

JICA ASSISTED GUWAHATI WATER SUPPLY PROJECT

Loan Agreement No. ID P-201

IFB No.: GWSP/LB/C#12B1/2023-24/04 Date: 07.05.2024

Contract Package No. C#12B1:

Rate contract for providing Drinking Water House Service Connections in lots of 5,000 each, for total of approximately 30,000 households in South-central and North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete

Bid Document For Contract Package No. C#12B1

Bid Document For Contract Package No. C#12B1

Parallel Rate contract for providing Drinking Water House Service Connections in lots of 5,000 each, for total of approximately 30,000 households in South-central and North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete

CONTENTS

Sl. No.	Description	Page No.	
		From	To
1	Invitation for Bid	IFB – 1	IFB– 2
2	Section I: Instructions to Bidders (ITB): Qualification of the Bidder, Bid Prices, Preparation of Bid, Bid Submission, Evaluation of Bids, Award of Contract, Performance Security	ITB – 1	ITB – 5
3	Section II: Bidding Forms – Technical (BFT): Letter of Technical Bid; Qualification Information	BFT – 1	BFT –5
4	Section III: Bidding Forms – Financial (BFF): Letter of Financial Bid : Declaration Of Acceptance of Rates, Contract Acceptance; Preamble to Price Schedule	BFF – 1	BFF – 5
5	Section IV: Scope of Works (ER)	ER - 1	ER-4
6	Section V: Technical Specifications (TS)	TS -1	TS -10
7	Section VI: Drawings (DRG)	DRG - 1	DRG - 8
8	Section VII: Contract Forms: (CF)		
	Draft Letter of Acceptance	CF - 1	CF - 1
	Articles of Contract Agreement with Conditions of Contract	CF - 2	CF - 7
	Performance Bank Guarantee	CF - 8	CF - 8
	Bank Guarantee for Advance Payment	CF - 9	CF – 9
	Contract data	1	4

**Office of the Project Director
Project Implementation Unit
JICA Assisted Guwahati Water Supply Project
Tripti Tower, 1st Floor, Ganeshguri,
Guwahati - 781 005, Assam, India.**
Tele-Fax - +91-361-2340132; Email: md.gjb@nic.in
www.gmdwsb.assam.gov.in

**Invitation for Bid
for providing Drinking Water House Service Connections
(Parallel Rate Contract)**

IFB No.: GWSP/LB/C#12B1/2023-24/04

Date: 07.05.2023

JICA Loan No. and Title: ID P-201 Guwahati Water Supply Project.

Government of India has received loan from the Japan International Cooperation Agency (JICA) towards the cost of Guwahati Water Supply Project and it intends to apply part of the proceeds of this loan to payments under the contract for Procurement of works [Parallel Rate Contract] for providing drinking water House Service Connections under Contract Package No. C#12B1.

Project Director, JICA Assisted Guwahati Water Supply Project, Guwahati invites Bids for the works as detailed below:

Sl. No.	Item	IFB No.: GWSP/LB/C#12A1/2023-24/04 Date: 06.05.2022
1	Work Description	Parallel Rate contract for providing Drinking Water House Service Connections in lots of 5,000 each, for total of approximately 30,000 households in South-central and North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete.
2	Time for Completion	12 Months.
3	Downloading from the designated website.	06.05.2023 to 30.05.2023 Office of the Project Director, PIU, JICA Assisted Guwahati Water Supply Project, Tripti Tower, 1st Floor, Ganeshguri, Guwahati - 781 005, Assam, India. www.gmdwsb.assam.gov.in Amendments if any will be informed in the above website only.
4	Tender Processing Fee	INR 2000 to be paid online through www.assamtenders.gov.in
5	Bid Security	Rs. 7 Lakhs per lot of 5,000 connections. Bid Security Shall be paid online through www.assamtenders.gov.in or in the form of Bank Guarantee. If Opted for Bank Guarantee, Original Copy shall be submitted to Project Director, PIU, JICA Assisted Guwahati Water Supply Project before the deadline of bid submission.
6	Prebid Meeting Date & Venue	16.05.2023, 1:00PM, Venue: Office of Project Director, PIU, 1 st Floor, Tripti Tower, Ganeshguri, Guwahati-781005
7	Last Date & Time for Submission of Bids	30.05.2023, 14:00 Hrs
8	Date & Time for Opening Bids	30.05.2023, 14:30 Hrs

Sl. No.	Item	IFB No.: GWSP/LB/C#12A1/2023-24/04 Date: 06.05.2022

Interested eligible Bidders may obtain further information from the Project Director, JICA assisted Guwahati Water Supply Project, Guwahati and inspect the Bidding document available on the website: www.gmdwsb.assam.gov.in & www.assamtenders.gov.in

Bids received without Bid Security shall be rejected out rightly. Bids delivered after the time and date noted above will be rejected.

The Employer will not be responsible for any costs or expenses incurred by Bidders relating to the preparation or delivery of Bids.

The Employer reserves the right to accept any bid, or reject any or all bids, without assigning any reason thereof and without thereby incurring any liability to the Bidder or Bidders.

Sd/-
Project Director,
JICA Assisted Guwahati Water Supply Project
Guwahati- 781 005.

Section. I: Instructions to Bidders

1. Scope of Works

The Project Director, JICA Assisted Guwahati Water Supply Project, Guwahati (Employer) invites quotations for the works as detailed below:

Brief Description of the Works	Period of Completion
Package C#12B1: Parallel Rate contract for providing Drinking Water House Service Connections in lots of 5,000 each for total of approximately 30,000 households in South-central and North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete.	12 Months

The successful Bidder will be expected to complete the works by the intended completion date specified above.

2. Qualification of the Bidder:

A Bidder may be a registered legal entity, ie; a proprietorship firm, a registered firm/ company a joint venture (JV) comprising maximum of two partners, under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent.

If it is a JV, each partner shall have the work share. The Letter of Intent or the JV Agreement shall spell out their specific role, i.e., civil works, supply of pipes & specials, etc., of each partner and provide JV Agreement or related document and either of the partners should be a registered entity in Guwahati.

The vendor must provide a Self-Declaration stating that he hasn't been debarred / blacklisted from JICA, Government or any other equivalent entity

2.1. Qualification Information to be provided by the Bidder: the Bidder shall provide information on his qualification which shall include:-

- a) List of works completed satisfactorily as a prime contractor or sub-contractor with similar work experience during the last 5 years, enclosing evidences such as Work Orders, experience letters from the respective Employers in support of experience claimed or sufficient documentary proof;
In case of a manufacturer, he shall submit the credentials, such as ISO, BIS Certification and Proof of production & Sales during the last years,
- b) Report on his financial standing, along with last 3 years' financial statements/Profit and Loss Statements.
- c) Details of any litigation, during the last 3 years in which the bidder is involved, the parties concerned, and disputed amount or award in each case (Give details of both completed and pending cases).
- d) The contractor shall provide a detail of his manpower available and the team that shall be engaged for the project
- e) The Bidder must demonstrate access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credit, and other financial means, other than any contractual advance payments to meet:
- f) Should at least have average Annual turnover of **INR 1 crore for the single Entity**, calculated as total certified payments received for work or supply contracts in progress or completed during the past 3 years, i.e., starting from 1stApril 2020;

- g) In case of JV, the JV together must meet the above criteria of **INR 1 crore**.
 h) **The Following documents are to be submitted as well.**

<u>Document Requirements</u>
1. Valid GST Registration. 2. Company/Firm registration certificate 3. Proof of registration with Assam PHED or GMC or GMDA or any Other Govt. Board. 4. Proof of annual turnover 5. Proof of Work Experience 6. JV agreement 7. Labour License. 8. Power of Attorney.
9. Tender Processing Fee. 10. EMD.

- 2.2. Evaluation Criteria:** The technical and financial bids will be evaluated on the following criteria's:

2.2.1 - Technical Evaluation Criteria –

<u>Requirement</u>	<u>Documents required</u>	<u>Maximum Marks</u>	<u>Remarks</u>
1. Average Annual Turnover: (a) 1 Cr	CA certificate	15	Highest Value among all bidders meeting minimum qualification requirement will be awarded Maximum Marks. Weighted Marks shall be awarded to other bidders. Example: If Firm 'A' submits highest no HSC of say 500 HSC among all bidders, Marks given to Firm 'A'=30 No of by Firm 'B'=4000 Weighted Marks to Firm "B"=(30/5000)X4000=24
2. Work Experience: Should have experience of working as a main contractor or subcontractor of providing Water House Service Connections/FHTC (a) 500 Connections	Completion Certificates	30	
3. Value of works Executed	LOA	30	
4.Total Years of Experience	LOA and Completion Certificates	25	

In case of Joint Venture, JV together must meet the above criteria.

- 3. Conflict of Interest:** A Bidder (a) shall not have conflict of interest as defined in the JICA's Procurement Guidelines; and (b) should not have been (i) suspended or debarred by the World Bank Group in compliance with the Bank's Anti-Corruption Guidelines and its Sanctions Framework; or (ii) blacklisted or suspended by Central or any State Government Departments in India.

4. **Clarifications & Amendments:** If the Employer receives any request for clarification of this Bid document, it will upload its response together with any amendment to this document, on the www.Gmdwsb.assam.gov.in/www.assamtenders.gov.in for information of all Bidders.
5. **Bid Prices:**
 - a) The existing rates for HSC shall be accepted with declaration.
 - b) The Bid shall be for supply & construction of the whole works as described in the Bill of quantities, drawings, and technical specifications.
 - c) All duties, taxes and other levies payable by the contractor under the contract shall be included in the total price.
 - d) The rates shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
6. **Preparation of Bid:**
 - 6.1 The Bidder is advised to visit the site of works at his own expense and obtain all information that may be necessary for preparing the Bid.
 - 6.2 **Each Bidder shall submit only one Bid.**
 - 6.3 Bidders shall not contact other Bidders on matters relating to this Bid.
 - 6.3 **The Bid shall comprise two Parts, namely the Technical Bid and the Financial Bid. Both Parts shall be submitted simultaneously. The Technical Bid Package should include the Pre-Qualification Criteria document requirements.**
 - 6.4 **The Technical Bid shall comprise the following:**
 - (a) **Letter of Technical Bid** as per Format given;
 - (b) **PQC Documents:** All the PQC documents required as per [ITB Clause 2.1] must be submitted in pre-described format.
 - (c) **Annual Turnover:** Confirmation showing Annual Turnover in civil Engineering construction works of similar nature [ITB Clause 2.2.1].
 - (d) **Work Experience:** Documentary evidence showing work experience of the bidder such as, work completion certificates. [ITB Clause 2.2.2]
The completion certificate shall be issued by an officer not below the rank of Executive Engineer in the department / project.. [ITB Clause 2.2.2]
 - (e) **Manpower & Equipment:** The bidder must furnish the List of Manpower. The list must comprise of **Civil Engineer (BE/B Tech) with at least 3 years of experience or Diploma with 5 years of experience, Two Supervisors (ITI Trained/GMDW&SB Trained) with 3 years experience. & Ten Labour** Registered under the Labour Department of Assam against each lot. All the qualifications & documentary proof of the manpower should be attached.
 - (f) **Complete address and contact details of the Bidder having the following information:**
 - Name of the Bidder
 - Address for communication
 - Telephone No(s): Office
 - Mobile No.
 - Electronic Mail Identification (E-mail ID)
 - (g) The Technical Bid shall not include any financial information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Bid, the Bid shall be declared non-responsive.

- 6.5** **The Financial Bid shall comprise the following:** Declaration of acceptance of approved Rates.
- 6.6** **Signing of Bid:** The name and position held by the person signing the Bid and related documents must be typed or printed below the signature.
- 6.7** **Deadline for Submission of Bid:** Bids must be submitted no later than the deadline for submission of Bids viz. time **14.00 hours and date 26.05.2023** .A Bidder may modify its Bids any number of times, before the deadline for submission of Bids.
- 6.8** **Validity of Bid:** Bid shall remain valid for a period not less than 90 Days after the deadline date specified for submission.
- 7. Bid Submission:**
- The Technical Bid and Financial Bid shall be filled, signed and shall be placed in designated folders in the e-procurement portal.
- Proof of payment of EMD (If paid through Bank Guarantee or Term Deposit) and Power of Attorney (if applicable) shall reach the office of the tender inviting authority on or before the deadline of online bid submission.**
- In case of discrepancy between Online and Offline bid, online bid shall prevail.
- 10. Confidentiality:**
- Information relating to the evaluation of Bids and recommendation of Contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders.
- Any attempt by a Bidder to influence the Employer in the evaluation of the Bids or Contract award decisions may result in the rejection of its bid.
- From the time of Bid opening to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the bidding process, it shall do so in writing.
- 11. Award of contract**
- Top Six ranked Bidders/Contractors who have qualified technical criteria shall be awarded the contract.
- 11.1** Notwithstanding the above, the Employer reserves the right to accept or reject any Bids and to cancel the bidding process and reject all Bids at any time prior to the award of contract.
- 11.2** The Bidder whose Bids accepted will be notified of the award of contract by the Employer prior to expiration of the Bid validity period.
- 11.3** **Forfeiture of Bid Security:** The Bid Security can be forfeited in the following cases:
- i. When the bidder withdraws or modifies its bid after opening of bids;
 - ii. When the bidder, after being selected for award of contract, does not deposit the required performance security within the specified period; and
 - iii. If the bidder breaches any provision of code of integrity prescribed for bidders specified in the Assam Public Procurement Act 2017 and Assam Public Procurement Rules 2020.

12. Performance Security:

Within 7 days of receiving letter of acceptance, the successful Bidder shall deliver to the Project Director, JICA Assisted Guwahati Water Supply Project, Guwahati (Employer), the performance security of **Amount INR 25,00,000 (Rupees Twenty Five Lakhs Only)**, either a Bank guarantee or a Term Deposit Receipt in favour of the Employer.

The Performance Security shall be valid till 28 days after expiry of the period of the Contract, specified in Clause 11 of contract data. Failure of the successful Bidder to furnish performance security and to sign the agreement within the period stipulated shall constitute sufficient grounds for forfeiture of EMD and debarring the Bidder from participation in bidding for works by the Employer for a period of one year, in which case the Employer may make the award to the next lowest evaluated bidder or seek Bids afresh.

.....

Date: XXXX

Loan Agreement No.: ID-P-201

IFB No.:XXXXX

To

Project Director,
Project Implementation Unit,
Tripti Tower, 1st Floor, Ganeshguri,
Guwahati - 781 005, Assam, India.

Sir,

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bid Documents, including addenda issued.
- (b) We, meet the eligibility requirements of the Tender and We, have no conflict of interest.
- (c) We are not participating in more than one Bid in this bidding process, and we have not been temporarily suspended or debarred by the World Bank or blacklisted or suspended the Central or any State Government;
- (d) We have no conflict of interest in accordance with ITB 3;
- (e) We have experience and financial capabilities and hence, we are capable and offer to execute in conformity with the Bidding Documents the following Works:
Parallel Rate Contract for providing Drinking Water House Service Connections in lots of 5,000 each, for total of approximately 30,000 households in South-central and North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete.
- (f) Our Bid shall be valid for a period of **Ninety (90) 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;
- (g) If our Bid is accepted, we commit to obtain a Performance Security in accordance with the Bidding Documents;
- (h) We understand that this Bid, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (i) We understand that you are not bound to accept the lowest evaluated Bid or any other bid that you may receive; and
- (j) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud, corrupt, collusive, coercive, or obstructive practices; and will be strictly observe the laws against fraud and corruption in force in India, namely, "Prevention of Corruption Act 1988"

Name of the Bidder: XXXXXXXX

Name of the person duly authorized to sign the Bid on behalf of the Bidder*XXXXXXXX

Title of the person signing the Bid : XXXXXX

Signature of the person named above:

Date signed xx Day of XXXXX 2023

*: Person signing the Bid shall have the power of attorney given by the Bidder to be attached with Bid.

QUALIFICATION INFORMATION

1) IFB No.: **GWSP/LB/C#12B1/2023-24/04** Date: 04.05.2023

2) Name & Address of the Bidder:

Bidder's legal name: XXXXXXXXXX
Bidder's actual or intended year of incorporation:
Bidder's legal address: XXXXXXXXXXXXXXXXXXXXXXXXXX
Bidder's authorized representative information Name: Bhaskar Baruah Address: XXXXXXXXXXXXXXXXXXXXXXXXXX Telephone/Fax numbers: XXXXXXXXXXXXXXXXXXXXXX E-mail address: XXXXXXXXXXXXXX
Attach copies of original documents of: <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above.

1 For Bidders

1.1 Principal place of business:

Power of attorney of signatory of Bid.

1.2. Average Annual Turnover during the past 3 years [Bid requirement: Should have Minimum average Annual turnover of **INR 1 crore**, calculated as total certified payments received for contracts in progress or completed during the past 3 years, i.e., from 1st April 2020.

To support your claim, submit the Audited Balance Sheets and Auditor/Chartered Accountant's certificate.

Financial Year	Annual Turnover- Rs. in crore
2020-21	
2021-22	
2022-23 (Provisional)	
Average Annual Turnover	

Note: (Provisional certified statement for the year 2022-23 shall be submitted)

1.4. Work Experience:

- (a) A Contractor / Subcontractor working for Government Departments of India / ongoing JICA/JnNURM/ADB funded Water Supply Projects for Guwahati and having experience during the last 5 years, in providing at least 500 House service connections.

Project Name	Name of Employer	Description of work- Diameter & Length of DI Pipes	Prime contractor or Sub-contractor	Contract No. & Date	Value of contract (Rs. Lakhs)	Stipulated period of completion	Actual date of completion*

* Enclose a certificate from the Engineer concerned for completion. If the Bidder is a Subcontractor, the Bidder shall submit the appropriate/required proof, such as the Work order, Contract and Proof of payment given by the main contractor.

- (b) In case of a manufacturer, furnish the details in the two tables below, with supporting documents:

Year	Production of PE Pipes in m	Sales to Govt./Projects*	Sales to others, viz., Private
2018-19			
2019-20			
2020-21			
2021-22			
2022-23			
Total			

*In case of supplies to Govt./Projects, furnish the following details:

Project Name	Name of Employer	Diameter & Length of PE Pipes	Value of contract (Rs. Lakhs)	Stipulated period of completion	Actual date of completion

- 1.5. Minimum cash-flow:** Demonstrate that you have access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credit, and other financial means, other than any contractual advance payments to meet: **Rs 50 Lacs. [Minimum cash-flow requirement: INR 50 lakhs].** To support your claim also submit the Banker's letter and other documents certified by the Company Auditor/ Chartered Accountant.

