, complete in all respect. Note: Contractor is advised to confirm the cable running length before commencement of work and termination as per site requirements.				
i)	4 Core - Cu.XLPE/PVC Cable (600/1000V)				
	4 Core - 16 Sq.mm	Rm.	710		
ii)	1 Core - CU/PVC Cable (For Pole Earthing)				
	1 Core - 16 Sq.mm Cu/PVC Cable	Rm.	710		
2	Supply, installation, testing & commissioning of following Isolators, in 16 SWG sheet steel enclosure with neutral and earth terminal strips, including all mounting accessories as per specification & drawing, complete in all respect.				
i	40A, TPN Isolator	No.	2		
ii	20A, SPN Isolator	No.	2		
3	Providing and laying of following size uPVC class D pipe for Incoming cable, Buried in ground/under road/under floor Including excavation for laying of pipe, bricks, warning tape, and backfilling with warning tape, and fresh soil as per specification as shown on the drawing, as per drawings and specification etc., complete in all respect.				
	100 mm dia uPVC Pipe	Rm.	710		
	50 mm dia uPVC Pipe	Rm.	100		
4	Supply & installing of Pull Box as per drawing and specification, complete in all respect.	No.	2		
5	Providing and Construction of Manhole Size 2'-0" x 2'-0" x 2'-6" deep, 6"thick, concrete 1:2:4 ratio with 2' round heavy duty cast iron cover, 100% water proof, as per specification as shown on the drawing, as per drawings and specification etc., complete in all respect.	No.	2		
6	Providing and fixing DB (Surface Type) with 18SWG Enclosure, changeover, circuit breakers and accessories etc. complete in all respects as per drawings, details and Engineer Incharge.	EACH	2		
Total Amount Rs.					-

ELECTRICAL WORKS



BILL OF QUANTITIES**PACKAGE 1-A (i)****BRIDGE**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY

Sub-Head	Name of Work	Amount (Rs.)
C	ELECTRICAL WORKS	
C1	BRIDGE LIGHTING	
1	<u>SCHEDULE ITEMS</u>	
i	SUB HEAD I MAINS & SUB-MAINS	84,913.40
	TOTAL OF SCHEDULE ITEMS (Rs.) ===>>>	84,913.40
	ADD PREMIUM ON SCHEDULE ITEMS ABOVE/BELOW	
	TOTAL OF SCHEDULE ITEMS WITH PREMIUM (Rs.) ===>>>	
2	<u>NON-SCHEDULE ITEMS</u>	
	TOTAL OF NON-SCHEDULE ITEMS (Rs.) ===>>>	
	Sub-Total (C) (1+2) ===>>>	



BILL OF QUANTITIES

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Gov. of Sindh CSR-2024 Schedule Item # / Page #	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
SCHEDULE ITEMS						
C1		BRIDGE LIGHTING				
1	Chapter No. 1	SUB HEAD I MAINS & SUB-MAINS				
	J	WITH 3 CORE OVERHEAD OR UNDERGROUND 300/500				
1.1	Item # 49 (J) / Page # 232	Providing & laying (MAIN or SUB MAIN) PVC insulated with three core copper conductor 300/500 volts size 2.5mm ²	P.Rft	260	326.59	84,913
CARRIED TO ELECTRICAL SUMMARY =====>>>>						84,913
Total Amount Rs.						84,913



