

**LINKING OF AUXILIARY TRACK WITH 60Kg / 52Kg 15/20 RAIL PANELS OR  
ANY OTHER**

**RAIL LENGTH:**

(a) Rail panels of 15/20 rails or any other length panels available alongside of track in advance will be used for formation and auxiliary track centrally with B.G. running track at 3.4 meters gauge on CST/9 Pots/Wooden/ST blocks at spacing of 1.5 to 2.0 meters (as decided by Engineer In-charge of the work). Sleepers will be properly packed with ballast. The contractor shall link these rails over CST/9 Pots / Wooden / ST blocks after pairing them if required and fasten the rail ends with fish plates.

Provision of rail closure for linking of auxiliary track will have to be done by the contractor. Pulling of rails if required up to 52 meters will have to be done by the contractor at his own cost under supervision of Railways representative using cess rollers. He will also provide **fish plates and bolts which will be supplied by the Railways free of cost.** The quality of auxiliary track will be certified by the PWI / In-charge at site on the basis of packing conditions, levels and alignment as per the laid down standards of the Railways.

(b) To avoid buckling of auxiliary track due to rise in temperature distressing of the same may have to be done by the contractor at high temperature if so, directed by the Engineer in charge of the work. Nothing extra shall be paid to the contractor on this account.

(c) The fabricated sleeper panels will then be laid by Railways using SQRS replacing old panels by 12.6 meter or other rail length panels.

(d) Rail panels of 20/15 rail panels or any other length from auxiliary track will now be dismantled for putting in track releasing 13.2 / 12.6-meter (or any other length) panels. This will release CST/9 pots / wooden / ST blocks from auxiliary track. All these released CST/9 Pots / wooden / ST blocks will have to be lead ahead by the contractor for auxiliary track. The rate of linking auxiliary track will include this job of leading CST/9 Pots / Wooden / ST blocks and nothing extra shall be paid on this account.

(e) The contractor shall always ensure that sufficient length of auxiliary track is available ahead of the actual relaying work.

(f) CST/9 Pots/Wooden/ST blocks used for formation of auxiliary track after being released shall be taken ahead for subsequent use and formation and auxiliary track. Normally one Km. of auxiliary track shall be made prior to start of the work of renewal of SQRS and daily 30 to 40 panel length shall be laid ahead for day-to-day work. While the work is in progress the contractor shall ensure that no material / tools and plants are kept in such a way that these foul the tracks.

### **1.1 PAIRING OF 60KG RAIL PANELS FOR WORK BY BRINGING THEM IN UPRIGHT POSITION, SHIFTING LONGITUDINALLY TO ELIMINATE THE GAP IN BETWEEN AS REQUIRED TO CARRYOUT THE WORK OF RAIL RENEWAL / MAKING AUXILIARY TRACK ETC.**

- (a) The work may be undertaken during traffic block.
- (b) For CTR 20 60kg rails loose or service rails up to 13.0mtr will be unloaded alongside the track by Contractor/Railway in advance. These panels will first be brought on the shoulders after levelling the ballast on shoulders. The panels will then be brought in upright position. The upright position means the similar position of rails as in normal track. The panels should not be tilted.
- (c) For pulling of rails panels, contractor will arrange non-infringing rollers as per standard adopted by Railways so that panels are not damaged. Direct hitting / pushing of panels are not permitted.
- (d) After brining the panels in upright position, these will be shifted longitudinally by pulling the panels by the contractor at his own cost. The pulling will be done to eliminate the gap in between the panels. A gap up to 52 meters will be eliminated by pulling the panels, after which, rail closure will be given to the contractor within 200 meters of work site.
- (e) Adjacent panels will be kept sideways so that they do not tough each other in normal circumstances and can be joined with fish plates by alright side shifting of panels. Wooden blocks will be provided between two panels at the joint so that they do not tough each other.
- (f) Temporary bonding of panels will be done by the Railways whenever continuous length becomes more than 300 meters. The contractor will also ensure that unless proper bonding is done, fish plating will not be done to make continuous panels of 300 meters or more. If work is stopped on this account, nothing extra will be paid to the contractor.
- (g) This work is part of rail renewal / auxiliary track making and nothing extra shall be paid. Tenderer is supposed to do the work of pairing at his own cost.
- (h) The P. Way fittings shall be supplied to the contractor at the base depot. He shall be responsible for its proper storing, guarding etc.

### **2.0 REMOVING SERVICE RAILS AND PUTTING BACK RAIL PANELS:**

- (a) After laying of panels has been done with SQRS, the contractor will do the work of replacement of these panels with 60Kg with new panels.
- (b) After laying of PRC panels by the Railways the contractor will use the disconnected the rails of auxiliary track. He will correctly place 60Kg / 52Kg rails released from auxiliary track or rail panels lying outside the track in position as directed by the PWI of the Railways so that the rail renewal is done properly. For this purpose the contractor may be required to do up to a maximum of 52 meters of pulling of these rails outside the track to bring them in position. All these works will have to be done by the contractor at his own cost and nothing extra shall be payable to him on this account.
- (c) After the rails lying outside have been placed in the correct position, the contractor will remove the fish plates and bolts / clamps of the rail joints of the panels lying inside the track. All the released fish plates, bolts & clamps will be stacked properly. Simultaneously the fastenings of the sleepers with the rails like

ERCs, liners etc. will also be removed. The rails are thus made free of sleepers. These rails then be taken out of the rail seats.

(d) The rail panels of 15/20 rails or any other length lying outside the track will now be brought into the track sleepers and put at correct position over rail seat of the sleepers. While doing this, the contractor will ensure that the rubber pads are placed in position correctly. The joints of all these rails put in track will be fastened by providing fish plates and bolts with proper expansion gaps as directed by PWI of the Railways.

(e) After linking both rails in the track with approved fastenings the contractor will do alignment of the track as directed by the site in charge.

(f) The work of rail renewal will be done in a traffic block only.

(g) The contractor will keep all the fish plates, bolts, nuts, clamps etc. in safe custody and plates, bolts, nuts, clamps etc. will be deposited by the contractor in PWI's store.

(h) Any other works as applicable out of following Item No.2.1 shall also be carried out at contractor's costs.

