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| **Abstract cost of estimate for the construction of (A) Sub-Mergible Embankment at Nunnir Haor From km.0.070 to km. 6.541 = 6.534 km (Part-A) , (B) Constriction Northern Depression Regulator (1-V-1.5 x 1.8m ) at km 2.62 (Part-B), Constriction of southern Depression Regulator (1-V-1.5 x 1.8m ) at km 6.20 (Part-B), (2nos) (C) Samarbari khal Regulator (4 v- 1.5m x1.8m) at km 0.78 ( Part- C) of Nunnir Haor Sub -Project in C/W Haor flood Managemant and Livelihood Improvement project Under Kishoreganj W.D Division,BWDB,Kishoreganj during the Financial year 2016-17 & 2017-18. Package No. BWDB/Kish/HFMLIP/PW-04.** | | | | | | |
| **Sl. No:** | **Item no & Code** | **Item Description** | **Qnty** | **Unit** | **Unit Rate (Tk)** | **Amount (Tk)** |
|  |  | **(A) Submergible Embankment (Part-B)** | |  |  |  |
| 1 | 16-100 | Erection of bamboo profile with full bamboo posts and pegs not less than 60mm in diameter and coir strings etc. complete as per direction of Engineer in charge. | 132.00 | each | 290.48 | 38,343.36 |
| 2 | 16-650-20 | Earth work by Mechanical Excavator (Long Boon) in constructing/ resectioning of embankment/canal bank/ road etc. compacted to 85%/90% maximum dry density at optimum moisture content, with reference to laboratory density test AAHSTO modified hammer, with clayey soil  (minm 30% clay, 0-40% silt, 0-30% sand) within the initial lead of 30m and all lifts including throwing the spoils to profiles in layers not exceeding 230mm in thickness with clod breaking to a maximum size of 100mm, benching the side slopes, removing roots and stumps of trees of girth upto 200mm from the ground, stripping/ploughing the base of embankment and borrow pit area, dug bailing, rough dressing including 150mm cambering at the centre of crest etc. complete, including maintenance of the same for 6 months after completion, (compaction will be done by the contractor with approved equipment, including all ancillary charges for compaction and  testing) as per direction of Engineer in charge. | 15,126.315 | Cum | 145.85 | 2,206,173.04 |
| 3 | 16-410-10 | Earth work by carried earth (by truck/boat or any other means) supplied at contractor's own cost (including royalty) direction of Engineer in charge. Earth work by manual labour in all kinds of soil for excavation/ re-excavation of pond/ tank in layers of 150mm including gbreaking clods, dressing, profiling etc. complete with all leads and lifts as per direction of Engineer in charge.  16-410-10: 300m to 1.00 km.(85% compaction) | 20,168.420 | Cum | 346.28 | 6,983,920.48 |
| 4 | 16-120-10 | Earth work by manual labour in constructing/ resectioning of embankment/canal bank/ road etc. compacted to 85%/90% maximum dry density at optimum moisture content, with reference ..., (compaction will be done by the contractor with approved equipment, including all ancillary charges for compaction and testing) as per direction of Engineer in charge. **16-120-10** : 0 m to 3 m height with 85% compaction. | 15,126.315 | Cum | 182.93 | 2,767,056.80 |
| 5 | 16-190 | Extra rate for every additional lead of 15m or part thereof beyond the initial lead of 30m upto a maximum of 19 leads (3 m neglected) for all kinds of earth work. 3 nos lead = 3x14.57= 43.71 | 15,126.315 | Pld  Cum | 43.71 | 661,171.23 |
| 6 | 48-100 | Fine dressing and close turfing of the slopes and the crest of embankment with 75mm thick, good quality durba or charkanta sods of size 200mm x 200mm, with all leads and lifts, including ramming, watering until the turfgrows properly, maintaining etc. complete (measurement will be given onwell grown grass only). as per direction of Engineer in charge. | 71,874.000 | Sqm | 26.17 | 1,880,942.58 |
| 7 | 48-130 | Biological protection of bare earth surface by Dholkalmi with minimum 50cm long sapling, planting @ not more than 30 cm apart including supplying, sizing, taping and nursing etc. complete as per direction of the Engineer in charge. | 39,204.000 | m | 4.47 | 175,241.88 |
| 8 | 56-100 | Earth work in box cutting up to 1.00 m depth, in all kinds of soil with all leads, removing the spoils to a safe distance, including levelling and dressing, maintaining required cambering etc. complete, as per direction of Engineer in charge. | 2,940.750 | Cum | 135.05 | 397,148.29 |
| 9 | 56-110 | Construction of improved road sub-grade of sand (FM>=0.8) in maximum 150mm thick layer including dressing, levelling, ramming, watering, cambering and compacting to attain minimum CBR-8% by..drawing and direction of Engineer in charge (payment shall be made on compacted volume). | 588.150 | Cum | 733.12 | 431,184.53 |
| 10 | Analysis Rate | Preparetion of Bed by Cutting and filling including watering to bring moisture +- 2% of OMC & compacting by appropiate machanical meands etc to attain minimum compaction 98% oc MDD (standard) to obtain a minimum soaked CBR 4% etc all complete as per direction of the E-I-C. | 3,921.000 | sqm | 11.39 | 44,660.19 |
| 11 | Analysis rate | Manufacturing and supplying C.C. blocks in leanest mix. 1:2:4. withcement, sand (FM>=1.5) and Stone Chips (40mm down graded) to attain a28 days cylinder strength of 15 N/mm² including grading, washing stonechips, mixing, laying in forms, consolidation, curing for at least 21 days, including preparation of platform, shuttering and stacking in measurablestacks etc. complete including supply of all materials (steel shutter to be used) as per direction of Engineer in charge.  Block size 30cmx30cmx30cm | 37,250.000 | each | 329.270 | 12265307.50 |
| 12 | Analysis rate | Manufacturing and supplying C.C. blocks in leanest mix. 1:2:4 withcement, sand (FM>=1.5) and Stone Chips (40mm down graded) to attain a28 days cylinder strength of 15 N/mm² including grading, washing stonechips, mixing, laying in forms, consolidation, curing for at least 21 days, including preparation of platform, shuttering and stacking in measurablestacks etc. complete including supply of all materials (steel shutter to beused) as per direction of Engineer in charge.  Block size 100cm x65cm x12.5cm(Av) | 2,483.000 | each | 977.18 | 2,426,337.94 |
