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# **Early Procurement for the Proposed Construction of Biology and Analytical Laboratory**

**Solicitation No.: RSU-23-01-001-EPA**

**Source of Fund:101**

**QTY: 1 Lot**

**ABC: PhP19,820,000.00**

**Government of the Republic of the Philippines**

**Sixth Edition**

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# Preface

These Philippine Bidding Documents (PBDs) for the procurement of Infrastructure Projects (hereinafter referred to also as the “Works”) through Competitive Bidding have been prepared by the Government of the Philippines for use by all branches, agencies, departments, bureaus, offices, or instrumentalities of the government, including government-owned and/or -controlled corporations, government financial institutions, state universities and colleges, local government units, and autonomous regional government. The procedures and practices presented in this document have been developed through broad experience, and are for mandatory use in projects that are financed in whole or in part by the Government of the Philippines or any foreign government/foreign or international financing institution in accordance with the provisions of the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

The PBDs are intended as a model for admeasurements (unit prices or unit rates in a bill of quantities) types of contract, which are the most common in Works contracting.

The Bidding Documents shall clearly and adequately define, among others: (i) the objectives, scope, and expected outputs and/or results of the proposed contract; (ii) the eligibility requirements of Bidders; (iii) the expected contract duration; and (iv) the obligations, duties, and/or functions of the winning Bidder.

Care should be taken to check the relevance of the provisions of the PBDs against the requirements of the specific Works to be procured. If duplication of a subject is inevitable in other sections of the document prepared by the Procuring Entity, care must be exercised to avoid contradictions between clauses dealing with the same matter.

Moreover, each section is prepared with notes intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They shall not be included in the final documents. The following general directions should be observed when using the documents:

- a. All the documents listed in the Table of Contents are normally required for the procurement of Infrastructure Projects. However, they should be adapted as necessary to the circumstances of the particular Project.
- b. Specific details, such as the “*name of the Procuring Entity*” and “*address for bid submission*,” should be furnished in the Instructions to Bidders, Bid Data Sheet, and Special Conditions of Contract. The final documents should contain neither blank spaces nor options.
- c. This Preface and the footnotes or notes in italics included in the Invitation to Bid, BDS, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, and Bill of Quantities are not part of the text of the final document, although they contain instructions that the Procuring Entity should strictly follow.
- d. The cover should be modified as required to identify the Bidding Documents as to the names of the Project, Contract, and Procuring Entity, in addition to date of issue.

- e. Modifications for specific Procurement Project details should be provided in the Special Conditions of Contract as amendments to the Conditions of Contract. For easy completion, whenever reference has to be made to specific clauses in the Bid Data Sheet or Special Conditions of Contract, these terms shall be printed in bold typeface on Sections I (Instructions to Bidders) and III (General Conditions of Contract), respectively.
- f. For guidelines on the use of Bidding Forms and the procurement of Foreign-Assisted Projects, these will be covered by a separate issuance of the Government Procurement Policy Board.

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# *Glossary of Terms, Abbreviations, and Acronyms*

**ABC** – Approved Budget for the Contract.

**ARCC** – Allowable Range of Contract Cost.

**BAC** – Bids and Awards Committee.

**Bid** – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

**Bidder** – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

**Bidding Documents** – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

**BIR** – Bureau of Internal Revenue.

**BSP** – Bangko Sentral ng Pilipinas.

**CDA** – Cooperative Development Authority.

**Consulting Services** – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

**Contract** – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

**Contractor** – is a natural or juridical entity whose proposal was accepted by the Procuring Entity and to whom the Contract to execute the Work was awarded. Contractor as used in these Bidding Documents may likewise refer to a supplier, distributor, manufacturer, or consultant.

**CPI** – Consumer Price Index.

**DOLE** – Department of Labor and Employment.

**DTI** – Department of Trade and Industry.

**Foreign-funded Procurement or Foreign-Assisted Project** – Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

**GFI** – Government Financial Institution.

**GOCC** – Government-owned and/or –controlled corporation.

**Goods** – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term “related” or “analogous services” shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

**GOP** – Government of the Philippines.

**Infrastructure Projects** – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

**LGUs** – Local Government Units.

**NFCC** – Net Financial Contracting Capacity.

**NGA** – National Government Agency.

**PCAB** – Philippine Contractors Accreditation Board.

**PhilGEPS** - Philippine Government Electronic Procurement System.

**Procurement Project** – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

**PSA** – Philippine Statistics Authority.

**SEC** – Securities and Exchange Commission.

**SLCC** – Single Largest Completed Contract.

**UN** – United Nations.



## ***Section I. Invitation to Bid***

### **Notes on the Invitation to Bid**

The Invitation to Bid (IB) provides information that enables potential Bidders to decide whether to participate in the procurement at hand. The IB shall be posted in accordance with Section 21.2 of the 2016 revised IRR of RA No. 9184.

Apart from the essential items listed in the Bidding Documents, the IB should also indicate the following:

- a. The date of availability of the Bidding Documents, which shall be from the time the IB is first advertised/posted until the deadline for the submission and receipt of bids;
- b. The place where the Bidding Documents may be acquired or the website where it may be downloaded;
- c. The deadline for the submission and receipt of bids; and
- d. Any important bid evaluation criteria.

The IB should be incorporated into the Bidding Documents. The information contained in the IB must conform to the Bidding Documents and in particular to the relevant information in the Bid Data Sheet.

**Invitation to Bid for the Early Procurement for the  
Proposed Construction of Biology and Analytical Laboratory of  
Romblon State University**

1. The **ROMBLON STATE UNIVERSITY**, through the *General Appropriations Act* intends to apply the sum of *Nineteen Million, Eight Hundred Twenty Thousand Pesos Only (PhP19,820,000.00)* being the Approved Budget for the Contract (ABC) to payments under the contract for *Proposed Construction of Biology and Analytical Laboratory of Romblon State University RSU-2023-01-001-EPA* . Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The **ROMBLON STATE UNIVERSITY** now invites bids for the above Procurement Project. Completion of the Works is required *within 180 calendar days*. Bidders should have completed a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).
3. Bidding will be conducted through open competitive bidding procedures using non-discretionary “*pass/fail*” criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.
4. Interested bidders may obtain further information from **ROMBLON STATE UNIVERSITY** and inspect the Bidding Documents at the address given below from **8:00 AM to 5:00 PM**.
5. A complete set of Bidding Documents may be acquired by interested bidders on **02 January 2023, 09:00 AM** from given address and website/s below {*Insert if necessary: and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of Twenty-Five Thousand Pesos Only (PhP25,000.00)*}. The Procuring Entity shall allow the bidder to present its proof of payment for the fees [*specify the manner if it will be presented in person, by facsimile, or through electronic means.*]
6. The **ROMBLON STATE UNIVERSITY** will hold a Pre-Bid Conference<sup>1</sup> on **19 December 2022, 09:00 AM** at **BAC Office, Community Outreach Center, Romblon State University- Main Campus, Manuel L. Quezon St., Liwanag, Odiongan, Romblon**. and/or through videoconferencing/webcasting via **ZOOM**, which shall be open to prospective bidders.
7. Bids must be duly received by the BAC Secretariat through (i) manual submission at the office address as indicated below, **BAC Office, Community Outreach Center, Romblon State University- Main Campus, Manuel L. Quezon St., Liwanag,**

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<sup>1</sup> May be deleted in case the ABC is less than One Million Pesos (PhP1,000,000) where the Procuring Entity may not hold a pre-bid conference.

*Odiongan, Romblon.* on or before **02 January 2023, 09:00 AM**. Late bids shall not be accepted.

8. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 16.
9. Bid opening shall be on **02 January 2023, 09:00 AM** at the given address below **BAC Office, Community Outreach Center, Romblon State University- Main Campus, Manuel L. Quezon St., Liwanag, Odiongan, Romblon.** and/or through **Video Conferencing (Zoom)** Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
10. The **ROMBLON STATE UNIVERSITY** reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
11. This Procurement Project is undertaken through Early Procurement Activities (EPA). Laws, rules, regulations and related issuances on early procurement therefore apply.
12. Pursuant to **Section 3 of GPPB Circular 06-2019** or the Guidelines on the Implementation of Early Procurement Activities (EPA), the award of contract for Procurement Projects undertaken through EPA may be made only upon the approval and effectivity of their respective funding sources, to wit: (i) GAA; (ii) Corporate Budget; (iii) Appropriations Ordinance; or (iv) loan agreement in the case of FAPs; or reenactment of the previous year's budget which constitutes the current year's authorized budget, when authorized by the Constitution, law or rules.
13. Condition of award, pursuant to GPPB Circular 06-2019, Section 7 include the following:
  - Notwithstanding the mandatory procurement timelines provided in **Section 37 of RA No. 9184**, Procurement Projects undertaken through EPA may be awarded upon approval and effectivity of GAA, reenacted budget, appropriations ordinance, corporate budget or loan agreement, as the case may be;
  - If the amount authorized for a Procurement project has been reduced, the PE may still make an award if the contract price to be awarded is within the amount authorized in the GAA, reenacted budget, appropriations ordinance, corporate budget, or loan agreement regardless of the posted ABC;
  - The HoPE shall not award any Procurement Project if the amount therefor has been withdrawn or in the event the amount authorized in the GAA, reenacted budget, appropriations ordinance, corporate budget, or loan agreement is lower than the amount of contract to be awarded;
  - In all instances, the HoPE has the authority to exercise the reservation clause under Section 41 of RA No. 9184, which grants the HoPE the right not to award the contract if, for any justifiable and reasonable ground, the award of the contract will not redound to the benefit of the government; and
  - Notwithstanding the approval and effectivity of the GAA, reenacted budget, appropriations ordinance, corporate budget or loan agreement, as the case may

be, Pes shall not award contracts for Procurement Projects requiring Special Allotment Release Order or Sub-Allotment Release Order until the same has been issued, secured or released.

14. Pursuant to **Section 61 of RA 9184**, all bid prices shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances and upon prior approval of the GPPB.
15. For further information, please refer to:

*(SGD)MS. VEE F. FRANCISCO*  
*Head, BAC Secretariat*  
*Romblon State University, Odiongan, Romblon 5505*  
*Email Address: bacrsu2016@gmail.com*  
*Telephone Number: 042-567-5952*  
*Website: [www.rsu.edu.ph](http://www.rsu.edu.ph)*

16. You may visit the following websites:  
[www.rsu.edu.ph](http://www.rsu.edu.ph)

*12 December 2022*

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**[(SGD)ATTY. NIÑO GLENN M. SARTILLO**  
BAC Chairperson

## ***Section II. Instructions to Bidders***

### **Notes on the Instructions to Bidders**

This Section on the Instruction to Bidders (ITB) provides the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Procuring Entity. It also provides information on bid submission, eligibility check, opening and evaluation of bids, post-qualification, and on the award of contract.

## 1. Scope of Bid

The Procuring Entity, **ROMBLON STATE UNIVERSITY** invites Bids for the *Early Procurement for the Proposed Construction of Biology and Analytical Laboratory of Romblon State University*, with Project Identification Number **RSU-2023-01-001-EPA**.

*[Note: The Project Identification Number is assigned by the Procuring Entity based on its own coding scheme and is not the same as the PhilGEPS reference number, which is generated after the posting of the bid opportunity on the PhilGEPS website.]*

The Procurement Project (referred to herein as “Project”) is for the construction of Works, as described in Section VI (Specifications).

## 2. Funding Information

2.1. The GOP through the source of funding as indicated below for 2023 in the amount of *Nineteen Million, Eight Hundred Twenty Thousand Pesos Only*.

2.2. The source of funding is:

a. NGA, the National Expenditure Program.

## 3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manual and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or invitation to bid by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have inspected the site, determined the general characteristics of the contracted Works and the conditions for this Project, such as the location and the nature of the work; (b) climatic conditions; (c) transportation facilities; (c) nature and condition of the terrain, geological conditions at the site communication facilities, requirements, location and availability of construction aggregates and other materials, labor, water, electric power and access roads; and (d) other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

#### **4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices**

The Procuring Entity, as well as the Bidders and Contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex “I” of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

#### **5. Eligible Bidders**

5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.

5.2. The Bidder must have an experience of having completed a Single Largest Completed Contract (SLCC) that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted, if necessary, by the Bidder to current prices using the PSA’s CPI, except under conditions provided for in Section 23.4.2.4 of the 2016 revised IRR of RA No. 9184.

A contract is considered to be “similar” to the contract to be bid if it has the major categories of work stated in the **BDS**.

5.3. For Foreign-funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the Bidding Document prepared for this purpose.

5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.2 of the 2016 IRR of RA No. 9184.

#### **6. Origin of Associated Goods**

There is no restriction on the origin of Goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN.

#### **7. Subcontracts**

7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than fifty percent (50%) of the Project.

The Procuring Entity has prescribed that:

- a. Subcontracting is not allowed.

## **8. Pre-Bid Conference**

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address and/or through videoconferencing/webcasting} as indicated in paragraph 6 of the **IB**.

## **9. Clarification and Amendment of Bidding Documents**

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

## **10. Documents Comprising the Bid: Eligibility and Technical Components**

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.
- 10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.
- 10.3. A valid special PCAB License in case of Joint Ventures, and registration for the type and cost of the contract for this Project. Any additional type of Contractor license or permit shall be indicated in the **BDS**.
- 10.4. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the **BDS**.
- 10.5. A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, must meet the minimum requirements for the contract set in the **BDS**.



## **11. Documents Comprising the Bid: Financial Component**

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.
- 11.2. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.
- 11.3. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

## **12. Alternative Bids**

Bidders shall submit offers that comply with the requirements of the Bidding Documents, including the basic technical design as indicated in the drawings and specifications. Unless there is a value engineering clause in the **BDS**, alternative Bids shall not be accepted.

## **13. Bid Prices**

All bid prices for the given scope of work in the Project as awarded shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances as determined by the NEDA and approved by the GPPB pursuant to the revised Guidelines for Contract Price Escalation guidelines.

## **14. Bid and Payment Currencies**

14.1. Bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.

14.2. *Payment of the contract price shall be made in:*

- a. Philippine Pesos.

## **15. Bid Security**

15.1 The Bidder shall submit a Bid Securing Declaration<sup>2</sup> or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.

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<sup>2</sup> In the case of Framework Agreement, the undertaking shall refer to entering into contract with the Procuring Entity and furnishing of the performance security or the performance securing declaration within ten (10) calendar days from receipt of Notice to Execute Framework Agreement.

15.2 The Bid and bid security shall be valid until **02 May 2023** or **One Hundred Twenty (120) calendar days from the Opening of Bids**. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

However, as stated on the Section 4 of the GPPB Circular 06-2019, the PE may request the bidders to extend the validity of their bid securities beyond One Hundred Twenty (120) calendar days, prior to their expiration, if the funding source for the procurement project has yet to be approved and made effective.

A change in the form of the bid security is allowed if this is made prior to the expiration of the bid validity sought to be extended.

If the bidder refuses to extend the bid validity, the PE shall reject the bid submitted by the said bidder.

## **16. Sealing and Marking of Bids**

Each Bidder shall submit one copy of the first and second components of its Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission to the given website or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

## **17. Deadline for Submission of Bids**

The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

## **18. Opening and Preliminary Examination of Bids**

18.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

- 18.2. The preliminary examination of Bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

## **19. Detailed Evaluation and Comparison of Bids**

- 19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.
- 19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 15 shall be submitted for each contract (lot) separately.
- 19.3. In all cases, the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184 must be sufficient for the total of the ABCs for all the lots participated in by the prospective Bidder.

## **20. Post Qualification**

Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS), and other appropriate licenses and permits required by law and stated in the **BDS**.

## **21. Signing of the Contract**

The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

## ***Section III. Bid Data Sheet***

### **Notes on the Bid Data Sheet (BDS)**

The Bid Data Sheet (BDS) consists of provisions that supplement, amend, or specify in detail, information, or requirements included in the ITB found in Section II, which are specific to each procurement.

This Section is intended to assist the Procuring Entity in providing the specific information in relation to corresponding clauses in the ITB and has to be prepared for each specific procurement.

The Procuring Entity should specify in the BDS information and requirements specific to the circumstances of the Procuring Entity, the processing of the procurement, and the bid evaluation criteria that will apply to the Bids. In preparing the BDS, the following aspects should be checked:

- a. Information that specifies and complements provisions of the ITB must be incorporated.
- b. Amendments and/or supplements, if any, to provisions of the ITB as necessitated by the circumstances of the specific procurement, must also be incorporated.

# Bid Data Sheet

| ITB Clause                       |   |                              |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
|----------------------------------|---|------------------------------|---------------------------|----------------------------|-------------------------|-----------|------------------------------|--------------------------------|---------|------------------------------|--------------------------------|----------|------------------------------|----------------------------------|---------------|------------------------------|-------------------------------|--|------------------------------|-------------------|--|---|
| 5.2                              | For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be:<br><i>[provide description/clarification of what are major categories of work].</i>   |                              |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| 7.1                              | <i>Subcontracting is not allowed.</i>   |                              |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| 10.3                             | <i>[Specify if another Contractor license or permit is required. ]</i>  |                              |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| 10.4                             | The key personnel must meet the required minimum years of experience set below:<br><table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Key Personnel</u></th> <th style="text-align: left;"><u>General Experience</u></th> <th style="text-align: left;"><u>Relevant Experience</u></th> </tr> </thead> <tbody> <tr> <td>Licensed Civil Engineer</td> <td></td> <td>at least 3 years' experience</td> </tr> <tr> <td>Registered Mechanical Engineer</td> <td></td> <td>at least 3 years' experience</td> </tr> <tr> <td>Registered Electrical Engineer</td> <td></td> <td>at least 3 years' experience</td> </tr> <tr> <td>Safety Officer (DOLE Accredited)</td> <td></td> <td>at least 2 years' experience</td> </tr> <tr> <td>First Aider (DOLE Accredited)</td> <td></td> <td>at least 2 years' experience</td> </tr> </tbody> </table>   | <u>Key Personnel</u>         | <u>General Experience</u> | <u>Relevant Experience</u> | Licensed Civil Engineer |           | at least 3 years' experience | Registered Mechanical Engineer |         | at least 3 years' experience | Registered Electrical Engineer |          | at least 3 years' experience | Safety Officer (DOLE Accredited) |               | at least 2 years' experience | First Aider (DOLE Accredited) |  | at least 2 years' experience |                   |  |   |
| <u>Key Personnel</u>             | <u>General Experience</u>   | <u>Relevant Experience</u>   |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| Licensed Civil Engineer          |   | at least 3 years' experience |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| Registered Mechanical Engineer   |   | at least 3 years' experience |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| Registered Electrical Engineer   |   | at least 3 years' experience |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| Safety Officer (DOLE Accredited) |   | at least 2 years' experience |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| First Aider (DOLE Accredited)    |   | at least 2 years' experience |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| 10.5                             | The minimum major equipment requirements are the following:<br><table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Equipment</u></th> <th style="text-align: left;"><u>Capacity</u></th> <th style="text-align: left;"><u>Number of Units</u></th> </tr> </thead> <tbody> <tr> <td>Backhoe</td> <td>0.80 cu.m</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Dump Truck</td> <td>10 cu.m</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Concete Mixer</td> <td>1 bagger</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Water pump</td> <td>At least 2 hp</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Welding Machine</td> <td></td> <td style="text-align: center;">1</td> </tr> <tr> <td>Concrete Vibrator</td> <td></td> <td style="text-align: center;">1</td> </tr> </tbody> </table> | <u>Equipment</u>             | <u>Capacity</u>           | <u>Number of Units</u>     | Backhoe                 | 0.80 cu.m | 1                            | Dump Truck                     | 10 cu.m | 1                            | Concete Mixer                  | 1 bagger | 1                            | Water pump                       | At least 2 hp | 2                            | Welding Machine               |  | 1                            | Concrete Vibrator |  | 1 |
| <u>Equipment</u>                 | <u>Capacity</u>   | <u>Number of Units</u>       |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| Backhoe                          | 0.80 cu.m   | 1                            |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| Dump Truck                       | 10 cu.m   | 1                            |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| Concete Mixer                    | 1 bagger  | 1                            |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| Water pump                       | At least 2 hp   | 2                            |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| Welding Machine                  |   | 1                            |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| Concrete Vibrator                |   | 1                            |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| 12                               | <i>No Further Instructions</i>  |                              |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| 15.1                             | The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:<br><ul style="list-style-type: none"> <li>a. The amount of not less than <b>PhP396,400.00</b> <i>[two percent (2%) of ABC]</i>, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</li> <li>b. The amount of not less than <b>PhP991,000.00</b> <i>[five percent (5%) of ABC]</i> if bid security is in Surety Bond.</li> </ul>  |                              |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| 19.2                             | Partial bids are allowed.   |                              |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| 20                               | <i>[List licenses and permits relevant to the Project and the corresponding law requiring it, e.g. Environmental Compliance Certificate, Certification that the project site is not within a geohazard zone, etc.]</i>  |                              |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |
| 21                               | Additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity, such as construction schedule and S-curve, manpower schedule, construction methods, equipment utilization schedule, construction safety and health program approved by the DOLE, and other acceptable tools of project scheduling.   |                              |                           |                            |                         |           |                              |                                |         |                              |                                |          |                              |                                  |               |                              |                               |  |                              |                   |  |   |

## ***Section IV. General Conditions of Contract***

### **Notes on the General Conditions of Contract**

The General Conditions of Contract (GCC) in this Section, read in conjunction with the Special Conditions of Contract in Section V and other documents listed therein, should be a complete document expressing all the rights and obligations of the parties.

Matters governing performance of the Contractor, payments under the contract, or matters affecting the risks, rights, and obligations of the parties under the contract are included in the GCC and Special Conditions of Contract.

Any complementary information, which may be needed, shall be introduced only through the Special Conditions of Contract.

## 1. Scope of Contract

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

## 2. Sectional Completion of Works

If sectional completion is specified in the **Special Conditions of Contract (SCC)**, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date shall apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

## 3. Possession of Site

3.1 The Procuring Entity shall give possession of all or parts of the Site to the Contractor based on the schedule of delivery indicated in the **SCC**, which corresponds to the execution of the Works. If the Contractor suffers delay or incurs cost from failure on the part of the Procuring Entity to give possession in accordance with the terms of this clause, the Procuring Entity's Representative shall give the Contractor a Contract Time Extension and certify such sum as fair to cover the cost incurred, which sum shall be paid by Procuring Entity.

3.2 If possession of a portion is not given by the above date, the Procuring Entity will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay may be addressed through contract extension provided under Annex "E" of the 2016 revised IRR of RA No. 9184.

## 4. The Contractor's Obligations

The Contractor shall employ the key personnel named in the Schedule of Key Personnel indicating their designation, in accordance with **ITB** Clause 10.3 and specified in the **BDS**, to carry out the supervision of the Works.

The Procuring Entity will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are equal to or better than those of the personnel listed in the Schedule.

## **5. Performance Security**

- 5.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR.
- 5.2. The Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to RA No. 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

## **6. Site Investigation Reports**

The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the SCC supplemented by any information obtained by the Contractor.

## **7. Warranty**

- 7.1. In case the Contractor fails to undertake the repair works under Section 62.2.2 of the 2016 revised IRR, the Procuring Entity shall forfeit its performance security, subject its property(ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.
- 7.2. The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. Specific duration of the warranty is found in the SCC.

## **8. Liability of the Contractor**

Subject to additional provisions, if any, set forth in the SCC, the Contractor's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Contractor is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

## **9. Termination for Other Causes**

Contract termination shall be initiated in case it is determined *prima facie* by the Procuring Entity that the Contractor has engaged, before, or during the implementation of the contract, in unlawful deeds and behaviors relative to contract acquisition and implementation, such as, but not limited to corrupt, fraudulent, collusive, coercive, and obstructive practices as stated in ITB Clause 4.



## **10. Dayworks**

Subject to the guidelines on Variation Order in Annex “E” of the 2016 revised IRR of RA No. 9184, and if applicable as indicated in the SCC, the Dayworks rates in the Contractor’s Bid shall be used for small additional amounts of work only when the Procuring Entity’s Representative has given written instructions in advance for additional work to be paid for in that way.

## **11. Program of Work**

11.1. The Contractor shall submit to the Procuring Entity’s Representative for approval the said Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works. The submissions of the Program of Work are indicated in the SCC.

11.2. The Contractor shall submit to the Procuring Entity’s Representative for approval an updated Program of Work at intervals no longer than the period stated in the SCC. If the Contractor does not submit an updated Program of Work within this period, the Procuring Entity’s Representative may withhold the amount stated in the SCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.

## **12. Instructions, Inspections and Audits**

The Contractor shall permit the GOP or the Procuring Entity to inspect the Contractor’s accounts and records relating to the performance of the Contractor and to have them audited by auditors of the GOP or the Procuring Entity, as may be required.

## **13. Advance Payment**

The Procuring Entity shall, upon a written request of the Contractor which shall be submitted as a Contract document, make an advance payment to the Contractor in an amount not exceeding fifteen percent (15%) of the total contract price, to be made in lump sum, or at the most two installments according to a schedule specified in the SCC, subject to the requirements in Annex “E” of the 2016 revised IRR of RA No. 9184.

## **14. Progress Payments**

The Contractor may submit a request for payment for Work accomplished. Such requests for payment shall be verified and certified by the Procuring Entity’s Representative/Project Engineer. Except as otherwise stipulated in the SCC, materials and equipment delivered on the site but not completely put in place shall not be included for payment.

## **15. Operating and Maintenance Manuals**

- 15.1. If required, the Contractor will provide “as built” Drawings and/or operating and maintenance manuals as specified in the **SCC**.
- 15.2. If the Contractor does not provide the Drawings and/or manuals by the dates stated above, or they do not receive the Procuring Entity’s Representative’s approval, the Procuring Entity’s Representative may withhold the amount stated in the **SCC** from payments due to the Contractor.

## ***Section V. Special Conditions of Contract***

### **Notes on the Special Conditions of Contract**

Similar to the BDS, the clauses in this Section are intended to assist the Procuring Entity in providing contract-specific information in relation to corresponding clauses in the GCC found in Section IV.