BILL OF QUANTITIES

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
NON-SCHEDULE ITEMS					
C1	BRIDGE LIGHTING				
a)	Supply, installation, testing and commissioning of following Octagonal Street lighting pole, hot dipped galvanized (Zinc coating not less than 100 micron) from inside and outside with 4mm wall thickness including base plate anchor bolt, nuts and washer, self inspection door with special keys, cable connection box, all required materials and accessories etc., (detail shown on the drawings). Complete in all respects as per specification and drawings.				
i	6 meter High, Single Arm Pole	No.	10		
b)	Construction and installation of Pole foundation in concrete class "A", reinforcement as per AASHTO M31, lean concrete, nuts, base plate, anchor bolts etc. Excavation and backfilling for the Pole foundation shall be included in this job. Foundation constructed above the drain or any location in project. Complete in all respects as per specifications and drawings.	Job.	10		
c)	Supply, installation, testing and commissioning of Street light fixture with 100W LED, min. Luminous Flux/watt 150, Color temperature shall be 4000K, Surge Protection min. 15kV, (IP-66 & IK-09 Rated), must be Painted Aluminum Injection housing material, as per specification and drawing. Lighting fixture samples must be submitted to Consultant for approval, complete in all respect. Note: Cost includes Street light fixture, bracket and other all required installation accessories.	No.	10		
d)	Supply, installation, testing and commissioning of Flood light fixture with 50W LED (IP-66) for under Bridge lighting, surface mounted including Bracketas as per specification and drawing. Lighting fixture samples must be submitted to Consultant for approval, complete in all respect.	No.	40		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
e)	Supply, installation, testing and commissioning of Terminal Box (IP 65 rated), including 1 No. 4A, Circuit Breaker with terminals, as per specification and drawing, complete in all respect.	No.	10		
f)	Supply, installation, testing and commissioning of following Pole mounted, Weatherproof IP65 rated, Lighting Control Panel (LCP) (mounted on existing pole) made with 14/16 SWG sheet metal, dust protected, vermin proof housing, confirming to protection class (IP-65), epoxy powder coated paint with approved color, having all the required installation materials, mounting accessories and protections etc. as per specifications and drawings, complete in all respect with providing shop drawings, manual and warranty documents to owners representative / Consultant.				
i	LCP	No.	1		
g)	Supply, laying, termination, tagging, testing and commissioning of following sizes of 600/1000 volts grade Copper conductor cable, multi core / single core, Cu/PVC/PVC, unarmoured, as incoming supply from nearest power source to LCP in already installed uPVC buried conduit, including cable glands, cable ID marker etc. Complete in all respects, as per drawing and specification and the entire satisfaction of the engineer and employer. Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work. Note: Contractor is advised to confirm the cable running lengths & termination as per site conditions before commencement of work.				
i	4C, 16 Sq.mm Cu/XLPE/PVC + 1C, 10 Sq.mm Cu/PVC as ECC	Rm.	60		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
h)	Supply, laying, termination, tagging, testing and commissioning of following sizes of Copper conductor cables, multi core / single core, Cu/PVC, Cu/PVC/PVC, unarmoured, 600/1000V, 450/750V or 300/500V voltage grade cables from LCP to Street light Pole / Under Bridge light and lights to lights, run in already installed uPVC buried pipe / Sleeves or run in already installed uPVC pipe in Jersey barrier including cable glands, cable ID marker etc. Complete in all respects, as per drawing, specification and the entire satisfaction of the engineer and employer. Note: Contractor is advised to confirm the cable running lengths & termination as per site conditions before commencement of work.				
i	4C, 6 Sq.mm Cu/XLPE/PVC + 1C, 6 Sq.mm Cu/PVC as ECC	Rm.	150		
ii	3C, 6 Sq.mm Cu/XLPE/PVC	Rm.	550		
j)	Supply and laying of following sizes of uPVC Class-D Pipes / Road Crossing Sleeves for LV Cables, buried in ground including excavation of trenches in hard / soft soil for laying of pipe, cost including providing fresh sand (6" under and 6" above pipe), laying protection A class bricks on sand, warning tape and backfilling with new and fresh sand, compaction, plugging of conduits ends etc., as per detail shown on the drawings and specifications, complete in all respect and the entire satisfaction of the engineer and employer. Note: Contractor is advised to confirm the actual pipe lengths as per site conditions before commencement of work.				
i	50mm dia uPVC Pipe (Class-D)	Rm.	400		
k)	Supply and laying of following sizes of uPVC Class-D Pipes run in Jersey barrier and from Jersey barrier to Lighting Pole for LV Cables, as per drawings and specifications, cost also includes concrete filling around the Pole. Complete in all respect and the entire satisfaction of the engineer and employer. Note: Contractor is advised to confirm the actual pipe lengths as per site conditions before commencement of work.				
i	2 x 50mm dia uPVC Pipe (Class-D)	Rm.	60		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
l)	Supply, installation, testing and commissioning of Earth pit with Rod type earth electrode, 3/4" dia and 9 Ft. long copper Clad rod for earthing system, including cost 4" dia boring up to water level or as directed by the engineer in charge, with Bentonite chemical, filling mixture material etc. as per specification to achieve earthing resistance not more than 1 ohm, Inspection pit 15" x 15" x 18" deep (min) with heavy duty C.I cover, complete as per detail drawing and instruction of consultant. providing as built drawings, test reports documents to Employer / Consultant representative. Complete in all respect.	No.	1		
m)	Supply, laying, termination, tagging, testing and commissioning of following size PVC insulated (yellow/green) earth continuity copper conductor (ECC) from earth pits to LCP/poles, in already installed conduit / directly buried, including all accessories lugs, cable gland etc. as per drawings and specification, complete in all respect. Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.				
i	1C, 10 Sq.mm Cu/PVC as ECC	Rm.	15		
n)	Preparation of scaled Shop drawings of complete works after approval from the consultant/client. Job also includes any relocation works. Preparation of shop drawings is compulsory before execution of work as per requirement of consultant's design and site during project execution with coordination of all other services.	Job	1		
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
Total Amount Rs.					



BILL OF QUANTITIES**PACKAGE 1-A (i)****GATE HOUSE**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
C	ELECTRICAL WORKS	
1	<u>SCHEUDLE ITEMS</u>	
i	SUB HEAD I MAINS & SUB-MAINS	8,638,432.80
ii	SUB HHEAD XI ELECTRICAL ACCESSORIES	130,611.68
	TOTAL OF SCHEDULE ITEMS (Rs.) ===>>>	8,769,044.48
	ADD PREMIUM ON SCHEDULE ITEMS ABOVE/BELOW	
	TOTAL OF SCHEDULE ITEMS WITH PREMIUM (Rs.) ===>>>	
2	<u>NON-SCHEUDLE ITEMS</u>	
C1	LOW VOLTAGE CABLES AND WIRES	
C2	L.V. DISTRIBUTION BOARDS	
C3	CONDUITS & PIPES	
C4	WIRING FOR LIGHTS, FANS & SOCKETS	
C5	WIRING ACCESSORIES	
C6	LIGHT FIXTURE & FANS	
C7	EARTHING SYSTEM	
C8	VOICE, DATA COMMUNICATION & CCTV CABLING SYSTEMS (Passive Equipment Only)	
C9	ADDRESSABLE FIRE ALARM SYSTEM	
C10	DIESEL GENERATOR SET	
C11	HVAC SYSTEM	
	TOTAL OF NON-SCHEDULE ITEMS (Rs.) ===>>>	
	Sub-Total (C) (1+2) ===>>>	



BILL OF QUANTITIES
GATE HOUSE (SCHEDULE ITEMS)

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Gov. of Sindh CSR-2024 Schedule Item # / Page #	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
1	Chapter No. 1	SUB HEAD I MAINS & SUB-MAINS				
	D	WITH 3 WIRE PVC CONDUIT RECESSED IN THE WALL OR COLUMN				
1.1	Item # 22 (J) / Page # 230	Providing & laying (Main or Sub Main) PVC insulated with size 3-3/.029 copper conductor in ¾" dia PVC conduit recessed in the wall or column as required. (1.5mm2)	P.Rft	2755	519.35	1,430,809
1.2	Item # 24 (J) / Page # 230	Providing & laying (MAIN or SUB MAIN) PVC insulated with size 3-7/.029 copper conductor in ¾" Dia PVC conduit recessed in the wall or column as required. (2.5mm2)	P.Rft	6605	684.64	4,522,047
1.3	Item # 25 (J) / Page # 230	Providing & laying (MAIN or SUB MAIN) PVC insulated with size 3-7/.036 copper conductor in ¾" Dia PVC conduit recessed in the wall or column as required. (4mm2)	P.Rft	710	934.36	663,396
1.4	Item # 26 (J) / Page # 230	Providing & laying (MAIN or SUB MAIN) PVC insulated with size 3-7/.044 (6mm2) copper conductor in 1" Dia PVC conduit recessed in the wall or column as required.	P.Rft	1475	1,370.97	2,022,181
CARRIED TO ELECTRICAL SUMMARY =====>>>>						8,638,433
2	Chapter No. 11	Sub Head XI Electrical Accessories				
	B	CEILING ROSE				
2.1	Item # 191 (B) / Page # 244	Providing & fixing Bakelite ceiling rose with two terminals	Per No.	4	373.39	1,494
	C	FAN				
2.2	Item # 195 (C) / Page # 244	Providing & fixing A.C Electric Ceiling fan 56" (good quality)	Per No.	4	14,869.21	59,477
2.3	Item # 196 (C) / Page # 244	Providing & fixing A.C Electric Wall Bracket fan 18" (good quality)	Per No.	6	11,606.88	69,641
CARRIED TO ELECTRICAL SUMMARY =====>>>>						130,612
Total Amount Rs.						8,769,044



