



Bangladesh Economic Zones Authority (BEZA)
Bangladesh Economic Zones Development Project (Phase-1)
Prime Minister's Office

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T E N D E R D O C U M E N T
FOR THE PROCUREMENT OF WORKS

**Outer curtain wall work of Administrative Building in Bangabandhu
Sheikh Mujib Shilpanagar**

Invitation for Tender No: 03/2019-20
Tender Package No: BEZA WD-1802 A
Issued on:

Table of Contents

Section 1. Instructions to Tenderers	1
A. General.....	1
1. Scope of Tender	1
2. Interpretation.....	1
3. Source of Funds	1
4. Corrupt, Fraudulent, Collusive, Coercive or Obstructive Practices.....	2
5. Eligible Tenderers.....	3
6. Eligible Materials, Equipment and Associated Services.....	4
7. Site Visit	5
B. Tender Document.....	5
8. Tender Document: General.....	5
9. Clarification of Tender Document.....	6
10.Pre-Tender Meeting	6
11. Addendum to Tender Document.....	6
C. Qualification Criteria.....	7
12. General Criteria.....	7
13. Litigation History.....	7
14. Experience Criteria	7
15. Financial Criteria	7
16. Personnel Capacity	8
17.Equipment Capacity	8
18. Joint Venture, Consortium or Association (JVCA).....	8
19. Subcontractor(s).....	8
D. Tender Preparation	9
20. Only one Tender.....	9
21.Cost of Tendering	9
22. Issuance and Sale of Tender Document	9
23. Language of Tender.....	9
24. Contents of Tender	9
25. Tender Submission Letter and Bill of Quantities	10
26. Alternatives.....	10
27. Tender Prices, Discounts and Price Adjustment	10
28. Tender Currency.....	11
29.Documents Establishing Eligibility of the Tenderer	11
30. Documents Establishing the Eligibility and Conformity of Materials, Equipment and Services	12
31. Documents Establishing Technical Proposal.....	12
32. Documents Establishing the Tenderer's Qualification.....	12
33. Validity Period of Tender	13
34. Extension of Tender Validity and Tender Security	13
35. Tender Security.....	13
36. Form of Tender Security.....	13
37. Authenticity of Tender Security	14
38. Return of Tender Security	14
39. Forfeiture of Tender Security.....	14
40. Format and Signing of Tender.....	14
E. Tender Submission.....	15
41. Sealing, Marking and Submission of Tender.....	15
42. Deadline for Submission of Tender.....	15
43. Late Tender	15

44. Notice for Modification, Substitution or Withdrawal of Tender.....	15
45. Tender Modification.....	16
46. Tender Substitution.....	16
47. Tender Withdrawal	16
F. Tender Opening and Evaluation.....	16
48. Tender Opening.....	16
49. Evaluation of Tenders.....	17
50. Evaluation Process.....	17
51. Preliminary Examination	18
52. Technical Responsiveness and Technical Evaluation	18
53. Clarification on Tender	19
54. Restrictions on Disclosure of Information.....	19
55. Correction of Arithmetical Errors.....	19
56. Financial Evaluation.....	20
57. Price Comparison	21
58. Negotiations.....	21
59. Post-qualification	22
60. Procuring Entity's Right to Accept any or to Reject Any or All Tenders.....	22
61. Informing Reasons for Rejection	22
G. Contract Award.....	22
62. Award Criteria	22
63. Notification of Award.....	23
64. Performance Security	23
65. Form and Time Limit for Furnishing of Performance Security	23
66. Validity of Performance Security.....	23
67. Authenticity of Performance Security.....	24
68. Adjudicator.....	24
69. Contract Signing.....	24
70. Publication of Notification of Award of Contract	24
71. Debriefing of Tenderers.....	24
72. Right to Complain.....	24
Section 2. Tender Data Sheet	25
A. General.....	25
B. Tender Document.....	25
C. Qualification Criteria	26
D. Tender Preparation	31
E. Tender Submission.....	32
F. Tender Opening and Evaluation.....	32
G. Contract Award.....	33
Section 3. General Conditions of Contract.....	34
A. General.....	34
1. Definitions.....	34
2. Interpretation	37
3. Communications and Notices	37
4. Governing Law	38
5. Governing Language	38
6. Documents Forming the Contract and Priority of Documents.....	38
7. Scope of Works	38
8. Assignment.....	38
9. Eligibility.....	39

10. Gratuities / Agency fees	39
11. Confidential Details.....	39
12. JVCA.....	39
13. Possession of the Site.....	39
14. Access to the Site	40
15. Procuring Entity's Responsibilities	40
16. Approval of the Contractor's Temporary Works	40
17. Contractor's Responsibilities.....	40
18. Taxes and Duties	40
19. Contractor's Personnel	40
20. Subcontracting.....	41
21. Nominated Subcontractor.....	41
22. Other Contractors	41
23. Project Manager's Decisions	41
24. Delegation.....	41
25. Instructions,.....	42
26. Queries about the Contract conditions	42
27. Safety, Security and Protection of the Environment	42
28. Working Hours.....	42
29. Welfare of Labourers	42
30. Child Labour.....	42
31. Discoveries	42
32. Procuring Entity's and Contractor's Risks	43
33. Procuring Entity's Risks.....	43
34. Contractor's Risks	43
35. Copyright.....	43
36. Limitation of Liability	44
37. Insurance	44
38. Management and Progress Meetings	45
39. Corrupt, Fraudulent, Collusive, Coercive, or Obstructive Practices	45
B. Time Control.....	47
40. Commencement of Works.....	47
41. Completion of Works	47
42. Programme of Works.....	47
43. Pro Rata Progress.....	48
44. Early Warning.....	48
45. Extension of Intended Completion Date	48
46. Delays Caused by Authorities	49
47. Acceleration	49
48. Delays Ordered by the Project Manager	49
49. Suspension of Work.....	50
50. Consequences of Suspension	50
C. Quality Control.....	50
51. Execution of Works.....	50
52. Examination of Works before covering up	50
53. Identifying Defects.....	50
54. Testing.....	50
55. Rejection of Works	51
56. Remedial Work	51
57. Correction of Defects	51
58. Uncorrected Defects.....	51
D. Cost Control.....	51
59. Contract Price	52

60. Bill of Quantities.....	52
61. Changes in the Quantities and Unit Rate or Price.....	52
62. Variations.....	52
63. Costing of Variations or Extra Orders.....	52
64. Cash Flow Forecasts	53
65. Payment Certificates.....	53
66. Payments to the Contractor.....	53
67. Delayed Payment	53
68. Payments to Nominated Subcontractor(s)	54
69. Compensation Events	54
70. Adjustments for Changes in Legislation.....	55
71. Price Adjustment.....	55
72. Retention Money	56
73. Liquidated Damages.....	56
74. Bonus	57
75. Advance Payment.....	57
76. Performance Security	57
77. Provisional Sums.....	58
78. Dayworks	58
79. Cost of Repairs to Loss or Damages.....	58
80. Completion	58
81. Taking Over.....	59
82. Amendment to Contract.....	59
83. Final Account	59
84. As-built Drawings and Manuals	59
85. Force Majeure.....	59
86. Notice of Force Majeure	60
87. Consequences of Force Majeure	60
88. Release from Performance	60
89. Termination	61
90. Payment upon Termination	63
91. Property	63
92. Frustration	63
93. Contractor's Claims	64
94. Settlement of Disputes	64
Section 4. Particular Conditions of Contract	66
Section 5. Tender and Contract Forms	72
Tender Submission Letter (Form PW3-1)	73
Tenderer Information (Form PW3-2).....	75
JVCA Partner Information (Form PW3-3)	79
Subcontractor Information (Form PW3-4)	83
Personnel Information (Form PW3-5)	85
Bank Guarantee for Tender Security (Form PW3-6).....	87
Notification of Award (Form PW3-7)	88
Contract Agreement (Form PW3-8).....	89
Bank Guarantee for Performance Security (Form PW3-9)	90
Bank Guarantee for Advance Payment (Form PW3-10)	91
Bank Guarantee for Retention Money Security (Form PW3-11)	92
Section 6. Bill of Quantities.....	92
Section 7. General Specifications.....	100
Section 8. Particular Specifications	138

Section 9.	Drawings	140
Section 10.	Environmental Management Plan.....	140

Section 1. Instructions to Tenderers

A. General

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| 1. Scope of Tender | 1.1 The Procuring Entity, as indicated in the Tender Data Sheet (TDS) issues this Tender Document for the procurement of Works and associated Services incidental thereto as specified in the TDS and as detailed in Section 6: Bill of Quantities . The name of the Tender and the number and identification of its constituent lot(s) are stated in the TDS . |
| | 1.2 The successful Tenderer shall be required to execute the works and physical services as specified in the General Conditions of Contract |
| 2. Interpretation | 2.1 Throughout this Tender Document: <ul style="list-style-type: none">(a) the term “in writing” means communication written by hand or machine duly signed and includes properly authenticated messages by facsimile or electronic mail;(b) if the context so requires, singular means plural and vice versa;(c) “day” means calendar days unless otherwise specified as working days;(d) “Person” means and includes an individual, body of individuals, sole proprietorship, partnership, company, association or cooperative society that wishes to participate in Procurement proceedings;(e) “Tenderer” means a Person who submits a Tender;(f) “Tender Document” means the Document provided by a Procuring Entity to a Tenderer as a basis for preparation of the Tender; and(g) “Tender” depending on the context, means a Tender submitted by a Tenderer for execution of Works and Physical Services to a Procuring Entity in response to an Invitation for Tender. |
| 3. Source of Funds | 3.1 The Procuring Entity has been allocated public funds as indicated in the TDS and intends to apply a portion of the funds to eligible payments under the Contract for which this Tender Document is issued. |
| | 3.2 For the purpose of this provision, “public funds” means any monetary resources appropriated to Procuring Entities under Government budget, or loan, grants and credits placed at the disposal of Procuring Entities through the Government by the Bank or foreign states or organisations. |
| | 3.3 Payments by the Bank, if so indicated in the TDS , will be made only at the request of the Government and upon approval by the Bank in accordance with the applicable Loan / Credit / Grant Agreement, and will be subject in all respects to the terms and conditions of that Agreement. |

4. Corrupt, Fraudulent, Collusive, Coercive or Obstructive Practices
- 4.1 The Government and the Bank require that Procuring Entities, as well as Tenderers and Contractors (including their suppliers, sub-contractors, agents, personnel, consultants, and service providers) shall observe the highest standard of ethics during implementation of procurement proceedings and the execution of Contracts under public funds.
- 4.2 For the purposes of ITT Sub Clause 4.3, the terms set forth below as follows:
- (a) “corrupt practice” means offering, giving or promising to give, receiving, or soliciting either directly or indirectly, to any officer or employee of a Procuring Entity or other public or private authority or individual, a gratuity in any form; employment or any other thing or service of value as an inducement with respect to an act or decision or method followed by a Procuring Entity in connection with a Procurement proceeding or Contract execution;
 - (b) “fraudulent practice” means the misrepresentation or omission of facts in order to influence a decision to be taken in a Procurement proceeding or Contract execution;
 - (c) “collusive practice” means a scheme or arrangement between two (2) or more Persons, with or without the knowledge of the Procuring Entity, that is designed to arbitrarily reduce the number of Tenders submitted or fix Tender prices at artificial, non-competitive levels, thereby denying a Procuring Entity the benefits of competitive price arising from genuine and open competition; or
 - (d) “coercive practice” means harming or threatening to harm, directly or indirectly, Persons or their property to influence a decision to be taken in the Procurement proceeding or the execution of a Contract, and this will include creating obstructions in the normal submission process used for Tenders.
 - (e) “obstructive practice” means deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation.
- 4.3 Should any corrupt, fraudulent, collusive, coercive or obstructive practice of any kind is determined by the Procuring Entity or the Bank, this will be dealt with in accordance with the provisions of the Procurement Guidelines of the Bank as stated in the **TDS** in combination with ITT sub-clause 4.4 and the Procurement Laws.
- 4.4 If corrupt, fraudulent, collusive, coercive or obstructive practices of any kind is determined against any Tenderer or Contractor (including its suppliers, sub-contractors, agents, personnel, consultants, and service providers) in competing for, or in executing a contract under public fund, the Bank shall :
- (a) exclude the concerned Tenderer from further participation in the concerned procurement proceedings;

- (b) reject any recommendation for award that had been proposed for that concerned Tenderer;
- (c) cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Procuring Entity or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract, without the Procuring Entity having taken timely and appropriate action satisfactory to the Bank to remedy the situation; and
- (d) sanction the concerned Tenderer or individual, at any time, in accordance with prevailing Bank's sanctions procedures, including by publicly declaring such Tenderer or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract; and (ii) to be a nominated sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract.

4.5 The Tenderer shall be aware of the provisions on corruption, fraudulence, collusion, coercion and obstruction as stated in GCC Clause 39 and 89.1(b)(vii).

4.6 In further pursuance of this policy, Tenderers, suppliers and contractors, and their sub-contractors, agents, personnel, consultants, service providers shall permit the Government and the Bank to inspect any accounts and records and other documents relating to the tender submission and contract performance, and to have them audited by auditors appointed by the Government and/or the Bank.

5. Eligible Tenderers

5.1 A Tenderer, and all partners constituting the Tenderer, may have the nationalities of any country except the nationalities specified in the TDS.

5.2 A Tenderer may be a physical or juridical individual or body of individuals, or company, association or any combination of them in the form of a Joint Venture, Consortium or Association (JVCA) invited to take part in public procurement or seeking to be so invited or submitting a Tender in response to an Invitation for Tenders.

5.3 A Government-owned enterprise in Bangladesh may also participate in the Tender if it is legally and financially autonomous, it operates under commercial law, and it is not a dependent agency of the Procuring Entity.

5.4 The Tenderer shall have the legal capacity to enter into the Contract.

5.5 A Tenderer shall not have a conflict of interest. All Tenderers found to have a conflict of interest shall be disqualified. A Tenderer may be considered to have a conflict of interest with one or more parties in this tendering process, if :

- (a) they have a controlling partner in common; or

- (b) they receive or have received any direct or indirect subsidy from any of them; or
- (c) they have the same legal representative for purposes of this Tender; or
- (d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Tender of another Tenderer, or influence the decisions of the Procuring Entity regarding this tendering process; or
- (e) a Tenderer or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Tender; or
- (f) a Tenderer, or any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as Engineer for the contract.

5.6 The Tenderer in its own name or its other names or also in the case of its Persons in different names, shall not be under a declaration of ineligibility for corrupt, fraudulent, collusive, coercive, or obstructive practices as stated under ITT Clause 4.

5.7 The Tenderer with a poor performance, such as abandoning the works, not completing contracts, or financial failure, or with a consistent history of litigation or arbitration awards against it shall not be eligible to Tender.

5.8 The Tenderer shall not be insolvent, be in receivership, be bankrupt, be in the process of bankruptcy, be not temporarily barred from undertaking business and it shall not be the subject of legal proceedings for any of the foregoing.

5.9 The Tenderer shall have fulfilled its obligations to pay taxes and social security contributions under the provisions of laws and regulations of the country of its origin.

5.10 Tenderers shall provide such evidence of their continued eligibility satisfactory to the Procuring Entity, as the Procuring Entity will reasonably request.

5.11 These requirements for eligibility will extend, as applicable, to each JVCA partner and Subcontractor proposed by the Tenderer.

5.12 A Tenderer is under declaration of ineligibility by the Bank and / or the Procuring Entity in accordance with the above ITT clause 4, or in relation to the Bank's *Guidelines on Preventing and Combating Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants*, shall not be eligible to be awarded a contract.

6. Eligible Materials, Equipment and	6.1 All materials, equipment and associated services to be supplied under the Contract are from eligible sources, unless their origin is from a country specified in the TDS.
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- Associated Services
- 6.2 For the purposes of this Clause, “origin” means the place where the Materials and Equipments are mined, grown, cultivated, produced or manufactured or processed, or through manufacturing, processing, or assembly, another commercially recognized new product results that differs substantially in its basic characteristics from its components or the place from which the associated services are supplied.
- 6.3 The origin of materials and equipment and associated services is distinct from the nationality of the Tenderer.
7. Site Visit
- 7.1 The Tenderer is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Tender and entering into a contract for construction of the Works.
- 7.2 The Tenderer and any of its personnel or agents will be granted permission by the Procuring Entity to enter into its premises and lands for the purpose of such visit, but only upon the express condition that the Tenderer, its personnel, and agents will release and indemnify the Procuring Entity and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.
- 7.3 The Tenderer should ensure that the Procuring Entity is informed of the visit in adequate time to allow it to make appropriate arrangements.
- 7.4 The costs of visiting the Site shall be at the Tenderer’s own expense.

B. Tender Document

8. Tender Document: General
- 8.1 The Sections comprising the Tender Document are listed below, and should be read in conjunction with any Addendum issued under ITT Clause 11.
- Section 1 Instructions to Tenderers (ITT)
 - Section 2 Tender Data Sheet (TDS)
 - Section 3 General Conditions of Contract (GCC)
 - Section 4 Particular Conditions of Contract (PCC)
 - Section 5 Tender and Contract Forms
 - Section 6 Bill of Quantities (BOQ)
 - Section 7 General Specifications
 - Section 8 Particular Specifications
 - Section 9 Drawings
 - Section 10 Environmental Management Plan
- 8.2 The Procuring Entity is not responsible for the completeness of the Tender Document and their addenda, if these were not purchased directly from the Procuring Entity, or through its agent(s) as stated in the **TDS**.
- 8.3 The Tenderer is expected to examine all instructions, forms, terms, and specifications in the Tender Document as well as in addendum to Tender, if any.

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| 9. Clarification of Tender Document | of | <p>9.1 A prospective Tenderer requiring any clarification of the Tender Document shall contact the Procuring Entity in writing at the Procuring Entity's address and within time as indicated in the TDS.</p> <p>9.2 A Procuring Entity is not obliged to answer any clarification request received after that date as stated under ITT Sub Clause 9.1.</p> <p>9.3 The Procuring Entity shall respond in writing within five (5) working days of receipt of any such request for clarification received under ITT Sub Clause 9.1.</p> <p>9.4 The Procuring Entity shall forward copies of its response to all those who have purchased the Tender Document, including a description of the enquiry but without identifying its source.</p> <p>9.5 Should the Procuring Entity deem it necessary to revise the Tender Document as a result of a clarification, it will do so following the procedure under ITT Clause 11 and ITT Sub Clause 42.2.</p> |
| 10.Pre-Tender Meeting | | <p>10.1 To clarify issues and to answer questions on any matter arising in the Tender Document, the Procuring Entity may, if stated in the TDS, hold a pre-Tender Meeting at the place, date and time as specified in the TDS. All potential Tenderers are encouraged and invited to attend the meeting, if it is held.</p> <p>10.2 The Tenderer is requested to submit any questions in writing so as to reach the Procuring Entity no later than one day prior to the date of the meeting.</p> <p>10.3 Minutes of the pre-Tender meeting, including the text of the questions raised and the responses given, together with any responses prepared after the meeting, will be transmitted within five (5) working days after holding the meeting to all those who purchased the Tender document and to even those who did not attend the meeting. Any revision to the Tender document listed in ITT Sub-Clause 8.1 that may become necessary as a result of the pre-Tender meeting will be made by the Procuring Entity exclusively through the issue of an Addendum pursuant to ITT Sub Clause 11 and not through the minutes of the Pre-Tender meeting.</p> <p>10.4 Non-attendance at the Pre-Tender meeting will not be a cause for disqualification of a Tenderer.</p> |
| 11. Addendum to Tender Document | to | <p>11.1 At any time prior to the deadline for submission of Tenders, the Procuring Entity, on its own initiative or in response to an inquiry in writing from a Tenderer, having purchased the Tender Document, or as a result of a Pre-Tender meeting may revise the Tender Document by issuing an Addendum.</p> <p>11.2 The Addendum issued under ITT Sub Clause 11.1 shall become an integral part of the Tender Document and shall have a date and an issue number and must be circulated by fax, mail or e-mail, to Tenderers who have purchased the Tender Documents, within five (5) working days.</p> <p>11.3 The Tenderers will acknowledge receipt of an Addendum within three (3) working days.</p> <p>11.4 Procuring Entities shall also ensure posting of the relevant addenda with the reference number and date on their websites including notice boards,</p> |

where the Procuring Entities had originally posted the IFTs.

- 11.5 To give a prospective Tenderer reasonable time in which to take an addendum into account in preparing its Tender, the Procuring Entity may, at its discretion, extend the deadline for the submission of Tenders, pursuant to ITT Sub Clause 42.2.
- 11.6 If an addendum is issued when time remaining is less than **one-third** of the time allowed for the preparation of Tenders, a Procuring Entity at its discretion shall extend the deadline by an appropriate number of days for the submission of Tenders, depending upon the nature of the Procurement requirement and the addendum. In any case, the minimum time for such extension shall not be less than three (3) working days.

C. Qualification Criteria

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| 12. General Criteria | 12.1 The Tenderer shall possess the necessary professional and technical qualifications and competence, financial resources, equipment and other physical facilities, managerial capability, specific experience, reputation, and the personnel, to perform the contract. |
| | 12.2 To qualify for multiple number of contracts/lots in a package made up of this and other individual contracts/lots for which tenders are invited in the Invitation for Tenders, the Tenderer shall demonstrate having resources and experience sufficient to meet the aggregate of the qualifying criteria for the individual contracts. |
| 13. Litigation History | 13.1 Litigation history shall comply with the requirement as specified in ITT 15.1(c). |
| 14. Experience Criteria | 14.1 The Tenderer shall have the following minimum level of construction experience to qualify for the performance of the Works under the Contract: <ul style="list-style-type: none">(a) a minimum number of years of general experience in the construction of works as Prime Contractor or Subcontractor or Management Contractor as specified in the TDS; and(b) Specific experience as a Prime Contractor or Subcontractor or Management Contractor in construction works of a nature, complexity and methods/construction technology similar to the proposed Works in at least a number of contract(s) and of a minimum value over the period, as specified in the TDS. |
| 15. Financial Criteria | 15.1 The Tenderer shall have the following minimum level of financial capacity to qualify for the performance of the Works under the Contract. <ul style="list-style-type: none">(a) the average annual construction turnover as specified in the TDS during the period specified in the TDS;(b) availability of minimum liquid assets or working capital or credit facilities, as specified in the TDS; and(c) satisfactory resolution of all claims, arbitrations or other litigation cases and shall not have serious negative impact on the financial capacity of the Tenderer. |

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| 16. Personnel Capacity | <p>16.1 The Tenderer shall have the following minimum level of personnel capacity to qualify for the performance of the Works under the Contract:</p> <p>(a) a Construction Project Manager, Engineers, and other key staff with qualifications and experience as specified in the TDS;</p> |
| 17. Equipment Capacity | <p>17.1 The Tenderer shall own suitable equipment and other physical facilities or have proven access through contractual arrangement to hire or lease such equipment or facilities for the desired period, where necessary or have assured access through lease, hire, or other such method, of the essential equipment, in full working order, as specified in the TDS.</p> |
| 18. Joint Venture, Consortium or Association (JVCA) | <p>18.1 The Tenderer may participate in the procurement proceedings forming a Joint Venture, Consortium or Associations (JVCA) by an agreement, executed case by case on a non judicial stamp of value as stated in TDS or alternately with the intent to enter into such an agreement supported by a Letter of Intent along with the proposed agreement duly signed by all partners of the intended JVCA and authenticated by a Notary Public .</p> <p>18.2 The figures for each of the partners of a JVCA shall be added together to determine the Tenderer's compliance with the minimum qualifying criteria; however, for a JVCA to qualify, lead partner and its other partners must meet the criteria stated in the TDS. Failure to comply with these requirements will result in rejection of the JVCA Tender. Subcontractors' experience and resources will not be taken into account in determining the Tenderer's compliance with the qualifying criteria.</p> <p>18.3 Each partner of the JVCA shall be jointly and severally liable for the execution of the Contract, all liabilities and ethical and legal obligations in accordance with the Contract terms.</p> <p>18.4 The JVCA shall nominate a Representative (partner-in-charge) who shall have the authority to conduct all business for and on behalf of any and all the partners of the JVCA during the tendering process and, in the event the JVCA is awarded the Contract, during contract execution including the receipt of payments for and on behalf of the JVCA.</p> <p>18.5 Each partner of the JVCA shall complete the JVCA Partner Information (Form PW3-3) for submission with the Tender.</p> |
| 19. Subcontractor(s) | <p>19.1 A Tenderer may intend to subcontract an activity or part of the Works, in which case such elements and the proposed Subcontractor shall be clearly identified.</p> <p>19.2 The Procuring Entity may require Tenderers to provide more information about their subcontracting arrangements. If any Subcontractor is found ineligible or unsuitable to carry out the subcontracted tasks, the Procuring Entity may request the Tenderer to propose an acceptable substitute.</p> <p>19.3 The Procuring Entity may also select nominated Subcontractor(s) to execute certain specific components of the Works and if so, those will be specified in the TDS.</p> <p>19.4 The successful Tenderer shall under no circumstances assign the Works or any part of it to a Subcontractor.</p> |

- 19.5 Each Subcontractor shall complete the Subcontractor Information **(Form PW3-4)** for submission with the Tender.

D. Tender Preparation

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| 20. Only one Tender | 20.1 | A Tenderer shall submit only one (1) Tender for each lot, either individually or as a JVCA. The Tenderer who submits or participates in more than one (1) Tender in one (1) lot will cause all the Tenders of that particular Tenderer to be rejected. |
| 21. Cost of Tendering | 21.1 | The Tenderer shall bear all costs associated with the preparation and submission of its Tender, and the Procuring Entity shall not be responsible or liable for those costs, regardless of the conduct or outcome of the Tendering process. |
| 22. Issuance and Sale of Tender Document | 22.1 | A Procuring Entity shall make Tender Documents available immediately to the potential Tenderers, requesting and willing to purchase at the corresponding price if the advertisement has been published in the newspaper. |
| | 22.2 | There shall not be any pre-conditions whatsoever, for sale of Tender Documents and the sale of such Document shall be permitted up to the day prior to the day of deadline for the submission of Tender. |
| 23. Language of Tender | 23.1 | The Tender shall be written in the English language. Correspondences and documents relating to the Tender may be written in English or <i>Bangla</i> . Supporting documents and printed literature furnished by the Tenderer that are part of the Tender may be in another language, provided they are accompanied by an accurate translation of the relevant passages in the English or <i>Bangla</i> language, in which case, for purposes of interpretation of the Tender, such translation shall govern. |
| | 23.2 | The Tenderer shall bear all costs of translation to the governing language and all risks of the accuracy of such translation. |
| 24. Contents of Tender | 24.1 | The Tender prepared by the Tenderer will comprise the following:
(a) the Tender Submission Letter in accordance with ITT Clause 25 (Form PW3-1) ;
(b) Tenderer Information in accordance with ITT Clauses 5, 29 and 32 (Form PW3-2) ;
(c) the priced Bill of Quantities for each lot in accordance with ITT Clauses 25, 27 and 28;
(d) Tender Security as stated under ITT Clauses 35, 36 and 37.
(e) alternatives, if permissible, as stated under ITT Clause 26;
(f) written confirmation authorizing the signatory of the Tender to commit the Tenderer, as stated under ITT Sub Clause 40.3;
(g) Valid Trade license ;
(h) documentary evidence of Tax Identification Number (TIN) and Value Added Tax (VAT) as a proof of taxation obligations as stated under ITT Sub Clause 5.9;
(i) documentary evidence as stated under ITT Clause 29 establishing the Tenderer's qualifications to perform the Contract if its tender is accepted;
(j) Technical Proposal describing work plan & method, personnel, equipment and schedules as stated under ITT Clause 31;
(k) documentary evidence as stated under ITT Clause 32 establishing the |

minimum qualifications of the Tenderer required to be met for due performance of the Works and physical services under the Contract; and

(l) any other document as specified in the **TDS**.

24.2 In addition to the requirements stated under ITT Sub Clause 24.1, Tenders submitted by a JVCA or proposing a Subcontractor shall include:

- (a) a Joint Venture Agreement entered into by all partners, executed on a non-judicial stamp of value or equivalent as stated under ITT Sub Clause 18.1; or
- (b) a Letter of Intent along with the proposed agreement duly signed by all partners of the intended JVCA with the declaration that it will execute the Joint Venture agreement in the event the Tenderer is successful;
- (c) the JVCA Partner Information (**Form PW3-3**);
- (d) the Subcontractor Information (**Form PW3-4**).

25. Tender Submission Letter and Bill of Quantities

25.1 The Tenderer shall submit the Tender Submission Letter (**Form PW3-1**), which shall be completed without any alterations to its format, filling in all blank spaces with the information requested, failing which the Tender may be rejected as being incomplete.

25.2 The Tenderer shall submit the priced Bill of Quantities using the form(s) furnished in **Section 6: Bill of Quantities**.

25.3 If in preparing its Tender, the Tenderer has made errors in the unit rate or price or the total price, and wishes to correct such errors prior to submission of its Tender, it may do so, but shall ensure that each correction is initialled by the authorised person of the Tenderer.

26. Alternatives

26.1 Unless otherwise stated in the **TDS**, alternatives shall not be considered.

26.2 When alternative times for completion are explicitly invited, a statement to that effect will be included in the **TDS**, as will the method of evaluating different times for completion.

26.3 Except as provided under ITT Sub Clause 26.4, Tenderers wishing to offer technical alternatives to the requirements of the Tender Documents **must first price** the Procuring Entity's design as described in the Tender Documents and shall further provide all information necessary for a complete evaluation of the alternative by the Procuring Entity, including drawings, designs, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details.

26.4 When specified in the **TDS**, Tenderers are permitted to submit alternative technical solutions for specified parts of the Works, and such parts will be identified in the **TDS**.

26.5 Only the technical alternatives, if any, of the lowest evaluated Tenderer conforming to the basic technical requirements will be considered by the Procuring Entity.

27. Tender Prices, Discounts and Price Adjustment

27.1 The prices and discounts quoted by the Tenderer in the Tender Submission Letter (**Form PW3-1**) and in the Bill of Quantities (BOQ) shall conform to the requirements specified below.

27.2 The Tenderer shall fill in unit rates or prices for all items of the Works both in figures and in words as described in the BOQ.

- 27.3 The items quantified in the BOQ for which no unit rates or prices have been quoted by the Tenderer will not be paid for, by the Procuring Entity when executed and shall be deemed covered by the amounts of other rates or prices in the BOQ and, it shall not be a reason to change the Tender price.
- 27.4 The Procuring Entity may, if necessary, require the Tenderer to submit the detail breakdown of the unit rates or prices quoted by the Tenderer for the facilitation of the Tender proceedings.
- 27.5 The price to be quoted in the Tender Submission Letter, as stated under ITT Sub Clause 25.1, shall be the total price of the Tender, excluding any discounts offered.
- 27.6 The Tenderer shall quote any unconditional discounts and the methodology for application of discount in the Tender Submission Letter as stated under ITT Sub Clause 25.1.
- 27.7 Tenderers wishing to offer any price reduction for the award of more than one lot shall specify in their Tender the price reductions applicable to each lot, or alternatively, to any combination of lots within the package. Price reductions or discounts will be submitted as stated under ITT Sub Clause 27.1, provided the Tenders for all lots are submitted and opened together.
- 27.8 All applicable taxes, custom duties, VAT and other levies payable by the Contractor under the Contract, or for any other causes, as of the date twenty-eight (28) days prior to the deadline for submission of Tenders, shall be included in the unit rates and prices and the total Tender price submitted by the Tenderer.
- 27.9 Unless otherwise provided in the **TDS** and the Contract, the price of a Contract shall be fixed in which case the unit rates or prices may not be modified in response to changes in economic or commercial conditions.
- 27.10 If so indicated under ITT Sub Clause 27.9, Tenders are being invited with a provision for price adjustments. The unit rates or prices quoted by the Tenderer are subject to adjustment during the performance of the Contract in accordance with the provisions of GCC Clause 71 and, in such case the Procuring Entity shall provide the indexes and weightings or coefficients in **Appendix to the Tender** for the price adjustment formulae specified in the PCC.
- 27.11 The Procuring Entity may require the Tenderer to justify its proposed indexes, if any of those as stated under ITT Sub Clause 27.10, are instructed to be quoted by the Tenderer in **Appendix to the Tender**.

28. Tender Currency

- 28.1 The Tenderer shall quote all prices in the Tender Submission Letter and in the Bill of Quantities in Bangladesh Taka currency unless otherwise specified in the **TDS**.

29. Documents Establishing Eligibility of the Tenderer

- 29.1 A Tenderer, if applying as a sole Tenderer, shall submit documentary evidence to establish its eligibility as stated under ITT Clause 5 and, in particular, it shall:
- (a) complete the eligibility declarations in the Tender Submission Letter (**Form PW3-1**);
 - (b) complete the Tenderer Information (**Form PW3-2**);
 - (c) provide completed Subcontractor Information (**Form PW3-4**), if it intends to engage any Subcontractor(s).
- 29.2 A Tenderer, if applying as a partner of an existing or intended JVCA shall submit documentary evidence to establish its eligibility as stated under

ITT Clause 5 and, in particular, in addition to as specified in ITT Sub Clause 29.1, it shall:

- (a) provide for each JVCA partner, completed JVCA Partner Information (**Form PW3-3**);
- (b) provide the JVCA agreement or Letter of Intent along with the proposed agreement of the intended JVCA as stated in ITT Sub Clause 18.1.

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| 30. | Documents Establishing the Eligibility and Conformity of Materials, Equipment and Services | 30.1 | The Tenderer shall submit documentary evidence to establish the origin of all Materials, Equipment and services to be supplied under the Contract as stated under ITT Clause 6. |
| | | 30.2 | To establish the conformity of the Materials, Equipment and services to be supplied under the Contract, the Tenderer shall furnish, as part of its Tender, the documentary evidence (which may be in the form of literature, specifications and brochures, drawings or data) that these conform to the technical specifications and standards specified in Section 7, General Specifications and Section 8, Particular Specifications . |
| 31. | Documents Establishing Technical Proposal | 31.1 | The Tenderer shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in TDS , in sufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the work requirements and the completion time. |
| 32. | Documents Establishing the Tenderer's Qualification | 32.1 | <p>Tenderers shall complete and submit the Tenderer Information (Form PW3-2) and shall include documentary evidence, as applicable to satisfy the following:</p> <ul style="list-style-type: none"> (a) general experience of construction works as stated under ITT Sub Clause 14.1(a) ; (b) specific experience in construction works of similar nature and size as stated under ITT Sub Clauses 14.1(b) (c) average annual construction turnover for a period as stated under ITT Sub Clause 15.1(a); (d) adequacy of working capital for this Contract i.e. access to line(s) of credit and availability of other financial resources as stated under ITT Sub Clause 15.1(b); (e) technical and administrative personnel along with their qualification and experience proposed for the Contract as stated under ITT Clause 16; (f) major items of construction equipment proposed to carry out the Contract as stated under ITT Clause 17; (g) authority to seek references from the Tenderer's bankers or any other sources. (h) information regarding any litigation, current or during the last five years, in which the Tenderer is involved, the parties concerned, and disputed amount; (i) reports on the financial standing of the Tenderer, such as profit and loss statements and auditor's reports for the past five years. |
| | | 32.2 | A Procuring Entity shall disqualify a Tenderer who submits a document containing false information for purposes of qualification or mislead or makes false representations in proof of qualification requirements. A |

Procuring Entity may declare such a Tenderer ineligible, either indefinitely or for a stated period of time, from participation in future procurement proceedings

32.3 A Procuring Entity may disqualify a Tenderer if it finds at any time that the information submitted concerning the qualifications of the Tenderer was materially inaccurate or materially incomplete. Also, a Procuring Entity may disqualify a Tenderer who has record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays, litigation history or financial failures.

33. Validity Period of Tender 33.1 Tenders shall remain valid for the period specified in the **TDS** after the date of Tender submission deadline prescribed by the Procuring Entity.. A Tender valid for a period shorter than that specified will be rejected by the Procuring Entity as non- responsive.

34. Extension of Tender Validity and Tender Security 34.1 In exceptional circumstances, prior to the expiration of the Tender validity period, the Procuring Entity may solicit the Tenderers' consent to an extension of the period of validity of their Tenders.

34.2 The request and the responses shall be made in writing. Validity of the tender security provided under ITT Clause 35 shall also be suitably extended for twenty eight (28) days beyond the new date for the expiry of the Tender Validity. If a Tenderer does not respond or refuses the request it shall not forfeit its tender security, but its tender shall no longer be considered in the evaluation proceedings. A Tenderer agreeing to the request will not be required or permitted to modify its tender.

35. Tender Security 35.1 The Tenderer shall furnish as part of its Tender, in favour of the Procuring Entity or as otherwise directed on account of the Tenderer, a Tender Security in original form and in the amount, as specified in the **TDS**.

35.2 If the Tender is a Joint Venture, the Tenderer shall furnish as part of its Tender, in favour of the Procuring Entity or as otherwise directed on account of the title of the existing or intended JVCA or any of the partners of that JVCA or in the names of all future partners as named in the Letter of Intent of the JVCA, a Tender Security in original form and in the amount as stated under ITT Sub Clause 35.2.

