



KERALA SHIPPING AND INLAND NAVIGATION
CORPORATION LTD

(A Government of Kerala Undertaking)

38/924 A, Udaya Nagar Road, Gandhi Nagar, Kochi -682020.

Tel: 0484 2203614/2206232, Fax 2206848 www.ksinc.in

VARIOUS CIVIL WORKS AT KSINC

SLIPWAY COMPLEX, THOPPUMPADY.

Tender No	CE-409/SWC/2017
Cost of Tender documents	Rs. 2,500/- +GST
Last date of tender submission	03.10.2017, 03.00 PM
EMD	Rs. 50,000 /-
Date of tender opening	03.10.2017, 03.30 PM

Notes:-

Interested contractors / construction firms may register themselves with us by sending an email to ceksinc@gmail.com. This will help us to communicate any changes/ extensions / amendments in the tender.

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No. CE-409/SWC/2017

Dated 15.09.2017

**TENDER FOR VARIOUS CIVIL WORKS AT KSINC SLIPWAY COMPLEX
THOPPUMPADY, COCHIN**

Sealed tenders invited in two bid system, from reputed and experienced contractors / construction firms for the Various Civil works at KSINC Slipway Complex Thoppumpady, Cochin. Tender documents can be downloaded from the website of the Company, www.ksinc.in. The bidders have to pay the cost of tender documents, Rs. 2,500/- +5% GST by DD in favor of K.S.I.N.C Ltd., payable at Ernakulam, along with the tender. Last date of submission of Bids is 03.00 P.M on 03.10.2017.

**Sd/-
Managing Director**

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KERALA SHIPPING AND INLAND NAVIGATION CORPORATION
UDAYA NAGAR, KADAVANTHARA, COCHIN

SUMMARY

- 1: Name of work : Various Civil works at KSINC Slipway Complex,
Thoppumpady
- 2: Defects Liability Period : 6 (Six) Months from the date of work completion.
- 3: Date of Commencement : 15th OCTOBER 2017
- 4: Time / Duration of work : 90 days from the date of issue of work order.
- 5: Liquidated damage : 0.5 % of the estimated amount per week subject
the Maximum of 10% of accepted contract value.
- 6: Earnest Money Deposit : Rs. 50,000 /- as demand draft payable to

***Kerala Shipping and Inland Navigation
Corporation Ltd.
Udaya Nagar, Kadavanthara, Cochin***
- 7: Security Deposit : 10% of gross value of contract value.
- 8: Mobilization Advance : Nil
- 9: Value of Works for
Interim Certificate : Rs. 10,00,000 /- Lakhs minimum
- 10: Rate of Interest for
delayed payment : Nil
- 11: Insurance Policy : Fully covered by the Contractor.
- 12: Cost of Tender Documents : Rs.2,500/- + GST
- 13: The Validity of the Tender is 6 months from the date of opening of the tender.

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GENERAL CONDITIONS OF TENDER

- 1) The tender document for the "Various Civil works at KSINC Slipway Complex" is available in the website of the Company. www.ksinc.in. Bidders are requested to download this tender document from the company website. Those who are submitting downloaded documents, are required to furnish the cost of the tender document as a separate DD for Rs.2,500.00 + GST @ 5%.
- 2) Before the deadline for submission of Bids, the K.S.I.N.C may modify any of the specifications or the bidding documents by using addenda. Such modifications will be posted in the website of K.S.I.N.C. Bidders shall prepare their quotation / offer based on the modifications / addenda.
- 3) The bids shall be submitted under two bid system, Part I, the "Technical bid" containing all details about the bidder, work completion certificates of similar rail fixing and civil works, details of machineries/equipments etc. and Part II - "Financial Bid" in the same format as given in the Price Schedule attached here to.
- 4) The **Part I -Technical bid** shall contain:
 - a) Personal and contact details of the bidder;
 - b) Details of the list of machineries and other facilities;
 - c) Details proving the eligibility criteria of the contractor
 - d) Satisfaction reports from previous customers;
 - e) Certificate from the main banker of the party certifying that the party is of sound financial position to execute projects of Rs. 1 Crore.
 - f) Registration details like valid A or B or C Class contract license from PWD /CPWD/MES / Irrigation Department /previous experience in similar works including GST, VAT, CST, PAN No, ESI and PF registration etc
- 5) The **Part II - Price bid** shall be in the same format as given in the price schedule annexed hereto. Any additions, omissions or conditions there to be not acceptable. Any deviation from the given format will make the price bid invalid.
- 6) Both the bids shall be placed in separate sealed covers indicating/ super scribing the name of the work and "Technical bid / Price bid" as the case may be. Both

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covers thus sealed shall be placed in a third sealed cover, super scribing name of the work.