BILL OF QUANTITIES
GATE HOUSE (NON-SCHEDULE ITEMS)

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
C1	LOW VOLTAGE CABLES AND WIRES				
	Supply, laying, termination, tagging, testing and commissioning of following size of single core / multicore, PVC insulated, PVC/PVC, XLPE/PVC sheathed, non-armored Copper conductor 600V/1000V or 450/750V voltage grade cable in already laid raceways or in ducts including all accessories lugs, cable glands, etc., as per drawings and specifications, complete in all respect. Note: Contractor is advised to confirm the cable running length before commencement of work and termination as per site requirements.				
a)	4 Core, Cu/XLPE/PVC Cable (600/1000V)				
i	4C, 70 Sq.mm Cu/XLPE/PVC Cable	Rm.	25		
ii	4C, 50 Sq.mm Cu/XLPE/PVC Cable	Rm.	200		
iii	4C, 25 Sq.mm Cu/XLPE/PVC Cable	Rm.	200		
iv	4C, 16 Sq.mm Cu/XLPE/PVC Cable	Rm.	220		
v	4C, 10 Sq.mm Cu/XLPE/PVC Cable	Rm.	20		
vi	4C, 6 Sq.mm Cu/XLPE/PVC Cable	Rm.	10		
b)	1 Core, Cu/PVC/PVC Cable (600/1000V)				
i	5 x 1C, 4 Sq.mm Cu/PVC/PVC Cable	Rm.	100		
c)	1 Core, Cu/PVC Cable (450/750V)				
i	3 x 1C, 6 Sq.mm Cu/PVC Cable	Rm.	250		
d)	1 Core, Cu.PVC Cable as ECC (450/750V)				
i	1C, 35 Sq.mm Cu/PVC Cable as ECC	Rm.	25		
ii	1C, 25 Sq.mm Cu/PVC Cable as ECC	Rm.	200		
iii	1C, 16 Sq.mm Cu/PVC Cable as ECC	Rm.	420		
iv	1C, 10 Sq.mm Cu/PVC Cable as ECC	Rm.	20		
v	1C, 6 Sq.mm Cu/PVC Cable as ECC	Rm.	10		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
C2	L.V. DISTRIBUTION BOARDS				
a)	Supply, installation, testing & commissioning of Wall/Flush mounted Main Distribution Board (MDB) / Sub Main Distribution Board (SMDB) / Distribution Boards (DB), made with 16 SWG sheet steel metal, as per single line diagram, dust protected, vermin proof housing coated with approved color having all the necessary switching & protections, including all mounting accessories as per specifications and drawings, complete in all respect.				
i	MDB-GH (including 50 kVAR PFI & ATS/AMF Panel)	No.	1		
ii	SMDB-GH	No.	1		
iii	LPDB-1	No.	1		
iv	UPSDB-1	No.	1		
v	EXTDB-1	No.	1		
vi	LPDB-2	No.	1		
vii	UPSDB-2	No.	1		
viii	EXTDB-2	No.	1		
ix	DB-CP-01	No.	1		
x	DB-CP-02	No.	1		
b)	Supply, installation, testing & commissioning of following Isolators, in 16 SWG sheet steel enclosure with neutral and earth terminal strips, including all mounting accessories as per specification & drawing, complete in all respect.				
i	40A, TPN Isolator Weatherproof type	No.	1		
ii	20A, SPN Isolator Weatherproof type	No.	16		
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
C3	CONDUITS & PIPES				
a)	Supply and laying of following size (inner dia) PVC Conduit / uPVC Pipe (Class D) / Flexible PVC Conduit, as race ways with all accessories, recessed / surface on wall / column / under floor, as per specifications and drawings, complete in all respect.				
i	25 mm dia PVC Conduit	Rm.	25		

