

PHILIPPINE BIDDING DOCUMENTS

(As Harmonized with Development Partners)



**Philippine Economic Zone
Authority**

PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND (PR20-09-85)

**Sixth Edition
July 2020**

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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



Philippine Economic Zone Authority

Baguio City Economic Zone

Invitation to Bid for *Proposed Re-piping Project for Water Supply Line at BCEZ SFB Compound (PR20-09-85)*

1. The **Philippine Economic Zone Authority - Baguio City Economic Zone**, through the *Corporate Operating Budget 2020* intends to apply the sum of **Three Million Six Hundred Eighty-Five Thousand Four Hundred Twenty-Two Pesos and Eighteen Centavos (Php 3,685,422.18)** being the Approved Budget for the Contract (ABC) to payments under the contract for "*Proposed Re-piping Project for Water Supply Line at BCEZ SFB Compound (PR20-09-85)*". Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The **Philippine Economic Zone Authority - Baguio City Economic Zone** now invites bids for the above Procurement Project. Completion of the Works is required *Eighty-eight (88) calendar days after receipt of the Notice to Proceed*. 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 **Philippine Economic Zone Authority - Baguio City Economic Zone** and inspect the Bidding Documents at the address given below from *8am to 5pm*.
5. A complete set of Bidding Documents may be acquired by interested bidders on *October 23, 2020* from given address and website/s below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of **Five Thousand Pesos Only (Php 5,000.00)**. The Procuring Entity shall allow the bidder to present its proof of payment for the fees *in person*.
6. The **Philippine Economic Zone Authority - Baguio City Economic Zone** will hold a Pre-Bid Conference on *November 3, 2020* at the *3F Conference Room, Admin Building, Baguio City Economic Zone, Loakan Road, Baguio City*, 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 on or before *November 16, 2020, 1 pm*. 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 *November 16th*, 2020, 1:30 pm at the given address below. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
10. The **Philippine Economic Zone Authority - Baguio City Economic Zone** 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. For further information, please refer to:

Kenneth C. Luma-ang
BAC Secretariat
2F Admin Bldg., Baguio City Economic Zone
Loakan Road, Baguio City
bcezbacsec@peza.gov.ph
(074)447 3683

12. You may visit the following websites:

For downloading of Bidding Documents: <http://www.peza.gov.ph/index.php/bid-opportunities>

October 23, 2020


ENGR. PAUL M. CODAMON
Chairperson, BCEZ BAC


Section II. Instructions to Bidders

1. Scope of Bid

The Procuring Entity, **Philippine Economic Zone Authority - Baguio City Economic Zone** invites Bids for the “*Proposed Re-piping Project for Water Supply Line at BCEZ SFB Compound*”, with Project Identification Number *PR20-09-85*.

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 *Corporate Operating Budget 2020* in the amount of **Three Million Six Hundred Eighty-Five Thousand Four Hundred Twenty-Two Pesos and Eighteen Centavos (Php 3,685,422.18)**.

2.2. The source of funding is:

- a. GOCC and GFIs, the Corporate Operating Budget.

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 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 PCAB License is required, and in case of joint ventures, a valid special PCAB License, 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.

a. *Payment of the contract price shall be made in: Philippine Pesos.*

15. Bid Security

15.1. The Bidder shall submit a Bid Securing Declaration 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**.

15.2. The Bid and bid security shall be valid until *March 15, 2021*. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

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 16 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

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: <i>Water Pipeline Supply and Distribution System</i>																				
7.1	<i>Subcontracting is not allowed</i>																				
10.3	<i>Applicable PCAB License</i>																				
10.4	<p>The key personnel must meet the required minimum years of experience set below:</p> <p><i>The key personnel should meet the following number of years' work experience.</i></p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="text-align: center;">Position</th> <th style="text-align: center;">No. of Personnel</th> <th style="text-align: center;">Total Experience (years)</th> <th style="text-align: center;">Same Position in Similar Works (years)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;">Project Engineer</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="text-align: center;">Material & Quality Control Engineer (Accredited Materials Engineer I)</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="text-align: center;">Construction Foreman</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">1</td> </tr> </tbody> </table> <p><i>Accredited Safety Officer (Required Upon issuance of Notice of Award) subject to D.O 98 Series of 2014 : Submission of Construction Safety and Health Program Approved by the Department of Labor and Employment (DOLE).</i></p> <p><i>First Aider w/ certificate of Training issued by RED CROSS in compliance to DOLE requirements for the approval of Construction Safety & Health Program (Required Upon issuance of Notice of Award) subject to D.O 98 Series of 2014 : Submission of Construction Safety and Health Program Approved by the Department of Labor and Employment (DOLE).</i></p> <p><i>Skilled Workers - Mason, Carpenter, Electrician...etc. - should have at least 2 years of experience.</i></p> <p><i>Welder - should at least have 3 years of pipe welding experience</i></p> <p><i>Pipe Fitter - should at least have 3 years of experience</i></p> <ol style="list-style-type: none"> 1. <i>The experience means total years of civil works experience (of any nature in construction and engineering consultancy services)</i> 2. <i>Include the Tax Identification Number (TIN) of the Key Personnel.</i> 	Position	No. of Personnel	Total Experience (years)	Same Position in Similar Works (years)					Project Engineer	1	2	1	Material & Quality Control Engineer (Accredited Materials Engineer I)	1	1	1	Construction Foreman	1	2	1
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Construction Foreman	1	2	1																		

	<i>Compliance to D.O. 98 series of 2016 : Revised Guidelines on the Accreditation of Contractors'/Consultants' Materials Engineer</i>																										
10.5	<p>The minimum major equipment requirements are the following:</p> <table border="1"> <thead> <tr> <th><u>Equipment</u></th> <th><u>Number of Units</u></th> </tr> </thead> <tbody> <tr> <td>Backhoe</td> <td>1</td> </tr> <tr> <td>Cargo Truck</td> <td>1</td> </tr> <tr> <td>Plate Compactor</td> <td>1</td> </tr> <tr> <td>Bar Bender</td> <td>1</td> </tr> <tr> <td>Barcutter</td> <td>1</td> </tr> <tr> <td>1-Bagger Conc. Mixer</td> <td>1</td> </tr> <tr> <td>Concrete Vibrator</td> <td>2</td> </tr> <tr> <td>Concrete Cutter</td> <td>1</td> </tr> <tr> <td>Welding Machine</td> <td>2</td> </tr> <tr> <td>Oxygen - Acetylene</td> <td>1</td> </tr> <tr> <td>Pipe Threader</td> <td>1</td> </tr> <tr> <td>Lifting Equipment</td> <td>1</td> </tr> </tbody> </table>	<u>Equipment</u>	<u>Number of Units</u>	Backhoe	1	Cargo Truck	1	Plate Compactor	1	Bar Bender	1	Barcutter	1	1-Bagger Conc. Mixer	1	Concrete Vibrator	2	Concrete Cutter	1	Welding Machine	2	Oxygen - Acetylene	1	Pipe Threader	1	Lifting Equipment	1
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12	<i>Value Engineering not allowed.</i>																										
15.1	<p>The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:</p> <p>a. The amount of not less than Php 73,708.44, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</p> <p>b. The amount of not less than 184,271.10 if bid security is in Surety Bond.</p>																										
19.2	Partial bids are NOT allowed																										
20	<i>None</i>																										
21	Construction Safety and Health Program Waste Disposal Program																										

Section IV. General 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

4.1. 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.

4.2. 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

GCC Clause	
2	N/A
4.1	<p><i>Upon receipt of Notice to Proceed and upon securing the following:</i></p> <ul style="list-style-type: none"> - <i>Temporary Zone Pass for all the Contractor's Personnel for the project</i> - <i>Mandatory attendance to the Safety Briefing to be conducted by the Baguio City Economic Zone – Environmental Health and Safety Division</i>
6	Conduct of site inspection is highly encouraged.
7.2	Five (5) years.
10	a. Dayworks are applicable at the rate shown in the Contractor's original Bid.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative within <i>three (3) calendar</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 2.5% of the contract cost.
13	The amount of the advance payment upon request is a maximum of 15% of the total contract price
14	<p>The following test results must be submitted as attachments to requests for progress payments:</p> <ul style="list-style-type: none"> a. Concrete structures – Compressive strength b. Concrete Pavement – Flexural strength c. Reinforced Steel bars – Tension strength d. GI Pipes – Mill Certificate with PEZA inspection report <p><i>(All testing shall be conducted by DPWH Accredited Test Laboratories and shall be witnessed by PEZA Representative/s)</i></p> <p>Materials and equipment delivered on the site but not completely put in place shall not be included for payment.</p>
15.1	<p>The date by which signed "as built" drawings are required is:</p> <ul style="list-style-type: none"> A. Progress billing "As Built" Plan (A3 size) B. Final "As Built" Plan (A1 size)
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 <i>10% of the contract price.</i>

Section VI. Specifications

ITEM A.1. - CLEARING AND GRUBBING

This Section shall consist of clearing, grubbing, removing and disposing all vegetation and debris as designated in the Contract, except those objects that are designated to remain in place or are to be removed in consonance with other provisions of this Specification. The work shall also include the preservation from injury or defacement of all objects designated to remain.

Payment will be made in accordance with the Bill of Quantities

ITEM A.2. – REMOVAL OF STRUCTURES AND OBSTRUCTIONS

This Section shall consist of the removal, wholly or in part, and satisfactory disposal of any obstructions which are not designated or permitted to remain, except for the obstruction to be removed and disposed of under other Items in the Contract. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes, and pits.

The Contractor shall perform the work described above, within and adjacent to the site and the roadway, as shown on the Plans or as directed by the Engineer. All designated salvageable material shall be removed, without unnecessary damage, in sections or pieces which may be readily transported, and shall be stored by the Contractor at specified places on the project area. Cavities left by structure removal shall be filled with acceptable materials to the level of the surrounding ground and, if within the prism of construction, shall be compacted to the required density.

Payment will be made in accordance with the Bill of Quantities

ITEM B.1. – STRUCTURAL EXCAVATION

This Section shall consist of the necessary excavation for foundations, and other structures not otherwise provided for in the Specifications. Except as otherwise provided for pipe culverts, the backfilling of completed structures and the disposal of all excavated materials, shall be in accordance with these Specifications and in reasonably close conformity with the Plans or as established by the Engineer.

This Section shall include necessary diverting of live streams, bailing, pumping, draining, sheeting, bracing, and the necessary construction of cribs and cofferdams, and furnishing the materials therefore, and the subsequent removal of cribs and cofferdams and the placing of all necessary backfill.

It shall also include the furnishing and placing of approved foundation fill materials to replace unsuitable material encountered below the foundation elevation of structures.

No allowance will be made for classification of different types of material encountered.

General, all structure. Trenches or foundation pits for structures or structure footing shall be excavated to the lines and grades or elevations shown on the Plans or as staked by the Engineer. They shall be of sufficient size to permit the placing of structures or structure footings of the full width and length shown. The elevations of the bottoms of footings, as shown on the Plans, shall be considered as approximate only and the Engineer may order, in writing, such changes in dimensions or elevations of footing as may be deemed necessary, to secure a satisfactory foundation.

Boulders, logs, and other objectionable materials encountered in excavation shall be removed.

After each excavation is completed, the Contractor shall notify the Engineer to that effect and no footing, bedding material or pipe culvert shall be placed until the Engineer has approved the depth of excavation and the character of the foundation material.

All excavated materials, so far as suitable, shall be utilized as backfill or embankment. The surplus material shall be disposed of in such a manner as not to obstruct the stream or otherwise impair the efficiency or appearance of the structure. No excavated material shall be deposited at any time so as to endanger the partly finished structure.

**Note: Contractor to ensure that affected roadways are passable for the duration of the project by using appropriate MS Plates*

Payment will be made in accordance with the Bill of Quantities

ITEM B.2. – EMBANKMENT

This Item shall consist of the construction of embankment in accordance with this Specification and in conformity with the lines, grades and dimensions shown on the Plans or established by the Engineer.

The Contractor shall compact the material placed in all embankment layers and the material scarified to the designated depth below subgrade in cut sections, until a uniform density of not less than 95 mass percent of the maximum dry density determined by AASHTO T 99 Method C, is attained, at a moisture content determined by Engineer to be suitable for such density. Acceptance of compaction may be based on adherence to an approved roller pattern developed as set forth in *Compaction Equipment and Density Control Strips*, Compaction Equipment and Density Control Strips.

Payment will be made in accordance with the Bill of Quantities

ITEM B.3. – GRAVEL BEDDING (3/4")

This Item shall consist of the construction of gravel bedding in accordance with this Specification and in conformity with the lines, grades and dimensions shown on the Plans or established by the Engineer.

Material to be used in this construction should be Gravel size 3/4".

The Contractor shall compact the material placed in all gravel bed and the material scarified to the designated depth.

Payment will be made in accordance with the Bill of Quantities

ITEM C.1. – REINFORCING STEEL BAR, GRADE 40

This Item shall consist of furnishing, bending, fabricating and placing of steel reinforcement of the type, size, shape and grade required in accordance with this Specification and in conformity with the requirements shown on the Plans or as directed by the Engineer.

Materials to be used in this construction should be deformed reinforcing steel bar "Grade 40" in all diameter of the reinforcing steel bar.

Steel reinforcement shall be stored above the surface of the ground upon platforms, skids, or other supports and shall be protected as far as practicable from mechanical injury and surface deterioration caused by exposure to conditions producing rust. When placed in the work, reinforcement shall be free from dirt, detrimental rust, loose scale, paint, grease, oil, or other foreign materials. Reinforcement shall be free from injurious defects such as cracks and laminations. Rust, surface seams, surface irregularities or mill scale will not be cause for rejection, provided the minimum dimensions, cross sectional area and tensile properties of a hand wire brushed specimen meets the physical requirements for the size and grade of steel specified.

All reinforcing bars requiring bending shall be cold-bent to the shapes shown on the Plans or required by the Engineer. Bars shall be bent around a circular pin having the following diameters (D) in relation to the diameter of the bar (d):

Nominal diameter, d, mm	Pin diameter (D)
10 to 20	6d
25 to 28	8d
32 and greater	10d

Bends and hooks in stirrups or ties may be bent to the diameter of the principal bar enclosed therein.

Payment will be made in accordance with the Bill of Quantities

ITEM C.2. – FORMWORKS AND FALSEWORKS

The fulfillment of these requirements would guarantee safe, strong, and robust formwork structure and provide safe working condition for workers. Formwork is a temporary mold into which fresh concrete and reinforcement are placed to form a particular reinforced concrete element. It supports part or the whole of a permanent structure until it is self-supporting.

- Formwork should be of the desired shape, size and fit at the location of the member in structure according to the plans.
- It should be carefully selected for required finish surface and lining to produce the desired concrete surface.
- Formwork need to withstand the pressure of fresh concrete and working loads and should not distort or deflect from their position during concrete pouring.
- The formwork must not damage the concrete edge surface; or themselves during removal from structure.
- Panels of the formwork should be tightly connected to minimize gap at the form connection to prevent leakage of cement paste.
- Formwork sections should be sized in a manner that can be lifted and transported easily from one job site to another.
- It should be dismantled and moved as easily as possible.
- Interchangeability of formwork units, enables formworks to be used for forming different members.
- Formwork shall be designed such that it fits and fastens together with reasonable ease.
- Simplicity in erection of forms.
- Formwork should be as lightweight as possible without any strength reduction.
- Formwork structure must be designed so that the whole formwork system can be assembled and dismantled with skilled or unskilled workers.
- Formworks needs to be manufactured such that workers can handle them without any safety issue.
- Health, safety, and hygiene regulation should be considered while forms are made.
- Stability of the whole structure should be checked and ensured to avoid any undesired events which may cause loss of life, delay of construction, and increase the cost of the project.
- Emergency escape route shall be provided.
- Emergency response plan need to be established.
- If it is not possible to eliminate the expected risk totally, then control measures and safe work procedures shall be implemented to minimize and control the risk.

The falsework shall be constructed to conform to the falsework drawings. The materials used in the falsework construction shall be of the quantity and quality necessary to withstand the stresses imposed. The workmanship used in falsework shall be of such quality that the falsework will support the loads imposed on it

without excessive settlement or take-up beyond that shown on the falsework drawings.

Payment will be made in accordance with the Bill of Quantities

ITEM C.3. – STRUCTURAL CONCRETE, CLASS A (4000 psi)

This Item shall consist of furnishing, placing and finishing concrete in buildings and related structures, flood control and drainage, ports, and water supply structures in accordance with this specification and conforming to the lines, grades, and dimension shown on the plans.

Materials to be used in this construction should be:

- Cement – Cement shall conform to the requirements of the following cited Specifications for the type specified or permitted (Type 1P).
- Gravel – **Composed of ¾" size gravel aggregates.**
- Sand – Composed of crushed sand (S1).
- Water – Water used in mixing, curing or other designated application shall be reasonably clean and free of oil, salt, acid, alkali, grass or other substances injurious to the finished product. Water which is drinkable may be used without test. Where the source of water is shallow, the intake shall be so enclosed as to exclude silt, mud, grass or other foreign materials.

The Contractor shall prepare the design mix based on the absolute volume method as outlined in the American Concrete Institute (ACI) Standard 211.1, the proportions of the mix shall be 1:2:3. 1-part cement, 2-parts sand, and 3-parts gravel or 9.1 bags of cement per cubic meter, 0.50 cubic meter of crushed sand per cubic meter of fresh concrete and **0.80 cubic meter of ¾" gravel per cubic meter of fresh concrete.**

The compaction shall be done by mechanical vibration. The concrete shall be vibrated internally unless special authorization of other methods is given by the Engineer or is provided herein. Vibrators shall be of a type, design, and frequency approved by the Engineer. The intensity of vibration shall be such as to visibly affect a mass of concrete with a 3 cm slump over a radius of at least 50 cm. A sufficient number of vibrator shall be provided to properly compact each batch immediately after it is placed in the forms. Vibrators shall be manipulated so as to thoroughly work the concrete around the reinforcement and embedded fixtures and into the corners and angles of the forms and shall be applied at the point of placing and in the area of freely placed concrete. The vibrators shall be inserted into and withdrawn from the concrete slowly. The vibration shall be of sufficient duration and intensity to compact the concrete thoroughly but shall not be continued so as to cause segregation and at any one point to the extent that localized areas of grout are formed. Application of vibrators shall be at points uniformly spaced, and not farther apart than twice the radius over which the vibration is visibly effective. Vibration shall not be applied directly or thru the reinforcement to sections or layers of concrete that have hardened to the degree that the concrete ceases to be plastic under vibration. It shall not be used to

make concrete flow in the forms over distances so great as to cause segregation, and vibrators shall not be used to transport concrete in the forms of troughs or chutes.

After forms for concrete shall remain in place undisturbed for not less than twenty-four (24) hours after concrete pouring. In the removal of forms, crowbars should be used in pulling out nails and pins. Care should be taken so as not to break the edges of the structure. In case portions of the concrete are spalled, they shall be immediately repaired with fresh mortar mixed in the proportion of one part of Cement and two parts fine aggregates. Major honeycomb areas will be considered as defective work and shall be removed and replaced at the expense of the Contractor.

Payment will be made in accordance with the Bill of Quantities

ITEM C.4. – PORTLAND CEMENT CONCRETE PAVEMENT, 4000psi @ 7 days

This Item shall consist of pavement of Portland Cement Concrete, with or without reinforcement, constructed on the prepared base in accordance with this Specification and in conformity with lines, grades, thickness and typical cross-section shown on the Plans.

Materials to be used in this construction should be:

- Portland Cement – It shall conform to the applicable requirements of Item 700, Hydraulic Cement. Only Type I Portland Cement shall be used unless otherwise provided for in the Special Provisions. Different brands or the same brands from different mills shall not be mixed nor shall they be used alternately unless the mix is approved by the Engineer. However, the use of Portland Pozzolan Cement Type IP meeting the requirements of AASHTO M 240/ASTM C 695, Specifications for Blended Hydraulic Cement shall be allowed, provided that trial mixes shall be done and that the mixes meet the concrete strength requirements, the AASHTO/ASTM provisions pertinent to the use of Portland Pozzolan Type IP shall be adopted.
- Gravel – It shall consist of crushed stone, gravel, blast furnace slag, or other approved inert materials of similar characteristics, or combinations thereof, having hard, strong, durable pieces and free from any adherent coatings.
- Sand – It shall consist of natural sand, stone screenings or other inert materials with similar characteristics, or combinations thereof, having hard, strong and durable particles. Fine aggregate from different sources of supply shall not be mixed or stored in the same pile nor used alternately in the same class of concrete without the approval of the Engineer.
- Water – Water used in mixing, curing or other designated application shall be reasonably clean and free of oil, salt, acid, alkali, grass or other substances injurious to the finished product. Water which is drinkable may be used without test. Where the source of water is shallow, the

intake shall be so enclosed as to exclude silt, mud, grass or other foreign materials.

- Admixtures – Air-entraining admixture shall conform to the requirements of AASHTO M 154, Chemical admixtures, if specified or permitted, shall conform to the requirements of AASHTO M 194, Fly Ash, if specified or permitted as a mineral admixture and as 20% partial replacement of Portland Cement in concrete mix shall conform to the requirements of ASTM C 618, Admixture should be added only to the concrete mix to produce some desired modifications to the properties of concrete where necessary, but not as partial replacement of cement.

The compaction shall be done by mechanical vibration. The concrete shall be vibrated internally unless special authorization of other methods is given by the Engineer or is provided herein. Vibrators shall be of a type, design, and frequency approved by the Engineer. The intensity of vibration shall be such as to visibly affect a mass of concrete with a 3 cm slump over a radius of at least 50 cm. A sufficient number of vibrator shall be provided to properly compact each batch immediately after it is placed in the forms. Vibrators shall be manipulated so as to thoroughly work the concrete around the reinforcement and embedded fixtures and into the corners and angles of the forms and shall be applied at the point of placing and in the area of freely placed concrete. The vibrators shall be inserted into and withdrawn from the concrete slowly. The vibration shall be of sufficient duration and intensity to compact the concrete thoroughly but shall not be continued so as to cause segregation and at any one point to the extent that localized areas of grout are formed. Application of vibrators shall be at points uniformly spaced, and not farther apart than twice the radius over which the vibration is visibly effective. Vibration shall not be applied directly or thru the reinforcement to sections or layers of concrete that have hardened to the degree that the concrete ceases to be plastic under vibration. It shall not be used to make concrete flow in the forms over distances so great as to cause segregation, and vibrators shall not be used to transport concrete in the forms of troughs or chutes.

After forms for concrete shall remain in place undisturbed for not less than twenty-four (24) hours after concrete pouring. In the removal of forms, crowbars should be used in pulling out nails and pins. Care should be taken so as not to break the edges of the pavement. In case portions of the concrete are spalled, they shall be immediately repaired with fresh mortar mixed in the proportion of one part of Cement and two parts fine aggregates. Major honeycomb areas will be considered as defective work and shall be removed and replaced at the expense of the Contractor.

Payment will be made in accordance with the Bill of Quantities

ITEM D.1 - 4. – G.I. PIPELINE, Schedule 40

This item shall consist of furnishing and installation of all pipes, fittings, closure **pieces, bolts, nuts, gaskets, jointing's** materials and appurtenances as shown and specified on the drawings, and as required by the designated assigned Engineer for a complete and workable piping system.

Material to be used in this item shall be under ASTM A53, Galvanized Iron "Schedule 40" in all diameter of the Pipeline.

Mechanical Properties (Schedule 40)	Dimension Tolerance
Yield Point: ≥ 240 MPa (35 000 psi) Tensile Point: ≥ 415 MPa (60 000 psi) Elongation : 17%-30%	Weight: +10%, -3.5% Outside Diameter 40mm and Below : ∓ 0.40 mm 50mm and Above : $\mp 1\%$ Wall Thickness : $\mp 12.50\%$

NOMINAL SIZE		OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT Plain Ends		MAXIMUM TEST PRESSURE	
in	mm	in	mm	in	mm	lb/ft	kg/m	psi	kPa
½	15	0.840	21.3	0.109	2.77	0.85	1.27	700	4800
¾	20	1.050	26.7	0.113	2.87	1.13	1.69	700	4800
1	25	1.315	33.4	0.133	3.38	1.68	2.50	700	4800
1 ¼	32	1.660	42.2	0.140	3.56	2.27	3.39	1300	9000
1 ½	40	1.900	48.3	0.145	3.68	2.72	4.05	1300	9000
2	50	2.375	60.3	0.154	3.91	3.66	5.44	2500	17 200
2 ¼	65	2.875	73.0	0.203	5.16	5.80	8.63	2500	17 200
3	80	3.500	88.9	0.216	5.49	7.58	11.29	2500	17 200
4	100	4.500	114.3	0.237	6.02	10.80	16.07	2210	15 200
5	125	5.563	141.3	0.258	6.55	14.63	21.77	1950	13 400
6	150	6.625	168.3	0.280	7.11	18.99	28.26	1780	12 300
8	200	8.625	219.1	0.322	8.18	28.58	42.55	1570	10 800
10	250	10.750	273.0	0.365	9.27	40.52	60.29	1430	9900
12	300	12.750	323.8	0.406	10.31	53.57	79.70	1340	9200
14	350	14.000	355.6	0.438	11.13	63.50	94.55	1310	9000
16	400	16.000	406.4	0.500	12.70	82.85	123.30	1310	9000
18	450	18.000	457	0.562	14.27	104.76	155.87	1310	9000
20	500	20.000	508	0.594	15.09	123.23	183.42	1250	8600
24	600	24.000	610	0.688	17.48	171.45	255.24	1200	8300

All threaded portion of the pipe shall be cut or removed before installation. All connected joints of the pipeline shall be welded full using welding rod N-6011.

Welding shall be carried out only by fully qualified welders as tested & approved by the Engineer. When welding is carried out on open air, steps shall be taken to protect the place of welding against wind or rain, the welding electrodes and parts being welded shall be dry. Before beginning the welding operation, each jointing shall be checked to ensure the parts to be welded or clean and root gaps provided as IS:823. The re-welding of the root is mandatory but only the metal deposits of the root have been cleaned by back gauging or chipping. The welding joints shall be left

to cool slowly. The contractor shall not be allowed to cool the welds quickly by any other methods. For multilayer welding, before welding the following layer, the formerly welded layer shall be cleaned metal bright by light chipping & wire brushing. Packing strips shall not be allowed i.e. All slag shall be removed.

Payment will be made in accordance with the Bill of Quantities

ITEM D.5. – FIRE HYDRANT

This item shall consist of installing of fire hydrant, fittings, closure pieces, bolts, **nuts, gaskets, jointing's** materials and appurtenances as shown and specified on the drawings, and as required by the designated assigned Engineer for a complete and workable piping system.

The hydrant should be 6-inch diameter, 3 way, Wet Type. Features include:

- Fire Hose Outlets Nozzle Threads shall conform to the National American Standard Fire Hose Coupling Crew Threads as per AWWA C-503.
- Outlet Nozzle each hydrant shall provide two (2) 2½ inch diameter Fire Hose Outlet Nozzle and one (1) 4½ inch diameter Hose Pumper Connection

All connected joints of the pipeline to the fire hydrant shall be welded full using welding rod N-6011.

