

1. Turnkey construction contract for civil work is proposed to be awarded to contractors at Vizag as per guidelines given herein. However, finishing and MEP works shall be within the Developers scope of work.
2. 2 types of buildings are proposed to be developed. Building 4554 is the first building of RCC labspace consisting of 2 stilts + 4 upper floors – 25,000 sft floor plate. Building 801 is the first building for manufacturing space consisting of G + 2 RCC structure with a floor plate of 10,000 sft and a PEB structure of about 40,000 sft.
3. Scope of work of turnkey civil contractor with labour and material at its cost:
  - a. Excavation, PCC, fillback, compaction, rock cutting upto 1.5mtr dia rocks, earth shifting, etc.
  - b. RCC work including footings, pedestals, plinth, column, slabs, staircases, lift wells, OHT, etc.
  - c. Civil work including brick work, plastering, mullions, transom, tie-beams, water proofing, etc.
  - d. Road work including earth compaction, laying of GSB, DLC, RCC, etc.
  - e. Laying of underground conducting by way of CC hume pipes.
  - f. Miscellaneous civil works in coordination with finishing and MEP works.
  - g. Assisting in shifting/lifting of manufactured sand, sand, tiles, cement, adhesives, etc., for finishing works.
  - h. Cleaning of premises after completion of civil works. Includes removal of extra concrete, mortar, construction debris, etc., from the site.
  - i. Civil work for ETP, STP, electrical power supply, power backup, sumps, etc.
  - j. Curing upto 21 days for all RCC works, 7 days for brick work, 7 days for plastering and 14 days for water proofing works.
  - k. Providing labour, tools and machinery for the above works.
  - l. Providing material for the above works including cement, sand, Msand, aggregate, concrete, RMC, bricks, chicken mesh, water proofing chemicals, ad-mixtures, plasticizer, polyester fiber, CC spacers, etc.
  - m. The contractors scope of work will also include:
    - i. Excavation, consolidation with morrum, sand cushioning, PCC for footings, PCC on ground level, fill back, site leveling, bringing/taking away additional earth, site cleaning, earth compaction, breaking/cutting rocks upto size 1500mm dia, earth shifting, etc.,
    - ii. RCC works including concrete, shuttering, rod bending, curing, tying bunds, hacking, CC spacers, marking, etc.,
    - iii. Civil work including brick work, plastering, chicken mesh, electrical conducting in RCC and brick work, fixing door frames and window templates, CRS/brick work for compound wall, PCC for drive way, compound wall, gate columns, parapet wall, etc.,
    - iv. Water proofing for terrace, bathrooms on upper floors, balconies and head room.
    - v. Contractor shall bring in all materials like cement, RMC, metal, sand, manufactured sand, bricks, blocks, chicken mesh, tools, miller mixture, vibrator, JCB, etc., including transportation cost.

- vi. However, scope of work shall exclude door frames, window templates and material for electrical conducting, which shall be provided by Developer. However, same to be installed by the contractor, if not included in estimate, at extra charge.
  - vii. Rock cutting of rocks larger than 1500mm dia shall be taken up by Developer at its cost.
  - viii. Contractors shall bring all tools like spades, gampas, pots, buckets, brooms, sponges, chicken mesh, drums, scaffoldings, gunny bags for curing, etc., at its cost. Contractor shall also procure safety equipment like helmets, fasteners, shoes, etc.
  - ix. Contractors shall pay the electrician for electrical conducting lines and the same shall be reimbursed to the contractor by the Developer. However, the rates payable for such works shall be as per standard guideline rates of the Developer.
  - x. Infrastructure for curing, accommodation for labour, store room, cleaning of areas around RCC and PEB buildings, electricity charges for construction activity, store room, security lighting, etc., & water charges for curing shall be borne by the contractor. However, the Developer shall provide borewells and one HDPE line for curing at its cost. Sub-meters shall be installed for dividing electricity consumption charges.
  - xi. The Contractor shall make provision for labour camp outside the site (AMTZ campus) at its cost. The Contractor shall make provision for transportation for its workers.
  - xii. All survey and marking related works.
4. Material to be supplied by Developer to turnkey contractor at its cost:
- a. Earth for filling (only if required).
  - b. Steel for all RCC works.
  - c. Electrical conducting, door frames, pipes-MS/PVC.
  - d. Hume pipes, manhole covers.
  - e. Power and water shall be provided at one point in the site. However, consumption charges to be borne by the contractor.
5. Scope of work of Developer:
- a. All finishing works like flooring, tiling, plumbing, electrical, HVAC, pumps, ETP, STP, lifts, painting, cladding, elevation including structural glazing + ACP, doors, windows, etc.
6. The schedule of work shall be as follows:
- a. For bldg 4554:
    - i. PCC – 4 weeks from start of work.
    - ii. Footings + pedestals + plinth – 10 weeks from PCC.
    - iii. Slab 1 – 7 weeks from plinth.
    - iv. Slab 2 – 6 weeks from slab 1.
    - v. Slab 3 to slab 7 – 6 weeks each.
    - vi. Headroom – 3 weeks from slab 6.
    - vii. OHT – 6 weeks from slab 6.
    - viii. D-shuttering to be completed in one week after 3 weeks of curing period.
    - ix. Civil work for each floor to be completed in 9 weeks from casting slab. Includes external and internal plastering.
    - x. Civil works of terrace to be completed in 6 weeks from casting slab 6.
    - xi. Waterproofing of terrace and OHT to be completed in 3 weeks from civil work.

