

Name Of Work	Construction of Boundary Wall in remaining portion of the South Asian University (SAU) Campus at Maidan Garhi, New Delhi 110068. (Package-I A).	
Estimated cost of work	: Rs.2,54,98,794/-	
(i) Earnest Money	: Rs.5,10,000/- (To be refunded after receiving of Performance Guarantee.)	
(ii) Performance Guarantee	: 5% of accepted tendered value (After recording of completion certificate for the Construction of Boundary Wall works by the competent authority, the performance guarantee shall be returned to the contractor, without any interest)	
(iii) Security Deposit	: 2.5% of accepted tendered value of work to be deducted from each running bill and final bill	
General Rules & Directions: -		
Officer inviting tender:		: Registrar, South Asian University
Definitions:		
I	Engineer-in-Charge	Project Manager of PMC
li	Accepting Authority	President SAU through Building Works Committee (BWC), SAU
lii	Percentage on cost of materials and Labour to cover all overheads and profits	15%



iv	Standard Schedule of Rates	CPWD DSR 2019 with amendments up to date of submission of the tender.
V	Department	South Asian University (SAU)
Vi	Standard CPWD Contract Form GCC2020, CPWD form 7/8 as modified and corrected up to:	CPWD Form 7 as per GCC 2020 (construction works) as modified & corrected up-to last date of submission of bid.

Clause 1

i) Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance	:15 (Fifteen) days
ii) Maximum allowable extension with late fee @ 0.1% per day of performance guarantee amount beyond the period provided in (i) above.	:7 (Seven) days
iii) Time allowed for submission of programme chart (Time and Progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date of issue of letter of acceptance.	: 30 Days

Clause 2

Authority for fixing compensation under clause 2	: President, South Asian University or successor thereof
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Clause 2A

Whether Clause 2A shall be applicable (Early Completion)	: Not Applicable
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Clause 5

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| i) Number of days from the date of issue of letter of acceptance for reckoning date of start | : 10 (Ten) days or date of handing over of site whichever is later |
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Table of Milestone(s)

SL. No	Description of Milestone (Physical)	Time allowed in days (From date of start)	% Amount of tendered cost to be with-held in case of non-achievement of milestone
1	Dismantling of fencing up to 300 metre. Excavation and laying PCC in footing up to a length of 200m; stone work up to plinth beam in 100m	2 months	1%
2	Excavation and laying PCC in footing up to a length of 500m; stone work up to plinth beam in 300m; RR wall up to top in 100m	4 Months	1%
3	Excavation and laying PCC in footing up to a length of 800m; stone work up to plinth beam in 500m; RR wall up to top in 300m and fixing MS railing in 200m	7 months	1%
4	Excavation and laying PCC in footing up to a length of 1000m; stone work up to plinth beam in 800m; RR wall up to top in 500m and fixing MS railing in 500m	9 months	1%
5	Completion of work, including handing over i.e providing and	12 Months	1%



	fixing concertina coil on old boundary wall.		
<p>1. The contractor will ensure that all components of the work are executed in time. In case milestones are not achieved by the contractor for the work, the amount shown against milestones shall remain withheld by the Engineer-in-charge as per condition of the contract.</p> <p>2. Withheld amount shall be released if and when subsequent milestone is achieved within respective time specified. However, in case milestones are not achieved by the Bidder for the work, the amount shown against milestone shall remain withheld.</p> <p>3. Intending bidder may submit phasing of activities/milestones based on their resources and methodology at the time of bidding corresponding to physical milestones/stages indicated in the above table. These shall be formed part of the agreement after approval of the accepting authority, otherwise it would be assumed that agency agrees with the above mentioned physical milestones.</p>			
Authority to Decide:			
i)	Extension of time		: President, SAU
(ii)	Rescheduling of mile stones		: President, SAU
(iii)	Shifting of date of start in case of delay in handing over of site		: President, SAU
Clause 5.2			
	Nature of Hindrance Register (either Physical or Electronic)		: Physical
Clause 6, 6A			
	Clause applicable - (6 or 6A)		: 6A (Computerized Measurement Book)
Clause 7			



Gross work to be done together with net payment/adjustment of advances for material collected if any, since the, last such payment for being eligible to interim payment.		: Rs.25 Lakhs
Clause 7A (EPFO, ESIC and BOCW)		: Yes, Applicable
		No running account bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW welfare board whatever applicable are submitted by the contractor to the Engineer-In-Charge.
Clause 10A		
List of testing equipment to be provided by the contractor at site lab.		: As per table below
Sl No.	Equipment	Quantity
1	Cube Mould	12
2	Cube Testing machine	1
3	Sieve analysis Set	1
4	Vicats apparatus with Desk pot	1
5	Electronic balance 600gx0.1g., 10kg	1
6	GI tray 600x450x50mm, 450x300x40mm, 300x250x40mm	1 each
7	Screw gauge 0.1mm-10mm, least count 0.05	1
8	Motorized sieve shaker	1



9	Pruning Rods 2 Kg weight length 40 cm and ramming face 25 Sq.mm	1
10	Extra Bottom plates for 15 cm cube mould	3
11	Standard Vibration Table for gauging the cubes	1
12	Weighing machine and Iron Weight of 5 kg, 2 kg, 1 kg, 500 gm, 200 gm, 100 gm	1 each
13	Pyrex, corning or Borosil beakers with cover capacity 500 ml, 200 ml, 50 ml	1 each
14	Hacksaw with 6 blades	2
15	Measuring tape 3 mtrs, 5 Mtrs, 15 Mtrs, 30 Mtrs	5 each
16	Depth gauge 20cm	3
17	Shovels & Spade	3
18	Steel plates 5 mm thick 75x75 cm	4
19	Plastic or G.I. Buckets 15 ltr, 10 ltr, 5 ltr	1

Note: Any other equipment for quality assurance as directed by the Engineer-In-Charge.

Clause 10B

Whether Clause 10 B (ii) & (iii) is applicable;
Mobilization advance and advance for T & P.

**Only Mobilization advance
Applicable**

Clause 10C (escalation)

Applicable

Component of labour expressed as percent of
value of work

25%

Clause 10CA

Not Applicable

Clause 10CC;
(Payment due to increase/decrease in the

Not Applicable



prices other than material under 10 CA):		
Clause 11		
Specification & Mode of Measurement to be followed for execution of work	CPWD Specifications 2019. Specifications mean amended/modified up to last date of submission of tender/bid	
Clause 12 (Extra/ deviation)		
Type of Work	Construction of boundary wall with stone masonry	
Maximum percentage for quantity of items of work to be executed/Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for boundary wall work determined in accordance with Clauses 12.2, 12.3	Please refer percentage below	
Boundary wall work except foundation and items under earth work sub head.	:30% (Thirty Percent)	
Foundation work (except items mentioned in earth work sub head in DSR and related items)	:50% (Fifty Percent)	
For items mentioned in earth work sub head of DSR and related items.	:100%(Hundred Percent)	
Clause 16		
Competent Authority for deciding reduced rates	: President SAU, or successor thereof.	
Clause 17		
Defects Liability Period	: 12 Months after completion of work	
Clause 18 List of mandatory minimum machinery, tools & plants to be deployed by the contractor at site:-		
S. No	Machinery	Nos



1	Excavator cum loader (L & T Poclain- PC- 200 or equivalent) with rock breaker arrangement	1
2	Excavator cum loader (L & T Poclain- PC- 72 or equivalent)	1
3	Excavator cum loader (JCB 3 D Model or equivalent)	2
4	Concrete pump(Minimum capacity 30 Cum Per hour and Head 90 M)	1
5	Hydraulic Drilling Machine	1
6	Needle Vibrator (electrical and petrol)	3
7	Total Stations	1
8	Electric pump/Centrifugal mono block water pump for curing and dewatering	As required on site
9	Dumpers	2
10	Bar cutting machine	1
11	Water Tanker	2
12	Mortar Mixers	2
13	Diesel generator Set as per site requirement	1
14	Concrete Mixer	2

Note:

1. **The above list is only indicative and not exhaustive.** The contractor is required to deploy necessary equipment for achieving the progress as per Milestone Schedule given in Schedule F, Clause 5 and the completion of Entire Work within the stipulated time. These resources are minimum required. All plants and equipment need not to be mobilized simultaneously, plants and equipment as required as per the progress of work shall be brought at site timely.
2. Any other machinery / equipment / tools and Plants as required as per the agreement / specification laid down in the agreement to be provided by the contractor at no extra cost and as per the actual requirement at site.



Clause 19: Penalty for each default in following cases	
Clause 19C (safety provisions)	Rs 500/- for each default
Clause 19D (labour report)	Rs 500/- for each default
Clause 19G (labour health and welfare)	Rs 500/- for each default
Clause 19H (labour hutment)	Rs 500/- for each default
Clause 25	
Constitution of Dispute Redressal Committee (DRC)	: South Asian University (SAU)
Chairman	OSD/Chief Liaison Officer, SAU, or equivalent officer in SAU
Member	Director Finance, SAU
Member	MEA technical representative
Member	External Technical Expert (BWC member)
Presenting Officer	PA or Engineer in charge from PMC or Executive Engineer/ Superintending Engineer, SAU.
<ol style="list-style-type: none"> 1. The above constitution of Dispute Redressal Committee is subject to change, for which necessary notification shall be issued by the competent authority of the SAU (i.e. the President SAU), <i>as may be required</i>. 2. The chairman of committee or President, SAU may substitute any member in case of their non-availability. 3. In addition to above, one or more BWC Members may be co-opted/Nominated by Chairman of the committee or by the President, SAU, whenever such a need arises. 	