- 7) The bidder shall sign all pages of the tender document and the Annexures and attachments in acceptance of the Conditions of tender.
- 8) The rates shall be inclusive of all taxes, levies, cess, octroi or any other local, state or central taxes as applicable/ charged by local, state or Central Government. All. The company shall not allow any other payment or enhancement in rates for any reason.
- 9) Duly filled and signed tender documents shall be submitted before 03.10.2017, 03.00 P.M at the following address super scribing the name of the work:

**The Managing Director,
Kerala Shipping and Inland Navigation Corporation Ltd
38/924-A, Udaya Nagar Road,
Gandhi Nagar,
Kochi - 682 020**

- 10) Tender(s) received late on account of any reason, whatsoever may be the case and telegraphic tender(s) shall not be entertained.
- 11) **Validity:** The Offers shall remain valid for a period of **six months** from the date of opening of the Financial /Price bid.
- 12) **Signatory to the Offer:** The Tender should be signed only by a duly authorized representative of the contractor / contracting firms, whose name and designation shall appear in Capital letters below the signature.
- 13) Received tenders will be opened on 03.10.2017 at 03.30 P.M. The Technical bids also will be opened on the same time. The financial bids of the qualified bidders will be opened later. The date and time of the opening will be intimated to the qualified bidders separately.
- 14) E.M.D for this tender is Rs. 50,000/- , which is to be submitted along with the tender in form of Demand draft drawn in favour of "K.S.I.N.C Ltd" payable at Ernakulam. EMD carries no interest.
- 15) The (pre)qualification criteria in the technical stage will be as follows. Bids by parties not matching these criteria will be summarily rejected.
 - a) For considering the work, the bidder should have completed similar civil works for value not less than 50 lakhs during the last five years.
 - b) The Company is not bound to accept the lowest bid and may reject it without assigning any reasons. K.S.I.N.C also reserves the right to reject any/all the

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tenders without assigning any reason thereof. K.S.I.N.C also reserves the right to select the eligible bidder on the basis of the satisfactory of the managing authority of KSINC. Priority will be given to those having similar work experience.

- 16) The successful bidder, within seven days of receipt of the work order have to furnish a **security deposit cum performance guarantee equal to 10% of the value of the contract** in the form of an unconditional and irrevocable bank guarantee for a period not less than 12 months
- 17) The successful bidder also may require to execute agreement with the company in stamp paper worth Rs.200/- within 15 days receipt of the work order.
- 18) The work to be completed within the period agreed to by the Company and indicated in the work order. **Details of the work schedule and the expected date of completion shall be submitted to the company along with the Technical Bid.**
- 19) The contractor shall use only quality materials for the work, List of approved items and after approval from both the consultant and KSINC.
- 20) If the works are not completed within the stipulated time, fine will be imposed at the rate of 0.5% of the contract value for each week of delay for the first three months and thereafter at the rate of 1% of contract value per week subject to a maximum of 10% of contract value.
- 21) KSINC shall not be responsible for any accident/theft or other damages occurred while the construction. The contractor must take adequate insurance to cover the risks. Contractor should also meet all the regulations and labour welfare measures such as ESI, PF etc and necessary documents to be provided for verification.
- 22) The KSINC requires that Bidder/Suppliers/Contractors under this contract, observe the highest standard of ethics during the bidding process and execution of this contract. Any effort by the Bidder to influence the KSINC's bid evaluation, bid comparison or contract award decisions, may result in the rejection of this bid. The successful bidder may be required to execute an Integrity Pact Agreement as per Annexure II.
- 23) The jurisdiction for all disputes arising out of this tender, subsequent work order, agreement or any other matter related thereto shall be the Courts in Ernakulam, irrespective of the location of the bidders.
- 24) If any of the bidders have any doubt / queries to be clarified, it shall be sent to the following email: ceksinc@gmail.com or faxed to 0484-2206848. The decisions taken or clarifications issued will be posted in the website of the Company and will be applicable to all bidders.

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TECHNICAL SPECIFICATION

I. All materials used in the works shall be of the best quality of their respective kinds and as specified herein, obtained from sources and suppliers approved by the Engineer in Charge (EIC) or his authorized representative and shall conform to the latest edition of Indian Standards issued by the Bureau of Indian Standards.

II. All materials used in the works shall be subjected to inspection and tests. **Samples of all materials proposed to be employed in the permanent works shall be submitted to the EIC for approval before they are brought to the site.** Samples required for approval and testing must be supplied in sufficient time to allow for testing and approval, due allowance being made for the fact that if the first samples are rejected, further samples may be required. Delay to the works arising from the late submission of samples will not be acceptable as a reason for delay in the completion of the works. Materials shall be tested before leaving the manufacturer's premises, quarry or source, where possible. Materials shall also be tested on the site and they may be rejected if found not suitable or not in accordance with the specifications. The contractor shall provide all assistance, instruments, machinery, labour and materials as are normally required for examining, measuring and testing any work.