Welding shall be carried out only by fully qualified welders as tested & approved by the Engineer. When welding is carried out on open air, steps shall be taken to protect the place of welding against wind or rain, the welding electrodes and parts being welded shall be dry. Before beginning the welding operation, each jointing shall be checked to ensure the parts to be welded or clean and root gaps provided as IS:823. The re-welding of the root is mandatory but only the metal deposits of the root have been cleaned by back gauging or chipping. The welding joints shall be left to cool slowly. The contractor shall not be allowed to cool the welds quickly by any other methods. For multilayer welding, before welding the following layer, the formerly welded layer shall be cleaned metal bright by light chipping & wire brushing. Packing strips shall not be allowed i.e. All slag shall be removed.

Payment will be made in accordance with the Bill of Quantities

ITEM D.6 - 7. – NON-RISING STEM GATE VALVE

This item shall consist of the installation of valves in accordance with the plans/drawings as directed by the Engineer.

The Valves to be used in this construction should be:

- Body and Bonnet: Ductile Iron, GGG50 to DIN 1693.
- Coating: Electrostatically applied epoxy resin to DIN 30677 Internally and Externally.
- Stem: Stainless Steel, DIN X 20 Cr 13.

- Stem Sealing: NBR wiper ring, 2 NBR O-rings inside and 2 outside a plastic bearing, EPDM rubber machete
- Wedge: Ductile Iron, GGG50, core fully encapsulated with EPDM rubber with integral wedge nut of dezincification resistant brass.
- Thrust Collar: Dezincification resistant brass.
- Bonnet Bolts: Stainless Steel A2, sealed with hot melt.
- Bonnet Gasket: EPDM rubber.
- Hydraulic Test: BS 5163 (DIN 3230/DIN 3352).
- Face to Face Dimension: BS 5163 (ISO 5752 S.3).
- Flanges and Drilling: ISO 7005-2.
- (EN 1092-2:1997, DIN 2501)

All connected joints of the pipeline to the fire hydrant shall be welded full using welding rod N-6011.

Valves shall be installed as specified herein and as shown on the drawings. All valves shall be new and of current manufacture.

Welding shall be carried out only by fully qualified welders as tested & approved by the Engineer. When welding is carried out on open air, steps shall be taken to protect the place of welding against wind or rain, the welding electrodes and parts being welded shall be dry. Before beginning the welding operation, each jointing shall be checked to ensure the parts to be welded are clean and root gaps provided as IS:823. The re-welding of the root is mandatory but only the metal deposits of the root have been cleaned by back gauging or chipping. The welding joints shall be left to cool slowly. The contractor shall not be allowed to cool the welds quickly by any other methods. For multilayer welding, before welding the following layer, the formerly welded layer shall be cleaned metal bright by light chipping & wire brushing. Packing strips shall not be allowed i.e. All slag shall be removed.

Payment will be made in accordance with the Bill of Quantities

ITEM D.8. – MANHOLE

This item shall consist of the construction, reconstruction or adjustment of manholes, inlets and catch basins in accordance with this Specification and in reasonably close conformity with the lines and grades shown on the Plans or as established by the Engineer.

Materials to be used in this construction should be:

- Cement – Cement shall conform to the requirements of the following cited Specifications for the type specified or permitted (Type 1P).
- Gravel – **Composed of ¾" size gravel aggregates.**
- Sand – Composed of crushed sand (S1).
- Water – Water used in mixing, curing or other designated application shall be reasonably clean and free of oil, salt, acid, alkali, grass or other

substances injurious to the finished product. Water which is drinkable may be used without test. Where the source of water is shallow, the intake shall be so enclosed as to exclude silt, mud, grass or other foreign materials.

- Reinforcing Steel Bars – Composed of deformed reinforcing steel bar **“Grade 40”** in all diameter of the reinforcing steel bar.

Metal frames shall be set in full mortar bed. Pipe sections shall be flushed on the inside of the structure wall and projected outside sufficiently for proper connection with next pipe section. Masonry shall fit neatly and tightly around the pipe.

Payment will be made in accordance with the Bill of Quantities

ITEM D.9. – STANDBY AND BLOW OFF CONNECTIONS

This item shall consist of the installation of standby connections and blow off connections in accordance with the plans/drawings as directed by the Engineer.

Connections shall be installed as specified herein and as shown on the drawings. All connections shall be new and of current manufacture.

All connected joints of the connections to the fire hydrant shall be welded full using welding rod N-6011.

Welding shall be carried out only by fully qualified welders as tested & approved by the Engineer. When welding is carried out on open air, steps shall be taken to protect the place of welding against wind or rain, the welding electrodes and parts being welded shall be dry. Before beginning the welding operation, each jointing shall be checked to ensure the parts to be welded or clean and root gaps provided as IS:823. The re-welding of the root is mandatory but only the metal deposits of the root have been cleaned by back gauging or chipping. The welding joints shall be left to cool slowly. The contractor shall not be allowed to cool the welds quickly by any other methods. For multilayer welding, before welding the following layer, the formerly welded layer shall be cleaned metal bright by light chipping & wire brushing. Packing strips shall not be allowed i.e. All slag shall be removed.

Payment will be made in accordance with the Bill of Quantities

ITEM D.10. – PAINTING WORKS (Metal Painting)

This Item shall consist of furnishing all paint materials, varnish and other related products, labor, tools, equipment and plant required in undertaking the proper application of painting, varnishing and related works indicated on the Plans and in accordance with this Specification.

Materials to be used in this construction should be:

- Red Oxide – All G.I. pipes shall be applied with 2 coats of red oxide primer.

- Quick Dry Enamel – All exposed G.I. pipes shall be applied with 2 coats of quick dry enamel (Dark Green).

The Contractor prior to commencement of the painting, varnishing and related work shall examine the surfaces to be applied in order not to jeopardize the quality and appearances of the painting varnishing and related works.

Metal shall be clean, dry and free from mill scale and rust. Remove all grease and oil from surfaces. Wash unprimed galvanized metal with etching solution and allow it to dry. Where required to prime coat surface with Red Lead Primer same shall be approved by the Engineer.

In addition, the Contractor shall undertake the following:

1. Voids, cracks, nick etc. will be repaired with proper patching material and finished flush with surrounding surfaces.
2. Marred or damaged shop coats on metal shall be spot primed with appropriate metal primer.
3. Painting and varnishing works shall not be commenced when it is too hot or cold.
4. Allow appropriate ventilation during application and drying period.
5. All hardware will be fitted and removed or protected prior to painting and varnishing works.

Paints when applied by brush shall become non-fluid, thick enough to lay down as adequate film of wet paint. Brush marks shall flow out after application of paint.

Paints made for application by roller must be similar to brushing paint. It must be nonstick when thinned to spraying viscosity so that it will break up easily into droplets.

Paint is atomized by high pressure pumping rather than broken up by the large volume of air mixed with it. These procedures change the required properties of the paint.

- a) All paints shall be evenly applied. Coats shall be of proper consistency and well brushed out so as to show a minimum of brush marks.
- b) All coats shall be thoroughly dry before the succeeding coat is applied.
- c) Where surfaces are not fully covered or cannot be satisfactorily finished in the number of coats specified such preparatory coats and subsequent coats as may be required shall be applied to attain the desired evenness of surface without extra cost to the owner.

- d) Where surface is not in proper condition to receive the coat the Engineer shall be notified immediately. Work on the questioned portion(s) shall not start until clearance be proceed is ordered by the Engineer.
- e) Hardware, lighting fixture and other similar items shall be removed or 'protected during the painting varnishing and related work operations and re-installed after completion of the work.

Payment will be made in accordance with the Bill of Quantities

Section VII. Drawings

[Insert here a list of Drawings. The actual Drawings, including site plans, should be attached to this section, or annexed in a separate folder.]



Republic of the Philippines

Philippine Economic Zone Authority

Office of the Building Official

Baguio City Economic Zone
LOAKAN ROAD, BAGUIO CITY

PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND

DRAWN BY:

DESIGNED BY:

RECOMMENDING APPROVAL:

APPROVED BY :

ANJEE ANNE D. MONTERO
ESO II / Architect

JC KING B. MANANSALA
ESO II / Civil Engineer

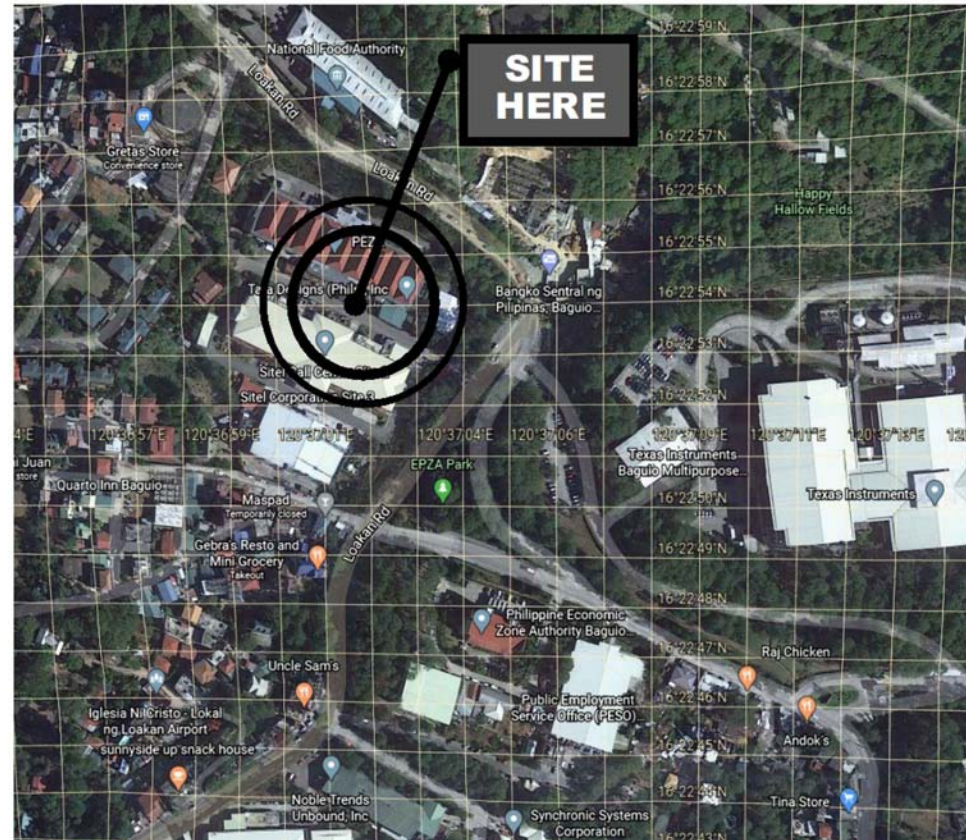
JOSEPH C. GALONG
OIC - DIVISION CHIEF,
ENGINEERING AND MAINTENANCE DIVISION

PAUL M. CODAMON
OIC - DEPARTMENT MANAGER, OPERATIONS

ALLAN P. DATAHAN
ECONOMIC ZONE DEPUTY ADMINISTRATOR

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
ITEM A SITE PREPARATION			
Item A.1	Clearing and Grubbing	sq.m.	1,262.85
Item A.2	Removal of Structures and Obstructions (Existing concrete pavement, sidewalk, manhole and curb and gutter)	sq.m.	87.57
ITEM B EARTH WORKS			
ITEM B.1	Manual Structural Excavation (Common Soil)	cu.m.	49.08
ITEM B.2	Embankment (From Structural Excavation)	cu.m.	6.66
ITEM B.3	Gravel Bedding (3/4")	cu.m.	9.39
ITEM C CIVIL WORKS			
ITEM C.1	Reinforcing Steel Bar, Grade 40	kgs.	845.36
ITEM C.2	Formworks and Falseworks	sq.m.	82.71
ITEM C.3	Structural Concrete Class A (Pedestal, Sidewalk, Manhole and Curb and Gutter)	cu.m.	49.71
ITEM C.4	PCC Pavement, 4000 psi @ 7 days	cu.m.	5.00
ITEM D WATER LINE WORKS			
ITEM D.1	6" G.I. Pipe Line, Schedule 40	ln.m.	480.17
ITEM D.2	4" G.I. Pipe Line, Schedule 41	ln.m.	50.75
ITEM D.3	2" G.I. Pipe Line, Schedule 42	ln.m.	15.60
ITEM D.4	1-1/2" G.I. Pipe Line, Schedule 43	ln.m.	23.51
ITEM D.5	6" Fire Hydrant	sets	5.00
ITEM D.6	6" Non-Rising Stem Gate Valve	sets	6.00
ITEM D.7	4" Non-Rising Stem Gate Valve	sets	2.00
ITEM D.8	Manhole with Cover	sets	2.00
ITEM D.9	Standby and Blow Off Connections	sets	8.00
ITEM D.10	Painting Works (Metal Painting)	sq.m.	252.07
ITEM E OTHER GENERAL REQUIREMENTS			
ITEM E.1	Mobilization / Demobilization	lot	1.00
ITEM E.2	Safety and Health Provisions	lot	1.00



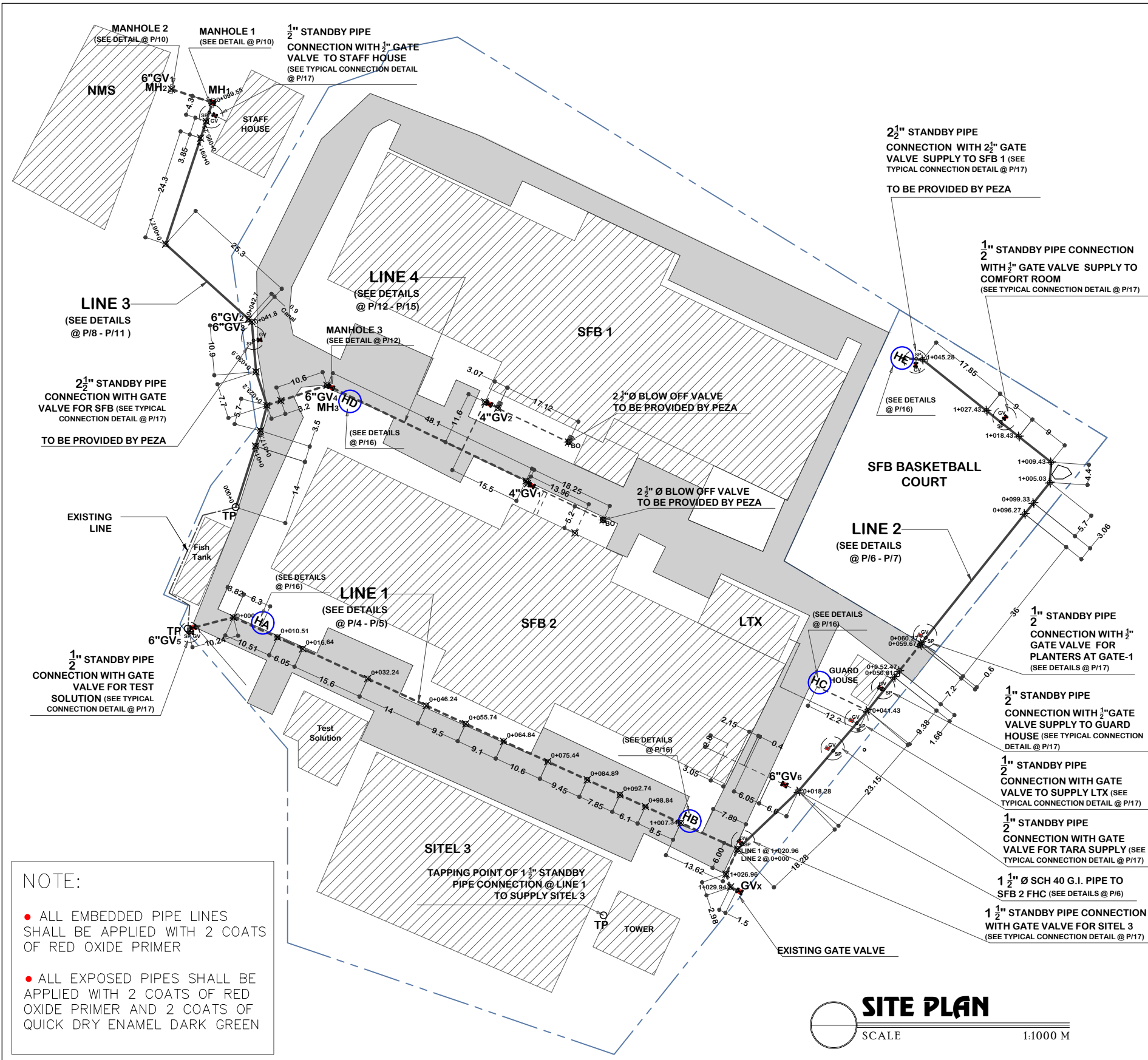
VICINITY MAP
SCALE _____ NTS

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P 05	<ul style="list-style-type: none"> • LINE 1 CONNECTION TO EXISTING GATE VALVE • PLAN VIEW • SECTIONAL VIEW <li style="text-align: right;">• SECTION "a" <li style="text-align: right;">• SECTION "b"
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SUMMARY OF QUANTITIES
SCALE _____ NTS

	PROJECT TITLE:	DRAWN BY:	DESIGNED BY:	RECOMMENDING APPROVAL BY:	APPROVED BY:	SHEET CONTENT:	SHEET NUMBER
	PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND	ANJEE ANNE D. MONTERO ESO II/ Architect	JC KING B. MANANSALA ESO II/ Civil Engineer	ENGR. JOSEPH C. GALONG OIC - DIVISION CHIEF, EMD	ENGR. PAUL M. CODAMON OIC - DEPARTMENT MANAGER, OPERATIONS	ALLAN P. DATAHAN ECONOMIC ZONE DEPUTY ADMINISTRATOR	<ul style="list-style-type: none"> • TABLE OF QUANTITIES • VICINITY MAP • TABLE OF CONTENTS
	LOCATION:						
	LOAKAN, BAGUIO CITY						



GENERAL PLUMBING NOTES:

- ALL WORKS SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE AND LOCAL CODE REQUIREMENTS AND REQUIREMENTS ALONG WITH SUBDIVISION REQUIREMENTS.
- THE PLUMBING LAYOUT IS ONLY DIAGRAMATIC, PIPES, CLEANOUTS AND CHECK VALVES ARE ONLY DIAGRAMATIC, SHALL BE CONCEALED AS MUCH AS POSSIBLE.
- ALL PVC PIPES SHALL BE APPROVED QUALITY AND G.I. PIPES FOR WATER DISTRIBUTION SHALL BE SCHEDULE 40 U.S. STANDARD WEIGHTS.
- ALL PLUMBING WORKS SHALL BE UNDER THE DIRECT SUPERVISION OF A LICENSED SANITARY ENGINEER OR A MASTER PLUMBER.

PLUMBING LEGENDS & SYMBOLS	
	FIRE HYDRANT (CORRESPONDING LETTER)
	6" Ø PIPE ABOVE GRADE LINE
	6" Ø PIPE BELOW GRADE LINE
	4" Ø PIPE BELOW GRADE LINE
	2" Ø PIPE BELOW GRADE LINE
	EXISTING WATER LINE
	STANDBY PIPE LINE
	STANDBY PIPE CONNECTION
	BLOW OFF VALVE
	EXISTING GATE VALVE
	GATE VALVE (CORRESPONDING NUMBER)
	DRAIN
	STAKING POINTS
	MANHOLE (CORRESPONDING NUMBER)
	TAPPING POINT

SITE PLAN
SCALE 1:1000 M

	PROJECT TITLE:	DRAWN BY:		DESIGNED BY:	RECOMMENDING APPROVAL BY:	APPROVED BY:	SHEET CONTENT:	SHEET NUMBER	
	PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND		ANJEE ANNE D. MONTERO ESO II/ Architect	JC KING B. MANANSALA ESO II/ Civil Engineer	ENGR. JOSEPH C. GALONG OIC - DIVISION CHIEF, EMD	ENGR. PAUL M. CODAMON OIC - DEPARTMENT MANAGER, OPERATIONS	ALLAN P. DATAHAN ECONOMIC ZONE DEPUTY ADMINISTRATOR	SITE PLAN GENERAL PLUMBING NOTES LEGENDS AND SYMBOLS	 02 / 17
	LOCATION: LOAKAN, BAGUIO CITY								

GENERAL CONSTRUCTION NOTES

NOTE:
PURSUANT TO SECTION 4 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, APPROVAL BY THE AUTHORIZED DPWH OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGN UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGN NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

THE DESIGN CONSULTANT SHALL BE HELD FULLY RESPONSIBLE FOR THE FAILURE OF THE FACILITY/IES/STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE CONSULTANTS.

GENERAL NOTES

- IN THE INTERPRETATION OF THE DRAWING, INDICATED DIMENSIONS SHALL GOVERN AND DISTANCES AND SIZES SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.
- IN REFERENCE TO OTHER DRAWINGS, SEE ARCHITECTURAL DRAWINGS FOR DEPRESSIONS IN FLOOR SLABS, OPENINGS IN THE WALLS AND SLABS, INTERIOR PARTIONS, LOCATION OF DRAINS ETC.
- IN CASE OF DISCREPANCIES AS TO THE LAYOUT, DIMENSIONS, AND ELEVATIONS BETWEEN THE STRUCTURAL PLANS, AND ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL NOTIFY BOTH THE STRUCTURAL ENGINEER AND THE ARCHITECT.
- ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH THE ACI 318-95 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND ALL STRUCTURAL STEEL WORK ACCORDING WITH AISC SPECIFICATION (9th EDITION) IN SO FAR AS THEY DO NOT CONFLICT WITH THE LOCAL BUILDING CODE REQUIREMENT.
- ACI REFERS TO AMERICAN CONCRETE INSTITUTE, AISC TO AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND ASTM TO AMERICAN SOCIETY FOR TESTING MATERIALS.
- CONSTRUCTION NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED. MODIFY TYPICAL DETAILS AS DIRECTED TO MEET SPECIAL CONDITIONS.
- SHOP DRAWINGS WITH ERECTION AND PLACING DIAGRAMS OF ALL STRUCTURAL STEELS, MISCELLANEOUS IRON, PRE-CAST CONCRETE, ETC. SHALL BE SUBMITTED FOR ENGINEERS APPROVAL BEFORE FABRICATION.
- CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEOUS CURBS, SILLS, STOOLS, EQUIPMENTS AND MECHANICAL BASES THAT ARE REQUIRED BY THE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS.
- ALL RESULTS OF MATERIAL TESTING FOR CONCRETE, REINFORCING BARS, & STRUCTURAL STEEL MUST BE NOTED & APPROVED BY THE STRUCTURAL DESIGNER.

NOTES ON CONCRETE MIXES & PLACING

- ALL CONCRETE SHALL DEVELOP A MIN. COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS W/ CORRESPONDING MAXIMUM SIZE AGGREGATE & SLUMPS AS FOLLOWS.
- | LOCATION | 28 DAYS STRENGTH | MAX. SIZE OF AGGREGATE | MAX. SLUMP |
|--|----------------------|------------------------|------------|
| ALL OTHERS, INCLUDING SUSPENDED SLABS, | 4000 PSI (27.6 MPa) | 20mm | 100mm |
| COLUMNS | 4000 PSI (27.6 MPa) | 20mm | 100mm |
| BEAMS, SLABS | 4000 PSI (27.6 MPa) | 20mm | 100mm |
| SLAB ON FILL | 3000 PSI (20.68 MPa) | 20mm | 100mm |

- MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS.
- | LOCATION | COVER |
|---|-------|
| SUSPENDED SLABS | 20mm |
| SLAB ON GRADE | 40mm |
| WALLS ABOVE GRADE | 25mm |
| BEAM STIRRUPS AND COLUMN TIES | 40mm |
| WHERE CONCRETE IS EXPOSED TO EARTH BUT POURED AGAINST FORMS | 50mm |
| WHERE CONCRETE IS DEPOSITED DIRECTLY AGAINST EARTH | 75mm |
- CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSITION WITHOUT SEGREGATION. RE-HAND LING OR PLACING SHALL BE DONE PREFERABLY WITH BUGGIES, BUCKETS OR WHEELBARROWS, NO CHUTES WILL BE ALLOWED EXCEPT TO TRANSFER CONCRETE FROM HOPPERS TO BUGGIES, WHEELBARROWS OR BUCKETS IN WHICH CASE THEY SHALL NOT EXCEED SIX (6) METERS IN AGGREGATE LENGTH.
 - NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS UNLESS AUTHORIZED IN WRITING BY THE DESIGNERS AND ONLY FOR UNUSUAL CONDITIONS WHERE VIBRATIONS IS EXTREMELY DIFFICULT TO ACCOMPLISH.
 - ALL ANCHOR BOLTS, DOWELS, AND OTHER INSERTS, SHALL BE PROPERLY POSITIONED & SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
 - ALL CONCRETE SHALL BE KEPT MOIST FOR A MINIMUM OF SEVEN CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE OF WET BURLAP, FOG SPRAYING, CURING COMPOUNDS OR OTHER APPROVED METHODS.
 - STRIPPING OF FORMS AND SHORES:
- | FOUNDATION | 24 HRS. |
|---|---------|
| SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED | 8 DAYS |
| WALLS | 21 DAYS |
| BEAMS | 14 DAYS |
| COLUMNS | 21 DAYS |
- THE CONTRACTOR SHALL SUBMIT THE SCHEDULE OF POURING AND THE LOCATION OF THE CONSTRUCTION JOINTS TO THE STRUCTURAL ENGINEER AT LEAST (4) DAYS PRIOR TO THE POURING FOR APPROVAL.
 - THE CONTRACTOR SHALL FURNISH AND MAINTAIN ADEQUATE FORMS AND SHORINGS UNTIL THE CONCRETE MEMBERS HAVE ATTAINED THEIR WORKING CONDITION AND STRENGTH.

NOTES ON FOOTINGS

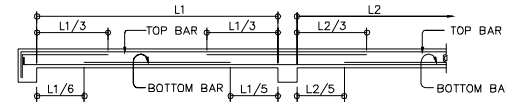
- FOOTINGS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 96 KPa (2000 psf). CONTRACTOR SHALL REPORT TO THE ENGINEER, IN WRITING, THE ACTUAL SOIL CONDITIONS UNCOVERED AND CONFIRM ACTUAL BEARING CAPACITY OF SOIL BEFORE DEPOSITING CONCRETE.
- FOOTING SHALL REST AT LEAST 1500mm BELOW NATURAL GRADE LINE UNLESS OTHERWISE INDICATED IN PLANS. NO FOOTING SHALL REST ON FILL.
- MINIMUM CONCRETE PROTECTION FOR REINFORCEMENTS SHALL BE 75mm CLEAR FOR CONCRETE DEPOSITED THE GROUND AND 50mm FOR CONCRETE DEPOSITED AGAINST A FORMWORK.

NOTES ON REINFORCEMENT

- UNLESS OTHERWISE NOTED IN PLANS, THE YIELD STRENGTH OF REINFORCING BARS SHALL BE:
 - A. FOOTINGS, FOOTING BEAMS AND GIRDERS ----- $f_y = 275 \text{ MPa}$ (40,000 psi)
 - B. COLUMNS AND SHEAR WALLS ----- $f_y = 275 \text{ MPa}$ (40,000 psi)
 - C. BEAMS AND GIRDER ----- $f_y = 275 \text{ MPa}$ (40,000 psi)
 - D. NON-LOAD BEARING WALL PARTITIONS, BEDDED SLABS, FLOOR & ROOF SLABS, PARAPETS, CATCH BASIN, SIDE WALK. ----- $f_y = 227.5 \text{ MPa}$ (33,000 psi)
- ALL REINFORCING BARS SIZE 10mm OR LARGER SHALL BE DEFORMED IN ACCORDANCE WITH ASTM A 706. BARS SMALLER THAN 10mm MAY BE PLAIN.
- SPICES SHALL BE SECURELY WIRED TOGETHER & SHALL LAP OR EXTEND IN ACCORDANCE W/ TABLE A & TABLE B (TABLE OF LAP SPICE & ANCHORAGE LENGTH) UNLESS OTHERWISE SHOWN ON DRAWINGS, SPICES SHALL BE STAGGERED WHENEVER POSSIBLE.