| 13 | 24-310-10 | Flush pointing to brick works, in sand cement mortar (sand of FM>=1.3), including scaffolding, curing, raking out joints, clearing the surface etc. complete in all floors including the cost of all materials and as per direction of Engineer in charge. 24-310-10: proportion 1:2 | 3,921.000 | Sqm | 162.47 | 637,044.87 |
| 14 | 40-220-10 | Labour charge for protective work in laying sand cement blocks of different sizes including preparation of base, ramming of base etc. complete as per direction of the Engineer in charge: 40-220-10: Within 200m. | 1,271.057 | Cum | 1145.88 | 1,456,478.80 |
| 15 | 36-150-10 | Formwork for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mmx40mmx6mm M.S. angle frame and 25mmx6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. 36-150-10: Vertical and inclined walls, columns, piers with 60-80mm dia barrack bamboo props. | 13.384 | sqm | 909.69 | 12175.291 |
| 16 | 76-120-10 | M.S. Work for reinforcement with deformed M.S. bar, fy=414 N/mm², (made from billet) in RCC works, including local handling, cutting, forging, bending, cleaning and fabrication with supply of deformed M.S. bar in different sizes and binding with 22 to 18 gages G.I. wire etc. complete including the cost of all materials as per direction of Engineer in charge. 76-120-10: 8mm dia to 30mm dia | 61.380 | kg | 77.34 | 4747.129 |
| 17 | 76-115-10 | M.S Work for reinforcement with Standard deformed bar fy=276 N/mm^2 in RCC works including local handling, cutting, forging,bending,cleaning and fabrication with supply of deformed M.S. bar in different sizes and bending with 22 to 18 gages G.I. wire etc. complete including the cost of all materials as per direction of Engineer in charge. 76-115-10: 6mm dia . | 13.319 | kg | 74.37 | 990.534 |
| 18 | 28-200-10 | Reinforced cement concrete work in leanest mix. 1:1.5:3, with 20mm down graded coarse aggregates and sand of FM>2.0 to FM<=2.5, to attain a minimum 28 day cylinder strength of 22.0 N/mm², including breaking, screening, grading, washing aggregates with clean water, mixing, laying in forms, consolidation to levels, curing, including supply of all materials, excluding cost of M.S. work for reinforcements and formworks etc. complete and as per direction of Engineer in charge.28-200-10: with stone chips . | 13.396 | kg | 11674.49 | 156391.468 |
| 19 | 04-110 | Fixing in position, boundary pillars/bench mark pillars/K.M. post etc. of size 110cm height, bottom dia 25cm and top dia 20cm, embedded 45cm below G.L. including carriage, earth cutting, filling, ramming, etc. complete as per direction of Engineer in charge | 11.00 | each | 47.91 | 527.010 |
|  |  |  | **Submergible** | **Sub** | **Total tk =** | **32,545,842.91** |
|  | **(B) Northern + Sourthern = 2 Nos Regulator, 1 vent (1.50 x 1.80)** | | | |  |  |
| 20 | 04-120 | Construction of B.M. Pillars at site with first class bricks in cement mortar (1:4) of size 38cm x 38cm x 75cm on cement concrete (1:2:4) base of size 50cm x 50cm x 7.5cm with 12mm thick cement plastering (1:2) on exposed surfaces of pillar and cement morter on top (1:2), with inscription of "BWDB" with 25cm of the pillar balow ground level etc. complete including ramming the backfill and the cost of all materials as per direction of Engineer in charge. | 8.00 | each | 1203.77 | 9630.160 |
| 21 | 12-100 | Installation of Pizeometer including supply of 40mm G.I. Pipe, Brass Strainer, Socket, Labour by wash boring, Lowering, fixing the elevation and providing cover on the top of the well etc. complete as per direction of Engineer in charge. | 8.00 | each | 2584.22 | 20673.760 |
| 22 | 12-310-20 | Bailing out of water with all leads and lifts by manual labour or pump, with all arrangements for protection of ring bund and side slopes of foundation pit against erosion or washout etc. complete actual volume of work will be measured by sounding method before starting the work) as per direction of Engineer in charge.  12-310-20: by pump. | 43685.460 | cum | 6.13 | 267791.870 |
| 23 | 16-150 | Earth work in excavation of foundation trenches in all kinds of soils including levelling, dressing, placing, removal of spoils to a safe distance with initial lead of 30m and lift of 1.5m as per direction of Engineer in charge. | 3936.926 | Cum | 172.85 | 680497.659 |
| 24 | 16-200 | Extra rate for every additional lift of 1.0m or part thereof beyond the initial lift of 1.5m (30cm negleted) for all kinds of earth work. 2 nos lift=2x10.99=21.98 | 1968.462 | Pld Cum | 21.98 | 43266.795 |
| 25 | 16-220 | Earth work by manual labour with clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) in construction of cross bundh/ ring bundh as per design and specification with all leads and lifts, throwing the earth in layers not exceeding 150mm in thickness, including breaking clods, rough dressing, clearing the jungle, removing stumps, dug bailing and 75mm cambering etc. complete as per direction of Engineer in charge. | 4855.074 | cum | 142.42 | 691459.639 |
| 26 | 44-240-30 | Supplying at site U-shape hot rolled steel sheet pile of different section of Phosphorus=0.04%(Maximum), Sulphur = 0.04% (Maximum), Copper= 0.25% (Minimum), Tensile strength=> 490 N/mm2 , Yield strength =>296 N/mm2, Elongation =15% (Minimum) including all taxes, freights, incidental charges etc. complete as per direction of the Engineer -in- charge.  **44-240-30:** U-shape, hot- rolled steel sheet pile width= 400mm to 600mm: height=> 100mm, Th.=> 10.5: wt. per sqm of pile wall =>120 kg/m2: sectional modulus per one meter of pile wall width => 874 cm3/m. | 16.992 | Mton | 145120.53 | 2465888.046 |
| 27 | 44-320-10 | Cutting of steel sheet piles to design and length and shape as per requirement in design and drawing and as per direction of Engineer in charge. 44-320-10: Upto 10mm thick. | 39.000 | m | 39.16 | 1527.240 |
