

Technical Specifications

1. **SCOPE OF WORK/ SUPPLY:**

Manufacture, Supply, and Delivery of Turned & Fitted Bolts (Property Class 8.8) complete with Nuts and Washers, conforming to BBJ Drawing Nos. 3144-ERC-61.0M-SK-04 and 3144-ERC-61.0M-SK-05, for the Gorakhpur-Valmiki Nagar Doubling Project.

The scope shall include manufacture, testing, inspection, packing, loading, transportation, and delivery of the following:

| Sl. No. | Description | Unit | Qty | Remarks |
|---------|--------------------------|------|------|--|
| 1 | 21.5 x M20 x 60 TF Bolt | Sets | 500 | As per BBJ Drawing Nos. 3144-ERC-61.0M-SK-04 |
| 2 | 23.5 x M22 x 65 TF Bolt | Sets | 1200 | |
| 3 | 23.5 x M22 x 75 TF Bolt | Sets | 1450 | |
| 4 | 23.5 x M22 x 80 TF Bolt | Sets | 385 | |
| 5 | 23.5 x M22 x 90 TF Bolt | Sets | 2080 | |
| 6 | 23.5 x M22 x 105 TF Bolt | Sets | 190 | |
| 7 | 23.5 x M22 x 110 TF Bolt | Sets | 1970 | |
| 8 | 23.5 x M22 x 135 TF Bolt | Sets | 6510 | |
| 9 | 23.5 x M22 x 145 TF Bolt | Sets | 940 | |
| 10 | M22 x 120 TF Bolt | Sets | 800 | As per BBJ Drawing Nos. 3144-ERC-61.0M-SK-05 |

The materials shall be supplied strictly in accordance with the drawings, technical specifications, inspection requirements, and other provisions of the tender document.

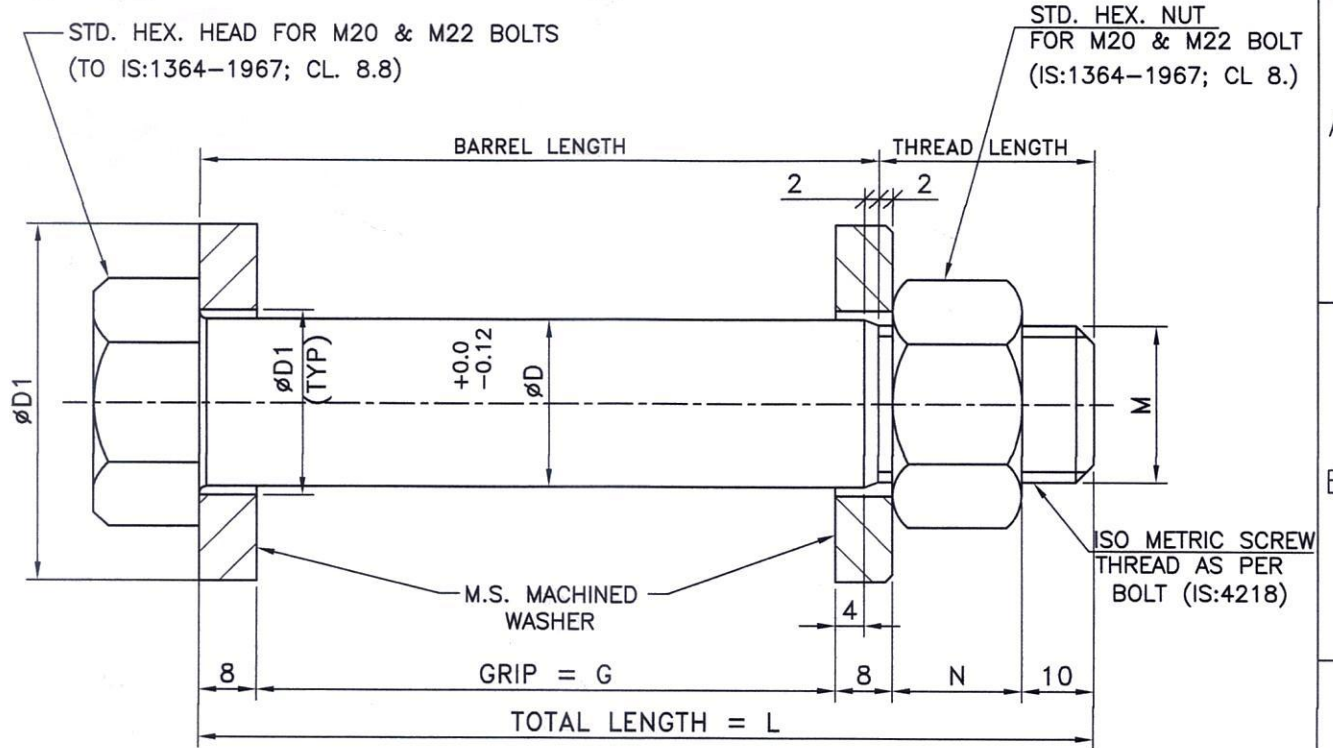
The successful bidder shall also be responsible for submission of Manufacturer's Test Certificates (MTCs), lot-wise traceability documents, inspection reports, packing, safe transportation, and replacement of any defective materials during the Defect Liability Period.

