

REQUEST FOR PROPOSAL (RFP)

for

Selection of Agency for Execution of Underground Optical Fiber Cable Network
Connectivity at selected locations in Visakhapatnam City

Ref. No- APSFL/BD/415/2020/UGOFC, Dated: 20/05/2021

Andhra Pradesh State FiberNet Limited

NTR Administrative Block, 3rd Floor, Pandit Nehru Bus Station,
Vijayawada – 520 013
Web address: www.apsfl.in

Email address: apsfl@ap.gov.in

Page left blank intentionally

Disclaimer

The information contained in this Request for Proposal document ("RFP" or "Tender") including any information subsequently provided to the bidders, ("bidder/s") verbally or in documentary form by Andhra Pradesh State FiberNet Ltd. (APSFL) or any of its employees or advisors, shall at all times be subject to the terms and conditions set out in this Tender document (as may be amended only by APSFL from time to time).

This RFP is not an agreement and is not an offer to any party. The purpose of this RFP is to provide the bidders or any other person with information to formulate their offers ("Bid"). This RFP includes statements, which reflect various assumptions and assessments arrived at by APSFL in relation to this scope. This Tender document does not purport to contain all the information each bidder may require. This Tender document may not be appropriate for all persons, and it is not possible for the Managing Director, APSFL and their employees or advisors to consider the objectives, technical expertise and particular needs of each bidder. The assumptions, assessments, statements and information contained herein are made considering the intended objectives of the project, and may not be complete, accurate or adequate. Each bidder must therefore conduct their own analysis of the information contained in this RFP and seek professional advice from appropriate sources.

Information provided in this Tender document to the bidder is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. APSFL accepts no responsibility for the accuracy or otherwise for any interpretation of opinion on law expressedherein.

APSFL, their employees and advisors make no representation or warranty and shall incur no liability to any person, including the bidder under law, statute, rules or regulation sort, the principles of restitution or unjust enrichment or otherwise for any loss, cost, expense or damage which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, reliability or completeness of the RFP, and any assessment, assumption, statement or information contained there in or deemed to form part of this RFP or arising in any way in the selection process as part of this RFP.

APSFL also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any bidder upon the statements contained in this RFP. APSFL may in its absolute discretion, but without being under any obligation to do so, can amend or supplement the information in this RFP.

The issue of this tender document does not imply that APSFL is bound to select a bidder or to appoint the selected bidder (as defined hereinafter), for supporting implementation of the project. APSFL reserves the right to reject all or any of the bidders or Bids without assigning any reason whatsoever.

The bidder shall bear all the costs associated with or relating to the preparation and submission of Bid pertaining to this RFP including but not limited to preparation, copying, postage, deliveryfees, expenses associated with any demonstrations or presentations, which may be required by. All such costs and expenses will remain with the bidder and APSFL shall not be liable in any manner whatsoever for the same, regardless of the conduct or outcome of the selection process.

Table of Contents

REQU	REQUEST FOR PROPOSAL (RFP)	
Discl	laimer	3
Acro	nyms	9
1.	Introduction	11
1.1	Invitation to Bid	11
1.2	Procedure for BidSubmission	11
a.	RFP Document	11
1.3	Key Events & Dates	12
2.	General Instructions to Bidder	16
2.1	Earnest Money Deposit (EMD)	16
2.2	RFP Amendment	16
2.3	Pre-Bid Queries	16
2.4	Cost of Bidding	16
2.5	Site Visit	17
2.6	Language	17
2.7	Bid Prices	17
2.8	Bidder Representative	17
2.9	Bid Validity	17
2.10	Documents Comprising the Bids	18
2.11	Modification and Withdrawal	18
2.12	Opening of Bids	19
2.13	Evaluation of Bids	19
2.14	Bids Not Considered for Evaluation	19
2.15	Pre-Qualification	19
2.16	Award Criteria	19
2.17	Rectification of Errors	19
2.18	Contacting APSFL	19
2.19	APSFL's right to vary Scope of Work	19
2.20	APSFL's Right to Accept /Reject	20
2.21	Signing of Agreement	20

1. Signing of Agreement	20
2. Discharge of Bid Security (EMD)	20
3. Expenses for the Agreement	20
4. Failure to abide by the Agreement	20
2.22 Performance Security	21
2.23 Rejection Criteria	22
2.24 Termination of Contract	23
1. Termination fordefault	23
2. Termination for Insolvency	23
3. Termination for Convenience	23
2.25 Execution of Work Order	23
2.26 Submission of Technical Solution and Approach Methodology	24
2.27 Extra/ new item	24
2.28 Liquidated Damages (LD)	24
2.29 Force Majeure	25
2.30 Arbitration	25
2.31 Exit Management Plan	25
2.32 Extension of time in Contracts	26
2.32.1 Extension due to modification	26
2.32.2 Extension for delay not due to APSFL or Contractor	26
2.32.3 Extension for delay due to APSFL	27
2.33 Extension of time for delay due to contractor	27
3. ProjectBackground	29
4. Scope ofWork	32
6. TechnicalSpecifications	43
6.1 Fiber Specifications:	43
6.2 Fiber Splice Joint Closure:	45
6.3 HDPE Coupler (50 mm):	46
6.4 End Plug for 50 mm HDPE Pipe:	46
6.5 Safety and PrecautionsMeasures	46
1. Safety Precautions when excavating/ working in excavations close to electric cables	46

2.	Electric shock-Action and treatment	47
4.	Danger from falling material	47
5.	Care when working in Excavations	47
6.	Danger of cavein	48
7.	Protection of Excavations	48
8.	Precautions while working on roads	48
9.	Traffic Control	49
10.	Protection from Lightening During Storing	49
11.	Precautions during thunder-storm	49
12.	Maintenance of records	50
13.	General Precautions	50
14.	. Allied Activities	50
7.	Bid Evaluation Criteria and Process	52
7.1	Pre-Qualification Criteria	52
7.2	Commercial EvaluationCriteria	54
7.3	Selection Process of Bidder	54
8.	Bid submission Forms	55
8.1	Pre-Qualification EvaluationForms	55
Anı	nexure A - Application Form	56
Anı	nexure B - Profile of Bidder/ Partners	58
Anı	nexure C – Declaration of Acceptance of Terms and Conditions in the RFP	59
Anı	nexure D – Undertaking on SoW Compliance and Unconditional Acceptance	60
Anı	nexure E — Pre-Qualification Compliance Documents	61
Anı	nexure F – Financial Turnover and Net worth of the Bidder	62
Anı	nexure G – Format for Past Experience of the Bidder	63
Anı	nexure H – Declaration regarding Clean Track Record	64
Anı	nexure I – Power of Attorney	65
Anı	nexure J – BoardResolution	67
Anı	nexure K – Document Verification Certificate	68
Anı	nexure L – Earnest Money Deposit (EMD) Format	70
Ma	anufacture Authorization Form (Only for Optical Fiber Cable)	71

Commercial Forms	
Annexure M – Commercial Proposal Submission Form	72
Annexure N – Commercial Bid Cost Components	74
8.2 Other Forms and Formats	76
Annexure O – Performance Bank Guarantee Format	76
Annexure P – Draft Contract Format	77
Annexure Q – Pre-Bid Queries Format	79
9. Penalties and PaymentSchedule	80
9.1 Service LevelAgreements	80
9.2 Project Milestone	80
9.3 Payment Terms	80
9.3.1 PaymenttermsforsupplyandinstallationofcomponentsrelatedUGfiber	rlaying: 81
9.4 Penalty	82
9.5 Conditions for No Penalties	84
9.6 Penalty during Commissioning Period:	84
9.9 Deliverables	84
10. Responsibility Matrix	84

Acronyms

Terms	Meaning	
APSFL	Andhra Pradesh fiber net Limited	
BOQ	Bill Of Quantity	
BW	Bandwidth	
CAD	Computer Aided Drawing	
CCTV	Closed Circuit Television	
DWC	Double Wall Corrugated	
EMI	Electromagnetic Interference	
FAT	Final Acceptance Test	
FDP	Fiber Distribution Panel	
FDU	Fiber Distribution Unit	
GIS	Geographical Information System	
HDD	Horizontal Directional Drilling	
HDPE	High DenBidder / Agency ty Polyethylene	
ISO	International Organization for Standardization	
ISP	Internet Service Provider	
ITIL	Information Technology Infrastructure Library	
ITU	International Telecommunication Union	
Lol	Letter of Intent	
LSPM	Light Source Power Meter	
MoUD	Ministry of Urban Development	
MSO	Multiple System Operator	
NOC	Network Operations Center	
OEM	Original Equipment Manufacturer	
OFC	Optical Fiber Cable	
OTDR	Optical Time Domain Reflectometer	
ОТР	One Time Password	
PBG	Performance Bank Guarantee	
PCC	Plain Cement Concrete	
PoP	Point Of Presence	
RCC	Reinforced Cement Concrete	
RFP	Request For Proposal	
RI	Road Reinstatement	
RoW	Right of Way	

SLA	Service Level Agreement	
SI	System integrator	
SPOC	Single Point of Contact	
SPOF	Single Point of Failure	
TIA	A Telecommunications Industry Association	
TPA	Third Party Administrator	
EPDCL Eastern Power Distribution Company Limited		

1. Introduction

1.1 Invitation to Bid

Andhra Pradesh State FiberNet Limited (APSFL), a fully owned entity of the Govt. of Andhra Pradesh (AP), having its Registered Office at 3rd Floor, NTR Administrative Block, Pandit Nehru Bus Station, NH–65, Vijayawada–520001, Andhra Pradesh, India, invites responses ("Proposals"/ "Bids") to this Request for Proposal("RFP") for "Selection of Agency / System Integrator for execution of Underground Optical Fiber cable Network Connectivity at selected locations in Visakhapatnam City".

The selected agency has to support APSFL in smooth execution of the project across the state of AP, which includes delivery and installation of components related to underground laying of optical fiber in Cities, Towns Categorized under R & B, NHAI, Municipal Corporation, Smart Cities Authority based on the Location and route.

Interested bidders are advised to study this RFP carefully before submitting the proposals in response to the RFP. Bidder / Agency on of a proposal in response to this RFP shall be deemed to have been done after careful study and examination of this document with full understanding of its terms, conditions and implications.

Interested bidders may download the RFP from www.apsfl.in. Any subsequent corrigenda/clarifications shall also be made available on the same portal. Bid proposals must be received not later than time and date mentioned in the key events and dates. Bid proposals received, in part or full, after the deadline WILL NOT be Considered in this procurement process.

To obtain first-hand information on the assignment, Bidders are encouraged to attend a pre-bid meeting. Attending the pre-bid meeting is optional.

1.2 Procedure for BidSubmission

The Bidder shall submit their response through bid submission process with two different and Separate Sealed Covers indicating Pre- Qualification Documents and Commerical Documents as two stage bid evaluation is involved as prescribed in the section 2.10 of this RFP.

a. RFP Document

The bidder is requested to download the RFP document and read all the terms and conditions mentioned in the RFP Document and seek clarification if any from the RFP inviting authority.

The bidder has to keep track of any changes by viewing the Addendum/Corrigenda issued by the RFP inviting authority from time-to-time in the APSFL Home Portal / Website. The Department calling for RFPs shall not be responsible for any claims/issues

arising out of this.

1.3 Key Events & Dates

1.	Name of the Authority	Managing Director Andhra Pradesh State FiberNet Limited
2.	Name of the Assignment	Agency for laying of Under Ground Optical fiberCable (Armoured) – 48F at selected locations in Visakhapatnam City
3.	Estimated value of the tender	INR 30,00,000/- (Rs. Thirty Lakhs only, exclusive of taxes)
4.	RFP Number	APSFL/BD/415/2021/UGOFC, Dated: 20/05/2021
5.	Place of availability of Tender Document (RFPs)	http://apsfl.in/tenders/
6.	Place of submission of Bids	APSFL Head Office, Vijayawda
7.	Tender Document (RFP)	Request for Proposal Document
8.	Tender Type (Open/Limited/EOI/Auction/Single)	Limited
9.	Tender Category (Services/Goods/works)	Works
10.	Type/Form of Contract (Work/Supply/Auction/Service/Buy /Empanelment/Sell)	Work
11.	Bid Submission Type (Offline / Online)	Offline
12.	Withdrawal Allowed (Yes/No)	No
13.	Is Multi Currency Allowed	No (Only Indian Rupees)
14.	Last date and time for receiving queries/clarifications	24/05/2021 at 03:00 PM No communication, in any form and for any reason, will be entertained post this date and
15.	Last date and time for submission of Proposal (Proposal Due Date)	time. 27/05/2021 at 01:00 PM The proposal is to be submitted at APSFL Head Office, Vijayawada.

	1	
17.	Date and time of opening of Prequalification (Sealed Cover / Envelope)	27/05/2021 at 03:00 PM Andhra Pradesh State FiberNet Limited NTR Administrative Block, 3rd Floor, Pandit Nehru Bus Station, NH -65, Vijayawada - 520001 Web address: http://www.apsfl.in Email address: apsfl@ap.gov.in
18.	Bid Processing Fee (Non - refundable)	Bid Processing Fee (Non-refundable): INR 25,000/- (Twenty-Five Thousand Rupees Only, including GST) The tender processing fees can be paid through either Demand Draft only Original DD must be submitted in APSFL office at Vijayawada before bid submission date. Note: Only Demand Draft (DD) is accepted.
19.	Bid Security / EMD (Refundable / Convertible)	Bid Security / EMD (Refundable / Convertible): INR 30,000/- (Thirty Thousand Rupees Only) The EMD amount can be Submitted in the form of Bank Guarantee or Demand Draft issued by one of the Nationalized / Scheduled Banks in India drawn in favour of 'Andhra Pradesh State FiberNet Limited', payable at Vijayawada. Note: APSFL will deny submission of the bid without submitting the EMD. EMD should be valid for a period of 90 (Ninety) days from bid submission Date. The Bid Security / EMD will be refunded to unsuccessful Applicant agencies within 15 (Fifteen) days of successful Bidder furnishing the performance security. Original BG must be submitted in APSFL office at Vijayawada before bid submission date. The EMD (bid security) of the unsuccessful Bidder/s will be discharged / returned as promptly as possible. No interest will be payable by APFSL on the amount of the EMD (Bid Security).

20.	Performance Security	Performance Securityof 3%of CAPEX for supply and installation on the total Project cost shall be submitted and valid for 60 days beyond the date of completion (including extension, if any) of supply, installation, and acceptance. Performance Security shall be in the form of Bank Guarantee or Auto Renewal Fixed Deposit Renewal (FDR), issued by one of the Nationalized / Scheduled Commercial Banks in India drawn in favour of Andhra Pradesh State FiberNet Limited, payable at Vijayawada. Details of the Bank: Name of the Beneficiary: ANDHRA PRADESH STATE FIBERNET LIMITED Bank Name: Andhra Bank Bank Account Number: 060611100003785 IFSC code: UBIN0806064 MICR Code: 520026016 Branch Code: 000606 Branch Name: Main Branch, RR Apparao Street, Vijayawada, Andhra Pradesh
21.	For any enquiries and clarifications, please contact:	Andhra Pradesh State FiberNet Limited NTR Administrative Block, 3rd Floor, Pandit Nehru Bus Station, Vijayawada – 520001 Web address: http://www.apsfl.in Email: apsfl@ap.gov.in
22.	Validity of the Proposal	Bidder proposals shall remain valid for a period of 90 days from the bidsubmission date.
23.	Nature of Bid Process	Two stage a) Stage- I: Pre-QualificationEligibility b) Stage- II: CommercialBid

24.	Method of Selection	As per Section 7 of this RFP
25.	RFP Tenure	a) Implementation phase: T + 3 Weeks (21 Days)

Note: Proposals/Bids submitted without Bid Processing Fee and EMD shall be summarily rejected.