| 28 | 72-180 | Painting of steel sheet piles, 2 coats of bitumen paint, including preparation of surface with sand paper, iron brush etc. including the cost of all materials and labour etc. complete as per direction of Engineer in charge. | 230.100 | sqm | 293.33 | 67495.233 |
| 29 | 44-270-20 | Driving steel sheet piles of various sections and weights of any type of soil, by monkey hammer including handling and placing in position, staging and supplying of all equipments like monkey hammer, pully, rope, bamboo, bullah etc. including correcting leaning beyond tolerance & other defects and any other incidental cost etc. complete (measurement will be taken on projected width x height) as per direction of Engineer in charge. **44-270-20:** U-type or any other type : Upto 4.50m depth. | 234.000 | sqm | 1250.75 | 292675.500 |
| 30 | 44-310 | Supplying and placing 20mm thick hessian cloth impregnated with bitumen in expansion joints or on top of sheet piles as per specification and direction of Engineer in charge. | 46.800 | Sqm | 461.80 | 21612.240 |
| 31 | 44-220-10 | Construction of pile yard for casting RCC pile with 50mm thick cement concrete (1:3:6) with cement, sand (FM>=1.5) and 20mm down graded picked jhama or 1st class brick chips including breaking, screening, grading and washing chips, mixing, laying and compacting to levels, over a brick flat soling with 1st class bricks including preparation of base, sand filling to make a level base, ramming and sand blinding with sand of FM>=0.8 etc. complete with neat cement finish over the concrete surface including the cost for supply of all materials and as per direction of Engineer in charge. 44-220-10: Weighing minimum 1.0 kg per 6.50 sqm. | 265.862 | sqm | 31.22 | 8300.212 |
| 32 | 28-120-20 | Cement concrete work in leanest mix. 1:3:6 with sand of FM>=1.5, in foundation or floor including breaking, screening, grading and washing aggregates with clear water, mixing, laying in position, consolidation to levels, curing, including supply of all materials, excluding the cost of formworks etc. complete as per direction of Engineer in charge. 28-120-20: With 25mm down graded stone chips | 44.074 | Cum | 10954.48 | 482807.752 |
| 33 | 28-100-20 | Cement concrete work in leanest mix. 1:4:8, with sand of FM>= 1.5, in foundation or floor, including breaking, screening, grading and washing aggregates with clear water, mixing, laying in position, consolidation to levels, curing, including supply of all materials, excluding the cost of formworks etc. complete as per direction of Engineer in charge.  28-100-20: With 25mm down graded stone chips. | 1.512 | Cum | 10601.19 | 16028.999 |
| 34 | 76-110-10 | M.S. Work for reinforcement with deformed M.S. bar, fy=414 N/mm², (made from billet) in RCC works, including local handling, cutting, forging, bending, cleaning and fabrication with supply of deformed M.S. bar in different sizes and binding with 22 to 18 gages G.I. wire etc. complete including the cost of all materials as per direction of Engineer in charge.  **76-110-10:** 8mm dia to 30mm dia | 22315.278 | kg | 77.34 | 1725863.601 |
| 35 | 76-115-10 | M.S. Work for reinforcement with deformed M.S. bar, fy = 276 N/mm2, (made from billet) in RCC works, including local handling, cutting, forging, bending, cleaning and fabrication with supply of deformed M.S. bar in different sizes and binding with 22 to 18 gages G.I. wire etc. complete including the cost of all materials as per direction of Engineer in charge. **76-115-10:** 6 mm dia. | 41.118 | Kg | 74.37 | 3057.946 |
| 36 | 36-150 | Formwork for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 40mmx40mmx6mm M.S. angle frame and 25mmx6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. |  |  |  |  |
| 36-150-60 | Footing, footing beams, grade beams, foundation slab with 60-80mm dia barrack bamboo props. | 256.192 | Sqm | 735.35 | 188390.787 |
| 36-150-10 | Vertical and inclined walls, columns, piers with 60-80mm dia barrack bamboo props. | 539.756 | Sqm | 909.69 | 491010.636 |
| 36-150-30 | 36-150-30: Deck slab, operating deck slab, top slab of barrel above 3.5m upto 6.5m height with 50mm dia GI pipe props. | 130.410 | sqm | 1326.16 | 172944.526 |
| 37 | 16-520-20 | Supplying and filling sand in foundation of hydraulic structures, buildings and in protective works with selected sand, in 150mm thick layer, including levelling, dressing, ramming, watering etc. complete (compacted to 50% relative density by manual laqbour using mallet/vibro compactor) as per direction of Engineer in charge. 16-520-20: sand of FM>= 1.50 | 37.960 | Cum | 1420.06 | 53905.478 |
| 38 | 40-610-30 | Supplying and laying dry 1st class or pick jhama chips as filter in two layers (top and bottom) as per specific size, range and gradation, including breaking chips, grading, preparation of surface, compacting each layer etc. complete with supply of all materials and as per direction of Engineer in charge. 40-610-30:Well graded between 20mm to 5mm size. (Combination of sub-item 10 and 30 or 20 and 30 shall be used) | 32.544 | Cum | 4076.09 | 132652.273 |
| 39 | 40-610-20 | Supplying and laying dry 1st class or pick jhama chips as filter in two layers (top and bottom) as per specific size, range and gradation, including breaking chips, grading, preparation of surface, compacting each layer etc. complete with supply of all materials and as per direction of Engineer in charge. 40-610-20: Well graded between 40mm to 20mm size. | 30.548 | Cum | 3730.47 | 113958.398 |
| 40 | 44-220-10 | Supplying and laying single layer polythene sheet in floor below cement concrete, RCC slab, on walls etc. complete in all respect as per direction of Engineer in charge. 44-220-10: Weighing minimum 1.0 kg per 6.50 sqm. | 259.800 | sqm | 31.22 | 8110.956 |
| 41 | 76-630-10 | Supply and fitting and fixing 23cm wide P.V.C water stops having minimum strength of 13.80N/mm2 at 225% elongation and of approved quality in antraction and expansion joints with necessary arrangements for modification in shuttering and keeping the water stop in position etc. complete as per design, specification anddirection of Engineer in charge. 76-630-10: 3 bulb type. | 27.200 | m | 1133.75 | 30838.000 |
