

MAHARASHTRA JEEVAN PRADHIKARAN

REGION : AURANGABAD

(Government of Maharashtra Undertaking)



SCHEDULE OF RATES

FOR THE YEAR : 2019-20

Effective from 01-06-2019

APPLICABLE FOR AURANGABAD REGION

Countersigned

CHIEF ENGINEER
Maharashtra Jeevan Pradhikaran
Aurangabad

महाराष्ट्र जीवन प्राधिकरण औरंगाबाद

कार्यालयीन २३७९३८६
(फोन) २३७०३२६
फॅक्स (०२४०) २३७०२३८
Email: cemipabd@gmail.com

मुख्य अभियंता,
महाराष्ट्र जीवन प्राधिकरण, औरंगाबाद
मिर्मलद कॉलेज समोर छावणी
पोस्ट बॉक्स क्र.५५६ औरंगाबाद-४३१००२

परिपत्रक.

विषय: सन २०१९-२० या वर्षासाठी औरंगाबाद प्रादेशिक विभागाची स्थापत्य कामाची दरसूची

- संदर्भ : १) मा. सदस्य सचिव मजीप्रा मुंबई यांनी कार्यालयीन टिपणी क्र.मजीप्रा/स स/तांशा-३ दि.०७/०६/२०१९ अन्वये दरसूचीचे दर अंतिम करण्या करिता दिलेले निर्देश.
- २) मुख्य अभियंता मजीप्रा पुणे यांचे कार्यालयाकडून दि.१०/६/२०१९ च्या ई-मेल व्दारे प्राप्त पाईप सेक्शनचे दर.
- ३) मा. सदस्य सचिव मजीप्रा मुंबई यांनी कार्यालयीन टिपणी क्र.मजीप्रा/तांशा-३ दि.१२/६/१९ अन्वये दिलेले निर्देश.
- ४) अध्यक्ष दरसूची समिती तथा मुख्य अभियंता (प्रभारी) मजीप्रा पुणे यांचे पत्र क्र. तांशा-३/दरसूची २०१९-२० /१०२४ दि.१४/६/१९.

मा. सदस्य सचिव मजीप्रा मुंबई यांनी दि.०७/०६/२०१९ व १२/०६/२०१९ च्या कार्यालयीन टिपणी व्दारे दिलेले निर्देश व अध्यक्ष दरसूची समिती तथा मुख्य अभियंता मजीप्रा पुणे यांनी संदर्भीय पत्र क्र. ४ व्दारे कळविल्यानुसार औरंगाबाद प्रादेशिक विभागासाठी सन २०१९-२० या वर्षाची दरसूची तयार करण्यात आली असून दि.०१/०६/२०१९ पासून या परिपत्रकाव्दारे लागू करण्यात येत आहे.

सदर दरसूचीच्या छापील प्रती कार्यकारी अभियंता मजीप्रा विभाग, वेदांतनगर, रेल्वेस्टेशन रोड औरंगाबादयांचे कार्यालयात उपलब्ध होऊ शकतील.

या दरसूचीमध्ये काही त्रुटी /कमतरता मुद्रणकोष असल्यास या कार्यालयाशी संपर्क साधून लेखी स्वरूपात निदर्शनास आणाव्यात. तसेच असेही स्पष्ट करण्यात येते की, या दरसूचीचे हक्क अबाधित असून सदर दरसूचीच्या कोणत्याही स्वरूपातील प्रती / छायाप्रती काढून इतरांना देणे नियमबाह्य आहे. असे आढळल्यास कायदेशीर कार्यवाही करण्यात येईल.

()
(व्ही.वी.जगतारे)

मुख्य अभियंता (प्रभारी)

जाक्र.मुअमजीप्राऔ/तांशा-१/२०१८ / १११७

दिनांक 15 JUN 2019

प्रतिलिपी:

- १ मा.सदस्य सचिव, महाराष्ट्र जीवन प्राधिकरण एक्सप्रेस टॉवर्स, नरीमन पॉईंट मुंबई यांना माहितीस्तव सविनय सादर.
- २ विशेष कार्य अधिकारी, पाणी. पुरवठा व स्वच्छता विभाग मंत्रालय मुंबई यांना माहितीस्तव सादर.
- ३ मुख्य अभियंता मजीप्रा ठाणे / नाशिक / पूणे / अमरावती / नागपुर यांना माहितीस्तव सन्नेह अग्रेषित.
- ४) अधीक्षक अभियंता मजीप्रा मध्यवर्ती नियोजन संकल्पचित्र व सनियंत्रण कक्ष सिडको भवन नवी मुंबई यांना माहितीस्तव.
- ५) अधीक्षक अभियंता मजीप्रा मंडळ औरंगाबाद / नांदेड / लातूर यांना माहितीस्तव.
- ६) कार्यकारी अभियंता मजीप्रा विभाग औरंगाबाद / जालना / बीड / नांदेड / परभणी / लातूर / उस्मानाबाद / गुणवत्ता परिक्षण पथक औरंगाबाद यांना माहितीस्तव.
- ७) कार्यकारी अभियंता ग्रामीण पाणी पुरवठा विभाग जिल्हा परिषद औरंगाबाद / जालना / बीड / नांदेड / परभणी / लातूर / उस्मानाबाद / हिंगोली यांना माहितीस्तव.

**MAHARASHTRA JEEVAN PRADHIKARAN
REGION AURANGABAD
SCHEDULE OF RATES
FOR THE YEAR 2019-20
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शासन निर्णय, ग्राम विकास विभाग क्र.
ग्रापापु-1090/सीआर-163/39-अ दि. 7 डिसेंबर 1990 चे सहपत्र.

परिशिष्ट - 1

राज्यातील डोंगरी विभागाचे क्षेत्र दर्शविणारे विवरणपत्र

जिल्हा	तालुका	ज्या डोंगरी भागात आहे त्या डोंगराचे नांव	पूर्ण गट ज्या तालुक्यात ५० टक्के पेक्षा जास्त क्षेत्र आहे तो पूर्णगट	उपगट ज्या तालुक्यात २० टक्के पेक्षा जास्त व ५० टक्के पेक्षा कमी क्षेत्र आहे तो उपगट	क्षेत्र
1	2	3	4	5	6
1 ठाणे वसई	1. मोखाडा 2. वाडा 3. शहापूर 4. मुरबाड 5. जव्हार 6. वसई 7. भिवंडी	सह्याद्री पर्वत रांगा, पश्चिम घाट — — — — — — — —	पूर्ण गट (1) पूर्ण गट (2) पूर्ण गट (3) पूर्ण गट (4) पूर्ण गट (5) — —	उपगट (1) उपगट (2)	पूर्व भाग उत्तर पश्चिम भाग
2. रायगड	8. कर्जत 9. खालापूर 10. सुधागड 11. रोहा 12. माणगांव 13. महाड 14. पोलादपूर 15. पेण 16. मुरुड 17. म्हसळा 18. पनवेल	— — — — — — — — — — — — — — — — — — — —	पूर्णगट (6) पूर्ण गट (7) पूर्ण गट (8) पूर्ण गट (9) पूर्ण गट (10) पूर्ण गट (11) पूर्ण गट (12) पूर्ण गट (13) पूर्ण गट (14) पूर्ण गट (15)	उपगट (3)	दक्षिण भाग

1	2	3	4	5	6
3. स्तनागिरी	19. खेड 20. चिपलूण 21. संगमेश्वर 22. लांजा 23. राजापूर 24. मंडणगड	—" — —" — —" — —" — —" — —" —	पूर्ण गट (16) पूर्ण गट (17) पूर्ण गट (18) पूर्ण गट (19) पूर्ण गट (20) ..	उपगट (4)	उत्तरेकडील भाग
4. सिंधुदुर्ग	25. कणकवली 26. सांवतवाडी 27. देवगड 28. कुडाळ 29. वैभववाडी 30. मालवण	—" — —" — —" — —" — —" — —" —	पूर्ण गट (21) पूर्ण गट (22) पूर्ण गट (23) पूर्ण गट (24) पूर्ण गट (25) —	उपगट (5)	पूर्वभाग
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6. अहमदनगर	38. सिन्नर 39. अकोला 40. संगमनेर	—" — —" — —	पूर्ण गट (33) पूर्ण गट (34) पूर्ण गट (35)		
7. पुणे	41. जुन्नर 42. आंबेगांव 43. खेड (राजगुरुनगर) 44. मावळ 45. हवेली 46. मुळशी 47. वेल्हे 48. शेर 49. पुरंदर	सहयाद्री पर्वत रांगा —" — —" — —" — —" — —" — —" — —" — —" —	पूर्ण गट (36) पूर्ण गट (37) पूर्ण गट (38) पूर्ण गट (39) पूर्ण गट (40) पूर्ण गट (41) पूर्ण गट (42) पूर्ण गट (43) पूर्ण गट (44)		
8. सातारा	50. सातारा 51. वाई 52. पाटणा	—" — —" — —" —	पूर्ण गट (45) पूर्ण गट (46) पूर्ण गट (47)		

1	2	3	4	5	6
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17. बुलढाणा	89. खामगांव	— —	—	उपगट (18)	उत्तर व पूर्वेकडील भाग
18. औरंगाबाद	90. कन्नड	— —	—	उपगट (19)	उत्तरे व पूर्वेकडील भाग
	91. खुलताबाद	— —	—	उपगट (20)	मधला व दक्षिणेकडील भाग
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	93. सिल्लोड	— —	—	उपगट (21)	उत्तरकडील व थोडादक्षिण पश्चिमे
19. परभणी	94. हिंगोली	— —	—	उपगट (22)	कडील भाग दक्षिणेकडील भाग
	95. कलमनूरी	— —	—	उपगट (23)	दक्षिणेकडील भाग

**घोषित केलेला
तालुका**

उपगट तालुक्यातील गावांची नांवे.

1) ठाणे
वसई.

1) चांदज 2) तिपलिया 3) शिवनासा 4) पानसा 5) उसगांव 6) पारोळ 7) शिरवली 8) जळकीया
1) वसई 9) सारवण 10) वसई घाटेघर 11) षवखल 12) पेलाट 13) साजिवली 14) दापेवली
15) कार्जुरा 16) खाडेकर 17) भिडा 18) खोलसट 19) खैरे 20) संदा 21) चुडाल 22) तिल्लेस
23) सावट 24) मरतारी 25) बिलवूडा 26) गया 27) दडविरा 28) सातिवली 29) खाडी 30) दैडा
31) दडीप 32) वामन 33) काजू 34) कोल्ही 35) कोळा 36) चिंचाटी 37) होवाऊन

2) भिवंडी

1) गणेशपुर 2) वडवली 3) उसगांव 4) धाडगांव 5) आंदीपाडा 6) गोबाटा 7) मोहिली 8) बावची
9) मालवियोर 10) बेलोली 11) उसपाडी पाडा 12) अंबराई पांडा 13) ध्यार 14) खडकी खुर्द
15) पिपळपेत 16) खडकी बुद्रुक 17) षऊपोळ 18) कुहापाडा 19) कुहा 20) आंबापाडा 21) देवपाडा
कुलईपाडा 29) पायगांव 30) पाया 31) पेरुनपाडा 32) षवडीपाडा 33) खारष्यभाव 35) गाना
36) लाकेवली 37) चिंचपाडा 38) गौरीपाडा 39) डोकरनापाडा 40) अलकोईअरी.

रायगड

3. पनवेल.

1) माणिकघर 2) घोडसावना 3) सावना 4) बामणोरी 5) नामदेवी 6) देवलोळी 7) छावना
8) कालेवली 9) सारसाई 10) आपटा 11) कासव 12) कारडा 13) देवटी 14) बुलसुडा 15) अकूवडी
16) पुराडाव 17) वावेधर 18) कोष्टी 19) दापोवली 20) देवतुला 21) सावला 22) करनाहा
23) कला 24) वडाना 25) कारल 26) दुलघट 27) कासभाट 28) दिधारी 29) हातवंडी.

रत्नागिरी

4) मंडणगड.

1) अंबावना बुद्रुक 2) केजालघर 3) लोरी 4) हेल्टी 5) गारीपाडा 6) पेवा 7) पांडेरी
8) पांडवा 9) अंबरसेट 10) टी व्हेसाई 11) टेरी 12) लोकरवन 13) महाप्रत 14) हडघर 15) तांभी
16) लोहरा 17) गौरज 18) कुंभार 19) गोवेळे 20) पन्हाली 21) धुरी 22) तारवली

सातारा 6) कराड.	1)मरळी 2)चोरजवाडी 3)कोरीवळे 4)बेलदारे 5)म्होप्रे 6)भोळेवाडी 7)साकुडी 8) येणके 9) कोळे 10)कुसूर 11) तुळवण 12) सवादे 13)े लाटकेवाडी 14) हवेलवाडी 15)म्हासोळी 16) शेळकेवाडी 17)मनु 18)येवती 19)घराळवाडी 20) हणमंतवाडी 21) टाळगांव 22)येळगांव 23)गौरवाडी 24)गणेशवाडी 25)भरवाडी 26) सोळभिरभे 27) महारगडेवाडी 28) जित्ती 29) अक्काईवाडी 30)कासारशिरमे 31) निगडी 32)घोलपावडी 33) किवळ 34)खोडताईवाडी 35) मसूर 36) हणबरवाडी 37) वाण्याची वाडी 38)मालवाडी 39)काबीखाडी 40)शिरगांव 41)तुळी 42)पाल 43)हरपळवाडी 44) रिसवड 45) वस्तीसाकडी 46)साजूर 47)तांबवे 48)आरेवाडी 49)रामेवाडी 50)मोळवाडी 51)डोळेवाडी 52) पांढरीवाडी 53)आणे 54)अंबवडे 55) तारुख 56)भवानपाडा 57)षितलवाडी 58)चिरवली 59)घरचुंद 60)कामथी 61)वाधेरी 62)करवडी 63)हजरार माची 64)वानर माची 65)वनवासमाची 66)राजमाची 67)टेंभू 68)भयापूर 69)कोरेगांव 70)कार्वे 71) वडगांव हवलेली 72) शेपोली कालवडे
सातारा 7) फलटण	1)सालपे 2) आदकीखुर्द 3) आळजापुर 4)कोराळे 5) वाघोषी 6) लाथवडा 7)मानेवाडी 8) झाडकबाईवाडी 9) वेलोषी 10)उजलवे 11) दाववाडी 12) भीरेवाडी 13)ेगिरवी 14)धुमाळवाडी 15)बेडकेवाडी 16)साकळ 17) भाडळी खुर्द 18)दुधेभावी 19) जावली 20) आंदुड 21) कुरवाली बंु.
सातारा 8) मान	1)कळसकरवाडी 2)गाडेवाडी 3)भिंडी बुद्रुक 4)पाळवण 5)तांडल 6)उगळेवाडी 7)षिदी बुद्रुक 8)षिगणापुर 9)भांडळी 10) इंजतात 11)कळचांडी 12)विरळी 13)ेवळई 14) कुकडगांव 15)मखणे 16) काळेवाडी 17) बोरगेवाडी 18)किरकसाड 19) हिमानगड 20) दिवडी 21) पांढरीवाडी 22)स्वरपवानवाडी 23)षिंद्री बुद्रुक 24) बोथे
धुळे 9) शहादा.	1)काकरेदे खुर्द 2) काकरेदे बुद्रुक 3) काँढावळ 4)चांदसेली 5)चिरंढे 6)वरुड बुद्रुक 7)मंगळगांव 8) भुलना 9)दरा 10) राणीपुरी 11) आकसपूर 12) मानमोडया 13)े नागझरी 14) लंगडी भवसनी 15)कुक्कडगांव 16) मखणे 17) अभाडपुर खुर्द 18)टरबा 19)नायगांव 20)सिसुरा 21) पेटा 22)फोफाराळे 23) चांदपूर 24) गुदा 25) इकरास 26) काटघर 27) पिरपूर
धुळे 10) तळोदा.	1)सोजुरवाडा 2)माळखुर्द 3)चोंगाव खुर्द 4) लाकुड शेट 5) खर्डी खुर्द 6) काठोर 7)बंधारा 8)खडी बुद्रुक 9) जुवाणी 10) लाखापूर 11) माळ 12)मोरामाळ 13)े अंाबा गव्हाण 14) सीत पावळी 15) बामनी 16) मलुवा 17) राजापूर
जळगांव 11) चोपडा	1) मराठा 2)सत्रासेन 3)खंडारा 4)षेरचिडा 5)उमरटी 6)गोवापाडा 7)कृष्णापूर 8) खा-यापाडा 9)विजापूर 10)मुख्यावतार 11)शेतपाणी 12)बोअरअनंती 13) मालापूर 14)विषणापूर 15)बोरमळी 16)कर्जणा 17)मेलाना 18)देव्हारी.
जळगांव 12) येवला	1) मनुवाई देवस्थान 2)लंगडया आंबा 3)गढू-या 4)जामन्या 5)उसमळी 6)हरीपूरी 7)नागदेवी 8)वाघझीर 9)आसरा वारी.
जळगांव 13) रावेर	1)तिडया 2)अंधारमाळी 3)मोहमोडी 4)चिचाडी 5)चिमडया 6) गारखेडा 7)मोहमांडली सून 8)पिंपट कुंड 9) पाल 10)मोरव्हाल 11)जिन्सी 12)गारखेड 13)ेसहस्नलिंग 14)लालमाती

जळगांव 14) एदलाबाद	1)दुई 2)सुकली 3)सोमणगांव 4)डोलरखेड 5)नॉंदवेल 6)वायल 7)चारठाणे 8)देवी मंदिर 9)मोरझिरा 10)जोनधखेड 11)लालगोडा 12) हलखेंडा.
बुलढाणा 15) खामगांव	1) गिरोळी 2)इसालवाडी 3)चिचखेडनाथ 4)कठडेगांव 5)चिचखेडबंड 6)षेंद्री 7)मांडणी 8) बोथा 9)खेडी 10)वाकी 11)गारखेड 12)गारोडी 13)ेधार 14)माटसगांव 15) चिचखेड 16) कान्दी 17)कझर 16)पिंपरी 17)धनगर 18) लाखनवाडी खुर्द 19)पत्तेपूर 20) निमखेडा 21) हिवरखेडा 22) निरोडा.
अकोला 16) पातूर	1) अंबारी 2)घनोसा 3)बेलवळ 4)बलकापूर 5)षेकद कंदोली 6)बडीआमराई 7)बोडसा 8)खानापूर 9)काकडदारी 10)कोठारी बुद्रुक 11)पासटल 12)कोसगांव 13) माळराजूरा 14)सावरखेड 15)चिचखेड पातूर 16) शेकापूर 17)कार्ला 18)चारमुळी 19)धरम 20)पादुर्णा 21)सोनुना 22)चिखलपावळ 23) चोंडी 24)जांब 25)चिचखेड 26)गोळेगांव 27) आधार सावंगी 28)गावडगांव 29)सावरगांव.
यवतमाळ 17) पुसद	1)पिंपळगांव 2)हौसापूर 3)बामनवाडी 4)कोल्हळ 5)गहुळी 6)चोडी 7)चिचघाट 8)देवगव्हाण 9)बोलगव्हाण 10)जामनी धुद 11)मोरगड 12)उडाणी 13)ेपारवा 14)पांदूणी खुर्द 15)खटकोला 16) पन्हाळा 17)मांजरजवळा खुर्द 18)मांजरजवळा 19)सावतमाळ 20)हनवंतखेडा 21)मारवाडी 22)अमृतनगर 23) धनतळ 24)अनजळ 25) उपवनवाडी 26)रामपूरनगर 27)दुधगिरी 28)अनसिंग 29) जांबनाइकर 30) शिलोना
यवतमाळ 18) उमरखेड	1)दिडाळा 2)पाडी 3)पिरंजी 4) गोविंदपुर 5)कुरळी 6)जाम 7)अकोली 8)सातारा 9)मसळग 10)पाडी 11)जेवळी 12)पिंपळगांव 13) बोडखा 14)पेधा 15)उदापूर 16) सावरगांव 17)परोटी 18)नानी 19) बोरी 20)धेरडी 21)पवनाळा 22)सोनदामी 23)यकोबा 24)मोरचंडी 25)कोसंबी 26)चिखली 27) रामपूर 28) बोरगांव 29) डोंगरगांव 30)धोंडोली 31)षेईर 32)नवेलालपूर 33)दिग्रस 34)काटी 35)कवठा 36)वहेली 37)वानोरा 38)शिवाजीनगर 39) जवराळा 40) उमरी 41)असोली 42) सेवालालनगर 43) वडगांव 44) दामसरी 45)थार बु. 46) सेरंडी 47) दरारी 48) मधुरानगर.
औरंगाबाद 19) सिल्लोड	1)धनषिगवाडी 2) बाभुळगांव 3) पोखरी 4) बाबरा 5)मोमोनाबाद 6)लेहा 7)बाधेगांव 8)अंधारी 9)जातवा 10)अमरावती 11)घाटनांद्रा 12) परदेशीवाडी 13) चारनेर 14)धावडा 15) अंधारवाडी 16) कडेगांव 17) सिरसाम 18)नातेगांव 19) घाटमखेळ 20) हालदा 21)पिंपळदरी 22) मुखबार 23) वाव्रा 24) रांजणी 25) अर्जिठा 26) अनाड 27) आमसरी 28)नारंबी 29) वडाळी.

परभणी 20) हिंगोली	1) नरसी 2) लोहगांव 3) सेवली 4)पिंपळी 5)बोरळा 6)जळगांव 7) षेलेगांव 8)सोनेगांव 9) पिंपरखेड 10) देवळा 11)अनपनवाडी 12) ससुळापूर 13) माथा 14) मुर्तीजापूर 15)केहरपिंपरी 16) सिध्देश्वर 17)दिघुळ 18)टुडचना 9)बडचुना 20)ओढा 21) हनुमानदरी 22)शिवकार 23)जामला 24) जामदन 25) बैजापूर 26)खंबाळा 27)फासेले 28)तबलीगव्हाण 29) मांडेगांव 30)राख 31) जामरी खुर्द 32)पांगरी 33)बोराळा 34) नांदूरा 35) कडवी 36) आमनखेड 37)ब्रम्हपूरी 38)खळगांव 39)जामसन 40)पारंडी 41)खळगांव 42)रिधोस 43)तेजगांव 44)कोळंब 45)सुकली बु. 46)सुकली 47)शिंदेफळ 48) धनगरवाडी 49) सबळखेड 50) बाभुळगांव 51) गोरेगांव 52) पिंडीखुर्द 53) ब्रम्हणवाडी 54) पिंपरी पाथबळ 55)बोरखेड 56)एकवा 57) खंडाळा 58) चिंचोळी 59) बेलरा 60)आडगांव 61) देवठाण 62) काळेगांव 63)कलोखेड 64)कपकुली 65) चाटोना 66) देवठाण.
औरंगाबाद 21) कन्नड	1) तांदुळवाडी 2) पेवली 3) मुमसापूर 4) पेकडवाडी 5)कोेडवाडी 6) कल्याणी 7)वडनेर 8)अंबाला 9)आंबा 10)जामडी 11) रेळ 12)कुंजखेड 13) नांदगीरवाडी 14)हिवरखेड 15)वडाळी 16) जैतखेड 17) मालेगांव ढोकळ 18)षरवा 19) मालेगांव लाखोंडे 20) मोहाडी 21)हस्ता 22) माहेगांव 23) चेडसर 24) पळसी खुर्द 25) कांबळी 26)भीलदरी 27)गोर पिंपरी 28) सावखेड बु. 29) पिंपरखेडा 30) सफीयाबाद 31) खडकी 32) पिषोर 33) षतवाडी 34) वासडी 35) निंभोरा 36) उमरखेड 37)सावरगांव 38)धामनी 39)आंबेवाडी बु. 40)मेहुण 41)हारेवाडी 42) वडगांव 43) लोझा 44) पांगोरी 45)षपेवाडी 46) सोनवाडी 47) शिवघाट 48) चिमनापूर 49) नागापूर 50)करंजखेड 51) रेडळगांव 52) नेवपूर 53)घाटशेंद्रा 54) टाकळी 55) अंतूर 56)लोहगांव.
औरंगाबाद 22) खुलताबाद	1)वडगांव 2)पाडळी 3)शिरोळा बु. 4) सावरखेडा 5)लोधी 6)बोडखा 7)खुलताबाद 8)धामनगांव 9) अब्दुलपूर 10) निरगुडी बु. 11) पिंपरी 12) जमालवाडी 13) म्हैसमाळ 14) शिरसमाळ 15) टाकळी खु. 16) आखतवाड 17) वेरुळ 18) मंत्रापूर 19) खुलताबाद 20)सराई 21) बदलाबाई 22) नंदुबाद 23) मापसाळा 24) रसुलपूर 25) शंकरपुरवाडी 26) साबुखेडा 27) खिडी 28) सोनखेडा 29) भटजी 30)लामनगांव 31) खोतेनापूर 32) विरमगांव
परभणी 23) कळमनुरी	1) खेड 2) धानापूर 3)धोत्रा 4)अमरखोजा 5) षिरसखुर्द 6)षिरस बु. 7)डिग्रस वापी 8)पिंपळी 9) सांडस 10)रेटकर 11) वराडी 12) खडकत बु. 13) खडकत खु. 14) मंदारी 15)गारखेड 16) महरी खु. 17) खडकेत 18)बैज 19) दुधेरी 20)चिंचोळी 21)खोडतला 22) पेडगांव 23) डोंगी 24) नादुरा 25) बेलापूरी 26) तळेगांव 27) जावा 28) मिसे बुद्रुक 29) कापस 30) षिपागी 31) माळवाडी 32) दांडेगांव 33) मोतीचुर 34) विठठलवाडी 35) पिंपरी खुर्द. 36) कानेगांव 37) फाटणा 38) दाभाडी 39) प्ांुंचा 40) मोरगांव.

General Notes

MAHARASHTRA JEEVAN PRADHIKARAN , AURANGABAD REGION

SCHEDULE OF RATES FOR THE YEAR 2019-20

GENERAL NOTES

- 1 These rates are applicable to all MJP works in the **AURANGABAD REGION** with effect from **dated 01-06-2019**.
- 2 Item of excavation is inclusive of normal manual dewatering, however, separate item for dewatering shall be proposed in the estimate where underground water is anticipated in significant magnitude.
- 3 The rates of excavation for O & M works where limited working space is available and work is required to be carried out on emergency basis, the rate should be adopted as per actual rate analysis which shall be approved by concerned S.E. for that particular work only.
- 4 Rates of all the Items are exclusive of GST (Goods and service Tax), levied by Central Government, State Government. The rates are inclusive of 12.5% EPF. These rates are applicable only for tendered works, these rates should be reduced by 12.5 % of labour part when works are to be carried out on piecemeal works and other small works without tendering.
- 5 For all completed items, **initial lead of 5 kms.** is considered for collection of materials like sand, bricks, metal, stone etc. Appropriate addition for lead charges excluding loading , unloading for these materials shall be done while estimation.

Following quantities shall be considered for additional lead charges beyond 5 km for material required for concrete and reinforcement for structures.

Capacity of ESR	Staging (M)	Quantity of concrete in cum	Reinforcement qty (MT)
20,000	12	27.40	2.14
30,000	12	32.70	2.55
40,000	12	37.80	2.95
50,000	12	41.90	3.27
60,000	12	46.40	3.62
70,000	12	51.20	3.99
75,000	12	53.00	4.13
80,000	12	56.00	4.37
90,000	12	62.40	4.87
125,000	25	107.40	8.38
150,000	12	89.80	7.00
160,000	12	94.30	7.36
175,000	16	117.60	9.17
200,000	20	143.60	11.20
200,000	25	157.00	12.25
250,000	25	177.00	13.81
300,000	25	206.00	16.07

Note : Spiral staircase not considered. SBC 5 MT/Sqm, Seismic Zone III is considered.

For RCC GSR

Capacity (Lit)	Concrete Qty	Reinforcement Qty (MT)
25,000	13.58	0.945
50,000	18.45	1.586
75,000	30.45	2.095
1,00,000	39.31	2.707
1,50,000	54.699	3.778
2,00,000	73.313	6.577
3,00,000	95.092	9.874
5,00,000	143.277	11.900
10,00,000	222.441	15.418

(For WTP & STP works, the quantities of completed/ongoing works shall be considered)

For Capacities beyond the mentioned capacities of ESR and GSR as well as for all capacities of WTP & STPs, the Quantities shall be considered with respect to the already completed/ on going work in the region. All the concrete items for water retaining structures are taken as M-300 grade. Hence aggregate quantity shall be 0.90 cum/cum of concrete and sand quantity shall be 0.45 cum/cum of concrete for RCC GSR, ESR, All Treatment Plants.

- 6 These rates are applicable to water supply and sewerage schemes and its allied works only. Rates, for items required for general construction, buildings, roads, Irrigation Works etc. shall be adopted from the current schedule of rates of P.W.D. or Irrigation Deptt. in respective areas. For bore wells, CSR of GSDA shall be followed. Increase in percentage over normal schedule of rates will also be as per norms of respective C.S.R.
- 7 For mechanical and electrical items related to water supply and sewerage schemes, CSR for 2018-19 prepared by Superintending Engineer (Mechanical), Maharashtra Jeevan Pradhikaran shall be adopted.
- 8 Following increase in % over normal schedule of rates of M.J.P. for 2019-20 will be applicable. (Ref. PWD GR. No. DSR/1091/CR-6577/Planning-3, dated 08/07/2003)

	Area	% Increase
a	Works in Corporation area	5%
b	Works in Municipal areas	2%
c	Works in tribal area / hilly and inaccessible areas	10%
d	Sugar cane area	5%
e	Prison / Jail area	15%
f	Defence area	20%
g	Excavation for pipeline work along National Highway	10%
h	Excavation for Dist.system pipe lines, Sewerage system in towns	10%

- 9 In case the area of work lies under categories more than one (mentioned at Sr.No.9) the higher percentage increase shall be made applicable (e.g. if any Municipal Council falls in hilly area, then additional percentage in rates will be only 10 % and not with 2 % + 10 %). This additional percentage is only on completed item of work and not applicable to items of providing of materials like steel, pipes, valves, specials etc.
- 10 For hilly and inaccessible areas / Tribal areas approved by Government, Planning Department's Circular Nos.(1)1089/CR-66/Plan-19,DT.23/11/1990 and (2) 1094/P-36/K-1455 dt.02/09/1994, shall be followed. In addition to amendment notification by the planning deptt. time to time.
- 11 For Action Plan Notified Area, Government's Circular in force from time to time shall be followed.
- 12 Whenever basic rates of completed items are increased by percentage given at Sr. No. 9, the issue rates of materials to be supplied by the Department (if any) shall be increased by same percentage.

- 13 This schedule of rates is based on following basic rates for important materials.

	Material	Rate in Rs. Per MT.
a	Cement	4969.17
b	Mild Steel	38589.9
c	Tor Steel/CTD bars	41781
d	Structural Steel	43543
e	Corrosion Resistant Steel (Fe 500)	44072.11

- 14 Details of standard cement consumption and standard weight of various pipes are incorporated in this CSR.
- 15 Rates for supply of various types of pipes, specials and valves are exclusive of GST (Goods and Service Tax) but inclusive of third party inspection charges, storage charges, overhead charges and transportation of materials upto divisional stores / sites and stacking. While preparation of estimates provision for GST should be made separately in recapitulation sheet.
- 16 Cost of carting of pipes and valves from departmental stores to site of work is not considered in rate analysis, hence this item must be incorporated in each scheme. While inviting tenders if supply is from departmental store, then this item shall appear in the tender, and if the supply is by contractor then this item shall not appear in the tender, even though same is provided in sanctioned scheme, because the contractor is supposed to bring the pipes and valves directly at site.

- 17 Though the contractor is required to do refilling before hydraulic testing to avoid traffic hurdle, no payment for refilling of the trenches of pipeline shall be payable till satisfactory hydraulic testing is given. Re-excavation required if any, during testing, shall be done by the contractor at his own cost.
- 18 10 % of cost of items of water retaining structures, such as GSR/ESR/MBR shall be retained till satisfactory hydraulic testing is given as per IS code.
- 19 10 % of cost of total sub-work of pipeline work shall be retained, till satisfactory hydraulic test is given, as per IS code or as per Tender condition.
- 20 In case of supply of pipes / valves etc. by contractor, only 60% payment shall be released after supply and 25% after laying and 15% after satisfactory hydraulic testing or as per Tender condition.
- 21 AC/PVC pipes shall not to be used in Urban Areas with reference to the Circular No.130 dated 09.03.2009 of M.S.,M.J.P. The HDPE pipes may be used in Distribution system of Urban areas with diameter restricted up to 300 mm dia only, provided that the area where these pipes are to be laid shall not be a rocky area. HDPE Pipes shall be as per latest IS : 4984-2016 specifications. Also HDPE Pipes upto 110 mm diameter shall be in coil form.
- 22 For use of ready mix cement concrete, prior permission of the Chief Engineer must be obtained.
- 23 For Dams , Balancing Tanks , Aerated Lagoons and similar structures, the rates for Film membranes as per prevailing rates for Irrigation Department will be followed.
- 24 Capacity of ESR / GSR to be constructed shall be rounded to nearest 1000 litres always on higher side i.e. if required capacity is 1,23,570 litre, it shall be rounded to 1,24,000 litre. Similarly, if required capacity is 8,26,070 litre, it shall be rounded to 8,27,000 litre.
- 25 Capacity of Unconventional / conventional Treatment Plants shall be rounded to nearest 0.5 Mld- always on higher side i.e. if WTP of 2.37 Mld is required; it shall be rounded to 2.5 Mld. For WTP having capacity less than 0.5 mld, package type WTP should be considered.
- 26 ***Provision for insurance @ 1% is considered in Rate analysis of CSR 2019-20. These rates are applicable only for tendered works, these rates should be reduced by 1 % of total rate when works are to be carried out on piecemeal works and other small works without tendering.***
- 27 Rates given in this CSR are for estimation purpose only.
- 28 The makes of Sluice / Butterfly valves etc. to be used for inlet / outlets of ESRs / GSRs / MBRs / Pumping main / Rising main and WTP should be from approved makes of M.J.P .
- 29 Mechanical CSR rates for respective items shall be followed while estimation and the list of approved makes shall be given in the item.
- 30 ***As per Govt. Circular No.DSR 1090/CR 6453/PLN_3 dated 14-07-1993, 1% for labour amenities is considered in the DSR .***
- 31 ***As per Govt. in Industries and Power GR No.BCA-2009/CR108/labour 7-A dated 17-06-2010, 1% cess on labour welfare is considered in DSR while arriving the rates.***
- 32 ***(1)Item of hydraulic testing shall be measured separately , as per detailed item in respective subwork.***
- (2) In case of water supplied by the MJP for hydraulic testing , amount of water supplied should be deducted from the item of hydraulic testing, with prevailing rates of Non Domestic (Bulk supply) of WSS , as per MJPs latest notification
- 33 In case of Geomembrane sheet to be provided by the agency 50% payment against supply 30% payment against lowering and 20% against hydraulic testing will be given
- 34 The Royalty charges are considered in the rate analysis of CSR 2019-20 as per Revenue and Forest Department , Govt. of Maharashtra Notification dtd. 11.05.2015

Section - A

Materials

SECTION - A - MATERIAL FOR 2019-20

S.No.	Material Description	Unit	Rate
1	Acetylene Gas	Nos	715.00
2	Alum Grade I Ex-factory	Mt	7654.96
3	Binding Wire	Kg	63.00
4	Black enamel paint Anti corrosive	Ltr	157.87
5	Bricks	No	5.80
6	Bullies, Struts (125 mm dia 1.5 M long)	rmt	170.00
7	C.C.Teak wood planks(3" X 6")	Cum	65767.26
8	Cement (Bags)	Bag	248.46
9	Cement (M.T.)	Mt	4969.17
10	Cement Sulphar Resistant	M.T.	5531.16
11	Charcoal	Kg	29.46
12	Corrosion Resistant steel	Mt	44072.11
13	Diesel	Lit	57.85
14	Epoxy paint	Kg	356.20
15	Fuse	No	19.00
16	G.I.Washers	Kg	
17	Gun Powder	Kg	65.45
18	Inferol 49 W thick	Ltr	
19	Liquid chlorine 100 kg Deptt Containor .	No.	
20	Liquid chlorine 100 kg supplier Containor	No.	2230.00
21	Liquid chlorine 900 kg Deptt Containor	No.	13160.38
22	Liquid chlorine 900 kg Supplier Containor	No.	
23	Lubricant Oil	lit	205.28
24	M.S.angle(50x50x6mm)	Kg	43.90
25	M.S.Bars (Delivery at site)	Mt	38589.00
26	M.S.Bars (in kgs)	Kg	38.59
27	M.S.Flats (40 mm x 3 mm)	Kg	42.96
28	M.S.plate	Kg	46.54
29	Maganafloc coagulant aid	Mt	
30	Mild steel Grill ready	Kg	62.00
31	Mild steel grill railing	mt	62.00
32	Mobile oil	Lit	242.18
33	Murum	cum	239.80
34	Nails	Kg	60.16
35	Nutbolts	Kg	79.10
36	Oxygen Gas (Refill)	Cylinder	295.28
37	Polling board	cum	14674.03
	Quarry spalls	cum	
38	R.S.Joist channel etc	MT	38548.87
39	Rapid sand Gravity filter sand At Source (Godhara, Gokak, Kanhan, Yesagi sand)	Cum	1263.81
40	Rapid sand Gravity filter Gravel At Source	Cum	1400.80
41	Ready mixed Alluminium paint	Ltr	296.29
42	Ready mixed lead/zinc paint	Ltr	195.04
43	Ready mix oil paint	Ltr	203.96
44	Ready mix primer	Ltr	146.00
45	Ready mix synthatic enamel paint.	Ltr	150.00
46	Rubber Gasket (8 mm thick)	Kg	77.91

SECTION - A - MATERIAL FOR 2019-20

S.No.	Material Description	Unit	Rate
47	Sand	cum	1000.00
48	Kasarde sand (for mortar lining work) @ source	cum	1744.00
49	Spun Yarn	Kg	75.43
50	Stone Aggregate 10 mm	cum	809.22
51	Stone Aggregate 20 mm	cum	809.22
52	Stone Aggregate 40 mm	cum	809.22
53	Rubble	cum	450.00
54	Structural Steel	M.T.	43543.00
55	T.C.L.(bleaching powder Gr.I) (5kg pack)	Kg	
56	T.C.L.(bleaching powder Gr.I) (10kg pack)	Kg	
57	T.C.L.(bleaching powder Gr.I) (25kg pack)	Kg	21.00
58	Teak wood	Cum	67337.00
59	Tor Steel	Mt	41781.00
60	Turpentine	Lit	
61	Walling (100x100mm)	cum	15076.31
62	Welding Rod Having weight 5.25 kg	Box	1209.22
63	White cement	Kg	31.29
64	White lead	Kg	135.44
65	Wire	Kg	61.35
66	Plywood Commercial 12 mm thick Waterproof for centering	sqm	441.00
	(Taken in analysis for RCC items only)		
67	Coarse Sand	Cum	1000.00
68	PAC Powder	MT	28099.8
69	PAC Liquid	MT	9595.89

Section - B

Labour and Machinery

SECTION - B - LABOUR FOR 2019-20

S.No.	Description	Unit	2019-20
1	Asst Fitter	No.	512
2	Bhandhani	No.	512
3	Bhisti with pakahal	No.	512
4	Blacksmith IInd class	No.	512
5	Breaker	No.	512
6	Carpainter 1st class	No.	539
7	Carpainter 2nd class	No.	539
8	Chiseller	No.	512
9	Excavator	No.	493
10	Fitter 1st class	No.	539
11	Glazier	No.	539
12	Helper	No.	493
13	Hole Driller	No.	512
14	Mason 1st class	No.	539
15	Mason 2nd class	No.	539
16	MAZDOOR (FEMALE)	No.	493
17	Mazdoor(Heavy)	No.	493
18	Mazdoor (Light)	No.	493
19	MAZDOOR (MALE)	No.	493
20	Maistry	No.	539
21	Mukadam	No.	539
22	Painter (for coloring)	No.	539
23	Painter	No.	539
24	Polisher	No.	512
25	Pump Driver	No.	512
26	StoneCutter or dresser	No.	539
27	Tile layer	No.	539
28	Welder	No.	539
29	Welder for pipe line	No.	539
30	WhiteWasher	No.	512
31	TileTurner	No.	539
32	L.M.V. Driver	No.	539
33	Electrician	No.	539
34	Plumber	No.	512
35	Mali	No.	493
36	Wireman	No.	539
37	Site Supervisor	No.	
38	Surveyor	No.	
39	Computer Operator (data entryoperator)	No.	539.00

HIRE CHARGES OF MACHINERIES			
1	Rent for chain pully block with tripod	Day	525
2	Rent for pump including operator & excluding fuel	BHP-Day	199.5
3	Rent for Mech.Mixer with fuel & crew	Day	2646
4	Rent for vibrator with fuel and crew	Day	992.25
5	Plate Bender	Day	1050
6	Rent for welding set with Electric set	Day	1207.5
7	Rent for welding set with Generator	Day	2152.5
8	Rent for Compressor with fuel	Day	2535.75
9	Rent for Concrete breaker & Compressor	Day	2310
10	Rent for poclain	Hour	2591.4
11	Rent for Crane	Hour	1653.75
12	Rent for JCB	Hour	1047.9
13	Truck hire charges upto 20 km	Day	2546.00
14	Truck hire charges for 20 km to 50 km	Day	2334.00
15	Truck hire charges for 50 km & above	Day	2122.00
16	Pipe cutter with operator	Day	1378.65
17	De sludging/ De silting pump	Day	2725.8
18	Jeep hire charges with driver and fuel(Upto 300 KM.)	Day	3509.1

Section - C

Transportation

STATEMENT - I

 Rate (Rs.)
2019-20

Sr. No.	Item of Work	Unit	Collecting the railway receipt etc. & unloading the consignment from railway wagon & keeping on railway	Lifting the materials from railway platform, loading into truck	Loading the material into truck from Departmental stores or site of work.	Unloading the material from truck including stacking in Departmental stores or site of work.
1	2	3	4	5	6	7
(A)	MANUAL HANDLING (Weight upto and including 300 kg)					
1	C.I. / D.I. / M.S. / H.D.P.E. pipes of all classes upto and including 200 mm dia pipes of any length	MT	271.00	329.00	86.00	86.00
2	R.C.C. pipes of all classes upto and including 350 mm dia	MT	271.00	329.00	86.00	86.00
3	A.C. pipes of all classes and dia.	MT	144.00	200.00	51.00	51.00
4	P.V.C. pipes of all classes and dia.	MT	144.00	200.00	51.00	51.00
5	All other materials such as C.I. specials of individual weight upto 300 kg.	MT	271.00	329.00	86.00	86.00
6	Mild steel / Tor steel / R.S.J.	MT	170.00	232.00	129.00	129.00
7	Cement / Bleaching powder / Alum	MT	82.00	126.00	66.00	66.00
(B)	CRANE HANDLING (Materials having individual weight above 300 kg)		0.00	0.00	0.00	0.00
1	C.I./ D.I./ B.W.S.C./ M.S./ R.C.C. pipes of all classes having individual weight more than 300 kg. and also other heavy materials, valves, machinery having individual weight more than 300 kg.	MT	182.00	232.00	165.00	165.00

1) The above rates in column 1 to 5 are applicable only for railway clearance purpose only and not for other carting.

2) The rates given in column 6 to 7 shall be adopted for estimate purpose only, however, actual quotations/ 'D' tender will prevail.

3) Irrespective of supply of CI / DI pipes as per rate contract, when pipes are directly supplied by the firms by road, railway freight upto destination station and carting as per schedule from railway station to work site is allowed. In such cases, rate of Mathadi Kamgar shall not be applicable for carting and normal loading, unloading, carting shall be allowed.

STATEMENT II

Including loading, unloading and stacking

Lead in km	Av. Speed	No. of Trips(N)= 8/ ((2L/S) +1)	Km. Done (2NL+6)	Litres of diesel consumed	cost of diesel @ 57.85/ lit	Lit. of Mobile oil consumed	cost of M.Oil @ 242.18/lit	cost of 6 mazdoor	Hire charges of truck Rs. Per day	Total cost (6+8+ 9+10)	Add 10% overhead charges	Total 11+12	cost per trip (13/3)
1	2	3	4	5	6	7	8	9	10	11	12	13	14
0.5	15	7.5	13.50	4.50	260.33	0.096	23.25	2958.00	2546	5787.57	578.76	6366.33	848.84
1	16	7.11	20.22	6.74	389.91	0.144	34.87	2958.00	2546	5928.78	592.88	6521.66	917.25
1.5	16.5	6.77	26.31	8.77	507.34	0.188	45.53	2958.00	2546	6056.87	605.69	6662.56	984.13
2	17	6.48	31.92	10.64	615.52	0.228	55.22	2958.00	2546	6174.74	617.47	6792.22	1048.18
2.5	17.25	6.2	37.00	12.33	713.29	0.264	63.94	2958.00	2546	6281.23	628.12	6909.35	1114.41
3	17.5	5.96	41.76	13.92	805.27	0.298	72.17	2958.00	2546	6381.44	638.14	7019.59	1177.78
3.5	17.75	5.74	46.18	15.39	890.31	0.330	79.92	2958.00	2546	6474.23	647.42	7121.65	1240.71
4	18	5.54	50.32	16.77	970.14	0.359	86.94	2958.00	2546	6561.09	656.11	7217.20	1302.74
4.5	18.25	5.36	54.24	18.08	1045.93	0.387	93.72	2958.00	2546	6643.65	664.37	7308.02	1363.44
5	18.5	5.19	57.90	19.30	1116.51	0.414	100.26	2958.00	2546	6720.77	672.08	7392.84	1424.44
6	18.75	4.88	64.56	21.52	1244.93	0.461	111.64	2958.00	2546	6860.58	686.06	7546.63	1546.44
7	19	4.61	70.54	23.51	1360.05	0.504	122.06	2958.00	2546	6986.11	698.61	7684.72	1666.97
8	19.183	4.36	75.76	25.25	1460.71	0.541	131.02	2958.00	2546	7095.73	709.57	7805.31	1790.21
9	19.6	4.17	81.06	27.02	1563.11	0.579	140.22	2958.00	2546	7207.33	720.73	7928.06	1901.21
10	20	4	86.00	28.67	1658.56	0.614	148.70	2958.00	2546	7311.26	731.13	8042.38	2010.6
15	25	3.64	115.20	38.40	2221.44	0.823	199.31	2958.00	2546	7924.75	792.48	8717.23	2394.84
20	25	3.08	129.20	43.07	2491.60	0.923	223.53	2958.00	2546	8219.13	821.91	9041.04	2935.4
25	25	2.67	139.50	46.50	2690.03	0.996	241.21	2958.00	2334	8223.24	822.32	9045.56	3387.85
30	25	2.35	147.00	49.00	2834.65	1.050	254.29	2958.00	2334	8380.94	838.09	9219.03	3922.99
35	30	2.4	174.00	58.00	3355.30	1.243	301.03	2958.00	2334	8948.33	894.83	9843.16	4101.32
40	30	2.18	180.40	60.13	3478.52	1.289	312.17	2958.00	2334	9082.69	908.27	9990.96	4583.01
45	30	2	186.00	62.00	3586.70	1.329	321.86	2958.00	2334	9200.56	920.06	10120.61	5060.31
50	30	1.85	191.00	63.67	3683.31	1.364	330.33	2958.00	2334	9305.64	930.56	10236.21	5533.09

Lead in km	Av. Speed	No. of Trips(N)= 8/ ((2L/S)+1)	Km. Done (2NL+6)	Litres of diesel consumed	cost of diesel @ 57.85 / lit	Lit. of Mobile oil consumed	cost of M.Oil @ 242.18/lit	cost of 6 mazdoor	Hire charges of truck Rs. Per day	Total cost (6+8+9+10)	Add 10% overhead charges	Total 11+12	cost per trip (13/3)
1	2	3	4	5	6	7	8	9	10	11	12	13	14
60	30	1.6	198.00	66.00	3818.10	1.414	342.44	2958.00	2122	9240.54	924.05	10164.60	6352.87
70	30	1.41	203.40	67.80	3922.23	1.453	351.89	2958.00	2122	9354.12	935.41	10289.53	7297.54
80	30	1.26	207.60	69.20	4003.22	1.483	359.15	2958.00	2122	9442.37	944.24	10386.61	8243.34
90	30	1.14	211.20	70.40	4072.64	1.509	365.45	2958.00	2122	9518.09	951.81	10469.90	9184.12
100	40	1.12	230.00	76.67	4435.36	1.643	397.90	2958.00	2122	9913.26	991.33	10904.59	9736.24
125	40	1.1	281.00	93.67	5418.81	2.007	486.06	2958.00	2122	10984.86	1098.49	12083.35	10984.86
150	40	0.94	288.00	96.00	5553.60	2.057	498.16	2958.00	2122	11131.76	1113.18	12244.94	13026.53
175	40	0.82	293.00	97.67	5650.21	2.093	506.88	2958.00	2122	11237.09	1123.71	12360.80	15074.15
200	40	0.73	298.00	99.33	5746.24	2.129	515.60	2958.00	2122	11341.84	1134.18	12476.03	17090.45
250	40	0.59	301.00	100.33	5804.09	2.150	520.69	2958.00	2122	11404.78	1140.48	12545.26	21263.14
300	45	0.56	342.00	114.00	6594.90	2.443	591.65	2958.00	2122	12266.55	1226.65	13493.20	24095
420	45	0.41	350.40	116.80	6756.88	2.503	606.18	2958.00	2122	12443.06	1244.31	13687.36	33383.81
540	45	0.32	351.60	117.20	6780.02	2.511	608.11	2958.00	2122	12468.13	1246.81	13714.95	42859.21
660	45	0.26	349.20	116.40	6733.74	2.494	604.00	2958.00	2122	12417.74	1241.77	13659.51	52536.58
780	45	0.22	349.20	116.40	6733.74	2.494	604.00	2958.00	2122	12417.74	1241.77	13659.51	62088.68
900	45	0.2	366.00	122.00	7057.70	2.614	633.06	2958.00	2122	12770.76	1277.08	14047.83	70239.17
1020	45	0.17	352.80	117.60	6803.16	2.520	610.29	2958.00	2122	12493.45	1249.35	13742.80	80839.99
1140	45	0.15	348.00	116.00	6710.60	2.486	602.06	2958.00	2122	12392.66	1239.27	13631.93	90879.5

- Note:
- 1) No. of trips in a working of 8 hours $N=8 / (2(L+S) + 1)$ where L = Lead in km and S = speed, 1 hour is allowed for loading
 - 2) Consumption of diesel taken as 3 km / litre
 - 3) Consumption of Mobile oil taken as 140 km / litre
 - 4) In col. 4 6 hours has been added for movement from parking place to duty and back
 - 5) Hire charges will remain Rs. 1500.00 for 1200 and above km lead
 - 6) Labour required for loading unloading and stacking after the No. of trips reduced below 1 is factorised with actual number of trip.

STATEMENT III
Excluding loading, unloading and stacking

Lead	Av.	No. of	Km.	Litres of	cost of	Lit. of	cost of	cost of 6	Hire	Total cost	Add 10%	Total	cost per
in km	Speed	Trips(N)=	Done	diesel	diesel @	Mobile	M.Oil @	mazdoor	charges	(6+8+	overhead	11+12	trip
		8/ ((2L/S)	(2NL+6)	cons	57.85 / lit	oil con-	242.18/lit		of truck	9+10)	charges		(13/3)
		+1)		umed		sumed			Rs. Per				
									day				
1	2	3	4	5	6	7	8	9	10	11	12	13	14
0.5	15	7.5	13.50	4.50	260.33	0.096	23.25	0	2546	2829.57	282.96	3112.53	415
1	16	7.11	20.22	6.74	389.91	0.144	34.87	0	2546	2970.78	297.08	3267.86	459.61
1.5	16.5	6.77	26.31	8.77	507.34	0.188	45.53	0	2546	3098.87	309.89	3408.76	503.51
2	17	6.48	31.92	10.64	615.52	0.228	55.22	0	2546	3216.74	321.67	3538.42	546.05
2.5	17.25	6.2	37.00	12.33	713.29	0.264	63.94	0	2546	3323.23	332.32	3655.55	589.6
3	17.5	5.96	41.76	13.92	805.27	0.298	72.17	0	2546	3423.44	342.34	3765.79	631.84
3.5	17.75	5.74	46.18	15.39	890.31	0.330	79.92	0	2546	3516.23	351.62	3867.85	673.84
4	18	5.54	50.32	16.77	970.14	0.359	86.94	0	2546	3603.09	360.31	3963.40	715.41
4.5	18.25	5.36	54.24	18.08	1045.93	0.387	93.72	0	2546	3685.65	368.57	4054.22	756.38
5	18.5	5.19	57.90	19.30	1116.51	0.414	100.26	0	2546	3762.77	376.28	4139.04	797.5
6	18.75	4.88	64.56	21.52	1244.93	0.461	111.64	0	2546	3902.58	390.26	4292.83	879.68
7	19	4.61	70.54	23.51	1360.05	0.504	122.06	0	2546	4028.11	402.81	4430.92	961.15
8	19.183	4.36	75.76	25.25	1460.71	0.541	131.02	0	2546	4137.73	413.77	4551.51	1043.92
9	19.6	4.17	81.06	27.02	1563.11	0.579	140.22	0	2546	4249.33	424.93	4674.26	1120.93
10	20	4	86.00	28.67	1658.56	0.614	148.70	0	2546	4353.26	435.33	4788.58	1197.15
15	25	3.64	115.20	38.40	2221.44	0.823	199.31	0	2546	4966.75	496.68	5463.43	1500.94
20	25	3.08	129.20	43.07	2491.60	0.923	223.53	0	2546	5261.13	526.11	5787.24	1878.98
25	25	2.67	139.50	46.50	2690.03	0.996	241.21	0	2334	5265.24	526.52	5791.76	2169.2
30	25	2.35	147.00	49.00	2834.65	1.050	254.29	0	2334	5422.94	542.29	5965.23	2538.4
35	30	2.4	174.00	58.00	3355.30	1.243	301.03	0	2334	5990.33	599.03	6589.36	2745.57
40	30	2.18	180.40	60.13	3478.52	1.289	312.17	0	2334	6124.69	612.47	6737.16	3090.44
45	30	2	186.00	62.00	3586.70	1.329	321.86	0	2334	6242.56	624.26	6866.81	3433.41
50	30	1.85	191.00	63.67	3683.31	1.364	330.33	0	2334	6347.64	634.76	6982.41	3774.27
55	30	1.71	194.10	64.70	3742.90	1.386	335.66	0	2122	6200.56	620.06	6820.61	3988.66
65	30	1.5	201.00	67.00	3875.95	1.436	347.77	0	2122	6345.72	634.57	6980.29	4653.53
75	30	1.33	205.50	68.50	3962.73	1.468	355.52	0	2122	6440.25	644.02	7084.27	5326.52
85	30	1.2	210.00	70.00	4049.50	1.500	363.27	0	2122	6534.77	653.48	7188.25	5990.21
95	40	1.39	270.10	90.03	5208.24	1.929	467.17	0	2122	7797.40	779.74	8577.14	6170.6
105	40	1.28	274.80	91.60	5299.06	1.963	475.40	0	2122	7896.46	789.65	8686.11	6786.02
130	40	1.07	284.20	94.73	5480.13	2.030	491.63	0	2122	8093.76	809.38	8903.13	8320.68
155	40	0.91	288.10	96.03	5555.34	2.058	498.41	0	2122	8175.74	817.57	8993.32	9882.76
180	40	0.8	294.00	98.00	5669.30	2.100	508.58	0	2122	8299.88	829.99	9129.87	11412.33
230	40	0.64	300.40	100.13	5792.52	2.146	519.72	0	2122	8434.24	843.42	9277.66	14496.35
280	45	0.6	342.00	114.00	6594.90	2.443	591.65	0	2122	9308.55	930.85	10239.40	17065.67
400	45	0.43	350.00	116.67	6749.36	2.500	605.45	0	2122	9476.81	947.68	10424.49	24243
520	45	0.33	349.20	116.40	6733.74	2.494	604.00	0	2122	9459.74	945.97	10405.71	31532.46
640	45	0.27	351.60	117.20	6780.02	2.511	608.11	0	2122	9510.13	951.01	10461.15	38744.99
760	45	0.23	355.60	118.53	6856.96	2.540	615.14	0	2122	9594.10	959.41	10553.51	45884.82
880	45	0.2	358.00	119.33	6903.24	2.557	619.25	0	2122	9644.49	964.45	10608.94	53044.72
1000	45	0.18	366.00	122.00	7057.70	2.614	633.06	0	2122	9812.76	981.28	10794.03	59966.86
1120	45	0.16	364.40	121.47	7027.04	2.603	630.39	0	2122	9779.43	977.94	10757.38	67233.61

STATEMENT VI

Including loading, unloading and stacking

Lead in km	Cost / trip	Lime murum building rubbish	Earth	Manure or sludge	Excavated rock	Sand stone aggregate 40 mm & below	Aggregate 40 mm & above	Soling stone	Concrete block (form)	Timber
1	2	3	4	5	6	7	8	9	10	11
	Pay load	6.0 cum	4.8 cum	5.52 cum	3.0 cum	5.75 cum	5.5 cum	4.7 cum	6.0 cum	5.75 cum
0.5	848.84	141.47	176.84	153.78	282.95	147.62	154.33	180.60	141.47	147.62
1	917.25	152.88	191.09	166.17	305.75	159.52	166.77	195.16	152.88	159.52
1.5	984.13	164.02	205.03	178.28	328.04	171.15	178.93	209.39	164.02	171.15
2	1048.18	174.7	218.37	189.89	349.39	182.29	190.58	223.02	174.70	182.29
2.5	1114.41	185.74	232.17	201.89	371.47	193.81	202.62	237.11	185.74	193.81
3	1177.78	196.3	245.37	213.37	392.59	204.83	214.14	250.59	196.30	204.83
3.5	1240.71	206.79	258.48	224.77	413.57	215.78	225.58	263.98	206.79	215.78
4	1302.74	217.12	271.4	236.00	434.25	226.56	236.86	277.18	217.12	226.56
4.5	1363.44	227.24	284.05	247.00	454.48	237.12	247.90	290.09	227.24	237.12
5	1424.44	237.41	296.76	258.05	474.81	247.73	258.99	303.07	237.41	247.73
6	1546.44	257.74	322.18	280.15	515.48	268.95	281.17	329.03	257.74	268.95
7	1666.97	277.83	347.29	301.99	555.66	289.91	303.09	354.67	277.83	289.91
8	1790.21	298.37	372.96	324.31	596.74	311.34	325.49	380.90	298.37	311.34
9	1901.21	316.87	396.09	344.42	633.74	330.65	345.67	404.51	316.87	330.65
10	2010.6	335.1	418.88	364.24	670.20	349.67	365.56	427.79	335.10	349.67
15	2394.84	399.14	498.93	433.85	798.28	416.49	435.43	509.54	399.14	416.49
20	2935.4	489.23	611.54	531.78	978.47	510.50	533.71	624.55	489.23	510.50
25	3387.85	564.64	705.8	613.74	1129.28	589.19	615.97	720.82	564.64	589.19
30	3922.99	653.83	817.29	710.69	1307.66	682.26	713.27	834.68	653.83	682.26
35	4101.32	683.55	854.44	742.99	1367.11	713.27	745.69	872.62	683.55	713.27
40	4583.01	763.84	954.79	830.26	1527.67	797.05	833.27	975.11	763.84	797.05
45	5060.31	843.39	1054.23	916.72	1686.77	880.05	920.06	1076.66	843.39	880.05
50	5533.09	922.18	1152.73	1002.37	1844.36	962.28	1006.02	1177.25	922.18	962.28
60	6352.87	1058.81	1323.51	1150.88	2117.62	1104.85	1155.07	1351.67	1058.81	1104.85
70	7297.54	1216.26	1520.32	1322.02	2432.51	1269.14	1326.83	1552.67	1216.26	1269.14
80	8243.34	1373.89	1717.36	1493.36	2747.78	1433.62	1498.79	1753.90	1373.89	1433.62
90	9184.12	1530.69	1913.36	1663.79	3061.37	1597.24	1669.84	1954.07	1530.69	1597.24
100	9736.24	1622.71	2028.38	1763.81	3245.41	1693.26	1770.23	2071.54	1622.71	1693.26
125	10984.86	1830.81	2288.51	1990.01	3661.62	1910.41	1997.25	2337.20	1830.81	1910.41
150	13026.53	2171.09	2713.86	2359.88	4342.18	2265.48	2368.46	2771.60	2171.09	2265.48
175	15074.15	2512.36	3140.45	2730.82	5024.72	2621.59	2740.75	3207.27	2512.36	2621.59
200	17090.45	2848.41	3560.51	3096.10	5696.82	2972.25	3107.35	3636.27	2848.41	2972.25
250	21263.14	3543.86	4429.82	3852.02	7087.71	3697.94	3866.03	4524.07	3543.86	3697.94
300	24095	4015.83	5019.79	4365.04	8031.67	4190.43	4380.91	5126.60	4015.83	4190.43
420	33383.81	5563.97	6954.96	6047.79	11127.94	5805.88	6069.78	7102.94	5563.97	5805.88
540	42859.21	7143.2	8929	7764.35	14286.40	7453.78	7792.58	9118.98	7143.20	7453.78
660	52536.58	8756.1	10945.12	9517.50	17512.19	9136.80	9552.11	11178.00	8756.10	9136.80
780	62088.68	10348.11	12935.14	11247.95	20696.23	10798.03	11288.85	13210.36	10348.11	10798.03
900	70239.17	11706.53	14633.16	12724.49	23413.06	12215.51	12770.76	14944.50	11706.53	12215.51
1020	80839.99	13473.33	16841.66	14644.93	26946.66	14059.13	14698.18	17200.00	13473.33	14059.13
1140	90879.5	15146.58	18933.23	16463.68	30293.17	15805.13	16523.55	19336.06	15146.58	15805.13

STATEMENT VII
Including loading, unloading and stacking

Lead in km	Cost / trip	Cement stone block, GI Cl CC AC Pipes below 120 mm dia	Tar bitumenn Asphalt roofing felt & Flooring Asphalt etc.	Steam coal	Matting thatching bambu ceiling board rubber PVC pipes fittings	Sheet & plate glass in packs Paints & Distempers AC Sheets & fittings iron fittings and iron sheets	Bricks modular bricks & Traditional bricks	Tiles half round tiles & Roofing tiles cement flooring tiles	Glass blocks (hollow) 200x200 x120 mm	Empty cement bags
1	2	3	4	5	6	7	8	9	10	11
	Pay load	7.0 Mt	4.5 MT	5.5 MT	3.0 MT	7.0 MT	3500 No.	3200 No.	1000 No.	2000 No.
		per 1 M.T.	per 1 M.T.	per 1 M.T.	per 1 M.T.	per 1 M.T.	per 1000 Nos.	per 1000 Nos.	per 1000 Nos.	per 1000 Nos.
0.5	848.84	121.26	188.63	154.33	282.95	121.26	242.53	265.26	84.88	424.42
1	917.25	131.04	203.83	166.77	305.75	131.04	262.07	286.64	91.73	458.63
1.5	984.13	140.59	218.70	178.93	328.04	140.59	281.18	307.54	98.41	492.07
2	1048.18	149.74	232.93	190.58	349.39	149.74	299.48	327.56	104.82	524.09
2.5	1114.41	159.20	247.65	202.62	371.47	159.20	318.40	348.25	111.44	557.21
3	1177.78	168.25	261.73	214.14	392.59	168.25	336.51	368.06	117.78	588.89
3.5	1240.71	177.24	275.71	225.58	413.57	177.24	354.49	387.72	124.07	620.36
4	1302.74	186.11	289.50	236.86	434.25	186.11	372.21	407.11	130.27	651.37
4.5	1363.44	194.78	302.99	247.90	454.48	194.78	389.55	426.08	136.34	681.72
5	1424.44	203.49	316.54	258.99	474.81	203.49	406.98	445.14	142.44	712.22
6	1546.44	220.92	343.65	281.17	515.48	220.92	441.84	483.26	154.64	773.22
7	1666.97	238.14	370.44	303.09	555.66	238.14	476.28	520.93	166.70	833.49
8	1790.21	255.74	397.82	325.49	596.74	255.74	511.49	559.44	179.02	895.11
9	1901.21	271.60	422.49	345.67	633.74	271.60	543.20	594.13	190.12	950.61
10	2010.60	287.23	446.80	365.56	670.20	287.23	574.46	628.31	201.06	1005.30
15	2394.84	342.12	532.19	435.43	798.28	342.12	684.24	748.39	239.48	1197.42
20	2935.40	419.34	652.31	533.71	978.47	419.34	838.69	917.31	293.54	1467.70
25	3387.85	483.98	752.86	615.97	1129.28	483.98	967.96	1058.70	338.79	1693.93
30	3922.99	560.43	871.78	713.27	1307.66	560.43	1120.85	1225.93	392.30	1961.50
35	4101.32	585.90	911.40	745.69	1367.11	585.90	1171.81	1281.66	410.13	2050.66
40	4583.01	654.72	1018.45	833.27	1527.67	654.72	1309.43	1432.19	458.30	2291.51
45	5060.31	722.90	1124.51	920.06	1686.77	722.90	1445.80	1581.35	506.03	2530.16
50	5533.09	790.44	1229.58	1006.02	1844.36	790.44	1580.88	1729.09	553.31	2766.55
60	6352.87	907.55	1411.75	1155.07	2117.62	907.55	1815.11	1985.27	635.29	3176.44
70	7297.54	1042.51	1621.68	1326.83	2432.51	1042.51	2085.01	2280.48	729.75	3648.77
80	8243.34	1177.62	1831.85	1498.79	2747.78	1177.62	2355.24	2576.04	824.33	4121.67
90	9184.12	1312.02	2040.92	1669.84	3061.37	1312.02	2624.03	2870.04	918.41	4592.06
100	9736.24	1390.89	2163.61	1770.23	3245.41	1390.89	2781.78	3042.58	973.62	4868.12
125	10984.86	1569.27	2441.08	1997.25	3661.62	1569.27	3138.53	3432.77	1098.49	5492.43
150	13026.53	1860.93	2894.78	2368.46	4342.18	1860.93	3721.87	4070.79	1302.65	6513.27
175	15074.15	2153.45	3349.81	2740.75	5024.72	2153.45	4306.90	4710.67	1507.42	7537.08
200	17090.45	2441.49	3797.88	3107.35	5696.82	2441.49	4882.99	5340.77	1709.05	8545.23
250	21263.14	3037.59	4725.14	3866.03	7087.71	3037.59	6075.18	6644.73	2126.31	10631.57
300	24095.00	3442.14	5354.44	4380.91	8031.67	3442.14	6884.29	7529.69	2409.50	12047.50
420	33383.81	4769.12	7418.62	6069.78	11127.94	4769.12	9538.23	10432.44	3338.38	16691.91
540	42859.21	6122.74	9524.27	7792.58	14286.40	6122.74	12245.49	13393.50	4285.92	21429.61
660	52536.58	7505.23	11674.80	9552.11	17512.19	7505.23	15010.45	16417.68	5253.66	26268.29
780	62088.68	8869.81	13797.48	11288.85	20696.23	8869.81	17739.62	19402.71	6208.87	31044.34
900	70239.17	10034.17	15608.70	12770.76	23413.06	10034.17	20068.33	21949.74	7023.92	35119.59
1020	80839.99	11548.57	17964.44	14698.18	26946.66	11548.57	23097.14	25262.50	8084.00	40420.00
1140	90879.50	12982.79	20195.44	16523.55	30293.17	12982.79	25965.57	28399.84	9087.95	45439.75

