cc. Final interior details at scale 1:50, 1:25 and 1:10. Including but not be limited to, false ceiling, toilets, partitioning, toilets, floor and wall layout with finishes and patterns.

dd. Cabinetry / millwork, plans, sections, details at scale 1:50, 1:25 and 1:10.

ee. Equipment selection / specifications.

ff. Schedules: doors, frames and hardware; windows, louvres, glazing; finishes; cabinetry / millwork; material samples; FF&E.

i. Coordinated hardware schedule and material cut sheets for selected items.

gg. Room data sheets as required.

5.9.46. Material samples

5.9.46.1. Complete and fully coordinated Technical Design Reports and presentations.

a. Updated design philosophy and story.

b. Updated Project description.

c. Updated Project brief.

d. Updated area calculations for all areas and summary report.

e. Key project components.

f. Site plan 1:200; showing all buildings, roads, Site, features, Project limit line, and landscaping property line vehicular access, as well as all public transport connections.

g. Floor plans 1:100 / 1:50, showing: all program spaces labelled with areas; structural system; major mechanical rooms; vertical transportation elements; core elements; vertical shafts; interior partitions; floor elevations; dimensions; column grids; general notes; material notes.

h. Coordinated reflected ceiling plans.

i. Sections and elevations 1:100 / 1:50, showing all facade component sizes, materials, glazing and shading devices, key dimensions, floor elevations.

j. Key plans, sections and interior elevations 1:20 / 1:50, showing all wall component sizes, materials, and integration of technical systems colour boards, renderings.

k. Facade systems detailed drawings 1:20 / 1:50.

l. Type of building and roofing detailed drawings 1:20 / 1:50.

m. Waterproofing detailed drawings 1:20 / 1:50.

n. Food and beverage design cut sheets and specifications.

o. Sample boards of finishing materials options.

p. Updated interior design perspectives (study perspectives).

q. Detailed specifications.

r. Five updated perspectives listed in the Scheme Design Phase.

s. Three updated external renderings.

t. 1:25 / 1:50 partial model of special feature(s).

u. Retail design documents for shop fronts and shell and core interiors with input from other retail designers.

v. Enlarged elevations of key areas to show design intent

w. Five updated interior perspectives / three dimensional visualizations as listed in Scheme Design Phase.

x. Three updated external renderings.

y. 1:25 / 1:50 partial façade model.

z. Any other information, mood boards, etc. as required to clearly and precisely allow the Project to be clearly understood by anyone reading the booklet. Other support documentation as required to be at rear of booklet in appendices.

5.9.46.2. Detailed technical specifications, in the agreed format and including the necessary contractual and technical information to assure adherence to contract documents.

a. Building Permit Application submittal package

5.9.47. Artwork / Public Art

5.9.47.1. The Consultant shall:

b. Identify artwork / public art to be commissioned.

c. Coordinate with lighting design, interior design, water features, landscape and any other relevant disciplines.

d. Prepare details of artwork and fully coordinated installation requirements identifying fixings, footings and structural connections, electrical power and data connections and mechanical and / or plumbing requirements.

e. Fully detailed technical specifications and schedules.

f. Maintenance and operational requirements.

5.9.48. Deliverables:

a. Artwork / public art report including budget.

5.10 ITT Tender and Document Phase

5.10.1 The Consultant shall prepare comprehensive tender construction contract procurement documentation as necessary for inviting competitive bids for the construction works for each project jointly or separately as required. All Tender Documents will be provided in accordance with the requirements of the Authority.

5.10.2 On completion of the ITT Tender and Document Phase a full set of design information shall be delivered to the Engineer for registration with the Authority's DCU within thirty (30) Days from the end of the Technical Design Phase, hard and soft copy, and shall include but not necessarily be limited to:

a. two prints of every drawing issued by the Consultant;

b. one copy of every report;

c. all Utility services approvals from all relevant agencies;

d. all survey information (as applicable); and

e. all of the above must be replicated in digital form in the appropriate electronic format / software etc.

5.10.2.1 During this Phase the Consultant shall support the Authority and the Engineer by responding to queries raised by tenderers arising from their review of the tender documents and provide any additional information required for clarification.

5.10.2.2 During the tender period for the Works contract(s) the Consultant shall review any recommendations, proposed Changes to the designs, methods of construction and general queries raised by the tenderers. The Consultant shall discuss these matters with the Engineer to formulate responses and incorporate Changes to the Authority's Requirements as agreed with the Engineer.

5.10.2.3 The Consultant shall assist in the assessment of tenders and collaborate with the Authority and the Engineer in the creation of a construction contract document that reflects the Authority's Requirements for the Works, including any clarifications or Changes that have arisen during the tender period.