2. General Instructions to Bidder

2.1 Earnest Money Deposit (EMD)

- a. Bidders shall submit an EMD as per the Key Events & Dates along with their Bids.
- b. The EMD amount is interest free and will be refundable to the unsuccessful bidders without any accrued interest onit.
- c. The bid / proposal submitted without EMD, mentioned above, will be summarily rejected.
- d. The EMD may beforfeited:
 - i. If a bidder withdraws its bid during the period of bidvalidity.
 - ii. If the successful bidder fails to Sign the contract and submit Performance Bank Guarantee within the stipulated period.
 - iii. In case, the documents submitted, or the information furnished by the bidder are found to be notgenuine/false.
 - iv. In case the bidder does not tender for the work, after submission of Tender fees or EMD.

2.2 RFP Amendment

APSFL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bid Document by amendment. All the amendments made in the document would be published in the website www.apsfl.in .APSFL shall not be responsible if the Bidders do not get the individual intimates of such amendments. All such amendments shall be binding on all the Bidders. The Bidders are also advised to the aforementioned website on regular basis for checking any updates. APSFL also reserves the rights to amend the dates mentioned in this RFP for Bid process.

2.3 Pre-Bid Queries

APSFL may incorporate any changes in the RFP based on acceptable suggestions received in pre-bid queries. The decision of APSFL regarding acceptability of any suggestion shall be final in this regard and shall not be called upon to question under any circumstances. It may not be possible to answer questions which are received late. The responses to the queries shall be Submitted by way of hosting amendments/clarifications on the website i.e. (www.apsfl.in) in accordance with the respective clauses of the RFP.

No queries in any form and for any reason shall be entertained after the last date and time for submission of queries.

2.4 Cost of Bidding

The Bidder is responsible for all costs incurred in connection with participation in this process, including, but not limited to, costs incurred in conduct of informative and other diligence activities, participation in meetings/discussions/ presentations, preparation of proposal, in

providing any additional information required by APSFL to facilitate the evaluation process, and in negotiating a definitive Service Agreement and all such activities related to the Bid process. This RFP does not commit APSFL to award a Contract or to engage in negotiations. Further, no reimbursable cost may be incurred in anticipation of award of Contract for implementation of Project.

2.5 Site Visit

The bidder may vist and examine sites at a time to be agreed with APSFL, and obtain all information at their own responsibility that may be necessary for preparing the Bid Document. The costs of visiting the site(s) shall be at Bidder's own expense.

2.6 Language

The proposal and all correspondence and documents shall be written in English. In case of accompanying literature or brochures etc., being in a language other than English, a certified translation should accompany the documents as a part of the RFP. All proposals and accompanying documentation will become the property of APSFL.

2.7 Bid Prices

- a. The Bidder shall indicate the price in the prescribed formatonly.
- b. The Bidder shall prepare the Bid based on details provided in the RFP. It must be clearly understood that the Scope of Work is intended to give the Bidder an idea about the order and magnitude of the work and is not in any way exhaustive and guaranteed by APSFL. The Bidder shall carry out all the tasks in accordance with the requirement of the RFP and due diligence and it shall be the responsibility of the Bidder to fully meet all requirements of RFP.
- c. Prices shall be quoted in Indian Rupees (INR), shall be exclusive of Goods and Service Tax (GST).

2.8 Bidder Representative

All documents of the bid may be Signed by a nominated Competent Authority. All Certificates and documents (including any clarifications sought and any subsequent correspondences) received hereby, shall, be signed by the competent Authority.

2.9 Bid Validity

The proposals shall be valid for a period of 90 days from the date of submission of Bids. On completion of the validity period, unless the Bidder withdraws proposal in writing, it will be deemed to be valid until such time that the Bidder formally (in writing) withdraws proposal. If required, beyond 90 days, the Bidder may be asked to extend the bid validity, based on the mutual consent between the APSFL and the Successful Bidder

2.10 Documents Comprising the Bids

The bids prepared by the Bidder shall comprise of the following documents:

1. Documents to be Submitted as PQ Bid (To be Submitted only in "PQ Bid Folder" Documents in Sealed Cover / Envelope)

All the below mentioned documents have to Submitted in the "PQ" bid folder and to be reached to APSFL Head Office, Vijayawada before due date & Time as mentioned above. If the following documents are not found in the "PQ" bid folder, the bid shall be considered as non-responsive and may be rejected.

- 2.10.1.1 Annexure A Application Form
- 2.10.1.2 Annexure B Profile of Bidder/ Partners
- 2.10.1.3 Annexure C Declaration of Acceptance of Terms and Conditions in the RFP
- 2.10.1.4 Annexure D Undertaking on SoW Compliance and Unconditional Acceptance
- 2.10.1.5 Annexure E Pre-Qualification Compliance Documents
- 2.10.1.6 Annexure F Financial Turnover and Net worth of the Bidder
- 2.10.1.7 Annexure G Format for Past Experience of the Bidder
- 2.10.1.8 Annexure H Declaration regarding Clean Track Record
- 2.10.1.9 Annexure I Power of Attorney
- 2.10.1.10 Annexure J Board Resolution
- 2.10.1.11 Annexure K Document Verification Certificate
- 2.10.1.12 Annexure L Earnest Money Deposit (EMD) Format
- 2.10.1.13 Copy of DD of Bid processing fees
- 2.10.1.14 Submission of MAF on OEM's Letter Head (Only for Optical Fiber Cable)

2. Documents to be Submitted as Commercial Bid (To be Submitted only in "Commercial Bid Folder" in Sealed Cover / Envelope)

All the below mentioned documents have to Submitted in the "Commercial" bid Documents in sealed cover and to be reached in APSFL Head Office, Vijayawada before due date & Time. If the following documents are not found in the "Commercial" bid folder, the bid shall be considered as non-responsive and may be rejected.

- 2.10.2.1 Annexure M Commercial Proposal Submission Form
- 2.10.2.2Annexure N Commercial Bid Cost Components

2.11 Modification and Withdrawal

No proposal may be modified / withdrawn in the interval between the deadline for submissionof proposals and the expiration of the validity period specified by the Bidder on

the proposal form. In case the Bidder wishes to withdraw the Bid after the date of opening of the bids, the EMD of the Bidder shall beforfeited.

2.12 Opening of Bids

The Pre-Qualification Bids has to be submitted at APSFL Head Office, Vijayawada on the date and time as specified in the RFP schedule.

2.13 Evaluation of Bids

- a. The Bids of only those Bidders, whose Bid Processing Fee and EMD are inorder, only, will be accepted.
- b. Bidders need to fulfill all the Pre-qualification conditions mentioned in the RFP. The technical committee will examine the Bids to determine whether they are complete, whether the Bid format conforms to the RFP requirements, whether documents have been properly Signed, and whether the Bids are generally inorder.
- c. Bids of Bidders whose Pre-qualification proposal does not meet the set criteria shall be rejected forthwith.

2.14 Bids Not Considered for Evaluation

Bids shall be summarily rejected due to incomplete documentation or late receipt.

2.15 Pre-Qualification

The pre-qualification evaluation shall be done as mentioned in this RFP.

2.16 Award Criteria

The Authority will open the Price Bids of the bidders who have met the conditions as per the Pre-Qualification Criteria in this RFP and the bidder with the Least Quoted Value would be eligible for the Award of the Project

2.17 Rectification of Errors

Bidders are advised to exercise adequate care in quoting the prices. No excuse for corrections in the quoted price will be entertained after the proposals are opened. Errors in proposals will be corrected as per the unit ratesquoted.

2.18 Contacting APSFL

Any effort by a Bidder to influence the Technical Evaluation and Tender Approval Committee in its decision on Bid evaluation, bid comparison or contract award may result in disqualification of the Bidder's Bid and also forfeiture of Bidsecurity.

2.19 APSFL's right to vary Scope of Work

APSFL may at any time, by a written order given to the Bidder, make changes to the Scope of the work.

If any such change causes an increase or decrease in the cost of or the time required for the Bidder's performance of any part of the work under the Agreement, whether changed or not changed by the order, an equitable adjustment shall be made in the Agreement Value or time schedule, or both, and the Agreement shall accordingly be amended. Any claims by the Bidder for adjustment under this Clause must be asserted within one (1) week from date of the Bidder's receipt of APSFL's order for change. The unitrate of each item quoted/accepted by the selected Bidder shall however not change.

2.20 APSFL's Right to Accept /Reject

APSFL reserves the right to accept or reject any proposal, and to annul the bid process and reject all proposals at any time prior to award of work, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for APSFL'saction.

2.21 Signing of Agreement

The Signing of agreement for the project is as follows:

1. Signing of Agreement

APSFL notifies the successful Bidder that its proposal has been accepted and APSFL shall enter into an Agreement with the successful Bidder as per the Master Service Agreement prescribed in this RFP. The Signing of agreement will constitute the formation of the Agreement.

2. Discharge of Bid Security (EMD)

Upon the successful Bidder's furnishing of Performance Security, APSFL will promptly return the EMD to each unsuccessful Bidder EMD within 15 days. The Bid security (EMD) of successful Bidder will be released, on receipt of the Performance Bank Guarantee.

3. Expenses for the Agreement

The incidental expenses of execution of Agreement shall be borne by the successful Bidder.

4. Failure to abide by the Agreement

Failure of the successful Bidder to agree with the Terms & Conditions of the RFP shall constitute sufficient grounds for the annulment of the award, in which event APSFL may forfeit the EMD/ Performance Bank Guarantee. The contract may be awarded to the next lowest bidder, or however deemed appropriate by the Authority.

2.22 Performance Security

- a. The successful Bidder shall have to submit a Performance Security within 7 days from the date of issuance of Letter of Award (LoA). Extension of time for submission beyond 7 days and up to 15 days from the date of issue of LoA may be given by APSFL, who is competent to sign the contract agreement. However, a penal interest of 15% per annum shall be charged for the delay beyond 15 days, i.e. from 16th day after the date of issue of LoA. In case the Bidder fails to submit the requisite Performance Security even after 15 days from the date of issue of LoA, the contract shall be terminated duly forfeiting EMD and other dues, if any payable against the contract. The failed Bidder shall be debarred from participating in re-tender for that work.
- b. The Performance Securityshall be submitted by the successful Bidder after the LoA has been issued, but before Signing of the contract agreement. The agreement should normally besigned within 15 days after the issue of LoA and the Performance Security shall also be submitted within this time limit. This Performance Security shall be initially valid up to the stipulated date of completion plus 60days beyond that. In case, the time limit for completion of work gets extended, the contractor shall get the validity of Performance Security extended to cover such extended time for completion of work plus 60 days.
- c. The value of Performance Security to be submitted by the Bidder will not change for variation up to 25% (either increase or decrease). In case during the course of execution, value of the contract increases by more than 25% of the original contract value, an additional Performance Security amounting to 5% (fiver percent) for the excess value over the original contract value shall be deposited by the Bidder.
- d. The Performance Security shall be released after the physical completion of the work based on the 'completion certificate' issued by the competent authority stating that the Bidder has completed the work in all respects satisfactorily. The security deposit shall, however, be released only after the expiry of the defect liability period and after passing the final bill on 'No Claim Certificate' from the contractor.
- e. Whenever the contract is rescinded, the security deposit shall be forfeited and the Performance Securitybe enchased. The balance work shall be got done independently without risk and cost of the failed Bidder; the failed Bidder shall be debarred from participating in the tender for executing the balance work. If the failed Bidder is a JV or a partnership firm, then every member/ partner of such a firm shall be debarred from participating in the tender for the balance work in his/ her individual capacity or as a partner of any other JV/ partnership firm.
- f. The Bank Guarantee should be from a Nationalized/Scheduled Commercial Bank acceptable to APSFL, in the format prescribed in Annexure P in section of this RFP, payable on demand, for the due performance and fulfillment of the Agreement by the Bidder.
- g. All incidental charges whatsoever such as premium, commission etc., with respect to the Performance Securityshall be borne by the Bidder. The Performance Security shall be valid

for 60 days post completion of the Payment terms as per RFP. However, no interest shall be payable on Performance Bank Guarantee.

2.23 Rejection Criteria

- a. The proposal of a Bidder is liable to be disqualified in the following cases or incase Bidder fails to meet the bidding requirements as indicated in this RFP:
 - i. Proposal not submitted in accordance with the procedure and formats prescribed in this document.
 - ii. During validity of proposal, or its extended period after last date and time for submission of Bids, if any, the Bidder increases the quoted prices.
 - iii. The Bidder proposal is a "Conditional-Proposal".
 - iv. Proposal is received in incomplete form.
 - v. Proposal is not accompanied by all the requisite documents.
 - vi. Information submitted in Qualification proposal is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the Agreement (no matter at what stage) or during the tenure of Agreement including the extension period ifany.
 - vii. Bidder tries to influence the proposal evaluation process by unlawful means at any point of time during the Bidprocess.
 - viii. In case any Bidder submits multiple proposals or if common interests are found in two or more Bidders, the Bids are likely to bedisqualified.
 - ix. Bidder fails to deposit the Performance Securityprior to Signing of the Agreement or fails to enter into an Agreement within 7 days of the date of issuance of LoA or within such extended period, as may be specified by APSFL.
- b. Bidders may specifically note that while evaluating the proposals, if it comes to APSFL's knowledge expressly or implied, that some Bidders may have colluded in any manner whatsoever or otherwise joined to form an alliance resulting in delaying the processing of proposal then the Bidders so involved a reliable to be disqualified for this Contract as well as for a further period of three years from participation in any of the RFPs floated by APSFL and their EMD shall beforfeited.
- c. Prevention of Collusion of Vendor: with a view to prevent collusion or the formation into a ring by vendor / Bidder, the following are issued;
 - i. Tender Schedules shall be issued till a date prior to the last date of submission of tenders
 - ii. Once a vendor / Bidder buys a tender schedule he shall not be permitted to return the schedule after buying a tender schedule / document, if a vendor does not tender for the work, his EMD shall be forfeited (Cash or Bank Guarantee or Both).
- d. APSFL will reject a proposal for award if it determines that the Bidder recommended for award, or any of its personnel, or its agents or, Agencies and/or their employees, has,

directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the Contract.