STATEMENT VIII

Including loading, unloading and stacking

Lead in Cost / trip , UNREINFORCED CEMENT PIPES, PRECAST COCRETE PIPES
km

		100 mm	125 mm	150 mm	200 mm	250 mm	300 mm	300 & 400 mm	450 & 500 mm	600, 700 & 750 mm	800, 900 & 1000 mm	1200 & 1800 MM
	Pay load in Rmt	292.8	219.6	183	109.8	80.52	62.22	54.9	29.28	18.183	15	5
1	2	3	4	5	6	7	8	9	10	11	12	13
PER 100 RMT												
0.5	848.84	289.90	386.54	463.85	773.08	1054.20	1364.26	1546.16	2899.04	4638.47	5658.93	16976.80
1	917.25	313.27	417.69	501.23	835.38	1139.16	1474.20	1670.77	3132.68	5012.30	6115.00	18345.00
1.5	984.13	336.11	448.15	537.78	896.29	1222.22	1581.69	1792.59	3361.10	5377.76	6560.87	19682.60
2	1048.18	357.98	477.31	572.78	954.63	1301.76	1684.64	1909.25	3579.85	5727.76	6987.87	20963.60
2.5	1114.41	380.60	507.47	608.97	1014.95	1384.02	1791.08	2029.89	3806.05	6089.67	7429.40	22288.20
3	1177.78	402.25	536.33	643.60	1072.66	1462.72	1892.93	2145.32	4022.47	6435.96	7851.87	23555.60
3.5	1240.71	423.74	564.99	677.98	1129.97	1540.87	1994.07	2259.95	4237.40	6779.84	8271.40	24814.20
4	1302.74	444.92	593.23	711.88	1186.47	1617.91	2093.76	2372.93	4449.25	7118.80	8684.93	26054.80
4.5	1363.44	465.66	620.87	745.05	1241.75	1693.29	2191.32	2483.50	4656.56	7450.49	9089.60	27268.80
5	1424.44	486.49	648.65	778.38	1297.30	1769.05	2289.36	2594.61	4864.89	7783.83	9496.27	28488.80
6	1546.44	528.16	704.21	845.05	1408.42	1920.57	2485.44	2816.83	5281.56	8450.49	10309.60	30928.80
7	1666.97	569.32	759.09	910.91	1518.19	2070.26	2679.15	3036.38	5693.20	9109.13	11113.13	33339.40
8	1790.21	611.41	815.21	978.26	1630.43	2223.31	2877.23	3260.86	6114.11	9782.57	11934.73	35804.20
9	1901.21	649.32	865.76	1038.91	1731.52	2361.16	3055.63	3463.04	6493.20	10389.13	12674.73	38024.20
10	2010.60	686.68	915.57	1098.69	1831.15	2497.02	3231.44	3662.30	6866.80	10986.89	13404.00	40212.00
15	2394.84	817.91	1090.55	1308.66	2181.09	2974.22	3848.99	4362.19	8179.10	13086.56	15965.60	47896.80
20	2935.40	1002.53	1336.70	1604.04	2673.41	3645.55	4717.78	5346.81	10025.27	16040.44	19569.33	58708.00
25	3387.85	1157.05	1542.74	1851.28	3085.47	4207.46	5444.95	6170.95	11570.53	18512.84	22585.67	67757.00
30	3922.99	1339.82	1786.43	2143.71	3572.85	4872.07	6305.03	7145.70	13398.19	21437.10	26153.27	78459.80
35	4101.32	1400.72	1867.63	2241.16	3735.26	5093.54	6591.64	7470.53	14007.24	22411.58	27342.13	82026.40
40	4583.01	1565.24	2086.98	2504.38	4173.96	5691.77	7365.81	8347.92	15652.36	25043.77	30553.40	91660.20
45	5060.31	1728.25	2304.33	2765.20	4608.66	6284.54	8132.93	9217.32	17282.48	27651.97	33735.40	101206.20
50	5533.09	1889.72	2519.62	3023.55	5039.24	6871.70	8892.78	10078.49	18897.17	30235.46	36887.27	110661.80
60	6352.87	2169.70	2892.93	3471.51	5785.86	7889.80	10210.33	11571.71	21696.96	34715.14	42352.47	127057.40
70	7297.54	2492.33	3323.11	3987.73	6646.21	9063.02	11728.61	13292.42	24923.29	39877.27	48650.27	145950.80
80	8243.34	2815.35	3753.80	4504.56	7507.60	10237.63	13248.70	15015.19	28153.48	45045.57	54955.60	164866.80
90	9184.12	3136.65	4182.20	5018.64	8364.41	11406.01	14760.72	16728.82	31366.53	50186.45	61227.47	183682.40
100	9736.24	3325.22	4433.62	5320.35	8867.25	12091.70	15648.09	17734.50	33252.19	53203.50	64908.27	194724.80
125	10984.86	3751.66	5002.21	6002.66	10004.43	13642.40	17654.87	20008.85	37516.60	60026.56	73232.40	219697.20
150	13026.53	4448.95	5931.94	7118.32	11863.87	16178.01	20936.24	23727.74	44489.52	71183.22	86843.53	260530.60
175	15074.15	5148.28	6864.37	8237.24	13728.73	18721.00	24227.18	27457.47	51482.75	82372.40	100494.33	301483.00
200	17090.45	5836.90	7782.54	9339.04	15565.07	21225.10	27467.78	31130.15	58369.02	93390.44	113936.33	341809.00
250	21263.14	7262.00	9682.67	11619.20	19365.34	26407.28	34174.12	38730.67	72620.01	116192.02	141754.27	425262.80
300	24095.00	8229.17	10972.22	13166.67	21944.44	29924.24	38725.49	43888.89	82291.67	131666.67	160633.33	481900.00
420	33383.81	11401.57	15202.10	18242.52	30404.20	41460.27	53654.47	60808.40	114015.74	182425.19	225558.73	667676.20
540	42859.21	14637.71	19516.94	23420.33	39033.89	53228.03	68883.33	78067.78	146377.08	234203.33	285728.07	857184.20
660	52536.58	17942.82	23923.76	28708.51	47847.52	65246.62	84436.80	95695.05	179428.21	287085.14	350243.87	1050731.60
780	62088.68	21205.15	28273.53	33928.24	56547.07	77109.64	99788.94	113094.13	212051.50	339282.40	413924.53	1241773.60
900	70239.17	23988.79	31985.05	38382.06	63970.10	87231.95	112888.41	127940.20	239887.88	383820.60	468261.13	1404783.40
1020	80839.99	27609.29	36812.38	44174.86	73624.76	100397.40	129926.05	147249.53	276092.86	441748.58	538933.27	1616799.80
1140	90879.50	31038.08	41384.11	49660.93	82768.21	112865.75	146061.56	165536.43	310380.81	496609.29	605863.33	1817590.00

STATEMENT IX
Including loading, unloading and stacking

STONEWARE PIPES

Lead in km	Cost/trip	100 mm	150 mm	200 mm	230 mm	250 mm	300 mm	350 mm	400 mm
	Pay Load	480 m	240 m	135 m	105 m	84 m	66 m	43 m	27 m
1	2	3	4	5	6	7	8	9	10
t Per 100 Rmt									
0.5	848.84	176.84	353.68	628.77	808.42	1010.52	1286.12	1974.05	3143.85
1	917.25	191.09	382.19	679.44	873.57	1091.96	1389.77	2133.14	3397.22
1.5	984.13	205.03	410.05	728.99	937.27	1171.58	1491.11	2288.67	3644.93
2	1048.18	218.37	436.74	776.43	998.27	1247.83	1588.15	2437.63	3882.15
2.5	1114.41	232.17	464.34	825.49	1061.34	1326.68	1688.5	2591.65	4127.44
3	1177.78	245.37	490.74	872.43	1121.7	1402.12	1784.52	2739.02	4362.15
3.5	1240.71	258.48	516.96	919.04	1181.63	1477.04	1879.86	2885.37	4595.22
4	1302.74	271.4	542.81	964.99	1240.7	1550.88	1973.85	3029.63	4824.96
4.5	1363.44	284.05	568.1	1009.96	1298.51	1623.14	2065.82	3170.79	5049.78
5	1424.44	296.76	593.52	1055.14	1356.61	1695.76	2158.24	3312.65	5275.7
6	1546.44	322.18	644.35	1145.51	1472.8	1841	2343.09	3596.37	5727.56
7	1666.97	347.29	694.57	1234.79	1587.59	1984.49	2525.71	3876.67	6173.96
8	1790.21	372.96	745.92	1326.08	1704.96	2131.2	2712.44	4163.28	6630.41
9	1901.21	396.09	792.17	1408.3	1810.68	2263.35	2880.62	4421.42	7041.52
10	2010.60	418.88	837.75	1489.33	1914.86	2393.57	3046.36	4675.81	7446.67
15	2394.84	498.93	997.85	1773.96	2280.8	2851	3628.55	5569.4	8869.78
20	2935.40	611.54	1223.08	2174.37	2795.62	3494.52	4447.58	6826.51	10871.85
25	3387.85	705.8	1411.6	2509.52	3226.52	4033.15	5133.11	7878.72	12547.59
30	3922.99	817.29	1634.58	2905.92	3736.18	4670.23	5943.92	9123.23	14529.59
35	4101.32	854.44	1708.88	3038.01	3906.02	4882.52	6214.12	9537.95	15190.07
40	4583.01	954.79	1909.59	3394.82	4364.77	5455.96	6943.95	10658.16	16974.11
45	5060.31	1054.23	2108.46	3748.38	4819.34	6024.18	7667.14	11768.16	18741.89
50	5533.09	1152.73	2305.45	4098.59	5269.61	6587.01	8383.47	12867.65	20492.93
60	6352.87	1323.51	2647.03	4705.83	6050.35	7562.94	9625.56	14774.12	23529.15
70	7297.54	1520.32	3040.64	5405.59	6950.04	8687.55	11056.88	16971.02	27027.93
80	8243.34	1717.36	3434.73	6106.18	7850.8	9813.5	12489.91	19170.56	30530.89
90	9184.12	1913.36	3826.72	6803.05	8746.78	10933.48	13915.33	21358.42	34015.26
100	9736.24	2028.38	4056.77	7212.03	9272.61	11590.76	14751.88	22642.42	36060.15
125	10984.86	2288.51	4577.03	8136.93	10461.77	13077.21	16643.73	25546.19	40684.67
150	13026.53	2713.86	5427.72	9649.28	12406.22	15507.77	19737.17	30294.26	48246.41
175	15074.15	3140.45	6280.9	11166.04	14356.33	17945.42	22839.62	35056.16	55830.19
200	17090.45	3560.51	7121.02	12659.59	16276.62	20345.77	25894.62	39745.23	63297.96
250	21263.14	4429.82	8859.64	15750.47	20250.61	25313.26	32216.88	49449.16	78752.37
300	24095.00	5019.79	10039.58	17848.15	22947.62	28684.52	36507.58	56034.88	89240.74
420	33383.81	6954.96	13909.92	24728.75	31794.1	39742.63	50581.53	77636.77	123643.74
540	42859.21	8929	17858	31747.56	40818.3	51022.87	64938.2	99672.58	158737.81
660	52536.58	10945.12	21890.24	38915.99	50034.84	62543.55	79600.88	122178.09	194579.93
780	62088.68	12935.14	25870.28	45991.61	59132.08	73915.1	94073.76	144392.28	229958.07
900	70239.17	14633.16	29266.32	52029.01	66894.45	83618.06	106422.98	163346.91	260145.07
1020	80839.99	16841.66	33683.33	59881.47	76990.47	96238.08	122484.83	187999.98	299407.37
1140	90879.50	18933.23	37866.46	67318.15	86551.9	108189.88	137696.21	211347.67	336590.74

STATEMENT IV

Including loading, unloading and stacking

Lead in km	Cost per trip	Cement pay load 9.00 MT	Steel pay load 9.00 MT	Bulk Asphalt in Bouzer pay load 4.50 MT	M.S.Bar 9.0 MT	Sand 5.75 cum
1	2	3	4	5	6	7
0.50	848.84	94.32	94.32	188.63	94.32	147.62
1.00	917.25	101.92	101.92	203.83	101.92	159.52
1.50	984.13	109.35	109.35	218.70	109.35	171.15
2.00	1048.18	116.46	116.46	232.93	116.46	182.29
2.50	1114.41	123.82	123.82	247.65	123.82	193.81
3.00	1177.78	123.82	123.82	247.65	130.86	204.83
3.50	1240.71	137.86	137.86	275.71	137.86	215.78
4.00	1302.74	144.75	144.75	289.50	144.75	226.56
4.50	1363.44	151.49	151.49	302.99	151.49	237.12
5.00	1424.44	158.27	158.27	316.54	158.27	247.73
6.00	1546.44	171.83	171.83	343.65	171.83	268.95
7.00	1666.97	185.22	185.22	370.44	185.22	289.91
8.00	1790.21	198.91	198.91	397.82	198.91	311.34
9.00	1901.21	211.25	211.25	422.49	211.25	330.65
10.00	2010.6	223.40	223.40	446.80	223.40	349.67
15.00	2394.84	266.09	266.09	532.19	266.09	416.49
20.00	2935.4	326.16	326.16	652.31	326.16	510.50
25.00	3387.85	376.43	376.43	752.86	376.43	589.19
30.00	3922.99	435.89	435.89	871.78	435.89	682.26
35.00	4101.32	455.70	455.70	911.40	455.70	713.27
40.00	4583.01	509.22	509.22	1018.45	509.22	797.05
45.00	5060.31	562.26	562.26	1124.51	562.26	880.05
50.00	5533.09	614.79	614.79	1229.58	614.79	962.28
60.00	6352.87	705.87	705.87	1411.75	705.87	1104.85
70.00	7297.54	810.84	810.84	1621.68	810.84	1269.14
80.00	8243.34	915.93	915.93	1831.85	915.93	1433.62
90.00	9184.12	1020.46	1020.46	2040.92	1020.46	1597.24
100.00	9736.24	1081.80	1081.80	2163.61	1081.80	1693.26
125.00	10984.86	1220.54	1220.54	2441.08	1220.54	1910.41
150.00	13026.53	1447.39	1447.39	2894.78	1447.39	2265.48
175.00	15074.15	1674.91	1674.91	3349.81	1674.91	2621.59
200.00	17090.45	1898.94	1898.94	3797.88	1898.94	2972.25
250.00	21263.14	2362.57	2362.57	4725.14	2362.57	3697.94
300.00	24095	2677.22	2677.22	5354.44	2677.22	4190.43
420.00	33383.81	3709.31	3709.31	7418.62	3709.31	5805.88
540.00	42859.21	4762.13	4762.13	9524.27	4762.13	7453.78
660.00	52536.58	5837.40	5837.40	11674.80	5837.40	9136.80
780.00	62088.68	6898.74	6898.74	13797.48	6898.74	10798.03
900.00	70239.17	7804.35	7804.35	15608.70	7804.35	12215.51
1020.00	80839.99	8982.22	8982.22	17964.44	8982.22	14059.13
1140.00	90879.5	10097.72	10097.72	20195.44	10097.72	15805.13

STATEMENT V

Excluding loading, unloading and stacking

Lead in km	Cost per trip	Cement pay load 9.00 MT	Steel pay load 9.00 MT	Bulk Asphalt in Bouzer pay load 4.50 MT
1	2	3	4	5
0.5	415	46.11	46.11	92.22
1	459.61	51.07	51.07	102.14
1.5	503.51	55.95	55.95	111.89
2	546.05	60.67	60.67	121.34
2.5	589.6	65.51	65.51	131.02
3	631.84	65.51	65.51	131.02
3.5	673.84	74.87	74.87	149.74
4	715.41	79.49	79.49	158.98
4.5	756.38	84.04	84.04	168.08
5	797.5	88.61	88.61	177.22
6	879.68	97.74	97.74	195.48
7	961.15	106.79	106.79	213.59
8	1043.92	115.99	115.99	231.98
9	1120.93	124.55	124.55	249.10
10	1197.15	133.02	133.02	266.03
15	1500.94	166.77	166.77	333.54
20	1878.98	208.78	208.78	417.55
25	2169.2	241.02	241.02	482.04
30	2538.4	282.04	282.04	564.09
35	2745.57	305.06	305.06	610.13
40	3090.44	343.38	343.38	686.76
45	3433.41	381.49	381.49	762.98
50	3774.27	419.36	419.36	838.73
55	3988.66	443.18	443.18	886.37
65	4653.53	517.06	517.06	1034.12
75	5326.52	591.84	591.84	1183.67
85	5990.21	665.58	665.58	1331.16
95	6170.6	685.62	685.62	1371.24
105	6786.02	754.00	754.00	1508.00
130	8320.68	924.52	924.52	1849.04
155	9882.76	1098.08	1098.08	2196.17
180	11412.33	1268.04	1268.04	2536.07
230	14496.35	1610.71	1610.71	3221.41
280	17065.67	1896.19	1896.19	3792.37
400	24243	2693.67	2693.67	5387.33
520	31532.46	3503.61	3503.61	7007.21
640	38744.99	4305.00	4305.00	8610.00
760	45884.82	5098.31	5098.31	10196.63
880	53044.72	5893.86	5893.86	11787.72
1000	59966.86	6662.98	6662.98	13325.97
1120	67233.61	7470.40	7470.40	14940.80

STATEMENT 'E'
Including loading, unloading & stacking.

Lead in km	Cost per trip.	Asbestos cement pipes			
		50mm dia.	80mm dia.	100mm dia.	150mm dia.
	Pay Load. M	960.00	576.00	512.00	288.00
1	2	3	4	5	6
Unit : Per 100 RMT.					
0.5	848.84	88.42	147.37	165.79	294.74
1	917.25	95.55	159.24	179.15	318.49
1.5	984.13	102.51	170.86	192.21	341.71
2	1048.18	109.19	181.98	204.72	363.95
2.5	1114.41	116.08	193.47	217.66	386.95
3	1177.78	122.69	204.48	230.04	408.95
3.5	1240.71	129.24	215.40	242.33	430.80
4	1302.74	135.70	226.17	254.44	452.34
4.5	1363.44	142.03	236.71	266.30	473.42
5	1424.44	148.38	247.30	278.21	494.60
6	1546.44	161.09	268.48	302.04	536.96
7	1666.97	173.64	289.40	325.58	578.81
8	1790.21	186.48	310.80	349.65	621.60
9	1901.21	198.04	330.07	371.33	660.14
10	2010.6	209.44	349.06	392.70	698.13
15	2394.84	249.46	415.77	467.74	831.54
20	2935.4	305.77	509.62	573.32	1019.24
25	3387.85	352.90	588.17	661.69	1176.34
30	3922.99	408.64	681.07	766.21	1362.15
35	4101.32	427.22	712.03	801.04	1424.07
40	4583.01	477.40	795.66	895.12	1591.32
45	5060.31	527.12	878.53	988.34	1757.05
50	5533.09	576.36	960.61	1080.68	1921.21
60	6352.87	661.76	1102.93	1240.79	2205.86
70	7297.54	760.16	1266.93	1425.30	2533.87
80	8243.34	858.68	1431.14	1610.03	2862.27
90	9184.12	956.68	1594.47	1793.77	3188.93
100	9736.24	1014.19	1690.32	1901.61	3380.64
125	10984.86	1144.26	1907.09	2145.48	3814.19
150	13026.53	1356.93	2261.55	2544.24	4523.10
175	15074.15	1570.22	2617.04	2944.17	5234.08
200	17090.45	1780.26	2967.09	3337.98	5934.18
250	21263.14	2214.91	3691.52	4152.96	7383.03
300	24095	2509.90	4183.16	4706.05	8366.32
420	33383.81	3477.48	5795.80	6520.28	11591.60
540	42859.21	4464.50	7440.84	8370.94	14881.67
660	52536.58	5472.56	9120.93	10261.05	18241.87
780	62088.68	6467.57	10779.28	12126.70	21558.57
900	70239.17	7316.58	12194.30	13718.59	24388.60
1020	80839.99	8420.83	14034.72	15789.06	28069.44
1140	90879.5	9466.61	15777.69	17749.90	31555.38

Section - D

Cement Consumption & Weight of Pipes

**STATEMENT SHOWING STANDARD WEIGHTS OF PIPES TO BE FOLLOWED FOR CARTIN
VARIOUS DIAMETERS AND TYPES OF PIPES**

(I) C. I. Pipes (IS : 1536-1989)

Diameter of Pipe in mm	Class of pipes and its weight in Kg. per meter length		
	LA	A	B
1	2	3	4
80	16.00	17.38	18.46
100	19.82	21.82	23.27
125	25.82	28.18	30.36
150	32.10	35.27	38.00
200	47.09	51.09	55.27
250	63.45	69.09	74.73
300	81.82	89.45	96.91
350	103.09	111.82	121.27
400	125.45	137.09	140.00
450	151.27	166.10	179.27
500	177.09	192.91	208.73
600	236.00	257.64	275.00
700	304.55	335.73	359.45
750	341.09	372.91	404.55
800	381.00	416.00	450.00
900	465.09	507.45	549.80
1000	558.73	610.36	659.64

SECTION - D : WEIGHT OF PIPE

STATEMENT SHOWING THE TOTAL WEIGHTS OF VARIOUS DIAD. I. K-9 PIPES INCLUDING WEIGHT OF MORTAR LINING PER M LENGTH.

II) D. I. PIPES

- 1) Barrel Mass as per IS : 8329 - 1994
- 2) Socket Mass as per IS : 8329 - 1994
- 3) Cement Mortar Lining Weight as per ISO : 4179 -1985.

Nominal dia meter	WEIGHT / M LENGTH OF D. I. K-9 PIPES OF			
	4M	5M	5.50 M	6M
I	2	3	4	5
80 mm wt. of DI Pipe / M weight mortar/m	13.00 1.56	13.00 1.56	12.91 1.56	12.67 1.56
Total wt./M.	14.56	14.56	14.47	14.23
100 mm wt. of DI Pipe / M weight mortar/m	16.25 1.93	16.00 1.93	16.00 1.93	15.86 1.93
Total wt./M.	18.18	17.93	17.93	17.79
125 mm wt. of DI Pipe / M weight mortar/m	20.50 2.42	20.00 2.42	20.00 2.42	19.83 2.42
Total wt./M.	22.92	22.42	22.42	22.25
150 mm wt. of DI Pipe / M weight mortar/m	24.75 2.90	24.20 2.90	24.18 2.90	24.00 2.90
Total wt./M.	27.65	27.10	27.08	26.90
200 mm wt. of DI Pipe / M weight mortar/m	33.25 3.88	32.60 3.88	32.54 3.88	32.33 3.88
Total wt./M.	37.13	36.48	36.42	36.21
250 mm wt. of DI Pipe / M weight mortar/m	43.75 4.84	43.00 4.84	42.73 4.84	42.50 4.84
Total wt./M.	88.59	47.84	47.57	47.34
300 mm wt. of DI Pipe / M weight mortar/m	55.50 5.80	54.60 5.80	54.18 5.80	53.83 5.80
Total wt./M.	61.30	60.40	59.98	59.63
350 mm wt. of DI Pipe / M weight mortar/m	69.25 12.12	68.00 12.12	67.45 12.12	67.17 12.12
Total wt./M.	81.37	80.12	79.57	79.29
400 mm wt. of DI Pipe / M weight mortar/m	82.75 13.82	81.40 13.82	80.91 13.82	80.33 13.82
Total wt./M.	96.57	95.22	94.73	94.15
450 mm wt. of DI Pipe / M weight mortar/m	98.75 15.53	97.00 15.53	96.36 15.53	95.83 15.53
Total wt./M.	114.28	112.53	111.89	111.36
500 mm wt. of DI Pipe / M weight mortar/m	115.00 17.26	112.80 17.26	112.00 17.26	111.40 17.26
Total wt./M.	132.26	130.06	129.26	128.76
600 mm wt. of DI Pipe / M weight mortar/m	152.00 20.75	149.00 20.75	147.82 20.75	147.00 20.75
Total wt./M.	172.75	169.73	168.57	167.75
700 mm wt. of DI Pipe / M weight mortar/m	193.75 29.45	189.80 29.45	188.36 29.45	187.70 29.45
Total wt./M.	223.20	219.25	217.81	211.15
750 mm wt. of DI Pipe / M weight mortar/m	217.50 31.56	213.00 31.56	211.45 31.56	210.00 31.56
Total wt./M.	249.06	244.56	243.01	241.56
800 mm wt. of DI Pipe / M weight mortar/m	240.75 33.69	235.80 33.69	233.82 33.69	232.33 33.69
Total wt./M.	274.44	269.49	267.51	266.02
900 mm wt. of DI Pipe / M weight mortar/m	292.75 37.89	286.20 37.89	283.82 37.89	281.83 37.89
Total wt./M.	330.64	324.09	321.71	319.72
1000 mm wt. of DI Pipe / M weight mortar/m	349.75 42.08	341.60 42.08	338.55 42.08	336.17 42.08
Total wt./M.	391.83	383.68	380.63	378.25

Note: These weights are as per the Circular issued by Superintending Engineer (HQ) vide Lt.No. MJP/10-2000 / SE (H/Q) / DI/ 15/AMDT/Stores/255 Dt. 26-6-2000.

SECTION - D : WEIGHT OF PIPE

**STATEMENT SHOWING STANDARD WEIGHTS TO BE FOLLOWED FOR CARTING OF
VARIOUS DIAMETERS AND TYPES OF PIPES**

(III) M. S. Pipes

Note : Weight of M. S. Pipes is to be computed by considering density of steel as 7850 Kg./Cum considering the diameter and thickness of plate used for manufacturing of M. S. Pipes.

(IV) A. C. Pressure Pipes (ISO-160)

Diameter of Pipe in mm	Class of pipes and its weight in Kg. per meter length			
	Class 5	Class - 10	Class - 15	Class - 20
1	2	3	4	5
80	6.00	6.20	6.40	6.80
100	7.60	7.70	8.20	10.30
125	9.57	9.80	11.00	13.30
150	11.87	12.20	15.30	19.00
200	15.57	19.30	25.60	32.70
250	19.25	25.20	32.70	41.50
300	24.97	32.30	45.10	58.10
350	39.77	47.52	55.27	71.42
400	49.20	60.20	71.36	93.10
450	56.92	70.27	83.63	111.37.
500	72.84	89.54	104.25	136.52
600	102.50	137.32	148.35	193.16

SECTION - D: WEIGHT OF PIPE

(V) P.V.C. Pipes (IS :4985-1988)

Diameter of Pipe in mm	Class of pipes and its weight in Kg. per meter length		
	4.00 Kg/Sq.cm	6.00 Kg/Sq.cm	10.00 Kg/Sq.cm
1	2	3	4
63	0.47	0.67	1.01
75	0.67	0.93	1.44
90	0.92	1.33	2.05
110	1.32	1.89	3.08
140	2.13	3.10	4.99
160	2.78	3.92	6.56
180	3.56	5.07	8.10
200	4.26	7.00	10.20
225	5.48	7.84	12.56
250	6.63	10.19	15.31
280	8.34	12.16	19.80
315	10.55	15.37	25.00

(VI) R. C. C. Pipes

Diameter of Pipe in mm	Class of pipes and its weight in Kg. per meter length					
	P-1	P-2	P-3	NP-2	NP-3	NP-4
1	2	3	4	5	6	7
100	23.56	23.56	23.56	21.20	21.20	21.20
150	33.00	33.00	33.00	29.40	29.40	29.40
200	42.10	42.10	42.10	37.90	37.90	37.90
250	51.84	63.40	75.18	57.10	67.60	77.20
300	74.64	102.50	117.10	92.25	105.40	119.10
350	92.28	134.30	168.10	120.80	151.30	170.20
400	104.16	169.60	208.10	152.60	187.30	212.40
450	127.92	188.70	235.23	169.90	211.70	240.80
500	141.36	229.90	261.37	206.90	235.23	270.50
600	192.96	305.70	313.64	275.10	282.27	320.20
700	225.59	325.80	365.92	293.20	329.32	370.90
800	257.82	345.19	418.19	310.60	376.30	425.40
900	290.00	389.58	470.47	350.60	423.00	482.30
1000	322.28	443.98	510.00	399.80	459.00	531.40

SECTION - D : WEIGHT OF PIPE

(VII) P.S.C. Pipes of all classes and B. W. S. C. pipes of all classes

Diameter of Pipes in mm	Weight of pipe per meter length for all classes.
350	197.50 Kg/m
400	240.00 Kg/m
450	257.50 Kg/m
500	292.50 Kg/m
600	375.00 Kg/m
700	432.50 Kg/m
800	582.50 Kg/m
900	705.00 Kg/m
1000	825.00 Kg/m
1100	947.50 Kg/m
1200	1115.00 Kg/m
1300	1190.00Kg/m
1400	1370.00 Kg/m
1500	1560.00Kg/m
1600	1767.50 Kg/m
1700	1987.50 Kg/m
1800	2205.50 Kg/m

(VIII) Stoneware Pipes

Diameter of Pipes in mm	Weight of 0.60 M long pipe in Kg per pipe
100	8.70 Kg/Each
150	15.00 Kg/Each
200	20.85 Kg/Each
225	23.70 Kg/Each
250	27.57 Kg/Each
300	43.60 Kg/Each

(IX) G. I. Pipes

Diameter of Pipes in mm	Class of Pipes and its weight in Kg. per meter length		
	Light (Blue)	Medium (Yellow)	Heavy (Red)
15	0.96	1.23	1.46
20	1.42	1.59	1.91
25	2.03	2.40	2.99
32	2.61	3.17	3.97
40	3.29	3.65	4.47
50	4.18	5.16	6.24
65	5.92	6.63	8.02
80	6.98	8.64	10.30
100	10.20	12.40	14.70
125	---	16.70	18.30
150	----	19.70	21.80

SECTION - D : WEIGHT OF PIPE

SECTION D - CEMENT CONSUMPTION

STANDARD CEMENT CONSUMPTION TO BE FOLLOWED FOR VARIOUS ITEMS OF WORKS

Sr. No.	Item of Works	Unit	Standard Cement Consumption
A.	P.C.C./R.C.C. Works		
1.	1 : 1/2 : 1 (M-300) with finishing in CM 1:3 proportion	Cum	9.20 bags
2.	1:1:2 (M-250) with finishing in CM 1:3 proportion	Cum	8.50 bags
3.	1:1 1/2:3 (M-200) with finishing in CM 1:3 proportion	Cum	6.90 bags
4.	1:1 1/2:3 (M-200) without finishing	Cum	6.80 bags
5.	1:2:4 (M-150) with finishing in CM 1:3 proportion	Cum	5.90 bags
6.	1:2:4 (M-150) without finishing	Cum	5.80 bags
B.	Brick Masonry Works		
1.	B.B. Masonry - IInd sort in CM 1:6 proportion	Cum	1.44 bags
2.	B.B. Masonry - IInd sort in CM 1:5 proportion	Cum	1.62
3.	B.B. Masonry - IInd sort in CM 1:4 proportion	Cum	2.30
4.	Half brick walls in CM 1:4 proportion	Cum	0.22
C.	Stone Masonry Works		
1.	U. C. R. Masonry - IInd sort in CM 1:6 proportion	Cum	1.77
2.	U. C. R. Masonry - IInd sort in CM 1:4 proportion	Cum	2.65
3.	Random Rubble Masonry - IInd sort in CM 1:6 proportion	Cum	1.77
4.	Random Rubble Masonry - IInd sort in CM 1:4 proportion	Cum	2.65
5.	C. R. Masonry - IInd sort in CM 1:4 proportion	Cum	2.65
6.	C. R. Masonry - IInd sort in CM 1:6 proportion	Cum	1.50

SECTION - D: CEMENT CONSUMPTION

Sr. No.	Item of Works	Unit	Standard C Consump
D.	Water proofing Works		
1.	Damp-proof course 50mm thick in 1:2:4 proportion with bitumen layer W.P. compound.	Sqm	0.35 bag
2.	Integral finishing to newly laid slab in CM 1:3 proportion with W.P. compound.	Sqm	0.06 bag
3.	Water proofing treatment over old slab with W.P. cement slurry as tack coat 12 mm thick, W. P. plaster in CM 1:3 proportion, brick bat coba average 9.50 cm thick in CM 1:6 proportion and 20 mm thick W.P. cement plaster over it in CM 1:3 proportion and finishing with cement slurry with novelling.	Sqm	0.37 bag
E.	Plastering and Pointing Works		
	i) 12mm thick plaster		
	a) CM 1:2 proportion	Sqm	0.16 bag
	b) CM 1:3 proportion	Sqm	0.12 bag
	c) CM 1:4 proportion	Sqm	0.10 bag
	ii) 20 mm thick plaster		
	a) CM 1:2 proportion	Sqm	0.27 bag
	b) CM 1:3 proportion	Sqm	0.19 bag
	c) CM 1:4 proportion	Sqm	0.15 bag
	iii) 25 mm thick plaster		
	a) CM 1:2 proportion	Sqm	0.34 bag
	b) CM 1:3 proportion	Sqm	0.25 bag
	c) CM 1:4 proportion	Sqm	0.19 bag
	iv) Cement pointing in CM 1:3 proportion	Sqm	0.03 bag
	v) Tuck cement pointing in CM 1:3 proportion	Sqm	0.05 bag
	vi) Sand faced plaster in CM 1:4 proportion including base coat 15 mm thick in CM 1:4 proportion with W.P. compound.	Sqm	0.22 bag
	vii) Rough cast cement plaster in CM 1:4 proportion in two coats.	Sqm	0.22 bag
F.	Flooring Works		
	i) I.P.S. flooring - 40 mm thick	Sqm	0.30 bag
	ii) I.P.S. flooring - 50 mm thick	Sqm	0.37 bag
	iii) Rough Shahabad - any other similar flooring in CM 1:4 proportion bedding.	Sqm	0.15 bag
	iv) All types of cement / kadappa / polished / mosaic tiles flooring or skirting / dado set on CM 1:4 proportion bedding.	Sqm	0.18 bags
	v) Glazed / ceramic tiles flooring or skirting / dado fixed with plain cement slurry.	Sqm	0.22 bags

SECTION - D : CEMENT CONSUMPTION

Section - E

Excavation

SECTION - E - EXCAVATION

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
1	Excavation for foundation / pipe trenches in <u>earth, soils of all types, sand, gravel and soft murum</u> , including removing the excavated material upto a distance of 50 metres and lifts as below, stacking and spreading as directed, normal dewatering, preparing the bed for foundation and <u>excluding backfilling</u> , etc. complete. (Bd-A-1/259)					
	Lift 0 to 1.5 M	Cum	140.00	140.00		
2	Excavation for foundation / pipe trenches in <u>hard murum</u> including removing the excavated material upto a distance of 50 M and lifts as below, stacking and spreading as directed by Engineer-in-charge, normal dewatering, preparing the bed for foundation and <u>excluding backfilling</u> , etc. complete. (Bd-A-2/259)					
	Lift 0 to 1.5 M	Cum	157.00	157.00		
3	Excavation for foundation / pipe trenches in <u>hard murum and boulders</u> , W.B.M. road including removing the excavated material upto a distance of 50 M beyond the area and lifts as below, stacking and spreading as directed by Engineer-in-charge, normal dewatering, preparing the bed for foundation and <u>excluding backfilling</u> , etc. complete. (Bd-A-3/259)					
	Lift 0 to 1.5 M	Cum	176.00	174.00		
4	Add for every <u>additional lift of 1.5 M</u> beyond initial lift of 1.5 M for Item Nos. 1 to 3	Cum	13.00	13.00		
5	Excavation for foundation / pipe trenches in <u>soft rock and old cement and lime masonry foundation</u> asphalt road by all means including removing the excavated material upto a distance of 50 M beyond the area and lifts as below, stacking as directed by Engineer-in-charge, normal dewatering, preparing the bed for foundation and <u>excluding backfilling</u> , etc. complete. (Bd-A-4/259)					
	Lift 0 to 1.5 M	Cum	513.00	454.00		
6	Excavation for foundation / pipe trenches in <u>hard rock by controlled blasting</u> , including trimming and levelling the bed by chiselling where necessary and removing the excavated material and stacking it in measurable heaps within a distance of 50 metres from the area and lifts as below, normal dewatering, <u>excluding backfilling</u> , etc. complete. (Bd-A-5/259)					
	Lift 0 to 1.5 M	Cum	684.00	558.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
7	Excavation for foundation / pipe trenches in <u>hard rock and concrete road by chiselling, wedging, line drilling by mechanical means or by all means other than blasting</u> including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the area and lifts as below, stacking as directed by Engineer-in-charge, normal dewatering, <u>excluding backfilling</u> , etc. complete by all means. (Bd-A-6/259)					
	Lift 0 to 1.5 M	Cum	889.00	855.00		
8	Excavation for foundation / pipe trenches in <u>slush muddy / marshy / slushy / soil including use of poclain</u> , labour for dewatering during execution including removing the excavated material upto a distance of 50 metres and lifts as below, stacking and spreading as directed, preparing the bed by cleaning the mud, labour required for execution for shuttering item but <u>excluding backfilling</u> , etc. complete. Providing and fixing shuttering shall be paid separately.					
	Lift 0 to 1.5 M	Cum	329.00	167.00		
9	Add for every <u>additional lift of 1.5 M beyond initial lift of 1.5 M</u> for Item Nos. 5 to 8	Cum	24.00	24.00		
	HEAD WORKS					
10	Excavation in general in <u>soft material comprising of soft soil, soft murum, sand, hard murum with boulders in wet or dry condition</u> for Head Works i.e. Intake Well, Connecting Pipe, Jack Well, Pump House, Supply Well, etc. for <u>lift 0 to 1.5M</u> and lead of 150 M including barricading, guarding, disposing off surplus excavated stuff within a radius of 0.5 km. as directed by Engineer-in-charge, etc. complete <u>excluding refilling</u> .					
a)	For Head Works <u>on river or dam submergence</u> for initial lift of 0 to 1.5 M	Cum	400.00	398.00		
b)	For Head Works <u>on nalla or any other site of GSDA</u> for initial lift of 0 to 1.5 M	Cum	282.00	280.00		
c)	Add for each <u>additional lift of 1.5 M beyond initial lift 1.5 M</u>	Cum	24.00	24.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
11	Excavation in general in <u>hard material comprising of soft rock, hard rock, Manjara rock, etc. by blasting / controlled blasting, chiselling</u> as required in wet or dry condition for Head Works i.e. Intake Well, Connecting Pipe, Jack Well, Pump House, Supply Well, etc. for <u>lift 0 to 1.5 M</u> and lead of 150 M including barricading, guarding, disposing off surplus excavated stuff within a radius of 0.5 km. as directed by Engineer-in-charge, <u>excluding refilling.</u>					
a)	For Head Works <u>on river or dam submergence</u> for initial lift of 0 to 1.5 M	Cum	889.00	694.00		
b)	For Head Works <u>on nalla or any other site of GSDA</u> for initial lift of 0 to 1.5 M	Cum	616.00	444.00		
c)	Add for each <u>additional lift of 1.5 M</u> beyond initial lift 1.5 M	Cum	25.00	25.00		
12	Excavation in general in <u>soft material comprising of soft soil, soft murum, sand, hard murum with boulders</u> in wet or dry condition for Head Works and allied works by <u>well sinking process</u> for average depth of 12 M and lead of 150 M including shoring, barricading, guarding, refilling, disposing off surplus excavated stuff as directed by Engineer-in-charge, etc. complete.					
a)	Diameter <u>upto and including 3 M</u>	Cum	821.00	787.00		
b)	Diameter <u>more than 3 M</u>	Cum	684.00	653.00		
13	<u>Desilting</u> the Supply Well, Intake Well / Head Works, Sump of water supply / sewerage works etc. in wet or dry condition including <u>lifts upto 9 M</u> and lead upto 150 M as required beyond the work site, stacking, spreading, including necessary guarding, etc. complete, as directed by Engineer-in-charge.	Cum	684.00	655.00		
	Add for each <u>additional lift of 1.5 M</u> beyond initial lift 9.0 M	Cum	23.00	23.00		
14	<u>Dewatering</u> the excavated trenches and pools of water in the building trenches / pipeline trenches, well works by using pumps and other devices including disposing off water to safe distance as directed by Engineer-in-charge (including cost of machinery, labour, fuel), etc. complete.	HP/ Hr.	65.00	12.00		
	(Bd-A-9/261)					

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
	(i) The Contractor at his request may be allowed to start construction of masonry steining so as not to allow silting of well in oncoming monsoon and while paying masonry, 25% amount shall be withheld and released only when excavation to the full depth is completed.					
	(ii) Dewatering : Total dewatering charges are to be proposed in the tender as lumpsum amount and 75% is payable for excavation and 25% is payable for construction of well / gallery. Out of 75% excavation, break-up shall be as under					
	25% for last 1 M depth.					
	20% for 2 M depth which is just above last 1 M depth.					
	15% for 2 M depth which is just above last 3 M depth.					
	15% for the rest of depth from water table level.					
	The above conditions will restrict the tendencies of agencies to avoid deepening of wells, etc. to the required depth.					
15	Refilling the trenches with available excavated stuff with soft material first over pipeline and then hard material in 15 cm layers with all leads and lifts including consolidation, surcharging, etc. complete.	Cum	73.00	70.00		
16	Filling in plinth and floors <u>murum bedding</u> in trenches with <u>approved murum from excavated materials</u> from foundation in 15 cm to 20 cm layers including watering and compaction, etc. complete. (Bd-A-10/263)	Cum	73.00	70.00		
17	Filling in plinth and floors / trenches with <u>contractor's murum</u> for bedding in 15 cm to 20 cm layers including watering and compaction, etc. complete. (Bd-A-11/263)	Cum	746.00	69.00		
18	Providing dry trap/ granite/ quartzite/ gneiss, <u>rubble stone soling</u> in 15 cm to 20 cm thick layers including hand packing and compacting, etc. complete. (Bd-A-12/264)	Cum	1009.00	340.00		
19	Providing and filling in <u>sand boxing</u> in pipeline or for foundation with sand of approved quality including watering and compaction, etc. complete. (Bd-A-13/264)	Cum	1008.00	162.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
20	Open timbering in trenches of depth more than 1.5 M for shoring and strutting including use of and waste of all necessary timber works including walling, struts, open polling boards / horizontal sheeting, runners, etc. as may be necessary and fixing and removal complete. (Measurements to be taken of the face area timbered) (N.B.O. Item No. 4-15, P.No. 59)					
	a) Lift 0 to 1.5 M for non-water logged area	Sqm	178.00	9.00		
	Additional per Sqm for further lifts of 1.5 M each	Sqm	32.00	19.00		
	b) Lift 0 to 1.5 for water logged area	Sqm	190.00	19.00		
	Additional per Sqm for further lifts of 1.5 M each	Sqm	28.00	17.00		
	<u>Note</u> : For the trenches with more than 1.5 M depth, shoring if required from GL is to be done and is payable from GL.					

Section - F

Iron & Structural Steel Work

SECTION - F - IRON & STRUCTURAL STEEL WORK

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
1	Providing and fixing <u>mild steel grill work</u> for windows/ ventilators of 20 Kg/Sqm. as per drawings including necessary welding and painting with one coat of anticorrosive paint and two coats of oil painting, etc. complete. (Bd-U-1/537)	Sqm	1658.00	149.00		
2	Providing and fixing <u>mild steel grill railing</u> of 20 Kg/Sqm with teak wood hand railing, still and newel posts for staircase and including fabricating, fixtures, erecting, painting the grill work with approved oil paint and polishing the hand rail and newel posts with French polish two coats, etc. complete. (Bd-U-2/537)	Sqm	2542.00	356.00		
3	Providing <u>structural steel work in rolled stanchions fixed with connecting plates or angle cleats</u> as in main and cross beams, hip and jack rafters, purlins connecting to truss members and like as per detailed designs and drawings or as directed by Engineer-in-charge including cutting, fabricating, hoisting, erecting, fixing in position, making riveted / bolted / welded connections and one coat of anticorrosive paint and over it two coats of oil painting, etc. complete. (Bd-C-3/275)	MT	58521.00	9251.00		
4	Providing <u>structural steel work in single stanchions composed of RSJ, channel, etc.</u> with caps, bases, mild steel plates, angles, brackets, cleats, gusset plates, anchor bolts, etc. as per detailed design and drawing or as directed by Engineer-in-charge including cutting, fabrication, hoisting, erecting, fixing in position, making riveted / bolted / welded connections and one coat of anticorrosive paint and over it two coats of oil painting, etc. complete. (Bd-C-6/277)	MT	57392.00	8533.00		
5	Providing <u>structural steel work in rolled sections like joists, channels, angles, tees, etc.</u> as per detailed designs and drawings including fixing in position without connecting plates, braces, etc. and one coat of anticorrosive paint and over it two coats of oil painting of approved quality and shade, etc. complete. (Bd-C-2/275)	MT	61532.00	9517.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
6	Providing <u>structural steel work in trusses, other similar trussed purlins and members with all bracing</u> , gusset plates, etc. as per detailed design and drawing or as directed by Engineer-in-charge including cutting, fabricating, hoisting, erecting and fixing in position, making riveted / bolted / welded connections and one coat of anticorrosive paint and over it two coats of oil painting, etc. complete.	MT	78525.00	22147.00		
	(Bd-C-8/278)					

Section - G

**Plain Cement Concrete,
Reinforced Cement Concrete**

**SECTION - G - PLAIN CEMENT CONCRETE,
REINFORCED CEMENT CONCRETE**

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
1	Providing and laying in situ following grades of Cement Concrete of trap/ granite / quartzite / gneiss metal for foundation and bedding including dewatering, form work, compaction, curing, finishing etc. complete.					
	Spec. No. - Bd E /1 Page No. 287 and B-7, Page No. 38					
	a) M-100	Cum	4323.00	1199.00		
	b) M-150	Cum	4712.00	1189.00		
2	Providing and laying in situ Cement Concrete of trap/ granite / quartzite / gneiss metal for RCC work in foundation like raft, grillage, strip foundation and footing of RCC columns and steel stanchions including normal dewatering, form work, bally, steel propups compaction, finishing and curing, etc. complete. (By weigh batching and mix design for M-250 and M-300 only. Use of L&T, A.C.C., Ambuja, Birla Gold, Manikgad, Rajashree, etc. cement is permitted.) (Excluding M.S. or Tor reinforcement)					
	a) In RCC M-150	Cum	5521.00	1418		
	b) In RCC M-200	Cum	5575.00	1408		
	c) In RCC M-250	Cum	6047.00	1423		
	d) In RCC M-300	Cum	6254.00	1424		
3	Providing and casting in situ Cement Concrete of trap/ granite / quartzite / gneiss metal of approved quality for RCC works as per detailed drawings and designs or as directed by Engineer-in-charge including normal dewatering, centering, form work, bally, steel propups, compaction, finishing the formed surfaces with CM 1:3 of sufficient minimum thickness to give a smooth and even surface wherever necessary or roughning if special finish is to be provided and curing, etc. complete. (By weigh batching and mix design for M-250 and M-300 only. Use of L&T, A.C.C., Ambuja, Birla Gold, Manikgad, Rajashree, etc. cement is permitted.) (Excluding M.S. or Tor reinforcement)					
	For all types of Columns					
	a) In RCC M-200	Cum	6824.00	1351		
	b) In RCC M-250	Cum	7296.00	1366		
	c) In RCC M-300	Cum	7504.00	1367		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
4	Providing and casting in situ C.C. of trap / granite/ quartzite / gneiss metal of approved quality for RCC works as per detailed drawings and designs or as directed by Engineer-in-charge including normal dewatering, centering, form work, bally, steel propups, compaction, finishing the formed surfaces with C.M. 1:3 of sufficient minimum thickness to give a smooth and even surface wherever necessary or roughening if special finish is to be provided and curing, etc. complete. (By weigh batching and mix design for M-250 and M-300 only. Use of L&T, A.C.C., Ambuja, Birla Gold, Manikgad, Rajashree, etc. cement is permitted.) (Excluding M.S. or Tor reinforcement)					
	<u>For Beams / Braces / Lintels</u>					
	a) In RCC M-200	Cum	6707.00	1351		
	b) In RCC M-250	Cum	7173.00	1366		
	c) In RCC M-300	Cum	7329.00	1367		
5	Providing and casting in situ C.C. of trap / granite/ quartzite / gneiss metal of approved quality for RCC works as per detailed drawings and designs or as directed by Engineer-in-charge including normal dewatering, centering, form work, bally, steel propups, compaction, finishing the formed surfaces with C.M. 1:3 of sufficient minimum thickness to give a smooth and even surface wherever necessary or roughening if special finish is to be provided and curing, etc. complete. (By weigh batching and mix design for M-250 and M-300 only. Use of L&T, A.C.C., Ambuja, Birla Gold, Manikgad, Rajashree, etc. cement is permitted.) (Excluding M.S. or Tor reinforcement)					
	<u>Slabs / Landings / Vertical Walls / Waist Slabs / Steps for Staircase</u>					
	a) In RCC M-200	Cum	7243.00	1351		
	b) In RCC M-250	Cum	7715.00	1366		
	c) In RCC M-300	Cum	7922.00	1367		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
6	Providing and casting in situ C.C. of trap / granite/ quartzite / gneiss metal of approved quality for <u>RCC works</u> as per detailed drawings and designs or as directed by Engineer-in-charge including normal dewatering, centering, form work, bally, steel propups, compaction, finishing the formed surfaces with C.M. 1:3 of sufficient minimum thickness to give a smooth and even surface wherever necessary or roughening if special finish is to be provided and curing, etc. complete. (By weigh batching and mix design for M-250 and M-300 only. Use of L&T, A.C.C., Ambuja, Birla Gold, Manikgad, Rajashree, etc. cement is permitted.) (Excluding M.S. or Tor reinforcement)					
	<u>Chajjas / Parapets / Curtain Walls / Partition Walls / Pardies</u>					
	a) In RCC M-200	Cum	7207.00	1351		
	b) In RCC M-250	Cum	7679.00	1366		
	c) In RCC M-300	Cum	7886.00	1367		
7	Providing and laying in situ R.C.C. of trap / granite/ quartzite / gneiss metal of approved quality for <u>RCC works of domes</u> as per detailed drawings and designs approved by Engineer-in-charge including centering, finishing, roughening the surfaces with special finish or plaster to be provided separately, curing, etc. complete. (By weigh batching and mix design for M-250 and M-300 only. Use of L&T, A.C.C., Ambuja, Birla Gold, Manikgad, Rajashree, etc. cement is permitted.) (Excluding M.S. or Tor reinforcement)					
	<u>Domes</u>					
	a) In RCC M-200	Cum	7516.00	1351		
	b) In RCC M-250 - Bottom Domes only	Cum	7988.00	1366		
	c) In RCC M-300 - Bottom Domes only	Cum	8195.00	1367		
8	Providing and fixing in position <u>steel bar reinforcement</u> of various diameters for RCC piles, caps, footings, foundations, slabs, beams, columns, canopies, staircases, newels, chajjas, lintels, pardies, copings, fins, arches, etc. as per detailed designs, drawings and schedules; including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required, etc. complete <u>(including cost of binding wire).</u> (Bd-F-17/306)					
	a) Mild Steel	MT	55922.00	8769.00		
	b) Tor Steel	MT	59542.00	9020.00		
	c) Corrosion Resistant Steel (Fe 500)	MT				

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
9	Providing <u>fusion bonded epoxy coating</u> to reinforcement bars as per IS-13620/1993 specification for a thickness of 175 (±50) microns including extra cost on account of careful handling, extra cost on account of using PVC coated binding wire instead of G.I. wire, extra cost on account of touch-up material supplied by coating agency and repair work, extra cost on account of transportation, loading, unloading, including all taxes (Central and local), etc. complete.					
A	<u>For Reinforcement Diameterwise Rates</u>					
	1) 8 mm dia	MT	17528.00			
	2) 10 mm dia	MT	15464.00			
	3) 12 mm dia	MT	14110.00			
	4) 16 mm dia	MT	13594.00			
	5) 20 mm dia	MT	12497.00			
	6) 25 mm dia	MT	11335.00			
	7) 28 mm dia	MT	10820.00			
	8) 32 mm dia	MT	10045.00			
B	<u>Average Rates (For estimation only)</u>					
	1) For 8 mm to 20 mm dia	MT	14639.00			
	2) For above 20 mm dia	MT	9758.00			
	<u>Notes for Estimation</u>					
	1) All the rates of Reinforced Cement Concrete Items from 1 to 6 shall be increased by 10% for each brace height above 1st brace for R.C.C. E.S.R.s. e.g. For a R.C.C. E.S.R. with 7 M staging and first brace at 3.50 M above ground, the concrete in columns above first brace, concrete of ring beam and bottom slab is entitled for 10% increase, concrete of vertical wall, roof slab and roof beams, columns in container are entitled for 20% increase.					
	2) These rates are applicable for R.C.C. well works also. These rates shall be increased by 10% for every 5 M depth below initial 5 M depth.					
	3) Rates for Item Nos. 8 and 9 shall be increased by 5% for each brace height above first brace for R.C.C. E.S.R.s. By 5% for every ring beam below first ring beam for R.C.C. wells. By 1% building works for every floor height.					
	4) Volumetric mix as per 1:1½:3 shall be adopted with 56.5 kg of cement for RCC-250 and 59.5 kg of cement for RCC-300, per load of mixer of 1 bag capacity.					
	5) Fusion bonded epoxy coating to be proposed only in Coastal Area with prior approval of the Chief Engineer.					

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
	6) For estimation purpose, average rates as per Item No. 9b shall be considered wherever necessary.					
	READY MIX CONCRETE					
10	Providing and laying in situ Ready Mix Cement Concrete grade of trap/ granite/quartzite/gneiss metal for RCC works of foundation like raft ,grillage, strip foundation and footing of RCC column and steel stanchion including normal dewatering , form work, compaction,finishing,and curing including transporting from mixing plant up to distance of 25 km.,pouring the concrete at work site for 1.5 M lift above GL and 5.0 M lift below GL., etc complete.(Excluding reinforcement and structural steel)					
	For Foundation					
	a) M-150	cum	4986.00	997.2		
	b) M-200	cum	5225.00	1045		
	c) M-250	cum	5800.00	1160		
	d) M-300	cum	6165.00	1233		
11	Providing and casting in situ Ready Mix Cement Concrete grade of trap/granite,/ quartzite/gneiss metal of approved quality for RCC works as per detailed drawings and designs or as directed by Engineer In charge including normal dewatering , cenetring , form work , compaction,finishing the formed surfaces with CM 1:3 of sufficient minimum thickness to give a smooth and even surface wherevr necessary or roughening if special finish is to be provided and curing including transporting from mixing plant up to distance of 25 km.,pouring the concrete at work site for 1.5 M lift above GL and 5.0 M lift below GL., etc complete.(Excluding reinforcement and structural steel)					
	For Columns					
	a) M-150	cum	6102.00	1220		
	b) M-200	cum	6342.00	1268		
	c) M-250	cum	6921.00	1384		
	d) M-300	cum	7288.00	1458		
	For Beams/Braces/Lintels					
	a) M-150	cum	6008.00	1202		
	b) M-200	cum	6327.00	1265		
	c) M-250	cum	6218.00	1244		
	d) M-300	cum	7274.00	1455		
	For Slabs/Landing/Vertical Walls					
	a) M-150	cum	6478.00	1296		
	b) M-200	cum	6719.00	1344		
	c) M-250	cum	7301.00	1460		
	d) M-300	cum	7666.00	1533		
	For Chajjas/Parapets/Curtain Walls					
	a) M-150	cum	6368.00	1274		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
	b) M-200	cum	6797.00	1359		
	c) M-250	cum	7379.00	1476		
	d) M-300	cum	7751.00	1550		
	For Domes					
	a) M-150	cum	6780.00	1356		
	b) M-200	cum	7021.00	1404		
	c) M-250	cum	7605.00	1521		
	d) M-300	cum	7970.00	1594		

Section - H

Miscellaneous

SECTION - H - MISCELLANEOUS

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
1	Providing and fixing <u>G.I. pipe railing</u> having 1.0 M height consisting 50 x 50 x 6 mm thick M.S. angles as verticals at 1.5 M c/c and additional posts at every corner with <u>3 rows</u> of 25 mm dia G.I. pipes of medium class variety as horizontal and painting 3 coats of oil paint over 1 coat of anticorrosive paint of approved colour and shade including cost of all labour, transporting bends to curved shape, etc. complete.	RM	755.00	60.00		
A	As above but with only 2 rows.	RM	581.00	41.00		
2	<u>Dismantling of ESRs</u> of various capacities and heights using crane (10 MT capacity) and handing over M.S./ C.I./G.I. pipes, valves, bends, etc. to the Department. However taking steel reinforcement by the dismantling agency including removing dismantled materials from site and disposing them at suitable place as directed, etc. complete.					
A	Capacity of E.S.R. upto 2 lakh litres and staging upto 12 M height.					
	i) Congested Area	Lit	2.36	2.36		
	ii) Open Area	Lit	1.18	1.18		
B	Capacity of E.S.R. above 2 lakh litres and staging upto 12 M height.					
	i) Congested Area	Lit	1.18	1.18		
	ii) Open Area	Lit	1.18	1.18		
	<u>Note</u> : Above 12 M staging height, add 5% per metre staging of E.S.R. of any capacity.					
3	Providing and fixing <u>M.S. gate</u> 2.5 M wide for compound with 40 mm dia G.I. pipe medium class, approved grill work, RCC M-150 side pillars of 25 cm x 40 cm x 2.5 M height, its foundation, finishing, painting, etc. complete.	No.	28653.00	3906.00		
4	Providing and fixing <u>Wicket gate</u> 1.0 M wide for compound with 40 mm dia G.I. pipe medium class, approved grill work, RCC M-150 side pillars of 25 cm x 40 cm x 2.5 M height, its foundation, finishing, painting, etc. complete.	No.	16470.00	2081.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
5	<u>Taking trial bore</u> (Core Bore Sampling) by Callyx machine with TCT/NX bits to gather undisturbed strata samples for investigation in all types of strata, soft soil, murum, hard murum with boulders, soft rock, hard rock and quartzite, etc. The item includes all hire and running cost of Callyx machine, conveying all materials to site of work excluding conveyance of callyx machine and back sampling all over burden strata in glass jar and core samples serially numbered at site in a wooden core box, samples to be taken at 1.0 M interval and conveying to the place as directed by Engineer-in-charge. The diameter of bore in overburden shall be 100 mm and of NX size (50 mm) in other strata. The item shall also include M.S. casing pipe of 2.5 mm thick plate in overburden only and shall be 1.0 M above GL with cap over it.					
	a) In overburden (soft soil, murum)	RMT	1379.00	151.00		
	b) In weathered rock with boulders	RMT	5459.00	875.00		
	c) In weathered rock / soft rock	RMT	2792.00	434.00		
	d) In hard rock other than quartzite	RMT	3727.00	627.00		
	e) In hard rock quartzite	RMT	8185.00	876.00		
6	Providing <u>pressure grouting</u> at a pressure of 5.6 kg/sqcm in required row / zigzag fashion as specified at 1.5 M interval as per site conditions to stop leakages through water retaining structures to the entire satisfaction of the Engineer-in-charge including material compound, hardening materials, compressor equipment including scaffolding, smooth finishing, etc. complete.					
	i) For masonry structure	Bag	938.00	144.00		
	ii) For concrete structure	Bag	927.00	186.00		
7	<u>Drilling 40 mm dia holes</u> in masonry or concrete structure with providing and fixing 0.5 M long G.I. pipeline for pressure grouting including all material, labour cost and machinery charges, etc. complete.	RM	768.00	200.00		
8	Providing and casting <u>ferrocrate water tank</u> at site including all cost of labour and material, etc. complete upto 25,000 litres (for foundation and providing and fixing taps, etc. shall be considered separately).	Lit	5.00			

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
9	Providing and applying one coat of <u>gamma coating</u> or equivalent such as Dr.Bake, Krishna Conchem, Asian Paint, Atul Limited, Burger Paint, epoxy primer 50 to 60 microns thick and covering two coats of gamma coatings or equivalent such as Dr. Bake, Krishna Conchem, Asian Paint, Atul Limited, Burger Paints 30 microns thick each to new M.S. pipes and structural steel or concrete surface including repainting the surface by finishing by solvent degreasing and de-rusting by applying chemical method and scaffolding if necessary, etc. complete as per manufacturer's specifications.	Sqm	321.00			
10	Making <u>cross connection to existing distribution main</u> of any type including excavation, breaking and removing existing pipes, lowering, laying of specials and pipes in their position, refilling, closing the water supply in that area, dewatering and restarting the water supply, etc. complete as directed by Engineer-in-charge for following diameters of existing pipeline, irrespective of diameter of branch line. (The number of joints involved will be paid separately depending upon the nature of joints and required pipes, valves and specials will be supplied free of cost at stores.)					
i)	80 mm	No	2095.00	1781.00		
ii)	100 mm	No	2392.00	2030.00		
iii)	125 mm	No	2633.00	2237.00		
iv)	150 mm	No	3010.00	2557.00		
v)	200 mm	No	3160.00	2686.00		
vi)	250 mm	No	3755.00	3192.00		
vii)	300 mm	No	4483.00	3811.00		
viii)	350 mm	No	5473.00	4652.00		
ix)	400 mm	No	6511.00	5533.00		
x)	450 mm	No	7366.00	6260.00		
xi)	500 mm	No	9083.00	7720.00		
xii)	600 mm	No	15619.00	13276.00		
xiii)	700 mm	No	19358.00	16453.00		
xiv)	750 mm	No	24446.00	20573.00		
xv)	800 mm	No	31241.00	26288.00		
xvi)	900 mm	No	41124.00	34608.00		
xvii)	1000 mm	No	57134.00	48083.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
	<u>Note</u> : Only 75% rate shall be payable till satisfactory hydraulic testing is given.					
11	<u>Dismantling dead pipeline</u> of M.S./ R.C.C./ C.I./ P.S.C. and G.I./ A.C./ P.V.C./ S.W./ H.D.P.E. pipe including cost of necessary excavation and refilling of trenches, breaking the joints, lifting the pipes and stacking to the place as directed by Engineer-in-charge with all leads and lifts including cleaning the surface, etc. complete.					
A	<u>For M.S. / R.C.C. / C.I. / P.S.C. / D.I.</u>					
	i) 80 mm	RMT	149.00	35.00		
	ii) 100 mm	RMT	164.00	53.00		
	iii) 125 mm	RMT	167.00	56.00		
	iv) 150 mm	RMT	172.00	59.00		
	v) 200 mm	RMT	187.00	70.00		
	vi) 250 mm	RMT	208.00	84.00		
	vii) 300 mm	RMT	226.00	94.00		
	viii) 350 mm	RMT	252.00	117.00		
	ix) 400 mm	RMT	275.00	131.00		
	x) 450 mm	RMT	314.00	145.00		
	xi) 500 mm	RMT	328.00	153.00		
	xii) 600 mm	RMT	402.00	194.00		
	xiii) 700 mm	RMT	468.00	226.00		
	xiv) 750 mm	RMT	526.00	256.00		
B	<u>For G.I. / A.C. / P.V.C. / S.W. / H.D.P.E.</u>					
	i) 80 mm	RMT	89.00	23.00		
	ii) 100 mm	RMT	98.00	32.00		
	iii) 125 mm	RMT	99.00	33.00		
	iv) 150 mm	RMT	101.00	35.00		
	v) 200 mm	RMT	114.00	42.00		
	vi) 250 mm	RMT	125.00	51.00		
	vii) 300 mm	RMT	134.00	56.00		
	viii) 350 mm	RMT	152.00	69.00		
	ix) 400 mm	RMT	165.00	80.00		
	x) 450 mm	RMT	186.00	88.00		
	xi) 500 mm	RMT	197.00	91.00		
	xii) 600 mm	RMT	241.00	117.00		
	xiii) 700 mm	RMT	281.00	135.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
xiv)	750 mm	RMT	316.00	153.00		
12	<u>Providing and constructing two taps standpost</u> as per type design with excavation 15 cm thick PCC 1:2:4 bedding 20 cm thick PCC 1:2:4 concrete for platform of 1.75 M dia. with side curb and bucket rest, 80 mm dia, heavy duty GI pipe central post duly filled therein with C.C. 1:2:4, 5 M long, 20 mm dia. medium G.I. pipe from point of tapping to standpost, additional 20 mm dia G.I. pipe fixed vertically and horizontally upto 15 mm dia self closing water taps and providing and fixing to 15 mm dia G.I. self closing water taps one brass ferrule, etc. complete together with all labour and material charges as per drawing and as directed by Engineer-in-charge <u>when good foundation is available.</u> Rate includes draining arrangement by excavating open gutters.	No	7720.90			
A	As above but when <u>precast RCC platform or precast standpost is issued free of cost</u> at departmental stores including cost of transportation and fixing, etc. complete.	No	4675.00			
13	<u>Providing and constructing two taps standpost</u> as per type design with excavation 30 cm thick boulder filling 15 cm thick PCC in 1:2:4 bedding, 20 cm thick PCC, 1:2:4 platform of 1.75 M dia. with side curb and bucket rest, 80 mm dia, heavy duty GI pipe central post duly filled therein with C.C. 1:2:4, 5 M long, 20 mm dia. medium G.I. pipe from point of tapping to standpost, additional 20 mm dia G.I. pipe fixed horizontally and vertically upto 15 mm dia self closing water taps and providing and fixing two 15 mm dia GI self closing water taps, one brass ferrule, etc. complete together with all labour and material charges as per drawing and as directed by Engineer-in-charge <u>when B.C. soil is available.</u> Rate includes draining arrangement by excavating open gutters.	No	7850.70			
A	As above but when <u>precast RCC platform or precast standpost is issued free of cost</u> at departmental stores including cost of transportation and fixing, etc. complete.	No	4805.90			

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
14	Pushing of MS pipe of following dia for road crossing and railway crossing by push through method in all types of strata by using hydraulic jack and drilling machine of required diameter below MS casing pipe, lowering, laying, jointing of material, required welding machinery, tripod, chain pully block, crane, blower, compressor, loading and unloading of machinery into the trench etc, transporting and dewatering etc complete as directed by engineer in charge but excluding cost of MS pipes.					
	a) 200 mm dia to 499 mm dia MS pipe	RMT	25023.00			
	b) 500 mm dia to 1000 mm dia MS pipe	RMT	31279.00			
15	Providing and erecting slip form shuttering including dismantling after completion for constructing vertical structures such as Jack Well, Balancing Tank, Bridge Column and for horizontal structures in RCC. The item includes lifting arrangement, centering, formwork, normal dewatering, electrical arrangement with generator set and with all equipments for slip form shuttering works with labour, material and machinery, all rents, fuels, insurance charges. The rate is for various dia, depth and various sizes of structures etc complete. Note:					
	A) All the risks and costs lies with the contractor itself.					
	B) The arrangement for lighting with cables till top height to be provided by the contractor.					
	C) Any accident arising out of the work will be responsibility of the contractor.					
	D) No idle charges for machinery and labour will be paid.					
	E) Insurance for all types of machinery and workers will be borne by the contractor.	Sqm				

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
16	Comprehensive cleaning of the ESR /GSR/Sump /Clariflocculator or any storage unit of water supply ,sewerage works in wet or dry condition during planned shutdown of the water supply with the help of water jet cleaning system including all lifts and leads upto 150 meters as required beyond the work site, stacking and spreading etc complete as directed by Engineer incharge . The rate to include all taxes, materials, equipment,electrical installation ,all labour,ednsumables and transportation charges, energy charges for entire job.	1000Lit	62.40			
	1) The item to include record submission of photographs taken during the cleaning process.					
	2) Electric supply will have to be arranged by the firm.					
	3) In case of any dishappening at the site to any structure /equipments or human being the same shall be sole responsibility of the firm. The firm must ensure the guidelines of NHRC and factories Act in this regard in case any compensation is to be paid, the same shall be					
	4) The person who executes the work at site must have Electrical qualification or Electrical license.					
	5) The firm must get checked the water samples before start of work and after completion of work from the laboratory ,the testing cost will be borne by the firm.					
	6) Care should be taken l'such that column assembly of pumping machinery is not disturbed or damaged otherwise necessary compensation would be recovered from firm.					
	7) The water in the reservoir is highly chlorinated having dose of 2 PPM or more .The firm must take all safety precaution before start of work and during execution period.					
	8)10% of payable amount will be withheld and will be released after 3 months from completion of work. NOTE : Conditions from Sr.No 1 to 8 shall form a part and parcel of the tender and must be included in draft tender papers.					