5.10.2.4 In the event the bids of all qualified, responsible and reliable contractors for the construction of the Project are in excess of the amount of the current Programme Budget of the Authority, the Consultant, to the extent necessary, in the Authority's judgment, to bring the cost of the Project within said programme budget, shall revise, subject to the approval and acceptance by the Authority, all or any part of the drawings and specifications of the Project that the Authority may deem advisable or, if the construction contract for the Project has been awarded by the Authority, the Consultant shall prepare all credit change orders, including any necessary revisions to the drawings and specifications that the Authority may deem advisable to bring the cost of the Project within the said programme budget.

5.10.2.5 Notwithstanding any other provisions of this Agreement, all of the services to be provided by the Consultant under the provisions of this paragraph shall be provided without reimbursement of costs or any additional compensation therefore, unless the Authority determines, in its sole discretion, that the factors that caused the variance between the low bid and the said programme budget were not the responsibility of the Consultant or could not reasonably have been anticipated by the Consultant.

5.10.2.6 The required outcome of this phase is the creation of a comprehensive contract for the delivery of the Project with the most appropriate contractor.

5.10.3 ITT Tender and Document Phase - Generally

5.10.3.1 The Consultant shall assist the Engineer during the ITT Tender and Document Phase by providing the following services:

a. packaging of relevant sections of the Authority's Requirements information;

b. consultation regarding potential bidders;

c. participation in pre-tender conference to describe the technical and aesthetical parameters of the Project;

d. responding to technical RFIs and questions during the tender process;

e. assistance in analysis of the tender submissions and selection of Contractor; and

f. review of the short-listed Contractor's proposal documentation where it relates to his proposed engineering or architectural design.

5.10.3.2 Actions prior to release of bid documentation to inform drafting of contract(s):

5.10.4 Risk Identification

5.10.4.1 the Consultant shall adopt a design risk management approach identifying main risks and key issues prior to the drafting of the Authority's Requirements and any subsequent works contracts;

5.10.4.2 prior to the issue of the tender, the Consultant shall work with the Engineer to generate a design risk file for the Project based upon the Deliverables. Based on this risk management approach the main risks and key issues will be defined;

5.10.4.3 Included in the list of Contractor's proposals required for review will be a series of samples, benchmarks and mock ups of critical elements that will show that the contractor has the capability to meet (and is fully aware of) the quality standards that he will be required to achieve. In liaison with the Consultant the Engineer shall have mock ups constructed to provide a defined standard against which the Contractor can effectively provide his offer.

5.10.5 Definition of achievable schedule for review of Contractors proposals

5.10.5.1 resulting from the compilation of contractors proposals required for review the Consultant shall produce a schedule of achievable review periods. This schedule shall be based on the 21 Day review cycle, enabling calculation of the number of drawings, written pages or other material that can be reasonably reviewed by the Consultant within the review period; and

5.10.5.2 This programme of document submission shall be included in the contract(s). The agreed programme of document submission shall also define the anticipated number of reviews per document that it is anticipated will be required.

5.10.6 Actions after Submission of Tenders

5.10.6.1 the Consultant shall provide a statement of consent that the Contractor's tender design (on the basis of the agreed list of contractor's proposals required for tender review) meets the Authority's Requirements or a statement of no objection for alternative contractors' proposals that do not meet or match the Authority's Requirements but which are acceptable.

5.10.7 Construction Documents - Generally

5.10.7.1 The Consultant shall review the work developed for tender and construction documents to Assure compliance with the objectives of the Project and the Authority's Requirements.

5.10.7.2 The Consultant shall provide review of but not limited to the following disciplines:

a. Architectural design - infrastructure;

b. Architectural Design – Buildings;

c. facade / envelopes;

d. interior design of public spaces;

e. interior design of back of house spaces;

f. interior design of special functions;

g. landscape Architecture - landscape design;

h. landscape Architecture – planting;

i. landscape Architecture – irrigation;

j. landscape Architecture - paved surfaces;

k. landscape Architecture – drainage;

l. traffic & highway - road alignment; and

m. geotechnics.

5.10.7.3 The Consultant shall attend any workshops with the Contractor(s) in which alternative material specifications, erection methods and structural detailing will be discussed and agreed or discounted.

5.10.7.4 The Consultant shall adopt a risk management approach identifying main risks and key issues. Based on this risk management approach the Consultant shall define the key design risks and key design issues.

5.10.7.5 The extent of the review work to be carried out in the construction document production phase is given in the following paragraphs, which define specific "design" and "design review" roles at this Phase.

5.10.7.6 The Consultant in its "reviewer" role during the construction documentation production Phase shall support the Engineer in provision of advice on matters related to the design of the Works.

5.11 Summary of the Deliverables

5.11.1 The following Sub-chapter provides minimum guidelines for the anticipated Deliverables envisioned per applicable Phase of the design. It is the Consultant's responsibility to ensure that all proposed deliverables adequately convey design intent. The Consultant is encouraged to provide any additional documentation as may be necessary to gain the Authority's non-objection of the Services.