## **2.1 REPLACEMENT OF EXISTING 52/60KG RAILS IN MAIN LINE WITH 60KG RAILS IN MAIN LINE WITH 60/52KG 15/20 RAIL PANELS SWP WITH OR WITHOUT RENEWAL OF FITTINGS:**

(a) The contractor will do the work of replacement of existing rails with 60KG. /52KG 15/20 rail panels/SWP rails. The work will not be started by the contractor till such time a PWI of the Railways is present at site of work and has allowed the contractor to start the work. Before starting the work, the site will be protected by display of flag, flagman for this purpose will be provided by the Railways free of cost.

(b) The work may be undertaken during traffic block.

(c) Rail panel of 15/20 rails/Short Welded Panels shall be made available by Railways along the track. Contractors will correctly place these 60Kg/52Kg 15/20 rail panels / SWP rails in position as directed by the PWI so that the rail renewal is done properly. For this purpose, the contractor may be required to do pairing / pulling of 60/52Kg panels by bringing the unloaded panels in upright position shifting longitudinally to eliminate the gaps (up to 52meters) in between the panels outside the track to bring them in position. All these works will have to be done by the contractor at his own cost and nothing extra shall be paid to him on this account.

(d) After the rail lying outside have been placed in correct position, the contractor will remove the fish plates and bolts / clamps of the rail joints of the panels lying in track. All the released fish plates bolts and clamps will be stacked properly. Simultaneously the fastenings of the sleepers with the rails like ERCs liners etc. will also be removed. The rails are thus made free of sleepers. These rails will then be taken out of the rail seats.

(e) The rail panels of 15/20 rails/SWP of 52Kg/60Kg lying outside the track will now be brought on the sleepers and put at correct position over the rail seats of the sleepers. While doing this, the contractor will ensure that the rubber pads are placed in position correctly. The joints of all these rails now put in track will be fastened by providing fish plates and bolts with proper expansion gaps as directed by the PWI of the Railways. Holes in rails if required will however, be drilled by the Railways at its own cost.

(f) The rail on one side will be fastened with the sleeper by providing sleeper fittings like ERC etc. The contractor will be responsible to provide all the sleeper fittings in correct position. The rail on the other

side will then fasten to the sleepers at square with respect to the other rails already fastened. Squaring of sleepers if required shall be done by contractor at his own cost and nothing extra shall be paid on this account.

(g) Renewal of fitting rubber pad, liners, pandrols shall be done along with rail renewal. For this purpose, existing rubber pads shall be removed, and new rubber pads shall be provided in correct position at this stage. Similarly new liners and pandrols shall be provided. All fittings / fastenings shall be fixed in correct way, complete and tight on the same block day. Rates of fastening renewal are included in through rail renewal. Nothing extra shall be paid.

(h) After linking both rails in the track the contractor will do alignment of the track as directed by PWI of the Railways.

(i) The work of rail renewal will be done in a traffic block only.

(j) The contractor will hand over duly stacked all the fish plates bolts, clamps, rubber pads, pandrols, liners released by him from rail renewal to the PWI of the Railways at the site of work / SQRS base depot store as directed.

(k) The contractor will classify combination liners, compound fish plates and hand over these to the place where these are required in the block section. Nothing extra shall be paid for this.

(l) Site must be made fit for 30 Kmph speed restrictions after renewal.

(m) Any gap at the F/P joints will be properly closed by putting suitable length 52Kg closures and rail pieces in 52Kg portion only. Compound fish plate 60/52Kg shall be fixed at junction point.

(n) A suitable length rail closure of 60Kg / 52Kg may be provided at the end of new panels as directed by site engineer.

(o) Fish plated 60Kg / 52Kg joints will be properly supported by wooden blocks till they are welded.

(p) If any work requires, shifting of adjoining sleepers for cutting of rails, the work of shifting of sleepers and packing will be done by the contractor at his own cost.

(q) When the work is completed, the contractor shall return all fish plates, bolts, and clamps surplus to the requirement for future working to the Railways at the PWIs base depot store. For any shortage of fittings, the cost of the same will be recovered from him @ book rate or purchase rate whichever is higher + 5% freight + 2% incidental charges + 12.5% supervision charges on this rate inclusive 18% GST.

### **3.0 DISMANTLING OF AUXILIARY TRACK:**

Contractor will dismantle the auxiliary track by removing sleepers, fastenings and take out the rails from CST-9 pots/Wooden/ST blocks laid under these rails.

### **4.0 LEVELLING / LOWERING BY 25MM TO 75MM OF BALLAST BED:**

All items' incidentals to Item NO.14 shall be carried out by the contractor as per schedule to complete the work. Decision of site in-charge in this regard will be final.

## **5.0 CUTTING OF RAILS:**

- (a) The above item of work envisages cutting of rails on cess / running track as specified in the schedule at isolated locations / Railways nominated depots / stacks as per Railway's requirements and / or as directed by the engineer or his representative complete with handling of rails and all incidental works.
- (b) It is presumed that the nominated depots / stacks / locations for the purpose of this work shall have been inspected by the contractor before submitting the tender and the accepted rate is deemed to be inclusive of all leads, lifts & descent and incidental works.
- (c) Without in any way restricting or modifying the provision of the General Conditions of Contract in this regard the rate for the above work shall be inclusive of all cost of contractor's labour, materials like blades etc. consumables, tools & plant and machinery including rail cutting machines etc. complete.
- (d) The measurement for payment shall be for each complete cut at correct locations and accepted by the engineer or his representative.
- (e) The work shall be carried out strictly as per instructions of the engineer or his representative whose decision in this regard shall be final and conclusive.
- (f) In addition to the above, the work shall conform to the following:
  - (i) The cut shall be made in a plane truly at right angle to the foot as well as running edge of the rail.
  - (ii) Cut pieces of rails shall have to be returned by the contractor at Railway's nominated depots / locations at his own cost.
  - (iii) The burr, if any, shall have to be removed by the contractor by using his own chisel and hammer, de-burring kits.
  - (iv) Flame / Gas cutting is forbidden except given in schedule by gas cutting.
  - (v) For preventing longitudinal movement of sleepers notching of rail foot of guard rail is to be done on every alternate sleeper when guard rails are fixed in wooden sleepers. The size of notch should be such as to accommodate stem of dog spike / rail screw and should be able to effectively arrest relative movement between rail and sleeper. The payment for nothing of guard rail shall be in number of notches cut. The size of dog spike stem is 16mm x 16mm and that of rail screw 20mm dia. Notches of 19mm x 19mm for dog spike and 22mm x 22mm for rail screw would serve the purpose.
- (g) For all works on the running track or adjacent to running track, the protection of work site shall be ensured by the Railways at its own cost. However, the contractor in addition will provide the necessary lookout men to ensure safety of his workmen/workwomen and the instructions given by engineer or his representative in this regard and as stipulated in special conditions of contract should be strictly adhered.