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
17	Providing and making MDPE pipe consumer service connection on C.I/D.I/HDPE pipes with the help of electrofusion machine or Ratchet and dye drill including all labour, MDPE pipe 10 m length ,MDPE specials like electrofusion tee, double compression elbow, female threaded adopter with metal insert,, UPVC compression end ball valve, G.I casing pipe of 40/50 mm for road crossing. The rate to include labour required, excavation, fitting , refilling ,Closing the water supply in that area ,dewatering and restarting the water supply,transportation etc complete as directed by Engineer in charge.					
	A) For connection on HDPE Pipes (With Road Crossing)					
	i) 15 mm	No	4357.00			
	ii)20mm	No	5097.00			
	ii)25 mm	No	3685.00			
	B) For Connection on HDPE Pipes (Without Road Crossing)					
	i) 15 mm	No	3628.00			
	ii)20mm	No	3853.00			
	ii)25 mm	No	4270.00			
	C) For connection on C.I/D.I/G.I Pipes (With Road Crossing)					
	i) 15 mm	No	3053.00			
	ii)20mm	No	3792.00			
	ii)25 mm	No	4479.00			
	D) For connection on C.I/D.I /G.I Pipes (Without Road Crossing)					
	i) 15 mm	No	2291.00			
	ii)20mm	No	2696.00			
	ii)25 mm	No	2966.00			
18	Providing and applying 3 layer polyethylene coating of minimum 3000 micron composite coating and internal fusion bonded epoxy lining as per IS 3589 annex C of 400 micron thickness for underground laying M.S pipes ,Similarly dual layer polyester coating of 400 micron externally and internal fusion bonded lining as per IS3531 for above ground laying M.S pipe .Rates shall include cost of material coating and wrapping over the pipes,handling charges,preparation of pipe surface all labour,material, including transportation of pipes from site of works to factory and back to site of works after coating etc complete.(The rate is for inside plus outside area both included.) Note- Pipe coating shall be done at factory.					

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
		Sqm	1308.00			
19	Supply and installation of prefabricated ground water storage bolted tanks, a complete package in knockdown, ready to assemble construction consisting of outer wall surface made out of special grade hot dip aluminum - Zinc alloy, metallic factory coated steel conforming to IS-15961 -2012, minimum thickness of 0.6 mm. The inner surface should be provided with liners of minimum 0.6 mm thickness of reinforce polyethylene or polypropylene or metallocene material suitable for drinking water purpose. Top cover shall be of polyethene tape monophylament yarn or woven polypropylene or corrugated G.I. sheets . Rate includes cost of inlet, outlet,overflow. Pipes upto 5 m from periphery of the tank including ball valves of standard quality, aluminum ladder, level indicator ,water tightness test, transportation upto site of work and all taxes etc. complete.					
	Notes:					
	1) Above tanks can be installed on elevated platform. (ESR) The rate of tank does not include the cost of elevated platform. 2% extra to be considered for installation of tank on elevated platform. The elevated platform needs to be designed as per requirements & which will be paid separately. The elevated platform must be of steel framed structure.					
	2) For the dome type GI corrugated roof structure with hot dip galvanized trusses with GI manhole for access for cleaning and maintenance, 10% extra shall be added.					
	3) For heavy duty five layer polypropylene reinforced liner with metallocene contact layer having a minimum thickness of 1 mm - 10% extra shall be added.					
	4) In case rain water harvesting filters & system to catch the rain from the GI tank roofs mounted on the tank roof and supplied with the tank then 10% extra shall be added.					
	Capacity in litres					
	25000	Lit	13.18	12.50		
	30000	Lit	11.96	11.28		
	50000	Lit	10.93	10.25		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
	75000	Lit	9.30	8.63		
	100000	Lit	8.03	7.35		
	150000	Lit	7.19	6.51		
	200000	Lit	6.68	6.00		
	250000	Lit	6.06	5.38		
	300000	Lit	5.87	5.19		
	375000	Lit	5.14	4.46		
	500000	Lit	4.72	2.89		
	750000	Lit	4.40	3.73		
	1000000	Lit	4.24	3.57		
	1500000	Lit	3.92	3.24		
20	Providing and laying HDPE Geo-membrane sheet of following thickness 100% acid, alkali proof, 100% rain forced sealing quality, every joints electronically welded, as per relevant IS specification & placing in proper position on prepared bed on foundation/ embankment with welding the joints of sheet using hot sedge and extrusion welding techniques according to the liner manufacturers specifications at ambient temperatures of 5 ⁰ C to 45 ⁰ C including all taxes & labour for jointing and placing etc. complete.					
	500 micron	Per Sqm.	259.00			
	250 micron	Per Sqm.	179.00			
21	Providing and supplying Poly aluminium chloride (PAC) of medium basicity, confirming to IS:15573:2005, and ISI mark and manufacture from vergin raw material in liquid/powder form with PH of 5%, having specific gravity 1.204 for use in water treatment plant for treatment of low to high turbidity water for drinking purpose including all local and central taxes, insurance charges, transportation and freight tax charges, third party charges, with material testing charges (from VJTI/IIT/ DPH lab.), loading and unloading charges and conveyance to water works and R.R. schemes sites in Maharashtra etc. complete as per MJP approved.					
	PAC medium basicity in powder form.	MT	28100.00			
	PAC medium basicity in liquid form.	MT	9596.00			

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
22	External Coating Providing and applying 100% solids Polyurethane coating meeting BIS16719 OR Rigid, Directto Metal , 100% Polyurethane coating meeting AWWA C-222 OF minimum 1000 micron thickness on the external surface of MS pipe after blast cleaning to SA 2.5 with anchor profile of > 75 microns using angular steel grit. Pipe blast cleaning and coating shall only be permitted in the pipe manufacturer's facility, preferably on rolling conveyor using fast set materials. The rates are including loading, unloading, handling, and transportation of pipe etc. complete.	sqm	662.00			
	Product shall be supplied and applied as per detailed specification provided by the department					
23	Internal Lining Providing and applying 100% solids Polyurethane coating meeting BIS16719 OR Rigid, Directto Metal , 100% Polyurethane coating meeting AWWA C-222 and satisfying the criterion for drinking water as per WRAS -BS 6920 to a thickness of 500 microns (SSPC PA2) on the internal surface of MS pipe after blast cleaning to SA 2 1/2 with Anchor profile of > 75 microns using angular steel grit. The coating should meet Total Organic Carbon (TOC) as per APHA - AWWAWEF5310C < 2.00 Milligram /Litre. Pipe lining shall only be permitted in the pipe manufacturer's facility. Site application shall not be permitted. .The rates are including loading, unloading, handling, and transportation of pipe etc. complete.	sqm	470.00			
	Product shall be supplied and applied as per detailed specification provided by the department					

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
24	Internal Lining (food grade epoxy) Providing and applying two part food grade polyamide cured solventless epoxy lining, meeting BIS 16676 on the internal surface of MS Pipe after blast cleaning to SA 2½ with Anchor Profile of >75 microns using angular steel grit. The minimum dry film thickness (DFT) of internal lining shall be 400 microns (SSPC PA2) . The epoxy coating should offer highest resistance to cathodic disbondment and provide excellent adhesion to steel . The manufacturer shall have the certificate issued in support of potable water service for tests of pH , turbidity, total hardness, chloride nitrate, iron, arsenic & fluoride as per IS 10500: 2003 and IS 16676:2017. Site application shall not be permitted. The rates are including loading, unloading, handling, and transportation of pipe etc. complete.	sqm	415.00			
	Product shall be supplied and applied as per detailed specification provided by the department					

Section - I
Pipes

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020	
1	2	3	4	5
	1. C.I. PIPES			
1	Providing and supplying ISI mark C.I. S&S pipes (push on joints pressure pipes of C.I of following class and diameters confirming to the I.S.specification inclusive cost of jointing materials(Rubber gasket of EPDM Quality) excluding GST levied by GoI and GoM in all respect, Third party inspection charges of TPI Agency approved by MJP including Transit insurance, Railway Freight, Unloading from railway wagon, Loading into Truck, Transportation to departmental store/site of work,unloading, stacking etc. completed as directed by Engineer –in-charge (IS 1536/2001 for pipes and IS 158/1969 and IS 12820/1989 or latest edition / revision with amendments for Rubber Gaskets.			
	(Suitable for Tyton / Pig lead joints)			
	a) Class 'LA'			
	80 mm	Rmt	797.00	
	100 mm	Rmt	999.00	
	150 mm	Rmt	1622.00	
	225 mm.	Rmt	2335.00	
	250 mm	Rmt	3147.00	
	75mm	Rmt	4058.00	
	b) Class 'A'			
	80 mm	Rmt	823.00	
	100 mm	Rmt	1028.00	
	125 mm	Rmt	1338.00	
	150 mm	Rmt	1647.00	
	200 mm	Rmt	2380.00	
	250 mm	Rmt	3216.00	
	300 mm	Rmt	4163.00	
	350 mm	Rmt	5204.00	
	400 mm	Rmt	6383.00	
	450 mm	Rmt	7732.00	
	500 mm	Rmt	8865.00	
	600 mm	Rmt	11837.00	
	700 mm	Rmt	15427.00	
	750 mm	Rmt	17135.00	
	800 mm	Rmt	19156.00	
	900 mm	Rmt	23316.00	
	1000 mm	Rmt	28046.00	
	c) Class 'B'			
	80 mm	Rmt	875.00	
	100 mm	Rmt	1096.00	
	125 mm	Rmt	1440.00	
	150 mm	Rmt	1773.00	
	200 mm	Rmt	2572.00	
	250 mm	Rmt	3478.00	
	300 mm	Rmt	4510.00	
	350 mm	Rmt	5645.00	

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020	
1	2	3	4	5
	400 mm	Rmt	6518.00	
	450 mm	Rmt	8343.00	
	500 mm	Rmt	9590.00	
	600 mm	Rmt	12636.00	
	700 mm	Rmt	16517.00	
	750 mm	Rmt	18590.00	
	800 mm	Rmt	20722.00	
	900 mm	Rmt	25262.00	
	1000 mm	Rmt	30308.00	
2	Lowering laying and jointing with SBR ruber gaskets C.I. S/S pipes of various classes with CI / MS specials of following diameter in proper position, grade and alignment as directed by Engineer-in-charge including conveyance of material from stores to site of work, including cost of jointing materials and rubber rings labour etc. complete.			
	Note : Only SBR Rubber gaskets to be used as per IS-5382 and IS-12820.		Without Rubber Rings	With Rubber Rings
	a) C.I. 'L.A.' Class / Mortar inlined DI K-9/K-7			
	80 mm	Rmt	48.00	55.00
	100 mm	Rmt	58.00	64.00
	150 mm	Rmt	78.00	87.00
	200 mm	Rmt	103.00	114.00
	250 mm	Rmt	135.00	149.00
	300 mm	Rmt	146.00	167.00
	350 mm	Rmt	182.00	205.00
	400 mm	Rmt	219.00	253.00
	450 mm	Rmt	219.00	266.00
	500 mm	Rmt	253.00	308.00
	600 mm	Rmt	332.00	409.00
	700 mm	Rmt	429.00	576.00
	750 mm	Rmt	480.00	630.00
	800 mm	Rmt	587.00	739.00
	900 mm	Rmt	702.00	928.00
	1000 mm	Rmt	829.00	1125.00
	b) C.I. 'A' Class			
	80 mm	Rmt	50.00	62.00
	100 mm	Rmt	62.00	73.00
	125 mm	Rmt	79.00	87.00
	150 mm	Rmt	86.00	94.00
	200 mm	Rmt	111.00	122.00
	250 mm	Rmt	146.00	161.00
	300 mm	Rmt	160.00	179.00
	350 mm	Rmt	196.00	220.00
	400 mm	Rmt	221.00	254.00
	450 mm	Rmt	232.00	268.00
	500 mm	Rmt	273.00	327.00
	600 mm	Rmt	361.00	437.00
	700 mm	Rmt	464.00	611.00
	750 mm	Rmt	523.00	670.00
	800 mm	Rmt	616.00	766.00
	900 mm	Rmt	741.00	967.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020	
1	2	3	4	5
	1000 mm	Rmt	866.00	1162.00
	c) C.I. 'B' Class			
	80 mm	Rmt	55.00	64.00
	100 mm	Rmt	65.00	79.00
	125 mm	Rmt	85.00	94.00
	150 mm	Rmt	95.00	106.00
	200 mm	Rmt	122.00	136.00
	250 mm	Rmt	158.00	179.00
	300 mm	Rmt	173.00	193.00
	350 mm	Rmt	212.00	246.00
	400 mm	Rmt	246.00	279.00
	450 mm	Rmt	251.00	287.00
	500 mm	Rmt	294.00	348.00
	600 mm	Rmt	391.00	464.00
	700 mm	Rmt	502.00	645.00
	750 mm	Rmt	567.00	714.00
	800 mm	Rmt	661.00	809.00
	900 mm	Rmt	783.00	1008.00
	1000 mm	Rmt	894.00	1187.00
	Note : Only 85% rate shall be payable till satisfactory hydraulic testing is given.			
3	Providing D.I. pipes (push on joints pressure pipes of D. I. of following class and diameters confirming to the I. S. specification inclusive cost of jointing materials (Rubber gasket of EPDM Quality) excluding GST levied by GOI & GOM in all respect including Third party inspection charges of TPI Agency approved by MJP including Transit insurance, Railway Freight, Unloading from railway wagon, Loading into Truck, Transportation to departmental store, unloading, stacking etc. completed as directed by Engineer in charges (IS 8329/2000 for pipes and IS 158/1969 and IS 12820/1989 or latest edition/ revision with amendments for Rubber Gaskets.			
	(IS:8329-2000 Latest Version)		D. I. K-7	D. I. K-9
	100mm	Rmt	808.00	952.00
	150mm	Rmt	1192.00	1383.00
	200mm	Rmt	1469.00	1870.00
	250mm	Rmt	2044.00	2485.00
	300mm	Rmt	2505.00	3106.00
	350 mm	Rmt	3371.00	3919.00
	400 mm	Rmt	3774.00	4558.00
	450 mm	Rmt	4696.00	5560.00
	500 mm	Rmt	5349.60	6405.00
	600 mm	Rmt	6817.50	8175.00
	700 mm	Rmt	9245.00	10370.00
	750 mm	Rmt	10759.00	12130.00
	800 mm	Rmt	12215.00	13188.00
	900 mm	Rmt	14852.00	16283.00
	1000 mm	Rmt	17900.00	19580.00
	1100 mm	Rmt	24375.00	24397.00
	1200 mm	Rmt	26964.00	27874.00
	Note: For DI pipe supply from MJP 18% GST would be applicable			

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020	
1	2	3	4	5
4	Providing and making lead caulked joint with molten lead to Cast Iron pipes and / or specials of all classes and fitting of following dia including cost of lead and all jointing material, labour, hydraulic testing etc. complete.			
	80 mm	Joint	792.00	
	100 mm	Joint	980.00	
	125mm	Joint	1166.00	
	150mm	Joint	1448.00	
	200mm	Joint	2111.00	
	250mm	Joint	2563.00	
	300mm	Joint	3091.00	
	350 mm	Joint	3504.00	
	400 mm	Joint	4087.00	
	450 mm	Joint	5675.00	
	500 mm	Joint	6101.00	
	600 mm	Joint	7839.00	
	700 mm	Joint	9209.00	
	750 mm	Joint	10459.00	
	800 mm	Joint	11232.00	
	900 mm	Joint	11980.00	
	1000 mm	Joint	12774.00	
	Note :Only 85 % rate shall be payable till satisfactory Hydraulic testing is given.			
5	Providing and supplying ISI standard CI double flanged pipes excluding all statutory duties & taxes such as GST levied by GOI & GOM in all respect, railway freight, insurance, unloading from railway wagon, loading into truck transport to stores / site, unloading etc. complete as directed by Engineer-in-charge			
	80 mm	Rmt.	1333.00	
	100 mm	Rmt.	1648.00	
	125 mm	Rmt.	2145.00	
	150 mm	Rmt.	2677.00	
	200 mm	Rmt.	4108.00	
	250 mm	Rmt.	5535.00	
	300 mm	Rmt.	7117.00	
	350 mm	Rmt.	9289.00	
	400 mm	Rmt.	11326.00	
	450 mm	Rmt.	13600.00	
	500 mm	Rmt.	15961.00	
	600 mm	Rmt.	22705.00	
	700 mm	Rmt.	30419.00	
	750 mm	Rmt.	33097.00	
6	Providing and supplying ISI standard CI flanged / S & S specials including all statutory duties & taxes such as GST levied by GOI & GOM in all respect, railway freight, insurance, unloading from railway wagon, loading into truck transport to departmental store /site, unloading stacking etc. complete.			
	D/F Specials			
	80 to 300 mm dia.	Kg.	66.00	
	350 to 600 mm dia	Kg.	71.00	

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020	
1	2	3	4	5
	above 600 mm dia	Kg.	76.00	
	S/S Specials / Socketed Branch Flanged Specials			
	80 to 300 mm dia.	Kg.	64.00	
	350 to 600 mm dia	Kg.	68.00	
	above 600 mm dia	Kg.	73.00	
	Plain ended /plain ended branch flanged specials			
	80 to 300 mm dia.	Kg.	62.00	
	350 to 600 mm dia	Kg.	68.00	
	above 600 mm dia	Kg.	73.00	
7	Providing and supplying ISI standard MS specials of required thickness with 3 coats of approved make epoxy paint (Shalimar, Ciba or Mahindra & Mahindra make) from inside and outside excluding all statutory duties & taxes such as GST levied by GOI & GOM in all respect, inspection charges, transportation to stores / site, and stacking, etc. complete.			
	a) Machine ends suitable for PSC pipes of all diameters as per detailed drawing with 10mm thick x 0.7 M long barrel welded to it.	Kg.	84.00	
	b) Only flanges with machining and drilling holes, etc. complete more than 40 mm thick	Kg.	82.00	
	c) Double flanged specials of all diameters	Kg.	79.00	
	d) All socketed specials or socketed branch flanged specials of all diameters	Kg.	79.00	
	e) Plain ended specials or plain ended branch flanged specials of all diameters	Kg.	79.00	
	f) MS barrels (pipepieces) locally manufactured (for small quantities)	Kg.	77.00	
8	Providing and making flanged joints to flanged C.I./M.S. pipes of all classes/specials etc. including cost of all jointing materials (rubber packing, nut bolts, etc.), labour, hydraulic testing etc. complete.			
	80 mm	Joint	239.00	
	100 mm	Joint	412.00	
	125 mm	Joint	431.00	
	150 mm	Joint	827.00	
	200 mm	Joint	857.00	
	250 mm	Joint	1229.00	
	300 mm	Joint	1276.00	
	350 mm	Joint	1662.00	
	400 mm	Joint	2071.00	
	450 mm	Joint	2531.00	
	500 mm	Joint	2620.00	
	600 mm	Joint	2813.00	
	700 mm	Joint	4237.00	
	750 mm	Joint	4356.00	
	800 mm	Joint	6028.00	
	900 mm	Joint	6248.00	
	1000mm	Joint	6468.00	
	Note : Only 85 % rate shall be payable till satisfactory Hydraulic testing is given.			

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020	
1	2	3	4	5
9	Erecting and hoisting in position and jointing, testing M.S./ C.I. D/F pipes and specials in vertical position including cost of all jointing materials (rubber packing, nut bolts, etc.) labour, scaffolding, hydraulic testing etc. complete.			
	80 mm	Joint	242.00	
	100 mm	Joint	409.00	
	125 mm	Joint	432.00	
	150 mm	Joint	804.00	
	200 mm	Joint	854.00	
	250 mm	Joint	1220.00	
	300 mm	Joint	1287.00	
	350 mm	Joint	1672.00	
	400 mm	Joint	2079.00	
	450 mm	Joint	2540.00	
	500 mm	Joint	2658.00	
	600 mm	Joint	2917.00	
	700 mm	Joint	4327.00	
	750 mm	Joint	4492.00	
	800 mm	Joint	6083.00	
	900 mm	Joint	6403.00	
	1000mm	Joint	6749.00	
	Note : Only 85 % rate shall be payable till satisfactory hydraulic testing is given.			
10	Providing and supplying ISI standard D. I. specials & fitting with sealing rubber gasket of S.B.R, complete with cast iron follower gland and M. S. nut bolts coated or otherwise protected from rusting and suitable for D.I.pipes including cost of labour ,materials, and transportation to stores / site, loading and unloading excluding GST levied by GOI & GOM in all respect, complete as per IS-9523. For all types of specials, bends tees etc.			
	80 to 300 mm dia	Kg.	103.00	
	350 mm and above dia	Kg.	125.00	
11	Providing and supplying ISI standard welded DI double flanged pipe excluding GST levied by GOI & GOM in all respect, railway freight, insurance, unloading from railway wagon, loading into truck transport to store / site, unloading, stacking etc. complete as directed by Engineer - in- charge. (for 2.75 m bare pipe)			
	100 mm	Rmt.	1725.00	
	150 mm	Rmt.	2343.00	
	200 mm	Rmt.	2997.00	
	250 mm	Rmt.	4069.00	
	300 mm	Rmt.	5120.00	
	350 mm	Rmt.	6669.00	
	400 mm	Rmt.	8072.00	
	450 mm	Rmt.	9646.00	
	500 mm	Rmt.	11212.00	
	600 mm	Rmt.	14762.00	
	700 mm	Rmt.	19864.00	
	800 mm	Rmt.	24281.00	

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020	
1	2	3	4	5
	900 mm	Rmt.	30139.00	
	1000 mm	Rmt.	35388.00	
12	Hydraulic testing of C.I./D.I. pipe line to specified pressure including cost of all materials and labour and water for testing for specified length including cutting, placing end cap making arrangement for filling safe water using reciprocating type pumps which should be able to provide specified test pressure gauges and other necessary equipments, labour, operation charges, etc. required for testing. The rate under this item shall also include cost of retesting, if necessary and reinstating to original position using water supplied by the contractor.			
	A) C.I. L.A. Class / Mortar lined D.I.K-9/ K-7			
	80 mm	Km	6155.00	
	100 mm	Km	7201.00	
	125 mm	Km	8942.00	
	150 mm	Km	9639.00	
	200 mm	Km	12659.00	
	250 mm	Km	16491.00	
	300 mm	Km	18581.00	
	350 mm	Km	22646.00	
	400 mm	Km	28104.00	
	450 mm	Km	29614.00	
	500 mm	Km	34143.00	
	600 mm	Km	45524.00	
	700 mm	Km	63986.00	
	750 mm	Km	70028.00	
	800 mm	Km	82222.00	
	900 mm	Km	103126.00	
	1000 mm	Km	125074.00	
	B) C.I. "A" Class			
	80 mm	Km	6852	
	100 mm	Km	8014	
	125 mm	Km	9639	
	150 mm	Km	10452	
	200 mm	Km	13472	
	250 mm	Km	17768	
	300 mm	Km	19858	
	350 mm	Km	24388	
	400 mm	Km	28221	
	450 mm	Km	29846	
	500 mm	Km	36350	
	600 mm	Km	48543	
	700 mm	Km	67822	
	750 mm	Km	74441	
	800 mm	Km	85125	
	900 mm	Km	107538	
	1000 mm	Km	129023	
	C) C.I. "B" Class			
	80 mm	Km	7201.00	
	100 mm	Km	8710.00	
	125 mm	Km	10452.00	

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020	
1	2	3	4	5
	150 mm	Km	11729.00	
	200 mm	Km	15098.00	
	250 mm	Km	19975.00	
	300 mm	Km	21369.00	
	350 mm	Km	27408.00	
	400 mm	Km	31123.00	
	450 mm	Km	31936.00	
	500 mm	Km	38556.00	
	600 mm	Km	51563.00	
	700 mm	Km	71654.00	
	750 mm	Km	79319.00	
	800 mm	Km	89887.00	
	900 mm	Km	111951.00	
	1000 mm	Km	131926.00	
13	Providing and supplying C.I. detachable joints suitable for A. C. pressure pipes manufactured as per IS-1538-1993 standards of following calass and diameter including cost of insurance, railway freight, inspection charges, unloding from railway wagon, loding into truck, transporting to departmental store, unloading, stacking and cost of rubber rings, nut bolts. excluding GST levied by GOI & GOM in all respect etc. complete (IS-1538-1993)			
	Class 10/15			
	80 mm	Rmt	254.00	
	100 mm	Rmt	321.00	
	125 mm	Rmt	432.00	
	150 mm	Rmt	538.00	
	200 mm	Rmt	812.00	
	250 mm	Rmt	1017.00	
	300 mm	Rmt	1395.00	
	Class 20			
	80 mm	Rmt	392.00	
	100 mm	Rmt	408.00	
	125 mm	Rmt	507.00	
	150 mm	Rmt	608.00	
	200 mm	Rmt	817.00	
	250 mm	Rmt	1153.00	
	300 mm	Rmt	1651.00	

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	II. P. V. C. PIPES		
1	Providing and supplying in standard lengths ISI mark rigid unplasticised PVC pipes suitable for potable water with solvent cement joints including cost of couplers, as per IS specification no. 4985 / 1988 excluding GST levied by GOI and GOM in all respect, including transportation, freight charges, inspection charges, loading, unloading, conveyance to the departmental stores and stacking the same in closed shed duly protected from sun rays and rains including cost of jointing material i.e. solvent cement, etc. complete (selffit type to be jointed with cement solvent).		
	Note : 1) 10% of cost of pipes shall be considered for cost of PVC specials for estimate purpose only.		
	2) One coupler and required cement solvent shall be provided with each full length pipe cost of which is included in rates below.		
	a) Working Pressure 4 Kg./Sq.cm.		
	63 mm	Rmt	50.00
	75 mm	Rmt	71.00
	225 mm.	Rmt	99.00
	110 mm	Rmt	135.00
	75mm	Rmt	226.00
	160 mm	Rmt	297.00
	180 mm	Rmt	406.00
	200 mm	Rmt	501.00
	225 mm	Rmt	641.00
	250 mm	Rmt	783.00
	280 mm	Rmt	1041.00
	315 mm	Rmt	1324.00
	b) Working Pressure 6 Kg./Sq.cm.		
	63 mm	Rmt	71.00
	75 mm	Rmt	101.00
	90 mm	Rmt	147.00
	110 mm	Rmt	201.00
	140 mm	Rmt	335.00
	160 mm	Rmt	433.00
	180 mm	Rmt	575.00
	200 mm	Rmt	736.00
	225 mm	Rmt	928.00
	250 mm	Rmt	1158.00
	280 mm	Rmt	1527.00
	315 mm	Rmt	1949.00
	c) Working Pressure 8 Kg./Sq.cm.		
	63 mm	Rmt	98.00
	75 mm	Rmt	140.00
	90 mm	Rmt	198.00
	110 mm	Rmt	281.00
	140 mm	Rmt	465.00
	160 mm	Rmt	610.00
	180 mm	Rmt	807.00
	200 mm	Rmt	1015.00
	225 mm	Rmt	1289.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	250 mm	Rmt	1612.00
	280 mm	Rmt	2123.00
	315 mm	Rmt	2689.00
	d) Working Pressure 10 Kg./Sq.cm.		
	63 mm	Rmt	119.00
	75 mm	Rmt	169.00
	90 mm	Rmt	242.00
	110 mm	Rmt	342.00
	140 mm	Rmt	554.00
	160 mm	Rmt	725.00
	180 mm	Rmt	999.00
	200 mm	Rmt	1235.00
	225 mm	Rmt	1575.00
	250 mm	Rmt	1990.00
	280 mm	Rmt	2503.00
	315 mm	Rmt	3179.00
	e) Working Pressure 12.5 Kg./Sq.cm.		
	63 mm	Rmt	151.00
	75 mm	Rmt	212.00
	90 mm	Rmt	307.00
	110 mm	Rmt	434.00
	140 mm	Rmt	707.00
	160 mm	Rmt	930.00
	180 mm	Rmt	1271.00
	200 mm	Rmt	1576.00
	225 mm	Rmt	2003.00
	250 mm	Rmt	2533.00
	280 mm	Rmt	3188.00
	315 mm	Rmt	4064.00
2	Providing and supplying in standard lengths ISI mark rigid unplastised PVC for potable water with rubber ring joints including cost of rubber ring as per IS-4985-1998, excluding GST levied by GOI and GOM in all respect, including transportation, freight charges, transit insurance, inspection charges, loading, unloading, conveyance to store and stacking the same in closed shed duly protected from sun rays and rains, etc. complete (with third party inspection) (socketed)		
	a) Working Pressure 4 Kg./Sq.cm.		
	63 mm	Rmt	55.00
	75 mm	Rmt	77.00
	90 mm	Rmt	110.00
	110 mm	Rmt	151.00
	125 mm	Rmt	207.00
	140 mm	Rmt	251.00
	160 mm	Rmt	331.00
	180 mm	Rmt	450.00
	200 mm	Rmt	554.00
	225 mm	Rmt	712.00
	250 mm	Rmt	872.00
	280 mm	Rmt	1156.00
	315 mm	Rmt	1469.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	b) Working Pressure 6 Kg./Sq.cm.		
	63 mm	Rmt	78.00
	75 mm	Rmt	113.00
	90 mm	Rmt	163.00
	110 mm	Rmt	222.00
	125 mm	Rmt	307.00
	140 mm	Rmt	373.00
	160 mm	Rmt	480.00
	180 mm	Rmt	641.00
	200 mm	Rmt	815.00
	225 mm	Rmt	1030.00
	250 mm	Rmt	1287.00
	280 mm	Rmt	1696.00
	315 mm	Rmt	2163.00
	c) Working Pressure 8 Kg./Sq.cm.		
	63 mm	Rmt	107.00
	75 mm	Rmt	157.00
	90 mm	Rmt	220.00
	110 mm	Rmt	311.00
	125 mm	Rmt	429.00
	140 mm	Rmt	516.00
	160 mm	Rmt	677.00
	180 mm	Rmt	898.00
	200 mm	Rmt	1128.00
	225 mm	Rmt	1431.00
	250 mm	Rmt	1789.00
	280 mm	Rmt	2358.00
	315 mm	Rmt	2988.00
	d) Working Pressure 10 Kg./Sq.cm.		
	63 mm	Rmt	132.00
	75 mm	Rmt	188.00
	90 mm	Rmt	268.00
	110 mm	Rmt	381.00
	125 mm	Rmt	523.00
	140 mm	Rmt	615.00
	160 mm	Rmt	805.00
	180 mm	Rmt	1109.00
	200 mm	Rmt	1371.00
	225 mm	Rmt	1749.00
	250 mm	Rmt	2212.00
	280 mm	Rmt	2780.00
	315 mm	Rmt	3532.00
	e) Working Pressure 12.5 Kg./Sq.cm.		
	63 mm	Rmt	166.00
	75 mm	Rmt	235.00
	90 mm	Rmt	341.00
	110 mm	Rmt	484.00
	125 mm	Rmt	667.00
	140 mm	Rmt	785.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	160 mm	Rmt	1031.00
	180 mm	Rmt	1411.00
	200 mm	Rmt	1750.00
	225 mm	Rmt	2225.00
	250 mm	Rmt	2812.00
	280 mm	Rmt	3539.00
	315 mm	Rmt	4510.00
3	Providing and supplying in ISI mark rigid PVC-O class-500 s/s pipe (push on joints) pressure pipes confirming to IS specifications no 16647-2017 inclusive cost of EPDM gasket seals on joints including all statutory duties excluding GST levied by Government of India and Government of Maharashtra in all respect including third party inspection charges of agency approved by MJP, transit insurance loading, unloading charges conveyance to the departmental store / site and stacking the same in closed shade duly protected from sunrays etc complete.		
	Note :- a) 10% cost of pipe shall be considered for the cost of O-PVC/DI compatible specials for estimate purpose b) Diameter wise overlapping lengths are respectively, 110mm 2.92%, 160mm- 3.33%, 200mm 3.75%, 250mm 4.5%, 315mm 5.42%, 400mm 6.25%		
	a) PVC -O-Class 500 - PN 12.5		
	110 mm	Rmt	519.00
	160 mm	Rmt	895.00
	200 mm	Rmt	1226.00
	250 mm	Rmt	1681.00
	315 mm	Rmt	2180.00
	400 mm	Rmt	3360.00
	450 mm	Rmt	4045.00
	500 mm	Rmt	4687.00
	560 mm	Rmt	6248.00
	630 mm	Rmt	7947.00
	b) PVC -O-Class 500 - PN 16		
	110 mm	Rmt	622.00
	160 mm	Rmt	1042.00
	200 mm	Rmt	1292.00
	250 mm	Rmt	1818.00
	315 mm	Rmt	2291.00
	400 mm	Rmt	3495.00
	450 mm	Rmt	4609.00
	500 mm	Rmt	5751.00
	560 mm	Rmt	7161.00
	630 mm	Rmt	9071.00
	c) PVC -O-Class 500 - PN 25		
	110 mm	Rmt	775.00
	160 mm	Rmt	1126.00
	200 mm	Rmt	1532.00
	250 mm	Rmt	2144.00
	315 mm	Rmt	3344.00
	400 mm	Rmt	5072.00
	450 mm	Rmt	6496.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	500 mm	Rmt	8040.00
	560 mm	Rmt	10067.00
	630 mm	Rmt	12730.00
4	Lowering, laying and jointing with P.V.C. pipes and specials of following class and diameter including cost of conveyance from stores to site of works including cost of all labour, material, except cement solvent, rubber ring, as per IS code, etc. complete (with cement solvent joint / ring fit joint).		
	Note: For PVC O pipes of all pressure 4 (b) rates applied.		
	a) Working Pressure 4 Kg./Sq.cm.		
	63 mm	Rmt	18.00
	75 mm	Rmt	23.00
	90 mm	Rmt	28.00
	110 mm	Rmt	32.00
	125 mm	Rmt	34.00
	140 mm	Rmt	37.00
	160 mm	Rmt	42.00
	180 mm	Rmt	46.00
	200 mm	Rmt	50.00
	225 mm	Rmt	58.00
	250 mm	Rmt	63.00
	280 mm	Rmt	69.00
	315 mm	Rmt	78.00
	b) Working Pressure 6 to 12.5 Kg./Sq.cm.		
	63 mm	Rmt	24.00
	75 mm	Rmt	32.00
	90 mm	Rmt	36.00
	110 mm	Rmt	41.00
	125 mm	Rmt	44.00
	140 mm	Rmt	48.00
	160 mm	Rmt	51.00
	180 mm	Rmt	58.00
	200 mm	Rmt	64.00
	225 mm	Rmt	69.00
	250 mm	Rmt	76.00
	280 mm	Rmt	86.00
	315 mm	Rmt	95.00
	400 mm	Rmt	105.00
	450 mm	Rmt	114.00
	500 mm	Rmt	125.00
	560 mm	Rmt	136.00
	630 mm	Rmt	149.00
5	Hydraulic testing of PVC pipe line to specified pressure including cost of all materials and labour and water for testing for specified length including cutting, placing end cap making arrangement for filling safe water using reciprocating type pumps which should be able to provide specified test pressure gauges and other necessary equipments, labour, operation charges, etc. required for testing. The rate under this item shall also include cost of retesting, if necessary and reinstating to original position.		
	a) Working Pressure 4 Kg./Sq.cm.		
	63 mm	Km	2255.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	75 mm	Km	2255.00
	90 mm	Km	3383.00
	110 mm	Km	3383.00
	125 mm	Km	3947.00
	140 mm	Km	4510.00
	160 mm	Km	4510.00
	180 mm	Km	5638.00
	200 mm	Km	5638.00
	225 mm	Km	6765.00
	250 mm	Km	6765.00
	280 mm	Km	7893.00
	315 mm	Km	9020.00
	b) Working Pressure 6 to 12.5 Kg./Sq.cm.		
	63 mm	Km	2255.00
	75 mm	Km	3383.00
	90 mm	Km	4510.00
	110 mm	Km	4510.00
	125 mm	Km	5074.00
	140 mm	Km	5638.00
	160 mm	Km	5638.00
	180 mm	Km	6765.00
	200 mm	Km	6765.00
	225 mm	Km	7893.00
	250 mm	Km	7893.00
	280 mm	Km	9020.00
	315 mm	Km	10148.00
	400 mm	Km	10148.00
	450 mm	Km	11275.00
	500 mm	Km	11275.00
	560 mm	Km	12403.00
	630 mm	Km	13530.00

Note:

1) Only 85% rate shall be payable till satisfactory hydraulic testing is given.

2) Third party inspecting agency shall invariably carry out.

I) Specific Gravity Test.

II) Weight / Rmt.

III) Ash Content Test and confirm in writing that those are within prescribed limits. This condition shall appear in tender conditions.

3) After receipt of pipes at site, concerned Deputy Engineer shall confirm that weight of pipe for every class and diameter is not less than the pre-scribed standard weight as per IS-4985/1998 (Which is given in CSR), Under weight pipes shall be rejected. This condition shall appear in the tender conditions.

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	III. GI PIPES		
1	Providing ISI mark G.I. pipe of following class and dia. excluding GST levied by GOI & GOM in all respect, inspection charges, transportation to stores, etc. complete as per IS-1239/2004. Note : One coupler shall be provided with each full length of pipe cost of which is included in rates below.		
a)	LIGHT		
	15 mm. (0.96 kg./m)	Rmt	64.00
	20 mm. (1.42 kg./m)	Rmt	95.00
	25 mm. (2.03 kg./m)	Rmt	130.00
	32 mm. (2.61 kg./m)	Rmt	165.00
	225 mm.	Rmt	207.00
	50 mm. (4.18 kg./m)	Rmt	253.00
	75mm	Rmt	348.00
	80 mm. (6.98 kg./m)	Rmt	418.00
	100 mm. (10.20 kg./m)	Rmt	593.00
b)	MEDIUM		
	15 mm. (1.23 kg./m)	Rmt	76.00
	20 mm. (1.59 kg./m)	Rmt	98.00
	25 mm. (2.40 kg./m)	Rmt	150.00
	32 mm. (3.17 kg./m)	Rmt	188.00
	40 mm. (3.65 kg./m)	Rmt	217.00
	50 mm. (5.16 kg./m)	Rmt	300.00
	65 mm. (6.63 kg./m)	Rmt	381.00
	80 mm. (8.64 kg./m)	Rmt	501.00
	100 mm. (12.40 kg./m)	Rmt	714.00
	125 mm (16.70 kg/m)	Rmt	972.00
	150 mm.(19.70 kg./m)	Rmt	1143.00
c)	HEAVY		
	15 mm.	Rmt	87.00
	20 mm.	Rmt	112.00
	25 mm.	Rmt	175.00
	32 mm.	Rmt	222.00
	40 mm.	Rmt	257.00
	50 mm.	Rmt	356.00
	65 mm.	Rmt	458.00
	80 mm.	Rmt	585.00
	100 mm (14.70 kg./m)	Rmt	845.00
	125 mm (18.30 kg/m)	Rmt	1046.00
	150 mm (21.80 kg./m)	Rmt	1257.00
2	Lowering, laying and jointing G. I. pipes and specials of following class and diameter including conveyance from stores to site of works, all labour, etc. complete either underground or in vertical position, as directed by Engineer-in-charge.		
a)	LIGHT		
	15 mm. (0.96 kg./m)	Rmt	26.00
	20 mm. (1.42 kg./m)	Rmt	29.00
	25 mm. (2.03 kg./m)	Rmt	36.00
	32 mm. (2.61 kg./m)	Rmt	41.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	40 mm. (3.29 kg./m)	Rmt	50.00
	50 mm. (4.18 kg./m)	Rmt	61.00
	65 mm. (5.92 kg./m)	Rmt	88.00
	80 mm. (6.98 kg./m)	Rmt	97.00
	100 mm. (10.20 kg./m)	Rmt	117.00
b)	MEDIUM		
	15 mm. (1.23 kg./m)	Rmt	28.00
	20 mm. (1.59 kg./m)	Rmt	31.00
	25 mm. (2.40 kg./m)	Rmt	37.00
	32 mm. (3.17 kg./m)	Rmt	43.00
	40 mm. (3.65 kg./m)	Rmt	56.00
	50 mm. (5.16 kg./m)	Rmt	65.00
	65 mm. (6.63 kg./m)	Rmt	95.00
	80 mm. (8.64 kg./m)	Rmt	107.00
	100 mm. (12.40 kg./m)	Rmt	117.00
	125 mm (16.70 kg/m)	Rmt	125.00
	150 mm.(19.70 kg./m)	Rmt	131.00
c)	HEAVY		
	15 mm.	Rmt	30.00
	20 mm.	Rmt	34.00
	25 mm.	Rmt	40.00
	32 mm.	Rmt	46.00
	40 mm.	Rmt	59.00
	50 mm.	Rmt	74.00
	65 mm.	Rmt	103.00
	80 mm.	Rmt	125.00
	100 mm (14.70 kg./m)	Rmt	117.00
	125 mm (18.30 kg/m)	Rmt	130.00
	150 mm (21.80 kg./m)	Rmt	140.00
	Note : Only 85% rate shall be payable till satisfactory hydraulic testing is given.		
3	Hydraulic testing of G. I. pipe line to specified pressure including cost of all materials and labour and water for testing for the length upto 1km using reciprocating type pumps which should be able to provide specified test pressure gauges and other necessary equipments, labour operation charges etc. required for testing, The rates under this item shall also include cost of retesting if necessary and reinstating to original postion.		
a)	LIGHT		
	15 mm. (0.96 kg./m)	Km	2255.00
	20 mm. (1.42 kg./m)	Km	3383.00
	25 mm. (2.03 kg./m)	Km	3383.00
	32 mm. (2.61 kg./m)	Km	4510.00
	40 mm. (3.29 kg./m)	Km	5638.00
	50 mm. (4.18 kg./m)	Km	6765.00
	65 mm. (5.92 kg./m)	Km	10148.00
	80 mm. (6.98 kg./m)	Km	11275.00
	100 mm. (10.20 kg./m)	Km	12403.00
b)	MEDIUM		