2.24 Termination of Contract

Following clauses shall be applicable, in case of termination of contract:

1. Termination fordefault

APSFL may without prejudice to any other remedy for breach of contract, by written notice of default with a notice period of 30 days, sent to the successful bidder, terminate the contractinwholeorpart

- (I) If the successful bidder fails to deliver any or all of the goods and services within the time period(s) specified in the Contract or fails to supply the items as per the Delivery Schedule or within any extension thereof granted by APSFL; or
- (iii) If the successful bidder fails to perform any of the obligation(s) under the contract; or (iii) If the successful bidder, in the judgment of APSFL, has engaged in fraudulent and corrupt practices in competing for or in executing the Contract.

In the event APSFL terminates the Contract in whole or in part, APSFL may procure, upon terms and in such manner as it deems appropriate, the goods and services Similar to those and delivered and the successful bidder shall be liable to APSFL for any additional costs for such Similar goods. However, the successful bidder shall continue the performance of the contract to the extent not terminated.

2. Termination for Insolvency

APSFL may at any time terminate the Contract by giving written notice with a notice period of 30 days, sent to the successful bidder, if the successful bidder becomes bankrupt or otherwise insolvent. In this event, the termination will be without compensation to the successful bidder, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to APSFL.

3. Termination for Convenience

APSFL may, by written notice, with a notice period of 30 days sent to the successful bidder, may terminate the Contract, in completely or in part, at any time for its convenience. The notice of termination shall specify that termination is for APSFL's convenience, the extent to which performance of work under the Contract is terminated and the date upon which such termination becomes effective. On termination, the successful bidder is entitled for compensation to the extent of work done till the date of termination.

2.25 Execution of Work Order

The successful bidder should nominate and intimate APSFL, a Manager as Single Point of Contact (SPoC), who should be responsible for effective delivery of work complying with all the terms and conditions. The successful bidder should ensure that the Manager fully familiarizes with the RFP Conditions, Scope of Work and deliverables.

2.26 Submission of Technical Solution and Approach Methodology

The bidder shall be required to submit the detailed technical solution document entailing minimum technical specifications of material mentioned in the RFP, design, drawing document, detailed implementation approach methodology, etc. The technical solution documents shall need to be submitted to APSFL within 7 days of issuance of LoA. If in case, there is increase/ decrease in the technical specifications of material, prior approval needs to be taken from APSFL. APSFL reserve rights to cancel the bid, if in case the technical solution document is not in compliance with the requirements mentioned in the RFP.

Broad areas to be covered in technical solution documents are given below, but not limited to:

- a) Route Mapping with Geo-Graphical Coordinates.
- b) Survey Reports, Drawings.
- c) Specification of the Fiber and the other necessary material being used as per the Requirement at the Site location.

Note: If in case of change of make and model of the components from the once specified in the technical solution document during the project, prior approval from APSFL needs to be taken.

2.27 Extra/ new item

Extra items of work shall not vitiate the contract. The reimbursement for extra items shall be validated by the APSFL/ any agency appointed by APSFL and cleared by the Authority. The Contractor shall be bound to execute extra items of work as directed by the Authority. The rates for extra items shall be worked out based on the unit rates quoted by the Bidder in PriceBid/as per mutually agreed terms and conditions. For new items which are beyond the scope of the BoQ, the APSFL/ any agency appointed by APSFL or any authorized official/agency shall validate the requirements and necessity of such new/extra items after due diligence, based on site conditions and workcontingencies

2.28 Liquidated Damages (LD)

- a. Liquidated Damages will be levied as per the penalty and payment schedule subject to a maximum of 5% of the total value of the contract for non-fulfilment of delivery schedule. Any delay due to the Force Majeure conditions or delay not due to the successful bidder will be excluded from the delivery schedule.
- b. In the event of failure by the successful bidder to fulfil the delivery conditions, Tender Inviting Authority at its discretion may initiate any of the action(s) as given below:
 - i. Extension of time may be permitted to complete thework.
 - ii. Additional resources will be requested for speeding up thework.
 - iii. Liquidated Damages will belevied.
 - iv. Contract with the successful bidder may be terminated as per the Termination

clause.

v. Any other action as may be deemed fit by Tender Inviting Authority in the best interest of thedepartment.

2.29 Force Majeure

Neither Tender Inviting Authority nor the successful bidder shall be liable to the other for any delay or failure in the performance of their respective obligations except causes or contingencies beyond their reasonable control due to Force Majeure conditions suchas:

- a. Any act of God such as lighting, earthquake, landslide, etc. or other events of natural disaster of rare severity. Meteorites or objects falling from aircraft or other aerial devices, travelling at highspeeds
- b. Fire or explosion, chemical or radioactive contamination or ionizing radiation
- c. Pandemic or Epidemic or plague. Act of war (whether declared or undeclared), threat of war, invasion, armed conflictor act of foreign enemy, unexpected call up of armed forces, blockade, embargo, revolution, riot, religious strife, bombs or civil commotion, sabotage, and terrorism

2.30 Arbitration

In case of any dispute, the matter will be referred to a Sole Arbitrator to be appointed by APSFLinaccordancewiththe "Arbitrationand Conciliation Act 1996" and any amendments thereafter Thear bitrations hall be held in Andhra Pradesh, India and in English.

2.31 Exit Management Plan

- a. An Exit Management plan shall be furnished by bidder in writing to the Authority within 90 days from the date of Signing this contract, which shall deal with at least the following aspects of exit management in relation to the contract and in relation to the project implementation and service levelmonitoring.
 - i. A detailed program of the transfer process that could be used in conjunction with a Replacement Service Provider including details of the means to be used to ensure continuing provision of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer;
 - ii. Plans for provision of contingent support to Project and Replacement Service Provider for a reasonable period after transfer;
 - iii. Exit Management Plan in case of normal termination of ContractPeriod
 - iv. Exit Management Plan in case of any eventuality due to which Project is terminated before the ContractPeriod
 - v. Exit Management Plan in case of termination of Supplier
- b. Exit Management plan at the minimum adhere thefollowing:
 - i. Three (3) Months of the support to Replacement Service Provider post termination of contract.
 - ii. Complete handover of the reports, documents and other relevant items to the Page 25 of 91

Replacement ServiceProvider/Authority.

- iii. Certificate of acceptance from authorized representative of Replacement Service Provider issued to supplier on successful completion of handover and knowledge transfer.
- iv. Tentative exit management schedule/Matrix isannexed
- c. Each Exit Management Plan shall be presented by the Service Provider to and approved by the Managing Director, APSFL or its nominated agencies.
- d. In the event of termination or expiry of contract, Project Implementation, or Service Level Monitoring, both PIA and Authority shall comply with the Exit Management Plan, and payment shall be made by APSFL only for the work done prior to termination notice, upon successful acceptance by Third Party Auditor (TPA)/ any agency / and personeel as appointed by APSFL.

During the exit management period, the Service Provider shall use its best efforts to deliver the services.

2.32 Extension of time in Contracts

Subject to any requirement in the contract as to completion of any portion or portions of the works before completion of the whole, the contractor shall fully and finally complete the whole of the works comprised in the contract (with such modifications as may be directed under conditions of this contract) by the date entered in the contract or extended date in terms of the following clauses.

2.32.1 Extension due to modification

If any modifications have been ordered which in the opinion of APSFL have materially increased the magnitude of the work, then such extension of contracted date of completion may be granted as shall appear to APSFL to be reasonable in the circumstances, provided moreover that the Contractor shall be responsible for requesting such extended on of the date may be comprised necessary as soon as the clause thereof shall arise and in any case not less than one month before the expiry of the date fixed for completion of the works.

2.32.2 Extension for delay not due to APSFL or Contractor

If in the opinion of APSFL, the progress of work has any time been delayed by any act or neglect of APSFL employees or by other contractor employed by the APSFL or in executing the work not forming part of the contract but on which contractor's performance necessarily depends or by reasons of proceeding taken or threatened by or dispute with adjoining or to neighbouring owners or public authority arising otherwise through the Contractor's own default etc. or by the delay authorized by APSFL pending arbitration or in consequences of the contractor not having received in due time necessary instructions from the APSFL for which he shall have specially applied in writing to the APSFL within 10 days of such happening but shall nevertheless make constantly his best endeavours to bring down or make good the delay and shall do all that may be

reasonable required of him to the satisfaction of the Engineer to proceed with the works. The contractor may also indicate the period for which the work is likely to be delayed and shall be bound to ask for necessary extension of time. APSFL on receipt of such request from the contractor shall consider the same and shall grant such extension of time as in its opinion is reasonable having regard to the nature and period of delay and the type and quantum of work affected thereby.

No other compensation shall be payable for works so carried forward to the extended period of time, the same rates, terms and conditions of contract being applicable, as if such extended period of time was originally provided in the original contract itself.

2.32.3 Extension for delay due to APSFL

In the event of any failure or delay by the APSFL to ensure site readiness necessary for the execution of the works or to give the necessary notice to commence the works or to provide the necessary drawings or instructions or any other delay caused by the APSFL due to any other cause whatsoever, then such failure or delay shall in no way affect or vitiate the contract or alter the character thereof or entitle the contractor to damages or compensation therefore, but in any such case, the APSFL may grant such extension or extensions of the completion date as may be considered reasonable.

2.33 Extension of time for delay due to contractor

The time for the execution of the work or part of the works specified in the contract documents shall be deemed to be essence of the contract and the works must be completed not later than the date(s) as specified in the contract. If the contractor fails to complete the works within the time as specified in the contract for the reasons other than reasons specified in the clause 2.29 and 2.32, APSFL may, if satisfied that the works can be completed by contractor within reasonable short time thereafter, allow the contractor for further extension of time as APSFL may decide. On such extension, APSFL will be entitled without prejudice to any other right and remedy available on that behalf, to recover from the contractor as per penalty terms mentioned below in this clause.

For the purpose of this clause, the contract value of the works shall be taken as value of work as per contract agreement including any supplementary work order/contract agreement issued. Provided also, that the total amount of liquidated damages under this condition, shall not exceed 10% of the first Rs.2 lakhs and 5% of the balance of the total value of the item or groups of items of work for which a separate distinct completion period is specified in the contract.

Further competent authority while granting extension to the currency of contract under clause 2.33 may also consider levy of token penalty as deemed fit based on the merit of the case. Provided further, if that the APSFL is not satisfied that the works can

be completed by the contractor and in the event of failure on the part aforesaid, the APSFL shall be entitled without prejudice to any other right or remedy available in that behalf, to appropriate the contractor's security deposit and rescind the contract, whether or not actual damage is caused by such default.

Note: All General Conditions of Contract (GCC) and Special Conditions of Contract (SCC) as per Department of Roads and Buildings, Government of Andhra Pradesh are applicable for thisRFP.

3. ProjectBackground

3.1 About the Project

APSFL is 100% owned by Andhra Pradesh State Government, and this Corporation is established to extend Internet /IPTV/Telephone Services throughout Andhra Pradesh including Tribal Areas and all Government Offices.

Visakhapatnam City has been declared as ONE of the Smart City among the top 20 smart cities in India.APSFL through this project desires to provide 24*7 Uninterrupted network connectivity to all offices and important establishment located in Visakhapatnam city. This project along with the Leased Line / Dark Fiber connectivity will act as a backbone.

APSFL aims to improvise and sustain the high levels of citizen satisfaction and promote a better quality of life for residents. APSFL desires to foster the development of a robust network infrastructure that supports digital applications and ensures network connectivity is available throughout the city and in government offices like Head Offices, Zonal Offices, Ward Offices, etc. Network connectivity is also critical at citizen centric locations like BRTSstops, bus depots, health centers, civic centers, community halls, amusement locations, and emergency response units, etc

The scope of this RFP is restricted only towards implementation of Underground Optical Fiber Cable Network Connectivity through utilization of duct provided by APEPDCL in the route as identified by APSFL.

3.2 Project Type

The Project will be rolled at Selected Locations in Visakhapatnam city as per the route and requirement of APSFL in Phased Manner.

3.3 Project Objective

The Project Objectives broadly are as follows;

- To provide uninterrupted network for 24*7 with Fiber Optical Connectivity at all identified locations / establishments / customers.
- To establish a medium for quick data gathering from multiple sources and make faster decisions.

3.4 Network Layer

The fiber network ring topology shall meet the following minimum requirements:

- Planning and execution of 48 Core armored loose tube Single mode Optical Fiber Cables (OFC).
- The proposed network span shall consider 16% more fiber length than surface length, 10% for looping in chambers, 3% for modulation, 2% for splice joint preparation & remaining 1% forwastage.
- The Network layer shall have chamber at approx. 150 meters and shall have OFC joint splice closure at approx. 150 200meters.
- Additional chambers to be constructed wherever there is a road crossing or at sharpturns.
- A loop of 15 meters of OFC shall be left in every HandHole.
- 48 Core Optical Fiber Cable shall consist of 8 Fiber per tube and shall have total 6 numbers of tubes.
- 2 numbers of 48F FDP will be installed at all PoP locations for full cable termination of 96F CoreOFC.
- 48 cores of fiber cable shall preferably be terminated on FDMS at NOC and PoP locations.
- The distance between two Hand Holes/RCC Chamber should not exceed 150 meters.
- It shall have 1 number of 40mm High Density Polyethylene (HDPE)pipe.

3.5 Proposed Underground Network Diagram:



3.6 Location Details:

Underground 48 F OFC cable to be laid between the following APEPDCL 33/11 KV Substations in Visakhapatnam City utilizing the APEPDCL duct allotted to APSFL.

SL.NO	FROM(Substation)	TO (Substation)	DUCT LENGTH IN KM*
1	NOC	SIRIPURAM	1.212
2	SIRIPURAM	PEDAWALTAIR	1.404
3	PEDA WALTAIR	RCD HOSPITAL	0.949
4	NOC (Near CWC)	Air Junction	0.768
5	SIRIPURAM	VIDYUT SAKHA	1.836
6	PANDIMETTA	VIDYUT SAKHA	0.510
7	PANDIMETTA	RK BEACH	1.020
8	AIR JUNCTION	PANDURANGAPURAM	0.990
9	TST COMPLEX	DONDAPARTY	1.603
10	RAJENDRA NAGAR	NAKKAVARIPALEM	1.301
		TOTAL LENGTH	11.593 KM

^{*}Length indicated is tentative, it might differ based on actuals.

4. Scope of Work

The scope of work & services covers the survey, design, procurement, supply, installation, execution, configuration, testing, commissioning of Optical Fiber Cable Network in the Visakhapatnam city.

SI shall ensure that network design and implementation must be free of any SPOF (Single Point of Failure) from perspective of both active and passive elements. Considering the scope set in this RFP, the SI Shall carefully consider the solutions it proposes and explicitly mention the same in the technical proposal.

SI shall have to Conduct a detailed assessment, scoping study (Feasibility Study) and develop a comprehensive project plan, including detailed technical architecture and gap analysis. Following services and applications shall be incorporated under project scope:

Installation, Configuration, Commissioning & Management of all Active & Passive components covered under this RFP and integration of same with existing APSFL network to provide Intranet and Internet connectivity to all offices which will be connected on network.

Monitoring & Fault Management Dark Fiber connectivity provided from other service provider for balance locations which will not be connected on APSFL fiber network as mentioned in detail.