The Special Conditions of Contract (SCC) complement the GCC, specifying contractual requirements linked to the special circumstances of the Procuring Entity, the Procuring Entity's country, the sector, and the Works procured. In preparing this Section, the following aspects should be checked:

- a. Information that complements provisions of the GCC must be incorporated.
- b. Amendments and/or supplements to provisions of the GCC as necessitated by the circumstances of the specific purchase, must also be incorporated.

However, no special condition which defeats or negates the general intent and purpose of the provisions of the GCC should be incorporated herein.

# Special Conditions of Contract

| GCC Clause |   |
|------------|---|
| 2          | No further instructions.  |
| 4.1        | No further instructions.  |
| 6          | The site investigation reports are: <i>[list here the required site investigation reports.]</i>   |
| 7.2        | <p><i>[Select one, delete the other.]</i></p> <p><i>[In case of permanent structures, such as buildings of types 4 and 5 as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with relevant structural codes (e.g., DPWH Standard Specifications), such as, but not limited to, steel/concrete bridges, flyovers, aircraft movement areas, ports, dams, tunnels, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar permanent structures:]</i> Fifteen (15) years.</p> <p><i>[In case of semi-permanent structures, such as buildings of types 1, 2, and 3 as classified under the National Building Code of the Philippines, concrete/asphalt roads, concrete river control, drainage, irrigation lined canals, river landing, deep wells, rock causeway, pedestrian overpass, and other similar semi-permanent structures:]</i> Five (5) years.</p> <p><i>[In case of other structures, such as bailey and wooden bridges, shallow wells, spring developments, and other similar structures:]</i> Two (2) years.</p> |
| 10         | <p><i>[Select one, delete the other:]</i></p> <p style="padding-left: 40px;">a. Dayworks are applicable at the rate shown in the Contractor’s original Bid.</p> <p style="padding-left: 40px;">b. No dayworks are applicable to the contract.</p>   |
| 11.1       | The Contractor shall submit the Program of Work to the Procuring Entity’s Representative within <i>[insert number]</i> days of delivery of the Notice of Award.   |
| 11.2       | The amount to be withheld for late submission of an updated Program of Work is <i>[insert amount]</i> .   |
| 13         | The amount of the advance payment is <i>[insert amount as percentage of the contract price that shall not exceed 15% of the total contract price and schedule of payment]</i> .   |
| 14         | <i>[If allowed by the Procuring Entity, state:]</i> Materials and equipment delivered on the site but not completely put in place shall be included for payment.  |
| 15.1       | The date by which operating and maintenance manuals are required is <i>[date]</i> .   |
|            | The date by which “as built” drawings are required is <i>[date]</i> .   |
| 15.2       | The amount to be withheld for failing to produce “as built” drawings  |

|  |   |
|--|---|
|  | and/or operating and maintenance manuals by the date required is<br><i>[amount in local currency]</i> . |
|--|---|

## *Section VI. Specifications*

### **Notes on Specifications**

A set of precise and clear specifications is a prerequisite for Bidders to respond realistically and competitively to the requirements of the Procuring Entity without qualifying or conditioning their Bids. In the context of international competitive bidding, the specifications must be drafted to permit the widest possible competition and, at the same time, present a clear statement of the required standards of workmanship, materials, and performance of the goods and services to be procured. Only if this is done will the objectives of economy, efficiency, and fairness in procurement be realized, responsiveness of Bids be ensured, and the subsequent task of bid evaluation facilitated. The specifications should require that all goods and materials to be incorporated in the Works be new, unused, of the most recent or current models, and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.

Samples of specifications from previous similar projects are useful in this respect. The use of metric units is mandatory. Most specifications are normally written specially by the Procuring Entity or its representative to suit the Works at hand. There is no standard set of Specifications for universal application in all sectors in all regions, but there are established principles and practices, which are reflected in these PBDs.

There are considerable advantages in standardizing General Specifications for repetitive Works in recognized public sectors, such as highways, ports, railways, urban housing, irrigation, and water supply, in the same country or region where similar conditions prevail. The General Specifications should cover all classes of workmanship, materials, and equipment commonly involved in construction, although not necessarily to be used in a particular Works Contract. Deletions or addenda should then adapt the General Specifications to the particular Works.

Care must be taken in drafting specifications to ensure that they are not restrictive. In the specification of standards for goods, materials, and workmanship, recognized international standards should be used as much as possible. Where other particular standards are used, whether national standards or other standards, the specifications should state that goods, materials, and workmanship that meet other authoritative standards, and which ensure substantially equal or higher quality than the standards mentioned, will also be acceptable. The following clause may be inserted in the SCC.

#### **Sample Clause: Equivalency of Standards and Codes**

Wherever reference is made in the Contract to specific standards and codes to be met by the goods and materials to be furnished, and work performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national, or relate to a particular country or region, other authoritative standards that ensure a substantially equal or higher quality than the standards and codes specified will be

accepted subject to the Procuring Entity's Representative's prior review and written consent. Differences between the standards specified and the proposed alternative standards shall be fully described in writing by the Contractor and submitted to the Procuring Entity's Representative at least twenty-eight (28) days prior to the date when the Contractor desires the Procuring Entity's Representative's consent. In the event the Procuring Entity's Representative determines that such proposed deviations do not ensure substantially equal or higher quality, the Contractor shall comply with the standards specified in the documents.

These notes are intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They should not be included in the final Bidding Documents.

## *Specifications*

*The **PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY** will be located at RSU Main Campus, Liwanag, Odiongan, Romblon. It is a **three (3) Storey building with roof deck** and has a total floor area of **693.25sq.m.***

*This building is composed of the following:*

| <b>Space</b>                       | <b>Quantity</b> | <b>Floor Area (sqm)</b> | <b>Total Floor Area (sqm)</b> |
|------------------------------------|-----------------|-------------------------|-------------------------------|
| <b>Ground Floor Level</b>          |                 |                         |                               |
| PWD Ramp                           | 1               | 25                      |                               |
| Parking Area                       | 1               | 138                     |                               |
| Pump Room                          | 1               | 12                      |                               |
| Main Stairs                        | 1               | 6.25                    |                               |
|                                    |                 |                         | <b>181.25</b>                 |
| <b>Second Floor Level</b>          |                 |                         |                               |
| Sterile Room                       | 1               | 25                      |                               |
| Laboratory room with Lavatory sink | 1               | 65                      |                               |
| Changing room                      | 1               | 10                      |                               |
| Office                             | 1               | 25                      |                               |
| Lobby                              | 1               | 15                      |                               |
| Main Stair and Landing             | 1               | 12.5                    |                               |




|   |   |       |              |
|---|---|-------|--------------|
| PWD CR Ladies                                 | 1 | 5     |              |
| PWD CR Gentlemen                              | 1 | 5     |              |
|   |   |       | <b>162.5</b> |
| <b>Third Floor Level</b>                      |   |       |              |
| AutoClave/Hot Room                            | 1 | 10    |              |
| Laboratory room with Lavatory sink            | 1 | 80    |              |
| Changing room                                 | 1 | 10    |              |
| Meeting Room                                  | 1 | 25    |              |
| Lobby   | 1 | 15    |              |
| Main Stair and Landing                        | 1 | 12.5  |              |
| CR Ladies                                     | 1 | 5     |              |
| CR Gentlemen                                  | 1 | 5     |              |
|   |   |       | <b>162.5</b> |
| <b>Roof Deck Level</b>                        |   |       |              |
| Main Stairs with Enclosure                    | 1 | 12.5  |              |
| Stainless Water Tank                          | 1 | 10    |              |
| Roof Deck                                     | 1 | 164.5 |              |
|   |   |       | <b>187.0</b> |
| <b>TOTAL BUILDING FLOOR AREA: 693.25 sq.m</b> |   |       |              |

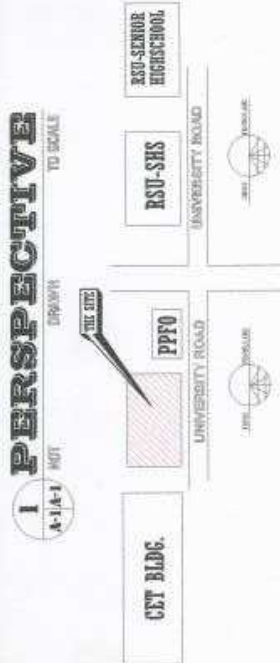
**The proposed project construction will include;** *I. General Requirements, II. Clearing, Layout, Excavation and Backfilling and Embankment, III. Structural Works and Water Proofing Works, IV. Masonry and Plastering Works, V. Plumbing Works including Concrete Water Base Tank, Catch Basin and Canal, Septic Tank, Stainless Overhead Tanks and Electric Water Pump including Pipes and Accessories. (Use Series 1000 for all Pipes and Fittings), VI. Window Works with Installation, VII. Doors Works with Installation, VIII. Tile Works and Deco Stone Works, IX. Stainless Railing Works for Stairs and PWD Ramp, X. Formworks and Scaffolding Works, XI. Electrical Works including Wires, Lighting system, Emergency Light, Convenience and ACU Outlets, Mechanical Power Supply, Panel Boards, Electrical concrete Post, ATS, Transformer, Generator Set and Testing and Commissioning, XII. Ceiling Works with Installation, XIII. Steel Fire Escape including G.I railings and Epoxy Painting Works, XIV. Stainless Metal Name Plate Works with Installation, XV. Fire Suppression System/Sprinkling System and Fire hose cabinets with complete hardware's and accessories with Installation including Jockey Pump and Diesel Engine Fire Pump and Testing and Commissioning, XVI. Air Conditioning Units with Installation, XVII. Painting Works, XVIII. Auxiliary Works (Telephone ports, Data Ports and Data Cabinet rack , TV ports, Fire alarm Devices and CCTV including wires and cable and compete hardware's and accessories and Testing and commissioning with Installation)*

*The project can be completed within **180 calendar days (6 months)**. The total estimated cost of the project is Php 19, 820,000.00. Building permit must be secured prior to construction of project and Occupancy Permit upon completion of the project.*

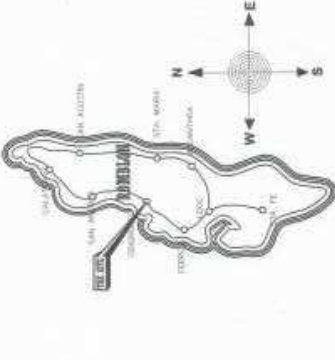
# Section VII. Drawings



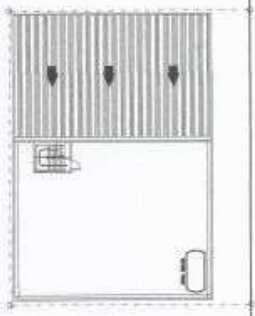
**1 PERSPECTIVE**  
A-1(A-1) NOT DRAWN TO SCALE




**2 LOCATION PLAN**  
A-1(A-1) SCALE 1:100



**3 VICINITY MAP**  
NTS



**4 SITE DEVELOPMENT PLAN**  
NTS

|   |   |                           |  |
|---|---|---------------------------|--|
| <b>PROJECT NO.:</b><br>ROBBIAN STATE UNIVERSITY | <b>CHECKED BY:</b><br><br><b>RAYMOND F. FARRIS</b> | <b>DATE:</b><br>8/11/2010 | <b>PROJECT TITLE:</b><br>PROPOSED CONSTRUCTION OF<br>BIOLOGY AND ANALYTICAL LABORATORY |
| <b>OFFICE OF PHYSICAL PLANT AND FACILITIES</b>  | <b>DESIGNED BY:</b><br>RAYMOND F. FARRIS  | <b>DATE:</b><br>8/11/2010 | <b>PROJECT NO.:</b><br>10000000000000000000  |
|   | <b>DATE:</b><br>8/11/2010   | <b>DATE:</b><br>8/11/2010 | <b>DATE:</b><br>8/11/2010  |
|   | <b>DATE:</b><br>8/11/2010   | <b>DATE:</b><br>8/11/2010 | <b>DATE:</b><br>8/11/2010  |
|   | <b>DATE:</b><br>8/11/2010   | <b>DATE:</b><br>8/11/2010 | <b>DATE:</b><br>8/11/2010  |

Activate Windows  
Go to Settings to activate Windows.

**A-1**

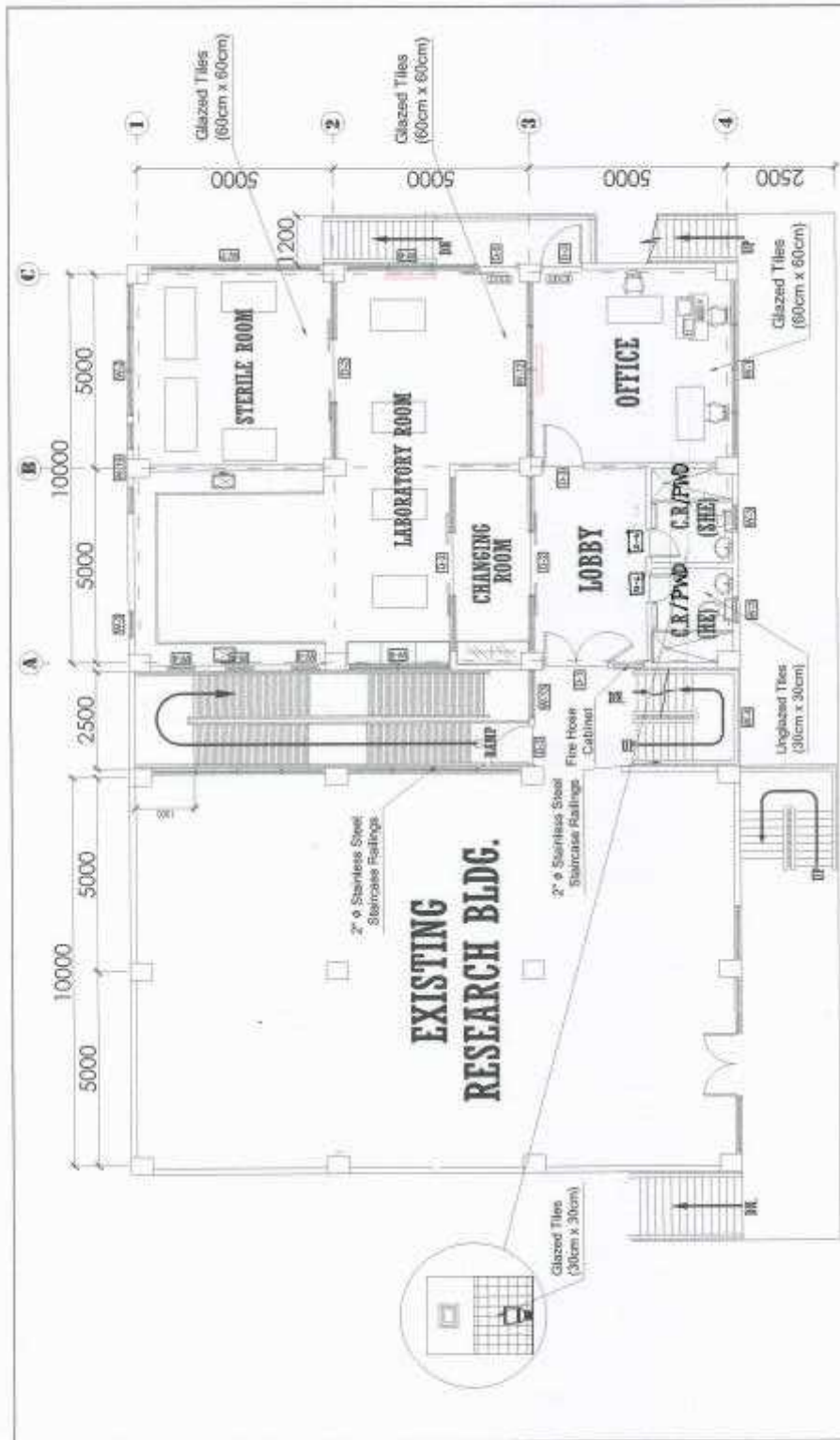


**1 PERSPECTIVE**  
A-1A-1 NOT DRAWN TO SCALE

|   |                    |   |   |                                |   |   |
|---|--------------------|---|---|--------------------------------|---|---|
| DRAWING NO.:<br><b>ROBESON STATE UNIVERSITY</b><br><b>OFFICE OF PHYSICAL PLANT AND FACILITIES</b> | CITY: INDIANAPOLIS | DESIGNED BY:<br><br><b>RAYMOND F. FADD</b><br>REG. REG. NO.: 020700201<br>EXPIRES: 02/07/2020<br>I.P.S. NO.: 0057576<br>PHONE: 0310/6644 | CHECKED BY:<br><br>APPROVED BY:<br><br>PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF<br/>BIOLOGY AND ANALYTICAL LABORATORY</b> | ISSUE DATE:<br><b>AS SHOWN</b> | FIGURED BY:<br>CAD OPERATOR:<br>I.C.S.C.<br>JOB NO.:<br>DATE: | SHEET NO.:<br> |
|---|--------------------|---|---|--------------------------------|---|---|

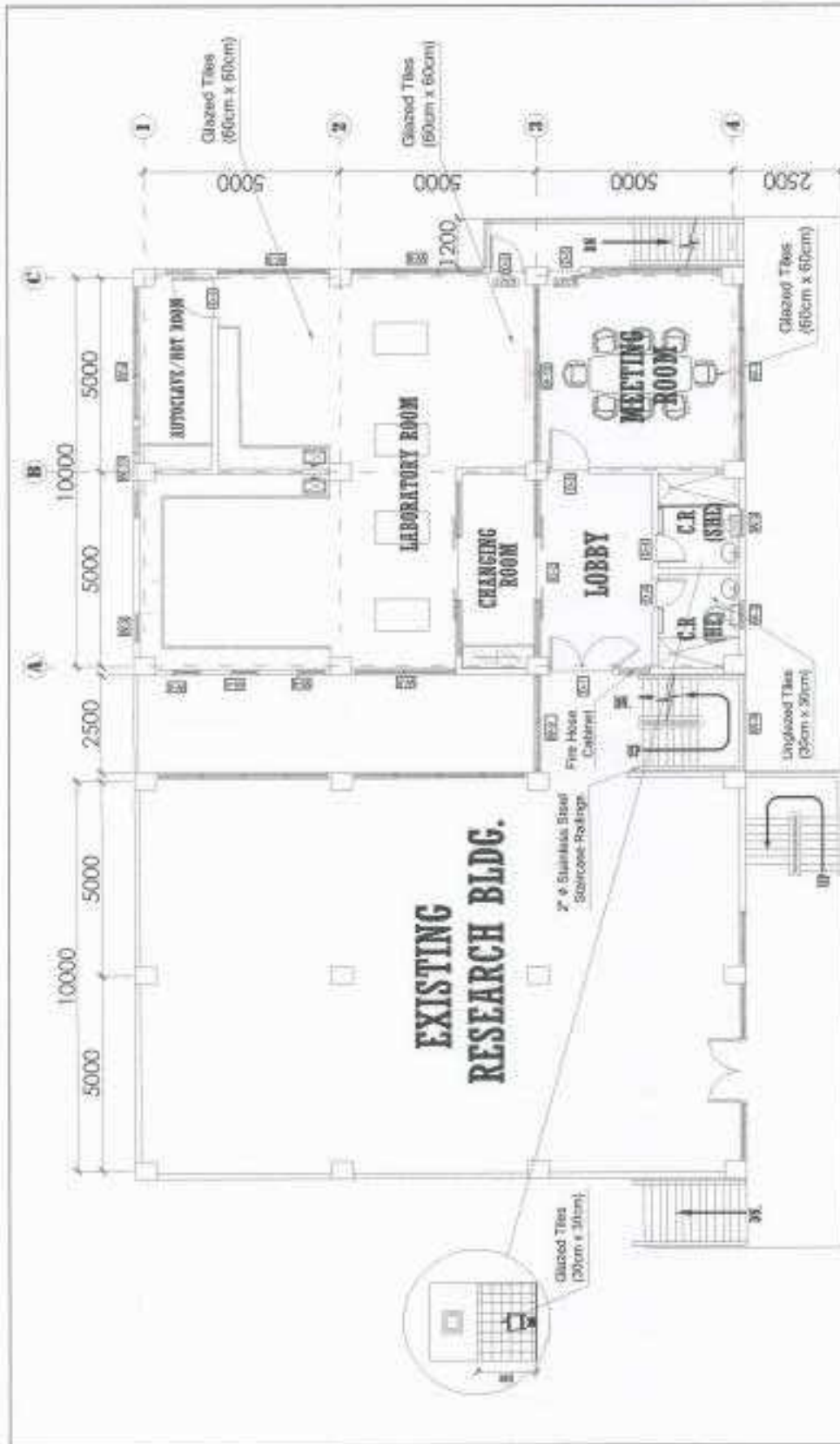




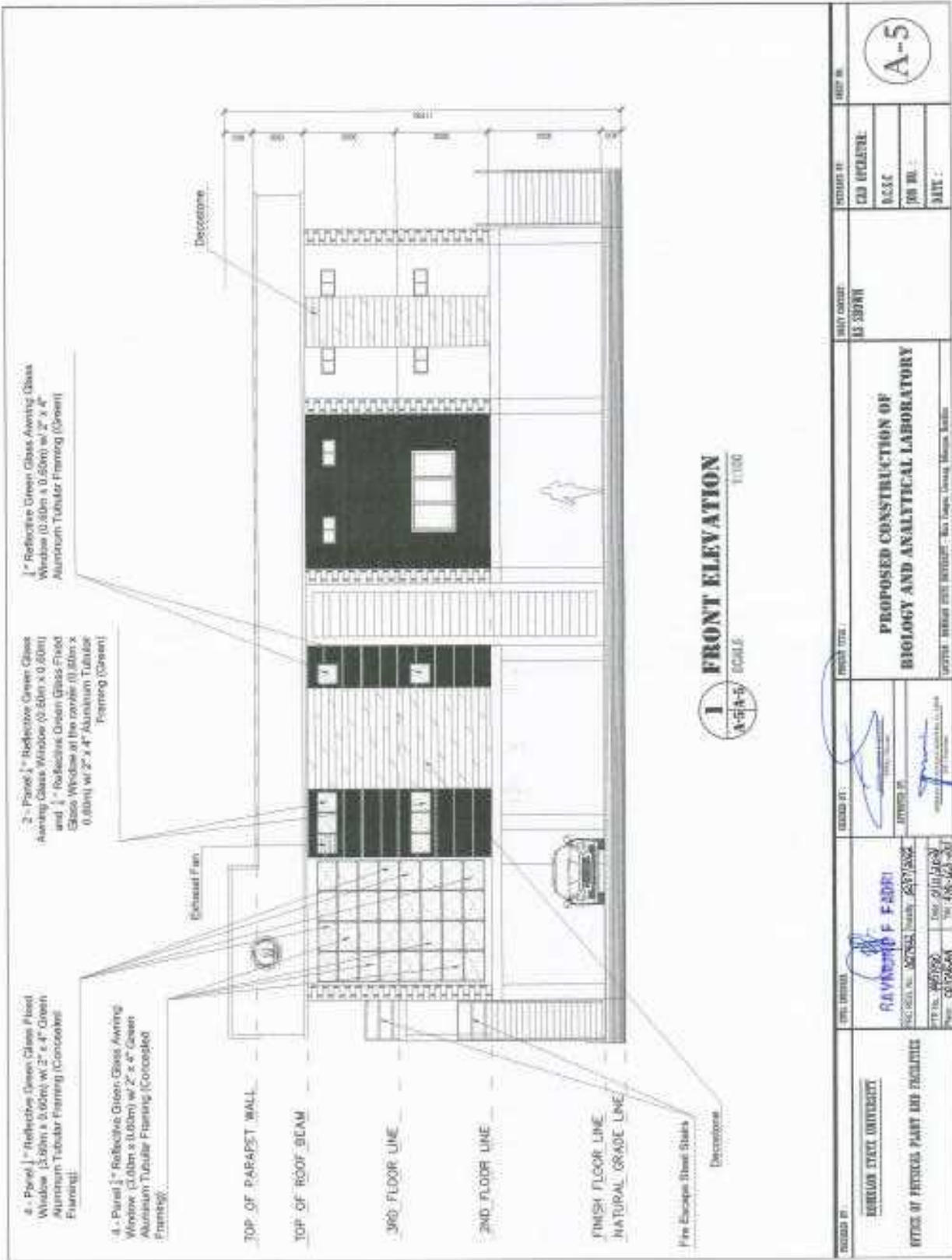


**1 SECOND FLOOR PLAN**  
SCALE 1:100

|   |   |  |                            |
|---|---|--|----------------------------|
| DRAWN BY:<br><b>HONOLULU STATE UNIVERSITY</b> | CIVIL ENGINEER<br><b>RAYMOND F. FAJFJ</b><br><small>REG. NO. 02-243 License (C.E.) State of Hawaii</small><br><small>PH. NO. 808-950-2100 Fax: 808-950-2101</small><br><small>PO BOX 80950 HONOLULU HI 96820-9501</small> | CHECKED BY:<br><br>PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b><br><small>UNIVERSITY MICROFILMS INTERNATIONAL, 300 North Zeeb Road, Ann Arbor, Michigan, U.S.A.</small> | DESIGNED BY:<br><b>A-3</b> |
| OFFICE OF PHYSICAL PLANT AND FACILITIES       |   | SHEET NO.:<br><b>A-3</b>   | SHEET NO.:<br><b>A-3</b>   |