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	15 mm. (1.23 kg./m)	Km	3383.00
	20 mm. (1.59 kg./m)	Km	3383.00
	25 mm. (2.40 kg./m)	Km	4510.00
	32 mm. (3.17 kg./m)	Km	4510.00
	40 mm. (3.65 kg./m)	Km	5638.00
	50 mm. (5.16 kg./m)	Km	6765.00
	65 mm. (6.63 kg./m)	Km	10148.00
	80 mm. (8.64 kg./m)	Km	11275.00
	100 mm. (12.40 kg./m)	Km	12403.00
	125 mm (16.70 kg/m)	Km	13530.00
	150 mm.(19.70 kg./m)	Km	14658.00
c)	HEAVY		
	15 mm.	Km	3383.00
	20 mm.	Km	3383.00
	25 mm.	Km	4510.00
	32 mm.	Km	5638.00
	40 mm.	Km	6765.00
	50 mm.	Km	7893.00
	65 mm.	Km	11275.00
	80 mm.	Km	13530.00
	100 mm (14.70 kg./m)	Km	12403.00
	125 mm (18.30 kg/m)	Km	14658.00
	150 mm (21.80 kg./m)	Km	15785.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	(IV) D.I. SPECIALS AND MECHANICAL FITTINGS		
	D.I. Socket and flanged fittings :-		
1	Providing and supplying D.I. fitting with ISI mark socket pushon joints or flanged joints confirming to table 12 to 31 of IS 9523/2000 upto latest amendments including cost of SBR/ EDPM tyton rings. Fittings should be with internally ordinary portland cement mortar lined and externally metallic zinc coating/zinc rich paint with finishing layer of black bitumen coating including transportation & excluding all statutory duties and taxes such as GST levied by Gol and GoM in all respect etc. complete.		
	Diameter in mm		
I	Double socket bend 90 degree		
	80 mm dia	Nos	1091.00
	100 mm dia	Nos	1360.00
	225 mm.	Nos	2450.00
	200 mm dia	Nos	3116.00
	75mm	Nos	5958.00
	300 mm dia	Nos	8269.00
	350 mm dia	Nos	11679.00
	400 mm dia	Nos	15438.00
	450 mm dia	Nos	20136.00
	500 mm dia	Nos	25387.00
	600 mm dia	Nos	41220.00
	700 mm dia	Nos	64057.00
II	Double socket bend 45 degree		
	80 mm dia	Nos	1010.00
	100 mm dia	Nos	1225.00
	150 mm dia	Nos	1895.00
	200 mm dia	Nos	3221.00
	250 mm dia	Nos	4533.00
	300 mm dia	Nos	6347.00
	350 mm dia	Nos	8726.00
	400 mm dia	Nos	11410.00
	450 mm dia	Nos	14497.00
	500 mm dia	Nos	17840.00
	600 mm dia	Nos	27171.00
	700 mm dia	Nos	41503.00
III	Double socket bend 22.50 degree		
	80 mm dia	Nos	884.00
	100 mm dia	Nos	1136.00
	150 mm dia	Nos	1761.00
	200 mm dia	Nos	2718.00
	250 mm dia	Nos	3691.00
	300 mm dia	Nos	5440.00
	350 mm dia	Nos	7174.00
	400 mm dia	Nos	8898.00
	450 mm dia	Nos	11410.00
	500 mm dia	Nos	13997.00
	600 mm dia	Nos	21681.00
	700 mm dia	Nos	32549.00
IV	Double socket bend 11.25 degree		
	80 mm dia	Nos	884.00
	100 mm dia	Nos	1091.00
	150 mm dia	Nos	1628.00
	200 mm dia	Nos	2584.00
	250 mm dia	Nos	3581.00
	300 mm dia	Nos	4823.00
	350 mm dia	Nos	5720.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	400 mm dia	Nos	7718.00
	450 mm dia	Nos	10202.00
	500 mm dia	Nos	12350.00
	600 mm dia	Nos	18114.00
	700 mm dia	Nos	26156.00
V	Double socket concentric reducer		
	100 x 80 mm dia	Nos	1010.00
	150 x 80 mm dia	Nos	1628.00
	150 x 100 mm dia	Nos	1761.00
	200 x 80 mm dia	Nos	2526.00
	200 x 100 mm dia	Nos	2526.00
	200 x 150 mm dia	Nos	2680.00
	250 x 80 mm dia	Nos	3497.00
	250 x 100 mm dia	Nos	3366.00
	250 x 150 mm dia	Nos	3713.00
	250 x 200 mm dia	Nos	3581.00
	300 x 100 mm dia	Nos	4921.00
	300 x 150 mm dia	Nos	5052.00
	300 x 200 mm dia	Nos	4957.00
	300 x 250 mm dia	Nos	4662.00
	350 x 200 mm dia	Nos	6900.00
	350 x 250 mm dia	Nos	6719.00
	350 x 300 mm dia	Nos	6628.00
	400 x 200 mm dia	Nos	9129.00
	400 x 250 mm dia	Nos	8322.00
	400 x 300 mm dia	Nos	8055.00
	400 x 350 mm dia	Nos	7174.00
	450 x 350 mm dia	Nos	9665.00
	450 x 400 mm dia	Nos	8898.00
	500 x 350 mm dia	Nos	13052.00
	500 x 400 mm dia	Nos	12350.00
	500 x 450 mm dia	Nos	11663.00
	600 x 300 mm dia	Nos	19760.00
	600 x 350 mm dia	Nos	20337.00
	600 x 400 mm dia	Nos	19211.00
	600 x 450 mm dia	Nos	18663.00
	600 x 500 mm dia	Nos	17015.00
	700 x 450 mm dia	Nos	32388.00
	700 x 500 mm dia	Nos	28818.00
	700 x 600 mm dia	Nos	30697.00
	800 x 600 mm dia	Nos	40198.00
	800 x 700 mm dia	Nos	30141.00
VI	All Socket Tee		
	80 x 80 mm dia	Nos	1493.00
	100 x 80 mm dia	Nos	1761.00
	100 x 100 mm dia	Nos	1895.00
	150 x 80 mm dia	Nos	2526.00
	150 x 100 mm dia	Nos	2718.00
	150 x 150 mm dia	Nos	3121.00
	200 x 80 mm dia	Nos	3542.00
	200 x 100 mm dia	Nos	3809.00
	200 x 150 mm dia	Nos	4346.00
	200 x 200 mm dia	Nos	5055.00
	250 x 80 mm dia	Nos	4792.00
	250 x 100 mm dia	Nos	5091.00
	250 x 150 mm dia	Nos	5513.00
	250 x 200 mm dia	Nos	6476.00
	250 x 250 mm dia	Nos	7383.00
	300 x 80 mm dia	Nos	6068.00
	300 x 100 mm dia	Nos	6201.00
	300 x 150 mm dia	Nos	7447.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	300 x 200 mm dia	Nos	8269.00
	300 x 250 mm dia	Nos	9067.00
	300 x 300 mm dia	Nos	10102.00
	350 x 80 mm dia	Nos	7785.00
	350 x 100 mm dia	Nos	7920.00
	350 x 150 mm dia	Nos	9129.00
	350 x 200 mm dia	Nos	10067.00
	350 x 250 mm dia	Nos	12082.00
	350 x 300 mm dia	Nos	13424.00
	350 x 350 mm dia	Nos	13692.00
	400 x 80 mm dia	Nos	9800.00
	400 x 100 mm dia	Nos	9665.00
	400 x 150 mm dia	Nos	12082.00
	400 x 200 mm dia	Nos	12350.00
	400 x 250 mm dia	Nos	14095.00
	400 x 300 mm dia	Nos	15797.00
	400 x 400 mm dia	Nos	17452.00
	450 x 100 mm dia	Nos	12082.00
	450 x 150 mm dia	Nos	14095.00
	450 x 200 mm dia	Nos	15438.00
	450 x 250 mm dia	Nos	16070.00
	450 x 300 mm dia	Nos	17977.00
	450 x 350 mm dia	Nos	20136.00
	450 x 400 mm dia	Nos	22151.00
	450 x 450 mm dia	Nos	22553.00
	500 x 100 mm dia	Nos	14743.00
	500 x 150 mm dia	Nos	17153.00
	500 x 200 mm dia	Nos	17840.00
	500 x 250 mm dia	Nos	20583.00
	500 x 300 mm dia	Nos	21957.00
	500 x 400 mm dia	Nos	25387.00
VII	Double Socket Tee with Flange branch-PN-10		
	80 x 80 mm dia	Nos	1854.00
	100 x 80 mm dia	Nos	1986.00
	100 x 100 mm dia	Nos	2118.00
	150 x 80 mm dia	Nos	2780.00
	150 x 100 mm dia	Nos	2846.00
	150 x 150 mm dia	Nos	3574.00
	200 x 80 mm dia	Nos	3838.00
	200 x 100 mm dia	Nos	4102.00
	200 x 150 mm dia	Nos	4765.00
	200 x 200 mm dia	Nos	5493.00
	250 x 80 mm dia	Nos	5020.00
	250 x 100 mm dia	Nos	5089.00
	250 x 150 mm dia	Nos	6241.00
	250 x 200 mm dia	Nos	7055.00
	250 x 250 mm dia	Nos	8141.00
	300 x 80 mm dia	Nos	6513.00
	300 x 100 mm dia	Nos	6785.00
	300 x 150 mm dia	Nos	7734.00
	300 x 200 mm dia	Nos	8820.00
	300 x 250 mm dia	Nos	10042.00
	300 x 300 mm dia	Nos	10855.00
	350 x 80 mm dia	Nos	8155.00
	350 x 100 mm dia	Nos	8297.00
	350 x 150 mm dia	Nos	9843.00
	350 x 200 mm dia	Nos	10688.00
	350 x 250 mm dia	Nos	12658.00
	350 x 300 mm dia	Nos	15469.00
	350 x 350 mm dia	Nos	16031.00
	400 x 80 mm dia	Nos	9843.00
	400 x 100 mm dia	Nos	10266.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	400 x 150 mm dia	Nos	11251.00
	400 x 200 mm dia	Nos	12938.00
	400 x 250 mm dia	Nos	15469.00
	400 x 300 mm dia	Nos	16031.00
	400 x 400 mm dia	Nos	20392.00
	450 x 80 mm dia	Nos	12235.00
	450 x 100 mm dia	Nos	12375.00
	450 x 150 mm dia	Nos	13782.00
	450 x 200 mm dia	Nos	15188.00
	450 x 250 mm dia	Nos	16876.00
	450 x 300 mm dia	Nos	18845.00
	450 x 350 mm dia	Nos	23907.00
	450 x 400 mm dia	Nos	24049.00
	450 x 450 mm dia	Nos	24486.00
	500 x 80 mm dia	Nos	14663.00
	500 x 100 mm dia	Nos	14807.00
	500 x 150 mm dia	Nos	17683.00
	500 x 200 mm dia	Nos	18114.00
	500 x 250 mm dia	Nos	21563.00
	500 x 300 mm dia	Nos	22139.00
	500 x 400 mm dia	Nos	26021.00
VIII	Flange Socket-PN-10		
	80 mm dia	Nos	953.00
	100 mm dia	Nos	1071.00
	150 mm dia	Nos	1668.00
	200 mm dia	Nos	2499.00
	250 mm dia	Nos	3287.00
	300 mm dia	Nos	4314.00
	350 mm dia	Nos	5568.00
	400 mm dia	Nos	6834.00
	450 mm dia	Nos	7657.00
	500 mm dia	Nos	9316.00
	600 mm dia	Nos	13586.00
	700 mm dia	Nos	23478.00
IX	Flange Spigot-PN-10		
	80 mm dia	Nos	939.00
	100 mm dia	Nos	1183.00
	150 mm dia	Nos	1895.00
	200 mm dia	Nos	2720.00
	250 mm dia	Nos	3839.00
	300 mm dia	Nos	4908.00
	350 mm dia	Nos	7214.00
	400 mm dia	Nos	8227.00
	450 mm dia	Nos	10504.00
	500 mm dia	Nos	9636.00
	600 mm dia	Nos	20184.00
	700 mm dia	Nos	30419.00
X	Blank Flange -PN-10		
	80 mm dia	Nos	488.00
	100 mm dia	Nos	590.00
	150 mm dia	Nos	976.00
	200 mm dia	Nos	1342.00
	250 mm dia	Nos	2126.00
	300 mm dia	Nos	3053.00
	350 mm dia	Nos	4363.00
	400 mm dia	Nos	5420.00
	450 mm dia	Nos	7403.00
	500 mm dia	Nos	8775.00
	600 mm dia	Nos	12691.00
	700 mm dia	Nos	26399.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
XI	Double Flange Bend 90 Deg -PN-10		
	80 mm dia	Nos	1166.00
	100 mm dia	Nos	1399.00
	150 mm dia	Nos	2518.00
	200 mm dia	Nos	3670.00
	250 mm dia	Nos	6524.00
	300 mm dia	Nos	8827.00
	350 mm dia	Nos	11610.00
	400 mm dia	Nos	14890.00
	450 mm dia	Nos	21453.00
	500 mm dia	Nos	23713.00
	600 mm dia	Nos	38148.00
	700 mm dia	Nos	73097.00
XII	Double Flange Bend 45 Deg -PN-10		
	80 mm dia	Nos	1107.00
	100 mm dia	Nos	1399.00
	150 mm dia	Nos	2214.00
	200 mm dia	Nos	3206.00
	250 mm dia	Nos	4879.00
	300 mm dia	Nos	9171.00
	350 mm dia	Nos	9717.00
	400 mm dia	Nos	12367.00
	450 mm dia	Nos	15142.00
	500 mm dia	Nos	23807.00
	600 mm dia	Nos	35402.00
	700 mm dia	Nos	50503.00
		Nos	
XIII	Double Flange Duck Foot Bend -PN-10		
	80 mm dia	Nos	1790.00
	100 mm dia	Nos	2237.00
	150 mm dia	Nos	3858.00
	200 mm dia	Nos	6054.00
	250 mm dia	Nos	9674.00
	300 mm dia	Nos	13458.00
	350 mm dia	Nos	19622.00
	400 mm dia	Nos	24229.00
	450 mm dia	Nos	34322.00
	500 mm dia	Nos	43712.00
	600 mm dia	Nos	61216.00
	700 mm dia	Nos	106913.00
XIV	All Flange Tee -PN-10		
	80 x 80 mm dia	Nos	1865.00
	100 x 80 mm dia	Nos	2098.00
	100 x 100 mm dia	Nos	2214.00
	150 x 80 mm dia	Nos	3263.00
	150 x 100 mm dia	Nos	3380.00
	150 x 150 mm dia	Nos	3730.00
	200 x 80 mm dia	Nos	4779.00
	200 x 100 mm dia	Nos	5036.00
	200 x 150 mm dia	Nos	5246.00
	200 x 200 mm dia	Nos	5712.00
	250 x 80 mm dia	Nos	6486.00
	250 x 100 mm dia	Nos	7762.00
	250 x 150 mm dia	Nos	7362.00
	250 x 200 mm dia	Nos	9075.00
	250 x 250 mm dia	Nos	9195.00
	300 x 80 mm dia	Nos	7777.00
	300 x 100 mm dia	Nos	10340.00
	300 x 150 mm dia	Nos	9080.00
	300 x 200 mm dia	Nos	11343.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	300 x 250 mm dia	Nos	11109.00
	300 x 300 mm dia	Nos	13494.00
	350 x 80 mm dia	Nos	11505.00
	350 x 100 mm dia	Nos	14133.00
	350 x 150 mm dia	Nos	13190.00
	350 x 200 mm dia	Nos	14839.00
	350 x 250 mm dia	Nos	15960.00
	350 x 300 mm dia	Nos	17285.00
	350 x 350 mm dia	Nos	19306.00
	400 x 80 mm dia	Nos	13837.00
	400 x 100 mm dia	Nos	17585.00
	400 x 150 mm dia	Nos	15797.00
	400 x 200 mm dia	Nos	18297.00
	400 x 250 mm dia	Nos	19064.00
	400 x 300 mm dia	Nos	19937.00
	400 x 400 mm dia	Nos	21453.00
	450 x 100 mm dia	Nos	22343.00
	450 x 150 mm dia	Nos	17883.00
	450 x 200 mm dia	Nos	23471.00
	450 x 250 mm dia	Nos	21179.00
	450 x 300 mm dia	Nos	22012.00
	450 x 350 mm dia	Nos	25237.00
	450 x 400 mm dia	Nos	25170.00
	450 x 450 mm dia	Nos	28393.00
	500 x 100 mm dia	Nos	27064.00
	500 x 150 mm dia	Nos	27450.00
	500 x 200 mm dia	Nos	27708.00
	500 x 250 mm dia	Nos	28352.00
	500 x 300 mm dia	Nos	34018.00
	500 x 400 mm dia	Nos	34520.00
	500 x 500 mm dia	Nos	37614.00
	600 x 100 mm dia	Nos	44678.00
	600 x 150 mm dia	Nos	45141.00
	600 x 200 mm dia	Nos	44779.00
	600 x 250 mm dia	Nos	47941.00
	600 x 300 mm dia	Nos	46467.00
	600 x 400 mm dia	Nos	48275.00
	600 x 500 mm dia	Nos	48312.00
	600 x 600 mm dia	Nos	53406.00
XV	Double Socket Level Invert Flange Branch Tee PN10		
	200 x 80 mm dia	Nos	3334.00
	250 x 80 mm dia	Nos	4347.00
	300 x 80 mm dia	Nos	5802.00
	350 x 80 mm dia	Nos	7249.00
	350 x 100 mm dia	Nos	7926.00
	400 x 100 mm dia	Nos	9478.00
	450 x 80 mm dia	Nos	11522.00
	450 x 100 mm dia	Nos	11766.00
	500 x 80 mm dia	Nos	13214.00
	500 x 100 mm dia	Nos	14464.00
XVI	Cap		
	80 mm dia	Nos	445.00
	100 mm dia	Nos	573.00
	150 mm dia	Nos	1017.00
	200 mm dia	Nos	1812.00
	250 mm dia	Nos	2179.00
	300 mm dia	Nos	3435.00
	350 mm dia	Nos	5557.00
	400 mm dia	Nos	7249.00
	450 mm dia	Nos	9181.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	500 mm dia	Nos	11238.00
	600 mm dia	Nos	15684.00
	700 mm dia	Nos	27827.00
XVII	Plug		
	80 mm dia	Nos	326.00
	100 mm dia	Nos	557.00
	150 mm dia	Nos	989.00
	200 mm dia	Nos	1531.00
	250 mm dia	Nos	2118.00
	300 mm dia	Nos	3339.00
	350 mm dia	Nos	5315.00
	400 mm dia	Nos	6282.00
	450 mm dia	Nos	8318.00
	500 mm dia	Nos	10127.00
	600 mm dia	Nos	14995.00
	D.I. FITTINGS (Mechanical Joints)		
1	Providing and supplying D.I. fittings with ISI mark Mechanical joint confirming to tables 12 to table 31 of IS 9523/2000 upto latest amendments including cost of SBR/ EDPM gaskets, Nuts, Bolts, Washers and Ductile iron follower glands. Fittings should be with internally Ordinary portland cement mortar lined and externally metallic zinc coating/zinc rich paint with finishing layer of black bitumen coating including transportation and excluding all statutory duties and taxes such as GST levied by Gol and GoM in all respect etc. complete.		
I	MJ Collar/Coupling		
	80 mm dia	Nos	2098.00
	100 mm dia	Nos	2292.00
	150 mm dia	Nos	2805.00
	200 mm dia	Nos	5015.00
	250 mm dia	Nos	6635.00
	300 mm dia	Nos	8600.00
	350 mm dia	Nos	12167.00
	400 mm dia	Nos	15223.00
	450 mm dia	Nos	17619.00
	500 mm dia	Nos	22771.00
	600 mm dia	Nos	28761.00
	700 mm dia	Nos	39467.00
II	Double Socket Bend 90 degree		
	80 mm dia	Nos	1126.00
	100 mm dia	Nos	1418.00
	150 mm dia	Nos	2445.00
	200 mm dia	Nos	3669.00
	250 mm dia	Nos	5200.00
	300 mm dia	Nos	6949.00
	350 mm dia	Nos	10114.00
	400 mm dia	Nos	13023.00
	450 mm dia	Nos	16844.00
	500 mm dia	Nos	19211.00
	600 mm dia	Nos	28060.00
III	Double Socket Bend 45 degree		
	80 mm dia	Nos	1126.00
	100 mm dia	Nos	1320.00
	150 mm dia	Nos	2066.00
	200 mm dia	Nos	3154.00
	250 mm dia	Nos	4242.00
	300 mm dia	Nos	5930.00
	350 mm dia	Nos	8819.00
	400 mm dia	Nos	11254.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	450 mm dia	Nos	12867.00
	500 mm dia	Nos	14987.00
	600 mm dia	Nos	21524.00
IV	Double Socket Bend 22.5 degree		
	80 mm dia	Nos	1040.00
	100 mm dia	Nos	1320.00
	150 mm dia	Nos	1980.00
	200 mm dia	Nos	2825.00
	250 mm dia	Nos	3766.00
	300 mm dia	Nos	5270.00
	350 mm dia	Nos	7629.00
	400 mm dia	Nos	9306.00
	450 mm dia	Nos	11687.00
	500 mm dia	Nos	13950.00
	600 mm dia	Nos	18015.00
V	Double Socket Bend 11.25 degree		
	80 mm dia	Nos	1040.00
	100 mm dia	Nos	1365.00
	150 mm dia	Nos	1883.00
	200 mm dia	Nos	2727.00
	250 mm dia	Nos	3582.00
	300 mm dia	Nos	4805.00
	350 mm dia	Nos	6601.00
	400 mm dia	Nos	8495.00
	450 mm dia	Nos	11002.00
	500 mm dia	Nos	13148.00
	600 mm dia	Nos	16341.00
VI	Double socket concentric reducer		
	100 x 80 mm dia	Nos	1853.00
	150 x 80 mm dia	Nos	2670.00
	150 x 100 mm dia	Nos	2910.00
	200 x 80 mm dia	Nos	3757.00
	200 x 100 mm dia	Nos	3770.00
	200 x 150 mm dia	Nos	4194.00
	250 x 80 mm dia	Nos	4913.00
	250 x 100 mm dia	Nos	5136.00
	250 x 150 mm dia	Nos	5475.00
	250 x 200 mm dia	Nos	5475.00
	300 x 100 mm dia	Nos	6810.00
	300 x 150 mm dia	Nos	7145.00
	300 x 200 mm dia	Nos	6867.00
	300 x 250 mm dia	Nos	7369.00
	350 x 200 mm dia	Nos	10379.00
	350 x 300 mm dia	Nos	10798.00
	400 x 200 mm dia	Nos	12868.00
	400 x 300 mm dia	Nos	13111.00
	400 x 350 mm dia	Nos	12328.00
	450 x 400 mm dia	Nos	14965.00
	500 x 300 mm dia	Nos	19980.00
	500 x 350 mm dia	Nos	18540.00
	500 x 400 mm dia	Nos	18290.00
	600 x 350 mm dia	Nos	25707.00
	600 x 400 mm dia	Nos	25430.00
	600 x 500 mm dia	Nos	23674.00
VII	All Socket Tee		
	80 x 80 mm dia	Nos	2518.00
	100 x 80 mm dia	Nos	2959.00
	100 x 100 mm dia	Nos	3180.00
	150 x 80 mm dia	Nos	4285.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	150 x 100 mm dia	Nos	4507.00
	150 x 150 mm dia	Nos	5186.00
	200 x 80 mm dia	Nos	5577.00
	200 x 100 mm dia	Nos	5986.00
	200 x 150 mm dia	Nos	6802.00
	200 x 200 mm dia	Nos	7952.00
	250 x 80 mm dia	Nos	7244.00
	250 x 100 mm dia	Nos	7619.00
	250 x 150 mm dia	Nos	8281.00
	250 x 200 mm dia	Nos	9625.00
	250 x 250 mm dia	Nos	10645.00
	300 x 80 mm dia	Nos	9167.00
	300 x 100 mm dia	Nos	9387.00
	300 x 150 mm dia	Nos	10952.00
	300 x 200 mm dia	Nos	11989.00
	300 x 250 mm dia	Nos	13314.00
	300 x 300 mm dia	Nos	14505.00
	350 x 80 mm dia	Nos	13179.00
	350 x 100 mm dia	Nos	13434.00
	350 x 150 mm dia	Nos	14965.00
	350 x 200 mm dia	Nos	16154.00
	350 x 250 mm dia	Nos	18791.00
	350 x 300 mm dia	Nos	20831.00
	350 x 350 mm dia	Nos	22192.00
	400 x 80 mm dia	Nos	16835.00
	400 x 100 mm dia	Nos	16750.00
	400 x 150 mm dia	Nos	19705.00
	400 x 200 mm dia	Nos	20319.00
	400 x 250 mm dia	Nos	22021.00
	400 x 300 mm dia	Nos	23978.00
	400 x 400 mm dia	Nos	28143.00
	450 x 100 mm dia	Nos	20342.00
	450 x 150 mm dia	Nos	23038.00
	450 x 200 mm dia	Nos	23528.00
	450 x 250 mm dia	Nos	24658.00
	450 x 300 mm dia	Nos	27123.00
	450 x 350 mm dia	Nos	32352.00
	450 x 400 mm dia	Nos	32995.00
	450 x 450 mm dia	Nos	34181.00
	500 x 100 mm dia	Nos	21295.00
	500 x 150 mm dia	Nos	24426.00
	500 x 200 mm dia	Nos	24928.00
	500 x 250 mm dia	Nos	29993.00
	500 x 300 mm dia	Nos	30940.00
	500 x 400 mm dia	Nos	34573.00
VIII	Double Socket Tee with Flange branch-PN-10		
	80 x 80 mm dia	Nos	2746.00
	100 x 80 mm dia	Nos	3228.00
	100 x 100 mm dia	Nos	3469.00
	150 x 80 mm dia	Nos	4675.00
	150 x 100 mm dia	Nos	4916.00
	150 x 150 mm dia	Nos	5657.00
	200 x 80 mm dia	Nos	6084.00
	200 x 100 mm dia	Nos	6530.00
	200 x 150 mm dia	Nos	7420.00
	200 x 200 mm dia	Nos	8675.00
	250 x 80 mm dia	Nos	7903.00
	250 x 100 mm dia	Nos	8311.00
	250 x 150 mm dia	Nos	9034.00
	250 x 200 mm dia	Nos	10500.00
	250 x 250 mm dia	Nos	11613.00
	300 x 80 mm dia	Nos	9999.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	300 x 100 mm dia	Nos	10240.00
	300 x 150 mm dia	Nos	11947.00
	300 x 200 mm dia	Nos	13078.00
	300 x 250 mm dia	Nos	14525.00
	300 x 300 mm dia	Nos	15824.00
	350 x 80 mm dia	Nos	14377.00
	350 x 100 mm dia	Nos	14655.00
	350 x 150 mm dia	Nos	16324.00
	350 x 200 mm dia	Nos	17623.00
	350 x 250 mm dia	Nos	20499.00
	350 x 300 mm dia	Nos	22724.00
	350 x 350 mm dia	Nos	24209.00
	400 x 80 mm dia	Nos	18334.00
	400 x 100 mm dia	Nos	18272.00
	400 x 150 mm dia	Nos	21497.00
	400 x 200 mm dia	Nos	22166.00
	400 x 250 mm dia	Nos	24023.00
	400 x 300 mm dia	Nos	26158.00
	400 x 400 mm dia	Nos	30702.00
	450 x 80 mm dia	Nos	22191.00
	450 x 100 mm dia	Nos	25133.00
	450 x 150 mm dia	Nos	25668.00
	450 x 200 mm dia	Nos	26899.00
	450 x 250 mm dia	Nos	29589.00
	450 x 300 mm dia	Nos	35293.00
	450 x 350 mm dia	Nos	35995.00
	450 x 400 mm dia	Nos	37289.00
	450 x 450 mm dia	Nos	23231.00
	500 x 80 mm dia	Nos	26647.00
	500 x 100 mm dia	Nos	27194.00
	500 x 150 mm dia	Nos	32719.00
	500 x 200 mm dia	Nos	33753.00
	500 x 250 mm dia	Nos	37716.00
	500 x 300 mm dia	Nos	32124.00
	500 x 400 mm dia	Nos	36213.00
	500 x 500 mm dia	Nos	42500.00
IX	Flange Socket-PN-10		
	80 mm dia	Nos	1452.00
	100 mm dia	Nos	1594.00
	150 mm dia	Nos	2417.00
	200 mm dia	Nos	3369.00
	250 mm dia	Nos	4642.00
	300 mm dia	Nos	6073.00
	350 mm dia	Nos	9016.00
	400 mm dia	Nos	10936.00
	450 mm dia	Nos	12270.00
	500 mm dia	Nos	14692.00
	600 mm dia	Nos	20452.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020	
1	2	3	4	5
	RCC PIPES			
1	Providing ISI standard R.C.C. pipes in standard lengths of following class and diameter suitable for either collar joints or rubber ring joints, excluding all statutory duties and taxes such as GST levied by Gol and GoM in all respect, inspection charges, transport to departmental stores/site, unloading and stacking etc. complete as per IS-458/1988 Note : One collar should be supplied with each full length plain ended RCC pipe, cost including in rates below. One rubber ring should be supplied with each full length of socketed pipe, cost included in rates below.			
	a) Class 'P-I'		Collar Joint	R/R Joint
	80 mm	Rmt	272.00	240.00
	100 mm	Rmt	284.00	258.00
	150 mm.	Rmt	300.00	266.00
	200 mm.	Rmt	348.00	312.00
	225 mm.	Rmt	397.00	357.00
	250 mm.	Rmt	435.00	390.00
	75mm	Rmt	556.00	497.00
	350 mm.	Rmt	599.00	538.00
	400 mm.	Rmt	760.00	687.00
	450 mm.	Rmt	935.00	844.00
	500 mm.	Rmt	1126.00	1013.00
	600 mm.	Rmt	1419.00	1280.00
	700 mm.	Rmt	1849.00	1663.00
	800 mm.	Rmt	2134.00	1919.00
	900 mm.	Rmt	2685.00	2417.00
	1000 mm.	Rmt	3147.00	2834.00
	1100 mm.	Rmt	3574.00	3218.00
	1200 mm.	Rmt	4294.00	3869.00
	Class, 'P-II'			
	80 mm	Rmt	290.00	256.00
	100 mm	Rmt	308.00	277.00
	150 mm	Rmt	369.00	333.00
	200 mm	Rmt	496.00	450.00
	225 mm	Rmt	588.00	530.00
	250 mm.	Rmt	637.00	579.00
	300 mm.	Rmt	841.00	802.00
	350 mm.	Rmt	1050.00	950.00
	400 mm.	Rmt	1171.00	1066.00
	450 mm	Rmt	1420.00	1274.00
	500 mm	Rmt	1983.00	1807.00
	600 mm	Rmt	2459.00	2217.00
	700 mm.	Rmt	3350.00	3047.00
	800 mm.	Rmt	4028.00	3671.00
	900 mm.	Rmt	4538.00	4572.00
	1000 mm.	Rmt	5491.00	4944.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020	
1	2	3	4	5
	Class 'P-III'			
	80mm.	Rmt	312.00	307.00
	100 mm.	Rmt	338.00	332.00
	150 mm.	Rmt	384.00	384.00
	200 mm	Rmt	522.00	522.00
	225 mm	Rmt	622.00	622.00
	250 mm	Rmt	728.00	727.00
	300 mm	Rmt	1013.00	1012.00
	350 mm	Rmt	1320.00	1320.00
	400 mm	Rmt	1817.00	1817.00
	450 mm	Rmt	2112.00	2086.00
	500 mm	Rmt	2545.00	2544.00
	600 mm	Rmt	3268.00	3268.00
	700 mm.	Rmt	4663.00	4662.00
	800 mm.	Rmt	5921.00	5921.00
	Class `NP-II'			
	(For 2.00 m. length)			
	80 mm.	Rmt	234.00	236.00
	100 mm.	Rmt	240.00	245.00
	150 mm.	Rmt	262.00	262.00
	200 mm.	Rmt	327.00	327.00
	225 mm	Rmt	366.00	373.00
	250 mm	Rmt	394.00	402.00
	300 mm	Rmt	510.00	510.00
	(For 2.50 m. length)			
	350 mm.	Rmt	644.00	657.00
	400 mm.	Rmt	743.00	743.00
	450 mm.	Rmt	878.00	891.00
	500 mm	Rmt	941.00	941.00
	600 mm	Rmt	1188.00	1188.00
	700 mm	Rmt	1584.00	1584.00
	800 mm.	Rmt	1782.00	1782.00
	900 mm.	Rmt	2277.00	2277.00
	1000 mm	Rmt	2772.00	2772.00
	1100 mm	Rmt	3780.00	3780.00
	1200 mm.	Rmt	4512.00	4512.00
	1400 mm.	Rmt	5465.00	5574.00
	1600 mm.	Rmt	6275.00	6400.00
	1800 mm.	Rmt	8789.00	8965.00
	Class NP-III			
	(For 2.50 M. length)			
	80mm	Rmt	265.00	269.00
	100 mm	Rmt	291.00	306.00
	150 mm	Rmt	331.00	337.00
	200mm	Rmt	455.00	372.00
	225 mm	Rmt	510.00	434.00
	250 mm	Rmt	540.00	510.00
	300 mm	Rmt	701.00	714.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020	
			4	5
1	2	3		
	350 mm.	Rmt	1239.00	1188.00
	400 mm.	Rmt	1388.00	1267.00
	450 mm.	Rmt	1651.00	1366.00
	500 mm	Rmt	1833.00	1683.00
	600 mm	Rmt	2415.00	1980.00
	700 mm.	Rmt	3218.00	2772.00
	800 mm.	Rmt	3911.00	2970.00
	900 mm	Rmt	4518.00	3466.00
	1000 mm	Rmt	5148.00	3862.00
	1100 mm	Rmt	6394.00	6522.00
	1200 mm.	Rmt	7435.00	7435.00
	1400 mm	Rmt	8742.00	8742.00
	1600 mm	Rmt	13135.00	13263.00
	1800 mm	Rmt	16233.00	16233.00
	Class 'NP-IV'			
	80 mm.	Rmt	285.00	290.00
	100 mm.	Rmt	334.00	340.00
	150 mm.	Rmt	378.00	386.00
	200 mm.	Rmt	528.00	421.00
	225 mm.	Rmt	582.00	495.00
	250 mm.	Rmt	639.00	582.00
	300 mm.	Rmt	896.00	891.00
	350 mm.	Rmt	1361.00	1267.00
	400 mm.	Rmt	1457.00	1386.00
	450 mm.	Rmt	1718.00	1485.00
	500 mm.	Rmt	2100.00	1832.00
	600 mm.	Rmt	2568.00	2376.00
	700 mm.	Rmt	3844.00	2970.00
	800 mm.	Rmt	4390.00	3218.00
	900 mm.	Rmt	5140.00	3763.00
	1000 mm.	Rmt	7278.00	4159.00
	1100 mm.	Rmt	7895.00	7981.00
	1200 mm.	Rmt	7931.00	8089.00
	1400 mm.	Rmt	12383.00	11522.00
	1600 mm.	Rmt	15439.00	15481.00
	1800 mm.	Rmt	21164.00	19980.00
	Note : Only 85% rate is payable till satisfactory hydraulic testing is given.			
2	Lowering, laying and jointing in proper grade and alignment R.C.C. pipes with collar joints in C.M.1:1 proportion or socketed R.C.C. pipes with rubber joints (excluding cost of rubber ring or R.C.C. collar,) including cost of conveyance from stores to site of work, cost of jointing material, labour, etc. complete as directed by Engineerin- charge (For all class of pipes.) as per IS- 783-1985.		Collar Joint	R/R Joint
	80 mm.	Rmt	48.00	35.00
	100 mm.	Rmt	57.00	41.00
	150 mm.	Rmt	88.00	62.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020	
			4	5
1	2	3		
	200 mm.	Rmt	117.00	83.00
	225 mm.	Rmt	136.00	96.00
	250 mm.	Rmt	153.00	107.00
	300 mm.	Rmt	185.00	130.00
	350 mm.	Rmt	189.00	133.00
	400 mm.	Rmt	241.00	171.00
	450 mm.	Rmt	294.00	204.00
	500 mm.	Rmt	319.00	222.00
	600 mm.	Rmt	404.00	279.00
	700 mm.	Rmt	457.00	317.00
	800 mm.	Rmt	529.00	366.00
	900 mm.	Rmt	582.00	405.00
	1000 mm.	Rmt	637.00	443.00
	1100 mm.	Rmt	886.00	600.00
	1200 mm.	Rmt	939.00	638.00
	1400 mm.	Rmt	1046.00	716.00
	1600 mm.	Rmt	1154.00	793.00
	1800 mm.	Rmt	1262.00	869.00
3	Hydraulic testing of RCC pipe line to specified pressure including cost of all materials and labour and water for testing for specified length including cutting, placing end cap making arrangement for filling safe water using reciprocating type pumps which should be able to provide specified test pressure gauges and other necessary equipments, labour, operation charges, etc. required for testing. The rate under this item shall also include cost of retesting, if necessary and reinstating to original position.		Collar Joint	R/R Joint
	80 mm.	Km	5638.00	3383.00
	100 mm.	Km	6765.00	4510.00
	150 mm.	Km	10148.00	6765.00
	200 mm.	Km	12403.00	9020.00
	225 mm.	Km	14658.00	10148.00
	250 mm.	Km	16913.00	12403.00
	300 mm.	Km	20295.00	14658.00
	350 mm.	Km	21423.00	14658.00
	400 mm.	Km	27060.00	19168.00
	450 mm.	Km	32698.00	22550.00
	500 mm.	Km	34953.00	24805.00
	600 mm.	Km	45100.00	31570.00
	700 mm.	Km	50738.00	34953.00
	800 mm.	Km	58630.00	40590.00
	900 mm.	Km	64268.00	45100.00
	1000 mm.	Km	71033.00	49610.00
	1100 mm.	Km	98093.00	66523.00
	1200 mm.	Km	104858.00	71033.00
	1400 mm.	Km	116133.00	80053.00
	1600 mm.	Km	128535.00	87945.00
	1800 mm.	Km	139810.00	96965.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	VI. P. S. C. PIPES		
1	Providing ISI standard Pre - stressed Cement concrete pipes of following class and diameter including cost of all material and labour required, cost, inspection charges, transportaion to stores, unloading and stacking excluding GST levied by GI & GOM in all respect etc. complete as per IS- 784-2001.		
	i) Factory test pressure a) Site test pressure + 01N/mm ² , For working pressure upto 1 N/mm ² b) Site test pressure + 02N/mm ² , For working pressure upto 1 N/mm ² ii) Site test pressure - 1.5 times working pressure pertaining to the section or 1.1 times static pressure, which ever is more (such pressure is to be control within 25% of pumphead incase of pumping main) iii) Working pessure - The maximum sustained internal pressure excluding surge to which each portion of pipeline my be subjected when installed.		
	Note : One rubber ring should be supplied with each pipe, cost included in rates below.		
	a) Factory test Pressure 2 Kg/Sqcm		
	Dia. in mm		
	350	Rmt	3131.00
	225 mm.	Rmt	3369.00
	450	Rmt	3534.00
	75mm	Rmt	3890.00
	600	Rmt	4677.00
	700	Rmt	5207.00
	800	Rmt	6431.00
	900	Rmt	7997.00
	1000	Rmt	9323.00
	1100	Rmt	10647.00
	1200	Rmt	12302.00
	1300	Rmt	14225.00
	1400	Rmt	15652.00
	1500	Rmt	17914.00
	1600	Rmt	19869.00
	1700	Rmt	21825.00
	1800	Rmt	23781.00
	b) Factory test Pressure 4 Kg/Sqcm		
	Dia. in mm		
	350	Rmt	3131.00
	400	Rmt	3370.00
	450	Rmt	3534.00
	500	Rmt	3890.00
	600	Rmt	4678.00
	700	Rmt	5209.00
	800	Rmt	6431.00
	900	Rmt	7998.00
	1000	Rmt	9326.00
	1100	Rmt	10649.00
	1200	Rmt	12303.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	1300	Rmt	14229.00
	1400	Rmt	15653.00
	1500	Rmt	17918.00
	1600	Rmt	19872.00
	1700	Rmt	21829.00
	1800	Rmt	23784.00
	c) Factory test Pressure 6 Kg/Sqcm		
	Dia. in mm		
	350	Rmt	3137.00
	400	Rmt	3388.00
	450	Rmt	3544.00
	500	Rmt	3919.00
	600	Rmt	4740.00
	700	Rmt	5390.00
	800	Rmt	6668.00
	900	Rmt	8314.00
	1000	Rmt	9697.00
	1100	Rmt	11041.00
	1200	Rmt	12789.00
	1300	Rmt	14775.00
	1400	Rmt	16256.00
	1500	Rmt	18621.00
	1600	Rmt	20681.00
	1700	Rmt	22741.00
	1800	Rmt	24800.00
	d) Factory test Pressure 8 Kg/Sqcm		
	Dia. in mm		
	350	Rmt	3140.00
	400	Rmt	3413.00
	450	Rmt	3566.00
	500	Rmt	3974.00
	600	Rmt	4900.00
	700	Rmt	5662.00
	800	Rmt	6951.00
	900	Rmt	8667.00
	1000	Rmt	10133.00
	1100	Rmt	11595.00
	1200	Rmt	13426.00
	1300	Rmt	15529.00
	1400	Rmt	17163.00
	1500	Rmt	19667.00
	1600	Rmt	22190.00
	1700	Rmt	24714.00
	1800	Rmt	27241.00
	e) Factory test Pressure 10 Kg/Sqcm		
	Dia. in mm		
	350	Rmt	3157.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	400	Rmt	3458.00
	450	Rmt	3690.00
	500	Rmt	4133.00
	600	Rmt	5111.00
	700	Rmt	5889.00
	800	Rmt	7306.00
	900	Rmt	9104.00
	1000	Rmt	10663.00
	1100	Rmt	12236.00
	1200	Rmt	14175.00
	1300	Rmt	16412.00
	1400	Rmt	18551.00
	1500	Rmt	21268.00
	1600	Rmt	23698.00
	1700	Rmt	26131.00
	1800	Rmt	28563.00
f) Factory test Pressure 12 Kg/Sqcm			
Dia. in mm			
	350	Rmt	3158.00
	400	Rmt	3468.00
	450	Rmt	3719.00
	500	Rmt	4175.00
	600	Rmt	5190.00
	700	Rmt	6012.00
	800	Rmt	7476.00
	900	Rmt	9295.00
	1000	Rmt	10892.00
	1100	Rmt	12485.00
	1200	Rmt	14715.00
	1300	Rmt	16945.00
	1400	Rmt	18856.00
	1500	Rmt	21591.00
	1600	Rmt	24060.00
	1700	Rmt	26526.00
	1800	Rmt	28994.00
g) Factory test Pressure 14 Kg/Sqcm			
Dia. in mm			
	350	Rmt	3236.00
	400	Rmt	3561.00
	450	Rmt	3833.00
	500	Rmt	4310.00
	600	Rmt	5391.00
	700	Rmt	6272.00
	800	Rmt	7814.00
	900	Rmt	9739.00
	1000	Rmt	11617.00
	1100	Rmt	13350.00
	1200	Rmt	15476.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	1300	Rmt	17866.00
	1400	Rmt	20360.00
	1500	Rmt	23330.00
	1600	Rmt	26090.00
	1700	Rmt	28851.00
	1800	Rmt	31610.00
	h) Factory test Pressure 16 Kg/Sqcm		
	Dia. in mm		
	350	Rmt	3308.00
	400	Rmt	3656.00
	450	Rmt	3952.00
	500	Rmt	4454.00
	600	Rmt	5588.00
	700	Rmt	6536.00
	800	Rmt	8152.00
	900	Rmt	10821.00
	1000	Rmt	12178.00
	1100	Rmt	14615.00
	1200	Rmt	16870.00
	1300	Rmt	19418.00
	1400	Rmt	21433.00
	1500	Rmt	25457.00
	1600	Rmt	28555.00
	1700	Rmt	31651.00
	1800	Rmt	34746.00
	i) Factory test Pressure 18 Kg/Sqcm		
	Dia. in mm		
	350	Rmt	3383.00
	400	Rmt	3757.00
	450	Rmt	4065.00
	500	Rmt	4592.00
	600	Rmt	5788.00
	700	Rmt	7148.00
	800	Rmt	8920.00
	900	Rmt	11281.00
	1000	Rmt	13257.00
	1100	Rmt	15299.00
	1200	Rmt	17683.00
	1300	Rmt	20367.00
	1400	Rmt	26876.00
	1500	Rmt	30304.00
	1600	Rmt	34158.00
	1700	Rmt	38008.00
	1800	Rmt	41859.00
	j) Factory test Pressure 20 Kg/Sqcm		
	Dia. in mm		
	350	Rmt	3462.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	400	Rmt	3847.00
	450	Rmt	4183.00
	500	Rmt	4734.00
	600	Rmt	5992.00
	700	Rmt	7918.00
	800	Rmt	10535.00
	900	Rmt	12452.00
	1000	Rmt	14980.00
	1100	Rmt	17808.00
	1200	Rmt	22395.00
	1300	Rmt	24641.00
	1400	Rmt	28787.00
	1500	Rmt	32634.00
	1600	Rmt	36498.00
	1700	Rmt	40361.00
	1800	Rmt	44225.00
	Note : 1) Only 85% rates of providing item shall be payable till satisfactory hydraulic testing is given.		
2	Lowering, laying and jointing in proper grade and alignment Pre-Stressed Cement Concrete Pipes with rubber ring joints including cost of conveyance from stores to site of works, all labour involved, etc. complete but excluding cost of rubber rings (for all class of pipes)		
	350	Rmt	116.00
	400	Rmt	163.00
	450	Rmt	197.00
	500	Rmt	222.00
	600	Rmt	298.00
	700	Rmt	326.00
	800	Rmt	367.00
	900	Rmt	378.00
	1000	Rmt	488.00
	1100	Rmt	641.00
	1200	Rmt	686.00
	1300	Rmt	815.00
	1400	Rmt	860.00
	1500	Rmt	1085.00
	1600	Rmt	1221.00
	1700	Rmt	1360.00
	1800	Rmt	1322.00
3	Hydraulic testing of Pre-Stressed Cement Concrete Pipes with rubber ring joints to specified pressure including cost of all materials and labour and water for testing for the length upto 1 km., using reciprocating type pumps which should be able to provide specified test pressure guages and other necessary equipments, labour, operation charges, etc. required for testing. The rate under this item shall also include cost of retesting, if necessary.		
	350	Km	12403.00
	400	Km	18040.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	450	Km	21423.00
	500	Km	24805.00
	600	Km	32698.00
	700	Km	36080.00
	800	Km	40590.00
	900	Km	41718.00
	1000	Km	54120.00
	1100	Km	71033.00
	1200	Km	76670.00
	1300	Km	90200.00
	1400	Km	95838.00
	1500	Km	120643.00
	1600	Km	135300.00
	1700	Km	151085.00
	1800	Km	160105.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	VII. BAR WRAPPED STEEL CYLINDER PIPES (BWSC)		
1	Providing and supplying European Standard EN 639/1994 and EN 641/1994 or AWWA C-303 standard and reinforced concrete pressure pipes cylinder type or IS-15155-2002 (Bar wrapped steel cylinder pipes suitable for overlapping steel welded joint or butt welded steel joints) of following class and diameter including cost of all material and labour required, inspection charges, transportation to stores, transit insurance, loading, unloading and stacking excluding GST levied by GOI & GOM in all respect, etc. complete.		
	i) Factory test pressure a) Site test pressure + 01N/mm ² , For working pressure upto 1 N/mm ² b) Site test pressure + 02N/mm ² , For working pressure upto 1 N/mm ² ii) Site test pressure - 1.5 times working pressure pertaining to the section or 1.1 times static pressure, which ever is more (such pressure is to be control within 25% of pumphead incase of pumping main) iii) Working pressure - The maximum sustained internal pressure excluding surge to which each portion of pipeline may be subjected when installed.		
	Note : 1) Class mentioned below represents the working pressure of pipe. 2) For external coating at site to the joints, necessary polythene wrapping for pouring cement slurry shall also be given free with each pipe.		
	A) Factory test Pressure 4 Kg/Sqcm		
	Dia. in mm		
	300	Rmt	3154.00
	225 mm.	Rmt	3548.00
	400	Rmt	3892.00
	75mm	Rmt	4309.00
	500	Rmt	4793.00
	600	Rmt	6232.00
	700	Rmt	7202.00
	800	Rmt	7822.00
	900	Rmt	10930.00
	1000	Rmt	12596.00
	1100	Rmt	18103.00
	1200	Rmt	20189.00
	1300	Rmt	23577.00
	1400	Rmt	25288.00
	1500	Rmt	26988.00
	1600	Rmt	29074.00
	1700	Rmt	30845.00
	1800	Rmt	32934.00
	B) Factory test Pressure 6 Kg/Sqcm		
	Dia. in mm		
	300	Rmt	3158.00
	350	Rmt	3551.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	400	Rmt	3896.00
	450	Rmt	4311.00
	500	Rmt	4802.00
	600	Rmt	6241.00
	700	Rmt	7209.00
	800	Rmt	7828.00
	900	Rmt	10936.00
	1000	Rmt	12602.00
	1100	Rmt	18112.00
	1200	Rmt	20197.00
	1300	Rmt	23582.00
	1400	Rmt	25296.00
	1500	Rmt	26995.00
	1600	Rmt	29083.00
	1700	Rmt	30851.00
	1800	Rmt	32939.00
	C) Factory test Pressure 8 Kg/Sqcm		
	Dia. in mm		
	300	Rmt	3161.00
	350	Rmt	3557.00
	400	Rmt	3899.00
	450	Rmt	4314.00
	500	Rmt	4812.00
	600	Rmt	6250.00
	700	Rmt	7218.00
	800	Rmt	7838.00
	900	Rmt	10947.00
	1000	Rmt	12613.00
	1100	Rmt	18122.00
	1200	Rmt	20206.00
	1300	Rmt	23592.00
	1400	Rmt	25304.00
	1500	Rmt	27005.00
	1600	Rmt	29093.00
	1700	Rmt	30861.00
	1800	Rmt	32951.00
	D) Factory test Pressure 10 Kg/Sqcm		
	Dia. in mm		
	300	Rmt	3162.00
	350	Rmt	3558.00
	400	Rmt	3903.00
	450	Rmt	4316.00
	500	Rmt	4826.00
	600	Rmt	6266.00
	700	Rmt	7234.00
	800	Rmt	7854.00
	900	Rmt	10962.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	1000	Rmt	12627.00
	1100	Rmt	18135.00
	1200	Rmt	20222.00
	1300	Rmt	23608.00
	1400	Rmt	25318.00
	1500	Rmt	27020.00
	1600	Rmt	29106.00
	1700	Rmt	30877.00
	1800	Rmt	32966.00
	E) Factory test Pressure 12 Kg/Sqcm		
	Dia. in mm		
	300	Rmt	3106.00
	350	Rmt	3495.00
	400	Rmt	3833.00
	450	Rmt	4241.00
	500	Rmt	4757.00
	600	Rmt	6167.00
	700	Rmt	7117.00
	800	Rmt	8801.00
	900	Rmt	10757.00
	1000	Rmt	13373.00
	1100	Rmt	17816.00
	1200	Rmt	19863.00
	1300	Rmt	23186.00
	1400	Rmt	24867.00
	1500	Rmt	26818.00
	1600	Rmt	29666.00
	1700	Rmt	32109.00
	1800	Rmt	35709.00
	F) Factory test Pressure 14 Kg/Sqcm		
	Dia. in mm		
	300	Rmt	3111.00
	350	Rmt	3501.00
	400	Rmt	3836.00
	450	Rmt	4253.00
	500	Rmt	4841.00
	600	Rmt	6279.00
	700	Rmt	8171.00
	800	Rmt	9579.00
	900	Rmt	11816.00
	1000	Rmt	14226.00
	1100	Rmt	17890.00
	1200	Rmt	19856.00
	1300	Rmt	23759.00
	1400	Rmt	26849.00
	1500	Rmt	29873.00
	1600	Rmt	33311.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	1700	Rmt	36575.00
	1800	Rmt	40014.00
	g) Factory test Pressure 16 Kg/Sqcm		
	Dia. in mm		
	300	Rmt	3113.00
	350	Rmt	3504.00
	400	Rmt	3841.00
	450	Rmt	4403.00
	500	Rmt	5192.00
	600	Rmt	6740.00
	700	Rmt	8697.00
	800	Rmt	10422.00
	900	Rmt	12889.00
	1000	Rmt	15666.00
	1100	Rmt	18870.00
	1200	Rmt	22004.00
	1300	Rmt	26213.00
	1400	Rmt	29590.00
	1500	Rmt	32999.00
	1600	Rmt	36698.00
	1700	Rmt	40733.00
	1800	Rmt	45451.00
	h) Factory test Pressure 18 Kg/Sqcm		
	Dia. in mm		
	300	Rmt	3267.00
	350	Rmt	3676.00
	400	Rmt	4083.00
	450	Rmt	4758.00
	500	Rmt	5601.00
	600	Rmt	7329.00
	700	Rmt	9635.00
	800	Rmt	11371.00
	900	Rmt	14054.00
	1000	Rmt	17145.00
	1100	Rmt	20629.00
	1200	Rmt	24037.00
	1300	Rmt	28542.00
	1400	Rmt	32616.00
	1500	Rmt	36024.00
	1600	Rmt	40865.00
	1700	Rmt	45322.00
	1800	Rmt	50163.00
	i) Factory test Pressure 20 Kg/Sqcm		
	Dia. in mm		
	300	Rmt	3333.00
	350	Rmt	3662.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	400	Rmt	4312.00
	450	Rmt	4925.00
	500	Rmt	5972.00
	600	Rmt	7812.00
	700	Rmt	10157.00
	800	Rmt	12398.00
	900	Rmt	15310.00
	1000	Rmt	18731.00
	1100	Rmt	22481.00
	1200	Rmt	26136.00
	1300	Rmt	31046.00
	1400	Rmt	35780.00
	1500	Rmt	40296.00
	1600	Rmt	45008.00
	1700	Rmt	50280.00
	1800	Rmt	55658.00

Notes :

1) For lowering, laying & pouring of cement mortar in the field on joints (after laying and welding), rates as per P. S. C. pipes lowering, laying and jointing shall be adopted.

2) For field welding rates applicable for similar welding in M. S. pipes given in that section shall be adopted.

3) Whenever manufacturer is separate and contractor for lowering laying, jointing and testing is separate, the principal contractor shall be enter into an agreement with B. W. S. C. pipe manufacturer for satisfactory manufacturing transporting, lowering, laying, jointing and testing of pipes.

This footnote shall appear into the tender condition.

4) Only 85% providing rates shall be payable till satisfactory Hydraulic testing is given.

5) No negative tolerance shall be accepted for the M. S. Shell thickness of B. W. S. C. pipes over the thickness mentioned in E. N. 641 of AWWA AC 303.

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	VIII. GLASS REINFORCED PLASTIC PIPES (GRP)		
	Providing and supplying Glass fibre reinforced polyester pipes confirming to BIS - 12709 / BIS 14402 with double bell REKA GRP coupling EPDM rubber gaskets for sealing of following pressure diameter and stiffness class including cost of all material and labour required, insurance, transportation to store, unloading and stacking excluding GST levied by GOI & GOM in all respect etc. complete.		
	A. Class (SN) 2500		
	a) 3 Kg/Sq.cm.		
	300 mm	Rmt	1515.00
	350 mm	Rmt	1752.00
	400 mm	Rmt	1929.00
	225 mm.	Rmt	2170.00
	500 mm	Rmt	2455.00
	75mm	Rmt	3155.00
	700 mm	Rmt	3922.00
	800 mm	Rmt	4815.00
	900 mm	Rmt	5883.00
	1000mm	Rmt	6978.00
	1100mm	Rmt	8483.00
	1200mm	Rmt	9876.00
	1300mm	Rmt	11183.00
	1400mm	Rmt	12913.00
	1500mm	Rmt	14676.00
	1600mm	Rmt	17092.00
	1700mm	Rmt	20427.00
	1800mm	Rmt	22290.00
	1900mm	Rmt	24917.00
	2000mm	Rmt	26939.00
	2100mm	Rmt	30104.00
	2200mm	Rmt	32314.00
	2300mm	Rmt	34922.00
	2400mm	Rmt	37330.00
	b) 6 kg/Sq.cm.		
	300 mm	Rmt	1573.00
	350 mm	Rmt	1797.00
	400 mm	Rmt	2020.00
	450 mm	Rmt	2242.00
	500 mm	Rmt	2549.00
	600 mm	Rmt	3302.00
	700 mm	Rmt	4105.00
	800 mm	Rmt	5030.00
	900 mm	Rmt	6128.00
	1000mm	Rmt	7289.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	1100mm	Rmt	8833.00
	1200mm	Rmt	10221.00
	1300mm	Rmt	11695.00
	1400mm	Rmt	13383.00
	1500mm	Rmt	15266.00
	1600mm	Rmt	17805.00
	1700mm	Rmt	21287.00
	1800mm	Rmt	23163.00
	1900mm	Rmt	25919.00
	2000mm	Rmt	27991.00
	2100mm	Rmt	31293.00
	2200mm	Rmt	33723.00
	2300mm	Rmt	36345.00
	2400mm	Rmt	38811.00
	c) 9 kg/Sq.cm.		
	300 mm	Rmt	1623.00
	350 mm	Rmt	1885.00
	400 mm	Rmt	2102.00
	450 mm	Rmt	2383.00
	500 mm	Rmt	2702.00
	600 mm	Rmt	3504.00
	700 mm	Rmt	4364.00
	800 mm	Rmt	5435.00
	900 mm	Rmt	6640.00
	1000mm	Rmt	7862.00
	1100mm	Rmt	9501.00
	1200mm	Rmt	11032.00
	1300mm	Rmt	12739.00
	1400mm	Rmt	14638.00
	1500mm	Rmt	16624.00
	1600mm	Rmt	19408.00
	1700mm	Rmt	23254.00
	1800mm	Rmt	25431.00
	1900mm	Rmt	28251.00
	2000mm	Rmt	30655.00
	2100mm	Rmt	34114.00
	2200mm	Rmt	36675.00
	2300mm	Rmt	39600.00
	2400mm	Rmt	42706.00
	d) 12 kg/Sq.cm.		
	300 mm	Rmt	1719.00
	350 mm	Rmt	1984.00
	400 mm	Rmt	2210.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	450 mm	Rmt	2886.00
	500 mm	Rmt	2501.00
	600 mm	Rmt	3763.00
	700 mm	Rmt	4668.00
	800 mm	Rmt	5784.00
	900 mm	Rmt	7092.00
	1000mm	Rmt	8454.00
	1100mm	Rmt	10362.00
	1200mm	Rmt	12086.00
	1300mm	Rmt	13677.00
	1400mm	Rmt	15742.00
	1500mm	Rmt	17999.00
	1600mm	Rmt	20877.00
	1700mm	Rmt	25062.00
	1800mm	Rmt	27477.00
	1900mm	Rmt	30415.00
	2000mm	Rmt	33075.00
	2100mm	Rmt	36873.00
	2200mm	Rmt	39790.00
	e) 15 kg/Sq.cm.		
	300 mm	Rmt	1790.00
	350 mm	Rmt	2067.00
	400 mm	Rmt	2300.00
	450 mm	Rmt	2650.00
	500 mm	Rmt	3046.00
	600 mm	Rmt	4025.00
	700 mm	Rmt	5019.00
	800 mm	Rmt	6263.00
	900 mm	Rmt	7721.00
	1000mm	Rmt	9163.00
	1100mm	Rmt	11242.00
	1200mm	Rmt	13044.00
	1300mm	Rmt	14972.00
	1400mm	Rmt	17233.00
	1500mm	Rmt	19550.00
	1600mm	Rmt	22684.00
	1700mm	Rmt	27612.00
	1800mm	Rmt	30176.00
	1900mm	Rmt	33695.00
	2000mm	Rmt	36671.00
	B. Class (SN) 5000		
	a) 3 Kg/Sq.cm.		
	300 mm	Rmt	1624.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	350 mm	Rmt	1905.00
	400 mm	Rmt	2170.00
	450 mm	Rmt	2470.00
	500 mm	Rmt	2732.00
	600 mm	Rmt	3561.00
	700 mm	Rmt	4457.00
	800 mm	Rmt	5523.00
	900 mm	Rmt	6802.00
	1000mm	Rmt	8089.00
	1100mm	Rmt	9807.00
	1200mm	Rmt	11494.00
	1300mm	Rmt	13088.00
	1400mm	Rmt	15041.00
	1500mm	Rmt	17166.00
	1600mm	Rmt	19954.00
	1700mm	Rmt	23911.00
	1800mm	Rmt	26225.00
	1900mm	Rmt	29189.00
	2000mm	Rmt	31747.00
	2100mm	Rmt	35346.00
	2200mm	Rmt	38152.00
	b) 6 Kg/Sq.cm.		
	300 mm	Rmt	1649.00
	350 mm	Rmt	1938.00
	400 mm	Rmt	2141.00
	450 mm	Rmt	2441.00
	500 mm	Rmt	2812.00
	600 mm	Rmt	3638.00
	700 mm	Rmt	4571.00
	800 mm	Rmt	5656.00
	900 mm	Rmt	6967.00
	1000mm	Rmt	8271.00
	1100mm	Rmt	10117.00
	1200mm	Rmt	11759.00
	1300mm	Rmt	13438.00
	1400mm	Rmt	15419.00
	1500mm	Rmt	17566.00
	1600mm	Rmt	20446.00
	1700mm	Rmt	24495.00
	1800mm	Rmt	26858.00
	1900mm	Rmt	29918.00
	2000mm	Rmt	32596.00
	2100mm	Rmt	36260.00
	2200mm	Rmt	39200.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	c) 9 Kg/Sq.cm.		
	300 mm	Rmt	1709.00
	350 mm	Rmt	2003.00
	400 mm	Rmt	2254.00
	450 mm	Rmt	2566.00
	500 mm	Rmt	2936.00
	600 mm	Rmt	4034.00
	700 mm	Rmt	4791.00
	800 mm	Rmt	6170.00
	900 mm	Rmt	7283.00
	1000mm	Rmt	8689.00
	1100mm	Rmt	14027.00
	1200mm	Rmt	15959.00
	1300mm	Rmt	17981.00
	1400mm	Rmt	20128.00
	1500mm	Rmt	23057.00
	1600mm	Rmt	26194.00
	1700mm	Rmt	31536.00
	1800mm	Rmt	34364.00
	d) 12 Kg/Sq.cm.		
	300 mm	Rmt	1758.00
	350 mm	Rmt	2085.00
	400 mm	Rmt	2305.00
	450 mm	Rmt	2669.00
	500 mm	Rmt	3048.00
	600 mm	Rmt	4025.00
	700 mm	Rmt	5073.00
	800 mm	Rmt	6261.00
	900 mm	Rmt	7819.00
	1000mm	Rmt	9196.00
	1100mm	Rmt	11303.00
	1200mm	Rmt	13135.00
	1300mm	Rmt	15054.00
	1400mm	Rmt	17347.00
	1500mm	Rmt	19703.00
	1600mm	Rmt	22773.00
	1700mm	Rmt	27413.00
	1800mm	Rmt	30136.00
	1900mm	Rmt	33396.00
	e) 15 Kg/Sq.cm.		
	300 mm	Rmt	1821.00
	350 mm	Rmt	2167.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	400 mm	Rmt	2423.00
	450 mm	Rmt	2798.00
	500 mm	Rmt	3193.00
	600 mm	Rmt	4238.00
	700 mm	Rmt	5335.00
	800 mm	Rmt	6675.00
	900 mm	Rmt	8232.00
	1000mm	Rmt	9814.00
	1100mm	Rmt	11937.00
	1200mm	Rmt	13987.00
	1300mm	Rmt	15983.00
	1400mm	Rmt	18442.00
	1500mm	Rmt	20975.00
	1600mm	Rmt	24285.00
	1700mm	Rmt	29161.00
	1800mm	Rmt	32117.00

Note :

1) For lowering, laying & jointing rates of GRP pipes 50 % rates for lowering, laying & jointing of PSC pipes of corresponding diameter shall be adopted.

2) Where manufacturer is separate & contractor for lowering, laying jointing & testing is separate the principal contractor shall enter into an agreement with G.R.P. pipe manufacture for satisfactory manufacturing, transporting, lowering, laying, jointing & testing of pipe.

This foot Note shall appear in tender conditions.

3) Only 85 % Payment shall be payable till satisfactory hydraulic testing is given.

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
	IX. H. D. P. E. PIPES		
1	Providing and supplying in standard lengths H.D. Polyethelene Pipes, confirming to IS 4984 /14151 / 12786 / 13488 with necessary jointing material like mechanical connector i. e. thread / insert joint / quick release coupler joint /compression fitting joint or flanged joint excluding coupler/ specials, including transportation and freight charges, inspection charges, loading / unloading charges, conveyance to the departmental stores & stacking the same in closed shade duly protecting from sunrays & rains, excluding GST levied by GI & GOM in all respect etc. complete. As per IS:4984-2016(HDPE Pipes upto 110mm dia. shall be		
A)	PE 100		
	a) 6 Kg/cm²,		
	63mm	Rmt	87.00
	75mm	Rmt	122.00
	90mm	Rmt	173.00
	110mm	Rmt	251.00
	225 mm.	Rmt	344.00
	140mm	Rmt	432.00
	75mm	Rmt	559.00
	180mm	Rmt	704.00
	200mm	Rmt	825.00
	225mm	Rmt	1063.00
	250mm	Rmt	1307.00
	280mm	Rmt	1637.00
	315mm	Rmt	2074.00
	355mm	Rmt	2628.00
	400mm	Rmt	3443.00
	450 mm	Rmt	4536.00
	500 mm	Rmt	5609.00
	560 mm	Rmt	7021.00
	630 mm	Rmt	8836.00
	710 mm	Rmt	11409.00
	800 mm	Rmt	13754.00
	900 mm	Rmt	17425.00
	1000 mm	Rmt	21487.00
	b) 8 Kg/cm²		
	63mm	Rmt	110.00
	75mm	Rmt	147.00
	90mm	Rmt	210.00
	110mm	Rmt	307.00
	125mm	Rmt	398.00
	140mm	Rmt	545.00
	160mm	Rmt	706.00
	180mm	Rmt	891.00
	200mm	Rmt	1048.00
	225mm	Rmt	1346.00
	250mm	Rmt	1659.00
	280mm	Rmt	2080.00
	315mm	Rmt	2635.00
	355mm	Rmt	3334.00
	400mm	Rmt	4377.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
	IX. H. D. P. E. PIPES		
	450 mm	Rmt	5852.00
	500 mm	Rmt	7218.00
	560 mm	Rmt	9062.00
	630 mm	Rmt	11402.00
	710 mm	Rmt	14722.00
	800 mm	Rmt	17760.00
	900 mm	Rmt	21942.00
	1000 mm	Rmt	22481.00
	c) 10 Kg/cm2		
	63mm	Rmt	135.00
	75mm	Rmt	191.00
	90mm	Rmt	275.00
	110mm	Rmt	405.00
	125mm	Rmt	520.00
	140mm	Rmt	650.00
	160mm	Rmt	845.00
	180mm	Rmt	1070.00
	200mm	Rmt	1255.00
	225mm	Rmt	1607.00
	250mm	Rmt	2005.00
	280mm	Rmt	2477.00
	315mm	Rmt	3180.00
	355mm	Rmt	3991.00
	400mm	Rmt	5316.00
	450 mm	Rmt	7073.00
	500 mm	Rmt	8743.00
	560 mm	Rmt	10515.00
	630 mm	Rmt	13802.00
	710 mm	Rmt	17532.00
	800 mm	Rmt	21131.00
	900 mm	Rmt	21383.00
	1000 mm	Rmt	24024.00
	d) 12.5 Kg/cm2		
	63mm	Rmt	161.00
	75mm	Rmt	226.00
	90mm	Rmt	325.00
	110mm	Rmt	479.00
	125mm	Rmt	618.00
	140mm	Rmt	776.00
	160mm	Rmt	1009.00
	180mm	Rmt	1275.00
	200mm	Rmt	1499.00
	225mm	Rmt	1934.00
	250mm	Rmt	2378.00
	280mm	Rmt	2983.00
	315mm	Rmt	3776.00
	355mm	Rmt	4795.00
	400mm	Rmt	6302.00
	450 mm	Rmt	8422.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
	IX. H. D. P. E. PIPES		
	500 mm	Rmt	10380.00
	560 mm	Rmt	12634.00
	630 mm	Rmt	16595.00
	710 mm	Rmt	17114.00
	800 mm	Rmt	18747.00
	900 mm	Rmt	23751.00
	1000 mm	Rmt	28927.00
	e) 16 Kg/cm2		
	63mm	Rmt	183.00
	75mm	Rmt	260.00
	90mm	Rmt	372.00
	110mm	Rmt	549.00
	125mm	Rmt	711.00
	140mm	Rmt	886.00
	160mm	Rmt	1163.00
	180mm	Rmt	1463.00
	200mm	Rmt	2297.00
	225mm	Rmt	2903.00
	250mm	Rmt	3581.00
	280mm	Rmt	4491.00
	315mm	Rmt	5677.00
	355mm	Rmt	7200.00
	400mm	Rmt	9329.00
	450 mm	Rmt	11824.00
	500 mm	Rmt	14581.00
	560 mm	Rmt	16041.00
	630 mm	Rmt	16842.00
	710 mm	Rmt	17980.00
	800 mm	Rmt	21663.00
	900 mm	Rmt	27418.00
	1000 mm	Rmt	33664.00
2	Lowering, Laying and Jointing H. D. P. E./M. D. P. E. pipes in proper position including all specials by compression fitting/electrofusion and butt fusion jointing procedure as per relevent IS Code complete with all materials for jointing procedure like Electrofusion machine, Electric heater/ butt fusion welding machine with hydraulic jack, top loading clamp etc. and all labours as directed by engineer in charge as per IS-7634 Part II		
	For all classes.		
	20mm	Rmt	11.00
	25mm	Rmt	17.00
	32mm	Rmt	21.00
	40mm	Rmt	28.00
	50mm	Rmt	34.00
	63mm	Rmt	41.00
	75mm	Rmt	44.00
	90mm	Rmt	61.00
	110mm	Rmt	64.00
	125mm	Rmt	73.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
	IX. H. D. P. E. PIPES		
	140mm	Rmt	97.00
	160mm	Rmt	105.00
	180mm	Rmt	105.00
	200mm	Rmt	117.00
	225mm	Rmt	150.00
	250mm	Rmt	154.00
	280mm	Rmt	191.00
	315mm	Rmt	210.00
	355mm	Rmt	229.00
	400mm	Rmt	232.00
	450 mm	Rmt	262.00
	500 mm	Rmt	337.00
	560 mm	Rmt	378.00
	630 mm	Rmt	425.00
3	Hydraulic testing of H. D. P. E./ M. D. P. E. pipe line to specified pressure including cost of all materials and labour and water for testing for specified length including cutting, placing end cap making arrangement for filling safe water using reciprocating type pumps which should be able to provide specified test pressure gauges and other necessary equipments, labour, operation charges, etc. required for testing. The rate under this item shall also include cost of retesting, if necessary and reinstating to original position.		
	20mm	Km	1128.00
	25mm	Km	2255.00
	32mm	Km	2255.00
	40mm	Km	3383.00
	50mm	Km	3383.00
	63mm	Km	4510.00
	75mm	Km	4510.00
	90mm	Km	6765.00
	110mm	Km	6765.00
	125mm	Km	7893.00
	140mm	Km	11275.00
	160mm	Km	11275.00
	180mm	Km	11275.00
	200mm	Km	12403.00
	225mm	Km	16913.00
	250mm	Km	16913.00
	280mm	Km	21423.00
	315mm	Km	23678.00
	355mm	Km	25933.00
	400mm	Km	25933.00
	450 mm	Km	29315.00
	500 mm	Km	37208.00
	560 mm	Km	41718.00
	630 mm	Km	47355.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
	IX. H. D. P. E. PIPES		
4	Providing supplying in standard length (PE material) HDPE Double wall corrugated pipe for non pressure underground drainage and sewerage with smooth internal & corrugated external surface confirming to IS 16098:Part-2 2013 with spigot or plain end with necessary jointing material coupler excluding all statutory duties and taxes such as GST levied by Gol and GoM in all respect, transportation and frieght charges, inspection charges, loading and unloading charges conveyance to departmental store/site and stacking the same in in closed shade duly protecting from direst sun ray and rains etc. complete. Correct as above		
	CL SN4		
	ID 135 mm dia	Rmt	249.00
	ID 150 mm dia	Rmt	318.00
	ID 170mm dia	Rmt	370.00
	ID 200 mm dia	Rmt	506.00
	ID 250mm dia	Rmt	835.00
	ID 300 mm dia	Rmt	1289.00
	ID 400 mm dia	Rmt	1740.00
	ID 500 mm dia	Rmt	2874.00
	ID 600 mm dia	Rmt	4374.00
	ID 800 mm dia	Rmt	7093.00
	CL SN8		
	ID 135 mm dia	Rmt	298.00
	ID 150 mm dia	Rmt	381.00
	ID 170mm dia	Rmt	443.00
	ID 200 mm dia	Rmt	608.00
	ID 250mm dia	Rmt	1002.00
	ID 300 mm dia	Rmt	1548.00
	ID 400 mm dia	Rmt	2088.00
	ID 500 mm dia	Rmt	3449.00
	ID 600 mm dia	Rmt	5249.00
	ID 800 mm dia	Rmt	8510.00
5	Lowering, Laying and Jointing (PE material) HDPE double wall corrugated pipe for non pressure underground by heating to the ends of pipes with the help of tefflon coated electric heater to the required temparature and then pressing the ends together against each other, to form a monolithic & leak proof joint by thermosetting process. The pressing may be required to be done with Jacks/ Hydraulic Jacks/Butt fusion machine etc. complete with all materials labours as directed by Engineer - in - charge. including		
	Rate for SN 4 and SN 8		
	ID 135 mm dia	Rmt	34.00
	ID 150 mm dia	Rmt	36.00
	ID 170mm dia	Rmt	40.00
	ID 200 mm dia	Rmt	43.00
	ID 250mm dia	Rmt	53.00
	ID 300 mm dia	Rmt	65.00
	ID 400 mm dia	Rmt	79.00
	ID 500 mm dia	Rmt	94.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
	IX. H. D. P. E. PIPES		
	ID 600 mm dia	Rmt	108.00
	ID 800 mm dia	Rmt	125.00
6	Hydraulic testing of HDPE double wall corrugated pipe for non pressure underground line to specified pressure including cost of all materials and labour and water for testing for specified length including cutting, placing end cap making arrangement for filling safe water using reciprocating type pumps which should be able to provide specified test pressure gauges and other necessary equipments, labour, operation charges, etc. required for testing. The rate under this item shall also include cost of retesting, if necessary and reinstating to original position		
	Rate for SN 4 and SN 8		
	ID 135 mm dia	Km	3383.00
	ID 150 mm dia	Km	3383.00
	ID 170mm dia	Km	4510.00
	ID 200 mm dia	Km	4510.00
	ID 250mm dia	Km	5638.00
	ID 300 mm dia	Km	6765.00
	ID 400 mm dia	Km	7893.00
	ID 500 mm dia	Km	9020.00
	ID 600 mm dia	Km	11275.00
	ID 800 mm dia	Km	12403.00
	Only 85% rates of providing item shall be payable till satisfactory hydraulic testing is given.		

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	X. M. D. P. E. PIPES & HDPE / MDPE Specials		
1	Providing and Supplying Blue MDPE pipes conforming to ISO 4427:1996 manufactured from virgin resin PE 80 Food grade compounded Raw Material having Blue Colour only with quality assurance certificate from quality agencies like WRC /CIPET (India) /DVGM /KIWA /SPGN etc. for usage in Drinking Water system. The cost shall include testing of all materials, Inspection charges, transportation up to store, transit insurance, loading, as specified and directed, unloading, stacking excluding GST levied by GOI & GOM in all respect, etc. complete as specified and directed.		
	a) PN 16 (SDR 9)		
	20mm	Rmt	23.00
	25mm	Rmt	31.00
	32mm	Rmt	51.00
	40mm	Rmt	75.00
	225 mm.	Rmt	113.00
	63mm	Rmt	167.00
	75mm	Rmt	225.00
	90mm	Rmt	326.00
	110mm	Rmt	483.00
	125mm	Rmt	624.00
	140mm	Rmt	784.00
	160mm	Rmt	1039.00
	180mm	Rmt	1316.00
	200mm	Rmt	1627.00
	225mm	Rmt	2060.00
	250mm	Rmt	2534.00
	280mm	Rmt	3184.00
	315mm	Rmt	4095.00
	b) PN 12.5 (SDR 11)		
	25mm	Rmt	29.00
	32mm	Rmt	48.00
	40mm	Rmt	71.00
	50mm	Rmt	100.00
	63mm	Rmt	135.00
	75mm	Rmt	188.00
	90mm	Rmt	273.00
	110mm	Rmt	401.00
	125mm	Rmt	523.00
	140mm	Rmt	652.00
	160mm	Rmt	854.00
	180mm	Rmt	1108.00
	200mm	Rmt	1357.00
	225mm	Rmt	1718.00
	250mm	Rmt	2128.00
	280mm	Rmt	2652.00
	315mm	Rmt	3362.00
	C) PN 10 (SDR 13.6)		
	63mm	Rmt	115.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	75mm	Rmt	162.00
	90mm	Rmt	233.00
	110mm	Rmt	344.00
	125mm	Rmt	443.00
	140mm	Rmt	556.00
	160mm	Rmt	726.00
	180mm	Rmt	919.00
	200mm	Rmt	1133.00
	225mm	Rmt	1436.00
	250mm	Rmt	1767.00
	280mm	Rmt	2215.00
	315mm	Rmt	2798.00
	D) PN 8 (SDR 17)		
	63mm	Rmt	92.00
	75mm	Rmt	131.00
	90mm	Rmt	189.00
	110mm	Rmt	280.00
	125mm	Rmt	358.00
	140mm	Rmt	450.00
	160mm	Rmt	588.00
	180mm	Rmt	747.00
	200mm	Rmt	919.00
	225mm	Rmt	1167.00
	250mm	Rmt	1463.00
	280mm	Rmt	1832.00
	315mm	Rmt	2321.00
	E) PN 6 (SDR 21)		
	63mm	Rmt	71.00
	75mm	Rmt	104.00
	90mm	Rmt	146.00
	110mm	Rmt	221.00
	125mm	Rmt	279.00
	140mm	Rmt	353.00
	160mm	Rmt	461.00
	180mm	Rmt	576.00
	200mm	Rmt	717.00
	225mm	Rmt	907.00
	250mm	Rmt	1110.00
	280mm	Rmt	1403.00
	315mm	Rmt	1764.00
2	Providing & Supply of Electro Fusion Fittings in accordance with BS EN12201: Part-3 suitable for drinking water with in black/ blue colour manufactured from compounded PE80/ PE100 virgin polymer and compatible with PE80/PE100 pipes, in pressure rating SDR11 with min PN12.5 rated for water application and shall be inclusive of all cost such as testing, inspection charges, transportation up to store, transit insurance, loading, unloading, stacking excluding GST levied by GOI & GOM in all respect, etc. complete.		