36. Form of Tender Security 36.1 The Tender Security shall:

- (a) at the Tenderer's option, be either;
 - i. in the form of a bank draft or pay order, or
 - ii. in the form of an irrevocable bank guarantee issued by a scheduled Bank of Bangladesh, in the format (**Form PW3-6**) furnished in **Section 5: Tender and Contract Forms**;
- (b) be payable promptly upon written demand by the Procuring Entity in the case of the conditions listed in ITT Sub Clause 39 being invoked; and
- (c) remain valid for at least twenty eight (28) days beyond the expiry date of the Tender Validity in order to make a claim in due course against a Tenderer in the circumstances as stated under ITT Sub Clause 39.1.

37. Authenticity of Tender Security	37.1	The authenticity of the Tender Security submitted by a Tenderer may be examined and verified by the Procuring Entity at its discretion in writing from the Bank issuing the security.
	37.2	If a Tender Security is found to be not authentic, the Procuring Entity may proceed to take measures against that Tenderer as stated under ITT Sub Clause 4.4.
	37.3	A Tender not accompanied by a valid Tender Security will be rejected by the Procuring Entity.
38. Return of Tender Security	38.1	No Tender Securities shall be returned by the Tender Opening Committee (TOC) during and after the opening of the Tenders.
	38.2	No Tender Security shall be returned to the Tenderers before contract signing, except to those who are found unsuccessful.
	38.3	Unsuccessful Tenderer's tender security will be discharged or returned as soon as possible but within 28 days of the end of the tender validity period specified in ITT Sub-Clauses 33.1.
	38.4	The tender security of the Successful Tenderer will be discharged upon the Tenderer's furnishing of the performance security pursuant to ITT Clause 33 and signing the Agreement.
39. Forfeiture of Tender Security	39.1	The Tender Security may be forfeited, if a Tenderer:
	(a)	withdraws its Tender after opening of Tenders but within the validity of the Tender as stated under ITT Clause 33 and 34; or
	(b)	refuses to accept a Notification of Award as stated under ITT Sub Clause 63.1; or
	(c)	fails to furnish Performance Security as stated under ITT Sub Clause 64.1 and 64.2; or
	(d)	refuses to sign the Contract as stated under ITT Sub Clause 69.2 ; or
40. Format and Signing of Tender	(e)	does not accept the correction of the Tender price following the correction of the arithmetic errors as stated under ITT Clause 55.
	40.1	The Tenderer shall prepare one (1) original of the documents comprising the Tender as described in ITT Clause 24 and clearly mark it "ORIGINAL." In addition, the Tenderer shall prepare the number of copies of the Tender, as specified in the TDS and clearly mark each of them "COPY." In the event of any discrepancy between the original and the copies, the ORIGINAL shall prevail.
	40.2	Alternatives, if permitted in accordance with ITT Clause 26, shall be clearly marked "Alternative".
	40.3	The original and each copy of the Tender shall be typed or written in indelible ink and shall be signed by the Person duly authorized to sign on behalf of the Tenderer. This authorization shall be attached to the Tender Submission Letter (Form PW3-1). The name and position held by each Person(s) signing the authorization must be typed or printed below the signature. All pages of the original and of each copy of the Tender, except

for un-amended printed literature, shall be numbered sequentially and signed or initialled by the person signing the Tender.

- 40.4 Any interlineations, erasures, or overwriting will be valid only if they are signed or initialled by the Person(s) signing the Tender.

E. Tender Submission

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| 41. Sealing, Marking and Submission of Tender | 41.1 | The Tenderer shall enclose the original in one (1) envelope and all the copies of the Tender, including the alternatives, if permitted under ITT Clause 26, in another envelope, duly marking the envelopes as "ORIGINAL" "ALTERNATIVE" (if permitted) and "COPY." These sealed envelopes will then be enclosed and sealed in one (1) single outer envelope. |
| | 41.2 | The inner and outer envelopes shall: <ul style="list-style-type: none"> (a) be addressed to the Procuring Entity at the address as stated under ITT Sub Clause 42.1; (b) bear the name of the Tender and the Tender Number as stated under ITT Sub Clause 1.1; (c) bear the name and address of the Tenderer; (d) bear a statement "DO NOT OPEN BEFORE -----" the time and date for Tender opening as stated under ITT Sub Clause 48.2; (e) bear any additional identification marks as specified in the TDS. |
| | 41.3 | The Tenderer is solely and entirely responsible for pre-disclosure of Tender information if the envelope(s) are not properly sealed and marked. |
| | 41.4 | Tenders shall be delivered by hand or by mail, including courier services at the address(s) as stated under ITT Sub Clause 42.1. |
| | 41.5 | The Procuring Entity will, on request, provide the Tenderer with acknowledgement of receipt showing the date and time when it's Tender was received. |
| 42. Deadline Submission for of Tender | 42.1 | Tenders shall be delivered to the Procuring Entity at the address specified in the TDS and no later than the date and time specified in the TDS . |
| | 42.2 | The Procuring Entity may, at its discretion,, extend the deadline for submission of Tender as stated under ITT Sub Clause 42.1, in which case all rights and obligations of the Procuring Entity and Tenderers previously subject to the deadline will thereafter be subject to the new deadline as extended. |
| | 42.3 | The submission of Tenders will not be allowed in more than one place. |
| 43. Late Tender | 43.1 | Any Tender received by the Procuring Entity after the deadline for submission of Tenders as stated under ITT Sub Clause 42.1 shall be declared LATE, rejected, and returned unopened to the Tenderer. |
| 44. Notice for Modification, Substitution or | 44.1 | A Tenderer may modify, substitute or withdraw its Tender after it has been submitted by sending a written notice duly signed by the authorized signatory and properly sealed, and shall include a copy of the |

Withdrawal of Tender		authorization ; provided that such written notice including the affidavit is received by the Procuring Entity prior to the deadline for submission of Tenders as stated under ITT Clause 42.
45. Tender Modification	45.1	The Tenderer shall not be allowed to retrieve its original Tender, but shall be allowed to submit corresponding modification to its original Tender marked as "MODIFICATION" .
46. Tender Substitution	46.1	The Tenderer shall not be allowed to retrieve its original Tender, but shall be allowed to submit another Tender marked as "SUBSTITUTION" .
47. Tender Withdrawal	47.1	The Tenderer shall be allowed to withdraw its Tender by a Letter of Withdrawal marked as "WITHDRAWAL" .

F. Tender Opening and Evaluation

48. Tender Opening	48.1	Tenders shall be opened in one location, immediately, but no later than one hour, after the deadline for submission of Tenders at the place as specified in the TDS.
	48.2	Persons not associated with the Tender may not be allowed to attend the public opening of Tenders.
	48.3	The Tenderers' representatives shall be duly authorised by the Tenderer. Tenderers or their authorised representatives will be allowed to attend and witness the opening of Tenders, and will sign a register evidencing their attendance.
	48.4	The authenticity of withdrawal or substitution of, or modifications to original Tender, if any made by a Tenderer in specified manner, shall be examined and verified by the Tender Opening Committee (TOC) based on documents submitted as stated under ITT Sub Clause 44.1.
	48.5	Tenders will be opened in the following manner:
	(a)	First, envelopes marked "Withdrawal" shall be opened and read out and the envelope with the corresponding tender shall not be opened, but returned to the Tenderer. No Tender withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at tender opening. Next, envelopes marked "Substitution" shall be opened and read out and exchanged with the corresponding tender being substituted, and the substituted tender shall not be opened, but returned to the Tenderer. No Tender substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at tender opening. Envelopes marked "Modification" shall be opened and read out with the corresponding tender. No tender modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at tender opening. Only envelopes that are opened and read out at tender opening shall be considered further.
	(b)	secondly, the remaining Tenders will be sorted out and those marked "Substitution" or "Modification" will be linked with their

corresponding “Original”(O) Tender;

- (c) thirdly, if so specified in this Tender Document, the envelopes marked “ Alternative ”(A) shall be opened and read aloud with the corresponding Tender and recorded.

48.6 Ensuring that only the correct (M), (S), (A), (O) envelopes are opened, details of each Tender will be dealt with as follows:

- (a) the Chairperson of the Tender Opening Committee will read aloud each Tender and record in the Tender Opening Sheet (TOS) :
 - (i) the name and address of the Tenderer;
 - (ii) state if it is a withdrawn, modified, substituted or original Tender;
 - (iii) the Tender price;
 - (iv) any discounts;
 - (v) any alternatives;
 - (vi) the presence or absence of any requisite Tender Security; and
 - (vii) such other details as the Procuring Entity, at its discretion, may consider appropriate.
- (b) only discounts and alternatives read aloud at the Tender opening will be considered in evaluation.
- (c) all pages of the original version of the Tender, except for un-amended printed literature, will be initialled by members of the Tender Opening Committee.

48.7 Upon completion of Tender opening, all members of the Tender Opening Committee and the Tenderers or Tenderer’s duly authorised representatives attending the Tender opening shall sign by name, address, designation, the Tender Opening Sheet, copies of which shall be issued to the Head of the Procuring Entity or an officer authorised by him or her and also to the members of the Tender Opening Committee and any authorised Consultants and, to the Tenderers immediately.

48.9 The omission of a Tenderer’s signature on the record shall not invalidate the contents and effect of the record under ITT Sub Clause 48.7.

48.10 No Tender will be rejected at the Tender opening stage except the LATE Tenders as stated in the ITT Clause 43.

49. Evaluation of Tenders

- 49.1 Tenders shall be examined and evaluated only on the basis of the criteria specified in the Tender Document.
- 49.2 The Procuring Entity’s **Tender Evaluation Committee (TEC)** shall examine, evaluate and compare Tenders that are substantially responsive to the requirements of Tender Documents in order to identify the successful Tenderer.

50. Evaluation Process

- 50.1 The TEC will consider a Tender responsive that conforms in all respects to the requirements of the Tender Document without material deviation, reservation, or omission. The evaluation process should

begin immediately after tender opening, following four broad steps:

- (a) Preliminary examination
- (b) Technical examination and responsiveness
- (c) Financial evaluation and price comparison
- (d) Post-qualification of the Tender.

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| 51. | Preliminary Examination | 51.1 | The Procuring Entity shall examine the tenders to confirm that all documentation requested in ITT Clause 24 has been provided, to determine the completeness of each document submitted . |
| | | 51.2 | The Procuring Entity shall confirm that the following documents and information have been provided in the tender. If any of these documents or information is missing, the offer shall be rejected. <ul style="list-style-type: none">(a) Tender Submission Letter;(b) Priced Bill of Quantities;(c) Written confirmation of authorization to commit the Tenderer; and(d) Tender Security. |
| 52. | Technical Responsiveness and Technical Evaluation | 52.1 | The Procuring Entity's determination of a tender's responsiveness is to be based on the contents of the tender itself without recourse to extrinsic evidence. |
| | | 52.2 | A substantially responsive tender is one that conforms in all respects to the requirements of the Tender Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that: <ul style="list-style-type: none">(a) affects in any substantial way the scope, quality, or performance of the Works specified in the Contract; or(b) limits in any substantial way, or is inconsistent with the Tender Documents, the Procuring Entity's rights or the Tenderer's obligations under the Contract; or(c) if rectified would unfairly affect the competitive position of other Tenderers presenting substantially responsive tenders. |
| | | 52.3 | If a tender is not substantially responsive to the Tender Document, it shall be rejected by the Procuring Entity and shall not subsequently be made responsive by the Tenderer by correction of the material deviation, reservation, or omission. |
| | | 52.4 | There shall be no requirement as to the minimum number of responsive tenders. |
| | | 52.5 | There shall be no automatic exclusion of tenders which are above or below the official estimate. |
| | | 52.6 | The Procuring Entity shall now examine the tender to confirm that all terms and conditions specified in the GCC and the PCC have been accepted by the Tenderer without any material deviation or reservation. |
| | | 52.7 | The Procuring Entity shall evaluate the technical aspects of the tender submitted in accordance with ITT Clauses 30,31 and 32, to confirm that all requirements specified in Section 7: General Specifications and Section 8: Particular Specifications of the Tender Document have been |

met without any material deviation or reservation.

52.8 If, after the examination of the terms and conditions and the technical aspects of the tender, the Procuring Entity determines that the tender is not substantially responsive in accordance with ITT Sub-Clauses 52.6 and 52.7, it shall reject the tender.

52.9 Provided that a tender is substantially responsive, the Procuring Entity may request that the Tenderer submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the tender related to documentation requirements. Such omission shall not be related to any aspect of the rates of the tender reflected in the Priced Bill of Quantities. Failure of the Tenderer to comply with the request may result in the rejection of its tender.

52.10 The TEC may regard a Tender as responsive even if it contains;

- (a) minor or insignificant deviations which do not meaningfully alter or depart from the technical specifications, characteristics and commercial terms and, conditions or other mandatory requirements set out in the Tender Document; or
- (b) errors or oversights, that if corrected, would not alter the key aspects of the Tender.

53. Clarification on Tender 53.1 The TEC may ask Tenderers for clarification of their Tenders, including information which are historical in nature or breakdowns of unit rates or prices, in order to facilitate the examination and evaluation of Tenders. The request for clarification by the TEC and the response from the Tenderer shall be in writing, and Tender clarifications which may lead to a change in the substance of the Tender or in any of the key elements of the Tender pursuant to ITT Sub Clause 52.2, will neither be sought nor be permitted.

53.2 Changes in the Tender price shall also not be sought or permitted, except to confirm the correction of arithmetical errors discovered by the TEC in the evaluation of the Tenders, as stated under ITT Sub Clause 55.1.

54. Restrictions on Disclosure of Information 54.1 After the opening of tenders, information relating to the examination, clarification, and evaluation of tenders and recommendations for award shall not be disclosed to tenderers or other persons not officially concerned with the evaluation process until the award of the contract is announced.

54.2 Any effort by a Tenderer to influence a Procuring Entity in its decision concerning the evaluation of Tenders, Contract awards may result in the rejection of its Tender as well as further action in accordance with Section 64 (5) of the Public Procurement Act, 2006.

55. Correction of Arithmetical Errors 55.1 Provided that the Tender is substantially responsive, the TEC shall correct arithmetical errors on the following basis:

- (a) if there is a discrepancy between the unit price and the line item total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the line item total price

shall be corrected, unless in the opinion of the TEC there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted will govern and the unit price will be corrected; and

(b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and

(c) if there is a discrepancy between words and figures, the unit price in words will prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

55.2 If the Tenderer determined to be the lowest evaluated tenderer does not accept the correction of errors, its tender shall be disqualified and its tender security may be forfeited.

56. Financial Evaluation

56.1 The TEC will evaluate each Tender that has been determined, up to this stage of the evaluation, to be substantially responsive to the requirements set out in the Tender Document.

56.2 To evaluate a Tender, the TEC will consider the following:

(a) the Tender price, excluding Provisional Sums and the provision, if any, for contingencies in the priced Bill of Quantities, but including Daywork items, where priced competitively;

(b) adjustments for correction of arithmetical errors pursuant to ITT Sub Clause 55.1;

(c) adjustments in order to take into consideration the unconditional discounts or methodology for application of the discount offered pursuant to ITT Sub Clause 27.7;

(d) adjustments for any other acceptable variations or deviations pursuant to ITT Sub Clause 52.10.

56.3 Variations, deviations, alternatives and other factors which are in excess of the requirements of the Tender Document or otherwise result in unsolicited benefits for the Procuring Entity will not be taken into account in Tender evaluation.

56.4 The estimated effect of any price adjustment provisions under GCC Clause 71, applied over the period of execution of the Contract, will not be taken into account in Tender evaluation.

56.5 If so indicated in the ITT Sub Clause 1.1 the Procuring Entity may award one or multiple lots to one Tenderer following the methodology specified in ITT Sub Clause 56.6.

56.6 To determine the lowest-evaluated lot or combination of lots, the TEC will take into account:

(a) the experience and resources sufficient to meet the aggregate of the qualifying criteria for the individual lot;

(b) the lowest-evaluated Tender for each lot calculated in accordance with all the requirements of Evaluation Criteria;

- (c) the price reduction on account of discount per lot or combination of lots and the methodology for application of the discount as offered by the Tenderer in its Tender; and
- (d) the Contract-award sequence that provides the optimum economic combination on the basis of least overall cost of the total Contract package taking into account any limitations due to constraints in Works or execution capacity determined in accordance with the post-qualification criteria stated under ITT Clause 59.

56.7 If the tender, which results in the lowest evaluated Tender Price, is Substantially below the updated official estimate or seriously unbalanced as a result of front loading in the opinion of the Procuring Entity, the Procuring Entity may require the Tenderer to produce details price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, taking into consideration the schedule of estimated Contract payments, the Procuring Entity may require that the amount of the performance security set forth in ITT Clause 64 be increased at the expenses of the Tenderer to a level sufficient to protect the Procuring Entity against financial loss in the event of default of the successful Tenderer under the Contract.

57. Price Comparison

57.1 The TEC will compare all substantially responsive Tenders to determine the lowest-evaluated Tender, in accordance with ITT Clause 56.

57.2 In the extremely unlikely event that there is a tie for the lowest evaluated price, the Tenderer with the superior past performance with the Procuring Entity shall be selected, whereby factors such as delivery period, quality of Works delivered, complaints history and performance indicators could be taken into consideration.

57.3 In the event that there is a tie for the lowest price and none of the Tenderers has the record of past performance with the Procuring Entity as stated under ITT Sub Clause 57.2, then the Tenderer shall be selected, subject to firm confirmation through the Post-qualification process, after consideration as to whether the Tenderer has demonstrated in its Tender superior past performance with the other Procuring Entities or a more efficient work programme and work methodology.

57.4 The successful Tenderer as stated under ITT Sub Clauses 57.1, 57.2 and 57.3 shall not be selected through **lottery** under any circumstances.

58. Negotiations

58.1 No negotiations shall be held during the Tender evaluation or award with the lowest or any other Tenderer.

58.2 The Procuring Entity through the TEC may, however, negotiate with the lowest evaluated Tenderer with the objective to reduce the Contract price by reducing the scope of works or a reallocation of risks and responsibilities, only when it is found that the lowest evaluated Tender is significantly higher than the official estimate; the reasons for such higher price being duly analyzed.

- 58.3 If the Procuring Entity decides to negotiate for reducing the scope of the requirements under ITT Sub Clause 58.2, it will be required to guarantee that the lowest Tenderer remains the lowest Tenderer even after the scope of work has been revised and shall further be ensured that the objective of the Procurement will not be seriously affected through this reduction.
- 58.4 In the event that the Procuring Entity decides because of a high Tender price to reduce the scope of the requirements to meet the available budget, the Tenderer is not obliged to accept the award and shall not be penalised in any way for rejecting the proposed award.
59. Post-qualification
- 59.1 The Procuring Entity shall determine to its satisfaction whether the Tenderer that is selected as having submitted the lowest evaluated and substantially responsive tender is qualified to perform the Contract satisfactorily.
- 59.2 The determination shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT Clause 32, clarifications in accordance with ITT Clause 53 and the qualification criteria indicated in ITT Clauses 12 to 17. Factors not included therein shall not be used in the evaluation of the Tenderer's qualification.
- 59.3 An affirmative determination shall be a prerequisite for award of the Contract to the Tenderer. A negative determination shall result in rejection of the Tenderer's Tender, in which event the Procuring Entity shall proceed to the next lowest evaluated tender to make a similar determination of that Tenderer's capabilities to perform satisfactorily
- 59.4 The TEC may verify information contained in the Tender by visiting the premises of the Tenderer as a part of the post qualification process, if practical and appropriate.
60. Procuring Entity's Right to Accept any or to Reject Any or All Tenders
- 60.1 The Procuring Entity reserves the right to accept any tender, to annul the tender proceedings, or to reject any or all tenders at any time prior to contract award, without thereby incurring any liability to Tenderers, or any obligations to inform the Tenderers of the grounds for the Procuring Entity's action.
61. Informing Reasons for Rejection
- 61.1 Notice of the rejection will be given promptly within seven (7) days of decision taken by the Procuring Entity to all Tenderers and, the Procuring Entity will, upon receipt of a written request, communicate to any Tenderer the reason(s) for its rejection but is not required to justify those reason(s).

G. Contract Award

62. Award Criteria
- 62.1 The Procuring Entity shall award the Contract to the Tenderer whose offer is responsive to all the requirements of the Tender Document and that has been determined to be the lowest evaluated Tender, provided further that the Tenderer is determined to be Post-qualified in accordance with ITT Clause 59.

- 62.2 A Tenderer will not be required, as a condition for award, to undertake responsibilities not stipulated in the Tender documents, to change its price, or otherwise to modify its Tender.
63. Notification of Award
- 63.1 Prior to the expiry of the Tender Validity period and within seven (7) working days of receipt of the approval of the award by the Approving Authority, the Procuring Entity shall issue the Notification of Award (NOA) to the successful Tenderer.
- 63.2 The Notification of Award, attaching the contract as per the sample (**Form PW3-7**) to be signed, shall state :
- (a) the acceptance of the Tender by the Procuring Entity;
 - (b) the price at which the contract is awarded;
 - (c) the amount of the Performance Security and its format;
 - (d) the date and time within which the Performance Security shall be submitted; and
 - (e) the date and time within which the Contract shall be signed.
- 63.3 Until a formal contract is signed, the Notification of Award will constitute a Contract, which shall become binding upon the furnishing of a Performance Security and the signing of the Contract by both parties.
64. Performance Security
- 64.1 The Performance Security shall be provided by the successful Tenderer in the amount as specified in the **TDS** and denominated in the currencies in which the Contract Price is payable.
- 64.2 The Procuring Entity may increase the amount of the Performance Security above the amounts as stated under ITT Sub Clause 64.1 but not exceeding twenty five (25) percent of the Contract price, if it is found that the Tender is substantially below the updated official estimated or seriously unbalanced as a result of front loading as stated under ITT Sub Clause 56.7.
- 64.3 The proceeds of the Performance Security shall be payable to the Procuring Entity unconditionally upon first written demand as compensation for any loss resulting from the Contractor's failure to complete its obligations under the Contract.
65. Form and Time Limit for Furnishing of Performance Security
- 65.1 The Performance Security, as stated under ITT Clause 64, may be in the form of a Bank Draft, Pay Order or an irrevocable Bank Guarantee in the format (**Form PW3-9**), issued by any scheduled Bank of Bangladesh acceptable to the Procuring Entity.
- 65.2 Within fourteen (14) days from the date of acceptance of the Notification of Award (NOA) but not later than the date specified therein, the successful Tenderer shall furnish the Performance Security for the due performance of the Contract in the amount as stated under ITT Sub Clauses 64.1 or 64.2.
66. Validity of Performance
- 66.1 The Performance Security shall be required to be valid until a date twenty eight (28) days beyond the Intended Completion Date as

	Security		specified in Tender Document.
67.	Authenticity of Performance Security	67.1	The Procuring Entity may verify the authenticity of the Performance Security submitted by the successful Tenderer by sending a written request to the branch of the bank issuing the Pay Order, Bank Draft or irrevocable Bank Guarantee in specified format.
68.	Adjudicator	68.1	The Procuring Entity proposes the person named in the TDS to be appointed as Adjudicator under the Contract, at an hourly fee and for those reimbursable expenses specified in the TDS .
69.	Contract Signing	69.1	At the same time as the Procuring Entity issues the Notification of Award (NOA), the Procuring Entity will send the draft Contract Agreement and all documents forming the Contract to the successful Tenderer.
		69.2	Within twenty-one (21) days of receipt of the Agreement, but not later than twenty-eight (28) days of issuance of the NOA, the successful Tenderer shall sign, date, and return it to the Procuring Entity.
		69.3	Failure of the successful Tenderer to submit the Performance Security, pursuant to ITT Sub-Clause 64.1, or sign the Contract, pursuant to ITT Sub-Clause 69.2, shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender Security. In that event the Procuring Entity may award the Contract to the next lowest evaluated Tenderer, whose offer is substantially responsive and is determined by the Procuring Entity to be qualified to perform the Contract satisfactorily.
70.	Publication of Notification of Award of Contract	70.1	Notification of Awards for Contracts of Taka ten (10) million and above shall be notified by the Procuring Entity to the Central Procurement Technical Unit within seven (7) days of issuance of the NOA for publication in their website, and that notice shall be kept posted for not less than a month.
		70.2	Notification of Award for Contracts below Taka ten (10) million, shall be published by the Procuring Entity on its Notice Board and where applicable on the website of the Procuring Entity and that notice shall be kept posted for not less than a month.
71.	Debriefing of Tenderers	71.1	Debriefing of Tenderers by Procuring Entity shall outline the relative status and weakness only of his or her Tender requesting to be informed of the grounds for not accepting the Tender submitted by him or her, without disclosing information about any other Tenderer.
		71.2	In the case of debriefing, confidentiality of the evaluation process shall be maintained.
72.	Right to Complain	72.1	Any Tenderer has the right to complain in accordance with Section 29 of the Public Procurement Act 2006 and Part 12 of Chapter Three of the Public Procurement Rules, 2008.

Section 2. Tender Data Sheet

<i>Instructions for completing Tender Data Sheet are provided in italics in parenthesis for the relevant ITT clauses</i>	
ITT Clause	Amendments of, and Supplements to, Clauses in the Instructions to Tenderers
A. General	
ITT 1.1	<p>The Procuring Entity is Project Director, Bangladesh Economic Zones Development Project (Phase- 1), Monem Business District (Level-12), 111, Bir Uttam C.R. Dutta Road, Dhaka-1205</p> <p>The Name of the Tender is: Outer Curtain Wall Work of Administrative Building in Bangabandhu Sheikh Mujib Shilpanagar Brief Description of the Works: Glass Curtain Wall, Point Fixing Glazing System, Auto Glass Doors and Glass Canopy etc.</p> <p>Tender Ref: 03.07.0000.008.29.208.2020-2338</p> <p>Lot No(s): 1</p>
ITT 3.1	The source of public funds is International Development Association (IDA)
ITT 3.3	The Bank means IDA
ITT 4.3	Guidelines: Procurement under IBRD Loans and IDA Credits< [under IBRD Loans and IDA Credits & Grants by World Bank Borrowers] January 2011, Revised July 2014 (hereinafter referred to as the Procurement Guidelines)
ITT 5.1	Tenderers from the following countries are not eligible : Israel
ITT 6.1	Materials, Equipments and associated services from the following countries are not eligible: Israel
B. Tender Document	
ITT 8.2	<p>The following are authorised agents of the Procuring Entity for the purpose of issuing the Tender Document: Accounts Officer, Executive Engineer and Project Director Bangladesh Economic Zones Development Project (Phase- 1).</p> <p><u>Agent's Name:</u> Address: Bangladesh Economic Zones Authority (BEZA) Monem Business District (Level-12), 111, Bir Uttam C.R. Dutta Road, Dhaka-1205</p>

	<p>Telephone No.:+880 2 9632459</p> <p>Fax No.:</p> <p>e-mail address: bezaproject1@gmail.com</p>
ITT 9.1	<p>For <u>clarification of Tender Document purposes</u> only, the Procuring Entity's address is:</p> <p>Attention: Abdullah Al Mahmud Faruk</p> <p>Address: Project Director, Bangladesh Economic Zones Development Project (Phase- 1)</p> <p>Telephone: +880 2 9632459</p> <p>Fax No.:</p> <p>e-mail address: bezaproject1@gmail.com</p>
ITT 10.1	<p>A Pre- Tender meeting shall be held at</p> <p>Address: Conference room</p> <p>Bangladesh Economic Zones Authority (BEZA)</p> <p>Monem Business District (Level-12), 111, Bir Uttam C.R. Dutta Road, Dhaka-1205.</p> <p>Time & Date: 06.04.2020 at 11:00 am.</p>
C. Qualification Criteria	
ITT 14.1(a)	<p>The minimum number of years of general experience of the Tenderer in the construction works as Prime Contractor or Subcontractor or Management Contractor shall be 5 (Five) years.</p> <p><i>[years counting backward from the date of publication of IFT in the newspaper]</i></p>
ITT 14.1(b)	<p>The minimum specific experience as a Prime Contractor or Subcontractor or Management Contractor in construction works of at least 1 (one) contract of Curtain Wall work in multi-storied building successfully completed within the last 3 (Three) years, each with a value of at least Tk. 600 (Six hundred) lac.</p> <p><i>[years counting backward from the date of publication of IFT in the newspaper]</i></p>

ITT 15.1(a)	The required average annual construction turnover shall be greater than Tk 1000 (One thousand) Lac within best 3 (Three) years over the last 5 (Five) years. <i>[years counting backward from the date of publication of IFT in the newspaper]</i>			
ITT 15.1(b)	The minimum amount of liquid assets or working capital or credit facilities of the Tenderer shall be Tk 500 (five hundred) Lac.			
ITT 16.1(a),	A Construction Project Manager, Engineer, and other key staff shall have the following qualifications and experience:			
	No	Position	Total Works Experience (years)	In Similar Works Experience (years)
	1	Project Manager- B.sc in Civil Engineer -1 Person	Min. 10 years.	Min. 5 years.
	2	Alternative Construction Project Manager- B.sc in Civil Engineer -1 Person	Min. 10 years.	Min. 5 years.
	3	Field Engineer - B.sc in Civil Engineer - 1 Person	Min. 7 years.	Min. 3 years.
	4	Quality Control Engineer - B.sc in Civil Engineer -1 Person	Min. 5 years.	Min. 3 years
	5	Site Supervisor – (Diploma –in- Civil Engineer – 2 persons	Min. 10 years.	Min. 5 years.
	6	Surveyor (Certificated in Surveying) -1 Person	Min. 5 years.	Min. 3 years
	7	Work Assistant-HSC- 2 Persons	Min. 5 years.	Min. 3 years
ITT 17.1	The Tenderer shall own or have proven access to hire or lease of the major construction equipments, in full working order as follows :			
	Sl No	Name of Equipment	Capacity, Model and Make	Minimum Required (Nos)
	1	6-axis Digital Cutter	Model SKGG-B2, China	3 nos
	2	Cable End Lock Press	Customized made, China	3 nos

3	Gum Injector	Model 427AF-300S, USA	3 nos
4	Gum Injector	Model ST1200AL, USA	3 nos
5	3-axis Aluminum Composite Processing Center	Model INDEX-M, Italy	3 nos
6	Rotational Profile Processing Center	Model SBL 130, Germany	3 nos
7	Double-headed Oblique Tenon Cutting Machine	Model KT-363A, China	3 nos
8	Double-headed Saw	Model 550SCA, Italy	3 nos
9	AME Single-headed Saw	Model 550SCA, Italy	3 nos
10	Double-headed Saw	Model TD330-D, China	3 nos
11	Inclined Cutting Machine	Model 255M/M, China	3 nos
12	Aluminum Cutting Machine	Model 2400B 255M/M, China	3 nos
13	Aluminum Cutting Machine	Model 251, China	3 nos
14	Drilling & Milling machine	Model ZX-20, China	3 nos
15	Punching Machine	Model 123-10 ton, China	3 nos
16	Electric Planer	Customized made, China	3 nos
17	Inclined Cutting Machine	Model 00215, China	3 nos
18	Inclined Angle-cutting machine	Model 00216, China	3 nos
19	Inclined Cutting Machine	Model 00217, China	3 nos
20	Angel Impact Machine	Model 00218, China	3 nos
21	Aluminum Window Section 45° Cutting machine	Model 0217A45, China	3 nos
22	Aluminum Window Angel Impact Machine	Model 0218A, China	3 nos
23	Cutting Grinder machine	Model C307, China	3 nos
24	Aluminum Saw	Model 255M/M, China	3 nos
25	Universal Aluminum Saw	Model 2400B, China	3 nos
26	Lathe	Model C16-1, China	3 nos
27	Monorail hoist	Model 2T, China	3 nos
28	Drilling, Milling & Grinding machine	Model ZXM40, China	3 nos
29	Digital Hydraulic Bending Machine	Model PBS150/450, Italy	3 nos
30	Digital Hydraulic Sheet-rolling Machine	Model MCB4022, Italy	3 nos
31	3.1m*60t Bending Machine	Model TA, China	3 nos
32	3*2.5m Swing Cutter	Model SB, China	3 nos
33	Aluminum Screw Machine	Model 805, China	3 nos
34	Drilling & Milling Machine	Model 7032, China	3 nos
35	Air-driven Hydraulic Milling Tenon Machine	Model 0026E, China	3 nos

36	Vertical Automatic Pipe-bending Machine	Model BSV 45, China	3 nos
37	Automatic Molecular Sieve Filling Machine	Model ALRL, China	3 nos
38	Digital Automatic Glass Cutting Machine	Model BOTERO 100BBM, Italy	3 nos
39	Double-side Edge-grinding Machine	Model Z, BAVZLLONIV, Italy	3 nos
40	Deformed Edge-grinding machine	Model ZEZ100, Italy	3 nos
41	Glass Boring Machine	Model BZ02B, Italy	3 nos
42	Glass Cleaning Machine	Model TRIULZI, Italy	3 nos
43	Tempered Furnace	Model TAMGLASS HT-2448-CTA-10-6, Finland	3 nos
44	Bended Tempered Furnace	Model SM-12B5025, China	3 nos
45	Uniform Furnace	Model JZ5100-240-1.5T, China	3 nos
46	Laminated Glass Processing Line	Model SHINYGO, China	3 nos
47	Insulation Glass Processing Line	Model FOR EL2000, Italy	3 nos
48	Transportation Truck	Model dong Feng 10T, China	3 nos
49	Self-lifted Tower Crane	Model C7022, China	3 nos
50	Automobile Crane	Model San Ling 16 T, Japan	3 nos
51	8 Sucking Disc Glass Pallet	Model MUNBELPC 1104DC, Italy	3 nos
52	Pneumatic 8 Sucking Disc	Customized made, Italy	3 nos
53	Pneumatic 12 Sucking Disc	Customized made, Italy	3 nos
54	Torque Wrench	Customized made, China	3 nos
55	Argon-arc Welding	Customized made, China	3 nos
56	Direct-current Argon-arc Welding	Model T1G-180S, China	3 nos
57	Alternating-current Welding	Model BX1-500, China	3 nos
58	Jump Drilling	Model BUSH, China	3 nos
59	Digital Membrane Surveyor	Model MINITEST-1100, China	3 nos
60	Laser Theodolite	Model J2-1, China	3 nos
61	Electrical Hammer	Germany	3 nos
62	Aluminum extrusion lines	Meirui form Taiwan, Yejing from China	3 nos
63	Anodizing lines	China	3 nos
64	Covered Van	FSR, Isuzu, Japan	3 nos
65	Computers with necessary software's	Various brand	3 nos
66	Pick up truck	3500cc, 2004, Toyota	3 nos
67	Cutter machine		3 nos
68	Hammer Drilling Machines		3 nos

	69	Glass holder/sucker		3 nos
	70	Silicon application machine 12 Pieces		3 nos
	71	Scaffolding		3 nos
	72	Exterior Portable lifts		3 nos
	73	Safety Belt		3 nos
	74	Helmets		3 nos
	75	Drill machine		3 nos
	76	Rivet gun		3 nos

ITT 18.1	The value of non-judicial stamp for execution of the Joint Venture agreement shall be Tk 300 (Three Hundred) only.			
ITT 18.2	The minimum qualification requirements of Leading Partner and other Partner(s) of a JVCA shall be as follows :			
	TDS Clauses References	Requirements by summation	Requirements for Leading Partner	Requirements for other Partner(s)
	ITT-14.1(a)	Summation not applicable	Same as stated in TDS	Same as for Leading Partner
	ITT-14.1(b)	100%	At least one Contract	Not applicable
	ITT-15.1(a)	100%	40%	25%
	ITT-15.1(b)	100%	40%	25%
	ITT-16.1(a)	100%	No minimum or maximum limit	No minimum or maximum limit
	ITT-17.1	100%	No minimum or maximum limit	No minimum or maximum limit
	<i>[Percent share of business of the JVCA partners shall not be taken into account in determining the qualification of a JVCA]</i>			
	ITT 19.3	The Nominated Subcontractor(s) named [insert name(s)] shall execute the following specific components of the proposed Works: None		
D. Tender Preparation				
ITT 24.1 (l)	The Tenderer shall submit with its Tender the following additional documents: None.			
ITT 26.1	Alternatives will not be permitted.			
ITT 26.2	There shall not be alternative times for completion of the Works.			
ITT 26.4	Alternative technical solutions for any parts of works will not be permitted.			