The scope of work for Fiber Optic Network Project shall cover the following activities and key components but not limited to:

IncludesSurvey, Route Map of Fiber Laying, Mapping of GIS Coordinates from Nearest APSFL's PoP to Customer Premises Location with laying of Approximately 11.5 Km of Underground Armoured 48F optical fiber cable through the utilization of the duct provided by APEPDCL inthedistrict / city premises of Visakhapatnam.

Through this RFP, APSFL intends to select agency responsible for laying of Underground optical fiber cable (48F) along with the other necessary material required as per the site / Project Locations.

The scope of work in **Pre – Implementation & Implementation phase** comprises of following, but not limited to:

Commissioning Phase:

The scope of work shall comprise survey, supply of fiber including all the accessories, live line installation and commissioning of underground optical fiber cable. The fiber has to be terminated at the points provided by APSFL. The agency shall take care of the existing cable safety while laying the UG cable.

Must conduct the feasibility Survey/ Study based on the requirements provided by the APSFL and propose the best possible solution

A. Field/Route Survey

- The service provider has to carry out the route /field survey and submit the feasibility report and route map (along with Latitudes and Longitudes) of fiber for approval/clearance from APSFL to commence the work along with Purchase Order (PO).
- The vendor shall finalise the exact distance of the UG OFC, location of the Manholes and loop chambers and submit a schematic diagram.
- On the basis of the survey reports done by Vendor and further approved by APSFL, routes for OF cable laying shall be finalized.
- It is essential that the cable is laid after obtaining due permission from all the concerned authorities in coordination with EPDCL Department and consultation of APSFL to avoid any damage (which may result in disruption of services / revenue loss) and shifting in near future due to their planned road widening works.

B. Fiber Implementation

- Bidder shall be responsible for Supply, Install, Design, Construction & commissioning of the Connectivity established through the Duct provided by EPDCL in co-ordination with the Dist. Network Manager of APSFL and NOC Team.
- Providing additional protection by R.C.C. Pipes/DWC pipes and/or concreting/chambering, wherever required according to construction specification
- The joint chambers have to be provided where ever required to keep the O.F.C. joint well
 protected and also to keep extra cable, which may be, required to attend the faults at a
 later date. Jointing chambers are to be prepared and actual location of jointing chamber
 depends on length of cable drum and appropriateness of location for carrying out jointing
 work. The location is finalized by APSFL.
- In built up areas, the Vendor shall resort to use of manual labour only to ensure no damage is caused to any underground or surface installations belonging to other public utility services and/or private parties.
- The 48F fibers are to be spliced at every Joint & at both ends (Terminations) as directed by the APSFL. The Infrastructure required for cable splicing i.e. Splicing machine, OTDR, Tool kit etc. shall be arranged by the Vendor and also any additional accessories. e. g. Engine etc. required at site for splicing shall also be arranged by the Vendor.

- The Optical Fiber Cable thus jointed end-to-end shall be tested by the APSFL representative for splice losses and transmission parameters. Optical Fiber should meet all the technical parameters, **specified and no relaxation will be granted.**
- The vendor shall provide GIS coordinates of the laid fiber clearly tagging signages wherever installed/provided for APSFL's record & verification.
- Route Tags & signage for every 500 Mtrs., at Man Holes/ Hand holes.

The scope of work in Post Implementation phase comprises of following, but not limited to:

- Graphical presentation depicting the route of the fiber laid generated
- Submission of survey report, Route Map of Fiber Laying to APSFL.
- Mapping of the Co-ordinates on the deployment of the Initial route of the Fiber to Endroute of the Fiber.
- Maintenance for a period of 3 Years for the Equipment / Material Supplied, Delivered and Commissioned at the Location.
- Submission of As-Built Diagram (Mandatory) & In-Built Diagram (If required).

5. Methodology (Procedure to be followed in adherence):

The successful agency is required to follow the methodology for Optical Fiber Cable execution as follows;

5.1 Field Survey, GIS Based Network Planning and Mapping of All Network Elements

- 1. This component of the project would involve detailed field survey of all locations specified by APSFL & designing/mapping of the Optical Fiber Network on GIS to connect them as part of complete turn key solution. Nominal design of network would be prepared on GIS Using different layers. Changes proposed during survey, execution and maintenance post hand over and take over (HOTO) will also be updated in GIS available with APSFL for end-to-end visibility of network. The SI is required to support/integrate this information on existing GIS platform available with APSFL.
- 2. All important information like no. of ducts, type of fiber, ROW authority, location of chambers, location of rack, model of equipment installed etc. along with location information will be maintained in attributes of different layers in GIS.

5.2 Laying of Underground Optical Fiber in Leased APEDPCL Corridor:

This component of the project would involve laying underground optical fiber so that the identified offices, are connected with each other as much as possible. Optical fiber shall be laid primarily along the APEPDCL DUCT corridor of the city and close coordination will have to be done with concerned department. This would involve all activities as mentioned in detail in Sr. No. 5.4 and 5.6 and as listed below in brief:

- 1. Verification and optimization of routes designed based on GIS data as per field condition.
- 2. Coordinate with GVMC for Row Permissions, excavation and laying of optical fibre. SI is required to submit the plan in advance so that necessary RoW permission shall be provided by APSFL/APEPDCL
- 3. Reinstatement of roads/Footpath
- 4. Acceptance testing
- 5. Submission of all the required documents, drawings and reports to APSFL.

Total length of underground fibre to be laid along the EPDCL duct corridor for creating the backbone is estimated to be around 11.5 KM (Tentative / Estimated) of Network layer.

*The SI is required to follow the methodology for Optical Fibre Cable Execution as per RFP.

*Laying optical Fiber through utilization of the duct facilitated by EPDCL, Right of Way permission is with in the scope of APSFL & EPDCL.

5.3 Other General Requirements:

- **1.** Based on the survey results and APEPDCL/GVMC requirements the mode of digging (Automatic or Manual or clamping) needs to be decided for each section of the route.
- **2.** After finalizing the same the route diagrams / sketch will be prepared on the AUTOCAD map and submit to the Authority forapproval.
- **3.** Preferably all digging open trench along with Chamber preparations needs to be doneontheFootpaths.
- **4.** After the same is over proper Labeling as per the design and consent of the Client and Consultants needs to be done so that identification post installation during the maintenance becomeseasy.
- **5.** OFC drums will be tested with OTDR on sampling basis to verify optical loss characteristics and cable length parameters as prescribed by Original Equipment

Manufacturer (OEM) before blowing the cable induct.

- **6.** After the Splicing work is over, Fiber testing needs to bedone.
- **7.** SIwill use PC APC patch cord for connectivity between FDP and active equipment, APC (angular Point Contact) connector at FDP end and PC (Polished Connector) at equipmentend.
- 8. The Report needs to be submitted to the Original Equipment Manufacturer (OEM) of the Fiber and Accessories who in turn will issue performance Certificate of the Installed Components for a minimum period of 10years. (On the Material / Equipment Supplied / being used)
- **9.** During the course of installation, if any utility services or roads or other APEPDCL/GVMC assets or third-party assets etc. are damaged, then the SI has to repair and reinstate the same at his own cost.
- **10.** Agency will be responsible to undertake and complete the works related to supply installation and commissioning of services as indicated in the RFP

During the installation activities, records must be kept of all items installed. Including reference to cable pathways used, final location, identity of cables and equipment. The presentation of all of these records will provide the "As-Installed" for all future reference to the installation.

- 11. The Optical Fiber cabling shall be installed in accordance with manufacturer's installation instructions. The Contractor will ensure that the manufacturer's specifications for the Optical Fiber cable meet the transmission characteristics required by CablingStandards.
- **12.** All installed racks, HHs, cables, FDMSboxes, distribution panels and wall outlets shall be marked and numbered in accordance with Administration Standard for the Telecommunications Infrastructure.
- **13.** The documentation required at the completion of the installation phases shall contain all of the following information, together with any other information the installer has acquired during theinstallation
- a) "As-Installed" documentation, showing total cabling and connections installed using floor space plans and cable record sheets. This documentation must show all cables and outlets incorporating the full numbering and marking convention supplied.
- b) All test results (including OTDR, LSPM & Splice report) and certification information, identified by cable, connection and numbering convention, necessary for all Optical Fibercables.
- c) As built drawings of all fiber optic routes and OFC blowingreport.
- d) SI is required to provide Centralized Logging & Reporting Solution for all types of

- Logs/Devices with dashboards and user-based views wrt System Logs / Event Logs along with the web client/Web view for viewing and analyzing all kind of logs with customizable reportsgeneration
- e) SI has to ensure confidentiality and integrity of sensitive information and data of users and portal information. A secure solution should be provided at the hardware infrastructure level, software level, and access level. Role based access for all the stakeholders should be envisaged to access and use the system as per instruction from APSFL.
- f) The SI its personnel shall not divulge or disclose to any person, any details of office, operation process technical know-how, administrative/ organizational matters as all are confidential/secret innature.

5.4 Project Methodology:

- **1. Turnkey Project Basis**: The SI shall act as single SI to organize and manage the entire project—including supply, installation and commissioning of all required items which should follow the guidelines and standards. The SI shall be in a position to test, demonstrate and certify the basic requirements in accordance with the contract.
- **2. Technical arrangements**: The SI shall provide details of site and infrastructure requirements (Joint closures, excavation and construction of joint closures pits, test pits etc.) in a layout plan after making the survey. The SI shall execute Works/ Project and Cabling as per the layout plan which will be approved by Authority post Under Ground utilities Survey and Submission by the SI for all routes.
- **3.** Warranty and Post-Warranty Support: The SI shall be responsible for the warranty support and also for the post warranty support as mentioned in this RFP.
- **4.** All goods or materials shall be supplied strictly in accordance with the specifications, other attachments and conditions stated in the RFP / Agreement/SLA. All materials supplied by the SI shall be guaranteed to be of the best quality of the irrespective kinds and shall be free from faulty design, workmanship and materials.
- **5. Documents**: The SI shall provide two set of documents and manuals (hard copy, soft copy with each item of the unitsupplied.)
- **6. Certification:** The SI shall test and certify the availability and reliability of Fiber Cabling/Accessories of the location and give the connectivity.
- **7. Reporting:** -Detailed report is required to be submitted for the work under progress and for functional performance of the connectivity, throughput. The same have to be certified by representative of Authority.

The SI shall adhere to the below guidelines while executing the work:

- 1. The SI shall prepare the list of equipment, number of field employees deployed and the implementation schedule and activities taking into consideration all the requirements of concerned Municipal and Government authorities.
- 2. The SI shall submit the work plan and implementation schedule with list of equipment and personnel to be deployed on field for execution of works for approval of Client.
- 3. The SI shall commence work post approval of work plan and schedule by the Client.
- 4. If the requirements of concerned Government authorities should supersede any instruction by Client to the SI; the SI shall immediately point out in writing if any such conflict is observed to the attention of the APSFL. The APSFL shall issue further necessary instructions.

- 5. The SI shall inform all concerned authorities and obtain NOC or permissions as required before starting the excavation and Hand Hole construction works.
- 6. The SI shall register and get approval from concerned Government authorities to carry out the work as required.
- 7. The SI shall adhere to guidelines issued by concerned Government authorities while executing the work.
- 8. The SI shall lay the underground OFC in the APEPDCL duct as permitted.
- 9. The SI shall lay OFC of 48 core through 50mm HDPEpipe.
- 10. The SI shall construct Hand Holes at successive intervals of 150 Meters to 200 Meters.

5.5 Duct Integrity Test:

- 1. The SI shall perform the Duct Integrity test for the 50 mm HDPE pipe with blow compressed air at 7.5 Kg/Sq-cm for removing sand, mud and other foreign particles creeped during laying ofpipes.
- 2. The SI shall carry out Duct integrity test with the help of medium density of sponge at pressure of 7.5Kg/Sq-cm.
- 3. The SI shall perform the Duct Integrity testing from Hand hole to Hand hole. However, wherever the site conditions permit SI shall perform the Duct integrity test for several Hand holes together by coupling the 50mm HDPE pipes within the Hand Holes.
- 4. The SI shall carry out the Duct Integrity test before pulling/blowing of OFC.
- 5. The SI shall seal the spare 50 mm HDPE pipes with End plugs immediately after acceptance of Duct integritytest.

5.6 Installation of OFC:

- 1. The SI shall install the OFC inside the 50mm HDPE pipe as per design consideration. The OFC shall be installed by compressed air blowing technique. However, for spans up to 250 meters, the SI can manually install the OFC in 50 mm HDPE pipe by pulling it with help of a Duct rodder.
- 2. The SI shall handle the Optical Fibre Cable Drums as per instructions given by the manufacturer.
- 3. The SI shall use Duct rodder for pulling OFC from Hand Hole to Hand hole for short spans up to 150Mtrs.
- 4. SI shall ensure manufacturer's guidelines for minimum bend radius and tension are followed while installing theOFC.
- 5. The SI shall keep minimum 15 m loop in each Hand hole, properly coiled and tied with cable ties. Aluminum cable tags with punching to be used fortagging.
- 6. The SI shall seal both the ends of 50 mm HDPE pipe with cable sealing plugs / simplex plugs after installingOFC.
- 7. The SI shall pull through 5mm thick Nylon rope in spare 50 mm HDPE pipes and tied

properly at both the ends for future cable pulling. The 50mm HDPE pipe then shall be secured using Endplug.

5.7 Installation of Hand Hole:

- **1.** The SI shall provide Hand Holes at a distance of 150meters.
- **2.** The SI shall provide additional Hand Holes at Major Road crossings, Bridges and other Location.

5.8 Splicing of OFC and Installation of Fiber Splice Joint Closure:

- 1. The SI shall ensure that the splice loss per joint shall be less than 0.05dB/splicing joint.
- 2. The SI shall ensure that during splicing fiber cores of 0.6 mtr to 0.8 mtr shall be stored in cabletray.
- 3. The SI shall seal and install the Fiber Splice Joint closure assembly as per instructions ofmanufacturer.
- 4. SI to install 96 F capacity joint closure for 48 F Core route and 48 F capacity joint closure for 24 F Accessroute
- 5. The SI shall carry one hour of leakage/water penetration test on Fiber Splice Joint closures after installation.
- 6. The SI shall attach Cable tags to all OFC which are entering the Fiber Splice Joint Closure and OFC readings shall be recorded for updating in the As-build and GIS drawings.
- 7. The SI shall provide an As-build diagram for splicing of OFC. The diagram shall indicate the cores from all OFC with their color coding and numbering.
- 8. The SI shall use Mid-Span Access BufferTube Slitter during mid-span splicing (for last mile location connectivity) to ensure that buffer jackets of fiber tubes are cut longitudinally to access all fibers inside tube and then only required fiber cores will be cut for splicing with fiber cores of last milecable.
- 9. During maintenance of the network, SI shall ensure that all fiber cores are spliced at the cut location (and not only live fiber cores) during rectification process. Any third party as appointed by APSFL may audit the health/continuity of all fiber cores at any time and SI shall have to facilitate this exercise by performing LSPM and OTDR testing in presence of this team.