Clause 32					
S. No	Minimum qualification of Technical Representative	Designation	Minimum experience (Years)	No"s	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 32
1	Graduate Engineer	Principle Technical Representative	2	1	Rs.40,000/ PM
2	Diploma Engineer	Technical Representative	5	1	Rs.25,000/-PM

1. Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers.
2. Other Diploma holder with minimum 10 year relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.
3. The contractor shall submit a proof of employment or affidavit/undertaking of the technical representative(s) and shall produce evidence at any time if so required by the Engineer-in-charge.
4. The deployment schedule of technical staff will be in accordance to sequence of work.

Clause 38 Variation in theoretical quantities

i)	(a)	Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of New Delhi Schedule of Rates	CPWD Delhi Schedule of Rates-2019 with amendments up to the date of submission of tender
ii)		Variations permissible on theoretical quantities.	
	(a)	Cement	



		For works with estimated cost put to tender more than Rs. 5 Lakh.	: 2% (Two percent) Plus/Minus
	(b)	Steel reinforcement and structural steel section for each diameter, section and category	: 2% (Two percent) Plus/Minus
	(c)	All other materials	: Nil

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION
(Annexure-I)

Sl. No	Description of item	Rates in figures and words at which recovery shall be made from the contractor	
		Excess beyond permissible variation	Less use beyond permissible variation
1	Cement PCC confirming to IS1489 (Part-I) Flyash based	0	Work will not be accepted
2	Steel Reinforcement	0	

6.0 PART B

SPECIAL CONDITION, PARTICULAR SPECIFICATIONS

& ADDITIONAL CONDITION



Note: The CPWD GCC Construction works 2020 suitably amended by SAU will not be issued along with the tender document but same shall form part of the agreement to be drawn and signed by both the parties after acceptance of tender.

6.1 SPECIAL CONDITIONS

- 6.1.1** The SAU may appoint/depute/assign a Project Management Consultant (PMC) for supervision of execution of the work. The PMC Project in-charge shall be the Engineer in charge and the contractor shall take necessary instructions from him.
- 6.1.2** The Contractor shall carry out survey of the work area, at his own cost, setting out the layout and fixing of alignment of the Boundary Wall as per architectural and Structural drawings in consultation with the Engineer-in-Charge and proceed further ensuring full structural continuity and integrated and monolithic construction. Any discrepancy between the architectural drawings and actual layout at site shall be brought to the notice of the Engineer-in-charge. It shall be responsibility of the Contractor to ensure correct setting out of alignment. Nothing extra shall be payable on this account. No claims, whatsoever, shall be entertained at a later date for any errors found, on plea that the information supplied by the SAU in the tender is insufficient or is at variance with the actual site conditions.
- 6.1.3** The Contractor shall, if required by him, before submission of the tender, inspect the drawings in the Office of the Executive Engineer, SAU, Akbar Bhawan, Chanakyapuri, New Delhi-110021. The SAU shall not bear any responsibility for the lack of knowledge and also the consequences, thereof to the Contractor. The information and data shown in the drawings and mentioned in the tender documents have been furnished for general information and guidance only. The Engineer-in-Charge, in no case, shall be held responsible for the accuracy thereof and/or interpretations or conclusions drawn there from by the Contractor and all consequences shall be borne by the Contractor. No claim, whatsoever, shall be entertained from the Contractor, if the data or information furnished in tender document is different or in-correct otherwise or actual working drawings are at variance with the drawings available for inspection or attached to the tender documents. It is presumed that the Contractor shall satisfy himself for all possible contingencies, incidental charges, wastages, bottlenecks etc. likely during execution of work and acts of coordination, which may be required between different agencies. Nothing extra shall be payable on this account.
- 6.1.4** The nomenclature of the item given in the schedule of quantities gives in general the work content but is not exhaustive i.e. does not mention all the incidental works required to be carried out for complete execution of the item of work. The work shall be carried out, all in accordance with true intent and meaning of the specifications and the drawings taken together, regardless of whether the same may or may not be particularly shown on the drawings and/or described in the specifications, provided



that the same can be reasonably inferred there from may be several incidental works, which are not mentioned in the nomenclature of each item but will be necessary to complete the item in all respect. All these incidental works / costs which are not mentioned in item nomenclature but are necessary to complete the item shall be deemed to have been included in the rates quoted by the contractor for various items in the schedule of quantities. No adjustment of rates shall be made for any variation in quantum of incidental works due to variation / change in actual working drawings (GFC). Also, no adjustment of rates shall be made due to any change in incidental works or any other deviation in such element of work (which is incidental to the items of work and are necessary to complete such items in all respects) on account of the directions of Engineer-in-Charge. Nothing extra shall be payable on this account.

- 6.1.5** The contractor(s) shall give to the local body, police and other authorities all necessary notices etc. that may be required by law and obtain all requisite licenses for temporary obstructions, enclosures etc. and pay all fee, taxes and charges which may be liveable on account of these operations in executing the contract. He shall make good any damage to the adjoining property whether public or private and shall supply and maintain lights during the work either for illumination or for cautioning the people at night.
- 6.1.6** The Contractor(s) shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night. In case of any accident of labours/ contractual staffs the entire responsibility will rest on the part of the contractor and any compensation under such circumstances, if becomes payable, shall be entirely borne by the contractor.
- 6.1.7** The several documents forming the tender are to be taken as mutually complementary to one another. Detailed drawings shall be followed in preference to small scale drawings and figured dimensions in preference to scale dimensions.
- 6.1.8** There be any difference or discrepancy between the description of items as given in the schedule of quantities, specifications for individual items of work (including special conditions ,particular specifications) and I.S. Codes etc., the following order of preference shall be observed.
- i. Description of items as given in Schedule of quantities/BOQ
 - ii. Particular Specifications / Technical Specifications
 - iii. Special Conditions
 - iv. Additional conditions
 - v. Tender drawings attached
 - vi. CPWD Specifications.
 - vii. General Conditions of Contract for CPWD
 - viii. Indian Standards Specifications of B.I.S.
 - ix. General / Prevalent Industry Practice/ direction of Engineer In Charge.

- 6.1.9** The works to be governed by this contract shall cover delivery and transportation up to destination, safe custody at site, insurance, erection, testing and commissioning of



the entire works. The works to be undertaken by the contractor shall inter-alia include the following:

- i. Preparation of detailed SHOP drawings and AS BUILT drawings wherever applicable and required.
- ii. Obtaining of Statutory permissions where-ever applicable and required.
- iii. Pre-commissioning tests as per relevant standard specifications, code of practice, Acts and rules wherever required.
- iv. All shop drawings submitted by the Contractor as per approved schedule shall be got approved by Engineer in Charge or his authorized representative before start of work.

6.1.10 The work shall be carried out in accordance with the approved architectural drawings, structural drawings, and other drawings to be issued from time to time, by the PMC/SAU. Before commencement of any item of work the contractor shall correlate all the relevant architectural and structural drawings, nomenclature of items and specifications etc. issued for the work and satisfy himself that the information available from there is complete and unambiguous.. The discrepancy, if any, shall be brought to the notice of the PMC/SAU. The contractor alone shall be responsible for any loss or damage occurring by the commencement of work on the basis of any erroneous and or incomplete information and no claim whatsoever shall be entertained by the SAU on this account.

6.1.11 Unless otherwise provided in the Schedule of quantities vide Part-C, the percentage tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths and nothing extra shall be payable to him on this account.

6.1.12 The Contractor(s) shall take instructions from the Engineer-in-Charge regarding collection and stacking of materials at any place. The stacking shall take place as per stacking plan however, if any change is required, the same shall be done with the approval of Engineer-in-Charge.

6.1.13 The contractor shall engage specialized agency for carrying out specialized items mentioned in this document. Before engaging such agency, the contractor shall submit the details for the approval of Engineer-in-charge, the name of the agency along with their working experience, presentation on method statement and materials being used for execution of such items etc.

6.1.14 The Contractor shall bear all incidental charges for cartage, storage and safe custody of materials, if any as to those materials also arranged by the contractor

6.1.15 No Imported item is allowed in work as per make in India Policy of Govt. of India.

6.1.16 Site register & material at site Registers to be maintained by contractor:

6.1.17 All site registers and material at site registers issued by the PMC/ SAU shall be maintained by the contractor which will be reviewed by the officers of Engineer-in-charge (PMC), or a person authorized by SAU at regular intervals. Frequency of



tests will be governed by the CPWD specifications or manufacturer specifications or as directed by Engineer In charge.

6.1.18 PREVENTION OF NUISANCE AND POLLUTION CONTROL

The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners from pollutants like smoke, dust, noise. The contractor shall use such methodology and equipment so as to cause minimum environmental pollution of any kind during and minimum hindrance to road users or other services running adjacent/near vicinity. The contractor shall make good at his cost and to the satisfaction of the Engineer-in-Charge, any damage to roads, paths, cross drainage works whatsoever caused due to the execution of the work or by traffic brought thereon by the contractor. All waste or superfluous materials shall be carried away by the contractor, without any reservation, entirely to the satisfaction of the Engineer-in-charge and disposed at designated place only. The Contractor shall take all precautions to abide by the environmental related restrictions imposed by any statutory body having jurisdiction in Delhi as well as prevent any pollution of streams, ravines, river bed and waterways

The contractor shall follow the guidelines of South Delhi Municipal Corporation, Delhi Pollution Control Board, National Green Tribunal and all other concerned government departments and statutory bodies regarding the construction of the above work.