ITT 27.9	The prices quoted by the Tenderer shall be fixed for the duration of the Contract.
ITT 28.1	The currency of the Tender shall be: <u>Bangladeshi Taka</u>
ITT 31.1	The required Technical Proposal shall include the following additional information: Detailed Method of Construction.
ITT 33.1	The Tender Validity period shall be 120 days.
ITT 35.1	The amount of the Tender Security shall be Tk 20,00,000 (Twenty Lac) in favour of <i>Project Director, Bangladesh Economic Zones Development Project (Phase- 1), Bangladesh Economic Zones Authority (BEZA).</i>
ITT 40.1	In addition to the original of the Tender, 02 (Two) copies shall be submitted.
E. Tender Submission	
ITT 41.2(e)	The inner and outer envelopes shall bear the following additional identification marks: BEZA WD-1802 A
ITT 42.1	<p>For <u>Tender submission purposes</u> only, the Procuring Entity's address is:</p> <p>Attention: Project Director, Bangladesh Economic Zones Development Project (Phase-1)</p> <p>Address: Bangladesh Economic Zone Authority (BEZA), Monem Business District (Level-12), 111, Bir Uttam C.R. Dutta Road, Dhaka-1205</p> <p>The deadline for the submission of Tenders is: Time & Date: 22.04.2020 at 14:00 hours local time.</p>
F. Tender Opening and Evaluation	

ITT 48.1	<p>The Tender opening shall take place at: BEZA Conference room</p> <p>Address: Monem Business District (Level-12), 111, Bir Uttam C.R. Datta Road, Dhaka-1205.</p> <p>Time & Date: 22.04.2020 at 14:30 hours local time.</p>
G. Contract Award	
ITT 64.1	The amount of Performance Security shall be 10 (Ten) percent of the Contract Price.
ITT 68.1	<p>The Adjudicator proposed by the Procuring Entity is [insert name and address]. The hourly fee shall be Tk [state amount] and the reimbursable expenses shall be limited to [state nature of reimbursable expenses, and limitations in value, if any]</p> <p>The biographical data of the Adjudicator is:</p> <p><i>[provide relevant information, such as education, experience, age, nationality, and present position; attach additional pages as necessary]</i></p>

Section 3. General Conditions of Contract	
A. General	
1. Definitions	<p>1.1 In the Conditions of Contract, which include Particular Conditions and these General Conditions, the following words and expressions shall have the meaning hereby assigned to them. Boldface type is used to identify the defined terms:</p> <ul style="list-style-type: none"> (a) Act means The Public Procurement Act, 2006. (b) Adjudicator is the expert appointed jointly by the Procuring Entity and the Contractor to resolve disputes in the first instance, as provided for in GCC Sub Clause 94.2. (c) The Bank means International Development Association (IDA). (d) Bill of Quantities (BOQ) means the priced and completed Bill of Quantities forming part of the Contract defined in GCC Clause 60. (e) Compensation Events are those defined in GCC Clause 69. (f) Approving Authority means the authority that gives decision on specific issues as per delegation of administrative and/or financial powers. (g) Completion Certificate means the Certificate issued by the Project Manager as evidence that the Contractor has executed the Works and Physical services in all respects as per design, drawing, specifications and Conditions of Contract. (h) Completion Date is the actual date of completion of the Works and Physical services certified by the Project Manager, in accordance with GCC Clause 80. (i) Contract means the Agreement entered into between the Procuring Entity and the Contractor, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein to execute, complete, and maintain the Works. (j) Contract Documents means the documents listed in GCC Clause 6, including any amendments thereto. (k) Contractor is the party whose Tender to carry out the Works has been accepted by the Procuring Entity. (l) Contract Price is the price stated in the Notification of Award and thereafter as adjusted in accordance with the provisions of the Contract. (m) Contractor's Tender is the completed Tender Document including the priced Bill of Quantities and the Schedules submitted by the Contractor to the Procuring Entity. (n) Day means calendar day unless otherwise specified as

	<p>working days.</p> <p>(o) Dayworks means work carried out following the instructions of the Procuring Entity or the authorised Project Manager and is paid for on the basis of time spent by the Contractor's workers and equipment at the rates specified in the Schedules, in addition to payments for associated Materials and Plant.</p> <p>(p) Defect is any part of the Works not completed in accordance with the Contract.</p> <p>(q) Defects Correction Certificate is the certificate issued by the Project Manager upon correction of defects by the Contractor.</p> <p>(r) Defects Liability Period is the period specified in the PCC and calculated from the Completion Date. Drawings include calculations and other information provided in Section 9 or as approved by the Project Manager for the execution and completion of the Contract.</p> <p>(s) Goods mean the Contractor's Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.</p> <p>(a) Equipment. is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.</p> <p>(t) GCC means the General Conditions of Contract.</p> <p>(u) Government means the Government of the People's Republic of Bangladesh.</p> <p>(v) "Head of the Procuring Entity" means the Secretary of a Ministry or a Division, the Head of a Government Department or Directorate; or the Chief Executive, by whatever designation called, of a local Government agency, an autonomous or semi-autonomous body or a corporation, or a corporate body established under the Companies Act;</p> <p>(w) Intended Completion Date is the date calculated from the Commencement Date as specified in the PCC, on which it is intended that the Contractor shall complete the Works and Physical services as specified in the Contract and may be revised only by the Project Manager by issuing an extension of time or an acceleration order.</p> <p>(x) Materials means things of all kinds other than Plant intended to form or forming part of the Works, including the supply-only materials, if any, to be supplied by the Contractor under the Contract.</p> <p>(y) Month means calendar month.</p> <p>(z) Initial Contract Price is the Contract Price stated in the Procuring Entity's Notification of Award.</p> <p>(aa) PCC means the Particular Conditions of Contract.</p>
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	<p>(bb) Plant means the apparatus, machinery and other equipment intended to form or forming part of the Works, including vehicles purchased for the Procuring Entity and relating to the construction of the Works and Physical services.</p> <p>(cc) Procuring Entity is the party who employs the Contractor to carry out the Works, as specified in the PCC.</p> <p>(dd) Project Manager is the person named in the PCC or any other competent person appointed by the Procuring Entity and notified to the Contractor who is responsible for supervising the execution and completion of the Works and Physical services and administering the Contract.</p> <p>(ee) Provisional Sums means amounts of money specified by the Procuring Entity in the Bill of Quantities which shall be used, at its discretion, for payments to Nominated Subcontractor(s) and for meeting other essential expenditures under the Contract pursuant to GCC Sub Clause 77.</p> <p>(ff) Site means the places where the Works are to be executed including storage and working areas and to which Plant and Materials are to be delivered, and any other places as may be specified in the PCC as forming part of the Site.</p> <p>(gg) Site Investigation Reports are those that were included in the Tender Document and are factual and interpretative reports about the surface and subsurface conditions at the Site.</p> <p>(hh) Specification means the Specification of the Works included in the Contract and any modifications or additions to the specifications made or approved by the Project Manager in accordance with the Contract.</p> <p>(ii) Start Date is the date defined in the PCC and it is the last date when the Contractor shall commence execution of the Works under the Contract.</p> <p>(jj) Subcontractor means a person or corporate body, who has a contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.</p> <p>(kk) Temporary Works means all temporary works of every kind other than Contractor's Equipment required on the Site for the execution and completion of the Works and remedying of any defects.</p> <p>(ll) A Variation is an instruction given by the Project Manager that varies the Works.</p> <p>(mm) Works means all works associated with the construction, reconstruction, site preparation, demolition, repair, maintenance or renovation of railways, roads, highways, or a building, an infrastructure or structure or an installation or any construction work relating to excavation, installation of equipment and materials, decoration, as well as physical services ancillary to works as detailed in the PCC, if the value of those services does not exceed that of the Works</p>
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	<p>themselves.</p> <p>(nn) Writing means communication written by hand or machine duly signed and includes properly authenticated messages by facsimile or electronic mail.</p>
2. Interpretation	<p>2.1 In interpreting the GCC, singular also means plural, male also means female or neuter, and the other way around. Headings in the GCC shall not be deemed part thereof or be taken into consideration in the interpretation or construance of the Contract. Words have their normal meaning under the language of the Contract unless specifically defined.</p>
	<p>2.2 Entire Agreement</p> <p>The Contract constitutes the entire agreement between the Procuring Entity and the Contractor and supersedes all communications, negotiations and agreements (whether written or verbal) of parties with respect thereto made prior to the date of Contract Agreement; except those stated under GCC Sub Clause 6.1(j).</p>
	<p>2.3 Non waiver</p> <p>(a) Subject to GCC Sub Clause 2.3(b), no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.</p>
	<p>(b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.</p>
	<p>2.4 Severability</p> <p>If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.</p>
	<p>2.5 Sectional completion</p> <p>If sectional completion is specified in the PCC, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).</p>
3. Communications and Notices	<p>3.1 Communications between Parties such as notice, request or consent required or permitted to be given or made by one party to the other pursuant to the Contract shall be in writing to the</p>

	addresses specified in the PCC .
	3.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.
	3.3 A Party may change its address for notice hereunder by giving the other Party notice of such change to the address.
4. Governing Law	4.1 The Contract shall be governed by and interpreted in accordance with the laws of the People's Republic of Bangladesh.
5. Governing Language	5.1 The Contract shall be written in English. All correspondences and documents relating to the Contract may be written in English or <i>Bangla</i> . Supporting documents and printed literature that are part of the Contract may be in another language, provided they are accompanied by an accurate translation of the relevant passages in English, in which case, for purposes of interpretation of the Contract, such translation shall govern.
	5.2 The Contractor shall bear all costs of translation to the governing language and all risks of the accuracy of such translation.
6. Documents Forming the Contract and Priority of Documents	6.1 The following documents forming the Contract shall be interpreted in the following order of priority: <ul style="list-style-type: none"> (a) the signed Contract Agreement (Form PW3-8); (b) the Notification of Award (PW3-7); (c) the completed Tender and the appendix to the Tender; (d) the Particular Conditions of Contract; (e) the General Conditions of Contract; (f) the Technical Specifications; (g) the General Specifications; (h) the Drawings; (i) the priced Bill of Quantities and the Schedules; and (j) any other document listed in the PCC forming part of the Contract.
7. Scope of Works	7.1 The Works to be executed, completed and maintained shall be as specified in the Bill of Quantities, the General and Particular Specifications and Drawings. 7.2 Unless otherwise stipulated in the Contract, the Works shall include all such items not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for completion of the Works as if such items were expressly mentioned in the Contract.
8. Assignment	8.1 Neither the Contractor nor the Procuring Entity shall assign, in whole or in part, its obligations under the Contract

9. Eligibility	9.1 The Contractor and its Subcontractor(s) shall have the nationality of a country other than that specified in the PCC .
	9.2 All materials, equipment, plant, and supplies used by the Contractor in both works and services supplied under the Contract shall have their origin in the countries except any specified in the PCC .
10. Gratuities / Agency fees	10.1 No fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the tender or in the Contract, have been given or received in connection with the procurement process or in the Contract execution.
11. Confidential Details	<p>11.1 The Contractor's and the Procuring Entity's personnel shall disclose all such confidential and other information as may be reasonably required in order to verify the Contractor's compliance with the Contract and allow its proper implementation.</p> <p>11.2 Each of them shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out their respective obligations under the Contract or to comply with applicable Laws. Each of them shall not publish or disclose any particulars of the Works prepared by the other Party without the previous agreement of the other Party. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.</p>
12. JVCA	<p>12.1 If the Contractor is a Joint Venture, Consortium, or Association (JVCA),</p> <p>(a) each partner of the JVCA shall be jointly and severally liable for all liabilities and ethical or legal obligations to the Procuring Entity for the fulfilment of the promises of the Contract;</p> <p>(b) the JVCA partners shall nominate a representative who shall have the authority to conduct all business including the receipt of payments for and on behalf of all partners of the JVCA;</p> <p>(c) the JVCA shall notify the Procuring Entity of its composition and legal status which shall not be altered without the prior approval of the Procuring Entity.</p> <p>(d) alteration of partners shall only be allowed if any of the partners is found to be incompetent or has any serious difficulties which may impact the overall implementation of the works.</p>
13. Possession of the Site	13.1 The Procuring Entity shall give possession of the Site or part(s) of the Site, to the Contractor on the date(s) stated in the PCC . If possession of a part of the Site is not given by the date stated in the PCC , the Procuring Entity will be deemed to have delayed the start of the relevant activities, and this will be a Compensation Event as

	stated under GCC Sub Clause 69.1(a).
14. Access to the Site	14.1 The Contractor shall allow the Project Manager and any person authorised by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.
15. Procuring Entity's Responsibilities	15.1 The Procuring Entity shall pay the Contractor, in consideration of the satisfactory progress of execution and completion of the Works and Physical services, and the remedying of defects therein, the Contract price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract Agreement.
	15.2 The Procuring Entity shall make its best effort to guide and assist the Contractor in obtaining, if required, any permit, licence, and approvals from local public authorities for the purpose of execution of the Works and Physical services under the Contract.
16. Approval of the Contractor's Temporary Works	16.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, who is to approve them, if they comply with the Specifications and Drawings.
	16.2 The Contractor shall be responsible for design of Temporary Works.
	16.3 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
	16.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.
17. Contractor's Responsibilities	17.1 The Contractor shall execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract Agreement.
18. Taxes and Duties	18.1 The Contractor shall be entirely responsible for all taxes, duties, fees, and other such levies imposed inside and outside Bangladesh.
19. Contractor's Personnel	19.1 The Contractor shall employ the key personnel named in the Schedule of Key Personnel, as referred to in the PCC, to carry out the functions stated in the Schedule or other personnel approved by the Project Manager.
	19.2 The Project Manager will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are equal to or higher than those of the personnel named in the Schedule.
	19.3 If the Project Manager asks the Contractor to remove a particular person who is a member of the Contractor's staff or work force from the Site, he or she shall state the reasons, and the Contractor

	shall ensure that the person leaves the Site within three (3) days and has no further connection with the work in the Contract.
20. Subcontracting	20.1 Subcontracting the whole of the Works by the Contractor shall not be permissible. The Contractor shall be responsible for the acts or defaults of any Subcontractor, his or her agents or employees, as if they were the acts or defaults of the Contractor.
	20.2 The prior consent, in writing, of the Project Manager shall however be obtained for other proposed Subcontractor(s). 20.3 Subcontractors shall comply with the provisions of GCC Clause 39.
21. Nominated Subcontractor	21.1 Nominated Subcontractor named in the Contract shall be entitled to execute the specific components of the Works stated in the PCC .
	21.2 The Contractor shall not be under obligations to employ a Nominated Subcontractor against whom the Contractor raises reasonable objection by notice to the Project manager as soon as practicable, with supporting particulars while there are reasons to believe that the Subcontractor does not have sufficient competence, resources or financial strength, or does not accept to indemnify the Contractor against and from any negligence or misuse of Goods by the nominated Subcontractor, or does not accept to enter into a subcontract which specifies that, for the subcontracted work including design, if any, the Nominated Subcontractor shall undertake to the Contractor such obligations and liabilities as will enable the contractor to discharge his or her liabilities under the Contract.
	21.3 Subcontracting shall in no event relieve the Contractor from any of its obligations, duties, responsibilities, or liability under the Contract and all Subcontractors shall comply with the provisions of GCC Clause 39.
22. Other Contractors	22.1 The Contractor shall cooperate and share the Site with other Contractors, public authorities, utilities, the Project Manager and the Procuring Entity between the dates given in the Schedule of other Contractors. The Contractor shall also provide facilities and services for them as described in the Schedule. The Procuring Entity may modify the Schedule of other Contractors, and shall notify the Contractor of any such modification.
23. Project Manager's Decisions	23.1 Except where otherwise specifically stated in the PCC , the Project Manager will decide Contractual matters between the Procuring Entity and the Contractor in its role as representative of the Procuring Entity.
24. Delegation	24.1 The Project Manager may delegate any of his duties and responsibilities to his representative except to the Adjudicator, after notifying the Contractor, and may cancel any delegation, without retroactivity, after notifying the Contractor.
	24.2 Any communications to the Contractor in accordance with such delegation shall have the same effect as if it was given by the

	Project Manager.
25. Instructions,	25.1 The Contractor shall carry out all instructions of the Project Manager that comply with the applicable law.
26. Queries about the Contract conditions	26.1 The Project Manager, on behalf of the Procuring Entity, will clarify queries on the Conditions of Contract.
27. Safety, Security and Protection of the Environment	27.1 The Contractor shall throughout the execution and completion of the Works and the remedying of any defects therein: <ul style="list-style-type: none"> (a) take all reasonable steps to safeguard the health and safety of all workers working on the Site and other persons entitled to be on it, and to keep the Site in an orderly state; (b) provide and maintain at the Contractor's own cost all lights, guards, fencing, warning signs and watching for the protection of the Works or for the safety on-site; and (c) take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of the Contractors methods of operation.
28. Working Hours	28.1 The Contractor shall not perform any work on the Site on the weekly holidays, or during the night or outside the normal working hours, or on any religious or public holiday, without the prior written approval of the Project Manager.
29. Welfare of Labourers	29.1 The Contractor shall comply with all the relevant labour Laws applicable to the Contractor's personnel relating to their employment, health, safety, welfare, immigration and shall allow them all their legal rights.
	29.2 The Contractor, in particular, shall provide proper accommodation to his or her labourers and arrange proper water supply, conservancy and sanitation arrangements at the site for all necessary hygienic requirements and for the prevention of epidemics in accordance with relevant regulations, rules and orders of the government.
	29.3 The Contractor, further in particular, shall pay reasonable wages to his or her labourers, and pay them in time. In the event of delay in payment the Procuring Entity may effect payments to the labourers and recover the cost from the Contractor.
30. Child Labour	30.1 The Contractor shall not employ any child to perform any work that is economically exploitative, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development in compliance with the applicable labor laws and other relevant treaties ratified by the government.
31. Discoveries	31.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the

	Procuring Entity. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.
32. Procuring Entity's and Contractor's Risks	32.1 The Procuring Entity carries the risks that the Contract states are Procuring Entity's risks and the Contractor carries the risks that the Contract states are Contractor's risks.
33. Procuring Entity's Risks	<p>33.1 From the Start Date until the Defects Correction Certificate has been issued, the following are Procuring Entity's risks:</p> <ul style="list-style-type: none"> (a) the risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to <ul style="list-style-type: none"> i. use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or ii. negligence, breach of statutory duty, or interference with any legal right by the Procuring Entity or by any person employed by or Contracted to him except the Contractor. (b) the risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Procuring Entity or in the Procuring Entity's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.
	<p>33.2 From the Completion Date until the Defects Correction Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is Procuring Entity's risk, except loss or damage due to:</p> <ul style="list-style-type: none"> (a) a Defect which existed on the Completion Date; (b) an event occurring before the Completion Date, which was not itself Procuring Entity's risk; or (c) the activities of the Contractor on the Site after the Completion Date.
34. Contractor's Risks	34.1 From the Start Date until the Defects Correction Certificate has been issued the risks of personal injury, death, and loss of or damage to property including without limitation, the Works, Plant, Materials, and Equipment, which are not Procuring Entity's risks are Contractor's risks.
35. Copyright	35.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Procuring Entity by the Contractor herein shall remain vested in the Contractor, or, if they are furnished to the Procuring Entity directly or through the Contractor by any third party, including Suppliers of materials, the copyright in such materials shall

	remain vested in such third party.
	35.2 The Contractor shall not, except for the purposes of performing the obligations under the Contract, without the written permission of the Procuring Entity disclose or make use of any specification, plan, design and drawing, pattern, sample or information furnished by or on behalf of the Procuring Entity.
36. Limitation of Liability	<p>36.1 Except in cases of criminal negligence or wilful misconduct:</p> <ul style="list-style-type: none"> (a) the Contractor shall not be liable to the Procuring Entity, whether in Contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Contractor to pay liquidated damages to the Procuring Entity; and (b) the aggregate liability of the Contractor to the Procuring Entity, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective Works, or to any obligation of the Contractor to indemnify the Procuring Entity with respect to patent infringement.
37. Insurance	<p>37.1 The Contractor shall provide, in the joint names of the Procuring Entity and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles specified in the PCC for the following events which are due to the Contractor's risks:</p> <ul style="list-style-type: none"> (a) loss of or damage to the Works, Plant, and Materials; (b) loss of or damage to Equipment; (c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and (d) personal injury or death.
	37.2 The Contractor shall deliver policies and certificates of insurance to the Project Manager, for the Project Manager's approval, before the Start Date. All such insurances shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.
	37.3 If the Contractor does not provide any of the policies and certificates required, the Procuring Entity may effect the insurance which the Contractor should have provided and recover the premiums the Procuring Entity has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
	37.4 Alterations to the terms of insurance shall not be made without the approval of the Project Manager.

	37.5 Both parties shall comply with conditions of the insurance policies.
38. Management and Progress Meetings	38.1 Either the Project Manager or the Contractor may require the other to attend a management and progress meeting. The business of such meeting shall be to review the progress and plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
	38.2 The Project Manager shall record the business of the meetings and provide copies of the record to those attending the meeting and to the Procuring Entity. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management and progress meeting or after the meeting, and stated in writing to all concerned.
39. Corrupt, Fraudulent, Collusive, Coercive, or Obstructive Practices	39.1 The Government and the Bank requires that Procuring Entity, as well as the Contractor shall observe the highest standard of ethics during the implementation of procurement proceedings and the execution of the Contract under public fund.
	39.2 For the purposes of GCC Sub Clause 39.3, the terms set forth below as follows: (a) "corrupt practice" means offering, giving or promising to give, receiving, or soliciting either directly or indirectly, to any officer or employee of a Procuring Entity or other public or private authority or individual, a gratuity in any form; employment or any other thing or service of value as an inducement with respect to an act or decision or method followed by a Procuring Entity in connection with a Procurement proceeding or Contract execution; (b) "fraudulent practice" means the misrepresentation or omission of facts in order to influence a decision to be taken in a Procurement proceeding or Contract execution;

	<p>(c) “collusive practice” means a scheme or arrangement between two (2) or more Persons, with or without the knowledge of the Procuring Entity, that is designed to arbitrarily reduce the number of Tenders submitted or fix Tender prices at artificial, non-competitive levels, thereby denying a Procuring Entity the benefits of competitive price arising from genuine and open competition; or</p> <p>(d) “coercive practice” means harming or threatening to harm, directly or indirectly, Persons or their property to influence a decision to be taken in the Procurement proceeding or the execution of the Contract, and this will include creating obstructions in the normal submission process used for Tenders.</p> <p>(e) “obstructive practice” means deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; and also means acts intended to materially impede the exercise of the inspection and audit rights provided for under GCC Sub-Clause 39.6.</p>
	<p>39.3 Should any corrupt, fraudulent, collusive, coercive or obstructive practice of any kind, in competing for or in executing the Contract, is determined by the Procuring Entity, then the Procuring Entity may, upon giving 28 days’ notice to the Contractor, terminate the Contractor’s employment under the Contract and expel the contractor from the site, and the provisions of Clause 89 shall apply as if such expulsion had been made under sub-clause 89.1 (Termination for Default).</p>
	<p>39.4 Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with Clause 19.3.</p>

	<p>39.5 The Contractor shall be aware of the provisions on corruption, fraudulence, collusion, coercion and obstruction of the Procurement Guidelines of The Bank, Public Procurement Act 2006 and Public Procurement Rules 2008.</p> <p>39.6 The Contractor (including its suppliers, sub-contractors, agents, personnel, consultants, and service providers) shall permit the Government and/or the Bank to inspect the Contractor's accounts and records and other documents relating to the submission of tender and contract performance, and to have them audited by auditors appointed by the Government and/or the Bank, if so required. The Contractor's attention is drawn to GCC Sub-Clause 39.3 which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under this sub-clause constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility under the Procurement Guidelines of the Bank).</p>
B. Time Control	
40. Commencement of Works	<p>40.1 Except otherwise specified in the PCC, the Commencement Date shall be the date at which the following precedent conditions have all been fulfilled and the Project Manager's instruction recording the agreement of both Parties on such fulfilment and instructing to commence the Works is received by the Contractor:</p> <ul style="list-style-type: none"> (a) signing of the Contract Agreement by both parties upon approval of the by relevant authorities; (b) possession of the Site given to the Contractor as required for the commencement of the Works; and (c) receipt by the Contractor of the Advance Payment under GCC Clause 75 provided that the corresponding Bank Guarantee has been delivered by the Contractor, if any.
	<p>If the Project Manager's instruction is not received by the Contractor within one hundred eighty (180) days from the date of signing of the Contract Agreement, the Contractor shall be entitled to terminate the Contract under GCC Sub Clause 90.1.</p>
	<p>40.2 The Contractor shall commence the execution of the Works as soon as is reasonably practicable by the Start Date as specified in the GCC Sub Clause 1.1(nn) after the Commencement Date, and shall then proceed with the Works with due expedition and without delay.</p>
41. Completion of Works	<p>41.1 The Contractor shall carry out the Works in accordance with the Programme of Works submitted by the Contractor and as updated with the approval of the Project Manager as stated under GCC Clause 42 to complete them in all respects by the Intended Completion Date.</p>
42. Programme of Works	<p>42.1 Within the time stated in the PCC, the Contractor shall submit to the Project Manager for approval a Programme of Works</p>

	showing the general methods, arrangements, order, and timing for all the activities in the Works. The programme may be in the form of an Implementation Schedule prepared in any software or other form acceptable to the Project Manager.
	42.2 The Contractor shall submit to the Project Manager for approval of an updated Programme at intervals no longer than the period stated in the PCC . An update of the Programme shall be a Programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.
	42.3 If the Contractor does not submit an updated Programme of Works at the intervals as stated under GCC Sub Clause 42.2, the Project Manager may withhold an amount as stated in the PCC from the next payment certificate and continue to withhold this amount until the next due payment after the date on which the overdue Programme of Works has been submitted.
	42.4 The Project Manager's approval of the Programme of Works shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Project Manager again at any time for approval. A revised Programme shall show the effect of Variations and Compensation Events.
43. Pro Rata Progress	43.1 The Contractor shall maintain Pro Rata progress of the Works. Progress to be achieved shall be pursuant to GCC Clause 42 and shall be determined in terms of the value of the works done.
44. Early Warning	44.1 If at any time during performance of the Contract, the Contractor or its Subcontractors should encounter events, circumstances, conditions that may adversely affect the quality of the work, increase the Initial Contract Price or delay the execution of the Works, the Contractor shall promptly notify the Project Manager in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Contractor's notice, the Project Manager shall evaluate the situation, and the Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced.
	44.2 The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Initial Contract price and Completion Date. The Contractor shall provide the estimate and the Project Manager shall further proceed as soon as reasonably possible.
45. Extension of Intended Completion Date	45.1 The Contractor shall be entitled to an extension of the Intended Completion Date, if and to the extent that completion of the Works or any part thereof is or will be delayed by Compensation Events or a Variation or Extra Work Order.

	<p>45.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within twenty-one (21) days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the extension of Intended Completion Date.</p>
	<p>45.3 Except in case of Force Majeure, as provided under GCC Clause 85, a delay by the Contractor in the performance of its Completion obligations shall render the Contractor liable to the imposition of Liquidated Damages pursuant to GCC Clause 73, unless an extension of Intended Completion Date is agreed upon, pursuant to GCC Clause 45.</p> <p>45.4 If the Contractor fails to complete the Works by the Intended Completion Date, as extended by the Project Manager as the case may be, the Contractor shall be liable to pay liquidated damages to the Employer.</p>
46. Delays Caused by Authorities	<p>46.1 If the following conditions apply, namely:</p> <ul style="list-style-type: none"> (a) the Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities, (b) these public authorities delay or disrupt the Contractor's work, and (c) the delay or disruption was unforeseeable; <p>then this delay or disruption will be considered as a cause of delay under GCC Sub Clause 45.1.</p>
	<p>46.2 The Project Manager shall notify the Contractor accordingly keeping the Procuring Entity posted.</p>
47. Acceleration	<p>47.1 When the Procuring Entity wants the Contractor to finish the Works before the Intended Completion Date, the Project Manager will obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Procuring Entity accepts these proposals, the Intended Completion Date will be advanced accordingly and confirmed by both the Procuring Entity and the Contractor.</p>
	<p>47.2 If the Procuring Entity accepts the Contractor's priced proposals for acceleration, they will be incorporated in the Contract Price and treated as a Variation under GCC Clause 62.</p>
48. Delays Ordered by the Project Manager	<p>48.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.</p>

49. Suspension of Work	49.1 The Project Manager may at any time instruct the Contractor to suspend progress of part or all of the Works. During such suspension, the Contractor shall protect, store and secure such part or the Works against any deterioration, loss or damage.
50. Consequences of Suspension	<p>50.1 If the Contractor suffers delay and/or incurs Cost from complying with the Project Manager's instructions under GCC Clause 49 and/or from resuming the work, the Contractor shall give notice to the Project Manager and shall be entitled subject to GCC Clause 93 to:</p> <ul style="list-style-type: none"> (a) an extension of time for any such delay, if Completion is or will be delayed and (b) payment of any such cost, which shall be included in the Contract Price.
	50.2 After receiving this notice, the Project Manager shall proceed to agree or determine these matters.
	50.3 The Contractor shall not be entitled to any extension of time for, or to any payment of the cost incurred in, making good the consequences of the Contractor's faulty design, workmanship or materials, or of the Contractor's failure to protect, store or secure in accordance with GCC Clause 49.
C. Quality Control	
51. Execution of Works	51.1 The Contractor shall construct, install and carry out the Works and Physical services in accordance with the Specifications and Drawings as scheduled in GCC Clause 6.
52. Examination of Works before covering up	52.1 All works under the Contract shall at all times be open to examination, inspection, measurements, testing and supervision of the Project Manager, and the Contractor shall ensure presence of its representatives at such actions provided proper advance notice is given by the Project Manager.
	52.2 No part of the Works shall be covered up or put out of sight without the approval of the Project Manager. The Contractor shall give notice in writing to the Project Manager whenever any such part of the Works is ready for examination and the Project Manager shall attend to such examination without unreasonable delay.
53. Identifying Defects	53.1 The Project Manager shall check the works executed by the Contractor and notify the Contractor of any Defects found. Such checking shall not relieve the Contractor from his or her obligations. The Project Manager may also instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.
54. Testing	54.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has

	a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.
55. Rejection of Works	55.1 If, as a result of an examination, inspection, measurement or testing, of Works it is found to be defective or otherwise not in accordance with the Contract, the Project Manager may reject the Works by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected Works subsequently complies with the Contract.
56. Remedial Work	56.1 Notwithstanding any test or certification, the Project Manager may instruct the Contractor to: <ul style="list-style-type: none"> (a) remove from the Site and replace any Plant or Materials which is not in accordance with the Contract, (b) remove and re-execute any other work which is not in accordance with the Contract, and (c) execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseeable event or otherwise.
	56.2 The Contractor shall comply with the instruction issued under GCC Sub Clause 56.1 within a reasonable time, which shall be specified in the instruction, or immediately if urgency is specified under GCC Sub Clause 56.1(c).
	56.3 If the Contractor fails to comply with the instruction issued under GCC Sub Clause 56.2, the Procuring Entity shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall be liable to pay all such costs arising from this failure.
57. Correction of Defects	57.1 The Project Manager shall give notice to the Contractor, with a copy to the Procuring Entity and others concerned, of any Defects before the end of the Defects Liability Period, which begins at Completion Date, and is defined in the PCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
	57.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.
58. Uncorrected Defects	58.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected by it, and the Contractor shall remain liable to pay the expenditures incurred on account of correction of such Defect.
D. Cost Control	

59. Contract Price	59.1 The Contract Price shall be as specified in the Contract Agreement subject to any additions and adjustments thereto, or deductions therefrom, as may be made pursuant to Contract
60. Bill of Quantities	60.1 The Bill of Quantities shall contain priced items for the construction, installation, testing, and commissioning work to be done by the Contractor.
	60.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.
61. Changes in the Quantities and Unit Rate or Price	61.1 If the final quantity of the work done for any particular item differs from the quantity in the Bill of Quantities by more than twenty-five percent (25%), provided the change in case exceeds one percent (1%) of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change.
	61.2 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.
62. Variations	62.1 All Variations and Extra Work Orders under the Contract shall be included in the updated Programme of Works produced by the Contractor.
63. Costing of Variations or Extra Orders	63.1 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.
	63.2 If the work in the Variation corresponds with an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work not above the limit stated in GCC Sub-Clause 61.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.
	63.3 If the Contractor's quotation is found to be unreasonable, the Project Manager may order the Variation and make a change to the Contract price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.
	63.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the

	Variation shall be treated as a Compensation Event under GCC Sub Clause 69.
	63.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning under GCC Sub Clause 44.1.
64. Cash Flow Forecasts	64.1 When the Programme of Works is updated under GCC Sub Clause 42.2, the Contractor shall provide the Project Manager with an updated cash flow forecast.
65. Payment Certificates	65.1 The basis for payment certificates shall be Bill of Quantities used to determine the Contract price.
	65.2 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the works executed less the cumulative amount certified previously.
	65.3 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
	65.4 The value of work executed shall be determined by the Project Manager.
	65.5 The value of work executed shall include the valuation of Variations or Extra Work Orders, Certified Dayworks and Compensation Events.
	65.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
66. Payments to the Contractor	66.1 Payments shall be adjusted for deductions for advance payments and retention. The Procuring Entity shall pay the Contractor the amounts certified by the Project Manager within twenty eight (28) days of the date of each certificate after due adjustments for deductions for advance payments, retention and any other additions or deductions which may have become due under the Contract or otherwise, including those under GCC Clause 93.
	66.2 Items of works quantified in the Bill of Quantities for which no rates or prices have been quoted shall be deemed covered by the amounts at rates and prices of other items in the Contract.
	66.3 Payments due to the Contractor in each certificate shall be made into the Bank Account in any scheduled Bank of Bangladesh of the title of the Contract specified in the PCC , nominated by the Contractor in the currency specified in the Contract.
67. Delayed Payment	67.1 If the Procuring Entity makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.

	<p>67.2 If an amount certified is increased in a subsequent certificate as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.</p>
<p>68. Payments to Nominated Subcontractor(s)</p>	<p>68.1 The Contractor shall pay to the Nominated Subcontractor(s) the amounts shown on the Nominated Subcontractor's invoices approved by the Contractor which the Project Manager certifies to be due in accordance with the subcontract included under the Contract.</p>
<p>69. Compensation Events</p>	<p>69.1 The following shall be Compensation Events:</p> <ul style="list-style-type: none"> (a) The Procuring Entity does not give access to or possession of the Site or part of the Site by the Site Possession Date stated in the GCC Sub Clause 13.1; (b) The Procuring Entity modifies the Schedule of other Contractors in a way that affects the works of the Contractor under the Contract; (c) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time; (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects; (e) The Project Manager unreasonably does not approve a subcontract to be let, if applicable; (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Notification of Award from the information issued to Tenderers (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site; (g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Procuring Entity, or additional work required for safety or other reasons; (h) Other Contractors, public authorities, utilities, or the Procuring Entity do not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor; (i) The advance payment is delayed; (j) The effects on the Contractor of any of the Procuring Entity's Risks; (k) The Project Manager unreasonably delays issuing a Completion Certificate; (l) A situation of Force Majeure has occurred, as defined in GCC Clause 85; and (m) Other Compensation Events described in the Contract or

	determined by the Project Manager in the PCC shall apply.
	69.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract price shall be increased and whether and by how much the Intended Completion Date shall be extended, only on justifiably acceptable grounds duly recorded.
	69.3 As soon as the Contractor has provided information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost, the Project Manager shall assess it, and the Contract price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract price based on the Project Manager's own forecast. The Project Manager will assume that the Contractor will react competently and promptly to the event.
	69.4 The Contractor shall not be entitled to compensation to the extent that the Procuring Entity's interests are adversely affected by the Contractor not having given early warning or not having cooperated with the Project Manager.
70. Adjustments for Changes in Legislation	70.1 Unless otherwise specified in the Contract, if between the date twenty-eight (28) days before the submission of Tenders for the Contract and the date of the last Completion Certificate, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in Bangladesh (which shall be deemed to include any change in interpretation or application by the approving authorities) that subsequently affects the Completion Date and/or the Contract price, then such Completion Date and/or Contract price shall be correspondingly increased or decreased, to the extent that the Contractor has thereby been affected in the performance of any of its obligations under the Contract.
	70.2 The Project Manager shall adjust the Contract Price on the basis of the change in the amount of taxes, duties, and other levies payable by the Contractor, provided such changes have not already been accounted for in the price adjustment as defined in GCC Clause 69 and/or reflected in the Contract price.
71. Price Adjustment	<p>71.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the PCC. If so provided, the amounts as certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amount. The formula indicated below applies:</p> $P = A + B (I_m/I_o)$ <p>where:</p> <p>P is the adjustment factor</p>

	<p>A and B are Coefficients specified in the PCC, representing the nonadjustable and adjustable portions, respectively, of the Contract; and</p> <p>Im is the Index during the month the work has been executed and Io is the Index prevailing twenty eight (28) days prior to the deadline for submission of Tender.</p> <p>The Indexes to be used is as published by the Bangladesh Bureau of Statistics (BBS) on a monthly basis. In case not available, then other countries or authorities of the sources mentioned in Appendix to the Tender may be used.</p>
	<p>If the value of the Index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The Index value shall be deemed to take account of all changes in price due to fluctuations.</p>
72. Retention Money	<p>72.1 The Procuring Entity may retain from each progressive payment due to the Contractor at the percentage specified in the PCC until completion of the whole of the Works under the Contract.</p>
	<p>72.2 On completion of the whole of the Works, the first half the total amount retained under GCC Sub Clause 72.1 shall be repaid to the Contractor and the remaining second half after the Defects Liability Period has passed and the Project Manager has certified in the form of Defects Corrections Certificate..</p>
	<p>72.3 On completion of the whole of the Works, the Contractor may substitute an unconditional Bank Guarantee in the format as specified (Form PW3-11) acceptable to the Procuring Entity for the second half of the retention money as stated under GCC Sub Clause 72.2.</p>
73. Liquidated Damages	<p>73.1 The Contractor shall pay liquidated damages¹⁶ to the Procuring Entity at the rate per day stated in the PCC for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the PCC. The Procuring Entity may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.</p>
	<p>73.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in Sub-Clause 43.1.</p>

¹⁶ Usually liquidated damages are set between 0.05 percent and 0.10 percent per day, and the total amount is not to exceed between 5 percent and 10 percent of the Contract Price.