III. No material shall be used in the works unless they have first been approved by the EIC.

IV. Before ordering any materials of any description for the works, the Contractor shall submit for the approval of the EIC, the names of the makers and suppliers proposed and any other detail required by the EIC.

V. All materials used in the works shall be stored on racks, supports, in bins, under cover, etc. as appropriate to prevent deterioration or damage from any cause whatsoever; without affecting day to day activities of the yard and to the entire satisfaction of the EIC or his representatives.

VI. **Materials** for the temporary works shall not be used for permanent works unless otherwise approved in writing by the EIC. Granting of such permission shall not prejudice the right of the EIC to reject materials so used, which have become unfit for use in the permanent works.

VII. Sampling of materials for approval and testing as called for under the appropriate Indian Standard or other relevant standard specification, and sampling and testing referred to in this specification, is to be done without charge and unless otherwise specified, the cost of all such tests and sampling shall be deemed to be included in the rates and prices quoted in the Bill of Quantities.

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VIII. A high standard of workmanship in all trades will be required. The Contractor shall ensure that only skilled and experienced tradesmen are employed.

IX. The Contractor shall be responsible for supply, use and maintenance of all construction plant and equipment and he shall ensure that it is suitable for the work and is maintained in such a manner as to ensure its efficient working. The EIC may direct that plant, which is not efficient and is prejudicial to the quality of the work, be removed from the site and replaced by plant to his/her satisfaction. The plant and machinery deployed for the work shall not be removed from the site till completion of work in all aspects and equipment shall not be taken out from site without approval of the Engineer-in-charge or his representative.

X. The Contractor's supervisory staff shall be men fully experienced in the types of work being carried out under their supervision and capable of ensuring that it is done well and efficiently.

XI. Where required, the Contractor shall furnish details of his temporary works as may be called for by the EIC and the Contractor shall satisfy the EIC as to their safety and efficiency. The EIC may direct that temporary works which he considers unsafe or inefficient shall be removed and replaced in satisfactory manner.

XII. All materials not herein fully specified and which may be offered for use in the works shall be subject to the approval of the EIC without which they shall not be used anywhere in the Permanent Works.

XIII. On completion of each work, the space to be cleaned and no waste material to be dumped in yard space.

XIV. The contractor shall ensure that all workers engaged at site use safety items like safety shoe, safety helmets, coveralls etc. (no dothis allowed inside yard).

XV. ID proof/PF/ESI details of all workers to be submitted well in advance for allowing entry inside yard and separate register to be maintained for the same.

XVI. Aggregates

a) Aggregates shall comply with the requirements of IS: 383 'Coarse and Fine Aggregates from Natural Sources for Concrete' (20mm broken stone to be used).

b) The aggregate shall be hard, strong, durable, clean and free from any adherent coatings or other deleterious matter and shall be obtained from an approved source. Aggregates which are chemically reactive with alkalis of cement shall not

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be used. Aggregates which are not clean shall be washed in clean fresh water to the satisfaction of the EIC.

c) Aggregates shall be stored at the site on clean, well-paved and drained areas which are not liable to flooding. The various sizes and types of aggregates shall be well separated and the layout and sitting of the storage areas shall be submitted to the EIC for approval prior to the starting of construction.

d) Any aggregate brought to the site which is not approved by the EIC shall be immediately removed from the site.

e) Storage of all materials/ aggregates to be done without affecting day to day activities of yard/pathway.

XVII. Cement

a) *Generally*, ordinary Portland Cement complying with the requirements of IS: 269 shall be used in all works.

b) The contractor shall be responsible for keeping the cement in sound and acceptable condition till it is used in the works. Any cement which deteriorates while in the stock and is rejected as unsuitable by the EIC shall be removed from the Site and replaced by the Contractor at his own expense.

c) In order to ensure due progress, the Contractor shall at all times maintain on his site at least such a stock of cement as the EIC may from time to time consider necessary. No cement shall be used upon the works until it has been accepted as satisfactory by the EIC.

d) Cement in bags shall be unloaded under cover and stored in a perfectly watertight and well ventilated building having a floor raised not less than 30 cm. from the ground. An air space shall be left between the floor and the bottom layer of the bags. Each consignment shall be stacked separately therein to permit easy access for inspection and a record shall be kept so that each consignment may be identified by a serial number and date of delivery. Cement shall be issued from the store in the order in which it is received on site, commencing with the consignment which has been in the store for the longest period of time, also without affecting the activities of yard/pathway.

e) Procurement is included in Contractor's scope of work.

f) The EIC may reject any cement which found not acceptable due to any cause such as bad storage, inadequate protection, caking etc. such rejected cement should be removed by the Contractor forth with at his cost and ensure that these never mixed-up.

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XVIII. Water

a) The contractor shall make his own arrangements for supply of water at no extra cost to the employer. Water used for cement concrete, mortar plaster, grout, curing, cooling or, washing of aggregates shall be potable water. The deleterious materials and its quantity should be within the permissible limits as per IS: 456 when tested as per IS: 3025. In case of doubt the EIC may required the contractor to get the water tested from an approved laboratory at contractor's expense.