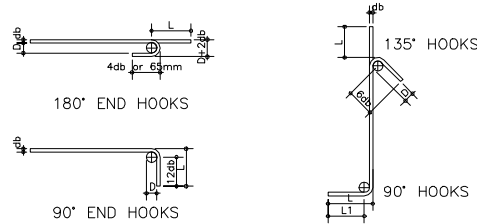
NOTES ON CONCRETE SLABS

- ALL SLAB REINFORCEMENTS SHALL BE 20mm CLEAR MINIMUM FROM BOTTOM AND FROM THE TOP OF SLAB.
- UNLESS OTHERWISE SHOWN, REINFORCEMENT IN CONTINUOUS ELEVATED SLAB SHALL BE CUT AS FOLLOWS:



NOTES OF STIRRUPS

- ALL REINFORCEMENT SHALL BE BENT COLD UNLESS OTHERWISE PERMITTED BY THE STRUCTURAL ENGINEER.
- REINFORCEMENT PARcially EMBEDDED IN CONCRETE SHALL NOT BE FILLED BENT, EXCEPT AS SHOWN IN THE DESIGN DRAWINGS OR PERMITTED BY THE STRUCTURAL ENGINEER.
- TIES & CLOSE STIRRUPS MUST BE BENT AT 135°.



BAR SIZE (DEFORMED)	MAIN BAR END HOOKS (ALL GRADES)			
	DIAMETER (mm)	180° HOOK	90° HOOK	90° HOOK
10mm #	60	75	125	150
12mm #	75	100	150	200
16mm #	95	125	175	250
20mm #	115	150	200	300
25mm #	150	200	230	450
28mm #	240	300	350	550
32mm #	300	335	450	600

BAR SIZE (DEFORMED)	STIRRUP AND TIE HOOKS (ALL GRADES)			
	DIAMETER (mm)	180° HOOK	90° HOOK	90° HOOK
10mm #	40	125	85	100
12mm #	50	165	115	115
16mm #	65	200	140	150
20mm #	115	250	165	300
25mm #	150	365	230	405

WELDING GENERAL NOTES

- ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE
- DRAWING IN ACCORDANCE WITH THE STANDARDS REFERENCED IN BS8888:2004
- COMPONENTS TO BE STAMPED WITH THEIR PLANT IDENT. NUMBER WHERE MARKED IN LETTERS AT LEAST 3MM HIGH.

FABRICATION NOTES

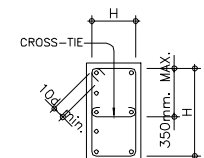
- WELDING TO BE IN ACCORDANCE WITH BS EN 1011-1998
- LINEAR DIMENSIONS 100 AND UNDER TO BE WITHIN $\pm 1.10\text{mm}$
- LINEAR DIMENSIONS OVER 100 AND UNDER 500 TO BE WITHIN $\pm 1.10\text{mm}$
- LINEAR DIMENSIONS OVER 500 TO BE WITHIN $\pm 1.10\text{mm}$
- PLATE THICKNESS & SECTION SIZES TO BE WITHIN NORMAL BS TOLERANCES U.O.S.
- ANGULAR TOLERANCES TO BE WITHIN $\pm 0.5^\circ$ U.O.S.
- WELDING SYMBOLS ARE IN ACCORDANCE WITH BS EN 22553:1995
- ALL PROFILE CUT EDGES TO BE DRESSED AND SHARP CORNERS REMOVED
- ALL WELD SIZES ARE FINAL SIZE
- ALL WELDS TO BE VISUALLY INSPECTED IN ACCORDANCE WITH BS EN 970:1997 SUBJECT TO MAGNETIC PARTICLE INSPECTION TO BS EN ISO 9934-1:2001 OR DYE PENETRANT TESTING TO BS EN 571-1:1997 UNLESS OTHERWISE STATED
- FOLLOWING COMPLETION OF WELDING AND BEFORE MACHINING OR LEAD FILLING FABRICATION TO BE STRESSED RELIEVED.

MACHINED COMPONENTS

- TOLERANCES UNLESS OTHERWISE STATED:
 - LINEAR DIMENSIONS 100 AND UNDER $\pm 0.25\text{mm}$
 - LINEAR DIMENSIONS OVER 100 AND UNDER 1000 $\pm 0.50\text{mm}$
 - LINEAR DIMENSIONS OVER 1000 $\pm 1.00\text{mm}$
 - ANGULAR DIMENSIONS $\pm 0'-15'$
 - HOLE POSITIONS ± 0.5
- REMOVE ALL BURRS AND SHARP EDGES
- ALL METRIC THREADS TO BS 3643 PT 2:1981 (6H/6G FIT). ALL METRIC LENGTHS AND INTERNAL DEPTHS TO BE FULL THREAD UNLESS OTHERWISE STATED.

NOTES ON COLUMNS

- PROVIDE EXTRA SETS OF TIES AT 100mm O.C. FOR TIED COLUMN REINFORCEMENT ABOVE AND BELOW BEAM-COLUMN CONNECTIONS FOR A DISTANCE FROM FACE OF CONNECTION EQUAL TO THE GREATER OF THE OVERALL THICKNESS OF COLUMN, 1/6 THE CLEAR HEIGHT OF COLUMN OR 450mm.
- COLUMN TIES SHALL BE PROTECTED EVERYWHERE BY A COVERING OF CONCRETE CAST MONOLITHICALLY WITH THE CORE WITH THE MINIMUM THICKNESS OF 40mm AND NOT LESS THAN 40 TIMES THE MAXIMUM SIZE OF COARSE AGGREGATE IN MILLIMETERS.
- WHERE COLUMNS CHANGE IN SIZE, VERTICAL REINFORCEMENTS SHALL BE OFFSET AT A SLOPE OF NOT MORE THAN 1 IN 6 AND EXTRA 10mm TIES AT 100mm SHALL BE PROVIDED THRU OUT THE OFFSET REGION.
- UNLESS OTHERWISE INDICATED IN THE PLANS, LAP SPICES FOR VERTICAL COLUMN REINFORCEMENT SHALL BE MADE WITHIN THE CENTER HALF OF COLUMN HEIGHT, AND THE SPICE LENGTH SHALL NOT BE LESS THAN 40 BAR DIAMETERS. WELDING OR APPROVED MECHANICAL DEVICES MAY BE USED PROVIDED THAT NOT MORE THAN ALTERNATE BARS ARE WELDED OR MECHANICALLY SPICED AT ANY LEVEL AND THE VERTICAL DISTANCES BETWEEN THESE WELDS OR SPICES OF ADJACENT BARS IS NOT LESS THAN 600mm.

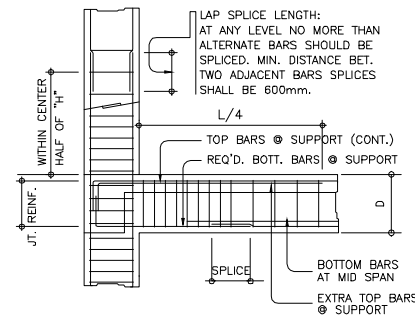


JOINT HOOP SPACE @ "25h" WHEN THERE ARE BEAMS HAVING WIDTH OF AT LEAST ONE-HALF THE COLUMN WIDTH & DEPTHS NOT LESS THAN THREE QUARTERS OF THE DEEPEST BEAM THAT FRAME INTO FOUR SIDES OF THE COLUMN. ALL OTHER CONDITIONS USE HOOPS @ "sh" CENTERS.

FOR COL. BAR SPICES SEE TABLE OF MIN. LAP SPICE LENGTH OF COLUMN REINFORCEMENT (SPACING OF TIES ALONG THIS REGION SHALL NOT BE LESS THAN 100mm)

NOTE: ALL CONCRETE REINF. DETAIL SHOULD BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF ACI DETAILING MANUAL

TYPICAL COLUMN ELEV. SHOWING DOWELS AND TIES SPACING



TYP. DETAIL OF COL. LAP SPICE & EXT. GIRDER TO COL. CONNECT.

NOTES ON BEAMS AND GIRDERS

- UNLESS , OTHERWISE NOTED IN PLANS, CAMBER ALL BEAMS AND GIRDER AT LEAST 6mm FOR EVERY 4.50M OF SPAN , EXCEPT CANTILEVERS FOR WHICH THE CAMBER SHALL BE AS NOTED IN PLANS OR AS ORDERED BY THE ENGINEER BUT IN NO CASE LESS THAN 20mm FOR EVERY 3.0M OF FREE SPAN.
- TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1.

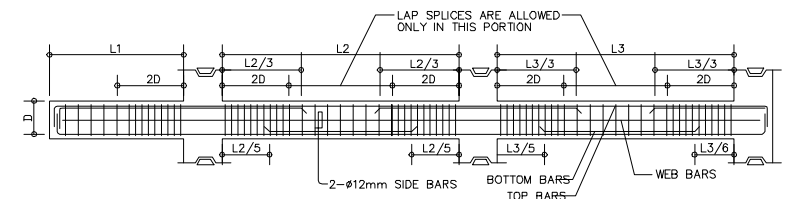


FIG. B-1

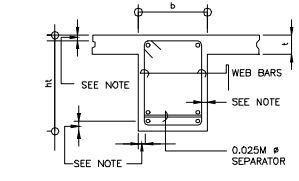
BAR SIZE (DEFORMED)	TABLE 'A' TENSION BARS EMBEDMENT LENGTHS AND LAPPED SPICED IN MILLIMETERS			
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
10mm #	300	300	300	300
12mm #	300	300	300	300
16mm #	300	400	300	400
20mm #	400	550	350	500
25mm #	600	800	550	750
28mm #	750	1000	650	850
32mm #	950	1300	850	1100

NOTE : TOP PLAN BARS , MULTIPLY VALUE BY 2

BAR SIZE (DEFORMED)	TABLE 'B' COMPRESSION BARS EMBEDMENT LENGTHS AND LAPPED SPICED IN MILLIMETERS			
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
10mm #	225	300	200	300
12mm #	275	300	250	300
16mm #	350	400	325	400
20mm #	450	500	475	500
25mm #	550	625	550	625
28mm #	625	675	625	675
32mm #	700	775	700	775

NOTE : TOP PLAN BARS , MULTIPLY VALUE BY 2
VALUES GIVEN ABOVE CAN ALSO BE USED FOR COLUMNS.

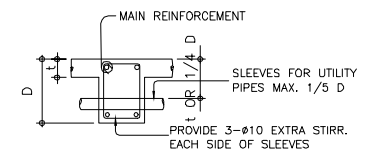
- IF THE BEAM REINFORCING BARS END IN A WALL THE CLEAR DISTANCE FROM THE BAR TO THE FARTHER FACE OF THE WALL NOT BE LESS THAN 25mm. EMBEDMENT LENGTH SHALL BE AS SHOWN IN A TABLE "A" FOR TENSION BARS AND TABLE "B" FOR COMPRESSION BARS UNLESS SPECIFIED IN PLAN. TOP BAR SHALL NOT BE SPICED WITHIN THE COLUMN OR WITHIN A DISTANCE TWICE THE MEMBER DEPTH FROM THE FACE OF THE COLUMN. AT LEAST TWO STIRRUPS SHALL BE PROVIDED AT ALL SPICES.
- IF THERE ARE TWO OR MORE LAYERS OF REINFORCING BARS, USE 25mm# BAR SEPARATORS SPACED AT 1.0M ON CENTER. IN NO CASE SHALL THERE BE LESS THAN TWO (2) SEPARATORS BETWEEN TWO LAYERS OF BARS.
- MINIMUM CONCRETE PROTECTION FOR REINFORCING BARS OR STEEL SHAPES SHALL BE AS SHOWN IN FIG. B-2 UNLESS SPECIFIED ELSEWHERE.



NOTE 1

20 mm CLEAR FOR JOIST
40 mm CLEAR FOR BEAMS AND GIRDERS


FIG. B-2

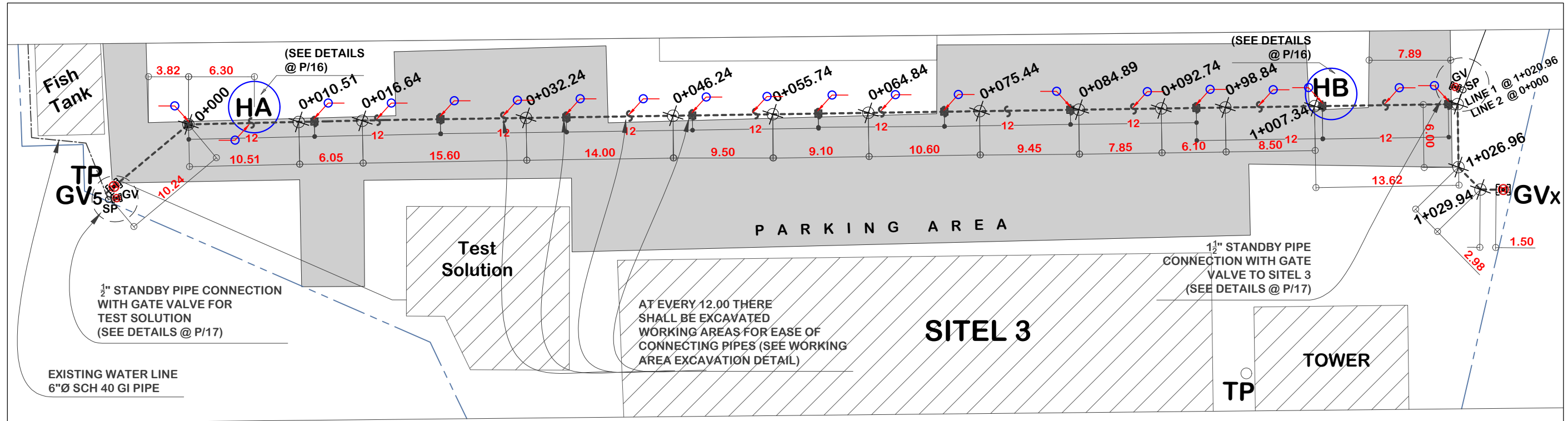


TYP. DET. FOR SLEEVES THRU CONCRETE BEAM

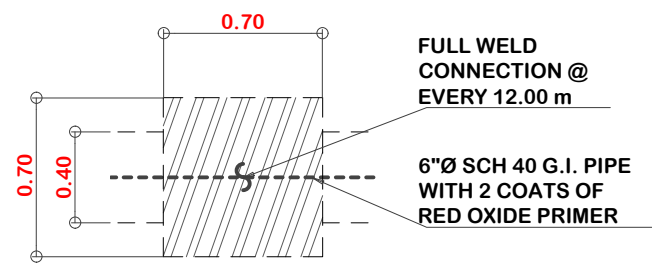
FIG. B-3

- WHEN A BEAM CROSSES A GIRDER, REST BEAM ON TOP OF GIRDER BARS, BEAM REINFORCING BAR SHALL BE SYMMETRICAL ABOUT CENTER LINE WHENEVER POSSIBLE.
- GENERALLY NO SPICES SHALL BE PERMITTED AT POINTS WHERE CRITICAL BENDING STRESSES OCCUR, SPICES WHERE SO PERMITTED SHALL BE INDICATED IN THE TABLE "A" AND "B". WELDED SPICES SHALL DEVELOP IN TENSION AT LEAST 125 % OF THE SPECIFIED YIELD STRENGTH OF THE BAR. NOT MORE THAN 50% OF THE BARS AT ANY ONE SECTION IS ALLOWED TO BE SPICED THEREIN.

PROJECT TITLE:	DRAWN BY:	DESIGNED BY:	RECOMMENDING APPROVAL BY:	APPROVED BY:	SHEET CONTENT:	SHEET NUMBER
 PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND	ANJEE ANNE D. MONTERO ESO II/ Architect	JC KING B. MANANSALA ESO II/ Civil Engineer	ENGR. JOSEPH C. GALONG OIC - DIVISION CHIEF, EMD	ENGR. PAUL M. CODAMON OIC - DEPARTMENT MANAGER , OPERATIONS	ALLAN P. DATAHAN ECONOMIC ZONE DEPUTY ADMINISTRATOR	<div style="border: 2px solid red; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> P 03 </div> <div style="display: flex; justify-content: space-between; width: 100%;"> 03 17 </div>
	LOCATION: LOAKAN, BAGUIO CITY					



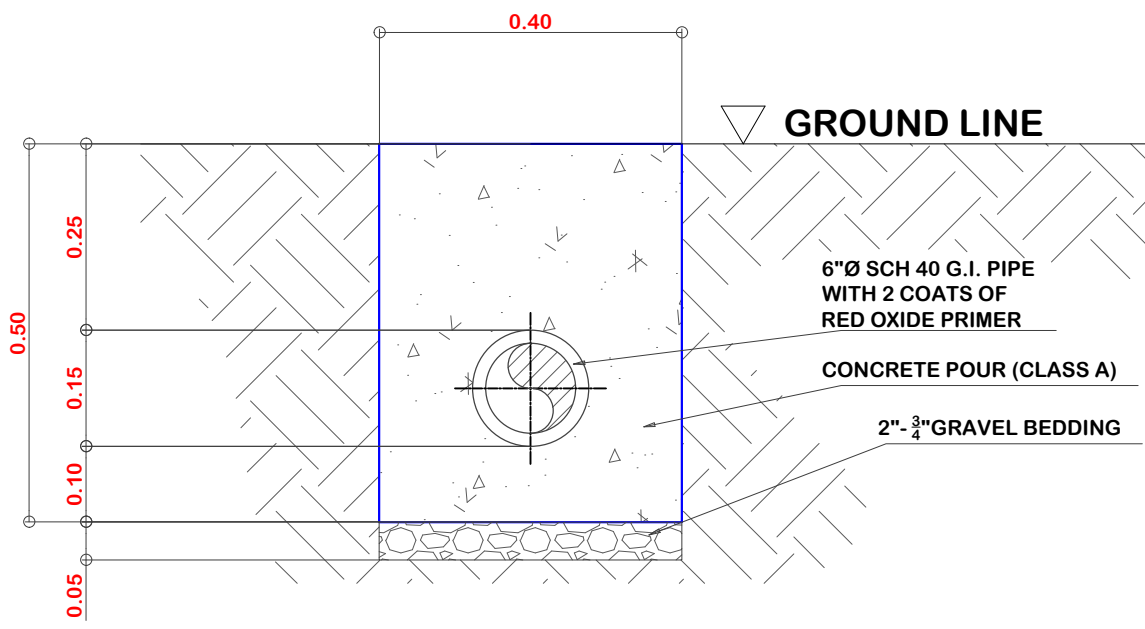
LINE 1 WATER SUPPLY LAYOUT
SCALE 1:400 M



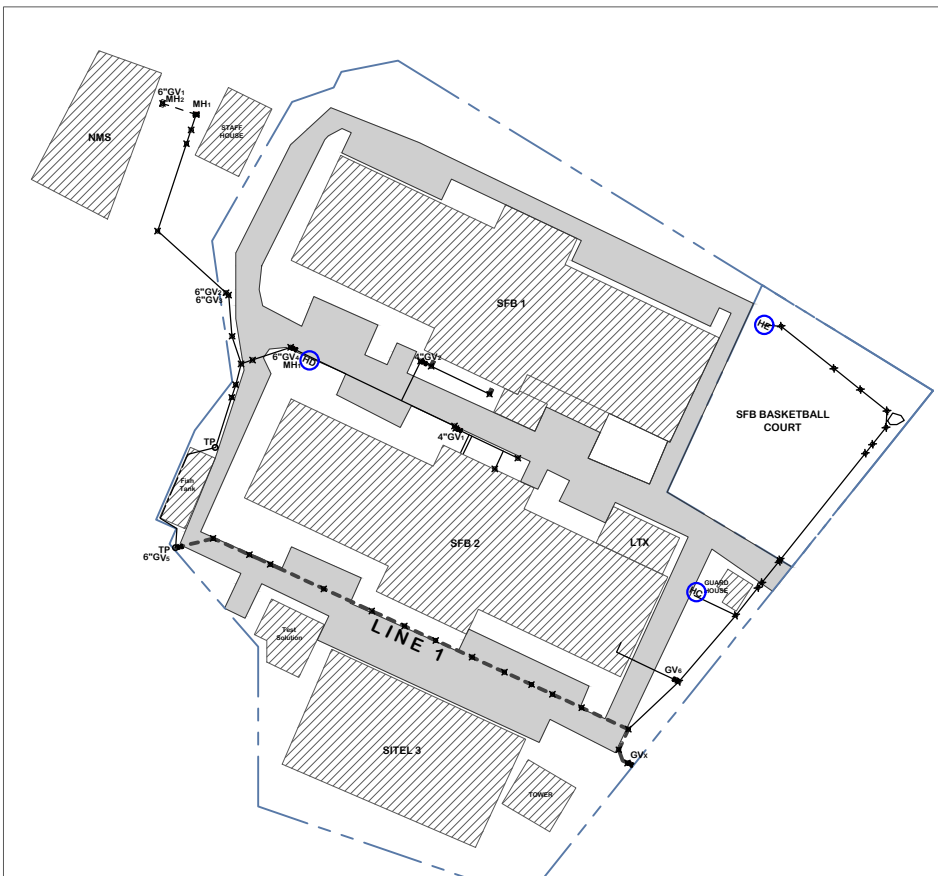
WORKING AREA EXCAVATION
SCALE NTS

NOTE:
ALL EMBEDDED PIPE LINES SHALL BE APPLIED WITH 2 COATS OF RED OXIDE PRIMER
ALL EXPOSED PIPES SHALL BE APPLIED WITH 2 COATS OF RED OXIDE PRIMER AND 2 COATS OF QUICK DRY ENAMEL DARK GREEN

FULL WELD CONNECTION AT EVERY 6.00 M

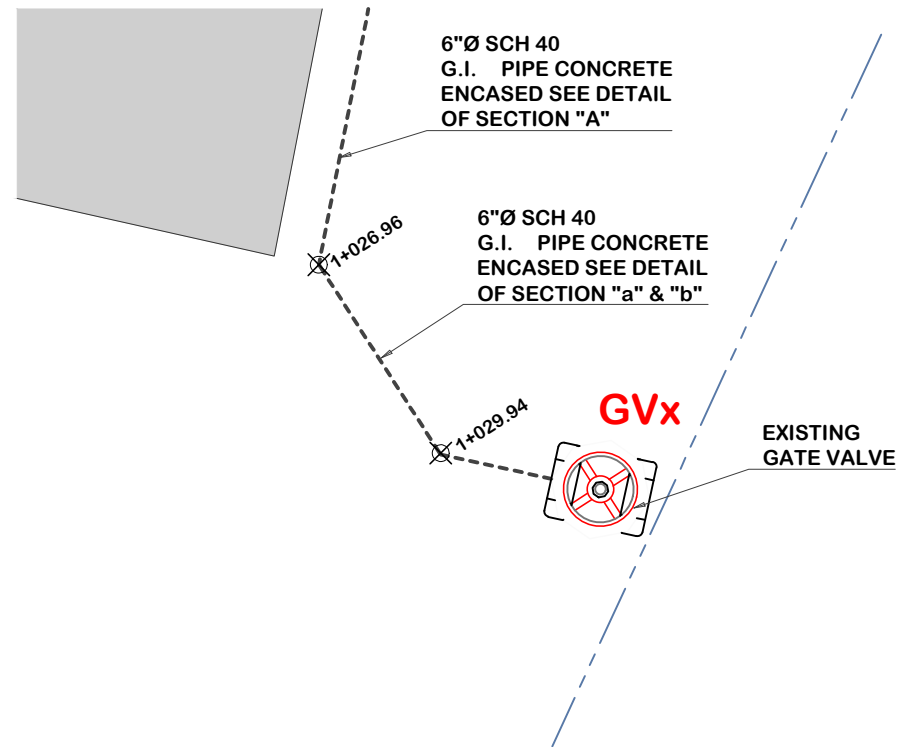


6 Ø PIPE ENCASEMENT SECTION
SCALE 1:10 M



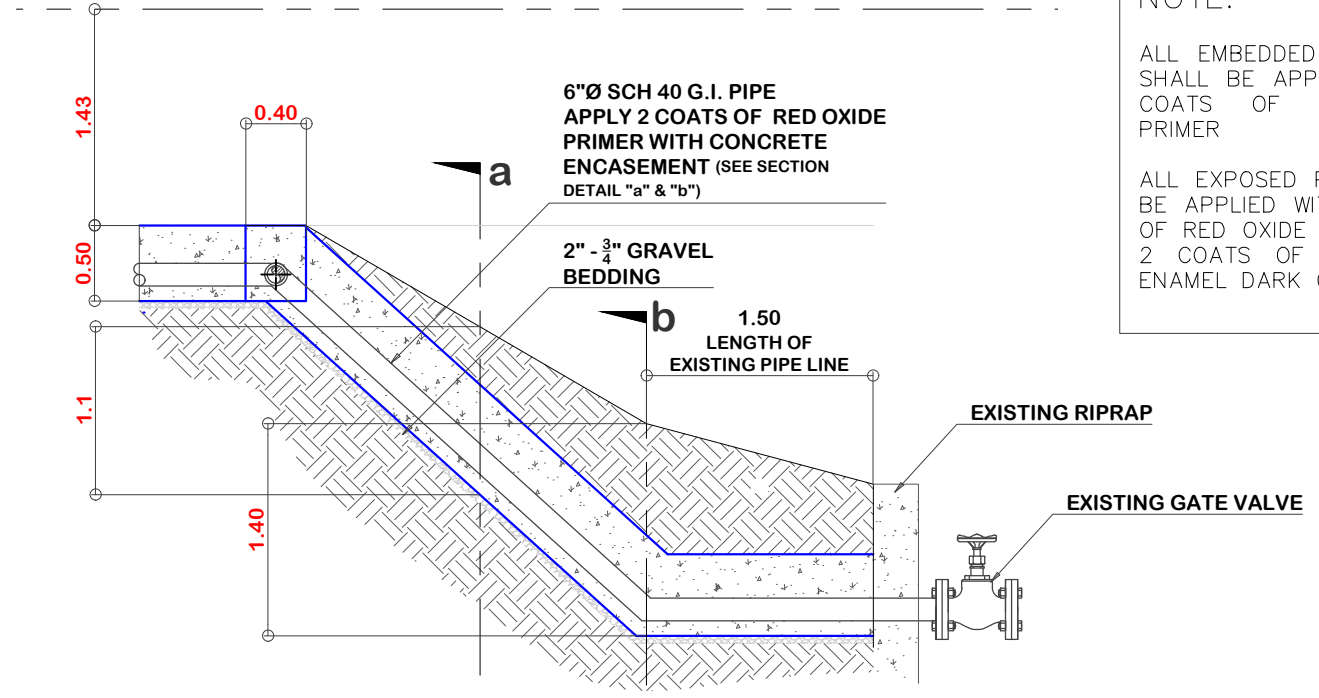
LINE 1 KEY MAP LOCATION

	PROJECT TITLE:	DRAWN BY:	DESIGNED BY:	RECOMMENDING APPROVAL BY:	APPROVED BY:	SHEET CONTENT:	SHEET NUMBER:	
	PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND LOCATION: LOAKAN, BAGUIO CITY	ANJEE ANNE D. MONTERO ESO II/ Architect	JC KING B. MANANSALA ESO II/ Civil Engineer	ENGR. JOSEPH C. GALONG OIC - DIVISION CHIEF, EMD	ENGR. PAUL M. CODAMON OIC - DEPARTMENT MANAGER, OPERATIONS	ALLAN P. DATAHAN ECONOMIC ZONE DEPUTY ADMINISTRATOR	• LINE 1 KEY MAP LOCATION • LINE 1 PLAN VIEW • 6" Ø PIPE ENCASEMENT SECTION • WORKING AREA EXCAVATION	P 04 04 17



