पत्रांक–2ब०/जला–01–01/2016 7932 /न०वि०एवंआ०वि०

बिहार सरकार
नगर विकास एवं आवास विभाग

प्रेषक,

चैतन्य प्रसाद,
सरकार के प्रधान सचिव।

सेवा में,

नगर आयुक्त,
सभी नगर निगम।
कार्यपालक पदाधिकारी,
सभी नगर परिषद् एवं सभी नगर पंचायत।

पटना, दिनांक– 27/10/16

विषयः– मुख्यमंत्री शहरी पेयजल निश्चय योजना अन्तर्गत "हर घर नल का जल" के कार्यान्वयन हेतु विस्तृत मार्गदर्शिका का प्रेषण।

महाशय,

उपर्युक्त विषयक प्रबंध निदेशक, बिहार राज्य जल पर्षद, पटना की अध्यक्षता में गठित समिति द्वारा "मुख्यमंत्री शहरी पेयजल निश्चय योजना" अन्तर्गत हर घर नल का जल के कार्यान्वयन हेतु विस्तृत मार्गदर्शिका तैयार कर समर्पित किया गया है, जिसे संलग्न किया जा रहा है। मार्गदर्शिका के साथ निम्नांकित अनुलग्नक भी संलग्न किये जा रहे है :–

1. Annexure 'A' - E-Processing Fees तथा BOQ Cost
2. Annexure 'B' - NIT from
3. Annexure 'C' - Special notes to bidder
4. Annexure 'D' - BOQ from
5. Annexure 'E' - Technical Bid Sheet
6. Annexure 'F' - Financial Bid Sheet
7. Annexure 'G' - Form No- F2 of P.W.D
8. Annexure 'H' - Departmental Notification no- 1250 dated- 12.07.2013 regarding User charges.
9. Annexure 'I' - RFP

अतः अनुरोध है कि योजना से संबंधित मार्गदर्शिका एवं अनुलग्नकों के अनुरूप योजना के क्रियान्वयन के संबंध में अग्रेतर कार्रवाई शीघ्र आरंभ करने की कृपा की जाय।

विश्वासभाजन,

27/10/2016

सरकार के प्रधान सचिव।

मुख्यमंत्री निश्चय "हर घर नल का जल" के कार्यान्वयन हेतु मार्गदर्शिका

1.पृष्ठभूमि :–

माननीय मुख्यमंत्री के 7 निश्चयों में से 3 निश्चय नगर विकास एवं आवास विभाग द्वारा सम्पादित किये जाने हैं इनमें से "हर घर नल का जल" निश्चय को प्राथमिकता के आधार पर पूरा करने के लिए ये दिशानिर्देश तैयार किये गए हैं।

मई–जून 2016 में राज्य के सभी नगर निकायों में किये गए सर्वे के आंकड़ों से ज्ञात होता है कि 140 शहरों में रहने वाले 19,05,292 परिवारों में से लगभग 82 प्रतिशत परिवारों को पेयजल पाईपलाईन से कनेक्शन नहीं दिया गया है जिसके कारण ऐसे परिवार या तो स्वयं के द्वारा निर्मित जल स्त्रोत से पानी ले रहे है या अपने घर से दूरस्थ सार्वजनिक पेयजल स्त्रोत से पानी ला रहे हैं। राज्य सरकार ने प्रत्येक परिवार को पाईपलाईन से शुद्व पेयजल उपलब्ध करने हेतु पर्याप्त धन राशि की व्यवस्था की है। इस कार्य को युद्व स्तर पर पूर्ण करने की जिम्मेवारी सम्बन्धित स्थानीय नगर निकाय को सौपी गई है। वर्णित कार्य को पूर्ण करने हेतु आवश्यक तकनीकी सहायता बिहार राज्य जल पर्षदद्वारा प्रदान की जानी है। आवश्यकता पड़ने पर लोक स्वास्थ्य अभियंत्रण विभाग के स्थानीय प्रमंडल से भी तकनीकी सहायता प्राप्त की जा सकती है।

बिहार राज्य जल पर्षद द्वारा 250, 500, 1000 एवं 1500 परिवारों के लिए छोटी छोटी पेयजल परियोजनाओं के मॉडल प्राक्कलन बनाये गए हैं। नगर पंचायतों में समान्यतः एक वार्ड में 500 परिवार तथा नगर परिषद् में 1000 परिवार होते हैं।योजना के कार्यान्वयन हेतु समान्यतः वार्ड को इकाई माना गया है। इसमें नगर पंचायतों को यह स्वतंत्रता होगी कि वे 500 परिवारों के लिए एक मॉडल का चयन करें या 250 परिवारों के लिए दो मॉडल प्राक्कलन का चयन करें। इसी प्रकार नगर परिषदों को यह स्वतंत्रता होगी कि वे 1000 परिवारों के लिए 500 के दो या 250 के चार या 500 के एक और 250 के दो मॉडल का चयन करें। नगर निकायों द्वारा मॉडल प्राक्कलन का चयन भूमि की उपलब्धता, वार्ड का आकार एवं तकनीकी उपयुक्तता के आधार पर किया जायेगा तथा सक्षम प्राधिकार से स्वीकृति प्राप्त कर ई–निविदा के माध्यम से योजनाओं को कार्यान्वित कर शहर के सभी परिवारों को पेयजल कनेक्शन उपलब्ध कराना सुनिश्चित किया जायेगा। इस क्रम में नगर निकायों द्वारा पूर्व से गाड़े गये ट्यूबवेल, जिनका जीर्णोद्धार करना हो या क्षमता विकसित करनी हो, उसके लिए भी नगर निकाय कार्य ले सकेंगे।

मॉडल प्राक्कलन में प्रावधान किये गये विभिन्न अवयवों की विशिष्टयॉ निम्न प्रकार है :–

उच्च प्रवाही नलकूप में व्यवहृत होने वाले 150mm एवं 100mm का केसिंग पाईप UPVC का है, जिसका न्यूनतम Wall thicknes 5 mm होना चाहिए। 300mm का केसिंग पाईप Mild Steel का है, जिसका न्यूनतम Wall thicknes 6 mm होना चाहिए एवं 200mm का केसिंग पाईप Mild Steel का है, जिसका न्यूनतम Wall thicknes 5.4 mm होना चाहिए। 200mm का Screen पाईप Mild Steel का है, जिसका न्यूनतम Wall thicknes 5.4 mm होना चाहिए।

वितरण प्रणाली के कार्य में व्यवहृत होने वाले 50 mm dia G.I Pipe, 65 mm dia G.I Pipe, 80 mm dia G.I Pipe, 100 mm dia C.I Pipe एवं 150 mm dia C.I Pipe का प्रतिमीटर दर क्रमशः 397.00, 523.40, 645.70, 1152.20 एवं 1730.70 रूपये है।

मॉडल प्राक्कलनों में सन्निहित मुख्य अवयवों की विवरणी :–

Table - 1

क्र0	विवरणी	मॉडल प्राक्कलन				अभियुक्ति
		250 परिवारों के लिए	500 परिवारों के लिए	1000 परिवारों के लिए	1500 परिवारों के लिए	
1	उच्च प्रवाही नलकूप	150mmX 100mmX 120M	150mmX 100mmX 150M	300mmX 200mmX 150M	300mmX 200mmX 150M	
2	मोटर/पम्प	3 HP Submersible	5 HP Submersible	7.5 HP Submersible	12.5 HP Submersible	
3	वितरण प्रणाली					
	150 मी0मी0	0	0	0	5940 मी0	
	100 मी0मी0	0	0	2952 मी0	4455 मी0	
	80 मी0मी0	608 मी0	1485 मी0	2952 मी0	5940 मी0	
	65 मी0मी0	608 मी0	1485 मी0	3936 मी0	0	
	50 मी0मी0	810 मी0	1980 मी0	0	0	
	कुल	2026 मी0	4950 मी0	9840 मी0	16335 मी0	
4	स्टैण्ड पोस्ट	3 अदद	5 अदद	10 अदद	10 अदद	
5	भैट्स	2000 लीटर	4000 लीटर	6000 लीटर	8000 लीटर	
6	गृह जल संयोजन	250 अदद	500 अदद	1000 अदद	1500 अदद	
7	लौह निष्काशन सयंत्र	10800 लीटर प्रति घंटा	16200 लीटर प्रति घंटा	27000 लीटर प्रति घंटा	43200 लीटर प्रति घंटा	गुणवत्ता प्रभावित क्षेत्रों के लिये।

राज्य के 21 शहरों (हाजीपुर, मोतीहारी, बगहा, बेतीया, छपरा, आरा, सिवान, औरंगाबाद, सासाराम, डिहरी, किशनगंज, बेगूसराय, सहरसा, जमालपुर, मुंगेर, कटिहार, बिहारशरीफ, जहानाबाद, बक्सर, दरभंगा एवं पूर्णिया) में वृहद् पेयजल परियोजनायें केन्द्र–राज्य–निकाय की भागीदारी युक्त AMRUT योजना के अन्तर्गत स्वीकृत हैं जिनका कार्यान्वयन BRJP द्वारा किया जा रहा है। इसके अतिरिक्त 8 (आठ) बड़े शहरों जैसे पटना, भागलपुर, गया, दानापुर, खगौल, फुलवारीशरीफ, मुजफ्फरपुर, बोधगया की पेयजल परियोजनायें जो JNNURM अथवा ADB द्वारा वित्तपोषित कार्यक्रम अन्तर्गत स्वीकृत है, का कार्यान्वयन BUIDCO द्वारा किया जा रहा है। शेष बचे 111 शहरों (चकिया, महुआ, साहेबगंज, नरकटियागंज, मोतीपुर, कांटी, लालगंज, महनार, सुगौली, अरेराज, पकडीदयाल, मेहसी, चनपटिया सोनपुर, मुरलीगंज, कोईल्वर,शाहपुर, कोआथ, कटैया, नासरीगंज, कोचस, रफीगंज, मैरवां, भभुआ, मोहनियॉ, पीरो, बिहियॉ, नोखा, नबीनगर, दिघवारा, मढौरा, रिवीलगंज, एकमा बाजार, परसा बाजार, महराजगंज, मीरगंज, बरौली, ठाकुरगंज, बीरपुर, दलसिंह–सराय,

खगड़िया, बिहट, नवगछिया, कहलगांव, बांका, अमरपुर, रोसड़ा, हवेली–खड़गपुर, गोगरी–जमालपुर, बखरी, तेघड़ा, बलिया, बहादुरगंज, मनिहारी, टेकारी, खुशरूपुर, बाढ, मोकामा, लखीसराय, शेखपुरा, जमुई, मनेर, बख्तियारपुर, नौबतपुर, शेरघाटी, बडहिया, झाझा, बरबीघा, जनकपुररोड़, डुमरा, घोधरडीहा, बेलसंड़, जयनगर, हिलसा, बेनीपुर, मधुवनी, फारबीसगंज, सिलाव, राजगीर, वारसलीगंज, हिसुआ, बैरगनिया, झंझारपुर, कसबा, बनमनखी, जोगबनी, ढाका, रक्सौल, केसरिया, रामनगर, शिवहर, निर्मली, मधेपुरा, बिक्रमगंज, डुमरांव, जगदीशपुर, दाउदनगर, गोपालगंज, सिमरी–बख्तियापुर, समस्तीपुर, सुलतानगंज, मसौढी, बिक्रम, फतुहा, मखदुमपुर, अरवल, सीतामढ़ी, नवादा, इस्लामपुर, अररिया एवं सुपौल) के लिए छोटी छोटी जलापूर्ति योजनाओं का निर्माण कर स्थानीय नगर निकायों द्वारा कार्यान्वित किया जाना है। इसमें से कुल 89 नगर निकायों में योजनाओं की प्रशासनिक स्वीकृति प्रदान की जा चुकी है। शेष अन्य शहरों की योजनाओं का भी चरणबद्ध तरीके से चालू वित्तीय वर्ष 2016–17 में प्रशासनिक स्वीकृति प्रदान कर दी जायेगी।

2. योजनाओं का निर्माण :–

शेष बचे 111 शहरों को निम्नांकित चार श्रेणियों में विभक्त किया जा सकता है:–

श्रेणी– 1 वैसे शहर जहाँ बिहार राज्य जल पर्षद द्वारा शहर के आंशिक क्षेत्र के लिए जलापूर्ति योजना का क्रियान्वयन किया जा रहा है।

श्रेणी– 2 वैसे शहर जहाँ लोक स्वास्थ्य अभियंत्रण विभाग द्वारा शहर के आंशिक क्षेत्र के लिए जलापूर्ति योजना का क्रियान्वयन किया जा रहा है अथवा किया जा चुका है।

श्रेणी– 3 वैसे शहर जहाँ पूर्व से पुरानी जलापूर्ति योजना कार्यरत है।

श्रेणी– 4 वैसे शहर जहाँ किसी भी तरह की जलापूर्ति योजना कार्यरत नहीं है।

श्रेणी 1 के शहरों के लिये तीन चरण में निर्माण कार्य किया जा सकता है :–

- नगर निकाय द्वारा विद्यमान/कार्यरत पाईप लाईन में गृह जल संयोजन के कार्य।
- नगर निकाय द्वारा विद्यमान/कार्यरत पाईप लाईन के अंतिम छोर पर छोटे साईज के पाईप से विस्तारीकरण कार्य।
- नगर निकाय द्वारा शेष बचे क्षेत्रों के लिये छोटे–छोटे जलापूर्ति योजनाओं के कार्य।

श्रेणी 2 के शहरों के लिये तीन चरण में निर्माण किया जा सकता है :–

- नगर निकाय द्वारा विद्यमान/कार्यरत पाईप लाईन में गृह जल संयोजन के कार्य।
- नगर निकाय द्वारा विद्यमान/कार्यरत पाईप लाईन के अंतिम छोर पर छोटे साईज के पाईप से विस्तारीकरण कार्य।
- नगर निकाय द्वारा शेष बचे क्षेत्रों के लिये छोटे–छोटे जलापूर्ति योजनाओं के कार्य।