Format for Banks Cash Flow Certificate

AVAILABILITY OF CASH FLOW (WORKING CAPITAL)

This is to certify that XXXXXXXXXXXX is a reputed Proprietorship Firm/Company with a good financial standing.

If the contract for the works, namely "Rate Contract for providing Drinking Water House Service Connections in lots of 5,000 each, for total of approximately 30,000 households in, South-central and North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete" is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. Equivalent **50 Lacs** to meet their capital requirements for executing the above contract.

-- Sd. --

Name of Bank Manager
Senior Bank Manager

Address of the Bank

Name, address, and telephone, telex, and fax numbers of the Bidders' bankers who may provide references if contacted by the Employer.

1.6. Information on litigation history in which the Bidder is involved.

Name of the work	Agreement number/date	Name & address of Employer	Contract Value in Rs	Cause of dispute	Amount Disputed	Remarks showing present status

1.7. Availability of Tools and Machinery

Bidders need to submit an affidavit declaring list of Machineries and Equipment's under its possession (Owned or Leased) to carry out the work.

1.8. Manpower:

- 1 Civil Engineer (BE/B Tech) with at least 3 years of relevant experience or Diploma with 5 years of experience- CV to be submitted
- 2 Supervisor with at least 3 years' experience (ITI/ GMDW&SB Trained).-CV to be submitted
- Labours (at Least 10 No): Documentary evidence (Labour license, PF Registration etc)

Signature of the Bidder

Bid Document for Contract Package No. C#12B1

IFB No. GWSP/LB/C#12B/2023-24/04 Date: 05.05.2023

**Contract Package No. C#12B1:
Procurement of Works [Rate Contract] for providing Drinking
water House Service Connections**

SECTION III: BIDDING FORMS – FINANCIAL

(Declaration of Acceptance of Approved Rates)

PREAMBLE TO PRICE SCHEDULE

Bill of Quantities for Rate contract for providing Drinking Water House Service Connections in lots of 5,000 each for total of approximately 30,000 households in, South-central and North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete

This Contract is for fixing rate contract for providing drinking water House Service Connections including supply of goods & materials, labour & allied services, excavation and road restoration works all complete.

- 1) The Contractor has to execute the work as per the Typical House service connection drawing provided along with the tender and has to provide Labour, materials and all allied services in connection with the execution of the works.
- 2) The Bill of quantities is for one Typical Lot of 5,000 Service Connections.
- 3) The Bill of quantities shall be read in conjunction with the Scope of Works, Technical Specifications, and Conditions of contract and Drawings.
- 4) The Bidder is advised to examine all instructions, terms, specifications and other information in the Bid documents and consider and evaluate fully the price implications therein contained before filling the contract amount.
- 5) The Bidder should acquaint himself with the site conditions including the access to Work site.
- 6) There are, however, several minor items not specifically mentioned in the break-up (BOQ items), but shall be required to complete the job as per scope and specification of works stipulated in the tender document. The cost of such items shall deem to be distributed among the rates and prices entered for the related items.
- 7) The quoted rates in the Bill of Quantities shall, except insofar as it is otherwise provided under the Contract, include all Construction, labour, supervision, materials, erection, maintenance, insurance, profit, taxes, forest royalty and duties together with all general risks, liabilities and obligations set out or implied in the contract.
- 8) It shall be deemed that Bidder has included likely expenditure in his quoted price i.e., provision for field investigations, site clearance and final removal of all temporary works of whatsoever nature required for construction including, dewatering and availability of material of required quality etc., for the proper execution of works. The rates shall also be deemed to include any works and setting out that may be required to be carried out for all the works involved.
- 9) A rate shall be entered against each item in the Bill of Quantities, whether quantities are stated or not. The cost of items against which the contractor has failed to enter a rate shall be deemed to be covered under other rates and prices entered in the Bill of Quantities.
- 10) The quantities given in the Bill of Quantities are estimated and provisional and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Engineer (accepted by contractor) and valued at the rates and prices quoted in the priced bill of quantities.
- 11) All costs associated with testing, commissioning, inspection shall be deemed to be included in the items for the works, supply and installation.
- 12) The rates entered by the Bidder under the "Rate" and "Amount" columns in the Price Schedule, shall be the Bidder's estimated rates for the item, inclusive of taxes and duties. The amount quoted by the Bidder including the taxes and duties will be considered for evaluation.
- 13) Incomplete Bids shall be summarily rejected.

Annexure-A

DECLARATION FORM

IFB No :

Description of the Works: Package C#12B1: Rate contract for providing Drinking Water House Service Connections in lots of 5,000 each for total of approximately 30,000 households in South-central and North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete

To,
The Project Director
Project Implementation Unit
JICA Assisted GWSP,
I Floor, Tripti Tower, Ganeshguri
Guwahati- 781 005

Sir,

Having examined all the terms and conditions of the BID document including addendum thereof (if any), the Payment Schedule and the SOP towards allotment of works, we hereby offer our bid against the works to be executed under JICA Assisted Guwahati Water Supply Project, Assam in accordance with the Conditions of Contract, Specifications, Drawings and Bill of Quantities accompanying this BID.

We understood that we will agree to the rates approved by the Department against different items of works to be executed under JICA Assisted Guwahati Water Supply Project.

We have gone through the prices established by the Department. We understood that the rates are fixed for the duration of the contract and shall not be adjusted owing to changes in the cost of labor/materials.

We understand that client does not guarantee us allotment of 5000 HSC installation work nor does it bestow the right to get works to the extent of our entitlement.

We hereby confirm that our BID complies with the prescribed eligibility criteria, Bid Validity and all the documents furnished by us are true to the best of my knowledge and self.

We understand that any misleading fact or false representation of any document will invite disqualification.

Yours faithfully,

Bidders' Authorized Signature:

Name & Title of Signatory : _____

Name of Bidder : _____

Address : _____

Phone No.: _____

Email ID : _____

JICA Assisted Guwahati Water Supply Project(ID-P-201)

Contract No:C#12B1

BILL OF QUANTITIES

SI NO	Description	Unit	Rate - Rs.		Total c= a+b
			Basic	Taxes	
			a	b	
1	MATERIAL SUPPLY, DELIVERY AND STACKING				
1	MATERIAL SUPPLY, DELIVERY AND STACKING Supply, delivery and stacking of Brass ferrules conforming to PN 16 with IS:319/1 standard, method of manufacturing should be forging. Inlet threading should be in BSPT and outlet threading should be in BSP. It should be tested as per IS: 2692/1984 (Reaffirmed 2005). The rates should include third party inspection, all taxes and duties, transportation, freight charges, loading and unloading, conveyance to the project site and stacking with cost of all labor and material as per direction of Employer's representative.				
1.01	15 mm (1/2 inch)	Nos	1,125.00	202.50	1,327.50
1.02	20 mm (3/4 inch)	Nos	1,142.86	205.71	1,348.57
1.03	25 mm (1 inch)	Nos	1,520.00	273.60	1,793.60
1.04	32 mm (1 1/4 inch)	Nos	1,440.00	259.20	1,699.20
1.05	Providing and supply of DI (Ductile iron) Strap saddle for House service connections for metal pipe water distribution mains shall be of fastened strap types with threaded outlet for service connection. DI (Ductile iron) saddle shall be suitable for nominal size of distribution mains pipe line. The strap shall be made up of SS 304 & rubber sleeve shall be			-	-
1.06	100mm (4 inch) N.B.			-	-
1.07	(100x15)mm / (4x 1/2)"	Nos	920.00	165.60	1,085.60
1.08	(100x20)mm / (4x 3/4)"	Nos	840.00	151.20	991.20
1.09	(100x25)mm / (4x 1)"	Nos	840.00	151.20	991.20
1.1	150 mm (6 inch) N.B.	Nos		-	-
1.11	(150x15)mm / (6x 1/2)"	Nos	1,028.00	185.04	1,213.04
1.12	(150x20)mm / (6x 3/4)"	Nos	875.00	157.50	1,032.50
1.13	(150x25)mm / (6x 1)"	Nos	875.00	157.50	1,032.50
1.14	200 mm (8 inch) N.B.			-	-
1.15	(200x15)mm / (8x 1/2)"	Nos	1,075.00	193.50	1,268.50
1.16	(200x20)mm / (8x 3/4)"	Nos	1,075.00	193.50	1,268.50
1.17	(200x25)mm / (8x 1)"	Nos	1,085.00	195.30	1,280.30
1.18	(200x32)mm / (8x 1 1/4)"	Nos	1,085.00	195.30	1,280.30
1.19	Providing and supply of PP clamp saddles for House service connections on HDPE pipe water distribution. Main body should be made up of Polypropylene molded with Stainless steel SS304 female threaded insert for fixing of Ferrule.			-	-
1.2	PE100 PN16 (110x20)mm (1/2 inch)	Nos	150.00	27.00	177.00
1.21	PE100 PN16 (63x20)mm (1/2 inch)	Nos	180.00	32.40	212.40
1.22	Supply, delivery and stacking of Medium Density Polyethylene pipe (MDPE) conforming to ISO 4984 & ISO 4427 and manufactured from virgin resin of PE80 PN16. Compression fittings should have Raw material which is conforming BS 6920 and with moulded-in chrome plated brass/SS threaded insert outlet with thread dimension	Nos		-	-

JICA Assisted Guwahati Water Supply Project(ID-P-201)

Contract No:C#12B1

BILL OF QUANTITIES

SI NO	Description	Unit	Rate - Rs.		Total c= a+b
			Basic	Taxes	
			a	b	
1.23	20 mm PE Pipe connections (1/2 inch)	Mts		-	-
1.24	MDPE Pipes	Mts	45.00	8.10	53.10
1.25	Providing & Supplying of Compression Fitting, PN 16 rated in conforming to ISO : 17885-2015 and shall be tested as per ISO:3459, ISO : 3501 & ISO :3503, Suitable for drinking water. The product group used for drinking water applications should have undergone type test by WRc- NSF, U.K. according to BS 6920 and a certificate from either WRc- NSF or WRAS.			-	-
1.26	Compression Female threaded adapter with brass/SS threaded insert	Nos	182.00	32.76	214.76
1.27	Compression Male threaded adapter with brass/SS threaded insert	Nos	190.00	34.20	224.20
1.28	Double compression elbow	Nos	82.00	14.76	96.76
1.29	25 mm PE Pipe connections (3/4 inch)			-	-
1.3	MDPE Pipes	Mts	52.00	9.36	61.36
1.31	Compression Female threaded adapter with brass/SS threaded insert	Nos	182.00	32.76	214.76
1.32	Compression Male threaded adapter with brass/SS	Nos	182.00	32.76	214.76
1.33	Double compression elbow	Nos	75.00	13.50	88.50
1.34	32 mm PE pipe connections (1inch)	Nos	-	-	-
1.35	MDPE Pipes	Mts	72.00	12.96	84.96
1.36	Compression Female threaded adapter with brass/SS	Nos	270.00	48.60	318.60
1.37	Compression Male threaded adapter with brass/SS	Nos	270.00	48.60	318.60
1.38	Double compression elbow	Nos	112.00	20.16	132.16
1.39	40 mm PE Pipe connections (1 1/4 inch)		-	-	-
1.4	MDPE Pipes	Mts	112.00	20.16	132.16
1.41	Compression Female threaded adapter with brass/SS	Nos	336.00	60.48	396.48
1.42	Compression Male threaded adapter with brass/SS	Nos	336.00	60.48	396.48
1.43	Double compression elbow	Nos	154.00	27.72	181.72
1.44	Supply, delivery and stacking of Compression End UPVC Ball Valve PN 16 rating (or any other material conforming BS 6920) with one end compression fitting and the other end with female thread conforming to ISO:4422-4 and ISO:7/BS:21/IS:554, etc. (Outer Diameter is considered). Including third party inspection, all taxes and duties, transportation, freight charges, loading and unloading, conveyance to the project site and stacking with cost of all labor and material as per direction of Employer's representative.		-	-	-
1.45	20 mm	Nos	225.00	40.50	265.50

JICA Assisted Guwahati Water Supply Project(ID-P-201)

Contract No:C#12B1

BILL OF QUANTITIES

SI NO	Description	Unit	Rate - Rs.		Total c= a+b
			Basic	Taxes	
			a	b	
1.46	25 mm	Nos	237.00	42.66	279.66
1.47	32 mm	Nos	259.00	46.62	305.62
1.48	40 mm	Nos	518.00	93.24	611.24
1.49	Supply, delivery and installation of HDPE pipe 32mm for Drain crossing sleeve for mdpe pipe with, all taxes and duties, transportation, freight charges, loading and unloading, conveyance to the project site and stacking with cost of all labor and material as per direction of Employer's representative.			-	-
1.5	32 mm	Mts	195.00	35.10	230.10
1.51	Supply, delivery and stacking of Brass Y-type strainer (ID). Including third party inspection, all taxes and duties, transportation, freight charges, loading and unloading, conveyance to the project site and stacking with cost of all labor and material as per direction of Employer's representative.			-	-
1.52	15 mm (1/2 inch)	Nos	460.00	82.80	542.80
1.53	20 mm (3/4 inch)	Nos	588.00	105.84	693.84
1.54	25 mm (1 inch)	Nos	620.00	111.60	731.60
1.55	32 mm (1 1/4 inch)	Nos	754.00	135.72	889.72
1.56	Supply, delivery and stacking of Pressure Reducing Valve (PRV) of rating PN 16 /0.8, made of Brass or Bronze or any suitable material as per BS EN 1567:2000 (ID). Including third party inspection, all taxes and duties, transportation, freight charges, loading and unloading, conveyance to the project site and stacking with cost of all labor and material			-	-
1.57	15 mm (1/2 inch)	Nos	2,044.64	368.04	2,412.68
1.58	20 mm (3/4 inch)	Nos	2,775.00	499.50	3,274.50
1.59	25 mm (1 inch)	Nos	3,235.00	582.30	3,817.30
1.6	32 mm (1 1/4 inch)	Nos	3,244.00	583.92	3,827.92
1.61	Supplying of HDPE 63mm Header Pipe (PE100, PN16) pipe including all specials confirming to IS 4984 and the specifications, including third party inspection, all taxes and duties, transportation, freight charges, loading and unloading, conveyance to the project site and stacking with cost of all labor and material as per direction of Employer's representative.			-	-
1.62	63mm HDPE Pipe	Nos	625.00	112.50	737.50
1.63	110mm HDPE Stubend with Annular Ring / Flange with	Nos	757.00	136.26	893.26
1.64	Supply D.I. Branched flanged Tee (100 x 100 x	Nos	328.00	59.04	387.04
1.65	Supply 100mm D.I. MJ Collar	Nos	300.00	54.00	354.00

JICA Assisted Guwahati Water Supply Project(ID-P-201)

Contract No:C#12B1

BILL OF QUANTITIES

SI NO	Description	Unit	Rate - Rs.		Total c= a+b
			Basic	Taxes	
			a	b	
1.66	Water Meter Protection Box - (Black) PP Meter Box of required size to accommodate the meter with opening and locking arrangement box- Positive locking arrangement with Delrin Locking stud, key & only one metallic part for locking (SS 304 spring) ensuring weather proof feature. Minimum meter box weight should be 750gms. Size-L-396mm x W-190 mm x H-160mm.-sizes are approximate	Nos	680.00	122.40	802.40
1.67	Earth Work Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, masonry work, etc. in all kinds of ordinary soils such as murum, sand, sandy silt, clay, kankar etc, including backfilling, dressing, compaction of the bottoms of the excavation, shoring and strutting wherever required, dewatering whenever required, removal of the excavated soil, stockpiling and disposal of surplus excavated rock off-site as directed by the Employer's Representative.		-	-	-
1.68	0 to 1.5 m from GL	Cum	196.00	35.28	231.28
1.69	above 1.5 m to 3.0 m depth from GL	Cum	196.00	35.28	231.28
1.7	Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, masonry work, etc. in all kinds of ordinary rock and hard rock (blasting prohibited), RCC, all types of road materials etc, including backfilling dressing, compaction of the bottoms, shoring and strutting wherever required, dewatering whenever required, removal of the excavated rock, stockpiling and disposal of surplus excavated rock off-site as directed by the Employer's Representative.			-	-
1.71	0 to 1.5 m from GL	Cum	910.00	163.80	1,073.80
1.72	FITTING AND INSTALLATION Supply, delivery and stacking of Brass ferrules conforming to PN 16 with IS:319/I standard, method of manufacturing should be forging. Inlet threading should be in BSPT and outlet threading should be			-	-
1.73	100 mm			-	-
1.74	100x15	Nos	132.00	23.76	155.76
1.75	100x20	Nos	130.00	23.40	153.40
1.76	100x25	Nos	130.00	23.40	153.40
1.77	150 mm			-	-
1.78	150x15	Nos	135.00	24.30	159.30
1.79	150x20	Nos	132.00	23.76	155.76
1.8	150x25	Nos	132.00	23.76	155.76
1.81	200 mm			-	-
1.82	200x15	Nos	146.00	26.28	172.28
1.83	200x20	Nos	142.00	25.56	167.56

JICA Assisted Guwahati Water Supply Project(ID-P-201)

Contract No:C#12B1

BILL OF QUANTITIES

SI NO	Description	Unit	Rate - Rs.		Total c= a+b
			Basic	Taxes	
			a	b	
1.84	200x25	Nos	142.00	25.56	167.56
1.85	200x32	Nos	142.00	25.56	167.56

JICA Assisted Guwahati Water Supply Project(ID-P-201)