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	Couplers		
	Couplers 20	No.	87.00
	Couplers 25	No.	87.00
	Couplers 32	No.	87.00
	Couplers 40	No.	151.00
	Couplers 50	No.	188.00
	Couplers 63	No.	224.00
	Couplers 75	No.	379.00
	Couplers 90	No.	415.00
	Couplers 110	No.	577.00
	Couplers 125	No.	588.00
	Couplers 140	No.	1257.00
	Couplers 160	No.	1366.00
	Couplers 180	No.	1960.00
	Couplers 200	No.	2202.00
	Couplers 225	No.	2775.00
	Couplers 250	No.	4325.00
	Couplers 280	No.	4871.00
	Couplers 315	No.	5321.00
	Couplers 355	No.	5818.00
	Couplers 400	No.	7582.00
	Couplers 450	No.	13734.00
	Couplers 500	No.	14448.00
	Equal Tee		
	Equal Tee 20	No.	183.00
	Equal Tee 25	No.	183.00
	Equal Tee 32	No.	183.00
	Equal Tee 40	No.	404.00
	Equal Tee 50	No.	412.00
	Equal Tee 63	No.	674.00
	Equal Tee 75	No.	988.00
	Equal Tee 90	No.	1409.00
	Equal Tee 110	No.	1957.00
	Equal Tee 125	No.	2700.00
	Equal Tee 160	No.	4680.00
	Equal Tee 180	No.	5878.00
	Equal Tee 200	No.	9422.00
	Equal Tee 225	No.	10626.00
	Equal Tee 250	No.	15567.00
	Equal Tee 315	No.	16906.00
	Equal Tee 400	No.	23560.00
	Elbow 90 Deg.		
	Elbow 90 Deg. 20	No.	97.00
	Elbow 90 Deg. 25	No.	97.00
	Elbow 90 Deg. 32	No.	98.00
	Elbow 90 Deg. 40	No.	133.00
	Elbow 90 Deg. 50	No.	158.00
	Elbow 90 Deg. 63	No.	219.00
	Elbow 90 Deg. 75	No.	343.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	Elbow 90 Deg. 90	No.	405.00
	Elbow 90 Deg. 110	No.	557.00
	Elbow 90 Deg. 125	No.	710.00
	Elbow 90 Deg. 160	No.	1554.00
	Elbow 90 Deg. 180	No.	1801.00
	Elbow 90 Deg. 200	No.	2331.00
	Elbow 90 Deg. 225	No.	5080.00
	Elbow 90 Deg. 250	No.	9519.00
	Elbow 90 Deg. 315	No.	9686.00
	Elbow 90 Deg. 400	No.	13121.00
	Elbow 45 Deg.		
	Elbow 45 Deg. 32	No.	104.00
	Elbow 45 Deg. 40	No.	126.00
	Elbow 45 Deg. 50	No.	150.00
	Elbow 45 Deg. 63	No.	209.00
	Elbow 45 Deg. 75	No.	326.00
	Elbow 45 Deg. 90	No.	385.00
	Elbow 45 Deg. 110	No.	557.00
	Elbow 45 Deg. 125	No.	710.00
	Elbow 45 Deg. 160	No.	1308.00
	Elbow 45 Deg. 180	No.	1714.00
	Elbow 45 Deg. 200	No.	1801.00
	Elbow 45 Deg. 225	No.	2331.00
	Elbow 45 Deg. 250	No.	5080.00
	Elbow 45 Deg. 315	No.	9658.00
	Elbow 45 Deg. 400	No.	13099.00
	Reducer		
	Reducer 25X20	No.	131.00
	Reducer 32X20	No.	137.00
	Reducer 32X25	No.	144.00
	Reducer 40X32	No.	156.00
	Reducer 50X32	No.	156.00
	Reducer 50X40	No.	156.00
	Reducer 63X32	No.	188.00
	Reducer 63X40	No.	188.00
	Reducer 63X50	No.	188.00
	Reducer 75 x 63	No.	425.00
	Reducer 90X63	No.	467.00
	Reducer 90X75	No.	474.00
	Reducer 110X50	No.	576.00
	Reducer 110X63	No.	576.00
	Reducer 110X75	No.	606.00
	Reducer 110X90	No.	606.00
	Reducer 125X90	No.	673.00
	Reducer 160X90	No.	1129.00
	Reducer 160X110	No.	1191.00
	Reducer 180X125	No.	1483.00
	Reducer 200X63	No.	1712.00
	Reducer 200X90	No.	1828.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	Reducer 200X110	No.	2123.00
	Reducer 200X160	No.	1758.00
	Reducer 225X160	No.	2571.00
	Reducer 250X110	No.	3297.00
	Reducer 250X160	No.	3551.00
	Reducer 250X200	No.	3883.00
	Reducer 315 x 200	No.	7379.00
	Reducer 315 x 250	No.	7481.00
	Reducer 400 x 200	No.	7947.00
	Reducer 400 x 315	No.	8535.00
	End Cap		
	End Cap 20	No.	34.00
	End Cap 25	No.	34.00
	End Cap 32	No.	48.00
	End Cap 40	No.	52.00
	End Cap 50	No.	55.00
	End Cap 63	No.	73.00
	End Cap 75	No.	268.00
	End Cap 90	No.	305.00
	End Cap 110	No.	428.00
	End Cap 125	No.	543.00
	End Cap 140	No.	888.00
	End Cap 160	No.	962.00
	End Cap 180	No.	1055.00
	End Cap 200	No.	1788.00
	End Cap 225	No.	3071.00
	End Cap 250	No.	3958.00
	End Cap 315	No.	6548.00
	Ferrule Tapping Tee		
	Ferrule tapping tee 63 x 1/2"	No.	658.00
	Ferrule tapping tee 63 x 3/4"	No.	658.00
	Ferrule tapping tee 63 x 1"	No.	658.00
	Ferrule tapping tee 75 x 1/2"	No.	658.00
	Ferrule tapping tee 75 x 3/4"	No.	658.00
	Ferrule tapping tee 75 x 1"	No.	658.00
	Ferrule tapping tee 90 x 1/2"	No.	658.00
	Ferrule tapping tee 90 x 3/4"	No.	649.00
	Ferrule tapping tee 90 x 1"	No.	649.00
	Ferrule tapping tee 90 x 1 1/4"	No.	855.00
	Ferrule tapping tee 90 x 1 1/2"	No.	855.00
	Ferrule tapping tee 90 x 2"	No.	855.00
	Ferrule tapping tee 110 x 1/2"	No.	658.00
	Ferrule tapping tee 110 x 3/4"	No.	658.00
	Ferrule tapping tee 110 x 1"	No.	658.00
	Ferrule tapping tee 110 x 1 1/4"	No.	855.00
	Ferrule tapping tee 100 x 1 1/2"	No.	855.00
	Ferrule tapping tee 110 x 2"	No.	855.00
	Ferrule tapping tee 160 x 1/2"	No.	658.00
	Ferrule tapping tee 160 x 3/4"	No.	658.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	Ferrule tapping tee 160 x 1"	No.	658.00
	Ferrule tapping tee 160 x 1 1/4"	No.	931.00
	Ferrule tapping tee 160 x 1 1/2"	No.	931.00
	Ferrule tapping tee 160 x 2"	No.	931.00
	Ferrule tapping tee 200 x 1 1/2"	No.	929.00
	Ferrule tapping tee 200 x 3/4"	No.	929.00
	Ferrule tapping tee 200 x 1"	No.	929.00
	Ferrule tapping tee 200 x 1 1/4"	No.	1340.00
	Ferrule tapping tee 200 x 1 1/2"	No.	1340.00
	Ferrule tapping tee 200 x 2"	No.	1340.00
	Ferrule tapping tee 250 x 1 1/2"	No.	929.00
	Ferrule tapping tee 250 x 3/4"	No.	929.00
	Ferrule tapping tee 250 x 1"	No.	929.00
	Ferrule tapping tee 250 x 1 1/4"	No.	1340.00
	Ferrule tapping tee 250 x 1 1/2"	No.	1340.00
	Ferrule tapping tee 250 x 2"	No.	1340.00
	Ferrule tapping tee 315 x 1 1/2"	No.	1106.00
	Ferrule tapping tee 315 x 3/4"	No.	1106.00
	Ferrule tapping tee 315 x 1"	No.	1106.00
	Ferrule tapping tee 315 x 1 1/4"	No.	1502.00
	Ferrule tapping tee 315 x 1 1/2"	No.	1502.00
	Ferrule tapping tee 315 x 2"	No.	1502.00
	Electrofusion Reducing Tee		
	Reducing Tee 32 x 32 x 20	No.	153.00
	Reducing Tee 32 x 32 x 25	No.	153.00
	Reducing Tee 40 x 40 x 20	No.	344.00
	Reducing Tee 40 x 40 x 25	No.	348.00
	Reducing Tee 40 x 40 x 32	No.	373.00
	Reducing Tee 50 x 50 x 20	No.	383.00
	Reducing Tee 50 x 50 x 25	No.	393.00
	Reducing Tee 50 x 50 x 32	No.	407.00
	Reducing Tee 50 x 50 x 40	No.	427.00
	Reducing Tee 63 x 63 x 20	No.	614.00
	Reducing Tee 63 x 63 x 25	No.	628.00
	Reducing Tee 63 x 63 x 32	No.	642.00
	Reducing Tee 63 x 63 x 40	No.	659.00
	Reducing Tee 63 x 63 x 50	No.	682.00
	Reducing Tee 75 x 75 x 40	No.	873.00
	Reducing Tee 75 x 75 x 50	No.	887.00
	Reducing Tee 75 x 75 x 63	No.	906.00
	Reducing Tee 90 x 90 x 50	No.	1271.00
	Reducing Tee 90 x 90 x 63	No.	1299.00
	Reducing Tee 90 x 90 x 75	No.	1322.00
	Reducing Tee 110 x 110 x 50	No.	1756.00
	Reducing Tee 110 x 110 x 63	No.	1785.00
	Reducing Tee 110 x 110 x 75	No.	1812.00
	Reducing Tee 110 x 110 x 90	No.	1844.00
	Reducing Tee 125 x 125 x 63	No.	2368.00
	Reducing Tee 125 x 125 x 75	No.	2394.00
	Reducing Tee 125 x 125 x 90	No.	2425.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	Reducing Tee 125 x 125 x 110	No.	2454.00
	Reducing Tee 160 x 160 x 50	No.	4128.00
	Reducing Tee 160 x 160 x 63	No.	4146.00
	Reducing Tee 160 x 160 x 75	No.	4167.00
	Reducing Tee 160 x 160 x 90	No.	4267.00
	Reducing Tee 160 x 160 x 110	No.	4362.00
	Reducing Tee 180 x 180 x 160	No.	5378.00
	Reducing Tee 200 x 200 x 63	No.	8539.00
	Reducing Tee 200 x 200 x 75	No.	8581.00
	Reducing Tee 200 x 200 x 90	No.	8620.00
	Reducing Tee 200 x 200 x 110	No.	8670.00
	Reducing Tee 200 x 200 x 160	No.	8717.00
	Reducing Tee 250 x 250 x 63	No.	13181.00
	Reducing Tee 250 x 250 x 75	No.	13235.00
	Reducing Tee 250 x 250 x 90	No.	13277.00
	Reducing Tee 250 x 250 x 110	No.	13317.00
	Reducing Tee 250 x 250 x 160	No.	13355.00
	Reducing Tee 250 x 250 x 200	No.	13412.00
	Reducing Tee 315 x 315 x 200	No.	17647.00
	Reducing Tee 315 x 315 x 250	No.	18016.00
	Reducing Tee 400 x 400 x 110	No.	23037.00
	Reducing Tee 400 x 400 x 160	No.	23553.00
	Reducing Tee 400 x 400 x 200	No.	24055.00
	Reducing Tee 400 x 400 x 250	No.	24417.00
	Reducing Tee 400 x 400 x 315	No.	24801.00
	Spigot Long Neck Pipe End (Stub End) for Electro Fusion joint		
	LNPE 63	No.	353.00
	LNPE 75	No.	397.00
	LNPE 90	No.	499.00
	LNPE 110	No.	761.00
	LNPE 125	No.	1197.00
	LNPE 140	No.	1363.00
	LNPE 160	No.	1951.00
	LNPE 180	No.	2630.00
	LNPE 200	No.	3093.00
	LNPE 225	No.	3710.00
	LNPE 250	No.	4260.00
	LNPE 280	No.	4769.00
	LNPE 315	No.	6199.00
3	Providing & Supply of Compression fittings , PN16 rated in conformation to ISO:14236-2000 and shall be tested as per ISO:3459, ISO:3501 & ISO:3503, suitable for drinking water & approved by WRAS, UK/ KIWA etc, in food grade polypropylene and shall be inclusive of all cost such as testing, inspection charges, transportation up to store, transit insurance, loading, unloading, stacking excluding GST levied by GOI & GOM in all respect, etc. complete.		
	Male Adaptor		
	Male Adaptor 20x1/2"	No.	54.00
	Male Adaptor 25x3/4"	No.	62.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	Male Adaptor 32x1"	No.	80.00
	Male Adaptor 40x1 1/4"	No.	146.00
	Male Adaptor 50x1 1/2"	No.	192.00
	Male Adaptor 63x2"	No.	273.00
	Female Adaptor		
	Female Adaptor 20x1/2"	No.	58.00
	Female Adaptor 25x3/4"	No.	68.00
	Female Adaptor 32x1"	No.	86.00
	Female Adaptor 40x1 1/4"	No.	161.00
	Female Adaptor 50x1 1/2"	No.	205.00
	Female Adaptor 63x2"	No.	290.00
	Coupling		
	Coupling 20x20	No.	56.00
	Coupling 25x25	No.	61.00
	Coupling 32x32	No.	78.00
	Coupling 40x40	No.	148.00
	Coupling 50x50	No.	191.00
	Coupling 63x63	No.	276.00
	Reducing Coupling		
	Reducing Coupling 25x20	No.	102.00
	Reducing Coupling 32x20	No.	135.00
	Reducing Coupling 32x25	No.	135.00
	Reducing Coupling 40x25	No.	230.00
	Reducing Coupling 40x32	No.	230.00
	Reducing Coupling 50x32	No.	297.00
	Reducing Coupling 50x40	No.	297.00
	Reducing Coupling 63x50	No.	422.00
	90 Deg. Elbow		
	90 Deg. Elbow 20	No.	104.00
	90 Deg. Elbow 25	No.	124.00
	90 Deg. Elbow 32	No.	151.00
	90 Deg. Elbow 40	No.	248.00
	90 Deg. Elbow 50	No.	352.00
	90 Deg. Elbow 63	No.	477.00
	90 Deg. Elbow threaded male take off		
	90 Deg. Elbow threaded male off take 20x1/2"	No.	62.00
	90 Deg. Elbow threaded male off take 25x3/4"	No.	76.00
	90 Deg. Elbow threaded male off take 32x1"	No.	98.00
	90 Deg. Elbow threaded male off take 40x1 1/4"	No.	156.00
	90 Deg. Elbow threaded male off take 50x1 1/2"	No.	214.00
	90 Deg. Elbow threaded male off take 63x2"	No.	297.00
	90 Deg. Elbow threaded female off take		
	90 Deg. Elbow threaded female off take 20x1/2"	No.	71.00
	90 Deg. Elbow threaded female off take 25x3/4"	No.	87.00
	90 Deg. Elbow threaded female off take 32x1"	No.	105.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	90 Deg. Elbow threaded female off take 40x1 1/4"	No.	204.00
	90 Deg. Elbow threaded female off take 50x1 1/2"	No.	267.00
	90 Deg. Elbow threaded female off take 63x2"	No.	352.00
	Equal Tee		
	Equal Tee 20x20x20	No.	124.00
	Equal Tee 25x25x25	No.	162.00
	Equal Tee 32x32x32	No.	209.00
	Equal Tee 40x40x40	No.	347.00
	Equal Tee 50x50x50	No.	469.00
	Equal Tee 63x63x63	No.	667.00
	End Cap		
	End Cap 20	No.	31.00
	End Cap 25	No.	31.00
	End Cap 32	No.	44.00
	End Cap 40	No.	48.00
	End Cap 50	No.	50.00
	End Cap 63	No.	67.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	XI. P. C. C. PIPES		
1	Providing and Supplying Prestressed Concrete Cylinder Pipes suitable for sliding overlap weld joint or confined rubber ring joint with necessary rubber ring of following class and diameter including cost of transportation, inspection charges to store, transit insurance, unloading and stacking excluding GST levied by GOI & GOM in all respect etc. complete.		
	i) Factory test pressure a) Site test pressure + 01N/mm ² , For working pressure upto 1 N/mm ² b) Site test pressure + 02N/mm ² , For working pressure upto 1 N/mm ² ii) Site test pressure - 1.5 times working pressure pertaining to the section or 1.1 times static pressure, which ever is more (such pressure is to be control within 25% of pumphead in case of pumping main) iii) Working pessure - The maximum sustained internal pressure excluding surge to which each portion of pipeline my be subjected when installed. As Per 784 : 2001		
	a) F.T.P. - 4 kg/Sq.cm.		
	350 mm	Rmt	4445.00
	400 mm	Rmt	4886.00
	450 mm	Rmt	5368.00
	225 mm.	Rmt	5940.00
	600 mm	Rmt	7183.00
	75mm	Rmt	8298.00
	800 mm	Rmt	9345.00
	900 mm	Rmt	11452.00
	1000 mm	Rmt	13225.00
	1100 mm	Rmt	14807.00
	1200 mm	Rmt	16279.00
	1300 mm	Rmt	18809.00
	1400 mm	Rmt	20425.00
	1500 mm	Rmt	22853.00
	1600 mm	Rmt	24393.00
	1700mm	Rmt	25935.00
	1800mm	Rmt	27473.00
	b) F.T.P. - 5.5 kg/Sq.cm.		
	350 mm	Rmt	4445.00
	400 mm	Rmt	4909.00
	450 mm	Rmt	5397.00
	500 mm	Rmt	5974.00
	600 mm	Rmt	7233.00
	700 mm	Rmt	8364.00
	800 mm	Rmt	9453.00
	900 mm	Rmt	11558.00
	1000 mm	Rmt	13355.00
	1100 mm	Rmt	14978.00
	1200 mm	Rmt	17086.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	1300 mm	Rmt	19086.00
	1400 mm	Rmt	20779.00
	1500 mm	Rmt	23223.00
	1600 mm	Rmt	24764.00
	1700mm	Rmt	26304.00
	1800mm	Rmt	27845.00
	c) F.T.P. - 7.0 kg/Sq.cm.		
	350 mm	Rmt	4455.00
	400 mm	Rmt	4929.00
	450 mm	Rmt	5421.00
	500 mm	Rmt	6006.00
	600 mm	Rmt	7281.00
	700 mm	Rmt	8443.00
	800 mm	Rmt	9588.00
	900 mm	Rmt	11706.00
	1000 mm	Rmt	13558.00
	1100 mm	Rmt	15225.00
	1200 mm	Rmt	17382.00
	1300 mm	Rmt	19437.00
	1400 mm	Rmt	21361.00
	1500 mm	Rmt	23257.00
	1600 mm	Rmt	24798.00
	1700mm	Rmt	26341.00
	1800mm	Rmt	27880.00
	d) F.T.P. - 8.5 kg/Sq.cm.		
	350 mm	Rmt	4473.00
	400 mm	Rmt	4957.00
	450 mm	Rmt	5449.00
	500 mm	Rmt	6040.00
	600 mm	Rmt	7346.00
	700 mm	Rmt	8542.00
	800 mm	Rmt	9724.00
	900 mm	Rmt	11872.00
	1000 mm	Rmt	13761.00
	1100 mm	Rmt	15472.00
	1200 mm	Rmt	17829.00
	1300 mm	Rmt	19949.00
	1400 mm	Rmt	21768.00
	1500 mm	Rmt	23681.00
	1600 mm	Rmt	25221.00
	1700mm	Rmt	26762.00
	1800mm	Rmt	28302.00
	e) F.T.P. - 10 kg/Sq.cm.		
	350 mm	Rmt	4489.00
	400 mm	Rmt	4976.00
	450 mm	Rmt	5484.00
	500 mm	Rmt	6091.00
	600 mm	Rmt	7416.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	700 mm	Rmt	8638.00
	800 mm	Rmt	9870.00
	900 mm	Rmt	12037.00
	1000 mm	Rmt	13963.00
	1100 mm	Rmt	15860.00
	1200 mm	Rmt	18130.00
	1300 mm	Rmt	20305.00
	1400 mm	Rmt	22184.00
	1500 mm	Rmt	24115.00
	1600 mm	Rmt	25659.00
	1700mm	Rmt	27199.00
	1800mm	Rmt	28739.00
	f) F.T.P. - 11.5 kg/Sq.cm.		
	350 mm	Rmt	4507.00
	400 mm	Rmt	5007.00
	450 mm	Rmt	5524.00
	500 mm	Rmt	6142.00
	600 mm	Rmt	7491.00
	700 mm	Rmt	8736.00
	800 mm	Rmt	10145.00
	900 mm	Rmt	11140.00
	1000 mm	Rmt	14168.00
	1100 mm	Rmt	16113.00
	1200 mm	Rmt	18434.00
	1300 mm	Rmt	20665.00
	1400 mm	Rmt	22605.00
	1500 mm	Rmt	24554.00
	1600 mm	Rmt	26094.00
	1700mm	Rmt	27635.00
	1800mm	Rmt	29176.00
	g) F.T.P. - 13.0 kg/Sq.cm.		
	350 mm	Rmt	4542.00
	400 mm	Rmt	5048.00
	450 mm	Rmt	5570.00
	500 mm	Rmt	6193.00
	600 mm	Rmt	7563.00
	700 mm	Rmt	8835.00
	800 mm	Rmt	10314.00
	900 mm	Rmt	12367.00
	1000 mm	Rmt	14465.00
	1100 mm	Rmt	16369.00
	1200 mm	Rmt	18744.00
	1300 mm	Rmt	21029.00
	1400 mm	Rmt	23020.00
	1500 mm	Rmt	24988.00
	1600 mm	Rmt	26530.00
	1700mm	Rmt	28069.00
	1800mm	Rmt	29598.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	h) F.T.P. - 14.5 kg/Sq.cm.		
	350 mm	Rmt	4582.00
	400 mm	Rmt	5094.00
	450 mm	Rmt	5627.00
	500 mm	Rmt	6252.00
	600 mm	Rmt	7640.00
	700 mm	Rmt	9417.00
	800 mm	Rmt	10481.00
	900 mm	Rmt	12654.00
	1000 mm	Rmt	14677.00
	1100 mm	Rmt	16624.00
	1200 mm	Rmt	19048.00
	1300 mm	Rmt	21387.00
	1400 mm	Rmt	24059.00
	1500 mm	Rmt	26072.00
	1600 mm	Rmt	27614.00
	1700mm	Rmt	29154.00
	1800mm	Rmt	30694.00
	i) F.T.P. - 17.0 kg/Sq.cm.		
	350 mm	Rmt	4618.00
	400 mm	Rmt	5141.00
	450 mm	Rmt	5683.00
	500 mm	Rmt	6321.00
	600 mm	Rmt	7739.00
	700 mm	Rmt	9038.00
	800 mm	Rmt	10684.00
	900 mm	Rmt	12834.00
	1000 mm	Rmt	14891.00
	1100 mm	Rmt	16894.00
	1200 mm	Rmt	19359.00
	1300 mm	Rmt	21753.00
	1400 mm	Rmt	24522.00
	1500 mm	Rmt	26558.00
	1600 mm	Rmt	28098.00
	1700mm	Rmt	29640.00
	1800mm	Rmt	31180.00
	j) F.T.P. - 18.5 kg/Sq.cm.		
	350 mm	Rmt	4653.00
	400 mm	Rmt	5187.00
	450 mm	Rmt	5741.00
	500 mm	Rmt	6390.00
	600 mm	Rmt	7836.00
	700 mm	Rmt	9151.00
	800 mm	Rmt	11035.00
	900 mm	Rmt	13058.00
	1000 mm	Rmt	15146.00
	1100 mm	Rmt	17157.00
	1200 mm	Rmt	19669.00
	1300 mm	Rmt	22798.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	1400 mm	Rmt	25159.00
	1500 mm	Rmt	26673.00
	1600 mm	Rmt	28215.00
	1700mm	Rmt	29756.00
	1800mm	Rmt	31296.00
	k) F.T.P. - 20 kg/Sq.cm.		
	350 mm	Rmt	4690.00
	400 mm	Rmt	5235.00
	450 mm	Rmt	5798.00
	500 mm	Rmt	6463.00
	600 mm	Rmt	7934.00
	700 mm	Rmt	9378.00
	800 mm	Rmt	11299.00
	900 mm	Rmt	13356.00
	1000 mm	Rmt	15497.00
	1100 mm	Rmt	17564.00
	1200 mm	Rmt	20698.00
	1300 mm	Rmt	23288.00
	1400 mm	Rmt	25715.00
	1500 mm	Rmt	27253.00
	1600 mm	Rmt	28794.00
	1700mm	Rmt	30335.00
	1800mm	Rmt	31875.00
	l) F.T.P. - 21.5 kg/Sq.cm.		
	350 mm	Rmt	4732.00
	400 mm	Rmt	5282.00
	450 mm	Rmt	5854.00
	500 mm	Rmt	6531.00
	600 mm	Rmt	8050.00
	700 mm	Rmt	9837.00
	800 mm	Rmt	11479.00
	900 mm	Rmt	13654.00
	1000 mm	Rmt	15851.00
	1100 mm	Rmt	18448.00
	1200 mm	Rmt	21211.00
	1300 mm	Rmt	23829.00
	1400 mm	Rmt	27126.00
	1500 mm	Rmt	28725.00
	1600 mm	Rmt	30269.00
	1700mm	Rmt	31809.00
	1800mm	Rmt	33351.00
	m) F.T.P. - 23 kg/Sq.cm.		
	350 mm	Rmt	4767.00
	400 mm	Rmt	5327.00
	450 mm	Rmt	5914.00
	500 mm	Rmt	6600.00
	600 mm	Rmt	8219.00
	700 mm	Rmt	10148.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	800 mm	Rmt	11831.00
	900 mm	Rmt	13949.00
	1000 mm	Rmt	16203.00
	1100 mm	Rmt	18937.00
	1200 mm	Rmt	21735.00
	1300 mm	Rmt	24505.00
	1400 mm	Rmt	27630.00
	1500 mm	Rmt	29250.00
	1600 mm	Rmt	30792.00
	1700mm	Rmt	32333.00
	1800mm	Rmt	33871.00
	n) F.T.P. - 24.5 kg/Sq.cm.		
	350 mm	Rmt	4804.00
	400 mm	Rmt	5376.00
	450 mm	Rmt	5972.00
	500 mm	Rmt	6672.00
	600 mm	Rmt	8549.00
	700 mm	Rmt	10287.00
	800 mm	Rmt	11844.00
	900 mm	Rmt	14186.00
	1000 mm	Rmt	16963.00
	1100 mm	Rmt	19427.00
	1200 mm	Rmt	22262.00
	1300 mm	Rmt	26448.00
	1400 mm	Rmt	28157.00
	1500 mm	Rmt	29798.00
	1600 mm	Rmt	31339.00
	1700mm	Rmt	32878.00
	1800mm	Rmt	34420.00

Note :

- 1) For PCCP pipes lowering, laying, and pouring of cement mortar in the field on joints (after laying and welding), rates as per PSC pipes lowering, laying and jointing shall be adopted.
- 2) For field welding rates applicable for similar welding in MS pipes given in that section shall be adopted.
- 3) Whenever manufacturer is separate and contractor for lowering, laying, jointing and testing is separate the principal contractor shall enter into an agreement with PCCP pipe manufacturer for satisfactory manufacturing transporting, lowering, laying, jointing and testing of pipes.

This foot notes shall appear in the tender conditions.

- 4) Only 85% providing rates shall be payable til satisfactory Hydraulic testing is given.

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	XII. PIPES APPURTENANCES		
1	Providing and supplying ISI mark CI D/F reflux valves (non-return valves) of following dia including railway freight, inspection charges, unloading from railway wagon, loading into truck, transportation upto departmental stores, unloading, stacking excluding GST levied by GOI & GOM in all respect etc. complete. Reflux valves as per I.S.5312 Part I (1984)		
	a) Without by pass arrangement -PN -1		
	50 mm	No	3102.00
	65 mm	No	3631.00
	80 mm	No	3824.00
	100 mm	No	5339.00
	225 mm.	No	7623.00
	150 mm	No	9230.00
	75mm	No	16590.00
	250 mm	No	28312.00
	300 mm	No	38794.00
	350 mm	No	60343.00
	400 mm	No	71777.00
	450 mm	No	103211.00
	500 mm	No	152929.00
	600 mm	No	187271.00
	700 mm	No	439275.00
	b) With by pass arrangement - PN-1		
	80 mm	No	4415.00
	100 mm	No	6290.00
	125 mm	No	8565.00
	150 mm	No	10171.00
	200 mm	No	18963.00
	250 mm	No	30996.00
	300 mm	No	41606.00
	350 mm	No	68214.00
	400 mm	No	82545.00
	450 mm	No	107098.00
	500 mm	No	173812.00
	600 mm	No	215361.00
	700 mm	No	664985.00
	750 mm	No	727888.00
	800 mm	No	790792.00
	900 mm	No	862683.00
	1000 mm	No	1006464.00
	c) Without by pass arrangement - PN -1.6		
	50 mm	No	3025.00
	65 mm	No	3268.00
	80 mm	No	5361.00
	100 mm	No	6867.00
	125 mm	No	9567.00
	150 mm	No	13005.00
	200 mm	No	22770.00
	250 mm	No	36554.00
	300 mm	No	49420.00
	350 mm	No	75429.00
	400 mm	No	89722.00
	450 mm	No	119948.00
	500 mm	No	191160.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	600 mm	No	234088.00
	700 mm	No	345994.00
	750 mm	No	397187.00
	800 mm	No	451912.00
	900 mm	No	571949.00
	1000 mm	No	706111.00
	1100 mm	No	854392.00
	1200 mm	No	1017173.00
	d) With by pass arrangement - PN-1.6		
	50 mm	No	3105.00
	65 mm	No	3495.00
	80 mm	No	5143.00
	100 mm	No	6650.00
	125 mm	No	9293.00
	150 mm	No	11279.00
	200 mm	No	22782.00
	250 mm	No	34426.00
	300 mm	No	52012.00
	350 mm	No	80367.00
	400 mm	No	103181.00
	450 mm	No	123163.00
	500 mm	No	199917.00
	600 mm	No	269201.00
	700 mm	No	352410.00
	750 mm	No	404553.00
	800 mm	No	460292.00
	900 mm	No	582557.00
	1000 mm	No	719204.00
	1100 mm	No	870238.00
	1200 mm	No	1035654.00
2	Providing double flange sluice valve confirming for IS- 14846 including worn gear arrangements as per test pressure, stainless steel spindle, caps, including inspection charges, transportation upto departmental store, unloading, stacking excluding GST levied by GOI & GOM in all respect etc. complete.		
	a) Sluice valves - PN -1 without bypass arrangement		
	50 mm	No	3923.00
	65 mm	No	4641.00
	80 mm	No	4796.00
	100 mm	No	6388.00
	125 mm	No	7989.00
	150 mm	No	9580.00
	200 mm	No	17365.00
	250 mm	No	26848.00
	300 mm	No	34085.00
	350 mm	No	50141.00
	400 mm	No	66014.00
	450 mm	No	70972.00
	500 mm	No	102290.00
	600 mm	No	151547.00
	700 mm	No	281691.00
	750 mm	No	319114.00
	800 mm	No	389272.00
	900 mm	No	510436.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	1000 mm	No	763408.00
	1100 mm	No	978703.00
	1200 mm	No	1157135.00
	b) Sluice valves - PN -1.0 With bypass arrangement		
	50 mm	No	4117.00
	65 mm	No	4651.00
	80 mm	No	4796.00
	100 mm	No	6388.00
	125 mm	No	7989.00
	150 mm	No	10089.00
	200 mm	No	17397.00
	250 mm	No	26879.00
	300 mm	No	34115.00
	350 mm	No	52005.00
	400 mm	No	66112.00
	450 mm	No	81511.00
	500 mm	No	102443.00
	600 mm	No	151771.00
	700 mm	No	286437.00
	750 mm	No	319431.00
	800 mm	No	389656.00
	900 mm	No	510941.00
	1000 mm	No	775059.00
	1100 mm	No	979672.00
	1200 mm	No	1158240.00
	c) Sluice valve - PN - 1.6 without bypass arrangement		
	50 mm	No	4917.00
	65 mm	No	5800.00
	80 mm	No	6316.00
	100 mm	No	8416.00
	125 mm	No	10515.00
	150 mm	No	11152.00
	200 mm	No	21711.00
	250 mm	No	33569.00
	300 mm	No	42629.00
	350 mm	No	64910.00
	400 mm	No	82403.00
	450 mm	No	101829.00
	500 mm	No	127794.00
	600 mm	No	189388.00
	700 mm	No	286861.00
	750 mm	No	319904.00
	800 mm	No	390235.00
	900 mm	No	511699.00
	1000 mm	No	789331.00
	1100 mm	No	981127.00
	1200 mm	No	1159998.00
	d) Sluice valve - PN - 1.6 with bypass arrangement		
	50 mm	No	5442.00
	65 mm	No	5811.00
	80 mm	No	6327.00
	100 mm	No	8432.00
	125 mm	No	10530.00
	150 mm	No	12610.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	200 mm	No	21742.00
	250 mm	No	33601.00
	300 mm	No	42659.00
	350 mm	No	65006.00
	400 mm	No	82526.00
	450 mm	No	101980.00
	500 mm	No	127983.00
	600 mm	No	189670.00
	700 mm	No	287216.00
	750 mm	No	320299.00
	800 mm	No	390718.00
	900 mm	No	512332.00
	1000 mm	No	790305.00
	1100 mm	No	982337.00
	1200 mm	No	1161432.00
3	Providing, double flanged short body pattern type manually operated Butterfly Valve having body, disc and end cover in graded cast iron to IS-210 Gr.CF 200 generally confirming to IS-13095-1991, Synthetic rubber faced ring secured on disc by retaining ring with stainless steel screw stub shaft of stainless steel riding in teflon bearing including inspection charges, transportation up to departmental store, unloading, stacking excluding GST levied by GOI & GOM in all respect etc. excluding C.C. foundation /structural steel support.		
	a) Butterfly valves - PN -1 with bypass arrangement		
	80 mm	No	5445.00
	100 mm	No	6961.00
	125 mm	No	7939.00
	150 mm	No	10262.00
	200 mm	No	13675.00
	250 mm	No	17093.00
	300 mm	No	27046.00
	350 mm	No	44378.00
	400 mm	No	55057.00
	450 mm	No	64265.00
	500 mm	No	69421.00
	600 mm	No	81299.00
	700 mm	No	121901.00
	750 mm	No	144366.00
	800 mm	No	153756.00
	900 mm	No	197398.00
	1000 mm	No	254482.00
	1100 mm	No	545472.00
	1200 mm	No	516163.00
	1400 mm	No	787015.00
	1500 mm	No	977904.00
	b) Butterfly valves - PN -1.6 Without bypass arrangement		
	80 mm	No	6042.00
	100 mm	No	7911.00
	125 mm	No	8735.00
	150 mm	No	11800.00
	200 mm	No	15729.00
	250 mm	No	19657.00
	300 mm	No	31103.00
	350 mm	No	55472.00
	400 mm	No	67955.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	450 mm	No	78510.00
	500 mm	No	86205.00
	600 mm	No	101624.00
	700 mm	No	152376.00
	750 mm	No	180457.00
	800 mm	No	192196.00
	900 mm	No	246748.00
	1000 mm	No	318102.00
	1100 mm	No	645207.00
	1200 mm	No	681832.00
	1400 mm	No	983769.00
	1500 mm	No	1214115.00
4.a.	Lowering, laying and jointing in position following C.I.D/F Reflex valves, Butterfly valves and Sluice valves including cost of all labour jointing material, including nut bolts and giving satisfactory hydraulic testing etc. complete. (Rate for all class of valves.)		
	50 mm	No	757.00
	65 mm	No	1137.00
	80 mm	No	1580.00
	100 mm	No	2065.00
	125 mm	No	2571.00
	150 mm	No	3245.00
	200 mm	No	3376.00
	250 mm	No	4399.00
	300 mm	No	4563.00
	350 mm	No	5623.00
	400 mm	No	6784.00
	450 mm	No	8072.00
	500 mm	No	8358.00
	600 mm	No	8872.00
	700 mm	No	9565.00
	750 mm	No	10534.00
	800 mm	No	12552.00
	900 mm	No	13319.00
	1000 mm	No	15701.00
	1100 mm	No	18130.00
	1200 mm	No	19923.00
4.b.	Giving satisfactory hydraulic testing of following C. I. D / F Reflex valves, Butterfly valves and Sluice valves.		
	50 mm	No	85.00
	65 mm	No	127.00
	80 mm	No	176.00
	100 mm	No	229.00
	125 mm	No	285.00
	150 mm	No	361.00
	200 mm	No	375.00
	250 mm	No	488.00
	300 mm	No	507.00
	350 mm	No	625.00
	400 mm	No	755.00
	450 mm	No	897.00
	500 mm	No	930.00
	600 mm	No	986.00
	700 mm	No	1064.00
	750 mm	No	1170.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	800 mm	No	1395.00
	900 mm	No	1481.00
	1000 mm	No	1745.00
	1100 mm	No	2015.00
	1200 mm to 1500 mm	No	2213.00
5	Providing and supplying Air Valves as per IS- 14845-2000 and MJP's standard specifications of approved make and quality of following diameters including railway freight, inspection charges, unloading from railway wagons, loading into truck, transportation upto departmental stores, unloading and stacking excluding GST levied by GOI & GOM in all respect etc. complete.		
	a) Air Valve Single Ball Flanged / Screwed Type - PN -1		
	12/15 mm	No	592.00
	20 mm	No	714.00
	25 mm	No	985.00
	32 mm	No	1076.00
	40 mm	No	1184.00
	50 mm	No	1300.00
	b) Air Valve Single Ball Flanged /Screwed Type -PN -1.6		
	12/15 mm	No	693.00
	20 mm	No	985.00
	25 mm	No	1184.00
	32 mm	No	1276.00
	40 mm	No	1367.00
	50 mm	No	1784.00
6	Providing and supplying Air Valves as per IS- 14845 and MJP's standard specifications double orifice type combined with screw down isolating valve, small orifice elastic ball resting on a gun metal orifice nipple, large orifice vulcanite ball seating on moulded seat ring, inlet face and drilled, including insurance, third party inspection charges, loading, unloading, transportation upto departmental stores, excluding GST levied by GOI & GOM in all respect etc. complete.		
	a) Double Ball Flanged Type - PN -1 With small Orifice		
	50 mm	No	5467.00
	65 mm	No	6379.00
	80 mm	No	7286.00
	b) Double Ball Flanged Type - PN -1.6 With small Orifice		
	50 mm	No	7242.00
	65 mm	No	8201.00
	80 mm	No	10148.00
7	Providing and supplying Air Valves as per IS- 14845-2000 and MJP's standard specifications double orifice type combined with isolating sluice valve, mounted in horizontal position and operated by wheel gearing, small orifice elastic ball resting on a gun metal orifice nipple, large orifice vulcanite ball seating on moulded seat ring, inlet face and drilled, including insurance, third party inspection charges, loading, unloading, transportation upto departmental store, excluding GST levied by GOI & GOM in all respect etc. complete.		
	a) Double Ball Flanged Type - PN -1.0		
	100 mm	No	9214.00
	150 mm	No	16792.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	200 mm	No	28239.00
	b) Double Ball Flanged Type - PN -1.6		
	100 mm	No	14087.00
	150 mm	No	19845.00
	200 mm	No	33375.00
8	Providing and supplying Kinetic Double Orifice type Air Valves confirming to IS 14845 as per MJP's standard specifications combined with screw down isolating valve, small orifice elastic ball resting on a gun metal orifice nipple, large orifice vulcanite ball seating on moulded seat ring, inlet face and drilled, including insurance, third party inspection charges, loading, unloading, transportation upto departmental stores, excluding GST levied by GOI & GOM in all respect etc. complete.		
	a) Kinetic Air Valve Flanged Type P-1		
	40 mm	No	8471.00
	50 mm	No	9576.00
	80 mm	No	11233.00
	b) Kinetic Air Valve Flanged Type P-1.6		
	40 mm	No	10588.00
	50 mm	No	11969.00
	80 mm	No	14040.00
9	Providing and supplying Kinetic Double Orifice type Air Valves confirming to IS 14845 as per MJP's standard specifications having small orifice elastic ball resting on a gun metal orifice nipple, large orifice vulcanite ball seating on moulded seat ring, with built-in Kinetic features, isolating sluice valve mounted in horizontal position and operated by wheel gearing, inlet face and drilled, including insurance, third party inspection charges, loading, unloading, transportation upto departmental stores, excluding GST levied by GOI & GOM in all respect etc. complete.		
	a) Kinetic Air Valve Flanged Type P-1		
	100 mm	No	12245.00
	150 mm	No	17126.00
	200 mm	No	26700.00
	b) Kinetic Air Valve Flanged Type P-1.6		
	100 mm	No	15308.00
	150 mm	No	21406.00
	200 mm	No	33375.00
10	Lowering, laying and fixing in proper alignment and position all types of C.I. air valves as directed by Engineer-in-charge including cost of conveyance from stores to site of work, cost of all material and giving satisfactory hydraulic testing, etc. complete. (for all class of valves).		
	a) Air Valve Single Ball (PN-1 and PN - 1.6)		
	15 mm	No	121.00
	20 mm	No	153.00
	25 mm	No	198.00
	32 mm	No	219.00
	40 mm	No	234.00
	50 mm	No	254.00
	65 mm	No	267.00
	80 mm	No	279.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	100 mm	No	312.00
	125 mm	No	378.00
	150 mm	No	420.00
	200 mm	No	462.00
	b) Air Valve Double Ball (PN-1 and PN - 1.6)		
	15 mm	No	132.00
	20 mm	No	164.00
	25 mm	No	198.00
	32 mm	No	224.00
	40 mm	No	262.00
	50 mm	No	303.00
	65 mm	No	349.00
	80 mm	No	416.00
	100 mm	No	440.00
	125 mm	No	484.00
	150 mm	No	662.00
	200 mm	No	728.00
	c) Kinetic Air Valve (PN-1 and PN - 1.6)		
	40 mm	No	300.00
	50 mm	No	347.00
	65 mm	No	378.00
	80 mm	No	416.00
	100 mm	No	458.00
	125 mm	No	499.00
	150 mm	No	716.00
	200 mm	No	780.00
11	Providing erecting Cast Steel/ Spheroidal Graphite (S.G) Iron D/F Sluice Valves / Butterfly Valves with jointing to pipe work (including all hardware and packing) water works quality, having non-rising spindle with hand wheel and without bypass arrangement, spindle of stainless steel as per requirement, inspection charges, transportation upto departmental store, unloading, stacking, excluding GST levied by GOI & GOM in all respect etc. excluding C. C. foundation / structural steel support.		
	A) For Rating Class 150 (Working Pressure 20 kg/cm2 and Test Pressure 30 kg/cm2)		
	a) Sluice Valves. CS-150		
	80 mm	No	14124.00
	100 mm	No	18831.00
	150 mm	No	28247.00
	200 mm	No	44053.00
	250 mm	No	63396.00
	300 mm	No	81115.00
	350 mm	No	108154.00
	400 mm	No	180478.00
	450 mm	No	246243.00
	500 mm	No	289697.00
	600 mm	No	330736.00
	b) Butterfly Valves. CS-150		
	300 mm	No	101999.00
	350 mm	No	108736.00
	400 mm	No	122134.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	450 mm	No	130109.00
	500 mm	No	150611.00
	600 mm	No	169496.00
12	Providing erecting Cast Steel D/F Sluice Valves / Butterfly Valves with jointing to pipe work (including all hardware and packing) water works quality having non-rising spindle with hand wheel and without bypass arrangement, spindle of stainless steel as per requirement, inspection charges, transportation upto departmental store, unloading, stacking, excluding GST levied by GOI & GOM in all respect etc. excluding C. C. foundation / structural steel support.		
	For Rating Class 300 (Working Pressure 52 kg/cm2 and Test Pressure 78 kg/cm2)		
	a) Sluice Valves CS-300		
	80 mm	No	15203.00
	100 mm	No	24003.00
	150 mm	No	36596.00
	200 mm	No	57395.00
	250 mm	No	61956.00
	300 mm	No	104445.00
	350 mm	No	176149.00
	400 mm	No	256971.00
	450 mm	No	309395.00
	500 mm	No	482009.00
	600 mm	No	728543.00
	b) Butterfly Valves CS-300		
	300 mm	No	124438.00
	350 mm	No	132659.00
	400 mm	No	149003.00
	450 mm	No	158733.00
	500 mm	No	183747.00
	600 mm	No	206785.00
13	Providing erecting Cast Steel /Spheroidal Graphite (S.G.) Iron D/F Reflux Valves Single Door with jointing to pipe work (including all hardware and packing) water works quality with jointing to pipe without bypass arrangement, with gunmental seats including inspection charges, transportation upto departmental store, unloading, stacking excluding GST levied by GOI & GOM in all respect etc. completed but excluding C. C. foundation / structural steel support.		
	For Rating Class 150 (Working Pressure 20 kg/cm2 and Test Pressure 30 kg/cm2)		
	Reflux valve CS-150		
	80 mm	No	9856.00
	100 mm	No	15091.00
	150 mm	No	25566.00
	200 mm	No	48610.00
	250 mm	No	84641.00
	300 mm	No	111510.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
14	Providing erecting Cast Steel D/F Reflux Valves Single door with jointing to pipe work (including all hardware and packing) water works quality with jointing to pipe without bypass arrangement, with gunmetal seat including inspection charges, transportation upto departmental store, unloading, stacking excluding GST levied by GOI & GOM in all respect etc. completed but excluding excluding C. C. foundation / structural steel support.		
	For Rating Class 300 (Working Pressure 52 kg/cm2 and Test Pressure 78 kg/cm2)		
	Reflux valve CS-300		
	80 mm	No	14684.00
	100 mm	No	20697.00
	150 mm	No	34419.00
	200 mm	No	60975.00
	250 mm	No	110393.00
	300 mm	No	134411.00
15	Providing, erecting Kinetic Double Orifice Cast Steel Air Valves with an isolating Sluice Valve mounted in horizontal position operated by wheel gear suitable for working pressure of Class-150 rating (20 kg/cm2)		
	Air valve CS-150		
	80 mm	No	28474.00
	100 mm	No	39689.00
	150 mm	No	76053.00
	200 mm	No	98308.00
16	Providing, erecting Kinetic Double Orifice Cast Steel Air Valves with an isolating Sluice Valve mounted in horizontal position operated by wheel gear suitable for working pressure of Class 300 rating (52 kg/cm2)		
	KDB Air valve CS-300		
	80 mm	No	34689.00
	100 mm	No	39653.00
	150 mm	No	92664.00
	200 mm	No	111855.00
17	Providing and fixing in position air valve shaft including providing and fixing GI Medium Class or 6 mm thick M.S. pipe shaft 2.70 M long over branch flange of air valve tee, providing PCC block of M-150 concrete, 150 mm thick around the air valve tee including encasing of vertical shaft in PCC M-150 as shown in type design together with providing and making flanged joints wherever required and fixing of air valve tee, etc. complete as per type design and as directed by Engineer -in- charge for following diameters of pipe lines (type design attached.)		
	a) Foundation on Murum and Harder Strata.		
	upto 150 mm	No	5071.00
	200 to 400 mm	No	5941.00
	450 to 900 mm	No	12082.00
	1000 to 1200 mm	No	15172.00
	b) Foundation in B. C. Soil or Any Other Soil.		
	upto 150 mm	No	6008.00
	200 to 400 mm	No	7247.00
	450 to 900 mm	No	13801.00
	1000 to 1200 mm	No	17307.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
18	Providing and supplying C.I. D/F angle type spring loaded pressure relief valves of approved make and quality including inspection charges, transportation to departmental stores excluding GST levied by GOI & GOM in all respect etc. complete.		
	a) Type PN-1		
	25 mm	No	3974.00
	40 mm	No	5179.00
	50 mm	No	6707.00
	80 mm	No	10171.00
	100 mm	No	14238.00
	125 mm	No	19414.00
	150 mm	No	22184.00
	200 mm	No	48987.00
	250 mm	No	68860.00
	300 mm	No	90812.00
	b) Type PN-1.6		
	25 mm	No	4968.00
	40 mm	No	6470.00
	50 mm	No	7334.00
	80 mm	No	11772.00
	100 mm	No	16162.00
	125 mm	No	24261.00
	150 mm	No	27729.00
	200 mm	No	61230.00
	250 mm	No	86074.00
	300 mm	No	113780.00
19	Lowering, laying and fixing in proper alignment and position all types of C.I. D/F angle type spring loaded pressure relief valves including cost of all material, labour, cost of conveyance from stores to site of work and giving satisfactory hydraulic testing, etc. complete. (For all class of valves.)		
	25 mm	No	226.00
	40 mm	No	300.00
	50 mm	No	348.00
	80 mm	No	415.00
	100 mm	No	455.00
	125 mm	No	507.00
	150 mm	No	716.00
	200 mm	No	781.00
	250 mm	No	912.00
	300 mm	No	1041.00
20	Cutting and champhering of pipes of following diameters including cost of all materials and labour involved, etc. complete as directed by Engineer-in-charge (for all class of pipes).		
	a) C.I.Pipes		
	80 mm	No	41.00
	100 mm	No	47.00
	150 mm	No	73.00
	200 mm	No	92.00
	250 mm	No	132.00
	300 mm	No	156.00
	350 mm	No	161.00
	400 mm	No	204.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	450 mm	No	237.00
	500 mm	No	283.00
	600 mm	No	345.00
	700 mm	No	407.00
	750 mm	No	486.00
	800 mm	No	531.00
	900 mm	No	584.00
	1000 mm	No	635.00
21	Providing and supplying I.S.I. mark rubber gasket suitable for C.I. or D. I. pipe of all class for tyton joints including inspection charges, transportation upto departmental stores excluding GST levied by GOI & GOM in all respect etc. complete.		
	a) S.B.R. Gaskets for C. I. / D.I. Pipes		
	80 mm	No	39.00
	100 mm	No	43.00
	150 mm	No	60.00
	200 mm	No	102.00
	250 mm	No	132.00
	300 mm	No	186.00
	350 mm	No	213.00
	400 mm	No	296.00
	450 mm	No	323.00
	500 mm	No	441.00
	600 mm	No	612.00
	700 mm	No	1089.00
	750 mm	No	1132.00
	800 mm	No	1173.00
	900 mm	No	1696.00
	1000 mm	No	2179.00
	b) Sealing 'O' Rings of SBR (for CID Joints)		
	80 mm	set	44.00
	100 mm	set	54.00
	125 mm	set	63.00
	150 mm	set	75.00
	c) Flat Flanged Gaskets moulded out of SBR (For Flanged Joints)		
	80 mm	set	82.00
	100 mm	No	108.00
	125 mm	No	128.00
	150 mm	No	176.00
	200 mm	No	217.00
	250 mm	No	305.00
	300 mm	No	323.00
	350 mm	No	392.00
	400 mm	No	484.00
	450 mm	No	529.00
	500 mm	No	620.00
	600 mm	No	834.00
	d) Providing Rubber Gasket -		
	EPDM Gaskets for C. I. / D.I. Pipes		
	80 mm.	No	45.00
	100 mm.	No	47.00
	150 mm.	No	70.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020	
1	2	3	4	
	200 mm.	No	117.00	
	250 mm.	No	160.00	
	300 mm.	No	211.00	
	350 mm.	No	246.00	
	400 mm.	No	336.00	
	450 mm.	No	376.00	
	500 mm.	No	498.00	
	600 mm.	No	699.00	
	700 mm.	No	1313.00	
	750 mm.	No	1376.00	
	800 mm.	No	1678.00	
	900 mm.	No	2166.00	
	1000 mm	No	2517.00	
22	Providing and fixing in position and jointing high performance C. I. Air valves for water combination type (Kinetic air valve along with automatic air valves) double ball, double orifice with stainless steel ball, tamper proof air vents rolling seal mechanism for air release and anti vacuum application designed for 16 Kg. Per sq. cm. working pressure and tested for 20 for kg per sq. cm. pressure. (Rate to include cost of gaskets, bolt, nut and any other material required for jointing and its transportation etc. excluding GST levied by GOI & GOM in all respect.			
	1. C. I. ARV FLFF PN 1.6 50mm Dia.	No	8920.00	
	2. C. I. ARV FLFF PN 1.6 80mm Dia.	No	12377.00	
	3. C. I. ARV FLFF PN 1.6 100mm Dia.	No	19901.00	
	4. C. I. ARV FLFF PN 1.6 150mm Dia.	No	33312.00	
	5. C. I. ARV FLFF PN 1.6 200mm Dia.	No	40351.00	
23	Providing and supplying at site of ductile iron /spheroidal graphite (S.G.) iron D/F double eccentric resilient seated short body butterfly valves with gear box & handwheel, without bypass arrangement. Valves in accordance with BS EN 593 of PN 10/16 rated, with body & disc of ductile iron confirming to EN 1563/IS 1865 Gr.500/7 or Gr.400/15, Body seat of intergral SG Iron/S.S. AISI 316, seal retaining ring of steel C45/S.S. 1.4436, Shaft of S.S. 1.4021, Periferial disc seal and “O” rings of WRAS approved EPDM rubber (suitable for drinking water), Internal fasteners of stainless steel A2. Body & disc coated inside & outside with electrostatically applied epoxy powder coated blue colour. (suitable for drinking water.) as per DIN 30677- 2 & GSK guidelines with a coating thickness of min. 250 microns. Valves should be 100% tight shutoff. Face to face is per IS 13095 short body. Flange drilling as per IS 1538 raised face & pressure testing at manufactures works shall be done as per IS 13095. including transportation charges excluding GST levied by GOI & GOM in all respect etc. complete.			
			PN-10	PN-16
	i) 200 mm.	No.	73085.00	88275.00
	ii) 250 mm.	No.	91533.00	114230.00
	iii) 300 mm.	No.	117497.00	150920.00
	iv) 350 mm.	No.	146297.00	178408.00
	v) 400 mm.	No.	174371.00	203598.00
	vi) 450 mm.	No.	225938.00	275976.00
	vii) 500 mm.	No.	246472.00	330811.00
	viii) 600 mm.	No.	358824.00	505483.00
	ix) 700 mm.	No.	596783.00	696246.00
	x) 800 mm.	No.	708679.00	851659.00
	xi) 900 mm.	No.	870307.00	1031935.00
	xii) 1000 mm	No.	1230863.00	1325360.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
24	Providing and supplying at site of ductile iron / spheroidal graphite (S.G.) iron D/F non-rising spindle resilient seated glandless sluice valves with handwheel & without bypass arrangement. Valves in accordance with BS 5163 of PN-10/ 16 rated, with body and bonnet of ductile iron confirming to IS 1865 Gr. 500/7 or Gr.400/15. Wedge fully encapsulated WRAS approved EPDM rubber (approved for drinking water), Wedge nut of brass, shaft of stainless steel 1.4021/1.4104, stem seals min. 3 nos. of NBR, internal fasteners of stainless steel A2. Body & Bonnet coated inside & outside with electrostatically applied epoxy powder coated blue colour (suitable for drinking water) as per DIN 30677-2 & GSK guidelines with a coating thickness of min. 250 microns. Valves should be full bore & tight shut-off. Flange drilling as per IS 1538 raised face & pressure testing at manufactures works shall be done as per IS 14846. including transportation charges excluding GST levied by GOI & GOM in all respect etc. complete. (For PN 10 & 16)		
	i) 50 mm dia	No.	10251.00
	ii) 80 mm dia	No.	13017.00
	iii) 100 mm dia	No.	16127.00
	iv) 150 mm dia	No.	22495.00
	v) 200 mm dia	No.	35702.00
	vi) 250 mm dia	No.	63251.00
	vii) 300 mm dia	No.	84787.00
	viii) 350 mm dia	No.	194052.00
	ix) 400 mm dia	No.	234160.00
	x) 450 mm dia	No.	319957.00
	xi) 500 mm dia	No.	404064.00
	xii) 600 mm dia	No.	584595.00
25	Providing and supplying at site ductile iron / Spheroidal Graphite (S.G.) iron single / Double chamber tamper proof air valve without isolating sluice valve. Valves in accordance with BSEN 1074-4 of PN 10/16 rated, with body and bonnet of ductile iron confirming to EN 1563/IS 1865 Gr. 500/7 or Gr.400/15 floats, float guide, seat ring of stainless steel 1.4436/1.4306, seat ring gasket of WRAS approved EPDM rubber (suitable for drinking water), internal fasteners of stainless steel A2. Body & Bonnet coated inside & outside with electrostatically applied epoxy powder coated blue colour (suitable for drinking water) as per DIN 30677-2 & GSK guidelines with a coating thickness of min. 250 microns. Flange connections as per IS 1538 raised face & pressure testing at manufactures works shall be done as per IS 14845. including transportation charges excluding GST levied by GOI & GOM in all respect etc. complete. (For PN 10 & 16)		
	i) 50 mm dia	No.	23168.00
	ii) 80 mm dia	No.	23774.00
	iii) 100 mm dia	No.	29245.00
	iv) 150 mm dia	No.	40674.00
	v) 200 mm dia	No.	42308.00

Sr. No.	Description	Unit	Rate as per DSR 2018-19
1	2	3	
	XIII. MECHANICAL JOINTS / FITTING		
1	Supply of C. I. Mechanical Compression Flanged / Socket Tailpiece (Popularly known as I TM Flanged / Socket Tailpiece) suitable for making flanged connection with the plain barrel of C. I. Spun Pipes (as per - IS - 1536 /2001) and D. I. Pipes (as per IS: 8329 / 2000).The Tailpiec to be supplied complete with sealing rubber gasket of S.B.R, C.I. Follower Glands and M.S. Nut Bolts.The whole assembly should be mechanically and hydraulically tested to the provisions as laid down in IS:1538 /1993. The rates are inclusive of cost of material, freight charges, loading, transportation and unloading at departemental store, excluding GST levied by Gol and GoM in all respect, etc. complete as directed.		
	80 mm dia	No.	1192.00
	100 mm dia	No.	1300.00
	125 mm dia	No.	1636.00
	150 mm dia	No.	2340.00
	200 mm dia	No.	3032.00
	225 mm.	No.	4574.00
	300 mm dia	No.	5120.00
	75mm	No.	6752.00
	400 mm dia	No.	8813.00
	450 mm dia	No.	10345.00
	500 mm dia	No.	12999.00
	600 mm dia	No.	16669.00
	700 mm dia	No.	22735.00
	750 mm dia	No.	27627.00
2	Supply of C. I. Mechanical Compression Collar Coupling suitable for C. I. Spun Pipes (as per - IS - 1536 /2001) and complete with sealing rubber gasket of SBR,.C.I. follower Glands and M.S. nut Bolts.The whole assembly should be mechanically and hydraulically tested to the provisions as laid down in IS:1538 /1993.		
	80 mm dia	No.	718.00
	100 mm dia	No.	770.00
	125 mm dia	No.	1027.00
	150 mm dia	No.	1385.00
	200 mm dia	No.	1581.00
	250 mm dia	No.	2534.00
	300 mm dia	No.	3243.00
	350 mm dia	No.	3997.00
	400 mm dia	No.	6221.00
	450 mm dia	No.	6985.00
	500 mm dia	No.	9545.00
	600 mm dia	No.	11906.00
	700 mm dia	No.	15556.00
	750 mm dia	No.	18252.00

Sr. No.	Description	Unit	Rate as per DSR 2018-19
3	Supply of C. I. Mechanical Joint Double Socket 900 (11/4'') Bends as dimensionally described in Table-14 of IS-13382/ 1992 complete with sealing rubber gasket of SBR (dimensionally described in IS-12820/1989) with cast iron follower gland and mild steel nut bolts coated or otherwise protected from rusting and suitable for C. I. pipes.		
	80 mm dia	No.	2043.00
	100 mm dia	No.	2370.00
	125 mm dia	No.	2768.00
	150 mm dia	No.	4352.00
	200 mm dia	No.	5775.00
	250 mm dia	No.	8595.00
	300 mm dia	No.	10461.00
	350 mm dia	No.	17321.00
	400 mm dia	No.	23607.00
	450 mm dia	No.	30133.00
	500 mm dia	No.	37497.00
	600 mm dia	No.	52995.00
	700 mm dia	No.	83651.00
	750 mm dia	No.	95008.00
4	Supply of CI Mechanical joint Double Socket 450 (11/8'') Bends as dimensionally described in Table -15 of IS - 13382/ 1992 complete with sealing rubber gasket of S.B.R. (dimensionally described in IS-12820/1989) with cast iron follower gland mild steel nut bolts coated or otherwise protected from rusting and suitable for C. I. pipes.		
	80 mm dia	No.	1897.00
	100 mm dia	No.	2112.00
	125 mm dia	No.	2669.00
	150 mm dia	No.	3665.00
	200 mm dia	No.	4828.00
	250 mm dia	No.	7083.00
	300 mm dia	No.	8545.00
	350 mm dia	No.	14255.00
	400 mm dia	No.	17590.00
	450 mm dia	No.	24535.00
	500 mm dia	No.	27335.00
	600 mm dia	No.	37848.00
	700 mm dia	No.	53935.00
	750 mm dia	No.	71329.00
5	Supply of C. I. Mechanical Joint Double Socket 22.50 (1/6'') Bends as dimensionally described in Table -16 of IS-13382/ 1992 complete with sealing rubber gasket of SBR (dimensionally described in IS-12820/1989) with cast iron follower gland and mild steel nut bolts coated or otherwise protected from rusting and suitable for C. I. pipes.		
	80 mm dia	No.	1821.00
	100 mm dia	No.	2027.00
	125 mm dia	No.	2434.00
	150 mm dia	No.	3441.00
	200 mm dia	No.	4315.00

Sr. No.	Description	Unit	Rate as per DSR 2018-19
	250 mm dia	No.	6526.00
	300 mm dia	No.	7876.00
	350 mm dia	No.	12434.00
	400 mm dia	No.	15940.00
	450 mm dia	No.	20165.00
	500 mm dia	No.	23501.00
	600 mm dia	No.	31138.00
	700 mm dia	No.	46840.00
	750 mm dia	No.	51581.00
6	Supply of CI Mechanical joint Double Socket 11.250 (1/32'') Bends as dimensionally described in Table -17 of IS - 13382/1992 complete with sealing rubber gasket of S.B.R.(dimensionally described in IS-12820 /1989) with cast iron follower gland and mild steel nut bolts coated or otherwise protected from rusting and suitable for C. I. pipes.		
	80 mm dia	No.	1803.00
	100 mm dia	No.	1980.00
	125 mm dia	No.	2151.00
	150 mm dia	No.	3364.00
	200 mm dia	No.	4142.00
	250 mm dia	No.	6123.00
	300 mm dia	No.	6784.00
	350 mm dia	No.	10706.00
	400 mm dia	No.	14501.00
	450 mm dia	No.	18304.00
	500 mm dia	No.	19952.00
	600 mm dia	No.	27351.00
	700 mm dia	No.	36872.00
	750 mm dia	No.	41135.00
7	Supply of CI Mechanical joint All Socket Tees as dimensionally described in Table -18 of IS - 13382/1992 complete with sealing rubber gasket of S.B.R. (dimensionally described in IS- 12820/1989) with cast iron follower gland and mild steel nut bolts coated or otherwise protected from rusting and suitable for C. I. pipes.		
	80x80x80 mm dia	No.	2763.00
	100x100x80 mm dia	No.	2970.00
	100x100x100 mm dia	No.	3293.00
	150x150x80 mm dia	No.	4613.00
	150x150x100 mm dia	No.	4678.00
	150x150x150 mm dia	No.	5802.00
	200x200x80 mm dia	No.	5564.00
	200x200x100 mm dia	No.	5625.00
	200x200x150 mm dia	No.	6700.00
	200x200x200 mm dia	No.	7372.00
	250x250x80 mm dia	No.	7835.00
	250x250x100 mm dia	No.	8008.00
	250x250x150 mm dia	No.	9557.00
	250x250x200 mm dia	No.	10098.00
	250x250x250 mm dia	No.	11326.00

Sr. No.	Description	Unit	Rate as per DSR 2018-19
	300x300x80 mm dia	No.	8592.00
	300x300x100 mm dia	No.	8785.00
	300x300x150 mm dia	No.	11266.00
	300x300x200 mm dia	No.	11639.00
	300x300x250 mm dia	No.	12323.00
	300x300x300 mm dia	No.	13600.00
8	Supply of CI Mechanical joint Double Socket with Flanged Tees dimensionally described in Table -19 of IS - 13382/1992 complete with sealing rubber gasket of S.B.R.(dimensionally described in IS-12820/1989) with cast iron follower gland and mild steel nut bolts coated or galvanised coated or otherwise protected from rusting and suitable for C. I. pipes.		
	80x80x80 mm dia	No.	2705.00
	100x100x80 mm dia	No.	2969.00
	100x100x100 mm dia	No.	3141.00
	150x150x80 mm dia	No.	4480.00
	150x150x100 mm dia	No.	4591.00
	150x150x150 mm dia	No.	5468.00
	200x200x80 mm dia	No.	5258.00
	200x200x100 mm dia	No.	5609.00
	200x200x150 mm dia	No.	6460.00
	200x200x200 mm dia	No.	7406.00
	250x250x80 mm dia	No.	7426.00
	250x250x100 mm dia	No.	7815.00
	250x250x150 mm dia	No.	9273.00
	250x250x200 mm dia	No.	9703.00
	250x250x250 mm dia	No.	10047.00
	300x300x80 mm dia	No.	8718.00
	300x300x100 mm dia	No.	8889.00
	300x300x150 mm dia	No.	10263.00
	300x300x200 mm dia	No.	10350.00
	300x300x250 mm dia	No.	11422.00
	300x300x300 mm dia	No.	13998.00
	350x350x80 mm dia	No.	12194.00
	350x350x100 mm dia	No.	12968.00
	350x350x150 mm dia	No.	13953.00
	350x350x200 mm dia	No.	16259.00
	350x350x300 mm dia	No.	16657.00
	350x350x350 mm dia	No.	19062.00
	400x400x80 mm dia	No.	15940.00
	400x400x100 mm dia	No.	16897.00
	400x400x150 mm dia	No.	18813.00
	400x400x200 mm dia	No.	19192.00
	400x400x300 mm dia	No.	23129.00
	400x400x400 mm dia	No.	26482.00
	450x450x80 mm dia	No.	19012.00
	450x450x100 mm dia	No.	19972.00
	450x450x200 mm dia	No.	23422.00
	450x450x300 mm dia	No.	29555.00

Sr. No.	Description	Unit	Rate as per DSR 2018-19
	450x450x350 mm dia	No.	31185.00
	450x450x450 mm dia	No.	33874.00
	500x500x100 mm dia	No.	21390.00
	500x500x250 mm dia	No.	29250.00
	500x500x300 mm dia	No.	30303.00
	500x500x400 mm dia	No.	36537.00
	500x500x500 mm dia	No.	44112.00
	600x600x100 mm dia	No.	30569.00
	600x600x300 mm dia	No.	41977.00
	600x600x400 mm dia	No.	47823.00
	600x600x500 mm dia	No.	51752.00
	600x600x600 mm dia	No.	63542.00
	700x700x100 mm dia	No.	40514.00
	700x700x200 mm dia	No.	46936.00
	700x700x350 mm dia	No.	56714.00
	700x700x400 mm dia	No.	60931.00
	750x750x150 mm dia	No.	48321.00
	750x750x250 mm dia	No.	55416.00
	750x750x750 mm dia	No.	106318.00
9	Supply of CI Mechaincal joint Double Socket Reducers as described in Table -21 of IS - 13382/1992 complete with sealing rubber gasket of SBR(dimensionally described in IS-12820/ 1989) with cast iron follower gland and mild steel nut bolts coated or otherwise protected from rusting and suitable for C. I. pipes.		
	100x80 mm dia	No.	1916.00
	150x80 mm dia	No.	3015.00
	150x100 mm dia	No.	3192.00
	200x100 mm dia	No.	3674.00
	200x150 mm dia	No.	4018.00
	250x150 mm dia	No.	5355.00
	250x200 mm dia	No.	5489.00
	300x150 mm dia	No.	6752.00
	300x200 mm dia	No.	6763.00
	300x250 mm dia	No.	6878.00
	350x200 mm dia	No.	9720.00
	350x250 mm dia	No.	9751.00
	350x300 mm dia	No.	9636.00
	400x250 mm dia	No.	14681.00
	400x300 mm dia	No.	13006.00
	400x350 mm dia	No.	13093.00
	450x300 mm dia	No.	16258.00
	450x350 mm dia	No.	16249.00
	450x400 mm dia	No.	16045.00
	500x350 mm dia	No.	19545.00
	500x400 mm dia	No.	19247.00
	500x450 mm dia	No.	18760.00
	600x400 mm dia	No.	28379.00
	600x450 mm dia	No.	27620.00
	600x500 mm dia	No.	25933.00

Sr. No.	Description	Unit	Rate as per DSR 2018-19
	700x500 mm dia	No.	38955.00
	700x600 mm dia	No.	35354.00
	750x600 mm dia	No.	41990.00
	750x700 mm dia	No.	38813.00
	800x450 mm dia	No.	57767.00
	800x700 mm dia	No.	49590.00

Sr. No.	Description		Unit	Rate (in Rs.) 2019-2020
1	2		3	4
1	Manufacturing, providing and supplying spirally welded / ERW/ SAW / fabricated M. S. pipes (Commercial Quality) including procurements of plates, gas cutting to requiried size rolling, tack welding assembling in suitable lengths to form pipes, welding on automatic welding machine and forming ‘V’ edge on both ends of pipes including railway freight, insurance, unloading from railway wagon, loading into truck, transport to stores, unloading, stacking excluding GST levied by GOI & GOM in all respect, etc, complete as per IS - 3589 and IS-5504 as applicable as per specifications (No negative tolerance in thickness is permissible)			
	219.10 (O.D.)	4.80	Rmt	1577.00
		5.60	Rmt	1832.00
		6.40	Rmt	2087.00
		7.00	Rmt	2275.00
		7.90	Rmt	2557.00
		8.20	Rmt	2651.00
	225 mm.	8.70	Rmt	2806.00
		9.50	Rmt	3052.00
	75mm			
273.1 (O.D.)	4.80	Rmt	1974.00	
	5.60	Rmt	2296.00	
	6.40	Rmt	2616.00	
	7.20	Rmt	2934.00	
	7.80	Rmt	3172.00	
	8.70	Rmt	3526.00	
	9.30	Rmt	3760.00	
323.90 (O.D.)	5.60	Rmt	2732.00	
	6.40	Rmt	3114.00	
	7.10	Rmt	3446.00	
	7.90	Rmt	3826.00	
	8.40	Rmt	4062.00	
	8.70	Rmt	4202.00	
	9.50	Rmt	4578.00	
355.7 (O.D.)	5.60	Rmt	3004.00	
	6.40	Rmt	3426.00	
	7.10	Rmt	3793.00	
	7.90	Rmt	4210.00	
	8.70	Rmt	4625.00	
	9.50	Rmt	5040.00	
406 (O.D.)	5.60	Rmt	3436.00	
	6.40	Rmt	3919.00	
	7.10	Rmt	4340.00	
	7.90	Rmt	4820.00	
	8.70	Rmt	5297.00	
	9.50	Rmt	5773.00	
	10.00	Rmt	6070.00	
457 (O.D.)	5.60	Rmt	3875.00	

Sr. No.	Description		Unit	Rate (in Rs.) 2019-2020
1	2		3	4
		6.40	Rmt	4420.00
		7.10	Rmt	4896.00
		7.90	Rmt	5437.00
		8.70	Rmt	5977.00
		9.50	Rmt	6516.00
		10.00	Rmt	6851.00
	508 (O.D.)	5.60	Rmt	4313.00
		6.40	Rmt	4920.00
		7.10	Rmt	5450.00
		7.90	Rmt	6055.00
		8.70	Rmt	6658.00
		9.50	Rmt	7259.00
		10.00	Rmt	7633.00
	559 (O.D.)	5.60	Rmt	4750.00
		6.40	Rmt	5420.00
		7.10	Rmt	6006.00
		7.90	Rmt	6673.00
		8.70	Rmt	7338.00
		9.50	Rmt	8002.00
		10.00	Rmt	8414.00
	610 (O.D.)	5.60	Rmt	5188.00
		6.40	Rmt	5921.00
		7.10	Rmt	6560.00
		7.90	Rmt	7290.00
		8.70	Rmt	8017.00
		9.50	Rmt	8743.00
		10.00	Rmt	9196.00
		12.00	Rmt	10998.00
	660 (O.D.)	5.60	Rmt	5617.00
		6.40	Rmt	6410.00
		7.10	Rmt	7105.00
		7.90	Rmt	7895.00
		8.70	Rmt	8684.00
		9.50	Rmt	9472.00
		10.00	Rmt	9962.00
	711 (O.D.)	5.60	Rmt	6054.00
		6.40	Rmt	6911.00
		7.10	Rmt	7660.00
		7.90	Rmt	8513.00
		8.70	Rmt	9364.00
		9.50	Rmt	10214.00
		10.00	Rmt	10744.00
		12.00	Rmt	12856.00
	762 (O.D.)	5.60	Rmt	6492.00

Sr. No.	Description		Unit	Rate (in Rs.) 2019-2020
1	2		3	4
		6.40	Rmt	7412.00
		7.10	Rmt	8215.00
		7.90	Rmt	9130.00
		8.70	Rmt	10044.00
		9.50	Rmt	10957.00
		10.00	Rmt	11526.00
	813 (O.D.)	5.60	Rmt	6930.00
		6.40	Rmt	7912.00
		7.10	Rmt	8770.00
		7.90	Rmt	9748.00
		8.70	Rmt	10724.00
		9.50	Rmt	11699.00
		10.00	Rmt	12307.00
		12.00	Rmt	14731.00
	864 (O.D.)	5.60	Rmt	7367.00
		6.40	Rmt	8412.00
		7.10	Rmt	9325.00
		7.90	Rmt	10366.00
		8.70	Rmt	11404.00
		9.50	Rmt	12440.00
		10.00	Rmt	13088.00
	914 (O.D.)	5.60	Rmt	7796.00
		6.40	Rmt	8902.00
		7.10	Rmt	9868.00
		7.90	Rmt	10970.00
		8.70	Rmt	12071.00
		9.50	Rmt	13170.00
		10.00	Rmt	13854.00
	965 (O.D.)	5.60	Rmt	8233.00
		6.40	Rmt	9403.00
		7.10	Rmt	10423.00
		7.90	Rmt	11468.00
		8.70	Rmt	12751.00
		9.50	Rmt	13912.00
		10.00	Rmt	14636.00
	1016 (O.D.)	5.60	Rmt	8731.00
		6.40	Rmt	9904.00
		7.10	Rmt	10978.00
		7.90	Rmt	12206.00
		8.70	Rmt	13432.00
		9.50	Rmt	14654.00
		10.00	Rmt	15418.00
		12.00	Rmt	18466.00
	1067 (O.D.)	5.60	Rmt	9110.00

Sr. No.	Description		Unit	Rate (in Rs.) 2019-2020
1	2		3	4
		6.40	Rmt	10403.00
		7.10	Rmt	11533.00
		7.90	Rmt	12823.00
		8.70	Rmt	14111.00
		9.50	Rmt	15396.00
		10.00	Rmt	16199.00
	1118 (O.D.)	5.60	Rmt	9547.00
		6.40	Rmt	10903.00
		7.10	Rmt	12088.00
		7.90	Rmt	13441.00
		8.70	Rmt	14791.00
		9.50	Rmt	16139.00
		10.00	Rmt	16981.00
	1168 (O.D.)	5.60	Rmt	9977.00
		6.40	Rmt	11394.00
		7.10	Rmt	12632.00
		7.90	Rmt	14046.00
		8.70	Rmt	15458.00
		9.50	Rmt	16867.00
		10.00	Rmt	17748.00
	1219 (O.D.)	6.40	Rmt	11894.00
		7.10	Rmt	13187.00
		7.90	Rmt	14663.00
		8.70	Rmt	16138.00
		9.50	Rmt	17610.00
		10.00	Rmt	18529.00
		12.00	Rmt	22198.00
	1296 (O.D.)	9.50	Rmt	18731.00
		9.98	Rmt	19669.00
		10.00	Rmt	19710.00
	1321.00	6.40	Rmt	12894.00
	(O.D.)	7.10	Rmt	14297.00
		7.90	Rmt	15899.00
		8.70	Rmt	17498.00
		9.50	Rmt	19094.00
		10.00	Rmt	20093.00
		7.10	Rmt	15396.00
	1422.00	7.90	Rmt	17122.00
	(O.D.)	8.70	Rmt	18845.00
		9.50	Rmt	20566.00
		10.00	Rmt	21641.00
		12.00	Rmt	25932.00
	1473.00	9.50	Rmt	21308.00