| 42 | 28-200-10 | Reinforced Cement Concrete Work in leanest mix. 1:1.5:3, with 20mm down graded coarse aggregates and sand of FM>= 2.0 to FM >= 2.5, to attain a minimum 28 day cylinder strength of 22.0 N/mm2, including breaking, screening, grading and washing aggregates with clear water, mixing, laying in forms, consolidation to levels, curing, including supply of all materials, excluding cost of M.S. work for reinforcements and formworks etc. complete and as per direction of Engineer in charge. 28-200-10: With stone chips. | 272.780 | Cum | 11674.49 | 3184567.382 |
| 43 | 04-600-20 | Providing cork sheet/polysterene sheet in expansion joints of concrete works including supply of all materials etc. complete as per direction of Engineer in charge. 04-600-20: 20mm thick sheet. | 14.194 | sqm | 470.07 | 6672.174 |
| 44 | 76-170 | M.S. Work in plates, angles, channels, flat bars, Tees etc. including fabricating, machining, cutting, bending, welding, forging, drilling, revetting, embedding anchor bars, staging and fitting, fixing, local handling etc. complete with energy consumption and supply of labours including the cost of materials as per design, specification and direction of Engineer in charge. | 1073.518 | Kg | 144.42 | 155037.470 |
| 45 | 04-620-20 | Filling of expansion joints upto a depth of 40mm with bitumen mixed with coarse sand (FM>=2.5) in concrete works including supply of all materials etc. complete as per specification and direction of Engineer in charge. 04-620-20: 20mm wide. | 51.200 | m | 69.54 | 3560.448 |
| 46 | 40-140-50 | Manufacturing and supplying C.C. blocks in leanest mix. 1:3:6, with cement, sand (FM>=1.5) and Stone Chips (40mm down graded), to attain a minimum 28 days cylinder strength of 9.0 N/mm² including grading, washing stone chips, mixing, laying in forms, consolidation, curing for at least 21 days, including preparation of platform, shuttering and stacking in measurable stacks etc complete including supply of all materials (steel shutter to be used) as per direction of Engineer in charge. 40-140-50:block size 30cmx30cmx30cm. | 4302.00 | each | 317.01 | 1363777.020 |
| 47 | 40-140-40 | Manufacturing and supplying C.C. blocks in leanest mix. 1:3:6, withcement, sand (FM>=1.5) and Stone Chips (40mm down graded), to attain a minimum 28 days cylinder strength of 9.0 N/mm² including grading,washing stone chips, mixing, laying in forms, consolidation, curing for atleast 21 days, including preparation of platform, shuttering and stacking inmeasurable stacks etc complete including supply of all materials (steelshutter to be used) as per direction of Engineer in charge.**40-140-40:** block size 40cmx40cmx20cm | 2644.00 | each | 381.46 | 1008580.240 |
| 48 | 80-230-40 | Supplying, laying, fitting and fixing of different dia G.I. pipes with all special fittings, such as bends, elbows, sockets, tees, unions, jamnuts etc. including cutting foundation trenches upto required depth where necessary and filling the same with earth duly compacted, making holes in floors and walls and mending the damages, fixing in walls with holders and clips, including cutting threads, making necessary connection etc. all complete, and as per direction of Engineer in charge: 80-230-40: 40mm dia G.I. pipe line. | 13.80 | m | 232.93 | 3214.434 |
| 49 | 16-130 | Earth work by manual labour in all kinds of soil in excavation or reexcavation of channels with the initial lead of 30m and lift of 1.5m including levelling, dressing and throwing the spoils to profile with breaking clods, rough dressing, clearing jungles including cutting trees upto 200mm girth, dug bailing etc. complete as per direction of Engineer in charge | 13750.00 | cum | 142.47 | 1958962.500 |
| 50 | 16-190 | Extra rate for every additional lead of 15m or part thereof beyond the initial lead of 30m upto a maximum of 19 leads (3m neglected) for all kinds of earth work | 13750.00 | Pld Cum | 14.57 | 200337.500 |
| 51 | 04-280-10 | Constructing at site, cement mortar gauge on masonry wall, including engraving in meter, decimeter & centimeter, painting and figuring with black and red water proof paint, etc. complete as per direction of Engineer in charge. 04-280-10: 150mm x 25mm | 5.60 | m | 77.73 | 435.288 |
| 52 | 16-240 | Earth work by manual labour, in all kinds of soil in removing the cross bundh/ring bundh, including all leads and lifts complete and placing the spoils to a safe distance, (minimum 15m apart from the bank) as per direction of Engineer in charge. | 7033.60 | cum | 142.47 | 1002076.992 |
| 53 | 16-520-20 | Supplying and filling sand in foundation of hydraulic structures, buildings and in protective works with selected sand, in 150mm thick layer, including levelling, dressing, ramming, watering etc. complete (compacted to 50% relative density by manual labour using mallet/ vibro compactor) as per direction of Engineer in charge. 16-520-20: sand of FM>=1.50 | 1221.180 | cum | 1420.06 | 1734148.871 |
| 54 | 16-540-20 | Back filling in hydraulic structures including all leads and lifts in 150mm layer including watering, ramming compacting to 30% relative density etc. complete by compactor or any other suitable method as per direction of Engineer in charge. 16-540-20: Sand of FM>= 0.80 | 827.996 | cum | 757.75 | 627413.969 |
| 55 | 68-130 | Supplying pressure treated wooden fall boards/stop logs of different size (not less than 15cm in depth) of Sal, Sundari, Garjan, Shishu or equivalant for regulator/sluices, including fixing in position with eye hook etc. complete as per direction of Engineer in charge. | 0.252 | Cum | 60966.40 | 15363.533 |
| 56 | 76-240-40 | Manufacturing & Supplying of M.S. Vertical Lift Gate shutter of 8mm thick M.S. skin plate and stiffener with minimum 75mmx75mmx10mm M.S. angle as frame, horizontal & vertical beam, 75mmx25mmx12mm P-type rubber seal, fixed with 10mm dia x 63.5mm M.S. counter shank bolts with nuts and 40mmx10mm M.S. strip as clamp drilled spaces @ 150mm c/c, stem attachment with proper thread, nut, cotter pin and washer as per approved design including the cost of all materials of proper grade & brand new with a prime coat of redoxide where necessary as per specification and direction of Engineer in charge. 76-240-10: Size 1.00m x 1.00m. | 2.00 | each | 96799.63 | 193599.260 |