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
ii	38 mm dia PVC Conduit	Rm.	15		
iii	50 mm dia PVC Conduit	Rm.	30		
iv	32 mm dia uPVC Pipe (Class-D)	Rm.	50		
v	38 mm dia uPVC Pipe (Class-D)	Rm.	15		
vi	50 mm dia uPVC Pipe (Class-D)	Rm.	15		
vii	25 mm dia Flexible PVC Conduit	Rm.	30		
b)	Supply and installation of following size (inner dia) uPVC Pipe (Class-D) / Road Crossing Sleeves (Class-D), buried in ground / under roads / under floor as per specification, including excavation of trenches in hard / soft soil for laying of pipe, cost including providing fresh sand (6" under and 6" above pipe), laying protection A class bricks on sand, warning tape, backfilling etc. (wherever required), as shown on drawing, complete in all respect and the entire satisfaction of the engineer and employer.				
i	1 x 50 mm dia uPVC Pipe (Class-D)	Rm.	30		
ii	2 x 50 mm dia uPVC Pipe (Class-D)	Rm.	135		
iii	4 x 50 mm dia uPVC Pipe (Class-D)	Rm.	125		
iv	1 x 100 mm dia uPVC Pipe (Class-D)	Rm.	260		
v	2 x 50 mm dia uPVC Pipe (Class-D) Road Crossing Sleeves	Rm.	90		
vi	1 x 100 mm dia uPVC Pipe (Class-D) Road Crossing Sleeves	Rm.	55		
c)	Supply and installation of following size (inner dia) G.I Pipe as race ways with all accessories, recessed / surface on wall / column / under floor, as per drawing and relevant specification, complete in all respect.				
i	38 mm dia G.I Pipe	Rm.	50		
ii	50 mm dia G.I Pipe	Rm.	25		
d)	Supply and installation of Pull Box with all installation accessories, as per specifications, drawings and approved brands, complete in all respect.	No.	10		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
e)	Supply, installation, testing and commissioning of In-ground Poly Carbonated Cable Junction Box (IP-65), Size (300x200x100mm) for LED Strip Light Drivers (imported) with all accessories, as per drawings, specifications and site requirements, complete in all respect.	No.	40		
f)	Supply and Construction of Handhole Size 1'-6" x 1'-6" x 2'-0" deep, 6"thick, concrete 1:2:4 ratio with 1'-6" round heavy duty cast iron cover, 100% water proof, as per specification and shown on the drawing, complete in all respect.	No.	24		
g)	Supply and Construction of Manhole Size 3'-0" x 3'-0" x 3'-0" deep, 6"thick, concrete 1:2:4 ratio with 3' round heavy duty cast iron cover, 100% water proof, as per specification and shown on the drawing, complete in all respect.	No.	2		
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
C4	WIRING FOR LIGHTS, FANS & SOCKETS				
a)	Supply, installation, testing and commissioning of circuit wiring from DB to first light point with 3 core, 2.5 sq.mm multi core copper conductor PVC insulated cable in 25mm dia PVC conduit / already installed pipe, surface / concealed / under floor / recessed in wall, column etc., including with all conduit accessories and back boxes as per drawing and specifications, complete in all respect.	No.	1		
b)	Supply, installation, testing and commissioning of Point wiring from light point to light point with 3 core, 2.5 sq.mm multi core copper conductor PVC insulated cable in 25mm dia PVC conduit / already installed pipe, surface / concealed / under floor / recessed in wall, column etc., including with all conduit accessories and back boxes as per drawing and specifications, complete in all respect.	No.	1		
c)	Supply, installation, testing and commissioning of circuit wiring from DB to first Bollard light / Flood light point with 2x2.5 sq.mm + 1x2.5 sq.mm as ECC single core copper conductor PVC insulated wires in 32mm dia uPVC Pipe / already installed pipe, surface / concealed / under floor / recessed in wall, column etc., including with all conduit accessories and back boxes as per drawing and specifications, complete in all respect.	No.	6		

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
d)	Supply, installation, testing and commissioning of Point wiring from Bollard light / Flood light point to light point with 2x2.5 sq.mm + 1x2.5 sq.mm as ECC single core copper conductor PVC insulated wires in 32mm dia uPVC Pipe / already installed pipe, surface / concealed / under floor / recessed in wall, column etc., including with all conduit accessories and back boxes as per drawing and specifications, complete in all respect.	No.	28		
e)	Supply, installing, testing and commissioning of wiring for 32A, 5-Pin Industrial Outlet (for Floor Standing AC units) with 4x6 sq.mm +1x6 sq.mm as ECC single core copper conductor PVC insulated wires in 32mm dia PVC conduit surface / recessed in wall, column, ceiling, under floor etc., including with all conduit accessories as per drawing and specification, complete in all respect.				
i	DB to 32A 5-Pin Industrial Outlet	No.	4		
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
C5	WIRING ACCESSORIES				
a)	Supply, installation, testing and commissioning of following 10/13/15/16/20 Amps, One / Two / Three / Four gang type Switches, Dimmer Switches, Sockets, Industrial Socket including 16 SWG Sheet Steel powder coated back Boxes with earth terminal, recessed in wall / column etc. with all accessories, as per drawings and specification, complete in all respects.				
i	One Gang Switch 10A	No.	20		
ii	Two Gang Switch 10A	No.	10		
iii	Three Gang Switch 10A	No.	6		
iv	Four Gang Switch 10A	No.	1		
v	One Gang Fan Dimmer Switch 10A	No.	4		
vi	13A, International Switched Socket Outlet	No.	46		
vii	13A, 3-Pin Flat 2-Gang Switched Socket Outlet	No.	20		
viii	13A, Unswitched Spur Outlet	No.	1		
ix	15A, 3-Pin Switched Socket Outlet	No.	10		
x	20A, Flex Outlet	No.	2		

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
xi	20A, Double Pole Switch with Neon	No.	14		
xii	32A, 3-Pin Industrial Socket with Plug top	No.	4		
xiii	32A, 5-Pin Industrial Socket with Plug top	No.	4		
b)	Supply, installation, testing and commissioning of Floor Distribution Box (imported), 14 SWG Sheet Steel with all accessories, as per drawings, specifications and site requirements, complete in all respect. Note: Excluded of all Sockets and Face plates.	No.	4		
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
C6	LIGHT FIXTURE & FANS				
a)	Supply, installation, testing and commissioning of following Light fixtures complete with starters, Electronic ballast (unless mention otherwise), lamps, lamp holders, drivers, mounting and connection accessories etc., as per drawings and specifications, complete in all respects. Lighting fixtures sample must be submitted to consultant for approval. Note: - For complete detail references of Light Fixtures, please refer to Light Fixture Schedules. - The Bidder shall provide the complete Technical Literature of light fixtures. - All light fixtures and its color temperature subject to approval of Architect. Lighting fixtures Sample must be submitted for approval.				
i	Surface Ceiling mounted Indoor LED Down Light Fixture, 4000K, IP-20 rated with 10W LED	No.	156		
ii	Surface Ceiling mounted Indoor LED Down Light Fixture, 4000K, IP-20 rated with 15W LED	No.	8		
iii	Floor mounted Extruded LED Bollard Light Fixture, 3000K, IP-54 rated with Aluminum Housing and 1x16W LED	No.	24		
iv	Surface Ceiling mounted LED Panel Light Fixture with 40W LED lamp	No.	4		
v	Wall mounted Indoor Wall Light Fixture, 4000K, IP-20 rated with 20W LED	No.	10		
vi	Floor mounted LED Flood Light Fixture, 3000K, IP-65 rated with Die Cast Aluminum housing and 150W LED	No.	2		
vii	Floor mounted LED Flood Light Fixture, 3000K, IP-65 rated with Die Cast Aluminum housing and 35W LED	No.	8		