74. Bonus	74.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day if stated in the PCC for each day (less any days for which the Contractor is paid for acceleration) that the Completion of the whole of the Works is earlier than the Intended Completion Date. The Project Manager shall require certifying that the Works are complete, although they may not have fallen due to being complete as per approved updated Programme of Works.
75. Advance Payment	75.1 If so specified in the PCC , the Procuring Entity shall make advance payment to the Contractor of the amounts and by the dates stated in the PCC against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Procuring Entity in an amount equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest will not be charged on the advance payment.
	75.2 The Contractor shall use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used for such specific purposes by supplying copies of invoices or other documents to the Project Manager.
	75.3 The advance payment shall be repaid by deducting at proportionate rate from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.
76. Performance Security	76.1 The Procuring Entity shall notify the Contractor of any claim made against the Bank issuing the Performance Security.
	76.2 The Procuring Entity may claim against the security if any of the following events occurs for fourteen (14) days or more. <ul style="list-style-type: none"> (a) The Contractor is in breach of the Contract and the Procuring Entity has duly notified him or her ; and (b) The Contractor has not paid an amount due to the Procuring Entity and the Procuring Entity has duly notified him or her.
	76.3 In the event the Contractor is liable to pay compensation under the Contract amounting to the full value of the Performance Security or more, the Procuring Entity may call the full amount of the Performance Security.
	76.4 The Performance Security furnished at the time of signing of the Contract Agreement shall be substituted, after the issuance of certificate of Completion of works by the Project Manager, by

	a new Security covering fifty (50) percent amount of the Performance Security to cover the Defects Liability Period.
	76.5 If there is no reason to call the Performance Security, the Performance Security shall be discharged by the Employer and returned to the Contractor not later than twenty-eight (28) days after the Defects Liability Period has passed and the Project Manager has certified in the form of Defects Corrections Certificate
77. Provisional Sums	77.1 Provisional Sums shall only be used, in whole or in part, in accordance with the Project Manager's instructions and the Contract price shall be adjusted accordingly. The total sum paid to the Contractor shall include only such amounts, for the work, supplies or services to which the Provisional Sum relates, as the Project Manager shall have instructed.
	77.2 Plants, Materials or Services to be purchased by the Contractor under the provisions of GCC Sub Clause 77.1 from Nominated Subcontractor(s) or for meeting the other expenditures under the Contract, and for which there shall be included in the Contract price, the actual amounts paid or due to be paid by the Contractor, and a sum for VAT, profit and overhead charges, as applicable, calculated as a percentage of these actual amounts by applying the relevant percentage rate stated in the PCC .
	77.3 The Contractor shall, when required by the Project Manager, produce quotations, invoices, vouchers and accounts or receipts in substantiation of purchases under GCC Sub Clause 77.2.
78. Dayworks	78.1 If applicable, the Dayworks rates in the Contractor's Tender shall be used for small additional amounts of work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.
	78.2 All works to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be certified and signed by the Project Manager within seven (7) days of the works being done.
	78.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.
79. Cost of Repairs to Loss or Damages	79.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Liability Period shall be remedied by the Contractor at the Contractor's own cost, if the loss or damage arises from the Contractor's acts or omissions.
E. Completion of the Contract	
80. Completion	80.1 The Contractor shall apply by notice to the Project Manager for issuing a Completion Certificate of the Works, and the Project

	Manager shall do so upon deciding that the work is completed.
81. Taking Over	81.1 The Procuring Entity shall take over the Site and the Works within seven (7) days of the Project Manager's issuing a certificate of Completion.
82. Amendment to Contract	82.1 The amendment to Contract shall generally include extension of time to the Intended Completion Date, increase or decrease in initial Contract price and any other changes acceptable under the conditions of the Contract.
	82.2 The Procuring Entity, in accordance with the Delegation of Financial Power or sub-delegation thereof, shall amend the Contract incorporating the changes introduced to the original terms and conditions of the Contract in line with the Rules.
83. Final Account	83.1 The Contractor shall submit with a detailed account of the total amount that the Contractor considers payable under the Contract to the Project Manager before the end of the Defects Liability Period .
	83.2 The Project Manager shall certify the Final Payment within fifty six (56) days of receiving the Contractor's account if the payable amount claimed by the Contractor is correct and the corresponding works are completed.
	83.3 If it is not, the Project Manager shall issue within fifty six (56) days a Defects Liability Schedule that states the scope of the corrections or additions that are necessary.
	83.4 If the Final Account of Works submitted under GCC Sub Clause 83.1 is unsatisfactory even after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.
84. As-built Drawings and Manuals	84.1 If "As Built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the PCC .
	84.2 If the Contractor does not supply the Drawings and/or Manuals by the dates specified in GCC Sub Clause 84.1, or they do not receive the Project Manager's approval, the Project Manager shall withhold a nominal amount specified in the PCC from payments due to the Contractor.
85. Force Majeure	85.1 Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind stated below; <ul style="list-style-type: none"> (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies ; (b) rebellion, terrorism, sabotage by persons other than the Contractor's personnel, revolution, insurrection, military or usurped power, or civil war ; (c) riot, commotion, disorder, strike or lockout by persons

	<p>other than the Contractor's personnel ;</p> <p>(d) munitions of war, explosive materials, ionising radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity ;</p> <p>and</p> <p>(e) natural catastrophes such as fires, floods, epidemics, quarantine restrictions, freight embargoes, cyclone, hurricane, typhoon, tsunami, storm surge, earthquake, hill slides, landslides, and volcanic activities.</p>
86. Notice of Force Majeure	<p>86.1 If a party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice, within fourteen (14) days after the party became aware, to the other party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented.</p>
	<p>86.2 Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either party to make payments to the other party under the Contract.</p>
87. Consequences of Force Majeure	<p>87.1 If the Contractor is prevented from performing its substantial obligations under the Contract by Force Majeure of which notice has been given under GCC Sub Clause 86, and suffers delay and/or incurs cost by reason of such Force Majeure, the Contractor shall be entitled subject to GCC Sub Clause 93 to:</p> <p>(a) an extension of time for any such delay, if completion is or will be delayed, under GCC Clause 45, and</p> <p>(b) if the event or circumstance is of the kind described sub-paragraphs (a) to (e) of GCC Sub Clause 85.1 occurs in the Country, payment of any such cost, including the costs of rectifying or replacing the Works and Physical services damaged or destructed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in GCC Clause 37.</p>
	<p>87.2 After receiving notice under GCC Sub Clause 86.1, the Project Manager shall proceed to determine these matters under the provisions of the Contract.</p>
88. Release from Performance	<p>88.1 Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the parties to be released from further performance of the Contract, then upon notice by either party to the other party of such event or circumstance:</p> <p>(a) the parties shall be discharged from further</p>

	<p>performance, without prejudice to the rights of either party in respect of any previous breach of the Contract, and</p> <p>(b) the sum payable by the Procuring Entity to the Contractor shall be the same as would have been payable under GCC Sub Clause 90.3 if the Contract had been terminated under GCC Sub Clause 89.3.</p>
F. Termination and Settlement of Disputes	
89. Termination	<p>89.1 <u>Termination for Default</u></p> <p>(a) The Procuring Entity or the Contractor, without prejudice to any other remedy for breach of Contract, by giving twenty eight (28) days written notice of default to the other party, may terminate the Contract in whole or in part if the other party causes a fundamental breach of Contract.</p> <p>(b) Fundamental breaches of the Contract shall include, but shall not be limited to, the following:</p> <ul style="list-style-type: none"> (i) the Contractor stops work for twenty-eight (28) days when no stoppage of work is shown on the current Programme and the stoppage has not been authorized by the Project Manager; (ii) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within eighty four (84) days; (iii) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager; (iv) the Contractor does not maintain a Security, which is required; (v) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of Liquidated Damages can be paid, as specified in GCC Sub Clause 73; (vi) the Contractor has subcontracted the whole of the Works or has assigned the Contract without the required agreement and without the approval of the Project Manager; (vii) the Contractor, in the judgment of the Procuring Entity has engaged in corrupt or fraudulent practices, as defined in GCC Sub Clause 39, in competing for or in executing the Contract. (viii) A payment certified by the Project Manager is not paid by the Procuring Entity to the Contractor within eighty-four (84) days of the date of the Project Manager's certificate.

	<p>89.2 <u>Termination for Insolvency</u></p> <p>The Procuring Entity and the Contractor may at any time terminate the Contract by giving twenty eight (28) days written notice to the other party if either of the party becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to any party, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the other party.</p>
	<p>89.3 <u>Termination for Convenience</u></p> <p>(a) The Procuring Entity, by giving twenty eight (28) days written notice sent to the Contractor, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Procuring Entity's convenience, the extent to which performance of the Contractor under the Contract is terminated, and the date upon which such termination becomes effective.</p> <p>(b) The Procuring Entity shall not terminate the contract under GCC Sub Clause 89.3 (a) in order to execute the Works itself or to arrange for the Works to be executed by another contractor or to avoid a termination of the Contract by the Contractor as stated under GCC Sub Clause 89.1(a).</p>
	<p>89.4 In the event the Procuring Entity terminates the Contract in whole or in part, the Procuring Entity shall accept the portion of the Works that are complete and ready for handing over after the Contractor's receipt of notice of termination of the Contract. For the remaining portion of the Works, the Procuring Entity may elect:</p> <p>(a) to have any portion completed by the Contractor at the Contract terms and prices; and /or</p> <p>(b) to cancel the remainder and pay to the Contractor an agreed amount for partially completed Works and for materials and parts previously procured by the Contractor, or</p> <p>(c) except in the case of termination for convenience as stated under GCC Sub Clause 89.3., engage another Contractor to complete the Works, and in that case the Contractor shall be liable to the Procuring Entity for any cost that may be incurred in excess of the sum that would have been paid to the Contractor, if the work would have been executed and completed by him or her.</p>
	<p>89.5 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as is reasonably possible</p>

90. Payment upon Termination	<p>90.1 If the Contract is terminated because of a fundamental breach of Contract under GCC Sub Clause 89.1 by the Contractor, the Project Manager shall issue a certificate for the value of the Works done and Plant and Materials ordered less advance payments received up to the date of the issue of the certificate and less the amount from percentage to apply to the contract value of the works not completed, as indicated in the PCC. If the total amount due to the Procuring Entity exceeds any payment due to the Contractor, the difference shall be a debt payable to the Procuring Entity.</p>
	<p>90.2 If the Contract is terminated for the Procuring Entity's convenience or because of a fundamental breach of Contract by the Procuring Entity, the Project Manager shall issue a payment certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's foreign personnel employed solely on the Works and recruited specifically for the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.</p>
	<p>90.3 If the Contract is terminated for reasons of Force Majeure, the Project Manager shall determine the value of the work done and issue a Payment Certificate which shall include:</p> <ul style="list-style-type: none"> (a) the amounts payable for any work carried out for which unit rates or prices are stated in the Contract; (b) the cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Procuring Entity when paid for by the Procuring Entity, and the Contractor shall place the same at the Procuring Entity's disposal; (c) other costs or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works; (d) the cost of removal of Temporary Works and Contractor's Equipment from the Site; and (e) the cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of termination.
91. Property	<p>91.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Procuring Entity if the Contract is terminated because of the Contractor's default stated under GCC Sub Clause 89.1.</p>
92. Frustration	<p>92.1 If the Contract is frustrated by the occurrence of a situation of Force Majeure as defined in GCC Sub Clause 85, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as</p>

	possible after receiving this certificate and shall be paid for all works carried out before receiving it and for any work carried out afterwards to which a commitment was made.
G. Claims, Disputes and Arbitration	
93. Contractor's Claims	<p>93.1 If the Contractor considers himself to be entitled to any extension of the Completion Time and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the Procuring Entity, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than twenty eight (28) days after the Contractor became aware, or should have become aware, of the event or circumstance.</p>
	<p>93.2 If the Contractor fails to give notice of a claim within such period of twenty eight (28) days, the Intended Completion Date shall not be extended, the Contractor shall not be entitled to additional payment, and the Procuring Entity shall be discharged from all liability in connection with the claim.</p>
	<p>93.3 Within forty two (42) days after the Contractor became aware or should have become aware of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Project Manager, the Contractor shall send to the Project Manager a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed, for settlement.</p>
94. Settlement of Disputes	<p>Amicable settlement</p> <p>94.1 The procuring Entity and the Contractor shall use their best efforts to settle amicably all possible disputes arising out of or in connection with this Contract or its interpretation.</p>
	<p>94.2 Adjudication</p> <p>(a) If the Contractor believes that a decision taken by the Project Manager was either outside the authority given to the Project Manager by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within fourteen (14) days of notification of the Project Manager's decision in writing.</p> <p>(b) The Adjudicator named in the PCC is jointly appointed by the parties. In case of disagreement between the parties, the Appointing Authority designated in the PCC shall appoint the Adjudicator within fourteen (14) days of receipt of a request from either party.</p> <p>(c) The Adjudicator shall give its decision in writing to both parties within twenty-eight (28) days of a</p>

	<p>dispute being referred to it.</p> <p>(d) The Contractor shall make all payments (fees and reimbursable expenses) to the Adjudicator, and the Procuring Entity shall reimburse half of these fees through the regular progress payments.</p> <p>(e) Should the Adjudicator resign or die, or should the Procuring Entity and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract; a new Adjudicator will be jointly appointed by the Procuring Entity and the Contractor. In case of disagreement between the Procuring Entity and the Contractor the Adjudicator shall be designated by the Appointing Authority within fourteen (14) days of receipt of a request from either party as stated under GCC Sub Clause 94.2 (b)</p>
	<p>94.3 Arbitration</p> <p>(a) If the parties are unable to reach a settlement as per GCC Clauses 94.1 and 94.2 within twenty-eight (28) days of the first written correspondence on the matter of disagreement, then either party may give notice to the other party of its intention to commence arbitration in accordance with GCC Sub Clause 97.3(b).</p> <p>(b) The arbitration shall be conducted in accordance with the Arbitration Act (Act No 1 of 2001) of Bangladesh as at present in force and in the place shown in the PCC.</p>

Section 4. Particular Conditions of Contract

Instructions for completing the Particular Conditions of Contract are provided in italics in parenthesis for the relevant GCC Clauses.

GCC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
GCC 1.1(k)	The Contractor is <i>[Name, address, and name of authorized representative]</i>
GCC 1.1(cc)	The Procuring Entity is Project Director, Bangladesh Economic Zones Development Project (Phase- 1) Address: Bangladesh Economic Zones Authority (BEZA), , Monem Business District (Level-12), 111, Bir Uttam C.R. Dutta Road, Dhaka-1205 Authorized Representative: Project Director, Bangladesh Economic Zones Development Project (Phase- 1)
GCC 1.1(dd)	The Project Manager is Executive Engineer, Bangladesh Economic Zones Development Project (Phase- I) Bangladesh Economic Zones Authority (BEZA), Address: Bangladesh Economic Zones Authority (BEZA), , Monem Business District (Level-12), 111, Bir Uttam C.R. Dutta Road, Dhaka-1205 Authorized Representative: Same as Project Manager
GCC 1.1 (z)	The initial Contract price is <i>[insert the amount in the NOA]</i>
GCC 1.1(w)	The Intended Completion Date for the whole of the Works shall be 6 (Six) months from the date of Commencement.
GCC 1.1(ff)	The Site is located at Bangabandhu Sheikh Mujib Shilpanagar, Upazila: Mirsarai, District: Chattogram .
GCC 1.1(ii)	The Start Date shall be 07 (Seven) days after the Commencement Date
GCC 1.1(mm)	The Works consist of Glass Curtain Wall, Point Fixing Glazing System, Auto Glass Doors and Glass Canopy etc.
GCC 2.5	The Sectional Completion Dates are: None.
GCC 3.1	The Procuring Entity's address for the purpose of communications under this

	<p>contract is :</p> <p>Contact person: Project Director, Bangladesh Economic Zones Development Project (Phase- I)</p> <p>Bangladesh Economic Zones Authority (BEZA),</p> <p>Address: Monem Business District (Level-12), 111, Bir Uttam C.R. Dutta Road, Dhaka-1205</p> <p>Tel: +880 2 9632459</p> <p>Fax:</p> <p>e-mail address: bezaproject1@gmail.com</p>								
	<p>The Contractor's address for the purpose of communications under this contract is :</p> <p>Contact person:</p> <p>Address:</p> <p>Tel:</p> <p>Fax:</p> <p>e-mail address:</p>								
GCC 6.1 (j)	<p>Other documents forming part of the Contract are Environmental Management Plan, Work schedule, Schedule of key personnel, Schedule of equipment, Site inspection report, <i>relevant correspondences prior to signing of the Contract agreement etc.</i></p>								
GCC 9.1	<p>A Contractor or a Subcontractor that is a national of, or registered in, the following countries are not eligible: Israel.</p>								
GCC 9.2	<p>Materials, Equipments, Plants and supplies shall not have their origin in the following countries: Israel.</p>								
GCC 13.1	<p>Possession of the Site or part(s) of the Site, to the Contractor shall be given on the following date(s): 7 days from the date of commencement.</p>								
GCC 19.1	<p>Following Key Personnel to carry out the functions stated in the Schedule shall be employed by the Contractor;</p> <table><tr><th>No</th><th>Position</th><th>Total Works Experience (Years)</th><th>Experience in similar works (Years)</th></tr><tr><td>1</td><td>Project Manager- B.sc in Civil Engineer -1 Person</td><td>Min. 10 years.</td><td>Min. 5 years.</td></tr></table>	No	Position	Total Works Experience (Years)	Experience in similar works (Years)	1	Project Manager- B.sc in Civil Engineer -1 Person	Min. 10 years.	Min. 5 years.
No	Position	Total Works Experience (Years)	Experience in similar works (Years)						
1	Project Manager- B.sc in Civil Engineer -1 Person	Min. 10 years.	Min. 5 years.						

	2	Alternative Construction Project Manager- B.sc in Civil Engineer -1 Person	Min. 10 years.	Min. 5 years.
	3	Field Engineer - B.sc in Civil Engineer -1 Person	Min. 7 years.	Min. 3 years.
	4	Quality Control Engineer - B.sc in Civil Engineer -1 Person	Min. 5 years.	Min. 3 years
	5	Site Supervisor – (Diploma –in- Civil Engineer – 2 persons	Min. 10 years.	Min. 5 years.
	6	Surveyor (Certificated in Surveying) -1 Person	Min. 5 years.	Min. 3 years
	7	Work Assistant- HSC- 2 Persons	Min. 5 years.	Min. 3 years
	<i>[insert name(s)]</i>			
GCC 21.1	Nominated Subcontractor(s) named below: None.			
GCC 23.1	The Contractual matters between the Procuring Entity and the Contractor shall be decided by <i>the Project Manager</i> .			
GCC 37.1	The minimum insurance cover shall be:			
	(a)	The maximum deductible for insurance of the Works and of Plant and Materials is Tk 110% of contract value.		
	(b)	The minimum cover for insurance of the Works and of Plant and Materials is Tk 110% of contract value <i>[state amount]</i> . <i>[the amount could be 110% of the value of the works, plant and materials that may be lost in a worst case scenario]</i> .		
	(c)	The maximum deductible for insurance of Equipment is <i>[state amount]</i> . <i>[the Contractor shall state this amount at the time of Contract signing. Amount could be 5 to 10 %t of the sum insured]</i>		

	(d)	The minimum cover for loss or damage to Equipment is Tk 110% of contract value.
	(e)	The maximum deductible for insurance of other property is Tk <i>[state amount]</i> . <i>[the Contractor shall state this amount at the time of Contract signing]</i> .
	(f)	The minimum cover for insurance of other property is Tk 10% of contract value.
	(g)	The minimum cover for personal injury or death insurance: (i) for the Contractor's employees is as per the law and common practice in Bangladesh. (ii) and for third parties is as per the law and common practice in Bangladesh.
GCC 40.1	Commencement Date of Works shall be as follows;	
GCC 42.1	The Contractor shall submit a Programme for the Works within 15 (Fifteen) days of signing the Contract.	
GCC 42.2	The period between Programme updates is Every 1 (One) Month.	
GCC 42.3	The amount to be withheld for late submission of an updated Programme is BDT 100,000.	
GCC 57.1	The Defects Liability Period is 12 (Twelve) months.	
GCC 66.3	<p>The particulars of the Bank Account nominated are as follows :</p> <p>Title of the Account : [insert title to whom the Contract awarded]</p> <p>Name of the Bank : [insert name with code, if any]</p> <p>Name of the Branch : [insert branch name with code ,if any]</p> <p>Account Number : [insert number]</p> <p>Address : [insert location with district]</p> <p>Tel :</p> <p>Fax :</p> <p>e-mail address :</p> <p><i>[information furnished by the Contractor shall be substantiated by the concerned Bank and authenticated by the Procuring Entity]</i></p>	

GCC 69.1(m)	The following additional events shall also be the Compensation Events: None.
GCC 71.1	The Contract is not subject to price adjustment.
GCC 72.1	The proportion of payments to be retained is 5 (five) percent.
GCC 73.1	<p>The amount of Liquidated Damages or in other words Delay Damages for the uncompleted Works or any part thereof is 0.05 of ONE (1) percent of its Contract price per day of delay.</p> <p><u>Guide to application of GCC Sub Clause 73.1 above</u></p> <p><i>[Liquidated damages is equivalent to an amount to be determined in accordance with the following formula</i></p> <p>$T_{LD} = V_{UW} \times P \times n$</p> <p><i>Where;</i></p> <p><i>T_{LD} = Total amount of Liquidated Damages</i></p> <p><i>V_{UW} = Value of Uncompleted Works (i.e. works not having been completed as of the expiry of the Intended Completion Date plus the works completed after the expiry of the Intended Completion Date). V_{UW} shall be calculated by deducting the value of the completed works under the Contract from the total Contract price</i></p> <p><i>P = Percent-rate at which the Liquidated Damages shall be imposed for every day of delay</i></p> <p><i>n = No of days of delay for completion of works under the Contract]</i></p>
GCC 73.1	The maximum amount of Liquidated Damages for the uncompleted Works or any part thereof is 10 (Ten) percent of the final Contract price of the whole of the Works.
GCC 74.1	<p>The Bonus for the whole of the Works is <i>[insert percentage]</i> percent of the final Contract price per day : Not Applicable.</p> <p>The maximum amount of Bonus for the whole of the Works is <i>[insert percentage]</i> percent of the final Contract price: Not Applicable.</p>
GCC 75.1	The Advance Payment shall be Tk <i>[insert amount]</i> and shall be paid to the Contractor not later than <i>[insert date]</i> :None.

GCC 77.2	The percentage for adjustment of Provisional Sums is None.
GCC 84.1	The date by which “ as-built ” drawings are required is within 30 days after substantial completion of works. The date by which operating and maintenance manuals are required is within 30 days after substantial completion of works.
GCC 84.2	The amount to be withheld for failing to produce “ as-built ” drawings and/or operating and maintenance manuals by the date specified in GCC Sub Clause 84.1, the taka 20 (Twenty) lac will be withhold.
GCC 90.1	The percentage to apply to the contract value of the works not completed, representing the Procuring Entity’s additional cost for completing the uncompleted Works, is 20 percent.
GCC 94.2 (b)	The Adjudicator jointly appointed by the parties is: Name: Address: Tel No: Fax No: e-mail address:
GCC 94.2(b)	In case of disagreement between the parties, the Appointing Authority for the Adjudicator is the President of the Institution of Engineers, Bangladesh.
GCC 94.3 (b)	The arbitration shall be conducted in the place mentioned below : Dhaka, Bangladesh.

Section 5. Tender and Contract Forms

Form	Title
Tender Forms	
PW3 – 1	Tender Submission Letter
PW3 – 2	Tenderer Information
PW3 – 3	JV Partner Information (<i>if applicable</i>)
PW3 – 4	Subcontractor Information (<i>if applicable</i>)
PW3 – 5	Personnel Information
PW3 – 6	Bank Guarantee for Tender Security (<i>when this option is chosen</i>)
Contract Forms	
PW3 – 7	Notification of Award
PW3 – 8	Contract Agreement
PW3 – 9	Bank Guarantee for Performance Security (<i>when this option is chosen</i>)
PW3 –10	Bank Guarantee for Advance Payment (<i>if applicable</i>)
PW3 –11	Bank Guarantee for Retention Money Security (<i>when this option is chosen</i>)

Forms **PW3 -1** to **PW3 -6** comprises part of the Tender Format and should be completed as stated in ITT Clauses 24.

Forms **PW3 -7** to **PW3 -11** comprises part of the Contract as stated in GCC Clause 6.

Tender Submission Letter (Form PW3-1)

[The Tenderer must prepare the Tender Submission Letter in its letterhead.]

[Note: All italicized text is for use in preparing this form and shall be deleted from the final letter]

To:

Date:

[Contact Person]

[Name of Procuring Entity]

[Address of Procuring Entity]

Invitation for Tender No:

[indicate IFT No]

Tender Package No:

[indicate Package No]

This Package is divided into the following Number of Lots

[indicate number of Lot(s)]

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Tender Document, including Addenda issued in accordance with Instructions to Tenderers (ITT) clause 11;
- (b) We offer to execute in conformity with the Tender Document the following Works and Physical Services:
;
- (c) The total price of our Tender, excluding any discounts offered in item (d) below is:
;
- (d) The discounts offered and the methodology for their application are:
;
- (e) Our Tender shall be valid for a period of ***[Insert Validity Period as specified in ITT sub-clause 33.1]***_____ days from the date fixed for the tender submission deadline in accordance with the Tender Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) If our Tender is accepted, we commit to obtain a Performance Security in accordance with the Tender Document;
- (g) We, including any subcontractors or suppliers for any part of the contract, have or will have nationalities from eligible countries, in accordance with ITT sub-clause 5.1;

- (h) We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITT sub-clause 5.5;
- (i) We are not participating, as a Tenderer or as a subcontractor, in more than one Tender in this Tendering process in accordance with ITT sub-clause 20.1, other than alternative offers submitted in accordance with ITT clause 26;
- (j) We, our affiliates or subsidiaries, including any of our subcontractors or suppliers for any part of the contract, have not been declared ineligible by the Bank, under the laws of Bangladesh or official regulations or by an act of compliance with a decision of the United Nations Security Council on charges of engaging in corrupt, fraudulent, collusive, coercive or obstructive practices in accordance with ITT sub clause 5.6;
- (k) We confirm that we do not have a record of poor performance as stated in ITT sub clause 5.7, and that we do not have, or have had, any litigation against us, other than that stated in the Tenderer Information (Form PW3-2);
- (l) We are not a government owned entity / We are a government owned entity but meet the requirements of ITT sub clause 5.3;
- (m) We understand that this Tender, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (n) We understand that you are not bound to accept the lowest evaluated Tender or any other Tender that you may receive; and
- (o) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature:	<i>[insert signature of authorised representative of the Tenderer]</i>
Name:	<i>[insert full name of signatory]</i>
In the capacity of:	<i>[insert capacity of signatory]</i>
Duly authorised to sign the Tender for and on behalf of the Tenderer	<i>[insert the Name of Tenderer]</i>

Attachment 1: *[ITT Sub Clause 40.3,
Written confirmation authorising the above signatory(ies) to commit the Tenderer]*

[and, if applicable]

Attachment 2: *[ITT Sub Clause 29.2(b),
Copy of the JVCA Agreement / Letter of Intent to form JVCA with draft proposed Agreement]*

Tenderer Information (Form PW3-2)

[This Form should be completed only by the Tenderer]

Invitation for Tender No: *[indicate IFT No]*
 Tender Package No: *[indicate Package No]*
 This Package is divided into the following Number of Lots: *[indicate number of Lot(s)]*

1.	Eligibility Information of the Tenderer [ITT –Clauses 5 & 29]	
1.1	Nationality of individual or country of registration	
1.2	Tenderer's legal title	
1.3	Tenderer's registered address	
1.4	Tenderer's legal status <i>[complete the relevant box]</i>	
	Proprietorship	
	Partnership	
	Limited Liability Concern	
	Government-owned Enterprise	
	Others [please describe, if applicable]	
1.5	Tenderer's year of registration	
1.6	Tenderer's authorised representative details	
	Name	
	National ID number	
	Address	
	Telephone / Fax numbers	
	e-mail address	
1.7	Litigation [ITT Cause 13]	
	If there is no history of litigation or no pending litigation then state opposite "None". If there is a history of litigation, or a number of awards, against the Tenderer provide	

	details below			
	A. Arbitration Awards made against			
	Year	Matter in dispute	Value of Award	Value of Claim
	B. Arbitration Awards pending			
	Year	Matter in dispute	Value of Claim	
1.8	Tenderer to attach photocopies of the original documents mentioned aside		[All documents required under ITT Clauses 5 and 29]	
The following two information are applicable for National Tenderers				
1.9	Tenderer's Value Added Tax Registration (VAT) Number			
1.10	Tenderer's Tax Identification Number(TIN)			
[The foreign Tenderers, in accordance with ITT Sub Clause 5.1, shall provide evidence by a written declaration to that effect to demonstrate that it meets the criterion]				
2. Qualification Information of the Tenderer [ITT Clause 32]				
2.1	General Experience in Construction Works of Tenderer			
	Start Month Year	End Month Year	Years	Contract No and Name of Contract Name and Address of Procuring Entity Brief description of Works
				Role of Tenderer [Prime/Sub/Management]
2.2	Specific Experience in Construction Works of Tenderer			
	Completed Contracts of similar nature, complexity and methods/construction technology			
	Contract No		[insert reference no] of [insert year]	

Name of Contract		[insert name]	
Role in Contract <i>[tick relevant box].</i>		Prime Contractor	Subcontractor Management Contractor
Award date		[insert date]	
Completion date		[insert date]	
Total Contract Value		[insert amount]	
Procuring Entity's Name Address Tel / Fax <u>e-mail</u> Brief description with justifications of the similarity compared to the Procuring Entity's requirements		[state justification in support of its similarity compared to the proposed works]	
2.3	Average annual construction turnover [ITT Sub Clause 15.1(a)] <i>[amount invoiced to Procuring Entity(s) for each year of works in progress or completed, using rate of exchange at the end of the period reported]</i>		
	Year	Amount & Currency	Taka or Equivalent Taka
2.4	Financial Resources available to meet the construction cash flow [ITT Sub Clause 15.1(b)]		
	No	Source of Financing	Amount Available

In order to confirm the above statements the Tenderer shall submit , as applicable, the documents mentioned in ITT Sub Clause 32.1(a), (b), (c) & (d)			
2.5	Contact Details [ITT Sub Clause 32.1 (g) & (i)]		
	Name, address, and other contact details of Tenderer Bankers and other Procuring Entity(s) that may provide references, if contacted by this Procuring Entity		
2.6	Qualifications and experience of key technical and administrative personnel proposed for Contract administration and management [ITT Sub Clause 32.1(e)]		
	Position Name Years of General Experience	Years of Specific Experience	
<i>[Tenderer to complete details of above. The Tenderer should complete the Personnel Information Form (Form PW3-5)]</i>			
2.7	Major Construction Equipments proposed to carry out the Contract [ITT Sub Clause 32.1(f)]		
	Item of Equipment	Condition (new, good, average, poor)	Owned, leased or to be purchased (state owner, lessor or seller)
<i>[Tenderer to list details of each item of major construction equipment, as applicable]</i>			

JVCA Partner Information (Form PW3-3)

[This Form should be completed by each JVCA partner].

Invitation for Tender No: *[indicate IFT No]*
Tender Package No *[indicate Package No]*
This Package is divided into the following Number of Lots *[indicate number of Lot(s)]*

1. Eligibility Information of the JVCA Partner [ITT –Clauses 5 & 29]		
1.1	Nationality of Individual or country of Registration	
1.2	JVCA Partner's legal title	
1.3	JVCA Partner's registered address	
1.4	JVCA Partner's legal status <i>[complete the relevant box]</i>	
	Proprietorship	
	Partnership	
	Limited Liability Concern	
	Government-owned Enterprise	
	Other (please describe, if applicable)	
1.5	JVCA Partner's year of registration	
1.6	JVCA Partner's authorised representative details	
	Name	
	National ID number	
	Address	
	Telephone / Fax numbers	
	e-mail address	
1.7	Litigation [ITT Sub Cause 13]	
	If there is no history of litigation or no pending litigation then state "None". If there is	

	a history of litigation, or a number of awards, against the JVCA Partner provide details below:				
	<u>A. Arbitration Awards made against</u>				
	Year	Matter in dispute	Value of Award	Value of Claim	
	<u>B. Arbitration Awards pending</u>				
	Year	Matter in dispute	Value of Claim		
1.8	JVCA Partner to attach copies of the original documents mentioned aside		[All documents required under ITT Clauses 5 and 29]		
The following two information are applicable for national JVCA Partners only					
1.9	JVCA Partner's Value Added Tax Registration (VAT) Number				
1.10	JVCA Partner's Tax Identification Number (TIN)				
<i>[The foreign JVCA Partners, in accordance with ITT Sub Clause 5.1, shall provide evidence by a written declaration to that effect to demonstrate that it meets the criterion]</i>					
2. Key Activity(ies) for which it is intended to be joint ventured [ITT Sub Clause 18.2 & 18.3]					
	Elements of Activity		Brief description of Activity		
3. Qualification Information of the JVCA Partner [ITT Clause 32]					
3.1	General Experience in Construction Works of JVCA Partner				
	Start Month Year	End Month Year	Years	Contract No and & Name of Contract Name and Address of Procuring Entity Brief description of Works	Role of JVCA Partner [Prime/Sub/Management]

3.2	Specific Experience in Construction Works of JVCA Partner Completed Contracts of similar nature, complexity and methods/construction technology			
	Contract No	[insert reference no] of [insert year]		
	Name of Contract	[insert name]		
	Role in Contract [tick relevant box]	Prime Contractor	Subcontractor	Management Contractor
	Award date	[insert date]		
	Completion date	[insert date]		
	Total Contract Amount	[insert amount]		
	Procuring Entity's Name Address Tel / Fax <u>e-mail</u> Brief description with justifications of the similarity compared to the Procuring Entity's requirements	[state justification in support of its similarity compared to the proposed works]		
3.3	Average annual construction turnover [ITT Sub Clause 15.1 (a)] <i>[amount invoiced to Procuring Entity(s) for each year of work in progress or completed, using rate of exchange at the end of the period reported]</i>			
	Year	Amount & Currency	Taka or Equivalent Taka	

3.4	Financial Resources available to meet the construction cash flow [ITT Sub-Clause 15.1(b)]		
	No	Source of financing	Amount available
	In order to confirm the above statements the JVCA Partner shall submit , as applicable, the documents mentioned in ITT Sub Clause 32.1 (a), (b), (c) & (d)		
3.5	Contact Details [ITT Sub Clause 32.1 (g) & (i)]		
	Name, address, and contact details of Tenderer's Bankers and other Procuring Entity(s) that may provide references if contacted by this Procuring Entity		

3.6	Qualifications and experience of key technical and administrative personnel proposed for Contract administration and management [ITT Sub Clause 32.1(e)]		
	Position Name Years of General Experience	Years of Specific Experience	
	<i>[Tenderer to complete details of above. The Tenderer should complete the Personnel Information Form (Form PW3-5)]</i>		
3.7	Major items of Construction Equipment proposed for carrying out the works [ITT Sub-Clause 32.1(f)]		
	Item of Equipment	Condition (new, good, average, poor)	Owned, leased or to be purchased (state owner, leaser or seller)
<i>[Tenderer to list details of each item of Major equipment, as applicable]</i>			

Subcontractor Information (Form PW3-4)

[This Form should be completed by each Subcontractor, preferably on its Letter-Head Pad]

Invitation for Tender No: *[indicate IFT No]*
Tender Package No *[indicate Package No]*
This Package is divided into the following Number of Lots *[indicate number of Lot(s)]*

1. Eligibility Information of the Subcontractor [ITT –Clauses 5 & 29]		
1.1	Nationality of Individual or country of Registration	
1.2	Subcontractor's legal title	
1.3	Subcontractor's registered address	
1.4	Subcontractor's legal status <i>[complete the relevant box]</i>	
	Proprietorship	
	Partnership	
	Limited Liability Concern	
	Government-owned Enterprise	
	Other (please describe)	
1.5	Subcontractor's year of registration	
1.6	Subcontractor's authorised representative details	
	Name	
	Address	
	Telephone / Fax numbers	
	e-mail address	
1.7	Subcontractor to attach copies of the following original documents	All documents to the extent relevant to ITT Clause 5 and 29 in support of its qualifications
The following two information are applicable for national Subcontractors		
1.8	Subcontractor's Value Added Tax	

	Registration (VAT) Number	
1.9	Subcontractor's Tax Identification Number(TIN)	
[The foreign Subcontractors , in accordance with ITT sub Clause 5.1, shall provide evidence by a written declaration to that effect to demonstrate that it meets the criterion]		
2. Key Activity(ies) for which it is intended to be Subcontracted [ITT Sub Clause 19.1]		
2.1	Elements of Activity	Brief description of Activity
2.2	List of Similar Contracts in which the proposed Subcontractor had been engaged	
	Name of Contract and Year of Execution Value of Contract Name of Procuring Entity Contact Person and contact details Type of Work performed	

Personnel Information (Form PW3-5)

[To be filled in for each person proposed by the Tenderer on Form PW3-2 & PW3-3, where applicable]

Invitation for Tender No:	<i>[indicate IFT No]</i>
Tender Package No	<i>[indicate Package No]</i>
This Package is divided into the following Number of Lots	<i>[indicate number of Lot(s)]</i>

A. Proposed Position (tick the relevant box)		
<input type="checkbox"/> Construction Project Manager	<input type="checkbox"/> Prime Candidate	<input type="checkbox"/> Alternative Candidate
<input type="checkbox"/> Key Personnel	<input type="checkbox"/> Prime Candidate	<input type="checkbox"/> Alternative Candidate
B. Personal Data		
Name		
Date of Birth		
Years overall experience		
National ID Number, if applicable		
Years of employment with the Tenderer		
Professional Qualifications: 1. 2. 3. 4.		
C. Present Employment <i>[to be completed only if not employed by the Tenderer]</i>		
Name of Employer		
Address of Employer:		
Present Job Title:		
Years with present Employer		

Tel No:		Fax No:	e-mail address:
Contact <i>[manager/personnel officer]</i> :			
D. Professional Experience			
Summarise professional experience over the last twenty years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.			
	From	To	Company / Project / Position / Relevant technical and management experience.
1			
2			
3			
4			
5			

Bank Guarantee for Tender Security (Form PW3-6)

[This is the format for the Tender Security to be issued by a scheduled Bank of Bangladesh in accordance with ITT Clause 35 & 36. All italicized text is for guidance on how to prepare this guarantee and shall be deleted from the final document]]

Invitation for Tender No:

Date:

Tender Package No:

To:

[Name and address of the Procuring Entity]

TENDER GUARANTEE No:

We have been informed that *[name of Tenderer]* (hereinafter called “the Tenderer”) intends to submit to you its Tender dated *[date of Tender]* (hereinafter called “the Tender”) for the execution of the Works of *[description of works]* under the above Invitation for Tenders (hereinafter called “the IFT”).