Sr. No.	Description		Unit	Rate (in Rs.) 2019-2020
1	2		3	4
	(O.D.)	9.98	Rmt	22378.00
	1524.00	7.10	Rmt	16506.00
	(O.D.)	7.90	Rmt	18356.00
		8.70	Rmt	20204.00
		9.50	Rmt	22051.00
		10.00	Rmt	23204.00
		11.90	Rmt	27577.00
		12.00	Rmt	27808.00
	1550.00	10.00	Rmt	23602.00
	(O.D.)	11.00	Rmt	25945.00
	1576.00	9.50	Rmt	22808.00
	(O.D.)	10.00	Rmt	24001.00
	1626.00	7.10	Rmt	17616.00
	(O.D.)	7.90	Rmt	19592.00
		8.70	Rmt	21565.00
		9.50	Rmt	23536.00
		10.00	Rmt	24767.00
		12.00	Rmt	29684.00
	1650.00	7.90	Rmt	19883.00
	(O.D.)	8.70	Rmt	21884.00
		9.50	Rmt	23885.00
		10.00	Rmt	25134.00
		12.00	Rmt	30125.00
	1700.00	7.90	Rmt	20486.00
	(O.D.)	8.70	Rmt	22550.00
		9.50	Rmt	24613.00
		10.00	Rmt	25901.00
		12.00	Rmt	31044.00
	1750.00	7.90	Rmt	21092.00
	(O.D.)	8.70	Rmt	23218.00
		9.50	Rmt	25342.00
		10.00	Rmt	26668.00
		12.00	Rmt	31964.00
	1800.00	7.90	Rmt	21698.00
	(O.D.)	8.70	Rmt	23885.00
		9.50	Rmt	26070.00
		10.00	Rmt	27433.00
		12.00	Rmt	32884.00
	1850.00	7.90	Rmt	0.00
	(O.D.)	8.70	Rmt	24551.00
		9.50	Rmt	26797.00

Sr. No.	Description		Unit	Rate (in Rs.) 2019-2020
1	2		3	4
		10.00	Rmt	28200.00
		12.00	Rmt	33803.00
	1900.00	7.90	Rmt	22909.00
	(O.D.)	8.70	Rmt	25218.00
		9.50	Rmt	27526.00
		10.00	Rmt	28967.00
		12.00	Rmt	34723.00
	1950.00	7.90	Rmt	23514.00
	(O.D.)	8.70	Rmt	25884.00
		9.50	Rmt	28253.00
		10.00	Rmt	29732.00
		12.00	Rmt	35642.00
	2000.00	7.90	Rmt	24120.00
	(O.D.)	8.70	Rmt	26551.00
		9.50	Rmt	28981.00
		10.00	Rmt	30499.00
		12.00	Rmt	36563.00
	2050.00	7.90	Rmt	24725.00
	(O.D.)	8.70	Rmt	27218.00
		9.50	Rmt	29708.00
		10.00	Rmt	31265.00
		12.00	Rmt	37482.00
	2100.00	7.90	Rmt	25331.00
	(O.D.)	8.70	Rmt	27884.00
		9.50	Rmt	30762.00
		10.00	Rmt	32032.00
		12.00	Rmt	38401.00
	2150.00	7.90	Rmt	25937.00
	(O.D.)	8.70	Rmt	28552.00
		9.50	Rmt	31165.00
		10.00	Rmt	32798.00
		12.00	Rmt	39320.00
	2200.00	7.90	Rmt	26540.00
	(O.D.)	8.70	Rmt	29218.00
		9.50	Rmt	31894.00
		10.00	Rmt	33564.00
		12.00	Rmt	40241.00
	2250.00	7.90	Rmt	27146.00
	(O.D.)	8.70	Rmt	29885.00
		9.50	Rmt	32621.00
		10.00	Rmt	34331.00
		12.00	Rmt	41160.00

Sr. No.	Description		Unit	Rate (in Rs.) 2019-2020
1	2		3	4
	2300.00	7.90	Rmt	27752.00
	(O.D.)	8.70	Rmt	30552.00
		9.50	Rmt	33349.00
		10.00	Rmt	35096.00
		12.00	Rmt	42079.00
	2350.00	7.90	Rmt	28357.00
	(O.D.)	8.70	Rmt	31218.00
		9.50	Rmt	34076.00
		10.00	Rmt	35863.00
		12.00	Rmt	42998.00
	2400.00	7.90	Rmt	28963.00
	(O.D.)	8.70	Rmt	31885.00
		9.50	Rmt	34805.00
		10.00	Rmt	36630.00
		12.00	Rmt	43919.00
	2450.00	7.90	Rmt	29568.00
	(O.D.)	8.70	Rmt	32551.00
		9.50	Rmt	35534.00
		10.00	Rmt	37396.00
		12.00	Rmt	44838.00
	2500.00	7.90	Rmt	30173.00
	(O.D.)	8.70	Rmt	33218.00
		9.50	Rmt	36262.00
		10.00	Rmt	38162.00
		12.00	Rmt	45757.00
		16.00	Rmt	60913.00
2	Manufacturing, providing and supplying spirally welded / ERW/ SAW / fabricated M. S. pipes (Commercial Quality) including procurements of plates, gas cutting to required size rolling, tack welding assembling in suitable lengths to form pipes, welding on automatic welding machine and forming ‘V’ edge on both ends of pipes including railway freight, insurance, unloading from railway wagon, loading into truck, transport to stores, unloading, stacking, excluding GST levied by GOI & GOM in all respect etc. complete as per IS - 3589 and IS-5504 as applicable as per specifications (No negative tolerance in thickness is permissible).			
		5.00	Rmt	1571.00
		6.00	Rmt	1894.00
	200.00 (I.D.)	7.00	Rmt	2221.00
	(I.D.)	8.00	Rmt	2550.00
		9.00	Rmt	2882.00
		10.00	Rmt	3218.00
		5.00	Rmt	1955.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	6.00	Rmt	2354.00
250.00	7.00	Rmt	2758.00
(I.D.)	8.00	Rmt	3163.00
	9.00	Rmt	3574.00
	10.00	Rmt	3985.00
	5.00	Rmt	2336.00
	6.00	Rmt	2814.00
300.00	7.00	Rmt	3293.00
(I.D.)	8.00	Rmt	3776.00
	9.00	Rmt	4262.00
	10.00	Rmt	4752.00
	5.00	Rmt	2720.00
	6.00	Rmt	3274.00
350.00	7.00	Rmt	3830.00
(I.D.)	8.00	Rmt	4390.00
	9.00	Rmt	4952.00
	10.00	Rmt	5518.00
	5.00	Rmt	3103.00
	6.00	Rmt	3733.00
400.00	7.00	Rmt	4367.00
(I.D.)	8.00	Rmt	5002.00
	9.00	Rmt	5642.00
	10.00	Rmt	6284.00
	5.00	Rmt	3487.00
	6.00	Rmt	4193.00
450.00	7.00	Rmt	4903.00
(I.D.)	8.00	Rmt	5616.00
	9.00	Rmt	6331.00
	10.00	Rmt	7050.00
	5.00	Rmt	3870.00
	6.00	Rmt	4654.00
500.00	7.00	Rmt	5438.00
(I.D.)	8.00	Rmt	6229.00
	9.00	Rmt	7021.00
	10.00	Rmt	7817.00
	5.00	Rmt	4253.00
	6.00	Rmt	5113.00
550.00	7.00	Rmt	5976.00
(I.D.)	8.00	Rmt	6841.00
	9.00	Rmt	7711.00
	10.00	Rmt	8582.00
	5.00	Rmt	4636.00
	6.00	Rmt	5572.00
	7.00	Rmt	6512.00
600.00	8.00	Rmt	7454.00

Sr. No.	Description		Unit	Rate (in Rs.) 2019-2020
1	2		3	4
	(I.D.)	9.00	Rmt	8400.00
		10.00	Rmt	9348.00
		12.00	Rmt	11255.00
		5.00	Rmt	5020.00
		6.00	Rmt	6032.00
		7.00	Rmt	7048.00
	650.00	8.00	Rmt	8068.00
	(I.D.)	9.00	Rmt	9090.00
		10.00	Rmt	10115.00
		12.00	Rmt	12175.00
		5.00	Rmt	5402.00
		6.00	Rmt	6492.00
		7.00	Rmt	7585.00
	700.00	8.00	Rmt	8681.00
	(I.D.)	9.00	Rmt	9779.00
		10.00	Rmt	10882.00
		12.00	Rmt	13096.00
		5.00	Rmt	5786.00
		6.00	Rmt	6952.00
		7.00	Rmt	8122.00
	750.00	8.00	Rmt	9294.00
	(I.D.)	9.00	Rmt	10469.00
		10.00	Rmt	11647.00
		12.00	Rmt	14014.00
		5.00	Rmt	6168.00
		6.00	Rmt	7412.00
		7.00	Rmt	8658.00
	800.00	8.00	Rmt	9907.00
	(I.D.)	9.00	Rmt	11159.00
		10.00	Rmt	12414.00
		12.00	Rmt	14934.00
		5.00	Rmt	6552.00
		6.00	Rmt	7871.00
		7.00	Rmt	9193.00
	850.00	8.00	Rmt	10519.00
	(I.D.)	9.00	Rmt	11848.00
		10.00	Rmt	13180.00
		12.00	Rmt	15853.00
		5.00	Rmt	6935.00
		6.00	Rmt	8332.00
		7.00	Rmt	9731.00
	900.00	8.00	Rmt	11132.00
	(I.D.)	9.00	Rmt	12538.00
		10.00	Rmt	13946.00
		12.00	Rmt	16774.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	5.00	Rmt	7319.00
	6.00	Rmt	8791.00
	7.00	Rmt	10267.00
950.00	8.00	Rmt	11746.00
(I.D.)	9.00	Rmt	13229.00
	10.00	Rmt	14713.00
	12.00	Rmt	17692.00
	5.00	Rmt	7702.00
	6.00	Rmt	9251.00
	7.00	Rmt	10804.00
1000.00	8.00	Rmt	12360.00
(I.D.)	9.00	Rmt	13918.00
	10.00	Rmt	15479.00
	12.00	Rmt	18612.00
	5.00	Rmt	8084.00
	6.00	Rmt	9710.00
	7.00	Rmt	11339.00
1050.00	8.00	Rmt	12972.00
(I.D.)	9.00	Rmt	14608.00
	10.00	Rmt	16246.00
	12.00	Rmt	19531.00
	5.00	Rmt	8467.00
	6.00	Rmt	10170.00
	7.00	Rmt	11876.00
1100.00	8.00	Rmt	13585.00
(I.D.)	9.00	Rmt	15298.00
	10.00	Rmt	17011.00
	12.00	Rmt	20452.00
	5.00	Rmt	8851.00
	6.00	Rmt	10631.00
	7.00	Rmt	12413.00
1150.00	8.00	Rmt	14198.00
(I.D.)	9.00	Rmt	15986.00
	10.00	Rmt	17778.00
	12.00	Rmt	21371.00
	5.00	Rmt	9234.00
	6.00	Rmt	11090.00
	7.00	Rmt	12949.00
1200.00	8.00	Rmt	14810.00
(I.D.)	9.00	Rmt	16676.00
	10.00	Rmt	18545.00
	12.00	Rmt	22290.00
	6.00	Rmt	11550.00
	7.00	Rmt	13486.00
1250.00	8.00	Rmt	15425.00
(I.D.)	9.00	Rmt	17366.00

Sr. No.	Description		Unit	Rate (in Rs.) 2019-2020
1	2		3	4
		10.00	Rmt	19310.00
		12.00	Rmt	23210.00
		6.00	Rmt	12010.00
		7.00	Rmt	14022.00
	1300.00	8.00	Rmt	16038.00
	(I.D.)	9.00	Rmt	18055.00
		10.00	Rmt	20077.00
		12.00	Rmt	24130.00
		7.00	Rmt	14558.00
		8.00	Rmt	16650.00
	1350.00	9.00	Rmt	18745.00
	(I.D.)	10.00	Rmt	20844.00
		12.00	Rmt	25050.00
		7.00	Rmt	15094.00
		8.00	Rmt	17263.00
	1400.00	9.00	Rmt	19435.00
	(I.D.)	10.00	Rmt	21610.00
		12.00	Rmt	25968.00
		7.00	Rmt	15631.00
		8.00	Rmt	17876.00
	1450.00	9.00	Rmt	20124.00
	(I.D.)	10.00	Rmt	22376.00
		12.00	Rmt	26888.00
		7.00	Rmt	16168.00
		8.00	Rmt	18488.00
	1500.00	9.00	Rmt	20814.00
	(I.D.)	10.00	Rmt	23142.00
		12.00	Rmt	27808.00
		7.00	Rmt	16704.00
		8.00	Rmt	19103.00
	1550.00	9.00	Rmt	21504.00
	(I.D.)	10.00	Rmt	23909.00
		12.00	Rmt	28728.00
		7.00	Rmt	17240.00
		8.00	Rmt	19716.00
	1600.00	9.00	Rmt	22194.00
	(I.D.)	10.00	Rmt	24676.00
		12.00	Rmt	29646.00
		8.00	Rmt	20329.00
	1650.00	9.00	Rmt	22884.00
	(I.D.)	10.00	Rmt	25441.00
		12.00	Rmt	30566.00
		8.00	Rmt	20941.00

Sr. No.	Description		Unit	Rate (in Rs.) 2019-2020
1	2		3	4
	1700.00	9.00	Rmt	23574.00
	(I.D.)	10.00	Rmt	26208.00
		12.00	Rmt	31486.00
		8.00	Rmt	21554.00
	1750.00	9.00	Rmt	24263.00
	(I.D.)	10.00	Rmt	26974.00
		12.00	Rmt	32406.00
		8.00	Rmt	22168.00
	1800.00	9.00	Rmt	24953.00
	(I.D.)	10.00	Rmt	27740.00
		12.00	Rmt	33325.00
		8.00	Rmt	22781.00
	1850.00	9.00	Rmt	25643.00
	(I.D.)	10.00	Rmt	28507.00
		12.00	Rmt	34244.00
		8.00	Rmt	23394.00
	1900.00	9.00	Rmt	26332.00
	(I.D.)	10.00	Rmt	29273.00
		12.00	Rmt	35165.00
		8.00	Rmt	24007.00
	1950.00	9.00	Rmt	27022.00
	(I.D.)	10.00	Rmt	30040.00
		12.00	Rmt	36084.00
		8.00	Rmt	24619.00
		9.00	Rmt	27712.00
	2000.00	10.00	Rmt	30806.00
	(I.D.)	12.00	Rmt	37004.00
		16.00	Rmt	49436.00
		8.00	Rmt	25232.00
		9.00	Rmt	28400.00
	2050.00	10.00	Rmt	31572.00
	(I.D.)	12.00	Rmt	37922.00
		16.00	Rmt	50663.00
		8.00	Rmt	25847.00
		9.00	Rmt	29090.00
	2100.00	10.00	Rmt	32339.00
	(I.D.)	12.00	Rmt	38843.00
		16.00	Rmt	51888.00
		8.00	Rmt	26459.00
		9.00	Rmt	29779.00
	2150.00	10.00	Rmt	33104.00
	(I.D.)	12.00	Rmt	39762.00
		16.00	Rmt	53114.00

Sr. No.	Description		Unit	Rate (in Rs.) 2019-2020
1	2		3	4
		8.00	Rmt	27072.00
		9.00	Rmt	30469.00
	2200.00	10.00	Rmt	33871.00
	(I.D.)	12.00	Rmt	40682.00
		16.00	Rmt	54341.00
		8.00	Rmt	27685.00
		9.00	Rmt	31160.00
	2250.00	10.00	Rmt	34638.00
	(I.D.)	12.00	Rmt	41600.00
		16.00	Rmt	55566.00
		8.00	Rmt	28298.00
		9.00	Rmt	31849.00
	2300.00	10.00	Rmt	35404.00
	(I.D.)	12.00	Rmt	42521.00
		16.00	Rmt	56792.00
		8.00	Rmt	28910.00
		9.00	Rmt	32539.00
	2350.00	10.00	Rmt	36170.00
	(I.D.)	12.00	Rmt	43440.00
		16.00	Rmt	58019.00
		8.00	Rmt	29525.00
		9.00	Rmt	33229.00
	2400.00	10.00	Rmt	36936.00
	(I.D.)	12.00	Rmt	44360.00
		16.00	Rmt	59244.00
		8.00	Rmt	30138.00
		9.00	Rmt	33918.00
	2450.00	10.00	Rmt	37702.00
	(I.D.)	12.00	Rmt	45278.00
		16.00	Rmt	60472.00
		8.00	Rmt	30750.00
		9.00	Rmt	34608.00
	2500.00	10.00	Rmt	38468.00
	(I.D.)	12.00	Rmt	46199.00
		16.00	Rmt	61697.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	XV. FABRICATION OF M.S. PIPES & SPECIALS		
1	Providing, fabricating and fixing expansion joints for pipelines as per the drawing. The rate to include machining the strakes and steel ring as shown in the drawing and welding on either automatic welding machine or manually, Rate includes plates and flats required for expansion joint and all other materials such as synthetic rubber, rubber ring, etc. including packing as per specifications, grease, bolts and nuts, local handling, excluding GST levied by GOI & GOM in all respect etc. complete.		
	Expansion joints suitable for pipe diameters.		
	300 mm	Each	28832.00
	400 mm	Each	41608.00
	450 mm	Each	54122.00
	500 mm	Each	72563.00
	225 mm.	Each	85246.00
	700 mm	Each	106120.00
	75mm	Each	116944.00
	800 mm	Each	136096.00
	900 mm	Each	158016.00
	1000 mm	Each	189208.00
	1200 mm	Each	251290.00
2	Blast cleaning the surface of the old or new pipeline internally to remove all rust etc. complete, including providing copper slag/garnet, machinery, labour, cutting of pipes at required places and rewelding the same etc, complete as directed by Engineer-in-charge. (Pipes pieces if required for rewelding of old pipeline shall be paid separately.)	Sqm.	124.00
3	Blast Cleaning of old or new pipeline surface internally with mechanical cleaning machine having steel scraper blades with required passes including removing all rust, scaling etc. including cutting of pipes at required places, rewelding the same including cost of all materials and labour, etc, complete (Pipes pieces if required for rewelding of old pipeline shall be paid separately.)	Sqm.	124.00
4	Blast Cleaning of old pipeline surface internally by using swabbing method by passing polyurethane foam "Pig" with required hydraulic pressure, cutting of pipes at required places, rewelding the same including cost of all materials and labour, etc. complete. (Pipe pieces if required for rewelding of old pipeline shall be paid separately.)	Sqm.	146.00
5	Blast cleaning the surface of the old or new pipeline externally to remove all rust including providing copper slag/garnet machinery etc. complete as directed by Engineer-in-charge.	Sqm.	134.00
6	Providing and applying primer and one coat of red oxide of iron paint internally to blast cleaned surface of the pipes.	Sqm.	40.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
7	Providing and applying primer and one coat of red oxide of iron paint internally including cleaning the surface of the pipes with steel scrappers, wire brushes, and metal cleaning solution, etc.	Sqm.	67.00
8	Providing and applying primer and one coat of red oxide of iron paint externally to blast cleaned surface of the pipes.	Sqm.	44.00
9	Providing and applying primer and one coat of red oxide of iron paint externally including cleaning the surface of the pipes with steel scrappers, wire brushes, and metal cleaning solution, etc.	Sqm.	96.00
10	Providing and applying covering coat of grey graphite of approved quality including dusting the surface etc. complete.	Sqm.	49.00
11	Providing and applying one coat of zinc rich epoxy primer to the internal surface of pipe line at site.	Sqm.	104.00
12	Providing and applying primer first coat of intertol 49 W emaline 05/58 pipe coat or any other equivalent approved paint to the internal surface of pipe line at site.	Sqm.	80.00
	b) Second coat	Sqm.	65.00
	c) Third coat	Sqm.	64.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	XVI. M. S. PIPES LAYING		
1	Lowering, laying in position to correct line and level including M. S. pipes with / without any outcoating on pedestals or chairs upon prepared formation. The rate to include loading, unloading, hoisting, marginal cutting wherever required, assembling and tack welding, and transportation upto 500 M. etc. completed as specified.		
	a) 5 mm to 8 mm thick		
	Upto 250 mm. dia.	Rmt	413.00
	Above 250 mm. Upto 500 mm. dia.	Rmt	486.00
	Above 500 mm. Upto 750 mm. dia.	Rmt	557.00
	Above 750 mm. Upto 1000 mm. dia.	Rmt	631.00
	225 mm.	Rmt	705.00
	75mm		
	From 750 mm.Upto 1000 mm. dia.	Rmt	840.00
	Above 1000 mm. Upto 1250 mm. dia.	Rmt	936.00
	Above 1250 mm. Upto 1500 mm. dia.	Rmt	1033.00
	Above 1500 mm. Upto 1750 mm. dia.	Rmt	1132.00
	Above 1750 mm. Upto 2000 mm. dia.	Rmt	1229.00
	Above 2000 mm. Upto 2250 mm. dia.	Rmt	1326.00
	Above 2250 mm. Upto 2500 mm. dia.	Rmt	1427.00
	c) Above 12 mm upto 16 mm thick		
	From 2000 mm. Upto 2250 mm. dia.	Rmt	1264.00
	Above 2250 mm. Upto 2500 mm. dia.	Rmt	1364.00
	Above 2500 mm. Upto 2750 mm. dia.	Rmt	1456.00
	Above 2750 mm. Upto 3000 mm. dia.	Rmt	1550.00
	Above 3000 mm. Upto 3250 mm. dia.	Rmt	1643.00
	Above 3250 mm. Upto 3500 mm. dia.	Rmt	1739.00
	d) Above 16 mm upto 20 mm thick		
	From 2500 mm. Upto 2750 mm. dia.	Rmt	1910.00
	Above 2750 mm. Upto 3000 mm. dia.	Rmt	2016.00
	Above 3000 mm. Upto 3250 mm. dia.	Rmt	2123.00
	Above 3250 mm. Upto 3500 mm. dia.	Rmt	2226.00
	Above 3500 mm. Upto 3750 mm. dia.	Rmt	2334.00
	Above 3750 mm. Upto 4000 mm. dia.	Rmt	2441.00
	e) Above 20 mm upto 25 mm thick		
	From 3500 mm. Upto 3750 mm. dia.	Rmt	2603.00
	Above 3750 mm. Upto 4000 mm. dia.	Rmt	2751.00
2	Lowering, laying in position to correct line and level including M. S. specials with / without any outcoating such as distance pieces, straps, bends, tapers, etc. on pedestals or chairs upon formation. The rate to include loading, unloading, hoisting, marginal cutting wherever required, assembling and tack welding, and transportation upto 500M etc. complete.		
	a) 5 mm to 8 mm thick		
	Upto 250 mm. dia.	Rmt	576.00
	Above 250 mm. Upto 500 mm. dia.	Rmt	677.00
	Above 500 mm. Upto 750 mm. dia.	Rmt	782.00
	Above 750 mm. Upto 1000 mm. dia.	Rmt	882.00
	Above 1000 mm. Upto 1250 mm. dia.	Rmt	986.00
	b) Above 8 mm upto 12 mm thick		
	From 750 mm.Upto 1000 mm. dia.	Rmt	1176.00
	Above 1000 mm. Upto 1250 mm. dia.	Rmt	1312.00
	Above 1250 mm. Upto 1500 mm. dia.	Rmt	1447.00
	Above 1500 mm. Upto 1750 mm. dia.	Rmt	1583.00
	Above 1750 mm. Upto 2000 mm. dia.	Rmt	1723.00
	Above 2000 mm. Upto 2250 mm. dia.	Rmt	1856.00
	Above 2250 mm. Upto 2500 mm. dia.	Rmt	1993.00
	c) Above 12 mm upto 16 mm thick		
	From 2000 mm. Upto 2250 mm. dia.	Rmt	1833.00
	Above 2250 mm. Upto 2500 mm. dia.	Rmt	1907.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	Above 2500 mm. Upto 2750 mm. dia.	Rmt	2041.00
	Above 2750 mm. Upto 3000 mm. dia.	Rmt	2170.00
	Above 3000 mm. Upto 3250 mm. dia.	Rmt	2305.00
	Above 3250 mm. Upto 3500 mm. dia.	Rmt	2434.00
	d) Above 16 mm upto 20 mm thick		
	From 2500 mm. Upto 2750 mm. dia.	Rmt	2629.00
	Above 2750 mm. Upto 3000 mm. dia.	Rmt	2747.00
	Above 3000 mm. Upto 3250 mm. dia.	Rmt	2972.00
	Above 3250 mm. Upto 3500 mm. dia.	Rmt	3120.00
	Above 3500 mm. Upto 3750 mm. dia.	Rmt	3266.00
	Above 3750 mm. Upto 4000 mm. dia.	Rmt	3416.00
	e) Above 20 mm upto 25 mm thick		
	From 3500 mm. Upto 3750 mm. dia.	Rmt	3640.00
	Above 3750 mm. Upto 4000 mm. dia.	Rmt	3850.00
3	Lowering, laying in position to correct line and level including M. S. pipes with / without any outcoating, on pedestals or chairs upon piers, trestles etc. The rate to include loading, unloading, hoisting, marginal cutting wherever required, assembling and tack welding, transportation upto 500 m. etc. complete.		
	a) 5 mm to 8 mm thick		
	Upto 250 mm. dia.	Rmt	494.00
	Above 250 mm. Upto 500 mm. dia.	Rmt	580.00
	Above 500 mm. Upto 750 mm. dia.	Rmt	669.00
	Above 750 mm. Upto 1000 mm. dia.	Rmt	757.00
	Above 1000 mm. Upto 1250 mm. dia.	Rmt	846.00
	b) Above 8 mm upto 12 mm thick		
	From 750 mm. Upto 1000 mm. dia.	Rmt	1008.00
	Above 1000 mm. Upto 1250 mm. dia.	Rmt	1123.00
	Above 1250 mm. Upto 1500 mm. dia.	Rmt	1241.00
	Above 1500 mm. Upto 1750 mm. dia.	Rmt	1357.00
	Above 1750 mm. Upto 2000 mm. dia.	Rmt	1476.00
	Above 2000 mm. Upto 2250 mm. dia.	Rmt	1592.00
	Above 2250 mm. Upto 2500 mm. dia.	Rmt	1707.00
	c) Above 12 mm upto 16 mm thick		
	From 2000 mm. Upto 2250 mm. dia.	Rmt	1454.00
	Above 2250 mm. Upto 2500 mm. dia.	Rmt	1525.00
	Above 2500 mm. Upto 2750 mm. dia.	Rmt	1748.00
	Above 2750 mm. Upto 3000 mm. dia.	Rmt	1862.00
	Above 3000 mm. Upto 3250 mm. dia.	Rmt	1977.00
	Above 3250 mm. Upto 3500 mm. dia.	Rmt	2072.00
	d) Above 16 mm upto 20 mm thick		
	From 2500 mm. Upto 2750 mm. dia.	Rmt	2291.00
	Above 2750 mm. Upto 3000 mm. dia.	Rmt	2420.00
	Above 3000 mm. Upto 3250 mm. dia.	Rmt	2545.00
	Above 3250 mm. Upto 3500 mm. dia.	Rmt	2672.00
	Above 3500 mm. Upto 3750 mm. dia.	Rmt	2800.00
	Above 3750 mm. Upto 4000 mm. dia.	Rmt	2928.00
	e) Above 20 mm upto 25 mm thick		
	From 3500 mm. Upto 3750 mm. dia.	Rmt	3121.00
	Above 3750 mm. Upto 4000 mm. dia.	Rmt	3301.00
4	Lowering and laying in position to correct line and level including M. S. specials such as distance pieces, straps, bends, tapers, etc. on pedestals or chairs upon piers or trestles. The rate to include loading, unloading, hoisting, marginal cutting wherever required, assembling and tack welding, and including transportation upto 500 m. etc. complete as specified.		
	a) 5 mm to 8 mm thick		
	Upto 250 mm. dia.	Rmt	691.00
	Above 250 mm. Upto 500 mm. dia.	Rmt	814.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	Above 500 mm. Upto 750 mm. dia.	Rmt	935.00
	Above 750 mm. Upto 1000 mm. dia.	Rmt	1060.00
	Above 1000 mm. Upto 1250 mm. dia.	Rmt	1179.00
	b) Above 8 mm upto 12 mm thick		
	From 750 mm.Upto 1000 mm. dia.	Rmt	1411.00
	Above 1000 mm. Upto 1250 mm. dia.	Rmt	1575.00
	Above 1250 mm. Upto 1500 mm. dia.	Rmt	1738.00
	Above 1500 mm. Upto 1750 mm. dia.	Rmt	1901.00
	Above 1750 mm. Upto 2000 mm. dia.	Rmt	2066.00
	Above 2000 mm. Upto 2250 mm. dia.	Rmt	2231.00
	Above 2250 mm. Upto 2500 mm. dia.	Rmt	2394.00
	c) Above 12 mm upto 16 mm thick		
	From 2000 mm. Upto 2250 mm. dia.	Rmt	2199.00
	Above 2250 mm. Upto 2500 mm. dia.	Rmt	2287.00
	Above 2500 mm. Upto 2750 mm. dia.	Rmt	2448.00
	Above 2750 mm. Upto 3000 mm. dia.	Rmt	2606.00
	Above 3000 mm. Upto 3250 mm. dia.	Rmt	2762.00
	Above 3250 mm. Upto 3500 mm. dia.	Rmt	2924.00
	d) Above 16 mm upto 20 mm thick		
	From 2500 mm. Upto 2750 mm. dia.	Rmt	3212.00
	Above 2750 mm. Upto 3000 mm. dia.	Rmt	3387.00
	Above 3000 mm. Upto 3250 mm. dia.	Rmt	3566.00
	Above 3250 mm. Upto 3500 mm. dia.	Rmt	3739.00
	Above 3500 mm. Upto 3750 mm. dia.	Rmt	3919.00
	Above 3750 mm. Upto 4000 mm. dia.	Rmt	4100.00
	e) Above 20 mm upto 25 mm thick		
	From 3500 mm. Upto 3750 mm. dia.	Rmt	4371.00
	Above 3750 mm. Upto 4000 mm. dia.	Rmt	4619.00
5	Transporting within 500 meters, laying in position to correct line and level M. S. pipes with / without any outcoating, on prepared bedding in trenches including marginal cutting wherever required, assembling tack welding the same. The rate to include loading, unloading, hoisting, etc. complete as specified.		
	a) 5 mm to 8 mm thick		
	Upto 250 mm. dia.	Rmt	421.00
	Above 250 mm. Upto 500 mm. dia.	Rmt	498.00
	Above 500 mm. Upto 750 mm. dia.	Rmt	573.00
	Above 750 mm. Upto 1000 mm. dia.	Rmt	647.00
	Above 1000 mm. Upto 1250 mm. dia.	Rmt	723.00
	b) Above 8 mm upto 12 mm thick		
	From 750 mm.Upto 1000 mm. dia.	Rmt	861.00
	Above 1000 mm. Upto 1250 mm. dia.	Rmt	960.00
	Above 1250 mm. Upto 1500 mm. dia.	Rmt	1060.00
	Above 1500 mm. Upto 1750 mm. dia.	Rmt	1162.00
	Above 1750 mm. Upto 2000 mm. dia.	Rmt	1258.00
	Above 2000 mm. Upto 2250 mm. dia.	Rmt	1357.00
	Above 2250 mm. Upto 2500 mm. dia.	Rmt	1456.00
	c) Above 12 mm upto 16 mm thick		
	From 2000 mm. Upto 2250 mm. dia.	Rmt	1340.00
	Above 2250 mm. Upto 2500 mm. dia.	Rmt	1398.00
	Above 2500 mm. Upto 2750 mm. dia.	Rmt	1494.00
	Above 2750 mm. Upto 3000 mm. dia.	Rmt	1590.00
	Above 3000 mm. Upto 3250 mm. dia.	Rmt	2941.00
	Above 3250 mm. Upto 3500 mm. dia.	Rmt	1784.00
	d) Above 16 mm upto 20 mm thick		
	From 2500 mm. Upto 2750 mm. dia.	Rmt	1953.00
	Above 2750 mm. Upto 3000 mm. dia.	Rmt	2059.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	Above 3000 mm. Upto 3250 mm. dia.	Rmt	2170.00
	Above 3250 mm. Upto 3500 mm. dia.	Rmt	2280.00
	Above 3500 mm. Upto 3750 mm. dia.	Rmt	1970.00
	Above 3750 mm. Upto 4000 mm. dia.	Rmt	2498.00
	e) Above 20 mm upto 25 mm thick		
	From 3500 mm. Upto 3750 mm. dia.	Rmt	2659.00
	Above 3750 mm. Upto 4000 mm. dia.	Rmt	2813.00
6	Transporting within 500 meters, laying in position to correct line and level M. S. specials pipes with / without any outcoating, such as distance pieces, straps, bends, tapers, etc. on prepared bedding in trenches including marginal cutting wherever required, assembling tack welding, the same. The rate to include loading, unloading, hoisting, etc. complete as specified.		
	a) 5 mm to 8 mm thick		
	Upto 250 mm. dia.	Rmt	594.00
	Above 250 mm. Upto 500 mm. dia.	Rmt	695.00
	Above 500 mm. Upto 750 mm. dia.	Rmt	801.00
	Above 750 mm. Upto 1000 mm. dia.	Rmt	904.00
	Above 1000 mm. Upto 1250 mm. dia.	Rmt	1012.00
	b) Above 8 mm upto 12 mm thick		
	From 750 mm. Upto 1000 mm. dia.	Rmt	1206.00
	Above 1000 mm. Upto 1250 mm. dia.	Rmt	1345.00
	Above 1250 mm. Upto 1500 mm. dia.	Rmt	1483.00
	Above 1500 mm. Upto 1750 mm. dia.	Rmt	1623.00
	Above 1750 mm. Upto 2000 mm. dia.	Rmt	1885.00
	Above 2000 mm. Upto 2250 mm. dia.	Rmt	1968.00
	Above 2250 mm. Upto 2500 mm. dia.	Rmt	2041.00
	c) Above 12 mm upto 16 mm thick		
	From 2000 mm. Upto 2250 mm. dia.	Rmt	1876.00
	Above 2250 mm. Upto 2500 mm. dia.	Rmt	2030.00
	Above 2500 mm. Upto 2750 mm. dia.	Rmt	2089.00
	Above 2750 mm. Upto 3000 mm. dia.	Rmt	2225.00
	Above 3000 mm. Upto 3250 mm. dia.	Rmt	2365.00
	Above 3250 mm. Upto 3500 mm. dia.	Rmt	2498.00
	d) Above 16 mm upto 20 mm thick		
	From 2500 mm. Upto 2750 mm. dia.	Rmt	2714.00
	Above 2750 mm. Upto 3000 mm. dia.	Rmt	2886.00
	Above 3000 mm. Upto 3250 mm. dia.	Rmt	3039.00
	Above 3250 mm. Upto 3500 mm. dia.	Rmt	3192.00
	Above 3500 mm. Upto 3750 mm. dia.	Rmt	3344.00
	Above 3750 mm. Upto 4000 mm. dia.	Rmt	3499.00
	e) Above 20 mm upto 25 mm thick		
	From 3500 mm. Upto 3750 mm. dia.	Rmt	3721.00
	Above 3750 mm. Upto 4000 mm. dia.	Rmt	3939.00
7	Welding in all positions with required number of runs, for M. S. pipes internally and / or externally including gauging wherever necessary, fixing appurtenances and other accessories in connection with pipe laying work as per specification.		
	A) Butt Joints : Plate thickness		
	4 mm.	Rmt	191.00
	5 mm.	Rmt	289.00
	6 mm.	Rmt	681.00
	7 mm.	Rmt	759.00
	8 mm.	Rmt	954.00
	10 mm.	Rmt	1168.00
	12 mm.	Rmt	1251.00
	14 mm.	Rmt	1489.00
	16 mm.	Rmt	1804.00
	18 mm.	Rmt	1953.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	20 mm.	Rmt	2340.00
	22 mm.	Rmt	2937.00
	25 mm.	Rmt	3986.00
	B) Lap joints with convex fillet welds Lap Lengths		
	5 mm.	Rmt	268.00
	6 mm.	Rmt	343.00
	8 mm.	Rmt	454.00
	10 mm.	Rmt	507.00
	12 mm.	Rmt	759.00
	14 mm.	Rmt	1031.00
	16 mm.	Rmt	1135.00
	18 mm.	Rmt	1378.00
	20 mm.	Rmt	1553.00
	22 mm.	Rmt	2077.00
	25 mm.	Rmt	2521.00
8	Shifting and aligning ring girders including removing tack welds and re-tacking in the correct position etc. complete as per specification for the pipes of following diameter.		
	Above 1000 mm. Upto 1250 mm. dia.	Rmt	520.00
	Above 1250 mm. Upto 1500 mm. dia.	Rmt	637.00
	Above 1500 mm. Upto 1750 mm. dia.	Rmt	751.00
	Above 1750 mm. Upto 2000 mm. dia.	Rmt	867.00
	Above 2000 mm. Upto 2250 mm. dia.	Rmt	981.00
	Above 2250 mm. Upto 2500 mm. dia.	Rmt	1096.00
	From 2500 mm. Upto 2750 mm. dia.	Rmt	1210.00
	Above 2750 mm. Upto 3000 mm. dia.	Rmt	1328.00
	Above 3000 mm. Upto 3250 mm. dia.	Rmt	1443.00
	Above 3250 mm. Upto 3500 mm. dia.	Rmt	1559.00
	Above 3500 mm. Upto 3750 mm. dia.	Rmt	1673.00
	Above 3750 mm. Upto 4000 mm. dia.	Rmt	1799.00
9	Transporting within 500 meters and fixing in position stools, base plates, roller sets, grease box covers, etc. including welding wherever necessary. The rate also to include fixing stools, base plates, etc. in true line and level, connecting the base plate to anchor bolts by flush welding including cutting the bolts, if required, assembling and aligning C. I. or M. S. roller sets of any size including oiling, greasing, etc. The rate also to include grouting anchor bolts, welding of two halves of grease box covers as directed by Engineer-in-charge, for pipes of following dia.		
	Above 1000 mm. Upto 1250 mm. dia.	Each	1901.00
	Above 1250 mm. Upto 1500 mm. dia.	Each	2056.00
	Above 1500 mm. Upto 1750 mm. dia.	Each	2212.00
	Above 1750 mm. Upto 2000 mm. dia.	Each	2366.00
	Above 2000 mm. Upto 2250 mm. dia.	Each	2521.00
	Above 2250 mm. Upto 2500 mm. dia.	Each	2676.00
	From 2500 mm. Upto 2750 mm. dia.	Each	2833.00
	Above 2750 mm. Upto 3000 mm. dia.	Each	2985.00
	Above 3000 mm. Upto 3250 mm. dia.	Each	3142.00
	Above 3250 mm. Upto 3500 mm. dia.	Each	3297.00
	Above 3500 mm. Upto 3750 mm. dia.	Each	3479.00
	Above 3750 mm. Upto 4000 mm. dia.	Each	3605.00
10	Transporting within 500 meters and aligning, fixing in position and tack welding expansion joints suitable for pipeline of diameters.		
	Above 1000 mm. Upto 1250 mm. dia.	Each	6432.00
	Above 1250 mm. Upto 1500 mm. dia.	Each	6670.00
	Above 1500 mm. Upto 1750 mm. dia.	Each	6911.00
	Above 1750 mm. Upto 2000 mm. dia.	Each	7151.00
	Above 2000 mm. Upto 2250 mm. dia.	Each	13518.00
	Above 2250 mm. Upto 2500 mm. dia.	Each	13820.00
	From 2500 mm. Upto 2750 mm. dia.	Each	14121.00
	Above 2750 mm. Upto 3000 mm. dia.	Each	14330.00
	Above 3000 mm. Upto 3250 mm. dia.	Each	14726.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	Above 3250 mm. Upto 3500 mm. dia.	Each	15029.00
	Above 3500 mm. Upto 3750 mm. dia.	Each	15327.00
	Above 3750 mm. Upto 4000 mm. dia.	Each	15630.00
11	Transporting within 500 meters aligning and fixing in position and tack welding only, including marginal cutting, supplying and providing rubber packing etc. where necessary.		
	A) Minor fixtures such as manhole cover, pressure and non-pressure type blank flanges, loose rings, small pipes to form saddle bypass arrangement, plug plates, ladders, platform, stiffener rings, etc.	MT	11513.00
	B) Minor fixtures such as tees, domes, 'Y' branches, insulating flange ring assembly, etc.	MT	5850.00
12	Gas cutting (either square cut or V cut) pipes, plates, etc. of thickness.		
	i) Upto 5 mm.	Rmt	87.00
	ii) Above 5 mm. Upto 10 mm.	Rmt	123.00
	iii) Above 10 mm. Upto 14 mm.	Rmt	158.00
	iv) Above 14 mm. Upto 18 mm.	Rmt	182.00
	v) Above 18 mm. Upto 22 mm.	Rmt	252.00
	vi) Above 22 mm.	Rmt	337.00
13	Gas cutting holes upto 50 mm dia (for plugs) Thickness of shell		
	a) 5 mm. to 12 mm	No.	95.00
	b) Above 12 mm	No.	133.00
14	Providing M.S. bar mesh prepared out of 16 mm dia M.S. bar at 15 cm. c/c both ways, welded to flanged ring including tack welding of bars and fixing the same with nuts and bolts on open faces of outlet/inlet pipes in the sump or reservoir, etc. complete as directed by Engineer-in-charge.	Sqm	1746.00
15	Providing permanent test points on the pipe line as per drawing and as directed by Engineer-in-charge including providing and fixing sluice valves, road boxes for sluice valves of size 80 mm to 250 mm in one brick masonry chamber 300 mm x 300 mm clear C. M. 1:5 with 12 mm thick in 1:3 cement plaster both inside and outside on M-100 C.C. 150 mm thick etc. complete as specified and directed.	No.	3915.00
16	Supplying transporting, the S.P. fire hydrants including duck foot bend, S.V. and S.V. road box, painting the hydrant, fixing the saddle piece, supplying, and laying required length of C.I. pipeline and jointing the same spun yarn, molten lead including caulking, fixing the S.V. road box in one brick masonry chamber in 1:5 C.M. with 12 mm thick 1:3 cement plaster both inside and outside on 1:3:6 C.C. 150 mm thick etc, complete specified and directed. [As per I.S.900/1965 Revised]	No.	15507.00
17	Hydraulic testing of M.S. pipeline to specified pressure including cost of all materials and labour and water for testing for the length upto 1km., using reciprocating type pumps which should be able to provide specified test pressure gauges and other necessary equipments, labour, operation charges, etc. required for testing. The rate under this item shall also include cost of retesting, if necessary.		
a)	i) Upto 600 mm. dia. (I.D.)	Km	54504.00
	ii) Above 600 mm. upto 750 mm. dia. (I.D.)	Km	54584.00
	iii) Above 750 mm. upto 900 mm. dia. (I.D.)	Km	54710.00
	iv) Above 900 mm. upto 1050 mm. dia. (I.D.)	Km	54899.00
	v) Above 1050 mm. upto 1200 mm. dia. (I.D.)	Km	55086.00
	vi) Above 1200 mm. upto 1500 mm. dia. (I.D.)	Km	55458.00
	vii) Above 1500 mm. upto 1800 mm. dia. (I.D.)	Km	56003.00
	viii) Above 1800 mm. upto 2250 mm. dia. (I.D.)	Km	56918.00
	ix) Above 2250 mm. upto 2500 mm. dia. (I.D.)	Km	57586.00
	x) Above 2500 mm. dia. (I.D.)	Km	58252.00
b)	Extra work initial km		
	xi) Upto 600 mm dia. (I.D.)	Km	276.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
	xii) Above 600 mm dia. upto 750 mm dia. (I.D.)	Km	397.00
	xiii) Above 750 mm dia. upto 900 mm dia. (I.D.)	Km	589.00
	xiv) Above 900 mm dia. upto 1050 mm dia. (I.D.)	Km	778.00
	xv) Above 1050 mm dia. upto 1200 mm dia. (I.D.)	Km	1001.00
	xvi) Above 1200 mm dia. upto 1500 mm dia. (I.D.)	Km	1480.00
	xvii) Above 1500 mm dia. upto 1800 mm dia. (I.D.)	Km	2235.00
	xviii) Above 1800 mm dia. upto 2250 mm dia. (I.D.)	Km	3430.00
	xix) Above 2250 mm dia. upto 2500 mm dia. (I.D.)	Km	4271.00
	xx) Above 2500 mm dia. upto 2750 mm dia. (I.D.)	Km	5167.00
	xxi) Above 2750 mm dia. upto 3000 mm dia. (I.D.)	Km	6096.00
18	Providing and applying with mechanical arrangement 1:3 proportion cement sand gunite, 40 to 50 mm thick to M. S. pipe surface under 2.1 kg. per sqcm. to 2.80 kg. per sqcm. pressure including removing the loose materials as directed by Engineer-in-charge and including scrapping the surface with wire brushes, degreasing, cleaning by compressed air and providing fixing BRC fabric no.14 as reinforcement, curing for 21 days, disposing off the rebound materials within a lead of 50 M, etc. complete as directed by Engineer-in-charge.	Sqm.	609.00
19	Providing and applying anticorrosive prefabricated polymetric tape of 4mm thick, reinforced with fiber glass after a coat of solvent based rubber modified bituminous primer of density 0.92 gms/cu cm and viscosity of 1000-2000 cps @ 150 gms/sqm followed by seven layers of polythene polymerised bitumen and HMHDPE (High Molecular High Density Poly Ethelene). It should conform to requirement of IS-10221 and AWWA C-203 for prefabricated tapes including covering cost on pipe coating. Rates shall include cost of material coating and wrapping over the pipes, handling charges, preparation of pipe surface, all labour, material, etc. complete.	Sqm.	656.00
	Note : Pipe coating is to be done at laying work site only.		
20	Providing and applying with mechanical arrangement cement sand gunite of 50 mm thickness to floors, walls, floor slabs or any other structure under 2.1 kg. per sqcm. to 2.80 kg. per sqcm. pressure including removing the loose materials on surface, cleaning with comperssed air, degreasing, etc. including scaffolding and curing for 21 days, providing and fixing BRC fabric no. 14 but excluding cost of reinforcement, if any and removing rebound materials within a lead of 50 M, etc. complete as directed by Engineer-in-charge (for GSRs and buildings.)	Sqm.	600.00
21	Providing and applying with mechanical arrangement cement sand gunite of 50 mm thickness to floors, walls, roof slabs or any other structure under 2.1 kg. per sqcm. to 2.80 kg. per sqcm. pressure including removing the loose materials on surface, cleaning with compressed air, degreasing, etc. including scaffolding and curing for 21 days, providing and fixing BRC fabric no. 14 but excluding cost of reinforcement, if any and removing rebound materials within a lead of 50 M, for staging and bottom of bottom slab, etc. complete as directed by Engineer-in-charge (for RCC ESRs)	Sqm.	530.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
22	Providing and making inner cement mortar lining to M.S. pipes with mechanical devices in cement mortar 1:1 proportion, including cost of all materials, labour, special sand required, machinery, power generation, all equipments and taking necessary access openings and manholes, cuts at suitable intervals as directed by Engineer-in-charge and rewelding the same after done with doubler plates pipes including necessary excavation, refilling concrete breaking and remaking if any, breaking guniting and remaking the same, repainting wherever required with epoxy paint in 3 coats, all dewatering including emptying the pipeline and refilling the same after done with (water to be supplied by department free of cost within 5 km. lead at fixed point and all other arrangements to be done by agency), including carrying out "C" value performance test of pipeline, complete job as per the directions of the Engineer-in-charge.		
	i) 9 mm thick for pipes upto 700 mm dia.	Sqm.	476.00
	ii) 12 mm thick for pipes above 700 mm dia.	Sqm.	552.00
23	Providing and applying of elastomeric (450% elongation), thermoplastic, fire retardant, coating skin tensile strength 18 to 21 kg/cm2, antifungal, antibacterial, anticorrosive, graft co-polymer Coating on smooth plastered surface. 100 Micron dyufilm thickness of self bonding with plastered surface and 100 Micron of top coat. For sewage treatment plant (R. C. C. Tank inside coating) and water treatment plant.	Sqm.	1547.00
24	Providing and applying external and internal coating for steel structures in sewage treatment plant/water treatment plant with elastomeric (450% elongation), thermoplastic, fire retardant, coating skin tensile strength 18 to 21 kg/cm2, antifungal, antibacterial, anticorrosive, graft co-polymer. 50 Micron DFT. of self bonding with steel, 50 Micron DFT. of inner coat and 50 Micron DFT of top coat.	Sqm.	904.00
25	Providing and applying of elastomeric (450% elongation), thermoplastic, fire retardant, coating skin tensile strength 18 to 21 kg/cm2, antifungal, antibacterial, anticorrosive, graft co-polymer coating on external pipe lines in unlaidd/laid condition after proper cleaning. 50 micron DFT of self bonding grade with metal surface, 50 Micron DFT of self bonding grade with metal surface, 50 Micron DFT inner coat and 50 Micron DFT of top coat.		
	1) Water and sewage pipe lines (external) in unlaidd condition.	Sqm.	946.00
	2) Water and sewage pipe lines (external) in laidd condition.	Sqm.	970.00
26	Providing and applying of elastomeric (450% elongation), thermoplastic, fire retardant, coating skin tensile strength 18 to 21 Kg/cm2, antifungal, antibacterial, anticorrosive, graft co-polymer coating on internal surface of pipe lines. 100 Micron DFT of site bonding grade with steel surface and 100 Micron DFT of top coat.		
	1) Pipe line in unlaidd condition	Sqm.	1191.00
	2) Pipe line in laidd condition	Sqm.	1271.00
27	Providing and applying of elastomeric (450% elongation), thermoplastic, fire retardant, coating skin tensile strength 18 to 21 kg/cm2, antifungal, antibacterial, anticorrosive, graft co-polymer coating on cleaned steel reinforcement bars. 80 to 100 micron DFT With self bonding trade of bar coating.		
	1. 6 mm dia.	MT	43309.00
	2. 8 mm dia.	MT	33140.00
	3. 10 mm dia.	MT	26260.00
	4. 12 mm dia.	MT	21852.00
	5. 16 mm dia.	MT	16363.00
	6. 20 mm dia.	MT	13316.00
	7. 25 mm dia.	MT	10515.00
	8. 32 mm dia.	MT	8427.00
	9. 40 mm dia.	MT	6400.00

Sr. No.	Description	Unit	Rate (in Rs.) 2019-2020
1	2	3	4
28	Providing and applying of H D P E coating for MS pipe internally as well as externally including cost of H D P E powder moulding pipe grade, labour, scrapping the pipe surface with wire brushes, degreasing, cleaning by compressed air and surface grinding and finishing including cost of loading , unloading and handling of pipe at factory etc. complete as directed by Engineer -in -charge.		
	HDPE coating External thickeess in micron Internal Total coating thickness in micron		
	1. 0 2000 2000	Sq. m	2383.00
	2. 2000 micron 1000 3000	Sq. m	2993.00
	3. 3000 micron 1000 4000	Sq. m	3440.00
	4. 3000 micron 2000 5000	Sq. m	3953.00

Section - I (XVII)

Treatment Plant (WTP & STP)

Section - I - XVII, TREATMENT PLANT (WTP & STP)

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	<u>Water Treatment Plant (WTP)</u>					
1	Designing (aesthetically), providing and constructing high rate <u>Unconventional Water Treatment Plant</u> i.e. Simplified Water Treatment Plant consisting of Civil, Mechanical and Electrical works including cost of providing and applying epoxy paint to inside surface of water retaining structures in contact with chlorine and providing anti-termite treatment to entire structure below ground level, mechanical and electrical components of various sub-works as given below, including necessary hydraulic testing, structural testing and trial run for 3 months, etc. complete as directed by Engineer-in-charge (turn-key job) works.					
1)	Aeration fountain					
2)	Inlet arrangements					
3)	Mixing channel with ventury flume and flow measuring arrangement					
4)	Inlet channel					
5)	Flocculator - Conforming to I.S. 7208-1974 (Type-C) with detention period of 30 minutes					
6)	Tube settlers - Designing, fabricating and constructing Tube Settlers with square or any other shaped tube like Circular, Cheveron, Hexagonal etc. having proven performance.					
7)	Rapid sand gravity filters					
8)	Filter house					
9)	Chemical house					
10)	Alum tanks - 2 Nos. with mixing, carrying and dosing arrangements with piping.					
11)	Gravity feed gas chlorinator with 100% standby.					
12)	TCL solution tank with mixing, carrying and dosing arrangement with piping.					
13)	Bypass arrangement					
14)	External and internal electrification					
15)	Laboratory equipments					
16)	Wash water tanks of capacity equal to 2% of designed quantity of filtered water in a day (+)10%.					
17)	Wash water pumps with 100% standby.					
18)	Air blowers - Air Blowers are not required for WTP having capacity less than and equal to 3 MLD, for WTP having capacity more than 3 MLD air blowers capable of delivering 600 LPM per square metre of free air of filter area at 0.4 Kg/ sqcm at the under drains (100% standby).					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
19)	Pure water sump of capacity equal to 1 hour pumping capacity.					
20)	Pure water pump house over the sump / by the side of sump.					
21)	Drainage arrangements					
22)	Alum store					
23)	Sanitary block with necessary water supply and drainage arrangements and internal WBM roads.					
24)	These rates are applicable for seismic zones 2, 3 and 4.					
25)	Rates given below are inclusive of uplift pressure if any and dewatering during the entire work.					
26)	All RCC structures shall be constructed in M-250. Structures in contact with water shall be in M-300.					
27)	Unconventional Treatment Plants less than 1 MLD capacity shall not be constructed.					
28)	Upto and including 5 MLD capacity WTP 100 Kg chlorine cylinder should be provided and for WTP having capacity more than 5 MLD chlorine tonner should be provided.					
29)	All required sluice valves should be of MJP approved glandless valves, all required railing should be of stainless steel, external paint of all units of WTP should be of Acrylic emulsion with silicon additives paint. All flooring should be of ceramic tiles.					
	<u>Note</u> : Conditions from Sr. No. 1 to 29 shall form a part and parcel of the tender and must be included in draft tender papers for the work of unconventional treatment plants.					
	<u>Unconventional Water Treatment Plant</u>					
1)	Fixed cost for 1 MLD	Job	54.67	22.26		
2)	Add for capacity above 1 MLD upto 2 MLD	MLD	24.05	9.11		
3)	Cost of 2 MLD treatment plant	Job	78.72	31.37		
4)	Add for capacity above 2 MLD upto 5 MLD	MLD	17.86	7.08		
5)	Cost of 5 MLD treatment plant	Job	132.30	52.64		
6)	Add for capacity above 5 MLD	MLD	14.43	5.87		
7)	Cost of 10 MLD treatment plant	Job	204.45	81.98		

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
2	Designing (aesthetically), providing, constructing and commissioning <u>Conventional Water Treatment Plant</u> consisting of all Civil, Mechanical and Electrical works including cost of providing and applying epoxy paint to inside surface of water retaining structures in contact with chlorine and providing anti-termite treatment to entire structure below ground level, mechanical and electrical components of various sub-works as given below, including necessary hydraulic testing, structural testing, equipment testing and trial run for a period of 3 months, etc. complete as directed by Engineer-in-charge (turn-key job).					
1)	Aeration Fountain - Plan area not less than 0.625 square metre per MLD					
2)	Ventury Flume - With necessary devices, consisting of simple mechanical indicator. (Pedestal type gauge)					
3)	Flash Mixer - Rapid mixing device, detention time 60 seconds to give velocity gradient 300 to 400 sec-1, vane mixer type conforming to I.S. 7090 of 1985.					
4)	Flocculator - Conforming to I.S. 7208-1974 (Type-C) with detention period of 30 minutes.					
5)	Clarifier - Horizontal flow circular tank, detention period 2-5 hours, overflow rate 30 cubic metre per square metre per day (to be specified), Weir loading not more than 300 cubic metre per metre per day, with mechanical sludge scraper conforming to I.S. No. 10313-1982.					
6)	Rapid Sand Filters and Filter House - Filter designed for filtration rate of 5,000 litres per square metre per hour, minimum 2 beds for plant upto 10 MLD, for larger plants as specified, filters to be located in filter house with roof slab, pipe gallery and platform minimum 5.5 metre in width.					
a)	Filter Sand - Effective size 0.45 to 0.70 mm, uniformity coefficient not more than 1.7, nor less than 1.3, depth of water over sand 0.75 M, free board 50 cm, gravel 0.45 M in depth, sand and gravel conforming to I.S. 8491(i)-77, backwash by air wash, standard appurtenances (to be specified), rate of flow controller, filter gauge, sand expansion gauge, etc.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
b)	Wash Water Tank - Capacity to be specified and suitable to supply water to wash 2 filter units at a time where the units are 4 or more.					
c)	Wash Water Pumps - Capacity to fill water tank in 1 hour with 100% standby.					
d)	Air Blowers - Air Blowers are not required for WTP having capacity less than and equal to 3 MLD, for WTP having capacity more than 3 MLD air blowers capable of delivering 600 LPM per square metre of free air, of filter area at 0.4 Kg/SqCm at the underdrains (100% Standby).					
7)	Chemical House in Two Storeys					
a)	Ground floor to accommodate 7 days' alum requirement and sundry storage.					
b)	First floor to accommodate alum and lime tanks. etc.					
c)	Solution tanks - Minimum 3 tanks (one for preparation, second for dosing and third as standby), each tank capable of giving 8 hours maximum dose without interruption, minimum free board 0.30 M, trays for dissolving, level indicator, mechanical agitation devices, solution feed and drain lines, solution feed device (constant head device, strength of solution upto 10% only) conforming to I.S. 9222 Part-I 1979.					
8)	Pure Water Sump and Sump House.					
a)	Capacity of sump - One hour of designed flow.					
b)	Pump House - Pump house of required size over the sump or by the side.					
9)	Store House - Suitable for alum storage of three months' requirement in monsoon with 10% extra capacity for other sundry articles.					
10)	Vacuum feed type Chlorinators - Make to be approved by MJP.					
a)	Conforming to I.S. 10533 - A Part-II 1983.					
b)	Rate for withdrawal					
	Temperature Kg. of Chlorine discharge Degree 'C' per day (Cylinders)					
	45 67 Tonnes					
	10 6.35 9.50 110					
	15 10.75 16.10 130					
	20 14.50 21.24 254					
	27&Above 18.70 28.12 315					
c)	Chlorinator equipment and container room to conform to IS.10553 Part-I 1983.					
d)	100% standby shall be provided.					
e)	Upto and including 5 MLD capacity WTP 100 Kg chlorine cylinder should be provided and for WTP having capacity more than 5 MLD chlorine tonner should be provided.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
11)	By pass arrangements - C.I. or M.S. pipes.					
12)	Drainage arrangements - RCC pipes upto plot boundary.					
13)	Electrical installation - Both internal and external including entire plant area.					
14)	Laboratory equipment - As per requirement (to be specified during tendering).					
15)	Sanitary blocks - Carpet area - 15 square metre minimum upto 25 Mld and 25 square metre above 25 Mld.					
16)	Administrative block and internal road - To accommodate office room, chlorine room, laboratory room, panel board room, blower room etc.and WBM road to connect all units from main gate of plot.					
17)	Rates given below are inclusive of uplift pressure if any and dewatering during entire work.					
18)	These rates are applicable for seismic zones 2, 3 and 4.					
19)	All RCC structures shall be constructed in M-250. Structures in contact with water shall be in M-300.					
20)	All required sluice valves should be of MJP approved glandless valves, all required railing should be of stainless steel, external paint of all units of WTP should be of Acrylic emulsion with silicon additives paint. All flooring should be of ceramic tiles.					
	<u>Note</u> : Conditions from Sr. No.1 to 20 shall form a part and parcel of the tender and must be incorporated in draft tender papers of conventional treatment plants (proposed).					
	<u>Conventional Water Treatment Plant</u>					
1)	Upto 5 MLD	MLD	32.60	13.13		
2)	Cost of 5 MLD treatment plant	Job	163.00	65.68		
3)	Add for capacity above 5 MLD upto 10 MLD	MLD	23.28	9.21		
4)	Cost of 10 MLD treatment plant	Job	279.40	111.73		
5)	Add for capacity above 10 MLD upto 20 MLD	MLD	15.15	9.99		
6)	Cost of 20 MLD treatment plant	Job	430.90	211.72		
7)	Add for capacity above 20 MLD upto 50 MLD	MLD	13.96	4.28		
8)	Cost of 50 MLD treatment plant	Job	849.70	339.95		
9)	Add for capacity above 50 MLD upto 100 MLD	MLD	11.65	4.65		
10)	Cost of 100 MLD treatment plant	Job	1432.20	572.31		
11)	Add for capacity above 100 MLD	MLD	9.52	3.91		

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
3	Designing (aesthetically), providing, fabricating Package Water Treatment Plant at the shop, transporting to site, installing, testing and commissioning at the site, giving necessary one month's free test and trial run with guarantee for one year, etc. complete.					
	Prefabricated Package Water Treatment Plant comprising following :					
1)	Rapid mixing channel in M.S. sheets and M.S. baffle.					
2)	Flocculator not less than 10 minutes detention, in M.S. prefabricated box, flocculation being achieved either by glass pebbles of graded size or PVC tetrapod or equivalent arrangement to ensure good floc formation.					
3)	Plate or tube settlers of not less than 30 minutes detention in M.S. prefabricated box, the plates / tubes mounted in the settler basin with inclination of not less than 60 degree to horizontal.					
4)	Rapid sand gravity filter in M.S. prefabricated box with filter sand not less than 500 mm thick, supported on false floor below with polypropylene nozzles spaced at not more than 500 mm centres in either direction.					
5)	Backwashing, inlet & outlet facilities shall be provided.					
5.1	Air blowers - Air Blowers are not required for WTP having capacity less than and equal to 3 MLD, for WTP having capacity more than 3 MLD air blowers capacity of delivering 600 LPM per sqm of free air of filter area 0.4 kg/sqcm at underdrain (100% standby)					
5.2	Wash water tank capacity equal to 2 % of designed quantity of filter water in a day + 10 %					
5.3	wash water pump with 100 % standby (Minimum 3 HP with all accessories)					
5.4	Backwash with water not less than 0.6 cum/sqm of filter bed area in filter box.					
5.5	Piping of outlet upto sump					
6	Laboratory equipments					
7	External & Internal electrification					
8	TCL solution tank with mixing, carrying and dosing arrangement with piping.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
9	Gravity feed gas chlorinator with 100% standby.					
10	Four alum storage unit					
11	Drainage arrangement					
12	Providing room with RCC roof for office and Lab space with necessary water supply & drainage arrangement & internal roads					
13	RCC sump of one hour cap.and pump house on it.					
14	Internal Road					
15	Wire fencing with gate for WTP premises.					
16)	All civil works for foundation, consisting of raised RCC platform above G.L. or walls in B.B. masonry or UCR masonry shall be provided as per needs at site.					
17)	Bypass in the form of pipes or M.S. channels included in the design, effecting bypass of such new tank and filter individually or both. (Limit upto 5.0 M. from W.T.P. face)					
18)	The entire M.S. fabricated tank provided with FRP lining (5 mm thick) to inside face in contact with water epoxy painting- two coats with one coat of primer on outside. The thickness of plates employed shall not be less than 6 mm					
19)	Alum dosing and mixing arrangements to be provided in twin tanks, each of 8 hours capacity, capable of importing does of 20 ppm with 5% solution. The alum tanks provided with a dose in steps of 5 ppm and entire unit mounted on the top of flocculator / settler box, in the form of prefabricated structure, with access platform and ladder. Alum boxes with FRP lining (5 mm thick) inside and epoxy paint two coats with one coat of primer on outside.					
20)	Both flocculator and settling basins provided with hopper bottom with slope not less than 45 degrees to the horizontal drain pipes and valves provided to both flocculator and settling basin.					
21)	Flow ratings to conform following parameters :					
a)	Velocities in channels not to exceed 0.6 M./Second.					
b)	Velocities in filter outlet pipes and valves not to exceed 1 M./Second.					
c)	Velocities in interconnecting pipe and controls not to exceed 1M./Second.					
22)	Free board for all units not less than 300 mm					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
23)	All RCC structures shall be constructed in M-250. Structures in contact with water shall be in M-300.					
24)	Upto and including 5 MLD capacity WTP 100 Kg chlorine cylinder should be provided and for WTP having capacity more than 5 MLD chlorine tonner should be provided.					
25)	All required sluice valves should be of MJP approved glandless valves, all required railing should be of stainless steel, external paint of all units of WTP should be of Acrylic emulsion with silicon additives paint. All flooring should be of ceramic tiles.					
	<u>Package Water Treatment Plant</u>					
1)	21 Cum/Hr. (0.50 MLD)	Each	25.93	0		
2)	34 Cum/Hr. (0.80 MLD)	Each	32.17	0		
3)	42 Cum/Hr. (1.00 MLD)	Each	36.32	0		
4)	63 Cum/Hr. (1.50 MLD)	Each	45.64	0		
5)	83 Cum/Hr. (2.00 MLD)	Each	53.96	0		
6)	125 Cum/Hr. (3.00 MLD)	Each	69.52	0		
	Note : Depending upon the capacity required for the scheme, one of the above capacities should be chosen.					
4	<u>Sewage Treatment Plant (STP)</u>					
A	Designing (aesthetically), providing, constructing and giving satisfactory trials of <u>modernised Sewage Treatment Plant</u> consisting of receiving chamber, screen chamber, grit chamber, measuring flume, distribution chamber with primary and secondary treatment, etc. as detailed below, administration block of suitable size including allied units for waste disposal with all civil and mechanical works involved, etc. complete (turn key job).					
	<u>Primary treatment - with extended sludge drying beds (Oxidation Ponds)</u>					
	<u>Rates</u>					
1)	Upto 10 MLD	MLD	45.64	18.26		
2)	Cost of 10 MLD plant	Job	456.40	182.57		
3)	Add for capacity above 10 MLD upto 20 MLD	MLD	39.95	15.95		
4)	Cost of 20 MLD plant	Job	855.90	342.07		
5)	Add for capacity above 20 MLD	MLD	34.24	13.71		
6)	Cost of 50 MLD plant	Job	1883.10	753.17		
7)	Add for capacity above 50 MLD	MLD	28.53	11.42		
8)	Cost of 100 MLD plant	Job	3309.60	1323.97		