- xii. Roads, compound wall, driveways, etc., to be completed before casting of 3<sup>rd</sup> slab.
  - b. For building 801:
    - i. PCC – 4 weeks from start of work.
    - ii. Footings + pedestals + plinth – 10 weeks from PCC.
    - iii. Slab 1 – 7 weeks from plinth.
    - iv. Slab 2 – 6 weeks from slab 1.
    - v. Slab 3 – 6 weeks from slab 2.
    - vi. Headroom – 3 weeks from slab 3.
    - vii. OHT – 6 weeks from slab 3.
    - viii. D-shuttering to be completed in one week after 3 weeks of curing period.
    - ix. Civil work for each floor to be completed in 9 weeks from casting slab. Includes external and internal plastering.
    - x. Civil works of terrace to be completed in 6 weeks from casting slab 3.
    - xi. Waterproofing of terrace and OHT to be completed in 3 weeks from civil work of terrace.
    - xii. Roads, compound wall, driveways, etc., to be completed before casting slab 3.
  - c. Site cleaning must be completed within 2 weeks from completing of all works.
7. Estimate of total construction cost:
- a. Contractor to provide rates of building material available locally in Vizag like cement, aggregates, sand, Msand, solid blocks, RMC, etc. These rates to be mutually agreed to by both the parties.
  - b. Contractor to provide rates for labour work that include centering + rod bending + concreting of RCC works like footings, pedestals, plinth, slabs, columns, mullions, transoms, tie-beams, shear walls, lift walls, staircase waist slab, 100/150/200/300mm brick work with solid blocks, internal plastering, external plastering, terrace water proofing, OHT water proofing, sumps water proofing, etc.
  - c. Both parties to jointly arrive at estimate of total construction cost based on BOQ + material rates + labour rates. The estimate shall be split into parts based on stage of work for purposes of billing like earth work, PCC, footings, pedestal, column 1, 2, 3, etc., slab 1, 2, 3, etc., head rooms, OHT, sumps, compound wall, floor wise brick work, internal plastering, external plastering, water proofing, etc.
  - d. Contractor shall be given 3% cost for supervision and overheads of the estimated value.
  - e. Contractor shall be given additional 10% as profit on the above. This shall be the final contract value.
  - f. In case of increase or decrease in material cost beyond +/- 5% on the rates agreed above, the contractor value shall be appropriately adjusted.
  - g. For purpose of estimation all rates to be considered before GST. 18% GST (or applicable rate) to be added to the final estimate.
  - h. Quantity of materials consumed shall be accurately recorded on a daily basis and benchmarked with the estimate. In case of variation in BOQ beyond +/- 5% on the estimate, the contractor value shall be appropriately adjusted. The final bill shall be prepared based on actual measurements of work done at site.
  - i. Estimate shall be prepared for brick work, plastering, mullions, transoms, tie-beams, RCC works including footings, pedestal, columns, lifts/shear walls and slabs in advance. Estimates for minor works and miscellaneous works shall be prepared as and when plans for them are finalized i.e., for sumps, OHTs, head rooms, elevation features, roads, grade slab, compound wall, gates, security kiosk, portico, bathrooms, etc.