श्रेणी 3 के शहरों के लिये तीन चरण में निर्माण किया जा सकता है :–

- नगर निकाय द्वारा विद्यमान/कार्यरत पाईप लाईन में गृह जल संयोजन के कार्य।
- नगर निकाय द्वारा विद्यमान/कार्यरत पाईप लाईन के अंतिम छोर पर छोटे साईज के पाईप से विस्तारीकरण कार्य।

➢ नगर निकाय द्वारा विद्यमान/कार्यरत पाईप लाईन के मरम्मति कार्य।

➢ नगर निकाय द्वारा शेष बचे क्षेत्रों के लिये छोटे–छोटे जलापूर्ति योजनाओं के कार्य।

श्रेणी 4 के शहरों के लिये छोटे–छोटे विकेन्द्रीकृत जलापूर्ति योजनाओं के निर्माण कार्य का प्राक्कलन तैयार किया जा सकता है।

छोटे–छोटे विकेन्द्रीकृत जलापूर्ति योजनाओं के निर्माण के क्रम में निम्नाकिंत चरणों का अनुपालन किया जा सकता है :–

I. **सर्वप्रथम आच्छादित किये जाने वाले क्षेत्रों में बोरिंग कार्य हेतु उपयुक्त स्थल (लगभग 25 फीट X 25 फीट) का चुनाव :–**

नगर निकाय को इस योजना के लिए पेयजल स्त्रोत के रूप में नलकूप निर्माण हेतु स्थान का चयन करना है और उसे Ward के नक्शे में दर्शाना है। नलकूप के स्थान के चयन करते समय इस बात का ध्यान रखा जाए कि उस स्थान पर भूगर्भ में पर्याप्त मात्रा में पानी का भंडार हो। इसके लिए नगर निकाय स्थानीय लोक स्वास्थ्य अभियंत्रण विभाग के अभियंता से भी राय ले सकते है।

II. **बोरिंग हेतु चयनित उपयुक्त स्थल से आच्छादित होने वाले क्षेत्रों के नजरी नक्शा में सभी सड़कों की लम्बाई को दर्शाना। आच्छादित होने वाले क्षेत्र एक वार्ड/अन्तरवार्ड हो सकते है :–**

नगर निकाय को ऐसे वार्डो के नजरी नक्शे में सभी सड़कों पर पूर्व से विद्यमान (Existing) एवं प्रस्तावित (Proposed) पाईप लाईन दर्शानी होगी और कम से कम 250 एवं अधिकतम 1500 ऐसे सभी परिवारों को चिन्हित करना है जिनके पास पेयजल कनेक्शन उपलब्ध नहीं है तथा जिनको एक नलकूप से संबंध Existing तथा Proposed पाईप लाईन से कनेक्शन दिया जा सके। यदि कोई सड़क दो वार्डो को विभाजित करती है तो उस सड़क के दूसरी ओर के घरों को भी योजना में शामिल करना होगा, भले ही वे घर दूसरे वार्ड में स्थित हों। इस प्रकार एक सड़क पर एक पाईप लाईन से सड़क की दोनो ओर के घरों को कनेक्शन दिया जा सकता है। वार्ड के नक्शे में योजना के इन सभी अवयवों को दर्शाया जाना आवश्यक होगा।

III. **आच्छादित होने वाले क्षेत्रों में परिवारों की संख्या/कुल जनसंख्या का आकलन :–**

स्थानीय निकायों में वार्डवार एवं सड़कवार परिवारों की संख्या/कुल जनसंख्या एवं जिनके पास गृह जल संयोजन उपलब्ध नहीं है का आकलन नगर विकास एवं आवास विभाग, बिहार सरकार के बुनियादी सर्वेक्षण में प्राप्त गणना के आधार पर किया जा सकता है।

IV. **आच्छादित होने वाले क्षेत्रों में दो–तीन ऐसे स्थलों का चुनाव करना जहॉ 4–4.5 मीटर की उॅचाई पर 2000 लीटर क्षमता का HDPE वाटर टैंक रखा जा सके :–**

कभी कभी ऐसी सम्भावना हो सकती है कि Water Supply के निर्धारित समय में विद्युत की उपलब्धता नहीं हो और नागरिकों को ससमय पानी उपलब्ध न हो सके। ऐसी स्थिति में विकल्प के रूप में उचित स्थान पर 2000 लीटर क्षमता के एक HDPE की पानी की टंकी (250 परिवारों के मॉडल प्राक्कलन के अनुसार), 2000 लीटर क्षमता के दो HDPE की पानी की टंकी (500 परिवारों के

मॉडल प्राक्कलन के अनुसार), 2000 लीटर क्षमता के तीन HDPE की पानी की टंकी (1000 परिवारों के मॉडल प्राक्कलन के अनुसार) एवं 2000 लीटर क्षमता के चार HDPE की पानी की टंकी (1500 परिवारों के मॉडल प्राक्कलन के अनुसार) मजबूत MS/RCC Structure के उपर रखी जाए तथा उससे ½" के GI या HDPE पाईप के द्वारा धरातल पर 4--5 नल लगाए जाने का प्रावधान योजना में रखा जाए। अभियंता को एक, दो या तीन ऐसे स्थानों का चयन करना है जहॉ 4–4.5 मीटर की उँचाई पर 2000 लीटर क्षमता का HDPE Water Tank रखा जा सके। ऐसे स्थान चिन्हित करते समय इस बात का ध्यान रखा जाए कि विद्युत प्रवाह नहीं होने की स्थिति में योजना से आच्छादित अधिकतम परिवार विकल्प के रूप में इस Water Tank से पानी का उपयोग कर सकें।

v. **आच्छादित क्षेत्र की जनसंख्या एवं सड़क की लम्बाई के आधार पर बोरिंग/पम्प मोटर एवं वितरण प्रणाली का 135 लीटर प्रति व्यक्ति प्रतिदिन के आधार पर डिजाईन करना अथवा बिहार राज्य जल पर्षद द्वारा तैयार किये गये मानक प्राक्कलन (तकनीकी अनुमोदित) के अनुसार प्रस्ताव तैयार करना:–** नलकूप में 250 परिवार, 500 परिवार, 1000 परिवार एवं 1500 परिवारों के लिये क्रमशः न्यूनतम 3 HP, 5 HP, 7.5 HP एवं 12.5 HP के सबमर्सिबल पम्प का प्रावधान किया जाना चाहिए। सबमर्सिबल पम्प उच्च गुणवत्ता का भारतीय मानक IS 8034:2002 के अनुरूप एवं राष्ट्रीय स्तर की कम्पनी जैसे Kirloskar, Crompton, KSB द्वारा बनाया गया हो और कम से कम 1 साल की Warranty प्राप्त हो। यदि एक वार्ड में 250 से कम ऐसे परिवार हों जिनमें पेयजल connection नहीं है, तो एक योजना में एक से अधिक वार्डो के परिवार भी लिए जा सकते हैं और यदि एक वार्ड में 500 से अधिक ऐसे परिवार हो जिसमें पेयजल connection उपलब्ध नहीं है, तो एक वार्ड में एक से अधिक योजनायें भी बनायी जा सकती है। पाईप का साईज नलकूप से पाईप लाईन के अंतिम छोर तक अधिकतम से घटते घटते न्यूनतम तक होना चाहिए। अनुमानतः पाईप लाईन का साईज कम से कम 50mm तथा अधिकतम 150mm होना चाहिए। मॉडल प्राक्कलन में साईज के अनुसार पाईपों की लम्बाई दर्शायी गई है। Table – 1पृष्ठ सं0– 2 पर द्रष्टव्य।

vi. **प्रस्ताव पर बिहार राज्य के एस0ओ0आर0 के आधार पर बी0ओ0क्यू0 (परिमाण विपत्र) का निर्माण :–** प्रत्येक योजना की विशिष्ट संख्या एवं नाम दिया जाना चाहिए। कोई भी नगर निकाय योजना के निर्माण हेतु तकनीकी सलाह के लिएबिहार राज्य जल पर्षद/स्थानीय लोक स्वास्थ्य अभियंत्रण विभाग/डुडा के अभियंताओं से सम्पर्क कर सकते है। उपरोक्त सभी अवयवों का डिजाईन एवं उनको वार्ड नक्शों पर चिन्हित करने के पश्चात् बिहार राज्य की SOR के आधार पर प्राक्कलन/परिमाण विपत्र तैयार किया जाए। मॉडल प्राक्कलन में सभी अवयवों का दर दर्शाया गया है। ऐसे नगर निकाय जहाँ जलापूर्ति हेतु विशिष्ट प्रकार की समस्या, यथा– पथरीला इलाका, जल स्त्रोत में कठिनाई इत्यादि हो, वैसे नगर निकायों में बिहार राज्य जल पर्षद/स्थानीय लोक स्वास्थ्य अभियंत्रण विभाग के अभियंता से तकनीकी सहायता प्राप्त कर योजनाओं का कार्यान्वयन किया जायेगा। आवश्यकतानुसार इसके लिए प्राक्कलन में अनुमान्य सीमा तक परिवर्तन भी किया जा सकता है। यदि

किसी भी अवयव की मात्रा में कोई बढ़ोतरी अथवा घटोतरी होती है तो मात्रा के अनुसार प्राक्कलित राशि को बढ़ाया/घटाया जा सकता है। बढ़ोतरी अगर 10 प्रतिशत से अधिक होती है तो फिर से तकनीकी स्वीकृती प्राप्त करना आवश्यक होगा।

VII. **नगर निकाय द्वारा परिमाण विपत्र एवं निविदा आमंत्रण सूचना तैयार करने के उपरान्त निकाय के बोर्ड से स्वीकृति प्राप्त कर निविदा आमंत्रित की जा सकती है :–**

मार्गदर्शिका के Annexure "A" में E-Proc e-procesing Fee एवं BOQ Cost से संबंधित जानकारी, Annexure "B" में NIT (निविदा आमंत्रण सूचना) Format, Annexure "C" में Special Notes to Bidder, Annexure "D" में परिमाण विपत्र (BOQ) का Format, Annexure "E" में Technical Bid Sheet का Format, Annexure "F" में Financial Bid Sheet का Format एवंAnnexure "G" में F_2 Agreement का Format संलग्न है। नगर निकाय द्वारा संलग्न Format के अनुसार परिमाण विपत्र एवं निविदा आमंत्रण सूचना तैयार कर सूचना एवं जन सम्पर्क विभाग के माध्यम से निविदा का प्रकाशन किया जाना है। ध्यान रहे कि सभी तरह की निविदा E-tendring के माध्यम से ही की जानी है।

VIII. **गृह जल संयोजन कार्य हेतु 1/8" Brass Ferrule का प्रावधान होना चाहिये :–**

योजना के अन्तर्गत जिस सड़क पर पाईप लाईन बिछाने का प्रावधान किया गया हो उस सड़क के दोनों ओर के घरों में निशुल्क गृह जल संयोजन देने का प्रावधान आवश्यक रूप से किया जाय भले ही सड़क के दूसरी ओर के घर दूसरे वार्ड में हो। एक परिवार को एक ही गृह जल संयोजन देने का प्रस्ताव रखा जाय। प्रत्येक घर को गृह जल संयोजन 1/8''साईज के Ferule से ही उपलब्ध कराया जाय। प्रत्येक घरों में गृह जल संयोजन का कार्य 1829.00 रूपये के तकनीकी अनुमोदित प्राक्कलन के अनुसार ही किया जाना है। नगर निकायों द्वारा गृह जल संयोजन देने के क्रम में मकान मालिक का नाम, पता, आधार नम्बर, मोबाइल नम्बर एवं तस्वीर अपने अभिलेख में रखने के अतिरिक्त उनसे एक प्रमाण–पत्र भी लेना सुनिश्चित किया जायेगा कि उनके घर में नल का जल उपलब्ध हो गया है। नल जल कनेक्शन से संबंधित सारी जानकारी विभाग द्वारा विकसित MIS पर Upload किया जाना आवश्यक होगा।

IX. **नगर विकास एवं आवास विभाग द्वारा सभी योजनाओं की अनुश्रवण online की जायेगी** :–https://nagarseva.bihar.gov.in/ Housesurvey/ पर login कर नगर के सभी वार्डो की पेयजल योजनओं की online entry कर दी जाय। और ऐसे परिवारों को सर्वे data में से चुन कर online प्रगति कार्य software में entry किया जाय।

3. योजनाओं की स्वीकृति एवं निविदा आमंत्रण :–

शहर के सभी वार्डो के सभी परिवारों को पेयजल कनेक्शन उपलब्ध कराने हेतु वरीयता के आधार पर योजना संख्या दी जाए और सभी योजनाओं की अनुमोदन नगर निकाय बोर्ड से प्राप्त की जाए जिसकी सूचना नगर विकास एवं आवास विभाग को भेजकर राशि की मांग की जाए। बोर्ड से अनुमोदनप्राप्त करने के

बाद 7 दिन में योजना की प्राक्कलित राशि के अनुसार BOQ बनाकर ई–निविदा आमंत्रित की जाए। निविदा प्राप्त करने की अंतिम तिथि निविदा प्रकाशन की तिथि से 3 सप्ताह रखी जाय। निविदा प्राप्त होने के 2 सप्ताह के अंदर न्यूनतम निविदादाता को कार्यादेश जारी किया जाए और इसकी सूचना https://nagarseva.bihar.gov.in/Housesurvey पर login कर entry कर दी जाय। शहर के सभी वार्डो के सभी परिवारों को पेयजल कनेक्शन उपलब्ध कराने हेतु एक वार्ड/अन्तरवार्ड के लिये बनाई गयी योजना का ग्रुप बनाया जाना है एवं सभी ग्रुपों की निविदा एक साथ किया जाना है, ताकि शहर के सभी घरों को एक साथ जलापूर्ति की जा सके।