XIX. Concrete

a) Concrete used for all piles, footings, beams, slabs, anchor slabs, capping beams should have a Cube strength corresponding to the grade of concrete after 28 days of curing. The no. of samples to be taken for testing is as per the following chart (each sample should contain 6 number of cubes).

Quantity of Concrete in work, m³	No. of Sample
1 - 5	1
6 - 15	2
16 - 30	3
31 - 50	4
51 and above	4 plus one additional sample for each additional 50 m ³ of part thereafter.

b) The concrete tested as per specified procedure herein shall be deemed to comply with the strength requirement if the criteria specified in Clause 15.1 of IS: 456 is met with. The concrete shall be deemed not to comply with the strength requirements if the concrete has strength less than that required by Clause 15.2 of IS: 456 and consequential action i.e. testing of structures shall be undertaken as directed by the EIC.

c) The arrangements for depositing concrete shall be subject to the approval of the EIC. In no case shall concrete be dropped or thrown from a height of more than 1.0 m. Concreting of beams, slabs, and similar members shall be carried out in one continuous operation to the full depth of the member and the sequence of placing shall be arranged as to avoid disturbance of partially set concrete. The concrete shall be deposited as close to its final position as practicable in order to prevent segregation. Freshly laid concrete shall not be wheeled over or otherwise disturbed. When depositing concrete adjacent to a construction joint, special care shall be taken not to disturb the dowels or other reinforcing bars projecting from the existing concrete. In foundations, walls, and columns where the full height is not being poured in one continuous operation the surface of each lift shall be

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finished horizontal and any laitance removed between the period of initial and final set. For wall concrete shall be placed in horizontal layers approximately 150 to 200 mm in thickness. Not more than half an hour should elapse between the placing of successive layers of concrete in any portion of the slip form. This is to ensure that each pour is thoroughly, worked into and made homogeneous with the preceding pour.

d) The Contractor shall agitate the placed concrete thoroughly into place by means of a sufficient number of mechanical vibrators complying with IS: 2505, IS: 2506 and IS: 4656. The vibrator shall be allowed to sink freely of its own weight until it enters the previous lift. It shall be withdrawn immediately at the same rate and used at a new location. Concrete once vibrated shall not be vibrated again.

e) Curing of concrete shall be in accordance with IS:456. Concrete shall be cured by keeping it moist for the period of time specified herein to ensure that complete hydration and hardening takes place. All concrete shall be cured by use of water which shall be continuously (not periodically) maintained on all exposed surfaces. Curing shall be assured by use of an ample water supply under pressure in pipes, with all necessary appliances of hose, sprinklers and spraying devices. Continuous fine- mist spraying or sprinkling shall be used, unless otherwise specified or approved by the EIC. Wherever, in the judgment of the EIC it may be necessary, the continuous spray method may be omitted and a covering of sand or other approved material such as burlap which will hold moisture for long periods and prevent loss of moisture from the concrete shall be used. Type of covering which would stain, disfigure, or damage the concrete during and after the curing period will not be approved. Approved covering shall be kept continuously wet during the specified curing period. Concrete shall be maintained in moist condition for at least the first 7 days after placing. Other curing period may be used with the permission of the EIC, if the specified strengths are obtained. The Contractor shall have all equipment and materials required for curing on hand and ready to use before concrete is placed. For curing of concrete in pavements, side walls, floors, flat roofs or other level surfaces the ponding method of curing is preferred. The method of containing the ponded water shall be approved by the EIC. Special attention shall be given to edges and corners of the slabs to ensure complete and proper protection to these areas. The ponded area shall be kept continuously filled with water and leaks shall be promptly repaired. Curing of concrete shall start after 8 hours of placement and in hot weather within 4 hours of placement for exposed faces. During the first 24 hours, the concrete shall be cured by use of wet burlap or such other means to cover the concrete surfaces. In very hot weather precaution shall be taken to see that the temperature of wet concrete does not exceed 38°C while placing.

f) Newly placed concrete shall be protected by approved means from rain, sun and wind. Concrete placed below the ground level shall be protected from falling earth during and after placing, surface shall be kept free from contact with such ground

or with water draining from such ground during placing of concrete and for a period of at least 3 days unless otherwise directed by the EIC. The ground water around newly poured concrete shall be kept to an approved level by pumping or other approved means of drainage and adequate steps shall be taken to prevent flotation and flooding. Steps shall be taken to protect immature concrete from damage by debris, loading, vibration, abrasion, mixing with deleterious materials that may in the opinion of the EIC impair the strength and/or durability of the concrete. Approved curing compounds may be used in lieu of moist curing with the permission of EIC. Such compounds shall be applied to all exposed surfaces of the concrete as soon as possible after the concrete has set.