2. **TECHNICAL SPECIFICATIONS:**

The materials shall conform strictly to the technical specifications, dimensions, tolerances, and requirements stipulated in BBJ Drawing Nos. 3144-ERC-61.0M-SK-04 and 3144-ERC-61.0M-SK-05, enclosed at Annexure-A.

All Turned & Fitted (TF) Bolts shall be of Property Class 8.8 and shall conform to the applicable provisions of relevant IS/ IRS/ RDSO specifications, including the latest amendments thereof.

The successful bidder shall ensure that all bolts, nuts, and washers are manufactured, tested, inspected, and supplied in accordance with the approved drawings, technical specifications, and applicable quality assurance requirements.



EACH T.F. BOLT CONSIST OF TWO ROUND WASHER & ONE HEX. NUT

| TYPE | HEAD | BARREL DIA. OF BOLTS (D) | GRIP (G) | BARREL LENGTH | HEX NUT (N) | THREAD DIA (M) | THREAD LENGTH | TOTAL LENGTH (M) | LENGTH TO BE CONSIDERED | ROUND WASHER BORE DIA (D1) | ROUND WASHER OUTER DIA (D2) | NET NO. FOR 1 SET ERECTION | 3 SETS WITH SPARE | 9 SETS WITH SPARE |
|---------------|------|--------------------------|----------|---------------|-------------|----------------|---------------|------------------|-------------------------|----------------------------|-----------------------------|----------------------------|-------------------|-------------------|
| 1 | HEX | 21.5 | 20 | 34 | 16 | 20 | 28 | 62 | 60 | 24 | 46 | 54 | 167 | 500 |
| 2 | HEX | 23.5 | 20 | 34 | 18 | 22 | 30 | 64 | 65 | 26 | 50 | 132 | 400 | 1200 |
| 3 | HEX | 23.5 | 30-32 | 46 | 18 | 22 | 30 | 76 | 75 | 26 | 50 | 126+32 | 483 | 1450 |
| 4 | HEX | 23.5 | 34 | 48 | 18 | 22 | 30 | 78 | 80 | 26 | 50 | 42 | 128 | 385 |
| 5 | HEX | 23.5 | 44-46 | 60 | 18 | 22 | 30 | 90 | 90 | 26 | 50 | 196+30 | 693 | 2080 |
| 6 | HEX | 23.5 | 62 | 76 | 18 | 22 | 30 | 106 | 105 | 26 | 50 | 20 | 63 | 190 |
| 7 | HEX | 23.5 | 68 | 82 | 18 | 22 | 30 | 112 | 110 | 26 | 50 | 216 | 657 | 1970 |
| 8 | HEX | 23.5 | 91 | 105 | 18 | 22 | 30 | 135 | 135 | 26 | 50 | 714 | 2170 | 6510 |
| 9 | HEX | 23.5 | 101 | 115 | 18 | 22 | 30 | 145 | 145 | 26 | 50 | 102 | 313 | 940 |
| TOTAL= | | | | | | | | | | | | 1664 | 5075 NOS. | 15225 NOS. |