8. Payment terms:

- a. Mobilization advance of about Rs. 10 lakhs shall be given at the time of commencement of the project. Amount to be recovered at the rate of 20% in each bill.
- b. Thereafter, payment shall be made on a weekly basis on material delivered to site (excluding tools, equipment, centering form work + props, scaffolding, machinery, etc).
- c. Contractor shall raise invoice with GST on completion of each stage of work. Developer to pay the bill within 15 days of completion of each stage of work. However, 5% retention shall be withheld in each bill till completion of project. In case of delay beyond 2 weeks from schedule, the retention amount shall be increased to 10%.
- d. Contractor shall purchase cement, RMC, blocks, bricks, sand, manufactured sand, metal, etc., in its own name and make payments to the suppliers from their account.
- e. Contractors shall be required to maintain details of attendance through biometric/electronic device provided by Developer at site for all its workers.
- f. Contractors shall also record details of hire charges for machinery used at site.
- g. Contractors shall further record materials delivered to site that were purchased by them in the inward register of the Developer. Photocopies (not originals) of bills and DCs to be handed over to the Developer at site before every Thursday.
- h. Admin officers/project managers at site shall be required to send a report of attendance of workers of the contractors at site as per format given in Annexure – A. Similarly, details of hire charges and material received of contractors report must be made as per format given in Annexure – B and C. (draft excel sheet is attached).
- i. DCs and bills received upto Thursday shall be considered for payments on Saturday/Monday. The cycle of report shall be from Friday to Thursday.
- j. Milestone report has to be sent to HO once a week i.e., every Friday/Saturday. Format of milestone report is given in Annexure –D.

9. Penalty for delay:

- a. Delay in casting footings + pedestal + plinth beam – Rs. 10,000/- per day.
- b. Delay in casting each slab – Rs. 10,000/- per day.
- c. Delay in casting OHT + headrooms – Rs. 10,000/- per day.
- d. Delay in completion of brickwork + plastering – Rs. 10,000/- per day per floor.
- e. All penalties shall be waived off if entire RCC + civil works is completed within the schedule period given by the Developer.

10. The above is applicable to all buildings in AMTZ, Vizag.

11. There is every chance of differences arising between contractor and the Developer. For that purpose, meticulous details of labour working at site, hire charges and material brought to site by contractor must be maintained. This will help in determining the value of work done and easy settlement of differences.

12. Procedure laid down for QC shall be strictly followed. QC inspection shall be taken up before casting footings, before casting plinth beam, after casting columns, before casting slab, after brick work, after plastering and after electrical conducting. Contractor can move to next stage of construction only after clearance from QC team and rectifying all errors pointed out in QC check report.

13. SOPs to be followed by contractor:

- a. Form work – good quality formwork to be used. Steel or ply formwork can be used. Sufficient column boxes should be available. Wooden formwork shall not be permitted.
- b. Props – wooden ballies will not be permitted. Good quality steel props and spans must be used. One prop for every 2 sqm to be used for slabs + one prop every 500mm for beams. In case of flat slab one prop must be used for every sqm under the capital.
- c. Concreting – only RMC shall be used. Site mix shall be permitted for plinth beams, compound wall, tie-beams, mullions, transoms, lintels and roads. Contractor shall provide batch report of every load of RMC to the Developer.
- d. Curing – the lift well shall be used for curing. 2 nos. 3/5HP open well submersible pump shall be used for curing. curing shall be shifted to OHT as soon as it is ready – alternately 10KL plastic tank shall be used for curing – placed on the top slab.
- e. Power, power backup – Developer shall provide 20KVA (check?) power for the Contractors construction activity. If available Developer shall provide 20KVA backup power through a generator – however cost of diesel and repairs to be borne by the Contractor.
- f. Bracing – 2 level bracing for all props is required in 2 directions. Prop shall be steel pipes or FRP pipes fasten with a coupler.
- g. Cement mortar – plastering first coat ratio – 1:6. plastering second coat ratio – 1:3. Brickwork mortar ratio – 1:6. Proportion box to be provided by Developer and must be used by Contractor. One packet of recron, 125gms must be mixed with one bag of cement for the first coat plastering.
- h. Chicken mesh – it must be used in all joints between brick work and RCC.
- i. Mullions and transoms of 150mm x 150mm and 200 x 200mm shall be provided wherever required in the brickwork as per Developers design.
- j. Scaffolding – wooden/ballis scaffolding shall not be permitted. Only steel scaffolding (H frames/cup lock) shall be used.
- k. Safety equipment – all workers must wear safety shoes, helmet and safety jacket at all times. Workers cannot enter the site without wearing them. All workers working on scaffolding or at a height above 3mtrs must wear a safety belt suitably anchored.
- l. The Contractor shall clearly mark the concreting date on all structures with a spray paint. Suitable stencil to be provided by the Developer.
- m. Safety signage – Safety signage to be displayed at prominent places. Signage to be provided by the Developer.
- n. Creche – The Developer shall provide a creche at its cost along with mid-day meals for workers children below 12 years near the site. No children shall be permitted in the work area of the site.
- o. Water proofing of terrace – water proofing to be taken up with M20 RMC + power trowel. Thickness – minimum 50mm, maximum – 100mm. Suitable add mixtures to be added to the RMC.
- p. Honey combs + grouting – honey combs to be covered with mortar within 24 hours of de-shuttering. Large honey combs to be sealed with pressure grouting at contractors cost.
- q. Ponding – curing of slabs must be done with ponding of less than 10sqm each. In case of breakage of ponding at time of casting columns or otherwise they must be rebuilt within one working day.
- r. Curing period – as given above. Date of concreting to be record with stencil and yellow spray paint on every column /slab /RCC structure.