- 6.1.19** Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the nearby occupants/users of building(s) if any and due to the reason that the Asola Wild Life Sanctuary is just few meters away.
- 6.1.20** The contractor shall ensure strict compliance of Govt. orders regarding precautions to be taken to control of pollution, if required he may be asked to use anti-Smog gun etc, for which nothing extra shall be paid
- 6.1.21** SAU will earmark some suitable land area (approx. 500 sqm) within SAU site, free of cost for establishing the labour hut on as is where basis is. The agency may visit the site to ascertain the feasibility with respect to prevailing labour regulations. The labour camp shall be properly isolated with 3 meters high metal barricading and security arrangements acceptable to SAU. The Contractor shall make his own arrangements to provide such accommodation as per the rules of the local bodies. Nothing shall be paid extra on account of such barricading and security of labour camp.
- 6.1.22** No payment shall be made for any damage caused by rain, snowfall, flood or any other natural calamity, whatsoever during the execution of the work. The contractor shall be fully responsible for any damage to the property and the work for which payment has been advanced to him under the contract and he shall make good the same at his risk and cost. The contractor shall be fully responsible for safety and security of his material, T&P/Machinery brought to the site by him.



- 6.1.23** The contractor shall construct suitable godowns /storage area, yard at the site of work for storing all materials so as to be safe against damage by sun, rain, damages, fire, theft etc. at his own cost and also employ necessary watch and ward establishment for the purpose at his cost. Some suitable land /areas shall be provided by the SAU on site for setting up of the site office and store. Before starting such office/ yard the agency will submit a layout plan to SAU for approval. This shall be maintained as per the prevailing norms of DPCC and NGT failing which a suitable penalty shall be imposed on the agency.
- 6.1.24** Proper temporary barricading by fencing with G.I. sheets or any other suitable material, shall be carried out by the Contractor at the start of work to physically define the boundaries of the plot area given to the agency for storing material and yard etc. for restricted entry to only those involved in the work and also to prevent any accidents, at the same time without causing any inconvenience to the traffic and the users of the buildings in the adjacent plots. He shall also provide and erect temporary protective barricades within the plot, if required, to prevent any accident. It shall be dismantled and taken away by the Contractor after the completion of work at his own cost with the approval of the Engineer-in- Charge. Nothing extra shall be payable on this account. The contractor shall maintain it during the complete period of execution and realign it if required, for execution of works. A suitable penalty/fine per day may be levied for not maintaining the barricading in good condition or breach of any of the above conditions as per the direction of Engineer-in-charge.
- 6.1.25** The contractor shall be responsible for the watch and ward/guard of the safety of all equipment, services provided by him against pilferage and breakage during the period of installations and thereafter till the work is physically handed over to SAU. No extra payment shall be made on this account and no claim shall be admissible on this account. The Contractor shall keep himself fully informed of all acts and laws of the Central & State Governments, all orders, decrees of statutory bodies, tribunals having any jurisdiction or authority, which in any manner may affect those engaged or employed and anything related to carrying out the work. All the rules & regulations and bye-laws laid down by Collector / DDA / NDMC/SDMC and any other statutory bodies shall be adhered to, by the contractor, during the execution of work. The Contractor shall also adhere to all traffic restrictions notified by the local authorities.
- 6.1.26** The water charges (for municipal water connection as well as tanker water), electricity charges etc shall be borne by the contractor. Also, if the contractor obtains water connection for drinking purposes from the municipal authorities or any other statutory body, the consequent sewerage charges shall be borne by the contractor. The clause 31A (Supply of water by department) of the General conditions of contract for CPWD works is not applicable to the tender.
- 6.1.27** For works below ground level the contractor shall keep that area free from water. If dewatering or bailing out of water is required the contractor shall do the same at

his own cost and nothing extra shall be paid except otherwise provided in the items of Schedule of Quantities

- 6.1.28** All statutory taxes and levies, charges (including water and sewerage charges, charges for temporary service connections and / or any other charges) payable to such authorities for carrying out the work, shall be borne by the Contractor.
- 6.1.29** The contractor shall ensure strict compliance of Govt. orders/SOP/guidelines etc. regarding precautions/steps to be taken for COVID-19 or similar pandemics/disasters at his own cost and nothing extra on this account shall be payable by SAU
- 6.1.30** The Contractor shall make all necessary arrangements for protecting the work etc. from rains, fog or likewise extreme weather conditions, the work already executed and for carrying out further work, during monsoon including providing and fixing temporary shelters, protections etc. Nothing extra shall be payable on this account and also no claims for hindrance shall be entertained on this account.
- 6.1.31** In case of flooding of site on account of rain or any other cause and any consequent damage, whatsoever, no claim financially or otherwise shall be entertained notwithstanding any other provisions elsewhere in the contract agreement. Also, the Contractor shall make good, at his own cost, the damages caused, if any. Further, no claims for hindrance shall be entertained on this account.
- 6.1.32** The contractor will take reasonable precautions to prevent his workman and employees from removing and damaging any flora (plant/vegetation) & fauna from the project area as this is prohibited

6.1.33 SETTING OUT

- a) The Contractor shall carry out survey of the work area, at his own cost, setting out the layout of boundary wall in consultation with the Engineer -in-Charge & proceed further.
- b) Any discrepancy between the Engineer-in-charge, architectural drawings and actual layout at site shall be brought to the notice of the Engineer -in-charge. It shall be responsibility of the Contractor to ensure correct setting out of alignment. Total station survey instruments only shall be used for layout, fixing boundaries, and centre lines, etc., Nothing extra shall be payable on this account.
- c) The Contractor shall establish, maintain and assume responsibility for grades, lines, levels and benchmarks. He shall report any errors or inconsistencies regarding grades, lines, levels, dimensions etc. to the Engineer -in-Charge before commencing work.
- d) The Contractor shall be entirely and exclusively responsible for the horizontal, vertical and other alignments, the level and correctness of every part of the work and shall rectify effectively any errors or imperfections therein. Such rectifications shall be carried out by the Contractor at his own cost to the entire satisfaction of the Engineer - in- Charge.



6.1.34 A site laboratory with the minimum equipment as specified in CPWD specifications/in this agreement shall be established, made functional and maintained within one month from the award of work as per Annexure-I without any extra cost to the SAU. In case of non-compliance / delay in compliance in this, a recovery @ Rs.5000/- per day will be imposed which will be recovered from the immediate next R/A Bill of the Contractor. The agency will calibrate all lab equipment as per manufacturers specifications and shall maintain a frequency chart of calibration of various lab equipment. The calibration certificate for equipment used for this project shall not be 3 month older than date of start of work. The agency will maintain a frequency chart for calibration of equipment at laboratory. The frequency of calibration of batching plant shall be one month. Notwithstanding above SAU will have the right to send the samples to independent third party labs to ensure the correctness of the equipment provided in lab.

6.1.35 TOOLS AND PLANTS

- a) The contractor should have own constructions equipment required for the proper and timely execution of the work. Nothing extra shall be paid on this account.
- b) No tools and plants including any special T&P etc. shall be supplied by the SAU and the Contractor shall have to make his own arrangements at his own cost. No claim shall be entertained on this account.

6.1.36 SCAFFOLDING

Wherever required for the execution of work, all the scaffolding shall be provided and suitably fixed, by the Contractor. Only steel shuttering will be allowed in the work.

6.1.37 ROYALTY

Royalty at the prevalent rates shall have to be paid by the Contractor on all boulders, earth, metals, shingle, all sizes stone aggregates, brick aggregates, coarse and fine sand, moorum, river sand, gravels and bajri etc. brought by him for the execution of the work, direct to the revenue authority of the state government concerned. Further, contractor may be asked to submit proof of submission of full royalty to the state government or local authority. Nothing extra shall be payable on this account

6.1.38 RESPONSIBILITY

- a) The Contractor shall protect and indemnify SAU and its officials & employees against any claim and /or liability arising out of violations of any such laws, ordinances, orders, decrees, by himself or by his employees or his authorized representatives. Nothing extra shall be payable on these accounts.
- b) The Contractor shall assume all liability, financial or otherwise in connection with this contract and shall protect and indemnify SAU from any and all damages and claims that may arise on any account. The Contractor shall indemnify the SAU against all claims in respect of patent rights, royalties, design, trademarks- of



name or other protected rights, damages to adjacent buildings, roads or members of public, in course of execution of work or any other reasons whatsoever, and shall himself defend all actions arising from such claims and shall indemnify the SAU in all respect from such actions, costs and expenses. Nothing extra shall be payable on this account.

- c) The Contractor shall be responsible for any liability imposed by law for any damage to the Work or any part thereof or to any of the materials or other things used in performing the Work or for injury to any person or persons or any property damage in or based under Work limit. The Contractor shall indemnify, keep indemnified and hold, the SAU, harmless against any and all liability, claims, loss or injury, including costs, expenses, and attorney's fees incurred in the defence of the same, arising from any allegations, whether groundless or not, of damage or injury to any person or property resulting from the performance of the Work or from any material used in the Work or from any portion of the Work or Work site or non-payment of statutory dues of any nature and penalty thereon or from any cause whatsoever during the process of the Work.
- d) The Contractor shall provide, during the entire Contract Period, such indemnification in the proforma approved by engineer in charge on a non-judicial stamp paper of appropriate value.

6.1.39 CO-OPERATION WITH OTHER CONTRACTORS/SPECIALIZED AGENCIES/SUB- CONTRACTORS

- a) The Contractor shall cooperate with and provide the facilities to the other agencies working at site for smooth execution of the work. The contractor shall indemnify the SAU against any claim(s) arising out of such disputes. The Contractor shall:
- b) The contractor shall conduct his work, so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the Engineer-In-Charge and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in an acceptable and in a proper co-ordination manner and shall perform it in proper sequence to the complete satisfaction of others.

6.1.40 SUPERVISION OF WORK

The Contractor shall depute Site Manager & skilled workers as required for the work. He shall submit organization chart along with details of Engineers and supervisory staff. It shall be ensured that all decision making powers shall be available to the representatives of the Contractor at New Delhi itself to avoid any likely delays on this account. The Contractor shall also furnish list of persons for specialized works to be executed for various items of work. The Contractor shall identify and deploy key persons having qualifications and experience in the similar and other major works, as per the field of their expertise. If during the course of execution of work, the PMC/Engineer-in-Charge is of the opinion that the deployed staff is not sufficient or not well experienced; the Contractor



shall deploy more staff or better- experienced staff at site to complete the work with quality and in stipulated time limit.