NOTE:-

1. ALL DIMENSIONS ARE IN MM.
2. ALL BOLTS ARE GR. CL-8.8 & NUTS ARE GR. CL-8 CONFORMING TO IS:1364-1967
3. ALL MACHINED WASHERS ARE M.S.
4. FOR CANTILEVER ERECTION, ONE COMPLETE SET OF T.F. BOLTS CAN BE USED FOR FOUR-FIVE TIMES.



THE BRAITHWAITE BURN AND JESSOP CONSTRUCTION COMPANY LIMITED (A GOVT. OF INDIA ENTERPRISE)

CLIENT:

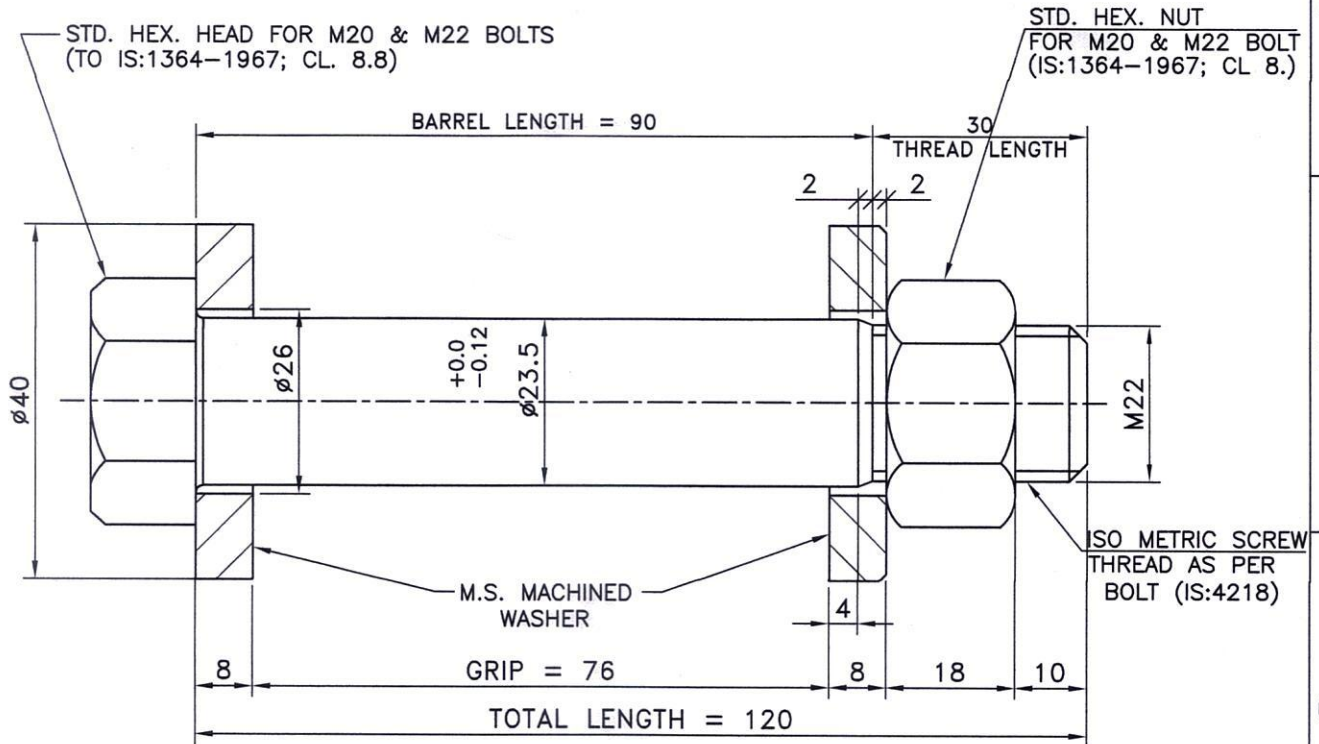
NORTH EASTERN RAILWAY

PROJECT: 25Ton. AXLE LOADING STANDARD-2008, OPEN WEB WELDED THROUGH TYPE GIRDER FOR BR.NO.-50(14x61.0M) SPAN FOR BETWEEN PANIAHWA-VALMIKINAGAR DOUBLING, BR.NO 16 (18x61.0M) BETWEEN MANJHI-BAKULAHA STATION OF CPR-BUI DOUBLING, BR.NO 391 (17x61.0M) BETWEEN CHOWKA GHAT- GHAGHRA GHAT OF BUG-GD 4TH LINE PROJECT.

TITLE:

DETAILS OF TURNED & FITTED BOLTS FOR ERECTION GADGET

| | | | | |
|--------------|------------|------------|------------------------|----------------|
| SCALE:- 1:2 | NAME | DATE | B.B.J. ORDER NO.- 3144 | |
| DRAWN BY: | R. BOSE | 07.04.2026 | DRG. NO. | REV. |
| CHECKED BY: | S.MAJUMDER | 07.04.2026 | 3144-ERC-61.0M-SK-04 | 0 |
| APPROVED BY: | | | REQN.NO.- D/2364 | DATE:-08.04.26 |
| | | | | A4 |



**REQUIRED 800 NOS. (INCLUDING 16 NOS. SPARE)
22 DIA TURNED & FITTED BOLTS; CLASS 8.8