Contract No:C#12B1

BILL OF QUANTITIES

SI NO	Description	Unit	Rate - Rs.		Total c= a+b
			Basic	Taxes	
			a	b	
1.86	Fitting & Fixing of PP clamp saddles for House service connections on HDPE pipe water distribution. Main body should be made up of Polypropylene molded with Stainless steel SS304 female threaded insert for fixing of Ferrule. Rubber seal: Shall be made up of NBR for leak proof joint & firm grip, saddle seal should have contoured gasket to provide a positive initial seal. Should comply with AS/NZS			-	-
1.87	(110x20)mm	Nos	150.00	27.00	177.00
1.88	(63x20)mm	Nos	142.00	25.56	167.56
1.89	Fitting and fixing of MDPE pipes along with all the compression fittings and compression end UPVC Ball Valve (or any other material conforming BS 6920) with necessary fittings etc. This item includes transportation from the storeyard to the project site, stacking as per BIS requirements, loading, unloading, hoisting, lowering, marginal cutting and grinding wherever necessary.	Nos		-	-
1.9	20 mm	Nos	156.00	28.08	184.08
1.91	25 mm	Nos	130.00	23.40	153.40
1.92	32 mm	Nos	140.00	25.20	165.20
1.93	40 mm	Nos	160.00	28.80	188.80
1.94	Fitting and fixing of Brass Y-type strainer as This item includes transportation from the storeyard to the project site, stacking as per BIS requirements, loading, unloading, hoisting, lowering, marginal cutting and grinding wherever necessary, assembling, jointing, providing temporary supports etc, all complete with approved equipment and as per directions of Employer's Representative.			-	-
1.95	15 mm (1/2 inch)	Nos	310.71	55.93	366.64
1.96	20 mm (3/4 inch)	Nos	345.00	62.10	407.10
1.97	25 mm (1 inch)	Nos	367.00	66.06	433.06
1.98	32 mm (1 1/4 inch)	Nos	367.00	66.06	433.06
1.99	Fitting & Fixing of Pressure Reducing Valve (PRV) This item includes transportation from the storeyard to the project site, stacking as per BIS requirements, loading, unloading, hoisting, lowering, marginal cutting and grinding wherever necessary, assembling, jointing, providing temporary supports etc, all complete with approved equipment and as per directions of Employer's			-	-
2	15 mm (1/2 inch)	Nos	580.36	104.46	684.82
2.01	20 mm (3/4 inch)	Nos	446.43	80.36	526.79
2.02	25 mm (1 inch)	Nos	446.43	80.36	526.79
2.03	32 mm (1 1/4 inch)	Nos	446.43	80.36	526.79
2.04	Handling,aligning,laying and jointing of PN16 HDPE (PE100) pipes with specials by butt welding/spigot joints confirming to IS and specifications. The item includes			-	-
2.05	63mm	Mts	385.00	69.30	454.30

JICA Assisted Guwahati Water Supply Project(ID-P-201)

Contract No:C#12B1

BILL OF QUANTITIES

SI NO	Description	Unit	Rate - Rs.		Total c= a+b
			Basic	Taxes	
			a	b	
2.06	Fitting and fixing of Consumer Water meters with necessary fittings of respective dia as well as Fitting & Fixing of Water Meter Box Enclosure made of PE/PP/Thermostating plastic. This item includes transportation from the storeyard to the project site, stacking as per BIS requirements, loading, unloading, hoisting, lowering, marginal cutting and grinding			-	-
2.07	15 mm (1/2 inch)	Nos	660.71	118.93	779.64
2.08	20 mm (3/4 inch)	Nos	648.00	116.64	764.64
2.09	25 mm (1 inch)	Nos	648.00	116.64	764.64
2.1	32 mm (1 1/4 inch)	Nos	648.00	116.64	764.64
2.11	Drilling & Tapping machine for DRY DI pipes, as per technical specifications in the tender document.	Nos	75,000.00	13,500.00	88,500.00
2.12	Electro fusion Welding Machine with 1 litre PE pipe cleaner and 10 manual pipe peeler/scrapper as per technical specifications in tender document.	Nos	85,000.00	15,300.00	100,300.00
				-	-
2.13	Road Restoration as required by the concerned Authority and as directed by Employer's Representative			-	-
2.14	Providing and laying of Prime Coat, as per specification and drawing and as directed	Sqm	35.00	6.30	41.30
2.15	Providing and laying of Semi dense bituminous concrete (SDBC), as per specification and drawing and as directed	Cum	9,080.00	1,634.40	10,714.40
2.16	Providing and laying of Tack coat (TC), as per specification and drawing and as directed	Sqm	24.00	4.32	28.32
2.17	Providing and laying of Bituminous macadam (BM), as per specification and drawing and as directed	Cum	7,776.00	1,399.68	9,175.68
2.18	Providing and laying of Premix carpet (PC), as per specification and drawing and as directed	Sqm	167.00	30.06	197.06
2.19	Reconstruction of WBM Roads : Providing, laying ,spreading and compacting stone aggregates of specific sizes as per specification and drawing to water bound macadam including spreading in uniform thickness, hand packing,	Cum	3,380.00	608.40	3,988.40
2.2	Reconstruction of Concrete Roads : Providing, placing and finishing Cement Concrete roads to match the existing roadway which was removed, as directed by the Employer's Representative	Cum	6,385.00	1,149.30	7,534.30
2.21	Providing and laying of interlocking concrete block pavement(ICBP) having thickness 80 mm as per IS:15658-2006(Compressive strength 47.20N/mm.Sq.), all complete, as per specification and drawing	Sqm	1,130.00	203.40	1,333.40
2.22	Miscellaneous Civil Work			-	-

JICA Assisted Guwahati Water Supply Project(ID-P-201)**Contract No:C#12B1****BILL OF QUANTITIES**

SI NO	Description	Unit	Rate - Rs.		Total c= a+b
			Basic	Taxes	
			a	b	
2.23	Providing and backfilling excavated HSC pit with crusher dust including watering, ramming, consolidating using portable vibratory compactor and dressing complete as per drawing, specifications and as per the instructions of the Employer's representative .	Nos	1,460.00	262.80	1,722.80
2.24	Earth work of Trial pit (1mx1mx upto 1.5m) for excavation of foundations, pipe trenches, valve chambers, thrust blocks, masonry work, etc. in all kinds of ordinary soils such as murum, sand, sandy silt, clay, kankar etc, including backfilling, dressing, compaction of the bottoms of the excavation, shoring and strutting wherever required, dewatering whenever required, removal of the excavated soil, stockpiling and disposal of surplus excavated soil off-site with complete restoration as directed by the Employer's Representative.	Nos	385.00	69.30	454.30

For Contractor**Authorised Signatory****Date:** _____

SECTION: IV: SCOPE OF WORK

Rate contract for providing Drinking Water House Service Connections in lots of 5,000 each- for total of approximately 30,000 households in South-west, South-central and North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete

Project Background

The Guwahati Metropolitan Area has been divided into four distribution zones for water supply, namely (1) South East, (2) South Central, (3) South West, all located south of the Brahmaputra River and (4) North Guwahati on the northern bank of the Brahmaputra River.

At present, there are three agencies which provide water supply in the City of Guwahati, namely the Guwahati Municipal Corporation, Public Health and Engineering Department (PHED), and Assam Urban Water Supply & Sewerage Board (AUWSSB). Of the three agencies the GMC covers about 30% of the population in this city. Most of the water treatment and supply facilities have outlived their lives as a result of a budget deficiency for repair or replacement.

The Master Plan for the Guwahati Metropolitan Area 2025 sets the target of “100% houses will be supplied with piped filtered water by the year 2025”. The on-going water supply project for the South West Zone is being taken up under Jawaharlal Nehru National Urban Renewal Mission (JNNURM) funding. The water supply for South East Zone is being planned under the Asian Development Bank’s (ADB’s) assistance.

The water supply zones under the Japanese International Cooperation Agency (JICA) funding for this Contract (ID-P 201) are the South Central and North Zones. The South Central Zone is the center of the city with the highest population among the four zones. This project will receive a loan assistance of 29,453 million Japanese Yen. The loan will fund civil works for constructing water supply facilities, procurement of machinery and equipment, and consulting services.

This Guwahati Water Supply Project (GWSP) aims to construct water treatment, conveyance and storage facilities in the South Central and Northern parts of the city to activate a potable water supply system with 100% coverage of the citizens within the above areas and thus leading to upgrading the citizen’s living standard.

Project Objectives

This project intends to improve living conditions in the rapidly growing Guwahati area, by providing new water supply facilities.

The main objective of Japanese loan assistance is to support India in establishing physical infrastructure to boost and sustain economic growth. At the same time, Japanese assistance seeks to support India’s efforts to alleviate poverty. In keeping with these goals, the loan package strategically covers this water supply project.

Project Description

The Guwahati Water Supply Project, (ICA Loan No.ID-P 201) has been structured to progressively develop the water supply facilities in a phased manner in order to meet the ever increasing water demands of the South Central and North Zones. The GWSP has been planned to be implemented in two (2) phases. Phase 1 will be designed to accommodate the projected year 2025 water demands and Phase 2 the projected year 2040 water demands. The transmission and distribution piping works under Phase I will be implemented to accommodate the demand of Phase 2.

Works under Contract Package C-1 and C-03 include: Intake, Water Treatment Plant and Clear Water Reservoir cum Pumping Station for North zone and South-Central zone respectively.

Works under the Contract Package (C-04) for the South-Central Zone facilities include: the construction of a main and seven service reservoirs, service buildings with booster chlorination facilities at all of the reservoir sites, the construction of booster pump stations, the supply and installation of MS and DI transmission mains etc.

Distribution networks installation works are included under Contract Packages: 2, 5, 6 & 7. The DI pipes to be installed under these Contracts (C- 02, 05, 06, 07) will be supplied by the PIU.

Providing House Service Connections:

Implementation of the projects is now underway; works are in different stages and partial commissioning of the project is scheduled for completion in phases from December 2023.

To ensure long-term sustainability of the water supply systems, it is critical that proper house service connections along with accurate and efficient water metering and billing systems to be provided to ensure proper customer services and for the recovery of operating and maintenance costs from water customers.

The House Service Connection work is being implemented by the Project Implementation Unit (PIU). Government of India has received loan from Japan International Cooperation Agency (JICA) under the loan ID-P-201 for the Guwahati Water Supply Project (GWSP) and it intends to apply part of the proceeds of this loan to payments for Procurement of works [Rate Contract] for providing drinking water House Service Connections.

Scope of Works

This is a single–point responsibility Rate contract for providing Drinking Water House Service Connections in lots of 5,000 each for total of approximately 30,000 households in South-central and North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete in the South-West, South-central and North Guwahati. The following is the scope of work of this tender.

- 1.1. The scope of work needs to be read in conjunction with the technical specifications provided in the Technical Specification section of this document. All rates and prices entered in the Schedule of Work shall be deemed to have included the following scope of works, but not limited to and shall cover all associated costs related to the item of work:
- 1.2. The Employer intends to complete the entire work of providing 5,000 House Service Connections, within 12 months' time. Employer will issue Work orders for 5,000 connections [considered as one 'Lot'] to the bidders and sign the contract.
- 1.3. Before signing the contract, the successful Bidders/Contractors shall submit the Performance Security amounting to 5% (Range) of the Value of Work order for one each lot of 5,000 connections.
- 1.4. The assignment of Work Orders to a certain Lot is contingent on the Contractor's performance, although the ceiling is set at 5,000 connections per Lot. Upon completion of one Lot the Work order for the next 5,000 connections will be issued and so on.
- 1.5. Contract completion time is 12 months, may be extendable on the basis of performance, client requirement and on mutual acceptance of both parties.
- 1.6. The decision of the Employer in terms of appointment of Contractors and allotment of Work and extending the time will be final and binding on all Contractors.
- 1.7. The list of Consumers for providing House Service Connections, area wise / DMA wise, as deemed appropriate by the Employer or Employer's Engineer will be provided, progressively over the period of the contract. The contractor has to plan and implement the work including its procurement. However prior approval of the Employer will be required before starting the HSC work in any area / DMA. Client reserves the right to allot work order of a particular DMA to any no. of contractors.
- 1.8. The Contractor has to be in touch with the consumers for providing the connections and have to implement the work with minimum inconvenience to the consumers. After completion of the work, the prescribed 'Work Completion Form' and the measurements accepted by the contractor, need to be

certified by the Engineer's representative or the employer. These shall be submitted along with the Interim Payment Certificate, which will be the basis for release of payment.

- 1.9. The Contractor shall be responsible for Construction, maintenance and removal, if required, of temporary site drainage on the Site, and for ensuring that all drains are kept clear of debris and blockages at all times.
- 1.10. The Contractor has to execute the work as per the Typical House service connection drawing provided along with the tender and has to provide all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete services in connection with the execution of the works.
- 1.11. The Contractor will be responsible for the crossing of any open or closed drains, channels, and roads, providing GI Pipe casing and restoring the drains to the original condition, if any damage is caused.
- 1.12. Wherever required, the Contractor has to provide HDPE PE 100, PN 16 Header pipes, with the required specials, in the by-lanes, as instructed by the Engineer.
- 1.13. The Service connection from the D.I Pipeline should be secured firmly by providing a Swivel Banjo Ferule and Strap Saddle. Fixation of ferrules are to be done using Drilling and Tapping machines only. Making holes in DI pipes through any other method like chiseling etc. is strictly prohibited.

All the Service connections will be given by providing MDPE PE 80 PN16 blue pipes conforming to ISO 4427 for conveyance of Potable water for Human Consumption and manufactured from virgin natural resin PE 80 food grade compounded raw material, containing those anti – oxidants, UV Stabilizers & Pigments necessary for manufacturing of pipes. Electro fusion Welding Machine that is required for installation of Electro Fusion Tapping Tee shall be provided by the Contractor at his own cost.

- 1.14. For all the house service connections, the compression end UPVC Ball Valve or of any other material conforming to BS 6920, Brass Y-Strainer and Pressure Reducing Valve conforming to BS EN 1567:2000 should be fixed on the connection before the meter point. The Contractor shall fix the Water Meter that will be provided by the Employer. The compression fittings PN 16 rated shall be conforming to ISO 14236 and its latest versions, etc., for crossing of any open or closed drains, channels, GI Pipe casing shall be provided.
- 1.15. The jurisdiction of the contractor starts from the distribution mains ferrule point to the meter point (1 meter) within the consumer premises. The consumer meter that will be supplied by the Employer will be installed and Ball Valve/Stop Cock, Y-Strainer, PRV will be provided by the Contractor within the consumer premises. The plumbing work beyond the meter point within the consumer premises will not fall under the jurisdiction of this contract and will be taken up by the individual consumer.
- 1.16. The Contractor has to supply Goods/Material required for the work and has to bear transportation, which shall include for all labour and equipment required for unpacking, loading, conveying, unloading, storing, and multiple handling of all and every item to be transported. The Contractor is responsible for storage and safe custody of the materials supplied by him for this work and the Water Meters supplied by the Employer.
- 1.17. The Consumer Water Meters are to be supplied by the Employer and to be fixed by the Contractor. All other materials required for completing the work, such as Swivel Banjo Ferule & Strap Saddle for tapping from D.I. Pipes, Electro Fusion Tapping Tee with inbuilt cutter for tapping from HDPE Pipes, MDPE PE 80 PN 16 Blue Pipes (sizes varying from 15 mm to 32 mm dia.) conforming to ISO 4427, UPVC Ball Valve PN16 or any other material conforming to BS 6920, Pressure Reducing Valve PN 16 conforming to BS EN 1567:2000, compression fittings PN 16 rated conforming to ISO 14236, GI Pipe casing, HDPE pipes and HDPE fittings etc., conforming to Indian or its equivalent standards shall be provided by the Contractor.
- 1.18. The Contractor needs to provide 12 months warranty of the materials supplied as a part of the contract which includes House Service Connection Pipes, fittings, Ball valves, Y-Strainer, PRV's, etc.,
- 1.19. Contractor needs to submit the Quality Assurance plan for all the material before procurement and the same should get it approved from the employer. Factory inspections shall be arranged by the contractor for testing all the material at manufacturing plant and the cost of factory inspection shall be considered in the rates quoted by the contractor. Or Factory Acceptance Test shall be carried out by the

contractor/supplier and the Test Reports shall be submitted to the Employer or his representative. The Employer reserves the right to appoint Third party inspection agencies at the manufacturers' premises. In such case, the inspection fee will be borne by the Employer.

- 1.20. The Contractor shall employ only the trained plumbers of Assam Skill Development Mission (ASDM) or Industrial Training Institute (ITI) licensed Plumbers or qualified plumbers trained under Guwahati metropolitan Drinking Water and Sewerage Board, who have general hands-on experience of plumbing works in municipal water supply system and whose credentials are to be approved by the contractor. Periodic competence shall be tested and those found incompetent shall be removed from the job.
- 1.21. All temporary works required for installation, testing and commissioning of the house service connection, for example excavation, backfilling, reinstatement, dewatering, providing valves and capping-off all works complete as per the applicable IS provisions, are to be executed by the contractor.
- 1.22. The Contractor must liaise with the Pipeline Contractor for charging of the lines for conducting testing and commissioning of the House Service Connections. Employer will assist in the process of smooth handover of the pipeline from the pipeline contractor to the house service connection contractor.
- 1.23. The Contractor should undertake reinstatement of the roads, drains and within the consumer premises as per the employer's requirement and to the satisfaction of the consumer. The reinstatement within the consumer premises are to be made to a reasonable extent, up to the meter point and however, it will be limited to maximum of cement concrete (CC) flooring irrespective of the type of flooring (marble / granite, etc.,) prevalent at the start of the work. In order to avoid dispute in this regard the contractor has to take pre and post work photographs of the flooring within consumer premises, for record purpose and to prevent potential dispute, if any.
- 1.24. All general obligations, liabilities and risks involved in the execution and maintenance of the Works set forth are reasonably implied in the documents on which the Tender is based.
- 1.25. All works in isolating and emptying existing mains and the satisfactory disposal of water is the responsibility of the contractor, in coordination with the pipeline contractor. The employer may intervene and assist in case any assistance is required.
- 1.26. Traffic management: Contractor should provide adequate safety barricades /reflective signs/ tapes, warning lights to ensure public safety while executing the work.
- 1.27. The contractor has to obtain road cutting permissions from the respective Departments. However assistance will be provided by the Employer in facilitating this.
- 1.28. The contractor has to provide prior intimation to traffic police and the concerned Utility Departments, wherever road cutting and service connection work will be taken up so as to minimize the public inconvenience.
- 1.29. The contractor also needs to provide prior intimation to the consumers before taking up service connection work to his premises.
- 1.30. Any other work which is required to be done and has relation with respect to the supply and installation work done by the contractor during the works contract period can be undertaken.
- 1.31. HSC Forms shall be filled for each HSC installation duly signed by the Consumer, PIU and PMC.

SECTION: V: TECHNICAL SPECIFICATIONS

1. Brass Ferrule:

Body: Body should be made up of Brass of IS: 319/I standard and method of manufacturing should be forging.

Threading Type: Inlet threading should be in BSPT and outlet threading should be in BSP.

Outlet Size: 15mm to 50mm.

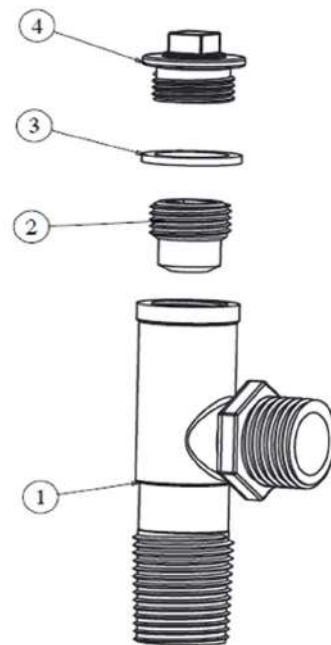
Flow Adjustment Screw: Body should contain flow control screw made up of brass to regulate the output flow.