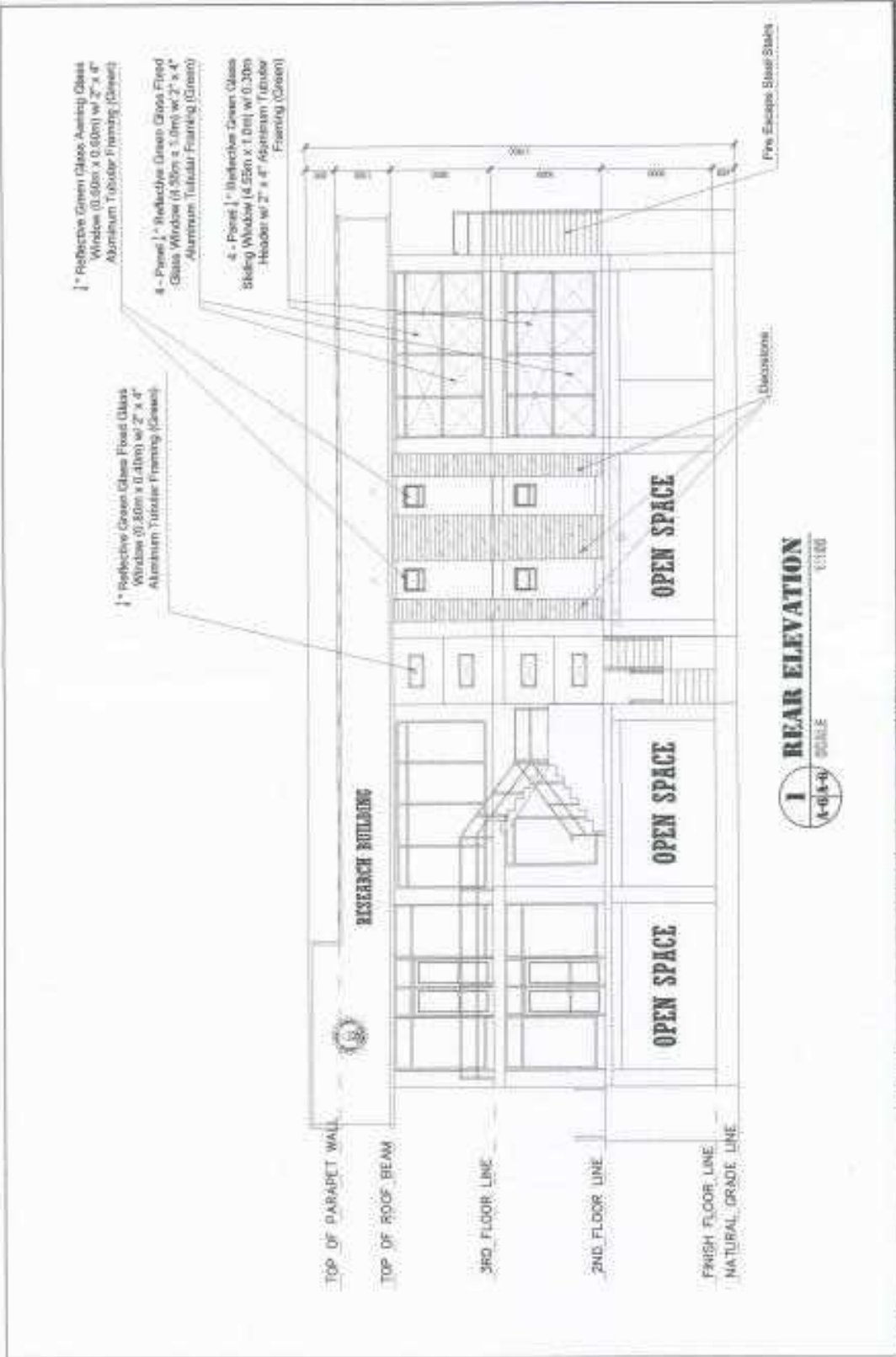


|   |   |                                      |                           |  |                          |
|---|---|--------------------------------------|---------------------------|--|--------------------------|
| REVIEWED BY:<br><b>MEMPHIS STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANNING AND FACILITIES | CITY DESIGN:<br><b>RAYMOND F. FADIS</b><br><small>RAYMOND F. FADIS ARCHITECTS, INC.</small><br><small>1000 N. GUYTON ST., SUITE 200, MEMPHIS, TN 38103</small><br><small>TEL: 901-726-1726 FAX: 901-726-1727</small><br><small>WWW.RFFA.COM</small> | DESIGNED BY:<br><br>RAYMOND F. FADIS | DRAWN BY:<br><br>J. BROWN | PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b><br><small>UNIVERSITY OF MEMPHIS, 450 S. COLLETT AVENUE, MEMPHIS, TN 38152</small> | SHEET NO.:<br><b>A-4</b> |
|   |   |                                      |                           |  |                          |



|  |   |   |                                 |   |                         |
|--|---|---|---------------------------------|---|-------------------------|
| DRAWN BY:<br><b>REBEKAH STATE UNIVERSITY</b> | CHECKED BY:<br><b>RAYMOND F. FARRU</b><br><small>REGISTERED PROFESSIONAL ARCHITECT</small><br>STATE OF MISSISSIPPI, LICENSE NO. 26373-0002<br>P.O. Box 469780   New Orleans, LA 70146-9780<br>Phone: 504.586.6561   Fax: 504.586.4631 | PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b><br><small>CURTIS CENTER FOR BIOLOGY, 610 College Avenue, Meridian, MS 39301</small> | CITY/COUNTY:<br><b>MS 39301</b> | DESIGNER:<br><b>CCSC</b><br>JOB NO.:<br>DATE: | SHEET NO.<br><b>A-5</b> |
|--|---|---|---------------------------------|---|-------------------------|

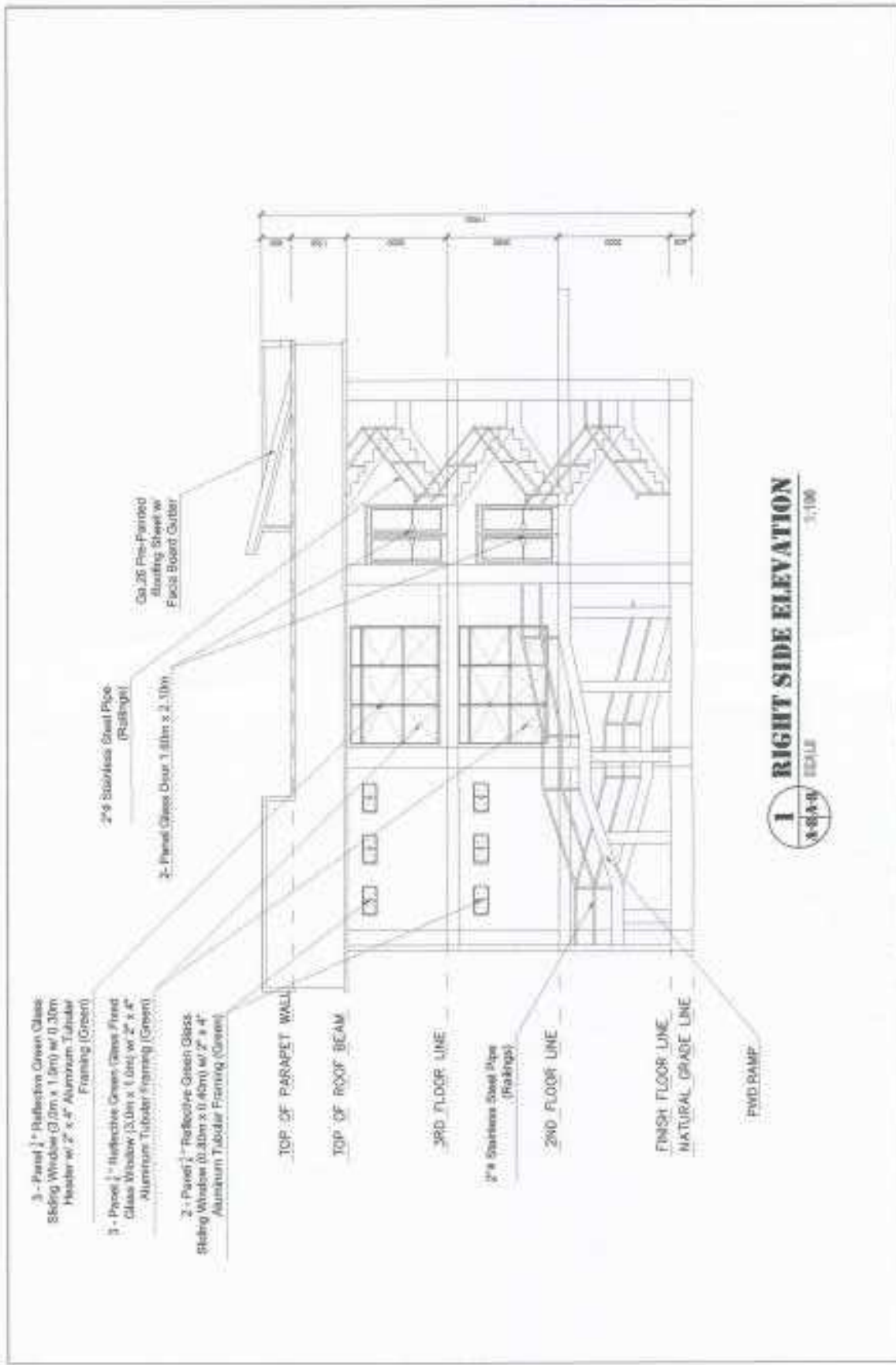




**1 REAR ELEVATION**  
SCALE 1/8" = 1'-0"

|   |  |                         |                          |   |                                |  |                         |
|---|--|-------------------------|--------------------------|---|--------------------------------|--|-------------------------|
| DRAWING BY<br><b>KANSAS STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANT AND FACILITIES | DATE: 08/20/2014<br>TIME: 10:00 AM<br>DRAWN BY: [Signature]  | CHECKED BY: [Signature] | DESIGNED BY: [Signature] | PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b> | ISSUED FOR:<br><b>KSU DOWR</b> | PREPARED BY:<br>CAD OPERATOR<br>ECCE<br>JH SE<br>DATE: | SHEET NO.<br><b>A-6</b> |
|   | PROJECT: <b>UNIVERSITY OF KANSAS - KANSAS STATE UNIVERSITY - 1600 S. CAMPUS, MANHATTAN, KANSAS</b> |                         |                          |   |                                |  |                         |





**1 RIGHT SIDE ELEVATION**  
 1/8" = 1'-0" SCALE

|  |   |                |                    |  |                              |
|--|---|----------------|--------------------|--|------------------------------|
| DRAWING NO.<br><b>SINGLE STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANT AND FACILITIES | DESIGNED BY<br><b>RAYMOND F. ROOP</b><br><small>RAYMOND F. ROOP ARCHITECTS</small><br>1000 W. 10TH STREET, SUITE 200, DENVER, CO 80202<br>PHONE: 303.733.7200 FAX: 303.733.7207 | CHECKED BY<br> | DATE<br>08/20/2007 | PROJECT TITLE<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b><br><small>UNIVERSITY MICROFILMS INTERNATIONAL, East Green, Green, Westcott</small> | SHEET NO.<br><b>A-8</b>      |
|  | PROJECT NO.<br><b>001493</b>  | DRAWN BY<br>   | DATE<br>08/20/2007 | SHEET NO.<br><b>A-8</b>  | PROJECT NO.<br><b>001493</b> |









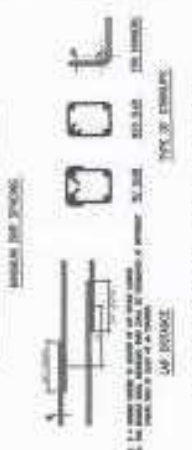
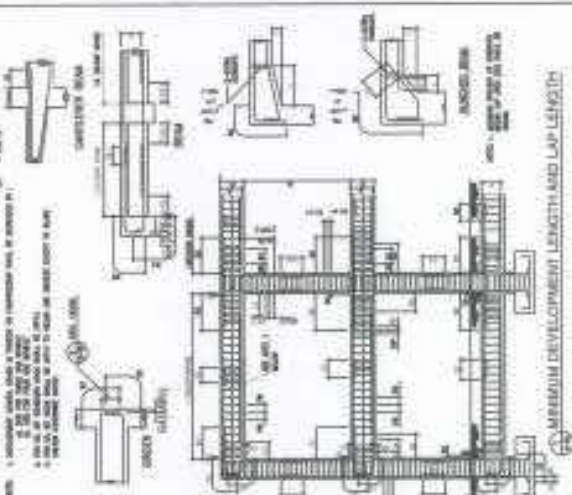




# STRUCTURAL NOTES

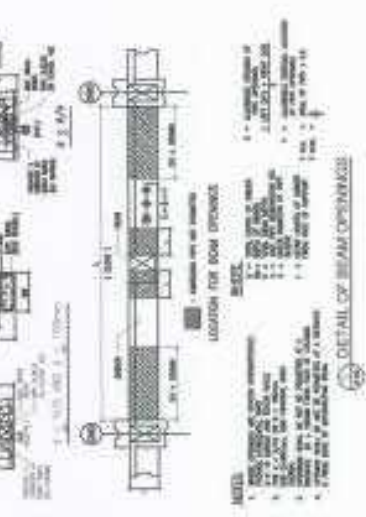
|                  |                  |
|------------------|------------------|
| 1 - 100% OF THE  | 1 - 100% OF THE  |
| 2 - 100% OF THE  | 2 - 100% OF THE  |
| 3 - 100% OF THE  | 3 - 100% OF THE  |
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| NO. | DESCRIPTION          | UNIT     | QTY | REMARKS           |
|-----|----------------------|----------|-----|-------------------|
| 1   | STANDARD HOOK & BEND | NO. BARS | 100 | SEE REINFORCEMENT |
| 2   | STANDARD HOOK & BEND | NO. BARS | 100 | SEE REINFORCEMENT |
| 3   | STANDARD HOOK & BEND | NO. BARS | 100 | SEE REINFORCEMENT |
| 4   | STANDARD HOOK & BEND | NO. BARS | 100 | SEE REINFORCEMENT |
| 5   | STANDARD HOOK & BEND | NO. BARS | 100 | SEE REINFORCEMENT |
| 6   | STANDARD HOOK & BEND | NO. BARS | 100 | SEE REINFORCEMENT |
| 7   | STANDARD HOOK & BEND | NO. BARS | 100 | SEE REINFORCEMENT |
| 8   | STANDARD HOOK & BEND | NO. BARS | 100 | SEE REINFORCEMENT |
| 9   | STANDARD HOOK & BEND | NO. BARS | 100 | SEE REINFORCEMENT |
| 10  | STANDARD HOOK & BEND | NO. BARS | 100 | SEE REINFORCEMENT |

|                  |                  |
|------------------|------------------|
| 1 - 100% OF THE  | 1 - 100% OF THE  |
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| 3 - 100% OF THE  | 3 - 100% OF THE  |
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| 7 - 100% OF THE  | 7 - 100% OF THE  |
| 8 - 100% OF THE  | 8 - 100% OF THE  |
| 9 - 100% OF THE  | 9 - 100% OF THE  |
| 10 - 100% OF THE | 10 - 100% OF THE |



DESIGNED BY: **RAMPHAD F. FADIP**  
 CHECKED BY: **RAMPHAD F. FADIP**  
 DATE: 10/10/2014  
 PROJECT: **PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY**

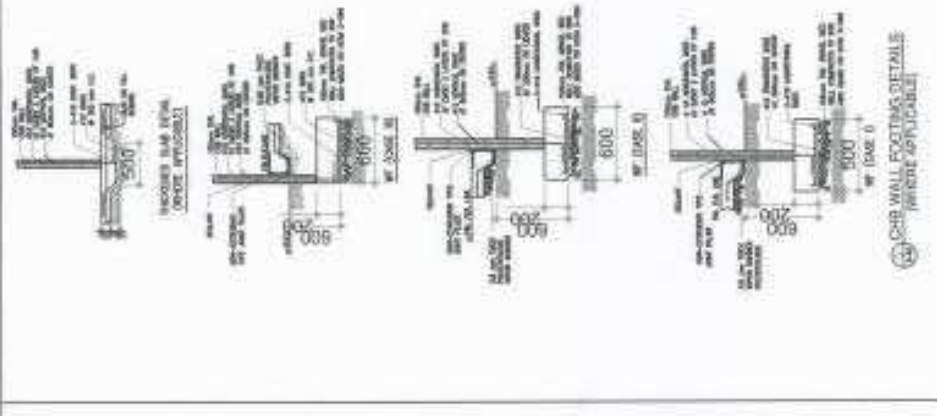
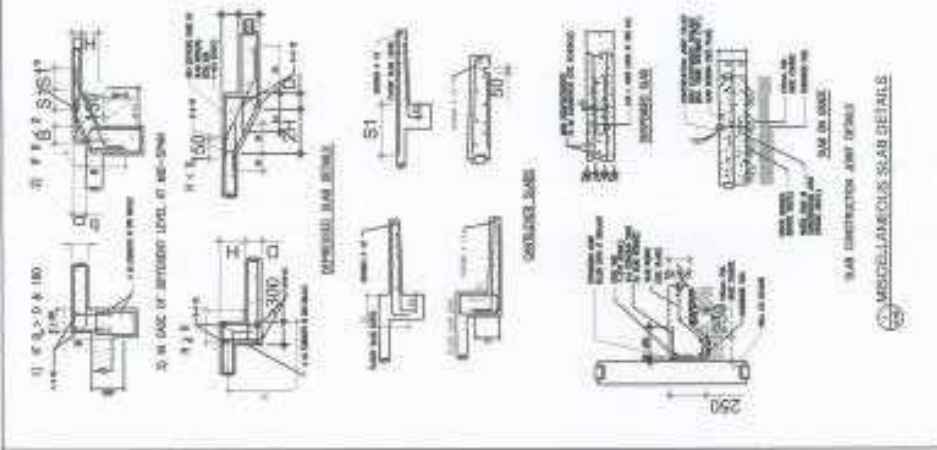
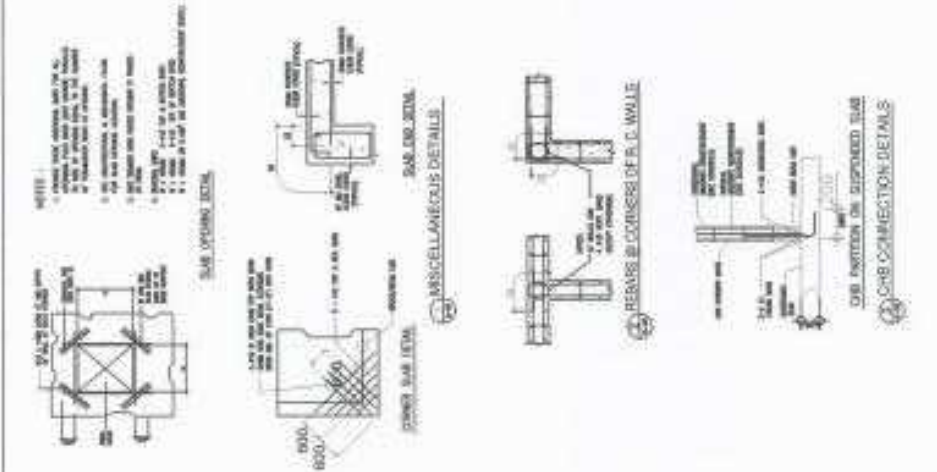
REVISIONS:

|     |                    |            |
|-----|--------------------|------------|
| NO. | DESCRIPTION        | DATE       |
| 1   | ISSUED FOR PERMITS | 10/10/2014 |

APPROVED BY: **RAMPHAD F. FADIP**  
 DATE: 10/10/2014



STRUCTURAL NOTES



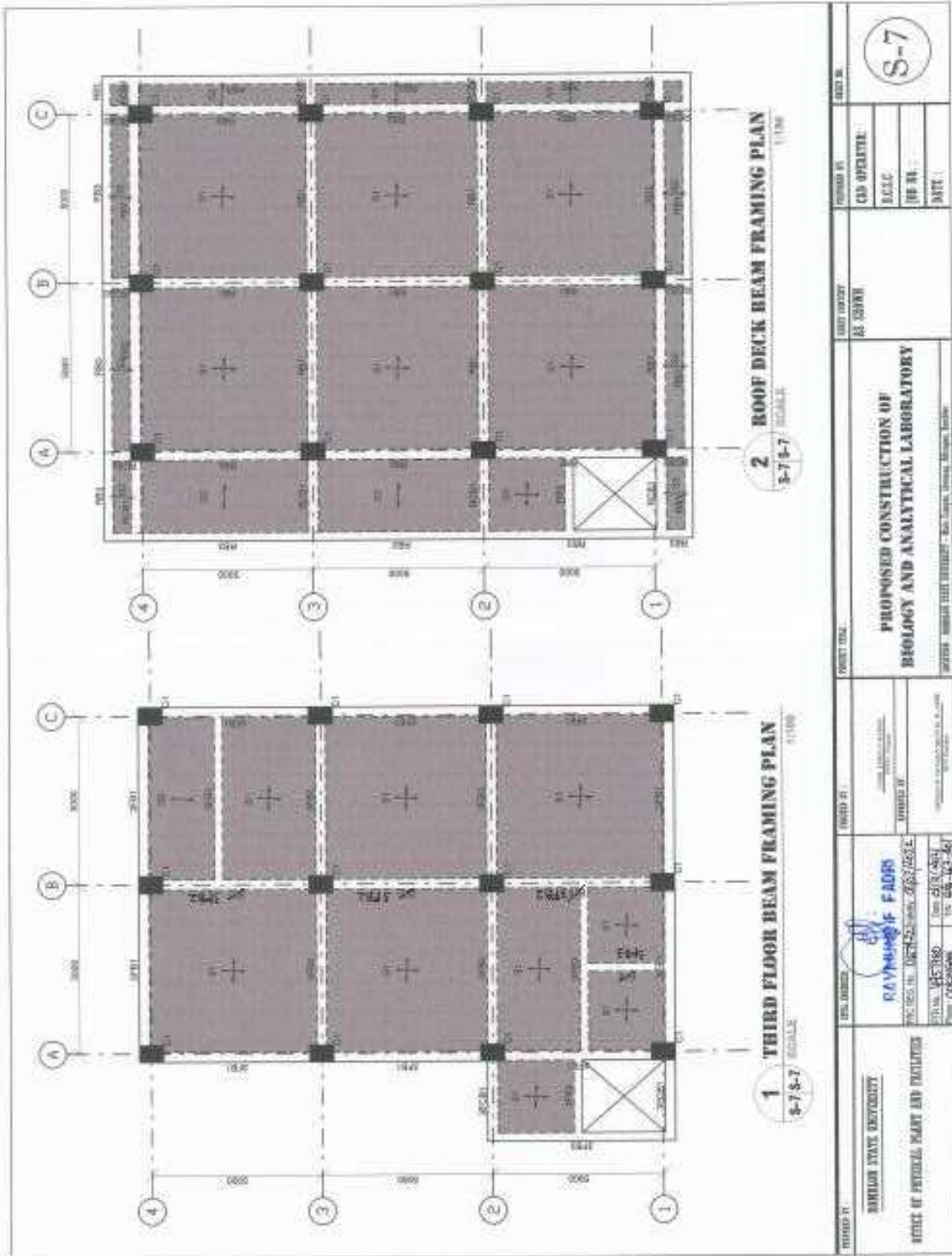
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|--|--|--|---|--|---|
| <p>DESIGNED BY: <b>MOHAMMAD F. FADRI</b></p> <p>DATE: 04/01/2022</p> <p>SCALE: 1:100</p> <p>PROJECT: PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</p> <p>CLIENT: UNIVERSITI TEKNOLOGI MALAYSIA</p> | <p>APPROVED BY: <i>[Signature]</i></p> <p>DATE: 04/01/2022</p> <p>SCALE: 1:100</p> <p>PROJECT: PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</p> <p>CLIENT: UNIVERSITI TEKNOLOGI MALAYSIA</p> | <p>REVISION NO: 01</p> <p>REVISION DATE: 04/01/2022</p> <p>REVISION DESCRIPTION: AS PER COMMENTS</p> | <p>PROJECT NO: 10000000000000000000</p> <p>DATE: 04/01/2022</p> <p>SCALE: 1:100</p> <p>PROJECT: PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</p> <p>CLIENT: UNIVERSITI TEKNOLOGI MALAYSIA</p> | <p>REVISION NO: 01</p> <p>REVISION DATE: 04/01/2022</p> <p>REVISION DESCRIPTION: AS PER COMMENTS</p> | <p>PROJECT NO: 10000000000000000000</p> <p>DATE: 04/01/2022</p> <p>SCALE: 1:100</p> <p>PROJECT: PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</p> <p>CLIENT: UNIVERSITI TEKNOLOGI MALAYSIA</p> |
|--|--|--|---|--|---|