## **6.0 GAS CUTTING OF RAIL IN / OUTSIDE OF TRACK VERTICALLY, GAS CUTTING OF RAIL THROUGH WEB / FLANGE INCLUDING ANY STEEL PLATE OF THICKNESS UP TO 10MM AND BENDING OF 52KG RAILS FOR MAKING FLARE IN CHECK RAILS AT LEVEL CROSSINGS:**

- (a) The contractor shall keep his own gas cutting arrangement at site of work at all times. This will consist of at least three cutters. In case of emergency the Railway shall be at liberty to use these gas cuttings arrangements and the payment to be

made to contractor will be limited to the reimbursement of the cost of consumed gas only if the item of work done is not covered by this schedule.

(b) No work on track shall be started by the contractor unless a PWI of railway is present at the site of work and he has allowed the contractor to start the work after imposing suitable speed restriction if required and protection of site of signals. The signalman shall be provided by the Railway free of cost. In case the contractor starts the work without the presence of an authorization from a Railway PWI, he shall be liable for criminal prosecution for endangering public life.

(c) The contractor shall be responsible for taking all precautionary measures to ensure safe storage, transport, working maintenance etc. of gases, correct and proper usage of gas and shall abide by all the rules / laws of the Central / State Govt., Local bodies as are in force. In case of any failure on this account the entire responsibility will rest on the contractor. The contractor shall also be responsible to ensure safe working at site and in case loss / damage to life or property of the Railway or anyone else taken place on account of contractors working the entire responsibility will rest on the contractor who will have to bear all such losses / damages / compensations etc. arising out of such incidents. The decision of the Engineer on this account shall be final and binding on the contractor.

(d) All equipment / machinery, gases, trained staff and labour for gas cutting of rails including transport to site of work and back will have to be done by the contractor at his own cost. Nothing extra shall be paid on this account.

(e) All materials / rails removed by gas cutting shall be the property of the Railway and the contractor shall not be entitled to take away any cut rails / part thereof etc.

(f) The contractor shall be responsible for safe custody of tools and plants being used by him and his labour. He shall ensure that the labour on work keep their tools clear off the track on the approach of the train. In no case labour be permitted to make tools to their homes and they should be asked to deposit them in proper tools boxes. The contractor should secure these tools in proper tools boxes, in such way that tools issued do not fall in unwanted hands who can temper with the railway track.

(g) Gas cutting of rails will be required during block also and gas cutter with equipment and gas will remain available with throughout the block. The contractor will not claim any reasons, the work of contractor may be reduced / stopped decided by the engineer. The contractor shall not be entitled to prefer any claims for loss / damage suffered on this account.

(h) The cuts should be vertical.

(i) Above conditions apply for hacksaw cutting also. In above conditions, word gases, equipment's shall be treated as hacksaw blade / mechanical cutting arrangements.

(j) Longitudinal gas cutting if required shall be also done by contractor whose payment shall be made treat by 200mm cutting ass 1 cut of rails.

### **6.1 LONGITUDINAL GAS CUTTING:**

(a) Longitudinal cutting will normally be required outside the traffic block but in some cases, it may be in traffic block also.

(b) The contractor may be asked to cut in any shape as per marking done by the PWI. Nothing extra will be paid for non-straight cutting also.

## **7.0 DRILLING HOLES IN RAILS:**

(a) The above item of work envisages drilling of holes in rails on cess / running track of diameter as specified in the schedule at isolated locations / railway's nominated depots / stacks as per Railway's requirement and / or as directed by the Engineer's his representative complete with handling of rails and all incidental works.

(b) The nominated depots / stacks / locations for the purpose of this work shall have been inspected by the contractor before submitting the tender and the accepted rate is deemed to be inclusive of all leads, lifts, descents and incidental works.

(c) Without in any way restricting or modifying the provisions of the General Conditions of Contract in this regard, the rates for the above quoted work shall be inclusive of all costs of contractor's tools & plants and machinery including drilling machines, drill bit, consumables, chamfering equipment etc. complete for the above.

(d) The measurements for payment shall be for each hole drilled in rails and accepted by the engineer or his representative.

(e) The work shall be carried out strictly as per the Railways standard drawings and / or as given in the Indian Railway Track Manual and instructions laid down in IRPWM 2024 and the instructions of engineer or his representative whose decision in this regard shall be final and conclusive.

(f) The finished diameter of the hole in the rail shall be as follows:

<b><u>Rail Section</u></b>	<b><u>Hole dia m</u></b>
60Kg., 52	32mm
90R, 75R, 60R	28mm

(g) In addition to above following shall be adhered to:

(i) No punch or reaming / drifting will be permitted.

(ii) After drilling the hole, the same shall be chamfered with chamfering tools to remove burrs and for work hardening the hold as per directions of engineer's representative.

(iii) The use of flame / gas cutting equipment is for hidden.

(h) For all works on the running track or adjacent to running track, the protection of work site shall be ensured by the railway at its own cost. However, the contractor in addition will provide the necessary lookout men to ensure safety of his workmen /workwomen and the instructions given by Engineer or his representative in this regard and as stipulated in special conditions of contract should be strictly adhered to.

## **8.0 SPECIFICATIONS OF FOLLOW UP (POST ATTENTION WORK) TO TSR, RR & BEFORE EACH ROUND OF TTM PACKING i.e. SPACING, SQUARING OF SLEEPERS, GAUGING, BALLAST BOXING & DRESSING:**

(a) All items' incidentals shall be carried out by the contractor as per schedule to complete the work. Decision of site in-charge in this regard will be final.