LINE 1 CONNECTION TO EXISTING GATE VALVE

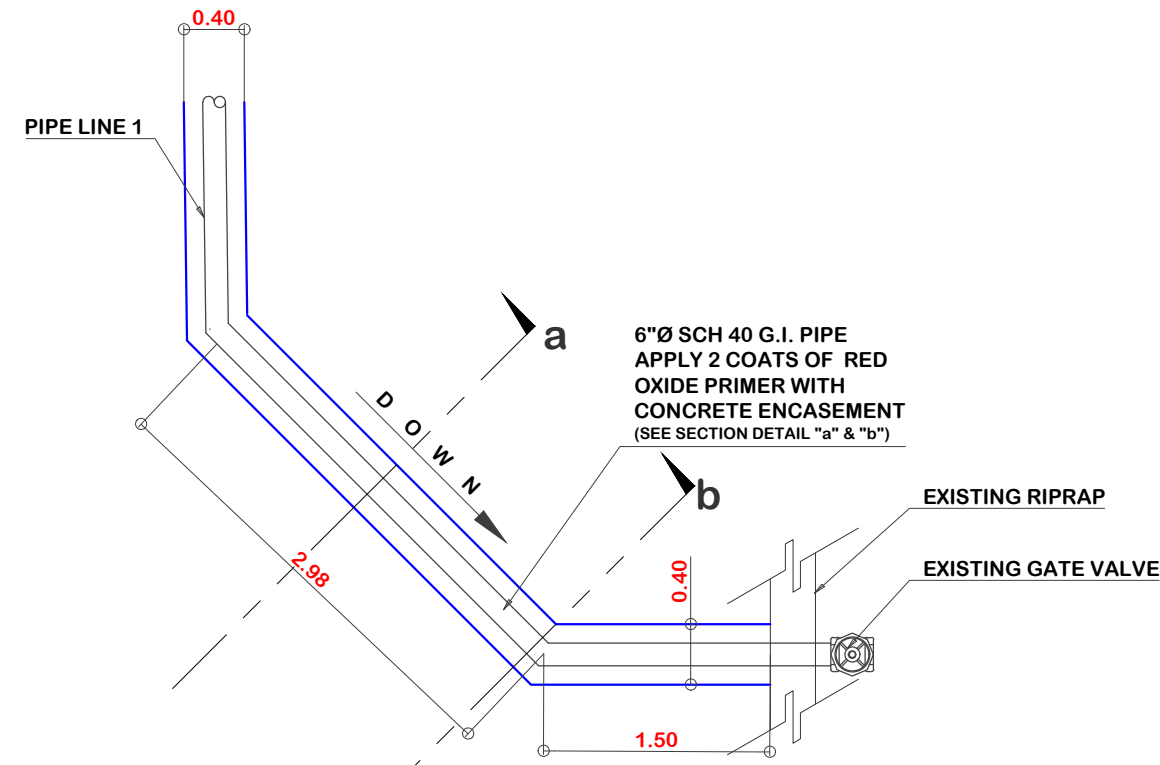
SCALE 1 : 1 0 0 M



NOTE:
 ALL EMBEDDED PIPE LINES SHALL BE APPLIED WITH 2 COATS OF RED OXIDE PRIMER
 ALL EXPOSED PIPES SHALL BE APPLIED WITH 2 COATS OF RED OXIDE PRIMER AND 2 COATS OF QUICK DRY ENAMEL DARK GREEN

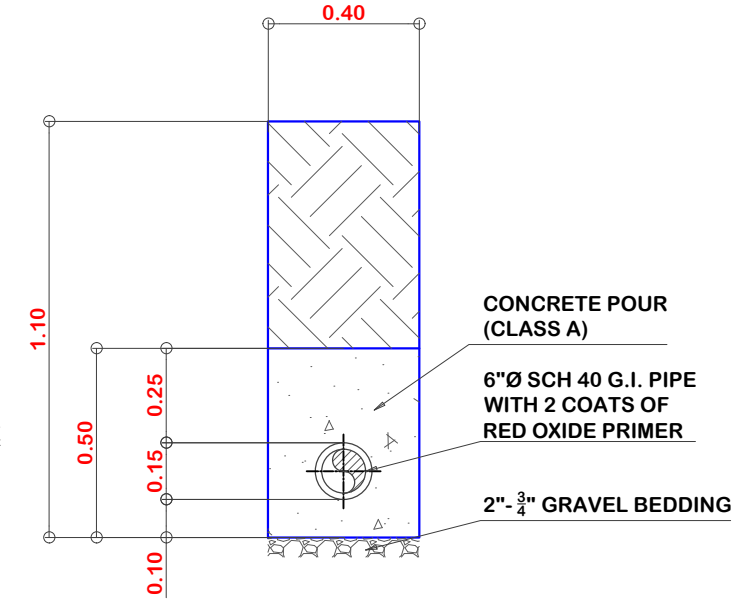
SECTIONAL VIEW

SCALE 1:50 M



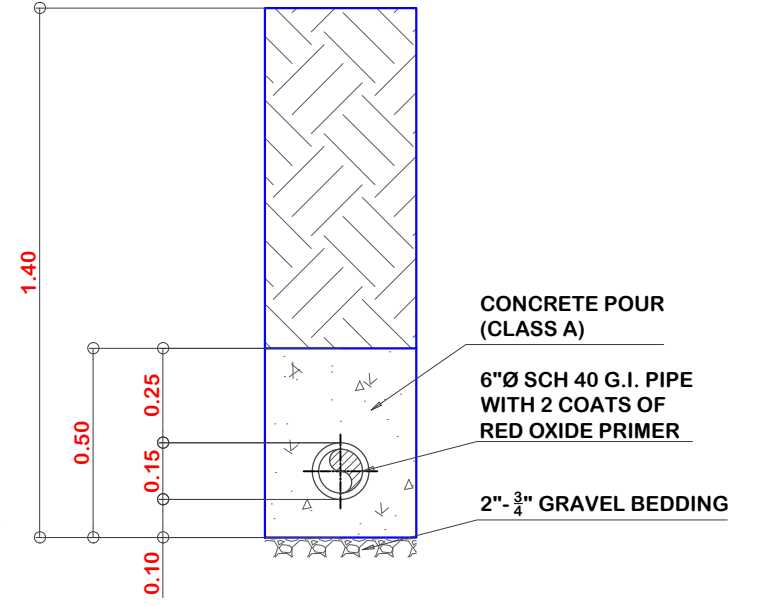
PLAN VIEW

SCALE 150 M



SECTION a

SCALE 1:20 M

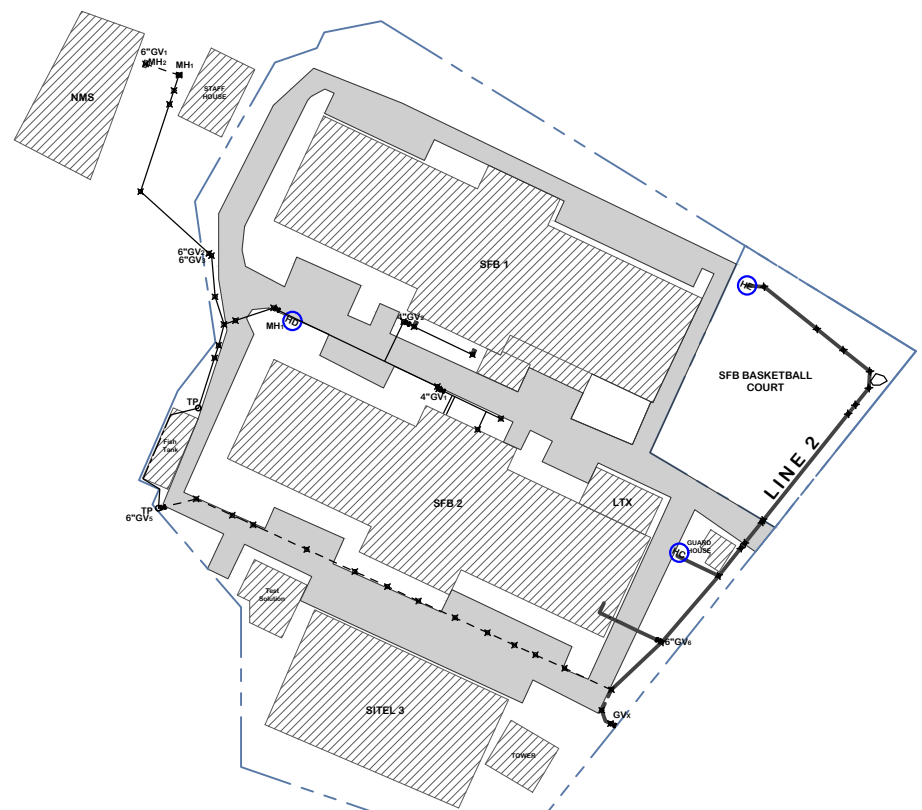


SECTION b

SCALE 1:20 M



	PROJECT TITLE:	DRAWN BY:		DESIGNED BY:	RECOMMENDING APPROVAL BY:	APPROVED BY:	SHEET CONTENT:	SHEET NUMBER		
	PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND		ANJEE ANNE D. MONTERO <small>ESO II/ Architect</small>		JC KING B. MANANSALA <small>ESO II/ Civil Engineer</small>	ENGR. JOSEPH C. GALONG <small>OIC - DIVISION CHIEF, EMD</small>	ENGR. PAUL M. CODAMON <small>OIC - DEPARTMENT MANAGER, OPERATIONS</small>	ALLAN P. DATAHAN <small>ECONOMIC ZONE DEPUTY ADMINISTRATOR</small>	• LINE 1 CONNECTION TO EXISTING GATE VALVE • PLAN VIEW • SECTIONAL VIEW • SECTION "a" • SECTION "b"	<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> P 05 </div>
	LOCATION:	LOAKAN, BAGUIO CITY								
									17	



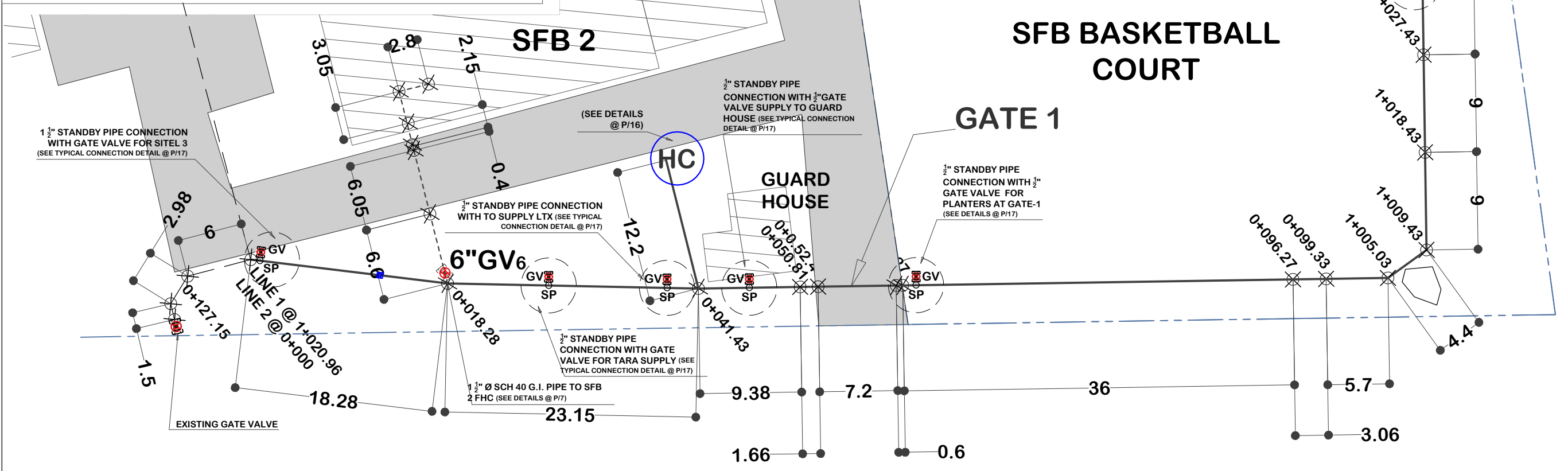
NOTE:


ALL EMBEDDED PIPE LINES SHALL BE APPLIED WITH 2 COATS OF RED OXIDE PRIMER

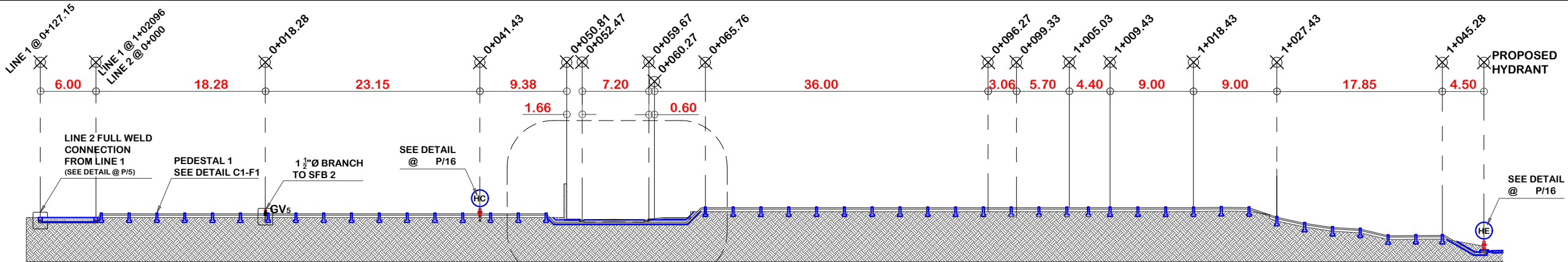
ALL EXPOSED PIPES SHALL BE APPLIED WITH 2 COATS OF RED OXIDE PRIMER AND 2 COATS OF QUICK DRY ENAMEL DARK GREEN

LINE 2 WATER SUPPLY LAYOUT
SCALE 1:400 M

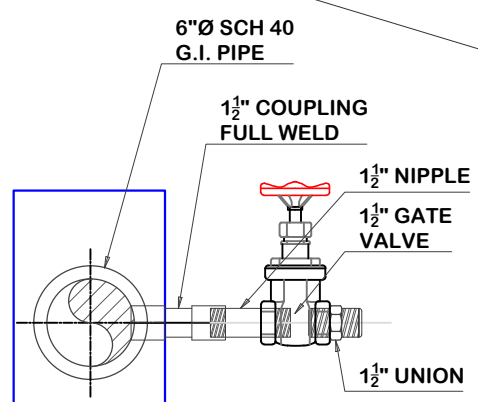
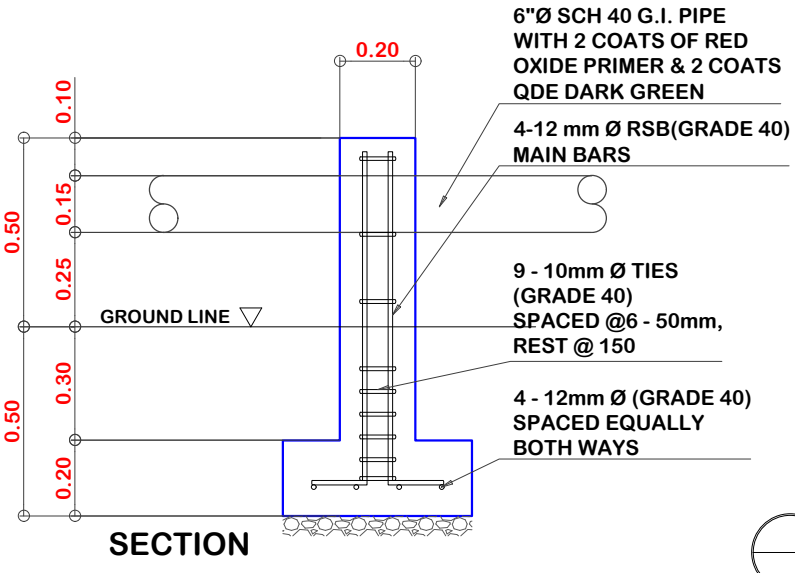
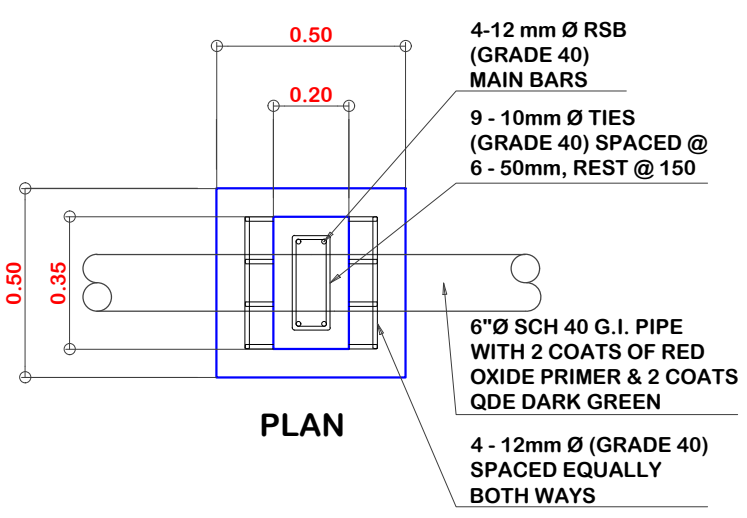
LINE 2 KEY MAP LOCATION



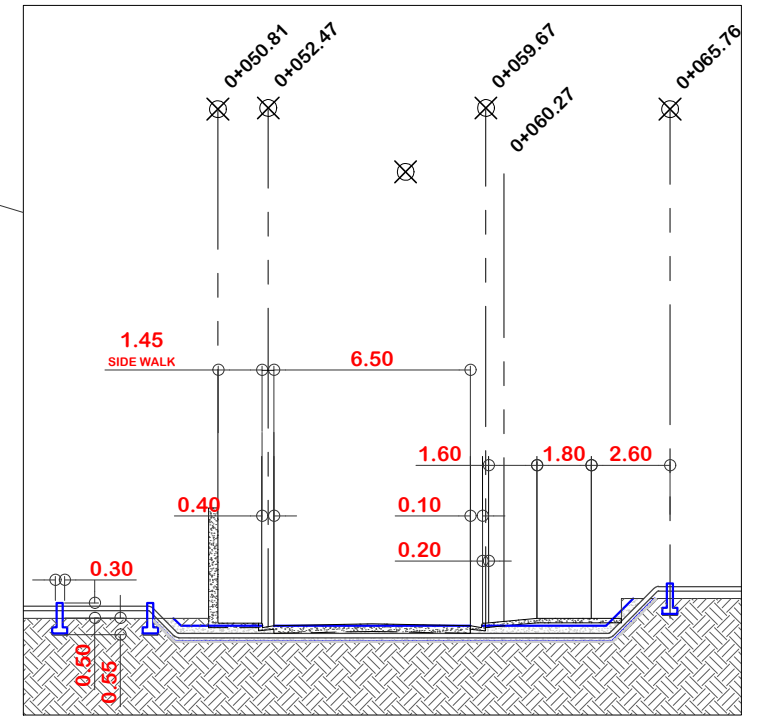
	PROJECT TITLE:	DRAWN BY:	DESIGNED BY:	RECOMMENDING APPROVAL BY:	APPROVED BY:	SHEET CONTENT:	SHEET NUMBER	
	PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND LOCATION: LOAKAN, BAGUIO CITY	ANJEE ANNE D. MONTERO ESO II/ Architect	JC KING B. MANANSALA ESO II/ Civil Engineer	ENGR. JOSEPH C. GALONG OIC - DIVISION CHIEF, EMD	ENGR. PAUL M. CODAMON OIC - DEPARTMENT MANAGER, OPERATIONS	ALLAN P. DATAHAN ECONOMIC ZONE DEPUTY ADMINISTRATOR	• LINE 2 KEY MAP LOCATION • LINE 2 WATER SUPPLY LAYOUT	<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> P 06 </div> <div style="display: flex; justify-content: space-between; width: 100%;"> 06 17 </div>



LINE 2 SECTION VIEW
SCALE 1:500 M

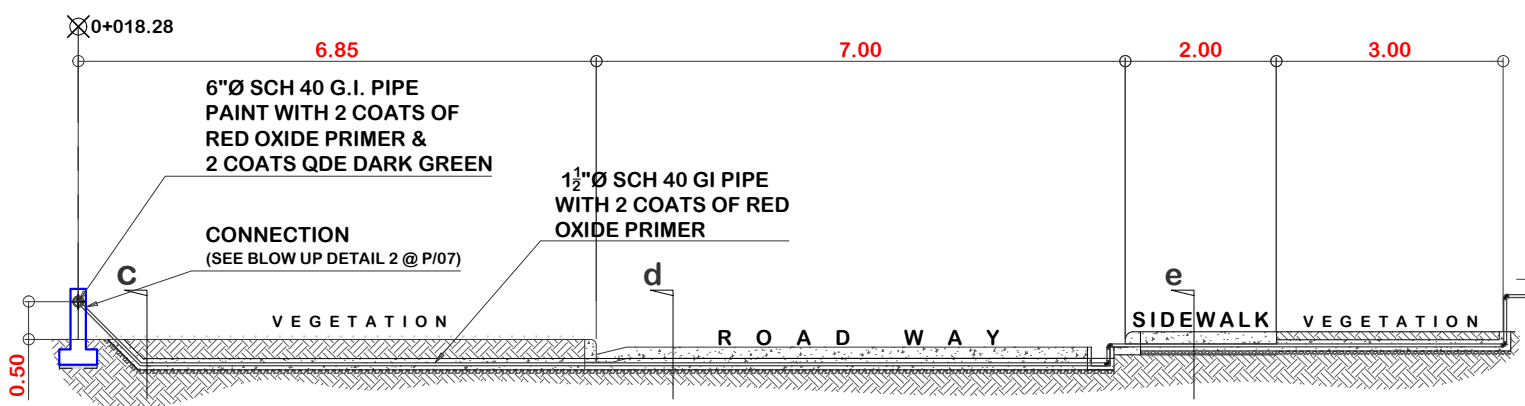


BLOW UP DETAIL 2
SCALE 1:250 M

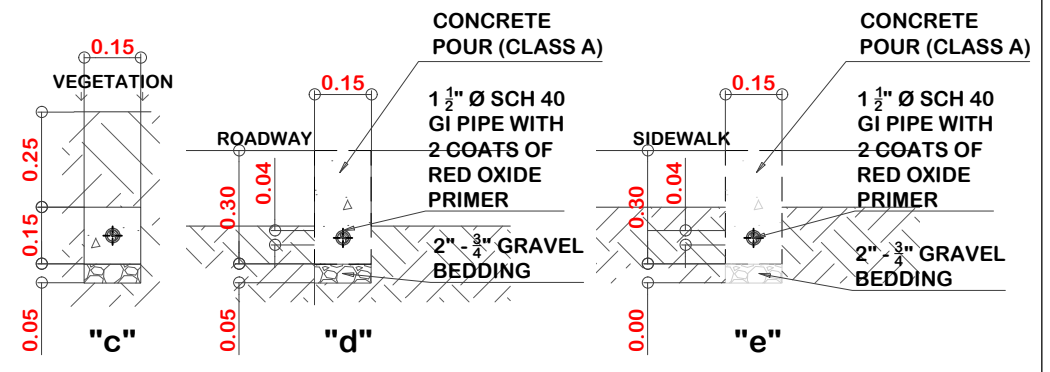


BLOW UP DETAIL 1
SCALE 1:250 M

PEDESTAL A (C1-F1)
SCALE 1:33 1/3 M



BRANCH LINE AT 0 + 018.28 SFB 2
SCALE 1:100 M



SECTIONS c, d & e
SCALE 1:20 M



PROJECT TITLE:
PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND

LOCATION:
LOAKAN, BAGUIO CITY

DRAWN BY:
ANJEE ANNE D. MONTERO
ESO II/ Architect

DESIGNED BY:
JC KING B. MANANSALA
ESO II/ Civil Engineer

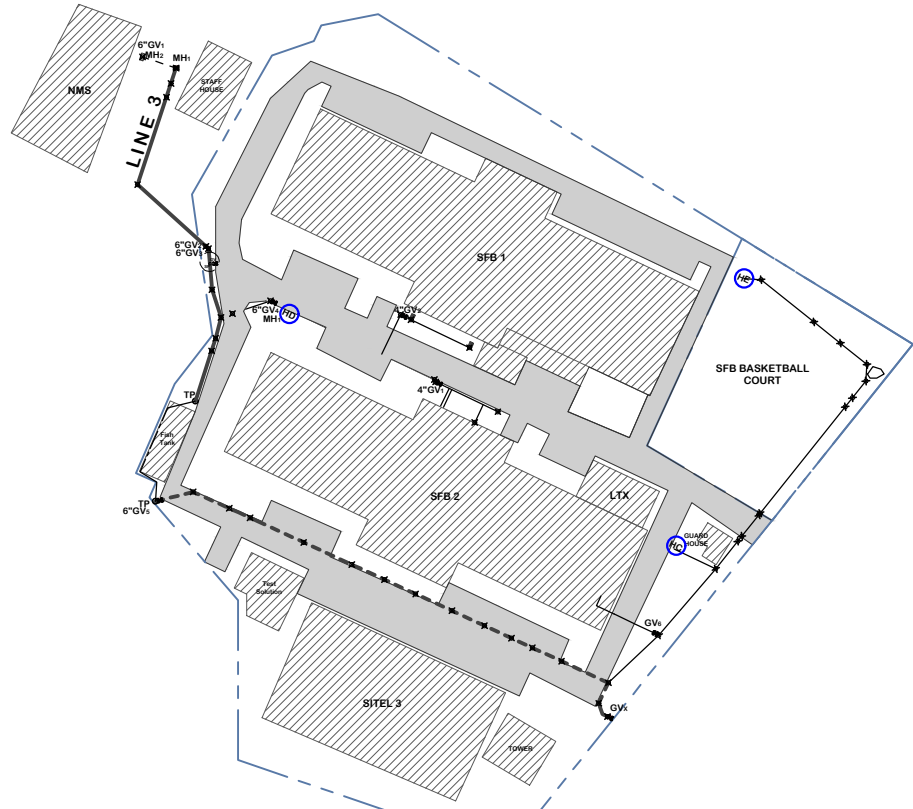
RECOMMENDING APPROVAL BY:
ENGR. JOSEPH C. GALONG
OIC - DIVISION CHIEF, EMD

APPROVED BY:
ENGR. PAUL M. CODAMON
OIC - DEPARTMENT MANAGER, OPERATIONS

APPROVED BY:
ALLAN P. DATAHAN
ECONOMIC ZONE DEPUTY ADMINISTRATOR

SHEET CONTENT:
• LINE 2 SECTION VIEW
• BLOW UP 1 DETAIL
• BLOW UP 2 DETAIL
• PEDESTAL 1 (C1-F1)
• BRANCH LINE @ 0+143.95
• SECTION c, d & e