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
B	Designing (aesthetically), providing, constructing and giving satisfactory hydraulic testing, commissioning and giving satisfactory trials of <u>modernised Sewage Treatment Plant</u> consisting of inlet chamber, screen chamber, detritus tanks, parshall flume, primary settling tanks, aeration tanks, secondary settling tanks, sludge sump and pump house, sludge thickener, primary digester, secondary digester, SST sump and pump house, chlorine contact tank, chlorinators, chlorinator room, sump cum blending tank, PST sludge sump cum blending tank, pump house, sludge centrifuge, gas holder, necessary piping work with required valves, gates, drains, pathways, administrative building cum laboratory, laboratory equipments, tools and plants, spare parts, etc. complete as turnkey job with all involved civil, electrical and mechanical works inclusive of following items, units as per detailed specification for civil, electrical and mechanical components with all duties and taxes, etc. complete.					
	<u>Inlet Chamber</u>					
	Designing, providing and constructing RCC(M-250) inlet chamber designed for the peak flow 2 DWF including necessary excavation in all types of strata including walkway around the periphery. Each compartment will have phosphor bronze, steel gate with extension rod, head stock, operating wheel, G.I. pipe railing, etc. The work includes providing and making necessary arrangements to connect the flow to screen chamber by approach channel as directed and as per specifications.					
	<u>Screen Chambers</u>					
	Designing, providing, constructing, testing and commissioning screen chamber designed for average 1 DWF and maximum 2 DWF in RCC(M-250) including inlet pipe/ channel from inlet chamber, outlet pipe/ channel to detritus tank, free board of 0.50 M minimum, RCC walkway 1.2 M wide with G.I. pipe railing, RCC staircase of 1.2 M width from GL to screen chamber.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	<u>Detritus Tank</u> Designing, providing and constructing continuously grit removal type of detritus tank, mechanically operated in RCC (M-250) capable of removing 100%, 0.20 mm size particle and above, having specific gravity 2.30 designed for one peak 2 DWF with suitable arrangement of separation of grit from putrescible solids including providing and making necessary arrangement of JB-1 inlet and outlet channel of required sizes as may be required to connect the flow to parshall flume, etc. complete including hydraulic testing for water tightness of the structure having minimum free board of 0.30 M washout arrangement to grit chamber and platform 1.20 M wide RCC walkway with G.I. pipe hand railing shall be provided. A pit for collecting grit conveyed by conveyor shall be provided.. It should be suitable to handle the grit for carting. All arrangements shall be as per detailed specifications and as directed.					
	<u>Parshall Flume</u> Designing, providing and constructing parshall flume channel in RCC (M-250) for measuring quantity of sewage received at the treatment works, max. flow of 2 DWF and minimum flow of ½ DWF including providing and making necessary arrangement of approach channel as may be required to connect the flow having minimum velocity of 0.3 M per second to distribution box (DB-1). The unit shall be provided with walkway and RCC staircase having width of 1.20 M each etc. complete, including hydraulic testing for watertightness of the civil structure having free board of 0.6 M including electrically operated, flow indicating and flow integrating devices having a standby of float operated ROF meter. All arrangements as per specifications.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	<u>Primary Settling Tanks with Equipments</u>					
	Designing, providing, constructing and hydraulic testing in RCC (M-250) watertight primary settling tanks of 1 DWF capacity with feed chamber, sludge and effluent chamber, base adequately supported, providing 1.20 M wide clear peripheral and approach walkway inter connecting C.I. double flanged pipes from feed chamber of the clarifier distribution well, grouting wherever necessary, including foundation, etc. as per specifications, water depth at outer side shall be minimum 3.0 M, weir loading shall not be greater than 125 cum, DWF for average flow, bottom slope shall be 1:12.					
	The floor of clarifier shall have 40 mm thick (min.) screed course of cement grout of mix in CM 1:2 detention period shall be 2.25 hrs. dispersion box and stiffened weir plate made of mild steel plate not less than 8 mm thick, anti-corrosive epoxy paint on both faces shall be provided. Minimum free board of 0.50 M be provided. It includes inlet pipe from distribution chamber, central shaft, inlet baffle, outlet chamber, scum remover, skimming device, scum chamber, connecting channel from PST, outlet chamber to DB-2 as per detailed specifications.					
	<u>Aeration Tank (AT)</u>					
	Designing, providing and constructing in RCC mix (M-250) aeration tank in compartments to handle combined flow of 1 DWF incoming flow and recirculation flow including construction of inlet, outlet and distribution chamber DB-3 and providing 1.20 m wide clear peripheral approach walkways, expansion joints wherever necessary, including foundation, etc. as per specifications. Peak factor shall be 2, F/M ratio shall be 0.40, low speed aerator speed between 20 to 100 RPM, recirculation flow @50% and free board 0.60 m depth, (SWD) 3.50 M minimum, D.O. level at A.T. 2 mg/lit, MLVSS concentration shall be 2500 mg/lit and MLVSS concentration shall be 2000 mg/lit, HRT shall be 4 to 6 hours and STR 6-8 days.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	It should have compartments for washing, oxygen transfer capacity of mechanical aerator shall not be less than 1.5 kg/KWH, BOD of effluent 20 mg/lit with input to aerator 0.15 to 0.30 KWH/1000 cum of aeration tank. All related works shall be as per detailed specifications.					
	<u>Secondary Settling Tanks with Equipments</u> Designing, providing and constructing in RCC (M-250) water tight secondary settling tank having detention period 2 hours and SWD shall be 4.20 M. The effluent BOD & SS from the secondary clarifier shall not be more than 20 Mg/lit and 30 Mg/lit respectively. It should be hydraulically tested, bottom floor slope of 1:12 and free board of 0.60 M minimum. Dispersion box shall be made of mild steel plate not less than 8 mm thick with anticorrosive epoxy paint from both faces and well stiffened. The sewage admitted at the centre flowing upward and outward towards periphery be slowly and continuously collected towards a convenient discharge point near centre by a rotating wheel arm. The clarifier will be completed with end drive half rotating bridge, structural steel rake, overflow weir, walkway diffuser, over load alarms, having push buttons, starters for the clarifier, walkway and the suitable sludge withdrawing arrangement with flush valve capable of withdrawing moisture content not more than 97% to 98% slopping floor shall have 40 mm thickness (minimum), screed course of cement grout of mix 1 cement : 2 sand, rotating sludge scrapper mechanism fitted with squeezes including providing and making necessary arrangement to connect the flow to outlet chamber (DB-4) then the gravity mains for final disposal and as per detailed specifications and obligatory provision. All other arrangements shall be as per detailed specifications.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	<u>Sludge Thickener with Equipments</u>					
	Designing, providing and constructing watertight of sludge thickener (gravity type) including foundation in RCC (M-250) with inlet and outlet chamber influent well, inlet and outlet pipes, with sludge pit and sludge removal arrangement, grouting wherever necessary with walkway all around of 1.20 M width G.I. pipe railing interconnecting CI pipes all complete as per specifications, detention time 24 hours. SWD shall be 4.25 metre with necessary fixed bridge scraper arrangement as per detailed specifications and necessary inlet and outlet arrangement. All other arrangement as per detailed specifications.					
	<u>Primary Digester with Mixer Equipment (Fixed Cover)</u>					
	Designing, providing and constructing unit of watertight and gastight primary digester suitable for 1 DWF plant and complete with pipe gallery, building, staircase for access from dome of digester into inside staircase, walkways at springing levels, etc. walls and base slab being in RCC (M-250), domes in structural concrete including providing burners and civil works for gas collection, grouting wherever necessary, etc. complete as per specifications. It should be designed for min 9°C and max. 45°C and minimum detention time of 30 days, water depth shall not be more than 8.5 M, free board shall be 0.6 M with inlet and outlet arrangement of C.I. flanged pipes including giving hydraulic testing and airtightness testing. The item includes providing works for collecting gas and gas burner as per specifications.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	<u>Secondary Digester with Equipment (Fixed Cover)</u> Designing, providing and constructing including foundation unit of watertight and gastight secondary digester to deal with 1 DWF complete with pipe gallery, building, staircase for access from dome of digester into inside, staircase to walkways at springing levels, etc. Walls and base slab and domes being in RCC M-250, providing arrangement for digested sludge from digesters to centrifuge, providing burners and civil works for gas collection grouting wherever necessary, etc. complete as per specifications and obligatory provision. All other arrangements as per detailed specifications.					
	<u>S.S.T. Sump and Pump House with Recirculation Pumps and Sludge Pumps to Digester</u> Designing, providing and constructing sump and pump house of requisite capacity with ceiling height not less than 6 M, sludge stream for recirculation to aeration tank and excess sludge to SCBT, including C.I. piping to carry this flow to sump as per detailed specification and as directed by Engineer-in-charge.					
	<u>Chlorine Contact Tank</u> Designing, providing and constructing chlorine contact chamber of adequate capacity to deal with 1 DWF average flow. The chlorine contact tank should be of 30 minutes capacity during average flow to achieve 99.99% coliform reduction. Chlorine dose shall be maintained as per standard provisions including designing, providing and constructing water supply arrangement for chlorination including providing dewatering and bypass arrangements, jointing to final effluent main and outlet weir, etc. complete. The effluent quality should match with the standards laid down by Maharashtra Water Pollution Control Board and as per the obligatory provisions and detailed specifications and as directed by Engineer-in-charge.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	<u>Chlorinator and Chlorinator Room / Tonner Room</u> Designing, providing and constructing chlorinators, vacuum type 2 nos. each having capacity of 10 Kg/hr as per obligatory provisions and detailed specifications with necessary provision of chlorinator room having floor area not less than 30 sqm including automatic residual chlorine controller with actuator and residual chlorine analyser including cost of chlorine cylinder, piping, valves, measuring and controlling equipments, safety devices, lifting equipments, etc. complete as per I.S.-10553 (Part II) 1982. The tonner room should have 3 MT capacity crane for loading and unloading facility. Tonner storage should distinctly isolated and should be for minimum 10 tonners space and arrangements as per gas laws 1981 and factory act shall be provided and all other matching amenities be provided, 5 MT gantry shall be provided for full length of tonner room at 6 M height from floor level, with outlet chamber and treated effluent outlet channel, etc. complete as per detailed specifications.					
	Upto and including 5 MLD capacity STP 100 Kg chlorine cylinder should be provided and for STP having capacity more than 5 MLD chlorine tonner should be provided.					
	<u>Sump cum Blending Tank (SCBT)</u> Designing, providing and constructing sump cum blending tank of appropriate size and detention time with free board of 0.60 M. The slope of floor 1:4 with suction pit at the centre as per detailed specifications and obligatory requirements.					
	<u>P.S.T. Sump cum Blending Tank, Pump House with Recirculation Pumps</u> Designing, providing and constructing pump house of appropriate size with pumps, ceiling height minimum 6 M over the circular sump for discharging the sludge to thickener and recycling of flow for blending with C.I. piping, etc. complete as per detailed specifications.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	<u>Sludge Centrifuge Room with Centrifuges</u>					
	Designing, providing, constructing and installing including foundation, etc. sludge centrifuge to handle the sludge flow of one day in one hour per unit with sludge dewatering unit, drain, etc. complete as per specifications, sludge centrifuge with all necessary arrangements as per detailed specifications mentioned in Volume-II and Volume-III of tender and obligatory provisions, be provided with satisfactory functioning.					
	<u>Gas Holder</u>					
	Designing, providing and constructing gas holder having gas collection system, gas flow meter and gas burner with floating dome arrangement and storage time 6 hrs. to be constructed in M-250 having appropriate diameter as per detailed specifications and obligatory provisions. The floating dome shall be of 8 mm thick M.S. plate minimum and shall be provided with two coats of anti-corrosive epoxy coating from both faces.					
	<u>Outfall Sewer</u>					
	Designing, providing and constructing appropriate outfall sewer of RCC NP-2 pipe to discharge treated effluent, untreated effluent from outlet chamber (after basin / chlorination tank) to the local nalla at a point shown on the drawing including necessary chambers for inspection / cleaning including necessary excavation , dewatering, refilling, concrete encasing/ bedding concrete steps to reach the nalla bed level, pitching and energy dissipation chamber in the nalla portion, etc. complete upto 50 M length RCC NP-2 pipeline and including all above items.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	<u>Piping Work in CI 'LA' class including Sluice Valve, Reflux Valve, M.S. Gate</u> Providing, laying and jointing pipes other than those already included in the above items for interconnection bypass drains, etc. of all units including adequate numbers of manhole chambers. The item includes excavations, refilling and hydraulic testing of pipes, valves, gates, accessories and cost of jointing materials. The item includes required channels with gates for interconnection of units, bypass drains, etc. for all units and as directed, etc. complete as per detailed specifications. All required sluice valves should be of MJP approved glandless valves.					
	<u>Administrative Building cum Laboratory (G+1)</u> Designing, providing and constructing administrative building, office cum laboratory including stores. This shall be a building having appropriate carpet area at ground floor and at first floor complete as per specifications including necessary excavation, foundation in RCC M-200 framed structure, BB masonry (IInd class in CM 1:6) 20 mm cement plaster in CM 1:3 inside and outside painting, aluminium door and window with glass panels, tile flooring and skirting and all other allied items, fixtures, fastening electrification arrangements, water supply arrangement, etc. complete. The building will have laboratory on upper floor of administrative building and should be so centralised that it should not be attached with any unit but should have complete control of every unit as per laboratory equipment, beautification, telephone and intercom arrangement and wireless system. All required railing should be of stainless steel, external paint of all units of STP should be of Acrylic emulsion with silicon additives paint. All flooring should be of ceramic tiles.					
	Structures in contact with water shall be in M-300 only					
	<u>Primary and secondary treatment-with digesters, sludge drying beds etc. complete.</u>					
	<u>Rates</u>					
1)	Upto 10 MLD	MLD	54.99	21.91		
2)	Cost of 10 MLD plant	Job	549.90	219.11		
3)	Add for capacity above 10 MLD upto 20 MLD	MLD	47.73	19.21		

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
4)	Cost of 20 MLD plant	Job	1027.20	411.21		
5)	Add for capacity above 20 MLD	MLD	41.09	16.42		
6)	Cost of 50 MLD plant	Job	2259.90	903.97		
7)	Add for capacity above 50 MLD	MLD	34.24	13.69		
8)	Cost of 100 MLD plant	Job	3971.90	1588.10		
C	Moving Media Bio Reactor (MMBR) /FAB (Fluidised Areated Bed) Process Designing, provoding, construction, hydraulic testing, commissioning and giving satisfactorily trials of STP consisting of inlet chamber, screen chamber, Grit Separator, MMBR / FAB (Based on technologies providing attached growth on plastic meddi kept suspended in the waste water due to low density of plastic and provided with compressed air for aeration with very high MLSS of greater than 15,000 mg/lit.) tank, Secondary Clari settler, Sludge sump, Sludge Thickener, Chlorine Contact Tank, Chlorinator room/Shed, sludge Centrifuge, associated piping work with required valves, gates, drains, pathways, Administration Block cum Laboratory, Laboratory equipments, spares parts for 2 years of operation, etc. complete as turnkey job with all involved civil, electrical and mechanical works inclusive of following items, units as per detailed specifications for civil, electrical and mechanical components with all duties and taxes etc. complete to achieve BOD<10 PPM, COD<100 PPM, TSS<10 PPM, NH3N<5 PPM, TP<1 PPM. Treated sewage can be used for irrigation, horticulture purposes.					
	1.Inlet Chamber Designing, providing and constructing RCC(M:25) inlet chamber, designed for the peak flow including necessary excavation in all types of strata including walkway all around the periphery. Each compartment will have CI gates with extension rod. Head stock, operating wheels,Stainless steel pipe railing etc. The work includes providing and making necessary arrangements to connect the flow to screen chamber by approach channel as directed and as per specifications.					
	2.Screen Chamber Designing, provoding, constructing, testing and commissioning of screen chamber, designed for peak flow in RCC (M-25), including walkway 1.2 m wide with Stainless steel pipe.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	3.Grit Separator Designing, providing & constructing detritor type grit removal mechanism in RCC(M-25) capable of removing 100% 0.2 mm size particle & above having specific gravity 2.30 designed for peak flow with suitable arrangement of separation of grit from putrescible solids including providing & making necessary arrangements of Jbl . Inlet & Outlet channels of required sizes as make be required to connect the flow to connecting unit etc.complete including hydraulic testing for water tightness of structure having minimum FB of 0.3m, washout arrangement to grit chamber & platform 1.2 m wide RCC walkway with Stainless steel pipe handling shall be provided. A pit for collecting grit conveyed by conveyor shall be provided. It should be suitable to handle the grit for carting. All arrangements shall be as per detailed specifications and as directed.					
	4.MMBR / FAB Tank Designing, providing and constructing in RCC(M-25) biological reactor tank for removal of BOD along with nutrient removal to handle the average flow & having hydraulics suitable to handle peak flow conditions with suitable 1.2 m wide walkway, expansion joints as required, including foundation etc as per specifications. The tank shall be equipped with inlet & outlet arrangement, air blowers for supply of air, coarse bubble diffusers & aeration grid in SS 304, PP carrier bio media etc. FB of 0.5m & SWD as required should be complete as per detailed specifications.					
	5.Secondary Clarisettler Designing, providing & constructing in RCC(M-25) water tight secondary clarisettler having SWD of 3.75 m + 0.50 m FB & has tube media in the clarification zone to provide additional surface area for settling. The settler shall be provided with scraper mechanism in MS with epoxy painting for collecting the settled solids at the bottom (bottom slope 1:12). The central feed well shall be made of MS with epoxy painting from both faces & well stiffened. The sewage will be admitted in the feed well & then will move outwards towards periphery slowly & continuously over a weir & will be collected in a launder.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	6.Chlorine Contact Tank Designing, providing & constructing chlorine contact tank of adequate capacity to deal with average flow. The contact time provided is 30 min to achieve 99.99 % reduction in coliform during average flow condition. Chlorine doage will be as per standard provisions including designing, providing & constructing water supply provision for chlorination, including providing dewatering & bypass arrangement for joining to final effluent mains & outlet weir etc complete. The effluent quality should match with the standards laid down by Maharashtra Pollution Control Board as per obligatory provision & as detailed specification & directed by engineer in charge.					
	7.Chlorinator & Chlorinator Room / Tonner Room Designing, provoding & constructing vaccum chlorinators having adequate capacity for dosage of adequate chlorine to ensure 99.99% ciliform reduction as per obligatory provisions detailed specifications with necessary provision of having chlorinator room of adequate size.The chlorinator equipment shall include chlorine cylinders / tonners, piping, valves, measuring controlling equipments, safety devises, lifting equipment etc. complete as per IS 10553 (Patr II) 1982. The tonner room should have minimum 3 MT capacity crane for loading & unloading facility. Tonner storage should be distinctly isolated and should have min.storage space as per detailed specifications & as per gas law 1981 & factory act shall be provided. All other matching amenities shall be provided, 5 MT gantry rail shall be provided for full length of tonner room at 6m Ht from level of tonner room with outlet.					
	Upto and including 5 MLD capacity STP 100 Kg chlorine cylinder should be provided and for STP having capacity more than 5 MLD chlorine tonner should be provided.					
	8.Sludge Sump Designing, providing & constructing of sludge sump and pump for discharging sludge to sludge thickener using MS pipe complete as per detailed specification.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	9.Sludge Thickener Designing, providing & constructing water tight sludge thickener gravity type in RCC(M-25) with inlet & outlet pipes, central feed well, sludge pit & sludge removal arrangement, grouting wherever necessary with walkway all around of 1.20 m with Stainless steel pipe railing interconnecting CI pipes all complete as per specifications, having bottom slope 1:8 & 3 m SWD with necessary fixed bridge scraper arrangements as per detailed specifications and necessary inlet & outlet arrangement. All other arrangement as per detailed specifications.					
	10.Sludge Centrifuge Platform with Centrifuge Designing, providing, constructing & installing including foundation etc. Sludge centrifuge to handle the sludge flow of 1 day in 18hrs per unit with sludge dewatering unit drain etc complete as per specification. Sludge centrifuge with necessary arrangements as per detailed specification mentioned in tender and obligatory provisions to be provided with satisfactory functioning.					
	11.Outfall Sewer Designing, providing, constructing appropriate outfall sewer of RCC NP2 pipe to discharge treated effluent, untreated effluent from outlet chamber (after basin / chlorination tank) to the local nallah at the point shown on the drawing including necessary chambers for inspection & cleaning including excavation, dewatering, refilling, concrete encasing & bedding concrete.					
	12.Piping work in CI-LA class including sluice valves, reflux valves, MS Gates Providing, laying & jointing pipes other than those already included in the above items for interconnection bypass drains etc. of all units including adequate numbers of manhole chambers. The item includes excavation, refilling & hydraulic testing of pipes, valves, gates, accessories & cost of jointing materials. The item includes required channels with gates or interconnection of units, bypass drains etc. for all units as directed etc complete as per detailed specifications. All required sluice valves should be of MJP approved glandless valves.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	3. Sludge thickener is not provided up to 3 MLD capacity STP. Sludge will be collected into sludge sump & pumped directly to sludge dewatering system					
	4. For all STP sludge dewatering is using solid bowl centrifuge.					
	5. Chlorinator room not provided for STP up to 3 MLD. For STP up to 3 MLD laboratory / administration building is not provided. Only a room for operator is provided.					
	6. Boundary wall, fencing, gate, storm water drains, site clearance is not considered in scope.					
	7. All water retaining structures are in M 25 grade of concrete.					
	8. Water table is considered 5 m below GL for design.					
	9. Soil bearing capacity is considered as 20 T/m ² at 1.5 m below GL.					
	10. Lead for excavation is considered as 0.5 km.					
	11. Grade of cement used is OPC 43 grade.					
	12. Grade of steel used is Fe 415.					
	13. Peak factor considered for design for plants up to 3 MLD is 3, 4 to 15 MLD is 2.5, 16 to 20 MLD is 2.0.					
	14. Chemicals required during trial run & commissioning is not considered.					
	15. Water & power during construction, trial run & commissioning shall be provided by client.					
	16. Power available at STP location is assumed as LT power supply.					
	MAKES OF EQUIPMENT					
	Description Make					
	Centrifugal Pumps Kirloskar / Jhonson / Kishor / Eqv.					
	Screw Pumps Roto / Tushaco / Eqv.					
	Air Blower Usha / Swam / Kay / Kulkami / Eqv.					
	Dosing Pumps Milton Roy / VK Pumps / Positive / Minimax / Eqv.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	Agitators / Flocculators Pavan / Fibre & Fibre / Ceecons					
	Clarifier/Thickener Mechanism To be fabricated as per MJP approved design / make					
	Screens To be fabricated as per MJP approved design / Make					
	Grit Separator To be fabricated as per MJP approved design / make					
	Chlorinator Toshcon Jesco / Banaco / Perfect Chloro / Chlorocontrol / Metito / Eqv.					
	Chlorine Tonner Meenakshi / Eqv.					
	Solid Bowl Centrifuge Alfa Laval / Humbolt /Wedag/ Hiller/ Eqv					
	Motors Crompton/ Siemens/Lakshmi					
	Cables Finolex/ Polycab					
	MS pipes Mahalakshmi Seamless/ Maharashtra Seamless/ Suryaroshni/ Jindal/Eqv.					
	CI Pipes Truform/ Electrosteel/ Kejriwal/ Eqv.					
	Valves Intervolve/BDK/ Procon/Tyco/AV valves/ Eqv.					
	Clarissettler Media Cooldeck/Munters					
	Bio Reactor Carrier Media As per MJP approved design / make					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	Cyclic Activated Sludge Process					
D	Designing , providing, constructing, hydraulic testing, commissioning and giving satisfactory trials of STP based on SBR technology consisting of Inlet Chamber, Screen Chamber, Detritus Tanks, Distribution Chamber and Biological CASP Basins, Sludge Sump, Chlorine Contact Tank, Chlorinator Room/Shed, Sludge Centrifuge necessary piping work with required valves, gates, drains, pathways administration Block cum Laboratory, Laboratory Equipments, Tools and Plants, Spare Parts, etc. complete as turnkey job with,all involved civil, electrical and mechanical works inclusive of following items, units as per detailed specification for civil, electrical and mechanical components with all duties and taxes etc. complete to achieve BOD <5 ppm, COD < 100 ppm, TSS < 10 ppm, to get recyclable quality of water for industrial / agricultural purposes. (In Case Cyclic activated sludge plant is designed for N, P outlet parameters shall also include TN < 10 ppm, Nh3N <2 ppm and TP < 1 ppm)					
	UNITS INCLUDED					
	1. Inlet Chamber Designing, providing, and constructing RCC (M:250) inlet chamber for the peak flow of 2 DWF including necessary excavation in all types of strata including walkway all around the periphery. Each compartment will have phosphor bronze steel gates with extension rod, head stock, operating wheels. Stainless steel pipe railing etc. The work includes providing and making necessary arrangements to connect the flow to screen chamber by approach channel as directed and as per specifications.					
	2. Screen Chamber Designing, providing, constructing, testing and commissioning of screen chamber, designed for average 1 DWF and maximum peak flow of 2 DWF in RCC (M -250), including inlet pipe / channel from inlet chamber, outlet pipe channel to detritus tank, free board of 0.5 m minimum, RCC walkway 1.2 m wide with Stainless steel pipe railing, RCC stair case of 1.2 m width from GL to screen chamber.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	3. Detritus Tank Designing, providing and constructing continuous grit removal type of Detritus Tank, mechanically operated in RCC (M 250) capable of removing 100% of 0.2 mm size particle and above, having specific gravity 2.30 designed for one peak 2 DWF with suitable arrangement of separation of grit from putrescible solids. Inlet and outlet channels of required sizes as may be required to connect the flow to connecting unit etc. Complete including hydraulic testing for water tightness of structure having minimum FB of 0.3 m, wash out arrangement to Grit chamber and platform ,1.2 m wide RCC walkway with Stainless steel pipe handling shall be provided. A pit for collecting grit conveyed by conveyor shall be provided. It should be suitable to handle the grit for carting. All arrangements shall be as detailed specifications and as directed.					
	4. CASP Basins Designing, providing and constructing in RCC (M:250), CASP basins for biological removal of BOD along with nitrification, denitrification, Bio-P removal in compartments to handle combine flow of I DWF incoming flow and recirculation flow including construction of selector compartments and providing 1.2 m wide clear approach walkways, expansion joints wherever necessary, including foundations etc as per specifications. Peak factor shall be 2, F/M ratio shall be 0.15, complete with air blowers, fine diffused aeration grid/equipment and FB 0.5 m and SWD as required. DO level in basin to be minimum 2 mg/l complete with "Oxygen Uptake Rate" control system and all related instruments. Stainless steel decanters and automation works. MLSS concentrations shall be 2000-5500 mg/l or more, MLVSS to MLSS ratio to be 0.8. HRT shall be between 12 to 13 hrs and SRT suitable for fully digested sludge. It should have all other related works as per detailed specification. In Case CASP is designed to achieve N, P removal HRT					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	5. Chlorine Contact Tank Designing providing and constructing chlorine contact chamber of adequate capacity to deal with 1 DWF average flow. The chlorine contact tank should be 30 min capacity, during average flow to achieve 99.99% coliform reduction. Chlorine dose shall be maintained as per standard provisions, including designing, providing and constructing water supply provision for chlorination including providing dewatering and by pass arrangement jointing to final effluent mains and outlet weir, etc complete. The effluent quality should match with the standards laid down by Maharashtra water pollution control board and as per obligatory provision and as detailed specification and as directed by Engineer-in-charge.					
	6. Chlorinator and Chlorinator Room /Tonner Room Designing, providing and constructing chlorinators vacuum type 2 Nos. with auto switchover facility and having capacity for dosage of adequate chlorine to ensure 99.99% colifonti reduction as per obligatory provisions and detailed specifications with necessary provision of having chlorinator room of adequate size. The chlorinator equipment shall include cost of chlorine cylinders/ tomer piping, valves, measuring and controlling equipments, safety devices, lifting equipments, etc. complete as per IS-10553 (Part II) 1982. The tonner room should have minimum 3 MTcapacity Hoist for loading and unloading facility. Tonner storage should be distinctly isolated and should be for minimum storage space as directed in the design specification and as per gas laws 1981 and factory act shall be provided. All other matching amenities shall be provided, 5 MT gantry rail shall be provided for full length of tonner room at 6 m height from level of tonner room, with outlet chamber and treated effluent outlet channel etc. complete as per detailed specification					
	Upto and including 5 MLD capacity STP 100 Kg chlorine cylinder should be provided and for STP having capacity more than 5 MLD chlorine tonner should be provided.					

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	7. Sludge Sump Designing, providing and constructing of sludge sump and pump house of appropriate size with pumps, ceiling height minimum 6 m over sump for discharging sludge to centrifuge using CI pipe complete as per detailed specification.					
	8. Sludge Centrifuge Platform with Centrifuges Designing, providing, constructing and installing including foundation etc.,, sludge centrifuge to handle the sludge flow of 1 day in 20 hours per unit with sludge dewatering unit drain etc complete as per specification. Sludge centrifuges with the necessary arrangement, as per detailed specification mentioned in tender and obligatory provisions to be provided with satisfactory functioning.					
	9. Outfall Sewer Designing, providing and constructing appropriate outfall sewer of RCC NP2 pipe, to discharge treated effluent from outlet chamber after chlorination tank to the local Nallah at the point shown on the drawing including necessary chamber for inspection and cleaning including necessary excavation, dewatering, refilling concrete encasing / bedding concrete steps to reach the nallah bed level, pitching and energy dissipation chamber in nallah portion etc. complete upto 50 m length RCC NP2 pipe line and including all above items.					
	10. Piping work in CI-LA Class including Sluice valves, Reflux Valves, MS gates Providing laying and jointing pipes other than those already included in the above items for interconnection by - pass drains etc. of all units including adequate numbers of manhole chambers. The item includes excavations, refilling and hydraulic testing of pipes, valves, gates, accessories and cost of jointing materials. The items includes required channels with gates for interconnection of units by pass drains etc for all units as directed etc complete as per detailed specifications. All required sluice valves should be of MJP approved glandless valves.					

Sr. No.	Description			Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
					Complete	Labour	Complete	Labour
	11. Administrative Building cum Laboratory (G+1) Designing, providing and constructing administrative building, office cum laboratory including stores. This shall be a building having appropriate carpet area and ground floor and at first floor complete as per specifications including necessary excavation, foundation in RCC M 200 framed structure B. B masonry (ii nd- class in C.M. 1:6) 20 mm cement plaster in CM 1:3 inside and outside painting. Aluminium door and window with glass panels, ceramic tile flooring and skirting and all other allied items, fixtures fastening electrification arrangement water supply arrangement etc complete. The building will have laboratory on upper floor of administrative building and should be so centralized that it should not be attached with any unit but should have complete control of every unit as per laboratory equipment, beautification, telephone and intercom arrangement and wireless							
	All required railing should be of stainless steel, external paint of all units of STP should be of Acrylic emulsion with silicon additives paint. All flooring should be of ceramic tiles.							
	Capacity of the Plant in MLD	Area required in Ha.	No of Basins					
	01	0.16	2	MLD	302.42			
	02	0.20	2	MLD	202.20			
	05	0.40	2	MLD	127.04			
	10	0.70	2	MLD	103.79			
	15	0.75	2	MLD	90.06			
	20	0.80	4	MLD	85.24			
	25	1.00	4	MLD	84.63			
	30	1.20	4	MLD	79.66			
	40	1.60	4	MLD	74.68			
	50	1.75	4	MLD	73.02			
	60	1.90	4	MLD	62.63			
	75	2.25	4	MLD	61.08			
	100	2.40	6	MLD	58.17			
	125	3.00	6	MLD	55.26			
	150	3.50	6	MLD	53.81			

Sr. No.	Description	Unit	Rate 2019-20 (Rs.in Lakhs)		Rate 2020-21 (Rs.in Lakhs)	
			Complete	Labour	Complete	Labour
	NOTES					
	A.These Rates are for Civil Works, in M30 grade RCC.					
	B.Water Table is considered at 5 m below ground level.					
	C.Soil bearing capacity considered as 20 T/m ² at 1.5 m below ground level.					
	D.OPC has been considered for costing purposes.					
	E.All civil items, electrical, piping, valves, pumps, motors, blowers,etc. are considered as per MJP Schedule of Rates.					
	F.I.No.1,2 includes sludge drying beds instead of sludge centrifuge and DWPE dosing system.					
	G.I.No.1,2,3 includes NaOCl Dosing System instead of Gas Chlorination.					
	H.I.No. 1,2,3 do not includes Lab and Lab Equipments.					
	I.O&M shall be added extra.					
	J.No piling,dewatering, soil improvement,desilting considered in the cost.					
	K.Site is cleared flat and levelled. No site development work filling, dewatering considered.					
	L.Peak factor is considered as 2.0 times average flow.For every 25% increase in peak factor ,10% extra cost shall be added over the above rates.					
	M.OPC Tor steel considered.					
	N.Treated water disposal upto 50 m considered.					
	O.N & P reduction not considered.					
	P.HT Electrical works shall be added as per case specific condition.					
	Q.Raw sewage pumping works shall be added as per case specific conditions.					
	R.In case TN<10 & TP<1 quality is required,above rates shall be increased by 10%					
	S.Cost of I No 1 to 5 do not include HT station,Lab and Mechanical dewatering of sludge ..					

Section - I - XVIII, RCC GSR AND SUMP

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
1	Designing (aesthetically), and constructing <u>RCC ground service reservoirs</u> / <u>RCC sumps</u> in M-300 mix of required capacity including excavation in all types of strata, foundation concrete, container walls, bottom slab top RCC roof slab / or dome, 20 mm thick cement plaster with water proofing compound in CM 1:3 proportion to inside face of the container, including epoxy paint from inside including refilling and disposing of surplus stuff within lead of 50 M, all labour and material charges, for laying and jointing of pipe assembly for inlet, outlet washout, over flow and bypass arrangement consisting of C.I. M.S. D/F. pipes, specials and valves of given diameters, providing and fixing accessories such as Stainless steel ladder inside tank and M.S. ladder outside, C.I. Manhole frame and cover, water top slab, B.B. masonry chamber for all valves, ventilating shafts, including giving satisfactory hydraulic test and water tightness test as per IS code and providing three coats of Acrylic emulsion with silicom additives paint to all exposed surface of structure including Anti-termite treatment shall be given for underground portion of the structure.					
	<u>Notes</u>					
1)	The design shall be in accordance with various relevant I.S. specification (I.S. 456/2000, I.S. 875 - 1987, I.S. 3370 - 1965 or revised.)					
2)	Only M.S. bars grade I conforming to I.S. 432 part-I or high yield strength deformed bars conforming to I.S. 1786 or I.S. 1139 shall be used. Grade-II M.S. bars shall not be used.					
3)	Entire structure shall be in M-300 only.					
4)	The scope of pipe assembly work shall be upto 5 metre beyond outside face of the wall, cost of pipes valves and specials is not included in the rate but labour cost for laying and jointing is included.					
5)	The G.S.R. / Sump above 15 lakh litres capacity shall be in two compartment.					

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
6)	The Job includes designing the structure for uplift pressure and dewatering if required during entire execution and disposal of surplus excavated stuff within lead of 50 metres as directed by Engineer-in-charge. If uplifts considered in design, then these rates shall be increased by 7.5%.					
7)	G.S.R. outlets shall be with bell mouth of approved pattern in bottom slab and cost of designing bell mouth is included in the rate. Sump well includes cost of suction pit required at bottom.					
8)	For pipe diameters upto 300 mm only CI pipes and CI specials shall be used. For pipe diameters above 300 mm, M.S. pipes and specials minimum 10 mm thick shall be used with proper anticorrosive epoxy treatment from inside and outside.					
9)	Cost of pump house is not included in these rates.					
10)	Above rates are applicable for Seismic Zones 2, 3 and 4.					
11)	75% part rate shall be payable for reinforcement, concrete and plastering items of all types of G.S.R.s and sumps till satisfactory hydraulic testing for water tightness test is given and till that work shall be treated as incomplete.					
12)	10% shall be added for sump if overhead pump house is proposed.					
	Note : Conditions from Sr. No. 1 to 11 shall form a part and parcel of tender and must be included in the draft tender papers for work of R.C.C. GSRs and sumps.					
	<u>Rates for RCC GSRs and Sumps</u>					
1)	Upto 25,000 litres	Lit	12.93	5.18		
2)	Cost of 25,000 litres capacity	Job	323250.00	129375.00		
3)	Add for capacity above 25,000 upto 50,000 litres	Lit	7.06	2.83		
4)	Cost of 50,000 litres capacity	Job	499750.00	200013.75		
5)	Add for capacity above 50,000 upto 75,000 litres	Lit	5.88	2.36		
6)	Cost of 75,000 litres capacity	Job	646750.00	259008.75		
7)	Add for capacity above 75,000 upto 1,00,000 litres	Lit	5.29	2.12		
8)	Cost of 1,00,000 litres capacity	Job	779000.00	311793.75		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
9)	Add for capacity above 1,00,000 upto 1,50,000 litres	Lit	5.67	2.27		
10)	Cost of 1,50,000 litres capacity	Job	1062500.00	425126.25		
11)	Add for capacity above 1,50,000 upto 2,00,000 litres	Lit	4.86	1.93		
12)	Cost of 2,00,000 litres capacity	Job	1305500.00	521898.75		
13)	Add for capacity above 2,00,000 upto 3,00,000 litres	Lit	4.26	1.70		
14)	Cost of 3,00,000 litres capacity	Job	1731500.00	691638.75		
15)	Add for capacity above 3,00,000 upto 5,00,000 litres	Lit	3.65	1.46		
16)	Cost of 5,00,000 litres capacity	Job	2461500.00	983508.75		
17)	Add for capacity above 5,00,000 upto 10,00,000 litres	Lit	3.05	1.21		
18)	Cost of 10,00,000 litres capacity	Job	3986500.00	1588983.75		
19)	Add for capacity above 10,00,000 upto 15,00,000 litres	Lit	2.44	0.98		
20)	Cost of 15,00,000 litres capacity	Job	5206500.00	2075433.75		
21)	Add for capacity above 15,00,000 litres	Lit	2.21	1.02		
	<u>Note</u> : 10% shall be added over the cost of GSR for sump where overhead pump house is proposed.					

Section - I - XIX, RCC ESR

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
1	Designing (aesthetically), and constructing RCC elevated service reservoirs of following capacity with RCC staging consisting of columns, internal and external bracings spaced vertically not more than 4.5 metres centre to centre for ESR having capacity upto 500 cum and not more than 6 m c/c for ESRs having capacity above 500 Cum including excavation in all types of strata, foundation concrete, cement plaster with water proofing compound to the inside face of the container including refilling disposing off the surplus stuff within a lead of 50 metres, all labour and material charges including lowering, laying, erecting, hoisting and jointing of pipe assembly of inlet, outlet, washout, overflow and bypass arrangements as per departmental design, providing and fixing accessories such as Stainless steel ladder inside container & M.S. ladder outside, C.I. manhole frame and covers, water level indicators, lightening conductor, G.I. pipe railing around walk way and top slab, providing spiral stair case from ground level to roof level, M.S. grill gate of 2 M height with locking providing and applying three coats of Acrylic emulsion with silicom additives to the structure including roof slab, epoxy painting to internal surface and anti-termite treatment for underground parts of the structure and giving satisfactory water tightness test as per I.S. code. The job to include painting the name of the scheme and other details on the reservoir as per the directions of Engineer-in-Charge.					
	<u>Notes</u>					
1)	The design of the structure be in accordance with relevant I.S. specification (I.S. 3370 - 1965 or revised.)					
2)	The design shall satisfy the stipulations as per I.S. 1893 - 1984 and I.S. 13920 / 1993 for seismic force and I.S. - 11682 / 1985 for R.C.C. staging of overhead tanks.					
3)	For design having more than 6 columns, provision of internal bracing is obligatory. External bracings is also obligatory.					
4)	Plain round mild steel bars grade-I conforming to I.S. 432 part-I or high yield strength deformed bars conforming to I.S. 1786 or I.S. 1139 shall be used, grade-II mild steel bars will not be allowed.					

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
5)	Irrespective of the type of foundation proposed in the design, one set of bracing be provided at the ground level.					
6)	These rates include providing M.S. ladder for E.S.R.s upto 2 lakh litres capacity and providing spiral staircase for E.S.R. above 2 lakh litres capacity.					
7)	Staging shall have to be designed with stresses of M-250 concrete for ESR. However all RCC construction should be done in M-300 .Structures in contact with water shall be designed & casted in M-300					
8)	These rates are including the cost of uplift pressure if any and entire dewatering during execution. In case of water logging area where water is struck at shallow depth, extra provision of dewatering shall be made as per site condition.					
9)	All conditions given in the Member Secretary's Circular No. MJP / TS-I / 350 / 1668 dt. 2-8-97 and MJP / S-I / 350 / 2127 dt. 13-7-99 shall be strictly followed and additional cost, if any, due to these conditions is included in the rates mentioned below.					
10)	75% part rate shall be payable for reinforcement concrete and plastering items of containers of E.S.R. till satisfactory hydraulic testing for water tightness is given; and till that work shall be treated as incomplete.					
11)	The rates indicated in the table are excluding the cost of pipes, specials and valves required for inlet, outlet, washout, overflow and bypass arrangement. The scope of work, however, includes cost of erecting, laying and jointing of pipes and valves including cost of jointing materials upto 5 M beyond outer face of outermost column.					
12)	For ESR upto 500 cum capacity C.I. double flanged pipes upto 300 mm dia shall be provided and C.I. specials shall be used. For ESR above 500 cum capacity C.I./M.S. pipe assembly with minimum 8 mm thickness upto 500 mm dia and minimum 10 mm thickness above 500 mm dia can be used with proper anti-corrosive epoxy treatment from inside and outside.					

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
13)	Below mentioned rates are for foundations with individual footing with bearing capacity of 20 tonnes per square metre. For raft foundations, these rates shall be increased by 7.5% where safe bearing capacity (SBC) is 5 MT per sqm and by 5% where SBC is more than 5 MT/sqm and upto 10 MT/sqm. This % of 5% or 7.5% is applicable for estimation of amount of lumpsum item of ESR. For extra item due to change from individual foundation to raft, actual increase in concrete and steel be paid as per relevant DSR item.					
14)	The rate shall be increased by 30% for bearing piles upto depth of 10 M and for further increased in depth by 5 M each, it shall be increased by another 10%. These rates are applicable where raft is not feasible. For pile foundations sulphate resistant cement shall only be used. Single pile for the column is not permitted, group of piles shall be designed with pile cap for each column of ESR.					
15)	The rates are applicable for staging height of 12 M. These rates shall be increased or decreased for per metre variation in this staging height as below :					
	12 to 16 M staging - 2% per metre					
	16 to 20 M staging - 3% per metre					
	20 M and above - 4% per metre					
	For 17 M staging height, percentage calculation will be like below :					
	12 to 16 M --- $4 \times 2 = 8\%$					
	16 & 17 M --- $1 \times 3\% = 3\%$ Total = 11%					
	For 21 M staging height, percentage calculation will be like below :					
	12 to 16 M --- $4 \times 2 = 8\%$					
	16 to 20 M --- $4 \times 3\% = 12\%$					
	20 & 21 M --- $1 \times 4\% = 4\%$ Total = 24%					
16)	Following rates are for seismic zone III. For zone IV, these rates shall be increased by 5% and for zone II, these rates shall be decreased by 5%. Concerned Executive Engineer shall confirm the seismic zone for the scheme from seismic zones plan before estimation and adopt appropriate rates as per actual seismic zones. (Seismic maps attached in this CSR).					
	<u>Notes</u>					
1)	Conditions from Sr. No. 1 to 10 shall form a part and parcel of the tender and must be included in the draft tender papers for works of R.C.C. E.S.R.					

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
2)	Conditions from Sr. No. 11 to 16 are for estimation purpose only and shall not appear in the tender.					
	Rates for RCC ESRs					
1)	Upto 25,000 litres	Lit	24.06	9.61		
2)	Cost of 25,000 litres capacity	Job	601335.00	240378.75		
3)	Add for capacity above 25,000 upto 50,000 litres	Lit	13.20	5.28		
4)	Cost of 50,000 litres capacity	Job	931335.00	372341.25		
5)	Add for capacity above 50,000 upto 75,000 litres	Lit	9.32	3.73		
6)	Cost of 75,000 litres capacity	Job	1164335.00	465491.25		
7)	Add for capacity above 75,000 upto 1,00,000 litres	Lit	9.96	3.99		
8)	Cost of 1,00,000 litres capacity	Job	1413335.00	565110.00		
9)	Add for capacity above 1,00,000 upto 1,50,000 litres	Lit	6.08	2.44		
10)	Cost of 1,50,000 litres capacity	Job	1717335.00	686722.50		
11)	Add for capacity above 1,50,000 upto 2,00,000 litres	Lit	5.82	2.33		
12)	Cost of 2,00,000 litres capacity	Job	2008335.00	803160.00		
13)	Add for capacity above 2,00,000 upto 2,50,000 litres	Lit	4.03	1.61		
14)	Cost of 2,50,000 litres capacity	Job	2209835.00	883372.50		
15)	Add for capacity above 2,50,000 upto 3,00,000 litres	Lit	5.07	2.02		
16)	Cost of 3,00,000 litres capacity	Job	2463335.00	984802.50		
17)	Add for capacity above 3,00,000 upto 4,00,000 litres	Lit	4.78	1.92		
18)	Cost of 4,00,000 litres capacity	Job	2941335.00	1176277.50		
19)	Add for capacity above 4,00,000 upto 5,00,000 litres	Lit	3.35	1.35		
20)	Cost of 5,00,000 litres capacity	Job	3276335.00	1310827.50		
21)	Add for capacity above 5,00,000 upto 7,50,000 litres	Lit	4.08	1.62		
22)	Cost of 7,50,000 litres capacity	Job	4296335.00	1717065.00		
23)	Add for capacity above 7,50,000 upto 10,00,000 litres	Lit	6.03	2.42		
24)	Cost of 10,00,000 litres capacity	Job	5803835.00	2319952.50		
25)	Add for capacity above 10,00,000 upto 15,00,000 litres	Lit	3.40	1.37		
26)	Cost of 15,00,000 litres capacity	Job	7503835.00	3003052.50		
27)	Add for capacity above 15,00,000 upto 20,00,000 litres	Lit	2.88	1.15		
28)	Cost of 20,00,000 litres capacity	Job	8943835.00	3577477.50		

SECTION - I - XX, CHAMBERS, MANHOLES AND DRAINAGE DROPS

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
1	<u>Valve Chamber with Precast RCC Covers</u>					
	Providing and constructing B.B. masonry valve chamber with 15 cm thick 1:2:4 proportion PCC bedding, excluding excavation, B.B. masonry in CM 1:5 proportion precast RCC frame and cover, etc. complete as directed by Engineer-in-charge.					
	<u>Note</u> : Wall thickness : 0.23 M for depth of 1.2 M and 0.35 M for balance depth exceeding 1.2 M.					
A	As above of <u>60 x 45 cm</u> internal size and depth upto <u>0.9 M</u> with precast R.C.C slab cover.	No	5797.00	1739.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	1313.00	394.00		
B	As above of <u>90 x 45 cm</u> internal size and depth upto <u>1.2 M</u> with precast R.C.C slab cover.	No	8632.00	2591.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	1570.00	472.00		
C	As above of <u>90 x 60 cm</u> internal size and depth upto <u>1.2 M</u> with precast R.C.C slab cover.	No	9381.00	2815.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	1697.00	508.00		
D	As above of <u>90 x 90 cm</u> internal size and depth upto <u>1.2 M</u> with precast R.C.C slab cover.	No	11193.00	3359.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	1960.00	589.00		
E	As above of <u>90 cm internal dia.</u> size and depth upto <u>1.2 M</u> with precast R.C.C slab cover.	No	8505.00	2550.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	1526.00	458.00		
F	As above of <u>1.2 x 1.2 M</u> internal size and depth upto <u>1.2 M</u> with precast R.C.C slab cover.	No	14927.00	4478.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	2489.00	747.00		
G	As above of <u>1.5 x 1.5 M</u> internal size and depth upto <u>1.5 M</u> with precast R.C.C slab cover.	No	21897.00	6569.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	3065.00	919.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
2	<u>Valve chamber with cast iron manhole frame and covers</u> Providing and constructing B.B. masonry valve chamber with 15 cm thick 1:2:4 proportion PCC bedding, excluding excavation, B.B. masonry in CM 1:5 proportion, 12 mm thick cement plaster in CM 1:4 proportion on both sides with providing and fixing C.I. manhole frame and cover in RCC 1:1.5:3 coping or RCC 1:1.5:3 proportion x 15 cm thick slab, etc. complete as directed by Engineer-in-charge.					
	<u>Note</u> : Wall thickness : 0.23 M for depth of 1.2 M and 0.35 M for balance depth exceeding 1.2 M.					
A	As above of <u>60 x 45 cm</u> internal size and depth upto <u>0.9 M</u> with 60 x 45 cm size CI manhole frame and cover of 40 kg.	No	8480.00	1696.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	1139.00	341.00		
B	As above of <u>90 x 45 cm</u> internal size and depth upto <u>1.2 M</u> with 90 x 45 cm size CI manhole frame and cover of 40 kg.	No	10421.00	2085.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	1274.00	382.00		
C	As above of <u>90 x 60 cm</u> internal size and depth upto <u>1.2 M</u> with 90 x 60 cm size CI manhole frame and cover of 50 kg.	No	11930.00	2387.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	1379.00	414.00		
D	As above of <u>90 x 90 cm</u> internal size and depth upto <u>1.2 M</u> with 53 cm dia CI manhole frame and cover of 90 kg. fixed in RCC slab.	No	16730.00	3345.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	1782.00	535.00		
E	As above of <u>1.2 x 1.2 M</u> internal size and depth upto <u>1.2 M</u> with 53 cm dia CI manhole frame and cover of 90 kg. fixed in RCC slab.	No	19437.00	3889.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	2262.00	679.00		
F	As above of <u>1.5 x 1.5 M</u> internal size and depth upto <u>1.5 M</u> with 53 cm dia CI manhole frame and cover of 90 kg. fixed in RCC slab.	No	24815.00	4963.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	2940.00	882.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
3	<u>Valve chamber with precast steel fibre reinforced concrete frame and covers (S.F.R.C. frame and covers)</u> Providing and constructing B.B. masonry valve chamber with 15 cm thick 1:2:4 proportion PCC bedding, excluding excavation, B.B. masonry in CM 1:5 proportion precast S.F.R.C. frame and cover, etc. complete as directed by Engineer-in-charge.					
	Note : Wall thickness : 0.23 M for depth of 1.2 M and 0.35 M for balance depth exceeding 1.2 M.					
A	As above of <u>60 x 45 cm</u> internal size and depth upto <u>0.9 M</u> with S.F.R.C. frame and cover.	No	7717.00	1543.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	1313.00	397.00		
B	As above of <u>90 x 45 cm</u> internal size and depth upto <u>1.2 M</u> with S.F.R.C. frame and cover.	No	11023.00	2296.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	1401.00	420.00		
C	As above of <u>90 x 60 cm</u> internal size and depth upto <u>1.2 M</u> with S.F.R.C. frame and cover.	No	11976.00	2522.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	1517.00	455.00		
D	As above of <u>90 x 90 cm</u> internal size and depth upto <u>1.2 M</u> with S.F.R.C. frame and cover.	No	15560.00	3113.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	1751.00	525.00		
E	As above of <u>1.2 x 1.2 M</u> internal size and depth upto <u>1.2 M</u> with S.F.R.C. frame and cover of size 540 mm dia. fixed in RCC slab.	No	19296.00	3860.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	2488.00	747.00		
F	As above of <u>1.5 x 1.5 M</u> internal size and depth upto <u>1.5 M</u> with S.F.R.C. frame and cover of size 540 mm dia. fixed in RCC slab.	No	26030.00	5205.00		
a)	Add for every increase in depth of 30 cm or part thereof	30 cm depth	3235.00	970.00		
4	Providing and fixing in position <u>M.S. air valve boxes</u> fabricated with 2 mm thick M.S. plate, 30 x 30 x 3 mm size M.S. angle frame, concreting in M-150 for fixing the box in position, applying two coats of oil paint, painting chainage, locking arrangement, etc. complete as directed by Engineer-in-charge.					
a)	For single ball air valve	No	2127.00	532.00		
b)	For double ball air valve	No	2992.00	747.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
5	Providing and fixing C.I. road box including loading, unloading and carting to site of work including all necessary excavation in all types of strata and fixing in murum packing, etc. complete.		0	0		
a)	100 mm x 225 mm (20 kg)	No	1342.00	359.00		
b)	225 mm x 300 mm (40 kg)	No	2684.00	715.00		
6	Providing and constructing on sewer, B.B. masonry circular manhole with concentric cone <u>1.2 M dia.</u> at bottom and 0.5 M dia. at top and upto a <u>depth of 2.00 M</u> with 23 cm brick work in CM 1:4 proportion excluding excavation including foundation concrete 250 mm thick and haunches and channels in C.C. 1:2:4 proportion, finishing channels in smooth rendering, providing C.I. dapuri type steps each weighing 5.5 kg., 1:2:4 coping and providing and fixing approved make and quality S.F.R.C. frame and cover of 56 cm dia. etc. complete as directed by Engineer-in-charge.	No	21046.00	4210.00		
a)	Rebate for every decrease in depth of 50 cm or part thereof	50 cm depth	3015.00	905.00		
7	Providing and constructing on sewer, B.B. masonry circular manhole concentric cone <u>1.5 M dia.</u> at bottom and 0.5 M dia. at top and upto a <u>depth of 5.00 M</u> with 23 cm brick work, upto depth of 2 M from top and 35 cm thick brick work for balance depth in CM 1:4 proportion with 20 mm thick smooth plaster on both sides in CM 1:2 proportion excluding excavation including foundation concrete 250 mm thick and haunches and channels in C.C. 1:2:4 proportion, finishing channels in smooth rendering, providing C.I. dapuri type steps each weighing 5.5 kg., 1:2:4 coping and providing and fixing approved make and quality S.F.R.C. frame and cover of 56 cm dia. etc. complete as directed by Engineer-in-charge.	No	65717.00	13144.00		
a)	Rebate for every decrease in depth of 50 cm or part thereof	50 cm depth	6815.00	2044.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
8	Providing and constructing on sewer, B.B. masonry circular manhole with concentric cone <u>1.5 M</u> dia. at bottom and 0.5 M dia. at top and upto a <u>depth of 9.00 M</u> with 23 cm brick work, upto depth of 2 M from top and 35 cm thick brick work for depth of 2 M and 45 cm thick brick work for remaining depth upto 9 M in CM 1:4 proportion with 20 mm thick smooth plaster on both sides in CM 1:2 proportion excluding excavation including foundation concrete 250 mm thick and haunches and channels in C.C. 1:2:4 proportion, finishing channels in smooth rendering, providing C.I. dapuri type steps each weighing 5.5 kg., 1:2:4 coping and providing and fixing approved make and quality S.F.R.C. frame and cover of 56 cm dia. etc. complete as directed by Engineer-in-charge.	No	141239.00	28248.00		
a)	Rebate for every decrease in depth of 50 cm or part thereof	50 cm depth	8606.00	2582.00		
9	Providing and constructing B.B. masonry circular manhole without conical shape excluding excavation, RCC 1:1.5:3 proportion, 20 cm bedding brick masonry in CM 1:4 proportion, 23 cm thick for 2 M depth from top 35 cm thick for 2 M below it and 45 cm thick for balance depth, RCC slab at top and at 2 M depth from top for supporting brick masonry above it, plastering with smooth finish in CM 1:2 proportion, C.C. 1:2:4 finishing channels in smooth rendering, providing C.I. dapuri type steps each weighing 5.5 kg., providing and fixing S.F.R.C. frame and cover of 56 cm dia. at top including cost of all materials and labour, etc. complete.		0	0		
A	1.00 M dia. x 2 M depth	No	19393.00	5818.00		
a)	Rebate for every decrease in depth of 50 cm or part thereof	50 cm depth	2896.00	869.00		
B	1.00 M dia. x 3 M depth	No	30792.00	9239.00		
a)	Rebate for every decrease in depth of 50 cm or part thereof	50 cm depth	4740.00	1422.00		
C	1.00 M dia. x 4.5 M depth	No	47662.00	14299.00		
a)	Rebate for every decrease in depth of 50 cm or part thereof	50 cm depth	6095.00	1827.00		
D	1.50 M dia. x 2 M depth	No	31472.00	9441.00		
a)	Rebate for every decrease in depth of 50 cm or part thereof	50 cm depth	4103.00	1232.00		
E	1.50 M dia. x 3 M depth	No	41792.00	12538.00		
a)	Rebate for every decrease in depth of 50 cm or part thereof	50 cm depth	6247.00	1873.00		
F	1.50 M dia. x 4.5 M depth	No	63872.00	19161.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
a)	Rebate for every decrease in depth of 50 cm or part thereof	50 cm depth	8031.00	2408.00		
10	<u>Drainage Drops</u> Providing 150 mm dia. S.W. or R.C.C. pipes in <u>vertical drop arrangement</u> including providing 150 mm dia S.W. and R.C.C. pipe fixed in B.B. masonry of manhole at the required level including providing 150 mm dia double tee, 150 mm dia right angled bend, encasing in B.B. masonry 1:4 proportion all around the pipe, double tee, bend upto the foundation of manhole, jointing, cutting, filleting including neat cement rendering, plugging the opening with jungle wood knob complete as directed by Engineer-in-charge (0.60 M depth) <u>excluding cost of chamber.</u>	No	1820.00	363.00		
a)	Extra for every 0.5 M depth beyond initial depth of 0.60 M.	50 cm depth	653.00	196.00		
11	As above but for <u>200 mm dia</u> pipes and depth 0.60 M	No	2369.00	487.00		
a)	Extra for every 0.5 M depth beyond initial depth of 0.60 M.	50 cm depth	758.00	228.00		
12	As above but for <u>250 mm dia</u> pipes and depth 0.60 M	No	2878.00	619.00		
a)	Extra for every 0.5 M depth beyond initial depth of 0.60 M.	50 cm depth	957.00	287.00		
13	As above but for <u>300 mm dia</u> pipes and depth 0.60 M	No	3485.00	722.00		
a)	Extra for every 0.5 M depth beyond initial depth of 0.60 M.	50 cm depth	1060.00	319.00		
14	As above but for <u>400 mm dia</u> pipes and depth 0.60 M	No	4818.00	963.00		
a)	Extra for every 0.5 M depth beyond initial depth of 0.60 M.	50 cm depth	1393.00	486.00		
15	As above but for <u>500 mm dia</u> pipes and depth 0.60 M	No	6432.00	1286.00		
a)	Extra for every 0.5 M depth beyond initial depth of 0.60 M.	50 cm depth	1806.00	541.00		
16	As above but for <u>600 mm dia</u> pipes and depth 0.60 M	No	8541.00	1708.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
a)	Extra for every 0.5 M depth beyond initial depth of 0.60 M.	50 cm depth	2055.00	617.00		
17	Providing and fixing in position steel fibre reinforced concrete (S.F.R.C.) frame and covers of approved make including loading, unloading, transportation, all taxes, etc. complete as directed by Engineer-in-charge (20 tonnes capacity).					
a)	540 mm dia	No	2896.00	724.00		
b)	560 mm dia	No	3854.00	965.00		
c)	90 x 45 cm size	No	2896.00	724.00		
d)	90 x 60 cm size	No	3138.00	784.00		
e)	60 x 60 cm size	No	2867.00	716.00		
f)	60 x 45 cm size	No	2484.00	622.00		
18	Providing and fixing intercepting sewer trap including concrete bedding, etc. complete.					
a)	150 x 100 mm	No	499.00	124.00		
b)	100 x 100 mm	No	356.00	89.00		
19	Providing and fixing in position S.W. bends of various size, etc. complete.					
a)	100 mm	No	158.00	40.00		
b)	150 mm	No	184.00	46.00		
20	Providing and fixing 'Y' junction and labour, etc. complete.					
a)	Saddle junction 100 x 100 M	No	193.00	47.00		
b)	'Y' junction 150 x 150 x 100 mm	No	222.00	55.00		
c)	'Y' junction 300 x 300 x 300 mm	No	262.00	65.00		
d)	'Y' junction 300 x 300 x 100 mm	No	222.00	55.00		
21	Providing and fixing in position A.C. soil ventilators / slotted as necessary and as directed by Engineer-in-charge, etc. complete.					
a)	80 mm	No	188.00	47.00		
b)	100 mm	No	229.00	56.00		
c)	150 mm	No	323.00	79.00		
22	Providing and fixing A.C. soil pipe or downtake pipe with all required fittings, taking hole, etc. complete (as per manufacturer's code of practice).					
a)	80 mm	No	329.00	83.00		
b)	100 mm	No	392.00	99.00		
c)	150 mm	No	614.00	153.00		
23	Providing and fixing Cast Iron soil pipe of 1.8 M length including taking out holes and all required fittings, etc. complete.					
	S/S					
a)	80 mm	No	1140.00	285.00		
b)	100 mm	No	1294.00	323.00		
	D/S					
a)	80 mm	No	1230.00	308.00		
b)	100 mm	No	1426.00	355.00		

Section - J

Well Sinking and River Infiltration Works

SECTION - J, WELL SINKING AND RIVER INFILTRATION WORKS

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
1	Providing, constructing <u>coffer dam</u> in river basin / dam storages as per type design including excavation, filling the middle portion with B.C. soil (in gunny bags if required). Providing impervious / semipervious materials on both sides of B.C. soil (in gunny bags if required) including ramming, compacting to the satisfaction of Engineer-in-charge till the completion of work including dismantling coffer dam after completion of works and disposing off the material as directed by the Engineer-in-charge.	Cum	613.00	13.00		
	<u>Note</u> : Pay line maximum. Top width payable shall be 2 Mtr. and maximum payable side slopes shall be 1.5 horizontal to 1 vertical, if the constructed top width of the side slopes are less, then the measurements at actual are payable. Extra top width or flat slopes are not payable. Contractor is free to use ballies, plastic sheets, piles, pipes, CGI sheets for supporting hearting materials instead of impervious/ semi-pervious hearting materials for which no extra payments shall be payable. 30% payment shall be withheld for dismantling of coffer dam. This foot note shall appear in tender condition. (Type section is shown on last page of type design section of CSR).					
2	Providing and fabricating at work shop, carting to site of work, including transport, loading, unloading, hoisting, lowering and setting out at actual site of well, sinking <u>M.S. plate cutting edge for R.C.C. well curb</u> consisting of 350 mm M.S. plate, 10 mm thick, champhering at bottom. Cutting edge should be provided in pieces not less than 2 M in length. Each joint should be plain from outside and jointed by gusset plate 400 x 200 x 12 mm thick M.S. plate with 12 nos. of 20 mm dia. crushank headed bolts (gusset plates from inside) with unequal angle of 90 x 60 x 10 mm should be welded from top of chamfered portion at 14 mm from bottom so that 15 mm side should be in contact with cutting edge with overlap of 300 mm joints. 16 mm dia bar should be welded	Kg	79.00	17.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
	to M.S. plate 200 mm below the top surface and length should be 1.8 M above plate with a bend 300 mm from plate surface including 3 coats of anti-corrosive paint as directed by Engineer-in-charge.					
3	Providing and filling <u>puddle</u> (selected good impervious clay) in Kolhapur type weirs in proper layers of 15 cm including watering, ramming and compaction, etc. complete with all leads and lifts.	Cum	304.00	123.00		
4	Providing and filling around the well <u>boulders filling</u> of selected variety and size of boulders including cost of all materials, labour, transportation, etc. complete with all leads and lifts.	Cum	813.00	216.00		
5	Providing and fixing 80 mm dia A.C./P.V.C. <u>pipe weep holes</u> at 1.5 M c/c staggered including cost of all materials and labour involved with all leads and lifts, etc. complete.	RMT	174.00	3.00		
6	Providing and fixing <u>M.S. chequered</u> plate flooring of following thickness supported on M.S. angles (25 x 25 x 5 mm size) including welding, cutting and fabricating the plates to the required square or rounding shape, making holes in the plate, including providing and applying 3 coats of anticorrosive paint, etc. complete as directed by Engineer-in-charge.					
a)	6 mm thick	Sqm	3361.00	457.00		
b)	8 mm thick	Sqm	4253.00	458.00		
7	Providing at site of works ISI standard <u>RCC slotted pipes</u> of NP-3 class including cost of all central and local taxes, octroi, inspection, transportation, etc. complete including cost of RCC collar, etc. complete.					
a)	450 mm dia	RMT	3659.00	0.00		
b)	600 mm dia	RMT	5674.00	0.00		
8	<u>Lowering, laying and jointing RCC slotted pipes</u> of following diameters including all leads and lifts, cost of jointing material, labour, etc. complete as directed by Engineer-in-charge.					
a)	450 mm dia	RMT	210.00	117.00		
b)	600 mm dia	RMT	279.00	155.00		
9	<u>Lowering, laying and jointing CI 'B' class connecting mains with rubber gaskets</u> including transportation of pipes from stores to site of works, cost of jointing materials, cost of rubber gasket with all leads and lifts, etc. complete.					
i)	300 mm dia	RMT	234.00	117.00		
ii)	350 mm dia	RMT	272.00	142.00		
iii)	400 mm dia	RMT	361.00	176.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
iv)	450 mm dia	RMT	371.00	169.00		
v)	500 mm dia	RMT	469.00	187.00		
vi)	600 mm dia	RMT	648.00	261.00		
vii)	700 mm dia	RMT	875.00	329.00		
viii)	750 mm dia	RMT	987.00	371.00		
10	Providing, lowering, laying and placing in position, <u>shrouding material</u> for porous pipe gallery / slotted pipe gallery / trench gallery with all leads and lifts involved including transportation of materials to site of works, screening and washing of materials and placing in position with given section, etc. complete as directed by Engineer-in-charge.					
a)	40 mm gauge pebbles	Cum	1499.00	363.00		
b)	12 mm to 20 mm gauge pebbles	Cum	1801.00	446.00		
c)	6 to 12 mm gauge pebbles	Cum	2052.00	504.00		
d)	Coarse sand (from river sand at site)	Cum	998.00	249.00		
e)	Fine sand (from river sand at site)	Cum	1000.00	250.00		
11	Providing and fixing in position <u>C.I. dapuri steps</u> or 22 mm dia. M.S. bar step with proper anchorage, etc. and providing and applying 3 coats of anti-corrosive paint, etc. complete as directed by Engineer-in-charge.	No	288.00	105.00		
12	Providing and fixing <u>M.S. sluice gates</u> in position as per detailed drawings and specification including cost of all materials, labour, operating pedestal, connecting rod, painting with three coats of anti-corrosive paint, etc. complete as directed by Engineer-in-charge.	Kg	98.00	38.00		
13	Providing and fixing in position <u>C.I. / M.S. rose pieces</u> in intake wells including cost of all materials and labour, painting with three coats of anti-corrosive oil paint, etc. complete as directed by Engineer-in-charge.	Kg	91.00	17.00		
14	Providing and spreading around the well 1 mm thick <u>polyethylene sheet</u> complete as directed by Engineer-in-charge.	Sqm	25.00	6.00		
15	<u>Dewatering charges for estimation purpose for head works in river basin or dam :</u>					
i)	Approach Channel	RMT	5723.00	1059.00		
ii)	Intake Well of 3 M dia.	No	76330.00	16126.00		
iii)	Inspection Well of 2 M dia.	No	49148.00	9671.00		
iv)	Connecting Main	RMT	4587.00	848.00		
v)	Jack Well of 6 M dia.	No	228977.00	47415.00		
vi)	Approach Bridge	RMT	771.00	252.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
	<u>Notes</u>					
1)	The Contractor at his request may be allowed to start construction of masonry steining so as not to allow silting of well in oncoming monsoon and while paying masonry, 25% amount shall be withheld and released only when excavation to the full depth is completed.					
2)	<u>Dewatering</u> : Total dewatering charges are to be proposed in the tender as lumpsum amount and 75% is payable for excavation and 25% is payable for construction of well/ gallery. Out of 75% excavation, break-up shall be as under:					
	25% for last 1 M depth.					
	20% for 2 M depth which just above last 1 M depth.					
	15% for 2 M depth which just above last 3 M depth.					
	15% for the rest of depth from water table level.					
3)	The provisions made for dewatering in the tender being on lumpsum basis, the same shall have to be reduced / increased proportionately as the length of approach channel, connecting main or approach bridge reduces / increases during actual execution.					
	Condition Nos. (1) & (2) shall appear in tender conditions.					
16	<u>Carrying out recuperation/ yield test</u> for asserting the discharge of constructed well/ excavated profile as directed by Engineer-in-charge. The test is carried out by drawing down water from the well/profile below normal/ subsoil water level upto full depth rise in water level is recorded. The normal water level/ subsoil water level in the well/ profile as well as stainer/ suction level at pump as per design of W.S. scheme shall be recorded prior to the test including cost of all materials, overhead, labourers, etc. completed as directed.					
	The test shall be carried out as per Tech. Circular No. 2597 & 2011-97 and shall be carried out for 7 days.					
i)	Lps more than 25,000	Day	2591.00	1469.00		
ii)	Lps less than 25,000	Day	1865.00	1318.00		