(b) Payment will be made per meter of track attended completely only once irrespective of no. of TTM.

(c) The follow up work will be done after the rail renewal, TSR and before each round of TTM packing.

NOTE-A: Contractor should keep in mind that after each unloading of DMT ballast is required to be boxed along the sleepers, but ballast profiling shall be done in final round only.

NOTE-B: TTM packing shall be taken for granted for 4-5 rounds per C.T.R. sites. During each round, contractor shall be required to depute 8-10 staffs for pre-post TTM attention works.

(d) All the PRC sleepers laid will be checked for the spacing and squaring. Sleeper spacing will be corrected so that it becomes  $60\text{cms} \pm 2\text{cm}$ . Squaring of sleepers will also be done simultaneously, and it should not be more than 1cm out of square.

(e) The work of correcting the spacing and squaring may be started on the day of laying itself and it must be completed within two days after laying. For example, sleepers laid on 10th day must be completed by 12<sup>th</sup> day. If the work is not completed within this period, ballast may be unloaded and TTM packing may be done by the Railway and the labour input for doing correction of spacing and squaring may increase, for which nothing extra shall be paid.

(f) In case the work of spacing and squaring is not completed within two days after laying, the Railway will be free to use its own labour for which penalty will be imposed @ Rs.2/- per meter.

(g) Following instruction of pre-requisites, pre-tamping and post-tamping precautions shall be completed by contractor as per requirement.

#### **(h) PRE-REQUISITES FOR TAMPING:**

Adequate ballast shall be available in the cribs and shoulders to allow for a general lift (about 20mm in each tamping operations) and packing of sleepers.

#### **(i) PRE-TAMPING PRECAUTIONS:**

(i) Rails shall be kept clear of ballast for about half of their height to ensure proper clamping of the rail head by lifting / lining rollers of the machine.

(ii) Rail clamps of the machine are not availed to grip the rail head wherever jogged fish plates are provided at the welds. These plates should be removed temporarily ahead of machine working and replaced after tamping.

(iii) Visibility of the end top of sleepers to the machine operator should be ensured.

(iv) Spacing and squaring of the sleepers should be checked and corrected.

(v) Gauge corrections should be carried out in advance to avoid alignment errors.

(vi) The fastenings must be complete and properly driven missing / defective ones should be recouped / replaced.

(vii) Wooden blocks which are sometimes used as supports under the AT welds and at other isolated spots should be removed.

(viii) Unserviceable sleepers should be replaced with good ones.

(ix) Guard rails at the approaches of the girder bridges should be removed to enable the machine to tamp the approach of bridges.

#### **(j) CESS CLEANING/ DRESSING:**

(a) The cess level shall be required to be maintained up to 650-700 mm below rail level up to a width of 1.0m from toe of ballast. For this, required earth work will be done by the contractor subject to 150mm average cut / fill.

(b) Excess loose earth / vegetation on entire width shall be dressed and low-lying area shall be filled up.

(c) All excess earth shall be thrown on the slope of cess.

**(k) POST TAMPING ATTENTIONS:**

(i) The contractor will mark standard sleeper spacing on the foot of one rail by paint (the spacing is at present 60cm). The work will be transferred to the opposite rail with the help of P. Way T square.

(ii) The contractor will then bring the sleeper to these marks of sleeper spacing by planting the crowbar firmly against the sleepers and pushing it. Under no circumstances should sleeper be hammered.

(iii) Whereas the correct sleeper spacing is to be achieved as standard sleeper spacing some adjustment may have to be done to ensure that no sleeper should come under the welded joints. For this purpose, Railway's representative of the site of work will give directives to contractor to adjust the sleeper spacing in such area as affected by the welded joints. No claim, whatsoever in this regard if made by the contractor will be entertained.

(iv) Before taking the work of spacing and squaring in hand the contractor or his authorized representative should inspect the sleepers with the site in charge of the work and if they find out any sleeper broken in the length of work in hand, the same will have to be changed at the time of doing spacing and squaring. The sleepers for replacement if required will be arranged and made available within 200m of the site of work by the Railways. Nothing extra shall be paid to the contractor for this work. If due to any reason the Railways are not in a position to supply sleepers on the day of post attention work the contractor will have to change such broken sleepers on any other day when the sleepers are made available by the Railways at the site. However, this should be done any day of the work of post attention after contractor may refuse to do this work.

(v) After the sleepers are correctly spaced and squared contractor will provide standard complete fittings in sleepers. All the fittings, so required will, however, be given by the Railways at the PWI's store if such fittings are not already existing on any sleepers. For the correct accountal, daily counting of the existing fittings will be done by the contractor's representative jointly with Railways representative at the site of work to find out as to how many fittings are short. Only after this counting is done and entered into a proper register, the contractor will start his working.

(vi) For proper follow up work, the contractor will remove all released / new rails lying along with the track in the length in which the work is to be done.

(vii) After the operations of spacing, squaring and providing fittings, the contractor will correct the gauge to specified tolerances.

(viii) The contractor will then pick up the ballast available in the shoulders, screen it with the help of 25mm square sieves and put it in between the two sleepers in the tamping zone for TTM working, where required. This work will be done as per directives of Railways representatives at the site who will have the sole authority to decide about the quantum and location of this work. This will, however, depend on the availability of ballast in between the sleepers and outside. The remaining muck after sieving will be thrown on the cess slopes, nothing on the cess or in the side drains. The contractor will ensure that no ballast of size 25mm above is thrown away with the muck.

## **9.0 INSERTION OF 60KG NEW SEJ:**

All items' incidentals to Item No.26 shall be carried out by the contractor as per schedule to complete the work. Decision of site in charge in this regard will be final.

## **10.0 REMOVAL AND INSERTION OF PRC SLEEPERS (WITHOUT DEEP SCREENING):**

(a) The above item of the work envisages interlacing of new sleepers in between the existing sleepers and removal of old sleepers along with complete fastening related work and packing of sleepers as specified in the schedule in the existing track at locations as per Railway's requirements and / or as directed by the Engineer or his representative complete with providing of rail sleeper fastenings etc. and all incidental works.