5.9 Optical Fiber Cable Testing Methodology:

- 1. Fibre-optic Tests applied to links and exclude equipment and work areacord.
- **2.** OF Attenuation testing is used to verify the initial performance of the installedlink.
- 3. 100 % of the installed OF links have to be tested and must pass the acceptancecriteria.
- **4.** The attenuation of the link is measured using the insertion loss method. This method uses an optical source and an optical power meter to compare the difference between two optical powerlevels.
- **5.** When testing Single Mode optical fiber links with a Light Source and a Power Meter, this measurement kit has to be capable of operating at 1550nmand 1310nm for Single Mode.

- **6.** The test scenario with a Light Source and a Power Meter shall be of the following for each link: Bidirectional testing @ 1550 nm and @ 1310 nm for single mode fibers and calculating average of both readings.
- **7.** The use of certification tool is recommended. Those tools are capable of producing a report logging the time of the test the link identification under test, the link length, the attenuation at the window tested and the acceptable link attenuation. The report shall also identify in which direction the testing wasimplemented.
- **8.** When testing with basic optical source and power meter, the operator will fill up a report logging the time of the test, the link identification under test, the link length and attenuation at the window tested in presence of the deputed staff/any person by APSFL.
- **9.** The report shall also identify in which direction the testing was implemented.
- **10.** Acceptable link attenuation/loss in dB per link (between 2 locations) to be calculated as perbelow.
- 11. For 1310 nm: 0.34 dB attenuation / Km + 0.05 dB / splice + 1 dB connectorloss
- 12. For 1550 nm: 0.20 dB attenuation / Km + 0.05 dB / splice + 1 dB connectorloss
- **13.** SI shall also be responsible to replace a patch of OFC cable for suitable length if optical losses are increased due to added splice joints etc. which may result in below conditions.
- **14.** Link is not getting up due to increased losses the measured attenuation of the links shall have a lower value than the acceptable link attenuation calculated.
- **15.** The Test should be carried out by certified Engineer and once the report is submitted to the manufacturer.
- **16.** The SI shall also provide bidirectional OTDR report for all fibrec ores.

5.10 Acceptance Testing:

The APSFL shall review and finalize the detailed acceptance test plan proposed by the SI. The APSFL would also conduct audit of the process, plan and results of the Acceptance Test carried out by the SI for both IT & non-IT components. If required APSFL may carry out the testing from the third party. The APSFL would issue certification of completion for which APSFL shall verify availability of all the defined services as per the contract signed between the SI and APSFL. The SI shall be required to demonstrate all the services, features, functionalities as mentioned in the agreement.

Commissioning shall involve the completion of the site preparation, supply and installation of the required components and making the Project available to the APSFL for carrying out live Operations and getting the acceptance of the same from the APSFL. Testing and Commissioning shall be carried out before the commencement of Operations.

5.11 Final Acceptance Testing:

The final acceptance shall cover 100% of the Project, after successful testing by the APSFL. The Final Acceptance Test Certificate (FAT) shall be issued by the APSFL to the SI. *Prerequisite for carrying out FAT activity:*

- 1. Detailed test plan shall be developed by the SI and approved by APSFL. This shall be submitted by SI before FAT activity to be carriedout.
- 2. All documentation related to Project and relevant acceptance test document should be completed & submitted before the final acceptance test to the APSFL.

6. TechnicalSpecifications

6.1 Fiber Specifications:

48 F Armoured Optical Fiber Cable

Proposed Make, Model with Warranty.			
1.	Single Mode Optical Fiber	ITU-T-G.652D	
2.	Maximum Cabled Fiber Attenuation db/Km	1310nm:0.34 and 1550nm:0.20	
3.	Tensile Strength	≥2500N	
4.	Crush Resistance	≥3000N	
5.	Fiber Polarization Mode Dispersion (PMD)	≤0.2ps/Vkm	
6.	Impact Strength	25Nm	
7.	Operating Temperature	-20°C to 70°C	
8.	Color Coding of Tubes and Fibers	EIA/TIA-598	
9.	Armouring	Type: ECCS tape Tape thickness: >=0.14mm	
10	Outer Jacket Thickness	≥1.6mm	
11	Water Tightness	EIA/TIA-455-81B	
12	Minimum Continuous Length	2kM±10%,	
13	Cable Design Life	More than 25 Years	
14		The mode field concentricity shall be less than 1µm	
15		The cladding of the Optical Fiber shall be made of silica glass having lower refractive index. The outside diameter of the cladded fiber shall be 125µm with tolerance of ±2.0µm.	

16	The non-circularity of cladding surface shall be2%, maximum.
17	The nominal fiber coating diameter shall be in the range of 245 to 400microns.
18	Maximum continuous operating temperature without optical degradation shall be 65°C.
19	Maximum optical loss variation at temperature range of -5°C to +70°C shall be ±0.05dB/km.
20	Water swellable yarns shall be added to prevent water ingress in the core of cable
21	The loose tubes carrying the fiber cores shall be made of thermoplastic or equivalent material which will not kink during normal operation of the cable including laying or blowing of cable.
	All the OFC shall be clearly marked at intervals of 1 meter with the following data which is not less than 5mm high. The details of marking on cable shall be approved by CLIENT before commencement of manufacturing.
	Name of Client withlogo
23	No of Fibers (48Core)
	Type of OFC
	Manufacture's name or trademarkYear of manufacturing
	Running length marking
	CableID
24	All optical fiber cable shall be supplied on strong wooden drums provided with lagging with adequate strength, constructed to protect the cabling against all damage and displacement during transit, storage and subsequent handling during installation

The Minimum technical requirements for the 48 CORE OFC are as follows.

1.	Fiber Count	48 nos.
2.	Fibers per tube	8nos.
3.	Tubes	6 nos.

4.	Diameter of Cable	13mm±5%
5.	Weight of Cable	170kg/kм±10%

6.2 Fiber Splice Joint Closure:

The Technical requirements for the Fiber Splice Joint Closure are as follows:

	Proposed Make, Model with Warranty/AMC: < <pl. specify="">></pl.>			
1.	Closure Length	420mm		
2.	Closure outer diameter Including Clamp	205 mm		
3.	Fiber Tray Capacity	12 cores		
4.	Fiber Capacity	144 nos.		
5.	Cable Ports	4 cable entry ports +1no. oval port for branching application.		
6.	Number of Fiber Splice Trays	12nos.		
7.	Others	The fiber splice joint closure shall have sealing based on heat shrink technology or reusable gel end piece that opens and closes easily for adding or removing efficient cable sealing with specific grommets.		
8.	The fiber splice joint closure shall provide splice trays that are hinged to provide access to all splices without disturbing other splice trays for inter-tray fiber management.			
9.		The fiber splice joint closure shall be water-proof and dust- proof.		
10.		The fiber splice joint closure shall have a mechanism to route atleast 1meter of loose tube per tray per optical fiber cable		

The joint closure shall ha provided for grounding the a	•
---	---

6.3 HDPE Coupler (50 mm):

1.	Type of Coupler	Push-Fit type 50mm Dia. Coupler	
2.	Pulling Force	≥330 kgf	
3.	Construction Material	HDPE	
4.	Other	The 50 mm HDPE Coupler shall be able to provide a durable airtight and watertight joint between two pipes without deteriorating the strength of the pipes.	

6.4 End Plug for 50 mm HDPE Pipe:

Proposed Make, Model with Warranty/AMC:			
1.	Type of End Plug	Push-Fit type 37mm ±0.4mm Dia. Plug	
2.	Material used for manufacturing	HDPE	
3.	Life expectancy	≥25 Years	
4.	End Plug	The end plugs once installed shall make the laid HDPE duct air tight.	

6.5 Safety and PrecautionsMeasures

1. Safety Precautions when excavating/ working in excavations close to electric cables

The Engineer- in-charge of the work should get full information from Electricity
undertaking regarding any electric cables, which are known or suspected to exist near
the proposed excavation and unless this is done, excavation should not be carried out
in the section concerned. The electricity undertaking should be asked to send a
representative and work should be preceded with close consultation with them.
Only wooden handled hand tools should be used until the electric cables have been
completely exposed. Power Cables, not laid in conduits, are usually protected from
above by a cover slab of concrete, brick or stone. They may or may not be protected

on the sides. It is safer, therefore, always to drive the point of the pick axe downwards then uncovering a cable, so that there is less chance of missing such warnings labs. No workman should be permitted to work alone where there are electric cables involved. At least one more man should be working nearby so that help can be given quickly in case of an accident. If disconnection of power could be arranged in that section it will be better. No electric cables shall be moved or altered without the consent of the Electric Authority and they should be contacted to do the needful. If an electric cable is damaged even slightly, it should be reported to the Electric Authority and any warning bricks disturbed during excavation should be replaced while back filling the trench. Before driving a spike into the ground, the presence of other underground properties should be checked. Information on plans regarding the location of power cables need not to be assumed as wholly accurate. Full precautions should be taken in the vicinity until the power cable is uncovered. All electric cables should be regarded as being live and consequently dangerous. Any power is generally dangerous, even low voltage proving fatal in severalcases.

2. Electric shock-Action and treatment

Free the victim from the contact as quickly as possible. He should be jerked away from the live conductors by dry timber, dry rope or dry clothing. Care should be taken not to touch with bare hands as his body may be energized while in contact. Artificial respiration should begin immediately to restore breathing even if life appears to be extinct. Every moment of delay is serious, so, in the meanwhile, a doctor should be called for.

3. Safety Precautions while working in public street and road crossings

Where a road or footpath is to be opened up in the course of work, special care should be taken to see that proper protection is provided to prevent any accidents from occurring. Excavation work should be done in such a manner that it will not unduly cause inconvenience to pedestrians or occupants of buildings or obstruct road traffic. Suitable bridges over open trenches should be so planned that these are required for the minimum possible time. If in the case of Where bridges are constructed to accommodate vehicular traffic and is done near or on railway property, it should be with the full consent and knowledge of the competent railway authorities.

4. Danger from falling material

Care should be taken to see that apparatus, tools or other excavating implements or excavated materials are not left in a dangerous or insecure position so as to fall or be knocked into the trench there by injuring any workman who may be working inside the trench.

5. Care when working in Excavations

Jumping into a trench is dangerous. If it is deep, workmen should be encouraged to

lower themselves. Workers should work at safe distance so as to avoid striking each other accidentally with tools. If the walls of the trench contain glass bits, corroded wire or sharp objects they should be removed carefully. If an obstruction is encountered, it should be carefully uncovered and protected if necessary. If an obstruction is encountered, it should be carefully uncovered and protected if necessary. Care must be taken to see that excavated material is not left in such a portion that it is likely to cause any accident or obstruction to a roadway or waterway. If possible, the excavated material should be put between the workmen and the traffic without encroaching too much on theroad.

6. Danger of cavein

When working in deep trenches in loose soil, timbering up/shoring the sides will prevent soil subsidence. The excavated material should be kept at sufficient distance from the edge of the trench or pit. Vehicles or heavy equipment must not be permitted to approach too close to the excavation.

When making tunneled opening, it should be ensured that the soil is compact enough to prevent cave in even under adverse conditions of traffic. Extra care should be taken while excavating near the foundations of buildings or retaining walls. In such cases, excavation should be done gradually and as far as possible in the presence of the owners of theproperty.

7. Protection of Excavations

Excavations in populated areas, which are not likely to be filled up on the same day should be protected by barriers or other effective means of preventing accidents and the location of all such openings must in any event be indicated by red flags or other suitable warning signs. During the hours from dusk to dawn, adequate number of red warning lamps should be displayed. Supervisory officers should ensure that all excavations are adequately protected in this manner as serious. Notwithstanding adoption of the above-mentioned precautions, works involving excavations should be so arranged as to keep the extent of opened ground and the time to open it to a minimum.

8. Precautions while working on roads

The period between half an hour after sun-set and half an hour before sunrise, and any period of fog or abnormal darkness may also be considered as night for the purpose of these instructions, for the purpose of providing the warning signs. Excavation liable to cause danger to vehicles or the public must at all times be protected with fencing of rope tied to strong uprights or bamboo poles at a suitable height or by some other effective means. Any such temporary erection which is likely to cause obstructions and which is not readily visible should be marked by posts carrying red flags or boards with a red background by day and by continuously lighted lamps at night.

The flags and the lamps should be placed in conspicuous portions so as to indicate the pedestrians and drivers of vehicles the full expanse i.e. both width and length of the obstruction. The distance between lamps or between floors should not generally exceed 1.25 m along the width and 6m along length of the obstruction in noncongested areas, but 4 meters along the length in congested areas.

If the excavation is extensive, sufficient notice to give adequate warning of the danger, should be displayed consciously not less than 1.25 m above the ground and close to the excavation. Where any excavation is not clearly visible for a distance of 25m to traffic approaching from any direction or any part of the carriage way of the road in which the excavation exists, a warning notice should be placed on the kerbor edge of all such roads from which the excavation or as near the distance as is practicable but not less than 10 m from the junction of an entering or intersecting road in which the excavation exists. All warnings, in these should have a red background and should be clearly visible and legible. All warning lamps should exhibit a redlight, but whitelights may be used in addition to facilitate working at night. Wherever required a passage for pedestrians with foot bridge should be provided. At excavations, cabledrums, tools and all materials likely to offer obstructions should be properly folded round and protected. This applies to jointer' stents as well. Leads, hoses etc. stretched and across the carriage way should be guarded adequately for their own protection and also that of thepublic.

9. Traffic Control

The police authorities are normally responsible for the control of traffic and may require the setting up of traffic controls to reduce the inconvenience occurs by establishment of a single line of traffic due to restriction in road width or any other form of obstruction caused by the work. As far as possible, such arrangements should be settled in advance. If there are any specific regulations imposed by the local authorities, these should befollowed.

10. Protection from Lightening During Storing

Every magazine shall have attached there to one or more efficient lightening conductors designed and erected in accordance with the specification laid down in Indian Standard Specifications No. 2309 as amended from time to time. The connections to various parts of earth resistance of the lightening conductor terminal on the building to the earth shall be tested at least once in every year by a qualified electrical engineer or any other competent person holding a certificate of competency in this behalf from the State Electricity Department. A certificate showing the results of such tests and the date of the last test shall be hung up in conspicuous place in the building.

11. Precautions during thunder-storm

When a thunder- storm appears to be imminent in the vicinity of a magazine or store

house every person engaged in or around such magazine and store house shall be withdrawn to a safe distance from such magazine or store house and the magazine and store house shall be kept closed and locked until the thunderstorm has ceased or the threat of it has passed.

12. Maintenance of records

Every person holding a license granted under these rules for possession, sale or use of explosives shall maintain records in the prescribed form and shall produce such record on demand to an Inspection Officer.

13. General Precautions

- a) For the safety of persons red flags shall be prominently displayed around the area where blasting operations are to be carried out. All the workers at site, except those who actually ignite the fuse, shall withdraw to a safe distance of atleast 200 meter from the blasting site. Audio warning by blowing whistle shall be given before igniting thefuse.
- b) Blasting work shall be done under careful supervision and trained personnel shall be employed. Blasting shall not be done within 200 meters of an existing structure, unless specifically permitted by the Engineer-in-Charge in writing.
- c) Where electrically operated equipment is used in locations having conductive ground or continuous metal objects, tests shall be made for stray current to ensure that electrical firing can proceed safely.