| 57 | 76-260-20 | Labour charge for fitting and fixing of M.S. vertical lift gate/ flap gate shutters of different size including making holes in concrete for hooking arrangements with supply of necessary materials, tools and other accessories required for fitting the same to regulator/sluice and mending the damages with CC (1:2:4), removing the spoils etc. complete including the cost of all materials as per direction of Engineer in charge.76-260-20: Size 1.95m x 1.35m or 1.95m x 1.65m | 2.00 | each | 9991.91 | 19983.820 |
| 58 | 76-190 | Manufacturing, supplying and Installation of Padestal type lifting device for slide gate with 63 mm dia threaded steel shaft, 146mm outer dia bronze nut, thrust bearing, steel bevel gear etc. as per approved design including supply of all components, labours with a prime coat of redoxide where necessary etc. complete including the cost of all materials as per specification and direction of Engineer in charge. | 2.00 | each | 84135.85 | 168271.700 |
| 59 | 16-140-10 | Earth work by manual labour in resectioning of embankment/ canal bank/ river slopes/ road/ compound etc. manually compacted by 7.0 kg iron rammer to avoid any air pocket in clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) within the initial lead of 30m and all lifts including throwing the spoils to profile in layers not exceeding 150mm thickness with clod breaking to a maximum size of 100mm, removing roots & stumps of trees of girth upto 200mm from the ground, benching the side slopes, stripping/ ploughing the base of embankment and borrowpit areas, dug bailing, bail out of water, rough dressing including 150mm cambering at the centre of the crest (where necessary) etc. complete as per direction of Engineer in charge. **16-140-10:** 0 m to 3 m height. | 4578.000 | cum | 187.79 | 859702.620 |
| 60 | NSI | Namplate Writing, As per market Rate | 2.00 | L.S | 5000.00 | 10000.000 |
| 61 | NSI | Red Flage, As per market Rate | 2.00 | L.S | 3000.00 | 6000.000 |
|  |  | **Northern + Sourthern = 2 Nos Regulator** | | | **Sub Total:** | **20512092.923** |
|  |  | **(C) Samarbari Khal Regulator** |  |  |  |  |
| 62 | 04-120 | Construction of B.M. Pillars at site with first class bricks in cement mortar (1:4) of size 38cm x 38cm x 75cm on cement concrete (1:2:4) base of size 50cm x 50cm x 7.5cm with 12mm thick cement plastering (1:2) on exposed surfaces of pillar and cement morter on top (1:2), with inscription of "BWDB" with 25cm of the pillar balow ground level etc. complete including ramming the backfill and the cost of all materials as per direction of Engineer in charge. | 4 | each | 1203.77 | 4815.080 |
| 63 | 04-180 | Site preparation by manually removing all miscellaneous objectional materials form entire site and removing soil upto 15cm depth including uprooting stumps, jungle clearing, levelling dressing etc. complete as per direction of Engineer in charge. | 9000.00 | sqm | 27.72 | 249480.000 |
| 64 | Approved rate | Preparation and mobilization of the Site for Construction of Submersible Embankment or other Structural Components in c/w "Haor Flood Management and Livelihood Improved Improvement Project(BWDB Part) as per Technical Specifications, including land lease, rental charges, obtaining permissions for work, developing work area, preparation of platform for temporary semi pucca site office(40sqm), CI Sheet labour sheds(200sqm), CI Sheet Stores(200sqm), supply of wooden & cane seated furniture etc. as specified and as per Contractor's Method Statement and as per direction of Engineer in charge. | 1.00 | LS | 967050.85 | 967050.850 |
| 65 | 04-620-20 | Filling of expansion joints upto a depth of 40 mm with bitumen mixed with coarse sand (FM>=2.5) in concrete works including supply of all materials etc. complete as per specification and direction of Engineer in charge. 04-620-20 . 20 mm wide. | 37.624 | m | 69.54 | 2616.37 |
| 66 | 12-100 | Installation of pizeometer including supply of 40mm G.I. pipe, brass strainer, socket, labour, by wash boring, lowering, fixing the elevation and providing cover on the top of the well etc. complete as per direction of Engineer in charge. | 6.00 | each | 2584.22 | 15505.32 |
| 67 | 16-310 | Earth work in excavation of foundation trenches in all kinds of soil as per layout plan of foundation excavation with all leads and lifts and placing the spoil earth for constructing the ring bundh/ cofferdam where necessary as per design and specification or disposing it to a safe distance including pushing, levelling, dressing, etc. complete as per direction of Engineer in charge. | 6289.395 | cum | 172.85 | 1087121.93 |
| 68 | 16-560-20 | Shoring for slope protection of foundation trench, canal, embankment, road, pond etc. as per design slopes, grades including removal of spoils to a safe distance as per direction of Engineer in charge. 16-560-20: By bamboo post of 6.0m length, c/c fixed with nails. | 243.00 | Cum | 837.15 | 203427.45 |
| 69 | 12-310-20 | Bailing out of water with all leads and lifts by manual labour or pump, with all arrengements for protection of ring bund and side slopes of foundation pit against erosion or washout etc. complete actual volume of work will be measured by sounding method before starting the work) as per direction of Engineer in charge. 12-310-20: By pump. | 64087.20 | cum | 6.13 | 392854.54 |
| 70 | 44-240-10 | Supplying at site U-shape hot rolled steel sheet pile of different section of Phosphorus=0.04%(Maximum), Sulphur = 0.04% (Maximum), Copper= 0.25% (Minimum), Tensile strength=> 490 N/mm2 , Yield strength =>296 N/mm2, Elongation =15% (Minimum) including all taxes, freights, incidental charges etc. complete as per direction of the Engineer -in- charge. 44-240-30 : U-shape, hot- rolled steel sheet pile width= 400mm to 600mm: height=> 100mm, Th.=> 10.5: wt. per sqm of pile wall =>120 kg/m2: sectional modulus per one meter of pile wall width => 874 cm3/m. | 30.144 | M ton | 145120.53 | 4374513.26 |