Top Cap with plastic washer: A top cap should protect the flow control screw; cap should be also made up of brass. Washer should provide a leak proof sealing.

Standards: It should be tested as per IS: 2692/1984 (Reaffirmed 2005).

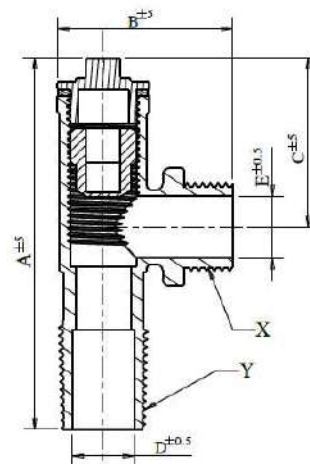
Pressure rating: Should be PN 16 rated and should withstand the pressure of 16 Bar

Marking on Body: The body should be marked with manufacturers logo, size & PN16.



Material of Construction:

Sr. No.	Description	MOC	Qty.
1	Ferrule Body	Brass	01
2	Flow Adjusting Screw	Brass	01
3	Sealing Washer	PTFE	01
4	Top Plug	Brass	01



Dimensions:

Sr. No.	1/2"	3/4"	1"
A	88	100	101.2
B	40	51	62
C	40	45	45
∅D	15.4	20.2	26.3
∅E	14.5	19	25
X	1/2" BSP	3/4" BSP	1" BSP
Y	1/2" BSPT	3/4" BSPT	1" BSPT

2. DI Strap Saddle:

DI Strap Saddle for service connection on Ductile Iron water distribution mains shall be of wrap around design and wide skirt for proper support which provides excellent stability to the saddle and reinforce the pipe. Manufacturers must have ISO 9001 for at least past five years. Manufacturer specification, Quality assurance plans (QAP) to be submitted by the respective bidder for the client/consultant approval. It shall be compatible for assembly on DI distribution mains pipe manufactured in accordance with ISO standard. Saddle fittings shall be suitable for maximum working pressure 16 bar (kg/cm²) with outlet/ branch sizes in 15mm, 20mm, 25mm, 32mm, 40mm and 50mm. It should be compatible with the dry tapping tools to create leakage free tapping on dry Ductile Iron water distribution pipes while installed on the pipe.

Material of Construction:

- a) Body: Main body should be made up of Ductile Iron with standard BSP female threads.
- b) D Washer: Should be made up of industrial plastic.
- c) Strap: Should be made up of SS 304 grade with rubber sleeve to prevent corrosion over the long service life. The strap length should be as per required pipe diameter.
- d) Fasteners/Hardware: Should be made up of SS 304 for long service life.
- e) Rubber Seal: Should be made up of NBR/TPE for leak proof joint & firm grip, saddle seal should be a contoured gasket to provide a positive initial seal.
- f) Coating: Powder Coating
- g) Pressure rating: Should be PN 16 rated and should withstand the pressure of 16 Bar.

3. Dry Type Drilling & Tapping Machines for DI Pipes:

The Drilling/tapping machine should be fit for the saddles (Dry Pressure). It should be capable for drilling on Cast Iron, Ductile Iron, steel pipes of various diameters {100mm (NB 100), 150mm (NB 150), 200mm (NB 200)} into the water mains through saddles. It should be hand operated (ratchet handle), easy maintained and highly durable to ensure simple installation of ferrule to the main pipe. All kit components shall be manufactured in top materials, with excellent surface finishes and are designed to withstand hard work with only minimum maintenance. The tapping tool kit shall be designed to fit on the metallic insert of the composite strap saddle perfectly in order to drill the pipe with the saddle already fitted.

The tool shall be designed without complicated aperture such as chains and belts to hold the pipe. The tapping/drilling tool shall be designed in such a way to minimize torque requirements while making the hole on pipes. It should be tempered with nickel-plated steel drilling device, with tempered ground stainless steel shaft.

Each machine kit should comprise of the required size and number of drill bits

4. Clamp Saddle:

House service connections from the HDPE Pipeline shall be taken by providing Clamp Saddle which shall be compatible for clamping on either PE 80 or PE 100 distribution mains pipe manufactured in accordance with IS 4985. The body should be Virgin Polypropylene.

Pressure rating will be PN 16. The grade of PP raw material used must be certified by an WRAS certification/BS 6920, Indian or International certifying body from their certified laboratories and certificate of Compliance to be produced for the following parameters:

- i) Odour & flavour of water
- ii) Appearance of water
- iii) Growth of micro organism
- iv) Extraction of substances that may be of concern to public health

Material of Construction:

- a) Body: Main body should be made up of Polypropylene moulded with Stainless Steel SS304 female threaded insert.
- b) Rubber Seal: Should be made up of NBR/TPE for leak proof joint & firm grip. Saddle seal should have contoured gasket to provide a positive initial seal. Use of a simple O ring should be prohibited at all times.
- c) Fasteners/Hardware: Should be made up of SS 304.
- d) Pressure Rating: Should be PN 16 rated and should withstand the pressure of 16 Bar
- e) Outlet Size: ½”.
- f) Colour: Blue
- g) Standards: Should comply with AS/NZS 4129:2008 for endurance, durability and product performance.
- h) Raw Material: BS 6920, WRAS certified for suitability of non-metallic products for use in contact with water intended for human consumption with regards to their effect on the quality of the water.

Hardware, Sizes & Assembly weight details.

Clamp Saddle Size	Fasteners Size	Approx. Weight in gms	Tolerance in gm
63mm X 1/2 “	M6 X 50	220	Tolerance +/-15 Gms
75mm X 1/2 “	M6 X 50	240	
90mm X 1/2 “	M8 X 50	370	
110mm X 1/2 “	M8 X 50	400	
125mm X 1/2 “	M10 X 60	625	
140mm X 1/2 “	M10 X 60	600	
160mm X 1/2 “	M10 X 60	645	

5. MDPE Pipes and Fittings:

MDPE PE 80 PN 16 Blue Pipes shall conform to ISO 4427 for conveyance of Potable water for Human Consumption and to be tested to comply with BS 6920 specifications in any of the laboratories like WRC/ \CIPET (India)/DVGM/KIWA/SPGN and certificate of compliance to be produced for the following parameters:

- Odour & Flavour of Water
- Appearance of Water
- Growth of Micro Organism
- Extraction of substances that may be of concern to Public Health (Cyto Toxicity)
- Extraction of Metals.

The Pipes shall be manufactured from virgin natural resin PE 80 food grade compounded raw material, containing those anti – oxidants, UV Stabilizers & Pigments necessary for manufacturing of pipes. Reworked material, generated from manufacturer's own production of pipes, shall not be used. The Pipes shall be designed for the nominal working pressure class PN 16 and shall have minimum required strength of material as 8Mpa at 20° C, as per ISO 4427: 1996.

Pressure Rating: The Pressure rating of MDPE Blue PE 80 Pipes shall be confirming to ISO 4427: 1996.

Colour of Pipes: The Colour of MDPE PE 80 Pipes shall be BLUE confirming to ISO 4427: 1996.

Dimensions: The pipe dimensions shall be as per latest revisions of ISO 4427 and pipes upto diameters 32 mm shall be supplied in Coils of 100- 300 m. The internal diameter, wall thickness, length and other dimensions of pipes shall be as per relevant tables of ISO 4427:1996. Each pipe shall be of uniform thickness throughout its length.

The dimension tolerances shall be as per ISO 4427

Performance requirements: The Pipe supplied should have passed the acceptance test as per ISO 4427. The manufacturer should provide the test certificates for the following tests.

- Melt Flow Rate
- Density,
- Oxidation and Induction test,
- Hydrostatic Test ,
- Pigment dispersion Test,
- Longitudinal Reversion Test.

Compression fittings: -

- PN 16 rated shall be conforming to ISO 3503, ISO 17885 and its latest versions and shall be tested as per ISO:3459, ISO 17885 in food grade poly propylene and suitable for drinking water supply, which shall be certified by WRAS.
- ISO 3459: Polyethylene pressure pipes joints assembled with mechanical fittings: test of internal pressure.
- ISO 3503: Assembled joints between fittings and polyethylene pressure pipes: test of leak-proof under internal pressure when subjected to bending.
- ISO 17885: Threaded outlet shall be verified with the help of thread GO/NOGO gauge.
- If the pipes and fittings are not produced by the same manufacturer, the Contractor shall perform the above tests at his own expense at an approved laboratory

Supply of Ball valve /Stop cock:

Each service connection will be provided with a Compression End UPVC Ball Valve (or any other material conforming BS 6920) PN 16 rating, with one end compression and the other end with female thread conforming to ISO:4422-4 and ISO:7/BS:21/IS:554, etc., which will be installed before the consumer meter. The raw materials should have undergone type tests as specified in BS 6920.

6. Brass Y-Strainer:

Brass Y-Type Strainer (Screwed)

Salient Features

Screwed Female Ends to BSPT.

Stainless Steel (S.S 304) Ø1 mm perforated sheet screen is guided in the body and cover.

Fine finish and smooth contours reduce pressure drop in the strainer.

Large screening area makes the strainer efficient in performance.

Test Pressure (Hydrostatic) :

Shell : 35.15 kg/cm²g (500 psig)

Working Pressure (Steam) : 17.58 kg/cm²g (250 psig)

Maximum Working Temperature : 225°C

Materials

P.No. Name of Part Material of Construction Specification Quantity

- 1 Body Bronze IBR 282 (a) (iv) Gr. B 1
- 2 Screen (Ø1 mm Perforation) Stainless Steel Type 304 1
- 3 Gasket Steam Jointing Sheet IS 2712 Gr. W/3 1
- 4 Cover Bronze IBR 282 (a) (iv) Gr. B 1.

7. Pressure-Reducing Valves

Most of the plumbing codes require water pressure reducing valves on domestic systems where the water main's pressure exceeds 55 m head to avoid high pressures causing rupture of pipes & fittings and injure the people using them. Water entering the valve from mains is constricted within the valve body and directed through the inner chamber controlled by an adjustable spring loaded piston/ diaphragm and disc. Even if the supply water pressure fluctuates, the pressure reducing valve ensures a constant flow of water at a functional pressure, as long as the supply pressure does not drop below the valve's pre-set pressure.

The Pressure Reducing Valve should be as per BS EN 1567:2000 or any equivalent standards applicable for drinking water supply.

Pressure-reducing valves (PRVs) shall be of the pressure compensated piston or diaphragm controlled, designed to reduce a variable inlet pressure to a pre-determined constant outlet pressure at varying flows. Valves shall be drop tight under no flow conditions.

The body of the PRV shall be made with bronze or brass or any equivalent material with integral strainer of stainless steel 316. All necessary repairs to the valve should be possible without removing the valve from the service connection pipe.

The pressure setting shall be capable of being adjusted on site by the use of an adjustment screw to alter the compression of the spring. The opening and closing speeds shall also be field adjustable by adjusting the flow regulation screw. The valves shall be capable of being fully opened or fully closed by respective opening and closing of upstream and downstream ground cocks.

These pressure reducing valves shall regulate downstream pressures to set values. Nominal pressures will be Inlet Pressure (0.25-1.6 MPa)/ Outlet Pressure (0.1-0.6 MPa) rating. Body ends shall be equipped with suitable and standard threads or connection arrangement which is capable of developing leak proof joint.

8. Supply of GI pipes (Medium)

GI pipes conforming to IS 1239 of sizes 50mm and 80mm should be provided for casing along with pipe specials and fittings (Heavy).

9. Supply of HDPE Pipes and Fittings

Supplying HDPE pipes PE 100, PN 16 shall conform to IS 4984:1995 with latest amendments.

Raw material used to manufacture the HDPE pipes shall be virgin compounded or Natural black PE 100 resin conforming to ISO4427:2007. The carbon black content in the material shall be within $2.5 \pm 0.5\%$ and the dispersion of carbon black shall be satisfactory when tested as per ISO2530.

The PE100 black compound proposed to be used for manufacturing of the pipes should also comply with the following norms certified by the raw material manufacturer from an independent third party laboratory like Exova (formerly Bodycote), KIWA, CIPET, etc. which should be submitted by the pipe supplier.

The raw material should have certification as per ISO 9080:2003 and ISO 12162 by an independent international testing laboratory for having passed 10,000 hour long term hydrostatic strength (LTHS) test extrapolated to 50 years to show that the resin has a minimum MRS of over 10 MPa. Certification as per ISO 13477:2008- Determination of resistance to rapid crack propagation (RCP)- small – scale steady state test (S4 test). Internal certificate of any resin manufacturer shall not be acceptable.

Certificate for having passed the full scale rapid crack propagation test as per ISO 13478. Tolerance & ovality, Wall thickness as per allowable hydrostatic design stress, minimum & maximum wall thickness and Testing of Pipes will be as specified in IS 4984.

All HDPE fittings/specials shall be fabricated or injection moulded at factory as per IS: 8360 (Part-I & Part-III) and as per IS: 8008 (Part-I to Part-IX). Fittings will be butt welded on the pipes or other fittings by use of heat fusion.

10. Installation of Water Meter and Valves

The meter shall be fixed in a position by means of connecting pipes, jam nut and socket etc. The paper disc inserted in the ripples of the meter shall be removed and the meter shall be installed exactly horizontally in the flow line in the direction shown by the arrow cast on the body of the meter. Care shall be taken to not to disturb the factory seal of the meter. Wherever the meter shall be fixed to a newly fitted pipeline, the pipeline shall have to be completely washed before fitting the meter.

13. Water Meter Box

General Requirement: Meter Box is to be provided to encompass & protect water meters installed on drinking water supply pipes. It should be of two components, comprising body and lid. Provision for embossed marking on the lid and body as per client requirement.

Raw Material: The material of construction of the lid and body of the valve box is weather resistant PP.

Minimum Dimensions: Length 395 mm x breadth 185 mm x height 160 mm

Lid fixing: Press fitted type only. No hinges should be used for open /close operation.

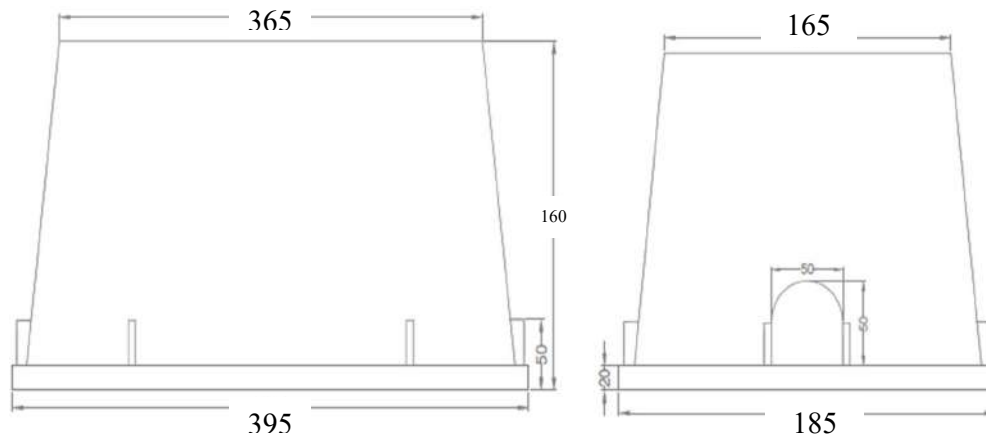
Locking: With built in lock.

Cut-outs for passing pipes: The body must have inlet and outlet windows to pass the pipe through. It should be suitable for use with pipes of sizes up to 1" with suitable sealing of the cut-outs of pipe inlet and outlet with material having same durability as the meter box.

Performance Requirement: In its properly installed position, must be able to take load of human traffic and small vehicular load that usually appear in residential areas.

It must pass test of load bearing when applied dead load of 100 kg on the meter box top for 1 hour, without any side support. No signs of deformation of the box shall be observed.

Installation: Meter Box shall be installed to the floor using anchor bolts/screws without grouting the entire base of the meter box, if necessary, by raising the base to avoid waterlogging.



14. Excavation Work:

Soil:

This classification shall comprise all kinds of soil, turf, sand, silt, loam, clay, mud, peat, black cotton soil, soft shale or loose murrum, a mixture of these and similar materials. All soils covered in ordinary and hard soils shall be covered in this category. Removal of gravel or any other nodular material having

dimension in any one direction not exceeding 75 mm occurring in such strata shall be deemed to be covered under this category.

Ordinary Rock (not requiring blasting):

This classification shall include rock types such as laterites, shales and conglomerates, varieties of limestone and sandstone etc., which may be quarried or split with crow bars or pneumatic rams. This classification also includes any rock which in the dry state may be hard and requires blasting, but which when wet becomes soft and can be excavated by a means other than blasting.

Macadam surfaces such as water bound and bitumen bound road surfaces, paths etc. and hard core compact murrum or stabilized soil requiring a grafting tool or pick to excavate them will be considered in this category. Gravel and cobble stone having a maximum dimension in any one direction between 75 and 300 mm shall also be included.

Lime concrete, stone masonry in lime mortar and brick work in lime/cement mortar below ground level, reinforced cement concrete which may be broken up with crow bars or picks and stone masonry in cement mortar below ground level shall be included in this category.

Boulders which do not require blasting having a maximum dimension in any direction of more than 300 mm, found lying loose on the surface or embedded and terrace material of dissimilar origin shall be included in this category.

Limits of Excavation and Restoration

The contractor shall disturb only that portion of the street and public or private property necessary for execution of the work and abide by the all prevailing rules of working on the streets. The work should cause a minimum of inconvenience to persons residing or moving near the work location. The Contractor shall protect all excavations by barricades, lights and other warning devices. When service connections are installed prior to rough grading, a minimum of 0.5 m deep earth filling shall be placed over the pipes and fittings.

Upon completion of the service connections, the public and private property shall be restored amicably as per the earlier condition.

The maximum length of open trench will be the distance necessary to accommodate the amount of pipe installed in a single day. To the extent practical, trenches shall be fully backfilled each day. At any time a trench is unattended, the entire trench shall be protected with a minimum of 1.5 m high barricading.

Dewatering of Pipe trenches

The contractor shall provide and operate suitable dewatering equipment to maintain trenches with no accumulation of water (from ground or pipes) and the water table is maintained at least 300 mm below the bottom of the trench during excavation, pipe laying and backfilling. Special care shall be exercised to prevent excessive and rapid drawdown of water table and rate of pumping shall be maintained in such a manner that no adverse structural effects on buildings and other structures are caused and no instability of the ground should be caused. Dewatering of trenches shall not cause any obstruction the functioning of normal storm drainage system with drainage water containing solid particles, floating matter, debris, etc. The contractor shall clear and maintain surface and underground drains of all such matter to prevent inconvenience to public and avoid damages to property.