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
viii	Wall Surface mounted LED Picture Light Fixture, IP-20 rated with 1x12W LED	No.	2		
ix	Recessed mounted LED Under Water Light Fixture (IP-68) with 5W LED Lamp	No.	4		
x	Surface mounted LED Planter Light Fixture (IP-65) with Aluminum / Tempered Glass Housing and 6W LED lamp	No.	14		
xi	LED Mono Strip Light Fixture (Flexi Tube Diffused), 3000K, IP-65 rated with 10W/Meter LED, Drivers etc. for Facade Lighting	Rm.	420		
xii	8W, Emergency light with self contained Battery, Ceiling mounted, IP-20 rated, UL 924 Listed, as per specification and drawing complete in all respect. (non-maintained)	No	6		
xiii	8W, Emergency light with self contained Battery, Wall mounted, IP-65 rated, UL 924 Listed, as per specification and drawing complete in all respect. (non-maintained)	No	12		
xiv	Surface mounted Emergency Exit Light Fixture, IP-20 rated, (3 Hrs Battery Backup, Maintained Type) with Poly Carbonate housing and 8W LED Lamp	No	6		
b)	Supply, installation, testing and commissioning of following types of fan including all connecting accessories, flexible wire etc. as per drawings and specifications, complete in all respects.				
i	8" dia Exhaust Fan	No.	10		
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
C7	EARTHING SYSTEM				
a)	Supply, installing, testing and commissioning of following items for complete earthing system including all connecting accessories as per drawings & specifications complete in all respect.				
i	Earth pit with Rod type earth electrode, 20mm dia and 3 meter long copper rod .	No.	4		
b)	Supply, installation, testing and commissioning of Copper Earth Bar 475 mm x 90 mm x 96 mm with single disconnecting link for earthing system as per drawings and instruction of consultant, including all mounting accessories etc., complete in all respect.	No.	1		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
c)	Supply, laying, testing and commissioning of 1x16 Sq.mm PVC insulated Cu. Conductor cable as earth continuity conductor (ECC) in 25 mm dia uPVC conduit, complete in all respect.	No.	40		
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
C8	VOICE & DATA COMMUNICATION				
	Supply, installation, testing and commissioning of following items for Voice & Data Communication System, described below including all accessories, wiring etc. as per drawings and specifications, complete in all respect.				
a)	Supply, installation, testing and commissioning of Dual RJ-45, Cat-6 outlet for Voice & Data with shutter type and 16 SWG back box including tagging, as per drawing and specification, complete in all respect.	No.	4		
b)	Supply, laying, termination, testing and commissioning of CAT 6 - 4 pair cable for Single RJ-45 outlet (Data, Voice, Camera, IPTV and Wifi systems) in 25mm dia PVC conduit concealed / surface from each outlet to IDF racks, including tagging and piping with all necessary accessories, complete in all respect.	Mtr.	150		
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
C9	ADDRESSABLE FIRE ALARM SYSTEM				
	Supply, installation, testing and commissioning of following items for Addressable Fire Alarm System, described below including all accessories, complete with mounting brackets, installation accessories, wiring etc. as per drawings and specifications, complete in all respect.				
a)	Supply, laying, termination, testing and commissioning of wiring for complete Fire Alarm System with 2C-1.5 Sq.mm shielded FP-200, twisted pair Fire Resistant Cable (2 hrs. rated) in 25mm dia PVC conduit concealed, (M.S conduit for surface.) etc., including any wiring between fire alarm control panel and other's systems control panel's etc. Complete in all respect.	Mtr.	550		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
b)	Supply, installation, testing and commissioning of Addressable Photoelectric Smoke Detector with base and back box, as per drawing and specification, complete in all respect.	No.	31		
c)	Supply, installation, testing and commissioning of Addressable Photoelectric Heat Detector with base and back box, as per drawing and specification, complete in all respect.	No.	2		
d)	Supply, installation, testing and commissioning of Addressable Manual Pull Station / Call Point with base and back box, as per drawing and specification, complete in all respect.	No.	6		
e)	Supply, installation, testing and commissioning of Addressable EVAC Speaker with flasher / Strobe, base and back box, as per drawing and specification, complete in all respect.	No.	6		
f)	Supply, installation, testing and commissioning of 01 Loop Addressable Fire Alarm Control Panel (FACP), including all necessary accessories, identification tagging etc. and 3Hrs battery back up. FACP as per drawing and specification, complete in all respect.	No.	2		
g)	Installation, testing and commissioning, Softwear, Programming by Manufacturer Authorized Agent / Dealer and handing over complete Fire Alarm system to owner with providing training, SOP, complete equipment's manual and warranty documents to Owner's Representative.	Job.	1		
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
C10	DIESEL GENERATOR SET				
	All items under this head to be carried out as per technical specifications and Electrical Inspector / Explosives Inspector approval, Drawings, relevant BSI / ASTM Standards, IEC regulation, complete in all respect and to the entire satisfaction of the Employer, and as mentioned in General Notes or noted otherwise, Including providing of shop and as built drawings. complete in all respects.				



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
a)	Supply, installation, testing and commissioning of 100 kVA (Prime Power Rated) 3 phase, 4 wire, 400V, 50 Hz, Diesel Generator set with Weather proof acoustic Canopy, Electronic Governor, AMF, an advanced LCD Display control panel (Programmable), Batteries, battery charger, battery cables, battery stand and circuit breaker and its accessories, as per specification, including transportation up to site and foundation pad. Exhaust piping, critical silencer with elbow, base fuel tank (8 hrs.) etc., also inclusive of Power cable end termination, with the approval of engineer. Complete in all respect.	No.	1		
b)	Prepare and Construction of RCC base as foundation / pad for above Generator (as per recommendation of manufacturer and specification) with the approval of engineer, complete in all respect.	Job	1		
c)	Providing, installing, testing and commissioning of Control Cabling with appropriate sized (multicore) cable as per manufacturer recommendation, between Generator and MDB, including terminations and all mounting accessories etc., complete in all respects.	Job	1		
d)	Supply and Handing Over to Client Representative of Standard Spare Parts as recommended by the manufacturer for the operation of 1000 hours for the above D.G. Set (List of Spares to be provided as per specification) and as per standard engine & alternator models provided by manufacturer.	Lot.	1		
e)	Getting necessary Approval/ NOC's for installation of above Generator from concerned Authorities (Electric Inspector) etc. All expenses are the responsibility of contractor.	Job	1		
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
C11	HVAC SYSTEM				
	DX-SPLIT TYPE AIRCONDITIONING UNIT (INVERTER)				