| 71 | 44-320-10 | Cutting of steel sheet piles to design and length and shape as per requirement in design and drawing and as per direction of Engineer in charge. 44-320-10: Upto 10mm thick. | 68.25 | m | 39.16 | 2672.67 |
| 72 | 44-270-20 | Driving steel sheet piles of various sections and weights of any type of soil, by monkey hammer including handling and placing in position, staging and supplying of all equipments like monkey hammer, pully, rope, bamboo, bullah etc. including correcting leaning beyond tolerance & other efects and any other incidental cost etc. complete (measurement will be taken on projected width x height) as per direction of Engineer in charge. 44-270-20: U-type or any other type : Upto 4.50m depth. | 251.200 | Sqm | 1250.75 | 314188.40 |
| 73 | 72-180 | Painting of steel sheet piles, 2 coats of bitumen paint, including preparation of surface with sand paper, iron brush etc. including the cost of all materials and labour etc. complete as per direction of Engineer in charge. | 408.200 | Sqm | 293.330 | 119737.31 |
| 74 | 44-310 | Supplying and placing 20mm thick hessian cloth impregnated with bitumen in expansion joints or on top of sheet piles as per specification and direction of Engineer in charge. | 91.845 | Sqm | 461.80 | 42414.02 |
| 75 | 44-220-10 | Supplying and laying single layer polythene sheet in floor below cement concrete, RCC slab, on walls etc. complete in all respect as per direction of Engineer in charge. 44-220-10: Weighing minimum 1.0kg per 6.50 sqm. | 424.209 | Sqm | 31.22 | 13243.80 |
| 76 | 28-120-20 | Cement concrete work in leanest mix. 1:3:6 with sand of FM>= 1.5, in foundation or floor, including breaking, screening, grading and washing aggregates with clear water, mixing, laying in position, consolidation to levels, curing, including supply of all materials, excluding the cost of formworks etc. complete as per direction of Engineer in charge. 28-120-20: With 25mm down graded stone chips. | 63.861 | Cum | 10954.48 | 699564.05 |
| 77 | 28-100-20 | Cement concrete work in leanest mix. 1:4:8, with sand of FM>=1.5, in foundation or floor, including breaking, screening, grading and washing aggregates with clear water, mixing, laying in position, consolidation to levels, curing, including supply of all materials, excluding the cost of formworks etc. complete as per direction of Engineer in charge. 28-100-20: With 25mm down graded stone chips. | 1.946 | Cum | 8755.07 | 17037.37 |
| 78 | 28-200-10 | Reinforced Cement Concrete Work in leanest mix. 1:1.5:3, with 20mm down graded coarse aggregates and sand of FM>= 2.0 to FM >= 2.5, to attain a minimum 28 day cylinder strength of 22.0 N/mm2, including breaking, screening, grading and washing aggregates with clear water, mixing, laying in forms, consolidation to levels, curing, including supply of all materials, excluding cost of M.S. work for reinforcements and formworks etc. complete and as per direction of Engineer in charge. 28-200-10: With stone chips. | 497.035 | Cum | 11674.49 | 5802630.14 |
| 79 | 76-120-10 | M.S. Work for reinforcement with twisted M.S. bar, fy = 414 N/mm2, (made from billet) in RCC works, including local handling, cutting, forging, bending, cleaning and fabrication with supply of twisted M.S. bar in different sizes and binding with 22 to 18 gages G.I. wire etc. complete including the cost of all materials as per direction of Engineer in charge. 76-120-10: 8mm dia to 30mm dia. | 41665.676 | kg | 77.34 | 3222423.38 |
| 80 | 76-115-10 | M.S Work for reinforcement with Standard deformed bar fy=276 N/mm^2 in RCC works including local handling, cutting,forging,bending,cleaning and fabrication with supply of deformed M.S. bar in different sizes and bending with 22 to 18 gages G.I. wire etc. complete including the cost of all materials as per direction of Engineer in charge. 76-115-10: 6mm dia | 54.45 | kg | 74.37 | 4049.67 |
| 81 | 36-150 | Formwork for centering and water tight shuttering as per drawing with 14 BWG M.S. sheet, fitted and fixed with 0mmx40mmx6mm M.S. angle frame and 25mmx6mm F.I. bar stiffener, with necessary fabrication, welding, making the forms including fitting, fixing of steel forms with necessary ties, battens, struts, nuts & bolts, props etc. as per desired shape and size including levelling and removing the forms after specified period including the cost of all materials as per direction of Engineer in charge. |  |  |  |  |
| a) 36-150-60 | 36-150-60 . Footing, footing beams, grade beams, foundation slab with 60-80mm dia barrack bamboo props. | 304.00 | sqm | 735.35 | 223546.40 |
| b) 36-150-10 | 36-150-10 . Vertical and inclined walls, columns, piers with 60-80mm dia barrack bamboo props. | 793.165 | Sqm | 909.69 | 721534.27 |
| c) 36-150-20 | 36-150-20 . Deck slab, operating deck slab, top slab of barrel upto 3.5m height with 60-80mm dia barrack bamboo props. | 126.55 | Sqm | 921.99 | 116677.83 |
| 82 | 76-630-10 | Supply and fitting and fixing 23cm wide P.V.C water stops having minimum strength of 13.80N/mm2 at 225% elongation and of approved quality in antraction and expansion joints with necessary arrangements for modification in shuttering and keeping the water stop in position etc. complete as per design, specification anddirection of Engineer in charge. 76-630-10: 3 bulb type. | 29.300 | m | 1133.75 | 33218.88 |
| 83 | 56-430 | Filling up the expansion joints by asphalt, sand and jute waste etc. complete including supply of all materials and as per direction of Engineer in charge. | 9.13 | m | 165.95 | 1515.12 |
| 84 | 16-520-20 | Supplying and filling sand in foundation of hydraulic structures, buildings and in protective works with selected sand, in 150mm thick layer, including levelling, dressing, ramming, watering etc. complete (compacted to 50% relative density by manual laqbour using mallet/vibro compactor) as per direction of Engineer in charge. 16-520-20: Sand of FM>= 1.50 | 341.454 | cum | 1402.06 | 478739.00 |