(b) The tenderers in their own interest should visit the site of work with the concerned SE/P-Way / ADEN or with their authorized representative after fixing an appointment with them on advance and ascertain the nature and quantum of work, site conditions, availability of approach roads, availability of labours, water, electricity, land for labour camps etc.

(c) Without in any way restricting or modifying the provisions of the General Conditions of Contract in this regard, the rate for the above quoted work shall be inclusive of all costs of contractor's labour, materials, consumables, tools and plants and machinery etc. complete for the schedule.

(d) The measurements for payment shall be per schedule (Per Track Meter) and accepted by the Engineer or his representative.

(e) The work shall be carried out strictly as per Railway's standard drawings, instructions laid down in IRPWM2024 and the instructions of the Engineer or his representative whose decision in this regard shall be final and conclusive.

(f) The work shall be carried out under the supervision of the Engineer incharge or his authorized representative under speed restriction.

(g) Work will be done without traffic block; hence, all precautions are to be taken by the contractor so that trains can pass safely at 20 / 30 Kmph speed from site, without causing any detention to them. At least two sleepers must be available well packed on either side of sleeper being tackled for renewal.

(h) Lifting of track is not permitted for inserting / removing PRC sleepers from track.

(i) No damaged sleepers are to be put in track.

(j) Removed 52Kg sleepers will be stacked properly on cess and not to be thrown haphazardly causing damage to them.

(k) SH & U/S released PRC sleepers will be placed separately.

(l) Disposal of muck / soil will be done within a lead of 200m as directed by site engineer.

(m) The through sleeper renewal work shall be primarily done in following sequence. First, interlacing the new sleeper by removing shoulder and crib ballast from in between two sleepers and placing new sleepers there, fixing the inserted sleepers with new 60Kg / combination / old fastenings as per availability. Thereafter removing the old 52Kg sleepers' fastenings, removing shoulder ballast coming in the way of sleepers and lastly removing the sleeper without lifting the track at all and putting back the ballast and again packing.

(n) The sleeper positions shall be marked on the rail foot by the contractor and sleeper should be inserted exactly at these locations without infringing the Railways SOD.

- (o) For handling sleepers' standard equipment's should only be used and it must be ensured that no damage is caused to the sleeper. In case of damage to the sleepers due to contractor's negligence, recovery will be made as per prevailing rates.
- (p) While laying concrete sleepers' necessary steps must be ensured to prevent seizure of ERCs in MCI inserts. All the ERCs and MCI inserts should be thoroughly cleaned. Grease to IS 408 1981 should be applied on the central leg of the ERC and eye of MCI insert and then these clips should be driven at the time of making the panels. The grease will be arranged by the contractor at his own cost.
- (q) Removing sleeper-rail fastenings and removing the sleepers from the track (including here minimum removal of 50mm ballast below the bottom of sleeper being inserted if work is not possible by interlacing first).
- (r) Putting back the ballast so removed into track after the insertion of the sleeper.
- (s) Initial packing of the sleeper so inserted so as to maintain track geometry as directed by engineer-in charge.
- (t) Sleepers and the fittings removed during the operation should be stacked as directed by the engineer in charge. Payment for extra leads for more than 200m, if any will be made under the relevant items of the schedule.
- (u) For all works on the running track or adjacent to running track, the protection of work site and the workmen shall be ensured at all times and the instructions given by Engineer, or his representative as given in special conditions of contract should be strictly adhered to.
- (v) All scattered ballast of crib and shoulder shall be put back by contractor at his own cost.
- (w) Sleepers shall be packed to ensure safety of track for 30 Kmph.
- (x) The released fittings shall be stacked at one place (within 200m of lead).
- (y) In case combination liners are not available, at the time of sleeper renewal, then old 52Kg / new 60Kg fastening shall be used. While doing so contractor shall follow the instructions:  
"Here every 5th old sleeper shall be left in the track till combination liners for at least these sleepers are arranged by Railways." However, these sleepers shall be replaced by 60Kg sleeper before rail renewal by 60Kg by contractor.
- (z) T-3741 and T-3742 (T-3707 and T-3708): Combination liners shall be painted by red colour and yellow colour respectively for easy identification and fixing on rail sleepers. This work will be done by Railways.
- (zi) Work of fixing of combination liners may be required to be done at later stage subject to its availability at site, for which no extra payment shall be made to the contractor.

## **12.0 SPREADING OF PRC SLEEPERS AND FABRICATION OF 12.6 TM LONG RAIL PANELS:**

The work of fabrication of panels will include spreading of PRC sleepers and linking of 52Kg / 60Kg 12.6 meters rail or any other suitable length panels as specified by the Engineer with PRC sleepers linked with standard fastenings i.e. pandrol clips, rubber pads and liner etc. at correct spacing of 60cms centre to centre of sleepers.

- (i) The rubber pads will be fixed to PRC sleepers using Khandelwal synthetic glue or any other glue approved by the Engineer. The glue will be arranged by the contractor at his own cost.

(ii) Spacing for linking will be marked on the rails with a fine paint by the contractor under the supervision of PWI in charge of fabrication depot and the sleepers will have to be laid at the specified spacing of 60cms each (centre to centre of sleepers). One panel will mean 2 rails of 52Kg / 60Kg 12.5m length (or any other length as specified by the Engineer linked with PRC sleepers with standard fastening at specified spacing of 60cms. The contractor will ensure that the PRC sleepers are laid square in the rail. The contractor will also ensure that ends of rails are also kept square.