4. योजनाओं का कार्यान्वयन :–

किसी भी योजना के कार्यादेश जारी करने के पश्चात् संवेदक को स्थल उपलब्ध कराकर अविलम्ब कार्य शुरू करने का निर्देश दिया जाए। सर्वप्रथम नलकूप निर्माण का कार्य किया जाना चाहिए। सफतलापूर्वक नलकूप का निर्माण पूर्ण होने के उपरान्त ही पाईप क्रयएवं बिछाने का कार्य शुरू किया जा सकता है। पाईप लाईन बिछाने के पूर्व पाईप के Material की गुणवत्ता की जॉच अवश्य की जानी चाहिए। आवश्यक हो तो अधिकृत Laboratory में पाईप की टेस्टिंग करवाई जाए। पाईप Manufacturer की इंडस्ट्री में पाईप की टेस्टिंग तृतीय पक्ष द्वारा अनिवार्य रूप से करें। निविदा में पाईप की टेस्टिंग निविदादाता के खर्चे पर करवाने का प्रावधान रखा जाए। पाईप लाईन Road Level से कम से कम 1.0 मीटर गहराई में बिछायी जानी चाहिए और यह सुनिश्चित करना चाहिए कि सभी पाईपों के जोड़ (Joint) लीक प्रूफ हों। 3 मीटर से कम की चौड़ाई की गली जो Motorable नही है वहॉ पर 1 फीट की गहराई पर उचित Cover के साथ पाईप विछायी जा सकती है जिससे गृह जल संयोजन करने में सुविधा हो। G.I पाईप Tata/Jindal Medium Class का इस्तेमाल किया जाय। सी0आई0 पाईप Electrosteel/Kapilance/Tata का इस्तेमाल किया जाय। पाईप लाईन के गढ़ढे को भरने से पूर्व पाईप लाईन के अंतिम छोर को बंद कर एवं पाईप के प्रथम छोर पर pressureguage लगाकर निर्धारित pressure जॉच करनी चाहिए। पाईप लाईन की टेस्टिंग के समय डुडा के अभियंता आवश्यक रूप से स्थल पर उपस्थित रहें। यदि पाईप लाईन निर्धारित pressure से पूर्व ही लीक करे तो संवेदक को पूरी पाईप लाईन को सुधारने हेतु निर्देश प्रदान करें।

5. अनुश्रवण :–

नगर निकायों द्वारा कार्यान्वित की जाने वाली योजनाओं का अनुश्रवण नगर निकाय स्तर पर कार्यपालक पदाधिकारी/नगर आयुक्त द्वारा किया जाएगा। नगर निकाय द्वारा नगर सेवा की Website https://nagarseva.bihar.gov.in/Housesurvey पर login कर पूर्व में entered योजनाओं में से सम्बन्धित योजना संख्या को Click कर योजना की साप्ताहिक भौतिक एवं वित्तीय प्रगति दर्ज किया जाना है। जिसकी समीक्षा नगर विकास एवं आवास विभाग के पदाधिकारी online कर सकते है। अपेक्षित भौतिक एवं वित्तीय प्रगति न होने पर नगर विकास एवं आवास विभाग द्वारा संबंधित नगर निकाय से स्पष्टीकरण मॉगा जा सकता है। योजना के प्रत्येक अवयव की गुणवत्ता के लिए नगर निकाय के कार्यपालक पदाधिकारी/संबंधित अभियंता पूर्ण रूप से जिम्मेदार होंगे। डुडा के कार्यपालक अभियंता एवं नगर निकाय के कार्यपालक पदाधिकारी संयुक्त

रूप से जिला पदाधिकारी से सम्पर्क कर योजनाओं के निगरानी हेतु एक अभियंता की प्रतिनियुक्ति सुनिश्चित करेंगे।

विभागीय स्तर पर योजना के अनुश्रवण हेतु उप सचिव स्तर के एक पदाधिकारी अथवा कार्यपालक पदाधिकारी को एक प्रमंडल के अन्तर्गत आने वाले सभी शहरों के अनुश्रवण की जिम्मेदारी होगी जो योजना के कार्यान्वयन के दौरान कम से कम एक बार निरीक्षण कर विभाग के सचिव/प्रधान सचिव को प्रतिवेदन प्रस्तुत करेंगे।

6. संधारण :–

योजना के पुरा होने के पश्चात् 5 वर्ष तक संचालन/रख–रखाव करने का कार्य संबंधित संवेदक के माध्यम से करने का प्रावधान प्राक्कलन/परिमाण विपत्र में किया जाना चाहिए। संचालन/रख–रखाव कार्य हेतु कुल प्राक्कलित राशि का 2 प्रतिशत प्रतिवर्ष की दर से संवेदक को भुगतान किया जा सकता है। विकल्प के रूप में योजना का संधारण करने के लिये 5 वर्ष के बाद निजी Agency को Outsource किया जा सकता है।

नलकूप से पेयजल सीधे पाईप लाईन के माध्यम से निर्धारित क्षेत्र के सभी परिवारों को प्रतिदिन निश्चित समय पर प्रातः एवं संध्या में 8–8 घंटे वितरित किया जाएगा ताकि प्रति व्यक्ति 135 लीटर प्रतिदिन पानी उपलब्ध हो सके। निर्धारित पेयजल आपूर्ति के समय विद्युत उपलब्ध नहीं होने की स्थिति में VAT (Water Tank) को हमेशा भरा रखा जाना चाहिए।

सिद्वांततः प्रत्येक योजना के संधारण पर होने वाला व्यय (मुख्यतः विद्युत विपत्र) Water Consumers से User Charges वसूल कर पूरा किया जाना चाहिए। इसलिए प्रत्येक नगर निकाय को नगर विकास एवं आवास विभाग द्वारा जारी User Charges Notification 1250 दिनांक– 12.07.2013 को अपने Board से अनुमोदन करा कर लागू करना चाहिए और Water Conusmers से User Charges वसूल कर अलग बैंक खाता में जमा करना चाहिए। नगर निकायों को Online Water Charge वसूलने की व्यवस्था करनी चाहिए। सुलभ प्रसंग हेतु अधिसूचना की प्रति मार्गदर्शिका के साथ Annexure - H पर संलग्न है।

7. गुणवत्ता नियंत्रण :–

योजनाओं के त्रिस्तरीय गुणवत्ता नियंत्रण की व्यवस्था विभागीय संकल्प संख्या– 1288, दिनांक– 25.02.2016 की कंडिका– 7 के अनुसार प्रभावी होगी।

Annexure 'A'

E-Proc e-processing Fess

Sl. No.	Estimated Cost	Eproc Cost with Service tax
1	Upto 70 lakh	Rs. 1150/-
2	70 lakh to 3 crore	Rs. 5750/-
3	3 crore to above	Rs. 17250/-

BOQ Cost

Sl. No.	Estimated Cost	BOQ Fee
1	Upto 10000	Rs. 50/-
2	10,001-50,000	Rs. 250/-
3	50,001-2,50,000	Rs. 500/-
4	2,50,001-5,00,000	Rs. 750/-
5	5,00,001-10,00,000	Rs. 1250/-
6	10,00,001-15,00,000	Rs. 2500/-
7	15,00,001-50,00,000	Rs. 5000/-
8	50,00,001 - above	Rs. 10000/-

Annexure 'B'

Government of Bihar

Office of the Municipal Commissioner/ Executive Officer,.....Nagar Nigam/ Parishad/Panchayat, Bihar

NOTICE INVITING TENDER (through e-procurement mode only- www.eproc.bihar.gov.in)

NIT No.- .....

1	Designation and Address of the Advertiser	:	**Municipal Commissioner/ Executive Officer, ...Nagar Nigam/ Parishad/Panchayat, Bihar**
2	Date of Issue of Notice Inviting Tender	:	DD.MM.YYYY
3	Period for download of Tender Document	:	DD.MM.YYYY to DD.MM.YYYY up to 15.00 hours (From Website : www.eproc.bihar.gov.in)
4	Date, Time & Place of Pre-Bid meeting	:	Date. DD.MM.YYYY .at 11.00 hours at the Office of the ..... Bihar.
5	Last Date & time for uploading tender documents by bidder	:	DD.MM.YYYY Up to 15.00 Hours on www.eproc.bihar.gov.in
6	Last date, time and place for submission of original instrument of EMD and cost of BOQ	:	DD.MM.YYYY Up to 15.00 hours Place: Office of the - (i) Municipal Commissioner/ Executive Officer,..... or (ii) ..... or (iii) .....
7	Date, time & Place of opening of Technical Bid	:	DD.MM.YYYY, *Time- 15.30 hours* Place: On Website - www.eproc.bihar.gov.in

8. Details of works:- :

S. N	Name of Work	Estimated Cost/ECV (In Rs.)	Amount of Earnest Money @ 2% of ECV (In Rs.)	Cost of B.O.Q (in Rs.)	Bid Processing Fee (Non-Refundable to be paid to Beltron by Net Banking (In Rs.)	Time of completion of work (in month) Including monsoon period, if any.
1	(write name of work)	.....	.....	.....	.....	.....

9. Date, time & place of opening of Financial Bid: After finalization of technical bid.
   Place: On Website-www.eproc.bihar.gov.in
10. Bid Validity: 120 Days.
11. Detailed NIT can be seen on web site www.prd.bihar.nic.in or www.eproc.bihar.gov.in or on the notice board of the office of the undersigned.
12. Any Contractor registered with the Central Government / any State Government or any PSU or an agency of international or national repute may participate in the tender but registration with the concerned ULB, Bihar will be essential after issue of L.O.A. and before executing the agreement.
13. For participating in the above E-Tendering process, the contractors shall have to get themselves registered with the service provider so that user ID, password and Digital Signature are issued to them. This will enable them to access the website www.eproc.bihar.gov.in and download/participate in E-Tender. For this, intending bidders may contact E-procurement Helpdesk at 1st Floor, M/22, Bank of India Building, Road No.-25, Sri Krishna Nagar, Patna,- 800020, Telephone No. 0612-2523006, Mob. No.-9939035696.
14. The undersigned reserves the right to extend or cancel or reject the tender/tenders at any time without assigning any reason thereof. No cost what so ever shall be claimed on such account by the bidder.
15. Earnest money in any form as prescribed in rule 161 of the revised PWD code and duly endorsed/pledged to the authorized departmental representative (concerned Municipal Commissioner/ Executive Officer) can be in any of the following shapes or combination thereof:-
    (a) Fixed Deposit receipt of Nationalized /Scheduled Bank and valid for 180 days after last date of receipt of tender.
    (b) Post Office/Saving Bank Passbook.
    (c) One, two or three years Post Office time deposit.
    (d) NSC issued within the State of Bihar.
    (e) 5 years National Development Bond.
    (f) State Development Loan Certificate.
    (g) For works costing more than one Crore, a Bank Guarantee of Nationalized/Scheduled Bank may also be

submitted.

The above instrument(s) shall remain valid for the minimum period of 180 days after last date of receipt of tender.

16. Bid Processing fees and Form fees/ BOQ Fee:-
    (a) Bid Processing Fees is mandatory to be paid through online mode i.e. Internet payment gateway (Credit / Debit Card), Net banking, NEFT/RTGS".
    (b) BOQ Fee is mandatory to be paid through Demand Draft (DD) in favor of concerned Municipal Commissioner/ Executive Officer.
    (c) Earnest money Deposit (EMD) can be paid through manual mode (BG, DD etc.). In manual mode of payment of EMD , the original hardcopy of the EMD which may be a DD/NSC/KVP/BG of any other instrument that should be submitted in the tendering authority office within the next working day after tender.
    (d) Bids along with necessary online payments must be submitted through e-Procurement portal www.eproc.bihar.gov.in before the date and time specified in the NIT. The department doesn't take any responsibility for the delay/Non Submission of Tender/Non Reconciliation of online Payment caused due to Non-availability of Internet Connection, Network Traffic/Holidays or any other reason. "BSEDC processing fee has to be paid through e-payment mode only. EMD & Tender/BOQ fee paid through offline mode".
17. Bidders/ Contractors can access tender documents on the website and must fill them and submit the completed tender documents in electronic form on the website itself. Bidders/ Contractors shall attach scanned copies of all required papers, DD and certificates as required in the eligibility criteria. All the uploaded documents shall have the signature of bidder or their authorized signatories. The scanned copies should be of the original papers and certificates.
18. Corrigendum/ Addendum, if any, will be published on the website itself.
19. In the unlikely event of the server for www.eproc.bihar.gov.in being down for more than two consecutive hours (in the period from midnight to closing time for receipt of tenders) on the last date of receiving of bid, the last date of the same shall automatically be extended to next working day till the last receiving time stipulated in the original NIT.
20. The bidders are requested to check their file size of uploaded documents at the time of submission & they should ensure that work file is uploaded. If they feel that the complete file is not uploaded then they should click on cancel & update the same before submission. The bidders should satisfy themselves of Download ability/visibility of the scanned & uploaded file by them.
21. The bidders are directed to zip their files using WinZip or WinRAR software only. Other formats of zipping will not be accepted and will be rejected.
22. The bidder must use MS Office-2007 or lower version.
23. File size should be less than 5MB and should be in Ms Word, Ms Excel, PDF and JPEG formats.
24. No claim shall be entertained on account of disruption of internet service being used by bidders. Bidders are advised to upload their bids well in advance to avoid last minute technical snags.

-sd-

Municipal Commissioner/ Executive Officer

.....Nagar Nigam/Parishad/Panchayat, Bihar

Annexure 'C'

BIHAR GOVERNMENT

SPECIAL NOTES TO BIDDER

1. The tender will be received in two bid system. (i) Technical Bid (ii) Financial Bid
2. The bidders shall submit their eligibility and qualification details, Technical Bid. financial bid etc. in the online standard formats given for respective tenders in e-procurement web site at the respective stage only. The bidders shall upload the scanned copies of all the relevant certificates, documents etc in support of their eligibility criteria/technical bids and other certificate/ documents in the e- procurement web site. The bidder shall sign on the supporting statements, documents, certificates, uploads by him owning responsibility for their correctness/ authenticity.
3. Any Contractor registered with the Central Government / any State Government or any PSU or an agency of international or national repute may participate in the tender but registration with the concerned ULB, Bihar will be essential after issue of L.O.A. and before executing the agreement.
4. Bids from Joint ventures are not acceptable.
5. Each bidder shall submit only one bid for any work or one package or group. A bidder who submits or participates in more than one Bid (other than as a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.
6. The bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will in no case be responsible and liable for those costs.
7. The unit's rates and the prices shall be quoted by the bidder entirely in Indian Rupees. All payments shall be made in Indian Rupees.
8. A self-attested copy of up to date sale Tax / VAT certificate, PAN and Site knowledge certificate should be submitted in office along with the cost of BOQ. Only Successful bidder have to produce valid labor license after issue of work order under Bihar contract labor rule, 1972.
9. The Bidder shall submit/upload one set of the Technical bid and one set of financial bid comprising of the documents as described special notes to bidders.
10. Complete Bids (including Technical and Financial) must be received by the Employer online not later than the date indicated in NIT. The electronic bidding system would not allow any late submission of bids after due date and time.
11. The Technical Bid will be opened & assessed first and subsequently the Financial Bid of Technical successful bidder in Technical Bid will only be opened.
12. If any of the tenderers or their agents is not present at the time of opening, the employer will open the tender in their absence and prepare a statement and that will be binding on the absent tenderers.
13. Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not official concerned with such process until the award to the successful Bidder has been announced. Any effort by a Bidder to influence the Employer's processing of Bids or award decisions may result in the rejection of his Bid.
14. Employer will award the Contract to the Bidder whose Bid has been determined to be substantially responsive to the Bidding documents and who has offered the lowest evaluated Bid Price.