XX. Shuttering

- a) All shuttering and supports included under the contract shall be designed by the Contractor and relevant drawings together with calculations for strength and deflection shall be submitted to the EIC for approval before commencement of the work.
- b) Material for shuttering shall be of timber, plywood, steel or any other material as agreed or directed by the EIC. Timber used for shuttering shall be easily workable with nails without splitting and of lightweight. It shall be stiff and strong enough to avoid undue deflection when loaded, be stable and not liable to warp when exposed to sun and rain or wetted during concreting. It shall not be so soft as to get damaged easily on the contact faces under normal condition or erecting forms, fixing steel and pouring concrete. All forms shall be fixed in perfect alignment and adequately be roped by ballies, steel posts and fixed in their correct position and shall be sufficiently strong to withstand the dead or live loads and forces caused by ramming and vibrations of concrete and other incidental loads imposed upon it during and after casting of concrete. Particular care shall be taken to maintain alignment of plane and uniformity of profile with glove tight forms at the junctions between columns, beams, walls and slabs and between lifts or joints in the work. All open joints are to be covered with building paper of approved quality.
- c) Wedges and clamps shall be used wherever possible instead of nails. Wire ties to shuttering through concrete shall not be permitted. If internal ties are necessary then bolts or rods shall be used through metal sleeves so that such metal sleeves shall be left within 40 mm of finished concrete surface. On the removal of such bolts or rods, the holes left shall be thoroughly filled with a stiff paste comprising of one part of cement to one part of sand. No ties whatsoever shall pass through any concrete members designed to be part of a watertight structure.
- d) The Contractor shall be responsible for properly supporting all concrete until it is sufficiently strong for the removal of the formwork including the props. No

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formwork shall be removed without the prior consent of the EIC. All formwork shall be so constructed as to permit easing and removal without jarring the concrete. Particular care shall be taken to avoid damaging the concrete when removing formwork from concrete surfaces which are required to be left with an 'as struck' finish. When props are to be left in position under beam and slabs the formwork shall be constructed in such a way that the props are in no way disturbed when the remainder of the formwork is removed. No patchwork or repairing of concrete surface shall be done without the notice of the EIC. All surfaces of concrete after stripping of formwork shall be got approved by the EIC before they are touched. The EIC's decision shall be final regarding the acceptance of the quality of concrete surface. Before removal of props and formwork, it shall be ensured that the concrete has attained the minimum strength required to avoid any unacceptable deflection due to shrinkage creeps etc. and the minimum striking period should follow as per provision of IS:456.

- e) The following clauses shall be read in conjunction with the section pertaining to concrete. All RCC work shall comply with IS: 456.

XXI. Steel

- a) Steel shall comply with IS: 456-2000.
- b) All reinforcements should be free from rusts, damages etc.
- c) Bent up of steel to be done by as per instruction of EIC.
- d) HYSD bars to be used. (Fe 500)
- e) Cover to be provided as per IS: 456-2000 code provisions.
- f) Steel should be properly stacked and covered with polythene sheet to avoid corrosion.

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Part-I Technical Bid

(To be filled and attached with part I- Technical bid. Details required as per tender conditions to be attached separately)

1	Name of the bidder	
2	Address for Communication	
3.	Contact person and phone numbers	
4	Constitution and registration numbers if any	
5	PF Registration no.	
6	ESI registration No	
7	PAN No	
8	GST/VAT/CST Registration no	
9	Details of turn over	Use separate sheet / Attach copies
10	Details of previous experiences	Use separate sheet / Attach copies of work completion certificates
11	List of key personnel	Use separate sheet
12	Other details if any	Use separate sheets
13	Details of infrastructure	Use separate sheets

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14	Clause under which eligibility claimed	
15	Details of bankers	
17.	Details of EMD furnished	

Summary of financial data:

		2016-17	2015-16	2014-15
1.	Total turnover			
2	Turn over for the last 5 years			
3	Turnover of last year			
5	Total liabilities			
6	Net worth			
7	Net profit			
8	Unpaid / contested statutory liabilities (if any)			

DECLARATION

1. I/We hereby undertake that all the information furnished above are correct and true to the best of my knowledge.
2. I/we further undertake that the work of Various Civil works at KSINC Slipway complex and shall be carried out as per the terms and conditions stated in the tender and at the rates specified in the price bid.

Place:.....

Signature:

Date:

Name:

Address:

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PART - 2 PRICE BID

QUOTED RATE OF THE CONTRACTOR

The scope of work includes:

1. Supply and installation of main entrance gate (3m height) and gate to out skirt jetty with RCC foundation and pillars to support the same.
2. Surface cleaning and removal of debris over existing concrete and tar macadam area.
3. Construction of compound wall and increasing height of existing wall.
4. Installation of barbed wire fencing with 'Y' posts on compound wall.
5. Verified tile flooring in staff room.
6. Truss roof for parking shed, security wash tower, store etc.
7. Construction of two numbers security watch towers in structural steel and concrete floors.
8. Drainage construction and concrete channels for winch house ropes.
9. Winch house renovation and flooring at ware house.