Section - K

Ancillary Items for Reservoirs

SECTION - K, ANCILLIARY ITEMS FOR RESERVOIRS

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
1	Providing and fixing in position <u>copper lightening conductor</u> including copper rod of 20 mm dia as per upper terminal 1.5 M long with a knob at end and with conical spike at top, <u>copper tape conductor</u> 20 x 3 mm size, copper earth plate of 3 mm thick and 0.81 sqm. in area, clamps at 1 M centre to centre including, necessary excavation, laying and fixing the conductor, providing and fixing 40 mm G.I. pipe upto 3 M height from ground and 0.5 M below ground including making all connections, filling earthing pit with charcoal, salt, etc. & refilling & watering, etc. complete as per specifications laid down in relevant I.S.					
i)	For tape of 10 M length	No	12984.00	859.00		
ii)	Rebate/ extra rate per metre length or part thereof over and above initial length of 10 M.	Mtr.	353.00	14.00		
2	Providing and fixing in position <u>copper lightening conductor</u> including copper rod of 20 mm dia upper terminal 1.5 M long with a knob at the end with a conical spike at top, <u>aluminium tape conductor</u> 20 x 3 mm size, copper earth plate of 3 mm thick and 0.81 sqm. in area, clamps at 1 M centre to centre including, necessary excavation, laying and fixing the conductor, providing and fixing 40 mm G.I. pipe upto 3 M height from ground and 0.5 M below ground including making all connections, filling earthing pit with charcoal, salt, etc. & refilling & watering, etc. complete as per specifications laid down in relevant I.S. codes.					
i)	For tape of 10 M length	No	10952.00	832.00		
ii)	Rebate/ extra rate per metre length or part thereof over and above initial length of 10 M.	Mtr.	135.00	4.00		
3	Providing, hoisting and fixing in position inverted 'J' type 100 mm dia <u>C.I. cowl type ventilators</u> with mosquitoproof aluminium mesh at top in including applying 2 coats of anti-corrosive paint, etc. complete as directed by Engineer-in-charge, weighing not less than 35 kg.	No	2055.00	904.00		
4	Providing, hoisting and fixing in position <u>C.I. manhole, frame and cover</u> of best quality and of required size and shape with locking arrangements including applying 2 coats of anti-corrosive paint, etc. complete.					
i)	90 x 60 cm size and weight 35 kg.	No	2597.00	198.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
ii)	Rate on weight basis for any size and type of frame and cover.	Kg	72.00	4.00		
5	Providing and fixing in position M.S. ladder 0.50 M wide consisting of 75 x 10 mm M.S. flats as stringers and 16 mm dia M.S. bars in double rows as steps placed at 25 cm c/c including cost of material and labour involved, welding, anchoring and applying 3 coats of anti-corrosive paint, etc. complete as directed by Engineer-in-charge.	RMT	1409.00	208.00		
6	Providing and applying epoxy paint of approved make (Shalimar, Ciba or Mahindra & Mahindra) to concrete surface for RCC ESR or GSR or any other structure including cleaning the surface by scrapping and air blowers to the satisfaction of Engineer-in-charge, necessary scaffolding, etc. complete with all leads and lifts and giving satisfactory hydraulic test for water tightness as per I.S. codes.					
i)	For new surfaces - Two coats	Sqm	704.00	358.00		
ii)	For old surfaces - Two coats	Sqm	793.00	431.00		
7	Providing and constructing RCC spiral staircase in M-250 mix concrete at site of work and consisting of central vertical column of 400 mm dia and steps in RCC M-250, tie members at each brace level, RCC parapet wall 80 cm high including cost of all labour and material involved, cost of scaffolding, centering, shuttering, curing, finishing in CM 1:3 proportion including RCC M-250 footing foundation, its excavation, refilling and cleaning the site, etc. complete as per type design, with 3 coats of cement paint.	RMT	6334.00	844.00		
8	Providing and constructing RCC ventilating shaft of diameters and height mentioned below with required number of RCC 15 x 15 cm size columns and RCC circular slab or dome over the pillars in M-150 including cost of all material and labour, providing and fixing steel or wooden frame and providing and fixing G.I. flyproof mesh of 26 gauge and providing and applying in 3 coats of oil paint to wooden or steel frame and cement paint to concrete structure, etc. complete as directed by Engineer-in-charge.					
i)	0.9 M dia x 1.35 M height	No	5988.00	683.00		
ii)	1.2 M dia x 1.80 M height	No	7741.00	888.00		
iii)	1.5 M dia x 2.25 M height	No	12273.00	1426.00		

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
9	Providing and installing <u>mercury water level indicator</u> for RCC ESR and wash water tank site as per instructions of Engineer-in-charge at ground level of the tank or nearing pump house or room for RCC ESR having 15 mtrs. stage height and 5 mtrs. water storage height with indication of water height in storage tank in metre and 1/10th of metre including providing and installing 15 mm dia class 'B' G.I. piping with necessary accessories from bottom of the tank upto the instrument as per instructions of Engineer-in-charge.	No	19246.00			
	For extra stage height over 15 mtrs. or part thereof and water depth over 5 mtrs. or part thereof for Item No. 9.	Mtr.	1002.00			
10	Providing, erecting, installing and commissioning <u>Barometric leg chlorination system for water treatment plant</u> upto 5 MLD capacity as per manufacturer's specification with all required materials viz. 15 kg. pressure yellow PVC pipe, specially prepared chamber, mixing chamber, scrubber unit, gas pressure flexible pipe, brass nozzle nipple, electronic alarm unit, PPM dose, indicator of 25 mm dia, 4 mm thick glass tube borosil, gas unit opening spanner 3 hole type, instruction board, aluminium pipe upto sump (max. length 15 M) including civil works wherever required for above materials, fittings, including satisfactory test and trial at work site, etc. complete. (Item do not include construction of chlorine gas room of 3.0 x 3.0 M or adequate size) as per drawing attached.					
i)	For 5.0 Mld capacity	No	105000.00			
ii)	Add / deduct per Mld or part of per Mld capacity	Mld	3675.00			
11	Providing and fixing <u>water level indicator</u> upto 5 M height including <u>M.S. enamelled gauge plate 300 mm wide</u> and 3 mm thick, copper float, providing and fixing required accessories such as pointer, pulleys, nylon thread including cost of all material, labour, etc. complete.	No	10104.00	1668.00		
12	Providing and fixing <u>water level indicator</u> upto 5 M height including <u>M.S. enamelled gauge plate 150 mm wide</u> and 3 mm thick, copper float, providing and fixing required accessories such as pointer, pulleys, nylon thread including cost of all material, labour, etc. complete.	No	6062.00	1660.00		

Section - L

Trial Run

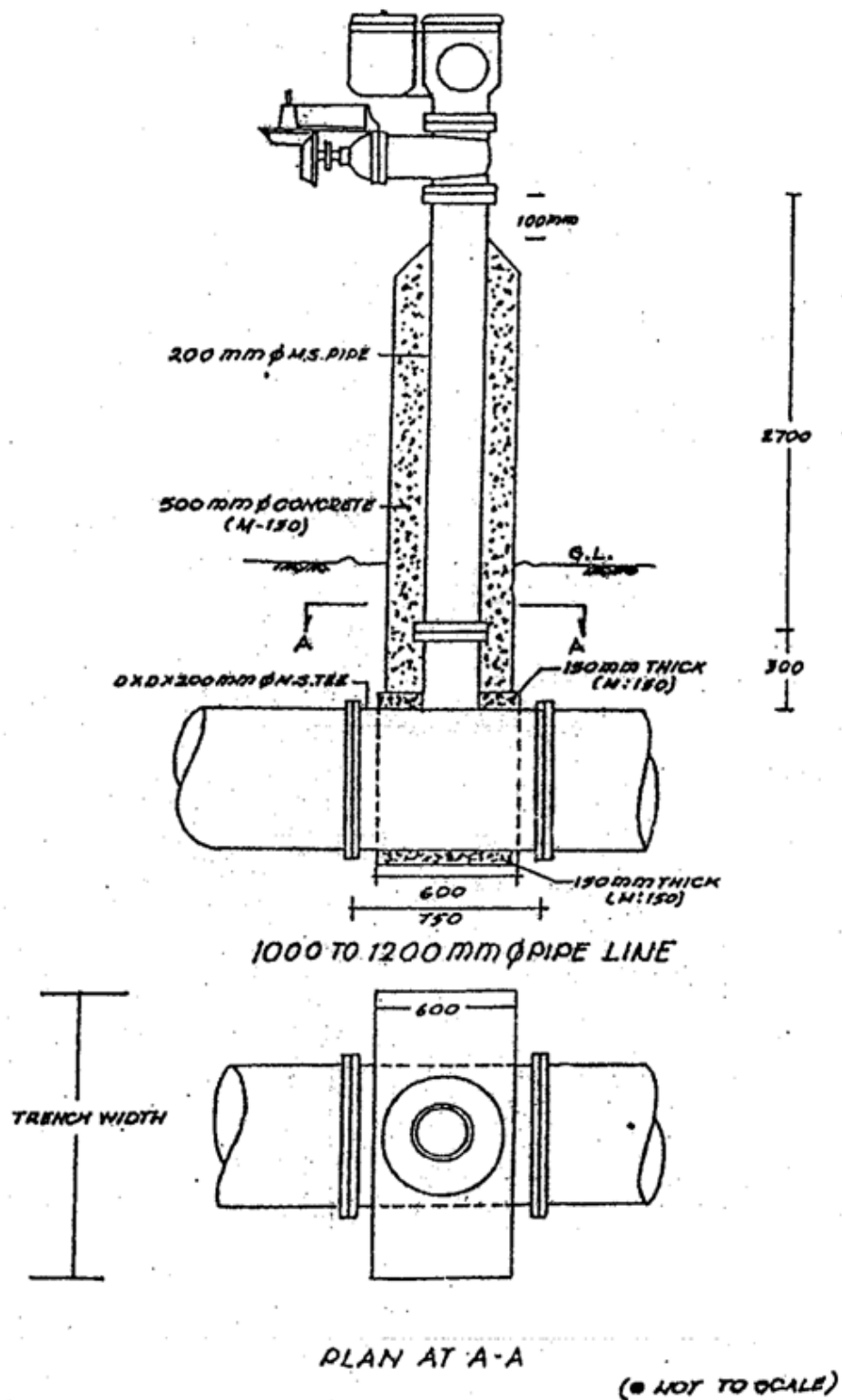
SECTION - L, TRIAL RUN

Sr. No.	Description	Unit	Rate (Rs.) 2019-20		Rate (Rs.) 2020-21	
			Complete	Labour	Complete	Labour
1	<u>Commissioning, running and maintaining the scheme</u> to quantities, rated capacity, including managing necessary personnel such as operator, valveman, etc. as per requirements of the scheme and who should also administer chemical dose together with training of personnel spared by MJP / Local Body and handing over the scheme to Local Body after completion of the specified period as directed by Engineer-in-charge.					
	<u>Note</u> : Required chemicals to be supplied by Department free of cost and electricity bill will also be paid by the Department.					
ai)	<u>For single village with out WTP</u>	MONTH	22399.00	13214.00		
aii)	<u>For single village with WTP</u>	MONTH	26132.00	15416.00		
b)	For <u>regional scheme upto 3 villages</u> with raw water pumping, one treatment plant with pumps, raw & pure water pumping main, leading main, ESR, BPT and distribution system,with WTP etc.(Trial run period upto 6 months)	MONTH	46372.00	36458.00		
c)	For <u>regional scheme upto 3 villages</u> with water pumping with pumps, water pumping main, leading main, ESR, BPT and distribution system, etc. <u>without WTP(Trial run period upto 6 months)</u>	MONTH	29993.00	23581.00		
d)	For <u>regional scheme up to 3 villages</u> with raw water pumping, one treatment plant with pumps, raw & pure water pumping main, leading main, ESR, BPT and distribution system,with WTP etc.(Trial run period more than 6 months)	MONTH	47037.00	36981.00		
e)	For <u>regional scheme up to 3 villages</u> with water pumping with pumps, water pumping main, leading main, ESR, BPT and distribution system, etc. <u>without WTP(Trial run period more than 6 months)</u>	MONTH	30448.00	23939.00		
f)	<u>Add for every additional villages or part thereof</u>	MONTH	8294.00	5453.00		
g)	<u>Add for every additional pumping station</u>	MONTH	13649.00	12554.00		

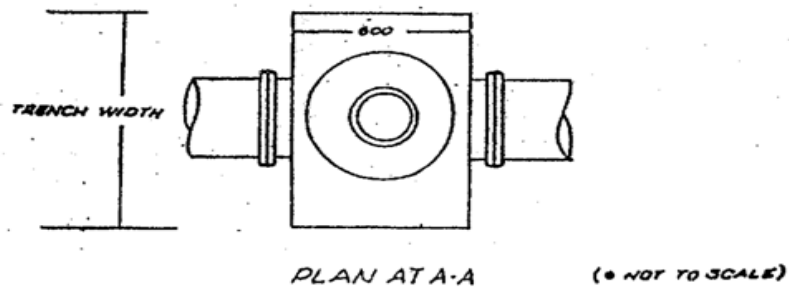
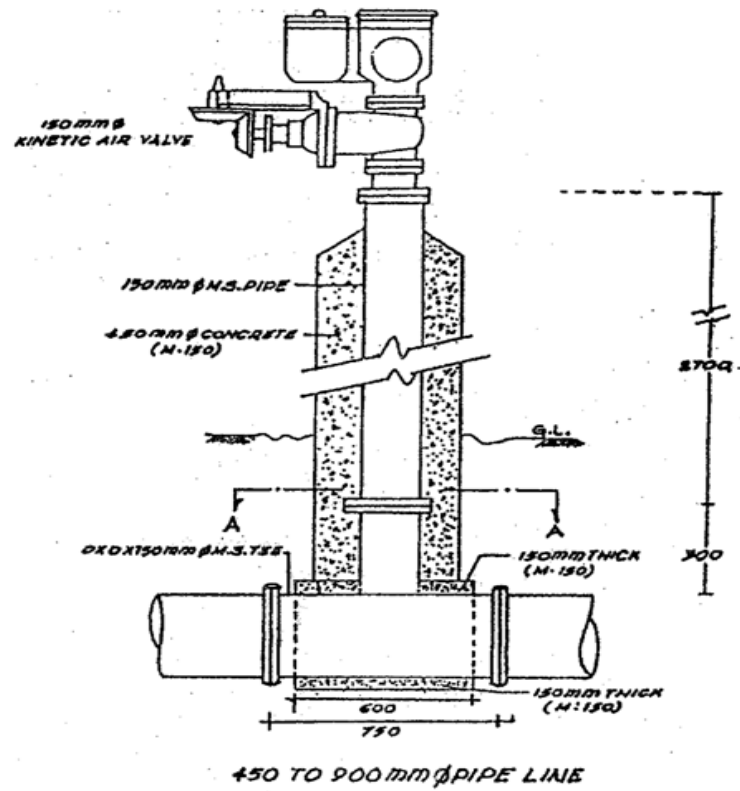
Section - M

Type Designs

MAHARASHTRA JEEVAN PRADHIKARN



MAHARASHTRA JEEVAN PRADHIKARN



TYPE DESIGN FOR FIXING OF AIR VALVE ON SHAFT

150 mm THICK (M:150)

600

750

150

8 mm ϕ BAR AT 300
20 mm c/c BOTHWAYS

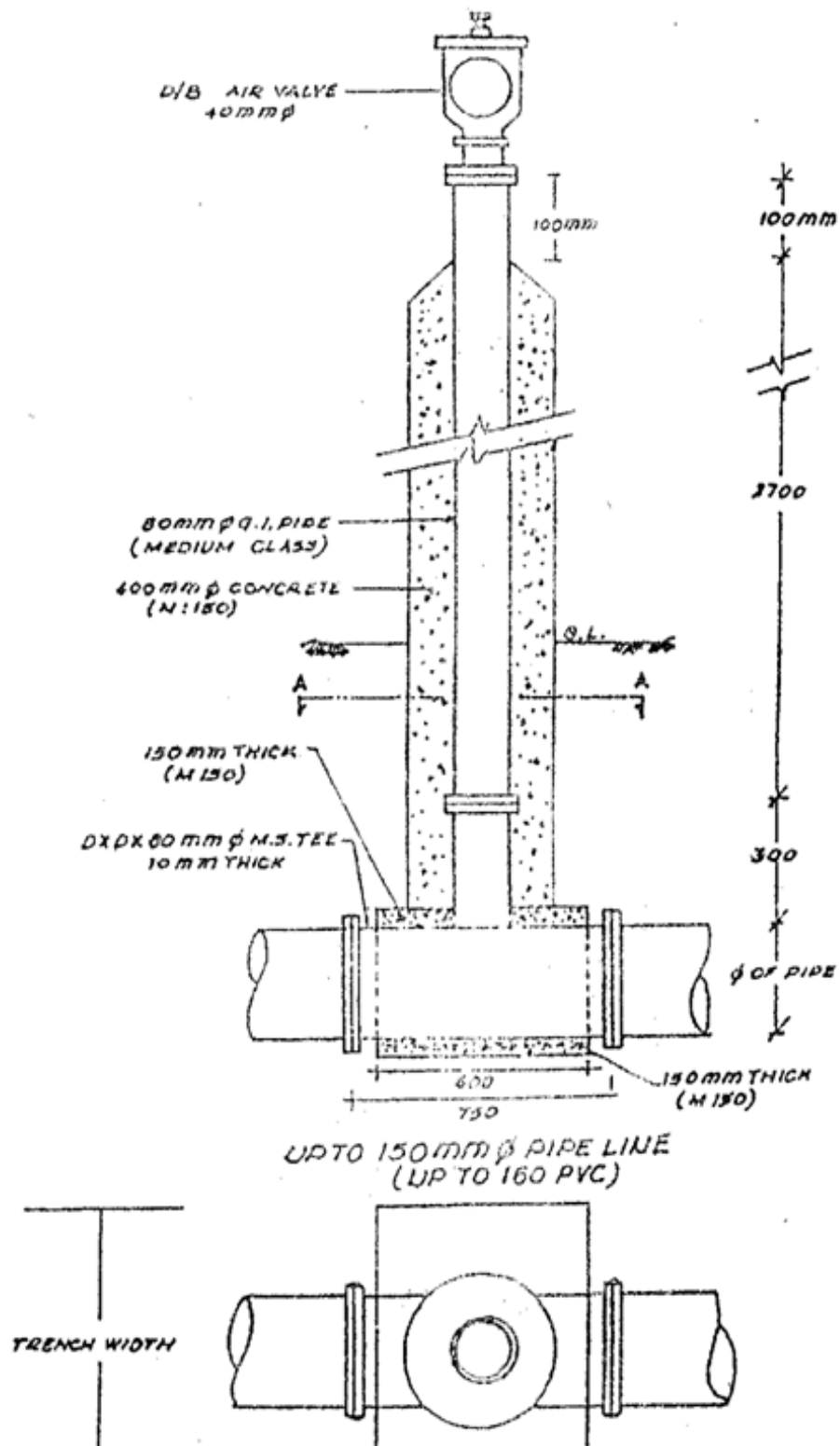
RCC RAFT M:150
BOULDER FILLING WITH HAND PACKING

G.L. 25/15

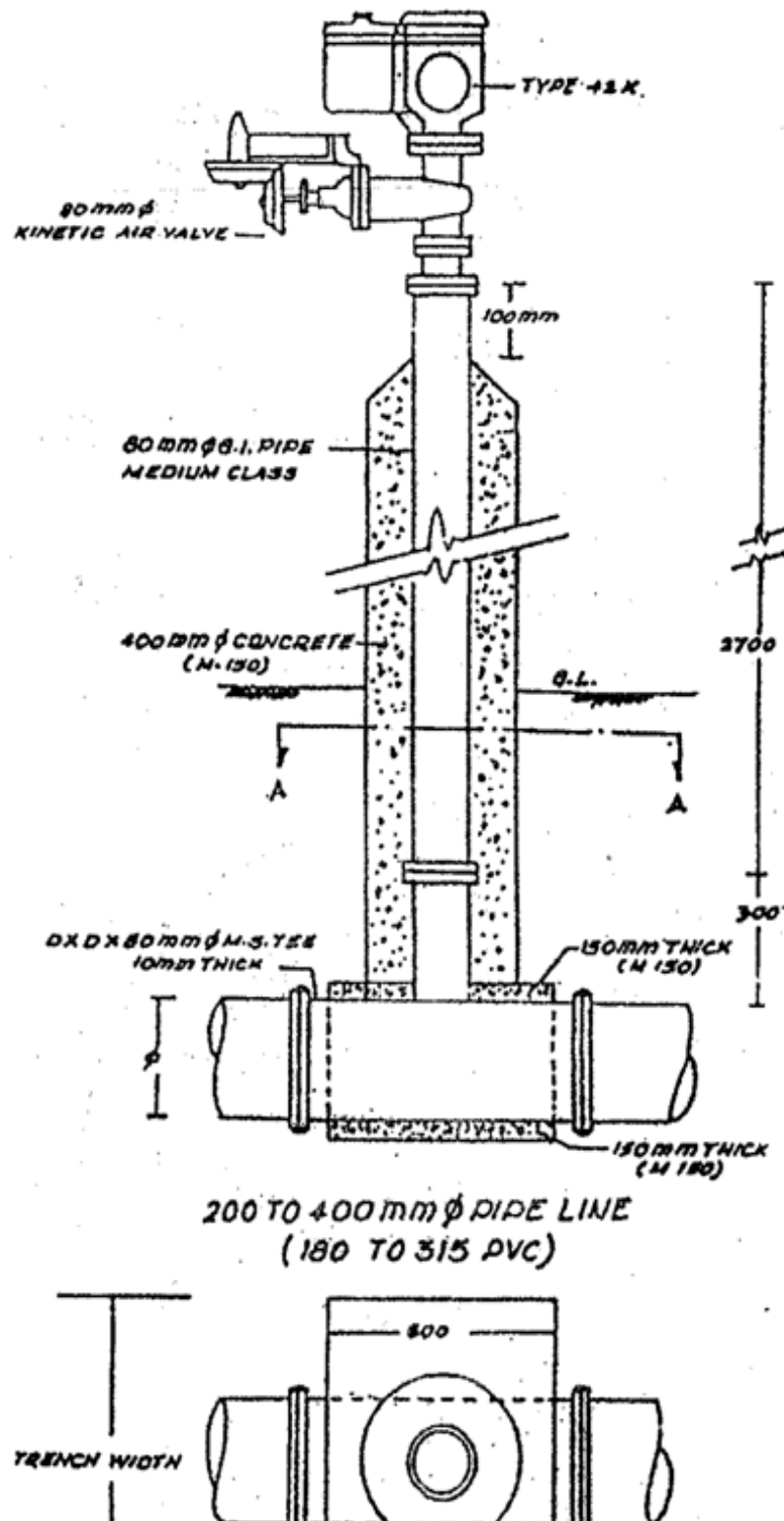
Diagram illustrating the Plan view of a trench crossing a central structure. The diagram shows a central circular structure (likely a well or manhole) with a smaller concentric circle inside. Two vertical lines, labeled "CONCRETE M-150" and "R.C.C. RAFT M-150", intersect the central structure. A horizontal line labeled "TRENCH WIDTH" spans the width of the trench. Section lines "A-A" are indicated on both sides. Dimensions are given at the bottom: 600 for the width of the central structure and 750 for the width of the trench.

PLAN

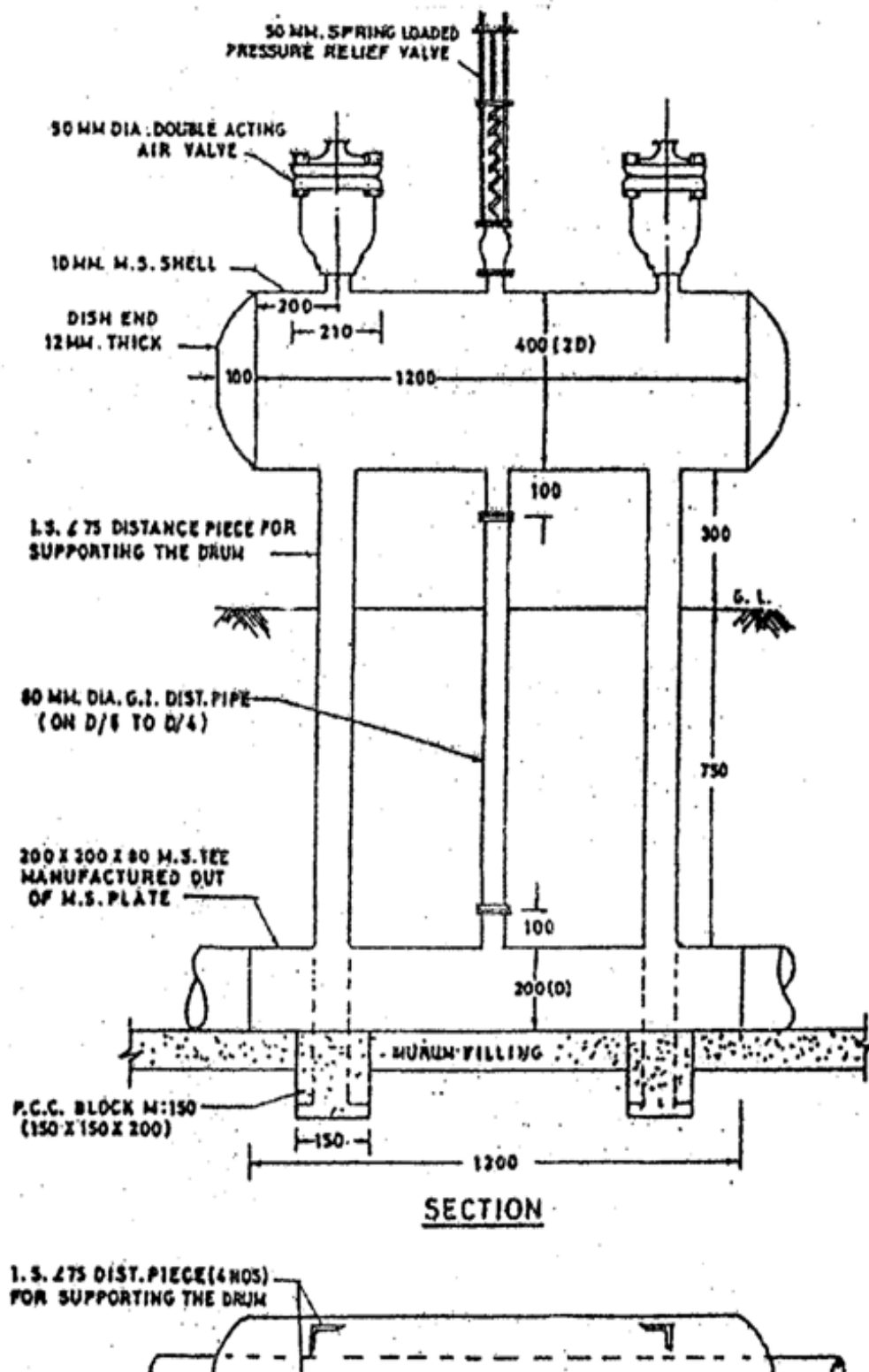
MAHARASHTRA JEEVAN PRADHIKARN



MAHARASHTRA JEEVAN PRADHIKARN

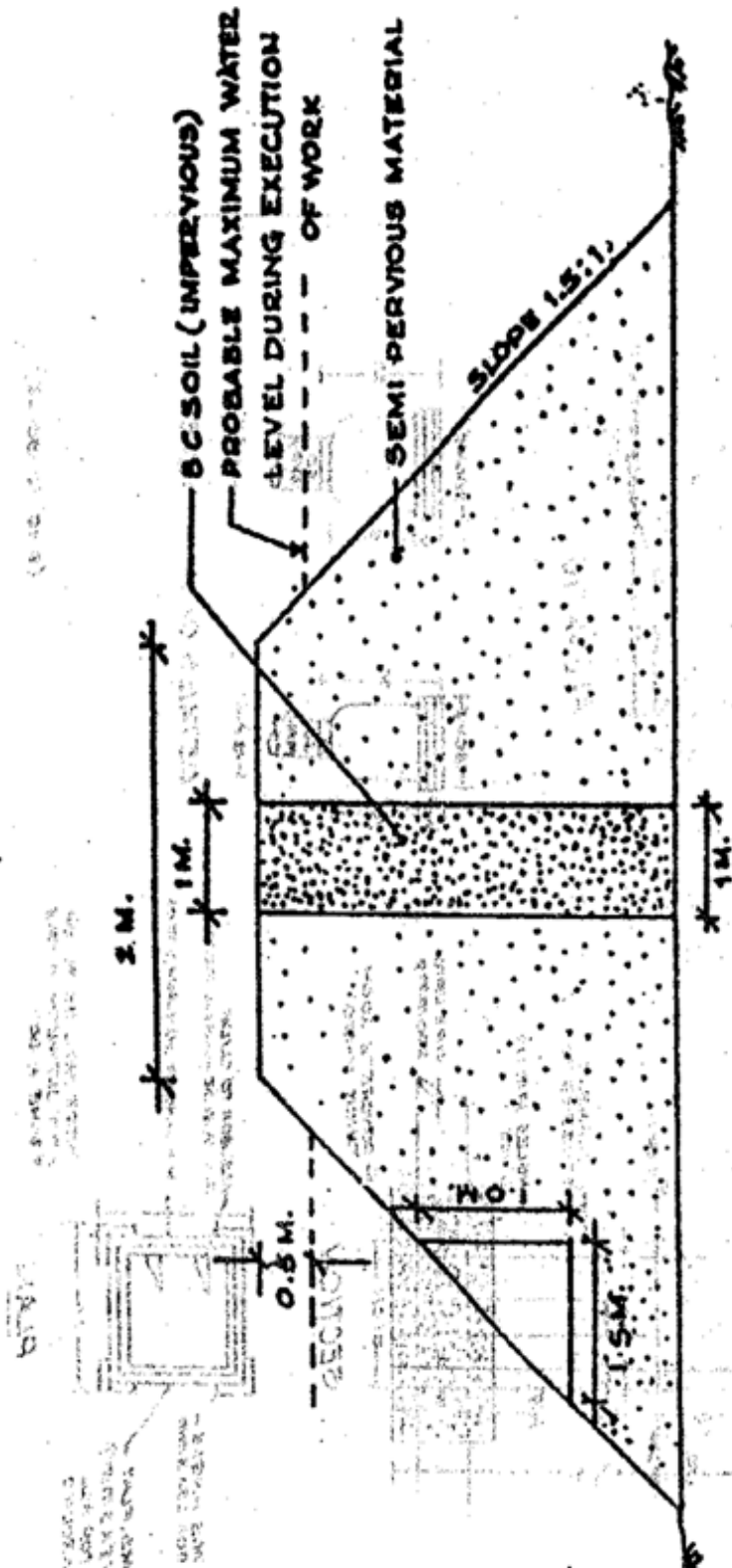


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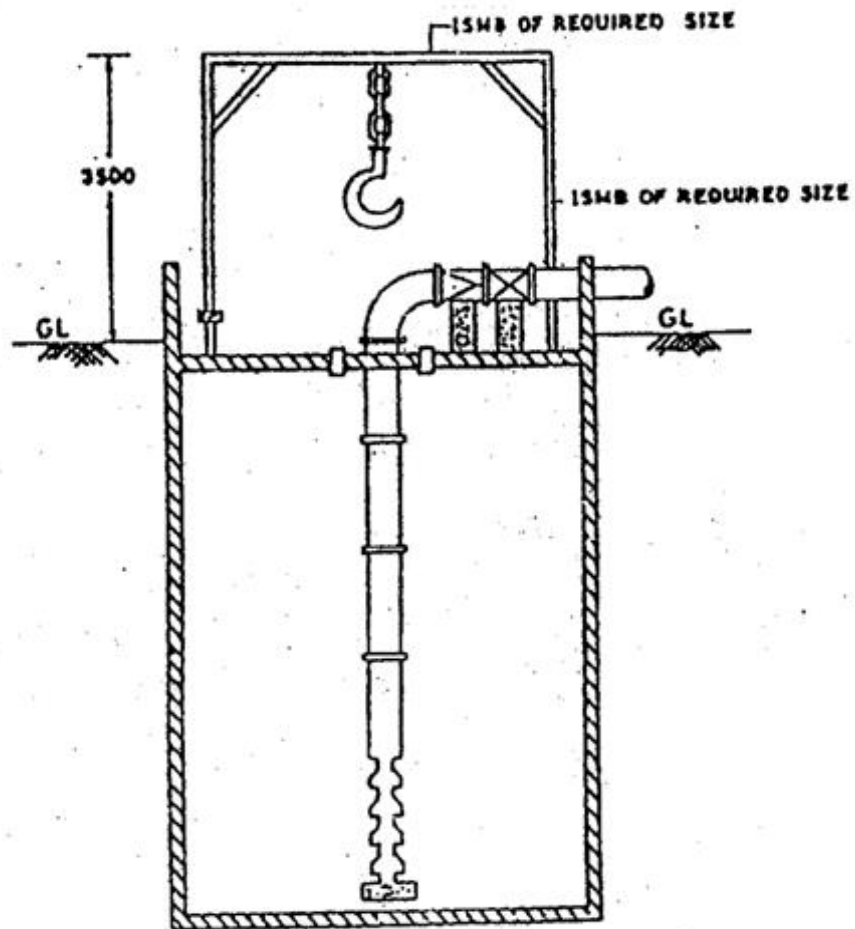
MAHARASHTRA JEEVAN PRADHIKARN

OF CYCLOPS PILES FOR THE CONSTRUCTION OF DAMS IN THE REGION

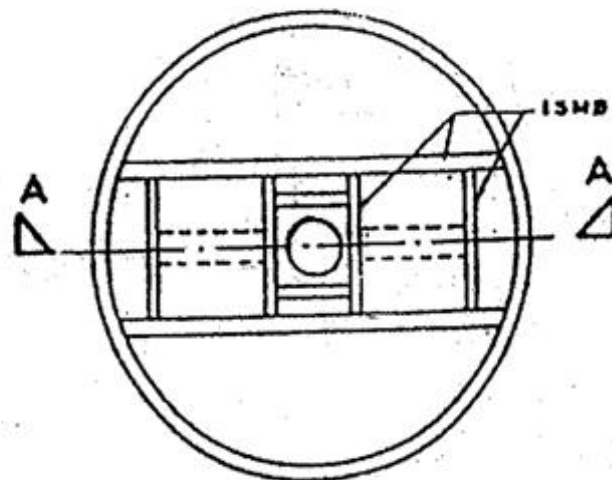


TYPICAL SKETCH OF COFFERDAM

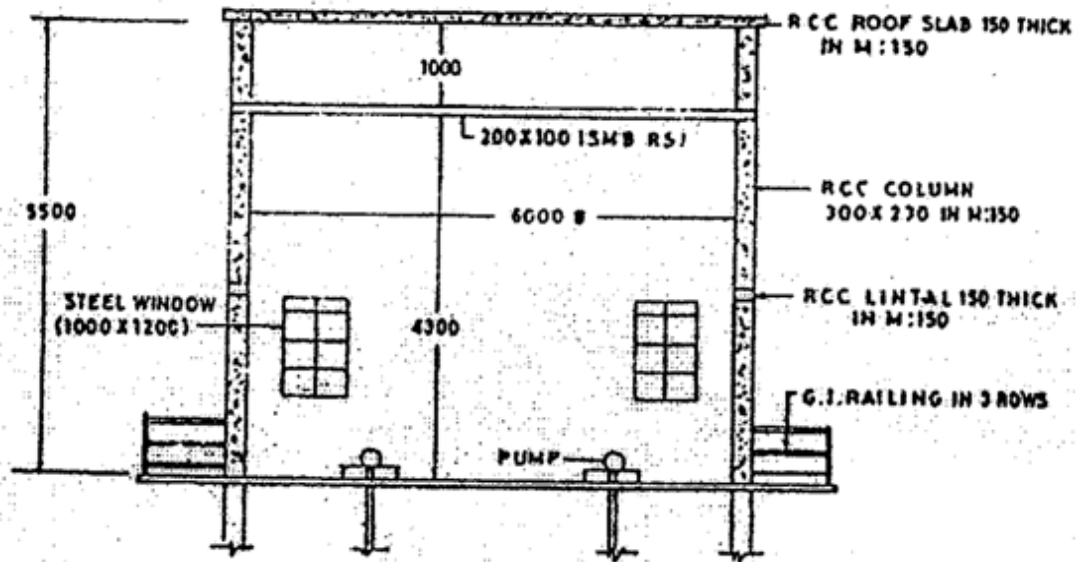
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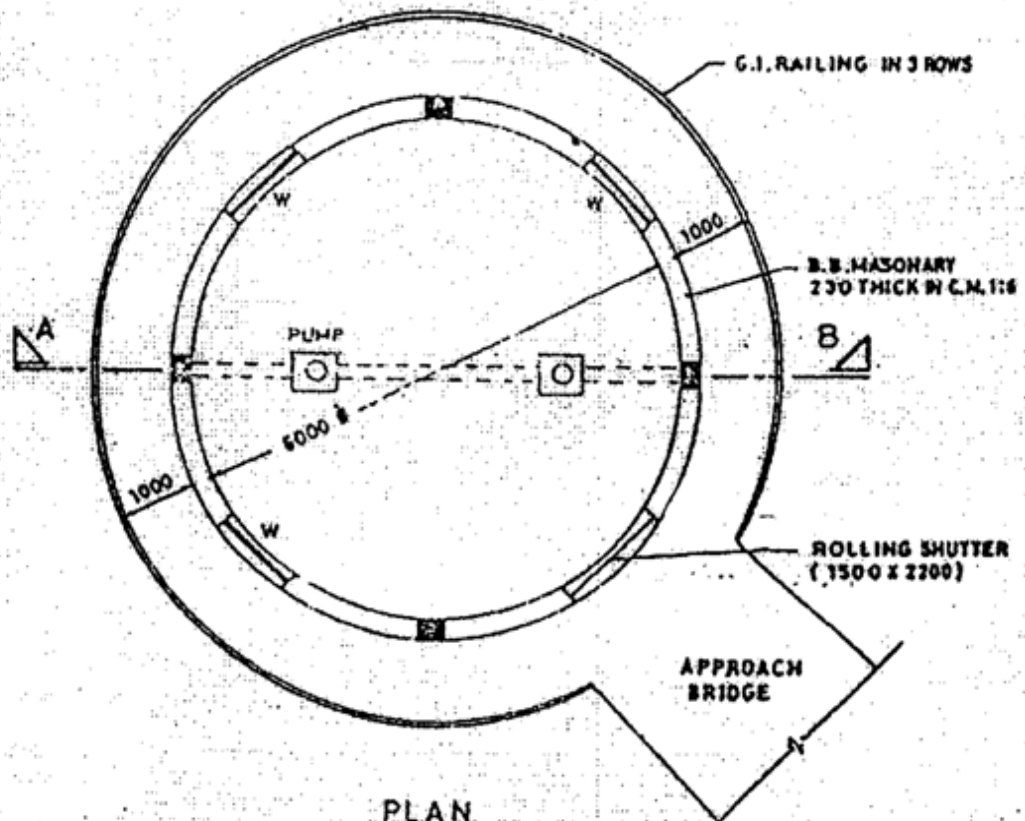
SECTION A-A



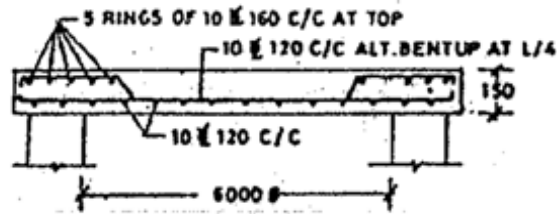
MAHARASHTRA JEEVAN PRADHIKARN



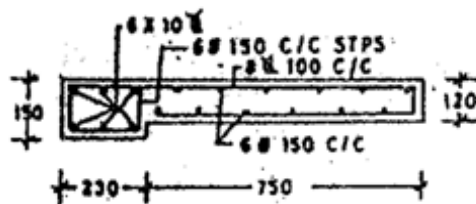
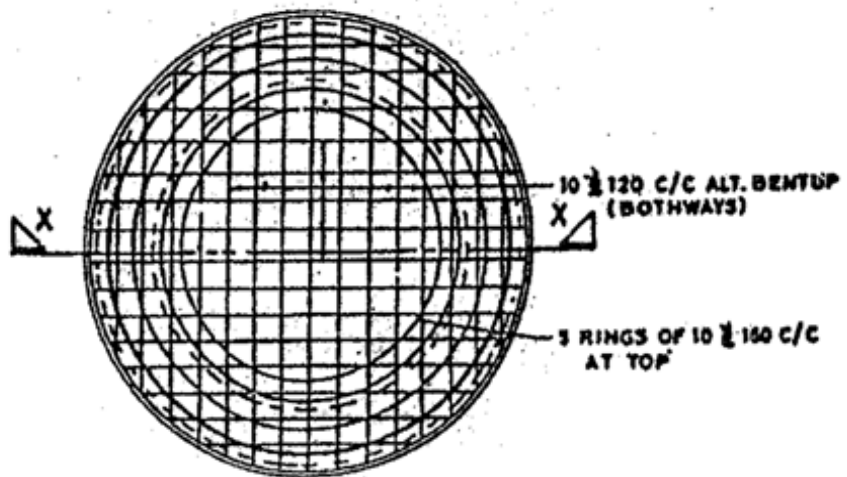
SECTION A-B



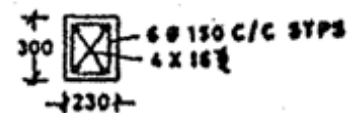
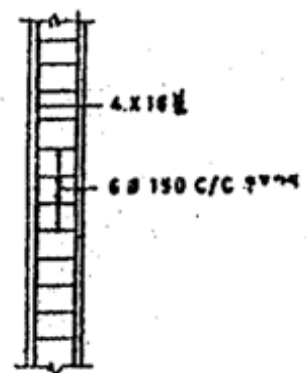
MAHARASHTRA JEEVAN PRADHIKARN



SECTION X-X

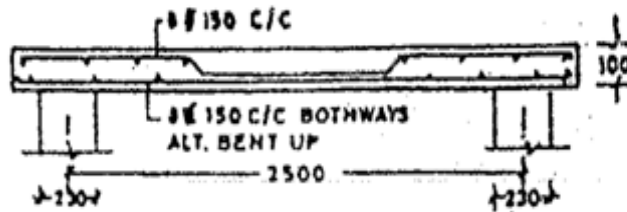


LINTAL AND CHEJJA

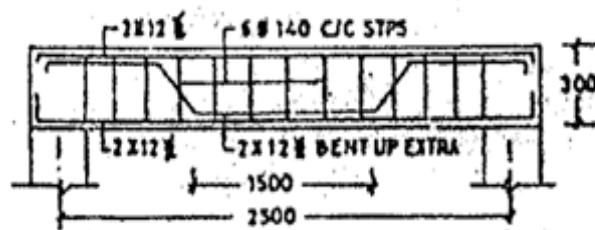


COLUMN

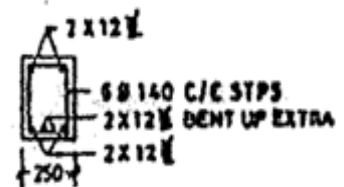
MAHARASHTRA JEEVAN PRADHIKARN



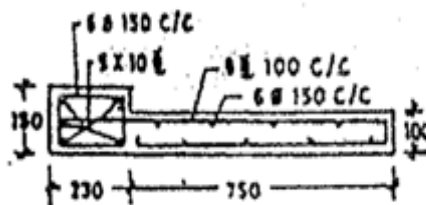
ROOF SLAB



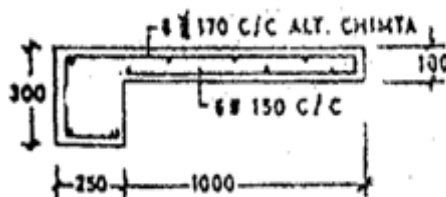
G. L. BEAM



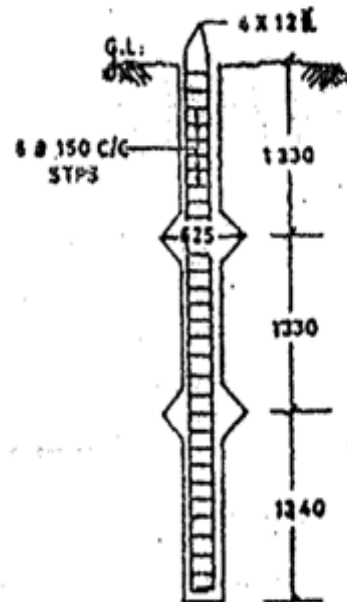
SEC.



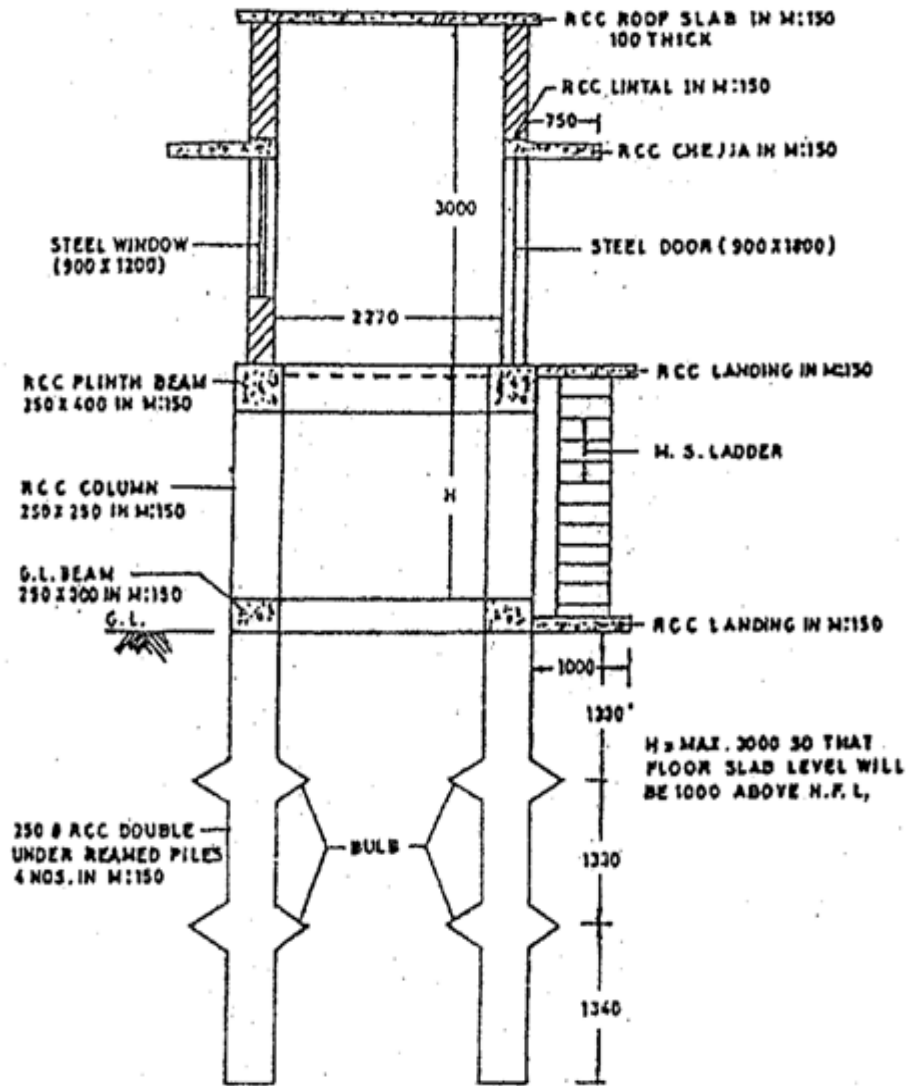
LINTAL AND CHEJJA



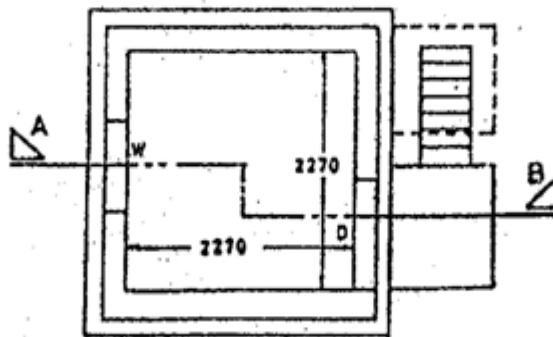
LANDING



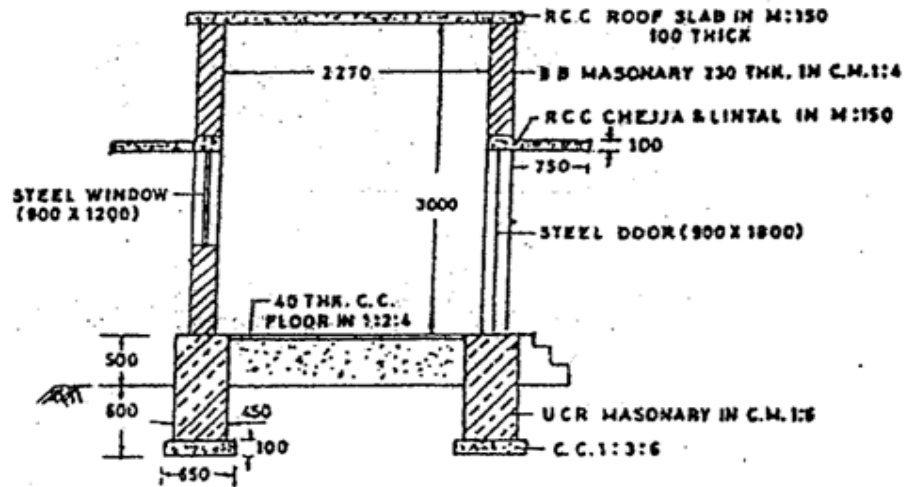
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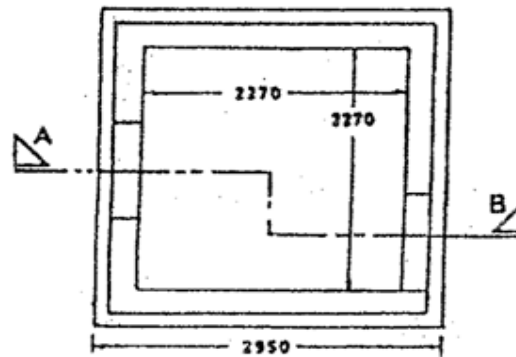
SECTION A-B



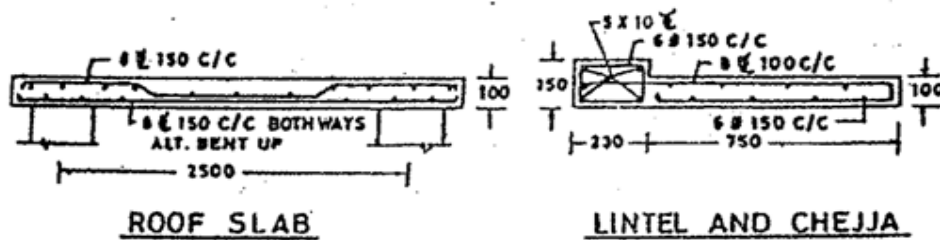
MAHARASHTRA JEEVAN PRADHIKARN



SECTION A-B



PLAN

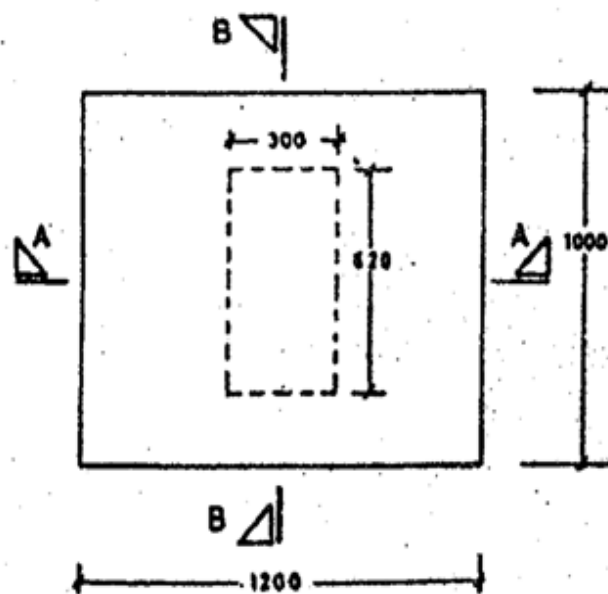
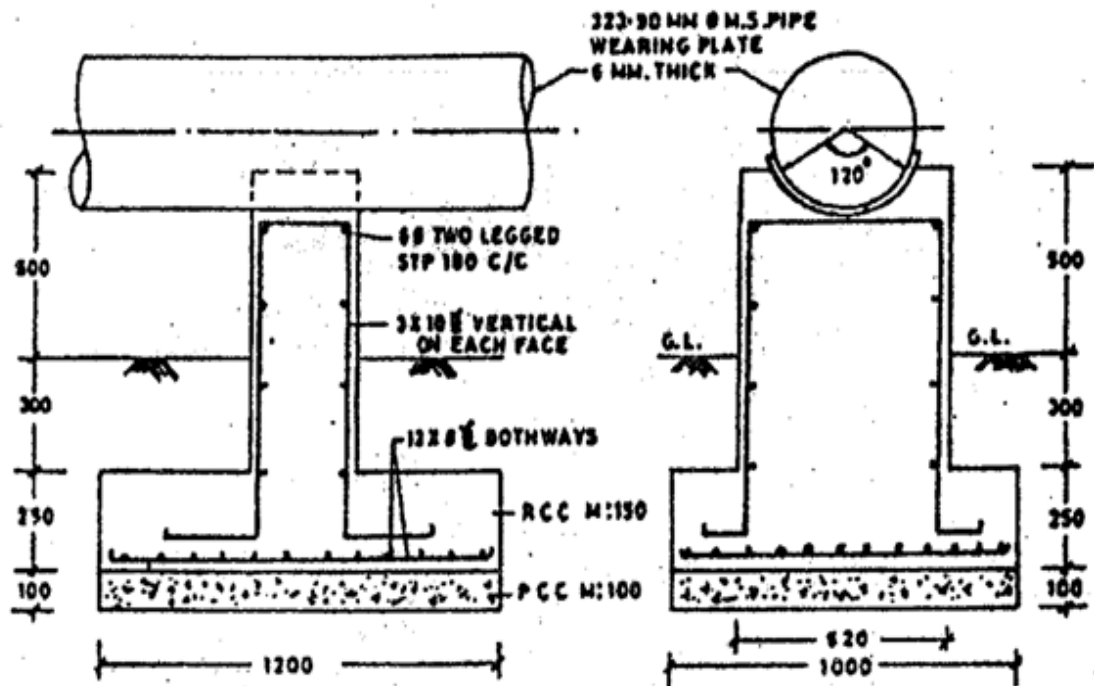


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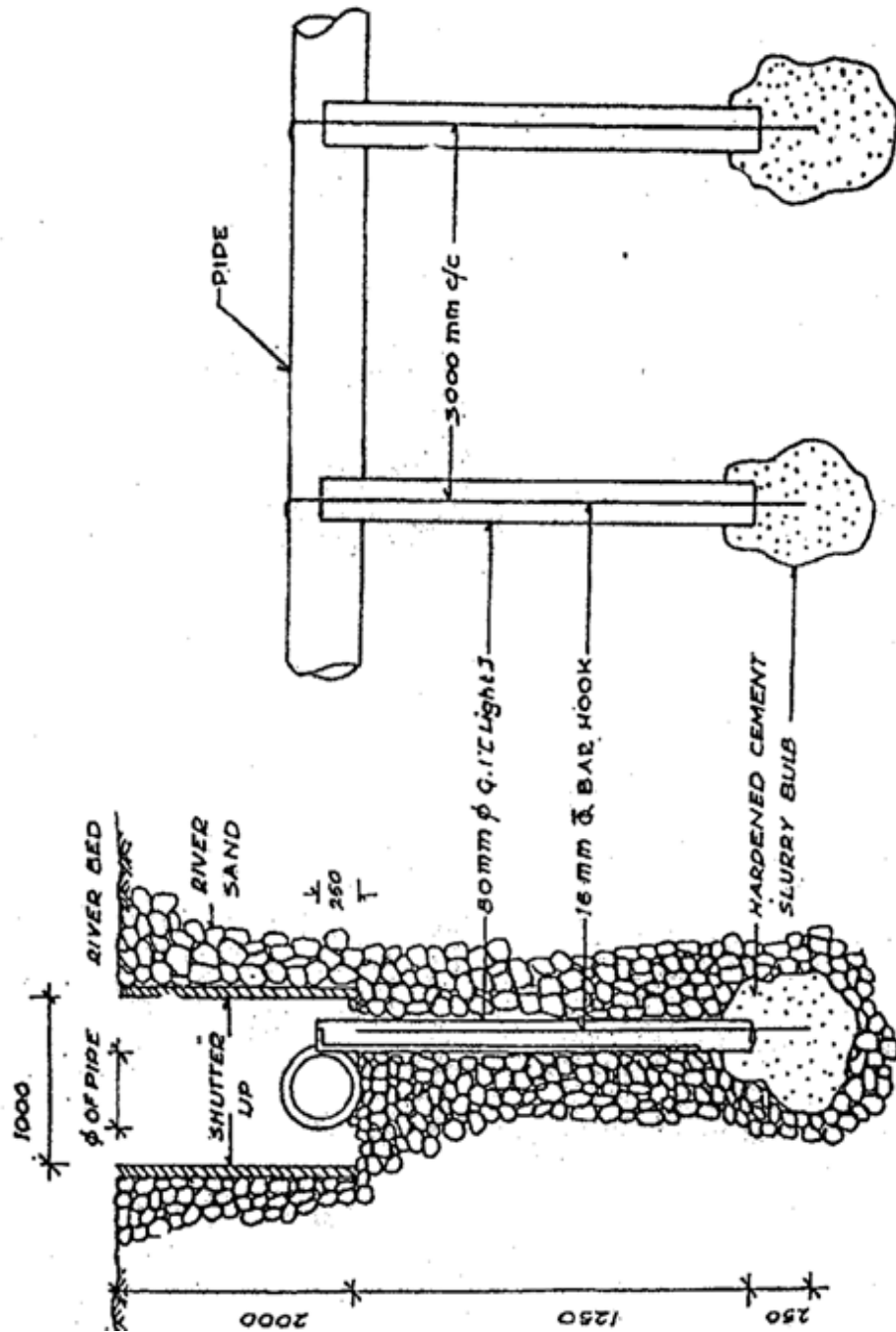
LINTEL AND CHEJJA

TYPE DESIGN OF SWITCH HOUSE WHEN GOOD FOUNDATION IS AVAILABLE AND G. L. IS ABOVE H. F. L.

MAHARASHTRA JEEVAN PRADHIKARN



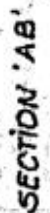
NOTE - DESIGN FOR EACH CASE
TO BE APPROVED BY
EX. ENGINEER INCHARGE



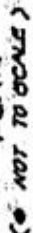
MAKING AN ANCHORAGE ARRANGEMENT

• ALL DIMENSIONS ARE IN MM UNLESS SPECIFIED
(• NOT TO SCALE)

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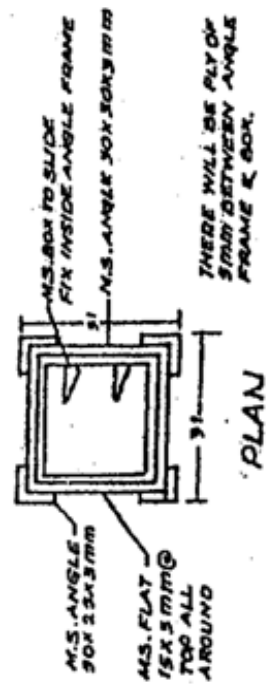
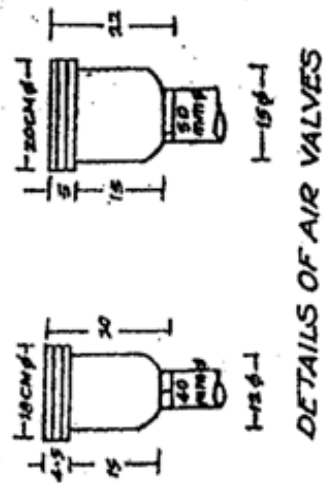
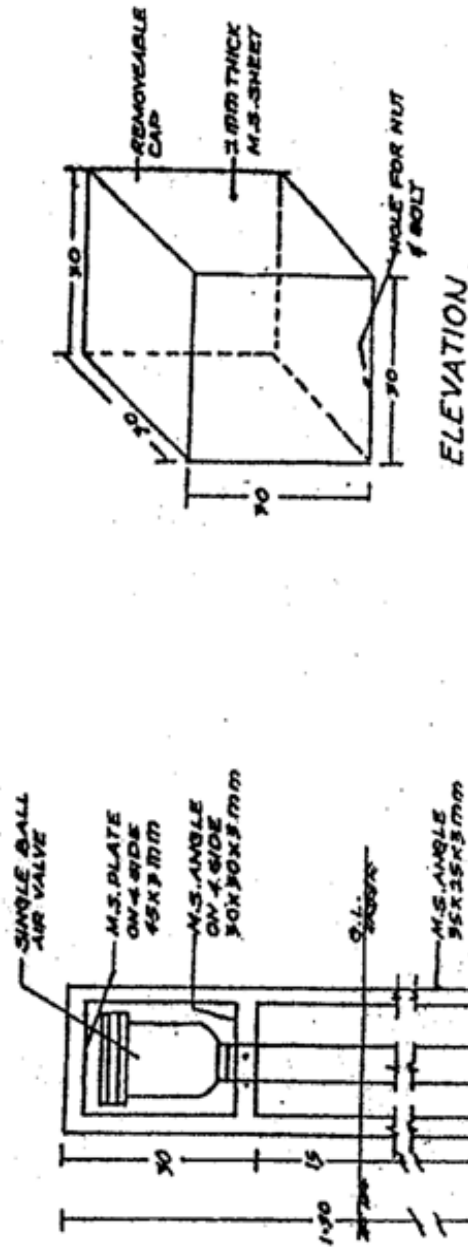


NOTES: THE BAD FOUNDATION PROVIDE
SOURCES FILING SUCH THAT
BEFORE 2000 DEC 31 2000



(• NOT TO SCALE)

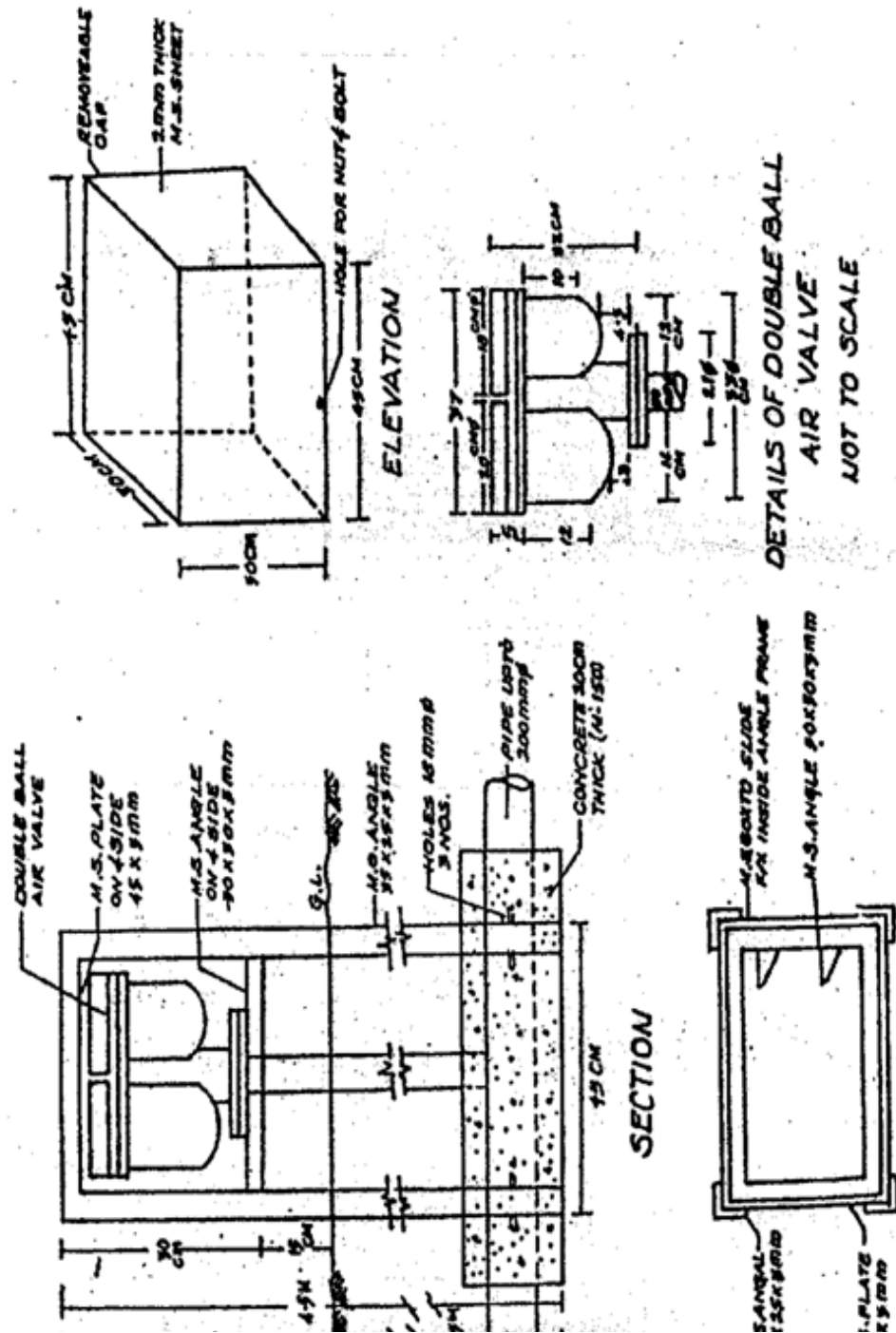
MAHARASHTRA JEEVAN PRADHIKARN



(NOT TO SCALE)

OF CAGE FOR SINGLE RAIL AIR VALVES 50mm ϕ & BELOW 50mm ϕ

MAHARASHTRA JEEVAN PRADHIKARN



OF CAGE FOR DOUBLE BALL AIR VALVES 50mm ϕ & BELOW 50mm ϕ