15. Trench Backfilling and Compaction

All trenches shall be backfilled as soon as practicable. When suitable material is not available from excavations the contractor may opt for select material for backfilling or for blending with existing material. The quantity and quality of the selected material shall be subject to the approval of the Engineer.

Placing and compacting of trench backfill including blending of backfilling materials, adding moisture or drying of materials, and procuring suitable materials from excavations within the project shall be considered as incidental to trench excavation or to the items for pipe.

Backfill material placed within 0.5 m of subgrade shall be compacted to a density of not less than 100 percent of maximum density and the relative moisture content shall be not more than 102 percent of

optimum moisture content. Subgrade shall be defined for this section as the elevation of the bottom of any aggregate material placed for pavement or sidewalk or the bottom of the topsoil for turf establishment.

16. Road Restoration

The contractor shall be responsible to ensure that all existing asphalt roads, brick road, concrete roads, paver block roads and WBM roads are reinstated as stated in typical drawings, immediately after hydraulic testing of the pipeline and backfilling has been completed. The finished levels of the completed reinstatement shall conform to the adjoining carriageway surface. Reinstated road shall match as nearly as practicable to the characteristics of the existing road.

Water Bound Macadam Road

This work shall consist of providing clean and crushed aggregates, laying & compacting of WBM sub-base / base course by rolling and bonding together with screening, binding material where necessary and watering, including preparation and compaction of sub-base & spreading of crushed aggregate to proper grade and camber including application of screenings for interlocking, sprinkling of water & rolling with power roller as per instructions of the Employers Representative, shall be as specified below.

- a. Grading No.1 material 90 to 45 mm size with stone screenings & binding material, 200 mm thick.
- b. Grading No.2 material 63 to 45 mm size with stone screenings & binding material, 100 mm thick.
- c. Grading No.3 material 53 to 22.4 mm size with stone screenings & binding material, 80 mm thick.

Bituminous Macadam

Coarse Aggregate 53 mm to 2.8mm size with bitumen spray grout at 15kg /10.Sq.m, 50mm thick.

Bituminous Concrete

Coarse Aggregate 22.4 to 2.8mm size bitumen spray at 15 kg / 10 sq.m, 25mm thick.

Pre-mix

Premix seal coat with pre-mix aggregate size passing through 2.36mm sieve at 0.6 kg/10sq.m. mixed with binder at 6.8 kg / 10sq.m.

Prime Coat– Providing and applying a primer coat at 0.6kg/m² with bitumen emulsion CSS-1 (IS 8887 – 2004) on prepared surface of WBM including cleaning of road surface and spraying primer at the rate specified using mechanical means.

Tack coat (TC)- Providing and applying tack coat with bitumen emulsion, using emulsion pressure distributor, at 0.2 kg/m² on the prepared surface, after cleaning broom. The bitumen emulsion shall be of CSS-1h for a normal bituminous surface. The materials shall be tested at the site and in a laboratory.

Cement Concrete Road

The concrete road shall be of M20 plain concrete of 200 mm thick. This work, if applicable anywhere as per direction of Employers Representative, shall conform to Standard specification – Cement concrete pavement under Road Section.


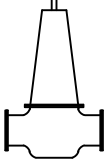

17. Testing

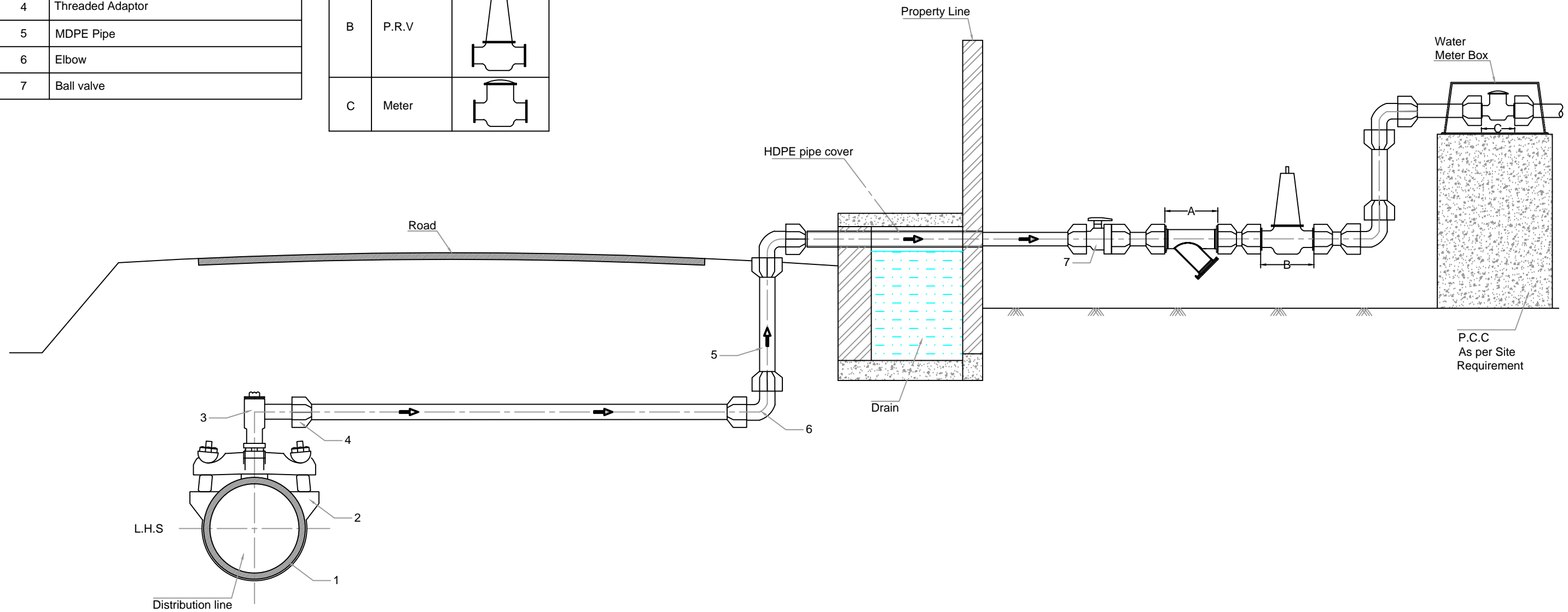
The Contractor is required to test individual house connection pipeline including water meter and other accessories for hydrostatic test between ferrule point and including water meter using clean water. Once the connection is done, it is to be observed for any leakages from ferrule to the water meter for any leakage from joints at supply time. If the joints are dry and no visible leaks are found during supply hours, it is deemed to be acceptable. All leaks and defects in joints revealed during the supply timings shall be rectified and got approved at site from PMC/ PIU.

18. Technical Specification

Contract Package 12B1 - Providing Drinking Water House Service Connections in lots of 5,000 each, for total of approximately 30,000 households in South-central and North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete		
Item No.	Description of Material	Compatible Brand List
1	Brass or any other suitable material ferrule confirming to PN 16	AIVA/ George Fisher/Kimplass or Equivalent
2	Fitting and fixing of MDPE pipes along with all the compression fittings and compression end UPVC Ball Valve (or any other material conforming BS 6920) with necessary.	AIVA/ George Fisher or Equivalent
3	DI Saddle.	AIVA/ Glynwed/ Frialeii/ Tega/ George Fisher or Equivalent
4	Medium Density Polyethylene pipe (MDPE) conforming to ISO 4984 & ISO 4427 and manufactured from virgin resin of PE80 PN16. Compression fittings should have Raw material which is conforming BS 6920 and with moulded-in chrome plated brass/SS threaded insert outlet with thread dimension conforming to IS 554/ISO 7.	Duraline, Time Technoplast, Supreme or Equivalent
5	Compression End PE 80 Ball Valve PN 16 rating (or any other material conforming BS 6920) with one end compression fitting and the other end with female thread conforming to ISO:4422-4 and ISO:7/BS:21/IS:554, etc.	Glynwed/ Frialeii/ Tega/ AIVA/ George Fisher or Equivalent
6	Brass Y-type strainer	Zoloto or Equivalent
7	Pressure Reducing Valve (PRV) of rating PN 16/0.8 made of Brass or Bronze or any suitable material as per BS EN 1567:2000.	Zoloto or Equivalent
8	HDPE (PE80, PN16) pipe including all specials conforming to IS 4984 - 110 mm dia	Duraline, Time Technoplast, Supreme or Equivalent
9	110mm HDPE Stub end with Annular Ring / Flange with Bolts each connection	Duraline, Time Technoplast, Supreme or Equivalent
10	Water Meter Box made of PE/PP/Thermostating Plastic.	Glynwed/ Frialeii/ Tega/ AIVA/ George Fisher or Equivalent

S. NO	Description
1	DI Main
2	Saddle with BSP outlet
3	Ferrule
4	Threaded Adaptor
5	MDPE Pipe
6	Elbow
7	Ball valve

S.I NO	Legend	
A	Strainer	
B	P.R.V	
C	Meter	



Size of the connection in pipe	Bore dia in Distribution pipe	Size of Meter
20 mm	16 mm	16 mm
25 mm	20 mm	20 mm
32 mm	25 mm	25 mm
40 mm	32 mm	32 mm
50 mm	40 mm	40 mm
63 mm	51 mm	51 mm

Distribution pipe dia	Size of connection in mm (OD)
100 mm	20,25
150 mm	20, 25, 32, 40
200 mm	25, 32, 40, 50, 65
250-300 mm	32, 40, 50, 65, 100

Description	Stop Valve	Strainer	PRV	Meter
High Pressure Zone static head more than 55 m	✓	✓	✓	✓
Average pressure zone less than 55 m head but more than 12 m	✓	✓	✗	✓
Low pressure zone i.e head is less than 12 m	✓	✗	✗	✓

Consultants:
PROJECT MANAGEMENT CONSULTANT (PMC)
 NJS Consultants Co., Limited
 Saikia Commercial Complex,
 3rd Floor,
 Christian Basti,
 G.S.Road
 Guwahati - 781005

Project:
**PROJECT MANAGEMENT CONSULTANTS (ICDC)
 HSC FOR SOUTH WEST GUWAHATI & SOUTH CENTRAL
 GUWAHATI AREA**

Client:
**PD, PIU
 (JICA ASSISTED GUWAHATI WATER SUPPLY PROJECT)**
 1st FLOOR, TRIPTI TOWER, GANESHGURI
 Guwahati-5, Assam


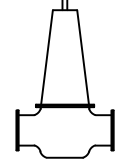
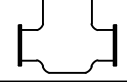
REV NO.	DATE	REMARKS
3		
2	28.12.2021	Revised
1	27.10.2021	Revised
0	04.09.2018	For Tendering Purpose

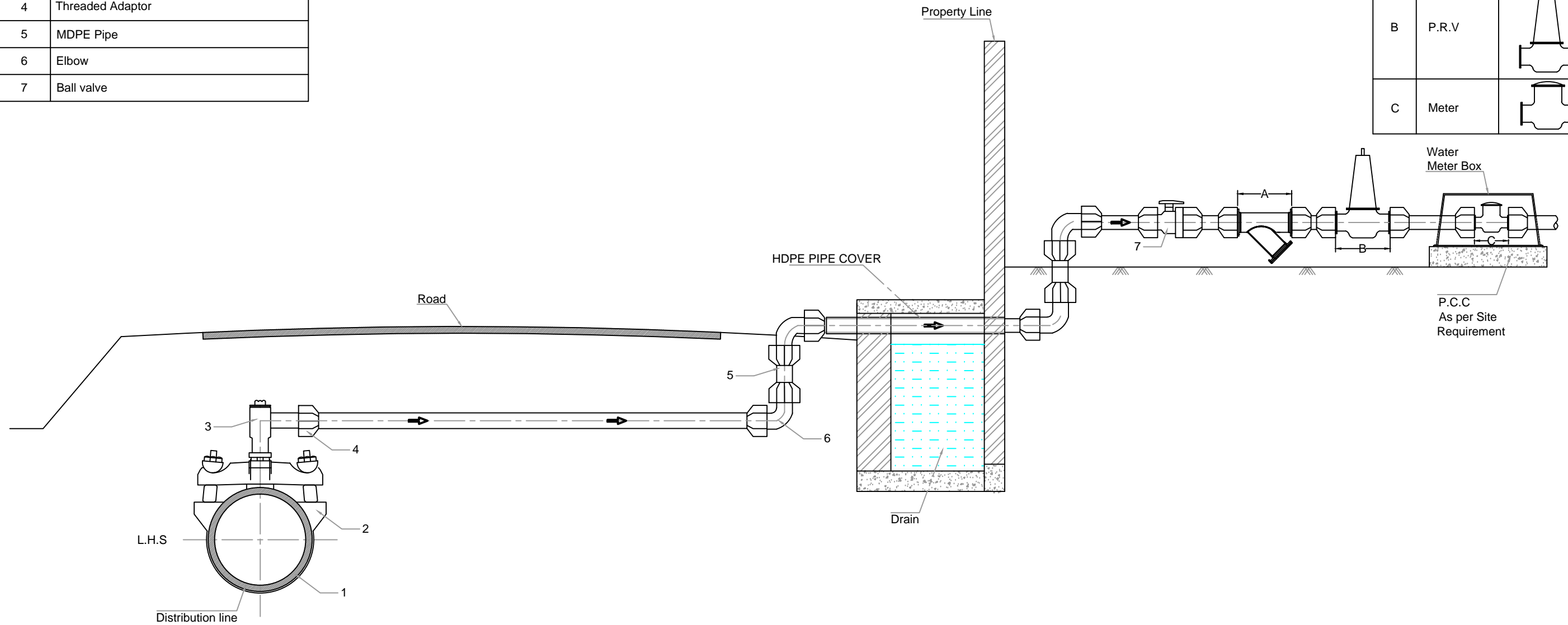
Approved by: R.Radhakrishnan
 Checked by: P.Datta
 Drawn by: H.K.S.
 Design by: P.Datta
 Scale: N.T.S

Title:
Typical Drawing for House Service connection on D.I pipe. Type I Long Side (Property Below Road Level)

Drg. no:
 GWSP/HSC/01

S. NO	Description
1	DI Main
2	Saddle with BSP outlet
3	Ferrule
4	Threaded Adaptor
5	MDPE Pipe
6	Elbow
7	Ball valve

S.I NO	Legend	
A	Strainer	
B	P.R.V	
C	Meter	



Size of the connection in pipe	Bore dia in Distribution pipe	Size of Meter
20 mm	16 mm	16 mm
25 mm	20 mm	20 mm
32 mm	25 mm	25 mm
40 mm	32 mm	32 mm
50 mm	40 mm	40 mm
63 mm	51 mm	51 mm

Distribution pipe dia	Size of connection in mm (OD)
100 mm	20,25
150 mm	20, 25, 32, 40
200 mm	25, 32, 40, 50, 65
250-300 mm	32, 40, 50, 65, 100

Description	Stop Valve	Strainer	PRV	Meter
High Pressure Zone static head more than 55 m	✓	✓	✓	✓
Average pressure zone less than 55 m head but more than 12 m	✓	✓	✗	✓
Low pressure zone i.e head is less than 12 m	✓	✗	✗	✓

Consultants:
PROJECT MANAGEMENT CONSULTANT (PMC)
 NJS Consultants Co., Limited
 Saikia Commercial Complex,
 3rd Floor,
 Christian Basti,
 G.S.Road
 Guwahati - 781005

Project:
**PROJECT MANAGEMENT CONSULTANTS (ICDC)
 HSC FOR SOUTH WEST GUWAHATI & SOUTH CENTRAL
 GUWAHATI AREA**

Client:
**PD, PIU
 (JICA ASSISTED GUWAHATI WATER SUPPLY PROJECT)**
 1st FLOOR, TRIPTI TOWER, GANESHGURI
 Guwahati-5, Assam


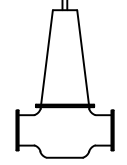
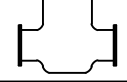
REV NO.	DATE	REMARKS
3		
2	28.12.2021	Revised
1	27.10.2021	Revised
0	04.09.2018	For Tendering Purpose

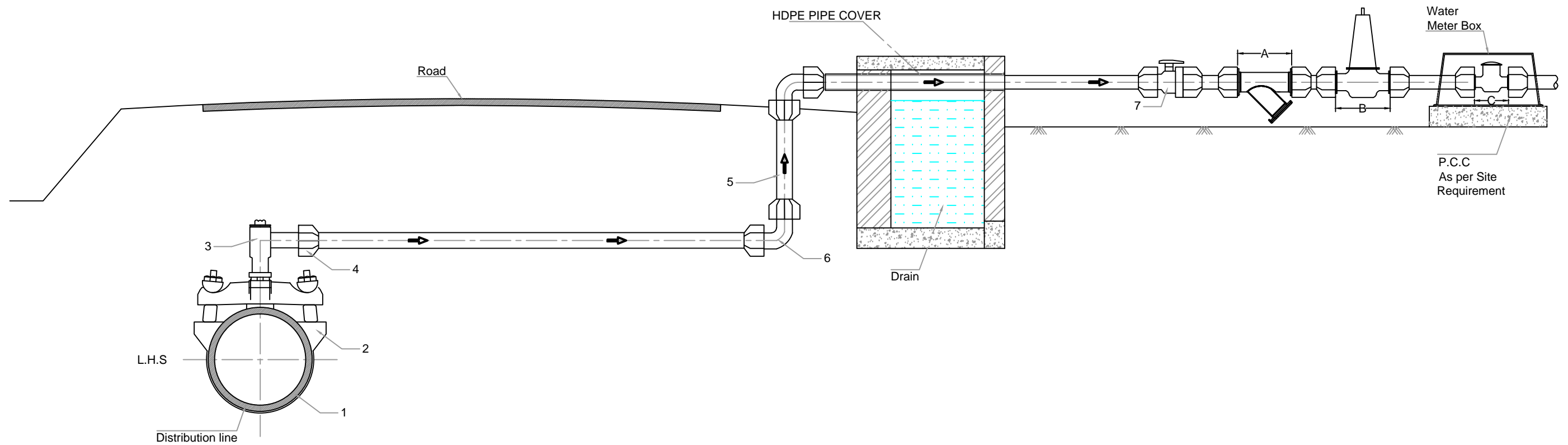
Approved by: R.Radhakrishnan
 Checked by: P.Datta
 Drawn by: H.K.S.
 Design by: P.Datta
 Scale: N.T.S

Title:
Typical Drawing for House Service connection on D.I pipe. Type II Long Side (Owner Property Above Road Level)

