

### **CERTIFICATE**

I/We hereby declare and certify that I/we have inspected/investigated the site(s) of work and have fully familiarized myself/ourselves with all aspect of Constructional restraints such as accessibility, working conditions, Geophysical/terrain conditions and also all items mentioned in this schedule etc. where upon only rates have been quoted by me/us. I am aware of

1. Topography of the area and soil conditions at the site of work.
2. Availability of local labour, both skilled and unskilled and the prevailing labour rates.
3. Availability of water and electricity.
4. The existing roads and access to the site of work.
5. Availability of space for putting labour, camps, offices, stores, godown, engineering tools etc.
6. Sources and availability of construction/fabrication material and rates for construction/fabrication materials

Date:

Signature of Contractor

## **SCOPE AND DETAILS OF WORK**

### **(Part of Tender Document)**

Name of work: - Bhopal-Division: :- Bina- Ruthiyai section :- Construction of Limited Height Subway on Trespassing location at Nazul colony Guna between Guna- Mahugara Station (RCC box 1/5.00 x 3.75)

#### **BRIEF DESCRIPTION OF WORK:**

The work which has to be carried out by Contractor/Agency broadly includes :-

- Design/drawing and casting of Thrust bed & Auxiliary bed for pushing of Barrel length RCC box segments of internal size 1/5.00 x 3.75 m . Design should be submitted duly proof checked by IIT/NIT
- The work of casting of pre cast segmental boxes to be carried out before operation of block for insertion. Casting of RCC box Segments for barrel length (for Pushing of internal size 1/5.00 x 3.75 m) as per Railway RDSO Drawing No RDSO /B -10153 over Thrust bed & Auxiliary bed and pushing the same by using jacks under the existing Railway embankment under Railway lines with suitable speed restriction including all the temporary works/arrangements required for safe & satisfactory pushing of box under running track.
- Transportation of RH Girders of 20.40 m (Two Nos for UP & DN track) from available site at that time as directed by Engineer-in- Charge. **Transportation of RH Girder/CC crib .....**

**RH Girder shall be Transported by the contractor from available site as directed by Railway by suitable means . Rate for this item includes cost of Deassembling & assembling of RH Girder and recoupment of damaged Nut/ boltes , damaged member etc. shall be responsibility of the contractor at his own cost. Contractors are advised to quote rates accordingly.**

- Arrangement of Road crane of Minimum Capacity of 200 Tonne or Higher capacity if required as per site condition for Launching & De-launching of RH Girders along with one stand by Road crane of same capacity.
- Removing of track, Placement of RH Girders of 20.40 m , Excavation of embankment for insertion of RCC box segments by Air pushing Technique , side filling of RCC box , Removal of RH Girders of 20.40 m , Filling of Ballast & Laying and packing of track.

- Approach road, Drainage arrangement, Height Gauge and misc. work.

The tenderers are advised to explore accessibility, availability of approach road, topography of land, nature of soil, availability of Materials, and extent of lead and lift involved in the work, availability of skill and unskilled labors etc. that may be encountered in the course of execution of work. As the nature of work warrants ensuring the high level of dimensional precision accuracy along with high QUALITY control, tenderers should make it a point to understand the work carefully and thoroughly before quoting the rates.

### **SPECIAL CONDITION FOR NS Items**

#### **1. NS Item (NS 2) : REMOVAL OF EXISTING TRACK.....**

Following is included in this item

- 1.1 De linking the track.
- 1.2 Track assembly including sleepers is lifted by suitable road crane or manually.
- 1.3 Released material to be staked properly at suitable location as directed by Engineer-In charge.
- 1.4 Existing track (including other material) to be dismantled/ removed in traffic block.
- 1.5 Ballast to be removed up to formation level & no payment will be made for this.

#### **2. NS Item (NS 3) : LAYING OF TRACK.....**

- 2.1 The track panel removed earlier will be placed back by the suitable road crane or manually.
- 2.2 Fish plates to be fixed after placement of panel.
- 2.3 Track to be given fit as per direction of SSE(P. Way) in-charge , all work after placing of track like filling of ballast, linking & packing, alignment shall be done by contractor during the block.

#### **3. NS Item (NS 4) : SUPPLYING AND STACKING OF BALLAST Supply**

- 3.1 Supply of ballast will be as per specifications for track ballast (Latest specification).
- 3.2 The contractor shall make level ground at specified location given by the railway representative, at his own cost and nothing extra will be paid for this.
- 3.3 Stack serial No. and lime marking shall be done by contractor and nothing extra shall be paid for this.
- 3.4 Ballast to be supplied nearer to bridge site as specified by site engineer.
- 3.5 Testing of ballast to be done from any approved test laboratory/ Govt Engineering Colleges/ Railway Laboratory at his own cost.