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
a)	Supply, installation, testing and commissioning of Wall mounted type DX Split Air-conditioning Units (Indoor Unit + Outdoor Condensing Unit), as shown on the drawings including copper piping with insulation, cladding, thermostate, control and power cables, connection from electrical outlet to the unit, hanger and supports, fittings, jointing and all needed material required for installation, and as directed by the engineer incharge in following sizes and capacities, complete in all respect.				
i	Capacity 1.0 TR	No.	2		
ii	Capacity 1.5 TR	No.	4		
iii	Capacity 2.0 TR	No.	6		
b)	Supply, installation, testing and commissioning of Floor Standing Air-conditioning Units, as shown on the drawings including copper piping with insulation, cladding, thermostate, control and power cables, connection from electrical outlet to the unit, hanger and supports, fittings, jointing and all needed material required for installation, and as directed by the engineer incharge in following sizes and capacities, complete in all respect.				
i	Capacity 1.0 TR	No.	8		
c)	Supply, installation and fixing of following size UPVC Class 'E' pipes and fittings as per BS 3505 (EN 1401) for Condenser Water drainage including insulation, fittings, bends, cuttings, filling etc. as indicated on drawings, as per specifications and Engineer's approval.				
i	1" dia	Rft.	800		
ii	1-1/2" dia	Rft.	400		
d)	Supply, Installation and Coordination of Refrigerant copper piping with insulation, with running length and sizes as per manufacturer's recommendation, This includes Wall or Floor Penetration with piping supports and hangers.	Job	1		
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
Total Amount Rs.					

BILL OF QUANTITIES**PACKAGE 1-A (i)****STREET LIGHTING**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY

Sub-Head	Name of Work	Amount (Rs.)
C	ELECTRICAL WORKS	
C1	STREET LIGHTING	
1	<u>SCHEDULE ITEMS</u>	
i	SUB HEAD I MAINS & SUB-MAINS	8,034,114.00
	TOTAL OF SCHEDULE ITEMS (Rs.) ==>>>	8,034,114.00
	ADD PREMIUM ON SCHEDULE ITEMS ABOVE/BELOW	
	TOTAL OF SCHEDULE ITEMS WITH PREMIUM (Rs.) ==>>>	
2	<u>NON-SCHEDULE ITEMS</u>	
	TOTAL OF NON-SCHEDULE ITEMS (Rs.) ==>>>	
	Sub-Total (C) (1+2) ==>>>	



BILL OF QUANTITIES
STREET LIGHTING (SCHEDULE ITEMS)

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Gov. of Sindh CSR-2024 Schedule Item # / Page #	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
C1		STREET LIGHTING				
1	Chapter No. 1	SUB HEAD I MAINS & SUB-MAINS				
	J	WITH 3 CORE OVERHEAD OR UNDERGROUND 300/500				
1.1	Item # 49 (J) / Page # 232	Providing & laying (MAIN or SUB MAIN) PVC insulated with three core copper conductor 300/500 volts size 2.5mm ²	P.Rft	24600	326.59	8,034,114
CARRIED TO ELECTRICAL SUMMARY =====>>>>						8,034,114
Total Amount Rs.						8,034,114



BILL OF QUANTITIES**EDUCATION CITY KARACHI PACKAGE 1-A (i)**

Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
C1	STREET LIGHTING				
a)	Supply, installation, testing and commissioning of following Octagonal Street lighting pole, hot dipped galvanized (Zinc coating not less than 100 micron) from inside and outside with 4mm wall thickness including base plate anchor bolt, nuts and washer, self inspection door with special keys, cable connection box, all required materials and accessories etc., (detail shown on the drawings). Complete in all respects as per specification and drawings.				
i	8 meter High, Single Arm Pole	No.	77		
ii	8 meter High, Double Arm Pole	No.	0		
iii	10 meter High, Single Arm Pole	No.	0		
iv	10 meter High, Double Arm Pole	No.	34		
v	10 meter High, Split Double Arm Pole	No.	103		
vi	12 meter High, Single Arm Pole	No.	4		
vii	12 meter High, Double Arm Pole	No.	121		
b)	Construction and installation of Pole foundation in concrete class "A", reinforcement as per AASHTO M31, lean concrete, nuts, base plate, anchor bolts etc. Excavation and backfilling for the Pole foundation shall be included in this job. Foundation constructed above the drain or any location in project. Complete in all respects as per specifications and drawings.	Job.	339		





Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
c)	Supply, installation, testing and commissioning of Street light fixture with 200W LED, min. Luminous Flux/watt 150, Color temperature shall be 4000K, Surge Protection min. 15kV, (IP-66 & IK-09 Rated), must be Painted Aluminum Injection housing material, as per specification and drawing. Lighting fixture samples must be submitted to Consultant for approval, complete in all respect. Note: Cost includes Street light fixture, bracket and other all required installation accessories.	No.	597		
d)	Supply, installation, testing and commissioning of Terminal Box (IP 65 rated), including 1 No. 4A, Circuit Breaker with terminals, as per specification and drawing, complete in all respect.	No.	81		
e)	Supply, installation, testing and commissioning of Terminal Box (IP 65 rated), including 2 No. 4A, Circuit Breakers with terminals, as per specification and drawing, complete in all respect.	No.	258		
f)	3.5 Meter High Hot Dip Galvanized Decorative Urban Pole covered with Stiff Poly Urethane Decorative Material Anti Corrosion, Post Top Decorative 50W LED Light Fixture, IP66 rated including all required materials and accessories etc.	No.	290		
g)	4.5 Meter High Hot Dip Galvanized Decorative Urban Pole covered with Stiff Poly Urethane Decorative Material Anti Corrosion, Post Top Decorative 50W LED Light Fixture, IP66 rated including all required materials and accessories etc.	No.	293		
h)	Recessed mounted LED Under Water Light Fixture (IP-68) with 10W LED Lamp	No.	12		
j)	LED Mono Strip Light Fixture (Flexi Tube Diffused), 3000K, IP-68 rated with 10W/Meter LED, Drivers etc.	Rm.	300		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
k)	Supply, installation, testing and commissioning of following Pad mounted, Weatherproof IP65 rated Feeder Pillar (FP) / Lighting Control Panel (LCP) made with 14/16 SWG sheet metal, dust protected, vermin proof housing, epoxy powder coated paint with approved color, having all the required installation materials, mounting accessories & protections, RCC foundation (including all civil related work) etc. as per specifications and drawings, complete in all respect with providing shop drawings, manual and warranty documents to owners representative / Consultant.				
i	FP (Feeder Pillar)	No.	3		
l)	Supply, laying, termination, tagging, testing and commissioning of following sizes of 600/1000 volts grade Copper conductor cables, multi core / single core, Cu/XLPE/SWA/PVC, Cu/PVC, armoured / unarmoured, as incoming supply from PMU to Feeder Pillar in already installed trenches, including cable glands, cable ID marker etc. Complete in all respects, as per drawing and specification and the entire satisfaction of the engineer and employer. Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work. Note: Contractor is advised to confirm the cable running lengths & termination as per site conditions before commencement of work.				
i	4C, 70 Sq.mm Cu/XLPE/SWA/PVC + 1C, 35 Sq.mm Cu/PVC as ECC	Rm.	150		
ii	4C, 50 Sq.mm Cu/XLPE/SWA/PVC + 1C, 25 Sq.mm Cu/PVC as ECC	Rm.	200		
m)	Supply, laying, termination, tagging, testing and commissioning of following sizes of 600/1000 volts grade Copper conductor cables, multi core / single core, Cu/XLPE/SWA/PVC, Cu/PVC, armoured / unarmoured cable from Feeder Pillar to Street light Pole and poles to poles in already installed trenches, including cable glands, cable ID marker etc. Complete in all respects, as per drawing, specification and the entire satisfaction of the engineer and employer. Note: Contractor is advised to confirm the cable running lengths & termination as per site conditions before commencement of work.				



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
i	4C, 16 Sq.mm Cu/XLPE/SWA/PVC + 1C, 10 Sq.mm Cu/PVC as ECC	Rm.	9500		
ii	4C, 10 Sq.mm Cu/XLPE/SWA/PVC + 1C, 10 Sq.mm Cu/PVC as ECC	Rm.	2050		
iii	4C, 6 Sq.mm Cu/XLPE/SWA/PVC + 1C, 6 Sq.mm Cu/PVC as ECC	Rm.	6500		
n)	Excavation of trenches in hard / soft soil, cost including providing fresh sand 6" above and 6" under cable, laying protection A class bricks on sand, warning tape and backfilling after laying of cables, compaction etc., as per detail shown on the drawing, complete in all respect and the entire satisfaction of the engineer and employer. (for underground Street Lighting Cables)	Rm.	7500		
o)	Supply and laying of following sizes of uPVC Class-D Road Crossing Sleeves for LV Cables, buried in ground including excavation of trenches in hard / soft soil for laying of pipe, cost including providing fresh sand (6" under and 6" above pipe), laying protection A class bricks on sand, warning tape and backfilling with new and fresh sand, compaction, plugging of conduits ends etc., as per detail shown on the drawings and specifications, complete in all respect and the entire satisfaction of the engineer and employer. Note: Contractor is advised to confirm the actual pipe lengths as per site conditions before commencement of work.				
i	2 x 50mm dia uPVC Road Crossing Sleeves (Class-D)	Rm.	70		
p)	Supply, installation, testing and commissioning of following 11000 / 415V, 50Hz, 3 phase, 4 wire, Pad mounted Transformer (PMU) with canopy (IP66 - Weather proof), including MV incoming, outgoing loop to the other Transformer and outgoing Disconnect Switches, MV HRC Fuse Links, LV Breaker, earth fault indicator, control cables, RCC foundation (including all civil related work) and all necessary installation accessories etc., as per KE specifications, drawings, data sheets and approval. Complete in all respects.				
i	500 kVA Pad Mounted Transformers	No.	3		
q)	Preparation of foundation for following Pad Mounted distribution transformers conforming to requirements, Technical Specifications, Standards, Drawings etc; complete in all respects and to the approval of the Engineer.				
i	For 500 KVA Trafo	No.	3		

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
r)	Supply, installation, testing and commissioning of Earth pit with Rod type earth electrode, 3/4" dia and 9 Ft. long copper Clad rod for earthing system, including cost 4" dia boring up to water level or as directed by the engineer in charge, with Bentonite chemical, filling mixture material etc. as per specification to achieve earthing resistance not more than 1 ohm, Inspection pit 15" x 15" x 18" deep (min) with heavy duty C.I cover, complete as per detail drawing and instruction of consultant. providing as built drawings, test reports documents to Employer / Consultant representative. Complete in all respect. (Pit for PMU)	No.	6		
s)	Supply, installation, testing and commissioning of Earth pit with Rod type earth electrode, 3/4" dia and 9 Ft. long copper Clad rod for earthing system, including cost 4" dia boring up to water level or as directed by the engineer in charge, with Bentonite chemical, filling mixture material etc. as per specification to achieve earthing resistance not more than 1 ohm, complete as per detail drawing and instruction of consultant. providing as built drawings, test reports documents to Employer / Consultant representative. Complete in all respect. (Pit for Lighting Circuits)	No.	84		
t)	Supply, installation, testing and commissioning of Copper Earth Bar 475 mm x 90 mm x 96 mm with single disconnecting link for earthing system as per drawings and instruction of consultant, including all mounting accessories etc., complete in all respect.	No.	3		
u)	Supply, laying, termination, tagging, testing and commissioning of following size PVC insulated (yellow/green) earth continuity copper conductor (ECC) from earth pits to LCP/poles, in already installed conduit / directly buried, including all accessories lugs, cable gland etc. as per drawings and specification, complete in all respect. Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.				
i	1C, 35 Sq.mm Cu/PVC as ECC	Rm.	120		
ii	1C, 10 Sq.mm Cu/PVC as ECC	Rm.	1000		

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
iii	1C, 6 Sq.mm Cu/PVC as ECC	Rm.	200		
v)	Supply and Construction of Manhole Size 3'-0" x 3'-0" x 3'-0" deep, 6"thick, concrete 1:2:4 ratio with 3' round heavy duty cast iron cover, 100% water proof, as per specification and shown on the drawing, complete in all respect.	No.	50		
w)	Preparation of scaled Shop drawings of complete works after approval from the consultant/client. Job also includes any relocation works. Preparation of shop drawings is compulsory before execution of work as per requirement of consultant's design and site during project execution with coordination of all other services.	Job	1		
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
Total Amount Rs.					