Furthermore, we understand that, according to your conditions, the Tender must be supported by a Bank Guarantee for Tender Security.

At the request of the Tenderer, we *[name of bank]* hereby irrevocably undertake to pay you, without cavil or argument, any sum or sums not exceeding in total an amount of Tk *[insert amount in figures and words]* upon receipt by us of your first written demand accompanied by a written statement that the Tenderer is in breach of its obligation(s) under the Tender conditions, because the Tenderer:

- a. has withdrawn its Tender after opening of Tenders but within the validity of the Tender Security; or
- b. refused to accept the Notification of Award (NOA); or
- c. failed to furnish Performance Security; or

failed or refused to sign the Contract Agreement

This guarantee will expire

- (a) if the Tenderer is the successful Tenderer, upon our receipt of a copy of the Contract Agreement signed by the Tenderer and the a copy of the Performance Security issued to you in accordance with the ITT; or
- (b) if the Tenderer is not the successful Tenderer, twenty eight (28) days after the expiration of the Tenderer’s Tender validity period.

Consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Signature

Seal of Bank and Signature

Sample Notification of Award (Form PW3-7)

Contract No:

Date:

To:

[Name of Contractor]

This is to notify you that your Tender dated *[insert date]* for the execution of the Works for *[name of project/Contract]* for the Contract Price of Tk *[state amount in figures and in words]*, as corrected and modified in accordance with the Instructions to Tenderers, has been approved by *[name of Procuring Entity]*.

You are requested to:

- i. accept in writing the Notification of Award within seven (7) working days of its issuance pursuant to ITT Sub Clause 63.1
- ii. furnish a Performance Security in the form as specified and in the amount of Tk *[state amount in figures and words]*, within fourteen (14) days of acceptance of this Notification of Award but not later than *[specify date]*, in accordance with ITT Clause 65.
- iii. sign the Contract within twenty-eight (28) days of issuance of this Notification of Award but not later than *[specify date]*, in accordance with ITT Sub Clause 69.2.

We attach the draft Contract and all other documents for your perusal and signature.

Signed

Duly authorised to sign for and on behalf of
[name of Procuring Entity]

Date:

Contract Agreement (Form PW3-8)

THIS AGREEMENT made the *[day]* day of *[month]* *[year]* between *[name and address of Procuring Entity]* (hereinafter called "the Procuring Entity") of the one part and *[name and address of Contractor]* (hereinafter called "the Contractor") of the other part:

WHEREAS the Procuring Entity invited Tenders for certain works, viz, *[brief description of works]* and has accepted a Tender by the Contractor for the execution of those works in the sum of Taka *[Contract price in figures and in words]* (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the General Conditions of Contract hereafter referred to.
2. The documents forming the Contract shall be interpreted in the following order of priority:
 - (a) the signed Contract Agreement
 - (b) the Notification of Award
 - (c) the completed Tender and the appendices to the Tender
 - (d) the Particular Conditions of Contract
 - (e) the General Conditions of Contract
 - (f) the Technical Specifications
 - (g) the General Specifications
 - (h) the Drawings
 - (i) the priced Bill of Quantities and the Schedules
 - (j) any other document listed in the PCC forming part of the Contract.
3. In consideration of the payments to be made by the Procuring Entity to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Procuring Entity to execute and complete the works and to remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Procuring Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Bangladesh on the day, month and year first written above.

For the Procuring Entity

For the Contractor

Signature

Name

National ID No.

Title

In the presence

of

Name

Address

Bank Guarantee for Performance Security (Form PW3-9)

[This is the format for the Performance Security to be issued by a scheduled bank of Bangladesh in accordance with ITT Clause 64, 65, 66 & 67. All italicized text is for guidance on how to prepare this guarantee and shall be deleted from the final document]

Contract No: [insert reference number]

Date: [insert date]

To:

[insert Name and address of Procuring
Entity]

PERFORMANCE GUARANTEE No:

We have been informed that *[name of Contractor]* (hereinafter called “the Contractor”) has undertaken, pursuant to Contract No *[insert reference number of Contract]* dated *[insert date of Contract]* (hereinafter called “the Contract”), the execution of works *[description of works]* under the Contract.

Furthermore, we understand that, according to your conditions, the Contract must be supported by a Bank Guarantee for Performance Security.

At the request of the Contractor, we *[name of bank]* hereby irrevocably undertake to pay you, without cavil or argument, any sum or sums not exceeding in total an amount of Tk *[insert amount in figures and in words]* upon receipt by us of your first written demand accompanied by a written statement that the Contractor is in breach of its obligation(s) under the Contract conditions, without you needing to prove or show grounds or reasons for your demand of the sum specified therein.

This guarantee is valid until *[insert date of validity of guarantee which should be twenty-eight days after the expected completion date; in case of extension of the time of completion, the Procuring Entity would need to get this guarantee extended]*, consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Signature

Seal of the Bank and Signature

Bank Guarantee for Advance Payment (Form PW3-10)

[This is the format for the Advance Payment Guarantee to be issued by a scheduled bank of Bangladesh in accordance with GCC Clause 75. All italicized text is for guidance on how to prepare this guarantee and shall be deleted from the final document]]

Contract No: [insert reference number]

Date: [insert date]

To:

[insert Name and address of the Procuring
Entity]

ADVANCE PAYMENT GUARANTEE No:

We have been informed that *[name of Contractor]* (hereinafter called “the Contractor”) has undertaken, pursuant to Contract No *[insert reference number of Contract]* dated *[insert date of Contract]* (hereinafter called “the Contract”), the execution of works *[description of works]* under the Contract.

Furthermore, we understand that, according to your Conditions of Contract under GCC Clause 75, the Advance Payment on Contract must be supported by a Bank Guarantee.

At the request of the Contractor, we *[insert name of bank]* hereby irrevocably undertake to pay you, without cavil or argument, any sum or sums not exceeding in total an amount of Tk *[insert amount in figures and in words]* upon receipt by us of your first written demand accompanied by a written statement that the Contractor is in breach of its obligation(s) under the Contract conditions, without you needing to prove or show grounds or reasons for your demand of the sum specified therein.

We further agree that no change, addition or other modification of the terms of the Contract to be performed, or of any of the Contract documents which may be made between the Procuring Entity and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee is valid until *[insert date of validity of guarantee]*, consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Signature

Seal of the Bank and Signature

Bank Guarantee for Retention Money Security (Form PW3-11)

[This is the format for the Retention Money Guarantee to be issued by a scheduled bank of Bangladesh in accordance with GCC Sub Clause 72.3. All italicized text is for guidance on how to prepare this guarantee and shall be deleted from the final document]]

Demand Guarantee

[Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: *[insert Name and Address of the Procuring Entity]*

Date: *[insert date]*

RETENTION MONEY GUARANTEE No.: *[insert number]*

We have been informed that *[insert name of Contractor]* (hereinafter called "the Contractor") has entered into Contract Number *[insert reference number of the Contract]* dated *[insert date]* with you, for the execution of *[insert name of Contract and brief description of Works]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, when the Taking-Over Certificate has been issued for the Works and the first half of the Retention Money has been certified for payment, payment of Tk. *[insert the amount of the second half of the Retention Money]* which becomes due after the Defects Liability Period has passed and certified in the form of Defects Correction Certificate, is to be made against a Retention Money Guarantee.

At the request of the Contractor, we *[insert name of Bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of Tk. *[insert amount in figures]* (Taka *[insert amount in words]*) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor failed to properly correct the defects duly notified in respect of the Works.

It is a condition for any claim and payment under this guarantee to be made that the payment of the second half of the Retention Money referred to above must have been received by the Contractor on its account number *[insert A/C no]* at *[name and address of Bank]*.

This guarantee is valid until *[insert the date of validity of Guarantee that being twenty eight (28) days beyond the Defects Liability Period]*. Consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

Signature

Section 6.

Seal of Bank and Signature
Bill of Quantities

Preamble to Bill of Quantities

1. The complete description for the work items listed in the Bill of Quantities is given in Section-06 of the Bid Documents.
2. The works shall be measured in accordance with the Measurement and Payment Sub-Clauses given at the end of each section of the specifications unless otherwise stated, together with any additional items included in the Bill of Quantities. The rates for these items should include all costs, including work of an ancillary or temporary nature, Test Fees, overheads and profit, required by the Bidder and shall (except insofar as is otherwise provided in the Contract) cover all his obligations under the Contract for the complete construction and maintenance of the works.
3. The quantities shall be computed net. In measuring earthworks no allowance shall be made for temporary batters, working space, shoring, Temporary works or bulking of the soil and the Bidder should make due allowance in his rates.
4. Payment for pre-cast piles shall be made in separate items for supplying and driving as per contract prices and units, concrete, reinforcement, pile shoe items shall be included.
5. The rates inserted against each item are to include for the provision and operation of all equipment necessary to meet the specifications. The Bidder shall be responsible for supplying the equipment.
6. The Bidder should not assume that equipment will be available from the BEZA and shall allow for obtaining equipment from other sources.
7. If the Bidder fails to enter a price against an item in the Bill of Quantities the amount shall be deemed to be included elsewhere in his rates.
8. The Bidder's attention is drawn to Clauses of the Conditions of Contract, which deal with variations in quantities.
9. No additional item of work of any nature shall be undertaken before a written order by the Engineer has been issued to the Bidder in this respect and a rate agreed. If there is no agreement between the Bidder and the Engineer on the rate, then the Engineer may instruct the Bidder to proceed with the work at a rate fixed by the Engineer.
10. The Bidder is responsible for ensuring the necessary tests and measurements are carried out field and at the laboratory fixed by BEZA in order to ensure that the work complies with the specifications. The Bidder shall give 24 hours notice of each item of work, which is due for testing. Any item of work, which is covered or buried without tests being carried out, may be rejected by the Engineer. Bidder's quoted rate for each item of work shall be inclusive of such test fees.
11. Only materials and work complying fully with all specified requirements shall be eligible for payment under the Contract.
12. Usable materials salvaged from within the site are the property of the BEZA and shall be applied to the works as indicated in the Bill of Quantities.

Bill of Quantities

Name of Works: Outer curtain wall work of Administrative Building in Bangabandhu
Sheikh Mujib Shilpanagar,
IFT No. 03/2019-20 Package No. : BEZA WD-1802 A, Lot No. : 01

Item no.	Item Code (if any)	Description of Item	Unit	Quantity	Unit Rate (BDT)		Amount (BDT)	
					In figures	In words	In figures	In words
1	2	3	4	5	6	7=6	8=5x6	9=8
1A		<p><u>Semi Unitized System Curtain Wall Glazing</u></p> <p>This work generally includes Supply, Fabrication and Installation of Semi Unitized System Structural Curtain wall glazing of 24mm DGU Low-E coated glass panel hold by vertical and horizontal aluminium member, glass will be glazed by Double Side Tape & Structural Silicon & Weather proofing silicon with Back-up rod from outside, Curtain frame shall be anchored with R.C.C surface by hot deep galvanized Bracket/angles & royal bolt. And all support system substructures guaranteed for specified performance of the same after complete in all respect.</p> <p><u>Materials Specification :</u></p> <p>Glass: 24 mm Double Glazing Insulated Low-E Coated Glass</p> <p>Glass Specification: 6mm Low-e Coated Tempered glass+12mm Air Gap+6mm Clear Tempered Glass.</p> <p>Glass Brand & Origin: Shanghai Yaohua Pilkington(SYP)/XINYI Glass (XYG)/Equivalent</p> <p>Alu. Profiles Surface Treatment : Powder Coated</p> <p>Alu. Profile Brand : WACANG/JIAHUA/Equival</p>	Sqm	3130				

Item no.	Item Code (if any)	Description of Item	Unit	Quantity	Unit Rate (BDT)		Amount (BDT)	
					In figures	In words	In figures	In words
1	2	3	4	5	6	7=6	8=5x6	9=8
		ent Alu. Profile Origin : China Alu. Vertical Profile : 150mmx60mm (Thickness: 3-4mm) Alu. Horizontal Profile: 60mmx70mm (Thickness: 2.5-3mm) Double Side Tape Tape: Norton T-Bond-II V2208 (Saint-Gobain),Nitto(Japan), Equivalent Structural Sealant : Siksil SG-18, Silande, Equivalent Weather Sealant: Sikahyflex 305 AP,Silande,Equivalent Royal Bolt: Hilti Bracket: Hot Deep Galvanized MS Bracket Smoke Barrier: Rock wool Density 80kg/m3						
1B		<u>Semi Unitized System</u> <u>Curtain Wall Glazing With</u> <u>Steel</u> This work generally includes Supply, Fabrication and Installation of Semi Unitized System Structural Curtain wall glazing of 24mm DGU Low-E coated glass panel hold by vertical and horizontal aluminium member, glass will be glazed by Double Side Tape & Structural Silicon & Weather proofing silicon with Back-up rod from outside, Curtain frame shall be anchored with R.C.C surface by hot deep galvanized Bracket/angles & royal bolt. And all support system substructures guaranteed for specified performance	Sqm	270				

Item no.	Item Code (if any)	Description of Item	Unit	Quantity	Unit Rate (BDT)		Amount (BDT)	
					In figures	In words	In figures	In words
1	2	3	4	5	6	7=6	8=5x6	9=8
		of the same after complete in all respect. <u>Materials Specification :</u> Glass: 24 mm Double Glazing Insulated Low-E Coated Glass Glass Specification: 6mm Low-e Coated Tempered glass+12mm Air Gap+6mm Clear Tempered Glass. Glass Brand & Origin: Shanghai Yaohua Pilkington(SYP)/XINYI Glass (XYG)/Equivalent Alu. Profiles Surface Treatment : Powder Coated Alu. Profile Brand : WACANG/JIAHUA/Equivalent Alu. Profile Origin : China Alu. Vertical Profile : 150mmx60mm (Thickness: 3-4mm) Alu. Horizontal Profile: 60mmx70mm (Thickness: 2.5-3mm) Steel Hollow Box: 120x50 mm GMS Hollow box inside Mullion, Grade Q235 Steel (minimum 80μ coating thickness) Double Side Tape Tape: Norton T-Bond-II V2208 (Saint-Gobain),Nitto(Japan), Equivalent Structural Sealant : Siksil SG-18, Silande, Equivalent Weather Sealant: Sikahyflex 305 AP,Silande,Equivalent Royal Bolt: Hilti Bracket: Hot Deep Galvanized MS Bracket Smoke Barrier: Rock wool Density 80kg/m3						

Item no.	Item Code (if any)	Description of Item	Unit	Quantity	Unit Rate (BDT)		Amount (BDT)	
					In figures	In words	In figures	In words
1	2	3	4	5	6	7=6	8=5x6	9=8
2		<u>Point Fixing Glazing Work</u> The work generally includes the design, manufacture, fabrication, Supply and erection of Point fixing paneling system composed of specially processed and composed of Tempered surface glass and laminated glass FIN together which includes all associated accessories, hardware and support system substructure guaranteed for specified performance of the same after complete in all respect. <u>Materials Specification :</u> Centre Glass: 15mm Tempered Clear Glass Fin Glass: 17.52mm Laminated Glass Glass Combination: 8mm Clear Tempered+1.52 PVB+8mm Clear Tempered Laminated Glass Glass Brand & Origin: Shanghai Yaohua Pilkington(SYP)/XINYI Glass (XYG)/Equivalent Spider &Routel: KINLONG,HEHE,Equivalent _China Sealant: Sikahyflex 305-Ap, Silande, Equivalent	Sqm	160				
3		<u>Glass Canopy</u> The works generally includes supply, fabrication and installation specially processed and composed of Sentry Laminated Glass Canopy with Heavy-Duty M.S. Frame with rust proof epoxy painted with all	Sqm	185				

Item no.	Item Code (if any)	Description of Item	Unit	Quantity	Unit Rate (BDT)		Amount (BDT)	
					In figures	In words	In figures	In words
1	2	3	4	5	6	7=6	8=5x6	9=8
		<p>related accessories and support system guaranteed for specified performance after complete in all respect.</p> <p>Materials Specifications : Glass : 21.52 mm Tempered Laminated Glass Glass Combination: 10mm Clear Tempered+1.52PVB+10mm Clear Tempered Glass Brand: Shanghai Yaohua Pilkington(SYP)/ XINYI Glass (XYG)/Equivalent Steel I-Beam: 250x250x9x14mm, 200x200x8x12mm, 150x150x7x10mm Steel I Beam Grade-Q235 (minimum 80μ coating thickness) 3.G.M.S. Round Tubes: Ø140x6mm Thick 6 G.M.S Pipes Grade-Q235. Sealant: Sikahyflex 305 Ap /Silande/Equivalent</p>						
4		<p><u>Auto Sensor Door</u> The work generally includes the design, manufacture, fabrication, supply and erection of specially processed tempered Glass Auto Sensor which include all associated accessories, hardware and support system substructure guaranteed for specified performance of the same after complete in all respect.</p> <p><u>Material Specification:</u> Glass:12mm Clear Tempered Glass Glass Brand &Origin: Shanghai Yaohua</p>	Sqm	5				

Item no.	Item Code (if any)	Description of Item	Unit	Quantity	Unit Rate (BDT)		Amount (BDT)	
					In figures	In words	In figures	In words
1	2	3	4	5	6	7=6	8=5x6	9=8
		Pilkington(SYP)/XINYI Glass (XYG)/Equivalent Door Sensor Device: Dorma Door Sensor Device Galvaized Steel : 250x125x6x9mm H type steel, GMS Angle etc with Grade-Q235 (minimum 80μ coating thickness)						
5		Construction of site office as mentioned in tender document & as per direction by BEZA.	LS	1				
6		Implementation of Environmental Management Plan as mentioned in tender document.	LS	1				
		Total						
In Word (BDT) :								

This Bill of Quantities contains [insert number] corrections duly initialled and signed by the authorised person of the Tenderer

Note

1. It is suggested that the Tenderer uses these sheets of the BOQ in order to avoid any manipulation, distortion and inadvertent mistakes or omissions in course of preparing the Tender by the Tenderer
2. Follow the Guidance notes under **Section 6** in filling this Schedule

Section 7. General Specifications

MAINTENANCE AND PROTECTION OF TRAFFIC

General

The Contractor shall at all times maintain the traffic flow along existing roads, rivers and canals and take all necessary measures for the safety of traffic, pedestrians and workers. The Contractor shall provide, erect, operate and maintain signs, markings, lights, barricades and traffic control equipment in accordance with the Bangladesh Road Transport Authority's Traffic Signs Manual, unless otherwise directed by the Engineer. The Contractor shall provide and maintain all detours, temporary roads, temporary bridges, necessary barricades, warning lights and signs as well as other equipment at all hours during the day or night.

The Engineer's approval of plan and section drawings of proposed detours, temporary roads and temporary bridges shall be obtained by the Contractor before any work is commenced. Where the work site takes up part of the road only, and the full width of the road can be restored for night time traffic, the Engineer may give permission for control of the traffic through the works area by use of flagmen or electronically controlled mobile traffic lights, without the need for construction of bypass roads, but the Engineer's approval will only be given if, and while, the Contractor demonstrates that sufficient resources are applied and maintained for this purpose.

Where construction interferes with the existing roads, track and footpaths, other than as noted above, provision shall be made to a similar standard that existed prior to the works for the free movement of traffic and pedestrians. The Contractor shall take all necessary steps to avoid or minimise delays and inconvenience to road users during the course of the works.

Notwithstanding the above any diversion of the National and Regional Highways shall comply to at least the minimum standard stated as following:

- Minimum carriageway width of 7.3 metres.
- Minimum horizontal radius of 150 metres.
- Maximum gradient of 1 in 33.
- The construction shall be sufficient for the smooth uninterrupted passage of all traffic and have a bituminous surface.

Notwithstanding the above any diversion of Feeder Roads shall comply to at least the minimum standard stated as following:

- Minimum carriageway width of 5.50 metres.
- Minimum horizontal radius of 100 metres.
- Maximum gradient of 1 in 33.
- All weather surfaces.

The Contractor shall supply all temporary signs, lights and other equipment, to the approval of the Engineer, to ensure smooth and safe flows of traffic. Also the Contractor shall take all reasonable precautions to prevent damage to vehicles from construction equipment or materials and shall be responsible for any claims arising from such damage.

The Contractor shall in due time and at least seven days before any diversion, interruption or impediment to traffic takes place, submit a detailed stage programme for the Engineer's approval. The programme shall show all arrangements necessary to ensure a smooth traffic flow. Upon completion of the Works, all temporary roads, temporary bridges, barricades, signs

and other equipment shall be completely removed, unless otherwise approved in writing by the Engineer. From the date of Commencement of the Contract to the date of the Completion or Partial Completion Certificate the Contractor shall also be responsible for maintenance of, and repair of damage, to all existing features, constructions, structures, pavements etc. which come within the limits of the site irrespective of the cause of the damage, unless that cause is determined to be an accepted risk and the repairs are determined to be a compensation event.

If in the opinion of the Engineer the Contractor has failed to properly repair or maintain existing or temporary construction, or provide sufficient or appropriate warning signs, lights, barricades etc. he shall instruct the Contractor, in writing, to provide such signs as he considers appropriate for protection of traffic, pedestrians, employees and the works. If the Contractor fails to respond within the time given by the Engineer, the Engineer may suspend works which interfere with traffic until such time as the Contractor provides sufficient signs etc. as the Engineer has directed, or the Engineer may arrange to provide the required signs etc. at cost to the Contractor, these costs being deducted from monies due to the Contractor under the Contract. These costs will include any costs for missing or stolen items not returned to the Engineer at the completion of works or when replaced by the Contractor.

The construction and ultimate removal of all temporary constructions as well as the provision of barricades, signs and other equipment shall be paid for at a lump sum price. This sum shall cover all earthworks, temporary bridging and culverts, pavement and surfacing materials, warning signs, lights, control of traffic including single lane working, by day and by night, and all other items to ensure the smooth and safe flow of traffic.

Where temporary bridging materials, such as Bailey Bridge components are supplied to the Contractor, these will be delivered to the Site. The Contractor shall be responsible for the care of all materials supplied to him and shall bear all costs associated with repair and replacement due to damage and loss.

The maintenance and repair of existing and temporary constructions, and equipment provided for the maintenance and protection of traffic flows shall be paid for at a daily rate. When the Engineer issues an instruction requiring the Contractor to provide; repairs, maintenance, or additional temporary signs, lights, barricades or any other such feature, every day the Contractor fails to comply with the instruction to the satisfaction of the Engineer, the day shall not be included for payment and a corresponding pro rata deduction shall be made to the Lump Sum for establishment of temporary construction and provision of signs etc. noted above. This means that for every day the Contractor fails to comply with the Engineer's instruction there will be no payment made for establishment and maintenance of temporary works and signs for the whole of the site.

Additional fill material used for temporary diversions outside the lines shown on the cross sections and plans for the permanent works may be allowed to remain in place on completion of the Works, provided it is trimmed to levels and slopes approved in writing by the Engineer and all additional costs such as extending drainage and for additional grassing to shoulders and side slopes are at the cost of the Contractor.

FIELD OFFICE FOR THE ENGINEER AND OTHER FACILITIES TO BE PROVIDED BY THE CONTRACTOR

Field Office for the Engineer and his Staff

In addition to the office space required for his own use, the Contractor shall provide and maintain a furnished field office for the use of the Engineer and his staff. Requirements for the office, including overall size, number and size of individual rooms, construction and furniture are stated in Particular Specifications Clause 1.2.1 in Section 6 of Volume 1 - The Tender.

The field office shall be maintained in a secure and watertight condition by the Contractor until completion of the Works or as otherwise instructed by the Engineer and shall be provided with electricity, running water and sewerage. All doors shall be fitted with approved locks, and windows shall be provided with mosquito screens and blinds and shall have interior locking devices.

The Contractor shall submit for the approval of the Engineer before construction, plans and drawings showing proposed details and location for the field office, including foundations, access roads, shades, layout of electrical and water supplies and hard standings thereto. The Engineer may require revision of the plans prior to giving approval for construction. The Contractor shall also submit details of proposed furniture and fittings to the Engineer for approval. These items shall generally be of the best quality obtainable locally.

The office, complete with furnishings, fittings, access roads and hard standings shall be ready for occupation by the Engineer within four weeks of the date when the Contractor first occupies the site.

The Contractor will provide all necessary MLSS (Members of Lower Service Staff) for the field office, including day and night security guards and a tea boy. The Contractor will also provide a competent computer operator. Staff considered unsuitable by the Engineer shall be replaced.

The Contractor shall arrange for the field office to be regularly and properly cleaned and for access roads and hard standings to be maintained in a well drained and trafficable condition. All furnishings and fittings in the field office shall also be maintained by the Contractor in working condition and to the approval of the Engineer.

All materials recovered from dismantling the office and removing access roads, hard standings etc., should be stockpiled on site as approved by the Engineer and along with all furniture and fittings will be the property of the Employer.

Where suitable buildings are available within the general limits of the site of the works the Contractor may propose to the Engineer that the buildings be rented. The buildings must conform with all the criteria above and if deemed to be satisfactory, the Engineer may accept their use as offices.

Sanitation

The Contractor shall provide adequate water-borne sanitation and refuse collection and disposal, complying with the Laws of Bangladesh and all local By-Laws, and to the satisfaction of the Engineer, for all offices, laboratories, workshops, houses etc. erected on the Site.

Office Equipment and Consumables

The Contractor shall provide and maintain the office equipment such as photocopy machines and computers for the Engineer's field office as listed in Particular Specifications Clause 1.2.3 in Section 6 of Volume 1-The Tender. Equipment supplied will be subject to the approval by the Engineer. The Contractor shall supply all consumables related to the equipment and arrange for the equipment to be maintained, including servicing at intervals recommended by the

respective manufacturers. Upon completion of the Works or as otherwise instructed by the Engineer, the equipment shall become the property of the Contractor.

The Contractor shall provide and maintain in working order/good condition, as applicable, the items of kitchen equipment listed in Particular Specifications Clause 1.2.3 in Section 6 of Volume 1-The Tender.

The Contractor shall provide all standard stationery items to the Engineer's field office, along with kitchen and bathroom supplies as may be required by the Engineer throughout the duration of the contract.

Sign Boards

The Contractor shall provide identification sign boards, of the number and size stated in Particular Specifications Clause 1.2.4 in Section 6 of Volume 1-The Tender, and maintain them in good condition. All information on the signboards will be written in English and Bengali. The signboards will be positioned as directed by the Engineer. The Contractor shall submit proposals for the materials of the signboards, the text layout and installation of the signboards on Site to the Engineer for approval. Each sign shall show:

- the name of the Project
- the name of the Employer
- all other details as required by the Engineer

The Contractor shall remove the sign boards on completion of the Works or when instructed by the Engineer

TESTING OF MATERIALS

Contractor's Site Laboratory

The Contractor shall provide and maintain a site laboratory for the use of the Contractor and the Engineer including furniture, testing equipment and consumable stores necessary to carry out the tests listed in Particular Specifications Clause 1.3.1 in Section 6 of Volume 1-The Tender. The laboratory shall be constructed with a reinforced concrete floor (minimum thickness 150mm) and brick walls. The building shall be watertight and provided with electricity, potable running water and sewerage connections. The location of septic tank(s) and soak-away(s) is to be approved by the Engineer. Doors shall be fitted with approved locks, and windows shall be provided with mosquito screens and blinds and shall have interior locking devices.

The Contractor shall submit for the approval of the Engineer before construction, plans and drawings of the proposed laboratory indicating location, overall size, construction details and layout of benches, washing facilities, furniture, testing equipment, sample storage etc. The Engineer may require revision of the plans prior to giving approval for construction. The Contractor shall also submit details of proposed testing equipment, furniture and fittings to the Engineer for approval.

The Contractor shall maintain the laboratory, furniture, fittings and testing equipment for the duration of the Contract and replace any part or item that is irreparably damaged or lost. The Contractor shall pay all expenses in respect of water, electricity and other consumables necessary for the running of the laboratory and shall arrange for the laboratory to be regularly cleaned.

The Contractor shall not be permitted to commence permanent works requiring on- Site testing until the Site laboratory is complete in all respects, unless temporary testing procedures proposed by the Contractor have been approved by the Engineer.

At the end of the Contract, all materials recovered from dismantling the laboratory, together with all furniture, fittings and testing equipment will remain the property of the Contractor.

Special and Additional Testing

In addition to the testing described in Specifications Sections, the Engineer may require further testing to be carried out. Such special and additional testing shall be arranged by the Contractor under the direction of the Engineer.

Staff for Materials testing

The Contractor shall provide qualified laboratory engineers, technicians, assistants, labourers, etc. to carry out sampling and testing of materials in accordance with Specifications Sections. Laboratory staff shall be subject to the approval of the Engineer and be available to assist the Engineer with materials testing, as and when required.

TRANSPORT FOR THE ENGINEER

General

The Contractor shall provide and maintain road and river transport for the exclusive use of the Engineer, his representatives and representatives of the Employer.

Items of Transport

Road transport, which shall be used both on and off the Site, shall include saloon cars of 1200 cc capacity, double cab pick-ups, four wheel drive vehicles with a minimum of 6 seats and motor cycles of 125 cc capacity.

River transport shall be motor boats of minimum length 5 m suitable for carrying out survey and inspection work and shall have covered deck areas to give protection from the sun and rain. No persons of either the Engineer's or Contractor's staff other than authorised boatmen shall be allowed to operate the boats.

The Bill of Quantities indicates the requirements for road and river transport. When items of transport are out of use for repairs, servicing etc., equivalent substitutes shall be provided by the contractor.

Items of transport and drivers or boatmen considered unsuitable by the Engineer shall be replaced.

RELOCATION OF PUBLIC UTILITIES

Description

The Contractor shall be responsible for establishing the locations of all public utilities within the Site of the Works, and for their protection.

Where the necessity for the permanent relocation of public utilities has been identified, details will be indicated on the Drawings.

Should the Contractor consider that the temporary diversion of public utilities is necessary in order to carry out Contract works, he shall submit details of his proposals to the Engineer.

Relocation works will normally be undertaken by the concerned authorities, with which the Contractor will be expected to liaise. The Contractor shall indicate relocation works in his Contract Programme.

GENERAL CONTRACTOR'S OBLIGATIONS

Site Establishment, Maintenance and Demobilisation

The Contractor is to allow for the provision, maintenance and removal at the end of the Contract of all offices, stores, covered workshops, canteens, toilet facilities etc. for his own use, required to execute the Works in accordance with the Contract Documents. In addition, the Contractor is to allow for complying with his obligations for safety, security and protection of the environment described in the Contract Documents.

Provision of Insurances

This item is for the provision of insurances as required in accordance with Clauses. The minimum amount of third party insurance shall be as stated in the Contract Data. Failure to provide insurance will result in no interim payments.

As-Built Drawings

The Contractor shall furnish sets of as-built Drawings of the Works to the Engineer, showing the permanent works as actually constructed, within one month of completion of the Works. Included in the sets of as-built Drawings will be revisions of Tender Drawings and Drawings supplied to the Contractor during the Contract as well as revisions of drawings supplied by the Contractor during the Contract. The As-built drawings submitted by the Contractor will be subject to the approval of the Engineer.

01. Semi Unitized System Curtain Wall Glazing

The work generally includes the design, manufacture, fabrication; supply and erection of **Semi Unitized System** of Curtain Wall Glazing work with Double glazed glass of LOW-E coated panels with vertical and horizontal aluminum profiles including all associated accessories, hardware and support system substructure guaranteed for specified performance of the same after complete in all respect.

Specification

System	Semi Unitized System Curtain wall glazing of 24mm Low-E Coated Double Glazing Insulated glass, the curtain wall frame and the glass panels shall be glazed and fixed to on the job site plant.
Method	The system is a method of bonding glass and aluminum frame using Double Sided Tape, structural & Weather silicone sealant as shown in the drawing.
Aluminum	Aluminum alloy should be confirming Alloy 6063-T5 & T-6. Aluminum surface treatment will be powder coated comply with AAMA 2604. The Vertical (Mullion) size is preferred 150x60mm and Horizontal (Transom) size is preferred 60x70mm. For vertical mullion aluminum thickness is preferred between 3mm-4mm as per structural calculation and for horizontal and edge transom thickness will be 2.5-3mm. Maximum thickness tolerance is (\pm) 0.15mm.
Aluminum Manufacturer	Wacang, Jiahua, Equivalent
Substructure	Heavy-duty anti-corrosive coated Mild Steel (MS) substructure, Zinc plated and Galvanized Steel brackets are designed for anchorage of the vertical mullion attached to the building structure.
Fire Stop/barrier	Rock Wool or appropriate (compliant) fire stop barrier between the horizontal floors shall be provided at areas of spandrel and panels around the glazed portion where ever necessary. Rock wool density 80 kg/m ³ with galvanized capping.
Spacer Tape	The spacer tape shall be Norton T-Bond II V2208 (Saint- Gobain USA)/ Nitto (Japan) with density of 0.0130 IB/in ³ as per testing method ASTM D1667 and thickness of 6.4mm
Flashing and coping	Flashing and coping shall be made of 1mm thick solid galvanized sheet of matching finish bent as per design and where ever necessary.
Glass	24mm Low-e Coated Double Glazing Insulated Tempered Glass as per specified performance and approved color by procuring entity

	Visible Light Transmittance:	53% min
	Visible Reflectance (Out):	15% max
	Summer U-factor (U-value):	1.85 max
	Shading Coefficient (SC):	0.50 max
	Solar Heat Gain Coefficient (SHGC):	0.44 max
Glass Combination	6 mm Low -E Coated Tempered Glass +12 Air Gap + 6mm Clear Tempered Glass	
Fastener& Anchor Bolt	“Fasteners” Zinc chromate steel anchor will be used for curtain wall and fixing brackets. Adopted Brand HILTI or Fischer.	
Structural Sealant	Structural Sealant shall be used for glazing work and adopted brand is Sikasil SG 18” or Silande or Equivalent	
Weather Sealant	Weather sealant will be used from outside for weather proofing. Adopted Brand is “Sikahyflex 305 AP or Silande or Equivalent	

02. Point Fixing Glazing System

The work generally includes the design, manufacture, fabrication, Supply and erection of Point fixing paneling system composed of specially processed and composed of laminated surface glass and laminated glass FIN together which includes all associated accessories, hardware and support system substructure guaranteed for specified performance of the same after complete in all respect.