## **SPECIAL CONDITIONS FOR USSOR 2021 Item**

### **Mode of payment**

**Note 1 :** *Payment for Casting of Segmental RCC Box and casting of Thrust bed/ Auxiliary bed* :- Precast RCC Box and Cast- in- Situ Thrust bed/ Auxiliary bed to be casted under USSOR item 024010. Sixty Percent (60 %) Payment will be done for USSOR 2021 item Nos. 024010 , 025071, 025072 & 025031 of Concreting, Cement and Centering/ Shuttering .and Thirty Five percent (35 %) Payment will be released after placement of precast RCC Box and **5% Payment to be release against USSOR 2021 Item No 031130 (Installation of RCC box) after proper filling of joints of RCC box segments.**

**Note 3 :** USSOR 2021 Item No 031130 -

**(A) Rates Not includes in USSOR 2021 Item No 031130**

Rates NOT includes in the items for Cost of Reinforcement ,cement concrete, cement , Reinforcement steel and shuttering of Main RCC box , thrust bed, foot path, parapet wall and wearing course which shall be paid extra under relevant items of USSOR

**(B) Rates includes in USSOR 2021 Item No 031130 for following activities -. Contractors are advised to quote rates accordingly.**

- (i) Rates are include in the items for Excavation of formation/Embankment including excavation in Rocky Strata if available for placement of Temporary RH Girders & insertion of Girders supports i. e. Cribbs , Thrust bed/ Auxiliary bed, Leveling of Thrust bed , Excavation of Embankment including bank slopes for RCC box pushing and 20m approaches beyond thrust bed for working space
- (ii) Leading of excavated surplus earth up to 1 Km i.e average lead 0.50Km
- (iii) Providing and laying base concrete i.e. leveling course below thrust/Auxiliary and Leveling course over thrust /auxiliary bed. Only cement and shuttering shall be paid extra under relevant items of USSOR.
- (iv) Insertion and Removal of Temporary girder of 20.40m length one Number and crib 2 Nos of 20.40m length with suitable capacity of crane and with one stand by crane of same capacity
- (v) Refilling of earth over RCC box and excavated portion with Railway's Earth

- (vi) Manufacturing and using contractor own wooden sleepers/ blocks required for matting and bearing for use below and above Cribs for insertion of Temporary Girder and released wooden Sleepers/ blocks shall be the property of the contractor.
- (vii) Providing and removing barricading with the help of potable fencing with self supporting steel angles of size 50 x50x 6mm, 1.50 m long provided with hooks etc and embedded in Cement Concrete with provision of painting verticals and horizontal with red luminous paints/ strips of 30 Cm each with a gap of 30 cm. Released material will be property of contractor after completion of work. Only cement and shuttering shall be paid extra under relevant items of USSOR.
- (viii) For Placement/Insertion/ Removal of Temporary RH Girders of 20.40m length on more than one line shall be paid in relevant USSOR Items.
- (ix) Filling of Sand for 200 mm depth for formation over RCC box with contract's Sand.
- (x) Complete pushing of RCC box segment is included in the Item, there will NOT be any payment for extra pushing required as per site availability. Payment will be made as per internal volume of RCC box barrel.
- (xi) Excavation for pushing of RCC box should be done as per approved GAD. In case of deviation from GAD necessary Design for side slope may be done and approved by Engineer- in- Charge.

### **SPECIAL CONDITIONS FOR USSOR 2021 Item**

#### **Special condition of contract**

2.

- Necessary survey should be carried out in advance at the site of work with Railways representative with latest survey & leveling instruments for collection of all data for preparation of Structural Drawings including subsoil data for obtaining soil characteristics for structural designing the Thrust bed & auxiliary bed suitable for Pushing RCC box segments doing the complete bridge work. **Segmental RCC box should be constructed as per approved GAD provided by Railway ( RDSO Standard Structural drawing will be provided by Railway for RCC box)** and inserted under track by Air pushing technique at the approved location. The detail Structural Drawing of Thrust bed & auxiliary bed will be prepared & submitted duly proof checked by NIT/IIT to Railway by the contractor at his own cost. Necessary changes, if any required by the Railway shall be made out without any extra payment. Design calculations in 3 copies and original structural drawings of Thrust bed/Auxiliary bed (i.e. on tracing) along with 6 copies shall be submitted to this office **within 3 weeks from the date of approval of GAD. Contractor should note that no extra payment will be made for design and drawings hence rate should be quoted considering this aspect.**
  - No Work shall be carried out unless and until all drawings are approved by railways and all design calculations, clarifications required are furnished and got approved.