15. The Bidder whose Bid has been accepted will be notified. The Agreement will be incorporated between the Employer and the successful Bidder. It will be signed by the Employer and the successful Bidder, after the performance security is furnished.
16. The N.I.T. will be part of tender document. Tender documents are not transferable.
17. The bidder shall have to deposit earnest money as mentioned in N.I.T./B.O.Q in the following from duly endorsed or pledged in favor of concerned Municipal Commissioner/ Executive Officer in any of the form mention below.
    (a) Fixed Deposit receipt of Nationalized /Scheduled Bank and valid for 180 days after last date of receipt of tender.
    (b) Post Office/Saving Bank Passbook.
    (c) One, two or three years Post Office time deposit.
    (d) NSC issued within the State of Bihar.
    (e) 5 years National Development Bond.
    (f) State Development Loan Certificate.
    (g) For works costing more than one Crore, a Bank Guarantee of Nationalized/ Scheduled Bank may also be submitted.
    The above instrument(s) shall remain valid for the minimum period of 180 days after last date of receipt of tender.
18. The bidder must have experience of at least 25% similar nature work of the estimated value in each group. Further qualifying requirement for selection of bidder regarding of award of work have been mentioned in bid document available on website.
19. The bidder must produce 25% amount of the estimated cost as bank solvency.
20. If the contractor fails to maintain the required progress to complete the work and clear the site on or before the contract or extended date of completion, he shall without prejudice to any other right or remedy available under the law to the Government on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below:
    (i) Compensation for delay of work @ 2 % per month of delay to be computed on the value of work remains incomplete on per Day basis and maximum of @10 %.
21. **Security deposit** – Successful bidder shall have to enter into an agreement within seven days after receiving work order. They will have to deposit 5 (five) % of the estimated cost inclusive of earnest money deposit at the submission of tender. Failure to complete the agreement in time the earnest money will be forfeited, A further deduction of 5% (five) present as S.D. will be made from each bill of the contractor during the execution of work. These S.D. will be released after six months of the completion of work with satisfactory report about the work.
22. **Work Program-** The successful bidder will be required to execute the work as per specification approved by the Department. He will have to ensure to complete the work to full satisfaction of the department. In case the bidder fails to complete the work, within time the tenders will be rescind.
23. **Award of the work:-**The Completive authority reserved the full rights to reject any or all tenders without assigning any reason.
24. **Conditional Tender:** - Conditional Tender will not be accepted.
25. **Quantities:** - Quantities given in B.O.Q may increase and decrease. They are not to be taken as guarantee that the actual quantities increase or decrease, and any claim whatsoever submitted for extra expenses incurred from such increase or decrease will not be accepted.

26. **Materials:** - All materials used are to be of the best new available and subject to the E/I approval and according to applicable BIS or ISI standards. Executive also is subject to approval of Employer/Engineer and shall be the best available common practice in engineering codes at the time of execution.
27. **Address:** - Bidder shall furnish their full permanent and local address with contract Telephone No. in the tende paper. The bidders are requested to sign each and every of the tender document before submitting the tender.
28. **Validity of Tender:** - The rate quoted by the bidder will remain valid for period of six months. No claim shall be entertained for variation of rates.
29. **Specification:** - The standard specification of RCD/BCD/PHED and relevant I.S. Specification will be followed during the execution of the work. All electrical items BSEB specifications mentioned in BOQ will be followed. General Specification of different type of material is attached herewith (Annexure I).
30. **Payment:** - Payment shall be made only after inspection and findings of satisfactorily Progress/ completion of work & subject of availability of fund.
31. **Taxes & Cess deduction:** - Taxes will be deducted from the each bill of the contractor as applicable. One percent cess will be deducted from each bill in the head of welfare of labor as per rule.

-sd-
Municipal Commissioner/ Executive Officer
.....Nagar Nigam/Parishad/Panchayat, Bihar

Annexure 'D'

BIHAR GOVERNMENT

Office of the Municipal Commissioner/ Executive Officer,.....Nagar Nigam/ Parishad/Panchayat, Bihar

BILL OF QUANTITY

Name of Work :- (Write Full Name of the Work)

Time of completion :- ....Days

Estimated Amount:- Rs. .....

Date of Tender :- .....

Earnest Money:- Rs: .....

Cost of B.O.Q:- Rs: .....

B.O.Q. issued to ----------

SCHEDULE "A"

Paste FULL BOQ Data.

-sd-
Municipal Commissioner/ Executive Officer
.....Nagar Nigam/Parishad/Panchayat, Bihar

SCHEDULE "B"

NIL

-sd-
Municipal Commissioner/ Executive Officer
.....Nagar Nigam/Parishad/Panchayat, Bihar

SCHEDULE "C"

NIL

-sd-
Municipal Commissioner/ Executive Officer ...
.....Nagar Nigam/Parishad/Panchayat, Bihar

Annexure I

1.1 GENERAL SPECIFICATIONS

Materials and methods of construction for all civil works shall be as per relevant Indian standard specification, part of which are incorporated in the standard specification of P.H.E.D. and P.W.D. Bihar and all will be followed during the execution of the work. The work shall be executed as per the guidelines and provisions of B.I.S. All materials shall conform to Indian standard code of practice National Building Code and CPHEEO manual to maintain quality of work.

1.2 General

All materials shall be best of their kind and shall confirm to the relevant latest Indian standard.

All materials shall be of approved quality as per samples and from origins approved by the Engineer in Charge. A set of specimen samples of all approved materials shall be kept in sealed container or otherwise at site, cost of which is to be borne by the contractor.

1.3 Bricks

Only 1st class kiln burnt bricks shall be used unless other wise specified. They shall be of a uniform deep cherry color; thoroughly burnt, regular in shape with sharp and square arris and they must emit a clear ringing sound on being struck. They must be free from cracks, chips, flaws, stones or lumps of any kind and they shall not absorb water more than one seventh of their own weight after soaking them in water for 15 minutes. The bricks shall show no sign of efflorescence either dry or subsequent to soaking in water.

1.4 Sand

The source from which sand is to be obtained shall be subject to the approval of Engineer-in-charge. The sand shall be clean, sharp and gritty to touch and be freed from soil and other impurities by washing. The sand shall be washed to such a degree that when a handful is mixed with clean water in a glass and allowed to stand for an hour the precipitate of mud over the sand shall not exceed 5%. The sand should conform to IS 382-1982 for fine and coarse aggregates from natural sources.

1.5 Coarse Sand

It is to be screened through a sieve of 64 meshes to the square inch so as to exclude large particles from the work. The fineness modulus shall not be less than 1.0

1.6 Fine sand

It is to be screened through a sieve of 64 meshes to the square inch so as to exclude large particles from the work. The fineness modulus shall not be less than 2.5

1.7 Stone chips

It shall be obtained from crushing trap quartzite or hard stones and from quarries approved by Engineer-in-charge. It shall be of approved quality and proper grade. It shall pass through ¾ "mesh and retained on ¼ "mesh. It shall be free from dirt, leaves, clay and any organic matter. The material conforming generally to IS 383-1983 for coarse and fine aggregate from natural sources or IS 515-1959 for natural and manufactured aggregates for use in mass concrete with latest revisions.

1.8 Cement

Ordinary or lowest heat Portland cement (minimum 43 grade) conforming I.S.S. 269 –1989 or Portland slag cement confirming IS 455:1989 or Portland Pozzolana cement confirming IS 1489:1991of A.C.C./RAYMOND/TATA /LAFARGE/ULTRATECH shall be used after due approval of the Engineer-in-charge. All cement shall be fresh when delivered. Cements of different types are not to be mixed with one another. Consignments shall be used in the order of delivery. Admixture if any shall be used only after approvals of Engineer in charge.

1.9 Reinforcement

Steel reinforcement shall be of mild steel of tested quality conforming to I.S.S. – 432 -1966/ H.Y.S.D. bars conforming to ISS-1786/1779-of SAIL/TATA make.

All the reinforcement shall be clean and free from rust, mild scales, dust, paint, oil, grease, adhering soil or any other material or coating that may impair the bond between the concrete and the reinforcement, or cause corrosion of the reinforcement or disintegration of concrete. Neither the size nor length of bar or wire shall be less than the size or length described in the bar schedule or elsewhere and the length shall not be more than 50 mm in excess of the length as described.

Welded joints in reinforcement may be used but in cases of important connection, tests shall be made to prove that the joints are of the full strength of bars connected, welding of reinforcement shall be done in accordance with the recommendations of the relevant Indian standards for welding mild steel bars used in the reinforced concrete construction.

Bending and overlapping, placing in position, fabrication, binding, reinforcement with wire of approved gauge shall be done as per I.S. 432 – 1960 (revised) and I.S. 1786 – 1966 and I.S. 2502 (revised). Handling and storage of materials for concrete or RCC should be followed as per I.S. 4082 – 1977.

1.10 Water

The water to be used in making and curing of concrete, mortar etc. shall be free from objectionable quantities of silts, organic matter, injurious amount of oils, acids, salts and other impurities etc. as per IS-456-1978. The Engineer-in-charge or his authorized representatives will determine whether or not such quantities of impurities are objectionable. Such comparison will usually be made by comparison of compressive strength, water requirement, time of setting and other

properties of concrete made with distilled or every clean water and concrete made with the water proposed for use, Permissible limit for solids when tested in accordance with I.S. 3025-1964. Shall be as tabulated below

1.	Organic	Permissible limit for solids Maximum permissible limit. 200 mg/litre.
2.	Inorganic	3000 mg/litre.
3.	Sulphate (As SO_4)	500 mg/litre.
4.	Chloride (As Cl)	2000 mg/litre for P.C.C and 1000 mg/litre for R.C.C. work
5.	Suspended matter	2000 mg/litre.

If any water to be used in concrete, suspected by the engineer-in-charge/or his authorized representative of exceeding the permissible limits of solids, samples of water will be obtained and get it tested by Engineer-in-charge in accordance with IS- 3025-1964.

1.11 Cement Mortar

The mortar shall consist of cement and sand mixed in proportion defined in relevant schedule item for various item of work. Only measured quantity shall be used. The sand shall be shoveled in a wooden measure of a clean masonry platform, after removing the measure box and spreading out sand if necessary, the cement (in required proportion) shall be emptied on the top of sand. The sand and cement shall be then turned over with shovels once dry and made into the form of a hollow cone; into this water can be poured and the whole shall then be turned over completely twice. The color and consistency shall at this stage be quite uniform, if not, further turning shall be done. Water shall be added by measured quantities. Only such quantities of mortar shall be mixed at one time as can be used at once before it can set. No mortar, which has once caked or begun to set, shall be used, nor shall such mortar be remixed; but it shall be removed from the site of the work immediately.

1.12 Cement concrete

The concrete shall consist of an aggregate of the proportion by volume defined in relevant schedule item or work. Only measured quantity shall be used. The aggregate shall consist of stone ballast of quality approved by Engineer-in-charge and shall consist of graded size 20 mm and down wards as per PWD specification or the size mentioned in the item description

1.13 Laying:

The cement, sand and stone chips shall be mixed properly in mechanical mixer in such a manner as to avoid loss of water. The concrete shall be mixed for minimum period of 2 minutes or until it is of even color and uniform consistency throughout. As soon as the concrete is mixed it should be

removed to the work in iron vessels as rapidly as practicable. The concrete laid will be vibrated for compaction by the vibrators. Slum test will be carried at site during execution of work.

1.14 Curing:

The concrete laid shall not be disturbed and shall be kept thoroughly damped by means of wet matting and sand until it shall have become thoroughly set and hard enough to prevent its drying and cracking.

1.15 Forms:

Contractor shall furnish on the site of work sufficient number of centering, molds or templates for its expeditious execution. The forms shall be made in such a way and of such materials as will ensure a smooth surface on the finished concrete. Forms and centering shall be left in place until the concrete has set sufficiently to permit the removal without danger to the structure.

1.16 Brick masonry work

1.17 Materials:

The brick works shall consist of bricks and mortar in accordance with general specification and plans.

1.18 Soaking bricks:

All bricks shall be soaked in clean water in tank for a period of at least twelve hour immediately before use. The contractor shall provide at his expense tanks of sufficient capacity to admit of the simultaneous immersion of bricks for the work its normal rate of progress.

1.19 Laying:

All the best shaped uniformly colored bricks shall be picked out and used for face work without any extra payment to the contractor. All bricks work shall be constructed in English bond and shall follow the type bond junctions etc. All courses unless otherwise specified or ordered by the Engineer in charge shall be truly horizontal and the walls shall be taken up truly plumb. Mortar joints shall never exceed 10 mm in thickness and this thickness shall be uniform throughout. Vertical joints in alternate courses shall not come directly over one another. The joints shall be racked out not less than 12mm deep when the mortar is green so as to provide proper key for the plaster or pointing to be done. Each face brick shall be set with both bed and vertical joints quite full of mortar. No damaged or broken brick shall be used in any part of the work except such as may be cut to size for closing the course. Closers shall be clean out to size as indicated in English bond and shall be situated near the end of walls. The masonry shall be carried up regularly and no step shall be allowed more than 60cm. Where the masonry of one part has to be delayed, the work must be raked back at an angle not exceeding 45 o Angles and Junctions. At all angles forming the junction of walls, the brick shall at each alternate course be carried into their respective walls so as to thoroughly unite the work with English bond. Care shall be taken that when a brick is left out to allow support for the scaffold pole on the wall face, such brick shall always be a header and that not more than one header for each pole shall be left out.