Principle Technical representative of the Contractor having experience in similar nature of work as mentioned in the clause 32 of the General Conditions of the Contract, shall always be available at the site during the actual execution of the work, failing which recovery shall be made.

6.1.41 RATES The rates quoted by the Contractor are deemed to be inclusive of;

- a) The site clearance, setting out work, profile, setting lay out on ground, establishment of reference bench mark(s), installing various signage, taking spot levels, survey with total station, Horticulture, landscaping and Irrigation work of all safety and protection devices, compulsory use of helmet and safety shoes, and other appropriate safety gadgets by workers, imparting continuous training for all the workers, barriers, preparatory works, working during monsoon or odd season, working beyond normal hours, working at all depths, height, lead, lift, levels and location, implementation of green building norms to achieve desired GRIHA Rating etc. and any other unforeseen but essential incidental works required to complete this work. Nothing extra shall be payable on this account and no extension of time for completion of work shall be granted on these accounts.
- b) Unless otherwise specified in the schedule of quantities, the rates for all items of work shall be considered, as inclusive of pumping out or bailing out water, if required throughout the Horticulture and landscaping work period for which no extra payment shall be made. This shall also include water encountered from any source such as rains, floods, sub soil water table being high and/or due to any other cause whatsoever.
- c) The rates for all items of work, shall unless clearly specified otherwise, include cost of all operations and all inputs of labour, material, T & P, wastages, watch and ward, all incidental charges, all taxes, cess, duties, levies etc. except GST, required for execution of the work except which are exempted as specified in the tender documents.
- d) **Taxes:** The South Asian University is an Inter-Governmental Organization established by the SAARC (South Asian Association for Regional Co-operation) Nations and has been extended the Privileges and Immunities under Section „3" of the United Nations (Privileges and Immunities) Act, 1947 by the Government of India. The University is exempted from paying and collecting all Direct and Indirect Taxes in India. The contractor / agency therefore advised to settle his tax liability accordingly.

In terms of Article 4(1) of the Agreement among SAARC Nations for establishment of South Asian University, "the (South Asian) University and its campuses and centres shall be exempted, in the state where they are located, from paying and from collecting



all direct and indirect forms of taxes and duties for the establishment and operations of the University". In terms of Section-3 of the South Asian University Act 2008 (Act No. 8 of 2009) passed by the Parliament of the Republic of India, notwithstanding anything contrary contained in any other law, the provisions of the above referred Agreement among SAARC Nations for establishment of South Asian University shall have the force of law in India.

i) Goods and Services Tax (GST):

1. SAU is entitled by Govt. of India for reimbursement of GST paid to the contractors to give effect to tax exemption status of the South Asian University for the work of its campus at Maidan Garhi, New Delhi.
 2. The estimated rates in SOQ are as per CPWD, DSR 2019. **The agency may quote their rates without GST. Contractor has to pay GST as per applicable rates and he will be paid for the same by SAU.**
 3. As Goods and Services Tax (GST) is reimbursable to SAU, the Contractor shall mention UIN no; 0717UNO00175UNQ in all invoices raised to SAU. The invoice should be in conformity with the various provisions of respective GST Act.
 4. The agency shall file GST returns in a timely manner so that the GST reimbursement claims of SAU are not being dishonoured. If this happens the amount will be deducted from the dues of the contractor.
- e) **Labour Cess;** Labour Cess @ 1% shall be deducted from the gross value of work done (bill of contractor) from every RA Bill.
- f) **Ancillary and incidental facilities** required for execution of work like labour camp, stores, nursery, offices for Contractor, watch and ward, water storage tanks, installation, electricity, water, sewerage etc. required for execution of the work, liaison and pursuing for obtaining various No Objection Certificates, completion certificates from local bodies etc., protection works, testing facilities / laboratory at site of work, facilities for all field tests and for taking samples etc. during execution or any other activity which is necessary (for execution of work and as directed by Engineer-in-Charge), shall be deemed to be included in rates quoted by the Contractor, for various items in the schedule of quantities. Nothing extra shall be payable on these accounts. Before start of the work, the Contractor shall submit to the Engineer-in-Charge for approval, a site / Horticulture and landscaping work yard layout in the area earmarked by SAU, specifying areas for Horticulture and landscaping work, site office, positioning of machinery, material yard, manure, plant and other storage, nursery, site laboratory, water tank, etc.
- g) **Working in shifts;** For completing the work in time, the Contractor might be required to work in two or more shifts (including night shifts). No claim whatsoever shall be entertained on this account, notwithstanding the fact that the Contractor may have to pay extra amounts for any reason, to the labourers and other staff engaged directly



or indirectly on the work according to the provisions of the labour and other statutory bodies regulations and the agreement entered upon by the Contractor with them.

- 6.1.42** All material shall only be brought at site as per program finalized with the Engineer-in-Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.

6.1.43 SAFETY PRACTICES

WARNING/ CAUTION BOARDS: All temporary warning / caution boards / glow signage display such as "Construction Work in Progress", "Keep Away", "No Parking", Diversions & protective Barricades etc. shall be provided and displayed during day time by the Contractor, wherever required and as directed by the Engineer-in-Charge. These glow signage and red lights shall be suitably illuminated during night also. The Contractor shall be solely responsible for damage and accident caused, if any, due to negligence on his part. Also he shall ensure that no hindrance, as far as possible, is caused to general traffic during execution of the work. This signage shall be dismantled & taken away by the Contractor after the completion of work, only after approval of the Engineer – in – Charge. Nothing extra shall be payable on this account Necessary protective and safety equipment (PPE) shall be provided to the Site Engineer, Supervisory staff, labour and technical staff of the contractor and visitors by the Contractor at his own cost and to be used at site.

- a) Appropriate Personal Protective Equipment (PPE) shall be supplied and maintained for all workers. Minimum PPE shall include a hard helmet, hi-visibility jacket, safety shoes, and gloves. Supervisors shall undertake a pre-inspection of all works to assess risks, if any.
- b) Vehicles shall be parked off the roadway so as not to obstruct driver's view of the presence of workers. Vehicles shall not, under any circumstances, be driven against the normal flow of traffic.
- c) Any vehicles used for work should be registered, roadworthy and well maintained.
- d) Carting material from one place to another to be under taken in such a manner as to cause minimum amount of pollution.
- e) Supervisors should meet the workers and instruct them about the safety aspects of the day's activities prior to commencement of work.
- f) No materials are to be stockpiled or unloaded onto the road surface except while being moved into the work area, and even then, only when barricaded and signposted with reflective warning signs.

6.1.44 QUALITY ASSURANCE

- a) The proposed boundary wall project is a prestigious project and quality of work is of paramount importance. Contractor shall have to engage well-experienced skilled labour and deploy modern T&P and other equipment to execute the work.
- b) The contractor shall ensure quality construction in a planned and time bound manner.
- c) Any sub-standard material / work beyond set out tolerance limit shall be summarily rejected by the Engineer-in-charge & contractor shall be bound to replace / remove such sub-standard / defective work immediately. If any material, even though approved by Engineer-In-Charge is found defective or not conforming to specifications shall be replaced / removed by the contractor at his own risk & cost.
- d) The technical representatives from SAU and the Consultants deployed by the SAU shall be carrying out regular and periodic inspection of the ongoing activities in the work and deficiencies, shortcomings, inferior workmanship pointed out by them shall be communicated to the contractor. Upon receipt of instructions from Engineer in Charge these are also to be made good by necessary improvement, rectification, replacement upto his complete satisfaction. Special attention shall be paid towards line and level of internal and external face of work, exposed smooth surface of RCC members by providing fresh shuttering plates, rubberized linings to all the shuttering joints, absence of hollow vertical joints in stone masonry, proper compaction of filled up earth, proper compaction of foundation bed etc. to achieve an Institution of International standards and up keeping of quality assurance shall be of paramount importance, as such.
- e) All materials brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-charge which shall be preserved till the completion of the work. If a particular brand of material is specified in the item of work in Schedule of Quantity, the same shall be used after getting the same approved from Engineer-In-Charge. Wherever brand / quality of material is not specified in the item of work, the contractor shall submit the samples as per suggested list of brand names given in the tender document / particular specifications for approval of Engineer-In- Charge. For all other items, materials and fittings of ISI Marked shall be used with the approval of Engineer-In-Charge. Wherever ISI Marked material / fittings are not available, the contractor shall submit samples of materials / fittings manufactured by firms of repute conforming to relevant specifications or IS codes and use the same only after getting the approval of Engineer-In-Charge.
- f) The Contractor shall procure and provide all the materials from the manufacturers / suppliers as per the list attached with the tender documents, as per the item description and particular specifications for the work. The equivalent brand for any item shall be permitted to be used in the work, only when the specified make is not available. This is, however, subject to documentary evidence produced by the contractor for non-availability of the brand specified and also subject to



independent verification by the Engineer-in-Charge. In exceptional cases, where such approval is required, the decision of Engineer-in-Charge as regards equivalent make of the material shall be final and binding on the Contractor. No claim, whatsoever, of any kind shall be entertained from the Contractor on this account. Nothing extra shall be payable on this account. Also, the material shall be procured only after written approval of the Engineer-in-Charge.