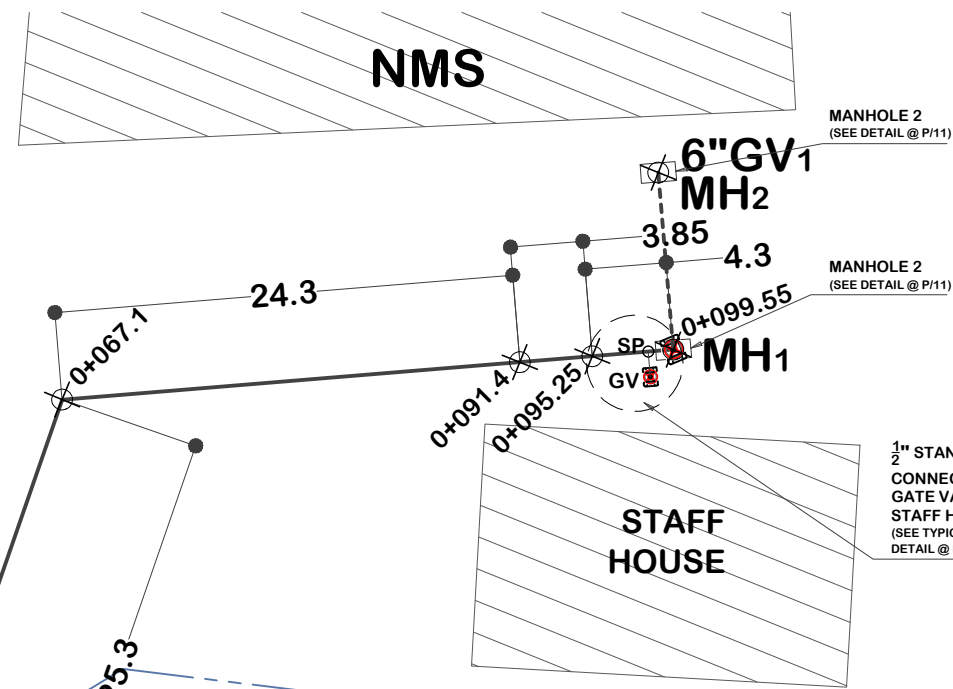
SHEET NUMBER
P 07
07
17



LINE 3 KEY MAP LOCATION

NOTE:
 ALL EMBEDDED PIPE LINES SHALL BE APPLIED WITH 2 COATS OF RED OXIDE PRIMER
 ALL EXPOSED PIPES SHALL BE APPLIED WITH 2 COATS OF RED OXIDE PRIMER AND 2 COATS OF QUICK DRY ENAMEL DARK GREEN

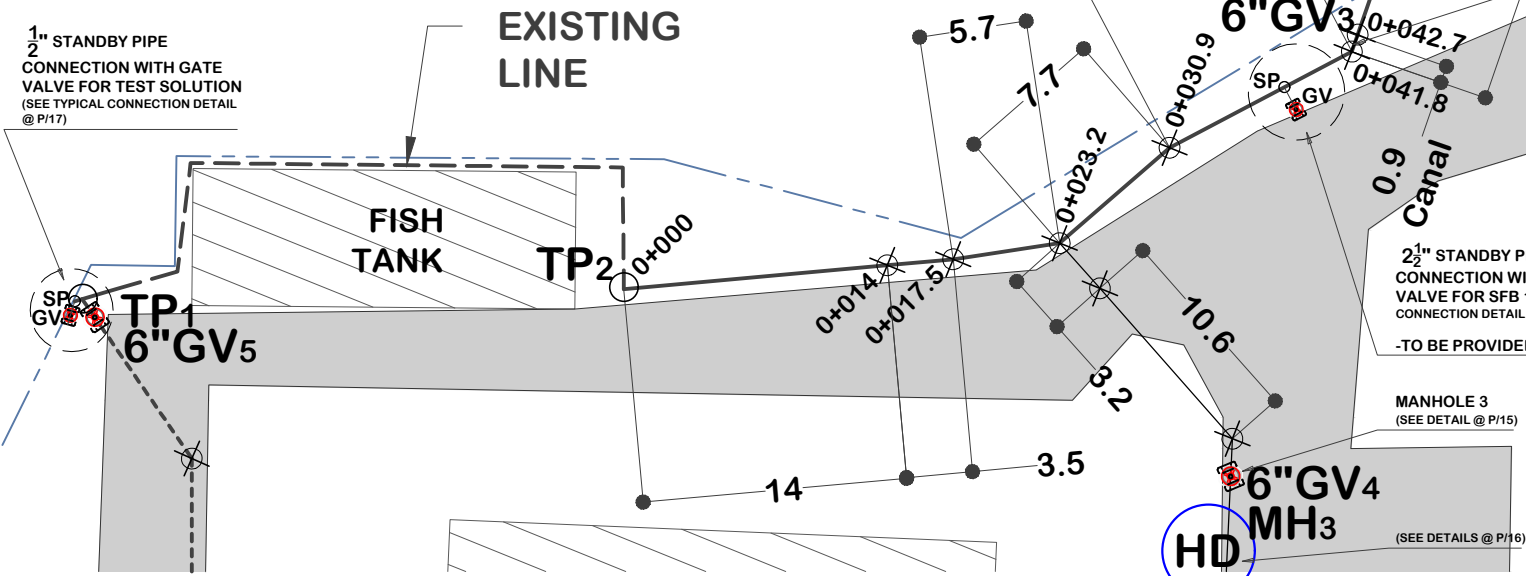
LINE 3



1" STANDBY PIPE CONNECTION WITH 1/2" GATE VALVE TO STAFF HOUSE (SEE TYPICAL CONNECTION DETAIL @ P17)

1/2" STANDBY PIPE CONNECTION WITH GATE VALVE FOR TEST SOLUTION (SEE TYPICAL CONNECTION DETAIL @ P17)

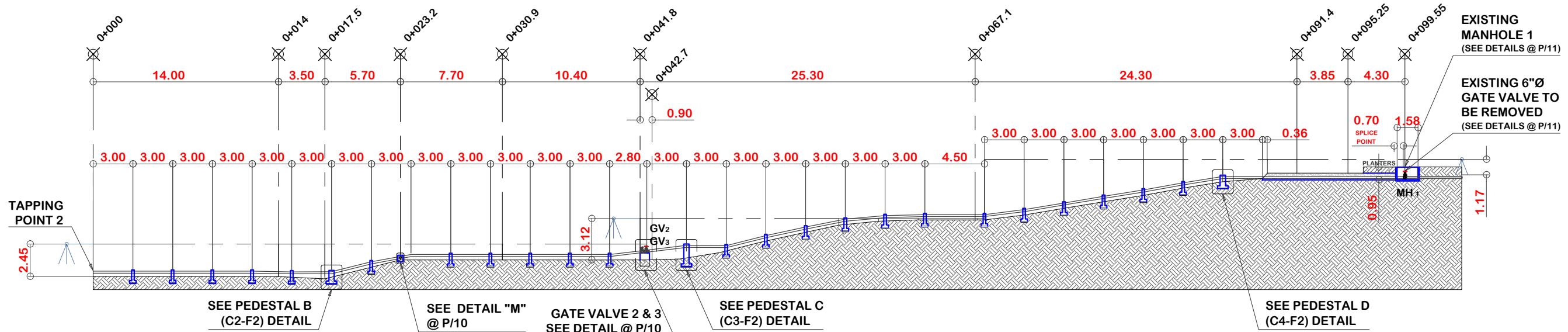
EXISTING LINE



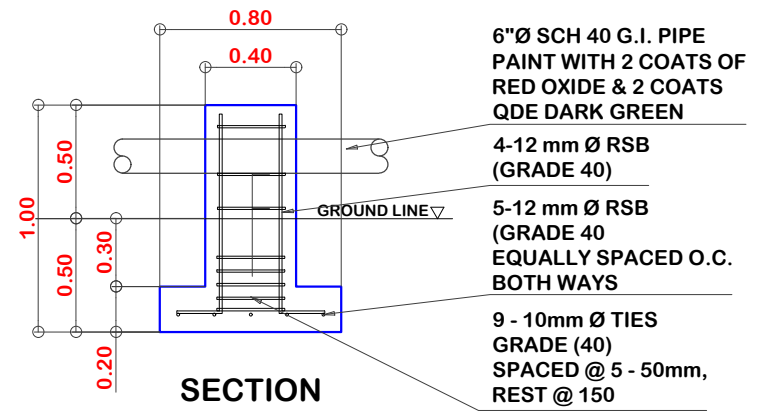
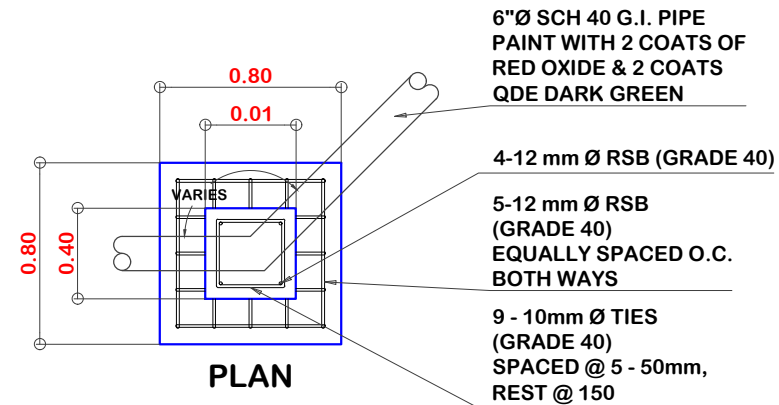
2" STANDBY PIPE CONNECTION WITH GATE VALVE FOR SFB 1 (SEE TYPICAL CONNECTION DETAIL @ P17)
 -TO BE PROVIDED BY PEZA

LINE 3 WATER SUPPLY LAYOUT
 SCALE 1:400 M

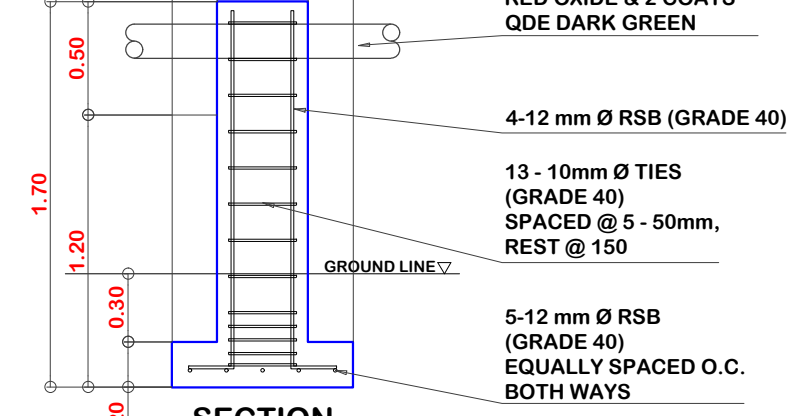
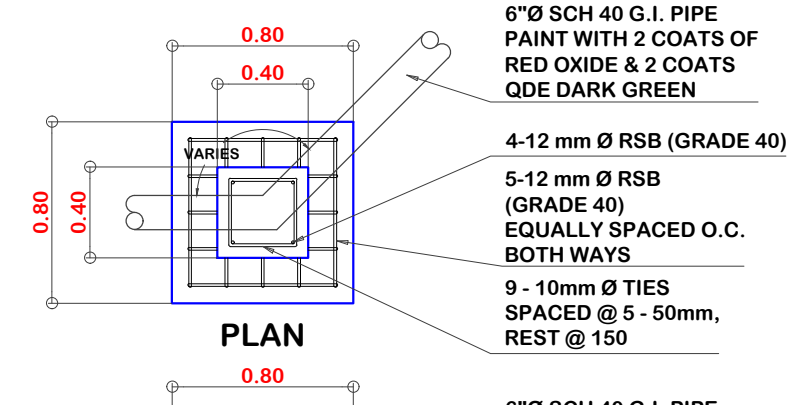
	PROJECT TITLE:	DRAWN BY:		DESIGNED BY:	RECOMMENDING APPROVAL BY:	APPROVED BY:	SHEET CONTENT:	SHEET NUMBER	
	PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND		ANJEE ANNE D. MONTERO ESO II/ Architect	JC KING B. MANANSALA ESO II/ Civil Engineer	ENGR. JOSEPH C. GALONG OIC - DIVISION CHIEF, EMD	ENGR. PAUL M. CODAMON OIC - DEPARTMENT MANAGER, OPERATIONS	ALLAN P. DATAHAN ECONOMIC ZONE DEPUTY ADMINISTRATOR	<ul style="list-style-type: none"> LINE 3 KEY MAP LOCATION LINE 3 WATER SUPPLY LAYOUT 	<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> P 08 </div>
	LOCATION:	LOAKAN, BAGUIO CITY						08 / 17	



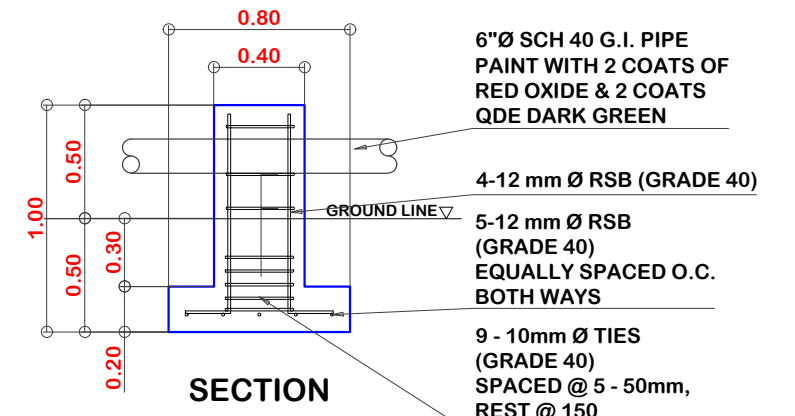
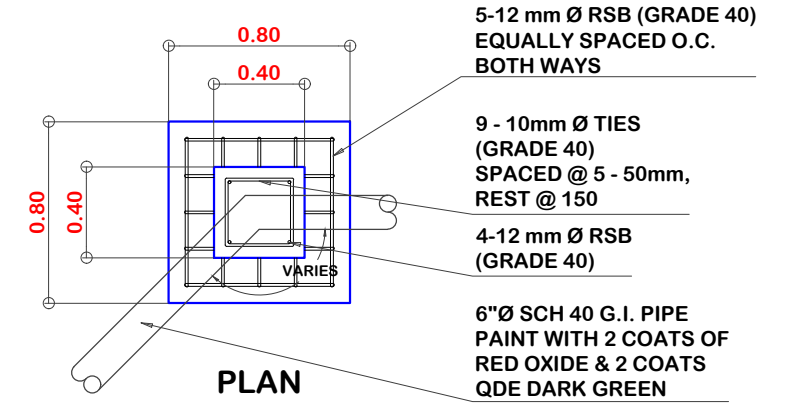
LINE 3 SECTION VIEW
SCALE NTS



PEDESTAL B (C2-F2)
SCALE 1:53 1/3 M

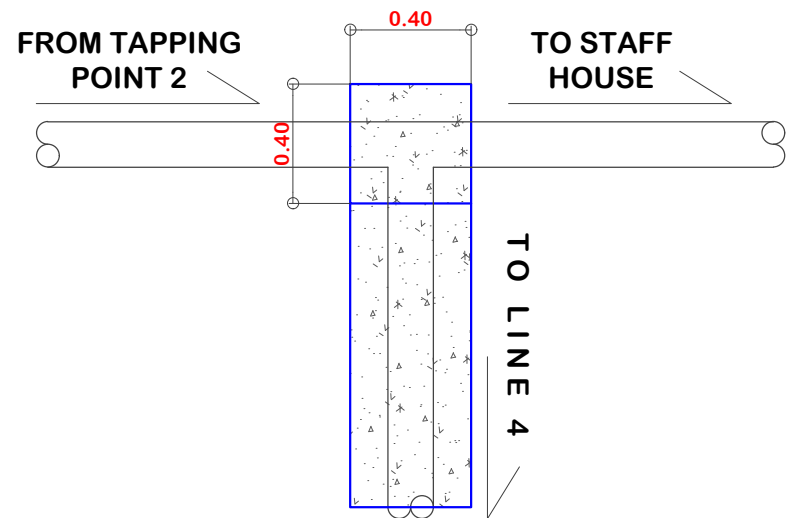


PEDESTAL C (C3-F2)
SCALE 1:53 1/3 M



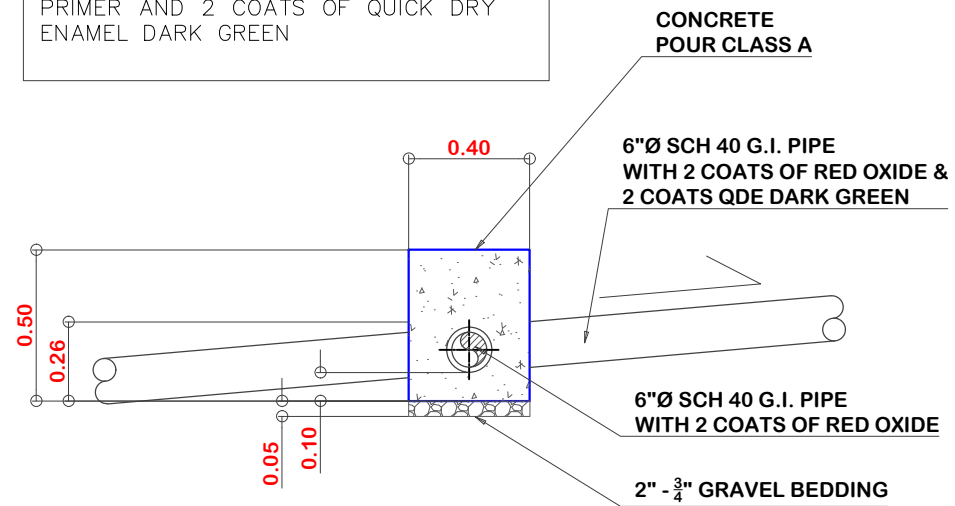
PEDESTAL D (C4-F2)
SCALE 1:53 1/3 M

	PROJECT TITLE:	DRAWN BY:	DESIGNED BY:	RECOMMENDING APPROVAL BY:	APPROVED BY:	SHEET CONTENT:	SHEET NUMBER:	
	PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND LOCATION: LOAKAN, BAGUIO CITY	ANJEE ANNE D. MONTERO ESO II/ Architect	JC KING B. MANANSALA ESO II/ Civil Engineer	ENGR. JOSEPH C. GALONG OIC - DIVISION CHIEF, EMD	ENGR. PAUL M. CODAMON OIC - DEPARTMENT MANAGER, OPERATIONS	ALLAN P. DATAHAN ECONOMIC ZONE DEPUTY ADMINISTRATOR	<ul style="list-style-type: none"> LINE 3 SECTION VIEW PEDESTAL B (C2-F2) PEDESTAL C (C3-F2) PEDESTAL D (C4-F2) 	P 09 09 17

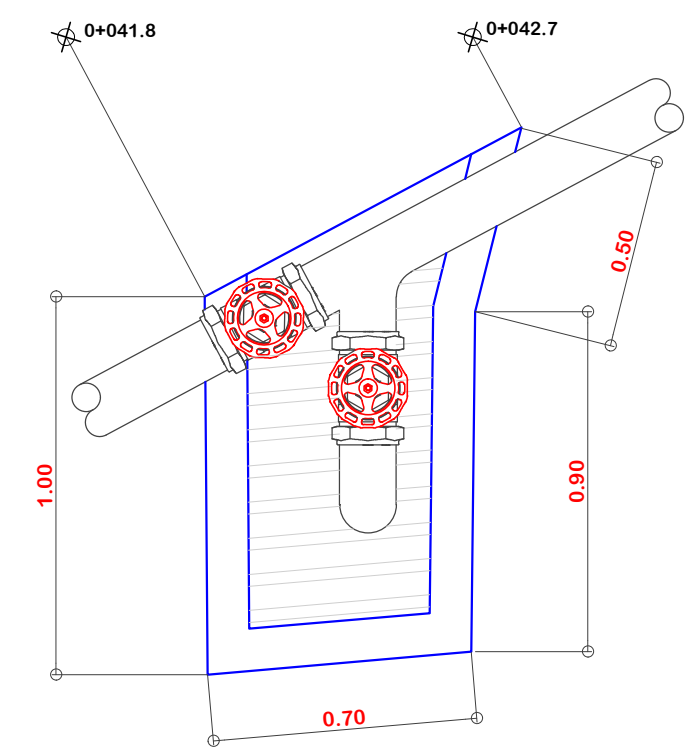


DETAIL M PLAN VIEW
SCALE 1:2.5 M

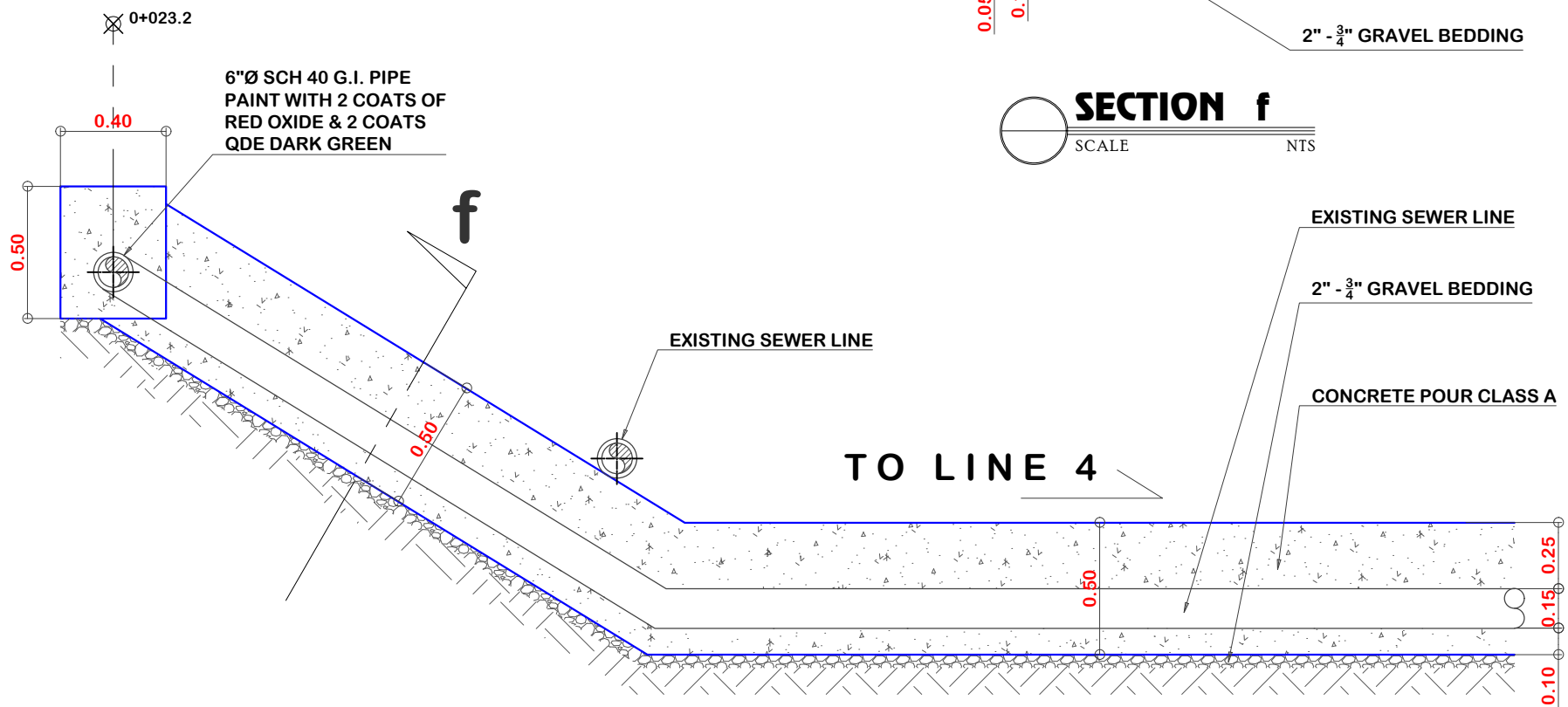
NOTE:
ALL EMBEDDED PIPE LINES SHALL BE APPLIED WITH 2 COATS OF RED OXIDE PRIMER
ALL EXPOSED PIPES SHALL BE APPLIED WITH 2 COATS OF RED OXIDE PRIMER AND 2 COATS OF QUICK DRY ENAMEL DARK GREEN