1.20 Scaffolding:

Proper scaffolding shall be provided whenever necessary having two sets of vertical supports and shall be subject to the approval of the Engineer in charge; who may order the contractor to alter or strengthen the scaffolding if he considers it necessary, without thus becoming responsible either for the safety of the work or workmen or for any additional payment. Holes shall be made good by bricks to match the face work when scaffolding is removed.

1.21 Curing of bricks:

All bricks work shall be keep well watered for 14 days after laying.

1.22 Reinforced Cement Concrete:

All R.C.C. work shall be of the grade M -15, M-20, M-25 as given in specifications. The materials will be measured when dry. The stone chips should be thoroughly washed in clean water and stacked. Vibrator will be used for all R.C.C and P.C.C work. The aggregate shall consist of stone ballast of quality approved by Engineer-in-charge and shall consist of graded size 20 mm and downwards as per PWD specification or the size mentioned in the item description.

1.23 Laying:

Cement, sand and stone chips shall be mixed properly in a mechanical mixer in such a manner as to avoid loss of water. The concrete shall be mixed for minimum period of 2 minutes or until it is of even color and uniform consistency throughout. As soon as the concrete is mixed it should be removed to the work in iron vessels as rapidly as practicable. The concrete laid will be vibrated for compaction by vibrators. Slum test will be carried at site during execution of work.

1.24 Curing:

The concrete laid should not be disturbed and shall be kept damped by means of wet matting and sand until it shall have become thoroughly set and hard enough to prevent its drying and cracking.

1.25 Forms:

Contractor shall furnish on the site of work sufficient number of centering, forms, molds or templates for its expeditious execution, the forms shall be made in such way and of such material as will ensure a very smooth surface on the finished concrete. Forms and centering shall be left in place until the concrete has set sufficiently to permit the removal without danger to the structure.

1.26 Reinforcement:

Steel bars for reinforcing concrete shall be of such shape to afford an approved mechanical bond with concrete to ensure intimate control between steel and concrete. Steel reinforcement shall be either mild steel of tested quality confirming to IS-432-1996 or cold worked steel high strength deformed bars as per IS-1786-1979 in strength grade Fe-415 or hot rolled high yield strength steel deformed bars with minimum yield strength of 425 N/mm2 as per IS – 1939 –1966 (Amended 1968) Reinforcement bars will be rejected if the actual weight vary more than 5% from the standard weight. All bars must

conform to the requirement of Indian standard specification. They shall be protected at all time before placed in the concrete from mechanical injury and the weather and when placed in the work, they shall be free from dirt, scales, loose or scaly rust, paint and oil. Bars which are to be embodied in concrete but remain exposed for some time after being placed in the work shall, if directed be immediately coated with a thin grout of equal part of cement and sand. Bars shall be bending to the shape shown on the drawings and in conforming to approved templates. When bars are cut and bent on the work site the contractor shall employ competent men and provide the necessary appliances for the purpose. All steel shall be rigidly held in place with 18 gauge annealed steel wire, cement mortar (1:2) cubes. M.S. chairs and spacer shall be used in order to ensure accurate positioning of reinforcement. All joints in steel reinforcement shall be overlapped. The length of overlap for tension and compression shall be as per the requirement of Indian standard specification. In water retaining structures a clear cover of 25 mm over steel should be provided.

1.27 Construction Joints

Construction joints shall be provided, where directed approved by the Engineer-in-charge. Such joints shall be kept in minimum and shall be right angles to the direction of main reinforcement. In case of column and walls the joint shall be horizontal and 8 to 15 cm below the bottom of the beam or slab running into the column or wall head or below the anchor reinforcement of beam and slab coming into the column and wall and the portion of the column or wall between the stopping level and the top of slab shall be concerted with the beam or slab.

1.28 Vertical Joints

At the end of any days work or run of concrete, the concrete should be finished off against temporary shutter stop, which should be vertical and securely fixed. This stop should be removed as early as weather permits.

1.29 Horizontal Joints:

Horizontal joints should be washed down two hours after a casting in the manner described above for vertical joints. If the concrete has been allowed to hard excessively, the surface shall be chipped over its whole surface to depth of at least 10 mm and there after thoroughly washed. Before fresh concrete is added on the other side of a construction joints, the surface of the old concrete will be thoroughly wetted then covered with a thin layer of cement mortar (1:2). All the construction joints in all concrete structure having contact with water or soil shall be provided with approved PVC water stops on both side with hot asphalt or approved metallic strips.

1.30 Expansion joints:

Expansion joints shall be provided wherever directed by the engineer in charge, or where necessary as per standard specification and practice. The filler to be used shall be of approved material.

1.31 Cube test:

Cube test for RCC work shall be done in lab and its compressive strength should be within the allowable limit.

1.32 Cement Plaster:

12 mm thick cement plaster in (1:4) proportion shall be applied on outside surface of all concrete works from 30cm below ground level up to top. The surface in contact with water will have 12 mm thick cement plaster of not less than (1:3) proportion with 3% water proofing compound. The concrete surface shall be properly hacked, washed, cleaned and applied with thick cement slurry before applying. All brick work unless otherwise specified will be plastered externally and internally with 12mm cement plaster (1:6) proportion. The plaster shall be protected from sun, rain and frost at the contractor's expense by such means as the Engineer in charge may approve. To protect the plaster from the sun, ordinarily the whole surface shall be covered with wet sacks. The contractor shall keep the plaster continuously waited for a period of seven days after application.

1.33 Flooring

Except where in otherwise specified flooring will have minimum 15cm thick sand filling, one brick flat soling and 150mm thick dry rammed khoa beaten up to 112mm as base in ground floor and 25mm thick patent stone flooring shall be provided over this base. In case flooring in raw water pump house 25mm patent stone flooring shall be provided directly over R.C.C. slab in strip placed in suitable manner to avoid construction cracks.

1.34 Door and Window:

All the doors and windows shall be of good quality well seasoned and well-dressed Sal wood with oxidized iron fittings. All windows shall be provided with M.S. grill of approved design. Rolling shutter of approved make with pusher and pull operated properly fabricated with M.S. lathers including all accessories and necessary fitting of approved quality as per PWD specification will be provided in the pump house. All the doors and windows shall be painted with two coats of enamel paints over a coat of primer. The materials, the size, the shape and the fitting of doors and windows shall be approved by Engineer in Charge before put in position.

1.35 Roof and Roof treatment:

R.C.C. M. 20 grade roof slab of adequate thickness shall be provided. The roof shall be treated with 40 mm average PCC with Damp Proofing material.

1.36 Snowcem Wash:

All the building shall have two coat of snowcem wash of approved shade over a coat of cement primer including preparing the plastered surface smooth with sand paper, scaffolding, centering etc. all complete as per building specification.

1.37 Painting:

All steel or wood shall have two coats of synthetic enamel paint over a coat of primer as specified by the manufacturer of the paint. The make, shade and color of the paints shall have to be approved by the Engineer-in-charge before use.

1.38 Pipe Laying Works:

Centrifugally cast iron or ductile iron or galvanized iron pipe shall be used for laying Rising and Distribution Mains as shown in drawing. **Centrifugally cast iron spun pipe (LA-Class)** conforming to IS 5382-1969 and **ductile iron (class K-7/K-9)** confirming IS 8329:2000 and **galvanized iron** confirming IS 1239 shall be used requisite number of Sluice valves and Scour valves will be provided on the mains. Necessary chambers for valves as per type design shall be constructed. Necessary CI Specials conforming to IS: - 1538-1969 or DI specials confirming to IS 9523:2000; GI specials confirming IS 3589; pig lead conforming to IS: - 782-1978, yarn conforming to IS: - 6587-1972 and making lead caulked joints as per IS Specification and direction Sluice valves and air valves etc. shall have ISI marking. All inlet, outlet pipe and scour pipes, which requires to be fixed in walls of water retaining structure shall have puddle collars and shall be properly fixed during the casting of concrete itself.

1.39 Excavation of Trenches:

No excavation of any trenches must be commenced until the pipes intended to be laid there in with all the necessary appliances for laying and jointing them have been arranged along its side. In the execution of all work of pipe laying no greater length of trenches that can be laid in 48 hours must be opened and should the pipe laying be delayed or stopped from any cause, the excavation of trenches must be stopped until the laying is resumed. In trenches where pipes are to be laid ground shall be excavated to the required depths and gradients and holes shall be taken out where the joints occur, so that the barrels of the pipes shall be on a solid bed throughout. The trenches shall be excavated to depths sufficient to secure a covering over the pipe as per IS specifications.

The trench shall be so dug that the pipe may be laid to the required alignment at required depth. When a pipeline is under a roadway a minimum cover of 1m for CI pipe is recommended for adoption, but it may be modified to suit local conditions. The width of the trench at bottom between faces of sitting shall be such as to provide not less than 200 mm clearance at either side of the pipe except where rock excavation is involved.

1.40 Laying:

Pipes shall be laid in straight lines, free from all sharp bends and should be in proper alignment. Each pipe before it is laid shall be examined and tested with a hammer to prove it, soundness and then shall be brushed through and washed to remove all solid or dirt. Pipes shall be placed in trenches by means of chain pulley blocks taking care to see that soil does not get into the pipe.

1.41 Jointing:

Rubber gasket suitable for joints will be provided to connect cast iron spun pipe conforming to I.S. 5382-1969 (latest amendment) in tyton pipe jointing special type of rubber gasket are to be used, which will be inserted into the socket in the groove. The spigot end being lubricated with grease and slipped into the socket by means of a jack used on the other end. Flange joint will be provided to connect the CI & DI flanged pipe. The rubber packing and nuts-bolts to be used for joining should be of approved quality.

1.42 Cleanliness:

The interior of the pipes must be carefully freed from all dust as the work proceeds, for which purpose a disc plate or brush sufficiently long to pass two or more joints from the end of pipe last laid shall be continuously drawn forward as the pipes are laid. The ends of the pipes must be securely protected during the progress of the work. The pipes laid shall not be made receptacle either for tools, hookahs, clothes or of any other matter during the progress of works. After completion of hydraulic testing, chlorination of pipelines is to be carried out before actual commissioning at his own cost.

1.43 Testing

The line of pipes after laying and jointing shall be tested to a pressure at least double that of working pressure, provided that in no case shall the pipes be tested to a less pressure than that equivalent to a head of 60 meters, of water and the pipes and joints shall be absolutely watertight. The contractor shall provide the water, appliances and labor for testing the pipes at his own expense.

HYDRAULIC TESTING OF LINE

The test of the pipeline in the field shall be carried out after the stretch of suitable length is laid. Testing shall be carried out in the following manner.

The pipeline shall be subjected to hydraulic test in full length or in part as may be found necessary. The pipes shall be subjected to a test pressure of 1.5 times the actual working pressure expected in the pipeline as per hydraulic design in the strip under observation.

There should be drop not more than 0.5kg/cm^2 within a period of two hours after the pressure has been built up by the use of suitable pumps. In case of leak anywhere in the field joints, the same shall be repaired entirely at the cost of the contractor, which shall include cost of excavation repairs etc. The rate of pipe is inclusive of this cost.

The contractor shall provide skilled and unskilled labour free of cost for Departmental check of the work.

SPECIAL NOTE:

I. No pipe shall be laid when; in the opinion of the Engineer-In-Charge trench conditions are unsuitable.

II. Pipes shall be laid in reasonably dry trenches and under no circumstances on slushy murum bedding.

III. The contractor shall use the pipes after checking and testing and he shall be helu responsible for replacement of such pipes if already inadvertently fixed or joined.

IV. Before the pipes are lowered and laid in position the contractor shall see that the invert at the support is correct and pipe is brought to uniform grade and level. This should be checked with the help of dumpy level and should be got approved in advance from the Engineer-in-Charge.

V. Temporary benchmarks shall be provided by the contractor at a minimum distance of every 100m without any claim for extra cost. The benchmarks shall be either of stone masonry or mass concrete.

VI. The pipes shall be laid confirming to the profile, line, level, curvature, straightness etc. as per the drawings. No variation, unless previously approved by engineer in charge, will be allowed.

VII. The contractor shall bear the cost for wastage, breakage in pipes and specials. The length of pipe and specials will be paid as per exact length in laid condition, for both fabrication and laying job.

VIII. All temporary supports made to the pipeline during laying and jointing shall be removed before pipeline is filled with water for hydraulic testing.

IX. Flanged caps or plugs, casting of thrust block, the hydraulic test pump with the required piping etc. shall be arranged for testing purpose by the contractor at his own cost.

X. The hydraulic test shall be made in the presence of Engineer-in-Charge.

XI. When any section of a main is provided with concrete thrust blocks or anchorages, the pressure test shall not be made within 28 days of casting of the R.C.C. block.

1.44 Painting:

All exposed surface of pipes, specials valves, Steel doors and windows, etc., shall have two coats of synthetic enamel paint of approved shade over a coat of red oxide primer etc. all complete as per approval and direction of the Engineer–in-charge.

1.45 Submersible Pump set:

Submersible pump set should be as per IS 8034:2002

Material of construction

There are number of recognized materials of construction available to meet the needs of submersible pump sets handling clear, cold water. Typical material for few components are indicated below merely for guidance of the manufacturer and user:

1. Shaft sleeve	Bronze grade LTB 2, 3, 4 or 5 of IS 318 of 12 percent chromium steel grade X 04 Cr 12, X 12 Cr 12 and X 20 Cr 13 conforming to IS 6911 or IS 6603
2. Casing wear ring (if provided)	Bronze grade LTB 2, 3, 4 or 5 of IS 318
3. Bush	Bronze grade LTB 2, 3 or 4 of IS 318 or Nitrile/ cut less rubber
4. Discharge casing (if provided)	Cast iron grade FG 200 of IS 210
5. Impeller	Bronze grade LTB 2 of IS 318 or Stainless steel grade X 12 Cr 12 of IS 6911 or IS 6603
6. Pump bowl/diffuser	Cast iron grade FG 200 of IS 210

7. Pump shaft	Stainless steel grade X 04 Cr 12, X 12 Cr 12 or X 20 C 13 of IS 6603
8. Suction casing	Cast iron grade FG 200 of IS210

Testing and inspection

Laboratory Tests

Testing procedures as given in IS 11346 shall be followed.

