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TECHNICAL SPECIFICATION FOR FIRE PROTECTION SERVICES

PROJECT	PROPOSED EXTENSION TO EXISTING BUILDING-CRYO LAB
CLIENT	PACIFIC COMMUNITY
PROJECT LOCATION	FNTC ROAD 2, NASINU.
ISSUE STATUS	TENDER ISSUE
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1.0 GENERAL

1.1 INTRODUCTION

This specification details the requirements for **Fire Protection**. The Fire Services covers the supply, installation and commissioning of all **fire protection services works** depicted on the engineering drawings and all other works necessary to implement this specification.

All sundry and incidental works or equipment necessary for the satisfactory completion of the work shall be allowed in the pricing submission even if it is not specifically nominated in this documentation.

1.2 DESCRIPTION OF PROJECT

The description of the project will be defined in the tender schedule.

1.2 DEFINITIONS AND ABBREVIATIONS

For the purpose of this specification the following definitions apply:

The term "Project" shall be as defined on the tender schedule.

The term "Site" shall mean the location defined on the tender schedule where the Project will occur.

The term "Employer, Client, Principal, and Owner" shall be as defined on the tender schedule.

The term "Project Manager" shall be as defined on the tender schedule.

The term "Architect" shall be as defined on the tender schedule.

The term "Structural Engineer" shall be as defined on the tender schedule.

The term "Services Engineer" shall mean Edison Consultants Limited.

The term "Builder" shall mean the company appointed to carry out the main building works for the project.

The term "Electrical Utility Company" shall mean the organisation defined on the tender schedule that supply electricity to the community.

The term "Telecom Utility Company" shall mean the organisation defined on the tender schedule that supplies telecommunication services to the community.

The term "Water Utility Company" shall mean the organisation defined on the tender schedule that supply water to the community.

The terms "Contractor, Tenderer, Nominated Sub-Contractor" shall mean the company bidding for and having subsequently been accepted to carry out the works in this specification.



The term “Contract” or “Sub-Contract” shall mean the works included in this specification and the accompanying engineering drawings, Contract Specifications and relevant Australian and New Zealand Standards to which the project shall be built. The most updated version of the Australian standards shall apply during the period of construction, and this shall supersede the relevant standards version applicable at the time of tendering and contract negotiations.

“Approved” shall mean subject to the inspection and written approval of the Services Engineer before being worked or fitted into the Contract works.

“Indicated” shall mean as indicated in the Contract drawings and specification and by notes, figures, sketches or writing, thereon or by any combination thereof.

1.3 REFERENCE DOCUMENTS

This specification is to be read with conjunction in all relevant reference documents and engineering drawings that are part of this project. All work covered by this specification shall be subject to all provisions of the Conditions of Contract and the Preliminary and General Sections of the Project Managers Specification.

1.4 STANDARDS AND CODES OF PRACTICE

Standards of workmanship, materials, and details of construction are to conform to relevant Australian and New Zealand Standards with any amendments unless specifically noted in this specification and drawings.

All work in respect to materials and workmanship shall meet or exceed relevant local and overseas engineering standards, best practices and recommended methods. In particular, relevant applicable sections of the following standards shall be deemed part of this specification.

All works shall comply with the following major standards as well as other codes called upon in these specifications:

1.4.1	The National Building Code, Fiji
1.4.2	New Zealand Building Code
1.4.3	Local Town Council
1.4.4	Health and Safety Regulations
1.4.5	SAA Wiring Rules (AS3000 – 2018)
1.4.6	National Fire Authority Regulations
1.4.7	Energy Fiji Limited Regulations
1.4.8	NZS4512 : Fire Indicator Systems in Buildings
1.4.9	NZS2139: Heat Actuated Fire Detectors
1.4.10	NZS4503 : Hand Operated Fire Fighting Equipment – location, installation and distribution
1.4.11	NZS4504 : Fire Hose Reels
1.4.12	NZS4506 : Portable Fire Extinguishers
1.4.13	NZS4507 : Fire Testing and Rating of Portable Fire Extinguishers
1.4.14	NZS4508 : Portable Fire Extinguishers
1.4.15	NZS4514 : Installation of Smoke Alarms
1.4.16	AS1670: Automatic Fire Detection and Alarm Systems



1.5 CONTRACTORS TO INFORM THEMSELVES AND ON SITE COORDINATION

The Contractor shall familiarise themselves with the site and the requirements of this specification before tendering. No allowance shall be given for the lack of knowledge of the site conditions and the requirements of this specification. Any queries with the requirements of the specification shall be brought to the Engineer's attention prior to tendering for clarification. The Contractor shall be fully responsible for meeting the requirements of the specification thereafter.