Drg. no:
 GWSP/HSC/02

S. NO	Description
1	DI Main
2	Saddle with BSP outlet
3	Ferrule
4	Threaded Adaptor
5	MDPE Pipe
6	Elbow
7	Ball valve

S.I NO	Legend	
A	Strainer	
B	P.R.V	
C	Meter	



Size of the connection in pipe	Bore dia in Distribution pipe	Size of Meter
20 mm	16 mm	16 mm
25 mm	20 mm	20 mm
32 mm	25 mm	25 mm
40 mm	32 mm	32 mm
50 mm	40 mm	40 mm
63 mm	51 mm	51 mm

Distribution pipe dia	Size of connection in mm (OD)
100 mm	20,25
150 mm	20, 25, 32, 40
200 mm	25, 32, 40, 50, 65
250-300 mm	32, 40, 50, 65, 100

Description	Stop Valve	Strainer	PRV	Meter
High Pressure Zone static head more than 55 m	✓	✓	✓	✓
Average pressure zone less than 55 m head but more than 12 m	✓	✓	✗	✓
Low pressure zone i.e head is less than 12 m	✓	✗	✗	✓

Consultants:
PROJECT MANAGEMENT CONSULTANT (PMC)
 NJS Consultants Co., Limited
 Saikia Commercial Complex,
 3rd Floor,
 Christian Basti,
 G.S.Road
 Guwahati - 781005

Project:
**PROJECT MANAGEMENT CONSULTANTS (ICDC)
 HSC FOR SOUTH WEST GUWAHATI & SOUTH CENTRAL
 GUWAHATI AREA**

Client:
**PD, PIU
 (JICA ASSISTED GUWAHATI WATER SUPPLY PROJECT)**
 1st FLOOR, TRIPTI TOWER, GANESHGURI
 Guwahati-5, Assam


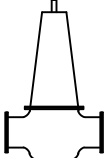
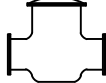
REV NO.	DATE	REMARKS
3		
2	28.12.2021	Revised
1	27.10.2021	Revised
0	04.09.2018	For Tendering Purpose

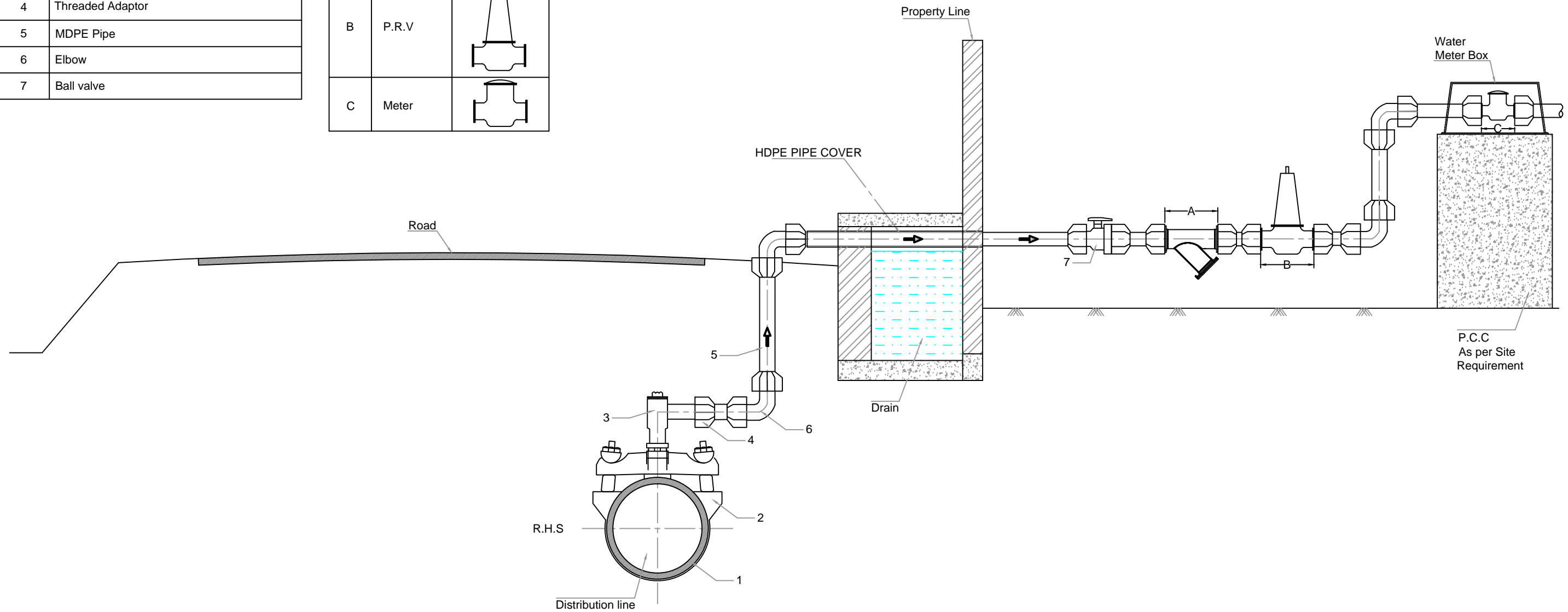
Approved by: R.Radhakrishnan
 Checked by: P.Datta
 Drawn by: H.K.S.
 Design by: P.Datta
 Scale: N.T.S

Title:
Typical Drawing for House Service connection on D.I pipe. Type III Long Side (Without Owner Property Boundary)

Org. no:
 GWSP/HSC/03

S. NO	Description
1	DI Main
2	Saddle with BSP outlet
3	Ferrule
4	Threaded Adaptor
5	MDPE Pipe
6	Elbow
7	Ball valve

S.I NO	Legend	
A	Strainer	
B	P.R.V	
C	Meter	



Size of the connection in pipe	Bore dia in Distribution pipe	Size of Meter
20 mm	16 mm	16 mm
25 mm	20 mm	20 mm
32 mm	25 mm	25 mm
40 mm	32 mm	32 mm
50 mm	40 mm	40 mm
63 mm	51 mm	51 mm

Distribution pipe dia	Size of connection in mm (OD)
100 mm	20,25
150 mm	20, 25, 32, 40
200 mm	25, 32, 40, 50, 65
250-300 mm	32, 40, 50, 65, 100

Description	Stop Valve	Strainer	PRV	Meter
High Pressure Zone static head more than 55 m	✓	✓	✓	✓
Average pressure zone less than 55 m head but more than 12 m	✓	✓	✗	✓
Low pressure zone i.e head is less than 12 m	✓	✗	✗	✓

Consultants:
PROJECT MANAGEMENT CONSULTANT (PMC)
 NJS Consultants Co., Limited
 Saikia Commercial Complex,
 3rd Floor,
 Christian Basti,
 G.S.Road
 Guwahati - 781005

Project:
**PROJECT MANAGEMENT CONSULTANTS (ICDC)
 HSC FOR SOUTH WEST GUWAHATI & SOUTH CENTRAL
 GUWAHATI AREA**

Client:
**PD, PIU
 (JICA ASSISTED GUWAHATI WATER SUPPLY PROJECT)**
 1st FLOOR, TRIPTI TOWER, GANESHGURI
 Guwahati-5, Assam


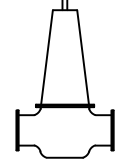
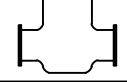
REV NO.	DATE	REMARKS
3		
2	28.12.2021	Revised
1	27.10.2021	Revised
0	04.09.2018	For Tendering Purpose

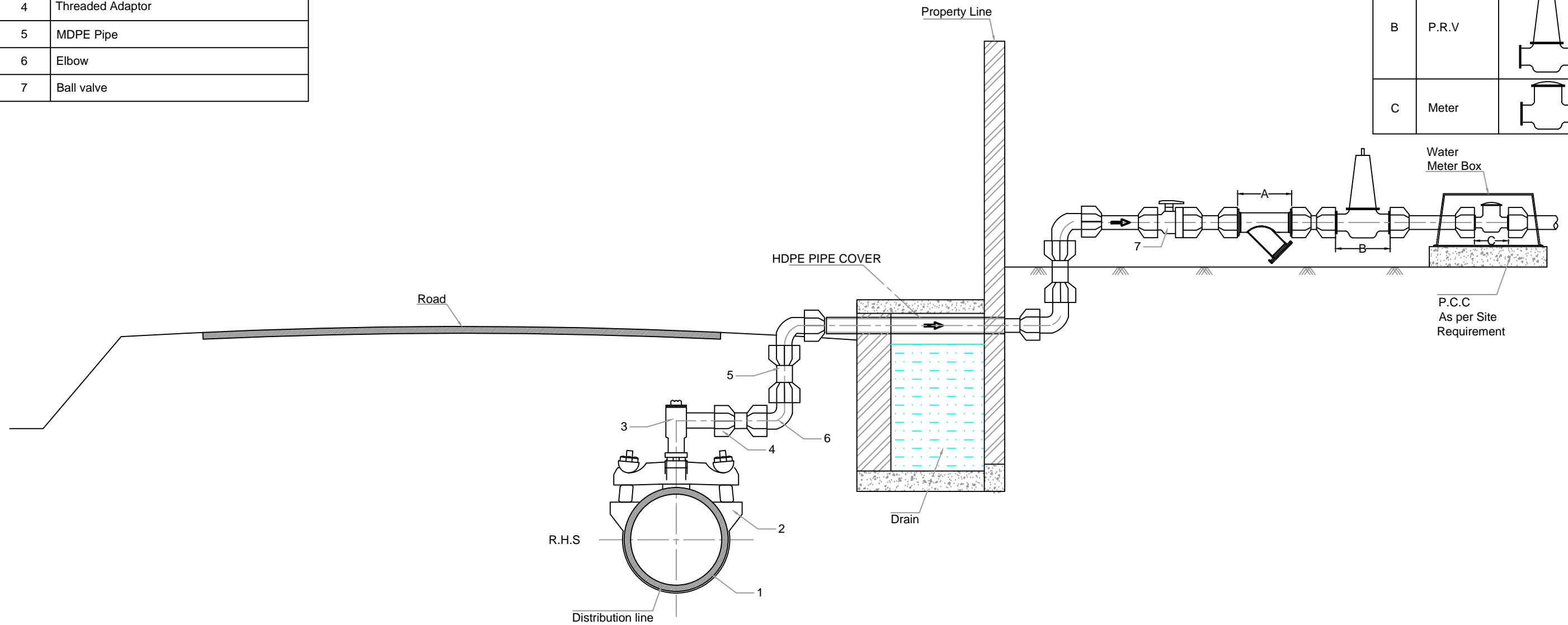
Approved by: R.Radhakrishnan
 Checked by: P.Datta
 Drawn by: H.K.S.
 Design by: P.Datta
 Scale: N.T.S

Title:
Typical Drawing for House Service connection on D.I pipe. Type I(a) Short Side(Owner Property Below Road Level)

Drg. no:
 GWSP/HSC/04

S. NO	Description
1	DI Main
2	Saddle with BSP outlet
3	Ferrule
4	Threaded Adaptor
5	MDPE Pipe
6	Elbow
7	Ball valve

S.I NO	Legend	
A	Strainer	
B	P.R.V	
C	Meter	



Size of the connection in pipe	Bore dia in Distribution pipe	Size of Meter
20 mm	16 mm	16 mm
25 mm	20 mm	20 mm
32 mm	25 mm	25 mm
40 mm	32 mm	32 mm
50 mm	40 mm	40 mm
63 mm	51 mm	51 mm

Distribution pipe dia	Size of connection in mm (OD)
100 mm	20,25
150 mm	20, 25, 32, 40
200 mm	25, 32, 40, 50, 65
250-300 mm	32, 40, 50, 65, 100

Description	Stop Valve	Strainer	PRV	Meter
High Pressure Zone static head more than 55 m	✓	✓	✓	✓
Average pressure zone less than 55 m head but more than 12 m	✓	✓	✗	✓
Low pressure zone i.e head is less than 12 m	✓	✗	✗	✓

Consultants:
PROJECT MANAGEMENT CONSULTANT (PMC)
 NJS Consultants Co., Limited
 Saikia Commercial Complex,
 3rd Floor,
 Christian Basti,
 G.S.Road
 Guwahati - 781005

Project:
**PROJECT MANAGEMENT CONSULTANTS (ICDC)
 HSC FOR SOUTH WEST GUWAHATI & SOUTH CENTRAL
 GUWAHATI AREA**

Client:
**PD, PIU
 (JICA ASSISTED GUWAHATI WATER SUPPLY PROJECT)**
 1st FLOOR, TRIPTI TOWER, GANESHGURI
 Guwahati-5, Assam


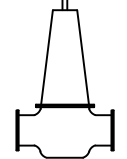

REV NO.	DATE	REMARKS
3		
2	28.12.2021	Revised
1	27.10.2021	Revised
0	04.09.2018	For Tendering Purpose

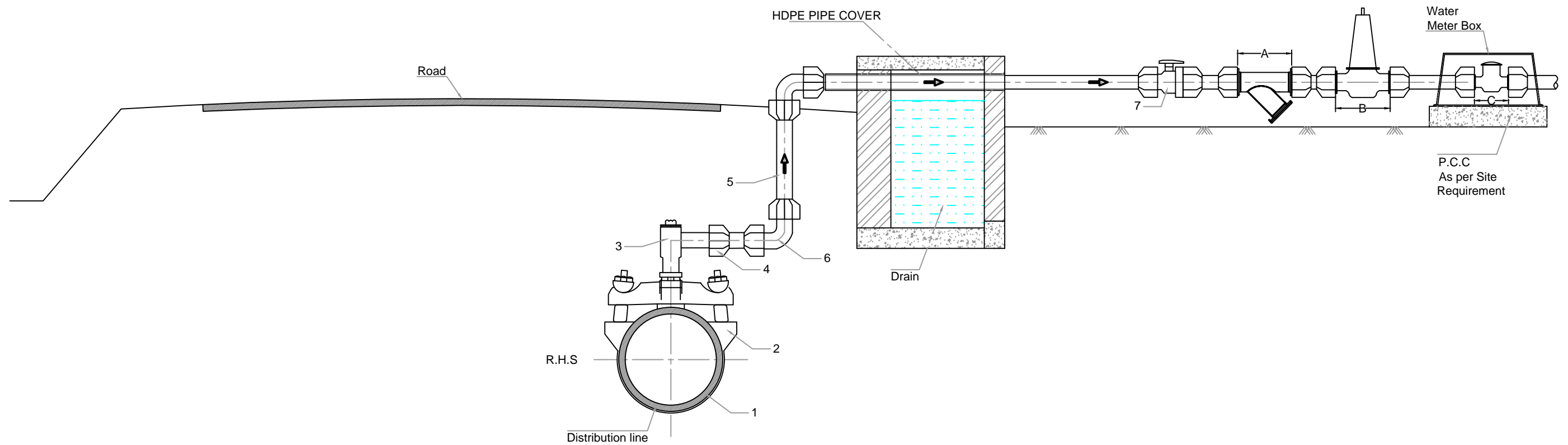
Approved by: R.Radhakrishnan
 Checked by: P.Datta
 Drawn by: H.K.S.
 Design by: P.Datta
 Scale: N.T.S

Title:
Typical Drawing for House Service connection on D.I pipe. Type II(a) Short Side (Owner Property Above Road Level)

Drg. no:
 GWSP/HSC/05

S. NO	Description
1	DI Main
2	Saddle with BSP outlet
3	Ferrule
4	Threaded Adaptor
5	MDPE Pipe
6	Elbow
7	Ball valve

S.I NO	Legend	
A	Strainer	
B	P.R.V	
C	Meter	



Size of the connection in pipe	Bore dia in Distribution pipe	Size of Meter
20 mm	16 mm	16 mm
25 mm	20 mm	20 mm
32 mm	25 mm	25 mm
40 mm	32 mm	32 mm
50 mm	40 mm	40 mm
63 mm	51 mm	51 mm

Distribution pipe dia	Size of connection in mm (OD)
100 mm	20,25
150 mm	20, 25, 32, 40
200 mm	25, 32, 40, 50, 65
250-300 mm	32, 40, 50, 65, 100

Description	Stop Valve	Strainer	PRV	Meter
High Pressure Zone static head more than 55 m	✓	✓	✓	✓
Average pressure zone less than 55 m head but more than 12 m	✓	✓	✗	✓
Low pressure zone i.e head is less than 12 m	✓	✗	✗	✓

Consultants:
PROJECT MANAGEMENT CONSULTANT (PMC)
 NJS Consultants Co., Limited
 Saikia Commercial Complex,
 3rd Floor,
 Christian Basti,
 G.S.Road
 Guwahati - 781005