| 85 | 40-610-20 | Supplying and laying dry 1st class or pick jhama chips as filter in two layers (top and bottom) as per specific size, range and gradation, including breaking chips, grading, preparation of surface, compacting each layer etc. complete with supply of all materials and as per direction of Engineer in charge. 40-610-20: Well graded between 20mm to 5mm size. (Combination of sub-item 10 and 30 or 20 and 30 shall be used) | 59.518 | Cum | 3730.47 | 222030.11 |
| 86 | 40-610-30 | Well graded between 20mm to 5mm size. (Combination of sub-item 10 & 30 or 20 & 30 shall be used) | 59.518 | Cum | 4076.090 | 242600.72 |
| 87 | 40-140-50 | Manufacturing and supplying C.C. blocks in leanest mix. 1:2:4 with cement, sand (FM>=1.5) and Stone Chips (40mm down graded) to attain a 28 days cylinder strength of 15 N/mm² including grading, washing stone chips, mixing, laying in forms, consolidation, curing for at least 21 days, including preparation of platform, shuttering and stacking in measurable stacks etc. complete including supply of all materials (steel shutter to be used) as per direction of Engineer in charge.block size 30cmx30cmx30cm | 13316.000 | nos | 317.01 | 4221305.16 |
| 88 | 40-220-10 | Labour charge for protective works in laying C.C. blocks of different sizes including preparation of base, watering and ramming of base etc. complete as per direction of the Engineer in charge. 40-220-10: Within 200m | 359.532 | Cum | 1145.88 | 411980.53 |
| 89 | 76-170 | M.S. Work in plates, angles, channels, flat bars, Tees etc. including fabricating, machining, cutting, bending, welding, forging, drilling, revetting, embedding anchor bars, staging and fitting, fixing, local handling etc. complete with energy consumption and supply of labours including the cost of materials as per design, specification and direction of Engineer in charge. | 3727.464 | kg | 144.42 | 538320.35 |
| 90 | 80-230-40 | Supplying, laying, fitting and fixing of different dia G.I. pipes with all special fittings, such as bends, elbows, sockets, tees, unions, jam nuts etc. including cutting foundation trenches upto required depth where necessary and filling the same with earth duly compacted, making holes in floors and walls and clips, including cutting threads, making necessary connection etc. all complete including the cost of all materials as per direction of Engineer in charge.  80-230-40 . 40mm dia G.I. pipe line.. | 4.50 | each | 232.93 | 1048.19 |
| 91 | 76-240-40 | Manufacturing & Supplying of M.S. Vertical Lift Gate shutter of 8mm thick M.S. skin plate and stiffener with minimum75mm x 75mm x 10mm M.S. angle as frame, horizontal & vertical beam,t with proper thread, nut, cotter pin and washer as per approved design including the cost of all materials of proper grade & brand new with a prime coat of redoxide where necessary as per specification and direction of Engineer in charge. 76-240-40: Size 1.95m x 1.65m | 8.00 | each | 96799.63 | 774397.04 |
| 92 | 76-260-20 | Labour charge for fitting and fixing of M.S. vertical lift gate/flap gate shutters of different size including making holes in concrete for hooking arrangements with supply of necessary materials, tools and other accessories required for fitting the same to regulator/sluice and mending the damages with CC (1:2:4), removing the spoils etc.complete including the cost of all materials as per direction of Engineer in charge. 76-260-20: Size 1.95m x 1.35m or 1.95m x 1.65m | 8.00 | each | 9991.91 | 79935.28 |
| 93 | 76-190 | Manufacturing, supplying and Installation of Padestal type lifting device for slide gate with 63mm dia threaded steel shaft, 146mm outer dia bronze nut, thrust bearing, steel bevel gear etc. as per approved design including supply of all components, labours with a prime coat of redoxide where necessary etc. complete including the cost of all materials as per specification and direction of Engineer in charge. | 8.00 | each | 84135.85 | 673086.80 |
| 94 | 16-140-10 | Earth work by manual labour in resectioning of embankment/ canal bank/river slopes/ road/ compound etc. manually compacted by 7.0 kg iron rammer to avoid any air pocket in clayey soil (minimum 30% clay, 0-40%silt and 0-30% sand) within the initial lead of 30m and all lifts includingthrowing the spoils to profile in layers not exceeding 150mm thickness withclod breaking to a maximum size of 100mm, removing roots & stumps oftrees of girth upto 200mm from the ground, benching the side slopes,stripping/ ploughing the base of embankment and borrowpit areas, dugbailing, bail out of water, rough dressing including 150mm cambering at thecentre of the crest (where necessary) etc. complete as per direction of Engineer in charge. 16-140-10: 0 m to 3 m height. | 2012.50 | cum | 187.79 | 377927.38 |
| 95 | 16-130 | Earth work by manual labour in all kinds of soil in excavation or reexcavation of channels with the initial lead of 30m and lift of 1.5m including levelling, dressing and throwing the spoils to profile with breaking clods, rough dressing, clearing jungles including cutting trees up to 200mm girth, dug bailing etc. complete as per direction of Engineer in charge. | 3064.140 | cum | 142.47 | 436548.03 |
| 96 | 16-200 | Extra rate for every additional lift of 1.0m or part thereof beyond the initial lift of 1.5m (30cm neglected) for all kinds of earth work. | 1532.070 | Pltcum | 10.990 | 16837.45 |
| 97 | 16-220 | Earth work by manual labour, in all kinds of soil in removing the crossbundh/ ring bundh, including all leads and lifts complete and placing the spoils to a safe distance, (minimun 15m apart from the bank) as perdirection of Engineer in charge. | 390.371 | Cum | 142.42 | 55596.64 |
| 98 | 04-280-10 | Constructing at site, cement mortar gauge on masonry wall, includingengraving in meter, decimeter & centimeter, painting and figuring with black and red water proof paint, etc. complete as per direction of Engineerin charge. 04-280-10: 150mm x 25mm | 5.60 | m | 77.73 | 435.29 |