- g) All materials shall be got checked by the Engineer-in-Charge or his authorized supervisory staff on receipt of the same at site before use.
- h) The agency shall get the sample of work of wall, railing etc approved from the Engineer-in-charge before mass construction.
 - i) The tests, as necessary, shall be conducted in the laboratory approved by the Engineer-in- Charge. The samples shall be taken for carrying out all or any of the tests stipulated in the particular specifications/CPWD specifications and/or as directed by the Engineer-in-Charge or his authorized representative.
 - j) All the registers of tests carried out at Construction Site or in outside laboratories and all material at site (MAS) registers including cement register shall be maintained by the contractor which shall be issued to the contractor by Engineer-in-charge. All the entries in the registers will be made by the designated Engineering Staff of the contractor and same should be regularly reviewed by Engineer-in-Charge or his authorized representative. Contractor shall be responsible for safe custody of all the registers.
 - k) The Contractor shall at his own risk and cost make all arrangements and shall provide all such facilities including material and labour, the Engineer-in-Charge may require for collecting, preparing, forwarding the required number of samples for testing as per the frequency of test stipulated in the contract specifications or as considered necessary by the Engineer-in-Charge, at such time and to such places, as directed by the Engineer-in- Charge. Nothing extra shall be payable for the above.
 - l) The Contractor or his authorized representative shall associate in collection, preparation, forwarding and testing of such samples. In case he or his authorized representative is not present or does not associate him, the result of such tests and consequences thereon shall be binding on the Contractor .The Contractor or his authorized representative shall remain in contact with the Engineer-in-Charge or his authorized representative associated for all such operations. No claim of payment or claim of any other kind, whatsoever, shall be entertained from the Contractor.
 - m) All the testing charges for the samples sent to outside approved laboratories shall be borne by the contractor/ SAU in the manner indicated below:
 - i) By the contractor, if the results show that the material does not conform to relevant specifications and BIS codes or any other relevant code for which confirmatory test is carried out.

- ii) By the SAU, if the results show that the material confirms to relevant specifications and BIS codes or any other relevant code for which confirmatory test is carried out
- n) The contractor shall procure the required materials in advance so that there is sufficient time for testing of the materials and clearance of the same before use in the work. The contractor shall provide at his own cost suitable weighing and measuring arrangements at site for checking the weight / dimensions as may be necessary for execution of work. The sealed samples are to be handed over to the testing lab by contractor in the presence of Engineer- in-charge of work.

6.1.45 DOCUMENTATION AND SUBMITTALS

- a) The Contractor shall display all permissions, licenses, registration certificates, bar charts, other statements etc. under various labour laws and other regulations applicable to the works, at his site office. He should also keep at site at least one set of CPWD Specifications with up to date correct on slips, Analysis of rates and DSR 2019 at site and produce the same if asked for by Engineer- In-Charge. In case of non compliance, these codes will be purchased from the Market and actual cost of purchase will be recovered from the next RA Bill of the Contractor.
- b) The Contractor shall coordinate and facilitate consultant for preparing Two (02) sets of "As Built Drawings" along with literatures, manuals. This shall be the prerequisite for payment of final bill.
- c) The contractor shall make available Two (02) sets of computerized Standard Measurement Books (SMBs) having measurement of all the permanent standing. One set will be returned to the agency after verification.
- d) The Performance Guarantee shall not be released to the contractor until the aforesaid **as built drawings** are submitted to the Engineer-in-Charge/ SAU.
- e) The contractor will submit computerized measurement sheet for the work carried out by him for making payment as per Clause - 6A of the CPWD General Conditions of Contract 2020 with correction slips up to date. For casting of RCC members and other hidden items the corrected and duly test checked measurement sheets of reinforcement or that of other hidden items shall be deposited with Engineer in charge or his authorized representative, before casting of RCC or other hidden items. The delay in submission of corrected and duly checked measurement sheet may, therefore, delay casting of RCC or execution of hidden item for which no hindrance shall be recorded.
- f) To avoid delay, contractor should submit all samples well in advance so as to give timely orders for procurement.
- g) Contractor shall fill-up all the forms and formats which would be provided by the sustainability consultant, and submit it to the Engineer-in-charge in a timely manner.



- h) The contractor shall, during the entire tenure of the construction phase, submit the following records to the Engineer in Charge on a monthly basis:-
1. Quantum of waste (volumetric/weight basis) generated at site and the segregated waste types divided into inert, chemical and hazardous wastes.
 2. Digital photo documentation to demonstrate compliance of safety guidelines
 3. Quantities of material brought into the site
 4. Quantities of construction debris (if at all) taken out of the site
 5. Digital photographs of the works at site, the workers facilities, the waste and other material storage yards, pre-fabrication etc as guided by the Engineer in Charge
- i) Before the start of construction, the contractor shall submit to the Engineer in Charge for approval:-
- 1 A site plan along with a narrative to demarcate areas on site from which top soil has to be gathered, designate area where it will be stored, measures adopted for top soil preservation and indicate areas where it will be reapplied after construction is complete.
 - 2 Certifications from manufacturers of Low VOC paints, adhesives, sealant and polishes used at this particular project site.
 - 3 Submit environmental and pollution clearance certificates for all diesel generators installed as part of this project.
- j) Provide total support to Engineer in Charge by the contractor in completing all Green Building Rating related formalities, including signing of forms, providing signed letters in the contractor's letterhead whenever required.
- k) The contractor shall submit to engineer in charge after construction of the buildings, a detailed as built quantification of following within 10 days of recording of completion, contractor will be penalised @ Rs. 500 per day of delay of non submission SMP beyond due date to be recovered from the final bill:
- i. Total materials use
 - ii. Total waste generated
 - iii. Total waste reused
 - iv. Total water used
 - v. Total electricity consumed, and
 - vi. Total diesel consumed

6.1.46 PROGRAM CHART: (please refer clause 1 and clause 5 in sub head 5.2 (Proforma Schedules))

- a) The Contractor shall prepare a program chart within **15 days** of issue of Letter of Award including civil activities for the execution of work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfilment of the program within the stipulated period and submit the same for approval of the Engineer-In-Charge. These shall be submitted by the contractor through electronic media besides forwarding hard copies of the same. The integrated program chart so submitted should not have any discrepancy with the physical milestones attached in the contract agreement.

- b) If at any time, it appears to the Engineer-In-Charge that the actual progress of work does not conform to the approved program referred above, the contractor shall produce a revised program showing the modifications to the approved program by additional inputs to ensure completion of the work within the stipulated time.
- c) The submission for approval by the Engineer-In-Charge of such program or the furnishing of such particulars shall not relieve the contractor of any of his duties or responsibilities under the contract. This is without prejudice to the right of Engineer-In-Charge to take action against the contractor as per terms and conditions of the agreement.
- d) Apart from the above integrated program chart, the contractor shall be required to submit fortnightly progress report of the work in a computerized form on 1st and 16th of every month.

6.1.47 WATER/ ELECTRICITY

- a) The concrete is to be procured from RMC plant and mortar is to be made by water as per IS code and for remaining work, the university is intending to use recycled/ water received from Sewage Treatment Plant (STP) in Boundary wall construction work. As of now such water is not available within SAU campus, so the agency has to make his own arrangement for such water. Later on, in case SAU may be able to provide recycled water (subject to availability) and in that case **water charges @ 1% of gross value of work done shall be deducted from the running bill of contractor.** Contractor shall get the water tested from laboratory approved by the Engineer-in-charge at regular interval as per the CPWD Specifications. All expenses towards collection of samples, packing, transportation etc. shall be borne by the contractor, however testing charges will be paid by SAU.
- b) Contractor shall make his own arrangement for electricity/power. Nothing extra shall be paid for this. In case of difficulty in obtaining an electricity connection from independent source (BSES), the agency may request SAU to provide electricity connection from SAU on payment basis through sub metre as per actual consumption on BSES rates prevailing at that time, provided SAU is in the position of giving such connection.
- c) The SAU shall in no way be responsible for either any delay in getting electric connection or water for carrying out the work or not getting connections at all. No claim of delay or any other kind, whatsoever, on this account shall be entertained from the Contractor. The contractor shall be responsible for contingency arrangement of stand-by water & electric supply for commencement and smooth progress of the work so that work does not suffer on account of power failure or disconnection or not getting connection at all. No claim of any kind whatsoever shall be entertained on this account from the Contractor. Nothing extra shall be payable on this account.

6.1.48 CLEANLINESS OF SITE

- a) The Contractor shall not stack building material/ malba/ muck /material/on the land or road of the local development authority or on the land owned by the others, as the case may be. So the muck, rubbish etc. shall be removed periodically as directed by the



Engineer-in- Charge, from the site of work to the approved dumping grounds as per the local byelaws and regulations of the concerned authorities and all necessary permissions in this regard from the local bodies shall be obtained by the Contractor. Nothing extra shall be payable on this account. In case, the Contractor is found stacking the building material/ malba as stated above, the Contractor shall be liable to pay the stacking charges/penalty as may be levied by the local body or any other authority and also to face penal action as per the rules, regulations and bye-laws of such body or authority. The Engineer -in-Charge shall be at liberty to recover, such sums due but not paid to the concerned authorities on the above counts, from any sums due to the Contractor including amount of the Security Deposit and performance guarantee in respect of this contract agreement.

- b) The contractor shall take instructions from the Engineer-In-Charge regarding collection and stacking of materials at any place. No excavated earth or building rubbish shall be stacked on areas where other buildings, roads, services and compound walls are to be constructed.
- c) The site of work shall be always kept clean due to constraints of space and to avoid any nuisance to the users of buildings in the adjacent plots. The Contractor shall take all care to prevent any water- logging at site. The waste water, slush etc. shall not be allowed to be collected at site. It may be directly pumped into the creek with prior approval of the concerned authorities. For discharge into public drainage system, necessary permission shall be obtained from relevant authorities after paying the necessary charges, if any, directly to the authorities. The work shall be carried out in such a way that the area is kept clean and tidy. All the fees/charges in this regard shall be borne by the Contractor. Nothing extra shall be payable on this account.
- d) The site is to be maintained as a tobacco free and no smoke control zone for preventing any harm to site and to maintaining the cleanliness.