(iii) The contractor shall first lift PRC sleepers from stacks & spread them on the same track by using mechanical equipment's. Mechanical means like road crane, mechanical gantries etc. The contractor shall lift PRC sleepers from the track, carry them to the site specified for fabrication of panels on the same track and put them over the rail / panels centrally so that SQRS portals can pass over them without any infringement. The spreading of PRC sleepers will be done by the contractor on the existing or over already linked PRC panels up to a maximum of 8 tiers (one tier for this purpose will mean a rail linked on PRC sleepers). The maximum lead of PRC sleepers from the stack to the site of spreading will be limited to 600 meters. Nothing extra shall be paid to the contractor for lift and lead as specified above. The contractor shall therefore, quote his rates keeping in view that all machinery like gantries etc. operators, labours, fuel etc. will have to be arranged by him at his own cost for lifting PRC sleepers from stacks, leading them to site and spreading them as specified including all lead & lift and nothing extra shall be paid on any account. In case the contractor does not spread the sleepers centrally to track and his causes infringement to the movement of portal cranes on that track, necessary adjustment of PRC sleepers shall be made by deploying departmental labour, the cost of which shall be recovered from the contractor. The decision of Engineer Incharge of the work shall be final in this regard and shall be binding on the contractor.

(iv) After spreading PRC sleepers, the contractor shall bring service rails with a maximum lead up to 600 meters along the same track, lift service rails from ground, put them over PRC sleepers spread by him and link the rails and sleepers at correct spacing after providing rubber pads and fittings. The linking of panels will be done up to maximum of 8 tiers one over the other. Nothing extra shall be paid for leading, lifting, adjustment, slewing of rails / sleepers / fittings for fabrication of panels except for spreading of PRC sleepers. This aspect should, therefore, be kept in mind by the tenderer while quoting rates. Minor slewing / shifting of PRC sleepers may be done manually.

(v) The elastic rail clips (ERC) shall be lubricated by the contractor with grease of approved quality before fixing the rails on the sleepers with the help of ERC. The material required for the greasing shall be arranged by the contractor at his own cost. Nothing extra shall be paid to the contractor on this account.

(vi) The contractor shall be required to fabricate adequate number of panels per day as instructed by PWI / ADEN In charge of the work. In the initial stage service rails for linking of panels will be supplied at site by the Railways. Later on these will be available from dismantled panels.

(vii) The quality of fabricated panels i.e. squaring and spreading of sleepers, proper positioning of fittings lubrication of ERCs, squaring of rail ends shall be to the entire satisfaction of PWI / Fabrication depot and the engineer in-charge to the work.

(viii) Grease, paint, anticorrosive paint etc. consumable required in the works shall be deposited by the contractor in advance to SE/P-Way In-charge depot and the same shall be issued to contractor for work as requirement. The contractor shall transport the same at their own cost.

### **13.0 LOADING OF FABRICATED PANELS OF 12.6 TM LENGTH PANELS ETC.**

- (i) Fabricated panels which are stacked one above the other will be lifted carried and loaded on the BFRs / BRHs placed on the same track.
- (ii) The contractor will have to load panels in such a way every day so that total no. of panels on SQRS rake are not less than 40, if otherwise not prevented by Railway's representative.
- (iii) Panels will be loaded on BFRs / BRHs in maximum of 4 layers.
- (iv) Maximum lead involved will be 450 meters only.
- (v) The SQRS rake will be placed in the yard any time after the block. The contractor will first unload released panels and then load fabricated panels.
- (vi) The loading of fabricated panels must be completed before 5.00 hrs. In case the rake is placed after sun set, the contractor will have to work during night for which he shall make his own arrangements for lighting.
- (vii) Fabricated panels will include intermediate stacking of panels in 3-4-5 layers on ground prior to loading panels into BFR.

### **14.0 UNLOADING OF 12.6 TM LONG RELEASED PANELS ETC.:**

- (i) After the block, the SQRS rake will be placed in the SQRS yard and the contractor will unload the released panels and stack them on the same track at specified place.
- (ii) Portals or mechanical gantries required for unloading of released panels will be arranged by the contractor at his own cost.
- (iii) The unloading of 40 released panels will have to be done every day.
- (iv) The unloading of released panels will be done soon after placement and will be completed in such a manner that fabricated panels are also loaded before 05.00 hrs. for next day block.

### **15.0 DISMANTLING OF 12.6M LONG RELEASED PANELS ETC.:**

- (i) Simultaneously, contractor shall do the work of dismantling released panels received from site 12.6 meter or any other length of 52Kg / 60Kg panels with PRC sleepers after they are unloaded by portals / mechanical gantries. The contractor will sort out U.S. and S.S. materials out of released as per direction of PWI In-charge and will then stack released PRC sleepers at places specified for staking by the PWI Incharge of the depot in the yard (but within 500 meters of the place of dismantling).
- (ii) In addition, the contractor shall remove service rails from the released panels and will lead them to the place where fabrication of panels with PRC sleepers is to be done. (Nothing extra shall be paid on this account) and the rates for dismantling of released panels must include dismantling out, leading stacking as well as leading of service rails, to fabrication points. The leading of service rails including extra rails brought over the panels will, however, be along the same track and up to a maximum of 450 meters (Xing of track other than the one on which work is being done will not be required to be done by the contractor). Nothing extra shall be payable for handling leading and stacking of extra rails brought over the panels.

(iii) The work will normally be done during sun rise to sun set if dismantling of released panels and formation of new panels is done at night at contractor's choice, lighting arrangement if needed will be arranged by the contractor at his own cost and nothing extra shall be payable on this account.

(iv) The released material shall be stacked on the space earmarked for stacking purposes by the PWI In charge of the work. One released panel will mean 2 rails of 52Kg linked with PRC sleepers. In addition, 2 to 4 more service rails of 52Kg / 60Kg may be brought loaded over these panels which will also be handled by the contractor without any extra payment. The fittings and fastenings of rails with sleepers released from panels will be stacked at places specified by PWI In-charge.

(v) New materials required for fabrication of panels will be issued to contractor by PWI / Fabrication depot in the SQRS yard.

(vi) The contractor will be required to dismantle 30 panels per day (depending upon availability of released panels for dismantling).

### **16.0 MECHANICAL / MANUAL LOADING OF RAILS:**

(i) The entire work of loading of rails will be done in base depot either in BFR's or trailer as per relevant NS items under the supervision of railway's representative. The contractor should closely examine and inspect the site of work and condition prevailing therein before quoting his rates.

(ii) The work will be undertaken between sun rise to sun set. However, the contractor will be free to do loading during night but for this purpose no lighting arrangement will be made by the Railways. Any lighting arrangements if required will be arranged by the contractor. Nothing extra shall be payable to the contractor on this account.