14. Allied Activities

- a) Transportation of Materials: The materials required for executing the work entrusted to the contractors against a work order shall be made available at ProjectStoreDepot.Insomecasesthematerialsmaybeavailableatsubdivisional store go down. The contractor shall be responsible for transporting the materials, or otherwise to execute the work under the contract, to site at his/ their own cost. The costs of transportation are subsumed in the standard Schedule Rates and therefore no separate charges are payable on this account.
- b) Disposal of Empty Cable Drums: The contractor shall be responsible to dispose of the empty cable drums after laying of the cables. The cost of various sizes of empty cable drums recoverable from the contractor has been fixed taking into account the prevailing market rates as mentioned in thisdocument.
- c) It shall be obligatory on part of the contractor to dispose of the empty cable drums at his/their level and the amount fixed for various empty cable drums shall be recovered from the bill for the work for which the drum (s) was/were issued or from any other amount due to the contractor or the SecurityDeposit.
- d) The contractor shall not be allowed to dump the empty cable drums in Govt./Public place which may cause inconvenience to the public and should be disposed at appropriate manner. If the contractor does not dispose of the empty

- cable drums within 3 days of becoming it empty, the APSFL shall be at liberty to dispose of the drums in any manner deemed fit and also recover the double the amount fixed in this contract from the bill/security deposit any other amount due to the contractor.
- e) Supply of Materials: There are some materials required to be supplied by the contractor for execution of work under this contract like Bricks, Cement, Wire Mesh and Steel for protection, etc., other consumables which do/don't become the part of the asset. The contractor shall ensure that the materials supplied are of best quality and workmanship and shall be strictly in an accordance with the specifications.
- f) Disposals of Cable Drums should not have any disturbance to Public Places. Transportation charges would be barred by the Bidder for the Disposals.

7. Bid Evaluation Criteria and Process

7.1 Pre-Qualification Criteria

The bidder should satisfy the following Pre-qualification criteria to be eligible for further evaluation under this RFP. The bidder should enclose documentary evidence for fulfilling the Eligibility in the Pre-qualification Bid. If a bidder fails to enclose the documentary proof for eligibility, their bid is liable to be rejected.

The following is the Pre-Qualification Criteria:

S. No	Eligibility Criteria	Documents Required	
1	The Bidder should be a Sole Proprietorship firm or a company registered in India under the Companies Act, 1956 / 2013 /LLP Act 2008 /Indian Partnership Act 1932, as amended from time to time, and should be in operation for at least the last 3 years as on the date of bid call.	For Sole Proprietorship firm, following documents are required. a. Copy PAN b. Proof of address and contact details For other, following documents are required: a. Copy of valid Certificate of Incorporation from Registrar of Companies b. Copy of Corporate Identification Number (CIN) c. Copy of GST registration certificate d. Copy ofPAN	
2	Thecumulativeannualturnoverofthe Bidder in the financial years i.e., FY 2017-18, FY 2018-19, FY 2019-20and current financial year, should be at least INR 45Lakhs	Certificate from the Statutory Auditor of the Company mentioning year-wise annual turnover. And, Copy of audited profit and loss statement showing the year-wise turnover, as mentioned in Annexure –F in Section 8.1 of the RFP	
3	Average Net Worth of the Bidder, for the financial years, i.e., FY 2017-18, FY 2018-19, FY 2019-20 and current financial year, should be at least INR1.50 Lakhs as per the audited financial results.	Certificate from Statutory Auditor clearly stating the Net worth of the Bidder, as mentioned in Annexure – F in section 8.1 of the RFP.	

S. No	Eligibility Criteria	Documents Required	
	The Bidder should have experience in works related to Underground Optical	Completion Certificate / Work Order Certificates on the letterhead of the client	
4	Fiber Cable only amounting to atleast INR 9 Lakhs in the past3 years.	clearly mentioning the value of work completed / On-goingrelated only to underground Optical Fiber Cable Connectivity in the last 3 years, as mentioned in Annexure – G in Section 8.1 of the RFP.	
5	Bidder should not have been blacklisted by any central or state Govt. department or PSU on the date of bid submission	Bidder should submit an undertaking, as mentioned in Annexure H in Section 8.1 of the RFP, that it has not been blacklisted/debarred by any Govt. department or any PSU in India as on bid submission date.	
6	All documents in the proposed bid, shall be signed by an authorized signatory, in whose name the Power of Attorney/ Board Resolution, should be duly issued.	For Pvt. Ltd. firms, a Board Resolution, as mentioned in Annexure-J, in Section 8.1 of the RFP to be submitted. For others, the Power of Attorney, as mentioned in Annexure-I, in Section 8.1 of the RFP to be submitted.	
7	Bidder to Share the Document Verification Certificate	Certificate, on INR 100/- non-Judicial Stamp Paper and duly notarized and Stamp, to be enclosed along with the bid documents (as per the format enclosed as Annexure – K in section 8.1 of the RFP.	
8	Manufacture Authorization Form (MAF)	MAF to be submitted on the letter head of the Original Equipment Manufacture (OEM) only for Optical Fiber Cable	

NOTE 1:

a. Only the bids of those Bidders, who submit the prescribed Bid-processing fee and EMD, shall be considered for evaluation. The bids not accompanied with a valid Bid-processing

fee and EMD as part of the proposal shall be summarily rejected.

- b. The Commercial bids of <u>only</u> those bidders, who meet the Pre-Qualification criteria, shall be opened.
- c. Bidders are required to provide the aforementioned information as per the formats provided along with the required supporting documents for each of the criteria mentioned above.

Post Tender Dicussions at any cost and at any form will not be entertained.

Proposals without necessary supporting documents or without meeting the prescribed qualification criteria will be treated as non-responsive and will not be considered for further evaluation.

7.2 Commercial EvaluationCriteria

- a. Financial bids submitted of only those bidders, who are qualified as per prequalification criteria shall be opened and are eligible for further evaluation.
- b. Bidders quoting unrealistic cost shall be rejected straightaway by APSFL. Any bid found to have unsatisfactory response in the eligibility criteria as mentioned shall be rejected and shall not be considered for further evaluation.
- c. The commercial Bids for the Pre-Qualification qualified bidders shall be reviewed to determine whether the Commercial Bids are substantially responsible. Bids that are not substantially responsive are liable to be disqualified at purchaser's discretion.
- d. Commercial Bids that are not as per the provided format in section8.2 shall be liable for rejection.
- e. In case of computation error in commercial forms, the Technical/Evaluation Committee's decision in this regard shall be final and binding on all.

7.3 Selection Process of Bidder

Evaluation of bids shall be done on Least Cost/Lowest Cost (L1) criteria as per the quotes submitted in commercial Bid who has fulfilled / Qualified in the Pre- Qualification Stage.

Note: Post award of work, APSFL has the right to alter the quantity of allotment to the successful bidder.

8. Bid submission Forms

8.1 Pre-Qualification EvaluationForms

"All the forms in this section shall be Submitted as part of "PQ" Bid and in the "PQ" bid folder. If the following documents are not found in the "PQ" bid folder, the bid shall be considered as non-responsive and may be rejected. Failure to submit any of the forms in this section shall lead to disqualification of the bidder."

Annexure A - Application Form

(On Bidder's letterhead)

(Date)

To,

Managing Director,
Andhra Pradesh State FiberNet Limited
NTR Administrative Block, 3rd Floor, Pandit Nehru Bus Station,
NH -65, Vijayawada - 520001

Sub: Selection of agency for execution of Underground Optical Fiber Network Connectivity At Selected Locations in Visakhapatnam City.

Ref: APSFL/BD/415/2020/UGOFC, Dated: 20/05/2021

Dear Sir,

With reference to your RFP Document dated XX/03/2021, I/We, having examined all relevant documents and understood their contents, hereby submit our Proposal to provide Underground Optical Fiber Cable Network Connectivity at the selected locations in Visakhapatnam City

- 1) All information provided in the Proposal and in the Appendices is true and correct and all documents accompanying such Proposal are true copies of their respective originals.
- 2) I/We shall make available to the Authority any additional information it may deem necessary or require for supplementing or authenticating the Proposal.
- 3) I/We acknowledge the right of the Authority to reject our Proposal without asrisingany reason or otherwise and hereby waive our right to challenge the same on any account whatsoever.
- 4) I/We to the best of our knowledge certify that in the last three years, we or any of our Associates have neither failed to perform on any contract, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against the Bidder, nor been expelled from any project or contract by any public authority nor have had any contract terminated by any public authority for breach on our part.

- 5) I/We understand that you may cancel the Selection Process at any time and that you are neither bound to accept any Proposal that you may receive nor to select the selected supplier, without incurring any liability to the Bidders
- 6) I/We to the best of our knowledge certify that in regard to matters other than security and integrity of the country, we or any of our Associates have not been convicted by a Court of Law or indicted or adverse orders passed by a regulatory authority which would cast a doubt on our ability to undertake the Consultancy for the Project or which relates to a grave offence that outrages the moral sense of the community.
- 7) I/We to the best of our knowledge further certify that in regard to matters relating to security and integrity of the country, we have not been charge-sheeted by any agency of the Government or convicted by a Court of Law for any offence committed by us or by any of our Associates.
- 8) I/We hereby irrevocably waive any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by the Authority and/ or the Government of India in connection with the selection of Supplier or in connection with the Selection Process itself in respect of the above-mentioned Project.
- 9) I/We agree and understand that the Proposal is subject to the provision of the RFP document. In no case, shall I/We have any claim or right of whatsoever nature if our Proposal is not opened or rejected.
- 10) I/We agree to keep this offer valid for 180 days from the Proposal Due Date specified in the RFP.
- 11) I/We agree and undertake to abide by all the terms and conditions of the RFP Document. In witness thereof, I/We submit this Proposal under and in accordance with the terms of the RFP Document.

Yours faithfully, (Signature, name and designation of the authorized Signatory) (Name and seal of the firm)

Annexure B - Profile of Bidder/ Partners

(To be submitted by Bidder)

S. No.	Particulars	Details
1	Name of the Company	
2	Year of incorporation	
3	Nature of the Company (Registered Company)	
4	Registered Office Address	
5	Office Telephone Number	
6	Fax Number	
7	Contact Person	
8	Name	
9	Telephone Number	
10	Email Address	
11	Local presence at Andhra Pradesh, if any	
12	Office Address	
13	Office Telephone Number	
14	Fax Number	
15	Registration Details	
16	Permanent Account Number	
17	GST Registration Number	
18	Service Tax Registration Number	
19	Banker's Name, Address and Account Number	
20	No. of Technical Staff employeed	
21	MAF Submission (Fiber Cable)	

Witness:	SUPPLIER:	
Signature	 Signature	
Name	 Name	
Address	 Designation	
	Company Seal	
Date	 Date	

Annexure C – Declaration of Acceptance of Terms and Conditions in the RFP

(To be submitted by Bidder)

To,		[Date]
NTR Admii	Director adesh State FiberNet Limited nistrative Block, 3rd Floor, Pandit Nehru jayawada - 520001	Bus Station,
Selected lo	ction of agency for execution of Unde ocation in Visakhapatnam City. L/BD/415/2020/UGOFC, Dated: 20/05/2	
Sir,		
20/05/202 COMPLIED the terms	rtify that the RFP document – Ref: APSF 21 is carefully read & understood and a UNCONDITIONALLY AND UNEQUIVOCA and conditions of the RFP. We also how the well meet the project requirements	all the sections and clauses are ALLY. There is no deviation from ereby confirm that the solution
•	nfully, Name of the Bidder / Authorized Signator d seal of the firm)	-y)
Note : A co	ppy of this form should be returned along	g with the Bid duly Signed
Witness:		Supplier:
signature	signature	
Name		Name
Address		Address:
Date		Company Seal Date

Annexure D – Undertaking on SoW Compliance and Unconditional Acceptance

То
Managing Director
Andhra Pradesh State FiberNet Ltd.
3 rd Floor, NTR Administrative Block, Pandit Nehru Bus Station, NH-65,
Vijayawada – 520001, Andhra Pradesh,
India.
Subject: Undertaking on SoW Compliance and Unconditional Acceptance with reference to
RFP No. APSFL/BD/415/2020/UGOFC, Dated: 20/05/2021
We, M/shereby confirm our
compliance to the requirements outlined in Section 4 - Scope of Work (SoW) of the above
referenced RFP. By way of this compliance undertaking, we confirm that we have adequate
capability and experience to perform the services outlined in the SoW, as per the
requirements defined in the RFP.
We confirm our unconditional acceptance of full responsibility of providing services in
accordance with the Terms and Conditions and Scope of work of this RFP.
For M/s
,
Authorized Bidder (Name of the Bidder / Authorized Signatory)
Name
Designation:

Annexure E – Pre-Qualification Compliance Documents

The bidder should attach following checklist for compliance with important criterion along with the bid to be submitted:

S. No.	Itom	Complied	Remarks
3. IVO.	Item	(Yes/ No)	Remarks
1.	Bid Processing Fee		
2.	EMD		
3.	Application Form		
4.	All pages of bid are numbered, signed by authorized Signatory and bids are sealed properly		
5.	Proof of authorized Signatory (Power of Attorney/ Board Resolution)		
6.	Profile of the Bidder		
7.	Financial Turnover and Net worth of the Bidder		
8.	Previous experience of supply/ installation/ maintenance of Underground Optical Fiber works in the last three financial years as on bid submission Agency on date.		
9.	Self-Declaration Certificate (Certificate to be enclosed in the bid duly Signed by the authorized Signatory on its letterhead) regarding blacklisting by any central or state Govt. department or PSU on the date of bid submission.		
10.	Undertaking for Unconditional Acceptance of Terms and Conditions of the RFP		
11.	MAF		

Annexure F – Financial Turnover and Net worth of the Bidder

(To be submitted by Bidder)

Annual Turnover of the Bidder

Criteria	Sub Criteria	FY	Total Financials
Financial Capability Turnover from business activities	Turnover from business	FY 2017-18	
	activities	FY 2018-19	
		FY 2019-20	
		FY 2020-21	
	Measured as paid-up capital	FY 2017-18	
Net worth	plus free reserves	FY 2018-19	
		FY 2019-20	
		FY 2020-21	

Documentary Proof Required:

- Statutory Auditor / CA Certificate clearly specifying the turnover for the specified years.
- Audited P&L and Balance Sheets

Annexure G – Format for Past Experience of the Bidder

Please provide citations as per the Qualification / Technical criteria in the format provided below. The relevant documentary proofs need to be attached.

(Attach separate sheet fo	r each Project)		
Name of Client		Address	
Name of Cheff		Address	
Type of Client		Order Value of	
(Govt./PSU/Others)		the Project(in	
		Crores)	
Duration of the		Start Date	
Assignment		(month/year):	
		End Date	
		(month/year):	
Referrals(Client Bidder /	Name		
Agency): Provide one	Designation		
referral only	Contact Number		
	E mail Id		
Brief Description of		'	
the Project			

Documentary Proof Required:

- Copy of Work order
- Certificate of successful operation by the client

Annexure H - Declaration regarding Clean Track Record

To, [Date]
Managing Director
Andhra Pradesh State FiberNet Limited
NTR Administrative Block, 3rd Floor, Pandit Nehru Bus Station,

Sub: Selection of agency for execution of Underground optical fiber at selected Locations in Visakhapatnam City.