The Fire Protection Services Contractor shall give all necessary notices, obtain all necessary permits and pay all fees in order that the work may be carried out, and shall furnish all certificates as evidence that the works installed comply with laws and regulations. Bring to the attention of and clarify any unusual aspects of the installation with the relevant Authority during the permit application period.

The Contractor shall be responsible for obtaining NFA inspections; permits and approvals for this work, the costs of the same shall be included in the tender price.

Full allowance shall be made in the tender price for all costs, including taxes, duties, local authority fees and any other applicable costs.

The fire services contractor shall coordinate with all other sub contractors' exact locations of equipment during installation of fire services. The locations shown on the drawings are indicative only; contractor shall confirm final locations on site once approved by the engineer.

1.6 LOCAL AUTHORITIES

The contractor shall be responsible for coordinating these works with the relevant local authorities as required to execute these works in a timely and legally compliant manner. The local authorities shall include but not be limited to the following:

- 1.6.1 Energy Fiji Limited (EFL)
- 1.6.2 Telecom Fiji Limited (TFL)
- 1.6.3 Water Authority of Fiji (WAF)
- 1.6.4 The National Fire Authority (NFA)
- 1.6.5 The Department of Town and Country Planning (DTCP)
- 1.6.6 Local Town Council
- 1.6.7 The Occupational Health and Safety Department (Labour and OHS)

The Contractor shall ensure that all necessary applications for executing the works are made and approvals obtained from the relevant local authorities. The Contractor shall be responsible for obtaining the necessary applications forms, completion of the same, including those items requiring client/owner and payment of fees for the same.

The Contractor shall make allowances in the tender prices for the costs associated with permits, applications, progress inspections, final inspections and final certifications.

The Contractor shall give all necessary notices, obtain all necessary permits and pay all fees in order that the work may be carried out, and shall furnish all certificates as evidence that the works installed comply



with laws and regulations. Bring to the attention of and clarify any unusual aspects of the installation with the relevant Authority during the permit application period.

The Contractor shall be responsible for obtaining NFA inspections; permits and approvals for this work, the costs of the same shall be included in the tender price.

Full allowance shall be made in the tender price for all costs, including taxes, duties, local authority fees and any other applicable costs as described above.

1.7 CONDITIONS OF CONTRACT

Refer to the Architect/lead Consultants for the conditions of contract.

Contractors shall ensure that they read and understand all Conditions of the Contract prior to submitting their tender. The contractor will be required to endorse the Conditions of Contract as part of the contract documentation set once the contract for fire protection services has been awarded.

1.8 SITE MEETINGS

A representative of the Contractor, who is fully qualified in all aspects of Fire Protection Services works, shall be required to attend all site meetings called by the Project Managers. The said representative shall be fully conversant with all aspects of this current project, including the latest site developments, prior to attending meetings. The said representative shall have been authorised by the Contractor to make decisions on the Contractor's behalf which shall be deemed binding on the Contractor.

1.9 WORK PROGRAMME

The Tenderer shall submit a programme of works with their tender in Gantt Chart Form, specifying Tasks, Duration, Resources and dependencies between scheduled tasks. This programme shall be kept updated at all times for the entire duration of the project. The Engineer reserves the right to inspect the work programme at any time.

1.10 OCCUPATIONAL HEALTH AND SAFETY

The Contractor shall ensure that all personnel are fully trained in matters relating to work safety. The Contractor shall ensure that their personnel are fully equipped with safety equipment and that a strict regime of safety is followed on site that complies with local OHS (Labour Department) Authority requirements.

1.11 TENDER COMPLIANCE

All tenders submitted shall be fully compliant with no tags, exclusions, counter-offers or any deviations from the requirement of the specifications and drawings. Alternative sales agreements or upfront payment requirements shall be considered non-compliant. The tender shall state explicitly that their tender is fully compliant.



Alternative, non-complying tenders may be submitted providing detailed information on alternative offering or any deviations. Alternative offers shall be submitted, clearly marked, in separate sealed envelopes.