Specification

System	Point fixing paneling system shall be composed of specially processed composed of Tempered glass supported by Laminated Glass Fins together to form a single pane bolted together at their corners by means of small stainless steel spider type fittings. The system shall allow the openings to transmit light to the building with minimum of visual barriers. The system shall be designed considering appropriate wind loading and performance requirements.
Method	The method is a structural glazing system with spider type fittings for vertical glazing, without the use of metal frames or mullions of any kind and which shall be hung from the building structure to form a complete glass façade. The assemblage so produced shall be suspended from the building structure by hangers bolted to its top edge, and shall be sealed to the building in peripheral steel angles.
Substructure (Fins)	Laminated glass panel joints are sealed with a silicone sealant and laminated tempered glass as stabilizers (Stabilizer Fins) are used at each vertical joint to provide lateral stiffness against wind loading.
Spider	Stainless Steel (Mirror Finished-316 Grade) as per Architect Choice. Adopted brand for Spider is Kinlong /HEHE/Equivalent
Surface Glass	15mm Tempered Clear Glass Substructure FIN Glass 17.52 Laminated Tempered glass (8mm Clear Tempered +1.52 PVB +8mm Clear Tempered)
U Channel	U Channel and other Stainless Steel accessories will be SS (Mirror Finished) 316 Grade.
Weather Sealant	Weather sealant will be used from outside for weather proofing. Adopted Brand is "Sikahyflex 305 AP or Silande or Equivalent

03. Glass Canopy

The works generally includes supply, fabrication and installation specially processed and composed of Sentry Laminated Glass Canopy with Heavy-Duty M.S. Frame with rust proof epoxy painted with all related accessories and support system guaranteed for specified performance after complete in all respect.

Specification

System	Glass canopy system shall be composed of specially processed and composed of laminated glass fitted in proper size GMS Frame with required rust proof paint. The system shall allow the openings to transmit light to the building with minimum of visual barriers. The system shall be designed considering appropriate wind loading and performance requirements.
Method	The method is a structural glazing system for horizontal glazing with the support of Heavy duty GMS Frame.
Substructure	GMS Steel Structure through horizontal & vertical direction taking support from RCC frame structure beam—which include all associated accessories, hardware, primer red oxide, final epoxy painted and support system substructure guaranteed for specified performance of the same after complete in all respect.
Spider	Stainless Steel (Mirror Finished-316 Grade) as per Client's Choice. Adopted brand for Spider is Kinlong/HEHE/Equivalent
Glass	21.52 Laminated Tempered glass (10mm Clear Tempered +1.52PVB+10mm ClearTempered)
U Channel	U Channel and other Stainless Steel accessories will be SS (Mirror Finished) 316 Grade.
Weather Sealant	Weather sealant will be used from outside for weather proofing. Adopted Brand is "Sikahyflex 305 AP or Silande or Equivalent

04. Auto Sensor Door

The work generally includes the design, manufacture, fabrication, supply and erection of specially processed tempered Glass Auto Sensor which include all associated accessories, hardware and support system substructure guaranteed for specified performance of the same after complete in all respect.

Specification

Method	The method is a 12mm Tempered Auto sensor door system with related accessories for specified performance of the same after complete in all respect.
Glass	12mm Clear Tempered Glass
Sensor Device	Dorma door sensor.

PERFORMANCE AND DESIGN REQUIREMENT

Requirement	
Air Infiltration Test as per ASTM E-283	Air infiltration for all kinds of curtain wall shall not exceed 1.1 m ³ /Hr/M ² at 75 Pa for fixed liters.
Water Penetration Test as per ASTM E-331	Water penetration of exterior curtain wall shall be by uniform static air pressure difference.
Structural Performance uniform static Test as per ASTM E-330	<p>The test pressure applied onto to curtain wall is positive 320 Pa and the duration of test is 15 minutes.</p> <p>Structural performance of exterior curtain wall by air pressure difference and the curtain wall system shall be designed to withstand both positive and negative design wind pressures acting normal to the plane of the curtain wall. The wind pressure applies onto the curtain wall is positive 5.5Kpa and negative 5.5Kpa. The deflection of main framing members shall not exceed L/175 of span, normal to the plane of the wall or 19mm whichever is less.</p> <p>Allowable stress for metal curtain wall elements shall conform to the minimum standards as published in the aluminium association's "aluminium construction manual - specifications for aluminium structures" current issue.</p>
Wind Pressure	Wind design loading shall be determined in accordance with Bangladesh National Building Code 1993 part 6, Section 2.4 using Exposure Category B and basic wind speed is 260km/h.
Vertical Loading	Vertical loading allowed shall be at least twice the dead weight of all masonry fixings supporting glazing and framing members.
Stiffness	Deflection of any member in any direction from horizontal loading on any section of the completed curtain wall system shall not be greater than 1/350 th of the unsupported span.
Deflection of members	Between fixings from vertical loading from the completed curtain wall system shall be limited to span/1000.
Allowance for Movement	An allowance for thermal movement of ±1.3mm/m length of members shall be for expansion and contraction in the plane of the members based on an installation temperature of 28° C. Calculations for suitable correction of this factor shall be submitted if the installation temperature varies from the assumed 28° C.

Expansion and contraction shall take place by the use Semi unitized method of fully weathered horizontal and vertical expansion joint in the units and not by slotted fixing holes in brackets to allow sliding movement between the brackets and the building structure or by absorption of expansion by rigidity of sections.

In addition to any other movement allowance contained within this clause, the curtain wall system shall be designed to provide for an anticipated structural member deflection of 15mm between columns generally. Allow also for the normal temperature, shrinkage and creep movements in the structure.

Computations

The design computations shall be prepared in accordance with the design requirements and shall show that the members and their fixings are satisfactory for strength and stiffness and that reasonable allowance has been made for thermal movements and differential movement of the structure.

Drawings

The Tenderer has to submit Tender Drawing along with related details. Tender Drawing needs to be supported by Structural calculation with related computation of each material and relative load like dead load, live load, seismic load, maintenance load, wind load, and wind pressure etc.

Successful contractor shall prepare shop drawings along with structural design with detail calculation of each materials for this project showing all sections, details and submit to the consultant or owner's representative for approval prior to manufacture.

The shop drawings, together with any notes or specification, shall demonstrate that the details, sections and method of erection and completion do not impair the concept shown on the drawings and that the performance requirements as specified are complied with, all to the satisfaction of the consultant as well as the owner.

Where required, the shop drawings shall be accompanied by computations showing designs provision for structural adequacy, deflections and thermal movements.

Equipment

The Contractor must have possession under own ownership sufficient numbers of Machinery a required for proper execution of the works to be decided by the Procurement entity.

Warranty

The contractor shall provide a written guarantee for a period of not less than ten (10) years from the date of actual completion and shall make provision for the making good of any defect causing:

- a) Water penetration
- b) Air leakage

- c) Failure of glass curtain wall, doors or any component including glass, aluminium panels, jointing, sealant, hardware unless any of the foregoing mentioned were caused by failure of displacement of the main structure or its components in excess of that covered within this specification.

Accepted Code and International Standard

Requirement

Following but not limited relevant codes are applicable. Wherever applicable Bangladesh National Building Code (BNBC) shall be referred

Title	Details	Code
Design Load	Wind Load	<ul style="list-style-type: none"> Bangladesh National Wind load Code IS 875(Part 3):1987-Code of practice for wind loads
	Imposed Loads	<ul style="list-style-type: none"> BS EN 1991-1-1:2002-Action on structures General actions densities, self-weight imposed loads for structures
Aluminium Design	Structural design of aluminium extrusion	<ul style="list-style-type: none"> BS 8118:Structural Use of Aluminium BS EN 1999-1-4:2007 BS EN 1999-1-3:2007
Structural Aluminium	Aluminium Extruded sections	<ul style="list-style-type: none"> BS 1161 Specification for aluminium alloy sections for structural purposes BS EN 12020 -Pts. 1 Aluminium and aluminium alloys. Extruded precision profiles in alloys EN AW-6060 and EN AW-6063. Technical conditions for inspection and delivery & BS EN 12020 -Pts. 2 Aluminium and aluminium alloys. Extruded precision profiles in alloys EN AW-6060 and EN AW-6063. Tolerances on dimensions and form
Structural Aluminium	Aluminium plate sheet & strip	<ul style="list-style-type: none"> BS EN 573 Pts. 1 to 3- <ol style="list-style-type: none"> Aluminium and aluminium alloys. Chemical Composition and form of wrought products. Numerical designation system Aluminium and aluminium alloys. Chemical Composition and form of wrought products. Chemical symbol based designation system Aluminium and aluminium alloys. Chemical Composition and form of wrought products. Chemical composition and form of products BS 4873- 2009-Aluminium alloy windows and door sets. Specification
Glass Design	Structural Design	ASTM E1300 : Glass in Buildings
	General	BS 6262:Code of Practice for glazing for buildings
Bracket	Hot dip Galvanization comply with	<ul style="list-style-type: none"> IS 4259-1996 This standard specifies the requirements for Zinc coating applied by hot dip for Zinc coating applied by hot dip galvanizing on Iron and steel products,

		galvanizing on Iron and steel products <ul style="list-style-type: none"> • BS EN ISO 1461:2009 • Hot dip galvanized coatings on fabricated iron and steel articles. Specifications and test methods
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MATERIALS

All work and materials within this section shall be carried out in accordance with the following standards of approved equivalent, including all specified standards and all other standards referred therein. The materials used in the manufacture and installation for this project shall be as follows:

Materials

1 Aluminium

1.1 Extrusions

- Aluminium shall have the chemical composition and temper appropriate for its function, exposure and applied finish.
- Use Grade 6061 T5&T6 of BS EN 12020 for exposed anodised aluminium extrusions
- Use Grades 6061. 6063 or 6106 of temper class T5 or T6 of BS EN 12020 for other locations.
- The extrusions shall have the webs, walls, and flanges of sufficient thickness and eliminate permanent distortion of elements in the finished Works.
- Structural design of aluminium extrusions to comply with requirements of BS 8118 or AS 1664.
- Comply with BS EN 486, BS EN 573-1 BS EN 755 and BS 1161.
- Platforms, webs, flanges, races and screw t'lutes of sufficient size to satisfy all structural requirements and eliminate distortion to the finished surfaces.
- Contractor should take due care to have sufficient wall thickness for extrusion in order to extruder the profiles with acceptable tolerances. Thickness should be adequate to avoid warping and twisting of profiles. Contractor cannot claim extra cost if the thickness needs to be increased at design development stage.

1.2 Extruder

- Extruder will be subject to quality review by consultants, extruder to be capable of extruding profiles with acceptable tolerances and international quality.
- All mating sections should only be extruded with single extruder to avoid profiles mismatch
- Full production of extrusions should only start after successful completion of trial runs with approved samples of extrusions.
- Extruder shall have spare die for critical section to avoid any production loss and delay in the event of die break down.

- Following submissions need to be made at the time of extruding
 - Mill certificate and test results for billets
 - Results of the spectrometer analysis on billets
 - Oncompleted extrusions after heat treatment
 - Results of Ultimate Tensile Strength (UTS) on aged samples
 - Results of hardness test on each lot
 - QA checking recorded form or table to show the extrusions were checked dimensions, tolerances, straightness at the agreed frequency

1.3.Aluminium Finish-Powder Coating

All visible surfaces of aluminium extrusions, pressings and the like shall be shop finished prior to assembly. Colour and gloss level to be nominated by the Architect. Coating systems shall be selected for durability, colour fastness and resistance to damage.

All finish coated aluminium sheeting and frames shall be protected during manufacture and erection. Provide details of protection to consultant for review and acceptance. Facade contractor shall finalise coating applicator only after review of consultants, if the proposed coating applicator is not satisfactory then alternate applicator should be sourced by the facade contractor. Facade contractor is responsible to get the colour approval on time and finalise the coating applicator.

Following are minimum requirements

- Comply with the minimum requirements of AAMA 2604
- Use a single supplier and applicator throughout production to ensure consistency of appearance.
- Coat all significant surfaces with the following minimum (unless noted otherwise):
- DFT Nominal thickness of 70 micron, (Min. 60 micron at any coated surface & not exceeding 120 micron)
- If a two coat system is used, the top coat is to have a minimum thickness of 25 microns.
- The coatings are to be free of flow lines, streaks, blisters, pin holes, tears, damage and other surface defects. Visual inspection for scratches, dents and blemishes to be from 1m under normal diffused daylight.

Apply the coating using an applicator approved by the polyester powder manufacturer and agreed by the Consultants. Use international powder (paints) suppliers such as Akzo Noble, Jotun

1.4. Alumunium Warranties

- Alumunium supplier should produce written warranty on performance and manufacturing defects for the period of min. 10 years from the date of supply for this project.
- Alumunium supplier should provide Back to Back or Joint Warranty to the owner, warranty should be given through the facade contractor.
- Draft warranty copy should be given prior to finalisationand final warranty should be

issued upon completion of Aluminium supply.

2. Glass

All glass shall be to approval as manufactured Shanghai Yaohua Pilkington Glass (SYP) China, , XINYI Glass (XYG.).China , Equivalent

Glass performance requirements will be determined by Consultant/Architect. Glass samples shall be tested at an approved third party international test laboratory such as PSB Singapore, Setsco or OTM (Singapore)

2.1 General Requirements

All base supply glass to be float glass comply with following

- Comply with the requirements of ASTM C1036.
- Cut to accurate sizes in the factory
- Clean cut, without significant edge faults that produce risk of breakage (including feathered edges, shells or other imperfections) and free from bubbles, inclusions, cracks, rippling, dimples, sleeks or other defects.
- Assessed for optical and visual faults as described in BS EN 572-2. Spot faults to be no worse than category C. There will be no linear / extended faults. Optical faults to be within the limits set in BS EN 572-2.
- No local defects producing irregular reflections.
- Glazing more than 3m above the ground with unsupported edges to be laminated.
- Glazing that is inclined by more than 15° from vertical or horizontal to be laminated.
- Do not use Toughened (Tempered) glass in situations where breakage could result in glass falling more than 4 metres to an occupied area, unless specifically approved.

2.3. Glass design Requirements.

The allowable design stresses in the glass shall be as follows.

Glass Type	Allowable Surface stresses Mpa	Allowable Edge Stresses Mpa
Annealed	19.4	18.3
Heat Strengthened	38.8	36.5
Toughened/Tempered	77.6	73.0

2.4. Thickness

The thickness and dimensions of glass shown on the drawings are minimum thicknesses, not prescribed thicknesses or dimensions. Contractor should calculate the glass thicknesses, using the recommendations in the relevant standards or validated proprietary design methods to meet the structural, environmental, and acoustic and safety requirements.

2.5. Visual Quality and Requirements.

- To comply with architectural design intent in terms of tone of glass.
- .Visual quality should comply with glass installed condition, i.e. glazed / installed at its final location on the building. Viewing condition apply to final installed condition.
- Visual distortions of views and reflections to minimised.

- Visual quality of views and reflections to be established using visual mock-ups.
- Glass used for visual mock-ups to follow actual composition where possible.
- Colour consistency to be maintained throughout the supply for the project. Colour variation that exceeds allowable limits as per international standards shall not be acceptable.
- Colour variations shall be within Delta E 2.5 measured with handheld spectrophotometer, measured as per ASTM D 2244 following CIE 1976 calculation method.

2.6. Safety and Thermal Stresses

Ensure that no glass or glazing combination develops stresses that may lead to damage of glass, glass breakage, glazing materials, components and/or framing systems. Conduct a thermal stress analysis to verify that all glazing that is not heat strengthened or toughened is thermally safe and will not be susceptible to heat cracking.

Take into account shading stresses that might occur from adjacent components and buildings including shading devices. Where analysis indicates thermal cracking may occur, use heat strengthened or toughened glass (subject to restrictions in Detailed Design Principles section).

2.7. Insulated Glazed Units (DGU)

Insulating glazing units to be / have:

- Hermetically sealed complying with BS5713.
- Mechanically applied primary poly-isobutylene seal located between glass and spacer providing a continuous vapour proof barrier of a minimum width of 2mm and a secondary two part silicone sealant extending around the perimeter of the unit.
- The design of the secondary seal consistent with the glazing details. Where the unit is supported by structural sealant or clips to the spacer bar the secondary seal to be designed for the effects of wind and barometric pressures.
- Secondary sealants to be verified by the glass supplier for the structural sealant bite based on biggest glass panel and design wind load. In any case the secondary sealant not to be less than 6mm.
- Aluminium alloy spacers with a natural or black finish and sufficient rigidity for their purpose. Formed to accommodate seals and to contain desiccant.
- All corners and joints fabricated so as to ensure a water vapour tight construction.
- Desiccant of molecular sieve Type 3 A complying with ASTM-E-774.
- Glass supplier shall be responsible to consider Atmospheric pressure difference to avoid excessive glass bowing or pillowing. If necessary breather tubes to be provided during DGU assembly to accommodate the pressure / temperature difference that may lead to overall bowing of DGU/IGU
- Glass supplier / contractor shall not carry out pressure equalisation or rectify DGU pillowing or bowing once delivered, ie, any supplied DGU do not comply within acceptable tolerances will have to be replaced.
- All breather tubes nipped closed prior to installation, glass supplier should advise and instruct Facade contractor for proper sealing of breather tubes during installation.
- Pillowing or bowing of assembled DGU should not be greater than allowed for individual glass lites, allowable limits are not cumulative of individual glass lites. This shall be

measured as per EN 12150 DGU on a vertical free standing position, similar measurement procedure shall be applied to install DGUs (not sloped or inclined).

- Bow on an assembled fully finished DGU shall not exceed more than 4mm measured while the DGU units placed vertically as per EN 12150
- DGU fabrication shall be done with vertical assembly setup, horizontally laid DGU fabrication methods are not acceptable.

2.8. Glass Coatings

High performance Low E -emissivity coating to be / have:

- Nominally neutral in colour and uniform in tone, hue, colour, texture, pattern and opacity.
- Consistent appearance to the glazed units. Allowable pinholes in coated surfaces:
- Diameter 0.8-1.2 mm (2 within 300x300mm)
- Diameter 1.2-1.6 mm (1 per sheet)
- Diameter 1.6 mm and above not allowed
- Any edge deletion of coatings stopped within 0.5mm of the primary seal.
- The Low-Emissivity coating shall be applied to the glass either by pyrolytic or vacuum (sputtering) deposition method, soft coat Low-E will be acceptable for double glazed units only. The coating shall meet the requirements of ASTM C 1376-97 and satisfy the thermal performance of the facade.

2.9. Spandrel Glass

Following are minimum criteria:

- Colour and shade to be approved by architect, finalisation should be based on full size visual mock-up.
- Colour should be consistent throughout the Facade, glass type and coatings to be appropriate to use for spandrel glazing
- Glass need to be heat strengthened for all spandrel areas.
- Use of opacifier or adhesive films to be compatible and warranted by the supplier

2.10. Glass Warranties

- Glass supplier should produce written warranty on performance and manufacturing defects for the period of min. 10 years from the date of supply for this project.
- Warranty should cover all manufacturing and processing defects including performance and visual criteria under glass installed conditions.
- Glass supplier should provide Back to Back or Joint Warranty to the owner, warranty should be given through the facade contractor.
- Draft warranty copy should be given prior to finalisation and final warranty should be issued upon completion of glass supply.

3. Weather Seals and Air Seals

Weather silicone shall be to approval as manufactured by Sika, Silande, Equivalent Select and install in accordance with BS 6213. Sealants shall be compatible, non-staining and fit for their intended purpose. Design sealant geometry (and cross section) to accommodate the

anticipated substrate movement. Use in accordance with the manufacturer's directions, particularly relating to the use of primers.

Sealants to be / have:

- Design of the seals and selection of glazing materials (eg. Backing rod, glazing tapes) submitted to the sealant supplier for approval
- Low modulus - E less than 0.4MPa (@ 100% elongation)
- +/- 50% elongation capacity
- Glazing materials as recommended by sealant manufacturer. Selection to be based on proposed glazing and curing procedures.
- Backing rod to be 25% wider than joint width
- Primers and joint preparation materials-as recommended by the sealant manufacturer.
- Colour selection of any visibly exposed sealants as advised by the SO.
- Acrylic sealants are not acceptable for frame seals or smoke flashings.
- Acid curing sealants are not acceptable.

3.1 Sealants - Structural Glazing

Structural silicone shall be to approval as manufactured by Sikasil or Silande or Equivalent

Primers shall be the same brand manufacture as the sealants used and shall be compatible with the substrate and all adjacent materials.

Determine structural silicone bite requirement from design wind pressure and panel size, using the sealant manufacturer's recommended procedure. Joint design must be in accordance with the sealant manufacturer's recommendation for glue-line and bite to glue-line ratio.

Provide documentation of the sealant manufacturer's requirements for the particular substrates of the project regarding joint size, limitations, backer fin, mixing, cleaning, surface preparations, priming and application, temperature and humidity of glazing conditions and any other criteria which may affect sealant performance.

All weather sealants of specified make should not bleed; stain adjacent facade during installation or in service.

The colours of all visible sealants are to be approved by the Architect.

3.2. Sealant Warranties

- Sealant supplier should produce written warranty on performance and manufacturing defects for the period of min. 10 years from the date of supply for this project.
- Sealant supplier should provide Back to Back or Joint Warranty to the owner, warranty should be given through the facade contractor.
- Draft warranty copy should be given prior to finalisation and final warranty should be issued upon completion of Sealant supply.

4. Brackets

All fixing brackets shall be galvanized steel or aluminium grade 6061 T6. Refer to attached table of minimum material requirement.

Brackets to be / have:

- Resist all loads, movements and dimensional changes that may occur in the building due to thermal changes, deflections, settlement and creep.
- Allow for construction tolerance in the all components and structure.
- Adjustable by small increments in and out, up and down and side
- Use lock nuts to prevent loosening due to movements and/or vibrations.
- No site welding is permitted on steel or aluminium brackets.

State the torque values for tightening all bolts and the maximum allowable shim dimension in the shop drawings. (Not to be greater than 10mm)

5. Fasteners

The selection and usage of fixings is to be strictly in accordance with the manufacturer's recommendations. Where the visual appearances of prime concern exposed fixings are not allowed and the fixing details are to be approved by SO. Refer to attached table for fastener material to be used.

Stainless steel fasteners may have hardened tips of other composition for self-drill and self-tap screws only.

Washers shall be minimum aluminium grade 6061 T5 or T6 or stainless steel grade 304.
Bolts to mullion shall be minimum of stainless steel grade A2-70.

6. Insulation

Thermal or sound deadening insulation to be

- Inert, durable, rot and vermin proof, CFC and HCFC free.
- Not capable of supporting mould fungal or bacteria growth.
- Capable of maintaining the specified performance throughout the service life of the curtain wall.
- An approved mineral wool
- At 50mm minimum thickness for all spandrels insulation
- Maximum U-value for insulation to be $0.11 \text{ W/m}^2\text{.}^\circ\text{C}$.
- Reinforced aluminium foil backing factory applied to the insulation
- With a minimum density of 120kg/m^3
- With melt point in excess of 1000°F .
- Be supported within the prefabricated panel by a continuous aluminium angle or equivalent.

All fixing pins and accessories needed for fixing insulation to be manufactured from materials which will provide a life equal to that of the metal finishes and result in the insulation maintaining its position, not to sag or delaminate for the duration of its design life.

7. Spacer Tape

The spacer tape shall be Norton T-Bond II V2208 (Saint- Gobain USA)/ Nitto(Japan)

8. Certification of Materials

Prior to commencement of fabrication, obtain certification from the manufacturer of each material that the material is of the correct grade, strength, size, finish etc., and that all applied coatings, finishes and the like have been applied to the relevant standards specified herein. **Provide copies of all such manufacture certificate with import declaration copy to the Engineer for inspection.**

Such materials requiring certification include but are not limited to:

- a. Glass
- b. Aluminium (coated and uncoated, sheet, pressings and extrusions)
- c. Aluminium surface finishes
- d. Bolts, Screws, Fixings.
- e. Sealants and Gaskets

Certification from structural silicone and other sealant manufacturers shall indicate that the sealant manufacturer has reviewed all sealant details and tested all contact surfaces, and finds same suitable for use with proposed sealant and the purpose intended. Further, the sealant manufacturer(s) shall certify that the sealants used are compatible with and will not stain the surfaces with which they are in contact and no leakage or contamination from run-off water will occur.

Materials Table - Minimum Requirements

Requirement

Following are minimum requirements for materials, this table will take precedence in case of any contradiction within any clauses of this specification. Contractor to submit technical data and material samples for approval

All component thickness mentioned anywhere in the drawings, BOQ like for glass, Aluminium profiles, flashing are the minimum required and it is expected that the contractor has checked and confirmed that it is meeting the design criteria and quoted accordingly.

Components	Material & Grade	Comments and basic requirements
Glass	<ul style="list-style-type: none"> Glass will be Double Glazing Insulated Glass Glass Performance and Color will be approved by the consultant/architect 	<ul style="list-style-type: none"> Approved manufactures is Shanghai Yaohua PilkingtonGlass(SYP), China, XINYI Glass (XYG.).China , Equivalent, Equivalent NiS inclusion on base float glass should be under acceptable international guidance. Glass supplier to provide certificate / evidence. Glass type and thickness should satisfy respective standards and special conditions as mentioned in the tender.
Laminated glass (If Any)	PVB laminated	Use PVB from Decent or KB make for laminated glass
Glass Processor	To be certified by the glass manufactures. To have adequate QAQC systems including all necessary instruments and equipment.	Glass processors finalization subject to consultant Approval.
Aluminium Extrusions	Aluminium grade 6063T5 or T6 for framing generally. Wall Thickness should be as per structural design calculation	Extruders are subject to facade consultant review. Wall thickness should comply with minimum requirements for flatness and dimension tolerances requirements.
General sub-frames /facade	Galvanized Mild Steel with Min. Yield stress of 240 MPa	Structural steel specifications apply Concealed elements. Finish for exposed

support frames		steelwork to be determined.
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Components	Material & Grade	Comments and basic requirements
Finish to Aluminium frames	External visible surfaces (colour to be approved by architect)	High performance Powder coated complies with AAMA 2604 (Min. DFT 70 microns) with min. 10 Years warranty. Recommended supplier ShiLi, jingaoLi -QAQC tests or samples to 5e completed as per facade specifications. Applicator is subject to facade consultant's review. -Certificate from Paint manufacturer shall be submitted min 4 instances throughout the project to certify paint applicator's quality and compliances.
	External or Internal -non visible: (cladding sub-frame & brackets)	Chromicised, use of mill finished Aluminium in any form not acceptable.
Fixing Brackets External	-External weather:-SS grade 304	Min. 4mm thick for all cladding brackets (steel/SS/aluminium) and min. 8mm thick for main structural brackets such as hand railing, main structural frames. Brackets should use extruded/rolled / welded, bend brackets are not acceptable
Fixing Brackets Internal	-Interior or Inside of air seal:-Hot-dip galvanised steel for non-visible and Galvanised + painted steel for visible. OR -Extruded Aluminium Grade: 6063-T6 or T5- Powder coated for visible chromaticid for non-visible	
Anchor bolts	External weather:- Stainless steel for visible or non-visible areas (same applicable for all cladding systems) Internal or inside air seal:-Galvanized for non- visible and SS for visible	<ul style="list-style-type: none"> Acceptable brands are Fischer or , Hilti Use of Chemical anchors and undercut anchors require prior approval from consultant Fixings on brickworks are not accepted Min size M12 -2nos /bracket
Pop Rivets	Stainless steel with stainless steelmandrel. Stainless steel grade 304	Aluminum rivets with SS mandrels required consultants review.
Screws &Bolts	Stainless steel grade 316 (for both visible and non-visible)	Bolts: Min. size M10 for all structural connections with min. 2 no, / fixing Use of teks screws or self-drilling screws for structural

		brackets requires consultant's approval
Flashings	Not less than 1.0 mm GI	Thickness verified for wind loads, stiffeners to be provided for 300 mm wide
Gaskets	EPDM or Neoprene 60 durometer	Test certificates to be submitted
Setting blocks	Neoprene 90 durometer	Test certificates to be submitted
Sealants	Silicone based sealants Acceptable suppliers Sika or Siland/Equivalent All sealants require prior approval.	<ul style="list-style-type: none"> • Compatibility and adhesion test should be carried out with actual profile and paint finished by actual applicator • Certificate from Sealant supplier to be submitted for glazing approval. • Periodical certificates from sealant supplier to be submitted for quality compliance of sealant application.
Backing Rods	Open cell	Closed cell not accepted.
Glazing Tapes	Breathable spacer tape	Do Equivalent Norton V2208/3M, Nitto, Equivalent
Insulation	Glass fibre or mineral wool insulation -min. weight 120 kg/m ³	50 mm min. thick
Fire Proof	Rock wool insulation -min weight 80 kg/m ³	Min thick 50 mm to be achieved after compression, fixing clips to be provided where necessary
Stainless steel Elements	Grade 316-mirror finished	SS elements to be isolated from aluminum and mild steel frames

Requirement

1. General

Facade and associated elements shall be fabricated in strict accordance with approved Shop Drawings. The Nominated Sub-Contractor shall comply as a minimum with all the relevant regulations and with the current edition of the relevant Standards and Codes. Where conflicts arise between this specification and the Code or Standard listed below the more stringent requirement shall apply.

2. Structural Silicone Glazing Units

2.1. Procedures

Obtain and review procedures from the specialist supplier/manufacturer for fabricating structural silicone glazing units:

- Documentation of the sealant manufacturer's requirements for the particular substrates of the construction including joint sizes, limitations, requirements for mixing, cleaning, surface preparation, priming and application.
- Glazing procedures including frame assembly, cleaning, priming (if necessary), gunning, "tooling, frame handling after glazing and curing.
- Silicone batch logging procedures to record all batches used including batch manufacture, date and arrival date of each batch at the fabrication works.
- Details of sealant testing to be carried out to ensure continued high quality of silicone being used on a batch or shift basis whichever is the least.
- Details of tensiometer and any other testing equipment as required.
- Details of substrate testing carried out on a daily basis to ensure continued high quality of and consistency of silicone adhesion to the substrate.
- Frame logging at time of assembly, which shall include identifying every panel by a unique number. The glazing record for each panel shall include silicone type, batch reference and date, curing time, date of application, glazier's name, and temperature and humidity measured inside the factory at a nominated time of each day.
- Details of de-glazing to ensure quality of the silicone joints. 3 no. frames for each type of structurally bonded glazing to be chosen at random by the SO and de-glazed. The quality of the de-glazed units to be assessed against the requirements for cohesion, adhesion, tears resistance and compatibility as defined by the sealant manufacturer.
- Details of procedures to deal with non-conformities. The procedure shall provide for the identification of all frames of unacceptable quality and their re-glaze or rejection. When nonconformity is established as a result of a random de-glaze, then the SO shall call for further de-glazing of the frames glazed on the same day and using the same silicone batch as the rejected frame.

2.2. Sealant Works

- Carry out works in accordance with the agreed procedures above
- Complete structural sealant works in a continuous operation for any single element
- Handling of panels to be consistent with setting periods of sealant

2.3. Production Records

Obtain review and approve factory production control records specific to the fabrication of the project structural glazing units, from the specialist supplier demonstrating that all procedures above have been satisfactorily followed.

3. Hot Dip Galvanising

Clean steel after chemical de-scaling in accordance with BS7079, so that all rust, mill scale, oil, grease and other foreign matter is removed leaving a clean surface of metal.

Reinstate all transport and erection abrasions, site welds, etc., by thoroughly wire brushing all affected areas to achieve a clean sound substrate and patch coating with an inorganic zinc silicate film thickness of 100 microns.

4. Aluminium Finishes

4.1 General

Aluminium finishing shall comply with the minimum requirements as specified on this specification. The coating shall be carried out by an applicator nominated by the Contractor, approved by the polyester powder manufacturer and agreed by the Architect & Curtain Wall Consultant. One single paint applicator and source shall be used for the duration of the Works.

4.2. Colour

The coating finish colour and gloss level shall be as specified by the Architect or as noted the Architect's Drawings.

4.3 Service Life

The minimum service life as defined in BS7543 shall not be less than 25 years. Paint applicator should provide a minimum warranty period of 10 years covering paint finishing including application and workmanship of finished surfaces.

4.4. Agreement certificate

Coating shall be carried out in full compliance with the appropriate Agreement Certificate. A headed with the name of the project mid countersigned by a director of the coating company shall be submitted to the Architect & Curtain wall Consultant before any production commences.

4.5. Fabrication requirements

Fabrications shall be from pre-finished to finished machine lengths at the recommendation of the powder coating applicator the contractor shall state in his Tender, which he has used. No visible or exposed areas of un-coated metal or unsealed crevices open to the exterior shall be accepted. Any area where coating is carried out after machining, satisfactory jiggling points shall be arranged between the contractor and the powder coating applicator. Where necessary, drain holes shall be provided. Two sample joints shall be submitted to the Architect for approval,

prior to fabrication. All welds, burrs and other edge machining shall be ground smooth to the requirements of the powder coating applicator prior to coating.

The contractor shall ensure uniformity of colour, texture and gloss, on the completed elevations, between adjacent panels and/or components within the approved control samples. He shall agree with the powder coating applicator, a sequence for coating the various elements in consistent batches. Particular attention shall be paid to small components such as any exposed fixings, plates, snap on cover plates and the like.

4.6.Workmanship

Fabrications shall be from pre-finished or finished machine lengths at the recommendation of the Coating Applicator. No visible or exposed areas of uncoated metal or unsealed crevices open to the exterior shall be accepted. Any area where coating is carried out after machining, satisfactory jiggling points shall be arranged between the Contractor and the Coating Applicator. Where necessary, drain holes shall be provided. All welds, burrs and other edge machining shall be ground smooth to the requirements of the Coating Applicator prior to coating.

The Contractor shall obtain from the Coating Applicator a detailed method statement for the coating process and submit it to the Architect & Curtain Wall Consultant for approval. Prior to submission,

The Contractor shall ensure that the Paint Manufacturer has endorsed the method statement. This shall include but not be limited to the following:

- (a) Receipt, labelling and storage of components prior to coating.
- (b) Pre-treatment (degreasing, rinsing, de-mineralizing).
- (c) Drying.
- (d) Coating application(s).
- (e) Curing.
- (f) Labelling.
- (g) Protection.
- (h) Storage and vehicle loading.
- (j) Recommendations for handling and transportation.

4.7.Temporary Protection

All coated surfaces vulnerable to damage during handling and installation or by subsequent site operations shall be fully protected for the duration of the works. Protective coverings shall be resistant to all weathers and be removed from areas inaccessible after installation. They shall be partially removable and replaceable for access to fixing points during installation and/or subsequent site operations.

4.8.Remedial Works

Site rectification of damage shall be subject to the approval of the Architect and shall only be permitted subject to the submission and approval of a specification and method statement endorsed by the powder manufacturer. The rectification of damage shall not invalidate the coating warranty. All remedial works shall be subject to trials and rejections shall be at the discretion of the Architect. The Architect as control samples shall keep accepted trial samples. Repair record sheets shall be logged by the contractor and submitted to the Architect on completion of the works together with the coating Warranty documents.

4.9.Maintenance

The contractor shall provide comprehensive instructions for the maintenance of the coating. He shall ensure that the recommendations have been endorsed by the powder manufacturer and that, when applied as specified, they shall fulfil the requirements of the coating Warranty. The recommendations shall include, but not be limited to the following:

- Frequency of washing
- Solutions/detergents to be used and recommended dilution levels
- Type of cleaning materials Recommendations (if any) for deep cleaning processes (including solutions/compounds etc.) and their frequency

5. Assembly

5.1. General

Assembled components shall comply with the approved shop drawings and, as a minimum, with the following requirements.

5.2. Checking of Manufactured Components

As part of the Quality Assurance system, the Contractor shall, upon receiving manufactured components into the factory, and prior to incorporating these into the Contract Works, check for compliance of the manufactured components with the requirements of the Specification and Shop Drawings. Such checks shall include but shall not be limited to:

- a) Painted aluminium extrusions
 - Correct extrusion type/size
 - Correct grade of aluminium
 - Correlation with die drawings
 - Colour and type of finish
 - Review of manufacturer's testing of paint film
 - Dimensional tolerances
 - Free from damage and defect
- b) Painted aluminium sheet
 - Dimensional tolerances
 - Correct grade of material
 - Colour and type of finish
 - Review of manufacturer' s testing of paint film
 - Free from damage and defect
 - Review testing of galvanising and paint film Free from damage and defect
- c) Glass
 - Dimensional tolerances
 - Free from damage and defects, including:
 - bubbles
 - spalls
 - waves
 - spots
 - scratches
 - distortion /deformation
 - discolouration
 - chipping
 - colour inconsistencies

- d) Correct colour and finish

Additionally, all other materials delivered to the factory shall have a QA check and sign off.

5.3. Frame Assembly

- As far as is possible, fabricate all frames under controlled factory conditions.
- Provide stable, clean surfaces and supports for the assembly
- Ensure the ends of all components are correctly prepared prior to assembly.
- Ensure all fasteners and fixing are installed with appropriate force and that no fixings are loose or overstressed.
- All sealant works to be tooled and neatly finished
- Ensure no ventilation or drainage holes are blocked.
- All junctions shall be adequately reinforced and accurately cut, fitted and sealed to leave only sealed hairline joints, in such a manner that drainage within sections is not impaired.
- Where dissimilar metals are in contact with the frames and there is a risk of galvanic corrosion, adequate means of separation shall be provided.
- Similar fabrication techniques and detailing shall be used in all assemblies to ensure consistent appearance of all completed work.