Head Measurement

The total head is made up of:

a) Vertical distance between pumping water level to gauge center distance in meters (Z).

b) Delivery gauge reading in meters in water column *(h)*, and

c) Velocity head in meters

Therefore, total head $H = Z + h + V d^2/2g$.

Power Measurement

Watt meter of adequate capacity shall be used.

GUARANTEE

Guarantee of Workmanship and Material

The pumps shall be guaranteed by the manufacturer against the defects in material and workmanship under normal use and service either for a period of at least 15 months from the date of dispatch or 12 months from the date of commissioning, whichever is earlier.

Guarantee of Performance

The pump sets shall be guaranteed for their performance of the nominal volume rate of flow, nominal head, and overall efficiency.

1.46 VALVES

Sluice valve

This shall be C.I. D/F water work quality, heavy duty with non-rising spindle, inside screw and shall be fitted with double faced gun metal wedge made in one piece and having two machined facing rings securely fixed into machined recesses in the wedge. The guides and lugs shall be provided to guide the wedge through its full travel and lugs and guide shall be lined with bronze. The bronze lining provided on guides and lugs shall be secured by counter sunk screws or rivets of non-ferrous metal. The clearance between the lugs and the guides shall not exceed 2.5 mm.

All the valves shall be provided with gearbox at the top and below the hand wheel (similar to I.V.I./I.V.C.) to facilitate easy manual operation.

The material of the components shall be as under

i) Body, bonnet cover wedges, stuffing box, gloves and hand wheel - grey C.I. grade FG 200 of IS 210.

ii) Spindle as per IS 6603 stainless steel.

iii) Edge and body hinges–Leaded tin bronze conforming to grade 2 of IS 318.

iv) Nuts and Bolts- As per Is 1363.

v) Wedge nut – High tensile brass confirming to alloy 3 of IS 320.

The valves shall be tested in the manufacturer's works as under

1) Body test - 16 Kg/Cm^2 2) Seat test – 10 Kg /Cm^2

The manufacturers test certificate for the material shall be provided at the time of the testing. Required supports to the valves in C.C. shall be provided.

The dimensional drawing shall be submitted by the contractor prior to manufacture showing all the construction details etc. of valve and gearbox for approval. The valves shall be painted after testing as directed by the Engineer in charge.

Approved makes I.V.C./I.V.I./Kirloskar

Non-return Valve (Reflux valve) –

This shall be C.I. D/F single / multi –door type free acting, quick opening, giving rapid non-slam closure and with low head loss Characteristic when in open position. The valve shall be generally designed as per IS 5312-part I. The valve shall be suitable for following working pressures and shall be tested at manufacturer's works as under.

Seat 10 Kg/Cm^2

Body 16 Kg/Cm^2

The valves shall be provided with suitable by pass arrangement with Gunmetal wheel valve/ Sluice valve.

The material of construction shall be as under

i) Body, cover door and door face disc – Grey cast iron confirming to grade FG 2002 of IS 210.

ii) Hinges cast steel as per IS 1030.

iii) Hinge pin, door pins and door suspension pin- stainless steel as per IS 6603.

iv) Bearing bushes, body hinges and door faces- Gun metal conforming to grade 2 of IS 318.

Approved makes IVC/IVI/Kirloskar.

Kinetic Air valve

Kinetic air valves of diameter 100 mm and above of approved make shall be provided and fixed. These shall be two-orifice type, the small orifice releasing air from the pipe carrying water under normal working condition while large orifice shall admit or release air when the pipe is being emptied or filled. The air valve shall be designed to operate satisfactorily at normal working pressure of 10 Kg/Cm2 Kinetic air valve body shall be tested for 10 Kg/Cm2. Air valve shall be provided with isolating sluice valve 100 mm diameter, which shall generally comply with above except gearbox and provided with hand wheel.

Material of construction

Float Chamber, cowl and cover – C.I. grade FG 200 of IS 210.

Small orifice float – Seasoned timber ball covered with soft rubber

Large orifice float - Seasoned timber ball covered with hard vulcanized rubber.

Orifice guides and mechanism – 12% chromium steel as per IS 1310 or stainless steel to 1S 5970- 1045 – 15

Sealing rings – Moulded rubber of suitable quantity

Valve chambers

The valve chambers should be constructed for protection of valves from traffic load to avoid damage by people. The valves should be constructed as per the type design drawings. The construction of the chamber should be in R.C.C and should be able to withstand the superimposed load due to vehicular traffic. The top of the chamber should be covered by RCC pre-cast slabs. All the civil work should be as per the general specification mentioned earlier and as per applicable I.S. standards.

1.49 TUBE WELL

(A) The bore shall be drilled up to a depth, which provides at least 20m of water bearing formation.

(B) The site of the Tube well will be generally approachable by the tractor from pucca road or katcha road or both in continuation. If any other then the above exists, then it has to be prepared by the contractor.

(C) The sample of strata of every 3m or part as required will be preserved in sample box at site. The box with the sample will be handed over to the authorized representative of the department after the completion of Tube well.

(D) A chart in triplicate giving full details of the strata concerned, the rate of progress of drilling should be submitted to the department after the test of the Tube well is completed to the satisfaction of Engineer in charge.

(E) All equipment's and plants, consumable materials required under the contract shall be supplied by the contractor at his own cost.

(F) The housing pipe shall be vertical such that at no stage the pipe is out of plumb line.

(G) The pea gravel used for packing shall be 6 mm to 12 mm size and free from dust etc. and shall screened and washed before use.

(H) The pipe shall be supplied confirming to ISS 6589 / 1976 and ISS 3580 / 1976 for housing pipe, blank pipe and slotted pipe.

(I) The lowering of pipe should be done only after approval of strata by Engineer in charge.

1.50 SUITABLE MAKE

1) **Submersible pump set** – Kirloskar, Crompton, KSB

2) **Valves** – I.V.C./I.V.I./Kirloskar/ KISWOK/ FOURESS

3) **Air Valve** I.V.C./I.V.I./Kirloskar/ Hawa/ KISWOK

4) **Pipe works** –

GI - Tata/Jindal Medium Class.

CI - Class LA Electro steel/Kapilance/Tata.

Annexure 'E'

TECHNICAL BID SHEET

SI.NO.		00
Name of Work	Estimated Cost of Work (in Rupees)	Duration of Work (in months)
Write full Name of Work	Write Total Estimated Cost/BOQ cost	Write duration of work in month

Sl No.	Items		Filled by Bidder(in Blue colour cell only)
1	Name of the Firm/Agency		
2	Address of the Firm/Agency		
3	Earnest Money Deposit	(A) As prescribed in Tender document by Demand Draft in Favour of Concerned Municipal Commissioner/Executive Officer,	
		Earnest Money Deposit -	

4	PAN (Permanent Account Number) / Services Tax Registration No.	
5	VAT TIN	
6	Labour License	
7	Registration in appropriate class	
8	Proof for Experience of atleast 25% of the Estimated value in similar nature work.	
9	The Bidder should not be backlisted or debarred by Center/ State Govt. or its Agency/utiity/enterprises.(An affidavit on Rs. 100+5 stamp paper of this regard.)	
10	Certificate conferming knowledge about site condition.	
11	Bank solvency certificate for 25% amount of the estimated cost.	
12	ANY ADDITIONAL DOCUMENT / GENERAL DOCUMENT	

Annexure 'F'

FINANCIAL BID SHEET

SI. NO.		00
Name of Work/Bill of Quantity for	:-	Write full Name of work.
Estimated Cost (in Rs.)	:-	Write total estimated cost in rupees.
Earnest Money (in Rs.)	:-	Write total earnest money in rupees.
Time of Completion (in months)	:-	Write work duration in months.
Cost of BOQ (in Rs.)	:-	Write cost of BOQ in rupees.

FINANCIAL BID FORM

TO BE FILLED IN BY BIDDER IN BLUE COLOUR CELLS

1	Estimated cost	:-	Rs.-	Write total estimated cost in rupees.
2	Cost of Govt. Material	:-	Rs.-	Nil
3	Rate quoted more than 10% Below BOQ rate will be rejected.			

4	Name of the Contractor		:-	
5	Address of the Contractor		:-	
6	Percent Above or Below or At the BOQ rate	in figures	:-	
		in words	:-	
7	Above or Below or At the BOQ Rate		:-	

Annexure 'G'

Schedule XLV - Form No. 61 (1)

BIHAR PUBLIC WORKS DEPARTMENT

[Form No. F-2]

ITEM RATE TENDER AND CONTRACT FOR WORKS

General Rule and Direction for the guidance of Contractors.

1. All works proposed for execution by contract will be notified in a form of invitation to tender passed on a board hung up in the office of and signed by the Sub-divisional Officer/Executive Engineer.

This notice will state the work to be carried out the items and approximate quantities thereof as well as the date for submitting and opening tenders also, amount of earnest money to be deposited and the amount of the security deposit to be deposited by the successful tenderex and the percentage if any to be deducted from bills, copies of the specifications, designs and any other documents required in connection with this submission of tender signed for the purpose of identification by the Sub-divisional Officer/Executive Engineer shall also be open for inspection by the contractor at the office of the Sub-divisional Officer/Executive Engineer during office hours.

2. In the event of the tender being submitted by a firm, it must be signed separately by each member there of or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power-authorising him to do so.

3. Receipt for payments made on account of work when executed by a firm must also be signed by the several partners, except where the contractors are described in their tender as a firm in which case the receipt must be signed in the name of the firm by one of the partners, or by some other person having authority to give effectual receipt for the firm.

4. The memorandum of work tendered or and the memorandum of materials to be supplied by the Public Works Department and their issue rates shall be filled in and completed in the Office of the Sub-divisional Officer/Executive Engineer before the tender form is issued. If a form is issued to a intending tender without having been so filled in and completed, he shall request the office to have this done before he complete and delivers his tender.

5. The amount of earnest money to be deposited will be : -

	Rs.
If the amount of the estimate does not exceed Rs. 2,000	 50
If the amount of the estimate exceeds Rs. 2,000 but does not exceed Rs. 5,000	 100
If the amount of the estimate exceeds Rs. 5,000 but does not exceed Rs. 10,000	 200
For each additional Rs. 5,000 or portion of Rs. 5,000 additional earnest money	 100

6. Any Person who submits a tender shall fill up the usual printed form stating there at what rate he is willing to undertake each item of the work incomplete tender and tenders which propose any alteration in the work specified in the said form of invitation tenders, or which contain any other conditions of any sort, or omit to note the time within which the work can be finished, or which are not accompanied by the treasury challan for the required earnest money will be liable to rejection. No single tender shall include more than one work, but contractors who will to tender for two or more works shall submit a separate tender for each Tender shall bear the name of the work to which they refer written outside the envelop. Cash deposits for earnests money here in before mentioned shall be made in Government Treasuries and the challan there of shou'd enclosed with the tender

7. The Engineer or his duly authorised assistant will open the tender in the presence of any intending contractors who may be present at the time and will enter the amounts of the several tenders a comparative statements in a suitable form. In the event of a tender being rejected the challan for the earnest money forwarded therewith shall there upon be returned to the tenderer with a pay order for the amount of the earnest money.

8. The Engineer shall have the right of rejecting all or any of the tenders.

9. In the event of a tender being selected for acceptance the Engineer who opened the tenders ill, if he is competent to accept the tender, inform the tenderer or the selected tender who shall thereupon sign copies of the specification & other documents mentioned in rules 1 and 4 for the purpose of identification and for his acceptance with, the tender. The tender of the selected tender shall also deposit the required amount of the security money within the prescribed time. If the tenderer fails to deposit the required amount of the security money within the prescribed time, the Engineer may reject the tender.

If the Engineer is not competent to accept the tender himself, he will inform the tenderer of the tender which he decides to recommend for acceptance. Such tenderer shall thereupon sign furth- with copies of the specification and other documents mentioned in rules 1 and 4 and shall deposit the required amount of the security money within the priscribed time. The tender with the specification and other documents signed by the tenderer will then be forwarded for acceptance and the security money deposited shall be refunded to the tenderer.

10. When a tender is selected for acceptance the tender shall deposit the required amount of the security money in cash in the treasury and shall forward the challan to the Executive Engineer, Government securities may be endorsed to the Executive Engineer lieu of a cash deposit of the required amount of the security money. No tender shall be finally accepted until the required amount of the security money has been deposited.

11. The amount of security money to be deposited by the tenderer whose tender is selected for acceptance shall be 10% of the estimated value of the work & towards this amount the earnest money already deposited by him shall be credit. At least half of this security inclusive of the earnest money shall be deposited by the tenderer within such time as may be notified to him in writing by the officer opening tender, failing which the tender shall be liable to rejection.

Any balance of the security money outstanding after completion of the contract with the tenderer may be made up by deductions of 5% of the amount of each payment to be made to him under clause 7 of the conditions of contract for work done under the contract.

12. When a tender has been selected for acceptance & the required amount of the security money has been deposited the Engineer shall scrutinise all pages of the form of item, rate, tender & contract for works to see that the form has been properly filled up and signed by the contractor & the signature witnessed He shall then if he is competent, to accept the tender, sign the acceptance of the tender, or, if he is not so competent shall send the form for signature of the acceptance of the officer competent to accept it

TENDER FOR WORKS

I/We hereby tender for the execution for the Governor of Bihar of the work specified in the under written memorandum at the rates specified therein within a period of years month from the date of written order to commence and in accordance in all respects with the specifications designs, drawing, and other documents referred to rule hereof and Subject to the annexed conditions of contract and with such materials as are provided for by and in other respects in accordance with, such conditions so far as applicable.

MEMORANDUM

[a] Name of work .....

[b] Estimated cost .....

[c] Earnest money .....

[d] Initial security deposits (including earnest money) to be deposited befor the commencement of the work .....