SL. NO	DESCRIPTION OF ITEM	UNIT	APX QTY	RATE	AMOUNT
1	Earth work excavation in foundation trenches in all classes of soil including hard laterite (except hard rock which requires blasting) cutting, shoring, strutting, dewatering etc., wherever required, conveying and dumping the excavated earth in convenient places with an initial lead of 0 to 50 m. and lift 0 to 1.5 m including charges for back filling the sides of foundation and basement of ground floor with earth excavated and filling the balance earth in various places within the compound, disposal of surplus earth, including labour charges for breaking clods, watering, ramming, bailing out water etc. complete as directed, complete for foundations.	cum	42		
2	Providing and Filling in basement / wherever required with imported red earth / murrum in layers not exceeding 15 cm, amply watered and consolidated to the correct level and thereafter flooding the surface with water for at least 24 hours, allowed to dry and then rammed, consolidated, after making good any settlement, including the cost of all materials, conveyance, lead, lift, labour, watering, ramming etc complete as directed.	cum	32		
3	Providing and laying Plain Cement Concrete 1 : 4 : 8 (1 cement : 4 fine aggregate : 8 coarse aggregate),				

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	using 40 mm downgraded hard granite broken stone aggregates, including formwork, cost and conveyance of all materials to site, lead and lift charges, labour charges, leveling, compacting, finishing, watering, curing, etc, complete as directed.				
a)	Foundations.	cum	4		
b)	Flooring.	cum	12		
4	Providing and laying Reinforced Cement Concrete, Mix 25 using 20 mm downgraded hard granite broken stone aggregates, machine mixed and mechanically vibrated, including labour, cost and conveyance of all materials, formwork, hire, lead and lift charges, watering, curing, etc. complete as directed, but excluding the cost and labour for reinforcement.				
a)	foundation/ footing/ Drainage base	cum	17		
b)	Plinth beams /floor beams/walls/ drainage walls	cum	10		
c)	floor slabs	cum	27		
d)	Column/Pillar	cum	10		
e)	Flooring/ drainage cover slab/ wire rope channel	cum	20		
5	Supplying, fabricating cold bent, tying and fixing in position, various sizes of high yield strength deformed bars conforming to IS: 1786 - 1985 (Grade Fe 500) for RCC works including straightening, placing in position, binding with 16 gauge black annealed binding wire etc., including cost, conveyance, allowance for wastage, lead, lift, labour charges for all materials etc complete as directed for all works.	kg	9500		
6	Solid Block masonry. Providing and laying cement solid block masonry, 200/150 mm thick, in cement mortar 1:6 (1 cement: 6 coarse sand) using first class precast cement solid blocks (factory made), including cost and conveyance of all materials to site, hire and labour charges for scaffolding, watering, curing, etc. Complete as directed at all levels.	cum	50		
7	Providing Brick masonry, 110 mm thick (Half brick masonry) in cement mortar 1:4 (1 cement: 4 coarse sand) using first class precast cement solid blocks (factory made), including cost and conveyance of all materials to site, hire and labour charges for scaffolding, watering, curing, etc. complete as directed at all levels.	sqm	600		
8	Plastering internal surface of walls, partition walls ceiling etc. with cement mortar 1:4 (1 cement: 4 fine river sand), with a minimum of 12 mm thick one coat floated hard and trowelled smooth, including cost and conveyance of all materials to site, labour charges, lead, lift and hire charges for scaffolding, watering, curing etc complete as directed at all levels.	sqm	330		
9	Plastering external surface of walls, fins columns etc. with cement mortar 1:4 (1 cement: 4 fine river sand),	sqm	1300		