5.11.1.1 Concept Design

a. Concept Design Phase

This period is the development of the Concept Design against an agreed brief including outline proposals for Architecture, Urban Design, infrastructure, utilities, landscaping, structural and mechanical engineering services. All of the work generated under this phase will be conceptual in nature and presented in written formats and graphically in as much detail to gain owner acceptance for a preferred direction in each project area and authorization to proceed to the next Phase of design.

i. Concept Design Deliverables:

- vision statement and Project guiding principles;
- detailed schedule of design deliverables and amended Baseline Programme;

- Concept Design plans - illustrative, annotated and scaled appropriately to convey design intent and obtain the Engineer's non-objection for progress to Design Development Phase;
- Concept Design land use plan with area tabulations in AutoCAD and 'pdf' format (geophysical coordinates and topographic information to be provided by the Authority);
- Concept Design programme components diagram with Concept Design space allocation per programme component sufficient in detail to obtain the Authority's non-objection for progress to Design Development Phase;
- key element enlargement plans / sketches and scaled appropriately and suitably detailed to convey design intent and obtain the Authority's non-objection;
- Architectural elevations / massing / character development and scaled appropriately to convey design intent and obtain the Authority's non-objection for progress to Design Development Phase;
- cross-sections through key area - suitably detailed, annotated and scaled appropriately to convey design intent and obtain the Authority's non-objection for progress to Design Development Phase;
- illustrative character perspectives of programme components as may be required to convey design intent and obtain the Authority's non-objection; and
- Concept Design schedule of full services process.
- Designers Assessment Register

ii. Concept Sustainability Study:

- analyse and identify environmental / social / economical elements within the proposed design that will assist the Engineer in achieving the goal of a minimum 'three (3) star' or equivalent rating as currently rated with the GSAS,
- Traffic Concept Study:
- trip generation & parking demands;
- circulation plan and traffic flow (internal systems and context fit); and
- coordination with external traffic impact study.
- Engineering Utilities Concept Study:
- external infrastructure due diligence assessment;
- Concept Design chiller methodology report;
- Concept Design bulk power requirements;
- Concept Design bulk potable water requirements;
- Concept Design sanitary waste and storm sewerage calculations; and
- Concept Design irrigation requirements.

iii. Concept Design Report:

- A3 size booklet format describing, in written narrative and graphic form. The Concept Design report shall include all relevant deliverables as required to convey design intent and receive the Authority's non-objection to proceed to Design Development Phase.

iv. BIM Process Management:

- prepare Concept Design BIM data base files
- Animated Video – final presentation level animated generated fly- through (3 min.- 5 min in length) produced for marketing purposes

v. Programme / Budget Assistance:

- provide assistance as maybe required in conjunction with the Engineer throughout the Concept Design Phase to ensure any information and pertinent costing is given in order to help establish an overall Project budget.

vi. Statutory Approvals:

- Concept Design Phase assessment of all required Statutory Approvals and recommended strategy for engagement and compliance. Include provisions and potential impacts to the Baseline Programme.

b. Scheme Design

i. Scheme Design Phase

This period is the further development of the Concept Design to a level of outline specification. The majority of work under this phase will still be conceptual in nature but intended to further define Project components and presented in written formats and graphically in as much detail to gain the Authority's non-objection for a preferred direction in each Project area.

ii. Scheme Design Deliverables:

- updated project guiding principles and design criteria;
- updated detailed schedule of design deliverables and Baseline Programme;
- updated overall illustrative master plan;
- updated overall land use plan with site area tabulations in AutoCAD and 'pdf' format with definition of limits of work as coordinated with the Engineer. (geophysical coordinates and topographic information to be provided by the Authority);
- updated location plan - all plans coordinated with the including general levels, arrangement plans, sections, elevations and isometrics as required. All plans to be at an appropriate scale to convey design intent;
- updated phasing plans and coordination;
- enlarged plans of areas of significant detail and appropriate scale to convey design intent;
- sun impact diagrams;
- scheme Design Phase sustainability assessment;

- diagrammatic and illustrations as required of significant features or elements requiring further description for Authority approval;
- illustrative perspectives of significant feature areas;
- updated programme diagram with updated space allocation per programme component sufficient in detail to obtain the non-objection of the Engineer to progress to Technical Design Phase;
- scheme Design Phase floor plans, elevations, cross sections with space allocations tabulations;
- Design Development Phase fire and life safety assessment; and
- updated Designer's Risk Register.

iii. Traffic / Circulation Design:

- updated roadway alignment; points of access and egress;
- updated parking counts and Scheme Design Phase layouts;
- updated circulation plan; and
- coordination with final traffic impact study.

iv. Engineering Utilities Design:

- updated external infrastructure due diligence assessment;
- updated chiller requirements;
- updated bulk power requirements;
- updated bulk potable water requirements;
- updated irrigation water supply;
- updated sanitary waste and storm sewerage calculations; and
- communication and security requirements.

v. Sustainability Design:

- work closely with respective authorities within the GSAS office to help develop a strategy and checklist criteria for measuring sustainable effectiveness of the project.

vi. Scheme Design Report

- A3 size booklet format describing, in written narrative and graphic form, fundamentals of all the elements and systems specific to each discipline and scope of work, the Scheme Design report shall include, but not be limited to, the following sections:
- executive summary - written narrative for each project component to include areas of concern, scope Changes, major decisions taken during previous Phase;
- compilation of all relevant documentation (plans, diagrams, charts, etc.) as noted above to include transportation and Utilities documentation;
- review and update of all design for each project component; and

- updated design schedule - coordinated with Project Execution Plan.

vii. BIM Process Management:

- updated BIM data.

viii. Programme Budget Assistance:

- provide assistance as maybe required in conjunction with the Engineer throughout the scheme Phase to ensure any information and pertinent costing is given in order to ensure that the approved project budget is valid; and
- carry out such studies as may be necessary to determine the feasibility of the Master Programme against existing budget allowances.
- Statutory Approvals:
- gain all required planning approvals to ensure design process progresses according to schedule and all design will meet applicable regulations.

c. Technical Design Phase

i. Technical Design Phase

This period is for the further development of the design to allow preparation of technical design to take place and detailed specifications to be concluded. Upon the receipt of the Engineer's non-objection of the Scheme Design Phase submission and non-objection to proceed, the Consultant shall commence production of fully coordinated Detailed Design (Technical Design) drawings and specifications setting forth in detail the requirements for the construction of the Project. The Consultant shall co-ordinate and integrate into these drawings and specifications with design work prepared by the Authority's other consultants and the work of Contractors as required. The Technical Design Phase includes, but is not limited to:

- updated overall master plan in AutoCAD and 'pdf' format;
- updated overall land use plan with site area tabulations;
- updated location plan - all plans coordinated with the Consultants designs including general levels, arrangement plans, sections, elevations and isometrics as required. All plans to be at an appropriate scale to convey design intent;
- updated definition of limits of work and notification to the Engineer of areas of overlap with other consultants (geotechnical and topographic information as prepared by the Consultant);
- updated phasing plans and coordination;
- updated programme components plans with updated space allocation per programme component sufficient in detail to obtain Engineer non-objection for progress to ITT and Tender Document Phase;
- updated floor plans, elevations, cross sections with space allocations tabulations; and
- update fire and life safety assessment;

- update designer's risk register.

ii. Traffic Detail Design:

- updated roadway alignment; points of access and egress;
- updated parking counts and preliminary layouts;
- updated circulation plan; and
- co-ordination with final traffic impact study.

iii. Engineering Utilities Detail Design:

- updated external infrastructure due diligence assessment;
- updated chiller requirements;
- updated bulk power requirements;
- updated bulk potable water requirements;
- updated irrigation water supply;
- updated sanitary waste and storm sewerage calculations; and
- IT communication and internal security strategy report.

iv. Technical Design Phase Deliverables

Upon the non-objection of the Scheme Design Phase by the Engineer, the Consultant shall immediately proceed with th e preparation of the Tec hnical Design documents of the Project areas designed by the Consultant, which shall initially be submitted in draft form for the Authority's non-objection and which will include, but not be limited to, the following:

- fully coordinated drawings, Technical Design specifications and other documents detailing all disciplines / components required to adequately convey the Technical Design of the entire Project;
- essential design elements from above need to ha ve all final options / amendments ready for final n on-objection for prod uction of final Deliverables;
- following submission of the Technical Design report, the Consultant shall make a full presentation of the repo rt to the En gineer supported by written and illustrative material as appropriate;
- Statutory Approvals (including all approvals and submission requirements);
- procurement strategy with regards to unusual items or material or any item requiring long lead time;
- finalise the Project budget; and
- finalise programme for the Authority's non-objection.

v. Technical Design Report

Technical Design report shall be in A3 size booklet format describing, in written narrative and graphic f orm, fundamentals of all the elements and systems

specific to the discipline. The Technical Design report shall include, but not be limited to the following sections:

- executive summary to include selected design options, scope Changes, major decisions taken during this Phase etc.;
- sustainability implementation plan;
- review and update of all design disciplines for the Project;
- final implementation of Project execution strategy (include summary of work packages to be issued for the Works); and
- validation of Technical Design in coordination with the other consultants.

vi. Technical Design Packages:

The Consultant shall coordinate all design works by sub-consultants. The sizes, layouts and routes of all services, structures and spaces shall be finalised, coordinated and submitted as part of the Technical Design drawings and documents. All work shall be done in accordance with local permitting and government approvals. The drawings that will be appropriate scales will include the following disciplines:

- Architectural design set;
- interior design set;
- exhibit design set;
- fire and life safety set;
- kitchen design set;
- façade and interior lighting set;
- structural design set;
- mechanical design set - plumbing systems, HVAC;
- electrical design set;
- infrastructures / site wide Utilities set;
- civil engineering set;
- security, IT and BIS systems (building and site wide) set;
- AV-CCTV systems set;
- site design set;
- infrastructure set;
- landscape and irrigation set;
- interpretive design set;
- signage / wayfinding set; and
- site lighting.

vii. Sustainability Technical Design:

- provide draft audit checklist for the Project to meet the minimum objective of a 'three (3) star' equivalent rating as measured by GSAS.

viii. BIM Process Management:

- updated and final BIM files of the Authority's non-objected programme components.

ix. Outline Design Specifications:

- the Consultant shall prepare and submit in previously approved formats, outline specifications for all Project components. These will include draft quality control requirements, product Technical Design specifications and execution and workmanship requirements. Outline Project specification will also include performance specifications for custom manufactured and assembled systems;
- the Consultant shall collate specifications of the areas designed by other consultants for inclusion in the Technical Design specifications. The outline specification shall include draft of the sustainability requirements, system components, operating criteria or other relevant sustainability items; and
- all specifications of materials, equipment, finishes etc. shall be with proven performance and shall ensure high performance and the capability of withstanding repetitive abuse by users. Specifications of materials shall also be based on being maintenance friendly.

x. Costing Assistance:

- the Consultant shall prepare the pricing schedules and the draft Bills of Quantities;
- the Consultant shall, throughout the final Technical Design Phase, monitor the design against cost to ensure that the approved budget is maintained. Should the Authority request Changes, and / or increases in scope, which result in an increase to the approved budget, the Consultant will immediately advise his inputs regarding any cost implication; and
- the Consultant will conduct take offs and develop the Cost Plans. All design calculation sheets and drawings shall be submitted to the Authority, as back up to the Cost Plans in a separate bound document.

xi. Statutory Approvals:

- gain all required planning approvals to ensure design process progresses according to schedule and all design will meet applicable regulations.

d. ITT Documents and Tender Phase

This period is to for the development of detailed information for construction. Upon the receipt of the Authority's non-objection of the Technical Design Phase submission and non-objection to proceed, the Consultant shall commence production of thoroughly coordinated construction drawings and specifications setting forth in detail the requirements for the construction of the Project. The

Consultant shall co-ordinate and integrate into these documents design work prepared by the Authority's other consultants and the work of Contractors.

i. Production Information Deliverable Packages

The Consultant shall provide final contract document sets that detail all components for construction of the Project, in such detail as may be required to construct the Project components. All work shall be done in accordance with Statutory Approvals. These drawings will indicate all critical dimensions, material finishes, locations, desired details illustrating the extent required for construction and will form the set of documents that the Engineer will tender and build from:

- Architectural design set;
- interior design set;
- exhibit design set;
- fire and life safety set;
- façade and interior lighting set;
- structural design set;
- mechanical design set - plumbing systems, HVAC;
- electrical design set;
- infrastructures / site wide Utilities set;
- civil engineering set;
- security, IT and BIS systems (building and site wide) set;
- AV-CCTV systems set;
- site design set;
- landscape and irrigation set;
- infrastructure set;
- interpretive design set;
- signage / wayfinding set; and
- site lighting.

ii. Sustainability Design:

- provide draft audit checklist for the Project to meet the minimum objective of a 'three (3) star' equivalent rating as measured by GSAS.

iii. BIM Process Management:

- final BIM file update of Engineer non-objected programme for turn-over to Engineer appointed consultant.

iv. Final Design Specifications:

- The Consultant shall prepare and submit in previously approved formats, final specifications for all Project components. These will include draft quality control requirements, product detail technical specification and execution and workmanship requirements. The final design Project specification will also

include performance specifications for custom manufactured and assembled systems;

- the Consultant shall collate specifications of the areas designed by other consultants for inclusion in his design specifications. The final design specification shall include draft of the sustainability requirements, system components, operating criteria or other relevant sustainability items; and
- all specifications of materials, equipment, finishes etc. shall be with proven performance and shall ensure high performance and the capability of withstanding repetitive abuse by users. Specifications of materials shall also be based on being maintenance friendly.

v. Final Cost Assistance:

- the Consultant shall prepare the Cost Plan and pricing schedules for areas designed by the Consultant and shall prepare the draft final Bills of Quantities;
- the Consultant shall, throughout the Production Information Phase, monitor the design against cost to ensure that the approved budget is maintained. Should the Authority request Changes, and / or increases in scope, which result in an increase to the approved budget, the Consultant will immediately advise his inputs regarding any cost implication; and
- the Consultant will conduct take offs and develop the Cost Plans. All design calculation sheets and drawings shall be submitted to the Authority, as back up to the Cost Plans in a separate document.

e. Tender Action (including Construction Documentation)

i. Prequalification of Contractors (Not required)

This period is to for the Consultant to assist in the preparation and collation of tender documentation for construction tenders:

- the prequalification of contractors will be performed primarily by the Engineer. The Consultant, if required shall assist the Engineer in selecting and preparing the preliminary list of contractors to submit an expression of interest in tendering for the Project;
- the Consultant shall prepare draft proposals for pre-qualification criteria and procedures, to be submitted, discussed and non-objected by the Engineer; and
- the Consultant shall participate in pre-qualification of contractors and shall submit a report to the Engineer recommending a short list of contractors to tender for the Project.

ii. Tender Clarifications:

- the tender process will be managed primarily by the Engineer with input from the Consultant as required. The Consultant shall review all tenderers' queries and prepare appropriate responses for the Authority's non-objection before issue to tenderers. All addenda, circulars and bulletins may only be issued with the Authority's non-objection. All correspondence with tenderers shall be through the Engineer.

iii. Tender Evaluation:

- the Consultant shall evaluate tenderer's technical and commercial offers and shall prepare a tender report with analyses and recommendations.

iv. Award of Construction Contract

- construction contract is awarded.

5.12 Design Guardianship During Construction Phase

5.12.1 General

5.12.1.1 The Design Consultant shall report to the PWA as part of the PWA Team during the Construction Phase to provide "Design Guardian Services" for the duration of the construction activities.

5.12.1.2 These Services are to provide continued Design Service support to PWA concerning certain specific work performed by the Supervision Consultants and Contractors during the Construction Period.

a. responding to Supervision Consultant design clarification requests;

b. review and comment to PWA on alternative proposals and alternative materials submitted by the Contractor;

c. attend minimum bi-weekly site visit meetings;

d. Review and issue "objection" or "non-objection" with comments to PWA for mock-up and material sample reviews;

e. Review and issue "objection" or "non-objection" with comments to PWA for compliance with the design intent.

5.12.2 Design Guardianship

5.12.2.1 The Consultant shall continue to work with the Authority to ensure the End User's design intent is consistently met through construction.

5.12.3 Consultant Resource, Pricing and Payment

5.12.3.1 The Design Consultant will provide all required resources to carry out this service.

5.12.3.2 All costs for these Construction Phase Services of the Architect will be included in the Contract Pricing Schedule.

5.12.3.3 Invoicing for the Design Consultant's Services during the Construction Phase will be monthly and proportional to the % completion of the installed Construction work approved by PWA.

5.12.4 Site Visits

5.12.4.1 The Design Consultant shall carry our periodic site visits (minimum 1 full day per site visit).

5.12.4.2 Visual inspection of the works to ensure compliance with the design intent.

5.12.4.3 The Design Consultant shall notify the Supervision Consultant of any non-conformances.

5.12.5 Changes and Substitutions During Construction Phases

5.12.5.1 The Design Consultant shall review the Supervision Consultant's submittal on design change proposals and material substitutions for compliance with the overall design intent. The Design Consultant shall review and issue "objection" or "non-objection" with comments to PWA.

5.12.6 Reporting

5.12.6.1 The Design Consultant shall provide to PWA a monthly inventory/progress report, which shall include the following minimum sections:

a) requests for Information/ Design Clarifications received and responses issued in the Period;
b) submittals received and reviewed;
c) Mock-ups Reviewed;
d) record of site visits, inspection reports and non-conformance register.

5.12.6.2 The Design Consultant shall maintain a register of non-conformances to the design to indicate the status of all non-conformities, which are identified by the Engineer, Supervisory Consultant and the Consultant.

5.12.7 Progress Meetings

5.12.7.1 The Design Consultant shall attend monthly progress meetings with PWA to present monthly report findings and provide evidence of progress on the Service being provided.

5.12.8 Submittals

5.12.8.1. The Design Consultant shall review and issue "objection" or "non-objection" with comments to PWA for all design change proposals and material substitutions within ten (10) Days of receipt of same.

5.12.8.2. The Design Consultant shall provide responses to Requests for Information from the

Supervision Consultants thru PWA as soon as possible, but not later than ten (10) Days from receipt.

6. DURATION OF THE SERVICES

6.1. General

6.1.1. The Agreement period (duration of the Services) is measured:

- from the construction mobilisation period immediately following the Commencement Date; to
- the Construction Completion Date and hand-over of the building to the Client.

During this period the Consultant shall provide the Services described in this Proj ect brief.