| 99 | 16-270-30 | Earth work by manual labour with clayey soil (minimum 30% clay, 0-40% silt and 0-30% sand) for closing breach or channel, with all leads and lifts within the channel width including profiling, clod breaking, ramming etc. complete as per specification and direction of Engineer in charge. 16-270-30: Upto 60m width. | 1159.122 | Cum | 142.47 | 165140.11 |
| 100 | 16-540-20 | Back filling in hydraulic structures including all leads and lifts in 150mmlayer including watering, ramming, compacting to 30% relative density etc. complete by compactor or any other suitable method as per direction of Engineer in charge. 16-540-20: Sand of FM>=0.80 | 2153.269 | Cum | 757.750 | 1631639.58 |
| 101 | 16-530 | Back filling in hydraulic structures and slope building in protective works including all leads and lifts with selected local soil in layer of 150mm including watering, ramming etc. complete compacted to 20% relative method as per direction of Engineer in charge. | 927.944 | Cum | 159.49 | 147997.79 |
| 102 | 68-130 | Supplying pressure treated wooden fall boards/stop logs of different sizes (not less than 15cm in depth) of sal, sundari, garjan, shishu or equivalent for regulator/ sluices, including fixing in position with eye hook etc. complete as per direction of Engineer in charge. | 8.16 | Cum | 60966.400 | 497485.82 |
| 103 | 48-100 | Fine dressing and close turfing of the slopes and the crest of embankmentwith 75mm thick, good quality durba or charkanta sods of size 200mm x200mm, with all leads and lifts, including ramming, watering until the turf grows properly, maintaining etc. complete (measurement will be given on well grown grass only). as per direction of Engineer in charge. | 1300.00 | Sqm | 26.17 | 34021.00 |
| 104 | 80-260-20 | Supplying, fitting and fixing of the different dia G.I. water distribution pipe line, with all special fittings such as bends, elbows, sockets, reducing sockets, tees, unions etc including cutting trench up to an average depth of 0.90m, maintaining proper level, cutting pipes where necessary, making threads etc. all complete, as per direction of Engineer in charge: **80-260-20:** 50mm dia G.I. pipe line | 17.60 | m | 339.02 | 5966.75 |
| 105 | NSI | Part time employment of environmental inspector for Implementation and reporting on environmental management plan provision for first aid Box and medical assistant as per specification and direction of engineer in-charge. | 1.00 | L.S | 200000.00 | 200000.00 |
| 106 | Analysis Rate | Mobilize, strengthen required land based construction equipment such as excavator, dump truck, chain dozer, vibro-compactor, and plants such as generator for site electrification, digital camera for taking photographs and digital video camera for recording/Taking photograph all sequences of works etc for keeping records of the Works by providing following information including transfer to site, complete for the purposes stated in the Technical Specification and Contractor’s Method Statement and as per direction of Engineer in charge. | 1.00 | L.S | 92026.55 | 92026.550 |
| 107 | Analysis Rate | Provide and maintain 1 (one) no. Engine boat with boatmen having sun and rainproof cover to facilitate supervision by the Engineer/Engineer's Representative during whole construction period of the work as per Technical Specification, Contractor’s Method Statement and as per direction of Engineer in charge. | 60.00 | day | 2497.86 | 149871.810 |
| 108 | Analysis Rate | Providing and maintaining adequate portable water supply by installing 6 Nos. of tube well and sanitation facilities by installing 6 Nos. of sanitary latrines for usage of labours,officials and others for prevailing the hygenic and healthy environment at allover the working site As per direction of the Engineer in charge. | 1.00 | L.S | 111148.95 | 111148.950 |
| 109 | Analysis Rate | Operate , maintain of plant and equipment such as generator for site electrification, for the purpose stated in the Technical Specification and in the Contractor’s Method Statement and as per direction of Engineer in charge. | 1.00 | L.S | 110909.92 | 110909.920 |
| 110 | Analysis Rate | Demobilization and clean-up of the site upon completion of the works, as per Specifications and Contractor's Method Statement and as per direction of Engineer in Charge | 1.00 | L.S | 112344.10 | 112344.100 |
|  |  | **Samarbari Khal regulator** |  | **Sub Total:** | | **30421178.441** |
|  |  |  |  | **Gross Total** | | **83479114.278** |

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|  |  |  |  | **(MD.Alauddin)** | |
|  |  |  |  | **Sectional officer** | |
|  |  |  |  | **Bhairab WD Section -01** | |
|  |  |  |  | **BWDB,Kishoregonj** | |
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| The estimate has been prepared on the basis of the approved design/drawing & examined on the basis of mymensing O&M circke schedule of rates effective for the year 2016-2017.The items provided are fully appropriate & essentially required. The varified edtimated amonting of tk. **8,34,79,114.278** (Taka Eight crore thirty four lac seventy nine thousand one hundred fourteen & poisa two seven eight) only is recommended for sanction. | | | | | |
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|  |  |  | **(Mohammad Aktaruzzaman)** | | |
|  |  |  | **Sub- Divisional Engineer** | | |
|  |  |  | **Bhairab WD Sub division** | | |
|  |  |  | **BWDB. Kishoregonj** | | |
| The estimate has been verified carefully verified amount of tk . . **8,34,79,114.278** (Taka Eight crore thirty four lac seventy nine thousand one hundred fourteen & poisa two seven eight) only is recommended for sanction. | | | | | |
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|  |  |  | **(Md.Shafiqul islam)** | | |
|  |  |  | **Executive Engineer)** | | |
|  |  |  | **Kishoregonj WD Division** | | |
|  |  |  | **BWDB. Kishoregonj.** | | |