Strict conformance to this specification is required to ensure that the installed system will function as designed, and will accommodate the future requirements and operations of the Client. All specified operational features must be met without exception.

The equipment to be supplied will be considered only if it meets all sections of the technical specifications. Any deviations of system performance outlined in this specification will only be considered when the following requirements have been met:

A complete description of proposed alternate system performance methods with three (3) copies of working drawings thereof for approval by the Client/Architect/Engineer, to be submitted with the tender.

1.11.2 The Contractor shall submit a point-by-point statement of compliance for all sections (including subsections), in this specification to ascertain that the tender is a fully complying one. The statement of compliance shall consist of a list of all paragraphs within each section of this specification. Each clause shall be answered with one of the following statements:

Response	Definition
Fully Complies	The equipment/system/installation methodology complies fully in all respects with the specification clause.
Partially Complies	The equipment/system/installation methodology offered does not comply fully but offers most or a substantial part of the requirements of the particular clause.
Does Not Comply	The equipment/system/installation methodology offered provides none of the requirements of the particular clause.
Understood and Accepted	The Contractor understands and accepts the conditions imposed by the particular clause and as such is fully included in the tender.
Not Accepted	The Contractor does not accept the condition imposed by the particular clause and as such is not included in the tender. The Contractor shall state as to why this requirement has not been accepted.
Submitted Herewith	The Contractor has submitted the information, material or sample as required by that particular clause.

Where the tender bid does not comply with the paragraph as written and the Contractor feels the proposed system will accomplish the intent of the paragraph, a full description of the function as well as a full narrative description of how its proposal will meet its intent shall be provided.

Any submission that does not include a point-by-point statement of compliance as described herein may be subject to disqualification.

The Client and the Engineer shall reserve the right to reject any such non-complying tenders.

1.12 QUALIFICATIONS OF PERSONNEL

The contractor shall have successfully completed projects of comparable size and complexity. The Client reserves the right to reject any components for which evidence of a successful prior installation performed by the contractor cannot be provided.



The contractor shall have in-house engineering and project management capability consistent with the requirements of this project. The contractor is responsible for retaining qualified personnel for detailed system documentation, coordination of system installation requirements, and final system testing and commissioning in accordance with these specifications.

1.13 PROJECT SITE AND WORK CONDITIONS

It shall be the Contractor's responsibility to inspect the job site and become familiar with the conditions under which the work will be performed. Inspection of the site may be made by appointment with the Client/Project Manager.

The Contractor shall remove rubbish and debris resulting from his work on a weekly basis. Rubbish not removed by the Contractor will be removed by the Client and back-charged to the Contractor. Removal of debris and rubbish from the premises shall be coordinated with the Client.

1.14 CONSULTANTS ADVICE (CA)

All tender queries and correspondence shall be formally sent to the Engineer via facsimile transmission. Responses to these queries will be issued in the form of Consultants Advice (CA).

All CA's shall be deemed to constitute an addendum to the tender documentation. If there is any conflicting information between the CA's, or technical specifications; the latest CA that has been issued shall take precedence over the rest of the documentation.

Note that the preferred mode of transmission for tender queries shall be via facsimile. Queries sent via e-mail will not be accepted.

All tender queries shall be provided in writing to the Engineer no later than 5 working days before the tender closing date. The Engineer will not be held accountable to answer any queries after this date.

1.15 SUBMITTALS REQUIRED BY CONTRACTOR

The following items of information are required to be submitted **with** the tender submission:

- 1.15.1 Contractors Project Execution and Management Plan
- 1.15.2 Contractors Quality Assurance Plan
- 1.15.3 Contractors Safety and Occupational Health Plan
- 1.15.4 Project Timeline and Work Programme in Gantt Chart form.
- 1.15.5 Schedule of proposed equipment and materials
- 1.15.6 Schedule of proposed suppliers and manufacturers
- 1.15.7 Inspection, Testing and Commissioning procedures
- 1.15.8 Company Profile For Project – Personnel Resumes, Resources and tools, instrumentation and equipment
- 1.15.9 Typical Inspection Test Plan (ITP) Sample
- 1.15.10 Typical Progress Inspection Report Sample
- 1.15.11 Typical Commissioning Sheet Sample
- 1.15.12 Typical Final Certification Sample
- 1.15.13 Warranty Statements For Major Items of Equipment Offered