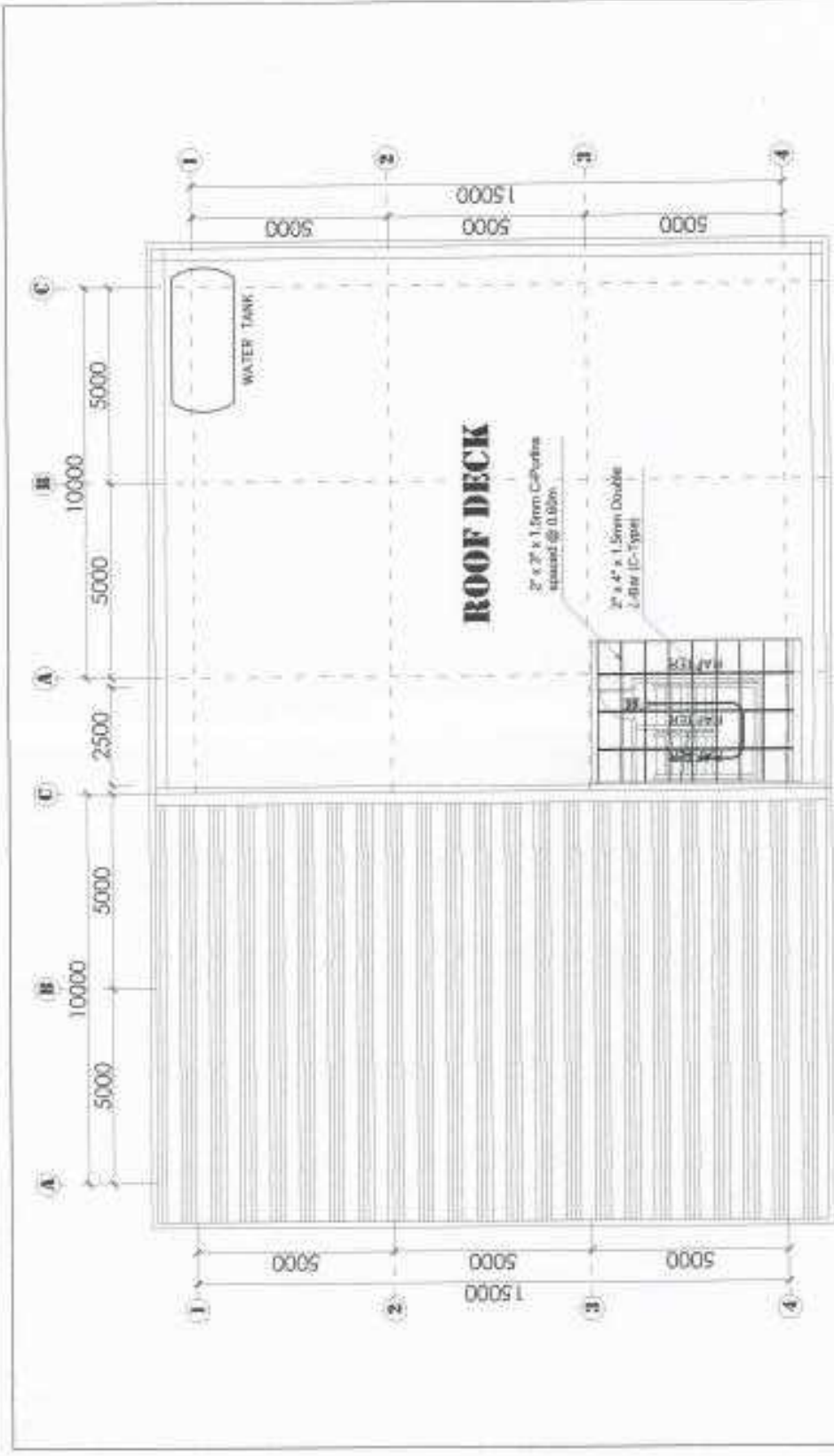




**1** THIRD FLOOR BEAM FRAMING PLAN  
 3/8" = 1'-0" SCALE

**2** ROOF DECK BEAM FRAMING PLAN  
 3/8" = 1'-0" SCALE

|   |   |   |
|---|---|---|
| DRAWING NO.<br><b>BARILOR STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANNING AND DEVELOPMENT | PROJECT TITLE<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b>   | SHEET NO.<br><b>S-7</b>   |
| DATE<br><b>APRIL 2018</b>   | DESIGNER<br><b>RAYMOND F. FARRIS</b><br>REGISTERED PROFESSIONAL ARCHITECT<br>No. 2513, 2484<br>State of California<br>License No. 4453180 | CLIENT<br><b>AS SHOWN</b>   |
| PROJECT NO.<br><b>18-00000000</b>   | PROJECT LOCATION<br><b>1000 UNIVERSITY AVENUE, BARILOR, CALIFORNIA 94001</b>  | CHECKED BY<br><b>AS SHOWN</b>   |
| SCALE<br><b>AS SHOWN</b>  | DRAWN BY<br><b>AS SHOWN</b>   | DESIGNER'S FIRM<br><b>RAYMOND F. FARRIS ARCHITECTS</b><br>1000 UNIVERSITY AVENUE, SUITE 100, BARILOR, CA 94001<br>TEL: (415) 338-1800 FAX: (415) 338-1801 |
| DATE<br><b>APRIL 2018</b>   | PROJECT NO.<br><b>18-00000000</b>   | SHEET NO.<br><b>S-7</b>   |



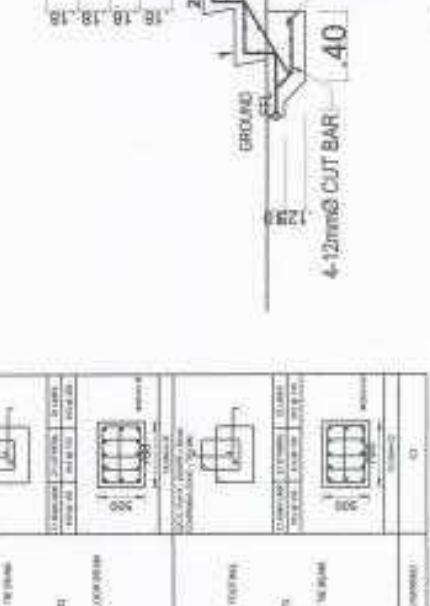
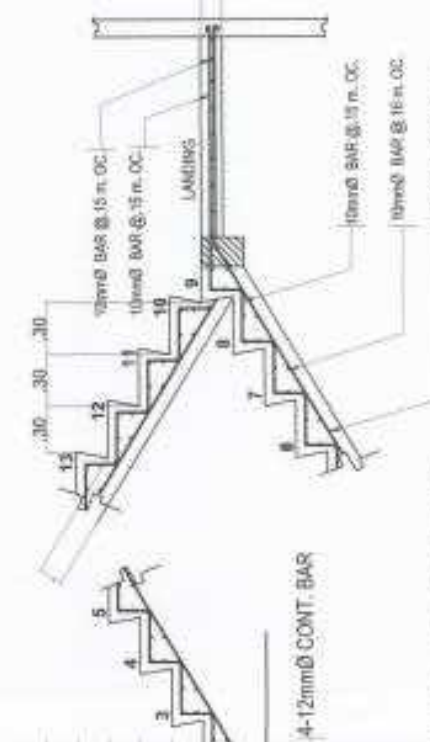
**1 ROOF PLAN VIEW**  
 SCALE: 1/8" = 1'-0"

|  |  |  |  |                                   |                                   |                                   |
|--|--|--|--|-----------------------------------|-----------------------------------|-----------------------------------|
| DESIGNED BY:<br><b>LONGHORN STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANNING AND FACILITIES | DATE: 08/24/2010<br>DRAWN BY: J. J. [Signature]<br>CHECKED BY: [Signature] | PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b> | PROJECT NUMBER: 1001000017 - 400 - 10000 - 00000 - 00000 | OWNER:<br><b>LSU</b>              | DESIGNER:<br><b>LSU</b>           | SHEET NO.:<br><b>S-8</b>          |
|  | PROJECT NO.:<br><b>1001000017</b>  | SHEET TITLE:<br><b>1 ROOF PLAN VIEW</b>  | PROJECT NO.:<br><b>1001000017</b>                        | PROJECT NO.:<br><b>1001000017</b> | PROJECT NO.:<br><b>1001000017</b> | PROJECT NO.:<br><b>1001000017</b> |



BEAM SCHEDULE (C27.5 Fy414)

| COL. NO. | COL. TYPE | TOP REINFORCEMENT |        | BOT. REINFORCEMENT |        | REMARKS |
|----------|-----------|-------------------|--------|--------------------|--------|---------|
|          |           | LEFT              | RIGHT  | LEFT               | RIGHT  |         |
| 101      | 101       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 102      | 102       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 103      | 103       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 104      | 104       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 105      | 105       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 106      | 106       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 107      | 107       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 108      | 108       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 109      | 109       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 110      | 110       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 111      | 111       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 112      | 112       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 113      | 113       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 114      | 114       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 115      | 115       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 116      | 116       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 117      | 117       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 118      | 118       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 119      | 119       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |
| 120      | 120       | 4-10mm            | 4-10mm | 4-10mm             | 4-10mm |         |



DETAIL OF STAIRS



|             |                      |
|-------------|----------------------|
| DESIGNED BY | DR. RAJESH K. SHARMA |
| CHECKED BY  | DR. RAJESH K. SHARMA |
| DATE        | 10/10/2023           |

|                      |                   |
|----------------------|-------------------|
| REVISION NO.         | 01                |
| REVISION DESCRIPTION | ISSUED FOR PERMIT |

PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY



BHARATHIDASAN UNIVERSITY  
OFFICE OF PROJECT, PLANNING AND TENDERS

PROJECT NO. B-10/2023  
DATE: 10/10/2023

SCALE: 1/10

DATE: 10/10/2023

PROJECT NO. B-10/2023

DATE: 10/10/2023

SCALE: 1/10

DATE: 10/10/2023

PROJECT NO. B-10/2023

DATE: 10/10/2023

SCALE: 1/10

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SCALE: 1/10

DATE: 10/10/2023

PROJECT NO. B-10/2023

DATE: 10/10/2023

SCALE: 1/10

DATE: 10/10/2023

PROJECT NO. B-10/2023

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SCALE: 1/10

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PROJECT NO. B-10/2023

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PROJECT NO. B-10/2023

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DATE: 10/10/2023

PROJECT NO. B-10/2023

DATE: 10/10/2023

SCALE: 1/10

DATE: 10/10/2023

PROJECT NO. B-10/2023

DATE: 10/10/2023

SCALE: 1/10

DATE: 10/10/2023

PROJECT NO. B-10/2023

DATE: 10/10/2023

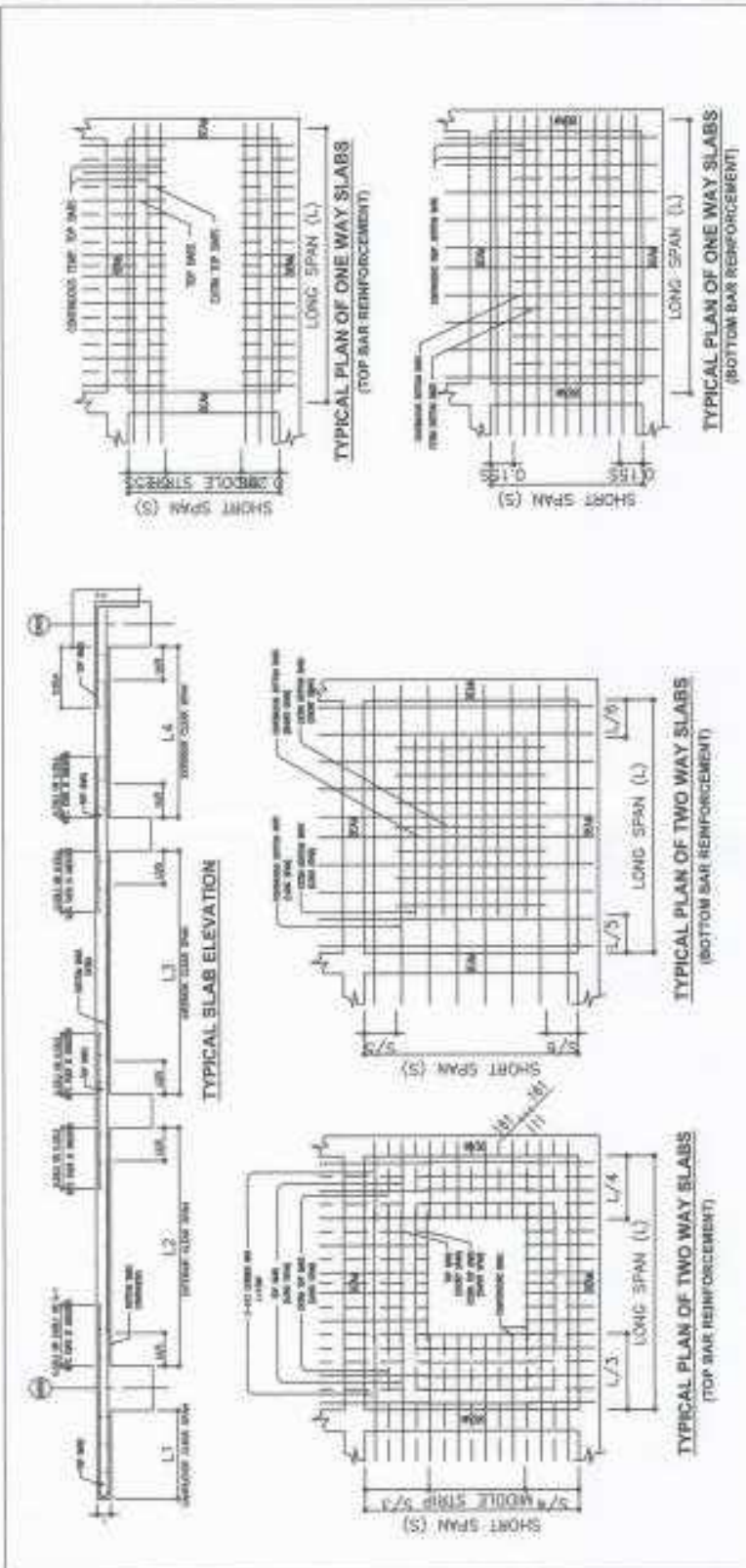
SCALE: 1/10

DATE: 10/10/2023

PROJECT NO. B-10/2023

DATE: 10/10/2023

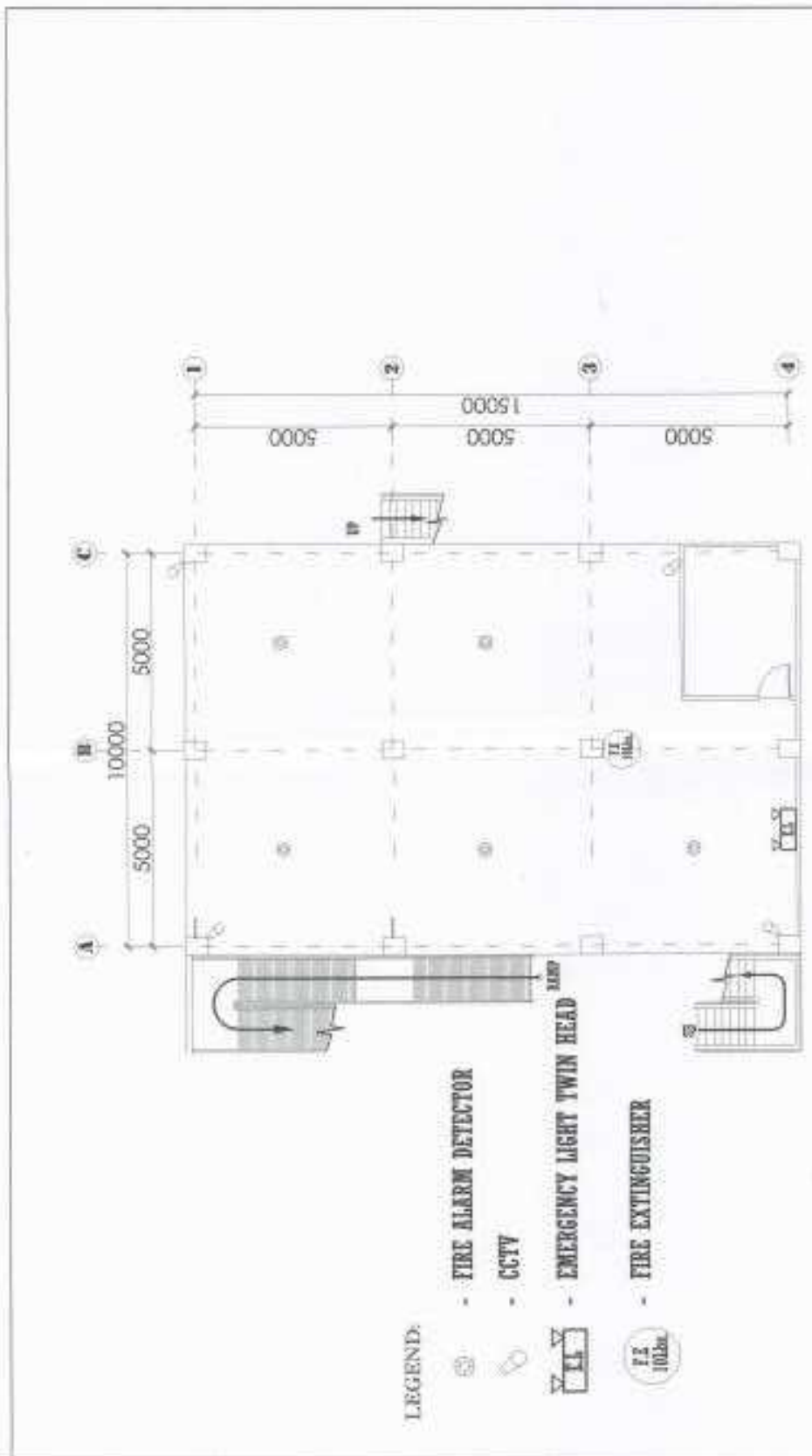




**SLAB SCHEDULE (C27.5 : FY414)**

| SLAB MARKED | SLAB THICKNESS | BOTTOM REINFORCEMENT |                 |                   | TOP REINFORCEMENT  |                    |             | REMARKS       |
|-------------|----------------|----------------------|-----------------|-------------------|--------------------|--------------------|-------------|---------------|
|             |                | ALONG SHORT SPAN     | ALONG LONG SPAN | OVER LONG SUPPORT | OVER SHORT SUPPORT | CONTINUOUS SUPPORT | END SUPPORT |               |
| 01          | 100            | 8-10@150             | 8-10@150        | 8-10@150          | 8-10@150           | 8-10@150           | 8-10@150    | REINFORCEMENT |
| 02          | 100            | 8-10@150             | 8-10@150        | 8-10@150          | 8-10@150           | 8-10@150           | 8-10@150    | REINFORCEMENT |

|  |   |   |                       |
|--|---|---|-----------------------|
| PROJECT NO: <b>4457003</b><br>DATE: <b>01/1/2021</b><br>DRAWN BY: <b>RAVAKRISHNA FADNIS</b><br>CHECKED BY: <b>RAVAKRISHNA FADNIS</b> | PROJECT TITLE: <b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b><br>ADDRESS: <b>SRINIVASA PURAM, HYDRABAD</b> | CLIENT: <b>SRINIVASA PURAM</b><br>CONTACT: <b>98491 10000</b> | SHEET NO: <b>S-11</b> |
|--|---|---|-----------------------|

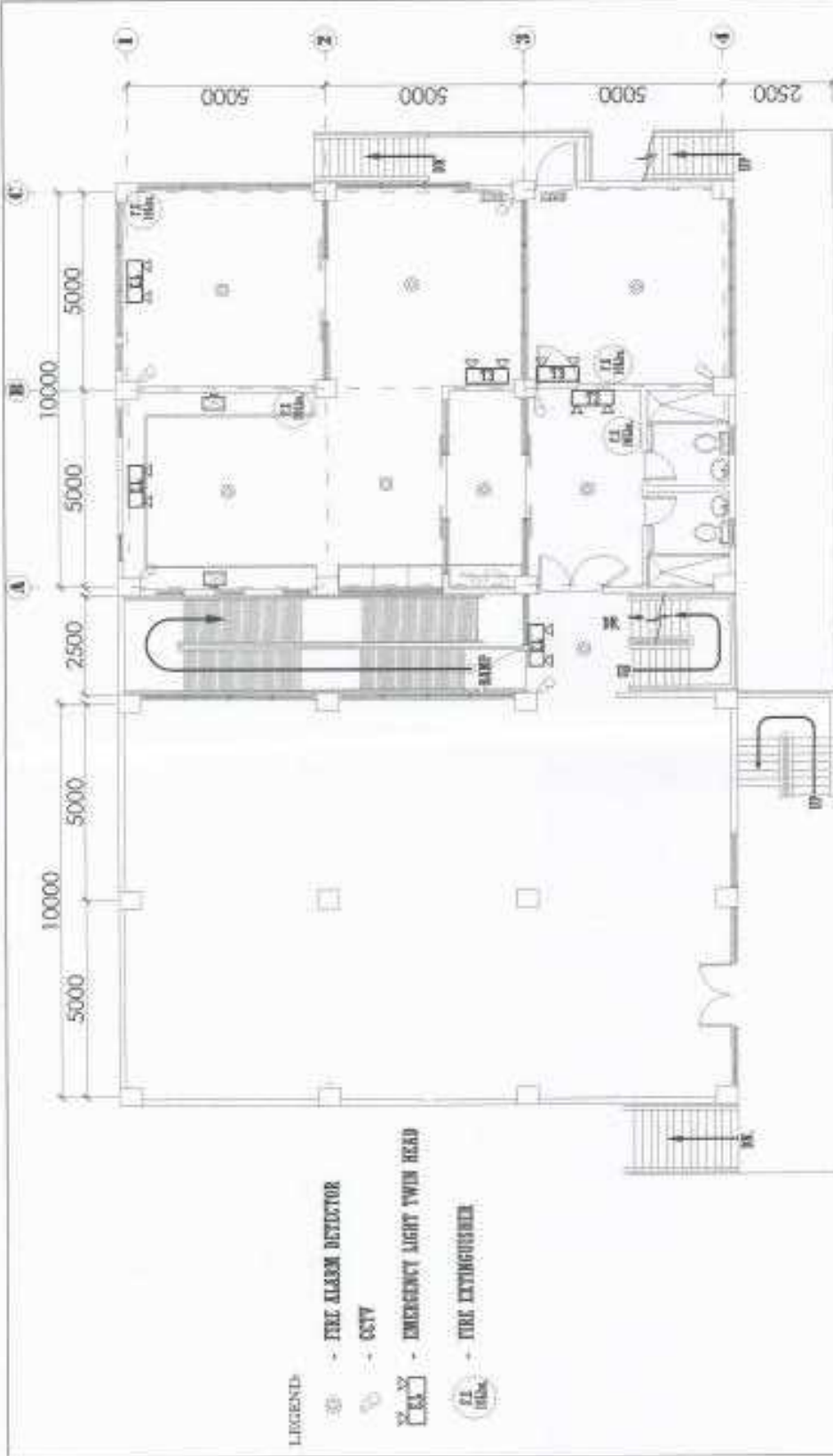


LEGEND:

- FIRE ALARM DETECTOR
- CCTV
- EMERGENCY LIGHT TWIN HEAD
- FIRE EXTINGUISHER

**1** GROUND FLOOR CCTV/EMERGENCY LIGHT/  
F.D.E./FIRE EXTINGUISHER LAYOUT PLAN  
N.T.S.

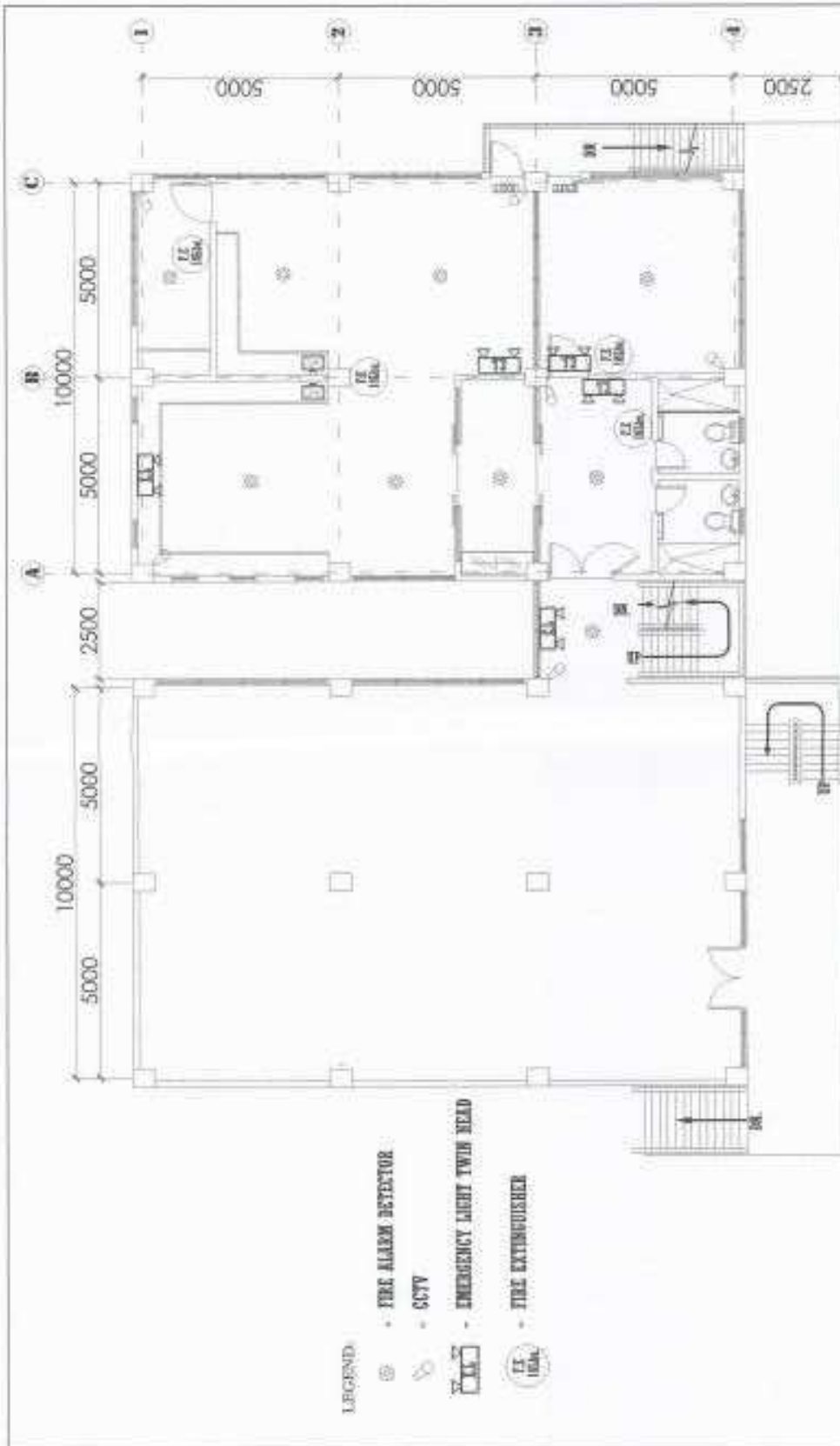
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| DRAWING NO.<br><b>ROBILAH STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANT AND FACILITIES | TITLE<br><b>PROPOSED CONSTRUCTION OF<br/>BIOLOGY AND ANALYTICAL LABORATORY</b> | PROJECT NO.<br><b>00000000000000000000</b> | SHEET NO.<br><b>F-1</b> | DATE<br><b>11/1/2021</b> | DRAWN BY<br><b>AS SUREN</b> | CHECKED BY<br><b>AS SUREN</b> |
|---|--|--|-------------------------|--------------------------|-----------------------------|-------------------------------|