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	with a minimum of 12 mm thick one coat floated hard and trowelled smooth, including cost and conveyance of all materials to site, labour charges, lead, lift and hire charges for scaffolding, watering, curing etc. complete as directed at all levels.				
10	Providing Hard wood door, frame size 100 x 80 mm, using best quality approved hard wood like anjili, thambakam, cheruthek etc, with resin coated flush door shutter, 30 mm thick, providing grooves, beadings, cutting necessary slots to suit shutters etc as detailed including providing and applying a coat of wood primer, a coat of coal tar to the external surface of frame abutted to masonry or RCC, all necessary fittings, labour charges, lead and lift charges etc complete, as directed.	sqm	4		
11	Providing and laying in floors, first quality Vitrified tiles, anti skid type of approved size, Johnson, Khajaria, Naveen or equivalent approved make, in cement mortar 1:4 (1 cement: 4 sand), average 12 mm thick, selecting the tiles to get perfect joints, filling the joints with joint filler of approved brand and matching colour, including cost and conveyance of all materials to site, labour charges, lead, lift and hire charges, watering, curing, etc complete as directed.	sqm	27		
12	Providing and fixing 100 mm high skirting on walls, including staircase skirting, with approved quality vitrified tiles in cement mortar 1:3 (1 cement : 3 sand) with a minimum of 9 mm thickness, preparing the edges of vitrified tiles to get perfect joints on fixing, filling the joints with white cement added with matching colour, fixing the tiles to true line as directed, including cost and conveyance of all materials to site, lead, lift and hire charges, electricity charges, labour charges, watering, curing, etc complete, as directed at all levels.	metre	22		
13	Finishing new cement plastered internal surface of walls, partition walls, parapet, ceilings etc., with one coat of cement primer including cost and conveyance of all materials to site, lead, lift and hire charges for scaffolding, labour charges, watering, curing etc. complete as directed for all levels.	sqm	350		
14	Finishing new cement plastered external surface of walls, with one coat of cement primer including cost and conveyance of all materials to site, lead, lift and hire charges for scaffolding, labour charges, watering, curing etc. complete as directed at all levels.	sqm	1300		
15	Finishing new cement plastered internal surface of walls with two coats of approved decorative/acrylic Emulsion Paint, roller finish, over two coats of primer, two coats of approved putty, Altek or equivalent	sqm	350		

	including cost and conveyance of all materials to site, hire charges for scaffolding, labour charges, etc. complete as directed at all levels.				
16	Finishing new cement plastered external surface of walls, fins, parapet, water tank etc with two coats of approved quality of exterior emulsion, Apex / Snowcryl / Weathershield or approved equivalent over a priming coat of white cement, including cost and conveyance of all materials to site, labour charges, lead, lift and hire charges for scaffolding, watering etc complete as directed, at all levels.	sqm	1300		
17	Providing and painting the wood works with two coats of synthetic enamel paint of approved brand and colour, roller finish, over one coat of primer and two coats of putty, including cost and conveyance of all materials to site, labour charges, etc. complete as directed, at all levels.	sqm	8		
18	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand over 100mm thick compacted bed of 6mm blue metal (baby metal), filling the joints with line sand etc. Finishing the sides with cement mortar 1:4 and cement concrete 1:2:4 wherever required. All complete as per the direction of Engineer-in-charge.	sqm	72		
19	Fabricating and supplying ms grills for windows/ ventilators, openings in parapet, winch house, wire rope channels etc. fabricated with ms flats, round or square bars, tubes, angles etc, including cost and conveyance of all materials and consumables to site, labour charges, lead, lift and hire charges of equipments, tools, tackles etc, providing and applying a coat of zinc chromate primer etc complete as directed.	kg	200		
20	Fabricating and supplying MS gate for compound wall opening, fabricated with ms round or square bars, tubes etc. including cost and conveyance of all materials and consumables to site, labour charges, lead, lift and hire charges of equipments, tools, tackles, hinges, locking facility, labour for fixing charges etc, providing and applying 2 coats epoxy primer, 2 coats enamel paint etc. complete as directed. for				
a)	Main gate with wicket gate (3m height)	kg	400		
b)	Gate to outskirts jetty.	kg	300		
21	Scarifying metalled (water-bound)/ tar macadam road surface including disposal of rubbish, lead up to 50 m	sqm	1700		

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	and consolidation of the aggregate received from scarifying with power road roller of 8 to 10 tonne capacity.				
22	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.	sqm	1700		
23	Surface dressing on new surface in two coats with bitumen of grade VG -10 of approved quality using 1.8 kg of bitumen per sqm with 1.5cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface for first coat and 1.1 kg. of bitumen per sqm with 1.00 cu.metre of stone chippings 11.2 mm nominal size per 100 sqm of road surface for second coat, including consolidation of each coat separately with road roller of 6 to 8 tonne capacity etc. complete.	Sqm	3400		
24	Providing corrugated 20 swg Aluminium Trafford sheet roofing including vertical / curved surface fixed with polymer coated J or L hooks / self screws , bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead, including one coat of approved epoxy primer and two coats of approved epoxy paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlins, rafters, trusses, as per the existing truss of ware house and including cutting to size and shape wherever required. Measurements will be based on area on plan.				
a)	Parking shed for JCB/Hydra	sqm	115		
b)	Security watch tower	sqm	10		
c)	Near store room	sqm	6		
d)	vertical/ curved sides and roof of Winch house	sqm	475		
25	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying one coat epoxy primer and two coats of epoxy paint of approved brand,all complete. With the same design of existing truss at ware house. (Excluding the cost of earth work and RCC foundation for posts)				
a)	Parking shed for JCB/Hydra	kg	1400		
b)	Security watch tower	kg	900		
c)	Near store room	kg	70		
d)	vertical/ curved sides and roof of Winch house	kg	1500		
26	Fencing with angle iron post placed at required distance embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only	metre	2350		