- 1.15.14 Manufacturer / Producer Statement Sample
- 1.15.15 Brief Maintenance Plan including sample maintenance record sheets
- 1.15.16 Tender Forms and Price Schedules
- 1.15.17 Tender Submittal Checklist

The following items of information are required to be submitted **after** the contract award and during the construction programme:

- 1.15.18 Detailed Inspection and Test Plans (ITP's)
- 1.15.19 Progress Reports
- 1.15.20 Confirmed and Updated Timelines based on Builders Timeline
- 1.15.21 Detailed manufacturers data sheets
- 1.15.22 Detailed manufacturers and contractors warranty statements
- 1.15.23 Equipment and Material Samples
- 1.15.24 Completed Inspection Test Plans (ITP)

- 1.15.25 Completed Progress Inspection Reports
- 1.15.26 Detailed and Completed Commissioning data sheets
- 1.15.27 Final Certification Documents
- 1.15.28 Detailed Maintenance Plan including with actual maintenance record sheets
- 1.15.29 Comprehensive As – Built Documentation and As – Built Drawings
- 1.15.30 Shop drawings for automatic fire alarm services installation

The Contractor shall note that the project methodology plan documents shall contain the following information:

- 1.15.30 Detailed procedures of carrying out the work
- 1.15.31 Skill level and numbers of personnel required to carry out this work
- 1.15.32 Materials, Equipment and instrumentation required
- 1.15.33 Calibration procedures for test equipment
- 1.15.34 Formatted sheet for witnessing, commenting and signing off of the work done.

1.16 CONSTRUCTION DRAWINGS

Three (3) sets of that document all works to be carried out under this contract including details of works, equipment location, and proposed cable routes shall be submitted to the Engineer for review prior to commencement of the installation. The drawings shall be submitted together with technical details of all equipment proposed to be used in this project. These shop drawings shall be prepared in AutoCAD 2000 or later format. Alternative formats or bitmap images are not acceptable as engineering shop drawings.

The drawings shall show sufficient details to enable the proper manufacture, installation and/or construction of the works. The drawings shall show plans, schematics, elevations and sections where appropriate.

Details drawings for manufactured items such as switchboards are required to be submitted to the Engineer for approval PRIOR to committing to manufacture. These drawings shall show actual equipment layout and dimensions, include elevations, sections and detail views.



1.17 AS-BUILT DOCUMENTATION

The Contractor shall produce as-built drawings for each element of work completed as part of this Contract Works. One (1) set of as-built drawings and the Contractor's commissioning test results shall be provided to the Engineer for his review at the completion of the works. Any identified inaccuracies on the as-built drawings shall be rectified by the Contractor at no additional cost to the Client, with a further one (1) set of revised drawings re-submitted for review until they are satisfactory to the Engineer.

When the as-built documents are considered to be satisfactory by the Engineer, three (3) hard copies and three (3) soft-copies (stored in CD-ROM discs) of these documents shall be submitted to the Engineer.

A copy of the as-built documents shall also be included in the final Operating and Maintenance Manual.

Scanned drawings which replicate the issued by the Engineer will not be accepted.

1.18 TENDER SUBMISSION

Details of tender submission shall be as per the tender cover letter.

Bids shall be submitted on the tender form. One copy of the tender form shall be submitted and one copy retained by the Contractor for his records. All blank spaces for bid prices shall be filled in type. Any exceptions, exclusions or tags to the tender documents shall be fully explained in the same.

The Contractor shall ensure that the tender includes all work necessary to fulfil the requirements of the specifications and drawings. The contractor shall ensure that all material and equipment quantities are correct.

All bids shall indicate the following:

- The contractor's projected duration of installation works
- All exclusions in this contract. Note that unless specified otherwise, it shall be deemed that all requirements of the tender documentation have been included in the bid.
- Validity period of the tender bid shall be explicitly stated.

The Contractor shall ensure that the tender pricing schedule is arithmetically accurate.

1.19 INSPECTIONS, TESTING AND COMMISSIONING

PROJECT TEST PROCEDURES AND TEST PLANS

The Contractor shall submit detailed project procedures and plans, as detailed in section 1.15 above, in good time to the engineer for review. The Contractor shall make any amendments requested by the Engineer and re-submit until a satisfactory result is achieved. These project plans shall form the basis of Quality assurance, inspections, testing, commissioning and final certification.