**1**  
**SECOND FLOOR CCTV/EMERGENCY LIGHT/  
 F.D.E/FIRE EXTINGUISHER LAYOUT PLAN**  
 N.T.S.



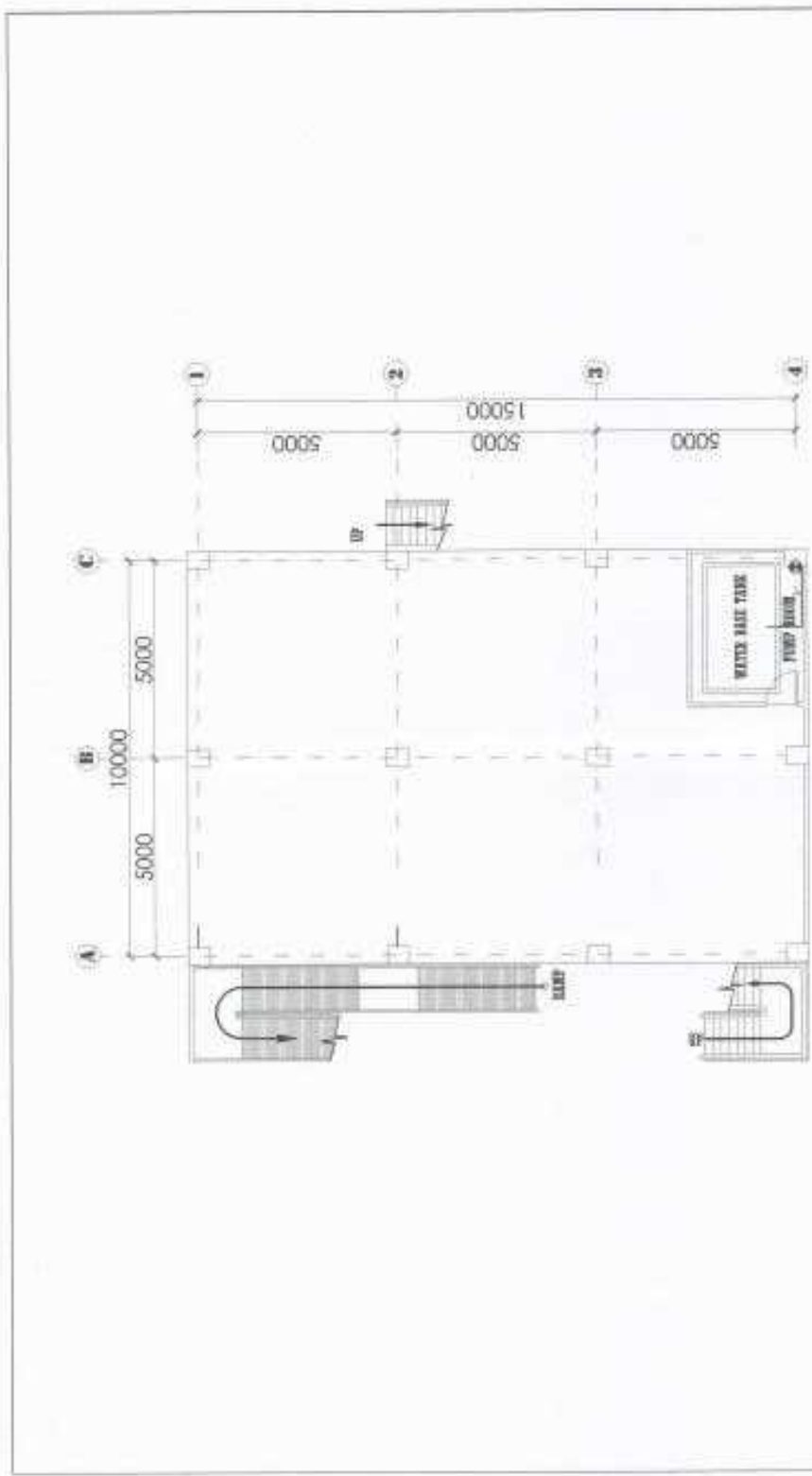
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|---|---|--|
| DRAWING NO.<br>BUREAU OF FIRE PREVENTION<br>DIVISION OF FIRE PREVENTION<br>125 N. 1ST ST. PHOENIX, ARIZONA 85004<br>PHONE: 481-2200 FAX: 481-2201 | PROJECT TITLE<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b><br><small>UNIVERSITY OF ARIZONA, TUCSON CAMPUS, TUCSON, ARIZONA</small> | DRAWING NO.<br><b>F-2</b>                  |
| CLIENT<br>UNIVERSITY OF ARIZONA<br>BIOLOGY AND ANALYTICAL LABORATORY  | PROJECT NO.<br>125098   | SHEET NO.<br>1 OF 1                        |
| DATE<br>08/10/2007  | DRAWN BY<br>J. J. JONES   | CHECKED BY<br>J. J. JONES                  |
| PROJECT LOCATION<br>125 N. 1ST ST. PHOENIX, ARIZONA 85004   | PROJECT OWNER<br>UNIVERSITY OF ARIZONA  | PROJECT ARCHITECT<br>UNIVERSITY OF ARIZONA |



|  |   |   |  |
|--|---|---|--|
| PROJECT NO:<br><b>BANGLOR STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANNING AND FACILITIES | DRAWN BY:<br><b>RAYMOND F. FARMS</b><br>DESIGNED BY:<br><b>RAYMOND F. FARMS</b><br>DATE: 05/18/2017<br>DRAWN: 05/18/2017<br>CHECKED: 05/18/2017 | PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b><br>ADDRESS: "UNION TRUST PROPERTY" - 4th Street, Union, Michigan, 48186 | SHEET NO.:<br><b>F-3</b>                               |
| PROJECT NO.:<br>SHEET NO.:<br>SHEET NO.:<br>SHEET NO.:                                       | SHEET NO.:<br>SHEET NO.:<br>SHEET NO.:<br>SHEET NO.:  | PROJECT NO.:<br>SHEET NO.:<br>SHEET NO.:<br>SHEET NO.:  | PROJECT NO.:<br>SHEET NO.:<br>SHEET NO.:<br>SHEET NO.: |







**1 GROUND FLOOR SPRINKLING LAYOUT PLAN**  
SCALE 1:100

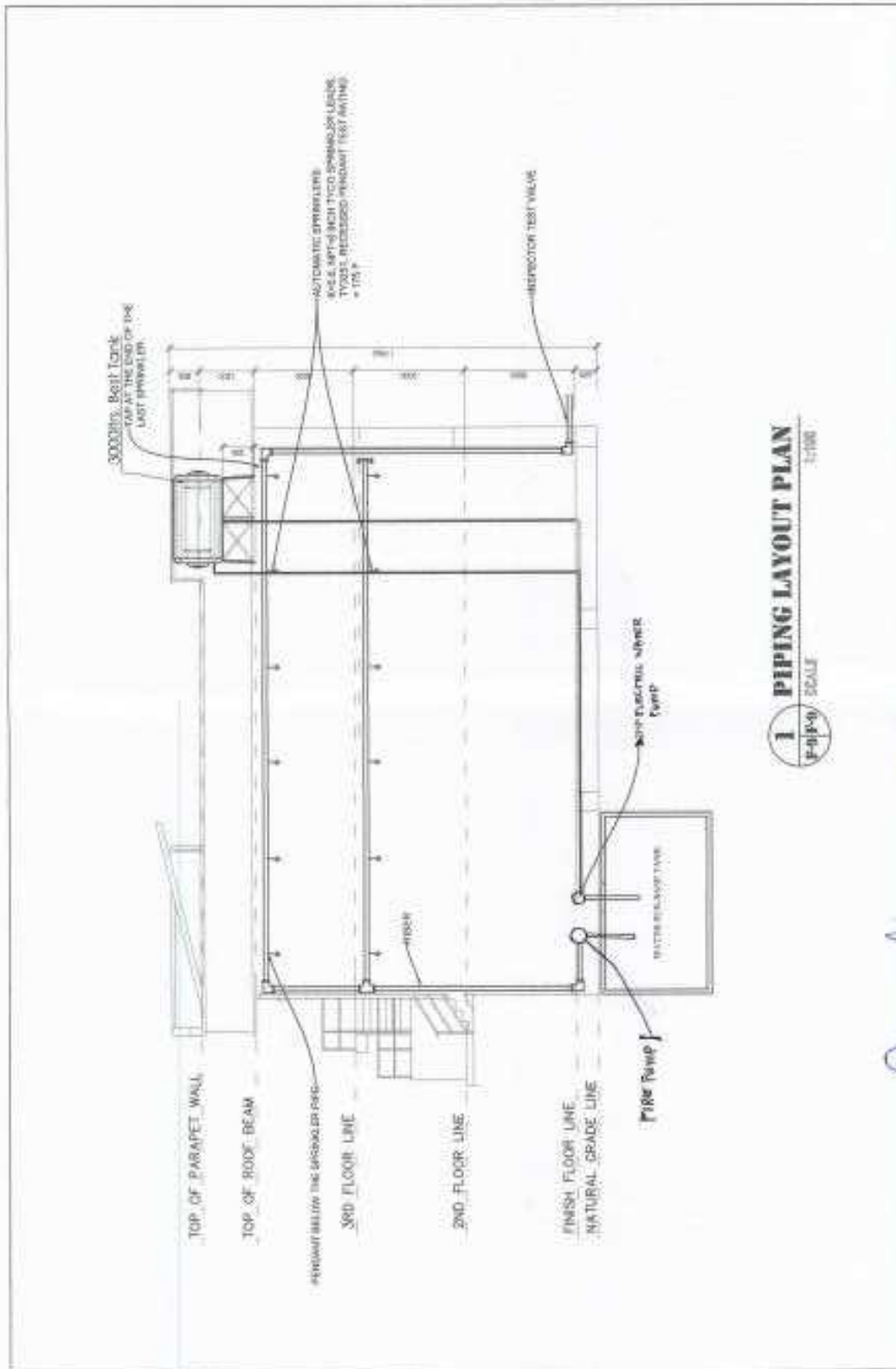
|  |                            |  |  |                        |                       |
|--|----------------------------|--|--|------------------------|-----------------------|
| REVISIONS<br>NO. DATE BY<br>1 10/10/11 J. [Signature]                | DESIGNER<br>[Signature]    | CHECKED BY<br>[Signature]  | DRAWN BY<br>[Signature]  | PROJECT NO.<br>11/1008 | SHEET NO.<br>F-5      |
|  | APPROVED BY<br>[Signature] | PROJECT TITLE<br>PROPOSED CONSTRUCTION OF<br>BIOLOGY AND ANALYTICAL LABORATORY | CLIENT NAME<br>[Blank]   | ARCHITECT<br>[Blank]   | CD OFFICER<br>[Blank] |
| BERKSHIRE STATE UNIVERSITY<br>OFFICE OF PHYSICAL PLANT AND ELECTRICS | PROJECT NO.<br>11/1008     | SHEET NO.<br>F-5   | PROJECT TITLE<br>PROPOSED CONSTRUCTION OF<br>BIOLOGY AND ANALYTICAL LABORATORY | CLIENT NAME<br>[Blank] | ARCHITECT<br>[Blank]  |





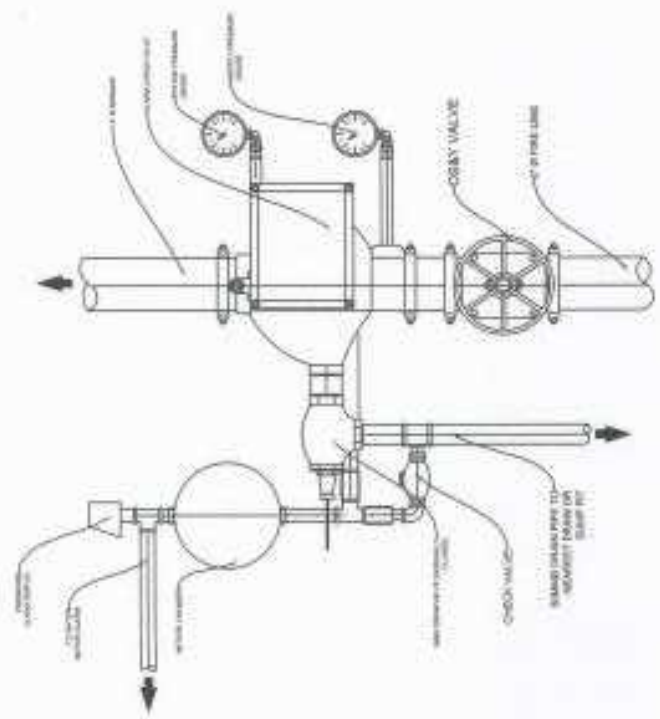




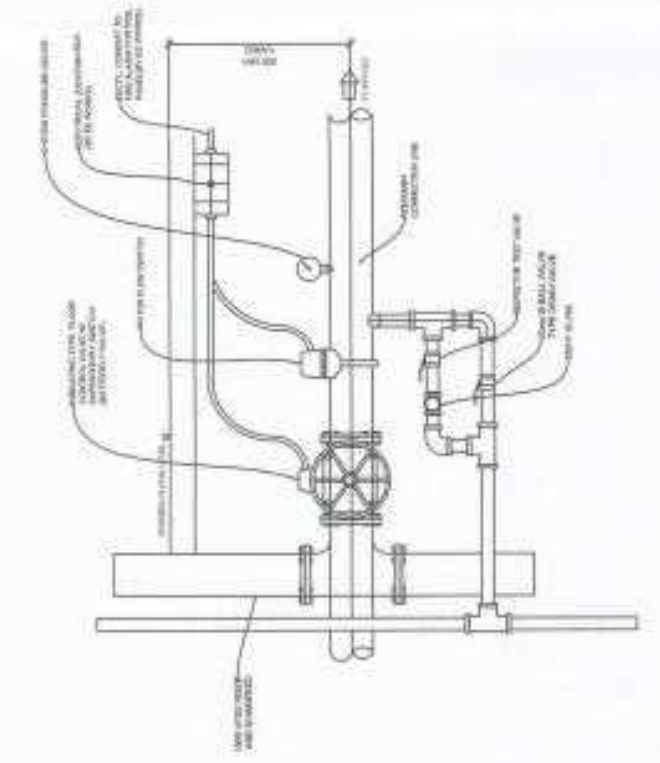


**1 PIPING LAYOUT PLAN**  
 SCALE 1/100

|   |  |   |                                  |                          |
|---|--|---|----------------------------------|--------------------------|
| PROJECT #:<br><b>BOHANN STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANT AND FACILITIES | DESIGNER:<br><i>[Signature]</i>                                      | CHECKED BY:<br><i>[Signature]</i>                   | DATE: 03/27/2009                 | SHEET NO.:<br><b>F-9</b> |
|   | PROJECT TITLE:<br><b>CONSTRUCTION OF UNIVERSITY LIBRARY BUILDING</b> | CLIENT:<br><b>BOHANN STATE UNIVERSITY</b>           | SHEET DATE:<br><b>03/27/2009</b> | OLD PROJECT:<br>N/A      |
| PROJECT NO.:<br><b>03-03-01</b>   | PROJECT NAME:<br><b>UNIVERSITY LIBRARY BUILDING</b>                  | PROJECT LOCATION:<br><b>BOHANN STATE UNIVERSITY</b> | PROJECT NO.:<br><b>03-03-01</b>  | SHEET NO.:<br><b>F-9</b> |
| PROJECT NO.:<br><b>03-03-01</b>   | PROJECT NAME:<br><b>UNIVERSITY LIBRARY BUILDING</b>                  | PROJECT LOCATION:<br><b>BOHANN STATE UNIVERSITY</b> | PROJECT NO.:<br><b>03-03-01</b>  | SHEET NO.:<br><b>F-9</b> |

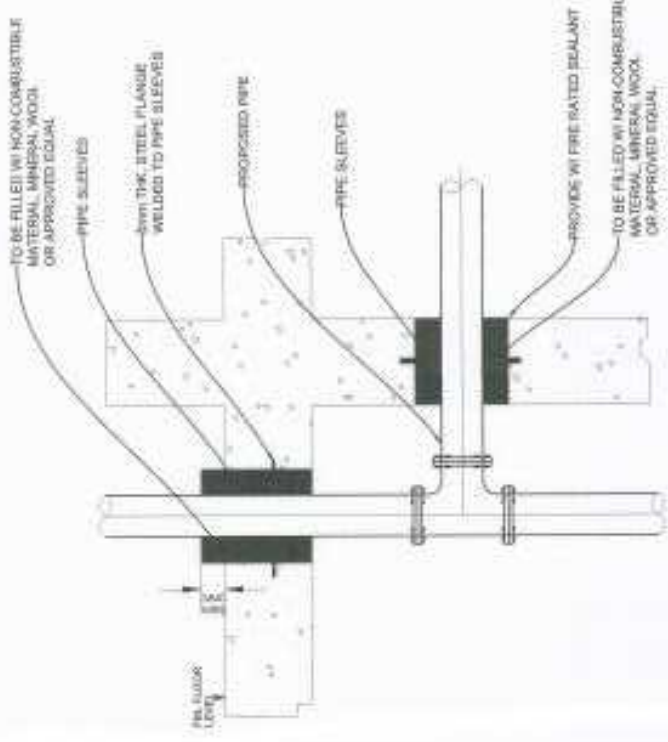


**1 FLOOR CONTROL VALVE ASSEMBLY** NOTES:



**2 ALARM CHECK VALVE ASSEMBLY** NOTES:

|   |                                    |                                    |  |                        |                           |
|---|------------------------------------|------------------------------------|--|------------------------|---------------------------|
| PROJECT #1:<br><b>BOZEMAN STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANT AND FACILITIES | DESIGNED BY:<br><i>[Signature]</i> | CHECKED BY:<br><i>[Signature]</i>  | PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b> | REVISIONS:<br>AS SHOWN | DRAWING #:<br><b>F-10</b> |
|   | APPROVED BY:<br><i>[Signature]</i> | APPROVED BY:<br><i>[Signature]</i> | DATE:<br>03/06/2011  | DATE:<br>              |                           |



# 1 PIPE HANGER DETAILS

TABLE OF PIPE SLEEVES

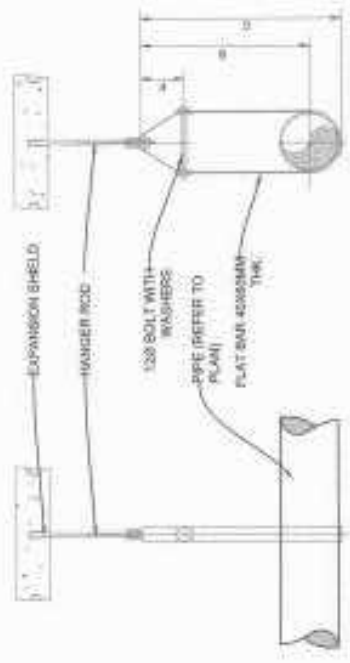
| SIZE OF BRANCHES | SIZE OF PIPE SLEEVES |
|------------------|----------------------|
| 200MM            | 200MM                |
| 250MM            | 250MM                |
| 300MM            | 300MM                |
| 350MM            | 350MM                |
| 400MM            | 400MM                |
| 450MM            | 450MM                |
| 500MM            | 500MM                |
| 550MM            | 550MM                |
| 600MM            | 600MM                |
| 650MM            | 650MM                |
| 700MM            | 700MM                |
| 750MM            | 750MM                |
| 800MM            | 800MM                |

NOTE:  
SLEEVES SHALL BE PROVIDED AROUND ALL PIPES EXCEEDING THROUGH WALLS, FLOORS, PARTITIONS AND FOUNDATIONS.

1. THE CLEARANCE BETWEEN THE PIPE SLEEVES SHALL BE FILLED WITH NON-COMBUSTIBLE FLEXIBLE MATERIAL SUCH AS MINERAL WOOL, FIBER GLASS OR FOAMULITE.

2. MINIMUM CLEARANCE BETWEEN PIPE AND SLEEVES SHALL NOT BE LESS THAN 25MM FOR PIPE 200MM THROUGH 700MM & MORE FOR PIPE SIZE 1000MM AND LARGER. FLOOR SLEEVES SHALL BE EXTENDED AT LEAST 100MM ABOVE THE TOP OF THE FINISHING SURFACE.

# 2 PIPE SLEEVES DETAILS



DESIGNED BY: [Signature]  
 CHECKED BY: [Signature]  
 DATE: 23/07/2018  
 DRAWN BY: [Signature]  
 DATE: 23/07/2018

ISSUED BY: [Signature]  
 DATE: 23/07/2018

FORWARDED BY: [Signature]  
 DATE: 23/07/2018

FORWARDED BY: [Signature]  
 DATE: 23/07/2018

REVISIONS:  
 NO. / DATE / BY / REASON

PROPOSED CONSTRUCTION OF  
 BIOLOGY AND ANALYTICAL LABORATORY

PROJECT: BIRLA INST. OF SCIENCE - 6th Floor, Science Block, Bhubaneswar

ISSUED BY: [Signature]  
 DATE: 23/07/2018

FORWARDED BY: [Signature]  
 DATE: 23/07/2018

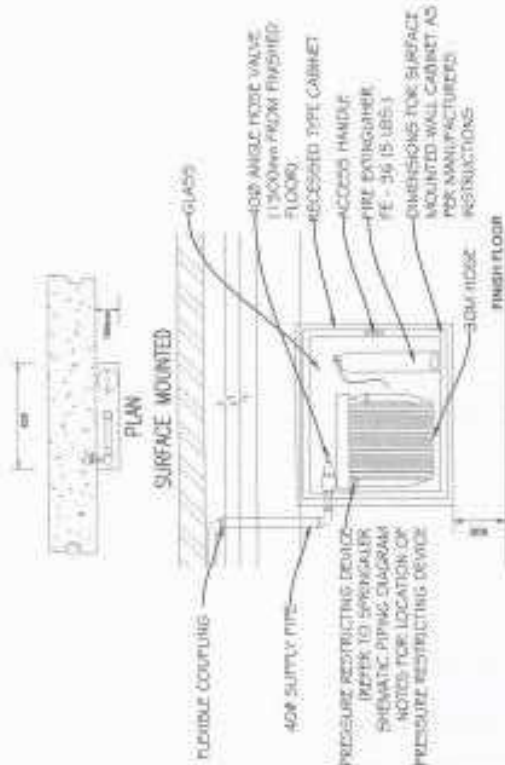
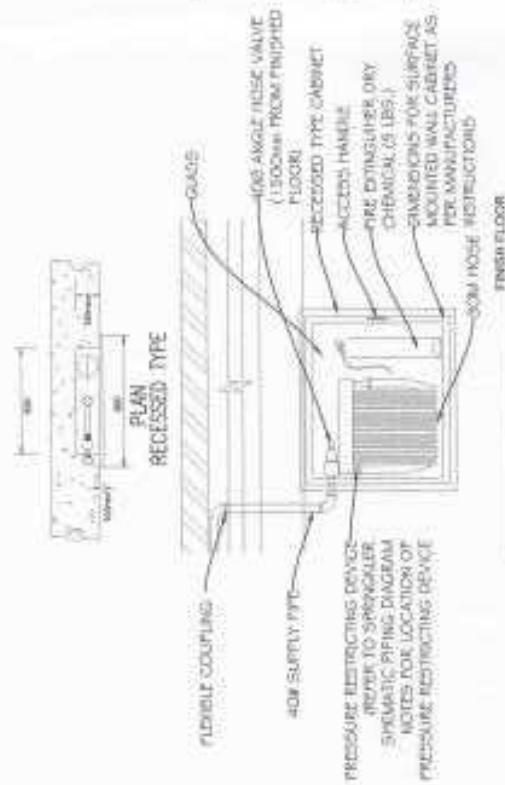
FORWARDED BY: [Signature]  
 DATE: 23/07/2018

FORWARDED BY: [Signature]  
 DATE: 23/07/2018

FORWARDED BY: [Signature]  
 DATE: 23/07/2018

FORWARDED BY: [Signature]  
 DATE: 23/07/2018

F-11



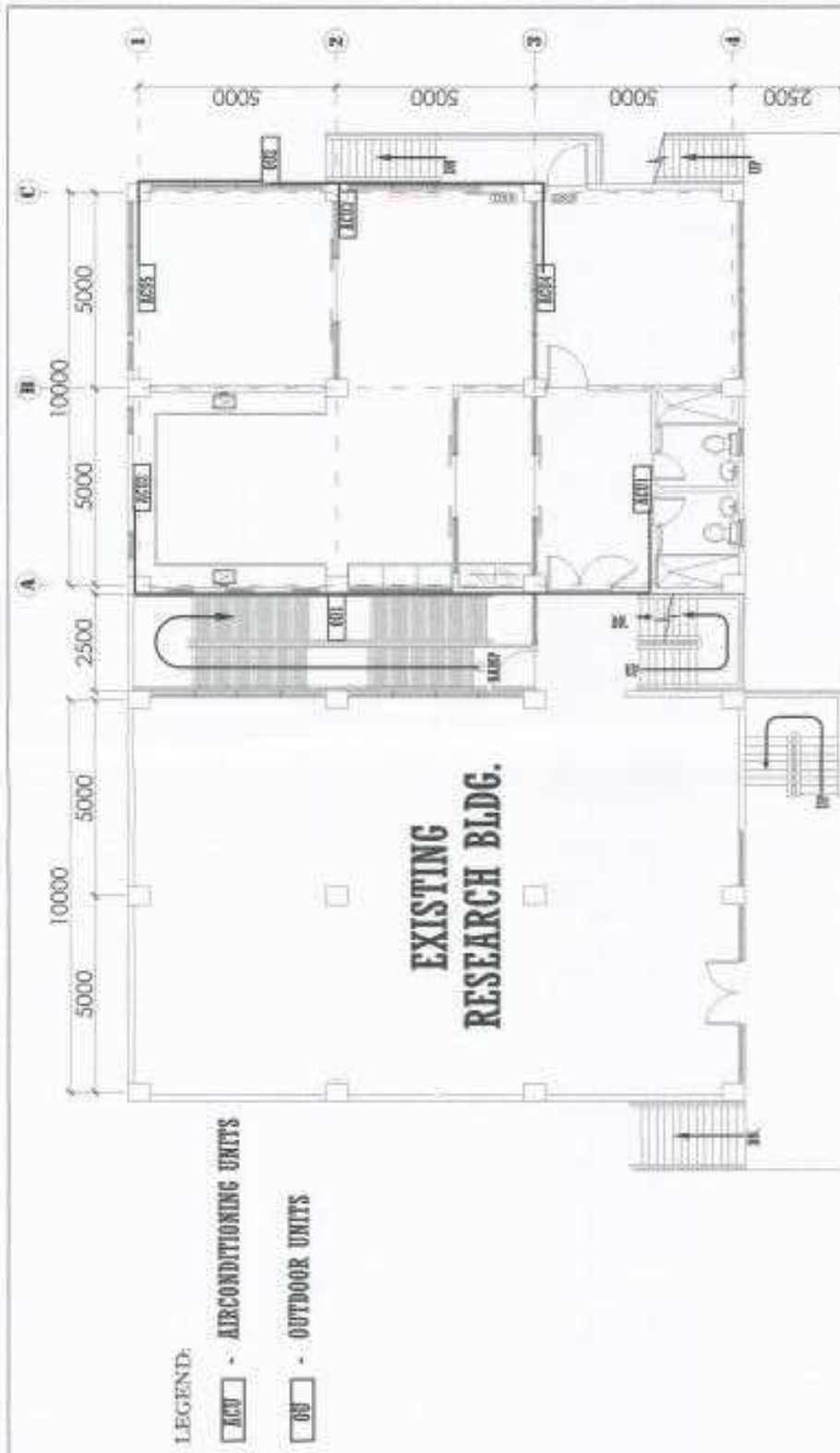
**1 FIRE HOSE CABINET DETAILS**  
M.T.S.