[e] Percentage to be deducted from bills Rs. 5% (Rupees five percent)

[f] Time required for the work from date of written order to commence .... monthly

[g] Date of written other to commence

[h] Total number of item of work tendered for

(a) If several sub-work are included they should be detained in a separate list

(b) This deposit will be 5% of the estimated cost of the Work.

(c) This percentage deduction from bills will be credited to the contractors security deposit.

Item No.	Item of work	RATE TENDERED		Per
		In figures	In words	

Schedule XLV - Form No. 61

Item No.	Item of work	RATE TENDERED		Per
		In figures	In words	

Item No.	Item of work	RATE TENDERED		Per
		In figures	In words	

Schedule XLV - Form No. 61 (6)

Item No.	Item of work	RATE TENDERED		Per
		In figures	In words	

Schedule XLV - Form No. 61 (7)

Item No	Item of work	RATE TENDERED		Per
		In figures	In words	

should this tender be accepted I/we hereby agree to abide by and fulfill all the terms and provisions of the said conditions of contract annexed hereto so, for as applicable, or in ssurs in office the sums of money mentioned in the said conditions

Dated the day of 20

*Signature, of contractor before comission of tender

Witness :-

Address :-

Occupation :-

Signature of witness to contractor's signature

The above tender is hereby accepted by me on behalf of the Governor of Bihar.

Dated the day of 20

signature of the officer accepting the tender.

Acceptances communicated on .....

signature of the party taking the tender

—●●—

CONDITIONS OF CONTRACT

Compensation

Clause 1 :- All compensation or other sums of payable by the contractor to Government under the terms of his contract may be deducted from, paid by the sale of a sufficient part of his security deposit or from the interest arising therefore or from any sums which may be due or may become due to the contractor by Government on any account whatsoever and in the event of his security deposit being reduced by reason of any such deduction or sale as aforesaid, the contractor shall within ten days there after make good in cash or Government securities endorsed as aforesaid any sum or sums which may have been deducted from, or arised by, sale of his security deposit of any part thereof.

The work should not be considered untill such date as the Executive Engineer shall certify as the date on which the work is finished after necessary rectification of defects as pointed by the Executive Engineer or his authorised agents are fully contractor to the Engineer's satisfaction.

Clause 2 :- The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date on which the written order to comence work is given to the contractor. The work shall throughout the stipulated period of the contract be carried on with all due diligence (time being deemed to be the essence of the contract on the part of the contract or) and the contractor shall pay as compensation an amount equal to ½ percent on the amount of the estimated cost of the whole work as shown by the tender for every day that the work remains uncommenced or unfinished after the proper date. And further to ensure good progress during the execution of the work the contractor shall be bound in all cases in which the time allowed for any work exceeds one month to complete one fourth of the whole of the work before one - fourth of the whole time allowed under the contract has elapsed one-half of the work before one-half of such time elapsed and three-fourths of the work, before three fourths of such time has elapsed in the event of the contractor failing to employ with this condition, I shall be liable to pay as compensation an amount equal to ½ percent on the said estimated cost of the whole work for every day that the due quantity of work remains incomplete provided always that the entire amount of compensation to be paid under the provisions the clause shall not exceed 10 percent of the estimated cost of the work as shown in the tender.

Action when porsnle security deposit foreited

Clause 3 :- In any case which under any clause or clauses of or this contract the contractor shall have rendered himself laible to pay compensation amounting to the whole of his security deposit in the hands of Government (where paid in one sum or deducted by instalments) the Executive Engineer on behalf on the Bihar Government shall have been powered to adopt any of the following courses, as he may deem best suited to the enterest of Government -

(a) To rescind the contract (of which rescind notice in writing to the contractor under the hand of the Executive Engineer shall be conclusive evidence) and in which case the sectitiry deposit of the contractor shall start forfeited, and be absolutely at the disposal of Government.

(b) To employ labour paid by the Public Works Department and to supply materials to carry out the work, or any part of the work, debitting the construction with the cost of the labour and the price of the materials (of the amount of which cost and price certificate of the Engineer-in -charge shall be final and conclusive against the contractor), and crediting him with the value of the work done, in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract, the certificate of the Executive Engineer as to the value of the work done shall be final and conclusive against the contractor.

(c) To measure up the work of the contractor and to take such part of the work of the contractor as shall be unexecuted out of his hands, and to give it to another contractor to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor if the whole work had been executed by him (of the amount of which excess the certificate in writing of the Executive Engineer shall be final and conclusive) shall be born and paid by the original contractor and made be deducted from any money due to him by Government under the contract or otherwise, or from his security deposit or the proceeds of sale thereof, or a sufficient part thereof.

In the event of any of the above courses being adopted by the Executive Engineer, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagement, or made advances on account of or with a view to execution of the work or the performance of the contract. And in case the contract shall be rescinded under the provision aforesaid, contractor shall not be entitled to recover or be paid any sum for any work there-to-fore actually performed under this contract unless and until the Executive Engineer shall have certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the values so certified.

contractor remains liable to pay compensation if action not take under cause 2

Clause 4 :- In any case in which any of the powers, conferred upon the Executive Engineer by clause 3 thereof shall have become exercisable and the same shall not be exercised the non-exercise there of shall not conlitury waiver of the conditions here and such power shall not with standing be exercisable in the event of any future case of default by the contractor for which by any clause or clauses hereof he is declared liable to pay compensation amounting to the whole of his security deposit and the liability of the contractor for past and future compensation shall remain unaffected in the event of the Executive Engineer putting in force the powers vested in him under the preceeding clause he may, if so desires, take possession of all or any tools, plants, materials and store, in or upon the works of the site thereof or belonging to the contractor or procured by him and intended to be for the execution of the work or any part there of paying or allowing for the same in the contract at the account rates, or in case of these not being applicable at current market rates to be certified by the Executive Engineer whose certificate thereof shall be final, otherwise the Executive Engineer may notice in writing to the contractor or his clerk of the work, foreman or other authorised agent require him to remove such tools, plants, materials or stores from the premises (within a time to be specified in such notice) and in the event to the contractor failing to comply with any such requisition the Executive Engineer may remove them at the contractor expense or sell them by auction or private sale on account of the contractor and at his risk in all respect, and the certificate of the Executive Engineer as to the expense of any such removal and the amount of the proceeds and expense of any such sale be final and conclusive against the contractor.

Power to take possession of or require removal of or sell contractor plant

Clause 5 :- If the contractor shall desire any extension of the time for completion of the work on the ground of his having been unavoidably hindered in its execution or on any other ground other than these mentioned in clause 12 (a) he shall apply in writing to the Executive Engineer within 40 days from the date of starting of the hinderance on account of which be desires such extension as aforesaid and the Executive Engineer shall, if in his opinion (which shall be final) reasonable grounds be shown thereof authorised such extension of time, if any, as may in his opinion be necessary or proper. The Executive Engineer shall at the same time inform the contractor whether he claims compensation for the delay.

Extension of time

Final certificate

Clause 6 - On completion of the work, the contractor shall be furnished with a certificate by the Executive Engineer (herein after called the Engineer-in-charge) of such completion, but no such certificate be given, nor shall the work be considered to be complete until the contractor no such certificate be given, nor shall the work be considered to be complete until the contractor shall have removed from the area of the premises (to be distinctly marked by the Executive Engineer in the site plan) on which the work shall be executed all scaffolding surplus materials, and rubbish, and cleaned of the dirt from all wood-work, doors, windows, walls, floors or other parts of any building, in upon or about which the work is to be executed, or of which he may have had possession for the purpose of the execution thereof, not until the work shall have been measured by the officer of the Public Work Department in accordance with rules of Department whose measurements shall be binding and conclusive against the contractor. If the contractor shall fail to comply with the requirements of this clause as to removal of scaffolding, surplus materials and rubbish and cleaning off dirt on or before the date fixed for completion the work the Engineer-in-charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish and dispose of the same as the thinks fit and clean of such dirt as aforesaid, and the contractor shall forth with pay amount of all expense so incurred, and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid, except for any sum actually realised by the sale thereof.

Payment of in terms date certificate to be regarded as advance and Bill to be submitted monthly

Clause 7.- A bill shall be submitted by the contractor each month or before the date fixed by the Engineer-in-charge for all work executed in the previous months and the Engineer-in-charge or his subordinate shall take the requisite measurement for the purpose of having the same verified and the claim, as far as admissible, adjusted, if possible, before the expiry of the days from the presentation of the bill. If the contractor does not submit the bill within the time fixed as aforesaid, the Engineer in-charge or his subordinate shall measure up the said work in the presence of the contractor whose counter whose counter signature on the measurement list will be sufficient warrant, and the Engineer-in-charge or his subordinate shall prepare at bill from such list which shall be binding to the contractor in all respects.

Provided that, if any balance of the 10% security is outstanding from each such payment shall be deducted so much not exceeding 5% may be necessary to make up the balance of the security. All such intermediate payment to the contractor shall be regarded as payments by way of advance against the final payments only and not as payments for work actually done and completed and shall not precinde the reputing of bad, unsound and imperfect or unskilful work to be removed and taken away and reconstructed or recreated be considered as an admission of due performance of the contractor, or any part thereof in any respect, or the actual of any claim nor shall it conclude, determine or affect in any way the powers of the Engineer-in-charge under these conditions or any of them as so the final settlement or adjustment of the accounts or in any other way vary or affect the contract.

Clause 8 :- The final bill shall be prepared by the officer of the Public Work Department in accordance with the rules of the department in the presence of the contractor within the month of the date fixed for completion of the work.

Stores supplied Government

Clause 9 - If the specification or estimate of the work provides for the use of any special description of material to be supplied from the Engineer in-charge's stores or if it is required that the contractor shall use certain stores to be provided be the Engineer-in-charge under the conditions of this contract or (such materials and stores, and the prices to be charged therefore as herein after mentioned being so far as practicable for the convenience of the contractor, but not so as in any way to control the meaning or effect of this contract are specified in schedule or memorandum here to annexed) the contractor shall be supplied with such materials and stores noted in the annexed such schedule required from time to time to be used by him for the purposes of the contract, only and the value of the full quantity of materials and stores so supplied at the rates specified in the said schedule may be set off or deducted from any sums then due or there after to become due to the contractor under the contract or otherwise, or against or form the security deposit, or the proceed of sale thereof, if the same is held in Government security the same or sufficient portion thereof in this case sold for the purpose. All materials supplied to the contractor shall remain the absolute property of Government and shall not on any accounts he removed from this site of the work and shall at all times be open to

Inspections by the Engineer-in-charge. Any such materials unused and in correctly in good condition at the time of the completion or determination of the contract shall be returned to the Engineer-in-charge's store, at the prevailing market rate or at the issue rate whichever is less if by a notice in writing under his hand he shall so require, but the contractor shall not be entitled to return any such materials unless with such consent and shall have no claim for compensation on account of any such materials so supplied to him as aforesaid being unused by him, or for any wastage to or any such materials.

Work to be executed accordance with specification drawing other etc

Clause 10.- The contractor shall executive the whole and every part of the work in the most substantial and workman like manner, and both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also confirm exactly, fully and faithfully to designs, drawings, and instructions in writing relating to the work singed by the Engineer-in-charge and lodged in his office and to which the contractor shall be entitle to access at such office, for the purpose of inspection during office hours, and the contractor shall, if he so require be entitled at his own expenses to make or cause to be made copies of the specification, and of all such designs, drawings and instructions as aforesaid.

Alteration in specifications and designation

Clause 11 .- Engineer-in-charge shall have power to make any alteration in additions to the original specifications, drawings and instructions that may appear to him to be necessary of advisable during the progress of the work. The contractor shall be bound to carry out the work in accordance with any instructions which may be given to him in writing signed by the Engineer-in-charge, and such alteration shall not invalidate the contract and any additional work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respects on which he agreed to do the main work, and at the same rates as are specified in the tender o. the main work. The time for completion of the work shall be extended in the proportion that the additional work bears to the original contract work and the certificate of the Engineer-in-charge shall be conclusive as to such proportion and to the additional work includes any class of work, for which no rates is specified in this contractor then such class of work shall be carried out at the rates entered in the sanctioned schedule or rates of the locality during the period when the work is being carried on and if such last mentioned class of work is not entered in the schedule of rates of the district then the contractor shall within seven days of the date of his receipt of the order to carry out the work inform the Engineer-in-charge does the rate which in his intention to charge for such class of work and if the Engineer-in-charge does not agree to this rate he shall be noticed in writing be at liberty to cancel his order to carry out such class of work and arrange to carry it out in such manner as he may consider advisable provided always that if the contract shall commence work or in our any expenditure in regard thereof before the rate shall have been determine as lastly herein before mentioned then and in such case he shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to the date of the determination of the rates as aforesaid according to such rate or rates as shall be fixed by the Engineer-in-charge in the event of a disputes the decision of the superintending Engineer of the circle will be final.

Do not in validate contract

Time in consequence of alteration

Provided always that the contractor shall not be entitled to any payment for any additional work done unless he has received an order in writing from the Engineer-in-charge for the additional work the contractor shall be bound to submit his claim for any additional work done during any month on or before the 15th days other following month accompanied by a copy of the order in witting of the Engineer-in-charge for the additional work and that contractor or shall not be entitled to any payment in respect of such additional work if be other submit his claim within date afore said period.

Rate for work no in estimate or schedule of rates of the district

Clause 12 - If at any time after the commencement of the wok the Government of Biher shall for any reason whatsoever not require the whole thereof as specified in the tender to be carried out, the Engineer-in-charge shall give notice in writing of the fact to the contractor who shall have no claim to any payment of compensation whatsoever on account of any profit or advantage, which he might have derived from the execution of the work in full, but which he did not derive in consequence of the full amount of the work not having been carried out neither shall he have any claim for compensation by reason of any alternation having been made in the original specification, drawing, designs and instruction which shall involve any installment of the work as originally contemplated clause 12 (a) As contained in G O 1929 dated 11.9.56

Compensation for alteration in or restriction of work to be carried out

Clause 12 (a) The contractor shall not be entitled to claim any compensation for loss suffered by him on account of delay by or on behalf of Government in the supply of materials as stores which the Government may have undertaken to supply where such failure is due to :-

(i) natural calamities, (ii) act of enemies, (iii) transport and procurement difficulties or (iv) circumstances beyond the control of the state Government

In case of such failure in delay in the supply of materials or stores on an application by the contractor within 30 days form the date of such failure or delay, such extension of time shall be granted to the contractor for completion of the work as shall appears to the Engineer to be reasonable in accordance with the circumstances of the case. The decision of the Executive Engineer as to the extension of time shall be accepted as finally by the contractor.