(iii) The loading of rails will be done by the contractor in Railway BFR / BRH / other type of open stock. In every case the wagons / BFRs so supplied for loading will be open from the top, so that the rails can be kept on them from the top.

(iv) The rails which are required to be loaded will be available either inside the track or near the track in the SQRS base depot.

(v) The rails required to be loaded will be brought by the contractor and loaded directly on to the BFR / BRH / other wagons supplied for this purpose. (The overall lead of the stack of the rails from which the rails are required to be picked up and loaded, will be confined to a maximum of 450 meters. The distance will be measured from the centre of the BFR / BRH or other stock in which the rails are to be loaded to the point along with the track where the rails are lying.

(vi) The Railway shall ask the contractor to load only ordinary rails which can be directly put on the BFR / BRH / other stock from top. If the rails are longer in length, the cutting required, if any, will be done by the contractor shall be paid separately.

(vii) The BFR / BRH / Wagons will be placed by the Railway as available and required for loading. The contractor will have no claim for a regular supply of BFR / BRH / Wagons for loading as the same will be arranged as available and no claim on this account will be entertained. The contractors should, therefore, quote their rates keeping this aspect in view. Further the BFR / BRH / Wagons may be placed in any line as convenient to the railways and contractor shall have no claim for any particular placement of wagons for loading.

(viii) Handling of service rails etc. brought or released panels shall be done by contractor for which no extra shall be paid.

- 17.0 (i) All the released fittings will be deposited in the store of PWI In-charge.
- (ii) Loss of any tool / plant if any will have to be made good by the contractor at the following rates: "Either in book rate or purchase rate of the particular items whichever is higher + 5% freight, 2% incidental charges and 12-1/2% supervision charges on the rates inclusive 18% GST." The contractor shall be responsible for safe custody of tools and plants used by him and his labour. He should ensure that labour on work remove their tools clear of the track on the approach of the train. After the day work, the contractor should secure tools in proper tools to their homes. Tools issued shall not be allowed to go in unwanted hands, who can tamper with the Railway track.
- (iii) The contractor shall employ one suitable supervisor at the site of work at his own cost. The name along with technical qualifications of such supervisor should be advised to engineer in charge. If in the opinion of the engineer in charge of the work, the supervisor is not fit to be incharge of the work, he should be forthwith replaced. In the matter the opinion of the engineer in charge will be final & binding on the contractor.
- (iv) The contractor will be responsible to ensure the safety of his workmen and tools during the operation of work and nothing will be left infringing the track at the time of passing of train. Safety of contractor's men working on the track is the responsibility of the contractor and railway will in no case be responsible for compensation required to be paid to the contractor's men in the event of any accident / mishap.

### **18.0 UNLOADING OF RAILS/SLEEPERS FROM DMT / HD. QRS. AT SITE:**

- (a) The contractor will be required to unload PRC sleepers normally from KCMs/BFRs/other stocks during traffic block either in block section or in yards etc.
- (b) Sleepers will be unloaded as per direction of PWI/In charge who will decide the location and no. of PRC sleepers to be unloaded in block section. Approximate 110 sleepers shall be unloaded in between OHE / Masts = (70m).
- (c) The work will not be continuous and will be done only when engine and PRC sleepers are available. The contractor will have no claim due to this.
- (d) Traffic block may not be given when unloading is planned and it may cause wastage of labour of the contractor but nothing extra will be paid on this account.
- (e) All the PRC sleeper unloaded must be kept clear off ballast section of the track. No sleeper will be left on shoulders of ballast. Sleeper shall be stacked on cess approx. parallel to existing sleeper in track.
- (f) All the rails unloaded from rail DMT 10/20 rail panels must be put at safe distance from running track while unloading. Sufficient labours should be provided for unloading as well as for clearing the track.

### **19.0 DESTRESSING OF TRACK:**

Destressing of track involves following items: -

- (i) Work shall only be undertaken after Speed restriction of 30 Kmph shall be imposed by the Railways.
- (ii) Closure rails shall be introduced in a traffic block by Railways.
- (iii) Fastening on alternate sleepers are loosened under the speed restriction of 30 Kmph.

- (iv) Traffic block of adequate length shall be arranged at such a time when rail temperature is within distressing temperature, then no tensor is required. Otherwise, tensor shall be used. Labour for tensor operation only shall be provided by Railways.
- (v) When the block is taken then closure rail shall be removed, SEJ adjusted and fastened in their mean position by contractor.
- (vi) The sleeper fastening on both running rails shall be removed and rail shall be lifted and placed on rollers at every sleeper to permit the rails to move freely. The rails shall be struck horizontally with heavy wooden mallets to assist their horizontal movement. After this operation, if extension is required then required extensions shall be done by PWI with tensor.
- (vii) If rubber pads are required to be changed then these should be changed at this stage while the rails are still on lifted position by contractor.
- (viii) The rollers shall then be removed, the rail lowered to alignment and other same or new fastenings (pendrols, liners etc.) are provided and tightened as directed by PWI.
- (ix) Cut rails between SEJ & LWR shall be provided simultaneously and welding etc. shall be done by Railways.
- (x) No Extra payments for renewed of rubber pads, shall be made to the contractor . The contractor shall not start any work without personal presence of the PWI at site. In case the contractor or his representative starts any work in absence of PWI, it shall be treated as unauthorized and illegal tampering with the track and shall be liable for action under Indian Railway Act.

#### **PENALTIES:**

- (a) In the event of accident at the work site, the departmental enquiry will be held and in case it is established with that the derailment has occurred on account of the contractor's negligence or the negligence of his men, penalties up to an upper limit of 10% of the total cost of the work shall be imposed in case there is accident for which the contractor is responsible. All losses and compensation as a result of Court's orders in case of accident due to fault of contractor or his men will be responsibility of contractor, irrespective of value.
- (b) Railway administration reserves the right to terminate the contract with immediate effect if the contractor is found responsible for the accident without giving any further notices to the contractor.
- (c) In the event of loss of any of the existing fittings and fastening in track due to contractor's working, the contractor will have to pay cost of materials at the prevailing rates fixed by the Railways + 19-1/2%.