5.4. Setting Blocks and Spacers

Setting blocks shall be of length calculated to properly support the glass. Provide a minimum of 2 blocks per glazed unit located at Quarter points or as required for the installation, Blocks shall not be closer than 150mm from a glazed unit corner and shall have a minimum length of 100mm.

5.5. Structural Silicone

Structural silicone shall be installed in clean factory conditions. Site application of structural silicone shall be restricted to replacement panels only.

6. Transportation and Handling

6.1 General

- Method statements are required for all stages from the production of the panels through to installation on site.
- Methods to minimise handling, repacking and lifting of panels. Panels to be stored directly after fabrication allowing for the setting and curing of sealants.
- Crates and packing to provide resistance to damage, the ingress of moisture and infestation
- All elements to be stored and protected against degradation due to weathering, distortion and damage by other construction activities.

6.2 Temporary Protection

- Fully protect all coated surfaces vulnerable to damage during handling and installation or by subsequent site operations.
- For protective tapes in direct contact with the coating, use a low tack, self-adhesive type in white or any colour lighter than the coating to be covered. Apply and remove in

accordance with the recommendations of the powder manufacturer guidelines.

- Do not keep protective tapes in contact with coated surfaces for longer than 6 months. If protection is needed for longer period than use appropriate protection material that will not cause stains to finished surface. Facade contractor will be fully responsible to project internal and external face of installed Facade works until handover to client. Partial handover shall only be acceptable as instructed by client.

7 Installation

7.1 General

- Installation shall be carried out in accordance with approved Shop Drawings by personnel experienced in the handling and site installation of all facade system and associated elements.
- Installation will not commence until shop drawings and method statement for installation approved by consultants and client.
- Client have right to instruct facade contractor to modify and change the sequence of site installation that will suit the construction progress. Thus facade contractor shall not claim any extra time or cost to follow the client instructions.
- Following review of samples, prototypes and demonstrations all subsequent materials and workmanship are to be the same or better standard.
- Use jigs laser lines and computer-controlled methods wherever appropriate to achieve accuracy.
- Use the correct tools for each task and equipment that is well maintained. Do not use blunt and worn tools.
- Do not carry out grinding, cutting, shaping and finishing of materials using tools, techniques and ancillary materials that will contaminate curtain wall components with particles or substances, which could disfigure, stain or corrode them.
- Do not carry out any rectification or modification for the Facade elements to be installed, if any modification required then the facade elements should only be corrected or re-worked at factory.
- Use experienced operatives skilled in using the techniques involved.
- Control the installation weather conditions by shading and shelter as appropriate to ensure performance requirements are met. It is the duty of facade contractor to provide adequate working environment to the installation team.
- If the Facade contractor fails to provide adequate working condition to his installation team then client will provide the same and back charge the cost from the facade contractor.
- Facade contractor should allow adequate time delay and work disruption in the installation programme that may arise due to natural weather conditions.

7.2 Site Glazing Work

- Site deglazing panels / replacement panels are acceptable to site applied silicone structural subject to consultant approval for glazing procedure.
- Install glazed units in accordance with their manufacturer's instructions and procedures.

- Comply with the recommended guidelines set out in BS 6262
- Remove any protective tapes from the edges
- All roller wave to be horizontal
- Install glazing units with at least 5mm clearance at the sides and top from the framing, and 6mm at the bottom with allowance for water to drain freely.
- Install gaskets without incorrect distortion such as stretching or compression of length, or folding back of wiper seals.

7.3 Site Sealant Work

- Apply and cure sealants in accordance with their manufacturer's directions on minimum and maximum temperature and RH conditions.
- Achieve the depth to width geometry.
- Prevent three-sided adhesion.
- Protect adjacent surfaces with masking tape while applying sealant
- Use appropriate backer rods, tapes, surface preparation and primers as manufacturer's directions. Tool off sealants neatly.

7.4 Installation of Fire and smoke stop

Install fire and smoke stopping at all voids and penetrations between compartments at designated locations to achieve the specified fire and smoke stopping performance. Support smoke stopping with galvanised steel sheets. Provide smoke seal where necessary to maintain fire integrity.

7.5 Setting Out

The Contractor shall co-ordinate with the builder or civil contractor to ensure the correct positioning of all concrete inserts for attachment of the facade and support structure to the concrete structure. The responsibility for casting in the inserts to the agreed positions is with the Facade Contractor; however civil contractor will help to fix the inserts as marked by Facade contractor. Final locations and accuracy of inserts should be the responsibility of Facade contractor.

7.6 Temporary Protection of Facade works

Following minimum requirements Facade contractor to comply with Facade works completed and partially completed. These protections are to be maintained until the work handover.

- All aluminium /SS frame surfaces to be protected
- Use adhesive film not less than 80 Microns thickness
- Film shall be removable/unwrapped without leaving any marks / stains on surfaces
- Films shall be external weather exposed life of 8 months period.
- Contractor to remove the films at appropriate time or as instructed by the client.
- Removal of film shall use appropriate methods to avoid dents, scratches on finishes.
- For large areas such as panels, protection shall use PE sheet with adhesive film protected at edges

8. Quality Control

In addition to contractor's own quality control following are specific compliance requirements. It is contractor responsibility to comply with the following on timely manner as per the project timeframe.

8.1 Glass- QA/QC

Following are the minimum checks that the glass processor should follow as part of their QA/QC system. In addition to these checks glass processor should also carry out other additional tests as specified by consultants with respect to the type of glass used.

8.1.1 Glass Pre-process

Parameter	Checking Method	Frequency of Checking	Pass Criteria
Thickness	Micro meter	Once per shift	To be within the tolerance
Size	Measuring tape	100%	To be within the tolerance
Visual defects	visual	100%	No visual defects

8.1.2 Heat treatment process

Parameter	Checking Method	Frequency of Checking	Glass Sample Size (mm)	Pass Criteria
Residual Surface compressive Stress	Use <i>GASP</i> (Grazing Angle Surface Polarimeter)	Every Heating Batch	300x300 for actual Project sample	24-52 MPa (for HS glass)
Residual Surface compressive Stress	Use <i>GASP</i> (Grazing Angle Surface Polarimeter)	Every Heating Batch	300x300 for actual project sample	52-90 MPa (for Temp glass)

8.1.3 DGU-QAQC

Parameter	Checking Method	Frequency of Checking	Glass Sample Size (mm)	Pass Criteria
Moisture Penetration test	EN- 1279 Part-2	Each Glass Type tested at third party testing lab	300x300 for actual Project sample	Comply the standard
Test For Edge Seal	EN- 1279 Part-4		300x300 for actual Project sample	
Fog test	EN-1279Part-6_		300x300 for actual Project sample	

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8.1.4.Lamination process

Follow European Standard EN -12545 Part 4]br the following tests on laminated glass of the actual project.

Type of Test	Test Method (Standard)	Frequency of Checking	Glass Sample Size (mm)	No. of Samples	Pass Criteria
High Temperature Test	EN- 12545 Part 4	Daily	Min. 300x300	3	3 samples should pass
Humidity Test	EN- 12545 Part 4	Each glass type or glass thick	Min. 300x300	3	3 samples should pass
Radiation Test	EN- 12545 Part 4	Each glass type or glass thick	Min. 300x300	3	3 samples should pass
Pummel Test	Glass supplier's standard procedure	Daily	Min. 300x300	4	Compare
Impact	BS 6206 or EN-12000 (Class B-drop height 457 mm)	Start of order Middle End of order	1930 height x 865 width	4	Fragments hold together with PVB.

8.2 Glazing Quality control

Documentation, preparation, installation and testing of structural silicone seals shall include, but not be limited to:

- Silicone batch logging procedures to record all batches used including silicone batch manufacture date and arrival date of each batch at the Contractor's premises.
- Frame logging at time of assembly will include identifying every panel by a unique number. Glazing records will then provide information on each panel (by its number) including silicone type and batch, date of silicone installation, glazier's name, temperature and humidity measured inside the factory at a nominated time each day.
- Establishment of a procedure in case a frame is rejected. This shall include de-glazing of frames glazed on the same day with the same silicon batch as the reject frame. The procedure shall provide for the identification of all frames of unacceptable quality and their re-glaze or rejection.

8.3 Testing Sealants

Following are the minimum sealant Tests & verification which are not limited to the table shall be conducted by the contractor in presence of Sealant supplier. These tests are to be carried out for the particular project.

Glazing works shall not proceed until these tests certificates are submitted to the consultant

Sealant Test and Parameter	Samples and Frequency
Compatibility as per ASTM C 1087	<ul style="list-style-type: none"> Sealant supplier has to provide the previous test certificates of the relevant job. confirm compatibility of the sealant with all surrounding materials including finishes (PVF2, paint etc.), glass coatings, glazing gaskets, setting blocks, spacers, backing fin, steel, aluminium, etc.
Non-stain Test As per ASTM C 1248	<ul style="list-style-type: none"> Sealant supplier has to furnish the previous test certificates. Provide a certificate from the sealant manufacturer stating that they were present during application of sealant and testing, and confirming that the methods used were appropriate.
Hand Pullout as per ASTM C794	<ul style="list-style-type: none"> At least 3 locations the sealant Hand pull out load shall be determined Sealant supplier has to provide the previous certificates. Provide a certificate from the sealant manufacturer stating that they were present during application of sealant and testing, and confirming that the methods used were appropriate.
Deglazing -Structural Compatibility	<ul style="list-style-type: none"> 1 out of the first 10 frames (frames 1 to 10) 1 out of the next 40 frames (frames 11 to 50) 1 out of the next 50 frames (frames 51 to 100) 1 out of each 100 frames for the remainder of the project. <p>Frames will be chosen at random as follows</p>
Cup test	Every Mix Design, this test shall be conducted
Butterfly test	Every Mix Design this test shall be conducted

9. Tests on Fixings

9.1 General

The Contractor shall carry out the following inspections as the Works proceed to check that:

- The fixings as detailed on the Contractor's installation drawings have been installed.
- Every cladding fixing to structure is the right size and is in the right place and has been correctly tightened using a calibrated torque wrench.
- Fixings do not restrain any intended movement and generate locked-up stresses.

In order to demonstrate that his proposed fixings are adequate, the Contractor shall provide all the necessary test data, calculations and technical literature. Where this information is not available, he shall arrange as part of his Works, for an Independent Testing Authority to carry out the tests noted below out. The tests shall be carried out generally in accordance with BS 5080 Parts 1 and 2. After testing, all test specimens shall be retained by the Independent Testing Authority for inspection by the Contractor and the Project Manager

As the Works are installed, the Contractor shall carry out 10 No. of tests to each type of mechanical, Chemical Anchors and embedded bolts forming part of the Works at each floor level.

9.2 Site testing

Following facade specimens, fixtures, items and Facade QAQC critical aspects shall be site tested as per table below.

Façade Items to be	Type of Test	Frequency & Samples
Post Fixed Anchors/Cast in Plates	Pull out test for Proof load factor of 1.5 on Service load anchors.	Min 15 pcs of Installed Anchors shall be tested
Aluminum Finish	Dry Film Thickness (DFT)	Min. DFT shall be 70 microns- 120 Microns
Steel Finish	Dry Film Thickness (DFT)	Min. DFT shall be 50 microns- 70 Microns
Typical and Non Typical Curtain wall & Interfaces	Site Water testing- Testing method to be as per AAMA Standard with Monarch Nozzle with standard pressure gauges. The Contractor shall carry out rectification in case of any leakage.	<ul style="list-style-type: none">• Typical facades to be tested for field water test upon initial completion of 1000 sqm facade area.• The contractor shall carry water testing not less than 10 locations, these locations randomly specified by the consultant.• The frequency of water tests shall be as per consultant's instruction.• The areas to be tested will be selected by the Consultant and will include all typical facade types.
Load Test on Glazing assembly /Miscellaneous	Left to Facade type and requirement.	As per consultant's recommendation

9.3 Laboratory Testing of Materials

Following materials are recommended for third party testing, the facade contractor is responsible to complete these test on schedule of the project.

Material	Parameters	Sample & Frequency of testing
Aluminium Extrusion	<ul style="list-style-type: none">• Chemical Test- Wet and Spectrograph (per every 10000 Sqm of Facade)• Mechanical Test- Tensile Proof Stress tests	3nos of samples per testing 100 tons / 10000 Sqm of tirade

Aluminium Finish As per adjacent ASTM standards	DFT-Dry Film Thickness	D6633	<ul style="list-style-type: none"> 5 no's of sample 300mm length Per batch of Powder coating/PVDF All tests specified herein to be carried out for every 100 Tons of aluminum profiles for each colour.
	Pencil hardness	D6633	
	Scratch resistance	D 1474-92	
	Abrasion resistance	D4060	
	Impact Resistance	D2794	
	Salt spray	Bin	
	Adhesion	D2197, D3359	
	Gloss level	D523	
Mild Steel Finish As per Adjacent ASTM standards	Abrasive / Blast Cleaning:	BS EN ISO 8504-2:2001 - Part2. Comply with •Sa21/2	3 samples shall be tested minimum per batch. For sample and specimen information Refer Sec: 9.3
	Film Thickness	D6633	
	Adhesion.	D2197,D3359	
	Resistance to impact.	D2794	
	Test for color fastness and consistency	Grey Scale meter	
Gasket	<ul style="list-style-type: none"> Shore Hardness Chemical test 		1 Sample per Each Type of gasket.
Glass Fittings & Hardware.	<ul style="list-style-type: none"> Mechanical Properties Chemical Properties 		3 no's of Samples shall be for each type of test.
Glass	<ul style="list-style-type: none"> Glass performance-spectrophotometric Properties 		2 Samples of 300x300 mm size-for Each type of performance glazing / DGUs

9.4 Quality Assurance

The Contractor shall be responsible for all quality control procedures necessary to ensure that all finished elements and their installation conform to the requirements of this specification.

The quality system requirements shall be in accordance with ISO 9001 -2000.

Section 8. Particular Specifications

01. The work must be carried out strictly in accordance with the specification and as per specifications of the items of work of the tender schedule, drawing, design (Which will be supplied by the Department) and also as per direction of the engineer-in-charge. The contractor shall remain fully responsible for the quality of work and finishing the same.
02. The rate quoted by the Contractor should include the cost of all materials and of all operations, which are connected with the items of work. In other words, the rates are meant for finished job in all respects and as per practice and convention followed by the Department. Cost of layout, dismantling, site cleaning, scaffolding, cleaning of mosses from bricks, washing dirt/clay from the materials, screening and washing the chips and shingles etc. Unrolling, straightening and removing rust from steel materials and cost of all local and other taxes, tolls and incidental charges, all taxes including VAT will be treated as having been included in the rates of the tender.
03. Name of work should be written fully over sealed cover in this regard of the Instruction to Tenderers (ITT) to be followed strictly.
04. All relevant documents supplied duly signed by the tenderer in every page and be binding upon the tenderer.
05. Before submitting the tender the tenderer should inspect the site of work thoroughly in consultation with concerned Executive Engineer, BEZA Monem Business District (Level-12), 111, Bir Uttam C.R. Dutta Road, Dhaka-1205. The contractors shall have to arrange necessary place for storing construction materials at his own arrangement near the construction site. No extra claim will be entertained for storing materials, any carriage of materials, cleaning the site, making roads, working space in site etc. under any circumstances.
06. All materials should be supplied by the Contractor. The Contractor's supplied materials must be of good quality and sample to be approved by the Engineer-in-charge before procurement.
07. If any portion of work found unspecified, that portion of work must be checked and verified by the Departmental staff before dismantling the same and the dismantled portion should be removed by the Contractor at his/ their own cost and no payment will be made for such work. In no circumstances the unspecified work will be entertained.
08. The quantities of the work may vary at the time of execution of work and some items may not be executed at all. For such work no claim will be entertained. No extension of time will be allowed for excess quantity of work done.
09. For misuse, damage or pilferage of materials supplied by the Department or supplied by the Contractor and if any accident of labourer's occurred the Contractor himself will be liable and no claim will be entertained. For misuse and pilferage of Government materials (if any) the cost will be recovered at double the issue rate.
10. Work program in bar chart and network diagram of the principal activities, including those on a critical path method and probable timing of the assignment of each item of work to be accomplished and submitted along with the tender by the Contractor/Firm. The program will have to be jointly signed by the contractor and Engineer-in-charge of the work before taking up the same.

11. If the contractor is unable to keep up the progress without justifying reason thereof, the contract will stand liable to be rescinded by the competent authority.
12. In case of dismantling any existing structure, measurement should be taken properly in the M.B in time for making any payment in due course.
13. The work may be done round the clock for which under any circumstances no extra claim will be entertained.
14. No claim from the Contractor shall be entertained if the work is not executed for any reason.
15. Running payment of work may be made.
16. The arrangement of water supply, sanitation, electrification, gas connection etc. If any required for the purpose of construction of work should be made by the contractors himself at his/ their own cost and risk.
17. All salvage i.e. dismantled materials of this work must be returned to this Department failing which the cost there of will be realized from the Contractor's bills as per current schedule of rates or present market rate whichever is higher.
18. The material will be tested from BUET/ CUET/ RUET/ KUET/ DUET or equivalent organization (as per selection from Project Manager) as and when required, by the Contractor for which no extra payment will be made by the Department.
19. The contractor shall have to arrange and bear the expenses of all kinds of tools and plants, which will be necessary for this work.
20. No claim for enhancement of rate of any item of the schedule will be entertained due to fluctuation of market rate for labours and of materials along with the period of execution of the works including extended time on genuine reasons.
21. Verbal instructions, whatsoever and from whomsoever will have no binding. All such instructions must be in writing from competent authority.
22. The contractor or his/ their representative will have to be available at site to receive instruction from the Departmental Staff and Engineer-in-charge in connection with the work.
23. The contractor shall have to follow the instructions of the Engineer-in-charge. No work should be carried out as per sweet will of the Contractor.
24. If the contractor makes delay to remove the rejected materials from the site, then and there, the Department shall remove the materials by engaging labourer's or other agency and no claim will be entertained for the value of the materials and the cost involved for removal will be deducted from the Contractor's bill even from security deposit of fixed deposit.
25. No running bill or final bill be passed if the period of work thereof is not found to be covered by the time allowed in the tender agreement or by extension of time already allowed.
26. The Contractor shall have to bear the expenses of all kinds of test, which will be necessary time to time for this work for which no extra payment will be made by the Department.
31. All materials will be of high quality. Requisite test result should conforms to the required.
- 32. Shop drawing must be submitted by Contractor to Department and take approval before starting work.**

Section 9. Drawings

Notes on Drawings (Attached) : In Annex-1

Section 10.Environmental Management Plan (EMP)

1. The Contractor shall carry out all mitigation and enhancement measures (including those related to mitigation of air/noise/water pollution; drainage/traffic congestion) as specified in the Environmental Management Plan (EMP) as below :

Environment al Aspect	Mitigation Measures	Location	Time Frame
Mobilization & Site Clearance			
Removal of Vegetation	Vegetation will be removed from the ROW before the commencement of Construction after obtaining necessary permissions	ROW	Before construction Starts and after centre line marking at site
Dredging components, Dumpy level, Grader, Dozer	Specifications of Dredging components, Dumpy level, Grader, Dozer, other Construction Vehicles, Equipment and Machinery to be procured will comply to the relevant Standards/ norms and with the requirements of the relevant current emission control legislations		Prior to mobilisation at site
Setting up of construction camps	The construction camps will be located far away from habitations and sensitive locations The Contractor during the progress of work will provide, erect and maintain necessary (temporary) living accommodation and ancillary facilities for labour to standards	All areas in vicinity of construction campsite	During Establishment, Operation and Dismantling of Such Camps.
Identification of debris dumping sites	Location of debris dumping sites shall consider the following, <ul style="list-style-type: none"> • Shall not be located within designated forest areas. • dumping shall not impact natural drainage courses • Settlements are located at least 1 km away from the site. 	Throughout the corridor	During mobilisation

CONSTRUCTION STAGE			
Land			
Soil Erosion and Sedimentation control	<p>Contractor should plan the activities so that no naked / loose earth surface is left out before the onset of monsoon, for minimising the soil erosion following preventive measures to be taken such as:</p> <ul style="list-style-type: none"> • Top soil from borrow area, Debris disposal sites; borrow area, construction site to be protected / covered for soil erosion. • Along sections abutting water bodies, stone pitching needs to be carried out 	Throughout Project Corridor, Service roads and equipment storage sites, etc.	Upon completion of construction activities at these sites.
Contamination of soil	<ul style="list-style-type: none"> • Vehicle / machinery and equipment operation, maintenance and refuelling shall be carried out in such a fashion that spillage of fuels and lubricants does not contaminate the ground. An "oil interceptor" will be provided for wash down and refuelling areas. • Fuel storage shall be in proper bunded areas. All spills and collected petroleum products shall be disposed off safely without causing any contamination • Plant to be set up 500 m away from surface water body. • Oil interceptor will be installed at construction site. • Septic tank will be constructed for safe disposal of waste. 	At fuel storage areas – usually at construction camps, temporarily acquired site.	During Construction.
Material sources	<ul style="list-style-type: none"> • Adequate safety precautions shall be ensured during transportation of quarry material from quarries to the construction site. Vehicles transporting the material shall be covered to prevent spillage. Operations to be undertaken by the as per the direction . 		During construction
Disposal of Debris	The disposal of debris shall be carried out only at sites identified for the purpose. All arrangement for transportation during construction including provision, maintenance, dismantling and clearing debris, where necessary will be considered incidental to the work and should be planned	Sites identified by the contractor	During Construction
Air			
Dust Generation	<ul style="list-style-type: none"> • Vehicles delivering materials should be covered to reduce spills and dust blowing off the load. • Clearing and grubbing to be done, just before the start of next activity on that site. • In laying sub-base, water spraying is needed to aid compaction of the material. After the compaction, water spraying 	Throughout Project Corridor, all access roads, temporarily acquired	Beginning with & throughout construction until asphaltting is completed and side slopes are covered.

	<p>should be carried out at regular intervals to limit the dust to below</p> <ul style="list-style-type: none"> • Road surface should be cleaned with air compressor and vacuum cleaners prior to the construction works. Manual labour using brooms should be avoided, if used labour to be provided masks. • The Contractor shall take every precaution to reduce the level of dust emission from the hot mix plants and the batching plants . • Plants, machinery and equipment shall be so handled (including dismantling) as to minimise generation of dust. 	sites.	
Equipment Selection, Maintenance and Operation	<ul style="list-style-type: none"> • All vehicles, equipment, crushers and machinery used for construction shall be regularly maintained to ensure that pollution emission levels comply with the relevant requirements. 	Throughout Project Corridor, all access roads, sites temporarily acquired and all borrow areas.	During Construction.
Pollution from Crusher	<ul style="list-style-type: none"> • 	All Aggregate Crushing Plants.	During Erection, Testing, Operation and Dismantling of Such plants.
Water			
Loss of water bodies/ surface / ground	<ul style="list-style-type: none"> • No excavation from the bund of the water bodies. • No debris disposal near any water body. • Prior written permission from authorities is required for use of water for construction activity. • Construction labours to be restricted from polluting the source or misusing the source. • Labour camps will be located away from water bodies. 	Near all water bodies	During construction
Silting / sedimentation	<ul style="list-style-type: none"> • Silt fencing shall be provided around water bodies to prevent runoff of sediment from construction site • 		Throughout construction period
Contamination of water	<ul style="list-style-type: none"> • Construction close to water bodies shall be avoided 	All areas in	Throughout construction

	<ul style="list-style-type: none"> • Car washing / workshops near water bodies will be avoided. 	immediate vicinity campsite.	period and during Operation and Dismantling of Camps.
Noise			
Noise from Vehicles, Plants and Equipment	<ul style="list-style-type: none"> • Noise standard at processing sites, eg. Aggregate crushing plants, batching plant, hot mix plant, any machinery will be strictly monitored to prevent exceeding of noise standards. • Workers in vicinity of loud noise, and workers working with or in crushing, compaction, concrete mixing operations shall wear earplugs and working time should be limited as a safety measure. • In construction sites within 150 m of sensitive receptors construction will be stopped from 20:00 to 06:00. • . 	Throughout Project Corridor, all access roads, sites temporarily acquired and all borrow areas.	Throughout construction
Noise from Blasting or Pre-splitting Operations	<ul style="list-style-type: none"> • Blasting shall be carried out during fixed hours (preferably during mid-day), All statutory laws, regulations, rules, pertaining to acquisition, transport, storage, handling and use of explosives shall be followed. • 	All Blasting and Pre-splitting Sites.	During Preparation, Operation and Closure of Such Sites.
Flora & Fauna			
Socio - Economic Environment			
Accidents	<ul style="list-style-type: none"> • The contractor will provide, and maintain barricades, including signs marking flats, lights and flagmen. • All Accidents shall be reported immediately and incident analysis, preventive measures shall be implemented. 		During Construction
Road Safety And Construction Safety			
Construction Safety	<ul style="list-style-type: none"> • Adequate precautions will be taken to prevent danger from electrical equipment. • No material or any of the sites will be so stacked or placed as to cause danger or inconvenience to any person or the public. • Fencing and lights shall be provided to protect the public. • All machines to be used in the construction will conform to the relevant Standards, will be free from defect, will be kept in good working order, will be regularly inspected and properly maintained. 	Entire Project site.	During Construction
Risk at Hazardous Activity	<ul style="list-style-type: none"> • All workers employed on mixing asphaltic material, cement, lime mortars, concrete etc., will be provided with protective 	Entire Project site.	During Construction

	<p>footwear and protective goggles.</p> <ul style="list-style-type: none"> Workers, who are engaged in welding works, would be provided with welder's protective eye-shields. Stonebreakers will be provided with protective goggles and clothing and will be seated at sufficiently safe intervals. . A register of all toxic chemicals delivered to the site shall be kept and maintained up to date. The register shall include the trade name, physical properties and characteristics, chemical ingredients, health and safety hazard information, safe handling and storage procedures, and emergency and first aid procedures for the product. 		
Risk caused by Force' Majure	All reasonable precaution will be taken to prevent danger of the workers and the public from fire, flood, drowning, etc. All necessary steps will be taken for prompt first aid treatment of all injuries likely to be sustained during the course of work.	Entire Project site	During Construction
Health and Safety Measures	<ul style="list-style-type: none"> At every workplace, a readily available first aid unit including an adequate supply of sterilised dressing material and appliances will be provided as per the Labour Act-2006.. Adequate safety measures and PPE for workers during handling of materials at site will be taken up. 	Entire Project site.	During Construction
		All construction sites	During construction
Hygiene	<ul style="list-style-type: none"> Latrines shall be provided with septic tank. The effluents can be diverted for horticulture inside the camps. The septic tank may be cleaned once in 6 months and filter cleaned after a year. All temporary accommodation must be constructed and maintained in such a fashion that uncontaminated water is available for drinking, cooking and washing. Garbage bins must be provided in the camps and regularly emptied and the garbage disposed off in a hygienic manner. Adequate health care is to be provided for the work force. Unless otherwise arranged for by the local sanitary authority, the local medical health or municipal authorities. On completion of the works, all such temporary structures shall be cleared away, all rubbish burnt, septic tank and other disposal pits filled in and effectively sealed off and the outline site left clean and 	All Worker's Camps	During construction

	tidy, at contractor's expense.		
Clearing of Construction of Camps & Restoration	<p>Contractors shall prepare site restoration plans. The plans shall be implemented prior to demobilization.</p> <p>On completion of works, all temporary structures shall be cleared, all rubbish burnt, excreta or other disposal pits or trenches filled in and sealed and the site left clean and tidy, .</p>	All Workers' Camps	
Resettlement and Social Management Framework of BEZA			
Abbreviated resettlement Plan of Mirsharai	<ul style="list-style-type: none"> • After Payment of Compensation, contractor can start the construction activities. • Contractor will ensure employment from affected people as per their qualification • After relocation of affected houses Contractor can start the construction 		

Temporary Works:

1. The Contractor shall make sure that all equipment and safeguards required for the construction work such as temporary stair, ladder, ramp, scaffold, hoist, run away, barricade, chute, lift, etc. are substantially constructed and erected, so as not to create any unsafe situation for the workmen using them or the workmen and general public passing under, on or near them.

Health and Safety:

- The Contractor shall observe and maintain standards of Health and Safety towards all of his employees not less than those laid down by the national standards or statutory regulations.
- Where appropriate, to prevent workers falling from heights, the Contractor shall make sure that every temporary floor openings shall either have railing of at least 900 mm height or shall be constantly attended; every floor hole shall be guarded by either a railing or a hinged cover, or constantly attended; every stairway floor opening shall be guarded by railing at least 900 mm high on the exposed sides; every ladder way floor opening or platform shall be guarded by a guard railing; every open sided floor or platform 1.2 m or more above adjacent ground level shall be guarded by a railing on all open sides.
- The Contractor shall provide all appropriate protective clothing and equipment for the work to be done and ensure its proper use. Where required, safety nets, belts, harnesses and lines shall be provided by the contractor. The "safety directives for work equipment" and "safety directives for protective gears", as specified in the Occupational Health and Safety Guidelines (attached) shall be followed.
- The Contractor shall provide and maintain in prominent and well-marked positions all necessary first-aid equipment, medical supplies and other related facilities. A sufficient number of trained personnel will be required to be available at all times to render first aid.

- The Contractor must provide or ensure that appropriate safety and/or health signs are in place at their work sites where hazards cannot be avoided or reduced.
- The Contractor shall report to the Engineer promptly and in writing particulars of any accident or unusual or unforeseen occurrences on the site, whether these are likely to affect progress of the work or not.

Disposal and Pollution:

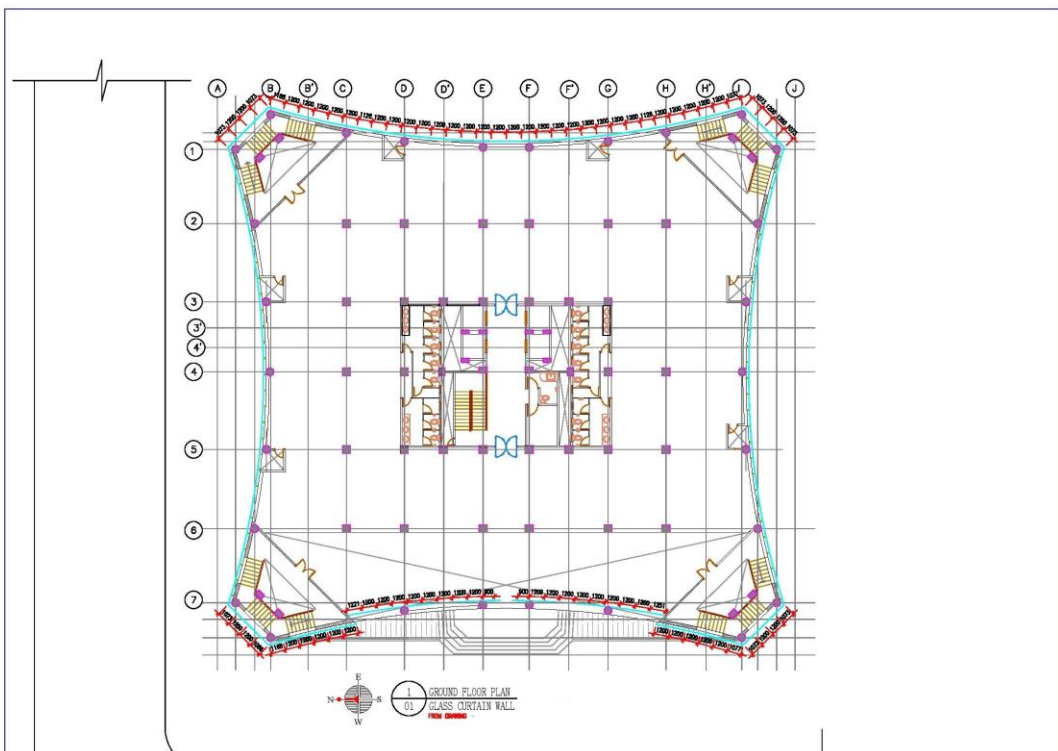
- The Contractor shall not dispose any waste, rubbish or offensive matter in any place not approved by the Engineer or Statutory Authority having jurisdiction. The Contractor shall not discharge into any watercourse oil, solids, noxious or floating materials.
- The Contractor shall take all reasonable precautions to keep public or private roads clean of any spillage or droppings from his vehicles or equipment. Any spillage or droppings which accrue shall be cleaned without delay to the satisfaction of the Engineer.

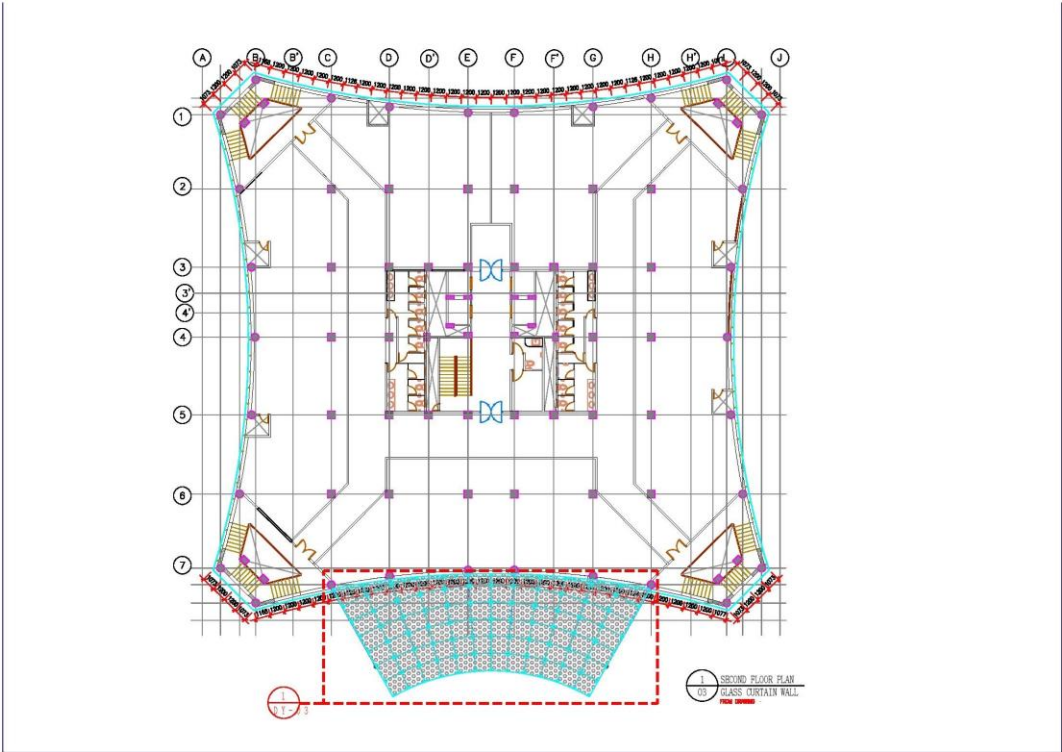
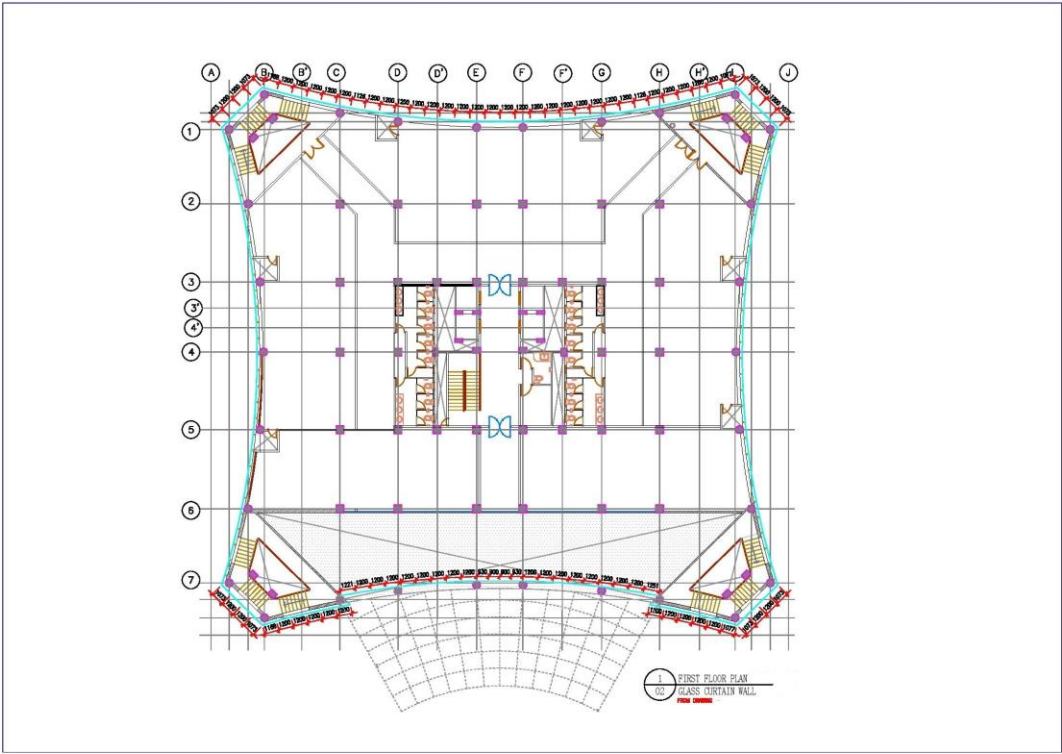
The Contractor shall construct sanitary latrine or septic tank system or install portable cabin toilet for disposal of human waste in the site office and temporary labor sheds for workers/ employees; the Contractor shall provide waste bins/ cans for collection of solid waste at appropriate locations (as directed by the Engineer), and ensure proper transfer/ disposal of solid waste.