|  |                                   |   |                           |
|--|-----------------------------------|---|---------------------------|
| DRAWN BY:<br><b>BORISLAV STAVITSKIY</b>    | CHECKED BY:<br><i>[Signature]</i> | PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b> | SHEET NO.:<br><b>F-12</b> |
| INSTITUTION:<br><b>BORISLAV STAVITSKIY</b> | DATE:<br><b>10/26/23</b>          | CLIENT:<br><b>UNIVERSITY OF MISSOURI</b>  | SCALE:<br><b>AS SHOWN</b> |
| OFFICE OF PHYSICAL PLANNING AND FACILITIES |                                   |   |                           |





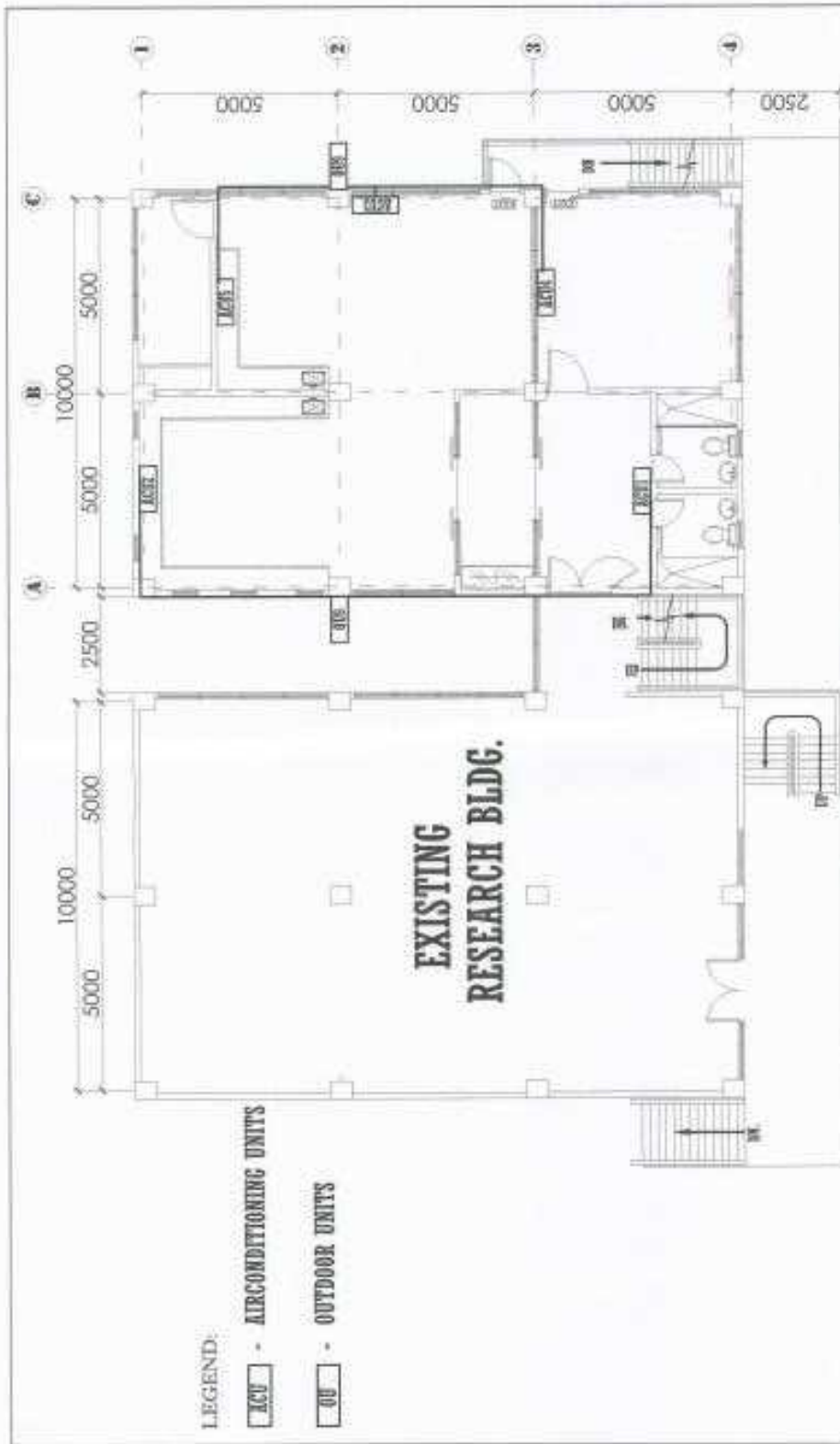




**1 SECOND FLOOR ACU AND OUTDOOR UNIT PLAN**  
NTS

|  |                              |                       |                               |
|--|------------------------------|-----------------------|-------------------------------|
| DRAWING NO.<br><b>M-1</b>  | PROJECT NO.<br><b>201001</b> | SHEET NO.<br><b>1</b> | CLIENT<br><b>KAUST</b>        |
|  |                              |                       | DATE<br><b>11/2011</b>        |
| PROJECT TITLE<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b> |                              |                       | DRAWN BY<br><b>...</b>        |
| ARCHITECT<br><b>...</b>  |                              |                       | CHECKED BY<br><b>...</b>      |
| OFFICE OF PHYSICAL PLANS AND SPECIFICATIONS<br><b>KUWAIT UNIVERSITY</b>            |                              |                       | PROJECT MANAGER<br><b>...</b> |





|   |   |
|---|---|
| DRAWN BY: <i>[Signature]</i><br>CHECKED BY: <i>[Signature]</i><br>PROJECT NO: 99-0334-02<br>DATE: 11-15-02    | SHEET NO: M-2   |
|   | PROJECT TITLE: PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY<br>CLIENT: UNIVERSITY OF MISSOURI SYSTEMS |
| DESIGNED BY: <i>[Signature]</i><br>CHECKED BY: <i>[Signature]</i><br>PROJECT NO: 99-0334-02<br>DATE: 11-15-02 | SHEET NO: M-2   |
| OFFICE OF FEDERAL PLANS AND PERMITS<br>1000 N. GARDNER ST., SUITE 100<br>COLUMBIA, MO 65203                   | SHEET NO: M-2   |

| SECOND FLOOR     |             |                  |                           |                |              |                  |      |                                  |                                 |      |              |
|------------------|-------------|------------------|---------------------------|----------------|--------------|------------------|------|----------------------------------|---------------------------------|------|--------------|
| AREA / ROOM CODE | INDOOR UNIT |                  |                           |                | OUTDOOR UNIT |                  |      |                                  | TOTAL COOLING CAPACITY (A/C/HP) |      |              |
|                  | LEAKS       | HP (Refrigerant) | COOLING CAPACITY (A/C/HP) | TYPE           | LEAKS        | HP (Refrigerant) | QTY. | ELECTRICAL REQUIREMENTS          |                                 | TYPE |              |
| REPT             | 4201        | 2.00             | 8000-20000                | 1 WALL MOUNTED |              |                  | 1    |                                  |                                 |      |              |
| LABORATORY AREA  | 4202        | 2.00             | 8000-20000                | 1 WALL MOUNTED |              |                  | 1    |                                  |                                 |      |              |
| LABORATORY AREA  | 4203        | 3.00             | 20000-30000               | 1 WALL MOUNTED |              |                  | 1    | 200-240 VAC, 200A, 3 Phase, 400V |                                 |      | 112,278 kJ/h |
| OFFICE           | 4204        | 3.00             | 8000-20000                | 1 WALL MOUNTED |              |                  | 1    |                                  |                                 |      |              |
| STORAGE ROOM     | 4205        | 2.00             | 8000-20000                | 1 WALL MOUNTED |              |                  | 1    |                                  |                                 |      |              |

4201 - RECEPTIONIST UNIT  
42 - OUTDOOR UNITS

| THIRD FLOOR      |             |                  |                           |                |              |                  |      |                                  |                                 |      |              |
|------------------|-------------|------------------|---------------------------|----------------|--------------|------------------|------|----------------------------------|---------------------------------|------|--------------|
| AREA / ROOM CODE | INDOOR UNIT |                  |                           |                | OUTDOOR UNIT |                  |      |                                  | TOTAL COOLING CAPACITY (A/C/HP) |      |              |
|                  | LEAKS       | HP (Refrigerant) | COOLING CAPACITY (A/C/HP) | TYPE           | LEAKS        | HP (Refrigerant) | QTY. | ELECTRICAL REQUIREMENTS          |                                 | TYPE |              |
| LABORATORY AREA  | 4301        | 2.00             | 8000-20000                | 1 WALL MOUNTED |              |                  | 1    |                                  |                                 |      |              |
| LABORATORY AREA  | 4302        | 2.00             | 8000-20000                | 1 WALL MOUNTED |              |                  | 1    |                                  |                                 |      |              |
| LABORATORY AREA  | 4303        | 3.00             | 20000-30000               | 1 WALL MOUNTED |              |                  | 1    | 200-240 VAC, 200A, 3 Phase, 400V |                                 |      | 112,278 kJ/h |
| MEETING ROOM     | 4304        | 3.00             | 8000-20000                | 1 WALL MOUNTED |              |                  | 1    |                                  |                                 |      |              |
| LABORATORY AREA  | 4305        | 2.00             | 8000-20000                | 1 WALL MOUNTED |              |                  | 1    |                                  |                                 |      |              |

4301 - RECEPTIONIST UNIT  
43 - OUTDOOR UNITS

# 1 AIRCONDITION/ OUTDOOR UNIT DETAILS

ETS



|                  |                           |   |                  |
|------------------|---------------------------|---|------------------|
| ISSUED BY:       | ISSUED DATE: 11/11/2011   | PROJECT TITLE: PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY | ISSUED NO: 11    |
| DESIGNED BY:     | DESIGNED DATE: 11/11/2011 | CLIENT: M-3   | PROJECT NO: 11   |
| CHECKED BY:      | CHECKED DATE: 11/11/2011  | CONTRACT NO: 11   | CLIENT NAME: M-3 |
| DATE: 11/11/2011 | TIME: 11:11               | PROJECT LOCATION: 11  | PROJECT NO: 11   |

| SECOND FLOOR        |       | INDOOR UNIT   |                       |     |              | OUTDOOR UNIT |               |     |                                 | TOTAL COOLING CAPACITY (Tons)             |
|---------------------|-------|---------------|-----------------------|-----|--------------|--------------|---------------|-----|---------------------------------|---|
| AREA / ROOM / SUITE | LEDSH | HP (Proposed) | COOLING CAPACITY (kW) | QTY | TYPE         | LEDSH        | HP (Proposed) | QTY | ELECTRICAL REQUIREMENT          | TYPE                                      |
| LABOR               | A01   | 2.00          | 1000-2000             | 1   | WALL MOUNTED | OU1          | 2.50          | 1   | 200-300 VAC, 60Hz, 1 Phase, 50A | Multiple Outdoor Units<br>Variable - Type |
| LABORATORY AREA     | A02   | 3.00          | 1000-2000             | 1   | WALL MOUNTED | OU2          | 5.00          | 1   | 200-300 VAC, 60Hz, 1 Phase, 50A | Multiple Outdoor Units<br>Variable - Type |
| LABORATORY AREA     | A03   | 3.00          | 1000-2000             | 1   | WALL MOUNTED |              |               |     |                                 |   |
| OFFICE              | A04   | 3.00          | 2000-3000             | 1   | WALL MOUNTED |              |               |     |                                 |   |
| STERILE ROOM        | A05   | 2.00          | 1000-2000             | 1   | WALL MOUNTED |              |               |     |                                 |   |

A01 - MICROBIOLOGY SUITE  
A02 - OUTDOOR UNIT

| THIRD FLOOR         |       | INDOOR UNIT   |                       |     |              | OUTDOOR UNIT |               |     |                                 | TOTAL COOLING CAPACITY (Tons)             |
|---------------------|-------|---------------|-----------------------|-----|--------------|--------------|---------------|-----|---------------------------------|---|
| AREA / ROOM / SUITE | LEDSH | HP (Proposed) | COOLING CAPACITY (kW) | QTY | TYPE         | LEDSH        | HP (Proposed) | QTY | ELECTRICAL REQUIREMENT          | TYPE                                      |
| LABOR               | A01   | 2.00          | 1000-2000             | 1   | WALL MOUNTED | OU1          | 2.50          | 1   | 200-300 VAC, 60Hz, 1 Phase, 50A | Multiple Outdoor Units<br>Variable - Type |
| LABORATORY AREA     | A02   | 3.00          | 1000-2000             | 1   | WALL MOUNTED | OU2          | 5.00          | 1   | 200-300 VAC, 60Hz, 1 Phase, 50A | Multiple Outdoor Units<br>Variable - Type |
| LABORATORY AREA     | A03   | 3.00          | 2000-3000             | 1   | WALL MOUNTED |              |               |     |                                 |   |
| METING ROOM         | A04   | 3.00          | 2000-3000             | 1   | WALL MOUNTED |              |               |     |                                 |   |
| LABORATORY AREA     | A05   | 1.00          | 1000-2000             | 1   | WALL MOUNTED |              |               |     |                                 |   |

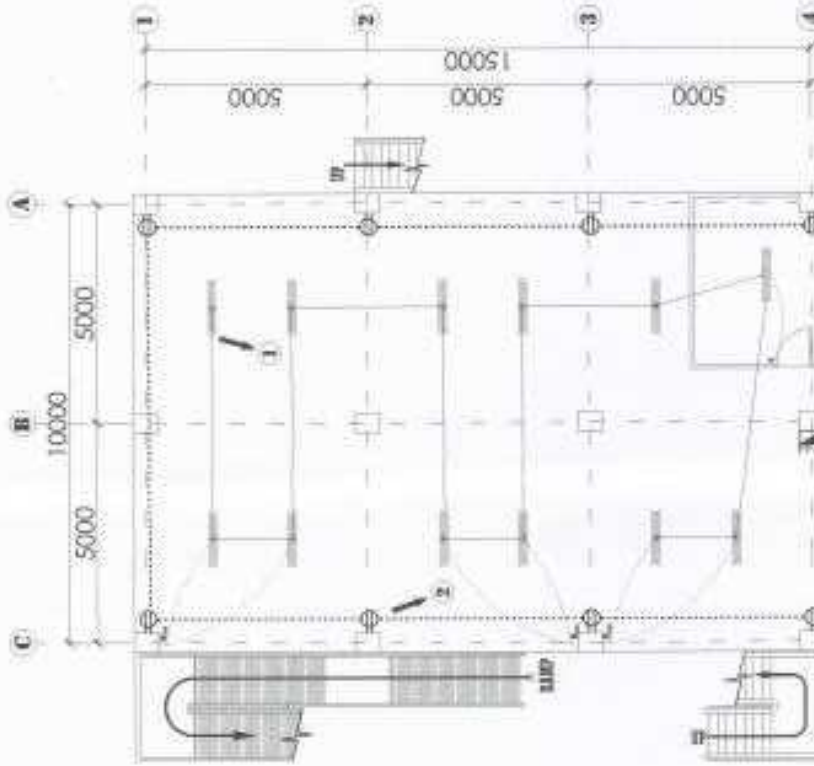
A01 - MICROBIOLOGY SUITE  
A02 - OUTDOOR UNIT

# 1 AIRCONDITION/ OUTDOOR UNIT DETAILS

DATE: \_\_\_\_\_



|   |  |  |                             |
|---|--|--|-----------------------------|
| PROJECT NO.:<br>DRAWING NO.:<br>DATE:   | REVISIONS:<br>1. _____<br>2. _____<br>3. _____ | DESIGNER:<br>CHECKED BY:<br>APPROVED BY: | SHEET NO.:<br>TOTAL SHEETS: |
| PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF<br/>BIOLOGY AND ANALYTICAL LABORATORY</b> |  | CLIENT:<br><b>MSU</b>                    | SHEET NO.:<br><b>M-3</b>    |

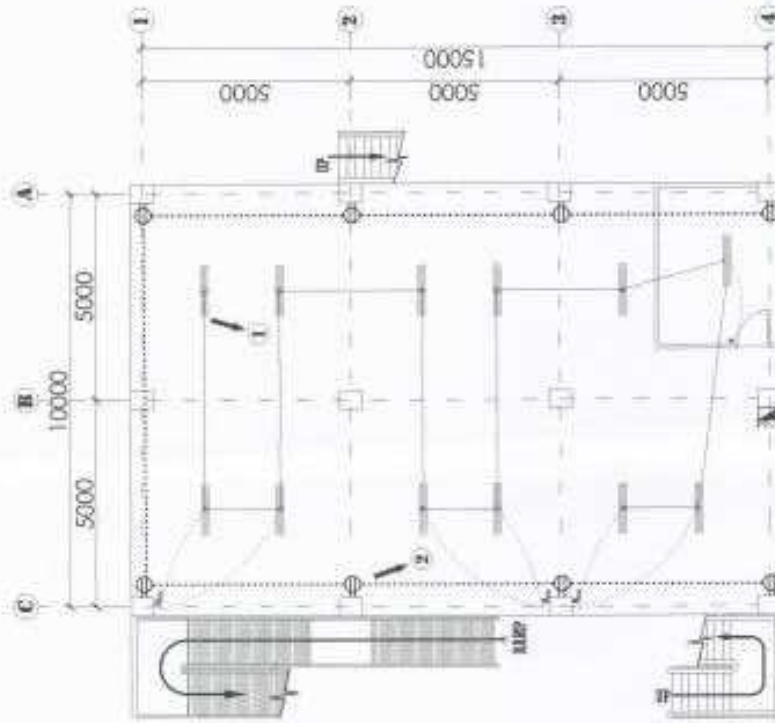


**GROUND FLOOR LIGHTING  
& C. O. LAYOUT PLAN**

1:100 SCALE

**CHRISTIAN M. MUTYA**  
 PROFESSIONAL ELECTRICAL ENGINEER I  
 P.R. NO. 4, 166 VALIDITY 03/03/2024  
 P.T.R. NO. 146 D.Y.  
 ISSUED ON 11/05/23 AT Zamboanga, Davao  
 TIN NO. 91877816

|  |  |  |   |
|--|--|--|---|
| SCHOOL OF<br><b>BOHOL STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANNING FOR FACILITIES | DATE: _____<br>TIME: _____<br>DRAWN BY: _____<br>CHECKED BY: _____ | PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b> | SHEET NO.:<br><b>E-1</b>                      |
|  | DESIGNED BY:<br><b>CHRISTIAN M. MUTYA</b>                          | PROJECT NO.:<br><b>11/05/23</b>  | CLIENT NAME:<br><b>BOHOL STATE UNIVERSITY</b> |



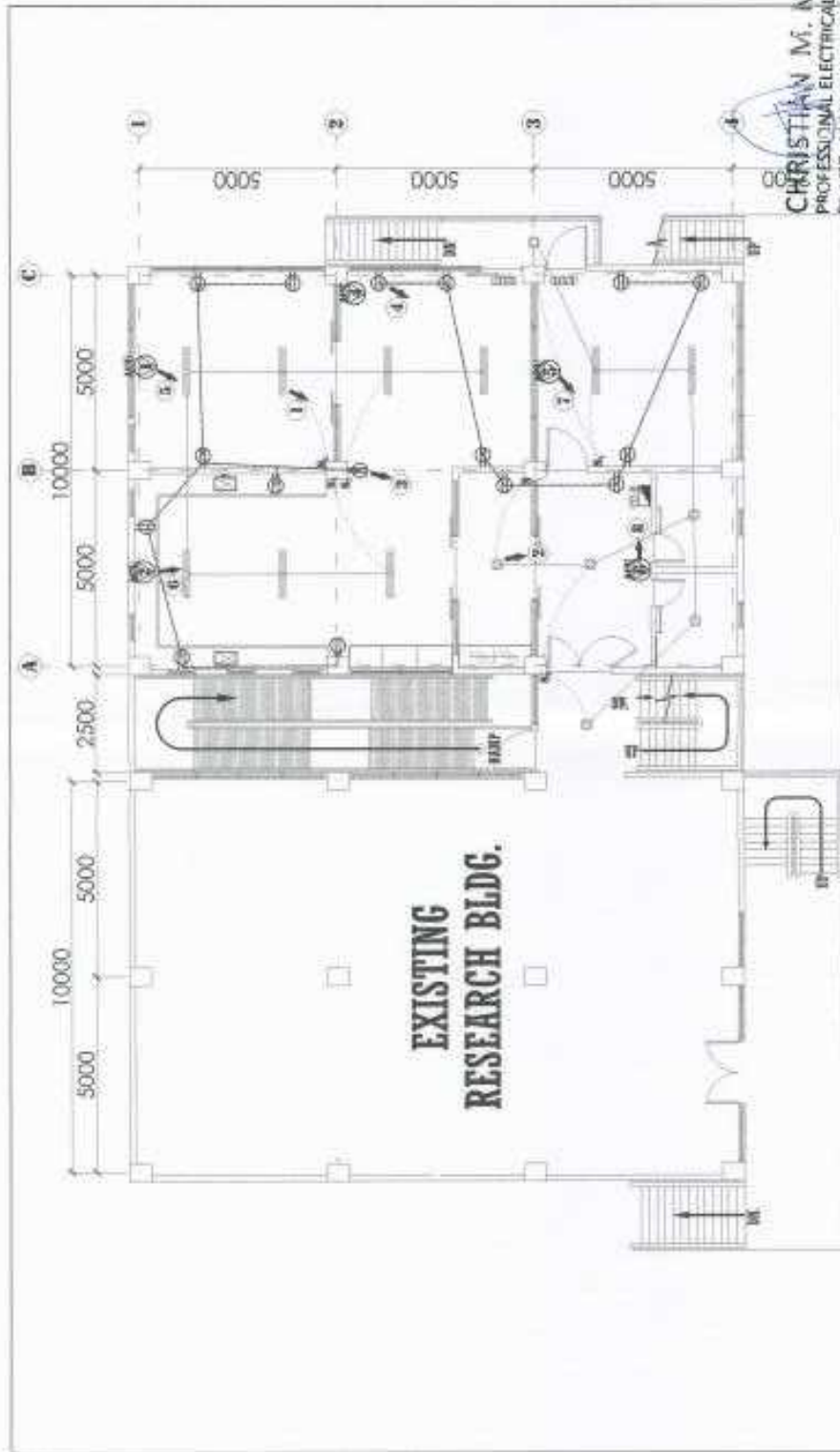
**GROUND FLOOR LIGHTING  
& C. O. LAYOUT PLAN**

1:100 SCALE

**CHRISTIAN M. MUTYA**  
 PROFESSIONAL ELECTRICAL ENGINEER  
 P.E. NO. 4786 VALIDITY 03/03/2028  
 PIR NO. 148815  
 ISSUED ON 11/23/21 AT Zamboanga, Bohol  
 TIN NO. 918777816

|  |                               |   |  |                         |
|--|-------------------------------|---|--|-------------------------|
| DRAWING NO.<br><b>MERRILL STATE UNIVERSITY</b><br>OFFICE OF PHYSICS PLANT AND FACILITIES | DATE ISSUED<br>_____          | DRAWN BY<br> | PROJECT TITLE<br><b>PROPOSED CONSTRUCTION OF<br/>BIOLOGY AND ANALYTICAL LABORATORY</b><br><small>UNIVERSITY OF MARIKINA - MARICOR CAMPUS - MARICOR AVENUE, MARICOR, CEBU</small> | SHEET NO.<br><b>E-1</b> |
|  | CHECKED BY<br><b>AS SHOWN</b> | DESIGNER<br> | CLIENT<br><b>ECC</b>   | DATE<br><b>11/23/21</b> |





**CHRISTIAN M. MUTYA**  
 PROFESSIONAL ELECTRICAL ENGINEER  
 P.E. NO. 4766 VALIDITY 03/03/2024

PTR NO. 88005  
 ISSUED ON 10/16/24 AT 10:00 AM  
 TIN NO. 3387793E

**1 SECOND FLOOR LIGHTING & C.O LAYOUT PLAN**  
 1/100 SCALE

|  |  |  |
|--|--|--|
| SHEET NO.<br><b>E-2</b>  | PROJECT NO.<br>23-03093  | SHEET NO.<br>E-2   |
|  | PROJECT NAME<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b> | CLIENT<br>MEDICAL STATE UNIVERSITY - Abu Dhabi, United Arab Emirates |
| DESIGNER<br>CHRISTIAN M. MUTYA   | DATE<br>10/16/24   | SCALE<br>1/100   |
| CHECKED BY<br>[Signature]  | DATE<br>10/16/24   | PROJECT NO.<br>23-03093  |
| OFFICE OF PHYSICAL PLANNING AND FACILITIES<br>MEDICAL STATE UNIVERSITY | PROJECT NAME<br>PROPOSED CONSTRUCTION OF<br>BIOLOGY AND ANALYTICAL LABORATORY                  | CLIENT<br>MEDICAL STATE UNIVERSITY - Abu Dhabi, United Arab Emirates |



### MPD SCHEDULE OF LOADS

| CIRCUIT NUMBER | LOAD DESCRIPTION | KVA    | LOADS |        |       | EXTRINSIC CONDUCTORS |               |       | RACEWAY |               |       |
|----------------|------------------|--------|-------|--------|-------|----------------------|---------------|-------|---------|---------------|-------|
|                |                  |        | 3Ø    | 3Ø     | 3Ø    | TYPE                 | SIZE (inches) | Ø DIA | TYPE    | SIZE (inches) | Ø DIA |
| 1              | LIGHTING         | 0.28   |       | 1.21   | 3Ø    | THHN                 | 2.5 x 2       | 2.3   | 15      | PTC           |       |
| 2              | EMERGENCY LIGHT  | 0.1025 |       | 0.1025 | 3Ø    | THHN                 | 2.5 x 2       | 2.3   | 15      | PTC           |       |
| 3              | C.O.I            | 1.6    |       | 1.22   | 3Ø    | THHN                 | 2.5 x 2       | 2.3   | 15      | PTC           |       |
| 4              | FIRE PUMP EOB    | 12     | 3Ø    |        | 3Ø    | THHN                 | 14 x 3        | 3.5   | 32      | PTC           |       |
| 5              | HP1              | 25.954 |       | 18.65  | 3Ø    | THHN                 | 14 x 3        | 3.5   | 32      | PTC           |       |
| 6              | HP2              | 25.954 |       | 18.65  | 3Ø    | THHN                 | 14 x 3        | 3.5   | 32      | PTC           |       |
| 7              | SPARE            |        |       |        | 3Ø    | THHN                 | 14 x 3        | 3.5   | 32      | PTC           |       |
| 8              | SPARE            |        |       |        | 3Ø    | THHN                 | 14 x 3        | 3.5   | 32      | PTC           |       |
| 9              | SPARE            |        |       |        | 3Ø    | THHN                 | 14 x 3        | 3.5   | 32      | PTC           |       |
| TOTAL          |                  | 65.79  | 20.88 | 65.77  | 65.67 | 24                   | 3Ø            | 3     |         |               |       |

DEMAND FACTOR : \_\_\_\_\_ N  
 DEMAND LOAD : \_\_\_\_\_ Kw  
 VOLTAGE DROP : \_\_\_\_\_ % @ Length : \_\_\_\_\_ m  
 WIRE SIZE : \_\_\_\_\_ Sq.mm  
 @ 100% DEMAND FACTOR : \_\_\_\_\_ SQ.MM  
 @ 80% DF : \_\_\_\_\_ SQ.MM  
 @ 70% DF : \_\_\_\_\_ SQ.MM  
 @ 60% DF : \_\_\_\_\_ SQ.MM  
 @ 50% DF : \_\_\_\_\_ SQ.MM  
 @ 40% DF : \_\_\_\_\_ SQ.MM  
 @ 30% DF : \_\_\_\_\_ SQ.MM  
 @ 20% DF : \_\_\_\_\_ SQ.MM  
 @ 10% DF : \_\_\_\_\_ SQ.MM  
 TOTAL WGT. : \_\_\_\_\_ KGS.