REQUIREMENTS OF INSPECTIONS, TESTING, COMMISSIONING

The Contractor shall provide ALL of the plant, equipment, tools, materials and instrumentation required to carry out tests at the Contractor's cost.



The Contractor shall ensure all of the equipment is suitable for testing procedures and that all instrumentation is accurately calibrated. The Contractor shall provide technicians and/or other personnel at the Contractor's costs, required to carry out the testing procedures.

The Contractor shall ensure that their site supervisor, technicians and sub-contractors are available for all inspection, testing and/or commissioning of the installation as required.

The contractor shall make good, repair, replace and/or reinstall any equipment or materials that are found to be unsatisfactory as a result of site inspection. Such work shall be to the Contractors cost.

The Contractor shall ensure that the relevant local authorities witness testing as they may require and provide sign-off of the same.

The Contractor shall ensure that the Engineer is allowed to witness all tests at all times including those conducted by the relevant local authorities.

Note the Contractors internal inspection and testing of the supply authorities testing and certification is not sufficient for compliance with this specification. The Engineer will require to witness and sign-off all testing and commissioning work stated above.

The testing, witnessing and/or signing-off these works by either the Engineer or the Local Authority does not relieve the Contractors obligations in respect of warranties and performance requirements. Any works found to be defective or otherwise unacceptable shall be rectified by the Contractor at no additional cost to the contract.

PROGRESS INSPECTIONS, TESTING AND REPORTING

The Contractor shall submit fortnightly progress reports during the construction phase describing the progress of Contractors works on site. It shall also mention any tests conducted or any deviations from the tender documents. A sample of this report shall be part of the tender submittal.

It is a requirement of this specification that all works are progressively tested; such tests are observed and signed-off when correct by the engineer. The defects and/or omissions identified in the progress reports and testing shall be progressively rectified and re-tested.

The satisfactory completion of both the works and the progress tests shall constitute the value of works for the purposes of assessing progress claims.

The Certificate of Practical Completion does not become due until site testing and commissioning is completed to the satisfaction of the Engineer, and the completed Contractor's Certificate of Compliance issued to the Engineer.

The engineer shall reserve the right to inspect and test 100% of all detectors installed including concealed space detectors. Also included are manual call points, strobe lights. The contractor shall submit test reports of dBA sound levels from the sounders installed within the building premises for review and verification by the engineer.



1.20 MAINTENANCE AND DEFECTS LIABILITY

Contractor shall provide a general description and maintenance plan as part of tender submission. After award of tender, the Contractor shall submit a detailed maintenance plan for the Engineer's approval.

A copy of the manufacturer's warranty shall be provided with close-out documentation and included with the operation and installation manuals.

The equipment manufacturer and/or supplier shall maintain a service organization with adequate spare parts. Any defects that render the system inoperative shall be repaired within 24 hours of the Client notifying the Contractor.

A logbook shall be provided to record each service activity that has been performed at each visit, the conditions of the system and equipment at the visit, and any defects found during the visit including rectification tasks. The logbooks shall be located on site as directed by the Engineer. Each maintenance visit shall be recorded with details of work done including any measurements taken. The maintenance record sheet shall be signed off by the technician carrying out the works and shall be countersigned by the client's representative. Copies of the maintenance records shall be submitted to the client AND the Engineer.

All maintenance activities shall be carried out by competent personnel who are trained in these activities.

GENERAL MAINTENANCE REQUIREMENTS

- Carry out monthly maintenance of all works under this contract for a period terminating twelve (12) months from the date of practical completion of the whole of the Contract Works.
- Replace or repair any faulty equipment or materials, or the results of unsatisfactory workmanship, free of charge.
- Carry out maintenance and testing as required by relevant standards and local authority regulations.
- Provide replacement of consumables at Contractors cost.
- Provide maintenance records, duly filled and copies submitted as required
- Maintain a stock of spare parts required
- Contractor to make available personnel to attend to any maintenance or emergency calls with a minimum of 2 hour response on 24 hour x 7 day basis, for the defects liability maintenance period

1.21 PROJECT COMPLETION

PRACTICAL COMPLETION

Practical Completion Status for works under this contract shall be granted only after all of the following conditions are fulfilled to the satisfaction of the engineer:

- Submission of correctly completed ITP's
- Submission of all progress inspection reports
- All final testing and commissioning has been completed and all works specified by this document are installed and operating correctly
- Client instruction and training manuals for the same have been submitted
- Submission of progressive and final certification by the relevant local authorities



- Written Certification by the Contractor, Suppliers and Manufacturer's that all equipment has been installed and is operating to the capacities and performance levels specified
- Submission of approved and final as built documentation
- Contractors Completed Certificate of Compliance issued to the Engineer.
- Defects rectified as per the latest Engineers Defects List

A Certificate of Practical Completion will be issued by the Engineer on satisfactory completion of all of the above.