- s. Cube testing – 3 cubes (2 sets) of 150mm must be casted for every 100 cum of concrete per day and tested by an independent laboratory on 7<sup>th</sup> & 28<sup>th</sup> day.
- t. Periodic cleaning – All floors to be cleaned of all building debris, mortar, concrete within 2 weeks of completing civil work. The Contractor shall chip/remove the excess mortar/concrete from all surfaces at its cost.
- u. Seniorage fees - aggregates must be purchased from authorized dealers with waybill.
- v. Approved plans – Developer to provide multiple set of approved plans marked as good for construction to the Contractor. Contractor must strictly use approved plans for all works. Unauthorised printouts from soft copies shall not be permitted.
- w. The Contractor shall mark the site, building and columns using total station at its cost.
- x. The Contractor shall endeavor enforce working hours of 9.30am to 6pm (except during concreting).

14. Details of material rates required from contractor are given in Schedule A.

15. Details of labour and hire charge rates required from contractor are given in schedule B.

16. The Contractor shall obtain labour license, trade license, register with PF/ESI department and pay the statutory fees and charges regularly. The contractor shall provide proof of payment of PF/ESI to the Developer on a monthly basis.

17. The contractor shall be solely responsible for the cost and consequences of any accidents or mishaps at site including injury/death to workers at site.

18. In case of differences or disputes between the Developer and the Contractor, all efforts will be made to resolve the differences amicably. The contractor shall not be entitled to seek or stop work at site. All disputes will be resolved by way of arbitration.

19. The Contractor shall execute a written contract before start of work as per the standard format of the Developer.

Schedule A  
Details of material rates /quote required from contractor.

Sl. No	Material description	Size/spec	Units	Rate without GST	GST rate	Rate with GST
1.	Cement	PPC / 43 / 53 Avg				
2.	RMC	M 10				
3.	RMC	M20				
4.	RMC	M25				
5.	RMC	M30				
6.	RMC	M35				
7.	20 mm metal					
8.	40 mm metal					
9.	Baby Chips					
10.	Sand Coarse					
11.	Sand Fine					
12.	Manufactured Sand fine					
13.	Manufactured Sand coarse					
14.	Cement blocks - solid	4"x 8" x 16"				
15.	Cement blocks - solid	6"x 8" x 16"				
16.	Cement blocks - solid	8" x 8" x 16"				
17.	Hallow blocks - 4"	4"x 8" x 16"				
18.	Cement blocks					
19.	Cement blocks					
20.	Recron					
21.	Plasticizer					
22.	Chicken Mesh	30 m per bundle				
23.	Table Brick					
24.	Earth - mohrum					
25.	Earth - rubble					

### Schedule B

Details of labour and hire charge quote/rates required from contractor.

Sl. No	Description	Size/spec	Units	Rate without GST	GST rate	Rate with GST
1.	Footings including centering + rod bending + concreting – double mat					
2.	Footings including centering + rod bending + concreting – single mat					
3.	Pedestal					
4.	Plinth beam					
5.	Columns upto 3 mtrs height					
6.	Columns upto 5.2 mtrs height					
7.	Slab – beam and slab structure – upto 3mtrs					
8.	Slab – beam and slab structure – upto 4.3 mtrs					
9.	Slab – flat slab – upto 3mtrs					
10.	Slab – flat slab – upto 4.3 mtrs					
11.	Slab – waffle slab – upto 3mtrs					
12.	Slab – waffle slab – upto 4.3 mtrs					
13.	OHT					
14.	Lift charges for RCC work					
15.	Sumps					
16.	Tie-beams					
17.	Mullions					
18.	Lentils					
19.	100mm brick work					
20.	200mm brick work					
21.	300mm brick work					
22.	75/100mm beds in brick work					
23.	Internal wall plastering					
24.	Internal ceiling plastering					
25.	External plastering					
26.	Terrace water proofing					
27.	Bathroom water proofing					
28.	OHT water proofing					
29.	Sump water proofing					

30.	Laying of road with levelling, grading, two layers of 100mm morrum, one layer of 100mm GSB and 100mm M20cc.					
31.	Laying of road with levelling, grading, two layers of 100mm morrum, one layer of 100mm GSB and 150mm M20cc.					
32.	Compound wall as per standard design					
33.	RCC for shear walls					
34.	RCC for lift shear walls					
35.						
36.						
37.						