MAIN ROOSTER : 200 AT 200 AT 3 P 200 V  
 FEEDER : THHN 1-10 FROM 1, 3 - 254 TO NETWORK  
 CALCULATION :  
 @ 100% DEMAND FACTOR : 62.88 KW  
 @ 80% DF : 50.30 KW  
 @ 70% DF : 44.05 KW  
 @ 60% DF : 37.67 KW  
 @ 50% DF : 31.29 KW  
 @ 40% DF : 24.91 KW  
 @ 30% DF : 18.53 KW  
 @ 20% DF : 12.15 KW  
 @ 10% DF : 5.77 KW

3Ø - 4WYS 0.2/20FT, 3 Phase, 480V 3Ø/208V, 1Ø/208V, 1Ø/120V  
 1Ø/120V, 1Ø/208V, 1Ø/240V

**CHRISTIAN M. MUTYA**  
 PROFESSIONAL ELECTRICAL ENGINEER  
 PRC NO. 42666 VALIDITY 03/03/2028  
 PTR NO. 044-015  
 ISSUED ON 03/03/2028 AT 08:00 PM  
 TIN NO. 918777816

|  |  |   |                        |  |                 |
|--|--|---|------------------------|--|-----------------|
| DESIGNED BY :<br><b>ROMELAN STATE UNIVERSITY</b> | ISSUED BY :<br>   | REVISIONS :<br>REV. NO. : _____<br>DATE : _____ | PROJECT NO. :<br>_____ | PROJECT TITLE :<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b> | DATE :<br>_____ |
| OFFICE OF PHYSICAL PLANNING AND FACILITIES       | APPROVED BY :<br> | DATE :<br>_____                                 | PROJECT NO. :<br>_____ | PROJECT TITLE :<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b> | DATE :<br>_____ |
| PROJECT NO. :<br>_____                           | PROJECT TITLE :<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b>                   | DATE :<br>_____                                 | PROJECT NO. :<br>_____ | PROJECT TITLE :<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b> | DATE :<br>_____ |
| PROJECT NO. :<br>_____                           | PROJECT TITLE :<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b>                   | DATE :<br>_____                                 | PROJECT NO. :<br>_____ | PROJECT TITLE :<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b> | DATE :<br>_____ |








### PP3 SCHEDULE OF LOADS

| CIRCUIT NUMBER | LOAD DESCRIPTION  | LOAD      |         | CONDUCTOR |       |      |               | RACEWAY |      | LENGTH (ft) |
|----------------|-------------------|-----------|---------|-----------|-------|------|---------------|---------|------|-------------|
|                |                   | VA        | AMPERES | AT        | AT #  | TYPE | SIZE (inches) | COND    | TYPE |             |
| 1              | LIGHTING          | 200       | 1.20    | 3         | 4     | TEHN | 2.0 x 3       | 2.0     | IS   | PVC         |
| 2              | EMERGENCY LIGHT   | 25        | 0.125   | 3         | 4     | TEHN | 2.0 x 3       | 2.0     | IS   | PVC         |
| 3              | C-10 1            | 185       | 1.27    | 3         | 4     | TEHN | 3.5 x 3       | 2.0     | IS   | PVC         |
| 4              | C-10 2            | 185       | 1.27    | 3         | 4     | TEHN | 3.5 x 3       | 2.0     | IS   | PVC         |
| 5              | ACU 2 hp (duct)   | 185       | 1.42    | 3         | 4     | TEHN | 3.5 x 3       | 2.0     | IS   | PVC         |
| 6              | ACU 2 hp (duct)   | 185       | 1.42    | 3         | 4     | TEHN | 3.5 x 3       | 2.0     | IS   | PVC         |
| 7              | ACU 2 hp (duct)   | 185       | 1.42    | 3         | 4     | TEHN | 3.5 x 3       | 2.0     | IS   | PVC         |
| 8              | ACU 2 hp (duct)   | 238       | 1.25    | 3         | 4     | TEHN | 3.5 x 3       | 2.0     | IS   | PVC         |
| 9              | ACU 3 hp (duct)   | 238       | 1.25    | 3         | 4     | TEHN | 3.5 x 3       | 2.0     | IS   | PVC         |
| 10             | ACU 2.5 hp (duct) | 233       | 1.69    | 3         | 4     | TEHN | 3.5 x 3       | 2.0     | IS   | PVC         |
| 11             | ACU 3 hp (duct)   | 482       | 3.11    | 4         | 5     | TEHN | 5.5 x 3       | 2.0     | IS   | PVC         |
| 12             | SPARE             | 200       | 1.89    | 3         | 4     | TEHN |               |         |      |             |
| 13             | SPARE             | 200       | 1.89    | 3         | 4     | TEHN |               |         |      |             |
| 14             | SPARE             |           |         | 3         | 4     | TEHN |               |         |      |             |
| TOTAL          |                   | 25,151.00 | 16.05   | 12.58     | 12.29 |      |               |         |      |             |

**BOARD FACTOR:** \_\_\_\_\_  
**BOARD LOAD:** \_\_\_\_\_  
**PHASE LOAD:** \_\_\_\_\_  
**WIRE SIZE:** \_\_\_\_\_  
**FE = 1.25**  
**FD = 0.85**  
**FE = 0.85 x 1.25 = 1.06**  
**FD = 0.85 x 0.85 = 0.72**  
**FE = 1.06 x 1.25 = 1.33**  
**FD = 0.72 x 0.85 = 0.61**  
**FE = 1.33 x 1.25 = 1.66**  
**FD = 0.61 x 0.85 = 0.52**  
**FE = 1.66 x 1.25 = 2.08**  
**FD = 0.52 x 0.85 = 0.44**  
**FE = 2.08 x 1.25 = 2.60**  
**FD = 0.44 x 0.85 = 0.37**  
**FE = 2.60 x 1.25 = 3.25**  
**FD = 0.37 x 0.85 = 0.31**  
**FE = 3.25 x 1.25 = 4.06**  
**FD = 0.31 x 0.85 = 0.26**  
**FE = 4.06 x 1.25 = 5.08**  
**FD = 0.26 x 0.85 = 0.22**  
**FE = 5.08 x 1.25 = 6.35**  
**FD = 0.22 x 0.85 = 0.19**  
**FE = 6.35 x 1.25 = 7.94**  
**FD = 0.19 x 0.85 = 0.16**  
**FE = 7.94 x 1.25 = 9.93**  
**FD = 0.16 x 0.85 = 0.14**  
**FE = 9.93 x 1.25 = 12.41**  
**FD = 0.14 x 0.85 = 0.12**  
**FE = 12.41 x 1.25 = 15.51**  
**FD = 0.12 x 0.85 = 0.10**  
**FE = 15.51 x 1.25 = 19.39**  
**FD = 0.10 x 0.85 = 0.08**  
**FE = 19.39 x 1.25 = 24.24**  
**FD = 0.08 x 0.85 = 0.07**  
**FE = 24.24 x 1.25 = 30.30**  
**FD = 0.07 x 0.85 = 0.06**  
**FE = 30.30 x 1.25 = 37.88**  
**FD = 0.06 x 0.85 = 0.05**  
**FE = 37.88 x 1.25 = 47.35**  
**FD = 0.05 x 0.85 = 0.04**  
**FE = 47.35 x 1.25 = 59.19**  
**FD = 0.04 x 0.85 = 0.03**  
**FE = 59.19 x 1.25 = 73.99**  
**FD = 0.03 x 0.85 = 0.02**  
**FE = 73.99 x 1.25 = 92.49**  
**FD = 0.02 x 0.85 = 0.01**  
**FE = 92.49 x 1.25 = 115.61**  
**FD = 0.01 x 0.85 = 0.00**

**CHRISTIAN M. MUTYA**  
 PROFESSIONAL ELECTRICAL ENGINEER  
 PTR NO. 4266 VALIDITY 03/03/2023  
 ISSUED ON 08/10/2023 AT 11:15  
 TIN NO. 918777816

|  |  |   |                         |
|--|--|---|-------------------------|
| DESIGNED BY<br><b>MORLOS STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANT AND FACILITIES | CHECKED BY<br><br>LICENSE NO. | PROJECT TITLE<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b> | SHEET NO.<br><b>E-6</b> |
| DATE<br>08/10/2023   | SCALE<br>AS SHOWN  | DRAWN BY<br>DATE  | APPROVED BY<br>DATE     |

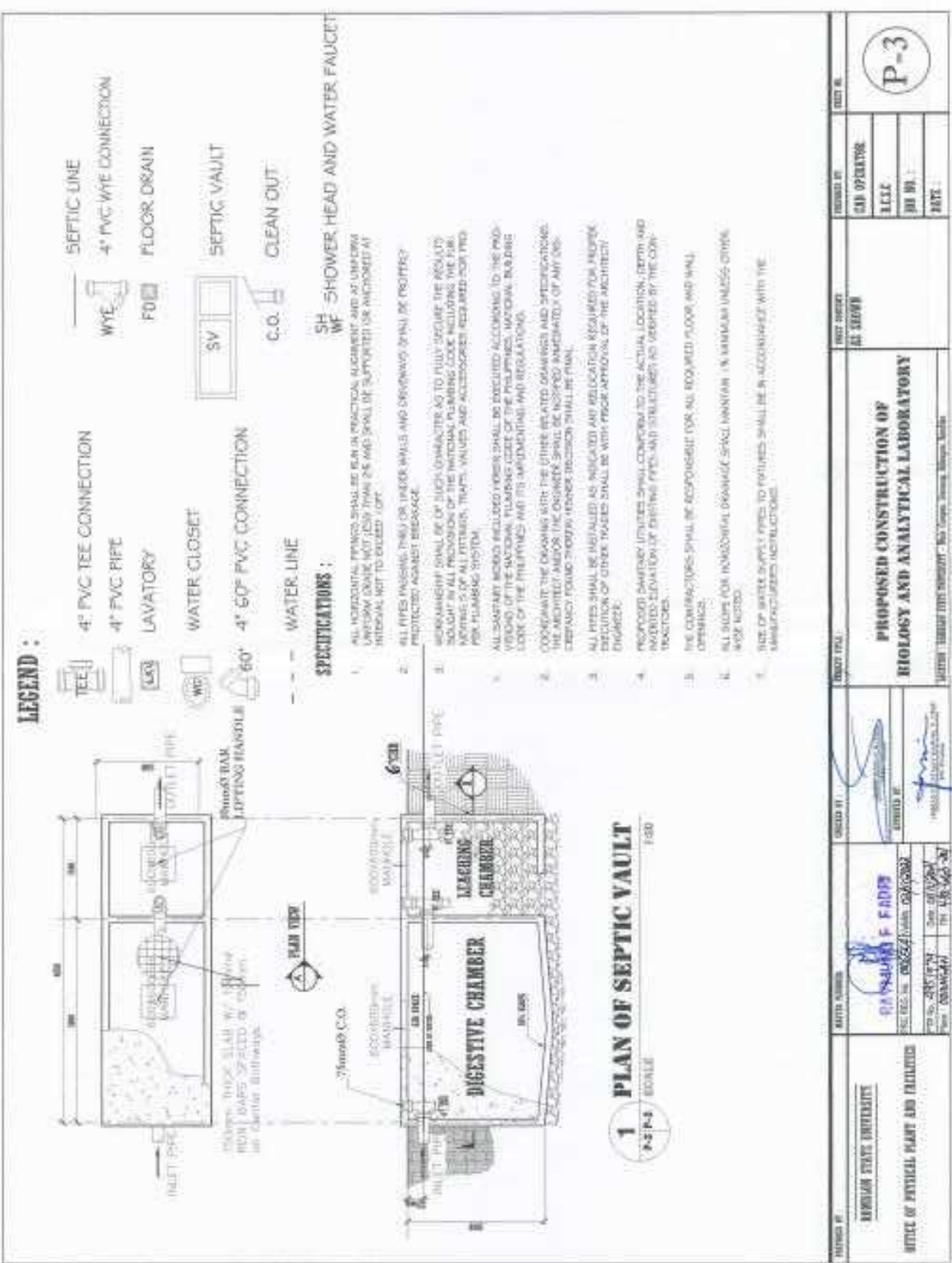












**LEGEND :**

- 4" PVC TEE CONNECTION
- 4" PVC PIPE
- LAVATORY
- WATER CLOSET
- 60° 4" 60° PVC CONNECTION
- WATER LINE
- SEPTIC LINE
- 4" PVC WYE CONNECTION
- FLOOR DRAIN
- SEPTIC VAULT
- CLEAN OUT

**SPECIFICATIONS :**

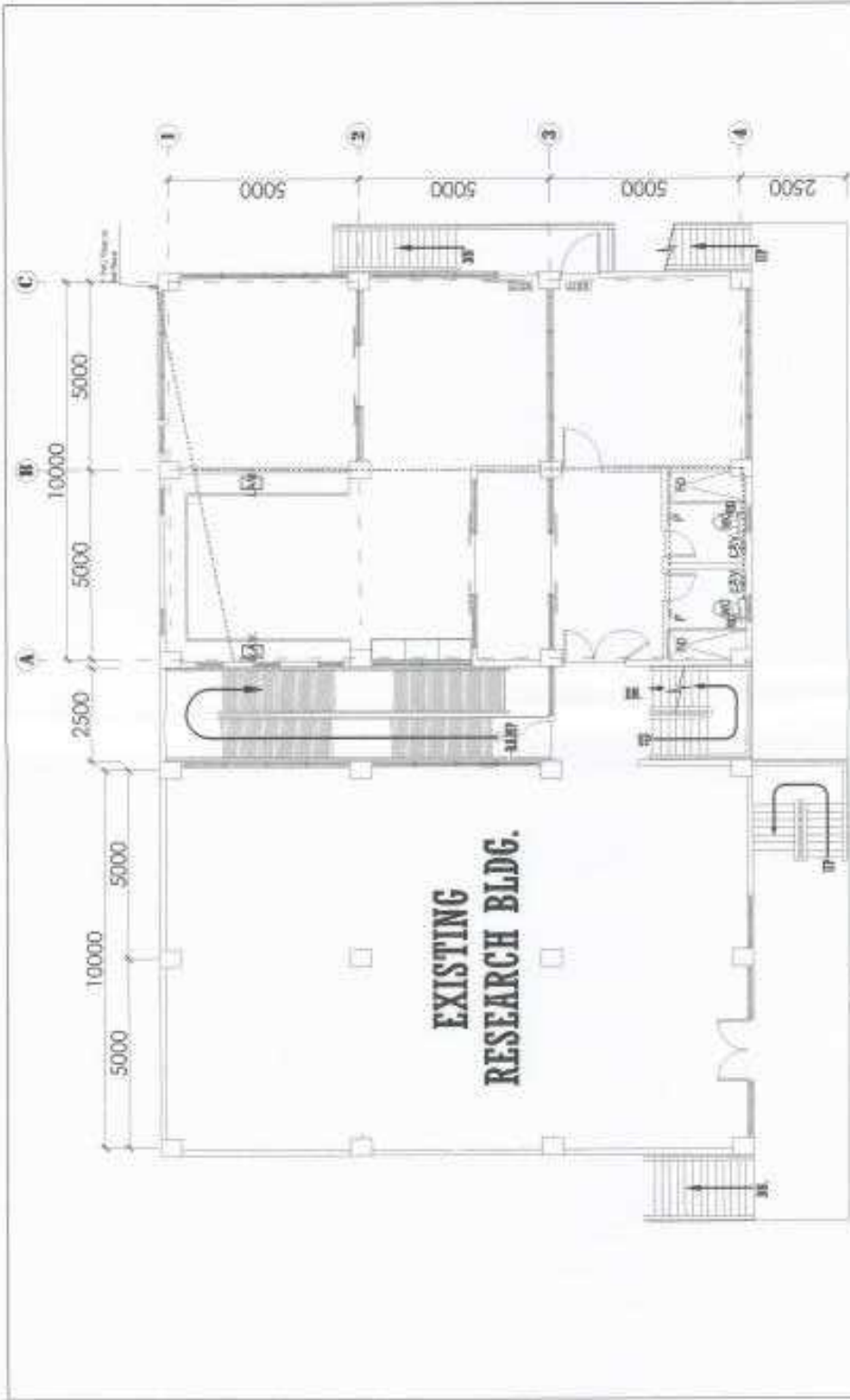
1. ALL HORIZONTAL PIPING SHALL BE IN PRACTICAL ALIGNMENT AND AT UNIFORM INTERVALS EXCEPT WHERE SHOWN OTHERWISE AND SHALL BE SUPPORTED OR ANCHORED AT INTERVALS NOT TO EXCEED 10 FT.
2. ALL PIPES PASSING THRU OR UNDER WALLS AND DIVISIONS (FIN) BE PROTECTED PROTECTED AGAINST DAMAGE.
3. WORKMANSHIP SHALL BE OF SUCH CHARACTER AS TO FULLY SECURE THE RESULTS OF THE WORK AND TO BE IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE AND ALL OTHERS, TRADE, LOCAL, STATE AND FEDERAL REQUIREMENTS FOR PLUMBING SYSTEMS.
4. ALL SHAPED IRON FITTINGS SHALL BE EXECUTED ACCORDING TO THE PROVISIONS OF THE NATIONAL PLUMBING CODE OF THE PLUMBING, NATIONAL BUILDING CODE OF THE PHILIPPINES AND ITS AMENDMENTS AND REGULATIONS.
5. COORDINATE THE DRAWING WITH THE OTHER RELATED DRAWINGS AND SPECIFICATIONS. THE ARCHITECT AND/OR ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY THROUGH WRITTEN RECORDS TO BE MAINTAINED.
6. ALL PIPES SHALL BE INSTALLED AS INDICATED AND ELEVATION REQUIRED FOR PROPER DRAINAGE OF OTHER TRADES SHALL BE WITH PRIOR APPROVAL OF THE ARCHITECT/ENGINEER.
7. PROPOSED SHOWER UNITS SHALL CONFORM TO THE ACTUAL LOCATION, DEPTH AND ANCHORING ELEVATION OF EXISTING PIPES AND STRUCTURES AS VERIFIED BY THE CONTRACTOR.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED FLOOR AND WALL FINISHES.
9. ALL SLOPE FOR INDIVIDUAL DRAINAGE SPACE MAINTAIN 1% MINIMUM UNLESS OTHERWISE NOTED.
10. SIZE OF WATER SUPPLY PIPES TO FEATURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

**1 PLAN OF SEPTIC VAULT**

SCALE 1/8" = 1'-0"

|   |  |   |  |
|---|--|---|--|
| DRAWING NO.<br><b>100-000000-000000</b>   | SHEET NO.<br><b>100-000000-000000</b>        | PROJECT NO.<br><b>100-000000-000000</b> | SHEET NO.<br><b>100-000000-000000</b>  |
| CLIENT<br><b>100-000000-000000</b>        | DATE<br><b>100-000000-000000</b>             | DRAWN BY<br><b>100-000000-000000</b>    | CHECKED BY<br><b>100-000000-000000</b> |
| PROJECT TITLE<br><b>100-000000-000000</b> | PROJECT LOCATION<br><b>100-000000-000000</b> | PROJECT NO.<br><b>100-000000-000000</b> | SHEET NO.<br><b>100-000000-000000</b>  |
| PROJECT TITLE<br><b>100-000000-000000</b> | PROJECT LOCATION<br><b>100-000000-000000</b> | PROJECT NO.<br><b>100-000000-000000</b> | SHEET NO.<br><b>100-000000-000000</b>  |

P-3

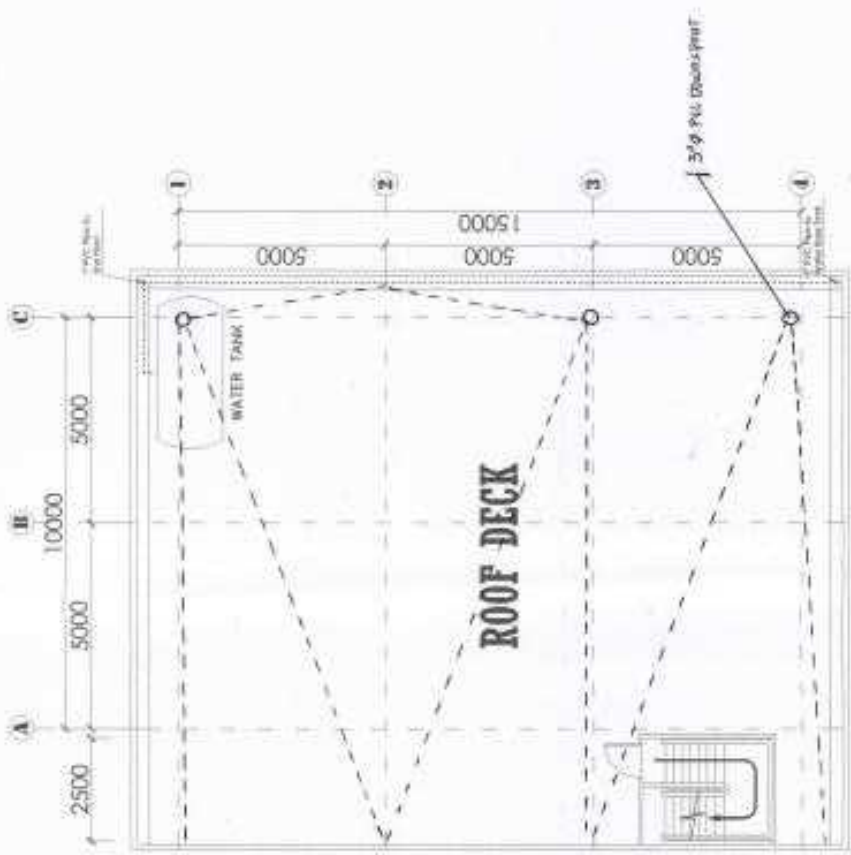


**1 SECOND FLOOR WATER LAYOUT PLAN**  
 1/100

|  |   |  |  |  |                       |
|--|---|--|--|--|-----------------------|
| BOARD OF<br><b>MICHIGAN STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANNING AND FACILITIES | ARCH NO: <b>RA 000000 F F 4039</b><br><small>REVISED BY: [Signature] DATE: 02/1/2008</small><br><small>DESIGNED BY: [Signature] DATE: 02/1/2008</small><br><small>PROJECT NO: 200800001</small>   | DRAWN BY: [Signature]<br>CHECKED BY: [Signature] | PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b><br><small>CAMPUS: EAST LANSING UNIVERSITY - East Campus, Lawson-McGee, Walker</small> | CLIENT: <b>MSU</b><br>PROJECT NO: <b>200800001</b> | SHEET NO.: <b>P-4</b> |
|  | ARCHITECT: <b>RA 000000 F F 4039</b><br><small>REVISED BY: [Signature] DATE: 02/1/2008</small><br><small>DESIGNED BY: [Signature] DATE: 02/1/2008</small><br><small>PROJECT NO: 200800001</small> | DRAWN BY: [Signature]<br>CHECKED BY: [Signature] | PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b><br><small>CAMPUS: EAST LANSING UNIVERSITY - East Campus, Lawson-McGee, Walker</small> | CLIENT: <b>MSU</b><br>PROJECT NO: <b>200800001</b> | SHEET NO.: <b>P-4</b> |