FINAL COMPLETION

Final completion shall be considered achieved when the Maintenance and Defects Liability Period has been satisfactorily completed and all specified requirements have been met to the Engineers satisfaction. The following requirements have to be met prior to granting final completion status:

- Final and comprehensive maintenance servicing of all works
- Final inspections with the contractor and sub-contractors of all works
- Rectification, repair and/or replacement of any defective works
- Submission of all regular maintenance reports and evidence that maintenance has been regularly and correctly carried throughout the course of the defects liability period.
- Test and operate all plant and equipment. Demonstrate to the Engineer that all plant, equipment and systems are operating correctly as intended.

NOTICE TO TENDERES, RFI'S

The Contractor shall note that all correspondence between the Engineer and himself during the tender period will be via the services engineer. All queries shall be addressed to:

**THE PROJECT MANAGER
EDISON CONSULTANTS LTD
22 MARION STREET SUVA
FIJI
TEL: (679) 330 7060
E-MAIL: nishal.prasad@edisonconsultants.com**

The Engineer will then issue NTT's to all of the services contractors. This response shall be referred to as Notice to Tenderers or NTT.

NTT's shall be deemed to constitute an addendum to the tender documentation. If there is any conflicting information between the NTT's, engineering drawings or technical specifications; the latest NTT that has been issued shall take precedence over the rest of the documentation.

Note that the preferred mode of transmission for tender queries shall be via hand delivery or facsimile to the Engineer. Queries sent via e-mail will be accepted.

All tender queries shall be provided in writing to the Engineer no later than 5 working days before the tender closing date. The Engineer will not be held accountable to answer any queries after this date.



2.0 SCOPE AND DESCRIPTION OF WORKS

The scope of work includes the supply, installation, commissioning of a new fire alarm system and final certification from the National Fire Authority for the Fire Protection Services for this project.

All works necessary to provide a fully functional and compliant system as detailed in this specification and drawings shall be carried out. These works shall include any minor works and/or materials not explicitly stated but necessary to implement the services required.

The Contractor shall make allowance in terms of cost and time for all necessary equipment and materials required to implement this specification whether or not explicitly stated and whether or not permanently installed upon completion. These items shall include but not be limited to hiring of equipment, fastening materials, minor building works such as penetrations for cables and support systems.

2.1 MAIN COMPONENTS WITHIN SCOPE OF WORKS

The scope of these works shall include but not be limited to the supply, installation and commissioning of the following major equipment and services:

2.1.2	Supply of new detectors, manual call points, sounders as per the proposed drawings
2.1.6	Supply and Installation of Signage for Fire Extinguishers.
2.1.7	Supply and Installation of Fire Hose Reel and Signage.
2.1.8	Testing, Commissioning, NFA Inspections and NFA Final Certification.
2.1.9	Maintenance and attendance to faults, including labour and materials for the defects liability period
2.1.10	As-Built Manuals, Manufacturer's Documentation and Client Instruction.
2.1.11	All penetrations, chasing of wall and columns for installation of Fire Protection equipment And making good of these building works.
2.1.12	Fire stopping of penetrations and cavity with application of Hilti CP611A intumescent fire proof mastic sealant to full depth.
2.1.13	Liaison with the Builder and other sub-contractor's as required.



2.2 EXCLUSIONS

The works excluded from this specification are:

- 2.2.1 Builders work such as **MAJOR** building penetrations, chasing of wall and columns for installation of fire services equipment and making good of these building works.

3.0 PENETRATIONS, BUILDERS WORKS AND MAKING GOOD

The Contractor shall provide construction drawings for prior approvals showing all locations where penetrations and other changes to the building are proposed. Details of each such location such as penetration size and purpose shall be indicated.

The drawings supplied with this specification are diagrammatic only and the Contractor shall check all details on site including locations of all equipment and any building work requirements.