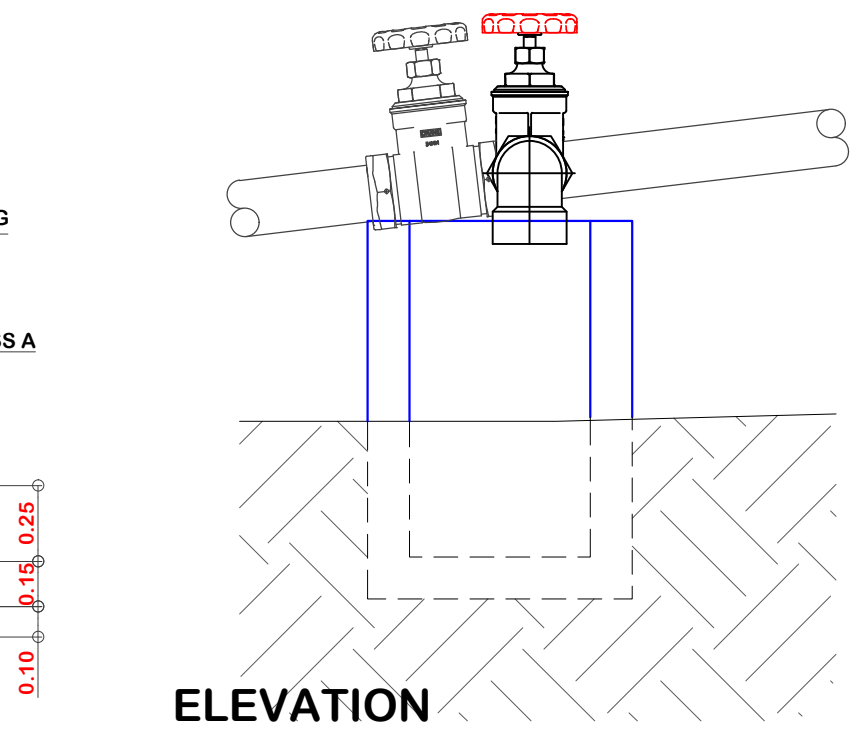
SECTION f
SCALE NTS



PLAN VIEW



DETAIL M LONGITUDINAL SECTION
SCALE 1:20 M



ELEVATION

6 GATE VALVE 2 & 3 CONNECTION DETAIL
SCALE 1:20 M



PROJECT TITLE:
PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND

LOCATION:
LOAKAN, BAGUIO CITY

DRAWN BY:
ANJEE ANNE D. MONTERO
ESO II/ Architect

DESIGNED BY:
JC KING B. MANANSALA
ESO III/ Civil Engineer

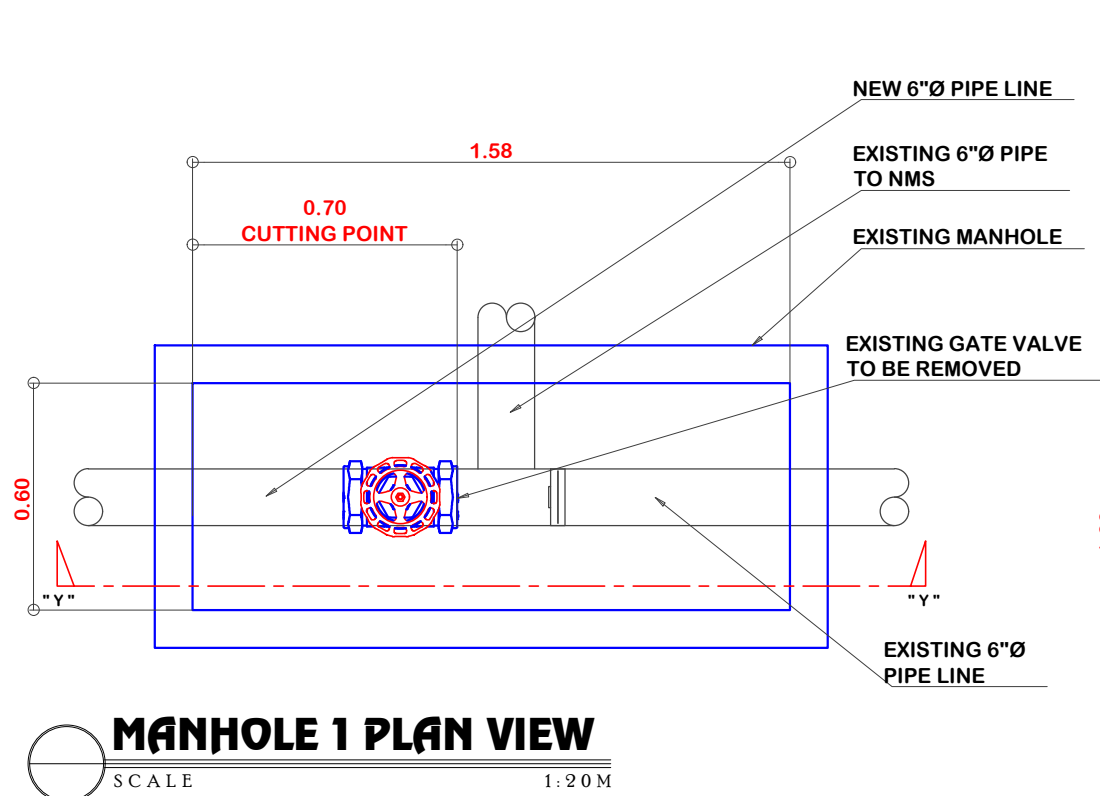
RECOMMENDING APPROVAL BY:
ENGR. JOSEPH C. GALONG
OIC - DIVISION CHIEF, EMD

APPROVED BY:
ENGR. PAUL M. CODAMON
OIC - DEPARTMENT MANAGER, OPERATIONS

APPROVED BY:
ALLAN P. DATAHAN
ECONOMIC ZONE DEPUTY ADMINISTRATOR

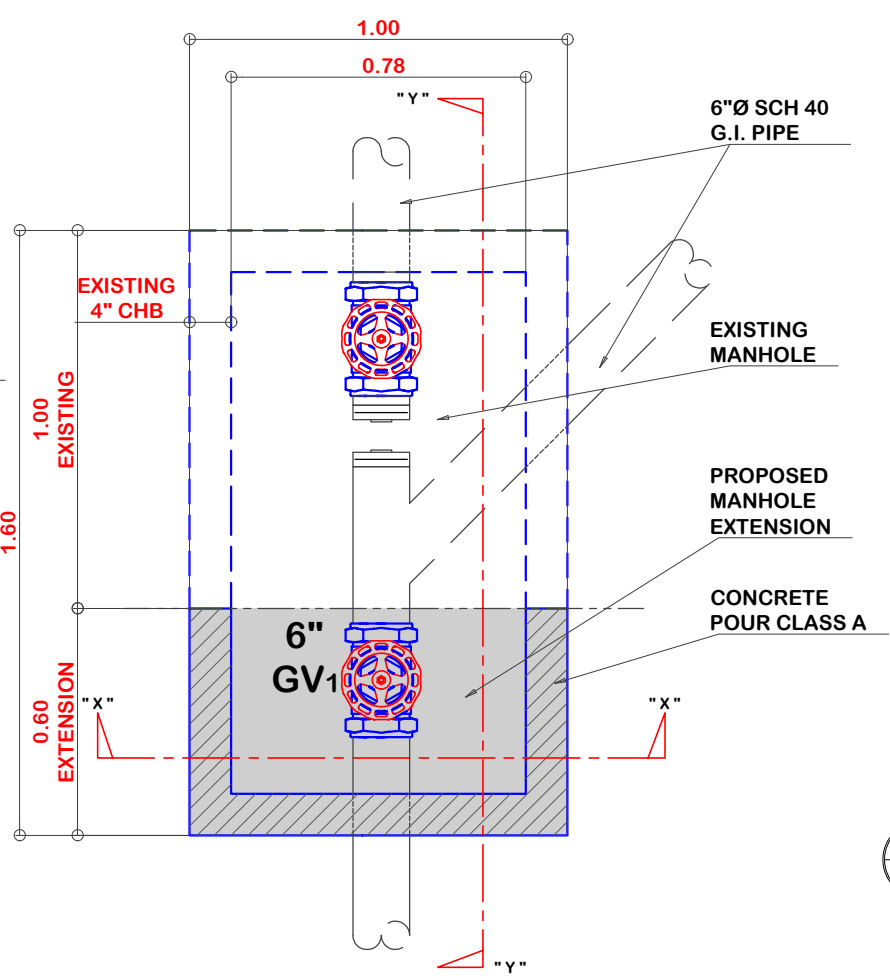
SHEET CONTENT:
• DETAIL "M" PLAN VIEW
• DETAIL "M" LONGITUDINAL SECTION
• SECTION "f"
• 6" GATE VALVE 2 & 3 CONNECTION DETAIL

SHEET NUMBER
P
10
10
17



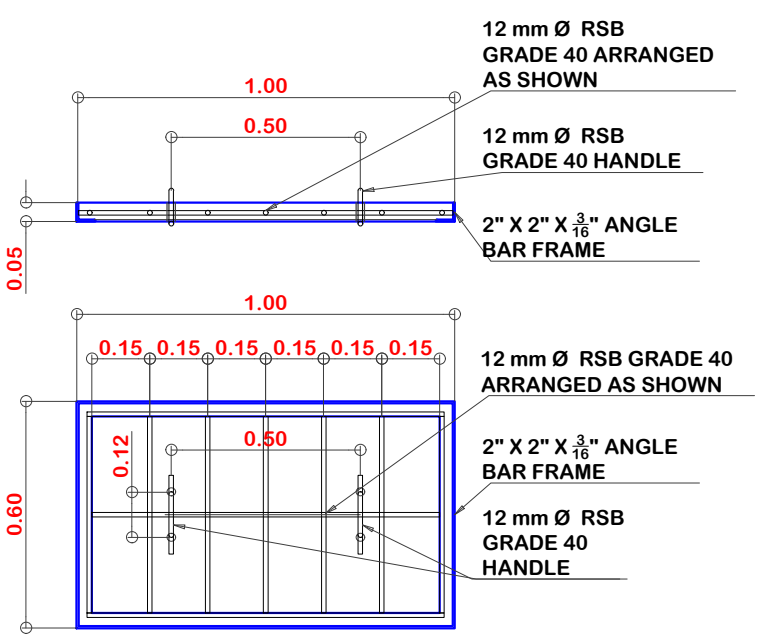
MANHOLE 1 PLAN VIEW

SCALE 1:20 M



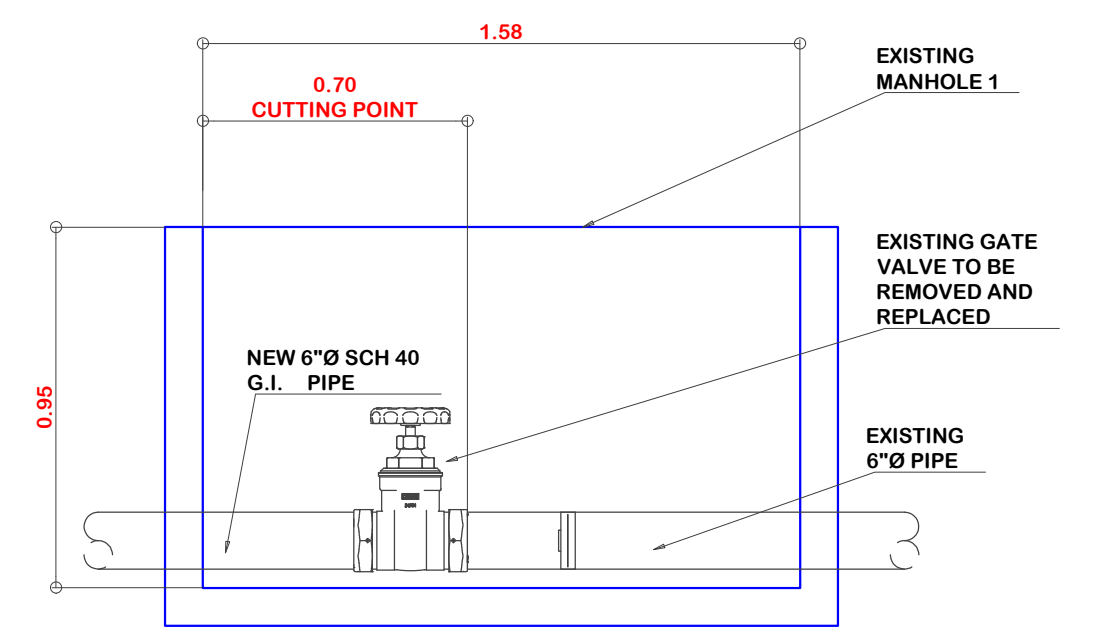
MANHOLE 2 PLAN VIEW

SCALE 1:20 M



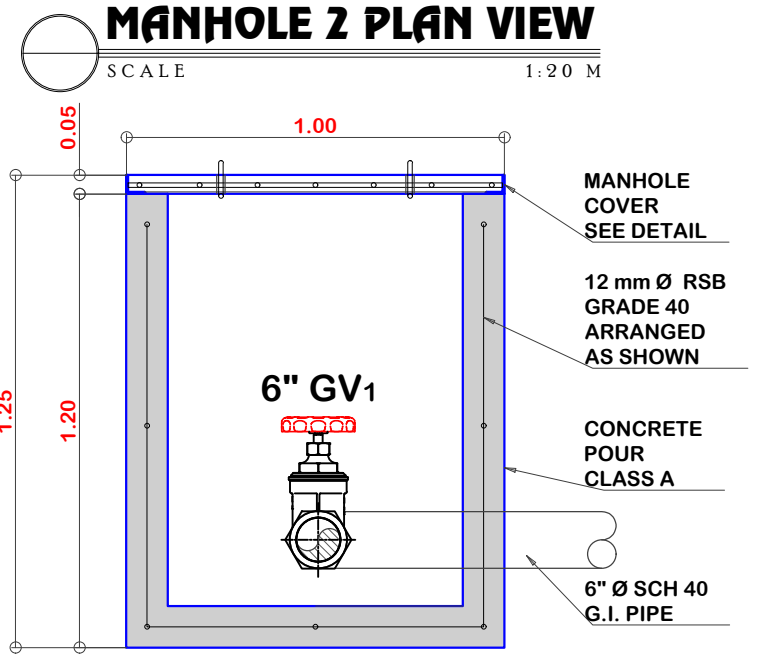
MANHOLE 2 COVER DETAIL

SCALE 1:20 M



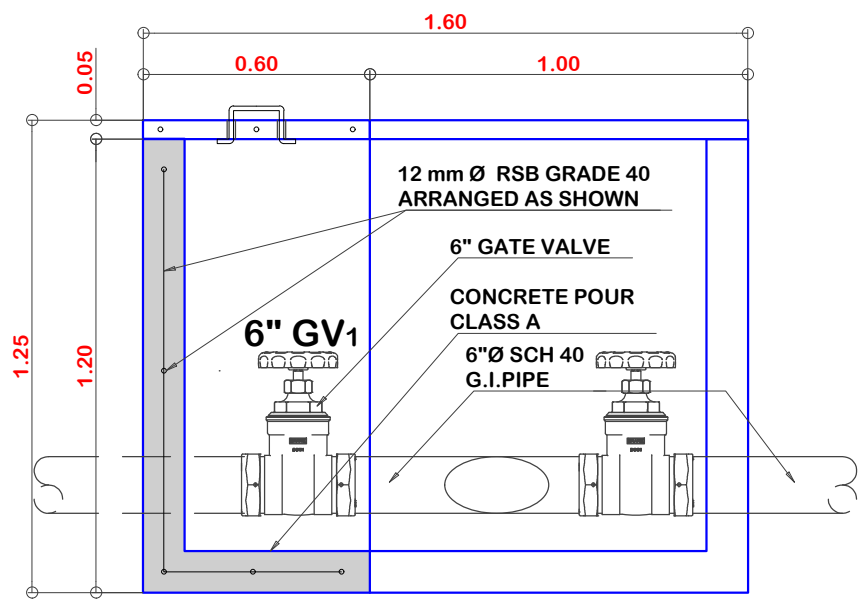
MANHOLE 1 SECTION VIEW

SCALE 1:20 M



CROSS SECTION X

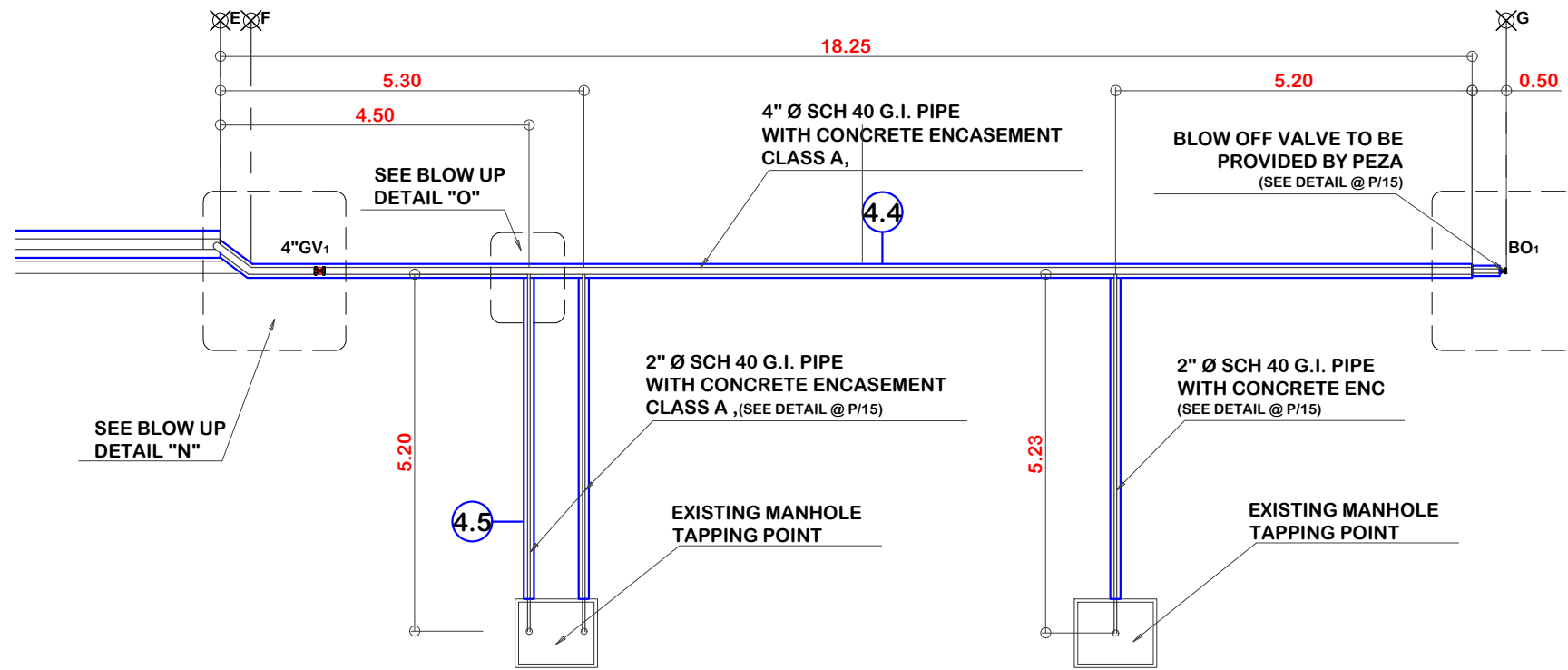
SCALE 1:20 M



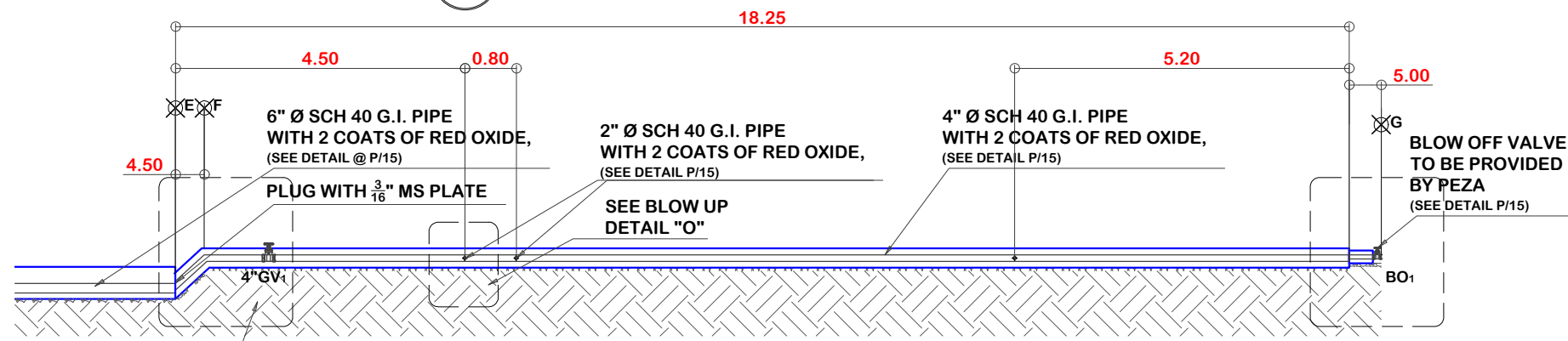
LONGITUDINAL SECTION Y

SCALE 1:20 M

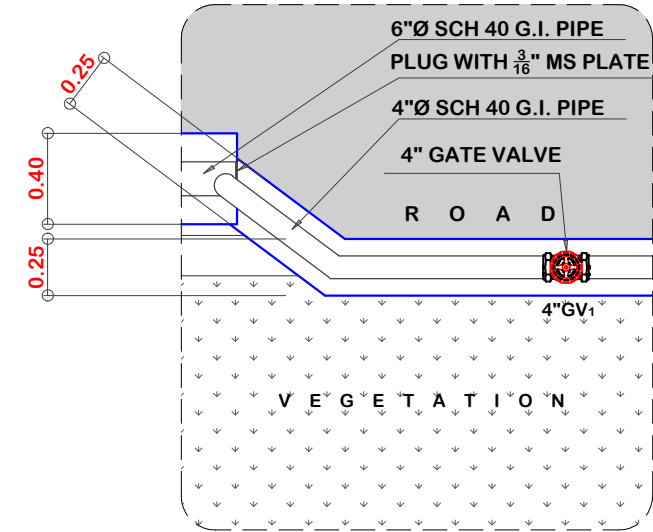
	PROJECT TITLE:	DRAWN BY:	DESIGNED BY:	RECOMMENDING APPROVAL BY:	APPROVED BY:	SHEET CONTENT:	SHEET NUMBER			
	PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND LOCATION: LOAKAN, BAGUIO CITY	ANJEE ANNE D. MONTERO ESO II/ Architect	JC KING B. MANANSALA ESO II/ Civil Engineer	ENGR. JOSEPH C. GALONG OIC - DIVISION CHIEF, EMD	ENGR. PAUL M. CODAMON OIC - DEPARTMENT MANAGER, OPERATIONS			ALLAN P. DATAHAN ECONOMIC ZONE DEPUTY ADMINISTRATOR	<ul style="list-style-type: none"> MANHOLE 1 PLAN VIEW MANHOLE 1 SECTION VIEW MANHOLE 2 PLAN VIEW CROSS SECTION "X" LONGITUDINAL SECTION "Y" MANHOLE 2 COVER DETAIL 	P 11 11 / 17



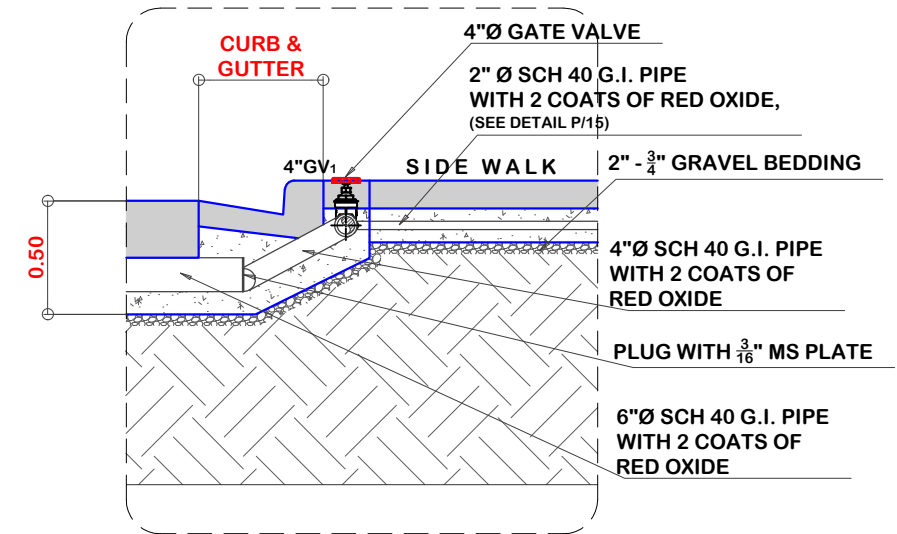
PLAN VIEW OF 4.4 & 4.5
SCALE 1:10 M



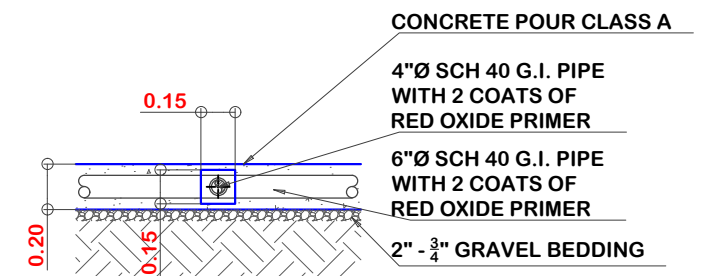
SECTION VIEW LINE 4.4
SCALE 1:10 M



DETAIL N PLAN VIEW
SCALE NTS



DETAIL N SECTIONAL VIEW
SCALE NTS



BLOW UP DETAIL O
SCALE NTS

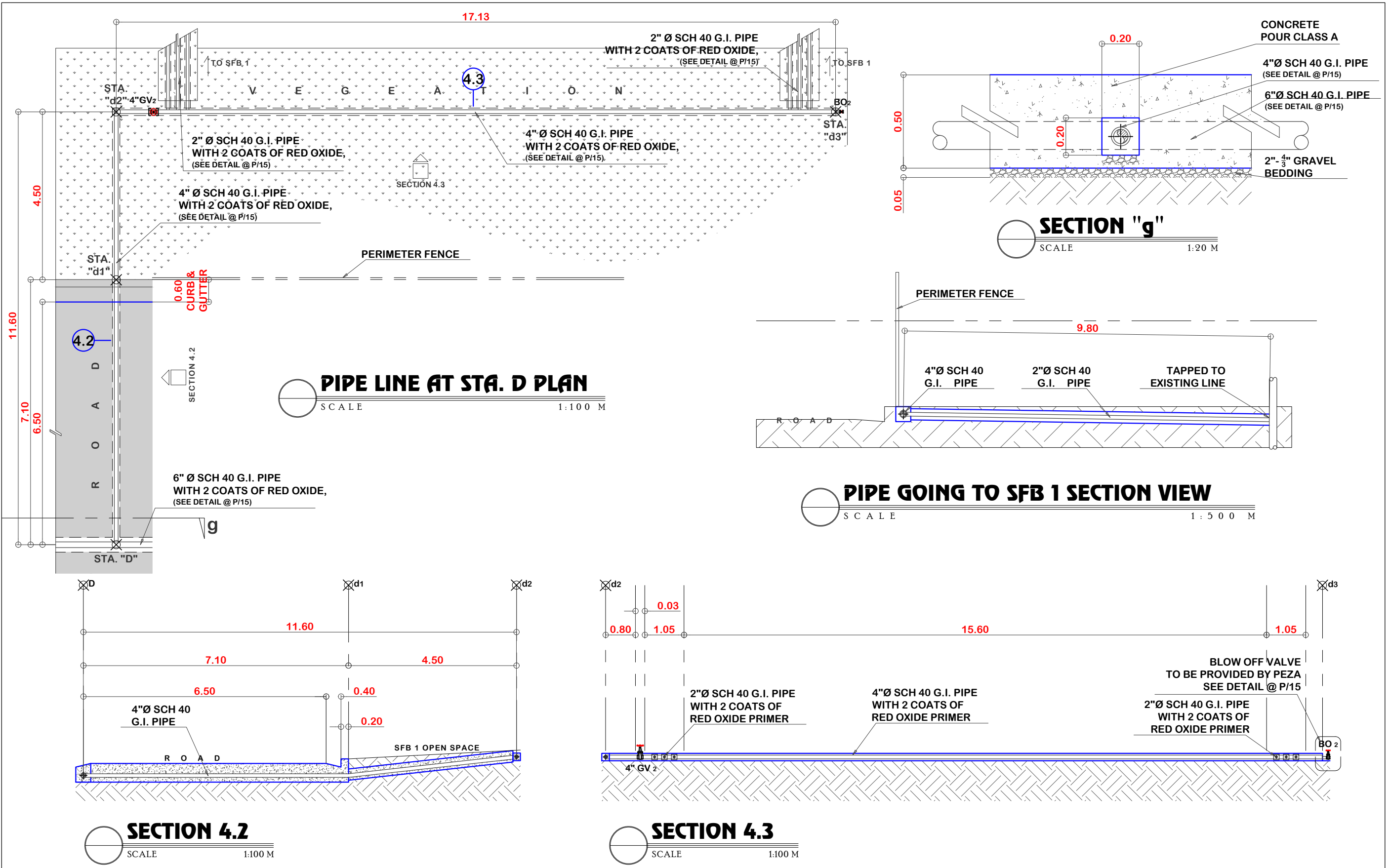
NOTE:


ALL EMBEDDED PIPE LINES SHALL BE APPLIED WITH 2 COATS OF RED OXIDE PRIMER

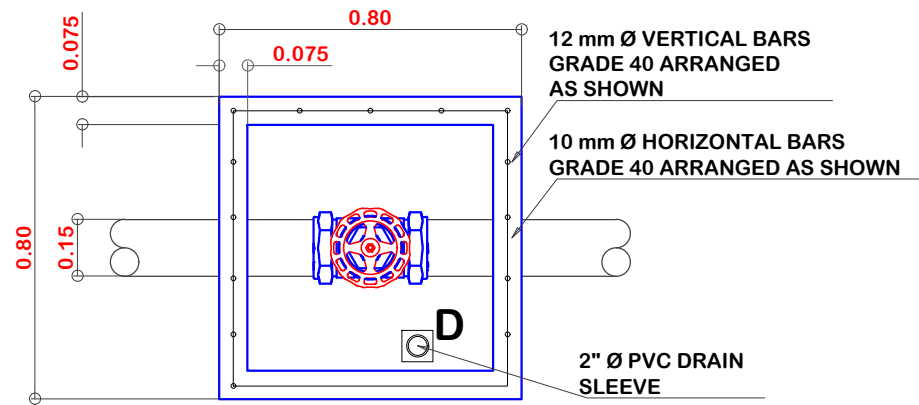
ALL EXPOSED PIPES SHALL BE APPLIED WITH 2 COATS OF RED OXIDE PRIMER AND 2 COATS OF QUICK DRY ENAMEL DARK GREEN



	PROJECT TITLE:	DRAWN BY:	DESIGNED BY:	RECOMMENDING APPROVAL BY:	APPROVED BY:	SHEET CONTENT:	SHEET NUMBER
	PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND LOCATION: LOAKAN, BAGUIO CITY	ANJEE ANNE D. MONTERO ESO II/ Architect	JC KING B. MANANSALA ESO II/ Civil Engineer	ENGR. JOSEPH C. GALONG OIC - DIVISION CHIEF, EMD	ENGR. PAUL M. CODAMON OIC - DEPARTMENT MANAGER, OPERATIONS		

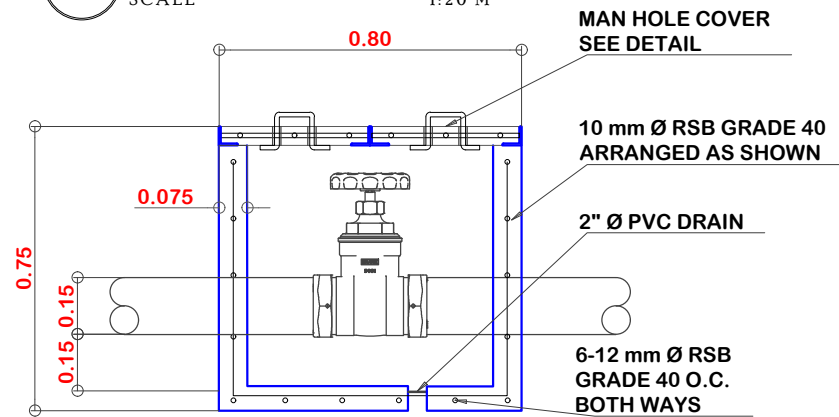


	PROJECT TITLE:	DRAWN BY:	DESIGNED BY:	RECOMMENDING APPROVAL BY:	APPROVED BY:	SHEET CONTENT:	SHEET NUMBER	
	<p>PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND</p> <p>LOCATION:</p> <p>LOAKAN, BAGUIO CITY</p>	<p>ANJEE ANNE D. MONTERO</p> <p>ESO II/ Architect</p>	<p>JC KING B. MANANSALA</p> <p>ESO II/ Civil Engineer</p>	<p>ENGR. JOSEPH C. GALONG</p> <p>OIC - DIVISION CHIEF, EMD</p>	<p>ENGR. PAUL M. CODAMON</p> <p>OIC - DEPARTMENT MANAGER, OPERATIONS</p>	<p>ALLAN P. DATAHAN</p> <p>ECONOMIC ZONE DEPUTY ADMINISTRATOR</p>	<ul style="list-style-type: none"> PIPE LINE @ STA. "D" PLAN SECTION 4.2 SECTION 4.3 PIPE GOING TO SFB 1 SECTION VIEW SECTION "g" 	<p style="text-align: center;">P</p> <p style="text-align: center;">14</p> <p style="text-align: center;">14 / 17</p>



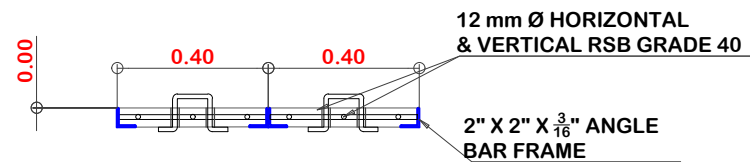
MANHOLE 3 PLAN

SCALE 1:20 M



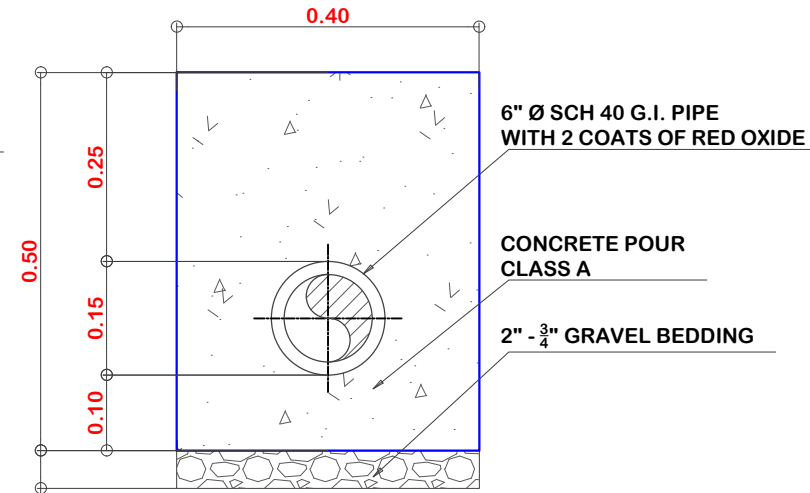
MANHOLE 3 SECTION

SCALE 1:20 M



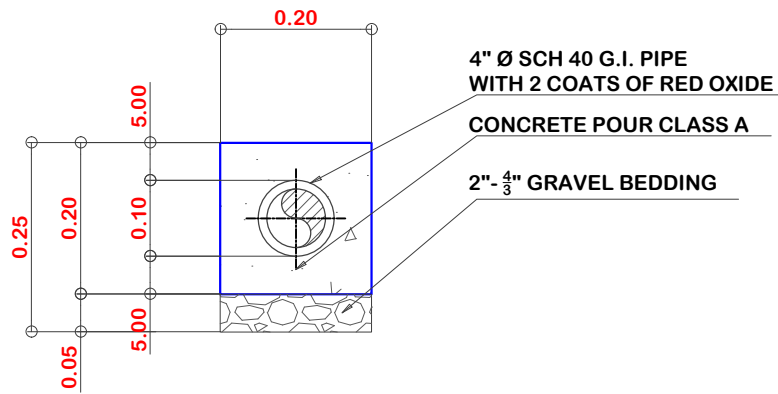
MANHOLE 3 COVER DETAIL

SCALE 1:20 M



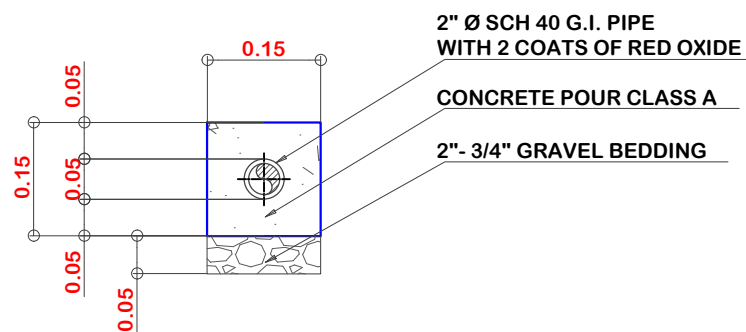
6 PIPE ENCASEMENT SECTION

SCALE 1:10 M



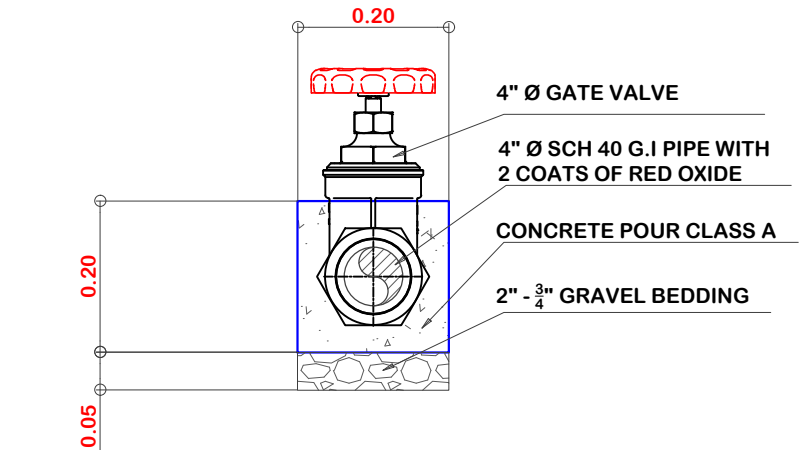
4 PIPE ENCASEMENT SECTION

SCALE 1:10 M



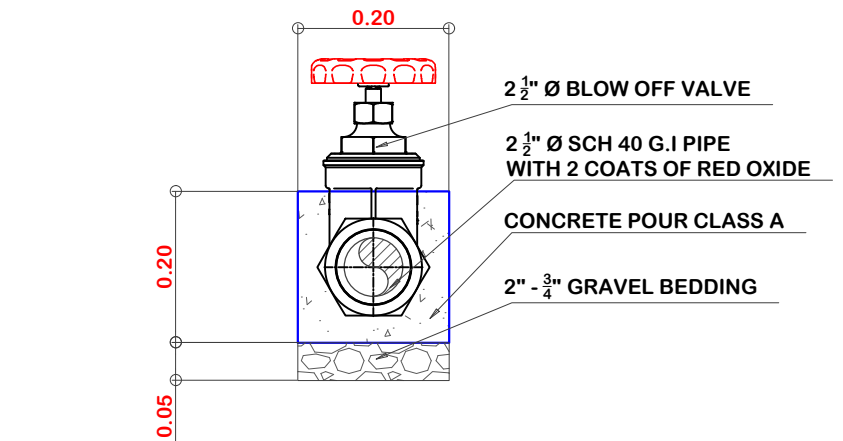
2 PIPE ENCASEMENT SECTION

SCALE 1:10 M



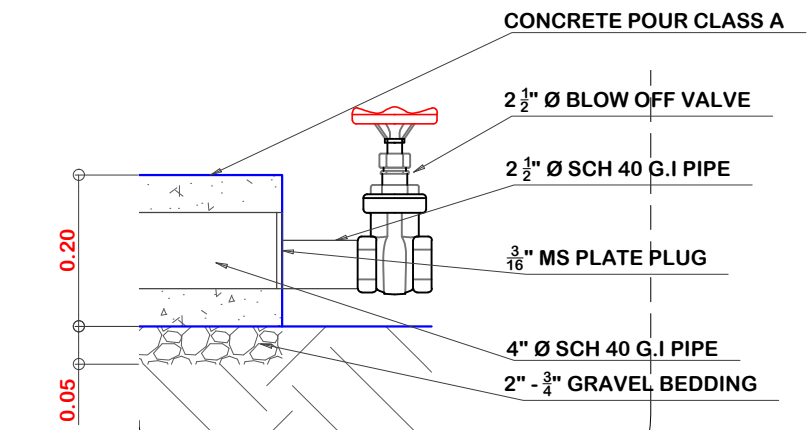
GATE VALVE SECTION

SCALE 1:10 M



BLOW OFF VALVE CROSS SECTION

SCALE 1:10 M



BLOW OFF VALVE LONGITUDINAL SECTION

SCALE 1:10 M



PROJECT TITLE:
PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND

LOCATION:
LOAKAN, BAGUIO CITY

DRAWN BY:
ANJEE ANNE D. MONTERO
ESO II/ Architect

DESIGNED BY:
JC KING B. MANANSALA
ESO II/ Civil Engineer

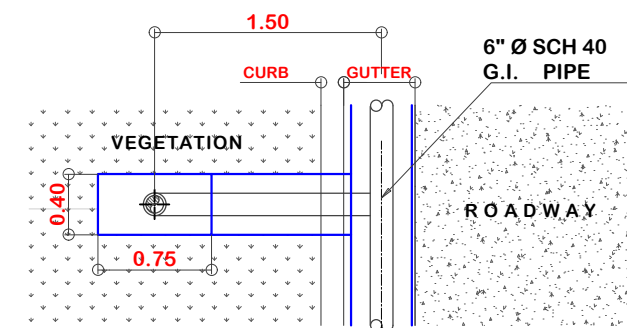
RECOMMENDING APPROVAL BY:
ENGR. JOSEPH C. GALONG
OIC - DIVISION CHIEF, EMD

APPROVED BY:
ENGR. PAUL M. CODAMON
OIC - DEPARTMENT MANAGER, OPERATIONS

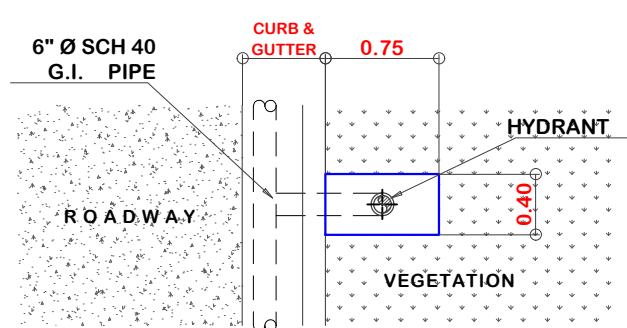
APPROVED BY:
ALLAN P. DATAHAN
ECONOMIC ZONE DEPUTY ADMINISTRATOR

- SHEET CONTENT:
- MANHOLE 3 PLAN
 - MANHOLE 3 SECTION
 - MANHOLE 3 COVER DETAIL
 - 6" Ø PIPE ENCASEMENT SECTION
 - 4" Ø PIPE ENCASEMENT SECTION
 - 2" Ø PIPE ENCASEMENT SECTION
 - GATE VALVE SECTION
 - BLOW OFF VALVE SECTION

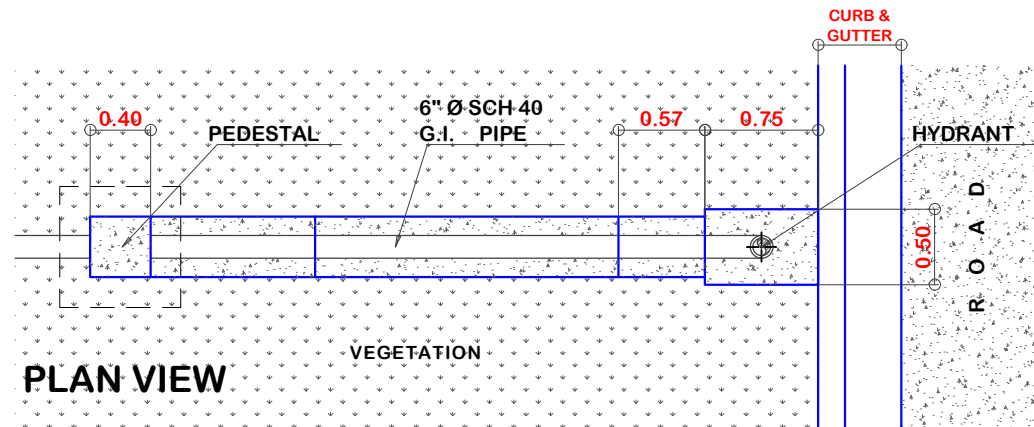
SHEET NUMBER
P 15
15 / **17**



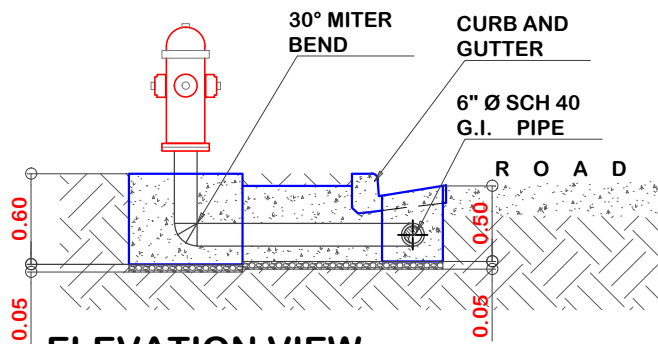
PLAN VIEW



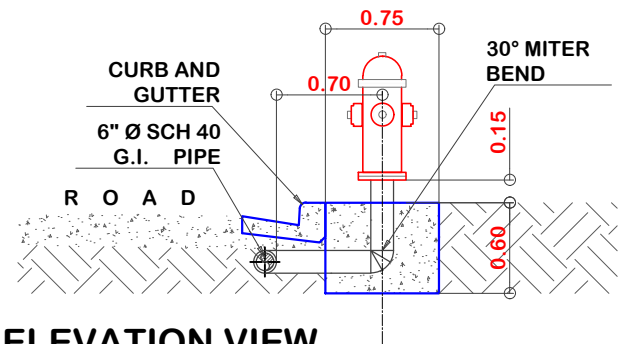
PLAN VIEW



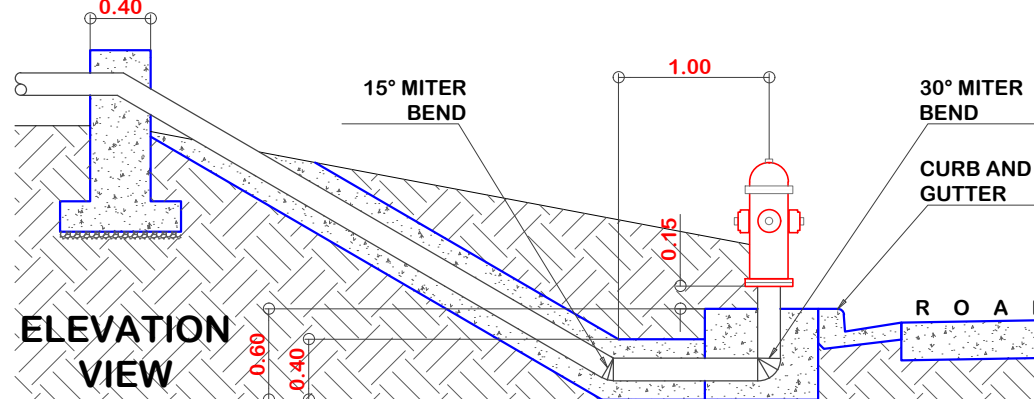
PLAN VIEW



ELEVATION VIEW



ELEVATION VIEW

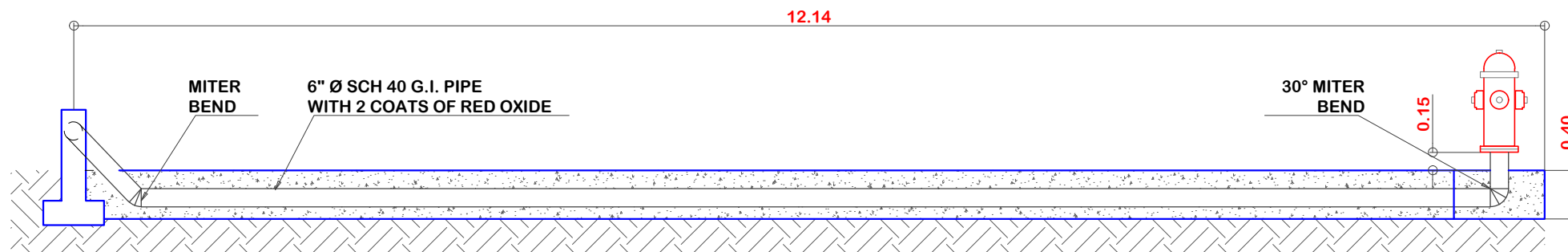


ELEVATION VIEW

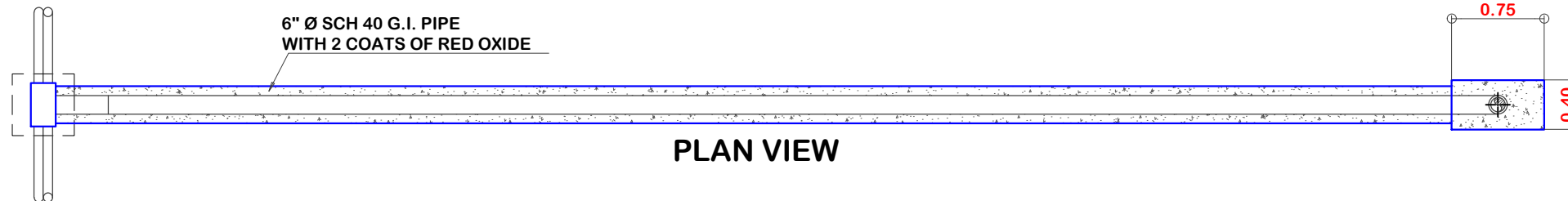
HYDRANT A & B DETAIL
SCALE 1:50 M

HYDRANT D DETAIL
SCALE 1:50 M

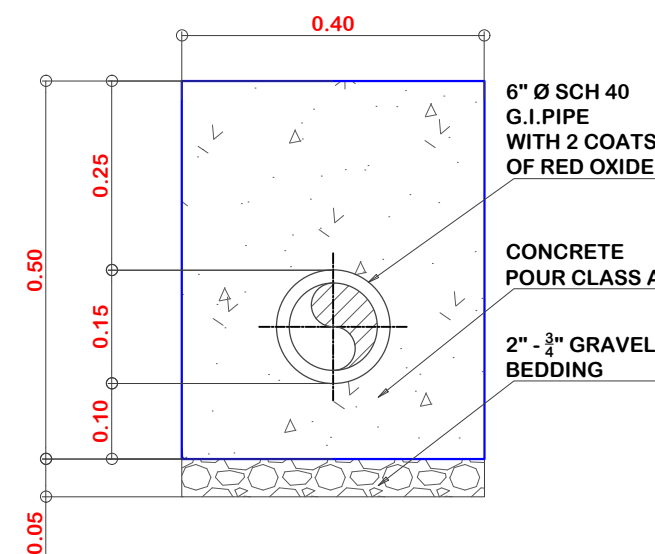
HYDRANT E DETAIL
SCALE 1:50 M



ELEVATION VIEW



PLAN VIEW



6 PIPE ENCASEMENT SECTION
SCALE 1:10 M

HYDRANT C DETAIL
SCALE 1:50 M



PROJECT TITLE:
PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND

LOCATION:
LOAKAN, BAGUIO CITY

DRAWN BY:
ANJEE ANNE D. MONTERO
ESO II/ Architect

DESIGNED BY:
JC KING B. MANANSALA
ESO II/ Civil Engineer

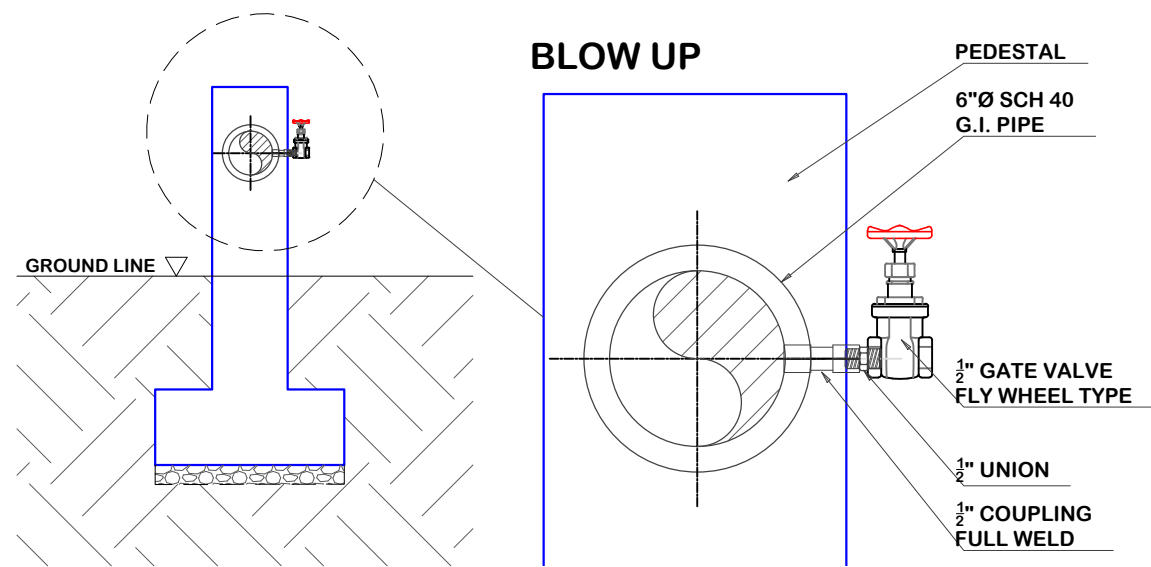
RECOMMENDING APPROVAL BY:
ENGR. JOSEPH C. GALONG
OIC - DIVISION CHIEF, EMD

APPROVED BY:
ENGR. PAUL M. CODAMON
OIC - DEPARTMENT MANAGER, OPERATIONS

APPROVED BY:
ALLAN P. DATAHAN
ECONOMIC ZONE DEPUTY ADMINISTRATOR

SHEET CONTENT:
 • PLAN AND SECTION OF FIRE HYDRANT "HA" & "HB" DETAIL - FIRE
 • PLAN AND SECTION OF FIRE HYDRANT "HC" DETAIL
 • PLAN AND SECTION OF FIRE HYDRANT "HD" DETAIL - FIRE
 • PLAN AND SECTION OF FIRE HYDRANT "HE" DETAIL
 • 6" PIPE ENCASEMENT SECTION