Project:
**PROJECT MANAGEMENT CONSULTANTS (ICDC)
 HSC FOR SOUTH WEST GUWAHATI & SOUTH CENTRAL
 GUWAHATI AREA**

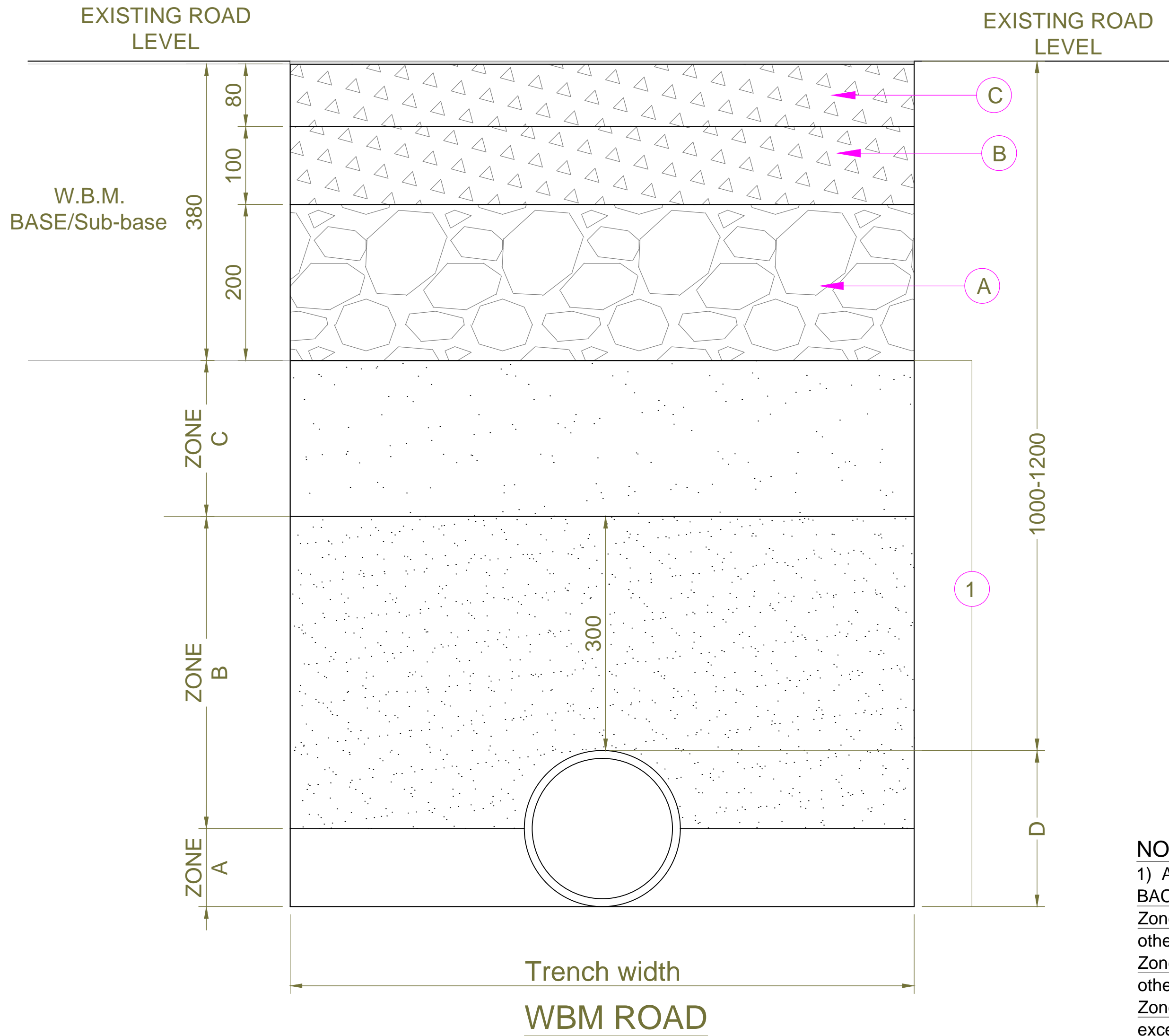
Client:
**PD, PIU
 (JICA ASSISTED GUWAHATI WATER SUPPLY PROJECT)**
 1st FLOOR, TRIPTI TOWER, GANESHGURI
 Guwahati-5, Assam

3		
2	28.12.2021	Revised
1	27.10.2021	Revised
0	04.09.2018	For Tendering Purpose
REV NO.	DATE	REMARKS

Approved by: R.Radhakrishnan
 Checked by: P.Datta
 Drawn by: H.K.S.
 Design by: P.Datta
 Scale: N.T.S

Title:
Typical Drawing for House Service connection on D.I pipe. Type III(a) Short Side(Without Owner Property Boundary)

Drg. no:
 GWSP/HSC/06



LAYER OF WBM ROAD

Layer	Thickness (mm)	Stone Size (mm)
A	200	90-45
B	100	63-45
C	80	53-22

PIPELINE DIAMETER (D) (mm)	MAXIMUM ALLOWABLE TRENCH WIDTH (mm)	MINIMUM FILL COVER OVER PIPE TOP (mm)
100 to 200	800	1000

NOTE:

1) All dimensions are in mm otherwise specified.

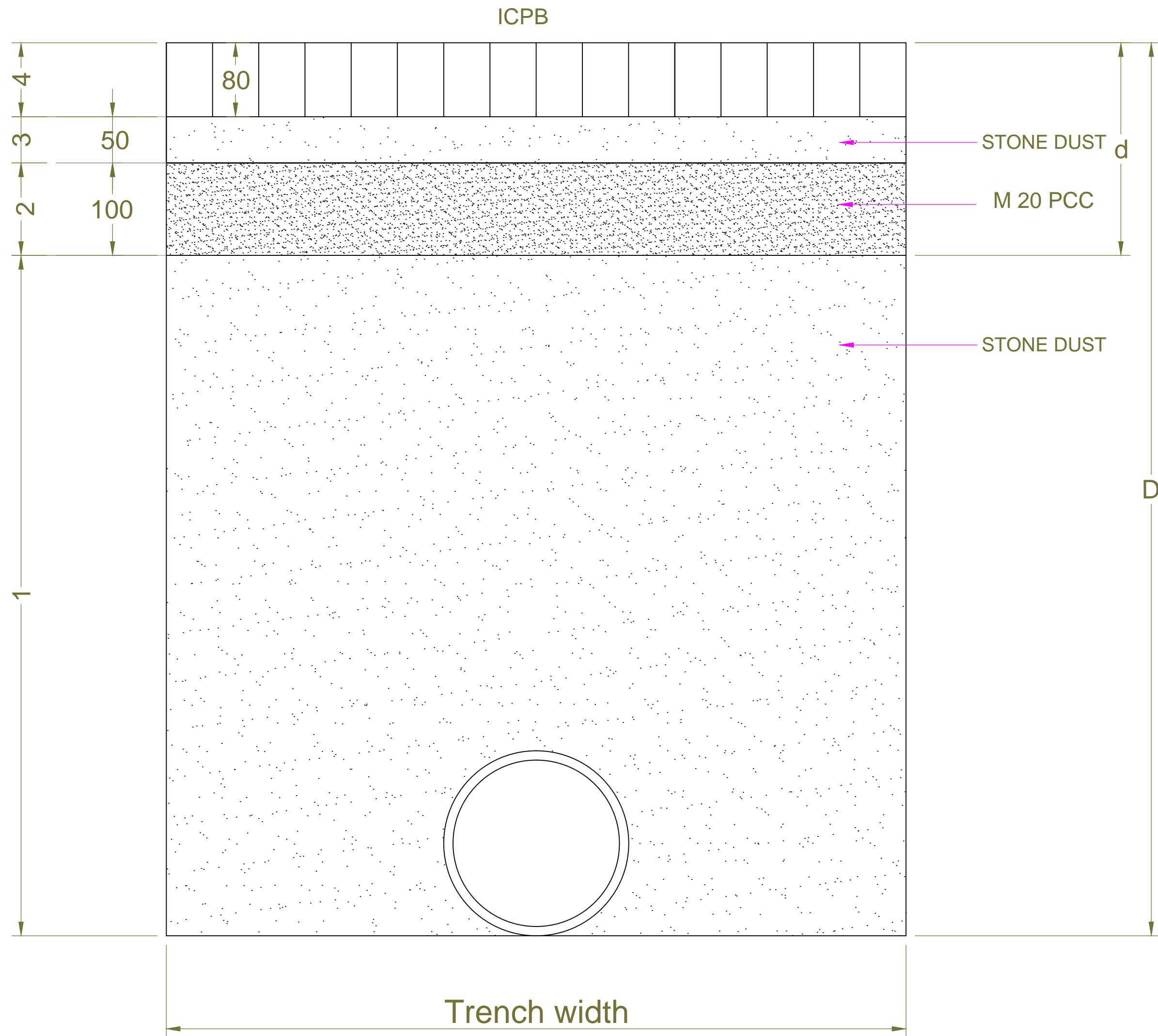
BACKFILLING :-

Zone A- Selected approved material available from excavation, well graded sand, fine gravel or other approved materials placed in layer not exceeding 150 mm. (Bottom of pipe to centre of pipe)

Zone B- Selected approved material available from excavation, well graded sand, fine gravel or other approved material placed in layers of 150mm (From centre of pipe to 300mm top of pipe)

Zone C- Excavated material which is suitable for backfilling. Filling shall be done in layers not exceeding 200mm. (300 mm above top of pipe to sub base)

Consultants: PROJECT MANAGEMENT CONSULTANT (PMC) NJS Co., Limited PMC Project Office, Saikia Commercial Complex, 3rd Floor, Christian Basti, G.S.Road Guwahati - 781005	Project: GUWAHATI WATER SUPPLY PROJECT (GWSP) (JICA ODA LOAN PROJECT: ID P-201)	3			Approved by: R.Radhakrishnan	Title: STANDARD DRAWING WBM ROAD FOR HSC	
	Client: PD, PIU (JICA ASSISTED GUWAHATI WATER SUPPLY PROJECT) 1st FLOOR, TRIPTI TOWER, GANESHGURI Guwahati-5, Assam	2			Checked by: P.Thakur		
		1			Drawn by: HKS		
		0	20.12.2022		Design by: P.Thakur		
		REV NO.	DATE	REMARKS	Scale:	Rev: 0	Drawing No. GWSP/HSC/RR/SD-001



LAYER OF ICPB ROAD

Layer	Layer type	Thickness (mm)
1	Stone Dust	D-d
2	M-20 PCC	100
3	Stone Dust	50
4	ICBP	80

NOTE:

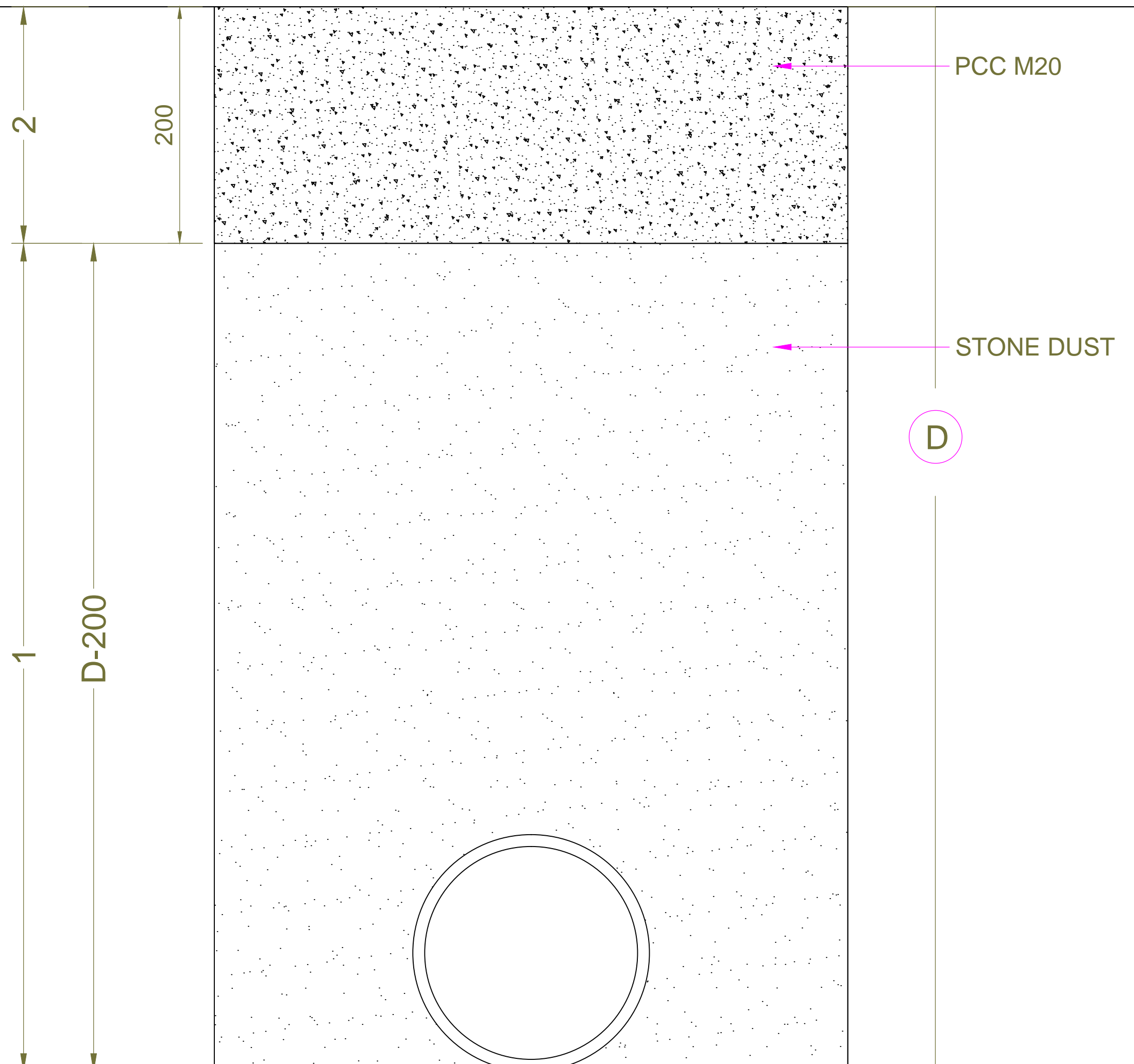
1) All dimensions are in mm otherwise specified.

ICPB ROAD

Consultants: PROJECT MANAGEMENT CONSULTANT (PMC) NJS Co., Limited PMC Project Office, Saikia Commercial Complex, 3rd Floor, Christian Basti, G.S.Road Guwahati - 781005	Project: GUWAHATI WATER SUPPLY PROJECT (GWSP) (JICA ODA LOAN PROJECT: ID P-201)	3			Approved by: R.Radhakrishnan	Title: STANDARD DRAWING ICPB ROAD FOR HSC	
	Client: PD, PIU (JICA ASSISTED GUWAHATI WATER SUPPLY PROJECT) 1st FLOOR, TRIPTI TOWER, GANESHGURI Guwahati-5, Assam	2			Checked by: P.Thakur		
		1			Drawn by: HKS		
		0	20.12.2022		Design by: P.Thakur		
		REV NO.	DATE	REMARKS	Scale:	Rev: 0	Drawing No. GWSP/HSC/RR/SD-001

EXISTING ROAD LEVEL

EXISTING ROAD LEVEL



PCC M20

STONE DUST

D

2

200

1

D-200

ASPHALT/CONCRETE ROAD

LAYER OF ASPHALT/CONCRETE ROAD

Layer	Layer type	Thickness (mm)
1	Stone Dust	D-200
2	M-20 PCC	200

NOTE:

1) All dimensions are in mm otherwise specified.

Consultants:
PROJECT MANAGEMENT CONSULTANT (PMC)
 NJS Co., Limited
 PMC Project Office,
 Saikia Commercial Complex,
 3rd Floor,
 Christian Basti,
 G.S.Road
 Guwahati - 781005

Project:
GUWAHATI WATER SUPPLY PROJECT (GWSP)
 (JICA ODA LOAN PROJECT: ID P-201)

Client:
PD, PIU
(JICA ASSISTED GUWAHATI WATER SUPPLY PROJECT)
 1st FLOOR, TRIPTI TOWER, GANESHGURI
 Guwahati-5, Assam

3		
2		
1		
0	20.12.2022	
REV NO.	DATE	REMARKS

Approved by:	R.Radhakrishnan
Checked by:	P.Thakur
Drawn by:	HKS
Design by:	P.Thakur
Scale:	Rev:
	0

Title:
**STANDARD DRAWING
 ASPHALT/CONCRETE ROAD
 FOR HSC**

Drawing No. **GWSP/HSC/RR/SD-002** Sheet No: **02 OF 03**

Section VII: Contract Forms

LETTER OF ACCEPTANCE

Dated: _____

To: _____ [Name and address of the Contractor]

Dear Sir,

This is to notify you that your Bid dated _____ for execution of the Contract Package No. C#12B1- Rate contract for providing Drinking Water House Service Connections in lots of 5,000 each, for total of approximately 30,000 households in south-central and North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete, for the contract price of Rupees _____ [amount in words and figures], is hereby accepted by us.

You are hereby requested to furnish performance security an amount of Rs. 25, 00,000 (Rupees Twenty Five Lakhs Only) within 7 days of the receipt of the letter. The Performance Security in the form of Bank guarantee or a Term Deposit Receipt in favour of “The Project Director, JICA Assisted Guwahati Water Supply Project, Guwahati” (Employer) shall be valid till the expiry of the period of contract and till taking over. Failure to furnish the Performance Security will entail cancellation of the award of contract and forfeiture of the EMD.

Authorized Signature
Name and title of Signatory of Employer

ARTICLES OF CONTRACT AGREEMENT

1. This deed of agreement is made in the form of agreement on _____ day _____ month _____ 20 __, between the Project Director, JICA Assisted Guwahati Water Supply Project, Guwahati (Employer) or his authorized representative (hereinafter referred to as the first party) and _____ (Name of the Contractor), resident of _____ (hereinafter referred to as the second party), to execute the work of: “Rate contract for providing Drinking Water House Service Connections in lots of 5,000 each, for total of approximately 30,000 households in South-west & south-central Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete under Contract Package C#12B1.” (Hereinafter referred to as works) on the following terms and conditions.

2. Contract Price

The total Contract Price for the works (hereinafter referred to as the “total price”) is Rs. _____ as reflected in the annexed Bill of Quantities.

3.1 Payments under its contract:

Payments to the second party for the work will be released by the first party in the following manner:-

On signing of agreement and Mobilization : 10% of total cost, as interest free mobilization advance against receipt of an unconditional Bank Guarantee from the Contractor for an equivalent amount valid up to the Intended Completion Date, in the format attached.

Minimum Amount of Interim Payment Certificates : 10% of the Contract Value

Final payment Certificate : Upon completion & commissioning and handing over.

3.2 Payments at each stage will be made by the first party:

- i) Mobilization Advance: on the second party submitting an invoice for an equivalent amount of unconditional bank guarantee ;
- ii) on certification of the invoice (except for the first installment) by the Engineer nominated by the first party with respect to quality/quantity of works executed and completion of restoration works of the HSC provided; and
- iii) Payments shall be adjusted for deductions for advance payments, recoveries if any in terms of the contract, and taxes at source, as applicable under the law.
- iv) The advance (if availed by the contractor) shall be repaid with percentage deductions from the interim payments, commencing with the next Interim Payment at the rate of 20 percent of the amounts of all Interim Payment Certificates until the advance has been repaid, provided that the advance shall be completely repaid prior to the expiry of the Intended Completion Date. The Bank Guarantee shall remain effective until the advance payment has been fully repaid.
- v) Payment Milestones for supply of materials: After Supply 70%, After Installation 20%, after commissioning 10%.
- vi) Payment Milestones for installation of materials: After installation 70%, after commissioning 10%, after road restoration 10%, and final 10% after 2 months of restoration work.

4. Notice by the Contractor to Engineer

The second party, on the works reaching full completion including trial run & commissioning, issue a notice to the first party or the Engineer nominated by the first party (who is responsible for supervising the contractor, administering the contract, certifying the payments due to the contractor, issuing and valuing variations to the contract, awarding extensions of time etc.), to visit the site for certification of completion. Within 15 days of the receipt of such notice, the first party or the Engineer nominated by it, will ensure issue of completion certificate after due verification.

Upon issuing the completion certificate, the first party will take over the works.

5. Completion time

The works should be completed in 12 months from the date of this Agreement. In exceptional circumstances, the time period stated in this clause may be extended in writing by mutual consent of both the parties.