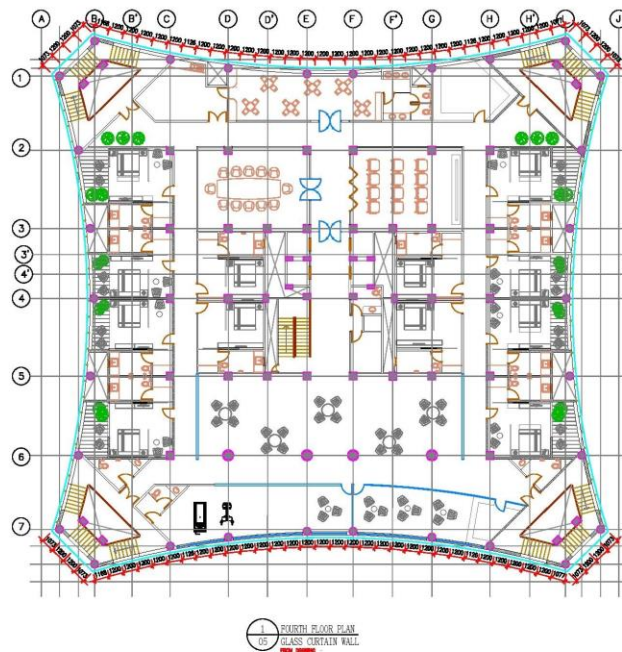
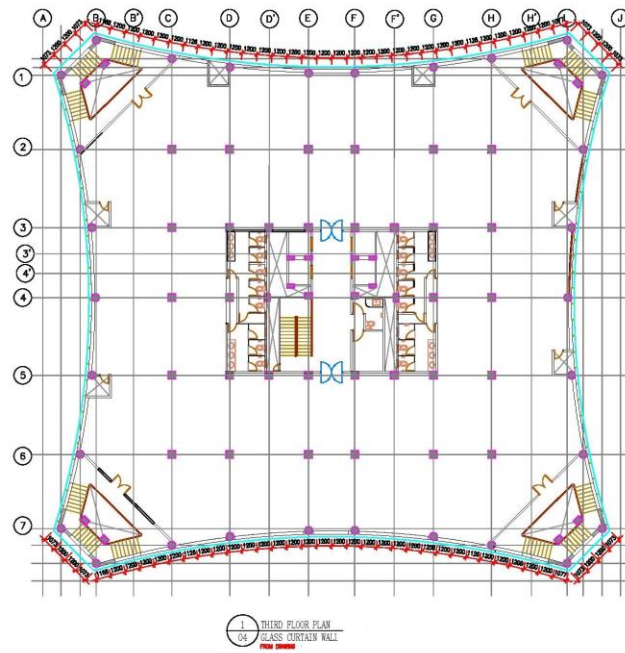
Annex -1 : Drawing : (To get idea for Work)

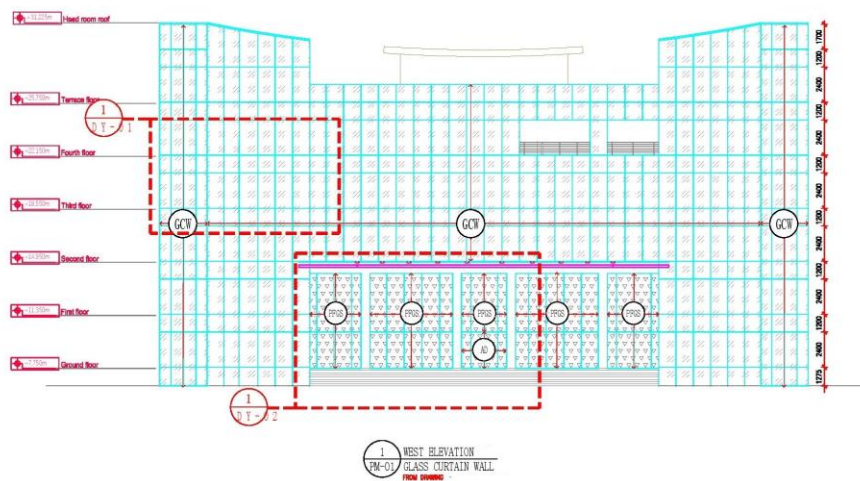
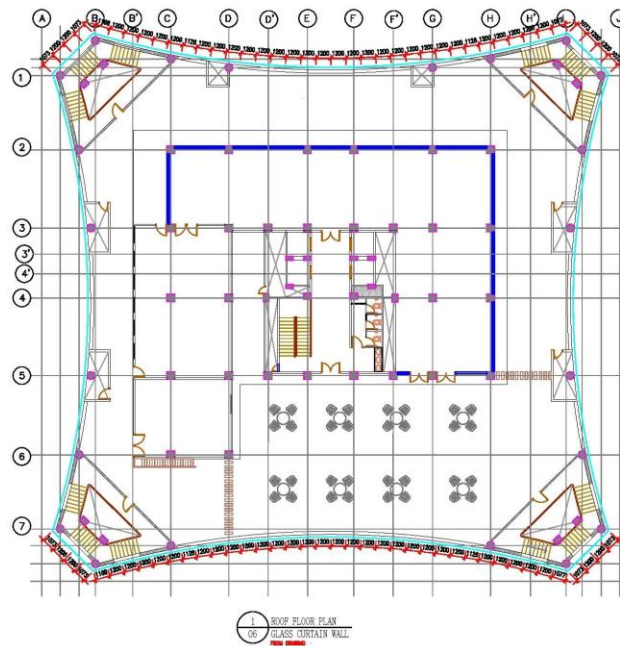
BEZA, MIRSORAI GLASS CURTAIN WALL ENGINEERING

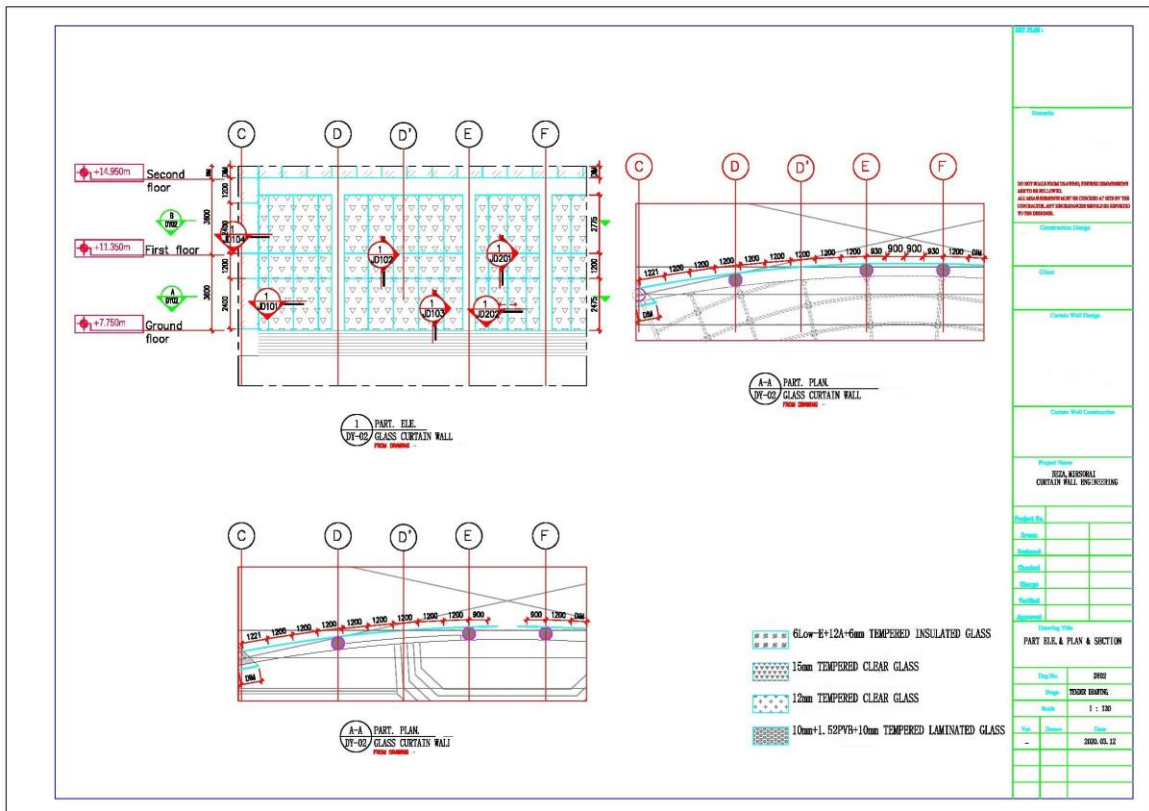
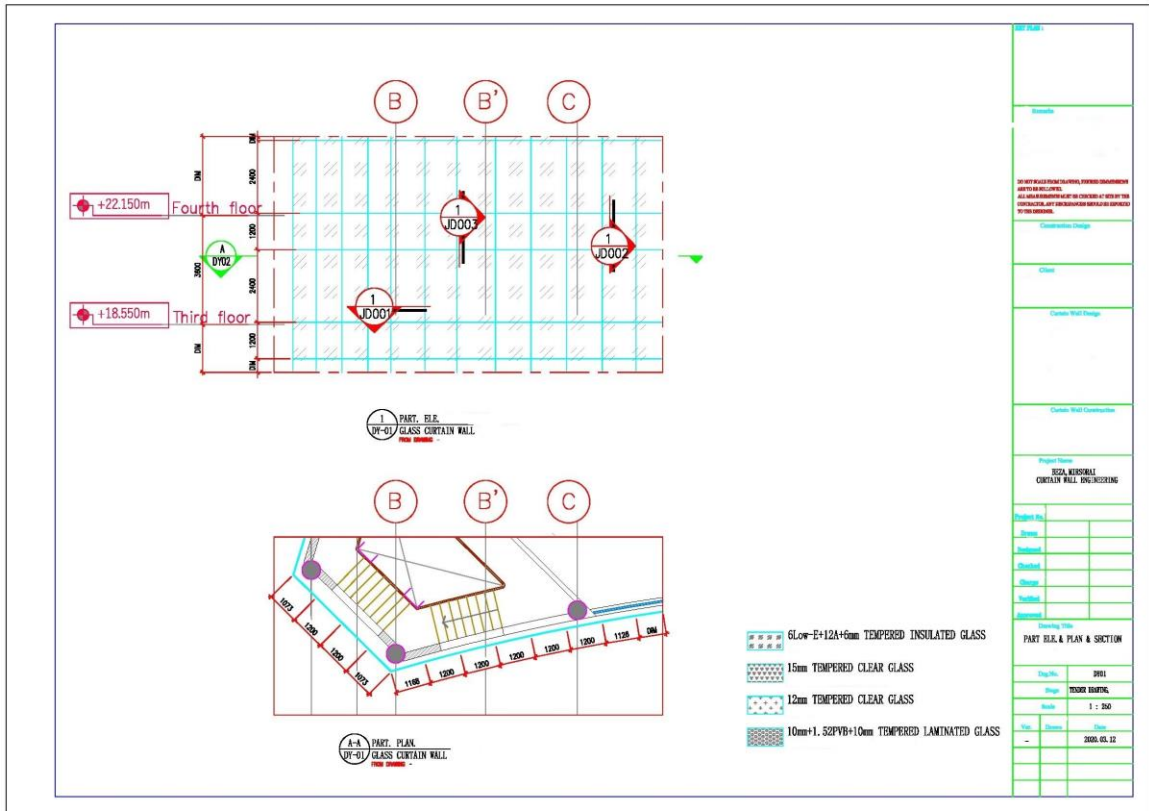
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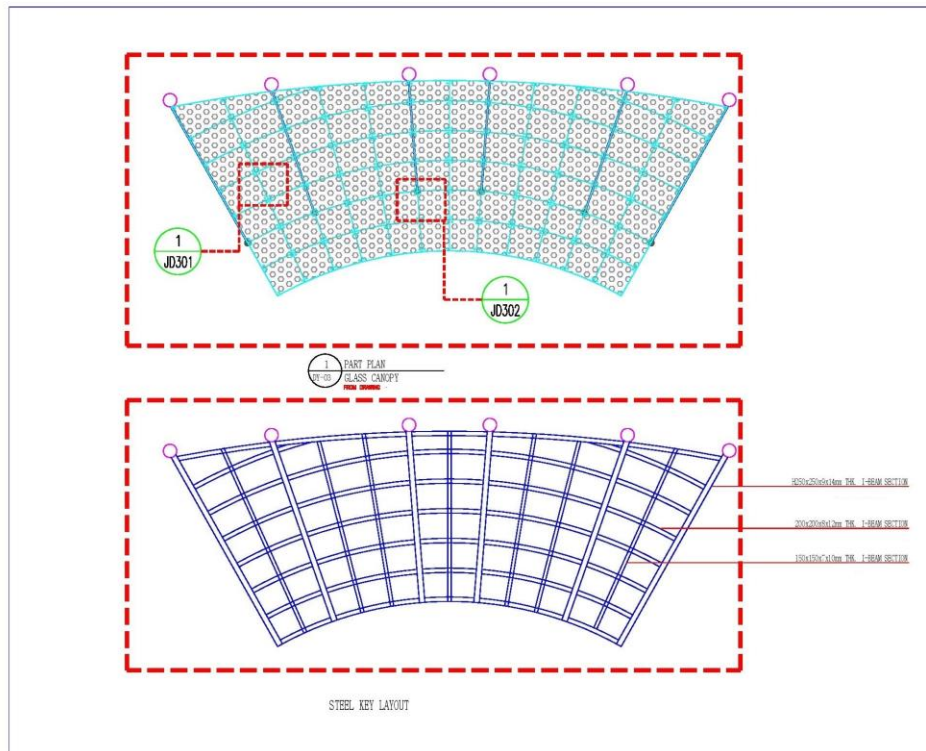






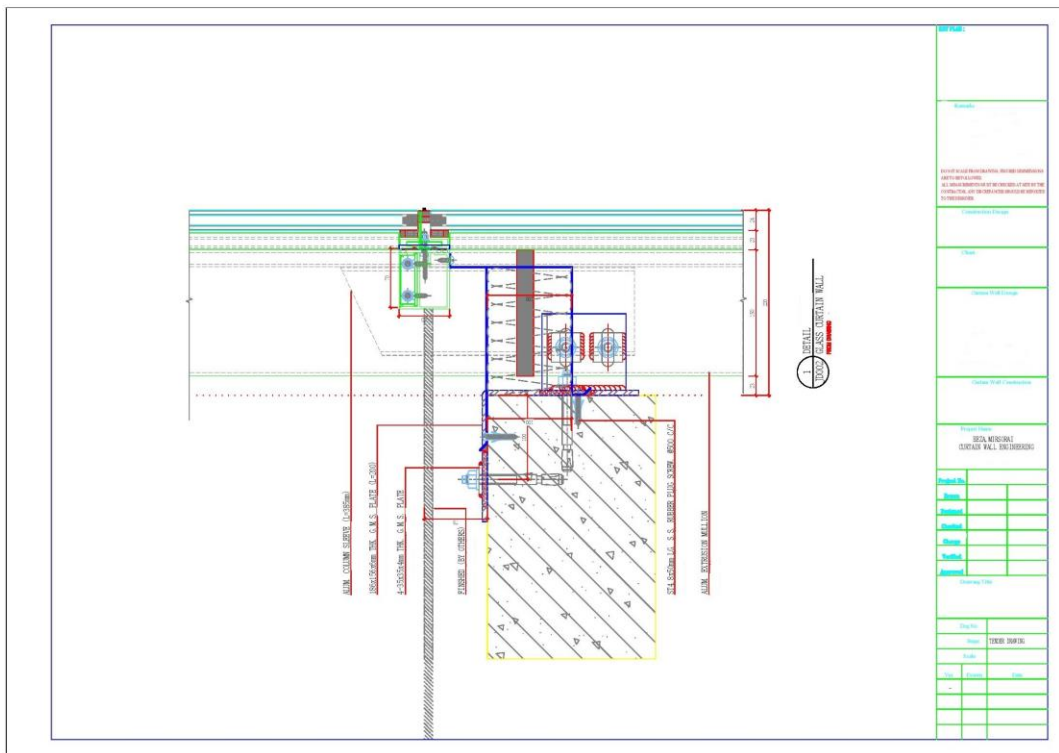
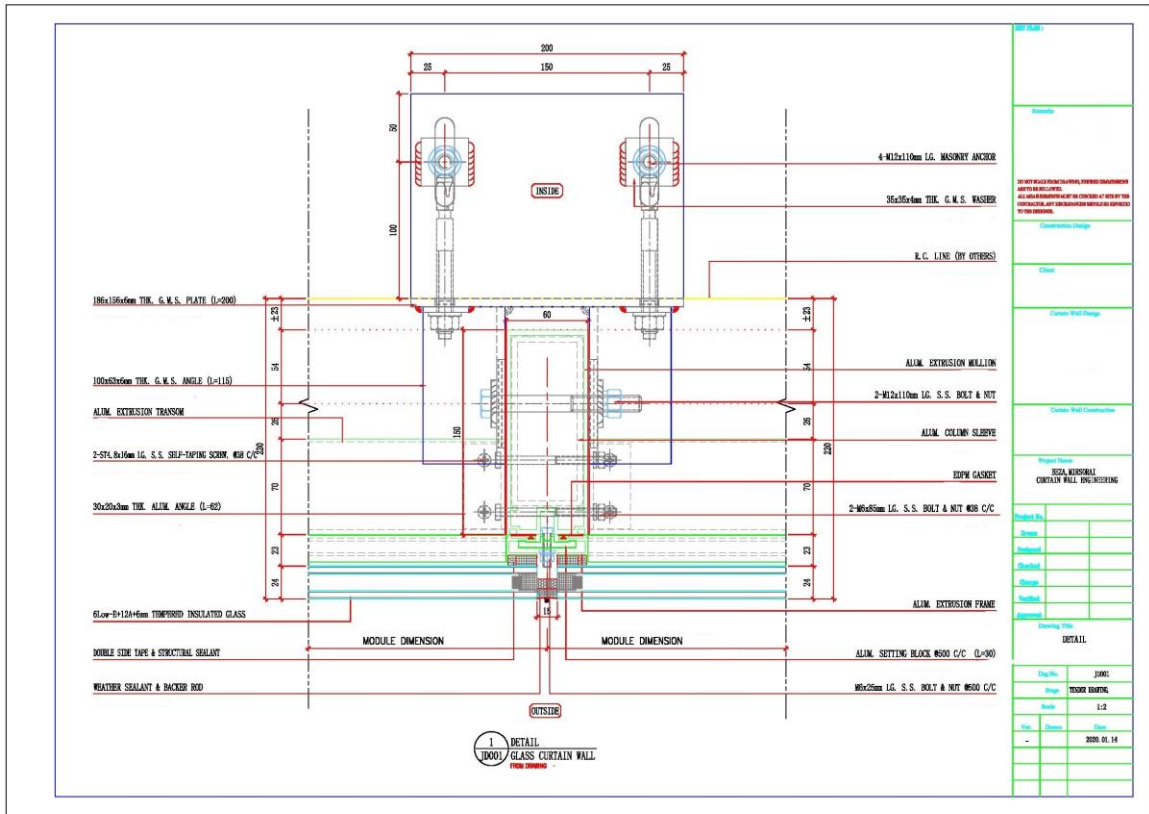


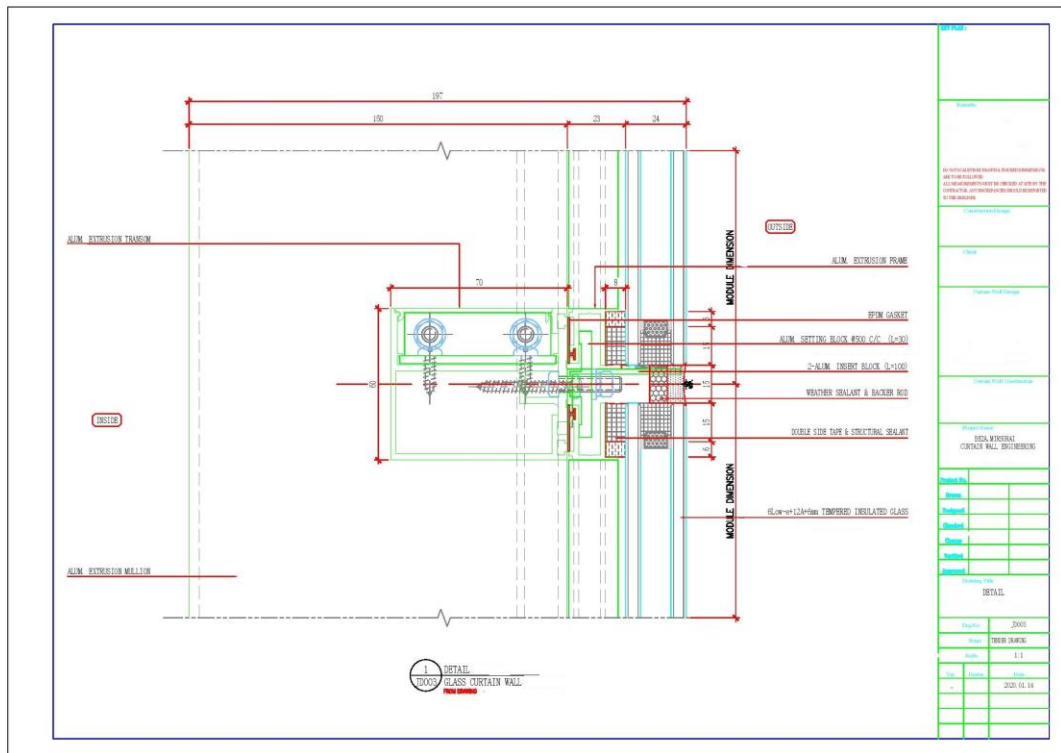




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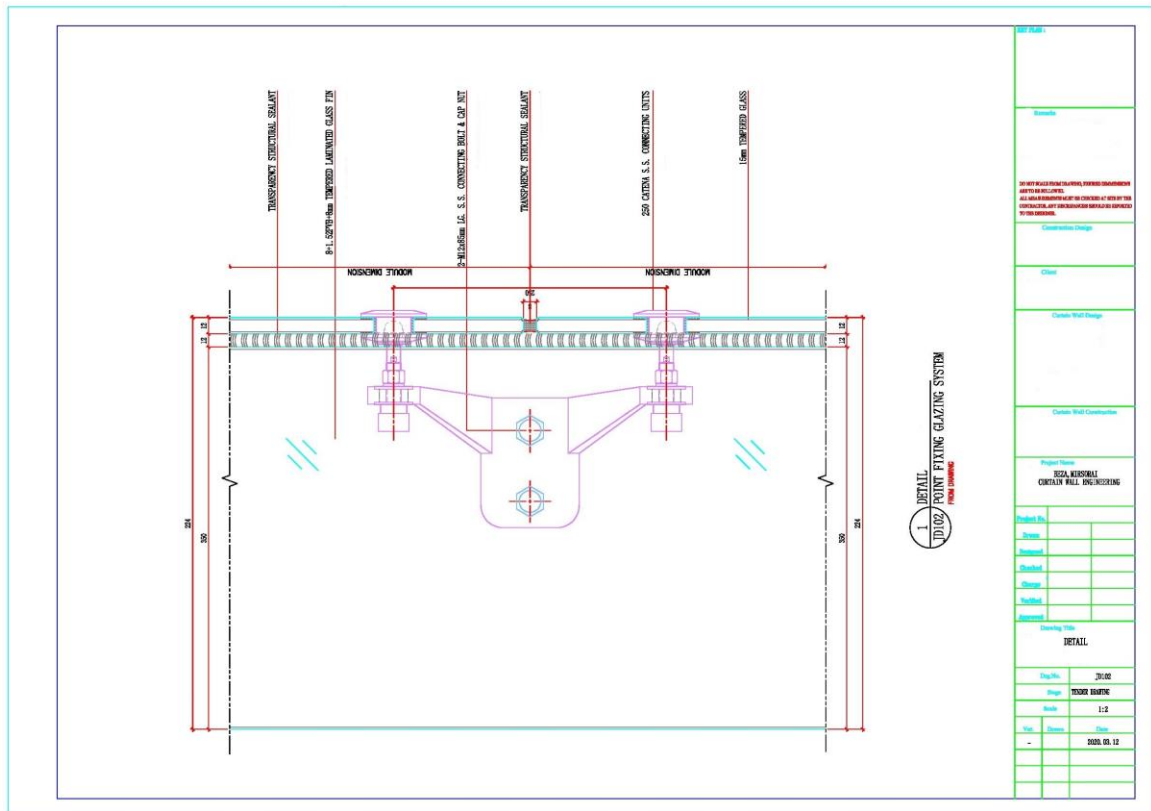
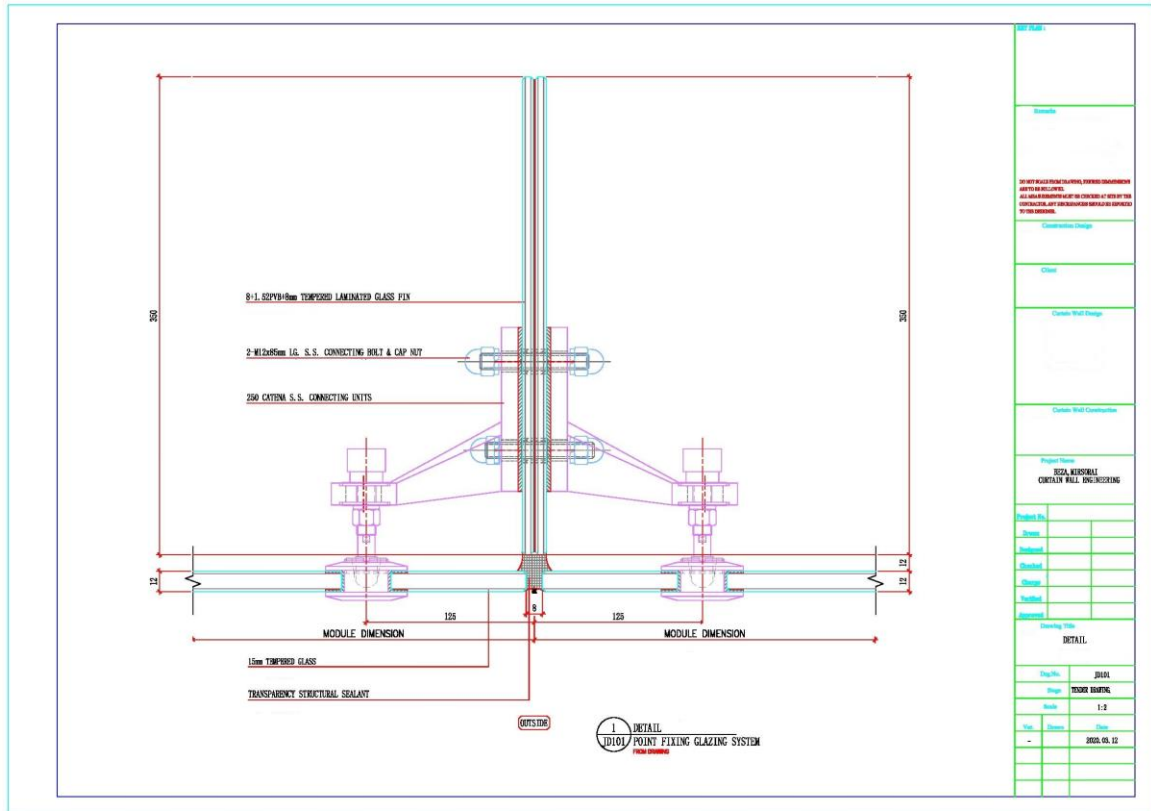
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GLASS CURTAIN WALL
(TEMPERED INSULATED GLASS)

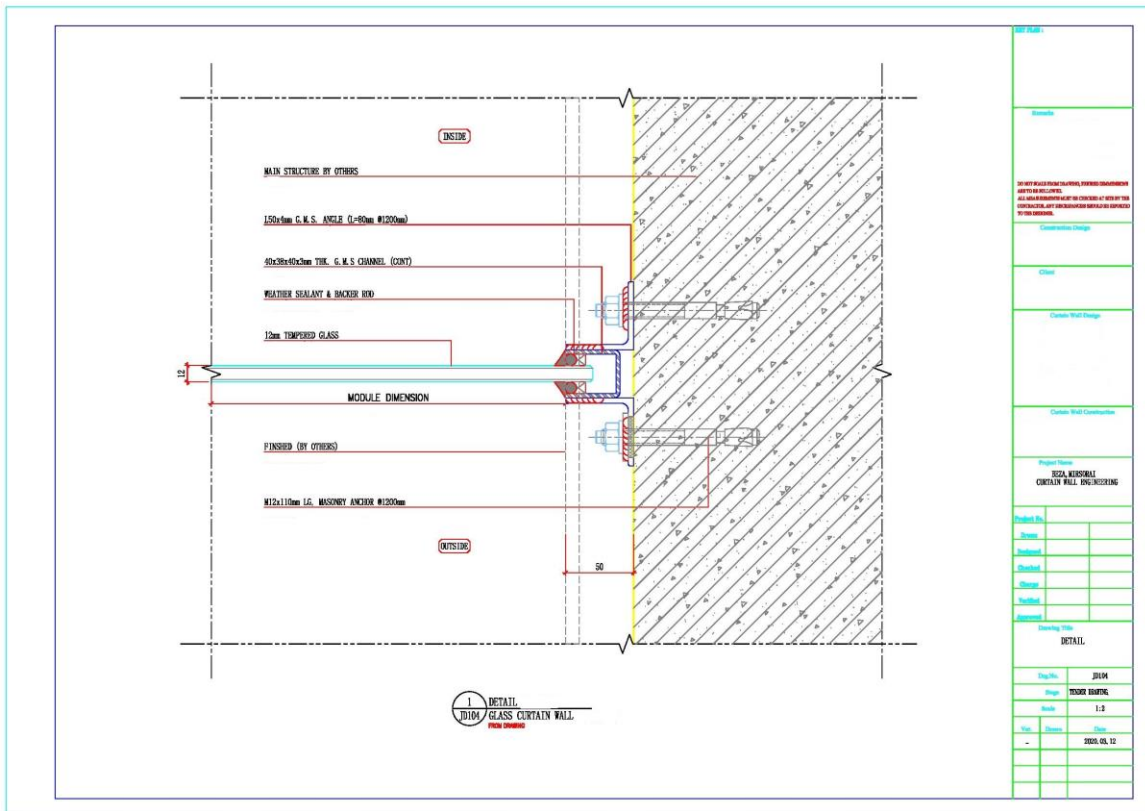
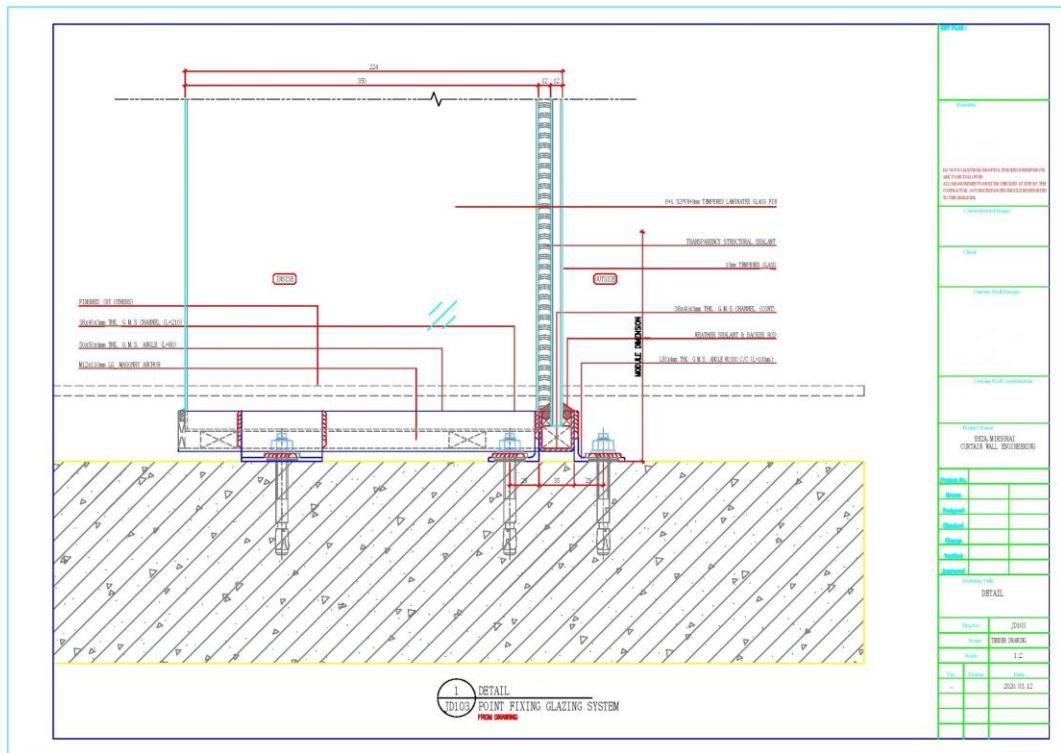




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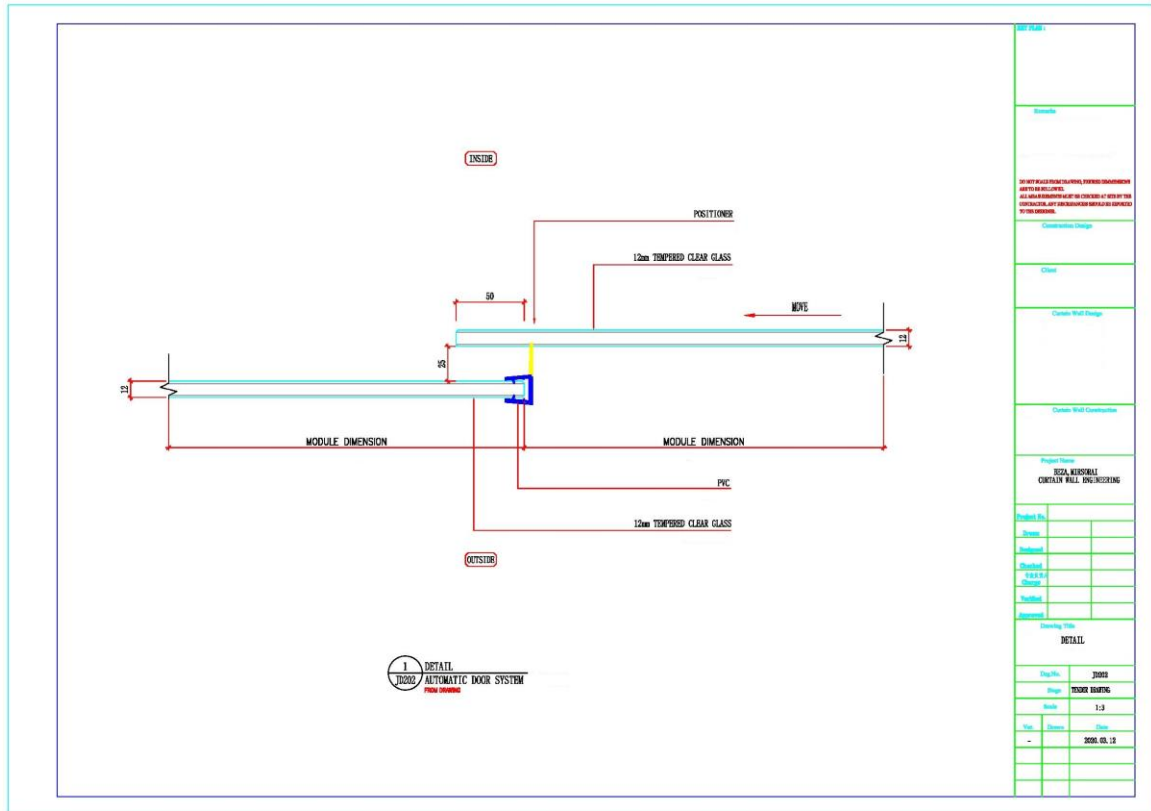
[PFGS]
POINT FIXING GLAZING SYSTEM
(TEMPERED LAMINATED GLASS)





[AD]
AUTO DOOR
(TEMPERED LAMINATED GLASS)





4 [SKYLIGHT]
GLASS CANOPY
(TEMPERED LAMINATED GLASS)