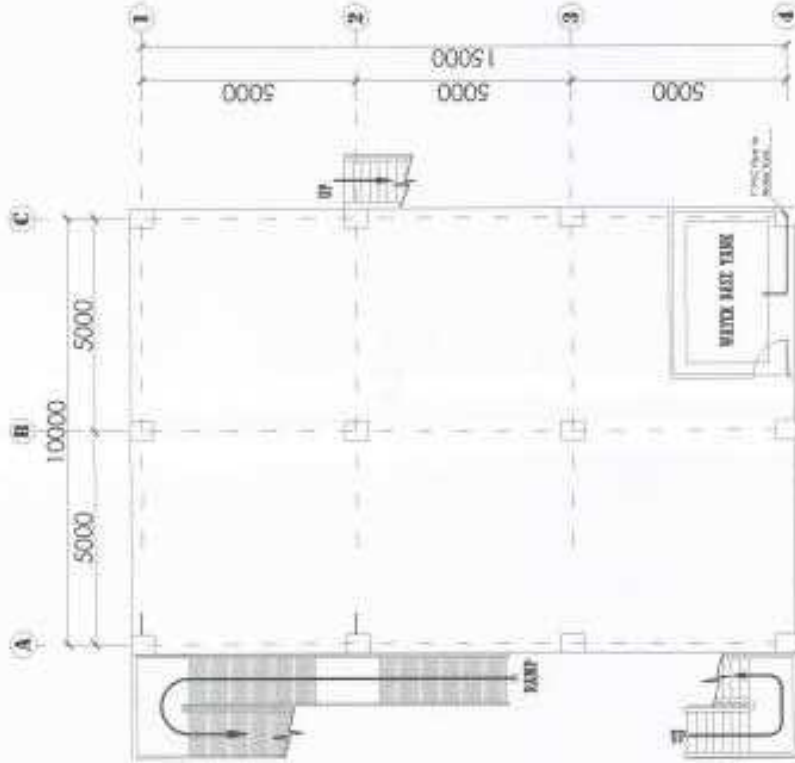






**1** PLACEMENT OF WATER TANK  
SCALE 1/1000

|  |  |                                 |   |
|--|--|---------------------------------|---|
| DRAWING NO.<br><b>KIRIBATI STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANNING AND FACILITIES  | DRAWING TITLE<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b> | SHEET NUMBER<br><b>AS SHOWN</b> | SHEET NO.<br><div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <span style="font-size: 24px; font-weight: bold;">P-6</span> </div> |
|  |  |                                 |   |
| ARCHITECT<br><b>CLAYTON &amp; FARRER</b><br>ARCHITECTS<br>111, W. WILSON ST. SUITE 200<br>HONOLULU, HI 96813-2000<br>TEL: 808-533-7777 FAX: 808-533-7778 | PROJECT TITLE<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b> | SHEET NUMBER<br><b>AS SHOWN</b> | SHEET NO.<br><div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <span style="font-size: 24px; font-weight: bold;">P-6</span> </div> |

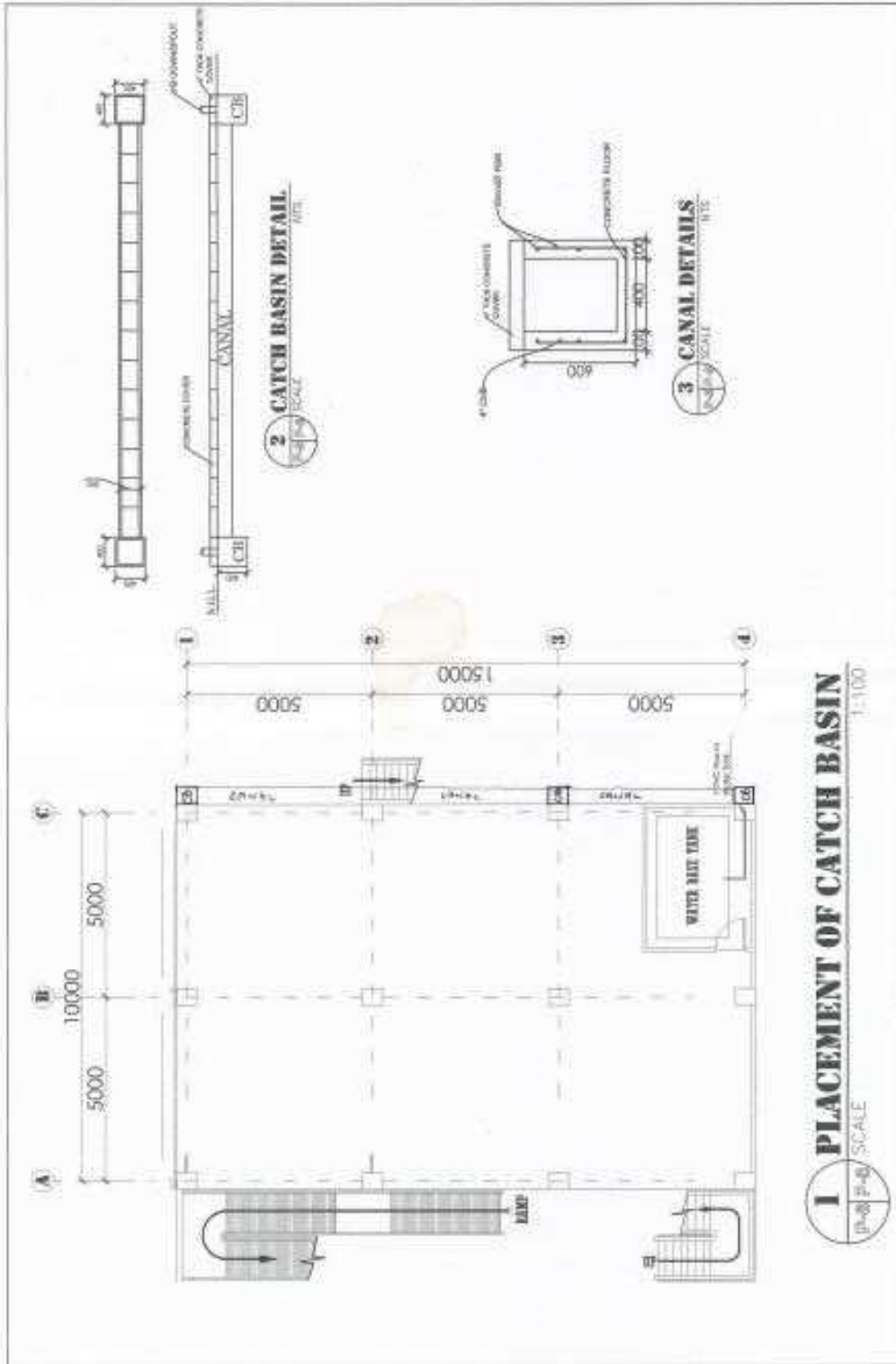


**1** **PLACEMENT OF WATER BASE TANK**

SCALE

1:100

|   |  |   |                                  |                          |                                  |   |                          |
|---|--|---|----------------------------------|--------------------------|----------------------------------|---|--------------------------|
| DRAWN BY:<br><b>SOMERSON STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANNING AND FACILITIES | CHECKED BY:<br><b>RAVARAND F. FADIS</b><br>PROJECT NO.: 2023/24/0001/01/00002<br>DATE: 2/17/2023<br>DRAWING NO.: 2023/24/0001/01/00002 | DESIGNED BY:<br><br>PROJECT NO.:<br>DATE: | CHECKED BY:<br>E.C.E.C.<br>DATE: | SHEET NO.:<br><b>P-7</b> | SHEET TOTAL:<br><b>11 SHEETS</b> | PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b><br>CLIENT: <b>BARCELON STATE UNIVERSITY - San Felipe Campus, Maricao, Puerto Rico</b> | SHEET NO.:<br><b>P-7</b> |
|---|--|---|----------------------------------|--------------------------|----------------------------------|---|--------------------------|

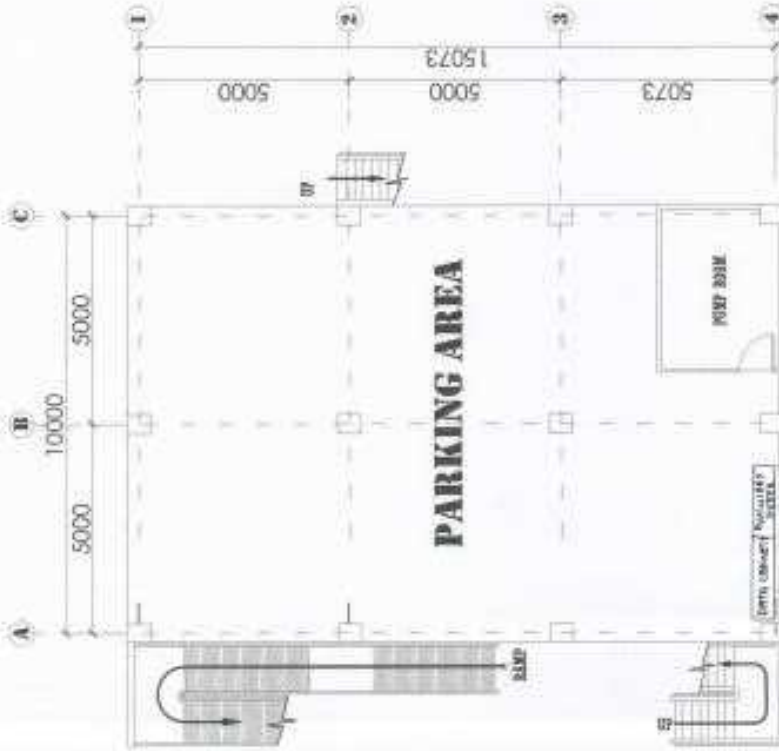


**1** **PLACEMENT OF CATCH BASIN**  
 (P-8) P-8 SCALE 1:100

|  |  |  |   |                              |   |                         |
|--|--|--|---|------------------------------|---|-------------------------|
| DRAWING NO.<br><b>BORISBEY TEST UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANNY AND FACILITIES | DESIGNER<br><b>RAYMOND F. FADIS</b><br>REG. NO. 00542<br>DATE: 05/11/2011<br>DRAWN BY: 00542/00542 | CHECKED BY<br>(Signature)<br>PROJECT NO. | PROJECT TITLE<br><b>PROPOSED CONSTRUCTION OF BIOLOGY AND ANALYTICAL LABORATORY</b><br>ADDRESS: "BILAL TAYYER STREET", AL-ZAYTUN, NORTH DAMMAM, SAUDI ARABIA | ARCHITECT<br><b>AS SHOFI</b> | PROVIDED BY<br>CIO DIRECTOR<br>I.L.C.<br>JOB NO.<br>DATE: | SHEET NO.<br><b>P-8</b> |
|--|--|--|---|------------------------------|---|-------------------------|



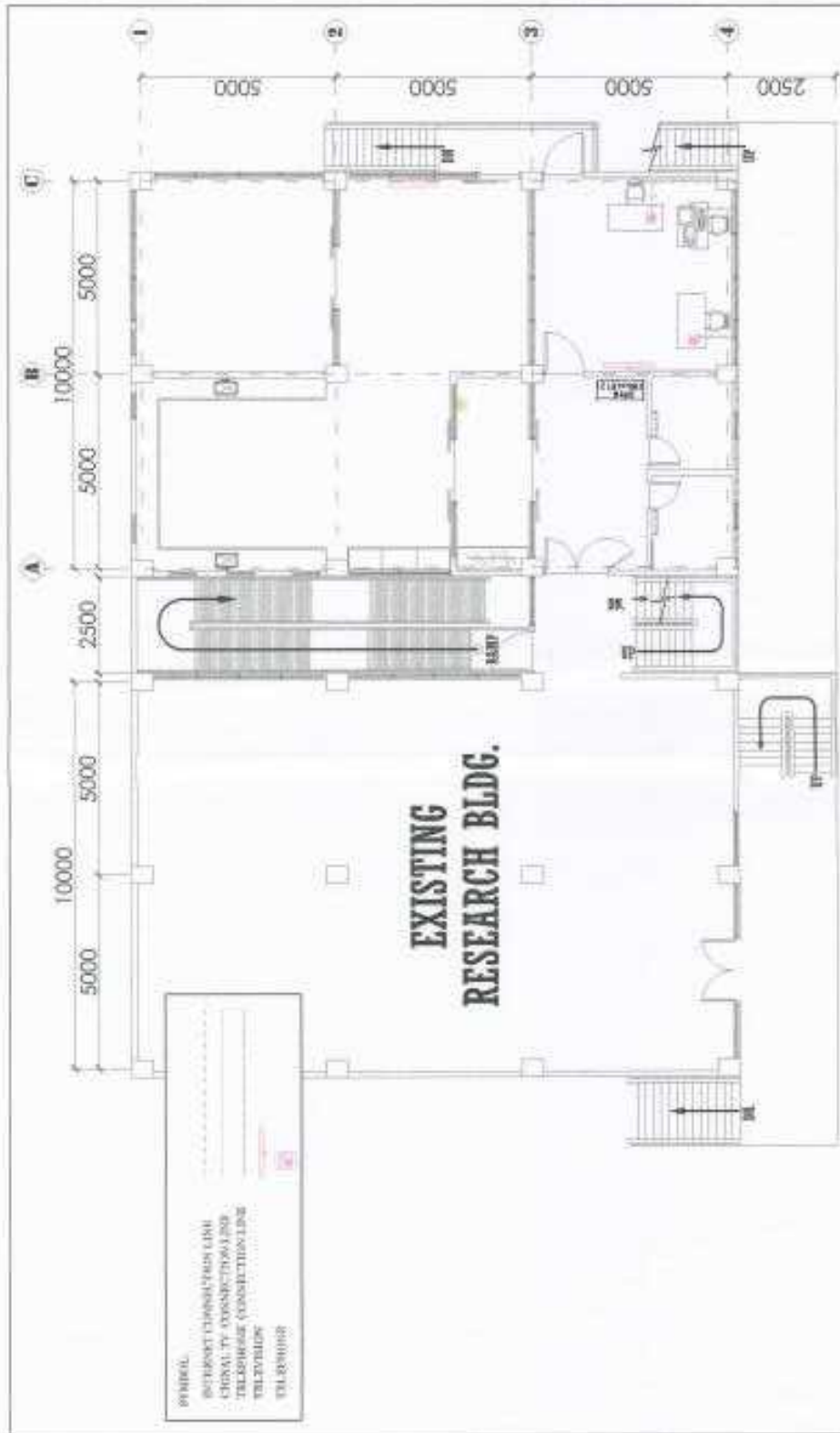
INTERNET  
 INTERNET CONSTRUCTION LINK  
 CABLE TV CONSTRUCTION LINK  
 TELEPHONE CONSTRUCTION LINK  
 TELEVISION  
 TELEPHONE



**1** GROUND FLOOR INTERNET, TELEPHONE AND CABLE TV LAY OUT PLAN  
 SCALE: 1/8" = 1'-0" N.T.S.

|  |  |  |  |                   |                     |                            |
|--|--|--|--|-------------------|---------------------|----------------------------|
| DESIGNED BY<br><b>BERNARD STATE UNIVERSITY</b><br>OFFICE OF PHYSICAL PLANNING AND FACILITIES | DRAWN BY<br><b>RAYMOND F. FARRER</b><br>PROJECT NO. 03-014<br>DATE: 01/17/2003<br>PLOT NO. 03-014-01 | CHECKED BY<br><br>PROJECT NO. 03-014<br>DATE: 01/17/2003 | PROJECT TITLE<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b><br>UNIVERSITY: BERNARD STATE UNIVERSITY - New Jersey, Lawrenceville, Virginia, Florida | DRAWN BY<br>DATE: | CHECKED BY<br>DATE: | PROJECT NO.<br><b>AU-1</b> |
|--|--|--|--|-------------------|---------------------|----------------------------|





**1 SECOND FLOOR INTERNET, TELEPHONE AND CABLE TV LAY OUT PLAN**  
 N.T.S.  
 SCALE

|   |  |  |  |                                 |   |                           |
|---|--|--|--|---------------------------------|---|---------------------------|
| DRAWN BY:<br><b>BOWLING STATE UNIVERSITY</b><br>NOTES BY PHYSICS PLANT AND FACILITIES | DATE ISSUED:<br><b>RAYMOND F. FARRI</b><br>PROJECT NO.: 202504/2000 - 10/20/2002<br>PLS. CALL: 336-1300 FAX: 336-1300<br>WWW: 336-3461 | DESIGN BY:<br><br>PROJECT NO.: 202504/2000 - 10/20/2002 | PROJECT TITLE:<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b><br><small>UNIVERSITY, VALPARAISO OHIO 44150-1000, Ohio Campus, Bowling, Bowling, Bowling, Bowling</small> | UNIT NUMBER:<br><b>AS 31000</b> | PROJECT NO. OF:<br><b>AS 31000</b><br>SHEET NO.:<br><b>AS 31000</b><br>JOB NO.:<br><b>AS 31000</b><br>DATE: | SHEET NO.:<br><b>AU-2</b> |
|   | NOTES:   |  |  |                                 |   |                           |





PROJECT:  
 NETWORK CONSTRUCTION (NET)  
 CABLE TV CONSTRUCTION (CMT)  
 TELEPHONE CONSTRUCTION (TLD)  
 TELEVISION  
 TELEPHONE

**EXISTING  
 RESEARCH BLDG.**

**MEETING  
 ROOM**

**1 THIRD FLOOR INTERNET, TELEPHONE AND CABLE TV LAY OUT PLAN**

NTS  
 SCALE

|   |   |                                  |
|---|---|----------------------------------|
| PROJECT NO.<br><b>1000000000</b>        | PROJECT TITLE<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b> | SHEET NO.<br><b>AU-3</b>         |
| CLIENT<br><b>HOBBS STATE UNIVERSITY</b> | ARCHITECT<br><b>QUAYLE &amp; FADDE</b>  | DATE<br><b>08/20/08</b>          |
| OFFICE OF PHYSICAL PLANNING AND DESIGN  | DESIGNER<br><b>QUAYLE &amp; FADDE</b>   | CHECKED BY<br><b>[Signature]</b> |
| PROJECT NO.<br><b>1000000000</b>        | PROJECT TITLE<br><b>PROPOSED CONSTRUCTION OF<br/>         BIOLOGY AND ANALYTICAL LABORATORY</b> | SHEET NO.<br><b>AU-3</b>         |
| CLIENT<br><b>HOBBS STATE UNIVERSITY</b> | ARCHITECT<br><b>QUAYLE &amp; FADDE</b>  | DATE<br><b>08/20/08</b>          |
| OFFICE OF PHYSICAL PLANNING AND DESIGN  | DESIGNER<br><b>QUAYLE &amp; FADDE</b>   | CHECKED BY<br><b>[Signature]</b> |

## ***Section VIII. Bill of Quantities***

### **Notes on the Bill of Quantities**

#### **Objectives**

The objectives of the Bill of Quantities are:

- a. to provide sufficient information on the quantities of Works to be performed to enable Bids to be prepared efficiently and accurately; and
- b. when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

In order to attain these objectives, Works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and content of the Bill of Quantities should be as simple and brief as possible.

#### **Daywork Schedule**

A Daywork Schedule should be included only if the probability of unforeseen work, outside the items included in the Bill of Quantities, is high. To facilitate checking by the Entity of the realism of rates quoted by the Bidders, the Daywork Schedule should normally comprise the following:

- a. A list of the various classes of labor, materials, and Constructional Plant for which basic daywork rates or prices are to be inserted by the Bidder, together with a statement of the conditions under which the Contractor will be paid for work executed on a daywork basis.
- b. Nominal quantities for each item of Daywork, to be priced by each Bidder at Daywork rates as Bid. The rate to be entered by the Bidder against each basic Daywork item should include the Contractor's profit, overheads, supervision, and other charges.

#### **Provisional Sums**

A general provision for physical contingencies (quantity overruns) may be made by including a provisional sum in the Summary Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a provisional sum in the Summary Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises. Where such provisional sums or contingency allowances are used, the SCC should state the

manner in which they will be used, and under whose authority (usually the Procuring Entity's Representative's).

The estimated cost of specialized work to be carried out, or of special goods to be supplied, by other contractors should be indicated in the relevant part of the Bill of Quantities as a particular provisional sum with an appropriate brief description. A separate procurement procedure is normally carried out by the Procuring Entity to select such specialized contractors. To provide an element of competition among the Bidders in respect of any facilities, amenities, attendance, etc., to be provided by the successful Bidder as prime Contractor for the use and convenience of the specialist contractors, each related provisional sum should be followed by an item in the Bill of Quantities inviting the Bidder to quote a sum for such amenities, facilities, attendance, etc.

### **Signature Box**

A signature box shall be added at the bottom of each page of the Bill of Quantities where the authorized representative of the Bidder shall affix his signature. Failure of the authorized representative to sign each and every page of the Bill of Quantities shall be a cause for rejection of his bid.

These Notes for Preparing a Bill of Quantities are intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They should not be included in the final documents.

## BILL OF QUANTITIES

Solicitation No. 2023-01-001- EPA

ABC: PhP19,820,000.00

QTY: 1 Lot

### Early Procurement for the Proposed Construction of Biology and Analytical Laboratory

Location: RSU, Main Campus

| Item No. | Description  | No. Qty. | Unit | Unit Cost | Amount (in PhP) | Total |
|----------|--|----------|------|-----------|-----------------|-------|
| I.       | General Requirements   | 1        | Lot  |           |                 |       |
|          | Mobilization/Demobilization  |          |      |           |                 |       |
|          | Preparation of Complete set of As-Built Plans with Sign and Seal of Professionals      |          |      |           |                 |       |
|          | Permits (Building Permit, Occupancy Permit and Other necessary permits and Clearances) |          |      |           |                 |       |
|          | Permanent electrical Connection Processing   |          |      |           |                 |       |
|          | Safety and Health Requirements (Safety Officer, Safety and Health Program, PPE etc.)   |          |      |           |                 |       |
|          | Temporary Facilities and Site Utilities (Water, electricity, Telephone etc)            |          |      |           |                 |       |
|          | Material Testing   |          |      |           |                 |       |
|          | Bond and Insurances  |          |      |           |                 |       |

|       |   |        |      |  |  |  |
|-------|---|--------|------|--|--|--|
|       | Project Bill Board  |        |      |  |  |  |
| II.   | Clearing, Layout, Excavation and Backfilling and Embankment   | 361.14 | Cu.m |  |  |  |
| III.  | Structural Works and Water Proofing Works   | 283.53 | Cu.m |  |  |  |
| IV.   | Masonry and Plastering Works  | 240    | Sq.m |  |  |  |
| V.    | Plumbing Works including Concrete Water Base Tank, Catch Basin and Canal, Septic Tank, Stainless Overhead Tanks and Electric Water Pump including Pipes and Accessories. (Use Series 1000 for all Pipes and Fittings)           | 1      | Lot  |  |  |  |
| VI.   | Window Works with Installation  | 30     | Set  |  |  |  |
| VII.  | Doors Works with Installation   | 23     | Set  |  |  |  |
| VIII  | Tile Works and Deco Stone Works   | 373.5  | Sq.m |  |  |  |
| IX.   | Stainless Railing Works for Stairs and PWD Ramp   | 1      | Lot  |  |  |  |
| X.    | Formworks and Scaffolding Works   | 1      | Lot  |  |  |  |
| XI.   | Electrical Works including Wires, Lighting system, Emergency Light, Convenience and ACU Outlets, Mechanical Power Supply, Panel Boards, Electrical concrete Post, ATS, Transformer, Generator Set and Testing and Commissioning | 1      | Lot  |  |  |  |
| XII.  | Ceiling Works with Installation   | 450    | Sq.m |  |  |  |
| XIII. | Steel Fire Escape including G.I railings and Epoxy  | 1      | Lot  |  |  |  |

|        |  |      |      |  |  |  |
|--------|--|------|------|--|--|--|
|        | Painting Works   |      |      |  |  |  |
| XIV.   | Stainless Metal Name Plate Works with Installation   | 1    | Lot  |  |  |  |
| XV.    | Fire Suppression System/Sprinkling System and Fire hose cabinets with complete hardware's and accessories with Installation including Jockey Pump and Diesel Engine Fire Pump and Testing and Commissioning                  | 1    | Lot  |  |  |  |
| XVI.   | Air Conditioning Units with Installation   | 16   | Unit |  |  |  |
| XVII.  | Painting Works   | 1189 | Sq.m |  |  |  |
| XVIII. | Auxiliary Works (Telephone ports, Data Ports and Data Cabinet rack , TV ports, Fire alarm Devices and CCTV including wires and cable and complete hardwares and accessories and Testing and commissioning with Installation) | 1    | Lot  |  |  |  |

Note: For further informations of Project requirements see Terms of Reference

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Name and Signature of the Bidder/Authorized Representative

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Name of the Company

## ***Section IX. Checklist of Technical and Financial Documents***

### **Notes on the Checklist of Technical and Financial Documents**

The prescribed documents in the checklist are mandatory to be submitted in the Bid, but shall be subject to the following:

- a. GPPB Resolution No. 09-2020 on the efficient procurement measures during a State of Calamity or other similar issuances that shall allow the use of alternate documents in lieu of the mandated requirements; or
- b. any subsequent GPPB issuances adjusting the documentary requirements after the effectivity of the adoption of the PBDs.

The BAC shall be checking the submitted documents of each Bidder against this checklist to ascertain if they are all present, using a non-discretionary “pass/fail” criterion pursuant to Section 30 of the 2016 revised IRR of RA No. 9184.



# Checklist of Technical and Financial Documents

## I. TECHNICAL COMPONENT ENVELOPE

### *Class “A” Documents*

#### Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages) in accordance with Section 8.5.2 of the IRR;

#### Technical Documents

- (b) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**
- (c) Statement of the bidder’s Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules; **and**
- (d) Special PCAB License in case of Joint Ventures **and** registration for the type and cost of the contract to be bid; **and**
- (e) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission **or** original copy of Notarized Bid Securing Declaration; **and**
- (f) Project Requirements, which shall include the following:
  - a. Organizational chart for the contract to be bid;
  - b. List of contractor’s key personnel (*e.g.*, Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;
  - c. List of contractor’s major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; **and**
- (g) Original duly signed Omnibus Sworn Statement (OSS) **and** if applicable, Original Notarized Secretary’s Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

#### Financial Documents

- (h) The prospective bidder’s computation of Net Financial Contracting Capacity (NFCC).

### *Class “B” Documents*

- (i) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence **or** duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

## **II. FINANCIAL COMPONENT ENVELOPE**

- (j) Original of duly signed and accomplished Financial Bid Form; **and**

### Other documentary requirements under RA No. 9184

- (k) Original of duly signed Bid Prices in the Bill of Quantities; **and**
- (l) Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; **and**
- (m) Cash Flow by Quarter.

Republic of the Philippines



Government Procurement Policy Board