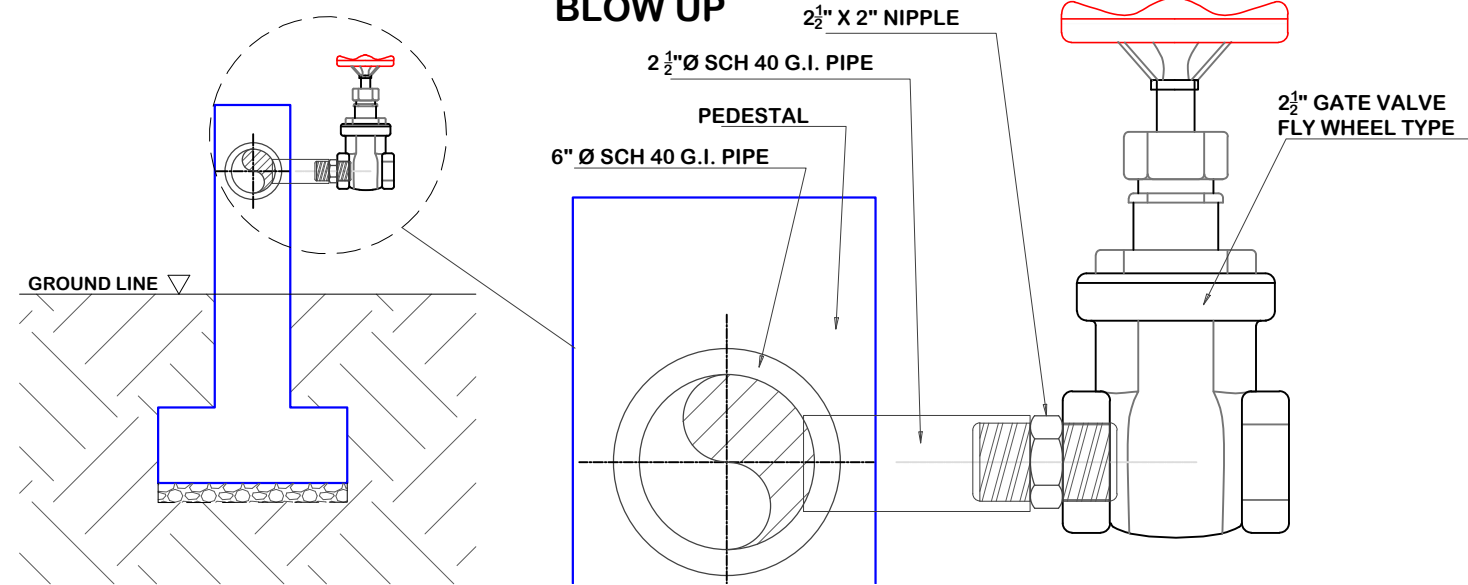
SHEET NUMBER
P 16
16 / **17**



FOR 1/2" TYPICAL STANDBY CONNECTION

SCALE

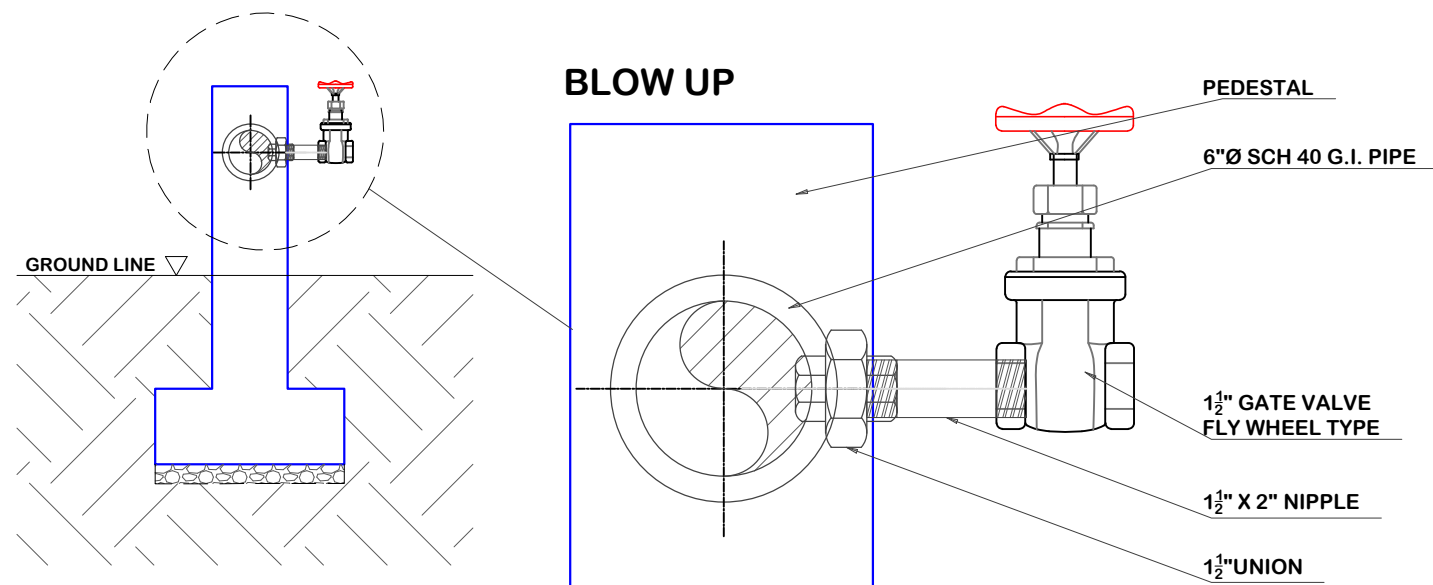
1 : 5 0 M



FOR 2 1/2" TYPICAL STANDBY CONNECTION

SCALE

1 : 5 0 M



FOR 1 1/2" TYPICAL STANDBY CONNECTION

SCALE

1 : 5 0 M



PROJECT TITLE:
PROPOSED RE-PIPING PROJECT FOR WATER SUPPLY LINE AT BCEZ SFB COMPOUND
 LOCATION:
LOAKAN, BAGUIO CITY

DRAWN BY:
ANJEE ANNE D. MONTERO
 ESO II/ Architect

DESIGNED BY:
JC KING B. MANANSALA
 ESO III/ Civil Engineer

RECOMMENDING APPROVAL BY:
ENGR. JOSEPH C. GALONG
 OIC - DIVISION CHIEF, EMD

APPROVED BY:
ENGR. PAUL M. CODAMON
 OIC - DEPARTMENT MANAGER, OPERATIONS

APPROVED BY:
ALLAN P. DATAHAN
 ECONOMIC ZONE DEPUTY ADMINISTRATOR

SHEET CONTENT:
 • TYPICAL 1/2" STANDBY PIPE CONNECTION
 • TYPICAL 1 1/2" STANDBY PIPE CONNECTION
 • TYPICAL 2 1/2" STANDBY PIPE CONNECTION
 • BLOWUP DRAWINGS

SHEET NUMBER
P
17
 17 / 17

Section VIII. Bill of Quantities

<i>(Columns (1), (2), (3), and (4) are to be filled up by the Procuring Entity)</i>				<i>(Columns (5) and (6) are to be filled up by the Bidder)</i>	
Pay Item No.	Description	Unit	Quantity	Unit Price (Pesos)	Amount (Pesos)
(1)	(2)	(3)	(4)	(5)	(6)
PART A					
Item A.1	Clearing and Grubbing	sq.m.	1,262.85	In words: Pesos _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
Item A.2	Removal of Structures and Obstructions (Existing concrete pavement, sidewalk, manhole and curb and gutter)	sq.m.	87.57	In words: Pesos _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
PART B					
Item B.1	Manual Structural Excavation (Common Soil)	cu.m.	49.08	In words: Pesos _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____

Item B.2	Embankment (From Structural Excavation)	cu.m.	6.66	In words: Pesos _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
Item B.3	Gravel Bedding (3/4")	cu.m.	9.39	In words: Pesos _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
PART C					
Item C.1	Reinforcing Steel Bar, Grade 40	kgs.	845.36	In words: Pesos _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
Item C.2	Formworks and Falseworks	sq.m.	82.71	In words: Pesos _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
Item C.3	Structural Concrete Class A (Pedestal, Sidewalk, manhole and Curb and Gutter)	cu.m.	49.71	In words: Pesos _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____

Item C.4	PCC Pavement, 4000psi @ 7 days	cu.m.	5.00	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
PART D					
Item D.1.	6" G.I. Pipe Line, Schedule 40	ln.m.	480.17	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
Item D.2.	4" G.I. Pipe Line, Schedule 40	ln.m.	50.75	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
Item D.3.	2" G.I. Pipe Line, Schedule 40	ln.m.	15.60	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
Item D.4.	1 1/2" G.I. Pipe Line, Schedule 40	ln.m.	23.51	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____

Item D.5.	6" Fire Hydrant	sets	5.00	In words: Pesos _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
Item D.6.	6" Non-Rising Stem Gate Valve	sets	6.00	In words: Pesos _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
Item D.7.	4" Non-Rising Stem Gate Valve	sets	2.00	In words: Pesos _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
Item D.8.	Manhole with Cover	sets	2.00	In words: Pesos _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
Item D.9	Standby and Blow Off Connections	sets	8.00	In words: Pesos _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____

Item D.10	Painting Works (Metal Painting)	sq.m.	252.07	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
PART E					
Item E.1	Mobilization/ Demobilization	lot	1.00	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____
Item E.2	Safety and Health Provision	lot	1.00	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____	In figures: Php _____ _____

Submitted by:

Name and Signature of Bidder's Representative
Position

Date: _____

Name of Bidder

SUMMARY of BID PRICES

PART NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
PART A	SITE PREPARATION				
Item A.1.	Clearing and Grubbing	sq.m.	1,262.85		
Item A.2.	Removal of Structures and Obstructions (Existing concrete pavement, sidewalk, manhole and curb and gutter)	sq.m.	87.57		
PART B	EARTHWORKS				
Item B.1.	Manual Structural Excavation (Common Soil)	cu.m.	49.08		
Item B.2.	Embankment (From Structural Excavation)	cu.m.	6.66		
Item B.3.	Gravel Bedding (3/4")	cu.m.	9.39		
PART C	CIVIL WORKS				
Item C.1.	Reinforcing Steel Bar, Grade 40	kgs.	845.36		
Item C.2.	Formworks and Falseworks	sq.m.	82.71		
Item C.3.	Structural Concrete Class A (Pedestal, Sidewalk, manhole and Curb and Gutter)	cu.m.	49.71		
Item C.4.	PCC Pavement, 4000psi @ 7 days	cu.m.	5.00		
PART D	WATER LINE WORKS				
Item D.1.	6" G.I. Pipe Line, Schedule 40	ln.m.	480.17		
Item D.2.	4" G.I. Pipe Line, Schedule 40	ln.m.	50.75		
Item D.3.	2" G.I. Pipe Line, Schedule 40	ln.m.	15.60		
Item D.4.	1 1/2" G.I. Pipe Line, Schedule 40	ln.m.	23.51		
Item D.5.	6" Fire Hydrant	sets	5.00		
Item D.6.	6" Non-Rising Stem Gate Valve	sets	6.00		

Item D.7.	4" Non-Rising Stem Gate Valve	sets	2.00		
Item D.8.	Manhole with Cover	sets	2.00		
Item D.9.	Standby and Blow Off Connections	sets	8.00		
Item D.10.	Painting Works (Metal Painting)	sq.m.	252.07		
PART E	OTHER GENERAL REQUIREMENTS				
ITEM E.1.	Mobilization/Demobilization	lot	1.00		
ITEM E.2.	Safety and Health Provision	lot	1.00		
	TOTAL				

Name _____ in the capacity of _____

Signed _____ Date _____

Duly authorized to sign the Bid for and on behalf of _____

Section IX. Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class “A” Documents

Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
or
- (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document;
and
- (c) Mayor’s or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;
and
- (e) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

Technical Documents

- (f) 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**
- (g) 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
- (h) Philippine Contractors Accreditation Board (PCAB) License;
or
Special PCAB License in case of Joint Ventures;
and registration for the type and cost of the contract to be bid; **and**
- (i) 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**
- (j) 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**
- (k) 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

- (l) The prospective bidder's audited financial statements, showing, among others, the prospective bidder's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission; **and**
- (m) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).

Class "B" Documents

- (n) 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

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

Other documentary requirements under RA No. 9184

- (p) Original of duly signed Bid Prices in the Bill of Quantities; **and**
- (q) 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**
- (r) Cash Flow by Quarter.

ANNEXES : STANDARD FORMS

A. Bid Form

Date: _____

IB N°: _____

To: *[name and address of PROCURING ENTITY]*

Address: *[insert address]*

We, the undersigned, declare that:

(a) We have examined and have no reservation to the Bidding Documents, including Addenda, for the Contract *[insert name of contract]*;

(b) We offer to execute the Works for this Contract in accordance with the Bid and Bid Data Sheet, General and Special Conditions of Contract accompanying this Bid;

The total price of our Bid, excluding any discounts offered below is: *[insert information]*;

The discounts offered and the methodology for their application are: *[insert information]*;

(c) Our Bid shall be valid for a period of *[insert number]* days from the date fixed for the Bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(d) If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract;

(e) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from the following eligible countries: *[insert information]*;

(f) We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;

(g) Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by the Funding Source;

(h) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and

(i) We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.

(j) We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and

perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the [Name of Project] of the [Name of the Procuring Entity].

- (k) We acknowledge that failure to sign each and every page of this Bid Form, including the Bill of Quantities, shall be a ground for the rejection of our bid.**

Name: _____

In the capacity of: _____

Signed: _____

Duly authorized to sign the Bid for and on behalf of: _____

Date: _____

B. Omnibus Sworn Statement

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

AFFIDAVIT

I, *[Name of Affiant]*, of legal age, *[Civil Status]*, *[Nationality]*, and residing at *[Address of Affiant]*, after having been duly sworn in accordance with law, do hereby depose and state that:

1. **Select one, delete the other:**

If a sole proprietorship: I am the sole proprietor or authorized representative of *[Name of Bidder]* with office address at *[address of Bidder]*;

If a partnership, corporation, cooperative, or joint venture: I am the duly authorized and designated representative of *[Name of Bidder]* with office address at *[address of Bidder]*;

2. **Select one, delete the other:**

If a sole proprietorship: As the owner and sole proprietor or authorized representative of *[Name of Bidder]*, I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for *[Name of the Project]* of the *[Name of the Procuring Entity]* *[insert "as shown in the attached duly notarized Special Power of Attorney" for the authorized representative]*;

If a partnership, corporation, cooperative, or joint venture: I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for *[Name of the Project]* of the *[Name of the Procuring Entity]*, accompanied by the duly notarized Special Power of Attorney, Board/Partnership Resolution, or Secretary's Certificate, whichever is applicable;

3. *[Name of Bidder]* is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board;
4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. *[Name of Bidder]* is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. **Select one, delete the rest:**

If a sole proprietorship: The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

If a partnership or cooperative: None of the officers and members of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

If a corporation or joint venture: None of the officers, directors, and controlling stockholders of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. *[Name of Bidder]* complies with existing labor laws and standards; and

8. *[Name of Bidder]* is aware of and has undertaken the following responsibilities as a Bidder:

a) Carefully examine all of the Bidding Documents;

b) Acknowledge all conditions, local or otherwise, affecting the implementation of the Contract;

c) Made an estimate of the facilities available and needed for the contract to be bid, if any; and

d) Inquire or secure Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.

9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

IN WITNESS WHEREOF, I have hereunto set my hand this ___ day of ___, 20__ at _____, Philippines.

Bidder's Representative/Authorized Signatory

SUBSCRIBED AND SWORN to before me this ____ day of [month] [year] at [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. _____ and his/her Community Tax Certificate No. _____ issued on ____ at _____.

Witness my hand and seal this ____ day of [month] [year].

NAME OF NOTARY PUBLIC

Serial No. of Commission _____

Notary Public for _____ until _____

Roll of Attorneys No. _____

PTR No. _____ [date issued], [place issued]

IBP No. _____ [date issued], [place issued]

Doc. No. _____

Page No. _____

Book No. _____

Series of _____

* This form will not apply for WB funded projects.

C. Bid-Securing Declaration

(REPUBLIC OF THE PHILIPPINES)

CITY OF _____) S.S.

x-----x

Invitation to Bid *[Insert reference number]*

To: *[Insert name and address of the Procuring Entity]*

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid-Securing Declaration.
2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1 (f), of the IRR of RA 9184; without prejudice to other legal action the government may undertake.
3. I/We understand that this Bid-Securing Declaration shall cease to be valid on the following circumstances:
 - a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
 - b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right;
 - c. I am/we are declared as the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this ____ day of [month] [year] at [place of execution].

[Insert NAME OF BIDDER'S AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]

Affiant

SUBSCRIBED AND SWORN to before me this __ day of [month] [year] at [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. _____.

Witness my hand and seal this ____ day of [month] [year].

NAME OF NOTARY PUBLIC

Serial No. of Commission _____
Notary Public for _____ **until** _____
Roll of Attorneys No. _____
PTR No. __, [date issued], [place issued]
IBP No. __, [date issued], [place issued]
Doc. No. ____
Page No. ____
Book No. ____
Series of ____.

D. FORM OF BID SECURITY: BANK GUARANTEE

WHEREAS, Name of Bidder , hereinafter called "the Bidder," has submitted its bid dated _____ for the Contract ID and Name , hereinafter called "the Bid."

KNOW ALL MEN by these presents that We, Name of Bank of Name of Country , having our registered office at _____, hereinafter called "the Bank," are bound unto Name of Procuring Entity , hereinafter called "the Entity," in the sum of amount in words and figures for which payment well and truly to be made to the said Entity the Bank binds itself, its successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____ 20____.

THE CONDITIONS of this obligation are that:

- 1) if the Bidder withdraws the Bid during the period of bid validity specified in the Form of Bid; or
- 2) if the Bidder does not accept the correction of arithmetical errors of its bid price in accordance with the Instructions to Bidder; or
- 3) if the Bidder having been notified of the acceptance of the Bid and award of contract to it by the Entity during the period of bid validity:
 - a) fails or refuses to submit the requirements for and to execute the Form of Contract in accordance with the Instructions to Bidders, if required; or
 - b) fails or refuses to furnish the Performance Security in accordance with the Instructions to Bidders;

we undertake to pay to the Entity up to the above amount upon receipt of its first written demand, without the Entity having to substantiate its demand, provided that in its demand the Entity will note that the amount claimed by it is due to the occurrence of any one or combination of the three (3) conditions stated above.

The Guarantee will remain in force up to a period of _____ days after the opening of bids as stated in the Instructions to Bidders or as it may be extended by the Entity, notice of

which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank within the said period.

Name and Signature of Bank's Authorized Signatory

Date:

_____ Position _____

E. FORM OF BID SECURITY: IRREVOCABLE LETTER OF CREDIT

Date of Issuance

Name of Head of Procuring Entity

Position

Name of Procuring Entity

Address

Irrevocable Letter of Credit No. _____

For: Contract ID and Name _____

WHEREAS, Name of Bidder, hereinafter called the "Bidder," has undertaken to submit to you a bid for the above stated Contract, and whereas you have stipulated in the Instructions to Bidders for the said Contract that the Bidder shall furnish you with an irrevocable standby Letter of Credit for a sum specified therein as Bid Security for the faithful compliance of the obligations of the Bidder:

WHEREAS, the Conditions of this obligation are that:

- 1) if the Bidder withdraws the Bid during the period of bid validity specified in the Form of Bid; or
- 2) if the Bidder does not accept the correction of arithmetical errors of its bid price in accordance with the Instructions to Bidder; or
- 3) if the Bidder having been notified of the acceptance of the Bid and award of contract to it by the Entity during the period of bid validity:
 - a) fails or refuses to submit the requirements for and to execute the Form of Contract in accordance with the Instructions to Bidders; or
 - b) fails or refuses to furnish the Performance Security in accordance with the Instructions to Bidders;

we undertake to pay to the Entity up to the above amount upon receipt of its first written demand, without the Entity having to substantiate its demand, provided that in its demand the Entity will note that the amount claimed by it is due to the occurrence of any one or combination of the three (3) conditions stated above.

WHEREAS, we have agreed to guarantee this obligation of the Bidder.

THEREFORE, we hereby affirm that we are guarantors and responsible to you, on behalf of the Bidder, up to the total amount of amount of guarantee and we undertake to pay you, upon first written demand declaring the Bidder to be in default under the Instructions to Bidders and without cavil or argument, any sum or sums within the limits of amount of guarantee as aforesaid, without you needing to prove or show grounds or reasons for your demand for the sum specified therein.

This irrevocable guarantee is valid until one hundred twenty (120) calendar days after the date of opening of bids for the said Contract on date.

This certification is being issued in favor of the said Bidder in connection with your requirements of the bidding for the said Contract. We are aware that any false statements issued by us make us liable to perjury.

Name and Signature of Authorized Financing Institution
Official Designation

Concurred by:

Name and Signature of Bidder's Authorized Representative
Official Designation

F. CONTRACTOR'S ORGANIZATIONAL CHART FOR THE CONTRACT

Submit a copy of the Organizational Chart that the Contractor intends to use to execute the Contract if awarded to it. Indicate in the chart the names of the Project Manager, Project Engineer, Structural Engineer, Materials and Quality Control Engineer, Foremen, and other Key Personnel, as required in the Instructions to Bidders (Bid Data Sheet). Include Sub Contractors, if any.

Attach the required Proposed Organizational Chart for the Contract as stated above.

Name and Signature of Bidder's Representative

Date: _____

Position

Name of Bidder

G. LIST OF CONTRACTOR'S KEY PERSONNEL TO BE ASSIGNED TO THE CONTRACT, WITH THEIR QUALIFICATION DATA

Date of Issuance

Name of Head of Procuring Entity

Position

Name of Procuring Entity

Address

Dear Sir/Madame:

Supplementing our Organizational Chart for the abovestated Contract, we submit, and certify as true and correct, the following information:

1. We have engaged the services of the following key personnel to perform the duties of the positions indicated in the abovestated Contract if it is awarded to us:

Proposed Position (<i>as applicable</i>)	Name	Years of Experience	
		Total (Similar and Related)	Similar Position
Project Engineer			
Materials Engineer			
Construction Safety Officer			
Foreman			
Pipe Fitter			
Pipe Welder			
Mason			
Carpenter			
Others (Pls. Specify)			

2. We submit the enclosed Curriculum Vitae / Resume / Bio-Data and Affidavits of Commitment to Work on the Contract of these key personnel.
3. We ensure that the abovementioned personnel shall employ their best care, skill, and ability in performing the duties of their respective positions in accordance with the provisions of the Contract, including the Conditions of Contract, Specifications, and Drawings, and that they shall be personally present in the jobsite during the period of their assignment in the Contract.

4. In the event that we choose to replace any of the abovementioned key personnel, we shall submit to you in writing at least fourteen (14) days before making the replacement, for your approval, the name and biodata of the proposed replacement whose qualifications shall be equal to or better than that of the person to be replaced.

5. We understand that any violation of the abovestated conditions shall be a sufficient ground for us to be disqualified from this Contract and future biddings of PEZA-BCEZ.

Very truly yours,

Name and Signature of Bidder's Authorized Representative

H. LIST OF CONTRACTOR'S MAJOR CONSTRUCTION AND LABORATORY EQUIPMENT UNITS TO BE ASSIGNED TO THE CONTRACT, SUPPORTED BY CERTIFICATIONS OF AVAILABILITY

Business Name : _____

Business Address : _____

Description	Model/Year	Capacity / Performance / Size	Plate No.	Motor No. / Body No.	Location	Condition	Proof of Ownership / Lease/Purchase
A. Owned ¹							
i.							
ii.							
iii.							
iv.							
v.							
B. Leased ²							
i.							
ii.							
iii.							
iv.							
v.							
C. Under Purchase Agreements ³							
i.							
ii.							

iii.							
iv.							
v.							

¹Attached are copies of sales invoice / Registration Certificate from LTO.

²Attached are the certifications from the lessors that the equipment units under B (Leased) shall be available for this contract.

³Attached are the certifications from the vendors that the equipment units under C (Purchase Agreements) shall be available for this contract.

Minimum major construction equipment requirement as prescribed in the Bid Data Sheet: Minimum major laboratory equipment requirements as prescribed in Bid Data Sheet: _____

Name and Signature of Bidder's Representative

Date: _____

Position

Name of Bidder

I. CASH FLOW BY MONTH

PARTICULAR	TOTAL.			
		Month 1	Month 2	Month 3
ACCOMPLISHMENT, IN %	100.0%			
CASH FLOW, IN PhP				
CUMULATIVE ACCOMPLISHMENT, IN %	100.0%			
CUMULATIVE CASH FLOW, IN PhP				

Submitted by:

Name and Signature of Bidder's Representative

Date: _____

Position

Name of Bidder

J. Form of Contract Agreement

THIS AGREEMENT, made this *[insert date]* day of *[insert month]*, *[insert year]* between *[name and address of PROCURING ENTITY]* (hereinafter called the “Entity”) and *[name and address of Contractor]* (hereinafter called the “Contractor”).

WHEREAS, the Entity is desirous that the Contractor execute *[name and identification number of contract]* (hereinafter called “the Works”) and the Entity has accepted the Bid for *[insert the amount in specified currency in numbers and words]* by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be attached, deemed to form, and be read and construed as integral part of this Agreement, to wit:
 - (a) General and Special Conditions of Contract;
 - (b) Drawings/Plans;
 - (c) Specifications;
 - (d) Invitation to Bid;
 - (e) Instructions to Bidders;
 - (f) Bid Data Sheet;
 - (g) Addenda and/or Supplemental/Bid Bulletins, if any;
 - (h) Bid form, including all the documents/statements contained in the Bidder’s bidding envelopes, as annexes, and all other documents submitted (e.g., Bidder’s response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity’s bid evaluation;
 - (i) Eligibility requirements, documents and/or statements;
 - (j) Performance Security;
 - (k) Notice of Award of Contract and the Bidder’s conforme thereto;
 - (l) Other contract documents that may be required by existing laws and/or the Entity.
3. In consideration of the payments to be made by the Entity to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Entity to

execute and complete the Works and remedy any defects therein in conformity with the provisions of this Contract in all respects.

4. The Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects wherein, the Contract Price or such other sum as may become payable under the provisions of this Contract at the times and in the manner prescribed by this Contract.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

Signed, sealed, delivered by _____ the _____ (for the Entity)

Signed, sealed, delivered by _____ the _____ (for the Contractor).

Binding Signature of Procuring Entity

Binding Signature of Contractor

[Addendum showing the corrections, if any, made during the Bid evaluation should be attached with this agreement]

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.

X-----X

PERFORMANCE SECURING DECLARATION

Invitation to Bid: [Insert Reference Number indicated in the Bidding Documents]

To: *[Insert name and address of the Procuring Entity]*

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, to guarantee the faithful performance by the supplier/distributor/manufacturer/contractor/consultant of its obligations under the Contract, I/we shall submit a Performance Securing Declaration within a maximum period of ten (10) calendar days from the receipt of the Notice of Award prior to the signing of the Contract.
2. I/We accept that: I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of one (1) year if in case it is my first offense, or two (2) years if I have a prior similar offense upon receipt of your Blacklisting Order if I/we have violated my/our obligations under the Contract.
3. I/We understand that this Performance Securing Declaration shall cease to be valid upon:
 - a. issuance by the Procuring Entity of the Certificate of Final Acceptance, subject to the following conditions:
 - i. Procuring Entity has no claims filed against the contract awardee;
 - ii. It has no claims for labor and materials filed against the contractor; and
 - iii. Other terms of the contract; or
 - b. replacement by the winning bidder of the submitted PSD with a performance security in any of the prescribed forms under Section 39.2 of the 2016 IRR of RA No. 9184 as required by the end-user.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this ____ day of *[month]* *[year]* at *[place of execution]*.

[Insert NAME OF BIDDER'S AUTHORIZED REPRESENTATIVE]

[Insert signatory's legal capacity]

Affiant

SUBSCRIBED AND SWORN to before me this __ day of *[month]* *[year]* at *[place of execution]*, Philippines.

[Select one of the two following paragraphs and delete the other]

Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC).

Affiant/s exhibited to me his/her *[insert type of government identification card used]* with no. _____ issued on _____ at _____.

Witness my hand and seal this ____ day of *[month]* *[year]*.

NAME OF NOTARY PUBLIC

Serial No. of Commission _____

Notary Public for _____ until _____

Roll of Attorneys No. _____

PTR No. __, *[date issued]*, *[place issued]*

IBP No. __, *[date issued]*, *[place issued]*

Doc. No. ____

Page No. ____

Book No. ____

Series of ____.