6.1.49 Reference to any Indian Standards;

Wherever any reference to any Indian Standards occurs in the documents relating to this contract, the same shall be inclusive of all amendments issued thereto or revisions thereof, if any, up to the date of receipt of tenders

6.1.50 Insurance Policies

- a) Before commencing the execution of work, the Contractor shall, without in any way limiting his obligations and liabilities, insure at his own cost and expense against any damage or loss or injury, which may be caused to any person or property, at site of work. **The Contractor shall obtain and submit to the PMC/Engineer-in-Charge proper Contractor All Risk (CAR) Insurance Policy for an amount 1.25 times the contract amount for this work, with South Asian University(SAU)as the first beneficiary.** The insurance shall be obtained in joint names of SAU and the Contractor (who shall be second beneficiary). Also, he shall indemnify the SAU from any liability during the execution of the work.



- b) **Further, He shall obtain and submit to the SAU, a third party insurance policy for maximum Rs.10 lakh for each accident, with the SAU as the first beneficiary.** The insurance shall be obtained in joint names of SAU and the Contractor (who shall be second beneficiary). The Contractor shall, from time to time, provide documentary evidence as regards payment of premium for all the Insurance Policies for keeping them valid till the completion of the work. The Contractor shall ensure that Insurance Policies are also taken for the workers of his Sub-Contractors / specialized agencies also. Without prejudice to any of its obligations and responsibilities specified above, the Contractor shall within 10 days from the date of letter of acceptance of the tender and thereafter at the end of each quarter submit a report to the SAU giving details of the Insurance Policies along with Certificate of these insurance policies being valid, along with documentary evidences as required by the Engineer-in-Charge.
- c) No work shall be commenced by the Contractor unless he obtains the Insurance Policies as mentioned above. Also, no payment shall be made to the Contractor on expiry of insurance policies unless renewed by the Contractor. Nothing extra shall be payable on this account. No claim of hindrance (or any other claim) shall be entertained from the contractor on these accounts.
- d) In case of any mishap during the work in progress, Contractor shall be fully responsible. Any kind of compensation shall not be paid by SAU to Contractor or his staff or worker. The Contractor to submit CAR policy, ESIC and EPF details, if required.

6.1.51 INSPECTION OF WORK

- a) In addition to the provisions of relevant clauses of the contract, the work shall also be open to inspection by Senior Officers of SAU & the representative of the Consultants. The contractor shall at times during the usual working hours and at all times at which reasonable notices of the intention of the Engineer-in-charge or other officers as stated above to visit the works shall have been given to the contractor, either himself be present to receive the orders and instructions or have a responsible representative duly accredited in writing, to be present for that purpose.
- b) The consultant (PA) appointed by SAU shall certify on completion of the boundary that it has been constructed according to the approved drawings design and specifications.

6.1.52 FINAL TESTING OF THE CONSTRUCTION WORK

The Engineer-in-Charge or his authorized representatives shall carry out final inspection of the various construction works. Any defect(s) noticed during demonstration shall be rectified by the Contractor at his own cost to the entire satisfaction of the Engineer-in-Charge. Nothing extra shall be payable on this account.

6.1.53 CONSTRUCTION PHASE AND WORKER FACILITIES

- a. The contractor shall specify and limit construction activity in pre-planned/designated areas and shall start construction work after securing the approval for the same from



the Engineer in Charge. This shall include areas of construction, storage of materials, and material and personnel movement.

- b. SAU shall provide adequate land for storage/office to the contractor for his use as per direction of the Engineer-In-Charge. The space has to be maintained/constructed by the contractor as per his usage requirements.
- c. All spaces allotted to the contractor, as described above shall be vacated and all structures removed from site at any time as and when required and directed by the relevant authorities or by the South Asian University, unconditionally and without any reservation. The authorities or the South Asian University will not be obliged to give any reason for such removal. Upon receiving instructions to vacate the space, the contractor shall immediately remove all his structures, materials, etc., from the spaces and clear and clean-up the site to the satisfaction of the Engineer-in-Charge.
- d. It shall be the specific responsibility of the Contractor to safeguard the site and ensure that no illegal encroachments are made by outside elements within the area allotted to the Contractor. Upon completion of the work or earlier as required by South Asian University/Authorities, the Contractor shall vacate the land totally without any reservations.

e. Preserve and Protect Existing Landscape during Construction

- 1. The contractor shall ensure that no trees, existing or otherwise, shall be harmed and damage to roots should be prevented during excavation, placing backfill, driving or parking heavy equipment, dumping of trash, oil, paint, and other materials detrimental to plant health. These activities should be restricted to the areas outside of the canopy of the tree, or, from a safe distance from the tree/plant by means of barricading. Trees will not be used for support; their trunks shall not be damaged by cutting and carving or by nailing posters, advertisements or other material. Lighting of fires or carrying out heat or gas emitting construction activity within the ground, covered by canopy of the tree is not to be permitted.
- 2. The contractor shall take steps to protect trees or saplings identified for preservation within the construction site.

f. Facility to workers;

- 1. The contractor shall provide potable water for all workers.
- 2. The Contractor/agency shall provide proper uniform to the workers with half jacket (fluorescent material) during construction works; Design to be got approved from PA/SAU, nothing shall be paid to the agency on this account.

6.1.54 Conditions to Be Adhered To As Per Environmental Clearance Obtained From DPCC

- a) Provision shall be made for temporary housing of labour within the site for the construction period only, with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care



along with first aid room, crèche etc. The housing may be in the form of temporary structures to be removed after completion of the project.

- b) Health and safety norms of CPWD (as given in the GCC) should be followed during the construction work
- c) Top soil excavated during construction work, shall be preserved and same to be used in horticulture/landscape development.
- d) Proper measures should be adopted to control dust emissions during construction work phase by providing adequate numbers of water sprinklers.
- e) Soil and water samples of the site should be tested by the Project Proponent (SAU) from any laboratory recognized by MOEF/DPCC to ascertain that there is no threat to ground water quality by leaching of contaminants, on quarterly basis for inclusion in the six monthly reports.
- f) Vehicles hired for bringing material for the work to the site should be in good condition, have pollution check certificate, and conform to applicable air & noise emission standards. These vehicles should be operated only during non-peak hours. The material loaded or unloaded should be covered (especially sand, excavated soil, etc.) before transportation to avoid fugitive emissions etc.
- g) Ambient noise levels should conform to prescribed residential standards both during day and night hours. Adequate measures should be made to reduce ambient air and noise level during work and operation phase. So as to conform to the norms stipulated by CPCB/DPCC. Ambient air and noise monitoring should be done by an accredited lab and data should be submitted along with compliance report in every six month.
- h) Relevant Requirements of GRIHA LD 5 STAR rating, should be followed.
- i) Regular supervision of the above and other measures for monitoring should be in place all through the work phase, so as to avoid disturbance to others.
- j) Officials from Ministry of Environment & Forests, Regional Office, Chandigarh and Delhi Pollution Control Committee, who would be monitoring the implementation of environmental safeguards, should be given full co-operation to inspect the facilities and documents/data on site during their site inspection. As and if be required, Six-monthly monitoring reports shall be prepared and submitted by SAU to Ministry of Environment & Forests, Regional Office Chandigarh & also to DPCC, Delhi.
- k) Ready Mixed concrete may be used to minimise the use of water.
- l) All demolition waste should be sent to C & D waste site of MCD for recycling.
- m) Others

- i) All vehicles delivering construction materials to the site shall be covered to avoid spillage of materials and maintain cleanliness of the roads.



- ii Wheel tyres of all vehicles used by of the contractor, or any of his sub-contractor or materials supplies shall be cleaned and washed clear of all dust/mud before leaving the project premises. This shall be done by routing the vehicles through tyre washing tracks.
- iii Contractor shall arrange for regular water sprinkling at least twice a day (i.e. morning and evening for dust suppression of the construction sites and unpaved roads used by his construction vehicles.

NOTE: - Failure to adhere to any of the above mentioned items, shall be deemed as a violation of contract and the contractor shall be held liable for penalty as per terms of the agreement



6.2 PARTICULAR SPECIFICATIONS – BOUNDARY WALL CONSTRUCTION WORK**6.2.1 Scope**

- a) **Area Clearance** - The Contractor shall remove all rubbish, small plants, bushes etc. from 1.5 m on either side of the proposed boundary wall. The contractor shall be paid as per relevant Schedule of Quantities item for this work.
- b) **Boundary Demarcation** – Layout of the external boundary, as provided by the concerned authorities will be made available by South Asian University. The contractor will establish the demarcation of site boundary as established by New Delhi Development Authority (DDA), Revenue, Forest Dept. or and any other body to have final demarcation of the land and get it verified from concerned authorities if required. The execution of the boundary wall will be for the exact layout demarcated by New Delhi Development Authority and any deviation will be borne by the contractor at his risk and cost.
- c) **Stone masonry wall – Construction of stone masonry wall with plinth beam and precast coping at the top of the wall .The Ms railing with concertina coil will be fixed.**
- d) **Hand Over** all the work to authorized representative of Engineer-in-charge / South Asian University or to the contractor of next stage work as directed by the Engineer-in-charge.

6.2.2 Conditions

- a) The contractor shall prepare and submit to the Engineer-In-Charge, „Spill prevention and control plans" before the start of construction, clearly stating measures to stop the source of the spill, to contain the spill, to dispose the contaminated material and hazardous wastes, and stating designation of personnel trained to prevent and control spills. Hazardous wastes include pesticides, paints, cleaners, and petroleum products.
- b) Contractor shall collect & submit the relevant material certificates for materials with high recycled (both post-industrial and post-consumer) content, including materials like RMC mix with fly-ash, etc.
- c) Where possible, the contractor shall select materials / vendors, harvested and manufactured regionally, within a 800-km radius of the project site. Bit exsagerated condition for boundary wall it seems
- d) Water as per IS should be used for construction works and for remaining works like curing spraying etc. recycled water will be used.
- e) Contractor should spray curing water on concrete structure/stone masonry and shall not allow free flow of water. Concrete structures should be kept covered with thick cloth/gunny bags and water should be sprayed on them.