Ref: APSFL/BD/415/2020/UGOFC, Dated: 20/05/2021

NH -65, Vijayawada – 520001

Sir,

I/We hereby declare that my company has not been debarred / black listed as on Bid submission date by any State Government, Central Government, Central & State Govt. Undertakings / Organizations and by any other Quasi Government bodies / Organizations, and any other major Enterprise / Organizations in India for non-satisfactory past performance, corrupt, fraudulent or any other unethical business practices.

Yours faithfully,

(Signature, name and designation of the authorized Signatory) (Name and seal of the firm)

Note:

 Submission of this Annexure is mandatory along with the bid. Failure to submit this Annexure may lead to disqualification.

Annexure I – Power of Attorney

Sample form of Power of Attorney for signing the Application & Bid

(On INR 100.00 Non judicial Stamp Paper and duly notarized and Stamp) KNOW ALL MEN BY THESE PRESENTS,

We	_ (name of the firm and address
of the registered office) do hereby irrevocably constitute, no	
Mr. / Ms. (name),	son/daughter/wife of and
presently residing at	
with us and holding the position of	, as our true and
lawful attorney (hereinafter referred to as the "Attorney")	
behalf, all such acts, deeds and things as are necessary or	required in connection with or
incidental to submission of our application for qualification a	nd submission of our bid for the
Project proposed by the M/s	(the "Andhra
Pradesh State FiberNet Limited") including but not limited t	
applications, bids and other documents and writings, part	icipate in pre-applications and
other conferences and providing information/ responses to t	he APSFL, representing us in all
matters before the APSFL, Signing and execution of all cont	tracts including the Agreement
and undertakings consequent to acceptance of our bid, and g	enerally dealing with the APSFL
in all matters in connection with or relating to or arising out	t of our bid for the said Project
and/ or upon award thereof to us and/or till the entering in	nto of the Agreement with the
APSFL.	
AND we hereby agree to ratify and confirm and do hereby ra	atify and confirm all acts, deeds
and things done or caused to be done by our said Attorney pu	irsuant to and in exercise of the
powers conferred by this Power of Attorney and that all acts	, deeds and things done by our
said Attorney in exercise of the powers hereby conferred sh	all and shall always be deemed
to have been done by us.	
The power of attorney shall be effective from	and will continue to be
valid binding and unforgettable till the attorney Mr./Ms	ceases to
be in the employment of the company unless otherwise with	drawn earlier by the company.
This power of attorney will supersede any power of attorney	issued earlier prior to the date
of execution. In case this Power of Attorney is withdrawn for	any reasons, APSFL shall be pre
intimated.	
IN WITNESS WHEREOFF for and on behalf of M/s	
Managing director of the co	ompany has set his hands with
company seal on the day of Month of	year and at
·	
For(Authorised Signatory	
(Signature, Name, Designation, Address and emblem of the o	ottice seal)

1. 2.

Accepted (Authorised Signatory of the company)
(Signature in Duplicate, Name, Title and Address of the Attorney)

Witnesses:

- 1. (Notarized)
- 2.

Notes:

- The mode of execution of the Power of Attorney should be in accordance with the
 procedure, if any, laid down by the applicable law and the charter documents of the
 executant(s) and when it is so required, the same should be under common seal
 affixed in accordance with the required procedure.
- Wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders' resolution/ power of attorney in favor of the person executing this Power of Attorney for the delegation of power here-under on behalf of the Bidder.
- In case the Application is signed by an authorized Signatory / Partner, a certified copy in the regard should be enclosed in lieu of the Power of Attorney.
- Submission of this Annexure is mandatory along with the bid. Failure to submit this Annexure may lead to disqualification.

Annexure J - BoardResolution

Annexure may lead to disqualification.

Board Resolution (Suggested format)

(To be printed on organization letter head)

DIRECTORS of (Company Name) HELD ON (Date) AT (Address)
RESOLVED THAT the company has decided to authorize, Mr. / Ms to sign and submit all the necessary
applications, annexure, and other documents to be submitted by the company in connection with RFP APSFL/BD/415/2020/UGOFC, Dated: 20/05/2021 for "Selection of agency for execution of Underground Optical Fiber at selected locations in Visakhapatnam City". The acts done and documents shall be binding on the company, until the same is withdrawn by giving written notice thereof. Specimen Signatures of AuthorisedSignatory:
(Bidder / Signature) RESOLVED FURTHER THAT, a copy of the above resolution duly certified as true by designated director/ authorised signatory of the company be furnished to APSFL as may be required from time to time in connection with the above matter.
For the Organization,
(Seal &Signature)
Name:
Designation:
Note: Submission of this Annexure is mandatory along with the bid. Failure to submit this

Annexure K - Document Verification Certificate

FORMAT FOR CERTIFICATE TO BE SUBMITTED / SUBMITTED BY TENDERER ALONGWITH THE TENDER DOCUMENTS

(On INR 100.00 Non judicial Stamp Paper and duly notarized and stamped)

Ι(Name and de	signation)**	appointed as	the attorney	/authorized
signatory of the	tenderer (ir	ncluding its	constituents),	M/s	
(hereinafter called	the tenderer)	for the purp	ose of RFP for	Selection of	Agency for
execution of Und	erground Opti	ical Fiber ca	ble Network (Connectivity	at Selected
locations in Visakh	apatnam City"	as per the to	ender No. APSF	L/BD/415/20	20/UGOFC,
Dated: 20/05/202	1 of APSFL, do l	hereby solem	nly affirm and s	state on the b	ehalf of the
tenderer including	its constituents	s as under:			

- 1. I/We the tenderer(s) am/are signing this document after carefully reading the contents.
- 2. I/We the tenderer(s) also accept all the conditions of the tender and have signed all the pages in confirmation thereof.
- 3. I/We hereby declare that I/we have downloaded the tender documents from APSFL website http://apsfl.in/tenders/ we have verified the content of the document from the website and there is no addition, no deletion or no alteration to the content of the tender document. In case of any discrepancy noticed at any stage i.e. evaluation of tenders, execution of work or final payment of the contract, the master copy available with the APSFL shall be final and binding uponme/us.
- 4. I/we declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
- 5. I/We also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.
- 6. I/We declare that the information and documents submitted along with the tender by me/us are correct and I/we are fully responsible for the correctness of the information and documents, submitted byus.
- 8. I/We also understand that if the certificates submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will leadto

termination of the contract, along with forfeiture of EMD and Performance guarantee besides any other action provided in the contract including banning of business for a period of up to five year.

SEAL AND SIGNATURE OF THE TENDERER
Place:
Dated:
Note:
Submission of this Annexure is mandatory along with the bid. Failure to submit this Annexure may lead to disqualification.

Annexure L – Earnest Money Deposit (EMD) Format (To be executed in Rs.100/- Stamp Paper)

To, The Managing Dire Andhra Pradesh St 3rd Floor, NTR Ade Pandit Nehru Bus NH – 65, Vijayawa	tate FiberNet Limit ministrative Block, Station,	·
Bank Guarantee N Amount of Guarar Guarantee covers Last date for lodge	ntee: from:	
This Guarantee exe	ecuted by	(Banker's Name & Address) having our
		(address) (hereinafter referred to as "Bank") in
favour of Andhra P	radesh State Fiber	Net Limited NTR Administrative Block, 3rd Floor,
Pandit Nehru Bus St	ation, NH -65, Vija	yawada – 520013 India (hereinafter referred to as
"Beneficiary") for a	an amount not ex	ceeding Rs/- (Rupees
Only) as per t	he request of	M/s having its office address
at	_(hereinafter refe	rred to as "Bidder") against RFP reference no
APSFL/BD/415/202	0/UGOFC, Dated	: 20/05/2021 of M/s. Andhra Pradesh State
FiberNet Limited (A	APSFL). This guara	ntee is issued subject to the condition that the
liability of the Bank	under this guarant	tee is limited to a maximum of Rs/-
(Rupees	Only) and the gua	rantee shall remain in full force up to
(date) and cannot b	e invoked otherwis	se by a written demand or claim by the beneficiary
under the Guarante	e served on the Ba	ank before (date).
ANDWHEREAS it ha	is been stipulated	by you in the said ORDER that the Supplier shall
furnish you with a	Bank Guarantee	by a Scheduled/Nationalized Bank for the sum
specified therein as	EMD towards bid	submission.
ANDWHEREAS we h	nave agreed to give	e the Bidder a Guarantee.
THEREFORE, we (Bankers address),	, hereby affirm that we are Guarantors and
responsible to you	on behalf of the B	idder for Rs/- (Rupees
Only) and we under	take to pay you, up	oon your first written demand without any demur,
		sums within the limit of Rs
(Rupees	Only) as afo	oresaid, without your needing to prove or show
grounds or reasons	for your demand	d or the sum specified therein. We will pay the
guaranteed amount	t notwithstanding a	any objection or dispute whatsoever raised by the
Bidder.		
This Guarantee is va	alid until	·
Place:		
Date:	Signature	and seal of Guarantors (Bank)

Manufacture Authorization Form (Only for Optical Fiber Cable) (To be submitted in Original Equipment Manufacturer's letterhead) To The Managing Director, Andhra Pradesh State FiberNetLimited, 3rd Floor, NTR Administrative Block, Pandit Nehru Bus Station, NH – 65, Vijayawada – 520013 Sir, We hereby authorize M/s_____to undertake to submit a Bid, and subsequently negotiate & sign the contract with APSFL for the Tender No: for product manufactured by us. We hereby extend our warranty of 1 years for the goods offered for supply by the above firm against this tender. We also undertake to provide timely supplies as per terms of tender and as agreed mutually and also to provide a trouble free and continuous support either directly or through our authorized distributors/dealers under our supervision during the said support period. We will provide the necessary while providing the support will arrange for complete replacement of the item(s) with an equivalent/higher version. In case of violation of any of the conditions above, I/We understand that I/We are liable to be blacklisted by APSFL for a period of three years. (Signature of authorized Personnel) Note: Competent authority of the Manufacturer should issue the letter of authority individually for each bidder separately. Note: Submission of this Annexure is mandatory along with the bid. Failure to submit this Annexure may lead to disqualification.

Commercial Forms

Annexure M – Commercial Proposal Submission Form	
	Dated:
То	
Sir/ Madam,	

Subject: "Selection of Agency for execution of Underground Optical Fiber Cable at Selected Locations in Visakhapatnam City"

Reference: RFP No: APSFL/BD/415/2020/UGOFC, Dated: 20/05/2021

We, the undersigned SUPPLIER, having read and examined in detail all the RFP in respect of "Selection of Agency for execution of Underground Optical Fiber Cable Network Connectivity at Selected Locations in Visakhapatnam City" do hereby propose to provide services as specified in the RFP number APSFL/BD/415/2020/UGOFC, Dated: 20/05/2021.

1. PRICE ANDVALIDITY

- a. All the prices mentioned in our Bid are in accordance with the terms & conditions as specified in the RFP. The validity of bid is 180 days from the date of opening of the RFP.
- b. We are an Indian Firm and do hereby confirm that our prices exclude all taxes. However, all the taxes are quoted separately under relevant sections and shall be applicable as per actuals.
- 2. We have studied the laws relating to Indian Income Tax Department and hereby declare that all income tax, surcharge on Income Tax, Professional and any other Corporate Tax, withholding tax as applicable under the law, shall be paid by us.

3. EARNEST MONEY DEPOSIT (EMD)

We have enclosed an EMD for a sum of Rs.50,000/- (In Words – Rupees Fifty Thousand Only). This EMD is liable to be forfeited in accordance with the provisions of the Section II - General Instructions to Bidders.

4. TENDER PRICING

We further confirm that the prices stated in our bid are in accordance with your Instruction to Bidders included in RFP.

5. QUALIFYING DATA

We confirm having submitted the information as required by you in your Instruction to Bidders. In case you require any other further information/documentary proof in this regard before evaluation of our Bid, we agree to furnish the same in time to your satisfaction.

6. BID PRICE

We declare that our Bid Price is for the entire scope of the work as specified in Scope of Work. These prices are indicated in Bid Submission Formats attached with our Financial Bid as part of the Bid Response and the price quoted in the reverse auction, as mentioned in the Clasue no: 2.7 of the RFP.

7. CONTRACT PERFORMANCE GUARANTEE BOND

We hereby declare that in case the Contract is awarded to us, we shall submit the Bank Guarantee for Contract performance in the prescribed format given in RFP.

We hereby declare that our Bidis made in good faith, without collusion or fraud and the information contained in the Bidis true and correct to the best of our knowledge and belief. We understand that our Bid is binding on us and that you are not bound to accept a Bid you receive.

We confirm that no deviations are attached here with this financial offer.

Thanking	you,			
_			Yours faith	fully,
			(Signature o	f the SUPPLIER)
		Printed Na Designatio		
Date:				
		Place:		
Business A	ddress:			
Witness:			Supplier:	
Signature Name			Signature Name	
Address				
Date			Designation Company Seal- Date	
Date			Date	Page 73 of 91

Annexure N – Commercial Bid Cost Components

Price Bid for laying of optical fiber cable at selected locations in Visakhapatnam City

Sl.No.	Description	Quantity	Units	Specifications	Price Per Unit	Total Price
1	48 F Armoured Fiber cable	14	Kms	48 F Armoured		
2	Chambers	40	Nos	2*2*2		
3	Closures	12		48 F		
4	Closure Chamber	12	Nos	2*3*2		
5	DIT	11.593	KMs	Per KM		
6	Blowing	14	Kms	Per KM		
7	Splicing	48	Nos	Per Fiber		
8	Couplers-40 mm	20	Nos	Per Duct		
9	End plugs-40 mm	40	Nos	Per Duct		
10	Simplex Plugs	80	Nos	Per Duct		
11	FDMS-48 F	4	Nos	Per Unit		
12	FDMS Splicing harges	48	Nos	Per Fiber		
13	LC-LC SM Duplex 10 Mts Patch Chords	30	Nos	10 Mtrs		
14	Pit Excavation charges (BT/CC)	70	Nos	Per Unit		
15	Civil works like base concreting, back filling and covering etc.	70	Nos	Per Meter		
	Total					
	Grand Total (Excl					
	(In Words – Rupees)					

Note:

- a. Prices in Financial Bid should be quoted in the provided format.
- b. All prices should be quoted in Indian Rupees and indicated in both figures and words.
- c. Incase there is discrepancy between words and figures, the amount in words shall prevail.
- d. APSFL reserves the right to reject the bid, which are not submitted in the prescribed format.
- e. Quantity Indicated above might Increase / Decrease based on the requirement and actuals.
- f. Payment would be made based on the actuals, the quantity mentioned above is tentative.