6.2. Key Phases and Key Dates

6.2.1. The Baseline Programme shall ha ve as its basis the ac hievement of the Key Dates and Key Phases. Key Dates are specified for the various Key Phases of the Project in Table 6.2 below and refer to the latest date of completion date for each.

Table 6.2 – Project Key Phases and Associated Key Dates

Key Phase	Key Phase Title	Key Date (Days from Commencement Date)
A	Completion of Validation Services Phase	CD +14
B	Completion of Concept Design Phase	CD + 75
C	Completion of Scheme Design Phase	CD + 140
D	Completion of Technical Design Phase	CD + 225
E	Completion of ITT Documents and Tender Phase	CD + 345
F	Completion Design Guardianship During Construction Phase	CD + 1075

CD = Commencement Date

6.3. Gateway Review

The Consultant shall be responsible for project compliance in accordance with a series of approval gateways. These are milestones in the project lifecycle beyond which the project shall not proceed without specific management and funding approval from Engineer. At each approval gateway, a Project Review of the technical scope, projected whole life cost and program for the project will be a pre-requisite for approval to proceed to the next Phase.

Approval Gateway 1, Project Initiation – Conducted at project inception this review has the following objectives:

1. Confirmation of PWA's needs;
2. Identification of the need for investment in line with PWA strategy;
3. Confirmation of drivers, project output or delivery requirements;
4. Confirmation of outline, the options and budgets to be considered for the project;
5. Confirmation of funding provision;
6. Incorporation of the needs of Operations and Maintenance Department;
7. Identification of any strategic issues including statutory approval requirements attached to the project;
8. Identification of potential impact on operation and maintenance (O&M) costs; and
9. Identification of all non-Ashghal stakeholders and required approvals (e.g., MoE, PE, Kahramaa, MoF, etc.).

Approval Gateway 2, Program Validation – Conducted following Project Option Assessment with the following objectives:

1. PWA Approval of all Reports and Deliverables required in Program Verification Phase
2. Confirmation that the Option is an effective solution to PWA's needs;
3. Recommendation of the approved project option;
4. Confirmation of drivers, project output; delivery requirements and long lead items;
5. Confirmation of Estimated Project costs (capital and whole life costs);
6. Confirmation of Project Milestones;
7. Identification of the impact of the preferred option on O&M costs;
8. Reports on feasibility Work undertaken to date;
9. Reports on Options considered for the project;
10. Confirmation of support from PWA Stakeholders
11. Confirmation of non-Ashghal general concurrence or compliance capability with project options; and

12. Establishment of Approvals, timeline/milestones for all non-Ashghal stakeholders (e.g., MoE, Kahramaa, etc.).

Approval Gateway 3, Design – Approval of Project Budget Allocation to include:

1. PWA Approval of all Deliverables required in Design Phase
2. Re-Confirmation of Options is an effective solution to PWA's needs;
3. Confirmation of PWA Budget for Project;
4. Confirmation of project output and delivery requirements;
5. Confirmation of latest project Milestones;
6. Confirmation of latest impact on O&M costs;
7. Reports on Design and project development work to date;
8. Reports on costs incurred to date;
9. Establishment of budget allocation for services and works
10. Capture of information required by PWA finance directorate; and
11. Confirmation of Approvals, timeline/milestones for all non-Ashghal stakeholders (e.g., MoE, Kahramaa, etc.).
12. Confirmation of PWA/Client Satisfaction;

Approval Gateway 4, Project Change/Variance – Conducted when a project is at variance or is forecast to be at variance with the agreed program in terms of cost, time, scope or output. It includes:

a) Confirmation that variation is an effective solution to PWA's needs;

b) Confirmation that project can proceed with the approved change;

c) Confirmation of change in project budget or program;

d) Confirmation that project drivers, output and delivery requirements are still relevant following the change; and

e) Confirmation of Approvals, timeline/milestones for all non-PWA stakeholders.

Approval Gateway 5, Delivery – Beneficial Use – Conducted when any asset, created or modified by the project, is capable of use by the Asset owner. It includes:

a) Confirmation of PWA/Client Satisfaction;

b) Confirmation of expenditure to date and forecasts to project close;

c) Confirmation of the scope of all outstanding works and services;

d) Confirmation of acceptance by Client of the asset for beneficial use;

e) Approval of all information necessary for updating the PWA Asset Inventory;

f) Approval of as built records and details of any assets taken out of operational use; and

g) Confirmation of Approvals delivery for all non-PWA stakeholders.

h) PWA Approval of all Deliverables required in Construction Phase

Approval Gateway 6, Project Closure – Completed prior to end of Contract. It includes:

a) Re-Confirmation of PWA/Client Satisfaction;

b) Confirmation of all Maintenance Period Deliverables Completed by Contractor and CSC

c) Confirmation that the anticipated outputs and benefits of the project have been delivered;

d) Confirmation of the actual cost incurred for the project;

e) Confirmation of the actual impact on O&M costs;

f) Confirmation that all project documentation has been committed to archive and is retrievable; and

For the avoidance of doubt, the Approval Gateway is a critical milestone in the development of each project and successful completion relies on the timely publication and distribution of all relevant documentation. The Consultant shall be responsible for planning, arranging and recording the output of each gateway review and shall undertake the same duties for repeated gateway reviews should the Project circumstances so dictate.