6. If any of the compensation events mentioned below would prevent the work being completed by the intended completion date, the first party will decide on the intended completion date being extended by a suitable period:

- a) The first party does not give access to the site or a part thereof by the agreed period.
- b) The first party orders a delay or does not issue completed drawings, specifications or instructions for execution of the work on time.
- c) Ground conditions are substantially more adverse than could reasonably have been assumed before issue of letter of acceptance and from information provided to second party or from visual inspection of the site.
- d) Payments due to the second party are delayed without reason.
- e) Certification for stage completion of the work is delayed unreasonably.

7. Any willful delay on the part of the second party in completing the construction [12 Months] within the stipulated period will render him liable to pay liquidated damages @ 0.10% of the contract value per day which will be deducted from payments due to him. The first party may cancel the contract and take recourse to such other action as deemed appropriate once the total amount of liquidated damages exceeds 3 % of the contract amount.

8. Duties and responsibilities of the first party

- 8.1 The first party shall be responsible for providing regular and frequent supervision and guidance to the second party for carrying out the works as per specifications. This will include written guidelines and regular site visit of the authorized personnel of the first party, for checking quality of material and construction to ensure that it is as per the norms.
- 8.2 The first party shall supply one set of drawings, specifications and guidelines to the second party for the proposed works.
- 8.3 Possession of the site will be handed over to the second party within 7 days of signing of the agreement.

- 8.4 The Engineer or such other person as may be authorized by the first party shall hold meeting once in a week, where the second party or his representative at site will submit the latest information including progress report and difficulties if any, in the execution of the work. The whole team may jointly inspect the site on a particular day to take stock of activities.
- 8.5 The Engineer shall record his observations/instructions at the time of his site visit in a site register maintained by the second party. The second party will carry out the instructions and promptly rectify any deviations pointed out by the engineer. If the deviations are not rectified, within the time specified in the Engineer's notice, the first party as well as the engineer nominated by it, may instruct stoppage or suspension of the construction. It shall thereupon be open to the first party or the Engineer to have the deviations rectified at the cost of the second party.
- 8.6. The first party will provide water at the entry point to the DMA during the trial run and commissioning period.

9. Duties and responsibilities of the second party:

9.1 The second party shall:

- a) Be responsible for the defects or other faults which may appear during the defect liability period of **6 months from the date of commissioning**, arising in the opinion of the Employer due to bad workmanship not in accordance with the contract, contractor shall make good the works at his own cost within a reasonable time. In case of default, Employer may employ and pay other agencies to amend and make good such defects and all expenses / damages / losses shall be recoverable by Employer or may be deducted from any money due to the contractor.
- b) take up the works and arrange for its completion within the time period stipulated in Clause 5;
- c) employ suitable skilled persons to carry out the works;
- d) regularly supervise and monitor the progress of work;
- e) abide by the technical suggestions/ direction of supervisory personnel including Engineers etc.;
- f) be responsible for bringing any discrepancy to the notice of the representative of the first party and seek necessary clarification:
- g) ensure that the work is carried out in accordance with specifications, drawings and within the total of the contract amount without any cost escalation;
- h) keep the first party informed about the progress of work;
- i) be responsible for all security and watch and ward arrangements at site till handing over of the building to the first party; and
- j) Be responsible for the safety of the men working at site. All safe practices shall be strictly adhered to by the workmen of the contractor like wearing helmets, safety belts when working at heights, gloves when handling sharp objects and reinforcement, eye shields, safety shoes, etc. He shall provide first aid boxes at site. In spite of following safe methods, in case of any unfortunate accident, the contractor shall indemnify the employer against any expenses or claims towards treatment or compensation.

- k) Maintain necessary insurance against loss of materials/cash, etc. or workman disability compensation claims of the personnel deployed on the works as well as third party claims.
- l) Pay all duties, taxes and other levies payable by construction agencies as per law under the contract (First party will effect deduction (TDS) from running bills in respect of such taxes as may be imposed under the law).
- m) Shall not directly or indirectly sublet the work to other party without written permission from the Employer.
- n) Shall carry out the entire work having full regard for the safety of the men working at site. All safe practices shall be strictly adhered to by the workmen of the contractor like wearing helmets, safety belts when working at heights, gloves when handling sharp objects and reinforcement, eye shields, safety shoes, etc. He shall provide first aid boxes at site. In spite of following safe methods, in case of any unfortunate accident, the contractor shall indemnify the employer against any expenses or claims towards treatment or compensation.
- o) Shall be responsible for all injury to persons / animals, any damage to building, building structure, roads, streets and footpaths etc., by his act / during the execution of work and the same shall be rectified at his own cost.
- p) Shall maintain the entire inventory supplied by him including the equipment if any supplied by the Employer.
- q) The Store shall be at Kharguli WTP or any other suitable location identified by first Party.

10. Variations / Extra Items

The works shall be carried out by the second party in accordance with the approved drawings and specifications. However, if, on account of site conditions or any other factors, variations are considered necessary, the following procedure shall be followed:-

- a) The second party shall provide the Engineer with a quotation for carrying out the Variation/Extra Items when requested to do so by the Engineer. The Engineer shall assess the quotation, which shall be given within seven days of the request before the Variation is ordered.
- b) If the quotation given by the second party is unreasonable, the Engineer may order the Variation and recommend a change to the Contract Price, which shall be based on Engineer's own forecast of the effects of the Variation on the Contractor's costs.
- c) The second party shall not be entitled to additional payment for costs which could have been avoided by giving early warning.

11. Securities

The Performance Security (Bank Guarantee from a Nationalized or Scheduled Bank in India in the format attached) shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a Bank or surety acceptable to the Employer. The Performance Security shall be valid until a date 28 days after the end of the Defects Liability Period.

This security shall be retained by the Employer and when the certificate of the virtual completion is issued to the contractor, the Performance security will be reduced to 50%. The balance 50% of the Security will be returned to the contractor after the expiry of defect liability period, subject to deductions for any appropriations thereof required to be

made by the Employer as per conditions of the contract. The contractor should note that no interest will be allowed on the security deposit.

12. Termination

12.1 The Employer may terminate the Contract if the other party causes a fundamental breach of the Contract.

12.2 Fundamental breaches of Contract include, but shall not be limited to the following:

- (a) The contractor stops work for 15 days and the stoppage has not been authorized by the Employer.
- (b) The Contractor failing to provide HSC within 15 days from issue of work Order. Default in more than 20% of no of HSC to be provided by a contractor against the work orders issued beyond 15 days may lead to termination of contract.
- (c) The Contractor has become bankrupt or goes into liquidation other than for a reconstruction or amalgamation.
- (d) the Employer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Employer;
- (e) The Contractor does not maintain a security which is required;
- (f) The Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the Clause 7 of this agreement

12.3 Notwithstanding the above, the Employer may terminate the Contract for convenience.

12.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

13. Payment upon Termination

13.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done less advance payments received up to the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law.

13.2 If the Contract is terminated at the Employer's convenience, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

14. Dispute settlement

If over the works, any dispute arises between the two parties, relating to any aspects of this Agreement, the parties shall first attempt to settle the dispute through mutual and amicable consultation.

In the event of agreement not being reached, the matter will be referred for arbitration by a Sole Arbitrator not below the level of retired Superintending Engineer, Assam

PHED/AUWSSB to be appointed by the first party. The Arbitration will be conducted in accordance with the Arbitration and Conciliation Act, 1996. The decision of the Arbitrator shall be final and binding on both the parties. The Arbitrator shall give his award/decision within 60 days of start of proceedings.

The Priced Bill of Quantities (Annexure 1), Format of Certificate (Annexure 2) and Specification and Drawings (Annexure 3) are attached.

Signed and delivered by Mr. _____ for and on behalf of the Contractor

In the presence of the Witness:

i)

ii)

SIGNATURE

Signed and delivered by Mr. _____ Project Director, JICA Assisted Guwahati Water Supply Project, Guwahati.

In the presence of the Witness:

i)

ii)

SIGNATURE

PERFORMANCE BANK GUARANTEE
(To be given from a nationalized or scheduled bank in India)

To
Project Director,
Project Implementation Unit,
JICA Assisted Guwahati Water Supply Project,
Tripti Tower, 1st Floor, Ganeshguri
Guwahati - 781 005, Assam, India.

WHEREAS _____ [*name and address of Contractor*] (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute "Rate contract for providing Drinking Water House Service Connections in lots of up to 5,000 each, for total of approximately 30,000 households in south-central & North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete under Contract Package C#12B", (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of _____ [*amount of guarantee*]¹ _____ [*in words*], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [*amount of guarantee*]¹ as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

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

This guarantee shall be valid until 28 days from the date of expiry of the Defects Liability Period.

Signature and seal of the guarantor _____
 Name of Bank _____
 Address _____
 Date _____

BANK GUARANTEE FOR ADVANCE PAYMENT

To
 Project Director,
 Project Implementation Unit,
 JICA Assisted Guwahati Water Supply Project,
 Tripti Tower, 1st Floor, Ganeshguri
 Guwahati - 781 005, Assam, India.

Name of Contract: Contract Package No.12B:- Rate contract for providing Drinking Water House Service Connections in lots of up to 5,000 each, for total of approximately 10,000 households in South-central and North Guwahati area, providing all the required goods & materials, install the Employer supplied Water meters, install the pipes & accessories, excavation and road restoration works all complete

Gentlemen:

In accordance with the provisions of the Conditions of Contract, sub-clause 3.1 of the above-mentioned Contract, _____ [name and address of Contractor] (hereinafter called "the Contractor") shall deposit with _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ [amount of guarantee]¹ _____ [in words].

We, the _____ [bank or financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to Project Director, JICA Assisted Guwahati Water Supply Project, Guwahati – 781 005 [Employer] on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding _____ [amount of guarantee]¹ _____ [in words].

We further agree that no change or addition to or other modification of the terms of the Contract or of Works to be performed thereunder or of any of the Contract documents which may be made between Project Director, JICA Assisted Guwahati Water Supply Project, Guwahati – 781 005 [Employer] and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ [name of Employer] receives full repayment of the same amount from the Contractor.

¹ An amount shall be inserted by the bank or financial institution representing the amount of the Advance Payment, and denominated in Indian Rupees.

Yours truly,

Signature and seal: _____

Name of Bank/Financial Institution: _____

Address: _____

Date: _____

CONTRACT CONDITIONS

1. **Compliance to local laws:** The contractor shall conform to the provisions of any Act of the Legislature relating to the work and to the Regulation of Bye Laws of any prevalent authority. He shall also obtain all necessary permission / approval / NOC from the competent authorities for completion of the said work, if required under the existing rules.
2. **Site cleaning:** All the rates quoted are inclusive of removal of rubbish / debris collected during the progress of work, rejected material and clearance of site before and after the work is completed. The contractor shall arrange to remove the same immediately. If the contractor fails to do so, Employer shall remove the same and the expenses thus incurred shall be recovered from the contractor and no claim of any sort will be entertained.
3. **Contractor's responsibility:** The work from time to time be examined by Employer's Engineer, but such examination shall not in any way exonerate the contractor from the obligation to remedy any defects which may be observed till 12 months after the same is completed.
4. **Dismissal from work:** The contractor shall upon the written request of the Employer immediately dismiss from the work any person employed by him thereon, who may in the opinion of the authority be incompetent or misconducts himself and such person shall not be again employed on the work, without the permission of the Employer.
5. **Order of work:** Employer reserves the right to fix the order in which the various items of work involved are to be executed. However, the contractor shall be responsible for the completion of the entire job within the item limit specified, failing which liquidated damages shall be payable by the Contractor.
6. **Distribution of work:** The Employer reserve the right to distribute the work for which Tender have been called, among more than one parties, if found necessary. No claim in this respect shall be considered and the contractor shall agree to cooperate with other agencies appointed by the Employer.
7. **Third party damage:** The contractor shall be responsible for all injury to persons / animals, any damage to building, building structure, roads, streets, and footpaths etc., by his act / during the execution of work and the same shall be rectified at an amicable cost to be decided between the employer and the contractor.
8. **Insurance cover:** All the workers of the contractor as well as his sub-contractors must be properly covered by an Insurance Policy under Workman's Compensation Act and Fatal Accidents Act. The contractor at his own expenses shall arrange to effect and maintain, until the virtual completion of the contract, insurance policy in the joint name of the Employer and the contractor against this risk, which is to be retained by the Employer until the actual completion of the work and indemnify the Employer from all the liabilities arising out of such events. In case of delay, contractor shall arrange to extend insurance policy till work is completed.
9. **Inventory Management:** The Contractor shall maintain all the inventory supplied by him including the equipment if any supplied by the Employer.
10. **Certificate of virtual completion:** As soon as the work is completed, the contractor shall inform in writing such completion to the Employer who will inspect the work and if satisfied will issue the certificate that the work has been virtually completed and the defects liability period shall commence from the date of such certificate.
11. **Defect liability period:** The defects or other faults which may appear during the defect liability period which is 6 months after the virtual completion of the work [lot], arising in the opinion of the Employer due to bad workmanship not in accordance with the contract, contractor shall make good the works at his own cost within a reasonable time. In case of default, Employer may employ and pay

other agencies to amend and make good such defects and all expenses / damages / losses shall be recoverable by Employer or may be deducted from any money due to the contractor.

12. **Arrangement of work:** The contractor shall organize the work in such a way that the nearby public areas are not subjected to any hardships and the working of the habitat is not affected. The contractor shall take adequate care during the progress of work to protect the consumer property. In case of any damage, the same shall be made good by the contractor and no claim in this regard shall be entertained. If Contractor agrees to work after office hours/during night, for this no extra cost shall be considered.
13. **Stacking of material:** The contractor is not to stack any of his material recklessly so as to endanger the safety of the surrounding and cause any nuisance to the occupants and the public.
14. **Extra charges:** It is clearly implied that all the conditions of contract are intended to be strictly enforced and that no extra charges in respect of extra work will be allowed unless they are clearly outside the spirit and meaning of the condition and unless such work shall have been ordered in writing.
15. **Protection of material and work:** The contractor shall be responsible for storing and watching his own material and protecting the work at his own cost. Any damage caused during such act will have to be made good by the contractor at his own expenditure.
16. **Water supply:** The contractor shall make his own arrangement for water required for the work.
17. **Workmanship:** The work involved calls for a high standard of workmanship combined with speed. All the properties are to be thoroughly cleaned after work is completed.
18. **Interpretation of documents / drawing:** Except where otherwise provided in the contract all questions and disputes relating to the meaning of the specifications, design drawings and instructions herein before mentioned and as to the quality of workmanship or materials used for the work or as to any other question, claim, right, matter or thing whatsoever, in any way arising out of or relating to the contract, designs, drawings specifications, estimates, instructions, orders or these conditions or otherwise concerning the works, or the execution or failure to execute the same whether arising during the progress of the work or after the completion or abandonment thereof shall be referred to the competent authority of the Employer whose decision shall be final and binding on the contractor.
19. **Use of scaffolding:** The contractor shall use the shoring / shuttering materials, wherever required.
20. **Provisional Item:** If ordered by the Employer, contractor shall be required to carry out provisional items at the same conditions and rates as applicable for this contract.
21. **Measurements of all concealed items:** Measurements of all concealed items of work and extra item if any, shall be recorded by the Employer's Representative Engineer before it is concealed or covered.
22. **Complying I.S. specification:** Unless otherwise mentioned in the contract, the latest Indian Standard Code for material specifications, method of work, and mode of measurements shall be followed. The payment shall be made on the basis of actual measurement of work done to be submitted along with bill.
23. **Rate to include:** The rates quoted by the contractor shall cover for work at any height on/below the ground for all finished items under this contract. The rate quoted shall be inclusive of all labor, loading, profit, taxes & duties including GST, testing, and commissioning of the Service Connections and related works. If there is any change in the tax structure / duties as per the Govt. order, after award of contract, the rates quoted will be adjusted accordingly.
24. **Price Fluctuation:** The rates approved by the Department is fixed throughout the duration of the contract and will not be subject to any fluctuation due to variation in the cost of Labor/Materials.

25. Abandonment of work: If in any case the work is required to be abandoned, the contractor shall not be entitled for any claims on that account, and he will be paid as per the actual work done till that period.

26. When the work has been virtually completed and Employer's Representative Engineer has certified in writing that the work has been completed on the basis of detailed measurements and has made a final scrutiny and that there is no dispute on items, rates, and quantities, the contractor shall be entitled to the payment of the final bill in accordance with the final certificate which will be honored within the period specified in the Contract as period of honoring final certificate.

27. The contractor shall be paid by the Employer within the period named in Contract, after Interim Payment certificate has been delivered to the employer by the Employer's Representative Engineer. Employer's Representative Engineer has power to withhold any certificate in the work or any part thereof are not carried out to his satisfaction or the contractor fails to show the desired progress or fails to follow the instructions given or in case of breach of this contract.

28. **Records & measurements:** Measurements shall be taken jointly by Employer's Representative Engineer and contractor and shall without extra charges provide assistance with appliance/ Equipment; labour and other things necessary for the work and measurements will be signed and dated by both the parties on completion of measurements. Only on completion of works relating to providing the service connection and installation of water meter, it will be measured for payment.

29. **First Aid:** The contractor shall be responsible for all first aid and he shall keep the site fully equipped to meet such emergency.

30. **Supervision:** The contractor is required to have on site during all working hours a competent supervisor (acceptable to Employer) who will be responsible for the conduct of workers and who has authority to receive and act on such instructions issued by the Representative Engineer of Employer.

31. All work shall be carried out in a workman-like manner to the entire satisfaction of Employer Representative Engineer.

32. Contractor shall follow all rules / regulations in force and should possess the license for employing labour and also follow all safety measures, labour bye-laws and shall be responsible for any lapse.

33. **Safety:** The contractor shall carry out the entire work having full regard for the safety of the men working at site. All safe practices shall be strictly adhered to by the workmen of the contractor like wearing helmets, safety belts when working at heights, gloves when handling sharp objects and reinforcement, eye shields, safety shoes, etc. He shall provide first aid boxes at site. In spite of following safe methods, in case of any unfortunate accident, the contractor shall indemnify the employer against any expenses or claims towards treatment or compensation.

34. **Daily Diary Register:** A daily diary register will be kept in the Engineer's Office or the site office. The contractor or his representative will furnish every day at 9.00 am details of work for the day proceeding and the diary will be written up every day and jointly signed by the Engineer and the Contractor or their representatives in token of its correctness.

35. **Nuisance:** The contractor shall not any time do cause or permit anyone to do or cause any nuisance on the site or do anything which shall cause unnecessary disturbance of inconvenience to the Employer or to the owners, tenants or occupiers of other properties near the site and to the public generally.