Instructions to fill the Financial Bid:

- a. Bidder should provide all prices as per the prescribed format under this Annexure. Bidder should not leave any field blank.
- b. All the prices are to be entered in Indian Rupees ONLY (%age values are not allowed).
- c. All the prices quoted in the Financial Bids shall be exclusive of applicable taxes and levies.
- d. APSFL reserves the right to ask the Bidder to submit proof of payment against any of the taxes, duties, levies indicated.
- e. For the purpose of evaluation of Financial Bids, the APSFL shall make appropriate assumptions to arrive at a common bid price for all the Bidders. This however shall have no co-relation with the Contract value or actual payment to be made to the Bidder.
- f. The financial bid formats shall be provided in company's letter of the lead bidder duly Signed and stamped.

8.2 Other Forms and Formats

Annexure O – Performance Bank Guarantee Format

(To be submitted by the successful bidder on Rs.100/- stamp paper)

In	onsideration of APSFL ("Authority"), having agreed to accept from					
	"successful bidder", a Performance Bank					
Gua	tee as maybe modified from time to time wherever necessary under the terms and					
cond	ons of the Agreement entered into by the said successful bidder in respect of work for					
exec	on of Underground Optical Fiber Cable Network Connectivity at Selected Locations in					
Visa	apatnam City, RFP No. APSFL/BD/415/2020/UGOFC, Dated: 20/05/2021 under APSFL					
for	e due fulfilment of the terms and conditions of the said Agreement under APSFL, on					
proc	tion of a Bank Guarantee for Rs(Rupees					
	only),webranch,					
here	undertake the guarantee to pay immediately to APSFL, on demand in writing by APSFL, an					
amo	t of Rs(Rupees)					
with	t any reservation and recourse against any loss or damage caused to or suffered by APSFL					
by r	son of any breach by the successful bidder of any of the terms and conditions of the said					
agre	nent under the said Authority.					
We	Bank, further agree that the					
guar	tee hereby contained shall remain in full force and effect during the period that will be taken					
for t	performance of the said Agreement under the APSFL and that it shall be in enforcement					
until	I the dues of APSFL under or by virtue of the said Agreement under the APSFL have been					
fully paid and their claims satisfied or discharged or until the said Authority certifies that the terms						
and	and conditions of the said Agreement under the APSFL have been fully and properly carried out by					
the	cessful bidder and accordingly discharges the guarantee subject. This bank guarantee is valid					
until	(date) and APSFL shall have no rights under this guarantee after					
	(date).					
We _	Bank, lastly undertake not to revoke this guarantee					
duri	its currency except with the previous consent of the APSFL in writing.					
Date	day of 2021.					
Plac						
Date	Signature and seal of Guarantors (Bank)					

Annexure P – Draft Contract Format

	THIS AGREEMENT made the day of20XX
	BETWEEN
	The APSFL (hereinafter referred to as "the Purchaser") which expression shall unless repugnant to
	the context or meaning thereof mean and be deemed to include its authorized agents,
	representatives and permitted as signs of the First Part.
	AND
	The Party (hereinafter referred to as "the SUPPLIER") which expresson shall unless
	repugnant to the context or meaning thereof mean and be deemed to include their successors and
	permitted as signs having its registered office at of the Second Part.
	WHEREAS
	The Purchaser had invited Bids vide their Tender (hereinafter referred to as "RFP') for
	"Selection of agency for execution of Underground Optical Fiber Network Connectivity at Selected
	Locations in Visakhapatnam City".
(a)	The SUPPLIER had submitted its proposal dated (hereinafter referred to as the 'Bid') for
	the provision of such services in accordance with its proposal as set out in its Bid and in accordance
	with the terms & conditions of the RFP and this Contract.
(b)	$The \ Purchaser \ has \ agreed \ to \ select \ the \ SUPPLIER \ for \ the \ provision \ of such \ services \ and \ the \ SUPPLIER$
	has agreed to provide services as are represented in the RFP, including the terms $\&$ conditions of
	this Contract, the Schedules and Annexure attached hereto and in accordance with the terms $\&$
	conditions of the RFP and in terms of the discussions, negotiations and clarifications in relation to
	the implementation of the scope of work
(c)	In consideration of the foregoing and the mutual covenants and promises contained herein and
	$other good and \ valuable \ consideration \ the \ receipt \ and \ adequacy \ of \ which \ is \ hereby \ acknowledged,$
	the parties intending to be bound legally.
	NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:
(d)	In this Agreement, words and expressions shall have the same meanings as are respectively as

- (d) signed to them in the General Conditions of the Contract referred to.
- (e) The following documents shall be deemed to form and be read and construed as part of this Agreement viz:
 - i. the Scope of Work

- ii. the General Conditions of the Contract
- iii. Approach Paper on methodology and work plan for performing the assignment

- iv. Copy of RFP, financial proposal as submitted by the SUPPLIER and as amended pursuant to the post bid negotiations
- v. Format of bank guarantee for Performance Security.
- vi. the Service Level Agreement (SLA)
- vii. the Purchaser's Notification of Award.
- (f) In consideration of the payments to be made by the Purchaser to the SUPPLIER as hereinafter mentioned, the SUPPLIER hereby covenants with the Purchaser to provide the Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
- (g) The Purchaser hereby covenants to pay the SUPPLIER in consideration of the provision of the Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

of:(WITNESS)	
signed, Sealed and Delivered b	y the said	(For the Purchaser in the presence
with their respective laws the o	day and year first above written	
IN WITNESS whereof the partie	es hereto have caused this Agree	ment to be executed in accordance

signed, Sealed and Delivered by the said _____ (For of: ____ (WITNESS)

(For the Bidder) in the presence

Annexure Q - Pre-Bid Queries Format

All enquiries from the Bidders relating to this RFP must be submitted to the Managing Director, APSFL. These queries should be e-mailed to apsfl@ap.gov.in. The queries should necessarily be submitted in the following Format:

Sectio	Page	Content of the RFP	Clarification Sought
n	no.	requiring	
No.		clarification	
S	n	n no.	n no. requiring

9. Penalties and PaymentSchedule

9.1 Service LevelAgreements

Service Level Agreement (SLA) shall become the part of contract between APSFL and the successful bidder. SLA defines the terms of the successful bidder's responsibility in ensuring the timely delivery of the deliverables and the correctness of the same based on the agreed Performance Indicators.

The successful bidder has to comply with service level requirements to ensure adherence to project timelines, quality and availability of services, throughout the period of this contract

i.e. during implementation phase.

9.2 Project Milestone

Milestone	Activity Description	Timelines
	Award of Contract	Т
Milestone - 1	Supply, Delivery, Installation and Commissioning of the Site - (4 Locations)	T+7 Days
Milestone - 2	Supply, Delivery, Installation and Commissioning of the Site - (4 Locations)	T+ 14 Days
Milestone - 3	Supply, Delivery, Installation and Commissioning of the Site - (2 Locations)	T+ 21 Days

Note: Site Locations forwhichRoWapprovalisalreadygrantedfromcompetentauthority for execution of work, selected agency will be required to complete the Underground Optical fiber laying work in that section/ location within three Weeks (21days) of award of purchase order/Signing ofagreement.

9.3 Payment Terms

The successful bidder shall be entitled to raise invoices (along with all supporting documents), as per below stated milestones. APSFL shall release payments against all valid invoices within 30 days of receipt of invoice, subject however to satisfactory acceptance of the deliverables as per the scope ofwork.

9.3.1 PaymenttermsforsupplyandinstallationofcomponentsrelatedUGfiberlaying:

S. No.	Activities	Payment (%)
1.	works required for fiber laying as	95% of CAPEX Value incurred of the mentioned locations indicated in the section 9.2 of this RFP for supply, Delivery, Installation and commissioning of the Locations with the required Material after submission of related documents mentioned in section 9.9 of the RFP as applicable for Milestone - 1
2	Supply and installation of materials and works required for fiber laying as applicable (Methodology) as per Milestone – 2	95% of CAPEX Value incurred of the Mentioned locations indicated in the section 9.2 of this RFP for supply, Delivery, Installation and commissioning of the Locations with the required Material after submission of related documents mentioned in section 9.9 of the RFP as applicable for Milestone - 2
3	Supply and installation of materials and works required for fiber laying as applicable (Methodology) as per Milestone – 3	95% of CAPEX Value Incurred of the Mentioned locations indicated in the section 9.2 of this RFP for supply, Delivery, Installation and commissioning of the Locations with the required Material after submission of related documents mentioned in section 9.9 of the RFP as applicable for Milestone - 3
4	Balance amount would be released at the end of the contract period (or) against the submission of Equivalent value of Performance Security	Remaining 5 % of CAPEX Value on the Purchase order for Supply, Delivery, Installation and Commissioning of the Locations with required materials as applicable for Milestone – 1 (Only after submission of Commissioning Certificate and FAT Report from Competent Authority)
5	Balance amount would be released at the end of the contract period after successful completion of Warranty Period (or) against the submission of Equivalent value of Performance Security	Remaining 5% of CAPEX Value on the Purchase order for Supply, Delivery, Installation and Commissioning of the Locations with required materials as applicable for Milestone – 2 (Only after submission of Commissioning Certificate

		and FAT Report from Competent Authority)
6	Balance amount would be released at the end of the contract period after successful completion of Warranty Period (or) against the submission of Equivalent value of Performance Security	Remaining 5% of CAPEX Value on the Purchase order for Supply, Delivery, Installation and Commissioning of the Locations with required materials as appliacable for Milestone – 3 (Only after submission of Commissioning Certificate and FAT Report from Competent Authority)

Note:

- a. All payments shall be released after certification of delivery, installation and acceptance testas per the Deliveables listed in **Section 9.9** of this RFP, by APSFL or its Nominated Representative / Authority.
- b. All payments shall be made in Indian rupees only (INR).
- c. Payment shall be released against the invoices raised by supplier on providing all relevant documents timely, including acceptance testing report duly signed and approved by APSFL / APSFL authorized agency / or its nominated representative and are complete in all respect and subsequentapproval.
- d. Payment shall be subject to deductions of any amount for which the supplier is liable under the RFP conditions. Further, all payments shall be made subject to deduction of applicable taxes and other Government levies like TDS (Tax Deduction at Source) and etc., as per the current Income-TaxAct.
- e. All payments shall be released only after deducting the all-SLA Penalties as applicable.

9.4 Penalty

The following penalties shall be imposed on the supplier if the supplier does not adhere to the timelines as mentioned in the RFP.

S. N	Description	Penalties
1.	Delay in supply and installation of materials and works required for fiber laying using applicable methodology or as applicable for Milestone - 1	 a) Sum equivalent to 5 % of the cost of supply and installation of materials and works required for fiber laying using applicable methodology or as applicable for delay of 1Weeks. b) Sum equivalent to 10% of the cost of supply and installation of materials and works required for fiber laying using applicable methodology or as applicable for delay of 2 Weeks. c) If the Sum Equivalent to 15% exceeds the cost of supply and installation of materials and works

			required, the contract would be terminated.
		d)	In addition to the above penalty, in casethe
		J.,	validity of application expires, the successful
			bidder shall be required to secure approval from
			competent authority from respective Dept
			through Communication letter for laying of fiber
			at his own cost (Where the amount is not
			considered during the invoice submission)
		e)	Sum equivalent to 5 % of the cost of supply and
	Delay in supply and installation of	۲)	installation of materials and works required for
	materials and works required for fiber		·
	laying using applicable methodology or		fiber laying using applicable methodology or as
	as applicable for Milestone - 2	٥,	applicable for delay of 1 Weeks.
		f)	Sum equivalent to 10% of the cost of supply and
			installation of materials and works required for
			fiber laying using applicable methodology or as
			applicable for delay of 2 Weeks.
2		g)	If the Sum Equivalent to 15% exceeds the cost of
_			supply and installation of materials and works
			required, the contract would be terminated.
		h)	In addition to the above penalty, in casethe
			validity of application expires, the successful
		i)	bidder shall be required to secure approval from
			competent authority from respective Dept
			through Communication letter for laying of fiber
			at his own cost (Where the amount is not
			considered during the invoice submission)
		j)	Sum equivalent to 5 % of the cost of supply and
	Delay in supply and installation of		installation of materials and works required for
	materials and works required for fiber laying using applicable methodology or		fiber laying using applicable methodology or as
			applicable for delay of 1 Weeks.
	as applicable for Milestone - 3	k)	Sum equivalent to 10% of the cost of supply and
		,	installation of materials and works required for
			fiber laying using applicable methodology or as
			applicable for delay of 2 Weeks.
3		1)	If the Sum Equivalent to 15% exceeds the cost of
		''	supply and installation of materials and works
			required, the contract would be terminated.
		<i>س</i> ۱	•
		m)	In addition to the above penalty, in casethe
		۳۱	validity of application expires, the successful
		n)	bidder shall be required to secure approval from
			competent authority from respective Dept
			through Communication letter for laying of fiber

	at his own cost (Where the amount is not considered during the invoice submission)	

9.5 Conditions for No Penalties

Penalties shall not be levied on the Bidder in the following cases:

- a. There is a force majeure event effecting the SLA, which is beyond the control of the successful bidder. Force Majeure events shall be considered in line with the clause duly mentioned in theRFP
- b. The non-compliance to the SLA has been due to reasons beyond the control of the successfulbidder

9.6 Penalty during Commissioning Period:

Penalty during commissioning period should be in compliance with SLA and performance indicators with the Terms and their definitions are discussed in the following sections.

9.9 Deliverables

- a. The Payment shall be released only after the submission of original invoice, signed delivery challan, and certification from Authority.
- b. Submission of route map (Single line Diagram & As Built Drawing) with lat/longs
- c. Submission of Drum test reports for all cores of fibercable
- d. Submission of OTDR Reports for the total length of cable for all cores (end toend)
- e. Submission of M Books &splicing report withLatlongs.
- f. Submission of lat/longs for all man holes, hand holes with three pointlocations

10. Responsibility Matrix

The (Indicative) responsibility matrix (RACIS) describing responsibilities of Agency and other parties to the project, are mentioned in below matrix. Any specific updates/or changes, as mutually agreed between the Parties, will be finalized/modified through discussion with the bidders.

Where RACIS stands for the following:

R (Responsibility): Those who do the work to achieve the task

A (Accountability): The one ultimately answerable for the correct and thorough completion of the deliverable or task, and the one who delegates the work to those

responsible

C (Consulted): Those whose opinions are sought, typically subject matter experts; and with whom there is two-way communication

I(Informed): Those who are kept up-to-date on progress, often only on completion of the task or deliverable; and with whom there is just one-way communication

S (Support): Resources allocated too responsible

Responsibility Matrix				
S.N o	Action Items	APSFL	Agency	Network Engineer
1	Contract Signing	A, R	A, R	-
2	Survey	I, C	R	-
3	RoW Grant & Coordination with the Dept.	R	I	-
4	Submission of Fiber Route Map	A, I	R	С
5	Laying of Underground Optical Fiber Cable using applicable Methodology as per the site conditions and Dept. approval	I, C	A, R	I
6	User Acceptance Test Report	I	R, S	Α
7	Commissioning Certificate (Duly Attested)	С	A, R	I
8	Mapping of GIS Co-ordinates of the Location (En-route Fiber)	I	A, R	-
9	Blowing Test Report, DIT Reports Validation	A, R	S	С
10	Submission of Invoices for release of Payment	A,R	S	-

 End of the Document