#### **20.0 DEEP SCREENING UNDER RUNNING TRAFFIC SITE:**

- (i) INSTRUCTIONS : The tenderer must inspect the site of work including locations of materials to be brought in for replacement as well for leading back to the station and acquaint themselves with the roads, heights of embankment, depth of cutting on the sections where work is to be done, leading, lift ascent, descent crossing of lines involves, availability of labour, dumping facilities and all other factors which will have bearing on the works before quoting the rates and the tendered rates should be include all such charges incidental to the work. No extra charge whatsoever will be payable.

(ii) The contractor will keep site order book at site with all pages duly top initialled by ADEN / DEN in charge of the work.

(iii) DEEP SCREENING:

Procedure- The work of deep screening will be executed under the speed restriction of 20 Kmph without any traffic block. The procedure of the work has been specified.

Description of work - Deep screening will involve the following items:-

(a) Deep screening of stone ballast and the entire ballast section for a depth as given in schedule of rates below the bottom of the sleepers including providing drainage slopes on the formation including making up of cess of the required profile with released muck / railway earth only. No additional earth work will be required to be done by the contractor for making up cess whatever can be done with the muck removed from deep screening will only be used. A slope of 1 in 10 shall be made in the formation towards cess side depending upon the site condition. The depth of deep screening / raising will be decided by the Engineer In charge before the start of the work. The longitudinal section of the existing rail as well as proposed rails level will be marked on RE Mast and given to the contractor before the start of the work.

The depth of deep screening can be reduced by the site engineer depending upon the condition of ballast / ceiling.

(b) The contractor should quote his rate deep screening inclusive of one round of pucca packing.

(c) Speed restriction as required will be arranged by the engineer in charge longitudinal section of existing rail profile and proposed rail profile will be given to the contractor before the commencement of the work. This will be done by the ADEN / DEN in charge of the work.

(d) The contractor should progress the work in systematic manner with sufficient labour so as to keep the length of trade under speed restriction to the minimum. The caution man / flagman during the day and the night will be arranged by the Railways from of any cost of the contractor.

(e) The cess side cess will be dressed up to full width or maximum 4 meters from the end of PRC sleeper. The rate of this work shall be inclusive in the schedule item and nothing extra shall be paid on this account. The cess in between UP & DN line shall be made up to middle of UP & DN line, subject to max. 1.0M from end of PRC sleepers. All ballast falling in this zone shall be screened and put back to the track which is being deep screening.

(f) The ballast shall be dressed and boxed as per instruction of the site incharge. This will be a part of deep screening work and nothing extra shall be paid for this.

(g) The re-spacing and squaring of sleepers will also be done by the contractor wherever required as directed by PWI. The rate of item shall be include the rate of this work also and nothing extra shall be paid to the contractor on this account.

(h) Shoulder of ballast shall be cut vertically from the edge of sleeper up the existing formation level for full depth (which may even more than 26") and then full shoulder shall be screened to reclaim the maximum quantity of ballast and then only cess shall be built up as given in para 'e'. This shoulder cleaning shall be required to be done from the centre of tracks on the track side tracks and up to toe of ballast on

the cess side. This work is a part of deep screening and nothing extra shall be paid on this account.

(i) The contractor shall not start any work without any personal presence of the PWI at site. In case the contractor / contractor's representative starts any work in absence of PWI, it shall be treated as unauthorized and illegal tampering with the track and shall be liable for action under Indian Railway Act.

## **21.0 TOOLS & PLANTS:**

(i) As far as possible the contractor shall make his own arrangements for tools required for the work. However, the following tools and plants if required for the work may be issued to the contractor subject to their availability on normal charges as under:

<b>SN</b>	<b>Description of Tools</b>	<b>Rent per month</b>
01	Crowbar	@ Rs.5/- per month each
02	Keying hammers	@ Rs.5/- per month each
03	Level Board	@ Rs.5/- per month each
04	Spirit levels	@ Rs.5/- per month each
05	Spanner double ended	@ Rs.5/- per month each.
06	Track gauge	@ Rs.5/- per month each
07	Rail Tongs	@ Rs.5/- per month each
08	Rail beaters	@ Rs.5/- per month each
09	Rail dolly	@ Rs.10/- per month each
10	Wire baskets	@ Rs.5/- per month each
11	P. way square	@ Rs.5/- per month each
12	Motor Pan	@ Rs.5/- per month each
13	Wire brush	@ Rs.5/- per month each
14	Rollers	@ Rs.1/- per month each
15	Rake ballast	@ Rs.5/- per month each
16	Phowrah / Shovel	@ Rs.5/- per month each
17	Hooter	@ Rs.10/- per month each

(ii) The wooden handles subsequently required for replacement will have to be arranged by the contractor at his own cost. Cane baskets for loading of small fittings will have to be procured by the contractor at his own cost.

(iii) The contractor shall have to give Security / Bank Guarantee of Rs.10,000/- towards the cost of tools issued to him. All these tools will have to be returned by the contractor at the end of his contract within one week after completion of work. Only nominal wear and tear will be allowed and decision of ADEN Incharge of the work in this regard will be final.

(iv) Loss of tools and plants if any will have to be made good by the contractor at the following rates: Either the book rate or purchase rate of that particular item whichever is higher + 5% freight + 2% incidental charges + 12.5% supervision charges on this rate inclusive 18% GST.

(v) The contractor shall be responsible for the safe custody of tools and plants being used by him or his labour. He shall ensure that the labour on the work keep their tools safe and are not permitted to take tools to their homes and they should be asked to deposit them in proper tool box before they leave the Railway premises.

The contractor should ensure that these tools are not kept in such a way that they fall in unwanted hands who can tamper with the railway track.

(vi) The tools / rail dolly / diplorry / roller etc. issued to the contractor will have to be repaired by the contractor at his own cost for which a temporary workshop may have to be set up at site. All materials required for reconditioning of these tools will have to be arranged by the contractor at his own cost and nothing will be paid on this account.

(vii) Tarpaulins / choldaries required for accommodating contractor's staff will have to be provided by the contractor at his own cost.