6.2.3 MATERIALS & FIXTURES FOR THE PROJECT

- a) Contractor will produce wherever feasible certificate regarding distance of the source of the relevant material.
- b) Unless otherwise stated cement used at site for reinforced concrete, precast members, mortar, plaster shall be PPC (Portland Pozzolana Cement). The PPC must meet the requirements of IS 1489 (Part I) as regards to fly ash content in cement. The contractor shall obtain from the PPC manufacturer the certificate regarding fly ash content in the PPC in each batch of consignment.
- c) The contractor shall ensure that all paints, polishes, adhesives and sealants used on any surface, shall be Low VOC products. The contractor shall get prior approval from the Engineer in Charge before the application of any such material.

6.2.4 CONSTRUCTION WASTE

- a) The contractor shall make himself conversant with the Site Waste Management Program Manual and actively contribute to its compilation by estimating the nature and volume of waste generated by the process/installation in question.
- b) All construction debris generated during construction shall be carefully segregated and stored in a demarcated waste yard. Clear, identifiable areas shall be provided for each waste type. Employ measures to segregate the waste on site into inert, chemical, or hazardous wastes.
- c) All construction debris shall be used for road preparation, back filling, etc., as per the instructions of the Engineer in Charge, with necessary activities of sorting, crushing, etc.
- d) No construction debris shall be taken away from the site, without the prior approval of the Engineer in Charge.
- e) The contractor shall recycle the unused chemical/hazardous wastes such as oil, paint etc.
- f) If and when construction debris is taken out of the site, after prior permissions from the Engineer in Charge, the contractor shall ensure the safe disposal of all wastes and will only dispose of any such construction waste in approved dumping sites.



6.3 ADDITIONAL CONDITIONS OF CONTRACT

- 6.3.1** These additional conditions of contract shall be read along with the general conditions of contract, Schedule of Quantities, Particular Specifications, Drawings and other documents relating to the work
- 6.3.2** The contractor shall acquaint himself with the proposed site of work, its approach roads, working space available before quoting his rates.
- 6.3.4** The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupiers of adjacent properties and to the public in general and to prevent any damage to such properties and any pollution of smoke, streams and water-ways. He shall make good at his cost and to the satisfaction of the Engineer-in-Charge, any damage to roads, paths, cross drainage works or public or private property whatsoever caused thereon by the contractor. All waste or superfluous materials shall be carried away by the contractor without any reservation entirely to the satisfaction of the Engineer-in-Charge.
- 6.3.5** Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants / users of building.
- 6.3.6** The proposed boundary wall work is a prestigious project and quality of work is of paramount importance. Contractor shall have to engage well experienced skilled labour and deploy modern T&P and other equipment to execute the work. Many items like stone masonry will specifically require engagement of skilled workers having experience particularly in execution of such items.
- 6.3.7** No payment shall be made for any damage caused by rain, snowfall, flood or any other natural calamity, whatsoever during the execution of the work.
- 6.3.8** The contractor shall be fully responsible for any damage to the property and work for which the payment has been advanced to him under the contract and he shall make good the same at his risk and cost. The contractor shall be fully responsible for safety and security of his material, T&P, Machinery brought to the site by him.
- 6.3.9** The contractor shall take instructions from the Engineer-In-Charge regarding collection and stacking of material at any place. No excavated earth or building rubbish shall be stacked on areas where other buildings, roads, services and compound walls are to be constructed. The stacking shall take place as per stacking plan however if any change is required, the same shall be done with the approval of Engineer-In-Charge.
- 6.3.10** Quality of the stone masonry work executed shall be to the satisfaction of the Engineer-in-Charge.
- 6.3.11** A mock-up of 3m in length of the stone masonry wall complete with MS work with finishing shall be erected for approval of Engineer-in-Charge.



- 6.3.12** Random rubble quartzite stone masonry wall, shall be brought to course at levels specified in the drawings. Each stone shall be hammer dressed on face, sides and bed. The masonry wall shall have flushed/ruled pointing.
- 6.3.13** The Tenderer will strictly comply the norms of the DPCC and NGT and their order being issued time to time.
- 6.3.14** The Tenderer must note that blasting is prohibited as the site is near Asola Wildlife Sanctuary.
- 6.3.15** The concertina coil is also to be fixed over the existing railing with the help M.S. brackets. The items will be paid in respective items of BOQ. Nothing extra will be paid for working over existing work.

6.4 LIST OF APPROVED MAKES

Note: Contractor shall quote for the best of the materials as specified below, the contractor shall obtain prior approval from Engineer-In charge before placing order for the specific material / agencies

The Engineer in charge reserves the right to select any of the makes/ brands indicated in the list of approved brand / make. The Tenderer shall quote his rates on the basis of the price for the best quality product of the brand / make stipulated for the item of work in the schedule of quality / specification /list of approved brand / make.

In case of non-availability of any of the approved / specified materials / agency, during the execution of the work, the Engineer-in Charge may approve suitable equivalent brand / agency and his decision shall be final and binding on the contractor and the prices variations if any shall be adjusted accordingly.

S.no.	Item Description	Brand / Manufacturer
1.	CEMENT	
A	Pozzolona Portland Cement 43 MPA	ACC, L&T, Birla Super
2.	RMC	ACC,L&T,Birla,Lafarge
3.	STEEL	
A	Reinforcement Steel	SAIL, RINL, TISCO
B	Structural Steel Section : Beam, Channel, Tees, Flats, angles, tube	TATA, SAIL, JINDAL, RINL
C	Welding Electrodes	Advani Oerlikon, Ador, Fusion
4.	Concertina Coil	<u>Amstrong wires, A-1 Fence, Shiva Fencing</u>
5.	PAINTS	
A	Epoxy/Synthetic Enamel	Nerolac, Asian, Berger, ICI



6.5 SCHEDULE OF DRAWINGS

ARCHITECTURAL AND LANDSCAPE DRAWINGS AND DOCUMENTS		
1	BW2-A-1.0	Boundary wall Layout Plan
2	BW2-A-1.1	Boundary wall Details
3	BW2-L-01	Site plan - boundary wall slope and type



SCHEDULE OF DRAWINGS

ARCHITECTURAL AND ELECTRICAL DRAWINGS AND DOCUMENTS		
1	General Notes	1
2	Site Plan	2
3	Foundation Plan	3
4	Ground Floor Plan	4
5	First Floor Plan	5
6	Sectional Elevation	6
7	Electrical Layout	7
8	Sanitary Layout	8
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7.1. SCHEDULE OF QUANTITIES

SUMMARY - BOUNDARY WALL & ALLIED WORKS

S.No.	Description of Work	Amount (Rs.)
1	Dismantling	-3,231.70
2	Area Clearance	42,139.76
3	Earth Work	8,64,435.15
4	Plain Cement Concrete	11,84,678.00
5	Reinforced Cement Concrete	20,02,534.48
6	Form Work	3,48,264.00
7	Stone Work	1,21,05,365.00
8	Steel Work	71,58,023.40
9	Finishing	17,96,585.30
	Total	2,54,98,793.39
Percentage to be quote by the tenderer above/below/atpar of the total amount (in %)		
Percentage to be quote by the tenderer above/below/atpar of the total amount (in %) in figure		
Total Quoted amount in figures		
Total Quoted amount in words		



BOUNDARY WALL & ALLIED WORKS
BILL OF QUANTITIES (BOQ)

S No	DSR Code No	Description	Quantity	Unit	Rate	Amount
1		DISMANTALING				
1.1	15.34	Dismantling and stacking within 50 metres lead, fencing posts or struts including all earth work and dismantling of concrete etc. in base of:				
	15.34.2	R.C.C.	360	No.	182.60	65,736.00
1.2	15.36	Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.	1717	kg	26.25	45,061.14
1.3	15.17	Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:				
	15.17.2	Channels, angles, tees and flats	3052	kg	1.70	5,188.54
1.4	MR	Credit for dismantled barbed wire & concertina wire received as per item no. 1.2 as per direction of Engineer in Charge.	1717	kg	25.00	-42,915.38
1.5	MR	Credit for dismantled MS angles received as per item no. 1.3 as per direction of Engineer in Charge.	3052	kg	25.00	-76,302.00
		Total carried over to summary				-3,231.70
2		AREA CLEARENCE				
2.1	2.31	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	3358	Sqm	12.55	42,139.76
		Total carried over to summary				42,139.76
3		EARTH WORK				
3.1	2.8	Earth work in excavation by mechanical means (Hydraulic Excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
	2.8.1	All kinds of soil.	110	cum	252.30	27,725.25



S No	DSR Code No	Description	Quantity	Unit	Rate	Amount
3.2	2.9	Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains not exceeding 1.5 m in width or 10 sqm on plan including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50m.				
3.2.1	2.9.1	Ordinary rock	110	cum	448.15	49,247.20
3.2.2	2.9.3	Hard Rock (Blasting Prohibited)	787	cum	1080.55	8,49,992.24
3.3	1157	Credit for taking away the excavated hard rock from site of work as per directions of Engineer in charge. (After using the available/excavated stone in boundary wall in foundation, the balance unused stone will be disposed off by the contractor by removing from site).	157	cum	1100.00	-1,73,058.44
3.4	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, for all lead and lift (the rate is inclusive of carriage of available earth from anywhere with in site)	503	cum	219.65	1,10,528.90
Total carried over to summary						8,64,435.15
5		PCC				
4.1	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level				
	4.1.5	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	130	cum	6259.10	8,16,777.00
4.2	4.5	Providing and fixing up to floor five level precast cement concrete string or lacing courses, copings, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, stair cases, etc., including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand), cost of required centering complete.				
	4.5.1	1:1.5:3 (1 cement : 1.5 coarse sand (zone III) : 3 graded stone aggregate 20 mm nominal size)	43	cum	8537.75	3,67,901.00
Total carried over to summary						11,84,678.00