The Consultant shall be responsible for organizing and preparing presentation documentation for the purpose of control point reviews. The format for the control point reviews to be provided by the Consultant shall take the form of a 45 minute presentation followed by a 45 minute question and answer segment. The presentation package must clearly communicate to the PWA the project status at the milestones indicated in the Design Process Control Point Chart. The presentation package must cover the following disciplines:

a) Architecture (including site plan)

b) GSAS (Sustainability)

c) Interior Design

d) Landscape Architecture

e) Structural

f) Mechanical
g) Electrical
h) Plumbing
i) Civil
j) Infrastructure
k) AV/IT/Security

The Control Point deliverables shall include:

a) No. 1 A1 Boards representing key project information (ie. Site Plan, plan, elevation, sections renderings, etc.).
b) No. 12 A3/A4 copies of the presentation.
c) All documents on No. 3 CD/DVDs with label indicating the project title, project number and date.
d) PDF of the presentation to be issued a minimum of three days prior to the scheduled control point presentation.

Required control points designated by PWA are as per the following:

Design Processes Control Points

1. Design - Program Validation Phase – 100%
2. Design - Concept Design Phase – 100%
3. Design - Scheme Design Phase – 100%
4. Design - Technical Design Phase – 100%
5. Design – Completion of ITT Documents and Tender Phase – 100%

Construction Processes Control Points

1. Construction Process – Mobilization - Kick Off Meeting
2. Construction Process – Mobilization - Deliverables Review
3. Construction Process – Delivery Works - Completed
4. Construction Process – Handover – Interim
5. Construction Process – Handover - Final
6. Construction Process – Defect Liability Period – Post Handover

6.4. Time for Completion

6.4.1. The Time for Completion of the whole of the Serv ices is One Thousand & Sixty Five (1065) Days.

6.4.2. The Time for Completion of the Services includes all necessary time for processing of documentation and obtaining the Engineer's non-objection for all Deliverables.

7. FACILITIES, INFORMATION AND SERVICES OF OTHERS

7.1. Facilities Provided by the Consultant

7.1.1. Except where expressly provided otherwise, the Consultant shall at its own cost provide all the facilities needed to carry out the Services, including accommodation, transport and all other resources and shall make its own arrangements for visas, exit permits, residence and work permits.

7.1.2. Subject to Paragraph 7.2 [Facilities Provided by the Authority] the Consultant shall provide all and sufficient offices, resources and equipment as shall be necessary so as to facilitate the performance and completion of the Services in accordance with the:

- Agreement, Schedule C [*Schedule of Resources*], Part 1 [*Master Programme*]; and
- Quality and other performance requirements of Conditions of Engagement, Schedule A [*Project Brief*].

7.1.3. The Consultant shall provide its staff with mobile phones, computers, printers and stationeries etc. so as to facilitate the performance of the Services on time and with the qualities as described in this document.

7.1.4. In accordance with the provisions of General Conditions of Engagement the Consultant shall maintain an operational office in the State of Qatar for the duration of the Project.

7.1.5. Unless expressly stated otherwise under Paragraph 7.2 [Facilities Provided by the Authority] the Consultant shall equip the office as needed to effectively and efficiently perform the Services.

7.1.6. Unless expressly stated otherwise under Paragraph 7.2 [Facilities Provided by the Authority] the Consultant shall provide, inter alia:

a. all necessary IT hardware and software systems, including specific Project based software systems and associated licences;

b. all Project controls systems and associated licences;

c. all necessary Project office stationery and associated consumables;

d. all necessary personnel transportation;

e. all necessary personnel mobile phones and associated communications devices;

f. all visas, permits and the like necessary to perform and complete the Services; and

g. all necessary statutory insurances and appropriate insurance coverage for Consultant provided equipment and resources for the duration of the Agreement.

7.2. Facilities Provided by the Authority

7.2.1. None.

7.3. Information Provided by the Authority

7.3.1. The information to be provided by the Authority is contained within Section C: Project Brief, Part 4: Project Data.

7.3.2. The information provided by the Authority and expressly indemnified for its accuracy pursuant to General Conditions of Engagement Sub-clause 6.4 [Authority Provided Facilities, Information and Services] is contained within Chapter 3 [Authority Indemnified Project Data] of Section C: Project Brief, Part 4: Project Data.