- The design of Thrust bed & auxiliary bed /jacking pit/reaction frame including collection of necessary field data to be done by contractor for carrying out the work. No extra payment will be made for this activity . **Structural design ,strength of thrust bed & auxiliary bed /jacking pit/reaction frame for the purpose of pushing will lie on contractor. If any failure occurs, the repairs/ rehabilitation/reconstruction will have to be done at his own cost.**
- **Transportation of RH Girder/CC crib ..... RH Girder shall be Transported by the contractor from available site as directed by Railway by suitable means . Rate for this item includes cost of Deassembling & assembling of RH Girder and recouplement of damaged Nut/ boltes , damaged member etc. shall be responsibility of the contractor at his own cost. Contractors are advised to quote rates accordingly.**
- Procurement of plants, jacking equipments, jack pumps, front shield, cutting shield, intermediate jacking station, rear shield etc. should be done by contractor by all his own cost and no extra payment will be made. For reduction of friction between soil and precast RCC box during pushing, suitable arrangement has to made to reduce the disturbance of track to the minimum.
- The cement and steel of approved specification to be procured by the contractor.
- Grouting of all joints after completion of pushing with epoxy compound so as to make them water tight. There should be no leakage. No extra payment will be made.

- During the construction, if any dewatering is required for carrying out the work, the contractor has to do at his own cost and no extra payment will be made.
- During the box pushing under the existing running railway track, contractor should ensure that there should be minimum disturbance to track. To achieve this, suitable arrangement to reduce friction at site, to be carried out by contractor and no extra payment will be made for the same. also, the track disturbed, if any during the pushing should be rectified by contractor immediately under the Railway supervision to the satisfaction of Railway representative at his own cost.
- The removal of earth after the excavation to be done by contractor as per the instruction of Engineer at site.
- Poorly executed concrete shall have to be demolished and repair shall not be allowed to carryout.
- For the work, if any temporary staging, sheet anchoring, Shoring etc. are required to be carried out, the contractor has to do the necessary arrangements as per the satisfaction of the Engineer-In charge and no extra payment for this will be done. The safety of the Railway track lies with the contractor during the working. Therefore, he should take all the precautions and satisfy the Engineer at site to ensure that, at all time the work carried out is in safe condition.
- All the temporary works, jacking arrangements will be the property of the contractor and after completion of the work, contractor can take away the material at the time of clearance of the site, if he desires so, otherwise there will be no right for him to claim the material afterwards. All the temporary works/arrangements required for safe & satisfactory pushing of box under running track should be done by contractor, filled up gunny bags in sufficient number as per instruction/direction of Site Engineer shall have to be made by contractor, if required, the necessary CC cribs can be taken free of charge from SSE/PWAY/WORKS depot/site in nearby location wherever available and to be returned the same after completion of work at IOW/PWI depot as per instruction of Engineer- in -charge. He should take all the precautions and satisfy the Engineer at site to ensure that, at all time the work carried out is in safe condition.
- During execution of work contractor shall make Mobile communication between site to ADEN/SSE (Works) in charge of the work for monitoring the progress, ensuring safety etc. for which two sets of Mobile Phone with SIM card to be provided for supervisor at site. These arrangements to be made effective till completion of work.
- Contractor shall make all arrangement for inspection of site by arranging vehicle/arrangement of progress display at site for inspection of Railway official whenever required for which no extra payment shall be made.

- **Concrete Work:** As per Railway's specification
- **Testing of Material:** All the test prescribed in specification of the works and in relevant IS code has to be conducted in Govt. approved laboratory/ Govt. Engineering College /NABL and the result for the same in original to be submitted by contractor to the Engineer at site. The cost of tests to be borne by the contractor.
- **SAFETY MEASURE:** Contractor has to carry out the work under Railway traffic therefore he will arrange sufficient number of men for maintaining the track parameter within the safety tolerance limit in the portion effected by box pushing works for which no additional payment will be made. The work of box pushing will be carried out under direct supervision of a nominated Railway representative who will ensure that track parameters are maintained within safety tolerance.

- **Preparation of completion report and completion drawings:-**

A Detailed report, along with sketches, about the work done shall have to be submitted by contractor in two copies duly incorporating photographs of the work done at various stages. Completion drawings prepared in AUTO CAD are also to be submitted in 6 BP copies along with the original tracing and in CD. On Non submission of Completion Drawing 20000/- will be recovered from Final bill FOR Each Subway

### **Important Notes**

- **Safety of labour:-** Contractor has to ensure the safety of all the labour including railway staff during the execution of work. All labour working at site should be provided with Retro jacket and helmet, safety belt should be provided to all person who are working at height and below ground level. Proper barricading should be done to ensure that no unauthorise person tress pass the working site and to avoid injury to the labour.
- **Crane working:-** Good condition crane with valid certification of suitable capacity should be brought by contractor. All accessories such as slings of proper length and adequate capacity, D- bracket , wooden block, crib etc shall be kept ready in advance before the block activity, operator of crane should be experienced and well trained in crane working. Adequate number of trained staff shall be available with crane for linking and delinking work.
- **Dewatering arrangement:-** Contractor has to make all arrangement at his own cost for dewatering of LHS and fit for road traffic . Once gate is close till a suitable drainage arrangement has not been made made by contractor.