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	and provided with horizontal lines and two diagonals inter woven with horizontal wires, of barbed wire weighing 9.38 kg per 100 m (minimum), between the two posts fitted and fixed with G.I staples, turn buckles etc. complete. (Cost of posts, struts, earth work and concrete work to be paid for separately). Payment to be made per metre cost of total length of barbed wire used. With GI barbed wire.				
27	Supplying and installing at site Angle iron post & strut of required size including bottom to be split and bent at right angle in opposite direction for 10cm length and drilling holes upto 10 mm dia. etc. complete. Dimensions matching to existing posts at yard.	Kg	2500		
28	Making holes in RCC beams, slabs, floors etc, using core cutting machine, for laying pipes with standard clearance and rendering the same in RCC M20, including nominal reinforcement wherever required, complete. The quoted rate shall also include water proofing compound (Conbextra GP-2 / GP-10) for complete sealing the same joints around the pipes for full depth etc to the satisfaction of the Engineer-in - charge including supply of all materials. for				
a)	50 mm dia	each	rate only		
b)	75 mm dia	each	rate only		
c)	110 mm dia	each	rate only		
22	site clearance and surface dressing of the ground/ bituminous road including removing vegetation, inequalities, debris, dust not exceeding 15 cm deep and upto surface of road/ floor and disposal of rubbish, lead upto 50 m and lift up to 1.5 m.	sqm	3400		
23	Demolishing cement concrete manually/by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.	cum	4		
24	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	cum	6		
25	Demolishing brick work in cement mortar/ lime mortar manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.	cum	12		
26	Demolishing stone rubble masonry in cement mortar/ lime mortar manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per	cum	5		

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	direction of Engineer-in-charge .				
27	Taking out doors, windows and clerestory window shutters with frames (steel or wood) including stacking within 50 metres lead : upto area of 3sqm	each	2		
28	Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50 metres lead. DSR 15.18	kg	300		
29	Dismantling steel work manually/ by mechanical means in built up sections without dismembering and stacking within 50 metres lead as per direction of Engineer-in-charge.	kg	Rate only		
30	Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.	kg	75		
31	Dismantling manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge :				
a)	Water bound macadam road	sqm	rate only		
b)	bituminous road	sqm	1500		
32	Dismantling aluminium/Gypsum/plywood partitions, doors, windows, fixed glazing and false ceiling etc. including disposal of unserviceable surplus material and stacking of serviceable material within 50 meters lead as directed by Engineer-in-charge.	sqm	55		
33	Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material within 50 meters lead as directed by Engineer-in-charge.	sqm	36		
34	Providing and fixing partition upto ceiling height consisting of G.I. frame and required board, including providing and fixing of frame work made of special section power pressed/ roll form G.I. sheet with zinc coating of 120 gms/sqm(both side inclusive), consisting of floor and ceiling channel 50mm wide having equal flanges of 32 mm and 0.50 mm thick, fixed to the floor and ceiling at the spacing of 610 mm centre to centre with dash fastener of 12.5 mm dia meter 50 mm length or suitable anchor fastener or metal screws with nylon plugs and the studs 48 mm wide having one flange of 34 mm and other flange 36 mm and 0.50 mm thick fixed vertically within flanges of floor and ceiling channel and placed at a spacing of 610 mm centre to centre by 6 mm dia bolts and nuts, including fixing of studs along both ends of partition fixed flush to wall with suitable anchor fastener or	sqm	42		

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	metal screws with nylon plugs at spacing of 450 mm centre to centre, and fixing of boards to both side of frame work by 25 mm long dry wall screws on studs, floor and ceiling channels at the spacing of 300 mm centre to centre. The boards are to be fixed to the frame work with joints staggered to avoid through cracks, M.S. fixing channel of 99 mm width (0.9 mm thick having two flanges of 9.5 mm each) to be provided at the horizontal joints of two boards, fixed to the studs using metal to metal flat head screws, including jointing and finishing to a flush finish with recommended jointing compound, jointing tape, angle beads at corners (25 mm x 25 mm x 0.5 mm), joint finisher and two coats of primer suitable for board as per manufacture's specification using with 12.5 mm thick double skin fire rated board conforming to IS: 2095: part I and with sliding door/ wall for staking goods, in direction of engineer in charge all complete				
35	Daily wages for				
a)	Skilled Labour (male)	day	rate only		
b)	Skilled Labour (female)	day	rate only		
c)	Semi-skilled labour (male)	day	rate only		
d)	Semi-skilled labour (female)	day	rate only		
e)	Un-skilled labour (male)	day	rate only		
f)	Un-skilled labour (female)	day	rate only		

GRAND TOTAL: /-

In words: (Rupees.....)

I / We agree to Undertake to execute the Various Civil works at K.S.I.N.C Slipway Complex, Thoppumpady for total amount of.....

SIGNATURE / NAME / ADDRESS OF CONTRACTOR

SIGNATURE OF TENDERER