The Contractor shall provide sleeving for all penetrations. Where service pipes, ducts or cables are passing through fire rated structures, these shall be installed as per Fire Protection Standards. Sleeving and sealing of the penetration with fire rated material shall be the responsibility of the Contractor.

All penetrations shall be covered with escutcheon plates, flush mounted to give a clean, neat appearance.

Minor penetrations, less than 300 mm diameter shall be provided by the Contractor. All other building works shall be provided by others. The Contractor shall advise their requirements for the latter well in advance.

4.0 EQUIPMENT AND MATERIALS

All electrical wiring shall fully comply with AS3000, SAA Wiring Rules. The equipment used and workmanship employed shall comply with this standard.

All fittings, systems and equipment used for the Fire Protection Services shall fully comply with the Fire Protection Services Standards listed in Clause 1.4.

All circuits and devices such as manual call points, sounders and strobe lights shall be labelled clearly with minimum 5 mm high red lettering on white traffolite background or approved equivalent systems.



5.0 SCHEDULE OF EQUIPMENT, UNIT RATES & PRICES

Where a selection of equipment and plant has been made by the Engineer, the tender shall be completed on that selection.

Where plant and/or equipment have not been selected by the Engineer, and a performance specification given instead, the Tenderer shall complete and submit a Schedule of Performance of Specified Equipment.

Include current descriptive trade literature complete with performance information, curves, etc. Note that trade literature will be considered to supplement the description of equipment in the tender documents but if it is inconsistent with the specified requirements in any way, tenderers shall draw attention to such inconsistencies in their tender. Otherwise the Contract will require the performance specified in the tender documents to be met.

Where trade literature includes models or options that are not part of the tender, clarify which sections are relevant. The use of such terms as “or equal approved” where equipment has been nominated by the Engineer does not allow Contractors to nominate alternatives after the tender stage.

Alternative plant and equipment may be offered for approval. Any alternatives shall be listed on a schedule and shall be submitted with the tender.

If an alternative plant schedule is not returned with the tender, the Contractor will be deemed to be installing the equipment selected by the Engineer without variance.

No plant or equipment on this list may be ordered until approval from the Engineer has been received in writing.

Where any plant offered as an alternative does not fully comply with the Tender Documents, this shall be stated and reference shall be made to the relevant specification clause or drawings.

Any proposed changes to sizes, or performance of equipment or control systems shall be similarly described.



5.1 SCHEDULE OF RATES

Following schedule of rates shall be filled by the tenderer and shall be submitted along with the tender. These unit rates shall form a basis for progress claims and final certification considering variation in any item/s mentioned below during the construction stage.

Item	Description	Unit	Unit Price (F\$)
5.1.1	Temperature detectors	Nos	\$
5.1.2	Smoke detectors	Nos	\$
5.1.3	Extinguishers	Nos	\$
5.1.4	Manual call point	Nos	\$
5.1.5	Strobe Lights	Nos	\$
5.1.6	Sounder	Nos	\$
5.1.7	Fire hose reel	Nos	\$
5.1.8	Dry Power Type Fire Extinguisher	Nos	\$
5.1.9	Carbon Dioxide Type Fire Extinguisher	Nos	\$
5.1.10	Fire Cabling	RMt	\$
5.1.11	Labour rates – Senior tradesman	Man hour	\$
5.1.12	Labour rates – Assistant tradesman	Man hour	\$
5.1.13	Percentage mark ups for Equipment's	%	\$
5.1.14	Percentage mark ups for Material	%	\$

Note:

RMTR: Running or linear meter

Nos.: Numbers

5.2 TENDER PRICE SCHEDULE

Refer attached excel file for tender price schedules.

The prices to be set out in this schedule are to provide a breakdown of the tender sum and shall be inclusive of all incidentals in accordance with the specifications. This is a comprehensive supply and installation contract and the tenderer shall take all responsibility for all items required to complete the Contract Works in accordance with the Contract Documents.



6.0 TENDER PRICE SCHEDULE

NAME OF COMPANY
TENDERING I/We _____

ADDRESS OF
COMPANY TENDERING Of _____

Do hereby agree to supply, construct, install, test, commission, maintain during the warranty period and carry out the whole of the works as specified in this specification and its associated engineering drawings

For the fixed, lump sum price, inclusive of all duties, fees and taxes in Fiji dollars

Amount in words _____

Amount in F\$ _____

Authorised Signatories _____

Name of Signatories _____

Dated this _____