BILL OF QUANTITIES
PACKAGE 1-A (i)
MV POWER DISTRIBUTION

Client / Owner : Project Implementation Unit
Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)
Name of Work : Infrastructure Development Works for Package 1-A(i)

SUMMARY		
Sub-Head	Name of Work	Amount (Rs.)
C	ELECTRICAL WORKS	
C1	MV POWER DISTRIBUTION	
1	<u>SCHEDULE ITEMS</u>	
	TOTAL OF SCHEDULE ITEMS (Rs.) ===>>>	
	ADD PREMIUM ON SCHEDULE ITEMS ABOVE/BELOW	
	TOTAL OF SCHEDULE ITEMS WITH PREMIUM (Rs.) ===>>>	
2	<u>NON-SCHEDULE ITEMS</u>	
	TOTAL OF NON-SCHEDULE ITEMS (Rs.) ===>>>	
	Sub-Total (C) (1+2) ===>>>	



BILL OF QUANTITIES**MV POWER DISTRIBUTION (NON-SCHEDULE ITEMS)**


Client / Owner : Project Implementation Unit

Name of Project : Development of Phase-I, Education City Project (4800 Acres) - Package 1-A(i)

Name of Work : Infrastructure Development Works for Package 1-A(i)

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
C1	MV POWER DISTRIBUTION				
	Note: All items shall be carried out in accordance with the specification and drawings and to the satisfaction of the Engineer.				
a)	Excavation of cable trench in any type of soil within the project area for laying of MV cables, as per dimensions and procedure given on the drawings, complete in all respects and to the approval of the Engineer.	Cu.mtr	7500		
b)	Backfilling of any type of trench already excavated, after laying various cables (MV) including sand, protective bricks and excavated earth compacted to 95% modified AASHTO density in layers of not exceeding 9" thickness, site cleaning etc, as per drawings, complete in all respects and to the approval of the Engineer:				
i	Sand (Bed and Cover)	Cu.mtr	450		
ii	Bricks (Protection Cover) 3" thick	Sq.mtr	950		
iii	Excavated earth back filling and compaction	Cu.mtr	6000		
iv	Supply and installation of HT cable markers as per specifications, drawings complete in all respects and to the approval of the Engineer.	Each	70		
c)	Supply, laying, connecting, testing and commissioning of following 8750 / 15000 Volt grade HT XLPE/SWA/PVC armoured aluminium conductor cables, in already excavated trenches or directly buried (already installed at road crossing) including provision of warning tape as per requirement, K-Electric specification and standards provided in the given drawings, complete in all respect and to the approval of the Engineer.				
i	400 Sq. mm XLPE/SWA/PVC armoured aluminium conductor 3-Core Cable	m	12000		



Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
d)	Supply, installation, testing and commissioning of following indoor type HT heat shrinkable termination kits for cables, including cable glands, ferules, lugs, ties and miscellaneous materials and installation as per requirements, standards, specification, complete in all respect and to the approval of the engineer.				
i	400 Sq. mm XLPE/SWA/PVC armoured aluminium conductor 3-Core Cable	Each	5		
e)	Supply and installation of straight cable joints pre-mold/cold shrink type for medium voltage cable as per K-Electric specifications, drawings, complete in all respects and to the approval of the engineer.				
i	400 Sq. mm XLPE/SWA/PVC armoured aluminium conductor 3-Core Cable	Each	4		
f)	Supply and installation of buried PE pipe, including jointing, excavation, sand bedding back-filling etc., complete in all respect and as per Specification and Drawings and to the approval of the Engineer, in the following sizes:				
i	150 mm (6") dia PE Pipe	m	900		
g)	Providing, laying and jointing of 150 mm (6") dia heavy gauge G.I. pipe as raceway for cable crossing including all accessories, bends, boxes, complete in all respect and as per Specifications and to the approval of the Engineer.	m	175		
h)	Supply, installation, testing and commissioning of following 11 KV HT, 4 way & 3 way pad mounted switches (Ring Main Units) as per K-Electric Specification provided with Tender document and provision of foundation according to drawings provided by manufacturer complete in all respect including the foundation and to the approval of the engineer.				
i	3-Way Type Pad Mounted Ring Main Unit	Each	1		
j)	Supply, installation, testing and commissioning of Pad Mounted distribution transformers conforming to requirements, K-Electric Specifications, Standards, Drawings etc; complete in all respects and to the approval of the Engineer.				
i	500 KVA	Each	1		

Sr. No.	Particulars	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
k)	Preparation of foundation for following Pad Mounted distribution transformers conforming to requirements, Technical Specifications, Standards, Drawings etc; complete in all respects and to the approval of the Engineer.				
i	500 KVA	Each	1		
l)	Supply, installation, testing and commissioning of Earthing System for HT 3-Way, 4-Way Switches (Ring Main Unit), Pad Mounted Distribution Transformers including earth electrode set, with 18 mm dia 3 meter long driven GI rod, connected with PVC insulated GI conductor, upto earth connecting point to achieve the specified earthing results up to 2.5 Ohms for transformer and 5 ohms for enclosures/HT panels as required for completion of the item as per requirements, specifications complete in all respects and to the approval of the Engineer.	Jobs	3		
	Notes: - Package 1ai only contains the road lighting, Gate House and Bridge. - MV Distribution network is only considered for Gate House, Considering the fact that MV Network for institutes and other amenities will be considered at the time of occupancy of Institutes and amenities.				
CARRIED TO ELECTRICAL SUMMARY =====>>>>					
Total Amount Rs.					