S No	DSR Code No	Description	Quantity	Unit	Rate	Amount
5		RCC				
5.1	5.22 & 5.22A	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete. Upto all level.				
	5.22.6 & 5.22A.6	Thermo-Mechanically Treated bars.	13294	kg	83.50	11,10,072.00
5.2	5.37	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).				
	5.37.1	All works upto plinth level	105	cum	8398.65	8,81,858.00
5.3	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	16	quintal	673.30	10,604.48
		Total carried over to summary				20,02,534.48
6		FORM WORK				
6.1	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
6.1.1	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete	336	sqm	284.85	95,646.00
6.1.2	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	458	sqm	552.05	2,52,618.00
		Total carried over to summary				3,48,264.00



S No.	DSR Code No	Description	Quantity	Unit	Rate	Amount
7		STONE WORK				
		Note:- The contractor will get the sample of stone approved by PA/SAU before supply. The stone brought at site will be similar to the one used in existing boundary wall.				
7.1	7.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with : (Available stone will be used in foundation for which recovery shall be made as per item no 7.2)				
	7.1.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	849	cum	6120.80	51,98,751.00
7.2	AR	Deduct for using available stone in masonry work, obtained from excavation in above item no 3 after the approval of the engineer in charge. (In this case item no 3.3 shall not be operative for the corresponding quantity of stone used in wall. The quantity shall be measured in completed wall .	629	cum	1661.20	-10,45,399.00
7.3	7.2	Random rubble masonry with hard stone in superstructure above plinth level and upto floor five level, including leveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) at window sills, ceiling level and the like.				
	7.2.1	Cement mortar 1:6 (1 cement : 6 coarse sand).	1062	cum	7489.95	79,52,013.00
		Total carried over to summary				1,21,05,365.0
8		STEEL WORK				
8.1	10.25	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
	10.25.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	46499	kg	131.00	60,91,369.00



S No	DSR Code No	Description	Quantity	Unit	Rate	Amount
8.2	16.53	Providing and fixing concertina coil fencing with punched tape concertina coil 600 mm dia 10 metre openable length (total length 90 m), having 50 nos rounds per 6 metre length, upto 3 m height of wall with existing angle iron 'Y' shaped placed 2.4m or 3.00 m apart and with 9 horizontal R.B.T. reinforced barbed wire, studied with G.I. staples and G.I. clips to retain horizontal, including necessary bolts or G.I. barbed wire tied to angle iron, all complete as per direction of Engineer-in-charge, with reinforced barbed tape(R.B.T.) / Spring core (2.5mm thick) wire of high tensile strength of 165 kg/ sq.mm with tape (0.52 mm thick) and weight 43.478 gm/ metre. The width of tape should be 19mm before crimping on the wire. Zinc coating on the tape should be a minimum of 120gsm/sqm.(cost of M.S. angle, C.C. blocks shall be paid separately)	3668.00	m	291	10,66,654.40
		Total carried over to summary				71,58,023.40
9		FINISHING				
9.1	Derived from 13.52.1	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including preparation of surface, etc. Complete				
	13.52.1	on steel work(Primer included in base item of steel railing	1091	sqm	132.19	1,44,255.00
9.2	Derived from 13.52	Finishing with Epoxy paint (one or more coats) on old work on existing railing fixed over boundary wall after welding of frame and fixing of concertina coil complete including removal of heat scales and applying a coat of approved primer and two coats of epoxy paint over welded area including preparation of surface etc.complete				
		On existing steel railing over boundary wall (The MS frame are proposed to be fixed at 3 meter distance and are to be paid separately)	1371	sqm	95.85	1,31,396.00
9.3	13.33	Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand) :				
9.3.1	13.33.1	Flush/ Ruled pointing	4896	sqm	285.40	13,97,204.10
9.3.2	13.33.2	Raised and cut pointing	238	sqm	520.75	1,23,730.20
		Total carried over to summary				17,96,585.30

- [illegible]

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and 22, 44, 66, 20, 22, 24.

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Boundary Value Layout

[illegible]

EXISTING FENCING ON SITE

RR BOUNDARY WALL
COMPLETED IN PHASE 1

BARBED WIRE BOUNDARY
WALL COMPLETED IN PHASE 1

PROPOSED BOUNDARY WALL
COMPLETED IN PHASE 1

EXISTING BARBED WIRE FENCE
TO BE DISMANTLED





NOTES:

1. ALL DIMENSIONS ARE IN METERS.
2. ALL DIMENSIONS ARE TO FACE UNLESS SPECIFIED.
3. ALL DIMENSIONS ARE TO FACE UNLESS SPECIFIED.
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9. ALL DIMENSIONS ARE TO FACE UNLESS SPECIFIED.
10. ALL DIMENSIONS ARE TO FACE UNLESS SPECIFIED.

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SOUTH ASIAN UNIVERSITY
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2023

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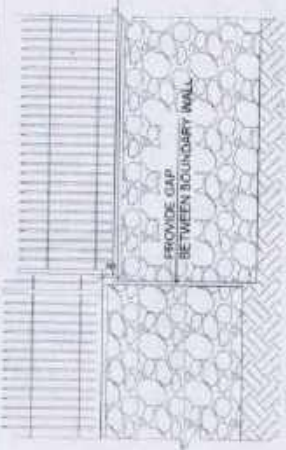
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S.NO.	SLOPE TYPE	% OF SLOPE	DROP IN BOUNDARY WALL
1	A - 7.5% TO 14.9%	0.3%	AT EVERY 300mm DROP IN SITE LEVEL, STEP OF 300mm TO BE GIVEN IN THE BOUNDARY WALL
2	B - 15.0% TO 19.9%	0.7%	
3	C - 20.0% AND ABOVE	1.0%	



A ELEVATION OF BOUNDARY WALL

1. ALL DIMENSIONS ARE IN METERS UNLESS SPECIFIED OTHERWISE.
2. FINISHES TO BE AS SPECIFIED IN THE SCHEDULE.
3. ALL WORKMANSHIP TO BE IN ACCORDANCE WITH THE SPECIFICATIONS OF THE BUREAU OF PUBLIC WORKS, NEW DELHI.
4. ALL MATERIALS TO BE OF THE BEST QUALITY AND TO BE SUPPLIED BY THE CONTRACTOR.
5. ALL WALLS TO BE CONSTRUCTED WITH REINFORCED CONCRETE.
6. ALL WALLS TO BE FINISHED WITH WHITE WASH.
7. THE TOP OF THE WALLS TO BE FINISHED WITH A 100 MM THICK CONCRETE SLAB.
8. THE WALLS TO BE FINISHED WITH A 100 MM THICK CONCRETE SLAB.
9. THE WALLS TO BE FINISHED WITH A 100 MM THICK CONCRETE SLAB.

NO.	DESCRIPTION	QUANTITY	UNIT
1	REINFORCED CONCRETE WALL	10.00	M ³
2	REINFORCED CONCRETE SLAB	10.00	M ³
3	REINFORCED CONCRETE COLUMN	10.00	M ³
4	REINFORCED CONCRETE BEAM	10.00	M ³
5	REINFORCED CONCRETE FOOTING	10.00	M ³
6	REINFORCED CONCRETE ROOF	10.00	M ³
7	REINFORCED CONCRETE CHIMNEY	10.00	M ³
8	REINFORCED CONCRETE STAIR	10.00	M ³
9	REINFORCED CONCRETE LIFT	10.00	M ³
10	REINFORCED CONCRETE PAVEMENT	10.00	M ³

PROJECT
SOUTH ASIAN UNIVERSITY
NEW DELHI, INDIA

DESIGNER
SOUTH ASIAN UNIVERSITY
NEW DELHI, INDIA

DATE
10/10/2020

SCALE
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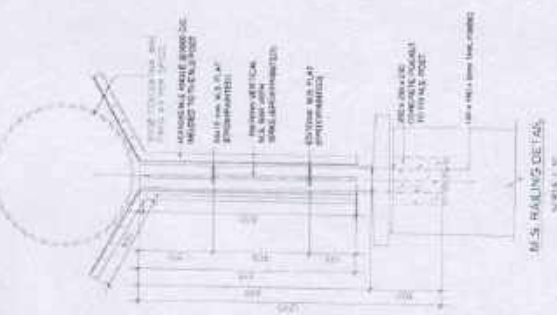
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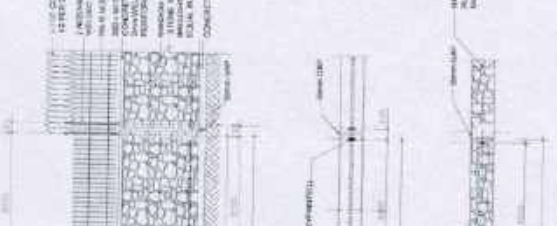
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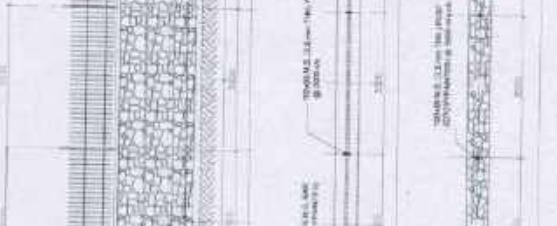
ELEVATION OF BOUNDARY WALL



PLAN OF BOUNDARY WALL



SECTION A



SECTION B



SECTION C



ELEVATION OF BOUNDARY WALL



PLAN OF BOUNDARY WALL