Action and compensation payable in case of work.

Clause 13 :- If it shall appear to the Engineer-in-charge or his subordinate in-charge of the work that any work has been executed with unsound, imperfect or unskilful workmanship or with materials of any inferior description, or by any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted for at otherwise not in accordance with the contract, the contractor shall on demand in writing form the Engineer-in-charge specifying the inadvertentaly passed certified and paid for, forthwith rectify or remove and re-contract the work so specified in whole or in part as the case may remove the materials or articles so specified and provided other proper and suitable materials or articles at his own proper charge and cost, and in the event of failing to do so within period to be specified by the Engineer-in-charge in his demand aforesaid the contractor shall be laible to pay compensation at the rate of one percent on the amount of the estimate for every day not exceeding ten days while his failure to do so shall continue and in the case of any such failure the Engineer-in-charge may certify or remove, and re-execute the work or remove and replace with others, the materials or articles complained of as the case may be,at the risk and expense in all respects of the contractoor.

Work to be taken to inspection

Clause 14 :-All work under in course of execution or executed in presence of the contractor shall at the times be open to the inspection and supervision of the Engineer-in-charge and his subordinates and the contractor shall at all times during the usual working hours and at all other time at which reasonable notice of the intimation of the Engineer-in-charge or his subordinate to visit the works shall have been given to the contractor, either himself to be present to receive orders and instruction, or have a responsible agent duly credited in writing present for that purpose orders given to the contractor's agent all shall be considered to have the same force as if they had been given to the contractor himself.

Contractor or responsible Agents to be present

Clause 15 :- The contractor shall give not less than five days notice in writing to the Engineer-in-charge or his subordinate-in-charge of the work before covering up or otherwise placing beyond the reach of measurement of any work in order that the same may be measured and correct dimensions there of be taken before the same is so covered up or placed beyond the reach of measurement and shall not cover up or place beyond the reach of measurement of any work without the consent in writing of the Engineer-in-charge or his subordinate in-charge of the work shall be covered up or placed beyond the reach of measurement without such notice having been given or consent obtained, the same shall be uncovered at the contractor's expenses or in default there on payment or allowance shall made for such work on materials with which the same was effected.

Notice to be taken before work covered up

Clause 16:- If the contractor or his work-people, or servants shall break, deface injure or destroy any part of a building in which they may be working or any building, road, road curves, fence enclosure water pipes, cables, drains, electric or telephone posts or wires, trees, grass or grassland or cultivated ground contiguous on which the work or any part of it is being executed or if any damage shall happen to the work, while in progress from any cause whatsoever or any imperfection become apparent in if within three months (six months in the case of a road-work) after a certificate final or other of its completion shall have been given by the Engineer-in-charge

as a fore seal, the contractor shall make the same good at his own expense, or in default, the Engineer-in-charge may cause the same to be made be good by other worksmen and deduct the expense of which time thereafter may become due to the contractor, or from his security deposit, or the proceed of sale there of, or of a sufficient portion there of the security deposit at the contractor shall not be refunded before the expiry of three months (six months in the case of a road-work) after the issue of the certificate final or otherwise of completion of work provided that in the case of a road work if in the opinion of the Engineer-in-charge behalf of the security deposit will be refundable after three months of the issue of the said certificate of completion

Contractor liable for damage done and for imperfection 3 months and after certificate

Clause 17:- The contractor shall supply at his own cost all materials (except such special materials) if any as may in accordance with the contract be supplied from the Engineer-in-charges stores). Plants, tools, application, implements, ladders, cordage, tackle scaffolding and temporary works requisite or proper for the proper execution of the work whether original, altered or substituted and whether include in the specification or other documents forming part of the contract or referred to in these conditions or not or which may be necessary for purpose of satisfying or complying with the requirement of the Engineer-in-charge as to any matter as to which under these conditions he is entitled to be satisfied which he is entitled to require together with carriage therefore to and form the work. The contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out works, and counting, weighing and assisting in the measurement or examination at any time and form time to time of the work or materials failing his so doing the same may be Provided by the Engineer-in-charge at the expense of the contractor and the expenses may be deducted from any money due to the contractor under the contract from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. The contractor shall also provide all necessary fencing and lights required to protect the public from accident, and shall be bound to bear to expenses of defence of every suit action or other proceeding at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to any such person or which may with the consent of the contractor be paid to compromise any claim by any such person.

Contractor to supply to plant ladder scaffolding etc.

And is liable for damage arising for non-provision of light fencing etc.

Clause 18 :- No female labour shall be employed within the limits of contonment. The contractor shall not employ for the purpose of his contract any person who is below the age of twelve years and shall pay to each labour for the work done by such labourer wages not less than the wages paid for similar work in the neighbourhood.

Work not to be subject

The executive Engineer shall have the right to enquire into the case and decide any complaint alleging that the wages paid by the contractor to any labourer for the work done by such labour is less than the wages paid for similar work in the neighbourhood.

The officer in-charge of the work shall have the right to decide whether any labourer employed by contractor is below the age of twelve years and to refuse to allow any labourer whom he decided to be below the age of twelve years to be employed by the contractor.

Clause 19:- The Contractor shall not be assigned or subject without the written approval of the Executive Engineer. And if the contractor shall assign or subject his contract, or attempt so to do, or become insolvent proceedings to make any composition with his creditors or attempt so to do, or if any bribe, gratuity, gift loan, requisite, reward or advantage pecunairy of otherwise, shall either directly or indirectly be given promissed, or offered by the contractor, or any of his servant or agents to any public officer or person in the employ of Government in any way relating to his officer or employment or if any such officer or person shall become in any way directly or indirectly interested in the contract the Executive Engineer may there upon by notice in writing rescind the contract. The security deposit of the contractor shall there upon stand forfeited and be absolutely at the disposal of Government and the same consequence shall ensure as if the contract had been recinded under clause 3 here of, in addition the contractor shall not be entitled to recover or be paid to any work therefore actually performed the under the contract

Contract may be rescinded and security deposit forfeited for subletting bribes or if contractor become insolvant

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such payable by way of compensation to be considered reasonable compensation without reference to actual loss

Clause 20 :- All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of the Government without reference to the actual loss or damages sustained and there of not any damage shall have been sustained.

Clause 21 :- In the case of a sender by partners, any change in the constitution of the firm shall be forthwith notified by the contractor to the Engineer-in-charge or this information.

Charges in constitution of firm

In case of failure to notify the change in the constitution within fifteen days the Engineer-in-charge may be notice in writing rescind the contract and the security deposit of the contractor shall thereupon stand forfeited and be absolutely at the disposal of Government and the same consequences shall ensure as if the contract has been rescinded under clause 3 hereof, and in addition the contractor shall not be entitled to recover or be paid for any work therefore actually performed under the contractor.

Works to be under direction of Superintending Engineer

Clause 22 :- All work to be executed under the contract shall be executed under the direction and subject to the approval in all respect of the superintending Engineer of the circle for the time being who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

Clause 23 :- In case any dispute or difference shall arise between the parties or either of there upon any question relating to the meaning of the specifications, designs, drawings and instructions here before mentioned or as to the quality of workmanship or materials used on the work or as to the construction of any of the conditions or any clause or thing there in contained or as to any question, claim, rights of the parties, or any matter, or things whatsoever in any way arising out of or relating to the contract designs, drawings specifications, estimates, instruction order of these conditions or otherwise concerning the work or the execution, or failure to execute the same whether arising during the progress of the work of alter the completion or abondment thereof or as the breach of those contract then either party shall forthwith give to the order notice of such dispute or difference and such dispute or difference shall be referred to the Superintending Engineer of the circle and his decision there on shall be final, conclusive and binding on all the parties.

Lum sum in estimate

(a) Clause 24 :- When the estimate on which a tender is made includes lump sum in respect of the contract shall be entitled to payment in respect of the items or work involved of the work in question the same rates as are payable under this contract such terms, for if the part of the work in question is not in the opinion of the Engineer-in-charge, capable of measurement the Engineer-in-charge, may at his direction pay the lump sum amounts entered in the estimate, and the certificate in writing of the Engineer-in-charge shall be final and conclusive against the contractor with regard to any sum payable to him under the provision of this clause.

Action where no specificaiton

Clause 25 :- In the case of any class of work for which there is no such specification as is mentioned in rule 1, such work shall be carried out in accordance with the circle specification and in the event of there being no circle specification, then in such case the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-charge.

Definition of works

Clause 26 :- The expression "work" or "works" where used in these conditions shall unless there be something either in the subject or context repugnant to such construction be constructed and taken to mean the work by or virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.

Clause 27 :- The terms and conditions of the agreement have been read/explained to me and.....certify.....clearly understand them.

Witness Contractor

Schedule XLV - Form No. 61

Schedule showing (Approximately) materials to be supplied, it available the rates of which they are to be charged for and the places at which they are to be supplied

Particulars	Rates at which the material will be charged to the contractor			Place of delivery
	Unit	Rs.	P.	

Note :-The person or firm submitting the tender should see that the rates in the above schedules are filled up by the Engineer-in-charge on the issue of the form prior to the submission of the tender.

(Signature of Contractor)

(Signature of Executive Engineer)

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Annexure 'H'

Annexure-H

बिहार सरकार
नगर विकास एवं आवास विभाग।

॥ अधिसूचना ॥

संख्या-3/UIG-रिफार्मस-10/12 1257 पटना, दिनांक- 12-7-13

नगर निकायों द्वारा जलापूर्ति कार्य में व्यय की गई शत प्रतिशत राशि को वसूलने एवं बिहार नगरपालिका अधिनियम, 2007 की धारा 129(i) के आलोक में नगरपालिका क्षेत्रों में जलापूर्ति मद में उपभोक्ता-शुल्क उगाही हेतु शुल्क निर्धारित किया जाता है। नगरपालिका अपने क्षेत्रों में निम्नांकित दर से शुल्क की उगाही कर सकेगी-

उपभोक्ता की श्रेणी

क	आधारीय	पाईप का व्यास	न्यूनतम मासिक शुल्क (रू० में)		
			नगर निगम	नगर परिषद	नगर पंचायत
i	बहुमंजिली इमारत (Apartment)	1/2"	80.00	60.00	40.00
		1/2" से ज्यादा	120.00	90.00	60.00
ii	स्वतंत्र मकान / बंगला	1/2"	120.00	90.00	60.00
		1/2" से ज्यादा	240.00	180.00	120.00
ख	वाणिज्यिक / औद्योगिक / सरकारी / संस्थानिक / अन्य	1/2"	600.00	450.00	300.00
		3/4"	1000.00	750.00	500.00
		1"	1900.00	1400.00	900.00
		1" 1/2"	4200.00	–	–
		2"	8400.00	–	–
		3"	16500.00	–	–
		4"	32000.00	–	–
		6'	60000.00	–	–
ग	नया जलापूर्ति कनेक्शन				
i	बहुमंजिली इमारत एवं स्वतंत्र मकान	1/2"	2000.00	1000.00	500.00
ii	वाणिज्यिक / औद्योगिक / सरकारी / संस्थानिक / अन्य	1/2" से अधिक	10000.00	5000.00	2000.00
	उपर्युक्त मद में बकाया शुल्क का भुगतान नहीं किये जाने के फलस्वरूप कनेक्शन कट जाने के उपरान्त पुनः चालू करने का शुल्क-		500.00	300.00	200.00

घ. जल उपभोग की मात्रा के आधार पर निर्धारित शुल्क प्रतिमाह –

जल की मात्रा	दर प्रति कि० ली०
25 किलो लीटर तक	15.00
25 किलो लीटर से 50 किलो लीटर तक	25.00
50 किलो लीटर से 100 किलो लीटर तक	35.00
100 किलो लीटर से ऊपर 500 किलो लीटर तक	50.00

2. उपर्युक्त मद में बकाया का भुगतान नहीं होने की स्थिति में संबंध विच्छेदन के उपरान्त पुनः स्थापन कराने का निर्धारित शुल्क –2,500/– (दो हजार पाँच सौ रूपये मात्र)

3. प्रस्ताव एवं प्रारूप में वित्त विभाग की सहमति प्राप्त है।

बिहार राज्यपाल के आदेश से

Sd/-
(जय सिंह)
संयुक्त सचिव,
नगर विकास एवं आवास विभाग।

ज्ञापांक - 3/UIG-रिफॉर्म्स 10/2012- / दिनांक –

प्रतिलिपि वित् विभाग, इ गजट कोषांग, बिहार पटना को सी॰डी॰ के साथ बिहार गजट के असाधारण अंक में प्रकाशनार्थ प्रेषित।

उनसे अनुरोध है की वे कृपया मुद्रित गजट की २०० प्रतियाँ नगर विकास एवं आवास विभाग को उपलब्ध करना सुनिश्चित करेंगे।

ह0/–
सरकार के संयुक्त सचिव,
नगर विकास एवं आवास विभाग, बिहार

ज्ञापांक - 3/UIG-रिफॉर्म्स 10/2012- 1250 / दिनांक - 12-7-13

प्रतिलिपि –मुख्यमंत्री, बिहार के प्रधान सचिव/मुख्यमंत्री–सह–प्रभारी मंत्री, नगर विकास एवं आवास विभाग, पटना के प्रधान आप्त सचिव को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

प्रतिलिपि – प्रमंडलीय आयुक्त, पटना, मगध, भागलपुर, तिरहुत, सारण, मुंगेर, कोशी, दरभंगा और पूर्णिया प्रमंडल / सभी जिला पदाधिकारी, बिहार को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

प्रतिलिपि– सभी मुख्य पार्षद/उप मुख्य पार्षद/सभी नगर आयुक्त/सभी नगर कार्यपालक पदाधिकारी, बिहार को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

सरकार के संयुक्त सचिव,
नगर विकास एवं आवास विभाग, बिहार