FOR FIXING CROSS GIRDER WITH END BRACKET & STRINGER**

NOTE:-

1. ALL DIMENSIONS ARE IN MM.
2. ALL BOLTS ARE GR. CL-8.8 & NUTS ARE GR. CL-8 (IS:1367)
3. ALL MACHINED WASHERS ARE M.S

| LOCATION | GRIP | REQD./SPAN |
|---|---------------------|------------|
| Stiffn Angl. + Cross Girder End Pl. +Cross girder web Pl. +Cross Girder End pl. +Stiffn Angl. | 12+20+12+20+12 = 76 | 16 NOS. |



**THE BRAITHWAITE BURN AND JESSOP
CONSTRUCTION COMPANY LIMITED
(A GOVT. OF INDIA ENTERPRISE)**

CLIENT: **NORTH EASTERN RAILWAY**

PROJECT: 25Ton. AXLE LOADING STANDARD-2008, OPEN WEB WELDED THROUGH TYPE GIRDER FOR BR.NO.-50(14x61.0M) SPAN FOR BETWEEN PANIAHWA-VALMIKINAGAR DOUBLING, BR.NO 16 (18x61.0M) BETWEEN MANJHI-BAKULAHA STATION OF CPR-BUI DOUBLING, BR.NO 391 (17x61.0M) BETWEEN CHOWKA GHAT- GHAGHRA GHAT OF BUG-GD 4TH LINE PROJECT.

TITLE: **DETAILS OF TURNED & FITTED BOLTS FOR
FIXING END CROSS GIRDER END PLATE**

| | | | | |
|--------------|------------|------------|------------------------|-------------------|
| SCALE:- 1:2 | NAME | DATE | B.B.J. ORDER NO.- 3144 | |
| DRAWN BY: | R. BOSE | 09.04.2026 | DRG. NO. | REV. |
| CHECKED BY: | S.MAJUMDER | 09.04.2026 | 3144-ERC-61.0M-SK-05 | 0 |
| APPROVED BY: | | | REQN.NO.- D/2366 | DATE:-09.04.26 A4 |